CITY OF SURPRISE
Planning and Zoning Commission Meeting
16000 N. Civic Center Plaza
Surprise, AZ 85374
Thursday, April 16, 2020 @ 6:00 PM
COUNCIL CHAMBERS

NOTICE: In an effort to protect health and safety of city employees, residents, and visitors, the Council Chambers will be closed to the public during this meeting. The public may access the meeting by viewing a live stream or broadcast of the meeting. To watch live, please visit www.surpriseaz.gov/surprisetv, the Surprise City Gov Facebook page at www.facebook.com/cityofsurprise. Cox channel 11 and Century Link channel 8513 will also carry the meeting live.

http://bit.ly/33zgqWv

A. Call To Order
B. Roll Call
C. Pledge of Allegiance
D. Current Events and Reports
E. Staff Reports
F. Planning and Zoning Commission Agenda:

CALL TO THE PUBLIC:

Public comment will be taken through email or via phone. To submit email comments, including Call to the Public for non-agenda items, please email PandZComments@surpriseaz.gov. Comments for Call to the Public must be submitted prior to the start of the meeting. To comment on agenda items, emails must be submitted prior to the time(s) designated for public comment by the Commission Chair during the meeting or before the agenda item has otherwise concluded.

To comment live by phone for Call to the Public for non-agenda items or for agenda items, please call 623-222-3030 prior to, or during, the meeting to have your name placed on a callback list. If you reach voicemail, please leave your name and phone number. The Commission Secretary will call those wishing to comment from the dais during the meeting, and the call will be streamed through the Council Chamber audio system. Only calls received before Call to the Public for non-agenda items or before or during the time(s) designated for public comment by the Commission Chair during the meeting on the subject agenda item will be accepted and streamed. No calls will be accepted after the time(s) designated by the Commission Chair for public comment or after an agenda item has otherwise concluded.

CONSENT AGENDA:

1.	Internal	Consideration and action to review and approve or disapprove the April 2, 2020, Planning and Zoning Commission Minutes.	Nichole Flores Community Development

REGULAR AGENDA ITEM - PUBLIC HEARING:

2.	District 3	Consideration and action pertaining to the rezoning of 285.2 acres of the 637.4-acre Sycamore Farms Planned Area Development (“PAD”) to modify land uses and development standards, located on the northwest corner of Peoria and Sarival Avenues.	Hobart Wingard Community Development
3.	District 6	Consideration and action pertaining to approval of the Preliminary Plat entitled, “W Ranch Preliminary Plat,” dated January 28, 2020, a property generally located 3,000 feet west of the intersection of Litchfield and Waddell Roads.	Hobart Wingard Community Development

REGULAR AGENDA ITEM - NON-PUBLIC HEARING:

4.	District 1	Consideration and action regarding a Site Plan to allow for a new Single Family Rental Community on Parcels 18 and 19 in the Surprise Farms PAD generally located south of Bell Road and west of 175th Avenue.	Shirley Phan Community Development

G. Other Business and Future Agenda Items

H. Executive Session

For information purposes: Upon a public majority vote of a quorum (“Commission”), the Commission may hold an executive session, which will not be open to the public, but for only the following purposes: discussion or consideration of records exempt by law from public inspection (A.R.S. §38-431.03(A)(2));

or discussion or consultation for legal advice with the attorney or attorneys of the public body (A.R.S. §38-431.03(A)(3)).

Confidentiality Requirements: Pursuant to A.R.S. §38-431.03(C)(D), any person receiving executive session information pursuant to A.R.S. §38-431.02 shall not disclose that information except to the Attorney General or County Attorney or by agreement of the Commission, or as otherwise ordered by a court of competent jurisdiction.

The Commission may vote to hold an executive session for the purpose of obtaining legal advice from the Commission’s attorney on any matter listed on the agenda pursuant to A.R.S. § 38-431.03(A)(3).

I. Adjournment

SHERRY ANN AGUILAR, CITY CLERK, MMC

POSTED: April 8, 2020 at 2:20 PM

SPECIAL NOTE: PERSONS WITH SPECIAL ACCESSIBILITY NEEDS, INCLUDING LARGE PRINT MATERIALS OR INTERPRETER, SHOULD CONTACT THE CITY CLERK’S OFFICE @ 623.222.1200 OR TTY 623.222.1002, BY NO LATER THAN 24 HOURS IN ADVANCE OF THE REGULAR SCHEDULED MEETING TIME.

CITY OF SURPRISE
Planning and Zoning Commission Meeting

Council Meeting Date: April 16, 2020 Contact Person: Nichole Flores
Submitting Department: Community Development District: Internal
Staff Recommendations:

Consent: Yes Regular: No Public Hearing: No Report/Discussion: No

Agenda Wording:
Consideration and action to review and approve or disapprove the April 2, 2020, Planning and Zoning Commission Minutes.

Motion:
I move to approve/disapprove the April 2, 2020, Planning and Zoning Commission minutes.

Background:

Objective Analysis:

Policy Compliant:

Financial Impact:

Budget Impact:

FTE Impact:

ATTACHMENTS:
1. 20.04.06 EVR 04-02-20 PZ MIN

CITY OF SURPRISE
PLANNING AND ZONING COMMISSION

MEETING MINUTES

April 2, 2020 / 6:00 PM

COUNCIL CHAMBERS
16000 North Civic Center Plaza
Surprise, AZ 85374

CALL TO ORDER.

Chair Matthew Keating called the Planning and Zoning Commission Meeting to order at 6:00 p.m. at Surprise City Hall, 16000 North Civic Center Plaza, Surprise, Arizona 85374, on April 2, 2020.

A. ROLL CALL
In attendance were Chair Matthew Keating, Vice-Chair Dennis Bash, Commissioner Scott Krous, Commissioner Ken Chapman and Commissioner Dennis Smith. In remote attendance were Commissioner Gisele Norberg and Commissioner Mitchell Rosenbaum.

STAFF PRESENT:
Ellen VanRiper, Chief Deputy City Attorney; Chris Boyd, Community Development Director; Lloyd Abrams, Assistant Community Development Director; Tiffany Copp, Assistant Community Development Director; Robert Kuhfuss, Current Planning Supervisor; Sergio Angulo, Current Planner; Nichole Flores, Planning and Zoning Secretary and Ashley Labhart, Senior Administrative Specialist.

COUNCIL MEMBERS PRESENT:
None.

B. PLEDGE OF ALLEGIANCE

C. CURRENT EVENTS REPORT
Mr. Boyd advised Commissioners who wish to participate remotely in Planning and Zoning Commission meetings while the emergency declaration is in place are to notify Chair Keating. Mr. Boyd also introduced Tiffany Copp, the new Assistant Director overseeing Development Services, Building Safety and Code Enforcement.

D. STAFF REPORT
None.

CALL TO THE PUBLIC:

Chair Keating opened the call to the public to discuss any items not listed on the agenda.

Hearing no comments, Chair Keating closed the call to the public.

CONSENT AGENDA:

Item 1 – Internal – Consideration and action to review and approve or disapprove the March 19, 2020, Planning and Zoning Commission Minutes.

Vice-Chair Bash made a motion to approve the March 19, 2020, Planning and Zoning Commission Minutes as presented. Commissioner Smith seconded the motion. Motion passes with 6 votes in favor (Commissioner Norberg abstained).

REGULAR AGENDA ITEMS REQUIRING A PUBLIC HEARING:

Item 2 – District 1 - Consideration and action pertaining to the Zone Change for Windstone Ranch of 19.92 acres from RR to RM-9 PUD, located on the northeast corner of the Happy Valley Road and 151st Avenue alignments. (Case FS19- 263)

Sergio Angulo, Current Planner, presented item 2 to the Commission.

Chair Keating opened the public hearing.

Hearing no comments, Chair Keating closed the public hearing

Chair Keating made a motion to recommend approval to the Mayor and City Council of the Zone Change of 19.92 acres from RR to RM-9 PUD, located on the northeast corner of the Happy Valley Road and 151st Avenue alignments as stated in the staff report subject to stipulations “A” and “B”. Commissioner Chapman seconded the motion. Motion passes with 5 votes in favor, 1 against (Commissioner Smith), 1 abstained (Commissioner Krous).

The Commission discussed the following:

- Pools
- Road access options

REGULAR AGENDA ITEMS NOT REQUIRING A PUBLIC HEARING:

None.

OTHER BUSINESS:

Item G – Other Business and Future Agenda Items.

Commissioners inquired about the status of the Land Development Ordinance (LDO), and Mr. Boyd advised the stakeholder process has been temporarily suspended due to the emergency declaration that is in place as a result of COVID-19.

Commissioner Norberg noted appreciation for the temporary accommodation granted which allows Commissioners to participate in meetings remotely.

ADJOURNMENT:

Hearing no further business, Chair Keating made a motion to adjourn the Planning and Zoning Commission meeting. Commissioner Smith seconded the motion.

Meeting adjourned at 6:14 P.M.

Matthew Keating
Planning and Zoning Commission Chair

The foregoing instrument is a full, true and correct copy of the original document on file in the office of the City Clerk, City of Surprise, Arizona.

ATTEST BY: _____
Nichole Flores, Commission Secretary

DATE: _____

CITY OF SURPRISE
Planning and Zoning Commission Meeting

Council Meeting Date: April 16, 2020 Contact Person: Hobart Wingard, PLANNER II
Submitting Department: Community Development District: District 3
Staff Recommendations:

Consent: No Regular: No Public Hearing: Yes Report/Discussion: No

Agenda Wording:
Consideration and action pertaining to the rezoning of 285.2 acres of the 637.4-acre Sycamore Farms Planned Area Development ("PAD") to modify land uses and development standards, located on the northwest corner of Peoria and Sarival Avenues.

Motion:
I move to recommend approval/denial to the Mayor and City Council the rezoning of 285.2 acres of the 637.4-acre Sycamore Farms Planned Area Development ("PAD") to modify land uses and development standards, located on the northwest corner of Peoria and Sarival Avenues.

Background:
RVI Planning and Landscape Architecture, on behalf of Moore Ranches, seeks approval of a PAD Zoning Amendment to modify land uses and provide development standards.

Objective Analysis:

Policy Compliant:

Financial Impact:
While this item does not have an immediate or direct financial impact, ongoing development activity in the City will inevitably have a future financial impact as additional resources are needed to provide city services.

Budget Impact:

FTE Impact:

ATTACHMENTS:
1. SR - FS19-787 - Sycamore Farms PADA - Staff Report - 041620
2. 01 - FS19-787 - Sycamore Farms PADA - Case Map - 041620

3. 02 - FS19-787 - Sycamore Farms PADA - Vicinity - 041620
4. 03 - FS19-787 - Sycamore Farms PADA - Project Narrative - 041620
5. 04 - FS19-787 - Sycamore Farms PADA - Luke Letter - 041620
6. 05 - FS19-787 - Sycamore Farms PADA - School Letter - 041620
7. 06 - FS19-787 - Sycamore Farms PADA - Public Engagement - 041620
8. 07 - FS19-787 - Sycamore Farms PADA - Citizen Participation - 041620
9. PP - FS19-787 - Sycamore Farms PADA - PowerPoint - 041620

SURPRISE
ARIZONA

PAD ZONE CHANGE

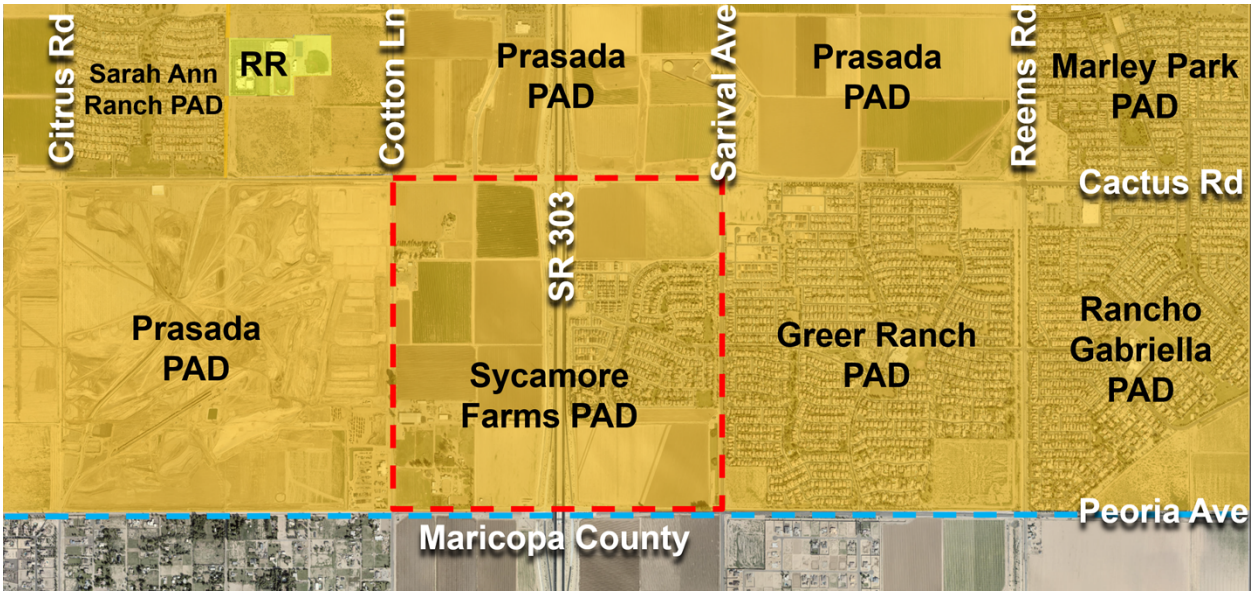
REPORT TO THE PLANNING AND ZONING COMMISSION

Case:	**FS19-787**
Project Name:	Sycamore Farms
Council District:	3
Meeting Date:	**April 16, 2020**
Planner:	Hobart Wingard

Owner:	Moore Ranch, Inc.
Applicant:	Alex Stedman of RVI Planning and Landscape Architecture on behalf of Moore Ranch, Inc.
Request:	Planned Area Development (PAD) Zone Change to modify land uses and development standards
Site Location:	Bounded by Cactus Road to the north, Sarival Avenue to the east, Peoria Avenue to the south, and Cotton Lane to the west.
Dwelling Units:	2,160 total units (635 existing units)
Site Size:	285.2 acres of 637.4-acre Sycamore Farms PAD (approx.)
Density:	5.35 DU/Ac for the modified portion and 3.39 DU/Ac overall
General Plan Conformance:	The proposal is consistent with the Surprise General Plan 2035
Support/Opposition:	Refer to the attached Citizen Review Participation Report
Staff Recommendation:	Staff recommends the Commission move to recommend **approval** of case **FS19-787** to the City Council, subject to stipulations 'a' and 'b'

Project Description: Alex Stedman of RVI Planning and Landscape Architecture, on behalf of Moore Ranch, Inc., requests a modification of the Sycamore Farms PAD to redistribute parcel types and introduce Medium to High Density Residential (MHDR) category for "detached apartments" similar to the Christopher Todd type development. The proposed Zone Change is in conjunction with a related Preliminary Plat, which is currently under review under separate cover. Both requests anticipate the eventual development of the property into a 2,160 lot, multi-phase, subdivision, although only the merits of the Zone Change are discussed in this report.

Surrounding Land Zoning:



CR	Prasada PAD	Prasada PAD
Prasada PAD	**Sycamore Farms PAD**	Greer Ranch PAD
RU-43 (Maricopa County)	RU-43 (Maricopa County) PAD (Glendale)	C-1 (Maricopa County)

Background:

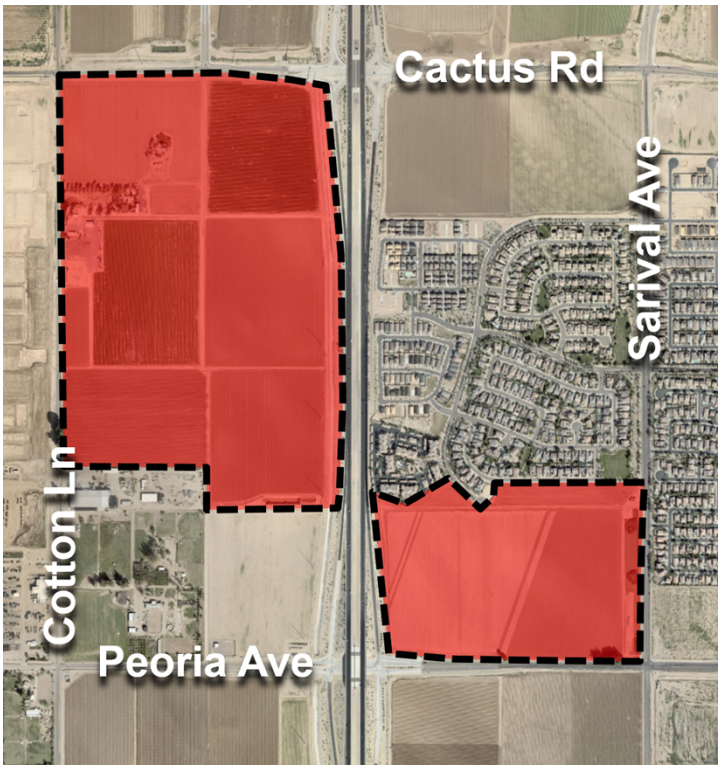
September 12, 2019: Staff met with the applicant to discuss the project during a regularly scheduled Concept Review meeting under CR19-614.

November 6, 2019: The applicant filed a request for a PAD Zone Change and Preliminary Plat to modify land uses and development standards for approximately 285.2 acres under case FS19-787, the subject case.

March 4, 2020: The applicant held a neighborhood outreach meeting to discuss the project.

Citizen Outreach: As noted above, the applicant held a Citizen Review meeting on March 4, 2020, which was well attended. Those in attendance were generally in favor of the project. This item was also advertised per state and local law. Refer to attached Citizen Participation Report.

Analysis and Discussion: The proposed PAD zone change will modify 285.2 acres of 637.4-acre Sycamore Farms PAD. The areas affected are outlined below:



The purpose of PAD zone change is to modify land uses and to introduce a Medium to High Density Residential (MHDR) category for "detached apartments" similar to the Christopher Todd type development. The changes proposed are provided in a matrix below:

Parcel Category	Existing PAD	Proposed PADA	Difference
Low Density Residential	108.4 acres 545 units	97.3 acres 487 units	Loss of 11.1 ac and 58 units
Medium Density Residential	124.2 acres 745 units	112.6 acres 674 units	Loss of 11.6 ac And 71 units
Medium High Density Residential	0 acres 0 units	18.2 acres 364 units	Gain of 18.2 ac and 364 units
Commercial	53.0 acres	57.1 acres	Gain of 4.1 ac
Total	285.6 acres	285.2 acres	Gain of 235 units

The modifications will provide a density of 5.35 DU/Ac for the modified portion and 3.39 DU/Ac overall.

Development Standards Table: The development standards have been modified to accommodate the proposed development. A Medium to High Density Residential (MHDR) categories has been added to accommodate detached apartments similar to the Christopher Todd multi-family product.

Sycamore Farms Development Standards - Residential Uses				
Parcel	**2, 3, 17, 18**	**4, 7, 8, 9, 12, 14**	**10**	**13**
Description	**LDR Single Family**	**MDR Single Family**	**MHDR Multi-Family**	**HDR Multi-Family**
Min Area	5 Acres	5 Acres	5 Acres	5 Acres
Max Density	5 du/ac	6 du/ac	20 du/ac	43 du/ac
Min Lot Width	58'	30'	N/A	N/A
Min Lot Depth	110'	80'	N/A	N/A
Min Lot Area/Unit	6,000 sq/ft	2,600 sq/ft	N/A	N/A
Front	12' /20' (8)	12' /20' (8)	N/A	N/A
Side	5' and 8'	0' attached, 5' and 5' detached	N/A	N/A
Street Side	13' single story, 15' multi-story (2)	10' (2)	N/A	N/A
Rear	15' Living, 5' for garage or unenclosed patio (1)	10' Living, 5' for garage or unenclosed patio (1)	N/A	N/A
Perimeter Setback	N/A	N/A	20 Feet	20 Feet
Rear or Side Adjacent to Residential	N/A	N/A	N/A	N/A
Rear Adjacent to Arterial Street	20 Feet	20 Feet	20 Feet	20 Feet
Outdoor Living Area/Unit	N/A	Per Site Plan	Per Site Plan	Per Site Plan
Distance Between Adjacent Building or Home	10 Feet	0' Attached, 10' Detached	8' for single story buildings; 20' for 2+ story buildings	20 Feet
Lot Coverage	N/A	N/A	N/A	N/A
Minimum Open Space	20% (7)	20% (7)	20% (7)	20% (7)
Max Building Height	30'	36'	4 Stories	4 Stories

Sycamore Farms Development Standards - Non-Residential Uses			
Parcel	**1, 11, 15, 16**	**5**	**6**
Description	**Commercial**	**Mixed Use**	**Institutional**
Min Area	1 Acre	1 Acre	1 Acre
Max Density	N/A	16 Du/Ac	N/A (3)
Max House Width	N/A	N/A	N/A
Min Lot Width	100'	100'	100'
Min Lot Depth	N/A	N/A	N/A
Min Lot Area/Unit		2,000 Sq.Ft.	N/A (3)
Front (4)	35'	35' Non-Residential (5)	35'
Side (4)	15; Interior; 25' Corner	15' Interior; 25' Corner	15' Interior; 25' Corner
Street Side (4)	25'	25' (5)	25'
Rear (4)	15'	15'	15'
Rear or Side Adjacent to Residential(4)	45'	45'	45'
Rear Adjacent to Arterial Street (4)	20'	20'	20'
Outdoor Living Area/Unit	N/A	N/A (5)	N/A
Distance Between Adjacent Building or Home	N/A	N/A (5)	N/A
Lot Coverage	0.30 FAR	0.50 FAR (5)	1.0 FAR
Minimum Open Space	10% (7)	15% (7)	15% (7)
Max Building Height	40'	4 Stories	4 Stories

(1) Fireplaces, bay windows, or entertainment pop-outs may encroach 3 feet into the front and rear setback.
(2) Setback includes adjacent common area landscape tract, but in no case shall be less than 5 feet from property line.
(3) Dormitories permitted as part of College, University, or Trade School at HDR max density.
(4) Refer to High Density Residential setbacks when developed with residental uses.
(5) Front setbacks may be 10 feet to property line if units have rear loaded garages and rear entry drives.
(6) In no case shall the face of the garage be less than 20 feet from back of sidewalk.
(7) Open space shall be calculated as a percentage of the net developable area for each parcel.

Utility and Services Table:

Water:	EPCOR Water
Wastewater:	City of Surprise
School District:	Dysart Unified

Conformance with Adopted Plans:

Surprise General Plan 2035: The Surprise General Plan 2035 shows the subject property as lying within the Neighborhood Character Area, which supports residential development of up to 8 DU/Ac or more.

Reviewing Agencies: In addition to the standard city reviewing agencies, the City of Glendale and Maricopa County, Arizona Department of Transportation, Maricopa Water District, and Luke AFB were included in the routing of this request. None of the reviewing agencies indicated any concerns over the request.

Summary: The applicant seeks a Zone Change over the subject property for the purpose of modifying an existing Master Planned Community. The zoning of the property is, and will remain, PAD, with the land uses associated with each development parcel similar to the City's "hard" zoning districts. The development standards are included with this Zone Change and will run with the land unless subsequently amended. The project will have a minimum of 20 percent open space and the overall density will be 3.39 DU/Ac.

Findings:

- The proposed PAD Zone Change is consistent with the Surprise General Plan 2035
- The proposed PAD Zone Change will advance the goals and policies of the General Plan.
- The proposed development standards will run with the land and allow the property to be reasonably developed.

Recommendation:

Based on the findings noted above, staff recommends the Commission move to recommend **approval** of case **FS19-787** to the City Council, subject to stipulations 'a' and 'b' as outlined below:

a. Development and use of the site shall be in substantial conformance with the project narrative entitled "Sycamore Farms Third Amendment", prepared by RVI Planning and Landscape Architecture, consisting of 64 pages dated revised February 2020 and stamped received February 12, 2020, except as modified by the following stipulations.

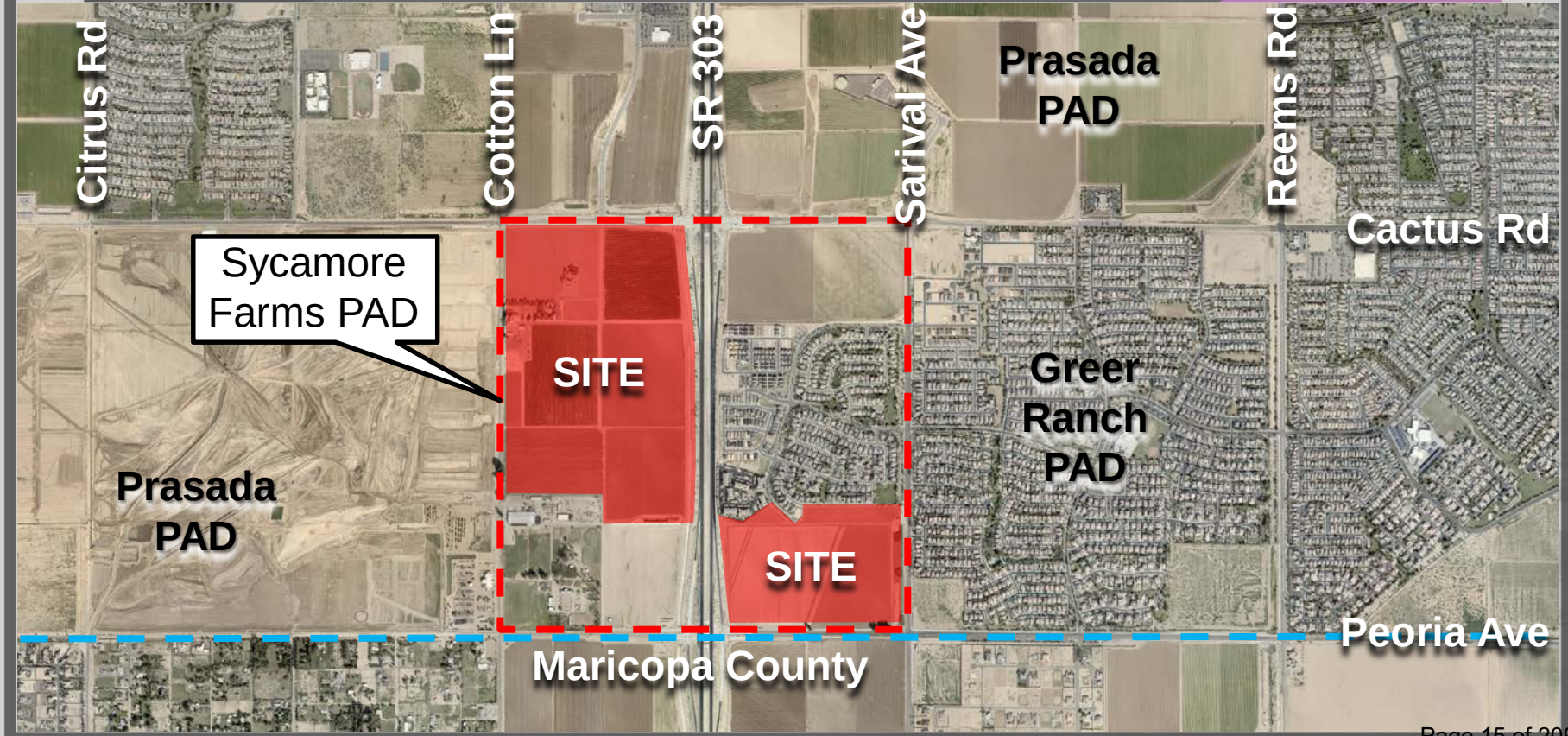
b. Non-compliance with the stipulations of approval of this case will be treated as a violation in accordance with the provisions of Article XIV of the Surprise Unified Development Code.

However, should the Commission wish to recommend denial of the request, the Commission should make its own findings and base its decision on those alternative findings.

Attachments:

01 Case Map
02 Vicinity Map
03 Project Narrative
04 Luke AFB comments
05 School District Comments
06 Public Engagement Plan
07 Citizen Participation Report

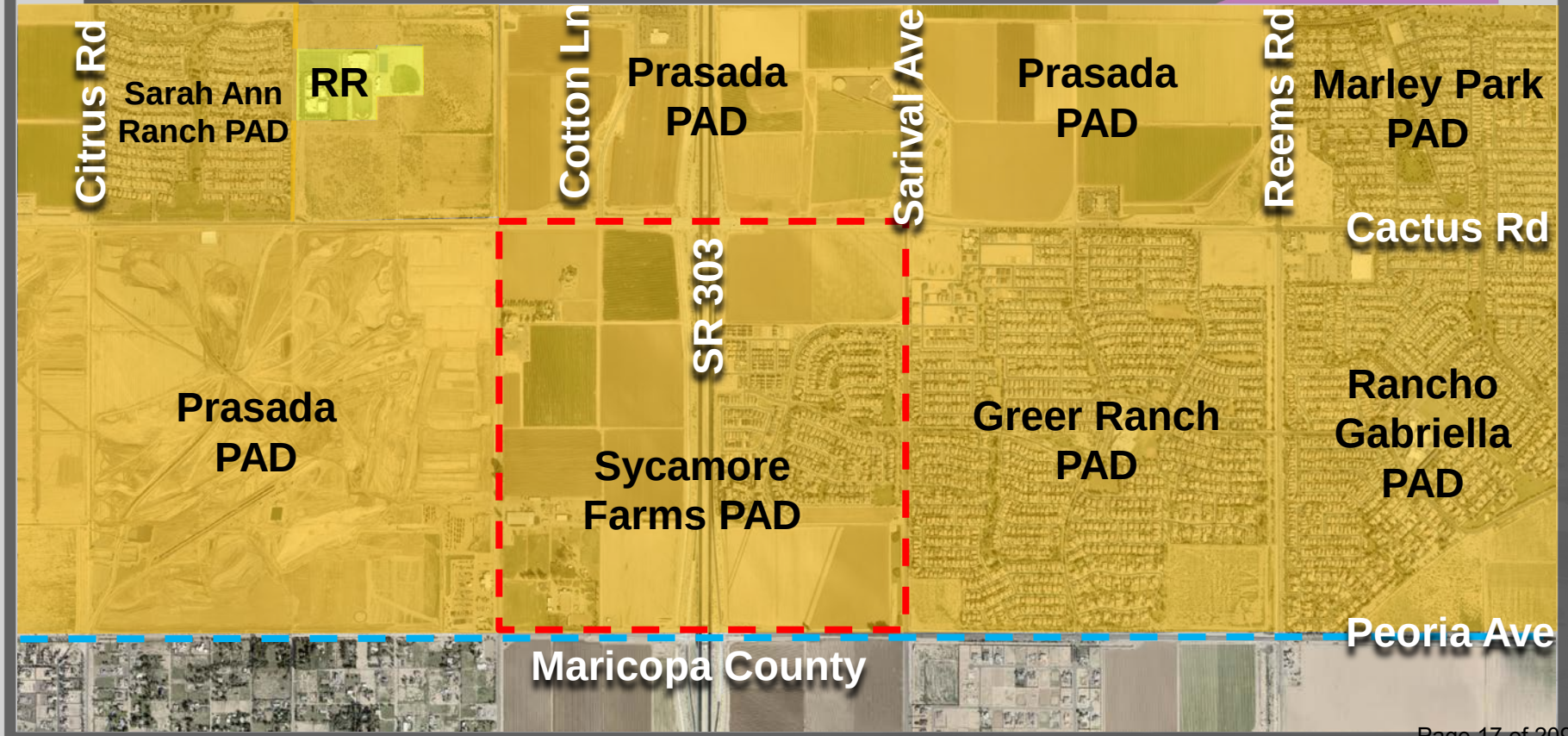
CASE MAP


Citrus Rd
Cotton Ln
SR 303
Sarival Ave
Prasada PAD
Reems Rd
Cactus Rd
Sycamore Farms PAD
SITE
Greer Ranch PAD
Prasada PAD
SITE
Peoria Ave
Maricopa County

VICINITY MAP



ZONING MAP


Citrus Rd
Sarah Ann Ranch PAD
RR
Cotton Ln
Prasada PAD
Sarival Ave
Prasada PAD
Reems Rd
Marley Park PAD
Cactus Rd
SR 303
Prasada PAD
Sycamore Farms PAD
Greer Ranch PAD
Rancho Gabriella PAD
Peoria Ave
Maricopa County

PLANNED AREA DEVELOPMENT

SYCAMORE FARMS

3RD AMENDMENT



1st Submittal: November, 2019
2nd Submittal: January, 2020
3rd Submittal: February, 2020
Case Number: FS19-787

A 637.6-acre community located within Surprise, AZ and bounded by Cactus Road, Sarival Avenue, Peoria Avenue and Cotton Lane.

DEVELOPMENT TEAM

DEVELOPER / APPLICANT

Taylor Morrison/Arizona, Inc.
Contact: Angela Carmitchel
4900 N. Scottsdale Road, Suite 2200
Scottsdale, Arizona 85251
acarmitchel@taylormorrison.com

ENGINEER

Kimley Horn & Associates
Contact: Jason Burm, P.E.
1001 W. Southern Avenue, Suite 131
Mesa, Arizona 85210
(480) 207-2667
Jason.Burm@kimley-horn.com

PLANNER / LANDSCAPE ARCHITECT

RVi Planning + Landscape Architecture
Contact: Alex Stedman
120 S. Ash Avenue, Tempe AZ, 95006
(480) 994-0994
astedman@rviplanning.com

TRAFFIC ENGINEER

Kimley Horn & Associates
Contact: Chuck Wright, P.E.
7740 North 16th Street, Suite 300
Phoenix, AZ 85020
(602) 906-1333
Chuck.wright@kimley-horn.com

TABLE OF CONTENTS

INTRODUCTION 1

GENERAL PLAN 1

PAD DEVELOPMENT PLAN 3

LUKE AFB GRADUATED DENSITY POLICY 3

CIRCULATION 4

- Vehicular Circulation 4
  - Loop 303 Freeway 4
  - Arterial Streets 4
  - Collector Streets 5
  - Local Streets 5
  - Lighting 6
- Pedestrian Circulation 6
  - Community Trail 6
  - Neighborhood Trail 6
  - Trail Crossings & Connectivity 6

EMPLOYMENT RELATED USES 7

- Commercial 7
  - Uses in Commercial Parcel 8
- Mixed-Use 9
  - Uses in Mixed Use Parcels 10
- Institutional 11
  - Uses in Institutional Parcels 11

RESIDENTIAL LAND USES 12

- High Density Residential 12
- Medium High Density Residential 13
- Medium Density Residential 14
- Low Density Residential 15
- Single-Family Design Guidelines 15

PARKS AND OPEN SPACES 16

ECONOMIC IMPACTS 17
DEVELOPMENT STANDARDS 17
LANDSCAPE & DESIGN THEME 20
Landscape Theme 20
Theme Walls and Entry Features 20
ARCHITECTURE 21
FLOOD CONTROL & DRAINAGE 21
PUBLIC UTILITIES AND SERVICES 23
Sewer 23
Water 23
Streets 23
Open Space / School 24
Utility Providers 24
PHASING 24
LANDSCAPE CONCEPT STATEMENT & PLANT PALETTE 25

LIST OF TABLES

Table 1: Residential Development Standards 18
Table 2: Non-residential Development Standards 19
Table 3: Conceptual Plan Data & Land Use Summary 31
Table 4: Zoning Use Matrix 54

LIST OF EXHIBITS

Exhibit A: Vicinity Map.....26
Exhibit B: Surrounding Property & Adjacent Ownership.....27
Exhibit C: Luke A.F.B. Graduated Density Analysis.....28
Exhibit D: General Plan Land Use.....29
Exhibit E: Conceptual Land Use Plan.....30
Exhibit F: Illustrative Plan.....32
Exhibit G: Typical Pedestrian Connection Between Residential Parcel & Linear Open Space.....33
Exhibit H: Typical Non-Residential Parcel Connection to Linear Open Space..34
Exhibit I: Conceptual Commercial Project.....35
Exhibit J: Conceptual Mixed-Use Project.....36
Exhibit K: Conceptual Institutional Projects.....37
Exhibit L: Typical High Density Residential Project.....38
Exhibit M: Typical Medium-High Density Residential Project.....39
Exhibit N: Conceptual Medium Density Residential Project.....40
Exhibit O: Linear Open Space Corridor.....41
Exhibit P: Conceptual Trails Plan.....42
Exhibit Q: Conceptual Trail Sections.....43
Exhibit R: Conceptual Entry Features & Monumentation Plan.....44
Exhibit S: Primary Entry Feature Elevation.....45
Exhibit T: Secondary Entry Feature Elevation & & Freestanding Directional Sign.....46
Exhibit U: Entry Features Elevations.....47
Exhibit V: Wall Design Elevations.....48
Exhibit W: View Wall Elevations.....49
Exhibit X: Accent Wall Elevations.....50
Exhibit Y: Proposed On-Site Drainage Patterns.....51
Exhibit Z: Conceptual Wastewater System.....52
Exhibit AA: Conceptual Water System.....53
Exhibit BB: Legal Description.....58

INTRODUCTION

Sycamore Farms is a 637.4-acre mixed-use Planned Area Development (PAD) master plan located on both sides of the planned Loop 303 Freeway between Cactus Road and Peoria Avenue in the City of Surprise. The Sycamore Farms PAD intends to implement the City's vision of a "Gateway" mixed-use employment-oriented development at the southern gateway into the City. The PAD proposes: detached single-family residential, attached single-family residential, multi-family residential, commercial (neighborhood level retail and community level retail) mixed-use (office, institutional, retail, and/or residential) institutional, community linear park, pedestrian trail system, and the Loop 303 freeway that bisects the site including two freeway interchanges.

The property encompasses an entire square mile located within the boundaries of Cactus Road to the north, Sarival Avenue to the east, Peoria Avenue to the south, and Cotton Lane to the west (see Vicinity Map, Exhibit A). All the existing adjacent arterials are improved with two lanes of paving. The site is currently partially developed with existing single-family attached and detached residential and relatively flat agricultural uses with a sight slope from the northwest to the southeast.

Adjacent properties in the area are either in general agricultural use or in various phases of construction. Adjacent properties to the east and southeast are built, planned and/or zoned with a mixture of residential and commercial land uses including: Greer Ranch to the east, which is a built-out one-square-mile residential master planned community; Toll Brothers at Prasada to the west and northwest, which is a platted 700 plus-acre residential master planned community. Properties to the north are currently in design for residential master-planned communities including the large, master planned Prasada subdivision (see Surrounding Property & Adjacent Ownership, Exhibit B). The 1988 and 1995 Luke AFB AICUZ 65-Ldn contours are located approximately 1½ miles southeast of Sycamore Farms near the intersection of Reems Road and Peoria Avenue (see Luke AFB Graduated Density Analysis, Exhibit C).

GENERAL PLAN

The City of Surprise General Plan 2035 identifies the entire Sycamore Farms site to be developed as Neighborhood with a Transit Orientated District Overlay (see General Plan Land Use, Exhibit D). Neighborhood is defined as various neighborhoods that are predominantly residential areas that can also be supported by locally oriented commercial and public facilities and can range from established to emerging and urban to rural in nature. The General Plan notes that the City encourages diversity and innovation through master planning and emphasizes the establishment of projects that create a "sense of place". The Sycamore Farms PAD is consistent with the Neighborhood use designation and the general principles of the Surprise General Plan 2035. Sycamore Farms PAD complies with the intent of the Transit Oriented Development area by incorporating safe and convenient walking and biking connections to current and future planned transit operations.

The General Plan incorporates a series of goals, objectives and policies to ensure development meets the vision of the community. Sycamore Farms through its mixed-use master plan successfully incorporates the following Land Use Element objectives and policies:

Objective: Promote a compatible mix of land uses throughout the planning area.
Policy: Minimize the amount of job leakage…by ensuring that adequate employment areas are maintained.
Policy: Encourage the location of residential neighborhoods to activity centers to minimize travel times.
Policy: Locate higher density/intensity…uses near major roadway corridors to promote an efficient transportation system.
Policy: Encourage the development of unique, compatible mixed-use developments in the designated "Gateway" areas.
Objective: Practice comprehensive development master that…incorporates a mix of compatible land uses.
Policy: Strive to master-plan large parcels…review the treatment…and impact on adjacent land uses.
Objective: Support the construction of viable commercial centers.
Policy: Encourage…regionally oriented retail and service uses of other high intensity employment uses along major roadways…
Policy: Discourage strip commercial developments and encourage clustering of commercial developments…
Policy: Require…developers to…locate commercial sites in close proximity to population centers…
Objective: Protect the public health, safety, and welfare in areas around Luke Air Force Base.
Policy: The City of Surprise recognizes the 1995 noise contours around Luke Air Force Base as shown on the General Plan Land Use Exhibit D.

The Economic Development Element sets a community goal to increase the jobs-to-population ratio, keep dollars in the community, and bring dollars from outside the community. Sycamore Farms plans a mixture of retail commercial, office and institutional uses that accommodate up to as much as 213 acres of land uses that can generate new jobs and tax base for the City of Surprise. Sycamore Farms is in compliance with the following Economic Development objective and policies:

Objective: Raise and maintain the employment-to-population ratio…
Policy: Ensure that adequate land is reserved for business development…
Objective: Provide employment and shopping opportunities in proximity to residential areas.
Policy: Maintain employment and commercial related land uses as prescribed in each Special Planning Area.
Objective: Ensure a stable municipal revenue stream to provide community services and development new amenities.
Policy: Reserve sites for commercial development to accommodate residents and minimize leakage to other communities.

The Sycamore Farms PAD Conceptual Land Use Plan is in general conformance with the City of Surprise General Plan Land Use map that indicates the subject property as “Neighborhood” Character Area with a Transit Oriented Development District overlay. The City’s Parks & Recreation Master Plan (2035) indicates a ‘new community park’ site proximate to the Sycamore Farms property. Subsequent to this park site designation, an amendment to the Sycamore Farms PAD was processed in 2019 (FS18-554) that relocated the public park to an area inside the Prasada PAD. The approved 2019 PAD amendment modified the Proposed Land Use Map to reflect the removal of the public park site.

PAD DEVELOPMENT PLAN

The Sycamore Farms site represents a portion of the recently re-approved, amended Sycamore Farms PAD (FS18-554). The proposal is for approximately 2,161 residential units at a gross density of 2.5 du/ac as depicted on the attached Sycamore Farms Conceptual Land Use Plan (Exhibit E) and includes areas on the west and east sides of the Loop 303 Freeway. The Sycamore Farms PAD incorporates a complete mixture of land uses in accordance with the intent of the "Neighborhood" designation in the General Plan. The following paragraphs describe the proposed PAD in terms of the circulation system, non-residential uses, residential uses, and open spaces that comprise Sycamore Farms. The land use arrangements are shown parcel by parcel within the bubble land use plan (see Conceptual Land Use Plan, Exhibit E). The development parcels are conceptually illustrated to depict the intended land uses and to demonstrate and how each could be interconnected (Illustrative Plan, Exhibit F). This Illustrative Plan is intended to show the potential land use combinations that could occur within Sycamore Farms. The implementation of the planned land uses, layouts of buildings and other design features will vary when site plans and plats are approved for each parcel. The illustrative plan shows how the planned land uses can be linked with pedestrian trails and the street system. The illustrative plan establishes a level of quality from which future site plans on parcels shall be measured.

LUKE AFB GRADUATED DENSITY POLICY

The Luke Air Force Base (AFB) Graduated Density Policy is a document that was created to ensure housing options, community safety and target densities for areas directly surrounding the Luke AFB. An analysis of the Sycamore Farms property in context to the approved noise contour map for the AFB was conducted and it was determined that the Sycamore Farms property is generally located within a zone that allows for a maximum of 6 dwelling units per acre. A small portion of the property located in the southeast corner is limited to maximum of 4 du/ac, but generally extends across a parcel designated for commercial use (Parcel 16).

In accordance with the Luke Air Force Base Graduated Density Policy, which calls for a majority of the PAD area to be capped at a maximum overall residential density of 6 dwelling units per acre, portions of the property may exceed the overall maximum density. Accordingly, the mixed-use parcel shall be limited to a maximum density of 16 du/ac, the HDR parcel shall be limited to 43 du/ac and the Medium High-Density Residential parcel shall allow for a maximum density of 20 du/ac.

CIRCULATION

Vehicular Circulation

The Sycamore Farms PAD provides a framework for Arterial and Collector street alignments that ensure for the efficient and safe distribution of traffic relative to the regional roadway and freeway network. The roadway hierarchy within and proximate to the property is described as follows.

Loop 303 Freeway

The recently constructed Loop 303 freeway corridor extends through the center of the subject property within a typical 300-foot right-of-way with flaring for the Cactus and Peoria Avenue interchanges. The freeway is constructed at or above grade with the most elevated portions located at the two interchanges. Existing sound wall segments have been constructed adjacent to existing residential uses (Parcels 12 & 13) on the eastern side of the corridor. Additional segments are planned to buffer planned residential development along the freeway.

Arterial Streets

The Sycamore Farms PAD area is bounded by arterial roadways on each of its four edges. Arterial roadways accommodate larger volumes of local and regional traffic at higher design speeds, and therefore seek to limit the number of access points.

- **Cactus Road** – a major arterial roadway that traverses the northern edge of the Sycamore Farms PAD area. The ultimate configuration will include a 68-foot half street right of way with three eastbound traffic lanes on the southern half. Deceleration lanes will be required at arterial intersections, collector intersections and commercial driveways.
- **Cotton Lane** – a major arterial roadways that traverses the western edge of the PAD area. The ultimate configuration will include a 68-foot half street right-of-way with three northbound traffic lanes on the eastern half. Deceleration lanes will be required at arterial intersections, collector intersections and commercial driveways.
- **Sarival Avenue** – a minor arterial roadway that extends along the eastern edge of the property. The ultimate configuration will include a 55-foot half street right-of-way dedication with two southbound traffic lanes on the western half. Sycamore Farms will be responsible for the construction of a raised landscaped median along the project frontage. Deceleration lanes will be required at arterial intersections, collector intersections and commercial driveways.
- **Peoria Avenue** – a major arterial roadway that extends along the southern edge of the PAD area. The ultimate configuration will include a 55 foot half street right-of-way dedication with three westbound traffic lanes on the northern half. 16' median improvements are proposed. Deceleration lanes will be required at arterial intersections, collector intersections and commercial driveways.

Unless otherwise approved by the City, all streets within the property, including the adjacent arterials, shall be designed and constructed in accordance with the City's adopted street cross sections in place at the time of Site Plan review. Due to the unique characteristics of the some

of the planned land uses, special street cross sections may be needed to accommodate individual project designs including private streets or special public streets as approved by the City.

Collector Streets

The Sycamore Farms collector street network is designed to facilitate the movement of vehicles from the local street level to arterial roadways. The implementation of a collector network reduces the need for multiple street intersections along arterial roadways and establishes safer intersections and ideal spacing for signalization progression. The curvilinear character of collector streets is designed to slow traffic speeds and create different view angles of buildings that front or back to these streets.

Collector/Arterial intersections as depicted on the Illustrative Land Use Plan shall be reviewed and confirmed by the City Traffic Engineer at the time of site plan or final plat approval. All residential parcels within the Sycamore Farms PAD have access to at least one of the collector street segments depicted on the Illustrative Land Use Plan.

- **Collector 1** alignment is depicted in the west half of the site and extends from Cactus Road to Cotton Lane. Seven of the residential parcels will utilize this alignment to access perimeter arterial roadways. Collector 1 shall be designed to include an 80-foot right-of-way dedication with two traffic lanes separated by a 14-foot landscape median and left turn pockets. The roadways will provide 6-foot detached sidewalks on both sides of the street. A minimum 20-foot landscape tract is provided beyond the right-of-way along the entire alignment.
- **Collector 2** alignment is depicted in the southwestern portion of the property and provides on-site circulation for the mixed use and institutional parcels, with no access by or to the residential parcels.
- **Collector 3** (Poinsettia/165th Dr) extends from Sarival Avenue (1/4-mile south of Cactus Road) to Peoria Avenue (1/4-mile west of Sarival Road). This segment may provide direct access to all parcels within the eastern half of Sycamore Farms, although commercial traffic from Parcel 11 may be limited or restricted for accessing. Collector 3 is currently constructed within a 70-foot right-of-way with 2 traffic lanes separated by a landscaped 14-foot median. 6-foot sidewalks are detached.
- **Collector 4** (Cholla Street) is a short existing segment that extends from Sarival Avenue (1/2-mile south of Cactus) and intersects with Collector 3. This segment is currently constructed within a 70-foot right-of-way with 2 traffic lanes separated by a landscaped 14-foot median. 6-foot sidewalks are detached.

Local Streets

Local streets within the Sycamore Farms may include the option for public and private street improvements. All streets will comply with the City of Surprise typical improvements and will include detached sidewalks. Street trees will be planted within the parkway strip to confirm with City of Surprise typical spacing requirements.

Lighting

The lighting standard for the PAD shall be subject to further review and approval by the Community Development Director or designee, and the developers of all parcels shall comply with any adopted lighting standards that exist prior to the first final plat approval.

Pedestrian Circulation

Non-vehicular circulation is a crucial component in creating strong communities. Pathways and sidewalks create opportunities for recreation and connections to uses, whereby reducing the need for reliance on vehicular trips. Sycamore Farms is founded on a premise of connectivity, providing for a hierarchy of trail types and complementary open spaces that promote a connected community.

Community Trail

The basis for the trail network on the west half of the property is focused around the linear open space corridor adjacent to the Loop 303 freeway. An existing high-voltage powerline easement that runs parallel to the freeway requires a corridor of approximately 100 feet in width that extends from Cactus Road to Peoria Avenue, a total length of a mile. The planned Community Trail segment to be constructed within this corridor will be a minimum of 8 feet in width, allowing for pedestrian and bicycle circulation between residential uses and institutional & mixed-use areas. Branching out from the Community Trail will be community trail connections that will extend west into the residential parcels, connecting to the planned community amenity center, neighborhood parks and non-residential use parcels. At the approximate mid-point of the linear open space (Cholla Street alignment), area will be available for an optional pedestrian bridge connection that may extend over the Loop 303 freeway to connect the east and west halves of Sycamore Farms in the future. This bridge improvement is not a requirement of the Sycamore Farms developer and would likely be funded with City funds or other public sources.

Neighborhood Trail

Development of parcels along the pedestrian trail system shall provide site plans and building orientations to take full advantage of the trail system. A 6-foot wide pedestrian trail connection will link from the adjacent residential subdivision to the linear open space corridor trail including a decorative pedestrian crosswalk on the local street. The requirement is to provide maximum visibility and accessibility to the park and to place semi-public spaces (front or side yards) next to public spaces (park). No walls or fences, except to enclose yards for individual homes, are permitted between the subdivision and the open space amenity in which case view walls shall be used.

Trail Crossings & Connectivity

Pedestrian trail crossings will be provided where trail segments cross collector roadways within the project area. The pedestrian trail crossings shall be clearly identified with standard crosswalk striping in locations identified as being subject to pedestrian connectivity. Four pedestrian crossing locations have been identified on the Conceptual Trails Plan in the northwest portion of the Sycamore Farms Property. Additional locations may be identified

concurrent with preliminary site plan submittals for the non-residential parcels (parcels 5, 6, 11, 15 and 16). Any trail crossing location changes are subject to City administrative approval.

High and medium-high density residential uses or non-residential uses adjacent to the open spaces along the 303 Freeway are encouraged to provide site plans that orient buildings, and not parking spaces, next to the open spaces. These site plans shall provide one or more Neighborhood Trail connections to the Community Trail system located within the open space corridor (see Typical Pedestrian Connection Between Residential Parcel & Linear Open Space, Exhibit G). Non-residential projects shall provide opportunities for courtyards and/or plazas adjacent to the park or open spaces as part of the pedestrian link to the primary trail system in the park or open spaces (see Typical Non-Residential Parcel Connection to Linear Open Space, Exhibit H). These courtyards and plazas may be fenced with view fences as needed for security purposes only, however solid walls are not permitted. Visual access is required between the plazas, courtyards and the adjacent open spaces.

Future transit stops are planned at the arterial/arterial intersections and at the collector/arterial intersections. Transit stop intervals will preclude a rider from having to walk more than a quarter mile to public transit stop. Park and Ride facilities may be incorporated into the site design of various institutional or commercial land uses depending on final site plan approvals and written agreements with the end users.

EMPLOYMENT RELATED USES

The focal point of Sycamore Farms as a "Gateway" project is the concentration of employment land uses that create jobs and generate revenue for the City. Approximately 213-acres or over 33% percent of the developable site area, excluding the 303 Freeway, is planned for commercial, mixed-use or institutional land uses. Employment generating land uses create a significant employment core at the southern gateway of the City. All the employment related land uses share superior regional access off the two 303 Freeway interchanges in addition to local access off the four-arterial/arterial intersections along Peoria Avenue and Cactus Road. These employment land uses combined with adjacent residential uses form the "sense of place" where residents work, live and play within the southern Gateway to the City.

Commercial

The four (4) commercial sites are planned at the arterial-arterial intersections for maximum accessibility and visibility from surrounding residential neighborhoods, arterial streets and the Loop 303 freeway. The commercial sites account for 127.3-acres of land. Each of the commercial parcels has direct access to two arterial streets and an internal collector street. Pedestrian trail connections shall be provided to each commercial parcel as part of the Sycamore Farms pedestrian trail system (see Conceptual Commercial Project, Exhibit I). This concept plan is for illustrative purposes only and does not reflect a particular project or design for a specific user but does reflect intended quality.

The commercial parcels shall be integrated with adjacent land uses using landscape retention areas and pedestrian trail connections as open space transitions. Screen walls shall be used when needed for aesthetic or security purposes only. Land uses shall be integrated by building

orientation, architecture, shared parking, pedestrian walkways and compatible landscape themes.

Uses in Commercial Parcel

- Permitted as listed in the C-2 Zoning District per the Zoning Use Matrix in Table 4
- Conditionally permitted uses as listed in the C-2 Zoning District per the Zoning Matrix in Table 4 with a Conditional Use Permit
- Home Improvement Center (indoors) permitted with a Conditional Use Permit
- Retailer over 50,000 square feet with an ancillary garden center.
- New vehicle dealership and ancillary uses permitted with a Conditional Use Permit

Commercial parcel uses shall be developed in accordance with the Non-residential Development Standards Table listed in Table 2 of this PAD narrative and all applicable City development regulations in effect at the time development is occurring.

Mixed-Use

The mixed-use parcel creates the opportunity for different land uses to interface through the use of site planning, building architecture, building· orientation, shared open space, shared driveway entries, and pedestrian linkages. The mixed-use parcel accommodates 70-acres of land within the PAD. The Mixed-Use parcel shall provide a combination of three or more of the following land uses: high-density residential, retail commercial, institutional, or office; of which residential is a required land use as part of the land use mix. Each land use within the mixture must be a distinct land use integrated with the other land uses. If there is any question whether a land use is distinct enough to be a legitimate contributor to the mix, the final decision will be made by the City.

The mix of buildings shall include similar character by providing similar architectural styles with shared use of materials and colors. Mixed-Use parcels shall also include a common landscape palate. Buildings on a mixed-use parcel shall incorporate the use of courtyards and pedestrian connections between buildings when possible. View fencing is permitted as needed for security purposes only. All buildings shall provide four-sided architecture so there is no perceived rear of buildings. Buildings and land uses in mixed-use parcels shall integrate the design of entries off arterial streets to provide a common entry theme.

There are no limitations (except the minimum of three different land uses) on the combination of land use(s) that can occur within the mixed-use category as long as the land uses are listed as permitted uses. For example Mixed-Use parcels may be developed with: residential units in the same building above or adjacent to retail or office uses; offices in the same building over or adjacent to retail uses; retail, institutional, office and residential uses on the same floor or different floors in the same building; a campus of buildings with residential, institutional, office and retail in different buildings with a shared architectural, and landscape theme; retail, institutional, office and residential uses on adjacent properties with shared vehicular entry access; any combination of two or more land uses designated for Mixed-Use parcels in this PAD (see Conceptual Mixed-Use Project, Exhibit J). This concept plan is to illustrate how the integration of buildings and land uses on mixed-use parcels should occur. It does not reflect a specific project or design but does reflect intended quality.

Mixed-Use parcels may develop in sequential phases with one land use preceding others, or all land uses may develop in a single phase. In the case where land uses are developed in sequential phases, the following shall apply: 1) A conceptual site plan shall be provided that includes the proposed land use project, and how any remaining undeveloped acreage within the mixed-use parcel can be developed with the minimum required mixture of land uses. The conceptual site plan shall illustrate how the proposed project and the conceptual mixture of land uses can be integrated. This conceptual site plan is required until the last of the undeveloped acreage within the mixed-use parcel is part of an application for a specific project; 2) The first land use shall establish the basic architectural use of color and materials, landscape palate, and pedestrian connection for the mixed use parcel; 3) Each land use project within the mixed-use parcel is responsible for perimeter improvements adjacent to its street frontages or project boundaries; and 4) The exact location and configuration of buildings, structures and improvements shall be submitted at the site plan review stage. In the site plan review stage, the orientation of buildings, pedestrian linkages, landscape open spaces, parking fields, and interface with other existing or future conceptual uses shall be illustrated to provide an overall context within the mixed-use parcel. The context of the

planned land uses shall also show adjacent existing uses in the PAD that are not within the mixed-use parcel.

Depending on site plan submittals the Mixed-Use parcel could result in approximately: 1,120 residential units; 134,165 (4) square feet of retail or 268,330 square feet of office space (5). There is potential for the office space square footage to exceed these figures if the site plans include multi-story structures and higher Floor Area Ratios (FAR). The mixed-use parcel will be developed under the MHDR and HDR base districts for residential uses, under the C base district for the institutional, retail and office uses based on the Zoning Use Matrix (see Zoning Use Matrix, Table 4), and in accordance with the following permitted use list and the Development Standards (Tables 1 & 2) listed in this PAD Narrative, and all applicable City development regulations in effect at the time development is occurring.

Uses in Mixed Use Parcels

- Permitted uses as listed in the Land Use Matrix (see Table 4)
- Conditionally permitted uses as listed in Land Use Matrix (see Table 4)
- Auto Mall or new vehicle dealerships and ancillary support facilities.
- Conference Center.
- Motion picture, art or photo studio (indoors only).
- Radio or Television studio (not including transmitters or towers).
- Temporary construction offices, sheds or storage incidental to construction on a parcel within the Sycamore Farms Master Plan (not to exceed 24 months per project).
- Uses permitted in the Institutional permitted use list of this PAD.

(4) Assuming 25% in retail on 80 percent net acreage and a .22 FAR.
(5) Assuming 50% in office on 80 percent net acreage at a .22 FAR.

Institutional

There is one Institutional parcel located on the west side of the Loop 303 Freeway in the southern portion of Sycamore Farms. This Institutional parcel provides 15.5-acres for the development of public/quasi-public land uses as defined in this narrative. The parcel may also be an employment generator that can provide approximately 135,036 square feet of building space (6). The institutional parcel has regional accessibility from the 303 Freeway, and Peoria Avenue with local accessibility from one of the planned collector streets that services the institutional and mixed-use parcels. These is no planned vehicular connection between the institutional use parcel and residential parcels to the north. However, pedestrian trail connections will be provided to connect these uses for access and recreational purposes. A concept for the institutional use has been provided (see Conceptual Institutional Project. Exhibit K) for illustrative purposes only and does not reflect a particular project or design for a specific user but does reflect intended quality.

Institutional parcels shall include a common landscape palate. Projects shall incorporate the use of courtyards and pedestrian connections between the buildings. View fencing is permitted as needed for security purposes only. All buildings shall provide four-sided architecture so there is no perceived rear of buildings. Pedestrian linkages are required to provide connection to adjacent land uses, such as the development of walkways through connecting common open spaces or connecting decorative pedestrian cross walks in streets.

Institutional uses are also allowed in any of the Mixed-Use parcels. Due to the unknown demand for institutional uses and the changing needs of the City, or if the institutional uses locate in a different part of Sycamore Farms within one of the Mixed-Use parcels, this PAD document may need to be revisited and amended. The Institutional parcels shall be developed in accordance with the following permitted use list and the Non-residential Development Standards (Table 2) listed in this PAD narrative and all applicable City development regulations in effect at the time development is occurring.

Uses in Institutional Parcels

- Public facilities for use by Governmental agencies excluding screened outdoor storage or other similar uses that are not located within enclosed buildings.
- Quasi-public facilities for use by civic or non-profit organizations
- Public or Private College, University, post-secondary Trade School
- Hospital, Out-Patient Care, Medical Offices
- Medical research, and laboratories
- Public or private museums
- Public or Private Theatre or Concert Hall with live entertainment or other similar uses as approved by the City of Surprise.
- All uses shall be conducted indoors except for patios, balconies, plazas, recreation fields for schools, and parking and loading/unloading areas.
- Other public or quasi-public facilities as approved by the City of Surprise
- Public civic center, meeting rooms, or conference center.

(6) Assuming 80 percent net acreage at .25 FAR

RESIDENTIAL LAND USES

Approximately 362-acres or 57 percent of the developable site area is planned with a mixture of residential densities and unit types. The residential properties are generally concentrated near the center of the Sycamore Farms PAD site, away from arterial intersections. All residential parcels on the western half of the site will have access to a network of primary and secondary pedestrian trail improvements that will promote non-vehicular access to employment and commercial services. The residential component of the master plan includes four separate use categories that provide for a range of detached single-family, attached single-family, detached for-rent, condominiums and apartment multi-family housing types.

High Density Residential

The Sycamore Farms PAD contains one parcel (Parcel 13) that allows for high-density multi-family residential development. This parcel is currently developed and accounts for 9.2-acres of land area located adjacent to the freeway corridor on the east half the site. The parcel has frontage along the existing collector street (165th Drive). The location of the parcel has allowed for massing of vertical buildings. This high-density residential parcel provides a land use transition between the freeway and the lower density detached single-family parcels to the east. Residents in this complex are proximate to future commercial land uses planned along Peoria Avenue and Cactus Road and will have efficient pedestrian access via sidewalks to these uses.

High-density residential uses are intended to be more intense than other residential use categories with densities up to 43 units per acre and allowed building heights up to four stories. These HDR units are intended to include owner-occupied condominiums, renter-occupied apartment units, fractional ownership timeshares, or dormitories for a college or trade school on one of the Institutional parcels. Condominiums will be operated and maintained by a Homeowners Association. Professional property management companies will operate apartment or time share units. Schools will operate dormitories. These residential parcels shall include on- site open space, recreation amenities, and pedestrian trail connections to the linear park and the primary pedestrian trail system (see Typical High-Density Residential Project, Exhibit L). This concept plan is for illustrative purposes only and does not reflect a particular project or design for a specific user but does reflect intended quality.

These parcels shall include a common landscape palate. Buildings shall incorporate the use of open space amenities and pedestrian connections between the buildings. No physical barriers, such as solid walls or other similar barriers that block views are permitted between buildings. View fencing is permitted as needed for security purposes only. All buildings shall provide four-sided architecture so there is no perceived rear of buildings. Physical barriers between adjacent land use parcels shall be minimized as much as practical depending on the adjacent land use. Residential buildings shall not immediately back to public streets or open spaces with the primary trail system. Parking lots or covered parking spaces shall not be located along collector or arterial street frontages. The high-density parcels shall be developed under the HDR district based on the Zoning Use Matrix (see Zoning Use Matrix, Table 4), and in accordance with the Residential Development Standards (Table 1) listed in this

PAD narrative and all applicable City development regulations in effect at the time development is occurring.

Medium High Density Residential

Parcel 10 is located adjacent to the Cactus Road & Loop 303 interchange is planned for medium-high density detached or attached for-rent units. The parcel accounts for 18.2-acres of land area with a maximum density of 20 du/ac or 364 units. Primary access to the parcel will be from the western collector roadway to allow for full turning movements onto Cactus Road and Cotton Lane. A secondary access point may be provided directly from Parcel 10 to Cactus Road but may be subject to access restrictions due to the proximity to the freeway interchange.

Proposed uses on the MHDR parcel shall adhere to the Residential Development Standards (Table 1) which dictates perimeter setbacks and a maximum of four stories. The allowed distance between buildings in the MHDR use varies depending on the product type. Building separation for single story buildings is 8 feet subject to all building and fire codes. Minimum building separation for all multi-story structures is 20 feet.

This parcel shall include a common landscape palate. Buildings shall incorporate the use of open space amenities and pedestrian connections between the buildings. View fencing is permitted as needed for security purposes only. All buildings shall provide four-sided architecture so there is no perceived rear of buildings. Parking lots or covered parking spaces shall not be located along street frontages unless setback a minimum of 30 feet from edge of right-of-way. The medium-high density parcel shall be developed under the MHDR district based on the Zoning Use Matrix (see Zoning Use Matrix, Table 4), and in accordance with the Residential Development Standards (Table 1) listed in this PAD narrative and all applicable City development regulations in effect at the time development is occurring.

Medium-high density residential uses are intended to be more intense with densities up to 20 dwelling units per acre and building heights to four stories. These residential units are intended to include a single story for-rent product, owner-occupied condominiums, renter-occupied apartment units, fractional ownership timeshares, or dormitories for a college or trade school on one of the Institutional parcels. Condominiums will be operated and maintained by a Homeowners Association. Professional property management companies will operate apartment or time share units.

The MHDR parcel will be required to provide a 100' powerline easement reservation adjacent to the freeway frontage. This corridor will also serve as a linear open space and will combine with similar reservations on parcels to the south to create a 1-mile linear open space corridor with trail and landscape improvements. This trail will serve as a backbone segment that will stretch from Cactus Road to Peoria Avenue and will extend secondary connections to residential and non-residential uses project wide. This MHDR parcel shall include private on-site open space, recreation amenities, and a minimum of two secondary pedestrian trail connections to the open space amenity (see Typical Medium-High Density Residential Project, Exhibit M). This concept plan is for illustrative purposes only and does not reflect a particular project or design for a specific user but does reflect intended quality.

Medium Density Residential

The Medium Density Residential (MDR) use category is proposed on six parcels within the Sycamore Farms PAD area. The MDR parcels cumulatively account for approximately 152 acres or 24% of the overall PAD area, and a maximum unit count of 893 units. MDR uses will predominantly be single family development with flexibility for attached product types. Minimum lot size for MDR uses is 2,600 square feet, and a maximum building height of 36 feet.

The MDR parcels are generally located proximate to the Loop 303 corridor on both the east and west halves of the site. Parcel 12 on the east side of the site has been previously developed and includes a mixture of single family and detached auto-court cluster product. Access to the MDR parcels is gained exclusively from the established and proposed collector roadway network, with no proposed direct access connections to adjacent arterial roadways. MDR parcels along the west half of the site that are adjacent to the Loop 303 Freeway will include a 100-foot powerline corridor easement reservation that will also include open space and trail improvements. These improvements combine to establish a public trail corridor (8-foot pathway) that will link to adjacent residential parcels and non-residential parcels between Cactus Road and Peoria Avenue. This linear open space corridor and the MDR development will be buffered from the adjacent freeway by a planned sound wall that will extend along the property line. Similar sound attenuation measures will be implemented for Parcel 14 on the east half of the site. The medium density residential uses provide the most compatible land uses next to trails, commercial, mixed-use, high-density residential and lower density residential uses (see Conceptual Medium Density Residential Project, Exhibit N). This concept plan is for illustrative purposes only and does not reflect a particular project or design for a specific user but does reflect intended quality.

The medium density parcels are intended to be platted subdivisions with common open spaces, recreation amenities, connections to the pedestrian trail system and pedestrian linkages via common open spaces to adjacent land uses if practical depending on the adjacent land use. Variations in lot configuration and unique house products are encouraged as long as the subdivisions do not exceed a maximum density of 6 du/acre and other development standards provided in the Residential Development Standards (Table 1). All common areas shall be owned and maintained by a homeowners' association. The medium-density parcels shall be developed under the permitted use list in the MDR district with the intention to allow detached single-family homes on cluster lots, Z lots, shared driveway lots or other equivalent lot configurations that may be introduced into the future residential market.

Low Density Residential

The Low Density Residential (LDR) component of the Sycamore Farms PAD is comprised of four parcels that are intended for single family residential development accounting for approximately 182.1 acres or 29% of the overall project area. Lots developed in LDR designated parcels shall be a minimum of 58 feet in width with a maximum density of 5.0 dwelling units per acre. These parcels are located in both the east and west halves of the community and are strategically offset from the immediate freeway corridor and therefore buffered by higher density residential and non-residential uses. Access to the LDR parcels is gained primarily from the established and proposed collector roadway network, with limited direct access connections to adjacent arterial roadways. Homes will be limited to one and two story homes and 30 feet in height, and a minimum lot area of 6,000 square feet. All LDR development is subject to the Residential Development Standards (Table 1) provided in this PAD and all current development City of Surprise development regulations.

Parcel 18 has been previously developed with single family homes, with Parcels 2, 3 and 17 planned for near-term residential development. Parcel 3 will provide for a community amenity area that will include such items as a clubhouse, pool and other passive and active amenities that will be presented in conjunction with the landscape plans for each parcel. This improvement will serve as a centralized recreational facility for a majority of the residential uses on the west half of the Sycamore Farms site, and pedestrian trail connections are proposed that extend to adjacent parcels and the broader community trail network. These connections will ultimately extend to connect with commercial, mixed use and institutional parcels to promote a walkable community and reduce reliance on vehicular travel to access nearby employment, education and goods & services.

Single-Family Design Guidelines

The Single-Family Design Guidelines have been removed from this document and are no longer applicable to the single family uses as described.

PARKS AND OPEN SPACES

The major open space feature in Sycamore Farms is a centrally located linear park that runs vertically adjacent to the Loop 303 with a primary pedestrian trail system. The linear open space corridor adjacent to the Loop 303 freeway is a private open space but the trail is accessible for public use. These areas shall be maintained by the HOA. Open space amenities may be provided within residential areas and shall be privately maintained. These active amenity areas may incorporate all or some of the following: paved trails, multi-use recreation fields, swimming pool, ball courts, playgrounds, benches, amphitheater, picnic tables, Ramada, BBQ grills and parking lots.

A community-wide trail system will connect public and private open spaces, courtyards, plazas or recreational amenities within the institutional, mixed-use and residential parcels. All parcels shall have appropriate perimeter landscape tracts with connections to other open spaces and the trail system as depicted on the Conceptual Trails Plan. Exact open space uses, sizes and locations within each parcel will be determined at the site plan or subdivision plat approval. Specific locations for trail connections and trail crossings over collector streets are identified in the Conceptual Trails Plan illustrated in Exhibit P.

The linear park adjacent to Loop 303 may accommodate regional storm water retention and/or retention for land uses in the PAD. The trail system throughout the community shall be designed in a manner to ensure that connections to the trail system can be accommodated by adjacent land uses. This exhibit is intended to show how the linear park and open space may be developed with a variety of community recreational uses, and how trail connections to adjacent land uses may be provided.

Pedestrian trails in the linear open space corridor are designed to allow connection to residential and non-residential parcels throughout Sycamore Farms (see Conceptual Trails Plan, Exhibit R). This trail system allows employees, students and residents to walk, jog, skateboard or bike between planned residential, institutional, office and retail uses. An option may include a pedestrian bridge under or over the 303 Freeway in the southern half of the community or the half-mile collector street alignment. Due to the expense of this bridge or underpass, it will need to be publicly financed.

By submittal of the PAD, that applicant as landowner agrees and approves to the approximate open space delineations designated in the approved PAD plan.

ECONOMIC IMPACTS

Sycamore Farms could have substantial financial impact on the City of Surprise. The combination of retail centers, offices, and institutional uses could potentially generate hundreds of new jobs for residents. Based on the planned acreage for different employment related uses, the annual salary for employees could be in the millions per year. The salary income is spent mostly in the local economy, which translates into retail sales tax for the City. The potential retail sales tax that could be generated by the retail uses in Sycamore Farms may be in the millions per year.

The benefit of Sycamore Farms, as the southern Gateway into the City of Surprise, is the creation of a mixed-use employment-oriented core with a unique environment where people can live, work, and play. The mixture of the planned employment-oriented uses is intentionally diversified to capture all areas of the current and future employment market. Sycamore Farms is geographically larger than downtowns of most major cities with the added benefit of planned open spaces, trails and a mixture of residential unit types. The regional access and balance of residential and non-residential uses creates a formula that will engender economic success for this City of Surprise Gateway.

DEVELOPMENT STANDARDS

Each parcel in Sycamore Farms is designated with a land use and corresponds with the Zoning Use Matrix (Table 4). All land uses identified in the PAD Land Use Plan for Sycamore Farms extend to the existing ownership property lines. All agricultural land uses on each parcel within the Sycamore Farms PAD Land Use Plan are permitted to continue and expand as exempted uses until each parcel is developed with the land uses identified in the PAD Land Use Plan and this narrative.

The land uses identified in the Sycamore Farms PAD Land Use Plan shall be developed under the permitted use list identified under each land use category discussed in this PAD narrative, and any additional permitted principal uses, conditional uses, and accessory uses identified in the Zoning Use Matrix (see Zoning Use Matrix, Table 4). The land uses shall be developed under development standards identified in the Development Standards Table listed on the next page of this PAD and all applicable City development regulations in effect at the time development is occurring.

Sycamore Farms Development Standards - Residential Uses				
Parcel	**2, 3, 17, 18**	**4, 7, 8, 9, 12, 14**	**10**	**13**
Description	**LDR Single Family**	**MDR Single Family**	**MHDR Multi-Family**	**HDR Multi-Family**
Min Area	5 Acres	5 Acres	5 Acres	5 Acres
Max Density	5 du/ac	6 du/ac	20 du/ac	43 du/ac
Min Lot Width	58'	30'	N/A	N/A
Min Lot Depth	110'	80'	N/A	N/A
Min Lot Area/Unit	6,000 sq/ft	2,600 sq/ft	N/A	N/A
Front	12' /20' (8)	12' /20' (8)	N/A	N/A
Side	5' and 8'	0' attached, 5' and 5' detached	N/A	N/A
Street Side	13' single story, 15' multi-story (2)	10' (2)	N/A	N/A
Rear	15' Living, 5' for garage or unenclosed patio (1)	10' Living, 5' for garage or unenclosed patio (1)	N/A	N/A
Perimeter Setback	N/A	N/A	20 Feet	20 Feet
Rear or Side Adjacent to Residential	N/A	N/A	N/A	N/A
Rear Adjacent to Arterial Street	20 Feet	20 Feet	20 Feet	20 Feet
Outdoor Living Area/Unit	N/A	Per Site Plan	Per Site Plan	Per Site Plan
Distance Between Adjacent Building or Home	10 Feet	0' Attached, 10' Detached	8' for single story buildings; 20' for 2+ story buildings	20 Feet
Lot Coverage	N/A	N/A	N/A	N/A
Minimum Open Space	20% (7)	20% (7)	20% (7)	20% (7)
Max Building Height	30'	36'	4 Stories	4 Stories

(1) Fireplaces, bay windows, or entertainment pop-outs may encroach 3 feet into the front and rear setback.
(2) Setback includes adjacent common area landscape tract, but in no case shall be less than 5 feet from property line.
(3) Dormitories permitted as part of College, University, or Trade School at HDR max density.
(4) Refer to High Density Residential setbacks when developed with residental uses.
(5) Front setbacks may be 10 feet to property line if units have rear loaded garages and rear entry drives.
(6) In no case shall the face of the garage be less than 20 feet from back of sidewalk.
(7) Open space shall be calculated as a percentage of the net developable area for each parcel.

Sycamore Farms Development Standards - Non-Residential Uses			
Parcel	**1, 11, 15, 16**	**5**	**6**
Description	**Commercial**	**Mixed Use**	**Institutional**
Min Area	1 Acre	1 Acre	1 Acre
Max Density	N/A	16 Du/Ac	N/A (3)
Max House Width	N/A	N/A	N/A
Min Lot Width	100'	100'	100'
Min Lot Depth	N/A	N/A	N/A
Min Lot Area/Unit		2,000 Sq.Ft.	N/A (3)
Front (4)	35'	35' Non-Residential (5)	35'
Side (4)	15; Interior; 25' Corner	15' Interior; 25' Corner	15' Interior; 25' Corner
Street Side (4)	25'	25' (5)	25'
Rear (4)	15'	15'	15'
Rear or Side Adjacent to Residential(4)	45'	45'	45'
Rear Adjacent to Arterial Street (4)	20'	20'	20'
Outdoor Living Area/Unit	N/A	N/A (5)	N/A
Distance Between Adjacent Building or Home	N/A	N/A (5)	N/A
Lot Coverage	0.30 FAR	0.50 FAR (5)	1.0 FAR
Minimum Open Space	10% (7)	15% (7)	15% (7)
Max Building Height	40'	4 Stories	4 Stories

(1) Fireplaces, bay windows, or entertainment pop-outs may encroach 3 feet into the front and rear setback.
(2) Setback includes adjacent common area landscape tract, but in no case shall be less than 5 feet from property line.
(3) Dormitories permitted as part of College, University, or Trade School at HDR max density.
(4) Refer to High Density Residential setbacks when developed with residental uses.
(5) Front setbacks may be 10 feet to property line if units have rear loaded garages and rear entry drives.
(6) In no case shall the face of the garage be less than 20 feet from back of sidewalk.
(7) Open space shall be calculated as a percentage of the net developable area for each parcel.

LANDSCAPE & DESIGN THEME

Landscape Theme

There is an integrated landscaping and wall theme for Sycamore Farms. Plant materials shall be selected from the Arizona Department of Water Resources low water user plant list. Accent materials shall be low water use plants known for form, color and visual texture. Trees will be clustered where appropriate. The placement of trees and shrubs will be staggered to provide depth along the perimeter landscape tract. The primary pedestrian trail system through the linear park and along the Freeway open spaces shall be a minimum of 8-feet wide, surfaced with concrete or other equivalent materials approved by the City. The landscape plan has been designed in conjunction with the conceptual drainage flow plan for the site. All landscaping shall either meet or exceed the specifications of the City of Surprise.

Theme Walls and Entry Features

The PAD provides: 1) a decorative theme wall design that may be developed along arterial and collector street frontages next to the planned low-density residential parcels; 2) a decorative view wall design that may be developed along open spaces next to planned low density residential parcels; and 3) a low decorative screen wall and/or landscaped berm that may be developed along street frontages next to parking spaces in non-residential projects. The perimeter theme wall and the view wall are to be located along arterial or collector street frontages when the single-family lots or open spaces in the planned low-density parcels back or side to these streets (see Wall Design Elevations, Exhibit V). The perimeter theme wall or view wall are not intended to be implemented on other planned parcels. Any theme wall, view wall or screen wall in locations other than those mentioned above shall require the review and approval of the City at the time of preliminary plat or the development plan review.

Sycamore Farms incorporates a theme wall design where different non-residential projects may create variations of the theme wall design if for some reason the theme wall is needed. Variations of the theme wall are permitted as long as they share some of the theme wall design elements, colors and materials. This gives non-residential of mixed- use parcel users some flexibility in design that ties to the theme of the PAD. The theme wall design incorporates single-scored smooth face block with repeating cultured stone veneer columns, and occasional stucco or trellis bar accents that match the entry feature designs. Cultured stone veneer columns repeat approximately every 250-feet. View walls include a single-scored smooth block base with a wrought iron top and repeating cultured stone veneer columns. The 3-foot high accent walls will provide single-scored smooth block with repeating cultured stone veneer columns. The Loop 303 Freeway sound attenuation design and timing will be based on ADOT policy. The sound attenuation shall be consistent with the PAD theme wall in colors and materials as much as is practical.

The Sycamore Farms entry features incorporate stone panels and cultured stone veneer columns with a beam laid horizontally across the top of the panels. Trellis bars provide accents at either end of the entry feature with one set of trellis bars supporting the Sycamore Farms sign. The entry feature incorporates vent louvers that are typically found on top of barns and

other large farm buildings to vent hot air from the top of the roof. The vent louvers are repeated at different entry features to provide an agricultural historical context to the overall master plan. Smaller entry features are designed to provide an entry feature theme for residential subdivisions, retail centers, institutional uses, and office centers. All of the smaller entry features use common materials and design elements found in the main Sycamore Farms entry features (see Conceptual Entry Features & Monumentation Plan, Exhibit R).

ARCHITECTURE

Sycamore Farms will incorporate a variety of architectural styles for commercial, office, institutional and residential. The architectural styles will vary, but the quality will be consistent throughout the PAD. All residential and non-residential architectural designs must comply with City adopted Planning and Design Guidelines. Exact architectural elevations, floor plans and color schemes will be submitted for approval during the Home Product Review process. The intent of the Sycamore Farms PAD is to provide diversity in the residential architecture and floor plans offered throughout the project area.

FLOOD CONTROL & DRAINAGE

The historical terrain of the surrounding area to Sycamore Farms generally slopes from the northwest to the southeast from the White Tank Mountains to the Agua Fria River. The McMicken Dam, which was constructed in the 1950's, intercepts immediate runoff departing the White Tank Mountains and disposes the stormwater through a series of channels that ultimately discharge to the Agua Fria River. The upper limits of the overarching drainage area, therefore, are defined by the McMicken Dam. Over the years, several developments have been constructed along with several regional drainage infrastructure improvements, most of which have been corresponding to the installation of the Loop 303. In 2009, the Maricopa County Flood Control District prepared a drainage master plan titled the Loop 303 Corridor/White Tanks Area Drainage Master Plan Update (ADMPU) Area Hydrology Analysis (AHA) to document the improvements and model the drainage patterns for the area. The study was updated in 2015 with the report titled Phase I – Updating the CIP in Hydrology Model. This study was used by recent adjacent developments to develop drainage plans and propose adequate improvements to satisfy the proposed regional drainage concept for the area.

Per the ADMPU and review of the adjacent developments, there are two primary locations where offsite stormwater impacts the Sycamore Farms project site. The first location is the intersection of Cactus Road and Cotton Lane. The second location is along Sarival Avenue, where an existing channel along the eastern frontage of Sycamore Farms – Parcel 13 terminates at the northern boundary of the subject project.

At Cactus and Cotton, stormwater currently ponds at the northwest corner of the intersection and then overtops in a sheet flow condition and continues southeasterly across the Sycamore Farms project site, west of the Loop 303. According to the ADMPU, the ultimate condition for Cactus Road features a regional drainage channel along the north side of the right-of-way

that incepts and conveys stormwater to the Loop 303 channel. Portions of this channel have been constructed with neighboring developments including from Citrus Road to 175th Avenue and from Cotton Lane to the Loop 303, leaving just the portion from 175th Avenue to Cotton Lane to be completed. Per correspondence with the City of Surprise, the adjacent development to the west, Toll at Prasada, includes plans to complete this portion of the channel with Phase 2 of the development. Offsite storm water impacts at Cactus and Cotton will be mitigate with the completion of this portion of the channel.

According to Final Drainage Report for Sycamore Farms – Parcel 13, the development was impacted by offsite flows from the north and east. The proposed drainage concept for this development included intercepting and conveying offsite flow in a channel along the frontage of Sarival Avenue. In the current condition, the channel terminates at the southern boundary of Sycamore Farms – Parcel 13 where offsite stormwater overtops and continues south along the west side of Sarival Avenue where it ultimately reaches Peoria avenue and splits flow to the south, southeast and east. Upon investigation of historical imagery, further development has occurred upstream of Sycamore Farms – Parcel 13 and it is likely offsite flows in the Sarival Avenue channel have been significantly reduced. The proposed development intends to accommodate this offsite flow with improvements to Sarival Avenue and will maintain the historical discharge condition.

According to the Flood Insurance Rate Map 04013C1660L, revised October 16, 2013, the vast majority of the project site is located within Flood Zone "X":

> *Areas of 0.2% annual chance of flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.*

A portion of the site, however, is located in Special Flood Hazard Area Zone "A":

> *Areas subject to flooding by the 1% annual chance flood. No Base Flood Elevations determined.*

The Zone "A" floodplain limits encumber the site along the Cotton Lane frontage. Per investigation of the topography, however, there appear to be no physical features that contain stormwater runoff to define a floodplain in this location. Per correspondence with City of Surprise and Maricopa County Flood Control District, a Letter of Map Revision (LOMR) is being processed with the Toll at Prasada development to remove the floodplain from the west half of Cotton Lane. The Sycamore Farms development intends to do the same and process a LOMR to remove the floodplain limits from the east half of the roadway.

Per City of Surprise requirements, all storm water runoff generated onsite and within the adjacent offsite half-street will be retained onsite and disposed of within 36 hours. The required retention on this site is the 100-year, 2-hour storm event.

PUBLIC UTILITIES AND SERVICES

Sewer

The estimated average daily flows and peak daily flows for this PAD are approximately 0.8 MGD and 2.4 MGD respectively. The Sycamore Farms PAD (project) is surrounded by existing wastewater infrastructure to serve the demands and land uses proposed. Peoria Road includes a 27-inch sewer line from Cotton Lane to Sarival Avenue and increases to a 36-inch main that continues east. Cactus Road includes a gravity sewer system that varies in size from 8-inches to 15-inches at the intersection of Auto show Avenue along the project frontage. An existing 21-inch sewer increasing to 24-inches exists in Cotton Lane from Cactus Road to Peoria Avenue. A 15-inch sewer main exists in Sarival Avenue along the project frontage, connecting to the Peoria Avenue 36-inch line at the intersection. Refer to Exhibit Z for the Conceptual Wastewater System Exhibit.

Sycamore Farms will ultimately connect sewer lines via collector streets to the gravity sewer mains in the surrounding arterial roadways. The existing City of Surprise Wastewater Treatment Plant located 3.5 miles east of Sycamore Farms has the capacity to serve the project demands. The City plans to expand the plant to increase capacity to a range of 24 to 28 MGD.

Water

The estimated average daily flows, maximum daily flows and peak daily flows for this PAD are approximately 1.1 MGD, 2.0 MGD and 3.3 MGD respectively. An existing 16-inch water main in Cactus Road and Cotton Lane exists along the project frontage. Sarival Avenue includes a 12-inch water main along the project frontage. Sycamore Farms will construct water lines in the collector streets and individual projects will connect to the collector roadway system and directly into the arterial roadway water system surrounding the property where applicable. The applicant has received a “Will Serve” letter from EPCOR Water Arizona, Inc. to serve water to the site. Refer to Exhibit AA for the Water System Exhibit.

Streets

All adjacent arterials (Cactus Road, Sarival Avenue, Peoria Avenue and Cotton Lane) will be constructed with paving, curb, gutter, sidewalk, street lighting and landscaping with half-width rights-of-way in accordance with City of Surprise Arterial street cross-sections. Collector and local streets will be constructed in accordance with approved City cross section standards. Analysis of the one-quarter mile access points to the arterial streets will be conducted at the time of platting and/or site plan reviews to determine their exact locations and design configurations.

Open Space / School

The Sycamore Farms PAD area will not be providing public park or school sites. The public park use originally designated on the subject property was removed by the City of Surprise during a 2019 amendment to the PAD. School uses are allowed by right as indicated in the Land Use Matrix on any of the PAD parcels. The Dysart Unified School District has not requested the reservation of a school site within the PAD area.

Utility Providers

Below is a list of the main utility providers for the Sycamore Farms PAD area:

Sewer	City of Surprise
Water	EPCOR Water Arizona, Inc.
Electricity	Arizona Public Service
Telephone/Internet	Various
Cable TV	Cox Communications & Century Link
Gas	Southwest Gas Company
Refuse	City of Surprise & private
Fire and Emergency	City of Surprise
Police	City of Surprise
Schools	Dysart Unified District #89

All infrastructure shall be constructed pursuant to the provisions of the current standards of the Surprise Municipal Code or an approved development agreement.

PHASING

Sycamore Farms may be constructed on a parcel-by-parcel basis depending on market demand. The exact phasing of infrastructure improvements shall be determined at the time each project within each parcel is to be constructed within the PAD. The phasing of infrastructure shall comply with all City Codes. All needed off-site and on-site improvements shall be constructed at the time each parcel is developed with a specific user, and in accordance with the City's adopted timing chart for arterial streets construction. When a parcel is developed it shall include needed sewer connections to the City system, water connections to the EPCOR water system, on-site storm water retention, and street improvements as required by the City. Water distribution system and water line connections shall be made per agreements with the EPCOR Water Company and comply with the fire-flow needs of the Surprise Fire Department. Entry features shall be constructed when development occurs on a parcel that is contiguous to a street improvement where an entry feature is identified in the PAD.

LANDSCAPE CONCEPT STATEMENT & PLANT PALETTE

Provide enhanced landscaping that creates continuity throughout the project area utilizing both arid and lush plant materials. Select project theme trees and colorful ground covers within streetscapes that create a continuous landscape character for the project. Use turf is recreation open space areas, retention basins and at select project entries. Establish a project plant list that is sensitive to the environmental concerns and adheres to City and ADWR approved plant lists.

A street tree program will be required for all single-family residential development within the Sycamore Farms PAD area. Tree plantings will be in conformance with City of Surprise size and spacing requirements. Timing of street tree installation will be concurrent with the completion of horizontal and vertical construction on a per-block basis to ensure that plant materials do not incur damage as a result of construction activity, and simultaneous installation will ensure for a consistent appearance.

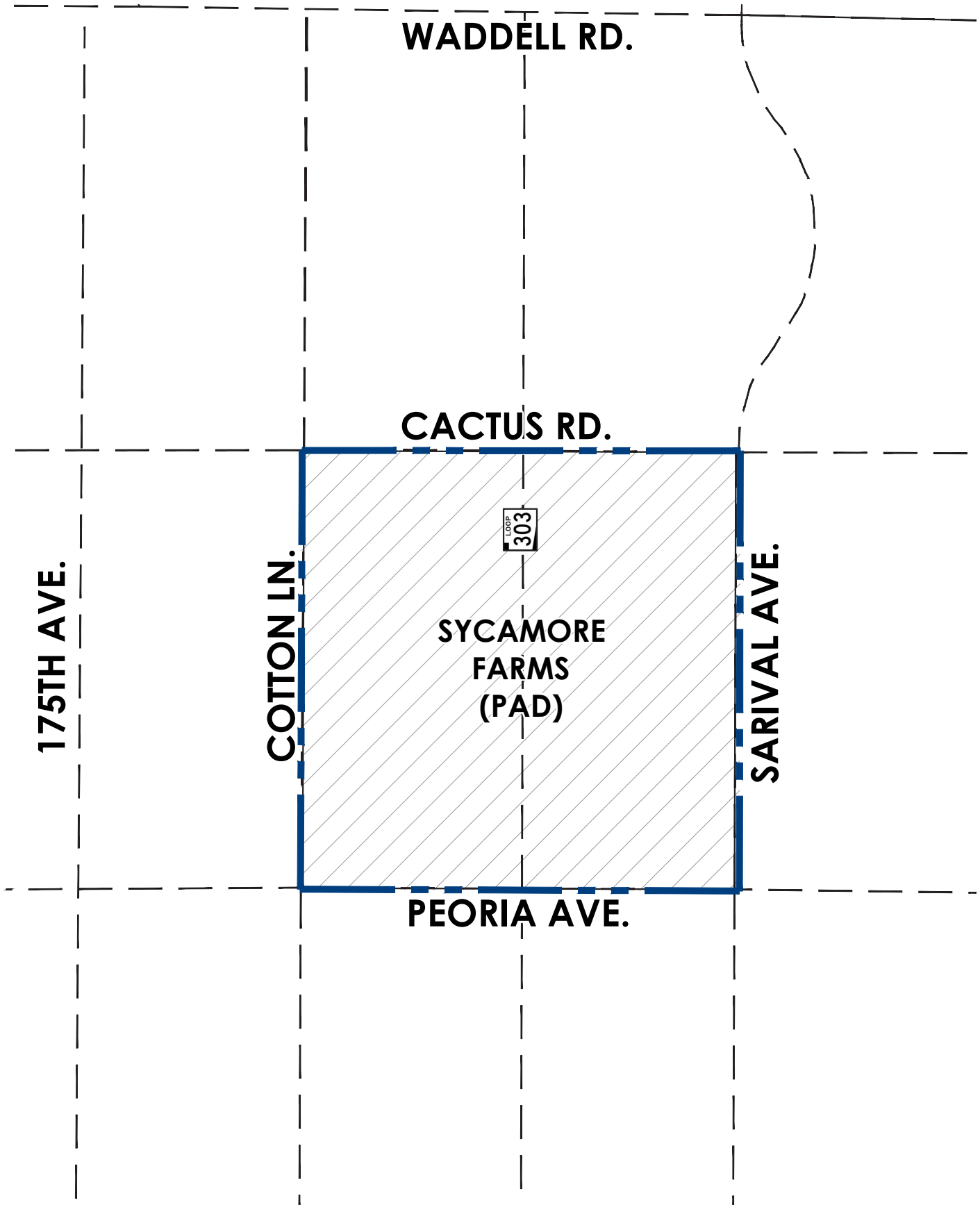


EXHIBIT A: VICINITY MAP

N.T.S.

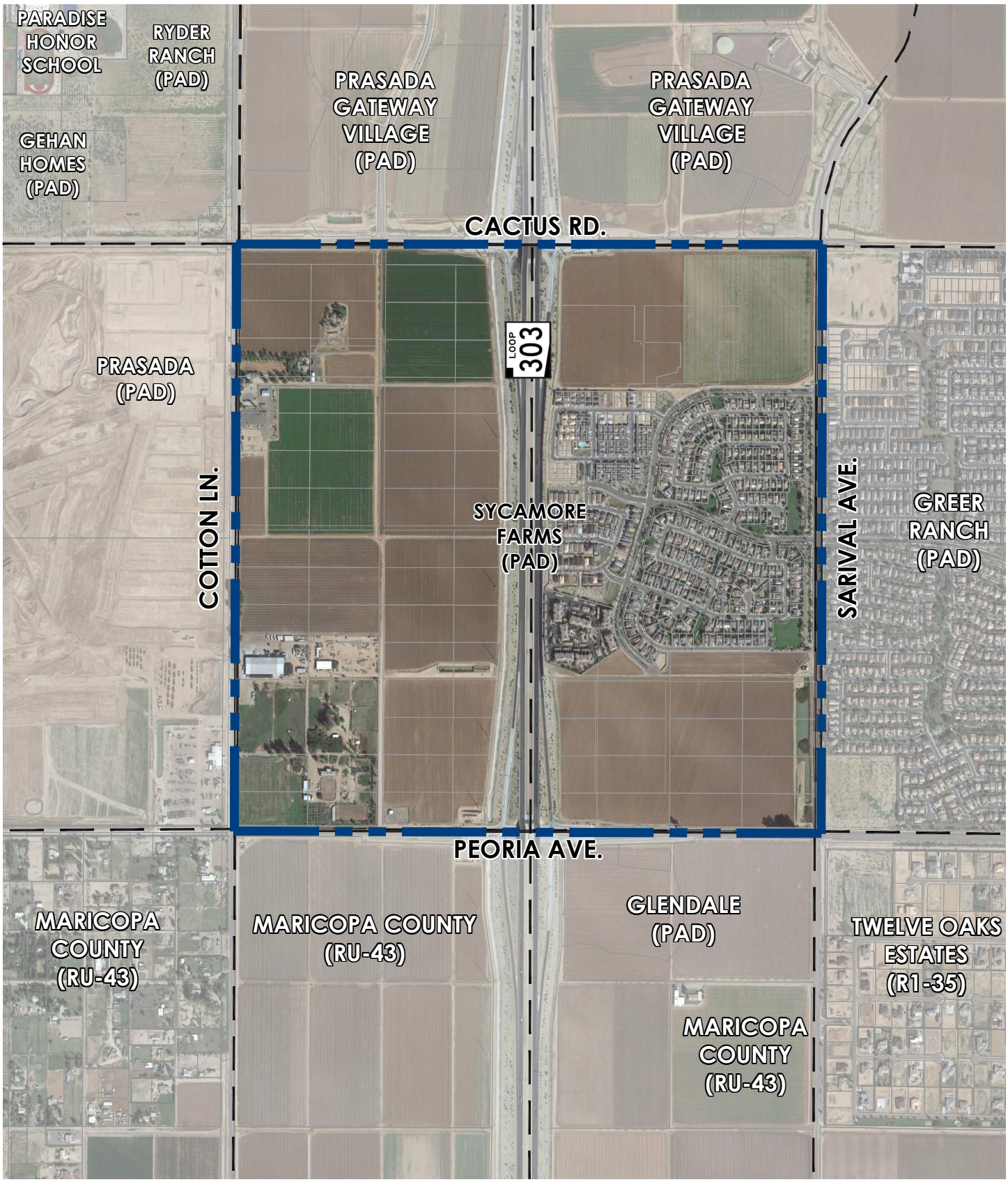


EXHIBIT B: SURROUNDING PROPERTY & ADJACENT OWNERSHIP

N.T.S.

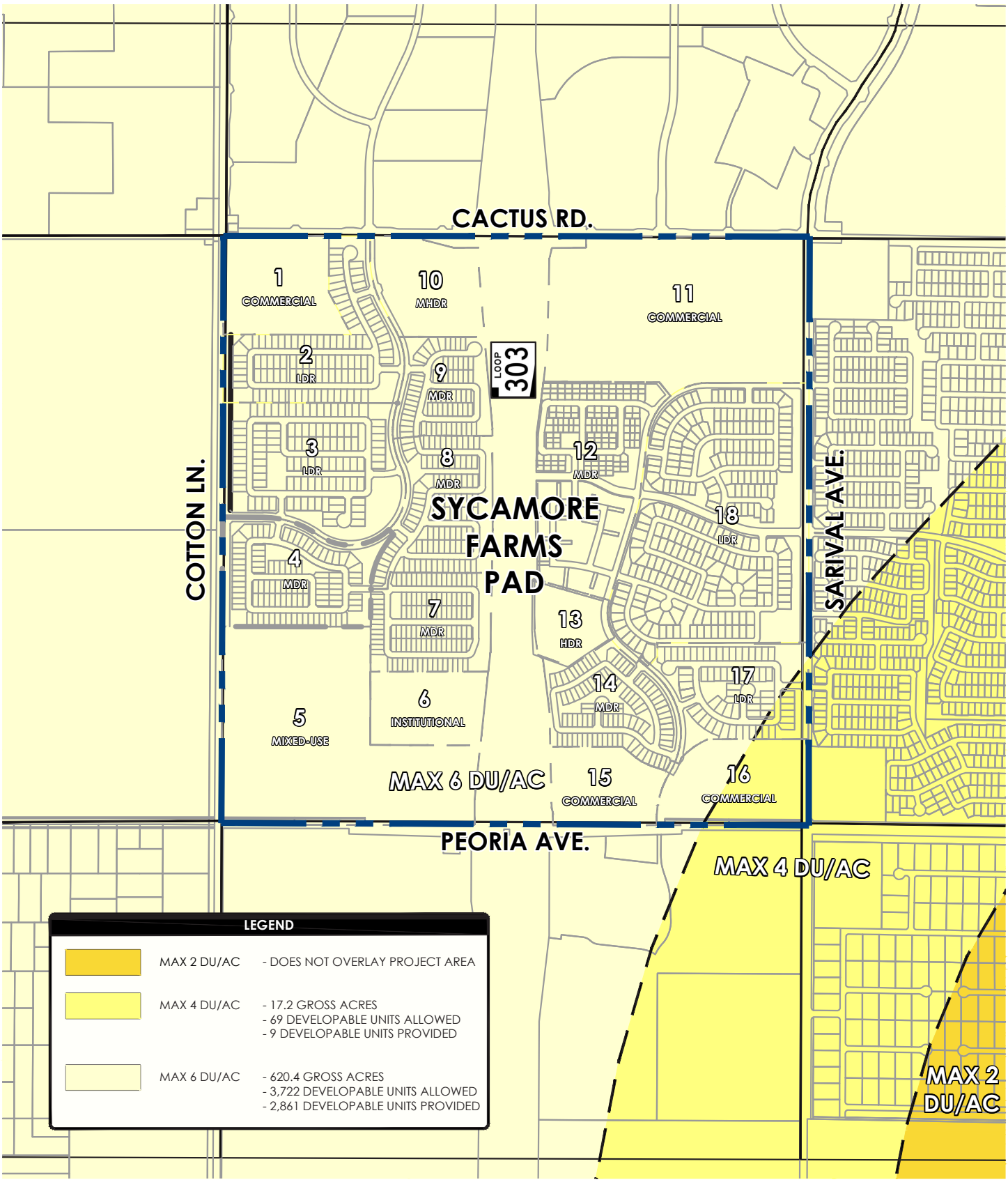
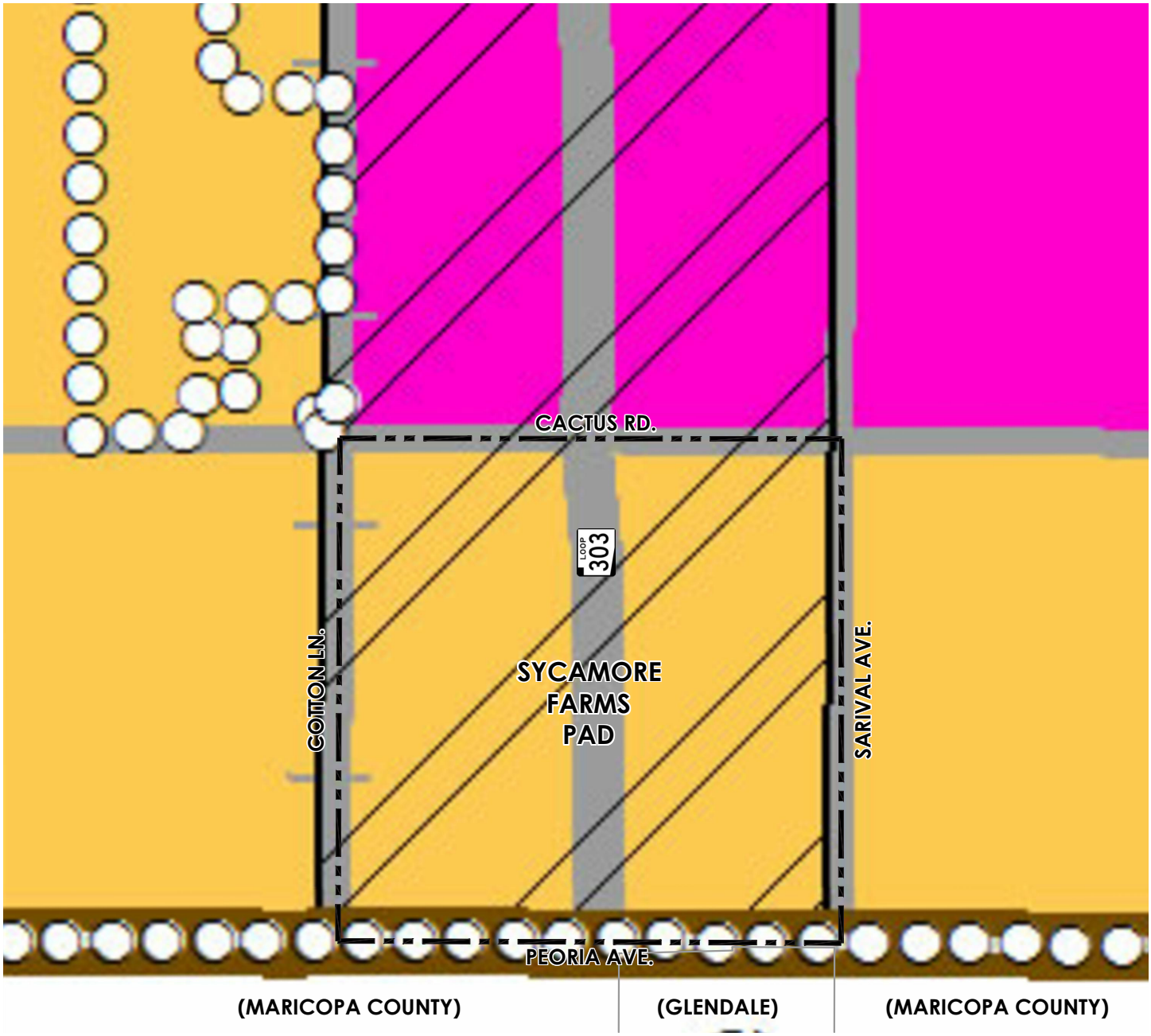


EXHIBIT C: LUKE A.F.B. GRADUATED DENSITY ANALYSIS

N.T.S.



