

CITY OF WESLACO

A REGULAR MEETING OF THE PLANNING & ZONING COMMISSION

APRIL 01, 2026 5:30P.M.

PCE CONFERENCE ROOM

255 S. KANSAS AVENUE

David Hernandez, Chairman

Lonnie Berry, Vice-Chairman

Randy Summers, PZ Commissioner

Adrian Torres, PZ Commissioner

Jim Forward, PZ Commissioner

Carolina Crockett, PZ Commissioner

Richard Valdez, PZ Commissioner

**CITY OF WESLACO
PLANNING & ZONING COMMISSION
REGULAR MEETING
MARCH 4, 2026**

On Wednesday, March 4, 2026, at 5:30 pm, the Planning and Zoning Commission of the City of Weslaco, Texas, convened in regular session in person.

The following commissioners were present:

David Hernandez	Chairman
Lonnie Berry	Vice-Chairman
Randy Summers	Commissioner
Adrain Torres	Commissioner
Carolina Crockett	Commissioner
Richard Valdez	Commissioner

Rebekah de la Fuente	Planning Director
Kayla Arevalo	City Planner
Flor E. Acuña	Secretary

Also, present were Mike Swinnea, Assistant Fire Marshall, Salvador Ayar, Assistant Engineer Director, and citizens.

I. CALL TO ORDER:

Chairman Hernandez called the meeting to order and welcomed everyone in the audience.

A. Roll Call/Establish a Quorum

Mrs. Arevalo called the roll call noting that Commissioner Froward was absent at the time of roll, a quorum was established.

II. PUBLIC COMMENTS

There were no comments received.

III. APPROVAL OF MINUTES

A. March 4, 2026, Regular Meeting

Commissioner Berry made a motion to approve the minutes of February 4, 2026, seconded by Commissioner Torres. Motion carried.

IV. PUBLIC HEARING

A. Discussion and consideration to approve Conditional Use Permit to obtain a Wine and Malt Beverage Retail Dealer's On-Premises Permit and Late Hours Certificate at 4024 E IH 2, also being Lot 3, Royal Subdivision, Weslaco, Hidalgo County, Texas.

No action taken.

B. Discussion and consideration to rezone 1015 W 6th St., also being E112.1, Lot 7, Farm Tract 671, West Tract Subdivision, Weslaco, Hidalgo County, and Texas from R-1 One Family Dwelling District to R-2 Duplex & Apartment District.

Mrs. Arevalo stated that notice appeared in the Monitor on February 11, 2026, there were twenty-six (26) property owners notified within the 200-foot radius, letters for against the item were received. Staff recommended approval.

Commissioner Berry made a motion to close the Public Hearing, seconded by Commissioner Crockett. Motion carried.

1. Jeff Walker- 910 W 6th St.
2. Judy St. John-1021 W 6th
3. Alicia Presas-1017 W 6th St.
4. Michelle Wilson-1102 Hackberry Dr.
5. Gary Wilson- 1102 Hackberry Dr.
6. Edna Sanchez- 902 W 6th St.
7. Vicky Rainwater -1010 Hackberry Dr.

The primary concerns raised by the above residents are as follows:

- **Increased Traffic and Congestion:** Many residents feel that the area is already experiencing traffic congestion, and the additional development would worsen this issue.
- **Loss of Neighborhood Character:** There is concern that the proposed changes would disrupt the existing character and balance of the neighborhood.
- **Environmental Concerns:** Some residents worry about potential flooding issues caused by the development.
- **Lack of City Infrastructure to Support Units:** Concerns about the city's ability to provide adequate infrastructure, including water, sewer, and roads, for a development of this scale.
- **Decrease in Property Values:** There is a fear that the proposed rezoning will lower the value of their homes due to changes in the neighborhood's character and infrastructure.

Commissioner Berry made a motion to deny the rezone request, seconded by Commissioner Summers. Motion carried.

V. DISCUSSION AND CONSIDERATION

A. Discussion and consideration for the Preliminary Plat for Bridge Heights Subdivision being a 11.327-acre tract of land out of Farm Tract 758, West & Adams Tract Subdivision, Weslaco, Hidalgo County, Texas. Located approximately 110ft East of South Bridge and Mile 5 N Rd.

Mrs. Arevalo stated the proposed development is a sixty-two (62) lot subdivision and is located inside the City of Weslaco. This subdivision is being serviced with water by City of Weslaco through an 8" waterline and sanitary sewer by City of Weslaco through an 8" sanitary sewer line. Staff recommends approval of Preliminary Plat.

Commissioner Torres made a motion to approve the Preliminary Plat with the condition to request variance on the street and verify sewage, seconded by Commissioner Crockett. Motion carried.

B. Discussion and consideration for the Final Plat for The Harbor Subdivision being 8.44-gross acres, more or less out of Farm Tract 1030, The West Adams Tracts Subdivision, Weslaco,

Hidalgo County, Texas. Located on the Southeast corner of the intersection of North International Blvd. and Mile 8 North Road.

Mrs. Arevalo stated the proposed development is a three (3) lot subdivision and is located inside the City of Weslaco. This subdivision is being serviced with water by City of Weslaco through an 8" waterline and sanitary sewer by City of Weslaco through an 8" sanitary sewer line. Staff recommends approval of Final Plat.

Commissioner Berry made a motion to approve the Final Plat request, seconded by Commissioner Summers. Motion carried.

C. Discussion and consideration for the Final Plat for Diamante Negro Estates Subdivision being a 3.51-acre tract of land out of Farm Tract 216, West Tract Subdivision, Weslaco, Hidalgo County, Texas. Located approximately 770ft South of Mile 10 Northwest of Mile 6 ½ West Rd.

Mrs. Arevalo stated proposed two (2) lot subdivision is located outside the City of Weslaco. This subdivision is being serviced with water by North Alamo Water Supply through a 16" waterline and sanitary sewer by OSSF. Applicant was granted a variance for OSSF. Staff recommends approval of Final Plat.

Commissioner Torres made a motion to approve the Final Plat with the variance on the lot width, seconded by Commissioner Berry. Motion carried.

D. Discussion and consideration of the Final Plat for Re-Plat of Pleasantview Terrace Subdivision being 25.54 acres out of Lots 1-85, of Pleasantview Terrace Subdivision, Weslaco, Hidalgo County, Texas. Located approximately 1100 ft North of Bus. 83 on the west side of Pleasantview Dr.

Mrs. Arevalo stated proposed one hundred and sixty-nine (169) lot subdivision is located inside the City of Weslaco. This subdivision is being serviced with water by City of Weslaco through an 8" waterline and sanitary sewer by City of Weslaco through an 8" sanitary sewer line. Staff recommends approval of Final Plat.

Commissioner Berry made a motion to approve the Final Plat, seconded by Commissioner Valdez. Motion carried.

E. Discussion and reconsideration of the Final Plat for Renovation Subdivision being a 0.953-acres out of Farm Tract 695, Block 141, West Tract Subdivision, Weslaco, Hidalgo County, Texas. Located approximately 400ft North of E 15th St. on S Tio Ave.

Mrs. Arevalo stated proposed three (3) lot subdivision is located inside the City of Weslaco. This subdivision is being serviced with water by City of Weslaco through an 8" waterline and sanitary sewer by City of Weslaco through an 8" sanitary sewer line. Staff recommends approval of Final Plat.

Commissioner Torres made a motion to approve the Final Plat, seconded by Commissioner Crockett. Motion carried.

F. Discussion and consideration for six-month extension of Two Points Subdivision being 2.32 acres out of Lot 9, Block 174, West and Adams Tract Subdivision, Weslaco, Hidalgo County, Texas. Located on the southwest corner of the Mile 4 W Rd and Mile 12 ½ Rd.

Mrs. Arevalo stated this a proposed two (2) lot subdivision is located outside the City of Weslaco. Final Plat approval is set to expire on March 19, 2025. This is the 3rd extension. The development is being overseen by county. The Engineering Department has provided an email.

Commissioner Summers made a motion to approve the six-month extension, seconded by Commissioner Berry. Motion carried.

VI. ADJOURNMENT

There being no further business to come before the Planning and Zoning Commission, Chairman Hernandez adjourned the meeting at 6:15p.m.

Planning and Zoning Commission

David Hernandez, Chairman

Lonnie Berry, Vice-Chairman

Randy Summers, Commissioner

Carolina Crockett, Commissioner

Adrian Torres, Commissioner

Absent
Jim Forward, Commissioner

Richard Valdez, Commissioner

ATTEST:

Flor E. Acuña, Secretary



**Planning & Zoning Commission
Standardized Agenda Request Form**

Date of Meeting: April 1, 2026	Agenda Item No. (to be assigned by PCE): IV.A.
From: Rebekah de la Fuente, Planning Director, on behalf of Leo & Emma Salazar.	
Subject/Agenda Item: Discussion and consideration to rezone 505 Santa Anna, also being Lots 17 & 18, Blk 1, Colonia M.P. (BUD) Lackland Subdivision, Weslaco, Hidalgo County, and Texas from R-1 One Family Dwelling District to B-1 Neighborhood Business District. Possible Action.	
Discussion/Overview: The applicant is requesting to rezone property from R-1 One Family Dwelling District to B-1 Neighborhood Business District. Notice of the application and the Public Hearing for the Planning and Zoning Commission appeared in The Monitor on March 11, 2026. Twenty-eight (28) property owners within 200 feet of the applicant's property were notified by letter on March 20, 2026.	
If item requires Publication Notice, provide date and periodical of publication; indicate if comments received from letters mailed to property owners: N/A	
Staff recommendation for Commission's Action: Staff recommends denial based on surrounding landuse.	
Additional Action Prompted: [X] Mayor's Signature [X] Public Hearing [] Budget Amendment [] Resolution [X] Ordinance – First Reading [X] Ordinance – Final Reading	
Advisory Review, (if any): (name of board/committee, date of action, recommendation): N/A	
If item previously considered, provide date and action by Commission: N/A	
Attachments, (if any): Application, legal notice, map, property owner list.	
Responsibilities upon Commission's Action: Planning staff will advise applicant.	



RZNE-000998-2026

APPLICATION FOR REZONING

The Planning & Zoning Commission meets every 1st Wednesday of each month at 5:30 pm.

The City Commission meets every 1st and 3rd Tuesday of each month at 5:30 pm

FILE NO. _____



PROPOSED PROJECT

Legal Description of Property to be rezoned:

Lot 17418 Block 1

Subdivision Name LACKLAND SUB, M.B. (Bud) - Colonia

Street Address 505 SANTA ANNA

Existing Zoning RESIDENTIAL Existing Land Use PRIVATE PARKING ^{R-1}

Proposed Zoning _____ Proposed Land Use PARKING B-1

_____ \$305.00 non-refundable filing fee.

_____ Detailed dimensioned site plan/map must be submitted with this request.

_____ Survey and metes and bounds if the legal description is a portion of a lot.

_____ City and school tax receipts attached.

_____ I have received a copy of "The Intent of Zoning Application Instructions".

APPLICANT

Name LEO & EMMA SALAZAR Phone 956-472-1849

Address 110 S. 29th St. Fax: _____

City DONNA State TX Zip Code 78537 E-Mail: SALAZARS OFFICE@Gmail.com

OWNER

Name LEO & EMMA SALAZAR Phone 956-472-1849

Address 110 S. 29th St. Fax: _____

City DONNA State TX Zip Code 78537 E-Mail: SALAZARS OFFICE@Gmail.com

I certify that I am the actual owner of the property described above and this application is being submitted with my consent (include corporate name if applicable); or I am authorized by the actual owner to submit this application and have attached written evidence of such authorization.

Signature [Signature] Date 02/12/2026

Signature [Signature] Date 02/12/2026

Signature [Signature] Date 02/12/2026

City of Weslaco

"The City on the Grow"



Adrian Gonzalez, Mayor
Pete Garcia, Jr., Mayor Pro-Tem, Commissioner, At-large
Israel Gonzalez, Jr., Commissioner, At-Large
Josh Pedraza, Commissioner, District 1
Letty Lopez, Commissioner, District 2
Jose "JP" Rodriguez, Commissioner, District 3
Adrian Farias, Commissioner, District 4

Xavier Salinas, City Manager
Omar Rodriguez, Assistant City Manager
Antonio Lopez, Assistant City Manager/Fire Chief/EMC

PLANNING DEPARTMENT

March 20, 2026

Legal Notice

Dear Occupant:

The Weslaco Planning and Zoning Commission will hold a public hearing on Wednesday, April 1, 2026, at 5:30 p.m. and the City Commission will hold a public hearing on April 15, 2026, at 5:00 p.m. at the City Hall Legislative Chambers located at 255 South Kansas Avenue.

Members of the public who wish to participate in Public Hearing on an agenda item must send their name, address and phone number via email to facuna@weslacotx.gov by 12:00 pm on April 1, 2026. A staff member will contact you with instructions via phone call to address your public comment.

REZONE REQUEST:

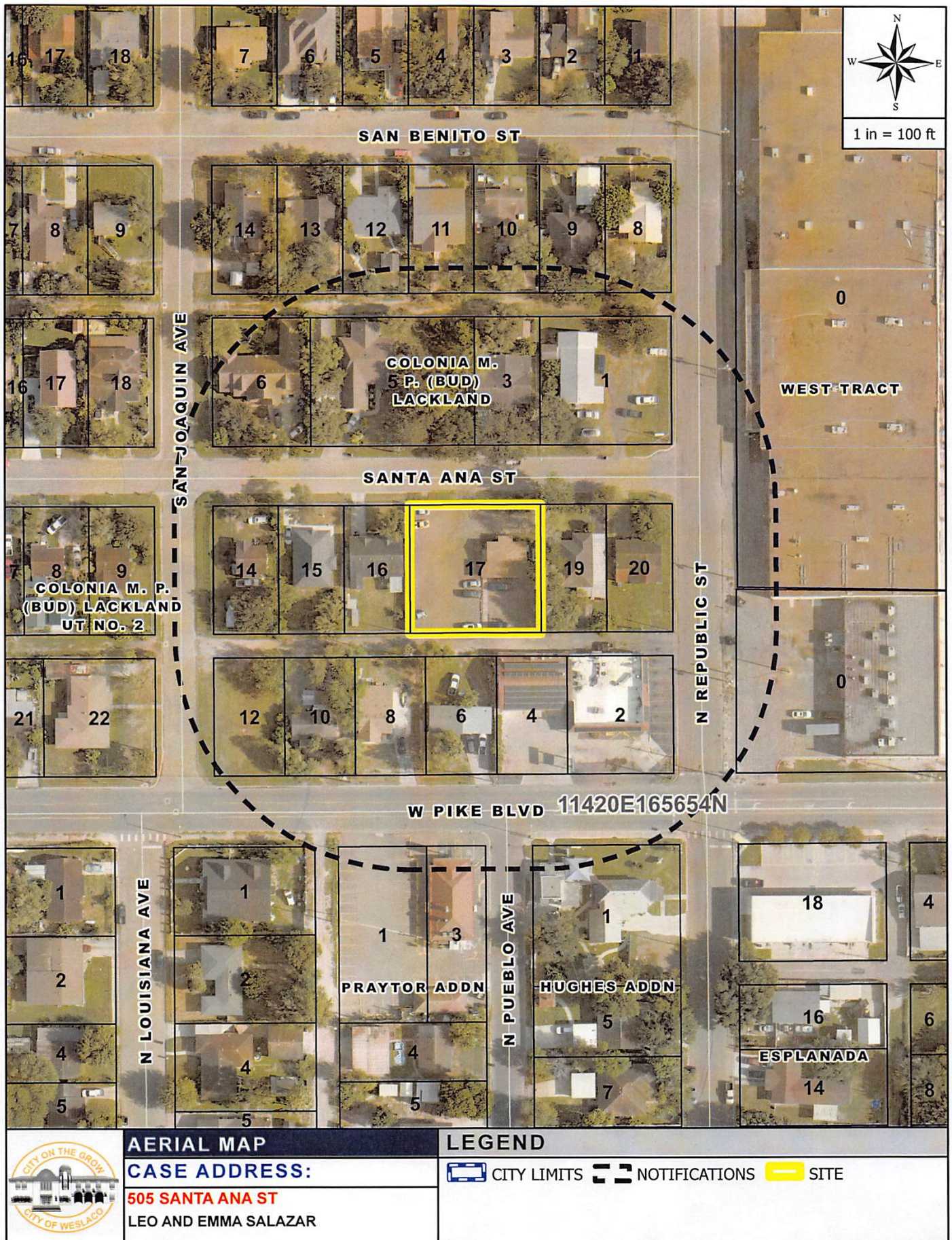
Leo & Emma Salazar are requesting to rezone 505 Santa Anna, also being Lots 17 & 18, Blk 1, Colonia M.P. (BUD) Lackland Subdivision, Weslaco, Hidalgo County, and Texas from R-1 One Family Dwelling District to B-1 Neighborhood Business District.

The public is hereby invited to attend and express their support or opposition to the request. You may also file a written notice supporting or protesting this action. For more information please call the Planning Department at (956) 447-3403.

Si desea información en español, por favor llame al departamento de Planeación de la ciudad de Weslaco, (956) 447-3403.

Sincerely,

Rebekah de la Fuente
Planning Director



AERIAL MAP

CASE ADDRESS:

505 SANTA ANA ST
LEO AND EMMA SALAZAR

LEGEND

CITY LIMITS NOTIFICATIONS SITE

SALAZAR DAVID JR
512 SANTA ANA ST
WESLACO, TX, 78596
L2200-01-002-0006-00

SALAZAR LEONEL R & EMMA Q
110 S 29TH ST
DONNA, TX, 78537-3635
P8300-00-008-0003-00

SALAZAR LEONEL & EMMA
110 S 29TH ST
DONNA, TX, 78537-3635
L2200-01-001-0004-00

RANGEL RAQUEL
509 SANTA ANNA STREET
WESLACO, TX, 78596-4317
L2200-01-001-0016-00

SALAZAR LEONEL R
110 S 29TH
DONNA, TX, 78537-3635
L2200-01-001-0002-00

CERVANTES RITA A
507 SAN BENITO ST
WESLACO, TX, 78596-4307
L2200-01-002-0011-00

AVILA ALBERT & JUAN PABLO
GALINDO
222 DELMA ST
WESLACO, TX, 78599-4419
L2200-01-002-0012-00

LOPEZ JUAN M & EMMA A
520 W PIKE BLVD
WESLACO, TX, 78596-4616
L2200-01-001-0010-00

DIAZ ROSA ISELA
503 W SAN BENITO ST
WESLACO, TX, 78596-4307
L2200-01-002-0010-00

RAMIREZ ROMEO & FRANCISCA
REVOCABLE LIVING TRUST
508 SANTA ANNA ST
WESLACO, TX, 78596-4318
L2200-01-002-0005-00

OLGUIN SANDRA J CUST
810 N LOUISIANA AVE
WESLACO, TX, 78596-4614
P6700-00-001-0001-00

SALAZAR LEONEL R & EMMA Q
110 S 29TH ST
DONNA, TX, 78537-3635
P8300-00-008-0001-00

ROBLEDO ANTONIO & CONCEPCION
501 SANTA ANNA ST
WESLACO, TX, 78596-4317
L2200-01-001-0020-00

RAMIREZ ROMEO & FRANCISCA
REVOCABLE LIVING TRUST
508 SANTA ANA ST
WESLACO, TX, 78596-4318
L2200-01-001-0015-00

MARTINEZ CATARINO JR
503 SANTA ANA ST
WESLACO, TX, 78596-4317
L2200-01-001-0019-00

DIAZ ROSA ISELA
200 N COLORADO
WESLACO, TX, 78596-5112
L2200-01-002-0013-00

MEJORADO JOSE & LAURA
4405 WILLOW WOOD ROAD
MELISSA, TX, 75454-2539
L2200-01-001-0008-00

CARREON ROEL
2008 WESTHAVEN DR
WESLACO, TX, 78599-3017
L2200-01-001-0006-00

WESLACO PALM PLAZA LLC
4629 MACRO DR
SAN ANTONIO, TX, 78218-5420
W3800-00-120-0000-02

TRUSTEES OF THE SPANISH
CHURCH OF CHRIST OF WESLACO
502 SANTA ANNA ST
WESLACO, TX, 78596-4318
L2200-01-002-0001-01

HERRERA PABLO & ANGELICA R
504 SANTA ANNA ST
WESLACO, TX, 78596-4318
L2200-01-002-0003-00

SALAZAR LEONEL R & EMMA
QUESADA
110 S 29TH ST
DONNA, TX, 78537
L2200-01-001-0017-00

RAMOS EDWARD
513 W SANTA ANNA
WESLACO, TX, 78596-4317
L2200-01-001-0014-00

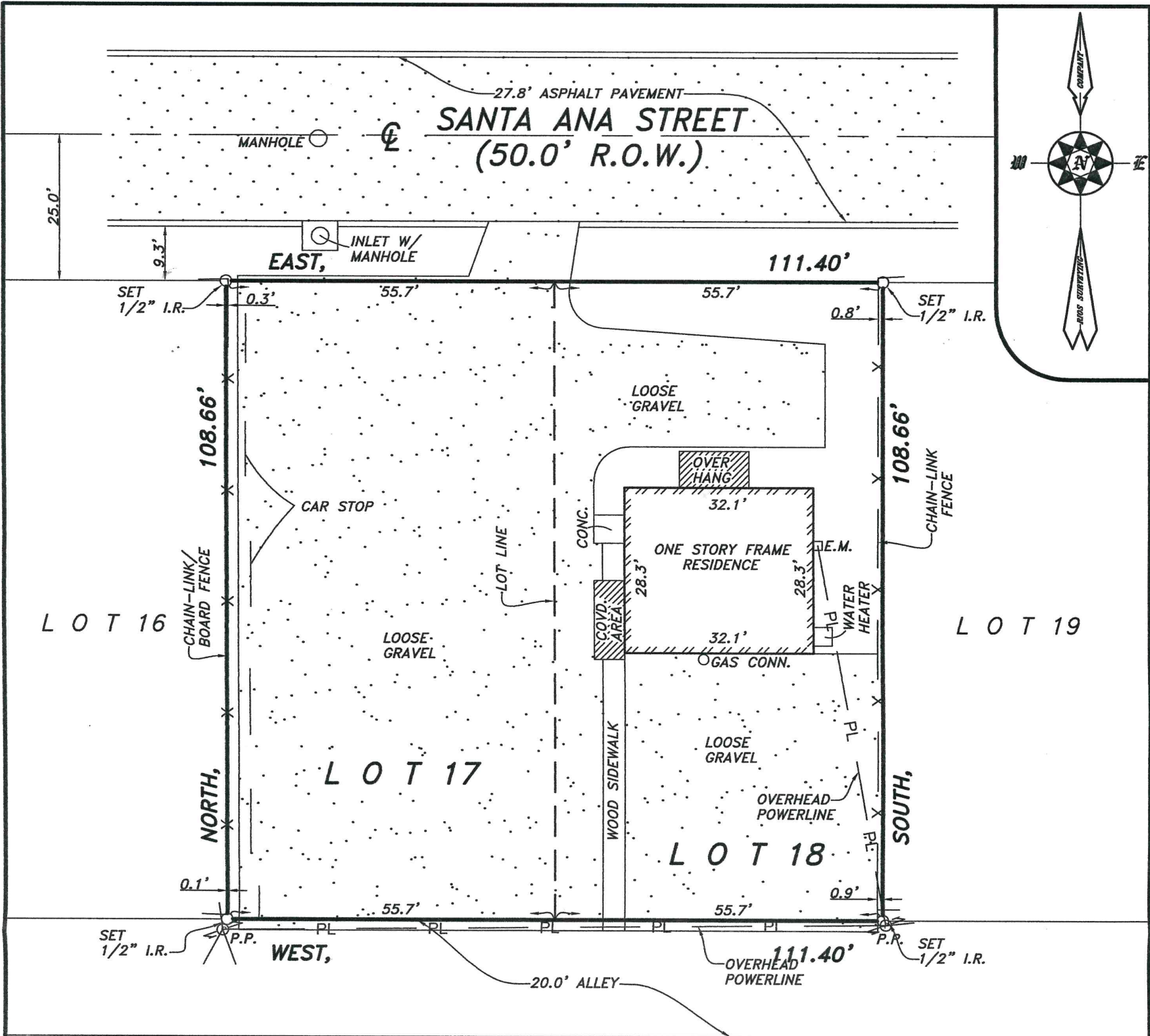
RAMIREZ BLANCA M
501 SAN BENITO ST
WESLACO, TX, 78596
L2200-01-002-0008-00

DIAZ ROSA ISELA
503 W SAN BENITO ST
WESLACO, TX, 78596-4307
L2200-01-002-0009-00

RAMIREZ ROMEO & FRANCISCA
REVOCABLE LIVING TRUST
508 SANTA ANNA ST
WESLACO, TX, 78596-4318
L2200-01-001-0012-00

FLORES AVELINA R ETAL
821 N REPUBLIC ST
WESLACO, TX, 78596-4766
H5100-00-001-0001-00

WESLACO PALM PLAZA LLC
4629 MACRO DR
SAN ANTONIO, TX, 78218-5420
W3800-00-120-0000-01



LOT 8

LOT 7

LOT 6

LOT 5

LOT 4

MAP OF SURVEY

LOT 17 & 18, BLOCK 1, COLONIA M.P. (BUD) LACKLAND SUBDIVISION,
HIDALGO COUNTY, TEXAS, ACCORDING TO THE MAP OR PLAT THEREOF
RECORDED IN VOLUME 11, PAGE 57, MAP RECORDS OF HIDALGO
COUNTY, TEXAS.

NOTES:

1. THIS LOT LIES IN FLOOD ZONE "B"
(AREAS BETWEEN LIMITS OF THE 100
YEAR FLOOD AND 500 YEAR FLOOD), AS
SCALED PER FIRM COMMUNITY PANEL
NUMBER: 4803490005B, EFFECTIVE
DATE: MARCH 4, 1980.
2. ALL BEARINGS ARE BASED ON THE MAP
OF COLONIA M.P. (BUD) LACKLAND AS
RECORDED IN VOLUME 11, PAGE 57,
MAP RECORDS OF HIDALGO COUNTY,
TEXAS.
3. THIS SURVEY WAS PERFORMED WITHOUT
THE BENEFIT OF A TITLE REPORT.
EASEMENTS AND RESTRICTIONS MAY
EXIST WHICH ARE NOT SHOWN HEREON

PROPERTY ADDRESS:
505 SANTA ANA STREET
WESLACO, TEXAS 78596

SURVEYED FOR:
EMMA SALAZAR



LEGEND	
ASPH.	ASPHALT
A/C	AIR CONDITION
BLDG.	BUILDING
BLK.	BLOCK
CL	CENTERLINE
CONC.	CONCRETE
E.M.	ELECTRIC METER
ESMT.	EASEMENT
E.J.B.	ELECTRIC JUNCTION BOX
F.H.	FIRE HYDRANT
FND.	FOUND
G.M.	GAS METER
I.R.	IRON ROD
L.P.	LIGHT POST
MON.	MONUMENT
P.P.	POWER POLE
R.O.W.	RIGHT-OF-WAY
T.P.	TELEPHONE PEDESTAL
TEMP.	TEMPORARY
W.M.	WATER METER

I HEREBY CERTIFY THAT THIS PLAT WAS
PREPARED FROM AN ACTUAL SURVEY
MADE ON THE GROUND ON FEBRUARY 13, 2026
BY MEN WORKING UNDER MY SUPERVISION AND
THAT THERE ARE NO VISIBLE ENCROACHMENTS,
VISIBLE OVERLAPPING, APPARENT CONFLICTS OR
VISIBLE EASEMENTS ON SAID PROPERTY EXCEPT
AS SHOWN HEREON. THIS SURVEY SUBSTANTIALLY
COMPLIES WITH THE CURRENT TEXAS SOCIETY OF
PROFESSIONAL SURVEYORS STANDARDS AND
SPECIFICATIONS FOR A CATEGORY 1B CONDITION
II SURVEY.

Francisco Rios
FRANCISCO RIOS
REGISTERED PROFESSIONAL LAND SURVEYOR
REGISTRATION NO. 4642

RIOS SURVEYING, L.L.C.

COPYRIGHT 2026 - FIRM NUMBER: 10117600
221 S. WILLIAMS ROAD, SAN BENITO, TEXAS 78586
PHONE (956) 361-9179 / 361-1853
FAX (956) 361-9254

DATE: 2-19-2026	2026-0147
SCALE: 1"=20'	RTM

SITE PLAN

SANTA ANA ST.

WEST

EAST

NORTH

SOUTH

EXIST 20' ALLEY

5' SIDEWALK

EXIST. BUILDING

TOTAL 24 P.S.

15, **16**, **17**, **18**, **19**, **20**, **21**, **22**, **23**, **24**

1, **2**, **3**, **4**, **5**, **6**, **7**, **8**, **9**, **10**, **11**, **12**, **13**, **14**

108.00', **110.00'**, **90.00'**, **72.00'**, **45.00'**, **28.50'**, **1.67'**, **37.00'**, **28.00'**, **18.00'**, **9.00'**, **25.00'**, **20.00'**, **9.50'**, **18.00'**, **8.00'**, **9.00'**, **4.50'**, **17.00'**, **34.50'**, **18.00'**, **4.00'**, **24.00'**

HANDICAP RAMP AT DRIVEWAY/STREET

Diagram illustrating the required dimensions for a ramp:

- The least possible slope shall be used for any ramp. The max. slope of a new const. shall be 1:12.
- 6.0' MIN. (width of the ramp)
- 6.0' MIN. (width of the ramp)
- LANDING SHALL BE AT LEAST AS WIDE AS THE RAMP RUN LEADING TO IT.
- HANDICAP SIGN

Ana St,
X 78596

Technical drawing of a wheelchair ramp showing side and front elevations with dimensions and material specifications.

Side Elevation (Left):

- Overall width: 19.0' MIN.
- Top horizontal section: 10.0' MIN.
- Top horizontal section height: 4.0'
- Top horizontal section material: 4" SOLID WHITE
- Top horizontal section slope: 4.5°
- Top horizontal section length: 6.0' MIN. (10.0' USUAL)
- Top horizontal section material: 4" SOLID WHITE

Front Elevation (Right):

- Overall width: 19.0' MIN.
- Top horizontal section: 10.0' MIN.
- Top horizontal section height: 4.0'
- Top horizontal section material: 4" SOLID WHITE
- Top horizontal section slope: 4.5°
- Top horizontal section length: 6.0' MIN. (10.0' USUAL)
- Top horizontal section material: 4" SOLID WHITE

Curbs & Gutter:

- Curbs & Gutter: 2.0' MIN.
- Curbs & Gutter: 4.0'
- Curbs & Gutter: 10.0' MIN.

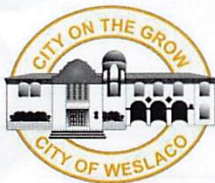
2.0% CROSS SLOPE (Max.)

505 Santa Ana St,
Weslaco, TX 78596



**Planning & Zoning Commission
Standardized Agenda Request Form**

Date of Meeting: April 1, 2026	Agenda Item No. (to be assigned by PCE): V.A.
From: Rebekah de la Fuente, Planning Director, on behalf of Melden & Hunt, Inc.	
Subject/Agenda Item: Discussion and consideration of the Preliminary Plat for Summerlin Phase 1 Subdivision being a 31.943-acre tract of land out of Farm Tract 245, West & Adams Tract Subdivision, Weslaco, Hidalgo County, Texas. Located Northwest of the intersection of W Mile 11 and N FM 88. Possible Action.	
Discussion/Overview: The proposed one hundred and seven (107) lot subdivision is located inside the City of Weslaco. This subdivision is being serviced with water by City of Weslaco through an 8" waterline and sewer by City of Weslaco through an 8" sewer line. The property is within a Flood Zone "X". Variances for the development were approved by the City Commission as part of the development agreement associated with the establishment of the TIRZ.	
If item requires Publication Notice, provide date and periodical of publication; indicate if comments received from letters mailed to property owners: N/A	
Staff recommendation for Commission's Action: Staff recommends approval of Preliminary Plat.	
Additional Action Prompted: [X] Mayor's Signature [] Public Hearing [] Budget Amendment [] Resolution [] Ordinance – First Reading [] Ordinance – Final Reading	
Advisory Review, (if any): (name of board/committee, date of action, recommendation): N/A	
If item previously considered, provide date and action by Commission: N/A	
Attachments, (if any): Application for Subdivision platting, Staff's comments, Drainage Report, Subdivision plat and Utility layout.	
Responsibilities upon Commission's Action: Planning staff will advise applicant.	



PAR-001008-2026

SUBDIVISION PLATTING APPLICATION

The Planning & Zoning Commission meets every 1st Wednesday of each month at 5:30 pm.

The City Commission meets every 1st and 3rd Tuesday of each month at 5:30 pm

FILE NO.

CANC MAR 25 2026

This form shall be completed by the Property Owner or Applicant and submitted to the Planning Department along with the required number of copies of the respective plat, review fee and all other required information listed below and in the Subdivision Ordinance. The submittal of an application does not constitute acceptance for processing until the staff reviews and determines the application is complete.

