

# CITY OF ALBUQUERQUE

Planning Department  
Alan Varela, Director



Mayor Timothy M. Keller

December 19, 2024

Robert Fierro, P.E.  
Fierro & Company  
3201 4<sup>th</sup> Street NW, Suite C  
Albuquerque, NM 87107

**RE: Tuscan Village Unit II  
Grading & Drainage Plans  
Engineer's Stamp Date: 12/11/2024  
Hydrology File: E22D024**

Dear Mr. Fierro:

Based upon the information provided in your submittal received 12/17/2024, the Grading & Drainage Plans **are** approved for Grading Permit. The following comments need to be addressed for approval of the above referenced project:

As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Doug Hughes, PE, [jhughes@cabq.gov](mailto:jhughes@cabq.gov), 505-924-3420) 14 days prior to any earth disturbance.

If you have any questions, please contact me at 505-924-3314 or [amontoya@cabq.gov](mailto:amontoya@cabq.gov).

Sincerely,

Anthony Montoya, Jr., P.E.  
Senior Engineer, Hydrology  
Planning Department, Development Review Services



# City of Albuquerque

Planning Department  
Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (DTIS)

Project Title: Tuscany Village, Unit II Hydrology File # E22D024  
Legal Description: Tract N-7-A-1, of the Bulk Land Plat of Tanoan Properties  
City Address, UPC, OR Parcel: UPC: 102206243250310203

Applicant/Agent: Fierro & Company Contact: Robert Fierro  
Address: 3201 4th Street NW, Suite C Phone: 505-352-8930  
Email: rfierro@fierrocompany.com

Applicant/Owner: \_\_\_\_\_ Contact: \_\_\_\_\_  
Address: \_\_\_\_\_ Phone: \_\_\_\_\_  
Email: \_\_\_\_\_

(Please note that a DFT SITE is one that needs Site Plan Approval & ADMIN SITE is one that does not need it.)

TYPE OF DEVELOPMENT: ☒ PLAT (#of lots) 9 ☐ RESIDENCE  
☐ DFT SITE ☒ ADMIN SITE

RE-SUBMITTAL: ☒ YES ☐ NO

DEPARTMENT: ☐ TRANSPORTATION ☒ HYDROLOGY/DRAINAGE

Check all that apply under Both the Type of Submittal and the Type of Approval Sought:

### TYPE OF SUBMITTAL:

- ☐ ENGINEER/ARCHITECT CERTIFICATION
- ☐ PAD CERTIFICATION
- ☐ CONCEPTUAL G&D PLAN
- ☒ GRADING & DRAINAGE PLAN
- ☐ DRAINAGE REPORT
- ☐ DRAINAGE MASTER PLAN
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL) ADMINISTRATIVE
- ☐ TRAFFIC CIRCULATION LAYOUT FOR DFT APPROVAL
- ☐ TRAFFIC IMPACT STUDY (TIS)
- ☐ STREET LIGHT LAYOUT
- ☐ OTHER (SPECIFY) \_\_\_\_\_

### TYPE OF APPROVAL SOUGHT:

- ☐ BUILDING PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY
- ☐ CONCEPTUAL TCL DFT APPROVAL
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ SITE PLAN FOR BLDG PERMIT DFT APPROVAL
- ☐ SIA/RELEASE OF FINANCIAL GUARANTEE
- ☐ FOUNDATION PERMIT APPROVAL
- ☒ GRADING PERMIT APPROVAL
- ☐ SO-19 APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ GRADING PAD CERTIFICATION
- ☐ WORK ORDER APPROVAL
- ☐ CLOMR/LOMR
- ☐ OTHER (SPECIFY) \_\_\_\_\_

DATE SUBMITTED: 12/17/2024

# Floodplain Development Permit Application

Planning Dept., City of Albuquerque

## Section 1: General Provisions (Applicant to read and sign)

1. No work of any kind may start in a Special Flood Hazard Area, SFHA, until a permit is issued.
2. Applicant is hereby informed that other permits may be required to fulfill local, state, and federal regulatory requirements.
3. Applicant hereby gives consent to the Floodplain Administrator and his/her representative to make reasonable inspections required to verify compliance.
4. Applicant must provide a Critical Habitat for Threatened & Endangered Species report prior to any work in a SFHA.
5. Applicant must provide the Base Flood Elevation, BFE, and must provide engineering calculations demonstrating that the development will not increase the BFE or result in increased flood risk on any neighboring property.
6. If this application is for a building the floodplain must be removed by first constructing any required storm drain and/or channel modifications and second acquiring a Letter of Map Revision, LOMR, from FEMA before a building permit will be issued. If storm drain and channel modifications are not involved then a draft Elevation Certificate must be submitted prior to Building Permit and a Final Elevation Certificate must be submitted prior to Certificate of Occupancy.
7. A Conditional Letter of Map Revision, CLOMR, is required prior to any work in the FLOODWAY, if applicable.
8. The applicant certifies that all statements herein and in attachments to this application are, to the best of my knowledge, true and accurate.

Applicant Signature Robert Fierro Date 12-17-2024

Applicant Printed Name Robert Fierro Phone #: (505) 503-9546

Owner Signature \_\_\_\_\_ Date \_\_\_\_\_

Owner Printed Name William Galbreth Phone #: (505) 506-9872

Applicant is (check one): Owner \_\_\_\_\_ Builder \_\_\_\_\_ Engineer/Architect ☒

## Section 2: Proposed Development in Special Flood Hazard Area (to be completed by Applicant)

Project address/Legal Disc/Location: San Antonio Rd. NE

Tract N-7-A-1, of the BULK LAND PLAT OF Tract N-7-A-1,  
TANDAN Properties. Located on San Antonio Rd, with Tramway Blvd/Academy  
Being closest main intersection.

**Section 2 (Cont.) - Description of Work in Special Flood Hazard Area (SFHA):**

**A. Building Development and Building Type**

ACTIVITY

STRUCTURE TYPE

\_\_\_ New Building

\_\_\_ Residential (1-4 Family)

\_\_\_ Addition

\_\_\_ Residential (More than 4 Family)

\_\_\_ Alteration

\_\_\_ Non Residential (Flood-proofing? \_\_\_ Yes)

\_\_\_ Relocation

\_\_\_ Combined Use (Residential & Commercial)

\_\_\_ Demolition

\_\_\_ Manufactured Home (In Mobile Home Park? \_\_\_ Yes)

\_\_\_ Replacement

**If an addition or alteration:**

Estimated Cost of Project \$ \_\_\_\_\_

Estimated Value of structure before addition/alteration. \$ \_\_\_\_\_

Percent of value (new construction /existing value) \_\_\_\_\_ %

**B. Other Development Activities**

\_\_\_ Clearing      ☒ Grading      \_\_\_ Utilities      \_\_\_ Paving

\_\_\_ Watercourse Alteration (Bridge or Channel Modification)

\_\_\_ Drainage Improvements (Storm drain or culverts)

\_\_\_ Road, Street or Bridge Construction

\_\_\_ Subdivision

\_\_\_ Walls or Fences

\_\_\_ Storage of Materials/Equipment for more than a year. (Materials Volume (cu. Ft.) \_\_\_\_\_)

Other (Please Specify) \_\_\_\_\_

**Is there a Grading & Drainage Plan associated with this work?**    Yes ☒ No \_\_\_

Drainage file Number: E220024



### Section 3: Floodplain Determination (Completed by the Floodplain Administrator)

X The proposed development is located on FIRM Panel: 35001C0142

       The proposed development is located in Zone X and NO FLOODPLAIN DEVELOPMENT PERMIT IS REQUIRED.

X A portion of the proposed development is located in a SFHA but not any buildings so an approved G&D Plan is required (Engineer's Stamp Date 12/11/2024) prior to issuance of a Floodplain Development Permit and no Building Permit will be issued for this construction.

       A portion of the proposed Building is located in a SFHA but the project does not include any storm drain improvements and/or channel modifications so:

1. Approved G&D Plan is required (Engineer's Stamp Date                     ) prior to issuance of a Floodplain Development Permit,
2. Draft Elevation Certificate (Date                     ) is required prior to issuance of a Building Permit, and
3. Final Elevation Certificate and Engineer's Certification is required prior to Certificate of Occupancy.

       A portion of the proposed Building is located in a SFHA and the project includes storm drain improvements and/or channel modifications that will change the floodplain location so

1. An Approved Grading and Drainage Plan is required (Engineer's Stamp Date                     ) prior to issuing a Flood Plain Development Permit and a Grading Permit and/or a Work Order.
2. The improvements must be constructed and an Approved Engineer's Certification (Engineer's Stamp Date                     ) and an Approved LOMR Request (Engineer's Stamp Date                     ) must be approved by Hydrology prior to approval of the LOMR application to FEMA.
3. The Floodplain must be removed by a LOMR from FEMA (Date                     ) prior to issuance of a Building Permit.

       A portion of the proposed development is located in a FLOODWAY so:

1. Approved G&D Plan (Engineer's Stamp Date                     ) and an Approved CLOMR Request (Date                     ) is required prior to approval of the application to FEMA, and
2. CLOMR from FEMA (Date                     ) is required prior to issuance of a Floodplain Development Permit, a Grading Permit, and/or a Work Order.
3. The improvements must be constructed and an Approved Engineer's Certification (Engineer's Stamp Date                     ) and an Approved LOMR Request (Engineer's Stamp Date                     ) must be approved by Hydrology prior to approval of the LOMR application to FEMA (Date                     ).
4. The Floodplain must be removed by a LOMR from FEMA (Date                     ) prior to issuance of a Building Permit.

Drainage File Number: E22D024

Floodplain Permit Number: E22F024

Signed: Rudy Rael

Date: 12/17/2024

Printed Name: Rudy E. Rael





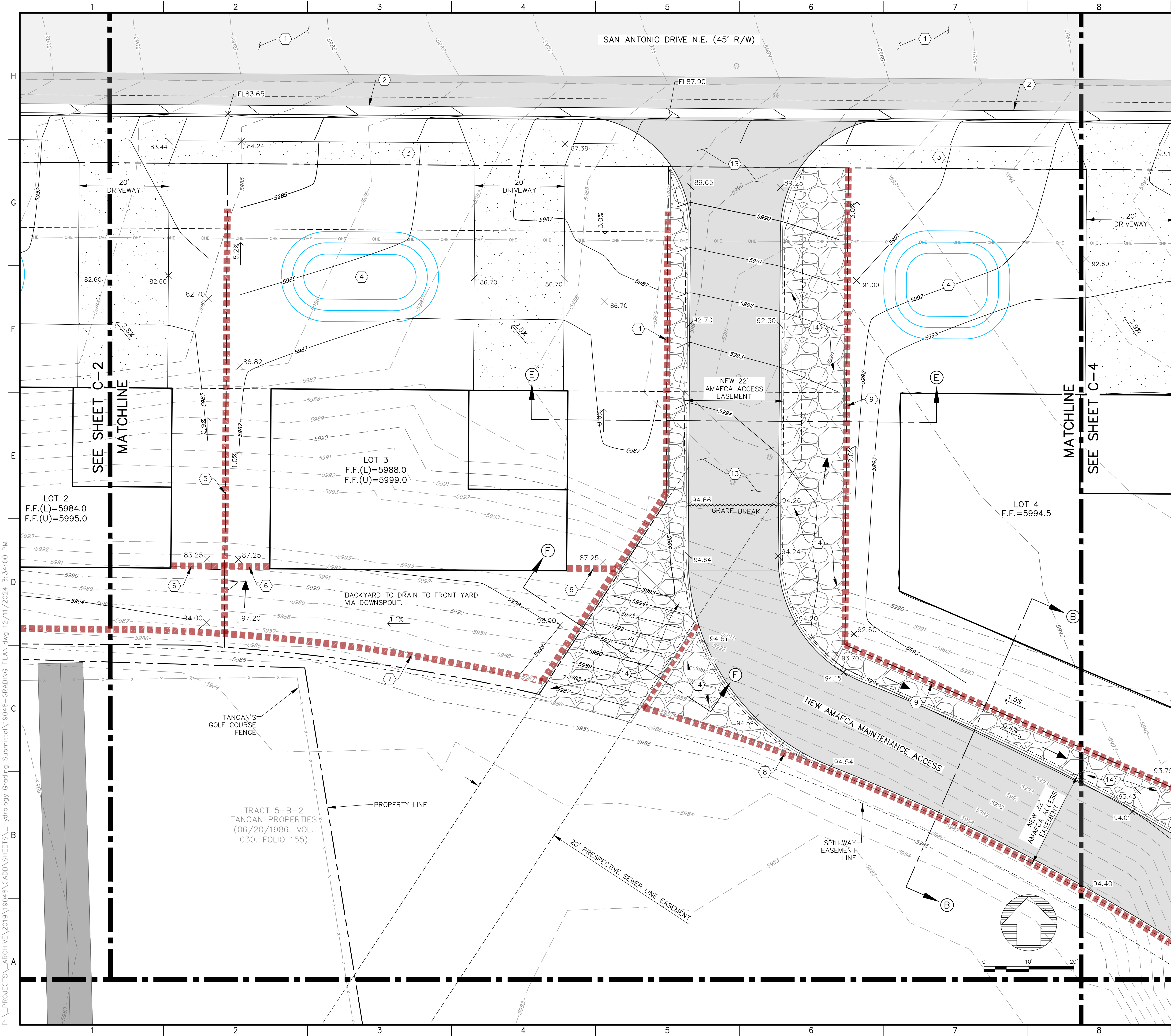




KEY MAP  
1" = 150'

SHEET NO: C-2





GENERAL NOTES:

