

CITY OF ALBUQUERQUE

Planning Department
Alan Varela, Director



Mayor Timothy M. Keller

December 19, 2024

Robert Fierro, P.E.
Fierro & Company
3201 4th 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, 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.

Sincerely,

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

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov



City of Albuquerque

Planning Department
Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (DTIS)

Project Title: _____ Hydrology File # _____

Legal Description: _____

City Address, UPC, OR Parcel: _____

Applicant/Agent: _____ Contact: _____

Address: _____ Phone: _____

Email: _____

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) _____ 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: _____

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.

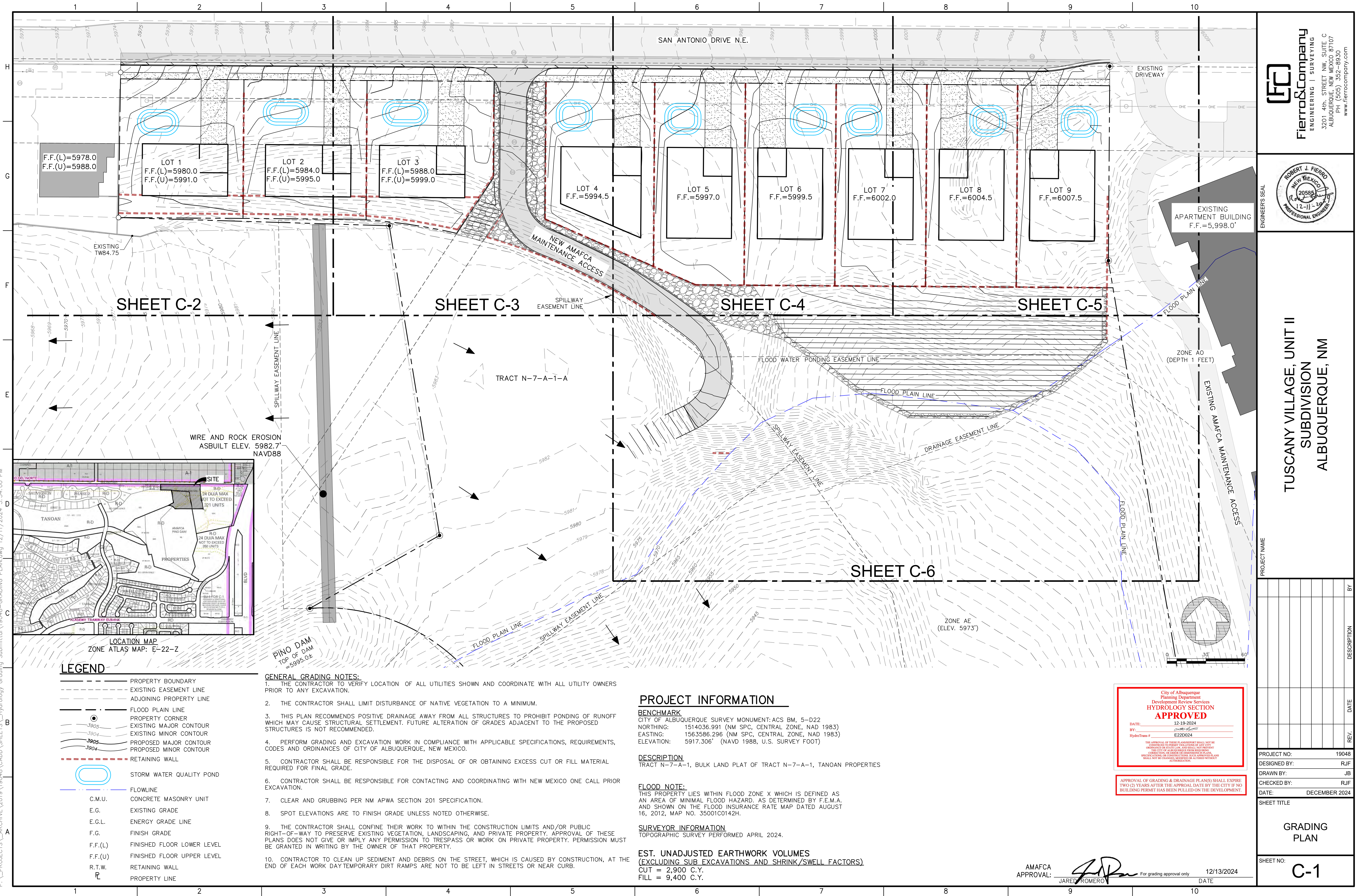
Drainage File Number: E22D024

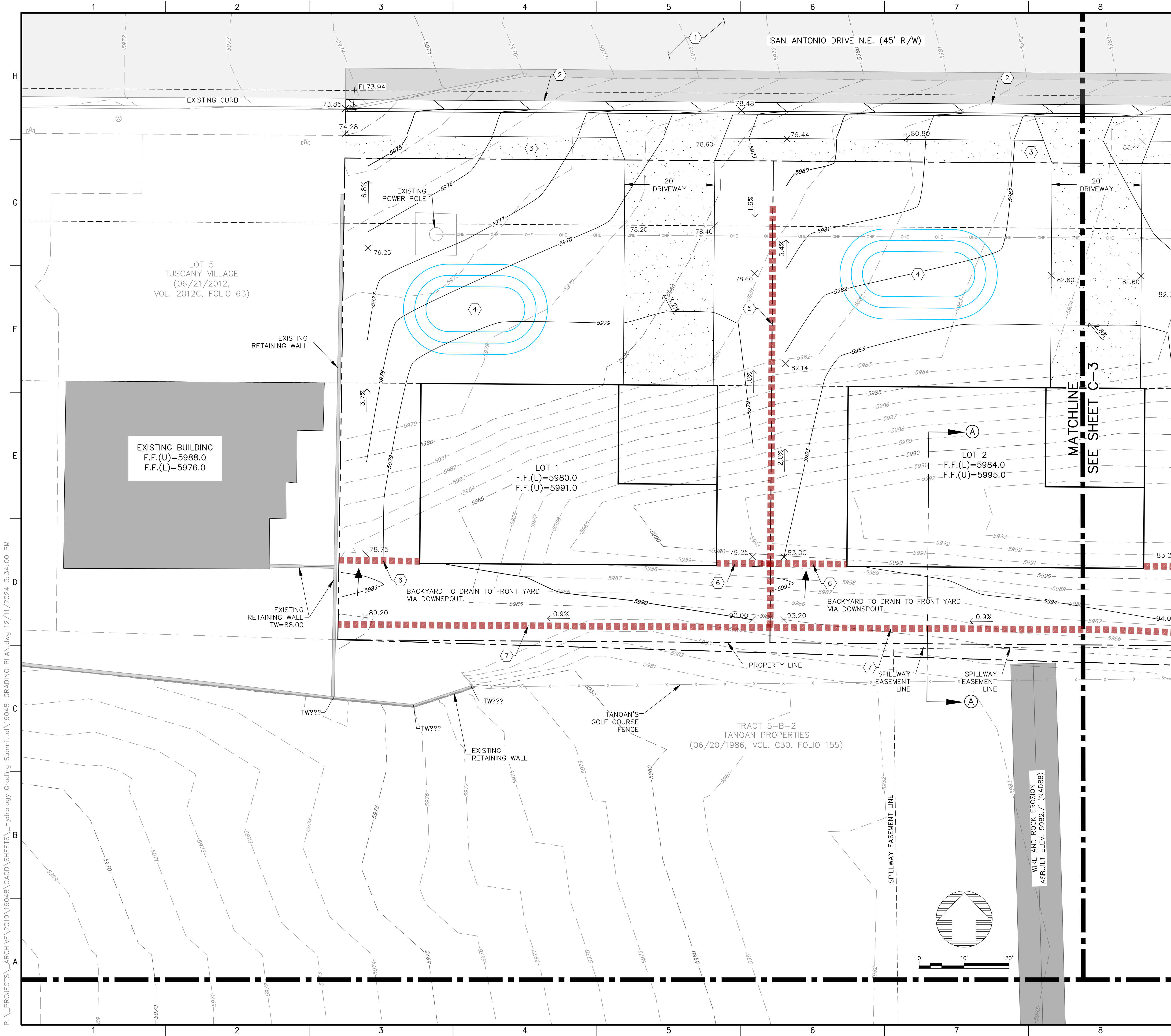
Floodplain Permit Number: E22F024

Signed: Rudy Rael

Date: 12/17/2024

Printed Name: Rudy E. Rael

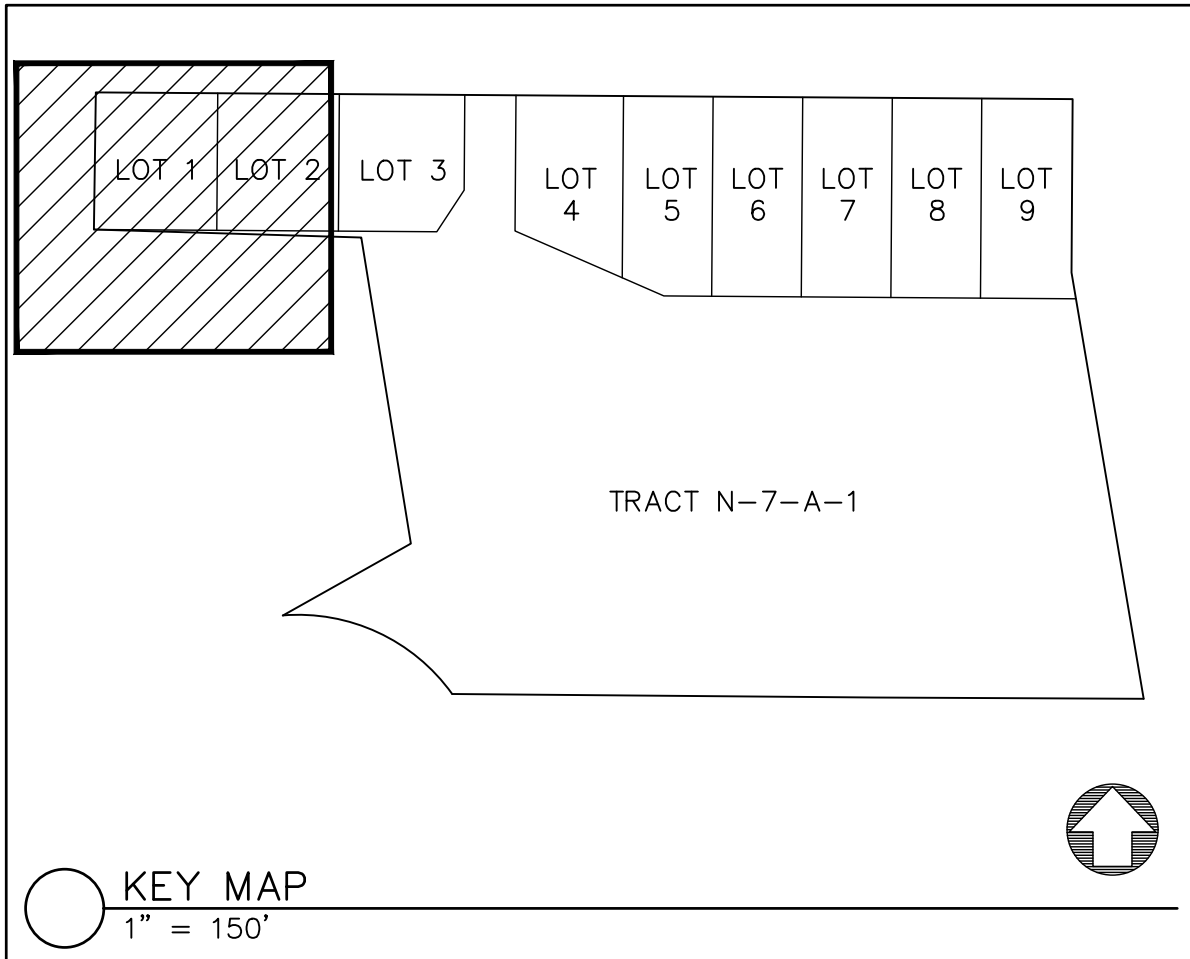




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 - 3) THE ENTIRE AREA OF LOTS 1-9 IS REQUIRED TO DRAIN TO SAN ANTONIO DRIVE INCLUDING ROOF DRAINAGE AND BACKYARD.
- KEYED NOTES:**
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 - 2) NEW CURB & GUTTER PER CITY WORK ORDER.
 - 3) NEW 5' SIDEWALK PER CITY WORK ORDER.
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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.



