

ZONING CHANGE REVIEW SHEET

CASE: C14-2023-0034 – 5402 S. Congress Avenue

DISTRICT: 3

ADDRESS: 106, 116, and 118 Red Bird Lane; 5402, 5408, and 5412 South Congress Ave;
111 West Mockingbird Lane

ZONING FROM: SF-2-NP; CS-MU-NP; CS-MU-CO-NP

TO: CS-MU-V-CO-NP

SITE AREA: 2.7198 acres

PROPERTY OWNER: RPC 106 Red Bird Ln LLC; RPC 5402 South Congress LLC;
5412 South Congress LLC (Rastegar)

AGENT: Drenner Group, PC (Amanda Swor)

CASE MANAGER: Nancy Estrada (512-974-7617, nancy.estrada@austintexas.gov)

STAFF RECOMMEDATION:

The Staff recommendation is to grant general commercial services – mixed use – vertical mixed use building – conditional overlay – neighborhood plan (CS-MU-V-CO-NP) combining district zoning. The Conditional Overlay will include the following:

- 1) Prohibits drive through service as an accessory use to a commercial use; and**
- 2) Prohibits the following uses:**

Alternative financial services	Adult-oriented businesses
Automotive rentals	Automotive repair services
Automotive sales	Automotive washing (of any type)
Bail bond services	Campground
Commercial off-street parking	Construction sales & services
Convenience storage	Equipment repair services
Equipment sales	Exterminating services
Funeral services	Indoor sports & recreation
Laundry services	Monument retail sales
Off-Site accessory parking	Outdoor sports and recreation
Pawn shop services	Pedicab storage & dispatch
Research services	Service station
Vehicle storage	Hospital services (general)
Custom manufacturing	Limited warehousing & distribution

For a summary of the basis of Staff's recommendation, see pages 3 - 5.

PLANNING COMMISSION ACTION / RECOMMENDATION:**December 12, 2023:**

November 28, 2023: *POSTPONED by PLANNING COMMISSION to DECEMBER 12, 2023*
[G. COX; J. MUSHTALER – 2ND] (7-4), A. AZHAR, G. ANDERSON, J. CONNOLLY,
F. MAXWELL – NAY; VC HEMPEL, A. WOODS – ABSENT

November 14, 2023: *POSTPONED by PLANNING COMMISSION to NOVEMBER 28, 2023*
[A. AZHAR; F. MAXWELL – 2ND] (12-0), N. BARRERA-RAMIREZ – ABSENT

October 10, 2023: *APPROVED A POSTPONEMENT REQUEST BY THE*
NEIGHBORHOOD TO NOVEMBER 14, 2023
[A. AZHAR; F. MAXWELL – 2ND] (11-0), G. COX, A. PHILLIPS – ABSENT

September 12, 2023: *Approved a POSTPONEMENT REQUEST by staff to October 10, 2023*
[VC HEMPEL; A. AZHAR – 2ND] (12-0), ONE VACANCY ON THE DIAS

CITY COUNCIL ACTION:**December 14, 2023:**ORDINANCE NUMBER:ISSUES:

On May 15, 2023, City of Austin staff sponsored a virtual community meeting to provide an opportunity for the neighborhood planning contact team, nearby residents, property owners, and any other interested parties to discuss the proposed development and the neighborhood plan amendment request.

The Applicant initially mailed letters to all residents within 500' of the property being rezoned that included information pertaining to the submitted rezoning case. The applicant has continued to be in communication with the South Congress Combined Neighborhood Plan Contact Team (SCCNPCT) as well as all interested parties.

The Neighborhood has requested a postponement to the November 14, 2023 Planning Commission hearing in order to continue discussions with the applicant. The applicant is in agreement with the postponement request. Please see correspondence received at the end of the staff report.

CASE MANAGER COMMENTS:

The subject rezoning area is approximately 2.72 acres and is located west of South Congress Avenue, just north of West Stassney Lane, between Red Bird Lane and West Mockingbird Lane. The property consists of five parcels that are currently zoned with three zoning districts: single family residence – standard lot – neighborhood plan (SF-2-NP); general commercial services – mixed use – neighborhood plan (CS-MU-NP); and general commercial services – mixed use – conditional overlay – neighborhood plan (CS-MU-CO-NP) combined district zoning. The southern tracts along Red Bird Lane are developed with a single family residence and a previous automotive sales use while three tracts are undeveloped.

The north lot that is 111 West Mockingbird Lane, (Lot 18, Block 5 of Pleasant Hill Addition) is subject to Ordinance No. 20051103-Z002. It includes an existing Conditional Overlay that establishes a 30-foot vegetative buffer along the west property line and prohibits automotive sales, automotive washing (of any type), automotive repair services and pawn shop service uses. This Conditional Overlay will remain in place and the Applicant does not propose to change the existing Conditional Overlay that was established by this ordinance. ***Please refer to Attachment A.***

Since the subject area is located along the South Congress Activity Corridor, it is surrounded by various small businesses. There are single family and multifamily residences to both the north and west (SF-2-NP; SF-6-NP; SF-4A-NP). Across South Congress Avenue to the east are a range of automotive businesses, a small treatment center, as well as a storage facility (CS-MU-NP). To the south across Red Bird Lane is a cocktail lounge, pawn shop services and a pharmacy drugstore (CS-MU-NP; GR-MU-CO). The intersection of South Congress Avenue and West Stassney Lane is less than a quarter of a mile south from the property. ***Please refer to Exhibits A (Zoning Map) and A-1 (Aerial).***

The applicant is requesting to rezone all parcels to general commercial services – mixed use – vertical mixed use building – conditional overlay – neighborhood plan (CS-MU-V-CO-NP) combined district zoning in order to build a cohesive development under one unified zoning category. The applicant intends to participate in the City's Vertical Mixed-Use program, which requires that 10% of units be made affordable to households making no more than 60% of the Median Family Income (MFI). There are also two types of VMU2 buildings that require 15% of the rental units in a building to be affordable for households earning 60% or less than the MFI or for 12% of the rental units to be affordable for households earning 50% or less than the MFI.

A building constructed under vertical mixed use building (–V) standards is required to contain a mix of residential and commercial uses, and the result is typically retail, restaurants and offices on the ground floor, and residential units on the upper levels. The overall project would consist of 250 multifamily units and 9,600 square feet of ground floor pedestrian oriented uses.

South Congress Avenue is a core transit corridor. Public transit is located within one quarter of a mile of the property as there are three Capital Metro bus stops on South Congress Avenue. In addition, there are two bus stops in close proximity on West Stassney Lane.

Staff is recommending (CS-MU-V-CO-NP) with a Conditional Overlay that consists of a list of prohibited uses above.

BASIS OF RECOMMENDATION:

1. *The proposed zoning should be consistent with the purpose statement of the district sought.*

The proposed general commercial services (CS) district zoning is intended for commercial or industrial uses that typically have operating characteristics or traffic service requirements generally incompatible with residential environments. The mixed use (MU) district is intended to allow for office, retail, commercial and residential uses to be combined in a single development. The Vertical Mixed Use Building (V) combining district may be applied in combination with any commercial base zoning district and allows for a combination of office, retail, commercial and residential uses within a vertical mixed use building. The Conditional Overlay (CO) combining district may be applied in combination with any base district. The district is intended to provide flexible and adaptable use or site development regulations by requiring standards tailored to individual properties. The neighborhood plan (NP) district denotes a tract located within the boundaries of an adopted Neighborhood Plan.

2. *Zoning should promote the policy of locating retail and more intensive zoning near the intersections of arterial roadways or at the intersections of arterials and collectors.*

General commercial services – mixed use – vertical mixed use building (CS-MU-V) zoning is appropriate for the subject property due to its frontage on South Congress Avenue road, a major arterial street.

3. *The rezoning should be consistent with the policies and principles adopted by the City Council.*

City Council has provided policy and direction for having more intensive uses and additional residential density on major corridors as well as allowing vertical mixed use building (-V) combining district on core transit corridors.

4. *Zoning changes should promote an orderly relationship among land uses.*

Staff is recommending (CS-MU-V-CO-NP) combining district zoning for the subject property based on the following considerations:

- 1) Its location at an intersection of a minor/major arterial street and collector,
- 2) Land uses along South Congress Avenue are in transition from undeveloped tracts to those that include mixed use and multifamily residences,

- 3) Commercial uses would be available to serve residents of the adjacent areas, as well as the wider community,
- 4) There is existing (CS) zoning located directly across South Congress Avenue as well as south of the property,
- 5) South Congress Avenue is a Core Transit Corridor, and this site is located within 0.25 miles of three public transit bus stops. It is currently served by two Capital Metro bus routes, including a Metro Rapid Bus Route.