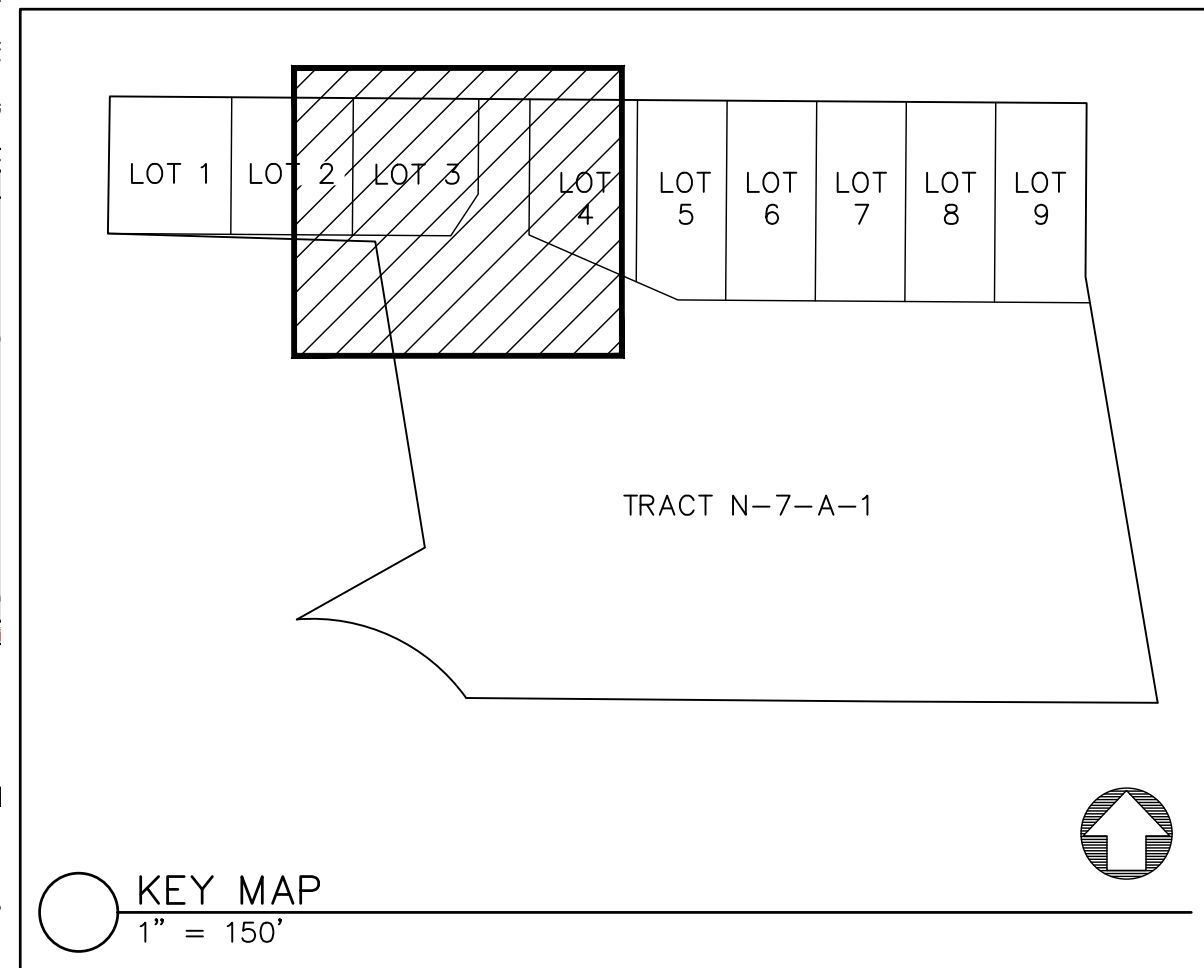
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- 2) ALL RETAINING WALLS TO BE CONSTRUCTED UNDER A CITY OF ALBUQUERQUE'S RETAINING WALL PERMIT. STRUCTURAL DESIGN IS BY OTHERS AND WILL NEED TO BE APPROVED BY CITY OF ALBUQUERQUE AND AMAFCA.
- 3) THE ENTIRE AREA OF LOTS 1-9 IS REQUIRED TO DRAIN TO SAN ANTONIO DRIVE INCLUDING ROOF DRAINAGE AND BACKYARD.

KEYED NOTES:

- 1 EXISTING ASPHALT.
- 2 NEW CURB & GUTTER PER CITY WORK ORDER.
- 3 NEW 5' SIDEWALK PER CITY WORK ORDER.
- 4 STORM WATER QUALITY POND PER BUILDING PERMIT.
- 5 CONSTRUCT SIDE YARD RETAINING WALL W/PRIVACY WALL. TYPICAL RETAINING WALL NOMENCLATURE PER DETAIL 1/C-7. RETAINING WALL PERMIT REQUIRED. STRUCTURAL DESIGN BY OTHERS.
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APPROVAL OF GRADING & DRAINAGE PLANS SHALL EXPIRE TWO (2) YEARS AFTER THE APPROVAL DATE BY THE CITY IF NO BUILDING PERMIT HAS BEEN FILED ON THE DEVELOPMENT.



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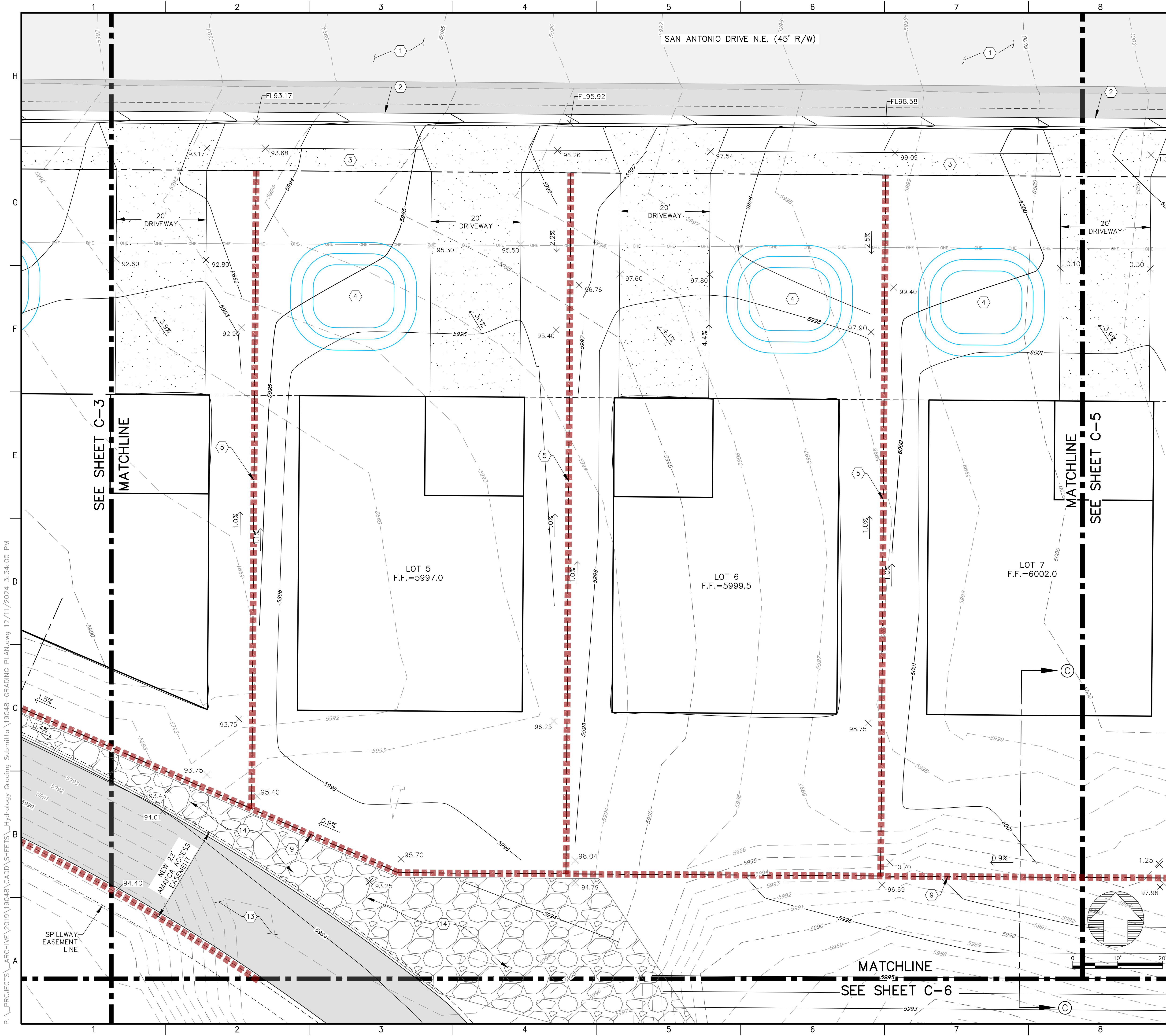
TUSCANY VILLAGE, UNIT II  
SUBDIVISION  
ALBUQUERQUE, NM

PROJECT NAME

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 19048  
DESIGNED BY: RJF  
DRAWN BY: JB  
CHECKED BY: RJF  
DATE: NOVEMBER 2024  
SHEET TITLE  
GRADING PLAN  
DETAIL  
SHEET NO:  
C-3





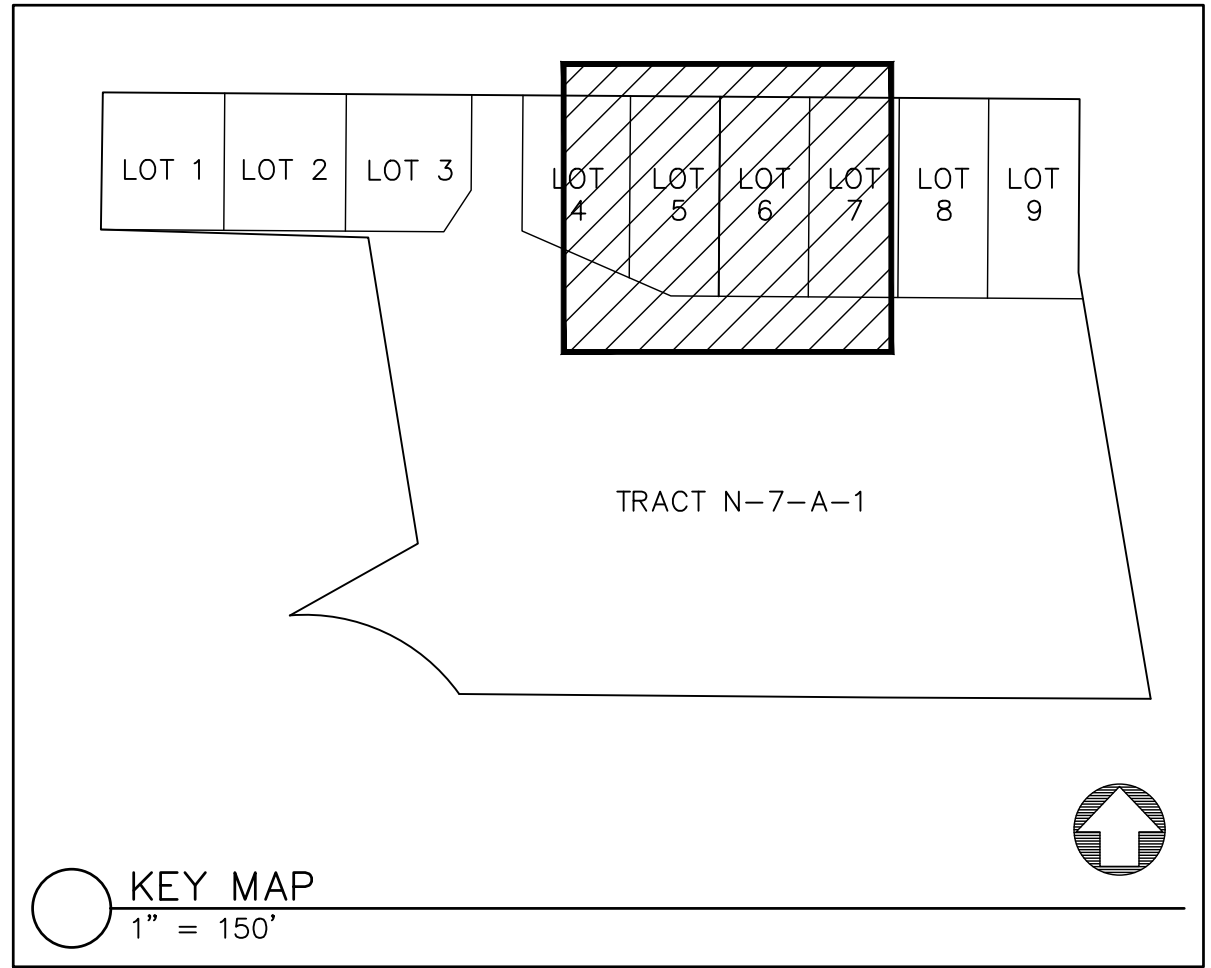
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ENGINEER'S SEAL

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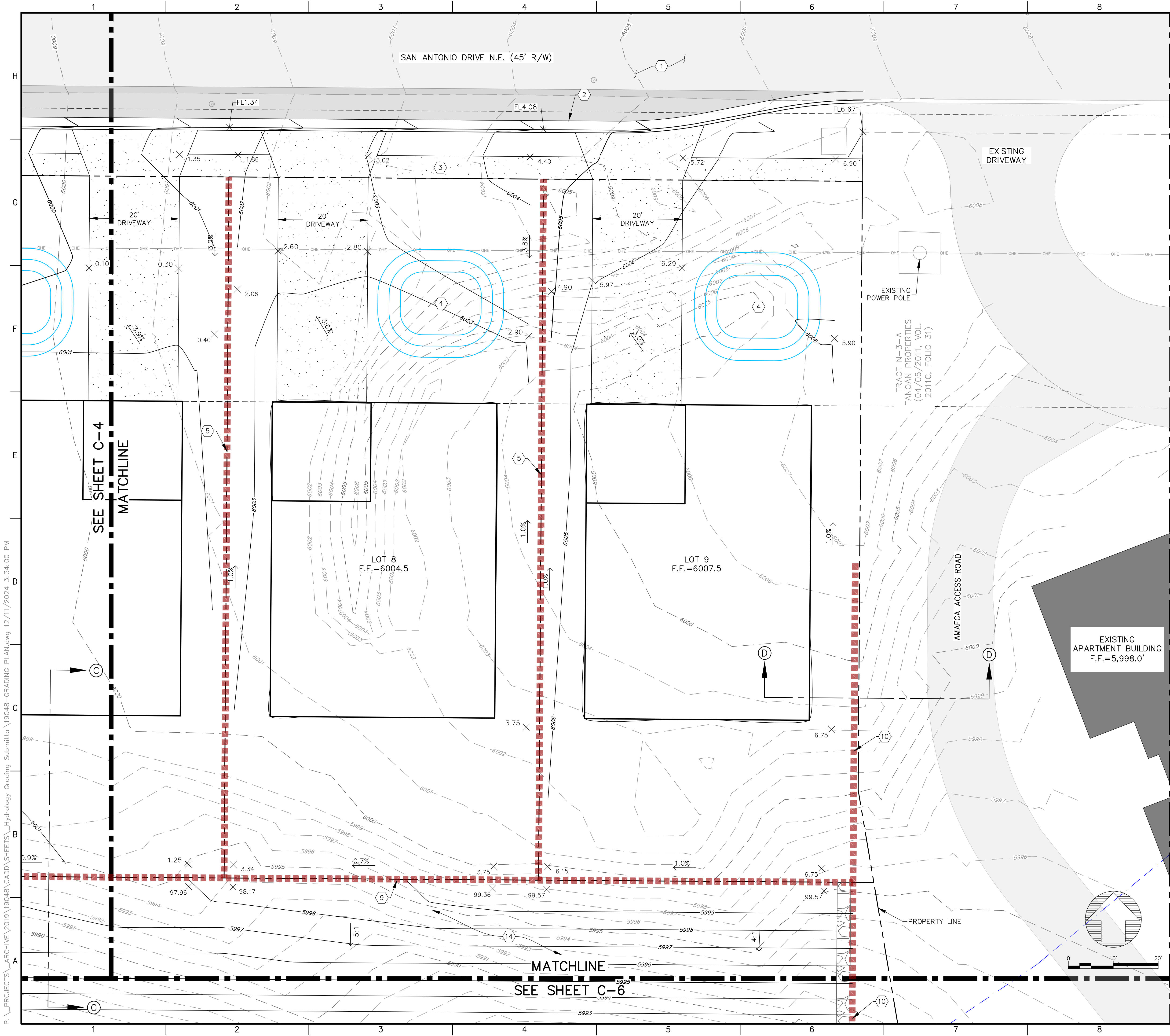
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	19048	

