PROJECT NAME: NETWORK EXPANSION COUNTY VOLUME 1

WORK PLAN INDEX

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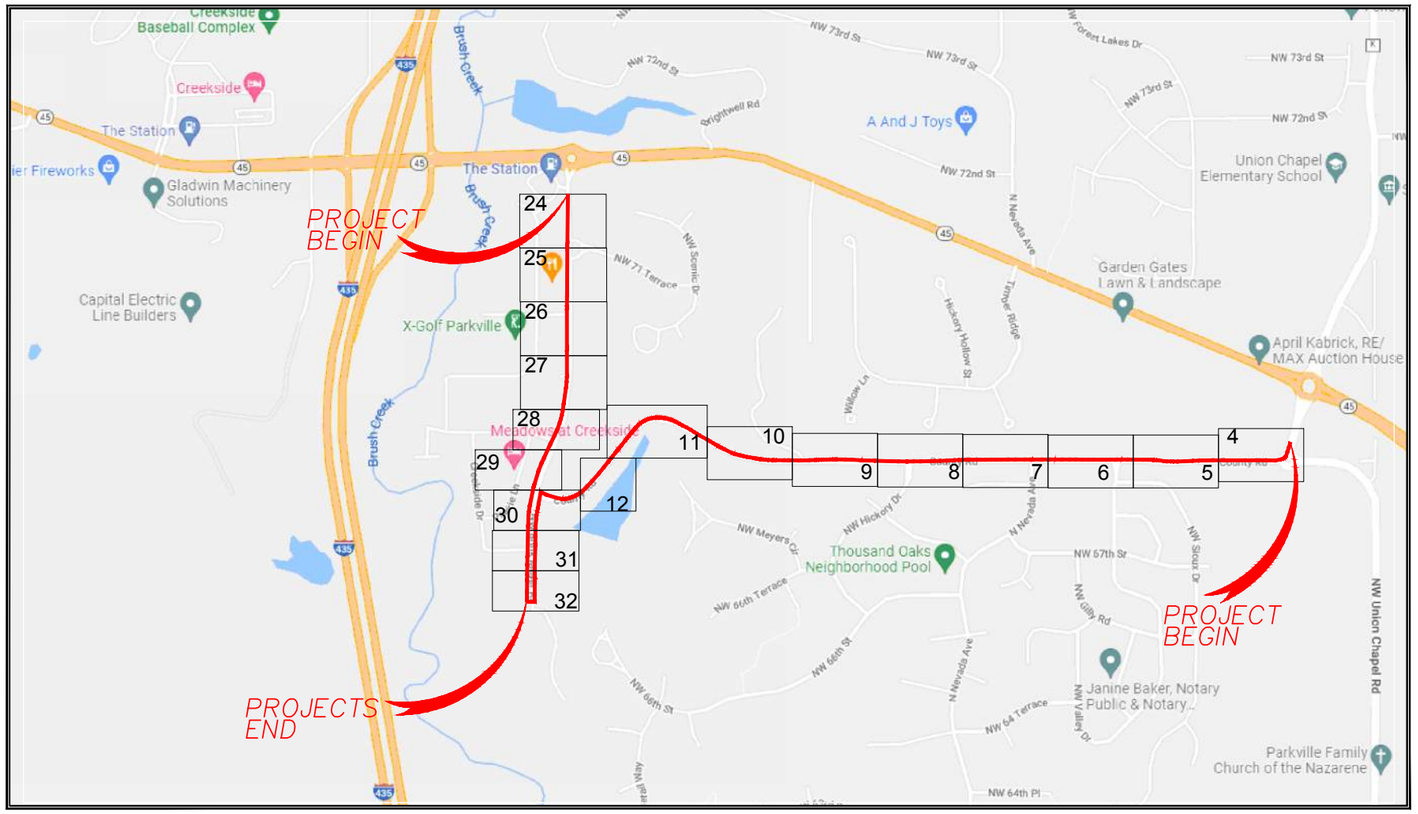
2	GENERAL NOTES/LEGEND
4–12, 24–32	DESIGN PLAN SHEETS
22	TYPICAL DETAILS
23	FINAL QUANTITIES



Vicinity Map

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PE Stamp & Approval
CLARENCE R. GASTINEAU
MO. NO. PE-2008025192

REV. NO.	DATE	REVISIONS DESCRIPTION

REVISIONS

COVER SHEET

SUPPORT SERVICES NORTH RING NETWORK EXTENSION

PARKVILLE, MO

2023

drawn by: SPM
checked by: DAH
approved by: CRG
project no.: project no.
drawing no.:
date: 9/21/2023

SHEET 1 OF 35

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LEGEND-KEY

UTILITY POLE	
UTILITY MANHOLE	
UTILITY HANDHOLE	
TELEPHONE PED – CROSS BOX	
EXISTING MANHOLE	
EXISTING HANDHOLE	
EXISTING COIL	
EXISTING AERIAL COIL	
EXISTING DOWN GUY	
EXISTING SPLICE POINT	
TREE	
PROPOSED MANHOLE	
PROPOSED HANDHOLE	
PROPOSED COIL	
PROPOSED AERIAL COIL	
PROPOSED DOWN GUY	
PROPOSED SPLICE POINT	
PROPOSED FIBER DISTRIBUTION PANEL	
PROPOSED BORE PIT	
PROPOSED PULL BOX	
PROPOSED RUNNING LINE	
FLOW LINE	
FIBER OPTIC CABLE	
EDGE OF PAVEMENT	
CUT & RESTORE CONC./ASPH.	
INLET	
INLET GRATE	
	G — GAS
	W — WATER
	T — TELEPHONE
	E — ELECTRIC
	SEW — SANITARY SEWER (SEW)
	SD — STORM SEWER
	X — X — FENCE
	TV — CABLE TV
	STM — STEAM
	OIL — OIL
	UNK — UNKNOWN UTILITY
	R/W — RIGHT OF WAY
	EOP — EDGE OF PAVEMENT
	UTILITY EASEMENT — UTILITY EASEMENT
	UTILITY CORRIDOR — MODOT UTILITY CORRIDOR
	EXISTING CONDUIT
	EXISTING AERIAL FIBER
	EXISTING STRAND
	PROPOSED CONDUIT
	PROPOSED AERIAL FIBER
	PROPOSED STRAND

1. CONTRACTOR MUST OBTAIN LOCATES PRIOR TO ANY TYPE OF EXCAVATION.

2. CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE NECESSARY REQUIRED PERMITS PERTAINING TO ALL ASPECTS OF THE PROJECT AND MUST HAVE THE APPROPRIATE PERMITS AT THE JOB SITE.

3. ALL CABLE WILL BE PLACED AT STANDARD MINIMUM DEPTH OF 36" IN UNPAVED AREAS AND 48" MINIMUM BELOW STREETS AT ALL TIMES, UNLESS OTHERWISE NOTED IN THE PLANS.

4. ANY LANDSCAPING WILL BE REPLACED TO EQUAL OR BETTER THAN THAT WHICH EXISTED PRIOR TO WORK.

5. PROJECT SITE WILL BE PROPERLY SECURED PRIOR TO THE END OF EACH DAY.

6. ALL WORK IS TO BE IN ACCORDANCE WITH AUTHORITIES HAVING JURISDICTION IN THE WORK ZONE.

7. CONTRACTORS ARE ADVISED TO CONTACT PHSD FOR ANY ADDITIONAL INFORMATION OR CLARIFICATION CONCERNING SCOPE OF WORK OR THE REQUIREMENTS NECESSARY FOR PROJECT COMPLETION.