EXISTING ZONING AND LAND USES:

	ZONING	LAND USES
<i>Site</i>	SF-2-NP; CS-MU-NP; CS-MU-CO-NP	Automotive sales; Single family residence; Undeveloped
<i>North</i>	SF-2-NP; CS; CS-MU-NP;	Single family residences; Multifamily; Personal Services
<i>South</i>	SF-2-NP; CS-MU-NP; GR-MU-CO	Cocktail lounge; Pawn shop services; General Retail Sales
<i>East</i>	CS-MU-NP	Automotive sales; Treatment Center; Automotive body work; Automotive services
<i>West</i>	SF-2-NP; SF-6-NP; SF-4A-NP	Single family residences; Multifamily

NEIGHBORHOOD PLANNING AREA: South Congress Combined (West Congress)

WATERSHED: Williamson Creek – Suburban

CAPITOL VIEW CORRIDOR: No

SCENIC ROADWAY: No

SCHOOLS: Austin Independent School District

Pleasant Hill Elementary

Bedichek Middle School

Crockett High School

COMMUNITY REGISTRY LIST:

Austin Neighborhoods Council

Austin Independent School District

Friends of Austin Neighborhoods

South Austin Neighborhood Alliance (SANA)

Go Austin Vamos Austin 78745

Homeless Neighborhood Association

Neighborhood Empowerment Foundation

Sierra Club, Austin Regional Group

South Congress Combined Neighborhood Plan Contact Team

Austin Lost and Found Pets

Park Ridge Gardens HOA

Preservation Austin

Park Ridge HOA

Onion Creek HOA

SELTexas

AREA CASE HISTORIES:

NUMBER	REQUEST	COMMISSION	CITY COUNCIL
C14-2022-0024 – 202 Red Bird Lane	SF-2-NP to SF-4A-NP	To Grant (5/10/2022) SF-4A-NP	Apvd SF-4A-NP (6/9/2022)
C14-2022-0116 – 5604 South Congress Avenue	CS-MU-CO-NP to CS-1-MU-CO-NP	To Grant (1/10/2023) CS-1-MU-CO-NP	Apvd CS-1-MU-CO-NP (2/9/2023)
C14-2017-0087 – 203 West Mockingbird Lane	SF-4A-NP to SF-3-NP	To Grant (8/22/2017) SF-3-NP	Apvd SF-3-NP (9/28/2017)
C14-2017-0053 – 206 Red Bird Lane	SF-2-NP to SF-3-NP	To Grant (6/13/2017) SF-3-NP	Apvd SF-3-NP (8/3/2017)
C14-05-0106 – West Congress Neighborhood Plan Area Rezoning	Proposed – Addition of -NP Combining District and change Base District Zoning on 24 tracts.	To Grant	Apvd to Add -NP Combining District (8/18/2005)

RELATED CASES:

NPA-2023-0020.02 – from Single Family to Mixed Use for a portion of the property

SP-2023-0087D – 5412 South Congress Demo (Vacant)

ADDITIONAL STAFF COMMENTS:Drainage

The developer is required to submit a pre- and post-development drainage analysis at the subdivision and site plan stage of the development process. The City's Land Development Code and Drainage Criteria Manual require that the Applicant demonstrate through engineering analysis that the proposed development will have no identifiable adverse impact on surrounding properties.

Environmental

The site is not located over the Edwards Aquifer Recharge Zone. The site is in the Williamson Creek Watershed of the Colorado River Basin, which is classified as a Suburban Watershed by Chapter 25-8 of the City's Land Development Code. The site is in the Desired Development Zone.

Under current watershed regulations, development or redevelopment on this site will be subject to the following impervious cover limits:

<i>Development Classification</i>	<i>% of Gross Site Area</i>	<i>% of Gross Site Area with Transfers</i>
Single-Family (minimum lot size 5750 sq. ft.)	50%	60%
Other Single-Family or Duplex	55%	60%
Multifamily	60%	70%
Commercial	80%	90%

According to floodplain maps there is no floodplain within or adjacent to the project location.

Standard landscaping and tree protection will be required in accordance with LDC 25-2 and 25-8 for all development and/or redevelopment.

At this time, site specific information is unavailable regarding vegetation, areas of steep slope, or other environmental features such as bluffs, springs, canyon rimrock, caves, sinkholes, and wetlands.

Under current watershed regulations, development or redevelopment requires water quality control with increased capture volume and control of the 2 year storm on site.

At this time, no information has been provided as to whether this property has any preexisting approvals that preempt current water quality or Code requirements.

PARD – Planning & Design Review

Parkland dedication will be required for the new applicable uses proposed by this development, multifamily with CS-MU-V-CO-NP zoning, at the time of subdivision or site plan, per City Code § 25-1-601. Whether the requirement shall be met with fees in-lieu or dedicated land will be determined using the criteria in City Code Title 25, Article 14, as amended. Should fees in-lieu be required, those fees shall be used toward park investments in the form of land acquisition and/or park amenities within the surrounding area, per the Parkland Dedication Operating Procedures § 14.3.11 and City Code § 25-1-607 (B)(1) & (2).

If the applicant wishes to discuss parkland dedication requirements in advance of site plan or subdivision applications, please contact this reviewer: thomas.rowlinson@austintexas.gov.

At the applicant's request, PARD can provide an early determination of whether fees in-lieu of land will be allowed.

Site Plan

Site plans will be required for any new development other than single-family, two-family or duplex residential.

Any new development is subject to Subchapter E. Design Standards and Mixed Use. Additional comments will be made when the site plan is submitted.

There is a site plan currently under review for this property (SP-2023-0087D) which provides for demolition of the site.

Any development which occurs in an SF-6 or less restrictive zoning district which is located 540-feet or less from property in an SF-5 or more restrictive zoning district will be subject to compatibility development regulations. The site is subject to compatibility standards due to the adjacent SF-2 district to the west.

This tract is already developed, and the proposed zoning change is a footprint within the existing development. The applicant is responsible for requesting relocation and demolition permits once the site plan is approved. The City Historic Preservation Officer will review all proposed building demolitions and relocations prior to site plan approval. If a building meets city historic criteria, the Historic Landmark Commission may initiate a historic zoning case on the property.

Austin Transportation Department – Engineering Review

The Austin Strategic Mobility Plan (ASMP) calls for 180 feet of right-of-way for South Congress Avenue. It is recommended that 90 feet of right-of-way from the existing centerline should be dedicated for South Congress Avenue according to the Transportation Plan with the first subdivision or site plan application. [LDC 25-6-51 and 25-6-55].

The Austin Strategic Mobility Plan (ASMP) calls for 58 feet of right-of-way for Red Bird Lane. It is recommended that 29 feet of right-of-way from the existing centerline should be dedicated for Red Bird Lane according to the Transportation Plan with the first subdivision or site plan application. [LDC 25-6-51 and 25-6-55].

The Austin Strategic Mobility Plan (ASMP) calls for 58 feet of right-of-way for West Mockingbird Lane. It is recommended that 29 feet of right-of-way from the existing centerline should be dedicated for West Mockingbird Lane according to the Transportation Plan with the first subdivision or site plan application. [LDC 25-6-51 and 25-6-55].

The adjacent street characteristics table is provided below:

Name	ASMP Classification	ASMP Required ROW	Existing ROW	Existing Pavement	Sidewalks	Bicycle Route	Capital Metro (within ¼ mile)
South Congress Avenue	Level 3 – Minor/Major Arterial	180'	123'	74'	No	Yes	Yes
Red Bird Lane	Level 1 – Residential Collector	58'	50'	18'	No	No	Yes
West Mockingbird Lane	Level 1 – Residential Collector	58'	48'	22'	No	No	Yes

A Traffic Impact Analysis is not required.

Austin Water Utility

No comments on zoning change.

The landowner intends to serve the site with existing City of Austin water utilities.

Depending on the development plans submitted, water and or wastewater service extension requests may be required. All water and wastewater construction must be inspected by the City of Austin. For more information pertaining to the Service Extension Request process and submittal requirements contact the Austin Water SER team at ser@austintexas.gov.