DESCRIPTION	REV.	DATE

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DRAWN BY: JB  
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DATE: NOVEMBER 2024  
SHEET TITLE: GRADING PLAN DETAIL

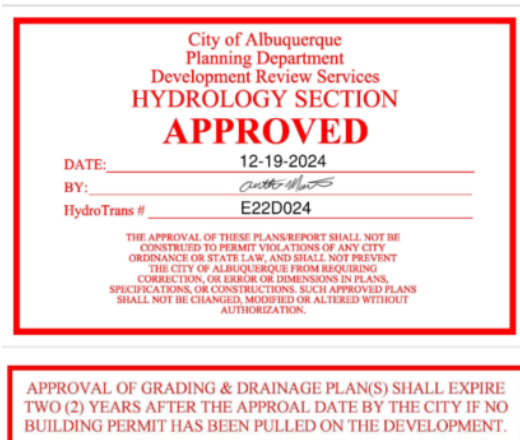
SHEET NO: C-4





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**KEY MAP**  
1" = 150'

LOT 1 LOT 2 LOT 3 LOT 4 LOT 5 LOT 6 LOT 7 LOT 8 LOT 9

TRACT N-7-A-1

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ENGINEER'S SEAL

**TUSCANY VILLAGE, UNIT II**  
**SUBDIVISION**  
**ALBUQUERQUE, NM**

PROJECT NAME	PROJECT NO.	BY
	19048	

REV.	DATE	DESCRIPTION

DESIGNED BY:	RJF
DRAWN BY:	JB
CHECKED BY:	RJF
DATE:	NOVEMBER 2024
SHEET TITLE	
GRADING PLAN DETAIL	
SHEET NO:	
C-5	

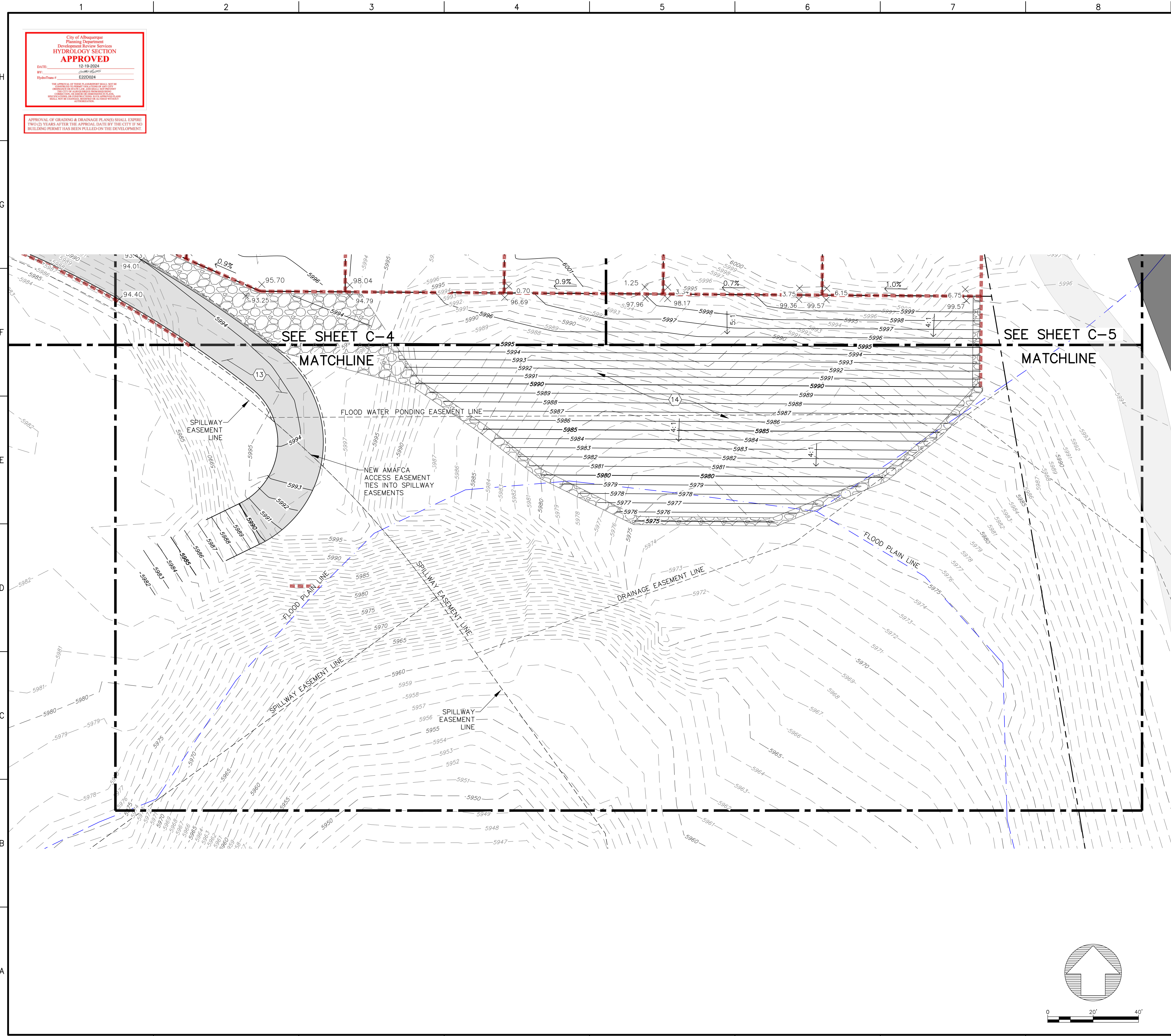


P:\PROJECTS\ARCHIVE\2019\19048\CADD\SHEETS\Hydrology Grading Submittal\19048-GRADING PLAN.dwg 12/11/2024 3:34:00 PM

City of Albuquerque  
Planning Department  
Development Review Services  
**HYDROLOGY SECTION**  
**APPROVED**  
DATE: 12-19-2024  
BY: [Signature]  
HydroTeam # E22D024

THE OFFICIAL OF THE CITY OF ALBUQUERQUE SHALL NOT BE RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF THE PROJECT. THE CITY OF ALBUQUERQUE SHALL NOT BE RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF THE PROJECT. THE CITY OF ALBUQUERQUE SHALL NOT BE RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF THE PROJECT.

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- THIS GRADING PLAN IS PREPARED TO ESTABLISH FINISH FLOOR ELEVATIONS, RETAINING WALL HEIGHTS, AND OVERALL GRADING. EACH LOT REQUIRES SEPERATE GRADING PLAN FOR BUILDING PERMIT.
  - ALL RETAINING WALLS TO BE CONSTRUCTED UNDER A CITY OF ALBUQUERQUE'S RETAINING WALL PERMIT. STRUCTURAL DESIGN IS BY OTHERS AND WILL NEED TO BE APPROVED BY CITY OF ALBUQUERQUE AND AMAFCA.
  - THE ENTIRE AREA OF LOTS 1-9 IS REQUIRED TO DRAIN TO SAN ANTONIO DRIVE INCLUDING ROOF DRAINAGE AND BACKYARD.
- KEYED NOTES:**
- EXISTING ASPHALT.
  - NEW CURB & GUTTER PER CITY WORK ORDER.
  - NEW 5' SIDEWALK PER CITY WORK ORDER.
  - STORM WATER QUALITY POND PER BUILDING PERMIT.
  - CONSTRUCT SIDE YARD RETAINING WALL W/PRIVACY WALL. TYPICAL RETAINING WALL NOMENCLATURE PER DETAIL 1/C-7. RETAINING WALL PERMIT REQUIRED. STRUCTURAL DESIGN BY OTHERS.
  - CONSTRUCT RETAINING WALL W/PRIVACY WALL. TYPICAL RETAINING WALL NOMENCLATURE PER DETAIL 2/C-7. RETAINING WALL PERMIT REQUIRED. STRUCTURAL DESIGN BY OTHERS.
  - CONSTRUCT RETAINING WALL No.1 REFER TO PLAN & PROFILE ON SHEET C-8. TYPICAL RETAINING WALL NOMENCLATURE PER 1/C-9. RETAINING WALL PERMIT REQUIRED. STRUCTURAL DESIGN BY OTHERS.
  - CONSTRUCT RETAINING WALL No.1 REFER TO PLAN & PROFILE ON SHEET C-8. TYPICAL RETAINING WALL NOMENCLATURE PER 2/C-9. RETAINING WALL PERMIT REQUIRED. STRUCTURAL DESIGN BY OTHERS.
  - CONSTRUCT RETAINING WALL No.2 W/PRIVACY WALL REFER TO PLAN & PROFILE ON SHEET C-10. TYPICAL RETAINING WALL NOMENCLATURE PER 1/C-11. RETAINING WALL PERMIT REQUIRED. STRUCTURAL DESIGN BY OTHERS. REAR LOT WALL GRADE 2% SLOPE FOR FIRST 5' SOUTH OF WALL.
  - CONSTRUCT RETAINING WALL No.3 W/PRIVACY WALL REFER TO PLAN & PROFILE ON SHEET C-12. TYPICAL RETAINING WALL NOMENCLATURE PER 1/C-12. RETAINING WALL PERMIT REQUIRED. STRUCTURAL DESIGN BY OTHERS.
  - CONSTRUCT RETAINING WALL No.4 W/PRIVACY WALL REFER TO PLAN & PROFILE ON SHEET C-13. TYPICAL RETAINING WALL NOMENCLATURE PER 1/C-14. RETAINING WALL PERMIT REQUIRED. STRUCTURAL DESIGN BY OTHERS.
  - CONSTRUCT RETAINING WALL No.5 W/PRIVACY WALL REFER TO PLAN & PROFILE ON SHEET C-13. REFER TO TYPICAL RETAINING WALL NOMENCLATURE PER 2/C-14. RETAINING WALL PERMIT REQUIRED. STRUCTURAL DESIGN BY OTHERS.
  - AMAFCA ACCESS ROAD AND GATE TO BE CONSTRUCTED UNDER CITY WORK ORDER.
  - ARMOR SWALES AND SLOPES. STABILIZE SLOPES PER THE FOLLOWING CRITERIA AS LISTED BELOW AND IN PART 6-4(E) MEANS OF EROSION CONTROL OF CITY OF ALBUQUERQUE'S DEVELOPMENT PROCESS MANUAL.
    - SLOPES BETWEEN 3H:1V TO 4H:1V PROTECT WITH 3" OR LARGER ROCK
    - SLOPES BETWEEN 2.5H:1V TO 3H:1V PROTECT WITH 1.5" ANGULAR ROCK
    - SLOPES BETWEEN 2H:1V TO 2.5H:1V PROTECT WITH 4" MINIMUM ANGULAR HAND-PLACED WITH NO LANDSCAPE FABRIC
    - SLOPES BETWEEN 1.5H TO 2H:1V PROTECT WITH 6" OR LARGER ANGULAR STONE HAND PLACED WITH NO LANDSCAPE FABRIC.

LOT 1

LOT 2

LOT 3

LOT 4

LOT 5

LOT 6

LOT 7

LOT 8

LOT 9

TRACT N-7-A-1

KEY MAP

1" = 150'

FI

Fierro & Company

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3201 4th STREET NW, SUITE C  
ALBUQUERQUE, NEW MEXICO 87107  
PH (505) 352-8930  
www.fierrocompany.com

ROBERT J. FIERRO

20585

12-11-2024

PROFESSIONAL ENGINEER

ENGINEER'S SEAL

TUSCANY VILLAGE, UNIT II  
SUBDIVISION  
ALBUQUERQUE, NM

PROJECT NAME

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 19048

DESIGNED BY: R/JF

DRAWN BY: JB

CHECKED BY: R/JF

DATE: NOVEMBER 2024

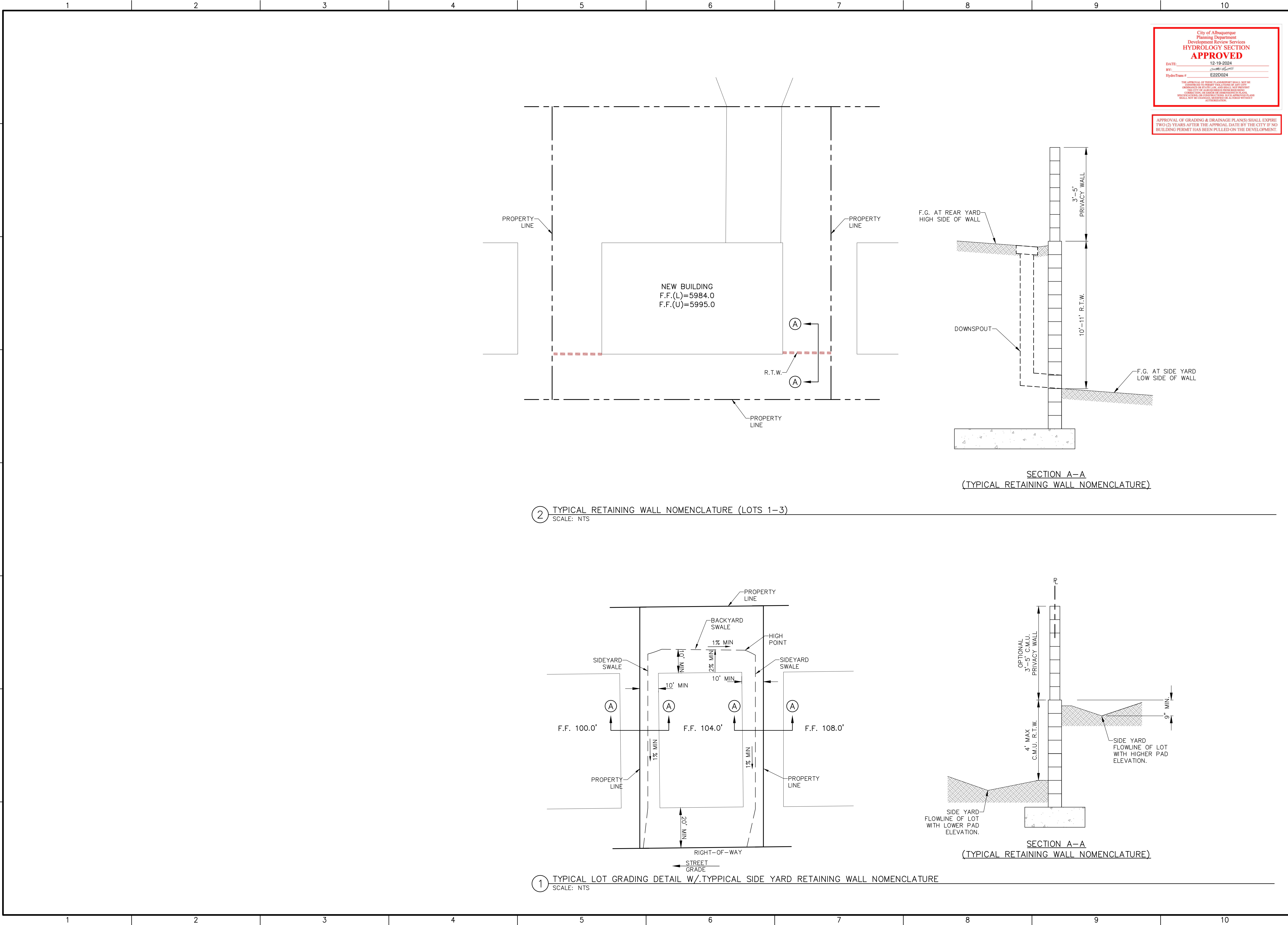
SHEET TITLE

GRADING PLAN  
DETAIL

SHEET NO: C-6



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APPROVAL OF GRADING & DRAINAGE PLANS SHALL EXPIRE TWO (2) YEARS AFTER THE APPROVAL DATE BY THE CITY IF NO BUILDING PERMIT HAS BEEN PULLED ON THE DEVELOPMENT.