8. ANY FIELD ADJUSTMENTS TO THE PROPOSED PLAN MUST BE APPROVED BY AN APPROPRIATE PHSD REPRESENTATIVE.

9. BEFORE CONSTRUCTION BEGINS, CONTRACTOR SHALL TAKE THE APPROPRIATE PRECAUTIONS TO AVOID ANY POTENTIAL OBSTRUCTIONS PRIOR TO PROCEEDING WITH WORK.

10. OLSSON ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITY LOCATIONS (HORIZONTAL OR VERTICAL) OR RIGHT-OF-WAY LOCATION. THE EXISTING UTILITIES AND RIGHT-OF-WAY SHOWN ON THESE PLANS HAVE BEEN PLOTTED FROM THE BEST INFORMATION AVAILABLE. IT IS HOWEVER , THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE LOCATION OF ALL UTILITIES AND RIGHT-OF-WAY PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.

11. MODOT: OLSSON ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITY LOCATIONS (HORIZONTAL OR VERTICAL) OR RIGHT-OF-WAY PLACEMENT. THE EXISTING UTILITIES AND RIGHT-OF-WAY SHOWN ON THESE PLANS HAVE BEEN PLOTTED FROM THE BEST INFORMATION AVAILABLE. IT IS HOWEVER , THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE LOCATION OF ALL UTILITIES AND RIGHT-OF-WAY PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. MODOT REQUIRES UTILITIES TO BE PLACED IN THE LAST 6' OF THEIR RIGHT-OF-WAY IN THE "UTILITY COORIDOR" IN HDPE CONDUIT RUNNING PARALLEL AT A 30" MINIMUM DEPTH AND PERPENDICULAR CROSSINGS AT A 72" MINIMUM DEPTH. PERPENDICULAR CROSSINGS MAY BE PLACED AT A 48" MINIMUM DEPTH IF PLACED IN STEEL CONDUIT.

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MO. NO. PE-2008025192

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REVISIONS

GENERAL NOTES/LEGEND

SUPPORT SERVICES NORTH RING NETWORK EXTENSION

PARKVILLE, MO

2023

drawn by: SPM
checked by: DAH
approved by: CRG
project no.: project no.
drawing no.:
date: 9/21/2023

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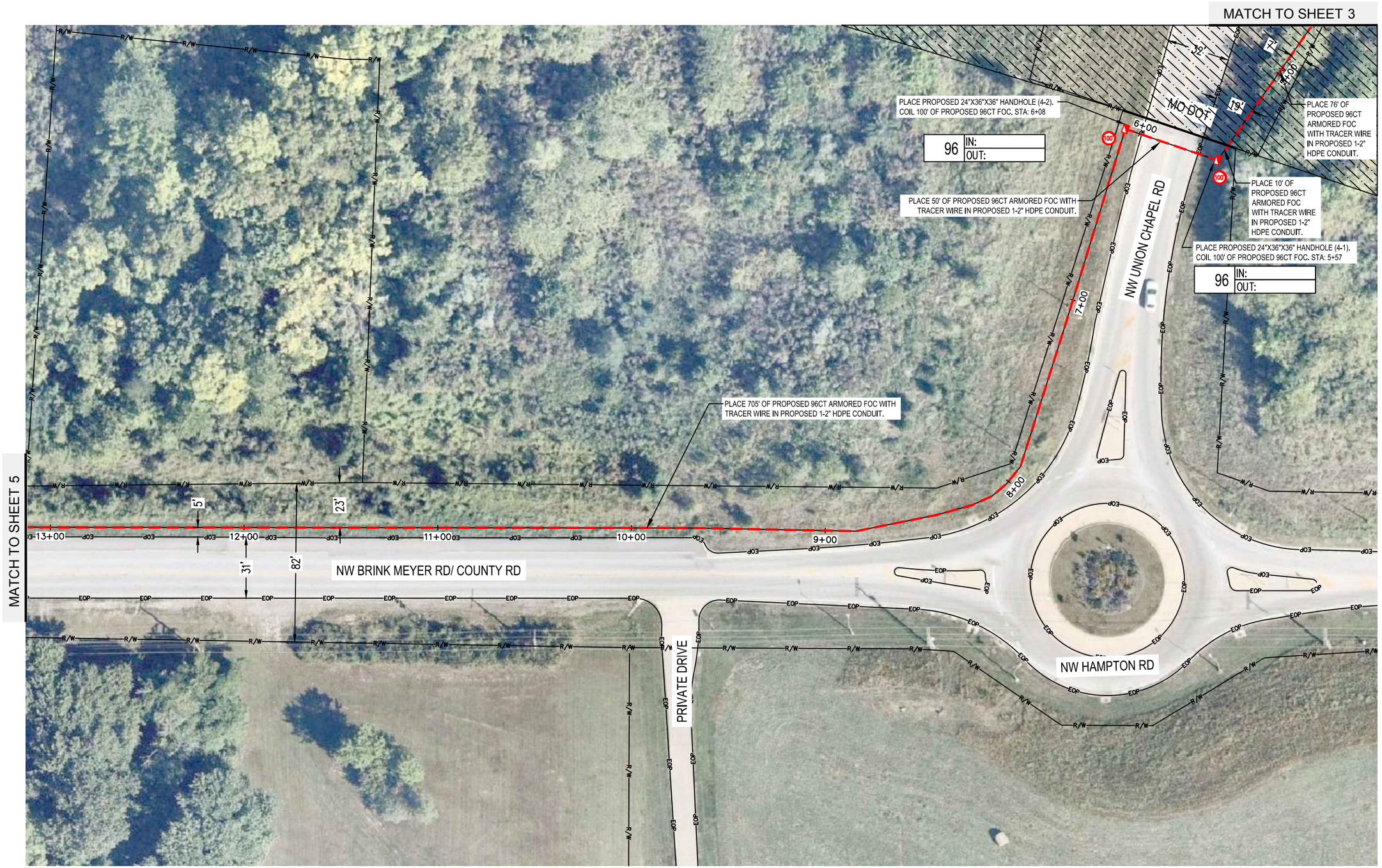

SHEET QUANTITIES

ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	765
2.	SUPPLY & INSTALL TRACER WIRE	LF	765
3.	SUPPLY & INSTALL 24"X36"X36" HANDHOLE	EACH	2
4.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	965

HATCH AREA IS PART OF UG MODOT PERMIT #1

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PROJECT SHEET

SUPPORT SERVICES NORTH RING
PARK HILL SCHOOL DISTRICT

PARKVILLE, MO

2023

drawn by: CAS
checked by: JMC
approved by: ENG
project no.:
drawing no.:

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SHEET QUANTITIES

ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	699
2.	SUPPLY & INSTALL TRACER WIRE	LF	699
3.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	699

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SHEET QUANTITIES

ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	697
2.	SUPPLY & INSTALL TRACER WIRE	LF	697
3.	SUPPLY & INSTALL 24"X36"X36" HANDHOLE	EACH	1
4.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	797

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1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	697
2.	SUPPLY & INSTALL TRACER WIRE	LF	697
3.	SUPPLY & INSTALL 24"X36"X36" HANDHOLE	EACH	1
4.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	797

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SHEET QUANTITIES

ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	698
2.	SUPPLY & INSTALL TRACER WIRE	LF	698
3.	SUPPLY & INSTALL 30"X48"X36" HANDHOLE	EACH	1
4.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	798

