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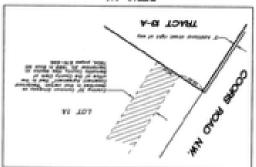
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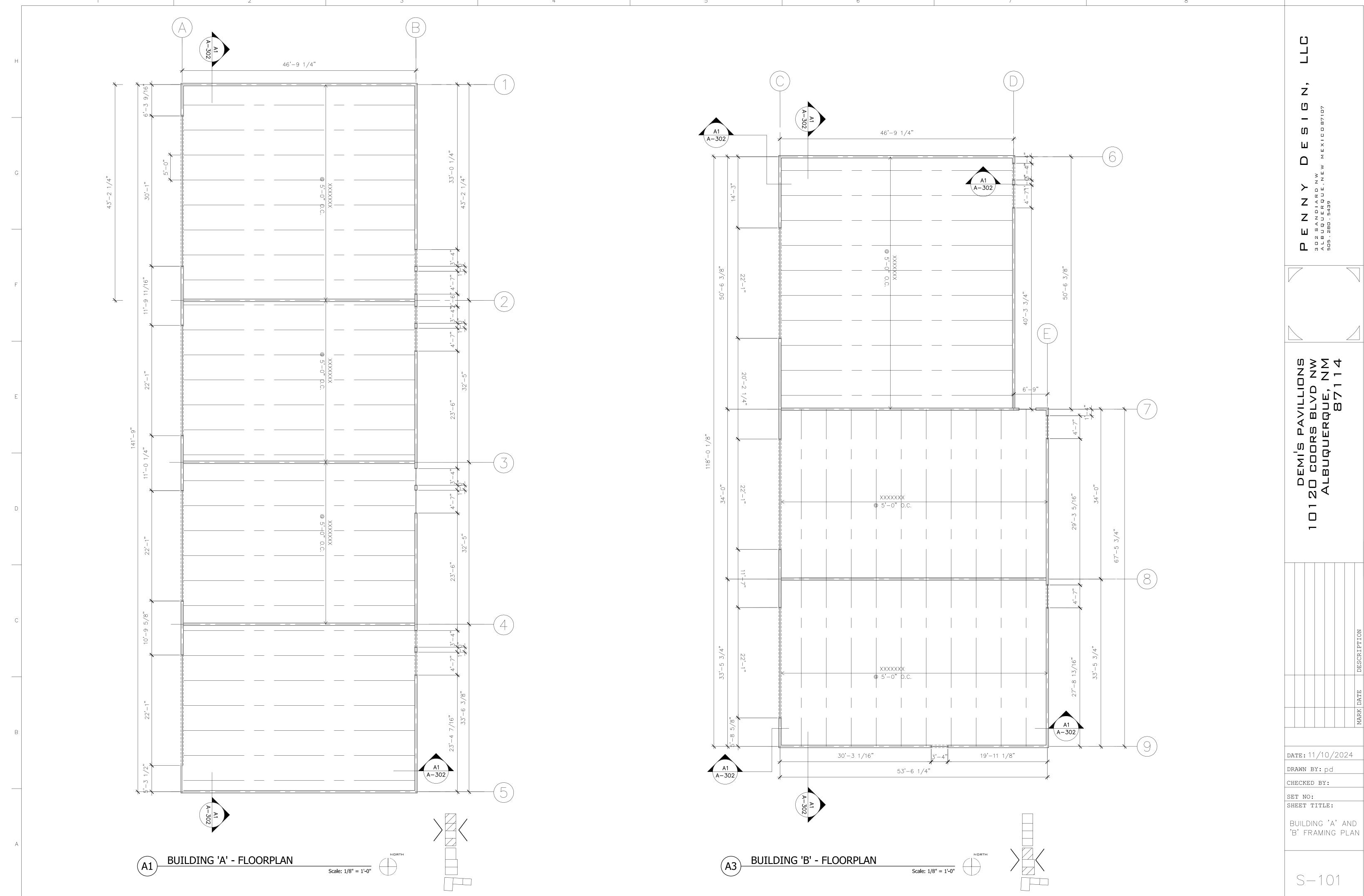
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