STAFF USE ONLY

☐ Single Lot Variance ☐ Minor Plat ☐ Planned Unit Development ☐ Standard Subdivision

GENERAL INFORMATION

Name of Subdivision: Summerlin Phase I

Location: Northwest of the intersection of Mile 11 North Rd/FM 88

Legal Description: 32.943 acres o/o Farm Tracts 245 The West and Adams Tracts

Is subdivision inside city limits? ☒ YES ☐ NO

If subdivision is in the ETJ, indicate? ☐ 3.5 Mile ☐ 5 Mile

If no submit letter of Annexation (Contiguous or Consensual)

Existing Zoning: N/A

Existing Land Use: Open Proposed Land Use: Residential

Number of Lots Proposed: 107 Gross Acreage: 32.943

Title Report Submitted: ☐ YES ☐ NO

OWNER INFORMATION

Owner's Name: BLJDD LTD/BARLIN LTD Telephone: c/o (956) 381-0981

Address: 107 Laurel Drive

Fax: _____

City: Weslaco State: TX Zip: 78596 E-mail: c/o mario@meldenandhunt.com

ENGINEER INFORMATION

Name: Melden & Hunt, Inc. Telephone: (956) 381-0981 Address: 115 W. McIntyre Street

(956) 381-0981

Fax: (956) 381-1839

City: Edinburg, TX State: TX Zip: 78541 E-mail: mario@meldenandhunt.com

UTILITY PROVISIONS

Will proposed subdivision connect to:

☒ YES ☐ NO Water Provision: NAWSC

☒ YES ☐ NO Wastewater Provision: LIFT STATION

☒ YES ☐ NO Electric Company: MVEC

☒ YES ☐ NO Phone Utility CHARTER

☒ YES ☐ NO Gas Utility

☒ YES ☐ NO Cable Utility

Proposed subdivision is in the following districts:

☒ YES ☐ NO Drainage District HCDD#1

☒ YES ☐ NO Irrigation District HCCID#9

Has the property been assessed as flat rate irrigable property: ☐ YES ☒ NO

Have Water Rights been conveyed to City/Water Supplier? ☐ YES ☒ NO

(Attach written proof of such assessment or that it has never been assessed as such a property) If YES, attach an estimate from the irrigation district of the proportional water rights for the subdivision as calculated under Texas Water Code § 49.505.

SUBMITTALS REQUIRED FOR MINOR PLAT REVIEW

Two (2) sets of plats **folded and stapled** (24 x 36) and forward a copy in PDF format to rdelafuente@weslacotx.gov
PDF copy of all documents submitted (emailed or USB)

Planning Review fee \$300 + \$25/lot for residential (excluding apartment complexes) or \$400 + \$200 (0-5 acres),
\$400 + \$300 (5.01 - 10 acres, \$400 + \$400 (10 acres or greater) for commercial, industrial, or apartment., Fire
Review fee \$100.00

One 11" X 17" reduced copy of plat

Plat Layout

Existing & Proposed Easements

Existing & Proposed ROW

Existing & Proposed Drainage Easements

Contours

Flood Zones

Adjoiners

Existing street names

Drainage plans and calculations with engineer's seal

Elevations

Flood directional arrows

Detention areas

Street names

Proof of ownership of the property

If septic tank system required, submit soil evaluation report

Water Rights associated with the property

Tax Receipt for all taxing entities showing that taxes are paid in full

SUBMITTALS REQUIRED FOR PRELIMINARY (P & Z)

X Twelve (12) sets of preliminary plat **folded and stapled** (24 x 36) and forward a copy in PDF format to
rdelafuente@weslacotx.gov

X PDF copy of all documents submitted (emailed or USB)

X Planning Review fee \$300 + \$25/lot for residential (excluding apartment complexes) or \$400 + \$200 (0-5 acres), \$400
+ \$300 (5.01 - 10 acres, \$400 + \$400 (10 acres or greater) for commercial, industrial, or apartment., Fire Review fee
\$100.00

X One 11" X 17" reduced copy of plat

255 S. KANSAS AVE ■ WESLACO, TEXAS 78596-6285 ■ 956-447-3401 ■ (Fax) 956-973-3128 ■ WWW.WESLACOTX.GOV

- ☒ Plat Layout
 - ☒ Existing & Proposed Easements
 - ☒ Existing & Proposed ROW ☐ Existing & Proposed Drainage Easements
 - ☒ Contours
 - ☒ Flood Zones
 - ☒ Adjoiners
 - ☒ Existing & Proposed street names
- ☒ Utility Layout
 - ☒ Existing & Proposed Utilities
 - ☒ Proposed Fire Hydrants
 - ☒ Adjoiners
 - ☒ Street names
- ☒ Drainage plans and calculations with engineer's seal
 - ☒ Elevations
 - ☒ Flood directional arrows
 - ☒ Detention areas
 - ☒ Street names
- ☒ Proof of ownership of the property
- ☐ N/A If septic tank system required, submit soil evaluation report
- ☒ Water Rights associated with the property
- ☒ Tax Receipt for all taxing entities showing that taxes are paid in full
- ☒ Number of fire hydrants proposed for subdivision

SUBMITTALS REQUIRED FOR FINAL (P & Z) **Will not apply to Single Lot Variance**

- ☐ Twelve (12) sets of plans **FOLDED & STAPLED** (24 x 36) & PDF copy **with all corrections**
- ☐ Plats to be sealed by Professional Engineer
- ☐ Approved Drainage Report

SUBMITTALS REQUIRED FOR FINAL (City Commission)

- ☐ One set of 8 ½ x 11 of plat and utilities with all corrections done

SUBMITTALS REQUIRED FOR PRE-CONSTRUCTION MEETING

- ☐ Seven (7) full sets of construction plans 24 x 36 and one (1) 11 x 17 with plan & profile.
- ☐ Material Testing are obtained by the city, developer will pay the full cost of the proposal
- ☐ \$85.00 per hour inspection fee to be billed monthly
- ☐ Traffic Impact Analysis (If required)
- ☐ Notice of Intent
- ☐ SW3P

SUBMITTALS REQUIRED FOR RECORDING OR HIDALGO COUNTY PLANNING

- ☐ Electronic file of final plat and as-builds
- ☐ Reproducible plat to be recorded with all required signatures
- ☐ Checks or Receipts: HCCID #9; HCDD #1; County Clerk
- ☐ Tax certificates
- ☐ Memo from engineering inspector releasing subdivision
- ☐ Water Rights shall be paid prior to recordation at \$2,896.81 per acre ft
- ☐ 30 Year Water and 30 Year Sewer Service Agreements
- ☐ Park dedication/Fees in lieu of

SUBMITTALS REQUIRED FOR RECORDING BY SECURITY

- ☐ Sealed engineering cost estimates
- ☐ Letter of Credit/Performance Bond/Escrow

** Any revisions requested would require resubmission of plats and reduced copy reflecting changes.

AUTHORIZATION AND ACKNOWLEDGEMENTS

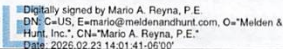
I certify that I am the actual owner of the property described above and this application is being submitted with my consent (include corporate name if applicable); and the following person listed below is my authorized agent to act on my behalf.

I certify that the above information is correct and complete to the best of my knowledge. I understand that I must comply with all applicable local, state, and federal regulations.

Owner Printed Name: BLJDD LTD/BARLIN LTD

Owner Signature: (See attached owner's authorization) Date: _____

Melden & Hunt, Inc. c/o Mario A. Reyna, P.E. is the authorized agent

Authorized Agent Signature:   Date: _____

Authorized Agent Printed Name: Mario A. Reyna

THIS PAGE FOR STAFF USE ONLY

Date Received: _____ Received By: _____ Date Paid _____

P & Z Commission Approval on Preliminary Plat: _____

P & Z Commission Approval on Final Plat: _____

City Commission Approval on Final Plat: _____

Preconstruction Meeting Date: _____

Date Recorded: _____ Instrument No. _____

General Comments: _____



PLAN CORRECTIONS REPORT PAR-000982-2026 FOR CITY OF WESLACO

PLAN ADDRESS: Summerlin Phase 1
Weslaco, TX 78596

PARCEL:

APPLICATION DATE: 01/22/2026

SQUARE FEET:

0.00

DESCRIPTION: SUMMERLIN PHASE 1 (Outside City Limits to be annexed)

EXPIRATION DATE: 01/22/2027

VALUATION:

\$0.00

CONTACTS

Name

Company

Address

Engineer

MARIO REYNA

MELDEN & HUNT INC

W 115 McIntyre St
Edinburg, TX 78541

Owner

BLJDD LTD/BARLIN LTD

107 Laurel Dr
Weslaco, TX

Pre-Application Subdivision Review

REVIEW ITEM	STATUS	REVIEWER
Building Review - Planning v.1	Requires Re-submit	Felix Salazar email: fsalazar@weslacotx.gov
Building Review - Planning		
Building Review - Planning v.2	Requires Re-submit	Felix Salazar email: fsalazar@weslacotx.gov
Building Review - Planning		
Building Review - Planning v.3	Approved	Felix Salazar email: fsalazar@weslacotx.gov
Building Review - Planning		
Engineering v.1	Requires Re-submit	Peter Hermida Ph: 9569683181 email: phermida@weslacotx.gov
Review conducted by the engineering department		
Engineering v.2	Requires Re-submit	Peter Hermida Ph: 9569683181 email: phermida@weslacotx.gov
Review conducted by the engineering department		
Engineering v.3	Requires Re-submit	Peter Hermida Ph: 9569683181 email: phermida@weslacotx.gov
Review conducted by the engineering department		
Fire Review v.1	Requires Re-submit	Mike Swinnea email: mswinnea@weslacotx.gov
Review by the fire department		
Fire Review v.2	Requires Re-submit	Mike Swinnea email: mswinnea@weslacotx.gov
Review by the fire department		
Fire Review v.3	Approved with Comments	Mike Swinnea email: mswinnea@weslacotx.gov
Review by the fire department		
Planning/Zoning v.1	Requires Re-submit	Kayla Arevalo email: karevalo@weslacotx.gov
Review conducted by the planning and zoning department		
Planning/Zoning v.2	Requires Re-submit	Kayla Arevalo email: karevalo@weslacotx.gov
Review conducted by the planning and zoning department		
Planning/Zoning v.3	Approved with Comments	Kayla Arevalo email: karevalo@weslacotx.gov
Review conducted by the planning and zoning department		
Police v.1	Not Required	System Administrator Ph: 444 email: admin@energov.com
Review conducted by the police department		
Public Works v.1	Requires Re-submit	David Arce Ph: 956-793-8735 email: darce@weslacotx.gov
Public Works		
Public Works v.2	Requires Re-submit	David Arce Ph: 956-793-8735 email: darce@weslacotx.gov
Public Works		
Public Works v.3	Approved	David Arce Ph: 956-793-8735 email: darce@weslacotx.gov
Public Works		

PLAN CORRECTIONS REPORT (PAR-0005-2026)

CONDITION(S) All access gates to property shall have specs submitted to our office. Shall maintain a 20' clearance or 12' on each side of an island, if present, prior to installation of gate. - All access gates to property shall have specs submitted to our office. Shall maintain a 20' clearance or 12' on each side of an island, if present, prior to installation of gate. Shall provide Knox Box Gate Entry System if the gate is automated and shall be mounted on keypad. Chained gates shall have a Knox padlock in place. If the gate system is automated, all gates in the system shall open automatically.

Comment: If gated

Approved as submitted with notes - Approved as submitted with notes with notes

Comment: On final walk-through, all cul-de-sacs shall have an approved marked fire lane with curb painted red. Shall have 4 inch stenciling every 10 to 12 feet to state "NO PARKING FIRE LANE" in white.

Access roads shall be 26' minimum with hydrant unobstructed, 20' without hydrant unobstructed. All weather surface road that supports the imposed loads of fire apparatus shall be in place (concrete or asphalt). - Access roads shall be 26' minimum with hydrant unobstructed, 20' without hydrant unobstructed. All weather surface road that supports the imposed loads of fire apparatus shall be in place (concrete or asphalt).

Comment: These widths are actual road driving surfaces. General Note

General Condition - Planning approved w/comments

Comment: 1. Proposed street names need to be aligned with existing streets. Developer must provide letter from 911 addressing of approved street names

2. Traffic Plan- must include Signs & sidewalks, cluster box layout, pre-cut for ramps (if any)

General Condition - 3rd Review of Phase 1

Comment: Sheet 3/7

1. Steel casing under main streets.

Sheet 4/7

2. Use city logo on super cover details

3. Extend Line to and through towards south

Sheet 5/7

4. As per various meetings, we will require a lift station area map, proposed plan to service the area and to size the lift station wet well depth to service the area.

General notes.

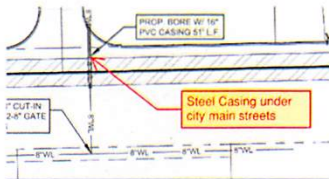
5. Provide a master plan for the sewer line for all three Phases. Ensure sewer lines are properly sized to accommodate all phasing's.

Guillermo Frausto

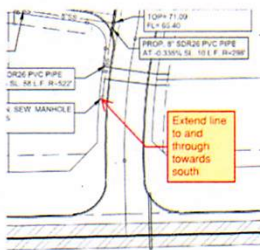
Shall have fire hydrant within 400'. Shall have 4 1/2" outlet facing the street with 18" to 24" clearance from bottom of outlet to grade level for hydrant wrench - Shall have fire hydrant within 400'. Shall have 4 1/2" outlet facing the street with 18" to 24" clearance from bottom of outlet to grade level for hydrant wrench. Hydrants shall be marked on the streets with reflective blue marker to show location of hydrants. Hydrants shall have 3' clearance from any fences, poles, brush, etc.

Comment: General Note

1. Steel casing under main streets.



2. Use city logo on super cover details
3. Extend Line to and through towards south



4. As per various meetings, we will require a lift station area map, proposed plan to service the area and to size the lift station wet well depth to service the area.

5. Provide a master plan for the sewer line for all three Phases. Ensure sewer lines are properly sized to accommodate all phasing's.

INDEX

FIRM NAME: MELDEN & HUNT, INC.
TBPELS FIRM #F1435
TITLE: SUMMERLIN PHASES 1-3 SUBDIVISION
PREPARED BY: MARIO A. REYNA, P.E
DATE: January 14, 2026
REVISED: February 11, 2026
REVISED: February 20, 2026



INDEX

- 1. Drainage Statement**
- 2. Drainage Calculations**
- 3. Weighted “C” Calculation**
- 4. Table of concentration**
- 5. Location Map**
- 6. Subdivision Plat**
- 7. Paving & Drainage Layout**
- 8. Drainage Areas Layout**
- 9. USGS Topographical Map**
- 10. Rainfall Intensity Table**
- 11. USDA Soils Map**
- 12. USDA Soils Legend & Description**
- 13. FEMA FIRM with site location**



TBPELS Firm # F-1435
TBPELS # 10096900

MELDEN & HUNT INC.

CONSULTANTS • ENGINEERS • SURVEYORS

MARIO A. REYNA • ALLAN F. BOOE • ROBERTO N. TAMEZ • RUBEN JAMES DE JESUS • MICHAEL HERNANDEZ

Drainage Statement

Summerlin Phases 1-3 Subdivision

Project #25223.00 Date: January 14, 2026 Revised: February 20, 2026

SUMMERNLIN PHASES 1-3 SUBDIVISION A tract of land containing 107.306 acres situated in the City of Weslaco, Hidalgo County, Texas, being a part or portion out of Farm Tracts 238, 239, 244 and 245, The West and Adams Tracts Subdivision, according to the plat thereof recorded in Volume 2, Pages 34-37, Hidalgo County Map Records. This subdivision lies in Zone "X" (Unshaded), which is defined as areas determined to be outside 500-year floodplain. Community Panel No. 480334 0450 C; Map Revised: June 6, 2000, Revised to Reflect LOMR: May 30, 2022. The property is located Northwest of the intersection of W. Mille 11 and N. FM 88. The property is currently open with a proposed use of 404 residential lots and 19 common areas, currently inside the City of Weslaco, Texas.

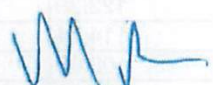
The soils in this area (25) Hidalgo fine sandy loam, (28) Hidalgo sandy clay loam, and (48) Racombes sandy clay loam, these soils belong to hydrologic group "B" having a moderate infiltration rate when thoroughly wet. (See excerpts from "Soil Survey of Cameron County, Texas").

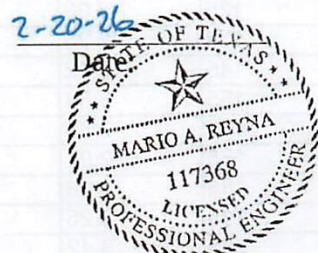
Existing runoff is in a northerly direction, with a runoff of 24.71 c.f.s. during the 10-year storm frequency as per the attached calculations. Proposed runoff after development is 167.65 c.f.s., during the 50-year storm frequency, per the attached calculation, which is an increase of 142.94 c.f.s.

The proposed drainage for this subdivision shall consist of surface runoff from the lots into the proposed streets and collected by type "A" inlets located at key points within the subdivision. The pipe size diameters shall range from 24" to 48". The proposed storm system shall discharge in part into proposed Detention Ponds within the site, which will discharge into the existing Hidalgo & Cameron County Irrigation District No. 9 Ditch, maintained by Hidalgo County Drainage District No. 1.

In accordance with the City of Weslaco drainage policy, the peak rate of runoff in this subdivision will not be increased during the 50-year rainfall event due to the building of this subdivision. Therefore, as per attached calculations the required 743,151 cubic feet of detention will be provided between the proposed Detention Ponds.

☐ REJECTED	
☒ APPROVED FOR SUBMITTAL	
☐ TO H.C. PLANNING DEPT.	
☐ TO CITY	
☒ DISCHARGE PERMIT REQUIRED	
☒ DISTRICT FACILITY	
☐ CITY FACILITY	
☐ OTHER	
H.C.D.D. NO. 1 <u>HCC109</u>	
DATE <u>2-20-26</u>	


Mario A. Reyna, P.E. #117368



DRAINAGE REPORT

PROJECT NAME: **SUMMERLIN PHASES 1-3** # of Lots: **404**
PROJECT NUMBER: **25045**
DATE: **February 20, 2026**

I. Existing Condition-10 year

Ex. Area: **4,674,233.391** sf
107.306 ac

Int. Coeff. "k" **0.213** Table 3-2
K_p 3.28
Length **3380** ft
Velocity 0.270582 ft/sec

Slope : **0.15** %
tc : 208.19 min
Rainfall Intensity (10yr) 1.152 in/hr
c factor 0.200
Q peak existing condition: 24.71 cfs

II. Future Condition-50 year

Future area: 4,674,233.39 sf
107.31 ac
Slope : 0.15 %
tc : **66.50** min
Rainfall Intensity (50yr) 3.811 in/hr
c factor 0.410
Q future cond. = Aci = i * = 167.65 * 0.41
43.9953097 i

time min.	time hour	i in/hr	Qin cfs	Vin cf	Qout cfs	Vout cf	REQ'D V cf
5	0.08	12.477	548.93	164679	24.71	53011	111668
10	0.17	10.253	451.08	270650	24.71	56718	213932
15	0.25	8.761	385.44	346899	24.71	60425	286474
25	0.42	6.864	301.98	452976	24.71	67839	385136
35	0.58	5.697	250.64	526347	24.71	75253	451093
45	0.75	4.899	215.53	581939	24.71	82667	499272
55	0.92	4.316	189.88	626616	24.71	90082	536535
65	1.08	3.869	170.22	663850	24.71	97496	566354
75	1.25	3.514	154.60	695698	24.71	104910	590788
85	1.42	3.226	141.93	723837	24.71	112324	611513
95	1.58	2.986	131.37	748809	24.71	119738	629071
105	1.75	2.782	122.39	771088	24.71	127152	643936
115	1.92	2.608	114.74	791704	24.71	134566	657138
125	2.08	2.456	108.05	810394	24.71	141980	668413
135	2.25	2.323	102.20	827829	24.71	149395	678434
145	2.42	2.205	97.01	843984	24.71	156809	687175
155	2.58	2.100	92.39	859228	24.71	164223	695006
165	2.75	2.006	88.25	873720	24.71	171637	702084
175	2.92	1.920	84.47	886945	24.71	179051	707894
185	3.08	1.843	81.08	900025	24.71	186465	713560
195	3.25	1.772	77.96	912128	24.71	193879	718249
205	3.42	1.707	75.10	923730	24.71	201293	722436
215	3.58	1.647	72.46	934738	24.71	208708	726030
225	3.75	1.592	70.04	945547	24.71	216122	729426
235	3.92	1.541	67.80	955934	24.71	223536	732399

245	4.08	1.493	65.68	965569	24.71	230950	734620
255	4.25	1.448	63.71	974690	24.71	238364	736326
265	4.42	1.407	61.90	984232	24.71	245778	738454
275	4.58	1.368	60.19	993062	24.71	253192	739870
285	4.75	1.331	58.56	1001338	24.71	260606	740731
295	4.92	1.297	57.06	1009996	24.71	268021	741975
305	5.08	1.264	55.61	1017664	24.71	275435	742230
315	5.25	1.233	54.25	1025253	24.71	282849	742405
325	5.42	1.204	52.97	1032922	24.71	290263	742659
335	5.58	1.177	51.78	1040828	24.71	297677	743151
345	5.75	1.150	50.59	1047308	24.71	305091	742217
355	5.92	1.125	49.49	1054238	24.71	312505	741732
365	6.08	1.102	48.48	1061774	24.71	319919	741855
375	6.25	1.079	47.47	1068096	24.71	327334	740763
385	6.42	1.057	46.50	1074220	24.71	334748	739473
395	6.58	1.037	45.62	1081268	24.71	342162	739107
405	6.75	1.017	44.74	1087260	24.71	349576	737685
415	6.92	0.998	43.91	1093292	24.71	356990	736302
425	7.08	0.980	43.12	1099443	24.71	364404	735039
435	7.25	0.962	42.32	1104643	24.71	371818	732825
445	7.42	0.946	41.62	1111242	24.71	379232	732010
455	7.58	0.930	40.92	1116997	24.71	386647	730350
465	7.75	0.914	40.21	1121907	24.71	394061	727846
475	7.92	0.899	39.55	1127226	24.71	401475	725751
485	8.08	0.885	38.94	1133033	24.71	408889	724144
495	8.25	0.871	38.32	1138101	24.71	416303	721798
505	8.42	0.857	37.70	1142431	24.71	423717	718713
515	8.58	0.845	37.18	1148740	24.71	431131	717608
525	8.75	0.832	36.60	1153029	24.71	438545	714484
535	8.92	0.820	36.08	1158045	24.71	445960	712085
545	9.08	0.808	35.55	1162426	24.71	453374	709053
555	9.25	0.797	35.06	1167640	24.71	460788	706852
565	9.42	0.786	34.58	1172273	24.71	468202	704071
575	9.58	0.775	34.10	1176325	24.71	475616	700709
585	9.75	0.765	33.66	1181340	24.71	483030	698310
600	10	0.750	33.00	1187833	24.71	494151	693681
630	10.5	0.722	31.76	1200715	24.71	516394	684322
690	11.5	0.673	29.59	1224990	24.71	560878	664112
720	12	0.651	28.62	1236463	24.71	583121	653343
750	12.5	0.630	27.72	1247540	24.71	605363	642177
780	13	0.611	26.89	1258250	24.71	627606	630644
810	13.5	0.593	26.10	1268619	24.71	649848	618771
840	14	0.577	25.37	1278670	24.71	672090	606580
870	14.5	0.561	24.68	1288426	24.71	694333	594093
900	15	0.546	24.04	1297903	24.71	716575	581328
930	15.5	0.532	23.43	1307121	24.71	738817	568304
960	16	0.519	22.85	1316094	24.71	761060	555034
990	16.5	0.507	22.30	1324836	24.71	783302	541534
1020	17	0.495	21.79	1333360	24.71	805544	527816
1050	17.5	0.484	21.30	1341679	24.71	827787	513892
1080	18	0.473	20.83	1349803	24.71	850029	499774
1110	18.5	0.463	20.39	1357742	24.71	872272	485470
1140	19	0.454	19.96	1365505	24.71	894514	470991
1170	19.5	0.445	19.56	1373101	24.71	916756	456344
1200	20	0.436	19.17	1380537	24.71	938999	441538
1230	20.5	0.427	18.81	1387821	24.71	961241	426580
1260	21	0.419	18.45	1394961	24.71	983483	411477
1290	21.5	0.412	18.11	1401961	24.71	1005726	396235

1320	22	0.404	17.79	1408829	24.71	1027968	380861
1350	22.5	0.397	17.48	1415569	24.71	1050211	365359
1380	23	0.390	17.18	1422187	24.71	1072453	349735
1410	23.5	0.384	16.89	1428688	24.71	1094695	333993
1440	24	0.378	16.61	1435077	24.71	1116938	318139

Storage Required: 743,151 cf
Storage Required: 17.060 Ac.-Ft.
w/ release rate of: 24.71 cfs
Storage / Ac. Development: 0.159 Ac.Ft. per Ac.
Storage / Lot: 1839.482167 cf per lot

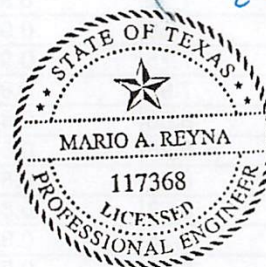


TABLE I TIME OF CONCENTRATION DETERMINATION SUMMERLIN PHASES 1-3												
COMPUTATION POINT	DESCRIPTION OF RUNOFF MEDIUM	OVERLAND FLOW				CHANNEL, PIPE, STREET, ETC. FLOW						
		C	LENGTH (FT.)	GRADE (%)	TIME (MIN)	WIDTH/ID. (FT)	GRADE (%)	LENGTH (FT)	VELOCITY (FPS)	TIME (MIN)	TOTAL TIME (MIN)	
D.A.#1	Overland & Gutter	0.410	156		17.3			147.50	1.7	1.4	18.8	
D.A.#1-D.A.#2	Pipe Flow	0.410						36.43	3.0	0.2	19.0	
D.A.#2	Overland & Gutter	0.410	142		15.8			147.50	1.7	1.4	17.2	
D.A.#2-D.A.#4	Pipe Flow	0.410						258.02	3.0	1.4	20.4	
D.A.#3	Overland & Gutter	0.410	139		15.4			285.75	1.7	2.8	18.2	
D.A.#3-D.A.#4	Pipe Flow	0.410						39.00	3.0	0.2	20.6	
D.A.#4	Overland & Gutter	0.410	180		20.0			310.00	1.7	3.0	23.0	
D.A.#4-S.M.#2	Pipe Flow	0.410						284.69	3.0	1.6	24.6	
D.A.#5	Overland & Gutter	0.410	156		17.3			306.00	1.7	3.0	20.3	
D.A.#5-D.A.#6	Pipe Flow	0.410						39.00	3.0	0.2	24.8	
D.A.#6	Overland & Gutter	0.410	116.5		12.9			273.75	1.7	2.7	15.6	
D.A.#6-S.M.#3	Pipe Flow	0.410						173.11	3.0	1.0	25.8	
D.A.#7	Overland & Gutter	0.410	179.5		19.9			278.75	1.7	2.7	22.7	
D.A.#7-D.A.#8	Pipe Flow	0.410						35.00	3.0	0.2	26.0	
D.A.#8	Overland & Gutter	0.410	140		15.6			239.25	1.7	2.3	17.9	
D.A.#8-S.M.#3	Pipe Flow	0.410						302.60	3.0	1.7	19.6	
S.M.#3	Overland & Gutter	0.410	116.5		12.9			273.75	1.7	2.7	15.6	
S.M.#3-D.A.#10	Pipe Flow	0.410						350.00	3.0	1.9	17.6	

FORMULA FOR TIME OF CONCENTRATION
 USING THE RATIONAL METHOD, AS PER
 "TXDOT BRIDGE HYDRAULIC MANUAL"

$$T_c = \frac{L}{(V \times 60)}$$

TABLE IA FLOWRATE DETERMINATION SUMMERLIN PHASES 1-3										
COMPUTATION POINT	TOTAL DRAINAGE AREA CONTRIBUTING TO POINT (acres)	C	TIME (SEE TABLE 1) (minutes)	RETURN FREQUENCY (years)	INTENSITY (in./hr.)	FLOWRATE (c.f.s.)	PIPE SIZE (inches)	MIN. SLOPE (FT./FT.)	DESIGN PIPE SLOPE	INLET OPENING IN FEET
D.A.#1	1.325	0.410	18.8	25	6.101	3.31				
D.A.#1-D.A.#2	1.325	0.410	19.0	25	6.070	3.30	24.00	0.021%	0.174%	3.0
D.A.#2	0.695	0.410	17.2	25	6.349	1.81				
D.A.#2-D.A.#4	2.020	0.410	20.4	25	5.863	4.86	24.00	0.046%	0.174%	1.7
D.A.#3	1.134	0.410	18.2	25	6.183	2.87				
D.A.#3-D.A.#4	1.134	0.410	20.6	25	5.833	2.71	24.00	0.014%	0.174%	2.6
D.A.#4	2.486	0.410	23.0	25	5.522	5.63				
D.A.#4-S.M.#2	5.640	0.410	24.6	25	5.337	12.34	30.00	0.091%	0.129%	5.2
D.A.#5	1.866	0.410	20.3	25	5.874	4.49				
D.A.#5-D.A.#6	1.866	0.410	24.8	25	5.313	4.06	24.00	0.032%	0.174%	4.1
D.A.#6	1.383	0.410	15.6	25	6.628	3.76				
D.A.#6-S.M.#3	3.249	0.410	25.8	25	4.791	6.38	24.00	0.080%	0.174%	3.4
D.A.#7	2.651	0.410	22.7	25	5.566	6.05				
D.A.#7-D.A.#8	2.651	0.410	26.0	25	5.188	5.64	24.00	0.062%	0.174%	5.6
D.A.#8	1.572	0.410	17.9	25	6.238	4.02				
D.A.#8-S.M.#3	4.223	0.410	19.6	25	5.981	10.36	30.00	0.064%	0.129%	3.7
S.M.#3		0.410	15.6	25	6.628	0.00				
S.M.#3-D.A.#10	7.472	0.410	17.6	25	6.291	19.27	36.00	0.084%	0.101%	0.0

FORMULA FOR INTENSITY $I = \frac{b}{(T_c + d)}$
 USING THE RATIONAL METHOD, AS PER
 "TXDOT BRIDGE HYDRAULIC MA"

TABLE I
TIME OF CONCENTRATION DETERMINATION
SUMMERLIN PHASES 1-3

COMPUTATION POINT	DESCRIPTION OF RUNOFF MEDIUM	OVERLAND FLOW				CHANNEL, PIPE, STREET, ETC. FLOW					TOTAL TIME (MIN)	
		C	LENGTH (FT.)	GRADE (%)	TIME (MIN)	WIDTH/ID. (FT)	GRADE (%)	LENGTH (FT)	VELOCITY (FPS)	TIME (MIN)		
D.A.#9	Overland & Gutter	0.410	179.5		19.9			282.00	1.7	2.8	22.7	
D.A.#9-D.A.#10	Pipe Flow	0.410						39.00	3.0	0.2	26.2	
D.A.#10	Overland & Gutter	0.410	118		13.1			296.25	1.7	2.9	16.0	
D.A.#10-S.M.#2	Pipe Flow	0.410						324.88	3.0	1.8	28.0	
S.M.#2	Overland & Gutter	0.410	180		20.0			310.00	1.7	3.0	23.0	
S.M.#2-OUTFALL	Pipe Flow	0.410						156.18	3.0	0.9	28.9	
D.A.#11	Overland & Gutter	0.410	236.5		26.3			237.75	1.7	2.3	28.6	
D.A.#11-D.A.#12	Pipe Flow	0.410						39.00	3.0	0.2	29.1	
D.A.#12	Overland & Gutter	0.410	118		13.1			212.75	1.7	2.1	15.2	
D.A.#12-D.A.#14	Pipe Flow	0.410						349.72	3.0	1.9	17.1	
D.A.#13	Overland & Gutter	0.410	130		14.4			145.50	1.7	1.4	15.9	
D.A.#13-D.A.#14	Pipe Flow	0.410						39.00	3.0	0.2	17.4	
D.A.#14	Overland & Gutter	0.410	114		12.7			163.00	1.7	1.6	14.3	
D.A.#14-D.A.#17	Pipe Flow	0.410						205.56	3.0	1.1	30.2	
D.A.#15	Overland & Gutter	0.410	131.5		14.6			185.00	1.7	1.8	16.4	
D.A.#15-D.A.#16	Pipe Flow	0.410						35.26	3.0	0.2	30.4	
D.A.#16	Overland & Gutter	0.410	128.75		14.3			184.75	1.7	1.8	16.1	
D.A.#16-D.A.#17	Pipe Flow	0.410						181.65	3.0	1.0	31.4	