INDEX OF EXHIBITS AND ATTACHMENTS TO FOLLOW:

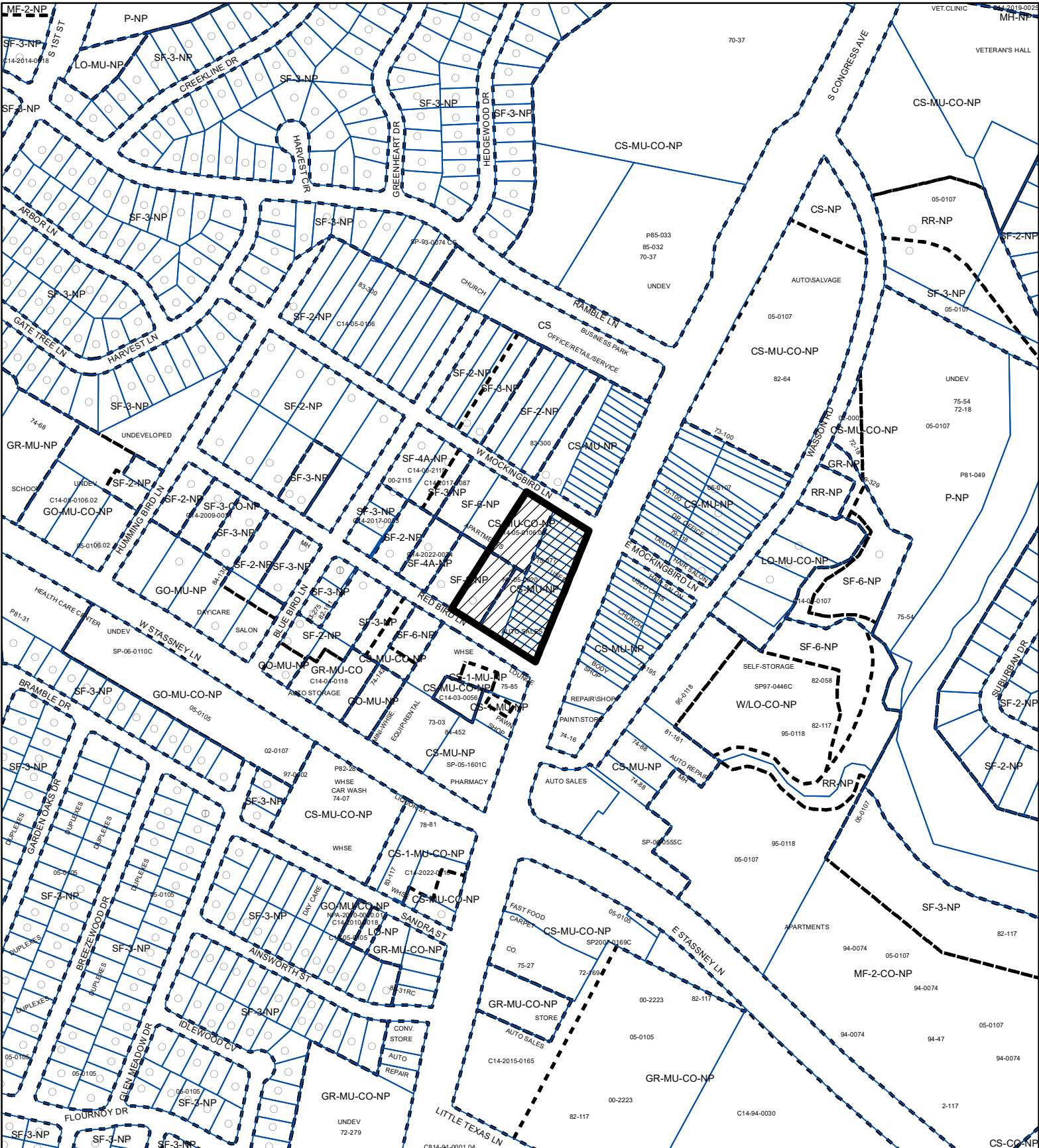
Exhibit A: Zoning Map

Exhibit A-1: Aerial Map

Applicant's Summary Letter

Attachment A: Ordinance No. 20051103-Z002

Correspondence



- SUBJECT TRACT
- PENDING CASE
- ZONING BOUNDARY

ZONING

ZONING CASE#: C14-2023-0034

EXHIBIT A



1" = 400'

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

This product has been produced by the Housing and Planning Department for the sole purpose of geographic reference. No warranty is made by the City of Austin regarding specific accuracy or

Created: 3/21/2023

March 9, 2023

Ms. Rosie Truelove
Housing and Planning Department
City of Austin
Street Jones Building
1000 E. 11th St, Ste 200
Austin, TX 78702

Via Electronic Delivery

Re: 5402 South Congress Avenue – Rezoning application for the 2.7198-acre piece of property located at 106, 116, and 118 Red Bird Lane; 5402, 5408, and 5412 S. Congress Avenue; and 111 W. Mockingbird Lane, Austin, Travis County, Texas (the “Property”)

Dear Ms. Truelove:

As representatives of the owner of the Property, we respectfully submit the enclosed rezoning application package. The project is titled 5402 South Congress Avenue, consists of 2.7198 acres, and is located at 106, 116, and 118 Red Bird Lane; 5402, 5408, and 5412 S. Congress Avenue; and 111 W. Mockingbird Lane. The Property is currently developed with automotive sales uses, a single family use, and three undeveloped tracts.

The site is currently zoned with three zoning districts: SF-2-NP (Single Family Residence – Standard Lot – Neighborhood Plan), CS-MU-NP (General Commercial Services – Mixed Use – Neighborhood Plan), and CS-MU-CO-NP (General Commercial Services – Mixed Use – Conditional Overlay – Neighborhood Plan). The proposed rezoning is from SF-2-NP, CS-MU-NP and CS-MU-CO-NP to CS-V-MU-CO-NP (General Commercial Services – Vertical Mixed Use Building – Mixed Use – Conditional Overlay – Neighborhood Plan) for the entire Property. The proposed rezoning will create a unified zoning category and support a vertical mixed use building with pedestrian-oriented commercial uses and multifamily residential on the Property. The existing Conditional Overlay that establishes a 30-foot vegetative buffer along the west property line and prohibits automotive sales, automotive washing (of any type), automotive repair services and pawn shop service uses will remain in place on 111 W. Mockingbird Lane, (Lot 18, Block 5 of Pleasant Hill Addition), as part of this rezoning.

A Traffic Impact Analysis is not required per the attached TIA Determination worksheet, executed by Maria Cardenas, dated February 10, 2023. Mitigation may be required per Land Development Code § 25-6-101.

The Property is located in the South Congress Combined Neighborhood Plan (West Congress) and is currently designated as "Mixed Use" and "Single Family" on the Future Land Use Map ("FLUM"). A Neighborhood Plan Amendment application is being submitted concurrently to change the FLUM for the portion of the Property designated as "Single Family" to "Mixed Use". The purpose of the NPA is to create a consistent designation that allows for a mixed use development and for comprehensive redevelopment of the Property.

Please let me know if you or your team members require additional information or have any questions. Thank you for your time and attention to this project.

Very truly yours,

A handwritten signature in blue ink that reads "Amanda Swor". The signature is written in a cursive, flowing style.

Amanda Swor

cc: Joi Harden, Housing and Planning Department (*via electronic delivery*)

ORDINANCE NO. 20051103-Z002

AN ORDINANCE REZONING AND CHANGING THE ZONING MAP FOR THE PROPERTY LOCATED IN THE WEST CONGRESS NEIGHBORHOOD PLAN AREA AT 5402 SOUTH CONGRESS AVENUE FROM SINGLE FAMILY RESIDENCE STANDARD LOT-NEIGHBORHOOD PLAN (SF-2-NP) COMBINING DISTRICT AND GENERAL COMMERCIAL SERVICES-NEIGHBORHOOD PLAN (CS-NP) COMBINING DISTRICT TO GENERAL COMMERCIAL SERVICES-MIXED USE-CONDITIONAL OVERLAY-NEIGHBORHOOD PLAN (CS-MU-CO-NP) COMBINING DISTRICT.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:

PART 1. The zoning map established by Section 25-2-191 of the City Code is amended to change the base district from single family residence standard lot-neighborhood plan (SF-2-NP) combining district and general commercial services-neighborhood plan (CS-NP) combining district to general commercial services-mixed use-conditional overlay-neighborhood plan (CS-MU-CO-NP) combining district on the property described in Zoning Case No. C14-05-0106.03, on file at the Neighborhood Planning and Zoning Department, as follows:

Lot 18 (save and except the north five feet adjacent to the Mockingbird Lane West right-of-way), Block 5, Pleasant Hill Addition, a subdivision in the City of Austin, Travis County, Texas, according to the map or plat of record in Plat Book 4, Page 7, of the Plat Records of Travis County, Texas (the "Property"),

locally known as 5402 South Congress Avenue, in the City of Austin, Travis County, Texas, and generally identified in the map attached as Exhibit "A".

PART 2. Except as specifically provided in Part 3 and Part 4, the Property may be developed and used in accordance with the regulations established for the neighborhood general commercial services (CS) base district and other applicable requirements of the City Code.

PART 3. The Property within the boundaries of the conditional overlay combining district established by this ordinance is subject to the following conditions:

1. A 30-foot wide vegetative buffer shall be provided and maintained along the west property line. Improvements permitted within the buffer zone are limited to drainage, underground utility improvements or those improvements that may be otherwise required by the City of Austin or specifically authorized in this ordinance.
2. The following uses are prohibited uses of the Property:

Automotive sales
Pawn shop services

Automotive washing (of any type)
Automotive repair services

PART 4. The Property is subject to Ordinance No. 20050818-Z003 that established the West Congress neighborhood plan combining district.

PART 5. This ordinance takes effect on November 14, 2005.