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PARK HILL SCHOOL DISTRICT

PARKVILLE, MO

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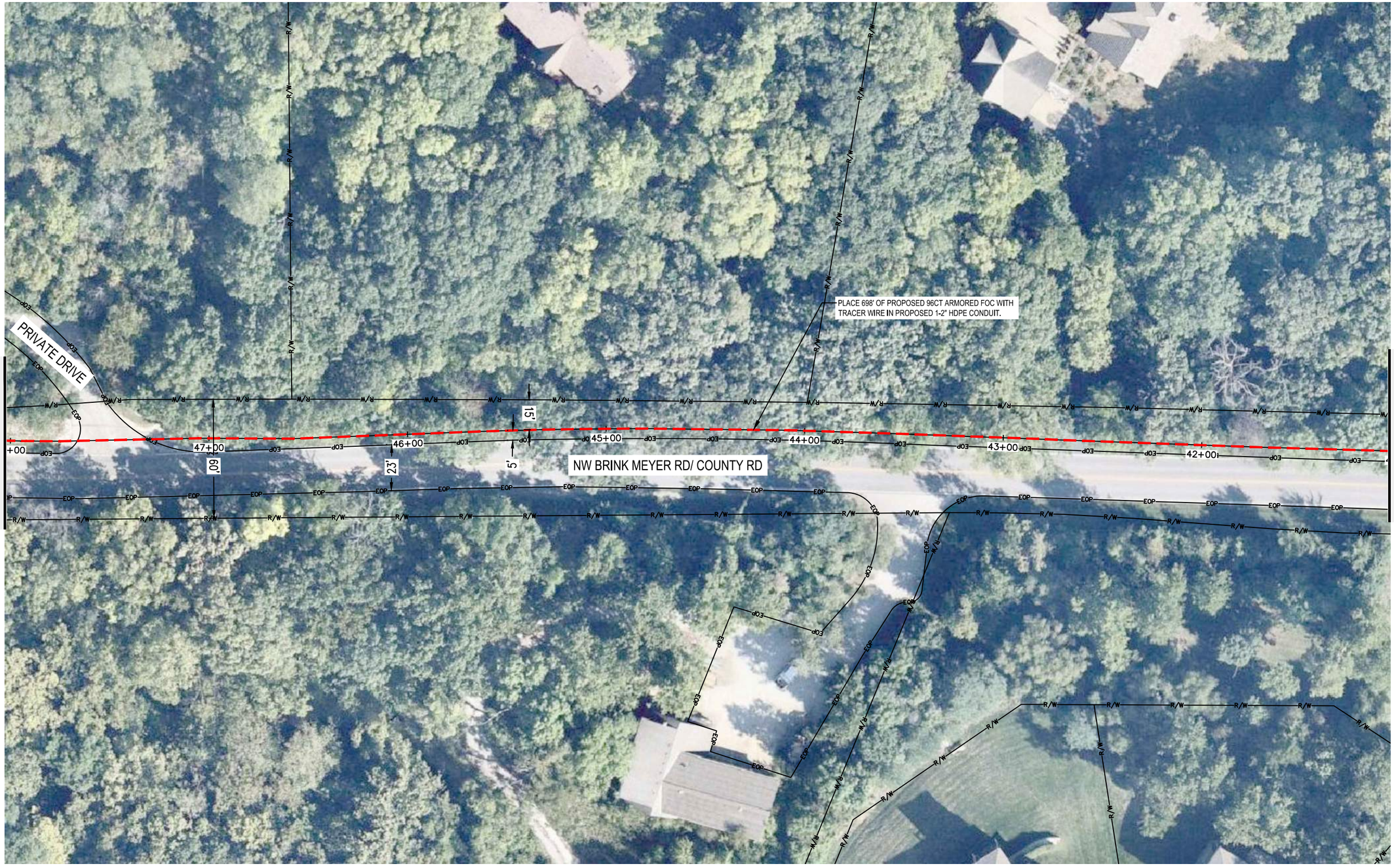

SHEET QUANTITIES

ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	698
2.	SUPPLY & INSTALL TRACER WIRE	LF	698
3.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	698

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PARKVILLE, MO

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SHEET QUANTITIES

ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	726
2.	SUPPLY & INSTALL TRACER WIRE	LF	726
3.	SUPPLY & INSTALL 24"X36"X36" HANDHOLE	EACH	1
4.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	826

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PROJECT SHEET

SUPPORT SERVICES NORTH RING
PARK HILL SCHOOL DISTRICT

PARKVILLE, MO

2023

drawn by: SPM
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10 of 35

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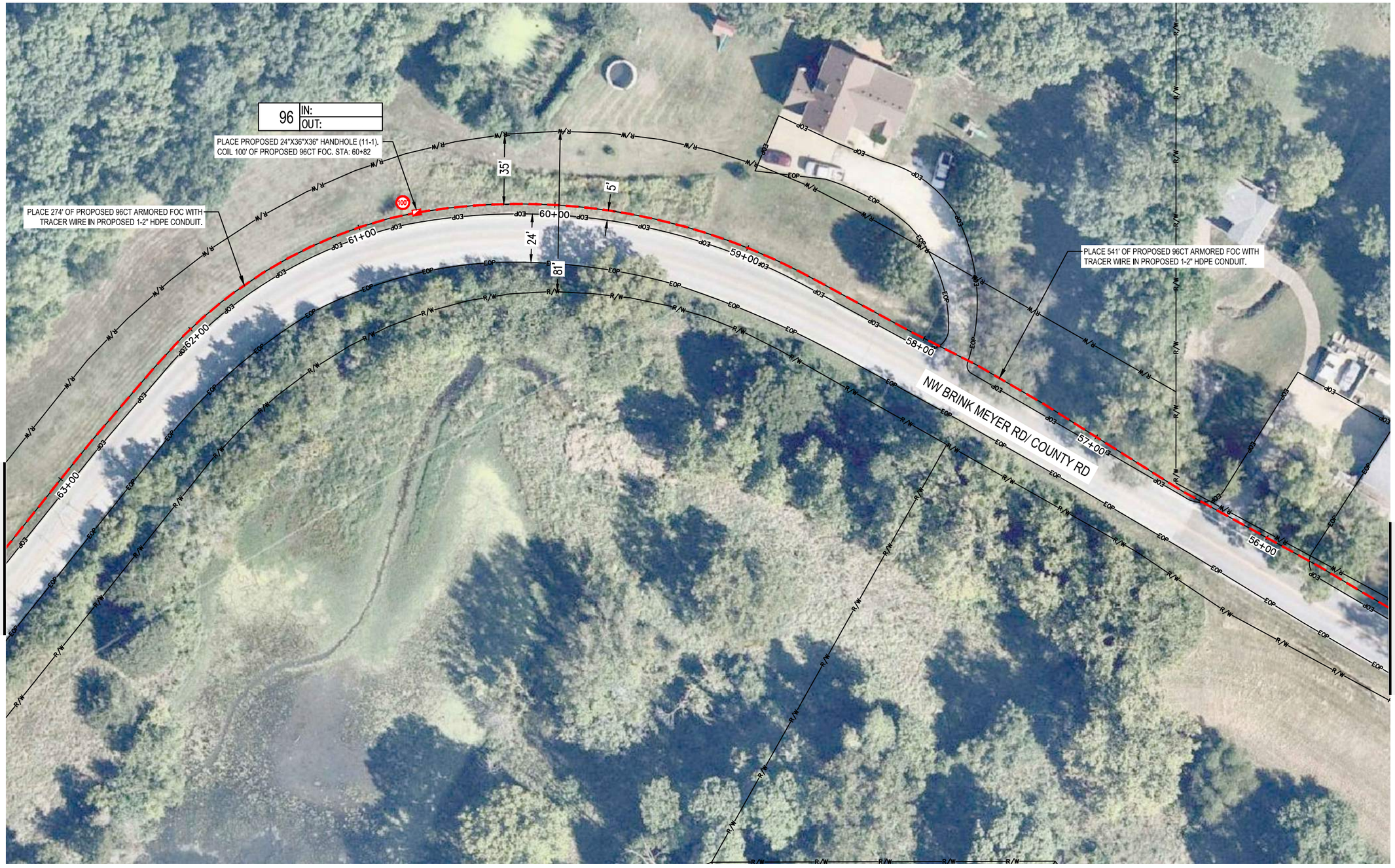

