



DEVELOPMENT APPLICATION

PROJECT INFORMATION

Title: Los Alamos North Mesa Housing Master Plan: Preliminary Plat

Project Address: approx. 651 San Ildefonso Road, Los Alamos, NM, 87544

Description:

A subdivision of Tract D within Section 10, T191N R6E, N.M.P.M. Town & County of Los Alamos, NMM

Check all application types, if applicable:

- | | |
|---|--|
| <input type="checkbox"/> Administrative Deviation ... \$25 | <input type="checkbox"/> Site Plan* ... \$500 plus
\$75 per/Million \$ estimated construction cost |
| <input type="checkbox"/> Administrative Wireless Telecom ... \$250 | Estimated Construction Cost: _____ |
| <input type="checkbox"/> Encroachment Permit ... \$25 | <input type="checkbox"/> Major Site Plan Amendment* ... \$500 |
| <input type="checkbox"/> Temporary Use Permit ... \$25 | <input type="checkbox"/> Minor Site Plan Amendment ... \$250 |
| <input type="checkbox"/> Comprehensive Plan Adoption &
Amendment*... \$250 | <input type="checkbox"/> Major Zone Map Amendment* ... \$150
<i>No fee if initiated by County Council
or County Manager</i> |
| <input type="checkbox"/> Conditional Use Permit* ... \$300 | <input type="checkbox"/> Minor Zone Map Amendment* ... \$150
<i>No fee if initiated by County Council
or County Manager</i> |
| <input type="checkbox"/> County Landmark or Historic District
Adoption/Amendment* ... \$250 | <input type="checkbox"/> Master Plans* (Major, Minor) ...\$250 |
| <input type="checkbox"/> Development Plan* ... \$500 | <input type="checkbox"/> Text Amendment* ... \$150
<i>No fee if initiated by County Council
or County Manager</i> |
| <input type="checkbox"/> Major Development Plan Amendment* ... \$500 | <input type="checkbox"/> Variance ... \$250
<i>No fee if application is a part of a Site Plan review</i> |
| <input type="checkbox"/> Minor Development Plan Amendment ... \$250 | <input type="checkbox"/> Administrative Wireless Telecommunication
Facility ... \$250 |
| <input type="checkbox"/> Summary Plat... \$100 plus \$25 lot; \$10 / acre for
non-residential | <input type="checkbox"/> Discretionary Wireless Telecommunication
Facility* ... \$500 |
| <input type="checkbox"/> Sketch Plat, Subdivision*... \$250 plus
\$175/lot (1-10 lots)
\$125/lot (11-30 lots)
\$75/lot (30+ lots) | <input type="checkbox"/> Small Wireless Facility ...\$250 |
| <input type="checkbox"/> Preliminary Plat, Subdivision* ... \$250 plus
\$175/lot (1-10 lots)
\$125/lot (11-30 lots)
\$75/lot (30+ lots) | <input type="checkbox"/> Major Historic Demolition* ... \$250 |
| <input checked="" type="checkbox"/> Final Plat, Subdivision* ... \$250 plus
\$175/lot (1-10 lots)
\$125/lot (11-30 lots)
\$75/lot (30+ lots) | <input type="checkbox"/> Major Historic Property Alteration
Certification* ... \$250 |
| <input type="checkbox"/> Landscaping Plan ...\$500 | <input type="checkbox"/> Minor Historic Property Alteration Certificate ... \$250 |
| <input type="checkbox"/> Lighting Plan ...\$500 | |

*** Application reviews require a pre-application meeting.**

PROPERTY & OWNER INFORMATION

Property Address:	San Ildefonso Rd/North Mesa <small>Address</small>	Los Alamos <small>City</small>	NM <small>State</small>	87544 <small>ZIP</small>
Zoning District:	SFR-5 - Proposed	Lot Size - Acres / Sq. Ft.: 17.07		
Existing Structure(s) Sq. Ft.:	0.00	Lot Coverage:		
Property Owner(s) Name: Sonja Donaldson, Sande Cremer				
Owner(s) Email: sonjacdonaldson@gmail.com, cdcremer@aol.com				
Owner(s) Phone(s)#: 805-886-3999; 505-263-8842				
<input type="checkbox"/> Owner's Address same as Property Address				
Owner(s) Address:	179 Barranca Rd <small>Address</small>	Los Alamos <small>City</small>	NM <small>State</small>	87544 <small>ZIP</small>

APPLICANT / OWNER'S AGENT INFORMATION

<input type="checkbox"/> Applicant is same as Owner				
Applicant Name: Titan Development				
Applicant Address:	6300 Riverside Plaza Ln#200 <small>Address</small>	Albuquerque <small>City</small>	NM <small>State</small>	87120 <small>ZIP</small>
Applicant Email: jrogers@titan-development.com				
Applicant Phone(s)#: 505-998-0163				

ASSOCIATED APPLICATIONS

Application Type: Final Plat	
Case Number:	
<i>I hereby certify and affirm, under penalty of perjury, that the information I have provide in this application is true and accurate to the best of my knowledge, information, and belief. [NMSA 1978, §30-25-1]</i>	
Signature: Joshua Rogers <small>Digitally signed by Joshua Rogers Date: 2025.04.28 14:33:40 -06'00'</small>	Date: 07/16/25

STAFF USE ONLY

Date Received:	Staff: djl
Case No. #: SUB-2025-0022	Meeting Date: August 27, 2025

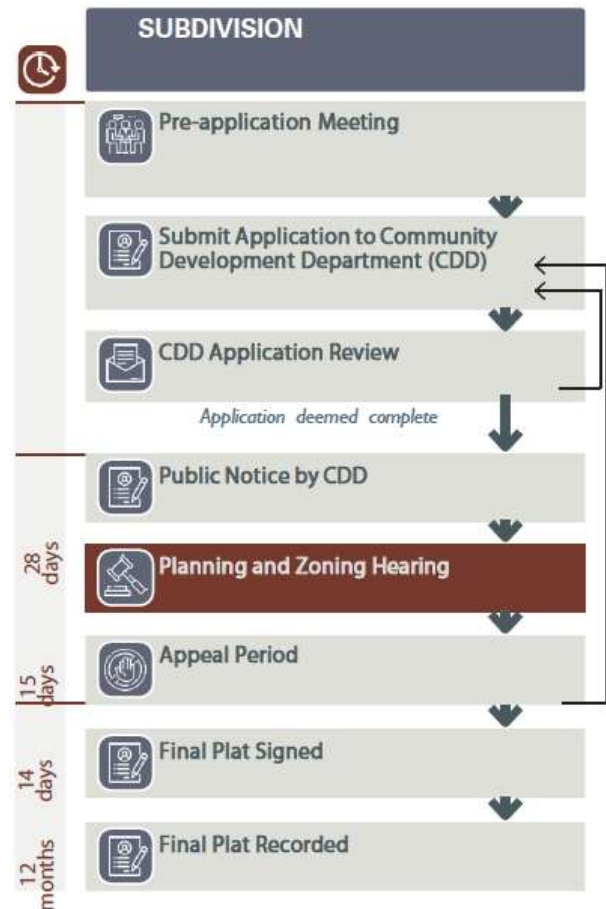
SUBMITTALS

- | | |
|---|---|
| <input checked="" type="checkbox"/> Proof of Ownership or
Letter of Authorization from Owner | <input checked="" type="checkbox"/> Complete Application – Date: _____ |
| <input checked="" type="checkbox"/> Items from associated Application Checklist | <input checked="" type="checkbox"/> Payment – Accepted upon verification of a complete
application - Date: _____ |

SUBDIVISION CHECKLIST (SKETCH, PRELIMINARY, AND FINAL PLATS)

Applicants for all development application reviews must complete this checklist and submit it with the Development Application. Refer to the referenced code sections for additional information. Contact the Planning Division with questions regarding these requirements: planning@lacnm.us.

PRE-APPLICATION MEETING
Date Held:
SUBMITTALS FOR SUBDIVISION
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> A Vicinity map, showing the boundaries of the property to be subdivided, and all adjacent lots within 300 feet. <input checked="" type="checkbox"/> A scaled Plat or survey which shall indicate and dimension any existing utility lines. <input checked="" type="checkbox"/> Show and label the footprint of all existing buildings and structures on the site. <input type="checkbox"/> Show the footprint of all buildings and public rights-of-way within 20 feet of all boundaries of the site. <input checked="" type="checkbox"/> Show, dimension and label all existing and proposed easements. <input type="checkbox"/> Subdivision Final plats shall include a list of any variances and/or deviations granted as an exhibit or note. <p>Note: There shall be no more than 12 months between final action on a preliminary plat and application for final plat.</p>
ADDITIONAL SUBMITTALS
Based on staff's review and Interdepartmental Review Committee's recommendation – additional submittals may be needed and will be communicated to the applicant by the assigned Case Manager.



See Reverse.

DECISION CRITERIA 16-74 - (a)(3)

- a. The development of the property substantially conforms to the intent and policies of the Comprehensive Plan and other adopted County policies and plans. Explain.

See Justification Letter for Items a. through j.

☐ *Staff finds that this criterion has been met*

☐ *Staff finds that this criterion has not been met – more information is needed*

- b. The subdivision action shall not be materially detrimental to public health, safety, and welfare. Explain.

☐ *Staff finds that this criterion has been met*

☐ *Staff finds that this criterion has not been met – more information is needed*

- c. The subdivision is in conformance with all applicable provisions of this Code and other adopted County regulations. Explain.

☐ *Staff finds that this criterion has been met*

☐ *Staff finds that this criterion has not been met – more information is needed*

d. The subdivision must be served or be capable of being served by all public utilities, with the exception of subdivisions for the R-E and R-A zone districts where it is determined by the Utilities Manager that it is economically unfeasible to extend sewer lines. Explain.

- ☐ *Staff finds that this criterion has been met*
- ☐ *Staff finds that this criterion has not been met – more information is needed*

e. The County's public infrastructure and services required to serve the proposed development including but not limited to water, sanitary sewer, electricity, gas, storm sewer, streets, etc. have adequate capacity to serve the proposed subdivision or made to be adequate if improvements are required in compliance with the County's construction standards, drainage standards, and adopted Utilities Department plans and specifications. Explain.

- ☐ *Staff finds that this criterion has been met*
- ☐ *Staff finds that this criterion has not been met – more information is needed*

f. Any necessary easements shall be provided for both existing and proposed utilities in an acceptable manner to the County Engineer and Utilities Manager. Explain.

- ☐ *Staff finds that this criterion has been met*
- ☐ *Staff finds that this criterion has not been met – more information is needed*

g. The plat retains natural features such as watercourses, natural vegetation, terrain, historic and archaeological sites and structures, and other community assets, which if preserved, will contribute to the overall appearance and quality of life in the County to the maximum extent feasible. Explain.

☐ *Staff finds that this criterion has been met*

☐ *Staff finds that this criterion has not been met - more information is needed*

h. The subdivision does not create a nonconformity or increase the extent or degree of an existing nonconformity with the provisions of this Code unless a Variance pursuant to Sec. 16-74(f) is approved concurrently with the plat. Explain.

☐ *Staff finds that this criterion has been met*

☐ *Staff finds that this criterion has not been met - more information is needed*

i. An application for a Preliminary Plat shall be approved if it complies with all applicable provisions of this Code, any other adopted County regulations, and any conditions specifically applied to development of the property in a prior permit or approval affecting the property. Explain.

☐ *Staff finds that this criterion has been met*

☐ *Staff finds that this criterion has not been met - more information is needed*

j. An application for a Final Plat shall be approved if it includes all changes, conditions, and requirements contained in the Preliminary Plat approval. Explain.

- ☐ *Staff finds that this criterion has been met*
- ☐ *Staff finds that this criterion has not been met – more information is needed*

Attach additional sheets, if needed.

May 8, 2025

Desirae Lujan, Senior Planner
Los Alamos County Community Development-Planning
1000 Central Ave., Suite 120
Los Alamos, NM 87544

RE: Letter of Authorization for Limited Agency

Dear Ms. Lujan:

The letter authorizes Consensus Planning and Titan Development (collectively, "Titan"), to act as a Limited Agent and Limited Applicant (collectively, the "Limited Agent") on behalf of the property owners, Sonja C. Donaldson and Sande D. Cremer (collectively, the "Owners"), of the real property located at 659 San Ildefonso Road (the "Property"). Pursuant to the Purchase and Sale Agreement by and between Titan and the Owners, the Owners grant Titan limited authority to act as their Limited Agent for the following matters relating to the development and replating of Property: (i) all meetings and public hearings before the County of Los Alamos, New Mexico (the "County"); and (ii) development applications submitted to the County relating to the future development of the Property and the review and approval of a new Preliminary Plat. The limited agency granted to Titan by the Owner does not include the authority to do the following: (i) submit any development or rezoning applications to the County without first obtaining the Owners' express written consent; (ii) sign any 'Owner Affidavit' on behalf of the Owner; or (iii) record any plat without the Owners' written consent and signature on the plat to be recorded. The Limited Agency granted to Titan herein may not be expanded without the express written consent of the Owner.

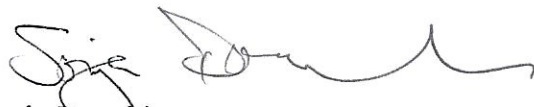
The Owner owns the subject property legally described as:

A SUBDIVISION OF TRACT D WITHIN SECTION 10, T19N R6E N.M.P.M., TOWN AND
COUNTY OF LOS ALAMOS, NEW MEXICO.

The County may contact the Owner using the following contact information:

Sonja C. Donaldson
2581 Paseo Noche
Camarillo, California 93012
Telephone: (805) 886-3999
Email: sonjacdonaldson@gmail.com

Sande D. Cremer
179 Barranca Road
Los Alamos, New Mexico 87544
Telephone: (505) 263-8842
Email: cdcremer@aol.com


Sonja Donaldson

Certificate Attached for
California Notary Wordling

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Ventura)

On May 8, 2025 before me, Taylor Anthony Mensinger Notary Public
(insert name and title of the officer)

personally appeared Sonja C. Donaldson,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are
subscribed to the within instrument and acknowledged to me that he/she/they executed the same in
his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

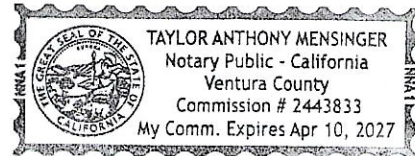
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing
paragraph is true and correct.

WITNESS my hand and official seal.

Signature



(Seal)



May 8, 2025

Desirae Lujan, Senior Planner
Los Alamos County Community Development-Planning
1000 Central Ave., Suite 120
Los Alamos, NM 87544

RE: Letter of Authorization for Limited Agency

Dear Ms. Lujan:

The letter authorizes Consensus Planning and Titan Development (collectively, "Titan"), to act as a Limited Agent and Limited Applicant (collectively, the "Limited Agent") on behalf of the property owners, Sonja C. Donaldson and Sande D. Cremer (collectively, the "Owners"), of the real property located at 659 San Ildefonso Road (the "Property"). Pursuant to the Purchase and Sale Agreement by and between Titan and the Owners, the Owners grant Titan limited authority to act as their Limited Agent for the following matters relating to the development and replating of Property: (i) all meetings and public hearings before the County of Los Alamos, New Mexico (the "County"); and (ii) development applications submitted to the County relating to the future development of the Property and the review and approval of a new Preliminary Plat. The limited agency granted to Titan by the Owner does not include the authority to do the following: (i) submit any development or rezoning applications to the County without first obtaining the Owners' express written consent; (ii) sign any 'Owner Affidavit' on behalf of the Owner; or (iii) record any plat without the Owners' written consent and signature on the plat to be recorded. The Limited Agency granted to Titan herein may not be expanded without the express written consent of the Owner.

The Owner owns the subject property legally described as:

A SUBDIVISION OF TRACT D WITHIN SECTION 10, T19N R6E N.M.P.M., TOWN AND
COUNTY OF LOS ALAMOS, NEW MEXICO.

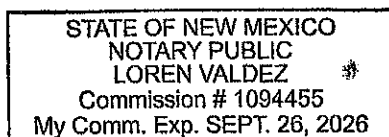
The County may contact the Owner using the following contact information:

Sonja C. Donaldson
2581 Paseo Noche
Camarillo, California 93012
Telephone: (805) 886-3999
Email: sonjacdonaldson@gmail.com

Sande D. Cremer
179 Barranca Road
Los Alamos, New Mexico 87544
Telephone: (505) 263-8842
Email: cdcremer@aol.com

Sincerely,

Owner



A handwritten signature in cursive script that reads "Sande D. Cremer".

ATTACHMENT C



July 16, 2025 - Updated August 5, 2025

Ms. Desirae Lujan, Senior Planner
Los Alamos County Planning Division
1000 Central Avenue
Los Alamos, NM 87544

Re: North Mesa Housing Final Plat

Landscape Architecture
Urban Design
Planning Services

302 Eighth St. NW
Albuquerque, NM 87102

(505) 764-9801
Fax 842-5495
cp@consensusplanning.com
www.consensusplanning.com

Dear Ms. Lujan,

The purpose of this letter is to request a Final Plat approval on behalf of Titan Development to create a new single family housing subdivision and a new tract for a future cottage development. The Preliminary Plat was approved on June 11, 2025.

SITE HISTORY

The subject property is currently known as the Arbolada Subdivision, as recorded by the County in August 2023.

EXISTING CONDITIONS

The subject property consists of approximately 17.1 acres zoned SFR-4, Single Family Residential (8,000 s.f. minimum lot size) as shown below and SFR-5 (proposed) to the west. Adjacent zoning is SFR-5 to the east (5,000 s.f. minimum lot size); Vacant land to the south and west (Pueblo Canyon); and RM-1 Residential Mixed to the north as shown:



Exhibit 1: Subject property with surrounding zoning

PRINCIPALS

James K. Strozier, FAICP
Jacqueline Fishman, AICP

ASSOCIATES

Ken Romig, PLA, ASLA
Margaret Ambrosino, AICP

The subject property is situated on the south side of San Ildefonso Road on North Mesa and is legally described as: A SUBDIVISION OF TRACT D WITHIN SECTION 10, T19N R6E N.M.P.M., TOWN AND COUNTY OF LOS ALAMOS, NEW MEXICO.