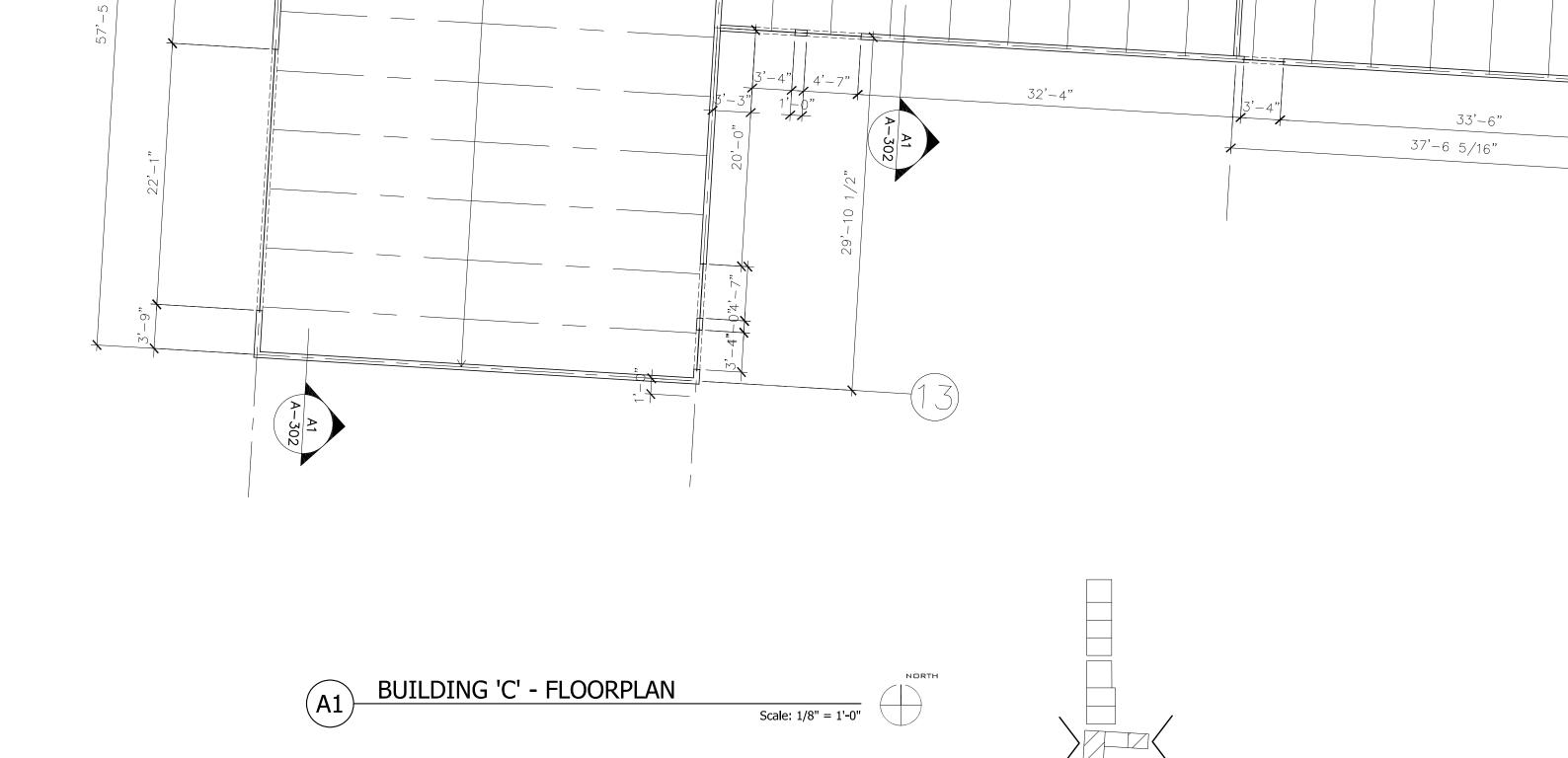
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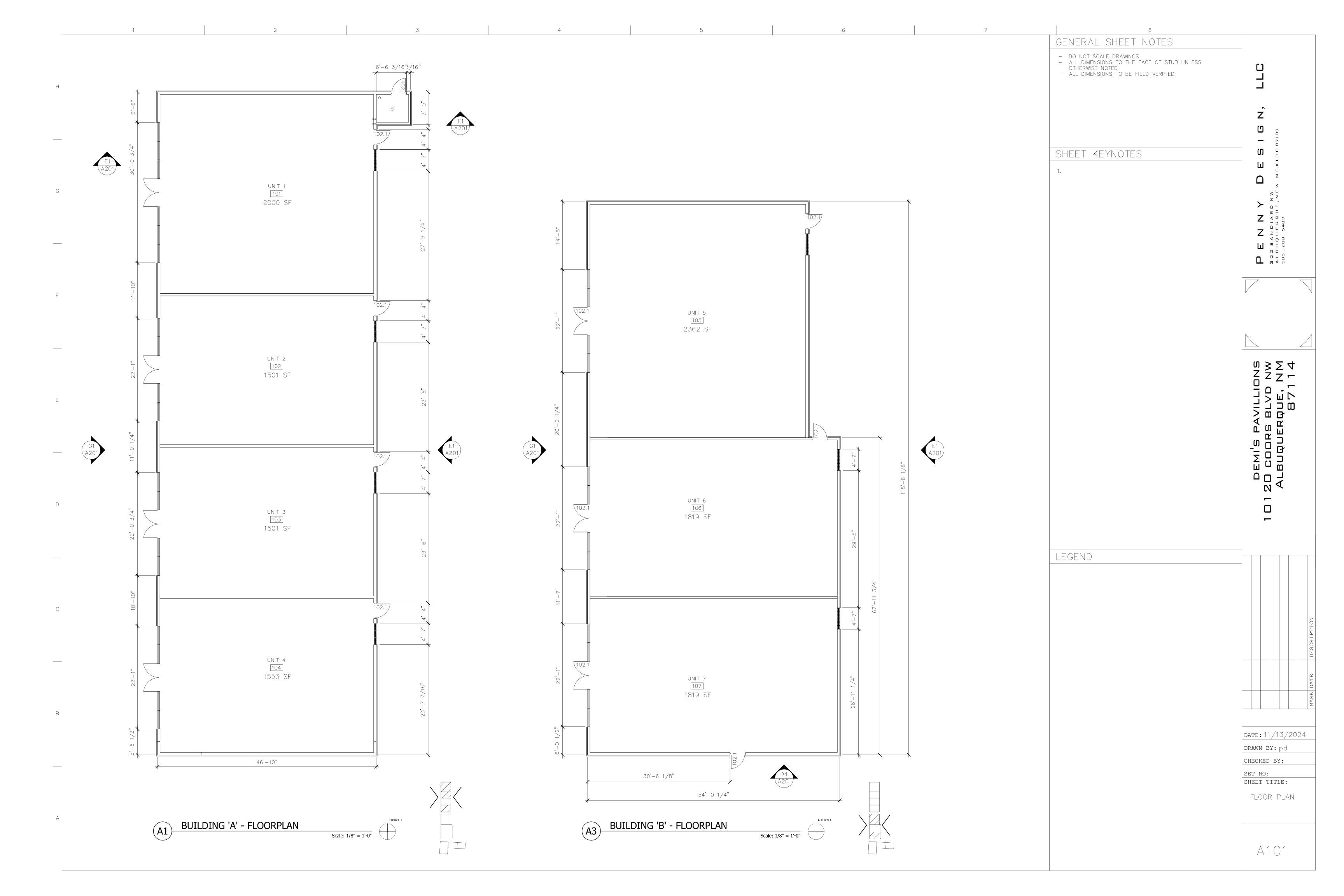
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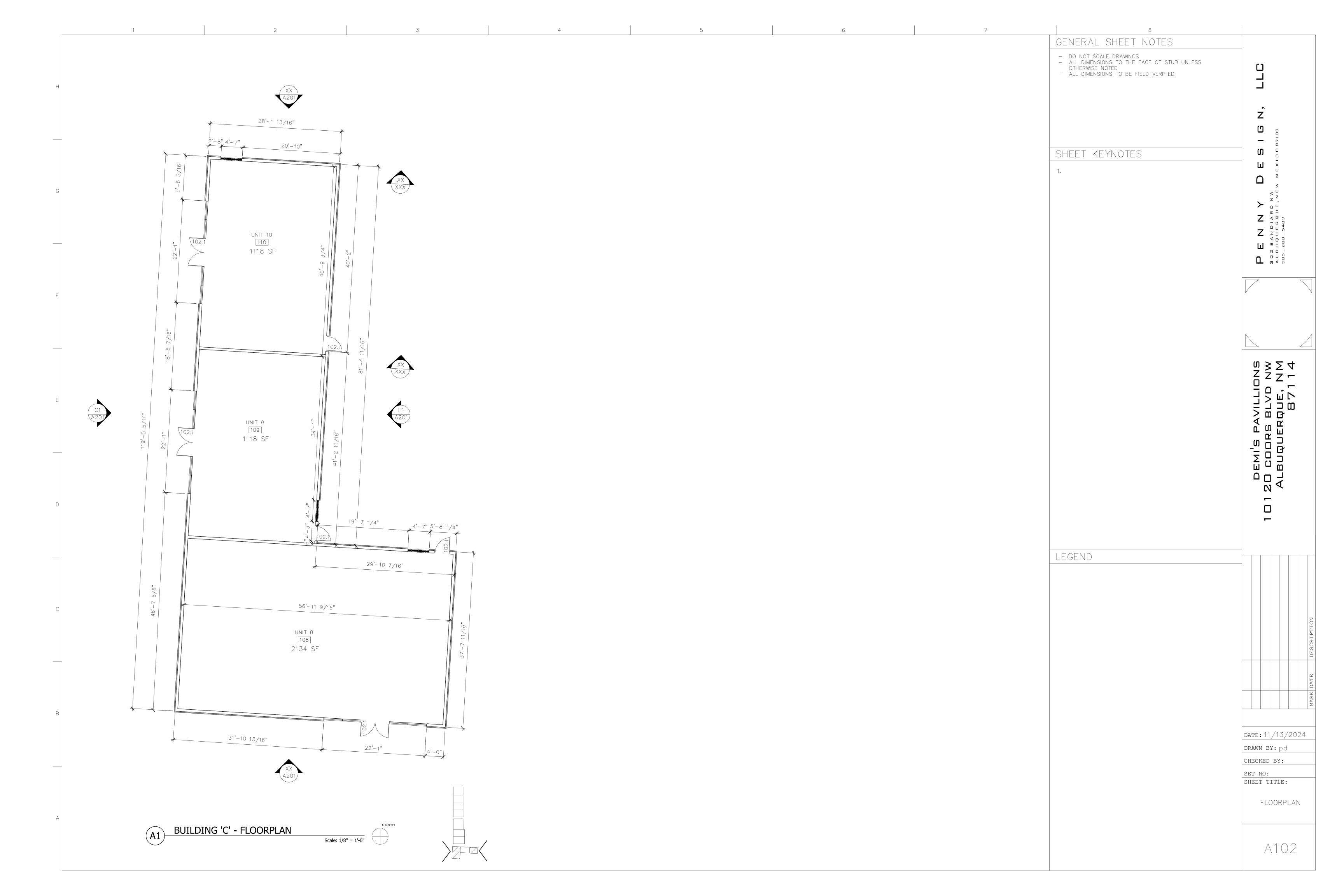