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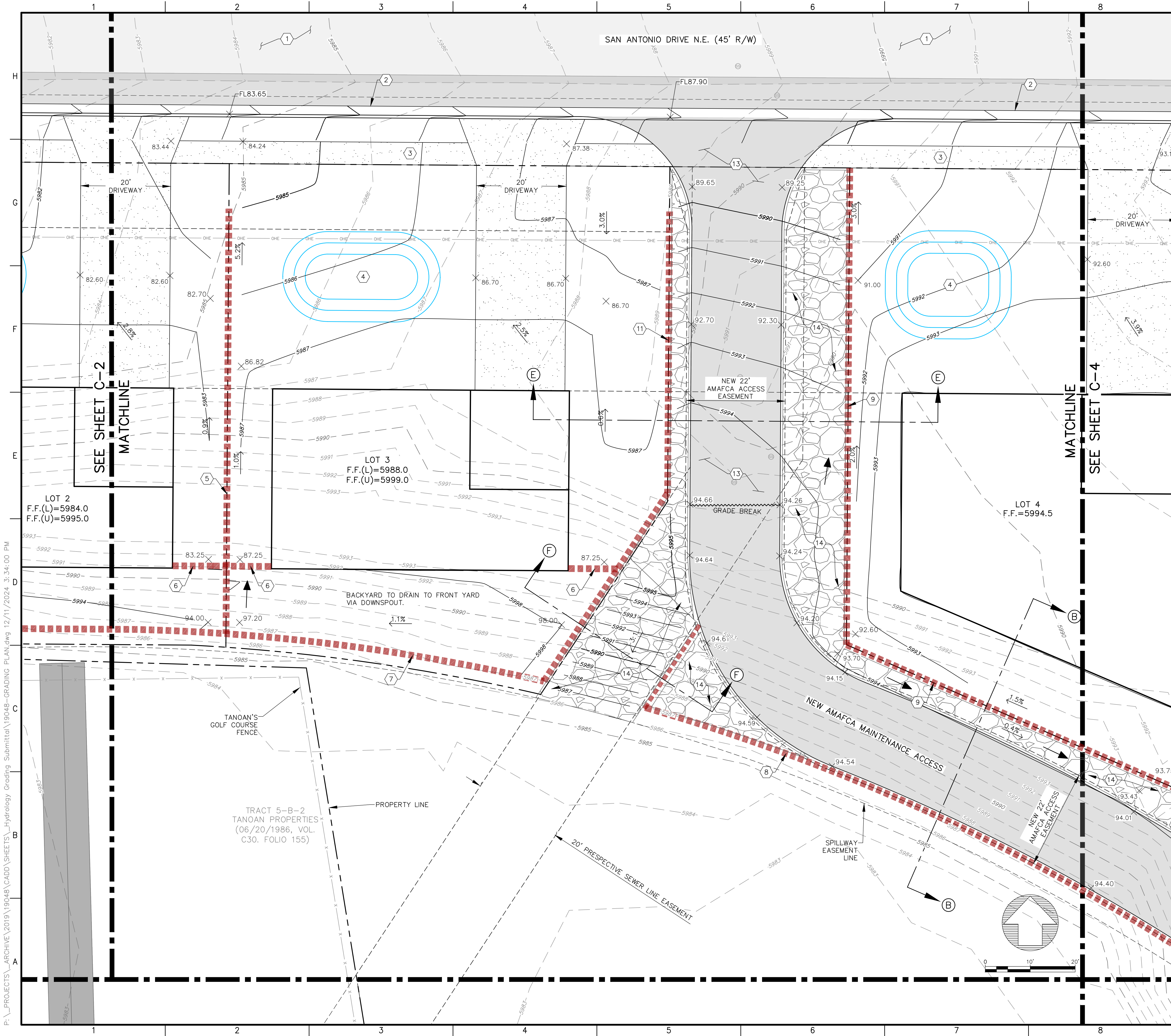
**ROBERT J. FIERRO**
NEW MEXICO
20585
12-31-2024
PROFESSIONAL ENGINEER

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-2



GENERAL NOTES:

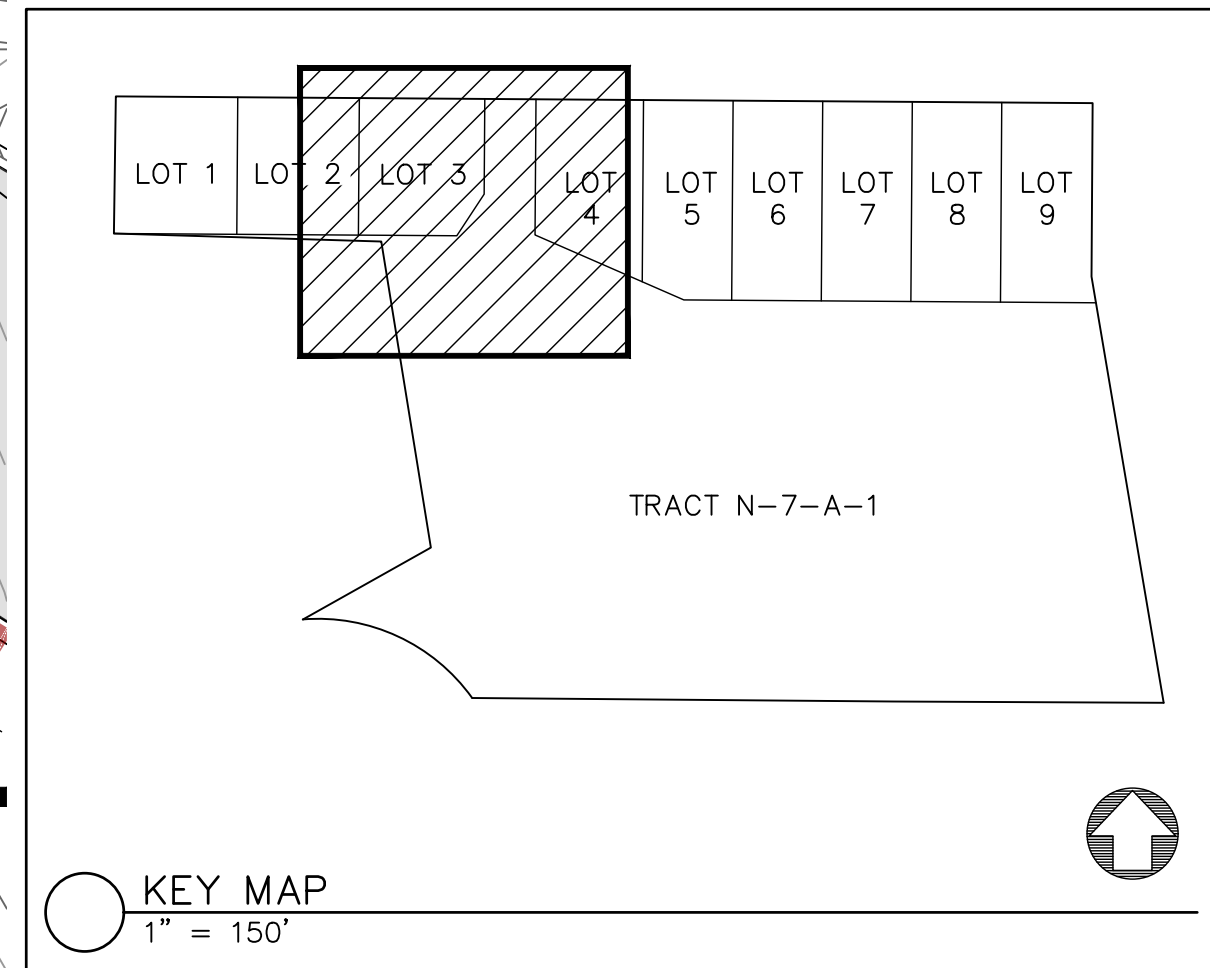
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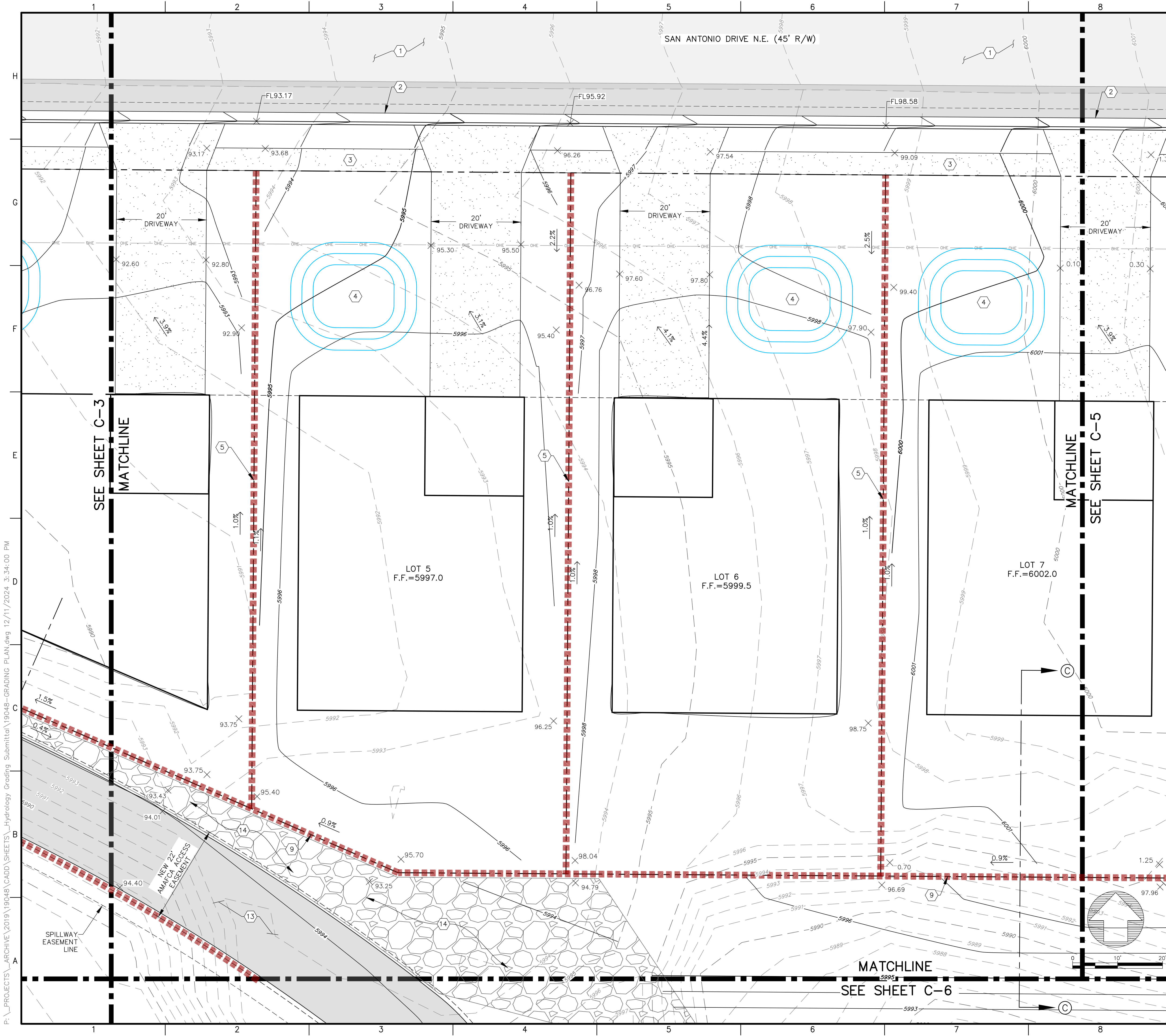
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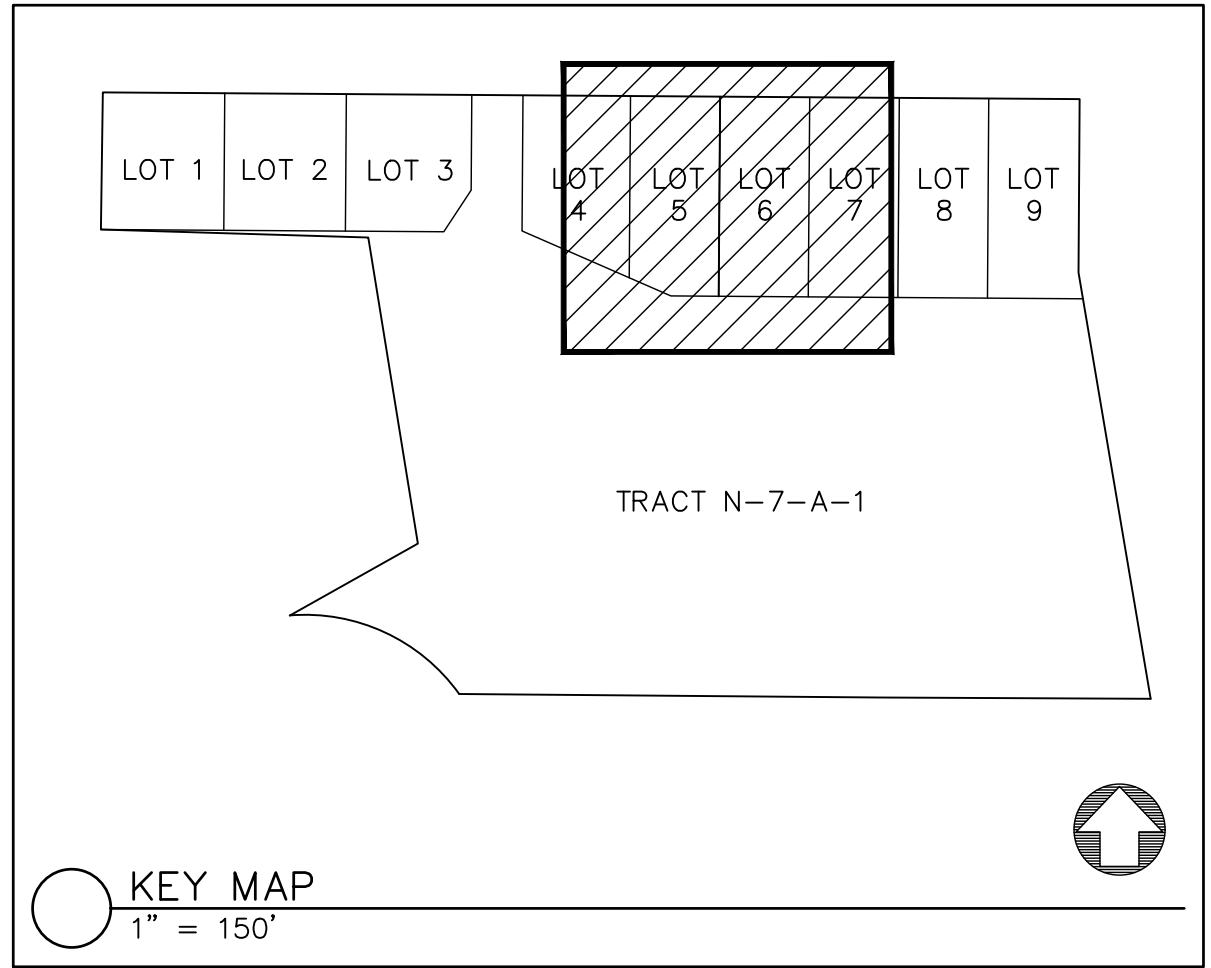
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ENGINEER'S SEAL