Exhibit 2: Existing Plat of Arbolada, recorded in August 2023

PROPOSAL

The proposed Final Plat is consistent with the approved Preliminary Plat and replaces the Arbolada Subdivision as a split development containing 23 single family fee-simple lots to the west, and one large tract to the east to accommodate a cottage, build-to-rent townhome concept under a future Conditional Use Permit. The following graphic shows the proposed plat ; including 23 single-family lots (yellow) and the 9-acre tract (white) to the east:

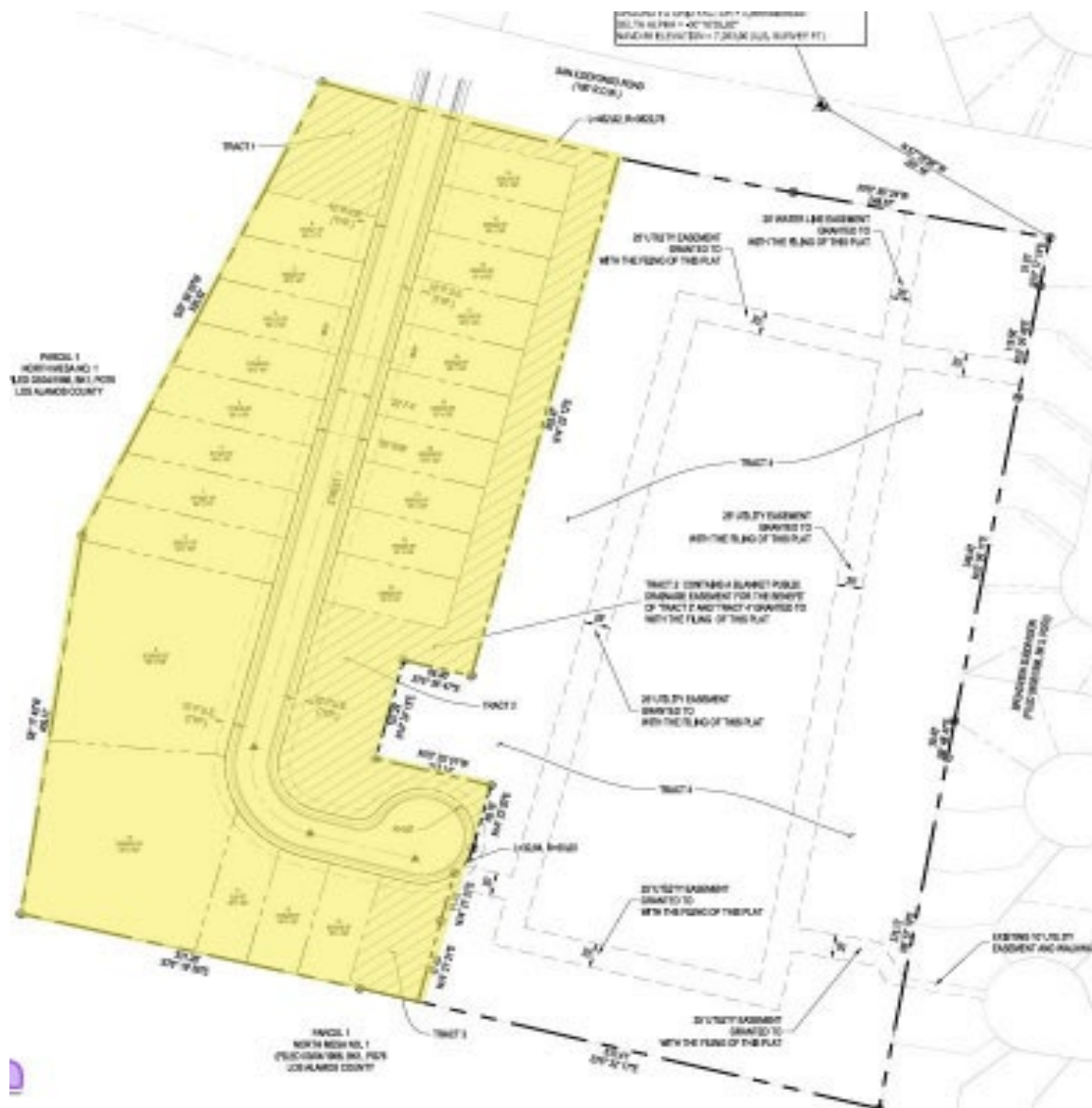


Exhibit 3: Proposed Plat subject area (full plat attached separately in submittal packet)

The following responses address the Decision Criteria as set out in Section 16-74 - (a)(3):

a. The development of the property substantially conforms to the intent and policies of the Comprehensive Plan and other adopted County policies and plans. Explain.

The proposed subdivision will yield 23 single-family lots and create a larger tract to the east for a future cottage development that when completed, will yield 114 Build-to-Rent townhomes. In total, 136 new housing units will be added to Los Alamos' housing stock when fully developed. This helps meet the goal of the 2016 Comprehensive Policy #1 by promoting and expanding the housing supply to meet the demand from employment growth. These units are intended to serve members of the community of all ages, from families, workforce, and retirees, thus addressing Policy #2, to promote housing for seniors, students, and the workforce.



Additionally, the 2024 Los Alamos Affordable Housing Plan states that nearly 55 percent of the County’s workforce live outside of the County, with “anecdotal evidence suggesting majority of these in-commuters are interested but unable to become residents due to insufficient, unavailable, or unaffordable housing” (pg.20). These developments add essential housing stock, to help preserve and retain spending in the community. This housing clearly benefits the community economically because those that may otherwise commute to Los Alamos can now shop in the community where they live, thus contributing to gross receipts tax.

b. The subdivision action shall not be materially detrimental to public health, safety, and welfare. Explain.

Approval of this subdivision is not detrimental to public health, safety or welfare because the technical criteria has been met at the Preliminary Plat stage. Should minor technical corrections be noted as required by County Public Works and Public Utilities staff, they will be incorporated prior to the Final Plat submission. The development team met with the North Mesa neighborhood on April 10 where the full development concept was presented with the anticipated phasing of Planning & Zoning Commission hearings. The first concern addressed was traffic. A Traffic Count Analysis was prepared that shows a total of 15 peak travel time morning and evening trips will be added by the proposed developments as shown:

Traffic Analysis

Traffic Count Analysis Prepared By Lee Engineering

TRIP GENERATION DATA
ITE Trip Generation Manual - 10th Edition

PREVIOUSLY APPROVED		TOTAL TRIPS GENERATED						
		UNITS	WEEKDAY	AM PEAK TOTAL		PM PEAK TOTAL		
			TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
SINGLE FAMILY	85	869	16	48	64	54	31	85
TOTAL	85	869	16	48	64	54	31	85
PROPOSED			TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
BUILD TO RENT MULTIFAMILY	114	821	14	41	55	38	27	65
SINGLE FAMILY	23	261	5	15	20	16	9	25
TOTAL	137	1082	19	56	75	54	36	90
DIFFERENCE	52	213	3	8	11	0	5	5

Exhibit 4: Current Traffic Count Analysis

Also discussed was the ingress/egress to the development, with no anticipated sight obstructions present due to the deep setbacks exceeding the required 10 foot setback for the northern side (single-family) and the front yard (cottage development to the east) adjacent to San Ildefonso Road. Architectural elevations were shared with the community, displaying Craftsman-inspired facades in earth tones to augment the variety of styles in the community. Lastly, concepts were discussed addressing landscape enhancements where the eastern portion of the development abuts the existing single-family development on its western edge, with a desire expressed to work with the neighbors on a design that meets



development standards, provides adequate buffering, and preserves western views to the extent feasible.

c. The subdivision is in conformance with all applicable provisions of this Code and other adopted County regulations. Explain.

The Development Team has submitted all required elements pursuant to the Final Plat Application checklist. A fire access roadway is shown on the plat and conforms to the requirements of the Los Alamos County Fire Marshal. Grading will be in conformance with the County Development Code. Rear-yard setbacks, particularly on the western edge of the single-family lots, avoid steep topography and adhere to all other setback and dimensional requirements pursuant to the requested SFR-5.

d. The subdivision must be served or be capable of being served by all public utilities, with the exception of subdivisions for the R-E and R-A zone districts where it is determined by the Utilities Manager that it is economically unfeasible to extend sewer lines. Explain.

The Los Alamos County Department of Public Utilities has confirmed that service for gas, water, electric can be provided via existing connections via San Ildefonso Road. Drawings of existing utility connections for electric transmission, water, sewer, and stormwater have been provided by the Department of Public Utilities and have been incorporated into this Final Plat.

e. The County's public infrastructure and services required to serve the proposed development including but not limited to water, sanitary sewer, electricity, gas, storm sewer, streets, etc. have adequate capacity to serve the proposed subdivision or made to be adequate if improvements are required in compliance with the County's construction standards, drainage standards, and adopted Utilities Department plans and specifications. Explain.

A Utility Plan has been included in this submittal, reflecting individual metering for the single-family lots along with dedications of a PUE for electric, water, sewer, and gas lines. Ponding areas to the southeast portion of the site and along the eastern edge are identified pursuant to the approved grading and drainage plan along with the associated specifications addressed on the plat. Historic flows shall be maintained, with the prevention of runoff occurring over DOE Areas of Concern, where applicable, and subject to technical corrections by the County Engineer with this Final Plat submittal. Sidewalks and street improvements to San Ildefonso Road will be in accordance with the County's construction improvements standards, as stated in Section 16.93 of the Land Development Code.

f. Any necessary easements shall be provided for both existing and proposed utilities in an acceptable manner to the County Engineer and Utilities Manager. Explain.

Easements that have been identified as required in this Final Plat submittal include a 26-foot wide emergency vehicular access between the southern end of this proposed subdivision at the cul-de-sac, connecting to the future cottage development to the east. The primary access to the subdivision via San Ildefonso Road is provided and is sufficient for emergency access by County emergency standards. Utility easements are also shown with this Final



Plat Application.

g. The plat retains natural features such as watercourses, natural vegetation, terrain, historic and archaeological sites and structures, and other community assets, which if preserved, will contribute to the overall appearance and quality of life in the County to the maximum extent feasible. Explain.

The terrain is relatively flat, with steeper slopes towards Pueblo Canyon at the southwest and southeast tract corners as indicated via the ALTA survey included with this submittal. The existing natural vegetation consists of common wild shrubs and naturally occurring pinon trees present on the southern portion of the tract. The property was recently surveyed for the approved Arbolada Subdivision and no sensitive archaeological sites or structures were identified.

h. The subdivision does not create a nonconformity or increase the extent or degree of an existing nonconformity with the provisions of this Code unless a Variance pursuant to Sec. 16-74(f) is approved concurrently with the plat. Explain.

The future developments meet setbacks and density requirements without creating non conformities or indicating a need for any variances to the proposed subdivision. This submittal creates 23 single-family lots for future homes to be built, and one future cottage development tract to the east that will accommodate low rise duplex and triplex townhomes on that single tract. This Final Plat Application and proposal includes the approval of a modest upzoning from SFR-4 to SFR-5 for the west, single-family portion of the development, with all lots demonstrating conformity with SFR-5 setbacks as shown on the submitted drawing. the minor Zone Map Amendment was approved of July 23, 2025. Even with the recent zone change, the density for the single family lots remains the same due to the two large lots shown in the final plat. The east portion of the development retains its existing SFR-4 zoning designation with setbacks in excess of the required 10-foot front yard setback, 5-foot interior side setbacks, and the required 15-foot rear setback. It also complies dimensionally and for density with the standards set forth in Sec. 16-15(a), Dwelling, Cottage Development with conformance to additionally be demonstrated with the Conditional Use Permit Application being heard with this final plat.

i. An application for a Preliminary Plat shall be approved if it complies with all applicable provisions of this Code, any other adopted County regulations, and any conditions specifically applied to development of the property in a prior permit or approval affecting the property. Explain.

The preliminary plat was approved on June 11, 2025.

j. An application for a Final Plat shall be approved if it includes all changes, conditions, and requirements contained in the Preliminary Plat approval. Explain.

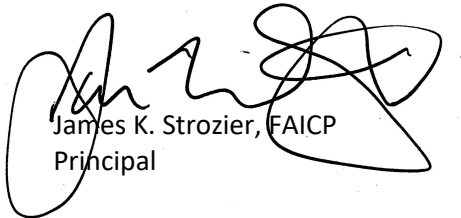


The Final Plat addresses the conditions and requirements in the Preliminary Plat approval, of which there were none.

The intent of this Final Plat submittal is to furnish a substantially complete plan to demonstrate feasibility of development and in compliance with Chapter 16 Development Code, along with all engineering standards to facilitate a Final Plat submittal that meets and implements the prior approval of the Preliminary Plat.

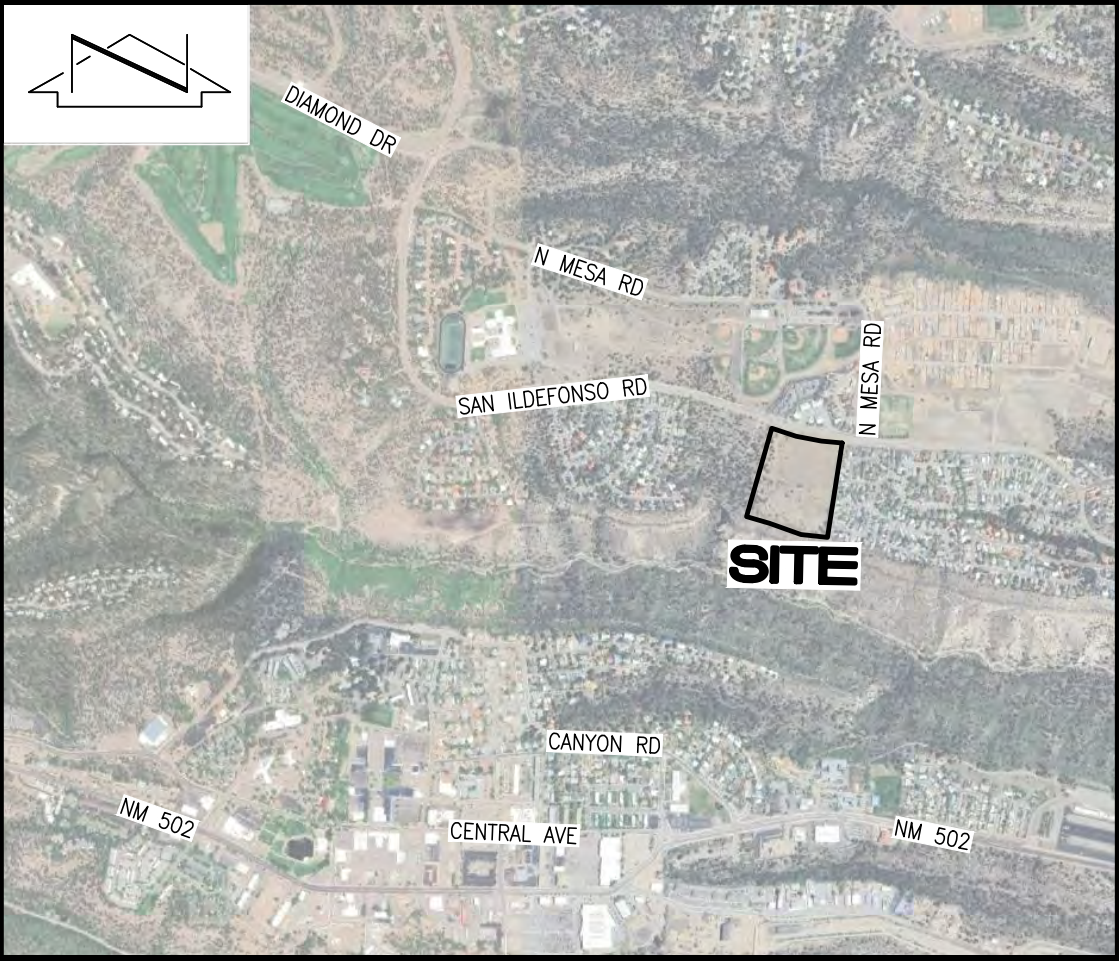
In conclusion, the development team feels that this submittal satisfies the 10 Final Plat criteria as described and respectfully requests conditional approval on any and all technical revisions as specified prior to Final Plat Application submittal.

Sincerely,



James K. Strozier, FAICP
Principal

File Name: V:\460300 - Arbolada Subdivision\460300-01-001 (SUR) - SUR Services\Survey\460300_PLAT.dwg - PLAT Plot Date: 8/20/25 Plot Time: 15:59



VICINITY MAP

NOT TO SCALE

PURPOSE OF PLAT

THE PURPOSE OF THIS PLAT IS TO:

- ELIMINATE THE INTERIOR PROPERTY LINES OF THE FORMER ARBOLADA SUBDIVISION.
- CREATE NEW SUBDIVISION LOTS AND TRACTS AND MULTI-FAMILY PARCEL.

SUBDIVISION DATA

CURRENT ZONING: SFR-4

PROPOSED ZONING: SFR-4 AND SFR-5

NUMBER OF EXISTING LOTS: 85

NUMBER OF PROPOSED TRACTS: 4

NUMBER OF PROPOSED LOTS: 23

GROSS SUBDIVISION ACREAGE: 17.066 ACRES±

NET SUBDIVISION ACREAGE: 17.066 ACRES±

DEDICATION AND FREE CONSENT

THE SUBDIVISION HEREON IS WITH THE FREE CONSENT AND IN ACCORDANCE WITH THE DESIRES OF THE UNDERSIGNED OWNERS AND DOES HEREBY DEDICATE TO THE CITY OF LOS ALAMOS IN FEE SIMPLE WITH WARRANTY COVENANTS THE PUBLIC STREET RIGHTS-OF-WAY AND GRANT THE EASEMENTS AS SHOWN, INCLUDING THE RIGHTS OF INGRESS AND EGRESS AND THE RIGHT TO TRIM INTERFERING TREES. WE HEREBY WARRANT THAT WE HOLD COMPLETE AND INDEFEASIBLE TITLE IN FEE SIMPLE TO THE LAND SUBDIVIDED, HEREON.

SANDE CREMER, OWNER DATE

SONJA DONALDSON, OWNER DATE

ACKNOWLEDGEMENT

STATE OF NEW MEXICO)

COUNTY OF LOS ALAMOS)

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS ____ DAY OF _____, 2025, BY SANDE CREMER AND SONJA DONALDSON, OWNER.