PASSED AND APPROVED

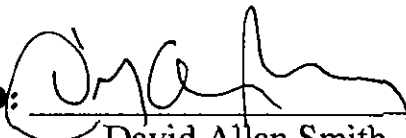
_____, November 3, 2005

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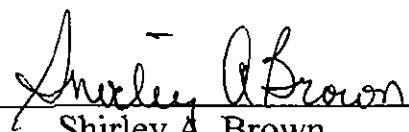


Will Wynn
Mayor

APPROVED:


David Allan Smith
City Attorney

ATTEST:


Shirley A. Brown
City Clerk



CASE MGR: W.WALSH

INTLS: SM

G17

 $1'' = 400'$

From: Brad Massingill

Sent: Thursday, October 5, 2023 12:10 PM

To: Amanda Swor

Cc: Meredith, Maureen <Maureen.Meredith@austintexas.gov>; Drew Raffaele; Mario Cantu; Estrada, Nancy <Nancy.Estrada@austintexas.gov>; Harden, Joi <Joi.Harden@austintexas.gov>; Hall, Victoria <Victoria.Hall@austintexas.gov>; Rivera, Andrew <Andrew.Rivera@austintexas.gov>; Valero, Jaelyn <Jaelyn.Valero@austintexas.gov>

Subject: Re: Oct. 10 PC PP Request: NPA-2023-0020.02_106 Red Bird & Zng

External Email - Exercise Caution

Amanda,

Thank you for agreeing to the November 14th hearing. I'll get back to you the first of next week. We're having a Neighborhood meeting on Friday and I'll float those dates by the group to see what works for them.

Y'all take care.

Brad

From: Amanda Swor

Sent: Thursday, October 5, 2023 11:43 AM

To: Brad Massingill

Cc: Meredith, Maureen <Maureen.Meredith@austintexas.gov>; Drew Raffaele; Mario Cantu; Estrada, Nancy <Nancy.Estrada@austintexas.gov>; Harden, Joi <Joi.Harden@austintexas.gov>; Hall, Victoria <Victoria.Hall@austintexas.gov>; Rivera, Andrew <Andrew.Rivera@austintexas.gov>; Valero, Jaelyn <Jaelyn.Valero@austintexas.gov>

Subject: Re: Oct. 10 PC PP Request: NPA-2023-0020.02_106 Red Bird & Zng

External Email - Exercise Caution

Mr. Massingill,

After much discussion, as representatives of the property owner we can agree to a postponement to November 14th. We would still like to move forward as fast as possible to make sure that we have everything buttoned up by November 14th. We will not be able to support another postponement after this date and will respectfully request to move forward at that time.

We will continue to work in earnest and request that since we are providing the additional time at this point in the process that we not request additional postponements at the time of City Council.

I have added Victoria and Jaelyn to this correspondence as well, so they are aware of the timeline that we are looking towards.

For the follow-up in person meeting. I have large blocks of time available next week Monday between 1:30pm and 4pm, Tuesday Between 8:00 and noon or Wednesday between 2pm and 4pm. I am hopeful something in those windows may work for a next step. I am traveling Thursday and Friday for work. If nothing in this window works we please let me know and we can look for additional times in the calendar.

Drew will give you a call to relay this information as well.

Respectfully,

Amanda W Swor, Director of Entitlements & Policy

Drenner Group, PC | 2705 Bee Cave Road | Suite 100 | Austin, TX 78746
512-807-2904 direct | 512-496-8573 cell

From: Brad Massingill

Date: Wednesday, October 4, 2023 at 4:57 PM

To: Amanda Swor

Cc: Meredith, Maureen <Maureen.Meredith@austintexas.gov>, Drew Raffaele, Mario Cantu, Estrada, Nancy <Nancy.Estrada@austintexas.gov>, Harden, Joi <Joi.Harden@austintexas.gov>, Rivera, Andrew <Andrew.Rivera@austintexas.gov>

Subject: Re: Oct. 10 PC PP Request: NPA-2023-0020.02_106 Red Bird & Zng

Hi y'all

Sorry for the delayed response. I had an accountant over helping me file my tax extension today. I had Medicare appointment already scheduled for today as well. Fun, fun.

I wish there was a Planning Commission meeting in four weeks, but there is not one. Two weeks doesn't seem like enough time from the neighborhood's perspective. The neighborhood is meeting on Friday to go over Drenner Group's responses. There are things like enforceable construction/traffic ground rules, more specific info on the types of sound insulation we want and other potential impacts on our neighborhood that we need to discuss *as* a neighborhood. Then we can present our ideas to Drenner Group in anticipation of another face-to-face with *all* concerned parties at City Hall. At that point the neighborhood will want to go over the revised proposed RC. All this is going to require back and forth between our Neighborhood, the South Congress Contact Team and Rastegar. With everyone's busy schedule, it's taken well over a week to confirm any single meeting time that's worked for all concerned, so far.

I scheduled our last meeting at Rastegar staff's convenience, even though it meant my neighbors were unable to attend. I want my neighbors there for our next meeting.

Here's what I would expect from US (that is all of us); before October 24th; for this not to be bumped to the next available Planning Commission meeting in November.

- 1) Time for the neighborhood to respond to Rastegar's latest communication concerning a proposed RC (we're having a Neighborhood meeting this Friday).
- 2) A meeting at City Hall with an agreed on, workable time/date (for all parties) to discuss Rastegar's review of our requests and clarification.
- 3) Another neighborhood meeting to decide if the Neighborhood is in accordance with the results of the Town Hall meeting.

With that many moving parts, I have my doubts on all of this happening in two weeks. I feel like we're being rushed. This is a 100+ year old neighborhood, let's give it the time and consideration it deserves.

I also need to remind all; the reason why we're doing this in person and the way we are; is to accommodate my glaucoma and dyslexia.

This brief missive has taken over an hour to compose.

Feel free to call me

Thanks

Brad Massingill
(770) 355-2120

On Oct 4, 2023, at 10:28 AM, Amanda Swor wrote:

Thank you, Maureen. Brad – we hope we can wrap this up within the two weeks and be ready to move forward. We are not precluded from asking for an additional postponement, if necessary, but would hate to push this out 6 weeks when it may not be necessary. Thank you all.

Amanda W Swor, Director of Entitlements & Policy

Drenner Group, PC | 2705 Bee Cave Road | Suite 100 | Austin, TX 78746
512-807-2904 direct | 512-496-8573 cell

From: Meredith, Maureen <Maureen.Meredith@austintexas.gov>

Date: Wednesday, October 4, 2023 at 10:21 AM

To: Drew Raffaele, Amanda Swor

Cc: Brad Massingill, Mario Cantu, Estrada, Nancy

<Nancy.Estrada@austintexas.gov>, Harden, Joi <Joi.Harden@austintexas.gov>, Rivera, Andrew <Andrew.Rivera@austintexas.gov>

Subject: RE: Oct. 10 PC PP Request: NPA-2023-0020.02_106 Red Bird & Zng

Brad:

Please let us know if you are OK with a PP to Oct. 24 PC hearing. If not, this will be a postponement discussion at the Oct. 10 PC hearing where you will go to the podium to make your case for why you want Nov. 14 PC date and the applicant will go to the podium to explain why they do not, then PC will take a vote on the requests.

Maureen

From: Drew Raffaele

Sent: Wednesday, October 4, 2023 10:18 AM

To: Meredith, Maureen <Maureen.Meredith@austintexas.gov>; Amanda Swor

Cc: Brad Massingill; Mario Cantu; Estrada, Nancy <Nancy.Estrada@austintexas.gov>; Harden, Joi <Joi.Harden@austintexas.gov>; Rivera, Andrew <Andrew.Rivera@austintexas.gov>

Subject: RE: Oct. 10 PC PP Request: NPA-2023-0020.02_106 Red Bird & Zng

External Email - Exercise Caution

Good Morning Maureen,

We are agreeable to a postponement request by Mr. Massingill but can only agree to a

th

two-week postponement to the October 24 Planning Commission hearing.

Since the November date would be almost an almost 6-week postponement, we believe that we can come to an agreement with all parties by the next Planning Commission meeting. We can communicate staff prior to the next PC meeting what we'd like to do if we still have discord.

Best,

Drew Raffaele, Senior Project Manager

Drenner Group, PC | Office: 512.807.2900 | Direct: 512.807.2913 | Mobile: 817.371.3150

From: Meredith, Maureen <Maureen.Meredith@austintexas.gov>

Sent: Tuesday, October 3, 2023 4:15 PM

To: Amanda Swor; Drew Raffaele

Cc: Brad Massingill; Mario Cantu; Estrada, Nancy <Nancy.Estrada@austintexas.gov>; Harden, Joi <Joi.Harden@austintexas.gov>; Rivera, Andrew <Andrew.Rivera@austintexas.gov>

Subject: Oct. 10 PC PP Request: NPA-2023-0020.02_106 Red Bird & Zng

Importance: High

Amanda and Drew:

Brad Massingill is requesting a PP of these cases from the Oct. 10 PC hearing to Nov. 14 PC hearing. Please see his email below. Please let us know if you agree to this PP request.

Maureen

From: Brad Massingill

Sent: Tuesday, October 3, 2023 4:09 PM

To: Meredith, Maureen <Maureen.Meredith@austintexas.gov>

Subject: Re: NPA-2023-0020.02

External Email - Exercise Caution

Hi Maureen

I think the November 14th option would give us enough time to meet with Rastegar again (with a followup neighborhood meeting to discuss and decide on the outcome of *that* meeting).