TUSCANY VILLAGE, UNIT II  
SUBDIVISION  
ALBUQUERQUE, NM

PROJECT NAME

REV.	DATE	DESCRIPTION	BY

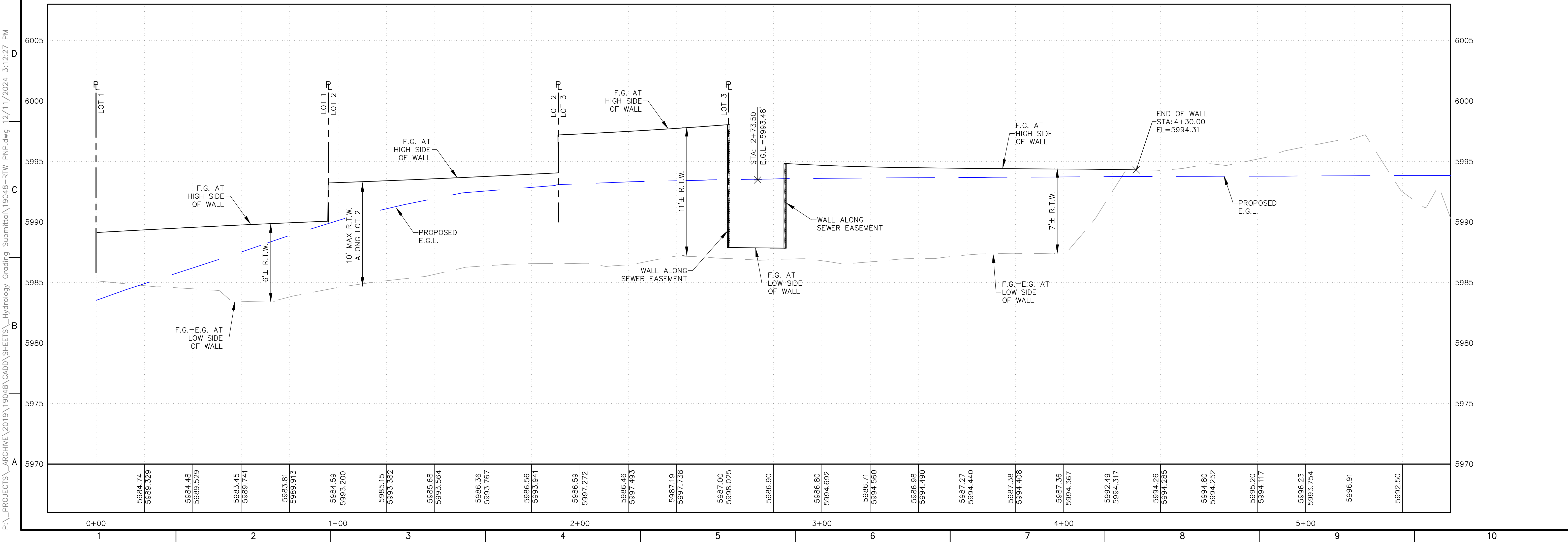
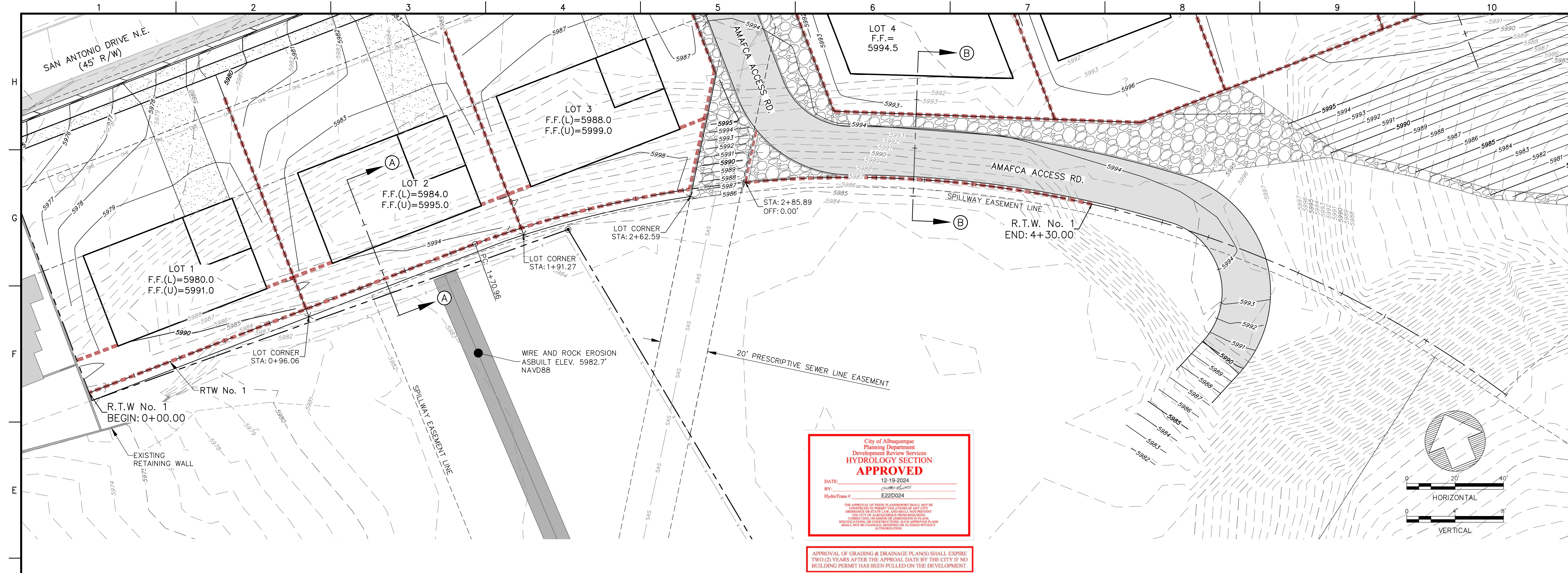
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DESIGNED BY: R/JF  
DRAWN BY: JB  
CHECKED BY: R/JF  
DATE: NOVEMBER 2024

SHEET TITLE

TYPICAL SECTIONS

SHEET NO:  
C-7





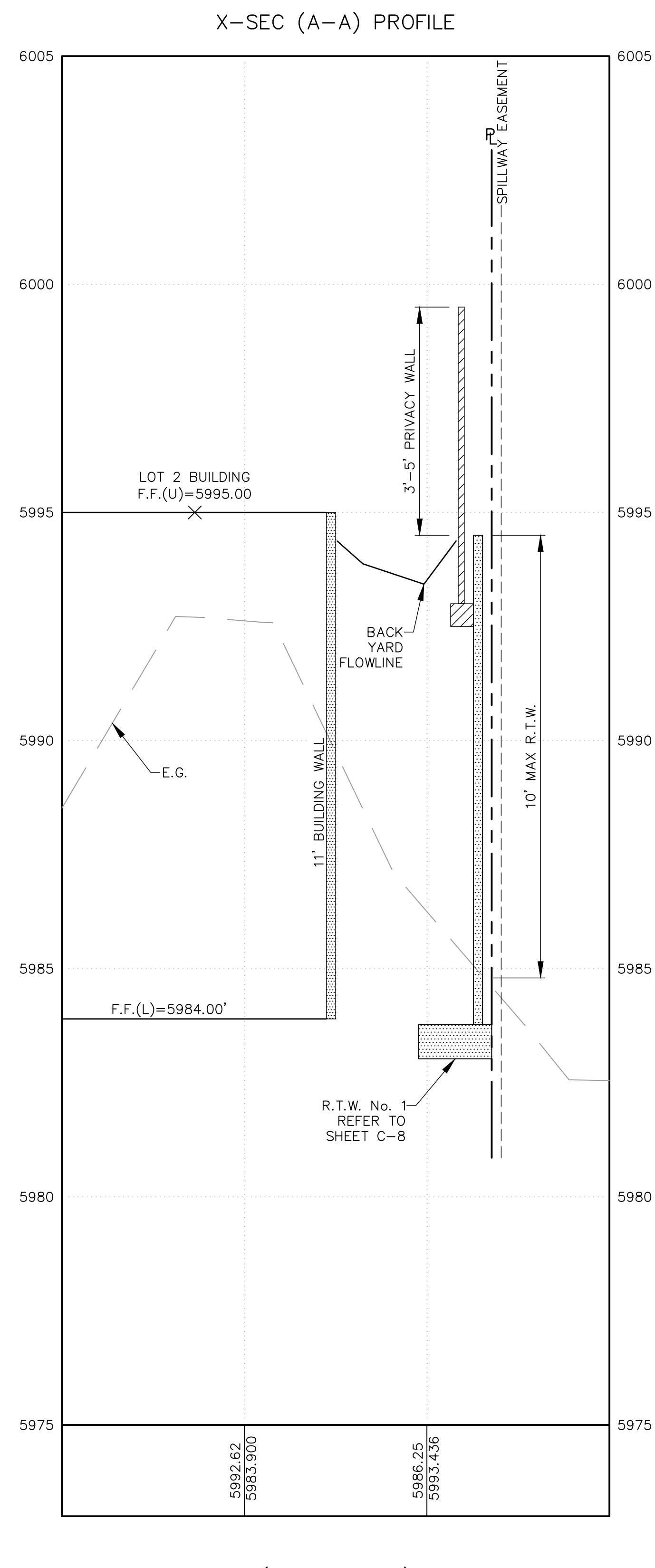
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12-11-2024  
PROFESSIONAL ENGINEER

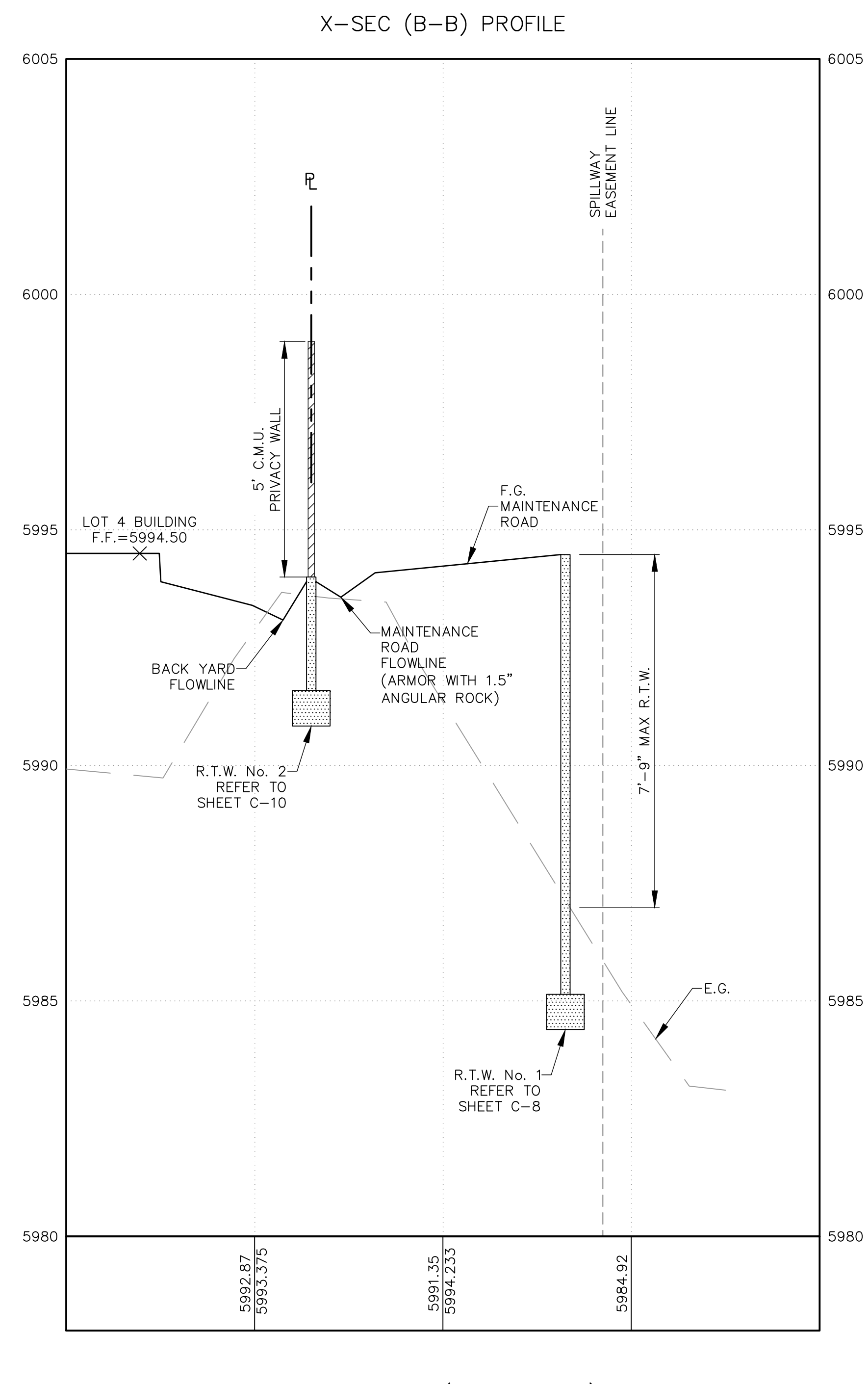
**TUSCANY VILLAGE, UNIT II**  
**SUBDIVISION**  
**ALBUQUERQUE, NM**

PROJECT NO: 19048  
DESIGNED BY: R/JF  
DRAWN BY: JB  
CHECKED BY: R/JF  
DATE: NOVEMBER 2024  
SHEET TITLE: R.T.W. No. 1 PLAN & PROFILE  
SHEET NO: C-8