SHEET QUANTITIES

ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	815
2.	SUPPLY & INSTALL TRACER WIRE	LF	815
3.	SUPPLY & INSTALL 24"X36"X36" HANDHOLE	EACH	1
4.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	915

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SUPPORT SERVICES NORTH RING
PARK HILL SCHOOL DISTRICT

PARKVILLE, MO

2023

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SHEET QUANTITIES

ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	558
2.	SUPPLY & INSTALL TRACER WIRE	LF	558
3.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	558

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SUPPORT SERVICES NORTH RING
PARK HILL SCHOOL DISTRICT

PARKVILLE, MO

2023

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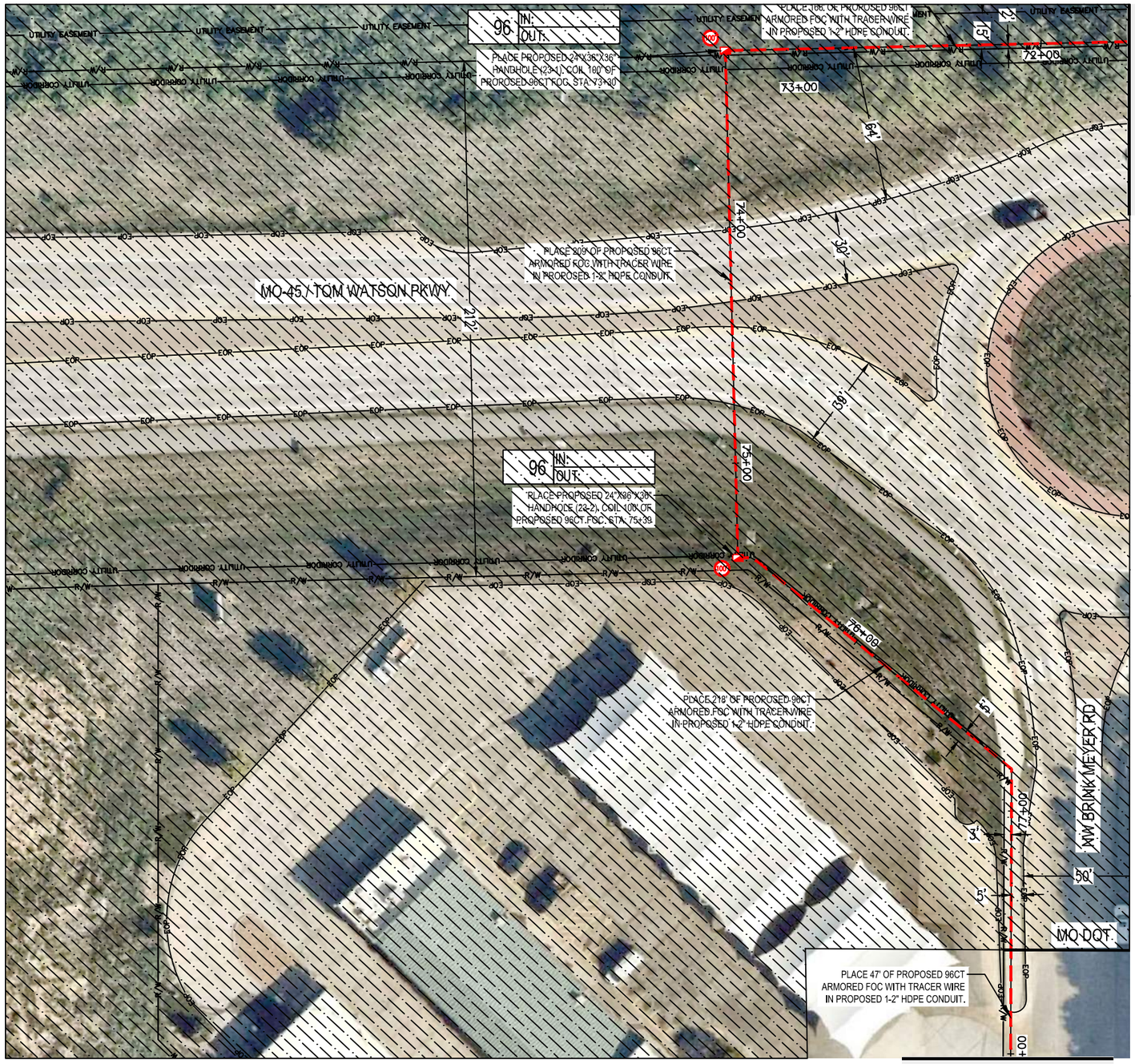

SHEET QUANTITIES

ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	47
2.	SUPPLY & INSTALL TRACER WIRE	LF	47
3.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	47

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PROJECT SHEET

SUPPORT SERVICES NORTH RING
PARK HILL SCHOOL DISTRICT

PARKVILLE, MO

2023

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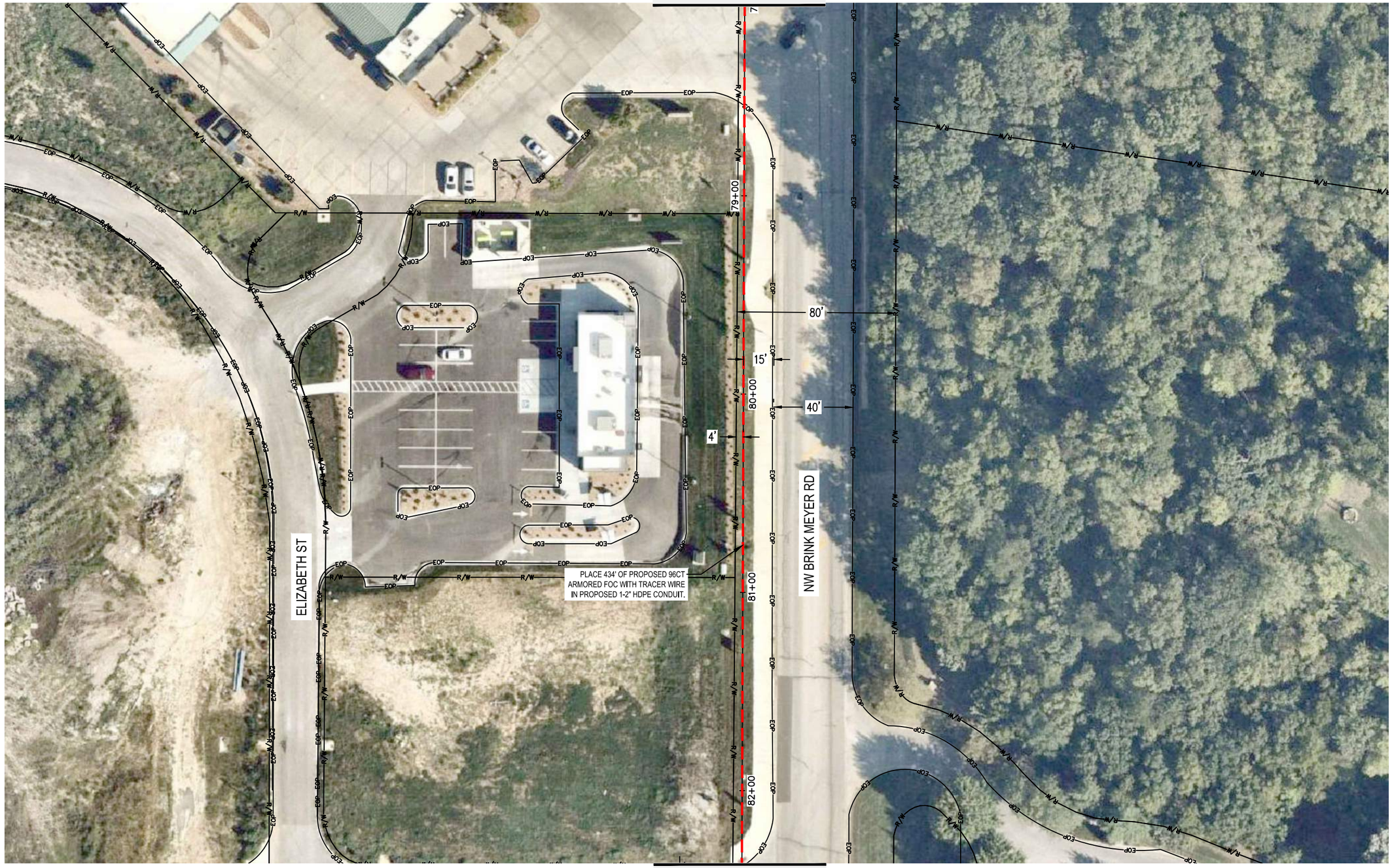
MATCH TO SHEET 23