Character Areas

- Neighborhood
  - *Rural*
  - *Suburban*
  - *Urban*
- Commerce & Office
  - *Mixed Use: Residential*
  - *Mixed Use: Commercial*
  - *Regional Commercial*
  - *Commercial Office*
- Employment
  - *Business Park*
  - *Industrial*
- Open Space
  (As described on page 53)

Sub Areas

- Luke Compatibility District
- Scenic Lands Development
- Surprise Center District
- Surprise Heritage District
- Transit Oriented Development District
- Aggregate Resource Areas

Features

- Planning Area
- Aux 1 Noise Contours
- Luke AFB Noise Contours
- Canals
- Military
- Existing Community Commercial
- Public Facility
- Mining

Circulation

- Freeway
- Parkway
- Major Arterial
- Minor Arterial
- BNSF Rail

N

Michael Baker INTERNATIONAL

SURPRISE ARIZONA

EXHIBIT D: GENERAL PLAN LAND USE

Page 29

N.T.S.

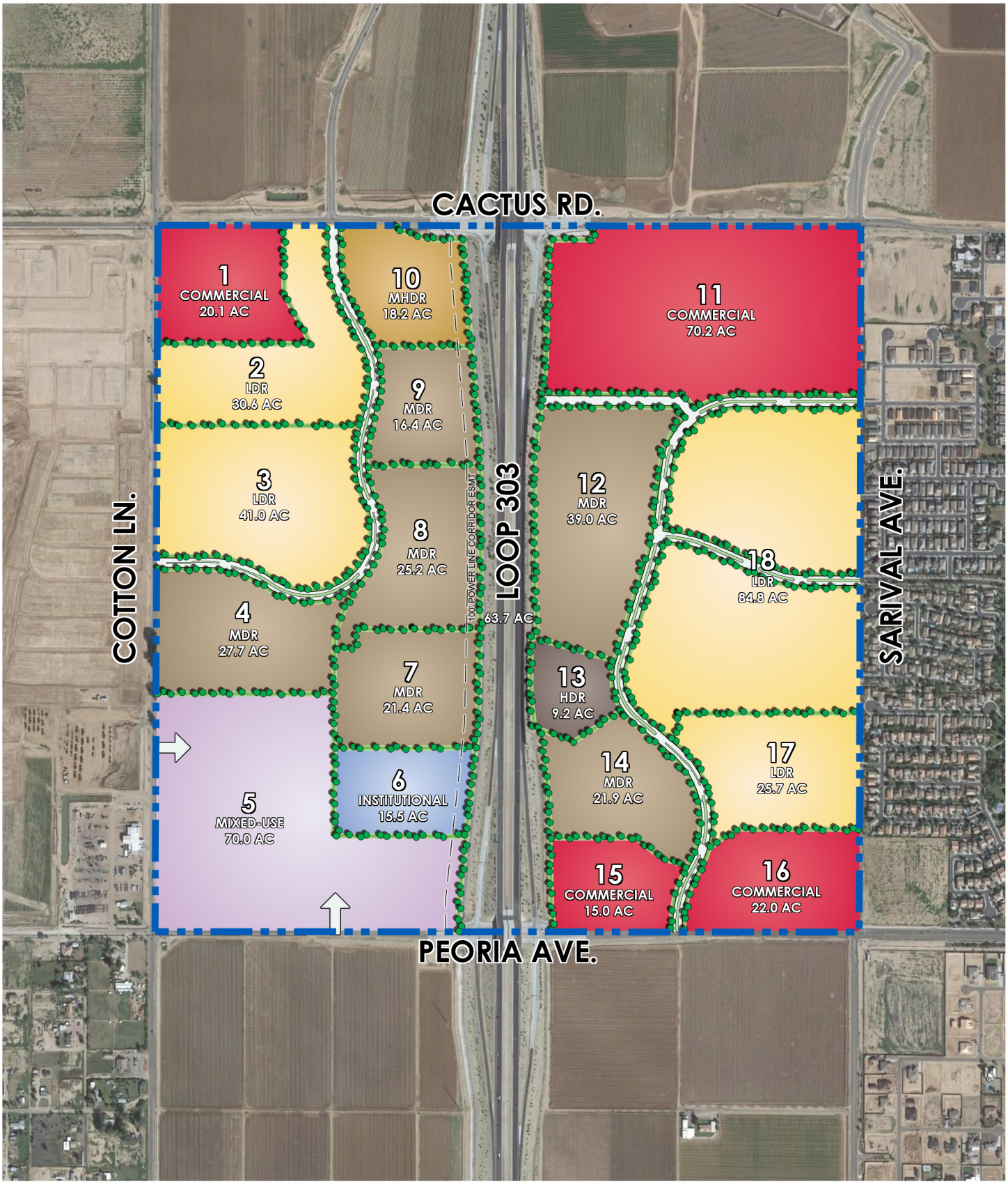


EXHIBIT E: CONCEPTUAL LAND USE PLAN

N.T.S.

Conceptual Plan Data				
Parcel	Gross Acres	Proposed Use	Maximum	
			Density	Units
1	20.1	Commercial (C)		0
2	30.6	Low Density Residential (LDR)	5.0	153
3	41.0	Low Density Residential (LDR)	5.0	205
4	27.7	Medium Density Residential (MDR)	6.0	166
5	70.0	Mixed Use (MU)	16.0	Varies*
6	15.5	Institutional (I)		0
7	21.4	Medium Density Residential (MDR)	6.0	128
8	25.2	Medium Density Residential (MDR)	6.0	151
9	16.4	Medium Density Residential (MDR)	6.0	98
10	18.2	Medium High Density Residential (MHDR)***	20.0	364
11	70.2	Commercial (C)		0
12	39.0	Medium Density Residential (MDR)	5.6	217
13	9.2	High Density Residential (HDR)	18.3	168
14	21.9	Medium Density Residential (MDR)	6.0	131
15	15.0	Commercial (C)		0
16	22.0	Commercial (C)		0
17	25.7	Low Density Residential (LDR)	5.0	129
18	84.8	Low Density Residential (LDR)	2.9	250
SR303	63.7	SR303		0
Total	**637.6**			2,161

*Depends on Mix of Uses
**Maximum Project Unit count is 2,161 units, not including Mixed Use units
***For-Rent Medium High Density Residential product is estimated at 10 to 12 du/ac

LAND USE SUMMARY			
Land Use	Acres	Density	Units*
Low Density Residential (LDR)	182.1	5 Du/Ac	737
Medium Density Residential (MDR)	151.6	6 Du/Ac	893
Medium High Density Residential (MHDR)***	18.2	20 Du/Ac	364
High Density Residential (HDR)	9.2	43 Du/Ac	168
Institutional (I)	15.5	N/A	-
Mixed Use (MU)	70.0	16 Du/Ac	Varies**
Commercial (C)	127.3	N/A	-
SR303	63.7	N/A	-
Totals	**637.6**		**2,161**

* Dwelling Units are targets; parcel maximums may allow for increased units but are capped at 2,161 units overall
** Depend on Mix of Uses
***For-Rent Medium High Density Residential product is estimated at 10 to 12 du/ac

TABLE 3: CONCEPTUAL PLAN DATA & LAND USE SUMMARY

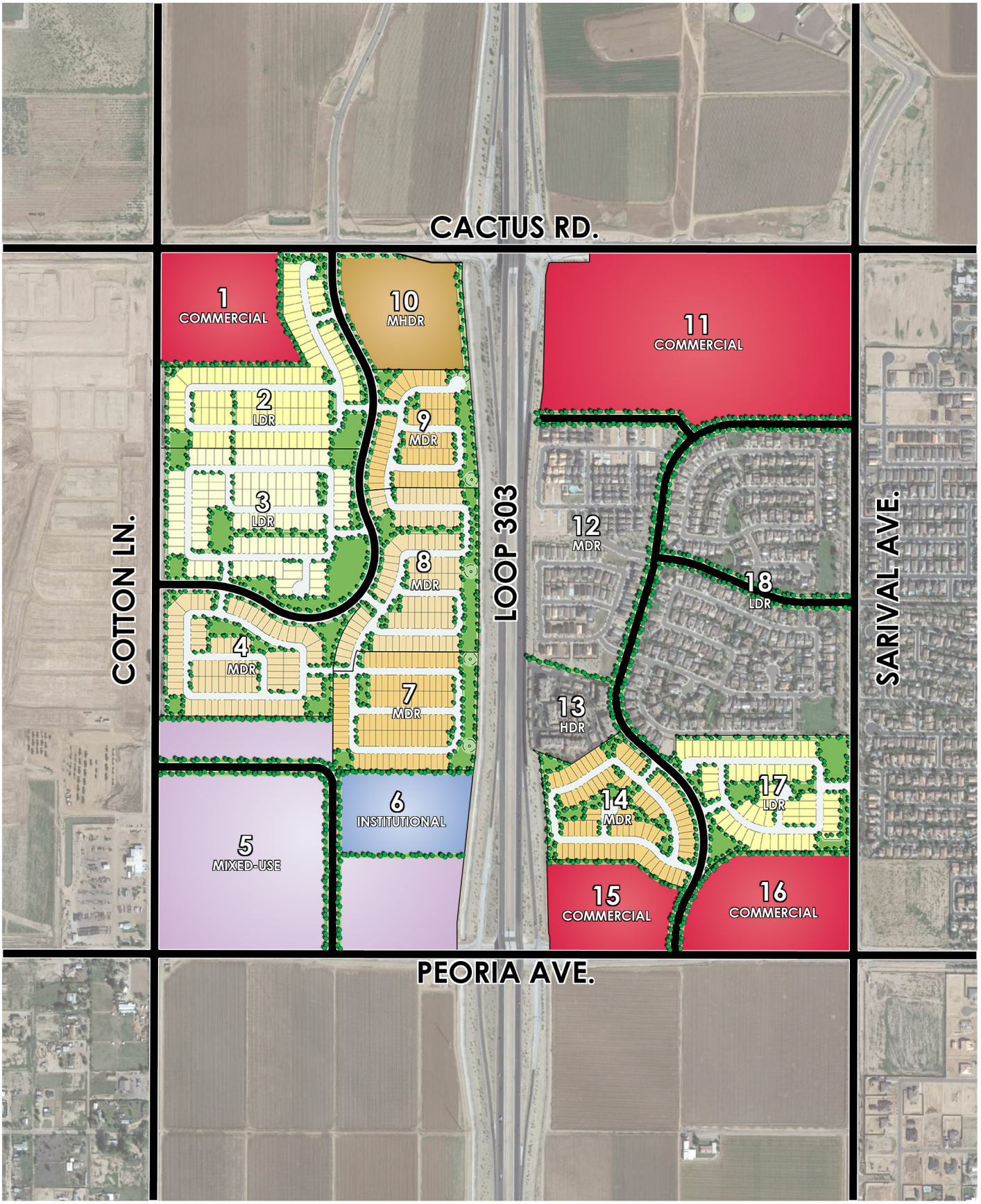


EXHIBIT F: ILLUSTRATIVE PLAN

N.T.S.

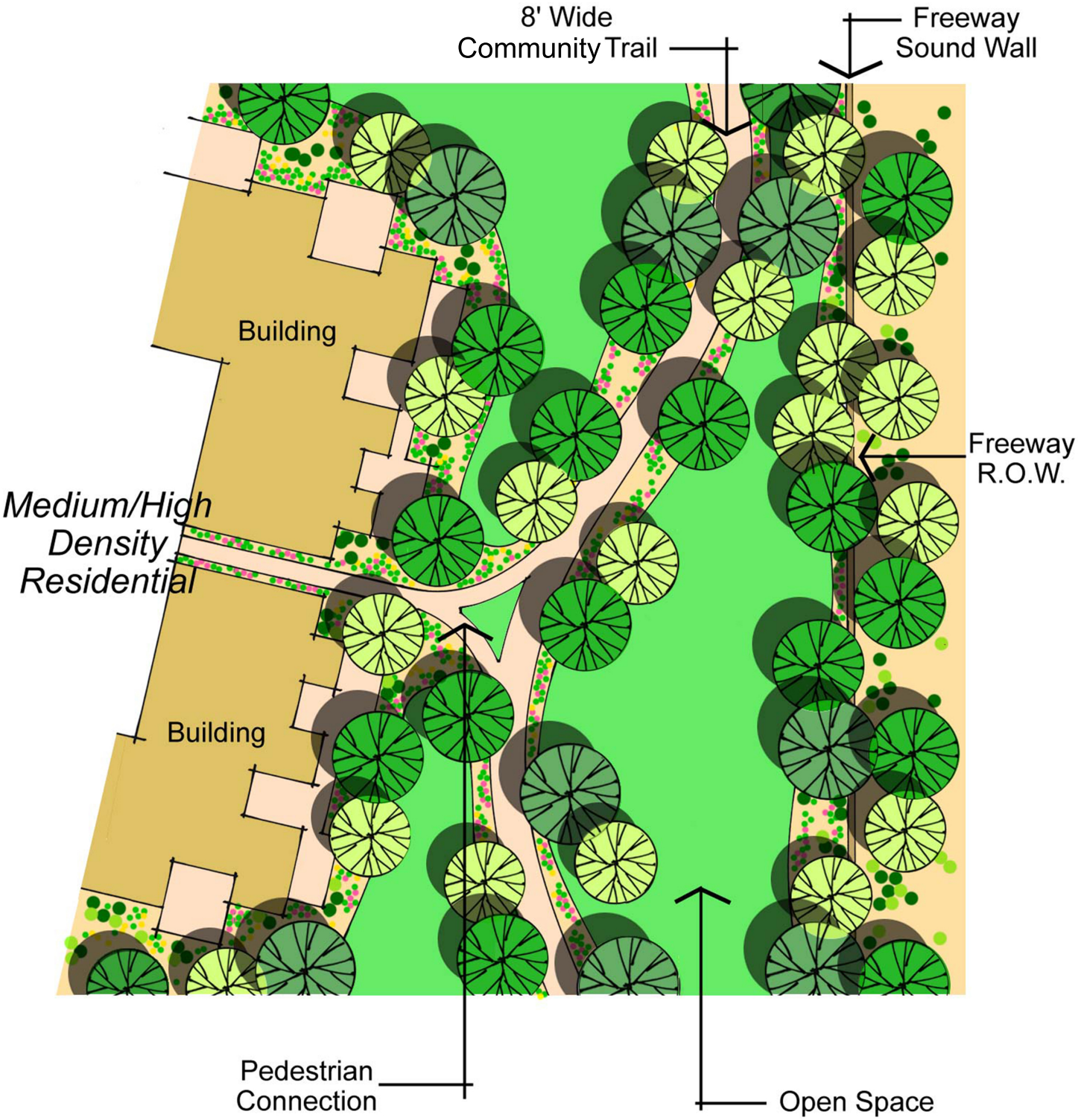


EXHIBIT G: TYPICAL PEDESTRIAN CONNECTION BETWEEN RESIDENTIAL PARCEL AND LINEAR OPEN SPACE

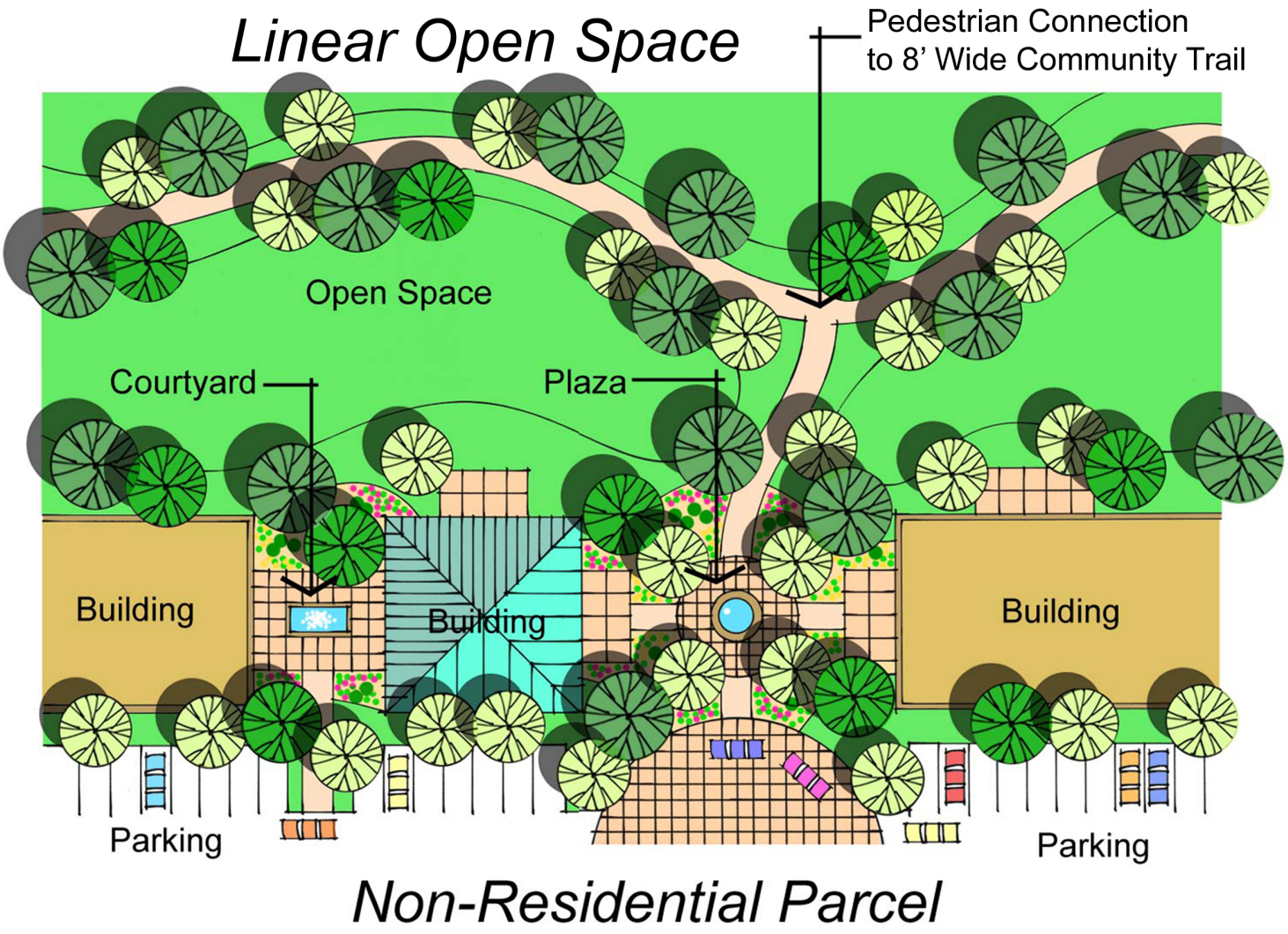


EXHIBIT H: TYPICAL NON-RESIDENTIAL PARCEL CONNECTION TO LINEAR OPEN SPACE

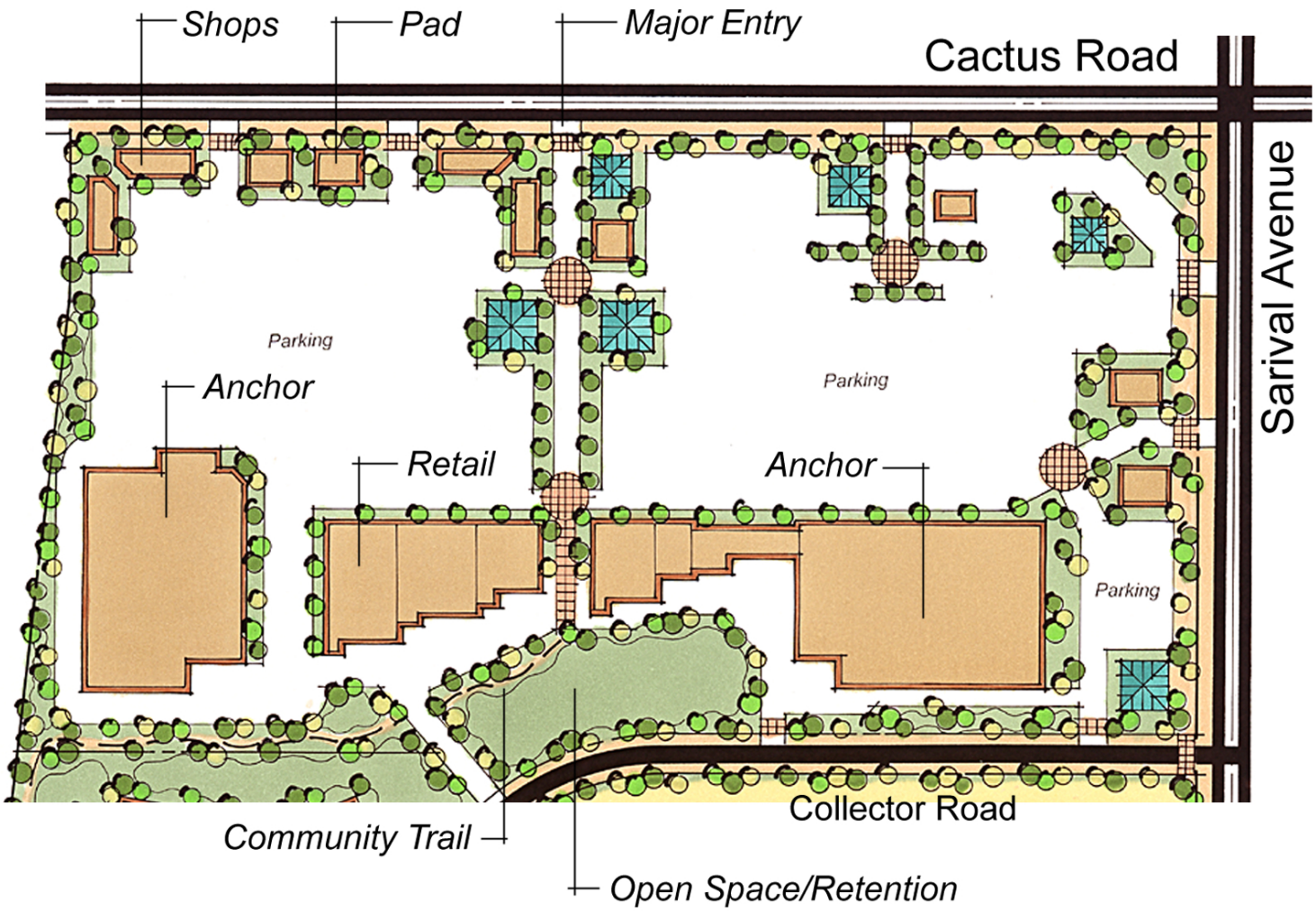
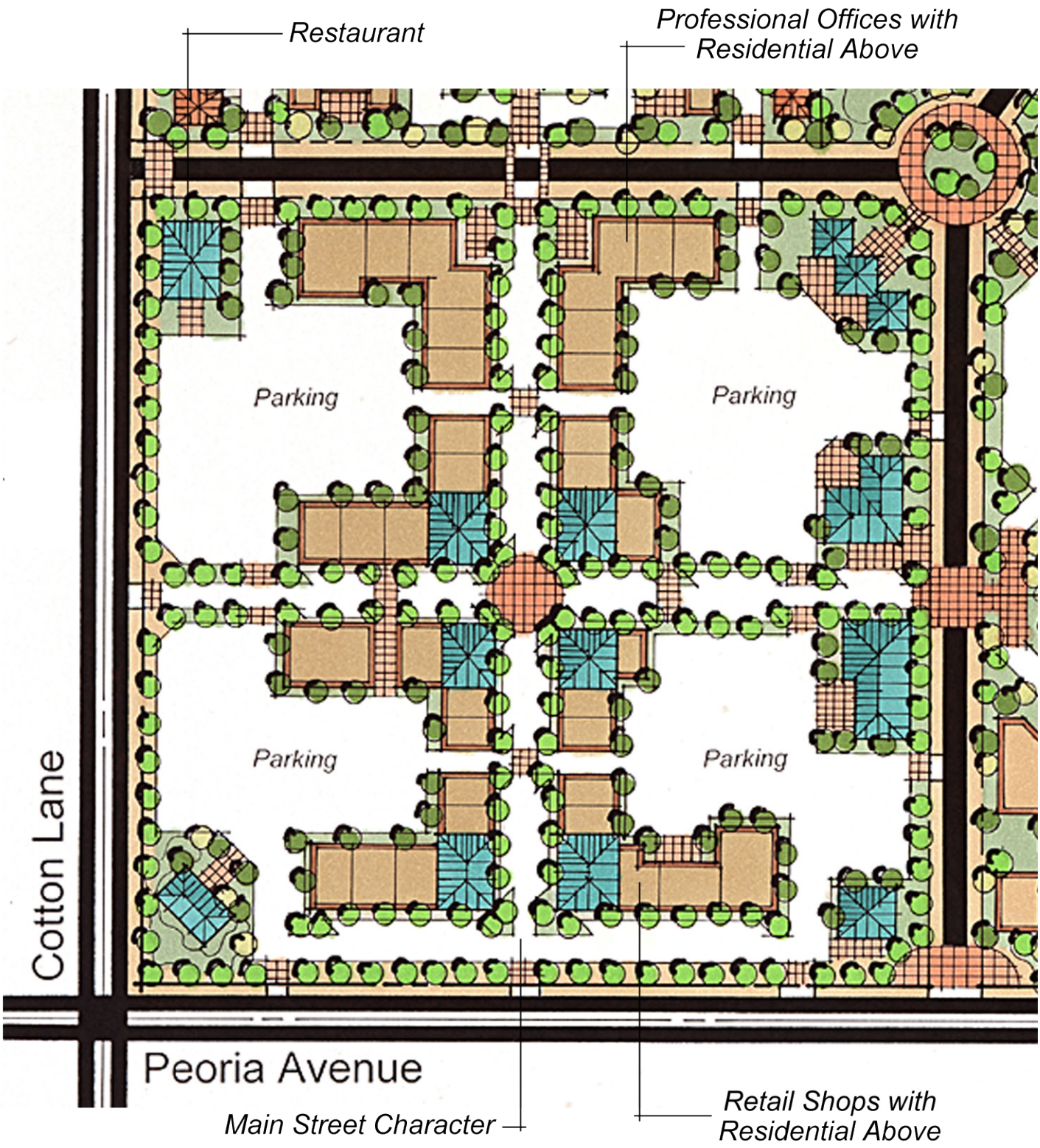


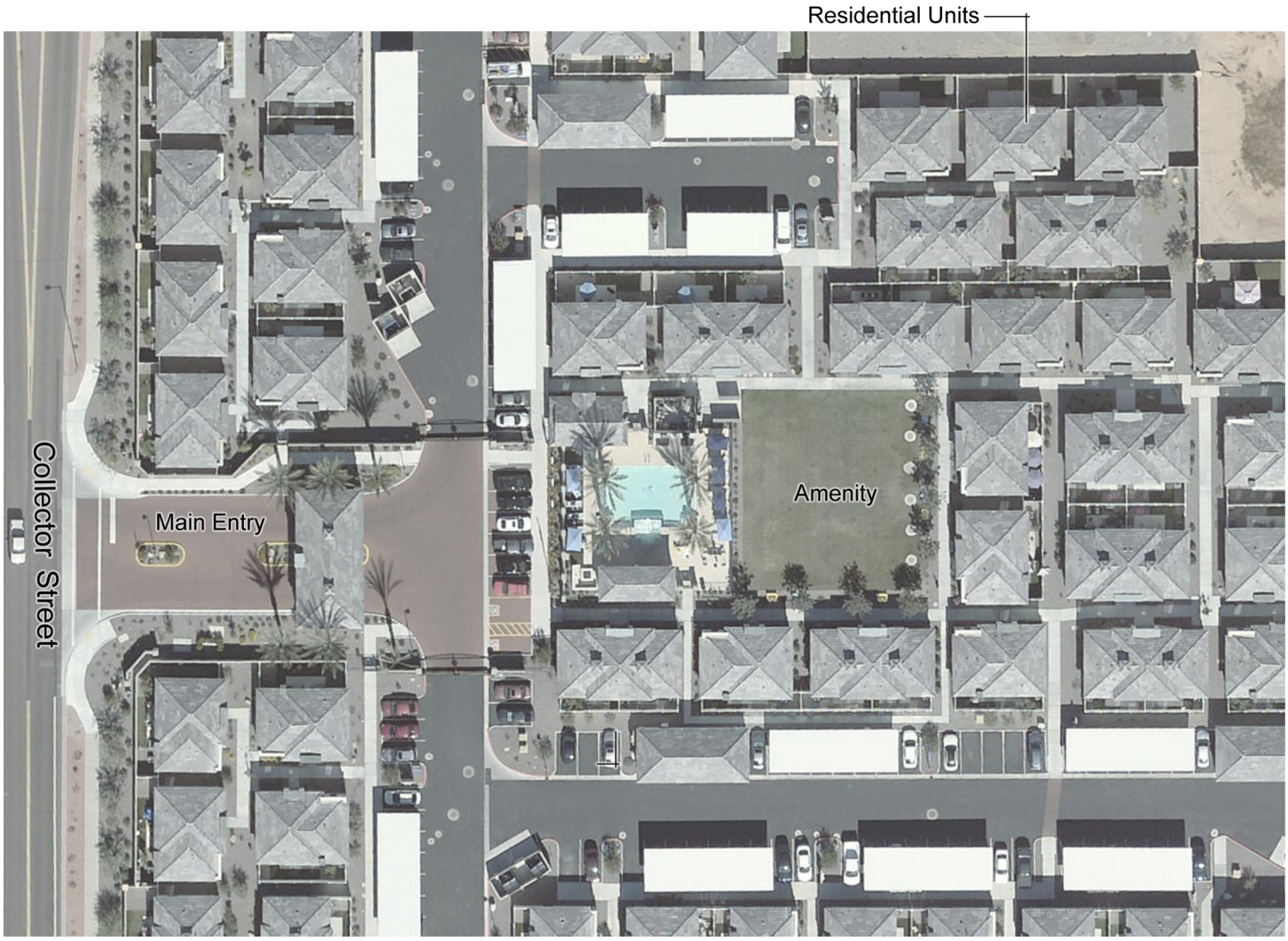
EXHIBIT I: CONCEPTUAL COMMERCIAL PROJECT


Restaurant
Professional Offices with Residential Above
Parking
Parking
Parking
Parking
Cotton Lane
Peoria Avenue
Main Street Character
Retail Shops with Residential Above


Community Trail
Parking
Parking
Parking
Parking
Estrella Freeway Loop 303
Collector Street
Peoria Avenue
Major Entry



Parcel 13: Wyngate Apartments

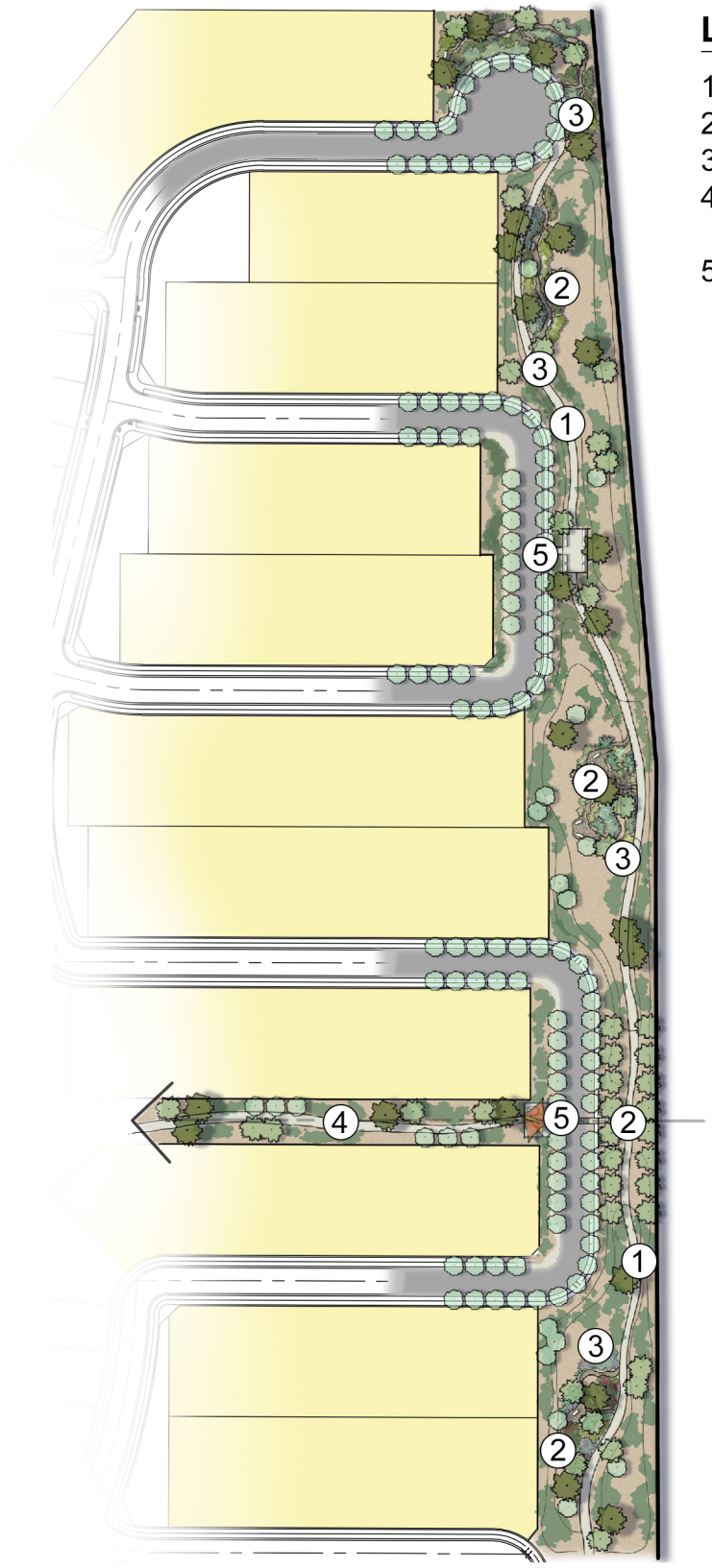


Example shown is single-story for rent product type.

EXHIBIT M: TYPICAL MEDIUM-HIGH DENSITY RESIDENTIAL PROJECT



EXHIBIT N: CONCEPTUAL MEDIUM DENSITY RESIDENTIAL PROJECT

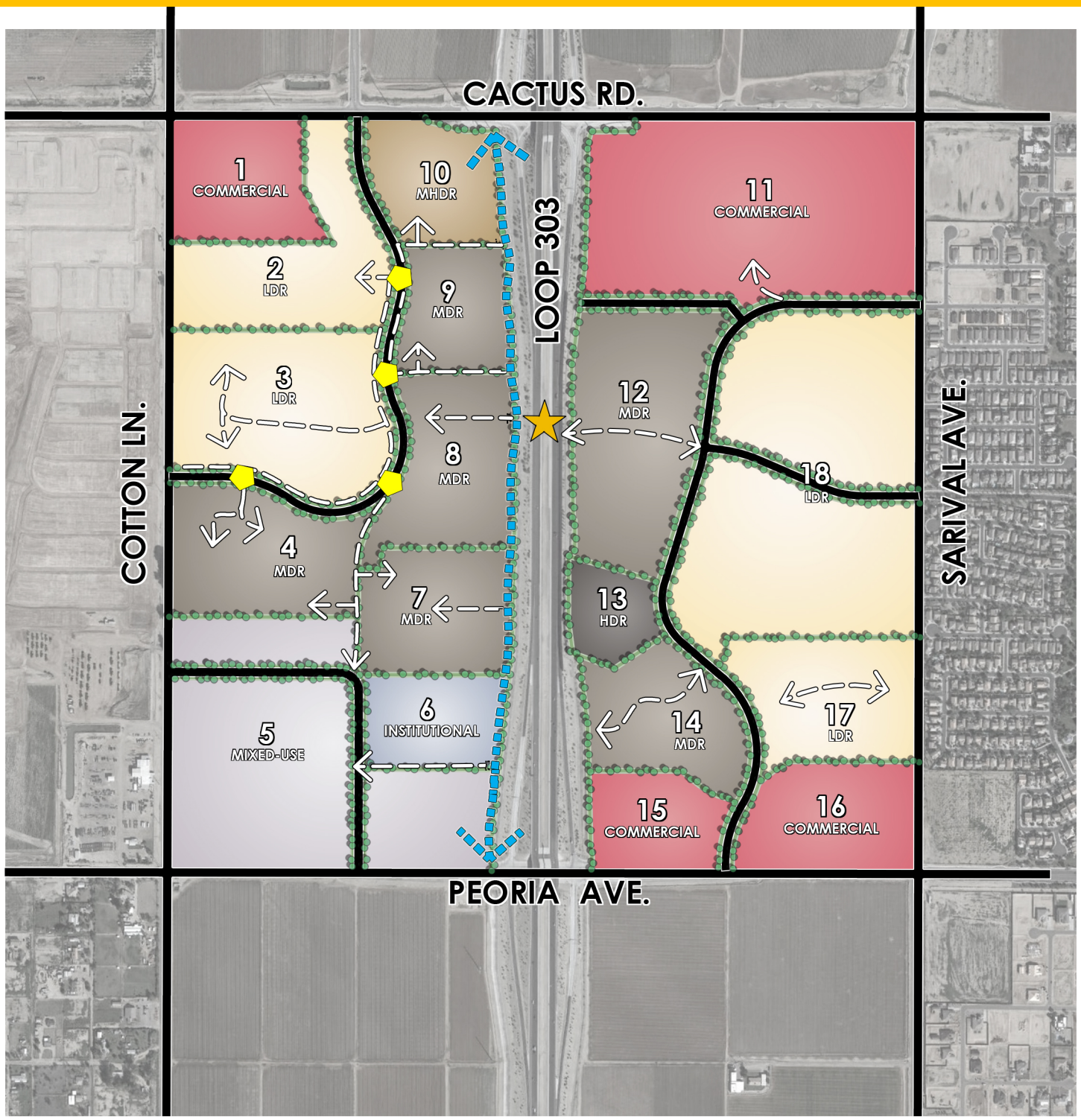


LEGEND

1. 8’ COMMUNITY TRAIL
2. EDUCATIONAL NODES
3. INTERPRETIVE SIGNAGE
4. NEIGHBORHOOD TRAIL CONNECTION
5. TRAIL ENTRY PLAZA

EXHIBIT O: LINEAR OPEN SPACE CORRIDOR

N.T.S.

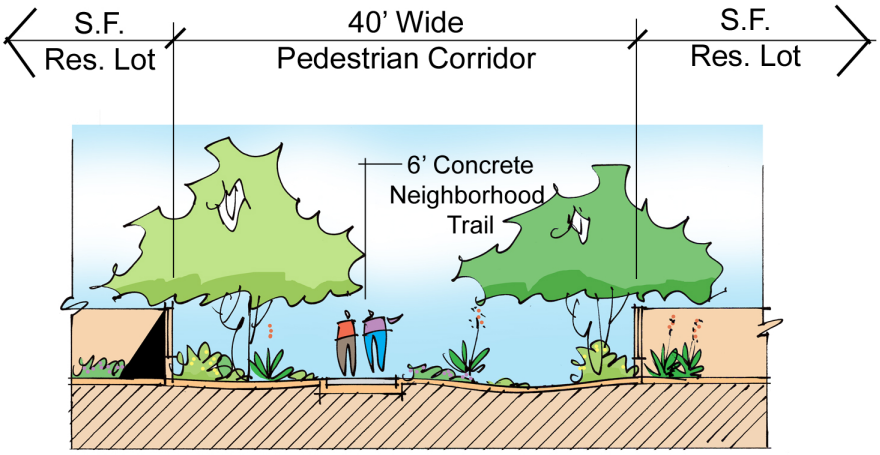


LEGEND

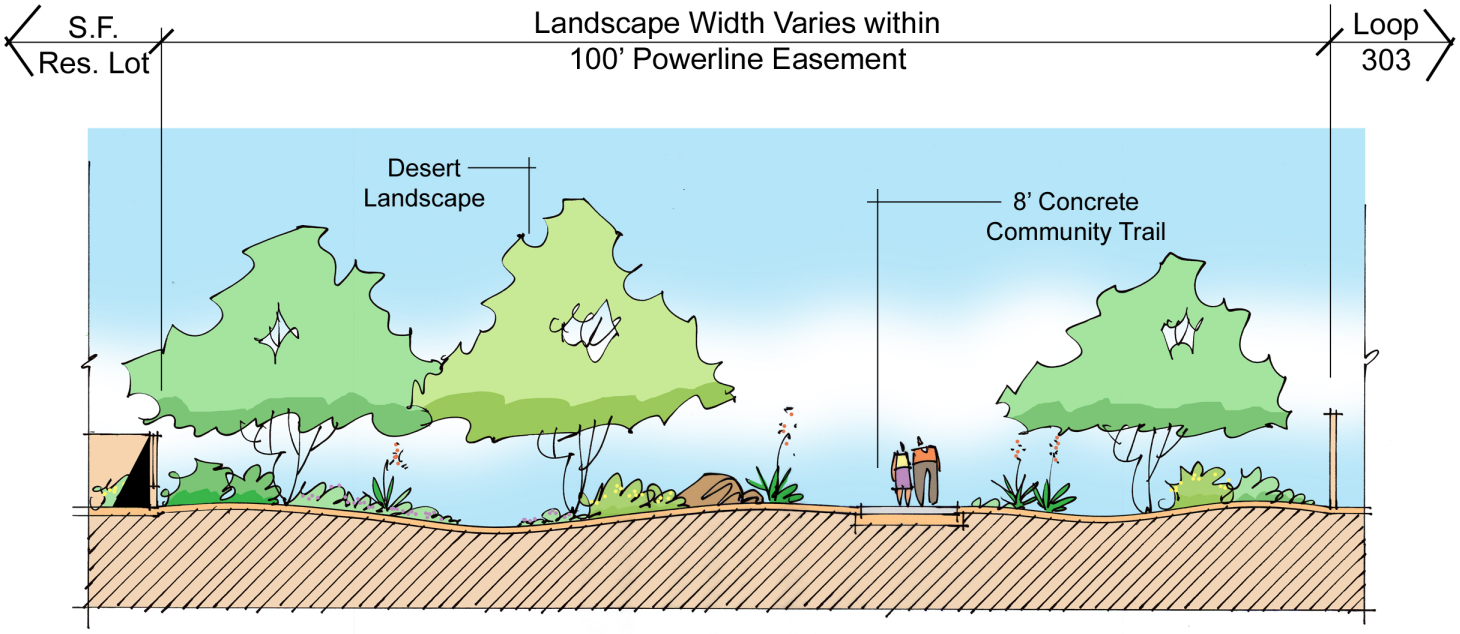
- 8' LINEAR OPEN SPACE CORRIDOR TRAIL
- 6' COMMUNITY TRAIL
- PEDESTRIAN CROSSING
- OPTIONAL PEDESTRIAN BRIDGE

EXHIBIT P: CONCEPTUAL TRAILS PLAN

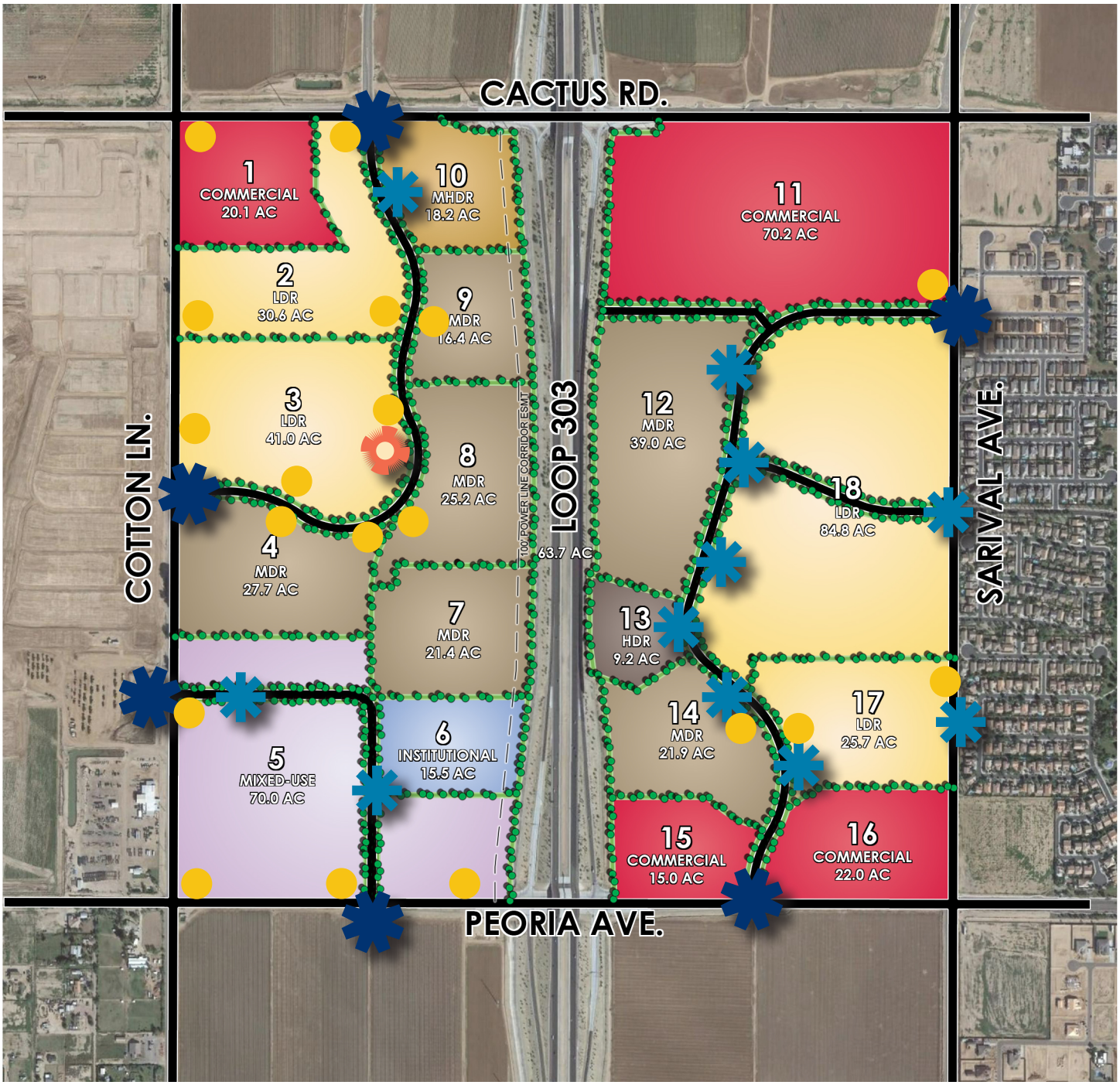
N.T.S.



Neighborhood Open Space Corridor
Cross-Section



Linear Open Space Corridor
Cross-Section



LEGEND

- PRIMARY MONUMENTATION
- SECONDARY MONUMENTATION
- AMENITY SIGNAGE
- TEMPORARY DIRECTIONAL SIGNAGE

NOTE: All sign locations are conceptual and may be subject to relocation.

EXHIBIT R: CONCEPTUAL ENTRY FEATURES & MONUMENTATION PLAN

N.T.S.

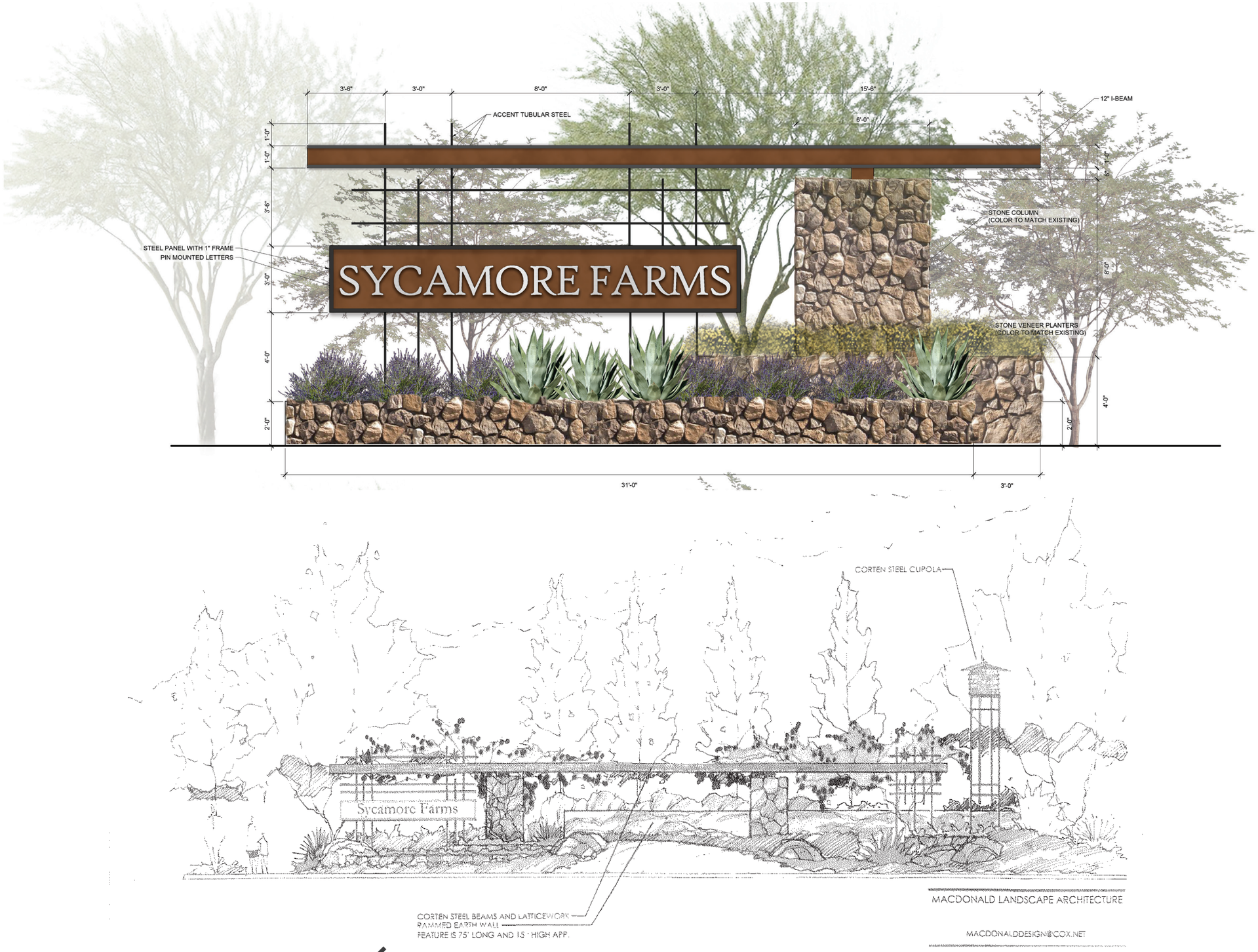
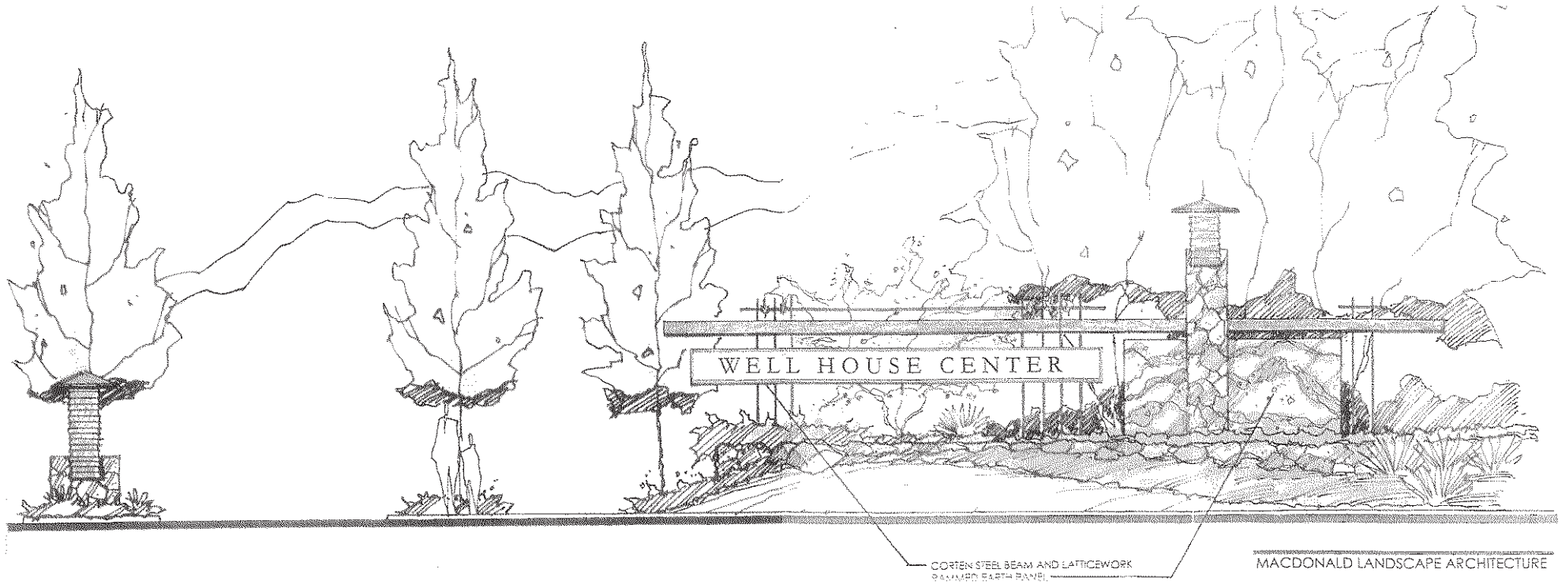
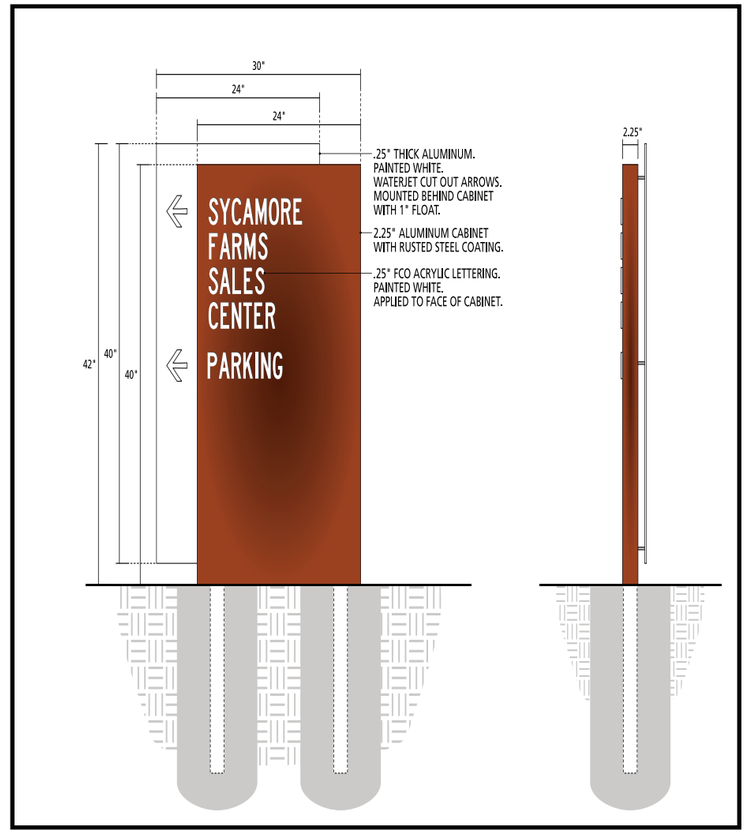


EXHIBIT S: PRIMARY ENTRY FEATURE ELEVATION

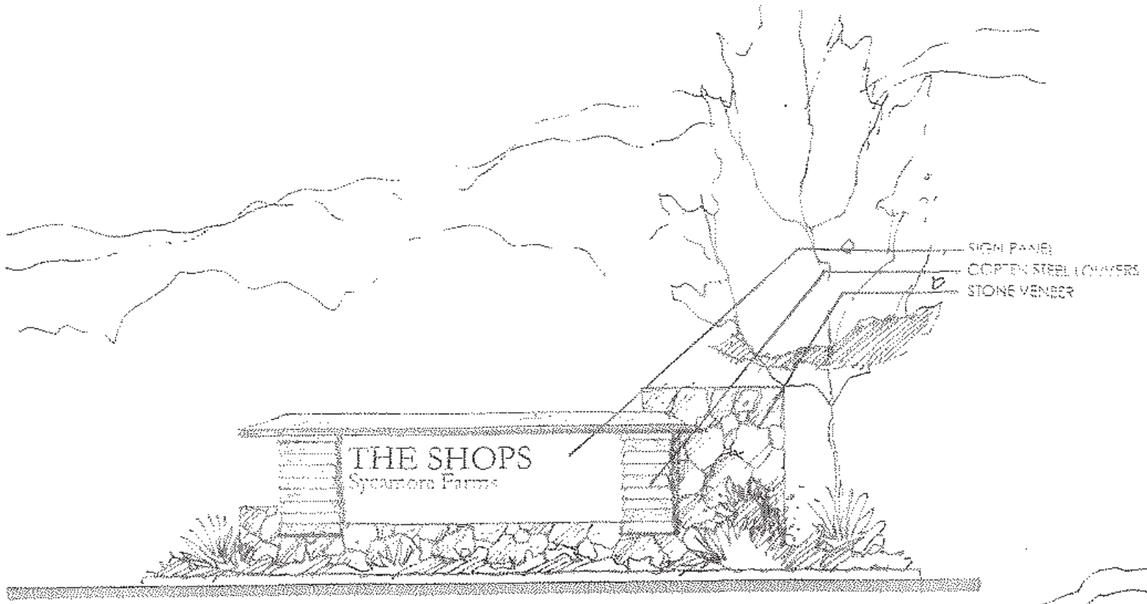




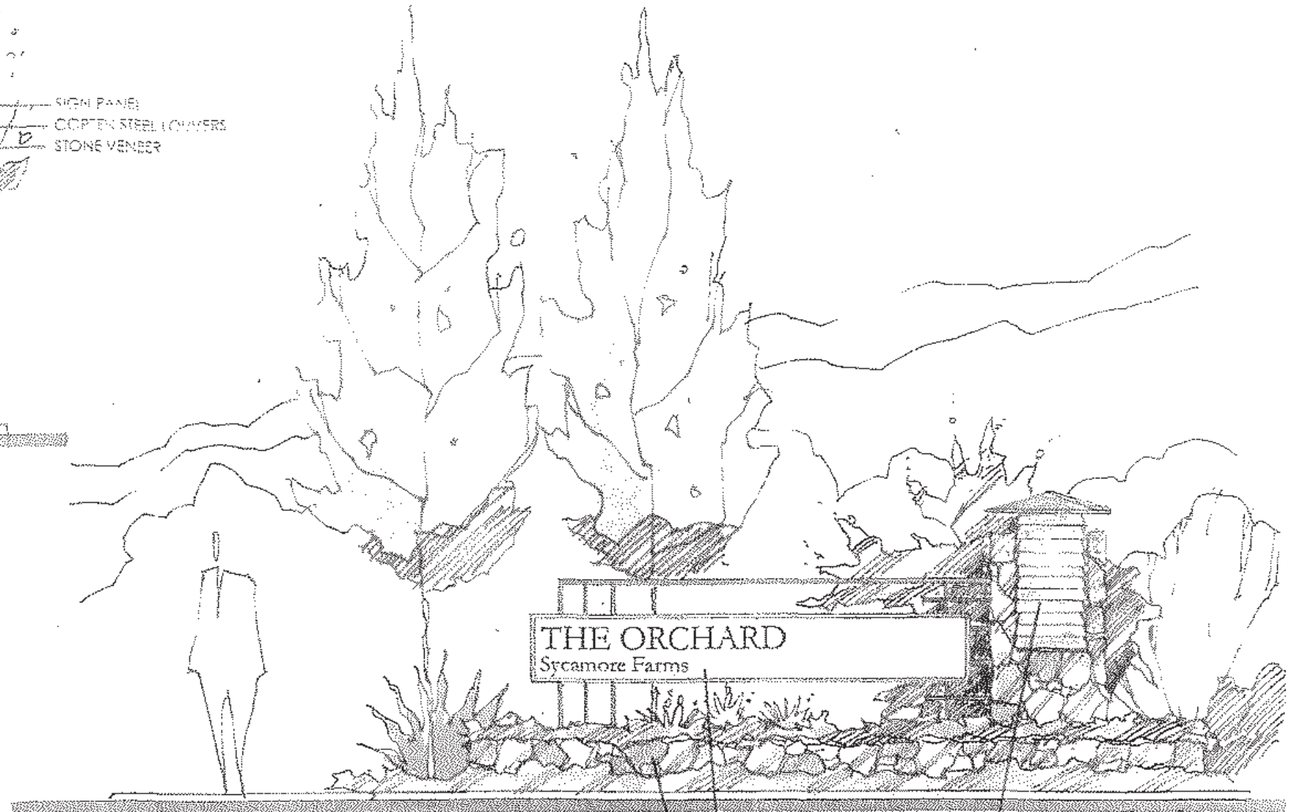


FREESTANDING DIRECTIONAL SIGN

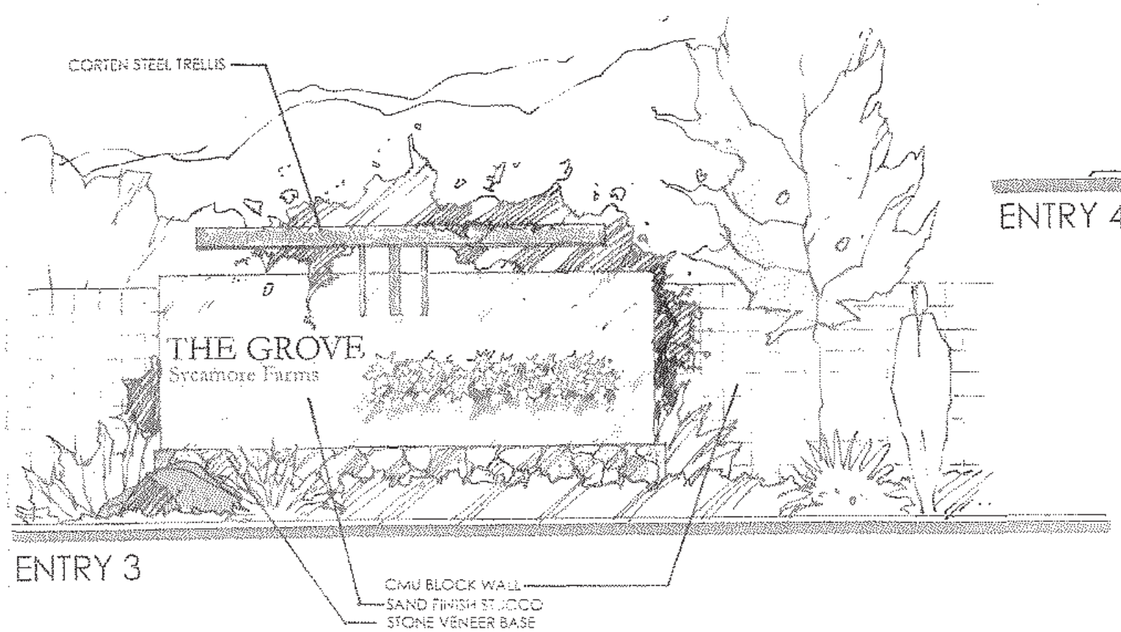
EXHIBIT T: SECONDARY ENTRY FEATURE ELEVATION & FREESTANDING DIRECTIONAL SIGN



ENTRY 5



ENTRY 4



ENTRY 3

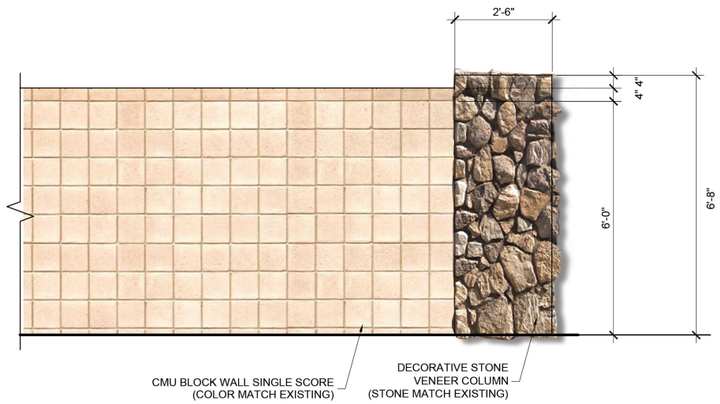
MACDONALD LANDSCAPE ARCHITECTURE

MACDONALDDESIGN@COX.NET

ENTRY FEATURES

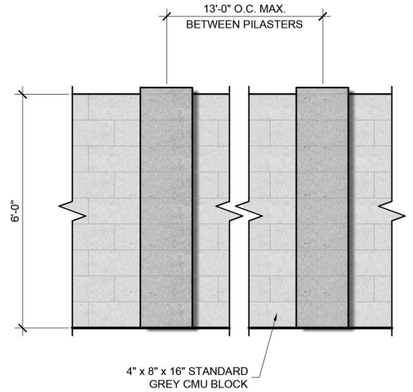
5.12.03

EXHIBIT U: ENTRY FEATURES ELEVATIONS



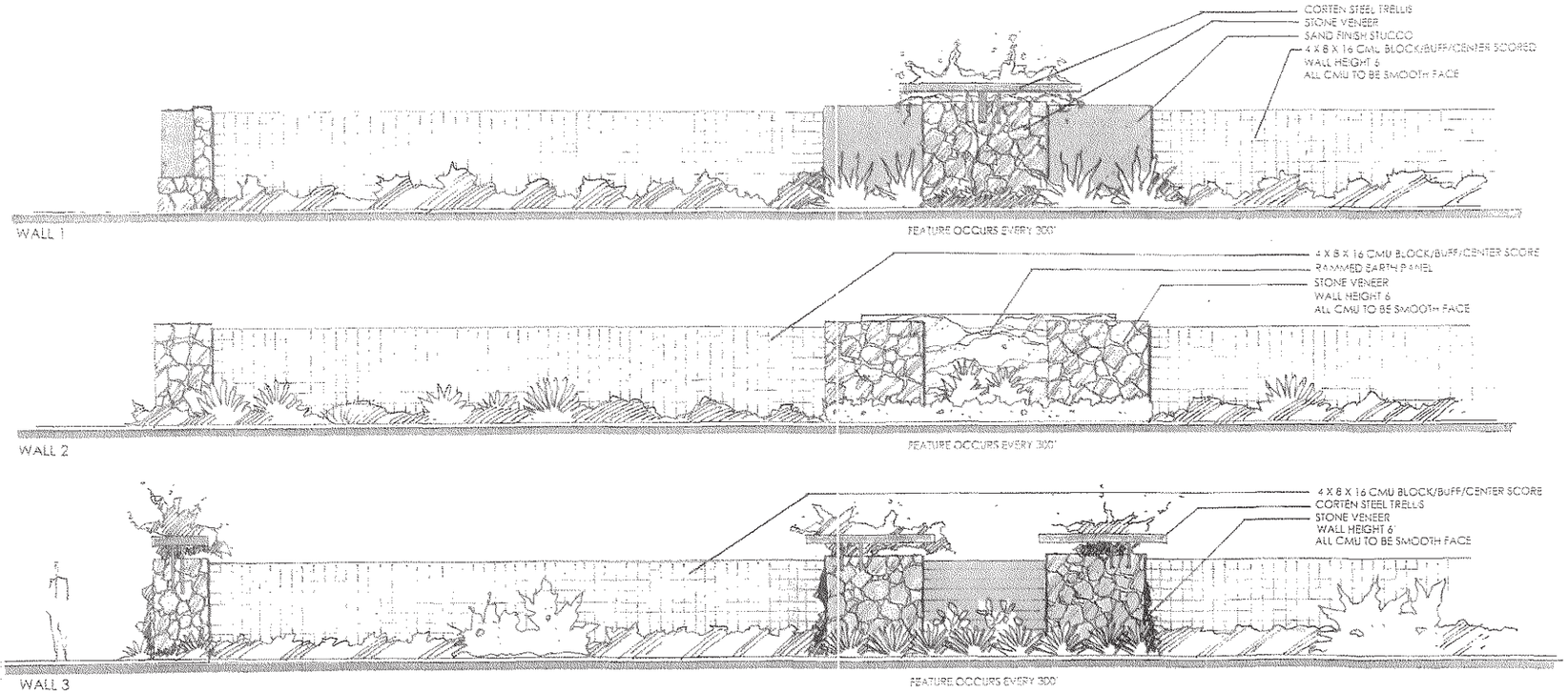
THEME WALL

SCALE: 1/2" = 1'-0"



BUILDER WALL

SCALE: 1/2" = 1'-0"

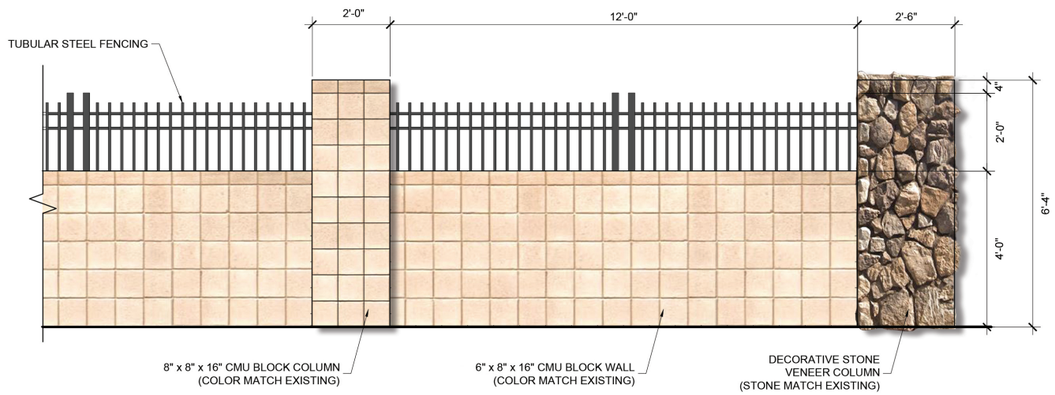


THEME WALL

MACDONALD LANDSCAPE ARCHITECTURE

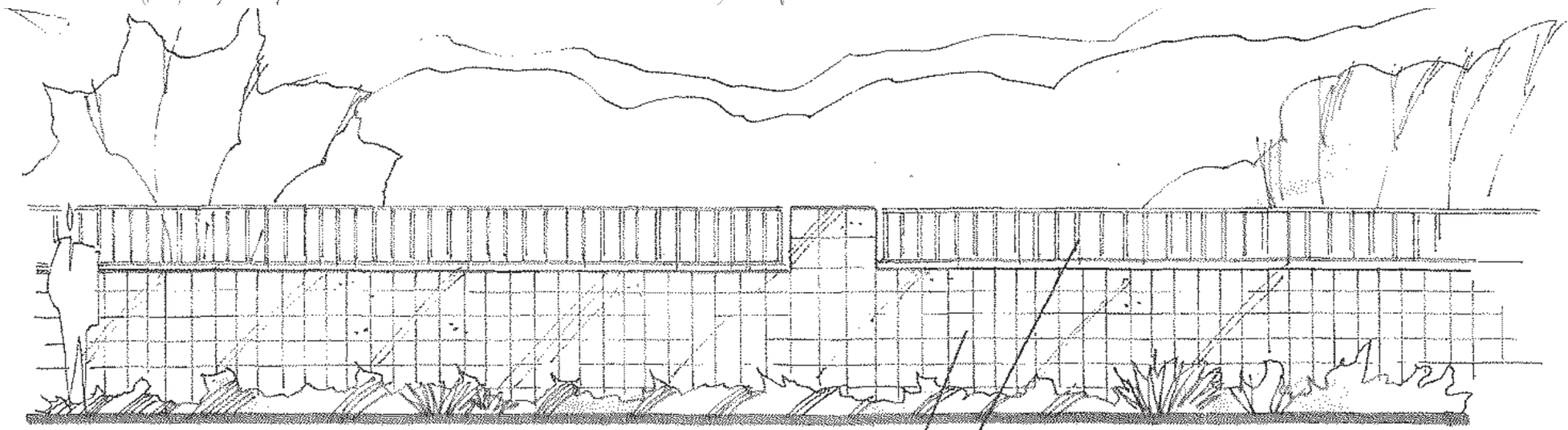


PERSPECTIVE



PARTIAL VIEW WALL

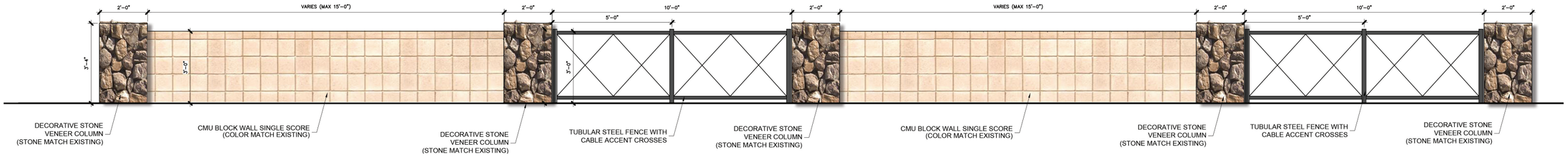
SCALE: 1/2" = 1'-0"



ELEVATION

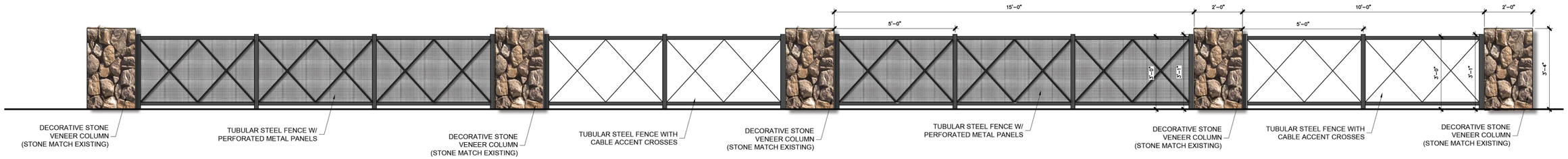
MACDONALD LANDSCAPE ARCHITECTURE

PARTIAL VIEW WALL



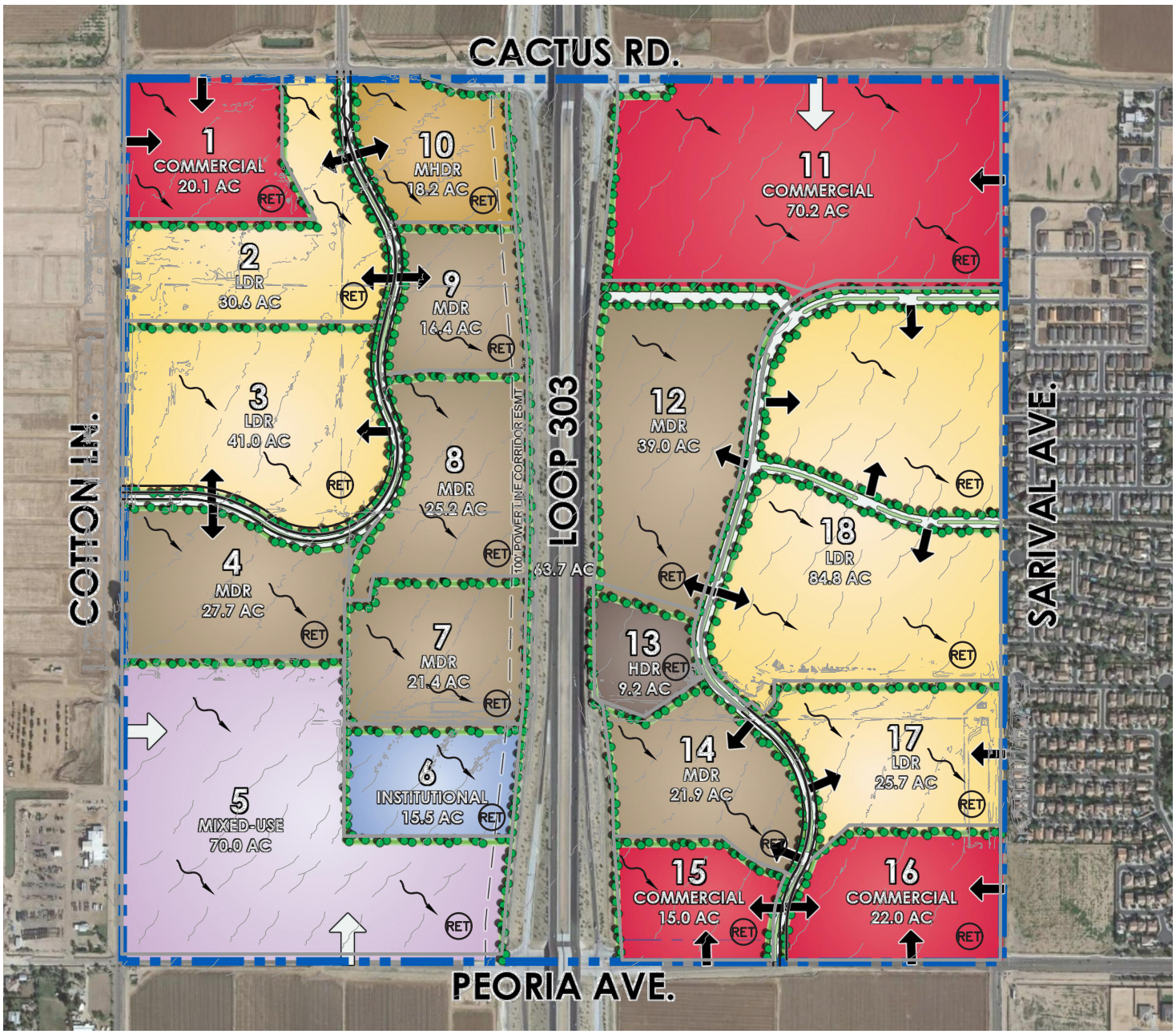
LOW ACCENT WALL AND ACCENT FENCE

SCALE: 1/2" = 1'-0"



LOW ACCENT WALL AND ACCENT FENCE - ALTERNATIVE A

SCALE: 1/2" = 1'-0"



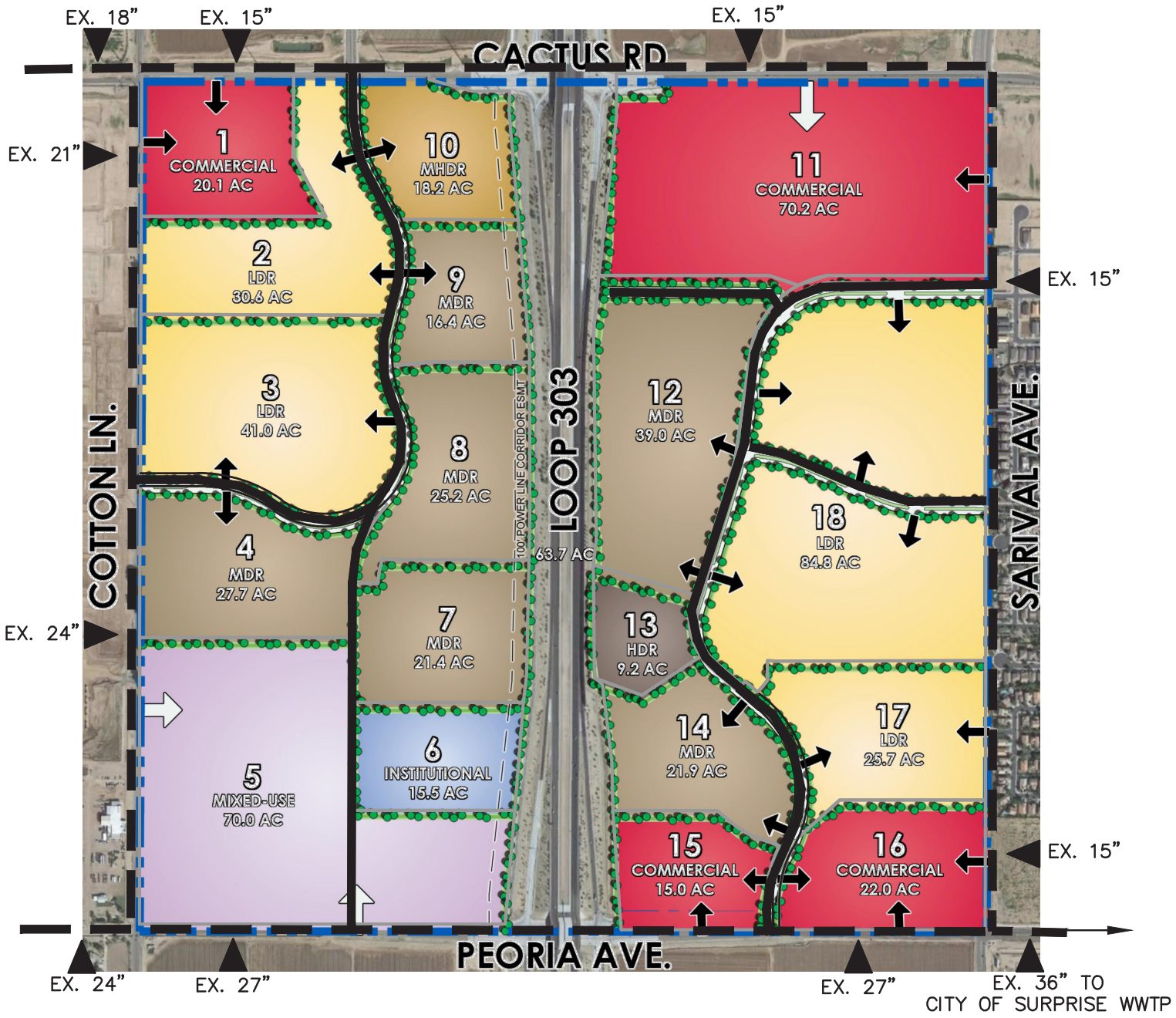
LEGEND

Direction Of Stormwater Flow

RET 100–yr 2–hr Retention Basin

EXHIBIT Y: PROPOSED ON-SITE DRAINAGE PATTERNS

N.T.S.



LEGEND

SEWER BY SYCAMORE FARMS

EXISTING SEWER (SIZE AS SHOWN)

EXHIBIT Z: CONCEPTUAL WASTEWATER SYSTEM

N.T.S.



LEGEND

WATER BY SYCAMORE FARMS

EXISTING WATER (SIZE AS SHOWN)

Land Use Matrix

Use Group	Land Use District	
	Permitted Use	Conditional Use
Agricultural, Ranching & Open Space Uses		
Animal Hospitals, Clinic, and Boarding Facilities	Commercial (“C”)	
Equestrian Center, Stables, and Riding Academies	C	Low Density Residential "LDR"
Parks, Recreation, and Open Lands	All Districts	
Residential Uses		
Assisted Living Facility	Medium Density Residential (“MDR”), Medium-High Density Residential ("MHDR"), High Density Residential (“HDR”), Institutional (“I”)	
Bed And Breakfast Establishments		LDR
Congregate Care Facility	MDR, MHDR, HDR, I	
Group Home	LDR, MDR, MHDR, HDR	
High Density Dwellings	MHDR, HDR, Mixed Use (“MU”)	
Hotels, Timeshares	C	
Low Density Dwellings	LDR	
Medium Density Dwellings	MLD	
Model Home Complex	LDR, MDR, MHDR, HDR	
Residential Setting Care Facility	LDR, MDR, MHDR, HDR	
Retail & Service Uses		
Alcohol - Bar and/or Tavern, Microbrewery	C, MU	
Alcohol - Beverage Retail Sales	C, MU	
Ambulance Service	C, MU	
Ammunition and Firearms Sales	C, MU	
Auto Mall or New Vehicle Dealership (and ancillary uses)	MU	C
Cemetery - Pets *(limited to small animals)*		C
Cemetery or Mausoleum		LDR, MDR, MHDR, HDR, C

Land Use Matrix

Use Group	Land Use District	
	Permitted Use	Conditional Use
Day Care Center - Child and/or Adult Care		LDR, MDR, MHDR, HDR, C
Drive-Through Facilities		C
Funeral Home, Mortuary	C	
Home Improvement Center (indoors)		C
Massage - Therapeutic	C, MU	
Medical Clinic or Laboratory	C, Institutional ("I")	
Medical Hospital or Outpatient Facility	I	
Medical Office	C, MU, I	
Mobile Vending	C, MU, I	
Motion picture, art or phot studio (indoors only)	MU	
Nursery *(Growing, display, or sale of plant stock, seeds, or other horticultural items)*	C	
Pawn Shop	C, MU	
Personal Services Establishment *(A facility for the sale of personal services. Typical personal service uses include arts and craft studios, banks, barber/beauty shops, locksmith, shoe repair, tailors, photo studios, laundry, cleaning pickup and receiving station, safe deposit boxes, travel* agencies, printing or copy shops, savings and loan, appliance repair)	C, MU	
Radio or Television studio *(not including transmitters or towers)*	MU	
Retail Shopping Establishment over 50,000 sq. ft. *(Typical general merchandise includes clothing and other apparel, equipment for hobbies and sports, gifts, flowers and household plants, dry goods, food, floor covering, home decor, toys, furniture, antiques, hardware, appliances, books and stationery, pets, drugs, auto parts and accessories, and similar consumer goods. Food store uses include grocery, delicatessen, catering, and convenience and specialty foods stores. The retail shopping establishment use does not include other uses in this article that are specifically listed)*	C	

Land Use Matrix		
Use Group	**Land Use District**	
	Permitted Use	**Conditional Use**
Temporary construction offices, sheds or storage incidental to construction on a parcel within the Sycamore Farms Master Plan *(not to exceed 24 months per project)*	MU	
Vehicle Fueling Stations	C	
Vehicle Service - Minor Repair		C
Vehicle Washing Facilities		C
Wholesale Shopping Establishment *(Uses Listed Above in Retail Shopping Establishment)*		C
Wireless Facilities	All Districts	
Office Uses		
Office	C, I	
Public & Quasi-Public Facility Uses		
Animal Shelter		C
Clubhouse, Private including Lodges	C	
Community Facilities, Conference Center or Public Meeting Hall	LDR, MDR, MHDR, HDR, C, I, MU	
Hospital, Out-Patient Care, Medical Offices	I	
Library	LDR, MDR, MHDR, HDR, C, I	
Medial Research and Laboratories	I	
Post Office	C	
Public Facilities for use by Governmental agencies excluding screened outdoor storage or other similar uses that are not located within enclosed buildings	I	
Public or Private Museums	I	
Utility Equipment Infrastructure	All Districts	
Education, Religious & Assembly Uses		
Places of Worship	All Districts	
Quasi-public facilities for use by civic or non-profit organizations	I	
School – University, College, Specialty, or Trade	I	C
School - Pre-K - 12	LDR, MDR, MHDR, HDR	

Land Use Matrix		
Use Group	**Land Use District**	
	Permitted Use	**Conditional Use**
Recreational & Amusement Uses		
Athletic or Fitness Club, Commercial Recreation Facilities	HDR, C,I	
Athletic or Fitness Club, Commercial Recreation Facilities *(Less than 5,000 GFA and Indoor* Activities Only)	LDR, MDR, HDR, C, I	
Athletic Fields - Non-commercial	LDR, MDR, MHDR, HDR, C	
Bowling Alley. Dance Hall, Pool Hall	C	
Galleries, Auditoriums, Museums	C	
Golf Course. Driving Range, & Miniature Golf Facilities	C	
Public or Private Theatre or Concert Hall (*with live entertainment or other similar uses as approved by the City of Surprise)*	I	
Skating Rink - Ice or Roller Skating	C	
Theater - Indoor including Dinner Theatres	C	

Performance Standards and Requirements for all Permitted and Conditionally Permitted uses shall comply with the current adopted version of the Surprise Municipal Code.

EXHIBIT "A"
SECTION 24, TOWNSHIP 3 NORTH, RANGE 2 WEST DESCRIPTION

SECTION 24, TOWNSHIP 3 NORTH, RANGE 2 WEST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID SECTION 24, BEING MARKED BY A BRASS CAP FLUSH, FROM WHICH A BRASS CAP IN HANDHOLE, MARKING THE NORTH QUARTER CORNER OF SAID SECTION 24, BEARS SOUTH 89 DEGREES 55 MINUTES 32 SECONDS EAST, 2627.83 FEET;

THENCE SOUTH 89 DEGREES 55 MINUTES 32 SECONDS EAST, ALONG THE NORTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 24, 2627.83 FEET TO A BRASS CAP IN HANDHOLE, MARKING THE NORTH QUARTER CORNER OF SAID SECTION 24;

THENCE DEPARTING SAID NORTH LINE, SOUTH 89 DEGREES 55 MINUTES 47 SECONDS EAST, ALONG THE NORTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 24, 2627.02 FEET TO A BRASS CAP IN HANDHOLE MARKING THE NORTHEAST CORNER OF SAID SECTION 24;

THENCE DEPARTING SAID NORTH LINE, SOUTH 00 DEGREES 08 MINUTES 05 SECONDS WEST, ALONG THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 24, 2637.85 FEET TO A BRASS CAP IN HANDHOLE, MARKING THE EAST QUARTER CORNER OF SAID SECTION 24;

THENCE DEPARTING SAID EAST LINE, SOUTH 00 DEGREES 07 MINUTES 00 SECONDS WEST, ALONG THE EAST LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 24, 2640.94 FEET TO BRASS CAP FLUSH MARKING THE SOUTHEAST CORNER OF SAID SECTION 24;

THENCE DEPARTING SAID EAST LINE, NORTH 89 DEGREES 55 MINUTES 23 SECONDS WEST, ALONG THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 24, 2631.67 FEET TO A BRASS CAP IN HANDHOLE, MARKING THE SOUTH QUARTER CORNER OF SAID SECTION 24;

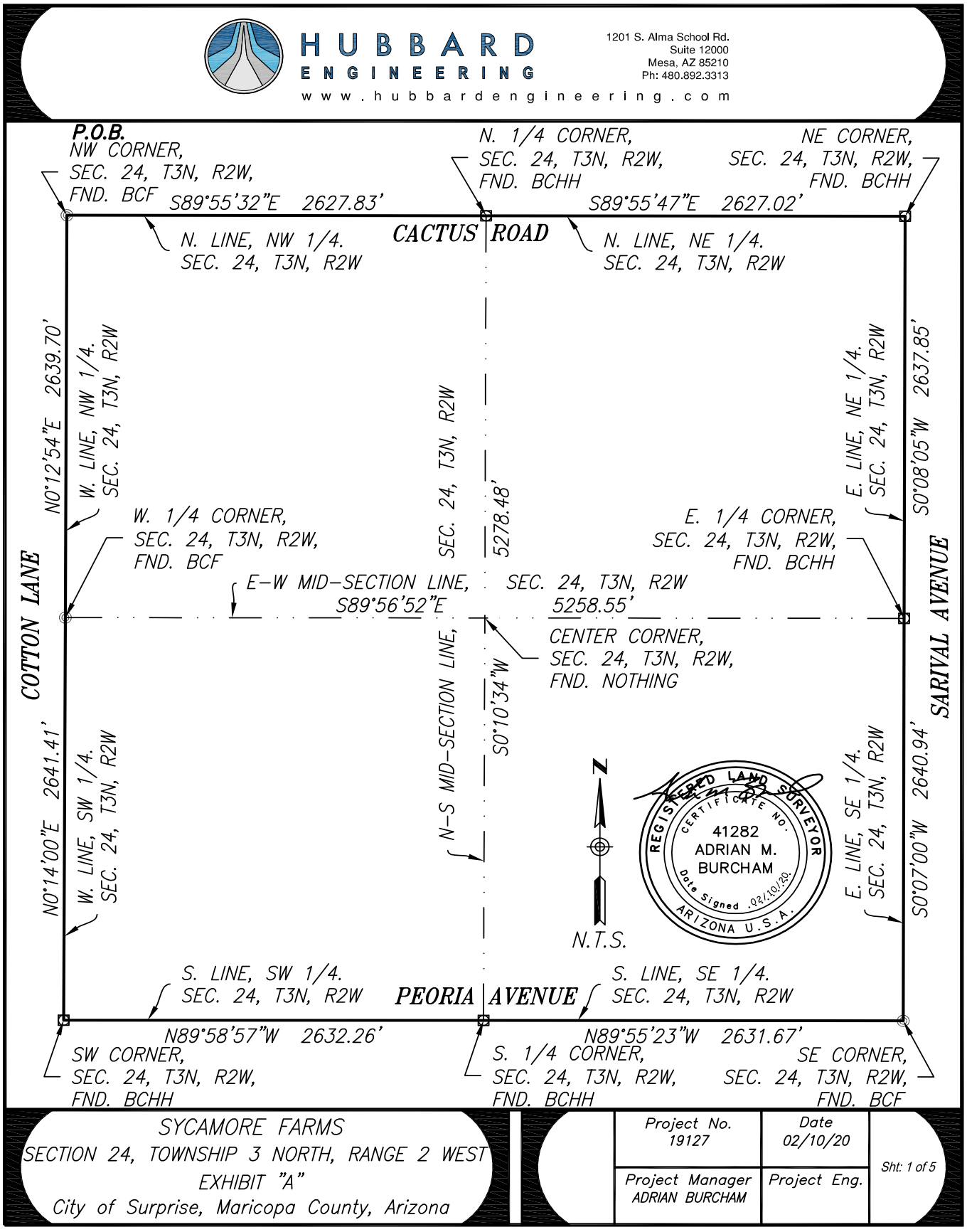
THENCE DEPARTING SAID SOUTH LINE, NORTH 89 DEGREES 58 MINUTES 57 SECONDS WEST, ALONG THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 24, 2632.26 FEET TO BRASS CAP IN HANDHOLE MARKING THE SOUTHWEST CORNER OF SAID SECTION 24;

THENCE DEPARTING SAID SOUTH LINE, NORTH 00 DEGREES 14 MINUTES 00 SECONDS EAST, ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 24, 2641.41 FEET TO A BRASS CAP FLUSH, MARKING THE WEST QUARTER CORNER OF SAID SECTION 24;

THENCE DEPARTING SAID WEST LINE, NORTH 00 DEGREES 12 MINUTES 54 SECONDS EAST, ALONG THE WEST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 24, 2639.70 FEET TO SAID NORTHWEST CORNER AND THE **POINT OF BEGINNING.**

SAID PARCEL CONTAINS 27,763,175 SQUARE FEET OR 637.3548 ACRES, MORE OR LESS.




HUBBARD ENGINEERING
1201 S. Alma School Rd.
Suite 12000
Mesa, AZ 85210
Ph: 480.892.3313
www.hubbardengineering.com
P.O.B.
NW CORNER,
SEC. 24, T3N, R2W,
FND. BCF
S89°55'32"E 2627.83'
N. 1/4 CORNER,
SEC. 24, T3N, R2W,
FND. BCHH
S89°55'47"E 2627.02'
NE CORNER,
SEC. 24, T3N, R2W,
FND. BCHH
CACTUS ROAD
N. LINE, NW 1/4.
SEC. 24, T3N, R2W
N. LINE, NE 1/4.
SEC. 24, T3N, R2W
COTTON LANE
SARIVAL AVENUE
N0°12'54"E 2639.70'
W. LINE, NW 1/4.
SEC. 24, T3N, R2W
S0°08'05"W 2637.85'
E. LINE, NE 1/4.
SEC. 24, T3N, R2W
W. 1/4 CORNER,
SEC. 24, T3N, R2W,
FND. BCF
SEC. 24, T3N, R2W
5278.48'
E. 1/4 CORNER,
SEC. 24, T3N, R2W,
FND. BCHH
E-W MID-SECTION LINE,
S89°56'52"E
SEC. 24, T3N, R2W
5258.55'
CENTER CORNER,
SEC. 24, T3N, R2W,
FND. NOTHING
N-S MID-SECTION LINE,
S0°10'34"W
N0°14'00"E 2641.41'
W. LINE, SW 1/4.
SEC. 24, T3N, R2W
S0°07'00"W 2640.94'
E. LINE, SE 1/4.
SEC. 24, T3N, R2W
N
N.T.S.
REGISTERED LAND SURVEYOR
CERTIFICATE No.
41282
ADRIAN M.
BURCHAM
Date Signed 02/10/20
ARIZONA U.S.A.
S. LINE, SW 1/4.
SEC. 24, T3N, R2W
PEORIA AVENUE
S. LINE, SE 1/4.
SEC. 24, T3N, R2W
N89°58'57"W 2632.26'
N89°55'23"W 2631.67'
SW CORNER,
SEC. 24, T3N, R2W,
FND. BCHH
S. 1/4 CORNER,
SEC. 24, T3N, R2W,
FND. BCHH
SE CORNER,
SEC. 24, T3N, R2W,
FND. BCF
SYCAMORE FARMS
SECTION 24, TOWNSHIP 3 NORTH, RANGE 2 WEST
EXHIBIT "A"
City of Surprise, Maricopa County, Arizona
Project No. 19127
Date 02/10/20
Project Manager ADRIAN BURCHAM
Project Eng.
Sht: 1 of 5

DEPARTMENT OF THE AIR FORCE
AIR EDUCATION AND TRAINING COMMAND

26 November 2019

Mr. James R. Mitchell
Director, Community Initiatives Team
56th Fighter Wing
14185 West Falcon St.
Luke AFB AZ 85309-1629

Ms. Lorraine Nevarez
Planning Project Coordinator
16000 North Civic Center Plaza
Surprise AZ 85374

Re: FS19-787; Sycamore Farms PAD Rezone (APN: 501-07-007, 501-10-001)

Dear Ms. Nevarez

Thank you for the opportunity to provide comments on Sycamore Farms PAD Rezone. The site sits on 231 acres of land located near the southwest corner of Loop 303 Freeway and Cactus Road in Surprise AZ. This proposed development is for 845 lots. The site is approximately 1 miles outside Luke AFB 1988 JLUS 65 Ldn, "high noise or accident potential zone" as defined by A.R.S. § 28-8461 and is within the "territory in the vicinity of a military airport" also defined by A.R.S. § 28-8461.

In an effort to promote a more compatible co-existence, Luke AFB follows the guidelines in the Graduated Density Concept (GDC). The GDC proposes, in the absence of a more restrictive state, county or municipal general or comprehensive plan, graduating densities away from the 65 Ldn as follows: a maximum of 2 du/acre from the 65 Ldn to 1/2 mile, a maximum of 4 du/acre from 1/2 to 1 mile, and a maximum of 6 du/acre from 1 to 3 miles. This project with a density of 3.65 du/ac falls within these guidelines and will not negatively impact the flying operations at Luke AFB.

If approved, Sycamore Farms PAD Rezone will be located within the "territory in the vicinity of a military airport," and will be subjected to approximately 165 over flights a day, with some as low as 1,500 feet above ground level. We recommend you review the sound attenuation requirements found in A.R.S. § 28-8482. In addition, a strong notification program on the part of the applicant would be essential to inform potential residents about Luke AFB operations.

If you have any questions, please contact my Community Planner, Mr. Reggie Christianson at (623) 856-9981.

Sincerely

JAMES R. MITCHELL

cc:
Colonel Scott W. Walker, Vice Commander, 56th Fighter Wing
Ms. Cindy L. Allen, GS-13, General and Environmental Law Attorney, 56th Fighter Wing

DYSART Unified School District

October 24, 2019

To Whom It May Concern,

Dysart Unified School District has reviewed the project and plan amendments for Sycamore Farms (CR19-614 et al.). The district has no objections to the project. There is a developer/district assistance agreement in place. The district is working with Byron Easton of RVI Planning; we have volunteered to adjust the agreement to reflect the limited student impact of potential 'cottage style' rental units and associated donation amounts.

The need for pedestrian connectivity was communicated in last month's concept review meeting. The proposal displayed good connectivity and City of Supriorse staff outlined additional needs for connections. As this development will include significant bus service, the ability for students to travel through the community to stops is paramount.

The district appreciates the opportunity to comment on the project and the developer's representatives willingness to address our comments.

Sincerely,



Kevin Shipman
Planning Administrator
Planning Department
Dysart Unified School District
a: 15802 N Parkview Place, Surprise, AZ 85374
w: www.dysart.org **e:** kevin.shipman@dysart.org
s: Visit us on Facebook, Twitter, Instagram, and YouTube @DysartUSD

PUBLIC ENGAGEMENT FORM

PROJECT TITLE: Sycamore Farms PAD Zone Change

OVERALL PUBLIC INVOLVEMENT LEVEL:

This activity will follow the citizen outreach and public hearing notification processes as outlined in state statute and the SUDC.

IDENTIFY STAKEHOLDERS:

Impacted residents; schools; businesses; public at-large; property owners.

OBJECTIVES:

The subject request involves the rezoning of approximately 285.2 acres of land to modify land uses and to introduce a Medium to High Density Residential (MHDR) category for “detached apartments."

PUBLIC ENGAGEMENT STRATEGIES & TOOLS:

Public Engagement & Project timeline:

Public outreach time frame (when to when) 03/04/20
Future Council Work Session/Meetings target dates PZ Commission 04/16/20, City Council 05/05/20
Election dates (if applicable) N/A
Project start/completion dates N/A

Communication Tools and Technique options: (which do you plan to use?)

- ☐ Press releases
- ☑ Public meetings (video/photos, poster boards, fact sheet(s) *do you need Spanish version?)
- ☑ Presentations to boards and commissions, other interested community partners/stakeholders
- ☐ Third-party consultant/moderator (pending budget)
- ☐ Survey (online/paper/both?)
- ☐ Social media
- ☑ Surprise 11
- ☐ Notify Me email/ Council newsletters (opt-in audience)
- ☑ Paid advertising (pending budget)
- ☐ Surprise Progress (mailed quarterly and tied to print deadlines)
- ☐ Booth at city events
- ☐ Paid mailings (pending budget)
- ☐ Creation of a subcommittee/task force
- ☐ Youth/adult activities, registration, or orientation (HOA Academy)
- ☐ Website updates

CITIZEN PARTICIPATION REPORT

SYCAMORE FARMS PAD AMENDMENT
CITY OF SURPRISE

Property Location:
Approximately 480 acres bounded by Cactus Road, Peoria Avenue, Sarival Avenue and Cotton Lane

Prepared by:
RVi Planning + Landscape Architecture
120 E. Ash Ave.
Tempe, AZ 85281

Prepared For:
City of Surprise

Case: FS19-787

March 9, 2020

Project Summary

This report has been prepared in conjunction with a request to amend the Sycamore Farms PAD to allow for general modifications to the residential use parcel and other incidental changes to the non-residential parcels. The proposal is for approximately 2,161 residential units at a gross density of 2.5 du/ac, which will include detached and attached single-family residential, and multi-family residential. The overall proposed unit count is a reduction from the currently approved Sycamore Farms PAD (FS18-554) which allows for 2.365 dwelling units. The plan of development will also show commercial (neighborhood level retail and community level retail) mixed-use (office, institutional, retail, and/or residential) institutional, a community linear park, pedestrian trail system, and the Loop 303 freeway that bisects the site including two freeway interchanges.