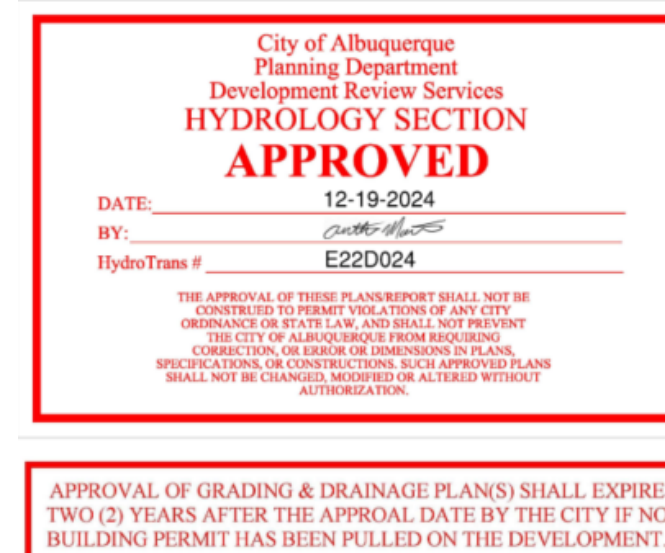




1 TYPICAL RETAINING WALL NOMENCLATURE (SECTION A-A)



## 2 TYPICAL RETAINING WALL NOMENCLATURE (SECTION B-B)



TUSCANY VILLAGE, UNIT II  
SUBDIVISION  
ALBUQUERQUE, NM

			PROJECT NAME
REV.	DATE	DESCRIPTION	BY

PROJECT NO:	19048
DESIGNED BY:	RJF
DRAWN BY:	JB
CHECKED BY:	RJF
DATE:	NOVEMBER 2024

SHEET TITLE

TYPICAL SECTIONS

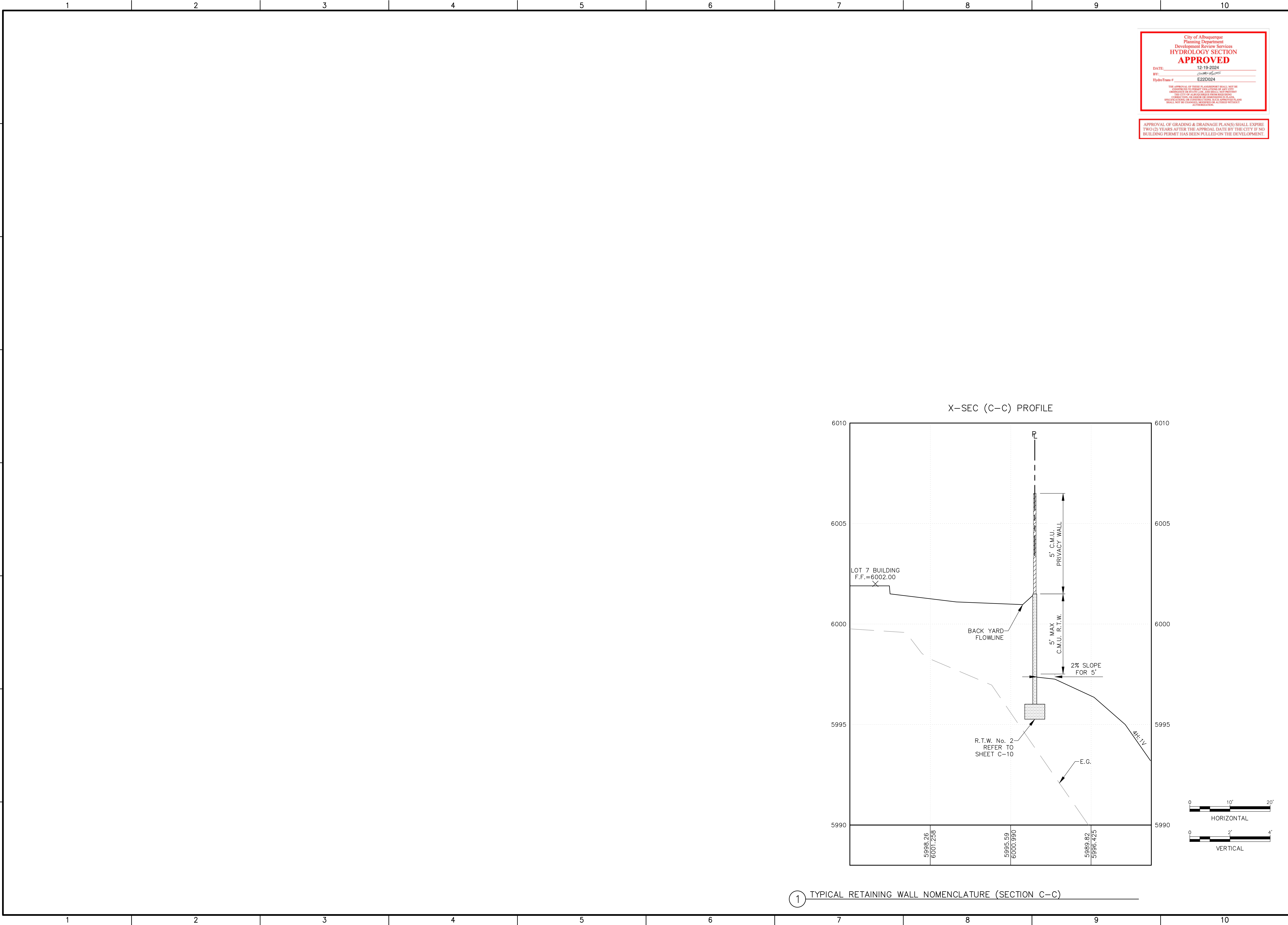
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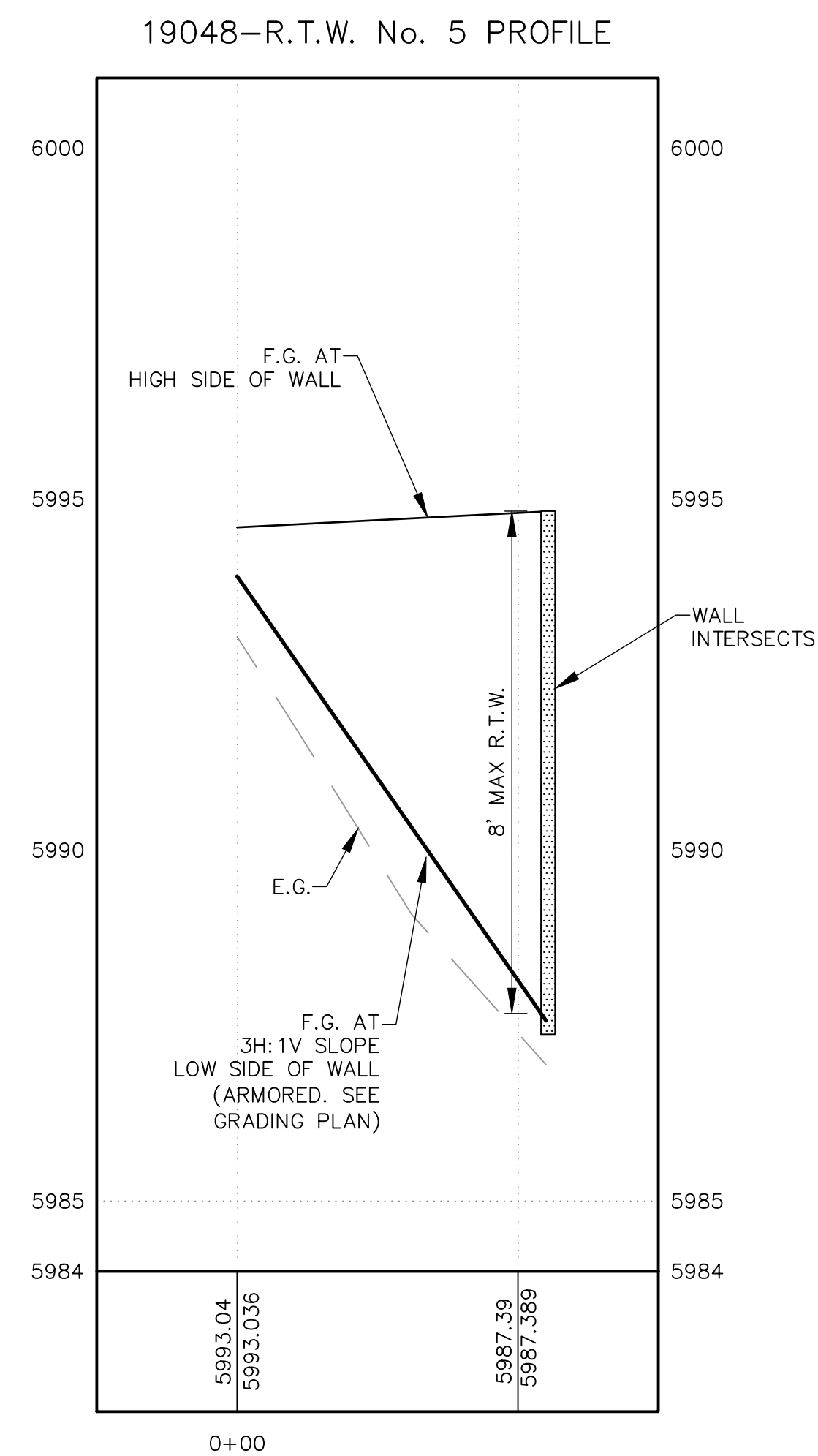
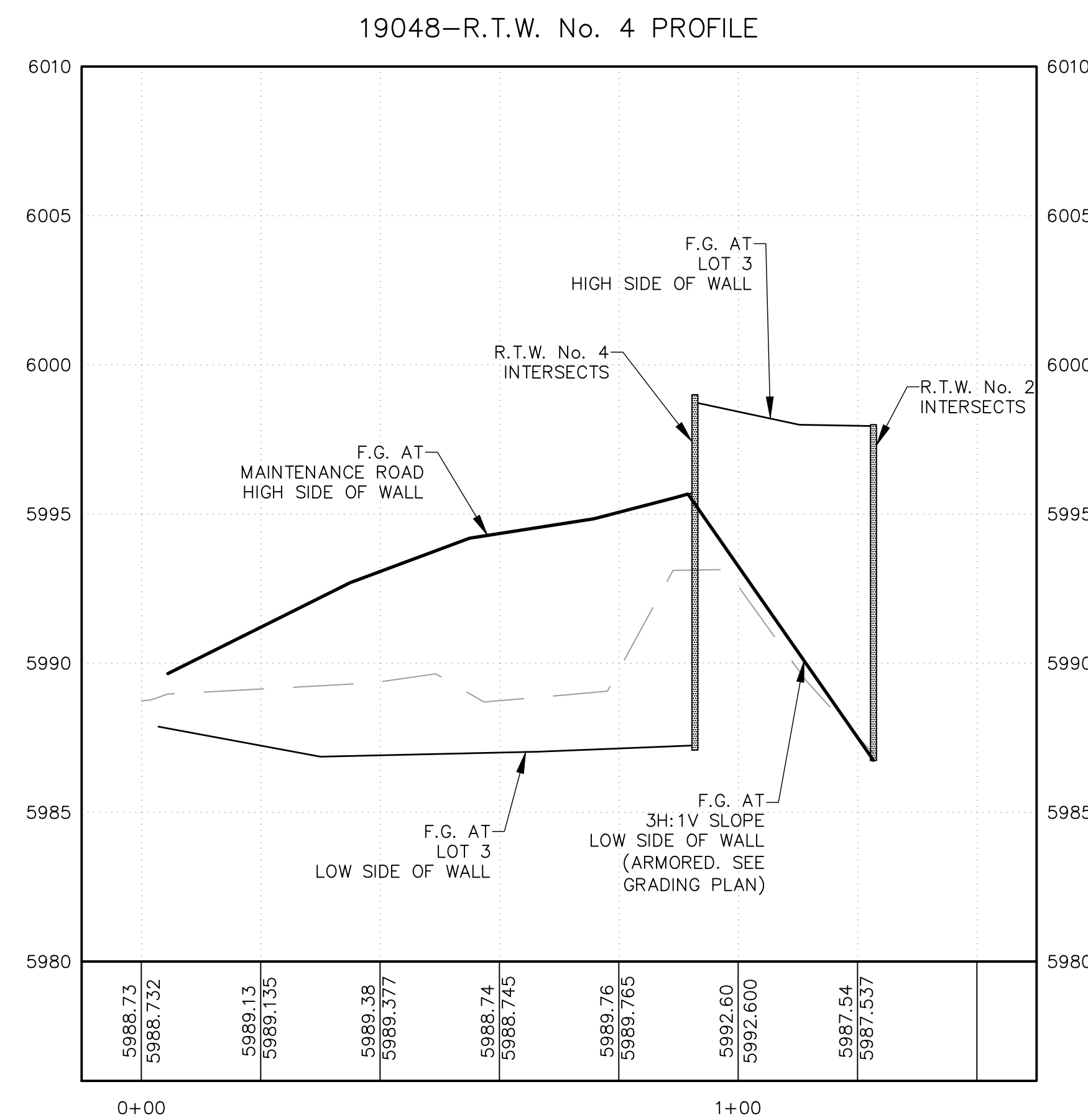
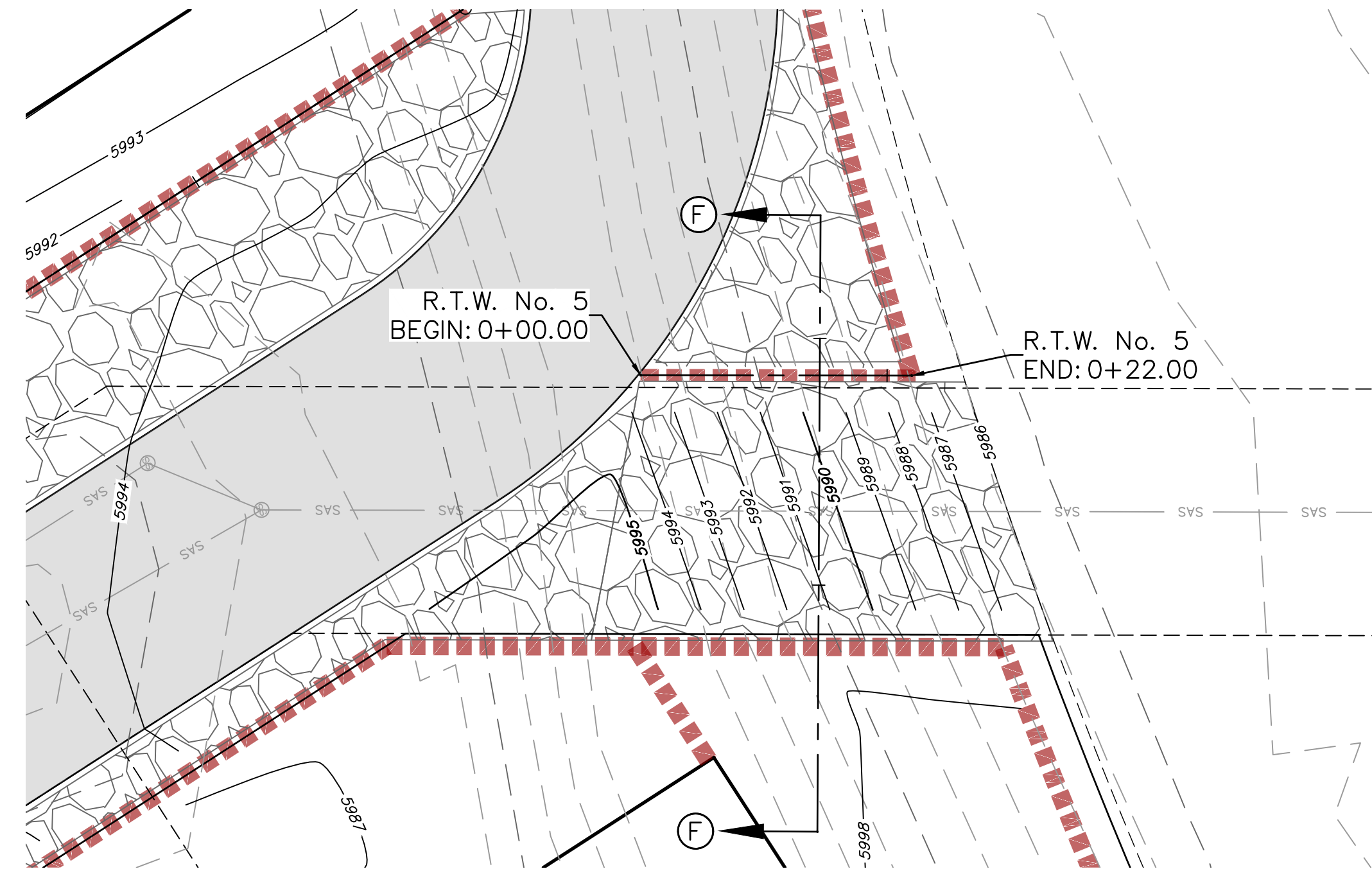
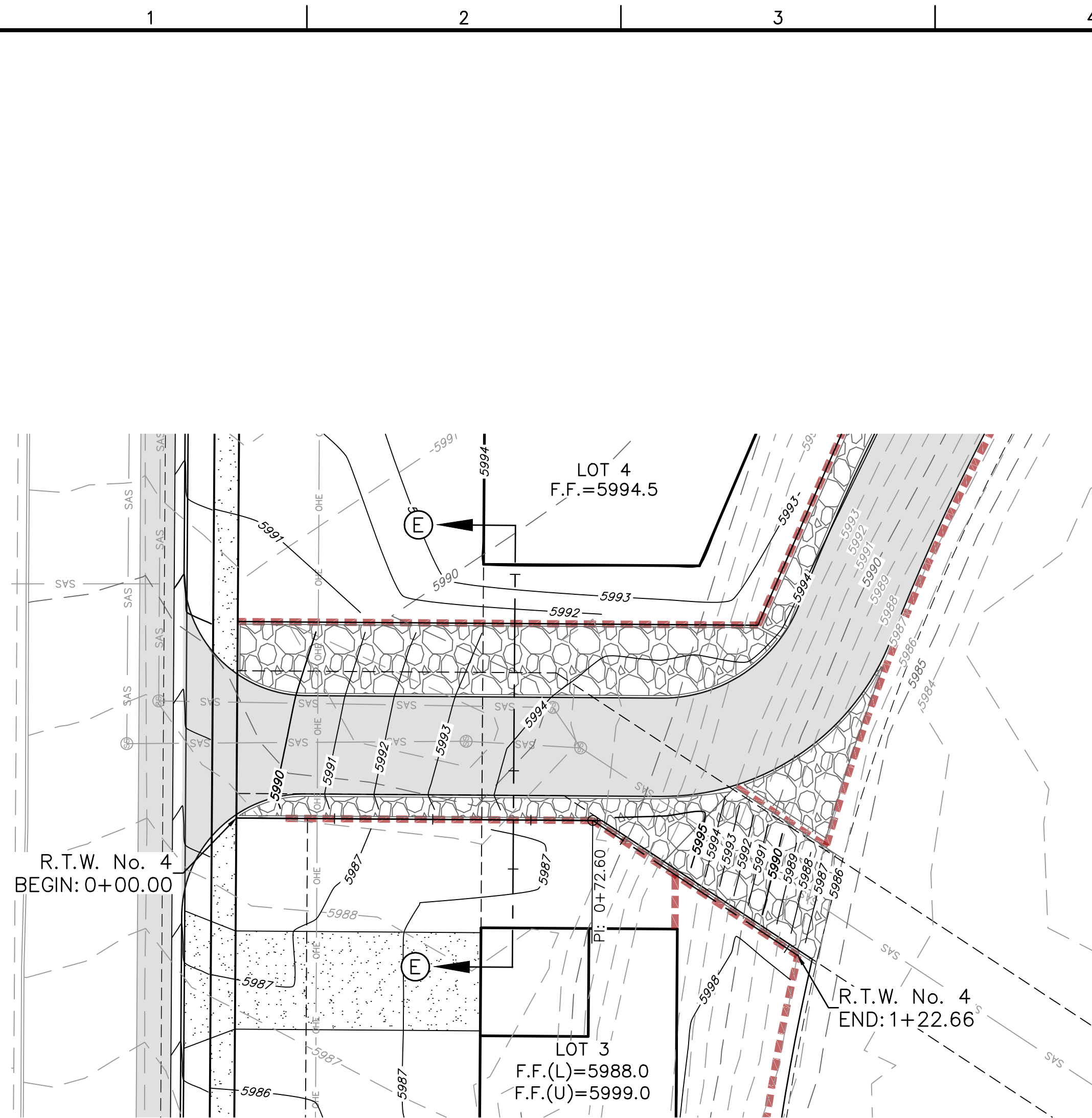
ENGINEER'S SEAL


