

MINNESOTA TRANSPORTATION DEPARTMENT HENNEPIN COUNTY

CONSTRUCTION PLAN FOR AN ADVANCED TRAFFIC MANAGEMENT SYSTEM LOCATED ON COUNTY STATE AID HIGHWAY NO. 1, 3, 5, 9, 24 AND 25

MINN. PROJ. NO. STPF 2720 (138)

GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2 - 20	TRAFFIC CONTROL INTERCONNECT DETAIL SHEETS
21-45	TRAFFIC CONTROL INTERCONNECT PLAN C.S.A.H. 1
46 - 72	TRAFFIC CONTROL INTERCONNECT PLAN C.S.A.H. 3
73 - 82	TRAFFIC CONTROL INTERCONNECT PLAN C.S.A.H. 5,25
83 - 104	TRAFFIC CONTROL INTERCONNECT PLAN C.S.A.H. 9,24

THIS PLAN CONTAINS 104 SHEETS

APPROVED	<i>Cara Stueve</i>	6/8/2020
	HENNEPIN COUNTY: COUNTY HIGHWAY ENGINEER	DATE
RECOMMENDED FOR APPROVAL	<i>Janina J. Imbrayich</i>	6/8/2020
	HENNEPIN COUNTY: DESIGN DIVISION ENGINEER	DATE
APPROVED	<i>Julie M. Yong</i>	5/20/2020
	CITY OF BLOOMINGTON: CITY ENGINEER	DATE
APPROVED	<i>W. H.</i>	06/05/2020
	CITY OF CRYSTAL: CITY ENGINEER	DATE
APPROVED	<i>Atta S. H.</i>	5/27/2020
	CITY OF HOPKINS: CITY ENGINEER	DATE
APPROVED	<i>Byron D. D.</i>	6/4/2020
	CITY OF MINNEAPOLIS: CITY ENGINEER	DATE
APPROVED	<i>J. Olson</i>	5/27/2020
	CITY OF MINNETONKA: CITY ENGINEER	DATE
APPROVED	<i>David D. Goyens</i>	6/5/2020
	CITY OF NEW ROSE: CITY ENGINEER	DATE
APPROVED	<i>Ch. Co.</i>	5/27/2020
	CITY OF PLYMOUTH: CITY ENGINEER	DATE
APPROVED	<i>APL</i>	26 May 20
	CITY OF ROBBINSDALE: CITY ENGINEER	DATE
APPROVED	<i>Donald Heise</i>	5/22/2020
	CITY OF ST. LOUIS PARK: CITY ENGINEER	DATE
	<i>D. L. L.</i>	6/9/2020
	DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE AID AND/OR FEDERAL AID RULES/POLICY	DATE
	for STATE AID ENGINEER: APPROVED FOR STATE AID AND FEDERAL AID FUNDING	DATE

- PLAN SYMBOLS**
- COUNTY LINE
 - SECTION LINE
 - QUARTER LINE
 - SIXTEENTH LINE
 - NEW RIGHT OF WAY LINE
 - PRESENT RIGHT OF WAY LINE
 - PROPERTY LINE (EXCEPT LAND LINES)
 - VACATED PLATTED PROPERTY
 - CORPORATE OR CITY LIMITS
 - TRUNK HIGHWAY CENTER LINE
 - RETAINING WALL
 - RAILROAD
 - WATER LINE
 - MEANDER CORNER
 - DRAINAGE DITCH
 - DRAIN TILE
 - CULVERT
 - QUARD RAIL
 - BARBED WIRE FENCE
 - CHAIN LINK FENCE
 - STONE WALL OR FENCE
 - HEDGE
 - RAILROAD CROSSING SIGN
 - MARSH
 - WOODS
 - ORCHARD
 - BUSH
 - NURSERY
 - CATCH BASIN
 - FIRE HYDRANT
 - OVERPASS (HIGHWAY OVER)
 - UNDERPASS (HIGHWAY UNDER)
 - BRIDGE
 - BUILDING
 - IRON PIPE OR ROD
 - MONUMENT (STONE, CONCRETE OR METAL)
 - SMALL SIGN
 - SLOPE EASEMENT
- UTILITY SYMBOLS**
- POWER POLE
 - TELEPHONE POLE
 - ANCHOR
 - STEEL TOWER
 - STREET LIGHT
 - TELEVISION CABLE RISER
 - WATER MAIN
 - CONDUIT
 - TELEPHONE CABLE IN CONDUIT
 - ELECTRIC CABLE IN CONDUIT
 - TELEPHONE MANHOLE
 - ELECTRIC MANHOLE
 - BURIED TELEPHONE CABLE
 - BURIED ELECTRIC CABLE
 - STORM SEWER
 - SEWER MANHOLE
 - SANITARY SEWER
 - GAS MAIN
 - TELEVISION CABLE

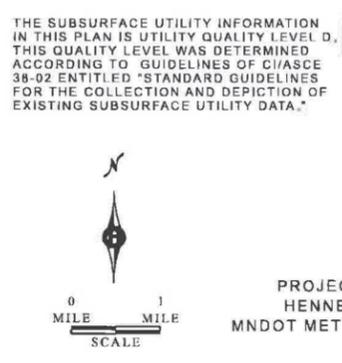
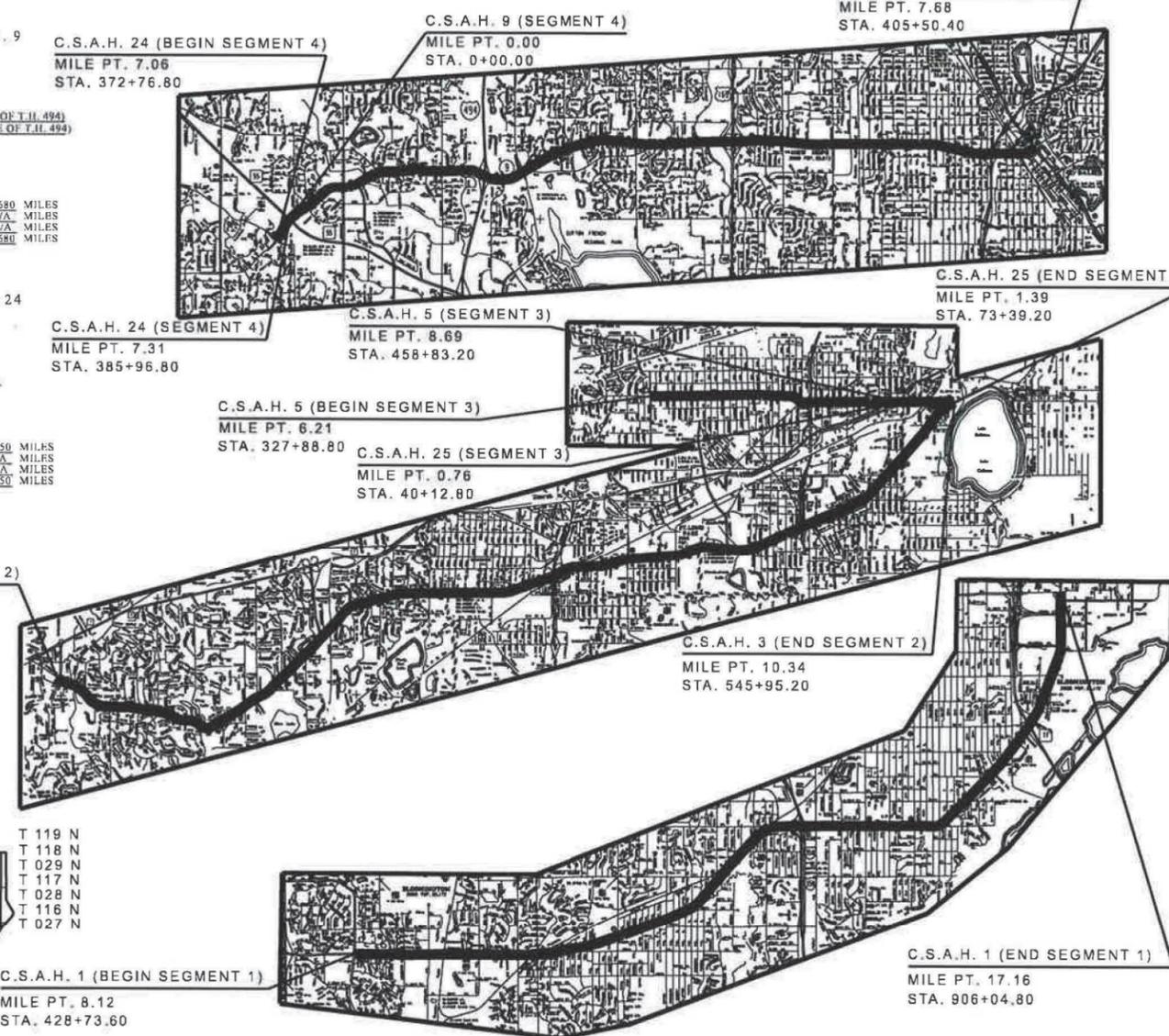
DESIGN DESIGNATION	SEGMENT	ADT (CURRENT YEAR) 2018	ADT (DESIGN YEAR) 2040	HCADT (DESIGN YEAR) 2040	FUNCTIONAL CLASS	NO. OF TRAFFIC LANES	NO. OF PARKING LANES	SHOULDER WIDTH	GROSS LENGTH	BRIDGE LENGTH	EXCEPTION LENGTH	NET LENGTH
C.S.A.H. 1	SEGMENT 1	30,000	32,000	1,493	A-MINOR EXPANDER	4	N/A	N/A	4,773.20 FEET	9.040 MILES	N/A	4,773.20 FEET
C.S.A.H. 3	SEGMENT 2	25,000	31,000	1,984	A-MINOR RELIEVER (W OF T.H. 60) A-MINOR AUGMENTOR (E OF T.H. 100)	4	N/A	N/A	54,595.20 FEET	10.340 MILES	N/A	54,595.20 FEET
C.S.A.H. 5	SEGMENT 3	23,400	24,300	574	A-MINOR RELIEVER (W OF T.H. 100) A-MINOR AUGMENTOR (E OF T.H. 100)	4	N/A	N/A	11,094.40 FEET	2.480 MILES	N/A	11,094.40 FEET
C.S.A.H. 25	SEGMENT 3	25,100	26,300	950	A-MINOR AUGMENTOR	4	N/A	N/A	3,326.40 FEET	0.630 MILES	N/A	3,326.40 FEET

DESIGN DESIGNATION	SEGMENT	ADT (CURRENT YEAR) 2018	ADT (DESIGN YEAR) 2040	HCADT (DESIGN YEAR) 2040	FUNCTIONAL CLASS	NO. OF TRAFFIC LANES	NO. OF PARKING LANES	SHOULDER WIDTH	GROSS LENGTH	BRIDGE LENGTH	EXCEPTION LENGTH	NET LENGTH
C.S.A.H. 9	SEGMENT 4	27,000	29,000	1,178	A-MINOR EXPANDER (W OF T.H. 494) A-MINOR AUGMENTOR (E OF T.H. 494)	4	N/A	N/A	40,550.40 FEET	7.680 MILES	N/A	40,550.40 FEET

DESIGN DESIGNATION	SEGMENT	ADT (CURRENT YEAR) 2018	ADT (DESIGN YEAR) 2040	HCADT (DESIGN YEAR) 2040	FUNCTIONAL CLASS	NO. OF TRAFFIC LANES	NO. OF PARKING LANES	SHOULDER WIDTH	GROSS LENGTH	BRIDGE LENGTH	EXCEPTION LENGTH	NET LENGTH
C.S.A.H. 24	SEGMENT 4	15,900	18,400	463	A-MINOR EXPANDER	4	N/A	N/A	1,320.00 FEET	0.250 MILES	N/A	1,320.00 FEET

DESIGN DESIGNATION	SEGMENT	ADT (CURRENT YEAR) 2018	ADT (DESIGN YEAR) 2040	HCADT (DESIGN YEAR) 2040	FUNCTIONAL CLASS	NO. OF TRAFFIC LANES	NO. OF PARKING LANES	SHOULDER WIDTH	GROSS LENGTH	BRIDGE LENGTH	EXCEPTION LENGTH	NET LENGTH
C.S.A.H. 3	SEGMENT 2	25,000	31,000	1,984	A-MINOR RELIEVER (W OF T.H. 60) A-MINOR AUGMENTOR (E OF T.H. 100)	4	N/A	N/A	54,595.20 FEET	10.340 MILES	N/A	54,595.20 FEET