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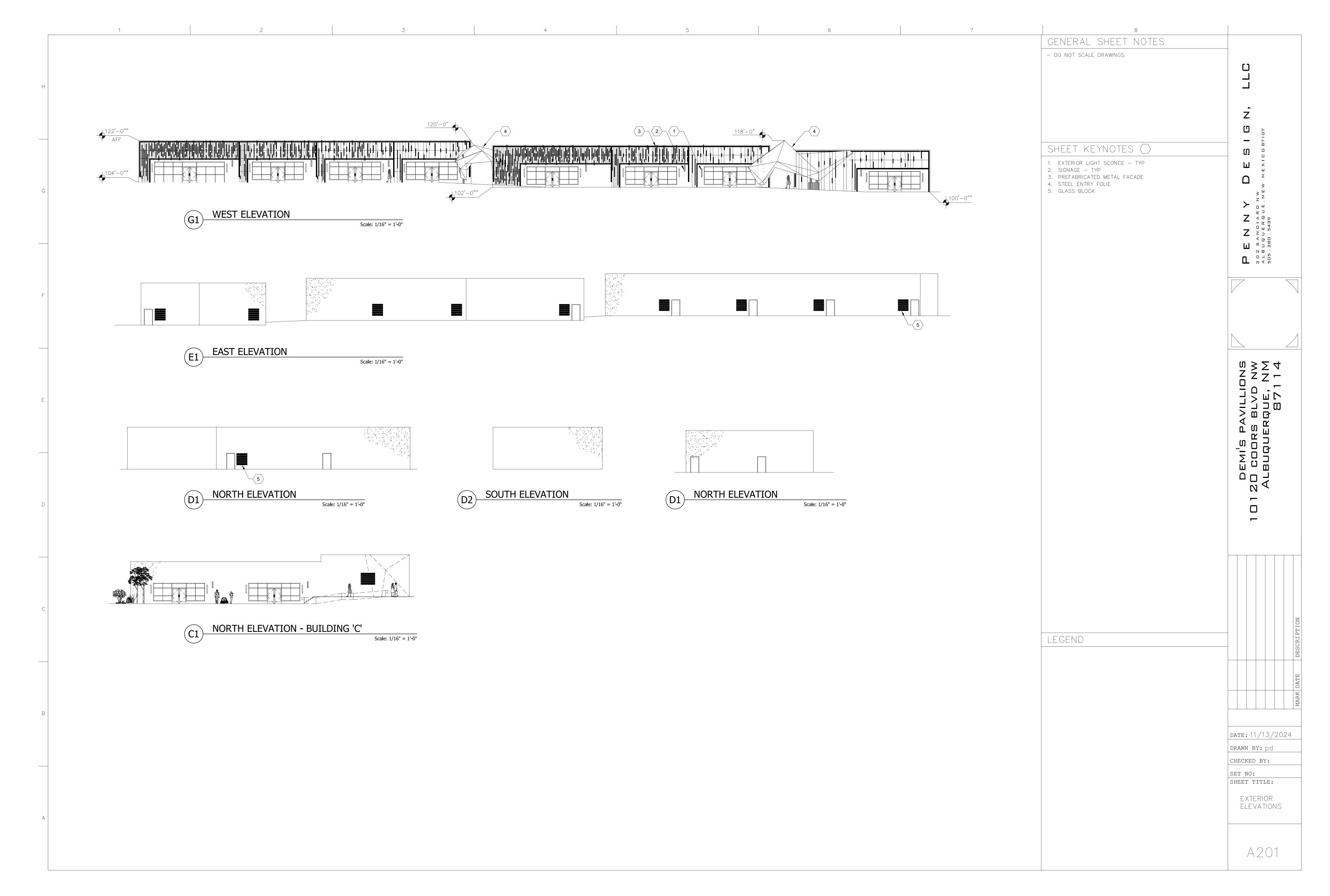
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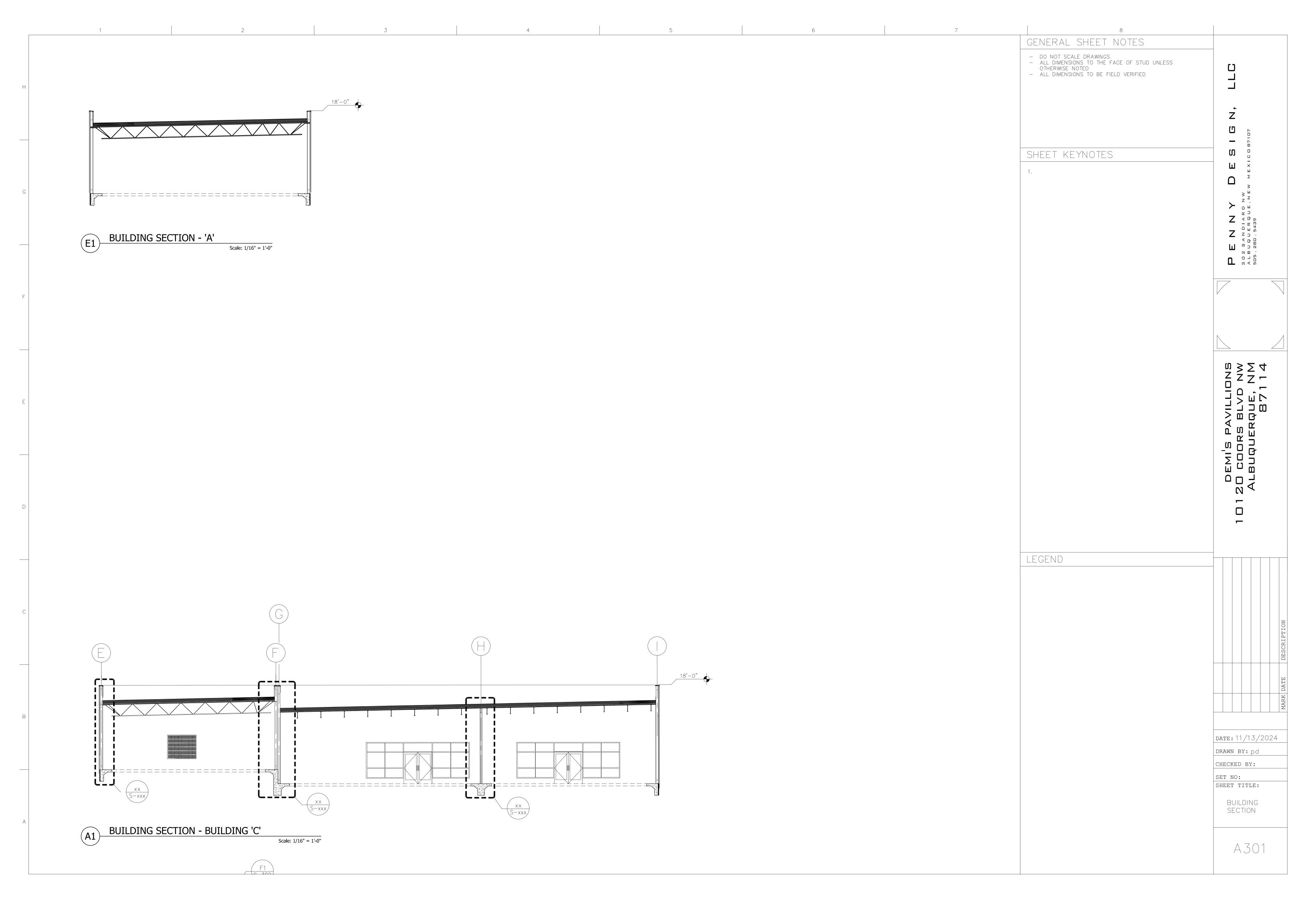
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## TIERRA WEST, LLC

