





Rezoning Site



Existing Condition Topographic Contour (1' Interval)



Erosion Hazard Setback Limit (EHSL)



Approximate 100-Year Regulatory Floodplain Limit



Regulated Riparian Habitat -- CLS Important Riparian Area (IRA) with Xeroriparian "C"



Saguaro < 6' in height



Saguaro >6' in height



Ironwood Tree



Existing Drainage Flow Entering / Exiting the Site

Jim Portner, Agent for Owner
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Thornydale/Overton

SEC THORNYDALE ROAD at OVERTON ROAD (Ownership Entity: Wong Family Limited Partnership) REZONING: SR to CR-5 & CB-1

EXHIBIT I-ICOMPOSITE MAP

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SECTION II:

Land Use Proposal

A. PROJECT OVERVIEW

The proposed rezoning is a quintessential infill development that wholly fits within an emerging urbanizing context comprised of both older and more recent residential subdivisions, together with substantial areas of commercial and non-residential growth. It will make efficient use of the existing public and private utility infrastructure that is already in-place adjacent to the property.

Within the past three years alone, a series of six comprehensive plan amendments and attendant/subsequent rezonings have been filed and approved by the Pima County Board of Supervisors within the same Thornydale Road corridor. This development activity has proven instrumental in furthering the many infill objectives prescribed by Pima Prospers.

1. Proposed Zoning Boundaries

The proposed rezoning request includes a 15.3-acre CR-5 residential sector, together with a 3.0-acre CB-1 commercial site. The respective boundaries for these two new zoning sectors have been provided in an ESRI shape file that was separately submitted in conjunction with this rezoning application filing.

2. Project Description

The site will be developed with two components: 1) a single-family residential subdivision, the intent of which is to be generally consistent in density and character with the existing subdivisions already in place to the adjacent northeast, east, southeast, and south, and 2) a single-tenant commercial corner with an anticipated gross floor area of approximately 18,000 square feet.

A review of the existing adjacent development shows that these prior residential subdivisions and commercial uses to the north, east and south were all essentially mass graded in their entirety. Their pre-development natural drainages were often narrowed or otherwise channelized. The residential/commercial development program proposed with this rezoning will provide for a significant protected natural corridor (associated with the Hardy Wash), as well as fully honor the requirements of the Conservation Lands System (CLS) through a combination of on-site and offsite set-asides and/or suitable mitigation.

a. Proposed Development Use & Type

As indicated above, the site will be developed as a combined single-family residential subdivision and commercial corner. The residential component will reflect the same basic character and density of residential development that is in place with the existing adjacent subdivisions to the northeast, east, southeast and south, with the exception that the proposed neighborhood will feature more open and space, natural area, and perimeter buffers than its residential predecessors.

b. Proposed Development Response to Opportunities & Constraints

The site's major constraints are natural and environmental ones, most notably pertaining to habitat resources and regulatory floodplain associated with the Hardy Wash that traverses the property.

The entire site is designated as *Multiple Use Management Area (MUMA)* and *Special Species Management Area (SSMA)* under the Maeveen Marie Behan Conservation Lands System (CLS), with a portion of it also classified as CLS *Important Riparian Area (IRA)* with underlying Xeroriparian "C" regulated habitat. Beyond these considerations, the site also contains numerous saguaros and ironwood trees, thereby necessitating special care in applying and executing the Native Plant Preservation Ordinance (NPPO).

The Preliminary Development Plan (PDP) presented below in Section II.B responds to these natural constraints by employing significant set-asides for both the CLS, regulatory-floodplain and habitat constraints identified above. The residential lots are located solely in that portion of the property that lies south of a preserved natural corridor for the Hardy Wash floodplain and its associated habitat, while the proposed commercial component lies entirely north of same, thereby providing the proper separation and buffering of the new neighborhood from the future commercial use.

c. Conformance with Comprehensive Plan, etc.

This Project, as proposed, will fully comply with Pima Prospers:

This Project complies with its Designated Land Use Intensity Category. The Property is designated as Neighborhood Activity Center (NAC) and Medium-Low Intensity Urban (MLIU) per adopted comprehensive plan amendment Resolution No. 2017-4. There are no rezoning policies attendant to this Resolution.

The proposed commercial corner (requested CB-1 zoning) and single-family residential subdivision (requested CR-5 zoning) presented in the proposed *Preliminary Development Plan (PDP)* are in full compliance with the NAC and MLIU Pima Prospers designations. The respective CB-1 and CR-5 zoning requests are wholly consistent with the established commercial and residential zoning construct immediately surrounding the property.

In terms of density, Pima Prospers stipulates a residential density range of 2.5 to 5.0 RAC (residential units per acre) for the portion of the rezoning site designated MLIU. The *Preliminary Development Plan (PDP)* for this rezoning proposes a subdivision containing fifty-two (52) lots on approximately fourteen (14.2) developed acres. This calculates to a net-effective density of 3.66 RAC and falls within the above prescribed density range.

This Project complies with the County's Pima Prospers Use of Land (Chapter 3) and Physical Infrastructure Connectivity (Chapter 4) policies. The pertinent policies are as follows: Land Use Element (Section 3.1), Environmental Element (Section 3.4), Housing & Community Design Element (Section 3.5), and Transportation Element (Section 4.1).