DESIGN DESIGNATION	SEGMENT	ADT (CURRENT YEAR) 2018	ADT (DESIGN YEAR) 2040	HCADT (DESIGN YEAR) 2040	FUNCTIONAL CLASS	NO. OF TRAFFIC LANES	NO. OF PARKING LANES	SHOULDER WIDTH	GROSS LENGTH	BRIDGE LENGTH	EXCEPTION LENGTH	NET LENGTH
C.S.A.H. 1	SEGMENT 1	30,000	32,000	1,493	A-MINOR EXPANDER	4	N/A	N/A	4,773.20 FEET	9.040 MILES	N/A	4,773.20 FEET



	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	DESIGN BY: <u>J WANNER</u> CAD BY: <u>J WANNER</u> CHECKED BY: <u>R ALLERS</u> LAST REVISION: <u>/ /</u>	TITLE SHEET
	RYAN T. ALLERS, LICENSED PROFESSIONAL ENGINEER LICENSE NO. <u>45896</u> DATE <u>05/15/2020</u>	2020 ATMS / HENNEPIN COUNTY PROJECT 164402 S.P. 027-030-047	SHEET 1 / 104

STATEMENT OF ESTIMATED QUANTITIES - SP 027-030-047

NOTES	ITEM NUMBER	ITEM DESCRIPTION	UNIT	FEDERAL PARTICIPATING				PROJECT TOTAL
				C.S.A.H. 1	C.S.A.H. 3	C.S.A.H. 5	C.S.A.H. 9	
				SEGMENT 1	SEGMENT 2	SEGMENT 3 (8)	SEGMENT 4 (9)	
				TOTAL	TOTAL	TOTAL	TOTAL	
	2021.501	MOBLIZATION	LUMP SUM	0.33	0.32	0.12	0.23	1
	2550.502	OUTDOOR FIBER SPLICE ENCLOSURE	EACH	23	21	8	18	70
(1)	2550.502	FIBER OPTIC SPLICE VAULT	EACH	44	50	17	39	150
	2550.503	3" RIGID STEEL CONDUIT	LIN. FT.			325		325
(2)	2550.503	SIGNAL CONTROL CABLE 1 COND NO 12	LIN. FT.	50850	56735	16980	38145	162710
(3)	2550.602	FIBER OPTIC TERMINATION PANEL	EACH	23	21	8	22	74
(4)	2550.602	FIBER OPTIC PIGTAIL TERMINATION	EACH	25	21	8	22	76
(4)	2550.602	FIBER OPTIC CABLE SPLICING	EACH	1526	1420	468	1326	4740
	2550.602	CORE DRILLED HOLE	EACH	25	21	8	22	76
	2550.603	FIBER OPTIC TRUNK CABLE 48SM	LIN. FT.	2920	4320	1440	3263	11943
	2550.603	FIBER OPTIC CABLE 144SM	LIN. FT.	51970	59420	18020	40447	169857
(5)	2550.603	1.25" BORED CONDUIT	LIN. FT.	98940	112750	33300	74372	319362
(6)	2550.603	4" BORED CONDUIT	LIN. FT.	2030	1100	400	340	3870
	2563.601	TRAFFIC CONTROL	LUMP SUM	0.33	0.32	0.12	0.23	1
(7)	2575.601	SITE RESTORATION	LUMP SUM	0.33	0.32	0.12	0.23	1

- (1) INCLUDES TEST STATION.
- (2) THE SIGNAL CONTROL CABLE 1 COND NO 12 COPPER CONDUCTOR SHALL BE USED FOR A LOCATE AND TRACER WIRE.
- (3) INCLUDES ENCLOSURE AND CASSETTES.
- (4) FO TERMINATION OR SPLICING WILL BE MEASURED BY THE NUMBER OF INDIVIDUAL FIBER SPLICES.
- (5) INCLUDES 1.25" HDPE CONDUIT.
- (6) INCLUDES 4" HDPE CONDUIT.
- (7) THE CONTRACTOR SHALL PLACE COMMON BACK FILL AND RESTORE ALL DISTURBED TURF, LANDSCAPING, CONCRETE OR BITUMINOUS WALK, ETC. TO IT'S ORIGINAL CONDITION OR BETTER. IF A CONCRETE PANEL IS IMPACTED THE CONTRACTOR SHALL REPLACE THE ENTIRE PANEL JOINT TO JOINT. IF BITUMINOUS IS IMPACTED THE CONTRACTOR SHALL REPLACE THE ENTIRE WIDTH FOR THE LENGTH OF THE IMPACTED AREA.
- (8) INCLUDES PORTION ALONG CSAH 25.
- (9) INCLUDES PORTION ALONG CSAH 24.

THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT.

STANDARD PLATES	
PLATE NO.	PLATE DESCRIPTION
8000J	CHANNELIZERS. (3 SHEETS)



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Ryan T. Allers
 RYAN T. ALLERS, LICENSED PROFESSIONAL ENGINEER

45896 06 / 01 / 2020
 LICENSE NO. DATE

DESIGN BY: J WANNER
 CAD BY: J WANNER
 CHECKED BY: R ALLERS
 LAST REVISION: / /

STATEMENT OF ESTIMATED QUANTITIES

2020 ATMS / HENNEPIN COUNTY PROJECT 164402
 S.P. 027-030-047

SHEET

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NOTES:

- 1.) THE CONTRACTOR SHALL DEVELOP A TRAFFIC CONTROL PLAN AND FURNISH, INSTALL, MAINTAIN AND REMOVE ALL TRAFFIC CONTROL DEVICES REQUIRED TO FACILITATE THE PROJECT, TRAFFIC OPERATIONS AND FIELD CONDITIONS.
- 2.) THE CONTRACTOR SHALL COVER, REMOVE OR REVISE ALL INPLACE PAVEMENT MARKINGS AND ALL INPLACE TRAFFIC CONTROL DEVICES, INCLUDING OVERHEAD SIGNS ON ROADWAYS OPEN TO TRAFFIC THAT ARE NOT CONSISTENT WITH TRAFFIC CONTROL OPERATIONS.
- 3.) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE MNDOT "TRAFFIC ENGINEERING MANUAL" AND THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD) INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- 4.) TEMPORARY SIGNING SHALL BE MOUNTED ON POSTS DRIVEN INTO THE GROUND OR ON PORTABLE SUPPORTS. WHEN THE TEMPORARY SIGNS ARE REMOVED THE SIGN POSTS SHALL ALSO BE REMOVED.
- 5.) ALL STREETS, ENTRANCES AND DRIVEWAYS SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES UNLESS A TEMPORARY CLOSURE IS APPROVED BY THE ENGINEER.
- 6.) ALL COSTS TO PROVIDE AND INSTALL ALL WORK AS DETAILED IN NOTES 1 - 6 SHALL BE INCLUDED IN THE UNIT PRICE BID FOR TRAFFIC CONTROL (LS).
- 7.) ALL INPLACE SIGNAL SYSTEMS AND ALL INPLACE TRAFFIC CONTROL INTERCONNECT SYSTEMS SHALL BE PROTECTED AND PRESERVED INPLACE, UNLESS NOTED.
- 8.) DAMAGE TO ANY PROTECTED AND PRESERVED INPLACE TRAFFIC SIGNAL SYSTEM OR ANY INPLACE TRAFFIC CONTROL INTERCONNECT SYSTEM IN ANY WAY BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AND NO COMPENSATION SHALL BE PAID.
- 9.) THE INPLACE COPPER CABLE TRAFFIC CONTROL INTERCONNECT SYSTEM SHALL BE ABANDONED INPLACE, UNLESS NOTED.
- 10.) THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL STRUCTURES, CONDUIT, SURFACE MOUNTING SUPPORTS, HARDWARE, TERMINATION PANELS, VAULTS, COUPLINGS, ENCLOSURES, CASSETTES, CABLES, CONDUCTORS AND SPLICES TO MAKE THE TRAFFIC INTERCONNECT SYSTEM FULLY OPERATIONAL.
- 11.) 36" X 24" X 36" IN GROUND FIBER OPTIC SPLICE VAULTS WITH MOLONEY V3 TEST STATION / LOCATE POST SHALL BE USED. MAXIMUM SPACING BETWEEN FIBER OPTIC SPLICE VAULTS SHALL BE 2,500'.
- 12.) ALL FIBER OPTIC SPLICE VAULTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. ACTUAL LOCATIONS SHALL BE DETERMINED IN THE FIELD.
- 13.) ALL COORDINATES ARE TO THE CENTER OF THE FIBER OPTIC SPLICE VAULTS AND ARE HENNEPIN COUNTY GROUND FEET, BASED ON THE MINNESOTA COORDINATE SYSTEM, SOUTHERN ZONE, NAD83 1986 (NON-HARN VALUES).
- 14.) ALL 1 1/4" NMC HIGH DENSITY POLYETHYLENE (HDPE) SHALL MEET THE REQUIREMENTS OF SDR-11, SHALL BE BORED, PLACED 42 INCHES BELOW EXSISTING GROUND OR 60 INCHES BELOW ROADWAYS. CONDUITS IN THE SAME PATH SHALL DIFFER IN COLOR. ONE CONDUIT SHALL BE ORANGE AND ONE SHALL BE BLUE. FIBER SHALL BE INSTALLED IN ORANGE CONDUIT AND THE BLUE CONDUIT SHALL BE EMPTY. CONDUIT COUPLINGS SHALL BE COMFIT COUPLER CDX08566115. ALL CONDUIT IS SHOWN IN APPROXIMATE LOCATIONS ACTUAL LOCATIONS SHALL BE DETERMINED IN THE FIELD.
- 15.) IF AN EMPTY INPLACE 2" RIGID STEEL CONDUIT (RSC) INTO AN INPLACE TRAFFIC SIGNAL CONTROLLER CABINET IS NOT AVAILABLE, THE INPLACE TRAFFIC SIGNAL CONTROLLER CABINET CONCRETE FOUNDATION SHALL BE CORE DRILLED.
- 16.) ALL CONDUITS SHALL BE FILLED TO NO MORE THAN FORTY PERCENT (40%) BY AREA.
- 17.) ALL FIBER OPTIC CABLES SHALL BE MADE WITH CORNING GLASS, AND ALL COPPER CONDUCTORS SHALL BE ONE CONTINUOUS RUN WITH THE LONGEST LENGTH AS POSSIBLE WITHOUT SPLICES.
- 18.) ALL FIBER OPTIC CABLE AND ALL COPPER CONDUCTOR SPLICES SHALL BE KEPT TO A MINIMUM AND SHALL ONLY BE ALLOWED WITHIN A FIBER OPTIC SPLICE VAULT, BE WEATHER TIGHT AND APPROVED BY THE ENGINEER. ALL EXPOSED ENDS OF ANY FIBER OPTIC STRANDS SHALL BE PROTECTED AND MADE WEATHER TIGHT. OUTDOOR FIBER SPLICE ENCLOSURES SHALL BE TYCO TYPE D.
- 19.) THE CONTRACTOR SHALL SPLICE THE 48 STRAND SM FIBER OPTIC CABLE TO THE 144 STRAND SM FIBER OPTIC CABLE AND BE INSTALLED IN A CONTINUOUS RUN AND TERMINATED IN THE TERMINATION PANEL WITHIN THE TRAFFIC SIGNAL CONTROLLER CABINET. FIBER TERMINATION PANEL (INCLUDING TERMINATION ENCLOSURE AND CASSETTES SHALL BE CORNING WCH-02P WITH CCH-CS24-A9-POORE (LC-UPC) CASSETTES).
- 20.) 100' EXTRA OF THE FIBER OPTIC CABLES SHALL BE COILED IN EACH FIBER OPTIC SPLICE VAULT. FOR F-O SV WITH BUTT SPLICES, TWO 75' TAILS SHALL BE COILED.
- 21.) 50' EXTRA OF THE COPPER CONDUCTOR SHALL BE COILED IN EACH FIBER OPTIC SPLICE VAULT FOR FUTURE USE AND TO FACILITATE LOCATOR OPERATIONS.
- 22.) ALL INPLACE UTILITIES SHOWN IN THIS PLAN ARE FOR INFORMATION ONLY. THE INFORMATION SHOWN IS NOT GUARANTEED. THE CONTRACTOR SHALL VERIFY ALL INPLACE UTILITY LOCATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT AND COMPLETE A GOPHER STATE ONE CALL PRIOR TO STARTING WORK.
- 23.) THE CONTRACTOR MAY REQUEST RECORD DRAWINGS FROM HENNEPIN COUNTY. THEY ARE PROVIDED FOR INFORMATION ONLY. THE INFORMATION SHOWN IS DEEMED RELIABLE BUT IT IS NOT GUARANTEED.
- 24.) INPLACE UTILITY AND DRAINAGE EASEMENTS ARE NOT SHOWN ON THE PLAN.
- 25.) ANY AND ALL WORK AS DETAILED IN NOTES 1 - 26 SHALL BE AS DIRECTED BY AND TO THE SATISFACTION OF THE ENGINEER.