FORMULA FOR TIME OF CONCENTRATION
USING THE RATIONAL METHOD, AS PER
"TXDOT BRIDGE HYDRAULIC MANUAL"

$$T_c = \frac{L}{(V \times 60)}$$

**TABLE 1A
FLOWRATE DETERMINATION
SUMMERLIN PHASES 1-3**

COMPUTATION POINT	TOTAL DRAINAGE AREA CONTRIBUTING TO POINT (acres)	C	TIME (SEE TABLE 1) (minutes)	RETURN FREQUENCY (years)	INTENSITY (in./hr.)	FLOWRATE (c.f.s.)	PIPE SIZE (inches)	MIN. SLOPE (FT./FT.)	DESIGN PIPE SLOPE	INLET OPENING IN FEET
D.A.#9	2.010	0.410	22.7	25	5.562	4.58				
D.A.#9-D.A.#10	2.010	0.410	26.2	25	5.165	4.26	24.00	0.035%	0.174%	4.2
D.A.#10	1.348	0.410	16.0	25	6.558	3.62				
D.A.#10-S.M.#2	10.830	0.410	28.0	25	4.984	22.13	42.00	0.048%	0.082%	3.3
S.M.#2		0.410	23.0	25	5.522	0.00				
S.M.#2-OUTFALL	16.470	0.410	28.9	25	4.902	33.10	48.00	0.053%	0.069%	0.0
D.A.#11	2.426	0.410	28.6	25	4.928	4.90				
D.A.#11-D.A.#12	2.426	0.410	29.1	25	4.882	4.86	24.00	0.046%	0.174%	4.5
D.A.#12	1.110	0.410	15.2	25	6.708	3.05				
D.A.#12-D.A.#14	3.536	0.410	17.1	25	6.363	9.22	30.00	0.051%	0.129%	2.8
D.A.#13	0.861	0.410	15.9	25	6.584	2.32				
D.A.#13-D.A.#14	0.861	0.410	17.4	25	6.327	2.23	24.00	0.010%	0.174%	2.1
D.A.#14	0.661	0.410	14.3	25	6.890	1.87				
D.A.#14-D.A.#17	5.058	0.410	30.2	25	4.780	9.91	30.00	0.058%	0.129%	1.7
D.A.#15	1.072	0.410	16.4	25	6.485	2.85				
D.A.#15-D.A.#16	1.072	0.410	30.4	25	4.763	2.09	24.00	0.009%	0.174%	2.6
D.A.#16	1.086	0.410	16.1	25	6.539	2.91				
D.A.#16-D.A.#17	2.158	0.410	31.4	25	4.677	4.14	24.00	0.034%	0.174%	2.7

FORMULA FOR INTENSITY $I = \frac{b}{(T_c + d)}$
 USING THE RATIONAL METHOD, AS PER e
 "TXDOT BRIDGE HYDRAULIC MA"

TABLE I TIME OF CONCENTRATION DETERMINATION SUMMERLIN PHASES 1-3											
COMPUTATION POINT	DESCRIPTION OF RUNOFF MEDIUM	OVERLAND FLOW				CHANNEL, PIPE, STREET, ETC. FLOW					TOTAL TIME (MIN)
		C	LENGTH (FT.)	GRADE (%)	TIME (MIN)	WIDTH/DIA. (FT)	GRADE (%)	LENGTH (FT)	VELOCITY (FPS)	TIME (MIN)	
D.A.#17	Overland & Gutter	0.410	129		14.3			251.00	1.7	2.5	16.8
D.A.#17-D.A.#18	Pipe Flow	0.410						35.00	3.0	0.2	31.6
D.A.#18	Overland & Gutter	0.410	9		1.0			245.00	1.7	2.4	3.4
D.A.#18-OUTFALL	Pipe Flow	0.410						67.23	3.0	0.4	32.0
D.A.#19	Overland & Gutter	0.410	183		20.3			334.00	1.7	3.3	23.6
D.A.#19-D.A.#20	Pipe Flow	0.410						39.00	3.0	0.2	32.2
D.A.#20	Overland & Gutter	0.410	143		15.9			297.25	1.7	2.9	18.8
D.A.#20-D.A.#22	Pipe Flow	0.410						416.24	3.0	2.3	34.5
D.A.#21	Overland & Gutter	0.410	133.75		14.9			290.25	1.7	2.8	17.7
D.A.#21-D.A.#22	Pipe Flow	0.410						39.00	3.0	0.2	17.9
D.A.#22	Overland & Gutter	0.410	128		14.2			286.00	1.7	2.8	17.0
D.A.#22-D.A.#24	Pipe Flow	0.410						507.80	3.0	2.8	37.4
D.A.#23	Overland & Gutter	0.410	122.5		13.6			280.00	1.7	2.7	16.4
D.A.#23-D.A.#24	Pipe Flow	0.410						39.00	3.0	0.2	37.6
D.A.#24	Overland & Gutter	0.410	127		14.1			293.00	1.7	2.9	17.0
D.A.#24-D.A.#26	Pipe Flow	0.410						470.22	3.0	2.6	40.2
D.A.#25	Overland & Gutter	0.410	131		14.6			158.50	1.7	1.6	16.1
D.A.#25-D.A.#26	Pipe Flow	0.410						39.00	3.0	0.2	16.3

FORMULA FOR TIME OF CONCENTRATION
USING THE RATIONAL METHOD, AS PER
"TXDOT BRIDGE HYDRAULIC MANUAL"

$$T_c = \frac{L}{(V \times 60)}$$

TABLE 1A FLOWRATE DETERMINATION SUMMERLIN PHASES 1-3										
COMPUTATION POINT	TOTAL DRAINAGE AREA CONTRIBUTING TO POINT (acres)	C	TIME (SEE TABLE 1) (minutes)	RETURN FREQUENCY (years)	INTENSITY (in./hr.)	FLOWRATE (c.f.s.)	PIPE SIZE (inches)	MIN. SLOPE (FT./FT.)	DESIGN PIPE SLOPE	INLET OPENING IN FEET
D.A.#17	1.455	0.410	16.8	25	6.421	3.83				
D.A.#17-D.A.#18	8.671	0.410	31.6	25	4.661	16.57	36.00	0.062%	0.101%	3.5
D.A.#18	0.228	0.410	3.4	25	10.328	0.97				
D.A.#18-OUTFALL	8.899	0.410	32.0	25	4.630	16.89	42.00	0.028%	0.082%	0.9
D.A.#19	1.775	0.410	23.6	25	5.454	3.97				
D.A.#19-D.A.#20	1.775	0.410	32.2	25	4.613	3.36	24.00	0.022%	0.174%	3.6
D.A.#20	1.353	0.410	18.8	25	6.097	3.38				
D.A.#20-D.A.#22	3.128	0.410	34.5	25	4.434	5.69	24.00	0.063%	0.174%	3.1
D.A.#21	1.265	0.410	17.7	25	6.269	3.25				
D.A.#21-D.A.#22	1.265	0.410	17.9	25	6.234	3.23	24.00	0.020%	0.174%	3.0
D.A.#22	1.864	0.410	17.0	25	6.382	4.88				
D.A.#22-D.A.#24	6.257	0.410	37.4	25	4.236	10.87	30.00	0.070%	0.129%	4.5
D.A.#23	0.769	0.410	16.4	25	6.497	2.05				
D.A.#23-D.A.#24	0.769	0.410	37.6	25	4.222	1.33	24.00	0.003%	0.174%	1.9
D.A.#24	1.766	0.410	17.0	25	6.389	4.63				
D.A.#24-D.A.#26	8.792	0.410	40.2	25	4.057	14.63	36.00	0.048%	0.174%	4.2
D.A.#25	0.848	0.410	16.1	25	6.541	2.27				
D.A.#25-D.A.#26	0.848	0.410	16.3	25	6.502	2.26	24.00	0.010%	0.174%	2.1

FORMULA FOR INTENSITY $I = \frac{b}{(T_c + d)^e}$
 USING THE RATIONAL METHOD, AS PER
 "TXDOT BRIDGE HYDRAULIC MA"

TABLE I
TIME OF CONCENTRATION DETERMINATION
SUMMERLIN PHASES 1-3

COMPUTATION POINT	DESCRIPTION OF RUNOFF MEDIUM	OVERLAND FLOW				CHANNEL, PIPE, STREET, ETC. FLOW					TOTAL TIME (MIN)
		C	LENGTH (FT.)	GRADE (%)	TIME (MIN)	WIDTH/DIA. (FT)	GRADE (%)	LENGTH (FT)	VELOCITY (FPS)	TIME (MIN)	
D.A.#26	Overland & Gutter	0.410	200		22.2			177.25	1.7	1.7	24.0
D.A.#26-OUTFALL	Pipe Flow	0.410						192.76	3.0	1.1	25.0
D.A.#27	Overland & Gutter	0.410	165		18.3			338.00	1.7	3.3	21.6
D.A.#27-D.A.#28	Pipe Flow	0.410						35.00	3.0	0.2	40.4
D.A.#28	Overland & Gutter	0.410	135		15.0			301.50	1.7	3.0	18.0
D.A.#28-OUTFALL	Pipe Flow	0.410						151.73	3.0	0.8	41.2
D.A.#29	Overland & Gutter	0.410	149		16.6			312.00	1.7	3.1	19.6
D.A.#29-D.A.#30	Pipe Flow	0.410						35.00	3.0	0.2	41.4
D.A.#30	Overland & Gutter	0.410	152		16.9			293.00	1.7	2.9	19.8
D.A.#30-D.A.#32	Pipe Flow	0.410						382.02	3.0	2.1	21.9
D.A.#31	Overland & Gutter	0.410	163		18.1			290.75	1.7	2.9	21.0
D.A.#31-D.A.#32	Pipe Flow	0.410						39.00	3.0	0.2	22.1
D.A.#32	Overland & Gutter	0.410	134.75		15.0			261.00	1.7	2.6	17.5
D.A.#32-D.A.#34	Pipe Flow	0.410						606.11	3.0	3.4	44.8
D.A.#33	Overland & Gutter	0.410	147.75		16.4			295.75	1.7	2.9	19.3
D.A.#33-D.A.#34	Pipe Flow	0.410						39.00	3.0	0.2	45.0
D.A.#34	Overland & Gutter	0.410	111		12.3			313.00	1.7	3.1	15.4
D.A.#34-S.M.#9	Pipe Flow	0.410						270.08	3.0	1.5	46.5

FORMULA FOR TIME OF CONCENTRATION
USING THE RATIONAL METHOD, AS PER

$$T_c = \frac{L}{(V \times 60)}$$

TABLE 1A
FLOWRATE DETERMINATION
SUMMERLIN PHASES 1-3

COMPUTATION POINT	TOTAL DRAINAGE AREA CONTRIBUTING TO POINT (acres)	C	TIME (SEE TABLE 1) (minutes)	RETURN FREQUENCY (years)	INTENSITY (in./hr.)	FLOWRATE (c.f.s.)	PIPE SIZE (inches)	MIN. SLOPE (FT./FT.)	DESIGN PIPE SLOPE	INLET OPENING IN FEET
D.A.#26	1.682	0.410	24.0	25	5.412	3.73				
D.A.#26-OUTFALL	11.322	0.410	25.0	25	5.291	24.56	42.00	0.060%	0.082%	3.4
D.A.#27	2.055	0.410	21.6	25	5.697	4.80				
D.A.#27-D.A.#28	2.055	0.410	40.4	25	4.046	3.41	24.00	0.023%	0.174%	4.4
D.A.#28	1.887	0.410	18.0	25	6.229	4.82				
D.A.#28-OUTFALL	3.942	0.410	41.2	25	3.996	6.46	24.00	0.082%	0.174%	4.4
D.A.#29	2.697	0.410	19.6	25	5.977	6.61				
D.A.#29-D.A.#30	2.697	0.410	41.4	25	3.984	4.41	24.00	0.038%	0.174%	6.1
D.A.#30	2.022	0.410	19.8	25	5.955	4.94				
D.A.#30-D.A.#32	4.719	0.410	21.9	25	5.666	10.96	30.00	0.071%	0.129%	4.5
D.A.#31	1.788	0.410	21.0	25	5.788	4.24				
D.A.#31-D.A.#32	1.788	0.410	22.1	25	5.638	4.13	24.00	0.033%	0.174%	3.9
D.A.#32	1.187	0.410	17.5	25	6.298	3.06				
D.A.#32-D.A.#34	7.694	0.410	44.8	25	3.800	11.99	36.00	0.032%	0.101%	2.8
D.A.#33	1.735	0.410	19.3	25	6.020	4.28				
D.A.#33-D.A.#34	1.735	0.410	45.0	25	3.789	2.69	24.00	0.014%	0.174%	3.9
D.A.#34	1.303	0.410	15.4	25	6.670	3.56				
D.A.#34-S.M.#9	10.732	0.410	46.5	25	3.713	16.34	42.00	0.026%	0.082%	3.3

FORMULA FOR INTENSITY $I = \frac{b}{e}$
USING THE RATIONAL METHOD, AS PER

"TXDOT BRIDGE HYDRAULIC MANUAL"

TABLE I
TIME OF CONCENTRATION DETERMINATION
SUMMERLIN PHASES 1-3

COMPUTATION POINT	DESCRIPTION OF RUNOFF MEDIUM	OVERLAND FLOW				CHANNEL, PIPE, STREET, ETC. FLOW					
		C	LENGTH (FT.)	GRADE (%)	TIME (MIN)	WIDTH/ID. (FT)	GRADE (%)	LENGTH (FT)	VELOCITY (FPS)	TIME (MIN)	TOTAL TIME (MIN)
D.A.#35	Overland & Gutter	0.410	127		14.1			255.75	1.7	2.5	16.6
D.A.#35-D.A.#36	Pipe Flow	0.410						39.00	3.0	0.2	46.7
D.A.#36	Overland & Gutter	0.410	166		18.4			287.25	1.7	2.8	21.3
D.A.#36-S.M.#9	Pipe Flow	0.410						332.61	3.0	1.8	48.6
S.M.#9	Overland & Gutter	0.410	111		12.3			313.00	1.7	3.1	15.4
S.M.#9-OUTFALL	Pipe Flow	0.410						63.97	3.0	0.4	48.9
D.A.#37	Overland & Gutter	0.410	122		13.6			206.00	1.7	2.0	15.6
D.A.#37-D.A.#38	Pipe Flow	0.410						35.00	3.0	0.2	49.1
D.A.#38	Overland & Gutter	0.410	135.5		15.1			239.00	1.7	2.3	17.4
D.A.#38-OUTFALL	Pipe Flow	0.410						80.57	3.0	0.4	17.8
D.A.#39	Overland & Gutter	0.410	238		26.4			319.00	1.7	3.1	29.6
D.A.#39-D.A.#40	Pipe Flow	0.410						39.00	3.0	0.2	29.8
D.A.#40	Overland & Gutter	0.410	145		16.1			297.75	1.7	2.9	19.0
D.A.#40-S.M.#10	Pipe Flow	0.410						542.22	3.0	3.0	52.1
D.A.#41	Overland & Gutter	0.410	166		20.7			301.00	1.7	3.0	23.6
D.A.#41-D.A.#42	Pipe Flow	0.410						35.00	3.0	0.2	52.3
D.A.#42	Overland & Gutter	0.410	220.5		24.5			286.00	1.7	2.8	27.3
D.A.#42-D.A.#44	Pipe Flow	0.410						244.68	3.0	1.4	53.7

FORMULA FOR TIME OF CONCENTRATION

$$T_c = \frac{L}{L}$$

"TXDOT BRIDGE HYDRAULIC MA (Tc + d)

TABLE 1A FLOWRATE DETERMINATION SUMMERLIN PHASES 1-3										
COMPUTATION POINT	TOTAL DRAINAGE AREA CONTRIBUTING TO POINT (acres)	C	TIME (SEE TABLE 1) (minutes)	RETURN FREQUENCY (years)	INTENSITY (in./hr.)	FLOWRATE (c.f.s.)	PIPE SIZE (inches)	MIN. SLOPE (FT./FT.)	DESIGN PIPE SLOPE	INLET OPENING IN FEET
D.A.#35	1.538	0.410	16.6	25	6.451	4.07				
D.A.#35-D.A.#36	1.538	0.410	46.7	25	3.702	2.33	24.00	0.011%	0.174%	3.7
D.A.#36	1.825	0.410	21.3	25	5.748	4.30				
D.A.#36-S.M.#9	3.363	0.410	48.6	25	3.614	4.98	24.00	0.049%	0.174%	3.9
S.M.#9		0.410	15.4	25	6.670	0.00				
S.M.#9-OUTFALL	14.095	0.410	48.9	25	3.598	20.79	54.00	0.011%	0.059%	0.0
D.A.#37	1.136	0.410	15.6	25	6.638	3.09				
D.A.#37-D.A.#38	1.136	0.410	49.1	25	3.589	1.67	24.00	0.005%	0.174%	2.8
D.A.#38	1.739	0.410	17.4	25	6.320	4.51				
D.A.#38-OUTFALL	2.875	0.410	17.8	25	6.247	7.36	24.00	0.106%	0.174%	4.1
D.A.#39	2.854	0.410	29.6	25	4.839	5.66				
D.A.#39-D.A.#40	2.854	0.410	29.8	25	4.820	5.64	24.00	0.062%	0.174%	5.2
D.A.#40	1.773	0.410	19.0	25	6.063	4.41				
D.A.#40-S.M.#10	4.627	0.410	52.1	25	3.457	6.56	24.00	0.084%	0.174%	4.0
D.A.#41	2.351	0.410	23.6	25	5.452	5.26				
D.A.#41-D.A.#42	2.351	0.410	52.3	25	3.449	3.32	24.00	0.022%	0.174%	4.8
D.A.#42	1.960	0.410	27.3	25	5.053	4.06				
D.A.#42-D.A.#44	4.311	0.410	53.7	25	3.393	6.00	24.00	0.070%	0.174%	3.7

FORMULA FOR INTENSITY I = b

(Vx60)

TABLE I

COMPUTATION POINT	DESCRIPTION OF RUNOFF MEDIUM	OVERLAND FLOW				CHANNEL, PIPE, STREET, ETC. FLOW					
		C	LENGTH (FT.)	GRADE (%)	TIME (MIN)	WIDTH/D.A. (FT)	GRADE (%)	LENGTH (FT)	VELOCITY (FPS)	TIME (MIN)	TOTAL TIME (MIN)
D.A.#43	Overland & Gutter	0.410	214		23.8			300.00	1.7	2.9	26.7
D.A.#43-D.A.#44	Pipe Flow	0.410						35.00	3.0	0.2	53.9
D.A.#44	Overland & Gutter	0.410	91		10.1			122.00	1.7	1.2	11.3
D.A.#44-S.M.#10	Pipe Flow	0.410						150.82	3.0	0.8	54.7
S.M.#10	Overland & Gutter	0.410	119.75		13.3			290.25	1.7	2.8	16.2
S.M.#10-D.A.#46	Pipe Flow	0.410						28.45	3.0	0.2	54.9
D.A.#45	Overland & Gutter	0.410	140		15.6			309.00	1.7	3.0	18.6
D.A.#45-D.A.#46	Pipe Flow	0.410						39.00	3.0	0.2	55.1
D.A.#46	Overland & Gutter	0.410	119.75		13.3			290.25	1.7	2.8	16.2
D.A.#46-D.A.#48	Pipe Flow	0.410						597.04	3.0	3.3	58.4
D.A.#47	Overland & Gutter	0.410	110.75		12.3			283.00	1.7	2.8	15.1
D.A.#47-D.A.#48	Pipe Flow	0.410						39.00	3.0	0.2	58.6
D.A.#48	Overland & Gutter	0.410	213.5		23.7			317.00	1.7	3.1	26.8
D.A.#48-OUTFALL	Pipe Flow	0.410						248.20	3.0	1.4	60.0
D.A.#49	Overland & Gutter	0.410	149		16.6			311.75	1.7	3.1	19.6
D.A.#49-D.A.#50	Pipe Flow	0.410						39.00	3.0	0.2	60.2
D.A.#50	Overland & Gutter	0.410	105.5		11.7			280.00	1.7	2.7	14.5
D.A.#50-S.M.#12	Pipe Flow	0.410						188.95	3.0	1.0	61.3

USING THE RATIONAL METHOD, AS PER e
"TXDOT BRIDGE HYDRAULIC MPA (Tc + d)

TABLE IA FLOWRATE DETERMINATION SUMMERLIN PHASES 1-3										
COMPUTATION POINT	TOTAL DRAINAGE AREA CONTRIBUTING TO POINT (acres)	C	TIME (SEE TABLE 1) (minutes)	RETURN FREQUENCY (years)	INTENSITY (in./hr.)	FLOWRATE (c.f.s.)	PIPE SIZE (inches)	MIN. SLOPE (FT./FT.)	DESIGN PIPE SLOPE	INLET OPENING IN FEET
D.A.#43	2.824	0.410	26.7	25	5.112	5.92				
D.A.#43-D.A.#44	2.824	0.410	53.9	25	3.385	3.92	24.00	0.030%	0.174%	5.4
D.A.#44	0.178	0.410	11.3	25	7.548	0.55				
D.A.#44-S.M.#10	7.313	0.410	54.7	25	3.352	10.05	30.00	0.060%	0.129%	0.5
S.M.#10		0.410	16.2	25	6.533	0.00				
S.M.#10-D.A.#46	11.940	0.410	54.9	25	3.346	16.38	42.00	0.027%	0.082%	0.0
D.A.#45	1.713	0.410	18.6	25	6.131	4.31				
D.A.#45-D.A.#46	1.713	0.410	55.1	25	3.338	2.34	24.00	0.011%	0.174%	4.0
D.A.#46	1.805	0.410	16.2	25	6.533	4.83				
D.A.#46-D.A.#48	15.458	0.410	58.4	25	3.215	20.37	42.00	0.041%	0.082%	4.4
D.A.#47	1.440	0.410	15.1	25	6.730	3.97				
D.A.#47-D.A.#48	1.440	0.410	58.6	25	3.207	1.89	24.00	0.007%	0.174%	3.6
D.A.#48	2.535	0.410	26.8	25	5.101	5.30				
D.A.#48-OUTFALL	19.433	0.410	60.0	25	3.159	25.17	48.00	0.031%	0.069%	4.9
D.A.#49	1.916	0.410	19.6	25	5.977	4.70				
D.A.#49-D.A.#50	1.916	0.410	60.2	25	3.152	2.48	24.00	0.012%	0.174%	4.3
D.A.#50	1.524	0.410	14.5	25	6.849	4.28				
D.A.#50-S.M.#12	3.440	0.410	61.3	25	3.116	4.40	24.00	0.038%	0.174%	3.9

$$T_c = \frac{L}{(V \times 60)}$$

TABLE I
TIME OF CONCENTRATION DETERMINATION
SUMMERLIN PHASES 1-3

[illegible]

[illegible]

Weighted "c" value				
Type of Drainage Area	"c" value:	Square Footage	Acreage	partial "c"
Residential				
Single Family (Lots less than 1/4 acre)	0.35	3034805.293	69.670	24.384
Single Family (Lots 1/4 to 1/2 acre)	0.3	0.000	0.000	0.000
Single Family (Lots greater than 1/2 acre)	0.25	0.000	0.000	0.000
Multi-Family (Less than 20 DU / AC)	0.5	0.000	0.000	0.000
Multi-Family (Greater than 20 DU / AC)	0.55	0.000	0.000	0.000
Business Districts:	0.75	0.000	0.000	0.000
Industrial				
Light areas	0.75	0.000	0.000	0.000
Heavy areas	0.75	0.000	0.000	0.000
Railroad yard areas	0.2	0.000	0.000	0.000
Roof/Building areas	0.75	0.000	0.000	0.000
Parks, cemeteries	0.1	0.000	0.000	0.000
Unimproved Areas				
Bare Surface	0.3	1038911.273	23.850	7.155
Grassland	0.25	0.000	0.000	0.000
Cultivated	0.2	0.000	0.000	0.000
Woodlands	0.15	0.000	0.000	0.000
Streets				
Asphalt	0.9	600516.825	13.786	12.407
Concrete	0.9	0.000	0.000	0.000
Drives and walks	0.9	0.000	0.000	0.000
Total:		4674233.391	107.306	43.947
Weighted "c":			0.410	

$$C_W = (C_1A_1 + C_2A_2 + C_3A_3 + \dots + C_nA_n) / A_{\text{total}}$$

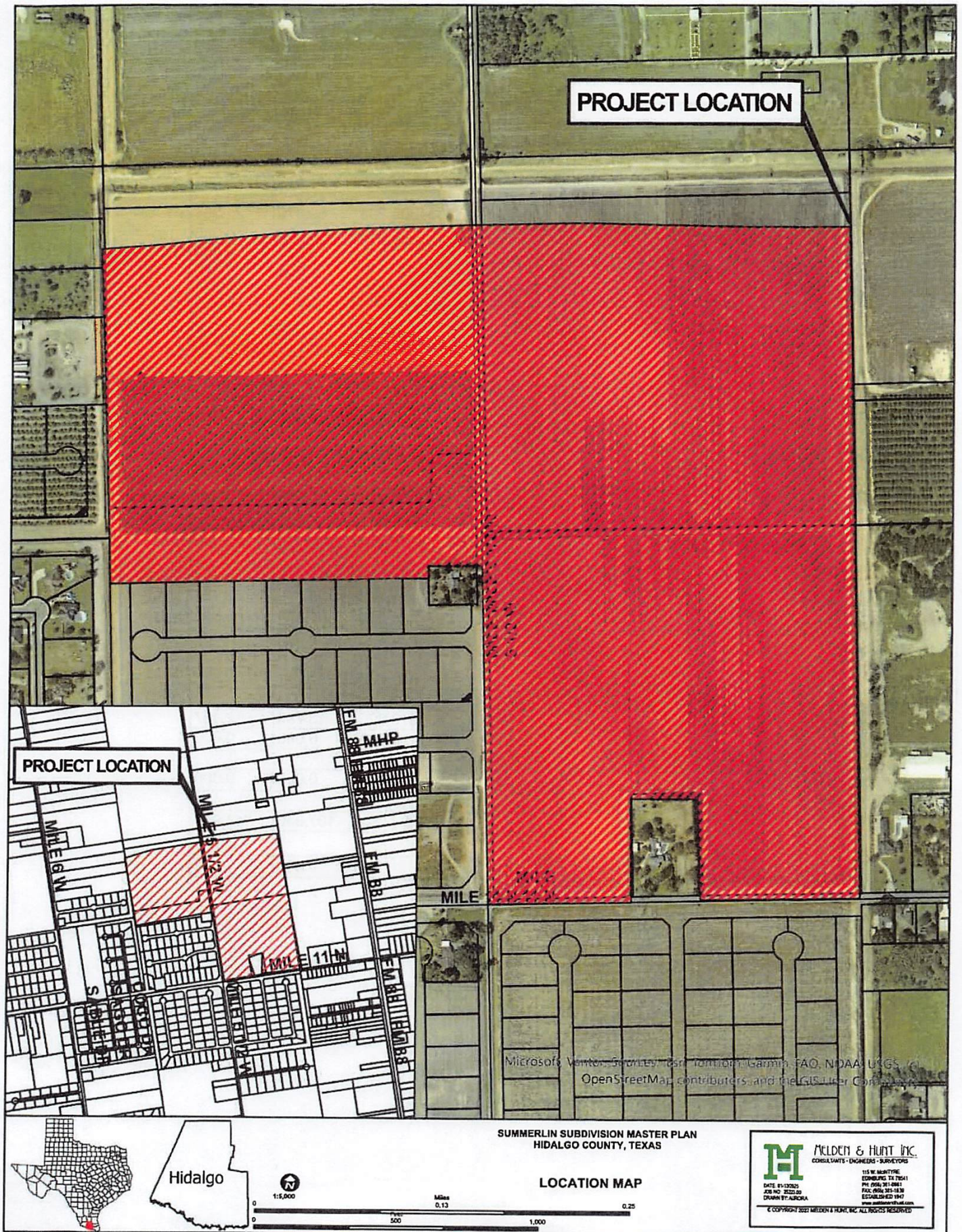
C_W = Weighted Runoff Coefficient (Composite Coefficient)