NOTARY PUBLIC

Bowman

6200 Jefferson St. NE, Suite 110, Albuquerque, NM 87109
P:505.345.4250 **bowman.com**

JOB #460300-02

FINAL PLAT OF ARBOLADA SUBDIVISION

PROJECTED SECTION 10, T. 19 N, R. 6 E
LOS ALAMOS, SANTA FE COUNTY, NEW MEXICO
AUGUST, 2025

SANDE CREMER AND SONJA DONALDSON
OWNER

SEC. 10, T 19 N, R 6 E, N.M.P.M.
LOCATION

ARBOLADA
SUBDIVISION

COUNTY CLERK FILING DATA

NOTES:

- AN ALTA/NSPS, TOPOGRAPHIC AND UTILITY SURVEY WAS PERFORMED IN FEBRUARY, 2025. PROPERTY CORNERS WERE FOUND OR SET AS INDICATED.
- SITE LOCATED WITHIN SECTION 10, TOWNSHIP 19 NORTH, RANGE 6 EAST, N.M.P.M.
- ALL DISTANCES ARE GROUND DISTANCES.
- BEARINGS SHOWN HEREON ARE NEW MEXICO STATE PLANE GRID BEARINGS, CENTRAL ZONE (NAD 83). THESE BEARINGS ARE POSITIONED FROM LOS ALAMOS COUNTY CONTROL STATION "JOE".
- RECORD BEARINGS AND DISTANCES ARE SHOWN IN PARENTHESIS.
- THE PURPOSE OF THIS PLAT IS TO:
 - ELIMINATE THE INTERIOR PROPERTY LINES BETWEEN FORMER LOTS 25-27, INCLUSIVE.
 - VACATE PREVIOUS EASEMENTS PER PLAT OF ARBOLADA SUBDIVISION FILED AUGUST 15, 2023, DOC. NO. 255184, LOS ALAMOS COUNTY, NM.
 - CREATE NEW SUBDIVISION AND MULTI-FAMILY PARCEL.
- THE FOLLOWING DOCUMENTS AND INSTRUMENTS WERE USED FOR THE PERFORMANCE AND PREPARATION OF THIS SURVEY:
 - A. COMMITMENT FOR TITLE INSURANCE ISSUED BY STEWART TITLE GUARANTY COMPANY, COMMITMENT #2432113, DATED SEPTEMBER 09, 2024 AT 8:00 AM.
 - BULK PLAT OF NORTH MESA NO.1 FILED MARCH 4, 1966, BOOK 1, PAGE 76, LOS ALAMOS COUNTY, NM.
 - PLAT OF PUEBLO BLUFFS SUBDIVISION FILED MAY 7, 1986, BOOK 5, PAGE 37, LOS ALAMOS COUNTY, NM.
 - PLAT OF BROADVIEW SUBDIVISION FILED SEPTEMBER 5, 1986, BOOK 5, PAGE 50, LOS ALAMOS COUNTY, NM.
 - PLAT OF BROADVIEW REPLAT NO. 2 FILED FEBRUARY 19, 1993, BOOK 5, PAGE 37, LOS ALAMOS COUNTY, NM.
 - PLAT OF ARBOLADA SUBDIVISION FILED AUGUST 15, 2023, DOC. NO. 255184, LOS ALAMOS COUNTY, NM
 - SPECIAL WARRANTY DEED FILED JANUARY 20, 1967, BOOK 7, PAGE 768, LOS ALAMOS COUNTY, NM.
 - RELEASE OF MORTGAGE FILED AUGUST 16, 2002, BOOK 105, PAGE 562, LOS ALAMOS COUNTY, NM.

PROJECT NUMBER _____

APPLICATION NUMBER _____

APPROVALS:

COUNTY SURVEYOR DATE

COUNTY ENGINEER DATE

UTILITIES MANAGER DATE

CHAIR OF LOS ALAMOS COUNTY PLANNING AND ZONING COMMISSION DATE

DIRECTOR LOS ALAMOS COUNTY COMMUNITY DEVELOPMENT DEPARTMENT DATE

INCORPORATED COUNTY OF LOS ALAMOS COUNTY CLERK DATE

SURVEYORS CERTIFICATION

I, JOSEPH M. SOLOMON, JR., NEW MEXICO PROFESSIONAL SURVEYOR NO. 15075, DO HEREBY CERTIFY; THAT THIS PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT THE SURVEY SHOWS ALL EASEMENTS MADE KNOWN TO ME BY THIS OWNER, UTILITY COMPANIES, OR OTHER PARTIES EXPRESSING AN INTEREST; THAT THIS SURVEY COMPLIES WITH THE MINIMUM REQUIREMENTS FOR MONUMENTATION AND SURVEYS OF THE ALBUQUERQUE SUBDIVISION ORDINANCE; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO, AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

JOSEPH M. SOLOMON, JR., NMPS 15075

DATE



ATTACHMENT C

File Name: V:\460300 - Arbolada Subdivision\460300_PLAT.dwg - PLAT 2 Plot Date: 8/20/25 Plot Time: 15:59 ATTACHMENT C

LOT/TRACT CONSOLIDATION AND EASEMENT VACATION DIAGRAM

ARBOLADA SUBDIVISION

PROJECTED SECTION 10, T. 19 N, R. 6 E
LOS ALAMOS, SANTA FE COUNTY, NEW MEXICO
AUGUST, 2025

SANDE CREMER AND SONJA DONALDSON
OWNER

SEC. 10, T 19 N, R 6 E, N.M.P.M.
LOCATION

ARBOLADA
SUBDIVISION

COUNTY CLERK FILING DATA

EASEMENTS NOTES (ALL TO BE VACATED)

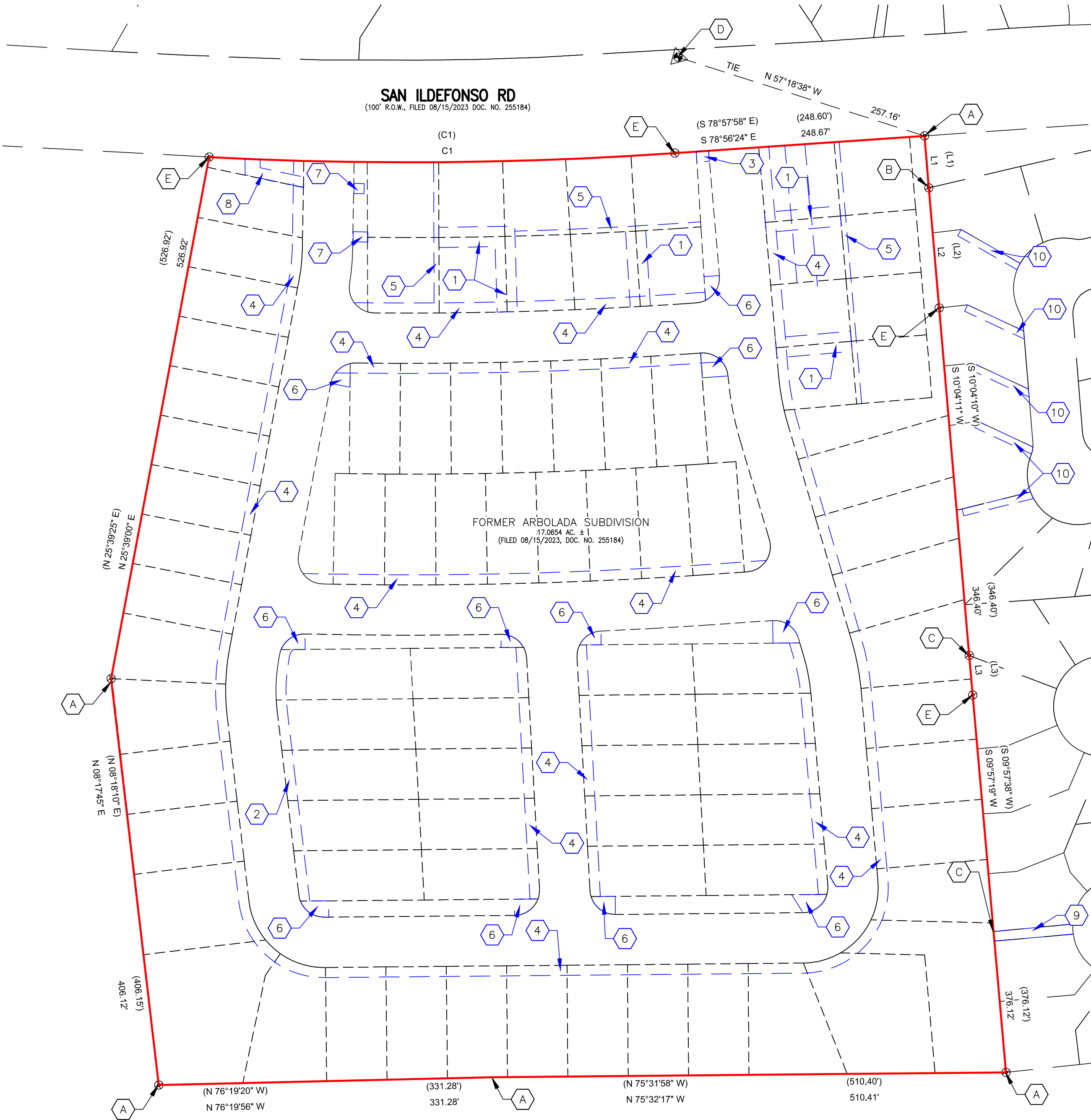
- 1 20' PRIVATE ACCESS AND PUBLIC UTILITY EASEMENT, GRANTED BY THE PLAT OF ARBOLADA FILED AUGUST 15, 2023, DOC. NO. 255184.
- 2 10' PRIVATE ACCESS AND PUBLIC UTILITY EASEMENT, GRANTED BY THE PLAT OF ARBOLADA FILED AUGUST 15, 2023, DOC. NO. 255184.
- 3 10.5' PUBLIC UTILITY EASEMENT, GRANTED BY THE PLAT OF ARBOLADA FILED AUGUST 15, 2023, DOC. NO. 255184.
- 4 10' PUBLIC UTILITY EASEMENT, GRANTED BY THE PLAT OF ARBOLADA FILED AUGUST 15, 2023, DOC. NO. 255184.
- 5 5' PUBLIC UTILITY EASEMENT, GRANTED BY THE PLAT OF ARBOLADA FILED AUGUST 15, 2023, DOC. NO. 255184.
- 6 PUBLIC UTILITY EASEMENT, GRANTED BY THE PLAT OF ARBOLADA FILED AUGUST 15, 2023, DOC. NO. 255184.
- 7 10' PUBLIC WATERLINE/WATER UTILITY EASEMENT, GRANTED BY THE PLAT OF ARBOLADA FILED AUGUST 15, 2023, DOC. NO. 255184.
- 8 PUBLIC WATERLINE/WATER UTILITY EASEMENT, GRANTED BY THE PLAT OF ARBOLADA FILED AUGUST 15, 2023, DOC. NO. 255184. VACATED PER THIS PLAT.

OFF-SITE EASEMENTS

- 9 10' UTILITY EASEMENT AND WALKWAY PER THE PLAT OF BROADVIEW SUBDIVISION, FILED SEPTEMBER 05, 1986, BOOK 5, PAGE 50.
- 10 7' DRAINAGE EASEMENT PER THE PLAT OF BROADVIEW SUBDIVISION, FILED SEPTEMBER 05, 1986, BOOK 5, PAGE 50.

MONUMENTS

- A FOUND BATHEY T-BAR W/ WASHER, STAMPED "PROPERTY LINE DO NOT DISTURB"
- B FOUND BATHEY T-BAR
- C FOUND #4 REBAR W/CAP, ILLEGIBLE
- D FOUND LOS ALAMOS COUNTY BRASS CAP STAMPED "JOE"
- E SET #5 REBAR W/CAP STAMPED "NMPS 15075"
- F TAGGED W/ WASHER, STAMPED "NMPS 15075"



ATTACHMENT C

File Name: V:\460300 - Arbolada Subdivision\460300-01-001 (SUR) - SUR Services\Survey\460300_PLAT.dwg - PLAT 4 Plot Date: 8/20/25 Plot Time: 15:59

BOUNDARY TABLE

LINE	DIRECTION	DISTANCE
L1	S 10°17'14" W	51.81'
(L1)	S 09°54'49" W	52.11'
L2	S 10°04'45" W	119.56'
(L2)	S 10°15'20" W	119.43'
L3	S 09°48'47" W	39.40'
(L3)	S 09°48'50" W	39.40'
L4	N 75°35'47" W	61.11'
L5	S 14°37'16" W	160.83'
L6	S 14°21'21" E	137.97'

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA
C1	3822.78'	462.92'	S 75°29'44" E	462.63'	06°56'17"
(C1)	3822.78'	462.92'	S 75°29'19" E	462.63'	06°56'17"
C2	57.00'	214.32'	S 50°10'28" E	108.59'	215°26'00"

KEYED NOTES

NEW EASEMENTS

- 1
- WATERLINE EASEMENT GRANTED BY THIS DOCUMENT.

2

3

4

5

6

MONUMENTS

- A
- FOUND BATHEY T-BAR W/ WASHER, STAMPED "PROPERTY LINE DO NOT DISTURB"

B

C

D

E

NEW TRACTS/LOTS DIAGRAM

ARBOLADA SUBDIVISION

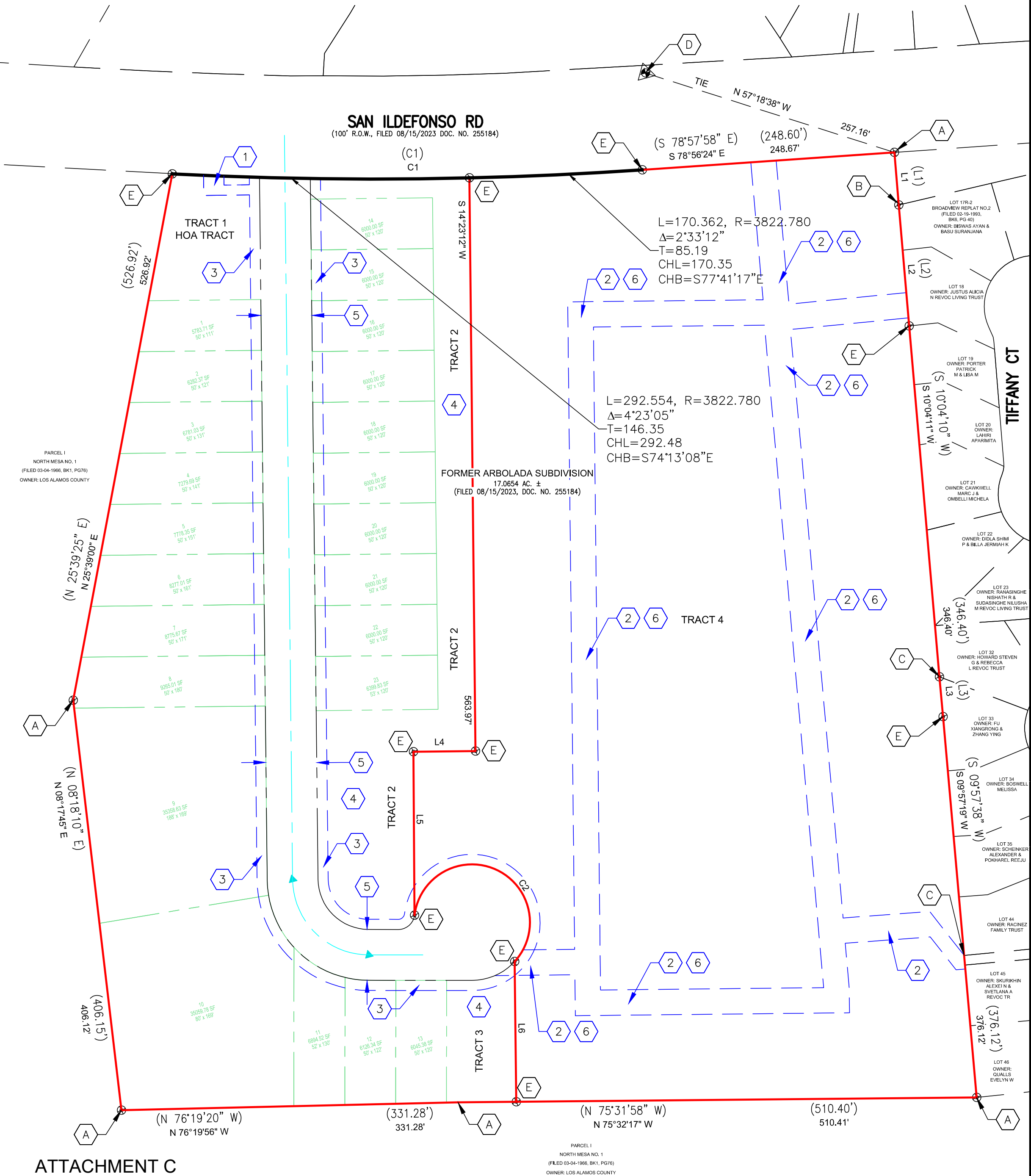
PROJECTED SECTION 10, T. 19 N, R. 6 E
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LOCATION

ARBOLADA
SUBDIVISION

COUNTY CLERK FILING DATA



Bowman

6200 Jefferson St. NE, Suite 110, Albuquerque, NM 87109
P:505.345.4250
bowman.com

JOB #460300-02

**DRAINAGE REPORT
FOR
ARBOLADA SUBDIVISION
LOS ALAMOS, NEW MEXICO**

AUGUST 2025

Prepared for:

**TITAN DEVELOPMENT
6300 RIVERSIDE PLAZA, SUITE. 200
ALBUQUERQUE, NM 87120**

Prepared by:

**BOHANNAN HUSTON, INC.
COURTYARD II
7500 JEFFERSON STREET NE
ALBUQUERQUE, NM 87109**

PREPARED BY:

_____	_____
Josh Lutz, PE	Jon Martinez, PE
Date	Date

TABLE OF CONTENTS

I.	PURPOSE AND SCOPE OF PROJECT	1
II.	SITE LOCATION	1
III.	EXISTING DRAINAGE CONDITIONS	2
IV.	HYDROLOGIC ANALYSIS.....	3
V.	PROPOSED DRAINAGE CONDITIONS.....	3
VI.	RESULTS AND RECOMMENDATIONS.....	5