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Ryan T. Allers
 RYAN T. ALLERS, LICENSED PROFESSIONAL ENGINEER 45896 06 / 01 / 2020
 LICENSE NO. DATE

DESIGN BY: J WANNER
 CAD BY: J WANNER
 CHECKED BY: R ALLERS
 LAST REVISION: / /

GENERAL NOTES	SHEET
2020 ATMS / HENNEPIN COUNTY PROJECT 164402 S.P. 027-030-047	3 104

INPLACE UTILITIES LEGEND

- S—<— SANITARY SEWER LINES
- <— STORM SEWER LINES
- P— P — UNDERGROUND POWER LINES
- G— G — UNDERGROUND NATURAL GAS LINES
- FIBER OPTIC — UNDERGROUND FIBER OPTIC LINES
- |—|— WATER LINES

 STREET LIGHT

 MAST ARM, SIGNAL ASSEMBLY,
OR PUSH BUTTON STATION

TRAFFIC CONTROL INTERCONNECT PLAN LAYOUT LEGEND

- SV XXX-XX  PROPOSED FIBER OPTIC SPLICE VAULT
- CAC XXX-XX  INPLACE CONTROLLER AND CABINET
- HH XXX-XX  INPLACE HANDHOLE
- SV XXX-XX  INPLACE SPLICE VAULT
-  PROPOSED 4" NON-METALLIC CONDUIT (NMC)
HIGH DENSITY POLYETHYLENE (HDPE)
-  PROPOSED 1.25" NON-METALLIC CONDUIT (NMC)
HIGH DENSITY POLYETHYLENE (HDPE)
- — — — — INPLACE CONDUIT

XXX-XX DENOTES ROAD NUMBER  XXX-XX DENOTES STRUCTURE DESIGNATION 



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LEGEND

2020 ATMS / HENNEPIN COUNTY PROJECT 164402
S.P. 027-030-047

SHEET

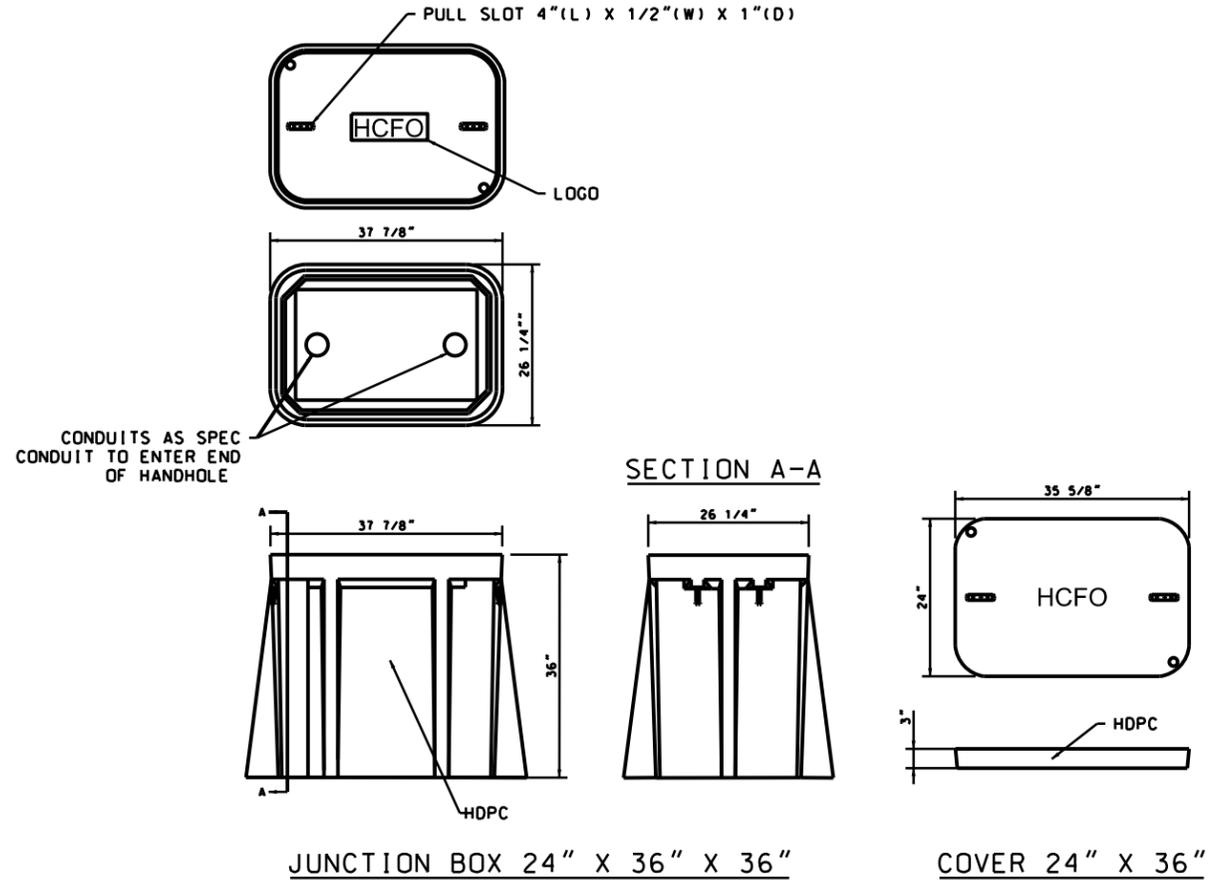
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104

ENCLOSURE FEATURES

- OPEN BOTTOM
- TAPERED WALL

COVER FEATURES

- HIGH DENSITY POLYMER CONCRETE (HDPC).
- LOGO EMBOSSED WITH 7/8" TEXT HEIGHT AS SHOWN.
- SKID RESISTANT SURFACE (0.5 COF SKID).
- SECURED WITH PENTA BOLTS.

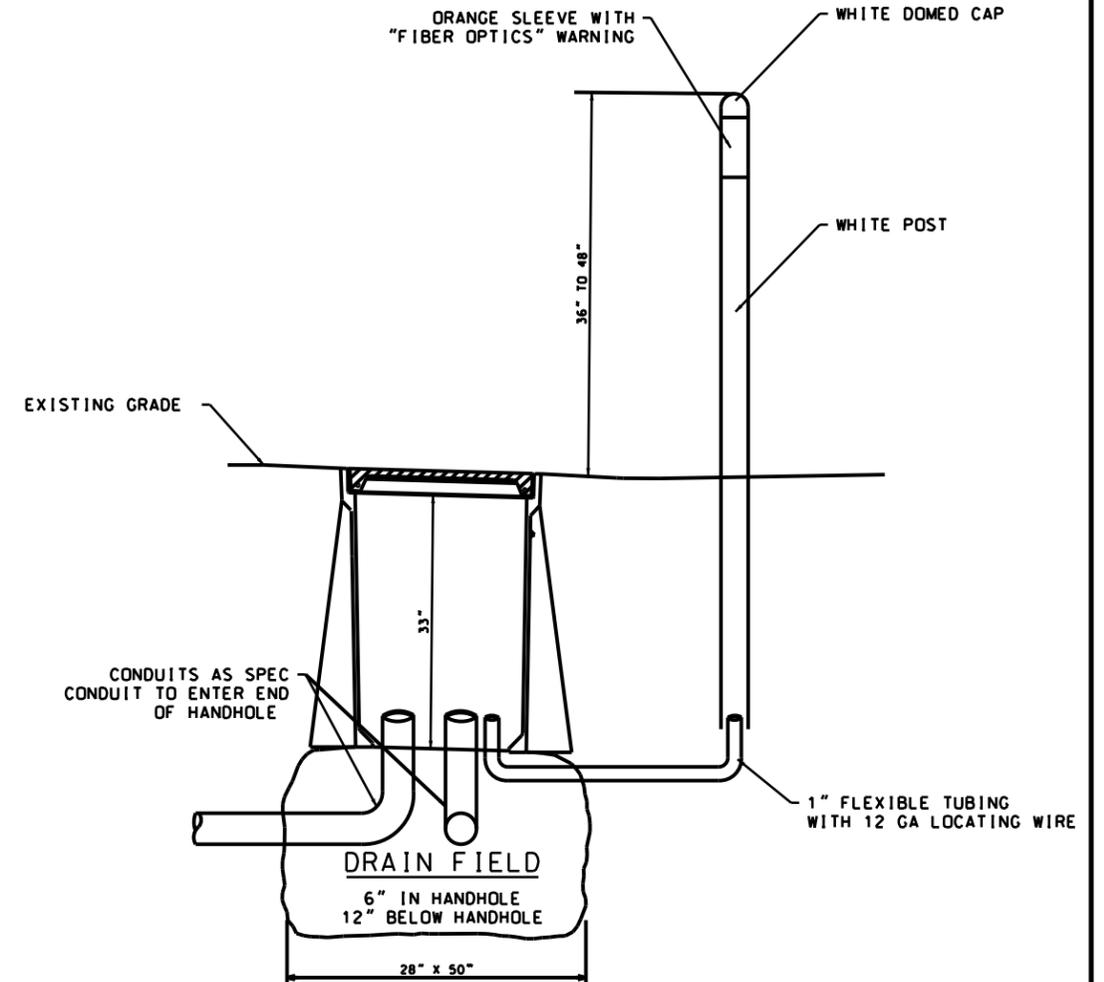


NOTES

1. COVER AND BOX SHALL MEET ANSI/SCTE 77- "T15/20K" RATING.
2. COLOR - CEMENT GRAY
3. ALL DIMENSIONS ARE NOMINAL.
4. INSTALLATION SHALL BE IN ACCORDANCE WITH HENNEPIN COUNTY STANDARD SPECIFICATIONS.

NOT TO SCALE

INSIDE DIMENSIONS		
LENGTH	WIDTH	DEPTH
33 1/8"	21 1/2"	33"
44 1/8"	32 1/2"	



NOTES

1. INSTALL SO THAT LID AND FRAME ARE 1" BELOW SURROUNDING GRADE.
2. WHEN LOCATED IN SIDEWALK AREAS INSTALL SO THAT LID AND FRAME ARE FLUSH WITH SURROUNDING GRADE.