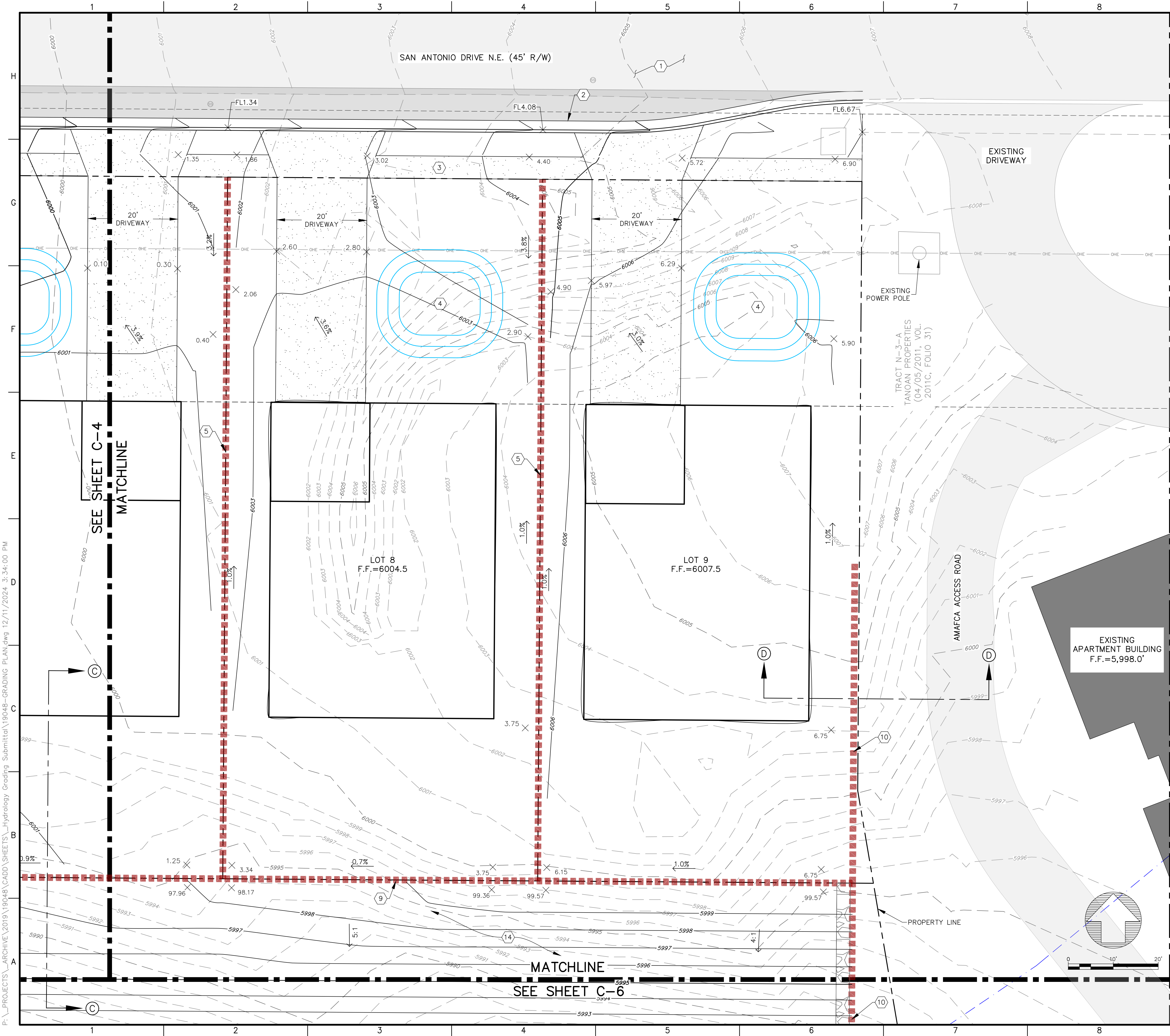
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PROJECT NAME	PROJECT NO.	BY
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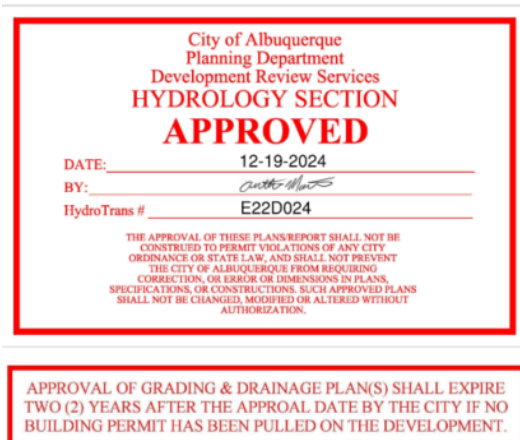
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DATE: NOVEMBER 2024
SHEET TITLE: GRADING PLAN DETAIL

SHEET NO: C-4



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 - 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.



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

EXISTING APARTMENT BUILDING F.F.=5,998.0'

AMAFCA ACCESS ROAD

EXISTING POWER POLE

TRACT N-3-A TANOAN PROPERTIES (04/05/2011, VOL. 2011C, FOLIO 31)

PROPERTY LINE

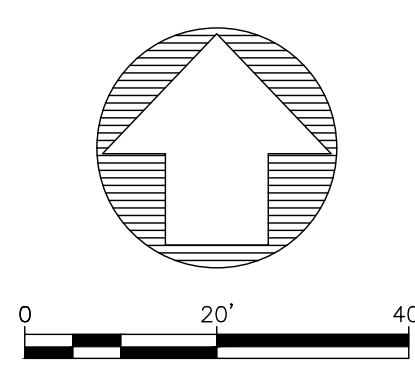
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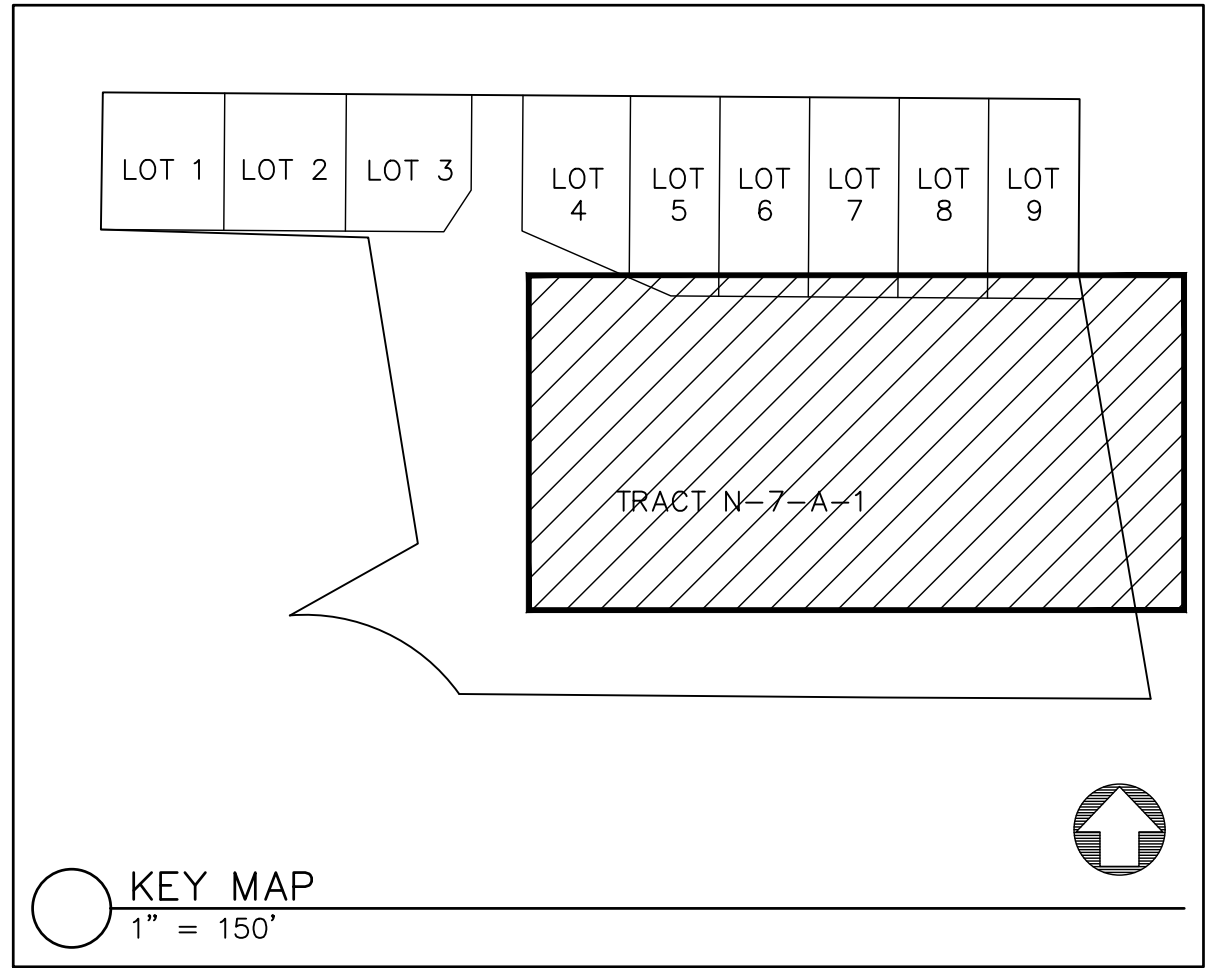
ENGINEER'S SEAL

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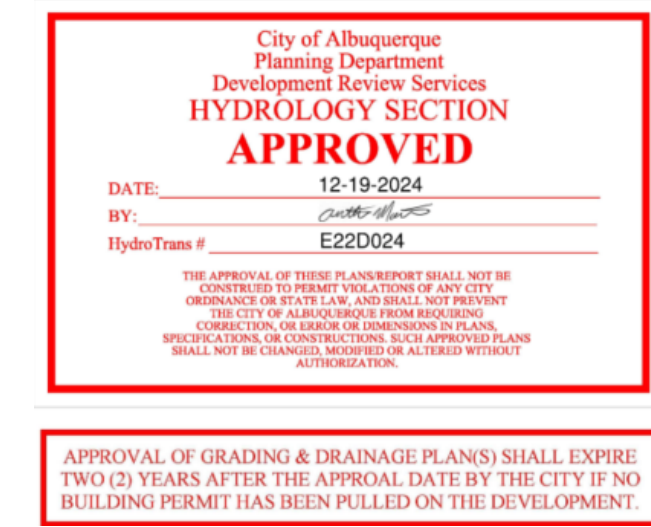
PROJECT NAME	PROJECT NO.	BY
	19048	RJF
	DESIGNED BY:	RJF
	DRAWN BY:	JB
	CHECKED BY:	RJF
	DATE:	NOVEMBER 2024
	SHEET TITLE	
	GRADING PLAN DETAIL	
	SHEET NO.	C-5



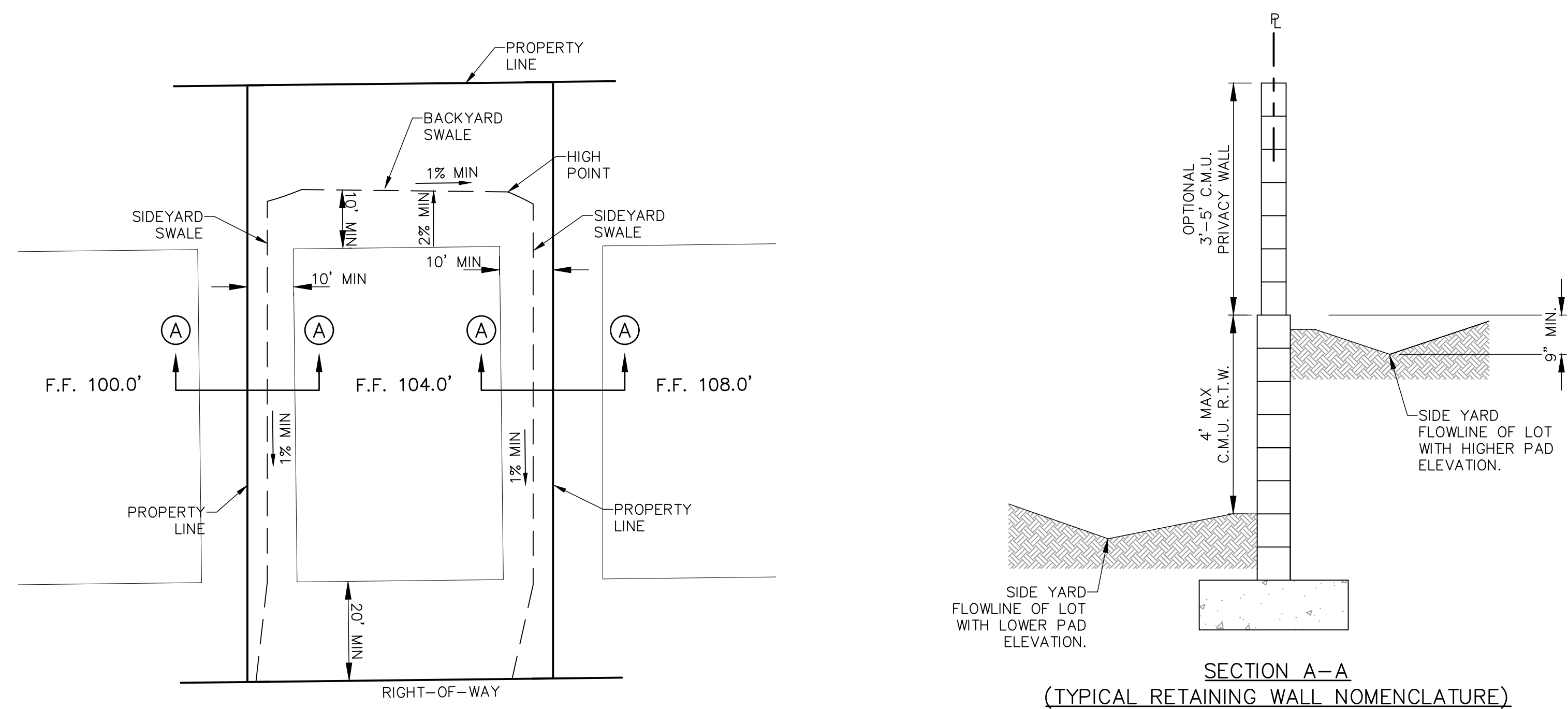
- KEYED NOTES:**
- 1 EXISTING ASPHALT.
 - 2 NEW CURB & GUTTER PER CITY WORK ORDER.
 - 3 NEW 5' SIDEWALK PER CITY WORK ORDER.
 - 4 STORM WATER QUALITY POND PER BUILDING PERMIT.
 - 5 CONSTRUCT SIDE YARD RETAINING WALL W/PRIVACY WALL.
TYPICAL RETAINING WALL NOMENCLATURE PER DETAIL 1/C-7.
RETAINING WALL PERMIT REQUIRED. STRUCTURAL DESIGN BY OTHERS.
 - 6 CONSTRUCT RETAINING WALL W/PRIVACY WALL.
TYPICAL RETAINING WALL NOMENCLATURE PER DETAIL 2/C-7.
RETAINING WALL PERMIT REQUIRED. STRUCTURAL DESIGN BY OTHERS.
 - 7 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.
 - 8 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.
 - 9 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.
 - 10 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.
 - 11 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.
 - 12 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.
 - 13 AMAFCA ACCESS ROAD AND GATE TO BE CONSTRUCTED UNDER CITY WORK ORDER.
 - 14 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 $\frac{3}{4}$ " 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.