Monday, November 11, 2024

Margaret L. Haynes, P.E., District 3 Traffic Engineer New Mexico Department of Transportation District 3 Office 7500 Pan American Freeway N.E. P. O. Box 91750 Albuquerque, New Mexico 87199-1750

## Re: Demi's Pavilion Retail Development - Deceleration Lane Assessment and Crash Analysis

Dear Ms. Haynes:

As request by you during our scoping meeting for Demi's Pavilion Retail Development Project on October 10, 2024, this letter contains:

- 1. Results of the deceleration lane assessment including comparison of the existing deceleration lane capacities and geometries to the minimum requirements specified in the State Access Management Manual (SAMM) and recommendations to comply with the requirements.
- 2. 2020-2022 crash data and analysis results at the study area intersections and corridors.

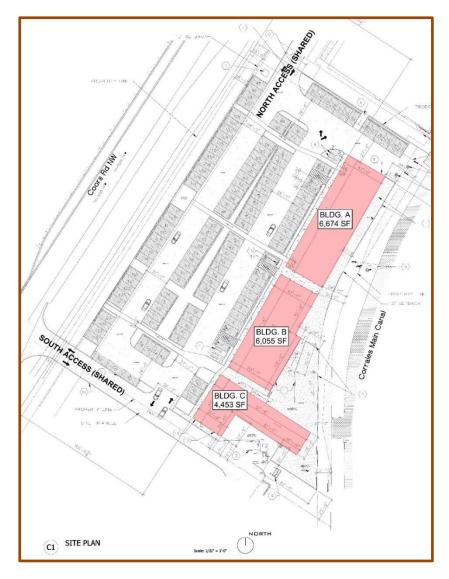
## **Project Location**

The project is located at 10120 Coors Blvd., NW. See the Vicinity Map below. Coors Blvd. is classified as a principal arterial on the NMDOT's functional class map and has a speed limit of 40 mph.



## **Project Description**

The proposed development is a Strip Shopping Center with 17,200 sq. ft. of retail space, constructed on 2.47 acres of vacant land. See the Site Plan below and in EXHIBIT 1.



Based on the ITE Trip Generation Manual, 11<sup>th</sup> Edition, for a Strip Plaza (ITE Land Use Code 822), the development is expected to generate 28 AM Peak Hour Trips (17 Entering and 11 Exiting) and 80 PM Peak Hour Trips (40 Entering and 40 Exiting) including a 30% pass-by trip rate. See EXHIBIT 2.

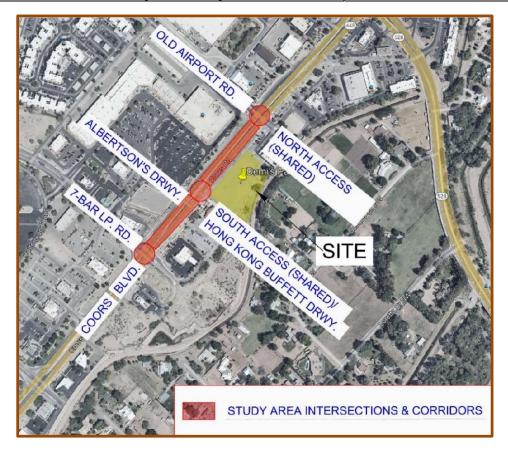
The proposed development will be accessed via two existing access driveways on the north and south boundaries of the site as shown in the diagram above. These driveways will be shared with the existing developments bordering the site.