Dysart Unified School District

The project is located within the boundaries of the Dysart Unified School District. On October 24, 2019 the project received a letter of support from the School District. The District notes that there is a current developer/district assistance agreement in place, but they will adjust the agreement to reflect the lessened student impact based on the decreased density of the site. Additionally, the District has requested that pedestrian connectivity be provided during the concept review meeting process and that the proposal currently shows good connectivity. See **Attachment A:** *Dysart Unified School District Letter of Support*.

Sign Posting

Two double-sided neighborhood meeting signs were originally posted at the northwest and southwest corners of the site on January 29, 2020. On February 17, 2020 the signs were modified to show the rescheduled meeting time. The signs included information about the rezoning request, the case number, and information regarding the official neighborhood meeting (Meeting # 1). The sign posting conformed to City of Surprise notification requirements. On Monday, March 9, 2020 the sign was updated to include the upcoming Planning & Zoning and City Council hearing dates. See **Attachment B:** *Affidavit of Sign Posting*.

Summary of Neighborhood Outreach Efforts

The development team understands the importance of reaching out to area residents and proactively working with neighborhood stakeholders to gain their feedback and address any potential site plan concerns. Thus far in the outreach process, the development team has presented the site plan to area residents at one neighborhood meeting. In this meeting, residents had the opportunity to view the proposed site plan concept and provide comment. The development team recorded this feedback and has provided a record of citizen comment card responses with this report. While we understand that not everyone will be fully satisfied with the revised plan, we feel that it is crucial to make a good faith effort to address as many concerns as possible. A Summary of the neighborhood meeting where the plan was presented has been provided as **Attachments C**. See below for a list of neighborhood feedback received as well as a summary of how the development team worked to address each comment.

Attachments

A. Dysart Unified School District Letter of Support
B. Affidavit of Sign Posting
C. Neighborhood Meeting #1 Summary
D. Comment Cards

DYSART Unified School District

October 24, 2019

To Whom It May Concern,

Dysart Unified School District has reviewed the project and plan amendments for Sycamore Farms (CR19-614 et al.). The district has no objections to the project. There is a developer/district assistance agreement in place. The district is working with Byron Easton of RVI Planning; we have volunteered to adjust the agreement to reflect the limited student impact of potential 'cottage style' rental units and associated donation amounts.

The need for pedestrian connectivity was communicated in last month's concept review meeting. The proposal displayed good connectivity and City of Supriorse staff outlined additional needs for connections. As this development will include significant bus service, the ability for students to travel through the community to stops is paramount.

The district appreciates the opportunity to comment on the project and the developer's representatives willingness to address our comments.

Sincerely,



Kevin Shipman
Planning Administrator
Planning Department
Dysart Unified School District
a: 15802 N Parkview Place, Surprise, AZ 85374
w: www.dysart.org **e:** kevin.shipman@dysart.org
s: Visit us on Facebook, Twitter, Instagram, and YouTube @DysartUSD


Notice of Public Hearing
City of Surprise
Neighborhood Meeting
Date: March 4, 2020
Time: 6:30 P.M.
Location: Paradise Honors
High School Cafeteria
12775 N 175th Avenue
Surprise, Arizona 85388
Planning & Zoning
Date: April 16, 2020
Time: 6:00 P.M.
Location: Surprise City Hall
16000 N. Civic Ctr. Plaza
Surprise, AZ 85374
City Council
Date: May 5, 2020
Time: 6:00 P.M.
Location: Surprise City Hall
16000 N. Civic Ctr. Plaza
Surprise, AZ 85374
Case #: FS19-787
Project Description: A Planned Area Development (PAD) rezone modifying land uses for Community Commercial (PAD-C2), Low-Density Residential (PAD-LDR), and PAD-Medium-Density Residential (PAD-MDR) zoned properties.
Please call to confirm dates:
623-222-3011
3/10/20 13:00:46


Notice of Public Hearing
City of Surprise
Neighborhood Meeting
Date: March 4, 2020
Time: 6:30 P.M.
Location: Paradise Honors
High School Cafeteria
12775 N 175th Avenue
Surprise, Arizona 85388
Planning & Zoning
Date: April 16, 2020
Time: 6:00 P.M.
Location: Surprise City Hall
16000 N. Civic Ctr. Plaza
Surprise, AZ 85374
City Council
Date: May 5, 2020
Time: 6:00 P.M.
Location: Surprise City Hall
16000 N. Civic Ctr. Plaza
Surprise, AZ 85374
Case #: FS19-787
Project Description: A Planned Area Development (PAD) rezone modifying land uses for Community Commercial (PAD-C2), Low-Density Residential (PAD-LDR), and PAD-Medium-Density Residential (PAD-MDR) zoned properties.
Please call to confirm dates:
623-222-3011
3/10/20 13:03:26


Notice of Public Hearing
City of Surprise
Neighborhood Meeting
Date: March 4, 2020
Time: 6:30 P.M.
Location: Paradise Honors
High School Cafeteria
12775 N 175th Avenue
Surprise, Arizona 85388
Planning & Zoning
Date: April 16, 2020
Time: 6:00 P.M.
Location: Surprise City Hall
16000 N. Civic Ctr. Plaza
Surprise, AZ 85374
City Council
Date: May 5, 2020
Time: 6:00 P.M.
Location: Surprise City Hall
16000 N. Civic Ctr. Plaza
Surprise, AZ 85374
Case #: FS19-787
Project Description: A Planned Area Development (PAD) rezone modifying land uses for Community Commercial (PAD-C2), Low-Density Residential (PAD-LDR), and PAD-Medium-Density Residential (PAD-MDR) zoned properties.
Please call to confirm dates:
623-222-3011
3/10/20 13:11:00


Notice of Public Hearing
City of Surprise
Neighborhood Meeting
Date: March 4, 2020
Time: 6:30 P.M.
Location: Paradise Honors
High School Cafeteria
12775 N 175th Avenue
Surprise, Arizona 85388
Planning & Zoning
Date: April 16, 2020
Time: 6:00 P.M.
Location: Surprise City Hall
16000 N. Civic Ctr. Plaza
Surprise, AZ 85374
City Council
Date: May 5, 2020
Time: 6:00 P.M.
Location: Surprise City Hall
16000 N. Civic Ctr. Plaza
Surprise, AZ 85374
Case #: FS19-787
Project Description: A Planned Area Development (PAD) rezone modifying land uses for Community Commercial (PAD-C2), Low-Density Residential (PAD-LDR), and PAD-Medium-Density Residential (PAD-MDR) zoned properties.
Please call to confirm dates:
623-222-3011
3/10/20 13:15:43

CITY OF SURPRISE
Site posting Process

AFFIDAVIT OF POSTING
(Sign modification)

Application No: FS19-787

Applicant Name: _____.

Location: Southeast corner of Cactus Rd and Cotton Ln

Date Site Posted: Org post: January 29th, 2020 sign modified: March 10th, 2020

In order to assist in providing adequate notice to interested parties, the applicant for any *type of public hearing* in the City of Surprise shall erect two (2) signs giving notice of the *date, time and place* of the scheduled hearings. These signs must be erected not less than **fifteen (15) days prior to** the date of the first hearing. The signs shall also include the nature of the request as contained on the formal zoning application. The size and format of this sign shall meet requirements established by the Planning and Zoning Department (see page 2).

Such notice shall be clearly legible and placed at a prominent location on the site – Generally adjacent and perpendicular to the public right-of-way. It shall be the *responsibility of the applicant* to erect and to maintain the sign on the subject property and to maintain the hearing information on the sign until final disposition of the case.

It shall also be the *responsibility of the applicant* to remove the signs within one week after the final disposition of the case.

I confirm that the site has been posted as required above, for the case noted above. A picture of the site posting, and photos of any subsequent changes/updates made to the sign, have also been submitted.

_____ 3/10/2020
Applicant/Representative Signature Date

This instrument was acknowledged before me on this 10th day of March, 2020, and by Maria Hitt. I witness whereof I hereunto set my hand and official seal.

_____
Notary Public

10.25.20
My commission expires

*Return completed and notarized **affidavit** and all relevant **photos** to the Planning andZoning Department at least fifteen (15) days **prior to** the scheduled meeting(s).*

MARYBETH CONRAD
Notary Public, State of Arizona
Maricopa County
My Commission Expires
October 25, 2020

MEETING 1:

Location: Paradise Honors High School, Cafeteria

Date: March 4, 2020

Time: 6:30pm

A community meeting was held on March 4, 2020 with community residents to discuss the proposed amendment to the Sycamore Farms PAD. The meeting was held at 6:30pm in the Cafeteria at Paradise Honors High School which is approximately 1 mile from the subject property. The meeting was attended by approximately 15 residents that generally expressed support for the PAD amendment and planned residential community by Taylor Morrison Homes. A majority of meeting attendees live within the existing Sycamore Farms residential east of the Loop 303.

The primary comments/questions raised by meeting attendees included the following:

- **Traffic and Vehicular Circulation**

  The project team was asked by meeting attendees about the extension of 165th Avenue from it's existing terminus to Peoria Avenue. The PAD identifies the roadways as being extended to a planned intersection to be located approximately half way between the Loop 303 and Sarival Avenue. The timing of these improvements are not determined at this time.

- **Pedestrian Circulation**

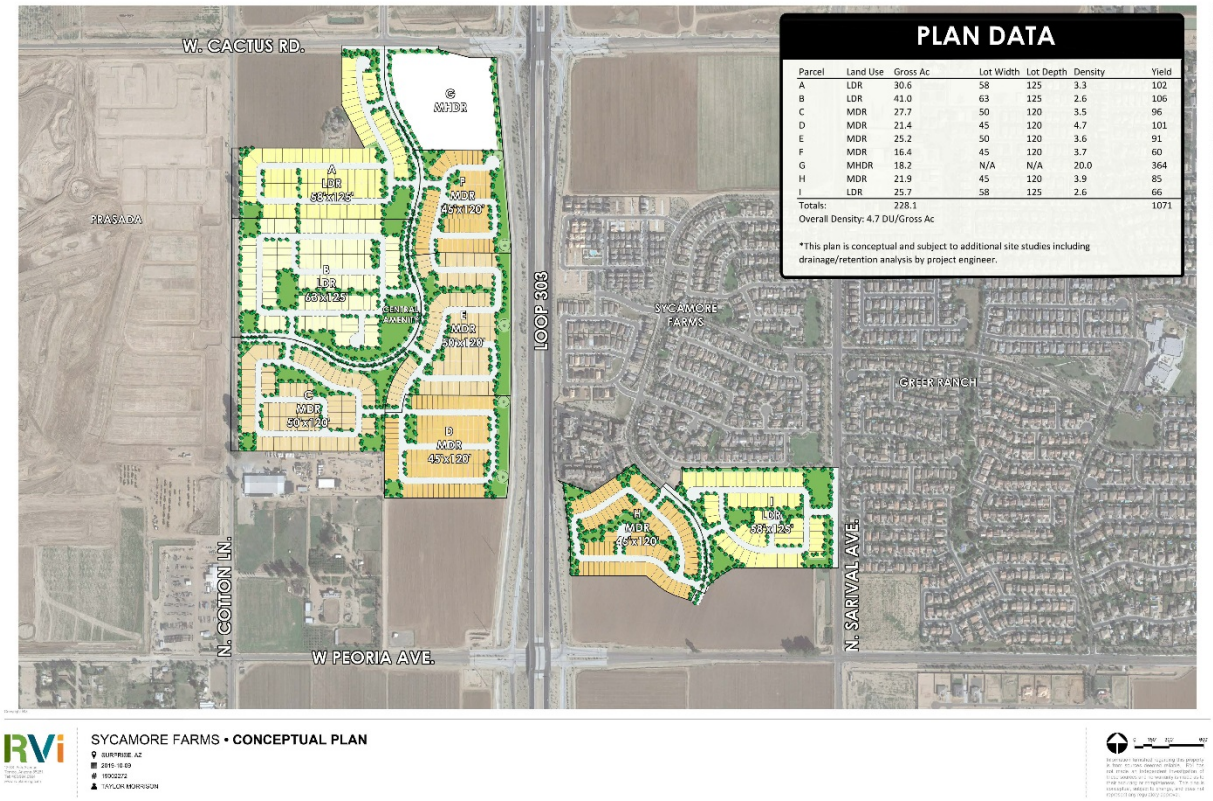
  Residents provided several suggestions for pedestrian circulation that focused on connections between existing and proposed neighborhoods. The project team members in attendance referenced multiple connection opportunities that would be enhanced by the extension of on-site and off-site improvements. Some specific connection points suggested by residents could not be provided due to site constraints but a very comprehensive network of accessible sidewalks, pathways and trails would be established throughout the planned community.

- **Protection of Existing Trees on Peoria Avenue**

  Team members explained that the existing trees are located within the future right-of-way and roadway expansion improvements and could likely not be maintained. Additionally, these trees are inadvertently watered as a result of tailwater ponding associated with the existing irrigation ditch that runs parallel to the roadway. Sarival Road improvements are likely to modify the agricultural water routing in a manner that removes the tailwater condition.

- **Other Topics**

  No apartments; timing of commercial; Taylor Morrison residential timing; pricing information about future homes.



Site Plan presented at the March 4th Neighborhood Meeting

COMMENT CARD

Sycamore Farms
Neighborhood Meeting – March 4, 2020

BRIAN HORGAN [redacted]

Name Street Address

[redacted]

Email Address Phone Number

COMMENTS / CONCERNS:

(1) PLEASE DO NOT CHANGE ANYTHING TO APARTMENTS

(2) PUSH 165TH DR ALL THE WAY TO PEORIA

Please place this card in the box.
Thank you!

COMMENT CARD

Sycamore Farms
Neighborhood Meeting – March 4, 2020

Susan Draper [redacted]

Name Street Address

[redacted] [redacted]

Email Address Phone Number

COMMENTS / CONCERNS:

Please allow walking path from Sycamore ~~Estates~~ to continue through the parcel to south of us. Would be nice to have access (walking) to the commercial areas to the south.

Please place this card in the box.
Thank you!

COMMENT CARD

Sycamore Farms
Neighborhood Meeting – March 4, 2020

Lari Staples
Name

[redacted]
Street Address

Surprise AZ
85388

[redacted]
Email Address

[redacted]
Phone Number

COMMENTS / CONCERNS:

Thank you for the meeting. We appreciate being able to ask questions. My one request is that the huge trees along Peoria by Sarival are left in place. Owls live in the trees and they are one of the reasons we purchased in the neighborhood.

Please place this card in the box.
Thank you!

Thank you!

COMMENT CARD

Sycamore Farms
Neighborhood Meeting – March 4, 2020

J.C. SCHNURR [redacted]

Name Street Address

[redacted] [redacted]

Email Address Phone Number

COMMENTS / CONCERNS:

PLEASE CONSIDER 2-STALL GARAGE OR RV GARAGES
BIGGER LOTS IF POSSIBLE. 8-9K SQ. FT.

Please place this card in the box.
Thank you!

COMMENT CARD

Sycamore Farms
Neighborhood Meeting – March 4, 2020

CHRISTIE ROBERTS [redacted] SURPRISE

Name Street Address

[redacted] [redacted]

Email Address Phone Number

COMMENTS / CONCERNS: Very informative. Glad I went. I want to be informed of future meetings — Zoning & Planning, etc. & public.

Thanks

Please place this card in the box.
Thank you!

COMMENT CARD

Sycamore Farms
Neighborhood Meeting – March 4, 2020

Will Randolph [redacted]
Name Street Address

[redacted] [redacted]
Email Address Phone Number

COMMENTS / CONCERNS:

Please forward me ongoing development change information. I'm a transportation planner @ M.A.G.

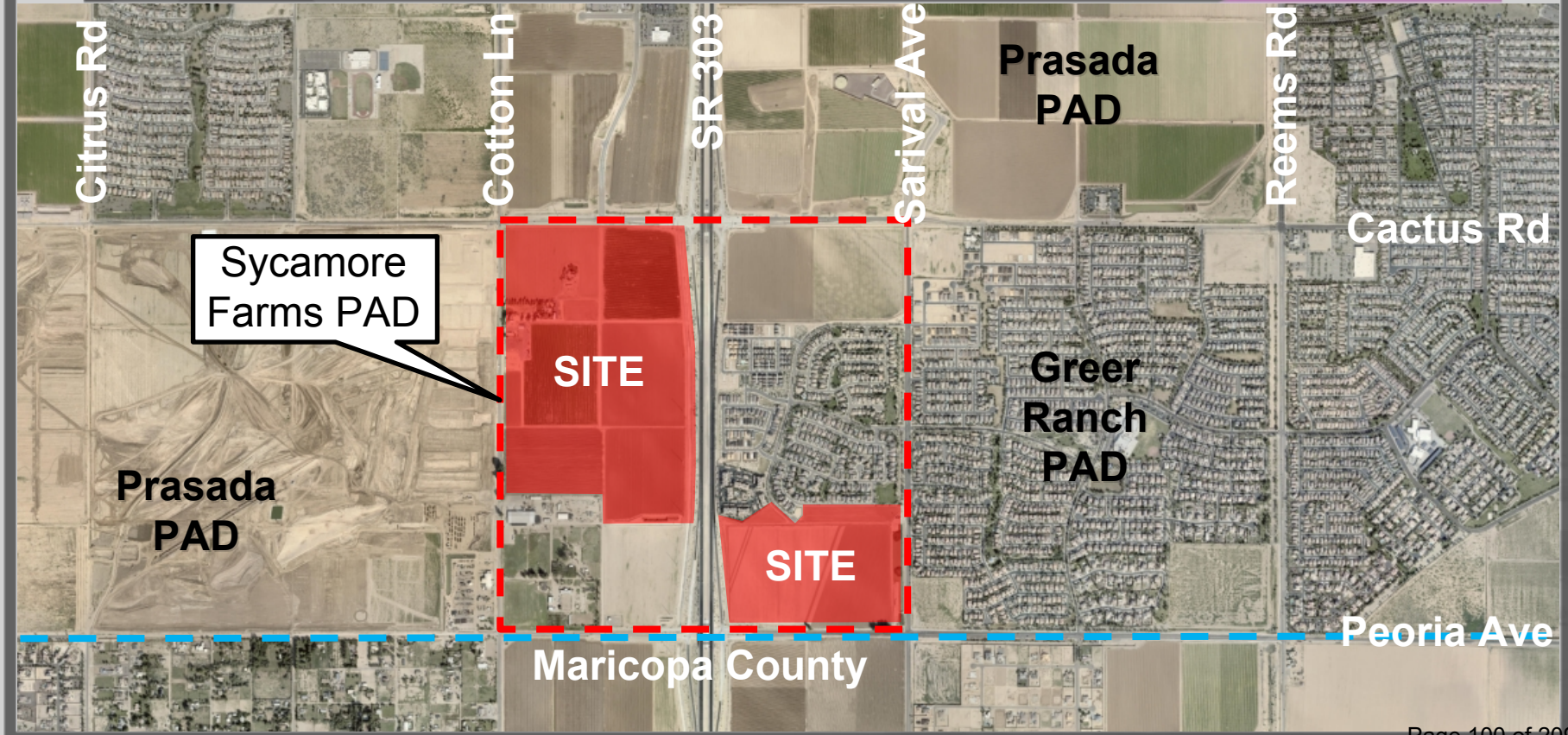
Please place this card in the box.
Thank you!

SURPRISE
ARIZONA

FS19-787
Sycamore Farms
PAD Rezone

Planning and Zoning Commission – April 16, 2020

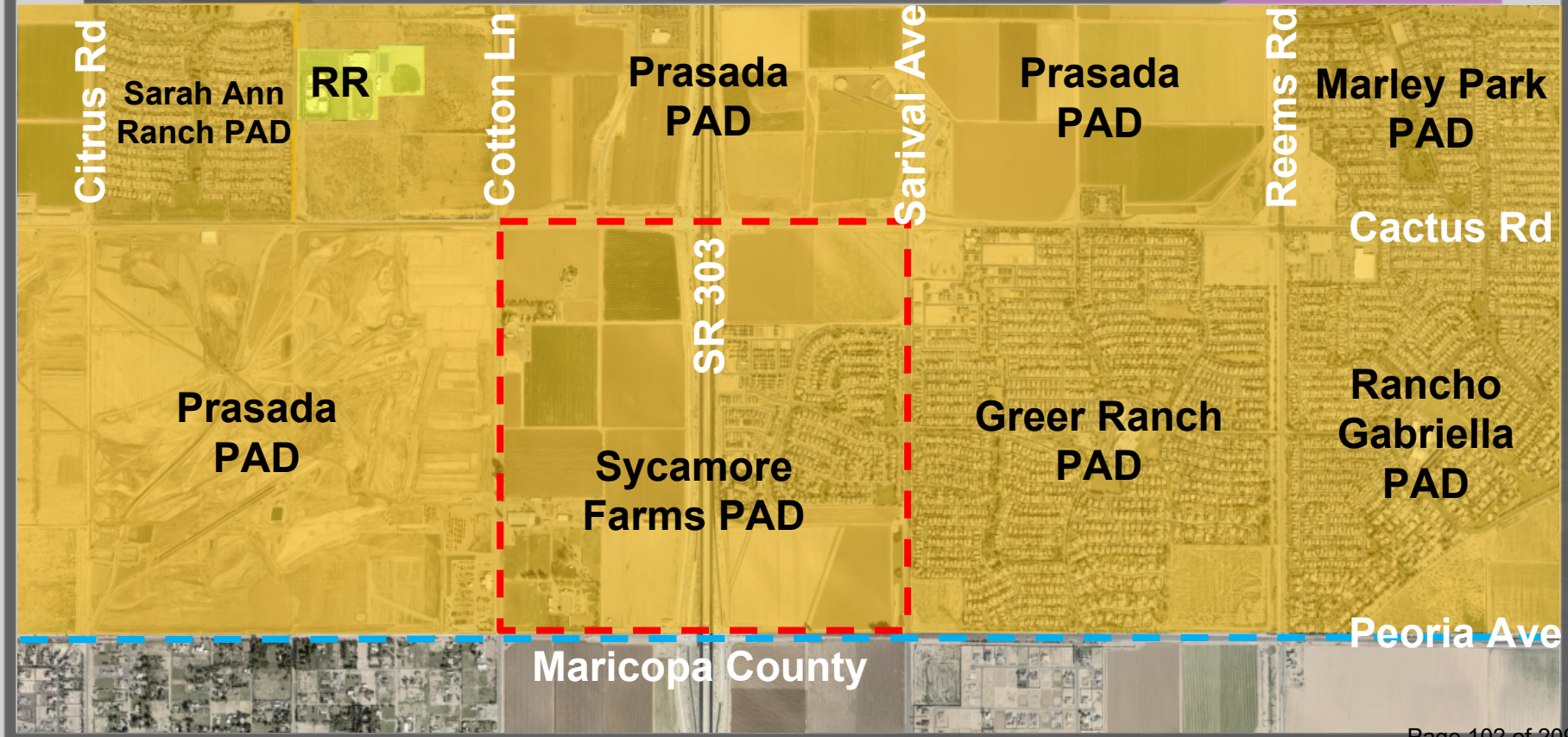
CASE MAP

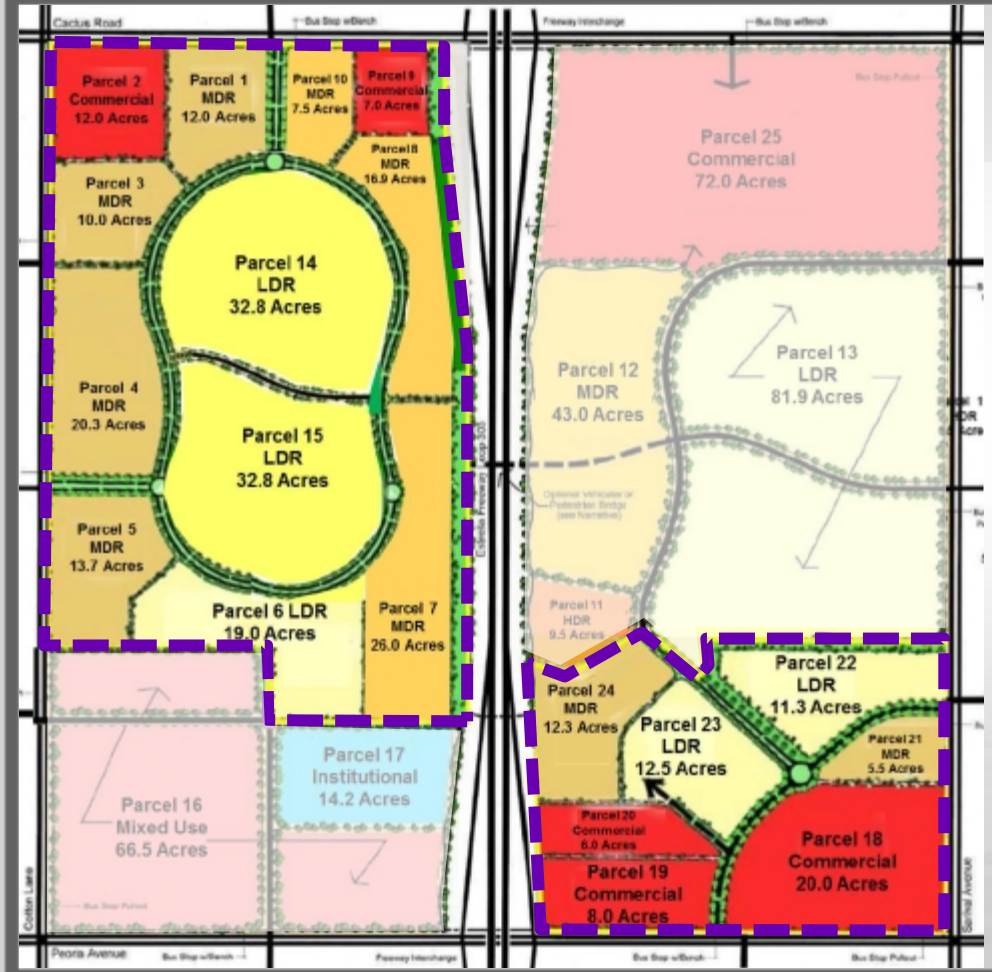

Citrus Rd
Cotton Ln
SR 303
Sarival Ave
Prasada PAD
Reems Rd
Cactus Rd
Sycamore Farms PAD
SITE
Greer Ranch PAD
Prasada PAD
SITE
Peoria Ave
Maricopa County

VICINITY MAP



ZONING MAP


Citrus Rd
Sarah Ann Ranch PAD
RR
Cotton Ln
Prasada PAD
Sarival Ave
Prasada PAD
Reems Rd
Marley Park PAD
Cactus Rd
SR 303
Prasada PAD
Sycamore Farms PAD
Greer Ranch PAD
Rancho Gabriella PAD
Peoria Ave
Maricopa County



Existing Zoning

LDR	108.4 acres
MDR	124.2 acres
Commercial	53.0 acres



Proposed Zoning

LDR	97.3 acres
MDR	112.6 acres
MHDR	18.2 acres
Commercial	57.1 acres



Medium High Density Residential Zoning

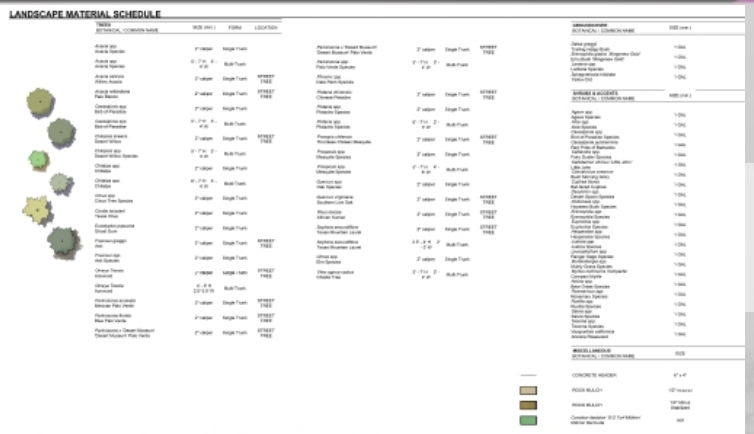
Parcel 10
Modified Setbacks



Parcel Category	Existing PAD	Proposed PADA	Difference
Low Density Residential	108.4 acres 545 units	97.3 acres 487 units	Loss of 11.1 ac and 58 units
Medium Density Residential	124.2 acres 745 units	112.6 acres 674 units	Loss of 11.6 ac And 71 units
Medium High Density Residential	0 acres 0 units	18.2 acres 364 units	Gain of 18.2 ac and 364 units
Commercial	53.0 acres	57.1 acres	Gain of 4.1 ac
Total	**285.6 acres**	**285.2 acres**	**Gain of 235 units**

OPEN SPACE







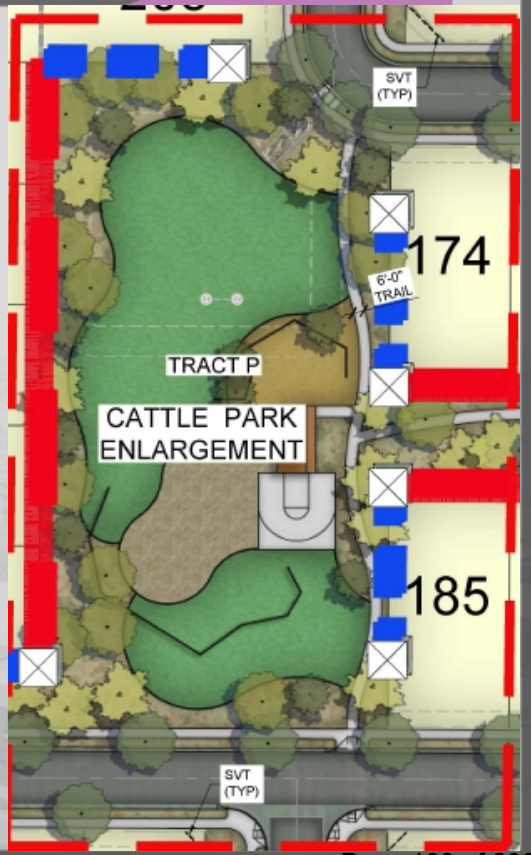
NOTE: SIGHT DISTANCE REQUIREMENTS ON ARTERIALS AND COLLECTORS WILL ADHERE TO SURPRISE DETAIL 4-01. SIGHT VISIBILITY WITHIN THE UNOBSTRUCTED VIEW EASEMENT AREA AND IN FRONT OF STOP SIGNS MUST MEET OR EXCEED REQUIREMENTS IN SURPISE DETAILS 4-01 AND 4-02.

23 Percent Open Space

OPEN SPACE


W SIERRA ST
N 169TH AV
THE ARIZONAN EXPERIENCE / MAIN AMENITY ENLARGEMENT
TRACT AM
N 168TH LN
DECORATIVE PED CROSSING (TYP.)
SITE DISTANCE LINE (TYP)
SVT (TYP)


TRACT R
CITRUS PARK ENLARGEMENT
TRACT BK
SVT (TYP)


TRACT P
CATTLE PARK ENLARGEMENT
174
185
6'-0" TRAIL
SVT (TYP)

SURPRISE
ARIZONA

QUESTIONS OR COMMENTS?

Thank You

CITY OF SURPRISE
Planning and Zoning Commission Meeting

Council Meeting Date: April 16, 2020 Contact Person: Hobart Wingard, PLANNER II
Submitting Department: Community Development District: District 6
Staff Recommendations:

Consent: No Regular: No Public Hearing: Yes Report/Discussion: No

Agenda Wording:
Consideration and action pertaining to approval of the Preliminary Plat entitled, "W Ranch Preliminary Plat," dated January 28, 2020, a property generally located 3,000 feet west of the intersection of Litchfield and Waddell Roads.

Motion:
I move to recommend approval of the Preliminary Plat to the City Council for a plat entitled, "W Ranch Preliminary Plat," dated January 28, 2020, a property generally located 3,000 feet west of the intersection of Litchfield and Waddell Roads.

Background:
The subject request involves a Preliminary Plat of 10.65 acres of land for 24 single family lots known as W Ranch.

Objective Analysis:

Policy Compliant:

Financial Impact:
While this item does not have an immediate or direct financial impact, ongoing development activity in the City will inevitably have a future financial impact as additional resources are needed to provide city services.

Budget Impact:

FTE Impact:

ATTACHMENTS:
1. SR - FS19-828 - W Ranch PP - PZ Staff Report - 041620
2. 01 - FS19-828 - W Ranch PP - Vicinity Maps - 041620

3. 02 - FS19-828 - W Ranch PP - Preliminary Plat - 041620
4. 03 - FS19-828 - W Ranch PP - Landscape Plans - 041620
5. 04 - FS19-828 - W Ranch PP - Luke Letter - 041620
6. PP - FS19-828 - W Ranch PP - PowerPoint - 041620

PRELIMINARY PLAT

REPORT TO THE PLANNING AND ZONING COMMISSION

Case:	**FS19-828**
Project Name:	W Ranch Preliminary Plat
Council District:	6
Meeting Date:	**April 16, 2020**
Planner:	Hobart Wingard

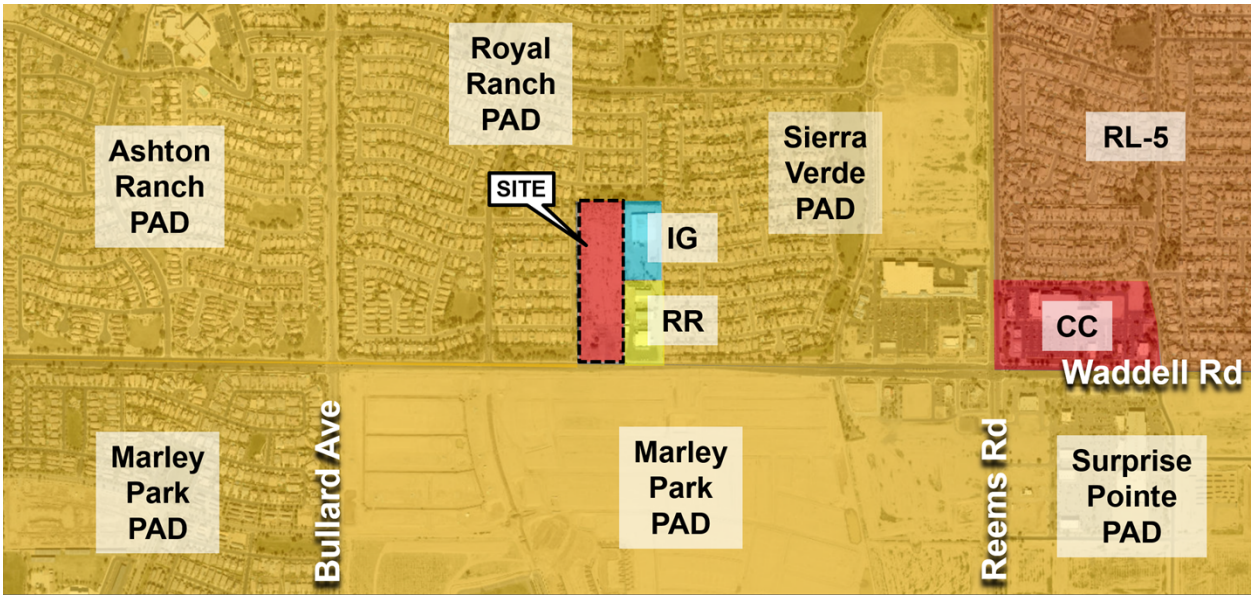
Owner/Applicant:	Craig Heldsing of Sage Land Holdings, LLC
Request:	Preliminary Plat Approval
Site Location:	Generally located 3,000 feet west of the intersection of Litchfield and Waddell Roads
Dwelling Units:	24 Units
Site Size:	10.65 acres (approx.)
Density:	2.25 DU/Ac
General Plan Conformance:	The proposal is consistent with the Surprise General Plan 2035
Support/Opposition:	None received
Staff Recommendation:	Staff recommends the Commission move to recommend **approval** of case **FS19-828** to the City Council, subject to stipulations 'a' thru 'c'

Project Description:

The subject request involves a Preliminary Plat for the W Ranch Community. The applicant seeks to subdivide the subject parcel into 24 lots and 6 tracts.

Surrounding Land Zoning:

The following map and chart depicts the existing zoning of the subject site and its surroundings:



Royal Ranch PAD	Royal Ranch PAD	Royal Ranch PAD
Royal Ranch PAD	**R1-5**	RR and IG
Marley Park PAD	Marley Park PAD	Marley Park PAD

Background:

March 17, 2015: The Mayor and City Council approved a zone change for W ranch from Rural Residential (RR) to low density residential (RL-5) under case FS14-396.

March 17, 2015: The Mayor and City Council approved a Preliminary Plat for W Ranch under Case FS14-396. The Preliminary Plat has since expired.

March 1, 2016: The Mayor and City Council approved a Final Plat for W Ranch under Case FS15-172. The plat was never recorded and has since expired.

November 25, 2019: The applicant filed a related request for a Preliminary Plat for a 24-lot single-family residential subdivision, under case FS19-828, the subject case.

November 25, 2019: The applicant filed a related request for a Final Plat for a 24-lot single-family residential subdivision, under case FS19-828, the subject case.

Analysis and Discussion:

W Ranch initially obtained Preliminary Plat approval on March 17, 2015. The subsequent Final Plat was processed by City staff and approved by the City Council on March 1, 2016. The Final Plat was never recorded, and the Preliminary Plat has since expired. This application is for the same plans as have been previously approved.

Craig Heldsing of Sage Land Holdings, LLC is requesting Preliminary Plat approval for a twenty-four (24) lot detached single family residential subdivision on a 10.65-acre parcel located at the northeast corner of 114th Avenue and Waddell Road. The project provides for a density of 2.29 du/acre and 2.33 acres of open space. The current zoning of the parcel is RL-5 and is located in a Neighborhood Character Land Use Area as established in General Plan 2035.

Utility and Services Table:

Water:	City of Surprise
Wastewater:	City of Surprise
School District:	Dysart Unified

Conformance with Adopted Plans:

Surprise General Plan 2035: The Surprise General Plan 2035 shows the subject property as lying within the Neighborhood Character Area, which supports residential development of up to 8 DU/Ac

Reviewing Agencies: In addition to the standard city reviewing agencies, Arizona Department of Transportation, Maricopa Water District, and Luke AFB were included in the routing of this request. None of the reviewing agencies indicated any concerns over the request.

Summary:

The applicant seeks a Preliminary Plat across the subject property. The proposed development is compatible with the neighboring land uses and the amenities included will provide recreational opportunities for the neighborhood residents.

Findings:

- The proposed Preliminary Plat is consistent with the Surprise General Plan.
- The proposed Preliminary Plat is consistent with the Rezone approved under FS14-396.
- The reviewing agencies have indicated no objections.

Commission Recommendation:

Based on the findings noted above, the Commission voted to recommend approval of the subject Preliminary Plat request to the City Council, subject to stipulations 'a' through 'c' as outlined below:

a. Development and use of the site shall be consistent with the Preliminary Plat entitled "W Ranch Preliminary Plat," consisting of two (2) sheets prepared by Bowman Consulting and stamped received January 31, 2020.

b. Landscaping of the site shall be consistent with the Landscape Plan entitled "W Ranch Landscape Plans," consisting of 16 sheets prepared by Pinnacle Design and stamped received January 31, 2020.

c. Non-compliance with the stipulations of approval of this case will be treated as a violation in accordance with the provisions of Article XIV of the Surprise Unified Development Code.

However, should the Commission wish to recommend denial of the request, the Commission should make its own findings and base its decision on those alternative findings.

Attachments:

01 Vicinity and Zoning Maps
02 Preliminary Plat
03 Landscape Plans
04 Luke AFB comments

VICINITY MAP

FS19-828
W Ranch



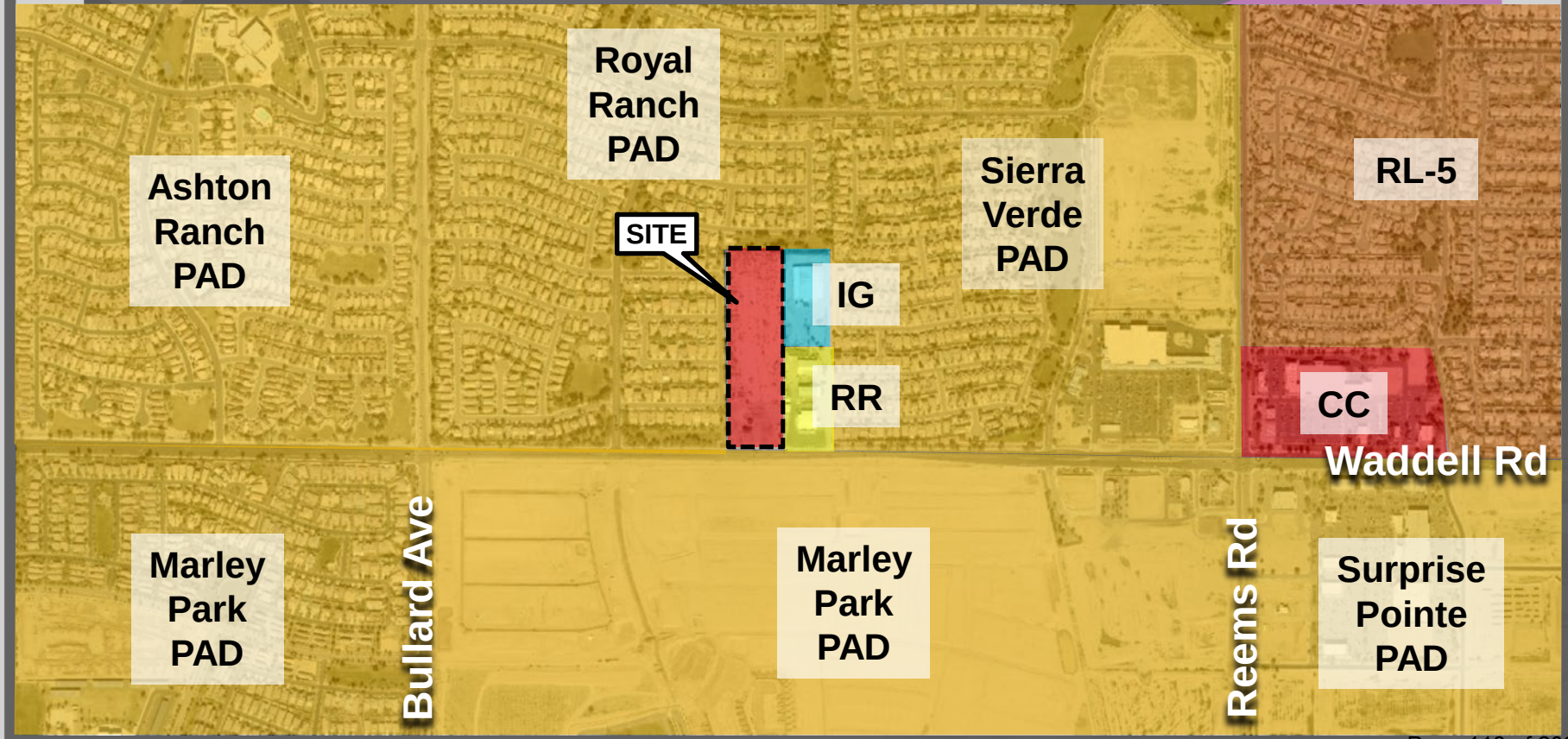
VICINITY MAP

FS19-828
W Ranch



ZONING MAP

FS19-828
W Ranch

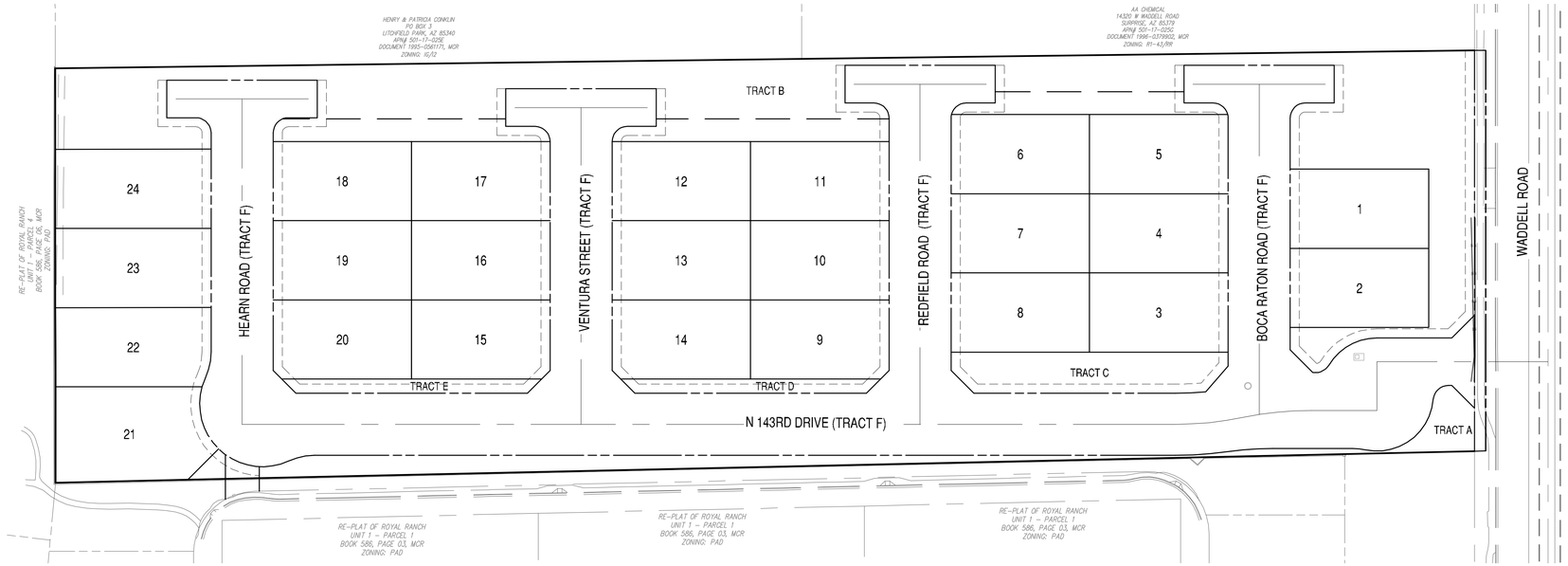


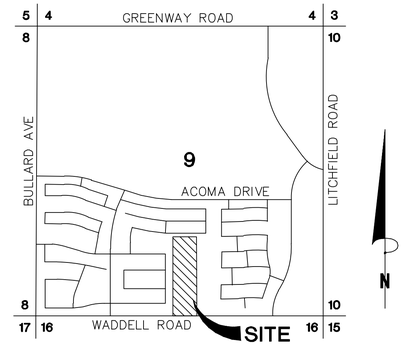
SITE DATA		
GROSS AREA	455,989.85 SF	10.47 AC
NET AREA	452,449.20 SF	10.39 AC
LOT SUMMARY		
LOT TOTAL	24	
TOTAL LOT AREA	211,198.65 SF	4.85 AC
AVG. LOT AREA	8,799.94 SF	0.20 AC
MIN. LOT AREA	8,546.87 SF	0.20 AC
MAX LOT AREA	10,959.24 SF	0.25 AC
LOT %	46.32%	
PROPOSED DENSITY	2.29 DU/AC	
OPEN SPACE SUMMARY		
TOTAL OPEN SPACE AREA	101,603.14 SF	2.33 AC
OPEN SPACE %	22.28%	
RIGHT-OF-WAY SUMMARY		
PUBLIC RIGHT-OF-WAY AREA	3,540.64 SF	0.08 AC
PUBLIC RIGHT-OF-WAY %	0.78%	
PRIVATE ROADWAY	139,647.41 SF	3.21 AC
PRIVATE ROADWAY %	30.63%	

W RANCH
PRELIMINARY PLAT

WADDELL ROAD AND 144TH AVENUE
SURPRISE, ARIZONA

A PORTION OF THE SOUTHWEST QUARTER OF SECTION 9,
TOWNSHIP 3 NORTH, RANGE 1 WEST OF THE GILA AND SALT
RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA





VICINITY MAP

CIVIL ENGINEER

BOWMAN CONSULTING GROUP, LTD.
6751 NORTH SUNSET BLVD
SUITE 325
GLENDALE, ARIZONA 85305
PHONE: 480.629.8830
CONTACT: JOSEPH CABLE
EMAIL: JCABLE@BOWMANCONSULTING.COM

OWNER/DEVELOPER

SAGE LAND HOLDINGS, LLC
8700 E VIA DE VENTURA BLVD
SUITE 350
SCOTTSDALE, ARIZONA 85258
PHONE: 480.829.5319
FAX: 480.829.7190
CONTACT: CRAIG HELSING
EMAIL: chelsing@brownhomesaz.com

BENCHMARK

TYPE OF MONUMENT: NVD88 DATA POINT CITY OF SURPRISE BRASS CAP AT THE INTERSECTION OF SWEETWATER AVE. AND BULLARD AVE. STAMPED: "31-16".

COORDINATES (NAD83):

LATITUDE 33°36'07.43"N
LONGITUDE 112°22'35.34"W

ELEVATION= 1166.25

BASIS OF BEARING

N90°00'00"W ALONG THE MONUMENT LINE OF WADDELL ROAD AS MEASURED BETWEEN MONUMENTS NUMBERED (1) AND (2) SHOWN HEREON. ALSO SHOWN ON THE FINAL PLAT FOR RE-PLAT OF ROYAL RANCH UNIT 1 PARCEL 1, BOOK 586 OF MAPS, PAGE 03, MARICOPA COUNTY RECORDS.

ZONING

RL-5/R1-5

SHEET INDEX

PP01	PRELIMINARY PLAT COVER SHEET
PP02	PRELIMINARY PLAT



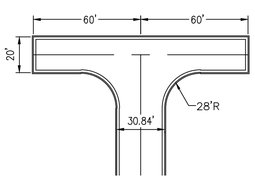
KEY MAP
N.T.S.

DEVELOPMENT NOTES

1. THE BOUNDARY AND TOPOGRAPHY SHOWN HEREON ARE BASED ON ALTA SURVEY PREPARED BY ARIZONA SURVEYING AND MAPPING, 2411 WEST NORTHERN AVENUE SUITE #110 PHOENIX, AZ 85069-5455, PHONE 602.246.9919.
2. THE SOUTHERN 10' OF THIS PROJECT WILL BE DEDICATED AS PUBLIC ROADWAY AND BECOME A PORTION OF WADDELL ROAD, ALL OTHER STREETS (ONSITE) ARE PRIVATE (TRACT F).
3. ALL SEWER AND WATER IMPROVEMENTS ARE TO BE PUBLIC
4. THE SITE IS LOCATED IN FLOOD ZONE "X" AS SHOWN ON FLOOD INSURANCE RATE MAP PANEL 1680 OF 4425, DATED OCTOBER 16, 2013. A PORTION OF THIS MAP HAS BEEN INCLUDED IN A PRELIMINARY DRAINAGE REPORT PREPARED FOR THIS PROJECT BY BOWMAN CONSULTING.
5. HOMEOWNERS ASSOCIATION TO INCLUDE ALL PROPERTY OWNERS SHALL BE CREATED AND WILL BE RECORDED CONCURRENTLY WITH THE FINAL PLAT. THE HOMEOWNERS ASSOCIATION WILL BE DEEDED THE OPEN SPACE TRACTS AND SHALL BE RESPONSIBLE FOR ALL REQUIRED MAINTENANCE OF THE LANDSCAPE IMPROVEMENTS, DRAINAGE AND RETENTION IMPROVEMENTS WITHIN THESE TRACTS AS WELL AS THAT FOR ANY RECREATIONAL AMENITIES PROVIDED BY THE DEVELOPER.
6. ALL FINISHED FLOORS SHALL BE ADEQUATELY PROTECTED FROM THE 100-YEAR RAINFALL EVENT AS REQUIRED BY CITY AND COUNTY ORDINANCES.
7. ALL LIGHTING SHALL COMPLY WITH THE CITY'S LIGHTING ORDINANCE.
8. BASED ON THE EXTREMELY SMALL PEAK SEWER AND WATER FLOWS FOR THE SITE FOR AS SHOWN IN THE PROJECT DESIGN REPORTS (HEREBY MADE A PART OF THIS PRELIMINARY PLAT) IT IS NOT ANTICIPATED THAT THIS SITE ALONE WILL HAVE ANY MEANINGFUL IMPACT ON THE CITY'S INFRASTRUCTURE.

LEGEND

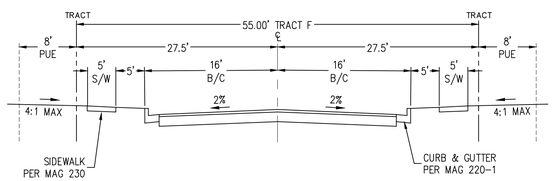
- CENTER LINE
- RIGHT-OF-WAY
- PUE
- SEWER MANHOLE
- EXISTING MEDIAN



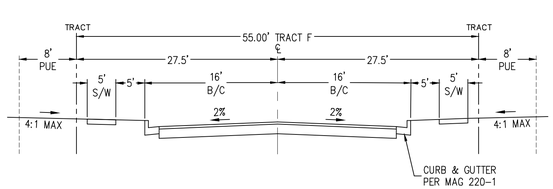
120' HAMMERHEAD
N.T.S.

NOTES:

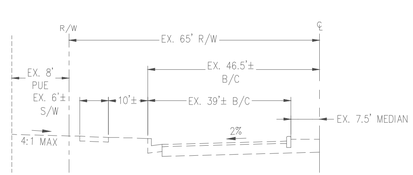
1. THE DIMENSIONS ARE THE MINIMUM REQUIREMENTS.
2. ALL DIMENSIONS ARE TO THE FACE OF CURB.



LOCAL STREET SECTION
N.T.S.



143rd DRIVE SECTION
N.T.S.



WADDELL ROAD SECTION
LOOKING EAST
N.T.S.

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

Bowman Consulting Group, Ltd.
6751 North Sunset Blvd. Ste 325
Glendale, Arizona 85305
Phone: (480) 629-8830
www.bowmanconsulting.com

© Bowman Consulting Group, Ltd.

PRELIMINARY PLAT COVER SHEET
W RANCH
SURPRISE, ARIZONA
MARICOPA COUNTY

PROJECT NUMBER

REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
33135
JOSEPH E.
CABLE
1/28/20
ARIZONA

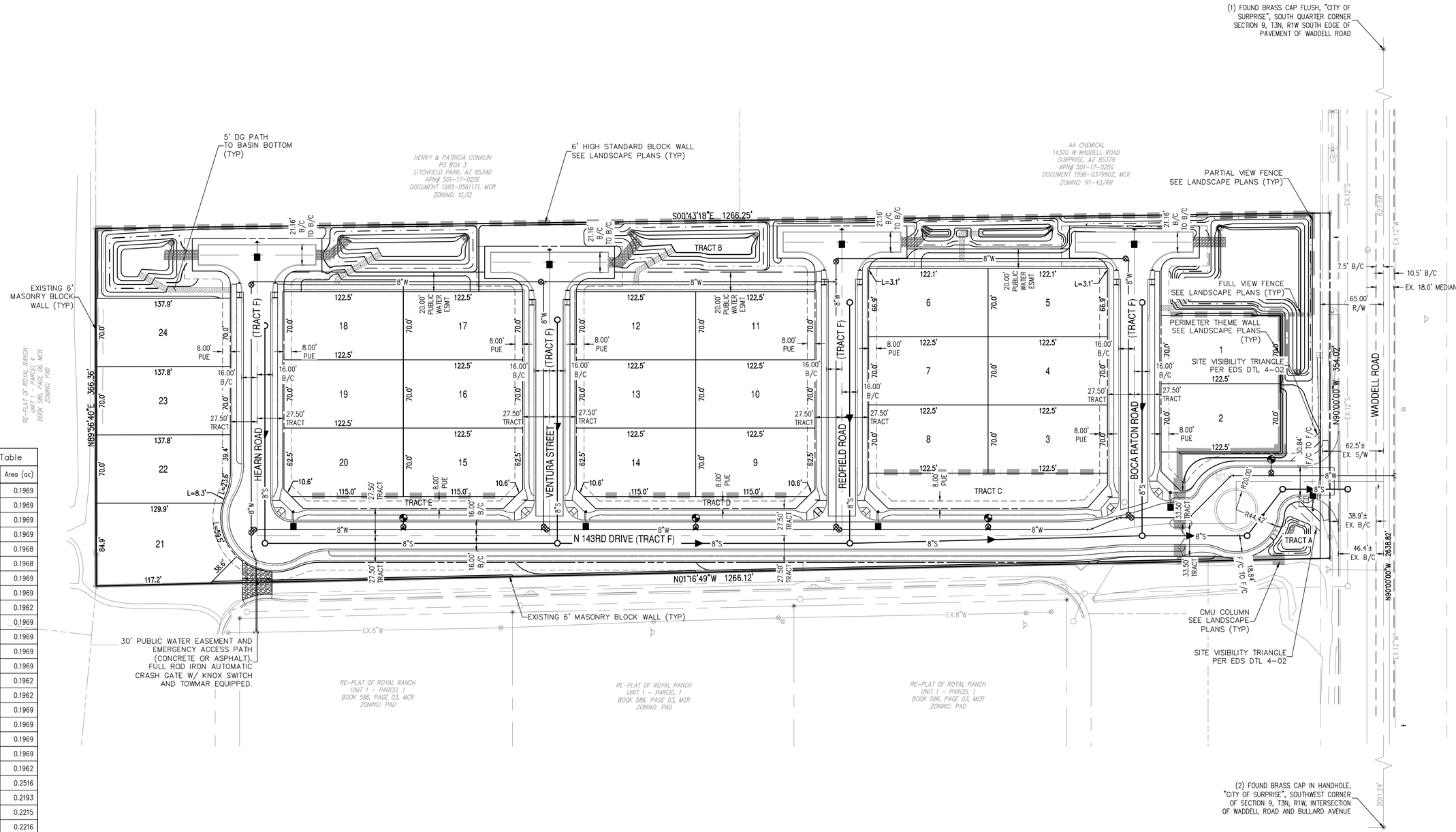
PLAN STATUS

DATE	DESCRIPTION	
KE	CRS	JEC
DESIGN	DRAWN	CHKD
SCALE	H: NONE V: NONE	
JOB No. 050013-01-001		
DATE : 01/28/20		

PP01
SHEET 01 OF 02

FS19-828

CAD FILE NAME: P:\050013 - Waddell & 144th Avenue\050013-01-001 (ENG)\Engineering\Engineering Plans\Preliminary Plat\050013 - PP01.dwg 01/27/2020



Lot Area Table		
Lot #	Area (sf)	Area (ac)
1	8575.00	0.1969
2	8575.00	0.1969
3	8575.00	0.1969
4	8575.00	0.1969
5	8574.62	0.1968
6	8574.62	0.1968
7	8575.00	0.1969
8	8575.00	0.1969
9	8546.87	0.1962
10	8575.00	0.1969
11	8575.00	0.1969
12	8575.00	0.1969
13	8575.00	0.1969
14	8546.87	0.1962
15	8546.87	0.1962
16	8575.00	0.1969
17	8575.00	0.1969
18	8575.00	0.1969
19	8575.00	0.1969
20	8546.87	0.1962
21	10959.24	0.2516
22	9554.14	0.2193
23	9646.89	0.2215
24	9651.64	0.2216
TOTAL	211,198.65	4.8485

Tract Area Table			
Tract #	Use	Area (sf)	Area (ac)
A	LANDSCAPING, OPEN SPACE, RETENTION	13009.63	0.2987
B	LANDSCAPING, OPEN SPACE, PUE, RETENTION, WATERLINE ESMT	74708.31	1.7151
C	LANDSCAPING, OPEN SPACE, PUE	8447.70	0.1939
D	LANDSCAPING, OPEN SPACE, PUE	2718.75	0.0624
E	LANDSCAPING, OPEN SPACE, PUE	2718.75	0.0624
F	STREET (PRIVATE ACCESSWAY), PUBLIC WATER AND SEWER, DRAINAGE, REFUSE COLLECTION, EMERGENCY AND SERVICE ACCESS	139647.41	3.2059
	TOTAL (PRIVATE STREET NOT A PART)	101,603.14	2.3325

Call at least two full working days before you begin excavation
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

Bowman CONSULTING

Bowman Consulting Group, Ltd.
6751 North Sunset Blvd. Ste 325
Glendale, Arizona 85305
Phone: (480) 629-8830
www.bowmanconsulting.com
© Bowman Consulting Group, Ltd.

PRELIMINARY PLAT
W RANCH
SURPRISE, ARIZONA
MARICOPA COUNTY

PROJECT NUMBER

REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 33135 JOSEPH E. CABLE DATE SIGNED 1/28/20 ARIZONA U.S.A.

PLAN STATUS

DATE	DESCRIPTION	
KE	CRS	JEC
DESIGN	DRAWN	CHKD
SCALE	H: 1" = 50' V: 1" = 50'	
JOB No. 050013-01-001		
DATE : 01/28/20		

PP02
SHEET 02 OF 02

FS19-828

PLOTTED: EMEADE ON 03/25/2020 AT 03:58 PM
THIS DRAWING AND ANY ELECTRONIC RESIN IS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF PINNACLE DESIGN, INC. WHETHER THE PROJECT FOR WHICH THIS DRAWING IS MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSIONS OF THIS PROJECT EXCEPT BY WRITTEN AGREEMENT AND/OR APPROPRIATE COMPENSATION TO PINNACLE DESIGN, INC. COPYRIGHT © 2011 PINNACLE DESIGN, INC.

'W RANCH'

LANDSCAPE PLANS

PINNACLE DESIGN, INC
1048 N. 44th Street
Suite 200 ◢ Phoenix, AZ 85008
Ofc:(602)952-8585 ◢ Fax:952-8686

PLANT LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QTY	COMMENTS
	TREES				
	ACACIA STENOPHYLLIA	SHOESTRING ACACIA	24" BOX	9	10' H., 4' W., 1.5" CAL. STAKE IN PLACE
	PROSOPIS CHILENSIS 'THORNLESS'	THORNLESS MESQUITE	24" BOX	13	7' H., 7' W., 1.5" CAL. STAKE IN PLACE
	OLNEYA TESOTA	IRONWOOD	24" BOX	57	6' H., 3.5' W., 1.5" CAL. MULTI-TRUNK
	QUERCUS VIRGINIANA	SOUTHERN LIVE OAK	24" BOX	137	9' H., 4' W., 1.5" CAL. STAKE IN PLACE
	SOPHORA SECUNDIFLORA	TEXAS MOUNTAIN LAUREL	24" BOX	32	4' H., 3' W., 1.0" CAL. STAKE IN PLACE
	SHRUBS				
	BOUGAINVILLEA SP.	BARBARA KARST BOUGAINVILLEA	5 GAL.	52	PLANT AT 5' O.C.
	EREMOPHILA MACULATA	'VALENTINE' BUSH	5 GAL.	57	PLANT AT 4' O.C.
	LEUCOPHYLLUM LAEVIGATUM	CHIHUAHUAN SAGE	5 GAL.	173	PLANT AT 5' O.C.
	RUELLIA PENINSULARIS	BAJA RUELLIA	5 GAL.	200	PLANT AT 4' O.C.
	RUELLIA BRITTONIANA	BARIO RUELLIA	5 GAL.	184	PLANT AT 4' O.C.
	TECOMA STANS 'GOLD STAR'	YELLOW BELLS	5 GAL.	12	PLANT AT 7' O.C.
	ACCENTS				
	AGAVE DESMETTIANA	AGAVE	5 GAL.	38	PLANT AT 4' O.C.
	HESPERALOE PARVIFLORA 'PERPA'	BRAKELIGHTS RED YUCCA	5 GAL.	87	PLANT AT 4' O.C.
	MUHLENBERGIA CAPILLARIS	REGAL MIST	5 GAL.	287	PLANT AT 4' O.C.
	GROUNDCOVER				
	LANTANA MONTEVIDENSIS	PURPLE LANTANA	1 GAL.	84	PLANT AT 3' O.C.
	LANTANA 'NEW GOLD'	NEW GOLD LANTANA	1 GAL.	185	PLANT AT 3' O.C.
	SPHAGNETICOLA TRILOBATA	YELLOW DOT	1 GAL.	68	PLANT AT 4' O.C.
	RUELLIA BRITTONIANA 'KATIE'	KATIE RUELLIA	1 GAL.	158	PLANT AT 2' O.C.
	TURF	HYDROSEED BERMUDA		34,850 SF.	

INERT GROUNDCOVER

2	DECOMPOSED GRANITE	"EXPRESS BROWN"	1/2" SCREENED	73,385 S.F. 611 TONS	2" MIN. DEPTH IN ALL PLANTERS
18	DECOMPOSED GRANITE	"EXPRESS BROWN"	1/4" MINUS STABLIZED	1,575 S.F. 13 TONS	2" DEPTH (STABLIZED) TRAILS
	CONCRETE HEADER	PLAIN CONCRETE	4" W X 6" HT.	1,555 LF	

NOTES:

1. CONTRACTOR TO VERIFY ALL QUANTITIES.
2. CONTRACTOR TO PROVIDE DECOMPOSED GRANITE SAMPLES TO LANDSCAPE ARCHITECT FOR APPROVAL.
3. TREE ROOT BARRIERS ARE REQUIRED PER CITY OF SURPRISE EDS, SEE DETAIL 8-14. WHEN TREES ARE WITHIN THREE FEET OF SIDEWALKS, CURBS, PAVEMENT OR WALLS.
4. ALL IRRIGATION SYSTEMS WILL BE INSTALLED WITH PURPLE PIPE.
5. THE LANDSCAPE AND IRRIGATION DESIGN WILL COMPLY WITH CITY OF SURPRISE EDS PER CHAPTER 8.

TRACT AREA TABLE

TRACT	DESCRIPTION	AREA
A	LANDSCAPING, OPEN SPACE	0.29 ac.
B	LANDSCAPING, OPEN SPACE, PU.E., RETENTION	1.71 ac.
C	LANDSCAPING, OPEN SPACE, PU.E.	0.19 ac.
D	LANDSCAPING, OPEN SPACE, PU.E.	0.06 ac.
E	LANDSCAPING, OPEN SPACE, PU.E.	0.06 ac.
F	STREET (PRIVATE ACCESSWAY), PUBLIC WATER AND SEWER, DRAINAGE , REFUSE COLLECTION, EMERGENCY AND SERVICE ACCESS	3.20 ac.

IRRIGATION DEMAND CALCULATIONS

	DESCRIPTION	TOTAL GPM
A	TURF PEAK SEASON	1,050,494 GAL/YR
B	NON-TURF PEAK SEASON	525,182 GAL/YR
C	ANUAL TOTAL	1,575,676 GAL/YR

PROJECT CONSULTANTS

DISCIPLINE	CONTACT INFORMATION
DEVELOPER:	EMPIRE RESIDENTIAL COMMUNITIES FUND II, LLC 6617 N. SCOTTSDALE ROAD SCOTTSDALE, AZ. 85250 PHONE: 480.951.2207 CONTACT: RICH ZACHER
CIVIL ENGINEER:	BOWMAN CONSULTING GROUP, LTD. 14100 NORTH 83RD AVENUE, SUITE 250, PEORIA, AZ. 85381 3010 SOUTH PRIEST DRIVE SUITE 103, TEMPE, AZ. 85282 PHONE: 623.299.8981 CONTACT: SHELBY DUPLESSIS (602.679.4438)
LANDSCAPE ARCHITECT:	PINNACLE DESIGN, INC. 1048 NORTH 44TH STREET, STE. 200 PHOENIX, AZ 85008 CONTACT: ED LORDEN PHONE: 602.952.8585 elorden@pdi-az.com

SHEET INDEX

SHEET	TITLE
L-1	COVER SHEET
L-2	GENERAL NOTES
L-3	PLANTING PLAN
L-4	PLANTING PLAN
L-5	IRRIGATION NOTES
L-6	IRRIGATION PLAN
L-7	IRRIGATION PLAN
L-8	WALL LAYOUT PLAN & NOTES
L-9	WALL DETAILS AND ELEVATIONS
L-10	ENTRY MONUMENT & GATE PLAN
L-11	PLANTING DETAILS
L-12	IRRIGATION DETAILS
L-13	IRRIGATION DETAILS
L-14	CONCRETE SPECIFICATIONS
L-15	PLANTING SPECIFICATIONS
L-16	IRRIGATION SPECIFICATIONS

VICINITY MAP

NOT TO SCALE



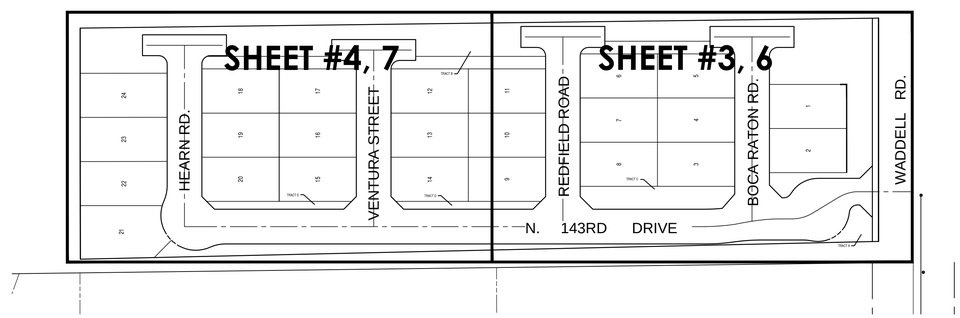
SITE DATA

ZONING:	RL-5
GROSS SITE AREA:	455,989 S.F. (10.47 ac.)
NET SITE AREA:	452,449 S.F. (10.39 ac.)
PROPOSED # OF LOTS:	24
RIGHT-OF-WAY LANDSCAPING	2,968 S.F. (.6%)
ON-SITE LANDSCAPE AREA:	106,842 (23.6%)
TURF AREA:	34,850 (31.7% of TOTAL L.S.)
TOTAL LANDSCAPING:	**109,810 S.F.**

SHEET INDEX MAP

NOT TO SCALE

NORTH



Surprise, AZ.

COVER SHEET

"W RANCH"

143rd AVENUE and WADDELL ROAD

CASE NUMBER: FS19-828

Drawn By: NR

Job No: 14021

Date:	4.26.15
TREE CHANGE	1.12.16
1 REAPPROVAL	8.8.17
2 REAPPROVAL	11.18.19
CITY COMMENTS	1.20.20
CITY COMMENTS	2.25.20

L-1 of 16

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

PLOTTED: EMEADE ON 02/25/2020 AT 03:59 PM
THIS DRAWING AND ANY ELECTRONIC FILE IS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF PINNACLE DESIGN, INC. WHETHER THE PROJECT FOR WHICH THIS DRAWING IS MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSIONS OF THIS PROJECT EXCEPT BY WRITTEN AGREEMENT AND/OR APPROPRIATE COMPENSATION TO PINNACLE DESIGN, INC. COPYRIGHT © 2011 PINNACLE DESIGN, INC.

GENERAL PLANTING NOTES

1. THE SUB-CONTRACTOR SHALL MARK AND CONFIRM LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO EXCAVATION. CONFLICTS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT FOR RESOLUTION.
2. PLANT MATERIALS SPECIFIED SHALL BE SUBJECT TO HAND SELECTION BY THE LANDSCAPE ARCHITECT AT THE NURSERY.
3. FINISH GRADE OR TOP OF D.G. (WHICHEVER IS HIGHER) SHALL BE 1-1/2" BELOW ADJACENT CONCRETE OR OTHER PAVED SURFACES.
4. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ALL PLANTS SHOWN ON PLANTING PLAN. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ACCURATE PLANT COUNTS.
5. CONTRACTOR TO STAKE ALL TREE, PALM, AND SHRUB LOCATIONS FOR LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO PLANTING.
6. LANDSCAPE ARCHITECT WILL NOT BE RESPONSIBLE FOR LOCATION AND PLACEMENT OF TREES AND PALMS UNLESS THE LOCATION WAS APPROVED BY LANDSCAPE ARCHITECT.
7. ALL MATURE TREE AND PALM CANOPIES MUST BE A MINIMUM OF 5' FROM ANY BUILDING WALLS OR BUILDING WINDOWS.
8. ALL PLANT MATERIALS SHALL BE SIZED ACCORDING TO THE ARIZONA NURSERY ASSOCIATION STANDARDS. PLANT MATERIAL SIZES NOT ESTABLISHED PER A.N.A. STANDARDS SHALL BE SIZED ACCORDING TO THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS.
9. ACID ETCH AS REQUIRED IMPERVIOUS SOILS AT TREE LOCATIONS TO ENSURE PLANT HEALTH.
10. SUB-CONTRACTOR TO TREAT ALL D.G. AREAS WITHIN LINE OF CONTRACT WITH ONE FINAL APPLICATION OF APPROVED PRE-EMERGENT HERBICIDE AT THE TIME OF ACCEPTANCE BY THE OWNER.
11. CACTI SHALL RECEIVE NO SUPPLEMENTAL IRRIGATION.
12. NO PLANT SUBSTITUTIONS, TYPE, OR QUANTITY DEVIATIONS FROM THE APPROVED LANDSCAPE OR IRRIGATION PLANS WITHOUT PERMISSION FROM THE LANDSCAPE ARCHITECT. THE CITY OF SURPRISE MUST ALSO APPROVE SUBSTITUTIONS.
13. ALL R.O.W. PLANT MATERIAL TO BE IN COMPLIANCE WITH THE ARIZONA DEPARTMENT OF WATER RESOURCES LOW WATER USE PLANT LIST.
14. EXISTING TREES AND SHRUBS IN R.O.W. TO REMAIN OR BE RELOCATED BY CONTRACTOR. ANY PLANT MATERIAL DAMAGED OR DESTROYED WILL BE REPLACED IN KIND BY THE CONTRACTOR.
15. ALL LANDSCAPE AREAS SHALL RECEIVE 2" D.G. UNLESS NOTED. COLOR TO BE SELECTED BY OWNER UNLESS NOTED.
16. ROUGH GRADING TO WITHIN +0.10 FOOT, INCLUDING ALL BERMS AND/OR SWALES AND RETENTION AREAS WILL BE PROVIDED BY BUILDER BEFORE PLANTING BEGINS.
17. ANY DISCREPANCIES FOUND BETWEEN PLANS, SPECIFICATIONS, AND SITE SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR RESOLUTION.
18. LANDSCAPE ARCHITECT HAS THE OPTION OF ACCEPTANCE OR REJECTION OF ANY PLANT MATERIALS DEEMED UNACCEPTABLE UPON DELIVERY TO SITE.
19. FINAL BUILDING PERMIT CANNOT BE OBTAINED UNTIL BONDING ON APPROVED ASSURANCES IS PROVIDED FOR LANDSCAPING WITHIN THE RIGHT-OF-WAY.
20. ACKNOWLEDGE REQUIREMENT OF COUNTY DUST CONTROL PERMIT AND LANDSCAPE PERMIT FOR ALL LANDSCAPE WORK WITHIN THE PROJECT ON RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL SUBDIVISIONS.
21. ALL ON-SITE SIDEWALKS SHALL HAVE A MAXIMUM SLOPE OF 1:20 WITH THE MAXIMUM CROSS SLOPE OF 1:50. ALL CURBS MUST PROVIDE ACCESSIBLE RAMPS PURSUANT TO THE AMERICAN WITH DISABILITIES ACT (ADA) STANDARDS.
22. TREES, SHRUBS, VINES, GROUNDCOVER, AND TURF WHICH HAVE TO BE REPLACED UNDER TERMS OF THE GUARANTEE, SHALL BE GUARANTEED FOR AN ADDITIONAL SIXTY (60) DAYS FROM THE DATE OF REPLACEMENT.
23. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED SHOP DRAWINGS TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO THE BEGINNING OF CONSTRUCTION. REQUIRED SHOP DRAWING MAY INCLUDE BUT NOT LIMITED TO WALLS, COLUMNS, ENTRY GATES, POOL FENCE AND/OR WATER FEATURES. SHOULD A DISPUTE ARISE WITH ANY DESIGN ELEMENT REQUIRING SHOP DRAWINGS, THE LANDSCAPE ARCHITECT SHALL ONLY ASSUME RESPONSIBILITY IF THE SHOP DRAWINGS IN QUESTION HAVE BEEN REVIEWED AND APPROVED BY THE LANDSCAPE ARCHITECT.
24. THERE ARE NOT ANY EXISTING OVERHEAD POWER LINES.
25. ALL TREES, SHRUBS, HEDGES, OR OTHER PLANTS WITHIN THE SIGHT TRIANGLE AND SIGHT TRIANGLE AND SIGHT DISTANCE AREAS SHALL BE MAINTAINED TO NOT ENCROACH ABOVE 30" OR BELOW 84".
26. SIGHT DISTANCE REQUIREMENTS ON ARTERIALS AND COLLECTORS WILL ADHERE TO SURPRISE DETAILS 4-01 AND 4-02.

PINNACLE DESIGN, INC
1048 N. 44th Street
Suite 200 ◢ Phoenix, AZ 85008
Ofc:(602)952-8585 ◢ Fax:952-8686

REGISTERED LANDSCAPE ARCHITECT
37505
EDWARD J
LORDEN
11.18.19
ARIZONA, U.S.A.
Expires 3/31/20

Surprise, AZ.

GENERAL NOTES

"W RANCH"

143rd AVENUE and WADDELL ROAD

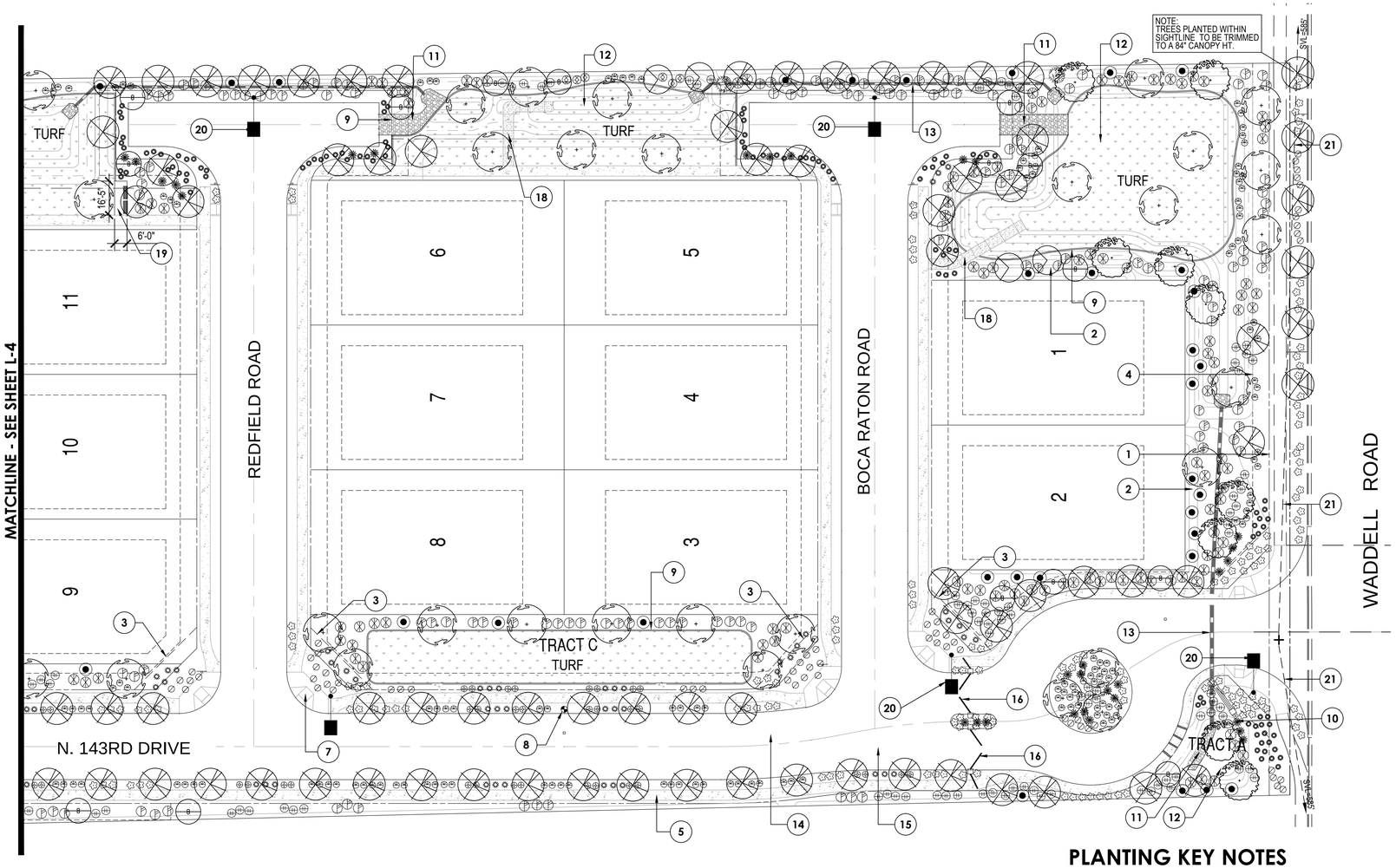
CASE NUMBER: FS19-828

Drawn By:	NR
Job No:	14021
Date:	4.26.15
△ TREE CHANGE	1.12.16
1 △ REAPPROVAL	8.8.17
2 △ REAPPROVAL	11.18.19
△ CITY COMMENTS	1.20.20
△ CITY COMMENTS	2.25.20

L-2 of 16

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

PLOTTED, EMEADE ON 02/25/2020 AT 03:59 PM
THIS DRAWING AND ANY ELECTRONIC MEDIA IS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF PINNACLE DESIGN, INC. WHETHER THE PROJECT FOR WHICH THIS DRAWING IS MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSIONS OF THIS PROJECT EXCEPT BY WRITTEN AGREEMENT AND/OR APPROPRIATE COMPENSATION TO PINNACLE DESIGN, INC. COPYRIGHT © 2011 PINNACLE DESIGN, INC.



PLANTING KEY NOTES

1. PROPERTY LINE / RIGHT OF WAY LINE / LIMITS OF WORK
2. DECOMPOSED GRANITE IN ALL PLANTING AREAS- ONSITE
3. 30'X30' LOCAL STREET SIGHT VISIBILITY TRIANGLES PER SURPRISE STANDARD, SEE DETAIL - 4-02.
4. P.U.E. SEE CIVIL ENG. PLANS.
5. SIDEWALK.
6. CURB. SEE CIVIL ENG. PLANS.
7. ACCESSIBLE RAMP. SEE CIVIL ENG. PLANS.
8. FIRE HYDRANT - NO PLANT MATERIAL WITHIN A MINIMUM OF 5'.
9. CONCRETE HEADER
10. MONUMENT SIGN. SEE WALL PLANS.
11. RIP RAP DRAINAGE STRUCTURE- SEE CIVIL PLANS
12. STORMWATER RETENTION. SEE CIVIL ENG. PLANS.
13. STORMWATER DRAINAGE PIPE. SEE CIVIL ENG. PLANS.
14. WATER LINE. SEE CIVIL ENG. PLANS.
15. SEWER LINE. SEE CIVIL ENG. PLANS.
16. ENTRY/EXIT GATE
17. EMERGENCY ACCESS CRASH GATE
18. 5' WIDE STABILIZED D.G. TRAIL
19. AMENITY AREA WITH SEATING-SEE SHT. L-4 FOR BENCH INFORMATION (3) TOTAL BENCHES
20. STREET LIGHT. SEE ELECTRICAL PLANS.
21. SIGHT DISTANCE LINES PER CITY SURPRISE STANDARD, SEE DETAILS - 4-01.

PLANT LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
TREES			
	ACACIA STENOPHYLLIA	SHOESTRING ACACIA	24" BOX
	PROSOPIS CHILENSIS 'THORNLESS'	THORNLESS MESQUITE	24" BOX
	OLNEYA TESOTA	IRONWOOD	24" BOX
	QUERCUS VIRGINIANA	SOUTHERN LIVE OAK	24" BOX
	SOPHORA SECUNDIFLORA	TEXAS MOUNTAIN LAUREL	24" BOX
SHRUBS			
	BOUGAINVILLEA SP.	BARBARA KARST BOUGAINVILLEA	5 GAL.
	EREMOPHILA MACULATA	'VALENTINE' BUSH	5 GAL.
	LEUCOPHYLLUM LAEVIGATUM	CHIHUAHUAN SAGE	5 GAL.
	RUELLIA PENINSULARIS	BAJA RUELLIA	5 GAL.
	RUELLIA BRITTONIANA	BARIO RUELLIA	5 GAL.
	TECOMA STANS 'GOLD STAR'	YELLOW BELLS	5 GAL.
ACCENTS			
	AGAVE DESMETTIANA	AGAVE	5 GAL.
	HESPERALOE PARVIFLORA 'PERPA'	BRAKELIGHTS RED YUCCA	5 GAL.
	MUHLENBERGIA CAPILLARIS	REGAL MIST	5 GAL.
GROUNDCOVER			
	LANTANA MONTEVIDENSIS	PURPLE LANTANA	1 GAL.
	LANTANA 'NEW GOLD'	NEW GOLD LANTANA	1 GAL.
	SPHAGNETICOLA TRILOBATA	YELLOW DOT	1 GAL.
	RUELLIA BRITTONIANA 'KATIE'	KATIE RUELLIA	1 GAL.
	TURF	HYDROSEED BERMUDA	
INERT GROUNDCOVER			
2	DECOMPOSED GRANITE	"EXPRESS BROWN"	1/2" SCREENED
18	DECOMPOSED GRANITE	"EXPRESS BROWN"	1/4" MINUS STABLIZED
	CONCRETE HEADER	PLAIN CONCRETE	4" W X 6" HT

NOTES:
1. CONTRACTOR TO VERIFY ALL QUANTITIES.
2. CONTRACTOR TO PROVIDE DECOMPOSED GRANITE SAMPLES TO LANDSCAPE ARCHITECT FOR APPROVAL.
3. TREE ROOT BARRIERS ARE REQUIRED PER CITY OF SURPRISE EDS, SEE DETAIL 8-14. WHEN TREES ARE WITHIN THREE FEET OF SIDEWALKS, CURBS, PAVEMENT OR WALLS.
4. ALL IRRIGATION SYSTEMS WILL BE INSTALLED WITH PURPLE PIPE.
5. THE LANDSCAPE AND IRRIGATION DESIGN WILL COMPLY WITH CITY OF SURPRISE EDS PER CHAPTER 8.

NORTH

0 30' 60' 120'

SCALE: 1" = 30'

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

PINNACLE DESIGN, INC
1048 N. 44th Street
Suite 200 ◢ Phoenix, AZ 85008
Ofc:(602)952-8585 ◢ Fax:952-8686

REGISTERED LANDSCAPE ARCHITECT
37505
EDWARD J. LORDEN
11.18.19
ARIZONA, U.S.A.
Expires 3/31/21

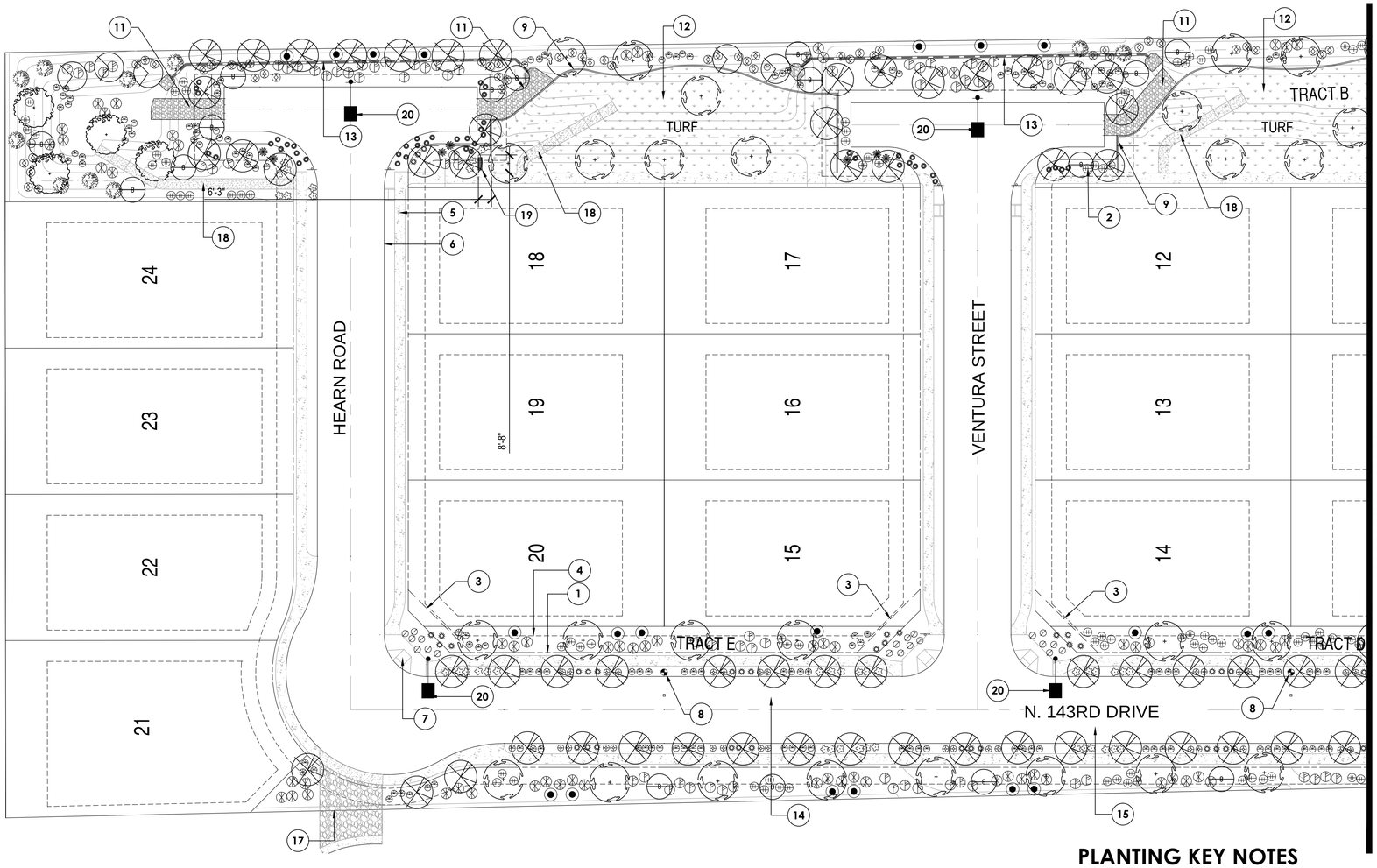
Surprise, AZ.

PLANTING PLAN
"W RANCH"
143rd AVENUE and WADDELL ROAD
CASE NUMBER: FS19-828

Drawn By:	NR
Job No:	14021
Date:	4.26.15
3 TREE CHANGE	1.12.16
2 REAPPROVAL	8.8.17
1 REAPPROVAL	11.18.19
2 CITY COMMENTS	1.20.20
1 CITY COMMENTS	2.25.20

L-3 of 16

PLOTTED: 6/4/2020 @ 4:03 PM
THIS DRAWING AND ANY ELECTRONIC FILE IS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF PINNACLE DESIGN, INC. WHETHER THE PROJECT FOR WHICH THIS DRAWING IS MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSIONS OF THIS PROJECT EXCEPT BY WRITTEN AGREEMENT AND/OR APPROPRIATE COMPENSATION TO PINNACLE DESIGN, INC. COPYRIGHT © 2011 PINNACLE DESIGN, INC.



PLANT LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
	TREES		
	ACACIA STENOPHYLLIA	SHOESTRING ACACIA	24" BOX
	PROSOPIS CHILENSIS 'THORNLESS'	THORNLESS MESQUITE	24" BOX
	OLNEYA TESOTA	IRONWOOD	24" BOX
	QUERCUS VIRGINIANA	SOUTHERN LIVE OAK	24" BOX
8	SOPHORA SECUNDIFLORA	TEXAS MOUNTAIN LAUREL	24" BOX
	SHRUBS		
	BOUGAINVILLEA SP.	BARBARA KARST BOUGAINVILLEA	5 GAL.
	EREMOPHILA MACULATA	'VALENTINE' BUSH	5 GAL.
	LEUCOPHYLLUM LAEVIGATUM	CHIHUAHUAN SAGE	5 GAL.
	RUELLIA PENINSULARIS	BAJA RUELLIA	5 GAL.
	RUELLIA BRITTONIANA	BARIO RUELLIA	5 GAL.
	TECOMA STANS 'GOLD STAR'	YELLOW BELLS	5 GAL.
	ACCENTS		
	AGAVE DESMETTIANA	AGAVE	5 GAL.
	HESPERALOE PARVIFLORA 'PERPA'	BRAKELIGHTS RED YUCCA	5 GAL.
	MUHLENBERGIA CAPILLARIS	REGAL MIST	5 GAL.
	GROUNDCOVER		
	LANTANA MONTEVIDENSIS	PURPLE LANTANA	1 GAL.
	LANTANA 'NEW GOLD'	NEW GOLD LANTANA	1 GAL.
	SPHAGNETICOLA TRILOBATA	YELLOW DOT	1 GAL.
	RUELLIA BRITTONIANA 'KATIE'	KATIE RUELLIA	1 GAL.
	TURF	HYDROSEED BERMUDA	
	INERT GROUNDCOVER		
2	DECOMPOSED GRANITE	"EXPRESS BROWN"	1/2" SCREENED
18	DECOMPOSED GRANITE	"EXPRESS BROWN"	1/4" MINUS STABLIZED
	CONCRETE HEADER	PLAIN CONCRETE	4" W X 6" HT

NOTES:
1. CONTRACTOR TO VERIFY ALL QUANTITIES.
2. CONTRACTOR TO PROVIDE DECOMPOSED GRANITE SAMPLES TO LANDSCAPE ARCHITECT FOR APPROVAL.
3. TREE ROOT BARRIERS ARE REQUIRED PER CITY OF SURPRISE EDS, SEE DETAIL 8-14. WHEN TREES ARE WITHIN THREE FEET OF SIDEWALKS, CURBS, PAVEMENT OR WALLS.
4. ALL IRRIGATION SYSTEMS WILL BE INSTALLED WITH PURPLE PIPE.
5. THE LANDSCAPE AND IRRIGATION DESIGN WILL COMPLY WITH CITY OF SURPRISE EDS PER CHAPTER 8.

PLANTING KEY NOTES

1. PROPERTY LINE / RIGHT OF WAY LINE / LIMITS OF WORK
2. DECOMPOSED GRANITE IN ALL PLANTING AREAS- ONSITE
3. 30'X30' LOCAL STREET SIGHT VISIBILITY TRIANGLES PER SURPRISE STANDARD, SEE DETAIL - 4-02.
4. P.U.E. SEE CIVIL ENG. PLANS.
5. SIDEWALK.
6. CURB. SEE CIVIL ENG. PLANS.
7. ACCESSIBLE RAMP. SEE CIVIL ENG. PLANS.
8. FIRE HYDRANT - NO PLANT MATERIAL WITHIN A MINIMUM OF 5'.
9. CONCRETE HEADER
10. MONUMENT SIGN. SEE WALL PLANS.
11. RIP RAP DRAINAGE STRUCTURE- SEE CIVIL PLANS
12. STORMWATER RETENTION. SEE CIVIL ENG. PLANS.
13. STORMWATER DRAINAGE PIPE. SEE CIVIL ENG. PLANS.
14. WATER LINE. SEE CIVIL ENG. PLANS.
15. SEWER LINE. SEE CIVIL ENG. PLANS.
16. ENTRY/EXIT GATE
17. EMERGENCY ACCESS CRASH GATE
18. 5' WIDE STABILIZED D.G. TRAIL
19. AMENITY AREA WITH SEATING-SEE SHT. L-4 FOR BENCH INFORMATION (3) TOTAL BENCHES
20. STREET LIGHT. SEE ELECTRICAL PLANS.
21. SIGHT DISTANCE LINES PER CITY SURPRISE STANDARD, SEE DETAILS - 4-01.

'WABASH' P-CA111I, 6' BENCH WITH BACK OR APPROVED EQUAL; COLOR: RED WITH RED FRAME. - 3 TOTAL.



NOTES:
1. ALL EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
2. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF EQUIPMENT AND INSTALLATION TO LANDSCAPE ARCHITECT FOR APPROVAL.
3. VERIFY FINAL COLORS OF EQUIPMENT WITH OWNER.

AVAILABLE FROM:
DAVE BANG ASSOCIATES
140 N. GILBERT RD.
MESA, AZ 85203
PHONE: 480.892.2266

A 6' BENCH

NORTH

0 30' 60' 120'

SCALE: 1" = 30'

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

PINNACLE DESIGN, INC
1048 N. 44th Street
Suite 200 ◢ Phoenix, AZ 85008
Ofc:(602)952-8585 ◢ Fax:952-8686

REGISTERED LANDSCAPE ARCHITECT
37505
EDWARD J. LORDEN
11.18.19
ARIZONA, U.S.A.
Expires 3/31/20

Surprise, AZ.

PLANTING PLAN
"W RANCH"
143rd AVENUE and WADDELL ROAD
CASE NUMBER: FS19-828

Drawn By:	NR
Job No:	14021
Date:	4.26.15
1 TREE CHANGE	1.12.16
1 REAPPROVAL	8.8.17
2 REAPPROVAL	11.18.19
1 CITY COMMENTS	1.20.20
2 CITY COMMENTS	2.25.20

L-4 of 16

PLOTTED: 8/4/EADE ON 02/25/2020 AT 04:00 PM
THIS DRAWING AND ANY ELECTRONIC FILES AS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF PINNACLE DESIGN, INC. WHETHER THE PROJECT FOR WHICH THIS DRAWING IS MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSIONS OF THIS PROJECT EXCEPT BY WRITTEN AGREEMENT AND/OR APPROPRIATE COMPENSATION TO PINNACLE DESIGN, INC. COPYRIGHT © 2011 PINNACLE DESIGN, INC.

PIPE SIZING SCHEDULE

ALL WATER SERVICES TO BE TYPE K COPPER. MAINLINE LESS THAN 3" SHALL BE A MINIMUM SCHEDULE 40 SOLVENT WELD. ALL MAINLINE PIPE 3" AND LARGER SHALL BE A MINIMUM CLASS 200 RING TYPE PIPE WITH DUCTILE IRON FITTINGS AND THRUST BLOCKING. ALL 1/2" LATERAL PIPE SHALL BE A MINIMUM CLASS 315 SOLVENT WELD. ALL LATERAL PIPE 3/4" AND ABOVE SHALL BE A MINIMUM CLASS 200 SOLVENT WELD. THE FOLLOWING PIPE SIZES ARE THE MINIMUM SIZES ALLOWED, PIPE SIZES SHOWN ON THE PLANS MAY BE LARGER TO COMPENSATE FOR HYDRAULIC LOSSES. SIZE ALL LATERAL PIPE TO MAINTAIN A MAXIMUM 10% PRESSURE DROP FROM THE VALVE TO THE MOST DISTANT POINT(S). ALL PVC FITTINGS SHALL BE SCHEDULE 80.

TYPE K COPPER		SCHEDULE 40		CLASS 200 & 315	
FLOW (GPM)	PIPE SIZE	FLOW (GPM)	PIPE SIZE	FLOW (GPM)	PIPE SIZE
0 - 3	1/2"	0 - 4	1/2"	0 - 6	1/2"
4 - 5	5/8"	5 - 8	3/4"	7 - 10	3/4"
6	3/4"	9 - 13	1"	11 - 17	1"
7 - 12	1"	14 - 23	1-1/4"	18 - 27	1-1/4"
13 - 18	1-1/4"	24 - 31	1-1/2"	28 - 35	1-1/2"
19 - 26	1-1/2"	32 - 52	2"	36 - 56	2"
27 - 47	2"	53 - 74	2-1/2"	57 - 82	2-1/2"
48 - 72	2-1/2"			83 - 122	3"
73 - 103	3"			123 - 203	4"
				204 - 440	6"

SLEEVING SCHEDULE

ALL SLEEVING SHALL BE SCHEDULE 80 PVC AND INSTALLED WITH A MIN. OFFSET AT ALL JOINTS TO PERMIT EASY INSTALLATION AND REMOVAL OF THE IRRIGATION LINES. MAINLINE PIPE, LATERAL PIPE, AND CONTROL WIRE SHALL BE PLACED IN SEPARATE SLEEVES. EXTEND ALL SLEEVES AT LEAST 12" BEYOND THE EDGES OF THE PAVEMENT AND "MARK" LOCATION BY DRIVING A 12" REBAR STAKE NEAR THE END OF EACH SLEEVE (TOP OF REBAR STAKE SHALL BE A MIN. OF 6" BELOW FINISH GRADE). SIZE OF SLEEVES SHALL BE AS FOLLOWS:

PIPE SIZE	SLEEVE SIZE	PIPE SIZE	SLEEVE SIZE
1/2" TO 3/4"	2" MINIMUM	2-1/2" TO 3"	6" MINIMUM
1" TO 1-1/2"	3" MINIMUM	4"	8" MINIMUM
2"	4" MINIMUM	6"	12" MINIMUM

EMITTER SCHEDULE

ALL EMISSION POINTS TO BE LOCATED ON THE UPHILL SIDE OF THE PLANT MATERIAL. ONE EMISSION POINT TO BE LOCATED AT THE PLANT BALL WITH ADDITIONAL POINTS WITHIN THE PLANT PIT PERIMETER AS DETAILED.