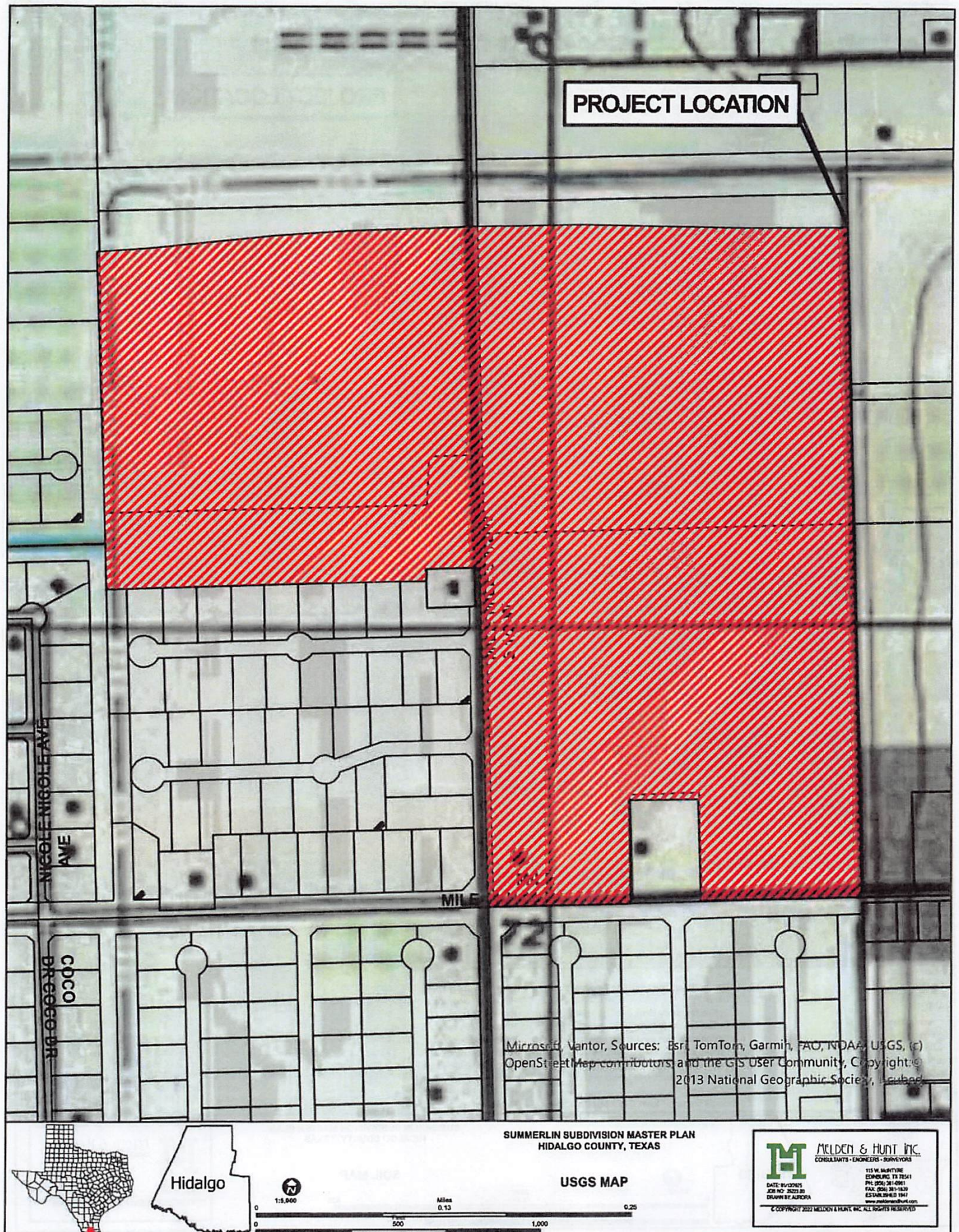
C_n = Runoff Coefficient n-th term

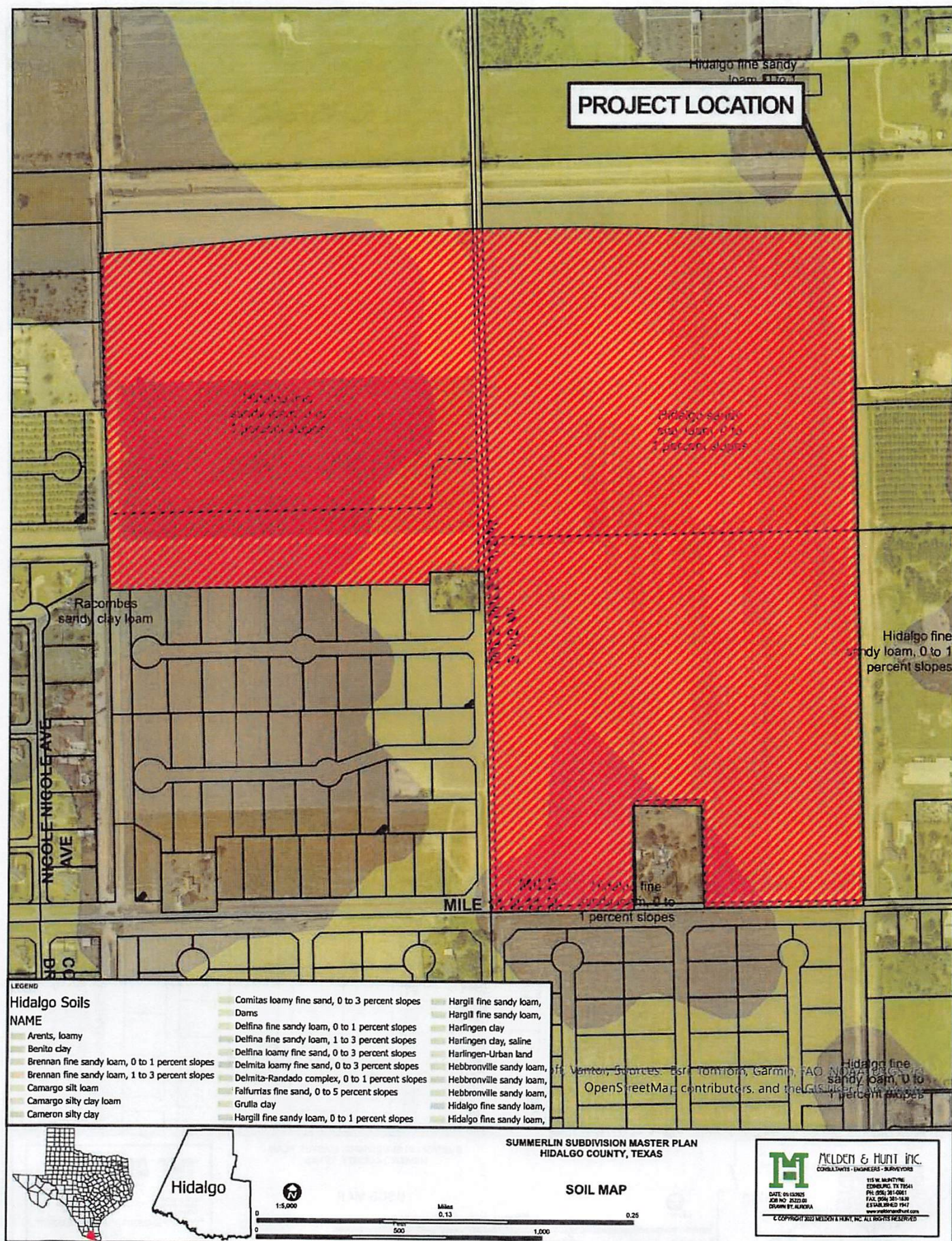
A_n = Area of n-th term

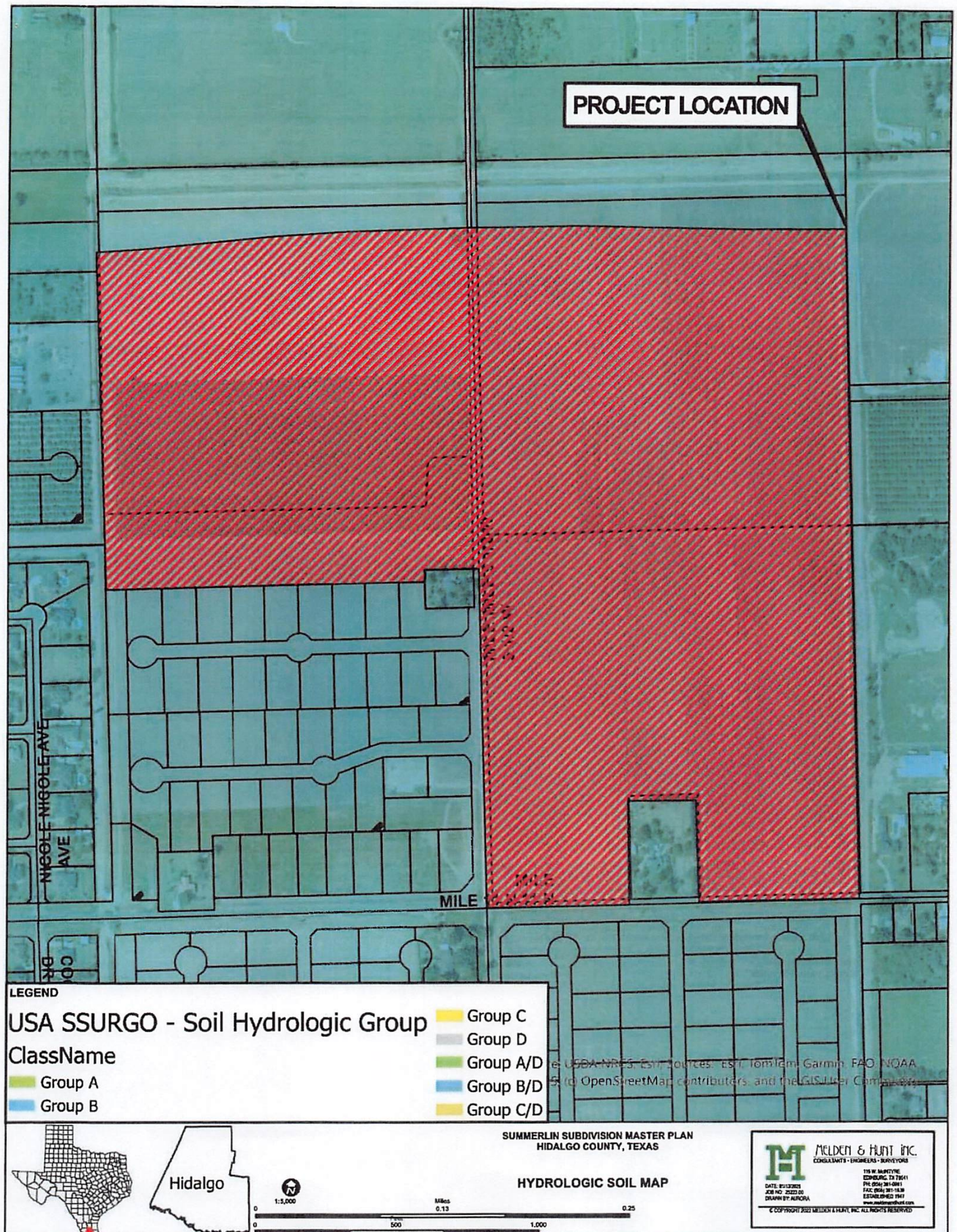
A_{total} = Total Area (acres)

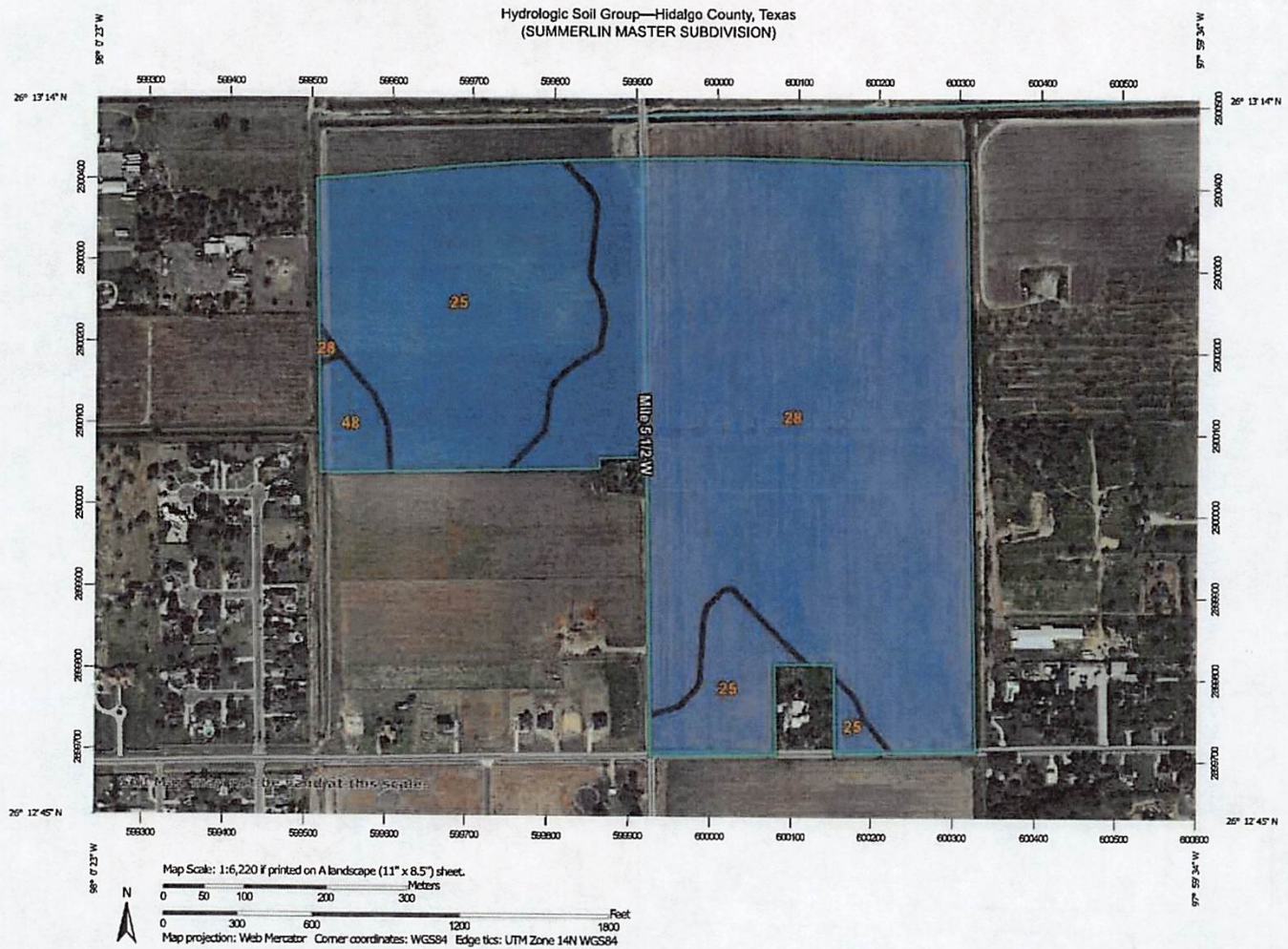
A_{total} = Total Area (acres)









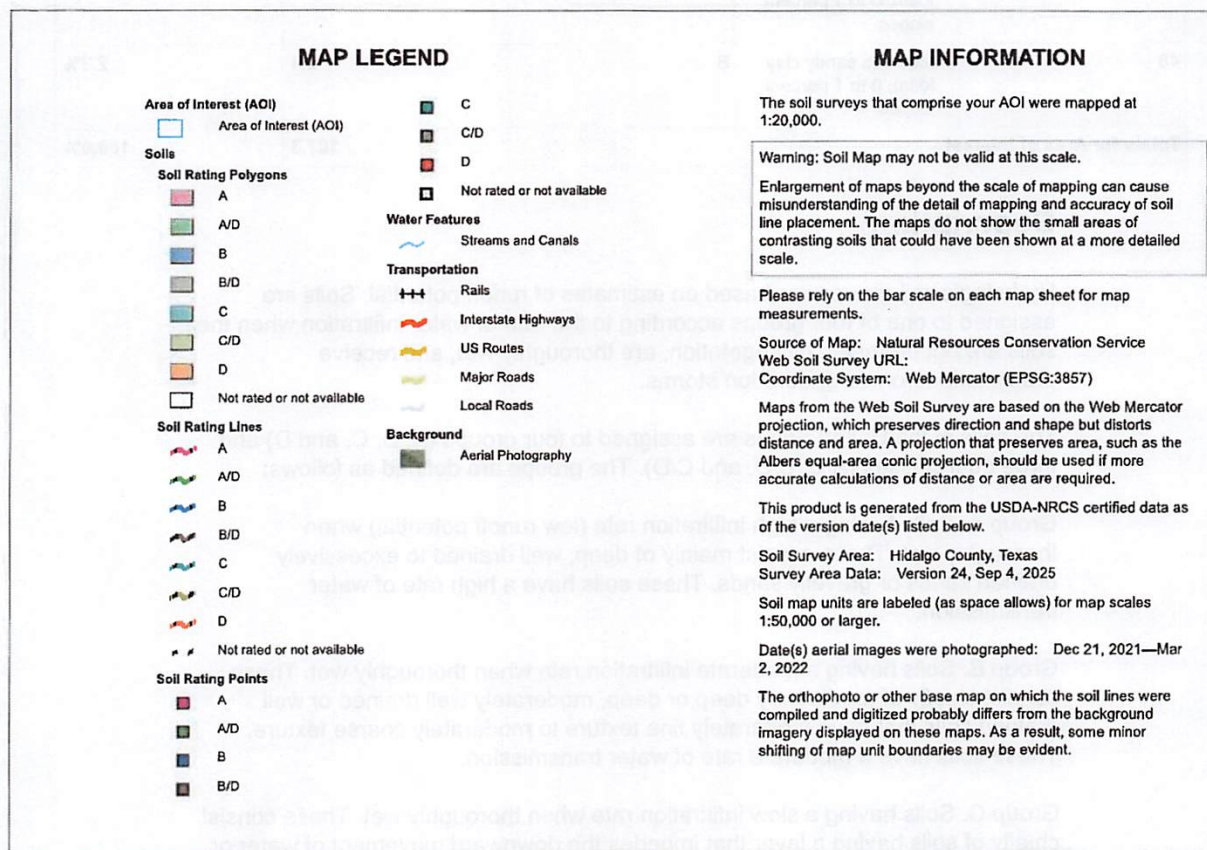


Natural Resources
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Web Soil Survey
National Cooperative Soil Survey

1/13/2026
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Hydrologic Soil Group—Hidalgo County, Texas
(SUMMERLIN MASTER SUBDIVISION)



Hydrologic Soil Group—Hidalgo County, Texas

SUMMERLIN MASTER
SUBDIVISION

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
25	Hidalgo fine sandy loam, 0 to 1 percent slopes	B	32.8	30.6%
28	Hidalgo sandy clay loam, 0 to 1 percent slopes	B	72.1	67.2%
48	Racombes sandy clay loam, 0 to 1 percent slopes	B	2.4	2.3%
Totals for Area of Interest			107.3	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

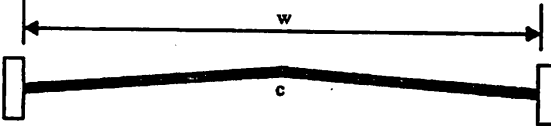
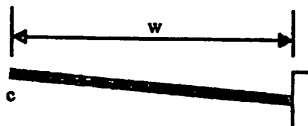
Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Street Velocities and Capacities Flowing Curb Full
Manning's n = 0.018

										
	Local Street		Local Street		Collector Street		Secondary Street (half-section)		Primary Street (half-section)	
	w = 30'		w = 40'		w = 44'		w = 24'			
Slope %	c = 4" wp = 31.16 A = 12.45 r = 0.40		c = 4" wp = 41.17 A = 16.67 r = 0.405		c = 5" wp = 45.17 A = 16.50 r = 0.365		c = 6" wp = 24.66 A = 7.92 r = 0.32		c = 9" wp = 28.52 A = 8.12 r = 0.28	
	V ft/sec	Q cfs	V ft/sec	Q cfs	V ft/sec	Q cfs	V ft/sec	Q cfs	V ft/sec	Q cfs
0.10	1.42	17.68	1.43	23.81	1.33	22.01	1.22	9.66	1.12	9.09
0.15	1.74	21.66	1.74	29.17	1.63	26.96	1.50	11.88	1.37	11.12
0.20	2.00	24.90	2.02	33.68	1.89	31.13	1.73	13.70	1.58	12.83
0.25	2.24	27.89	2.26	37.66	2.11	34.80	1.93	15.29	1.77	14.37
0.30	2.46	30.63	2.47	41.25	2.31	38.13	2.12	16.79	1.94	15.75
0.35	2.65	32.99	2.67	44.56	2.50	41.18	2.29	18.14	2.09	16.97
0.40	2.84	35.36	2.86	47.64	2.67	44.02	2.44	19.32	2.24	18.19
0.45	3.01	37.47	3.03	50.53	2.83	46.69	2.59	20.51	2.37	19.24
0.50	3.17	39.47	3.19	53.26	2.98	49.22	2.73	21.62	2.50	20.30
0.55	3.32	41.33	3.35	55.86	3.13	51.62	2.87	22.73	2.62	21.27
0.60	3.47	43.20	3.50	58.34	3.27	53.92	2.99	23.68	2.74	22.25
0.65	3.61	44.94	3.64	60.72	3.40	56.12	3.12	24.71	2.86	23.14
0.70	3.75	46.62	3.78	63.02	3.53	58.24	3.23	25.58	2.96	24.04
0.75	3.88	48.31	3.91	66.23	3.65	60.28	3.35	26.53	3.06	24.85
0.80	4.01	49.92	4.04	67.37	3.77	62.26	3.46	27.40	3.16	25.66
0.85	4.13	51.42	4.17	69.44	3.89	64.17	3.56	28.20	3.26	26.47
0.90	4.25	52.91	4.29	71.45	4.00	66.03	3.67	29.07	3.35	27.20
0.95	4.37	54.41	4.40	73.41	4.11	67.84	3.77	29.86	3.44	27.93
1.00	4.48	55.78	4.52	75.31	4.22	69.61	3.86	30.57	3.53	28.66
1.50	5.49	68.35	5.53	92.25	5.17	85.25	4.73	37.46	4.33	35.16
2.00	6.34	78.93	6.39	106.52	5.97	98.44	5.46	43.24	5.00	40.60
2.50	7.09	88.27	7.14	119.09	6.67	110.06	6.11	48.39	5.59	45.39
3.00	7.76	96.61	7.83	130.46	7.31	120.56	6.69	52.98	6.12	49.59
3.50	8.39	104.46	8.45	140.91	7.89	130.22	7.23	57.26	6.61	53.67
4.00	8.97	111.68	9.04	150.64	8.44	139.21	7.73	61.22	7.07	57.41
4.50	9.51	118.40	9.58	159.78	8.95	147.66	8.20	64.94	7.50	60.90
5.00	10.02	124.75	10.10	168.42	9.43	155.65	8.64	68.43	7.90	64.15
5.50	10.51	130.85	10.60	176.64	9.89	163.24	9.06	71.76	8.29	67.31
6.00	10.98	136.70	11.07	184.49	10.33	170.50	9.46	74.92	8.65	70.24
6.50	11.43	143.30	11.52	192.03	10.76	177.46	9.85	78.01	9.01	73.16
7.00	11.86	147.66	11.95	199.28	11.16	184.16	10.22	80.94	9.35	75.92
7.50	12.28	152.89	12.37	206.27	11.55	190.63	10.58	83.79	9.68	78.60
8.00	12.68	157.85	12.78	213.04	11.93	196.88	10.93	86.57	9.99	81.12
8.50	13.07	162.72	13.17	219.59	12.30	202.94	11.26	89.18	10.30	83.64
9.00	13.45	167.45	13.55	225.96	12.66	208.82	11.59	91.79	10.60	86.07
9.50	13.82	172.06	13.93	232.15	13.00	214.54	11.91	94.33	10.89	88.43
10.00	14.18	176.54	14.29	238.18	13.34	220.12	12.22	96.78	11.17	90.70

Appendix 1.0 **HIDALGO COUNTY RAINFALL INTENSITY TABLES**

based on "NOAA Atlas 14 Precipitation-Frequency Atlas of the United States, Vol. 11 Version 2.0:Texas"

$$\text{formula } I = b/(t_c + d)^e$$

TIME	2 yr.	5 yr.	10 yr.	25 yr.	50 yr.	100 yr.
1	7.109	9.484	11.251	13.548	15.264	16.907
2	6.690	8.934	10.609	12.798	14.442	16.030
3	6.322	8.449	10.043	12.136	13.713	15.250
4	5.996	8.019	9.541	11.546	13.062	14.551
5	5.704	7.635	9.091	11.017	12.477	13.921
6	5.442	7.289	8.686	10.539	11.948	13.349
7	5.205	6.976	8.319	10.106	11.467	12.828
8	4.989	6.692	7.985	9.710	11.027	12.351
9	4.792	6.432	7.680	9.348	10.624	11.913
10	4.611	6.193	7.399	9.015	10.253	11.508
11	4.445	5.973	7.141	8.707	9.910	11.133
12	4.291	5.770	6.901	8.422	9.591	10.785
13	4.149	5.581	6.679	8.157	9.295	10.460
14	4.016	5.406	6.472	7.910	9.019	10.157
15	3.892	5.242	6.279	7.679	8.761	9.873
16	3.777	5.089	6.099	7.463	8.518	9.606
17	3.669	4.946	5.929	7.260	8.291	9.355
18	3.567	4.811	5.770	7.069	8.076	9.119
19	3.471	4.684	5.620	6.889	7.874	8.896
20	3.381	4.564	5.478	6.719	7.683	8.684
21	3.296	4.451	5.344	6.558	7.502	8.484
22	3.215	4.344	5.217	6.406	7.330	8.294
23	3.138	4.243	5.097	6.261	7.167	8.113
24	3.066	4.146	4.983	6.124	7.012	7.941
25	2.997	4.054	4.874	5.993	6.864	7.778
26	2.931	3.967	4.771	5.868	6.724	7.621
27	2.868	3.884	4.672	5.749	6.589	7.472
28	2.809	3.804	4.578	5.635	6.461	7.329
29	2.752	3.728	4.487	5.526	6.338	7.192
30	2.697	3.656	4.401	5.422	6.220	7.060
31	2.645	3.586	4.318	5.322	6.107	6.934
32	2.594	3.519	4.239	5.226	5.998	6.813
33	2.546	3.455	4.163	5.134	5.894	6.697
34	2.500	3.394	4.090	5.045	5.794	6.585
35	2.456	3.335	4.019	4.960	5.697	6.477

TIME	2 yr.	5 yr.	10 yr.	25 yr.	50 yr.	100 yr.
36	2.413	3.278	3.952	4.878	5.604	6.374
37	2.372	3.223	3.887	4.799	5.515	6.274
38	2.332	3.170	3.824	4.722	5.428	6.177
39	2.294	3.119	3.763	4.649	5.345	6.084
40	2.257	3.070	3.705	4.578	5.264	5.993
41	2.222	3.023	3.648	4.509	5.186	5.906
42	2.188	2.977	3.593	4.443	5.111	5.822
43	2.154	2.933	3.541	4.379	5.038	5.740
44	2.122	2.890	3.489	4.316	4.968	5.661
45	2.091	2.848	3.440	4.256	4.899	5.584
46	2.061	2.808	3.392	4.198	4.833	5.510
47	2.032	2.769	3.345	4.141	4.769	5.438
48	2.004	2.731	3.300	4.086	4.706	5.368
49	1.976	2.694	3.257	4.033	4.646	5.300
50	1.950	2.659	3.214	3.981	4.587	5.233
51	1.924	2.624	3.173	3.931	4.529	5.169
52	1.899	2.590	3.133	3.882	4.474	5.107
53	1.874	2.558	3.094	3.835	4.420	5.046
54	1.850	2.526	3.056	3.788	4.367	4.987
55	1.827	2.495	3.019	3.743	4.316	4.929
56	1.805	2.465	2.983	3.700	4.266	4.873
57	1.783	2.436	2.948	3.657	4.217	4.818
58	1.762	2.407	2.914	3.615	4.170	4.765
59	1.741	2.379	2.880	3.575	4.124	4.713
60	1.721	2.352	2.848	3.535	4.079	4.662
65	1.627	2.227	2.698	3.351	3.869	4.425
70	1.544	2.115	2.564	3.187	3.682	4.215
75	1.469	2.015	2.444	3.041	3.514	4.025
80	1.402	1.924	2.336	2.908	3.363	3.854
85	1.342	1.843	2.238	2.788	3.226	3.699
90	1.286	1.768	2.149	2.679	3.100	3.557
95	1.236	1.700	2.067	2.578	2.986	3.427
100	1.190	1.638	1.992	2.486	2.880	3.307
105	1.147	1.580	1.923	2.401	2.782	3.196
110	1.108	1.527	1.859	2.322	2.692	3.093

where:

	2yr	5yr	10yr
e=	0.8385	0.8215	0.8123
b=	62.336	79.151	92.23
d=	12.322	12.233	12.329

	25yr	50yr	100yr
	0.802	0.7952	0.789
	110	123.47	137.99
	12.6	12.858	13.318

Prepared By Melden & Hunt, Inc.

Appendix 1.0 (cont.) **HIDALGO COUNTY RAINFALL INTENSITY TABLES (cont.)**

based on "NOAA Atlas 14 Precipitation-Frequency Atlas of the United States, Vol. 11 Version 2.0: Texas"

$$\text{formula } I = b / (t_c + d)^e$$

TIME	2 yr.	5 yr.	10 yr.	25 yr.	50 yr.	100 yr.
115	1.071	1.477	1.799	2.249	2.608	2.998
120	1.037	1.431	1.744	2.180	2.530	2.909
125	1.005	1.388	1.692	2.117	2.456	2.826
130	0.975	1.348	1.643	2.057	2.388	2.748
135	0.948	1.311	1.598	2.001	2.323	2.674
140	0.921	1.275	1.555	1.948	2.263	2.605
145	0.897	1.242	1.515	1.898	2.205	2.540
150	0.874	1.210	1.477	1.851	2.151	2.479
155	0.852	1.180	1.441	1.807	2.100	2.420
160	0.831	1.152	1.407	1.765	2.052	2.365
165	0.811	1.125	1.375	1.725	2.006	2.313
170	0.793	1.100	1.344	1.687	1.962	2.263
175	0.775	1.076	1.315	1.651	1.920	2.215
180	0.758	1.053	1.287	1.616	1.881	2.170
185	0.742	1.031	1.260	1.583	1.843	2.127
190	0.726	1.010	1.235	1.552	1.807	2.085
195	0.712	0.990	1.211	1.522	1.772	2.046
200	0.698	0.970	1.188	1.493	1.739	2.008
205	0.684	0.952	1.165	1.465	1.707	1.971
210	0.671	0.934	1.144	1.439	1.676	1.936
215	0.659	0.918	1.123	1.414	1.647	1.903
220	0.647	0.901	1.104	1.389	1.619	1.871
225	0.635	0.886	1.085	1.366	1.592	1.840
230	0.624	0.871	1.067	1.343	1.566	1.810
235	0.614	0.856	1.049	1.321	1.541	1.781
240	0.604	0.842	1.032	1.300	1.516	1.753
245	0.594	0.829	1.016	1.280	1.493	1.726
250	0.584	0.816	1.000	1.260	1.470	1.700
255	0.575	0.803	0.985	1.241	1.448	1.675
260	0.566	0.791	0.970	1.223	1.427	1.651
265	0.558	0.779	0.956	1.205	1.407	1.628
270	0.549	0.768	0.942	1.188	1.387	1.605
275	0.541	0.757	0.929	1.172	1.368	1.583
280	0.533	0.746	0.916	1.156	1.349	1.562
285	0.526	0.736	0.903	1.140	1.331	1.541

TIME	2 yr.	5 yr.	10 yr.	25 yr.	50 yr.	100 yr.
290	0.519	0.726	0.891	1.125	1.314	1.521
295	0.512	0.716	0.879	1.110	1.297	1.501
300	0.505	0.707	0.868	1.096	1.280	1.483
305	0.498	0.698	0.857	1.082	1.264	1.464
310	0.492	0.689	0.846	1.069	1.249	1.446
315	0.485	0.680	0.836	1.055	1.233	1.429
320	0.479	0.672	0.825	1.043	1.219	1.412
325	0.473	0.663	0.815	1.030	1.204	1.395
330	0.467	0.655	0.806	1.018	1.190	1.379
335	0.462	0.648	0.796	1.006	1.177	1.364
340	0.456	0.640	0.787	0.995	1.163	1.348
345	0.451	0.633	0.778	0.984	1.150	1.334
350	0.446	0.626	0.769	0.973	1.138	1.319
355	0.440	0.619	0.761	0.962	1.125	1.305
360	0.436	0.612	0.753	0.952	1.113	1.291
365	0.431	0.605	0.744	0.942	1.102	1.278
370	0.426	0.599	0.736	0.932	1.090	1.265
375	0.421	0.592	0.729	0.922	1.079	1.252
380	0.417	0.586	0.721	0.913	1.068	1.239
385	0.412	0.580	0.714	0.904	1.057	1.227
390	0.408	0.574	0.707	0.895	1.047	1.215
395	0.404	0.568	0.700	0.886	1.037	1.203
400	0.400	0.562	0.693	0.877	1.027	1.192
405	0.396	0.557	0.686	0.869	1.017	1.180
410	0.392	0.552	0.679	0.860	1.007	1.169
415	0.388	0.546	0.673	0.852	0.998	1.158
420	0.384	0.541	0.667	0.844	0.989	1.148
425	0.381	0.536	0.660	0.837	0.980	1.138
430	0.377	0.531	0.654	0.829	0.971	1.127
435	0.373	0.526	0.648	0.822	0.962	1.118
440	0.370	0.521	0.642	0.814	0.954	1.108
445	0.367	0.517	0.637	0.807	0.946	1.098
450	0.363	0.512	0.631	0.800	0.938	1.089
455	0.360	0.507	0.626	0.793	0.930	1.080
460	0.357	0.503	0.620	0.787	0.922	1.071

where:	2yr	5yr	10yr	25yr	50yr	100yr
e=	0.8385	0.8215	0.8123	0.802	0.7952	0.789
b=	62.336	79.151	92.23	110	123.47	137.99
d=	12.322	12.233	12.329	12.6	12.858	13.318

Prepared By Melden & Hunt, Inc.

Appendix 1.0 (cont.)

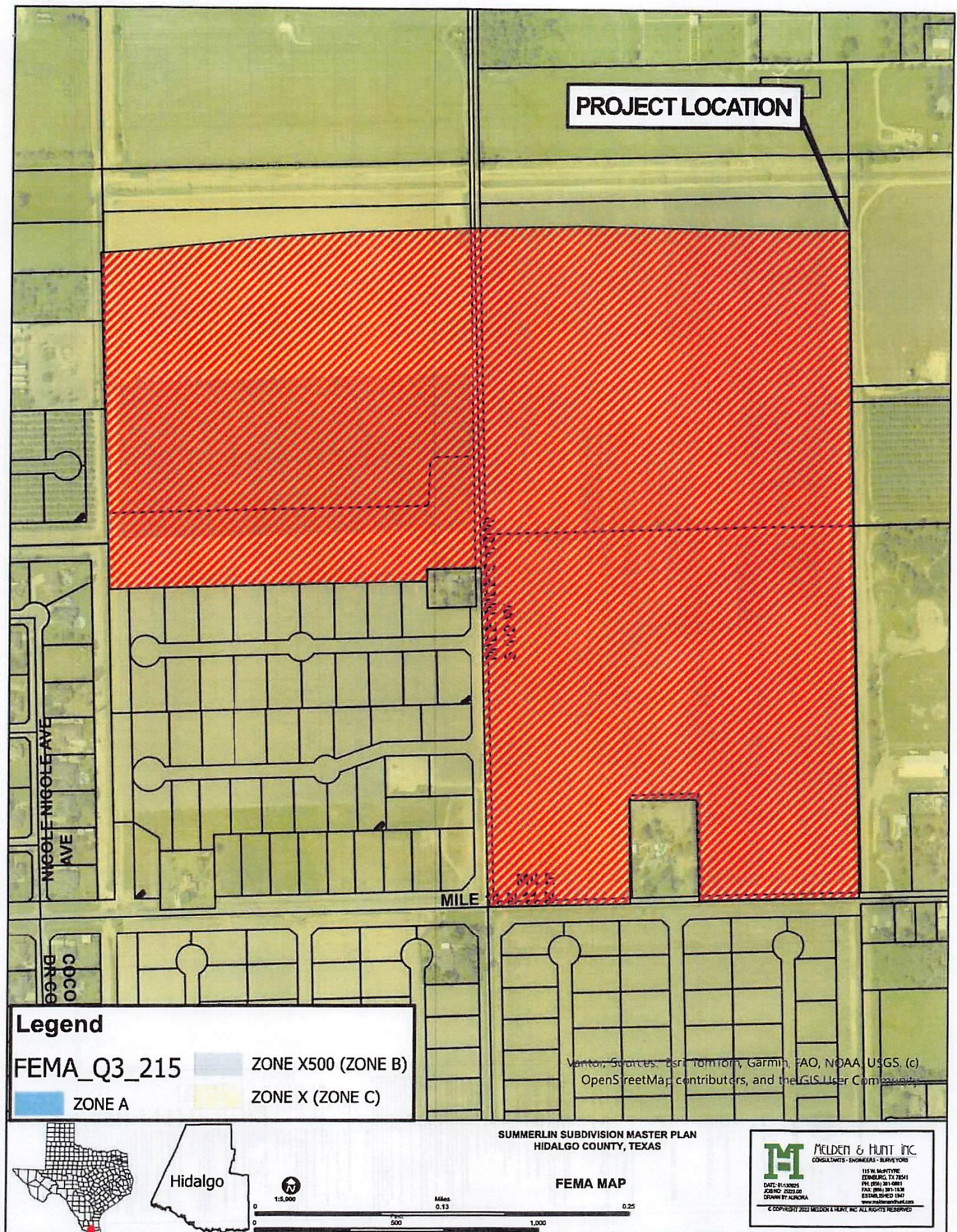
HIDALGO COUNTY RAINFALL INTENSITY TABLES (cont.)