**TUSCANY VILLAGE, UNIT II**  
**SUBDIVISION**  
**ALBUQUERQUE, NM**

PROJECT NO.	19048
DESIGNED BY:	RJF
DRAWN BY:	JB
CHECKED BY:	RJF
DATE:	NOVEMBER 2024
SHEET TITLE	TYPICAL SECTIONS
SHEET NO:	C-11







City of Albuquerque Planning Department Development Review Services	
<b>HYDROLOGY SECTION</b>	
<b>APPROVED</b>	
DATE:	12-19-2024
BY:	
HydroTrans #	E220024
<p>THE APPROVAL OF THESE PLANS/PROJECT SHALL NOT BE CONSIDERED TO IMPLY A GUARANTEE THAT CITY AND ORDINANCE OR STATE LAW, AND SHALL NOT PREVENT THE CITY OF ALBUQUERQUE FROM ENFORCING ANY APPLICABLE ORDINANCES, SPECIFICATIONS OR CONSTRUCTION. SUCH APPROVED PLANS SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT AUTHORIZATION.</p>	
<p>APPROVAL OF GRADING &amp; DRAINAGE PLANS SHALL EXPIRE TWO (2) YEARS AFTER THE APPROVAL DATE BY THE CITY IF NO BUILDING PERMIT HAS BEEN PULLED ON THE DEVELOPMENT.</p>	

[illegible]

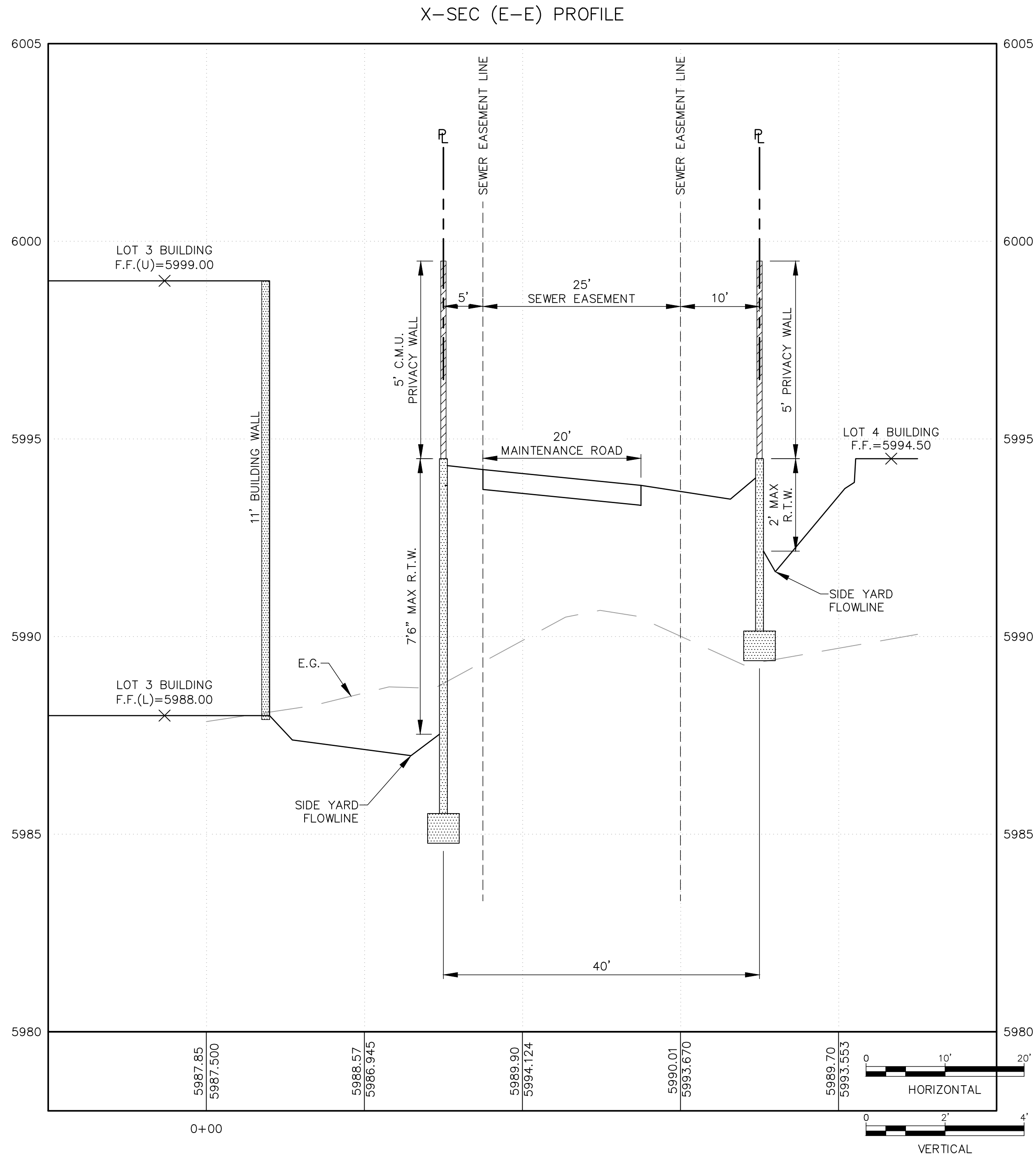


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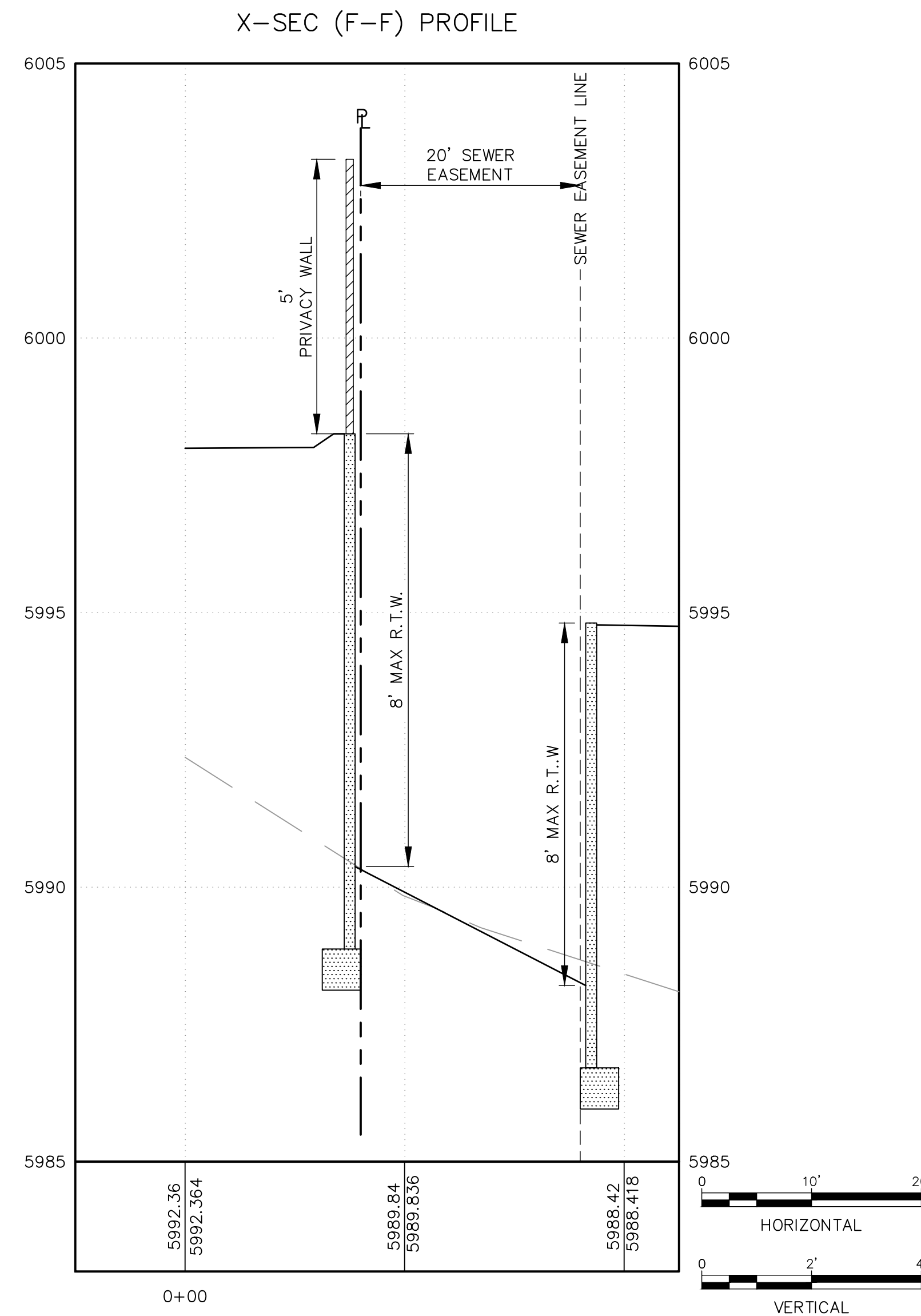
H  
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1 2 3 4 5 6 7 8 9 10

① TYPICAL RETAINING WALL NOMENCLATURE (SECTION E-E)



② TYPICAL RETAINING WALL NOMENCLATURE (SECTION F-F)



City of Albuquerque  
Planning Department  
Development Review Services  
**HYDROLOGY SECTION**  
**APPROVED**  
DATE: 12-19-2024  
BY: [Signature]  
HydroTrans #: E22D024

THE APPROVAL OF THESE PLANS SHALL NOT BE  
CONSIDERED TO BE A GUARANTEE OF ANY CITY  
ENGINEER OR PLANNING DEPARTMENT. THE CITY OF ALBUQUERQUE IS NOT RESPONSIBLE FOR ANY  
CONSTRUCTION OR CONSTRUCTION. THESE APPROVED PLANS  
SHALL NOT BE CHANGED, REPRODUCED, OR ALTERED WITHOUT  
AUTHORIZATION.