APPENDICES

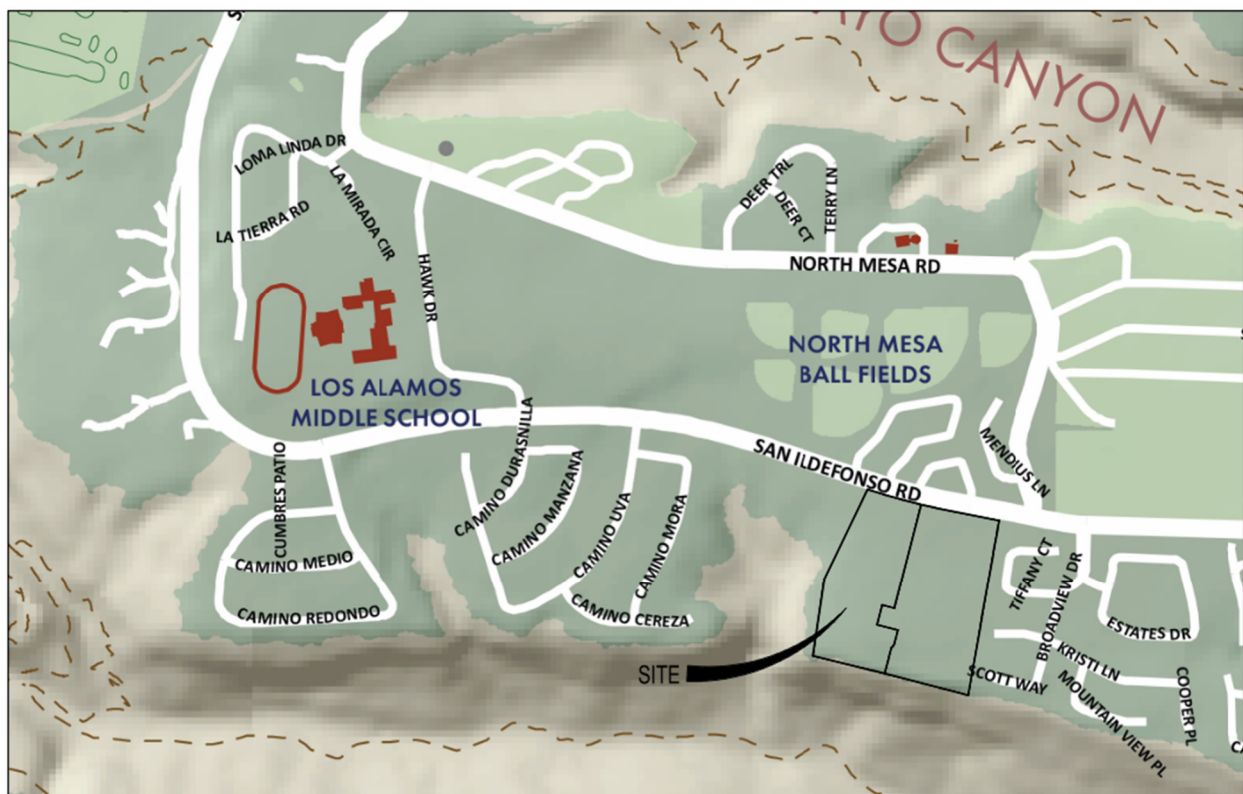
APPENDIX A:	DRAINAGE REPORT INFORMATION SHEET
APPENDIX B:	FEMA FIRMETTE
APPENDIX C:	NRCS WEB SOIL SURVEY
APPENDIX D:	POINT PRECIPITATION TABLE
APPENDIX E:	HEC-HMS ANALYSIS
APPENDIX F:	EXISTING CONDITIONS DRAINAGE MAP
APPENDIX G:	PROPOSED CONDITIONS DRAINAGE PLAN

I. PURPOSE AND SCOPE OF PROJECT

The Arbolada Subdivision is an undeveloped, but previously platted subdivision, in the City of Los Alamos, New Mexico. The current proposed development includes a replat of the previously platted subdivision to provide a multi-family tract along with single-family lots, right-of-way, and associated utilities. The proposed development is expected to occur in two separate phases of construction, split between development of the single-family lots and the multi-family units. Proposed improvements include asphalt street paving, lot/site grading, concrete curb, gutter, and sidewalks, trails, retaining walls, storm drain, stormwater ponds/facilities, sanitary sewer, domestic water, fire, electric, and natural gas services. The multi-family tract will also include a clubhouse and community pool.

II. SITE LOCATION

The project site is located along the southern side of San Ildefonso Road, just west of the intersection of San Ildefonso Road and North Mesa Road. An existing subdivision borders the property on the east. Undeveloped land owned by the County borders the property on the west. The property is approximately 17 acres of undeveloped land. See Vicinity Map for site location.



VICINITY MAP
NOT TO SCALE

III. EXISTING DRAINAGE CONDITIONS

The project site generally slopes from north-to-south. The current ground cover for the property is native weeds and shrubs. A ridge exists near the middle of the property, running north-to-south, that splits runoff generated from the site to the east and west. A fence exists along the property boundary for most of the site. A ridge with a large drop-off to an arroyo exists along the southern edge of the property. Although there are no designated FEMA Floodplains associated with the property, the project site is immediately north of a Zone A Floodplain that exists in Pueblo Canyon Creek south and below the property. A FEMA Firmette including the property location is provided in the appendix. An NRCS Web Soil Survey for the site is also included in the appendix, showing rock outcroppings and hydrologic group D soils throughout the site.

The project watershed starts from the north at the back of curb along San Ildefonso Road and extends south to the southern and western property limits. The property exists at the top of a local ridge, and there are no offsite flows that enter the project site. A small ridge that runs from north-to-south near the middle of the site divides runoff to the east and west. Following existing drainage patterns, the project watershed was divided into three separate basins for analysis. Each basin represents an area that drains to separate outfall locations along the project boundary. Basin locations in relation to the project boundary are shown on the Existing Conditions Drainage Map provided in the appendix. Analysis Points (AP) on the map are shown to represent the separately analyzed outfall locations.

EXISTING CONDITIONS BASIN TABLE								
BASIN ID	AREA (AC)	LAG TIME (MIN)	CN	IMPERVIOUS PERCENT	Q50 (CFS)	V50 (AC-FT)	Q100 (CFS)	V100 (AC-FT)
EX-01	5.60	7.2	86	0	15.7	0.850	18.9	0.993
EX-02	3.78	7.2	86	0	10.6	0.574	12.8	0.671
EX-03	8.18	7.2	86	0	22.9	1.242	27.6	1.451
AP1	-	-	-	-	15.7	0.850	18.9	0.993
AP2	-	-	-	-	10.6	0.574	12.8	0.671
AP3	-	-	-	-	22.9	1.242	27.6	1.451

Basin EX-01 represents the area draining to the west side of the project site. Basin EX-02 represents the area draining to the south along the southern project limits. Basin EX-03 starts along the ridge between EX-02 and EX-03 and is cut off by the existing fence line along the eastern boundary and represents the area draining to the southeast corner of the site. Runoff generally leaves the site under non-concentrated sheet flow conditions along the western and southern property limits. Runoff from Basin EX-03 accumulates along the eastern boundary

before heading south, leaving the site at the southeast corner as shallow concentrated flow. Results from the existing conditions analysis are provided in the Existing Conditions Basin Table. The table shows the characteristics for each basin, the resulting runoff, and the volumes generated during the 50-year, 24-hour and 100-year, 24-hour storm events. Peak design flows at analysis points that coincide with the project outfall locations are also provided in the table.

The receiving waters for all site runoff is Pueblo Canyon Creek, and eventually the Rio Grande. Analysis of existing conditions during the 100-year, 24-hour storm event shows 18.9 cfs leaving the site along the western boundary (AP1), 12.8 cfs leaving the site along the southern boundary (AP2), and 27.6 cfs leaving the site at the southeast corner of the property (AP3).

IV. HYDROLOGIC ANALYSIS

To accurately characterize and model onsite basins, drainage patterns, and for routing flows, the United States Army Corps of Engineers hydraulic Engineering Center Hydrologic modeling System, version 4.12 (HEC-HMS) was used to develop runoff hydrographs for the site. The modeling software uses the Nations Resource Conservation Services (NRCS) unit hydrograph methodology to characterize the hydrologic response of individual basins within the project watershed. Drainage basins were delineated using surveyed grades, with each basin's hydrologic characteristics represented by NRCS runoff curve numbers (CN). These CN's are a composite representation of the site's hydrologic soil characteristics, the existing land usage or treatment, as well as the vegetative cover. A basin CN is used to calculate the amount of precipitation that is infiltrated versus the amount of precipitation that becomes direct runoff. NRCS unit hydrographs represent a given drainage basin's hydrologic response and how the peak runoff from a given storm event varies over time. This methodology is based on NRCS's Technical Release 55 "Urban Hydrology for Small Watersheds". The specific assumptions for the existing conditions and proposed conditions hydrologic assessments are discussed in sections III and V of this report, respectively. NOAA Atlas 14 point precipitation values for the project site were used in the analysis outlined in this report. The project point precipitation table is provided in the appendix.

V. PROPOSED DRAINAGE CONDITIONS

Development of this project site will maintain the historic drainage flow paths and discharge locations for stormwater runoff. Generally, runoff will drain from housing units to the adjacent street sections and then be directed to one of the ponds or outfall locations via curb

and gutter, alley-pan, swale, and/or storm drain. Ponds, local depressions, and swales with check dams will help mitigate peak runoff rates to historic levels.

The proposed layout and grading for the development divides the site into 13 drainage basins. Basin locations and analysis points are shown on the Proposed Conditions Drainage Plan provided in the appendix. Basins PR-01, PR-02, PR-03, PR-04, PR-05, PR-06, PR-07, and PR-08 all convey runoff to the east side of the property where a swale collects and directs runoff south to detention Pond 2 in the southeast corner of the site. A 24" diameter storm pipe with a restrictor plate and an emergency overflow in Pond 2 will hold back the water and discharge at a rate lower than historic conditions for this location. Basins PR-09, PR-10, and PR-11 direct runoff to detention Pond 1 near the middle of the site. An 18" diameter storm pipe with a restrictor plate attached to the opening in Pond 1 will hold back water and discharge through storm drain to the south where an additional ponding area and riprap protected overflow will help mitigate peak flows to lower than historic levels for this location. Basin PR-12 allows runoff to leave the site along the southern boundary primarily under sheet flow conditions. Basin PR-13 directs runoff to the backs of lots along the western boundary, allowing runoff to leave the site under sheet flow conditions. Each outfall location is shown on the map, labeled AP1, AP2, and AP3. The proposed outfall locations coincide with the existing conditions outfall locations shown on Existing Conditions Drainage Map. Riprap protection shall be provided at each outfall location for the development that carries concentrated flows.

PROPOSED CONDITIONS BASIN TABLE								
BASIN ID	AREA (AC)	LAG TIME (MIN)	CN	IMPERVIOUS PERCENT	Q50 (CFS)	V50 (AC-FT)	Q100 (CFS)	V100 (AC-FT)
PR-01	0.87	7.2	86	5	2.5	0.137	3.0	0.160
PR-02	0.71	7.2	86	60	2.8	0.158	3.2	0.178
PR-03	1.30	7.2	86	90	5.7	0.330	6.5	0.368
PR-04	0.92	7.2	86	85	4.0	0.229	4.5	0.255
PR-05	0.97	7.2	86	90	4.3	0.247	4.8	0.275
PR-06	1.16	7.2	86	85	5.0	0.289	5.7	0.323
PR-07	1.35	7.2	86	90	5.9	0.343	6.7	0.382
PR-08	0.26	7.2	86	0	0.7	0.039	0.9	0.045
PR-09	1.80	7.2	86	90	7.9	0.459	9.0	0.511
PR-10	2.64	7.2	86	95	11.8	0.687	13.4	0.763
PR-11	1.32	7.2	86	0	3.7	0.200	4.5	0.234
PR-12	1.33	7.2	86	40	4.6	0.261	5.4	0.297
PR-13	2.91	7.2	86	50	10.7	0.608	12.4	0.687
AP1	-	-	-	-	10.7	0.608	12.4	0.687
AP2	-	-	-	-	8.8	1.605	9.9	1.803
AP3	-	-	-	-	22.3	1.764	24.1	1.981

The receiving waters for all site runoff under proposed conditions is Pueblo Canyon Creek, and eventually the Rio Grande. Analysis of proposed conditions during the 100-year, 24-hour storm event shows 12.4 cfs leaving the site along the western boundary (AP1), 9.9 cfs leaving the site along the southern boundary (AP2), and 24.1 cfs leaving the site at the southeast corner of the property (AP3). Basin characteristics, runoff volumes, and peak runoff rates during design storms are shown in the Proposed Conditions Basin Table. Peak design flows at analysis points that coincide with the project outfall locations are also provided in the table. Detention pond characteristics are outlined in the Proposed Conditions Pond Table.

PROPOSED CONDITIONS POND TABLE							
Pond ID	Pond Top Elevation (ft)	Pond Bottom Elevation (ft)	100YR-24HR Q_{in} (cfs)	100YR-24HR Q_{out} (cfs)	100YR-24HR Peak WSEL (ft)	100YR-24HR Peak Volume (ac-ft)	Total Pond Volume (ac-ft)
POND 1	7,254.50	7,250.50	26.8	5.6	7253.58	0.600	0.861
POND 2	7,241.00	7,234.00	35.2	23.6	7239.02	0.264	0.484

VI. RESULTS AND RECOMMENDATIONS

Through the development of this site, peak stormwater runoff rates discharged from the project boundary will be reduced below historic levels for all design storms, including the 50-year, 24-hour and the 100-year, 24-hour storm events. This drainage report demonstrates that runoff is safely managed for the developed conditions, and the onsite drainage design is in accordance with Los Alamos County drainage requirements.

APPENDICES

APPENDIX A: DRAINAGE REPORT INFORMATION SHEET

APPENDIX B: FEMA FIRMETTE

APPENDIX C: NRCS WEB SOIL SURVEY

APPENDIX D: POINT PRECIPITATION TABLE

APPENDIX E: HEC-HMS ANALYSIS

APPENDIX F: EXISTING CONDITIONS DRAINAGE MAP

APPENDIX G: PROPOSED CONDITIONS DRAINAGE PLAN

APPENDIX A

DRAINAGE REPORT INFORMATION SHEET

12.1 DRAINAGE REPORT INFORMATION SHEET

Project Title: Arbolada Subdivision

Project Address: South Side of San Ildefonso Road, Southwest of North Mesa Road Intersection

Legal Description: Arbolada Subdivision - A Replat of Tract D

Engineering Firm: Bohannon Huston Contact: Josh Lutz, Jon Martinez

Address: 7500 Jefferson St NE, 87109 Phone: 800.877.5332

Owner: _____ Contact: _____

Address: _____ Phone: _____

Architect: Titan Development Contact: Brian Patterson

Address: 6300 Riverside Plaza, Suite 200, 87120 Phone: 505.998.0163

Surveyor: Bowman Contact: Joe Solomon

Address: 6010-B Midway Park Blvd NE, 87109 Phone: 505.345.4250

Pre-Design Meeting:

☒ No

☐ Yes

☐ Copy of meeting minutes attached

Date Submitted: August 4, 2025

Submitted by: Josh Lutz

Name

Senior Project Manager

Title

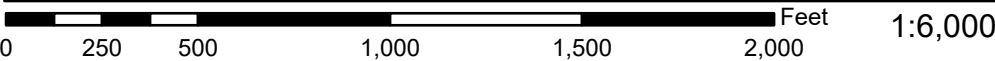
APPENDIX B

FEMA FIRMETTE

National Flood Hazard Layer FIRMette



106°17'32"W 35°53'43"N



106°16'54"W 35°53'14"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

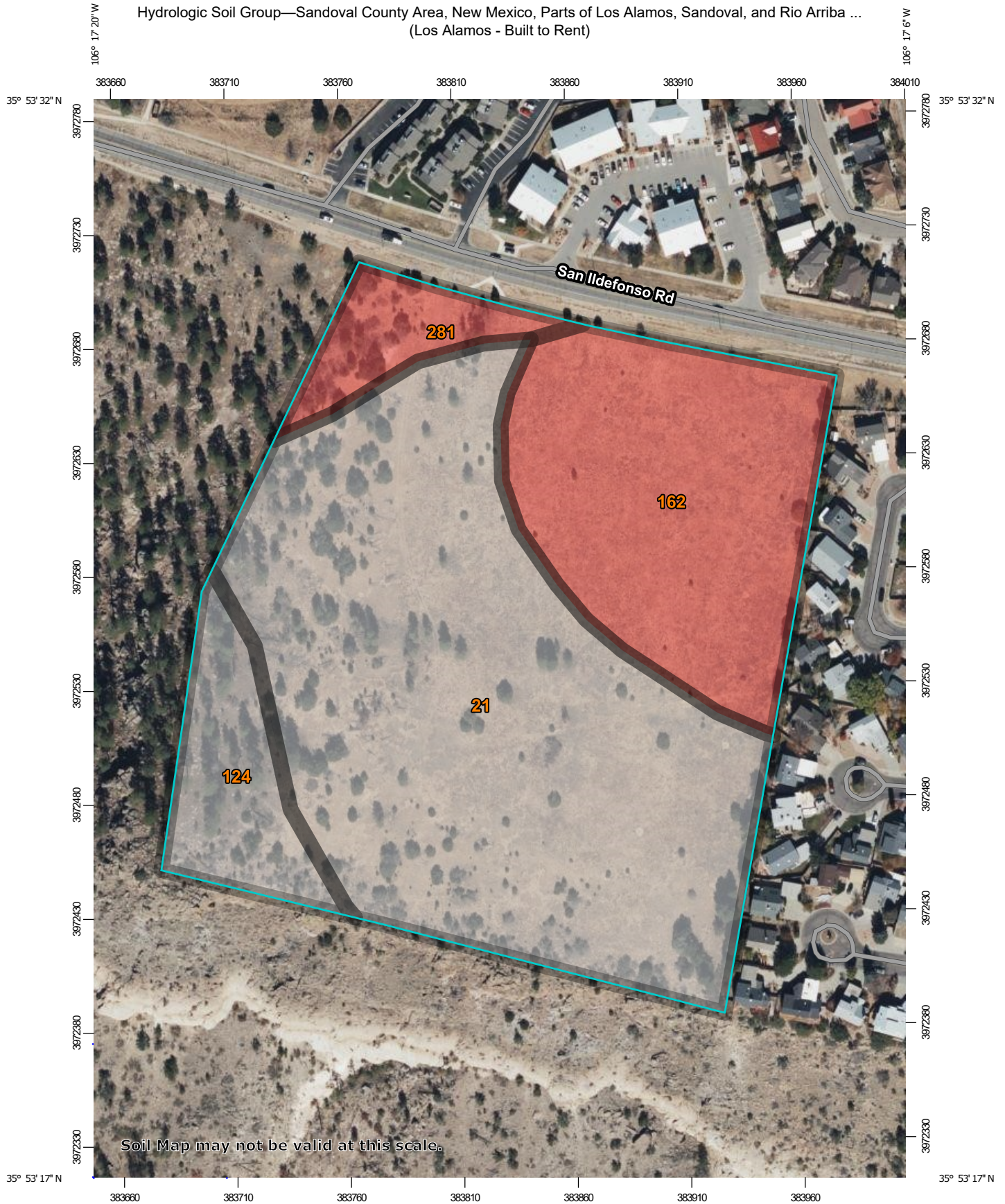
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **12/10/2024 at 6:28 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