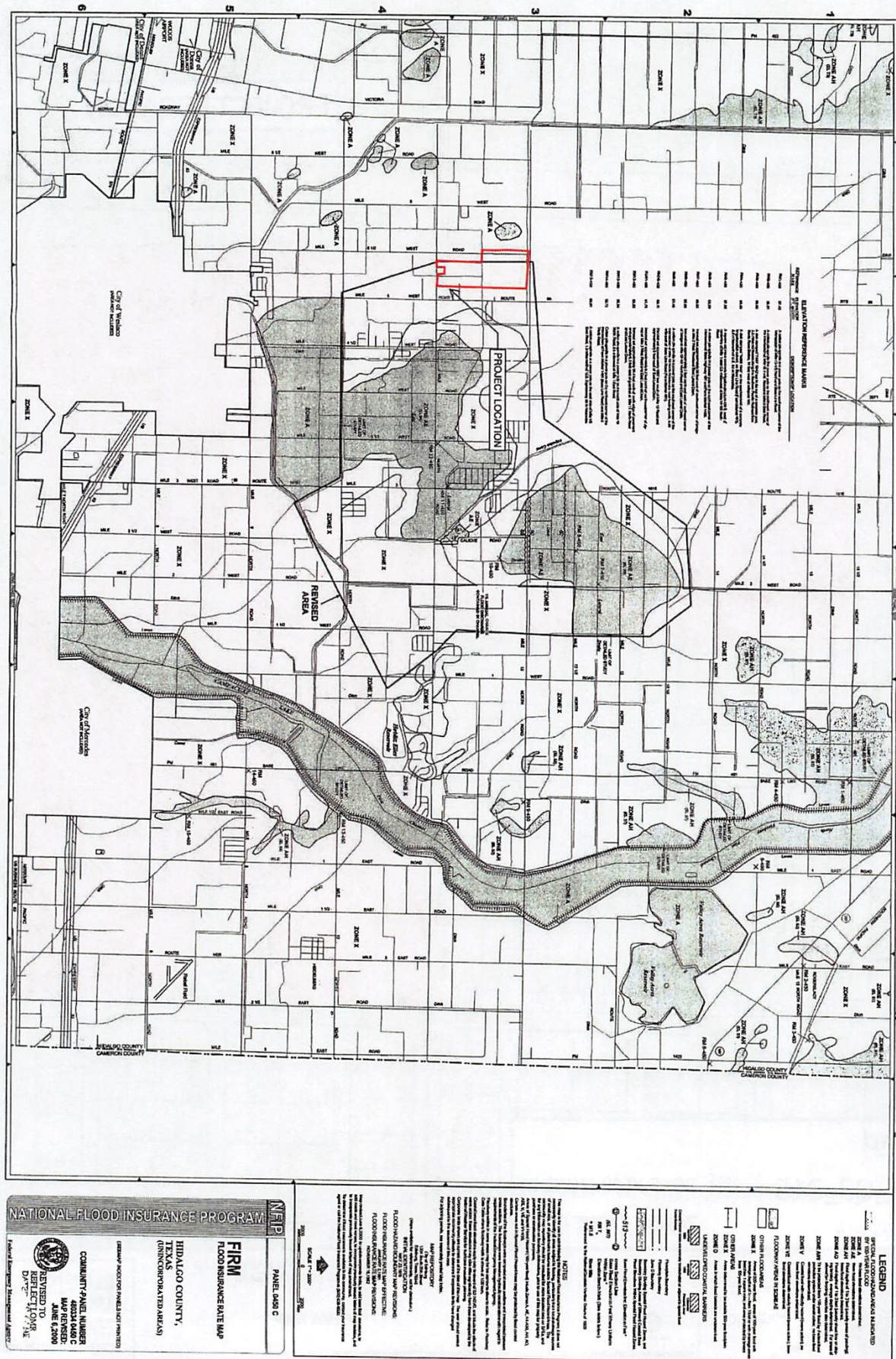
based on "NOAA Atlas 14 Precipitation-Frequency Atlas of the United States, Vol. 11 Version 2.0:Texas"

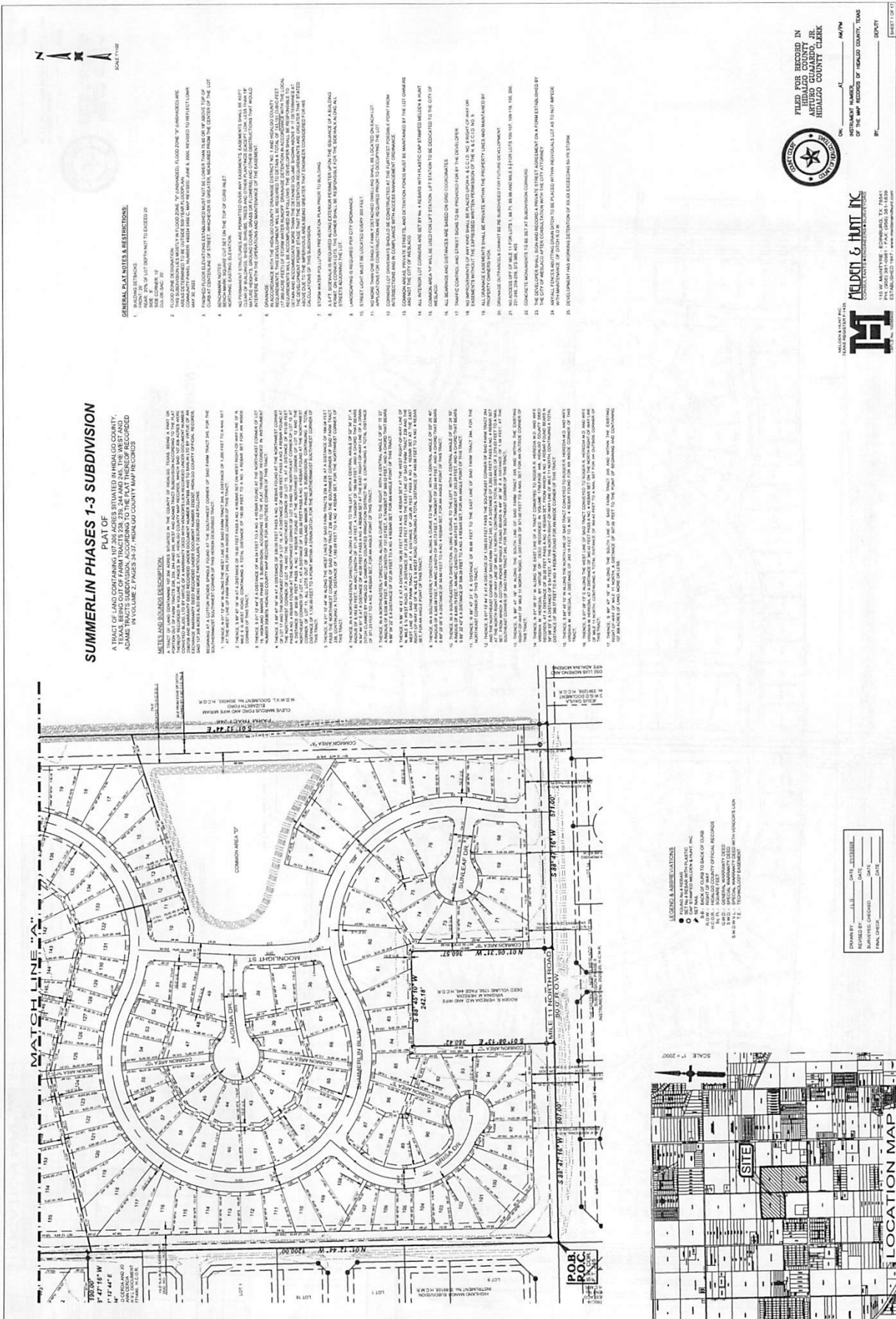
formula $I = b/(t_c + d)^c$

TIME	2 yr.	5 yr.	10 yr.	25 yr.	50 yr.	100 yr.
465	0.354	0.499	0.615	0.780	0.914	1.062
475	0.348	0.490	0.605	0.767	0.899	1.045
485	0.342	0.482	0.595	0.755	0.885	1.028
495	0.336	0.474	0.585	0.743	0.871	1.012
505	0.331	0.467	0.576	0.731	0.857	0.997
515	0.325	0.460	0.567	0.720	0.845	0.982
525	0.320	0.453	0.559	0.709	0.832	0.967
535	0.315	0.446	0.550	0.699	0.820	0.953
545	0.311	0.439	0.542	0.689	0.808	0.940
555	0.306	0.433	0.534	0.679	0.797	0.927
565	0.301	0.427	0.527	0.670	0.786	0.914
575	0.297	0.421	0.520	0.661	0.775	0.902
585	0.293	0.415	0.513	0.652	0.765	0.890

where:	<u>2yr</u>	<u>5yr</u>	<u>10yr</u>	<u>25yr</u>	<u>50yr</u>	<u>100yr</u>
c=	0.8385	0.8215	0.8123	0.802	0.7952	0.789
b=	62.336	79.151	92.23	110	123.47	137.99
d=	12.322	12.233	12.329	12.6	12.858	13.318









A TRACT OF LAND CONTAINING 107.308 ACRES SITUATED IN HEDALGO COUNTY, TEXAS, BEING OUT OF FARM TRACTS 238, 239, 244 AND 245, THE WEST AND ADAMS TRACTS SUBDIVISION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 2, PAGES 34-37, HEDALGO COUNTY MAP RECORDS

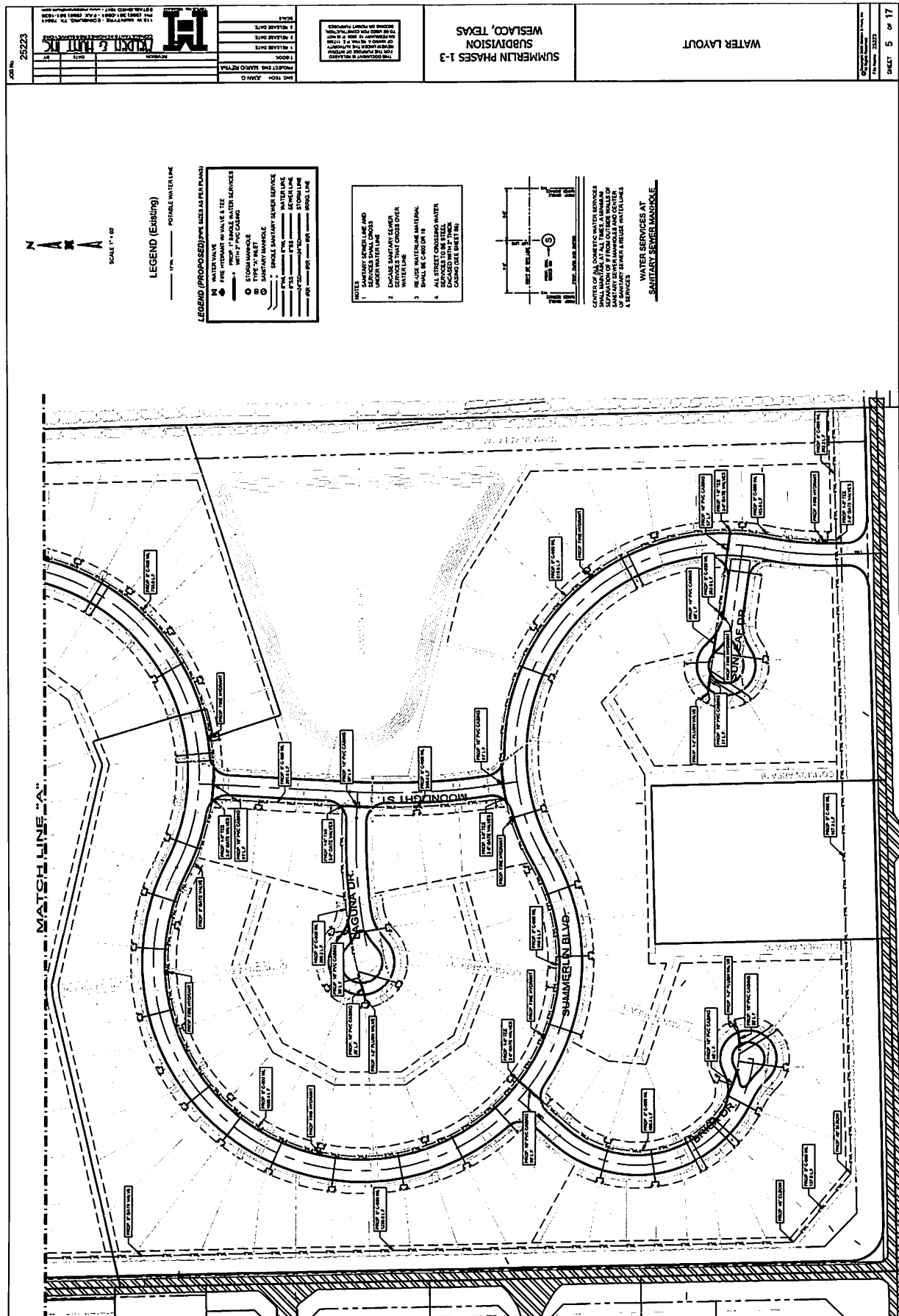
FILED FOR RECORD IN
HIDALGO COUNTY
ARTURO GUJARDO, JR.
HIDALGO COUNTY CLERK

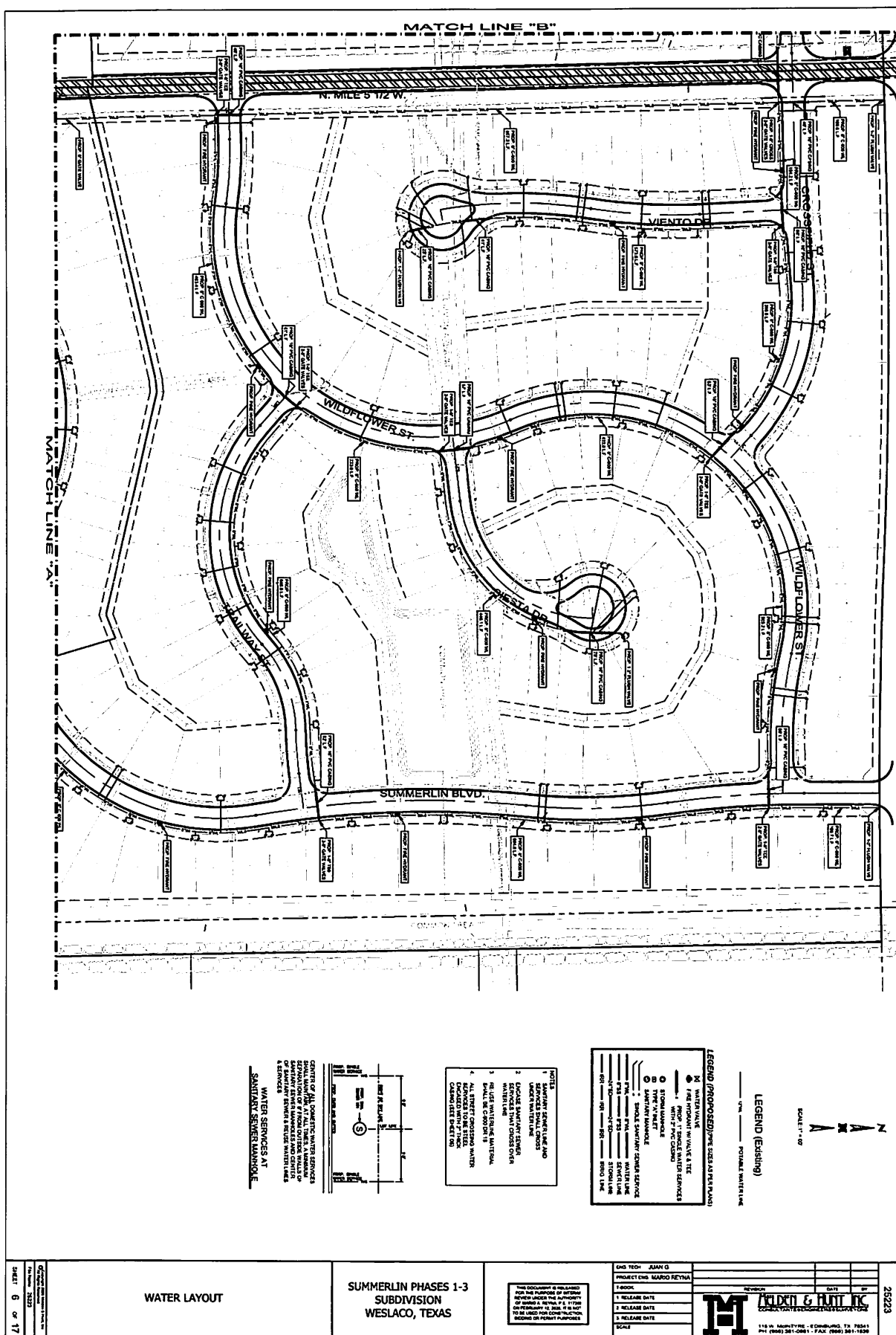
On _____ AT _____ AM/PM
NOTARY PUBLIC
OF THE MAP RECORDS OF HIDALGO COUNTY, TEXAS

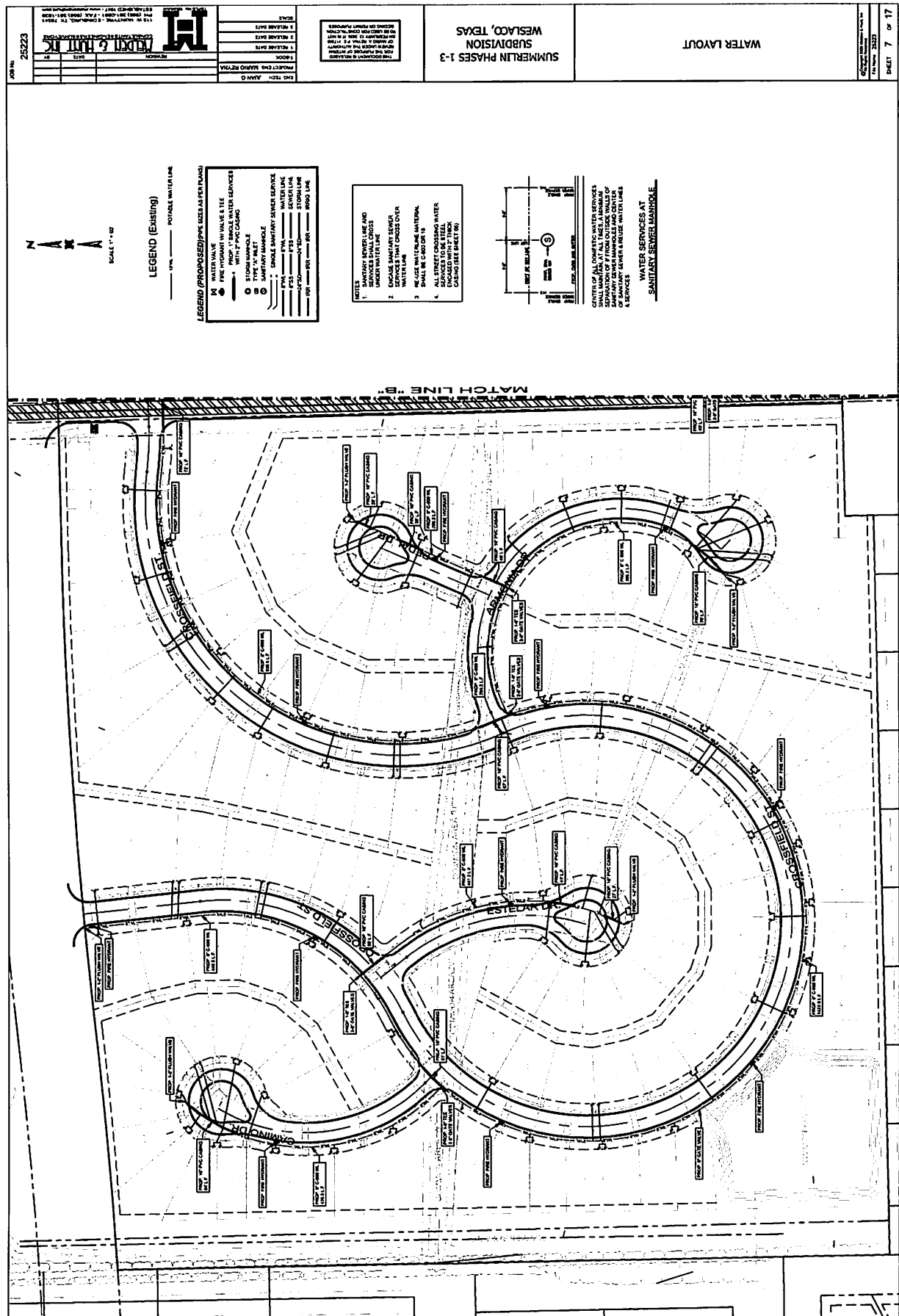
OF _____ COUNTY

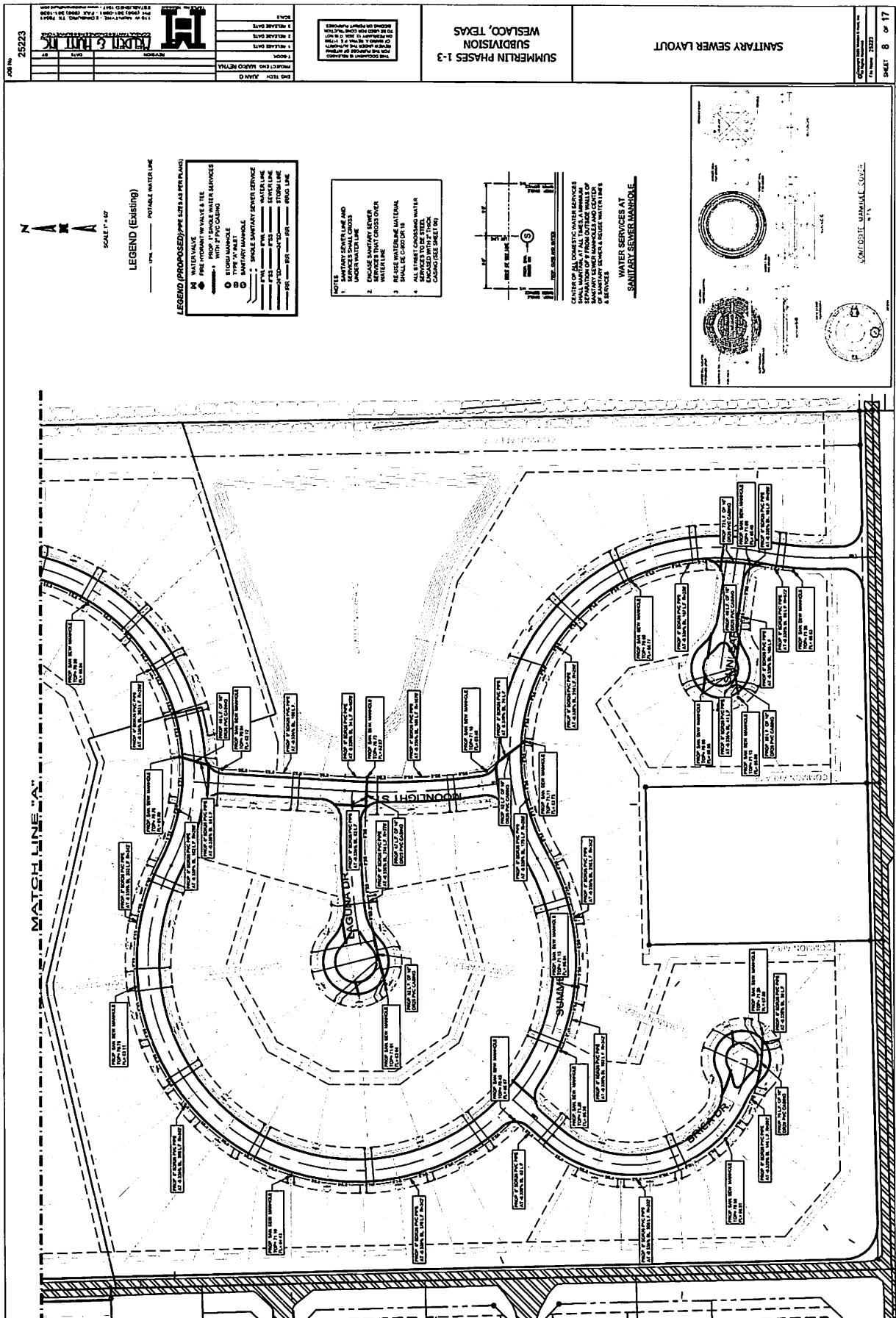


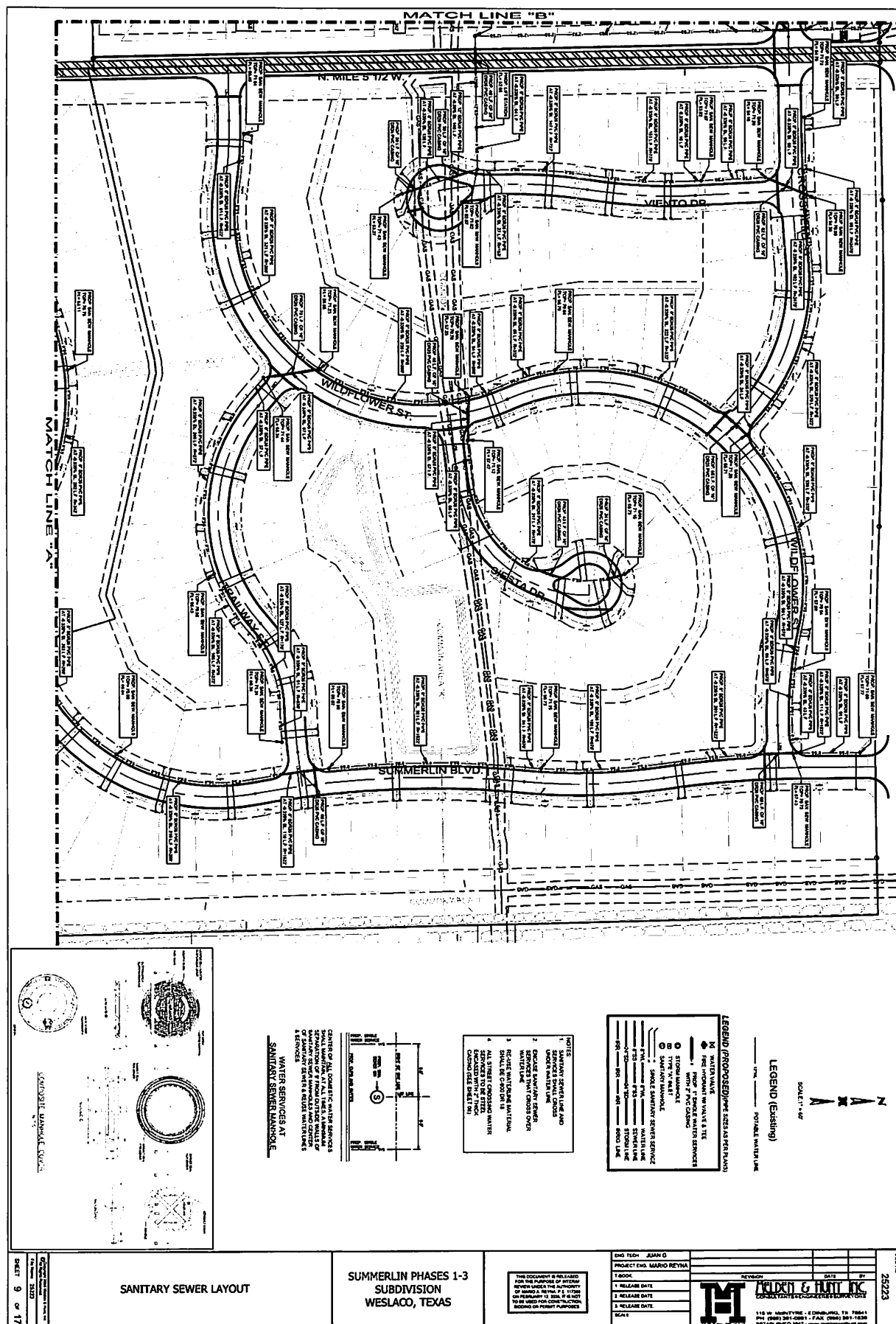
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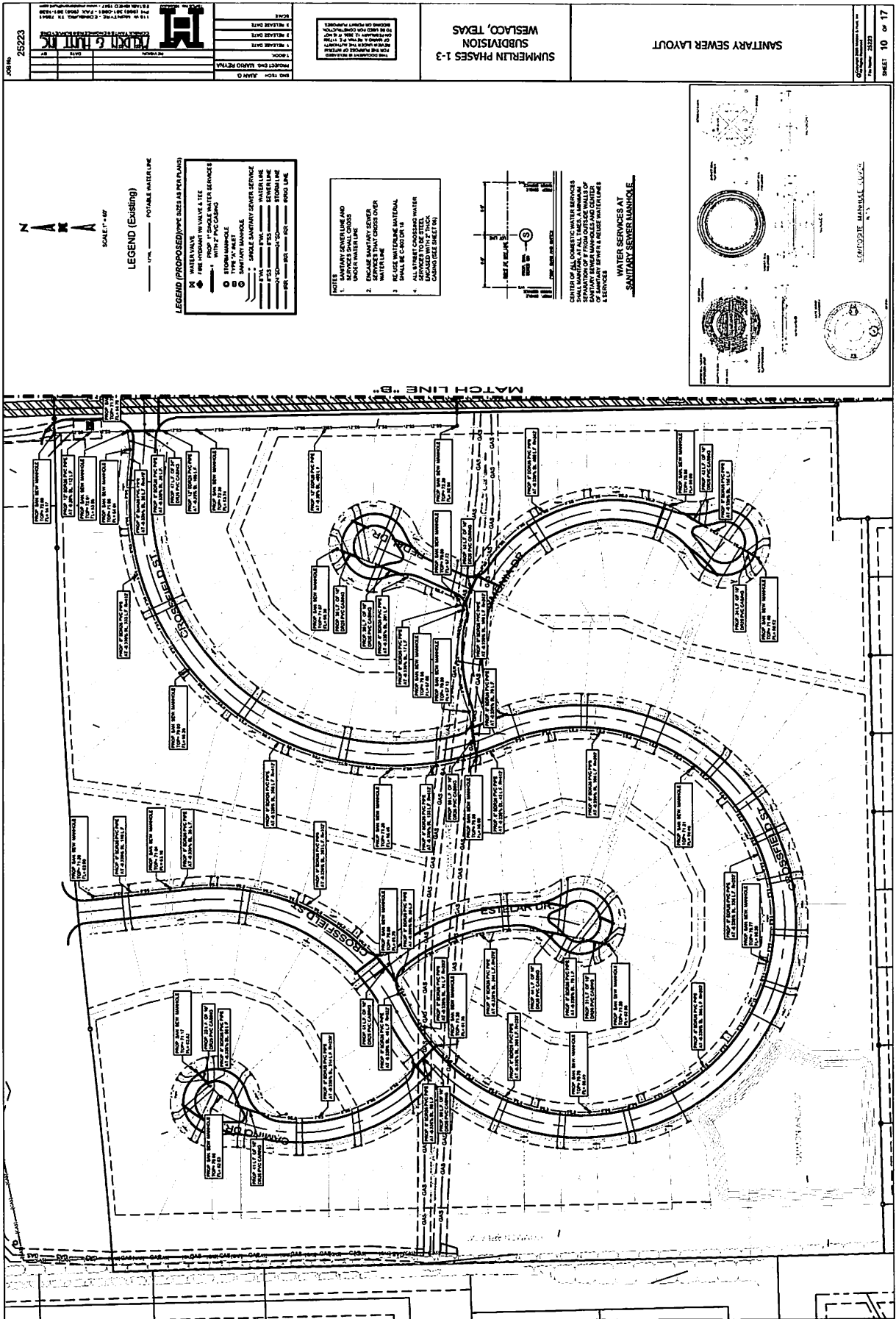