NOT TO SCALE



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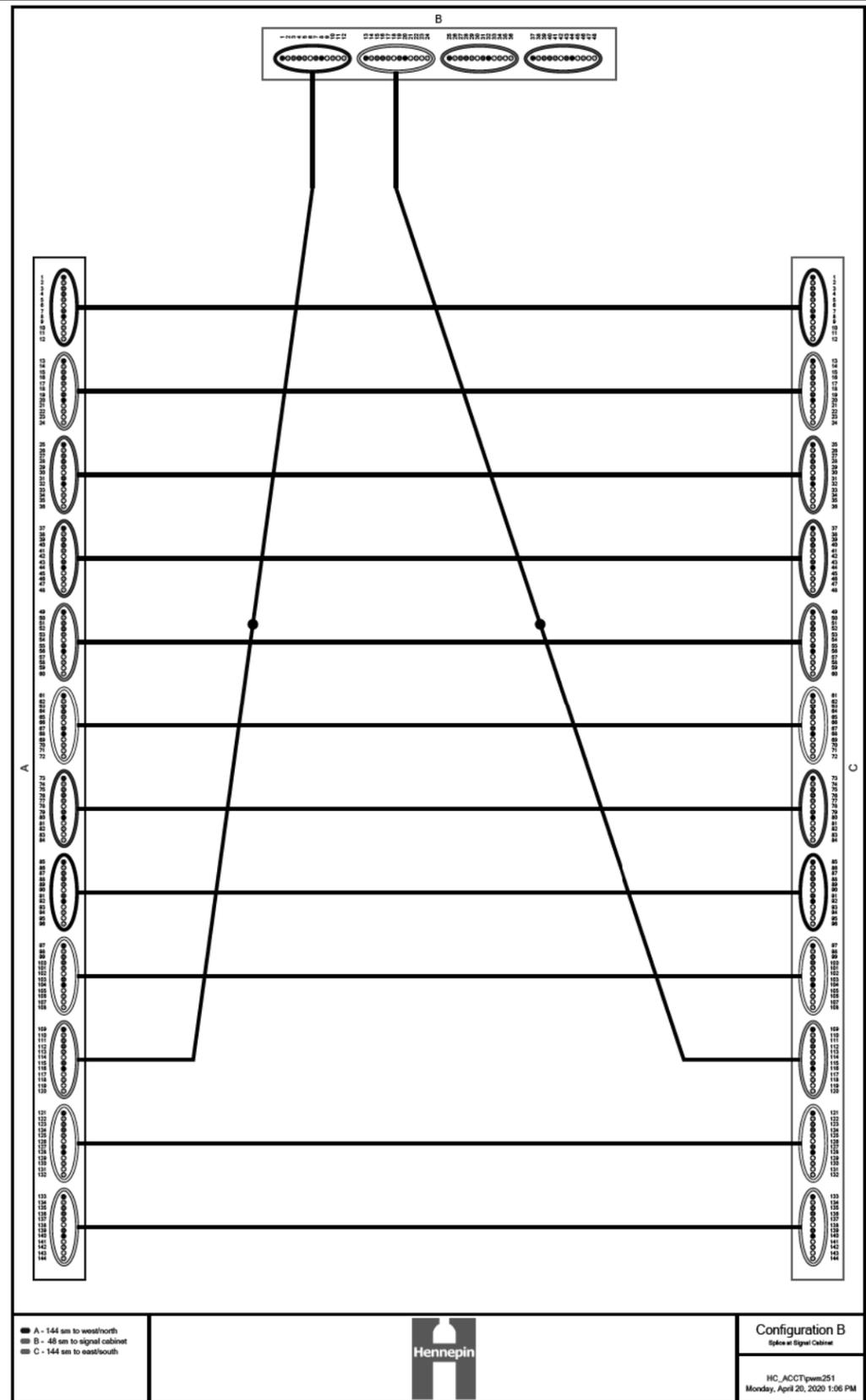
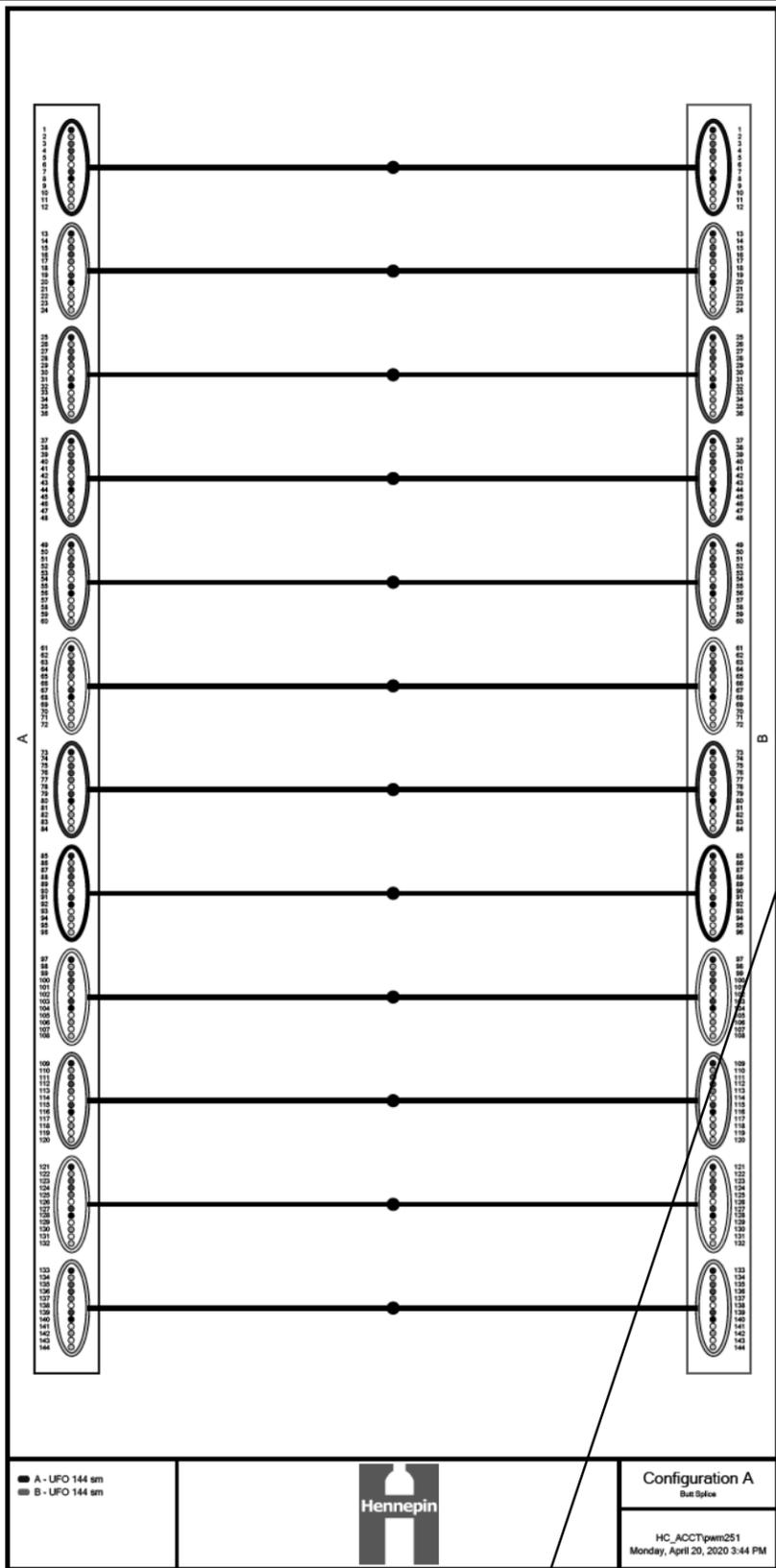
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DETAIL SHEET

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SHEET

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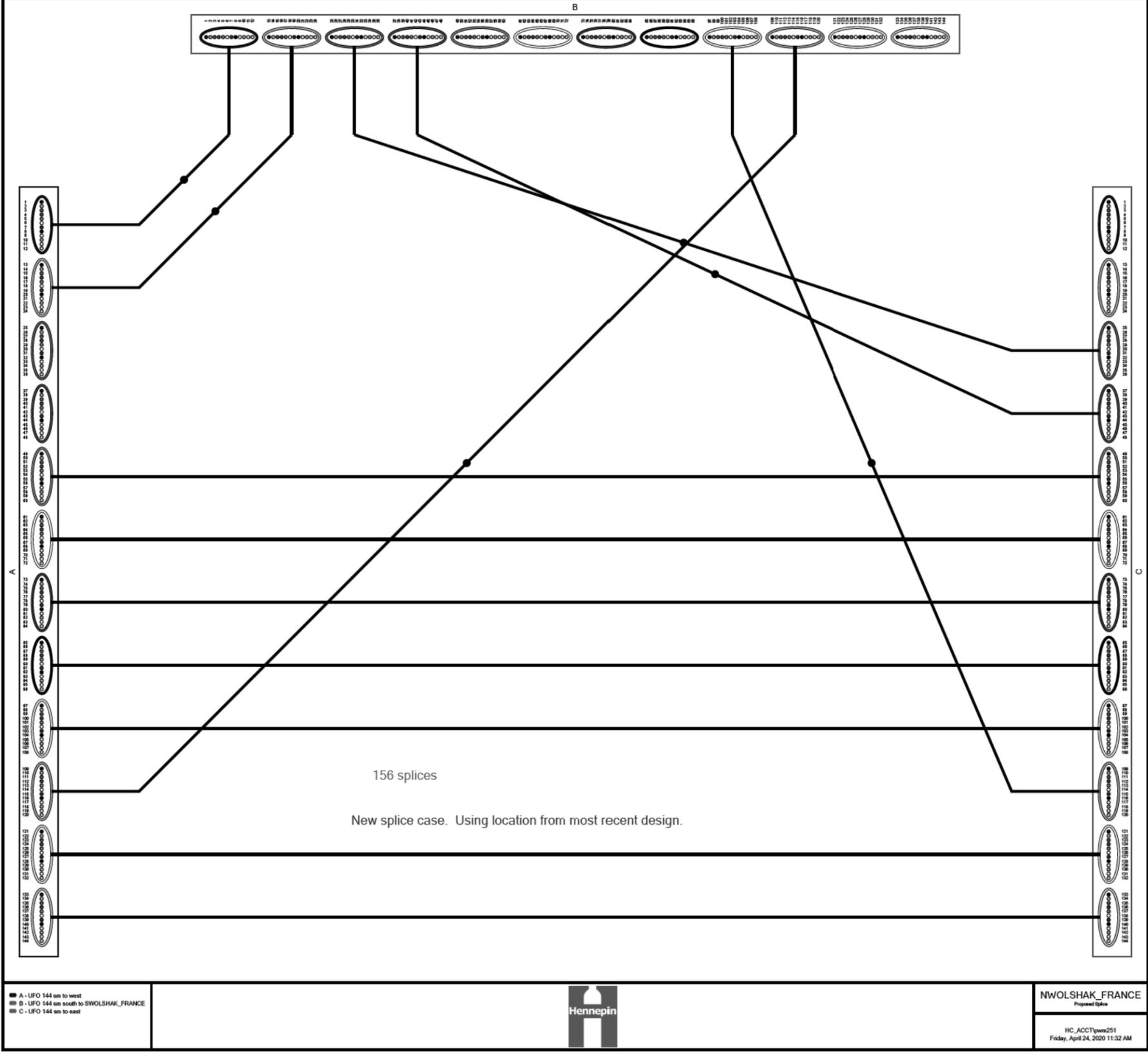
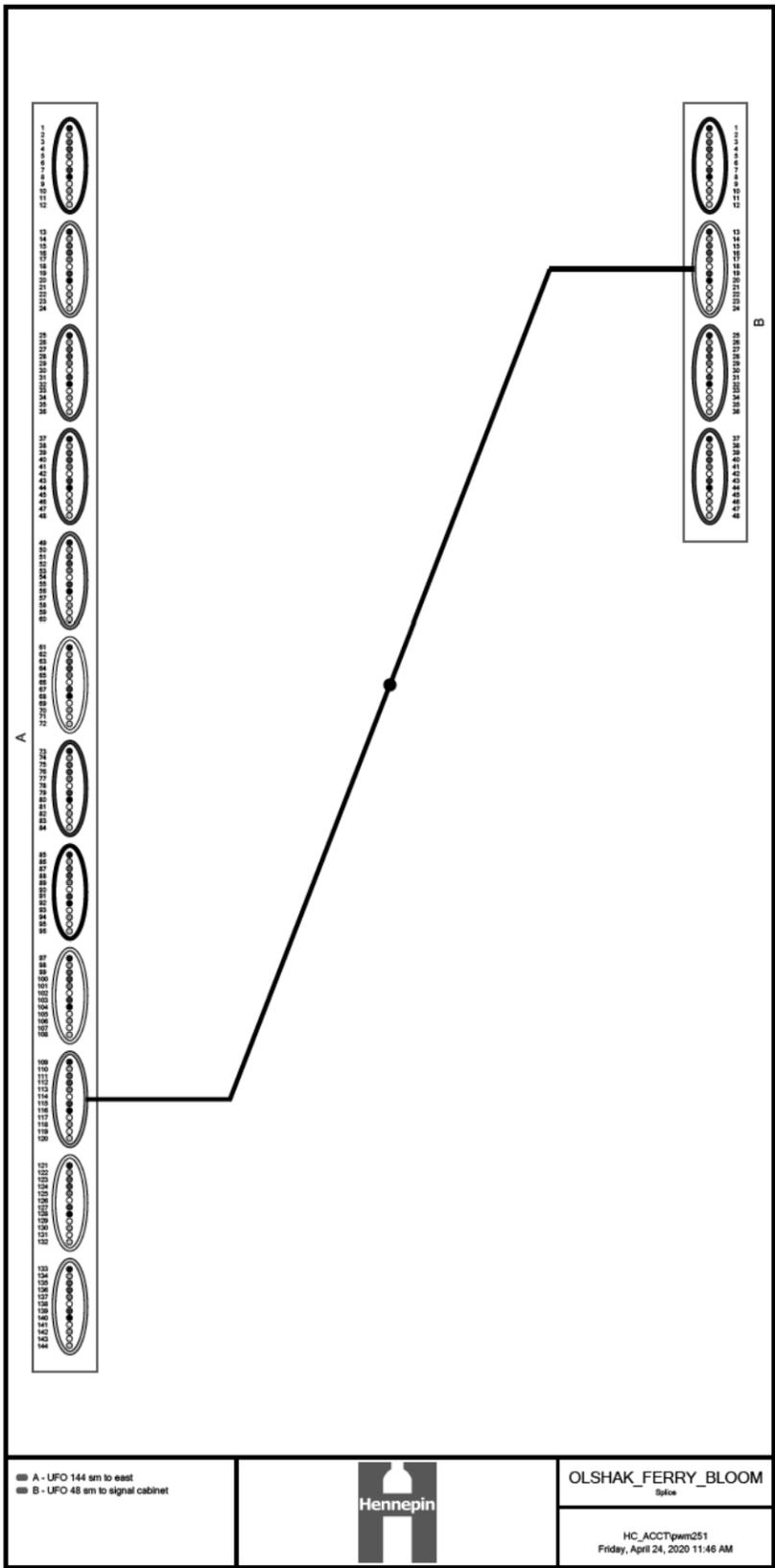
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DETAIL SHEET