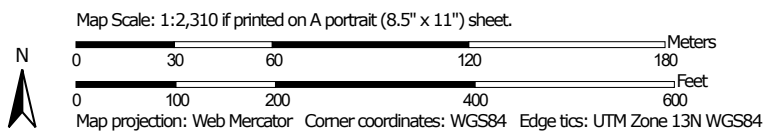
APPENDIX C

NRCS WEB SOIL SURVEY

Hydrologic Soil Group—Sandoval County Area, New Mexico, Parts of Los Alamos, Sandoval, and Rio Arriba ...
(Los Alamos - Built to Rent)



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available


Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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: Sandoval County Area, New Mexico, Parts of Los Alamos, Sandoval, and Rio Arriba Counties
 Survey Area Data: Version 18, Sep 3, 2024

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

Date(s) aerial images were photographed: Oct 22, 2021—Dec 2, 2021

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.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
21	Rock outcrop-Hackroy complex, 1 to 8 percent slopes		10.2	60.0%
124	Rock outcrop		1.4	8.4%
162	Hackroy-Nyjack association, 1 to 5 percent slopes	D	4.5	26.4%
281	Carjo loam, 1 to 9 percent slopes	D	0.9	5.3%
Totals for Area of Interest			17.1	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.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

APPENDIX D

POINT PRECIPITATION TABLE



NOAA Atlas 14, Volume 1, Version 5
Location name: Los Alamos, New Mexico, USA*
Latitude: 35.8907°, Longitude: -106.2868°
Elevation: m/ft**
 * source: ESRI Maps
 ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aeriels](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.210 (0.182-0.243)	0.273 (0.237-0.315)	0.365 (0.315-0.421)	0.435 (0.375-0.500)	0.530 (0.455-0.611)	0.603 (0.515-0.694)	0.681 (0.578-0.783)	0.761 (0.642-0.878)	0.871 (0.726-1.01)	0.960 (0.793-1.12)
10-min	0.320 (0.278-0.370)	0.415 (0.361-0.480)	0.556 (0.480-0.640)	0.662 (0.571-0.762)	0.807 (0.693-0.929)	0.918 (0.784-1.06)	1.04 (0.880-1.19)	1.16 (0.977-1.34)	1.32 (1.10-1.53)	1.46 (1.21-1.70)
15-min	0.397 (0.345-0.458)	0.515 (0.447-0.595)	0.689 (0.595-0.794)	0.820 (0.708-0.944)	1.00 (0.859-1.15)	1.14 (0.973-1.31)	1.29 (1.09-1.48)	1.44 (1.21-1.66)	1.64 (1.37-1.90)	1.81 (1.50-2.10)
30-min	0.535 (0.464-0.617)	0.694 (0.602-0.801)	0.927 (0.801-1.07)	1.10 (0.953-1.27)	1.35 (1.16-1.55)	1.53 (1.31-1.76)	1.73 (1.47-1.99)	1.93 (1.63-2.23)	2.21 (1.84-2.56)	2.44 (2.01-2.83)
60-min	0.662 (0.574-0.764)	0.858 (0.745-0.991)	1.15 (0.992-1.32)	1.37 (1.18-1.57)	1.67 (1.43-1.92)	1.90 (1.62-2.18)	2.14 (1.82-2.46)	2.39 (2.02-2.76)	2.74 (2.28-3.16)	3.02 (2.49-3.51)
2-hr	0.772 (0.665-0.909)	0.990 (0.853-1.16)	1.31 (1.12-1.54)	1.56 (1.34-1.84)	1.91 (1.62-2.24)	2.18 (1.84-2.56)	2.48 (2.08-2.90)	2.79 (2.32-3.26)	3.21 (2.63-3.77)	3.56 (2.89-4.19)
3-hr	0.834 (0.724-0.978)	1.06 (0.917-1.24)	1.38 (1.19-1.61)	1.64 (1.40-1.91)	2.00 (1.70-2.32)	2.28 (1.93-2.66)	2.58 (2.17-3.01)	2.90 (2.42-3.38)	3.34 (2.75-3.90)	3.70 (3.01-4.32)
6-hr	0.966 (0.848-1.12)	1.22 (1.07-1.41)	1.55 (1.36-1.79)	1.82 (1.58-2.10)	2.19 (1.89-2.52)	2.48 (2.13-2.86)	2.78 (2.37-3.21)	3.10 (2.63-3.57)	3.53 (2.96-4.07)	3.87 (3.21-4.47)
12-hr	1.11 (0.991-1.26)	1.40 (1.24-1.59)	1.76 (1.56-2.00)	2.05 (1.81-2.32)	2.45 (2.15-2.77)	2.75 (2.41-3.12)	3.08 (2.67-3.49)	3.41 (2.95-3.87)	3.86 (3.30-4.39)	4.21 (3.57-4.81)
24-hr	1.34 (1.23-1.46)	1.67 (1.54-1.82)	2.08 (1.92-2.26)	2.40 (2.21-2.62)	2.85 (2.61-3.09)	3.19 (2.92-3.46)	3.54 (3.22-3.84)	3.90 (3.54-4.23)	4.38 (3.94-4.75)	4.75 (4.25-5.15)
2-day	1.54 (1.42-1.67)	1.92 (1.77-2.09)	2.38 (2.20-2.58)	2.76 (2.53-2.98)	3.26 (2.99-3.53)	3.64 (3.33-3.95)	4.04 (3.68-4.37)	4.44 (4.02-4.81)	4.98 (4.48-5.41)	5.40 (4.84-5.87)
3-day	1.68 (1.55-1.82)	2.10 (1.94-2.28)	2.60 (2.40-2.82)	3.00 (2.76-3.25)	3.54 (3.25-3.84)	3.96 (3.62-4.29)	4.39 (4.00-4.76)	4.82 (4.37-5.23)	5.41 (4.87-5.88)	5.86 (5.25-6.38)
4-day	1.82 (1.68-1.98)	2.27 (2.10-2.47)	2.81 (2.59-3.05)	3.24 (2.99-3.52)	3.83 (3.51-4.15)	4.28 (3.91-4.64)	4.74 (4.32-5.15)	5.21 (4.72-5.66)	5.84 (5.26-6.35)	6.32 (5.66-6.88)
7-day	2.19 (2.04-2.36)	2.73 (2.53-2.95)	3.36 (3.12-3.63)	3.85 (3.57-4.16)	4.52 (4.17-4.88)	5.02 (4.62-5.42)	5.53 (5.07-5.98)	6.04 (5.52-6.54)	6.72 (6.10-7.28)	7.24 (6.54-7.86)
10-day	2.52 (2.34-2.73)	3.14 (2.91-3.40)	3.88 (3.58-4.19)	4.45 (4.11-4.81)	5.23 (4.81-5.66)	5.82 (5.35-6.30)	6.43 (5.88-6.96)	7.04 (6.41-7.62)	7.84 (7.09-8.50)	8.46 (7.60-9.18)
20-day	3.40 (3.15-3.69)	4.24 (3.92-4.61)	5.18 (4.79-5.62)	5.89 (5.43-6.40)	6.82 (6.27-7.40)	7.50 (6.89-8.14)	8.18 (7.49-8.89)	8.84 (8.07-9.61)	9.69 (8.80-10.5)	10.3 (9.33-11.2)
30-day	4.23 (3.92-4.55)	5.26 (4.88-5.67)	6.38 (5.92-6.87)	7.22 (6.69-7.77)	8.29 (7.66-8.91)	9.07 (8.36-9.75)	9.82 (9.03-10.6)	10.5 (9.67-11.4)	11.5 (10.5-12.4)	12.1 (11.0-13.1)
45-day	5.32 (4.98-5.69)	6.60 (6.17-7.08)	7.92 (7.40-8.50)	8.89 (8.30-9.53)	10.1 (9.41-10.8)	11.0 (10.2-11.7)	11.8 (10.9-12.6)	12.6 (11.6-13.5)	13.5 (12.5-14.5)	14.2 (13.1-15.3)
60-day	6.22 (5.78-6.67)	7.73 (7.19-8.30)	9.28 (8.63-9.96)	10.4 (9.67-11.2)	11.8 (10.9-12.7)	12.8 (11.8-13.7)	13.7 (12.7-14.7)	14.6 (13.4-15.6)	15.6 (14.4-16.8)	16.4 (15.0-17.7)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).
 Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.
 Please refer to NOAA Atlas 14 document for more information.

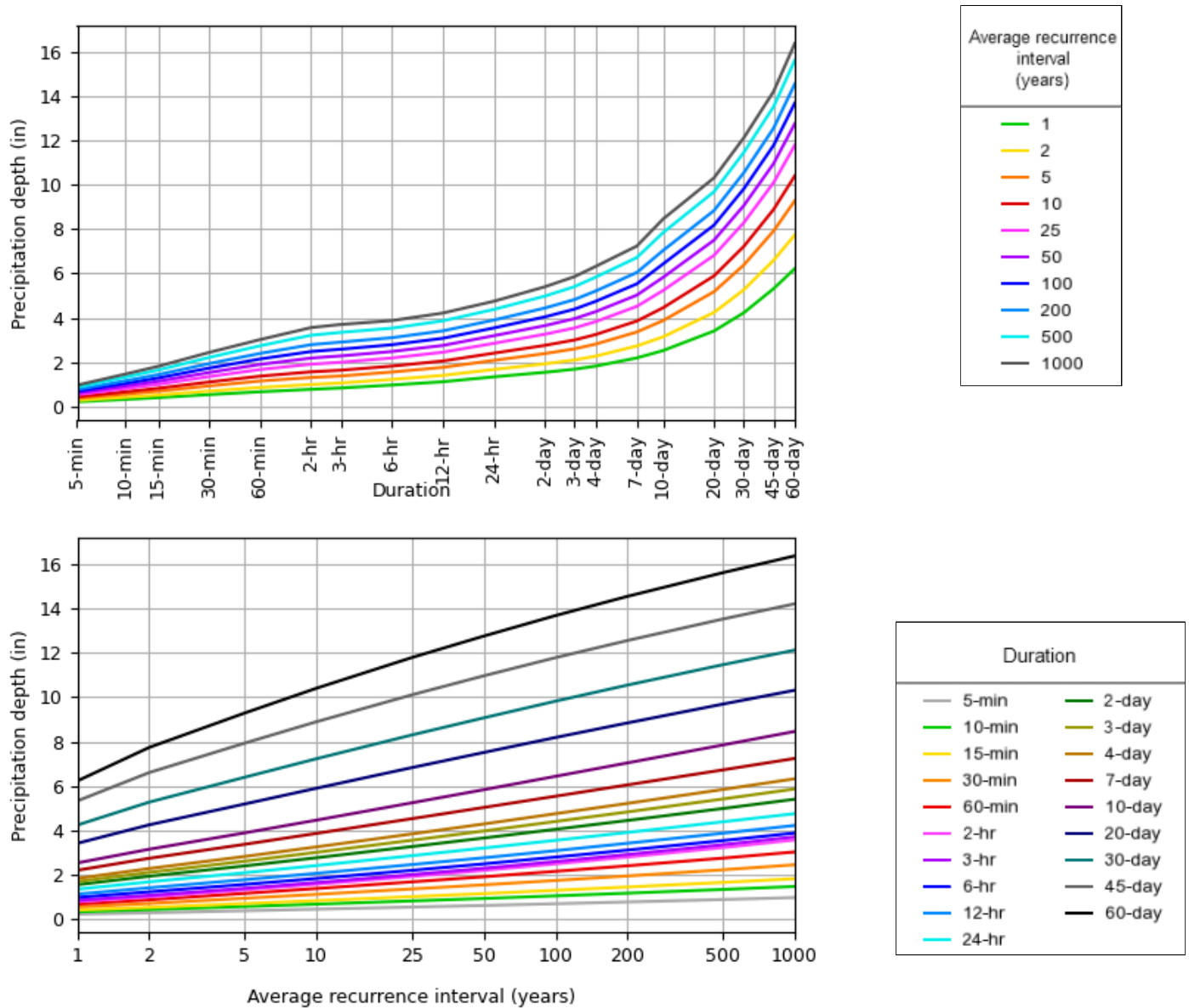
[Back to Top](#)

PF graphical

ATTACHMENT C

PDS-based depth-duration-frequency (DDF) curves

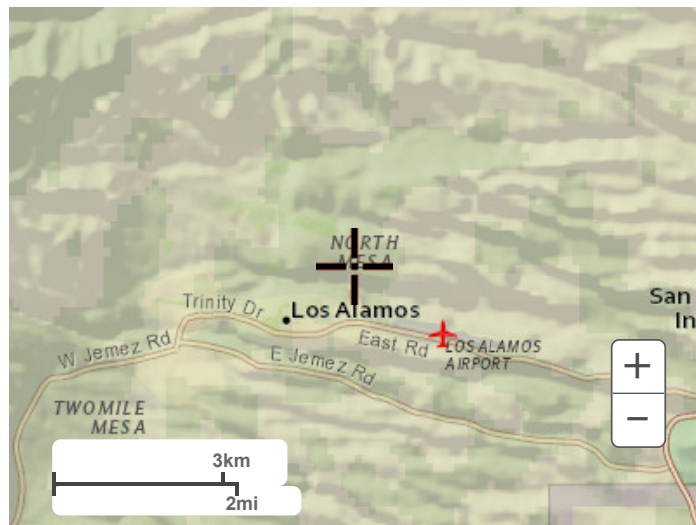
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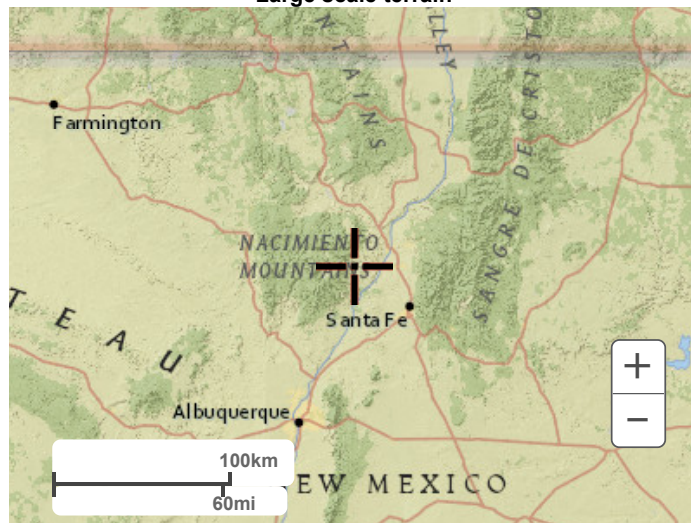
NOAA Atlas 14, Volume 1, Version 5

Created (GMT): Tue Dec 10 15:55:12 2024

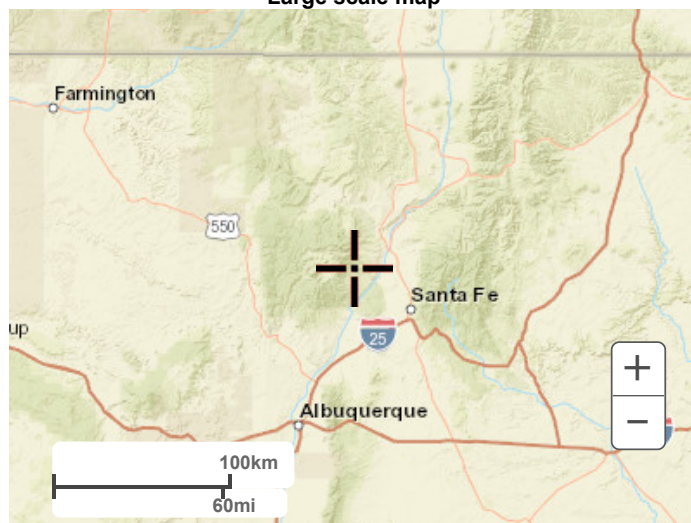
[Back to Top](#)**Maps & aerials****Small scale terrain****ATTACHMENT C**



