



# **INTERSECTION IMPROVEMENTS**

**NW 150<sup>TH</sup> STREET AND LONE OAK DRIVE**

## **PRELIMINARY ENGINEERING**

### **REPORT**

**PROJECT TC-0631**

**Prepared for:**  
The City of Oklahoma City

**olsson**

April 2024  
Project No. TC-0631, Task 1



# APPROVAL SHEET

Preliminary Engineering Report – TC-0631

Intersection Improvements of NW 150<sup>th</sup> Street and Lone Oak Drive

Prepared by:

*Brittany McAnelly*  
Brittany McAnelly, PE



C.A. 2483 EXP. 06-30-2025  
11600 Broadway Extension, Suite 300  
Oklahoma City, OK 73114  
(405) 242-6600

Recommended for Approval:

*Debbie Miller*  
Debbie Miller, PE  
Public Works Director / City Engineer

APPROVED by the Council of the City of Oklahoma City this 21ST day of MAY, 2024.

*Amy K. Simpson*  
City Clerk



*David Holt*  
Mayor



# TABLE OF CONTENTS

<b>INTRODUCTION.....</b>	<b>2</b>
Scope.....	2
Budget.....	3
Cost Estimate Summary.....	3
Schedule.....	3
Site Plan .....	4
<b>BACKGROUND .....</b>	<b>5</b>
Existing Conditions.....	5
<b>UTILITIES .....</b>	<b>6</b>
<b>RIGHT-OF-WAY .....</b>	<b>7</b>
<b>COST ESTIMATE.....</b>	<b>8</b>
<b>Appendix A – Detailed Preliminary Cost Estimate.....</b>	
<b>Appendix B – 60% Plan Set.....</b>	

# INTRODUCTION

## Scope

The City of Oklahoma City approved engineering services for the roadway and traffic design services to design traffic signalization and ADA upgrades at the intersection of the ARPA funded project at Lone Oak Drive and NW 150<sup>th</sup> Street. ADA compliant ramps and landings will be provided for pedestrian crossings on all four legs of the intersection. There are existing ramps crossing Lone Oak Drive (the north leg) which meet ADA criteria and will be preserved. Six total ADA ramps will be designed and installed to provide crossings for NW 150<sup>th</sup> Street and Gaillardia Drive. Crosswalks, ADA ramps, pedestrian pushbuttons, and pedestrian signal heads will be provided for all four intersection crossing movements.

The intersection is currently unsignalized with stop-control only for the north (NW 150<sup>th</sup> Street) and south (Gaillardia Drive) legs. A signal system will be installed including signal mast arm poles controlling each approach, signal controller and cabinet, and Wavetronics radar detection system. Stop line detection will be provided on all four approaches and advanced dilemma zone area detection will be provided for both NW 150<sup>th</sup> Street approaches. Flashing yellow arrow signal heads will be utilized over both left-turn lanes on NW 150<sup>th</sup> Street under protected/permitted left-turn operation. The scope also includes restriping of the intersection.





## Budget

The **fixed limit construction budget** for this project is **\$490,000**.

## Cost Estimate Summary

The design of Lone Oak Drive and NW 150<sup>th</sup> Street has a preliminary construction cost estimate of \$486,966. No right-of-way acquisition or utility relocation appear to be necessary for this project.

## Schedule

The Olsson design team understands that the project schedule is especially critical because this is an ARPA project.

- Final Plan Completion – June 2024
- Begin Construction Date – December 2024
- Construction Completion – March 2025



## Site Plan



The detailed construction plans for the NW 150<sup>th</sup> St and Lone Oak Drive intersection project is included in **Appendix B** of this report.

# **BACKGROUND**

## **Existing Conditions**

### **Roadway**

The City of Oklahoma City designates NW 150<sup>th</sup> Street as a Major Arterial street. The existing roadway has 5-12 ft lanes at the intersection with Lone Oak Drive, including exclusive left-turn lanes with storage lengths of 125 feet each. The existing street is an undivided asphalt-paved facility with curb and gutter. There are no horizontal curves in the vicinity of the intersection. The street is posted at 45 miles per hour and is relatively flat. The pavement width is approximately 60 feet wide with 8-inch tall curb and gutter.

Lone Oak Drive is primarily functioning as a local street servicing the Lone Oak neighborhood. The existing roadway has 2-22 ft lanes and is an undivided asphalt street. The street is posted at 25 miles per hour and is relatively flat. There are no horizontal curves, and 8-inch tall curb and gutter is present on both sides.

Gaillardia Drive is the south leg of this intersection which serves an entrance to the Gaillardia neighborhood. This entrance is gated and is accessed by residents and guests of residents only.

### **Survey**

The project area was surveyed in the February of 2024. The survey included full topographic survey, boundary survey, and utility locates. Available as-builts for the project area were collected through an open records request and through the City's Open Data Portal.

### **Traffic**

The existing NW 150<sup>th</sup> St corridor carries an annual average daily traffic (AADT) volume of 14,500 (2022) vehicles per day.

The intersection is currently unsignalized with stop-control only for the north (NW 150<sup>th</sup> Street) and south (Gaillardia Drive) legs. NW 150<sup>th</sup> Street currently flows freely.

## UTILITIES

**There are currently no identified utility relocations required to accommodate this project, but additional utility coordination is necessary as detailed below.**

A 12" DIP waterline main runs along the south side of NW 150<sup>th</sup> St located approximately 28' from the centerline Survey. Currently the waterline is under the roadway curbline. This waterline crosses NW 150<sup>th</sup> approximately 118' from the centerline of Lone Oak Drive and follows the right-of-way line towards the north at an offset of 10'.

There is an existing 8" sewerline located on the south side of NW 150<sup>th</sup> St outside of project limits.

A 12" ONG steel gas line runs along the south side of NW 150<sup>th</sup> St located approximately 58' from centerline Survey. This gas line is outside of project limits.

A 1 ½" AT&T Fiber Optic cable runs along the south side of NW 150<sup>th</sup> St located approximately 29' from the centerline Survey. The utility potholes done by Sidewinder Utility Locators indicates this cable has been cut and abandoned.

A 2" AT&T Fiber Optic PVC line runs along the north side of NW 150<sup>th</sup> St located approximately 44' from the CL Survey. Coordination with AT&T will be required to ensure proposed mast arm poles meet clearance requirements.

Overhead power lines run along the north side of NW 150<sup>th</sup> St approximately 45' from CL Survey. Coordination with OG&E will be required to ensure proposed mast arm poles meet clearance requirements. There is also communication underbuilt on these poles. Coordination will be required to ensure clearance requirements are met.

A COX TUG line is present in the north east quadrant of the intersection. No potholes were done on this TUG line but according to the atlas provided, it does not appear to be in conflict with the proposed mast arm pole. Further coordination needed.



## **RIGHT-OF-WAY**

**There are currently no apparent right-of-way impacts to accommodate this intersection improvement project.**

The existing right-of-way along NW 150<sup>th</sup> St is 100 feet total (50 feet on either side of the centerline survey).

The existing right-of-way along Lone Oak Drive and Gaillardia Drive varies, but all four corners contain bumped-out corner clips. Gaillardia Homeowners Association (HOA) has approved preliminary design and granted necessary access for construction.