Land Use Element (Section 3.1)

The proposed project works substantially toward the established Goal 1 objective (p.3.2) of integrating land use with physical infrastructure and resource conservation to insure long-range viability of the region. The requested rezoning integrates with the existing, established, or already-planned transportation, wastewater, potable water, and recreational infrastructure resources adjacent to the property and within the larger Thornydale Road corridor. It represents a quintessential infill development that, by definition, works off of this existing infrastructure rather than requiring the further expansion of it. The continued commercial and residential densification of the Thornydale Road corridor through infill projects such as this one takes advantage of these available efficiencies and enhances the opportunity for expanded multi-modal transportation and future transit options.

Environmental Element (Section 3.4)

The proposed project is in full compliance with the Conservation Lands System (CLS) and its stated Goal 1 (p. 3.23) objective of conserving and protecting natural resources, together with its enumerated Policies (pp. 3.23 thru 3.31). The *Preliminary Development Plan (PDP)* presented herein provides for a significant natural-area set aside in conjunction with the Hardy Wash that traverses the site. This on-site set-aside respects applicable ordinances pertaining to the regulated riparian habitat and, together with the use of off-site habitat dedications, will satisfy all prescriptions of the CLS.

Housing and Community Design Element (Section 3.5)

The proposed project furthers the Goal 8 (p. 3.45) objective of providing new development that is generally compatible and scale-appropriate, as well as the Goal 10 (p. 3.46) objective of ensuring development that reflects the character and sense of place of its given area. This infill project is guided by the simple goal of: 1) providing a single-family residential use that, as best as possible, general fits within and respects the type, character, and density of the existing residential development that already surrounds it; and 2) provides a commercial use that is essentially the same as that which occurs directly across the street (Overton Road) from it. This approach ensures a consistency and compatibility of both scale and character, while respecting the established sense of place of the area.

<u>Transportation Element (Section 4.1)</u>

The proposed project furthers the Goal 1 (p. 3.45) objective of promoting a comprehensive and multi-modal transportation system. The Thornydale Road corridor is one of the most significant north-south transportation arteries within the overall County transportation system. Multi-modal objectives are met by fostering the growth, commercial intensification, and residential densification of such corridors. At present, the Thornydale corridor is served by only a single public transit route, this being a Sun *Shuttle* service, not a full-size Sun Tran bus. Continued growth and development of infill parcels, such as the subject property, will contribute toward the goal of achieving truly multi-modal, transit-rich corridors throughout the region.

This Project complies with the County's applicable Rezoning Policies. As mentioned above, the subject property is designated as Neighborhood Activity Center (NAC) and Medium-Low Intensity Urban (MLIU) per adopted comprehensive plan amendment Resolution No. 2017-4. There are no rezoning policies attendant to this Resolution.

d. Interactions With Surrounding Property Owners; Attendant Issues

The property owner (Wong Family Limited Partnership) heard and incorporated neighboring property owner concerns during the aforementioned comprehensive plan amendment process for this property (Case No. P16CA00001), the application of which was ultimately approved by the Board of Supervisors in January, 2017. While there were no formal conditions of approval or rezoning policies attached to that amendment, this rezoning proposal and its attendant *PDP* are in substantial conformance with the concept plan that was publicly presented to the neighbors at the time of the plan amendment, including the significant set-aside and protection of the Hardy Wash, its attendant regulatory floodplain, and its designated riparian habitat resources.

The rezoning applicant will continue working with neighborhood representatives and leaders so as to fully inform them of the proposed rezoning application and the specifics of the commercial development and single-family subdivision planned for the property. These discussions and interactions will be on-going through the rezoning process and we will ensure that Pima County staff is kept abreast of their progress.

e. Impact on Existing Land Uses in the Surrounding ¼ Mile Area

The proposed Preliminary Development Plan (PDP) depicts commercial and residential development that is generally similar in both type and character to that which already exists in immediate proximity to it. The on-site

protection and preservation of the existing Hardy Wash channel as shown in the proposed PDP provides an important natural-area corridor expansion and wildlife connectivity to the substantial habitat resources the exist across Thornydale Road within Arthur Pack Regional Park.

f. Contribution to Smart Growth Principles

The proposed rezoning is consistent with, or furthers, several of the Smart Growth Principles as identified by the Smart Growth Network (SGN). These are individually discussed below:

Mix of Land Uses

Given the emerging urbanization trend in the entire Thornydale Road corridor and taking into account the property's immediate context, the site is best developed as a mix of commercial and residential uses. The riparian and drainage constraints impacting the property have carefully been incorporated into the *PDP* to ensure that these new uses coexist well with each other, as well as with the existing/established residential and commercial neighbors that immediately surround it.

Take Advantage of Compact Building Designs

The project will promote an increased population density and commercial intensity within the Thornydale Road corridor. The proposed residential lots are located in a concentrated spatial arrangement that affords opportunities for efficient on-site infrastructure while, at the same time, creating a significant open-space corridor and CLS set-aside area to protect and preserve the Hardy Wash riparian corridor.