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SHEET

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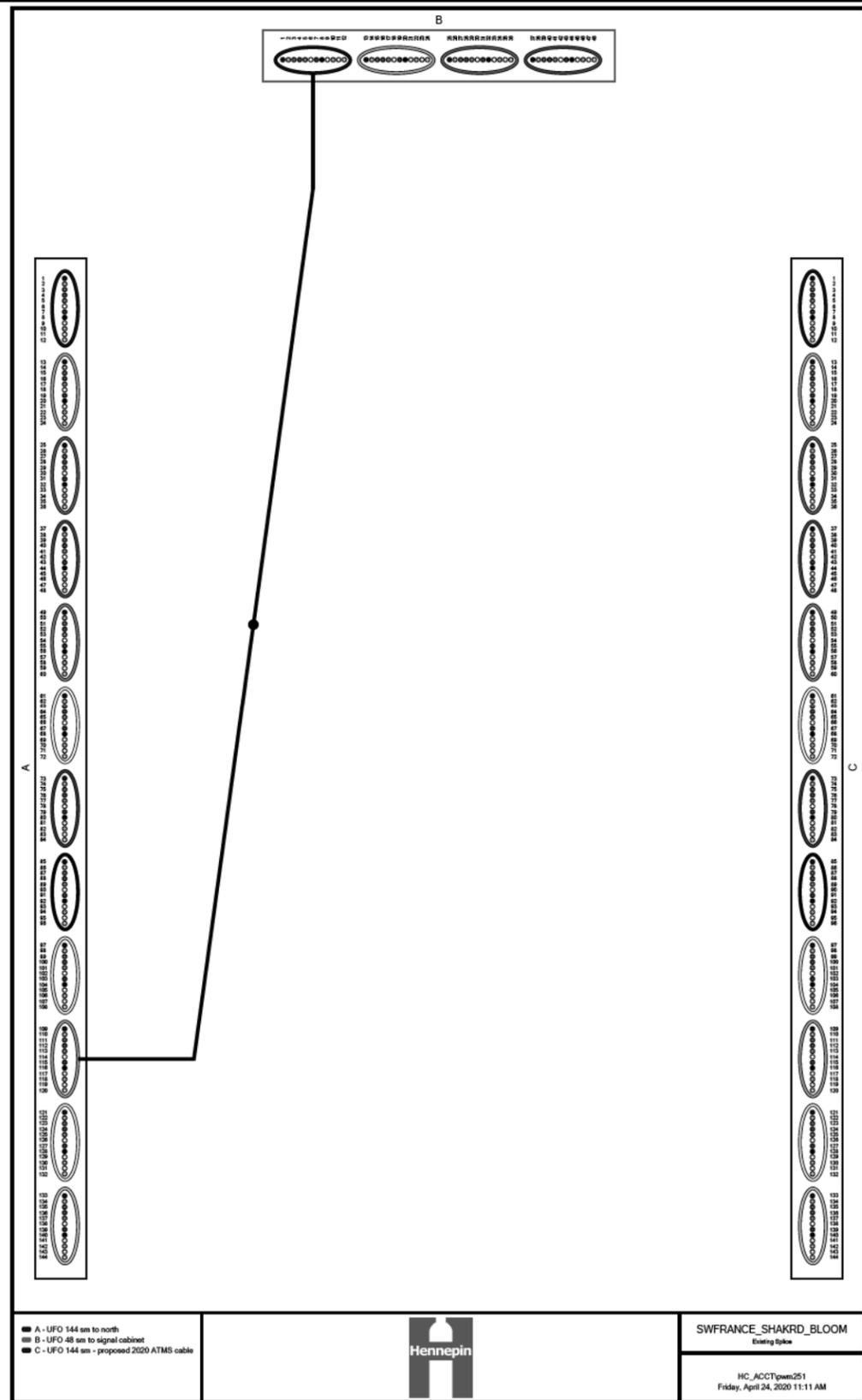
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DETAIL SHEET
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SHEET
 7 / 104

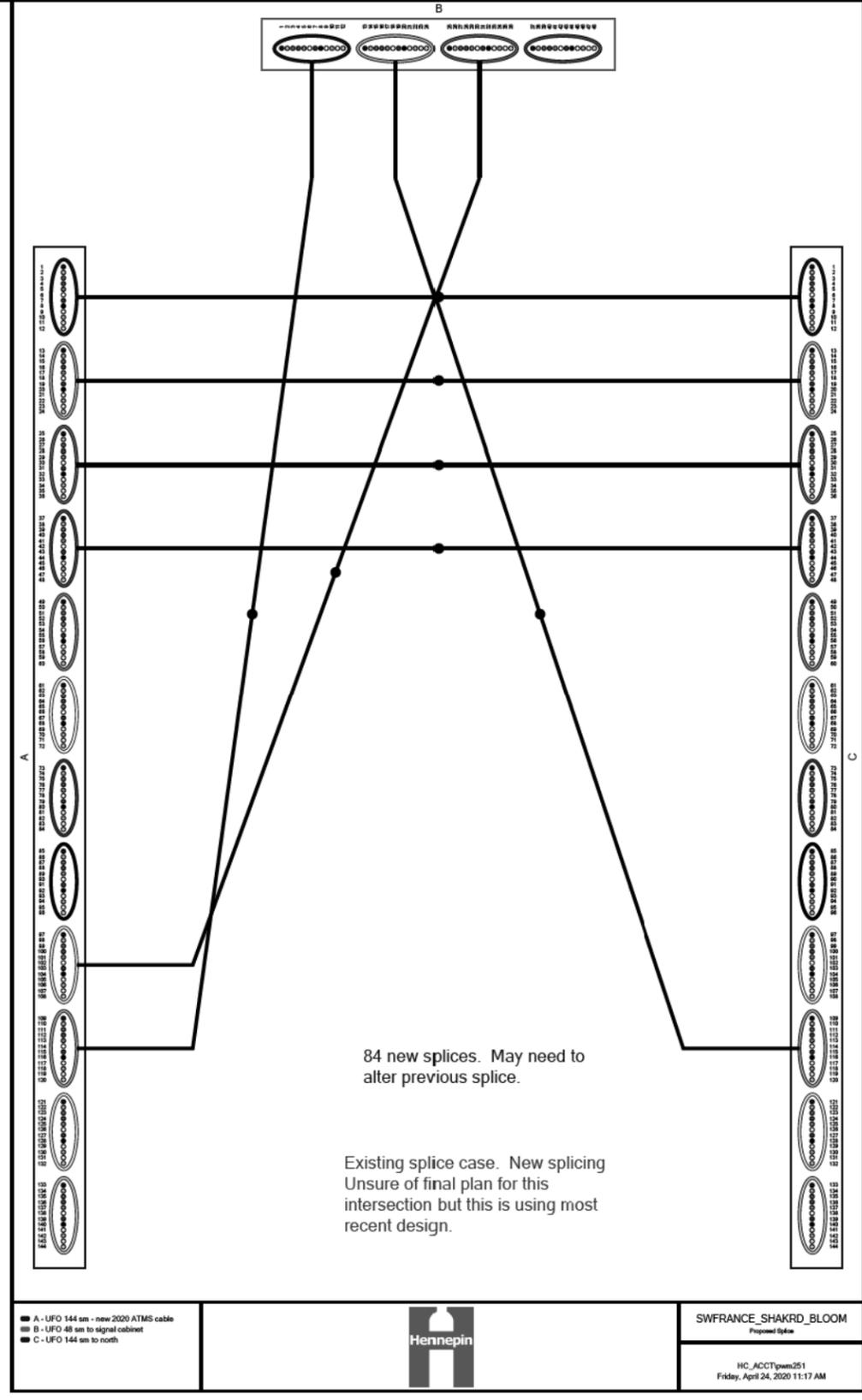


■ A - UFO 144 sm to north
 ■ B - UFO 48 sm to signal cabinet
 ■ C - UFO 144 sm - proposed 2020 ATMS cable



SWFRANCE_SHAKRD_BLOOM
Existing Splice

HC_ACCT\pwn251
Friday, April 24, 2020 11:11 AM



■ A - UFO 144 sm - new 2020 ATMS cable
 ■ B - UFO 48 sm to signal cabinet
 ■ C - UFO 144 sm to north



SWFRANCE_SHAKRD_BLOOM
Proposed Splice

HC_ACCT\pwn251
Friday, April 24, 2020 11:17 AM

84 new splices. May need to alter previous splice.

Existing splice case. New splicing
 Unsure of final plan for this intersection but this is using most recent design.



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Ryan T. Allers
 RYAN T. ALLERS, LICENSED PROFESSIONAL ENGINEER

45896 06/01/2020
 LICENSE NO. DATE

DESIGN BY: J WANNER
 CAD BY: J WANNER
 CHECKED BY: R ALLERS
 LAST REVISION: / /

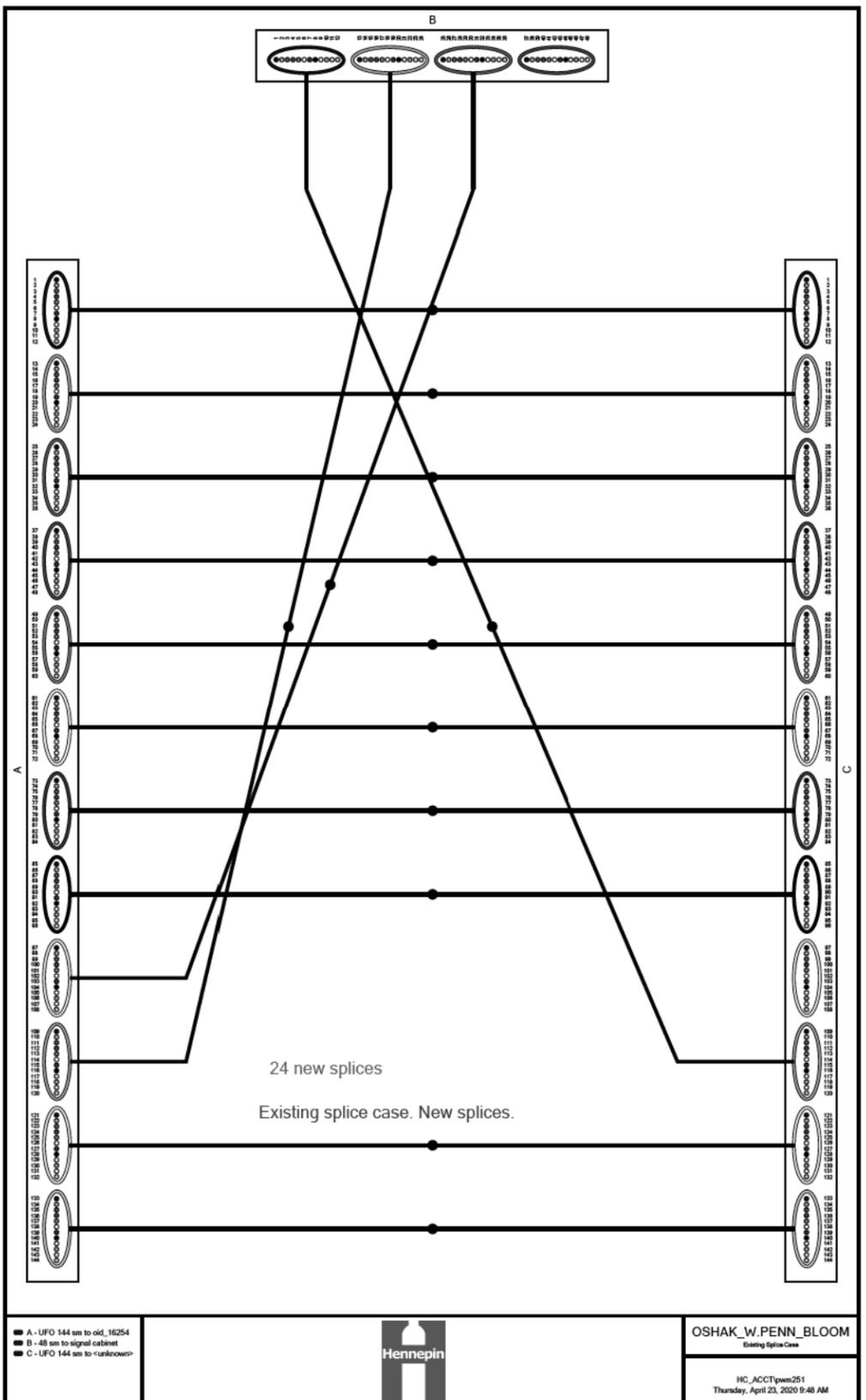
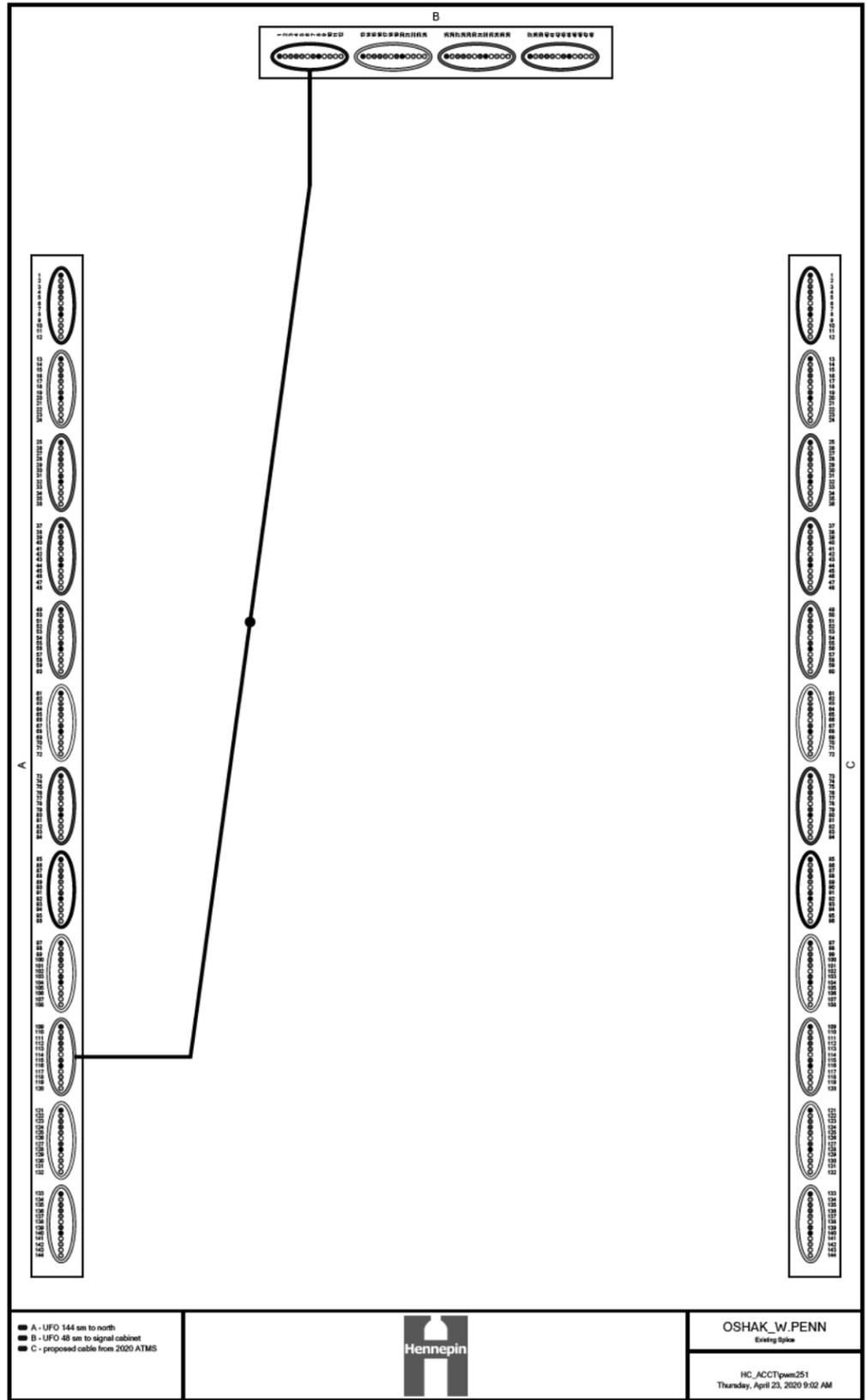
DETAIL SHEET