PLANT TYPE	PLANT SIZE	EMITTERS / PLANT	GPH / OUTLET	NO. OF OUTLETS	TOTAL GPH
TREE	15 GAL.	2 MULTI	2 GPH	2	4 GPH
TREE	24" BOX	2 MULTI	2 GPH	3	6 GPH
TREE	36" BOX	2 MULTI	2 GPH	4	8 GPH
TREE	42" BOX	2 MULTI	2 GPH	4	8 GPH
TREE	48" BOX	2 MULTI	2 GPH	5	10 GPH
TREE	54" BOX	3 MULTI	2 GPH	8	16 GPH
TREE	60" BOX	3 MULTI	2 GPH	8	16 GPH
TREE	68" BOX	4 MULTI	2 GPH	10	20 GPH
TREE	72" BOX	4 MULTI	2 GPH	10	20 GPH
TREE	84" BOX	4 MULTI	2 GPH	12	24 GPH
TREE	96" BOX	5 MULTI	2 GPH	16	32 GPH
PALM	PALM	2 MULTI	2 GPH	5	10 GPH
SHRUB	1 GAL.	1 SINGLE	1 GPH	1	1 GPH
SHRUB	5 GAL.	1 SINGLE	1 GPH	1	1 GPH
G.C.	1 GAL.	1 SINGLE	1 GPH	1	1 GPH

GENERAL IRRIGATION NOTES

1. THE CONTRACTOR SHALL MARK AND CONFIRM LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO EXCAVATION. CONFLICTS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT FOR RESOLUTION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL WORK AS SHOWN WITH THAT OF OTHER TRADES (AS IT RELATES TO PVC SLEEVING, PAVING, ELECTRICAL, ETC.).
3. CONTRACTOR SHALL PREPARE AS-BUILT DRAWINGS OF COMPLETED WORK AND SUBMIT FOR APPROVAL PRIOR TO ACCEPTANCE BY OWNER. AS-BUILTS TO BE UPDATED ON A DAILY BASIS DURING INSTALLATION OF SYSTEM.
4. IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
5. IF THERE ARE ANY DISCREPANCIES WITH THE FOLLOWING: VALVE SIZES, METER SIZES, MAINLINE SIZES, WATER PRESSURE, COVERAGE, CONTROLLER SIZES, OBSTRUCTIONS, GRADE DIFFERENCES OR LAYOUT - THE CONTRACTOR IS TO NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY. THE LANDSCAPE ARCHITECT WILL THEN MAKE ANY NECESSARY CORRECTIONS AND WILL RESUBMIT THE THE PLANS.
6. FOR METERS THAT OPERATE MORE GALLONS PER MINUTE (G.P.M.) THAN THE METER'S CAPACITY, CONTRACTOR SHALL PROGRAM THE CONTROLLER TO OPERATE VALVES TO THE MAXIMUM METER CAPACITY. A METER MAY NEED TO HAVE SEVERAL RUN TIMES TO OPERATE ALL VALVES ASSOCIATED WITH THE METER.
7. CONTRACTOR TO VERIFY WATER PRESSURE AT WATER METER PRIOR TO START OF WORK. A BOOSTER PUMP MAY BE REQUIRED IF THE PRESSURE IS TOO LOW.
8. BACKFLOW PREVENTOR TO BE VERIFIED IN FIELD BY LANDSCAPE ARCHITECT OR OWNER PRIOR TO INSTALLATION.
9. ELECTRICAL POWER/PEDESTAL(S) LOCATIONS TO BE PROVIDED BY OTHERS. FINAL LOCATION OF CONTROLLER TO BE STAKED AND APPROVED BY LANDSCAPE ARCHITECT OR OWNER PRIOR TO INSTALLATION.
10. ALL 24 VOLT WIRING FROM CONTROLLER TO ELECTRIC VALVES SHALL BE MINIMUM 14 GAUGE SOLID COPPER DIRECT BURIAL WIRE.
11. PER ARIZONA HOUSE BILL 2256, A BLUE 18 GAUGE TRACER WIRE SHALL BE INSTALLED WITH 2" AND LARGER MAINLINES. 6" INCHES OF WHICH SHALL BE COILED INSIDE THE CONTROLLER.
12. MAINLINE AND LATERAL PIPING IS SCHEMATIC. LOCATE ALL MAINLINES AND EQUIPMENT OUTSIDE OF THE PUBLIC R.O.W. AND P.U.E. BUT WITHIN THE LANDSCAPE AREAS. CONTRACTOR TO ADJUST AS NECESSARY IN FIELD. CONTRACTOR IS ENCOURAGED TO USE COMMON TRENCH WHERE POSSIBLE. MINIMUM COVER OVER PIPING PER DETAILS.
13. ALL MAINLINES, LATERAL LINES AND WIRING UNDER PAVEMENT TO BE IN SEPARATE SCHEDULE 80 PVC SLEEVES. PVC SCHEDULE SLEEVES SHALL BE A MINIMUM INSIDE DIAMETER OF 2 TIMES THE IRRIGATION LINE DIAMETER. VALVE WIRING SHALL BE WITHIN SEPARATE ADJACENT SLEEVE.
14. THE CONTRACTOR SHALL PROVIDE IN-LINE AND/OR SPRINKLER CHECK VALVES AS REQUIRED THROUGHOUT THE IRRIGATION SYSTEM LOCATED WITHIN A SLOPED AREAS TO PREVENT LOW IRRIGATION HEAD DRAINAGE.
15. PROVIDE SEPARATE VALVES FOR TREES AND SHRUBS. ALL DRIP ZONE PVC SHALL BE A MINIMUM 3/4" CLASS 200.
16. ALL PIPING IS TO BE FLUSHED FOR A PERIOD OF 10 MINUTES PRIOR TO THE INSTALLATION OF EMITTERS. CONTRACTOR SHALL BE RESPONSIBLE FOR NECESSARY FLUSHING OF SYSTEM DUE TO CLOGGING FOR THE DURATION OF THE LANDSCAPE MAINTENANCE PER SPECIFICATIONS.
17. MAXIMUM LENGTH OF MICROTUBING ON DRIP ZONE TO BE 5'. WITH 6" MIN. EXPOSED AT THE EMITTER END.
18. CONTRACTOR TO GUARANTEE 100% IRRIGATION COVERAGE FOR ALL LAWN AREAS. CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT OF ANY LAWN AREAS WITHOUT FULL COVERAGE.
19. IRRIGATION HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE UNLESS OTHERWISE SPECIFIED.
20. NOTIFY LANDSCAPE ARCHITECT PRIOR TO MAINLINE PRESSURE TEST OF SYSTEM FOR APPROVAL.

IRRIGATION MATERIAL SCHEDULE

NOTES: THIS IRRIGATION SYSTEM TO USE THE FOLLOWING EQUIPMENT OR APPROVED EQUAL. REFER TO IRRIGATION DETAILS, NOTES AND SCHEDULES FOR ADDITIONAL INFORMATION. N/S DENOTES SYMBOL NOT SHOWN ON PLANS FOR CLARITY.

- M — WATER METER - SIZE AS INDICATED ON PLANS
- ⬢ — BACKFLOW PREVENTION UNIT: REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY- SEE COS EDS DETAIL 6-13 ON SHEET L-12 - SIZE AS INDICATED ON PLANS. ASSEMBLY TO BE PLACED IN A GUARDSHACK ENCLOSURE- SEE COS EDS DETAIL 6-14 ON SHEET L-12.
- A — CONTROLLER: IRRITROL MC PLUS-B SERIES CONTROLLER. [CONTRACTOR TO CONNECT CONTROLLER, AND MASTER VALVE AS NEEDED.] FINAL LOCATION TO BE DETERMINED IN FIELD BY OWNER AND LANDSCAPE CONTRACTOR PRIOR TO INSTALLATION. ELECTRICAL POWER SOURCE BY OTHERS.
  CONTROLLER 'A': IRRITROL MC-18 PLUS-B (18 STATION) WALL-MOUNTED CONTROLLER.
  CONTROLLER 'A': IRRITROL MC-8 PLUS-B (8 STATION) WALL-MOUNTED CONTROLLER.
- ⧓ — ISOLATION BALL VALVE - ASAHI TYPE 21 TRUE UNION BALL VALVE; LINE SIZE.
- ◔ — REMOTE CONTROL VALVE: IRRITROL 700 SERIES, SELF-FLUSHING ELECTRIC REMOTE CONTROL VALVE. SIZE AS INDICATED. INSTALL ONE ISOLATION VALVE PER TAP (TWO CONTROL VALVES MAX.) UPSTREAM FROM THE CONTROL VALVES.
- ◧ — PRESSURE REGULATOR & WYE FILTER: SENNINGER 3/4" PRESET PRESSURE REGULATOR (30 PSI) AND 3/4" AG PRODUCTS WYE FILTER WITH 150 MESH SCREEN.
- ⊖ — QUICK COUPLING VALVE: TORO 100-2SL[L]VC WITH LOCKING COVER AND LK COVER KEY.

90°	180°	270°	360°	
▽	▽	▽	▼	HUNTER I-20 POP UP ROTOR TURF SPRAYS - STD. NOZZLES AS INDICATED ON PLANS NOZZLE 1.5, 1.5 GPM @ 45PSI - 31' RADIUS — NOZZLE 3.0, 3.0 GPM @ 45 PSI - 38' RADIUS NOZZLE 2.0, 2.0 GPM @ 45 PSI - 34' RADIUS — NOZZLE 4.0, 4.0 GPM @ 45 PSI - 40' RADIUS
◔	◓	-	-	HUNTER I-20 POP UP ROTOR TURF SPRAYS - SHORT RADIUS NOZZLES (1.5 SR: 90°, 3.0: 180°) NOZZLE 1.5SR, 1.5 GPM @ 50PSI - 25' RADIUS NOZZLE 3.0SR, 3.0 GPM @ 50 PSI - 25' RADIUS

- N/S — MANUAL DRAIN VALVE: CHAMPION #100 1" BRONZE MANUAL VALVE WITH 3/4" MALE HOSE THREAD ON THE DISCHARGE. ASSEMBLY TO BE PLACED IN A BELOW GRADE VALVE BOX.
- N/S — FLUSH CAP: PVC END CAP.
- N/S — DRIP EMITTER, TREE: BOWSMITH ML220 SERIES, MULTI-PORT 2 G.P.H DRIP EMITTER.
- N/S — DRIP EMITTER, SHRUB: BOWSMITH SL210 SERIES, SINGLE-PORT 1 G.P.H. DRIP EMITTER.
- ▬ ▬ ▬ — MAINLINE PIPE, SCH. 40 PVC
- ─ ─ ─ — LATERAL LINE, TREE, CL. 200 PVC
- ─ · ─ — LATERAL LINE, SHRUB, CL. 200 PVC
- ——— — LATERAL LINE, TURF, CL. 200 PVC
- N/S — DISTRIBUTION TUBING (SPAGHETTI): 0.25" X 0.17" NOMINAL, WITH DISCO BPS-187 BUG PLUG STAKES AND/OR DISCO BP-187 BUG PLUGS.
- - - - - - - — PVC SLEEVE: SIZE PER SLEEVING SCHEDULE AND/OR IRRIGATION PLANS.

A-01 / 2" / 60 / TURF
- A-01 — VALVE DESIGNATOR:
- 2" — VALVE SIZE
- 60 — GALLONS PER MINUTE
- TURF — VALVE TYPE

PINNACLE DESIGN, INC
1048 N. 44th Street
Suite 200 ◢ Phoenix, AZ 85008
Ofc:(602)952-8585 ◢ Fax:952-8686

REGISTERED LANDSCAPE ARCHITECT — 37505 EDWARD J. LORDEN — 11.18.19 — ARIZONA, U.S.A. — Expires 3/31/20

Surprise, AZ.

IRRIGATION NOTES

"W RANCH"

143rd AVENUE and WADDELL ROAD

CASE NUMBER: FS19-828

Drawn By: NR

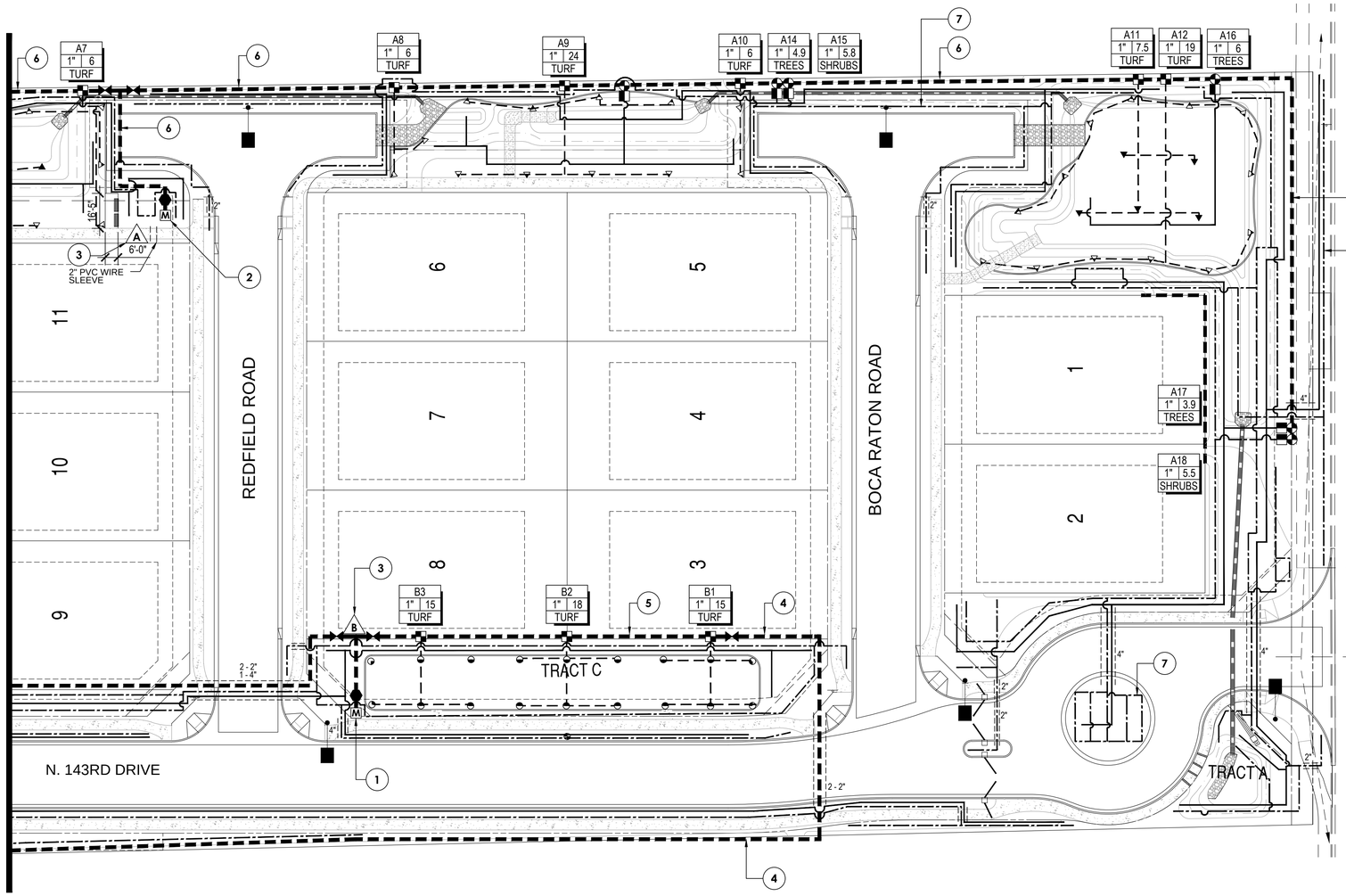
Job No: 14021

Date: 4.26.15
TREE CHANGE 1.12.16
1 REAPPROVAL 8.8.17
2 REAPPROVAL 11.18.19
CITY COMMENTS 1.20.20
CITY COMMENTS 2.25.20

L-5 of 16

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

PLOTTED: EMEADE ON 02/25/2020 AT 04:00 PM
THIS DRAWING AND ANY ELECTRONIC MEDIA IS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF PINNACLE DESIGN, INC. WHETHER THE PROJECT FOR WHICH THIS DRAWING IS MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSIONS OF THIS PROJECT EXCEPT BY WRITTEN AGREEMENT AND/OR APPROPRIATE COMPENSATION TO PINNACLE DESIGN, INC. COPYRIGHT © 2011 PINNACLE DESIGN, INC.



IRRIGATION LEGEND

SYMBOL	DESCRIPTION
M	WATER METER
	BACKFLOW PREVENTION UNIT
	ISOLATION BALL VALVE
A	PEDESTAL MOUNTED SOLAR CONTROLLER
	REMOTE CONTROL VALVE
	PRESSURE REGULATOR
90° 180° 270° 360°	HUNTER I-20 POP UP ROTOR TURF SPRAYS - STD. NOZZLES AS INDICATED ON PLAN
- -	HUNTER I-20 POP UP ROTOR TURF SPRAYS - SHORT RADIUS NOZZLES (1.5 SR: 90°, 3.0: 180°)
	MAINLINE PIPE - SIZE AS LABELED ON PLANS
	LATERAL LINE, TREE
	LATERAL LINE, SHRUB
	LATERAL LINE, TURF
	PVC SLEEVE(S) - SIZE AS LABELED ON PLANS

IRRIGATION KEY NOTES

1. 1" WATER METER AND BACKFLOW PREVENTER
2. 1-1/2" WATER METER AND BACKFLOW PREVENTER
3. WALL MOUNTED CONTROLLER
4. PVC MAINLINE - 1" SIZE
5. PVC MAINLINE - 1-1/2" SIZE
6. PVC MAINLINE - 2" SIZE
7. PVC DRIP LATERAL LINE - 3/4" SIZE

NOTES:
1. FLUSH VALVES ARE TO BE PLACED AT THE TERMINUS OF ALL LATERAL LINES.
2. LOCATE UNDERGROUND LINES IN LANDSCAPE AREAS WHEREVER POSSIBLE, AND NEVER BENEATH BUILDINGS OR SIMILAR STRUCTURES UNLESS APPROVED BY THE ARCHITECT.
3. THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE THE FOLLOWING SHOULD BE NOTED:
   A. ALTHOUGH IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY, INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPE AREAS .
   B. TREES AND SHRUB LOCATIONS AS SHOWN ON LANDSCAPE PLANS TAKE PRECEDENCE OVER IRRIGATION EQUIPMENT LOCATIONS. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS AND ARCHITECTURAL FEATURES.
   C. USE ONLY STANDARD TEES AND ELBOWS FITTINGS. USE OF CROSS TYPE FITTINGS IS ALLOWED.
4. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF IRRIGATION SLEEVING. SLEEVES ARE REQUIRED FOR BOTH PIPING AND ELECTRICAL WIRING AT EACH HARDSCAPE CROSSING. COORDINATE INSTALLATION OF SLEEVING WITH OTHER TRADES. ANY PIPE OR WIRE WHICH PASSES BENEATH EXISTING HARDSCAPE WHERE SLEEVING WAS NOT INSTALLED WILL REQUIRE HORIZONTAL BORING BY THE IRRIGATION CONTRACTOR.

NORTH

0 30' 60' 120'

SCALE: 1" = 30'

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

PINNACLE DESIGN, INC
1048 N. 44th Street
Suite 200 ◢ Phoenix, AZ 85008
Ofc:(602)952-8585 ◢ Fax:952-8686

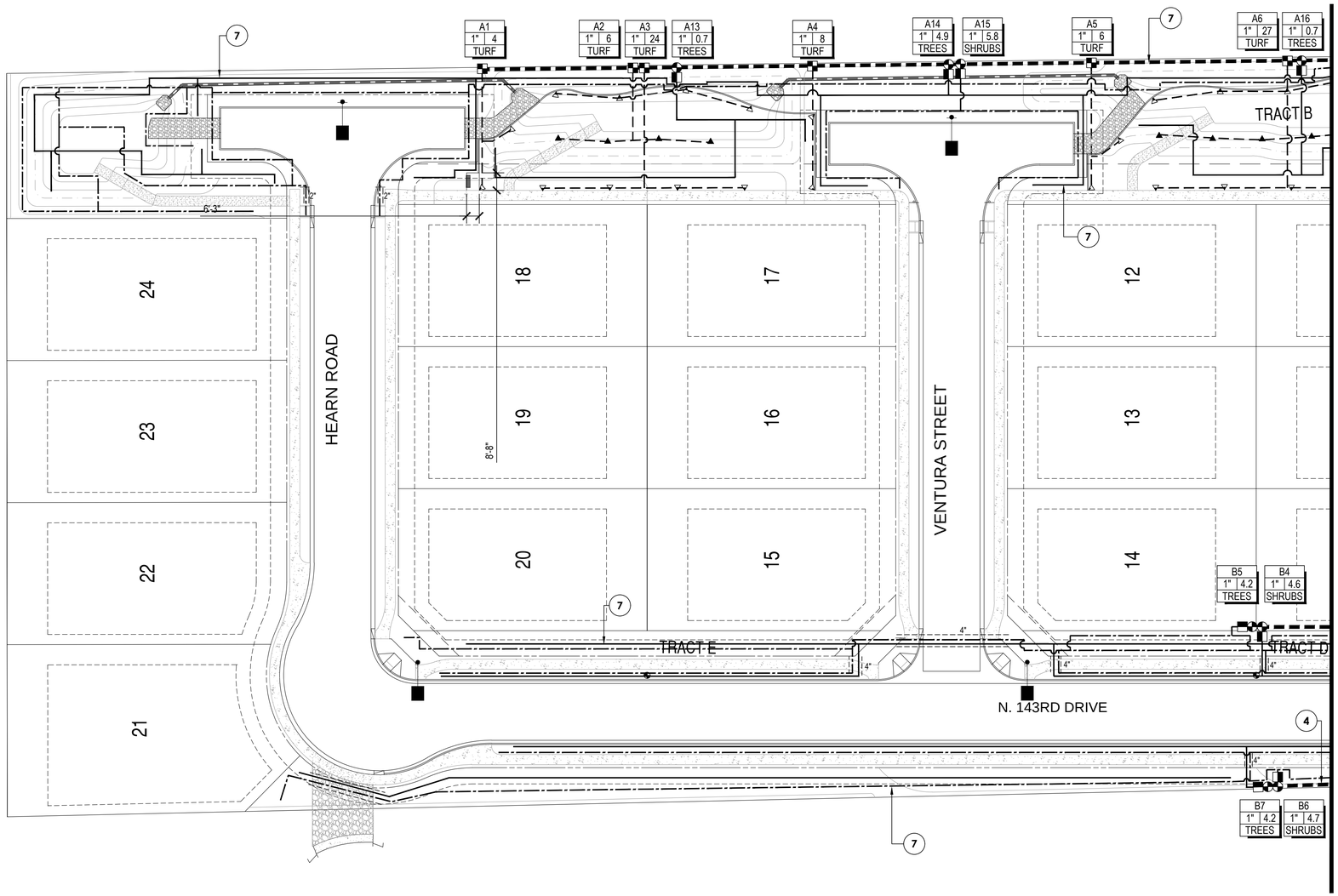
REGISTERED LANDSCAPE ARCHITECT
37505
EDWARD J LORDEN
11.18.19
ARIZONA, U.S.A.
Expires 3/31/20

Surprise, AZ.

IRRIGATION PLAN
"W RANCH"
143rd AVENUE and WADDELL ROAD
CASE NUMBER: FS19-828

Drawn By:	NR
Job No:	14021
Date:	4.26.15
0 TREE CHANGE	1.12.16
1 REAPPROVAL	8.8.17
2 REAPPROVAL	11.18.19
CITY COMMENTS	1.20.20
CITY COMMENTS	2.25.20

L-6 of 16



IRRIGATION LEGEND

SYMBOL	DESCRIPTION
M	WATER METER
	BACKFLOW PREVENTION UNIT
	ISOLATION BALL VALVE
A	PEDESTAL MOUNTED SOLAR CONTROLLER
	REMOTE CONTROL VALVE
	PRESSURE REGULATOR
90° 180° 270° 360°	HUNTER I-20 POP UP ROTOR TURF SPRAYS - STD. NOZZLES AS INDICATED ON PLAN
- -	HUNTER I-20 POP UP ROTOR TURF SPRAYS - SHORT RADIUS NOZZLES (1.5 SR: 90°, 3.0: 180°)
	MAINLINE PIPE - SIZE AS LABELED ON PLANS
	LATERAL LINE, TREE
	LATERAL LINE, SHRUB
	LATERAL LINE, TURF
	PVC SLEEVE(S) - SIZE AS LABELED ON PLANS

IRRIGATION KEY NOTES

1. 1" WATER METER AND BACKFLOW PREVENTER
2. 1-1/2" WATER METER AND BACKFLOW PREVENTER
3. WALL MOUNTED CONTROLLER
4. PVC MAINLINE - 1" SIZE
5. PVC MAINLINE - 1-1/2" SIZE
6. PVC MAINLINE - 2" SIZE
7. PVC DRIP LATERAL LINE - 3/4" SIZE

NOTES:
1. FLUSH VALVES ARE TO BE PLACED AT THE TERMINUS OF ALL LATERAL LINES.
2. LOCATE UNDERGROUND LINES IN LANDSCAPE AREAS WHEREVER POSSIBLE, AND NEVER BENEATH BUILDINGS OR SIMILAR STRUCTURES UNLESS APPROVED BY THE ARCHITECT.
3. THE DRAWINGS ARE DIAGRAMMATIC. THEREFORE THE FOLLOWING SHOULD BE NOTED:
   A. ALTHOUGH IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY, INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPE AREAS .
   B. TREES AND SHRUB LOCATIONS AS SHOWN ON LANDSCAPE PLANS TAKE PRECEDENCE OVER IRRIGATION EQUIPMENT LOCATIONS. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS AND ARCHITECTURAL FEATURES.
   C. USE ONLY STANDARD TEES AND ELBOWS FITTINGS. USE OF CROSS TYPE FITTINGS IS ALLOWED.
4. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF IRRIGATION SLEEVING. SLEEVES ARE REQUIRED FOR BOTH PIPING AND ELECTRICAL WIRING AT EACH HARDSCAPE CROSSING. COORDINATE INSTALLATION OF SLEEVING WITH OTHER TRADES. ANY PIPE OR WIRE WHICH PASSES BENEATH EXISTING HARDSCAPE WHERE SLEEVING WAS NOT INSTALLED WILL REQUIRE HORIZONTAL BORING BY THE IRRIGATION CONTRACTOR.

NORTH

0 30' 60' 120'

SCALE: 1" = 30'

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

PINNACLE DESIGN, INC
1048 N. 44th Street
Suite 200 ◢ Phoenix, AZ 85008
Ofc:(602)952-8585 ◢ Fax:952-8686

REGISTERED LANDSCAPE ARCHITECT
37505
EDWARD J LORDER
11.18.19
PHOENIX, ARIZONA, U.S.A.
Expires 3/31/20

Surprise, AZ.

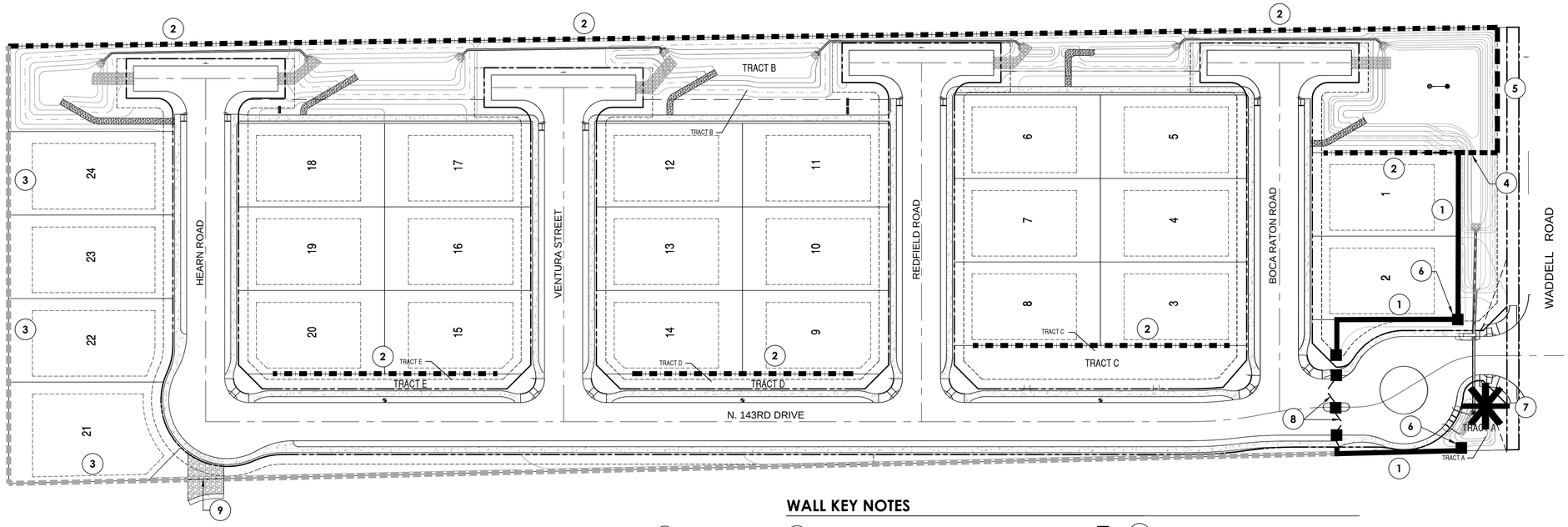
IRRIGATION PLAN
"W RANCH"
143rd AVENUE and WADDELL ROAD
CASE NUMBER: FS19-828

Drawn By:	NR
Job No:	14021
Date:	4.26.15
TREE CHANGE	1.12.16
1 REAPPROVAL	8.8.17
2 REAPPROVAL	11.18.19
CITY COMMENTS	1.20.20
CITY COMMENTS	2.25.20

L-7 of 16

PLOTTED: EMEADE ON 02/25/2020 AT 04:00 PM
THIS DRAWING AND ANY ELECTRONIC MEDIA IS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF PINNACLE DESIGN, INC. WHETHER THE PROJECT FOR WHICH THIS DRAWING IS MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSIONS OF THIS PROJECT EXCEPT BY WRITTEN AGREEMENT AND/OR APPROPRIATE COMPENSATION TO PINNACLE DESIGN, INC. COPYRIGHT © 2011 PINNACLE DESIGN, INC.

PLOTTED: ERIKADE ON 02/25/2020 AT 04:01 PM
THIS DRAWING AND ANY ELECTRONIC FILES AS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF PINNACLE DESIGN, INC. WHETHER THE PROJECT FOR WHICH THIS DRAWING IS MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSIONS OF THIS PROJECT EXCEPT BY WRITTEN AGREEMENT AND/OR APPROPRIATE COMPENSATION TO PINNACLE DESIGN, INC. COPYRIGHT © 2011 PINNACLE DESIGN, INC.



WALL KEY NOTES

1. PERIMETER THEME WALL. SEE SHT. L-10 QTY: 350 L.F.
2. 6' HIGH STANDARD 4" X 8" X 16" BLOCK WALL WITH 8" X 8" X 16" "H" BLOCK PILASTERS 13' O.C.- MATCH THEME WALL COLOR QTY: 1,950 L.F.
3. EXISTING BUILDER WALL- PAINT TO MATCH THEME WALL
4. FULL VIEW FENCE- 6' HT, MATCH CRASH GATE DESIGN QTY: 33 L.F.
5. PARTIAL VIEW FENCE- 4' IRON OVER 2' CMU QTY: 105 L.F.
6. 2' X 2' CMU COLUMN. SEE SHEET L-10 QTY: 6
7. ENTRY MONUMENT SIGN. SEE SHT, L-10 QTY: 1
8. AUTOMATIC ENTRY GATES. SEE SHT. L-10
9. EMERGENCY CRASH GATE. SEE SHT. L-10

NORTH

0 50' 100' 150'

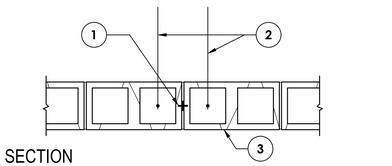
SCALE: 1" = 50'

WALL NOTES

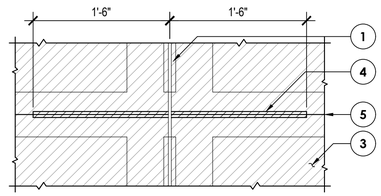
1. THESE NOTES ARE GENERAL AND MAY BE SUPERSEDED BY EITHER THE SPECIFICATIONS OR LOCAL TRADE PRACTICES. ALL WALLS, FENCES AND STRUCTURES SHALL CONFORM TO APPLICABLE JURISDICTIONAL REGULATIONS.
2. ALL WALLS AND FENCES SHALL CONFORM TO APPLICABLE POOL FENCING ORDINANCES.
3. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO THE BEGINNING OF CONSTRUCTION. REQUIRED SHOP DRAWINGS SHALL INCLUDE BUT NOT LIMITED TO WALL, COLUMNS, ENTRY GATES, POOL FENCE, AND WATER FEATURES. THE LANDSCAPE ARCHITECT SHALL NOT BE HELD RESPONSIBLE FOR ANY ITEMS REQUIRING SHOP DRAWING UNLESS THE LANDSCAPE ARCHITECT HAS REVIEWED AND APPROVED THE SHOP DRAWINGS.
4. ALL VIEW FENCING SHALL BE POWDER COATED.
5. FOOTINGS SHALL BEAR IN UNDISTURBED NATIVE SOIL OR COMPACTED FILL.
6. THE EXPOSED UPPERMOST SOIL TO RECEIVE FILL SHALL BE SCARIFIED 6" DEEP, MOISTURE CONDITIONED TO 3% ± OF OPTIMUM DENSITY CURVE FOR EACH TYPE OF SOIL ENCOUNTERED AND COMPACTED TO 95% OF MAXIMUM DRY DENSITY PER ASTM D-2922 OR D-3017.
7. FILL MATERIAL SHALL BE PREDOMINANTLY GRANULAR, NON-EXPANSIVE, CLEAN OF ALL ORGANIC OR DETRITUS SUBSTANCES, AND HAVE A PLASTICITY INDEX LESS THAN SEVEN (7). BACKFILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY IN HORIZONTAL 8" LIFTS.
8. EXCAVATIONS FOR FOUNDATIONS SHALL BE NEAT TO BE REMOVED FROM SURFACE TO RECEIVE CONCRETE.
9. ALLOWABLE SOIL BEARING PRESSURES AT FOOTING ON COMPACTED SOIL: 1500 PSI.
10. CONCRETE MIX DESIGN SHALL BE MAG CLASS "B" (2500 PSI), UNLESS OTHERWISE NOTED ON DRAWINGS. SUBMIT TEST REPORTS FOR CONCRETE MIX DESIGNS TO LANDSCAPE ARCHITECT FOR REVIEW.
11. NO PIPES OR DUCTS SHALL BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED.
12. CONCRETE FOOTINGS SHALL BE CONTINUOUS POUR TO GREATEST EXTENT PRACTICAL. STEP FOOTINGS IN EVEN BLOCK INCREMENTS.
13. IF STRUCTURAL DRAWINGS ARE NOT PROVIDED BY THE LANDSCAPE ARCHITECT, THEN THE WALL CONTRACTOR SHALL BE RESPONSIBLE FOR STRUCTURAL CALCULATIONS FOR THE WALLS. SUCH ENGINEERING SHALL CONFORM TO APPLICABLE JURISDICTIONAL REGULATIONS.
14. WATERPROOF ALL WALLS TO HIGH GRADE, IF APPLICABLE. GROUT SOLID AL C.M.U. CELLS AND VOIDS BELOW GRADE AND/OR CONTAINING REBAR.
15. ALL IRON/STEEL WORK TO BE OF HIGHEST QUALITY WITH WELDS GROUND SMOOTH. ALL IRON WORK, EXCEPT WHERE NOTED, TO BE PRIMED AND PAINTED. PAINT COLOR TO BE SELECTED BY OWNER AND/OR LANDSCAPE ARCHITECT. CONTRACTOR SHALL PROVIDE A 1 YEAR RUST WARRANTY ON IRON/STEEL WORK.
16. VERIFY HEIGHTS AND SLOPES AND TURNDOWNS BEFORE POURING FOOTIN
17. NEW WALL FINISHES SHALL MATCH EXISTING SURFACES, UNLESS OTHERWI NOTED ON DRAWINGS.
18. ALL PERIMETER AND INTERIOR WALLS NOT NOTED ABOVE SHALL BE STANDARD 4" X 8" X 16" CMU FENCE BLOCK UNLESS SPECIFIED OTHERWISE OWNER. OWNER TO SELECT PAINT COLOR.
19. ALL C.M.U. AND CONCRETE WALLS SHALL BE PRIMED AND PAINTED, UNLESS OTHERWISE NOTED. PAINT COLOR TO BE SELECTED BY OWNER AND/OR LANDSCAPE ARCHITECT
20. ALL STEPS IN WALLS SHALL OCCUR AT PROPERTY CORNERS. THE REAR WALLS OF EACH LOT SHALL MAINTAIN A CONSISTENT TOP OF WALL ELEVATION.
21. THE CONTRACTOR TO COORDINATE THE END OF SIDE YARD WALLS WITH TH HOUSING PRODUCT AND BUILDING SETBACKS.
22. WIND LOAD DESIGN SHALL BE IN ACCORDANCE WITH THE LOCAL BUILDING CODE.

GENERAL MASONRY NOTES

1. THESE NOTES ARE GENERAL AND MAY BE SUPERSEDED BY EITHER THE SPECIFICATIONS OR LOCAL TRADE PRACTICES.
2. MASONRY UNITS: SHALL BE GRADE "N" TYPE I CONFORMING TO LATEST ASTM STANDARD SPECIFICATION C-90 AND MANUFACTURED IN ACCORDANCE WITH "CONCRETE MASONRY ASSOCIATION" STANDARDS. SPECIFICALLY BLOCK SHALL BE AS NOTED ON PLANTS.
3. MORTAR: SHALL BE TYPE S, CONFORMING TO ASTM C270, WITH A 28 DAY COMPRESSIVE STRENGTH OF 1800 PSI.
4. GROUT: FRESHLY PREPARED AND UNIFORMLY MIXED. GROUT SHALL BE COMPOSED BY VOLUME OF 1 PART PORTLAND CEMENT AND 2 1/4 TO 3 PARTS SAND, TO WHICH MAY BE ADDED NOT MORE THAN ONE-TENTH PART LIME. WATER SHALL BE ADDED TO PRODUCE CONSISTENCY OF POURING WITHOUT SEGREGATION OF THE CONSTITUENTS. GROUT SHALL ATTAIN A COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS.
5. PORTLAND CEMENT: SHALL BE TYPE II AND CONFORM TO LATEST ASTM STANDARDS SPECIFICATION C-150.



PLAN SECTION



ELEVATION

KEYNOTES

1. CONTROL JOINT PER ARCHITECTURAL DRAWINGS AND SPECIFICATIONS
2. ONE VERTICAL BAR EACH SIDE OF JOINT IN SOLID GROUTED CELLS TO MATCH VERTICAL WALL REINFORCING
3. CMU WALL
4. WRAP REINFORCING WITH MASTIC FOR BOND BREAK
5. CONTINUOUS BOND BEAM BARS

NOTE:
BOND BEAM BARS CANNOT BE LAPPED WITHIN 8'-0" ON THE CONTROL JOINT

A **CONTROL JOINT IN CMU WALL**

1" = 1'-0"

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

PINNACLE DESIGN, INC
1048 N. 44th Street
Suite 200 ◢ Phoenix, AZ 85008
Ofc:(602)952-8585 ◢ Fax:952-8686

REGISTERED LANDSCAPE ARCHITECT
37505
EDWARD J
LORDEN
11.18.19
STATE OF ARIZONA
PRESCOTT, AZ
Expires 3/31/21

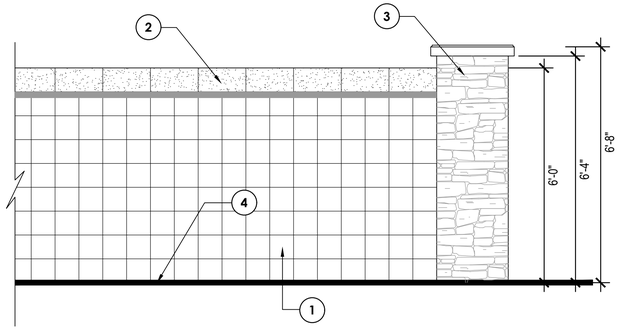
Surprise, AZ.

WALL LAYOUT PLAN & NOTES
"W RANCH"
143rd AVENUE and WADDELL ROAD
CASE NUMBER: FS19-828

Drawn By:	NR
Job No:	14021
Date:	4.26.15
TREE CHANGE	1.12.16
1 REAPPROVAL	8.8.17
2 REAPPROVAL	11.18.19
CITY COMMENTS	1.20.20
CITY COMMENTS	2.25.20

L-8 of 16

PLOTTED: EMEADE ON 02/25/2020 AT 04:01 PM
THIS DRAWING AND ANY ELECTRONIC FILES IS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF PINNACLE DESIGN, INC. WHETHER THE PROJECT FOR WHICH THIS DRAWING IS MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSIONS OF THIS PROJECT EXCEPT BY WRITTEN AGREEMENT AND/OR APPROPRIATE COMPENSATION TO PINNACLE DESIGN, INC. COPYRIGHT © 2011 PINNACLE DESIGN, INC.



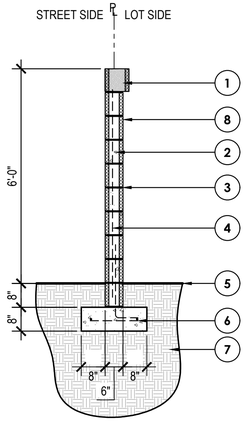
KEY NOTES

1. 6X8X16 PAINTED CMU BLOCK- SINGLE SCORE, COLOR: TBD
2. TOP COURSE TO BE 8X8X16 SPLIT FACE BLOCK- OVERHANG ON STREET SIDE, COLOR: DE SP-8, DESERT GRAY
3. 24" SQ. CMU COLUMN WITH STONE VENEER AND PRECAST CAP. COLUMNS AT WALL ENDS
4. FINISH GRADE

A 6" X 8" X 16" CMU WALL ELEVATION (THEME WALL)

SCALE: 1/2" = 1'-0"

NOTE: THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO THE BEGINNING OF CONSTRUCTION.



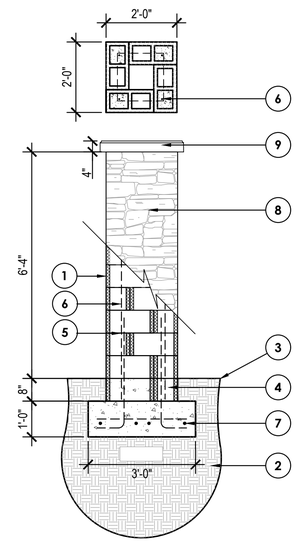
KEY NOTES

1. 8X8X16 SPLIT FACE BLOCK- OVERHANG ON STREET SIDE, COLOR: DE SP-8, DESERT GRAY
2. CMU BLOCK, GROUT SOLID ALL CELLS WITH REBAR AND CELLS BELOW GRADE
3. HORIZONTAL JOINT REINFORCING AT 16" O.C.
4. #4 REBAR VERT. 48" O.C.
5. FINISH GRADE
6. CONCRETE FOOTING WITH (2) #4 REBAR CONT. & (1) #4 REBAR 12" O.C.
7. COMPACTED SUBGRADE
8. 6" X 8" X 16" CMU BLOCK

B 6" X 8" X 16" CMU WALL SECTION DETAIL (THEME WALL)

SCALE: 1/2" = 1'-0"

NOTE: THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO THE BEGINNING OF CONSTRUCTION.



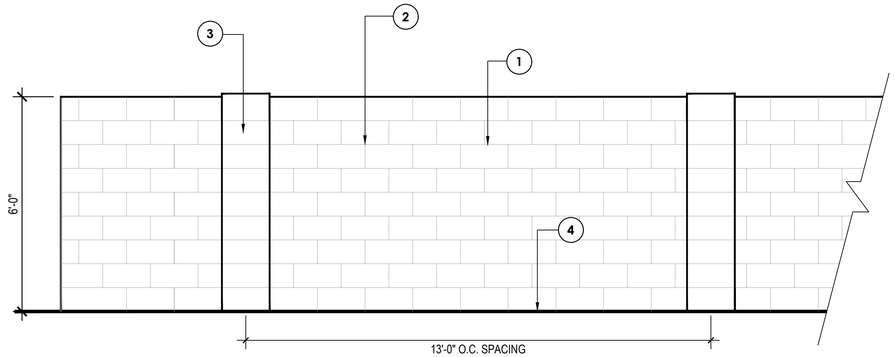
KEY NOTES

1. 8" X 8" X 16" CMU BLOCK
2. COMPACTED SUBGRADE
3. FINISH GRADE
4. CMU BLOCK, GROUT SOLID ALL CELLS WITH REBAR AND CELLS BELOW GRADE
5. HORIZONTAL JOINT REINFORCING AT 16" O.C.
6. #5 VERT. REBAR AT EACH CORNER CELL (GROUT CELL SOLID)
7. CONCRETE FOOTING WITH (4) #5 REBAR BOTH WAYS (1) #4 REBAR 12" O.C.
8. STONE VENEER - ELDORADO STONE- CYPRESS RIDGE IN ORCHARD COLOR
9. PRE-CAST CAP

C 8" X 8" X 16" WALL PILASTER SECTION DETAIL

SCALE: 1/2" = 1'-0"

NOTE: THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO THE BEGINNING OF CONSTRUCTION.



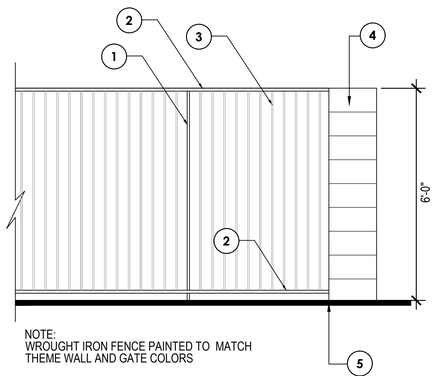
KEY NOTES

1. CMU WALL (COLOR TO MATCH THEME WALL)
2. 4" x8"x16" CMU BLOCK DOOLEY WALL W/ 8"x8x16" CMU PILASTERS AT 13' o.c.
3. CMU PILASTER AT 13' o.c.
4. FINISH GRADE

D 6' HT. STANDARD CMU BLOCK WALL ELEVATION

SCALE: 1/2" = 1'-0"

NOTE: THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO THE BEGINNING OF CONSTRUCTION.



NOTE:
WROUGHT IRON FENCE PAINTED TO MATCH THEME WALL AND GATE COLORS

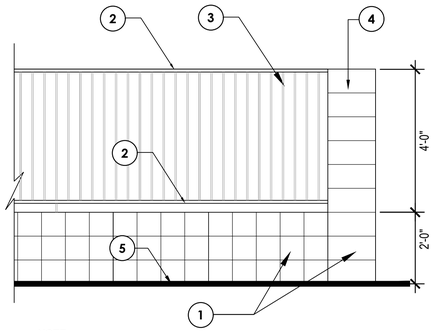
KEY NOTES

1. 2" X 2" STEEL POSTS 14 GUAGE W/ CAST IRON FLAT CAP. SPACING 48" OR AS PER PLAN
2. 1" X 1" SQ. TUBULAR STEEL RAIL
3. 3/4" X 3/4" SQ. TUBULAR STEEL PICKETS AT 3-3/4" O.C. MAXIMUM SPACING
4. 8" X 8" X 16" CMU PILASTER
5. FINISH GRADE

E 6' HT. FULL VIEW FENCE

SCALE: 1/2" = 1'-0"

NOTE: THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO THE BEGINNING OF CONSTRUCTION.



NOTE:
WROUGHT IRON FENCE PAINTED TO MATCH THEME WALL AND GATE COLORS

KEY NOTES

1. 6X8X16 PAINTED CMU BLOCK- SINGLE SCORE, COLOR: DE SP-8, DESERT GRAY
2. 1" X 1" SQ. TUBULAR STEEL RAIL
3. 3/4" X 3/4" SQ. TUBULAR STEEL PICKETS AT 3-3/4" O.C. MAXIMUM SPACING
4. 8" X 8" X 16" CMU PILASTER
5. FINISH GRADE

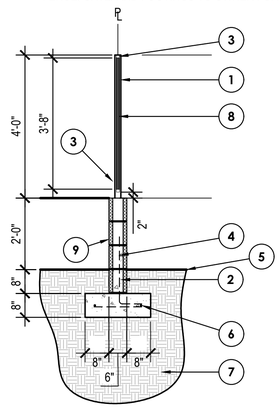
F 6' HT. PARTIAL VIEW FENCE

SCALE: 1/2" = 1'-0"

NOTE: THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO THE BEGINNING OF CONSTRUCTION.

NOTES:

- ALL METAL TO BE DEGREASED, PHOSPHATIZED WITH RUST RETARDANT UNDERCOAT AND DIP COATED WITH TWO COATS OF INDUSTRIAL GRADE FLAT BLACK ENAMEL.
- CONTRACTOR TO PROVIDE SHOP DRAWINGS OF WROUGHT IRON FENCE, GATE, AND FOOTINGS TO OWNER FOR APPROVAL.



KEY NOTES

1. 2" X 2" STEEL POSTS 14 GUAGE W/ CAST IRON FLAT CAP. SPACING 96" OR AS PER PLAN
2. CMU BLOCK, GROUT SOLID ALL CELLS WITH REBAR AND CELLS BELOW GRADE
3. 1" X 1" SQ. TUBULAR STEEL RAIL
4. #4 REBAR VERT. 48" O.C.
5. FINISH GRADE
6. CONCRETE FOOTING WITH (2) #4 REBAR CONT. & (1) #4 REBAR 12" O.C.
7. COMPACTED SUBGRADE
8. 3/4" X 3/4" SQ. TUBULAR STEEL PICKETS AT 3-3/4" O.C. MAXIMUM SPACING
9. 6" X 4" X 16" CMU BLOCK

G 6" X 8" X 16" CMU WALL W/ VIEW FENCE

SCALE: 1/2" = 1'-0"

NOTE: THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO THE BEGINNING OF CONSTRUCTION.

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

PINNACLE DESIGN, INC
1048 N. 44th Street
Suite 200 ◢ Phoenix, AZ 85008
Ofc:(602)952-8585 ◢ Fax:952-8686

REGISTERED LANDSCAPE ARCHITECT
37505
EDWARD J LORDER
11.18.19
PHOENIX, ARIZONA, U.S.A.
Expires 3/31/20

Surprise, AZ.

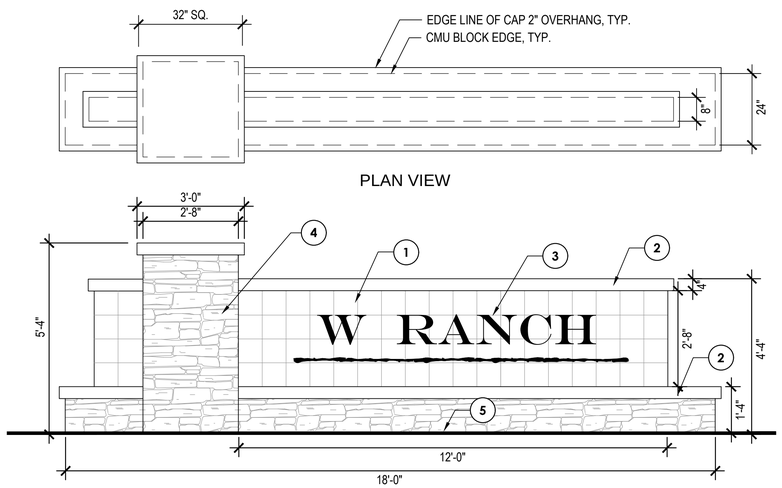
WALL DETAILS AND ELEVATION PLANS

"W RANCH"

143rd AVENUE and WADDELL ROAD

CASE NUMBER: FS19-828

Drawn By:	NR
Job No:	14021
Date:	4.26.15
TREE CHANGE	1.12.16
1 REAPPROVAL	8.8.17
2 REAPPROVAL	11.18.19
CITY COMMENTS	1.20.20
CITY COMMENTS	2.25.20



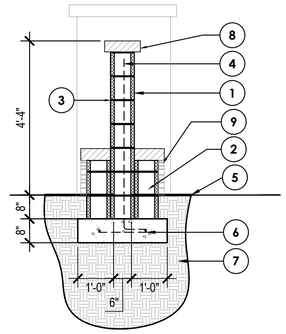
KEY NOTES

1. SIGNAGE WALL- 8x8x16 CMU- SINGLE SCORE, COLOR- DE SP-41, ADOBE.
2. 4" PRECAST CAP- COLOR- DE SP-3, CLIFF BROWN
3. LETTERS MOUNTED TO WALL, NAME/ LETTER STYLE TBD
4. 36" SQ. CMU COLUMN WITH STONE VENEER AND 4" PRECAST CAP. BASE TO MATCH IN MATERIAL. STONE VENEER TO BE ELDORADO STONE- CYPRESS RIDGE IN ORCHARD COLOR
5. FINISH GRADE

A ENTRY MONUMENTATION - ELEVATION

NOTE: THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO THE BEGINNING OF CONSTRUCTION.

SCALE: 1/2" = 1'-0"



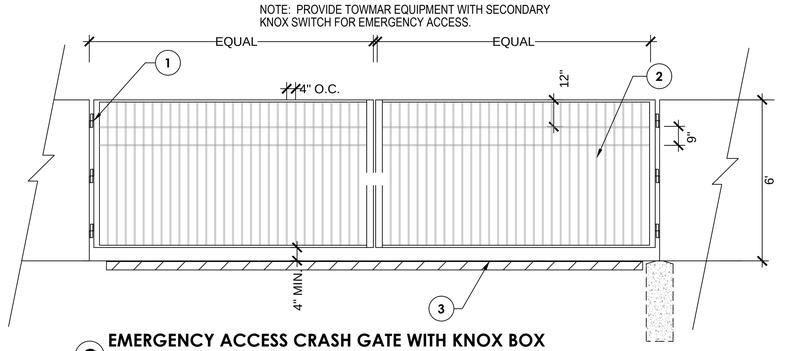
KEY NOTES

1. 8x8x16 CMU- SINGLE SCORE, COLOR- DE SP-41, ADOBE.
2. CMU BLOCK, GROUT SOLID ALL CELLS WITH REBAR AND CELLS BELOW GRADE
3. HORIZONTAL JOINT REINFORCING AT 16" O.C.
4. #4 REBAR VERT. 48" O.C.
5. FINISH GRADE
6. CONCRETE FOOTING WITH (2) #4 REBAR CONT. & (1) #4 REBAR 12" O.C.
7. COMPACTED SUBGRADE
8. 4" PRECAST CAP- COLOR- DE SP-3, CLIFF BROWN
9. STONE VENEER-ELDORADO STONE- CYPRESS RIDGE IN ORCHARD COLOR

B ENTRY MONUMENT WALL SECTION DETAIL

NOTE: THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO THE BEGINNING OF CONSTRUCTION.

SCALE: 1/2" = 1'-0"



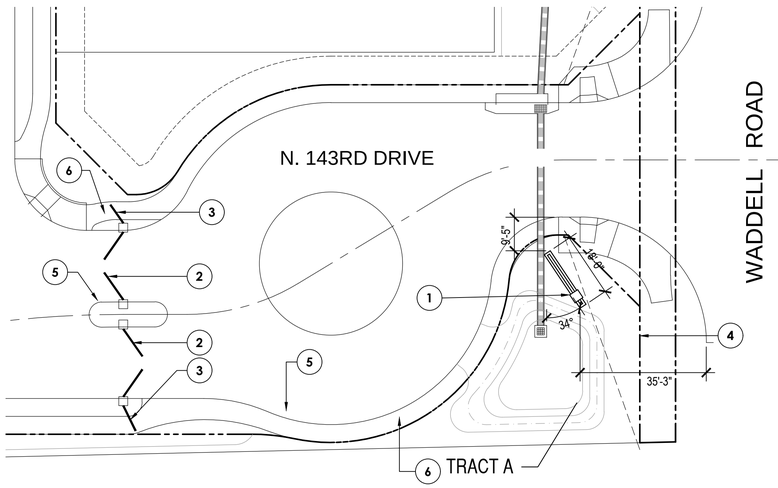
KEY NOTES

1. COMMERCIAL GRADE SWING GATE HINGE TO BE PROVIDED BY GATE FABRICATOR
2. TUBE STEEL GATE AND FENCE PANELS, SPECS PER FENCE FABRICATOR.
3. ASPHALT FIRE LANE

C EMERGENCY ACCESS CRASH GATE WITH KNOX BOX

NOTE: THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO THE BEGINNING OF CONSTRUCTION.

SCALE: 3/8" = 1'-0"



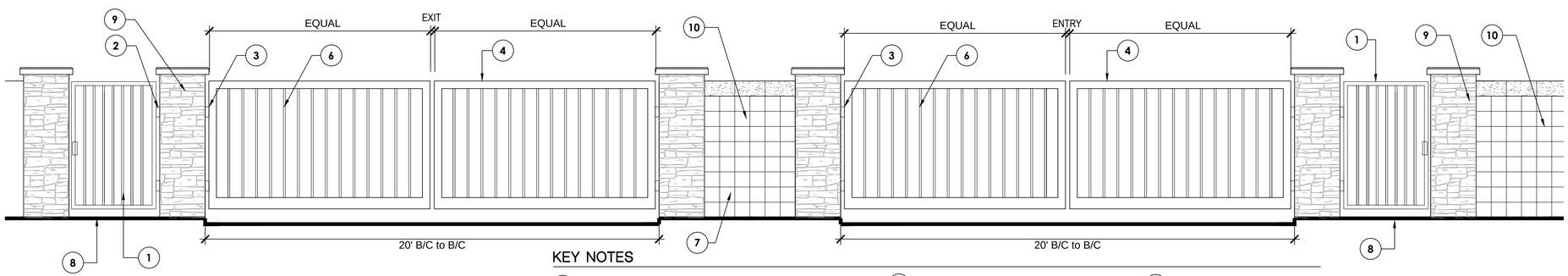
KEY NOTES

1. ENTRY MONUMENT/SIGNAGE WALL
2. VEHICULAR GATE
3. PEDESTRIAN GATE
4. R.O.W.
5. CURB
6. 5' SIDEWALK

D ENTRY MONUMENT - NORTH ENTRY

SCALE: 1" = 20'-0"

NORTH



KEY NOTES

1. PEDESTRIAN GATE WITH LOCKING HANDLE, CLOSING MECHANISM AND GATE HINGES PER GATE MANUFACTURER.
2. BARREL HINGE WITH BALL BEARING OPERATIONA AND GREASE FITTING, PROVIDE "KANT SLAM" GATE CLOSER, OR EQUAL.
3. COMMERCIAL GRADE SWING GATE HINGE TO BE PROVIDED BY GATE FABRICATOR. ATTACH TO STEEL GATE SUPPORT POST, SIZE PER GATE MANUFACTURER-TYP.
4. VEHICULAR GATES WITH AUTOMATIC OPENERS, GATE MANUFACTURER TO PROVIDE CALL BOX AS REQUIRED, TYP.
5. 3/4" STEEL PICKETS , PAINTED BLACK COLOR
6. 4" FRAME STEEL FRAME
7. GATE MOTORS BY GATE INSTALLER BEHIND WALL. COORDINATE POWER SUPPLY WITH ELECTRICAL PLANS
8. 5' SIDEWALK
9. 24" SQ. MASONRY THEME COLUMN
10. THEME WALL

NOTE: PROVIDE TOWMAR EQUIPMENT WITH SECONDARY KNOX SWITCH FOR EMERGENCY ACCESS.

E VEHICULAR/PEDESTRIAN GATE ELEVATION

NOTE: THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO THE BEGINNING OF CONSTRUCTION.

SCALE: 3/8" = 1'-0"

PLOTTED: EMEADE ON 02/25/2020 AT 04:02 PM
THIS DRAWING AND ANY ELECTRONIC MEDIA IS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF PINNACLE DESIGN, INC. WHETHER THE PROJECT FOR WHICH THIS DRAWING IS MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSIONS OF THIS PROJECT EXCEPT BY WRITTEN AGREEMENT AND/OR APPROPRIATE COMPENSATION TO PINNACLE DESIGN, INC. COPYRIGHT © 2011 PINNACLE DESIGN, INC.

PINNACLE DESIGN, INC
1048 N. 44th Street
Suite 200 ◢ Phoenix, AZ 85008
Ofc:(602)952-8585 ◢ Fax:952-8686

REGISTERED LANDSCAPE ARCHITECT
37505
EDWARD J LORDEN
11.18.19
ARIZONA, U.S.A.
Expires 9/30/21

Surprise, AZ.

ENTRY MONUMENT & GATE PLAN
"W RANCH"
143rd AVENUE and WADDELL ROAD
CASE NUMBER: FS19-828

Drawn By:	NR
Job No:	14021
Date:	4.26.15
1 TREE CHANGE	1.12.16
1 REAPPROVAL	8.8.17
2 REAPPROVAL	11.18.19
CITY COMMENTS	1.20.20
CITY COMMENTS	2.25.20

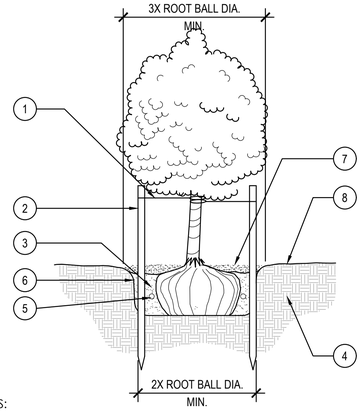
L-10 of 16

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

PLOTTED: EMEADE ON 02/25/2020 AT 04:03 PM
THIS DRAWING AND ANY ELECTRONIC FILE IS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF PINNACLE DESIGN, INC. WHETHER THE PROJECT FOR WHICH THIS DRAWING IS MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSIONS OF THIS PROJECT EXCEPT BY WRITTEN AGREEMENT AND/OR APPROPRIATE COMPENSATION TO PINNACLE DESIGN, INC. COPYRIGHT © 2011 PINNACLE DESIGN, INC.

KEYNOTES:

1. 2 STRAND TWISTED 12 GA. GALV. WIRE ENCASED IN 1/2" DIA. RUBBER HOSE
2. (2) HARDWOOD TREE (LENGTH AS REQ'D) STAKES DRIVEN OUTSIDE ROOTBALL INTO SUBGRADE (18" MIN.) PRIOR TO BACKFILLING TIE TO FIRST BRANCHES & AS NECESSARY FOR FIRM SUPPORT.
3. BACKFILL W/ SPECIFIED SOIL MIX. WATER & TAMP TO REMOVE AIR POCKETS REFER TO SPECS.
4. SUBSOIL
5. PLANT TABS PER SPECS.
6. SCARIFY SIDES OF PLANTING HOLE TO PREVENT GLAZING
7. DECOMPOSED GRANITE AT MIN. 2" DEPTH. COLOR AND SIZE NOTED ON SHEET L-1. NO DECOMPOSED GRANITE TO BE USED IN TURF AREAS.
8. FINISH GRADE



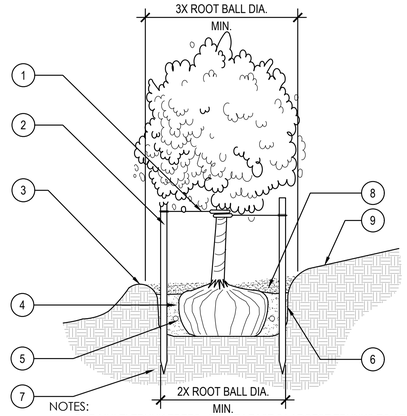
NOTES:
1. FOR MULTI-TRUNK TREES - TIE AT LEAST 2 LARGEST TRUNKS TO AT LEAST ONE STAKE.
2. 8" HIGH ARBOR GUARD TO BE PLACED AROUND TRUNK OF TREES LOCATED IN TURF AREAS.
3. TOP OF ROOT BALL AND WELL TO BE 4" BELOW FINISH GRADE.
4. PAINT CUTS OVER 1" DIA.
5. WIRE SHALL NOT TOUCH OR RUB ADJACENT TRUNKS OR BRANCHES.
6. TREE TRUNK GUARDS REQUIRED FOR TREES WITHIN TURF.

A TREE PLANTING

NOT TO SCALE

KEYNOTES:

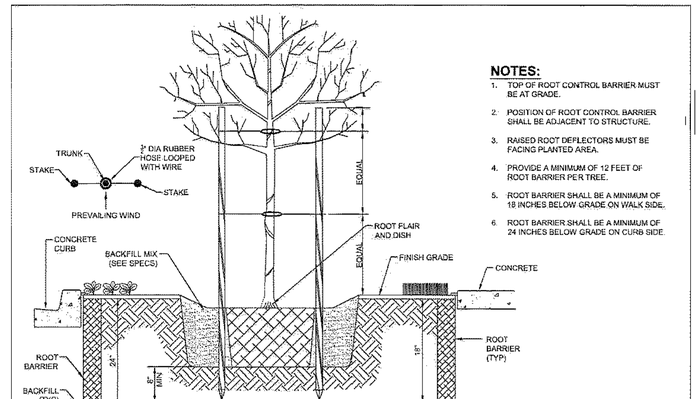
1. 2 STRAND TWISTED 12 GA. GALV. WIRE ENCASED IN 1/2" DIA. RUBBER HOSE
2. 2 HARDWOOD TREE (LENGTH AS REQ'D) STAKES DRIVEN OUTSIDE ROOTBALL INTO SUBGRADE (18" MIN.) PRIOR TO BACKFILLING TIE TO FIRST BRANCHES & AS NECESSARY FOR FIRM SUPPORT.
3. MAINTAIN SAUCER ON LOWER SIDES OF PLANT TO RETAIN WATER
4. BACKFILL W/ SPECIFIED SOIL MIX. WATER & TAMP TO REMOVE AIR POCKETS REFER TO SPECS.
5. PLANT TABS PER SPECS.
6. SCARIFY SIDES OF PLANTING HOLE TO PREVENT GLAZING
7. SUBSOIL
8. DECOMPOSED GRANITE AT MIN. 2" DEPTH. COLOR AND SIZE NOTED ON SHEET L-1.
9. ORIGINAL GRADE OF SLOPE (FINISH GRADE)



NOTES:
1. FOR MULTI-TRUNK TREES - TIE AT LEAST 2 LARGEST TRUNKS TO AT LEAST ONE STAKE.
2. 8" HIGH ARBOR GUARD TO BE PLACED AROUND TRUNK OF TREES LOCATED IN TURF AREAS.
3. TOP OF ROOT BALL AND WELL TO BE 4" BELOW FINISH GRADE.
4. PAINT CUTS OVER 1" DIA.
5. WIRE SHALL NOT TOUCH OR RUB ADJACENT TRUNKS OR BRANCHES.
6. TREE TRUNK GUARDS REQUIRED FOR TREES WITHIN TURF.

B TREE PLANTING ON SLOPE

NOT TO SCALE



NOTES:
1. TOP OF ROOT CONTROL BARRIER MUST BE AT GRADE.
2. POSITION OF ROOT CONTROL BARRIER SHALL BE ADJACENT TO STRUCTURE.
3. RAISED ROOT DEFLECTORS MUST BE FACING PLANTED AREA.
4. PROVIDE A MINIMUM OF 12 FEET OF ROOT BARRIER PER TREE.
5. ROOT BARRIER SHALL BE A MINIMUM OF 18 INCHES BELOW GRADE ON WALK SIDE.
6. ROOT BARRIER SHALL BE A MINIMUM OF 24 INCHES BELOW GRADE ON CURB SIDE.

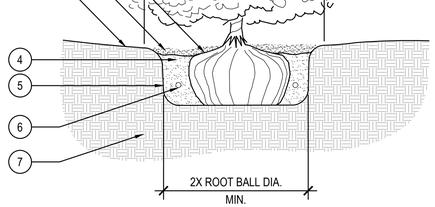
DATE REVISED: 8/2015			DETAIL NO:
APPROVED FOR DISTRIBUTION (SIGNATURE ON FILE)	SURPRISE ARIZONA	ROOT BARRIER	8-14

C TREE ROOT BARRIER

NOT TO SCALE

KEYNOTES:

1. TOP OF ROOT BALL AND WELL TO BE 2" BELOW SAUCER
2. DECOMPOSED GRANITE AT MIN. 2" DEPTH. COLOR AND SIZE NOTED ON SHEET L-1.
3. FINISH GRADE
4. BACKFILL W/ SPECIFIED SOIL MIX. WATER & TAMP TO REMOVE AIR POCKETS REFER TO SPECS.
5. SCARIFY SIDES OF PLANT PIT
6. PLANT TABS PER SPECS.
7. SUBSOIL

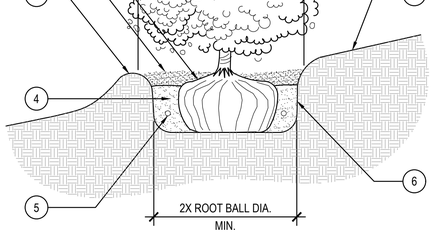


D SHRUB PLANTING

NOT TO SCALE

KEYNOTES:

1. TOP OF ROOT BALL AND WELL TO BE 2" BELOW SAUCER
2. DECOMPOSED GRANITE AT MIN. 2" DEPTH. COLOR AND SIZE NOTED ON SHEET L-1.
3. MAINTAIN SAUCER ON LOWER SIDES OF PLANT TO RETAIN WATER
4. BACKFILL W/ SPECIFIED SOIL MIX. WATER & TAMP TO REMOVE AIR POCKETS REFER TO SPECS.
5. PLANT TABS PER SPECS.
6. SCARIFY SIDES OF PLANT PIT
7. ORIGINAL GRADE OF SLOPE (FINISH GRADE)



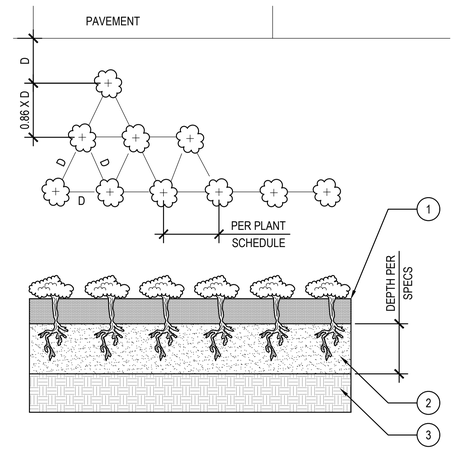
E SHRUB PLANTING ON SLOPE

NOT TO SCALE

KEYNOTES:

1. MULCH PER SPEC.
2. TOPSOIL OR PLANT MIX PER SPECS.
3. SUBSOIL

NOTES:
1. TILL 2" OF POTTING OR PLANTING SOIL OR APPROVED EQUAL TO A DEPTH OF 6"
2. D = ON CENTER DIMENSION

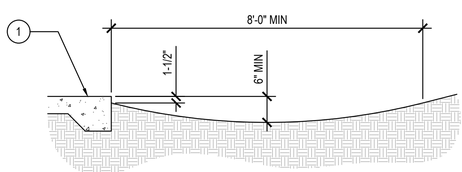


F GROUNDCOVER PLANTING

NOT TO SCALE

KEYNOTES:

1. SIDEWALK



NOTES:
1. SWALE ADJACENT TO CURB OR SIDEWALK FOR LANDSCAPE IRRIGATION WATER CONTROL.

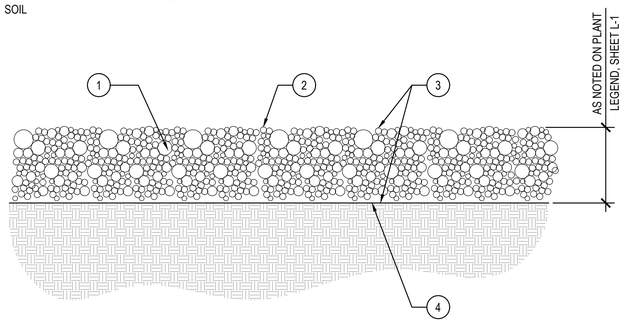
G SWALE

NOT TO SCALE

KEYNOTES:

1. DECOMPOSED GRANITE
2. FINISHED GRADE
3. APPROVED PRE-EMERGENT
4. FINISH SUB-GRADE OF COMPACTED SOIL

NOTES:
1. SEE SHEET L-1 FOR SIZE AND COLOR OF DECOMPOSED GRANITE.
2. PRE-EMERGENT SHALL BE APPLIED TO FINISH SUB-GRADE BEFORE INSTALLATION OF DECOMPOSED GRANITE AND TO TOP OF DECOMPOSED GRANITE AFTER INSTALLATION.



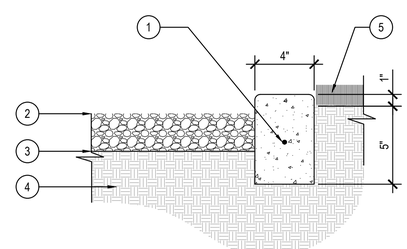
H DECOMPOSED GRANITE

NOT TO SCALE

KEYNOTES:

1. CONCRETE HEADER W/ #4 REBAR, CONTROL JNTS @ 5' O.C. 1/2" EXP. JNTS W/ 2' GREASED DOWEL @ 20' O.C. CONCRETE IS CLASS B (2,500 P.S.I.)
2. FINISH GRADE OF DECOMPOSED GRANITE - DEPTH PER PLANS
3. FINISH SUB-GRADE
4. COMPACTED SUBGRADE
5. TURF

NOTES:
1. COMPACT GRADE TO 90% OF MAXIMUM ADJACENT TO EDGING TO AVOID SETTLING.



I 4" X 6" CONCRETE HEADER

NOT TO SCALE

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

PINNACLE DESIGN, INC
1048 N. 44th Street
Suite 200 ◢ Phoenix, AZ 85008
Ofc:(602)952-8585 ◢ Fax:952-8686

REGISTERED LANDSCAPE ARCHITECT
37505
EDWARD J. LORDER
11.18.19
ARIZONA, U.S.A.
EXPIRES 3/31/20

Surprise, AZ.

PLANTING DETAILS

"W RANCH"

143rd AVENUE and WADDELL ROAD

CASE NUMBER: PS19-028

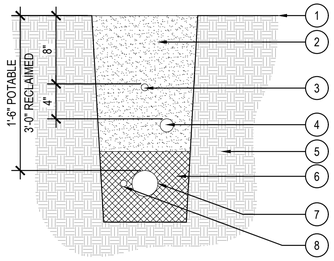
Drawn By:	NR
Job No:	14021
Date:	4.26.15
TREE CHANGE	1.12.16
1 REAPPROVAL	8.8.17
2 REAPPROVAL	11.18.19
CITY COMMENTS	1.20.20
CITY COMMENTS	2.25.20

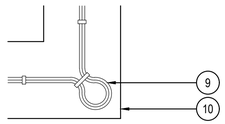
L-11 of 16

PLOTTED: EMEADE ON 02/25/2020 AT 04:03 PM
THIS DRAWING AND ANY ELECTRONIC MEDIA IS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF PINNACLE DESIGN, INC. WHETHER THE PROJECT FOR WHICH THIS DRAWING IS MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSIONS OF THIS PROJECT EXCEPT BY WRITTEN AGREEMENT AND/OR APPROPRIATE COMPENSATION TO PINNACLE DESIGN, INC. COPYRIGHT © 2011 PINNACLE DESIGN, INC.

KEYNOTES:

1. FINISH GRADE
2. BACKFILL, CLEAN AND ROCK FREE
3. DRIP TUBING
4. LATERAL LINE
5. NATIVE SOIL
6. BEDDING PER SPECS
7. MAINLINE PIPE
8. CONTROL VALVE WIRING, TAPED AT 10'-0" INTERVALS
9. TIE A LOOSE 24" LOOP IN ALL WIRING AT CHANGES OF DIRECTION GREATER THAN 30° UNTIE ALL LOOPS AFTER ALL CONNECTIONS HAVE BEEN MADE
10. TRENCH

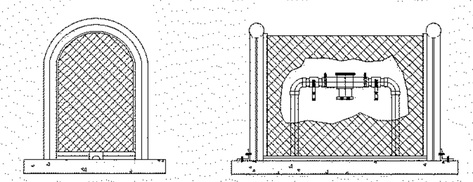




NOTES:
1. PLACE POTABLE AND RECLAIMED IRRIGATION LINES IN SEPARATE TRENCHES.
2. PLACE ALL PIPE IN LANDSCAPE AREAS WITHIN SPECIFIED CONSTRUCTION LIMITS.
3. ALL WIRING TO BE INSTALLED PER LOCAL CODE.
4. ALL PLASTIC PIPING TO BE SNAKED IN TRENCHES.
5. ALL TRENCHES TO BE THOROUGHLY COMPACTED TO MATCH ADJACENT DENSITIES.
6. MAINTAIN 4" MIN. HORIZONTAL CLEARANCE BETWEEN PIPES AND/OR WIRING.

A TRENCHING

NOT TO SCALE



NOTES:

1. SET EYEBOLT WITH BOTTOM OF CIRCLE FLUSH WITH CONCRETE BASE, THEN EYEBOLT CANNOT BE TURNED WHEN BRACKET IS IN PLACE.
2. BOLT BRACKETS TO ENCLOSURE ON ENDS OR BOTH SIDES, USE 1/4" x 1-1/4" TAMPER-PROOF BOLTS WITH HEX NUTS AND WASHERS PROVIDED.
3. SUGGESTED PAD DIMENSIONS - 32" L x 16" W x 3-3/4" THICK.
4. FOR BACKFLOW PREVENTION ASSEMBLIES CONNECTED TO THE RECLAIMED WATER SYSTEM, COLOR OF CAGE SHALL BE PAINTED PURPLE AND TAGGED FOR "RECLAIMED WATER". OTHERWISE, COLOR OF CAGE SHALL BE PAINTED "ROLLING STONE #CLC 1249W" AS DISTRIBUTED BY FRAZEE PAINT, OR APPROVED EQUAL, OR A COLOR TO MATCH THE BUILDING.
5. ALL A/C BOLT SHALL BE IN ENCLOSED TO PROTECT EYEBOLT AND LOCK.

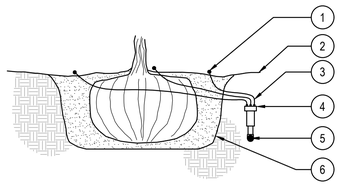
DATE REVISED: 6/2016	SURPRISE ARIZONA	METAL CAGE FOR REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTION ASSEMBLIES - 2 ½" OR LESS	DETAIL NO: 6-14
APPROVED FOR DISTRIBUTION (SIGNATURE ON FILE)			

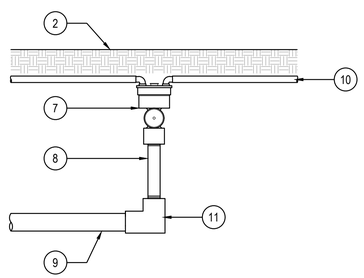
D BACKFLOW PREVENTOR CAGE

NOT TO SCALE

KEYNOTES:

1. EMISSION POINT WITH BUG PLUG
2. FINISH GRADE
3. MICROTUBING
4. DRIP EMITTER
5. PVC LATERAL
6. PLANT PIT
7. MULTI-PORT DRIP EMITTER
8. 1/2" SCH. 80 PVC NIPPLE
9. LATERAL LINE
10. 0.160x0.220 MICROTUBING
11. SxT PVC FITTING





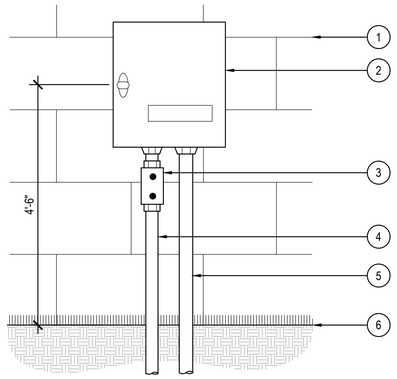
NOTES:
1. INSTALL EMITTERS PER IRRIGATION MATERIAL SCHEDULE. PLACE EMITTERS ON THE UPHILL SIDE OF THE PLANT MATERIAL.
2. PRIOR TO EMITTER INSTALLATION ALL LINES, INCLUDING MICROTUBING SHALL BE FLUSHED A MIN. OF 10 MINUTES.
3. MICROTUBING NOT EXCEED 5' IN LENGTH OR BE EXPOSED NOT MORE THAN 6".
4. SPACE EMITTERS AND EMISSION POINTS EVENLY AROUND PERIMETER OF TREES' DRIP ZONE.

G MULTI-PORT EMITTER

NOT TO SCALE

KEYNOTES:

1. WALL, REFER TO PLANS FOR CONSTRUCTION TYPE
2. IRRIGATION CONTROLLER, PER IRRIGATION MATERIAL SCHEDULE
3. JUNCTION BOX W/ ENCLOSED MINI ON-OFF SWITCH FOR 120-VOLT WIRING & COVER PLATE
4. ELECTRICAL CONDUIT 120-VOLT WIRING PER ALL CODES
5. PVC CONDUIT FOR CONTROL VALVE WIRING. PAINT EXPOSED ELECTRICAL CONDUITS CONNECTED TO WALL MOUNTED IRRIGATION CONTROLLER TO MATCH PREDOMINANT COLOR OF BUILDING
6. FINISH GRADE



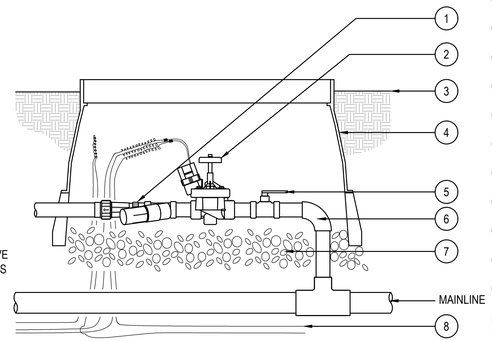
NOTES:
1. MOUNT CONTROLLER TO WALL WITH APPROPRIATE HARDWARE.

B WALL MOUNTED CONTROLLER

NOT TO SCALE

KEYNOTES:

1. WYE STRAINER AND PRESSURE REGULATOR, PER IRRIGATION MATERIAL SCHEDULE
2. ELECTRIC REMOTE CONTROL VALVE, MODEL AND SIZE PER PLANS.
3. FINISH GRADE
4. PLASTIC VALVE BOX, WITH W/ LOCKING BOLT COVER SIZE AS REQUIRED TO ACCESS ALL EQUIPMENT. SET TOP OF VALVE BOX ABOVE FINISH GRADE 1/2" IN TURF AND 1" DECOMPOSED GRANITE.
5. ISOLATION VALVE, PER IRRIGATION MATERIAL SCHEDULE. INSTALL ONE VALVE PER TAP (TWO REMOTE CONTROL VALVES MAX. PER TAP).
6. SCH. 80 FITTING AS REQUIRED
7. 6" LAYER OF PEA GRAVEL



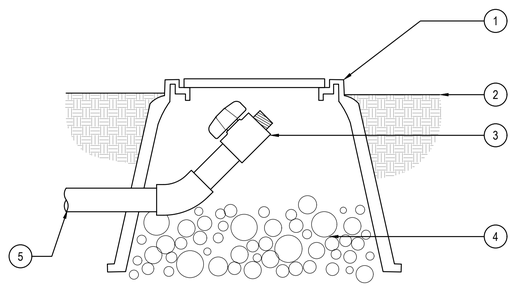
NOTES:
1. USE DRY-TYPE WATERPROOF CONNECTORS.
2. PROVIDE EXPANSION COILS AT EACH WIRE CONNECTION IN VALVE BOX. WRAP WIRE AROUND 1/2" PIPE 15 TIMES.
3. MAINTAIN 6" BETWEEN VALVE AND TOP OF BOX.
4. EMBOSS COVER WITH 1/2" NUMBERS WHICH CORRESPOND TO VALVE NUMBERS AT IRRIGATION CONTROLLER.

E DRIP REMOTE CONTROL VALVE

NOT TO SCALE

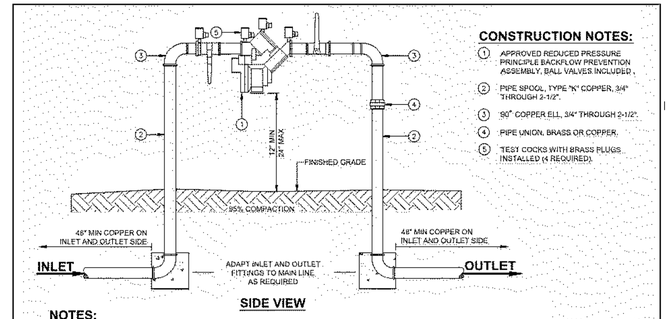
KEYNOTES:

1. BOLT DOWN LOCKING VALVE BOX
2. FINISH GRADE
3. BALL VALVE WITH FEMALE HOSE THREADS, LINE SIZE
4. 6" LAYER OF PEA GRAVEL
5. LATERAL LINE



H LATERAL LINE FLUSH VALVE

NOT TO SCALE



SIDE VIEW

NOTES:

1. CONTACT CITY OF SURPRISE FOR THE LATEST LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES AND CERTIFIED TESTERS.
2. BACKFLOW PREVENTERS MUST BE TESTED BY A CERTIFIED TESTER BEFORE FINAL APPROVAL IS ISSUED.
3. COPPER FITTINGS SHALL BE CONNECTED WITH LEAD-FREE SOLDER JOINTS
4. SEE CITY OF SURPRISE STANDARD DETAIL 6-14 FOR METAL CAGE DETAILS.
5. ALL BRASS SHALL MEET COS' LOW LEAD STANDARDS AND SHALL BE ON THE APPROVED LIST BY USC-FCCCHR (EDS 6 15.8).

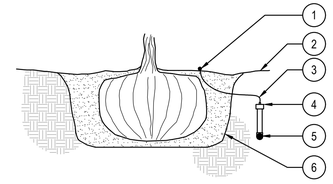
DATE REVISED: 6/2016	SURPRISE ARIZONA	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLIES - 2 ½" AND SMALLER	DETAIL NO: 6-13
APPROVED FOR DISTRIBUTION (SIGNATURE ON FILE)			

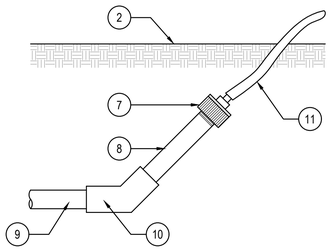
C REDUCED PRESSURE BACKFLOW PREVENTOR

NOT TO SCALE

KEYNOTES:

1. EMISSION POINT WITH BUG PLUG
2. FINISH GRADE
3. MICROTUBING
4. DRIP EMITTER
5. PVC LATERAL
6. PLANT PIT
7. SINGLE-PORT DRIP EMITTER
8. 1/2" SCH. 80 PVC "TOE" NIPPLE
9. LATERAL LINE
10. SxS PVC FITTING
11. 0.160x0.220 MICROTUBING





NOTES:
1. INSTALL EMITTERS PER IRRIGATION MATERIAL SCHEDULE. PLACE EMITTERS ON THE UPHILL SIDE OF THE PLANT MATERIAL.
2. PRIOR TO EMITTER INSTALLATION ALL LINES, INCLUDING MICROTUBING SHALL BE FLUSHED A MIN. OF 10 MINUTES.
3. MICROTUBING NOT EXCEED 5' IN LENGTH OR BE EXPOSED NOT MORE THAN 6".
4. SINGLE OUTLET EMITTERS SHALL BE USED FOR SHRUBS. MULTI-PORT EMITTERS SHALL BE USED FOR GROUNDCOVER.

F SINGLE-PORT EMITTER

NOT TO SCALE

PINNACLE DESIGN, INC
1048 N. 44th Street
Suite 200 ◢ Phoenix, AZ 85008
Ofc:(602)952-8585 ◢ Fax:952-8686

REGISTERED LANDSCAPE ARCHITECT
37505
EDWARD J LORDEN
11.18.19
PHOENIX, ARIZONA, U.S.A.
Expires 3/31/20

Surprise, AZ.

IRRIGATION DETAILS
"W RANCH"
143rd AVENUE and WADDELL ROAD
CASE NUMBER: FS19-828

Drawn By:	NR
Job No:	14021
Date:	4.26.15
△ TREE CHANGE	1.12.16
1 △ REAPPROVAL	8.8.17
2 △ REAPPROVAL	11.18.19
△ CITY COMMENTS	1.20.20
△ CITY COMMENTS	2.25.20

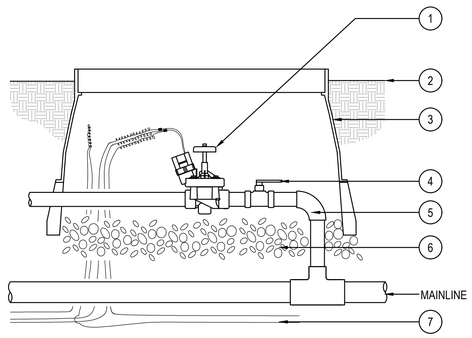
L-12 of 16

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

PLOTTED: 5/4/EADE ON 02/25/2020 AT 04:04 PM
THIS DRAWING AND ANY ELECTRONIC FILES AS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF PINNACLE DESIGN, INC. WHETHER THE PROJECT FOR WHICH THIS DRAWING IS MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSIONS OF THIS PROJECT EXCEPT BY WRITTEN AGREEMENT AND/OR APPROPRIATE COMPENSATION TO PINNACLE DESIGN, INC. COPYRIGHT © 2011 PINNACLE DESIGN, INC.

KEYNOTES:

1. ELECTRIC REMOTE CONTROL VALVE, MODEL AND SIZE PER PLANS.
2. FINISH GRADE
3. PLASTIC VALVE BOX, WITH W/ LOCKING BOLT COVER SIZE AS REQUIRED TO ACCESS ALL EQUIPMENT. SET TOP OF VALVE BOX ABOVE FINISH GRADE 1/2" IN TURF AND 1" DECOMPOSED GRANITE.
4. ISOLATION VALVE, PER IRRIGATION MATERIAL SCHEDULE. INSTALL ONE VALVE PER TAP (TWO REMOTE CONTROL VALVES MAX. PER TAP).
5. SCH. 80 FITTING AS REQUIRED
6. 6" LAYER OF PEA GRAVEL
7. ELECTRIC CONTROL WIRES



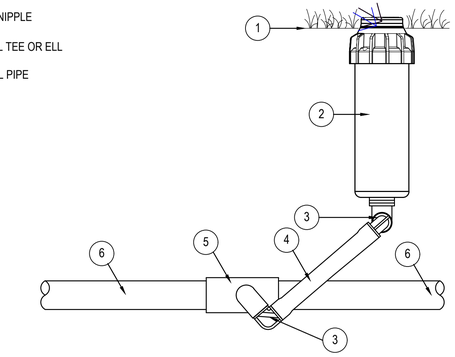
NOTES:
1. USE DRY-TYPE WATERPROOF CONNECTORS.
2. PROVIDE EXPANSION COILS AT EACH WIRE CONNECTION IN VALVE BOX. WRAP WIRE AROUND 1/2" PIPE 15 TIMES.
3. MAINTAIN 6" BETWEEN VALVE AND TOP OF BOX.
4. EMBOSS COVER WITH 1/2" NUMBERS WHICH CORRESPOND TO VALVE NUMBERS AT IRRIGATION CONTROLLER.

I TURF REMOTE CONTROL VALVE

NOT TO SCALE

KEYNOTES:

1. FINISH GRADE
2. MODEL I-20-04 ROTOR HEAD
3. 3/4" PVC STREET ELLS (3)
4. SCH 80 NIPPLE
5. LATERAL TEE OR ELL
6. LATERAL PIPE

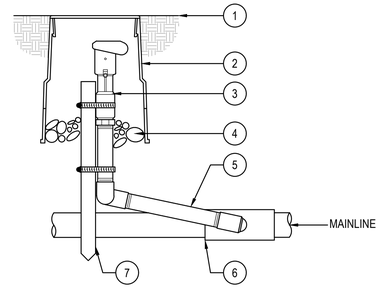


J ROTOR SPRAY HEAD

NOT TO SCALE

KEYNOTES:

1. FINISH GRADE
2. BOLT DOWN LOCKING VALVE BOX
3. QUICK-COUPLING VALVE, PER IRRIGATION MATERIAL SCHEDULE
4. 6" LAYER OF PEA GRAVEL
5. PREFABRICATED SWING JOINT
6. TEE OR ELL AS REQUIRED
7. 1" X 30" GALVANIZED ANGLE IRON WITH STAINLESS STEEL GEAR CLAMPS OR EQUIVALENT SUPPORT SYSTEM



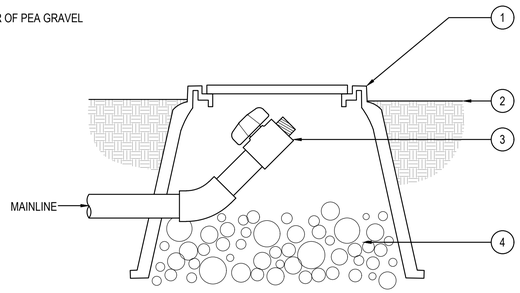
NOTES:
1. FURNISH FITTINGS AND PIPING NOMINALLY SIZED IDENTICAL TO NOMINAL QUICK COUPLING VALVE INLET SIZE.

K QUICK COUPLING VALVE

NOT TO SCALE

KEYNOTES:

1. BOLT DOWN LOCKING VALVE BOX
2. FINISH GRADE
3. BALL VALVE WITH FEMALE HOSE THREADS, LINE SIZE
4. 6" LAYER OF PEA GRAVEL



L MAINLINE FLUSH VALVE

NOT TO SCALE

TREES			
TEMPERATURE	**1ST YEAR**	**2-5 YEARS**	**AFTER 5 YEARS**
OVER 108 DEGREES	EVERY 2 DAYS	EVERY 10 DAYS	EVERY 3 WEEKS
OVER 100 DEGREES	ONCE A WEEK	EVERY 10 DAYS	GRADUALLY EXTEND INTERVALS TO EVERY 4 WEEKS
90-100 DEGREES	EVERY 10 DAYS	EVERY 2 WEEKS	GRADUALLY EXTEND INTERVALS TO EVERY 6 WEEKS
75-90 DEGREES	EVERY 2 WEEKS	EVERY 3 WEEKS	WATER IF NO RAINFALL FOR 60 DAYS
BELOW 75 DEGREES	EVERY 30 DAYS	EVERY 30 DAYS	WATER IF NO RAINFALL FOR 60 DAYS
SHRUBS			
TEMPERATURE	**1ST YEAR**	**2-5 YEARS**	**AFTER 5 YEARS**
OVER 108 DEGREES	EVERY DAY	EVERY 3 DAYS	EVERY WEEK
OVER 100 DEGREES	ONCE A WEEK	EVERY 10 DAYS	EVERY 2 WEEKS
90-100 DEGREES	EVERY 10 DAYS	EVERY 2 WEEKS	EVERY 3 WEEKS
75-90 DEGREES	EVERY 2 WEEKS	EVERY 3 WEEKS	EVERY 4 - 5 WEEKS
BELOW 75 DEGREES	EVERY 30 DAYS	EVERY 30 DAYS	EVERY 4 - 5 WEEKS

NOTES:
1. SMALL PLANTS IN 1 GALLON CONTAINERS NEED TO BE WATERED TWICE A WEEK.
2. THE WATERING CHART IS PROVIDED AS A GUIDE ONLY AND MUST BE ADJUSTED FOR SPECIFIC TEMPERATURE AND ENVIRONMENTAL CONDITIONS. IT IS THE OWNER'S RESPONSIBILITY TO MAINTAIN ALL PLANT MATERIALS IN A THRIVING, HEALTHY CONDITIONS.

M WATERING SCHEDULE

scale

PINNACLE DESIGN, INC
1048 N. 44th Street
Suite 200 ◢ Phoenix, AZ 85008
Ofc:(602)952-8585 ◢ Fax:952-8686

REGISTERED LANDSCAPE ARCHITECT
37505
EDWARD J
LORDEN
11.18.19
ARIZONA, U.S.A.
Expires 9/30/20

Surprise, AZ.

IRRIGATION DETAILS

"W RANCH"

143rd AVENUE and WADDELL ROAD

CASE NUMBER: FS19-028

Drawn By:	NR
Job No:	14021
Date:	4.26.15
△ TREE CHANGE	1.12.16
1 △ REAPPROVAL	8.8.17
2 △ REAPPROVAL	11.18.19
△ CITY COMMENTS	1.20.20
△ CITY COMMENTS	2.25.20

L-13 of 16

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

PLOTTED: EMEADE ON 02/25/2020 AT 04:04 PM
THIS DRAWING AND ANY ELECTRONIC MEDIA AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF PINNACLE DESIGN, INC. WHETHER THE PROJECT FOR WHICH THIS DRAWING IS MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSIONS OF THIS PROJECT EXCEPT BY WRITTEN AGREEMENT AND/OR APPROPRIATE COMPENSATION TO PINNACLE DESIGN, INC. COPYRIGHT ©2011 PINNACLE DESIGN, INC.

PART 1 GENERAL

PORTLAND CEMENT CONCRETE PAVING

A. General: Provide excavating and compacting of subgrade, and forming, placing and curing of concrete driveways, curbs, gutters, slabs and sidewalks in accordance with MAG.

REFERENCE STANDARDS

A. ASTM A615 - Specification for Deformed and Plain Billet Steel Bars for Concrete Reinforcement.
B. MAG 301 - Subgrade Preparation (except payment subheading).
C. MAG 505 - Concrete Structures (except payment subheading).
D. MAG 601 - Trench Excavation Backfilling and Compaction (except payment subheading).
E. MAG 725 - Portland Cement Concrete.
F. MAG 729 - Expansion Joint Filler.
G. ADOT 615 - Concrete Curb and Gutter (except payment subheading).
H. ADOT 616 - Concrete Sidewalks, Slabs and Driveways (except payment subheading).

JOB MOCK-UP

A. Construct sidewalk width by 4 foot long mock-up, which may be incorporated into work. Construct mock-up in time to allow evaluation of color and texture after setting.

SUBMITTALS

A. Mix Design: Submit proposed mix design of each class of concrete including water/cement/strength curves and supporting data in accordance with requirements for product data.
B. Tests: Submit three certified copies of test results, samples and suppliers certification that materials conform to specified criteria.

PART 2 - PRODUCTS

MATERIALS

A. Concrete Formwork: MAG 505.3.
B. Steel Reinforcement: MAG 727, types and sizes as indicated.
C. Concrete: MAG 725, ADOT 615 and ADOT 616, with following 28 day compressive strength of 2,500 psi.
D. Expansion Joint Filler: MAG 729 or ADOT 502.
E. Concrete Curing Materials:
   1. Waterproof Paper, or Polyethylene Film: AASHTO M-171.
   2. Liquid Membrane-Forming Compounds: AASHTO M-148.
   3. Type 1 compound with either a Class A or Class B vehicle shall be used for concrete pavement, bridge decks and approach slabs.
   4. Burlap Cloth (made from jute or kenaf): AASHTO M-182.
   5. Cotton Mats: AASHTO M-73 "Specification for Cotton Mats for Curing Concrete".

MIXES

A. Mix concrete in accordance with related work.
B. Compressive Strength: Minimum 3,000 psi after 28 days unless indicated otherwise.
C. Compressive Strength for Concrete in Driveways, Paving, Footings and Slabs on Expansive Soils: Minimum 3,000 psi after 28 days.
D. Slump: From 3 inches to 4 inches, unless indicated otherwise, when tested in accordance with ASTM C143.

PART 3 - EXECUTION

PREPARATION

A. Cut existing pavements and concrete to be joined by new construction in accordance with MAG 601.2.7.
B. Construct and compact subgrades true to grades and lines indicated in accordance with MAG 301. Remove soft or unsuitable material to not less than 6 inches below subgrade elevation and replaced with acceptable material. When subgrade consists of soils with swelling characteristics, bring moisture content to optimum required for compaction by adding water, by adding and blending dry suitable material or by drying existing material. Compact subgrade to relative density of from minimum 75% to maximum 85% unless indicated otherwise.
C. Do not place material displaced in construction on base or surface material already in place or roadway, or excavated materials so it interferes with access to property or traffic flow in street.
D. Sawcut at match lines and remove concrete driveways which are necessarily disturbed by construction as required to maintain slopes as indicated by standard details.

FORMWORK AND REINFORCING

A. Construct concrete curbs, gutters and sidewalks with conventional forms, or with appropriate machines specifically designed for construction of concrete curbs, gutters and sidewalks when approved.
B. When machines designed specifically for such work and approved are used and results are not satisfactory, discontinue use of machine and make repairs. Apply applicable requirements of construction with use of forms to use of machines.
C. Carefully set forms conforming to dimensions of curb, gutter, sidewalk and driveway to line and grade, and securely stake forms in position. Water forms and subgrade immediately prior to placing concrete.
D. Install expansion joints in straight lines and vertical planes perpendicular to longitudinal lines of sidewalks or curbs and gutters, or when in curved alignments, along radial lines. Install joints to full depth and width of concrete and matching joints in adjacent sidewalks or curb gutters. Install joints at radius points, driveways and adjoining structures and at maximum 20 feet o.c.
E. Install 1/2 inch thick expansion joint filler strips with top edge - inch below projected concrete surface. Hold joint filler strips in place with steel pins or other devices to prevent warping or deflecting of filler during placing and finishing.
F. Thoroughly clean forms after each use and coat forms with light oil, or other releasing agent which will not discolor concrete.
G. Thoroughly spade concrete away from forms so that there is no rock pockets next to forms, or compact concrete with approved mechanical vibrators. Continue tamping or vibrating until mortar flushes to surface, and coarse aggregate is below surface.

CONCRETE PLACEMENT AND FINISHING

A. Place concrete in accordance with related work.
B. Place concrete in forms in one layer of such thickness that when compacted and finished sidewalk will be of thickness indicated.
C. After placing concrete, strike-off surface with strike-off tool guided by side forms. Tamp and consolidate concrete with suitable wood or metal tamping bar.
D. Finish surface with wood float.
E. Divide surface into rectangular areas as indicated or at approximately 5 feet o.c. with scored « inch deep control joints. Score control joints with deep cutting scoring tool.
F. Strike control or contraction joints in straight lines and vertical planes perpendicular to longitudinal lines of sidewalks or curbs and gutters, or when in curved alignments, along radial lines of curbs. Strike joints to minimum 1 inch deep and at maximum 10 feet o.c.
G. Immediately after finishing, round joint edges with edging tool having a radius of 1/8 inch, and remove concrete from over joint fillers. Completed surface shall be uniform in color and free of surface blemishes and tool marks.
H. Do not remove front face forms until concrete has initially set and has sufficient strength to carry its own weight. Do not remove gutter forms and rear forms until concrete has hardened sufficiently to prevent damage to edges. Exercise care to prevent any damage. Repair or replace any portion of concrete damaged while stripping forms. Test faces, tops, backs, and flow lines of curb and gutters with straightedge or curve template, longitudinally along surfaces. Correct any deviation in excess of ¬ inch.

TESTING OF SURFACES

A. Test surfaces of concrete sidewalks with a 5 foot straightedge. Correct any deviation in excess of 1/8
B. Water test gutters slopes of 0.8 foot per hundred feet or less, or where unusual or special conditions cast doubt on capability of gutters to drain. Establish flow in length of gutter to be tested by supplying water from hydrants, tank trucks or other source. One hour after water supply is shut off, inspect gutter for evidence of ponding or improper shape. Correct defects when water is found ponded in gutters to « inch or greater, or on adjacent asphalt pavement.

FINISHING

A. Finish and cure concrete in accordance with MAG 505.
B. Finish concrete with smooth trowel or heavy broom finish where indicated or directed.
C. For broom finish, drag bristle broom in one direction perpendicular to direction of traffic or to form pattern indicated.
D. Stamp name and year on work on each end of curb, gutter, or sidewalk in letters not less than 3/4 inch high.
E. Backfill behind curbs or sidewalks with soil native to area to lines and grades indicated.

PROTECTION AND REPAIR

A. Protect concrete work from damage. Repair damaged concrete and clean discolored concrete.
B. When concrete cannot be repaired and must be removed, remove damaged concrete and replace concrete between expansion joints.

TESTING

A. Provide free access to work and cooperate with appointed firm.
B. Tests of cement and aggregates may be performed to ensure conformance with Contract Documents.
C. Three concrete test cylinders will be taken for every 100 or less cu. yds. of each class of concrete places. Make and cure concrete compressive strength test specimens in accordance with ASTM C31. Construct storage box of sufficient size and design to provide protection for cylinders stored on site.
D. One additional test cylinder will be taken during cold weather concreting, and be cured on job site under same conditions as concrete it represents.
E. One slump test will be taken in accordance with ASTM C143 for each set of compressive strength test cylinders taken.
F. Where concrete is placed by pumping, tests shall be taken at truck before concrete
G. Tests performed by testing agency personnel in accordance with ASTM C39.

PINNACLE DESIGN, INC
1048 N. 44th Street
Suite 200 ◢ Phoenix, AZ 85008
Ofc:(602)952-8585 ◢ Fax:952-8686

REGISTERED LANDSCAPE ARCHITECT
37505
EDWARD J
LORDEN
11.18.19
ARIZONA, U.S.A.
Expires 3/31/20

Surprise, AZ.

CONCRETE SPECIFICATIONS

"W RANCH"

143rd AVENUE and WADDELL ROAD

CASE NUMBER: FS19-828

Drawn By:	NR
Job No:	14021
Date:	4.26.15
TREE CHANGE	1.12.16
1 REAPPROVAL	8.8.17
2 REAPPROVAL	11.18.19
CITY COMMENTS	1.20.20
CITY COMMENTS	2.25.20

L-14 of 16

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

PLOTTED: EMEADE ON 02/25/2020 AT 04:04 PM
THIS DRAWING AND ANY ELECTRONIC MEDIA IS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF PINNACLE DESIGN, INC. WHETHER THE PROJECT FOR WHICH THIS DRAWING IS MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSIONS OF THIS PROJECT EXCEPT BY WRITTEN AGREEMENT AND/OR APPROPRIATE COMPENSATION TO PINNACLE DESIGN, INC. COPYRIGHT © 2011 PINNACLE DESIGN, INC.