PROJECT NAME						ENGINEER'S SEAL		 Fierro & Company ENGINEERING SURVEYING 3201 4TH STREET NW, SUITE C ALBUQUERQUE, NEW MEXICO 87107 PH: (505) 352-8930 www.fierrocompany.com	
TUSCANY VILLAGE, UNIT II SUBDIVISION ALBUQUERQUE, NM									
PROJECT NO:	DESIGNED BY:	DRAWN BY:	CHECKED BY:	DATE:	REV.	DESCRIPTION	BY		
19048	RJF	JB	RJF	NOVEMBER 2024					
SHEET TITLE									
GRADING PLAN DETAIL									
SHEET NO: C-6									



1 TYPICAL LOT GRADING DETAIL W/.TYPICAL SIDE YARD RETAINING WALL NOMENCLATURE
SCALE: NTS

[illegible]

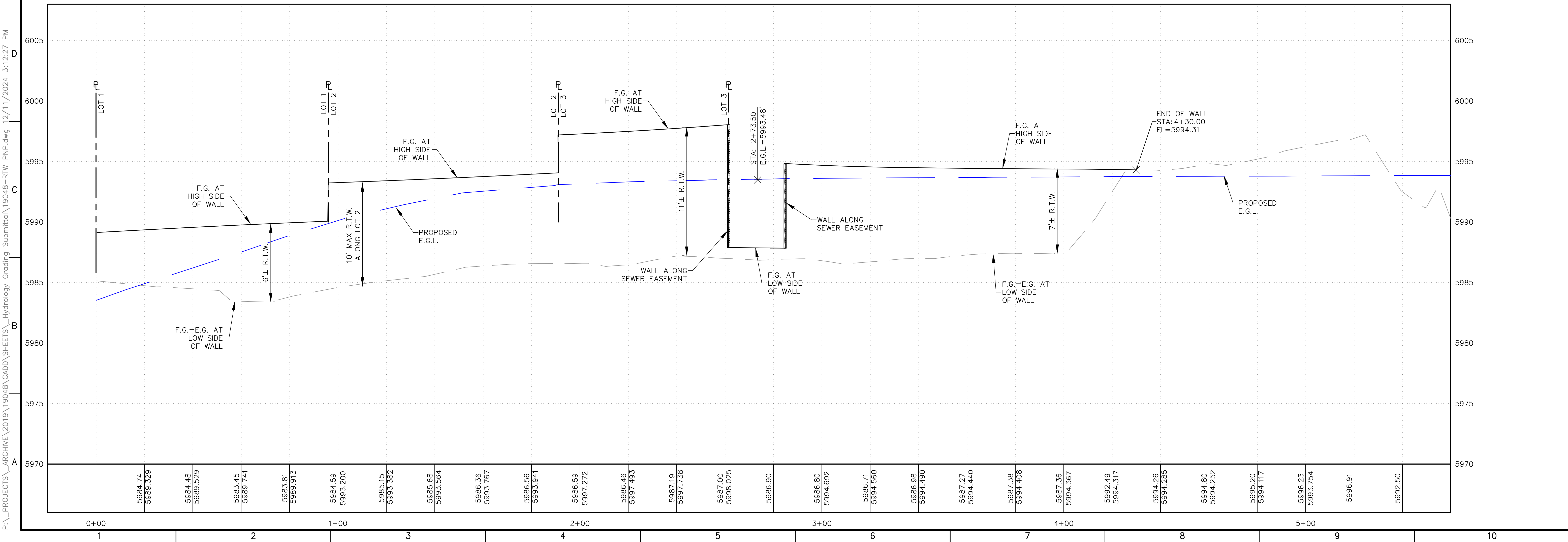
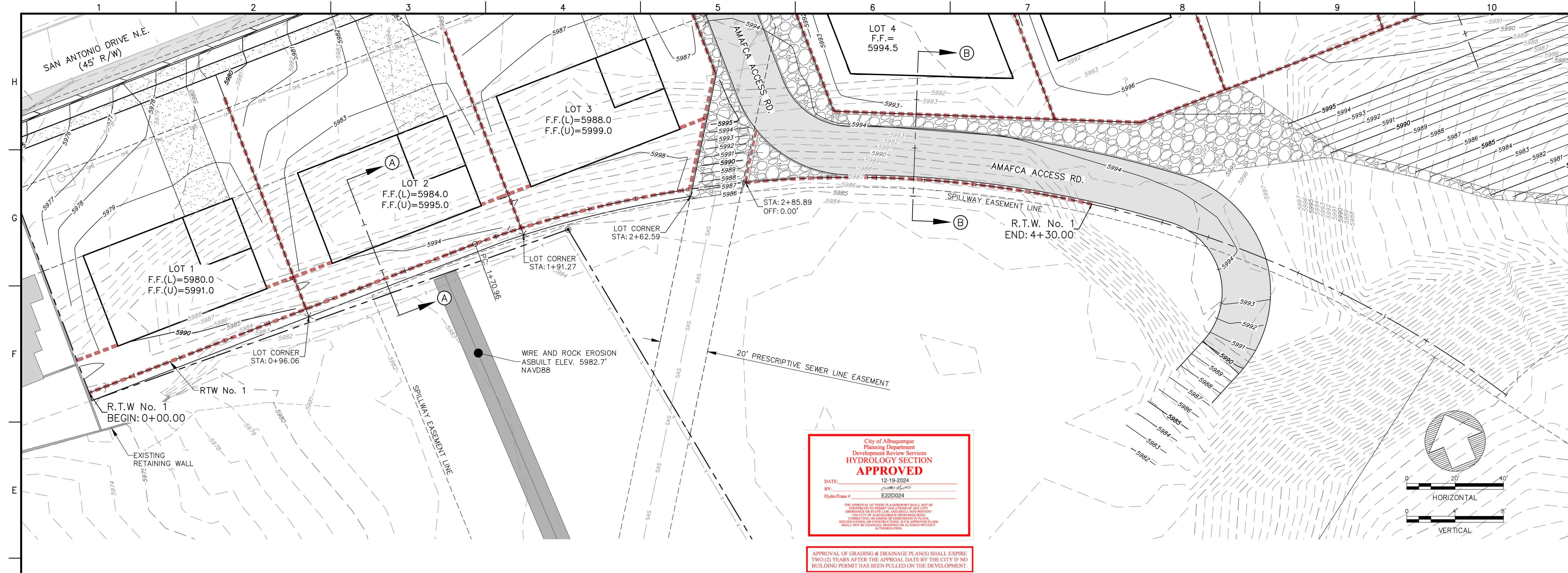
TYPICAL SECTIONS

SHEET NO: C-7

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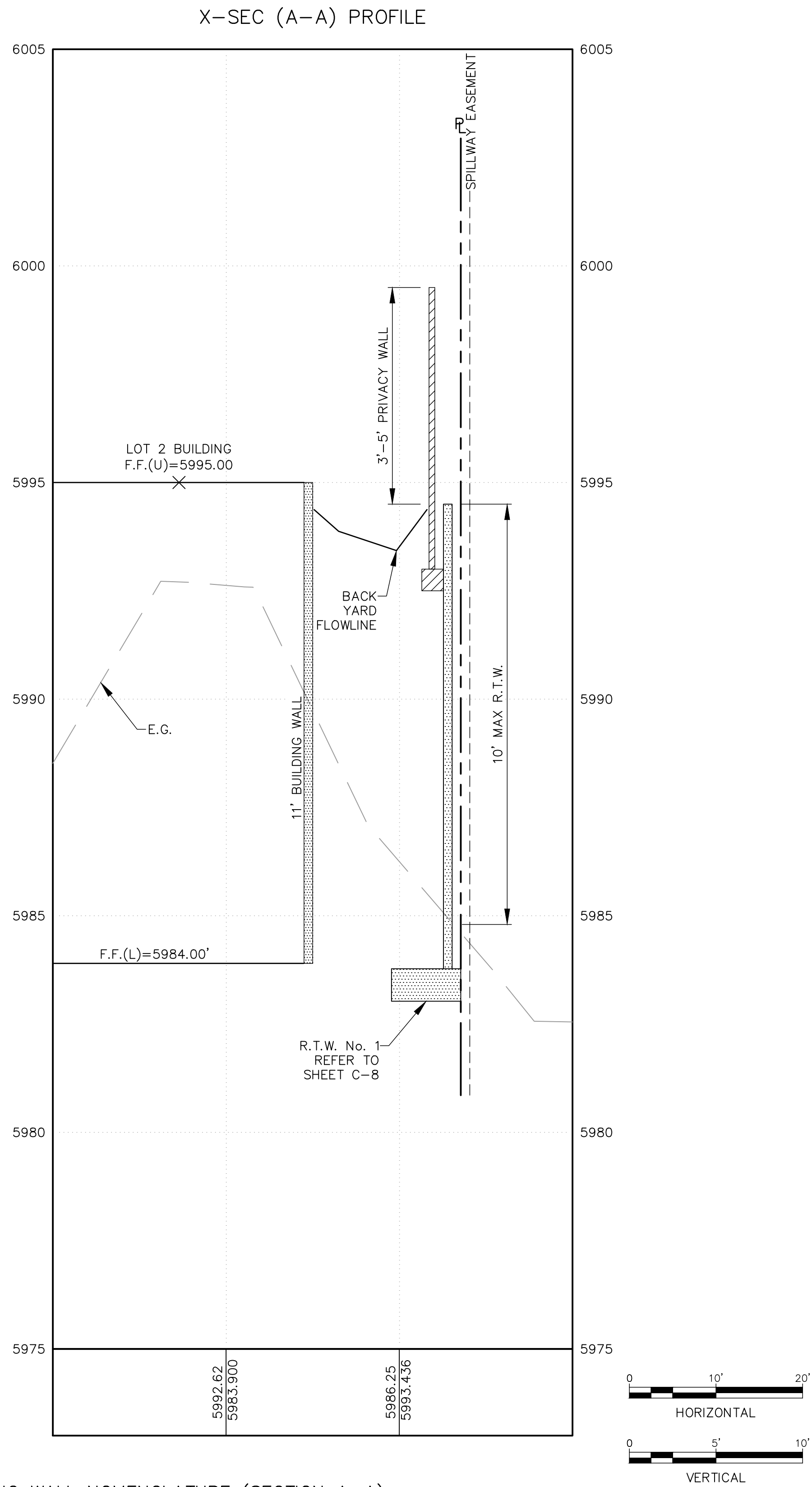
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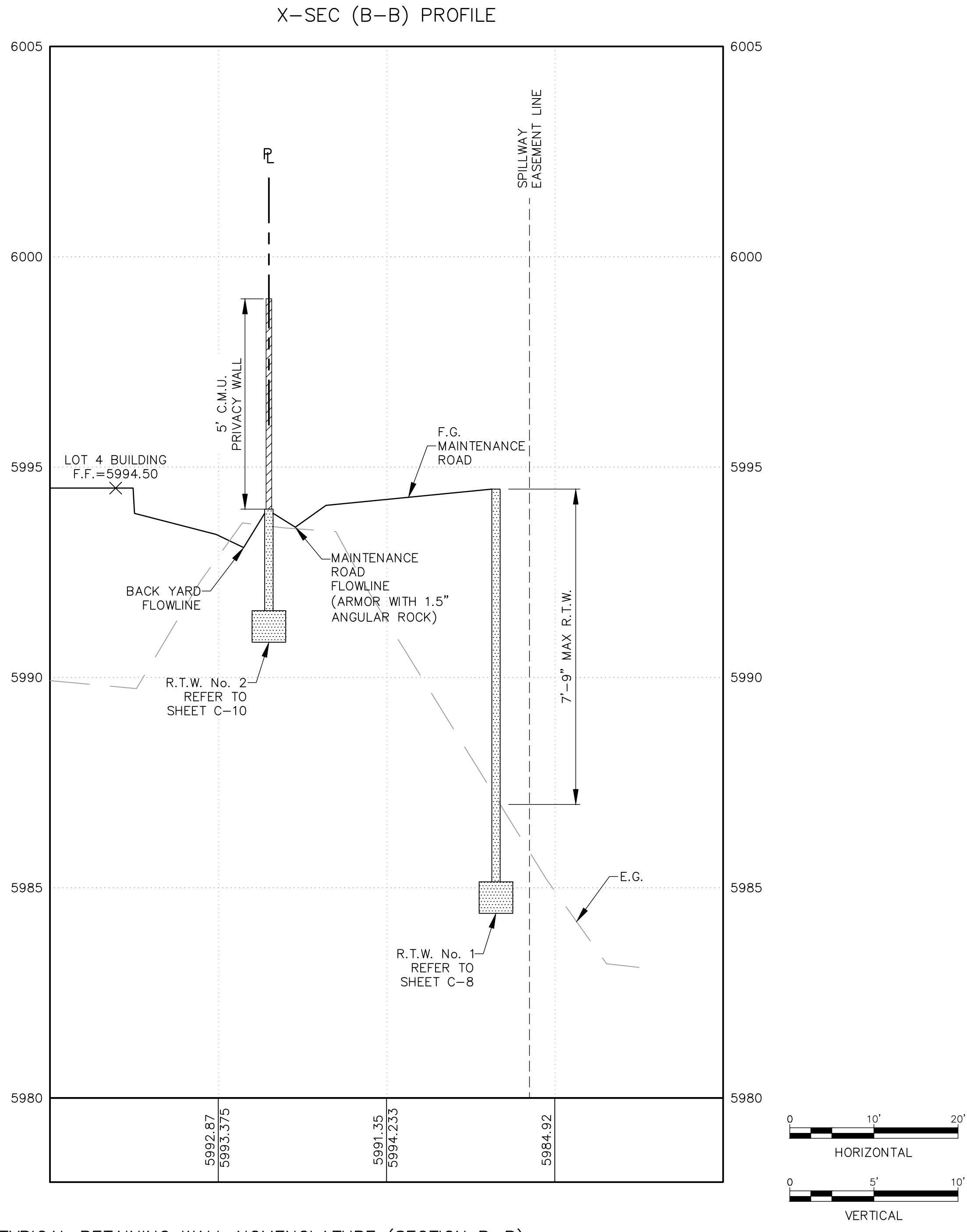
PROJECT NO:	19048
DESIGNED BY:	RJF
DRAWN BY:	JB
CHECKED BY:	RJF
DATE:	NOVEMBER 2024
SHEET TITLE	R.T.W. No. 1 PLAN & PROFILE
SHEET NO:	C-8

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1 TYPICAL RETAINING WALL NOMENCLATURE (SECTION A-A)



2 TYPICAL RETAINING WALL NOMENCLATURE (SECTION B-B)



City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED

DATE: 12-19-2024
BY: [Signature]
HydroTrans #: E22D024

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OR A WARRANTY OF ANY KIND. THE CITY OF ALBUQUERQUE
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SUFFERED BY ANY PARTY AS A RESULT OF THE CITY OF ALBUQUERQUE
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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
TYPICAL SECTIONS