All proposed pedestrian ramps, mast arm poles, and pedestrian poles are able to be constructed within existing right-of-way.



## **COST ESTIMATE**

The detailed construction cost estimate for the NW 150<sup>th</sup> St and Lone Oak Drive intersection project is included in **Appendix A** of this report. Estimates include Roadway, Traffic, and Miscellaneous Items as summarized below.

### Summary of Construction Costs:

Roadway Items (Earthwork, ADA Ramps, Sidewalk, etc.)	\$51,081
Traffic Signal Items (Traffic & Pedestrian Signal Improvements)	\$348,420
Misc. Items (Traffic Control, Signing, Striping, Mobilization, etc.)	\$87,465
<b>Total Construction Cost</b>	<b>\$486,966</b>

## **APPENDIX A**

Detailed Preliminary Cost Estimate



**OPINION OF PROBABLE COST (OPC)**  
**TC-0631: NW 150th St and Lone Oak Dr**  
**60% SUBMITTAL**  
**4/19/2024**

Roadway Items		Quantity	Unit	Unit Cost	Item Cost
200-00	UNCLASSIFIED EXCAVATION	0	CY	\$15.00	\$0.00
202-00	BORROW	50	CY	\$45.00	\$2,250.00
305-00	CURB AND GUTTER(2'-8")(8" BARRIER)	214	LF	\$45.00	\$9,630.00
710-01	E.P.S. OPTICAL DETECTOR	2	EA	\$1,000.00	\$2,000.00
710-02	E.P.S. 2 CHANNEL PHASE DETECTOR	1	EA	\$3,700.00	\$3,700.00
710-03	OPTICAL DETECTOR CABLE	425	LF	\$5.00	\$2,125.00
711-00	VEHICLE ACTUATED TRAFFIC SIGNAL CONTROL ASSEMBLY	1	LSUM	\$26,000.00	\$26,000.00
713-08	2" TRAFFIC SIGNAL CONDUIT (TRENCHED)	200	LF	\$21.00	\$4,200.00
713-09	2" TRAFFIC SIGNAL CONDUIT (BORED)	50	LF	\$35.00	\$1,750.00
713-10	3" TRAFFIC SIGNAL CONDUIT (TRENCHED)	60	LF	\$24.00	\$1,440.00
713-11	3" TRAFFIC SIGNAL CONDUIT (BORED)	500	LF	\$40.00	\$20,000.00
714-01	TWO CONDUCTOR SHIELDED CABLE	50	LF	\$4.00	\$200.00
714-04	(5) CONDUCTOR TRAFFICE SIGNAL ELECTRICAL CABLE	4,000	LF	\$4.00	\$16,000.00
714-05	(7) CONDUCTOR TRAFFIC SIGNAL ELECTRICAL CABLE	300	LF	\$6.50	\$1,950.00
714-06	(21) CONDUCTOR TRAFFIC SIGNAL ELECTRICAL CABLE	500	LF	\$7.00	\$3,500.00
714-10	(1/CONDUCTOR)(AWG NO. 6) ELECTRICAL CONDUCTOR	350	LF	\$5.00	\$1,750.00
714-11	(1/CONDUCTOR)(AWG NO. 10) ELECTRICAL CONDUCTOR	1,750	LF	\$3.00	\$5,250.00
715-01	THREE (3) SECTION TRAFFIC SIGNAL HEAD	8	EA	\$1,200.00	\$9,600.00
715-02	FOUR (4) SECTION TRAFFIC SIGNAL HEAD	2	EA	\$1,650.00	\$3,300.00
717-00	PEDESTRIAN SIGNAL HEAD	8	EA	\$800.00	\$6,400.00
722-00	PEDESTRIAN PUSH BUTTON AND SIGN	8	EA	\$1,250.00	\$10,000.00
724-33	POLE & SPECIFIED 25' MAST ARM(S) & LUM. ARM (INSTALLED)	1	EA	\$16,000.00	\$16,000.00
724-34	POLE & SPECIFIED 45' MAST ARM(S) & LUM. ARM (INSTALLED)	1	EA	\$16,000.00	\$16,000.00
724-35	POLE & SPECIFIED 45' MAST ARM	1	EA	\$20,000.00	\$20,000.00
724-36	POLE & SPECIFIED 50' MAST ARM(S) & LUM. ARM (INSTALLED)	1	EA	\$20,000.00	\$20,000.00
724-68	PEDESTAL POLE W/ 10-FT MOUNTING HEIGHT	7	EA	\$1,200.00	\$8,400.00
725-00	STRUCTURAL CONCRETE	29	CY	\$1,200.00	\$34,800.00
725-01	REINFORCING STEEL	4,046	LBS	\$2.50	\$10,115.00
726-00	PULL BOX TYPE II	4	EA	\$1,200.00	\$4,800.00
727-00	ROADWAY LUMINAIRE	3	EA	\$20.00	\$60.00
729-00	SHEET ALUMINUM SIGNS	98.5	SF	\$10.00	\$985.00
729-01	REMOVAL OF EXISTING SIGNS	2	EA	\$100.00	\$200.00
729-02	MAST ARM MOUNTED SIGNS	89	SF	\$55.00	\$4,895.00
733-00	SQUARE STEEL SIGN POST	52	LF	\$20.00	\$1,040.00
735-00	TRAFFIC STRIPE (MULTI-POLYMER) (4" WIDE)	4,372	LF	\$1.50	\$6,558.00
735-01	TRAFFIC STRIPE (MULTI-POLYMER) (12" WIDE)	257	LF	\$4.00	\$1,028.00
735-02	TRAFFIC STRIPE (MULTI-POLYMER) (24" WIDE)	605	LF	\$8.00	\$4,840.00
736-00	TRAFFIC STRIPE (MULTI-POLY) (ARROW) (SINGLE)	7	EA	\$150.00	\$1,050.00
736-01	TRAFFIC STRIPE (MULTI-POLY) (ARROW) (DOUBLE)	1	EA	\$200.00	\$200.00
742-00	REMOVE TRAFFIC STRIPE (4" WIDE)	6,583	LF	\$3.00	\$19,749.00
744-04	RADAR VEHICLE DETECTION FOR 3-WAY INTERSECTION	1	EA	\$75,000.00	\$75,000.00
801-00	CONTRUCTION STAKING	1	LSUM	\$15,000.00	\$15,000.00
802-00	CONSTRUCTION TRAFFIC CONTROL	1	LSUM	\$8,000.00	\$8,000.00
809-00	MOBILIZATION	1	LSUM	\$30,000.00	\$30,000.00
810-00	CLEARING AND GRUBBING	1	LSUM	\$9,000.00	\$9,000.00
811-00	STRUCTURE REMOVAL (TRAFFIC SIGNAL EQUIPMENT)	1	LSUM	\$18,000.00	\$18,000.00
812-01	REMOVE CURB AND GUTTER	226	LF	\$15.00	\$3,390.00