APPROVAL OF GRADING & DRAINAGE PLANS SHALL EXPIRE  
TWO (2) YEARS AFTER THE APPROVAL DATE BY THE CITY IF NO  
BUILDING PERMIT HAS BEEN PULLED ON THE DEVELOPMENT.

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ENGINEER'S SEAL  
ROBERT J. FIERRO  
20585  
12-11-2024  
PROFESSIONAL ENGINEER

TUSCANY VILLAGE, UNIT II  
SUBDIVISION  
ALBUQUERQUE, NM

PROJECT NAME					BY

PROJECT NO:	19048
DESIGNED BY:	RJF
DRAWN BY:	JB
CHECKED BY:	RJF
DATE:	NOVEMBER 2024

SHEET TITLE	TYPICAL SECTIONS
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City of Albuquerque  
Planning Department  
Development Review Services  
**HYDROLOGY SECTION**  
**APPROVED**  
DATE: 12-19-2024  
BY:   
HydroTrans #: E220204

THE APPROVAL OF THESE PLANS/REPORT SHALL NOT BE  
CONSIDERED TO BE AN ENDORSEMENT OF ANY CITY,  
ORGANIZATION OR INDIVIDUAL, AND SHALL NOT PREVENT  
THE CITY OF ALBUQUERQUE FROM RECOVERING  
COSTS INCURRED ON BEHALF OF EMPLOYEES IN PLANS,  
SPECIFICATIONS OR CONSTRUCTION. SUCH APPROVED PLANS  
SHALL NOT BE CHANGED, MODIFIED OR ALTERED WITHOUT  
AUTHORIZATION.

APPROVAL OF GRADING & DRAINAGE PLAN(S) SHALL EXPIRE  
TWO (2) YEARS AFTER THE APPROVAL DATE BY THE CITY IF NO  
BUILDING PERMIT HAS BEEN PULLED ON THE DEVELOPMENT.

**Introduction**  
The site is 6.6575 acres located along San Antonio Drive NE approximately 900 feet west of Tramway Blvd. The site is Zoned RD-4 which allows the development of lots with a minimum lot size of 10,000 sq.ft. The existing tract is encumbered with several easements. Due to these easements the only developable area is approximately the northern 150 feet of the property. The purpose of this Grading & Drainage Plan is to 1) provide hydrologic and hydraulic analysis of the existing and proposed condition, 2) satisfy allowable stormwater discharge rates, and 4) seek grading permit approval for the lots under an approved preliminary plat.

**Methodology**  
Hydrologic procedures presented in the Hydrology Section of the DMP, Article 6-2(a), approved June 8, 2020 were followed. Precipitation Zone 4 data was used in the hydrologic computations.

**Existing Condition**  
The site is undeveloped. Basins of Lots 1-9 drain to San Antonio Drive. San Antonio Drive has an approximate slope of 5% and drops in elevation going West. The remaining tract, Tract N7-A-1-A, is within a portion of Pino Dam' pool and emergency spillway. Pino Dam stores runoff from an approximately 5.05 sq.mi. watershed, which extends East to the crest of the Sandia Mountains. Offsite runoff enters said tract from an increased stage in water surface within the Pino Dam pool. Runoff enters Pino Dam pool via Pino Channel as shown on Sheet D-1. Bohannon Huston, Inc. (BHI) has completed hydrologic modeling of the Pino Dam. Hydrologic information from BHI's Memorandum dated June 30th, 2014 was used to model the emergency spillway with HEC-RAS. The Peak Outflow used is 22,485 cfs which was obtained from page 5 of said memorandum.

Said tract lies partially within the following two flood zones as depicted on Federal Emergency Management Agency (F.E.M.A) Flood Insurance Rate Map No. 35001C0142H, effective date August 16, 2012: 1) Zone AE, Base Flood Elevation 5973 feet and 2) Zone AO, with flood depth 1 foot. A portion of Pino Dam's emergency spillway is located within said Tract.

**Proposed Condition**  
A nine (9) lot residential subdivision is proposed. Runoff from Lots 1-9 will continue to discharge to San Antonio Drive. Tract N-7-A-1-A will continue to function as Pino Dam's pool and emergency spillway. Grading is proposed to occur within said tract to support an AMAFCA Maintenance Road and adjust slopes to a minimal south of lots 6-9. Lots 1-5 are in close proximity to the Spillway Easement and were graded so that the backyard elevation is above the energy grade line which was calculated in HEC-RAS based on the 22,485 cfs outflow via the emergency spillway. Retaining walls are proposed to retain the backyards of Lots 1-4 and the maintenance road. These walls were designed so the top of wall is higher in elevation than the energy grade line.

The proposed subdivision does not require attenuating runoff since the runoff rate for the 100-year, 6-hour storm is nearly the same as in the existing condition. Therefore, only the Storm Water Quality Volume (SWQV) will be stored in Storm Water Quality Ponds (SWQPs) that are located within the proposed lots. A separate grading plan will need to be submitted for building permit which shows detailed grading of the storm water quality ponds and respective calculations. The table under the "Proposed Condition Hydrology Summary" list the allowable land treatment percentages. SWQV of each lot is listed in the table under "Summary of Runoff Rates".

**Conclusion**  
The proposed subdivision does not alter drainage patterns nor adversely impact downstream development. The proposed peak discharge of each lot is negligible. This drainage report and grading plan submittal demonstrates feasibility of the proposed subdivision and achieved hydrologic objectives; therefore, seeks grading permit to grade the subdivision which has preliminary plat approval.

## DRAINAGE REPORT

HYDROLOGY SUMMARY - EXISTING CONDITION									
Lot #	Total Area (sq.ft.)	Total Area (acres)	Land Treatment (%)				Q <sub>100</sub> (cfs)	V <sub>100yr-24hr</sub> (ac-ft)	V <sub>100yr-24hr</sub> (cu-ft)
			A	B	C	D			
1	10,247	0.235	0	0	100	0	0.8	0.024	1,025
2	10,176	0.234	0	0	100	0	0.8	0.023	1,018
3	10,499	0.241	0	0	100	0	0.8	0.024	1,050
4	10,416	0.239	0	0	100	0	0.8	0.024	1,042
5	10,691	0.245	0	0	100	0	0.8	0.025	1,069
6	10,920	0.251	0	0	100	0	0.9	0.025	1,092
7	10,920	0.251	0	0	100	0	0.9	0.025	1,092
8	10,920	0.251	0	0	100	0	0.9	0.025	1,092
9	11,113	0.255	0	0	100	0	0.9	0.026	1,111
Tract	190,082	4.364	0	0	100	0	14.9	0.436	19,008

HYDROLOGY SUMMARY PROPOSED CONDITION										
Lot #	Total Area (sq.ft.)	Total Area (acres)	Land Treatment (%)				Q <sub>100</sub> (cfs)	V <sub>100yr-24hr</sub> (ac-ft)	V <sub>100yr-24hr</sub> (cu-ft)	SW QV (cu-ft)
			A	B	C	D				
1	10,247	0.235	0	60	0	40	0.8	0.045	1,955	143
2	10,176	0.234	0	60	0	40	0.8	0.045	1,942	142
3	10,499	0.241	0	60	0	40	0.9	0.046	2,004	147
4	10,416	0.239	0	60	0	40	0.8	0.046	1,988	146
5	10,691	0.245	0	60	0	45	0.9	0.051	2,232	168
6	10,920	0.251	0	60	0	45	0.9	0.052	2,280	172
7	10,920	0.251	0	58	2	45	1.0	0.052	2,284	172
8	10,920	0.251	0	58	2	45	1.0	0.052	2,284	172
9	11,113	0.255	0	58	2	45	1.0	0.053	2,324	175
Tract	190,082	4.364	0	0	100	0	14.9	0.436	19,008	0

Summary of Runoff Rates			
Lot #	Existing	Proposed	SWQV
	Q <sub>100yr-6hr</sub>	Q <sub>100yr-24hr</sub>	
	(cu-ft)	(cu-ft)	
1	0.8	0.8	143
2	0.8	0.8	142
3	0.8	0.9	147
4	0.8	0.8	146
5	0.8	0.9	168
6	0.9	0.9	172
7	0.9	1.0	172
8	0.9	1.0	172
9	0.9	1.0	175
Tract	14.9	14.9	0

## EXISTING CONDITION HYDROLOGY SUMMARY

## PROPOSED CONDITION HYDROLOGY SUMMARY

## HYDROLOGY SUMMARY COMPARISON

HEC-RAS Plan: Plan 01 River: Pino Dam Spillwa Reach: 19048-SPILLWAY C Profile: PF 1												
Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
19048-SPILLWAY C	625	PF 1	22485.00	5948.09	5993.41		5993.43	0.000011	1.31	17160.63	574.73	0.04
19048-SPILLWAY C	610	PF 1	22485.00	5951.20	5993.41		5993.43	0.000013	1.33	16860.18	598.46	0.04
19048-SPILLWAY C	585	PF 1	22485.00	5956.65	5993.39		5993.43	0.000023	1.64	13705.78	561.08	0.06
19048-SPILLWAY C	560	PF 1	22485.00	5962.50	5993.35		5993.43	0.000058	2.20	10221.77	543.67	0.09
19048-SPILLWAY C	525	PF 1	22485.00	5969.29	5993.12		5993.40	0.000375	4.23	5310.28	425.96	0.21
19048-SPILLWAY C	500	PF 1	22485.00	5971.94	5992.84		5993.37	0.000685	5.82	3862.57	299.62	0.29
19048-SPILLWAY C	480	PF 1	22485.00	5974.18	5992.81		5993.35	0.000751	5.89	3819.38	314.21	0.30
19048-SPILLWAY C	450	PF 1	22485.00	5977.53	5992.76		5993.32	0.000865	6.01	3739.38	336.73	0.32
19048-SPILLWAY C	420	PF 1	22485.00	5980.24	5992.58		5993.28	0.001176	6.70	3353.57	325.68	0.37
19048-SPILLWAY C	385	PF 1	22485.00	5981.09	5992.34		5993.21	0.001653	7.50	2998.44	320.50	0.43
19048-SPILLWAY C	360	PF 1	22485.00	5982.17	5991.98		5993.14	0.002611	8.62	2608.63	321.74	0.53
19048-SPILLWAY C	340	PF 1	22485.00	5982.92	5991.55		5993.04	0.004127	9.78	2299.78	334.28	0.66
19048-SPILLWAY C	320	PF 1	22485.00	5983.31	5991.09	5990.04	5992.90	0.005847	10.80	2081.69	340.76	0.77
19048-SPILLWAY C	300	PF 1	22485.00	5983.37	5989.96	5989.96	5992.66	0.010399	13.19	1705.01	319.01	1.01
19048-SPILLWAY C	274.1	PF 1	22485.00	5982.86	5989.26	5989.26	5991.98	0.010396	13.24	1698.53	315.77	1.01
19048-SPILLWAY C	250	PF 1	22485.00	5982.14	5988.31	5988.31	5991.01	0.010423	13.17	1707.62	320.75	1.01
19048-SPILLWAY C	225	PF 1	22485.00	5981.03	5987.20	5987.20	5989.85	0.010456	13.06	1722.07	328.46	1.01
19048-SPILLWAY C	200	PF 1	22485.00	5979.43	5985.77	5985.77	5988.38	0.010495	12.95	1736.10	336.35	1.01
19048-SPILLWAY C	180	PF 1	22485.00	5977.67	5984.46	5984.46	5987.05	0.010548	12.90	1742.74	341.01	1.01
19048-SPILLWAY C	135	PF 1	22485.00	5974.24	5981.57	5981.57	5984.16	0.010440	12.90	1742.47	338.99	1.00
19048-SPILLWAY C	100	PF 1	22485.00	5971.49	5978.98	5978.98	5981.65	0.010331	13.10	1716.05	323.44	1.00
19048-SPILLWAY C	60	PF 1	22485.00	5968.36	5976.13	5976.13	5978.67	0.010661	12.78	1758.81	352.00	1.01
19048-SPILLWAY C	40	PF 1	22485.00	5966.98	5974.45	5974.45	5976.90	0.010588	12.54	1793.52	367.98	1.00
19048-SPILLWAY C	0	PF 1	22485.00	5964.63	5971.97	5971.97	5974.35	0.010657	12.39	1814.46	380.55	1.00