SHEET NO:
C-9

ENGINEER'S SEAL

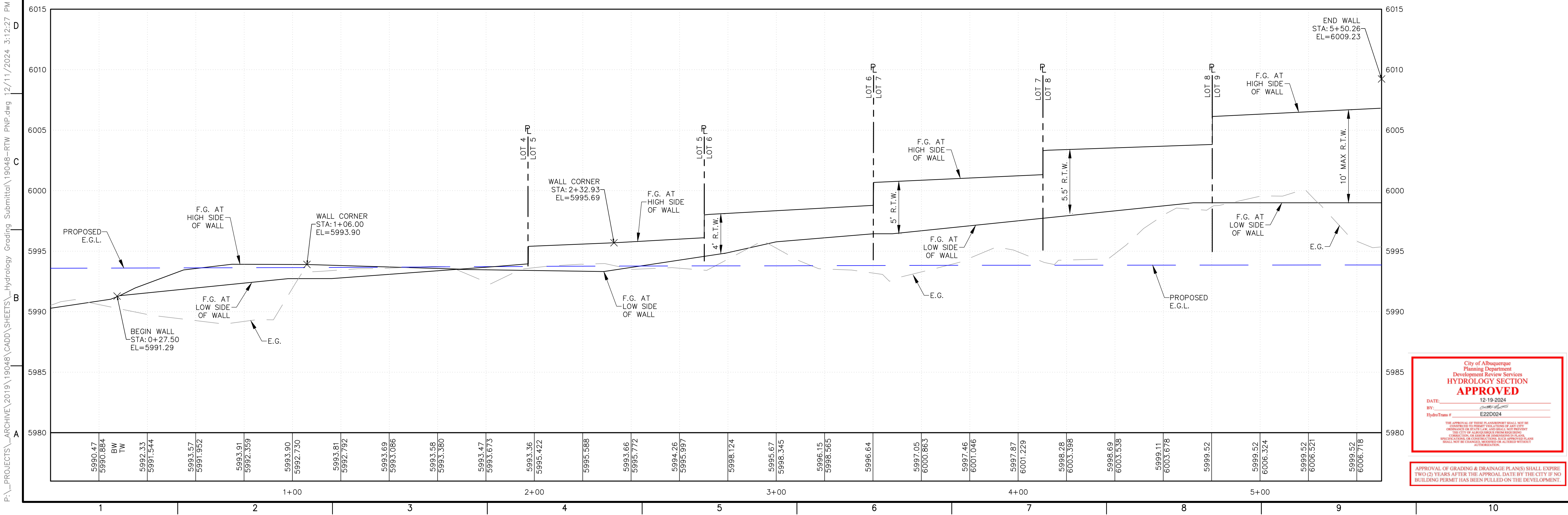


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19048-RTW2 PROFILE



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ROBERT J. FIERRO
20585
12-31-2024
PROFESSIONAL ENGINEER

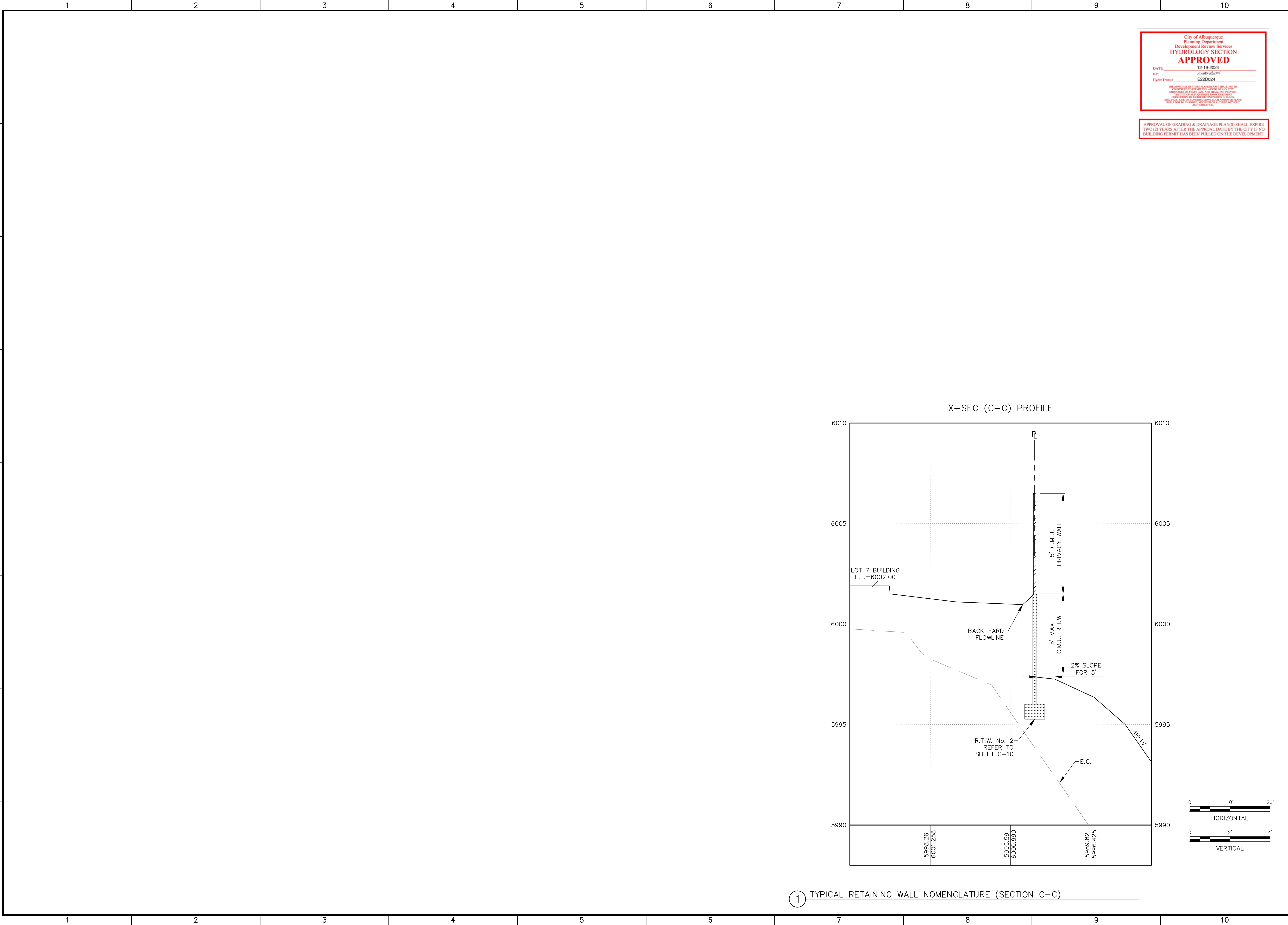
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ALBUQUERQUE, NM

PROJECT NAME	PROJECT NO.	DESIGNED BY	DRAWN BY	CHECKED BY	DATE	REV.	DESCRIPTION	BY
	19048	RJF	JB	RJF	NOVEMBER 2024			

PROJECT TITLE
R.T.W. No. 2
PLAN & PROFILE

SHEET NO.
C-10

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City of Albuquerque
Planning Department
Development Review Services
APPROVED
DATE: 12-19-2024
BY: [Signature]
HydroTrans # E220024

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ORDINANCES OR STATE LAWS, AND SHALL NOT PREVENT
THE CITY OF ALBUQUERQUE FROM ENFORCEING
SPECIALTY, OR OTHER, ORDINANCES IN PLANS.
REVISIONS TO CONSTRUCTION SHALL BE APPROVED BY THE
CITY OF ALBUQUERQUE. ANY CHANGES TO THE PLANS
SHALL NOT BE CHANGED WITHOUT THE CITY OF ALBUQUERQUE
APPROVAL.

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PROJECT NO.	19048
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DRAWN BY:	JB
CHECKED BY:	RJF
DATE:	NOVEMBER 2024
PROJECT NAME	
BY	
DESCRIPTION	
DATE	
REV.	

PROJECT NO: 19048

DESIGNED BY: RJF

DRAWN BY: JB

CHECKED BY: RJF

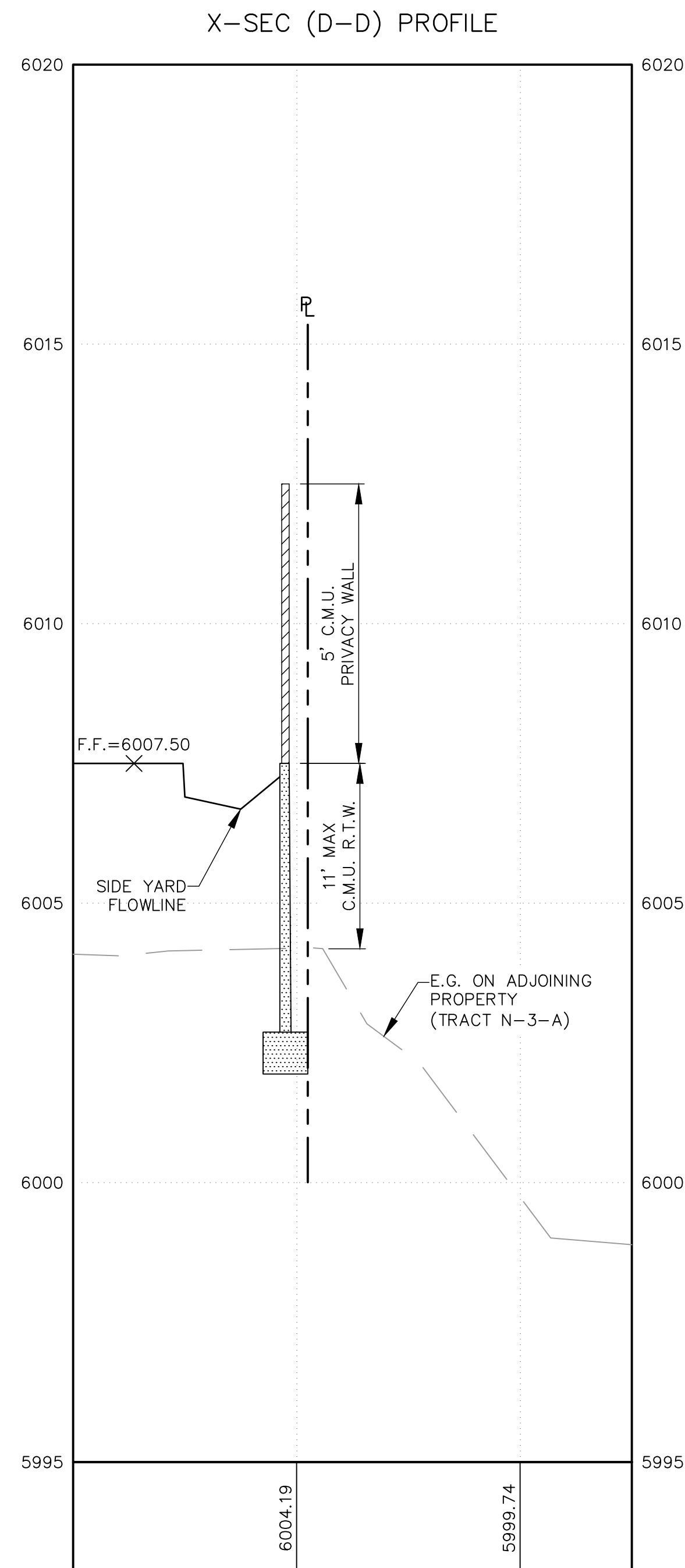
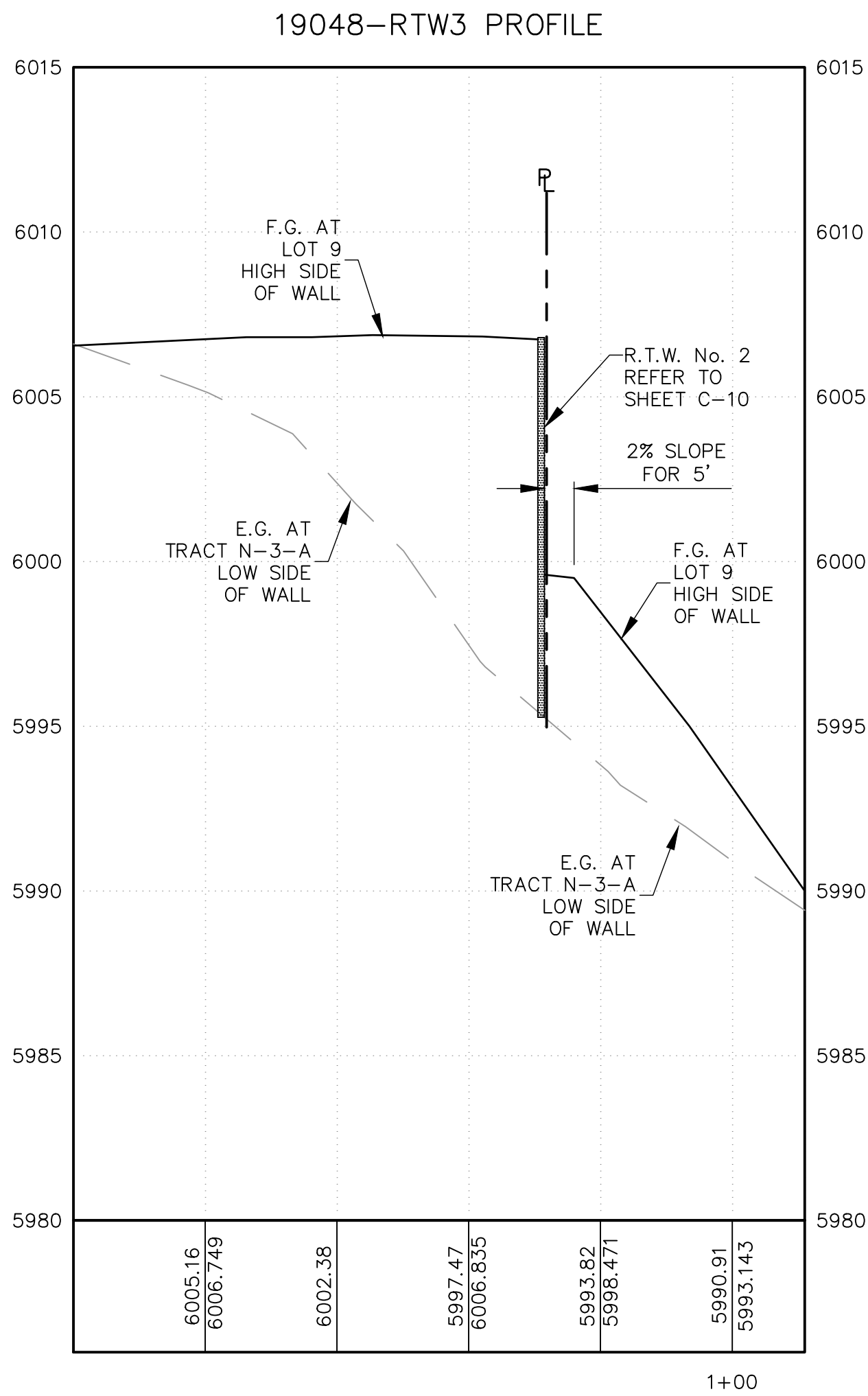
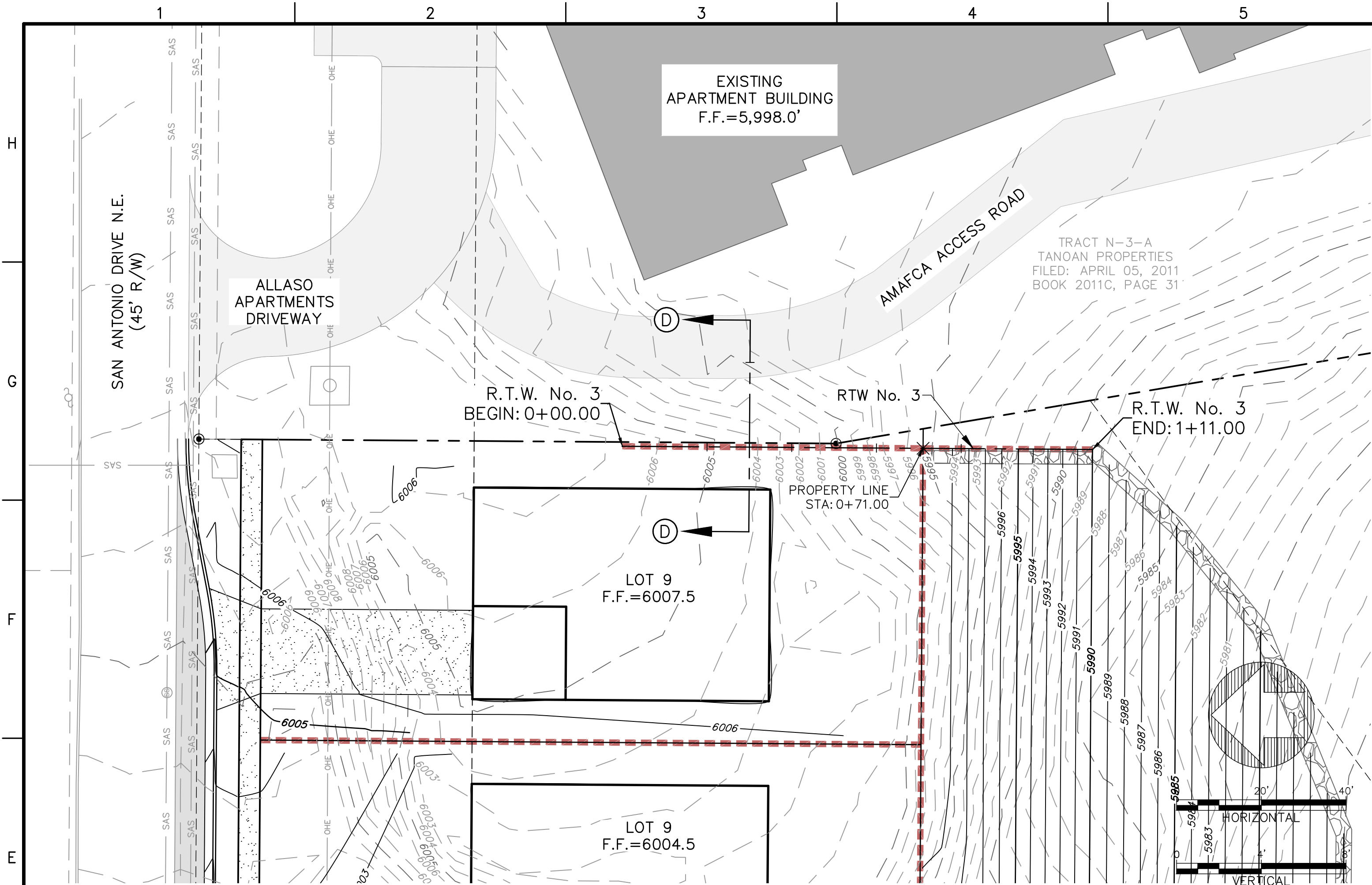
DATE: NOVEMBER 2024