Thanks

Sent from my iPad

On Oct 3, 2023, at 3:44 PM, Meredith, Maureen

<Maureen.Meredith@austintexas.gov> wrote:

Brad:

The next PC hearing date is Oct. 24. The next two dates are Nov. 14 and Nov. 28. Please let us know which PP date you are requesting so I can forward your request to Amanda and Drew to see if they agree.

Maureen

-----Original Message-----

From: Brad Massingill

Sent: Tuesday, October 3, 2023 2:58 PM

To: Meredith, Maureen <Maureen.Meredith@austintexas.gov>

Subject: NPA-2023-0020.02

External Email - Exercise Caution

Hi Maureen

Got your call. I have spoken with Nancy. I'm sending her the same request I'm sending you.

Can the Neighborhood and I please request to reschedule the October 10th hearing of case # NPA-2023.0020.02?

The recent response from Drenner Group to the neighborhood's requests is fairly extensive and we feel there is room for more clarity on several of their answers (ie. more face-to-face meetings).

Thank you

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From: [Brad Massingill](#)
To: [Estrada, Nancy](#)
Subject: 5400 S Congress/ case # C14-2023-0034
Date: Tuesday, October 3, 2023 3:15:32 PM

[You don't often get email from. Learn why this is important at
<https://aka.ms/LearnAboutSenderIdentification>]

External Email - Exercise Caution

Hi Nancy

Thanks for taking the time to talk with me this afternoon.

Can the Neighborhood and I please request to reschedule the October 10th hearing of case # C14-2023-0034?

The recent response from Drenner Group to the neighborhood's requests is fairly extensive and we feel there is room for more clarity on several of their answers (ie. more face-to-face meetings).

Thanks

Brad Massingill

(770) 355-2120

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From: [John Estrada](#)
To: [Meredith, Maureen](#)
Cc: [Estrada, Nancy](#)
Subject: Case Number NPA-2023-0020.02
Date: Thursday, April 13, 2023 12:40:53 PM

Some people who received this message don't often get email from [Learn why this is important](#)

***** External Email - Exercise Caution *****

Hello!

I'm writing in regards to this current project referenced in the subject of this email but also involves case number: C14-2023-0034 (106/116/118 Red Bird Ln and 5402/5408/5412 S Congress Ave).

I'm not writing today in opposition of this project. I know this project likely has all the green lights.

I'm writing today to voice my concern with what will happen once construction begins on this project, and its aftermath. As I'm receiving these notifications from the city in the mail, I'm not seeing anything addressing the impact that Blue Bird Lane and the 300 block of Red Bird Lane will experience from the city's POV traffic wise.

As Blue Bird and Red Bird are level 1 streets, they aren't intended to be used for heavy traffic and mixed use. How much traffic is estimated to be brought in by this mixed use project? I know the assumption might be that plenty of that traffic will come through Congress, but with parking requirements disappearing has any thought gone towards how that will impact Blue Bird and Red Bird? Especially given the fact that the stretch of Red Bird between Congress and Blue Bird has official "No Parking" signs along a majority of it.

I'm concerned about this because we've been given a preview of it.

This image (*IMG_0452*) of the GIS shows the area affected. The green indicates where heavy on-street parking would be, yellow where there are no parking signs, and red where the proposed changes are coming.

Before Sagebrush, located at 5500 S Congress Ave, started using the vacant lot at 5412 S Congress for additional parking, Blue Bird and Red Bird started looking like this: <https://drive.google.com/file/d/18OIFKhRMSWF0aNWJo6lGKwp-Bwf3cA9i/view?usp=drivesdk>

Since the street doesn't really have a buffer zone or sidewalks, it made taking a walk with my family dangerous. We liked taking our son for walks in his stroller on weekends, but we don't really do that anymore.

Cars, in the search for parking since there wasn't any at the bar or on the street, would do u-turns in the intersection of Red Bird and Blue Bird. It makes seeing oncoming traffic difficult at that intersection. With cars on both sides of the street it could even make it difficult for

emergency vehicles such as fire trucks or EMS to navigate.

Now that that vacant lot is about to undergo a makeover into a mixed use project, and the parking on the side of Congress leading up to Sagebrush is likely going to be blocked due to construction, I'm expecting these sights and dangers again only permanently.

(This image *IMG_0454* shows overflow parking building up in the vacant lot and on Congress)

Were there any plans to address this? Was a TIA performed? If there was, I'd like to wager it's likely inaccurate due to the fact that the bar/music venue was using this vacant lot as temporary overflow *and* because the tax office located on the corner of Stassney and Blue Bird is currently awaiting reconstruction due to a fire (that has a heavy impact on daily traffic too).

Thanks for your time and patience!

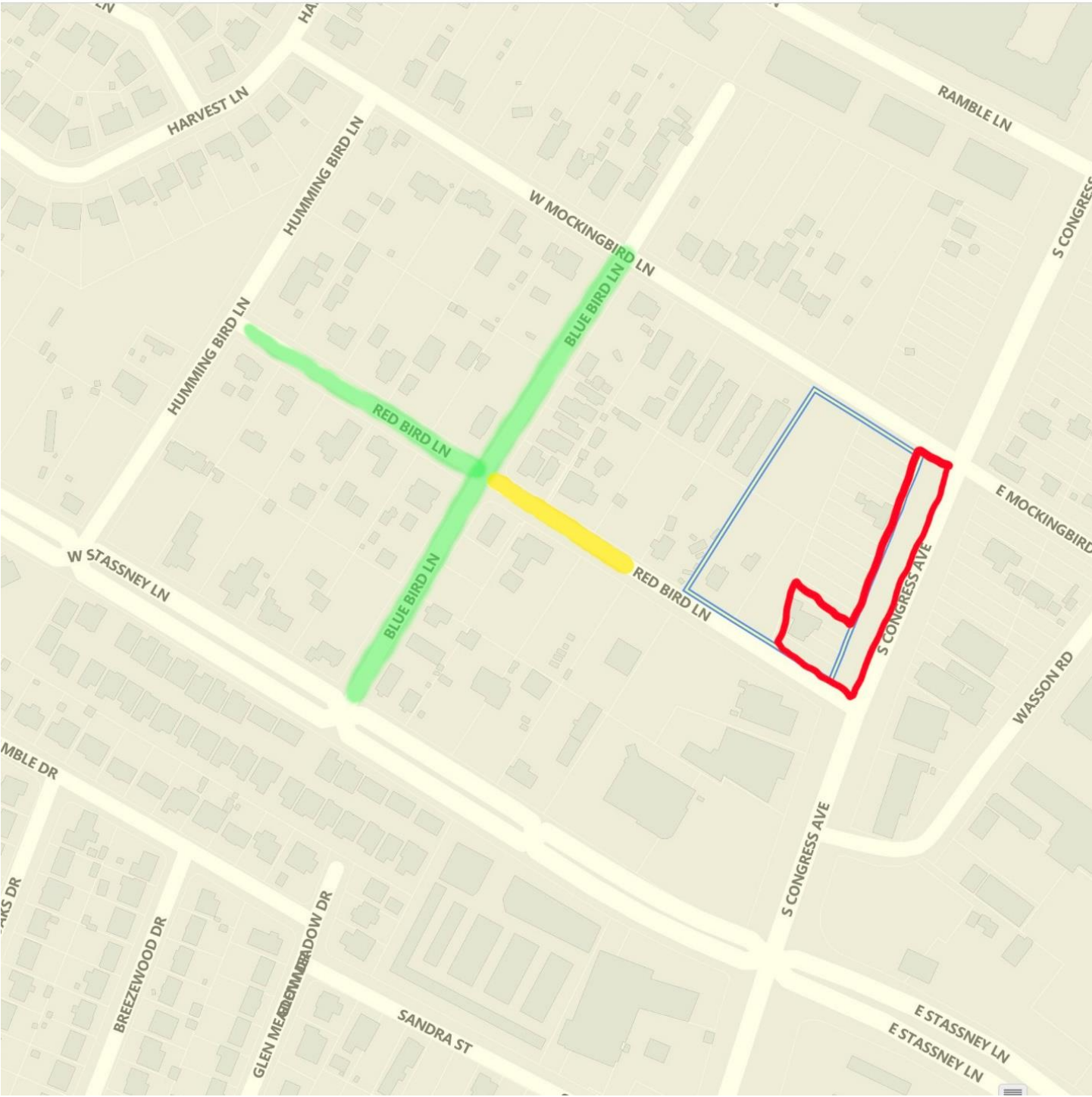
John Estrada

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IMAGE 0454



IMAGE 0452



From: [Andrea Hendrix](#)
To: [Estrada, Nancy](#)
Subject: Fw: Case# C14-2023-0034
Date: Tuesday, October 3, 2023 1:49:06 PM

You don't often get email from [Learn why this is important](#)

External Email - Exercise Caution

Ms. Estrada,

I would like to provide my input on the encroachment of development upon our tiny neighborhood in South Austin. I live on Red Bird Lane (78745) in a house which has been standing since 1940. My in-laws live next door to me and have lived in their home for 40+ years. My brother-in-law lives next to them. This is a neighborhood of low turnover for the most part, with many of my neighbors also living here for decades. These few blocks inside Stassney and South Congress with the Bird names (Red Bird, Hummingbird, Blue Bird and Mockingbird) are very unique and quiet, mostly untouched from development.

