



WASTEWATER REPORT — VILLAGES AT STERLING RANCH



PREPARED BY

John McGinn, PE CO-19534

RESPEC

5540 Tech Center Drive, Suite 100
Colorado Springs, Colorado 80919

PREPARED FOR

Falcon Area Water and Wastewater Authority

REVISED AUGUST 2024

Project Number W0242.22001





TABLE OF CONTENTS

1.0 INTRODUCTION	1
1.1 OVERALL DEVELOPMENT DESCRIPTION.....	1
2.0 WASTEWATER REPORT	1
2.1 PROJECTED WASTEWATER LOADS	1
2.2 WASTEWATER CONTRACT AND WASTEWATER TREATMENT.....	2
2.3 ADEQUANCY OF TREATMENT CAPACITY.....	2
2.4 COLLECTION, PUMPING, AND PIPING	3

APPENDICES

APPENDIX A – FAWWA SERVICE AREA

APPENDIX B - PROPOSED DEVELOPMENT (VILLAGES AT STERLING RANCH)



1.0 INTRODUCTION

This wastewater report is for the Retreat at Villages at Sterling Ranch. The service entity is the Falcon Area Water and Wastewater Authority and the property is in the service area. The service areas and location of tie-in point are shown in *Appendix A*. The subdivision includes 39.06 gross acres and includes 227 high density single family lots which will be provided central water service. The proposed subdivision layout is shown in *Appendix B*.

1.1 OVERALL DEVELOPMENT DESCRIPTION

The Villages at Sterling Ranch development is east of Vollmer adjacent to Briargate.

2.0 WASTEWATER REPORT

2.1 PROJECTED WASTEWATER LOADS

Wastewater unit user loading projections are based on similar District historical use developed in the Falcon area. Average daily- maximum monthly wastewater loads are expected to be roughly 172 gallons per day per single family residence. For population estimate, we are using 2.6 persons per household.

Table 1. Calculation of Wastewater Loads

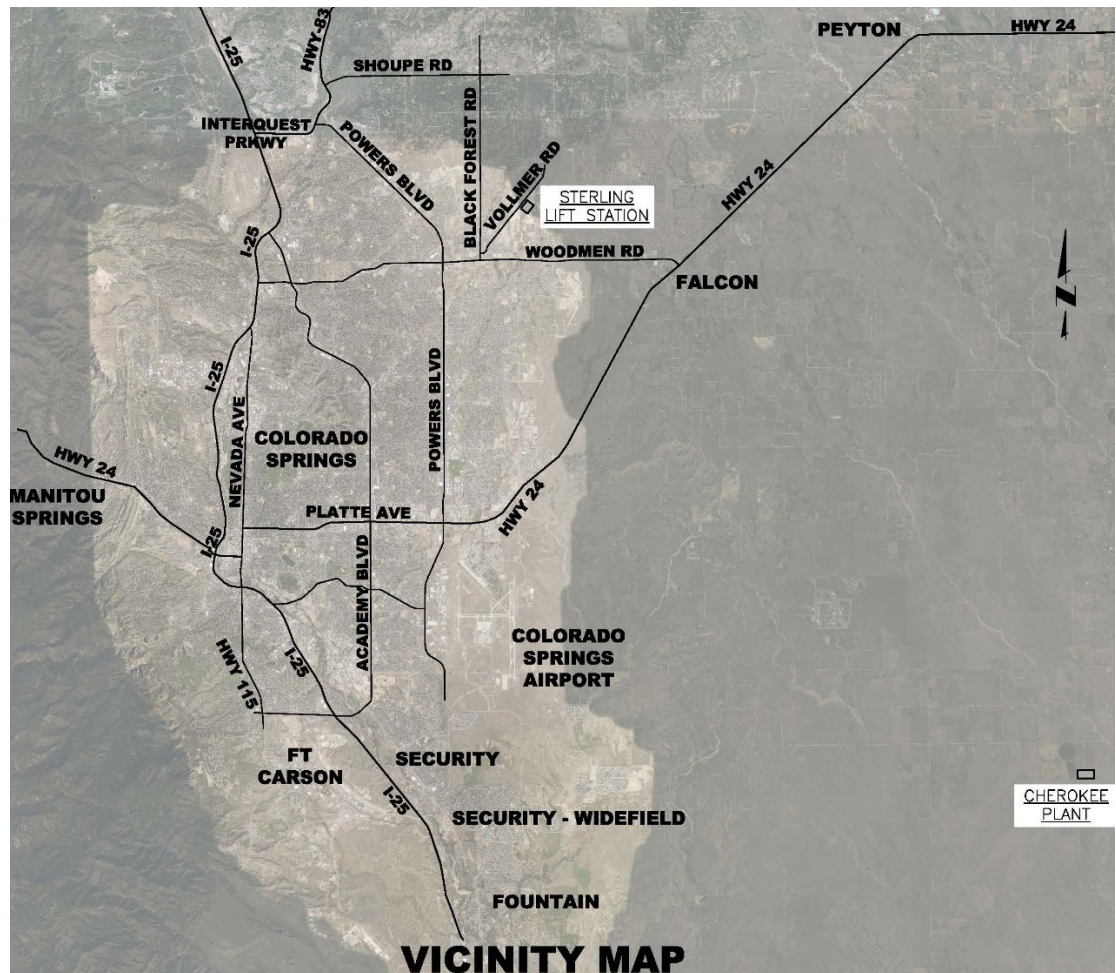
Use	Units	Single Family Equivalent	Average Daily Max-Month Flows	Estimated Population
	#	#	GPD	#
Residential Units				
Single family	227	227	39,044	590
Non-Residential Use				
NONE				
Total			39,044	

2.2 WASTEWATER TREATMENT PLANT

Interim Wastewater Treatment Services will be provided by Colorado Springs Utilities. A copy of the Interim Service Agreement was attached in prior Water and Wastewater Reports and therefore is not included here. FAWWA has access to 1.006 MGD of wastewater treatment capacity in the Cherokee Wastewater Treatment Plant via Meridian Service Metro District.

MSMD owns 2.2 million gallons per day of wastewater capacity in the Cherokee Wastewater Treatment Facility. The plant operator, Cherokee Metropolitan District (CMD) has already approved the systems associated with transport and treatment. MSMD and CMD are in compliance with their current COC issued by the Colorado Department of Public Health and Environment. The location of the 4.6 MGD Cherokee Wastewater Treatment Plant is shown below:

Figure 1. Location of Cherokee Wastewater Treatment Plant





2.3 ADEQUACY OF WASTEWATER TREATMENT CAPACITY

The Falcon Area Water and Wastewater Authority has a perpetual contract with the Meridian Service Metropolitan District (MSMD) for the provision of wastewater treatment. The contract allows for the purchase of up to 5849 SFEs of wastewater capacity from MSMD which is equivalent to 1.006 Million Gallons/Day (MGD). Wastewater projections are based on similar District historical use developed in the Falcon area. Average daily-maximum monthly wastewater loads of 172 gallons per day per single family residence are iterated in the Wastewater Contract.

The loading projected from Villages at Sterling Ranch represents roughly 3.881% of the contractual capacity available to the Falcon Area Water and Wastewater Authority. FAWWA therefore has more than adequate wastewater treatment capacity to provide service to serve the Subdivision.