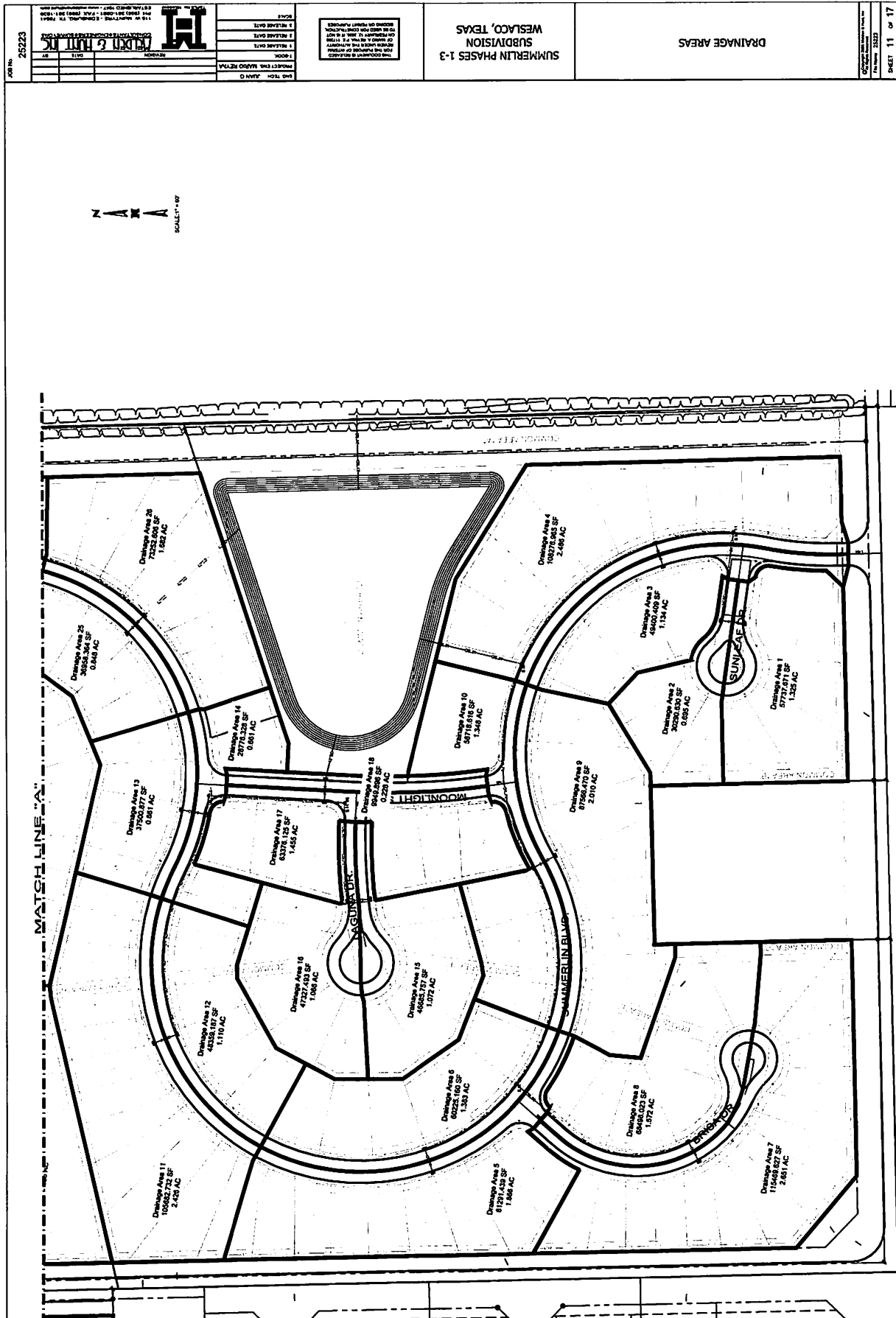


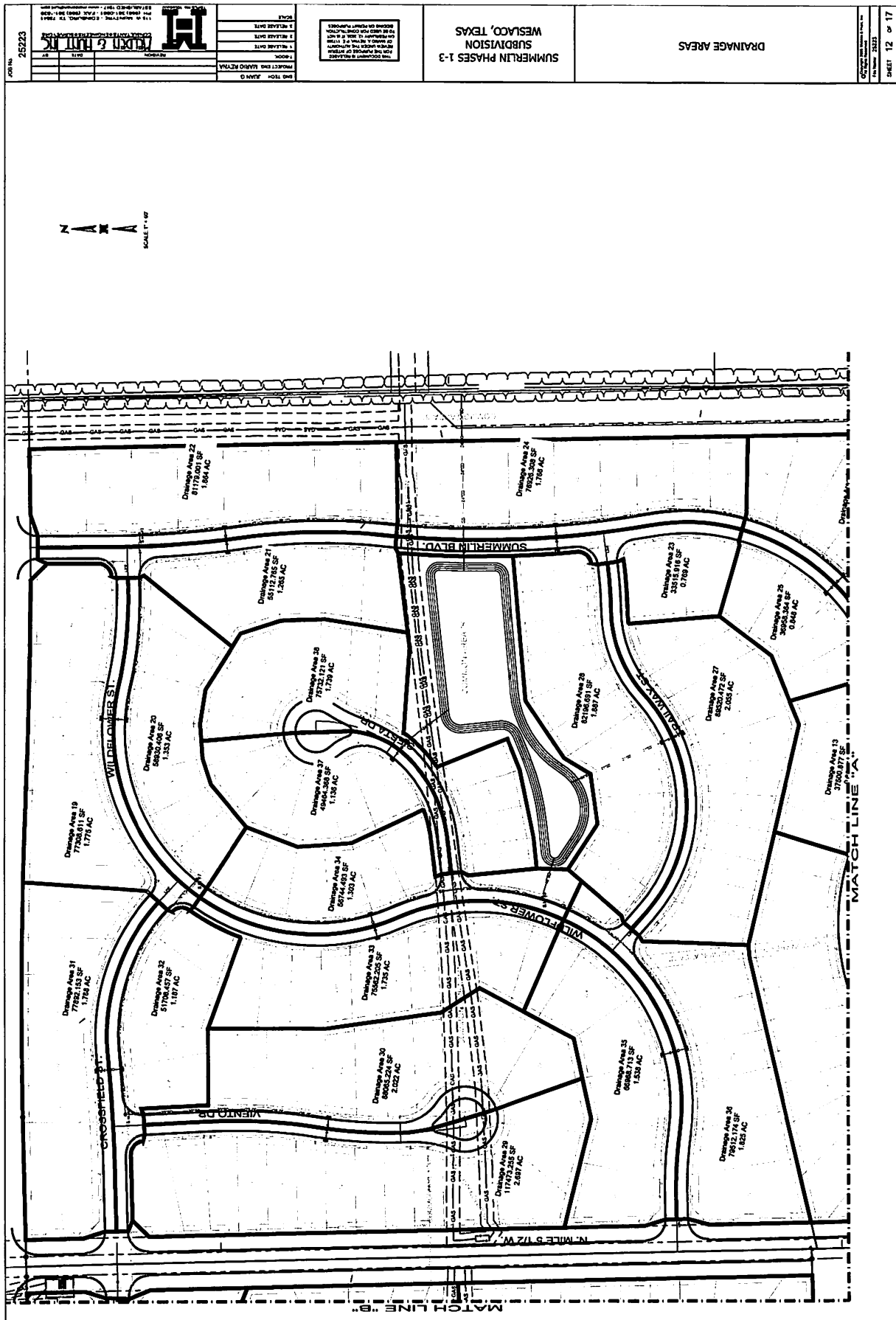


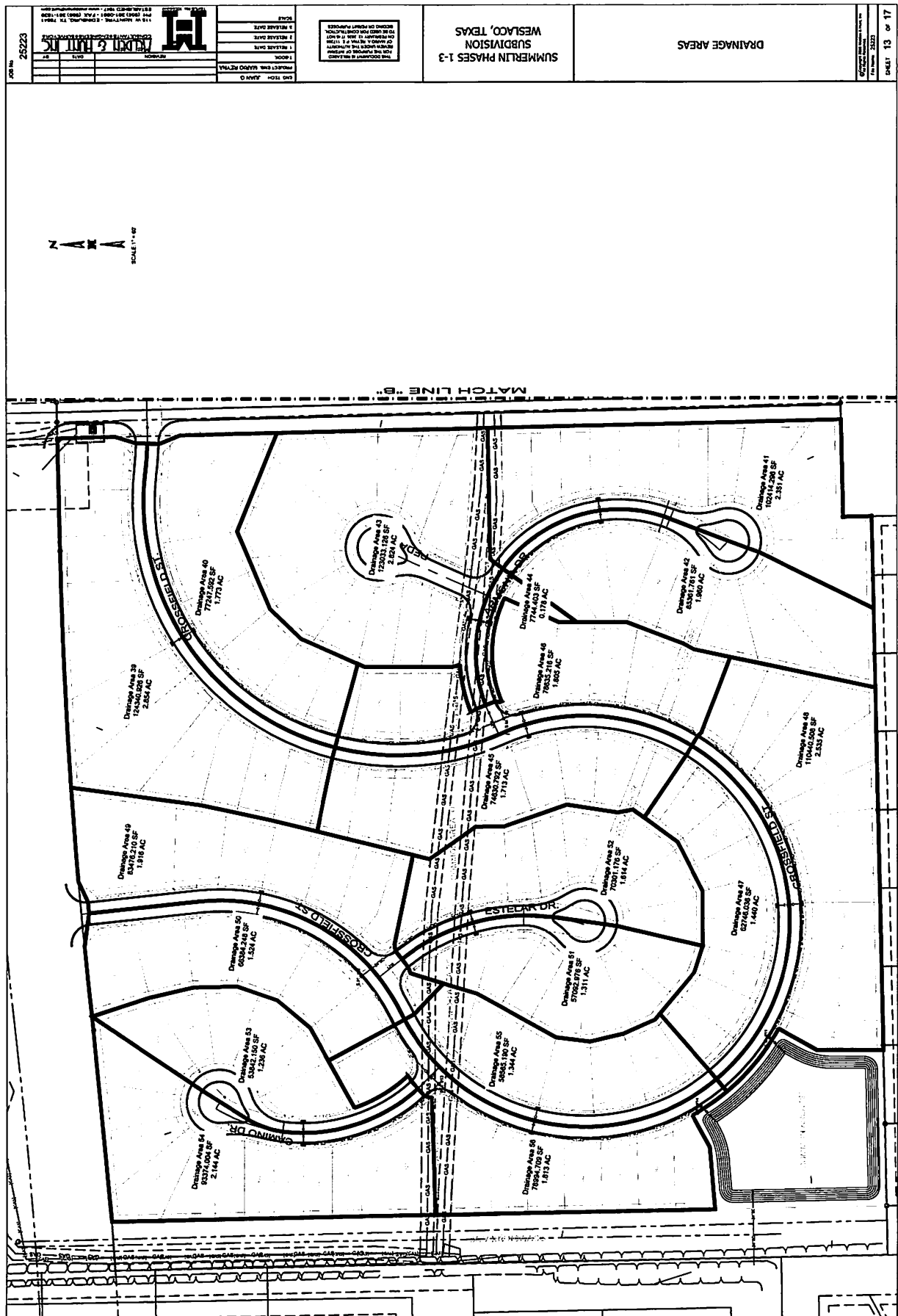


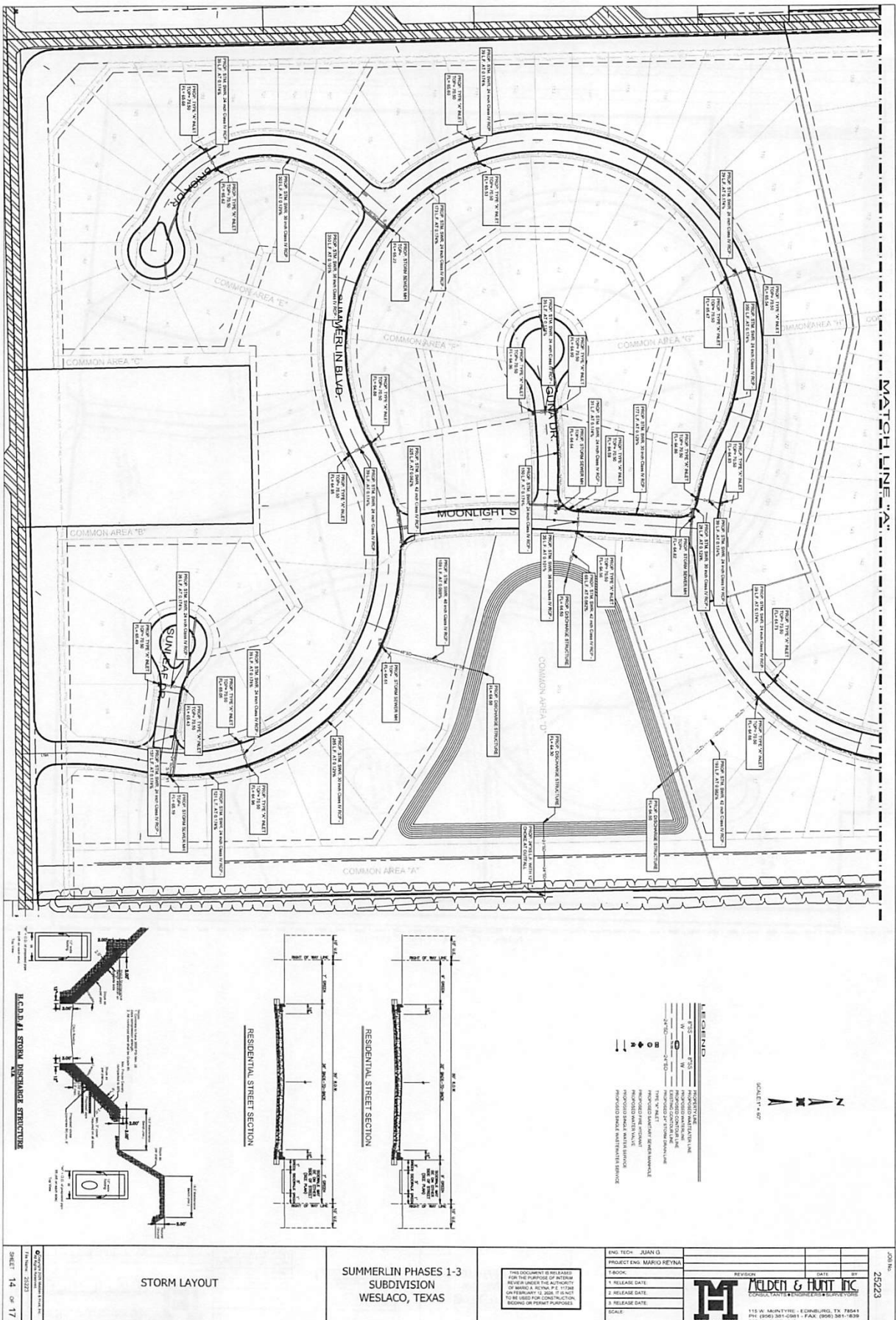


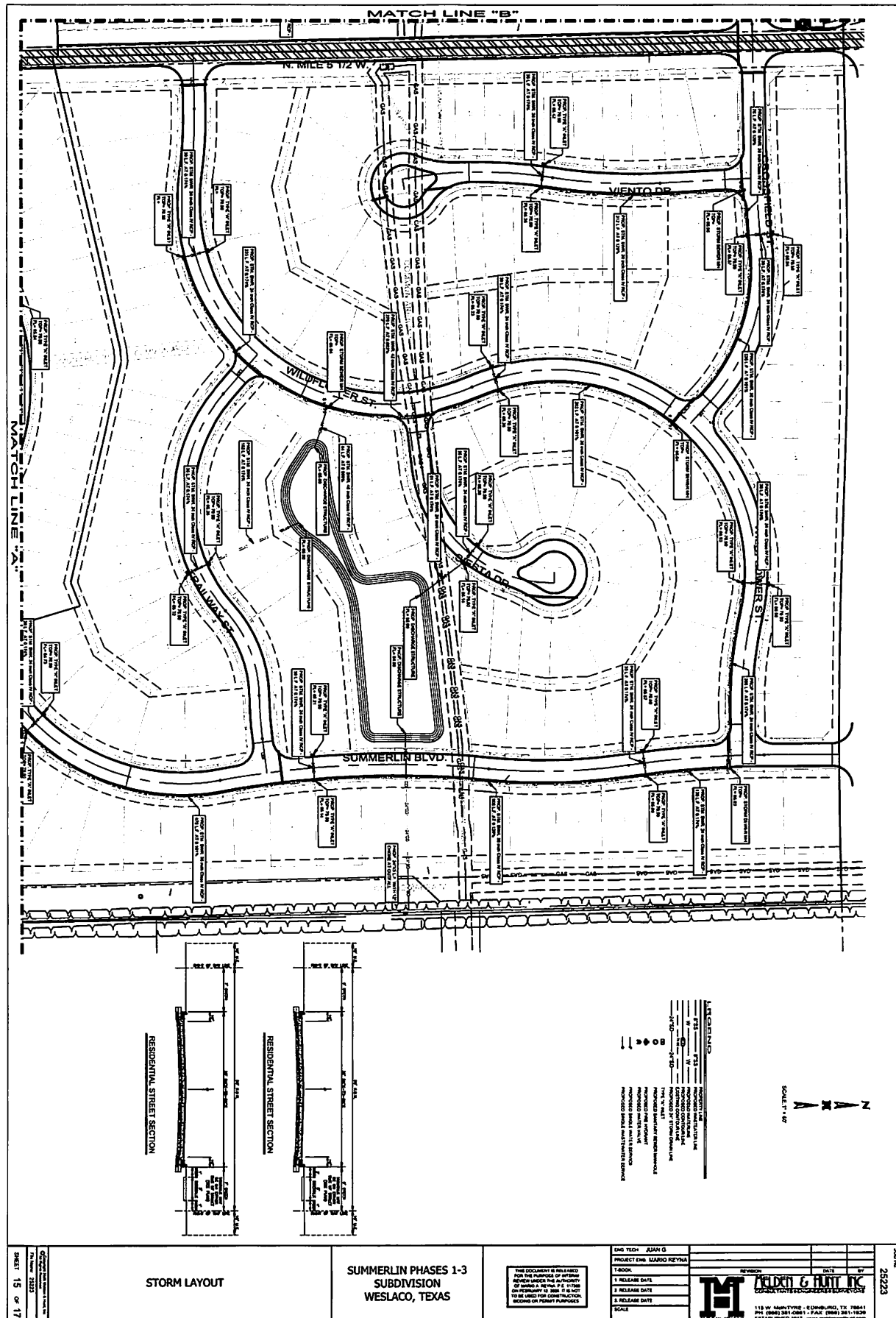


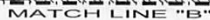












STORM LAYOUT

[illegible]

SCALE 1" = 100'

THIS DOCUMENT IS RELEASED
FOR THE PURPOSE OF INTERIM
REVIEW UNDER THE AUTHORITY
OF MARIO A. REYNA, P.E. 117368
ON FEBRUARY 12, 2026. IT IS NOT
TO BE USED FOR CONSTRUCTION,
BIDDING OR PERMIT PURPOSES.

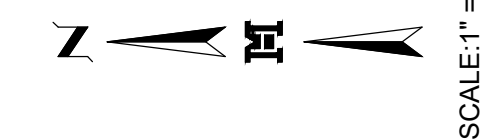
SUMMERLIN PHASES 1-3
SUBDIVISION
WESLACO, TEXAS

ENG TECH	JUAN G
PROJECT ENG	MARIO REYNALDO
T-BLOCK	
1. RELEASE DATE	
2. RELEASE DATE	
3. RELEASE DATE	
SCALE	



115 W. McINTYRE - EDINBURG, TX 78541
P4 (956) 381-0961 - FAX: (956) 381-1839
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[illegible]



JOB No. 25223

115 W. MCINTYRE - EDINBURG, TX 78541
PH: (956) 381-0981 - FAX: (956) 381-1839
ESTABLISHED 1947 - WWW.MELDENANDHUNT.COM

MELDEN & HUNT INC.

CONSULTANTS • ENGINEERS • SURVEYORS

ENG. TECH: JUAN G.
PROJECT ENG: MARIO REYNA
T-BOOK:
1. RELEASE DATE:
2. RELEASE DATE:
3. RELEASE DATE:
SCALE:

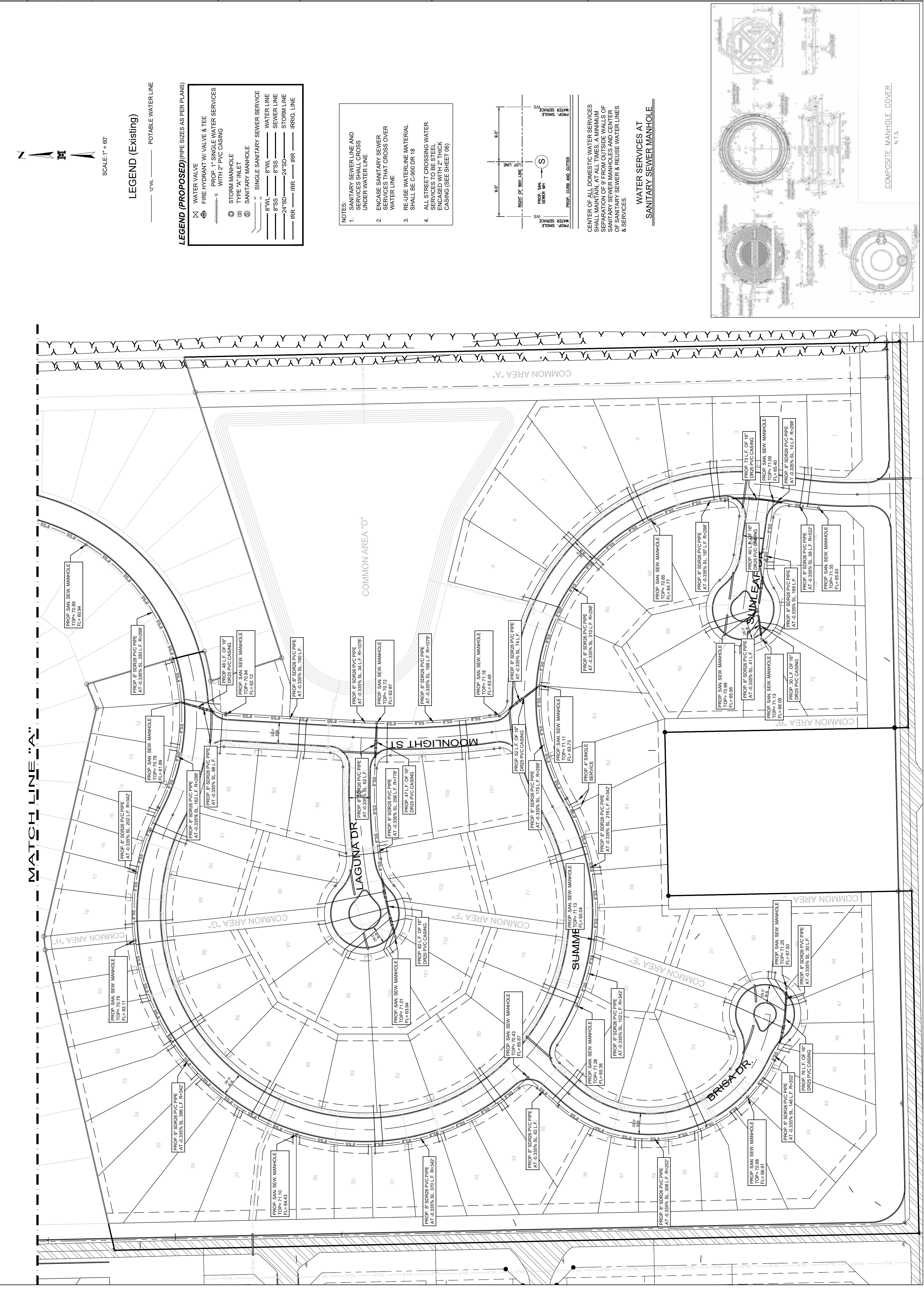
THIS DOCUMENT IS RELEASED
FOR THE PURPOSE OF AIRLIFT
REVIEW UNDER THE AUTHORITY
OF MARIO A. REYNA, P.E. 117368
FOR AIRLIFT REVIEW
TO BE USED FOR CONSTRUCTION
BIDDING OR PERMIT PURPOSES.

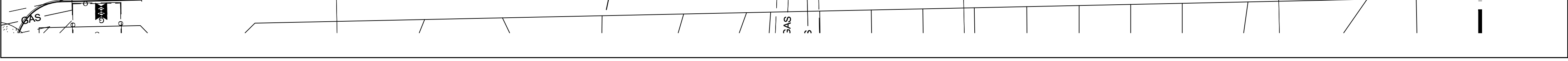
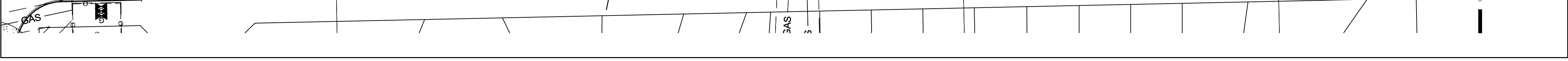
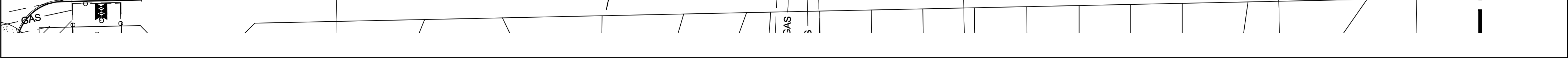
SUMMERLIN PHASE 1
SUBDIVISION
WESLACO, TEXAS

SANITARY SEWER LAYOUT

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File Name: 25223

SHEET 4 OF 7









**Planning & Zoning Commission
Standardized Agenda Request Form**

Date of Meeting: April 1, 2026	Agenda Item No. (to be assigned by PCE): V.B.
From: Rebekah de la Fuente, Planning Director, on behalf of Supreme Engineering, PLLC.	
Subject/Agenda Item: Discussion and consideration of the Final Plat for Bridge Heights Subdivision being a 11.327-acre tract of land out of Farm Tract 758, West & Adams Tract Subdivision, Weslaco, Hidalgo County, Texas. Located approximately 110ft East of South Bridge and Mile 5 N Rd. Possible Action.	
Discussion/Overview: The proposed sixty-two (62) lot subdivision is located inside the City of Weslaco. This subdivision is being serviced with water by City of Weslaco through an 8" waterline and sewer by City of Weslaco through an 8" sewer line. The property is within a Flood Zone "B".	
If item requires Publication Notice, provide date and periodical of publication; indicate if comments received from letters mailed to property owners: N/A	
Staff recommendation for Commission's Action: Staff recommends approval of Final Plat.	
Additional Action Prompted: ☒ Mayor's Signature ☐ Public Hearing ☐ Budget Amendment ☐ Resolution ☐ Ordinance – First Reading ☐ Ordinance – Final Reading	
Advisory Review, (if any): (name of board/committee, date of action, recommendation): N/A	
If item previously considered, provide date and action by Commission: N/A	
Attachments, (if any): Application for Subdivision platting and variance, Staff's comments, Drainage Report, Subdivision plat and Utility layout.	
Responsibilities upon Commission's Action: Planning staff will advise applicant.	



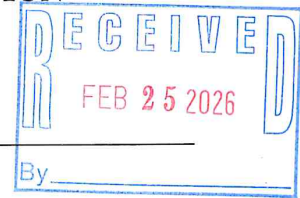
SUBDIVISION PLATTING APPLICATION

PLAT-000999-2026

The Planning & Zoning Commission meets every 1st Wednesday of each month at 5:30 pm.

The City Commission meets every 1st and 3rd Tuesday of each month at 5:30 pm

FILE NO. _____



This form shall be completed by the Property Owner or Applicant and submitted to the Planning Department along with the required number of copies of the respective plat, review fee and all other required information listed below and in the Subdivision Ordinance. The submittal of an application does not constitute acceptance for processing until the staff reviews and determines the application is complete.

STAFF USE ONLY

☐ Single Lot Variance ☐ Minor Plat ☐ Planned Unit Development ☒ Standard Subdivision

GENERAL INFORMATION

Name of Subdivision: Bridge Heights

Location: Bridge Ave. just north of Mile 5 N. Rd.

Legal Description: A 11.327 acre tract of land, out of farm tract 758, the west and adams tracts recorded in volume 2, page 34-37, Hidalgo County, Texas.

Is subdivision inside city limits? ☒ YES ☐ NO

If subdivision is in the ETJ, indicate? ☐ 3.5 Mile ☐ 5 Mile

If no submit letter of Annexation (Contiguous or Consensual)

Existing Zoning: RT-1

Existing Land Use: Agriculture

Proposed Land Use: Townhomes

Number of Lots Proposed: 62

Gross Acreage: 11.327

Title Report Submitted: ☐ YES ☐ NO

OWNER INFORMATION

Owner's Name: South Texas Providential Development, LLC Telephone: (956) 784-9874

Address: 1108 Houston Way

Fax: _____

City: San Juan

State: TX

Zip: 78589

E-mail: marc@ursa-holdings.com

ENGINEER INFORMATION

Name: Supreme Engineering, PLLC

Telephone: (956) 403-1314

Address: 138 Paseo del Prado Ste. 7

Fax: _____

City: Edinburg

State: TX

Zip: 78539

E-mail: omar.cano@supremeengineering.com

UTILITY PROVISIONS

Will proposed subdivision connect to:

- ☒ YES ☐ NO Water Provision: City of Weslaco
- ☒ YES ☐ NO Wastewater Provision: City of Weslaco
- ☒ YES ☐ NO Electric Company: AEP

☐ YES ☒ NO Phone Utility _____	☐ YES ☒ NO Gas Utility _____	☒ YES ☐ NO Cable Utility _____
---	---	---

Proposed subdivision is in the following districts:

☒ YES ☐ NO Drainage District <u>#1</u>	☒ YES ☐ NO Irrigation District <u>#9</u>
---	---

Has the property been assessed as flat rate irrigable property: ☐ YES ☒ NO

Have Water Rights been conveyed to City/Water Supplier? ☐ YES ☒ NO

(Attach written proof of such assessment or that it has never been assessed as such a property) If YES, attach an estimate from the irrigation district of the proportional water rights for the subdivision as calculated under Texas Water Code § 49.505.

SUBMITTALS REQUIRED FOR MINOR PLAT REVIEW

- _____ Two (2) sets of plats **folded and stapled** (24 x 36) and forward a copy in PDF format to rdelafuente@weslacotx.gov
- _____ PDF copy of all documents submitted (emailed or USB)
- _____ **Planning Review fee \$300 + \$25/lot for residential (excluding apartment complexes) or \$400 + \$200 (0-5 acres), \$400 + \$300 (5.01 - 10 acres, \$400 + \$400 (10 acres or greater) for commercial, industrial, or apartment., Fire Review fee \$100.00**
- _____ One 11" X 17" reduced copy of plat
- _____ Plat Layout
 - _____ Existing & Proposed Easements
 - _____ Existing & Proposed ROW
 - _____ Existing & Proposed Drainage Easements
 - _____ Contours
 - _____ Flood Zones
 - _____ Adjoiners
 - _____ Existing street names
- _____ Drainage plans and calculations with engineer's seal
 - _____ Elevations
 - _____ Flood directional arrows
 - _____ Detention areas
 - _____ Street names
- _____ Proof of ownership of the property
- _____ If septic tank system required, submit soil evaluation report
- _____ Water Rights associated with the property
- _____ Tax Receipt for all taxing entities showing that taxes are paid in full

SUBMITTALS REQUIRED FOR PRELIMINARY (P & Z)

- _____ Twelve (12) sets of preliminary plat **folded and stapled** (24 x 36) and forward a copy in PDF format to rdelafuente@weslacotx.gov
- _____ PDF copy of all documents submitted (emailed or USB)
- _____ **Planning Review fee \$300 + \$25/lot for residential (excluding apartment complexes) or \$400 + \$200 (0-5 acres), \$400 + \$300 (5.01 - 10 acres, \$400 + \$400 (10 acres or greater) for commercial, industrial, or apartment., Fire Review fee \$100.00**
- _____ One 11" X 17" reduced copy of plat

255 S. KANSAS AVE ■ WESLACO, TEXAS 78596-6285 ■ 956-447-3401 ■ (Fax) 956-973-3128 ■ WWW.WESLACOTX.GOV

- _____ Plat Layout
 - _____ Existing & Proposed Easements
 - _____ Existing & Proposed ROW _____ Existing & Proposed Drainage Easements
 - _____ Contours
 - _____ Flood Zones
 - _____ Adjoiners
 - _____ Existing & Proposed street names
- _____ Utility Layout
 - _____ Existing & Proposed Utilities
 - _____ Proposed Fire Hydrants
 - _____ Adjoiners
 - _____ Street names
- _____ Drainage plans and calculations with engineer's seal
 - _____ Elevations
 - _____ Flood directional arrows
 - _____ Detention areas
 - _____ Street names
- _____ Proof of ownership of the property
- _____ If septic tank system required, submit soil evaluation report
- _____ Water Rights associated with the property
- _____ Tax Receipt for all taxing entities showing that taxes are paid in full
- _____ Number of fire hydrants proposed for subdivision

SUBMITTALS REQUIRED FOR FINAL (P & Z) **Will not apply to Single Lot Variance**

- _____ **Twelve (12) sets of plans FOLDED & STAPLED (24 x 36) & PDF copy with all corrections**
- _____ Plats to be sealed by Professional Engineer
- _____ Approved Drainage Report

SUBMITTALS REQUIRED FOR FINAL (City Commission)

- _____ One set of 8 ½ x 11 of plat and utilities with all corrections done

SUBMITTALS REQUIRED FOR PRE-CONSTRUCTION MEETING

- _____ Seven (7) full sets of construction plans 24 x 36 and one (1) 11 x 17 with plan & profile.
- _____ Material Testing are obtained by the city, developer will pay the full cost of the proposal
- _____ \$85.00 per hour inspection fee to be billed monthly
- _____ Traffic Impact Analysis (If required)
- _____ Notice of Intent
- _____ SW3P

SUBMITTALS REQUIRED FOR RECORDING OR HIDALGO COUNTY PLANNING

- _____ Electronic file of final plat and as-builds
- _____ Reproducible plat to be recorded with all required signatures
- _____ Checks or Receipts: HCCID #9; HCDD #1; County Clerk
- _____ Tax certificates
- _____ Memo from engineering inspector releasing subdivision
- _____ Water Rights shall be paid prior to recordation at \$2,896.81 per acre ft
- _____ 30 Year Water and 30 Year Sewer Service Agreements
- _____ Park dedication/Fees in lieu of

SUBMITTALS REQUIRED FOR RECORDING BY SECURITY

- _____ Sealed engineering cost estimates
- _____ Letter of Credit/Performance Bond/Escrow

** Any revisions requested would require resubmission of plats and reduced copy reflecting changes.

AUTHORIZATION AND ACKNOWLEDGEMENTS

I certify that I am the actual owner of the property described above and this application is being submitted with my consent (include corporate name if applicable); and the following person listed below is my authorized agent to act on my behalf.