2020 ATMS / HENNEPIN COUNTY PROJECT 164402

S.P. 027-030-047

SHEET

8 / 104



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

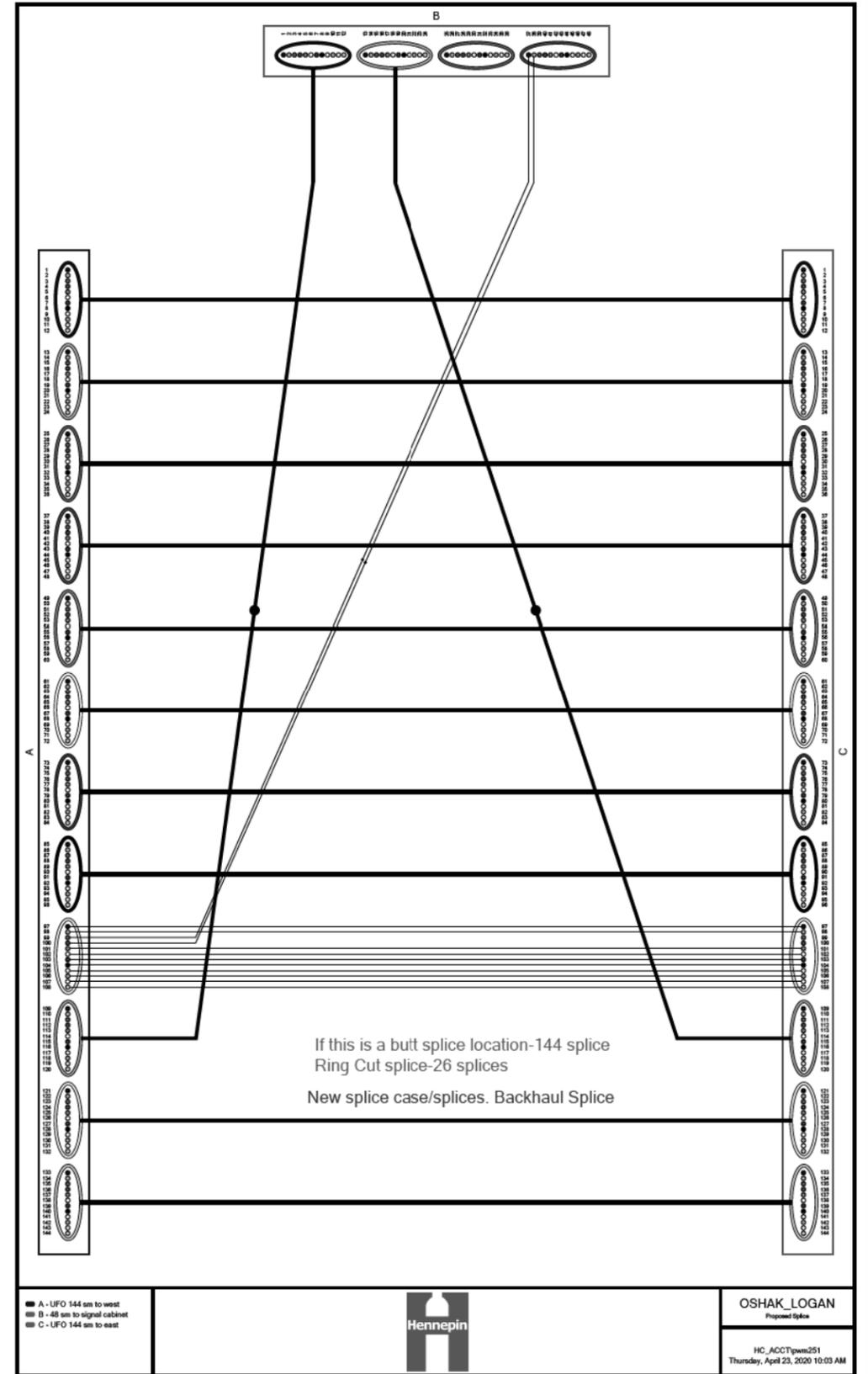
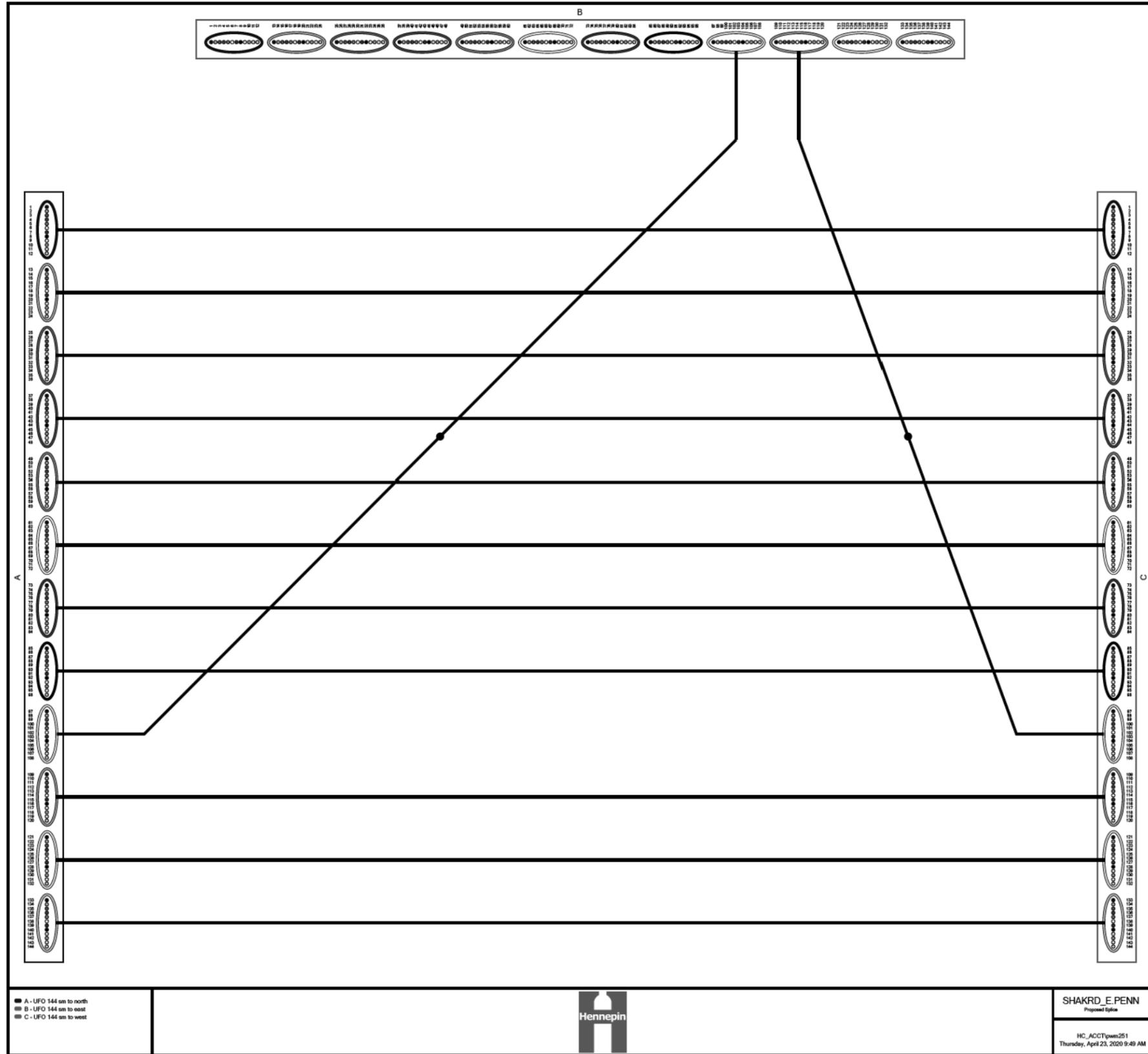
Ryan T. Allers
 RYAN T. ALLERS, LICENSED PROFESSIONAL ENGINEER 45896 06/01/2020
 LICENSE NO. DATE

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2020 ATMS / HENNEPIN COUNTY PROJECT 164402
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SHEET
 9
 104