MATCH TO SHEET 25

SHEET QUANTITIES

ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	434
2.	SUPPLY & INSTALL TRACER WIRE	LF	434
3.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	434

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PROJECT SHEET

SUPPORT SERVICES NORTH RING
PARK HILL SCHOOL DISTRICT

PARKVILLE, MO

2023

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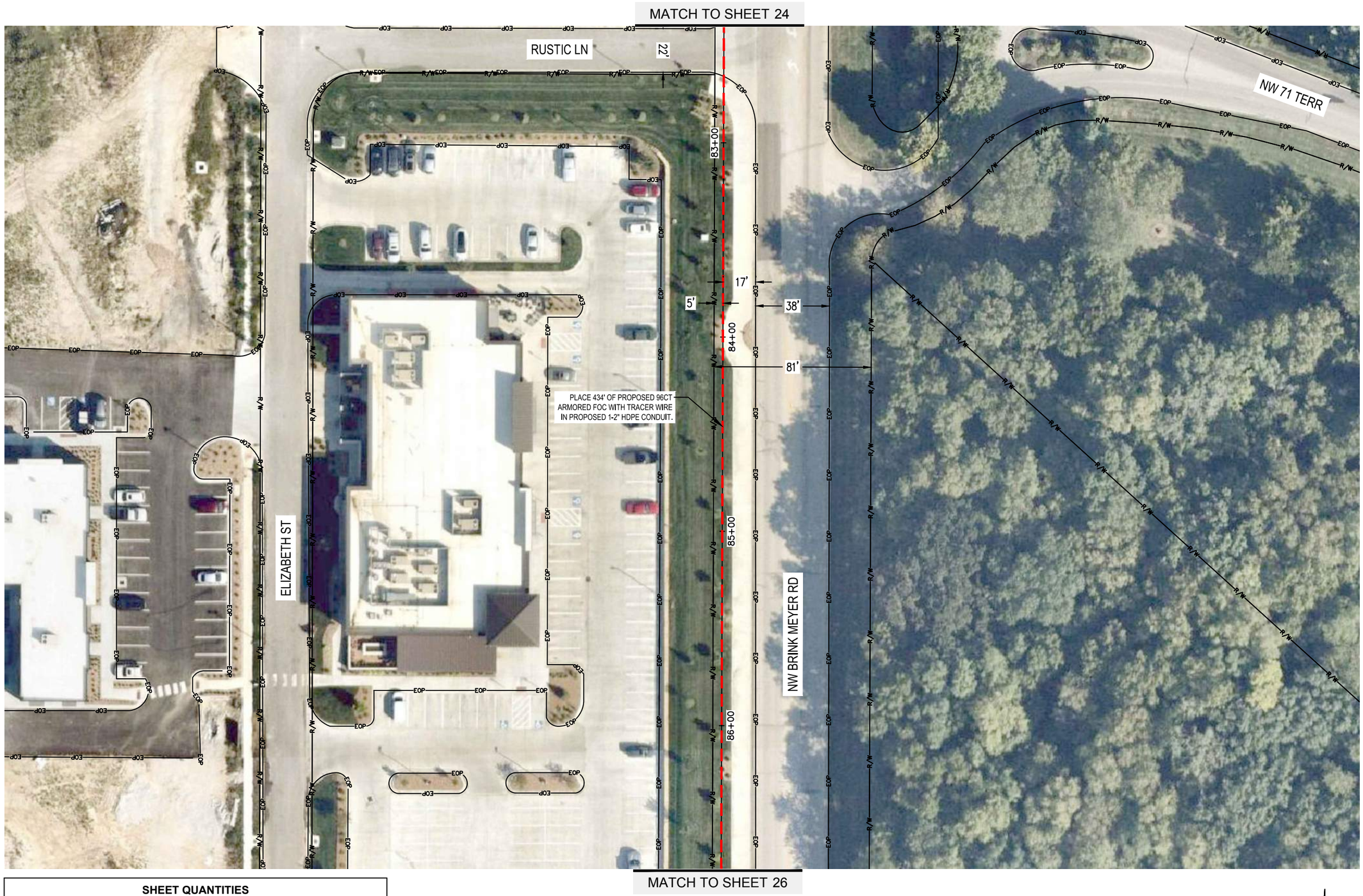

SHEET QUANTITIES

ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	434
2.	SUPPLY & INSTALL TRACER WIRE	LF	434
3.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	434

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PARK HILL SCHOOL DISTRICT

PARKVILLE, MO

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MATCH TO SHEET 25

MATCH TO SHEET 27

SHEET QUANTITIES

ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	435
2.	SUPPLY & INSTALL TRACER WIRE	LF	435
3.	SUPPLY & INSTALL 24"X36"X36" HANDHOLE	EACH	1
4.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	535

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PARK HILL SCHOOL DISTRICT

PARKVILLE, MO

2023

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MATCH TO SHEET 26

MATCH TO SHEET 28

SHEET QUANTITIES

ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	436
2.	SUPPLY & INSTALL TRACER WIRE	LF	436
3.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	436

Know what's below. Call before you dig.

0 10' 20' 30' 40' 50'
SCALE: 1"=50'

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Overland Park, KS 66213-4750
TEL 913.381.1170
www.olsson.com