Offsite improvements along the project frontage of Coors Blvd. will include new pedestrian sidewalk, street lighting, curb and gutter, and northbound turn lane taper extension. All improvements will be designed in accordance with the City of Albuquerque Development Process Manual (DPM). See EXHIBIT 6.

## Study Area

The study area is fully developed and all parcels in the vicinity of the project are occupied by commercial retail businesses and restaurants. The study area includes the following intersections, corridors, and associated deceleration lanes:

Intersections	Traffic Control		
Seven Bar Loop/Coors Blvd.	Signalized		
Hong Kong Buffet Access/Coors Blvd.	Unsignalized, 2-Way Stop		
Albertson's Access/Coors Blvd.	Unsignalized, 2-Way Stop		
Old Airport Rd./Coors Blvd.	Signalized		
Corridors	Geometry		
Coors Blvd. between Seven Bar Loop and Old Airport Rd.	4-Lane Divided Roadway		



## **Deceleration Lane Assessment**

Deceleration distances and taper lengths of ten deceleration lanes (EXHIBITS 3 & 4) in the study area were assessed against the minimum lengths listed Table 18.K-1 of the State Access Management Manual (SAMM). The minimum deceleration lengths and taper geometry for a posted speed limit of 40mph (speed limit on Coors Blvd.) are highlighted in Table 18.K-1 below. Right turn deceleration lanes were compared to the "slow to 15mph" standard (300-ft) and left-turn deceleration lanes were compared to the "Stop Condition" criteria (325-ft). Minimum deceleration distances include a 125-ft long taper.

Table 18.K-1 Deceleration and Acceleration Lengths (feet)											
Speed Change Lane Posted Speed (mph)											
Condition	25	30	35	40	45	50	55	60	65	70	
Deceleration Distance Stop Condition	150	200	250	325	400	475	550	650	725	850	
Slow to 15 mph	130	175	230	300	370	450	525	620	700	820	
Deceleration Taper											
Length for 12-foot Lane	50	75	100	125	150	175	200	225	250	250	
Straight Line Ratios (L:W)	4:1	6:1	8:1	10.5:1	12.5:1	14.5:1	16.5:1	18.5:1	21:1	21:1	
Acceleration Lane Length	NA	190	270	380	550	760	960	1,170	1,380	1,590	
Acceleration Taper											
Length for 12-foot Lane	NA	100	120	150	170	180	230	270	300	300	
Straight Line Ratios (L:W)	NA	8:1	10:1	12.5:1	14:1	15:1	19:1	22.5:1	25:1	25:1	

This table assumes level terrain and acceleration distances for the passenger car/pickup design vehicle. Refer to the text discussion of Sub-Section 18.K for additional guidance regarding the design of speed change lanes.

Queue capacities of the deceleration lanes were compared to 2035 Queue lengths for the BUILD condition as reported in the 7-Bar Retail Development Traffic Impact Study approved by the City Albuquerque and NMDOT in January 2024. The results of the assessment are summarized in EXHIBIT 5.

## Crash Analysis

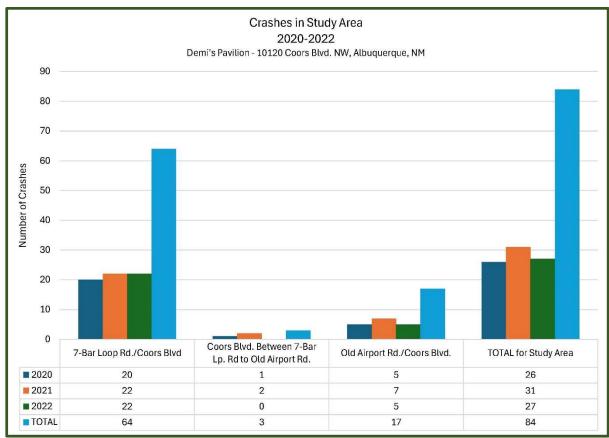
Crash data from 2020 thru 2022 for the study area was extracted using the AASHTOWare Safety Transportation Crash Query Application developed by Numetric. The extracted information was compared with the Mid-Region Council of Governments' High Fatal and Injury Network (HFIN) dataset to verify consistency between the two platforms and confirm that the crash data on both systems align. A report summarizing the data is in the following table.

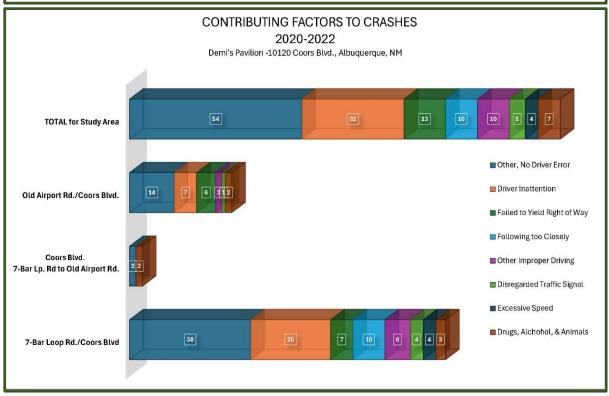
## Crash Data Summary

Demi's Pavilion -10120 Coors Blvd., Albuquerque, NM

			Coors Blvd.		
		7-Bar Loop	Between 7-Bar	Old Airport	TOTAL for
		Rd./Coors Blvd		Rd./Coors Blvd.	
		Ru./Cools bivu	•	Ru./Coors bivu.	Study Area
			Airport Rd.	_	
Year	2020	20	1	5	26
	2021	22	2	7	31
	2022	22	0	5	27
	TOTAL	64	3	17	84
KABCO Crash Severity	K (Fatal)	0	0	0	0
	A (Serious Injury)	0	0	0	0
	B (Minor Injury)	5	0	5	10
	C(Possible Injury)	18	1	7	26
	O(Property Damage Only)	41	2	5	48
Contributing Factor	Other, No Driver Error	38	2	14	54
	Avoid No Contact Other		1		1
	Avoid No Contact Vehicle			1	1
	Disregarded Traffic Signal	4		1	5
	Driver Distracted by Passenger	1			1
	Driver Distracted by Other Activity		1		1
	Driver Inattention	25		7	32
	Excessive Speed	4			4
	Failed to Yield Right of Way	7		6	13
	Following too Closely	10			10
	Improper Lane Change	1			1
	Made Improper Turn	1			1
	Other Improper Driving	6			6
	Passed a Stop Sign			1	1
	Speed too Fast for Conditions		1		1
	Under the Influence of Alcohol	1			1
	Under the Influence of Drugs	1	1		2
	Animal(s) in Roadway	1			1
Other Conditions	Pedestrian Involved				0
	Pedacycle Invoved	2		1	3
	Fixed Object			1	1

The charts below show a graphical representation of the data. The first graph illustrates the total crashes at each intersection and the total for the study are by year. The second graph displays the contributing factors to the crashes at the two study area intersections and the corridor between the intersections.