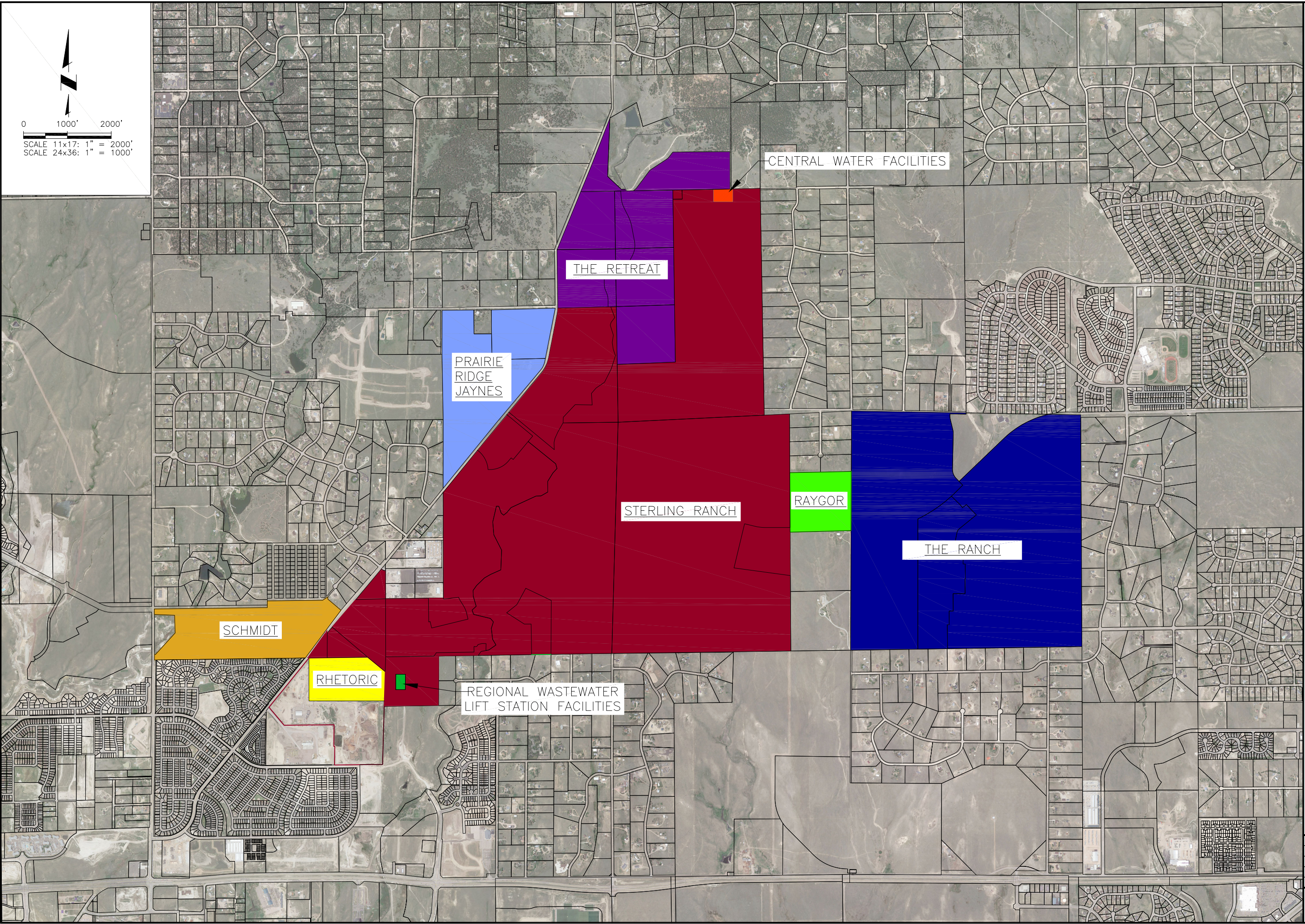
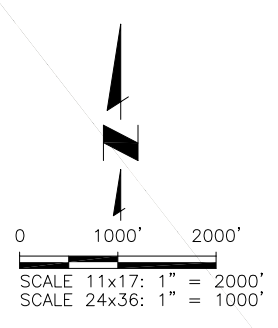
Including all commitments to date, (August 30, 2024) and including Villages at Sterling Ranch in the current committed capacity is for 2982 SFE which is 50.983 % of FAWWA contractual treatment capacity.

2.4 COLLECTION, PUMPING, AND PIPING

All lands to be developed within the Falcon Area Water and Wastewater Authority (FAWWA) areas will gravity feed to the southern portion of the Sterling site. This will be the main collection point for most of the entire future development as well. FAWWA is completing construction of the Lift Station and Force Main to serve the area. The force main is constructed across the lower portion of The Ranch. From this point wastewater is intercepted by Meridian Service Metropolitan District and delivered to Cherokee through the Meridian system.

2023/12/05 9:44 AM By: Kathy Nisto N:\Projects\W0242.22001-FAWMA General Engineering\Drawings\16104_Sterling_Ranch.dwg

IF BAR DOES NOT MEASURE ONE INCH, SCALE OF THIS DRAWING HAS BEEN ALTERED



Colorado Springs, CO
 5540 Tech Center Dr., Suite 100
 Colorado Springs, CO 80919
 Phone: 719.227.0072
 www.respec.com

APPENDIX A
FALCON AREA WATER AND WASTEWATER AUTHORITY
SERVICE AREA

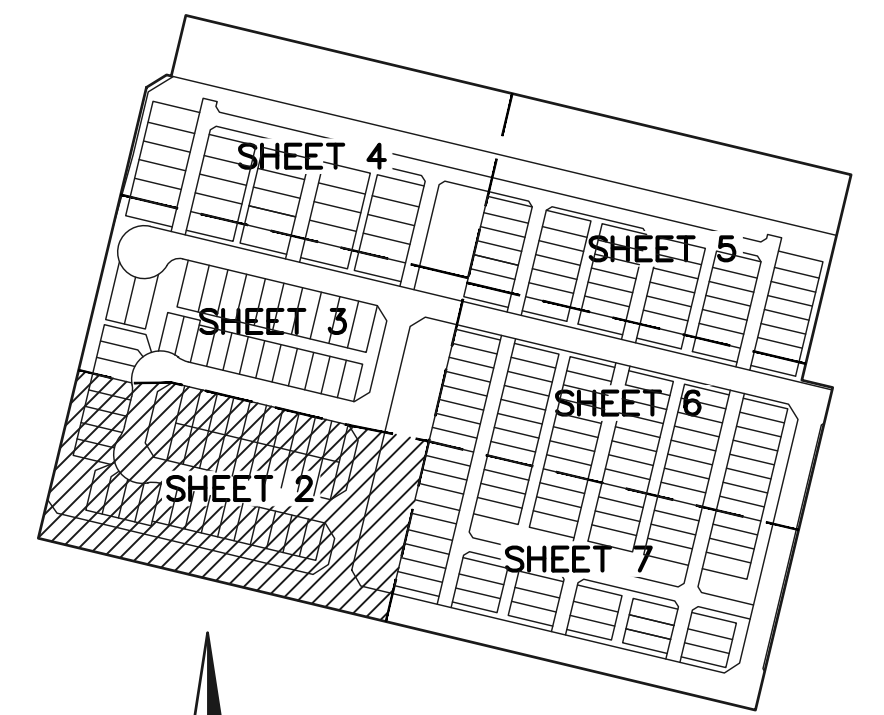
REVISIONS		
NO.	DESCRIPTION	DATE
1		
2		
3		
4		
5		
6		
7		

EXHIBIT

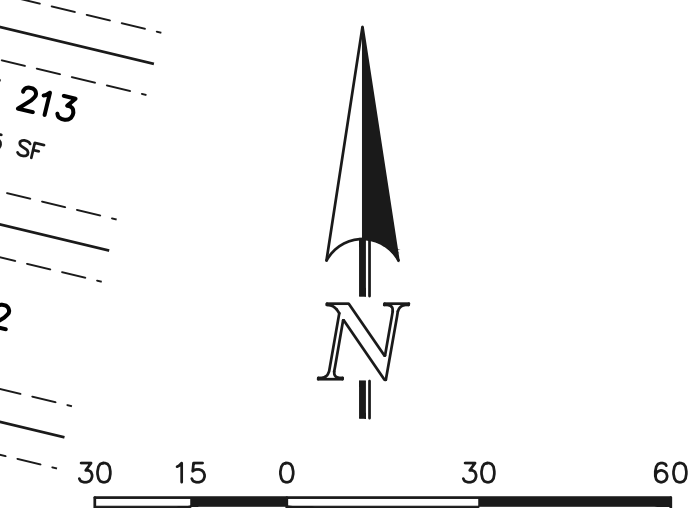
Proj #: 161.04
 Date: 12/05/2023
 Design: JPM
 Drawn: JLB
 Check: JPM

VILLAGES AT STERLING RANCH

A PORTION OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST
OF THE SIXTH PRINCIPAL MERIDIAN, EL PASO COUNTY, COLORADO



KEY MAP
N.T.S.