PART 1 GENERAL

DESCRIPTION

A. Work Included: Provide all labor, materials, equipment and services as necessary to complete all Landscaping work as shown on the Drawings and as specified herein.
B. Related work described elsewhere:
   1. Coordinate with Grading, Drainage, and Paving Drawings.

CODES, RULES, AND SAFETY ORDERS

A. All work and materials to be in full accordance with the latest rules and regulations of Safety Orders of Division of Industrial Safety; the Uniform Building Code, and other applicable laws and regulations, including all City codes. Nothing in these Specifications is to be construed to permit Work not conforming to these codes. Should the Contract Documents be at variance with the aforementioned rules and regulations, notify Landscape Architect and get his instructions before proceeding with the Work affected.

GUARANTEE

A. Plant Guarantee: Warrant all new transplanted plant material to remain alive and be in a healthy, vigorous condition throughout the Contract and 90-day Landscape guarantee period shall have a new guarantee period of 90 days beginning with the time of replacement. If landscape installation as specified herein is not completed prior to September 1, the plant guarantee and landscape maintenance period shall be extended to May 1 of the following year.
B. Replacement of Plants: All plants that are dead or, as determined by the Landscape Architect or Owner's Representative, are in an unhealthy or damaged condition are to be replaced. The cost of such replacement(s) is at Contractor's expense.
C. Conditions of Plant Guarantee: Warranty shall not include damage or loss of trees, shrubs, and ground covers caused by floods, fires, freezing rains, lightning storms or winter kill caused by extreme cold and severe winter conditions not typical of planting area. All damage caused from acts of negligence from Contractor's operations and maintenance shall be repaired and replaced at Contractor's expense.
D. Hydroseeding shall be performed only during the time of day and during seasons when satisfactory result can be expected unless authorized in writing by the architect.
E. Composted organic humus shall be tested by the soils testing laboratory prior to being used.
F. Nitrogen stabilized sawdust shall be derived from redwood or fir and shall be granular in nature, stabilized with nitrogen and shall have a minimum organic content of 90% by weight, particle size with 95% to 100% passing 2.33 mm standard sieve, 0.5% nitrogen, 1.75 salinity, iron content minimum 0.08% dilute acid soluble Fe (dry weight), ash 0 to 6% (dry weight), ph of 5.5 to 6.0.
G. Sand shall be fine, clean and natural, free from deleterious material, weed seed, clay balls, or rock with minimum 95% . passing a No. 4 sieve and maximum of 10% passing a No. 100 sieve.
H. Gypsum shall be agriculture grade with 90% minimum calcium sulfate.
I. Fertilizer shall be commercially mixed and packaged pelleted or granular form N-P-K blend with micro nutrients as recommended by an approved soils report.
J. Dolomite lime shall be agricultural grade with 35% minimum magnesium carbonate and 49% minimum calcium carbonate with 100% passing a No. 65 sieve.
K. Stolons shall be supplied from West Coast Turf and shall be (to be specified.) The stolons shall be completely healthy and free of weeds, disease an insect infestations.
L. Net weight should not be less than (to be specified) lbs. per bushel.

COORDINATION AND RESPONSIBILITY

A. Utilities: Before commencing work on the site, become thoroughly acquainted with layout of all underground utilities and structures over the entire site. All requisite repairs to damage caused by Work of this Section shall be at the Contractor's expense.
B. Coordinate and cooperate with other Contractors working on the site for successful completion of the project, including irrigation work to insure successful integration with the landscaping.
C. Finish rough grades. Finish grades will take the forms shown on the grading and drainage plans. Coordinate Work of this Section with other work relating to Grading and Drainage. See Landscape Details for finish design grades adjacent to curbs and sidewalks.

INSPECTIONS

A. Periodic Inspection: During the course of construction the Landscape Architect may visit the site and inspect work in progress at his discretion.
B. Scheduled Inspections: The Contractor must notify the Landscape Architect for inspection at the following periods:
   1. Prior to planting trees, shrubs, and ground covers to inspect plant material delivered to site and inspect plant pits and backfill mixture. It shall be the responsibility of the Contractor to have all plant material at site, backfill mixture stockpiled, and all tree pits excavated prior to Landscape Architect visiting site.
   2. At completion of all work In accordance with Contract Documents.

SUBSTITUTIONS

A. Plant Substitution: Plants of kinds other than those indicated n the plant list will be considered by the Landscape Architect upon submission of proof that any plant is not procurable in the region. Replacement plant will be approved on the grounds that it resembles the plant specified in regards to appearance, ultimate height, shape, habit of growth, general soil, and other requirements. In no case shall the average cost and value of the substituted plants be more than the cost and value of the plants indicated. All substitutions must be submitted in writing no more than seven (7) days after the notice to proceed and approval of the substitution must be acknowledged by the Landscape Architect in writing before approval is granted.

PART 2 PRODUCTS

PLANT MATERIALS

A. Conform to requirements of Plant Schedule on Drawings. Caliper, spread, and height, as specified in the Plant Schedule on Drawings will take precedence over the container size. Container size is given as a minimum rootball size only.
B. Quality: Sound, healthy, vigorous, free from plant disease, insects, pests, or their eggs and noxious weeds. Container stock shall be well established and free of excessive rootbound conditions.
C. Inspection of Plant Materials required by City, County, State, or Federal authorities shall be the responsibility of the Contractor. Secure permits or certificates prior to delivery of plants to site.
D. Acceptance or reliction of plant material will be determined by the City, Owner, or the Owner's Representative on the project site. Plants are subject to inspection and approval or rejection at any time before or during progress of work for size, variety, condition, latent defects and injuries. Rejected plants shall be removed from the project site immediately.
E. Equipment shall have a built in agitation system and operating . capacity sufficient to agitate, suspend and homogeneously mix a slurry containing not less than 20 kilos (44 lbs.) of organic mulching amendment plus fertilizer, chemical additives and solids for each 100 gallons of water.
F. Cellulose Fiber Mulch: Apply at a minimum rate of 1500 lbs./ac.
G. Fertilizers: Best 6-20-20 or Best 15-15-15 or approved equal applied at rate appropriate for product.
H. Organic tackifier shall be applied at rate of 70 lbs./acre.
I. Hydroseed mix shall be applied at the lbs./100 sq.ft. designated on the planting plans.

TREE STAKES AND WIRE TIES FOR TREE STAKING AND GUYING

A. Tree Stakes: Two inch diameter new lodgepole pine treated with copper nepthenate or approved equal. Length or stake as required for maximum support of tree.
B. Wire & Rubber Ties: #12 gauge annealed, galvanized steel inserted through new or used 1/2 inch green rubber garden hose. Staking procedure subject to approval.

SOIL AMENDMENTS

A. Mulch Used in Plant Backfill Mix and Soil Preparation in Lawn Areas: Maricopa Mulch as produced by Western Organics, Phoenix, AZ or approved equal. Well-rotted wood fiber, commercially prepared and processed for ninety-eight (98) percent organic content and composted to support bacterial cultures; pH range to be 6.8-7.2. Mulch shall contain a minimum 1.0 percent nitrogen on a dry weight basis.
B. Fertilizer tablets for plant pits: Best (21 gram) with a guaranteed analysis of 20% Nitrogen, 10% available Phosphoric Acid, 5% Potash, 2% combined Calcium, 1.5% Sulfur, .36% Iron, .43% Zinc, and .18% Manganese.
C. All plants with the exception of Ground covers in flats and turf areas to receive Agriform (20-10-5) plant tabs at the following rates:
   - 1 gallon 1 - 21 gram tablets
   - 5 gallons 2 - 21 gram tablets
   - 15 gallons 4 - 21 gram tablets
   - 24" box 6 - 21 gram tablets
   - 36" box & Palm Trees 8 - 21 gram tablets
D. Set tablets 3" below finished grade and space evenly around plant's perimeter.
E. Ammonium Phosphate: (16-20-0) with a guaranteed analysis of 16% Nitrogen, 20% available Phosphoric Acid.
F. Plant backfill Mix: Planting backfill shall be a thoroughly blended mixture of soil and soil amendments at the following mixtures:
   - Mulch 1/3 c.y.
   - Topsoil 2/3 c.y.

APPROVED TOPSOIL

A. Topsoil content: 20-45% Silt, 14-20% Clay, and 30-60% sand with a minimum of 5% organic material (natural or added). The pH shall not be lower than 6.0 nor higher than 7.8. Soluble Salts shall not exceed 1200 ppm.
B. Topsoil quality: Screened, fertile, friable soil from well drained arable land and free from nutgrass, refuse, roots, heavy clay, noxious weeds and any material toxic to plant growth. Provide the Landscape Architect with a soil analysis by an independent testing laboratory for verification prior to having topsoil delivered to site. Soil analysis shall be at the expense of the Contractor.

MATERIALS USED FOR TOP DRESSING OF SHRUBS AND GROUNDCOVER PLANTERS

A. Decomposed granite: Refer to plans for color and size. Contractor to provide samples to Landscape Architect for approval. Decomposed granite shall consist of granular fragments of quartz and feldspar. The material shall remain stable when saturated in water. All material shall be from a single production source.

WEED CONTROL CHEMICALS

A. The Applicator of all Weed Control Materials shall be licensed by the State of Arizona as a pest control operator and a pest control advisor in addition to holding any subcontractor licenses that are required.
B. Prior to the installation of any weed control materials, the pest control advisor shall submit to the Landscape Architect a list of the weed control materials and quantities per acre intended for use in controlling the weed types prevalent and expected on the site. Pest control advisor shall furnish data to demonstrate the compatibility of the weed control materials and methods with the intended planting varieties.
C. Weed control shall eliminate all nut grass, Johnson grass, burr clover, spurge and other invasive weeds common to the area.
D. No material or method shall affect the landscape planting or hydrosprig germination and establishment. Materials and methods must conform to Federal, State and Local Regulations.
E. Weed control shall be applied to all lawn and planting areas with adequate time to meet manufacturer's recommendations. If after application, weeds reappear prior to planting, reapplications will be provided per manufacturer's recommendations. If weeds reappear after planting, additional weed control will be applied in a manner not to damage or retard the growth of plant material. Any plant material damaged or killed during this process or as a result of the application of weed control material, shall be replaced at no cost to the Owner.
   1. Selective contact systemic herbicides: Compatible with existing plant material to remain and having no residual. Use in quantities and strengths recommended by manufacturer.
   2. Pre-emergent herbicides: Use pre-emergent herbicide(s) compatible with newly planted materials in quantities and strength recommended by manufacturer. Use only approved weed control materials and a licensed applicator.

PART 3 EXECUTION

SITE PREPARATION

A. Protection: Take care in performing Work of this Section to avoid conditions which will create hazards. Post signs or barriers as required.
B. Prior to Planting Operations: All top growth of grass, weeds, and other unwanted plant material shall be removed from all areas to be planted. Contractor shall spray all existing grass and weeds with specified contact systemic herbicide a minimum of two times per manufacturer's instructions. Do not spray plant material and turf to remain. Protect as required.
C. Inspection of conditions: Examine related work including irrigation and grading of surface before proceeding with any work and notify the Landscape Architect in writing on conditions which may prevent the proper execution of this work. Failure to report unsuitable conditions will require the contractor to rectify the unacceptable work at no additional cost to the Owner.
D. Water all plant areas thoroughly to saturate upper layers of soil prior to the hydroseeding operation.
E. Allow the planting area soil surface to dry out for one day only prior to hydroseeding application. Exercise care not to allow the soil surface to be overly saturated with water prior to the hydroseeding installation. At the same time the soil surface should not become too dry during this period. There should be some residual moisture within the first 1/4 inch of the soil surface.
F. Prior to starting the hydroseeding operation, notify the Landscape Architect forty eight (48) hours in advance to be present at start of hydroseeding.
G. Apply the hydroseeding in the form of a slurry consisting of organic soil amendments, commercial fertilizer, and any other chemicals that are called out. When hydraulically sprayed onto the soil, the mulch shall form a blotter-like material. Direct the spray operation so that this procedure will drill and mix the slurry components into the soil, the slurry will also penetrate the soil surface, thus ensuring maximum impregnation and coverage. The impregnation and mixing of the components will help in retaining moisture while stabilizing soil surface from superficial erosion.
H. Do not let hydroseeding slurry components in the hydroseeding machine for more than two (2) hours because of possible seed destruction. If slurry components are left for more than two hours in the machine, add 50% more of the originally specified seed mix to any slurry mixture that has not been applied within the two hours after mixing. Add 75% more of the original seed mix to any slurry mixture which has not been applied eight (8) hours after mixing. All mixtures more than eight (8) hours old must be disposed, off-site, at the contractor's expense.
I. Spray the area with a uniform visible coat, using the dark color of the cellulose fiber as a visual guide. The slurry shall be applied in a downward drilling motion via a fan steam nozzle. Insure that all of the slurry components enter and mix with the soil. Insure the uniformity of the hydroseed application. The hydraulic contractor shall be approved by the Landscape Architect.
J. Exercise special care to prevent any of the slurry from being sprayed onto any hardscape areas including concrete walks, fences, walls, buildings, etc. Remove all slurry sprayed onto these surfaces at the contractor's expense.
K. Contractor shall save all seed and fertilizer tags and fiber, mulch bags for the Landscape Architect to verify compliance with the drawings and specifications.
L. The Landscape Architect shall be present during hydroseeding operation and has final determination if conditions are acceptable for hydroseeding application.
M. Upon acceptance of hydroseeding operations, maintain all hydroseeding areas for a period of 90 calendar days as follows:
   1. Germination stage irrigation: Approximately 25 hours after hydroseeding the planting areas, initiate the watering sequence. Leave the water on long enough to moisten the soil thoroughly to the depth of the slurry mulch taking care not to super saturate or wash away the slurry and seed. Perform frequent, light irrigation until the seed has germinated. Repair all seed washings and erosion.
   2. Establishment stage irrigation: After germination, reduce each watering. The specific watering program shall be approved by the Landscape Architect.

SITE PREPARATION

N. Fertilization: Fertilize all hydroseed areas with an approved commercial fertilizer, 30 days from the start of the maintenance period and continuing once every 60 calendar days until the completion of the 90 calendar day maintenance period.
O. Weeding: All concentrated developments of weed growth appearing in the seed mix planting areas during maintenance period shall be removed at two (2) week intervals. The contractor may elect to remove such concentrations of weeds manually or by an approved herbicide program.
P. Minimum Coverage and Acceptance:
   1. Minimum coverage: Final acceptance may be given at the end of the 90 calendar day maintenance period if an acceptable germination of turf and adequate plant establishment has been obtained, as determined by the Landscape Architect.
   2. Final approval and acceptance will be given in writing by the Landscape Architect following a final acceptance inspection. The Landscape Architect reserves the option to extend the maintenance period to achieve complete germination of all turf or other plant materials with a uniform height, color and density throughout all hydroseeded areas.

FINISH GRADING

A. Coordinate with Rough Grading. Provide and place additional specified topsoil as required to facilitate drainage patterns.
B. Direct surface drainage in manner indicated on Grading and Drainage Drawings by molding surface to facilitate natural run-off of water. Fill low spots and pockets with topsoil and grade to drain properly.

PLANT MATERIALS

A. Examination: Before proceeding with work, check and verify dimensions and quantities. Report variations between Drawings and Site to Landscape Architect before proceeding with work. All planting indicated on Drawings is required unless otherwise indicated.
B. Protection: Take care and preparation in Work to avoid conditions which will create hazards. Post signs or barriers as required. Provide adequate means for protection from damage through excessive erosion, flooding, heavy rains, etc. Replace or repair damaged areas as required at no cost to Owner.
C. Installation: Do not plant trees, shrubs, and ground covers until major construction operations are completed, soil preparation is complete, and irrigation system is in full operation.
   1. Layout individual tree locations and areas of multiple shrub and groundcover plantings. Stake locations and secure acceptance from Landscape Architect before planting. Make minor adjustments as requested.
   2. Excavate plant pits to minimum dimensions detailed on Drawings.
   3. Remove plant from container and place immediately in plant hole over compacted backfill mix. Place trees, shrubs, and ground covers in holes to conform to planting details on drawings.
   4. Backfill with homogeneous mixture of specified backfill. Add fertilizer tablets in plant pits in quantities specified.
   5. Settle by firming and watering to bring ball down to proper level as shown on Drawings. Do not use muddy soil for backfilling. Make adjustments in positions of plants as directed.
   6. Thoroughly water plants immediately after planting.

TREE STAKING, BRACING, AND GUYING

A. Support for Trees: In planting trees 36 - inch box and smaller, include placement of tree stakes in plant pits outside of plant rootball. Drive stakes into undisturbed soil a minimum of 12 inches before backfilling so tree roots are not damaged.
   1. Backfill with homogeneous mixture of specified backfill. Add fertilizer tablets in plant pits in quantities specified.
   2. Settle by firming and watering to bring ball down to proper level as shown on Details. Do not use muddy soil for backfilling. Make adjustments in positions of plants as directed.
   3. Thoroughly water plants immediately after planting.
B. Lodgepole stakes shall be installed in a vertical position with tops of stakes at the same level.
C. Wire Ties: Tie tree to stakes as detailed on Drawings. Install single strand of galvanized wire through section of rubber hose. Length of hose shall be long enough to protect tree trunk from wire. Secure wire to stake by stapling and remove excess wire ends.

TOP-DRESSING OF PLANTERS

A. Rake and grade smooth subgrade removing all rocks larger than 1/4 inch in diameter and deleterious material.
B. Apply specified pre-emergent herbicide to subgrade in accordance with manufacturer's recommendations.
C. Place decomposed granite to a 2-inch depth and rake to a neat finish appearance. Finish grade of granite to be 1-1/2 inch below top of walks, concrete headers, and paving.

FINISH APPEARANCE

A. Clean Up and Repair: Clean all sidewalks, walls, and planting areas of debris, soil and chemical stains, and waste materials.
B. Finish Appearance: Prior to final acceptance of landscaping by Owner, all new and transplanted plant material shall be in a healthy state of growth, planter areas weed free, trees have been staked as detailed, and all landscaping, headers, and planter top dressing have been installed as per Contract documents.

LANDSCAPE MAINTENANCE

A. General: Contractor will be responsible for the health and growth of all new and transplanted landscaping for 90 days from preliminary acceptance of landscape work by Owner or Owner's Representative.
B. Replace landscaping that is dead or appears dead as directed by Landscape Architect. Make replacements within 10 days of notification.
C. Provide written instructions on maintenance requirements.
D. Submit instructions to Landscape Architect for forwarding to Owner's Custodian.
E. Trees, Shrubs, and Plants
   1. Maintain by pruning, cultivating, and weeding as required for health growth.
   2. Restore planting basins.

PINNACLE DESIGN, INC
1048 N. 44th Street
Suite 200 ◢ Phoenix, AZ 85008
Ofc:(602)952-8585 ◢ Fax:952-8686

REGISTERED LANDSCAPE ARCHITECT
37505
EDWARD J. LORDEN
11.18.19
ARIZONA, U.S.A.
Expires 3/31/20

Surprise, AZ.

PLANTING SPECIFICATIONS
"W RANCH"
143rd AVENUE and WADDELL ROAD
CASE NUMBER: FS19-828

Drawn By:	NR
Job No:	14021
Date:	4.26.15
1 TREE CHANGE	1.12.16
1 REAPPROVAL	8.8.17
2 REAPPROVAL	11.18.19
1 CITY COMMENTS	1.20.20
2 CITY COMMENTS	2.25.20

L-15 of 16

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

PLOTTED: EMEADE ON 02/25/2020 AT 04:05 PM
THIS DRAWING AND ANY ELECTRONIC MEDIA IS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF PINNACLE DESIGN, INC. WHETHER THE PROJECT FOR WHICH THIS DRAWING IS MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSIONS OF THIS PROJECT EXCEPT BY WRITTEN AGREEMENT AND/OR APPROPRIATE COMPENSATION TO PINNACLE DESIGN, INC. COPYRIGHT © 2011 PINNACLE DESIGN, INC.

PART 1 GENERAL

GENERAL SYSTEM DESCRIPTION

A. Work Included: Furnish and install new irrigation system as described in Contract Documents complete with accessories necessary for proper function.

INTENT OF CONTRACT DOCUMENTS

A. It is the intention of this Specification to accomplish the work of installing a new irrigation system to operate in an efficient and satisfactory manner. The Specification can only indicate the intent of the work to be performed rather than a detailed description of the performance of the work. It shall be the responsibility of the Contractor to install said materials and equipment in such a manner that they shall operate efficiently and evenly and support optimum plant growth and health.
B. The Landscape Architect and/or their Consultant shall be the sole judge of the true intent of the Drawings and Specifications and of the quality of all materials furnished in performance of the contract.
C. In the event of any discrepancies between the Drawings and the Specification, the final decision as to which shall be made by the Landscape Architect and/or his consultant. The Contractor will be compelled to act on this decision as directed. In the event the installation is contradictory to the direction of the Landscape Architect, the installation shall be rectified by the Contractor at no additional cost. Any such discrepancies shall be immediately brought to the attention of the Landscape Architect by the Contractor.
D. Make use of all data in all of the Contract Documents including manufacturer's catalogs and verify the information on-site prior to bidding on this work and also at the time of installation.

QUALITY ASSURANCE

A. Regulatory requirements: Work and materials shall be in accordance with latest rules and regulations, and other applicable state, county or local laws. Nothing in Contract Documents is to be construed to permit work not conforming to these codes.

PRODUCT STORAGE

A. During construction, store and protect materials from damage and prolonged exposure to sunlight.

WARRANTY

A. One Year: Shall include filling and repairing depressions and replacing plantings due to settlement of irrigation trenches.

PERMITS AND REGULATIONS

A. The Contractor shall give all notices and pay all fees necessary for completion of work under this contract, and shall obtain and pay for all permits and licenses over all or any part of the work as drawn and specified.

EXAMINATION OF SITE

A. The Contractor shall be held to have examined the project sites and to have compared it with the drawings and specifications, to have carefully examined all of the Contract Documents and to have satisfied himself as to the conditions under which the work is to be performed before entering into a Contract for this work. No allowance shall subsequently be made on behalf of the Contractor on account of an error, negligence or failure to acquaint himself with the conditions of the sites, existing utility locations and easements, or of the streets or roads approaching the site. Submit any questions in writing prior to commencement of the job.

SAFEGUARDS

A. The Contractor shall maintain sufficient safeguards, such as railing, temporary walks, lights, barricades, etc., against the occurrence of accidents, injuries or damage to any person or property resulting from the work, and shall alone be responsible for the same if such occurs.

PROTECTION OF WORK AND PROPERTY

A. The Contractor shall continuously maintain adequate protection of all work and materials from damage, destruction, or loss, and shall protect the Owner's property from damage arising in connection with this Contract. He shall make good any such damage, destruction, loss, or injury. He shall adequately protect adjacent property as provided by law and the Contract Documents.
B. Prior to excavation for irrigation piping or equipment, Contractor shall contact Bluestake (602-263-1100) for location of underground utility lines and take proper precautions to avoid damage to such improvements. In the event of a conflict between such lines and irrigation piping or equipment locations, Contractor shall notify the Landscape Architect who will arrange for the relocation of one or the other. The Contractor assumes responsibility for making repairs for damages resulting from work as herein specified.

PART 2 PRODUCTS

MATERIALS

A. Materials equipment, apparatus and appliances used throughout the systems shall be new and pristine perfect condition.
B. Equipment or materials installed or furnished without the prior approval of the Landscape Architect will be rejected and such materials removed from the site at no cost to the Owner or Landscape Architect

PIPE, PIPE FITTINGS, AND CONNECTIONS FOR IRRIGATION SYSTEM:

A. All pipe shall be free of blisters, internal striations, cracks, or any defects or imperfections. Pipe shall be continuously and permanently marked with Dimension Ration No., Manufacturer's name, size, schedule, or pressure class, type, and working pressure, material code designation, seal of the testing agency that verified the suitability of the pipe material (NSF). Pipe size schedule shown on Drawings is a minimum. Larger sizes may be substituted without additional cost to Owner or Landscape Architect.
   1. Plastic Pipe:
      - Sleeves: Schedule 80 PVC (polyvinyl chloride) Solvent Weld Pipe complying with ASTM Designation D-1785, latest edition.
      - Pressure Lines: 2-1/2" diameter and smaller schedule 40 PVC (polyvinyl chloride) Solvent Weld Pipe complying with ASTM Designation D-1785, latest edition (minimum pressure rating 200 psi). 3" diameter and larger pressure Class 200 PVC SDR21, PVC-1120, Type 1, Grade 1, complying with ASTM designation D-2241 PVC SDR-PR Pipe Specification.
      - Non-Pressure Lines: Pressure Class 200 PVC SDR21, PVC-1120, Type 1, Grade 1, complying with ASTM designation D-2241 PVC SDR-PR Pipe Specification.
   2. Plastic Pipe Fittings:
      - Threaded Type: Schedule 80, Type 1, Grade 1, 1. Polyvinyl Chloride (PVC) per ASTM D1784, D2464, and D2467, uniformly gray in color, manufactured by Spears or approved equal.
      - Slip socket Type: Schedule 40, Type 1, Grade 1, Polyvinyl Chloride (PVC) per ASTM D-2466 and D-1784 uniformly white in color. Manufactured by Spears or approved equal. (Note: Use epoxy coated steel fitting for rubber ring and gasketed mainline.)
   3. Copper Pipe:
      - Copper pipe shall be Type "K" in accordance with. ASTM B88. Copper pipe shall be jointed with the appropriate solder type wrought copper pressure fittings for 2 1/2 inch and smaller sizes.

PIPE CONNECTION MATERIALS

A. Joint compound for threaded connections: Teflon tape, or approved equal UL listed.
B. Adhesive solvents and primer for all classes and schedules of PVC: Slow drying solvent cement shall be used whenever ambient air temperature is 90 degrees F. or higher. P-70 purple primer and slow-set solvent cement as manufactured by Industrial Polychemical Service, Gardena, California.
C. Solvent for Slip-Fit flex vinyl hose and fittings: Shall be P-70 primer and #795 solvent cement as manufactured by Industrial Polychemical Service, Gardena, California.
D. All cans of solvents and primers shall have labels intact and shall be stamped with the date of manufacture. No cans dated over two years old will be permitted.

AUTOMATIC CONTROLLERS

A. Make and Models as shown on Drawings. Contractor to provide 110V Power to controllers on a dedicated circuit. Submit shop drawing of electrical schematic to Landscape Architect prior to installing controller.
B. Control Valves: Shall be of size and type indicated on Drawings.
C. Control wire shall be UF-UL listed, color coded copper conductor direct burial size No. 14 AWS. Tape control wire to side of main line every 10 feet. Where control wire leaves main or lateral line, enclose it in Class 200 PVC conduit. Use waterproof wire connectors at splices and locate all splices within valve boxes.

PRESSURE REDUCING VALVES, Y-STRAINERS, AND FLUSH VALVES

A. Make and Models as shown on Drawings.

VALVE BOXES

A. Rectangular or round heavy duty plastic valve boxes with green, tan or purple bolt-down lid or approved equal. Valve boxes shall be large enough for easy removal or maintenance of valves. Minimum size for rectangular boxes shall have top dimensions of 13 inches x 20 inches x 12 inches deep. Valve box tops to be factory marked with the work "Irrigation". Provide and install Manufacturer's valve box extensions as required to enclose valves and equipment.

BACKFILL MATERIALS

A. Irrigation Pipe Trench Backfill
   1. 2 - inch cover and bedding for pressure irrigation mainline and all Non-Pressure Laterals: Screened soil having no rock or debris larger than 1/4 inch.
   2. Other Backfill Materials: Clean native soil with no rock or debris larger than 1/2 inch.
B. Pea gravel (for use around drains and valves)
   1. 1/2 inch maximum round, water worn, washed rock.

PART 3 EXECUTION

GENERAL

A. Contractor shall obtain all information pertaining to locations of all existing and proposed utilities, lines, and appurtenances prior to irrigation installation.
B. Contractor shall be responsible for making connections to existing piping, valves, conduit, and appurtenances not in his contract utilizing proper adaptation tools and procedures. Water line shut downs/trenching at mains are Contractor's responsibility. No change orders for connections or installation are warranted.

LAYOUT AND VERIFICATION

A. Locations and drawings are diagrammatic and approximate only. Actual work shall be changed and adjusted to meet existing conditions and obtain complete water coverage. All fittings that are necessary for proper connections such as swing joints, offsets, and reducing bushings are not shown but shall be installed as directed.
B. Minor changes in locations of irrigation equipment and piping from locations shown on drawings shall be made to avoid utilities, structures, etc. at the Contractor's expense.
C. The Contractor shall be held responsible for relocation of any items without first obtaining the Landscape Architect's approval. The Contractor shall remove and relocate such items at his expense if so directed by the Landscape Architect.
D. Before starting work on irrigation system, carefully check all grades to determine that work may safely proceed, keeping within the specified minimum depths. The Contractor shall be aware of the fact that the Drawings are based on horizontal dimensions. Actual measurements taken along the slope of a bank will differ from those shown on the Drawings.

TRENCHING AND BACKFILLING

A. Over-excavate trenches 2 inches and bring back to indicated depth by filling with backfill material specified in this Section. Lay pipe on bedding material providing a firm, uniform bearing. Unless otherwise specified, the minimum depth of cover over pipelines and conduits shall be as follows:
   1. Reclaimed Water Pressure Mainline: 36 inches minimum.
   2. Pressure Mainline: 18 inches minimum.
   3. Non-Pressure Lateral lines servicing Emitters: 12 inches minimum.
   5. Sleeves under Paving: 10 inches minimum below sub-base.
B. Do not cover pressure main, non-pressure lateral sprinkler pipe, or fittings until Landscape Architect has inspected and approved systems. Balance of trench backfill material shall be as specified. Compact backfill soil using recommended mechanical compaction equipment to densities as follows:
   Under pavement: 95%.
   In landscaped areas: 90%.

SLEEVING

A. Sleeve all water lines and control wires under walks and paving. Size sleeve two pipe sizes larger than pipe to be sleeved and extend sleeves 6 inches minimum beyond walk or pavement edge.

INSTALLING PLASTIC SOLVENT WELD PIPE

A. Install plastic pipe in a manner to provide for expansion and contraction as recommended by Manufacturer. Cut plastic pipe square and remove burrs at cut ends prior to installation so unobstructed flow will result.
   1. Do not make solvent weld joints if ambient temperature is below 40 degrees F.
   2. Clean mating pipe and fitting with clean, dry cloth and apply one coat of P-70 primer to each.
   3. Apply uniform coat of specified solvent to outside pipe.
   4. Apply solvent to inside fitting in a similar manner.
   5. Reapply a light coat of solvent to pipe and quickly insert into fitting.
   6. Give pipe or fitting a quarter turn to insure even distribution of solvent and make sure pipe is inserted to full depth of socket.
   7. Hold in position for 15 seconds minimum or long enough to secure joint.
   8. Wipe off solvent appearing at outer shoulder of fitting to PVC pipe.
   9. Allow Joints to set at least 24 hours before applying pressure
   10. Tape threaded connections with Teflon tape as per manufacturer's written recommendations.

METAL PIPE

A. All threaded pipe connections shall be made using Teflon tape applied to male threads only. (Note: Do not tape Acme threads on swing joints.)
B. Metal to non-metallic connections: couplings connecting metal to non-metallic items shall be of the same material as the metallic item or as shown on respective detail.
C. When connection is plastic to metal, PVC male adapters complete the connection. Joints shall be made with two wraps of Teflon tape and hand-tightened plus one turn with a strap wrench.
D. Conduit Installation: Metallic Conduit shall be used and assembled as per Manufacturer's written specifications and per local codes where wiring is routed above grade.
E. Stub conduit into control cabinetry as indicated by manufacturer.

PIPE CLOSING AND FLUSHING

A. Pipe closing: Openings in piping system are to be capped and plugged, leaving caps and plugs in place until removal is necessary for completion of installation. Prevent dirt and debris from entering pipe and equipment at all times.
B. Flushing: All pipes and tubing are to be thoroughly flushed out before installing valve caps, or sprinkler heads. After flushing, proceed to install aforementioned equipment, and center load the lines. Joints, fittings, and connections are to remain visible.

PURGING

A. Immediately prior to hydrostatic testing, all irrigation lines shall be thoroughly purged of all entrapped air.
B. Mainline piping system may be tested in sections. Lateral systems shall be tested valve by valve.
C. Adjust zone control valves and install temporary caps in order to force water to be discharged from a single outlet.
D. Introduce water into lines to be tested at full operating pressure head. Observe water flow at end discharge point until determination is made that all air and residual debris have been expelled from the line.

HYDROSTATIC PRESSURE TESTING

A. While the necessary piping system components are exposed, and under the direct observation of the Landscape Architect, all piping is to be subjected to a hydrostatic testing.
   1. Contractor is to supply all testing equipment including caps, valves, pumps, tanks, and gauges.
   2. Calibration of pressure gauges shall be such that accurate determination of potential pressure loss can be ascertained.
   3. Pressure gauges are required at a minimum of two locations on the section of piping being tested.
B. Piping shall be tested as follows:
   1. Test supply lines of 150 psi for a minimum of four (4) hours with an allowable loss of 5 psi.
   2. Test lateral lines at 76 psi for a minimum of one (1) hour with an allowable loss of 5 psi.
   3. Test Drip Emitter lines at 40 psi for a minimum of one (1) hour with an allowable loss of 3 psi.
C. Remedy any failures and retest until the system meets the requirements. During the tests, regardless of the amount of leakage, all detectable leaks are to be stopped and all defects corrected.
D. Materials and installation procedure used for making corrections are to be the same as specified herein.

INSTALLATION OF DRIP IRRIGATION

A. Entire drip irrigation system shall be installed per details on drawings.
B. Do not install emitters until flushing, purging, and pressure testing of system is completed.

CONTROL VALVES AND CONTROLLER

A. Install controllers, control wires, and valves as detailed on Drawings and in accordance with manufacturer's written recommendations and according to electrical codes. Install only one remote control valve box positioned over valve so that all parts of valve can be reached for service. Install pea gravel sump as detailed on drawings. Valve box shall be reasonably free from dirt and debris. Clearance between the highest part of the valve and the bottom of valve box and/or the valve box knock-outs shall be a minimum 2 inches (the box must not rest on piping)

FIELD QUALITY CONTROL

A. Test pressure and lateral lines and make certain there are no leaks before backfilling. Notify Landscape Architect prior to testing.

MAINTENANCE

A. Provide the following services during the maintenance period:
   1. On a daily basis, check complete operation of the irrigation system. Adjust equipment to obtain maximum efficiency.
   2. During the last two weeks of the maintenance period, provide equipment familiarization and instruction on the total operation of the system to the grounds maintenance personnel who will assume responsibility for system operation.

PINNACLE DESIGN, INC
1048 N. 44th Street
Suite 200 ◢ Phoenix, AZ 85008
Ofc:(602)952-8585 ◢ Fax:952-8686

REGISTERED LANDSCAPE ARCHITECT
37505
EDWARD J
LORDEN
11.18.19
PHOENIX, ARIZONA, U.S.A.
Expires 3/31/20

Surprise, AZ.

IRRIGATION SPECIFICATIONS
"W RANCH"
143rd AVENUE and WADDELL ROAD
CASE NUMBER: FS19-828

Drawn By:	NR
Job No:	14021
Date:	4.26.15
TREE CHANGE	1.12.16
1 REAPPROVAL	8.8.17
2 REAPPROVAL	11.18.19
CITY COMMENTS	1.20.20
CITY COMMENTS	2.25.20

L-16 of 16

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

DEPARTMENT OF THE AIR FORCE
AIR EDUCATION AND TRAINING COMMAND

4 December 2019

Mr. James R. Mitchell
Director, Community Initiatives Team
56th Fighter Wing
14185 West Falcon Street
Luke AFB AZ 85309-1629

Ms. Lorraine Nevarez
Planning Project Coordinator
Community Development
16000 N. Civic Center Plaza
Surprise AZ 85374

Re: FS19-828; W Ranch (APN: 501-17-025D)

Dear Ms. Nevarez

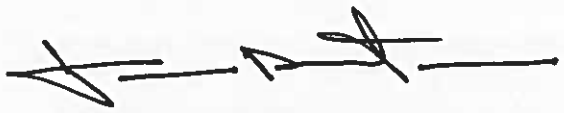
Thank you for the opportunity to provide comments on the Final Plat for W Ranch. The site sits on 10.5 acres of vacant land located at northeast corner of 144th Ave and Waddell Rd in Surprise AZ. This request is for 24 single-family residential units for a density of approximately 2 du/ac. The site is approximately .25 miles outside the Luke AFB 1988 JLUS 65 Ldn, "high noise or accident potential zone." as defined by A.R.S. § 28-8461 and is outside the "territory in the vicinity of a military airport" also defined by A.R.S. § 28-8461.

In an effort to promote a more compatible co-existence Luke AFB follows the guidelines in the Graduated Density Concept (GDC). The GDC proposes, in the absence of a more restrictive state, county or municipal general or comprehensive plan, graduating densities away from the 65 Ldn as follows: a maximum of 2 du/acre from the 65 Ldn to 1/2 mile, a maximum of 4 du/acre from 1/2 to 1 mile, and a maximum of 6 du/acre from 1 to 3 miles. W Ranch with a density of approximately 2 du/ac falls within these guidelines.

As stated in the narrative, this request will not have a negative impact on Luke AFB Flight Operations. Since the site will be located within the "territory in the vicinity of a military airport," it will be subjected to approximately 165 over flights a day, with some as low as 1,500 feet above ground level. If this development is approved, we recommend you review the sound attenuation requirements found in A.R.S. § 28-8482. In addition, a strong notification program on the part of the applicant would be essential to inform potential residents about Luke AFB operations.

If there are any questions, please contact my Community Planner, Mr. Reggie Christianson at (623) 856-9981.

Sincerely



JAMES R. MITCHELL

cc:
Colonel Scott W. Walker, Vice Commander, 56th Fighter Wing
Ms. Cindy L. Allen, GS-13, General and Environmental Law Attorney, 56th Fighter Wing

SURPRISE
ARIZONA

FS19-828
W Ranch
Preliminary Plat

Planning and Zoning Commission – April 16, 2020

VICINITY MAP

FS19-828
W Ranch



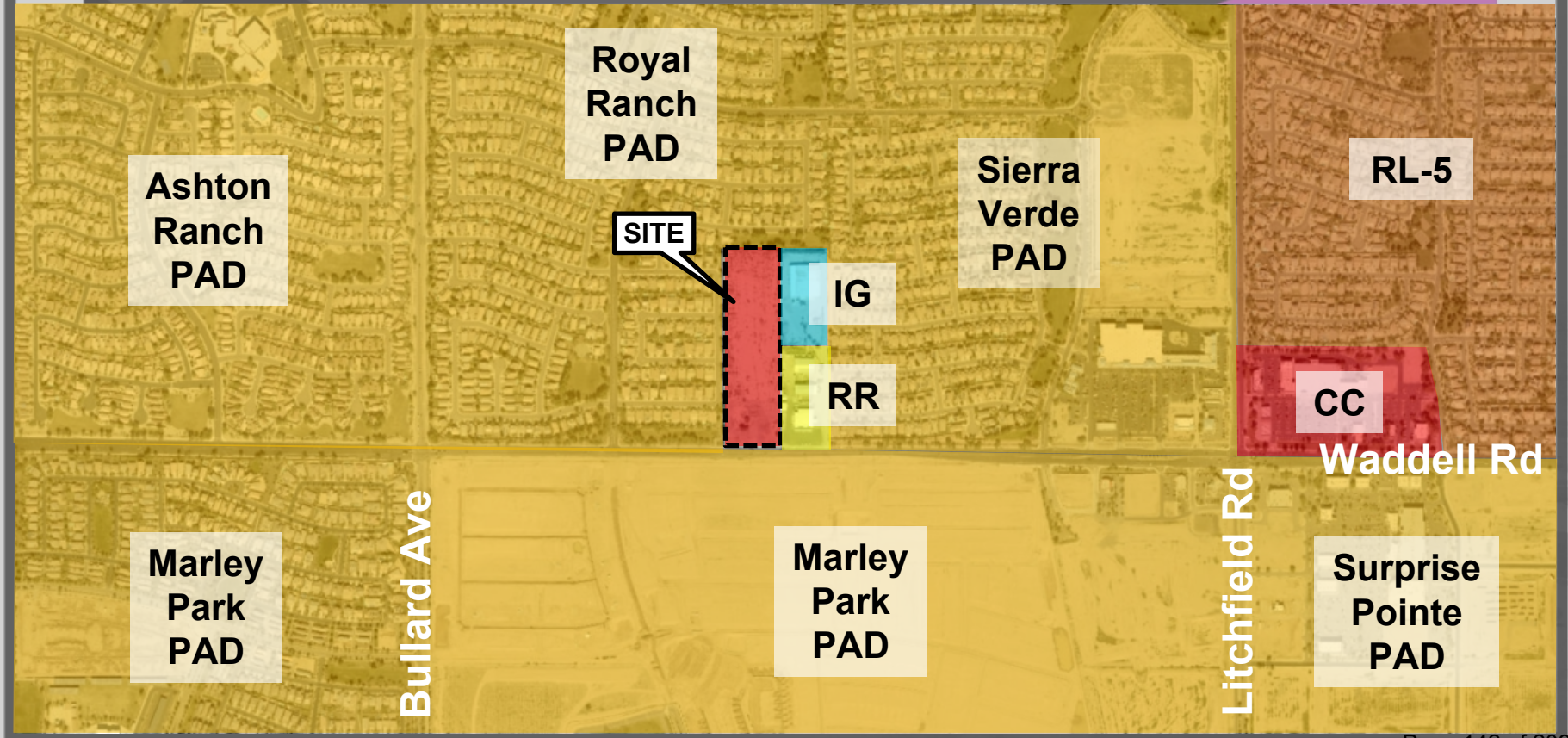
VICINITY MAP

FS19-828
W Ranch

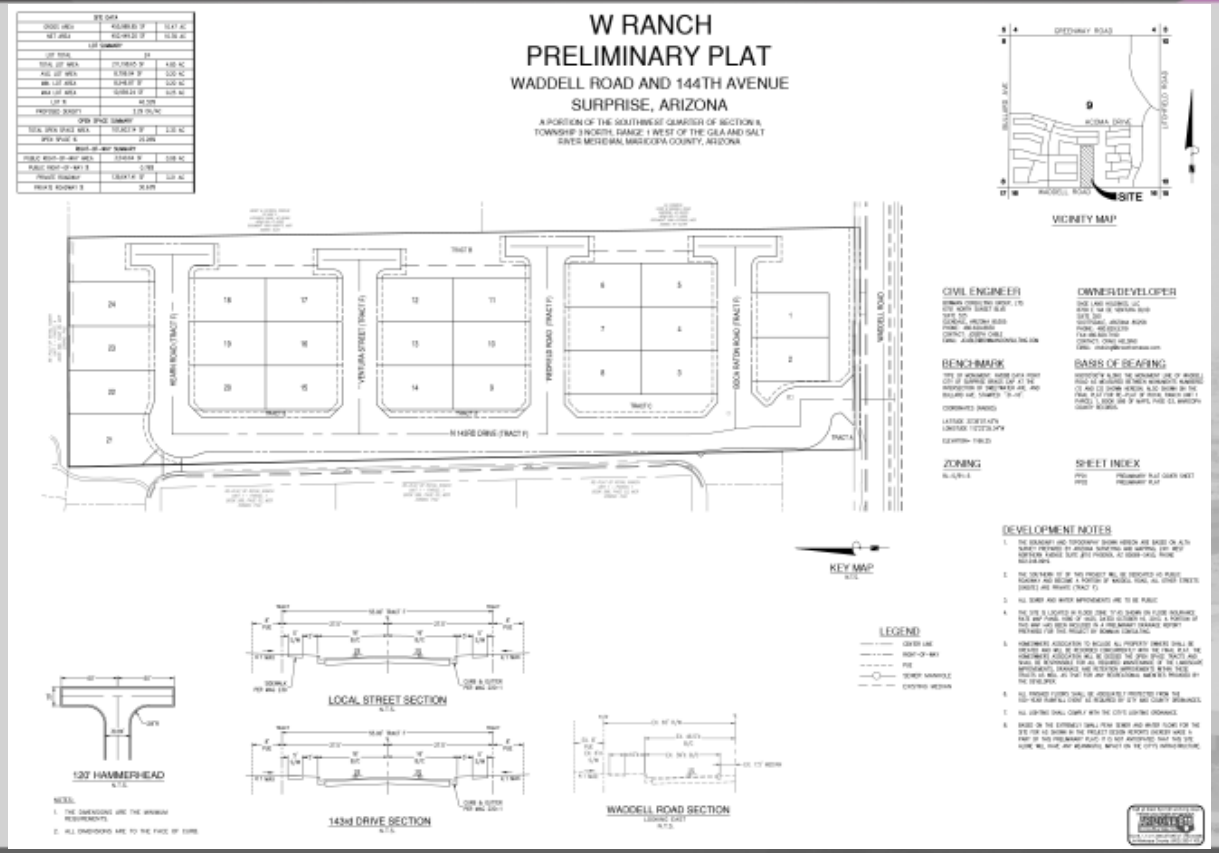


ZONING MAP

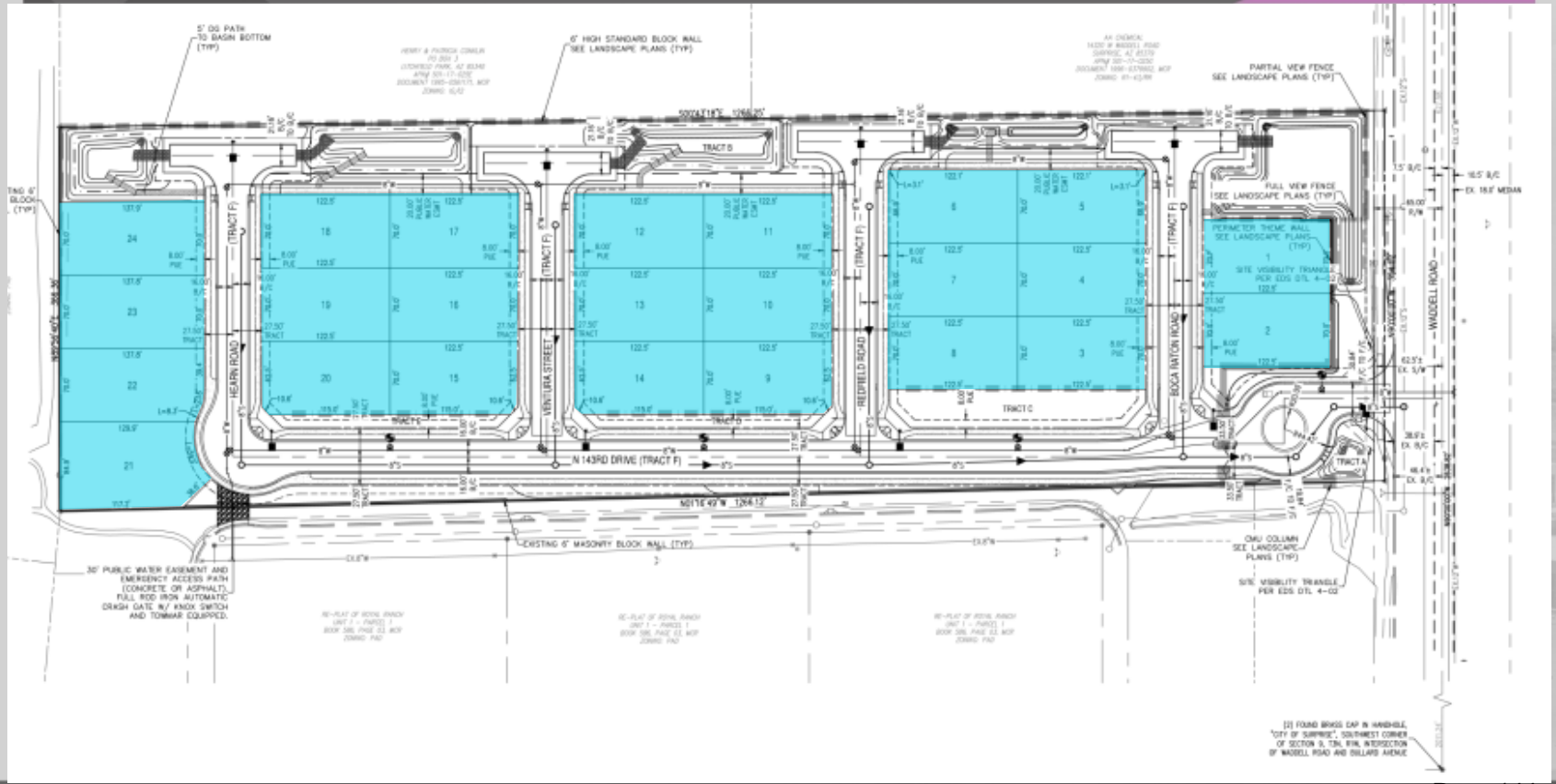
FS19-828
W Ranch



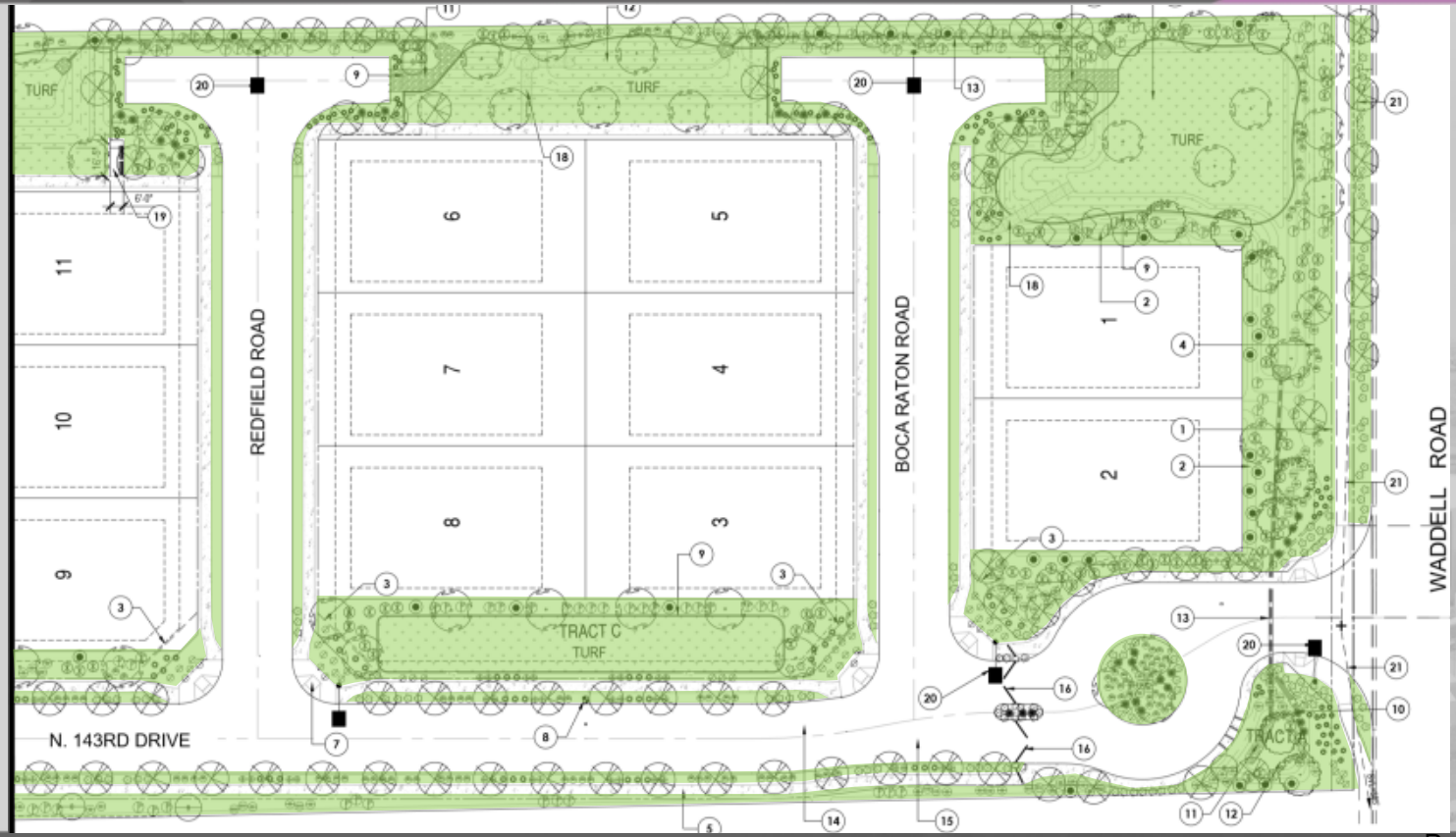
PRELIMINARY PLAT



PRELIMINARY PLAT



LANDSCAPE


TURF
TURF
TURF
TURF
REDFIELD ROAD
BOCA RATON ROAD
WADDELL ROAD
N. 143RD DRIVE
TRACT C
TURF
TRACT B
1
2
3
4
5
6
7
8
9
10
11

LANDSCAPE


HEARN ROAD
VENTURA STREET
N. 143RD DRIVE
TRACT B
TRACT E
TRACT D
TURF
MATCHLINE - SEE SHEET L-3
24
23
22
21
18
19
20
17
16
15
12
13
14

SURPRISE
ARIZONA

QUESTIONS OR COMMENTS?

Thank You

CITY OF SURPRISE
Planning and Zoning Commission Meeting

Council Meeting Date: April 16, 2020 Contact Person: Shirley Phan
Submitting Department: Community Development District: District 1
Staff Recommendations:

Consent: No Regular: No Public Hearing: No Report/Discussion: No

Agenda Wording:
Consideration and action regarding a Site Plan to allow for a new Single Family Rental Community on Parcels 18 and 19 in the Surprise Farms PAD generally located south of Bell Road and west of 175th Avenue.

Motion:
I move to approve/deny the Site Plan to allow for a new Single Family Rental Community on Parcels 18 and 19 in the Surprise Farms PAD generally located south of Bell Road and west of 175th Avenue, subject to stipulations "A" through "F".

Background:
On September 10, 2019, Hilgart Wilson, LLC, submitted a request for a Site Plan to allow for a new Single Family Rental Community on Parcels 18 and 19 in the Surprise Farms PAD generally located south of Bell Road and west of 175th Avenue.

Objective Analysis:

Policy Compliant:

Financial Impact:
This item does not have a direct financial impact, however While this item does not have an immediate or direct financial impact, ongoing development activity in the City will inevitably have a future financial impact as additional resources are needed to provide city services.

Budget Impact:

FTE Impact:

ATTACHMENTS:
1. 20.03.31 EVR Surprise Farms Villas- Staff Report

2. 01- FS19-645-Surprise Farms Villas- Case Map
3. 02- FS19-645-Surprise Farms Villas- Vicinity Map
4. 03- FS19-645-Surprise Farms Villas - Site Plan
5. 04- FS19-645- Surprise Farms Villas- Landscape Plans
6. 05-FS19-645- Surprise Farms Villas - Elevations
7. 06- FS19-645- Surprise Farms Villas- LUKE comments
8. 07- FS19-645-Surprise Farms Villas-SP- PowerPoint

SURPRISE
ARIZONA

Site Plan

REPORT TO THE PLANNING AND ZONING COMMISSION

Case:	**FS19-645**
Project Name:	Surprise Farms Villas
Council District:	1- Acacia
Meeting Date:	**April 16, 2020**
Planner:	Shirley Phan

Applicant:	Nguyen Lam of Hilgart Wilson, LLC and Kevin Kiesl of HBT Construction INC.
Request:	Site Plan to allow for a new Single Family Rental Community on Parcels 18 and 19 in the Surprise Farms PAD generally located south of Bell Road and west of 175th Avenue.
Site Location:	Generally south of Bell Road and west of 175th Avenue
Site Size:	27.32 acres (approx.)
Density:	9.22 Du/Ac
General Plan Conformance:	The proposal is consistent with the Surprise General Plan 2035.
Support/Opposition:	None known
Staff Recommendation:	Staff recommends the Commission **approve** case FS19-645, subject to stipulations 'A' through 'F'.

Project Description:

Hilgart Wilson, LLC and HBT Construction INC. submitted a request for a Site Plan to allow for a new Single Family Rental Community on Parcels 18 and 19 in the Surprise Farms PAD generally located south of Bell Road and west of 175th Avenue. The subject site is zoned PAD and has a land use designation of High Density Residential (HDR). The proposal is for the development of a 252 unit rental community, consisting of 1-bedroom and 2-bedroom single-story units.

The site is to be accessed through two (2) existing driveways on Bell Road and Surprise Farms Loop North. The proposed Site Plan also demonstrates good pedestrian connectivity to the existing sidewalks along Bell Road and Surprise Farms Loop North.

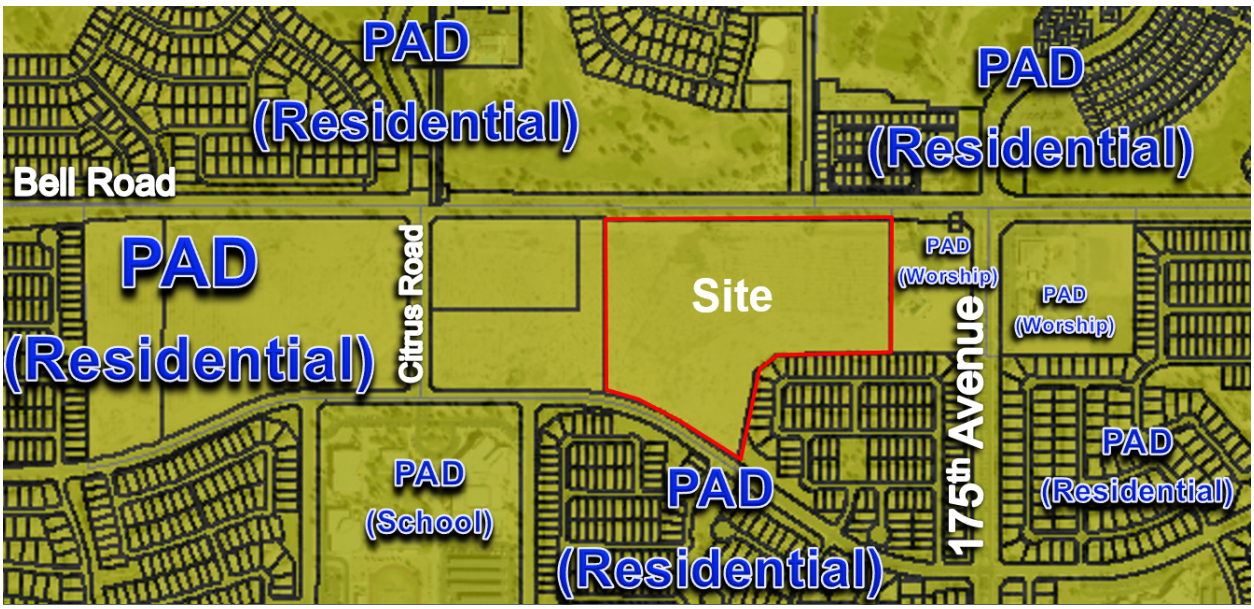
A total of 550 parking spaces will be provided on site which meets the City standards of 1.5 spaces per 1-bedroom unit and 2.0 spaces per 2-bedroom unit. The spaces are placed in close proximity to all of the buildings for convenience of the residents. Refuse containers are located on the southwest of the property.

The applicant proposes 51.4% of landscape coverage. The primary open space amenity is centrally located to minimize travel distances for the residents. The primary amenity area includes the community swimming pool, BBQ, ramada, fire pit, clubhouse, and dog park.

The proposed building colors and material palette meets the requirement from the PAD design guidelines. The proposed exterior design also complies with the PAD design guidelines and will complement the surrounding area.

The applicant also included a lighting photometric study with the application which meets the lighting requirements of the SUDC.

Surrounding Land Zoning:



PAD (Residential)	PAD (Residential)	PAD (Residential)
PAD (Residential)	**PAD (Residential)**	PAD (Worship)
PAD (Residential)	PAD (Residential)	PAD (Residential)

Background:

June 20, 1984: The subject parcel was annexed into the City under Ordinance 84-03.

January 28, 1999: The Mayor and City Council approved the Surprise Farms PAD (Planned Area Development) under case PADA97-063.

May 8, 2019: Staff met with the applicant to discuss the project during a regularly scheduled Concept Review meeting under CR19-338.

September 10, 2019: The applicant filed a request for a Site Plan, PADA, and Final Plat under case FS19-645, the subject request. The PADA was administratively approved on March 6, 2020. The Final Plat is scheduled for City Council on May 5, 2020.

Utility and Services Table:

Water:	EPCOR Water
Wastewater:	City of Surprise
Schools:	Dysart U.S.D.

Reviewing Agencies:

In addition to the standard city reviewing agencies, Arizona Department of Transportation, Flood Control District, Maricopa Water District, and Luke AFB were included in the routing of this request. Maricopa Water District required the applicant to submit for a separate review to include MWD approval on the Final Plat. The other agencies did not indicate any concerns over the request.

Summary:

The proposed Site Plan meets the requirements of the Surprise Farms PAD and the SUDC.

Findings:

- The proposed Site Plan is consistent with the Surprise Farms PAD.
- The proposed Site Plan is consistent with the SUDC.

Recommendation:

Based on the findings noted above, staff recommends the Commission **approve** case **FS19-645**, subject to stipulations 'A' - 'F' as outlined below:

A. Development and use of the site shall be consistent with the Site Plan entitled "Surprise Farm Villas" consisting of four (4) sheet prepared by Hilgart Wilson and stamped received March 3, 2020.

B. Landscaping of the site shall be consistent with the Landscape Plan entitled "Surprise Farm Villas" consisting of thirty-three (33) sheets prepared by The Design Element and stamped received January 24, 2020.

C. Building elevations shall be consistent with the Elevations entitled "Surprise Farm Villas" consisting of five (5) sheet prepared by Homes by Towne and stamped received January 24, 2019.

D. This Site Plan is valid for one (1) year after approval by the Planning and Zoning Commission. This Site Plan shall expire on the one (1) year anniversary of approval, unless construction commences prior to that date.

E. Site Plan approval is contingent upon approval of the related rezoning request by the City Council.

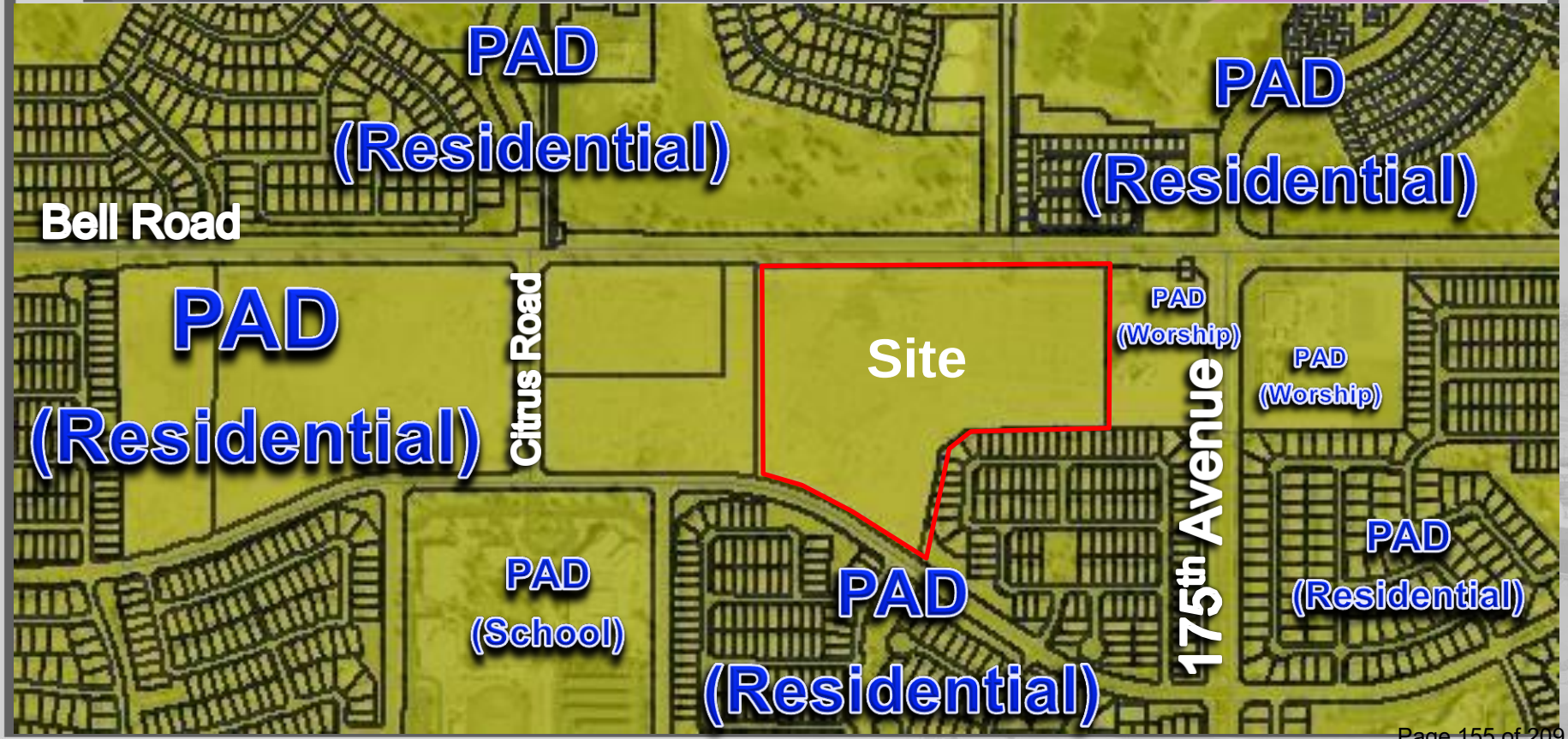
F. Non-compliance with the approved plan for this case will be treated as a violation in accordance with the provisions of Article XIV of the Surprise Unified Development Code.

However, should the Commission wish to deny the request, the Commission should make its own findings and base its decision on those alternative findings.

Attachments:

01 Case Map
02 Vicinity Map
03 Site Plan
04 Landscape Plan
05 Elevations
06 Luke AFB comments
07 Powerpoint

CASE MAP

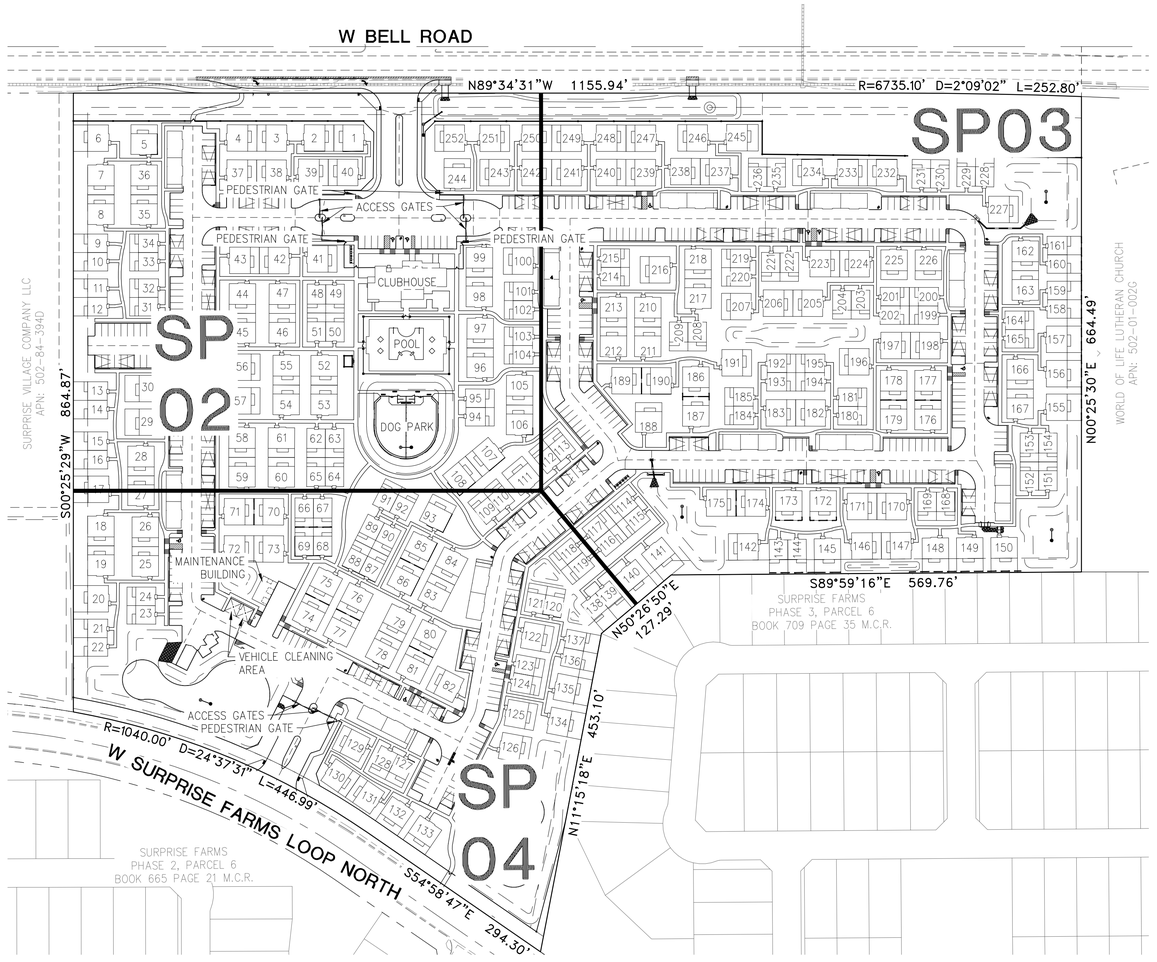

PAD
(Residential)
PAD
(Residential)
Bell Road
PAD
(Residential)
Citrus Road
Site
PAD
(Worship)
PAD
(Worship)
175th Avenue
PAD
(School)
PAD
(Residential)
PAD
(Residential)

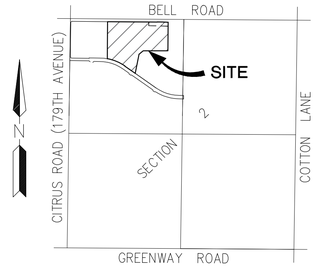
VICINITY MAP



SITE PLAN
SURPRISE FARMS VILLAS
SURPRISE, ARIZONA

A PORTION OF THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 3 NORTH, RANGE 2 WEST
OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA





VICINITY MAP
NTS

ENGINEER
HILGARTWILSON
2141 E. HIGHLAND AVENUE, SUITE 250
PHOENIX, ARIZONA 85016
PHONE: (602) 490-0535
FAX: (602) 368-2436
CONTACT: NGUYEN LAM, PE
EMAIL: NLAM@HILGARTWILSON.COM

OWNER/DEVELOPER
HOMES BY TOWNE
706 E. BELL RD., SUITE 212
PHOENIX, AZ 85022
PHONE: (602) 996-6800
CONTACT: KEVIN KEISL

ARCHITECT
FELTEN GROUP
18325 N. ALLIED WAY SUITE 200
PHOENIX, AZ 85054
PHONE: (602) 867-2500
CONTACT: KEN VANSCIVER
EMAIL: KEN.VANSCIVER@FELTENGROUP.COM

LANDSCAPE ARCHITECT
THE DESIGN ELEMENT, PLLC
2211 EAST HIGHLAND AVE SUITE 120
PHOENIX, AZ 85016
PHONE: (602) 244-1970
CONTACT: MARC BEYER
EMAIL: MARCB@TDE.DESIGN

SITE DATA

SITE AREA:	27.32 AC
ZONING:	PAD
# UNITS:	252
DENSITY:	9.22 DU/AC

PARKING SUMMARY

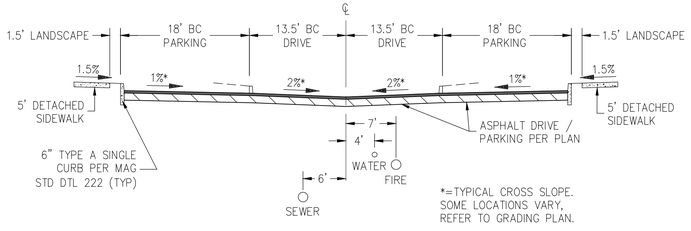
GARAGE (12x6 STALLS):	72
COVERED PARKING:	252
OPEN PARKING:	204
ADA PARKING:	12
EV CHARGING STATION:	9
STAFF CART PARKING	1
TOTAL PARKING:	550

BICYCLE PARKING

OPEN RACKS:	20

NOTE
ALL SIGNAGE IS TO BE REVIEWED AND APPROVED UNDER SEPARATE SIGN PERMIT.

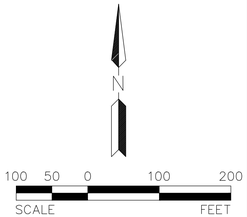
SITE PLAN LEGEND
- PROPERTY LINE
- EASEMENT LINE
- VERTICAL CURB & GUTTER
- (1632) EXISITING CONTOUR
- 1632 PROPOSED CONTOUR
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- PROPOSED HEADWALL
- PROPOSED SD CATCH BASIN
- RETAINING WALL
- GRADE BREAK
- BARRICADE
- 8"S PROPOSED 8" SEWER LINE
- 8"S EXISTING SEWER LINE
- 8"W PROPOSED 8" WATER LINE
- 8"W EXISTING WATER LINE
- 8"RW EXISTING RECLAIMED WATER
- EXISTING SEWER M.H.
- PROPOSED SEWER M.H.
- SEWER CLEANOUT
- TAPPED CAP
- BENDS
- TEE
- FIRE HYDRANT
- VALVE AND TEE
- PROPOSED VALVE
- EXISTING VALVE
- PROPOSED METER
- BARRICADE
- (#) CONSTRUCTION NOTE
- PROPOSED STREET LIGHT
- PROPOSED SITE LIGHT
- PROPOSED FENCE
- EXISTING FENCE



TYPICAL PRIVATE DRIVE W/ PARKING
NTS
LOOKING NORTH OR WEST

APPROVAL
THIS SET OF PLANS HAS BEEN REVIEWED FOR COMPLIANCE WITH CITY REQUIREMENTS PRIOR TO ISSUANCE OF PERMITS. THE CITY NEITHER ACCEPTS NOR ASSUMES ANY LIABILITY FOR ERRORS OR OMISSIONS. THIS COMPLIANCE APPROVAL SHALL NOT PREVENT THE CITY ENGINEER FROM REQUIRING CORRECTIONS OF ERRORS OR OMISSIONS IN PLANS FOUND TO BE IN VIOLATION OF LAWS OR ORDINANCES.

CITY OF SURPRISE ENGINEER DATE



Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA 811
CALL 811 or click Arizona811.COM

REV.:

HILGARTWILSON
ENGINEER | PLAN | SURVEY | MANAGE
2141 E. HIGHLAND AVE. STE 250
PHOENIX, AZ 85016
P: 602.490.0535 | F: 602.368.2436
www.hilgartwilson.com

REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
38783
NGUYEN
LAM
2-19-20
RENEWAL 06-30-21
ARIZONA U.S.A.

SURPRISE FARMS VILLAS
BELL ROAD & 175TH AVENUE
SURPRISE, ARIZONA

OVERALL SITE PLAN

HILGARTWILSON
PROJ NO.: 1329
DATE: FEB 2020
SCALE: 1" = 100'
DRAWN: RD
DESIGNED: JF
APPROVED: NL

DWG. NO.
SP01
SHT. 1 OF 4

CASE #: FS19-645

©Copyright 2020, HILGARTWILSON, LLC - This plan document set is the sole property of HILGARTWILSON, LLC. No alterations to these plans, other than adding "as-built" information, are allowed by anyone other than authorized HILGARTWILSON, LLC employees.

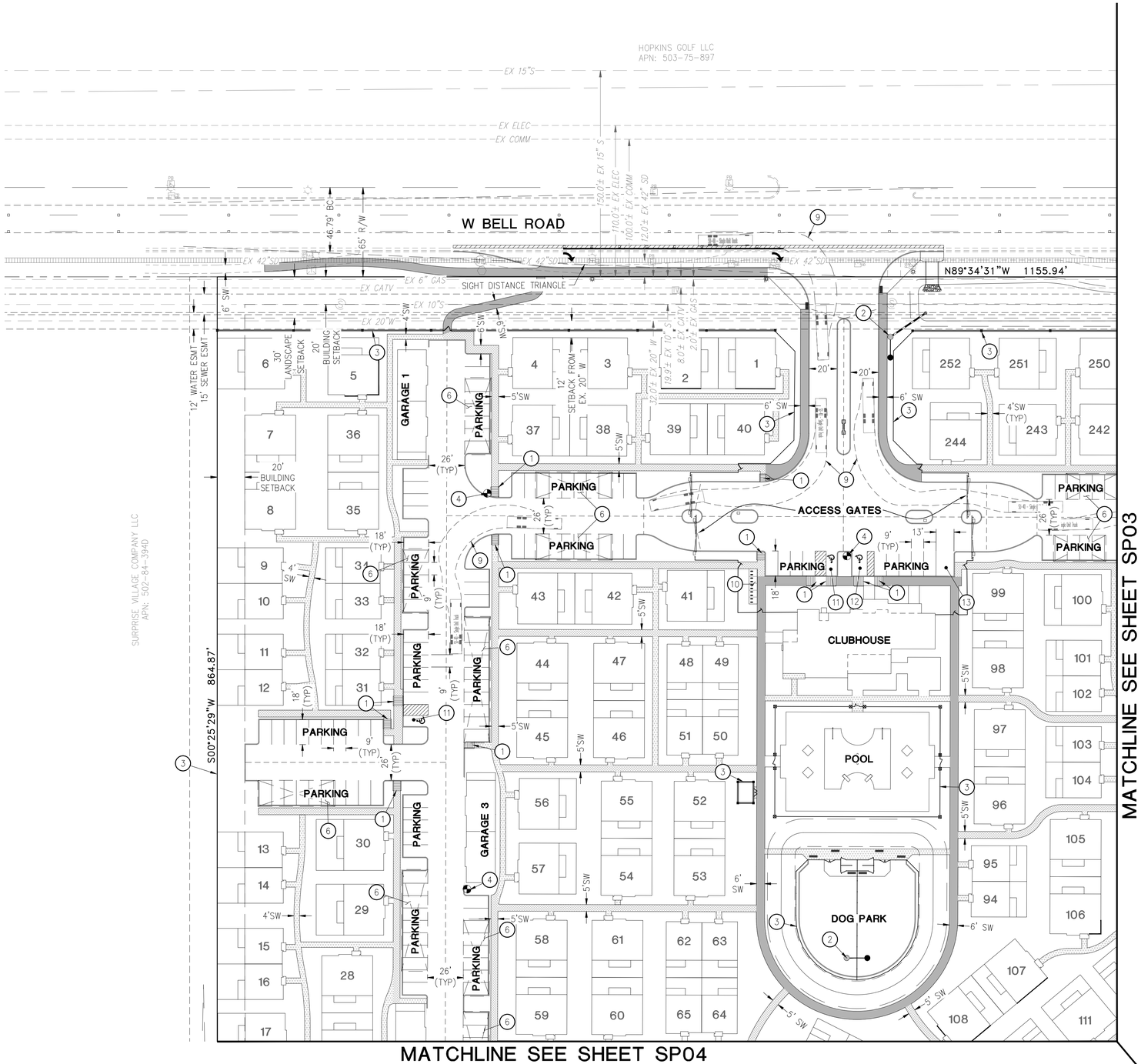
U: \1300\1329\ENGR\PLANS\SITE\1329-SP01.dwg 2/19/2020 3:31 PM

SIDEWALK LEGEND

- 4' SIDEWALK
- 5' SIDEWALK
- 6' SIDEWALK

SITE PLAN CONSTRUCTION NOTES

1. PROPOSED ADA ACCESSIBLE RAMP
2. PROPOSED DRYWELL
3. PROPOSED WALL OR FENCE PER LANDSCAPE PLAN
4. PROPOSED FIRE HYDRANT
6. PROPOSED COVERED PARKING AWNING
8. PROPOSED ELECTRIC VEHICLE PARKING STALL
9. PROPOSED FIRE TRUCK TURNING PATH
10. PROPOSED BICYCLE RACK
11. PROPOSED ADA PARKING STALL (STANDARD)
12. PROPOSED ADA PARKING STALL (VAN PARKING)
13. PROPOSED MAINTENANCE CART PARKING



SITE PLAN LEGEND

- PROPERTY LINE
- EASEMENT LINE
- VERTICAL CURB & GUTTER
- (1632) EXISITING CONTOUR
- 1632 PROPOSED CONTOUR
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- PROPOSED HEADWALL
- PROPOSED SD CATCH BASIN
- RETAINING WALL
- GRADE BREAK
- BARRICADE
- 8"S PROPOSED 8" SEWER LINE
- 8"S EXISTING SEWER LINE
- 8"W PROPOSED 8" WATER LINE
- 8"W EXISTING WATER LINE
- 8"RW EXISTING RECLAIMED WATER
- EXISTING SEWER M.H.
- PROPOSED SEWER M.H.
- SEWER CLEANOUT
- TAPPED CAP
- BENDS
- TEE
- FIRE HYDRANT
- VALVE AND TEE
- PROPOSED VALVE
- EXISTING VALVE
- PROPOSED METER
- BARRICADE
- CONSTRUCTION NOTE
- PROPOSED STREET LIGHT
- PROPOSED SITE LIGHT
- PROPOSED FENCE
- EXISTING FENCE

N

40 20 0 40 80
SCALE FEET

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
CALL 811 or click Arizona811.COM

REV.:

HILGARTWILSON
ENGINEER | PLAN | SURVEY | MANAGE
2141 E. HIGHLAND AVE., STE. 250 | P: 602.490.0535 / F: 602.368.2436
PHOENIX, AZ 85016 | www.hilgartwilson.com

REGISTERED PROFESSIONAL ENGINEER (CIVIL)
CERTIFICATE NO.
38783
NGUYEN
LAM
2-19-20
ARIZONA U.S.A.

SURPRISE FARMS VILLAS

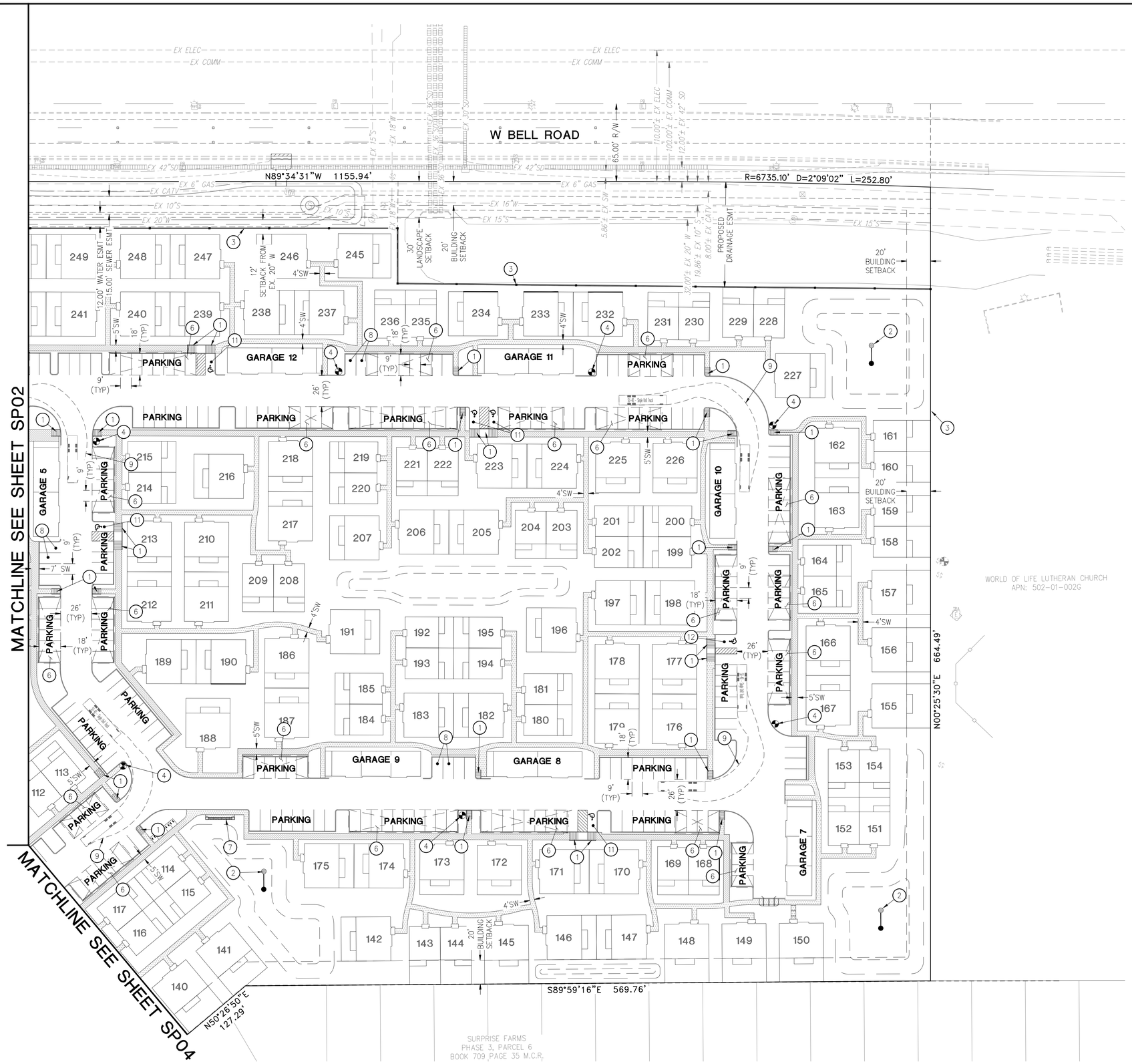
BELL ROAD & 175TH AVENUE
SURPRISE, ARIZONA

SITE PLAN

HILGARTWILSON
PROJ NO.: 1329
DATE: FEB 2020
SCALE: 1" = 40'
DRAWN: RD
DESIGNED: JF
APPROVED: NL
DWG. NO.
SP02
SHT. 2 OF 4
CASE #: FS19-645

U:\1300\1329\ENGR\PLANS\SITE\1329-SP02.dwg 2/19/2020 3:32 PM

©Copyright 2020, HILGARTWILSON, LLC - This plan document set is the sole property of HILGARTWILSON, LLC. No alterations to these plans, other than adding "as-built" information, are allowed by anyone other than authorized HILGARTWILSON, LLC employees.



SIDEWALK LEGEND

- 4' SIDEWALK
- 5' SIDEWALK
- 6' SIDEWALK

SITE PLAN CONSTRUCTION NOTES

1. PROPOSED ADA ACCESSIBLE RAMP
2. PROPOSED DRYWELL
3. PROPOSED WALL OR FENCE PER LANDSCAPE PLAN
4. PROPOSED FIRE HYDRANT
6. PROPOSED COVERED PARKING AWNING
7. PROPOSED MAILBOX
8. PROPOSED ELECTRIC VEHICLE PARKING STALL
9. PROPOSED FIRE TRUCK TURNING PATH
11. PROPOSED ADA PARKING STALL (STANDARD)
12. PROPOSED ADA PARKING STALL (VAN PARKING)

REV.:

HILGARTWILSON
ENGINEER | PLAN | SURVEY | MANAGE
2141 E. HIGHLAND AVE., STE. 250
PHOENIX, AZ 85016
P: 602.490.0535 / F: 602.368.2436
www.hilgartwilson.com

REGISTERED PROFESSIONAL ENGINEER (CIVIL)
CERTIFICATE NO. 38783
NGUYEN LAM
Date Signed 2.7.20
ARIZONA U.S.A.

SURPRISE FARMS VILLAS

BELL ROAD & 175TH AVENUE
SURPRISE, ARIZONA

SITE PLAN

40 20 0 40 80
SCALE FEET

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
CALL 811 or click Arizona811.COM

HILGARTWILSON

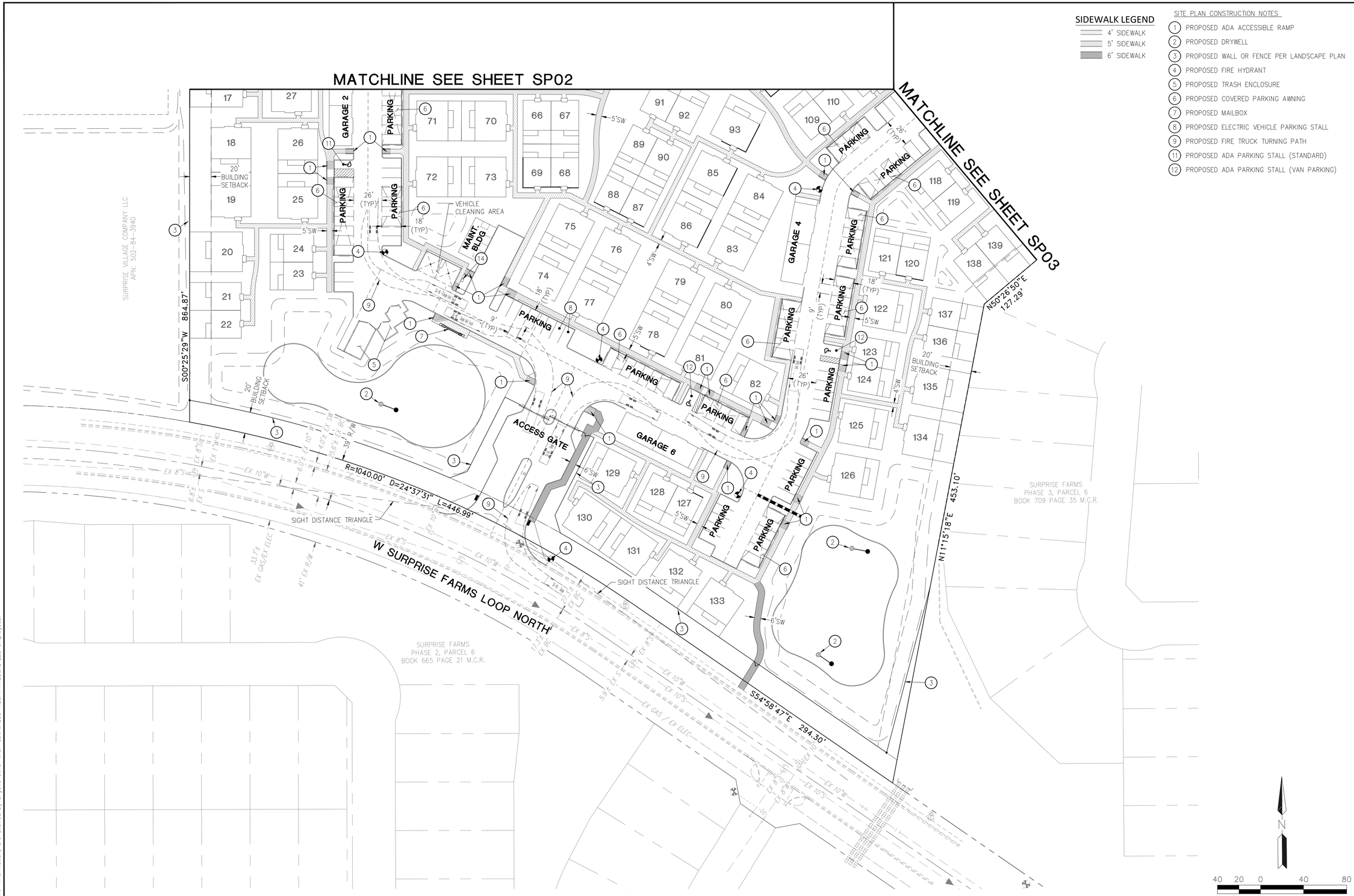
PROJ NO.:	1329
DATE:	MAR 2020
SCALE:	1" = 40'
DRAWN:	RD
DESIGNED:	JF
APPROVED:	NL

DWG. NO.
SP03
SHT. 3 OF 4

CASE #: FS19-645

U:\1300\1329\ENGR\PLANS\SITE\1329-SP03.dwg 3/3/2020 6:30 AM

© Copyright,2020, HILGARTWILSON, LLC – This plan document set is the sole property of HILGARTWILSON, LLC. No alterations to these plans, other than adding "as-built" information, are allowed by anyone other than authorized HILGARTWILSON, LLC employees.


MATCHLINE SEE SHEET SP02
MATCHLINE SEE SHEET SP03
SURPRISE VILLAGE COMPANY LLC
APN: 502-84-394D
S00°25'29"W 864.87'
20' BUILDING SETBACK
GARAGE 2
GARAGE 4
GARAGE 6
MAINT. BLDG
VEHICLE CLEANING AREA
ACCESS GATE
PARKING
26' (TYP)
18' (TYP)
9' (TYP)
5'SW
4'SW
6'SW
R=1040.00' D=24°37'31" L=446.99'
SIGHT DISTANCE TRIANGLE
39' R/W
W SURPRISE FARMS LOOP NORTH
SURPRISE FARMS
PHASE 2, PARCEL 6
BOOK 665 PAGE 21 M.C.R.
SURPRISE FARMS
PHASE 3, PARCEL 6
BOOK 709 PAGE 35 M.C.R.
N50°26'50"E 127.29'
N11°15'18"E 453.10'
S54°58'47"E 294.30'
EX 8"S
EX 10"W
EX GAS / EX ELEC
EX 5'
EX 6"W
EX 2"G
EX 8"G
EX 1"W
EX 1"G
EX 1"T
EX 1"E
EX 6"E
EX 8"E
EX 10"E
EX 12"E
EX 4"T
EX 6"T
EX 8"T
EX 10"T
EX 12"T
EX 4"W
EX 6"W
EX 8"W
EX 10"W
EX 12"W
EX 4"S
EX 6"S
EX 8"S
EX 10"S
EX 12"S
EX 4"G
EX 6"G
EX 8"G
EX 10"G
EX 12"G
EX 4

Landscape and Irrigation

SURPRISE FARMS VILLAS

SURPRISE, ARIZONA

DEVELOPER

TI INVESTORS OF ARIZONA APARTMENTS,LLC
706 E BELL ROAD
SUITE 212
PHOENIX AZ 85022
CONTACT: KEVIN KIESL
PHONE: (602) 309-0866

ARCHITECTURE

FELTON GROUP
18325 NORTH ALLIED WAY
SUITE 200
PHOENIX, ARIZONA 85054
CONTACT: KEN VANSCIVER
PHONE: (602) 867-2500

LANDSCAPE ARCHITECTURE

THE DESIGN ELEMENT, PLLC
2211 EAST HIGHLAND AVENUE
SUITE 120
PHOENIX, ARIZONA 85016
CONTACT: MARC BEYER
PHONE: (602) 244-1970

PLANNER AND ENGINEER

HILGART WILSON LLC
2141 EAST HIGHLAND
SUITE 250
PHOENIX, AZ 85016
CONTACT: GEORGE KRALL
PHONE: (602) 490-0535

PROJECT DATA

TOTAL UNITS = 252
TOTAL PROPOSED PROPERTY AREA = 27.33 AC
UNUSABLE AREA = 1.90 AC*
PARKING STALLS 9'x18' = 499

*=Unusable area includes water / sewer easements and drainage easements as well as a 12' buffer from waterlines, per EPCOR requirements.

UNIT 1 (1-BR) = 102 UNITS
UNIT 1 TYP AREA = 1,027 SF (0.024 AC)
100 1-BR UNITS x 1,027 SF/UNIT
TOTAL AREA = 102,700 SF (2.36 AC)

UNIT 2 (2 BR) = 150 UNITS
UNIT 2 TYP AREA = 1,551 SF (0.035 AC)
150 2 BR UNITS x 1,551 SF/UNIT
TOTAL AREA = 232,650 SF (5.34 AC)

AREAS
AMENITY AREA = 13,709 SF (0.31 AC)
OTHER AREAS = 21,441 SF (0.49 AC)
HARDSAPE AREA = 206,547 SF (4.74 AC)
LANDSCAPE AREA = 611,649 SF (14.04 AC)

TURF AREA = 4.8%
LANDSCAPE AREA = 51.4%

TOTAL AREA = 1,190,247 SF (27.32 AC)

LANDSCAPE GENERAL NOTES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL CONCURRENT WORK WITH OTHER CONTRACTORS. PROVIDE SLEEVES AS REQUIRED FOR DRAINAGE, IRRIGATION AND ELECTRICAL LINES.

IRRIGATION AND ELECTRICAL SLEEVES AND SUBSURFACE DRAINAGE SYSTEMS SHALL BE CONSTRUCTED PRIOR TO PAVING AND LANDSCAPE WORK, AS INDICATED.

THE INFORMATION AND BOUNDARY LOCATIONS SHOWN WERE COMPILED FROM SOURCES ASSUMED TO BE ACCURATE. THEIR ACCURACY HOWEVER IS NOT GUARANTEED. REPORT ANY DISCREPANCIES TO THE CONSTRUCTION COORDINATOR OR CITY'S REPRESENTATIVE IMMEDIATELY.

VERIFY ALL CONDITIONS AT JOB SITE AND NOTIFY CONSTRUCTION COORDINATOR OF DIMENSIONAL ERRORS, OMISSIONS OR DISCREPANCIES BEFORE BEGINNING ANY WORK. VERIFY EXISTING ELEVATIONS. COS TO PROVIDE NECESSARY PERMITS PRIOR TO CONSTRUCTION.

ALL WORK SHALL CONFORM TO THE APPROPRIATE AGENCIES.

CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UNDERGROUND UTILITIES, LINES AND STRUCTURES PRIOR TO EXCAVATION OR TRENCHING. DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE CITY.

CONTRACTOR TO VERIFY THE EXACT LOCATION OF UTILITIES PRIOR TO CONSTRUCTION. (CALL TWO WORKING DAYS BEFORE YOU DIG (602) 263-1100). CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING OVER OR NEAR THE EXISTING GAS MAIN, WATER LINES AND ELECTRICAL LINES.

ALL LAYOUT DIMENSIONS ARE FROM PLAN VIEW CALCULATIONS. ACTUAL FIELD DIMENSIONS MAY VARY FROM PLAN DUE TO ACTUAL LENGTHS ALONG A SLOPED SURFACE. HORIZONTAL LAYOUT AND DIMENSIONING ARE FROM RIGHT-OF-WAY TO FACE OF CURB UNLESS OTHERWISE NOTED. VERIFY RIGHT-OF-WAY DIMENSION AFTER STREET CONSTRUCTION, PRIOR TO PEDESTRIAN IMPROVEMENTS.
IF THERE IS A CONFLICT WITH LAYOUT IN THE FIELD, NOTIFY CONSTRUCTION COORDINATOR PRIOR TO INSTALLATION. FIELD VERIFY PRIOR TO SHOP DRAWING PRODUCTION.

DRAWING SYMBOLS: A SYSTEM OF DIAGRAMMATIC SYMBOLS AND NOTATIONS IS USED IN THESE DRAWINGS. REVIEW NOTATION CAREFULLY, NOTIFY CONSTRUCTION COORDINATOR AND REQUEST CLARIFICATION OF ANY UNCLEAR NOTATION OR DISCREPANCY PRIOR TO COMMENCING WORK.

WORK PERFORMED WITHOUT APPROVAL OF OWNER AND/OR IN COMPLIANCE WITH SPECIFICATIONS IS SUBJECT TO REMOVAL AT CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL PROVIDE A FULL SCALE MOCKUP FOR PAVING AND HARDSCAPE SYSTEMS, LANDSCAPE WALLS AND SPECIALTY ITEMS (REFER TO SPECIFICATIONS AND ATTACHED PLAN) AND RECEIVE WRITTEN APPROVAL FROM CONSTRUCTION COORDINATOR FOR ALL SYSTEMS BEFORE BEGINNING CONSTRUCTION.

THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE FLOW AWAY FROM ALL BUILDINGS TOWARD DRAIN INLETS, PLANTER/LAWN AREAS OR STREET AS INDICATED.
LAYOUT OF ALL SITE FURNISHINGS, INCLUDING BENCHES, TRASH RECEPTACLES, AND BICYCLE RACKS IS TO BE STAKED IN THE FIELD AND APPROVED BY THE CONSTRUCTION COORDINATOR PRIOR TO INSTALLATION. CONCRETE FOOTINGS FOR ALL SITE FURNISHINGS ARE TO BE STAKED AND VERIFIED BY THE CONSTRUCTION COORDINATOR PRIOR TO INSTALLING FINISH PAVEMENT.

DIMENSIONS MARKED 'VERIFY' ARE TO BE FIELD MEASURED. ANY DISCREPANCY FROM THE NOTED DIMENSION IS TO BE BROUGHT TO THE ATTENTION OF THE GENERAL CONTRACTOR PRIOR TO FURTHER WORK.

ALL ANGLES ARE 90 DEGREES UNLESS NOTED OTHERWISE.

THE DESIGN ON THESE PLANS IS ONLY APPROVED BY THE CITY IN SCOPE AND NOT DETAIL. CONSTRUCTION QUANTITIES ON THESE PLANS ARE NOT VERIFIED BY THE CITY. APPROVAL OF THESE PLANS ARE FOR PERMIT PURPOSES ONLY AND SHALL NOT PREVENT THE CITY FROM REQUIRING CORRECTION OF ERRORS IN THE PLANS WHERE SUCH ERRORS ARE SUBSEQUENTLY FOUND TO BE IN VIOLATION OF ANY LAW, ORDINANCE, HEALTH, SAFETY, OR OTHER DESIGN ISSUES.

FINAL BUILDING PERMIT CANNOT BE OBTAINED UNTIL BONDING OR APPROVED ASSURANCES ARE PROVIDED FOR THE LANDSCAPING WITHIN THE RIGHT OF WAY.

NO PLANT SUBSTITUTIONS, TYPE, SIZE OR QUANTITY, OR DEVIATIONS FROM THE APPROVED LANDSCAPE OR IRRIGATION PLANS ARE ALLOWED WITHOUT PRIOR APPROVAL FROM THE LANDSCAPE ARCHITECT

ALL PLANT MATERIAL AND SPECIFICATIONS TO CONFORM TO THE ARIZONA NURSERYMAN ASSOCIATION STANDARDS.

ALL RIGHT OF WAY PLANT MATERIAL SHALL BE IN COMPLIANCE WITH THE DEPARTMENT OF WATER RESOURCES LOW WATER USE PLANT LIST.

ALL EXISTING TREES AND SHRUBS IN RIGHT OF WAY DESIGNATED TO REMAIN BUT ARE DAMAGED OR DESTROYED WILL BE REPLACED IN LIKE SIZE AND KIND BY THE CONTRACTOR.

THE PROPOSED IRRIGATION SYSTEM SHALL INCLUDE ANY MODIFICATIONS REQUIRED TO TIE THE EXISTING IRRIGATION SYSTEM IN THE RIGHT OF WAY TO THE PROPOSED SYSTEM. ALL THROUGH IRRIGATION SYSTEMS IN THE RIGHT OF WAY SHALL BE MAINTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CAPPING AND/OR ABANDONING EXISTING IRRIGATION TO PLANT MATERIALS AND PROVIDING NEW IRRIGATION TO THE EXISTING PLANT MATERIAL, IN RIGHT OF WAY, PER THE APPROVED PLAN.