SHEET TITLE

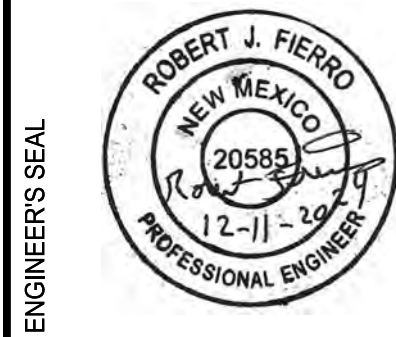
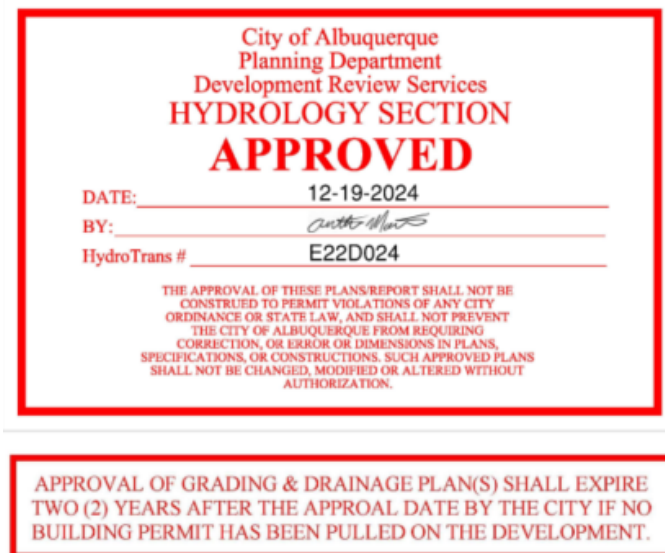
TYPICAL SECTIONS

SHEET NO: C-11

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1 TYPICAL RETAINING WALL NOMENCLATURE (SECTION D-D)



TUSCANY VILLAGE, UNIT II
SUBDIVISION
ALBUQUERQUE, NM

PROJECT NAME

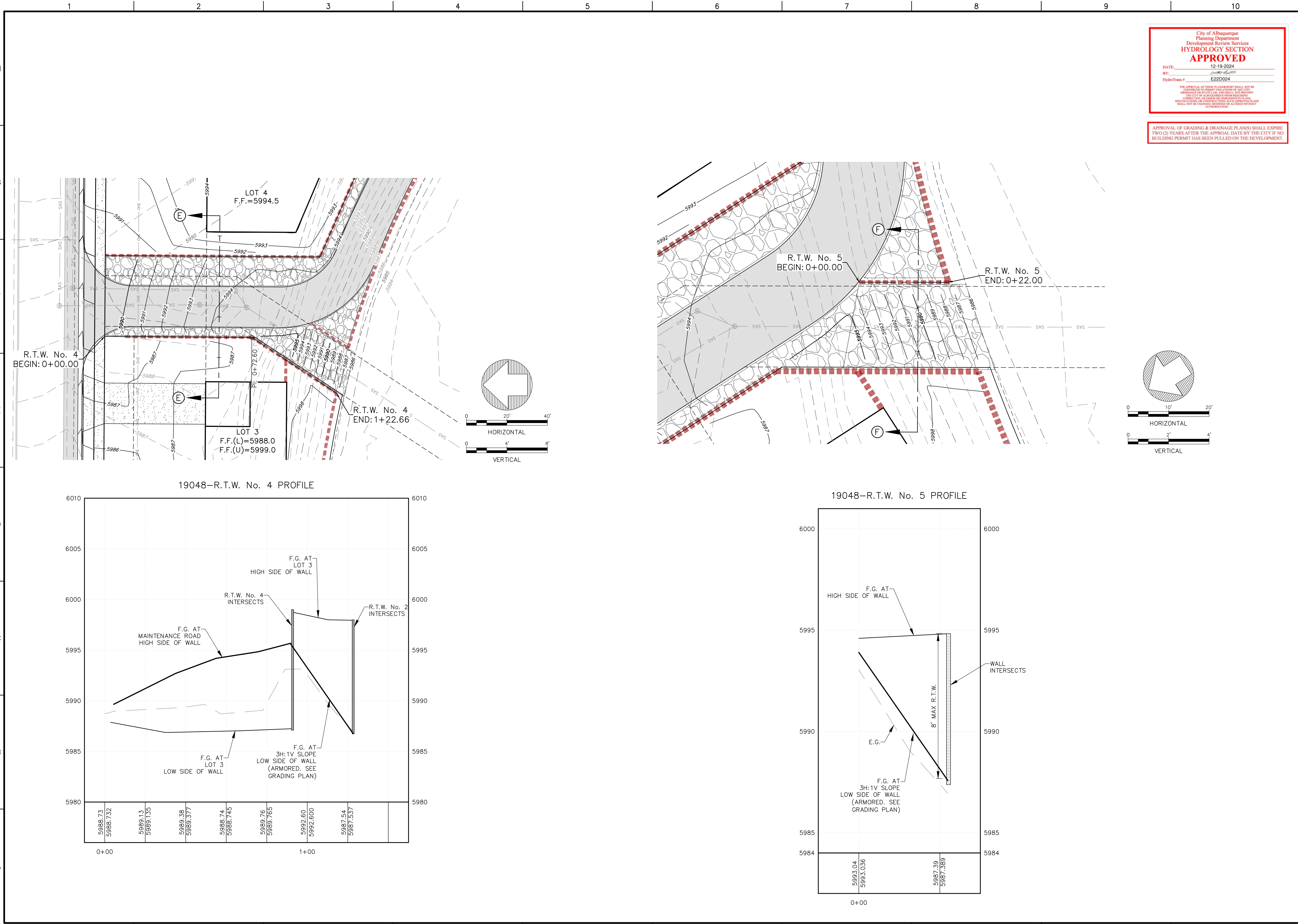
REV.	DATE	DESCRIPTION	BY

PROJECT NO: 19048
DESIGNED BY: R/JF
DRAWN BY: JB
CHECKED BY: R/JF
DATE: NOVEMBER 2024

SHEET TITLE
R.T.W. No. 3
PLAN & PROFILE &
TYPICAL SECTIONS

SHEET NO:
C-12

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Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 12-19-2024
BY: [Signature]
HydroTrans #: E220024

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TUSCANY VILLAGE, UNIT II
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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
R.T.W. No. 4 & No. 5
PLAN & PROFILE