812-07	SAWCUT PAVEMENT	261	LF	\$8.00	\$2,088.00
812-08	REMOVAL OF SIDEWALK	126	SY	\$40.00	\$5,040.00
819-01	ADJUST EXISTING STRUCTURE (WATER VALVE)	1	EA	\$200.00	\$200.00
823-00	SIDEWALK	74	SY	\$70.00	\$5,180.00
823-01	DRIVEWAY (WIDTH VARIES)	22	SY	\$80.00	\$1,760.00
830-00	ADA CURB RAMP (8")	6	EA	\$850.00	\$5,100.00
830-01	TACTILE MARKERS/TRUNCATED DOMES	71	SY	\$75.00	\$5,325.00
840-00	SOLID SLAB SODDING	179	SY	\$6.00	\$1,074.00
900-02	SILT SOCK	2	EA	\$250.00	\$500.00
900-04	FILTER FABRIC SILT FENCE-COMPLETE IN PLACE	136	LF	\$4.00	\$544.00
<b>Total Construction Cost</b>					<b>\$486,966.00</b>
<b>City Fixed-Limit Cost</b>					<b>\$490,000.00</b>

## **APPENDIX B**

60% Plan Set





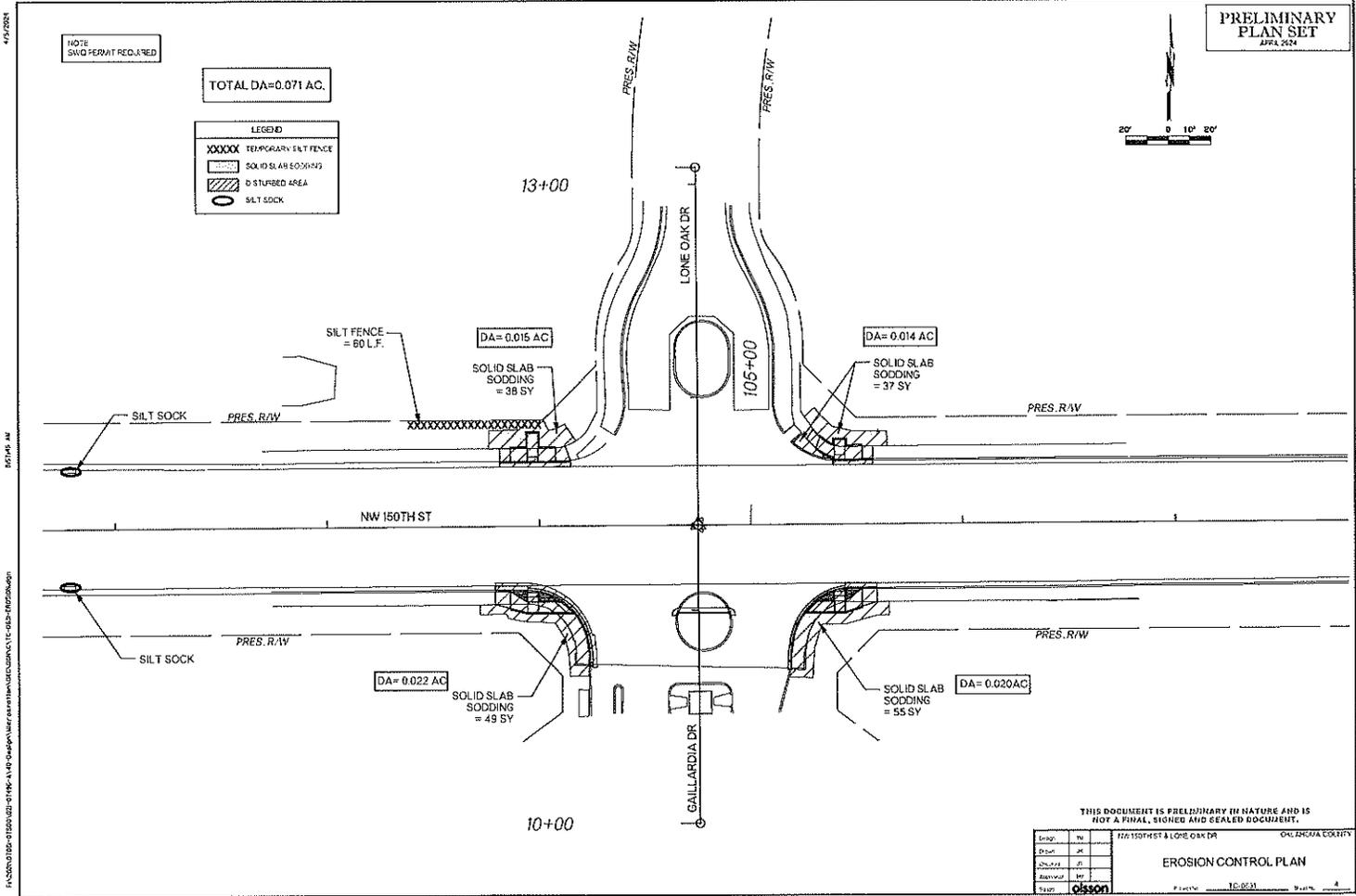


NOTE:  
SIGN PERMIT REQUIRED

TOTAL DA=0.071 AC.

LEGEND

XXXXXX	TEMPORARY SILT FENCE
[Hatched Box]	SOLID SLAB SODDING
[Diagonal Lines Box]	D STURBED AREA
○	SILT SOCK



THIS DOCUMENT IS PRELIMINARY IN NATURE AND IS NOT A FINAL, SIGNED AND SEALED DOCUMENT.

Project No.	126150TH ST & LONE OAK DR	OKLAHOMA COUNTY
Client		
Sheet No.		
Revision		
Date		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet		
Scale		
Author		
Checker		
Drawn		
Project		
Sheet	</	