Multi-Modal Transportation Opportunities

Higher density and intensity development significantly contributes to larger regional opportunities for multi-modal transportation. The Thornydale Road corridor functions as the most important north-south transportation artery in this area and is suitable for future bicycle routes and public transit. Higher density residential development and commercial expansion is essential in creating the level of demand needed to warrant and further such multimodal opportunities.

Rational Infrastructure Expansion and Improvements

The proposed rezoning and its commercial/residential program adheres closely to this principle. Intelligent and efficient growth demands the intelligent and efficient use of established public infrastructure. The proposed rezoning represents an important infill opportunity that will utilize existing public utility and planned transportation improvements,

while contributing its fair share of the costs that will be needed to expand same within the proposed development.

Conservation of Natural Resources

The rezoning site falls within the *Multiple Use Management Area (MUMA)* classification of the Conservation Lands System (CLS), with portions of the property classified as *Important Riparian Area (IRA)* with underlying Xeroriparian "C" regulated habitat. In addition, the Special-Species Management aspect of the CLS also applies, thereby increasing the CLS's established conservation and mitigation guidelines.

The proposed PDP ensures the preservation of the site's primary natural resource, i.e. the Hardy Wash regulatory floodplain and riparian habitat corridor. Approximately 3.8 acres of the site are dedicated as a natural area set-asides in order to suitably protect this resource.

3. Compliance with the Pima County Zoning Code

At the time of this writing, we anticipate no portion of the Pima County Zoning Code which cannot be complied with in the ultimate design and construction of this project. In the event that any such particulars arise during final engineering and subdivision platting, these will be appropriately dealt with through staff interactions and any attendant processes (e.g. variances) that might be required.

B. PRELIMINARY DEVELOPMENT PLAN (PDP)

1. PDP Map and Overlay -- General Description

A Preliminary Development Plan (PDP), in accordance with Section II-B.1a-p of the Site Analysis Checklist, is provided as Exhibit II-B.1a-p. This PDP illustrates a proposed commercial corner and single-family residential subdivision program that protects the Hardy Wash corridor traversing the site and which confines the commercial and residential components to those upland areas respectively lying north and south of the Wash.

In terms of timing and phasing, it is anticipated that the residential component will proceed first and will commence construction later in 2018, generally at the same time that the Pima County Department of Transportation is commencing with its comprehensive repaving of Thornydale Road. The commercial component is in discussions with a variety of single-tenant users. Construction of this aspect of the project will proceed under timing dictated by market demand.

2. Support Data

The following support data is provided here and is also reflected in notes on the PDP as appropriate:

a. Estimated Floor Area of Structures.

The commercial component of this project anticipates a single-user tenant with approximately 18,000 square foot of gross floor area. It must be noted that the PDP layout presented herein is purely conceptual in nature at this point based upon best-guess projections and discussions to date with various potential tenants. The ultimate design for this commercial site is subject to change and refinement at which time a final end-user/tenant is identified and at which time the ultimate design is depicted on a future Development Package (DP). The intent of this rezoning and the PDP layout shown is to simply depict a typical, single-tenant commercial development.

b. Building Heights

The commercial development will be limited to the thirty-nine foot (39') building height prescribed under CB-1 zoning. The residential subdivision will contain both one-story and two-story residences in response to market demand. The maximum building height therein will not exceed that allowed under the requested CR-5 zoning, i.e. thirty-four feet (34').

c. Number of Dwelling Units

The PDP illustrates fifty-two (52) individual residential lots. The typical lot width is fifty feet (50'), with typical depths of approximately one hundred eighteen feet (118). These lot dimensions are subject to minor modifications at the time of final subdivision platting, based upon available floor-plans and prevailing market preferences in force at the time.

d. Maximum & Minimum Residential Densities

The maximum residential density allowed by Pima Prospers for the Medium-Low Intensity Urban (MLIU) designation is 5 RAC (residential units per acre). The effective net density of the proposed PDP (52 lots on approximately 14.6 developed acres) is 3.66 RAC.

e. Type of Landscaping

Landscaping within the developed subdivision will be a mixture of native preserved desert and xero-riparian landscape species. The proposed landscape program for the site is described more fully in Sections II.E (Biological Resources) and II.F (Landscape & Buffer Plan).