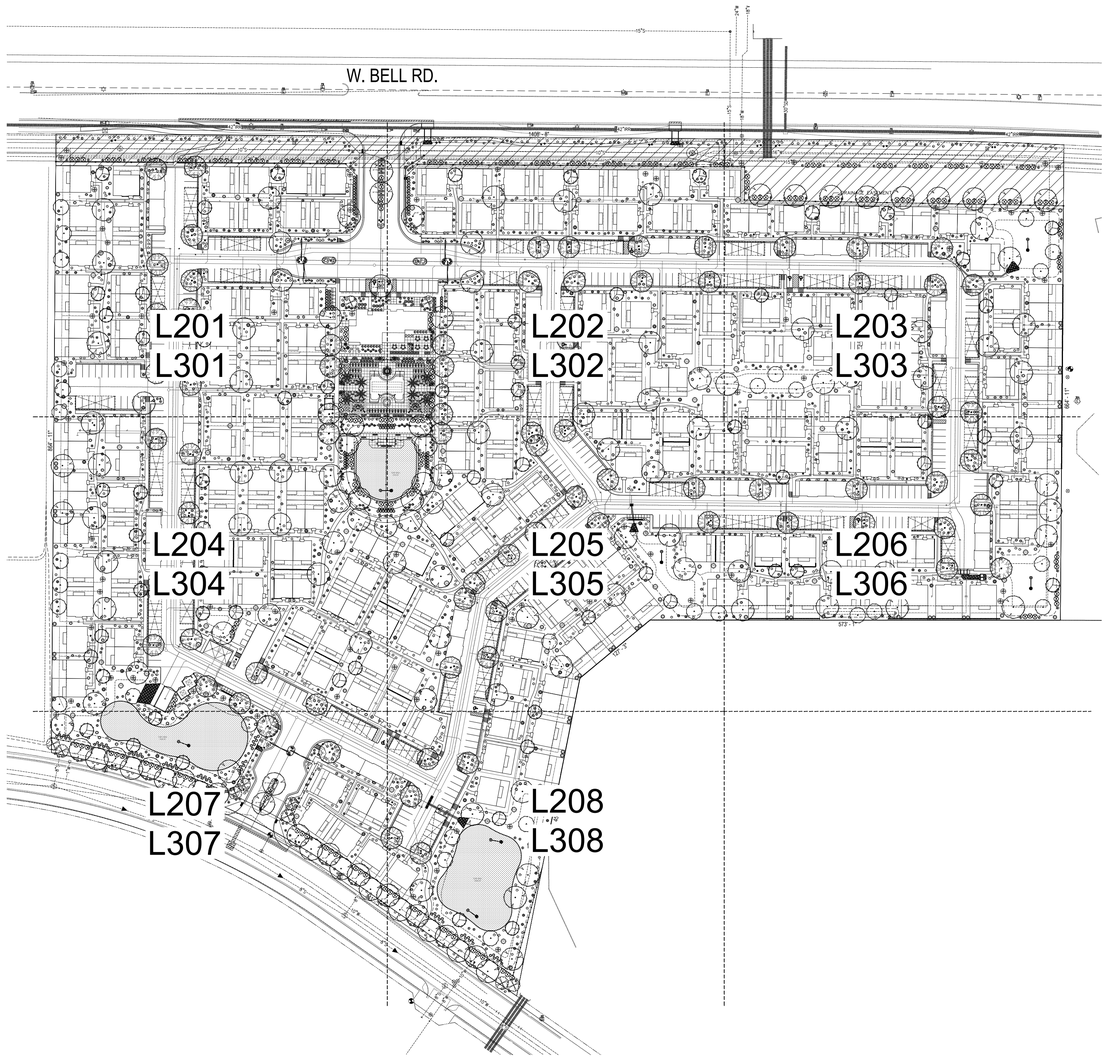
WALLS ARE NOT APPROVED AS PART OF THE LANDSCAPE PLAN BUT ARE SHOWN FOR REFERENCE ONLY.

TREES ADJACENT TO PEDESTRIAN WALKWAYS SHOULD HAVE A MINIMUM CANOPY CLEARANCE OF 6'-8".

PVC PIPE LATERALS ARE REQUIRED. A MAXIMUM OF (5') FIVE FEET OF POLY TUBING OFF OF PVC IS ALLOWED. NO POLY TUBING LATERALS ARE ALLOWED.

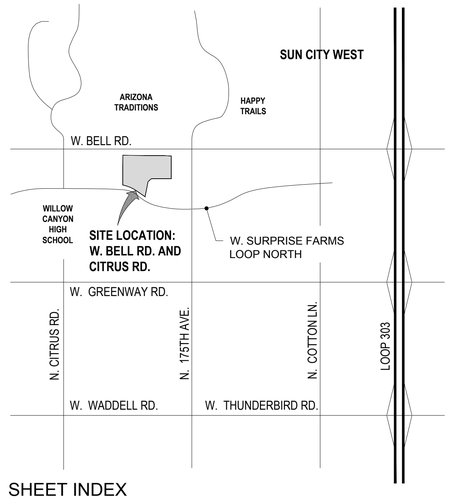
PLANT QUANTITIES AND CALIPER SIZES, PER THE SPECIFIC ZONING REQUIREMENTS FOR THIS SITE, PROVIDED IN THE LEGEND ON THE APPROVED PLANS ARE REQUIRED TO BE INSTALLED IN THE FIELD. ANY DEVIATIONS FROM THE PLAN WILL REQUIRE A REVISION TO THE APPROVED PLANS.

OVERALL SITE VIEW & SHEET INDEX



SCALE: 1" = 100'-0"
0 50' 100' 150' 300'
NORTH

VICINITY MAP



SHEET INDEX

L100	COVER SHEET
L101	KEYNOTES
L102	HARDSCAPE DETAILS
L103	HARDSCAPE DETAILS
L104	HARDSCAPE DETAILS
L105	HARDSCAPE DETAILS
L106	LANDSCAPE LIGHTING
L107	LANDSCAPE LIGHTING
L201	PLANTING PLAN
L202	PLANTING PLAN
L203	PLANTING PLAN
L204	PLANTING PLAN
L205	PLANTING PLAN
L206	PLANTING PLAN
L207	PLANTING PLAN
L208	PLANTING PLAN
L209	ENTIRE PARCEL PLANTING PLAN
L210	PLANTING DETAILS
L211	SPECIFICATIONS
L300	IRRIGATION COVER
L301	IRRIGATION PLAN
L302	IRRIGATION PLAN
L303	IRRIGATION PLAN
L304	IRRIGATION PLAN
L305	IRRIGATION PLAN
L306	IRRIGATION PLAN
L307	IRRIGATION PLAN
L308	IRRIGATION PLAN
L309	IRRIGATION PLAN
L310	IRRIGATION DETAILS
L311	IRRIGATION DETAILS
L312	IRRIGATION DETAILS
L313	SPECIFICATIONS

SURPRISE
ARIZONA

TRACKING: FS19-645

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
ARIZONA U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL
175TH AVE. & BELL ROAD
SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR:
CD

ISSUED DATE:
1 / 16 / 2019

DRAWN BY: JP REVIEWED BY: MB

ARIZONA811
Know what's below.
Call 811 or click Arizona811.com before you dig.

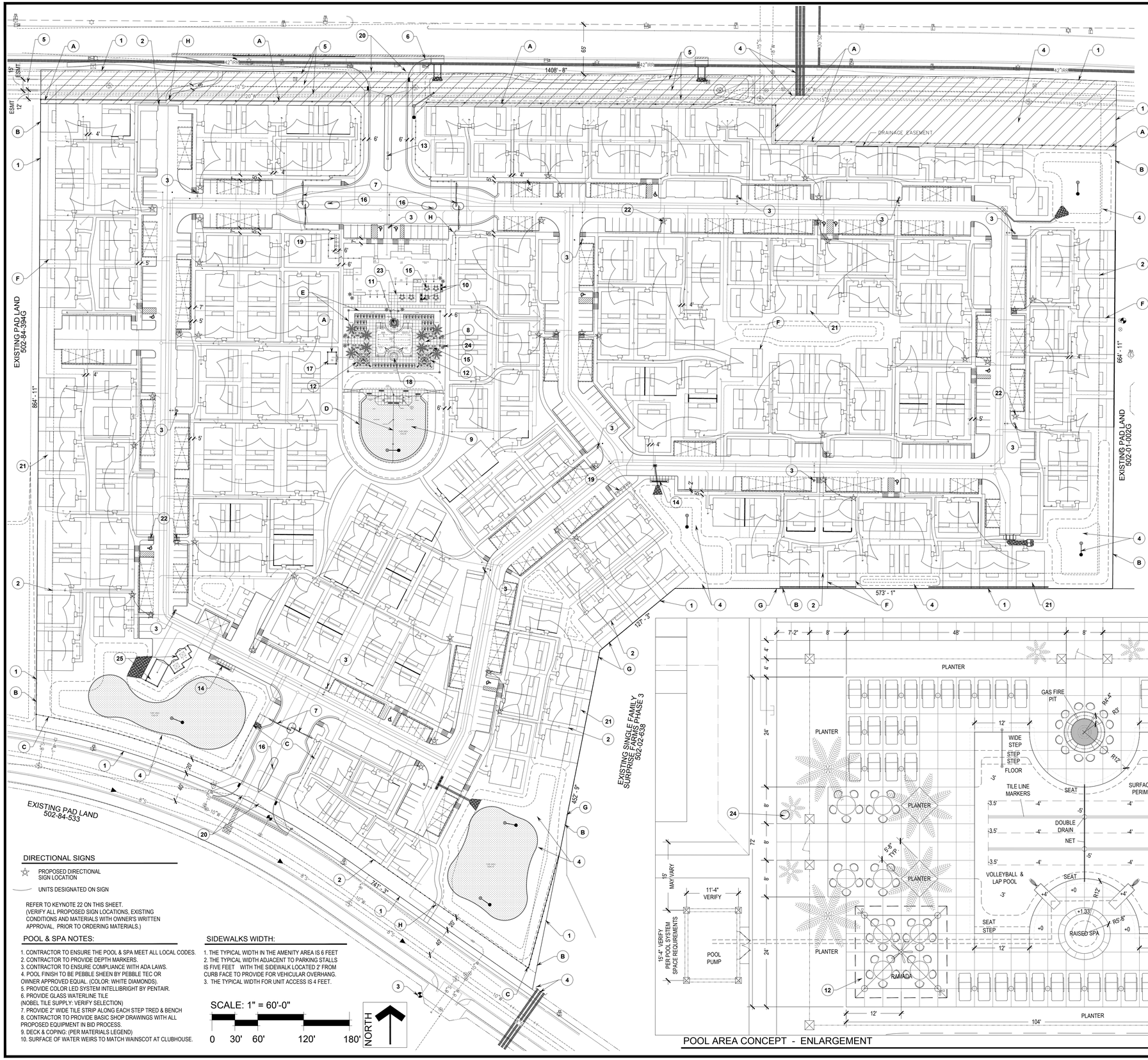
REVISIONS:

#	date	description

SHEET NAME:
LANDSCAPE COVER

SHEET NUMBER:
L100
1 OF 33

SURPRISE TRACKING# FS19-645



WALL PLAN

- (A) THEME WALL ALONG BELL ROAD FRONTAGE (REFER TO DETAIL 2, SHEET L102)
- (B) STANDARD PERIMETER WALL - MAY VARY AT SOME LOCATIONS TO SUIT EXISTING CIVIL CONDITIONS. (REFER TO DETAIL 1, SHEET L102)
- (C) VIEW FENCE (REFER TO DETAIL 3 & 5, SHEET L102)
- (D) DOG PARK FENCE (SIMILAR TO DETAIL 3 & 5, SHEET L102)
- (E) POOL FENCE (REFER TO DETAIL 4 & 5, SHEET L102)
- (F) TYPICAL UNIT FENCE (PER ARCHITECTURAL PLANS)
- (G) VINYL FENCE AT PERIMETER (PER ARCHITECTURAL PLANS)
- (H) PEDESTRIAN ACCESS CONTROL GATE (DETAIL 1, SHEET L102)

NOTE:

REFER TO MATERIALS SCHEDULE ON SHEET L104 FOR ADDITIONAL INFORMATION. INSTALL MATERIALS PER MANUFACTURER'S DETAILS, INSTRUCTIONS AND SPECIFICATIONS.

KEYNOTES

1. PROPERTY LINE
2. BUILDING SETBACK LINE
3. FIRE HYDRANT LOCATION (MAINTAIN 3' CLEAR SPACE)
4. BASIN OR DRAINAGE SYSTEM (PER CIVIL DOCUMENTS)
5. EXISTING EASEMENTS
6. NEW CURBS (PER CIVIL DOCUMENTS)
7. ACCESS CONTROL GATES (BY OTHERS)
8. POOL AREA (DESIGN BUILT BY POOL CONTRACTOR BASED ON MATERIALS AND PLAN DIMENSIONS) - SEE ENLARGEMENT AND NOTES FOR POOL AND SPA ON THIS SHEET.
9. DOG PARK AREA
10. BBQ AND SINK (REFER TO DETAIL 3, SHEET L103)
11. GAS FIRE PIT (REFER TO DETAIL 2, SHEET L103)
12. PRE-FAB RAMADA (REFER TO DETAIL 3, SHEET L104)
13. MAIN DIRECTORY (REFER TO DETAIL 4, SHEET L103)
14. MAILBOX CLUSTER (REFER TO DETAIL 5, SHEET L103)
15. SITE FURNITURE (REFER TO MATERIALS SCHEDULE)
16. GATE CALL BOX (REFER TO DETAIL 6, SHEET L103)
17. POOL PUMP ENCLOSURE (REFER TO DETAIL 2, SHEET L102) TYPE A WALL TYPICAL WITH 6' WIDE DBL. GATE ENTRY.
18. RAISED HEATED SPA 16" A.F.G. - SEE POOL & SPA NOTES (DESIGN BUILT BY POOL CONTRACTOR)
19. BIKE RACKS (REFER TO DETAIL 1, SHEET L103)
20. TRAFFIC SIGHT VISIBILITY TRIANGLE PER SURPRISE EDS DETAILS 4-01 & 4-02.
21. TYPICAL BACK YARD (REFER TO DETAIL 8, SHEET L209) VERIFY UTILITY LOCATIONS. CONTRACTOR TO FIELD ADJUST PLANTING TO SUIT VARIOUS UTILITY AND SUN EXPOSURE CONDITIONS.
22. PROPOSED DIRECTIONAL SIGN LOCATION. MAINTAIN 12" CLEAR MIN. OF ADJACENT CURBS AND SIDEWALKS. SEE LEGEND AT LOWER LEFT OF THIS SHEET. (REFER TO DETAIL 7, SHEET L103)
23. CLUBHOUSE PATIO AREA (REFER TO ENLARGEMENT ON SHEET L103)
24. TRASH RECEPTACLE (REFER TO MATERIALS SCHEDULE ON SHEET L104)
25. TRASH ENCLOSURE (REFER TO DETAIL 1 THRU 5, SHEET L105)

DIRECTIONAL SIGNS

- PROPOSED DIRECTIONAL SIGN LOCATION
- UNITS DESIGNATED ON SIGN

REFER TO KEYNOTE 22 ON THIS SHEET.
(VERIFY ALL PROPOSED SIGN LOCATIONS, EXISTING CONDITIONS AND MATERIALS WITH OWNER'S WRITTEN APPROVAL, PRIOR TO ORDERING MATERIALS.)

POOL & SPA NOTES:

1. CONTRACTOR TO ENSURE THE POOL & SPA MEET ALL LOCAL CODES.
2. CONTRACTOR TO PROVIDE DEPTH MARKERS.
3. CONTRACTOR TO ENSURE COMPLIANCE WITH ADA LAWS.
4. POOL FINISH TO BE PEBBLE SHEEN BY PEBBLE TEC OR OWNER APPROVED EQUAL. (COLOR: WHITE DIAMONDS).
5. PROVIDE COLOR LED SYSTEM INTELLIBRIGHT BY PENTAIR.
6. PROVIDE GLASS WATERLINE TILE (NOBEL TILE SUPPLY: VERIFY SELECTION)
7. PROVIDE 2" WIDE TILE STRIP ALONG EACH STEP TRED & BENCH
8. CONTRACTOR TO PROVIDE BASIC SHOP DRAWINGS WITH ALL PROPOSED EQUIPMENT IN BID PROCESS.
9. DECK & COPING: (PER MATERIALS LEGEND)
10. SURFACE OF WATER WEIRS TO MATCH WAINSCOT AT CLUBHOUSE.

SIDEWALKS WIDTH:

1. THE TYPICAL WIDTH IN THE AMENITY AREA IS 6 FEET
2. THE TYPICAL WIDTH ADJACENT TO PARKING STALLS IS FIVE FEET WITH THE SIDEWALK LOCATED 2' FROM CURB FACE TO PROVIDE FOR VEHICULAR OVERHANG.
3. THE TYPICAL WIDTH FOR UNIT ACCESS IS 4 FEET.

POOL AREA CONCEPT - ENLARGEMENT (SCALE: 1" = 10'-0")

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD

SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR: CD

ISSUED DATE: 1 / 16 / 2019

DRAWN BY: JP REVIEWED BY: MB

ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com before you dig.

REVISIONS:

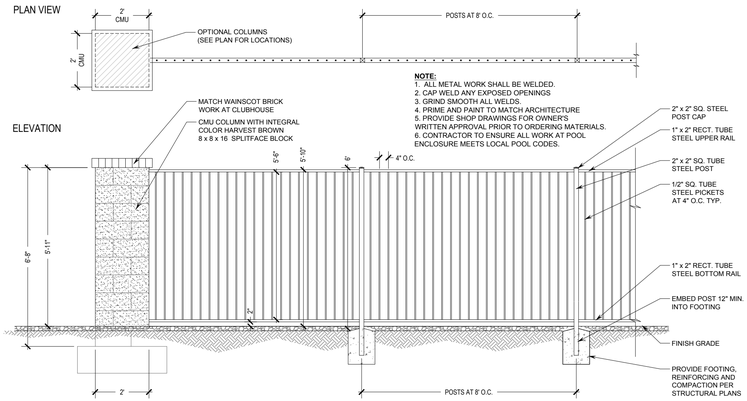
#	date	description

SHEET NAME: LANDSCAPE KEYNOTES

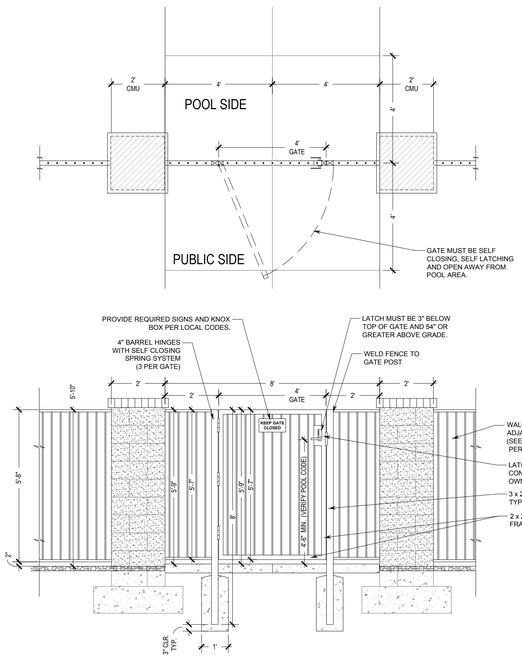
SHEET NUMBER: L101

2 OF 33

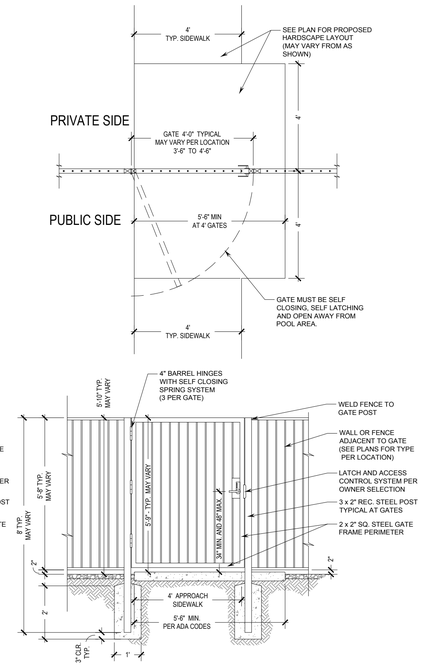
SURPRISE TRACKING# FS19-845



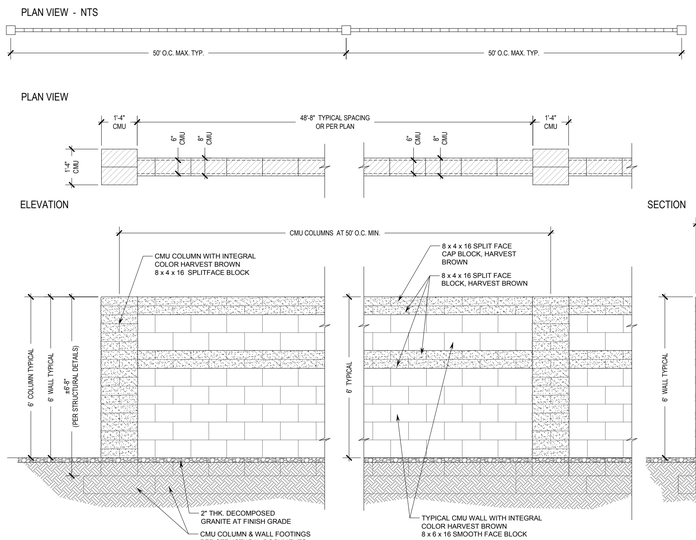
5 POOL AREA FENCE
SCALE: NTS



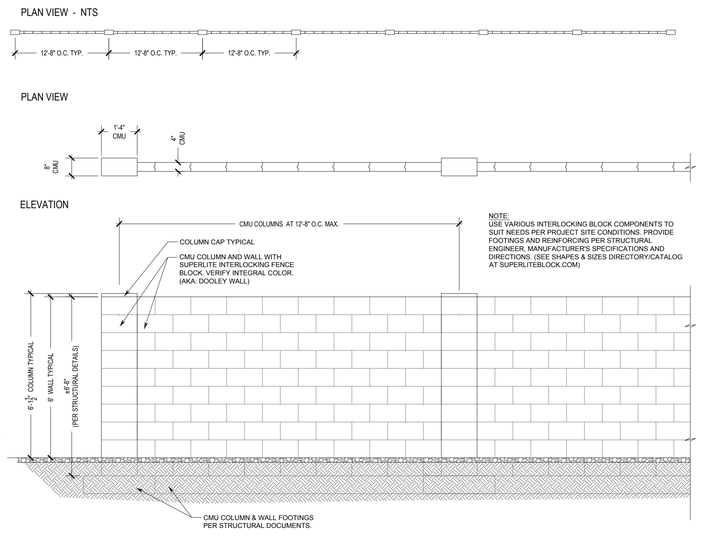
4 POOL AREA GATE
SCALE: NTS



3 ACCESS CONTROL GATE
SCALE: NTS



2 PERIMETER WALL AT FRONTAGE (50' O.C. COLUMNS)
SCALE: NTS



1 STANDARD WALL
SCALE: NTS

the design element
landscape architecture
the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT 31270 MARC F. LANGE 1-16-20 ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD
SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR: CD

ISSUED DATE: 1 / 16 / 2019

DRAWN BY: JP REVIEWED BY: MB

ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com before you dig.

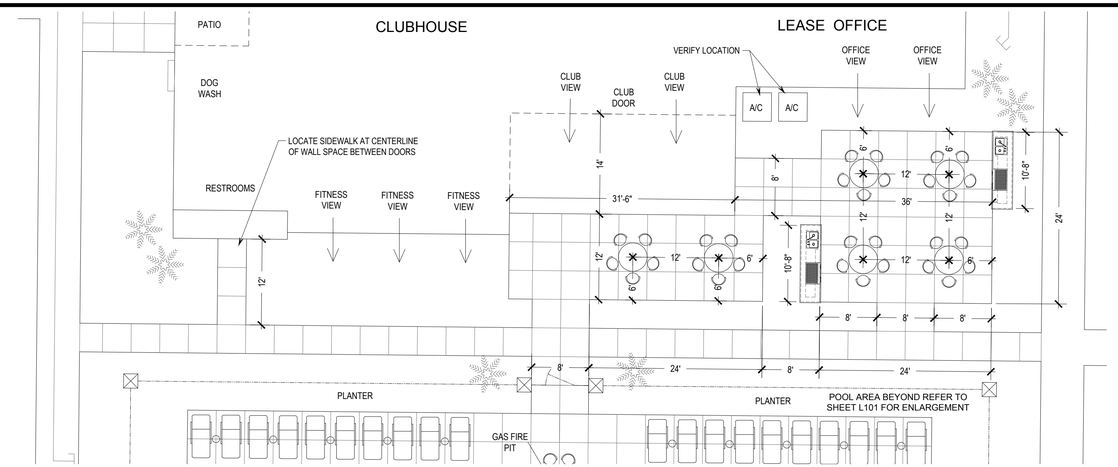
REVISIONS:

#	date	description

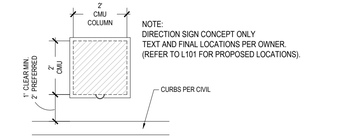
SHEET NAME:
HARDSCAPE DETAILS

SHEET NUMBER:
L102
3 OF 33

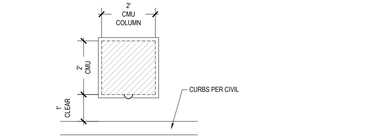
SURPRISE TRACKING# FS19-645



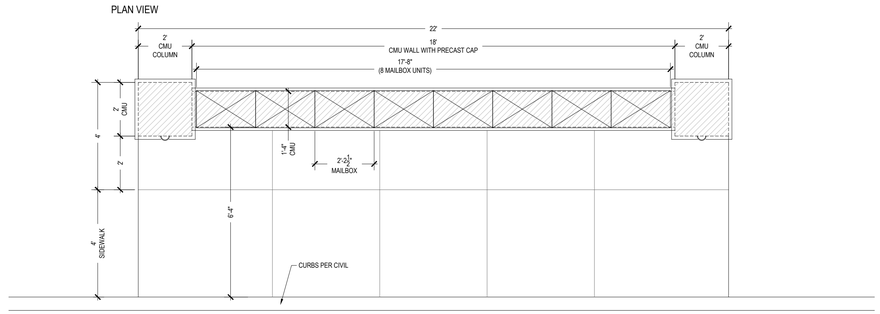
CLUBHOUSE PATIO AREA CONCEPT - ENLARGEMENT (SCALE: 1" = 10'-0")



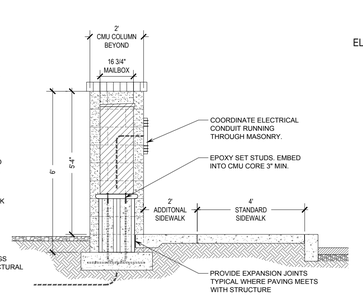
7 DIRECTIONAL SIGN
SCALE: NTS

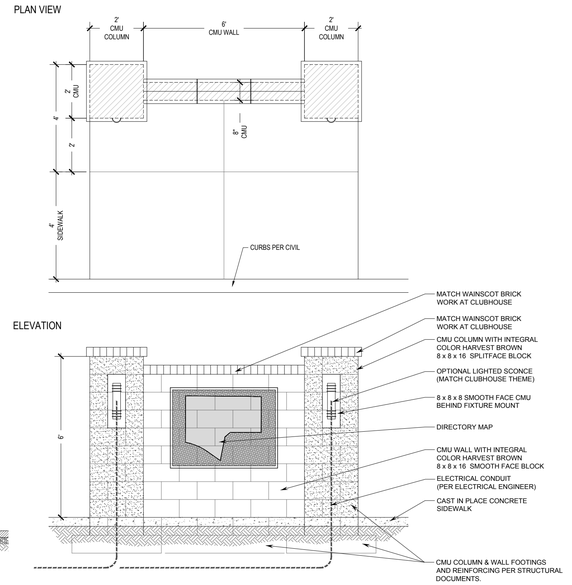


6 CALL BOX AT VEHICULAR GATES
SCALE: NTS

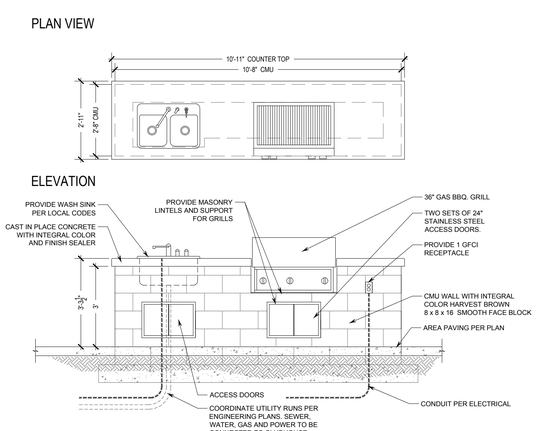


5 COMMUNITY MAILBOX (8 x 16 BOXES)
SCALE: NTS

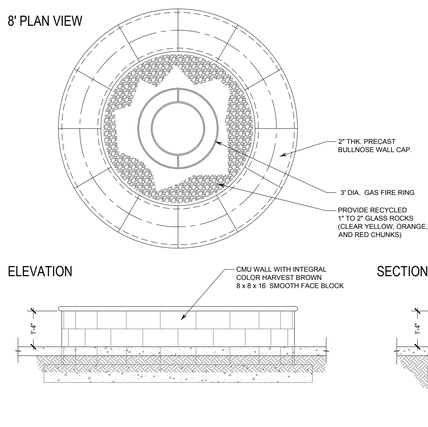




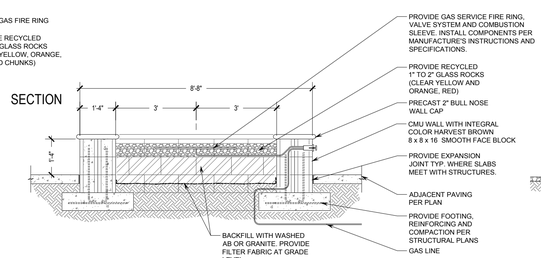
4 MAJOR DIRECTORY
SCALE: NTS

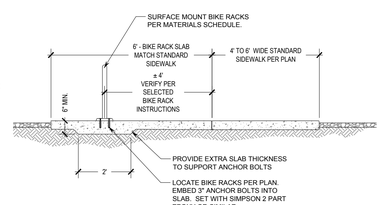


3 POOL AREA B.B.Q.
SCALE: NTS



2 FIRE PIT NEAR POOL AREA
SCALE: NTS





1 BIKE RACK SLAB
SCALE: NTS

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
STATE OF ARIZONA
31270
MARC F. LANGE
1-16-20
USA
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD

SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR: CD

ISSUED DATE: 1 / 16 / 2019

DRAWN BY: JP REVIEWED BY: MB

ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com before you dig.

REVISIONS:

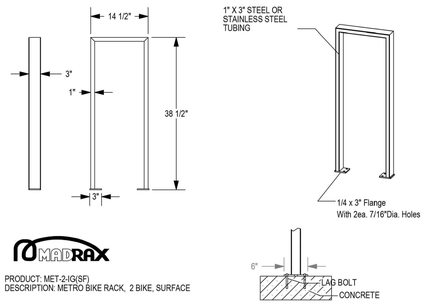
#	date	description

SHEET NAME:
HARDSCAPE DETAILS

SHEET NUMBER:
L103
4 OF 33

SURPRISE TRACKING# FS19-645

NOTES:
1. INSTALL BIKE RACKS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
2. CONSULTANT TO SELECT COLOR/FINISH, SEE MANUFACTURER'S SPECIFICATIONS.
3. SEE SITE PLAN FOR LOCATION OR CONSULT OWNER.



MADRAX

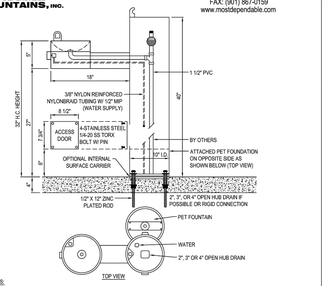
PRODUCT: MIET-2-IG(SF)
DESCRIPTION: METRO BIKE RACK, 2 BIKE, SURFACE

6 BIKE RACKS - SURFACE MOUNT
SCALE: NTS



5 POOL FURNITURE
SCALE: NTS

MOST DEPENDABLE FOUNTAINS, INC.
5705 COMMANDER DR. P.O. BOX 587
ARLINGTON, TN 38002-0587
TOLL FREE: 1-800-552-6331
PHONE: (901) 867-0339
FAX: (901) 867-0159
www.mostdependable.com



NOTES:
1. MEETS ADA REGULATIONS.
2. OPTIONAL STAINLESS STEEL SURFACE CARRIER RECOMMENDED.
3. SHOWN WITH OPTIONAL 10 STAINLESS STEEL SURFACE CARRIER, ATTACHED PET FOUNTAIN.
4. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
5. DO NOT SCALE DRAWING.
6. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
7. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
8. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 3354-1.51.

MODEL 440 SM
SHOWN W/ OPTIONAL SS SURFACE CARRIER, PF

3354-1.51 REVISION DATE: 05/01/2018
PROTECTED BY COPYRIGHT ©2016 CADDETAILS.COM LTD. CADdetails.com

NOTE: DRINKING FOUNTAINS SHALL COMPLY WITH ANSI A117.602.4, SPOUT OUTLET HEIGHT. OUTLETS OF BARRIER FREE WHEELCHAIR ACCESSIBLE DRINKING FOUNTAIN SHALL BE 32 INCHES MAXIMUM ABOVE THE FLOOR/FINISHED SURFACE.

4 DRINKING FOUNTAIN WITH PET BOWL
SCALE: NTS

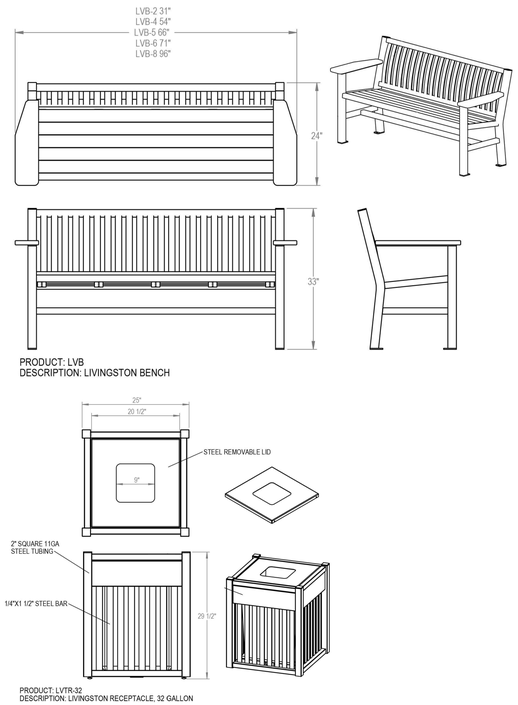
ALUMINUM DOGIPOT® PET STATION (#1003-L)

The Aluminum DOGIPOT® Pet Station sets the standard with heavy-duty commercial durability for high-traffic, dog-friendly areas.



- Aluminum DOGIPOT® Pet Sign (Choice of On or Off-Leash)
- Aluminum DOGIPOT® Junior Bag Dispenser with two (2) rolls of 200 count DOGIPOT® SMART Litter Pick Up Bags™
- 10-Gallon Steel Trash Receptacle with Stainless Steel Lid (can upgrade to include the all Aluminum Trash Receptacle with Lid Item #1206A-L)
- Box of 50 count DOGIPOT® SMART Liner Trash Bags™
- 2" x 2" x 4'-8' square galvanized steel telescopic mounting post with installation hardware
- Installation instructions and mounting hardware included

4 PET WASTE STATION
SCALE: NTS

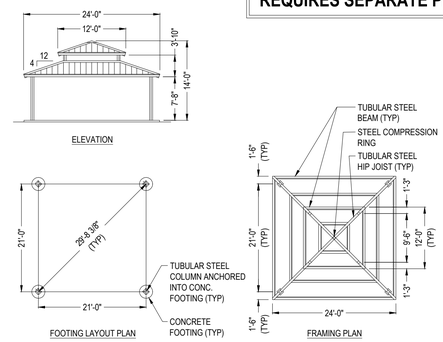


2 SITE FURNITURE
SCALE: NTS

COVERWORX
Recreational Architecture

COVERWORX RECREATIONAL
ARCHITECTURE
11800 EAST NINE MILE ROAD
WARREN, MI 48089
TOLL FREE: 1-800-657-6118
PHONE: (586) 486-1088
FAX: (586) 754-9130
www.coverworx.com

REQUIRES SEPARATE PERMIT



☑ SELECT DESIRED COLOR:

☐ WHITE	☐ ROMAN BLUE	☐ CHARCOAL	☐ TERRATONE
☐ CLAY	☐ SURREY BEIGE	☐ TUDOR BROWN	☐ EVERGREEN
☐ IVORY	☐ ASH GREY	☐ MATTE BLACK	☐ BRANDYWINE
☐ PATRICIAN BRONZE	☐ LIGHT STONE	☐ AUTUMN RED	☐ HARTFORD GREEN

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. ALL DIMENSIONS ARE CONSIDERED TRUE AND REFLECT MANUFACTURER'S SPECIFICATIONS.
3. DO NOT SCALE DRAWING.
4. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 4168-61.

SQUARE STRUCTURES
MODEL: SQVT-24-SW - STEELWORX SQUARE SHELTER WITH VENTED TOP - 24'

4168-061 REVISION DATE 08/12/2015
PROTECTED BY COPYRIGHT ©2015 CADDETAILS.COM LTD. CADdetails.com

3 RAMADA (FOR REFERENCE ONLY. REQUIRES SEPARATE PERMIT).
SCALE: NTS

FURNISHING MATERIALS SCHEDULE

ITEM	MANUFACTURER	PART NO/MODEL	COLOR	REMARKS	QTY.	DETAIL
Bench	Thomas Steele 800-448-7931	Livingston Benches LVB-6-RPC-SF	Cedar (RPC) Powder Coat Forest Green	Surface Mount		
Litter Receptacle	Thomas Steele 800-448-7931	Livingston Liter Receptacle LVTR-32-RPC-SF Covered Square Lid, LID-CSQ	Cedar (RPC) Powder Coat Forest Green	Surface Mount		
Bicyle Rack	MADRAX 800-448-7931	Metro MET-2-SF	Powder Coat Forest Green	Surface Mount		
Pet Drinking Fountain	Most Dependable Fountains 1-800-552-6331	#440 SM	Green	Mount - Surface		
Pet Waste Station	Dog-On-It 877-348-3647	DP-1003L	Green	Mount - In-ground		
Pool Chair	Pool Furniture Supply Royal Patio-Windward	Sienna Dining Arm Chair SKU: RPW7150	Frame: Greco Fabric: Aqua Marine	-		
Dining Table	Pool Furniture Supply Royal Patio Windward	Round 42" SKU: RPKD4228NU	Top: Greco Frame: Greco	**WITH** Umbrella Hole		
Chaise Lounge	Pool Furniture Supply Royal Paio Windward	Sienna Sling Chaise Lounge SKU: RPW7110A	Frame: Greco Fabric: Porcelain	-		
Adirondack Chair (at fire pit)	Pool Furniture Supply Royal Patio Windward	Sling Adirondack SKU: RPQ4444SL	Frame: Greco Fabric: Snappy	-		
Table / Pool Umbrella	Pool Furniture Supply Frankford	7.5 foot Octangonal Fiberglass SKU: FF845FM	Frame: Bronze Fabric: Linen	-		

HARDSCAPE MATERIALS SCHEDULE

ITEM	DISCRIPTION	COLOR / PATTERN	COMMENTS
Sidewalk - Standard Finish	Broom Finish	Natural Gray	Provide Mock Up 2' x 2'
Concrete Pavers at Entry	Artistic Paver Mfg. Roadlock, 8x8	Grand Canyon / Diamond Straignt	Provide Mock Up 2' x 2' Thickness and setting bed to be vehicular rated
Turf Header	Cast in Place Concrete	Natural Gray	
Pool Deck	Artistic Paver Mfg. Desertlock, 12x12	Cool White / Diamond Straight	Provide Mock Up 2' x 2'
Pool Coping	Artistic Paver Mfg. Desertlock, 4x12	Cool White / Straight	Provide Mock Up 2' x 2'

1 MATERIALS SCHEDULE
SCALE: NTS

the design element
landscape architecture
the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL
175TH AVE. & BELL ROAD
SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR: CD
ISSUED DATE: 1 / 16 / 2019
DRAWN BY: JP REVIEWED BY: MB

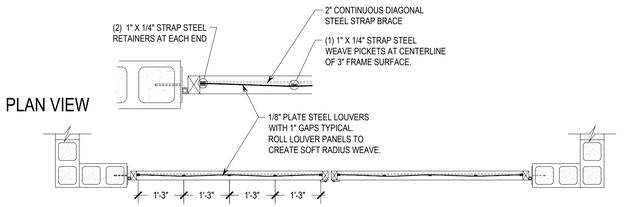
ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com before you dig.

REVISIONS:

#	date	description

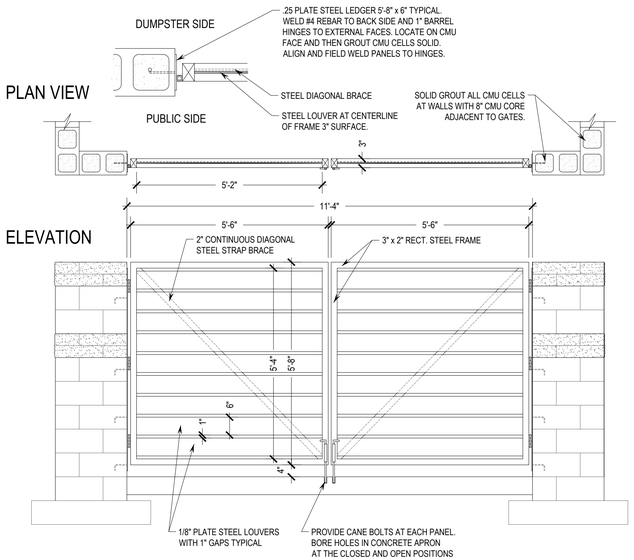
SHEET NAME:
HARDSCAPE DETAILS
SHEET NUMBER:
L104
5 OF 33

SURPRISE TRACKING# FS19-645



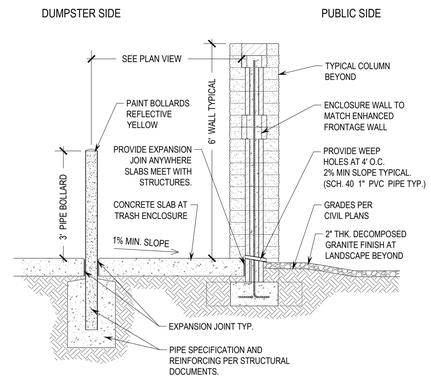
5 GATES - OPTIONAL UPGRADE DESIGN

SCALE: 1/2" = 1'-0"



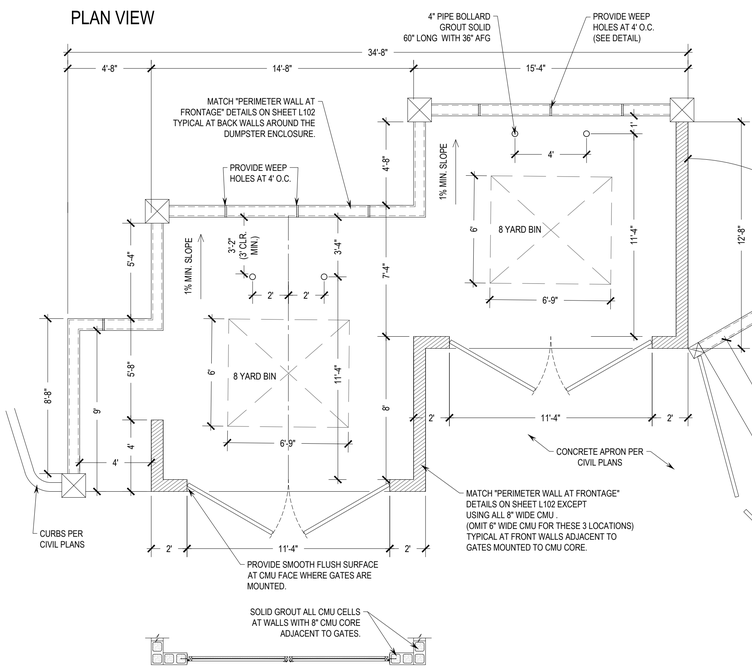
4 TRASH ENCLOSURE GATES

SCALE: 1/2" = 1'-0"



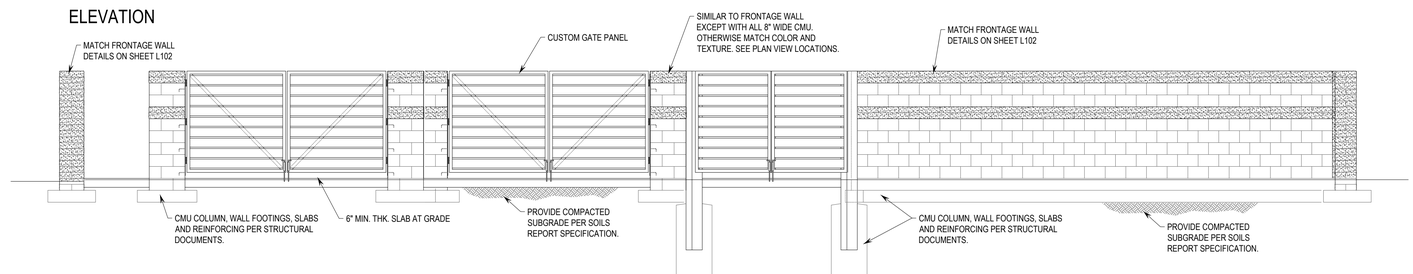
3 PIPE BOLLARD, WEEP HOLES AND EXPANSION JOINTS

SCALE: 1/2" = 1'-0"



1 TRASH & COMPACTOR ENCLOSURES

SCALE: 1/4" = 1'-0"



PLAN VIEW

COMPACTOR SIDE

8 x 8 SQ. STEEL POST (VERIFY SIZE AND FOOTING PER STRUCTURAL)

STEEL DIAGONAL BRACE

STEEL LOUVER AT CENTERLINE OF FRAME 3" SURFACE.

PUBLIC SIDE

ELEVATION

8'-2"
7'-10"
8'-2"
7'-10"
5'-4"
5'-8"
6"
1"
4"

LOCKABLE SLIDE BOLT LATCH SYSTEM

PROVIDE CANE BOLTS AT EACH PANEL. BORE HOLES IN CONCRETE APRON AT THE CLOSED AND OPEN POSITIONS

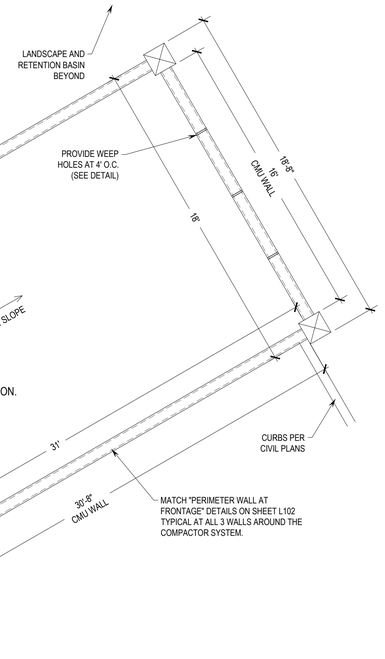
WALL FOOTINGS, POST FOOTING, SLABS AND REINFORCING PER STRUCTURAL DOCUMENTS.

2 TRASH COMPACTOR ENCLOSURE GATE

SCALE: 1/2" = 1'-0"

NOTE:

1. ALL METAL WORK SHALL BE WELDED.
2. CAP WELD ANY EXPOSED OPENINGS
3. GRIND SMOOTH ALL WELDS.
4. PRIME AND PAINT TO MATCH ARCHITECTURE
5. PROVIDE SHOP DRAWINGS FOR OWNER'S WRITTEN APPROVAL PRIOR TO ORDERING MATERIALS.
6. INSTALL ALL HARDWARE DEVICES PER MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS.



COMPACTOR NOTE:
VERIFY COMPACTOR SPACE REQUIREMENTS PRIOR TO CONSTRUCTION. COORDINATE POWER SUPPLY PER MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS.

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD

SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR: CD

ISSUED DATE: 1 / 16 / 2019

DRAWN BY: JP REVIEWED BY: MB

ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com before you dig.

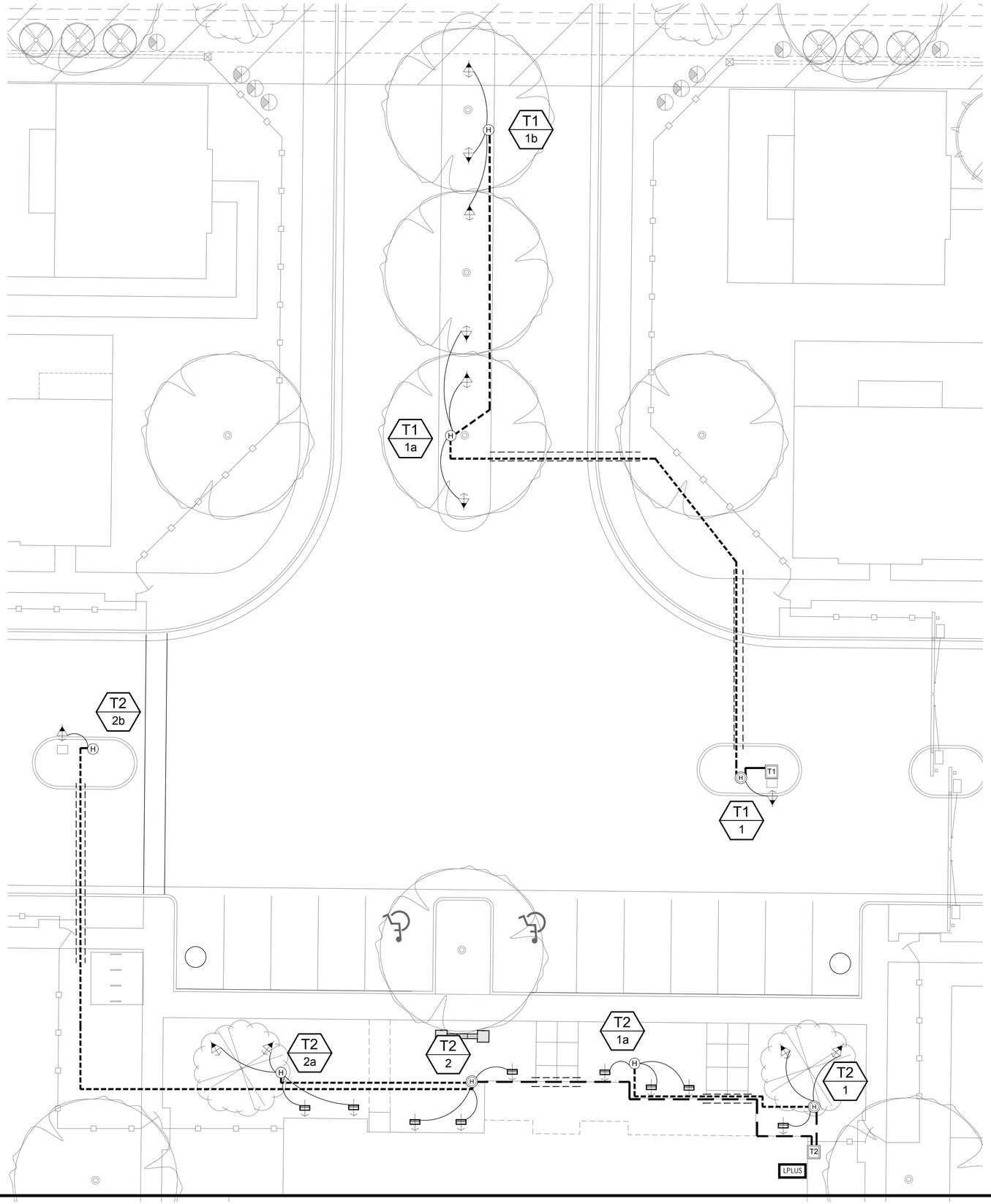
REVISIONS:

#	date	description

SHEET NAME:
HARDSCAPE DETAILS

SHEET NUMBER:
L105
6 OF 33

SURPRISE TRACKING# FS19-845



LIGHTING LEGEND

SYMBOL	DESCRIPTION	QTY
	UNIQUE, PULSAR = PULS-12-L427 *CAST BRASS, GLARE CONTROL LENS KIT, PVC MOUNTING STAKE, 25' WIRE LEAD, FLEX SERIES 4 WATT LED*	12
	UNIQUE, STARBURST = STAR-12-L527 *CAST BRASS, GLARE CONTROL LENS KIT, PVC MOUNTING STAKE, 25' WIRE LEAD, FLEX SERIES LED 5 WATT LED*	9
TRANSFORMERS & HUBS		
T#	UNIQUE, INTELLI-MATIC TRANSFORMER 150SSL-LED *SINGLE CORE, MULTI TAP, 12 VOLT TRANSFORMER, STAINLESS STEEL HOUSING WITH LIGHT LOGIC CLOCK (LPCU-A)*	2
LPLUS	UNIQUE LIGHT LOGIC PROGRAMMING MODULE (LPLUS)	1
H	UNIQUE, INTELLI-HUB	3
H	UNIQUE, SATELLITE HUB	5
T# / #	TRANSFORMER NO. HUB NO.	
	HOME RUN WIRE *FROM TRANSFORMER TO INTELLI-HUB. SEE TRANSFORMER LOAD CALCS FOR SIZE AND QUANTITY.*	
	HOME RUN WIRE *FROM INTELLI-HUB TO S-HUB. SEE TRANSFORMER LOAD CALCS FOR SIZE AND QUANTITY.*	
	LEAD WIRE *(SEE TRANSFORMER LOAD CALCS FOR SIZE AND QTY)*	

LIGHTING GENERAL NOTES:

1. This plan is intended for landscape lighting purposes only. All lighting fixtures and transformers shall be installed per manufacturer's specifications. It is the contractor's responsibility to maintain compliance with the National Electric Code (current edition) and all local building safety codes and ordinances.
2. Fixtures are shown in approximate location. The contractor shall field verify the actual placement of each fixture upon completion of landscape installation.
3. All pathlights to be installed at a minimum of 18" from any sidewalk edge or structure.
4. All hubs shall be labeled and installed primarily in planter areas 2" above finished grade; or in a readily accessible area that does not obstruct pathways, drainage swales or common areas.
5. All "Home Run" wire shall be labeled and installed at a minimum depth of 6" or per local electrical codes. All fixture lead wires shall be installed at a minimum depth of 6" or per local electrical codes.
6. In order to minimize future disturbance, all wire runs shall be installed parallel and adjacent to hard surfaces such as sidewalks, driveways and walls.
7. The installing contractor shall be responsible for installing sleeves under the hardscape surfaces, using a minimum 1-inch dedicated PVC pipe.
8. Contractor shall not cut the wire leads from the fixtures. Coil and bury excess wire at the fixture and leave a minimum of 2' coiled in each hub.
9. All underground splices shall be installed in approved in-ground hubs with water-tight connections.
10. All exterior 120-Volt electrical outlets shall be GFI protected as per National Electrical Code.
11. All transformers plugged into an outdoor receptacle shall have an "in use" cover. Contractor shall install weatherproof covers at all outlets.
12. All plug-in transformers shall have a "Drip Loop" in the power cord.
13. All exposed conduits shall be painted to match surroundings.
14. All exposed wires shall be UV rated, protected and painted.
15. The installing contractor shall be responsible for adjusting the fixtures at night in order to help reduce glare and to archive optimum lighting effect intended by the lighting design.
16. The Glare Control kit shall consist of a rotational shroud, frosted, linear and spread lens and a hex louver to minimize glare up to a 45 degree angle.
17. A frosted lens shall be used in any down light that is placed under 12' in height.

FOR ANY QUESTIONS, PLEASE CONTACT UNIQUE LIGHTING SYSTEMS, ANTONY VERALDI 480-270-2020

NORTH

SCALE: 1" = 10'-0"

0 5' 10' 20' 30'

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
STATE OF ARIZONA
31270
MARC F. LANGE
1-16-20
U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD

SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR:
CD

ISSUED DATE:
1 / 16 / 2019

DRAWN BY: JP REVIEWED BY: MB

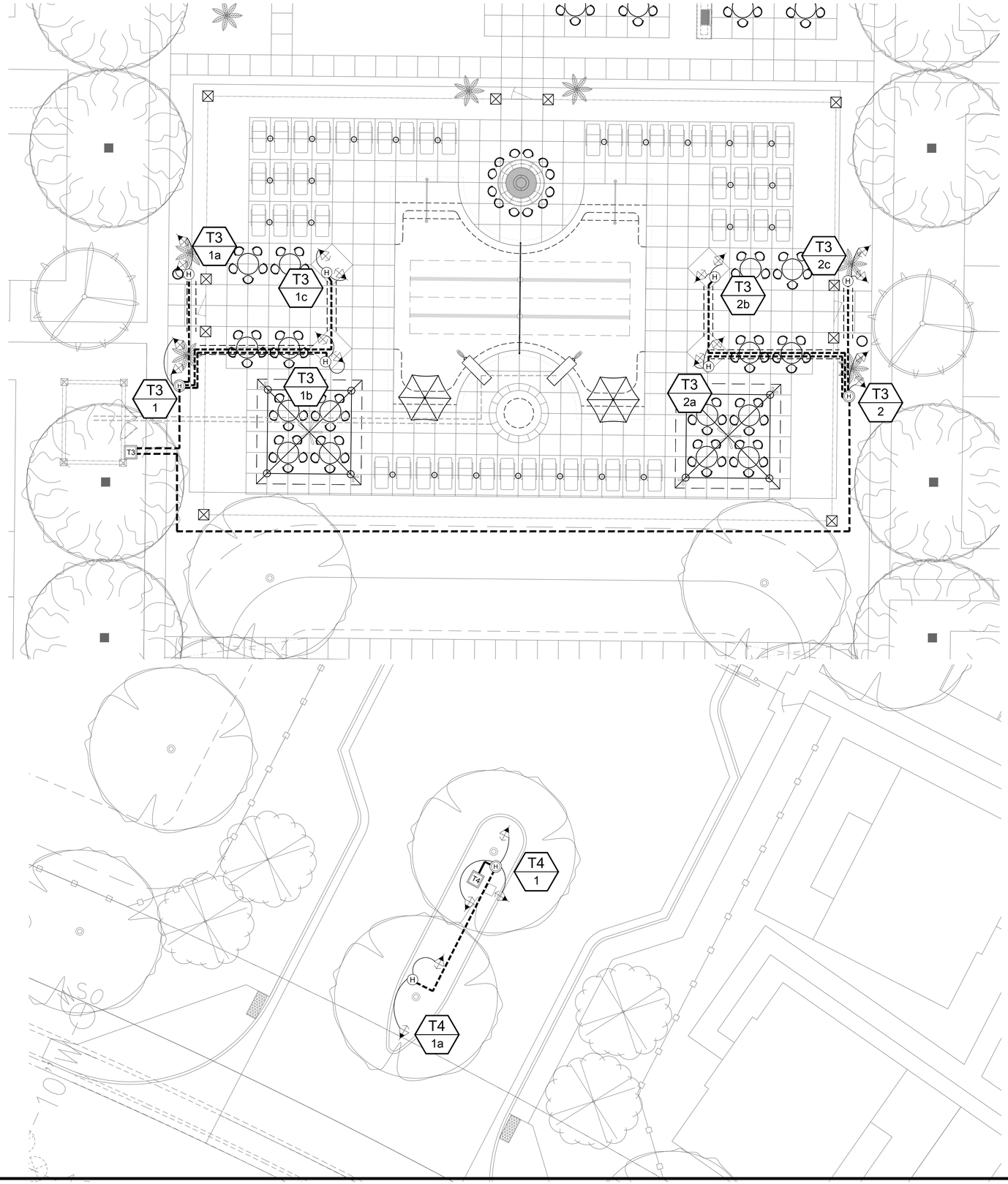
REVISIONS:

#	date	description

SHEET NAME:
LANDSCAPE LIGHTING

SHEET NUMBER:
L106
7 OF 33

SURPRISE TRACKING# FS19-645



LIGHTING LEGEND

SYMBOL	DESCRIPTION	QTY
	UNIQUE, PULSAR = PULS-12-L427 *CAST BRASS, GLARE CONTROL LENS KIT, PVC MOUNTING STAKE, 25' WIRE LEAD, FLEX SERIES 4 WATT LED*	12
	UNIQUE, STARBURST = STAR-12-L527 *CAST BRASS, GLARE CONTROL LENS KIT, PVC MOUNTING STAKE, 25' WIRE LEAD, FLEX SERIES LED 5 WATT LED*	9
TRANSFORMERS & HUBS		
T#	UNIQUE, INTELLI-MATIC TRANSFORMER 150SSL-LED *SINGLE CORE, MULTI TAP, 12 VOLT TRANSFORMER, STAINLESS STEEL HOUSING WITH LIGHT LOGIC CLOCK (LPCU-A)*	2
LPLUS	UNIQUE LIGHT LOGIC PROGRAMMING MODULE (LPLUS)	1
H	UNIQUE, INTELLI-HUB	3
H	UNIQUE, SATELLITE HUB	5
T# / #	TRANSFORMER NO. HUB NO.	
	HOME RUN WIRE *FROM TRANSFORMER TO INTELLI-HUB. SEE TRANSFORMER LOAD CALCS FOR SIZE AND QUANTITY.*	
	HOME RUN WIRE *FROM INTELLI-HUB TO S-HUB. SEE TRANSFORMER LOAD CALCS FOR SIZE AND QUANTITY.*	
	LEAD WIRE *(SEE TRANSFORMER LOAD CALCS FOR SIZE AND QTY)*	

LIGHTING GENERAL NOTES:

1. This plan is intended for landscape lighting purposes only. All lighting fixtures and transformers shall be installed per manufacturer's specifications. It is the contractor's responsibility to maintain compliance with the National Electric Code (current edition) and all local building safety codes and ordinances.
2. Fixtures are shown in approximate location. The contractor shall field verify the actual placement of each fixture upon completion of landscape installation.
3. All pathlights to be installed at a minimum of 18" from any sidewalk edge or structure.
4. All hubs shall be labeled and installed primarily in planter areas 2" above finished grade; or in a readily accessible area that does not obstruct pathways, drainage swales or common areas.
5. All "Home Run" wire shall be labeled and installed at a minimum depth of 6" or per local electrical codes. All fixture lead wires shall be installed at a minimum depth of 6" or per local electrical codes.
6. In order to minimize future disturbance, all wire runs shall be installed parallel and adjacent to hard surfaces such as sidewalks, driveways and walls.
7. The installing contractor shall be responsible for installing sleeves under the hardscape surfaces, using a minimum 1-inch dedicated PVC pipe.
8. Contractor shall not cut the wire leads from the fixtures. Coil and bury excess wire at the fixture and leave a minimum of 2' coiled in each hub.
9. All underground splices shall be installed in approved in-ground hubs with water-tight connections.
10. All exterior 120-Volt electrical outlets shall be GFI protected as per National Electrical Code.
11. All transformers plugged into an outdoor receptacle shall have an "in use" cover. Contractor shall install weatherproof covers at all outlets.
12. All plug-in transformers shall have a "Drip Loop" in the power cord.
13. All exposed conduits shall be painted to match surroundings.
14. All exposed wires shall be UV rated, protected and painted.
15. The installing contractor shall be responsible for adjusting the fixtures at night in order to help reduce glare and to archive optimum lighting effect intended by the lighting design.
16. The Glare Control kit shall consist of a rotational shroud, frosted, linear and spread lens and a hex louver to minimize glare up to a 45 degree angle.
17. A frosted lens shall be used in any down light that is placed under 12' in height.

FOR ANY QUESTIONS, PLEASE CONTACT UNIQUE LIGHTING SYSTEMS, ANTONY VERALDI 480-270-2020

NORTH

SCALE: 1" = 10'-0"

0 5' 10' 20' 30'

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
DATE OF STATE
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD

SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR:
CD

ISSUED DATE:
1 / 16 / 2019

DRAWN BY: JP REVIEWED BY: MB

REVISIONS:

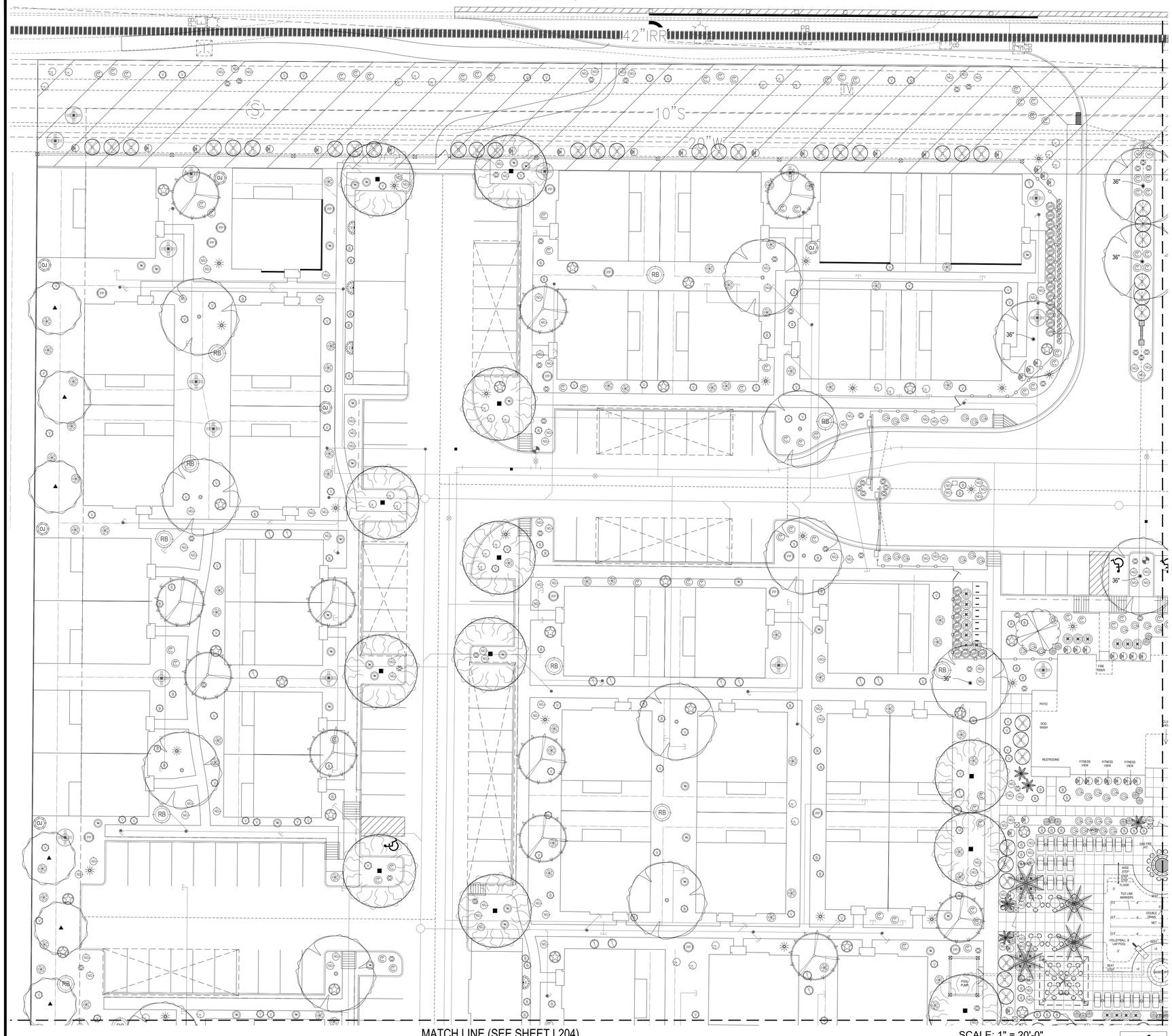
#	date	description

SHEET NAME:
LANDSCAPE LIGHTING

SHEET NUMBER:
L107
8 OF 33

SURPRISE TRACKING# FS19-645

BELL ROAD



SCALE: 1" = 20'-0"

0 10' 20' 40' 60'

NORTH

PLANT MATERIALS LEGEND

SYM.	PLANT NAME	CALIPER (H' x W')	QTY	REMARKS
TREES				
	Caesalpinia cacalaco 'Cascalote 'Smoothie'	24" BOX	66	
	Chilopsis linearis Desert Willow	24" BOX	30	
	Phoenix dactylifera Date Palm	16' TRUNK HT.	8	DIAMOND CUT NO AIR ROOT A.F.G.
	Phoenix roebelenii Pygmy Date Palm	15 GAL.	10	
	Pistacia species Red Push	24" BOX	75	DOUBLE STAKE
	Prunus cerasifera Purple-leaf Plum	24" BOX	10	-
	Ulmus parvifolia Allee Evergreen Elm	24" BOX 36" BOX	118 22	DOUBLE STAKE
SHRUBS				
RB	Caesalpinia pulcherrima Red Bird of Paradise	5 GAL.	73	-
	Calliandra x fairy duster Sierra Star	5 GAL.	106	-
	Carissa macrocarpa Natal Plum	5 GAL.	58	-
	Cordia Parvifolia Little Leaf Cordia	5 GAL.	73	-
DD	Dietes bicolor Fortnight Lily	5 GAL.	46	-
E	Eremophila hygrophana Blue Emu Bush	5 GAL.	319	-
V	Eremophylla maculata Valentine Bush	5 GAL.	458	-
	Leucophyllum candidum Thunder Cloud	5 GAL.	280	-
TX	Leucophyllum frutescens compacta Compact Texas Ranger	5 GAL.	276	-
PP	Nerium oleander Dwarf Petite Pink	5 GAL.	128	-
	Juniperus 'Sea Green' Juniper	5 GAL.	106	-
MM	Muhlenbergia capillaris Regal Mist	5 GAL.	170	-
	Raphiolepis indica 'Pinkie' Indian Hawthorne	5 GAL.	170	-
	Ruellia peninsularis Desert Ruellia	5 GAL.	101	-
	Ruellia brittoniana 'Katie' Dwarf Ruellia - Blue	5 GAL.	58	-
OJ	Tecoma X. Orange Jubilee	5 GAL.	87	-
	Xylosma congestum Shiny Xylosma	5 GAL.	212	-
ACCENTS				
	Dasylirion wheeleri Desert Spoon	5 GAL.	111	-
	Hesperaloe parviflora Red Yucca 'breaklights'	5 GAL.	190	-
GROUNDCOVER				
C	Convolvulus cneorum Bush Morning Glory	1 GAL.	361	-
MG	Lantana X New Gold Lantana	1 GAL.	553	-
	Rosmarinus officinalis 'Prostratus' Dwarf Rosemary	1 GAL.	175	-
VINE				
	Bougainvillea 'San Diego Red' Bright Red Bougainvillea	5 GAL.	36	-

MISC.

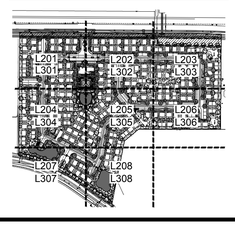
CAST IN PLACE 6" CONCRETE HEADER 1175 LF

2" THK. DECOMPOSED GRANITE ALL LANDSCAPE AREAS TYPICAL (VERIFY SELECTION: 3/4" SCREENED - EXPRESS CARMEL)

TURF 29,600 SF

NOTE:
CONTRACTOR TO TRIM OVERHANG TREES ABOVE STREET TO A MINIMUM 15' VERTICAL CLEARANCE TO LOWEST BRANCHES.

INDEX



LANDSCAPE PLANS

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
STATE OF ARIZONA
31270
MARC F. LANGE
1-16-20
U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL
175TH AVE. & BELL ROAD
SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR:
CD

ISSUED DATE:
1 / 16 / 2019

DRAWN BY: JP REVIEWED BY: MB

ARIZONA811
Know what's below.
Call 811 or click Arizona811.com before you dig.

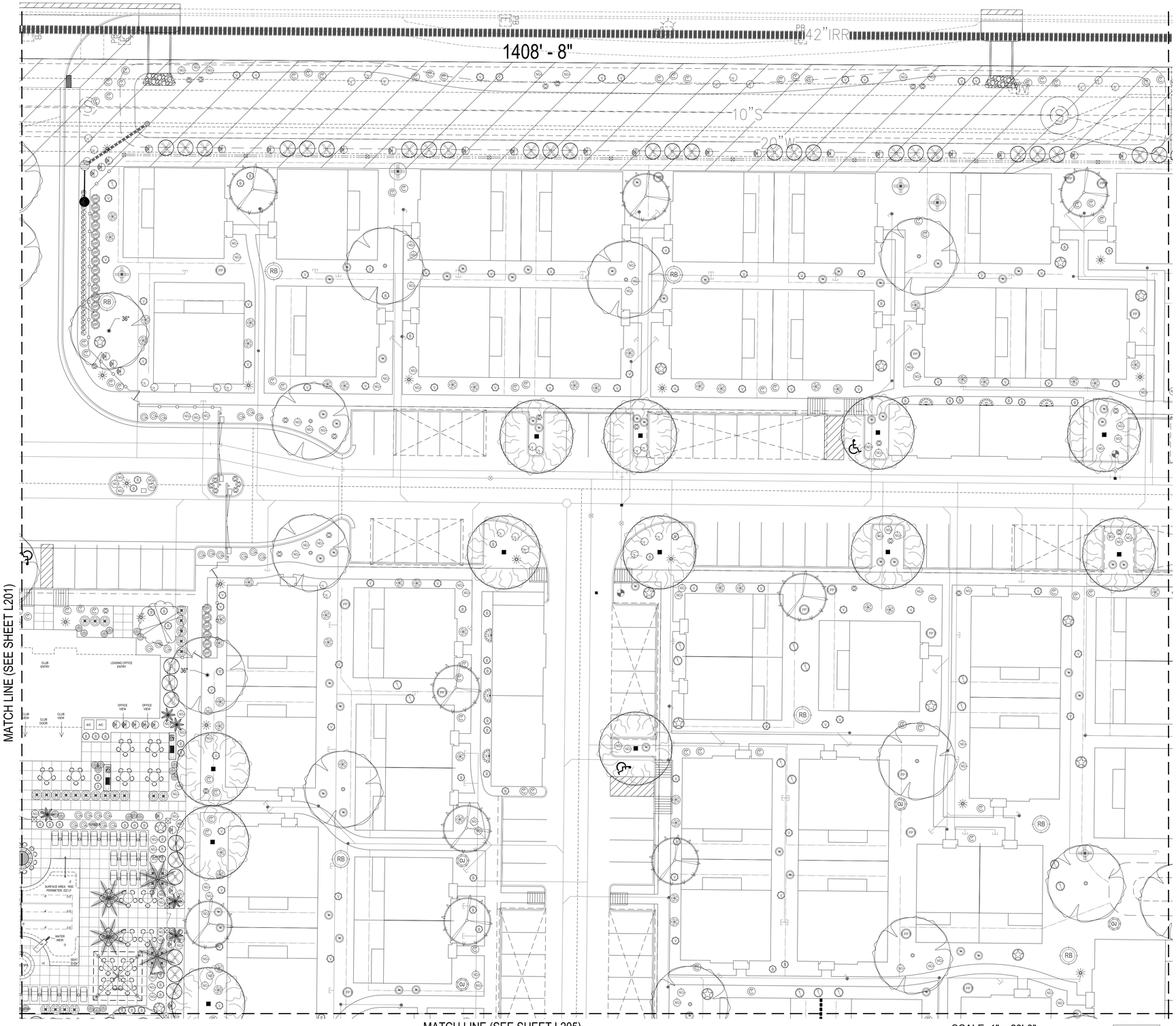
REVISIONS:

#	date	description

SHEET NAME:
PLANTING PLAN

SHEET NUMBER:
L201
9 OF 33

SURPRISE TRACKING# FS19-645



PLANT MATERIALS LEGEND

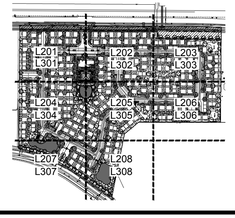
SYM.	PLANT NAME	CALIPER (H' x W')	QTY	REMARKS
TREES				
	Caesalpinia cacalaco 'Cascalote 'Smoothie'	24" BOX	66	
	Chilopsis linearis Desert Willow	24" BOX	30	
	Phoenix dactylifera Date Palm	16' TRUNK HT.	8	DIAMOND CUT NO AIR ROOT A.F.G.
	Phoenix roebelenii Pygmy Date Palm	15 GAL.	10	
	Pistacia species Red Push	24" BOX	75	DOUBLE STAKE
	Prunus cerasifera Purple-leaf Plum	24" BOX	10	-
	Ulmus parvifolia Allee Evergreen Elm	24" BOX 36" BOX	118 22	DOUBLE STAKE
SHRUBS				
RB	Caesalpinia pulcherrima Red Bird of Paradise	5 GAL.	73	-
	Calliandra x fairy duster Sierra Star	5 GAL.	106	-
	Carissa macrocarpa Natal Plum	5 GAL.	58	-
	Cordia Parvifolia Little Leaf Cordia	5 GAL.	73	-
DI	Dietes bicolor Fortnight Lily	5 GAL.	46	-
E	Eremophila hygrophana Blue Emu Bush	5 GAL.	319	-
V	Eremophylla maculata Valentine Bush	5 GAL.	458	-
LC	Leucophyllum candidum Thunder Cloud	5 GAL.	280	-
LX	Leucophyllum frutescens compacta Compact Texas Ranger	5 GAL.	276	-
PP	Nerium oleander Dwarf Petite Pink	5 GAL.	128	-
JC	Junuperus 'Sea Green' Juniper	5 GAL.	106	-
MM	Muhlenbergia capillaris Regal Mist	5 GAL.	170	-
RI	Raphiolepis indica 'Pinkie' Indian Hawthorne	5 GAL.	170	-
R	Ruellia peninsularis Desert Ruellia	5 GAL.	101	-
RB	Ruellia brittoniana 'Katie' Dwarf Ruellia - Blue	5 GAL.	58	-
OJ	Tecoma X. Orange Jubilee	5 GAL.	87	-
X	Xylosma congestum Shiny Xylosma	5 GAL.	212	-
ACCENTS				
DW	Dasylirion wheeleri Desert Spoon	5 GAL.	111	-
HP	Hesperaloe parviflora Red Yucca 'breaklights'	5 GAL.	190	-
GROUNDCOVER				
C	Convolvulus cneorum Bush Morning Glory	1 GAL.	361	-
LMD	Lantana X New Gold Lantana	1 GAL.	553	-
RO	Rosmarinus officinalis 'Prostratus' Dwarf Rosemary	1 GAL.	175	-
VINE				
BB	Bougainvillea 'San Diego Red' Bright Red Bougainvillea	5 GAL.	36	-

MISC.

	CAST IN PLACE 6" CONCRETE HEADER	1175 LF
	2" THK. DECOMPOSED GRANITE (VERIFY SELECTION: 3/4" SCREENED - EXPRESS CARMEL)	ALL LANDSCAPE AREAS TYPICAL
	TURF	29,600 SF

NOTE:
CONTRACTOR TO TRIM OVERHANG TREES ABOVE STREET TO A MINIMUM 15' VERTICAL CLEARANCE TO LOWEST BRANCHES.

INDEX



SCALE: 1" = 20'-0"
0 10' 20' 40' 60'
NORTH

LANDSCAPE PLANS

the design element
landscape architecture
the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL
175TH AVE. & BELL ROAD
SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR: CD

ISSUED DATE: 1 / 16 / 2019

DRAWN BY: JP REVIEWED BY: MB

ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com before you dig.

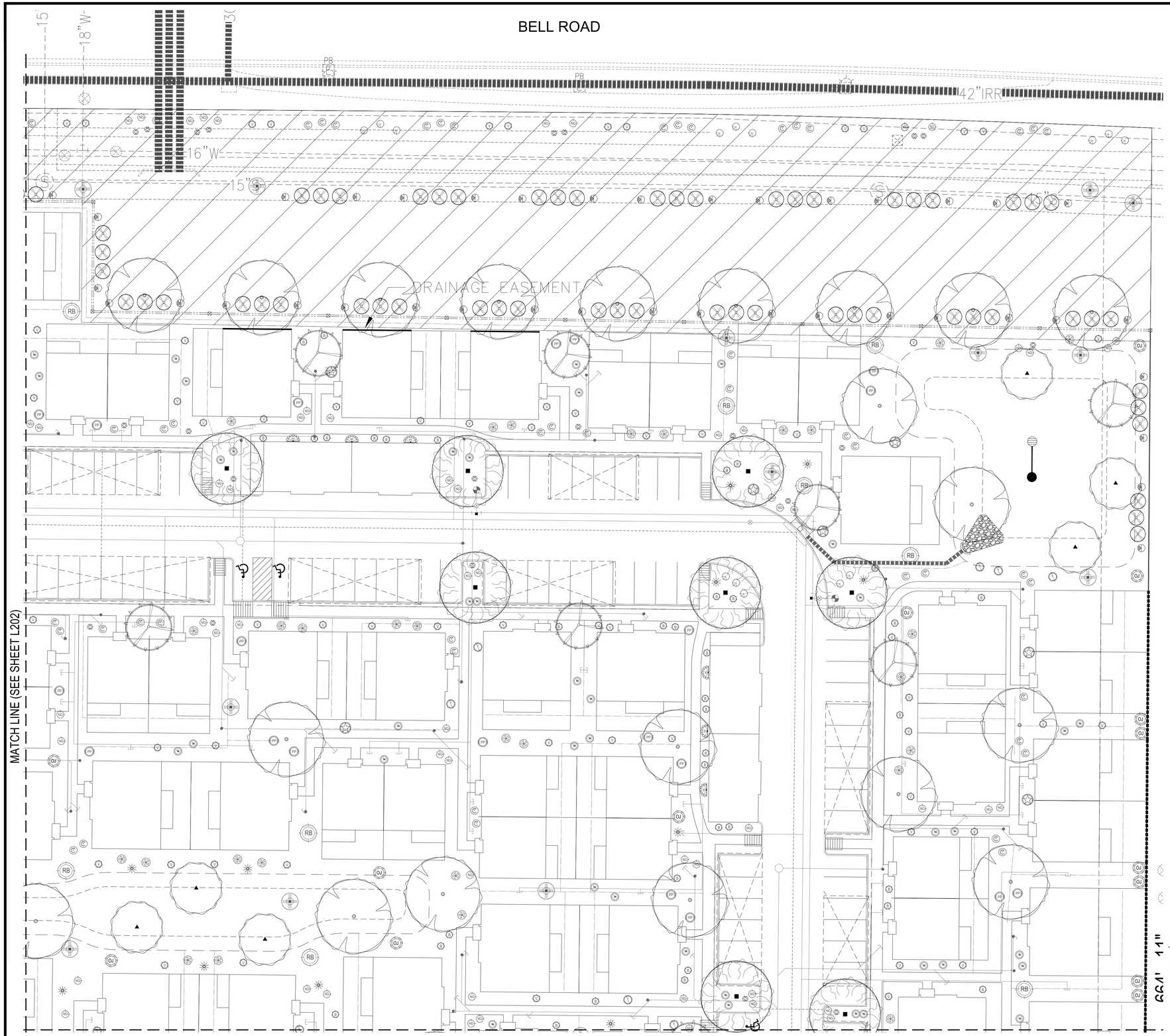
REVISIONS:

#	date	description

SHEET NAME:
PLANTING PLAN

SHEET NUMBER:
L202
10 OF 33

SURPRISE TRACKING# FS19-645



PLANT MATERIALS LEGEND

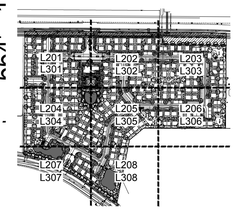
SYM.	PLANT NAME	CALIPER (H' x W')	QTY	REMARKS
TREES				
	Caesalpinia cacalaco 'Cascalote 'Smoothie'	24" BOX	66	
	Chilopsis linearis Desert Willow	24" BOX	30	
	Phoenix dactylifera Date Palm	16' TRUNK HT.	8	DIAMOND CUT NO AIR ROOT A.F.G.
	Phoenix roebelenii Pygmy Date Palm	15 GAL.	10	
	Pistacia species Red Push	24" BOX	75	DOUBLE STAKE
	Prunus cerasifera Purple-leaf Plum	24" BOX	10	-
	Ulmus parvifolia Allee Evergreen Elm	24" BOX 36" BOX	118 22	DOUBLE STAKE
SHRUBS				
RB	Caesalpinia pulcherrima Red Bird of Paradise	5 GAL.	73	-
	Calliandra x fairy duster Sierra Star	5 GAL.	106	-
	Carissa macrocarpa Natal Plum	5 GAL.	58	-
	Cordia Parvifolia Little Leaf Cordia	5 GAL.	73	-
	Dietes bicolor Fortnight Lily	5 GAL.	46	-
	Eremophila hygrophana Blue Emu Bush	5 GAL.	319	-
	Eremophylla maculata Valentine Bush	5 GAL.	458	-
	Leucophyllum candidum Thunder Cloud	5 GAL.	280	-
	Leucophyllum frutescens compacta Compact Texas Ranger	5 GAL.	276	-
	Nerium oleander Dwarf Petite Pink	5 GAL.	128	-
	Junuperus 'Sea Green' Juniper	5 GAL.	106	-
	Muhlenbergia capillaris Regal Mist	5 GAL.	170	-
	Raphiolepis indica 'Pinkie' Indian Hawthorne	5 GAL.	170	-
	Ruellia peninsularis Desert Ruellia	5 GAL.	101	-
	Ruellia brittoniana 'Katie' Dwarf Ruellia - Blue	5 GAL.	58	-
	Tecoma X. Orange Jubilee	5 GAL.	87	-
	Xylosma congestum Shiny Xylosma	5 GAL.	212	-
ACCENTS				
	Dasylirion wheeleri Desert Spoon	5 GAL.	111	-
	Hesperaloe parviflora Red Yucca 'breaklights'	5 GAL.	190	-
GROUNDCOVER				
	Convolvulus cneorum Bush Morning Glory	1 GAL.	361	-
	Lantana X New Gold Lantana	1 GAL.	553	-
	Rosmarinus officinalis 'Prostratus' Dwarf Rosemary	1 GAL.	175	-
VINE				
	Bougainvillea 'San Diego Red' Bright Red Bougainvillea	5 GAL.	36	-

MISC.

	CAST IN PLACE 6" CONCRETE HEADER	1175 LF
	2" THK. DECOMPOSED GRANITE (VERIFY SELECTION: 3/4" SCREENED - EXPRESS CARMEL)	ALL LANDSCAPE AREAS TYPICAL
	TURF	29,600 SF

NOTE:
CONTRACTOR TO TRIM OVERHANG TREES ABOVE STREET TO A MINIMUM 15' VERTICAL CLEARANCE TO LOWEST BRANCHES.

INDEX



SCALE: 1" = 20'-0"
0 10' 20' 40' 60'
NORTH

LANDSCAPE PLANS

the design element
landscape architecture
the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
ARIZONA U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD
SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR: CD
ISSUED DATE: 1 / 16 / 2019
DRAWN BY: JP REVIEWED BY: MB

ARIZONA811
Know what's below.
Call 811 or click Arizona811.com before you dig.

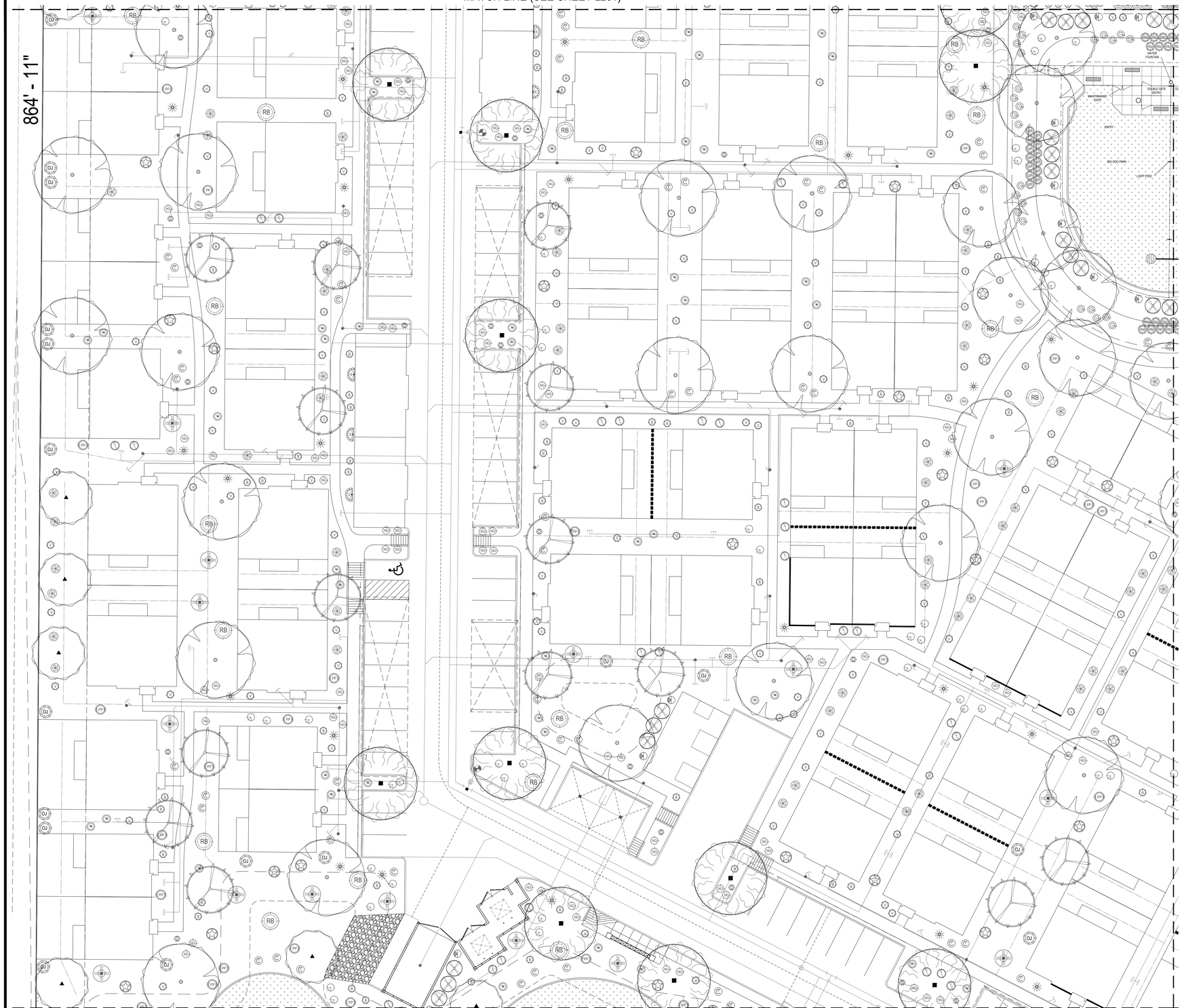
REVISIONS:

#	date	description

SHEET NAME:
PLANTING PLAN

SHEET NUMBER:
L203
11 OF 33

SURPRISE TRACKING# FS19-645



PLANT MATERIALS LEGEND

SYM.	PLANT NAME	CALIPER (H' x W')	QTY	REMARKS
TREES				
	Caesalpinia cacalaco 'Cascalote 'Smoothie'	24" BOX	66	
	Chilopsis linearis Desert Willow	24" BOX	30	
	Phoenix dactylifera Date Palm	16' TRUNK HT.	8	DIAMOND CUT NO AIR ROOT A.F.G.
	Phoenix roebelenii Pygmy Date Palm	15 GAL.	10	
	Pistacia species Red Push	24" BOX	75	DOUBLE STAKE
	Prunus cerasifera Purple-leaf Plum	24" BOX	10	-
	Ulmus parvifolia	24" BOX	118	
	Allee Evergreen Elm	36" BOX	22	DOUBLE STAKE
SHRUBS				
RB	Caesalpinia pulcherrima Red Bird of Paradise	5 GAL.	73	-
	Calliandra x fairy duster Sierra Star	5 GAL.	106	-
	Carissa macrocarpa Natal Plum	5 GAL.	58	-
	Cordia Parvifolia Little Leaf Cordia	5 GAL.	73	-
	Dietes bicolor Fortnight Lily	5 GAL.	46	-
B	Eremophila hygrophana Blue Emu Bush	5 GAL.	319	-
V	Eremophylla maculata Valentine Bush	5 GAL.	458	-
	Leucophyllum candidum Thunder Cloud	5 GAL.	280	-
W	Leucophyllum frutescens compacta Compact Texas Ranger	5 GAL.	276	-
PP	Nerium oleander Dwarf Petite Pink	5 GAL.	128	-
	Junuperus 'Sea Green' Juniper	5 GAL.	106	-
MM	Muhlenbergia capillaris Regal Mist	5 GAL.	170	-
	Raphiolepis indica 'Pinkie' Indian Hawthorne	5 GAL.	170	-
	Ruellia peninsularis Desert Ruellia	5 GAL.	101	-
	Ruellia brittoniana 'Katie' Dwarf Ruellia - Blue	5 GAL.	58	-
OJ	Tecoma X. Orange Jubilee	5 GAL.	87	-
	Xylosma congestum Shiny Xylosma	5 GAL.	212	-
ACCENTS				
	Dasylirion wheeleri Desert Spoon	5 GAL.	111	-
	Hesperaloe parviflora Red Yucca 'breaklights'	5 GAL.	190	-
GROUNDCOVER				
C	Convolvulus cneorum Bush Morning Glory	1 GAL.	361	-
MO	Lantana X New Gold Lantana	1 GAL.	553	-
	Rosmarinus officinalis 'Prostratus' Dwarf Rosemary	1 GAL.	175	-
VINE				
	Bougainvillea 'San Diego Red' Bright Red Bougainvillea	5 GAL.	36	-

MISC.

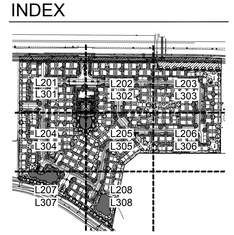
CAST IN PLACE 6" CONCRETE HEADER 1175 LF

2" THK. DECOMPOSED GRANITE ALL LANDSCAPE AREAS TYPICAL (VERIFY SELECTION: 3/4" SCREENED - EXPRESS CARMEL)

TURF 29,600 SF

NOTE:
CONTRACTOR TO TRIM OVERHANG TREES ABOVE STREET TO A MINIMUM 15' VERTICAL CLEARANCE TO LOWEST BRANCHES.

INDEX



SCALE: 1" = 20'-0"

0 10' 20' 40' 60'

NORTH

LANDSCAPE PLANS

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
STATE OF ARIZONA
31270
MARC F. LANGE
1-16-20
U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD

SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR: CD

ISSUED DATE: 1 / 16 / 2019

DRAWN BY: JP REVIEWED BY: MB

ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com before you dig.

REVISIONS:

#	date	description

SHEET NAME:

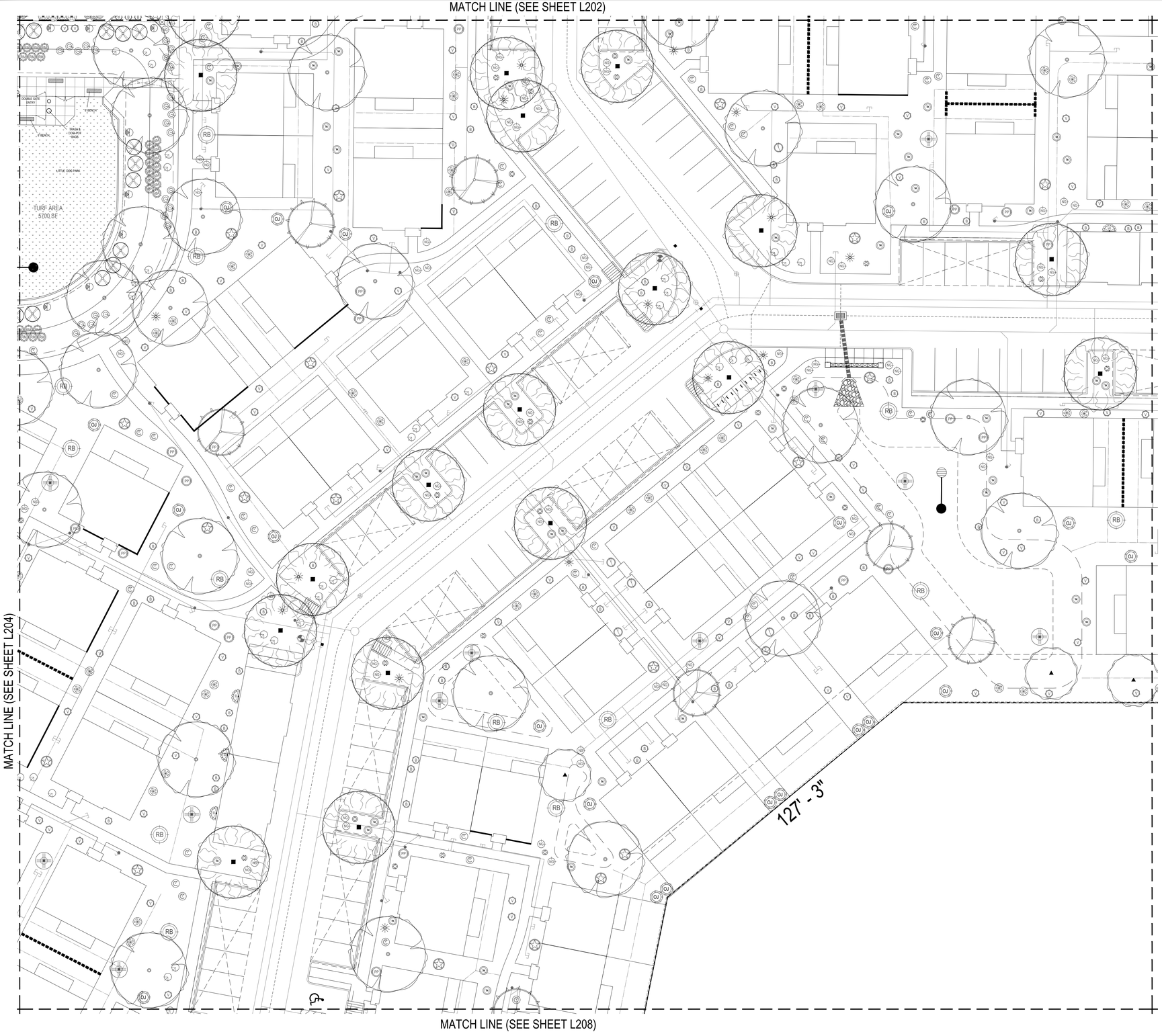
PLANTING PLAN

SHEET NUMBER:

L204

12 OF 33

SURPRISE TRACKING# FS19-845



PLANT MATERIALS LEGEND

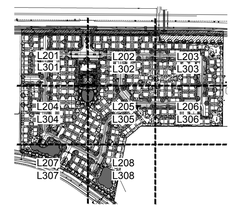
SYM.	PLANT NAME	CALIPER (H' x W')	QTY	REMARKS
TREES				
	Caesalpinia cacalaco 'Cascalote 'Smoothie'	24" BOX	66	
	Chilopsis linearis Desert Willow	24" BOX	30	
	Phoenix dactylifera Date Palm	16' TRUNK HT.	8	DIAMOND CUT NO AIR ROOT A.F.G.
	Phoenix roebelenii Pygmy Date Palm	15 GAL.	10	
	Pistacia species Red Push	24" BOX	75	DOUBLE STAKE
	Prunus cerasifera Purple-leaf Plum	24" BOX	10	-
	Ulmus parvifolia Allee Evergreen Elm	24" BOX 36" BOX	118 22	DOUBLE STAKE
SHRUBS				
RB	Caesalpinia pulcherrima Red Bird of Paradise	5 GAL.	73	-
	Calliandra x fairy duster Sierra Star	5 GAL.	106	-
	Carissa macrocarpa Natal Plum	5 GAL.	58	-
	Cordia Parvifolia Little Leaf Cordia	5 GAL.	73	-
	Dietes bicolor Fortnight Lily	5 GAL.	46	-
	Eremophila hygrophana Blue Emu Bush	5 GAL.	319	-
	Eremophylla maculata Valentine Bush	5 GAL.	458	-
	Leucophyllum candidum Thunder Cloud	5 GAL.	280	-
	Leucophyllum frutescens compacta Compact Texas Ranger	5 GAL.	276	-
	Nerium oleander Dwarf Petite Pink	5 GAL.	128	-
	Junuperus 'Sea Green' Juniper	5 GAL.	106	-
	Muhlenbergia capillaris Regal Mist	5 GAL.	170	-
	Raphiolepis indica 'Pinkie' Indian Hawthorne	5 GAL.	170	-
	Ruellia peninsularis Desert Ruellia	5 GAL.	101	-
	Ruellia brittoniana 'Katie' Dwarf Ruellia - Blue	5 GAL.	58	-
OJ	Tecoma X. Orange Jubilee	5 GAL.	87	-
	Xylosma congestum Shiny Xylosma	5 GAL.	212	-
ACCENTS				
	Dasylirion wheeleri Desert Spoon	5 GAL.	111	-
	Hesperaloe parviflora Red Yucca 'breaklights'	5 GAL.	190	-
GROUNDCOVER				
	Convolvulus cneorum Bush Morning Glory	1 GAL.	361	-
	Lantana X New Gold Lantana	1 GAL.	553	-
	Rosmarinus officinalis 'Prostratus' Dwarf Rosemary	1 GAL.	175	-
VINE				
	Bougainvillea 'San Diego Red' Bright Red Bougainvillea	5 GAL.	36	-

MISC.

	CAST IN PLACE 6" CONCRETE HEADER	1175 LF
	2" THK. DECOMPOSED GRANITE (VERIFY SELECTION: 3/4" SCREENED - EXPRESS CARMEL)	ALL LANDSCAPE AREAS TYPICAL
	TURF	29,600 SF

NOTE:
CONTRACTOR TO TRIM OVERHANG TREES ABOVE STREET TO A MINIMUM 15' VERTICAL CLEARANCE TO LOWEST BRANCHES.

INDEX



SCALE: 1" = 20'-0"
0 10' 20' 40' 60'
NORTH

LANDSCAPE PLANS

the design element
landscape architecture
the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL
175TH AVE. & BELL ROAD
SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR:
CD

ISSUED DATE:
1 / 16 / 2019

DRAWN BY: JP REVIEWED BY: MB

ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com
before you dig.