SCALE: 1" = 30"
U.S. SURVEY FEET

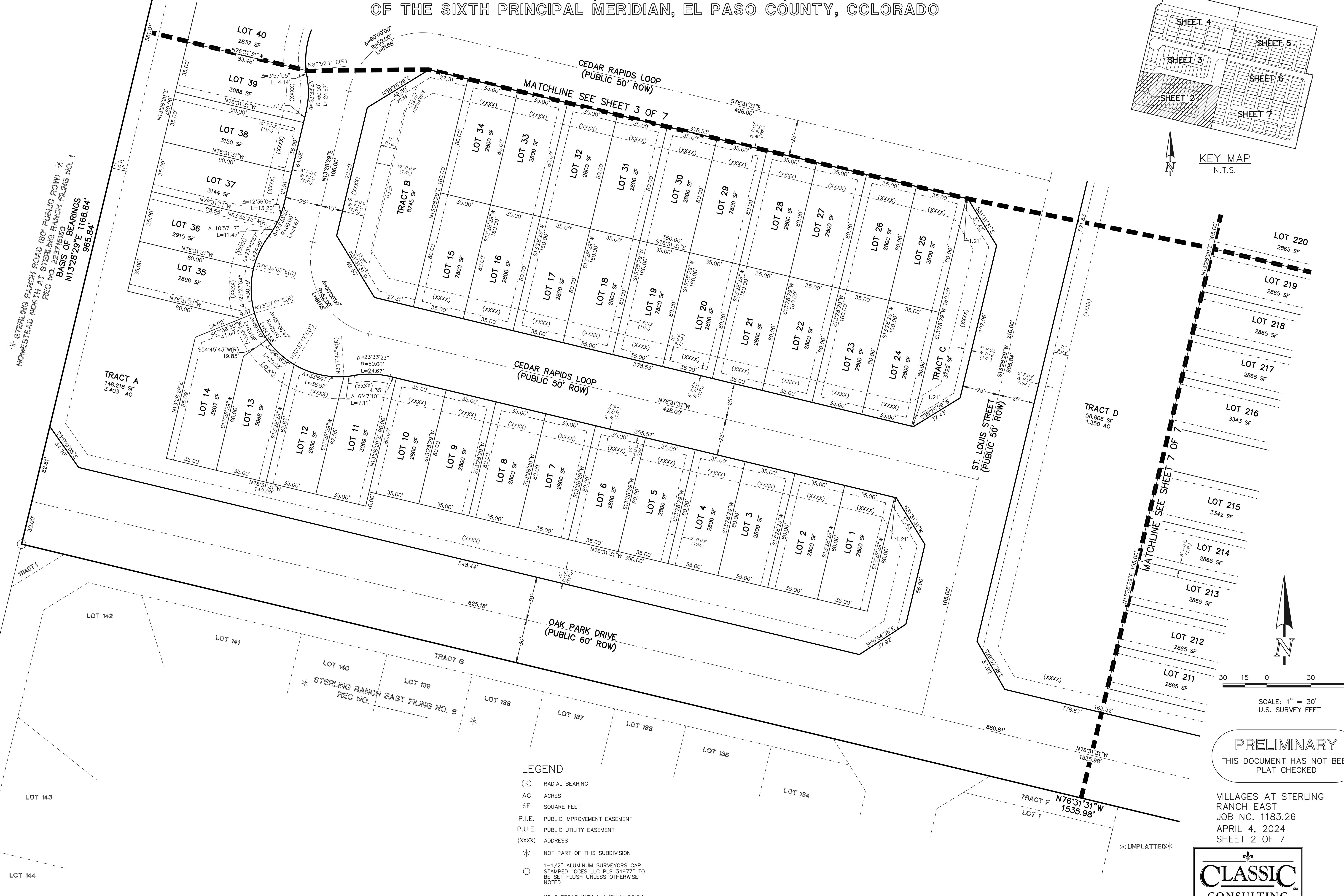
PRELIMINARY
THIS DOCUMENT HAS NOT BEEN
PLAT CHECKED

VILLAGES AT STERLING
RANCH EAST
JOB NO. 1183.26
APRIL 4, 2024
SHEET 2 OF 7



619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903 (719)785-0790

- LEGEND**
- (R) RADIAL BEARING
 - AC ACRES
 - SF SQUARE FEET
 - P.I.E. PUBLIC IMPROVEMENT EASEMENT
 - P.U.E. PUBLIC UTILITY EASEMENT
 - (XXXX) ADDRESS
 - * NOT PART OF THIS SUBDIVISION
 - 1-1/2" ALUMINUM SURVEYORS CAP STAMPED "CCES LLC PLS 34977" TO BE SET FLUSH UNLESS OTHERWISE NOTED
 - NO. 5 REBAR WITH 1-1/2" ALUMINUM SURVEYORS CAP STAMPED "JR ENG LS 38252" RECOVERED FLUSH WITH GROUND



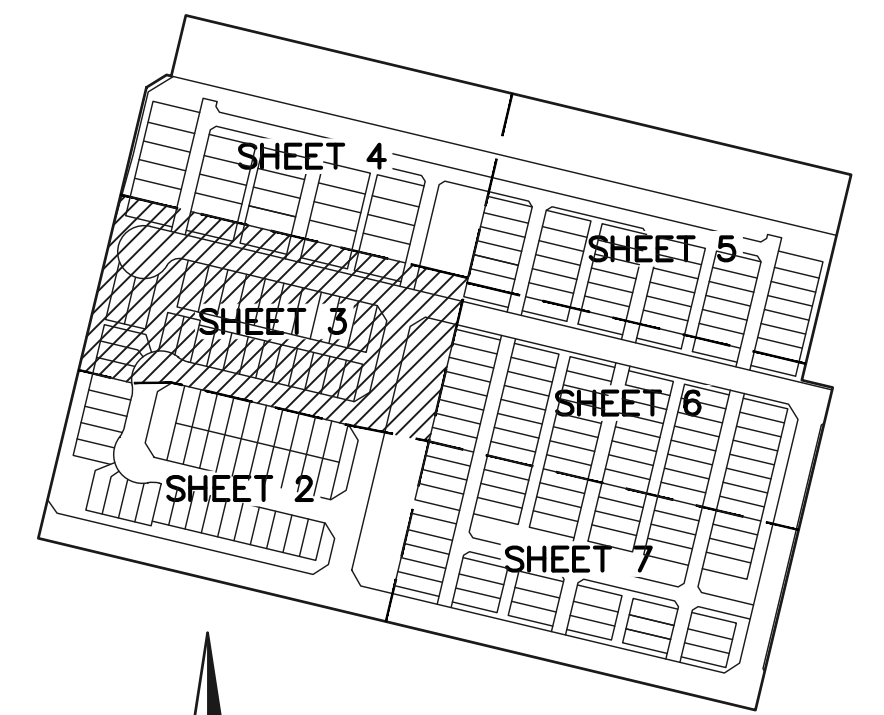
* STERLING RANCH ROAD (60' PUBLIC ROW)
REC NO. 22374160
BASIS OF BEARINGS
N13°28'29"E 1168.84'
N13°28'29"E 965.84'

PCD FILE NO.:

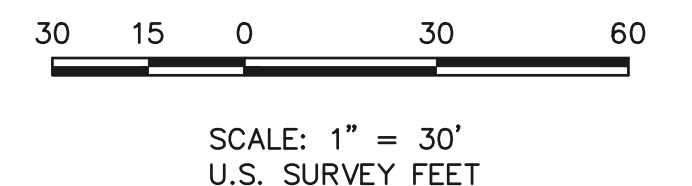
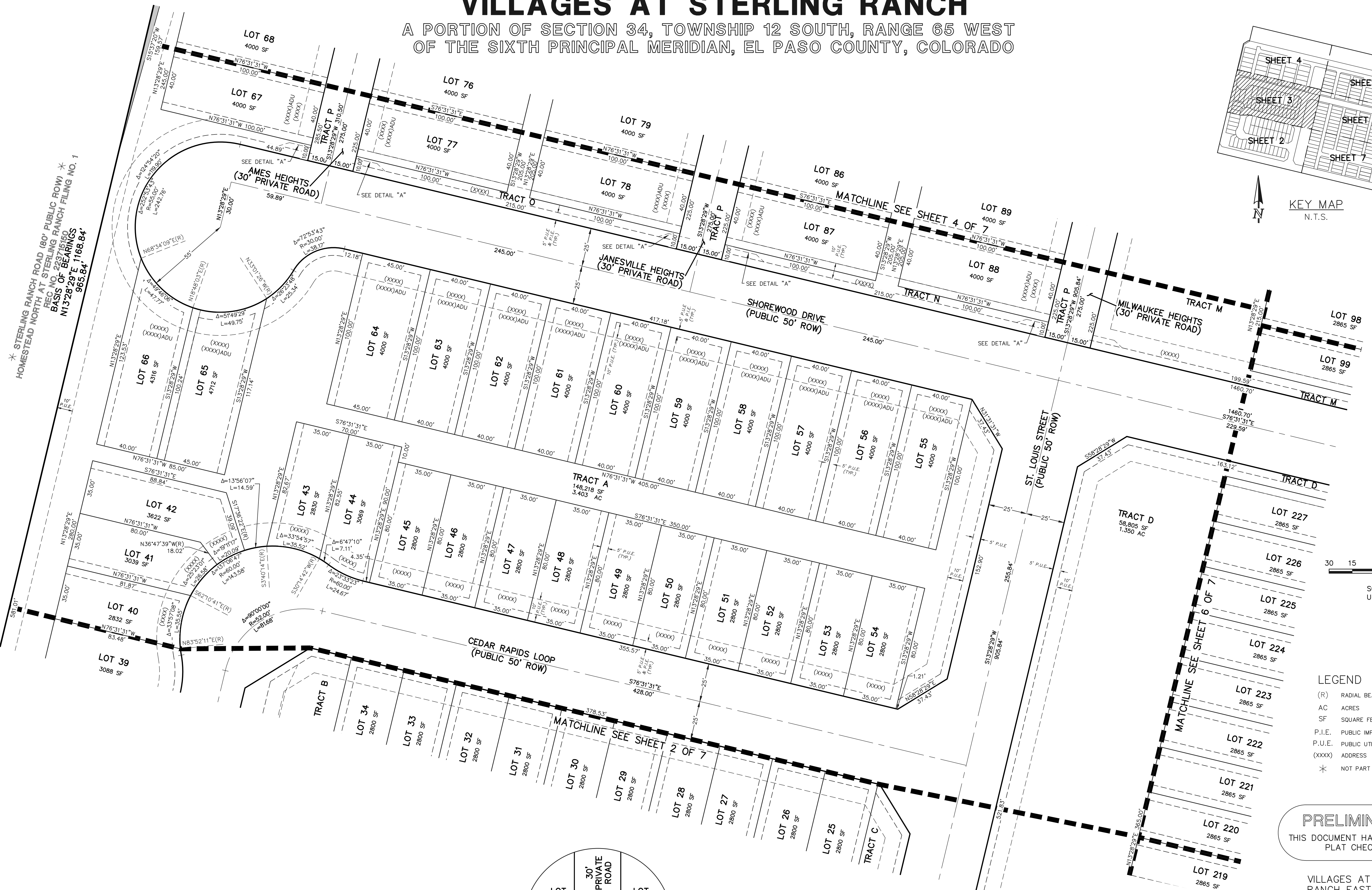
N:\118326\DRAWINGS\BUREAU\PLAT\118326P2.P7, Aug. 8, 2024, 2:07:50 PM, 11.

VILLAGES AT STERLING RANCH

A PORTION OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST
OF THE SIXTH PRINCIPAL MERIDIAN, EL PASO COUNTY, COLORADO



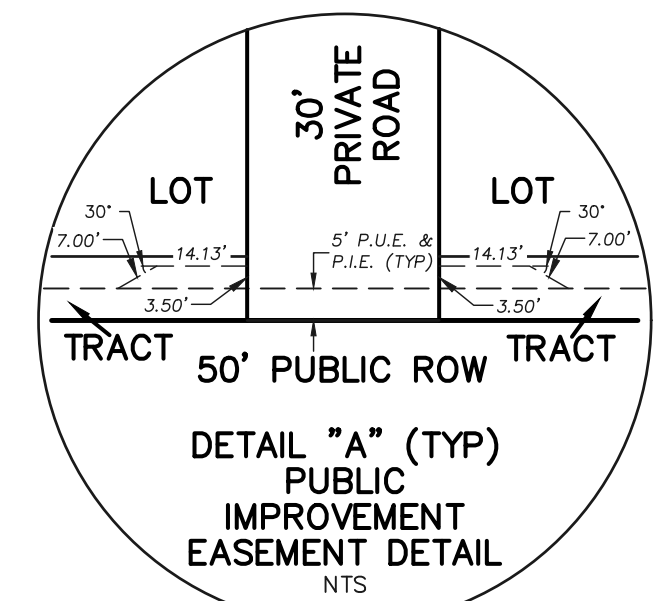
KEY MAP
N.T.S.



- LEGEND**
- (R) RADIAL BEARING
 - AC ACRES
 - SF SQUARE FEET
 - P.I.E. PUBLIC IMPROVEMENT EASEMENT
 - P.U.E. PUBLIC UTILITY EASEMENT
 - (XXXX) ADDRESS
 - * NOT PART OF THIS SUBDIVISION