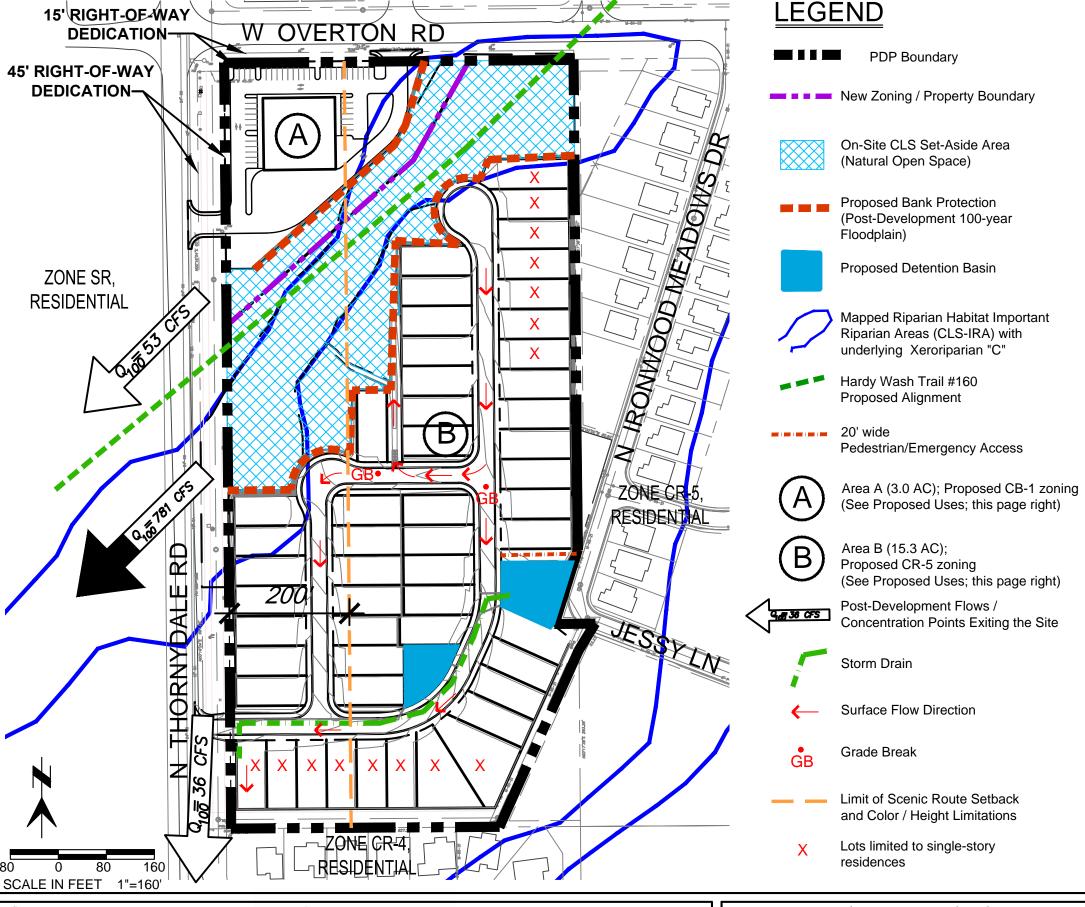
f. Size & Description of Recreation Areas, Natural/Functional Open Space

The project's most significant open space element is the substantial natural area set-aside for the Hardy Wash floodplain and riparian habitat corridor. These areas are illustrated on the PDP and described more fully in Sections II.E. (Biological Resources) and II.F (Landscape & Buffer Plan).

The designated Hardy Wash Trail No. 160 alignment traverses this corridor. In accordance with Pima Prospers Section 4.8 (Goal 1, Policy 3.e) and Section 4.10 (Goal 1, Policy 2.e), the Preliminary Development Plan (PDP) includes on-site pedestrian paths (in addition to the sidewalks provided on both sides of the residential subdivision streets), that will ensure connectivity from the residential lots to the Hardy Wash corridor and designated trail alignment (also see Section M.3; p. 80).

g. Other Supplemental Information – Safe Streets

In keeping with the objectives of providing safe streets to schools, all new streets within the proposed subdivision will provide concrete sidewalks on both sides of the street, such that there is a continuous pedestrian system throughout the neighborhood and extending to both the Thornydale and Overton Road rights-of-way. It is anticipated that these sidewalks will then eventually be connected to the public sidewalks constructed along Thornydale and Overton Road at which time Pima County proceeds with its full reconstruction and widening of Thornydale Road to its ultimate divided-arterial cross-section.



PROJECT AREA

Overall Rezoning Site Area: 18.30 AC Site Area After R.O.W. Dedications: 16.80 AC

PROJECT PARTICULARS

Existing Zoning: SR

Comprehensive Plan Designations: NAC & MLIU Proposed Zoning: CB-1 & CR-5

PROPOSED USES

AREA A: Commercial/Retail Use with an approximate gross floor area of 18,000 sf. The PDP layout presented here is conceptual in nature and subject to change and refinement at the time the final End-User/Tenant is identified. The intent of this rezoning and PDP is to depict a typical single-tenant commercial development.

AREA B: A single-family detached residential subdivision containing approximately fifty-two (52) lots. Typical lot size is 50'x118'.

BUILDING HEIGHT

AREA A: Maximum commercial building height is thirty-nine (39').

AREA B: Maximum residential height is thirty-four (34'). Project will contain both 1-story and 2-story residences per market needs.

PARKING & LOADING

Parking and loading will be in accordance with Section 18.75 (Parking & Loading Standards). Final design and compliance with same will be demonstrated at the time of future site development package (for commercial area) and residential subdivision plat review.