PE Stamp & Approval

REV. NO.	DATE	REVISIONS DESCRIPTION

REVISIONS

PROJECT SHEET

SUPPORT SERVICES NORTH RING
PARK HILL SCHOOL DISTRICT

PARKVILLE, MO

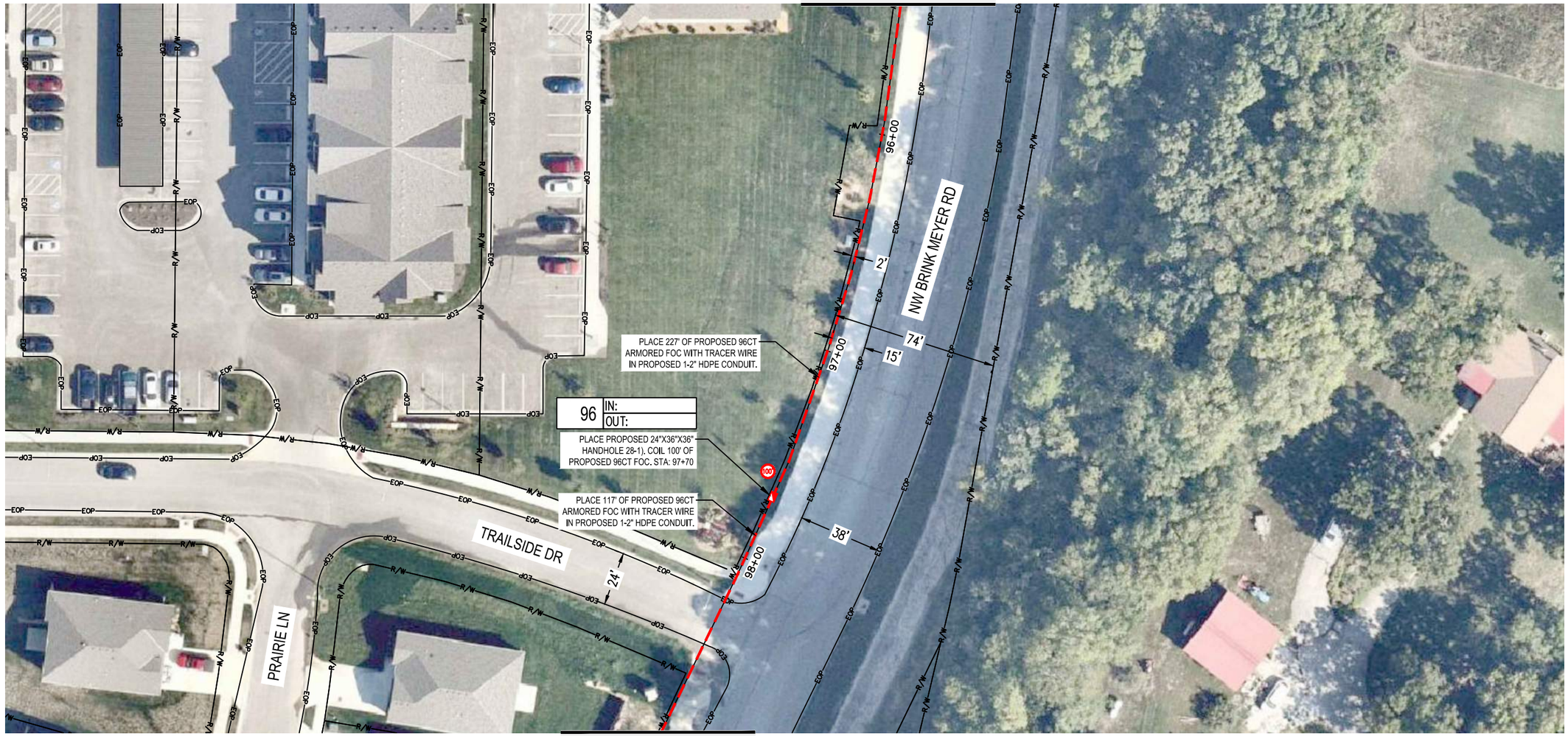
2023

drawn by: CAS
checked by: JMC
approved by: ENG
project no.:
drawing no.:

SHEET
27 of 35

DWG: F:\projects\015-1955-d\40-design\AutoCAD\final plans\Sheets\TLCM\Final Plans\Network Extension Final 2.dwg USER: jflickner
DATE: Sep 21, 2023 6:57am XREFS: Alignment Sheets NetExt_Base_1 D15-1955_MO_GSMS N-Route Alignment S-Route Alignment NetExt_Base_2 D15-1955_NetExt_ROW

MATCH TO SHEET 27



MATCH TO SHEET 29

SHEET QUANTITIES

ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	344
2.	SUPPLY & INSTALL TRACER WIRE	LF	344
3.	SUPPLY & INSTALL 24"X36"X36" HANDHOLE	EACH	1
4.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	444

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PARK HILL SCHOOL DISTRICT

PARKVILLE, MO

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28 of 35

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DATE: Sep 21, 2023 6:57am XREFS: Alignment Sheets NetExt_Base_1 D15-1955_MO_GISMS N-Route Alignment S-Route Alignment NetExt_Base_2 D15-1955_NetExt_ROW

MATCH TO SHEET 28

MATCH TO SHEET 30

SHEET QUANTITIES

ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	350
2.	SUPPLY & INSTALL TRACER WIRE	LF	350
3.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	350

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SCALE: 1"=50'

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PARK HILL SCHOOL DISTRICT

PARKVILLE, MO

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SHEET 29 of 35

DWG: F:\projects\015-1955-d\40-design\AutoCAD\final plans\Sheets\TLCM\Final Plans\Network Extension Final 2.dwg USER: jflickner
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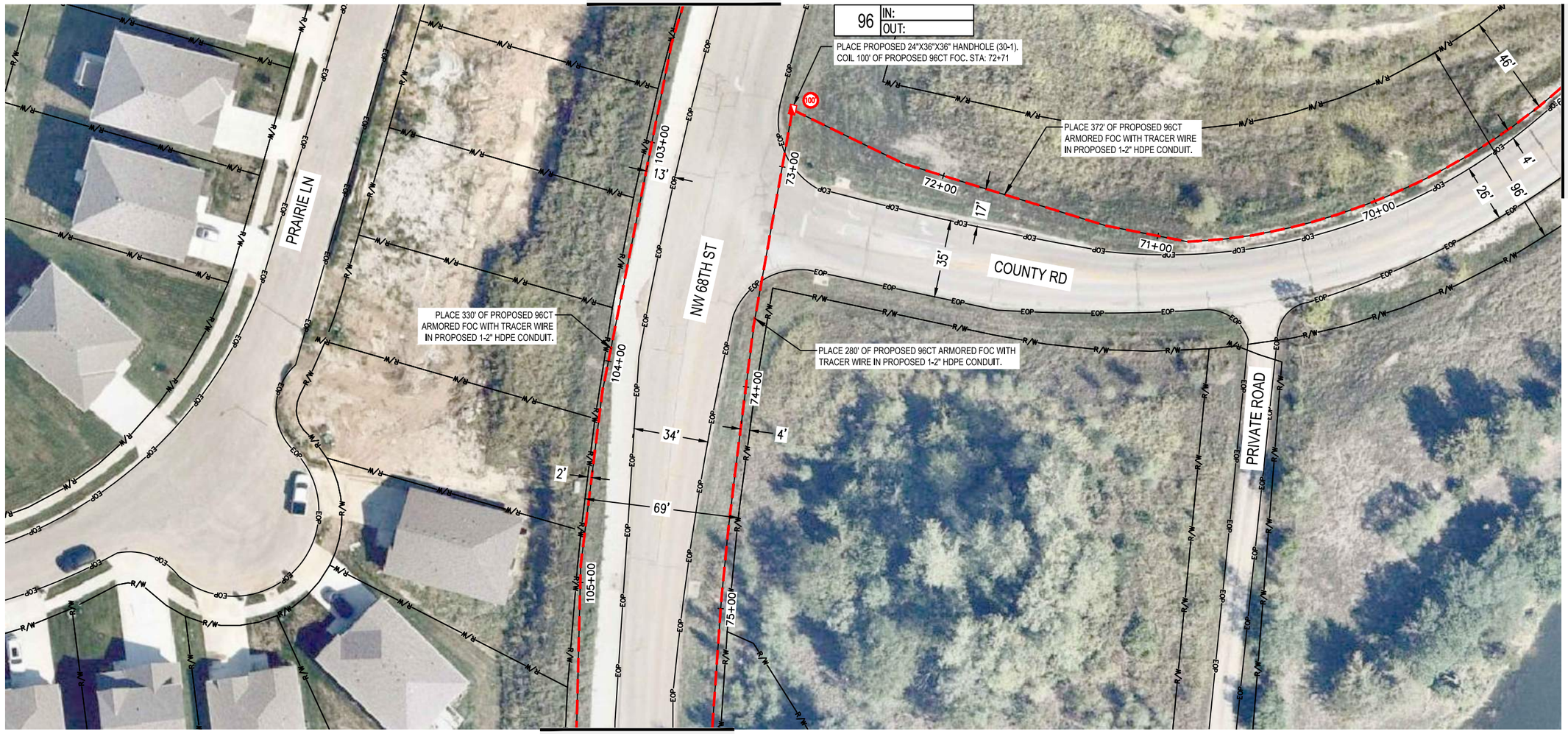
MATCH TO SHEET 29