Large scale terrain

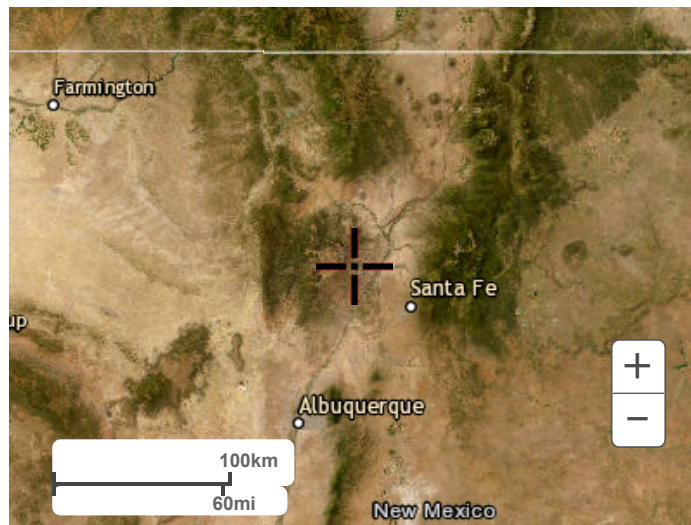


Large scale map



Large scale aerial

ATTACHMENT C



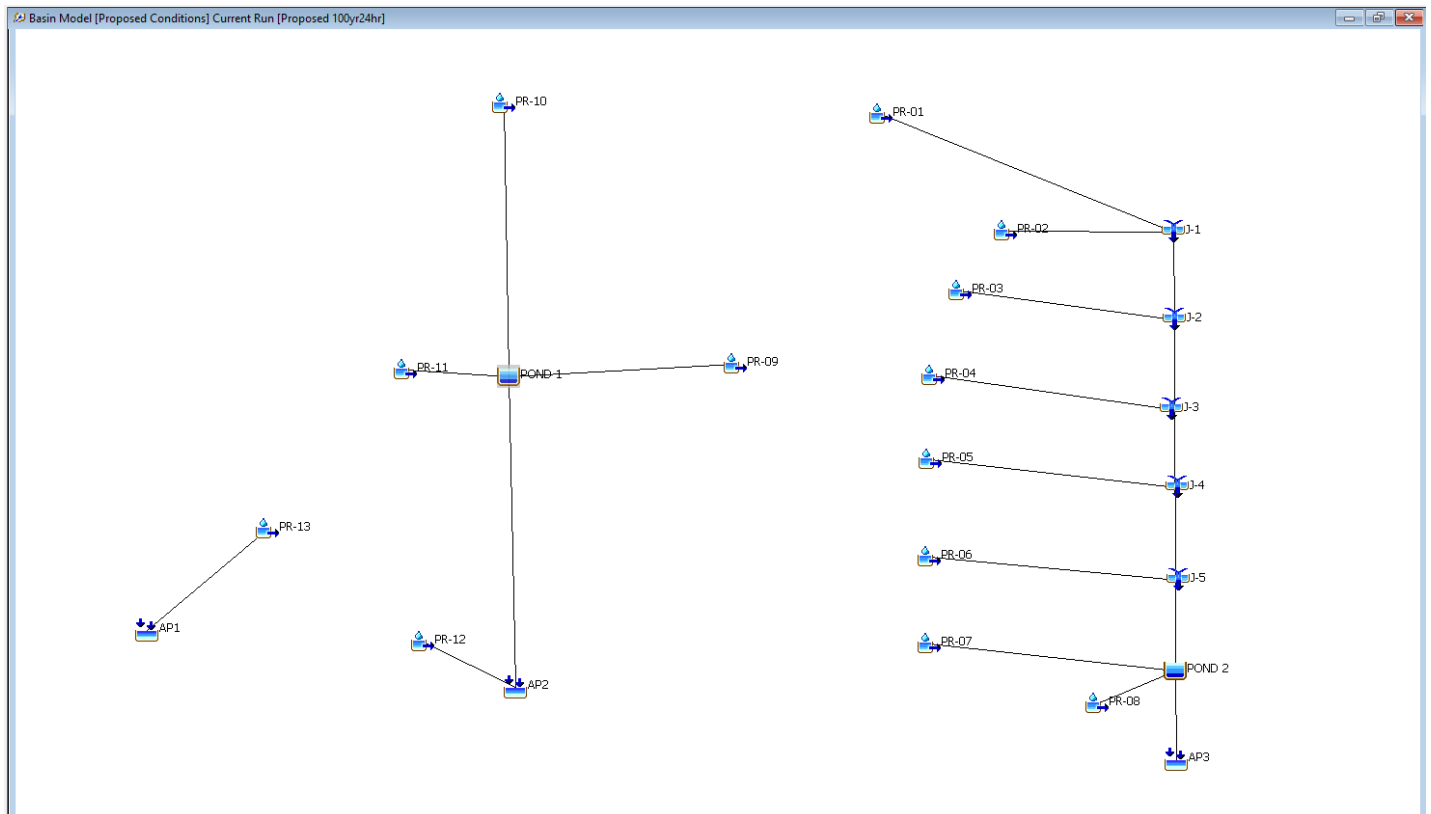
[Back to Top](#)

[US Department of Commerce](#)
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[National Weather Service](#)
[National Water Center](#)
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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APPENDIX E

HEC-HMS ANALYSIS



Frequency Storm

Met Name: 100yr24hr

Annual-Partial Conversion: --None--

Annual-Partial Ratio: 1.00

Storm Duration: 1 Day

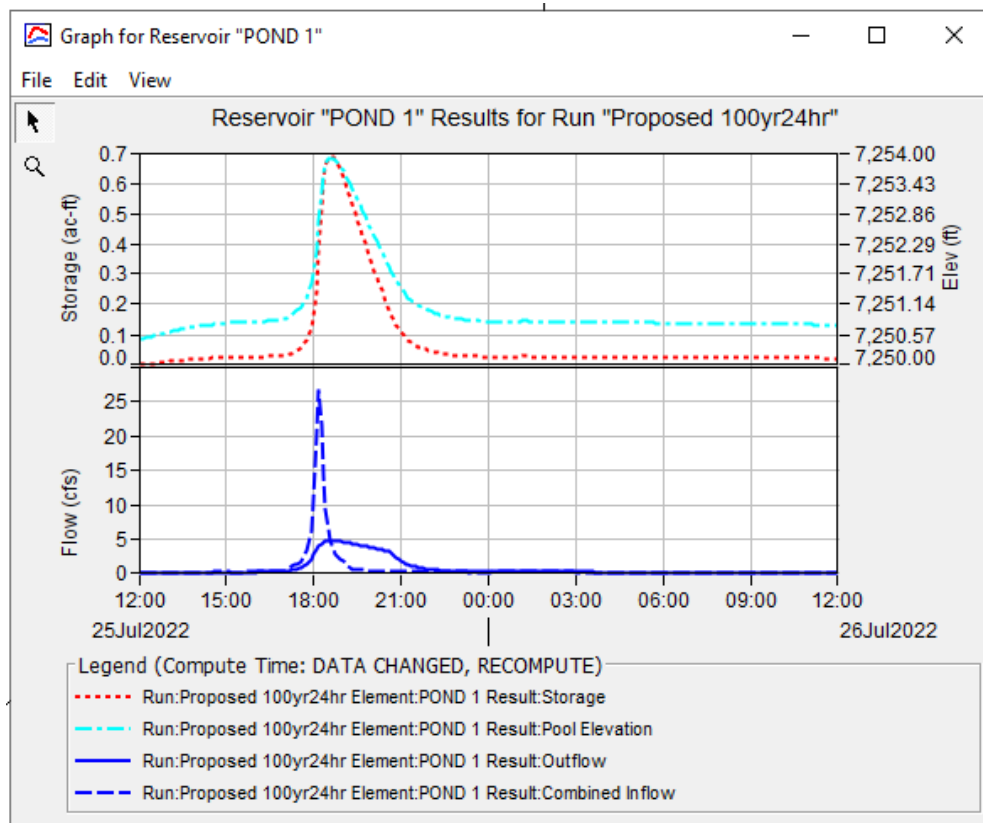
Intensity Duration: 5 Minutes

Intensity Position: 25 Percent

Area Reduction: --None--

Spatial Distribution: Uniform For All Subbasins

Duration	Depth (IN)	Area-Reduction Function
5 Minutes	0.681	
10 Minutes	1.04	
15 Minutes	1.29	
30 Minutes	1.73	
1 Hour	2.14	
2 Hours	2.48	
3 Hours	2.58	
6 Hours	2.78	
12 Hours	3.08	
1 Day	3.54	
2 Days		
3 Days		
4 Days		
7 Days		
10 Days		



Reservoir Outlet 1 Options

Basin Name: Proposed Conditions
Element Name: POND 1

Method: Culvert Outlet

Direction: Main

Number Barrels: 1

Solution Method: Automatic

Shape: Circular

Chart: 1: Concrete Pipe Culvert

Scale: 1: Square edge entrance with headwall

*Length (FT) 143

*Diameter (FT) 1

*Inlet Elevation (FT) 7250.50

*Entrance Coefficient: 0.5

*Outlet Elevation (FT) 7249.50

*Exit Coefficient: 0.5

*Mannings n: 0.013

Select a Paired Data

Select Table Graph

Elevation (FT)	Storage (ACRE-FT)
7250.50	0.0
7251.00	0.0426768
7251.50	0.11364
7252.00	0.21149
7252.50	0.32589
7253.00	0.44797
7253.50	0.57779
7254.00	0.71551
7254.50	0.86129

Summary Results for Reservoir "POND 1"

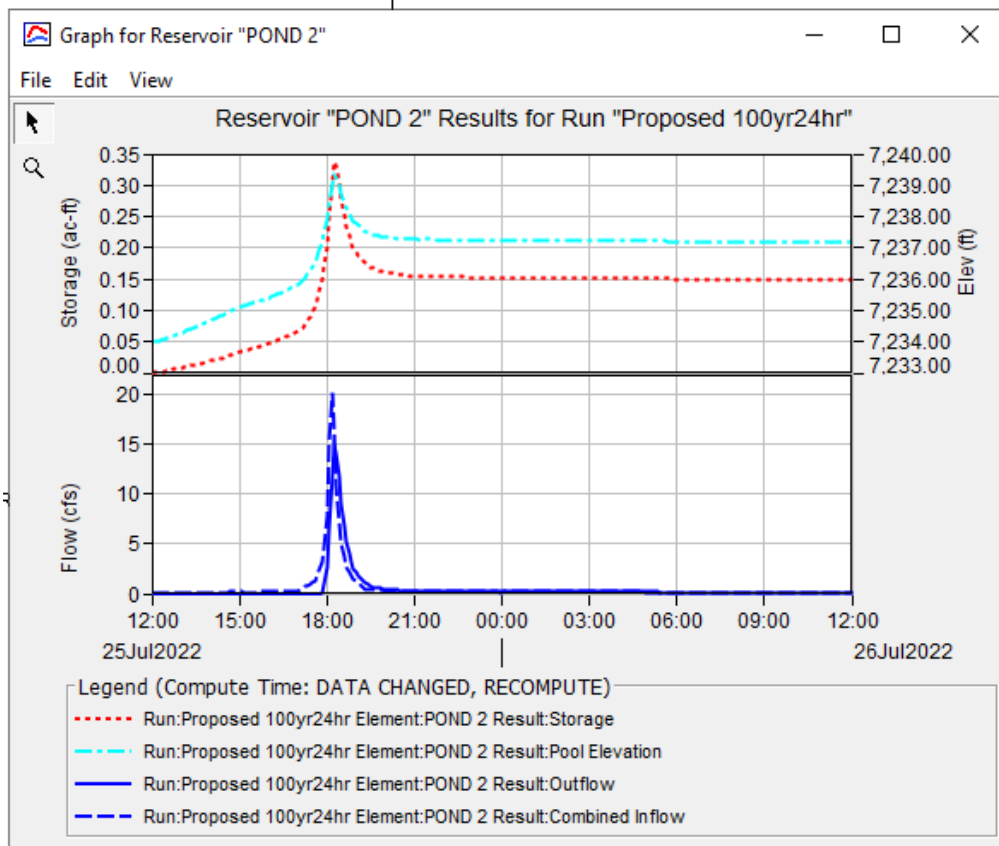
Project: Los Alamos Built To Rent Simulation Run: Proposed 100yr24hr
Reservoir: POND 1

Start of Run: 25Jul2022, 12:00 Basin Model: Proposed Conditions
End of Run: 26Jul2022, 12:00 Meteorologic Model: 100yr24hr
Compute Time: DATA CHANGED, RECOMPUTE Control Specifications: Control 1

Volume Units: ☐ IN ☒ ACRE-FT

Computed Results

Peak Inflow: 26.78 (CFS)	Date/Time of Peak Inflow: 25Jul2022, 18:10
Peak Discharge: 4.77 (CFS)	Date/Time of Peak Discharge: 25Jul2022, 18:35
Inflow Volume: 1.50762 (ACRE-FT)	Peak Storage: 0.68810 (ACRE-FT)
Discharge Volume: 1.48481 (ACRE-FT)	Peak Elevation: 7253.90 (FT)



Reservoir Outlet 1 Options

Basin Name: Proposed Conditions
Element Name: POND 2

Method: Culvert Outlet
Direction: Main
Number Barrels: 1
Solution Method: Automatic
Shape: Circular
Chart: 1: Concrete Pipe Culvert
Scale: 1: Square edge entrance with headwall

*Length (FT) 10
*Diameter (FT) 2
*Inlet Elevation (FT) 7237
*Entrance Coefficient: 0.5
*Outlet Elevation (FT) 7236.9
*Exit Coefficient: 0.5
*Mannings n: 0.013

Select a Paired Data

Select Table Graph

Elevation (FT)	Storage (ACRE-FT)
7234.00	0.0000000
7235.00	0.0286834
7236.00	0.0736068
7237.00	0.1343200
7238.00	0.2106800
7239.00	0.3027800
7240.00	0.4109400

Select Apply Cancel

Summary Results for Reservoir "POND 2"

Project: Los Alamos Built To Rent Simulation Run: Proposed 100yr24hr
Reservoir: POND 2

Start of Run: 25Jul2022, 12:00 Basin Model: Proposed Conditions
End of Run: 26Jul2022, 12:00 Meteorologic Model: 100yr24hr
Compute Time: DATA CHANGED, RECOMPUTE Control Specifications: Control 1

Volume Units: ☐ IN ☒ ACRE-FT

Computed Results

Peak Inflow: 20.22 (CFS)	Date/Time of Peak Inflow: 25Jul2022, 18:10
Peak Discharge: 14.82 (CFS)	Date/Time of Peak Discharge: 25Jul2022, 18:15
Inflow Volume: 1.13203 (ACRE-FT)	Peak Storage: 0.33890 (ACRE-FT)
Discharge Volume: 0.98475 (ACRE-FT)	Peak Elevation: 7239.33 (FT)

SCS Curve Number [Proposed Cond...]

Filter: --None-- ting: Watershed Explorer

Subbasin	Initial Abstraction (IN)	Curve Number	Impervious (%)
PR-10		86	95
PR-09		86	90
PR-11		86	0
PR-12		86	40
PR-01		86	5
PR-02		86	60
PR-03		86	90
PR-07		86	90
PR-08		86	0.0
PR-13		86	50
PR-04		86	85
PR-05		86	90
PR-06		86	85

SCS Unit Hydrograph [Proposed Condit...]

Filter: --None-- Sorting: Watershed Explorer

Subbasin	Graph Type	Lag Time (MIN)
PR-10	Standard (PRF 484)	7.2
PR-09	Standard (PRF 484)	7.2
PR-11	Standard (PRF 484)	7.2
PR-12	Standard (PRF 484)	7.2
PR-01	Standard (PRF 484)	7.2
PR-02	Standard (PRF 484)	7.2
PR-03	Standard (PRF 484)	7.2
PR-07	Standard (PRF 484)	7.2
PR-08	Standard (PRF 484)	7.2
PR-13	Standard (PRF 484)	7.2
PR-04	Standard (PRF 484)	7.2
PR-05	Standard (PRF 484)	7.2
PR-06	Standard (PRF 484)	7.2

Global Summary Results for Run "Proposed 100yr24hr"

Project: Los Alamos Built To Rent Simulation Run: Proposed 100yr24hr

Start of Run: 25Jul2022, 12:00 Basin Model: Proposed Conditions

End of Run: 26Jul2022, 12:00 Meteorologic Model: 100yr24hr

Compute Time: 04Aug2025, 13:26:39 Control Specifications: Control 1

Show Elements: All Elements Volume Units: ☐ IN ☒ ACRE-FT Sorting: Alphabetic

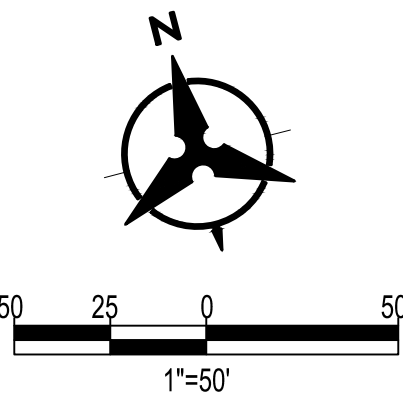
Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (ACRE-FT)
AP1	0.00455	12.41	25 July 2022, 18:10	0.68727
AP2	0.01108	9.33	25 July 2022, 18:10	1.78197
AP3	0.00702	14.82	25 July 2022, 18:15	0.98475
J-1	0.00248	6.20	25 July 2022, 18:10	0.33712
J-2	0.00451	12.65	25 July 2022, 18:10	0.70462
J-3	0.00144	4.50	25 July 2022, 18:10	0.25529
J-4	0.00152	4.83	25 July 2022, 18:10	0.27517
J-5	0.00182	5.68	25 July 2022, 18:10	0.32266
POND 1	0.00901	4.77	25 July 2022, 18:35	1.48481
POND 2	0.00702	14.82	25 July 2022, 18:15	0.98475
PR-01	0.00136	3.02	25 July 2022, 18:10	0.15955
PR-02	0.00112	3.18	25 July 2022, 18:10	0.17757
PR-03	0.00203	6.45	25 July 2022, 18:10	0.36750
PR-04	0.00144	4.50	25 July 2022, 18:10	0.25529
PR-05	0.00152	4.83	25 July 2022, 18:10	0.27517
PR-06	0.00182	5.68	25 July 2022, 18:10	0.32266
PR-07	0.00211	6.71	25 July 2022, 18:10	0.38199
PR-08	0.00040	0.86	25 July 2022, 18:10	0.04543
PR-09	0.00282	8.96	25 July 2022, 18:10	0.51052
PR-10	0.00413	13.36	25 July 2022, 18:10	0.76316
PR-11	0.00206	4.45	25 July 2022, 18:10	0.23394
PR-12	0.00207	5.41	25 July 2022, 18:10	0.29715
PR-13	0.00455	12.41	25 July 2022, 18:10	0.68727