RESIDENTIAL SUBDIVISION PUBLIC STREETS

Proposed Right-of-Way Width: 45'

Travel Lanes: Minimum Two (2) 12' Lanes
Curbing: 2' Wedge Curbs on both sides
Sidewalks: 5' Sidewalks on both sides
On-Street Parking: Allowed both sides

CONSERVATION LANDS SYSTEM (CLS) PARTICULARS

Total Natural Open Space provided on-site: Minimum 3.0 AC

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Thornydale/Overton

SEC THORNYDALE ROAD at OVERTON ROAD (Ownership Entity: Wong Family Limited Partnership)

REZONING: SR to CR-5 & CB-1

EXHIBIT II-B

PRELIMINARY DEVELOPMENT
PLAN
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C. TOPOGRAPHY & GRADING

Please refer to Exhibit II.C (Topography and Grading) for an illustration of the various grading and design features of the proposed development. In addition, the following required information is also provided:

1. Development Features on Slopes of 15% or Greater

There are no slopes greater than 15% located anywhere on the proposed development; no special measures are therefore necessary.

2. Natural Areas Used for HDZ Allowances

There are no areas being set aside as natural open space for the purposes of average cross slope or HDZ calculation (or for any other reasons) on subject property.

3. Disturbed, Revegetated and Natural Areas

The site is characterized by the following topography/grading facts:

a. Natural Open Space

Approximately 3.8 acres, or twenty-one percent (23%) of the post-development site will be preserved as natural open space.

b. Revegetated Areas

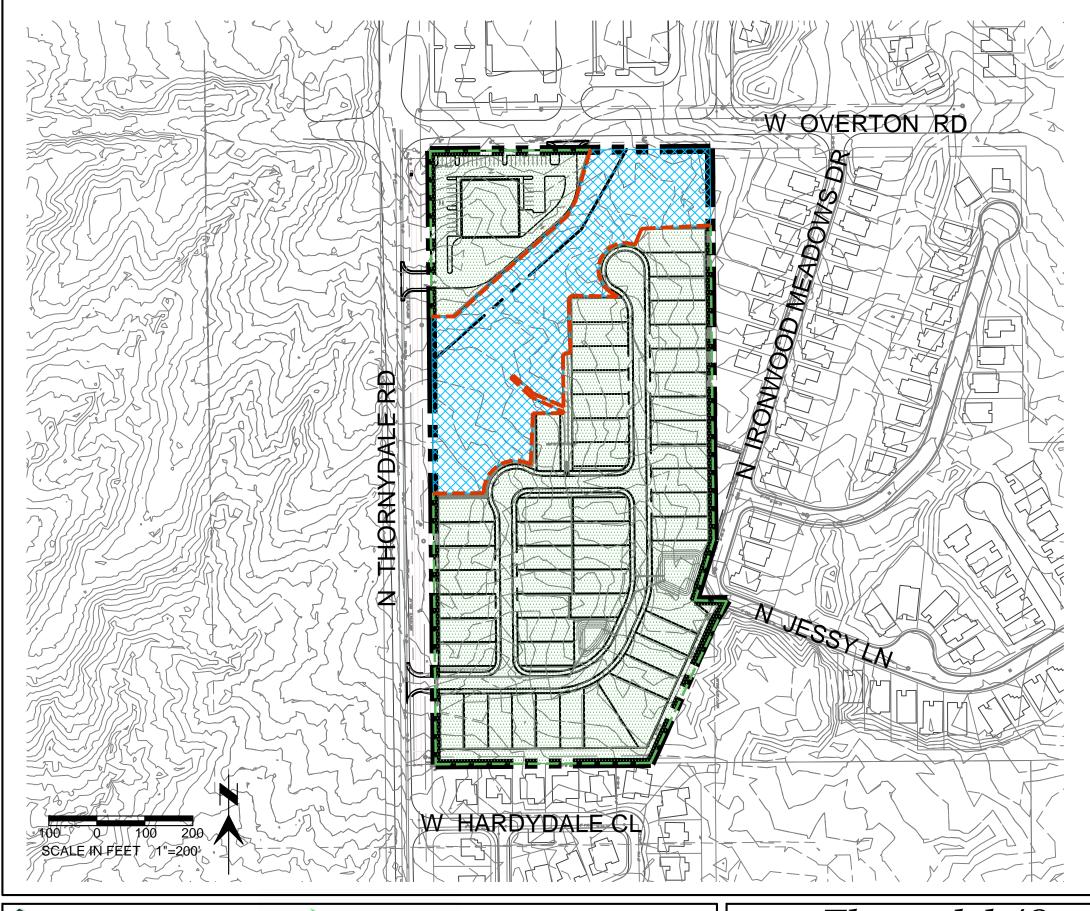
Revegetation will occur in those areas designated on the PDP for detention basins and drainage, as well as in certain perimeter buffer areas. In addition, there will be the customary landscaping of the new residential lots and streetscapes throughout the neighborhood.

c. Graded/Disturbed

Approximately 13.0 AC of the site's 16.8-acre post-development area (net after right-of-way dedications) will be graded/disturbed to construct the new commercial site and residential subdivision. These improvements include the commercial parking and driveway areas, the residential lots, new public streets, and the necessary detention basins and minor drainage channels. The approximate limits of grading have been illustrated on Exhibit I.C.