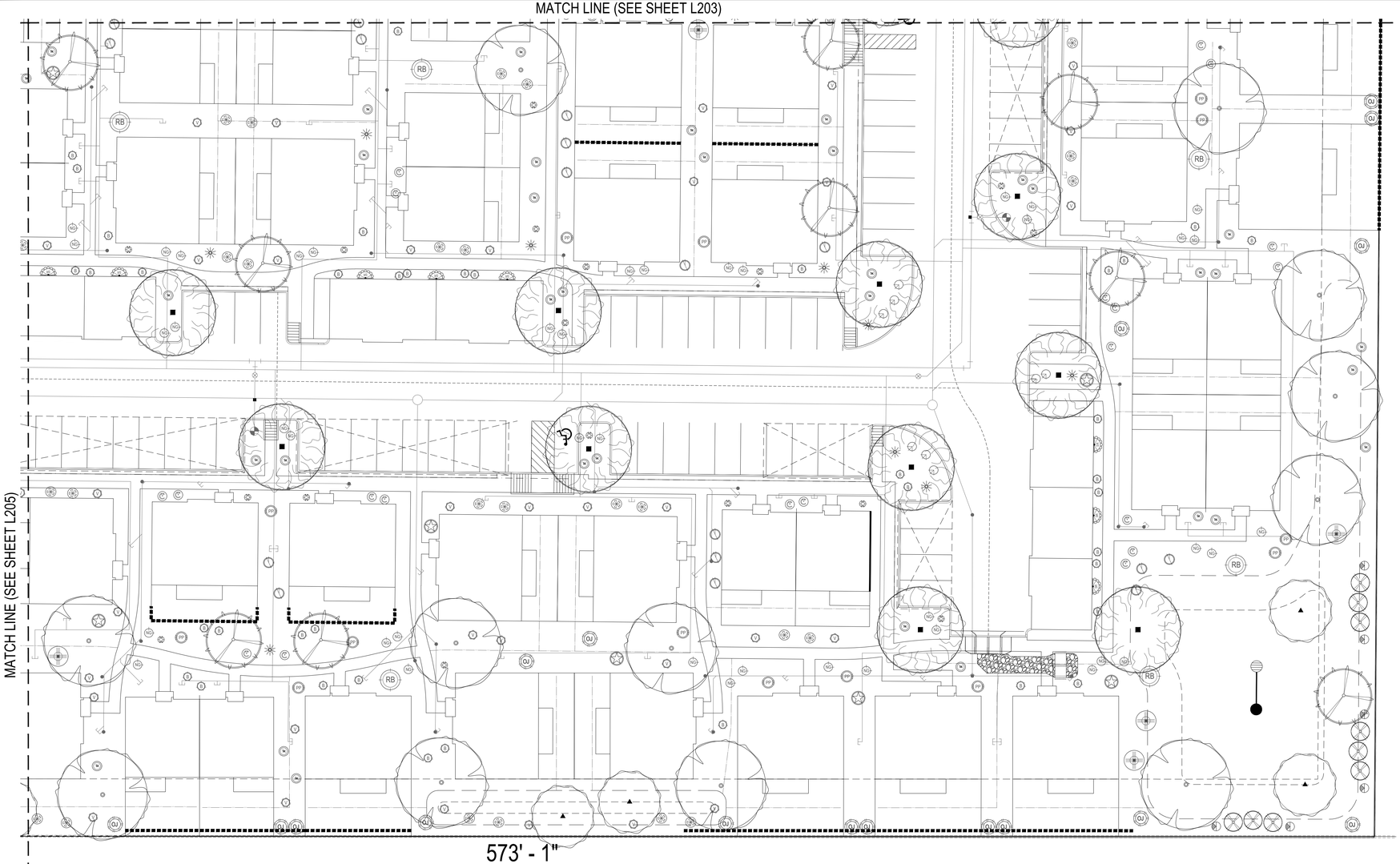
REVISIONS:

#	date	description

SHEET NAME:
PLANTING PLAN

SHEET NUMBER:
L205
13 OF 33

SURPRISE TRACKING# FS19-645



SCALE: 1" = 20'-0"

0 10' 20' 40' 60'

NORTH

LANDSCAPE PLANS

PLANT MATERIALS LEGEND

SYM.	PLANT NAME	CALIPER (H' x W')	QTY	REMARKS
TREES				
	Caesalpinia cacalaco 'Cascalote 'Smoothie'	24" BOX	66	
	Chilopsis linearis Desert Willow	24" BOX	30	
	Phoenix dactylifera Date Palm	16' TRUNK HT.	8	DIAMOND CUT NO AIR ROOT A.F.G.
	Phoenix roebelenii Pygmy Date Palm	15 GAL.	10	
	Pistacia species Red Push	24" BOX	75	DOUBLE STAKE
	Prunus cerasifera Purple-leaf Plum	24" BOX	10	-
	Ulmus parvifolia Allee Evergreen Elm	24" BOX 36" BOX	118 22	DOUBLE STAKE
SHRUBS				
RB	Caesalpinia pulcherrima Red Bird of Paradise	5 GAL.	73	-
	Calliandra x fairy duster Sierra Star	5 GAL.	106	-
	Carissa macrocarpa Natal Plum	5 GAL.	58	-
	Cordia Parvifolia Little Leaf Cordia	5 GAL.	73	-
DI	Dietes bicolor Fortnight Lily	5 GAL.	46	-
E	Eremophila hygrophana Blue Emu Bush	5 GAL.	319	-
V	Eremophylla maculata Valentine Bush	5 GAL.	458	-
	Leucophyllum candidum Thunder Cloud	5 GAL.	280	-
	Leucophyllum frutescens compacta Compact Texas Ranger	5 GAL.	276	-
PP	Nerium oleander Dwarf Petite Pink	5 GAL.	128	-
	Junuperus 'Sea Green' Juniper	5 GAL.	106	-
MM	Muhlenbergia capillaris Regal Mist	5 GAL.	170	-
	Raphiolepis indica 'Pinkie' Indian Hawthorne	5 GAL.	170	-
	Ruellia peninsularis Desert Ruellia	5 GAL.	101	-
	Ruellia brittoniana 'Katie' Dwarf Ruellia - Blue	5 GAL.	58	-
OJ	Tecoma X. Orange Jubilee	5 GAL.	87	-
	Xylosma congestum Shiny Xylosma	5 GAL.	212	-
ACCENTS				
	Dasylirion wheeleri Desert Spoon	5 GAL.	111	-
	Hesperaloe parviflora Red Yucca 'breaklights'	5 GAL.	190	-
GROUNDCOVER				
C	Convolvulus cneorum Bush Morning Glory	1 GAL.	361	-
NG	Lantana X New Gold Lantana	1 GAL.	553	-
	Rosmarinus officinalis 'Prostratus' Dwarf Rosemary	1 GAL.	175	-
VINE				
	Bougainvillea 'San Diego Red' Bright Red Bougainvillea	5 GAL.	36	-

MISC.

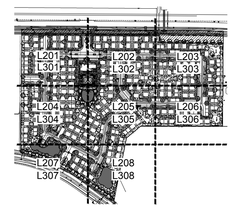
CAST IN PLACE 6" CONCRETE HEADER 1175 LF

2" THK. DECOMPOSED GRANITE ALL LANDSCAPE AREAS TYPICAL (VERIFY SELECTION: 3/4" SCREENED - EXPRESS CARMEL)

TURF 29,600 SF

NOTE:
CONTRACTOR TO TRIM OVERHANG TREES ABOVE STREET TO A MINIMUM 15' VERTICAL CLEARANCE TO LOWEST BRANCHES.

INDEX



the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD

SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR:
CD

ISSUED DATE:
1 / 16 / 2019

DRAWN BY: JP REVIEWED BY: MB

ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com before you dig.

REVISIONS:

#	date	description

SHEET NAME:

PLANTING PLAN

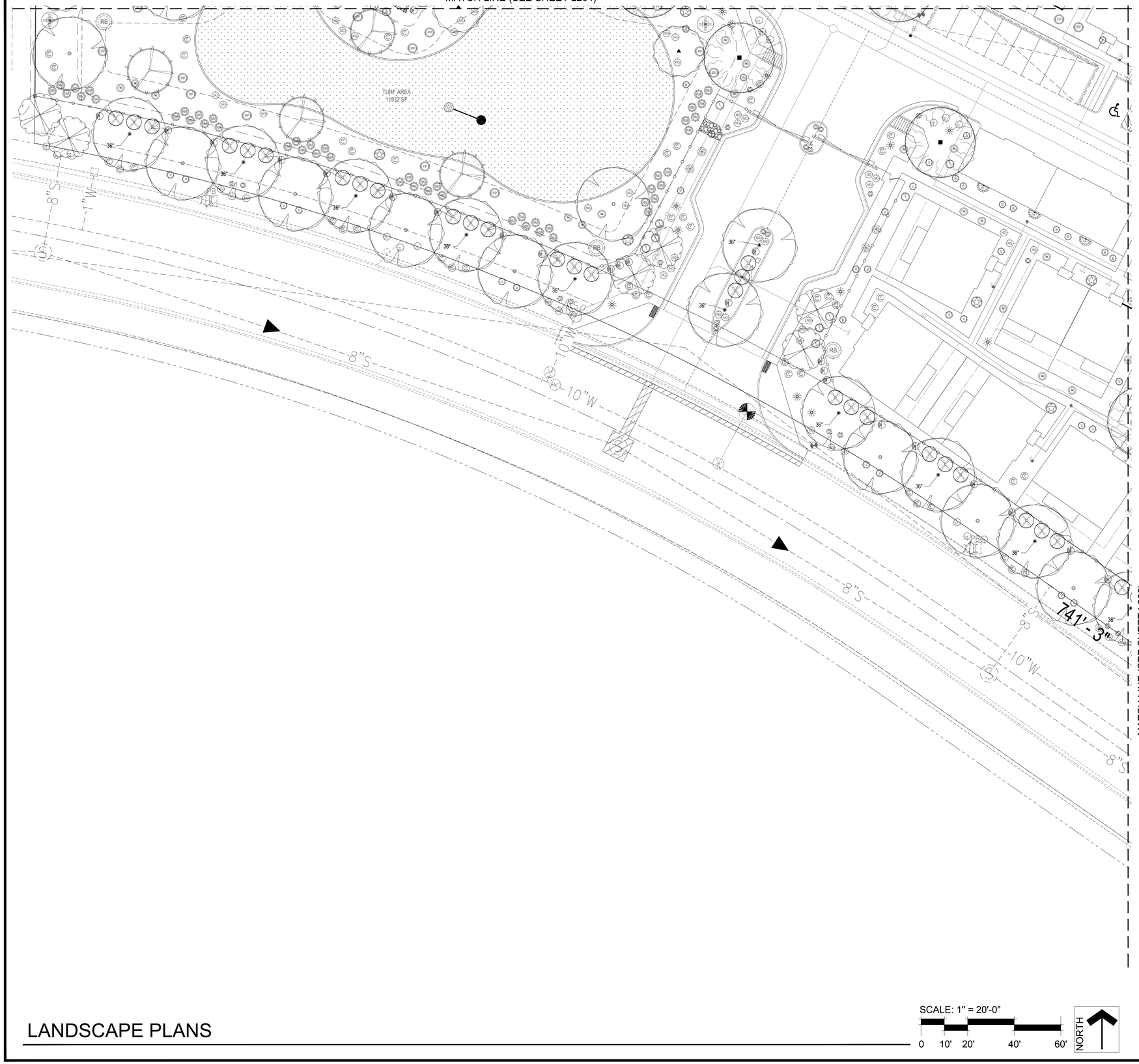
SHEET NUMBER:

L206

14 OF 33

SURPRISE TRACKING# FS19-645

MATCH LINE (SEE SHEET L204)



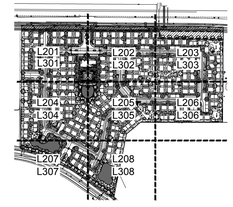
MATCH LINE (SEE SHEET L208)

PLANT MATERIALS LEGEND

SYM.	PLANT NAME	CALIPER (H' x W')	QTY	REMARKS
TREES				
	Caesalpinia cacalaco 'Cascalote 'Smoothie'	24" BOX	66	
	Chilopsis linearis Desert Willow	24" BOX	30	
	Phoenix dactylifera Date Palm	16' TRUNK HT.	8	DIAMOND CUT NO AIR ROOT A.F.G.
	Phoenix roebelenii Pygmy Date Palm	15 GAL.	10	
	Pistacia species Red Push	24" BOX	75	DOUBLE STAKE
	Prunus cerasifera Purple-leaf Plum	24" BOX	10	-
	Ulmus parvifolia Allee Evergreen Elm	24" BOX 36" BOX	118 22	DOUBLE STAKE
SHRUBS				
RB	Caesalpinia pulcherrima Red Bird of Paradise	5 GAL.	73	-
	Calliandra x fairy duster Sierra Star	5 GAL.	106	-
	Carissa macrocarpa Natal Plum	5 GAL.	58	-
	Cordia Parvifolia Little Leaf Cordia	5 GAL.	73	-
	Dietes bicolor Fortnight Lily	5 GAL.	46	-
	Eremophila hygrophana Blue Emu Bush	5 GAL.	319	-
	Eremophylla maculata Valentine Bush	5 GAL.	458	-
	Leucophyllum candidum Thunder Cloud	5 GAL.	280	-
	Leucophyllum frutescens compacta Compact Texas Ranger	5 GAL.	276	-
	Nerium oleander Dwarf Petite Pink	5 GAL.	128	-
	Junuperus 'Sea Green' Juniper	5 GAL.	106	-
	Muhlenbergia capillaris Regal Mist	5 GAL.	170	-
	Raphiolepis indica 'Pinkie' Indian Hawthorne	5 GAL.	170	-
	Ruellia peninsularis Desert Ruellia	5 GAL.	101	-
	Ruellia brittoniana 'Katie' Dwarf Ruellia - Blue	5 GAL.	58	-
	Tecoma X. Orange Jubilee	5 GAL.	87	-
	Xylosma congestum Shiny Xylosma	5 GAL.	212	-
ACCENTS				
	Dasylirion wheeleri Desert Spoon	5 GAL.	111	-
	Hesperaloe parviflora Red Yucca 'breaklights'	5 GAL.	190	-
GROUNDCOVER				
	Convolvulus cneorum Bush Morning Glory	1 GAL.	361	-
	Lantana X New Gold Lantana	1 GAL.	553	-
	Rosmarinus officinalis 'Prostratus' Dwarf Rosemary	1 GAL.	175	-
VINE				
	Bougainvillea 'San Diego Red' Bright Red Bougainvillea	5 GAL.	36	-
MISC.				
	CAST IN PLACE 6" CONCRETE HEADER		1175 LF	
	2" THK. DECOMPOSED GRANITE (VERIFY SELECTION: 3/4" SCREENED - EXPRESS CARMEL)		ALL LANDSCAPE AREAS TYPICAL	
	TURF		29,600 SF	

NOTE:
CONTRACTOR TO TRIM OVERHANG TREES ABOVE STREET TO A MINIMUM 15' VERTICAL CLEARANCE TO LOWEST BRANCHES.

INDEX



SCALE: 1" = 20'-0"

0 10' 20' 40' 60'

NORTH

LANDSCAPE PLANS

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL
175TH AVE. & BELL ROAD
SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR:
CD

ISSUED DATE:
1 / 16 / 2019

DRAWN BY: JP REVIEWED BY: MB

Know what's below.
Call 811 or click Arizona811.com before you dig.

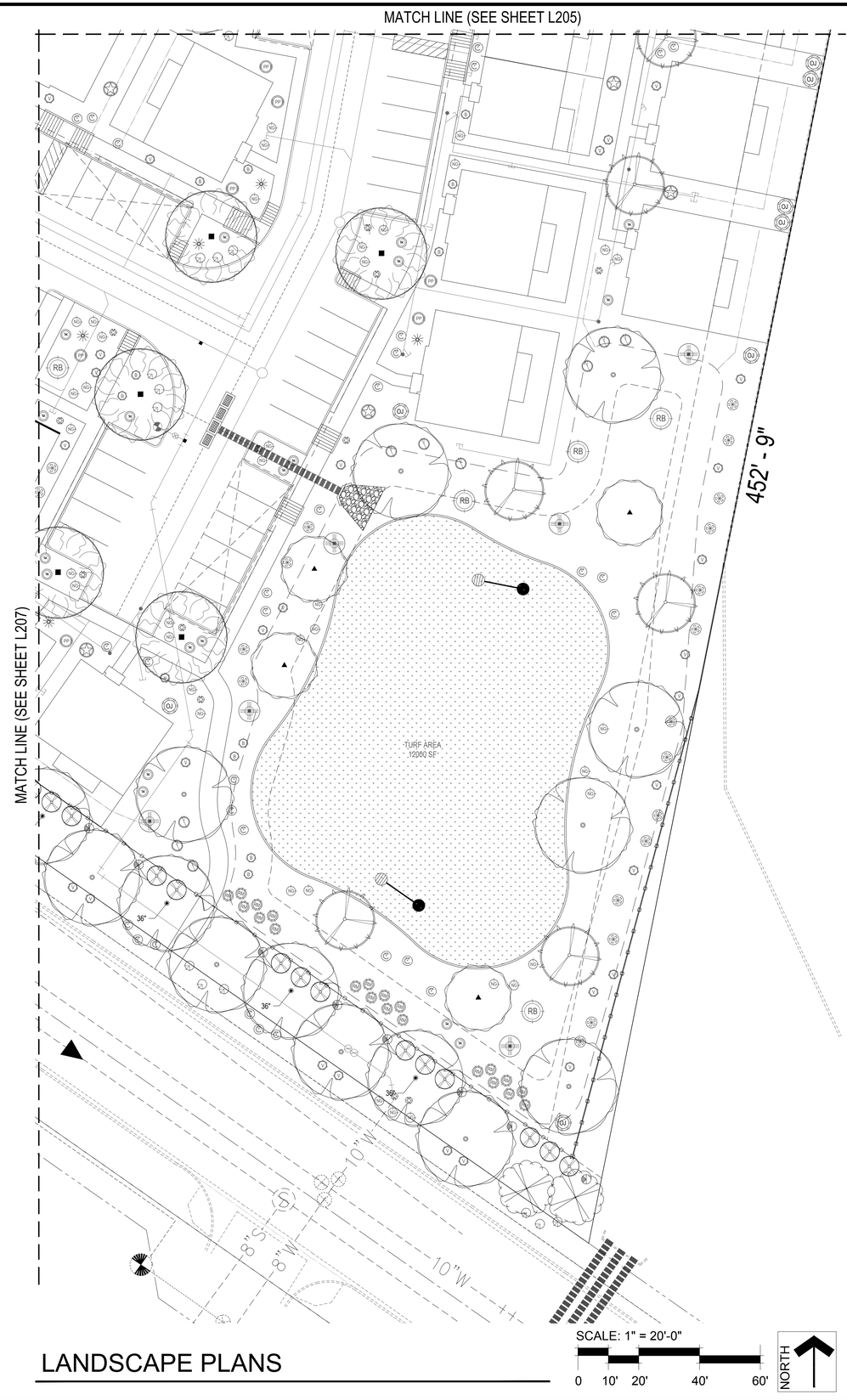
REVISIONS:

#	date	description

SHEET NAME:
PLANTING PLAN

SHEET NUMBER:
L207
15 OF 33

SURPRISE TRACKING# FS19-645



LANDSCAPE PLANS

SCALE: 1" = 20'-0"

0 10' 20' 40' 60'

NORTH

PLANT MATERIALS LEGEND

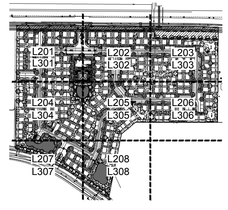
SYM.	PLANT NAME	CALIPER (H' x W')	QTY	REMARKS
TREES				
	Caesalpinia cacalaco 'Cascalote 'Smoothie'	24" BOX	66	
	Chilopsis linearis Desert Willow	24" BOX	30	
	Phoenix dactylifera Date Palm	16' TRUNK HT.	8	DIAMOND CUT NO AIR ROOT A.F.G.
	Phoenix roebelenii Pygmy Date Palm	15 GAL.	10	
	Pistacia species Red Push	24" BOX	75	DOUBLE STAKE
	Prunus cerasifera Purple-leaf Plum	24" BOX	10	-
	Ulmus parvifolia Allee Evergreen Elm	24" BOX 36" BOX	118 22	DOUBLE STAKE
SHRUBS				
RB	Caesalpinia pulcherrima Red Bird of Paradise	5 GAL.	73	-
	Calliandra x fairy duster Sierra Star	5 GAL.	106	-
	Carissa macrocarpa Natal Plum	5 GAL.	58	-
	Cordia Parvifolia Little Leaf Cordia	5 GAL.	73	-
	Dietes bicolor Fortnight Lily	5 GAL.	46	-
	Eremophila hygrophana Blue Emu Bush	5 GAL.	319	-
	Eremophylla maculata Valentine Bush	5 GAL.	458	-
	Leucophyllum candidum Thunder Cloud	5 GAL.	280	-
	Leucophyllum frutescens compacta Compact Texas Ranger	5 GAL.	276	-
	Nerium oleander Dwarf Petite Pink	5 GAL.	128	-
	Junuperus 'Sea Green' Juniper	5 GAL.	106	-
	Muhlenbergia capillaris Regal Mist	5 GAL.	170	-
	Raphiolepis indica 'Pinkie' Indian Hawthorne	5 GAL.	170	-
	Ruellia peninsularis Desert Ruellia	5 GAL.	101	-
	Ruellia brittoniana 'Katie' Dwarf Ruellia - Blue	5 GAL.	58	-
	Tecoma X. Orange Jubilee	5 GAL.	87	-
	Xylosma congestum Shiny Xylosma	5 GAL.	212	-
ACCENTS				
	Dasylirion wheeleri Desert Spoon	5 GAL.	111	-
	Hesperaloe parviflora Red Yucca 'breaklights'	5 GAL.	190	-
GROUNDCOVER				
	Convolvulus cneorum Bush Morning Glory	1 GAL.	361	-
	Lantana X New Gold Lantana	1 GAL.	553	-
	Rosmarinus officinalis 'Prostratus' Dwarf Rosemary	1 GAL.	175	-
VINE				
	Bougainvillea 'San Diego Red' Bright Red Bougainvillea	5 GAL.	36	-

MISC.

	CAST IN PLACE 6" CONCRETE HEADER	1175 LF
	2" THK. DECOMPOSED GRANITE (VERIFY SELECTION: 3/4" SCREENED - EXPRESS CARMEL)	ALL LANDSCAPE AREAS TYPICAL
	TURF	29,600 SF

NOTE:
CONTRACTOR TO TRIM OVERHANG TREES ABOVE STREET TO A MINIMUM 15' VERTICAL CLEARANCE TO LOWEST BRANCHES.

INDEX



the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD

SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR:
CD

ISSUED DATE:
1 / 16 / 2019

DRAWN BY: JP REVIEWED BY: MB

ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com before you dig.

REVISIONS:

#	date	description

SHEET NAME:

PLANTING PLAN

SHEET NUMBER:

L208

16 OF 33

SURPRISE TRACKING# FS19-645



PLANT MATERIALS LEGEND

SYM.	PLANT NAME	CALIPER (H' x W')	QTY	REMARKS
TREES				
	Caesalpinia cacalaco 'Cascalote 'Smoothie'	24" BOX	66	
	Chilopsis linearis Desert Willow	24" BOX	30	
	Phoenix dactylifera Date Palm	16' TRUNK HT.	8	DIAMOND CUT NO AIR ROOT A.F.G.
	Phoenix roebelenii Pygmy Date Palm	15 GAL.	10	
	Pistacia species Red Push	24" BOX	75	DOUBLE STAKE
	Prunus cerasifera Purple-leaf Plum	24" BOX	10	-
	Ulmus parvifolia Allee Evergreen Elm	24" BOX 36" BOX	118 22	DOUBLE STAKE
SHRUBS				
RB	Caesalpinia pulcherrima Red Bird of Paradise	5 GAL.	73	-
	Calliandra x fairy duster Sierra Star	5 GAL.	106	-
	Carissa macrocarpa Natal Plum	5 GAL.	58	-
	Cordia Parvifolia Little Leaf Cordia	5 GAL.	73	-
	Dietes bicolor Fortnight Lily	5 GAL.	46	-
	Eremophila hygrophana Blue Emu Bush	5 GAL.	319	-
	Eremophylla maculata Valentine Bush	5 GAL.	458	-
	Leucophyllum candidum Thunder Cloud	5 GAL.	280	-
	Leucophyllum frutescens compacta Compact Texas Ranger	5 GAL.	276	-
	Nerium oleander Dwarf Petite Pink	5 GAL.	128	-
	Junuperus 'Sea Green' Juniper	5 GAL.	106	-
	Muhlenbergia capillaris Regal Mist	5 GAL.	170	-
	Raphiolepis indica 'Pinkie' Indian Hawthorne	5 GAL.	170	-
	Ruellia peninsularis Desert Ruellia	5 GAL.	101	-
	Ruellia brittoniana 'Katie' Dwarf Ruellia - Blue	5 GAL.	58	-
	Tecoma X. Orange Jubilee	5 GAL.	87	-
	Xylosma congestum Shiny Xylosma	5 GAL.	212	-
ACCENTS				
	Dasylirion wheeleri Desert Spoon	5 GAL.	111	-
	Hesperaloe parviflora Red Yucca 'breaklights'	5 GAL.	190	-
GROUNDCOVER				
	Convolvulus cneorum Bush Morning Glory	1 GAL.	361	-
	Lantana X New Gold Lantana	1 GAL.	553	-
	Rosmarinus officinalis 'Prostratus' Dwarf Rosemary	1 GAL.	175	-
VINE				
	Bougainvillea 'San Diego Red' Bright Red Bougainvillea	5 GAL.	36	-

MISC.

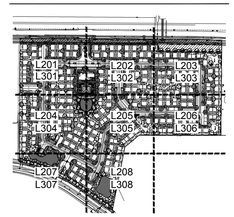
CAST IN PLACE 6" CONCRETE HEADER 1175 LF

2" THK. DECOMPOSED GRANITE ALL LANDSCAPE AREAS TYPICAL (VERIFY SELECTION: 3/4" SCREENED - EXPRESS CARMEL)

TURF 29,600 SF

NOTE:
CONTRACTOR TO TRIM OVERHANG TREES ABOVE STREET TO A MINIMUM 15' VERTICAL CLEARANCE TO LOWEST BRANCHES.

INDEX



SCALE: 1" = 60'-0"

0 30' 60' 120' 180'

NORTH

LANDSCAPE PLANS - ENTIRE PARCEL

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL
175TH AVE. & BELL ROAD
SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR: CD

ISSUED DATE: 1 / 16 / 2019

DRAWN BY: JP REVIEWED BY: MB

ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com before you dig.

REVISIONS:

#	date	description

SHEET NAME:
ENTIRE PARCEL PLANTING PLAN

SHEET NUMBER:
L209
17 OF 33

SURPRISE TRACKING# FS19-645

CONTRACTOR TO FIELD VERIFY UTILITIES AND ADJUST PLANTING TO SUIT UTILITIES AND SUN EXPOSURE CONDITIONS.

TYPICAL UNIT 1 (SMALLER YARD)

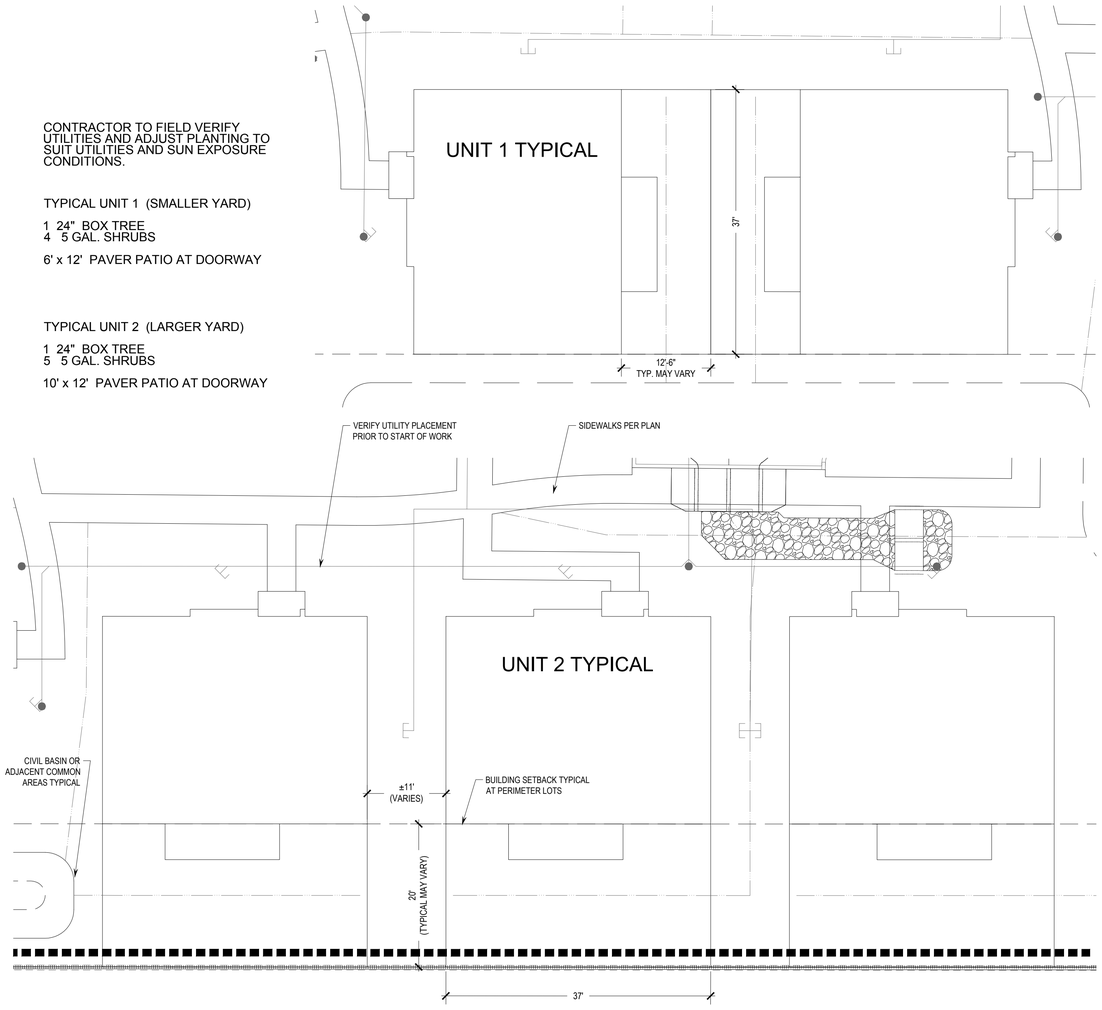
1 24" BOX TREE
4 5 GAL. SHRUBS

6' x 12' PAVER PATIO AT DOORWAY

TYPICAL UNIT 2 (LARGER YARD)

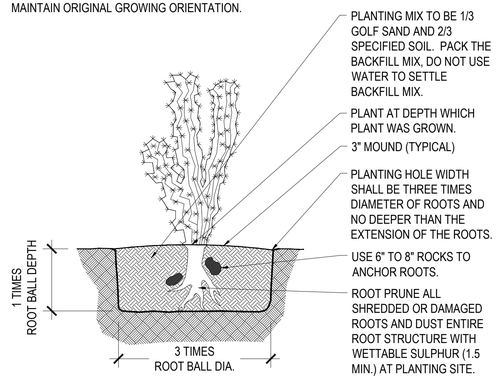
1 24" BOX TREE
5 5 GAL. SHRUBS

10' x 12' PAVER PATIO AT DOORWAY



8 TYPICAL BACKYARD LANDSCAPE PER UNIT
SCALE: 1" = 10'

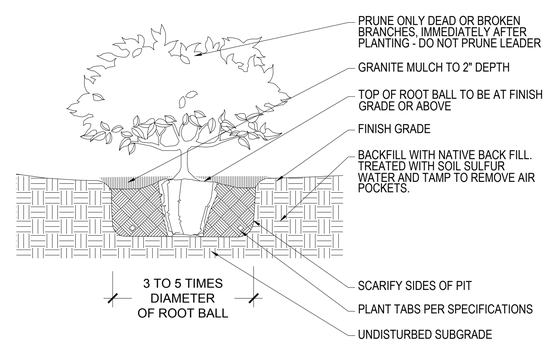
GENERAL NOTES:
FINISH GRADE TO DRAIN AWAY FROM CACTUS.
CACTUS TO BE HEALTHY, FRESHLY SALVAGED AND PROPERLY CALLOUSED. PROVIDE ONE YEAR WARRANTY ON ALL CACTI
PLANT CACTI AWAY FROM WALKS OR TRAILS PLANT IN MASS TO MIMIC NATIVE SITE (TYP. - MEDIUM, LARGE, SMALL). REFER TO PLANTING PLAN. WATER WEEKLY THROUGH THE SUMMER. MAINTAIN ORIGINAL GROWING ORIENTATION.



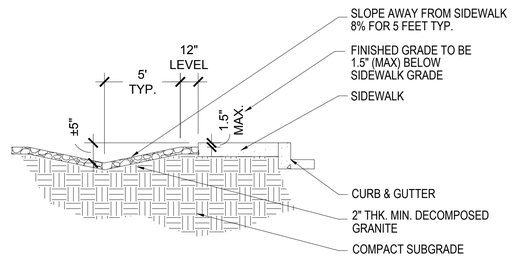
6 CACTUS PLANTING
SCALE: 1/8"=1'-0"

NOTE: FOR SLOPES STEEPER THAN 4:1 USE JUTE NETTING FOR EROSION CONTROL AND PLANT STABILIZATION. CONTRACTOR TO INSTALL PER MANUFACTURER'S SPECIFICATIONS.

NOTE:
TILL AREA 3 TO 5 TIMES THE WIDTH OF ROOTBALL AND NO DEEPER. WALLS OF UNDISTURBED SOIL SHOULD BE ROUGH AND SLOPING.

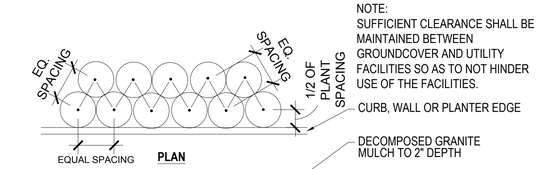


3 SHRUB PLANTING
SCALE: 1/4"=1'-0"

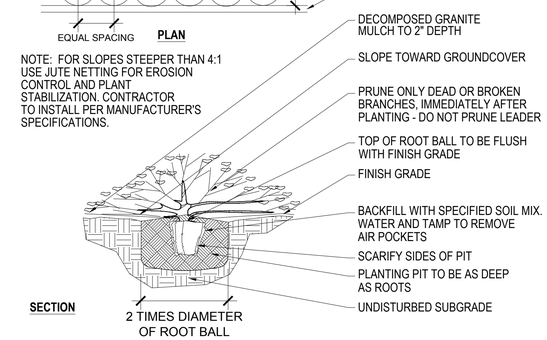


5 SWALE
SCALE: 1/4"=1'-0"

NOTE:
SUFFICIENT CLEARANCE SHALL BE MAINTAINED BETWEEN GROUNDCOVER AND UTILITY FACILITIES SO AS TO NOT HINDER USE OF THE FACILITIES.



NOTE: FOR SLOPES STEEPER THAN 4:1 USE JUTE NETTING FOR EROSION CONTROL AND PLANT STABILIZATION. CONTRACTOR TO INSTALL PER MANUFACTURER'S SPECIFICATIONS.

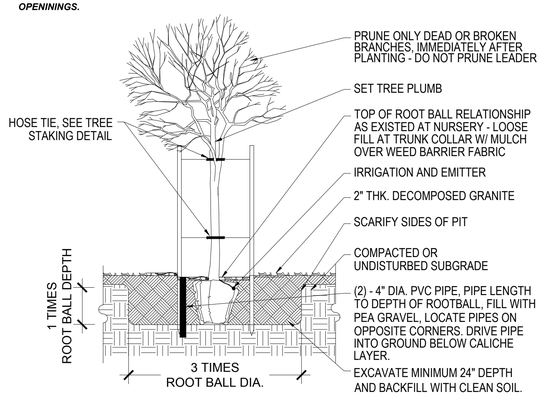


2 GROUNDCOVER PLANTING
SCALE: 1/4"=1'-0"

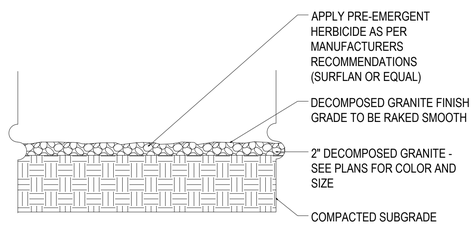
NOTE:
-REFER TO TREE STAKING DETAIL FOR ADDITIONAL INFORMATION.

-CONTRACTOR TO ENSURE EACH TREE RECEIVES EMITTER(S) AND STANDPIPE.

-SAME DETAIL APPLIES TO TREE PLANTING IN SIDEWALK WITH DECORATIVE TREE GRATE. INSTALL TREE STAKES IN LIGHT WELL OPENINGS.



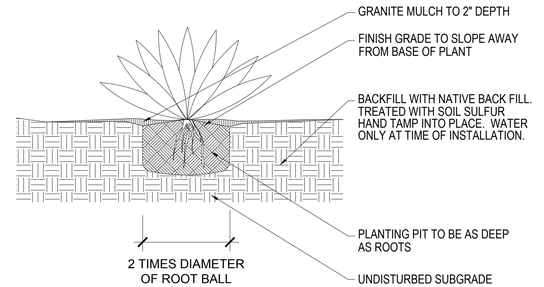
7 TREE PLANTING
SCALE: 1/4"=1'-0"



4 DECOMPOSED GRANITE
SCALE: NTS

NOTE:
TILL AREA 2 TIMES THE WIDTH OF ROOTBALL AND NO DEEPER. WALLS OF UNDISTURBED SOIL SHOULD BE ROUGH AND SLOPING.

IN AREAS WHERE CALICHE OR HARDPAN OCCURS BENEATH THE ROOTS, BORE THROUGH IT WITH AN 8" DIAMETER HOLE, 24" DEPTH



1 ACCENT PLANTING
SCALE: 1/4"=1'-0"

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD

SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR: CD

ISSUED DATE: 1 / 16 / 2019

DRAWN BY: JP REVIEWED BY: MB

ARIZONA811
Know what's below.
Call 811 or click Arizona811.com before you dig.

REVISIONS:

#	date	description

SHEET NAME:
LANDSCAPE DETAILS

SHEET NUMBER:
L210
18 OF 33

SURPRISE TRACKING# FS19-645

A. GENERAL NOTES

1. BIDDING: IT SHALL BE THE OWNER'S RESPONSIBILITY IN INVITING AND OBTAINING BIDS, SETTING ITS PROVISIONS AND INSTRUCTIONS TO BIDDERS, SECURING THEIR BONDS AND WORKERS COMPENSATION INSURANCE CERTIFICATES, ETC. TO FULLY ENSURE THE QUALITY AND TIMELY COMPLETION OF THE PROJECT.

2. SCOPE OF WORK: CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY TO FURNISH AND INSTALL ALL LANDSCAPING PER THE DRAWINGS AND SPECIFICATIONS WITHIN.

3. PLAN VERIFICATION: THESE DOCUMENTS MAY CONTAIN ERRORS, OMISSIONS, CONTRADICTIONS, ETC. THE CONTRACTOR SHALL REVIEW ALL DOCUMENTS THOROUGHLY AND SHALL NOTIFY THE LANDSCAPE ARCHITECT AND OWNER IMMEDIATELY UPON ANY SUCH DISCOVERY OF DISCREPANCY. GOVERNING CODES SHALL THEN APPLY.

4. LICENSE: THE CONTRACTOR SHALL BE AN APPROVED ARIZONA STATE LICENSED LANDSCAPE CONTRACTOR.

5. ORDINANCES AND REGULATIONS: ALL LANDSCAPE PLANTING WITHIN THESE DRAWINGS AND SPECIFICATIONS SHALL CONFORM TO ALL APPLICABLE GOVERNING CODES AND ORDINANCES (LOCAL, COUNTY & STATE).

6. PERMITS AND INSPECTIONS: THE CONTRACTOR SHALL OBTAIN, COORDINATE AND PAY FOR ALL PERMITS, FEES AND AGENCY INSPECTIONS AS REQUIRED.

7. FIELD VERIFICATION: CONTRACTOR SHALL VERIFY DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE LANDSCAPE ARCHITECT AND OWNER SHALL BE NOTIFIED IMMEDIATELY UPON ANY DISCOVERY OF DISCREPANCIES. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE LANDSCAPE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.

8. LIABLE FOR ENCROACHMENT: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ENCROACHMENT ONTO ADJACENT PROPERTY, RIGHT-OF-WAYS, EASEMENTS, SET-BACKS OR ANY OTHER LEGAL PROPERTY RESTRICTIONS EITHER MARKED OR UNMARKED.

9. METHODS OF CONSTRUCTION: THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, SEQUENCES, PROCEDURES AND TECHNIQUES. THE LANDSCAPE ARCHITECTURAL FIRM IS NOT LIABLE FOR CONSTRUCTION METHODS.

10. SAFETY: THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS DURING CONSTRUCTION.

11. UTILITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UNDERGROUND UTILITIES, ELECTRICAL CABLES, CONDUITS, AND IRRIGATION LINES PRIOR TO ANY CONSTRUCTION, SO THAT PROPER PRECAUTIONS MAY BE TAKEN NOT TO DAMAGE SUCH IMPROVEMENTS.

12. INSURANCE: THE CONTRACTOR SHALL OBTAIN (AND KEEP IN FORCE DURING THE PERIOD OF THE CONTRACT) PUBLIC LIABILITY, WORKMAN'S COMPENSATION AND PROPERTY DAMAGE INSURANCE, AS REQUIRED BY ALL APPLICABLE CODES AND REGULATIONS.

13. LIABLE FOR DAMAGE: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY ITS OPERATIONS TO UTILITIES, EXISTING PLANTING, CONSTRUCTION, PERSONS, PROPERTY, ETC. AND SHALL PROVIDE PROTECTIVE MEANS TO GUARD AGAINST DAMAGE.

14. COORDINATION: CONTRACTOR SHALL COORDINATE ALL LANDSCAPE CONSTRUCTION WITH APPROPRIATE TRADES THROUGH THE OWNER BEFORE STARTING WORK.

15. PLANTING PLANS: THE PLANTING PLANS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. THE CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS DURING INSTALLATION TO AVOID CONFLICTS BETWEEN, EXISTING IRRIGATION, EXISTING PLANTING, ARCHITECTURAL FEATURES AND UTILITIES.

16. DIMENSIONS: ALL SCALE DIMENSIONS ARE APPROXIMATE. WRITTEN DIMENSIONS ON DETAILS AND PLANS TAKE PRECEDENCE OVER SCALED DIMENSIONS.

17. PLANTING NOTES: SEE GENERAL NOTES ON THE DRAWINGS FOR ADDITIONAL WORK REQUIRED, NOT SPECIFICALLY MENTIONED IN THESE SPECIFICATIONS. ALL WORK CALLED FOR ON THE DRAWINGS BY NOTES SHALL BE FURNISHED AND INSTALLED WHETHER OR NOT SPECIFICALLY MENTIONED IN THE SPECIFICATIONS AND/OR DETAILS.

18. MATERIALS: ALL MATERIALS AND EQUIPMENT SPECIFIED IN THESE DRAWINGS SHALL BE NEW AND IN PERFECT CONDITION OR THE BEST GRADE OF THEIR RESPECTIVE KINDS WHERE INSTALLED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

19. SUBSTITUTIONS: DESIGN, MATERIAL, EQUIPMENT AND PRODUCTS OTHER THAN THOSE DESCRIBED OR INDICATED ON DRAWINGS MAY BE CONSIDERED FOR USE. WRITTEN APPROVAL FOR SUBSTITUTIONS SHALL BE OBTAINED FROM THE OWNER AND LANDSCAPE ARCHITECT. ALL SUBSTITUTIONS SHALL CONFORM TO LOCAL CODES AND ORDINANCES. ANY EQUIPMENT OR MATERIALS INSTALLED WITHOUT APPROVAL BY THE OWNER OR LANDSCAPE ARCHITECT MAY BE REJECTED AND REPLACED AT CONTRACTOR'S EXPENSE.

20. NOTICE OF COMPLETION: THE COMPLETION OF THE CONTRACT SHALL BE ACCEPTED, AND NOTICE OF COMPLETION RECORDED ONLY WHEN THE ENTIRE CONTRACT IS COMPLETED TO THE SATISFACTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE.

21. SITE MAINTENANCE: DURING CONSTRUCTION THE CONTRACTOR SHALL KEEP THE PROJECT SITE CLEAN AND FREE FROM RUBBISH AND DEBRIS. ALL DEBRIS SHALL BE REMOVED FROM SITE PER LOCAL CODE AND ORDINANCES.

22. MAINTENANCE INSTRUCTIONS: AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL INSTRUCT THE OWNER'S AUTHORIZED REPRESENTATIVE ON HOW TO PROPERLY MAINTAIN AND CARE FOR LANDSCAPE PLANTINGS.

23. GUARANTEE: THE ENTIRE LANDSCAPE INCLUDING ALL WORK DONE UNDER THIS CONTRACT, SHALL BE GUARANTEED AGAINST ALL DEFECTS AND FAULT OF MATERIAL AND WORKMANSHIP, AND SHALL BE IN PERFECT WORKING ORDER FOR 90 DAYS FROM DATE OF COMPLETION BY THE CONTRACTOR WITHOUT EXPENSE TO THE OWNER. TREES SHALL BE GUARANTEED FOR ONE (1) YEAR. ALL MATERIALS USED SHALL CARRY A MANUFACTURER'S GUARANTEE OF MINIMUM ONE (1) YEAR. ANY SETTLING OF TREE/SHRUB WELLS WHICH MAY OCCUR DURING THE 90 DAY PERIOD FINAL ACCEPTANCE SHALL BE REPAIRED TO THE OWNER'S SATISFACTION BY THE CONTRACTOR WITHOUT EXPENSE TO THE OWNER -INCLUDING THE COMPLETE RESTORATION OF ALL DAMAGED PLANTING, PAVING OR OTHER IMPROVEMENTS OF ANY KIND.

B. FIELD OBSERVATIONS

1. FIELD OBSERVATION WORK: THE CONSULTANT SHALL VISIT THE SITE AT INTERVALS APPROPRIATE TO THE STAGE OF CONSTRUCTION, OR AS OTHERWISE AGREED TO IN WRITING BY THE CLIENT AND THE CONSULTANT, IN ORDER TO OBSERVE THE PROGRESS AND QUALITY OF THE WORK COMPLETED BY THE CONTRACTOR. SUCH VISITS AND OBSERVATION ARE NOT INTENDED TO BE AN EXHAUSTIVE CHECK OR A DETAILED INSPECTION OF THE CONTRACTOR'S WORK BUT RATHER ARE TO ALLOW THE CONSULTANT TO BECOME GENERALLY FAMILIAR WITH THE WORK IN PROGRESS AND TO DETERMINE, IN GENERAL, IF THE WORK IS PROCEEDING IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. BASED ON THIS GENERAL OBSERVATION, THE CONSULTANT SHALL KEEP THE CLIENT INFORMED ABOUT THE PROGRESS OF THE WORK AND SHALL ADVISE THE CLIENT ABOUT OBSERVED DEFICIENCIES IN THE WORK. IF THE CLIENT DESIRES MORE EXTENSIVE PROJECT OBSERVATION OR FULL-TIME PROJECT REPRESENTATION, THE CLIENT SHALL REQUEST THAT SUCH SERVICES BE PROVIDED BY THE CONSULTANT AS ADDITIONAL SERVICES IN ACCORDANCE WITH THE TERMS OF THIS AGREEMENT. THE CONSULTANT SHALL NOT SUPERVISE, DIRECT OR HAVE CONTROL OVER THE CONTRACTOR'S WORK NOR HAVE ANY RESPONSIBILITY FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES SELECTED BY THE CONTRACTOR NOR FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR PROGRAMS IN CONNECTION WITH THE WORK. THESE RIGHTS AND RESPONSIBILITIES ARE SOLELY THOSE OF THE CONTRACTOR IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.THE CONSULTANT SHALL NOT BE RESPONSIBLE FOR ANY ACTS OR OMISSIONS OF THE CONTRACTOR, ANY SUBCONTRACTOR, ANY ENTITY PERFORMING ANY PORTIONS OF THE WORK OR ANY AGENTS OR EMPLOYEES OF ANY OF THEM. THE CONSULTANT DOES NOT GUARANTEE THE PERFORMANCE OF THE CONTRACTOR AND SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO PERFORM ITS WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR ANY APPLICABLE LAWS, CODES, RULES OR REGULATIONS.

2. FIELD OBSERVATION COORDINATION: THE FOLLOWING OBSERVATIONS SHALL BE INITIATED BY THE CONTRACTOR AND COORDINATED THROUGH THE OWNER (JOB SUPERINTENDENT). THE CONTRACTOR SHALL NOTIFY THE OWNER (JOB SUPERINTENDENT) AND LANDSCAPE ARCHITECT NOT LESS THAN FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY OBSERVATION. CONTINUED WORK WITHOUT OBSERVATION OF ANY REQUIRED CHANGES OR MODIFICATIONS TO BE AT THE CONTRACTOR'S EXPENSE. THE OWNER (JOB SUPERINTENDENT) SHALL INFORM THE LANDSCAPE ARCHITECT AS TO THE PURPOSE AND TIME OF THE OBSERVATION FORTY-EIGHT (48) HOURS IN ADVANCE.

3. CLOSING OF WORK NOT INSPECTED: THE CONTRACTOR SHALL NOT ALLOW NOR CAUSE ANY OF THE WORK TO BE COVERED OR ENCLOSED UNTIL IT HAS BEEN INSPECTED, TESTED AND APPROVED BY THE CONSULTING ENGINEER OR AUTHORIZED REPRESENTATIVE AND/OR GOVERNMENTAL AUTHORITY HAVING JURISDICTION OVER THE WORK. SHOULD ANY OF THE WORK BE ENCLOSED OR COVERED BEFORE SUCH INSPECTION AND TEST, HE SHALL UNCOVER HIS WORK AT HIS OWN EXPENSE. AFTER IT HAS BEEN INSPECTED, TESTED AND APPROVED, THE CONTRACTOR SHALL MAKE ALL REPAIRS NECESSARY TO THE OWNER'S SATISFACTION.

4. TYPICAL JOB SITE MEETINGS AND INSPECTIONS:
   A. PRE-JOB MEETING ON SITE- PRIOR TO COMMENCEMENT OF WORK
   B. DURING SOIL PREPARATION
   C. AT COMPLETION OF SOIL PREPARATION
   D. COMPLETION OF WEED CONTROL
   E. PLANT MATERIAL INSPECTION
   F. GRADING CHECK PRIOR TO GROUND COVER
   G. PROGRESS / INSTALLATION INSPECTION
   H. COMPLETION OF PLANTING
   I. 30, 60, & 90-DAY MAINTENANCE INSPECTIONS

5. COMPLETION: WORK SHALL BE COMPLETED UPON FINAL APPROVAL BY OWNER AND LANDSCAPE ARCHITECT. A FINAL INSPECTION SHALL BE HELD UPON THE COMPLETION OF THE WORK PROVIDING THE CONTRACTOR HAS COMPLETED THE INSTALLATION OF ALL PHASES OF THE CONTRACT, RESOLVED ALL PUNCH LIST ITEMS AND CONFORMED TO ALL REQUIREMENTS OF THESE SPECIFICATIONS.

C. MATERIAL NOTES

1. GENERAL: THE ASSOCIATED PLANS COMPRISE THE PRINCIPLE MATERIALS BUT DOES NOT SET THE LIMITATION FOR MATERIALS REQUIRED. IT SHALL BE UP TO THE CONTRACTOR TO SHOW THAT AMPLE QUANTITIES OF THE REQUIRED MATERIALS WERE USED AND INSTALLED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS.

2. PLANT MATERIALS: ALL PLANTS SHALL BE HEALTHY, WELL ESTABLISHED NURSERY STOCK, FREE FROM WEEDS, INSECTS AND THEIR EGGS AND DISEASES. PLANTS SHALL BE FURNISHED IN THE QUANTITIES REQUIRED TO COMPLETE THE WORK AS INDICATED ON THE DRAWINGS AND SHALL BE OF THE SPECIES AND SIZES INDICATED ON THE PLANT LIST. ALL PLANTS SHALL MEET OR EXCEED THE SPECIFICATIONS SET FORTH BY THE PLAN LEGEND AND THE ARIZONA NURSERY ASSOCIATION. ALL PLANTS SHALL BE INSPECTED AND APPROVED PRIOR TO PLANTING.

3. REJECTION OF PLANT MATERIAL: THE OWNER OR LANDSCAPE ARCHITECT MAY REJECT ANY PLANT MATERIAL REGARDED AS UNSUITABLE AT ANY TIME AT NO ADDITIONAL COST TO THE OWNER

4. HANDLING/STORAGE: ALL PLANTS SHALL BE HANDLED AND STORED SO THEY ARE ADEQUATELY PROTECTED FROM DRYING OUT, SUN, WIND BURN, VANDALISM OR ANY OTHER INJURY.

5. TREE TAGGING: ALL SPECIMEN TREES CALLED OUT ON PLAN TO BE TAGGED SHALL BE SELECTED BY LANDSCAPE ARCHITECT.

6. TREE STAKES AND GUYS: TREE STAKES SHALL BE AN APPROVED LODGE POLE PINE. FURNISH AND INSTALL AS INDICATED BY TYPE AND SIZE ON DETAILS.

7. TREE TIES: SHALL BE FLEXIBLE NON-DETERIORATING SELF-FASTENING BLACK VINYL TREE TIES OF THE SIZES REQUIRED TO PROPERLY SUPPORT TREES, "CINCH TIES" OR EQUAL.

8. ROOT BARRIERS: CONTRACTOR SHALL INSTALL APPROVED ROOT BARRIERS ON ALL TREES WITHIN FIVE (5) FEET OF HARDSCAPE, STRUCTURES, ETC. ROOT BARRIERS ARE REQUIRED FOR ALL TREES PLACED WITHIN TEN (10) FEET OF ANY UNDERGROUND WET UTILITY.

9. SOD: SOD VARIETY SHALL BE PER PLANS. SOD SHALL BE SUPPLIED BY AN APPROVED SOD FARM OR , PURCHASED FROM A RECOGNIZED TURF NURSERY OF FIRST QUALITY, FRESH AND CLEAN.

10. AGRIFORM PLANTING TABLETS: SHALL BE 20-10-5 ANALYSIS PROLONGED RELEASE NITROGEN. 1 PER 1 GALLON, 2 PER 5 GALLON, 4 PER 15 GALLON, AND 6 PER BOX FOR SPECIMENS LARGER THAN 15 GALLON OR PER DRAWINGS. ADJUST AS REQUIRED PER SITE SOILS REPORT RECOMMENDATION.

11. COMMERCIAL FERTILIZER: SHALL BEAR THE MANUFACTURER'S GUARANTEED STATEMENT OF ANALYSIS AND SHALL BE CONTROLLED RELEASE TYPE FERTILIZER WITH THE FOLLOWING MINIMUM REQUIREMENTS:

16% NITROGEN - 7% PHOSPHORIC ACID - 12% POTASH (+ IRON)

ADJUST AS REQUIRED PER SITE SOILS REPORT RECOMMENDATION

12. SOIL SULFUR: STANDARD COMMERCIAL BRAND, GUARANTEED ANALYSIS OF 99% SULFUR (EXPRESSED AS ELEMENTAL) SUPPLIED IN UNOPENED BAGS WITH ANALYSIS ATTACHED.

13. BONE MEAL: : SHALL BE FINE GROUND, STEAMED, DRY MATERIAL WITH A MINIMUM ANALYSIS OF 1% NITROGEN - 30% PHOSPHORIC ACID - 69.5% UNDILUTED BONE.

14. SAMPLES: : SAMPLES OR CUT SHEETS OF ALL MATERIALS TO BE USED PER THE CONTRACT SHALL BE SUBMITTED FOR APPROVAL AND ANY SAMPLES SHALL BE STORED ON THE SITE UNTIL FURNISHING OF MATERIALS IS COMPLETED.

15. CERTIFICATES: CERTIFICATES FOR EACH DELIVERY OF BULK MATERIAL SHALL BE FURNISHED TO THE LANDSCAPE ARCHITECT BY THE CONTRACTOR. CERTIFICATES SHALL STATE THE SOURCE, QUANTITY AND TYPE OF MATERIAL AND DATE AND ADDRESS OF THE LOCATIONS IT WAS DELIVERED TO.

D. LANDSCAPE GRADING NOTES

1. SITE PREPARATION: THE CONTRACTOR SHALL REMOVE ALL WEEDS, ROCKS, DEBRIS, AND OTHER EXTRANEOUS MATERIALS FROM THE JOB SITE PRIOR TO PROCEEDING WITH ANY WORK.

2. SOIL PREPARATION: ALL SOIL PREPARATION SHALL BE INSTALLED AS PER THE SOIL AGRONOMY REPORT TO BE PROVIDED AND PAID FOR BY THE OWNER. SOILS REPORT SHALL CONTAIN FULL SOIL AMENDMENT RECOMMENDATIONS. THE REPORT SHALL BE IMMEDIATELY FORWARDED TO THE LANDSCAPE ARCHITECT UPON COMPLETION.

3. SOIL AMENDMENTS: THE SOIL AMENDMENTS SPECIFIED ARE FOR BIDDING PURPOSES ONLY. THE OWNER SHALL PROVIDE FOR A SOILS AGRONOMY REPORT FROM AN APPROVED SOILS LABORATORY AND/OR ANY ADDITIONAL SPECIFICATION PROVIDED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF PLANT MATERIALS.

4. TURF AREA CULTIVATION DEPTH: ALL NEW TURF AREAS SHALL BE CULTIVATED TO A DEPTH OF 6".

5. FINISH GRADE: FINISH GRADES SHALL BE THOSE INDICATED ON THE DRAWINGS OR AS MAY BE CONTROLLED BY EXISTING INSTALLATIONS. GRADES NOT OTHERWISE INDICATED SHALL BE UNIFORM. STRAIGHT LEVELS BETWEEN POINTS WHERE ELEVATIONS ARE DETERMINED. FINISH GRADES SHALL BE SMOOTH AND EVEN OF A UNIFORM PLANE WITH AN ABRUPT CHANGES IN THE SURFACE. MINOR MODELING OF THE GROUND SURFACE MAY BE REQUIRED. GRADES SHALL PROVIDE FOR THE NATURAL RUN-OFF OF WATER WITHOUT LOW SPOTS OR POCKETS. FLOW LINES SHALL BE SET BY INSTRUMENT AND SHALL BE THE MAXIMUM GRADIENT POSSIBLE.

6. DRAINAGE: THE CONTRACTOR SHALL BE RESPONSIBLE FOR POSITIVE DRAINAGE IN ALL PLANTING AREAS IN ACCORDANCE WITH THE PLANS, DETAILS AND SPECIFICATIONS OR AS SPECIFIED BY THE OWNER.

7. FINISH GRADE AT TURF AREAS: FINISH GRADE OF ALL TURF AREAS SHALL BE ONE INCH BELOW THE GRADE OF ADJACENT WALKS, PAVEMENTS, CURBS, ETC.

8. FINISH GRADE AT SHRUB AREAS: FINISH GRADE OF ALL SHRUBBERY AND GROUND COVER AREAS SHALL BE TWO INCHES BELOW THE GRADE OF ADJACENT WALKS, PAVEMENTS, CURBS, ETC., EXCEPT WHERE WATER FLOWS ACROSS SAME.

E. TREE AND SHRUB PLANTING NOTE:

1. PLANT DEPTH: PLANT ALL PLANTS AT THEIR NATURAL GROWING DEPTH PER DETAIL, IN THE LOCATIONS SHOWN ON THE DRAWINGS.

2. EXCAVATED PITS: EXCAVATE PITS WITH SQUARE AND VERTICAL SIDES, 3 TIMES THE DIAMETER, AND 12" GREATER IN DEPTH THAN THE SIZE OF THE PLANT CONTAINER.

3. BACKFILL MIXTURE: BACKFILL TO BOTTOM OF ROOT BALL WITH PREPARED NATIVE BACKFILL MIXTURE, TAP FIRMLY, SET PLANT IN CENTER OF PIT IN A VERTICAL POSITION, CROWN LEVEL WITH FINISH GRADE. BACKFILL BALANCE OF PIT WITH THE FOLLOWING PREPARED MIXTURE OR PER SOILS REPORT:

   10 PARTS TOP SOIL
   5 PARTS NATIVE SOIL
   1/4 LB. BONE MEAL
   AGRIFORM PLANT TABLETS, PER LEGEND

4. TREE LOCATIONS: TREE LOCATIONS TAKE PRECEDENCE OVER IRRIGATION LINES, CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NECESSARY.

5. WATER BASIN: CONSTRUCT A SIX INCH DEEP WATER BASIN, MULCH WITH A TWO INCH LAYER OF GRANITE GROUNDCOVER, AND WATER THOROUGHLY, BACKFILLING WITH ADDITIONAL MIX WHERE VOIDS APPEAR.

6. TREE STAKES: ALL NURSERY STAKES SHALL BE REMOVED AND ALL TREES SHALL BE INSTALLED WITH LODGE POLE STAKES DRIVEN 3 FEET INTO THE GROUND. TREE STAKES SHALL NOT PIERCE THE ROOTBALL AND NOT INJURE TREE ROOTS. SEE TREE PLANTING DETAILS.

7. TREE TIES: TREE TIES SHALL BE FASTENED TO THE TREE AND STAKE BY LOOPING THE TIES IN FIGURE 8'S WITH THE INSIDE OF THE TREE TRUNK. FASTEN TIE TO THE STAKE WITH ONE GALVANIZED ROOFING NAIL.

8. DEFECTS: ALL DEFECTS IN TREE AND SHRUB PLANTING SHALL BE CORRECTED THROUGH THE GUARANTEE PERIOD SPECIFIED HEREIN AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

F. VINE PLANTING NOTES

1. GENERAL: ALL VINES SHALL BE PLANTED PER THE VINE PLANTING DETAIL, AND THE WOOD SUPPORT STAKE SHALL BE CAREFULLY REMOVED WITHOUT DAMAGE TO THE ROOTBALL.

2. WOOD FENCES: VINES ATTACHED TO WOOD FENCES SHALL BE SECURED WITH GALVANIZED NAILS OR GALVANIZED EYE SCREWS AND HEAVY DUTY VINE TIES.

3. MASONRY WALLS: ON MASONRY WALLS ATTACH WITH ADHESIVE TYPE VINE SUPPORTS WITH SILICONE ADHESIVE OR GALVANIZED EYE SCREWS AND WIRE (PER DETAIL). ATTACH VINE WITH HEAVY DUTY VINE TIES.

G. GROUNDCOVER PLANTING NOTES

1. GENERAL: ALL GROUNDCOVER AREAS NOTED ON PLANS SHALL BE PLANTED PER THE SIZE INDICATED ON THE PLANS. PLANT PER SPACING NOTED IN THE LEGEND AND REFER TO DETAIL FOR LAYOUT DIMENSIONS.

2. SPACING: INSTALL PLANS IN AREAS AND TO SPACING AS SHOWN ON THE DRAWINGS IN EVENLY TRIANGULAR SPACED ROWS.

3. EXCAVATE PITS: EXCAVATE PITS A MINIMUM OF 2 TIMES THE CONTAINER SIZE WITH SUFFICIENT DEPTH TO ALLOW ROOT SYSTEM TO HANG FREE IN PIT. PLACE EACH PLANT AT ITS NATURAL GROWING DEPTH AND FIRM SOIL AROUND BASE OF PLANT WITHOUT PILING AT CROWN.

4. WATERING: WATER THOROUGHLY AFTER SUFFICIENT AREA HAS BEEN PLANTED. ANY PLANTINGS SHOWING EVIDENCE OF DRYING OUT OR BADLY WILTING WILL NOT BE ACCEPTED.

5. PRE-EMERGENT: APPLY SURFLAN OR APPROVED PRE-EMERGENT IMMEDIATELY AFTER PLANTING TO ALL GROUNDCOVER AREAS. HYDROSEEDED AREAS NOT INCLUDED.

6. DEFECTS: ALL DEFECTS IN GROUNDCOVER PLANTING SHALL BE CORRECTED THROUGH THE GUARANTEE PERIOD SPECIFIED HEREIN AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

H. SODDING NOTES

1. FINISH GRADE: SOIL SHALL BE LEFT 1 - 1/2' BELOW FINISH GRADE AS THE SOD WILL BRING THE LEVEL UP TO THE PROPER HEIGHT.

2. SITE PREPARATION: AFTER PREPARATION OF SOIL, THE AREA MUST BE PRE-IRRIGATED TO WET IT TO A DEPTH OF FOUR INCHES. IT SHALL BE DAMP BUT NOT MUDDY AND WITHOUT DEPRESSIONS.

3. HANDLING: INITIAL PLACEMENT OF SOD SHALL BE LAID WITHIN TWO DAYS AFTER IT IS DELIVERED. IT SHALL NOT BE LEFT IN THE HOT SUN, IN ROLLS, OR STACKED OVERNIGHT.

4. FERTILIZER: PRIOR TO PLACING OF SOD, BROADCAST 16-20-0 FERTILIZER AT A RATE OF SEVEN POUNDS PER 1,000 SQUARE FEET OVER SURFACE.

5. LAYOUT: SOD SHALL BE UNROLLED AND PLACED CAREFULLY IN A STAGGERED PATTERN. A PIECE OF 2 X 4 SHALL BE USED TO TAMP EACH ROLL AGAINST THE STRIPS TO ELIMINATE JOINTS AND EDGES.

6. INSTALLATION: AFTER LAYING SOD, IRRIGATE MODERATELY TO INSURE MOISTURE PENETRATION, THEN ROLL WITH A RYAN TYPE SOD ROLLER. SOD SHALL BE FLUSH WITH GRADES OF ADJACENT SIDEWALKS, CURBS AND HEADER BOARDS. WATER AND ROLL AGAIN IF GRADE DOES NOT MEET THESE CONDITIONS.

7. WATERING: AFTER ROLLING THE SOD, THE AREAS SHALL BE THOROUGHLY WATERED TO A DEPTH OF 6" AND KEPT CONTINUALLY MOIST FOR A PERIOD OF TEN DAYS.

8. DEFECTS: ALL DEFECTS IN SOD PLANTING SHALL BE CORRECTED THROUGH THE GUARANTEE PERIOD SPECIFIED HEREIN AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

I. SLOPE PLANTING NOTES

1. GENERAL: : THE OWNER SHALL HAVE A SOIL ANALYSIS MADE AFTER COMPLETION OF THE ROUGH GRADING. THE LANDSCAPE CONTRACTOR SHALL INCORPORATE ALL SOIL AMENDMENTS AND FERTILIZERS PRESCRIBED PER SOIL AGRONOMY REPORT. THE SOIL PREPARATION SPECIFIED BELOW SHALL BE ADJUSTED ACCORDINGLY TO THE ANALYSIS.

2. SLOPE TEXTURING (CUT SLOPES): THESE SURFACES SHALL BE ROUGHENED IN A HORIZONTAL DIRECTION FOLLOWING THE CONTOUR OF THE SLOPE. THE ROUGHENED TEXTURE SHALL BE MADE BY HAND RAKING OR SIMILAR MECHANICAL MEANS.

3. SLOPE TEXTURING (FILL SLOPES): THESE SURFACES SHALL BE COMPACTED AND FINISHED AND ALSO ROUGHENED IN A HORIZONTAL DIRECTION FOLLOWING THE CONTOUR OF THE SLOPES. THE ROUGHENED TEXTURE SHALL BE MADE BY HAND RAKING OR SIMILAR MECHANICAL MEANS.

4. WEED ERADICATION PROCEDURES:

A. MANUALLY REMOVE ALL EXISTING VEGETATION AND DISPOSE OF IT OFF-SITE IN A SUITABLE AND LAWFUL MANNER.

B. FERTILIZE ALL PLANTING AREAS WITH FERTILIZER BASED ON SOIL LAB'S RECOMMENDATIONS. (SEE PLANTING DETAIL SHEET). ADD ANY AND ALL SOIL AMENDMENTS AS REQUIRED, PER THE SOIL ANALYSIS. BEGIN WATERING PROCESS TO ACTIVATE FERTILIZER AND ADDITIVE CHEMICALS.

C. WATER ALL PLANTING AREAS THOROUGHLY AND CONTINUOUSLY FOR A PERIOD OF TWO (2) CONSECUTIVE WEEKS. THE LANDSCAPE ARCHITECT SHALL APPROVE SPECIFIC WATERING DURATION AND FREQUENCY PROGRAM DESIGNED TO GERMINATE ALL RESIDUAL WEED SEEDS.

D. DISCONTINUE WATERING PROCESS FOR TWO (2) DAYS, THEN APPLY 'ROUND-UP' TO THE SLOPES PER THE PEST CONTROL ADVISOR'S RECOMMENDATIONS. NO WATER SHALL BE APPLIED FOR A MINIMUM OF FOUR (4) DAYS FOLLOWING APPLICATION OF CONTACT WEED KILLER.

E. ALLOW SUFFICIENT PERIOD OF TIME TO ENSURE THAT ALL WEEDS ARE DEAD. REPEAT THE ABOVE PROCEDURE AS MANY TIMES AS NECESSARY TO ACHIEVE A WEED-FREE CONDITION.

F. CLEAR ALL DESICCATED WEEDS FROM THE SLOPES TO THE FINISHED GRADE.

5. WATERING: WATER ALL PLANTING AREAS THOROUGHLY AND CONTINUOUSLY FOR THREE (3) CONSECUTIVE DAYS TO SATURATE UPPER LAYERS OF SOIL PRIOR TO PLANTING.

6. PLANTING: PLANT TREES AND SHRUBS AS CALLED FOR WHERE INDICATED ON PLANTING PLAN AND AS DETAILED ON PLANTING DETAIL SHEET. SUBSTITUTIONS OF PLANTS WILL NOT BE ACCEPTED UNLESS APPROVED BY LANDSCAPE ARCHITECT. INSTALL AGRI-FORM PLANTING TABLETS AS CALLED FOR IN LEGEND. PLANT ALL CONTAINER GROWN PLANTS IN PLANTING PITS TWO (2) TIMES WIDER AND TWO (2) TIMES DEEPER THAN THE CONTAINER. THOROUGHLY MIX THE SPECIFIED MATERIALS FOUND IN THE SOIL ANALYSIS REPORT AND THOSE SPECIFIED ON THE PLANTING DETAIL SHEET, WITH THE SITE SOIL, PRIOR TO BACKFILLING OF PLANTING PITS.

7. DEFECTS: ALL DEFECTS IN SLOPE PLANTING SHALL BE CORRECTED THROUGH THE GUARANTEE PERIOD SPECIFIED HEREIN AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

J. MAINTENANCE NOTES

1. MAINTENANCE PERIOD: : THE MAINTENANCE PERIOD SHALL BE FOR 90 CALENDAR DAYS BEGINNING ON THE DAY OF THE CHECK INSPECTION AFTER ALL WORK HAS BEEN INSTALLED AND APPROVED BY THE LANDSCAPE ARCHITECT. THE MAINTENANCE PERIOD MAY BE EXTENDED TO INCLUDE ANY ADDITIONAL TIME THAT MAY BE REQUIRED TO MEET THE REQUIREMENTS OF THE WORK SPECIFIED.

2. GENERAL: THE GENERAL CARE AND MAINTENANCE OF ALL AREAS SHALL CONSIST OF PROPER WATERING, FERTILIZATION, WEEDING, RODENT CONTROL, CLEANUP, ETC.

3. SAFETY: ALL PLANT MATERIALS SHALL BE CHECKED AND MAINTAINED AS REQUIRED IN AN ONGOING PROGRAM TO ASSURE A SAFE ENVIRONMENT.

4. WATERING: WATER ALL PLANTINGS TO ASSURE COMPLETE GERMINATION OF ALL SEEDED AREAS AND CONTINUED GROWTH OF THE PLANTS. AREAS THAT DO NOT HAVE ADEQUATE IRRIGATION COVERAGE OR WHICH MAY REQUIRE ADDITIONAL DEEP WATERING SHALL BE WATERED BY HAND AS REQUIRED.

5. IRRIGATION COVERAGE: ADJUST ALL IRRIGATION HEADS IN EACH AREA AND ZONE OF EXPOSURE SO THAT THE OPTIMUM AMOUNT OF WATER IS APPLIED AT THE PROPER TIMES WITHOUT OVERTHROW ONTO WALLS, WALKS, ETC.

6. CULTIVATING AND WEEDING: CULTIVATE AND WEED ALL PLANTED AREAS AT REGULAR INTERVALS NOT TO EXCEED 15 DAYS. EXERCISE CARE WHEN CULTIVATING TO AVOID DAMAGE TO ROOTS OF THE GROWING PLANTS.

7. CHEMICAL HERBICIDES: A CERTIFIED TECHNICIAN SHALL APPLY CHEMICAL HERBICIDES TO CONTROL WEEDS AT THE OPTION OF THE CONTRACTOR AND UPON PRIOR APPROVAL BY THE LANDSCAPE ARCHITECT.

8. PEST AND DISEASE CONTROL: A CERTIFIED TECHNICIAN SHALL SPRAY AS NECESSARY TO CONTROL ALL INFESTATIONS.

9. RODENT CONTROL: THE CONTRACTOR SHALL TAKE THE NECESSARY STEPS TO ELIMINATE ANY RODENTS ENCOUNTERED ON SITE.

10. PRUNING: ALL PRUNING SHALL BE IN ACCORDANCE WITH ARBORS GUIDELINES. DAMAGED, DEAD OR DRYING BRANCHES SHALL BE REMOVED BACK TO A POINT OF GROWTH.

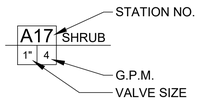
11. PLANT REPLACEMENTS: DURING THE MAINTENANCE PERIOD, SHOULD ANY PLANT SHOW WEAKNESS AND PROBABILITY OF DYING, IT SHALL BE REPLACED BY THE CONTRACTOR WITHIN 5 DAYS OF NOTIFICATION TO DO SO. AT THE END OF THE MAINTENANCE PERIOD, ALL PLANT MATERIAL SHALL BE IN A HEALTHY, GROWING CONDITION.

12. TURF AREAS: AT THE END OF EACH THIRTY DAY PERIOD OF MAINTENANCE, THE CONTRACTOR SHALL DO THE FOLLOWING. OVERSE

IRRIGATION LEGEND

SYM.	DESCRIPTION	MANUFACTURE	MODEL #	DETAIL #
	CONTROLLER	SEE PLAN	SEE PLAN	B, L309
1	WATER METER	REFER TO CIVIL	SEE PLAN	-
BF	BACKFLOW PREVENTER	FEBCO	825YA	A&C, L309
	W/ SECURITY ENCLOSURE	GUARDSHACK	TAN-GS	
	GATE VALVE	HAMMOND OR EQUAL	667-32	F, L309
	DRIP VALVE ASSEMBLY			D, L309
	W/BRASS BALL VALVE	WATTS	FBV	
	ELECTRIC VALVE	HUNTER	ICV	
	VALVE BOX	CARSON OR EQUAL	1220-12 (JUMBO)	
	FILTER	HUNTER	HY-100	
	PRESSURE REGULATOR	SENNINGER	PMR30MF4F4V	
	CONTROL VALVE	HUNTER	ICV	E, L309
	PVC MAINLINE	CRESLINE OR EQUAL	SEE BELOW (PURPLE)	R, L310
	PVC SLEEVE	CRESLINE OR EQUAL	SEE SCHEDULE	K, L309
	PVC LATERAL LINE	CRESLINE OR EQUAL	CLASS 200 (PURPLE)	-
S	PVC DRIP LATERAL (SHRUB)	CRESLINE OR EQUAL	3/4" CLASS 200 (PURPLE)	M&O, L310
T	PVC DRIP LATERAL (TREE)	CRESLINE OR EQUAL	3/4" CLASS 200 (PURPLE)	M&N, L310
	DRIP FLUSH CAP	SPEARS OR EQUAL	3/4" SCH. 40	G, L309
	QUICK COUPLER	HUNTER	HQ-5LRC W/SNAPLOCK OUTLET AND HSJ-1 SWING JOINT	H, L309
NOT SHOWN	EMITTER	BOWSMITH	SEE SCHEDULE	L300
	FLOOD BUBBLER	HUNTER	AFB	-

∗ ALL MAINLINE 3" AND LARGER SHALL BE CLASS 200 W/RUBBER RING WITH HARCO DUCTILE IRON FITTINGS AND CONCRETE THRUST BLOCKS. PIPE 2.5" AND SMALLER SHALL BE SOLVENT WELD SCH. 40. INSTALL TRACER WIRE WITH ALL MAINLINE 2" AND LARGER.
ALL IRRIGATION PIPE SHALL BE PURPLE PER CITY OF SURPRISE DEVELOPMENT STANDARD 8.2.(5).



GENERAL IRRIGATION NOTES:

- IRRIGATION CONTRACTOR TO REVIEW ACTUAL SITE CONDITIONS PRIOR TO INSTALLING IRRIGATION OR ORDERING MATERIALS. SOME ADJUSTMENTS IN EQUIPMENT LOCATIONS MAY BE REQUIRED TO MATCH ACTUAL CURRENT CONDITIONS. REVIEW ANY CHANGES WITH OWNERS REPRESENTATIVE.
- THE IRRIGATION SYSTEM HAS BEEN DESIGNED FOR A STATIC WATER PRESSURE OF 70 PSI. BEFORE THE BACKFLOW PREVENTER. CONTRACTOR TO CHECK WATER PRESSURE PRIOR TO STARTING CONSTRUCTION AND NOTIFY OWNER'S REPRESENTATIVE IF NOT MIN. 70 PSI.
- ALL MAINLINE FITTINGS SHALL BE SCHEDULE 80.
- REFER TO EMITTER SCHEDULE FOR TREE, SHRUB GPH. & NUMBER OF EMITTERS. USE MULT-PORT EMITTERS ON SHRUBS WHEN SPACING ALLOWS.
- EQUIPMENT SUBMITTAL FOR APPROVAL PRIOR TO ORDERING MATERIALS.
- SOME IRRIGATION PIPING AND EQUIPMENT ARE SHOWN SCHEMATIC AND ARE TO BE LOCATED IN THE IRRIGATION AREA.
- TREES IN TURF HAVE (1) MULTI-PORT EMITTER W/ SIX OUTLETS.
- LOCATE SPRAY HEADS 6" FROM HEADER AND WALKS. ADJUST NOZZLE TO PREVENT OVERSPRAY ON SIDEWALKS.
- EMBOSS VALVE BOX LIDS WITH CONTROLLER LETTER AND VALVE NUMBER AND INSTALL YELLOW CHRISTY VALVE TAG PER DETAIL.
- SLEEVE ALL SIDEWALKS TYPICAL PER SLEEVE SCHEDULE.
- USE MULT-PORT EMITTERS ON SHRUBS WHEN SPACING ALLOWS. REFER TO DETAIL.
- ALL IRRIGATION LINES AND EQUIPMENT ARE DIAGRAMMATIC AND ARE SOMETIMES SHOWN IN ROADWAYS AND HARDSCAPE FOR GRAPHIC CLARITY. LOCATE PIPING AND EQUIPMENT IN IRRIGATION.

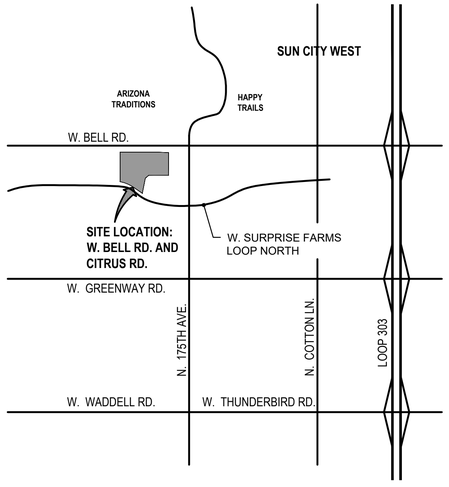
HUNTER ACC TWO-WIRE NOTES:

1. ALL VALVES ARE TO BE INSTALLED WITH HUNTER DECODERS ICD SERIES, 1, 2, 4 OR 6 STATION PER MANUFACTURES SPECIFICATIONS.
2. TWO-WIRE SHALL BE HUNTER ID1 BLU OR ID2 BLU BASED ON MAXIMUM DISTANCE TO DECODER.
   14 AWG WIRE PATH: 10,000'
   12 AWG WIRE PATH: 15,000'
3. INSTALL HUNTER SURGE ARRESTORS. PROVIDE GROUNDING OF THE TWO-WIRE PATH EVERY 12 DECODERS OR 1,000' OF WIRE RUN, WHICHEVER IS SHORTER. THE LAST DECODER ON A RUN SHALL BE GROUNDED. REFER TO DETAILS AND HUNTER SPECIFICATIONS.
4. ALL CONNECTIONS ON THE TWO-WIRE PATH SHALL BE MADE WITH DB (YORR) 6 WATERPROOF, STRAIN RELIEVING DIRECT BURIAL CONNECTIONS. DBY-6 CONNECTORS SHALL BE USED FOR ALL DECODER CONNECTIONS TWO-WIRE. DBY-6 CONNECTORS SHALL BE USED FOR ALL THE SPLICES IN THE PATH, GROUND WIRE CONNECTIONS OR WHEN JOINING 3 OR MORE WIRES. DECODER OUTPUT TO SOLENOID CONNECTIONS SHALL BE MADE WITH 3M DBY CONNECTORS.
5. LOCATE ALL WIRE SPLICES IN A 10" ROUND LOCKING VALVE BOX. PROVIDE 5'-0" OF SLACK AT ALL SPLICES AND CONNECTIONS. COIL SLACK AND PLACE INSIDE VALVE BOX.
6. REFER TO DECODER DETAIL AND HUNTER'S "ACC DECODER SYSTEM DESIGN GUIDE" FOR ADDITIONAL INSTALLATION REQUIREMENTS.

IRRIGATION NOTES:

1. Irrigation system has been designed for a static water pressure of 70 p.s.i.. Contractor to field verify pressure prior to starting irrigation installation. Notify consultant of any difference from stated pressure. If contractor fails to notify consultant he assumes full responsibility for any system alterations.
2. The contractor shall be responsible for completing the installation of a fully automated irrigation system prior to starting planting. If installation or operation of the irrigation system is interrupted for any reason, the contractor shall be responsible to continue manual watering of all plant material until the irrigation system is fully operative.
3. The contractor shall be responsible for all water service connections to the water meter. The contractor shall provide and install all connections down stream of the water meter and extend tap size type "K" hard copper from water meter through backflow preventer. Install per local city code.
4. All irrigation equipment to be located in decomposed granite IRRIGATION areas within property boundaries of the project. Specific written permission shall be obtained to locate valves or irrigation equipment in turf areas. All lines and equipment are schematic and are sometimes shown in roadways, sidewalks, or outside property lines. This is done for clarity purposes only. Locate valves and backflow prevention units within areas so that they are as visually unobtrusive as possible.
5. Do not install the irrigation system as shown on the drawings when it is obvious in the field that unknown obstructions, grade differences, or differences in area dimensions exist that might not have been considered in the engineering plans. Such obstructions or conflicts should be brought to the attention of the owner and IRRIGATION architect immediately. In the event this notification is not performed, the contractor shall assume full responsibility for any revision necessary.
6. All material used shall be installed as detailed. All irrigation equipment not otherwise detailed or specified shall be installed per manufacturer's recommendations and owner's representative and /or IRRIGATION architect.
7. The owner's representative may, at any time, take and analyze samples of materials and equipment for conformity to specifications. The contractor shall make such samples available upon request. Rejected material shall be immediately removed form the site and replaced at the contractor's expense.
8. Install backflow prevention units piping between the point of connection and the BFPU per local codes. The final location of the backflow prevention unit shall be approved by the owner's representative prior to installation.
9. 120 volt service to be provided by electrical contractor. The Irrigation contractor is responsible for power connection to controller. Coordinate connections, locations, equipment needs with electrical contractor prior to installation.
10. Contractor shall be responsible for supplying materials and labor to provide specified electrical service to all controller locations. All electrical work to be as per manufacturer's specifications and as per local code.
11. Level of pea gravel in irrigation boxes shall be a minimum or 2" below the bottom of the valve so that the valve is completely visible. All pea gravel in the valve box to be cleaned from top of valve so that the valve is completely visible. The lip of the valve box is also to be free of debris.
12. 24 volt wire shall be 600v, UF US approved, #14 gauge, single strand, plastic, insulated copper wire. Common wires to be white. Control wires to be red. No black wiring is to be used. Tape and bundle wire every 10' and lay beside mainline in trench. Splice in valve boxes only, using electrometric silicone connections. Provide 18" slack at each elbow in mainline trench and at each remote control valve. Pull one additional spare control wire to each valve box location for potential future use. Color of extra cable shall be green.
13. All drip systems to be flushed through flush caps. Flush caps to be located in 10" round tan color valve boxes with lids.
14. Pipe sizes shall conform to those shown on the drawings. No substitution of smaller pipe sizes shall be permitted, but substitutions of larger sizes may be approved by the IRRIGATION architect.
15. Backfill shall be placed in two or more compacted lifts. Settling of trenches by more than an inch shall be brought to finish grade at no additional cost to the owner.
16. All plants requiring more than one drip emitter shall have emitters distributed evenly around perimeter of the planting well. Emission points at the rootballs shall be located on the uphill side. Position emitter per details.
17. Prior to owner's approval, an irrigation tune up must be performed as follows:
    a. All irrigation equipment (including all pipe lines and and sleeves) to be documented from two stationary points.
    b. All drip systems to be flushed beginning with 'V strainer, working away from the pressure regulator.
    c. All irrigation sprinkler heads to be flushed of debris and flow controls. Adjusted to achieve 100% coverage for turf areas as applicable. Avoid overspray on all streets, curbs, walks and structures.
    d. All irrigation heads to be field and manually adjusted to the proper height.
18. Setback all spray and stream type irrigation heads 6" from back of curb, sidewalk, and/or driveways to reduce over spray. Alternatives to achieve similar results shall be approved by LA or owner's representative.
19. Plans are drawn for clarity to indicate coverage areas for the system. Irrigation laterals may be placed in common trenches to avoid extensive runs under pavement, where appropriate.
20. IRRIGATION contractor is fully responsible to provide owner with a complete set of As-Built drawings that are completely legible and accurate for the actual installation that was done by the IRRIGATION contractor. IRRIGATION contractor hired to do the installation shall be responsible for the accuracy of the As Built drawings.
21. Emboss valve box lids to corresponding controller station number. Letter height shall be 1" with additional labeling as follows: FC = flush cap, QC = quick coupler, GV = gate valve, WS = wire splice.
22. All valve assembly fittings shall be schedule 80.
23. Contractor is responsible for irrigating existing plant material throughout the construction period.
24. Contractor shall adjust the performance of the irrigation system for optimum plant growth based on actual site conditions, including soil types, slope or other variables that may deviate from project plans.
25. Irrigation mainline pipe shall be bedded in at least 2 inches of finely graded native soil or sand. After laying the pipe shall have at least 2" of finely graded native soil or sand over the top of the pipe. Finely graded native soil shall not have rocks larger than 1/2" in diameter.
26. Per Arizona house bill 2256, an 18 gage blue tracer wire shall be installed with 2 inch and larger mainline, 12 inches of which shall be coiled inside controller.

VICINITY MAP



PIPE SIZING SCHEDULE

PIPE SIZE	FLOW (GPM)	PIPE SIZE	FLOW (GPM)
1/2"	0 - 5	2"	36 - 60
3/4"	6 - 10	2-1/2"	61 - 80
1"	11 - 15	3"	81 - 120
1-1/4"	16 - 25	4"	121 - 200
1-1/2"	26 - 35		

ALL VALVE BOXES SHALL BE CARSON. ALL MAINLINE PIPE 3" AND LARGER SHALL BE A MINIMUM CLASS 200. RINGTITE PIPE. MAINLINE LESS THAN 3" SHALL BE A MINIMUM SCHEDULE 40 PVC. ALL LATERAL PIPE ABOVE1/2" SHALL BE A MINIMUM CLASS 200. ALL 1/2" LATERAL PIPE SHALL BE CLASS 315.

SLEEVE SCHEDULE

IRRIGATION PIPE SIZE	SLEEVE SIZE
1/2"	2"
3/4"	2"
1"	2"
1 1/2"	3"
2"	4"
2 1/2"	6"
3"	6"
4"	10"

NOTES

1. SLEEVE SIZE EQUALS THE SUM OF ALL PIPE WITHIN THE SLEEVE.
2. WIRE SLEEVES SHALL BE PROVIDED AS NOTED BELOW AND ARE NOT INDICATED ON THE PLANS.
3. ALL SLEEVES UNDER STREETS SHALL BE C 900 PVC FOR 4" & LARGER, USE SCH40 PVC FOR SMALLER SIZES. LOCATE WIRE SLEEVE ALONG ONE SIDE OF PIPE SLEEVE.
   1-24 WIRE, (1) 3" SCH. 40 SLEEVE
   25-48 WIRE, (1) 4" SCH. 40 SLEEVE
4. ALL SLEEVES SHALL EXTEND AT LEAST 2' BEYOND THE EDGE OF THE HARDSCAPE/PAVEMENT. SLEEVE SIDEWALKS AS REQUIRED.
5. TWO-WIRE SYSTEM
   1" WIRE/CABLE SLEEVE

EMITTER SCHEDULE (BOWSMITH)

TYPE	MODEL	QTY./PLANT	TOTAL GPH
TREES			
15 GAL.	ML-210	2	10
24" BOX	ML-210	2	10
36" BOX	ML-210	2	12
42" BOX	ML-210	2	12
48" BOX	ML-220	2	20
54" BOX	ML-220	2	20
60" BOX	ML-220	2	24
66" BOX	ML-220	3	36
72" BOX	ML-220	3	36
∗SHRUBS/GROUNDCOVERS			
1 GAL.	SL-210	1	1.0
5 GAL.	SL-210	1	1.0
CACTI	SL-206	1	0.5
OCOTILLO	SL-206	2	
SAGUARO	SL-206	2	

∗USE MULTI-PORT EMITTER ON THE SHRUBS WHEN GROUPINGS ALLOW. LIMIT DISTRIBUTION TUBING LENGTH TO 5'. TREES IN TURF TO BE INSTALLED WITH (1) MULTIPORT EMITTER WITH 3 OPEN PORTS. MONITOR WATER TO CACTI, DO NOT OVER WATER. ADJUST WATER TO OCOTILLO AND CACTI FOR OPTIMUM PLANT GROWTH PERIOD BY CAPPING EMITTER TUBING.

SPRAY HEAD SCHEDULE

SYMBOL	MANUFACTURER/MODEL	ARC	PSI	GPM	RADIUS
M	HUNTER MP1000 PROS-04-PRS40-CV	90-210	40		14'
N	HUNTER MP2000 PROS-04-PRS40-CV	360	40	1.48	19'
A	HUNTER MP3000 PROS-04-PRS40-CV	360	40	3.64	30'
B	HUNTER MP3000 PROS-04-PRS40-CV	90-210	40		30'
Y	HUNTER MP3000 PROS-04-PRS40-CV	210-270	40		30'
Φ	HUNTER MP800SR PROS-04-PRS40-CV	ADJ	40		10'

SYMBOL	MANUFACTURER/MODEL	PSI	GPM	RADIUS
2.0	HUNTER I-20-04	45	2.00	34'
3.0	HUNTER I-20-04	45	3.00	38'
4.0	HUNTER I-20-04	45	4.00	40'

SURPRISE
ARIZONA

watermarc
DESIGN LLC
622 Sandpiper Drive
Prescott, AZ. 86303
480.529.7337
marc@watermarcdesign.com

the design element
landscape architecture
the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
31270
MARC F. LANGE
1-16-20
REGISTERED
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL
175TH AVE. & BELL ROAD
SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR:
CD

ISSUED DATE:
1 / 16 / 2019

DRAWN BY: MB REVIEWED BY: ML

ARIZONA811
Know what's below.
Call 811 or click Arizona811.com before you dig.

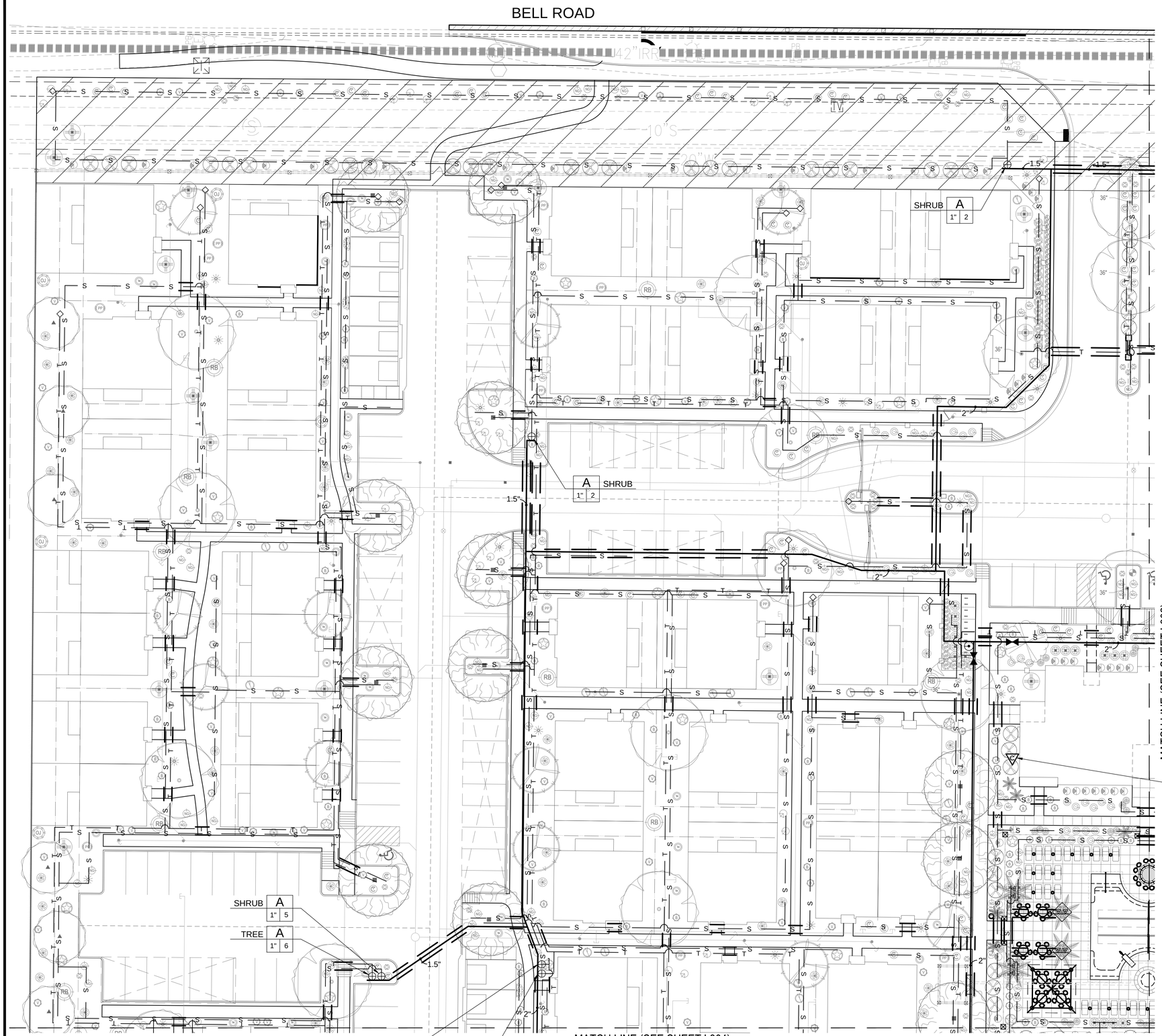
REVISIONS:

#	date	description

SHEET NAME:
IRRIGATION COVER

SHEET NUMBER:
L300
20 OF 33

SURPRISE TRACKING# FS19-645



IRRIGATION PLANS

IRRIGATION LEGEND

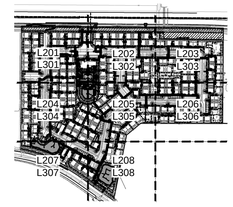
SYM.	DESCRIPTION
	CONTROLLER
1	WATER METER
BF	BACKFLOW PREVENTER W/ SECURITY ENCLOSURE
	GATE VALVE
	DRIP VALVE ASSEMBLY W/BRASS BALL VALVE
	ELECTRIC VALVE
	FILTER
	PRESSURE REGULATOR
	VALVE BOX
	CONTROL VALVE
	PVC MAINLINE
	PVC SLEEVE
S	PVC LATERAL LINE
S	PVC DRIP LATERAL (SHRUB)
T	PVC DRIP LATERAL (TREE)
	DRIP FLUSH CAP
	QUICK COUPLER
NOT SHOWN	EMITTER
	FLOOD BUBBLER

ALL MAINLINE 3" AND LARGER SHALL BE CLASS 200 W/RUBBER RING WITH HARCO DUCTILE IRON FITTINGS AND CONCRETE THRUST BLOCKS. PIPE 2.5" AND SMALLER SHALL BE SOLVENT WELD SCH. 40. INSTALL TRACER WIRE WITH ALL MAINLINE 2" AND LARGER.

A17 SHRUB 1" 4
- STATION NO.
- G.P.M.
- VALVE SIZE

CONTROLLER 'A'
HUNTER A2C-75D-M-WITH A2C-WIFI, 75 STATION TWO-WIRE DECODER SYSTEM WITH WIFI MODULE. WALL MOUNT CONTROLLER AT LOCATION SHOWN. REFER TO HUNTER TWO-WIRE NOTES ON COVER SHEET AND MANUFACTURES SPECIFICATIONS FOR INSTALLATION REQUIREMENTS. REFER TO ELECTRICAL PLANS FOR POWER. REFER TO DETAIL B, SHEET L309.

KEY MAP



watermarc
DESIGN LLC
622 Sandpiper Drive
Prescott, AZ. 86303
480.529.7337
marc@watermarcdesign.com

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD
SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR: CD

ISSUED DATE: 1 / 16 / 2019

DRAWN BY: MB REVIEWED BY: ML

ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com before you dig.

REVISIONS:

#	date	description

SHEET NAME:
IRRIGATION PLAN

SHEET NUMBER:
L301
21 OF 33

SURPRISE TRACKING# FS19-645

BELL ROAD

1408' - 8"

A SHRUB 1" 2

A TREE 1" 2

A SHRUB 1" 2

MATCH LINE (SEE SHEET L301)

MATCH LINE (SEE SHEET L303)

MATCH LINE (SEE SHEET L305)

IRRIGATION PLANS

SCALE: 1" = 20'-0"

0 10' 20' 40' 60'

NORTH

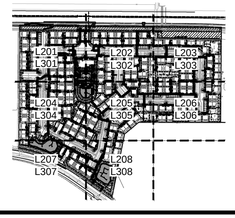
IRRIGATION LEGEND

SYM.	DESCRIPTION
	CONTROLLER
1	WATER METER
BF	BACKFLOW PREVENTER W/ SECURITY ENCLOSURE
	GATE VALVE
	DRIP VALVE ASSEMBLY W/BRASS BALL VALVE
	ELECTRIC VALVE
	FILTER
	PRESSURE REGULATOR
	VALVE BOX
	CONTROL VALVE
	PVC MAINLINE
	PVC SLEEVE
	PVC LATERAL LINE
S	PVC DRIP LATERAL (SHRUB)
T	PVC DRIP LATERAL (TREE)
	DRIP FLUSH CAP
	QUICK COUPLER
NOT SHOWN	EMITTER
	FLOOD BUBBLER

ALL MAINLINE 3" AND LARGER SHALL BE CLASS 200 W/RUBBER RING WITH HARCO DUCTILE IRON FITTINGS AND CONCRETE THRUST BLOCKS. PIPE 2.5" AND SMALLER SHALL BE SOLVENT WELD SCH. 40. INSTALL TRACER WIRE WITH ALL MAINLINE 2" AND LARGER.

STATION NO.
A17 SHRUB
1" 4
G.P.M.
VALVE SIZE

KEY MAP



watermarc
DESIGN LLC
622 Sandpiper Drive
Prescott, AZ. 86303
480.529.7337
marc@watermarcdesign.com

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD

SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR:
CD

ISSUED DATE:
1 / 16 / 2019

DRAWN BY: MB REVIEWED BY: ML

ARIZONA811
Know what's below.
Call 811 or click Arizona811.com before you dig.

REVISIONS:

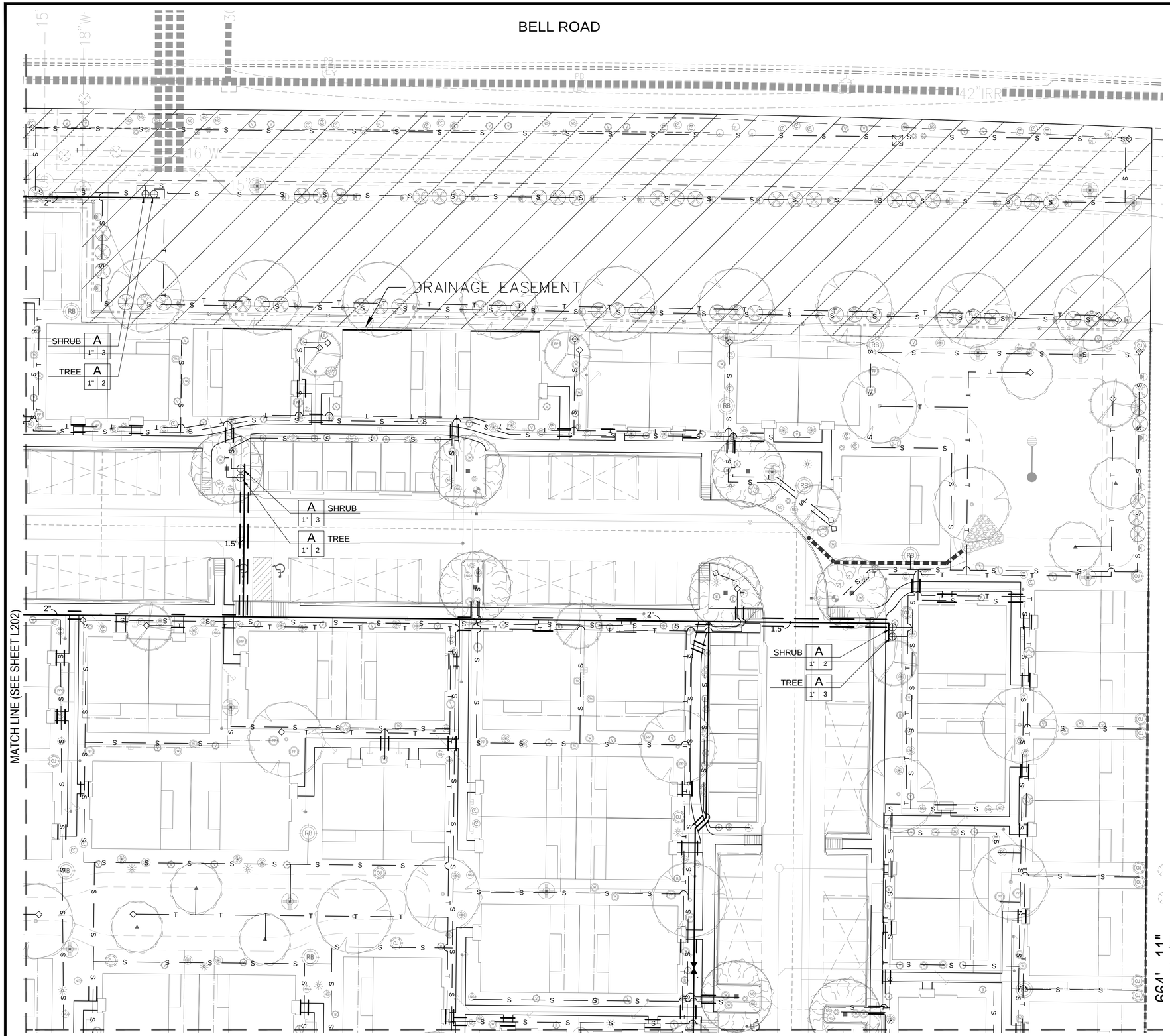
#	date	description

SHEET NAME:
IRRIGATION PLAN

SHEET NUMBER:
L302
22 OF 33

SURPRISE TRACKING# FS19-645

BELL ROAD



IRRIGATION LEGEND

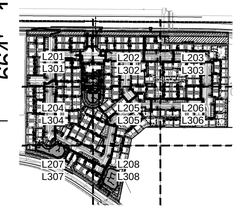
SYM.	DESCRIPTION
1	CONTROLLER
	WATER METER
BF	BACKFLOW PREVENTER W/ SECURITY ENCLOSURE
	GATE VALVE
	DRIP VALVE ASSEMBLY W/BRASS BALL VALVE
	ELECTRIC VALVE
	FILTER
	PRESSURE REGULATOR
	VALVE BOX
	CONTROL VALVE
	PVC MAINLINE
	PVC SLEEVE
	PVC LATERAL LINE
S	PVC DRIP LATERAL (SHRUB)
T	PVC DRIP LATERAL (TREE)
	DRIP FLUSH CAP
	QUICK COUPLER
NOT SHOWN	EMITTER
	FLOOD BUBBLER

ALL MAINLINE 3" AND LARGER SHALL BE CLASS 200 W/RUBBER RING WITH HARCO DUCTILE IRON FITTINGS AND CONCRETE THRUST BLOCKS. PIPE 2.5" AND SMALLER SHALL BE SOLVENT WELD SCH. 40. INSTALL TRACER WIRE WITH ALL MAINLINE 2" AND LARGER.