MATCH TO SHEET 31

MATCH TO SHEET 12

SHEET QUANTITIES

ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	982
2.	SUPPLY & INSTALL TRACER WIRE	LF	982
3.	SUPPLY & INSTALL 24"X36"X36" HANDHOLE	EACH	1
4.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	1082

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SCALE: 1"=50'

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PARK HILL SCHOOL DISTRICT

PARKVILLE, MO

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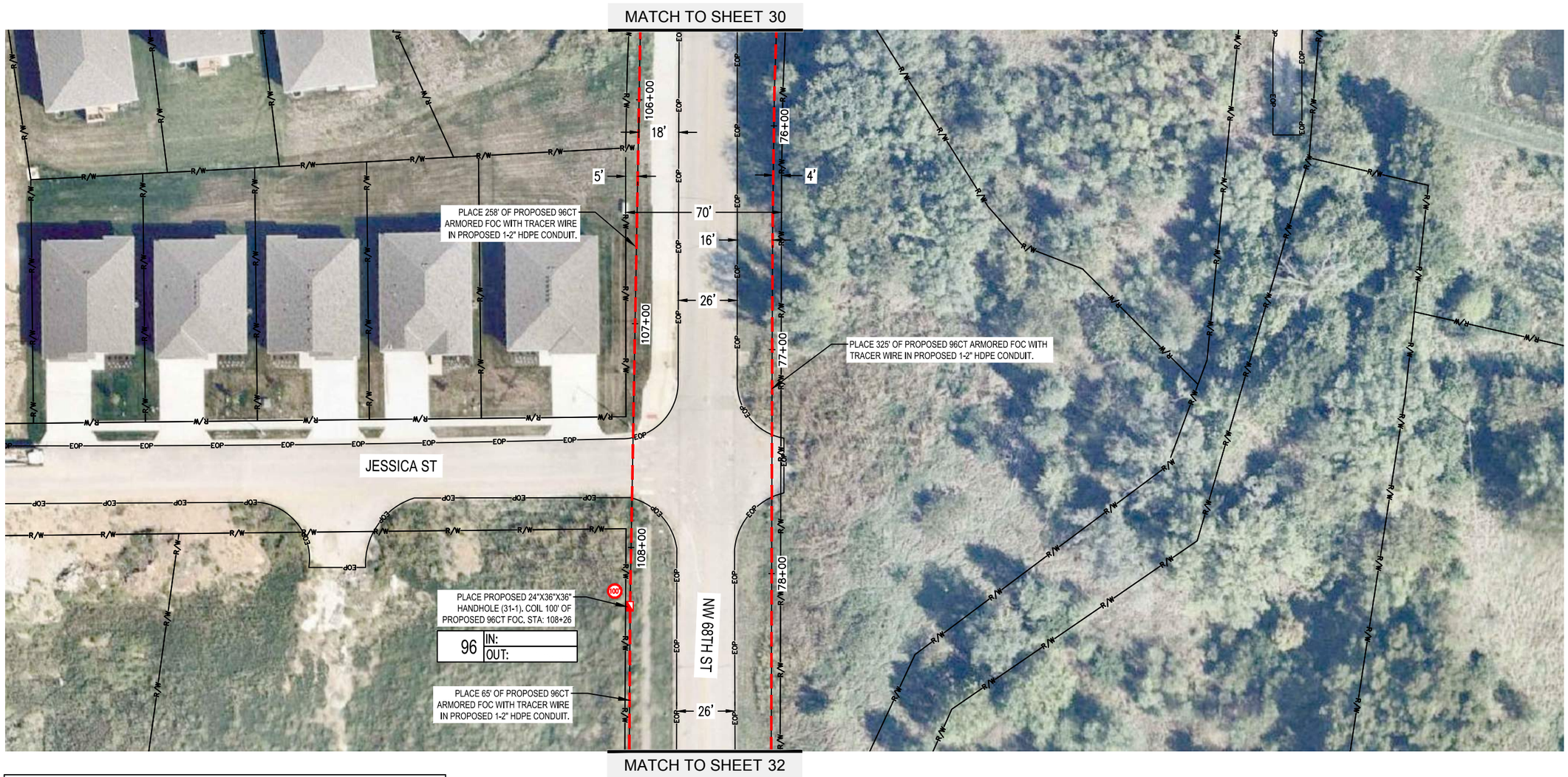

SHEET QUANTITIES

ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	648
2.	SUPPLY & INSTALL TRACER WIRE	LF	648
3.	SUPPLY & INSTALL 24"X36"X36" HANDHOLE	EACH	1
4.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	748

Know what's **below.** **Call** before you dig.

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PARKVILLE, MO

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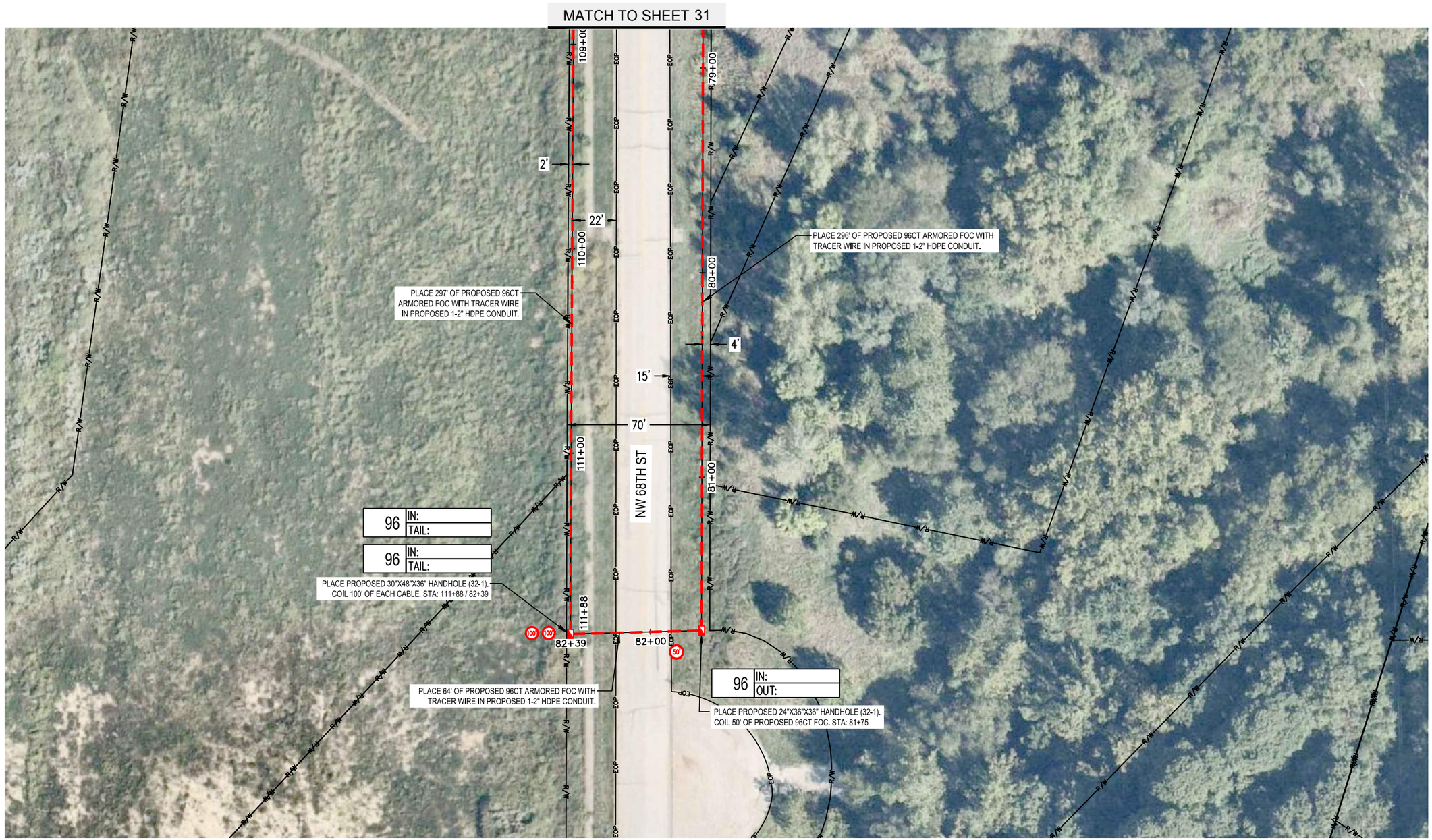