4. Maximum Grade Change; Areas By More than 5' of Cut or Fill

No areas of the site will be cut or filled more than five feet (5') from existing grade.





PDP Boundary



Existing Condition Topographic Contour (1' Interval)



Proposed Graded Area (Approximately 13.0 AC)



Proposed Ungraded/Preserved Natural Area (Approximately 3.8 AC)



Approximate Limits of Grading

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Thornydale/Overton

SEC THORNYDALE ROAD at OVERTON ROAD (Ownership Entity: Wong Family Limited Partnership) REZONING: SR to CR-5 & CB-1

EXHIBIT II-C
TOPOGRAPHY AND GRADING

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D. HYDROLOGY

The proposed development will be a combination of commercial and residential uses, together with natural area set-asides. The developed portions will be massgraded, as described in Section II.C (and as illustrated on Exhibit II-C). Please refer to Exhibit II-D.1 (Proposed Hydrology) in conjunction with the following:

1. Post-Development On-Site Hydrology

A combination of natural open space, setbacks, and man-made drainage improvements will be used to accommodate surface drainage for this subdivision.

a. Preserved Natural Washes.

The Hardy Wash corridor through the site will remain largely undisturbed. There will be minor encroachments into the regulatory flood plain by both the commercial site (to the north) the residential subdivision (to the south). Impacts to the floodplain must be mitigated to ensure that the discharge exiting the site replicates pre-development conditions.

b. Regulatory Floodplains.

The post-development regulatory floodplain within the proposed subdivision has been illustrated on Exhibit II-D.1. As indicated thereon, the pre-development floodplain will be slightly modified by this development. A CLOMR/LOMR is proposed to address the encroachments to the FEMA and the Regional Flood Control District (RFCD) regulatory floodplains.

c. Erosion Hazard Setbacks

The applicable 50' pre-development erosion hazard setbacks (EHS's) will be mitigated with erosion protection; same is illustrated on Exhibit II-D.1.

The erosion protection will incorporate sub-surface toe downs below the thalweg (minimum of 3'). Suitable bank protection in accordance with RFCD standards and specifications will be constructed along the entire commercial and residential frontages.

d. Pima County Regulated Habitat

A portion of the Xeroriparian "C" Regulated Riparian Habitat will be encroached upon by the new commercial and residential developments. The area just north of the residential street "knuckle" is envisioned for xeroriparian mitigation and will be enhanced with appropriate plant species. Surface drainage from the northern portion of the subdivision will water this area, with subsurface infiltration proposed within the same

area to support the new plantings. The particulars of the proposed encroachment and any on-site mitigation will be coordinated with RFCD at the time of tentative subdivision platting, together with applicable requirements for a Riparian Habitat Mitigation Plan (RHMP).

e. Proposed Drainage Structures

The commercial site will require detention and water harvesting to meet applicable RFCD requirements, the details of which will be provided at the time of final engineering and submittal of the future Development Package (DP).

The residential subdivision proposes two detention basins within the southeast portion of the development. The basin located adjacent to the east property boundary is approximately 30,000 cubic feet in volume. The interior basin just to the west is approximately 15,000 cubic feet. Both basins will provide water harvesting to a depth of six inches (6").

To the immediate east of the north-south oriented residential lot near the street "knuckle", a drainage swale will convey surface drainage from the northern portion of the subdivision and discharge it to the Hardy Wash corridor (and to the anticipated xeroriparian habitat mitigation area).

Water harvesting will also be employed on each individual residential lot to further mitigate surface flows.

f. Drainage Crossings & Attendant Structures.

The two basins described above will be connected by a sub-surface storm drain that will also be used to collect street flows. The anticipated final destination of these collected flows will be the southwest corner of the subdivision, such that they can be discharged to the Thornydale Road right-of-way after appropriate energy dissipation, etc.

g. Floodplain Encroachments & Associated Erosion Protection.

As mentioned above, both the commercial site and the residential subdivision site will require erosion-protection mitigation. While there is some minor encroachment into the floodplain itself, the erosion protection is mainly required to address erosion hazard setback (EHS) concerns. The erosion protection provided will be in accordance with RFCD standards and specifications and will provide for appropriate sub-surface toe downs.

h. Proposed Storm Drain Alignments & Inlets.

Storm drainage will be required to interconnect the proposed basins as well as control street drainage within the southern portion of the residential subdivision.

i. Drainage Easements.

Proposed drainage features for this project will be privately owned and maintained. Therefore, no drainage easements will be necessary.

j. Streets, Lots, Building Pads.

Refer to Exhibit II-D.1 for the proposed layout of the new subdivision streets and lots. All building pads shall be set at an elevation of at least one foot (1') above the adjacent wash water surface elevation (WSEL).

Exhibit II-D.1 also presented a very preliminary grading plan for the residential subdivision.

2. Preliminary Integrated Water Management Plan

The rezoning property is served by the Metropolitan Domestic Water Improvement District (MDWID), which has a potable and renewable water supply. A will-serve letter from Metro Water is provided in Exhibit II-D.2. MDWID advises us that their will-serve letters are valid for a period of two (2) years, and so has issued the same letter they prepared in October, 2016 during the comprehensive plan amendment process for this same property. The project's required Table "A", representing the developer's commitment to implement sufficient water conservation standards, will be provided at the time of future subdivision platting or development-package submittal.