PRELIMINARY
THIS DOCUMENT HAS NOT BEEN
PLAT CHECKED

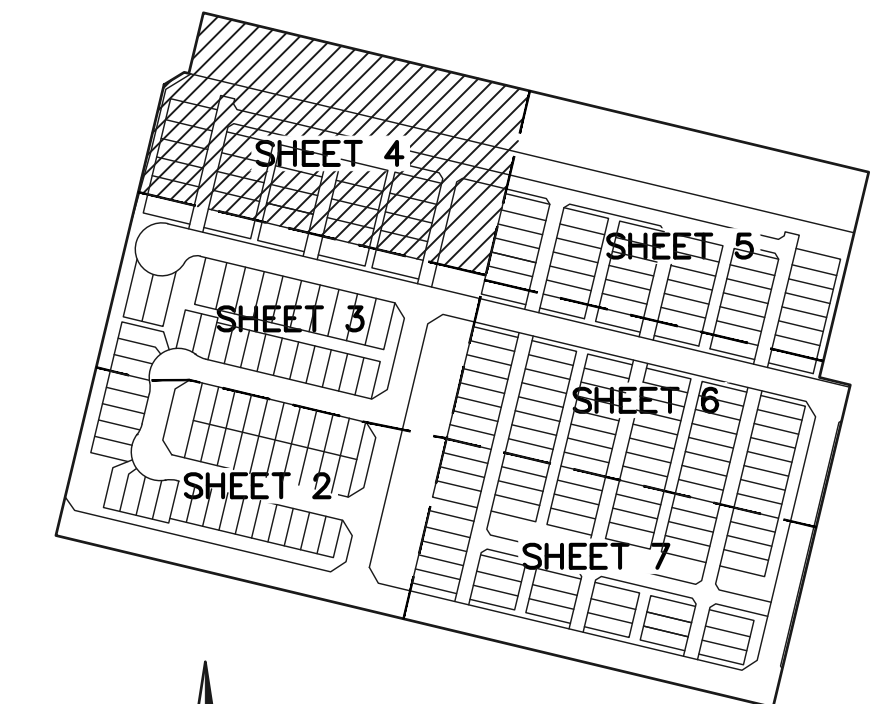
VILLAGES AT STERLING
RANCH EAST
JOB NO. 1183.26
APRIL 4, 2024
SHEET 3 OF 7



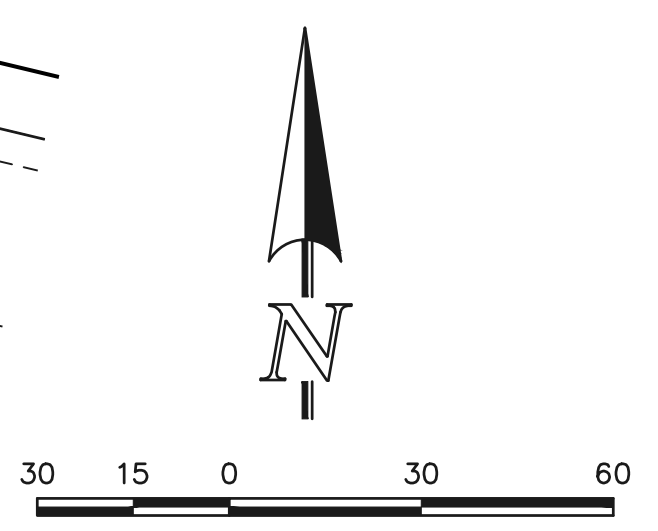
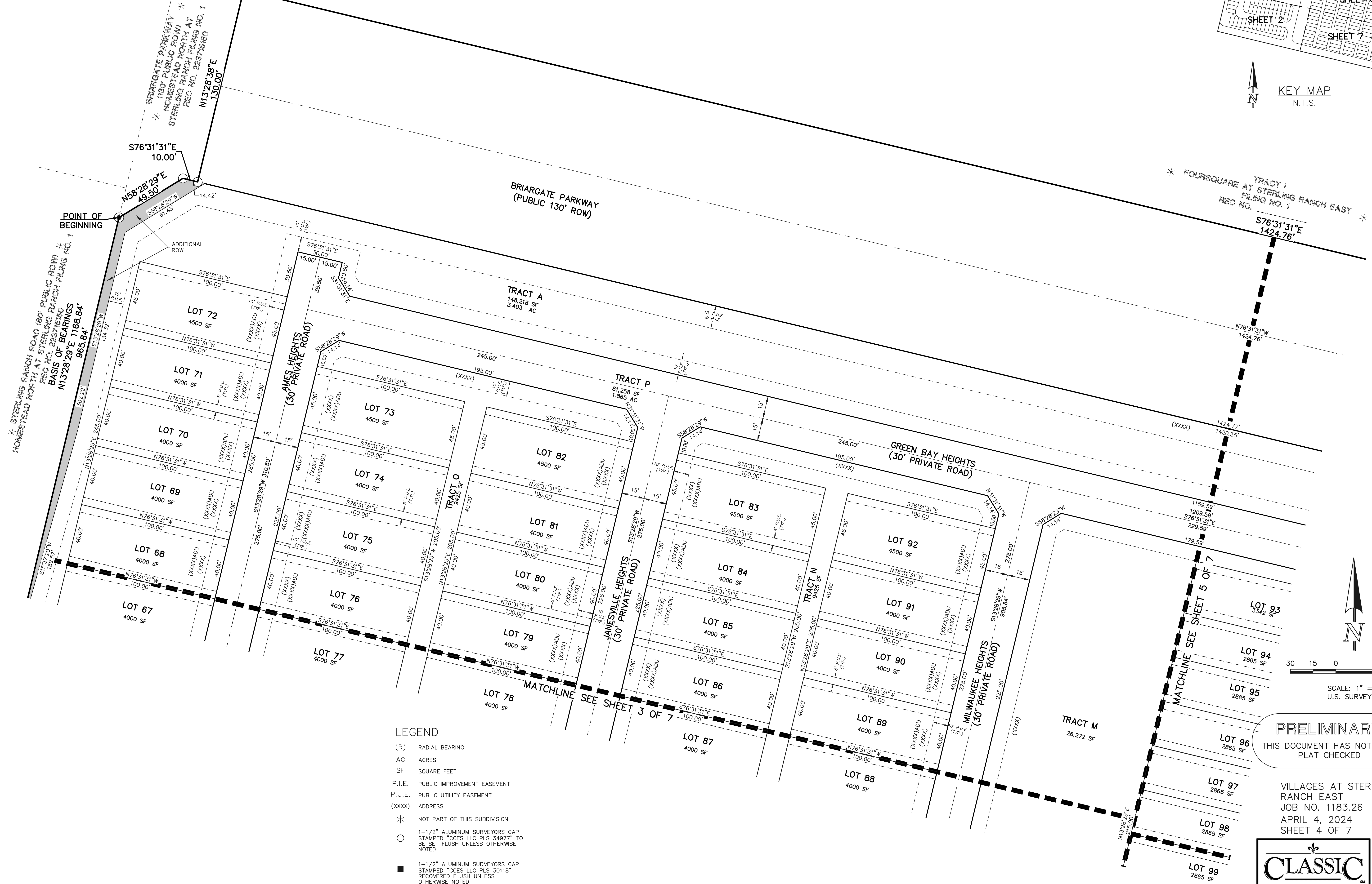
N:\118326\DRAWINGS\BUREAU\PLAT\118326P2.P7.dwg, 8/23/2024, 2:07:55 PM, 1:1

VILLAGES AT STERLING RANCH

A PORTION OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST
OF THE SIXTH PRINCIPAL MERIDIAN, EL PASO COUNTY, COLORADO



KEY MAP
N.T.S.



SCALE: 1" = 30'
U.S. SURVEY FEET

- LEGEND**
- (R) RADIAL BEARING
 - AC ACRES
 - SF SQUARE FEET
 - P.I.E. PUBLIC IMPROVEMENT EASEMENT
 - P.U.E. PUBLIC UTILITY EASEMENT
 - (XXXX) ADDRESS
 - * NOT PART OF THIS SUBDIVISION
 - 1-1/2" ALUMINUM SURVEYORS CAP STAMPED "CCES LLC PLS 34977" TO BE SET FLUSH UNLESS OTHERWISE NOTED
 - 1-1/2" ALUMINUM SURVEYORS CAP STAMPED "CCES LLC PLS 30118" RECOVERED FLUSH UNLESS OTHERWISE NOTED
 - NO. 5 REBAR WITH 1-1/2" ALUMINUM SURVEYORS CAP STAMPED "R" ENG. LS 38252" RECOVERED FLUSH WITH GROUND

PRELIMINARY
THIS DOCUMENT HAS NOT BEEN
PLAT CHECKED

VILLAGES AT STERLING
RANCH EAST
JOB NO. 1183.26
APRIL 4, 2024
SHEET 4 OF 7



PCD FILE NO.:

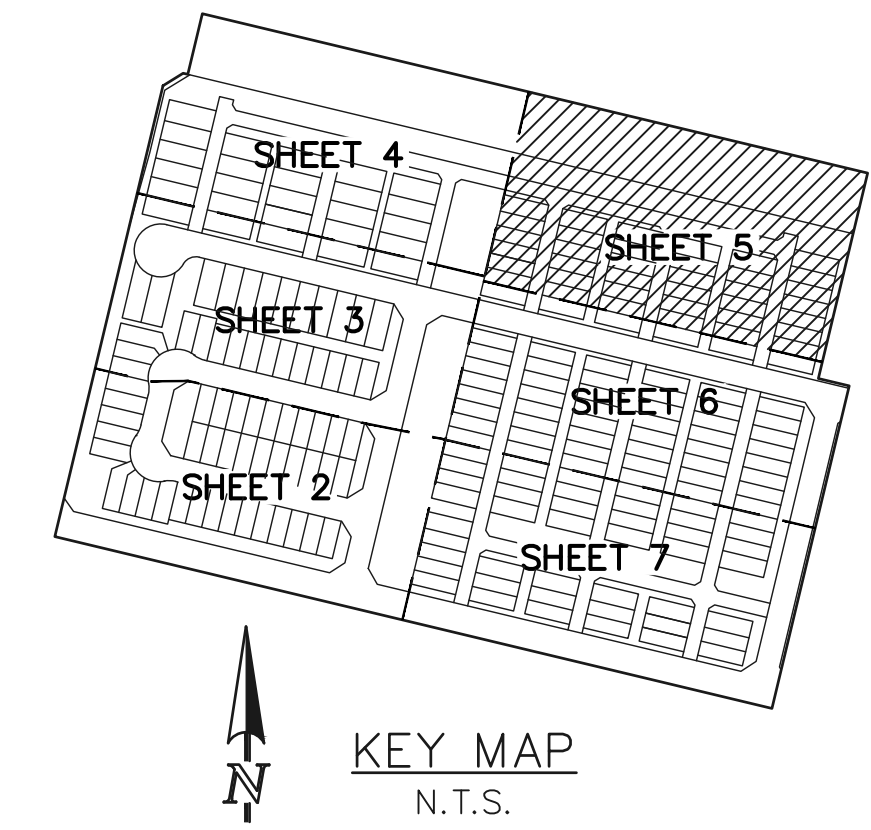
619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903