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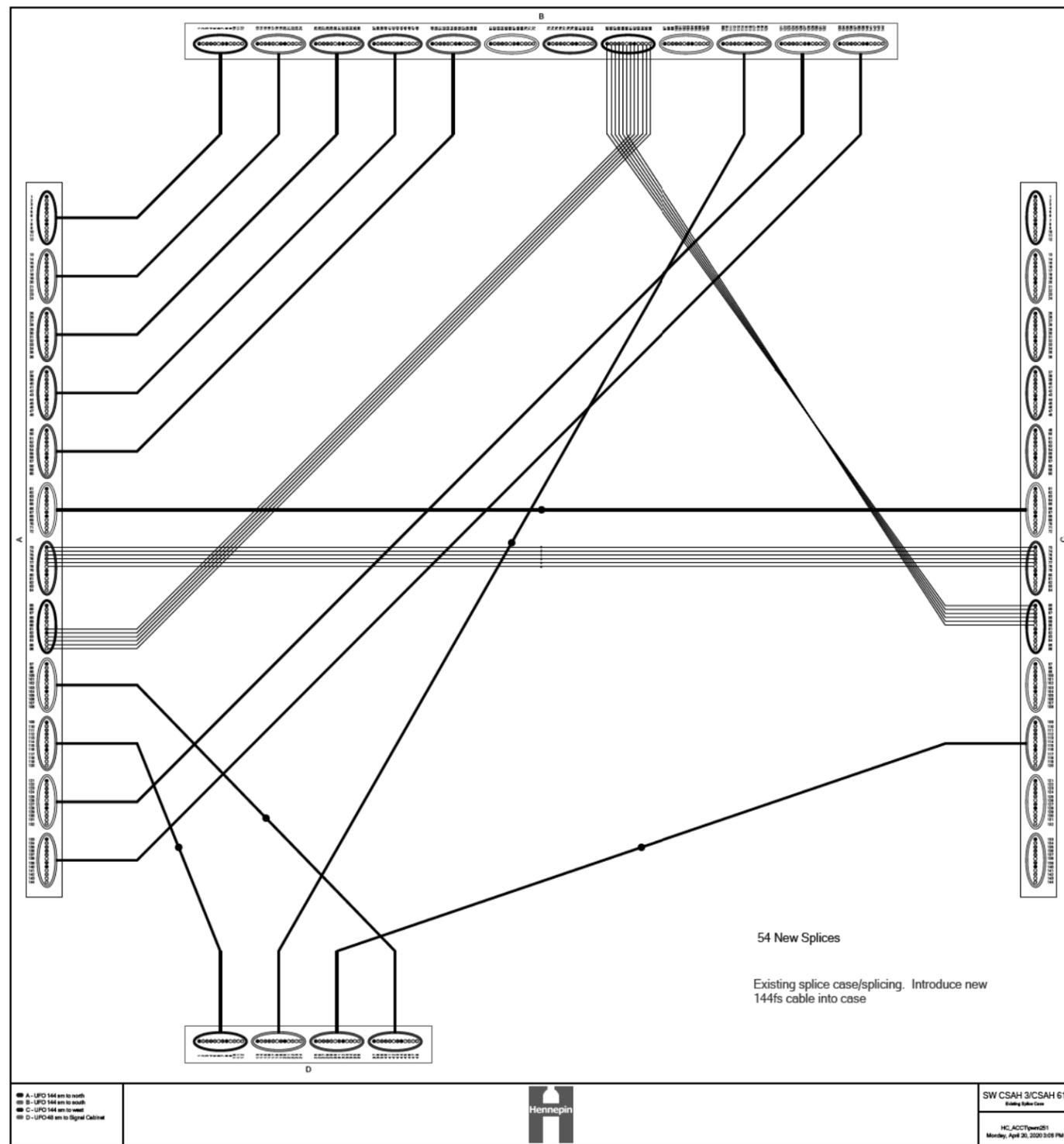
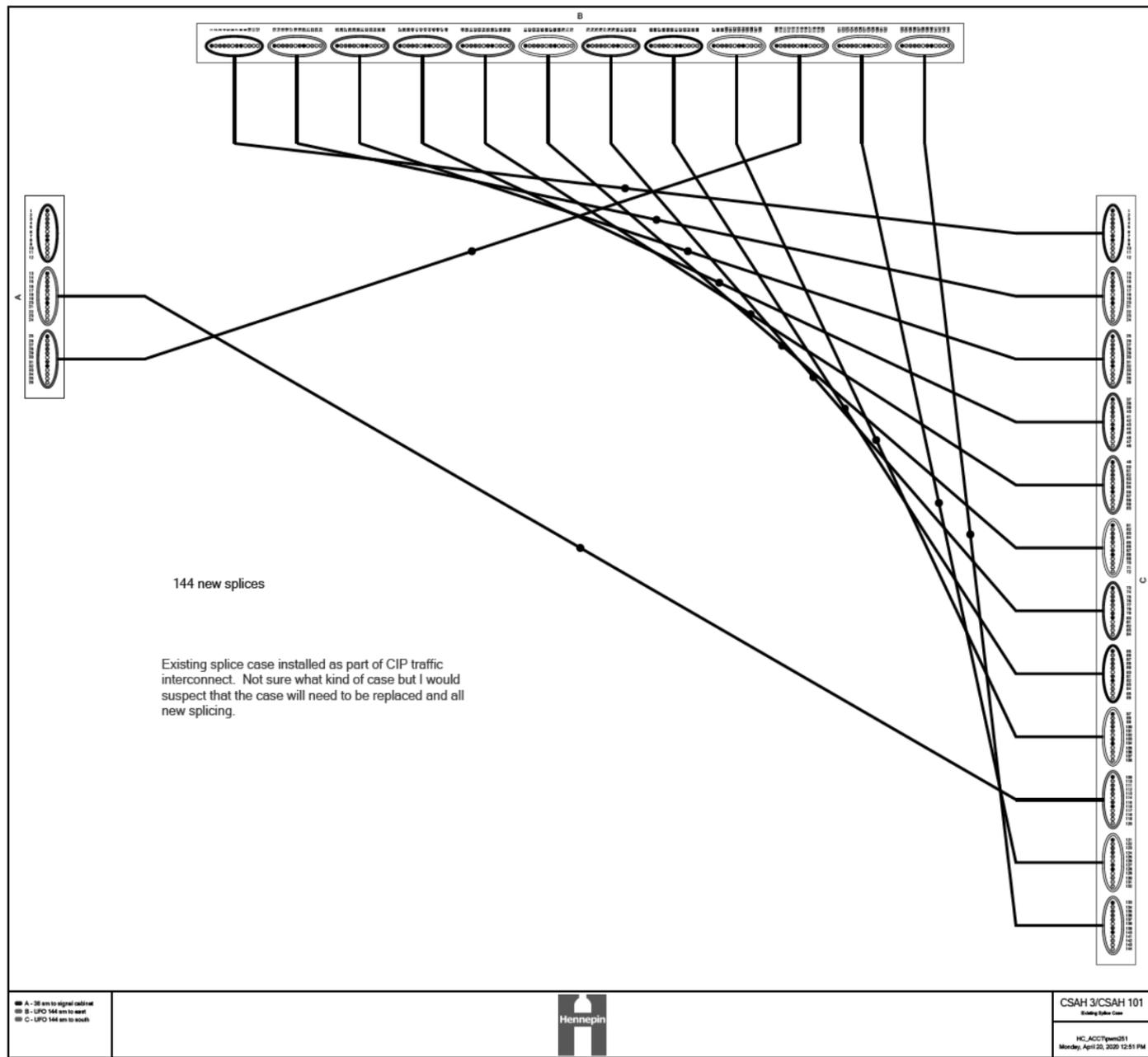
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10
 104



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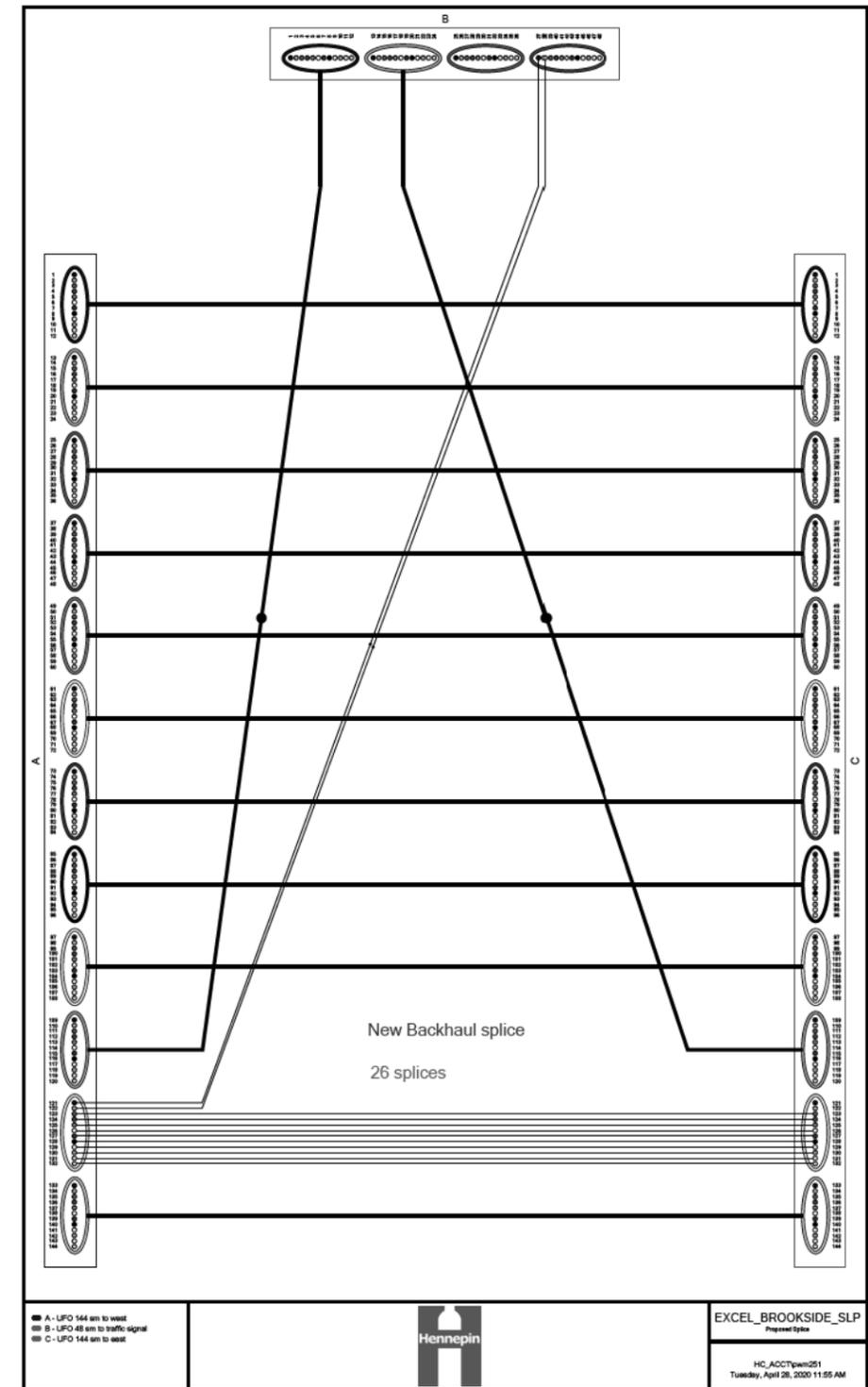
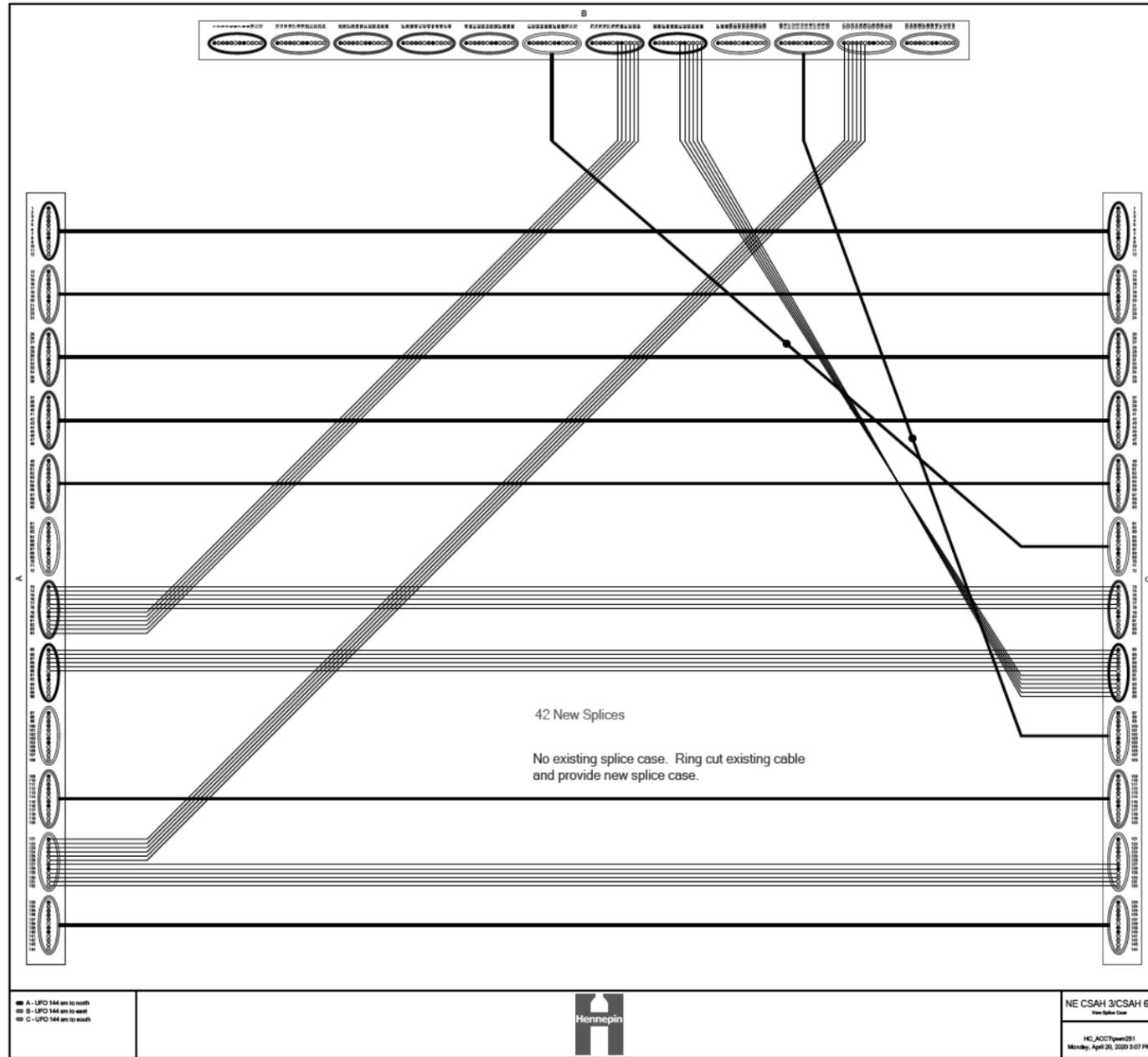
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2020 ATMS / HENNEPIN COUNTY PROJECT 164402
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11
 104