3. Proposed Hydrology

Post-Development discharges flowing onto the property will not change as a result of this subdivision development. Post-Development discharges exiting the property will be detained and will meet adopted Pima County RFCD criteria for designated critical basins.

a. PDP Response to Constraints

The commercial portion of the PDP has not yet been investigated in detail, but water harvesting and low-impact techniques will be employed in final design to mitigate associated hydrologic impacts accordingly. As mentioned previously, encroachment into the existing Xeroriparian "C" area will be required to accommodate the commercial use and its driveway entry to Overton Road (which must be aligned with the adjacent entry to the existing Walgreens store to the north).

The residential subdivision on the PDP has been configured to maximize development with a minimum hydrologic impact. In addition to the subdivision drainage elements described previously, low impact development techniques will also be employed, including front-lot water harvesting, subsurface infiltration within the xeroriparian mitigation areas, and water harvesting within the larger detention basins. Common areas will also be utilized for water harvesting wherever practical.

b. Encroachment Justification

The commercial portion of the PDP requires two entries, one of which must be on Overton Road and must align with the existing driveway for the Walgreens drugstore to the north. This placement of the new driveway results in encroachment into the regulatory floodplain and Xeroriparian area.

The residential subdivision also requires minor encroachment into the floodplain and xeroriparian area in order to meet the density prescriptions of Pima Prospers, developer requirements and project economics, and prevailing consumer market demands for lot size.

The above commercial and residential encroachments can be accommodated in a manner that sufficiently protects the existing Hardy Wash corridor, while also protecting the interests of downstream properties.

c. Table of Concentration Points Pre-Development/Post-Development

A watershed summary table, together with pre/post flow quantities at the site's various concentration point, are provided on Exhibit II-D.1.

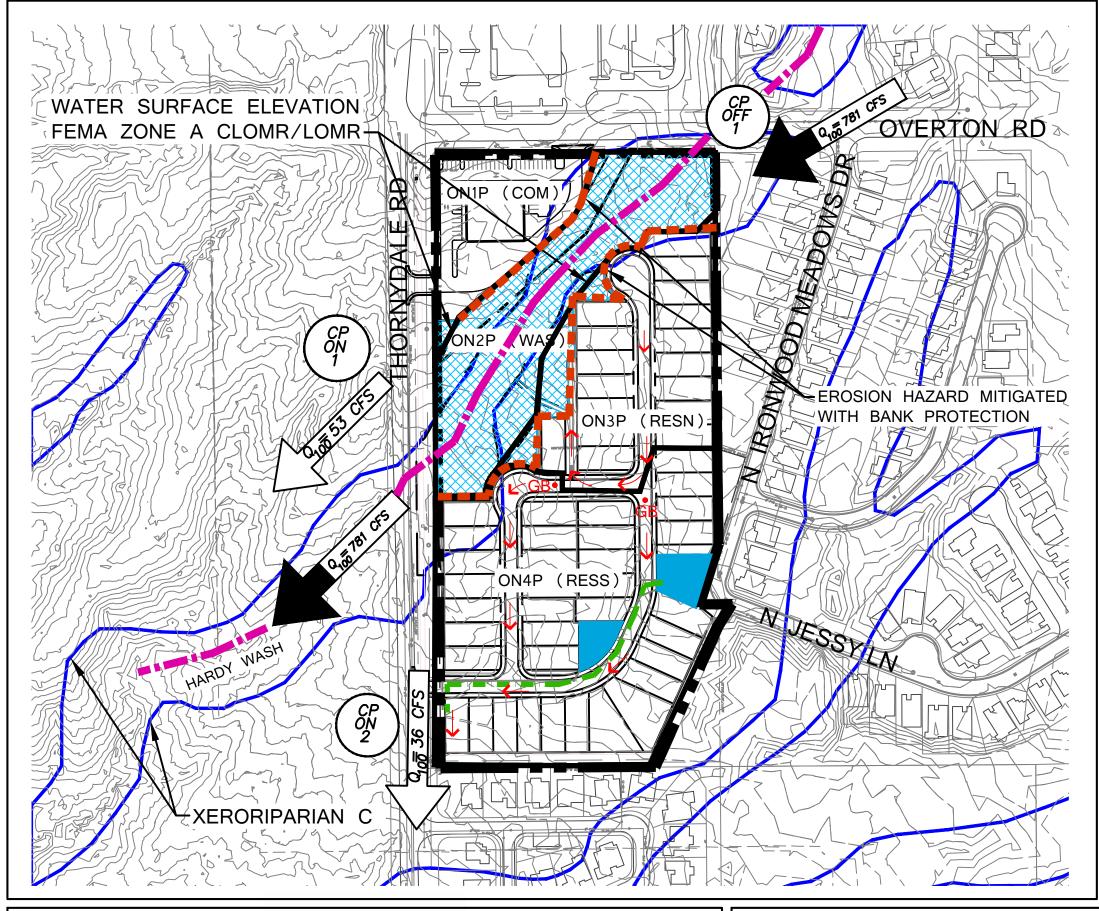
d. Potential Engineering & Design Features

A sub surface infiltration design will be utilized for xeroriparian mitigation area within the flood plain. Two large detention basins within the residential subdivision will utilize water harvesting techniques. Erosion protection will be utilized along the entire Hardy Wash corridor bordering the commercial and residential components of the project. A storm drain will direct flows from the southern portion of the residential subdivision to the extreme southwest corner of the site.