(719)785-0790

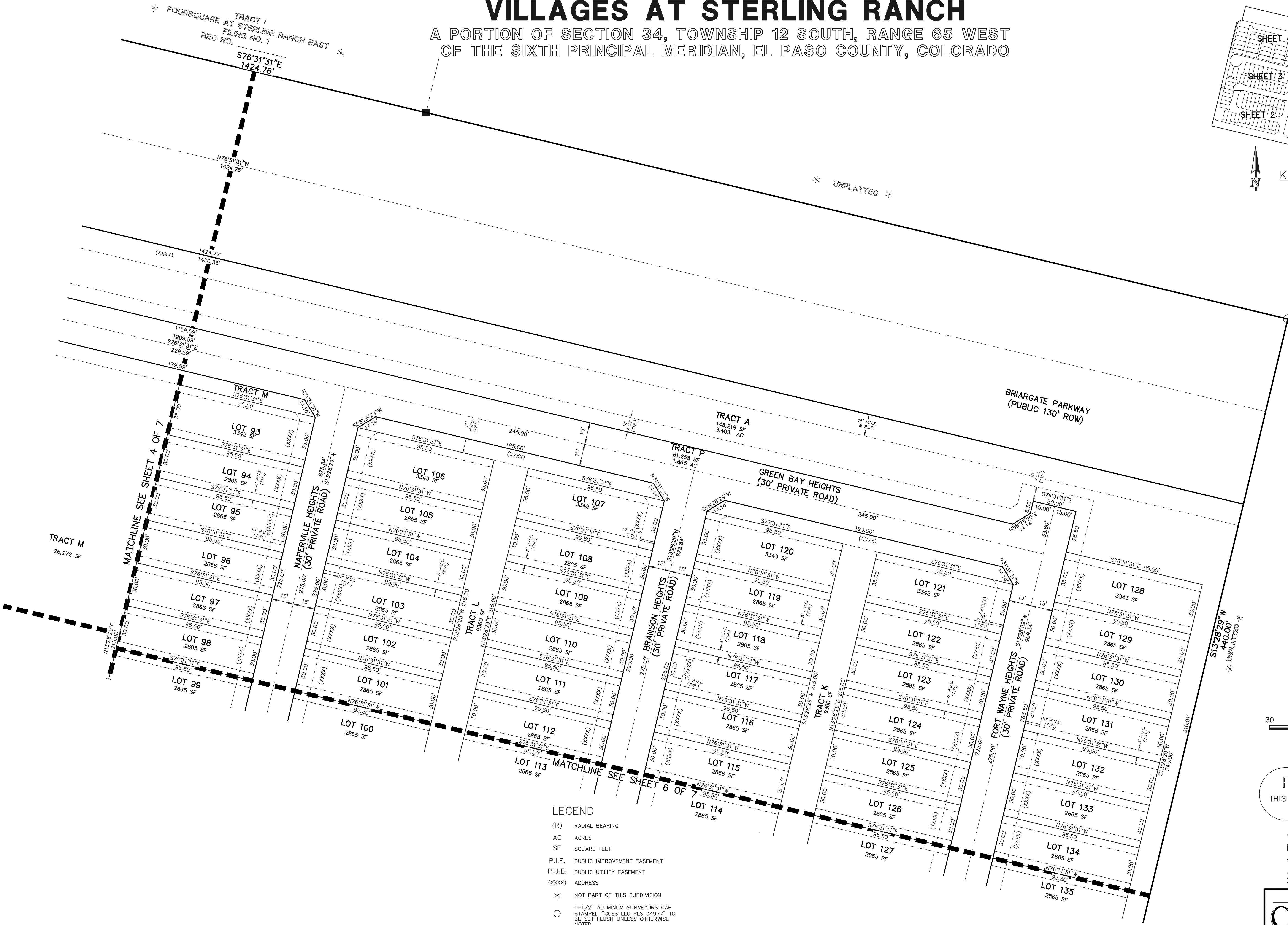
N:\118326\DRAWINGS\BUREAU\VE\PLAT\118326P2.P7.dwg, 8/23/2024, 2:07:58 PM, 1:1

VILLAGES AT STERLING RANCH

A PORTION OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, EL PASO COUNTY, COLORADO

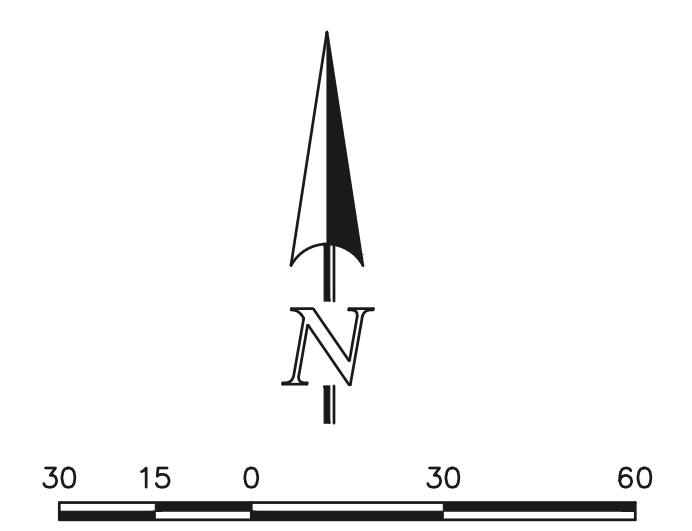


KEY MAP
N.T.S.