APPENDIX F

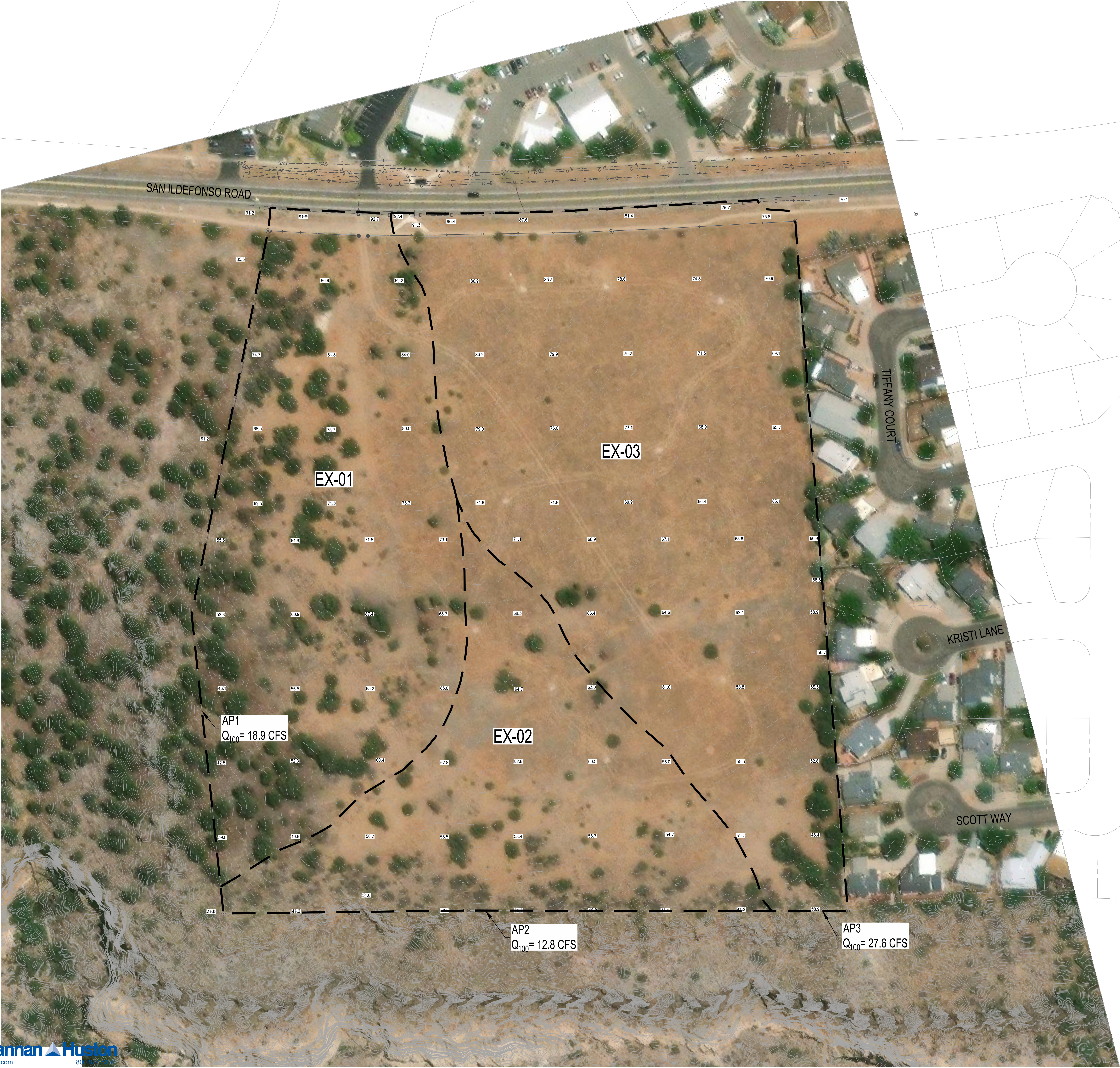
EXISTING CONDITIONS DRAINAGE MAP

LEGEND	
	PROPERTY LINE
	EXISTING INDEX CONTOUR
	EXISTING INTERMEDIATE CONTOUR
	DRAINAGE BASIN

EXISTING CONDITIONS BASIN TABLE								
BASIN ID	AREA (AC)	LAG TIME (MIN)	CN	IMPERVIOUS PERCENT	Q50 (CFS)	V50 (AC-FT)	Q100 (CFS)	V100 (AC-FT)
EX-01	5.60	7.2	86	0	15.7	0.850	18.9	0.993
EX-02	3.78	7.2	86	0	10.6	0.574	12.8	0.671
EX-03	8.18	7.2	86	0	22.9	1.242	27.6	1.451
AP1	-	-	-	-	15.7	0.850	18.9	0.993
AP2	-	-	-	-	10.6	0.574	12.8	0.671
AP3	-	-	-	-	22.9	1.242	27.6	1.451



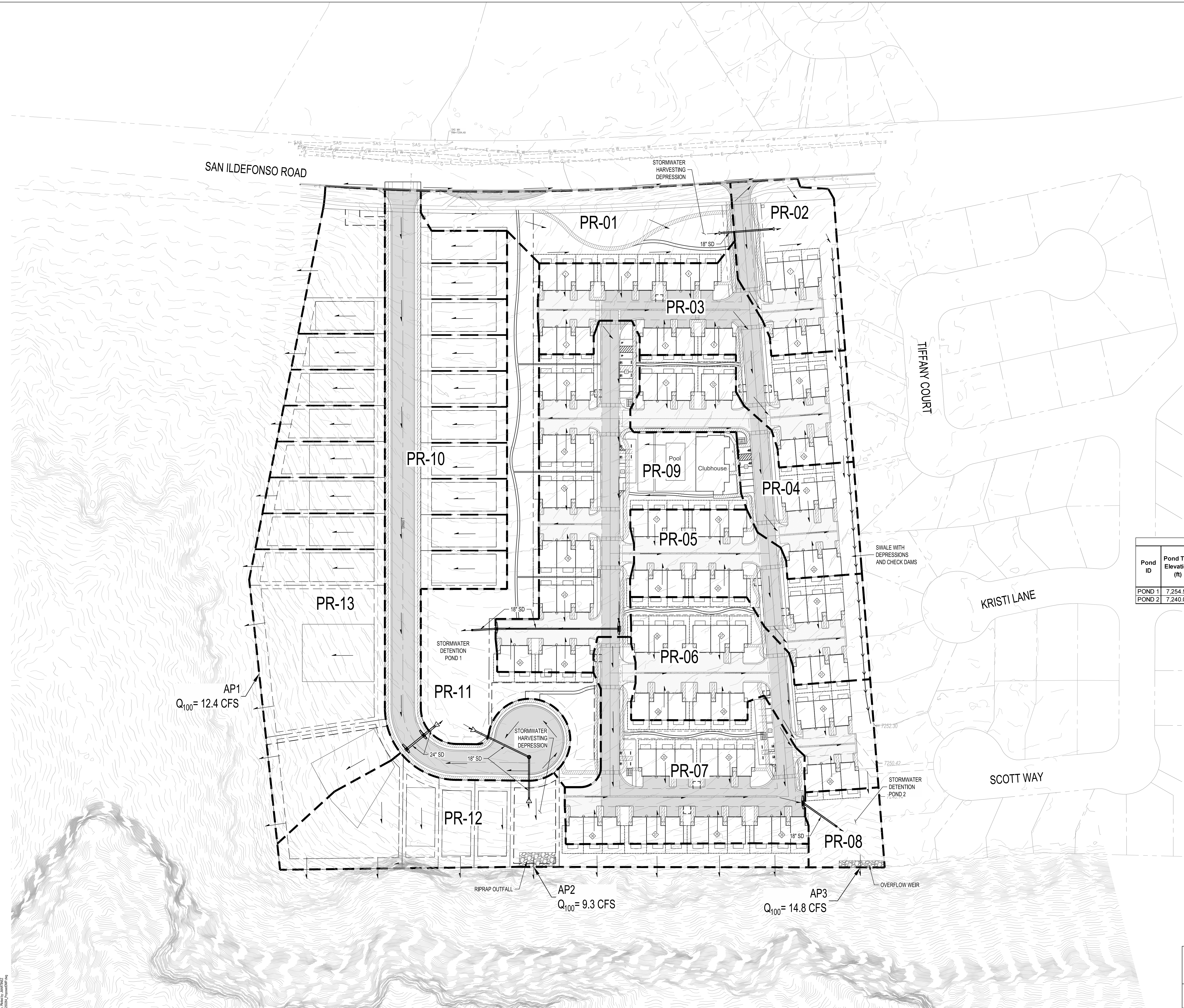
EXISTING CONDITIONS DRAINAGE MAP			
ARBOLADA			
DRAWN BY:	JMM	DATE:	8/19/2025
CHECKED BY:	JL	BHI PROJECT NO:	20250264
		SHEET NO.:	C400



ATTACHMENT C

APPENDIX G

PROPOSED CONDITIONS DRAINAGE PLAN



LEGEND

PROPERTY LINE

EXISTING INDEX CONTOUR

EXISTING INTERMEDIATE CONTOUR

PROPOSED INDEX CONTOUR

PROPOSED INTERMEDIATE CONTOUR

DRAINAGE SWALE

PROPOSED STORM DRAIN MANHOLE

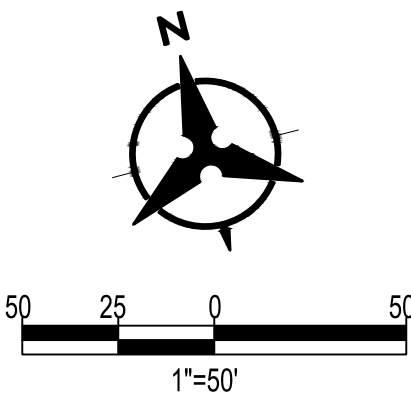
PROPOSED STORM DRAIN INLETS

DIRECTION OF FLOW

DRAINAGE BASIN

PROPOSED CONDITIONS BASIN TABLE									
BASIN ID	AREA (AC)	LAG TIME (MIN)	CN	IMPERVIOUS PERCENT	Q50 (CFS)	V50 (AC-FT)	Q100 (CFS)	V100 (AC-FT)	
PR-01	0.87	7.2	86	5	2.5	0.137	3.0	0.160	
PR-02	0.71	7.2	86	60	2.8	0.158	3.2	0.178	
PR-03	1.30	7.2	86	90	5.7	0.330	6.5	0.368	
PR-04	0.92	7.2	86	85	4.0	0.229	4.5	0.255	
PR-05	0.97	7.2	86	90	4.3	0.247	4.8	0.275	
PR-06	1.16	7.2	86	85	5.0	0.289	5.7	0.323	
PR-07	1.35	7.2	86	90	5.9	0.343	6.7	0.382	
PR-08	0.26	7.2	86	0	0.7	0.039	0.9	0.045	
PR-09	1.80	7.2	86	90	7.9	0.459	9.0	0.511	
PR-10	2.64	7.2	86	95	11.8	0.687	13.4	0.763	
PR-11	1.32	7.2	86	0	3.7	0.200	4.5	0.234	
PR-12	1.33	7.2	86	40	4.6	0.261	5.4	0.297	
PR-13	2.91	7.2	86	50	10.7	0.608	12.4	0.687	
AP1	-	-	-	-	10.7	0.608	12.4	0.687	
AP2	-	-	-	-	8.4	1.584	9.3	1.782	
AP3	-	-	-	-	12.7	0.860	14.8	0.985	

PROPOSED CONDITIONS POND TABLE							
Pond ID	Pond Top Elevation (ft)	Pond Bottom Elevation (ft)	100YR-24HR Q _{in} (cfs)	100YR-24HR Q _{out} (cfs)	100YR-24HR Peak WSEL (ft)	100YR-24HR Peak Volume (ac-ft)	Total Pond Volume (ac-ft)
POND 1	7,254.50	7,250.50	26.8	4.8	7253.90	0.688	0.861
POND 2	7,240.00	7,234.00	20.2	14.8	7239.33	0.339	0.411



PROPOSED CONDITIONS
DRAINAGE PLAN

ARBOLADA

DRAWN BY: JMM

DATE: 8/19/2025

CHECKED BY: JL

BH PROJECT NO: 20250264

SHEET NO: C401

June 13, 2025

Brian Patterson

Titan Development
6300 Riverside Plaza, Suite 200
Albuquerque, NM 87120

Re: Traffic Impact Analysis Arbolada Subdivision Los Alamos, New Mexico – Trip Generation Comparison

Mr. Patterson,

Lee Engineering has reviewed the development contents and trip generations contained in the report “Traffic Impact Analysis Arbolada Subdivision Los Alamos, New Mexico” dated September 2022 and Revised November 2022. The development contents studies in the referenced report contained a total 85 lots designated as 67 Single Family Detached Housing (ITE trip generation code ITE 210) and 18 Multi-Family Housing (Low Rise) (ITE trip generation code 220). The extracted page from the original report is attached to this memo. The report used the ITE Trip Generation Manual, 10th Edition.

Reproduced from the 2022 report, peak hour trip generations consisted of the following:

Table 1: Trip Generations - 2022 Traffic Impact Study

Land Use	Units		Weekday AM Peak Hour			Weekday PM Peak Hour		
			Total	In	Out	Total	In	Out
ITE 220 - Multifamily Housing (Low Rise)	18	Dwelling Units	9	2	7	13	8	5
ITE 210 - Single Family Detached Housing	67	Dwelling Units	52	13	39	70	44	26
			61	15	46	83	52	31

It is understood that development contents are now proposed to consist of 114 “Build to Rent” housing units and 23 detached single-family homes. The closest ITE Trip Generation Manual, 11th Edition land use code for “Build to Rent” housing is ITE 215 – Single Family Attached Housing. The trips produced by the proposed development are shown below with printouts from the ITE Trip Generation Manual attached to this memo.

Table 2: Proposed Development Trip Generations

Area	Land Use	Units		Weekday Total	Weekday AM Peak Hour					Weekday PM Peak Hour				
					Total	Enter	Exit	In	Out	Total	Enter	Exit	In	Out
Build To Rent Multifamily	ITE 215 - Single Family Attached Housing	114	Dwelling Units	821	55	25%	75%	14	41	65	59%	41%	38	27
Single Family	ITE 210 - Single Family Detached Housing	23	Dwelling Units	261	20	25%	75%	5	15	25	63%	37%	16	9
Total				1082	75			19	56	90			54	36

As shown by comparing the above tables, the proposed development generates an additional 4 ingress and 10 egress trips in the AM peak hour and 2 ingress and 5 egress trips in the PM peak hour. These trips constitute less than 12% of the AM+PM peak hour trips generated by the proposed development and equate to an increase of around 1 exiting vehicle every 5-6 minutes (AM Peak Hour). In my opinion, the additional trips generated by the change in development are negligible and their consideration would not alter the recommendations presented in the previously completed traffic impact study.

Please feel free to contact me if you have any questions.

Sincerely,

Jonathon Kruse, PE, PTOE

Attachments:

Attachment A – Extracted page(s) from “Traffic Impact Analysis Arbolada Subdivision Los Alamos, New Mexico”

Attachment B – Proposed Development Trip Generation Sheets

d. Multi-Family Housing (Low Rise) (Land Use Code 220)

The ITE provides different categories of multi-family housing. Multi-family Housing (Low Rise) includes condominiums and townhouses and is considered appropriate for this project. The ITE description for Multi-Family Housing (Low Rise) is as follows:

“Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have one or two levels (floors)...Apartments are rental dwelling units located within the same building with at least three other dwelling units, for example, quadraplexes and all types of apartment buildings...”

There are three independent variables available for projecting trip generations, the number of dwelling units, the number of occupied dwelling units, and the number of residents. For this analysis, the number of dwelling units was used.

The traffic generated during the peak hour was calculated. The projected traffic generated by this land use is presented in Table 3. The Trip Generation Calculations are presented in Appendix D.