There have been exceptions to this just in the last few years: one house on the corner of Red Bird and Hummingbird was bought for a song and razed, making way for a larger, "fancy" home; the occupants built a tall fence around their entire property and we have barely ever seen them. They now rent their home to the public as an Air BnB on the weekends. Another house across the street from my brother-in-law was razed and SIX houses were built on the property; the same thing happened on a property across the street from that new development. Slowly but surely the flavor of the neighborhood is being changed.

I understand you can't stop progress. Just like the rest of Austin, nothing stays the same forever. That should not stop us from fighting to keep Developers from destroying the last parts of unique Austin. There are ways to develop Austin responsibly. I am strongly against another huge apartment building/mixed use property being built on South Congress between Mockingbird and Red Bird Lane. This proposed development, which would take a big parcel of land on Red Bird Lane, threatens to destroy the distinct character and peaceful quiet of our small, South Austin hamlet. Beyond that, it threatens our neighborhood resources and our very homes. There are already two large apartment buildings coming up in the neighborhood - one on Stassney and Hummingbird and one on Congress and Mockingbird. We will be bordered by large buildings and face a proliferation of people and traffic. This should not be the fate of an older South Austin neighborhood of longtime residents.

Thank you,
Andrea Hendrix
306 Red Bird Ln
Austin, TX 78745
512-799-6171

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From: Brad Massingill

Sent: Monday, November 6, 2023 4:36 PM

To: Estrada, Nancy <Nancy.Estrada@austintexas.gov>; Meredith, Maureen <Maureen.Meredith@austintexas.gov>

Subject: Cases # C14-2023-0034 and NPA-2023-0020.02 Bird Streets of Pleasant Hill testimony to be included in PC weekly briefing prior to Nov. 14th Hearing

External Email - Exercise Caution

Hi y'all

Could you please include the following information in the Planning Commission's weekly briefing materials prior to the November 14th Planning Commission hearing?

I will have a more concise version of the neighborhood's view on the Restrictive Covenant/Conditional Overlay work we've been attempting with The Drenner Group in your inbox tomorrow morning as well. I just wanted to make sure you had this portion today.

Thanks

Brad Massingill
(770) 355-2120

The Bird Streets of Pleasant Hill

Welcome to the Bird Streets of Pleasant Hill.

Our neighborhood was once just a wide spot on the Old San Antonio Highway.

It was the first community south of St. Edwards School and Penn Field on you're way south to the Alamo City.

There was a honky tonk (now the Sagebrush), a motor court and a little group of houses just west of the highway, that's us. A four block area west of the current 5400 block of South Congress; incorporated in the mid-1930's. It was out in the "boonies". Our neighborhood is largely unchanged in it's general character with half acre rural lots with narrow (16 foot wide) streets, no sidewalks and drainage ditches in lieu of gutters and underground storm drains. We have lots and lots of trees and abundant wildlife to go along with them, thanks to our close proximity to Little Turtle Creek (a tributary of Williamson Creek).

We are an actual neighborhood.

We know each others names, share in triumphs and tragedies and look out for one another.

The Hendrix Family is a prime example. Three generations; living on three lots, side by side.

Grandparents, working class kids and UT students, all here. Staying here. Austinites.

Many of our residents are longtime members of Austin's music, art and cultural communities;

touring and recording musicians, working artists, stagehands, ex-club owners all currently live in the

neighborhood.

We have big, beautiful gardens, nice old houses (mine was built around 1910) and nature at hand. With no sidewalks and all that greenery, we enjoy the feeling of country life walking around in our hundred year old neighborhood.

It's a hidden gem, right here in South Austin.

The last remnant of a part of Austin's history.

A history including the first all Black School in the area, Boot Hill Cemetery, one of the earliest Motor Courts around (picture Model T's), the original location of Miller Blue Print and other long-passed bits of history.

All gone, with the exception of The Sagebrush and us; The Bird Streets of Pleasant Hill.

Our four block area is all that remains of an older style of urban design that was once used extensively, statewide.

Now it's unique in Austin.

Our Creeks

The Bird Streets are bordered by creeks on three sides (W,N,E).

Little Turtle Creek passes behind the neighborhood on the West behind Humming Bird Lane. The main portion of Little Turtle Creek runs behind our resident's homes on the north side of Mockingbird Lane. They are veritable highways for the animal and plant life we here in the neighborhood consider a huge part of our lives.

Mystery Creek

The third Creek (Mystery Creek) runs from Red Bird Lane to the boundary of [106 Red Bird Lane](#) and the 5400 block of South Congress Ave It's path travels north to emerge on the north side of Mockingbird Lane where it empties into Little Turtle Creek.

This particular creek (Mystery Creek) has been identified as the **only drain** asset for the five acres of runoff on the east end of Red Bird Lane.

It is also a neighborhood asset in as much as it slows down rainwater to allow it to sink in and keep our Wildland/Urban Interface at an optimum; a prime concern for us that have 100+ year old houses.

Mystery Creek is also a wildlife corridor. It harbors foxes, possums, raccoons, armadillos and all kinds of birds and reptiles including Golden Cheeked Warblers, families of Cardinals, Horny Toads and Horned Lizards. A mother Broadtail Hawk has raised several broods in the top of a tree on the banks of Mystery Creek.

Mystery Creek is an essential part of our neighborhood.

The neighborhood opposes this proposed amendment to the Future Land Use Map on environmental grounds.

Case # NPA-2023-0020.02

This proposed amendment to the FLUM is problematic because Mystery Creek (a public easement) is on the eastern border of [106 Red Bird Lane](#) and the western border of the larger property at 5400

South Congress (the proposed combined M/U the developer is applying for) smack dab in the middle of their proposed project.

Eduardo Perez at Watershed Protection came out to do a study on the water patterns on Red Bird Lane (see included WPD study). The study clearly shows that a traditional creek is present and must be, not only protected, but restored with appropriate setbacks.

The developer has indicated on several occasions (during this amendment process and two previous site plan applications) that they intend to channel Mystery Creek underground into a concrete culvert and some type of pumping system to lift the water to the city's wastewater system (ie. storm drains).

That water belongs to Little Turtle Creek and the neighborhood (not to mention the wildlife displacement the absence of our creek would entail).

Mr. Perez (WPD) is working on a solution to the Neighborhood's flooding issue. He endorses the Bird Streets of Pleasant Hill's recommendation to restore Mystery Creek.

Letting the Future Land Use Map be amended to take the SF property at [106 Red Bird Lane](#) out of our neighborhood without first determining whether the developer can actually do what they are proposing on the property seems premature.

We propose that City Council make a determination on the FLUM amendment case before even considering the larger M/U bundling case (C14-2023-0034). That is, the combining of the [106 Red Bird Lane](#) parcel with the lots on the 5400 block of South Congress Ave and adjacent properties to create one big M/U lot.

Public Works has to sign off on the relinquishment of a public easement.

Title 14 - chapter 14-11-22 (B) concerning release of public easements where "the easement serves a present or future public purpose." seems to indicate that's the case with Mystery Creek.

Watershed Protection has to sign off on it as well.

Taking Mystery Creek out of our neighborhood is unthinkable to us.

We need assurances and a real verifiable plan that includes full input from the neighborhood and the good folks at Public Works and Watershed Protection before we feel comfortable with any amending of the FLUM.

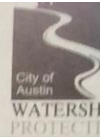
Sincerely

Brad Massingill

Representing The Bird Streets of Pleasant Hill

in the South Congress Combined Neighborhood District

[\(770\) 355-2120](tel:7703552120)



REVISIONS	DATE	BY	APP'D

WATERSHED ENGINEERING DIVISION
GENERAL PERMIT PROGRAM

SHEET NO.

OF
October 30, 2023



TECHNICAL MEMORANDUM

TO: Mr. Bradford Massingill III
Resident at 110 Red Bird Lane
Williamson Creek Watershed

FROM: J. Eduardo Perez, E.I.T., C.F.M.
Watershed Protection Department

DATE: September 25, 2023

SUBJECT: Drainage Pattern and Public Infrastructure around Your Property

The purpose of this memorandum is to document the drainage pattern and the public infrastructure affecting the drainage pattern near your property. Your address 110 RED BIRD LN is near S Congress Ave and E Stassney Ln, and in the Williamson Creek watershed.

The drainage pattern of any creek ecology is affected by qualities in the landscape such as ground surface slope and type of ground cover. When rain falls water collects in territorial low spots and eventually, once enough water has ponded in these spots, water pours ‘downstream,’ in strict accordance to laws of physics. Streams wash over natural terrain via creeks, channels, and streambeds eroding landscapes into gravel and clay. The earthen material, once eaten away by washing water, is deposited elsewhere as silt and mud, molding landscapes and natural terrains.