* UNPLATTED *

* UNPLATTED *



SCALE: 1" = 30'
U.S. SURVEY FEET

PRELIMINARY
THIS DOCUMENT HAS NOT BEEN
PLAT CHECKED

VILLAGES AT STERLING
RANCH EAST
JOB NO. 1183.26
APRIL 4, 2024
SHEET 5 OF 7



619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903 (719)785-0790

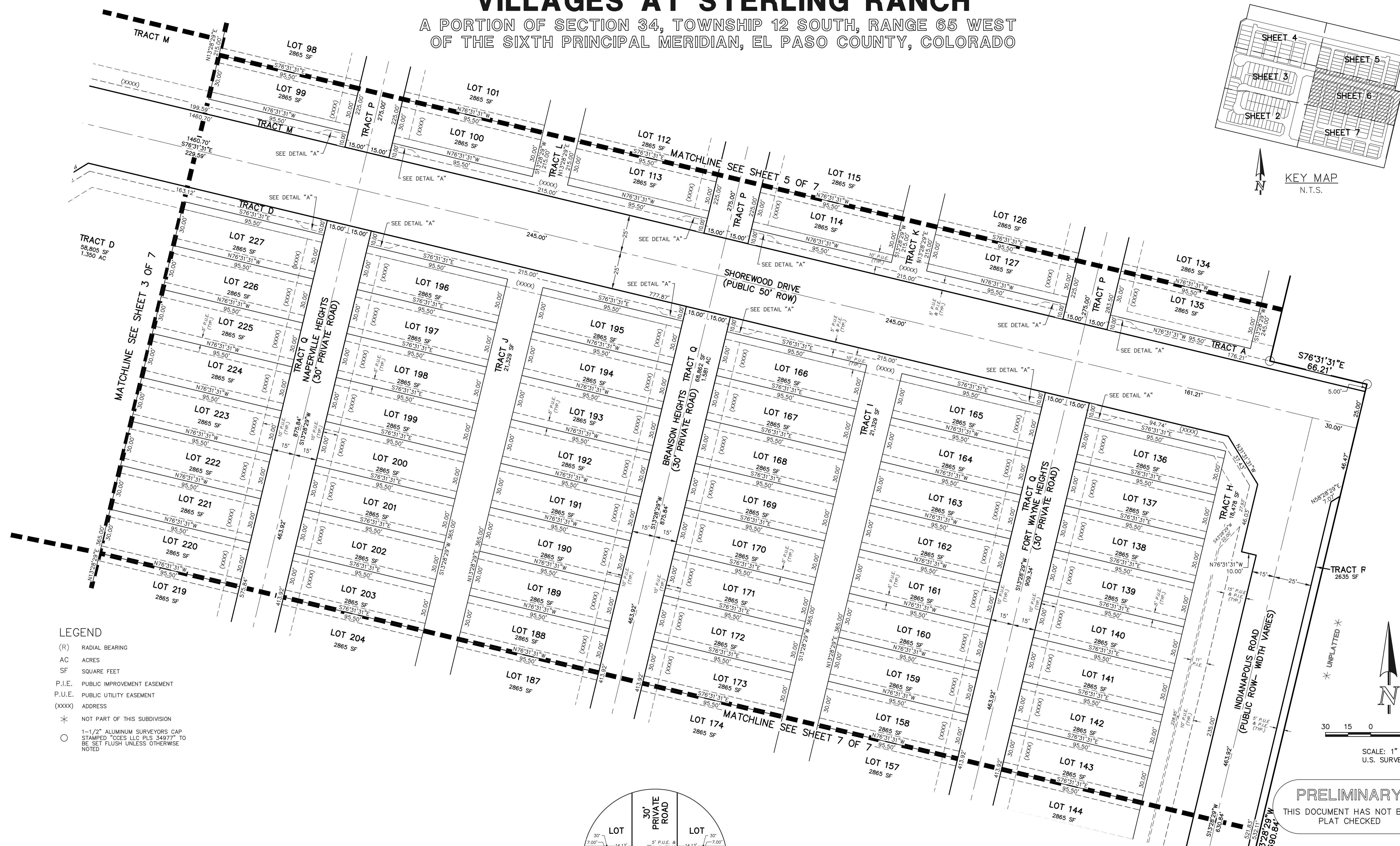
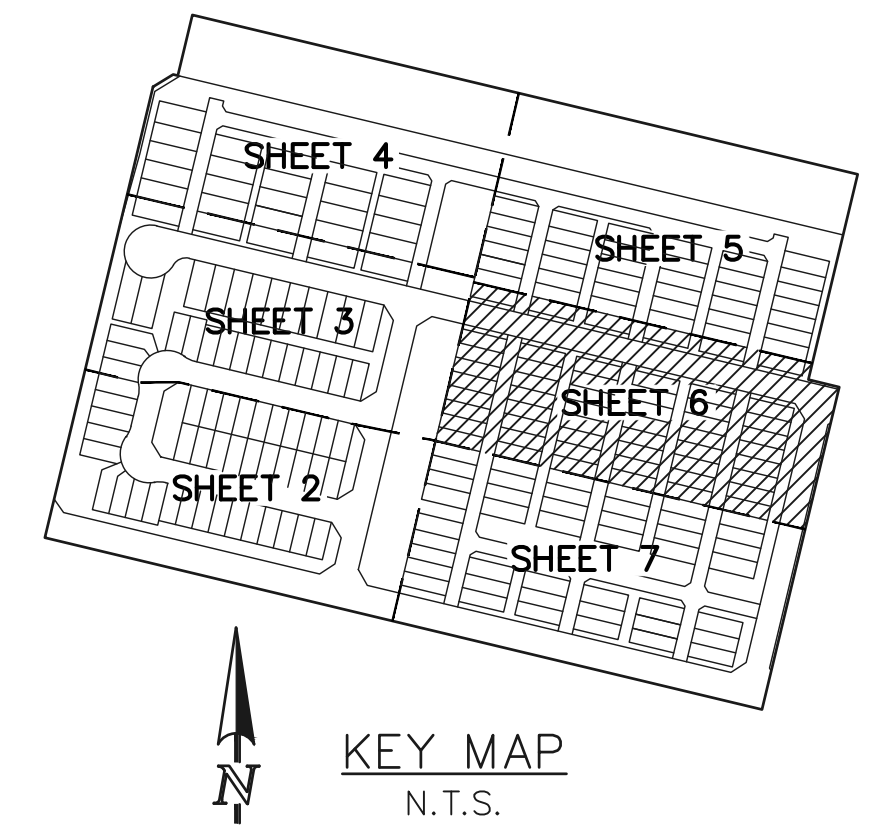
PCD FILE NO.:

- LEGEND**
- (R) RADIAL BEARING
 - AC ACRES
 - SF SQUARE FEET
 - P.I.E. PUBLIC IMPROVEMENT EASEMENT
 - P.U.E. PUBLIC UTILITY EASEMENT
 - (XXXX) ADDRESS
 - * NOT PART OF THIS SUBDIVISION
 - 1-1/2" ALUMINUM SURVEYORS CAP STAMPED "CCES LLC PLS 34977" TO BE SET FLUSH UNLESS OTHERWISE NOTED
 - 1-1/2" ALUMINUM SURVEYORS CAP STAMPED "CCES LLC PLS 30118" RECOVERED FLUSH UNLESS OTHERWISE NOTED

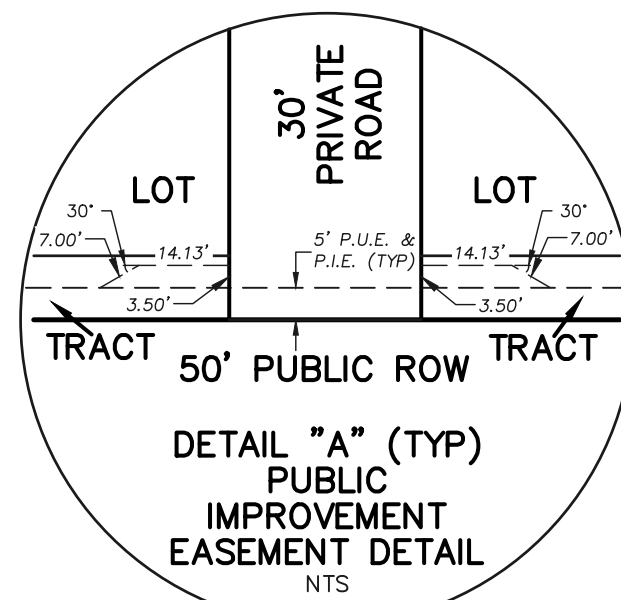
N:\118326\DRAWINGS\BUREAU\PLAT\118326P2.P7.dwg, B23/2024, 2:08:02 PM, 11.

VILLAGES AT STERLING RANCH

A PORTION OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST
OF THE SIXTH PRINCIPAL MERIDIAN, EL PASO COUNTY, COLORADO



- LEGEND**
- (R) RADIAL BEARING
 - AC ACRES
 - SF SQUARE FEET
 - P.I.E. PUBLIC IMPROVEMENT EASEMENT
 - P.U.E. PUBLIC UTILITY EASEMENT
 - (XXXX) ADDRESS
 - * NOT PART OF THIS SUBDIVISION
 - 1-1/2" ALUMINUM SURVEYORS CAP STAMPED "COES LLC PLS 34977" TO BE SET FLUSH UNLESS OTHERWISE NOTED