SHEET QUANTITIES

ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	657
2.	SUPPLY & INSTALL TRACER WIRE	LF	657
3.	SUPPLY & INSTALL 24"X36"X36" HANDHOLE	EACH	1
4.	SUPPLY & INSTALL 30"X48"X36" HANDHOLE	EACH	1
5.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	907

811 Know what's below. Call before you dig.

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PROJECT SHEET

SUPPORT SERVICES NORTH RING
PARK HILL SCHOOL DISTRICT

PARKVILLE, MO

2023

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drawing no.:

TYPICALS

PCA243636-00006

PCX POLYMER CONCRETE ASSEMBLY

24" x 36" x 36"
(For actual dimensions see drawing)

Polymer Concrete Assembly, Straight Sides, No Floor, WUC 3.6, ANSI/SCTE 77 - "T15/20K," 3/8" Hex Bolts, Standard Nameplate (Specify at time of order) Installed

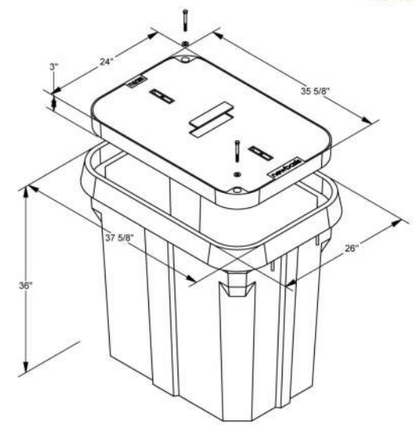
LOAD RATINGS
Incidental Traffic - Parking Lot, Sidewalk
Conforms to:
- WUC 3.6
- ASTM C 857
- ANSI/SCTE 77

FEATURES:
- Drop-In nameplate
- Shipped assembled
- Skid resistant cover
- Stainless steel bolts
- Cast-in floating nut box
  - Integral drain holes

Additional product information continued on the reverse

newbasis
Composites for Infrastructure
2626 Kansas Avenue
Riverside, California 92507
951.787.0600
951.787.0632 (fax)
info@newbasis.com
newbasis.com

PCX POLYMER CONCRETE The Next Generation



Inside Dimensions		
Length	Width	Depth
33 9/16"	21 15/16"	33"
27 1/8"	15 1/2"	

Rev: C.0

PCA243636-00006

PCX POLYMER CONCRETE ASSEMBLY

PCX POLYMER CONCRETE The Next Generation — newbasis

Polymer Concrete Assembly, Straight Sides, No Floor, WUC 3.6, ANSI/SCTE 77 - "T15/20K," 3/8" Hex Bolts, Standard Nameplate (Specify at time of order) Installed

24" x 36" x 36" **For actual dimensions, see drawing on front side.**

AVAILABLE OPTIONS

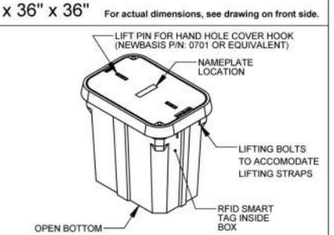
- ☐ Tier 22 Load Rating
- ☐ Penta Bolts
- ☐ Telephone EMS
- ☐ Power EMS
- ☐ Custom Nameplate Installed
- ☐ Custom Nameplate Shipped Separately
- ☑ Standard Nameplate Installed
- ☐ Standard Nameplate Shipped Separately

☑ - Indicates a selected option

NAMEPLATES

One standard nameplate included with each assembly, installed at the factory or easily installed in the field. Custom nameplates are available. Contact customer service.

Standard Nameplates
- Electric
- Telephone
- Fiber Optic
- Water
- Street Lighting
- Broadband
- Traffic
- CATV
- Traffic Signal
- Communications



MATERIAL PROPERTIES AND ATTRIBUTES

Compressive Strength
Polymer Concrete - 11500 PSI
Per ASTM D695

Flexural Strength
Polymer Concrete - 4000 PSI
Per ASTM D790

Coefficient of Friction (Dry)
1.085
Per ASTM C1028

Polymer Concrete
- Advanced composite: Very high strength to weight ratio
- Non-metallic
- Non-conductive
- UV Resistant
- High impact resistant
- Impervious to chemicals and moisture

Materials tested in accordance with ASTM D-543 and ASTM D-570

WEIGHTS AND SHIPPING

COVER WEIGHT: 98.0 lbs.

BOX WEIGHT: 239.9 lbs.

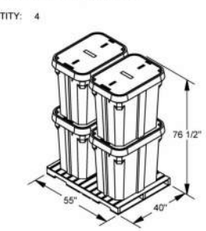
ASSEMBLY WEIGHT: 337.9 lbs.

LOADED PALLET WEIGHT: 1394 lbs.

Standard shipping includes van delivery of pallet quantities to the lower 48 states. Partial pallet quantities and flat bed shipping available at an additional cost.

PACKAGING (Steel Banding, Edge Protection)

PALLET QUANTITY: 4



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CLARENCE R. GASTINEAU
MO. NO. PE-2008025192

REV. NO.	DATE	REVISIONS DESCRIPTION

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TYPICAL DETAILS

SUPPORT SERVICES NORTH RING NETWORK EXTENSION

PARKVILLE, MO

2023

drawn by: SPM
checked by: DAH
approved by: CRG
project no.: project no.:
drawing no.:
date: 9/21/2023

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DATE: Sep 21, 2023 6:57am XREFS:

	TOTAL QUANTITIES			
	ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
	1.	SUPPLY & INSTALL 1-2" HDPE DUCT	LF	11120
	2.	SUPPLY & INSTALL 24"X36"X36" HANDHOLE	EACH	9
	3.	SUPPLY & INSTALL 30"X48"X36" HANDHOLE	EACH	2
	4.	SUPPLY & INSTALL TRACER WIRE	LF	11120
	5.	INSTALL 96CT ARMORED FIBER OPTIC CABLE - UNDERGROUND	LF	12470
*	6.	TRAFFIC PERMIT	AGENCIES	1
*	7.	RIGHT OF WAY PERMIT	AGENCIES	1

* CITY, COUNTY, AND STATE.

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REV. NO.	DATE	REVISIONS DESCRIPTION

REVISIONS

FINAL QUANTITIES

SUPPORT SERVICES NORTH RING
NETWORK EXTENSION

PARKVILLE, MO

2023

drawn by: SPM
checked by: DAH
approved by: CRG
project no.: project no.:
drawing no.:
date: 9/21/2023

SHEET
35 OF 35

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