The size of this effect can be witnessed in person or can be captured via satellite imagery. The awesome behavior of running water is consistent, dynamic, ecological, and economic. For these reasons, the City of Austin Watershed Protection Department keeps track of drainage assets that allow for these phenomena to occur in a harmonious and comprehensible manner for the residents of Austin.

The drainage assets that affect the drainage pattern near your home are summarized in the Map titled: *WPD Map of Drainage Assets near 110 Red Bird Lane*.

Drainage data and other calculations are provided in the Table: *Drainage Summary for 110 Red Bird Ln*.

Concept Designs for engineered drainage infrastructure are provided in *Appendix A: Three Types of Infrastructure to Convey Rainfall Runoff*

BACKGROUND

J. Eduardo Perez EIT, CFM and Kathy Rock visited the address 110 RED BIRD LN as a continuation of a flood investigation in this block of Red Bird Lane. The group witnessed what

Mr. Massingill had experienced with the lack of storm-drain infrastructure between the north and south lots of Red Bird Lane.

Preliminary drainage calculations showed a large drainage area, and a quick inventory of WPD drainage assets yielded no results.

E. Perez called Mr. Massingill after visiting the site address to confirm field investigation discoveries. After speaking with Mr. Massingill, I (J. E. Perez) took to initiative to author this technical memo to summarize my findings.

METHODOLOGY

The City of Austin Drainage Criteria Manual references the Rational Method as an acceptable method of calculating storm runoff resulting from precipitation events i.e. rain. Section 2 of the City of Austin Design Criteria Manual describes the equations and methodology used to calculate the proceeding hydraulic flow estimates. For brevity, no portion of that text will be shared here.

CALCULATION SAMPLE

$$Q_{10} = C * \text{Intensity} * \text{Area} = 0.85 * 9.6 \text{ in/hr} * 5.9 \text{ acres} * (1\text{cfs}/1.0083\text{in-ac/hr}) = 47 \text{ cfs}$$

FIGURES

Table 1 and 2 – Drainage Summary for 110 Red Bird Ln

Basin ID	Zone	Area (ac)	Tc (min)	Q2 (cfs)	Q5 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
110 Red Bird	1	5.90	5	27	37	47	61	79

Basin ID	Zone	Area (ac)	Tc (min)	C2	C5	C10	C25	C100	i2 (in/hr)	i5 (in/hr)	i10 (in/hr)	i25 (in/hr)	i100 (in/hr)	Q2 (cfs)	Q5 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
110 Red Bird	1	5.90	5	0.75	0.8	0.85	0.9	0.95	6.3	8.1	9.6	11.8	15.4	27	37	47	61	79

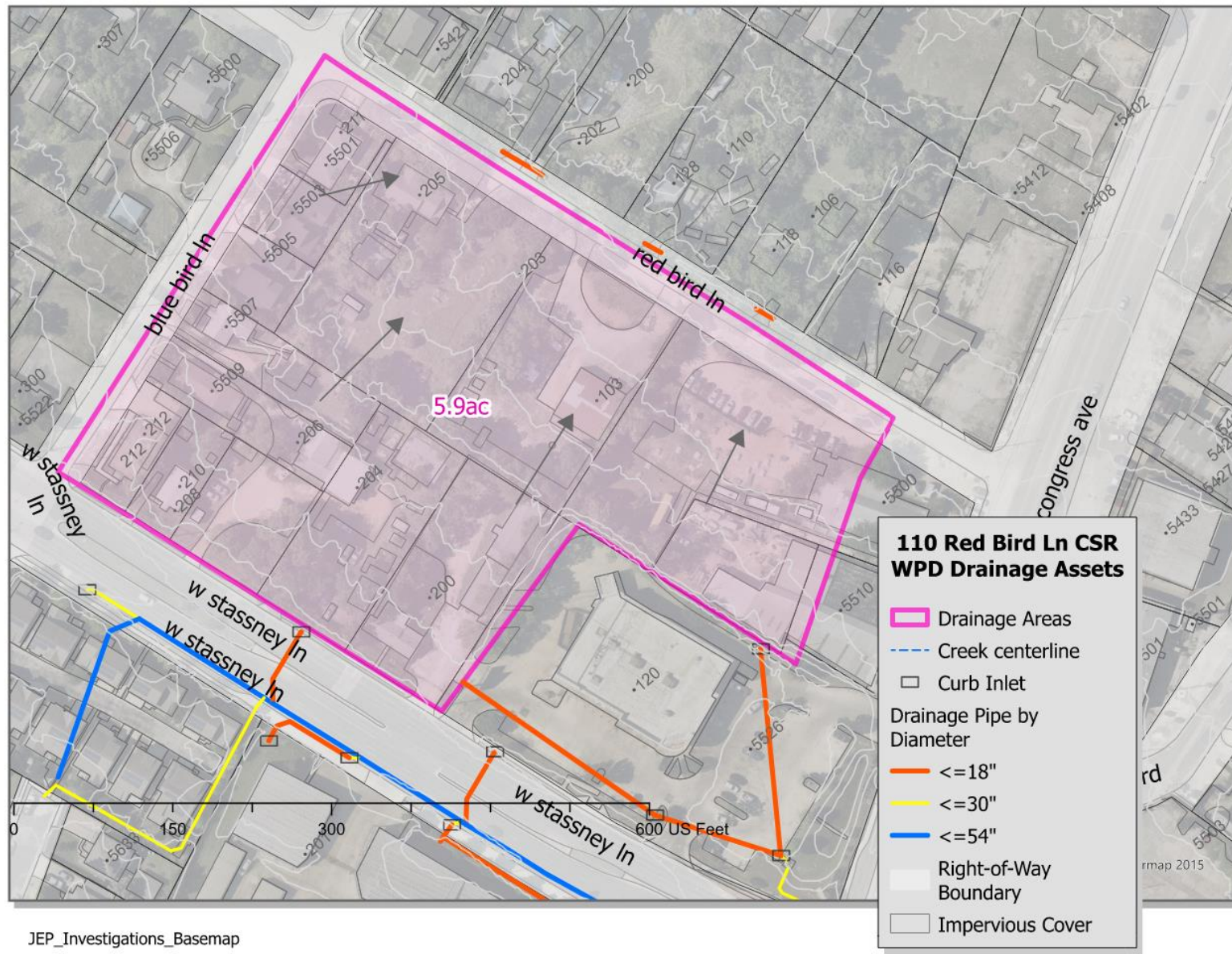


Figure 1 – WPD Map of Drainage Assets near 110 Red Bird Lane

Appendix A – Three Types of Infrastructure to Convey Rainfall Runoff

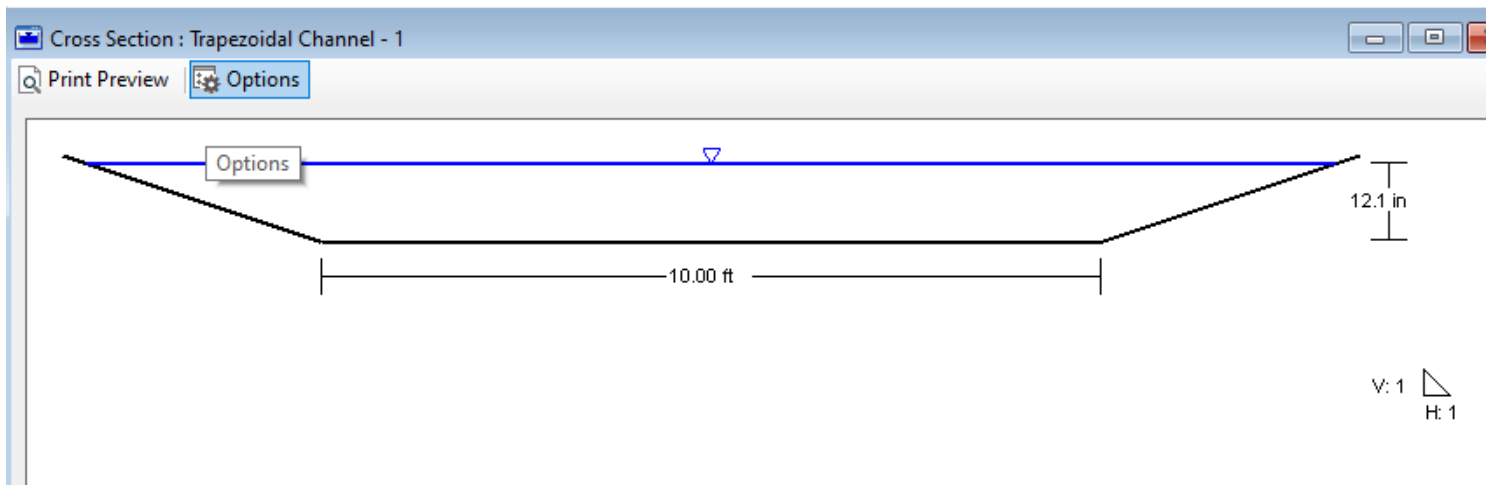
- Concept 1: Trapezoidal Channel at 0.8% – 20ft Wide - Dimensions Shown**