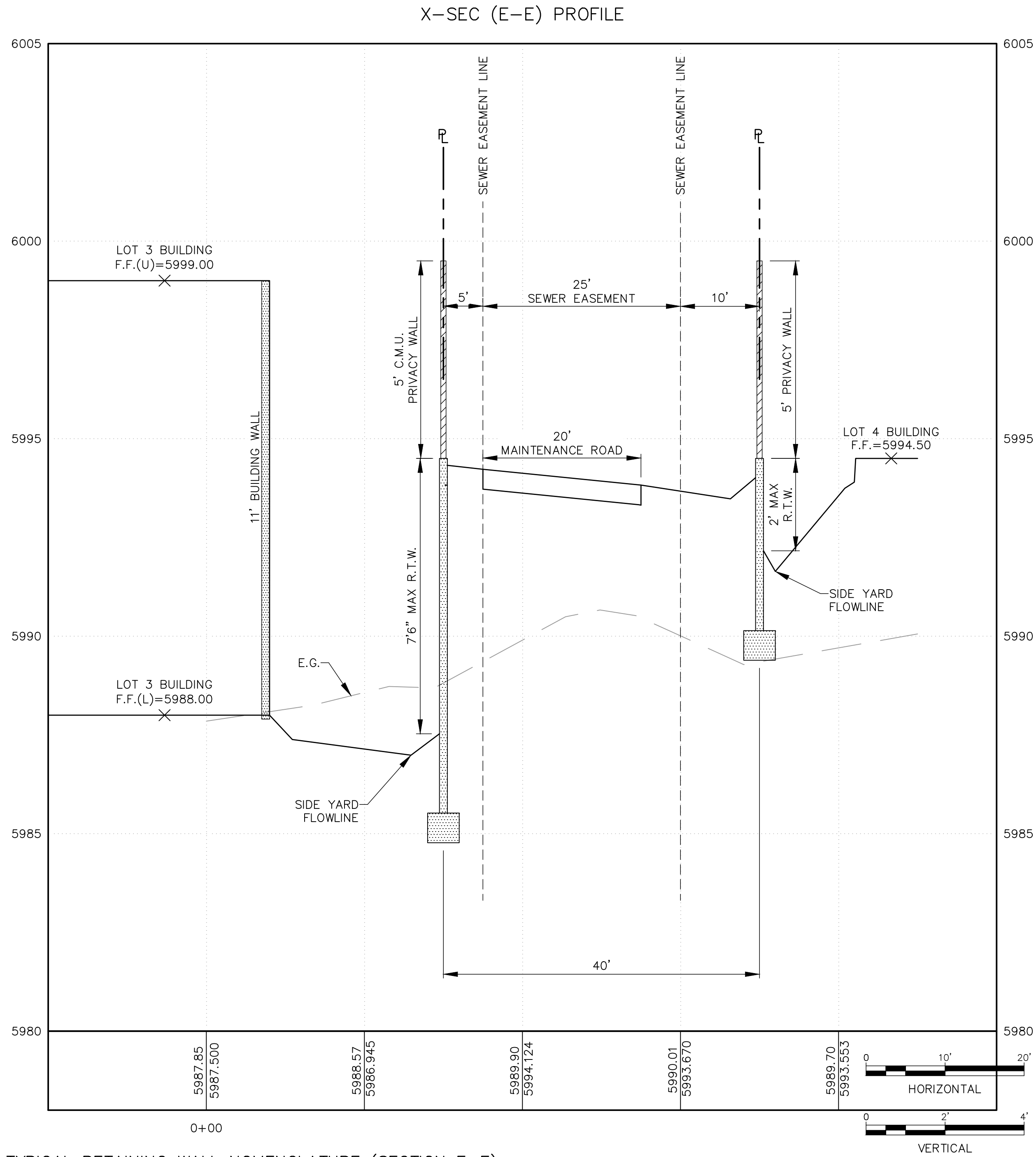
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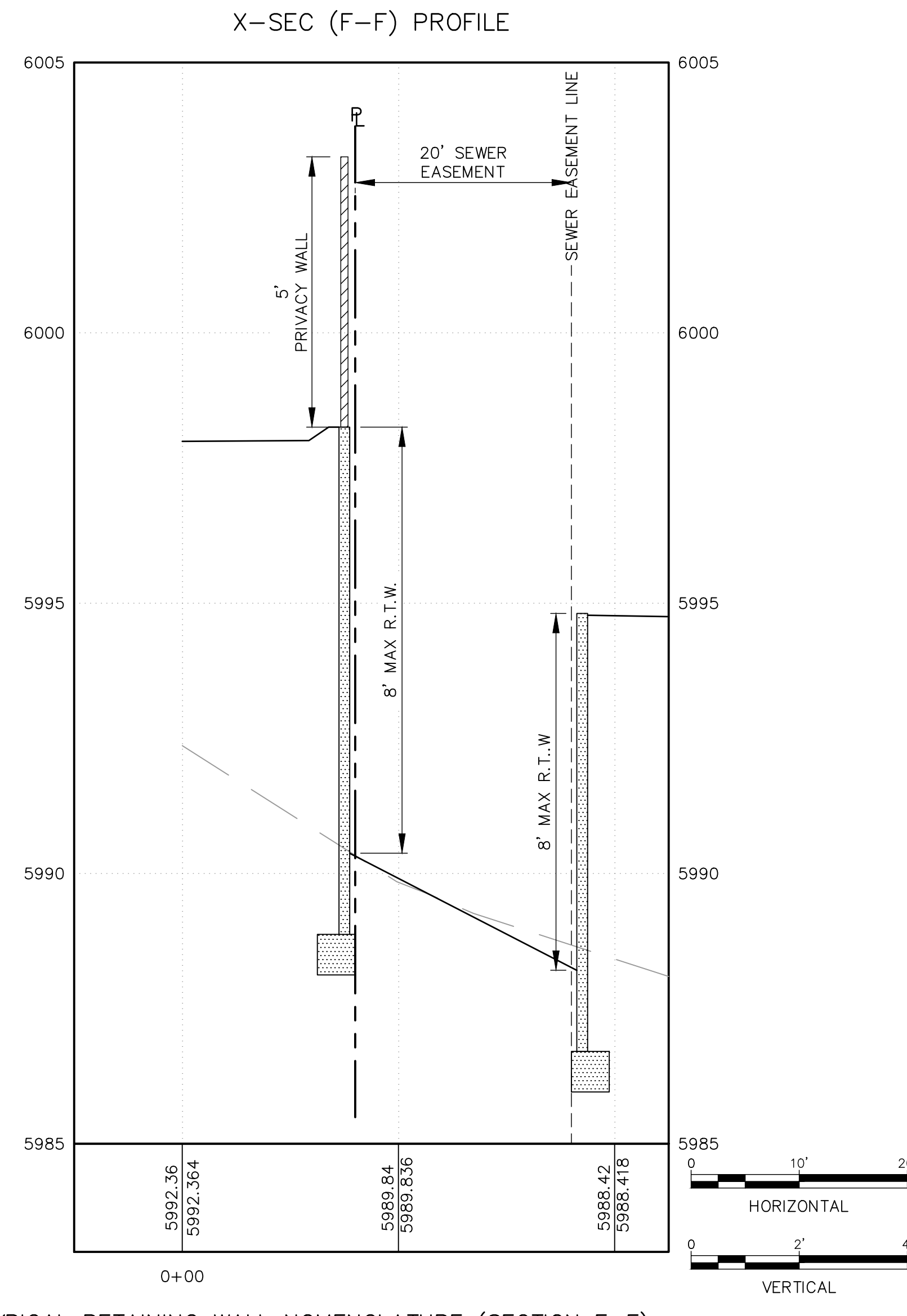
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1 2 3 4 5 6 7 8 9 10

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

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PROJECT NAME

TUSCANY VILLAGE, UNIT II
SUBDIVISION
ALBUQUERQUE, NM

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 19048

DESIGNED BY: R/JF

DRAWN BY: JB

CHECKED BY: R/JF

DATE: NOVEMBER 2024

SHEET TITLE

TYPICAL SECTIONS

SHEET NO:

C-14

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City of Albuquerque
Planning Department
Development Review Services
HYDROLOGY SECTION
APPROVED
DATE: 12-19-2024
BY:
HydroTrans #: E2202024

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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 ₁₀₀ (cfs)	V _{100yr-24hr} (ac-ft)	V _{100yr-24hr} (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	Total Area (acres)	Land Treatment (%)				Q ₁₀₀ (cfs)	V _{100yr-24hr} (ac-ft)	V _{100yr-24hr} (cu-ft)	SW QV (cu-ft)
	(sq.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 Q _{100yr-6hr}	Proposed Q _{100yr-24hr}	SWQV
	(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