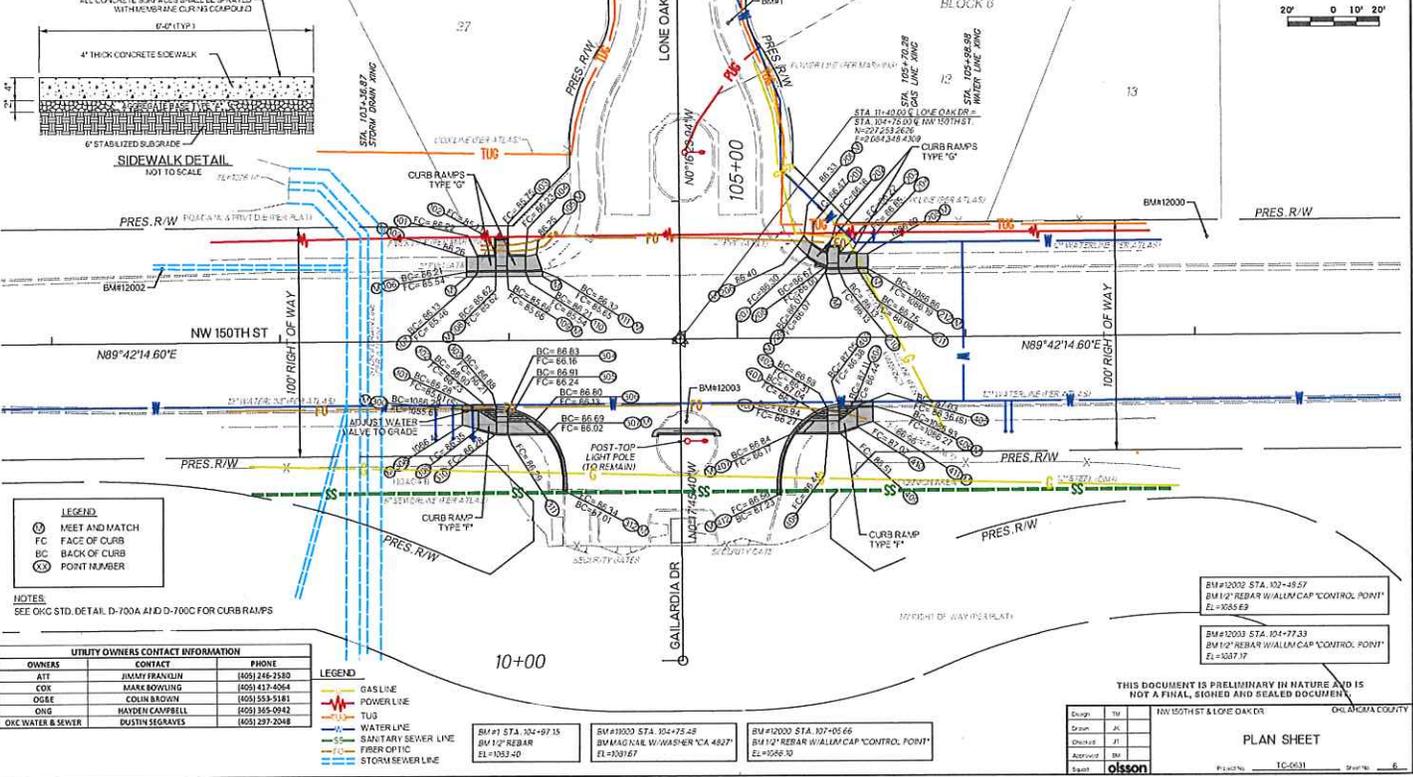


**PRELIMINARY PLAN SET**  
APRIL 2024

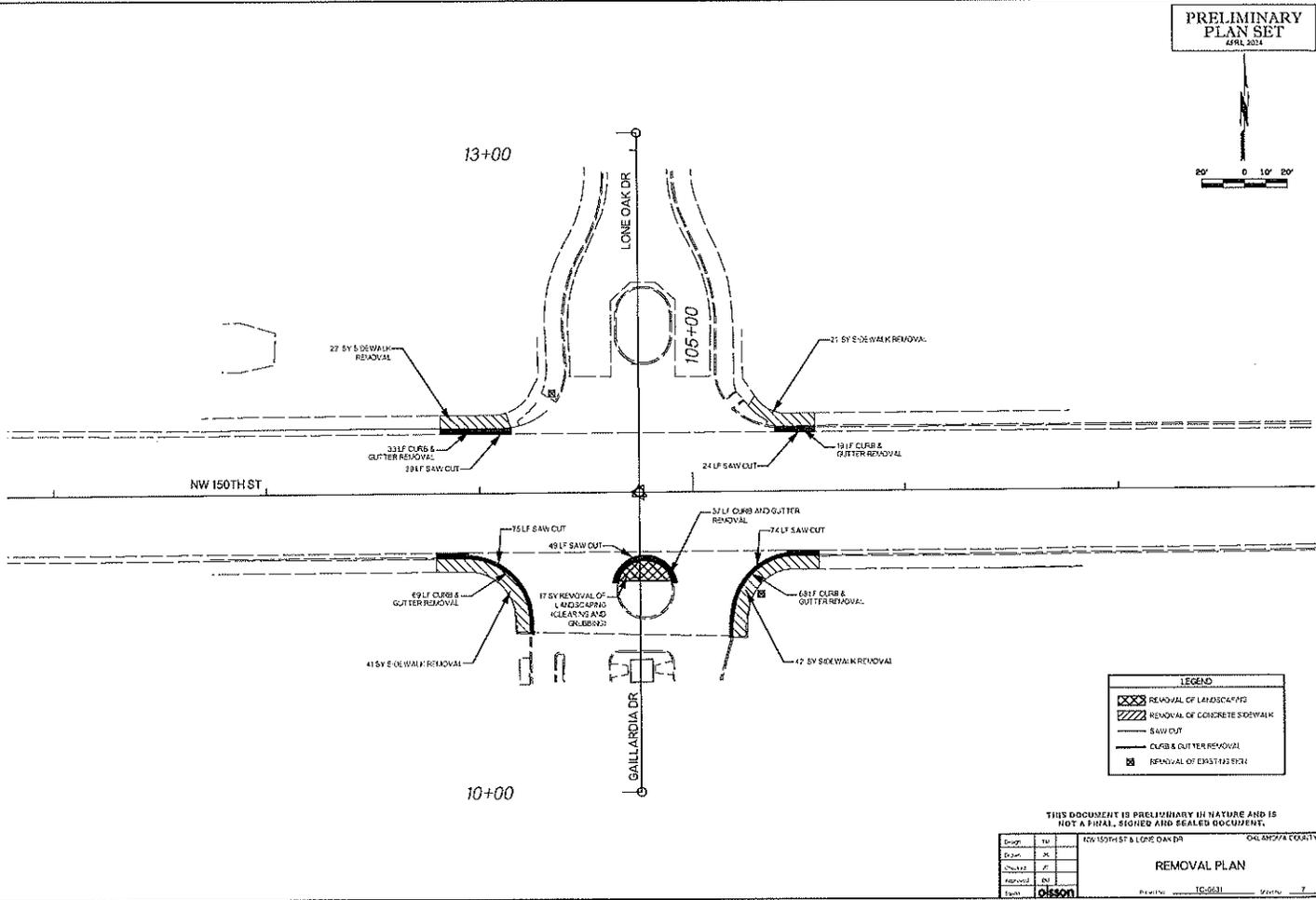
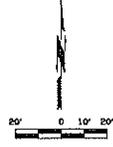


NW QUADRANT				NE QUADRANT					
POINT NO.	STATION	OFFSET	ALIGNMENT	POINT NO.	STATION	OFFSET	ALIGNMENT		
100	103+91.64	26.57	LT	NW 150TH	200	103+29.84	44.84	LT	NW 150TH
101	103+63.66	36.58	LT	NW 150TH	201	103+32.83	49.78	LT	NW 150TH
102	103+81.66	38.81	LT	NW 150TH	202	103+29.59	34.57	LT	NW 150TH
103	103+92.65	33.63	LT	NW 150TH	203	103+44.89	36.49	LT	NW 150TH
104	104+07.56	36.60	LT	NW 150TH	204	103+52.59	38.52	LT	NW 150TH
105	104+12.46	37.88	LT	NW 150TH	205	103+57.59	38.66	LT	NW 150TH
106	103+81.51	29.92	LT	NW 150TH	206	103+26.58	48.17	LT	NW 150TH
107	103+69.53	29.87	LT	NW 150TH	207	103+50.93	35.86	LT	NW 150TH
108	103+84.53	29.50	LT	NW 150TH	208	103+29.56	31.30	LT	NW 150TH
109	103+69.53	29.89	LT	NW 150TH	209	103+12.56	28.85	LT	NW 150TH
110	104+07.53	29.86	LT	NW 150TH	210	103+44.61	29.82	LT	NW 150TH
111	104+14.83	30.14	LT	NW 150TH	211	103+62.56	39.83	LT	NW 150TH
				212	103+57.55	29.89	LT	NW 150TH	