#### Conclusions

- All deceleration lanes in the study area have sufficient queue capacity but do not meet the minimum taper ratio requirement (10.5:1 or 125-ft long for a 12-ft wide lane) in the SAMM.
- Half of the lanes meet the deceleration distance requirements and half of the lanes are too short.
- Three of the ten deceleration lanes in the study area will be used by traffic generated by the development. The taper length of one of these lanes, the northbound right turn lane at Old Airport Rd./Coors Blvd., is short by 63-ft or about 2.5 vehicle lengths. This could be corrected during the construction of the new curb and gutter along the project frontage as part of the offsite infrastructure improvements.
- Out of the 84 crashes in the study area, 64 (or 76%), occurred at the 7-Bar Loop Rd./Coors Blvd. intersection.
- Total crashes were consistent from year to year.
- The highest contributing factor reported was "Other, No Driver Error" which, unfortunately, has no further description in the accident reports. The next highest causes of crashes were driver inattention, failure to yield right of way, and following too closely.
- 3.5% of crashes (3 crashes) involved pedestrians which were all on bicycles.
- There were no crashes involving fatalities or serious injuries. This is a significant improvement to crash rates reported on the MRMPO Region High Fatal and Injury Network (HFIN) for the previous five years (2017-2021), when 4 people were killed and 133 people were injured because of crashes at the same locations.
- 57% (48 Crashes) of the crashes involved property damage only. The other 43% (36 Crashes) involved only minor or possible injuries.
- Drugs and alcohol were not major contributing factors to crashes, only 3 out of 84 crashes involved drugs or alcohol.

Please call me if you have questions.

Best Regards,

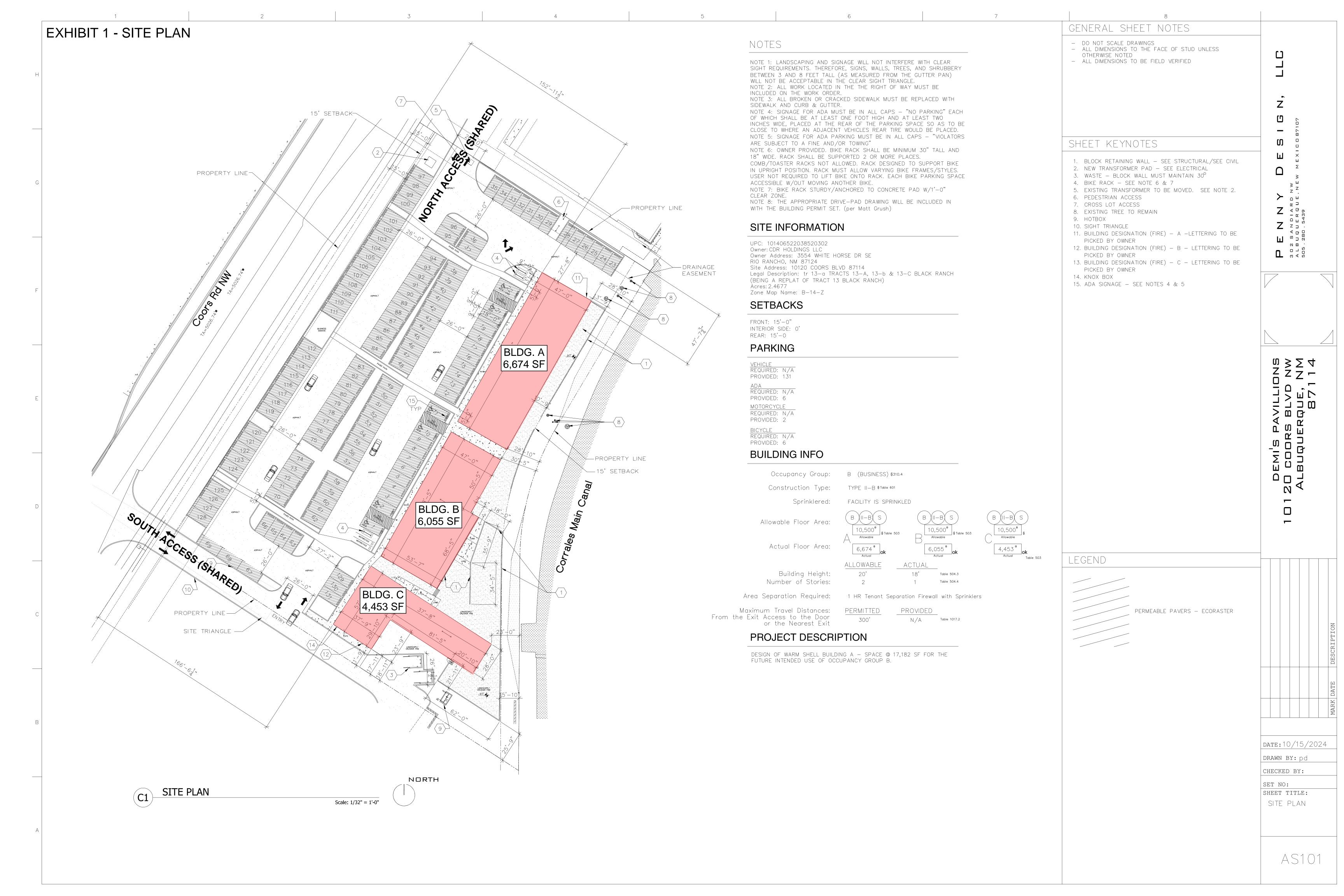
Judith Becker, P.E.

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## **EXHIBITS**

EXHIBIT 1	Site Plan
EXHIBIT 2	ITE Trip Generation Table and Graphs
EXHIBIT 3	Deceleration Lanes at and near 7-Bar Loop Rd./Coors Blvd
EXHIBIT 4	Deceleration Lanes at Old Airport Rd./Coors Blvd.
EXHIBIT 5	Deceleration Lanes Assessment Summary Table
EXHIBIT 6	Proposed Off-site Improvements



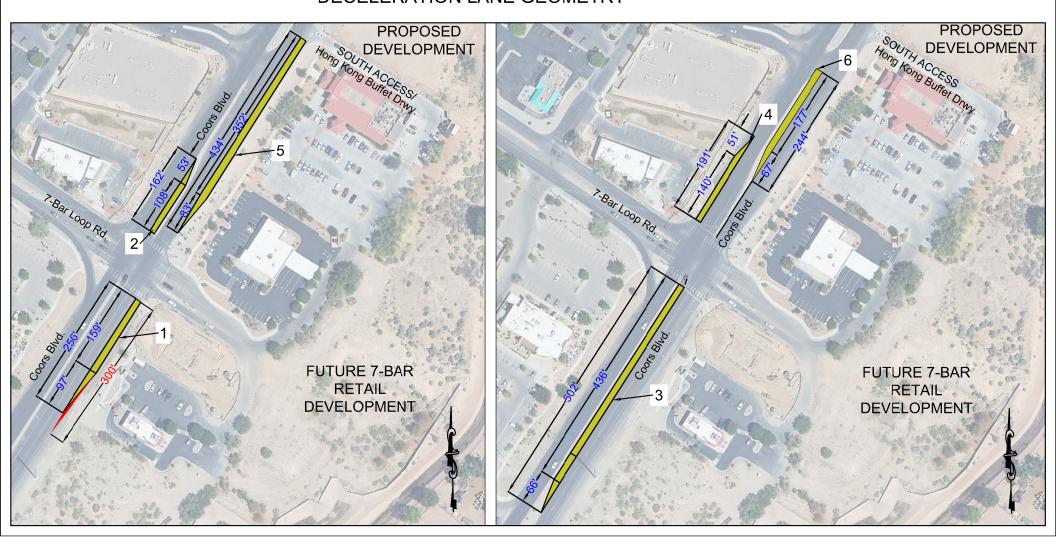
## **EXHIBIT 2 - ITE TRIP GENERATION TABLE**

Demi's Pavillions

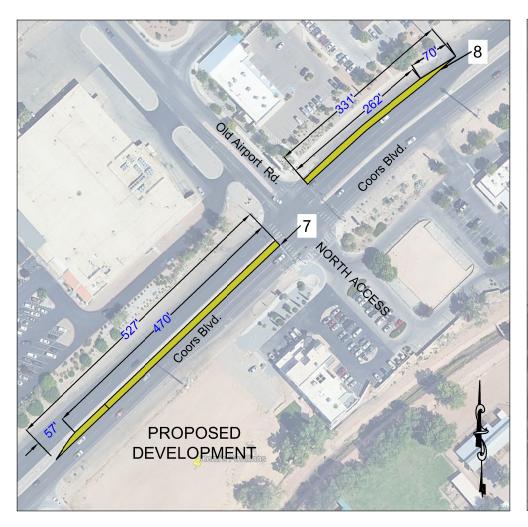
Trip Generation Data (ITE Trip Generation Manual - 11th Edition)

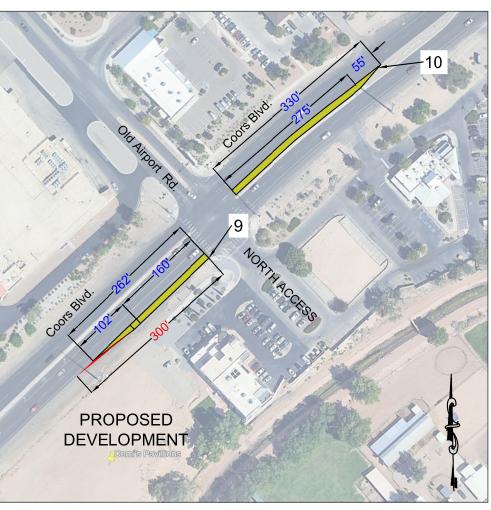
USE (ITE CODE)	24 HR VOL	A. M. PEAK HR.		P. M. PE	AK HR.	
DESCRIPTION		GROSS	ENTER	EXIT	ENTER	EXIT
Summary Sheet	Units					
Strip Retail Plaza <40K - Linear (822)	17.20	937	24	16	57	57
Subtotal		937	24	16	57	57
Pass-By Trips	30%		-7	-5	-17	-17
Total Primary Trips			17	11	40	40