STATION NO.
A17 SHRUB
1" 4
G.P.M.
VALVE SIZE

SCALE: 1" = 20'-0"
0 10' 20' 40' 60'
NORTH

KEY MAP



IRRIGATION PLANS

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
DATE OF STATE RE
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD

SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR: CD

ISSUED DATE: 1 / 16 / 2019

DRAWN BY: MB REVIEWED BY: ML

Know what's below.
Call 811 or click Arizona811.com before you dig.

REVISIONS:

#	date	description

SHEET NAME:
IRRIGATION PLAN

SHEET NUMBER:
L303
23 OF 33

SURPRISE TRACKING# FS19-645

watermarc
DESIGN LLC
622 Sandpiper Drive
Prescott, AZ. 86303
480.529.7337
marc@watermarcdesign.com

MATCH LINE (SEE SHEET L301)

MATCH LINE (SEE SHEET L305)

MATCH LINE (SEE SHEET L307)

TREE A 1" 3

SHRUB A 1" 3

A PALM 1" 6

A TREE 1" 1

A SHRUB 1" 3

TURF A 1.5" 21

A TURF 1" 12

A TURF 1.5" 28

SHRUB A 1" 4

TREE A 1" 4

IRRIGATION LEGEND

SYM.	DESCRIPTION
	CONTROLLER
1	WATER METER
BF	BACKFLOW PREVENTER W/ SECURITY ENCLOSURE
	GATE VALVE
	DRIP VALVE ASSEMBLY W/BRASS BALL VALVE
	ELECTRIC VALVE
	FILTER
	PRESSURE REGULATOR
	VALVE BOX
	CONTROL VALVE
	PVC MAINLINE
	PVC SLEEVE
	PVC LATERAL LINE
	PVC DRIP LATERAL (SHRUB)
	PVC DRIP LATERAL (TREE)
	DRIP FLUSH CAP
	QUICK COUPLER
NOT SHOWN	EMITTER
	FLOOD BUBBLER

ALL MAINLINE 3" AND LARGER SHALL BE CLASS 200 W/RUBBER RING WITH HARCO DUCTILE IRON FITTINGS AND CONCRETE THRUST BLOCKS. PIPE 2.5" AND SMALLER SHALL BE SOLVENT WELD SCH. 40. INSTALL TRACER WIRE WITH ALL MAINLINE 2" AND LARGER.

STATION NO.

A17 SHRUB 1" 4

G.P.M.

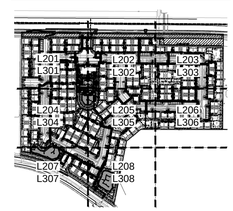
VALVE SIZE

SCALE: 1" = 20'-0"

0 10' 20' 40' 60'

NORTH

KEY MAP



IRRIGATION PLANS

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL
175TH AVE. & BELL ROAD
SURPRISE, ARIZONA

watermarc
DESIGN LLC
622 Sandpiper Drive
Prescott, AZ. 86303
480.529.7337
marc@watermarcdesign.com

PROJECT NUMBER: 19021

ISSUED FOR: CD

ISSUED DATE: 1 / 16 / 2019

DRAWN BY: MB REVIEWED BY: ML

ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com before you dig.

REVISIONS:

#	date	description

SHEET NAME:
IRRIGATION PLAN

SHEET NUMBER:
L304
24 OF 33

SURPRISE TRACKING# FS19-645

MATCH LINE (SEE SHEET L302)

MATCH LINE (SEE SHEET L304)

MATCH LINE (SEE SHEET L306)

MATCH LINE (SEE SHEET L308)

A TURF 1" 4
A SHRUB 1" 4
A TREE 1" 5
SHRUB A 1" 2
TREE A 1" 1
A TREE 1" 6
A SHRUB 1.5" 24
SHRUB A 1" 3
TREE A 1" 2
TREE A 1" 3
SHRUB A 1" 3
TREE A 1" 4
SHRUB A 1" 4

2" 1" 1½" 1.5" 3.0 DRIVE AREA SEDAN

127' - 3"

IRRIGATION PLANS

SCALE: 1" = 20'-0"

0 10' 20' 40' 60'

NORTH

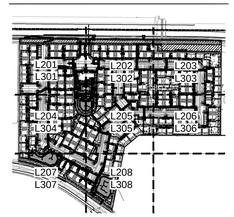
IRRIGATION LEGEND

SYM.	DESCRIPTION
	CONTROLLER
1	WATER METER
BF	BACKFLOW PREVENTER W/ SECURITY ENCLOSURE
	GATE VALVE
	DRIP VALVE ASSEMBLY W/BRASS BALL VALVE
	ELECTRIC VALVE
	FILTER
	PRESSURE REGULATOR
	VALVE BOX
	CONTROL VALVE
	PVC MAINLINE
	PVC SLEEVE
	PVC LATERAL LINE
S	PVC DRIP LATERAL (SHRUB)
T	PVC DRIP LATERAL (TREE)
	DRIP FLUSH CAP
	QUICK COUPLER
NOT SHOWN	EMITTER
	FLOOD BUBBLER

ALL MAINLINE 3" AND LARGER SHALL BE CLASS 200 W/RUBBER RING WITH HARCO DUCTILE IRON FITTINGS AND CONCRETE THRUST BLOCKS. PIPE 2.5" AND SMALLER SHALL BE SOLVENT WELD SCH. 40. INSTALL TRACER WIRE WITH ALL MAINLINE 2" AND LARGER.

A17 SHRUB 1" 4
STATION NO.
G.P.M.
VALVE SIZE

KEY MAP



watermarc
DESIGN LLC
622 Sandpiper Drive
Prescott, AZ. 86303
480.529.7337
marc@watermarcdesign.com

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD

SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR: CD

ISSUED DATE: 1 / 16 / 2019

DRAWN BY: MB REVIEWED BY: ML

ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com before you dig.

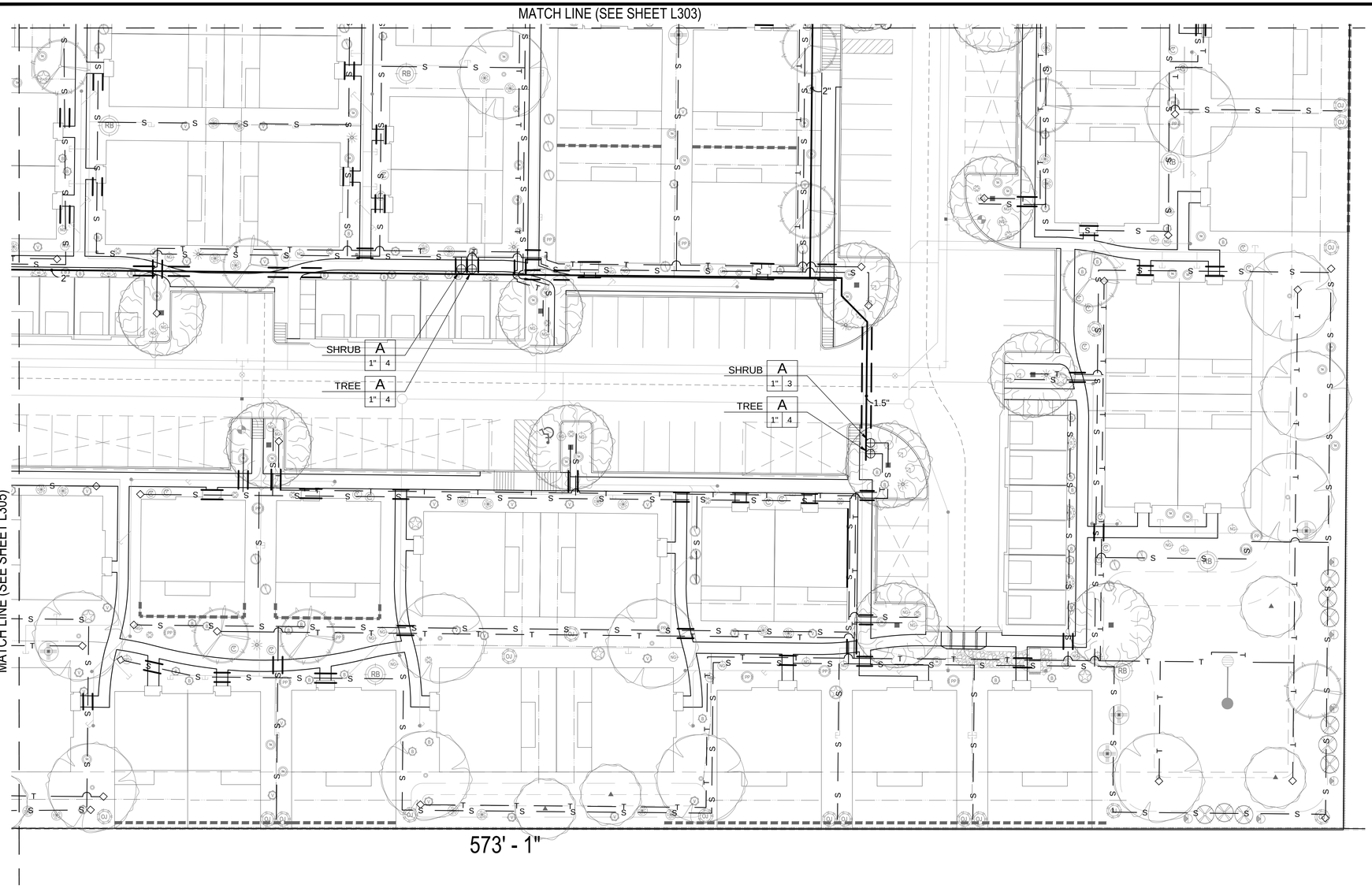
REVISIONS:

#	date	description

SHEET NAME:
IRRIGATION PLAN

SHEET NUMBER:
L305
25 OF 33

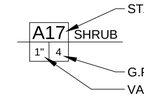
SURPRISE TRACKING# FS19-645



IRRIGATION LEGEND

SYM.	DESCRIPTION
	CONTROLLER
1	WATER METER
BF	BACKFLOW PREVENTER W/ SECURITY ENCLOSURE
	GATE VALVE
	DRIP VALVE ASSEMBLY W/BRASS BALL VALVE
	ELECTRIC VALVE
	FILTER
	PRESSURE REGULATOR
	VALVE BOX
	CONTROL VALVE
	PVC MAINLINE
	PVC SLEEVE
	PVC LATERAL LINE
S	PVC DRIP LATERAL (SHRUB)
T	PVC DRIP LATERAL (TREE)
	DRIP FLUSH CAP
	QUICK COUPLER
NOT SHOWN	EMITTER
	FLOOD BUBBLER

ALL MAINLINE 3" AND LARGER SHALL BE CLASS 200 W/RUBBER RING WITH HARCO DUCTILE IRON FITTINGS AND CONCRETE THRUST BLOCKS. PIPE 2.5" AND SMALLER SHALL BE SOLVENT WELD SCH. 40. INSTALL TRACER WIRE WITH ALL MAINLINE 2" AND LARGER.



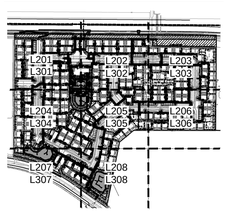
IRRIGATION PLANS

SCALE: 1" = 20'-0"

0 10' 20' 40' 60'

NORTH

KEY MAP



watermarc
DESIGN LLC
622 Sandpiper Drive
Prescott, AZ. 86303
480.529.7337
marc@watermarcdesign.com

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.

EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD

SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR:
CD

ISSUED DATE:
1 / 16 / 2019

DRAWN BY: MB REVIEWED BY: ML

ARIZONA811
Know what's below.
Call 811 or click Arizona811.com before you dig.

REVISIONS:

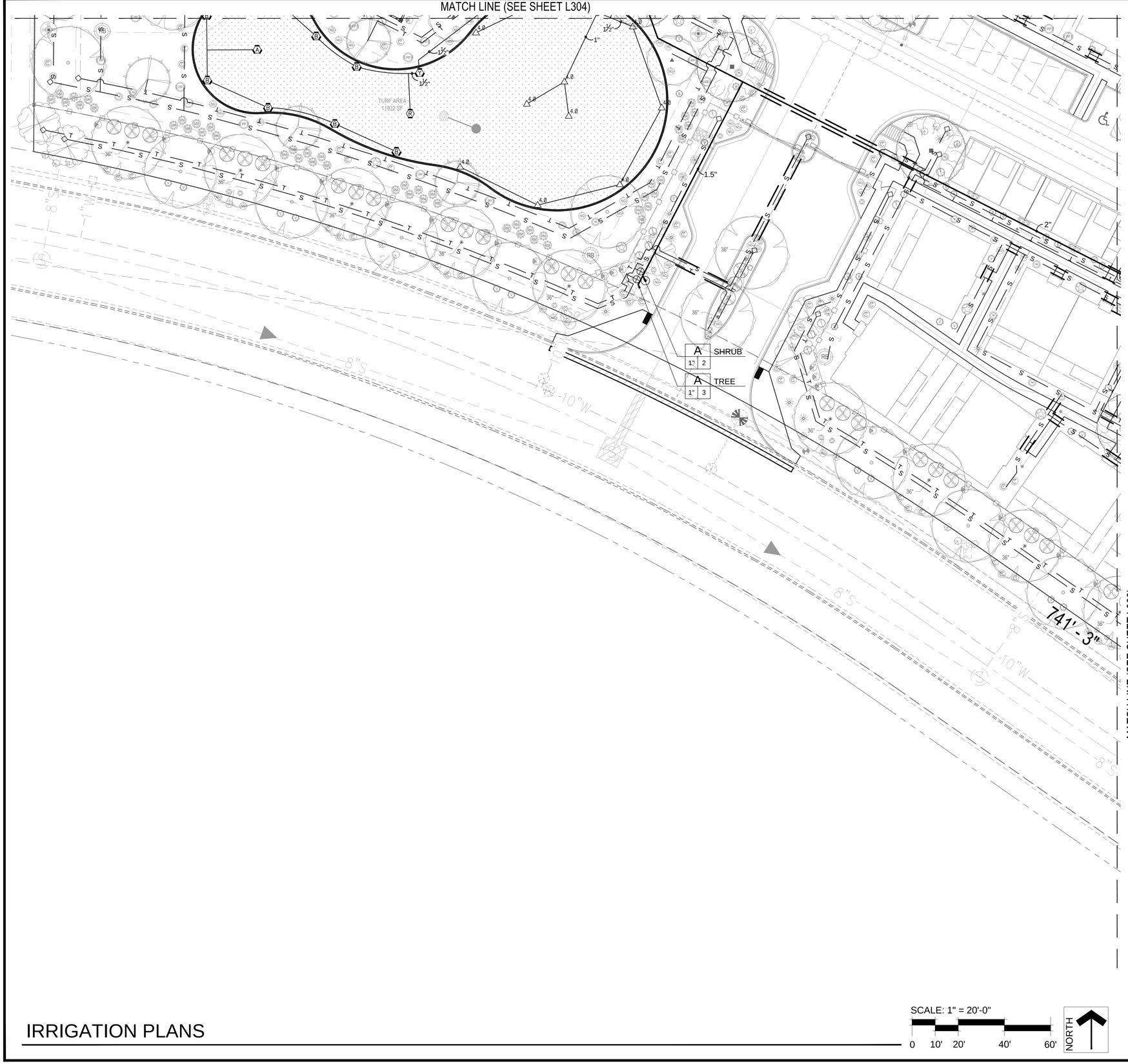
#	date	description

SHEET NAME:
IRRIGATION PLAN

SHEET NUMBER:
L306
26 OF 33

SURPRISE TRACKING# FS19-645

MATCH LINE (SEE SHEET L304)

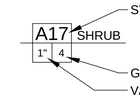


MATCH LINE (SEE SHEET L308)

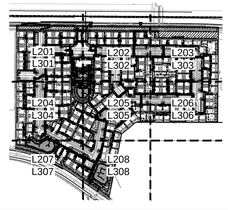
IRRIGATION LEGEND

SYM.	DESCRIPTION
	CONTROLLER
1	WATER METER
BF	BACKFLOW PREVENTER W/ SECURITY ENCLOSURE
	GATE VALVE
	DRIP VALVE ASSEMBLY W/BRASS BALL VALVE
	ELECTRIC VALVE
	FILTER
	PRESSURE REGULATOR
	VALVE BOX
	CONTROL VALVE
	PVC MAINLINE
	PVC SLEEVE
S	PVC LATERAL LINE
S	PVC DRIP LATERAL (SHRUB)
T	PVC DRIP LATERAL (TREE)
	DRIP FLUSH CAP
	QUICK COUPLER
NOT SHOWN	EMITTER
	FLOOD BUBBLER

ALL MAINLINE 3" AND LARGER SHALL BE CLASS 200 W/RUBBER RING WITH HARCO DUCTILE IRON FITTINGS AND CONCRETE THRUST BLOCKS. PIPE 2.5" AND SMALLER SHALL BE SOLVENT WELD SCH. 40. INSTALL TRACER WIRE WITH ALL MAINLINE 2" AND LARGER.



KEY MAP



SCALE: 1" = 20'-0"

0 10' 20' 40' 60'

NORTH

IRRIGATION PLANS

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
DATE OF STATE RE
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL
175TH AVE. & BELL ROAD
SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR:
CD

ISSUED DATE:
1 / 16 / 2019

DRAWN BY: MB REVIEWED BY: ML

ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com before you dig.

REVISIONS:

#	date	description

SHEET NAME:
IRRIGATION PLAN

SHEET NUMBER:
L307
27 OF 33

SURPRISE TRACKING# FS19-645

watermarc
DESIGN LLC
622 Sandpiper Drive
Prescott, AZ. 86303
480.529.7337
marc@watermarcdesign.com

MATCH LINE (SEE SHEET L305)

MATCH LINE (SEE SHEET L307)

SHRUB A 1" 4

TREE A 1" 4

TURF A 1.5" 28

TURF A 1" 14

SHRUB A 1" 2

TREE A 1" 3

TURF AREA
12000 SF

452' - 9"

POINT OF CONNECTION #1
2" WATER METER AND 2" REDUCED PRESSURE BACKFLOW PREVENTER W/ METAL SECURITY ENCLOSURE. REFER TO DETAILS A & C, SHEET L309.

IRRIGATION PLANS

SCALE: 1" = 20'-0"

0 10' 20' 40' 60'

NORTH

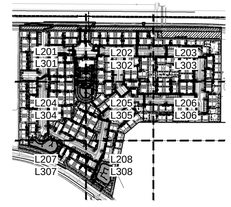
IRRIGATION LEGEND

SYM.	DESCRIPTION
	CONTROLLER
1	WATER METER
BF	BACKFLOW PREVENTER W/ SECURITY ENCLOSURE
	GATE VALVE
	DRIP VALVE ASSEMBLY W/BRASS BALL VALVE
	ELECTRIC VALVE
	FILTER
	PRESSURE REGULATOR
	VALVE BOX
	CONTROL VALVE
	PVC MAINLINE
	PVC SLEEVE
	PVC LATERAL LINE
S	PVC DRIP LATERAL (SHRUB)
T	PVC DRIP LATERAL (TREE)
	DRIP FLUSH CAP
	QUICK COUPLER
NOT SHOWN	EMITTER
	FLOOD BUBBLER

ALL MAINLINE 3" AND LARGER SHALL BE CLASS 200 W/RUBBER RING WITH HARCO DUCTILE IRON FITTINGS AND CONCRETE THRUST BLOCKS. PIPE 2.5" AND SMALLER SHALL BE SOLVENT WELD SCH. 40. INSTALL TRACER WIRE WITH ALL MAINLINE 2" AND LARGER.

A17 SHRUB 1" 4
- STATION NO.
- G.P.M.
- VALVE SIZE

KEY MAP



watermarc
DESIGN LLC
622 Sandpiper Drive
Prescott, AZ. 86303
480.529.7337
marc@watermarcdesign.com

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.

EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD

SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR:
CD

ISSUED DATE:
1 / 16 / 2019

DRAWN BY: MB REVIEWED BY: ML

Know what's below.
Call 811 or click Arizona811.com before you dig.

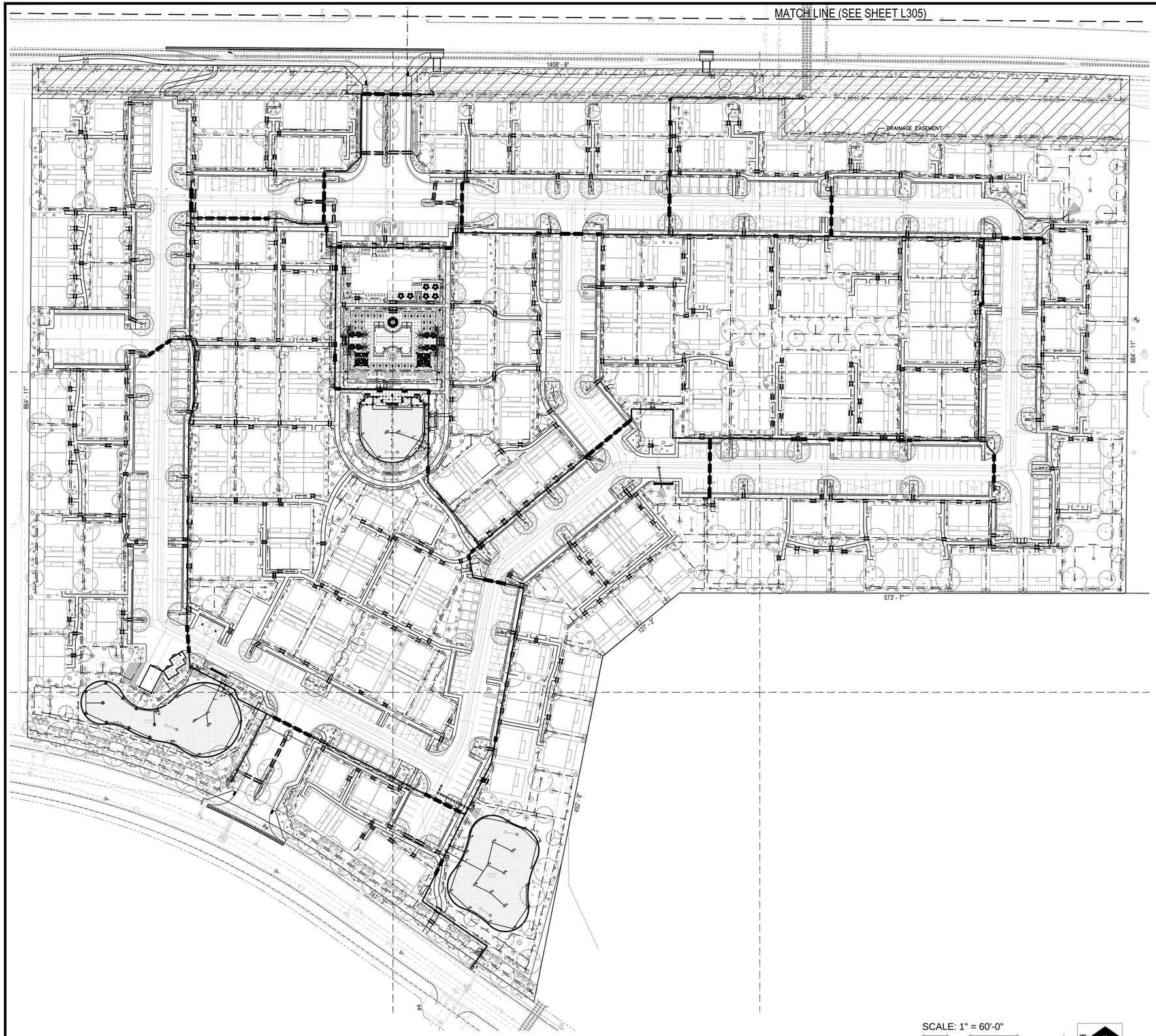
REVISIONS:

#	date	description

SHEET NAME:
IRRIGATION PLAN

SHEET NUMBER:
L308
28 OF 33

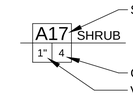
SURPRISE TRACKING# FS19-645



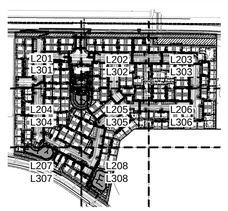
IRRIGATION LEGEND

SYM.	DESCRIPTION
1	CONTROLLER
M	WATER METER
BF	BACKFLOW PREVENTER W/ SECURITY ENCLOSURE
	GATE VALVE
	DRIP VALVE ASSEMBLY W/BRASS BALL VALVE
	ELECTRIC VALVE
	FILTER
	PRESSURE REGULATOR
	VALVE BOX
	CONTROL VALVE
	PVC MAINLINE
	PVC SLEEVE
	PVC LATERAL LINE
S	PVC DRIP LATERAL (SHRUB)
T	PVC DRIP LATERAL (TREE)
	DRIP FLUSH CAP
	QUICK COUPLER
NOT SHOWN	EMITTER
	FLOOD BUBBLER

ALL MAINLINE 3" AND LARGER SHALL BE CLASS 200 W/RUBBER RING WITH HARCO DUCTILE IRON FITTINGS AND CONCRETE THRUST BLOCKS. PIPE 2.5" AND SMALLER SHALL BE SOLVENT WELD SCH. 40. INSTALL TRACER WIRE WITH ALL MAINLINE 2" AND LARGER.



INDEX



IRRIGATION PLANS - ENTIRE PARCEL

SCALE: 1" = 60'-0"

0 30' 60' 120' 180'

NORTH

watermarc
DESIGN LLC
622 Sandpiper Drive
Prescott, AZ. 86303
480.529.7337
marc@watermarcdesign.com

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL
175TH AVE. & BELL ROAD
SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR:
CD

ISSUED DATE:
1 / 16 / 2019

DRAWN BY: MB REVIEWED BY: ML

ARIZONA811
Know what's below.
Call 811 or click Arizona811.com before you dig.

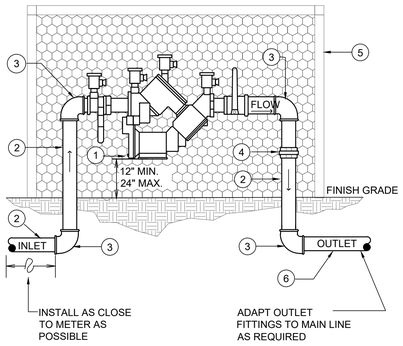
REVISIONS:

#	date	description

SHEET NAME:
IRRIGATION PLAN

SHEET NUMBER:
L309
29 OF 33

SURPRISE TRACKING# FS19-645



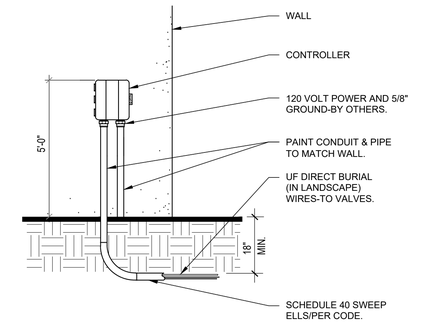
LIST OF MATERIALS

1. APPROVED REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY, BALL VALVES INCLUDED.
2. TYPE "L" COPPER PIPE, 3/4" THRU 2"
3. 90° ELL, COPPER, 3/4" THRU 2"
4. PIPE UNION, BRASS OR COPPER
5. GUARDSHACK ENCLOSURE (SEE DETAIL C)
6. SCHEDULE 80 PVC MAINLINE

GENERAL NOTES:

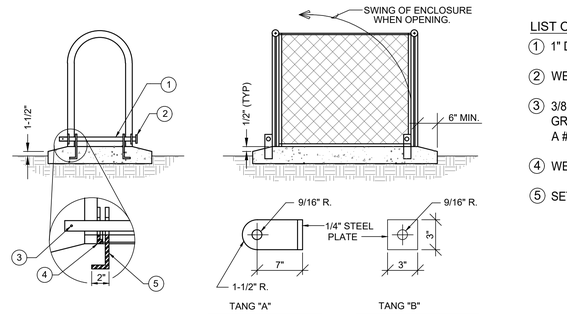
- BACKFLOW PREVENTERS MUST BE TESTED BY A CERTIFIED TESTER BEFORE A FINAL APPROVAL IS ISSUED.
- ALL COPPER PIPE JOINTS SHALL BE SOLDERED. THE SOLDER ALLOY SHALL COMPLY W/ASTM B 32 HAVING A SILVER CONTENT OF NOT LESS THAN 3.4% INTENDED FOR JOINING COPPER PIPES FOR POTABLE WATER SYSTEMS (GRADES SN 94, SN 95, OR SN 96). THE FLUX SHALL BE TYPE OA FOR GENERAL SOLDERING ON COPPER
- INSTALL A BRASS PIPE PLUG IN EACH TEST COCK ON THE ASSEMBLY.
- FINISHED GRADE UNDER THE BACKFLOW PREVENTER SHALL BE COMPACTED TO 95% OF MAX. DENSITY.
- PROVIDE 12-INCH MIN. CLEARANCE BETWEEN BACKFLOW PREVENTION ASSEMBLY AND PERMANENT STRUCTURES OF LANDSCAPE VEGETATION.

A | SCALE: NTS | SN: - | REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY



- ALL WIRING TO BE INSTALLED PER LOCAL CODE, SEE MANUAL FOR MOUNTING INSTRUCTIONS.
- ALL WIRE SHALL BE LOCATED WITHIN CONDUIT PER LOCAL CODE AS NOTED ON ELECTRICAL PLANS.
- GROUNDING PER CONTROLLER MANUFACTURE SPECIFICATIONS.

B | SCALE: NTS | SN: - | CONTROLLER (WALL MOUNT)



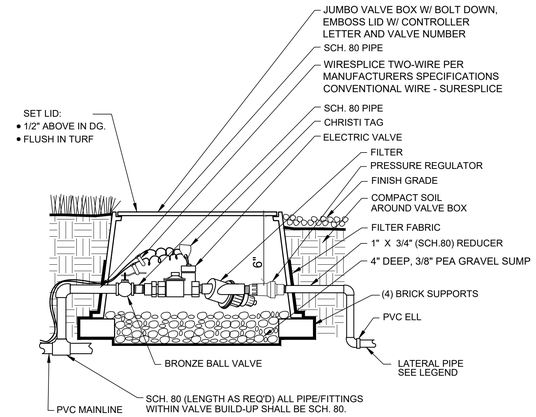
LIST OF MATERIALS

1. 1" DIAMETER LOW CARBON STAINLESS STEEL BAR.
2. WELD 1/4" X 1-1/2" DIAMETER STOP PLATE.
3. 3/8" DIAMETER DRILL THRU FOR PADLOCK. GRIND OUT AS NEEDED TO CLEARLY ACCOMODATE A #5 "MASTER LOCK"
4. WELD TANG "B" TO STEEL ANGLE. WELD ALL AROUND.
5. SET TANG "A" INTO CONCRETE SLAB (4" MIN.)

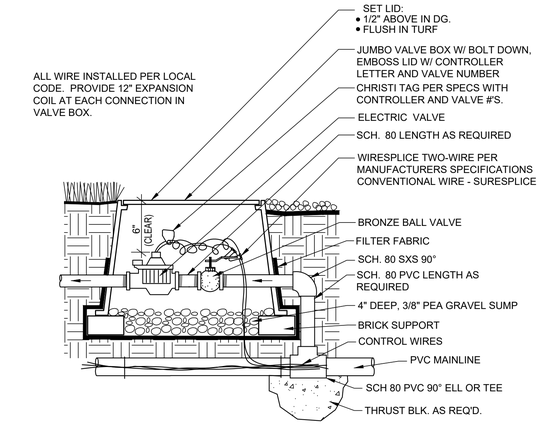
NOTES:

1. THE CONTRACTOR SHALL VERIFY DIMENSIONS PRIOR TO CONSTRUCTION OF ENCLOSURE.
2. THE ENCLOSURE SHALL BE BUILT WITH 1" X1" X 1/8" STEEL ANGLE ON ALL 4 CORNERS. TOP AND BOTTOM.
3. FABRIC SHALL BE 14 GA. EXPANDED METAL ON TOP AND ALL 4 SIDES. WELD 1" X 1/2" STIFFENER BAR INSIDE OF ENCLOSURE AS REQUIRED.
4. COLOR: REFER TO EQUIPMENT LEGEND.
5. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF ENCLOSURE TO ASSURE EQUIPMENT CLEARANCE WHEN OPENING.
6. THE ENCLOSURE SHALL SIT ON A CLASS "B" CONCRETE SLAB. THE SLAB SHALL HAVE 6" CONCRETE STRIP ON ALL 4 SIDES. TOP OF SLAB SHALL BE 1" ABOVE FINISHED GRADE.
7. GRIND ALL WELD SPOTS SMOOTH.

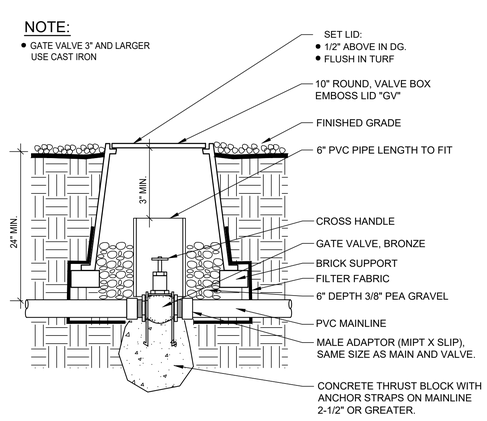
C | SCALE: NTS | SN: - | GUARDSHACK ENCLOSURE



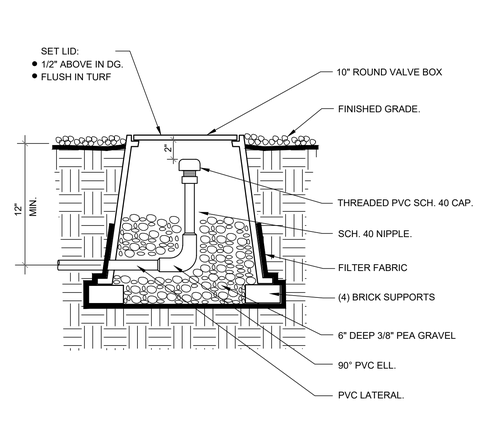
D | SCALE: NTS | SN: - | DRIP VALVE ASSEMBLY



E | SCALE: NTS | SN: - | ELECTRIC CONTROL VALVE



F | SCALE: NTS | SN: - | GATE VALVE



G | SCALE: NTS | SN: - | FLUSH VALVE

watermarc DESIGN LLC
622 Sandpiper Drive
Prescott, AZ. 86303
480.529.7337
marc@watermarcdesign.com

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
DATE OF ISSUE
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL
175TH AVE. & BELL ROAD
SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR: CD

ISSUED DATE: 1 / 16 / 2019

DRAWN BY: MB REVIEWED BY: ML

ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com before you dig.

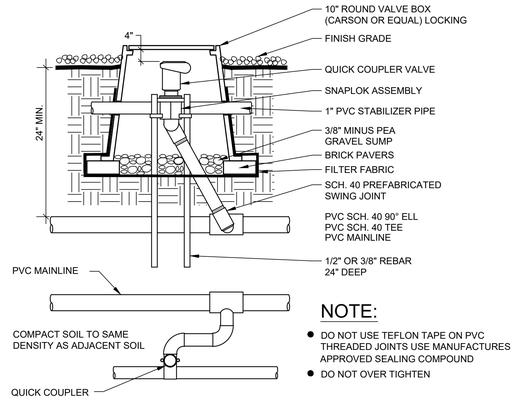
REVISIONS:

#	date	description

SHEET NAME:
IRRIGATION DETAILS

SHEET NUMBER:
L310
30 OF 33

SURPRISE TRACKING# FS19-645



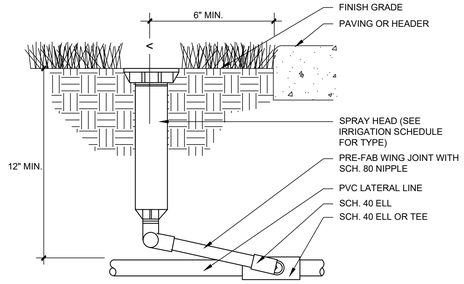
NOTE:

- DO NOT USE TEFLON TAPE ON PVC THREADED JOINTS USE MANUFACTURES APPROVED SEALING COMPOUND
- DO NOT OVER TIGHTEN

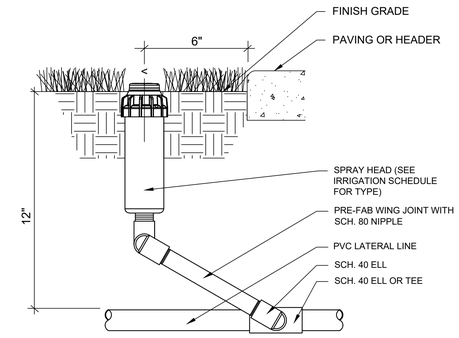
H | SCALE: NTS | SN: - | QUICK COUPLING VALVE

NOTE:

1. USE NOZZLES AS SPECIFIED, ADJUST AS NECESSARY FOR COMPLETE COVERAGE.
2. CONTRACTOR TO VERIFY SPRAY COVERAGE PRIOR TO SEED OR SOD INSTALLATION.
3. CONTRACTOR TO ADJUST HEADS FOR COMPLETE COVERAGE WITHOUT OVERSPRAY AFTER TURF IS ESTABLISHED.



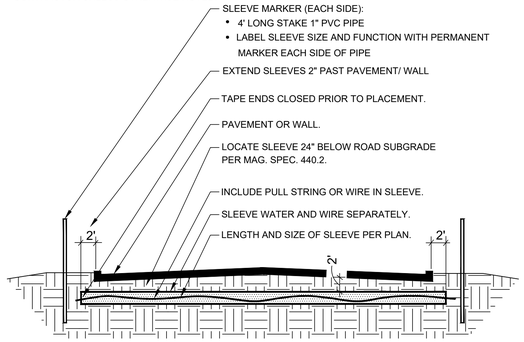
I | SCALE: NTS | SN: | POP-UP SPRAY HEAD



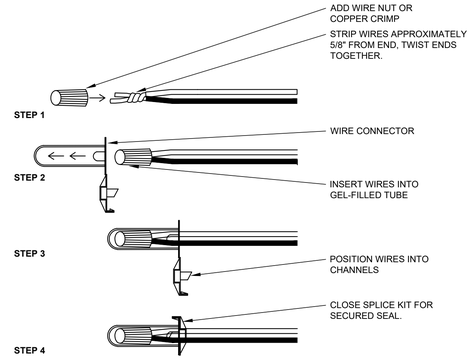
J | SCALE: NTS | SN: | GEAR DRIVEN ROTOR

NOTE:

- SIMILAR TREATMENTS AT WALLS, WALKS OR PATIOS.
- COORDINATE SLEEVES INSTALLED BY UNDERGROUND UTILITY CONTRACTOR UNLESS OTHERWISE NOTED.



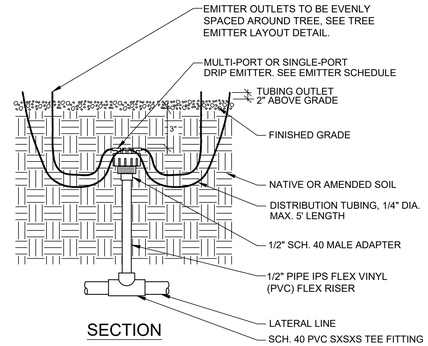
K | SCALE: NTS | SN: - | PIPE SLEEVE



NOTE:

1. ALL WIRE CONNECTORS TO BE 3M DBR-6

L | SCALE: NTS | SN: - | WIRE SPLICE

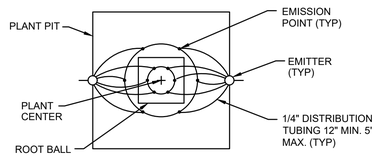


SECTION

NOTE:

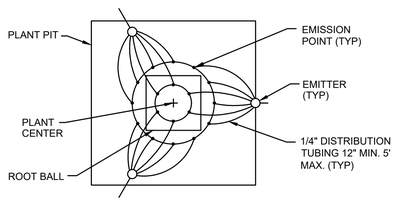
EMITTER OUTLETS MUST EXTEND 2" ABOVE FINISHED SURFACE.

M | SCALE: NTS | SN: - | TREE & SHRUB EMITTER ON PVC



TREE EMITTER - MULTI OUTLET
15 GAL TO 60" BOX TREES

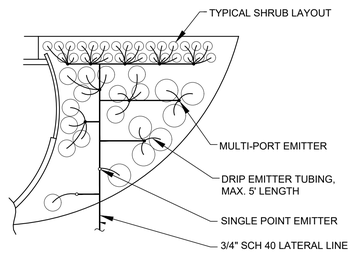
(SEE EMITTER SCHEDULE)



TREE EMITTER - MULTI OUTLET
66" BOX TO 84" BOX TREES

(SEE EMITTER SCHEDULE)

N | SCALE: NTS | SN: - | TREE EMITTER LAYOUT



NOTE:

USE MULTI-PORT EMITTER WHEN TWO (2) OR MORE SHRUBS ARE GROUPED TOGETHER.
USE SINGLE-PORT EMITTER WHEN PLANT SPACING IS GREATER THAN 12'.
MAXIMUM 1/4" DRIP EMITTER TUBING LENGTH 5'.

O | SCALE: NTS | SN: - | SHRUB EMITTER LAYOUT

watermarc
DESIGN LLC
622 Sandpiper Drive
Prescott, AZ. 86303
480.529.7337
marc@watermarcdesign.com

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD

SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR:
CD

ISSUED DATE:
1 / 16 / 2019

DRAWN BY: MB REVIEWED BY: ML

ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com
before you dig.

REVISIONS:

#	date	description

SHEET NAME:

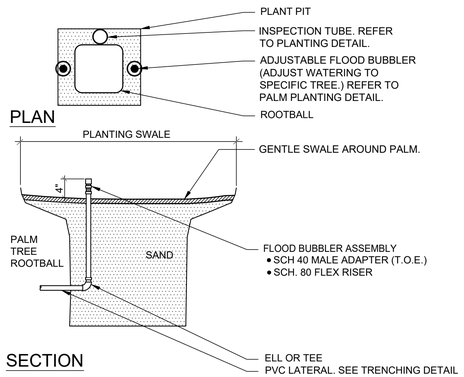
IRRIGATION
DETAILS

SHEET NUMBER:

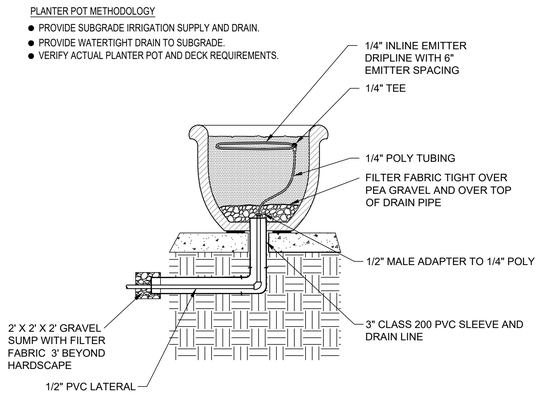
L311

31 OF 33

SURPRISE TRACKING# FS19-645

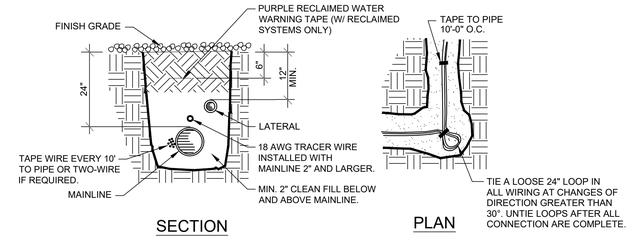


P	SCALE: NTS	BUBBLER AT PALM TREE IN D.G.
	SN: -	



Q	SCALE: NTS	IRRIGATED POT
	SN: -	

NOTE:
- WIRE SHALL BE INSTALLED PER LOCAL CODE.
- POLY PIPE TO BE SNAKED IN TRENCHES.
- TRENCHES TO BE COMPACTED TO MATCH ADJACENT DENSITIES.
- SITE LIGHTING MAY USE COMMON TRENCH.

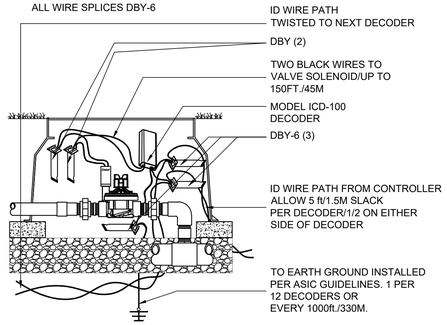


NOTE:

WHEN ROCKY SOILS ARE ENCOUNTERED, AS DETERMINED BY OWNERS REPRESENTATIVE, CONTRACTOR SHALL REMOVE ALL ROCK OR DEBRIS GREATER THAN 2" DIA. FROM TRENCHES AND BED PIPE IN SCREENED MATERIAL,1/4" MINUS DECOMOSED GRANITE OR SAND TO PROTECT PIPE AND WIRING (6" MINIMUM DEPTH). INCLUDE WARNING TAPE WHEN USING RECLAIMED WATER.

R	SCALE: NTS	PIPE & WIRE TRENCH
	SN: -	

NOTE: All ICD 100 DECODERS SHALL HAVE THE FOLLOWING ADDRESS AND CORRESPONDING COLOR
ADDRESS 1 = Black
ALL WIRE SPLICES DBY-6



REFER: TO DRIP VALVE AND CONTROL VALVE DETAILS FOR BALL VALVE, FILTER, PRESSURE REGULATOR AND VALVE BOX MATERIALS AND INSTALLATION.

X	SCALE: NTS	HUNTER ICD 100 DECODER
	SN: -	

the design element
landscape architecture

the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL

175TH AVE. & BELL ROAD

SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR: CD

ISSUED DATE: 1 / 16 / 2019

DRAWN BY: MB REVIEWED BY: ML

ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com before you dig.

REVISIONS:

#	date	description

SHEET NAME:
IRRIGATION DETAILS

SHEET NUMBER:
L312
32 OF 33

SURPRISE TRACKING# FS19-645

watermarc
DESIGN LLC
622 Sandpiper Drive
Prescott, AZ. 86303
480.529.7337
marc@watermarcdesign.com

PART 1 - GENERAL

1.01 SUMMARY:

A. Work Included: Provide a provision for an underground irrigation system including the following:

1. Trenching, stockpiling, excavation of materials, and refilling trenches.
2. Complete systems including but not limited to piping, pump station, backflow preventer, assemblies, valves, fittings, heads, controller wiring, and final adjustments to ensure efficient coverage as determined by Consultant.

1. 02 REFERENCES:

A. Perform Work in accordance with requirement of Conditions of the Contract and Division 01-General Requirements as well as provisions of all applicable laws, codes, ordinances, rules and regulations. Conform to requirements of reference information listed below, except where more stringent requirements are shown or specified in Contract Documents.

1. American Society for Testing and Materials (ASTM) - Specifications and Test Methods specifically referenced in this section.
2. Underwriters Laboratories (UL) - UL wires and Cables.

1.03 QUALITY ASSURANCE:

A. Installer Qualifications: Installer shall have had considerable experience and demonstrated ability in the installation of irrigation system(s) of specified type(s) in a neat, orderly, and responsible manner in accordance with recognized standards of workmanship.

B. Special Requirements:

1. Tolerances - Specified depths and separations of pressure supply lines and laterals and pitch of pipes are minimums. Settlement of trenches is cause for removal of finish grade treatment and repair of finished grade treatment.
2. Coordination with Other Contracts - Protect, maintain, and coordinate Work with Tasks under other sections.
3. Damage to Other Improvements - Contractor shall replace or repair damage to grading, soil preparation, seeding, sodding, or planting done under other Sections during work associated with installation of irrigation system at no additional cost to the Owner.
4. Work involving substantial plumbing for installation of pump station, backflow preventers, copper service, and related work shall be executed by licensed and bonded plumber(s), performed in accordance with all prevailing codes and regulations.
5. Work involving connection to, installation, or extension of 120-volt or greater electrical service shall be executed by a licensed and bonded electrician, performed in accordance with all prevailing codes and regulations.

D. Irrigation Control System Procedures:

1. Contractor shall be responsible to provide and install all specified control equipment to result in a complete and working system, whether or not all appurtenances are shown on plans. System shall include controllers; all grounding and surge protection; master valves; and weather communication source.

1.04 SUBMITTALS:

A. Submittals: Prepare and make submittals in accordance with conditions of the Contract prior to installation.

B. Construction Record Drawings:

1. Contractor shall draw lateral piping, controller station numbers, and all other record information on the Field Record. The Field Record plan(s) shall be available at the Project Site for review. Upon completion of Project, Contractor shall submit Field Record Plan for review, prior to final acceptance. Dimension from two permanent points of reference, (building corners, sidewalks, road intersections, or permanent structures), location of the following items:
   a. Routing of pressure supply lines (dimension every 100 feet along the routing).
   b. Electric control valves.
   c. Control wire routing (if not with pressure supply line).
   d. Record plans shall be to same scale and in the same format as designed plans.
2. Prior to scheduling walk-through for substantial completion, Contractor is to submit all Field Record information to the Owner for approval.
3. Contractor shall also provide both a hard copy and Electronic Form version of the Controller Data Sheets to the Consultant.

C. Controller Charts: Do not prepare controller charts until record (as-built) drawings have been approved by the Consultant.

1. Provide controller chart, automatic controller.

   a. Controller drawing may be same size reproduction of the record drawing, if scale permits fitting them inside the controller door without folding drawing. If photo reduction prints are required, keep reproduction to maximum size possible to retain full legibility. Chart may also be Controller Data Sheet as for central-satellite systems, if approved by Consultant.
   b. Controller chart shall be bond print of actual as-built system, showing area covered by that controller; or Controller Data Sheet showing information on each station, and with complete description of each station's location.
   c. Identify area of coverage of each remote control valve, using a distinctly different pastel color for each zone. Highlight heads, lateral piping, and control valves.
   d. Following review of controller drawings by Consultant, hermetically seal each chart between two layers of 20 mm thick clear plastic.
   e. Controller chart shall be completed and approved by Consultant prior to final completion walk-through of irrigation system.
   f. Attach approved controller chart to inside of each controller door using self adhesive Velcro strips.
2. Following installation of each controller, contractor shall record all station data on a "Data Sheet" provided by the Consultant. This data shall include the type and quantity of irrigation devices on each station, nozzle type, arc, area of control (turf, trees, shrubs, etc), valve size, gpm, location, etc. as shown on the Data Sheet.
3. Prior to final walk-through for each area of the project, Contractor shall confirm that the following has been accomplished:
   a. Construction record drawings per 1.04.1.
   b. Data Sheets for Controllers.

E. Operational Manual: Submit 3 sets of Operations Manual to Consultant for approval, prior to scheduling the final completion walk-through. Manual is to include the following in a 1 x 3 ring binder:

1. KEY MAP sheet stating project name, and listing Contractor name, address, phone number, and contact person. Include same information for Primary Sub-Contractors.
2. Manufacturer cut sheets for all material components of irrigation system. Highlight or circle specific models or items.

1.05 DELIVERY, STORAGE and HANDLING:

A. Deliver, unload, store and handle materials, packaging, bundling, products, in dry conditions, or a weatherproof manner, to prevent damage, breakage, deterioration, intrusion, ignition, and vandalism. Deliver in original unopened packaging containers prominently displaying manufacturer name, volume, quantity, contents, instructions, and conformance to local, state, and federal law. Remove and replace cracked, broken, or contaminated items or elements prematurely exposed to moisture, inclement weather, snow, ice, temperature extremes, fire, or job site damage.
B. Handling of PVC Pipe: Exercise care in handling, loading and storing of PVC pipe. All PVC pipe shall be transported in a vehicle which allows the entire length of pipe to lie flat so as not to subject it to undue bending or concentrated external loads. All sections of pipe that have been dented or damaged shall be discarded, and if installed, shall be removed and replaced with new piping.

1.06 JOBSITE CONDITIONS:

A. Protection of Property:

1. Preserve and protect all trees, plants, monuments, structures, and paved areas from damage due to Work in this Section. In the event damage does occur, all damage to inanimate items shall be completely repaired or replaced to the satisfaction of the Owner. All injuries to living plants shall be repaired by the Owner, and all costs of such repairs shall be charged to and paid by the Contractor.
2. Protect buildings, walks, walls, and other property from damage. Flare and barricade open ditches. Damage caused to asphalt, concrete, or other building material surfaces shall be repaired or replaced at no cost to the Owner. Restore disturbed areas to original condition.

B. Existing trees:

1. All trenching or other Work under limb spread of any and all evergreens or low branching deciduous material shall be done by hand or by other methods so as to prevent damage to limbs or branches.

C. Protection and Repair of Underground Lines: Request proper utility company to stake exact location (including depth) of all underground utilities. Take whatever precautions necessary to protect these underground lines from damage. In the event damage does occur, all damages shall be repaired by Contractor unless other arrangements have been made.

D. Replacement of Paving and Curbs: Where trenches and lines cross existing roadways, paths, curbing, etc., damage to these shall be kept to a minimum and shall be restored to original condition.

1.07 WARRANTY / GUARANTEE:

A. Contractor shall warrant materials against defects for a period of one year from the date of Substantial Completion. Contractor shall guarantee workmanship for similar period. Contractor shall be responsible for coordinating material warranty items with the manufacturer / distributor.
B. Settling of backfilled trenches which may occur during guaranty period shall be repaired by Contractor at no expense to the Owner, including complete restoration of damaged property.
C. Expenses due to vandalism before substantial completion shall be borne by Contractor.
D. Owner or representative maintenance company will maintain turf and planting areas during warranty period, so as not to hamper proper operation of the irrigation system.

1.08 MAINTENANCE:

A. Furnish the following maintenance items to Owner prior to final Acceptance:

1. 2 sets of special tools required for moving, disassembling, and adjusting each type of sprinkler head and valve supplied on this project.
2. 2 keys for each automatic controller.

1.09 EXTRA STOCK:

A. In addition to installed system furnish the following items to Owner:
1. 4 per 100 installed drip emitters of each type used.
2. 2 pop-up heads of each type used.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. General piping:

Note: All piping for reclaimed water systems shall be purple colored, or wrapped with reclaimed "sock" or reclaimed marking tape, and main lines shall have detectable reclaimed marking tape in trench 12" above top of pipe continuously.

1. Pressure Supply Lines (downstream of Pump Station) - Sch. 40 PVC, Solvent Weld Belled End for 2-1/2" or smaller, and rubber-ring joint for 3" and larger with ductile iron fittings and taps.
2. Non-pressure lines - Sch. PVC, Solvent Weld Belled End.
3. Drip Piping - ¾" Sch. 40, Solvent Weld unless otherwise specified on plans.
4. Emitter Tubing - by emitter manufacturer.

B. Plastic Pipe and Fittings:

1. Identification Markings:
   a. All pipe to be identified with following indelible markings:
      1) Manufacturer's Name.
   b. All fittings including valve taps for rubber-ring pipe shall be cast or ductile iron, rubber-ring for PVC.
2. Solvent Weld Pipe - Manufactured from virgin polyvinyl chloride (PVC) compound in accordance with ASTM D2241 and ASTM D1784; cell classification 12245-B, Type 1, Grade 1.

   a. Fittings - Standard weight, Schedule 40, injection molded PVC; complying with ASTM D1784 and D2466, cell classification 12454-B.
      1) Threads - Injection molded type (where required).
      2) Tees and ells - Side gated.
   b. Threaded Nipples - ASTM D2464, Schedule 80 with molded threads.
   c. Joint Cement and Primer - Type as recommended by manufacturer of pipe and fittings.

C. Low Pressure / Volume Systems:

1. Emitters as indicated on drawings.
2. Drip Piping - manufactured of polyvinyl chloride compound conforming to ASTM D2241 and ASTM D1784, Type 1, Grade 1.
3. Fittings - Schedule 40 PVC, or as recommended by piping manufacturer.
4. Drip Valve Assembly - Type and size shown on drawings.
   a. Wye Strainer - Plastic / Fiberglass construction with 150 mesh nylon screen and blow out assembly.
   b. Control Valve - 2-way, solenoid pilot operated type made of synthetic, non-corrosive material; diaphragm-activated and slow closing. Include freely pivoted seat seal; retained (mounted) without attachment to diaphragm.
   c. Pressure Regulator - Plastic / Fiberglass construction, preset type with pressure setting per drawings.

D. Copper Pipe and Fittings:

1. Copper Pipe - Type K hard tempered.
2. Fittings - Wrought copper, solder joint type.
3. Joints - Soldered with solder, 45% silver, 15% copper, 16% zinc, and 24% cadmium and solids at 1125 F and liquids at 1145 F.

E. Brass Pipe and Fittings:

1. Fittings - Medium brass, screwed 125 pound class.
2. Brass Pipe - 85% red brass, AMSI Schedule 40 screwed pipe.

G. Valve Boxes:

1) Note: All box covers for reclaimed water systems shall be purple colored, and marked for reclaimed. Nominal pipe size.
2) Schedule or class.
3) Pressure Rating.
4) NSF (National Sanitation Foundation) seal of approval.
5) Date of extrusion.

Otherwise, valve box color to be selected based upon a review of the location and adjacent material by Owner and Landscape Architect prior to installation.

1. Drip Line Blow-out Stubs, and Wire Stub Box - Carson #910-12.
2. 1-inch through 2-inch Control Valves - Carson #1419-13B.
3. Drip Valve Assemblies - Carson #1419-13B.
4. Control Wiring Splices - Carson #910-12.
5. Main Line Gate Valves - Carson #910-12.
6. Air-Relief Valves - Carson #1419-13B.
7. Manual Drain Valves - Carson #1419-13B.
8. Master Control Valve - As shown on detail.

H. Electrical Control Wiring:
1. Low Voltage:
   a. Electrical Control Wire - Hunter two-wire.
   b. If multiple controllers are utilized, a different two wire for each controller.
2. High Voltage: Type required by local codes and ordinances, of proper size to accommodate needs of equipment serviced.

I. Sprinkler Heads: As shown on drawings. Use Purple caps or nozzles for Reclaimed Water use.
K. Electric Control Valves: As noted on drawings. Purple handles for Reclaimed Water use. Install pressure regulating devices where specified on plans.
L. Pipe Bedding Material: Construction grade sand approved by Consultant.
M. Automatic Controller: As shown on drawings. Provide two (2) remote control units (compatible as specified by Owner) as part of the work.
N. Manual Drain Valve: As shown on drawings.
O. Air-Relief Valve: As shown on drawings.
P. Master Control Valve: As shown on drawings.
Q. Pump Station: As shown on drawings.

PART 3 - EXECUTION

3.01 INSPECTION:

A. Examine areas and conditions under which Work of this Section is to be performed. Do not proceed with Work until unsatisfactory conditions have been corrected.
B. Grading operations, with the exception of final grading, shall be completed and approved by Owner prior to staking or installation of any portion of irrigation system except sleeving.

3.02 PREPARATION:

A. Staking Shall Occur as Follows:
1. Mark with powdered lime or marking paint routing of pressure supply lines, and flag heads and control valve locations for first series of zones for approval.
B. Sleeving: Install sleeving under all asphalt paving and concrete walks, prior to the installation of concrete or paving operations, to accommodate piping and wiring. Compact backfill around sleeves to 95% Standard Proctor Density within 2% of optimum moisture content in accordance with ASTM D1557.
C. Trenching: Trench excavation shall follow, as much as possible, layout shown on Drawings. Dig trenches straight, and support the pipe continuously on the bottom of trench. Trench bottom shall be clean and smooth with all rock and organic debris removed. Pressure supply line trenches shall be over-excavated as required to allow for bedding material. Trench depth shall be uniform as required to meet minimum depth requirements for the type of piping being installed.

1. Clearances:
   a. Piping smaller than 3 inches - Trenches shall have a minimum width of 7 inches. 12 inches for 3" and larger pipe.
   b. Line clearance - Provide not less than 6 inches of clearance between each line, and not less than 12 inches of clearance between lines of other trades.
   c. For Reclaimed Water systems, 2-foot vertical (below) and 6-foot horizontal separations from potable lines are required per MAG and industry standards.

2. Pipe and Wire Depth:
   a. Pressure Supply Piping - 24 inches from top of pipe (30 inches where 6" and larger pipe is on project).
   b. Non-pressure piping - 12 inches from top of pipe.
   c. Two-wire - Side and bottom of pressure supply line.
   d. Drip Piping - 12 inches from top of pipe.
   e. Emitter tubing - 12 inches from top of pipe (non slope plantings). 4 inches from the top of pipe (slopes 2:1 of greater).

3.03 INSTALLATION:

A. Other Equipment: Locate other equipment as near as possible to location designated on construction drawings. Deviations shall be approved by Consultant prior to installation.
B. PVC Piping:
1. Snake pipe in trench as much as possible to allow for expansion and contraction.
2. When pipe laying is not in progress, or at end of each day, close pipe ends with tight plug or cap. (Perform work in accordance with good practices prevailing in piping trades).
3. Coordinate pressure supply line installation with required bedding operations. Concrete thrust blocks or steel joint restraints shall be utilized for all rubber-ring joint fittings per industry standards. In sandy soil, mechanical joint fittings shall be used with thrust blocks.
4. Stake all above-grade PVC piping per details.
5. Use 45-degree ells when making perpendicular crossings of above-grade PVC piping, to depress bottom pipe.
6. Lay pipe and make all plastic-to-plastic joints in accordance with manufacturer's recommendations.

C. Drip Piping:
1. Install fitting connections per manufacturer's recommendations.
2. Use threaded risers and Sch. 40 or Sch. 80 fittings per details when making connections in drip piping for emitters and fittings.
3. Install drip line blow-out stubs at all dead ends of drip piping.
4. Any deviations from drip pipe routing shown on drawings must be approved by Consultant prior to installation.

D. Control Wiring:
1. Low Voltage Wiring (Two Wire):
   a. Bury control wiring between controller and electric valves in pressure supply line trenches, with wires consistently located to one side of pipe, on top of initial pipe bedding, or in separate trench.
   b. Provide an expansion loop at pressure supply line angle fittings, every electric control valve location (in valve box), and at minimum 500 feet intervals. Form expansion loop by wrapping wire at least 8 times around a 1-inch pipe and withdrawing pipe.
   c. Make splices and electric control valve connections using DBY connectors or similar dry splice method.
   d. Install two wire splices not occurring at control valve in a separate splice valve box.

2. High Voltage Wiring for Automatic Controller:
   a. Provide 120-volt power connection to automatic controller.

E. Automatic Controller:
1. Install controller in accordance with manufacturer's instructions as detailed and where shown on Drawings.
2. Connect remote control valves to controller in numerical sequence as shown on Drawings.
3. Final location of controller shall be approved by Consultant prior to installation.
4. Each controller shall have a dedicated separate ground wire and surge protection.
5. Above-ground conduit shall be rigid galvanized steel with appropriate fittings. Below-ground conduit shall be Schedule 40 PVC.

F. Drip Valve Assemblies: Install drip valve assembly as detailed.

G. Drip Emitters: Install drip emitters as detailed.

H. Valve Boxes:
1. Install one valve box for each type of valve installed as detailed flush with grade for all sodded areas, and above-grade for all seeded areas.
2. Valve box extensions are not acceptable, except for master valve.
3. Install gravel sump after compaction of all trenches. Valve box to rest on gravel sump. Place final portion of gravel inside valve box after valve box is backfilled and compacted.
4. Install "Christy" stainless steel or 2.5" x 5" plastic valve label tags for each valve box (1-800-258-4583). Entire controller & station number shall be printed on each tag. Letter and number size shall be no smaller than 1/8 inch and no greater than ¼ inches. Label each valve box as follows:
   a. Control valves - Controller letter and station number.
   b. Quick Coupler Valves - Label "QCV."
   c. Wire Splices - Label wire splices with the letters "W.S."
   d. Drip Piping Blow-our Stubs - Controller letter and station number of each drip piping blow-out.
   e. Gate Valves - Label with letters "GV" typical.
   f. Air-Relief Valves - Label with letters "ARV" typical.
   g. Manual Drain Valve - Label with letters "MDV."
5. Valve box color to be selected based upon a review of the location and adjacent material by Owner and Landscape Architect prior to installation. These guidelines are typical of all installations unless water source is effluent. In that case all valve boxes no matter the location are to be purple in color and meet all applicable codes and ordinances.

I. Pump Station: Install as detailed on Drawings.

J. Electric Control Valves:

1. Install top of cross handle a maximum of 3 inches below finished grade where shown on Drawings and as detailed.
2. When grouped together, allow a minimum of 12 inches between valve box sides.
3. Space control valves accordingly.
4. Install each remote control valve in a separate valve box.
5. Install valve boxes flush with grade.
6. When parallel to roadway, sidewalk or other permanent element or structure, control valve and box are to be installed perpendicular to element or structure, spaced equally.
7. For athletic areas such as football fields where concrete curbs exist, place the electric valves within one foot of the curb (no further into the playfield).

K. Main Line Gate Valves: Install as detailed on Drawings.

L. Air-Relief Valves: Install as detailed on Drawings.

M. Control Wiring:

1. All control wiring to be laid to bottom and side of pressure supply line trench. Separate wire trenches will not be allowed unless approved by Consultant prior to installation.

N. Backfilling: Do not begin backfilling operation until required system tests have been completed. Backfill shall not be done in freezing weather except with prior written approval by Consultant. Leave trenches slightly mounded to allow for settlement after backfilling is complete. Trenches shall be finished graded prior to walk-through of system by Consultant.

1. All pressure supply lines shall be bedded with construction grade sand 4 inches below invert of pipe, to 6" above top of pipe and width of trench when site conditions are rocky or otherwise unfavorable.
2. Materials: Excavated material is generally considered satisfactory for backfilling purposes after completing bedding requirements. Backfill materials shall be free of rubbish, vegetative matter, frozen materials, and stones larger than 2 inches in maximum dimension. Do not mix subsoil with topsoil. Material not suitable for backfill shall be hauled away. Contractor shall be responsible for providing suitable backfill if excavated material is unacceptable, or not sufficient to meet backfill, compaction, and final grade requirements.
3. Do not leave trenches open for a period of more than 48 hours. Open excavations shall be protected in accordance with OSHA regulations.
4. Compact backfill to 90% maximum density in 6" lifts, determined in accordance with ASTM D155-7 utilizing the following methods:

   a. Mechanical tamping.
   b. Puddling or ponding. Puddling or ponding and/or jetting is prohibited within 10'-0" of building or foundation walls.

S. Piping Under Paving:

1. Provide for a minimum cover of 24 inches between the top of the pipe and the bottom of the aggregate base for all pressure and non-pressure piping installed under asphalt concrete or concrete paving. Provide sleeving as required by municipality, or as shown on plans.
2. Piping shall be bedded with construction grade sand - 6 inches below pipe to 6 inches above pipe and the width of the trench.
3. Compact backfill material in 6-inch lifts at 95% maximum density determined in accordance with ASTM D1557 using manual or mechanical tamping devices.
4. Set in place, cap, and pressure test all piping under paving, in presence of Consultant or Owner prior to backfilling and paving operations.
5. Piping under existing walk or concrete pavement shall be done by jacking, boring, or hydraulic driving, but where cutting or breaking of walks and/or concrete is necessary, it shall be done and replaced at no cost to the Owner. Obtain permission and prior approval from Owner to cut or break walks and / or concrete.

3.04 FIELD QUALITY CONTROL:

A. Flushing: After piping, risers, and valves are in place and connected, but prior to installation of emitter heads, quick coupler valves, and air relief valves, thoroughly flush piping system under full head of water pressure from dead end fittings. Maintain flushing for 5 minutes through furthestmost valves. Cap riser after flushing.

B. Testing: Conduct tests in presence of Consultant. Arrange for presence of Consultant a minimum of 48 hours in advance of testing. Supply force pump and all other test equipment.

1. After backfilling, and installation of all control valves & quick coupler valves, fill pressure supply line with water, and pressurize to 40 PSI over the designated static pressure or 120 PSI, whichever is greater, for a period of 2 hours.
2. Leakage, Pressure Loss: Test is acceptable if no leakage or loss of pressure is evident during test period.
3. Leaks: Detect and repair leaks.
4. Retest system until pressure can be maintained for the duration of the test.
5. Before final acceptance, pressure supply line shall remain under pressure for a period of 48 hours.

C. Walk-Through for Substantial Completion:

1. Arrange for Consultant's presence a minimum of 48 hours in advance of walk-through.
2. Entire System shall be completely installed and operational prior to scheduling of walk-through. All sodded areas are to be complete with head height and valve boxes adjusted accordingly.
3. Operate each zone in its entirety for Consultant at time of walk-through, and open all valve boxes.
4. Consultant shall generate a list of items to be corrected prior to Final Completion ("Punch List").
5. Furnish all materials and perform all Work required to correct all inadequacies due to deviations from Contract Documents, and as directed by Consultant.
6. During walk-through, expose all drip emitters and sprinklers under operations for observation by Consultant to demonstrate that they are performing and installed as designed; prior to placing of all mulch material. Schedule separate walk-through if necessary.

D. Walk-Through for Final Completion:

1. Arrange for Consultant's presence a minimum of 48 hours in advance of walk-through.
2. Show evidence to Consultant that Owner has received all accessories, charts, record drawings, and equipment as required before Final Completion walk-through is scheduled.
3. Operate each zone identified as deficient at substantial completion walk-through for Consultant to review at time of final completion walk-through to ensure correction of all incomplete items.
4. Items deemed not acceptable by Consultant shall be reworked to the complete satisfaction of Consultant.
5. If after request to Consultant for a walk-through for Final Completion of the irrigation system, Consultant finds items during walk-through to be deficient, Contractor shall be charged for all subsequent walk-throughs. Funds will be withheld from final payment and/or retainage to Contractor, in amount equal to additional time and expenses required by Consultant to conduct and document further walk-throughs as deemed necessary to ensure compliance with Contract Documents.

3.05 ADJUSTING:

A. Upon substantial completion of installation, fine-tune entire system by regulating valves, adjusting spray patterns and break-up arms/screws, and setting pressure reducing valves or throttling electric valve flow control stems to proper pressure settings to provide optimum and efficient coverage. Flush and adjust all sprinkler heads for optimum performance and to prevent overspray onto walks, roadways, and buildings as much as possible. Heads of same type shall be operating at same pressure +/- 7%.
B. If it is determined that irrigation adjustments will provide proper and more adequate coverage, make such adjustments prior to Final Acceptance, as directed, at no additional cost to Owner. Adjustments may also include changes in nozzle sizes, degrees of arc, and control valve throttling.
C. All sprinkler heads shall be set perpendicular to finish grade unless otherwise designated.
D. Areas which do not conform to designated operation requirements due to unauthorized changes or poor installation practices shall be immediately corrected at no additional cost to the Owner.

3.06 CLEANING:

A. Maintain continuous cleaning operation throughout duration of Work. All trash or debris generated by installation of irrigation system shall be properly disposed of by Contractor off-site.

END OF SECTION 32 84 00

watermarc
DESIGN LLC
622 Sandpiper Drive
Prescott, AZ. 86303
480.529.7337
marc@watermarcdesign.com

the design element
landscape architecture
the design element, pllc
2211 east highland avenue
suite 120
phoenix, arizona 85016
ph 602.244.1970
fax 602.244.1971
www.tde.design

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
31270
MARC F. LANGE
1-16-20
ARIZONA, U.S.A.
EXPIRES 3.31.2021

SURPRISE FARMS VILLAS
SINGLE FAMILY RENTAL
175TH AVE. & BELL ROAD
SURPRISE, ARIZONA

PROJECT NUMBER: 19021

ISSUED FOR: CD

ISSUED DATE: 1 / 16 / 2019

DRAWN BY: MB REVIEWED BY: ML

ARIZONA811 BLUE STAKE, INC.
Know what's below.
Call 811 or click Arizona811.com before you dig.

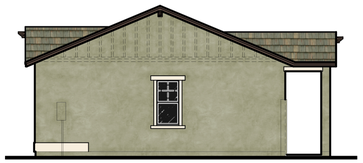
REVISIONS:

#	date	description

SHEET NAME:
IRRIGATION SPECIFICATIONS

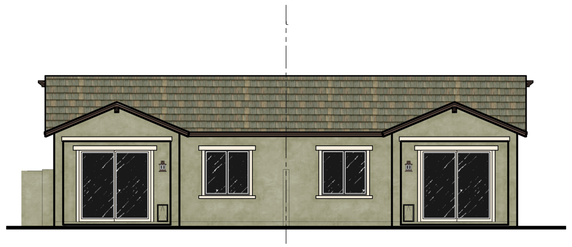
SHEET NUMBER:
L313
33 OF 33

SURPRISE TRACKING# FS19-645



Right Elevation

Elevation A



Rear Elevation

Elevation A



Left Elevation

Elevation A

0 8' 16' 32'



Front Elevation

Elevation A

0 4' 8' 16'

REGISTERED ARCHITECT
68041
PAUL
KNITTER
ARIZONA, U.S.A.

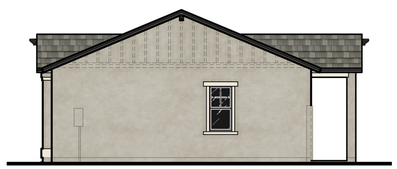
Surprise Farms Villas | Unit 1 Duplex | Surprise, Arizona

11-19-2019

Homes by Towne®
706 E. Bell Road Suite 212
Phoenix, AZ 85022
Phone:(602) 996-6800

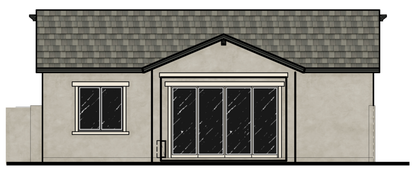
FELTENGROUP
ARCHITECTURE | ENGINEERING | FORENSICS
PHONE: 602.867.2500 WWW.FELTENGROUP.COM
www.feltengroup.com

copyright 2019



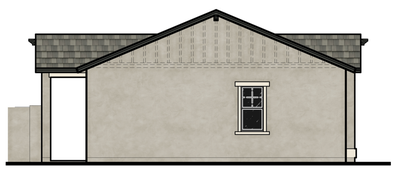
Right Elevation

Elevation A



Rear Elevation

Elevation A



Left Elevation

Elevation A

0 8' 16' 32'



Front Elevation

Elevation A

0 4' 8' 16'

REGISTERED ARCHITECT
68041
PAUL
KNITTER
ARIZONA, U.S.A.

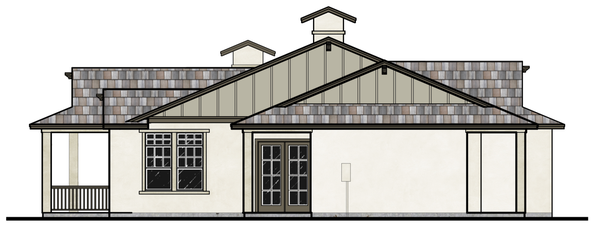
Surprise Farms Villas | Unit 2 Duplex | Surprise, Arizona

11-19-2019

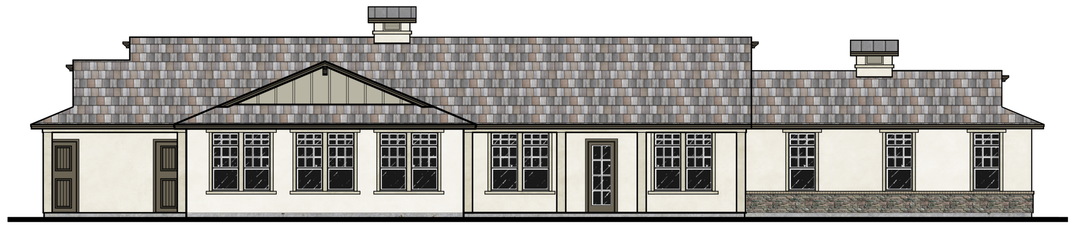
Homes by Towne®
706 E. Bell Road Suite 212
Phoenix, AZ 85022
Phone:(602) 996-6800

FELTENGROUP
ARCHITECTURE | ENGINEERING | FORENSICS
PHONE: 602.867.2500 WWW.FELTENGROUP.COM
www.feltengroup.com

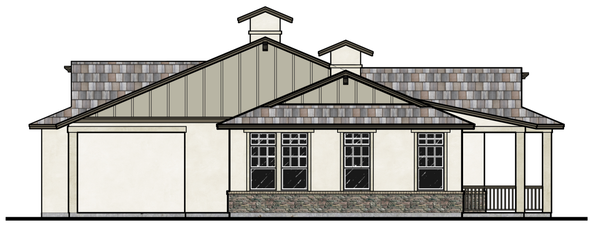
copyright 2019



Right Elevation

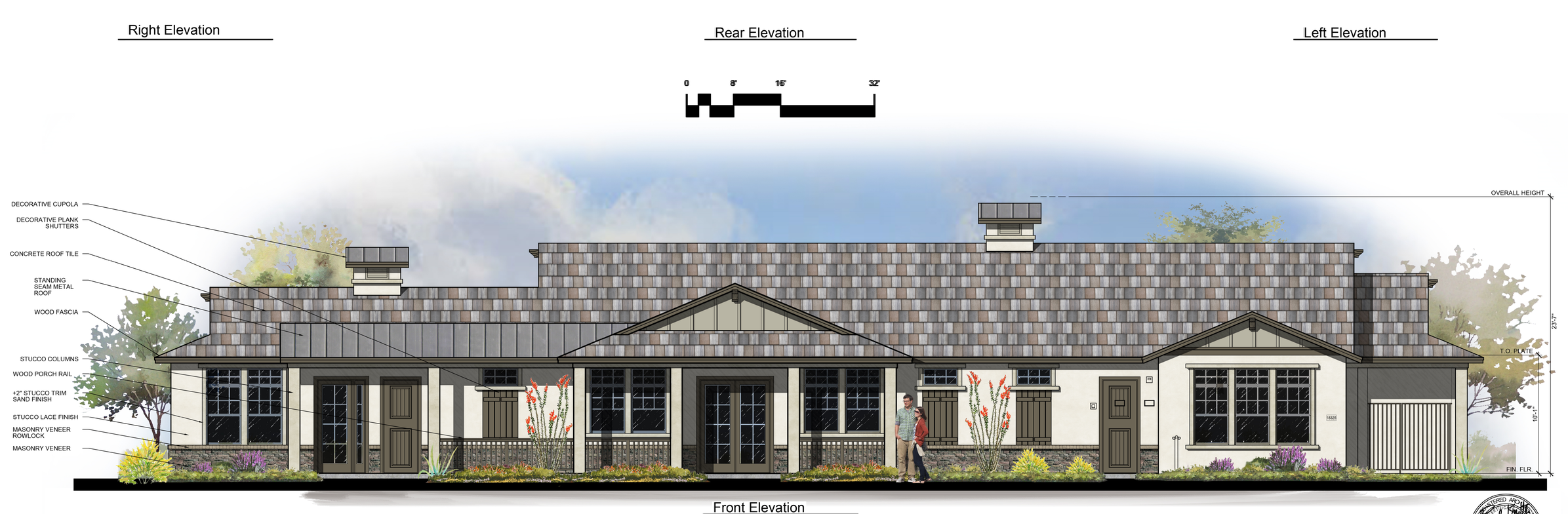


Rear Elevation



Left Elevation

0 8' 16' 32'



Front Elevation

0 4' 8' 16'

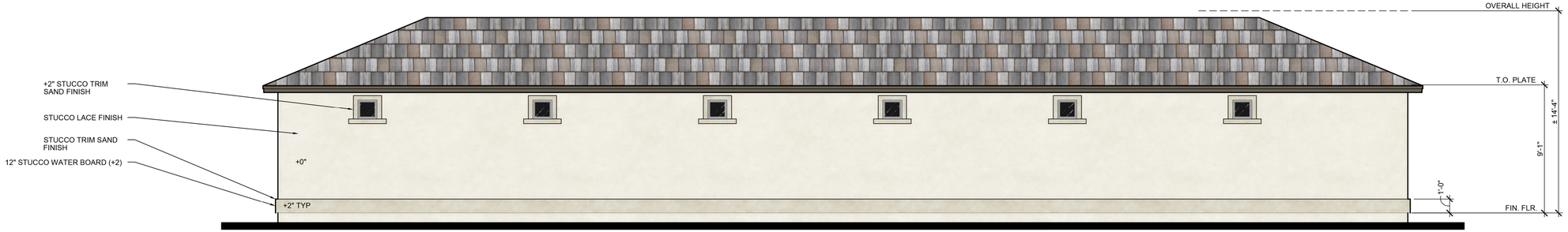
REGISTERED ARCHITECT
68041
PAUL
KNITTER
ARIZONA, U.S.A.

Surprise Farms Villas | Community Center And Leasing Office | Surprise, Arizona

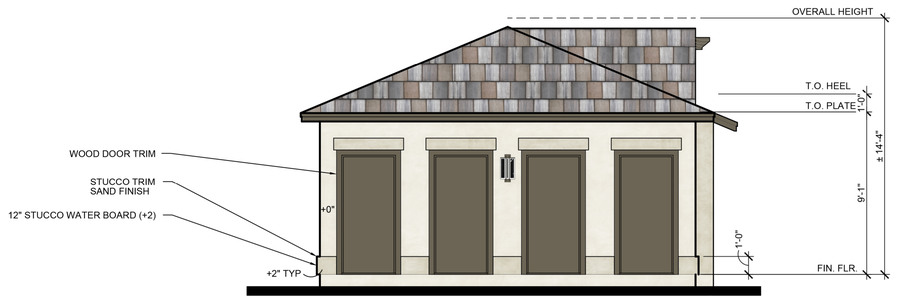
11-19-2019

Homes by Towne®
706 E. Bell Road Suite 212
Phoenix, AZ 85022
Phone:(602) 996-6800

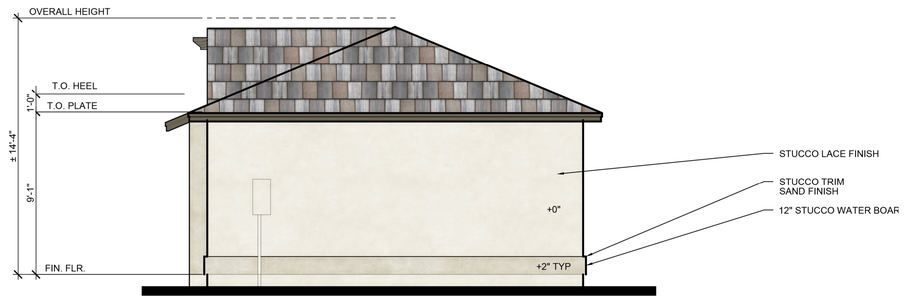
FELTENGROUP
ARCHITECTURE | ENGINEERING | FORENSICS
PHONE: 602.867.2500 WWW.FELTENGROUP.COM
www.feltengroup.com
copyright 2019



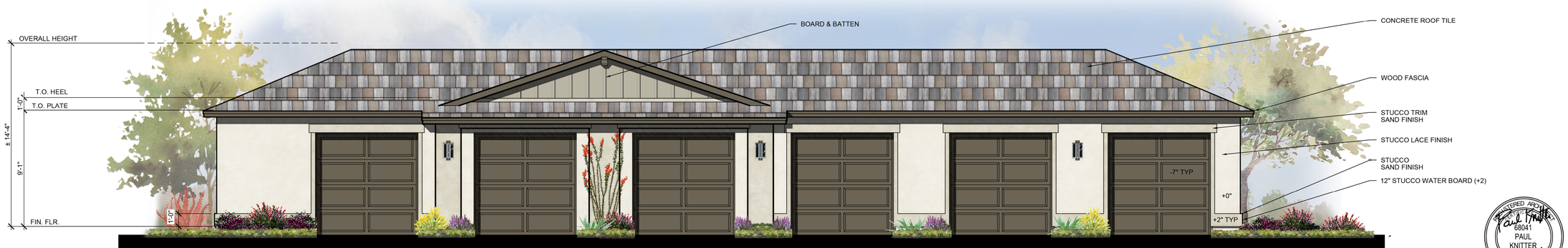
Rear Elevation



Left Elevation



Right Elevation



Front Elevation

REGISTERED ARCHITECT
68041
PAUL KNITTER
ARIZONA, U.S.A.

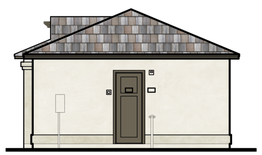
0 4' 8' 16'

Surprise Farms Villas | Garage With Storage | Surprise, Arizona

11-19-2019

Homes by Towne®
706 E. Bell Road Suite 212
Phoenix, AZ 85022
Phone:(602) 996-6800

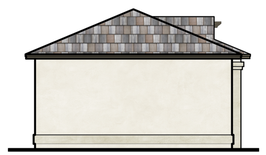
FELTENGROUP
ARCHITECTURE | ENGINEERING | FORENSICS
PHONE: 602.867.2500 WWW.FELTENGROUP.COM
www.feltengroup.com
copyright 2019



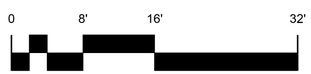
Right Elevation



Rear Elevation

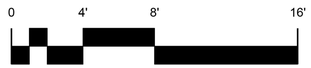


Left Elevation





Front Elevation





Surprise Farms Villas | Maintenance Building | Surprise, Arizona

11-19-2019

Homes by Towne®
706 E. Bell Road Suite 212
Phoenix, AZ 85022
Phone:(602) 996-6800

FELTENGROUP
ARCHITECTURE | ENGINEERING | FORENSICS
PHONE: 602.867.2500 WWW.FELTENGROUP.COM
www.feltengroup.com
copyright 2019

From:	CHRISTIANSON, REGGIE A GS-12 USAF AETC 56 FW/CVE
To:	Allysa Robinson
Cc:	56 FW/CIT Community Initiative
Subject:	RE: OUTSIDE AGENCIES FS19-645 Surprise Farms Single Family Rental Community PAD Amendment, Site Plan, Final Plat New Submittal 091119
Date:	Wednesday, September 11, 2019 2:29:55 PM
Attachments:	smime.p7s ATT00001.txt ATT00002.htm

Allysa,
Thank you for allowing Luke AFB to make comments on the Surprise Farms Single Family Rental Community site plan. This application is to construct 252 multi-family rental residential development on approximately 27 acres. The site is located in the Southwest corner of Bell Road and N. 175th Avenue in Surprise, AZ. The site is located 3.4 miles outside the Aux-1 2004 65 Ldn, "high noise or accident potential zone" as defined by A.R.S. § 28-8461 and is inside the "territory in the vicinity of a military airport" also defined by A.R.S. § 28-8461.
As described, this project will not negatively impact the flying operations at Luke AFB. Since the site will be located inside the "territory in the vicinity of a military airport," it will be subjected to approximately 165 over flights per day, as low as 1,500 feet above the ground. We recommend you review the sound attenuation requirements found in A.R.S. § 28-8482. In addition, a strong notification program on the part of the applicant is essential to inform the tenant about Luke AFB operations.
v/r
Reg

Reggie A Christianson
Strategic Planning Manager, Community Initiatives Team
Luke AFB AZ 85309
Office: 623-856-6115
DSN: 896-6115

From: Allysa Robinson
Sent: Wednesday, September 11, 2019 11:07 AM
To: 'Bob Woodring - TEMPX' ; 'Brad Finke - EPCOR' ; 'Chris Cain - MWD' ; Christina Betz ; Daniel Trujillo ; 'Debbie Trasancos - MWD' ; 'Don Romero - USPS' ; Donna Miller ; 'Douglas Kirkland - Epcor' ; 'Ernest (USPS)' ; 'Eva Pierce' ; Greg Welch ; 'Ibeth - USPS' ; Joseline Castaneda ; 'Kevin Shipman' ; 'Leslie - MWD' ; 56 FW/CIT Community Initiative <56FW.CIT.CommunityInitiative@us.af.mil>; 'Mark Frago' ; 'Mary Orta - Surprise Chamber' ; 'Peter Hughes - FCDX' ; 'Project Coordinator' ; 'Raoul Sada - Surprise Chamber' ; 'Richard Hammitt' ; Sandy Simmons ; 'Vern Wolfley - MAG' ; 'Victor.Schaum' ; 'Yvonne Aguirre'
Cc: Lorraine Nevarez ; Shirley Phan
Subject: [Non-DoD Source] OUTSIDE AGENCIES FS19-645 Surprise Farms Single Family Rental Community PAD Amendment, Site Plan, Final Plat New Submittal 091119
Attached please find the **application**, **narrative, final plat**, and **site plan** for the above referenced project.
Please feel free to contact us with any questions.
Best regards,
Allysa Robinson

Project Coordinator
City of Surprise | Community Development
16000 N. Civic Center Plaza | Surprise AZ | 85374
www.surpriseaz.gov
Phone: 623-222-3099
Fax: 623-222-3001
Allysa.Robinson@surpriseaz.gov

City of Surprise offices open at 8 a.m. and close at 5 p.m. Monday through Friday. More info at www.surpriseaz.gov.

This e-mail and any accompanying files transmitted are intended solely for the use of the individual or entity to whom they are addressed; if you have received this e-mail in error please delete it and notify the sender. In addition, under Arizona law, e-mail communications and e-mail addresses may be public records.
0.1

11 Sep 2019 18:06:50 -0000

SURPRISE
ARIZONA

FS19-645
Surprise Farms Villas

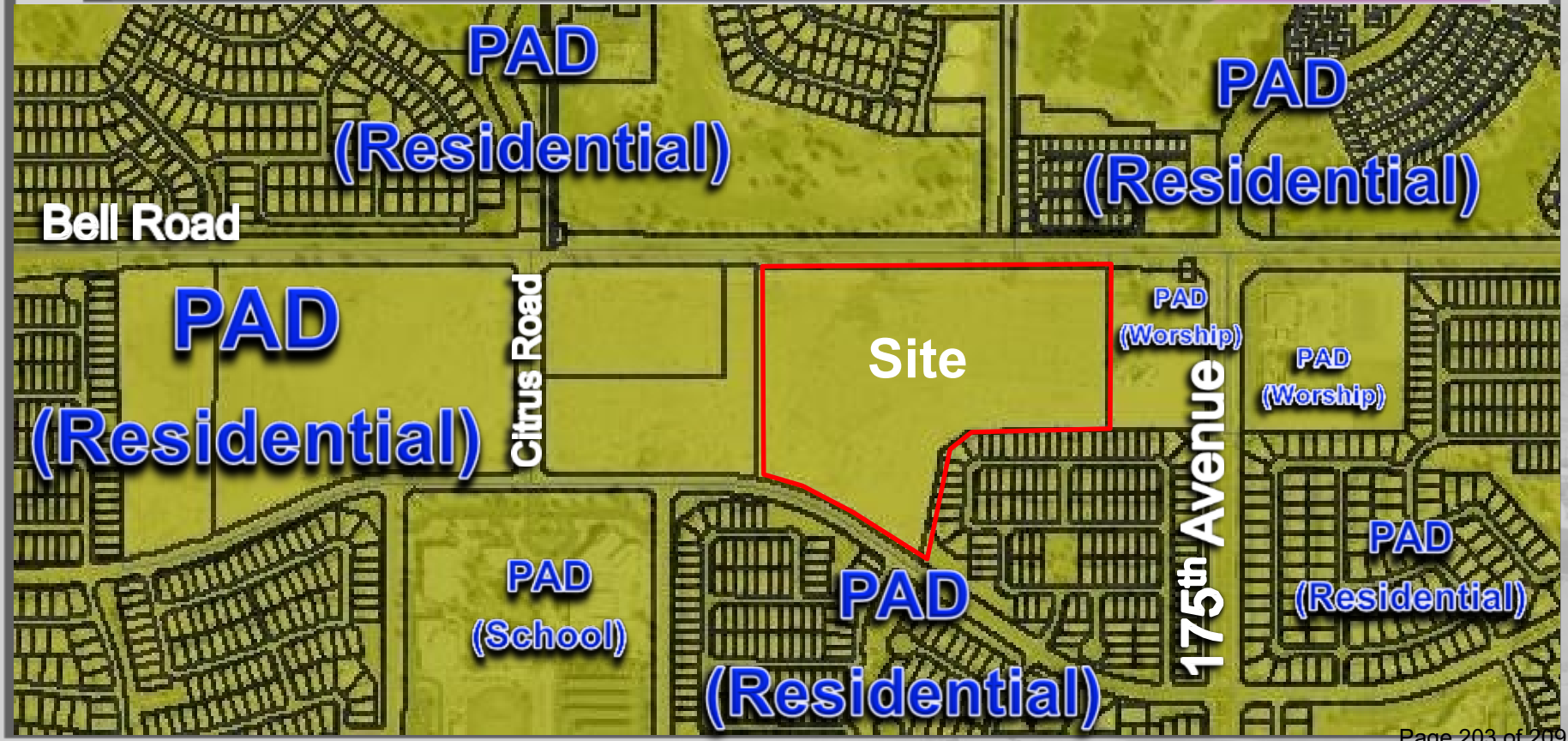
Planning & Zoning Commission

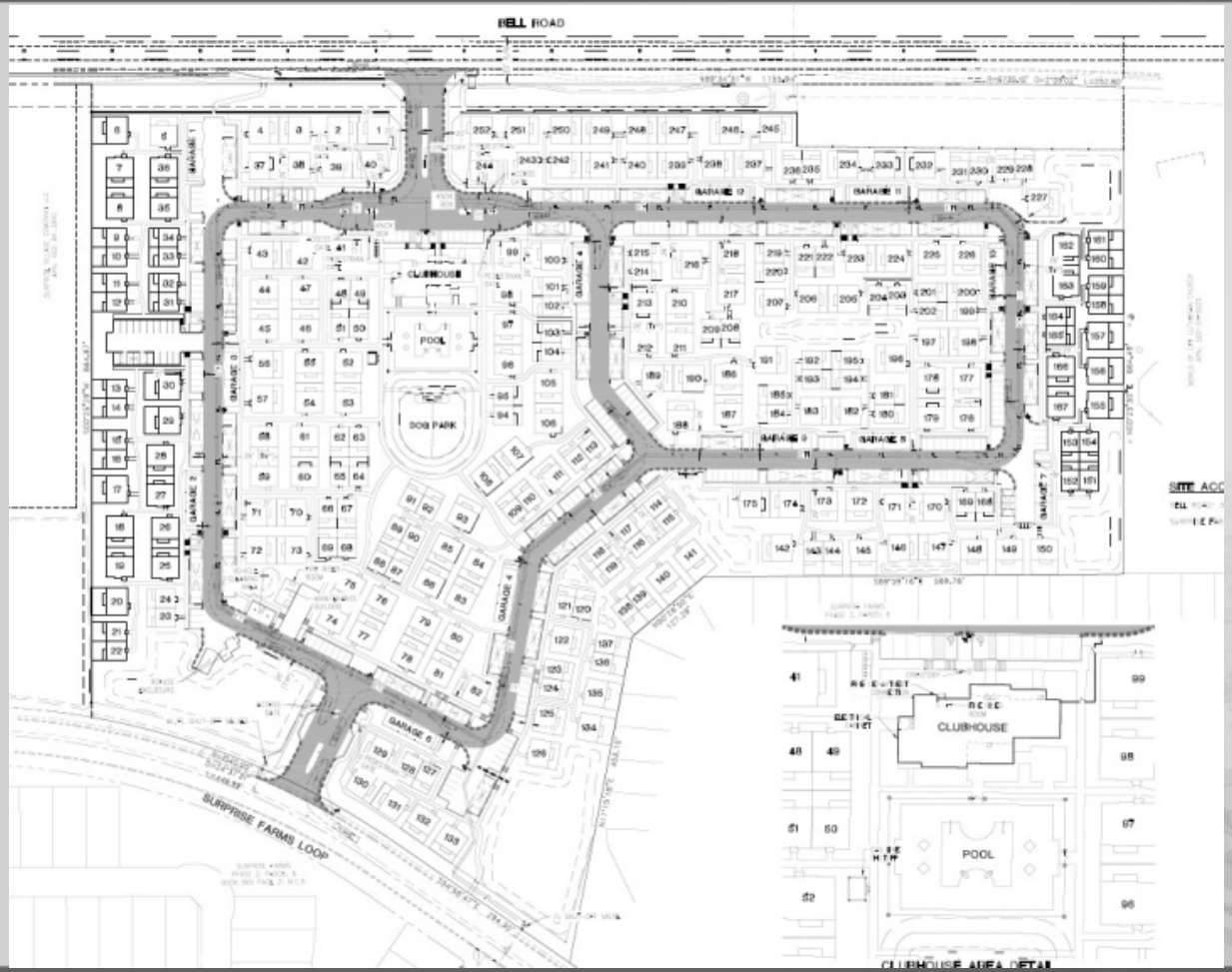
April 16, 2020

VICINITY MAP



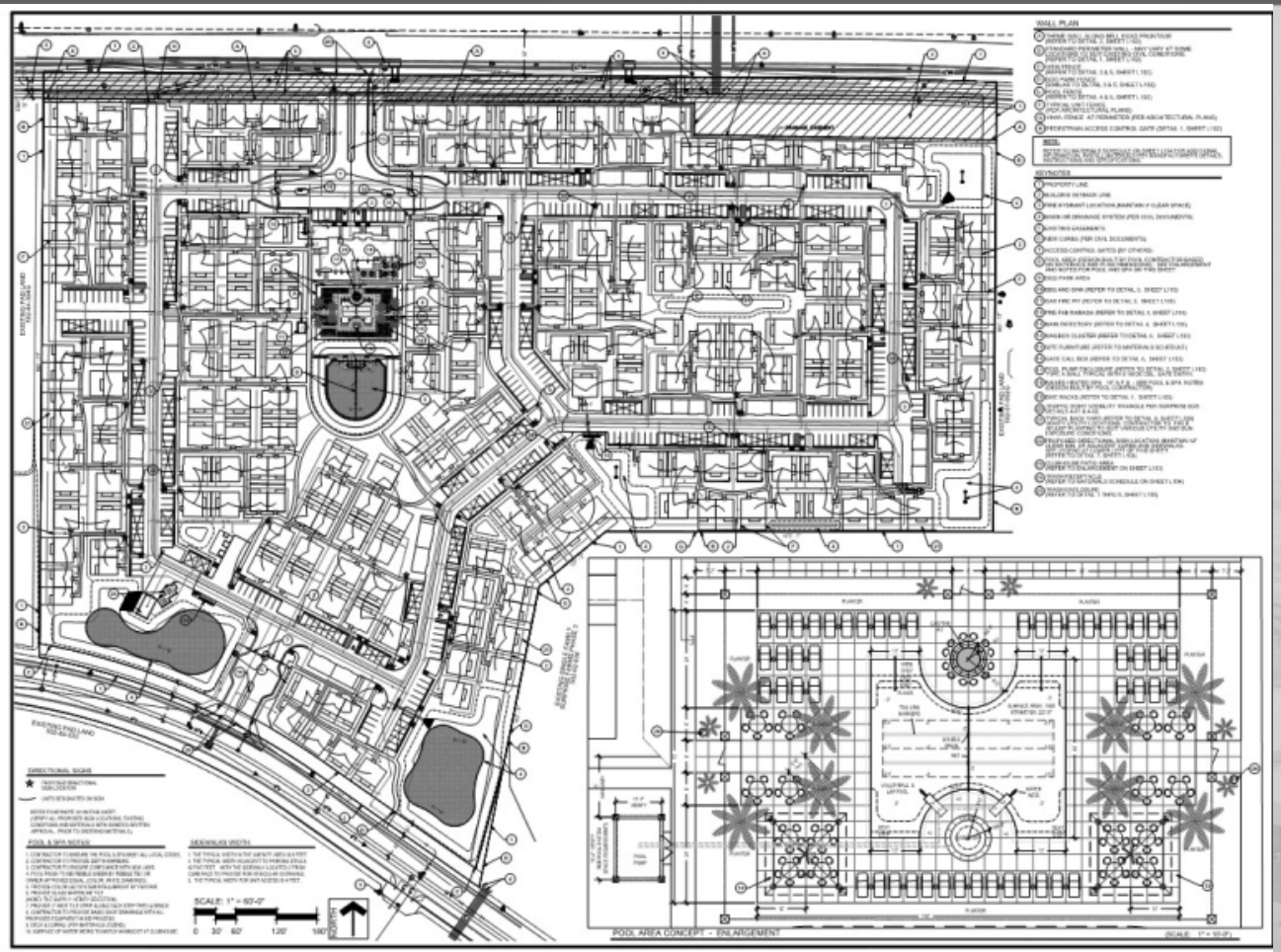
CASE MAP


PAD
(Residential)
PAD
(Residential)
Bell Road
PAD
(Residential)
Citrus Road
Site
PAD
(Worship)
PAD
(Worship)
175th Avenue
PAD
(School)
PAD
(Residential)
PAD
(Residential)


BELL ROAD
CLUBHOUSE
POOL
DOG PARK
GARAGE 1
GARAGE 2
GARAGE 3
GARAGE 4
GARAGE 5
GARAGE 6
GARAGE 7
GARAGE 8
GARAGE 9
GARAGE 10
GARAGE 11
GARAGE 12
SURPRISE FARMS LOOP
CLUBHOUSE
POOL
CLUBHOUSE AREA DETAIL

Site Plan

Landscape Plan





Front Elevation

Elevation A



Front Elevation





Front Elevation



Elevations

STAFF RECOMMENDATION

Staff Recommendation:

- Approval this Site Plan subject to Stipulations ‘A’ through ‘F’

SURPRISE
ARIZONA

QUESTIONS OR COMMENTS?

Thank You

STIPULATIONS

A. Development and use of the site shall be consistent with the Site Plan entitled “Surprise Farm Villas” consisting of four (4) sheet prepared by Hilgart Wilson and stamped received March 3, 2020.

B. Landscaping of the site shall be consistent with the Landscape Plan entitled “Surprise Farm Villas” consisting of thirty-three (33) sheets prepared by The Design Element and stamped received January 24, 2020.

C. Building elevations shall be consistent with the Elevations entitled “Surprise Farm Villas” consisting of five (5) sheet prepared by Homes by Towne and stamped received January 24,2019.

D. This Site Plan is valid for one (1) year after approval by the Planning and Zoning Commission. This Site Plan shall expire on the one (1) year anniversary of approval, unless construction commences prior to that date.

E. Non-compliance with the approved plan for this case will be treated as a violation in accordance with the provisions of Article XIV of the Surprise Unified Development Code.

F. Site Plan approval is contingent upon Final Plat approval by City Council.