TABLE 3 SUMMARY OF TRIP GENERATION CALCULATIONS				
	AM Peak		PM Peak	
	Entry	Exit	Entry	Exit
Land Use 210 – Single Family Detached Housing – 67 Dwelling Units				
	13	39	44	26
Land Use 220 – Multi-Family Housing (Low Rise) – 18 Dwelling Units				
	2	7	8	5
Total	15	46	52	31

Source: Institute of Transportation Engineers
Trip Generation, 10th Edition, 2017

Query

Filter

DATA SOURCE:

Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:

210

LAND USE GROUP:

(200-299) Residential

LAND USE :

210 - Single-Family Detached Housing

LAND USE SUBCATEGORY:

All Sites

SETTING/LOCATION:

General Urban/Suburban

INDEPENDENT VARIABLE (IV):

Dwelling Units

TIME PERIOD:

Weekday, Peak Hour of Adjacent Street Traffic

TRIP TYPE:

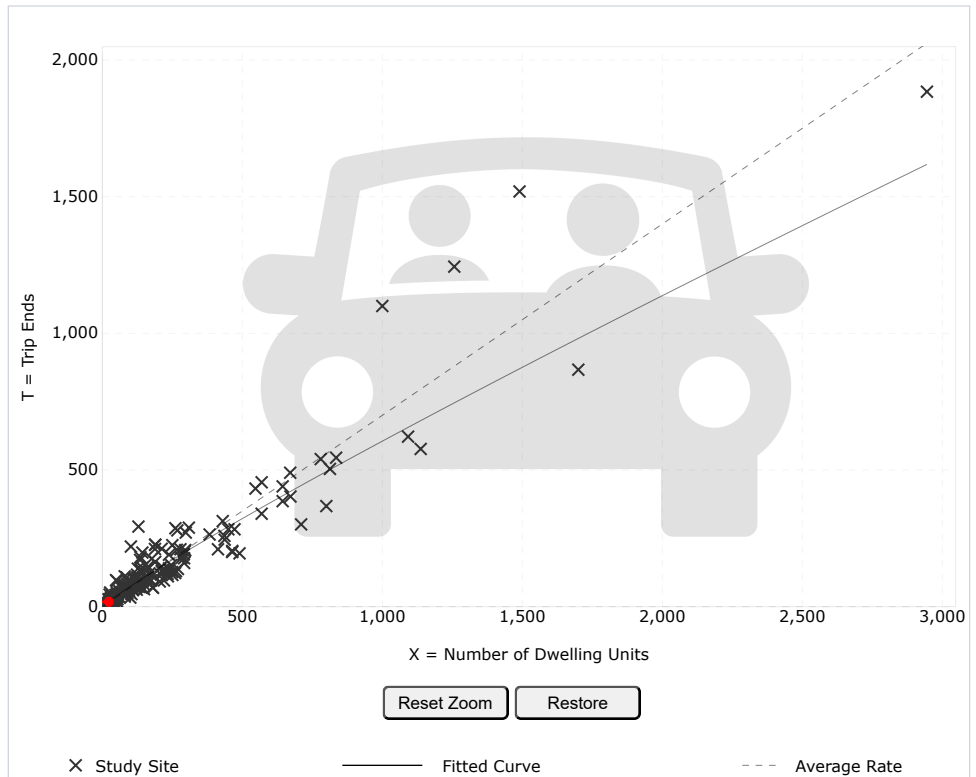
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:

23

Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

Land Use:

Single-Family

[Description a](#)

Independent

Dwelling Unit:

Time Period:

Weekday

Peak Hour of

One Hour Bel

Setting/Loca

General Urba

Trip Type:

Vehicle

Number of S

192

Avg. Num. of

226

Average Rat

0.70

Range of Ra

0.27 - 2.27

Standard De

0.24

Fitted Curve

$\ln(T) = 0.91 \ln(X) + 0.24$

R^2 :

0.90

Directional C

25% entering

Calculated T

Average Rate

Fitted Curve:

Graph Look Up

Query

Filter

DATA SOURCE:

Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:

210



LAND USE GROUP:

(200-299) Residential

LAND USE :

210 - Single-Family Detached Housing

LAND USE SUBCATEGORY:

All Sites

SETTING/LOCATION:

General Urban/Suburban

INDEPENDENT VARIABLE (IV):

Dwelling Units

TIME PERIOD:

Weekday, Peak Hour of Adjacent Street Traffic

TRIP TYPE:

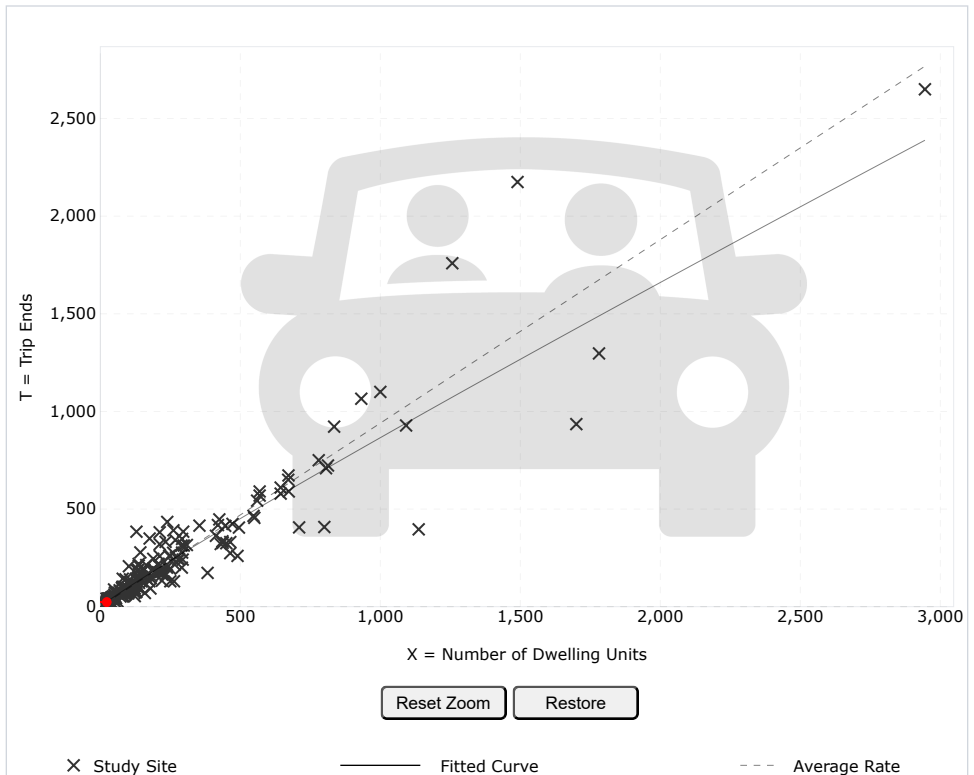
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:

23

Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

Land Use:

Single-Family
[Description a](#)

Independent

Dwelling Unit:

Time Period:

Weekday
Peak Hour of
One Hour Bel

Setting/Loca

General Urba

Trip Type:

Vehicle

Number of S

208

Avg. Num. of

248

Average Rat

0.94

Range of Ra

0.35 - 2.98

Standard De

0.31

Fitted Curve

$\ln(T) = 0.94 \ln(X) + 0.31$

R²:

0.92

Directional C

63% entering

Calculated T

Average Rate

Fitted Curve:

Query

Filter

DATA SOURCE:

Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:

210

LAND USE GROUP:

(200-299) Residential

LAND USE :

210 - Single-Family Detached Housing

LAND USE SUBCATEGORY:

All Sites

SETTING/LOCATION:

General Urban/Suburban

INDEPENDENT VARIABLE (IV):

Dwelling Units

TIME PERIOD:

Weekday

TRIP TYPE:

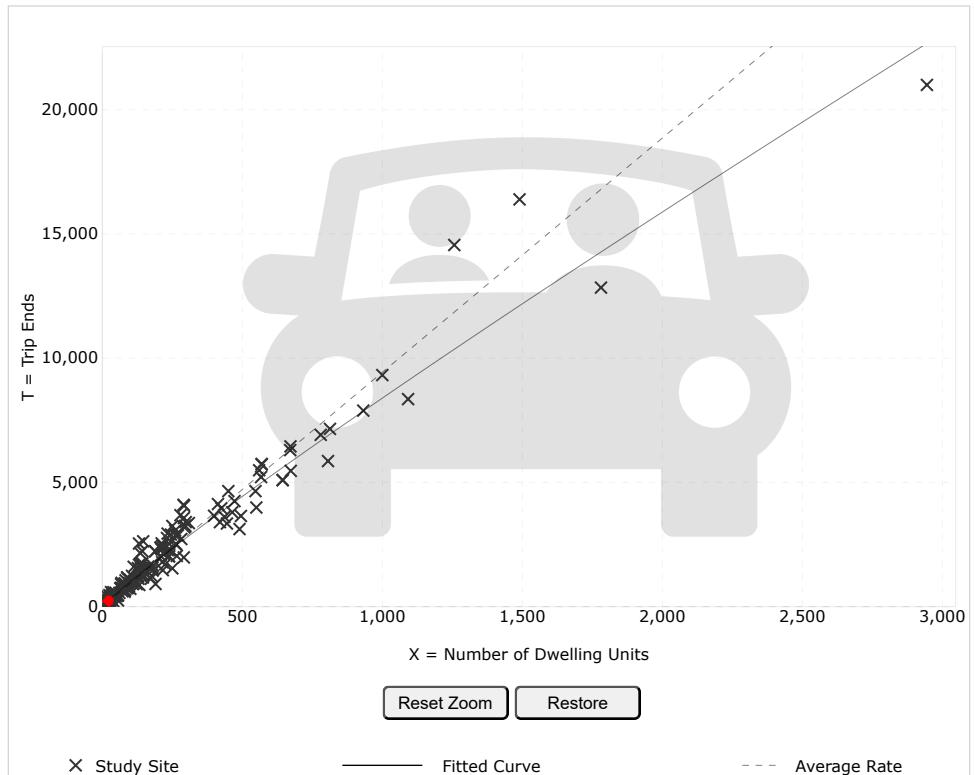
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:

23

Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

Land Use:

Single-Family
[Description a](#)

Independent
Dwelling Unit:

Time Period:
Weekday

Setting/Loca
General Urban

Trip Type:
Vehicle

Number of S
174

Avg. Num. of
246

Average Rate
9.43

Range of Rate
4.45 - 22.61

Standard Dev
2.13

Fitted Curve
 $\ln(T) = 0.92 \ln(X) + 1.1$

R²:
0.95

Directional Co
50% entering

Calculated T
Average Rate
Fitted Curve:

Graph Look Up

Query

Filter

DATA SOURCE:

Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:

215



LAND USE GROUP:

(200-299) Residential

LAND USE :

215 - Single-Family Attached Housing

LAND USE SUBCATEGORY:

All Sites

SETTING/LOCATION:

General Urban/Suburban

INDEPENDENT VARIABLE (IV):

Dwelling Units

TIME PERIOD:

Weekday, Peak Hour of Adjacent Street Traffic

TRIP TYPE:

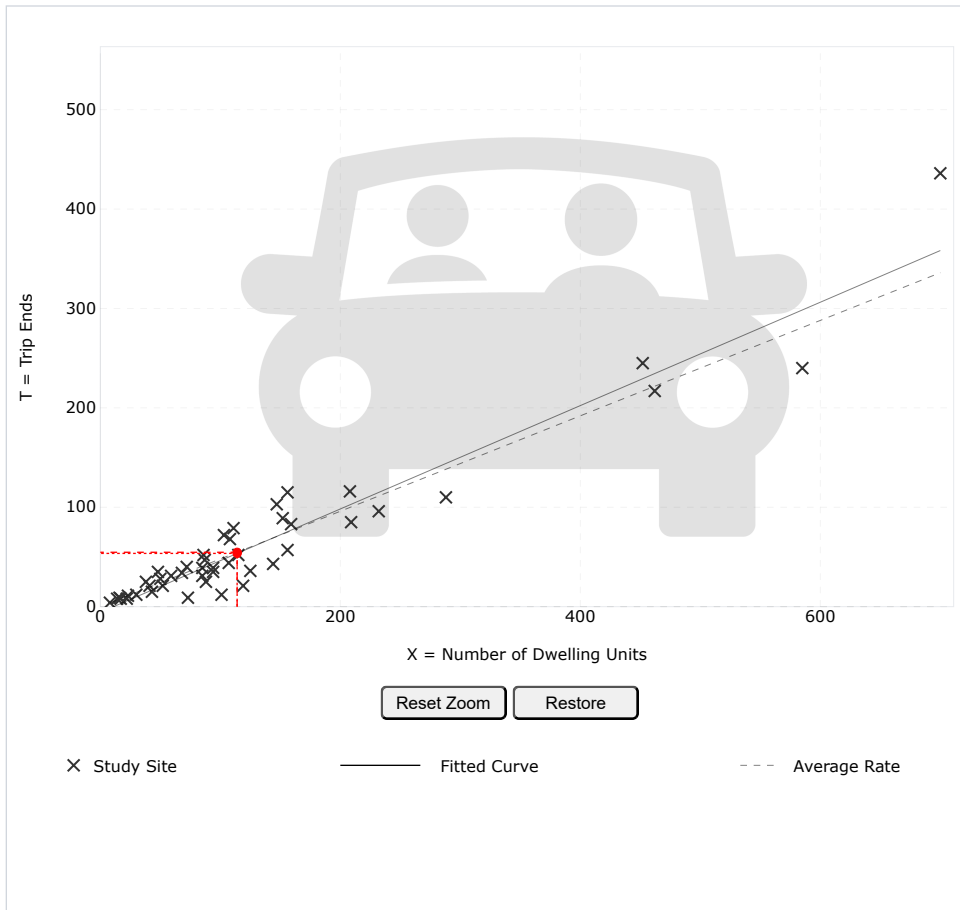
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:

114

Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

Land Use:

Single-Family
[Description a](#)

Independent
Dwelling Unit:

Time Period:

Weekday
Peak Hour of
One Hour Bel

Setting/Loca

General Urban

Trip Type:

Vehicle

Number of S

46

Avg. Num. of

135

Average Rate

0.48

Range of Ra

0.12 - 0.74

Standard De

0.14

Fitted Curve

$T = 0.52(X) -$

$R^2:$

0.92

Directional D

25% entering

Calculated T

Average Rate

Fitted Curve:

Query

Filter

DATA SOURCE:

Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:

215



LAND USE GROUP:

(200-299) Residential

LAND USE :

215 - Single-Family Attached Housing

LAND USE SUBCATEGORY:

All Sites

SETTING/LOCATION:

General Urban/Suburban

INDEPENDENT VARIABLE (IV):

Dwelling Units

TIME PERIOD:

Weekday, Peak Hour of Adjacent Street Traffic

TRIP TYPE:

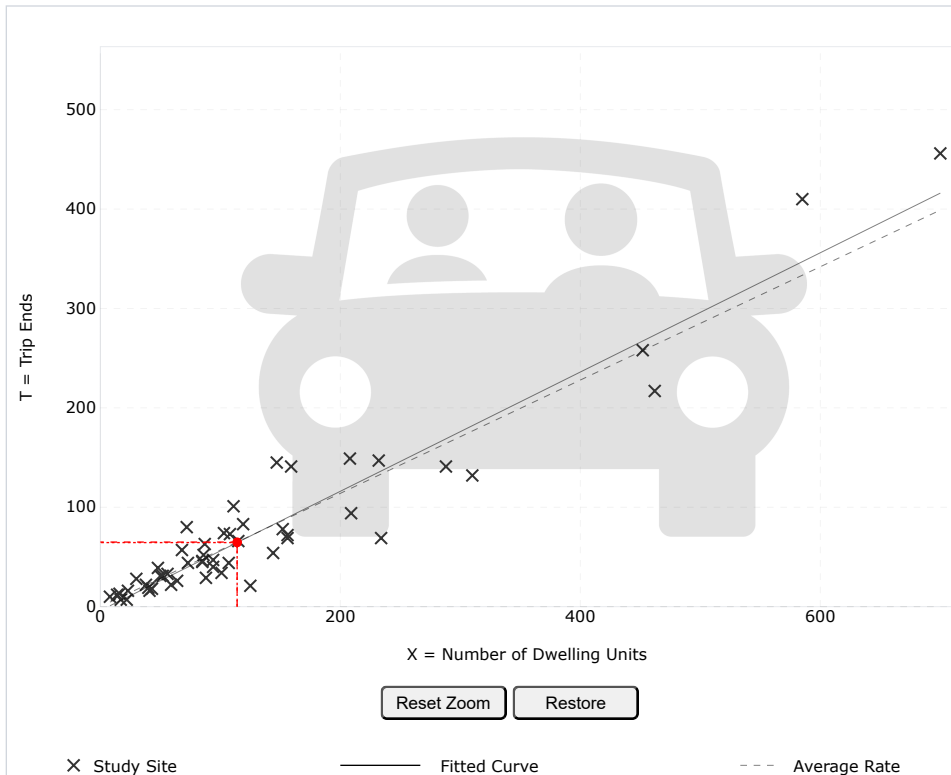
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:

114

Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

Land Use:

Single-Family

[Description a](#)

Independent

Dwelling Unit:

Time Period:

Weekday

Peak Hour of

One Hour Bel

Setting/Loca

General Urba

Trip Type:

Vehicle

Number of S

51

Avg. Num. of

136

Average Rate

0.57

Range of Ra

0.17 - 1.25

Standard De

0.18

Fitted Curve

$T = 0.60(X) -$

$R^2:$

0.91

Directional C

59% entering

Calculated T

Average Rate

Fitted Curve:

Query

Filter

DATA SOURCE:

Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:

215

LAND USE GROUP:

(200-299) Residential

LAND USE :

215 - Single-Family Attached Housing

LAND USE SUBCATEGORY:

All Sites

SETTING/LOCATION:

General Urban/Suburban

INDEPENDENT VARIABLE (IV):

Dwelling Units

TIME PERIOD:

Weekday

TRIP TYPE:

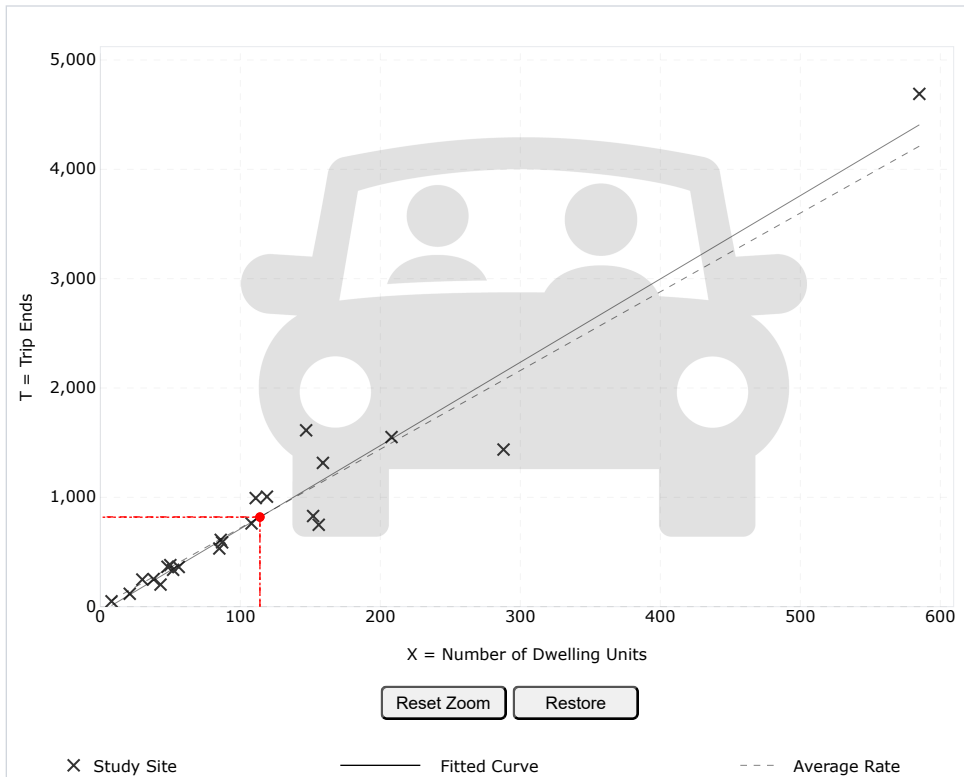
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:

114

Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

Land Use:

Single-Family
[Description a](#)

Independent
Dwelling Unit:

Time Period:
Weekday

Setting/Loca
General Urba

Trip Type:
Vehicle

Number of S
22

Avg. Num. of
120

Average Rate
7.20

Range of Rate
4.70 - 10.97

Standard Dev
1.61

Fitted Curve
 $T = 7.62(X) -$

R^2 :
0.94

Directional C
50% entering

Calculated T
Average Rate
Fitted Curve: