



CITY OF CORNELIUS
COMMUNITY DEVELOPMENT DEPARTMENT
SUPPLEMENTAL STAFF REPORT

**U-Haul – COMMERCIAL DEVELOPMENT
Type III Site Design Review
Type III Conditional Use Permit**

Land Use File Numbers DR-70-23 and CUP-02-03

Planning Commission Hearing Date: February 27, 2024
Supplemental Staff Report Date: February 27, 2024

Request: A Type III Site Design Review (DR-70-23) and Type III Conditional Use Permit (CUP-02-23) to redevelop a commercially zoned property and build a new three-story self-storage facility that will be 38.6-feet in height (3.6-feet taller than the height standard of the zone). The development will include a three-story 94,764-sf building for a U-Haul moving and storage facility. The new building will have 843 interior storage spaces of various sizes, a 2,483-sf showroom/retail area, a 1,460-sf Delivery & Receiving (D&R) area, a new parking lot, landscaping, a water quality facility, and new frontage improvements.

Applicant: ~~Shannon Marvin, MGP~~ **Property** Mary Delfs
Lance Blades, Marketing President **Owner:** 2962 Baseline Street
2727 N Central Avenue Cornlius, OR 97113
Phoenix, AZ 85004

Site: 2962 Baseline Street, Cornelius, OR 97113
Map: Township 1 North, Range 3 West, Map 34 DD, Tax Lot #07700 and #07900
Zone: Highway Commercial, C-2

Process: Approval of a Type III Site Design Review, Type III Conditional Use Permit and Type II Land Partition with public hearing shall be processed consistent with Cornelius Municipal Code (CMC) Section 18.15.010(C), a Type III Planning Commission Review. The application shall be processed with notice and a public hearing before the Planning Commission

pursuant to CMC Chapter 8.15.040. The notice of the Planning Commission's decision shall be provided to the applicant, interested parties, and anyone that testifies in the matter.

APPEAL RIGHTS

An affected party may appeal a decision of the Planning Commission to the City Council by filing an appeal within ten (10) working days of notice of the decision pursuant to the CMC. The notice of appeal shall indicate the decision that is being appealed and include all required contents pursuant to CMC Chapter 18.15.090.

APPLICABLE CRITERIA OF THE CORNELIUS MUNICIPAL CODE

- Chapters 18.10 & 18.15 (Application & Review Procedures)
- Chapter 18.45 (Highway Commercial, C-2)
- Chapter 18.100 (Site Design Review)
- Chapter 18.105 (Conditional Use Permit)
- Chapter 18.143 (Transportation Facilities)
- Chapter 18.145 (Off Street Parking and Loading)
- Chapter 18.155 (Solar Access for New Development)

Chapter 18.155 Solar Access for New Development is the sole subject of this Supplemental Staff Report. This section was inadvertently missed in the original staff report.

18.155.040 Access to Sunshine.

The elements of a development plan shall be located and designed, to the maximum extent feasible, to protect access to sunshine for planned solar energy systems or for solar-oriented rooftop surfaces that can support a solar collector or collectors capable of providing for the anticipated hot water needs of the buildings in the project between the hours of 9:00 am and 8:00 pm PST on December 21st.

The project can support solar-oriented rooftop arrays to provide solar energy or power for hot water needs of the building. There is sufficient space and the solar arrays available in today's market place can be oriented to maximum the solar gain.

18.155.050 Shading.

(A)The physical elements of the development plan shall be, to the maximum extent feasible, located and designed so as not to cast a shadow onto structures on adjacent property greater than the shadow which would be cast by a 25-foot hypothetical wall located along the property lines of the project between the hours of 9:00 am and 3:00 pm PST on December 21st.

The following picture identifies the latitude and longitude of the project site.

Assessment & Taxation Report	
General Property Information	
Site Address:	. CORNELIUS OR, 97113
Tax Lot ID:	1N334DD07700
Property Account ID:	R755837,
Property Classification:	2210 - - See full list of Codes
Neighborhood Code:	ZFGC
Latitude / Longitude:	45.5208522 / - 123.035139

The National Oceanic and Atmospheric Administration has a Solar Position Calculator on their web site. The following two charts are copied from that website and depict the solar position for the largest of the two tax lots in question. The first chart is for 9:00 am and the second chart is for 1500 hours, or 3:00 pm.

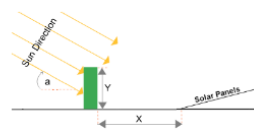
City:		Deg:	Min:	Sec:	Time Zone	
Portland, OR	Lat: North== South==	45	31	1	Offset to UTC (MST==+7):	Daylight Saving Time:
Click here for help finding your lat/long coordinates	Long: East== West==	122	39	0	8	No
<p>Note: To manually enter latitude/longitude, select Enter Lat/Long -> from the City pulldown box, and enter the values in the text boxes to the right.</p>						
Month:	Day:	Year (e.g. 2000):	Time: (hh:mm:ss)			
December	21	2024	9	: 00	: 00	<input type="radio"/> AM <input type="radio"/> PM <input checked="" type="radio"/> 24hr
Calculate Solar Position						
Equation of Time (minutes):	Solar Declination (degrees):	Solar Azimuth:	Solar Elevation:	cosine of solar zenith angle		
1.57	-23.44	137.01	8.87	0.1542		
<p>Azimuth is measured in degrees clockwise from north. Elevation is measured in degrees up from the horizon. Az & El both report <i>dark</i> after astronomical twilight.</p>						

City:		Deg:	Min:	Sec:	Time Zone	
Portland, OR	Lat: North== South==	45	31	1	Offset to UTC (MST==+7):	Daylight Saving Time:
Click here for help finding your lat/long coordinates	Long: East== West==	122	39	0	8	No
<p>Note: To manually enter latitude/longitude, select Enter Lat/Long -> from the City pulldown box, and enter the values in the text boxes to the right.</p>						
Month:	Day:	Year (e.g. 2000):	Time: (hh:mm:ss)			
December	21	2024	15	: 00	: 00	<input type="radio"/> AM <input type="radio"/> PM <input checked="" type="radio"/> 24hr
Calculate Solar Position						
Equation of Time (minutes):	Solar Declination (degrees):	Solar Azimuth:	Solar Elevation:	cosine of solar zenith angle		
1.45	-23.44	219.32	10.95	0.1899		
<p>Azimuth is measured in degrees clockwise from north. Elevation is measured in degrees up from the horizon. Az & El both report <i>dark</i> after astronomical twilight.</p>						

Using an obstruction shading calculator, a 25 foot height wall with the sun at 23.44 degrees (same solar declination for both times) would need a minimum distance of 57.7 feet to avoid shading. For a 38.6 foot building, the distance is 89 feet, while a 35 foot building is 80.7 feet. Based on analysis using the aerial view of the property and a GIS application, the yellow line on the next page is approximately 89 feet from the new proposed building.

Obstruction Shading Calculator

Calculate The Allowed Distance Between an Obstruction To Your Panels



Please provide the following information:

Y = Obstruction Height (ft)

a = Sun Angle (degrees)

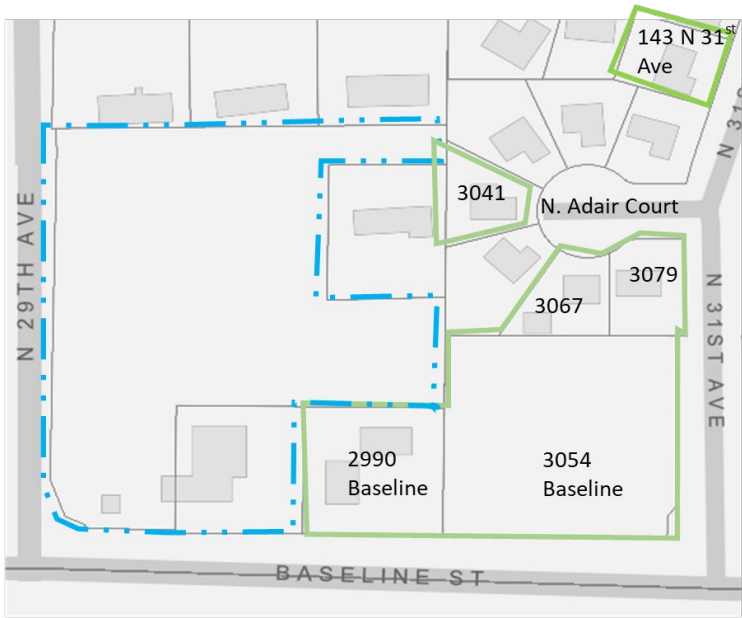
35

-23.44

Result:

Minimum distance to panels (to avoid shading): X = -80.7 ft

The northern portion of the closest building would be shaded, however; the southern exposure (where you would place solar) would not be shaded as the building is set back beyond the roof pitch line.



Approximately 89 feet from the proposed building

18.155.050 Shading.

(B)The impact of trees shall be evaluated on an individual basis considering the potential impacts of the shading and the potential adverse impacts that the shading could create for the adjacent properties in terms of blocking sunlight in indoor living areas, outdoor activity areas, gardens, and similar spaces benefiting from access to sunlight.

No new trees are proposed that would potentially block sunlight to any of the adjacent properties.

Date of Supplemental Staff Report: **February 27, 2024**



Barbara Fryer, AICP, Community Development Director

- Exhibits: Applicant's submittal dated 02_27_2024
- Preliminary Landscape Plan (updated 2_27_2024)
 - Solar Shadow Exhibit (dated 02_27_2024)

FILE NAME: P:\1\0\1\23\23836 - AMERCO_UHAUL CORNELIUS LU\CAD\ENGINEERING\SHEETS\P23836 LP-COLOR PLAN.DWG
 SAVE TIME: 5/26/2024 5:28:31 PM
 PLOT TIME: 5/27/2024 10:11 AM
 USER NAME: BRIAN WAY
 XREF FILES: ###



PLANT SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QTY		
CONIFEROUS TREES						
	Calocedrus decurrens	Incense Cedar	5' HT. MIN.	2		
	Chamaecyparis obtusa 'Gracilis'	Slender Hinoki Cypress	6' HT. MIN.	8		
	Pseudotsuga menziesii	Douglas Fir	5' HT. MIN.	2		
	Thuja plicata	Western Red Cedar	5' HT. MIN.	2		
STREET TREES						
	Cercidiphyllum japonicum	Katsura Tree	2" CAL. MIN. B&B	2		
	Davidia involucrata	Handkerchief Tree	2" CAL. MIN. B&B	2		
	Fagus sylvatica 'Atropunicea'	Purple European Beech	2" CAL. MIN. B&B	4		
	Liriodendron tulipifera	Tulip Tree	2" CAL. MIN. B&B	2		
	Quercus coccinea	Scarlet Oak	2" CAL. MIN. B&B	2		
	Quercus rubra	Red Oak	2" CAL. MIN. B&B	2		
	Ulmus americana 'Princeton'	Princeton American Elm	2" CAL. MIN. B&B	2		
SHRUBS						
	Berberis thunbergii 'Crimson Pygmy'	Crimson Pygmy Barberry	2 GAL	17		
	Cistus x hybridus	White Rockrose	2 GAL	40		
	Nandina domestica 'Burgandy Wine'	Burgandy Wine Heavenly Bamboo	2 GAL	22		
	Pinus mugo mugo	Dwarf Mugo Pine	2 GAL	4		
	Potentilla fruticosa	Bush Cinquefoil	2 GAL	6		
	Rhododendron x 'Hino-crimson'	Hino-crimson Kurume Azalea	2 GAL	12		
	Thuja occidentalis 'Smaragd'	Emerald Green Arborvitae	6' HT. MIN.	60		
GRASSES						
	Helictotrichon sempervirens	Blue Oat Grass	2 GAL	22		
SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QTY
GROUND COVERS						
	LAWN	Lawn Hydroseed	Drought Tolerant Fescue Blend	---		19,557 sf

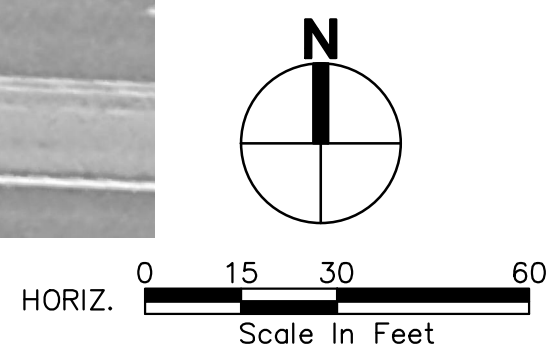
STREET TREES & PUBLIC WORKS TREE DIVERSITY REQUIREMENTS

N. 29th Avenue 360 LF Frontage / 30' Tree = 12 Street Trees
 E. Baseline Street 217 LF Frontage / 30' Tree = 8 Street Trees
 20 Total Street Trees Required

10 different tree species, 9 different tree genera, & 7 different tree families proposed.

CWS STORMWATER FACILITY PLANTING STANDARDS (4.09.2 Detention Pond)
 6,551 SF TOTAL AREA

Plant Species per CWS standards, Appendix A "Storm Water Facility (swf)"
 3 or more evergreen species, pond bottom side slopes and freeboard to be fully vegetated



NO.	DATE	REVISION	SYM.

PACE Engineers
 4500 Kruse Way, Suite 250
 Lake Oswego, OR 97035
 p. 503.597.3222
 www.paceengrs.com

REGISTERED
 1151
PRELIMINARY
 V. BRIAN WAY
 OREGON
 08/31/2024
 LANDSCAPE ARCHITECT

U-HAUL INTERNATIONAL, INC.

2727 N. CENTRAL AVE.
 PHOENIX, AZ 85004
 (541) 520-5479

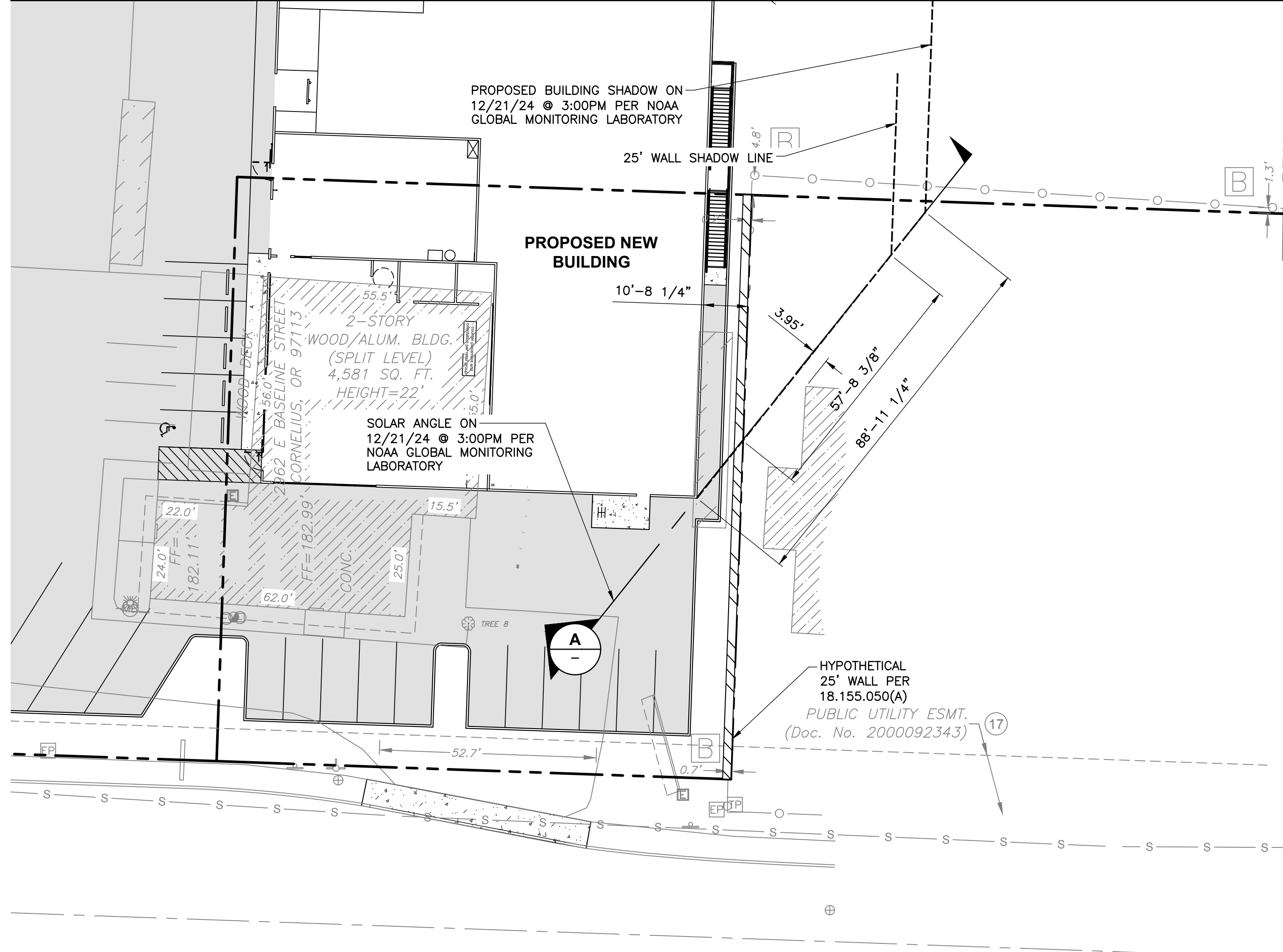
U-HAUL MOVING & STORAGE - CORNELIUS STORE 704072

PRELIMINARY LANDSCAPE PLAN

SCALE: AS SHOWN	DATE: FEB 2024
DESIGNED BY: MAA	CHECKED BY: BDL
JOB NUMBER 23836.00	
DWG NAME: P23836 LP-COLOR PLAN	
SHEET <u> C7 </u> OF <u> 11 </u>	

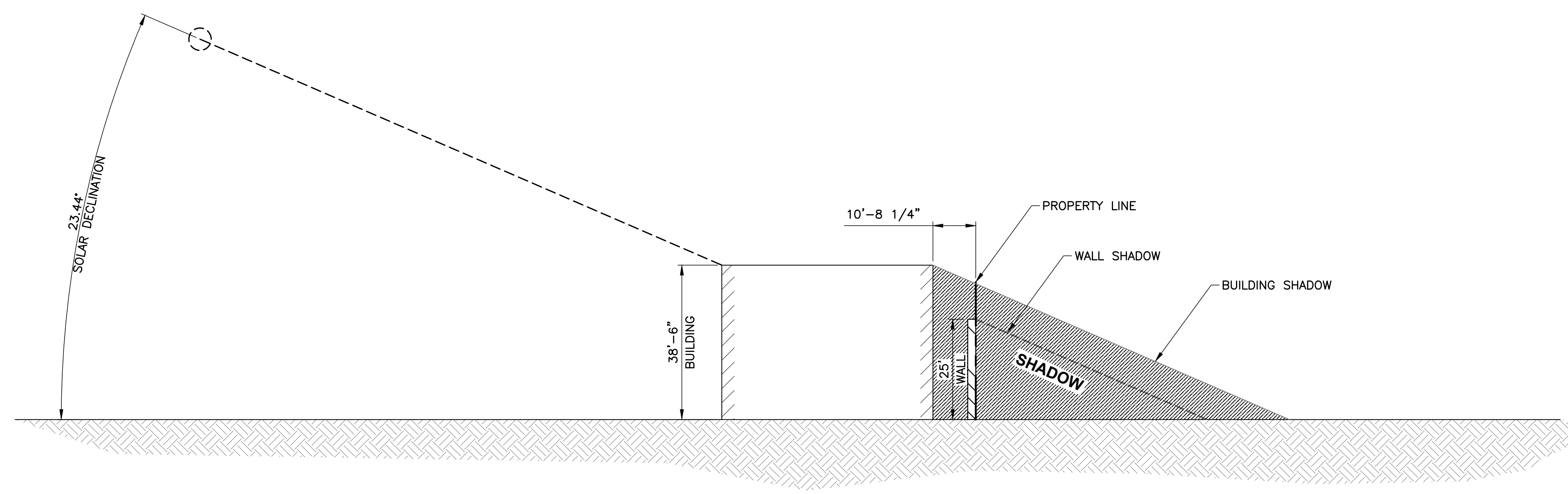
FILE NAME: P:\1\01\23\23836_AMERCO_UHAUL CORNELIUS.LU\CAD\ENGINEERING\FIGURES\SHEETS\F23836-SHADOW.DWG
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 PLOT TIME: 2/27/2024 11:25 AM
 USER NAME: TIM SOULE
 XREF FILES: ###

CONTINUATION, SEE SHEET F1.1



EAST BASELINE STREET

PLAN
 1"=20'



A SECTION
 1"=20'



Date: Day: 21 Month: Dec Year: 2024

Local Time: 03 : 00 : 00 PM Use Current Time

Equation of Time (minutes)	Solar Declination (in")	Solar Noon (hh:mm:ss)	Apparent Sunrise (hh:mm)	Apparent Sunset (hh:mm)	Az/El (in *) at Local Time:
1.45	-23.44	12:10:23	07:50	16:32	219.01 11.12
<input type="checkbox"/> Show Sunrise	<input type="checkbox"/> Show Sunset	<input checked="" type="checkbox"/> Show Azimuth			

NOAA GLOBAL MONITORING LABORATORY - SOLAR RESULTS

REV	REVISION	DATE

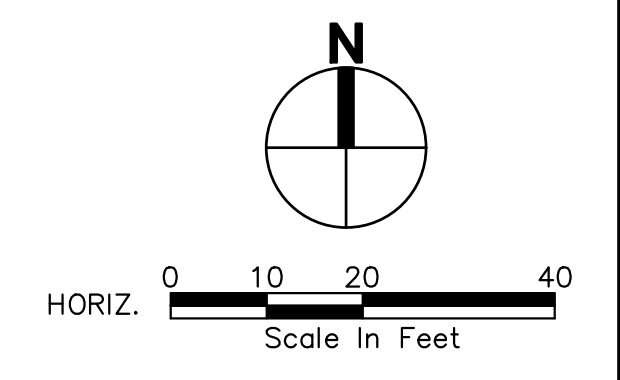


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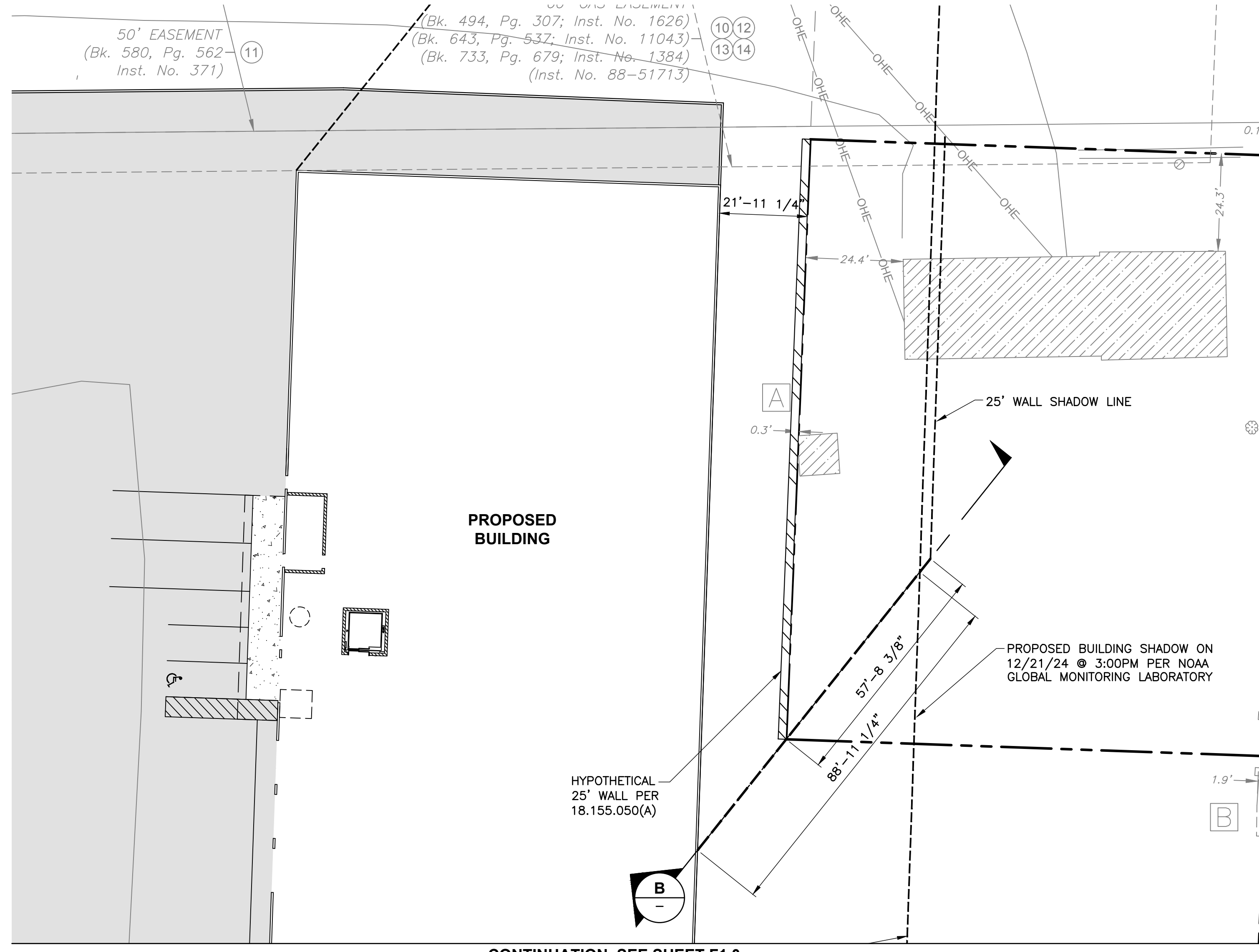
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 2727 N. CENTRAL AVE.
 PHOENIX, AZ 85004
 (541) 520-5479

U-HAUL MOVING & STORAGE - CORNELIUS STORE 704072
 SHADOW PLAN

SCALE: AS SHOWN	DATE: FEB 2024
DESIGNED BY: TLS	CHECKED BY: BDL
JOB NUMBER 23836.00	
DWG NAME: F23836-SHADOW	
SHEET <u>F1.0</u> OF <u>2</u>	

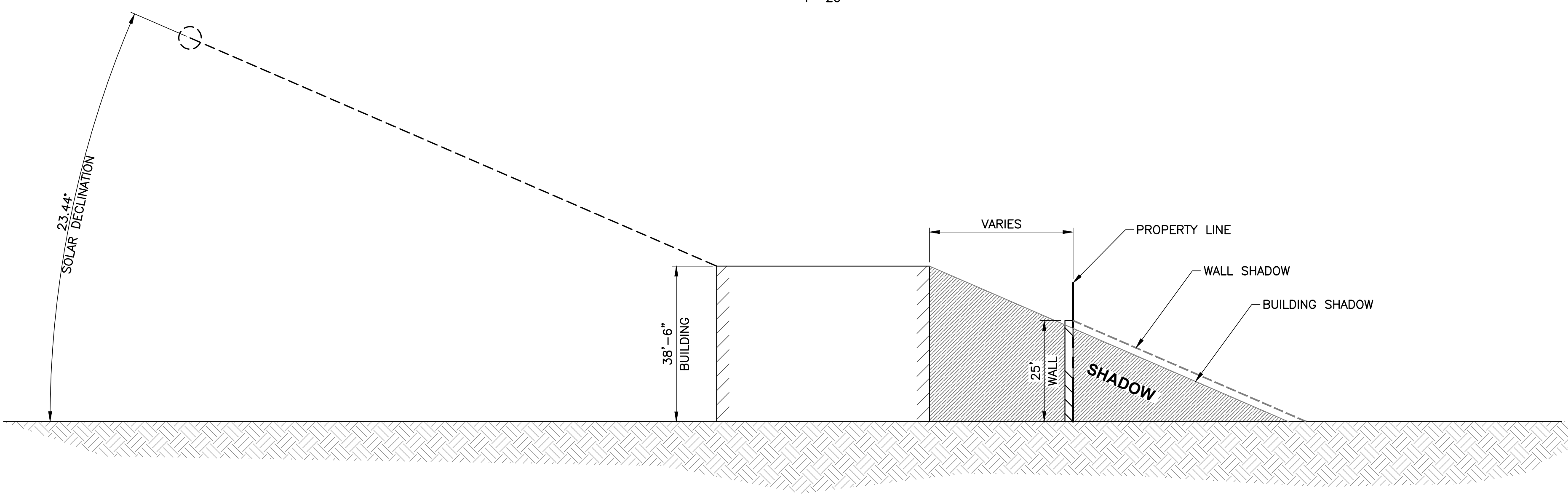


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 USER NAME: TIM SOULE
 XREF FILES: ###

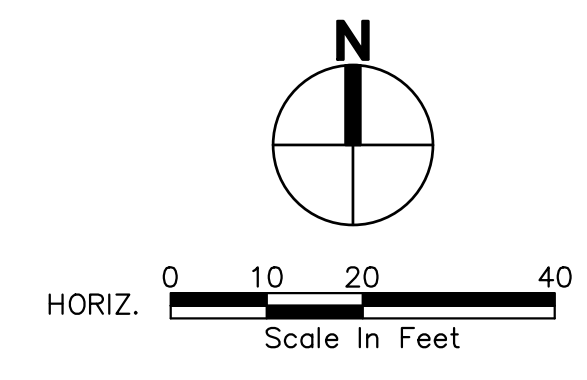


CONTINUATION, SEE SHEET F1.0

PLAN
1"=20'



B SECTION
1"=20'



NO.	REVISION	SYM.	DATE

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 (541) 520-5479

U-HAUL MOVING & STORAGE - CORNELIUS STORE 704072
 SHADOW PLAN

SCALE: AS SHOWN	DATE: FEB 2024
DESIGNED BY: TLS	CHECKED BY: BDL

JOB NUMBER
23836.00
 DWG NAME:
F23836-SHADOW
 SHEET **F1.1** OF **2**