Worksheet : Trapezoidal Channel - 1

Uniform Flow | Gradually Varied Flow | Messages

Solve For: Normal Depth | Friction Method: Manning Formula

Roughness Coefficient	0.060		Flow Area:	13.1	ft ²
Channel Slope:	0.008	ft/ft	Wetted Perimeter:	16.4	ft
Normal Depth:	12.1	in	Hydraulic Radius:	9.6	in
Left Side Slope:	3.000	H:V	Top Width:	16.03	ft
Right Side Slope:	3.000	H:V	Critical Depth:	6.6	in
Bottom Width:	10.00	ft	Critical Slope:	0.068	ft/ft
Discharge:	25.00	cfs	Velocity:	1.91	ft/s
			Velocity Head:	0.06	ft
			Specific Energy:	1.06	ft
			Froude Number:	0.373	
			Flow Type:	Subcritical	



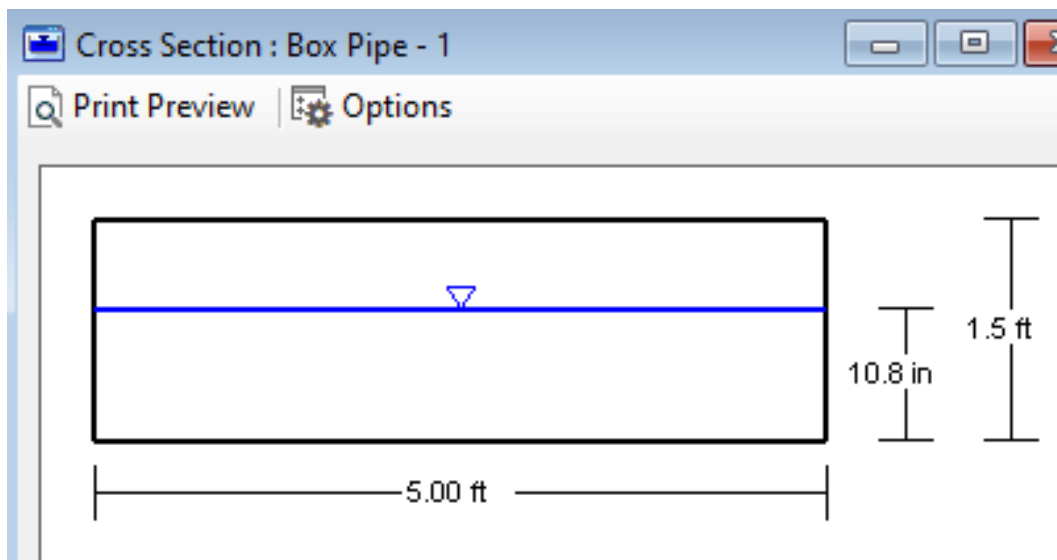
- **Concept 2: Rectangular Concrete Channel @ 1.5% and 1.0% – 10 Ft Wide – Dimensions Shown**

Worksheet : Box Pipe - 1

Uniform Flow | Gradually Varied Flow | Messages

Solve For: Normal Depth | Friction Method: Manning Formula

Roughness Coefficient	0.025		Flow Area:	4.5	ft ²
Channel Slope:	0.015	ft/ft	Wetted Perimeter:	6.8	ft
Normal Depth:	10.8	in	Hydraulic Radius:	8.0	in
Height:	1.5	ft	Top Width:	5.00	ft
Bottom Width:	5.00	ft	Critical Depth:	11.0	in
Discharge:	25.00	cfs	Percent Full:	60.2	%
			Critical Slope:	0.014	ft/ft
			Velocity:	5.54	ft/s
			Velocity Head:	0.48	ft
			Specific Energy:	1.38	ft
			Froude Number:	1.027	
			Discharge Full:	37.84	cfs
			Slope Full:	0.015	ft/ft
			Flow Type:	Supercritical	

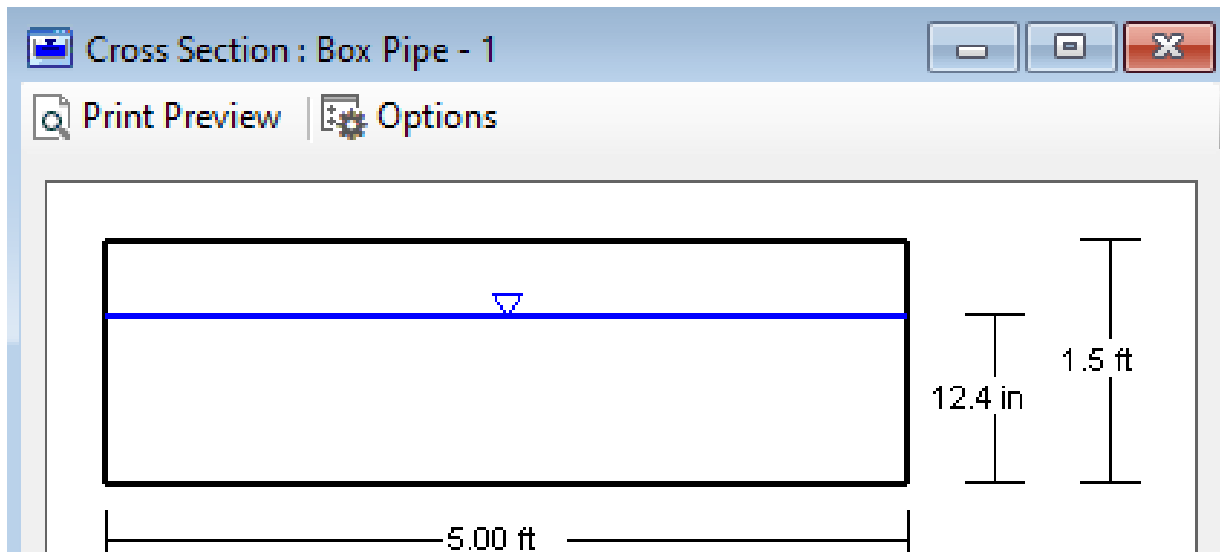


Worksheet : Box Pipe - 1

Uniform Flow | Gradually Varied Flow | Messages

Solve For: Normal Depth  Friction Method: Manning Formula

Roughness Coefficient	0.025	
Channel Slope:	0.010	ft/ft
Normal Depth:	12.4	in
Height:	1.5	ft
Bottom Width:	5.00	ft
Discharge:	25.00	cfs
Flow Area:	5.2	ft²
Wetted Perimeter:	7.1	ft
Hydraulic Radius:	8.8	in
Top Width:	5.00	ft
Critical Depth:	11.0	in
Percent Full:	69.0	%
Critical Slope:	0.014	ft/ft
Velocity:	4.83	ft/s
Velocity Head:	0.36	ft
Specific Energy:	1.40	ft
Froude Number:	0.837	
Discharge Full:	30.89	cfs
Slope Full:	0.010	ft/ft
Flow Type:	Subcritical	



- **Concept 3: 30in Reinforced Concrete Pipe (Circular) @ 1.5%– Dimensions Shown**
 - Note: 24" RCP shown for comparison

Worksheet : Circular Pipe - 14

Uniform Flow | Gradually Varied Flow | Messages

Solve For: Full Flow Capacity Friction Method: Manning Formula

Roughness Coefficient	0.015		Flow Area:	3.1	ft²
Channel Slope:	0.015	ft/ft	Wetted Perimeter:	6.3	ft
Normal Depth:	24.0	in	Hydraulic Radius:	6.0	in
Diameter:	24.0	in	Top Width:	0.00	ft
Discharge:	24.01	cfs	Critical Depth:	20.8	in
			Percent Full:	100.0	%
			Critical Slope:	0.014	ft/ft
			Velocity:	7.64	ft/s
			Velocity Head:	0.91	ft
			Specific Energy:	2.91	ft
			Froude Number:	(N/A)	
			Maximum Discharge:	25.83	cfs
			Discharge Full:	24.01	cfs
			Slope Full:	0.015	ft/ft
			Flow Type:	Undefined	

Worksheet : Circular Pipe - 14

Uniform Flow | Gradually Varied Flow | Messages

Solve For: Full Flow Capacity  Friction Method: Manning Formula

Roughness Coefficient	0.015		Flow Area:	4.9	ft²
Channel Slope:	0.015	ft/ft	Wetted Perimeter:	7.9	ft
Normal Depth:	30.0	in	Hydraulic Radius:	7.5	in
Diameter:	30.0	in	Top Width:	0.00	ft
Discharge:	43.54	cfs	Critical Depth:	26.4	in
			Percent Full:	100.0	%
			Critical Slope:	0.013	ft/ft
			Velocity:	8.87	ft/s
			Velocity Head:	1.22	ft
			Specific Energy:	3.72	ft
			Froude Number:	(N/A)	
			Maximum Discharge:	46.83	cfs
			Discharge Full:	43.54	cfs
			Slope Full:	0.015	ft/ft
			Flow Type:	Undefined	