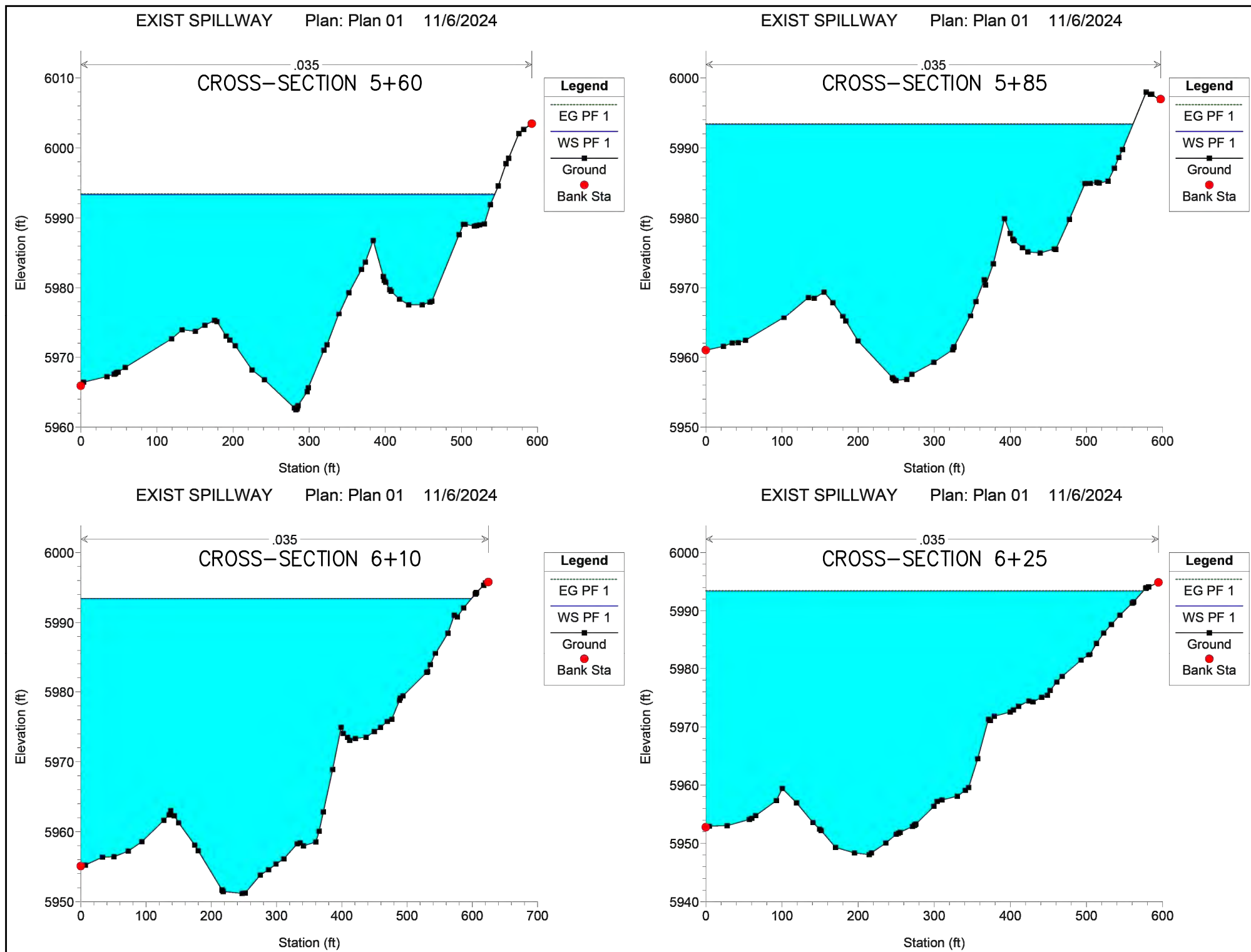
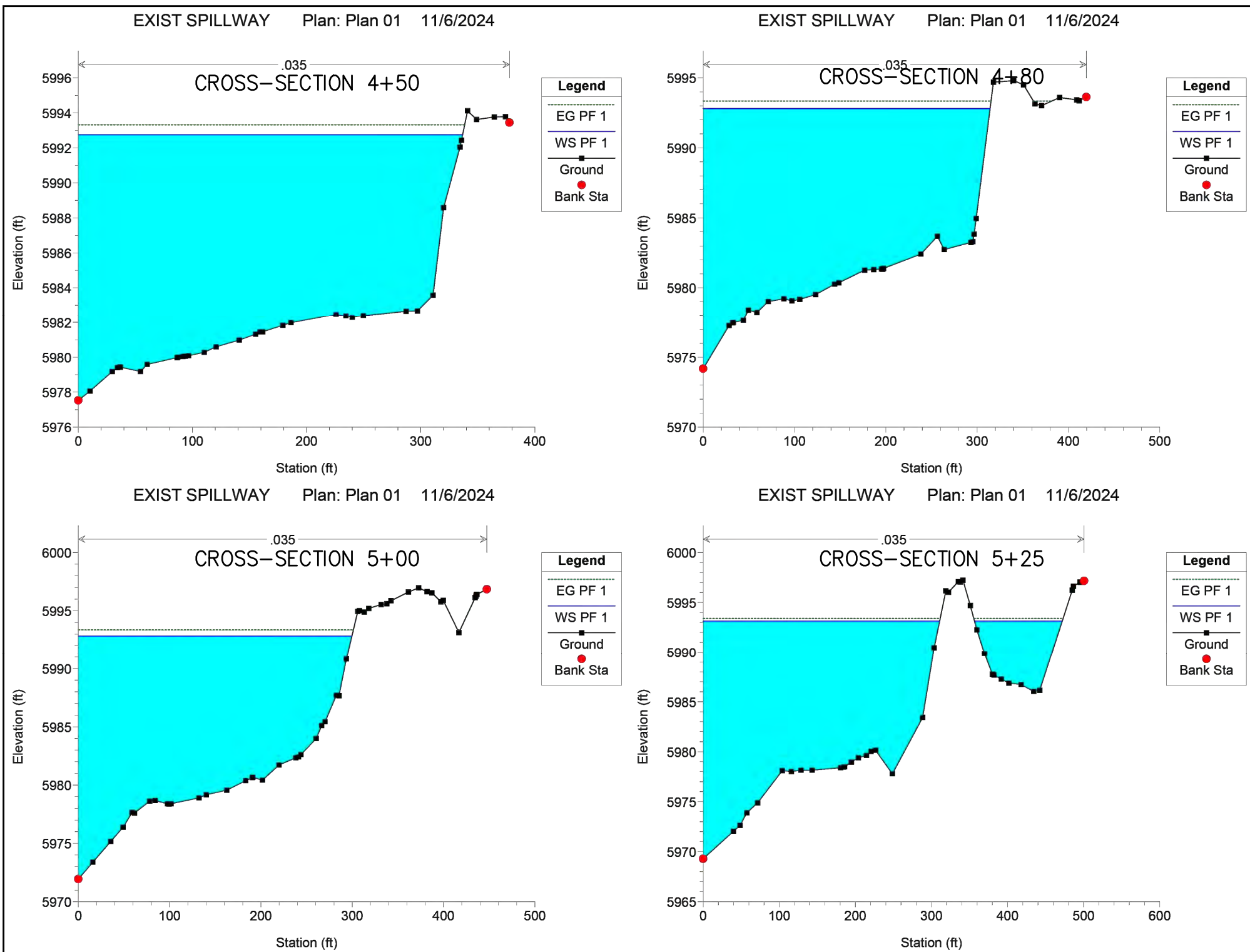
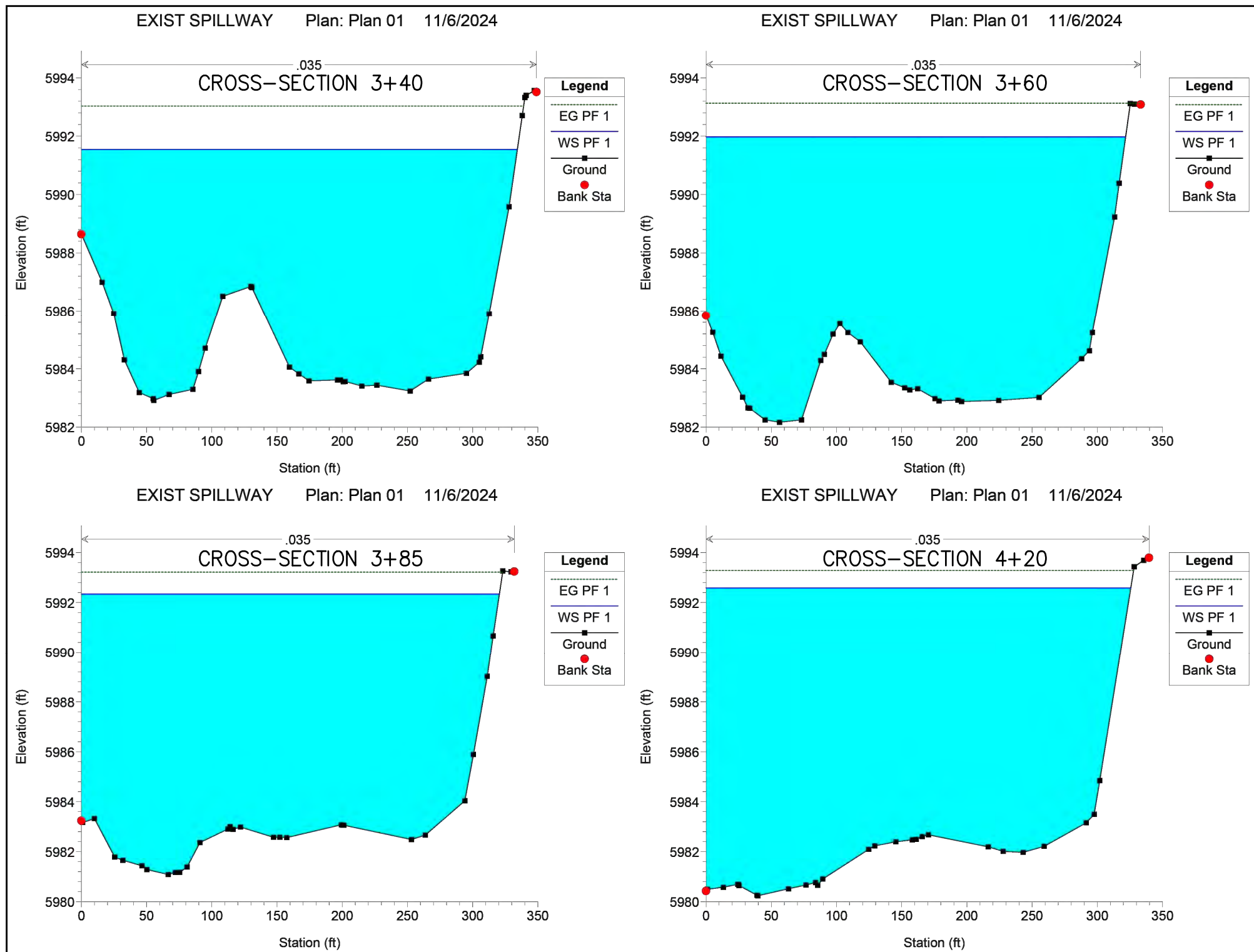
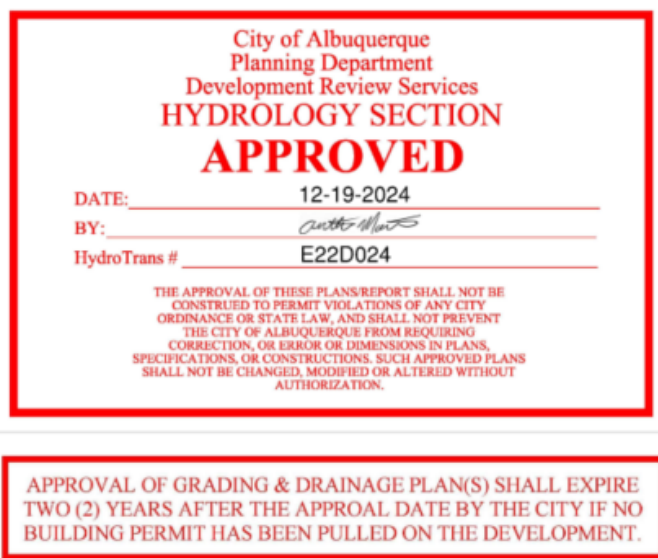
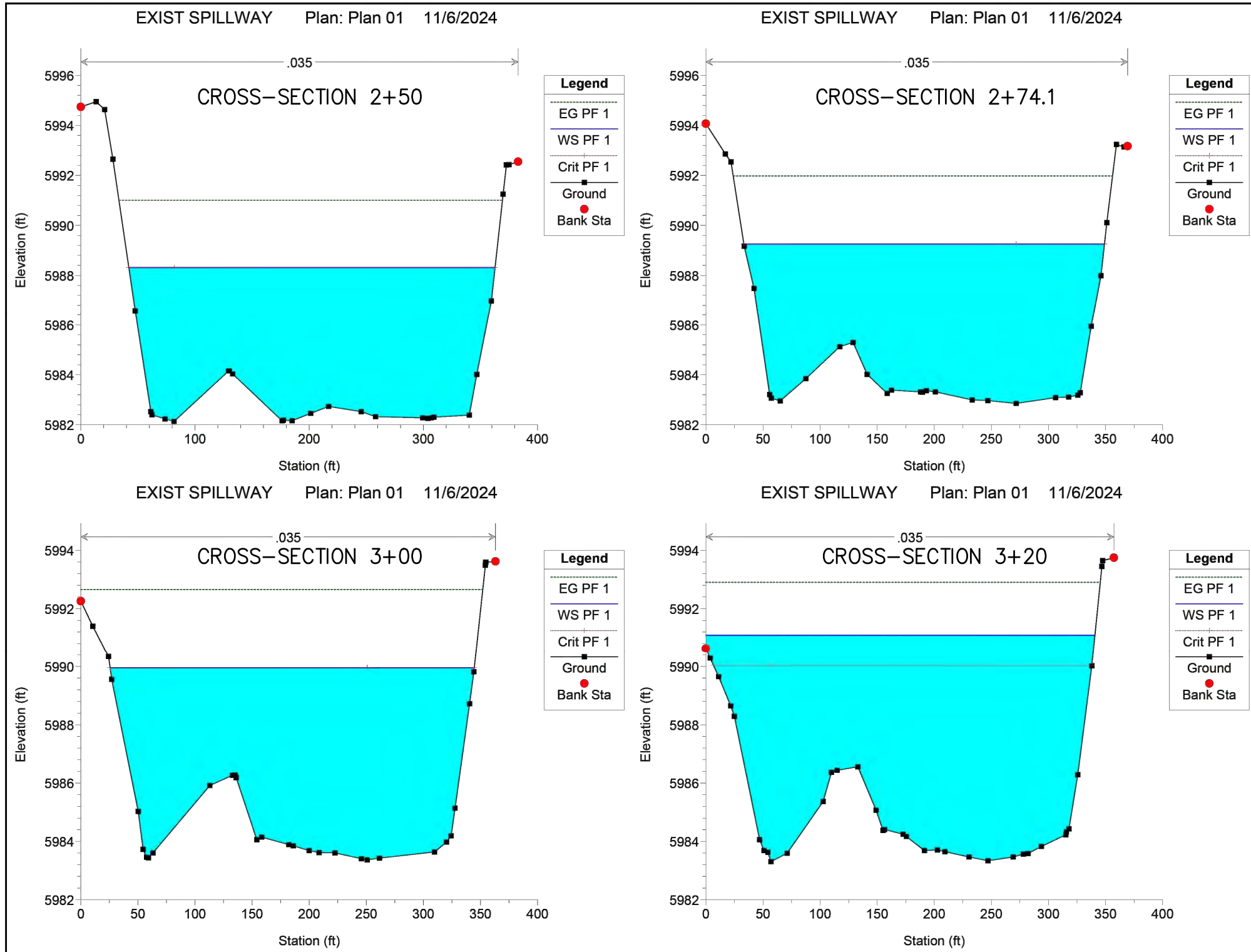
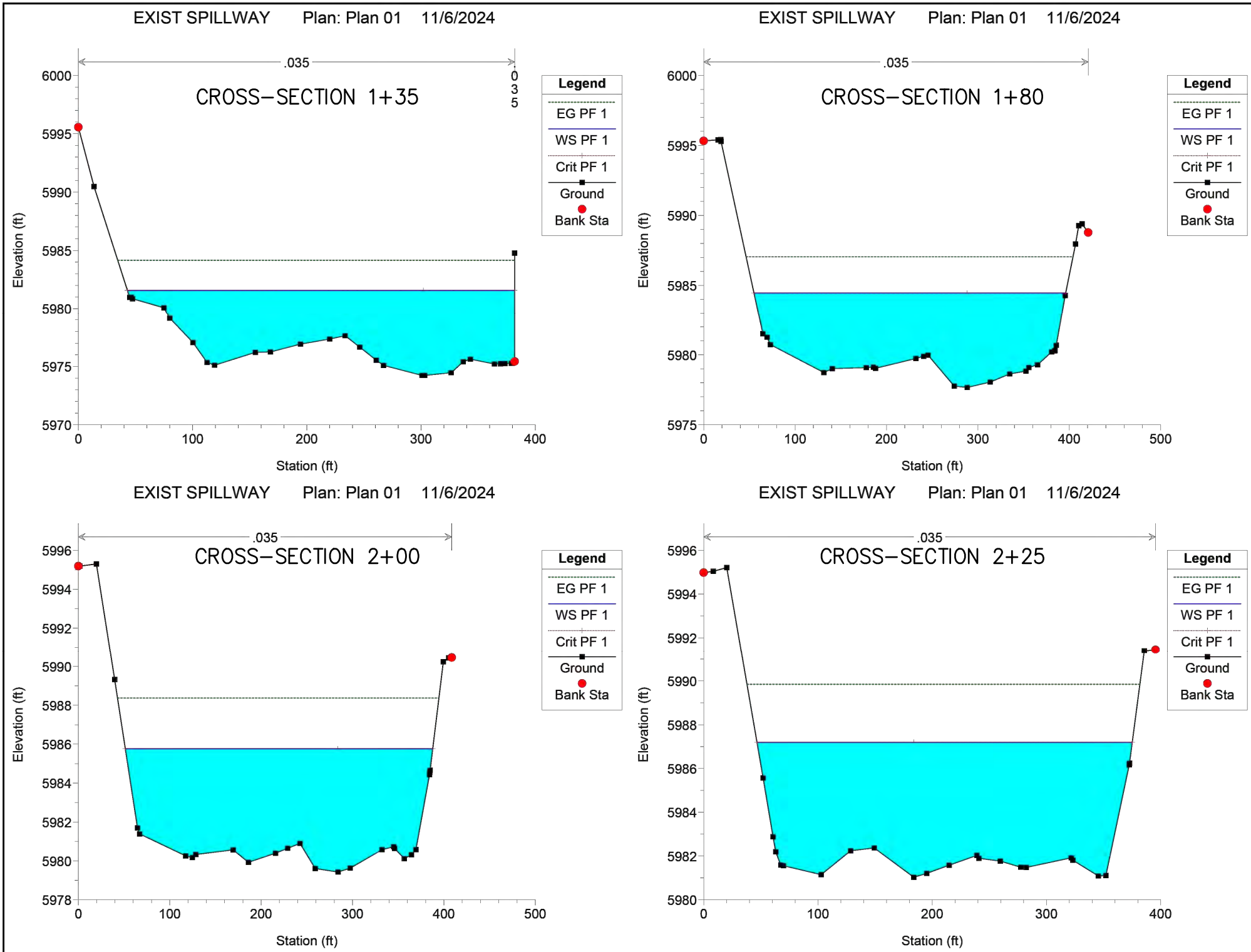
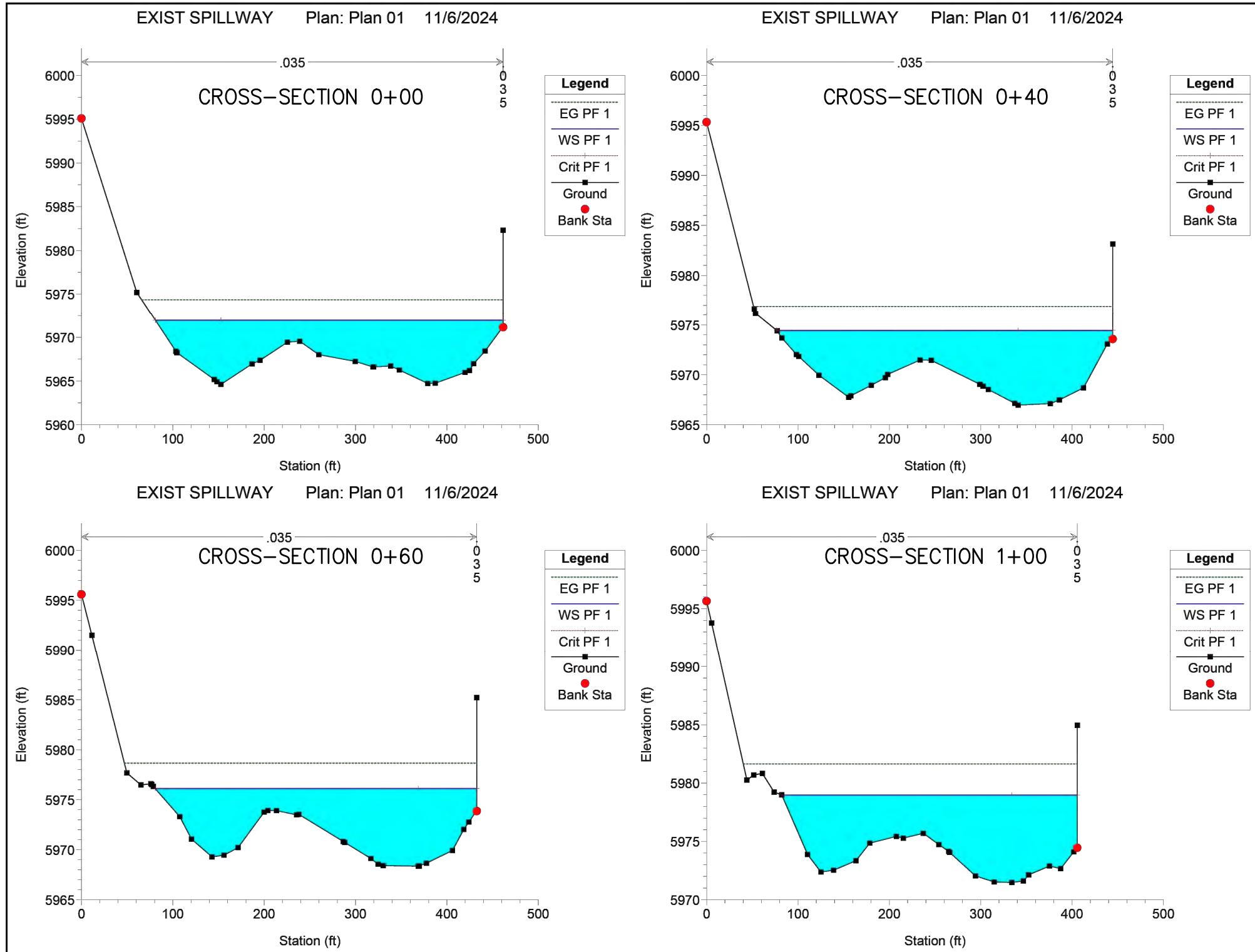
HYDROLOGY SUMMARY COMPARISON

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	5974.35	0.010893	12.47	1803.69	380.37	1.01

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TUSCANY VILLAGE, UNIT II
SUBDIVISION
ALBUQUERQUE, NM

PROJECT NAME			
REV.	DATE	DESCRIPTION	BY

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

SHEET TITLE
**HEC-RAS
RESULTS
EXISTING
CONDITION**

SHEET NO:
D-3