SW QUADRANT				SE QUADRANT					
POINT NO.	STATION	OFFSET	ALIGNMENT	POINT NO.	STATION	OFFSET	ALIGNMENT		
300	103+78.22	29.84	RT	NW 150TH	400	105+29.84	36.17	RT	NW 150TH
301	103+66.22	28.65	RT	NW 150TH	401	105+39.21	36.22	RT	NW 150TH
302	103+84.19	35.47	RT	NW 150TH	402	105+30.24	31.84	RT	NW 150TH
303	103+84.22	29.97	RT	NW 150TH	403	105+44.24	29.97	RT	NW 150TH
304	103+99.22	30.55	RT	NW 150TH	404	105+44.21	35.25	RT	NW 150TH
305	103+89.19	35.50	RT	NW 150TH	405	105+52.24	29.77	RT	NW 150TH
306	103+99.83	35.50	RT	NW 150TH	406	105+59.24	29.78	RT	NW 150TH
307	104+16.45	40.55	RT	NW 150TH	407	105+24.76	41.15	RT	NW 150TH
308	103+78.19	36.67	RT	NW 150TH	408	105+39.19	41.22	RT	NW 150TH
309	103+66.16	33.42	RT	NW 150TH	409	105+44.16	41.25	RT	NW 150TH
310	103+64.17	40.47	RT	NW 150TH	410	105+52.20	38.76	RT	NW 150TH
311	103+59.17	40.50	RT	NW 150TH	411	105+59.21	36.53	RT	NW 150TH
312	10+74.26	51.34	LT	LOPE OAK	412	10+71.81	42.87	RT	LOPE OAK



**PRELIMINARY  
PLAN SET**  
APRIL 2024



**LEGEND**

- REMOVAL OF LANDSCAPING
- REMOVAL OF CONCRETE SIDEWALK
- SAW CUT
- CURB & GUTTER REMOVAL
- REMOVAL OF EXISTING SIGN

THIS DOCUMENT IS PRELIMINARY IN NATURE AND IS NOT A FINAL, SIGNED AND SEALED DOCUMENT.

Drawn	TR	126 155TH ST & LONE OAK DR	OKLAHOMA COUNTY
Checked	JK		
Reviewed	JF		
Approved	AV		
Scale	AS		

**REMOVAL PLAN**

Plan No. 10-0631 Sheet 7

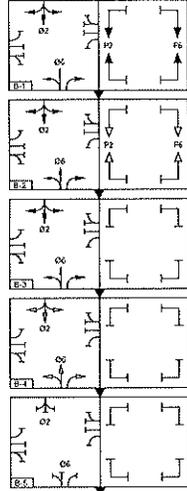
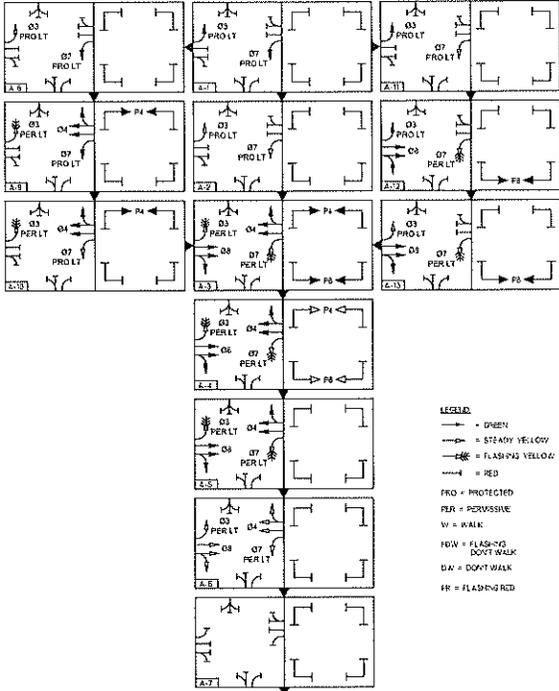
4/2/2024  
 8:26:14 AM  
 F:\2024\10-0631\10-0631-01\10-0631-01.dwg



**PHASING DIAGRAM**

EAST-WEST MOVEMENTS  
NW 150TH ST

NORTH-SOUTH MOVEMENTS  
LDNE OAK DR



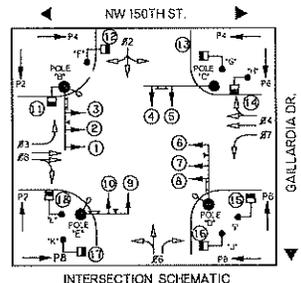
- LEGEND**
- = GREEN
  - = STEADY YELLOW
  - = FLASHING YELLOW
  - = RED
- PRO = PROTECTED  
PER = PERMISSIVE  
W = WALK  
RDW = FLASHING DON'T WALK  
DA = DON'T WALK  
FR = FLASHING RED

TOR OCK B1-B3  
A1-A3 A5-A7 C8-A-V

TOR OCK A1-A3 A5-A7  
B1-OR-B3

**SEQUENCE CHART**

BLOCK	PHASE DESCRIPTION	SIGNAL PHASE									
		G1	G2	G3	G4	G5	G6	G7	G8	G9	G10
A-1	G1 & G7 PRO LT ROW	1	1	1	1	1	1	1	1	1	1
A-2	G2 & G8 PRO LT CLEAR	1	1	1	1	1	1	1	1	1	1
A-3	G3 & G9 PRO LT ROW PERLT ROW PERLT ROW	1	1	1	1	1	1	1	1	1	1
A-4	G4 & G10 PRO LT ROW PERLT ROW PERLT ROW	1	1	1	1	1	1	1	1	1	1
A-5	G5 & G11 PRO LT ROW PERLT ROW PERLT ROW	1	1	1	1	1	1	1	1	1	1
A-6	G6 & G12 PRO LT ROW PERLT ROW PERLT ROW	1	1	1	1	1	1	1	1	1	1
A-7	ALL RED	1	1	1	1	1	1	1	1	1	1
B-1	G1 & G7 PRO LT ROW G3 PRO LT CLEAR	1	1	1	1	1	1	1	1	1	1
B-2	G2 PRO LT, G4 & G8 PRO LT PERLT	1	1	1	1	1	1	1	1	1	1
B-3	G3 PRO LT ROW G5 PRO LT CLEAR G7 PERLT	1	1	1	1	1	1	1	1	1	1
B-4	G4 PRO LT, G6 & G10 PRO LT PERLT	1	1	1	1	1	1	1	1	1	1
B-5	ALL RED	1	1	1	1	1	1	1	1	1	1
C-1	FLASHING RED	1	1	1	1	1	1	1	1	1	1



**INTERSECTION SCHEMATIC**

THIS DOCUMENT IS PRELIMINARY IN NATURE AND IS NOT A FINAL, SIGNED AND SEALED DOCUMENT.