## EXISTING CONDITION HEC-RAS SUMMARY

HEC-RAS Plan: Plan 01			River: Pino Dam Spillwa		Reach: 19048-SPILLWAY C		Profile: PF 1					
Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
19048-SPILLWAY C	625	PF 1	22485.00	5948.09	5993.56		5993.59	0.000011	1.31	17145.04	575.81	0.04
19048-SPILLWAY C	610	PF 1	22485.00	5951.20	5993.56		5993.59	0.000013	1.36	16593.19	576.30	0.04
19048-SPILLWAY C	585	PF 1	22485.00	5956.65	5993.54		5993.59	0.000024	1.69	13320.44	545.96	0.06
19048-SPILLWAY C	560	PF 1	22485.00	5962.50	5993.50		5993.58	0.000063	2.29	9827.35	519.49	0.09
19048-SPILLWAY C	525	PF 1	22485.00	5969.29	5993.21		5993.55	0.000361	4.71	4772.90	310.96	0.21
19048-SPILLWAY C	500	PF 1	22485.00	5971.94	5993.02		5993.53	0.000687	5.69	3952.48	319.53	0.29
19048-SPILLWAY C	480	PF 1	22485.00	5974.18	5992.99		5993.51	0.000703	5.77	3898.01	314.56	0.29
19048-SPILLWAY C	450	PF 1	22485.00	5977.53	5992.94		5993.49	0.000809	5.94	3783.52	326.96	0.31
19048-SPILLWAY C	420	PF 1	22485.00	5980.24	5992.73		5993.44	0.001141	6.76	3328.34	305.67	0.36
19048-SPILLWAY C	385	PF 1	22485.00	5981.09	5992.48		5993.38	0.001612	7.58	2964.54	299.27	0.42
19048-SPILLWAY C	360	PF 1	22485.00	5982.17	5992.20		5993.31	0.002416	8.44	2664.15	319.62	0.52
19048-SPILLWAY C	340	PF 1	22485.00	5982.92	5991.70		5993.20	0.003938	9.82	2288.69	313.64	0.64
19048-SPILLWAY C	320	PF 1	22485.00	5983.31	5991.26	5990.07	5993.08	0.005539	10.80	2082.10	322.24	0.75
19048-SPILLWAY C	300	PF 1	22485.00	5983.37	5990.03	5990.03	5992.83	0.010382	13.42	1675.56	300.30	1.00
19048-SPILLWAY C	274.1	PF 1	22485.00	5982.86	5989.31	5989.31	5992.13	0.010416	13.47	1668.94	298.32	1.00
19048-SPILLWAY C	250	PF 1	22485.00	5982.14	5988.36	5988.36	5991.15	0.010440	13.39	1679.32	304.00	1.00
19048-SPILLWAY C	225	PF 1	22485.00	5981.03	5987.19	5987.19	5989.92	0.010610	13.27	1694.43	313.74	1.01
19048-SPILLWAY C	200	PF 1	22485.00	5979.43	5985.76	5985.76	5988.43	0.010611	13.11	1714.65	324.55	1.01
19048-SPILLWAY C	180	PF 1	22485.00	5977.67	5984.47	5984.47	5987.08	0.010481	12.95	1736.48	333.46	1.00
19048-SPILLWAY C	135	PF 1	22485.00	5974.24	5981.56	5981.56	5984.16	0.010797	12.94	1737.18	338.94	1.01
19048-SPILLWAY C	100	PF 1	22485.00	5971.49	5978.98	5978.98	5981.65	0.010535	13.11	1715.41	323.43	1.00
19048-SPILLWAY C	60	PF 1	22485.00	5968.36	5976.13	5976.13	5978.67	0.010749	12.78	1758.98	352.01	1.01
19048-SPILLWAY C	40	PF 1	22485.00	5966.98	5974.45	5974.45	5976.90	0.010664	12.55	1791.19	367.89	1.00
19048-SPILLWAY C	0	PF 1	22485.00	5964.63	5971.94	5971.94	5974.30	0.010893	12.47	1803.69	380.37	1.01



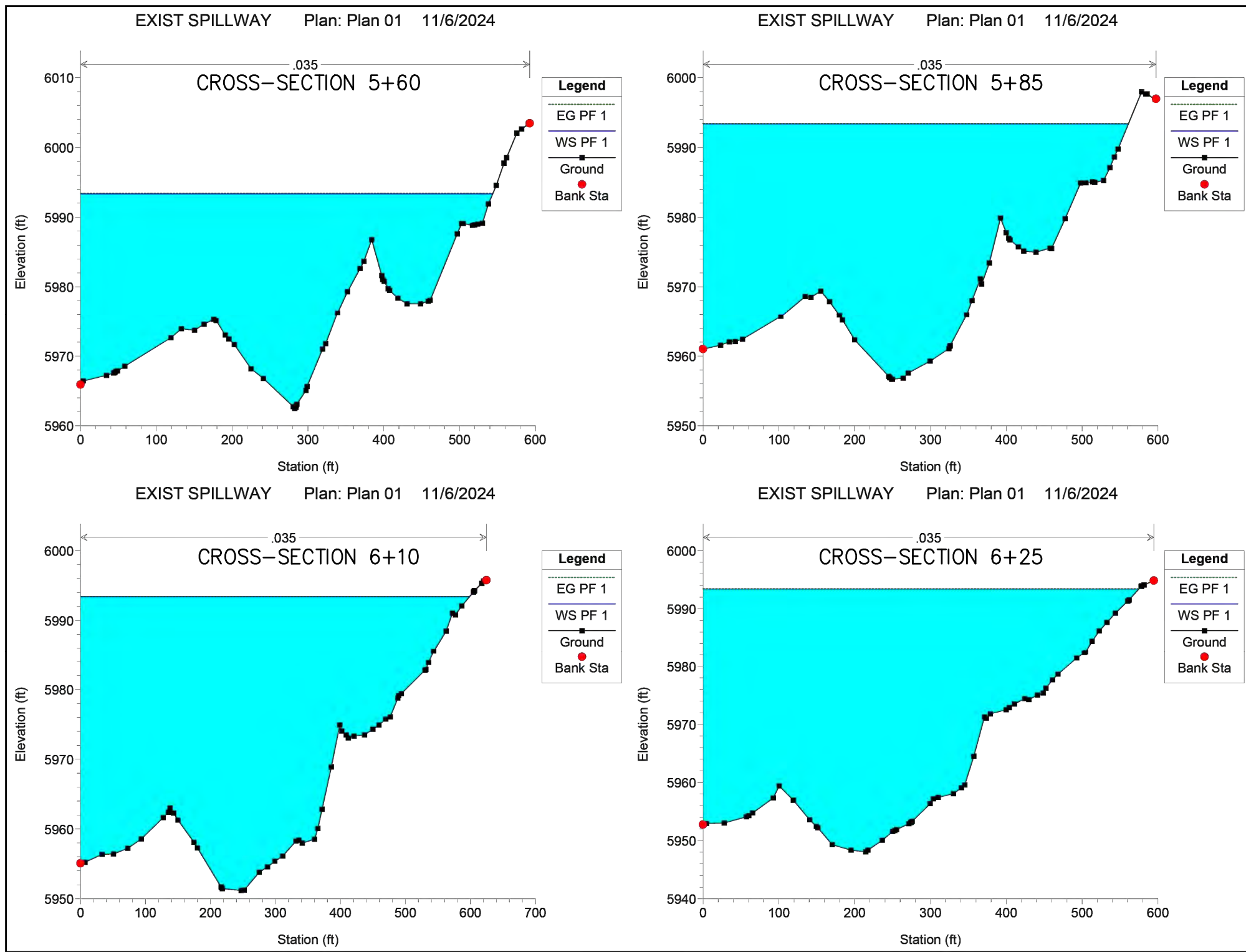
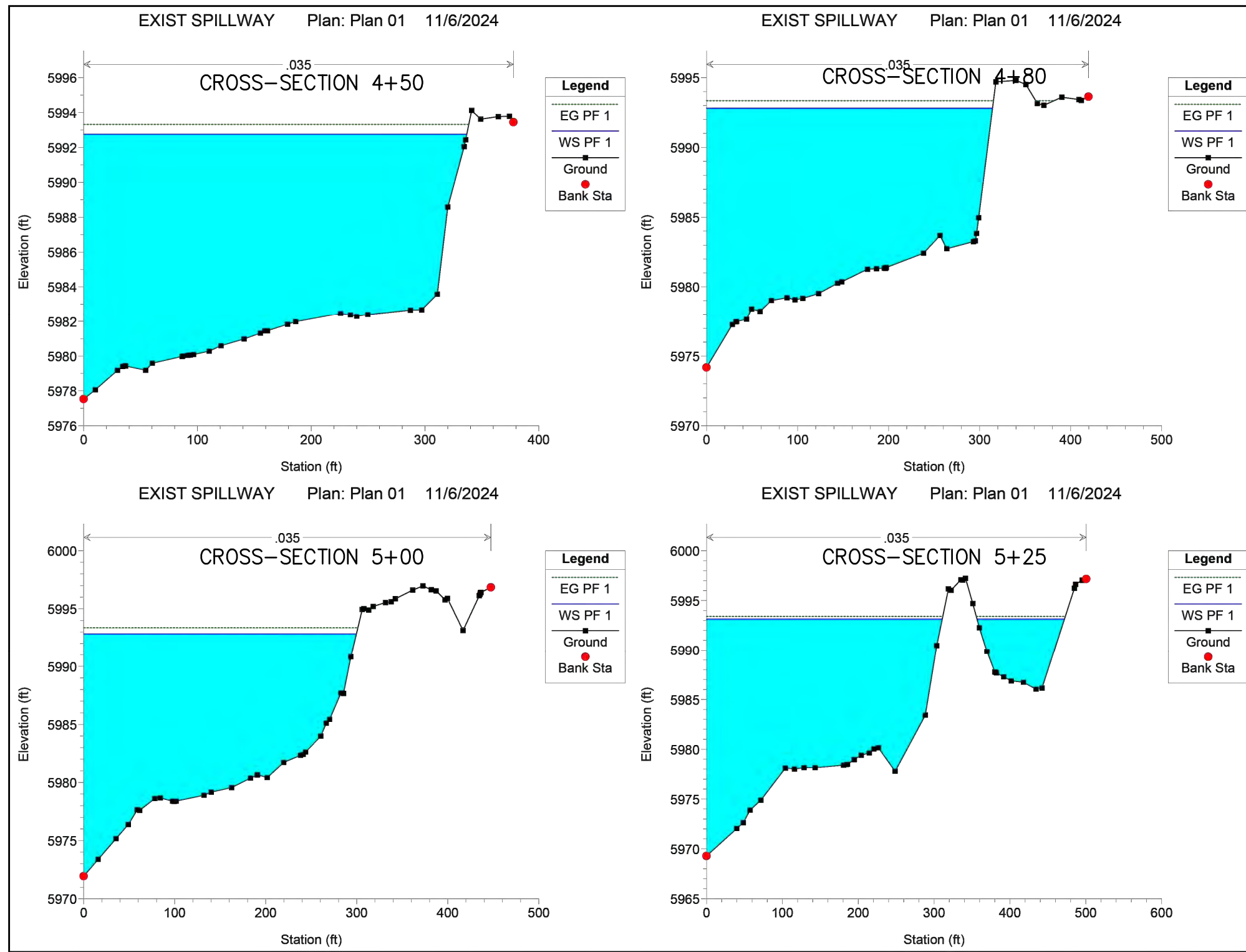
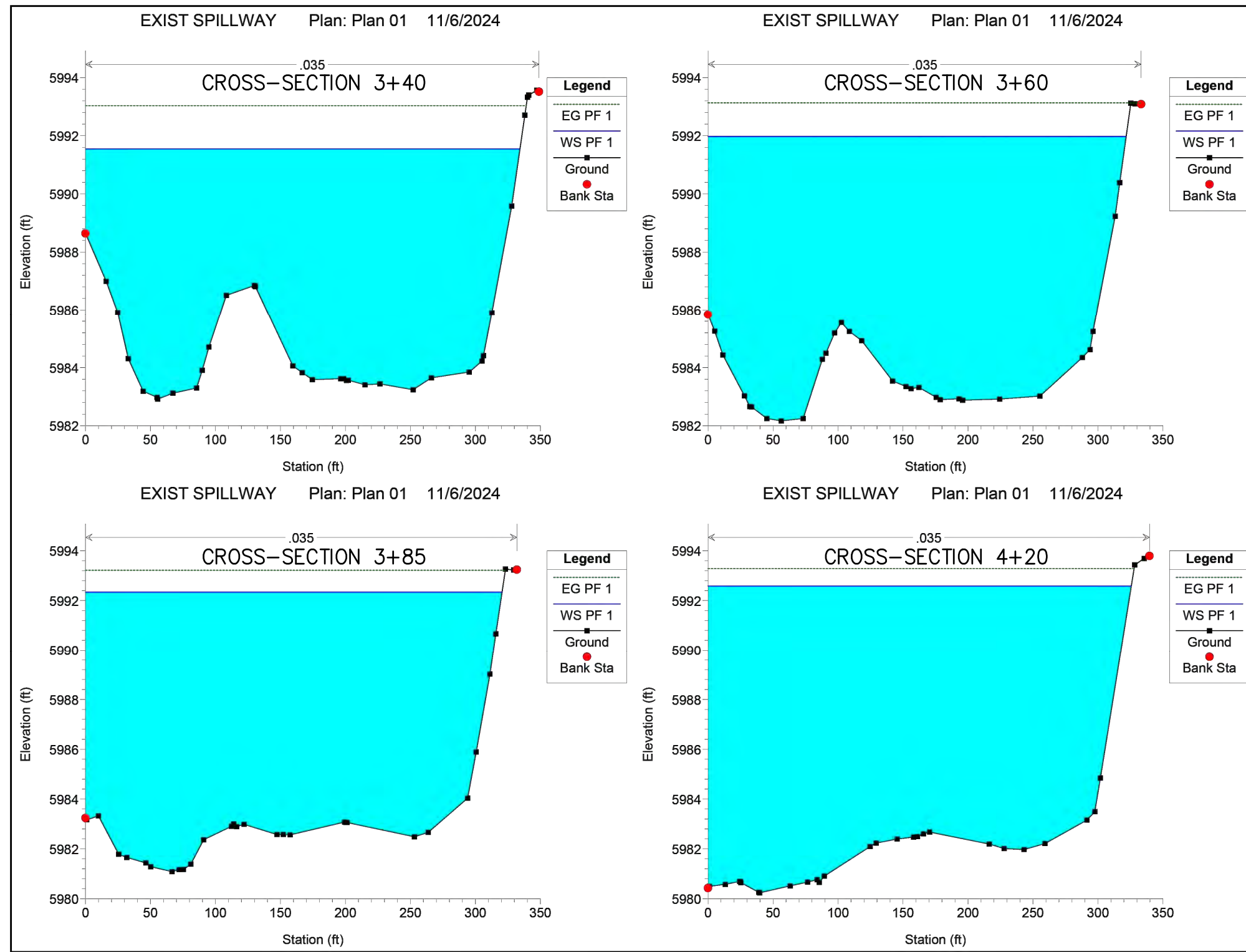
## PROJECT NAME

[illegible]

SHEET TITLE

HEC-RAS  
RESULTS  
EXISTING  
CONDITION

SHEET NO: **D-3**



City of Albuquerque Planning Department Development Review Services <b>HYDROLOGY SECTION</b>	
<b>APPROVED</b>	
DATE:	12-19-2024
BY:	<i>[Signature]</i>
HydroTrans #	E220024
<p>THE APPROVAL OF THIS PLAN/PERMIT DOES NOT BE CONSIDERED TO IMPLY ENDORSEMENT OF ANY CITY DEPARTMENT OR AGENCY OF THE CITY OF ALBUQUERQUE. THE CITY OF ALBUQUERQUE (FROM HEREON CALLED "CITY") OR ANY OF ITS DEPARTMENTS, SPECIFICATIONS, OR CONSTRUCTION SHALL APPROVE PLANS SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.</p>	
<p>APPROVAL OF GRADING &amp; DRAINAGE PLANS) SHALL EXPIRE TWO (2) YEARS AFTER THE APPROVAL DATE BY THE CITY IF NO BUILDING PERMIT HAS BEEN FILLED OUT BY THE DEVELOPMENT.</p>	