I certify that the above information is correct and complete to the best of my knowledge. I understand that I must comply with all applicable local, state, and federal regulations.

Owner Printed Name: Misael Perez

Owner Signature:  Date: 24/02/2026
Misael Perez (Feb 24, 2026 12:39:40 CST)

_____ is the authorized agent

Authorized Agent Signature: _____ Date: _____

Authorized Agent Printed Name: _____

THIS PAGE FOR STAFF USE ONLY

Date Received: _____ Received By: _____ Date Paid _____

P & Z Commission Approval on Preliminary Plat: _____

P & Z Commission Approval on Final Plat: _____

City Commission Approval on Final Plat: _____

Preconstruction Meeting Date: _____

Date Recorded: _____ Instrument No. _____

General Comments: _____



PLAN CORRECTIONS REPORT PAR-000946-2025 FOR CITY OF WESLACO

PLAN ADDRESS: Bridge Heights
Weslaco, TX 78596

PARCEL:

APPLICATION DATE: 11/03/2025

SQUARE FEET: 0.00

DESCRIPTION: BRIDGE HEIGHTS

EXPIRATION DATE: 11/03/2026

VALUATION: \$0.00

CONTACTS

Name

Company

Address

Engineer

SUPREME ENGINEERING

135 Paseo Del Prado Ste 7
Edinburg, TX 78539

Owner

SOUTH TEXAS PROVIENTIAL
DEVELOPMENT

1108 Houston Way
San Juan, TX 78589

Pre-Application Subdivision Review

REVIEW ITEM

STATUS

REVIEWER

Building Review - Planning v.1

Requires Re-submit

Felix Salazar email: fsalazar@weslacotx.gov

Building Review - Planning

Building Review - Planning v.2

Approved

Felix Salazar email: fsalazar@weslacotx.gov

Building Review - Planning

Engineering v.1

Requires Re-submit

Peter Hermida Ph: 9569683181 email: phermida@weslacotx.gov

Review conducted by the engineering department

Engineering v.2

Requires Re-submit

Peter Hermida Ph: 9569683181 email: phermida@weslacotx.gov

Review conducted by the engineering department

Engineering v.3

Approved

Peter Hermida Ph: 9569683181 email: phermida@weslacotx.gov

Review conducted by the engineering department

Fire Review v.1

Approved with
Comments

Mike Swinnea email: mswinnea@weslacotx.gov

Review by the fire department

Planning/Zoning v.1

Requires Re-submit

Kayla Arevalo email: karevalo@weslacotx.gov

Review conducted by the planning and zoning department

Planning/Zoning v.2

Requires Re-submit

Kayla Arevalo email: karevalo@weslacotx.gov

Review conducted by the planning and zoning department

Planning/Zoning v.3

Approved with
Comments

Kayla Arevalo email: karevalo@weslacotx.gov

Review conducted by the planning and zoning department

Police v.1

Not Required

System Administrator Ph: 444 email: admin@energov.com

Review conducted by the police department

Public Works v.1

Requires Re-submit

Marcelo Cosme Ph: 956-973-3146 email: mcosme@weslacotx.gov

Public Works

Public Works v.2

Approved

David Arce Ph: 956-793-8735 email: darce@weslacotx.gov

Public Works

PLAN CORRECTIONS REPORT (PAR-000946-2025)

CONDITION(S) Access roads shall be 26' minimum with hydrant unobstructed, 20' without hydrant unobstructed. All weather surface road that supports the imposed loads of fire apparatus shall be in place (concrete or asphalt). - Access roads shall be 26' minimum with hydrant unobstructed, 20' without hydrant unobstructed. All weather surface road that supports the imposed loads of fire apparatus shall be in place (concrete or asphalt).

Comment: General Note

All access gates to property shall have specs submitted to our office. Shall maintain a 20' clearance or 12' on each side of an island, if present, prior to installation of gate. - All access gates to property shall have specs submitted to our office. Shall maintain a 20' clearance or 12' on each side of an island, if present, prior to installation of gate. Shall provide Knox Box Gate Entry System if the gate is automated and shall be mounted on keypad. Chained gates shall have a Knox padlock in place. If the gate system is automated, all gates in the system shall open automatically.

Comment: If gated

General Condition - Planning approved w/comments.

Comment: 1. Proposed street names need to be aligned with existing streets. Developer must provide letter from 911 addressing of approved street names

2. Minimum Building Setback lines shall be as follows:

Front : 25' (otherwise must apply for a variance) (note 2nd revisions was at 25' and 3rd revisions changed to 20')

Cul-de-sac (front) : 25' (otherwise must apply for a variance)

Shall have fire hydrant within 400'. Shall have 4 ½" outlet facing the street with 18" to 24" clearance from bottom of outlet to grade level for hydrant wrench - Shall have fire hydrant within 400'. Shall have 4 ½" outlet facing the street with 18" to 24" clearance from bottom of outlet to grade level for hydrant wrench. Hydrants shall be marked on the streets with reflective blue marker to show location of hydrants. Hydrants shall have 3' clearance from any fences, poles, brush, etc.

Comment: General Note

Drainage Statement

Bridge Heights Subdivision

Weslaco, Texas

Prepared by:



Supreme Engineering, PLLC
Texas Engineering Firm F-21135
135 Paseo del Prado Ste 7
Edinburg, TX 78539
(956) 403-1314

November 20, 2025



Hector Garcia



Index

- Cover Sheet
- Index Sheet
- Drainage Statement
- Drainage Calculations
- Table 3-2 Intercept Coefficients “k” value
- Table 3-3 Runoff Coefficients Table "C" value
- Weighted "C" Calculation “if applicable”
- Time of Concentration Determination Table “if applicable”
- Location Map
- USDA Contours
- USDA Soils Map
- Soils Legend & Description
- USDA Soil Engineering Properties
- FEMA FIRM with site location
- Subdivision Plat
- Preliminary Site/Drainage Plan Layout



Bridge Heights Subdivision Drainage Statement

Bridge Heights Subdivision being 11.327 acres of land out of farm tract 758, West Adams tracts, recorded in volume 2, pages 34-37, map records Hidalgo County, Texas. The property is located along S. Bridge Avenue, north 0.35 miles of the intersection with Mile 5 N. Rd. within the **City of Weslaco** limits, County of Hidalgo, Texas. Property is on the process of annexing the City of Weslaco. The tract is **currently vacant**. Proposing a **single-family** development.

The property is located mostly in **Zone “B”** on FEMA’s Flood Insurance Rate Map, Community Panel No. 480334 0525B Map dated January 2, 1981. Zone B is defined as areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood.

The predominate soils in this area are Hidalgo sandy clay loam and Hidalgo fine sandy loam (**Soils 25 & 28**), these soils belong to hydrologic group “B” which have a moderate infiltration rate when thoroughly wet. Group B soils consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission. (See “USDA, NRCS Web Soil Survey” Soils Maps, Engineering Properties and information for the Hidalgo County, Texas).

The surface runoff of this property flows in an easterly direction. The pre-development storm runoff is 10.35 cfs based on a 10-year storm frequency, as per attached calculations. The post-development storm runoff is 58.26 cfs based on a 50-year storm frequency, which is an increase of 47.91 cfs as per the attached calculations.

In accordance with Hidalgo County Drainage District No. 1 (HCDD1) and City of **Weslaco’s** drainage policy, the 11.327-acre property storm drainage system for the proposed **single-family subdivision** will consist of sheet flow through proposed paved street, gutters, inlets and storm sewer system with pipe sizes 18”, 24”, 30”, and 36” as shown on the attached storm sewer plan.



SUPREME ENGINEERING – CIVIL ENGINEERING CONSULTANT

Pertinent permitting as necessary shall be coordinated with the City of **Weslaco**, **HCCID9** and **HCDD1** during public improvements.

In accordance with HCDD1 and City of **Weslaco**'s drainage policy, the difference between the pre (10-yr storm) and the post (50-yr storm) development storm runoff shall not increase; therefore, as per attached calculations, the required detention of **72,639 cubic feet (1.67 acre-ft)** of storm runoff shall be stored as per attached calculations. The additional runoff will be accommodated in a proposed on-site detention. The proposed pond excavation will accommodate **74,979 cubic feet (1.72 acre-ft)** of detention runoff. The pond will discharge with a 24" RCP line into a south HCDD1 ditch, that transitions into Ditch 36 with an ultimate outfall at IBWC floodway.

By Hector Garcia
Engineer Signature

11/20/2025
Date



Project Name: **Bridge Heights Subdivision**
Project Location: **City of Weslaco**
Proposed Use: **Single-Family**
Calculation Analysis: **Rational Method (TxDOT Hydraulic Design Manual, Revised Sep 2019)**

Pre Development (Existing) Conditions 10 - Year Storm Frequency

Property Area:	<u>11.327 Acres</u>		
	<u>493,404.1 Sq Ft</u>		
Time of Concentration, t_c	<u>28 Minutes</u>	Surface Conditions	
		Flow Length, L:	<u>780 Feet</u>
		Surface Constant, K_u :	<u>3.28</u>
Overland Flow Velocity, V	<u>0.28 ft/s</u>	Overland Flow Length, L:	<u>100 Feet</u>
Shallow Conc. Velocity, V	<u>0.51 ft/s</u>	Intercept Coefficient, k:	<u>0.274</u> Table 3-2
		Slope, S_p :	<u>0.10 %</u>
Runoff Coefficient, C :	<u>0.20</u> Table 3-3	Shallow Concentrated Flow Length, L:	<u>680 Feet</u>
Intensity, I :	<u>4.57 in/hr</u>	Intercept Coefficient, k:	<u>0.491</u> Table 3-2
		Slope, S_p :	<u>0.10 %</u>
		Rainfall Coefficients	e: <u>0.812</u>
		(10-yr storm)	b: <u>92.23</u>
			d: <u>12.33</u>
Peak Flow, Q :	<u>10.35 cfs</u>		

Post Development (Future) Conditions 50 - Year Storm Frequency

Property Area:	<u>11.327 Acres</u>		
	<u>493,404.1 Sq Ft</u>		
Time of Concentration, t_c	<u>13 Minutes</u>	Surface Conditions	
		Flow Length, L:	<u>780 Feet</u>
		Surface Constant, K_u :	<u>3.28</u>
Velocity, V	<u>1.02 ft/s</u>	Intercept Coefficient, k:	<u>0.619</u> Table 3-2
		Slope, S_p :	<u>0.25 %</u>
Runoff Coefficient, C :	<u>0.55</u>	e:	<u>0.795</u>
Intensity, I :	<u>9.35 in/hr</u>	Rainfall Coefficients	b: <u>123.47</u>
		(50-yr storm)	d: <u>12.86</u>
Peak Flow, Q :	<u>58.26 cfs</u>		

11/20/2025



Hector Garcia

**Modified Rational Method
Detention Calculations (50-yr Storm Frequency)**

Duration		Intensity 50-year	Q _{in}	Vol _{in}	Q _{out} *	Vol _{out}	Storage Required	
(min)	(hr)	(in/hr)	(cfs)	(ft ³)	(cfs)	(ft ³)	(ft ³)	(acre-ft)
10	0.17	10.25	63.87	38,324.89	10.35	7,078.03	31,246.86	0.72
20	0.33	7.68	47.86	57,435.94	10.35	10,181.63	47,254.31	1.08
30	0.50	6.22	38.75	69,745.39	10.35	13,285.23	56,460.16	1.30
40	0.67	5.26	32.80	78,709.64	10.35	16,388.83	62,320.80	1.43
50	0.83	4.59	28.57	85,723.31	10.35	19,492.43	66,230.88	1.52
60	1.00	4.08	25.41	91,473.31	10.35	22,596.04	68,877.27	1.58
70	1.17	3.68	22.94	96,343.71	10.35	25,699.64	70,644.07	1.62
80	1.33	3.36	20.95	100,569.15	10.35	28,803.24	71,765.91	1.65
90	1.50	3.10	19.32	104,302.66	10.35	31,906.84	72,395.83	1.66
100	1.67	2.88	17.94	107,649.20	10.35	35,010.44	72,638.76	1.67
110	1.83	2.69	16.77	110,683.66	10.35	38,114.04	72,569.62	1.67
120	2.00	2.53	15.76	113,461.29	10.35	41,217.64	72,243.65	1.66
130	2.17	2.39	14.87	116,023.93	10.35	44,321.24	71,702.69	1.65
140	2.33	2.26	14.10	118,404.00	10.35	47,424.84	70,979.15	1.63
150	2.50	2.15	13.40	120,627.11	10.35	50,528.44	70,098.66	1.61
160	2.67	2.05	12.78	122,713.83	10.35	53,632.05	69,081.78	1.59
170	2.83	1.96	12.22	124,680.94	10.35	56,735.65	67,945.29	1.56
180	3.00	1.88	11.72	126,542.28	10.35	59,839.25	66,703.03	1.53
190	3.17	1.81	11.26	128,309.42	10.35	62,942.85	65,366.57	1.50
200	3.33	1.74	10.83	129,992.09	10.35	66,046.45	63,945.64	1.47
210	3.50	1.68	10.44	131,598.61	10.35	69,150.05	62,448.56	1.43
220	3.67	1.62	10.09	133,136.10	10.35	72,253.65	60,882.45	1.40

Proposed Total Detention:	72,638.76 cu. ft.	1.67 acre-ft
Detention/Acre Developed	6,412.89 cu. ft.	0.15 acre-ft

11/20/2025



Hector Garcia

Land Cover / Flow Regime	k
Forest with heavy ground litter; hay meadow (overland flow)	0.076
Trash fallow or minimum tillage cultivation; contour or strip cropped; woodland (overland flow)	0.152
Short grass pasture (overland flow)	0.213
Cultivated straight row (overland flow)	0.274
Nearly bare and untilled (overland flow); alluvial fans in western mountain regions	0.305
Grassed waterway (shallow concentrated flow)	0.457
Unpaved (shallow concentrated flow)	0.491
Paved area (shallow concentrated flow); small upland gullies	0.619

Table 3-2: Intercept Coefficients

Rainfall Intensity-Duration-Frequency Coefficients for Texas

Based on United States Geological Survey (USGS) Scientific Investigations Report 2004-5041
"Atlas of Depth-Duration Frequency of Precipitation Annual Maxima for Texas"

1. Select English or SI Units

English

2. Select or Enter a County

Hidalgo

3. Enter a Time of Conc.

Select Units

28min

Coefficient	50% (2-year)	20% (5-year)	10% (10-year)	4% (25-year)	2% (50-year)
e	0.8645	0.8647	0.8599	0.8572	0.8613
b (in.)	72.40	100.21	116.24	140.47	170.66
d (min)	12.92	13.90	14.33	15.32	16.71

Intensity (in./hr) 2.93 3.96 4.64 5.55 6.47

(Spreadsheet Release Date: August 31, 2015; data table reshuffled)

Rainfall Intensity-Duration-Frequency Coefficients for Texas

Based on United States Geological Survey (USGS) Scientific Investigations Report 2004-5041
"Atlas of Depth-Duration Frequency of Precipitation Annual Maxima for Texas"

1. Select English or SI Units

English

2. Select or Enter a County

Hidalgo

3. Enter a Time of Conc.

Select Units

13 min

Coefficient	50% (2-year)	20% (5-year)	10% (10-year)	4% (25-year)	2% (50-year)
e	0.8645	0.8647	0.8599	0.8572	0.8613
b (in.)	72.40	100.21	116.24	140.47	170.66
d (min)	12.92	13.90	14.33	15.32	16.71

Intensity (in./hr) 4.34 5.82 6.76 8.00 9.19

(Spreadsheet Release Date: August 31, 2015; data table reshuffled)

BRIDGE HEIGHTS SUBDIVISION
HYDRAULIC CALCULATIONS

#line	Pipe	From	To	3D Length - Center to Center (ft)	Drainage Area Inc (sq. ft)	Drainage Area Total (sq. ft)	Runoff Coeff "C" (sq. ft)	Area X "C" Inc (sq. ft)	Area X "C" Total (sq. ft)	Time of Concentration Inlet (min)	Time of Concentration System (min)	Rain "I" (inch/hr)	Runoff "Q" (cu. ft/sec)	Known Q (cu. ft/sec)	Total Q (cu. ft/sec)	Pipe Dia. (ft)	Full Q (cu. ft/sec)	Velocity Full (ft/s)	Velocity Design (ft/s)	Sec Time (min)	Invert Elevation U/S (ft)	Invert Elevation D/S (ft)	Crown Drop (ft)	Slope
1	Pipe - (26) OUTFALL	STMH1	OUTFALL	31.91	0	466518.54	0	0	256585.19	33.35	26.209	4.413	26.209	0	12.135	2	12.403	3.948	4.496	0.759	68.5	N/A	N/A	0.17%
2	Pipe - (15) STMH2	STMH1	STMH1	204.85	0	212967.33	0	0	117132.03	31.945	12.135	4.476	12.135	0	12.135	2	12.403	3.948	4.496	0.759	70.44	N/A	N/A	0.30%
3	Pipe - (14) C15	STMH2	STMH2	126.06	17924.93	212967.33	0.55	9858.71	117132.03	10.736	31.477	4.496	12.192	0	12.192	2	12.403	3.948	4.496	0.467	71.05	N/A	N/A	0.30%
4	Pipe - (13) STMH3	STMH3	STMH3	84.87	0	145847.8	0	0	80216.29	31.067	8.383	4.515	8.383	0	8.383	2	9.607	3.058	3.443	0.411	71.43	N/A	N/A	0.18%
5	Pipe - (12) C11	STMH3	STMH3	487.36	17687.36	35700	0.55	9728.05	19635	10.134	10.238	7.25	3.295	0	3.295	2	9.607	3.058	2.77	2.932	71.58	N/A	N/A	0.18%
6	Pipe - (11) C1	STMH3	STMH3	36	18012.64	18012.64	0.55	9906.95	9906.95	10.014	10.014	7.306	1.675	0	1.675	1.5	5.361	3.034	2.68	0.24	72.46	N/A	N/A	0.26%
7	Pipe - (17) C12	STMH3	STMH3	232.55	57120.16	110147.8	0.55	31416.09	60581.29	27.174	29.882	4.574	6.415	0	6.415	2	9.607	3.058	3.273	1.184	72.25	N/A	N/A	0.18%
8	Pipe - (16) C12.1	C12	C12	36	53027.64	53027.64	0.55	29165.2	29165.2	29.691	29.691	4.593	3.101	0	3.101	1.5	5.361	3.034	3.142	0.191	72.67	N/A	N/A	0.26%
9	Pipe - (18) C15.1	C15	C15	36	49194.59	49194.59	0.55	27057.03	27057.03	27.911	27.911	4.771	2.988	0	2.988	1.5	5.361	3.034	3.114	0.193	71.93	N/A	N/A	0.26%
10	Pipe - (22) (1) C14	STMH1	STMH1	306.91	60440.02	253551.21	0.55	33242.01	139453.16	27.174	31.86	4.479	14.46	0	14.46	2.5	14.803	3.016	3.434	1.49	68.55	N/A	N/A	0.13%
11	Pipe - (21) STMH4	C14	STMH4	193	0	118291.44	0	0	65060.29	0	30.89	4.523	6.811	0	6.811	2	9.607	3.058	3.315	0.97	71.83	N/A	N/A	0.13%
12	Pipe - (20) C13	STMH4	STMH4	191	49172.47	118291.44	0.55	27044.86	65060.29	25.952	29.932	4.569	6.882	0	6.882	2	9.607	3.058	3.322	0.958	72.52	N/A	N/A	0.18%
13	Pipe - (19) C13.1	C13	C13	36	69118.96	69118.96	0.55	38015.43	38015.43	29.751	29.751	4.587	4.037	0	4.037	1.5	5.361	3.034	3.33	0.18	72.61	N/A	N/A	0.26%
14	Pipe - (25) C14.1	C14	C14	36	74819.75	74819.75	0.55	41150.86	41150.86	28.872	28.872	4.675	4.453	0	4.453	1.5	5.361	3.034	3.39	0.177	72.77	N/A	N/A	0.26%

#line	Struct. ID	D (ft)	Q (cu. ft/sec)	L (ft)	V (ft/s)	d (ft)	dc (ft)	v ² /2g (ft)	EGLo (ft)	HGLo (ft)	Sf (ft)	Total Pipe Loss (ft)	EGLi (ft)	HGLi (ft)	Ea (ft)	EGLa (ft)	U/S TOC (ft)	Surface Elev. (ft)	Step4* (ft)	Step7* (ft)	Step14* (ft)
0	OUTFALL								70.84	70.84											
1	STMH1	3	26.209	31.91	4.428	2.34	1.65	0.3	71.15	70.84	0.002	0.05	71.2	70.9	2.81	71.36	72.44	79.04	N/A	Case C	Case B
2	STMH2	2	12.135	204.85	4.496	1.6	1.25	0.31	72.35	72.04	0.003	0.61	72.97	72.65	2.03	73.08	73.05	78.62	N/A	Case B	Case B
3	C15	2	12.192	126.06	3.881	1.61	1.26	0.23	73.17	72.94	0.003	0.37	73.54	73.31	2.21	73.64	73.43	78.36	Case B	N/A	Case B
4	STMH3	2	8.383	84.87	2.669	2	n/a	0.11	73.68	73.57	0.001	0.12	73.8	73.69	2.29	73.87	73.58	78.58	Case B	N/A	Case A
5	C11	2	3.295	487.36	1.049	0.81	0.63	0.02	73.87	73.86	0	0.1	73.98	73.96	1.53	73.99	73.96	78.55	Case B	N/A	Case B
6	C11.1	1.5	1.675	36	0.948	0.58	0.49	0.01	74	73.98	0	0.01	74.3	73.99	1.47	74.02	---	78.55	Case B	N/A	Case B
7	C12	2	6.415	232.55	3.273	1.2	0.9	0.17	73.9	73.81	0.002	0.42	74.32	74.15	1.77	74.44	74.17	78.25	N/A	Case F	Case B
8	C12.1	1.5	3.101	36	1.755	1.5	n/a	0.05	74.46	74.41	0.001	0.03	74.49	74.44	1.76	74.52	---	78.26	Case B	N/A	Case A
9	C15.1	1.5	2.988	36	1.691	1.5	n/a	0.04	73.66	73.61	0.001	0.03	73.69	73.64	1.7	73.72	---	78.27	Case B	N/A	Case A
10	C14	2.5	14.46	306.91	2.946	2.5	n/a	0.13	71.41	71.28	0.001	0.38	71.79	71.66	2.89	71.84	73.83	78.37	Case B	N/A	Case A
11	STMH4	2	6.811	193	3.315	1.24	0.93	0.17	73.25	73.08	0.002	0.35	73.42	73.42	1.56	73.74	74.18	78.12	N/A	Case B	Case B
12	C13	2	6.882	191	3.322	1.25	0.93	0.17	73.78	73.68	0.002	0.34	74.13	73.95	1.73	74.25	74.02	78.1	N/A	Case F	Case B
13	C13.1	1.5	4.037	36	2.284	1.5	n/a	0.08	74.28	74.2	0.001	0.05	74.34	74.26	1.78	74.39	---	78.11	Case B	N/A	Case A
14	C14.1	1.5	4.453	36	3.39	1.04	0.81	0.18	73.9	73.72	0.003	0.09	73.99	73.81	1.36	74.13	---	78.27	N/A	Case A	Case B

*URBAN DRAINAGE DESIGN MANUAL - Hydraulic Engineering Circular No.22 Third Edition

#line	Struct. ID	Exit Ho (ft)	Hf (ft)	Hb (ft)	He (ft)	Hc (ft)	Hj (ft)	Total (ft)	Ei (ft)	y+P(gamma) (ft)	CB	C-theta	Cp	Ha (ft)	Ea (ft)
0	OUTFALL														
1	STMH1	0.3	0.05	0	0	0	0	0.05	2.65	2.34	0	1.608	0	0.1	2.81
2	STMH2	0	0.61	0	0	0	0	0.61	1.92	1.6	0	0.812	0	0.05	2.03
3	C15	0.09	0.37	0	0	0	0	0.37	2.11	1.88	0	0.872	0.201	0.05	2.21
4	STMH3	0.04	0.12	0	0	0	0	0.12	2.22	2.11	0	2.044	0	0.05	2.29
5	C11	0.01	0.1	0	0	0	0	0.1	1.52	1.5	0	1.618	1.132	0.01	1.53
6	C11.1	0.01	0.01	0	0	0	0	0.01	1.45	1.44	0	3.028	0.01	0.147	1.47
7	C12	0.03	0.42	0	0	0	0	0.42	1.65	1.48	0	1.538	1.01	0.08	1.77
8	C12.1	0.02	0.03	0	0	0	0	0.03	1.73	1.68	0	2.505	0.02	0.176	1.76
9	C15.1	0.02	0.03	0	0	0	0	0.03	1.66	1.62	0	3.11	0.03	1.7	1.7
10	C14	0.05	0.38	0	0	0	0	0.38	2.85	2.71	0	0.722	0.02	2.89	2.89
11	STMH4	0	0.35	0	0	0	0	0.35	1.42	1.24	0	3.215	0	0.11	1.56
12	C13	0.04	0.34	0	0	0	0	0.34	1.61	1.43	0	1.867	0.82	0.09	1.73
13	C13.1	0.03	0.05	0	0	0	0	0.05	1.73	1.65	0	2.501	0.04	1.78	1.78
14	C14.1	0	0.09	0	0	0	0	0.09	1.22	1.04	0	2.827	0.1	1.36	1.36

No.	Name	Stat. (ft)	Drain. Area A (sq. ft)	Time of Conc. (min)	Rainfall intens. (inch/hr)	Q=C/A/Kc (cu. ft/sec)	Cross Slope Sw	Prev. Bypass Flow (cu. ft/sec)	Total Gutter Flow (cu. ft/sec)	Depth d (ft)	Gutter Width Spread T (ft)	W / T	Inlet Type	Grate Length (ft)	Grate Width (ft)	Curb Opening Length (ft)	Curb Opening Height (ft)	Intercept Flow QI (cu. ft/sec)	Bypass Flow Qb (cu. ft/sec)	Remark
1	C11.1	---	18012.64	10.014	7.306	1.675	0.05	0	1.675	0.253	2	9.644	Curb inlet	---	---	5	0.417	1.675	0	---
2	C11	---	17687.36	10.134	7.276	1.638	0.05	0	1.638	0.25	2	9.501	Curb inlet	---	---	5	0.417	1.638	0	---
3	C15	---	17924.93	7.125	7.125	1.626	0.05	0	1.626	0.249	2	9.453	Curb inlet	---	---	5	0.417	1.626	0	---
4	C12.1	---	53027.64	29.691	4.593	3.101	0.05	0	3.101	0.351	2	14.538	Curb inlet	---	---	5	0.417	3.101	0	---
5	C12	---	57120.16	27.174	4.844	3.523	0.05	0	3.523	0.377	2	15.827	Curb inlet	---	---	5	0.417	3.523	0	---
6	C15.1	---	49194.59	27.911	4.771	2.988	0.05	0	2.988	0.344	2	14.182	Curb inlet	---	---	5	0.417	2.988	0	---
7	C13.1	---	69118.96	29.751	4.587	4.037	0.05	0	4.037	0.407	2	17.332	Curb inlet	---	---	5	0.417	4.037	0	---
8	C13	---	49172.47	25.952	4.966	3.109	0.05	0	3.109	0.351	2	14.562	Curb inlet	---	---	5	0.417	3.109	0	---
9	C14	---	60440.02	27.174	4.844	3.727	0.05	0	3.727	0.389	2	16.435	Curb inlet	---	---	5	0.417	3.727	0	---
10	C14.1	---	74819.75	28.872	4.675	4.453	0.05	0	4.453	0.43	2	18.504	Curb inlet	---	---	5	0.417	4.453	0	---

11/20/2025



Hector Garcia

11/20/25, 4:46 PM

CutFillReport.html

Cut/Fill Report

Generated: 2025-11-20 16:45:53

By user: Junior

Drawing: K:\Shared drives\Supreme Engineering_Projects\E23-017 Bridge Heights
Subdivision\CAD\Construction Plans\K:\Shared drives\Supreme
Engineering_Projects\E23-017 Bridge Heights Subdivision\CAD\Construction
Plans\E23-017 Master Updated Single Family.dwg

Volume Summary							
Name	Type	Cut Factor	Fill Factor	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Detention Provided	full	1.000	1.000	14915.42	2776.97	179.82	2597.15<Cut>

Totals				
	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Total	14915.42	2776.97	179.82	2597.15<Cut>

* Value adjusted by cut or fill factor other than 1.0

HIDALGO COUNTY DRAINAGE DISTRICT NO. 1

" C " - VALUES FOR RATIONAL METHOD

Type of Drainage Area	Runoff Coefficient
Residential Districts:	
Single Family (Lots less than 1/4 acre)	0.35
Single Family (Lots 1/4 to 1/2 acre)	0.30
Single Family (Lots greater than 1/2 acre)	0.25
Multi - Family (Less than 20 DU / AC)	0.45
Multi - Family (Greater than 20 DU / AC)	0.55
Business District:	0.70
Industrial Districts:	
Light Areas	0.50
Heavy Areas	0.60
Railroad Yard Areas:	0.20
Parks:	0.10
Unimproved Areas:	
Bare Surface	0.30
Grassland	0.25
Cultivated	0.20
Woodlands	0.15
Streets:	
Asphalt	0.70
Concrete	0.75
Caliche	0.70
Drives & Walks:	
Concrete	0.75
Rooftop	0.75

BRIDGE HEIGHTS SUBDIVISION



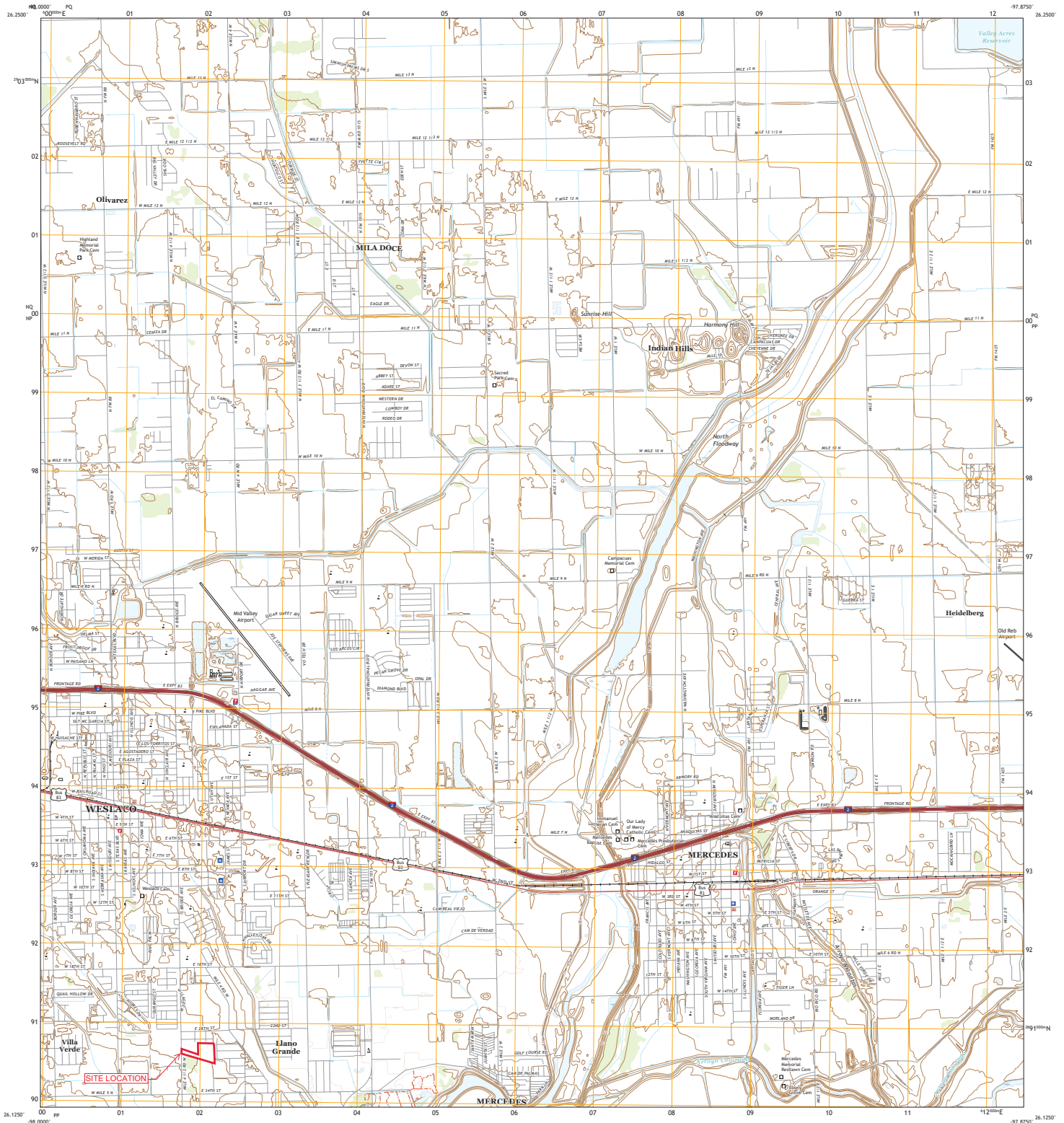
BEING 11.327 ACRES OF LAND OUT OF FARM TRACT 758, THE WEST AND
ADAMS TRACTS, RECORDED IN VOLUME 2, PAGES 34-37, MAP RECORDS
HIDALGO COUNTY, TEXAS.



U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



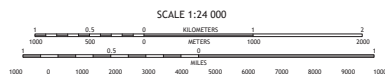
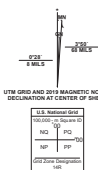
MERCEDES QUADRANGLE
TEXAS - HIDALGO COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey

North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84)
1:50,000-scale Universal Transverse Mercator, Zone 14B
This map is not a legal document. Boundaries may be
generalized for this map scale. Private land within government
operations may not be shown. Obtain permission before
entering private lands.

Imagery: NADP, November 2016 - January 2017
Roads: U.S. Census Bureau, 2015
Names: National Hydrography Dataset, 2002 - 2018
Contour: National Elevation Dataset, 2019
Boundaries: Multiple sources; see metadata file 2019 - 2021
Wetlands: FWS National Wetlands Inventory Not Available



CONTOUR INTERVAL: 5 FEET
NORTH AMERICAN DATUM OF 1983
This map was produced in conformance with the
National Geospatial Program US Topo Product Standard.



1	2	3
4	5	6
7	8	9

QUADRANGLE LOCATION

1 La Blanca
2 Edinburg
3 Santa Rosa
4 Donna
5 La Feria
6 San Juan SE
7 Progress
8 Santa Maria

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Interstate Route
Local Connector
Local Road
dms
US Route
State Route

MERCEDES, TX
2022





MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hidalgo County, Texas
Survey Area Data: Version 22, Sep 5, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 21, 2021—Mar 2, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
25	Hidalgo fine sandy loam, 0 to 1 percent slopes	5.9	48.8%
28	Hidalgo sandy clay loam, 0 to 1 percent slopes	6.2	51.2%
Totals for Area of Interest		12.1	100.0%

Map Unit Description

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named, soils that are similar to the named components, and some minor components that differ in use and management from the major soils.

Most of the soils similar to the major components have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Some minor components, however, have properties and behavior characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. Soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Additional information about the map units described in this report is available in other soil reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the soil reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description

Hidalgo County, Texas

25—Hidalgo fine sandy loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2sxn

Elevation: 20 to 500 feet

Mean annual precipitation: 20 to 27 inches
Mean annual air temperature: 72 to 74 degrees F
Frost-free period: 300 to 365 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Hidalgo and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hidalgo

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Calcareous loamy alluvium

Typical profile

Ap - 0 to 17 inches: fine sandy loam
Bk1 - 17 to 28 inches: sandy clay loam
Bk2 - 28 to 38 inches: clay loam
Ck - 38 to 80 inches: clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: B
Ecological site: R083DY019TX - Gray Sandy Loam
Hydric soil rating: No

Minor Components

Willacy

Percent of map unit: 10 percent

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R083DY023TX - Sandy Loam
Hydric soil rating: No

Brennan

Percent of map unit: 5 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R083EY023TX - Sandy Loam
Hydric soil rating: No

28—Hidalgo sandy clay loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2sxxv
Elevation: 20 to 500 feet
Mean annual precipitation: 20 to 27 inches
Mean annual air temperature: 72 to 74 degrees F
Frost-free period: 300 to 365 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Hidalgo and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hidalgo

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Calcareous loamy alluvium

Typical profile

Ap - 0 to 17 inches: sandy clay loam
Bk1 - 17 to 28 inches: sandy clay loam
Bk2 - 28 to 38 inches: clay loam
Ck - 38 to 80 inches: clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible

Capacity of the most limiting layer to transmit water
(Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0
mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water supply, 0 to 60 inches: Moderate (about 7.8
inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 2c
Hydrologic Soil Group: B
Ecological site: R083DY019TX - Gray Sandy Loam
Hydric soil rating: No

Minor Components

Raymondville

Percent of map unit: 7 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R083DY025TX - Clay Loam
Hydric soil rating: No

Racombes

Percent of map unit: 6 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R083DY025TX - Clay Loam
Hydric soil rating: No

Willacy

Percent of map unit: 2 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R083DY023TX - Sandy Loam
Hydric soil rating: No

Data Source Information

Soil Survey Area: Hidalgo County, Texas
Survey Area Data: Version 22, Sep 5, 2023

Engineering Properties

This table gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

Hydrologic soil group is a group of soils having similar runoff potential under similar storm and cover conditions. The criteria for determining Hydrologic soil group is found in the National Engineering Handbook, Chapter 7 issued May 2007(<http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba>). Listing HSGs by soil map unit component and not by soil series is a new concept for the engineers. Past engineering references contained lists of HSGs by soil series. Soil series are continually being defined and redefined, and the list of soil series names changes so frequently as to make the task of maintaining a single national list virtually impossible. Therefore, the criteria is now used to calculate the HSG using the component soil properties and no such national series lists will be maintained. All such references are obsolete and their use should be discontinued. Soil properties that influence runoff potential are those that influence the minimum rate of infiltration for a bare soil after prolonged wetting and when not frozen. These properties are depth to a seasonal high water table, saturated hydraulic conductivity after prolonged wetting, and depth to a layer with a very slow water transmission rate. Changes in soil properties caused by land management or climate changes also cause the hydrologic soil group to change. The influence of ground cover is treated independently. There are four hydrologic soil groups, A, B, C, and D, and three dual groups, A/D, B/D, and C/D. In the dual groups, the first letter is for drained areas and the second letter is for undrained areas.

The four hydrologic soil groups are described in the following paragraphs:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly."

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Percentage of rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an oven-dry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Liquid limit and plasticity index (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

References:

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

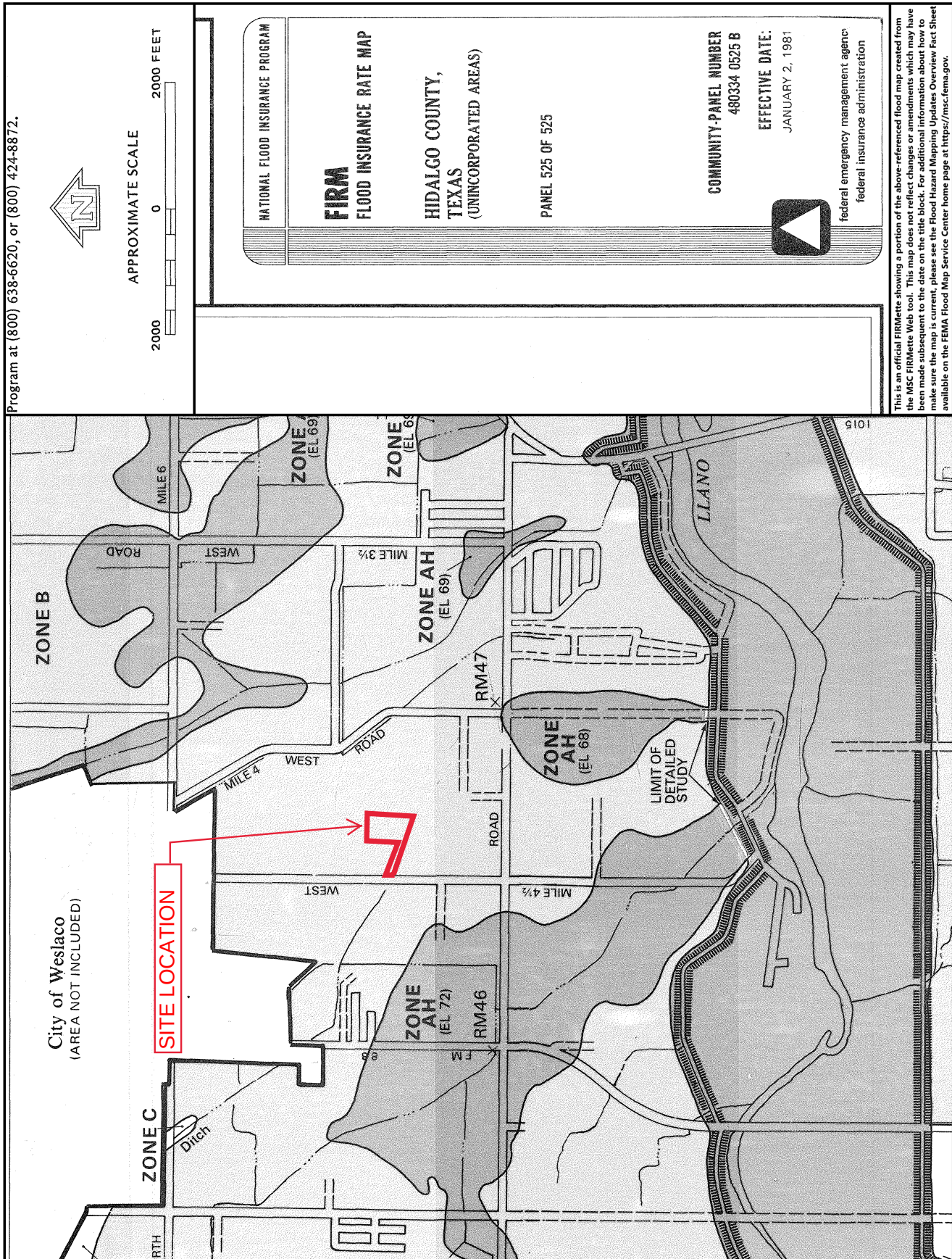
Report—Engineering Properties

Absence of an entry indicates that the data were not estimated. The asterisk ^{*} denotes the representative texture; other possible textures follow the dash. The criteria for determining the hydrologic soil group for individual soil components is found in the National Engineering Handbook, Chapter 7 issued May 2007 (<http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba>). Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Engineering Properties—Hidalgo County, Texas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	L-R-H
25—Hidalgo fine sandy loam, 0 to 1 percent slopes														
Hidalgo	85	B	0-17	Fine sandy loam	CL, SC-SM, SC, SM	A-2-4, A-4	0-0-0	0-0-0	100-100-100	94-96-100	84-94-100	35-47-56	15-23-25	1-7-8
			17-28	Sandy clay loam, clay loam	CL, SC	A-7-6, A-6	0-0-0	0-0-0	100-100-100	94-98-100	85-96-100	50-60-75	30-35-44	11-17-22
			28-38	Clay loam, sandy clay loam	CL, SC	A-7-6, A-6	0-0-0	0-0-0	95-97-100	91-94-100	81-93-100	54-68-81	30-38-44	11-17-22
			38-80	Clay loam, sandy clay loam	CL, SC	A-7-6, A-6	0-0-0	0-0-0	96-97-100	91-95-100	82-94-100	57-72-84	30-38-44	11-17-22
28—Hidalgo sandy clay loam, 0 to 1 percent slopes														
Hidalgo	85	B	0-17	Sandy clay loam	CL, SC	A-6	0-0-0	0-0-0	100-100-100	95-98-100	86-96-100	44-54-63	25-30-39	11-15-18
			17-28	Sandy clay loam, clay loam	CL, SC	A-7-6, A-6	0-0-0	0-0-0	100-100-100	94-98-100	85-96-100	50-60-75	30-35-44	11-17-22
			28-38	Clay loam, sandy clay loam	CL, SC	A-7-6, A-6	0-0-0	0-0-0	95-97-100	91-94-100	81-93-100	54-68-81	30-38-44	11-17-22
			38-80	Sandy clay loam, clay loam	CL, SC	A-7-6, A-6	0-0-0	0-0-0	96-97-100	91-95-100	82-94-100	57-72-84	30-38-44	11-17-22

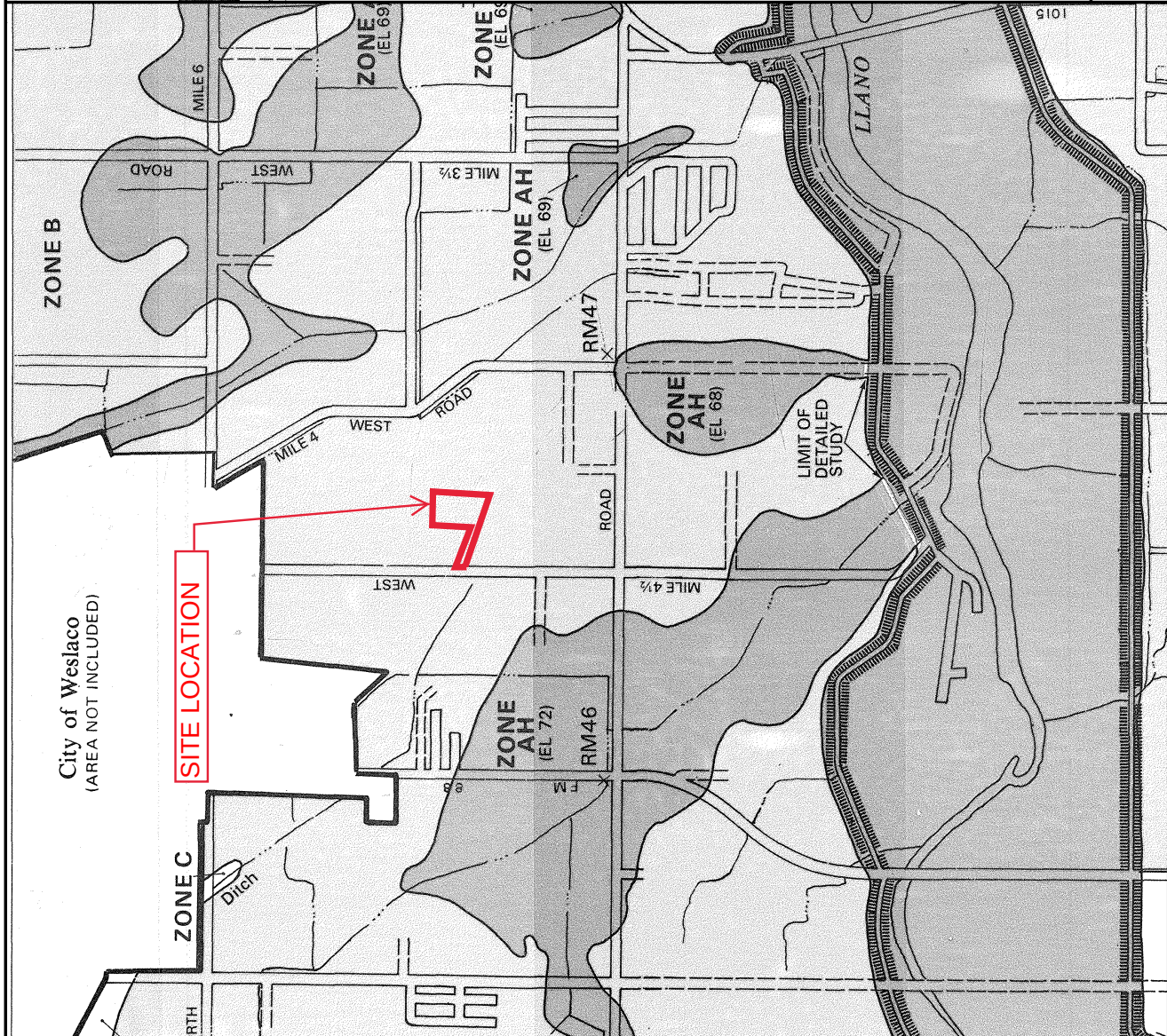
Data Source Information

Soil Survey Area: Hidalgo County, Texas
Survey Area Data: Version 22, Sep 5, 2023



COMMUNITY-PANEL NUMBER
480334 0525 B

EFFECTIVE DATE:
JANUARY 2, 1981



KEY TO MAP

500-Year Flood Boundary	ZONE B
100-Year Flood Boundary	ZONE A2
Zone Designations* With Date of Certification	DATE
100-Year Flood Boundary	ZONE A1
500-Year Flood Boundary	DATE
Base Flood Elevation Line With Elevation in Feet**	ZONE B
Base Flood Elevation in Feet Where Uniform Within Zone**	513
Elevation Reference Mark	(EL 987)
River Mile	RM7 X
	* M1.5

** Referenced to the National Geodetic Vertical Datum of 1929

***EXPLANATION OF ZONE DESIGNATIONS**

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths or flood hazard factors are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; base flood elevations and flood hazard factors with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at <https://msc.fema.gov>.

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TBPELS FRM No. F-21135

ENGINEERING

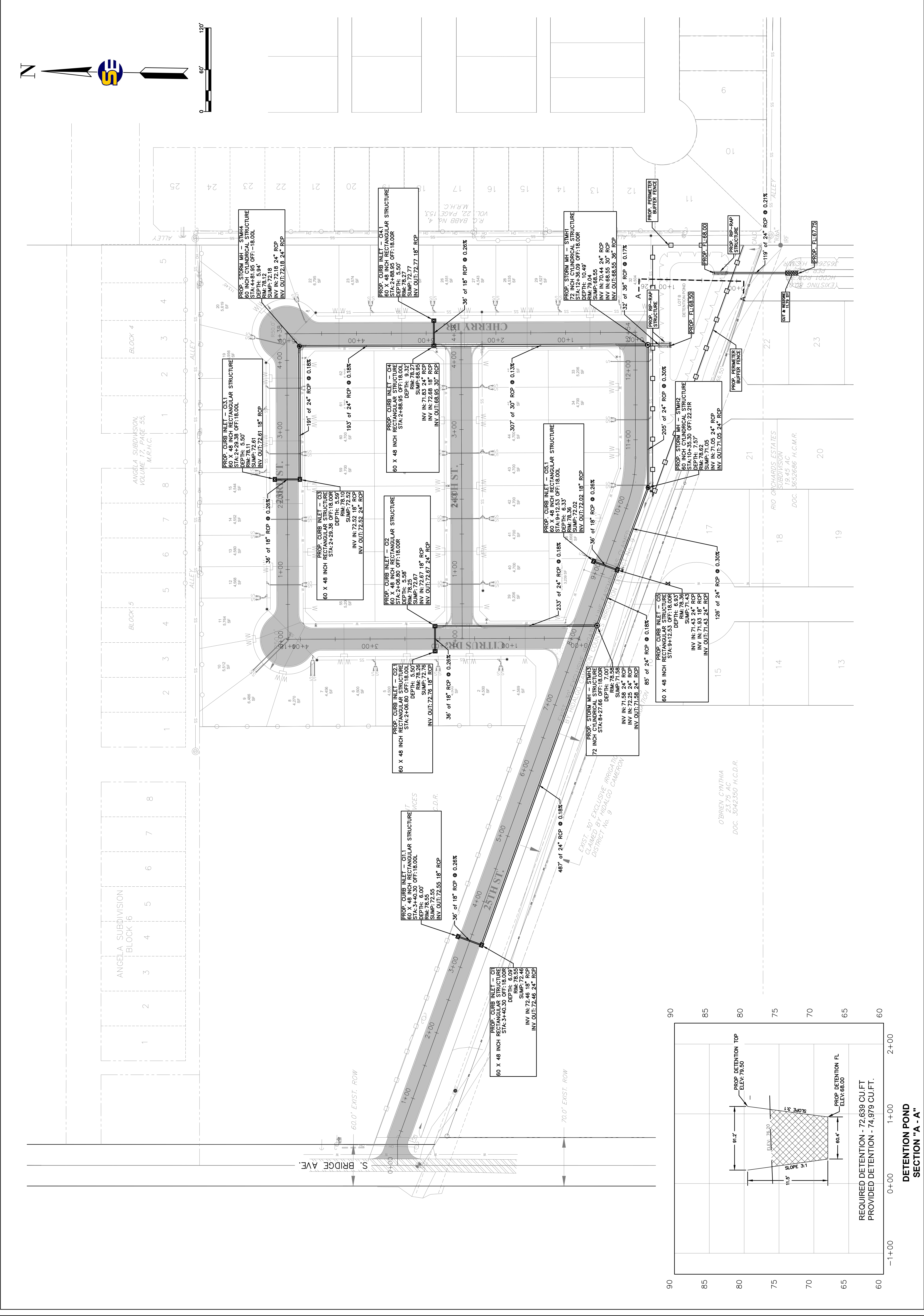
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SAN JUAN, TX 78589

BRIDGE HEIGHTS SUBDIVISION
OVERALL STORM SEWER PLAN

C7



C6.0

BRIDGE HEIGHTS SUBDIVISION
DRAINAGE AREA PLAN

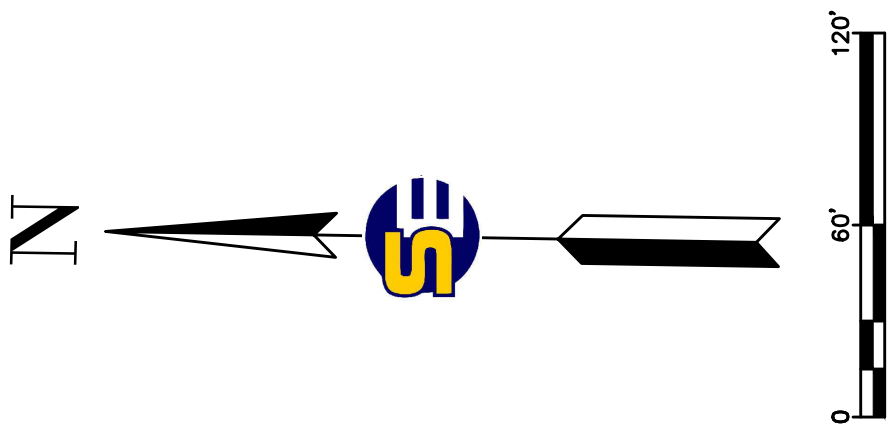
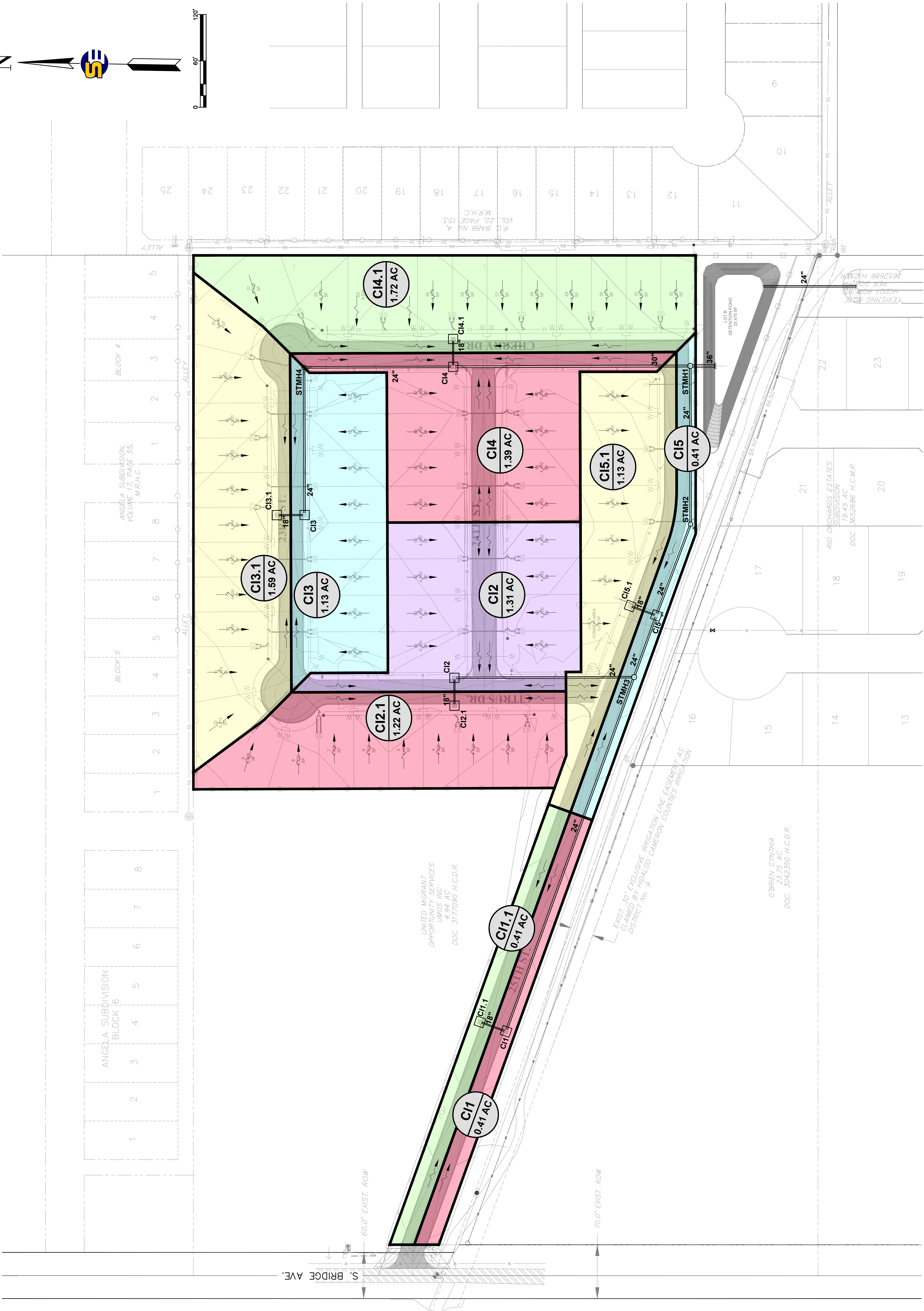
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PROJECT TEAM	DESIGN BY:	O.C.
J.L.G.	DRAWN BY:	O.C.
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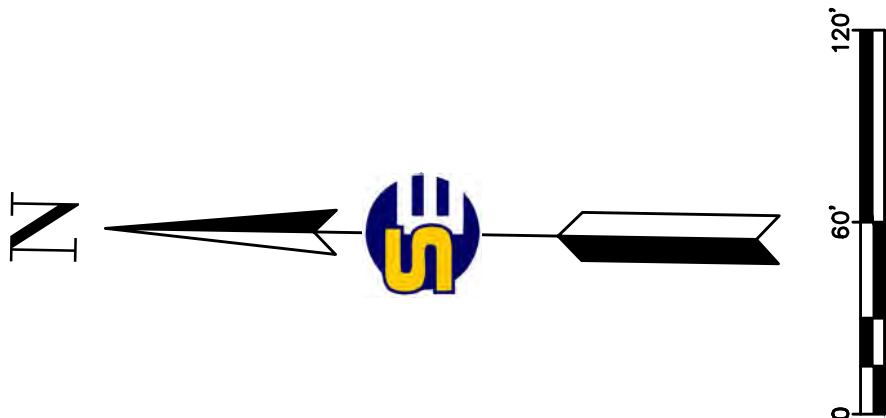
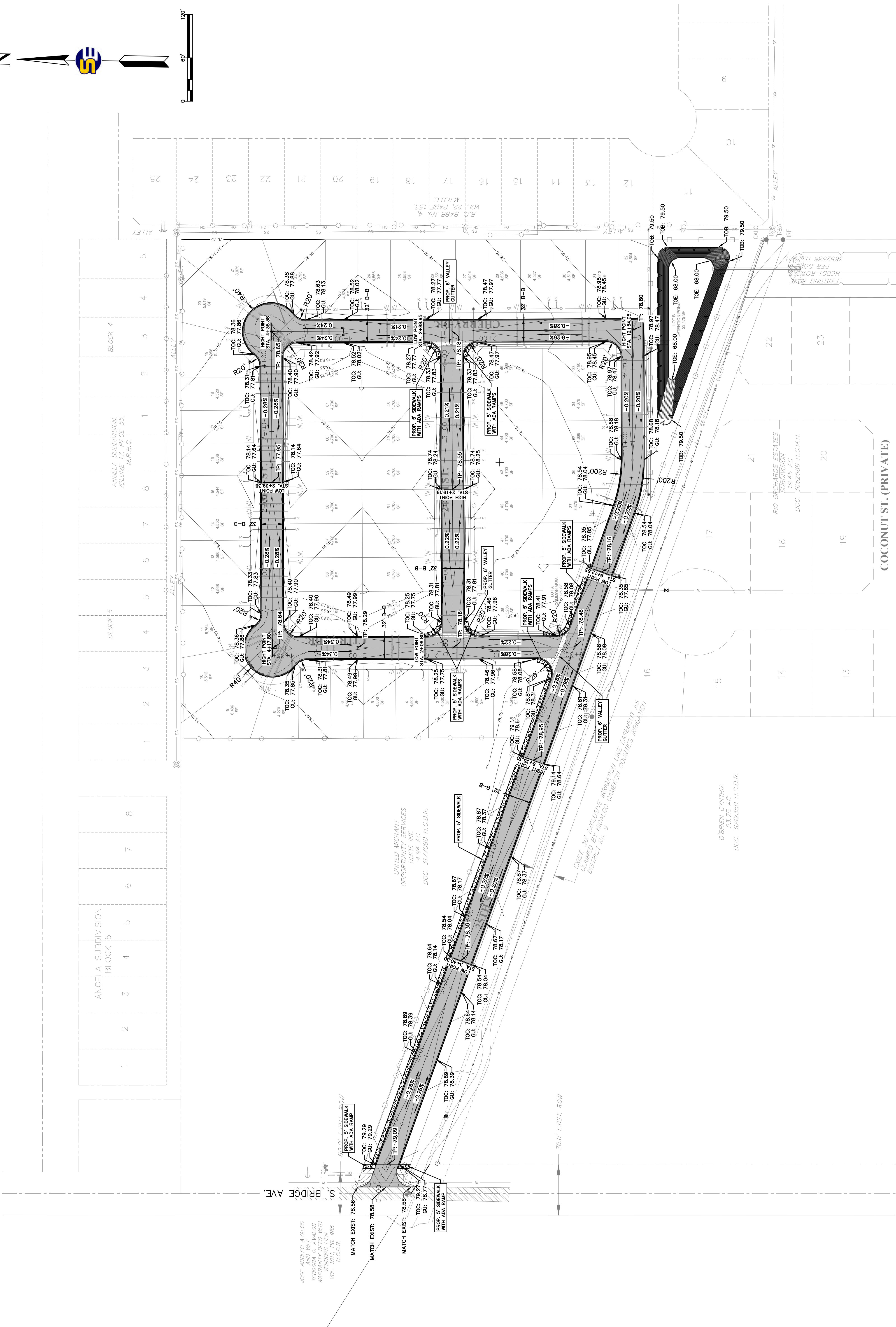
BRIDGE HEIGHTS SUBDIVISION
PAVING & GRADING PLAN

PROJECT No.	REVISIONS:	DESIGN BY:	PROJECT TEAM	DESIGN BY:	PROJECT TEAM
O.C.		O.C.		O.C.	
APPROVED BY:	REV	DESCRIPTION	DATE:	APPROVED	BY:
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