PRELIMINARY
THIS DOCUMENT HAS NOT BEEN
PLAT CHECKED

VILLAGES AT STERLING
RANCH EAST
JOB NO. 1183.26
APRIL 4, 2024
SHEET 6 OF 7



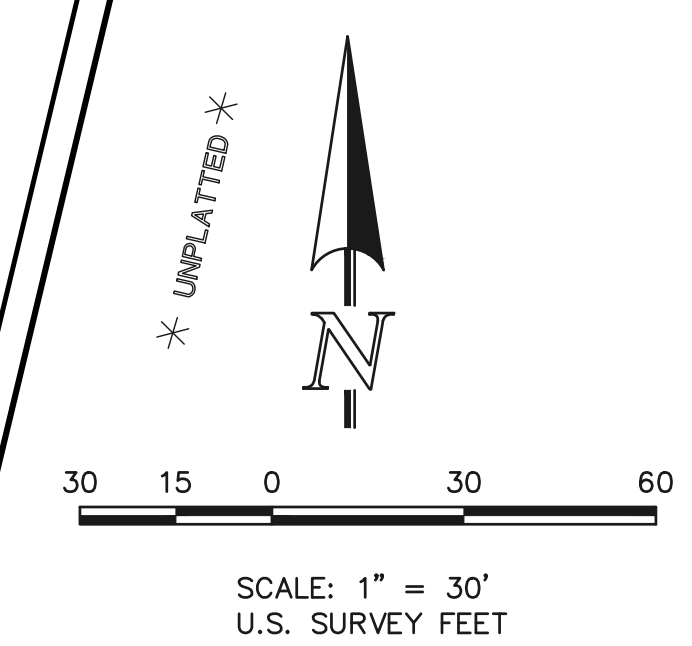
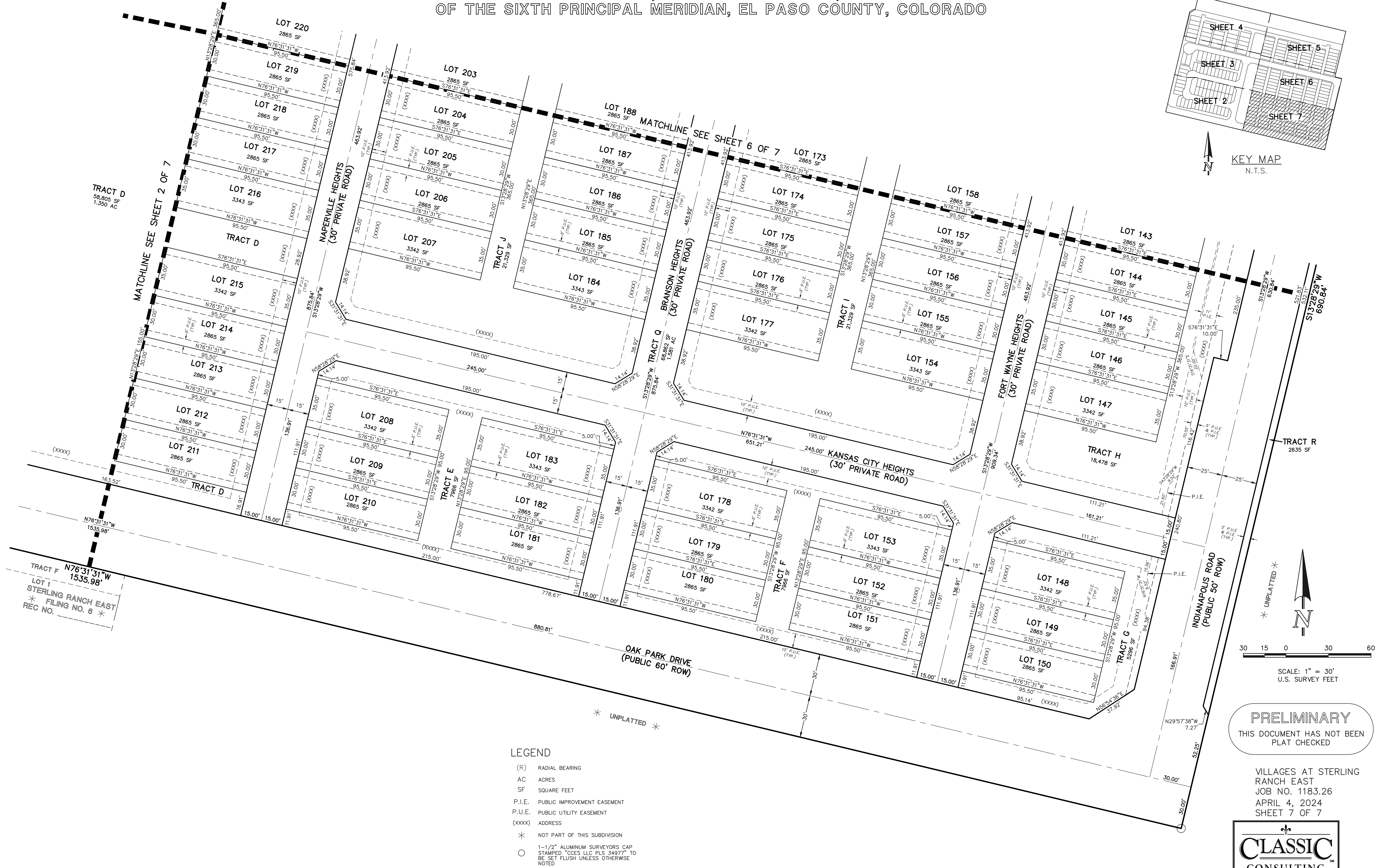
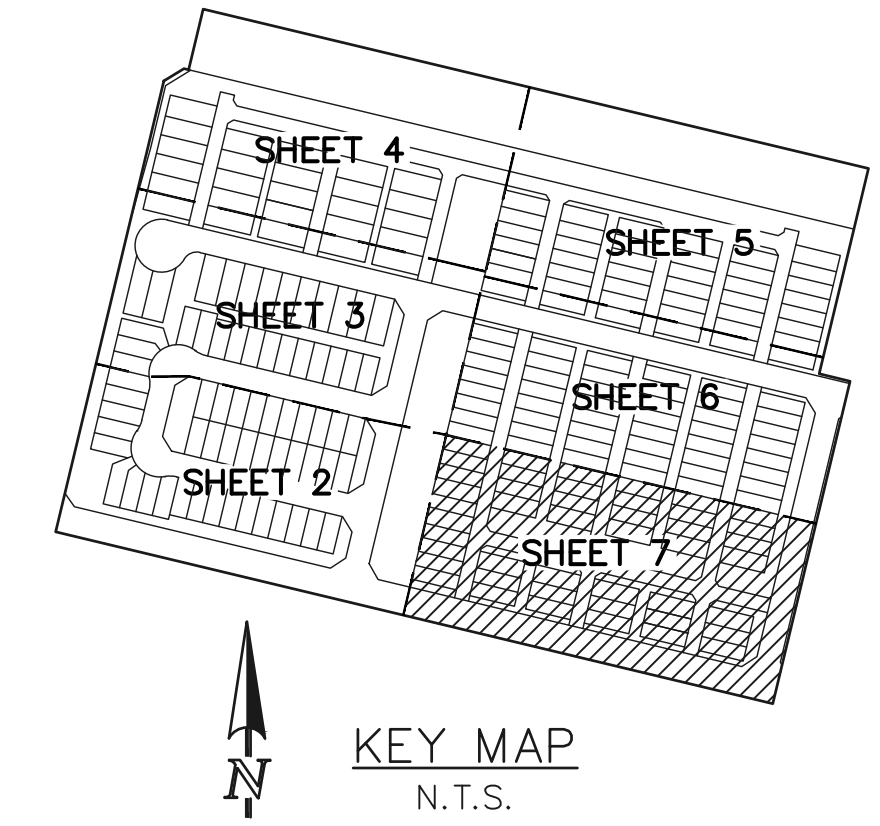
619 N. Cascade Avenue, Suite 200
Colorado Springs, Colorado 80903 (719)785-0790

PCD FILE NO.:

N:\118326\DRAWINGS\BUREAU\VIEW\PLAT\118326P2.P7.dwg, B23/2024, 2:08:05 PM, 1:1

VILLAGES AT STERLING RANCH

A PORTION OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST
OF THE SIXTH PRINCIPAL MERIDIAN, EL PASO COUNTY, COLORADO



PRELIMINARY
THIS DOCUMENT HAS NOT BEEN
PLAT CHECKED

VILLAGES AT STERLING
RANCH EAST
JOB NO. 1183.26
APRIL 4, 2024
SHEET 7 OF 7



- LEGEND**
- (R) RADIAL BEARING
 - AC ACRES
 - SF SQUARE FEET
 - P.I.E. PUBLIC IMPROVEMENT EASEMENT
 - P.U.E. PUBLIC UTILITY EASEMENT
 - (XXXX) ADDRESS
 - * NOT PART OF THIS SUBDIVISION
 - 1-1/2" ALUMINUM SURVEYOR'S CAP
STAMPED "CCES LLC PLS 34977" TO
BE SET FLUSH UNLESS OTHERWISE
NOTED

N:\118326\DRAWINGS\BUREAU\PLAT\118326P2.P7.dwg, B23/2024, 2:08:08 PM, 11.