Copy	No.	11615514 ST & LDNE OAK DR	04/18/24 02:27:17
Drawn	By		
Checked	By		
Approved	By		
Date			

**TRAFFIC SIGNAL SEQUENCING**

Plan No. 11615514-01

4/15/24  
 04/18/24  
 11615514-01 ST & LDNE OAK DR  
 04/18/24 02:27:17

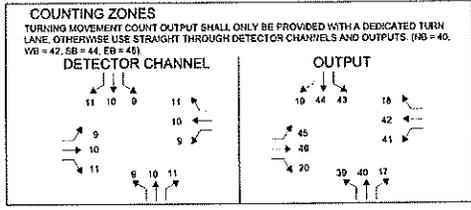
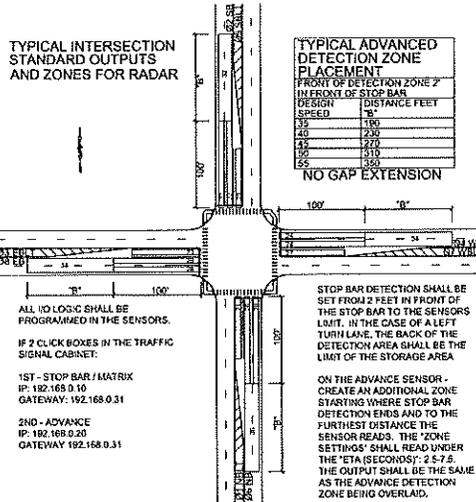
PRELIMINARY  
PLAN SET  
APRIL 2024

SIGN DETAIL  
N.T.S.



ITEM	DESCRIPTION	UNIT	QUANTITY
1	TRAFFIC SIGN	SQ. FT.	1
2	POST	INCHES	1
3	BRACKET	PAIRS	1
4	WASHER	PAIRS	1
5	NUT	PAIRS	1
6	SCREW	PAIRS	1
7	PLATE	PAIRS	1
8	SPACER	PAIRS	1
9	WASHER	PAIRS	1
10	NUT	PAIRS	1
11	SCREW	PAIRS	1
12	PLATE	PAIRS	1
13	SPACER	PAIRS	1
14	WASHER	PAIRS	1
15	NUT	PAIRS	1
16	SCREW	PAIRS	1
17	PLATE	PAIRS	1
18	SPACER	PAIRS	1
19	WASHER	PAIRS	1
20	NUT	PAIRS	1
21	SCREW	PAIRS	1
22	PLATE	PAIRS	1
23	SPACER	PAIRS	1
24	WASHER	PAIRS	1
25	NUT	PAIRS	1
26	SCREW	PAIRS	1
27	PLATE	PAIRS	1
28	SPACER	PAIRS	1
29	WASHER	PAIRS	1
30	NUT	PAIRS	1
31	SCREW	PAIRS	1
32	PLATE	PAIRS	1
33	SPACER	PAIRS	1
34	WASHER	PAIRS	1
35	NUT	PAIRS	1
36	SCREW	PAIRS	1
37	PLATE	PAIRS	1
38	SPACER	PAIRS	1
39	WASHER	PAIRS	1
40	NUT	PAIRS	1
41	SCREW	PAIRS	1
42	PLATE	PAIRS	1
43	SPACER	PAIRS	1
44	WASHER	PAIRS	1
45	NUT	PAIRS	1
46	SCREW	PAIRS	1
47	PLATE	PAIRS	1
48	SPACER	PAIRS	1
49	WASHER	PAIRS	1
50	NUT	PAIRS	1
51	SCREW	PAIRS	1
52	PLATE	PAIRS	1
53	SPACER	PAIRS	1
54	WASHER	PAIRS	1
55	NUT	PAIRS	1
56	SCREW	PAIRS	1
57	PLATE	PAIRS	1
58	SPACER	PAIRS	1
59	WASHER	PAIRS	1
60	NUT	PAIRS	1
61	SCREW	PAIRS	1
62	PLATE	PAIRS	1
63	SPACER	PAIRS	1
64	WASHER	PAIRS	1
65	NUT	PAIRS	1
66	SCREW	PAIRS	1
67	PLATE	PAIRS	1
68	SPACER	PAIRS	1
69	WASHER	PAIRS	1
70	NUT	PAIRS	1
71	SCREW	PAIRS	1
72	PLATE	PAIRS	1
73	SPACER	PAIRS	1
74	WASHER	PAIRS	1
75	NUT	PAIRS	1
76	SCREW	PAIRS	1
77	PLATE	PAIRS	1
78	SPACER	PAIRS	1
79	WASHER	PAIRS	1
80	NUT	PAIRS	1
81	SCREW	PAIRS	1
82	PLATE	PAIRS	1
83	SPACER	PAIRS	1
84	WASHER	PAIRS	1
85	NUT	PAIRS	1
86	SCREW	PAIRS	1
87	PLATE	PAIRS	1
88	SPACER	PAIRS	1
89	WASHER	PAIRS	1
90	NUT	PAIRS	1
91	SCREW	PAIRS	1
92	PLATE	PAIRS	1
93	SPACER	PAIRS	1
94	WASHER	PAIRS	1
95	NUT	PAIRS	1
96	SCREW	PAIRS	1
97	PLATE	PAIRS	1
98	SPACER	PAIRS	1
99	WASHER	PAIRS	1
100	NUT	PAIRS	1

LETTER POSITIONS (X)	LENGTH	SERIES/SIZE
15.1 15.4 15.7 16.0 16.3 16.6 16.9 17.2 17.5 17.8 18.1 18.4 18.7 19.0 19.3 19.6 19.9 20.2 20.5 20.8 21.1 21.4 21.7 22.0 22.3 22.6 22.9 23.2 23.5 23.8 24.1 24.4 24.7 25.0 25.3 25.6 25.9 26.2 26.5 26.8 27.1 27.4 27.7 28.0 28.3 28.6 28.9 29.2 29.5 29.8 30.1 30.4 30.7 31.0 31.3 31.6 31.9 32.2 32.5 32.8 33.1 33.4 33.7 34.0 34.3 34.6 34.9 35.2 35.5 35.8 36.1 36.4 36.7 37.0 37.3 37.6 37.9 38.2 38.5 38.8 39.1 39.4 39.7 40.0 40.3 40.6 40.9 41.2 41.5 41.8 42.1 42.4 42.7 43.0 43.3 43.6 43.9 44.2 44.5 44.8 45.1 45.4 45.7 46.0 46.3 46.6 46.9 47.2 47.5 47.8 48.1 48.4 48.7 49.0 49.3 49.6 49.9 50.2 50.5 50.8 51.1 51.4 51.7 52.0 52.3 52.6 52.9 53.2 53.5 53.8 54.1 54.4 54.7 55.0 55.3 55.6 55.9 56.2 56.5 56.8 57.1 57.4 57.7 58.0 58.3 58.6 58.9 59.2 59.5 59.8 60.1 60.4 60.7 61.0 61.3 61.6 61.9 62.2 62.5 62.8 63.1 63.4 63.7 64.0 64.3 64.6 64.9 65.2 65.5 65.8 66.1 66.4 66.7 67.0 67.3 67.6 67.9 68.2 68.5 68.8 69.1 69.4 69.7 70.0 70.3 70.6 70.9 71.2 71.5 71.8 72.1 72.4 72.7 73.0 73.3 73.6 73.9 74.2 74.5 74.8 75.1 75.4 75.7 76.0 76.3 76.6 76.9 77.2 77.5 77.8 78.1 78.4 78.7 79.0 79.3 79.6 79.9 80.2 80.5 80.8 81.1 81.4 81.7 82.0 82.3 82.6 82.9 83.2 83.5 83.8 84.1 84.4 84.7 85.0 85.3 85.6 85.9 86.2 86.5 86.8 87.1 87.4 87.7 88.0 88.3 88.6 88.9 89.2 89.5 89.8 90.1 90.4 90.7 91.0 91.3 91.6 91.9 92.2 92.5 92.8 93.1 93.4 93.7 94.0 94.3 94.6 94.9 95.2 95.5 95.8 96.1 96.4 96.7 97.0 97.3 97.6 97.9 98.2 98.5 98.8 99.1 99.4 99.7 100.0 100.3 100.6 100.9 101.2 101.5 101.8 102.1 102.4 102.7 103.0 103.3 103.6 103.9 104.2 104.5 104.8 105.1 105.4 105.7 106.0 106.3 106.6 106.9 107.2 107.5 107.8 108.1 108.4 108.7 109.0 109.3 109.6 109.9 110.2 110.5 110.8 111.1 111.4 111.7 112.0 112.3 112.6 112.9 113.2 113.5 113.8 114.1 114.4 114.7 115.0 115.3 115.6 115.9 116.2 116.5 116.8 117.1 117.4 117.7 118.0 118.3 118.6 118.9 119.2 119.5 119.8 120.1 120.4 120.7 121.0 121.3 121.6 121.9 122.2 122.5 122.8 123.1 123.4 123.7 124.0 124.3 124.6 124.9 125.2 125.5 125.8 126.1 126.4 126.7 127.0 127.3 127.6 127.9 128.2 128.5 128.8 129.1 129.4 129.7 130.0 130.3 130.6 130.9 131.2 131.5 131.8 132.1 132.4 132.7 133.0 133.3 133.6 133.9 134.2 134.5 134.8 135.1 135.4 135.7 136.0 136.3 136.6 136.9 137.2 137.5 137.8 138.1 138.4 138.7 139.0 139.3 139.6 139.9 140.2 140.5 140.8 141.1 141.4 141.7 142.0 142.3 142.6 142.9 143.2 143.5 143.8 144.1 144.4 144.7 145.0 145.3 145.6 145.9 146.2 146.5 146.8 147.1 147.4 147.7 148.0 148.3 148.6 148.9 149.2 149.5 149.8 150.1 150.4 150.7 151.0 151.3 151.6 151.9 152.2 152.5 152.8 153.1 153.4 153.7 154.0 154.3 154.6 154.9 155.2 155.5 155.8 156.1 156.4 156.7 157.0 157.3 157.6 157.9 158.2 158.5 158.8 159.1 159.4 159.7 160.0 160.3 160.6 160.9 161.2 161.5 161.8 162.1 162.4 162.7 163.0 163.3 163.6 163.9 164.2 164.5 164.8 165.1 165.4 165.7 166.0 166.3 166.6 166.9 167.2 167.5 167.8 168.1 168.4 168.7 169.0 169.3 169.6 169.9 170.2 170.5 170.8 171.1 171.4 171.7 172.0 172.3 172.6 172.9 173.2 173.5 173.8 174.1 174.4 174.7 175.0 175.3 175.6 175.9 176.2 176.5 176.8 177.1 177.4 177.7 178.0 178.3 178.6 178.9 179.2 179.5 179.8 180.1 180.4 180.7 181.0 181.3 181.6 181.9 182.2 182.5 182.8 183.1 183.4 183.7 184.0 184.3 184.6 184.9 185.2 185.5 185.8 186.1 186.4 186.7 187.0 187.3 187.6 187.9 188.2 188.5 188.8 189.1 189.4 189.7 190.0 190.3 190.6 190.9 191.2 191.5 191.8 192.1 192.4 192.7 193.0 193.3 193.6 193.9 194.2 194.5 194.8 195.1 195.4 195.7 196.0 196.3 196.6 196.9 197.2 197.5 197.8 198.1 198.4 198.7 199.0 199.3 199.6 199.9 200.2 200.5 200.8 201.1 201.4 201.7 202.0 202.3 202.6 202.9 203.2 203.5 203.8 204.1 204.4 204.7 205.0 205.3 205.6 205.9 206.2 206.5 206.8 207.1 207.4 207.7 208.0 208.3 208.6 208.9 209.2 209.5 209.8 210.1 210.4 210.7 211.0 211.3 211.6 211.9 212.2 212.5 212.8 213.1 213.4 213.7 214.0 214.3 214.6 214.9 215.2 215.5 215.8 216.1 216.4 216.7 217.0 217.3 217.6 217.9 218.2 218.5 218.8 219.1 219.4 219.7 220.0 220.3 220.6 220.9 221.2 221.5 221.8 222.1 222.4 222.7 223.0 223.3 223.6 223.9 224.2 224.5 224.8 225.1 225.4 225.7 226.0 226.3 226.6 226.9 227.2 227.5 227.8 228.1 228.4 228.7 229.0 229.3 229.6 229.9 230.2 230.5 230.8 231.1 231.4 231.7 232.0 232.3 232.6 232.9 233.2 233.5 233.8 234.1 234.4 234.7 235.0 235.3 235.6 235.9 236.2 236.5 236.8 237.1 237.4 237.7 238.0 238.3 238.6 238.9 239.2 239.5 239.8 240.1 240.4 240.7 241.0 241.3 241.6 241.9 242.2 242.5 242.8 243.1 243.4 243.7 244.0 244.3 244.6 244.9 245.2 245.5 245.8 246.1 246.4 246.7 247.0 247.3 247.6 247.9 248.2 248.5 248.8 249.1 249.4 249.7 250.0 250.3 250.6 250.9 251.2 251.5 251.8 252.1 252.4 252.7 253.0 253.3 253.6 253.9 254.2 254.5 254.8 255.1 255.4 255.7 256.0 256.3 256.6 256.9 257.2 257.5 257.8 258.1 258.4 258.7 259.0 259.3 259.6 259.9 260.2 260.5 260.8 261.1 261.4 261.7 262.0 262.3 262.6 262.9 263.2 263.5 263.8 264.1 264.4 264.7 265.0 265.3 265.6 265.9 266.2 266.5 266.8 267.1 267.4 267.7 268.0 268.3 268.6 268.9 269.2 269.5 269.8 270.1 270.4 270.7 271.0 271.3 271.6 271.9 272.2 272.5 272.8 273.1 273.4 273.7 274.0 274.3 274.6 274.9 275.2 275.5 275.8 276.1 276.4 276.7 277.0 277.3 277.6 277.9 278.2 278.5 278.8 279.1 279.4 279.7 280.0 280.3 280.6 280.9 281.2 281.5 281.8 282.1 282.4 282.7 283.0 283.3 283.6 283.9 284.2 284.5 284.8 285.1 285.4 285.7 286.0 286.3 286.6 286.9 287.2 287.5 287.8 288.1 288.4 288.7 289.0 289.3 289.6 289.9 290.2 290.5 290.8 291.1 291.4 291.7 292.0 292.3 292.6 292.9 293.2 293.5 293.8 294.1 294.4 294.7 295.0 295.3 295.6 295.9 296.2 296.5 296.8 297.1 297.4 297.7 298.0 298.3 298.6 298.9 299.2 299.5 299.8 300.1 300.4 300.7 301.0 301.3 301.6 301.9 302.2 302.5 302.8 303.1 303.4 303.7 304.0 304.3 304.6 304.9 305.2 305.5 305.8 306.1 306.4 306.7 307.0 307.3 307.6 307.9 308.2 308.5 308.8 309.1 309.4 309.7 310.0 310.3 310.6 310.9 311.2 311.5 311.8 312.1 312.4 312.7 313.0 313.3 313.6 313.9 314.2 314.5 314.8 315.1 315.4 315.7 316.0 316.3 316.6 316.9 317.2 317.5 317.8 318.1 318.4 318.7 319.0 319.3 319.6 319.9 320.2 320.5 320.8 321.1 321.4 321.7 322.0 322.3 322.6 322.9 323.2 323.5 323.8 324.1 324.4 324.7 325.0 325.3 325.6 325.9 326.2 326.5 326.8 327.1 327.4 327.7 328.0 328.3 328.6 328.9 329.2 329.5 329.8 330.1 330.4 330.7 331.0 331.3 331.6 331.9 332.2 332.5 332.8 333.1 333.4 333.7 334.0 334.3 334.6 334.9 335.2 335.5 335.8 336.1 336.4 336.7 337.0 337.3 337.6 337.9 338.2 338.5 338.8 339.1 339.4 339.7 340.0 340.3 340.6 340.9 341.2 341.5 341.8 342.1 342.4 342.7 343.0 343.3 343.6 343.9 344.2 344.5 344.8 345.1 345.4 345.7 346.0 346.3 346.6 346.9 347.2 347.5 347.8 348.1 348.4 348.7 349.0 349.3 349.6 349.9 350.2 350.5 350.8 351.1 351.4 351.7 352.0 352.3 352.6 352.9 353.2 353.5 353.8 354.1 354.4 354.7 355.0 355.3 355.6 355.9 356.2 356.5 356.8 357.1 357.4 357.7 358.0 358.3 358.6 358.9 359.2 359.5 359.8 360.1 360.4 360.7 361.0 361.3 361.6 361.9 362.2 362.5 362.8 363.1 363.4 363.7 364.0 364.3 364.6 364.9 365.2 365.5 365.8 366.1 366.4 366.7 367.0 367.3 367.6 367.9 368.2 368.5 368.8 369.1 369.4 369.7 370.0 370.3 370.6 370.9 371.2 371.5 371.8 372.1 372.4 372.7 373.0 373.3 373.6 373.9 374.2 374.5 374.8 375.1 375.4 375.7 376.0 376.3 376.6 376.9 377.2 377.5 377.8 378.1 378.4 378.7 379.0 379.3 379.6 379.9 380.2 380.5 380.8 381.1 381.4 381.7 382.0 382.3 382.6 382.9 383.2 383.5 383.8 384.1 384.4 384.7 385.0 385.3 385.6 385.9 386.2 386.5 386.8 387.1 387.4 387.7 388.0 388.3 388.6 388.9 389.2 389.5 389.8 390.1 390.4 390.7 391.0 391.3 391.6 391.9 392.2 392.5 392.8 393.1 393.4 393.7 394.0 394.3 394.6 394.9 395.2 395.5 395.8 396.1 396.4 396.7 397.0 397.3 397.6 397.9 398.2 398.5 398.8 399.1 399.4 399.7 400.0 400.3 400.6 400.9 401.2 401.5 401.8 402.1 402.4 402.7 403.0 403.3 403.6 403.9 404.2 404.5 404.8 405.1 405.4 405.7 406.0 406.3 406.6 406.9 407.2 407.5 407.8 408.1 408.4 408.7 409.0 409.3 409.6 409.9 410.2 410.5 410.8 411.1 411.4 411.7 412.0 412.3 412.6 412.9 413.2 413.5 413.8 414.1 414.4 414.7 415.0 415.3 415.6 415.9 416.2 416.5 416.8 417.1 417.4 417.7 418.0 418.3 418.6 418.9 419.2 419.5 419.8 420.1 420.4 420.7 421.0 421.3 421.6 421.9 422.2 422.5 422.8 423.1 423.4 423.7 424.0 424.3 424.6 424.9 425.2 425.5 425.8 426.1 426.4 426.7 427.0 427.3 427.6 427.9 428.2 428.5 428.8 429.1 429.4 429.7 430.0 430.3 430.6 430.9 431.2 431.5 431.8 432.1 432.4 432.7 433.0 433.3 433.6 433.9 434.2 434.5 434.8 435.1 435.4 435.7 436.0 4		



**TYPICAL RADAR DETECTOR CHANNEL AND OUTPUT SETTINGS**

PHASE	DETECTION		COUNTING		DESCRIPTION
	DETECTOR CHANNEL	OUTPUT	DETECTOR CHANNEL	OUTPUT	
1	1	22	10	44	SB STOP BAR
2	2	23	11	45	SB STOP BAR RIGHT TURN
2	2	32	-	-	SB ADVANCE
2	2	33	-	-	SB ADVANCE 'ETA SETTINGS'
3	3	24	8	41	SB STOP BAR LEFT TURN
4	4	25	9	42	WB STOP BAR
4	4	24	11	18	WB STOP BAR RIGHT TURN
4	4	34	-	-	WB ADVANCE
4	4	34	-	-	WB ADVANCE 'ETA SETTINGS'
5	5	27	9	41	WB STOP BAR LEFT TURN
5	5	28	10	42	NB STOP BAR
5	5	26	11	17	NB STOP BAR RIGHT TURN
5	5	36	-	-	NB ADVANCE
5	5	36	-	-	NB ADVANCE 'ETA SETTINGS'
6	6	21	8	39	NB STOP BAR LEFT TURN
6	6	28	10	45	EB STOP BAR
6	6	38	11	20	EB STOP BAR RIGHT TURN
6	6	38	-	-	EB ADVANCE
6	6	38	-	-	EB ADVANCE 'ETA SETTINGS'
6	6	23	9	45	EB STOP BAR LEFT TURN

THIS DOCUMENT IS PRELIMINARY IN NATURE AND IS NOT A FINAL, SIGNED AND SEALED DOCUMENT.

Client	NO. 105TH ST & LOS OSAKOS	CLAY COUNTY
Drawn		
Checked		
Approved		
Date	03/20/24	10-0531

TRAFFIC SIGNAL DETECTION DETAIL (RADAR)

4/5/2024  
 8:30 AM  
 C:\Users\jdoyle\OneDrive\Documents\105th St Signal\105th St Signal.dwg





# **PRELIMINARY ENGINEERING REPORT**

The City of Oklahoma City

April 2024

Project No. TC-0631, Task 1



The City of  
**OKLAHOMA CITY**

**olsson**