All of the above notwithstanding, the majority of the Hardy Wash corridor will remain as natural open space with only limited encroachment into the actual flood plain.

e. Summary of Overall Development Impacts

The overall impact of the site will not impact any adjacent flows to the north, east, or south, nor will it increase any flows to the downstream watershed. No upstream or downstream drainage improvements will be required to develop this site. Low-impact techniques, detention basins, and storm drain will be utilized to control the proposed drainage. This site will meet all Pima County Regional Flood Control District critical basin requirements.





■ ■ ■ PDP Boundary



Existing Condition Topographic Contour (1' Interval)



Detention Basin



Mapped Riparian Habitat --Xeroriparian "C"



CLS Set-Aside Area



Concentration Point, Typ.



Primary Wash Channel



Storm Drain



Surface Flow Direction



Grade Break

WATERSHED SUMMARY TABLE (POST DETENTION)

CONCENTRATION POINT ID	DA (AC)	Q100 (CFS)	Q10 (CFS)	Q2 (CFS)
OFF1	247.7	781	NA	NA
ON1P (COM)	1.8	14	7	2
ON2P (WAS)	3.9	18	7	1
ON3P (RESN)	3.3	21	10	5
ON4P (RESS)	9.2	36	19	9







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SEC THORNYDALE ROAD at OVERTON ROAD (Ownership Entity: Wong Family Limited Partnership)

REZONING: SR to CR-5 & CB-1

EXHIBIT II-D.1PROPOSED HYDROLOGY

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October 12, 2016

Michael Marks, AICP MJM Consulting, Inc. 7002 E. 4th Street Tucson, AZ 85710

Re: ±18 Acres at the SEC of Thornydale and Overton Roads CAP16-07

Dear Mr. Marks,

The Metropolitan Domestic Water Improvement District (MDWID) is certified to provide water to the above referenced development and is designated as having a 100-year assured water supply.

Any onsite or offsite requirements deemed necessary to provide the domestic and fire flow water supply will be determined at the time of improvement plan submittal or whenever application for water service is received, and will be the financial responsibility of the owner or those developing the property. Pipe sizing and system augmentation, if necessary, will be based on calculated demand for both domestic and fire flows as needed to adequately supply this area.

If an improvement plan has not been submitted within 2 years after the date of this letter, a reevaluation and reissuance of this will-serve letter will be necessary.

Please let me know if you have any questions or concerns at 575-8100.

Sincerely

Timothy Dinkel, P.E. Civil Engineer

Enclosure

c: Project File Signature File

Metropolitan Domestic Water Improvement District
P.O. Box 36870 Tucson, Arizona 85740 (520) 575-8100 (520) 575-8454 FAX www.metrowater.com

Exhibit II-D.2 Metropolitan Water District Will-Serve Letter

E. BIOLOGICAL RESOURCES

1. Expected Impacts

a. Conservation Lands System (CLS) Compliance

This development will affect the amount of undisturbed Multiple Use Management Area (MUMA), Special-Species Management Area (SSMA), and Important Riparian Area IRA) with underlying Xeroriparian "C" habitat as shown Table 2 below:

CLS Category	Pre-Development Area	Post-Development Area
MUMA with SSMA	14.7 AC	1.2 AC
MUMA/SSMA with Underlying IRA and Xeroriparian "C"	3.6 AC	2.6 AC

It must be noted that 0.4 acres of the pre-development figure shown above for the MUMA/SSMA/IRA (3.6 AC) will be dedicated to Pima County for public street rights-of-way in the post-development condition.

Disturbance of the CLS area will be mitigated through a combination of onsite preservation and a contribution of approved offsite mitigation lands. Please refer to Exhibit II-E.

b. Saguaros

There are a total of one hundred eighty four (184) viable saguaros on the property, of which 65 are \leq 6' and 119 are > 6'. It is anticipated that approximately 3 of the saguaros \leq 6' will be preserved on site; approximately 21 of the saguaros > 6' will be preserved on site. Final numbers for the above, as well as the manner in which the remaining saguaros will be dealt with, will be determined with the formal Native Plant Preservation Plan (NPPP) provided at the time of future subdivision platting and development.

c. Ironwood Trees

The site was surveyed for Ironwood trees and 82 viable specimens were found on the site. Approximately 26 will be preserved in place, to be detailed with the formal Native Plant Preservation Plan (NPPP) provided at the time of future subdivision platting and development.

d. Pima Pineapple Cactus

The site was surveyed for Pima Pineapple Cactus and no (0) specimens were found.

e. Needle-Spined Pineapple Cactus

The site was surveyed for Needle-Spined Pineapple Cactus and none (0) were found.

Exhibit to Follow