EXHIBIT 3
7-BAR LOOP RD./COORS BLVD.
DECELERATION LANE GEOMETRY



# EXHIBIT 4 OLD AIRPORT RD./COORS BLVD. DECELERATION LANE GEOMETRY





## **EXHIBIT 5**

## DECELERATION LANE GEOMETRY ASSESSMENT SUMMARY TABLE

DEMI'S PAVILION - 10120 COORS BLVD, ALBUQUEQUE, NM

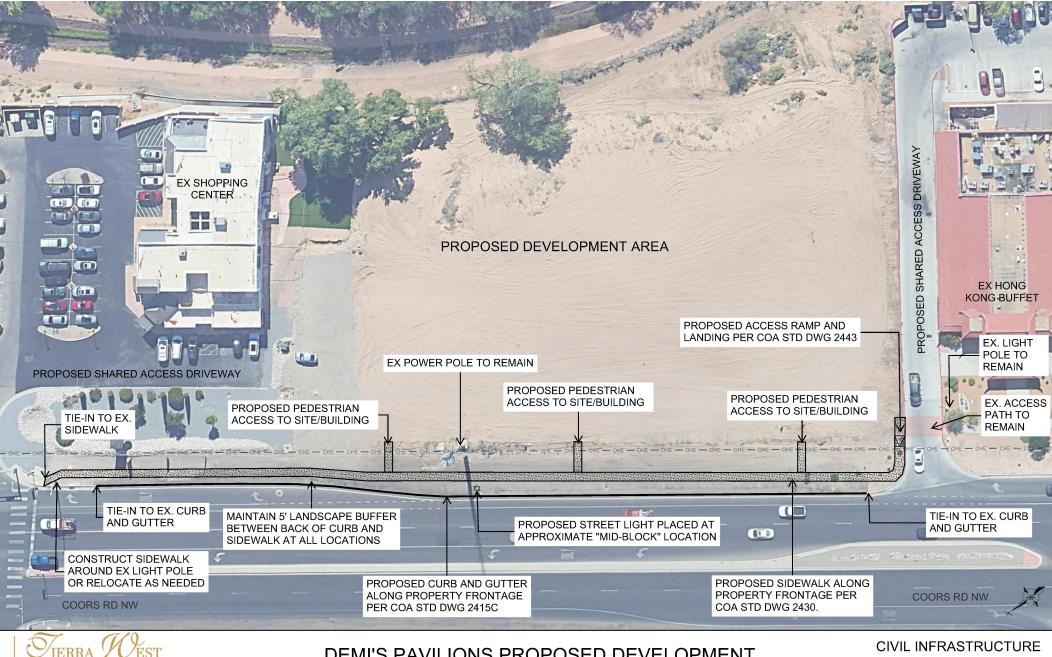
DECELERATION LANE NO.	EXHIBIT#	INTERSECTION	DIRECTION	RIGHT (RT) OR LEFT (LT) TURN LANE	EXISTING DECELERATION DISTANCE (FT)	MINIMUM REQUIRED DECELERATION DISTANCE(1) (FT)	QUEUE CAPACITY (FT)	2034 QUEUE LENGTH (2) (FT)	IS QUEUE CAPCITY SUFFICIENT?	TAPER RATIO≥ MINIMUM REQUIRED TAPER RATIO (1)?	LANE USED BY TRAFFIC GENERATED BY DEVELOPMENT?	ADDITIONAL LANE LENGTH REQUIRED (FT)	NOTES
1	1	7-BAR/COORS	NORTHBOUND	RT	256	300	159	83	YES	NO	NO	44	ADDITIONAL 44-FT OF DECELERATION LENGTH REQUIRED TO MEET MINIMUM STANDARD (1) QUEUE CAPACITY > 2034 QUEUE LENGTH (2) LANE NOT USED BY TRAFFIC GENERATED BY PROPOSED DEVELOPMENT TAPER RATIO <standard (1)<="" ratio="" taper="" td=""></standard>
2	1	7-BAR/COORS	SOUTHBOUND	LT	162	325	108	35	YES	NO	NO	163	ADDITIONAL 163-FT OF DECELERATION LENGTH REQUIRED TO MEET MINIMUM STANDARD (1) BUT CANNOT EXTEND DUE TO PROXIMITY TO NORTHBOUND LT TURN LANE AT ALBERTSON'S DRWY. QUEUE CAPACITY > 2034 QUEUE LENGTH (2) LANE NOT USED BY TRAFFIC GENERATED BY PROPOSED DEVELOPMENT TAPER RATIO <standard (1)<="" ratio="" taper="" td=""></standard>
3	1	7-BAR/COORS	NORTHBOUND	LT	502	325	436	45	YES	NO	NO	0	NO ADDITIONAL OF DECELERATION LENGTH REQUIRED TO MEET MINIMUM STANDARD (1) QUEUE CAPACITY > 2034 QUEUE LENGTH (2) LANE NOT USED BY TRAFFIC GENERATED BY PROPOSED DEVELOPMENT TAPER RATIO <standard (1)<="" ratio="" taper="" td=""></standard>
4	1	7-BAR/COORS	SOUTHBOUND	RT	191	300	140	18	YES	NO	NO	109	ADDITIONAL 109-FT OF DECELERATION LENGTH REQUIRED TO MEET MINIMUM STANDARD (1). LANE COULD BE EXTENDED BY RESTRIPING THE PAVEMENT AND ADDING CURB & GUTTER.     QUEUE CAPACITY > 2034 QUEUE LENGTH (2)     LANE NOT USED BY TRAFFIC GENERATED BY PROPOSED DEVELOPMENT     TAPER RATIO <standard (1)<="" ratio="" taper="" td=""></standard>
5	1	HONG KONG BUFFET DRWY/COORS	NORTHBOUND	RT	434	300	352	UNKN.	YES	NO	YES	0	NO ADDITIONAL DECELERATION LENGTH REQUIRED TO MEET MINIMUM STANDARD (1) QUEUE CAPACITY > 2034 QUEUE LENGTH (2) LANE USED BY TRAFFIC GENERATED BY PROPOSED DEVELOPMENT TAPER RATIO <standard (1)<="" ratio="" taper="" td=""></standard>
6	1	ALBERTSON DRWY/COORS	NORTHBOUND	LT	244	325	177	10	YES	NO	NO	81	ADDITIONAL 81-FT OF DECELERATION LENGTH REQUIRED TO MEET MINIMUM STANDARD (1) BUT CANNOT EXTEND DUE TO PROXIMITY TO SOUTHBOUND LT TURN LANE AT 7-BAR LP. RD.     QUEUE CAPACITY > 2034 QUEUE LENGTH (2)     LANE NOT USED BY TRAFFIC GENERATED BY PROPOSED DEVELOPMENT     TAPER RATIO <standard (1)<="" ratio="" taper="" td=""></standard>
7	2	OLD AIRPORT/COORS	NORTHBOUND	LT	527	325	470	93	YES	NO	NO	0	NO ADDITIONAL DECELERATION LENGTH REQUIRED TO MEET MINIMUM STANDARD (1) QUEUE CAPACITY > 2034 QUEUE LENGTH (2) LANE NOT USED BY TRAFFIC GENERATED BY PROPOSED DEVELOPMENT TAPER RATIO <standard (1)<="" ratio="" taper="" td=""></standard>
8	2	OLD AIRPORT/COORS	SOUTHBOUND	RT	331	300	262	40	YES	NO	NO	0	NO ADDITIONAL DECELERATION LENGTH REQUIRED TO MEET MINIMUM STANDARD (1) QUEUE CAPACITY > 2034 QUEUE LENGTH (2) LANE NOT USED BY TRAFFIC GENERATED BY PROPOSED DEVELOPMENT TAPER RATIO <standard (1)<="" ratio="" taper="" td=""></standard>
9	2	OLD AIRPORT/COORS	SOUTHBOUND	LT	262	325	160	100	YES	NO	YES	63	ADDITIONAL 63-FT OF DECELERATION LENGTH REQUIRED TO MEET MINIMUM STANDARD (1)     QUEUE CAPACITY > 2034 QUEUE LENGTH (2)     LANE USED BY TRAFFIC GENERATED BY PROPOSED DEVELOPMENT     TAPER RATIO <standard (1)<="" ratio="" taper="" td=""></standard>
10	2	OLD AIRPORT/COORS	NORTHBOUND	RT	330	300	275	40	YES	NO	YES	0	NO ADDITIONAL DECELERATION LENGTH REQUIRED TO MEET MINIMUM STANDARD (1) QUEUE CAPACITY > 2034 QUEUE LENGTH (2) LANE USED BY TRAFFIC GENERATED BY PROPOSED DEVELOPMENT TAPER RATIO <standard (1)<="" ratio="" taper="" td=""></standard>

<sup>(1)</sup> Refer to Table 18.K-1, State Access Management Manual (SAMM), SEE PG. 2

Page 1

<sup>(2) 2034</sup> BUILD Vehicle Queue lengths taken from the 7-Bar Retail Development Traffic Impact Study, January 2024

## **EXHIBIT 6** PROPOSED OFFSITE IMPROVEMENTS



DEMI'S PAVILIONS PROPOSED DEVELOPMENT

**CONCEPTUAL LAYOUT**