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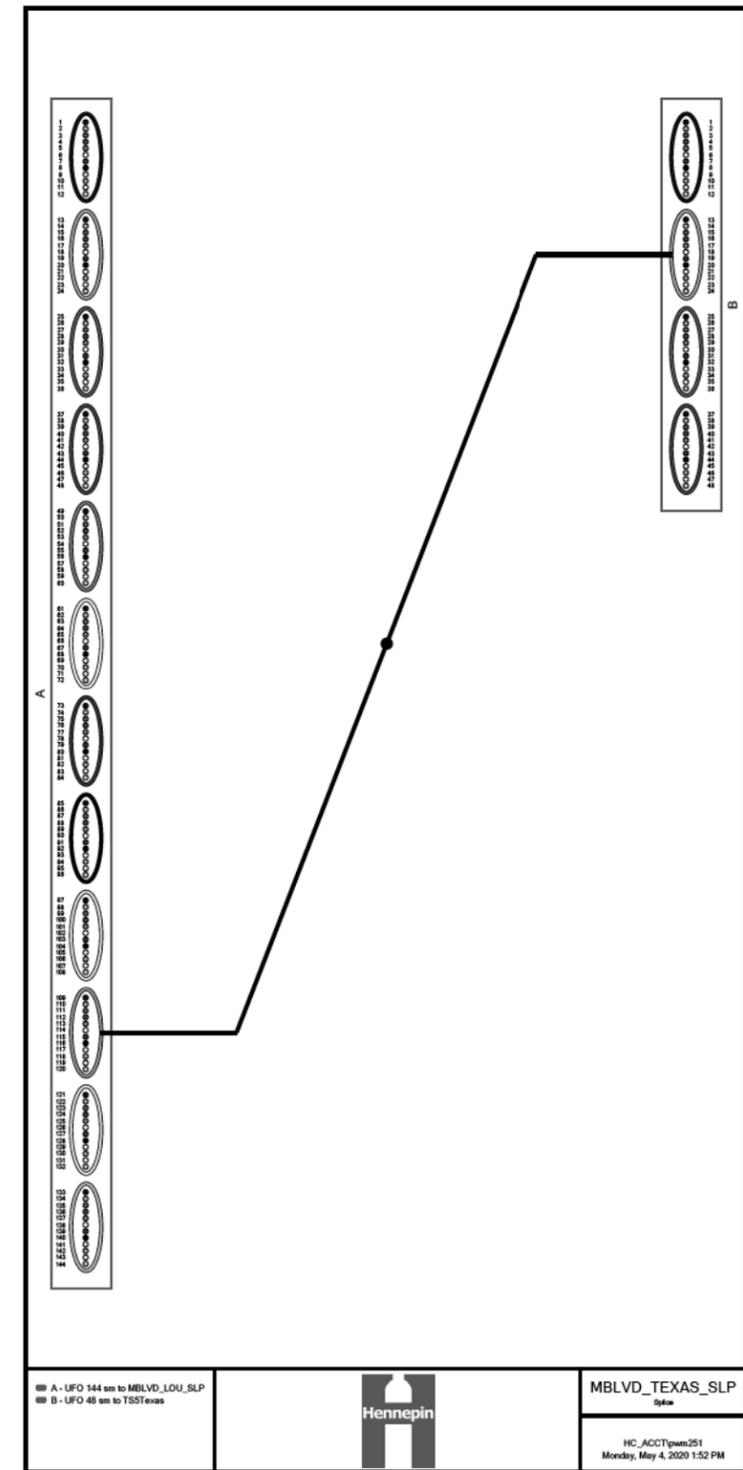
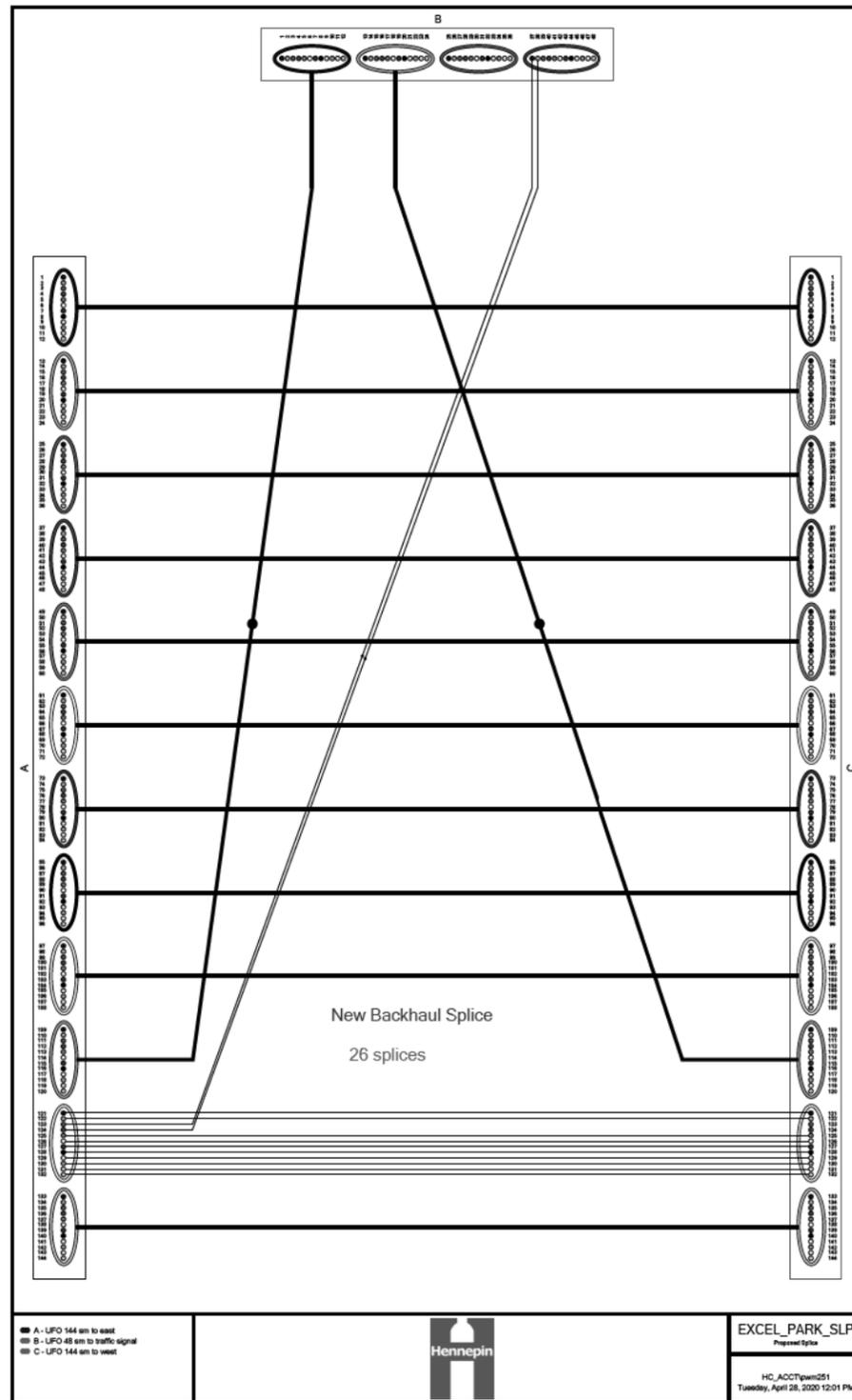
2020 ATMS / HENNEPIN COUNTY PROJECT 164402

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12

104



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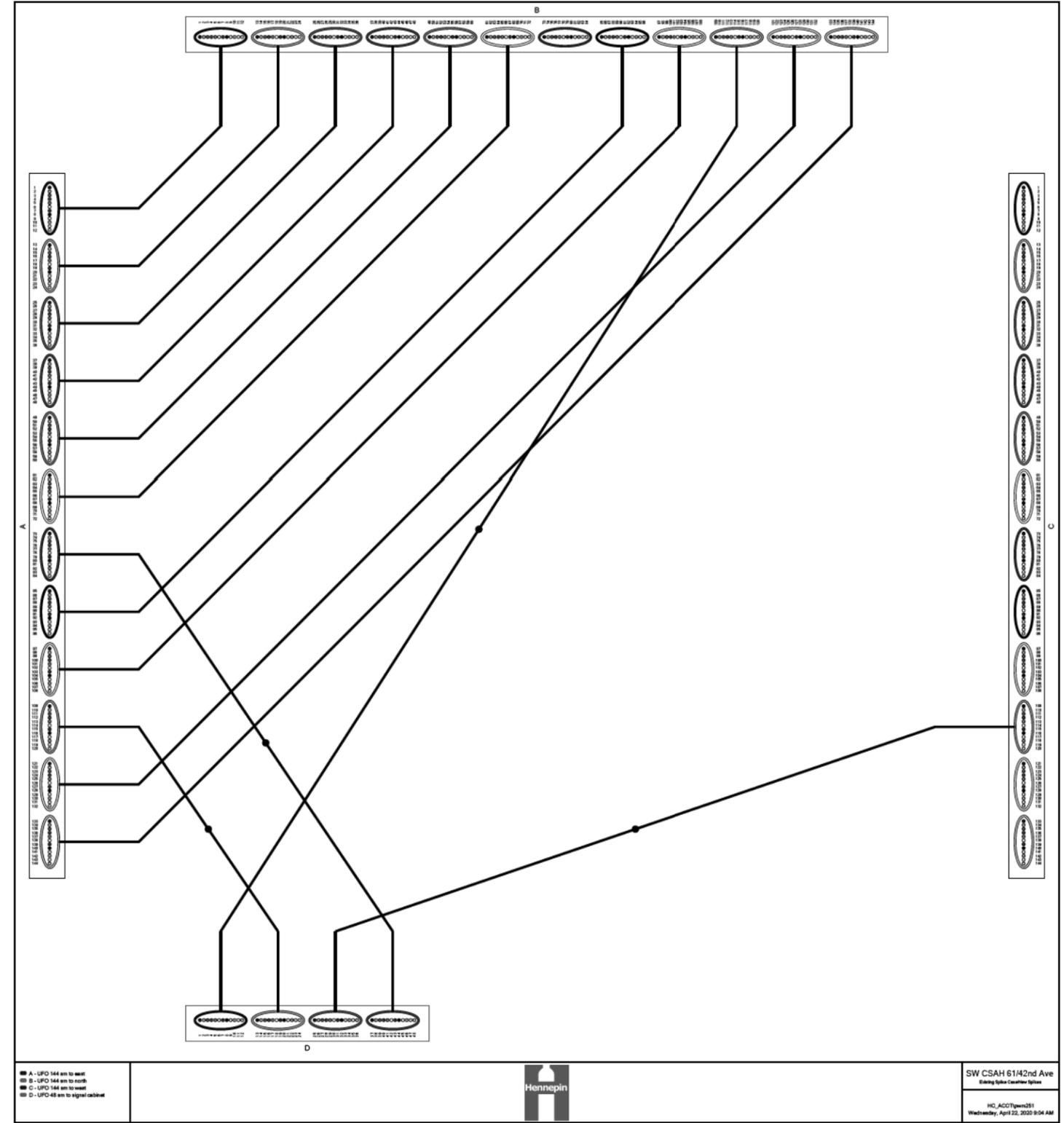
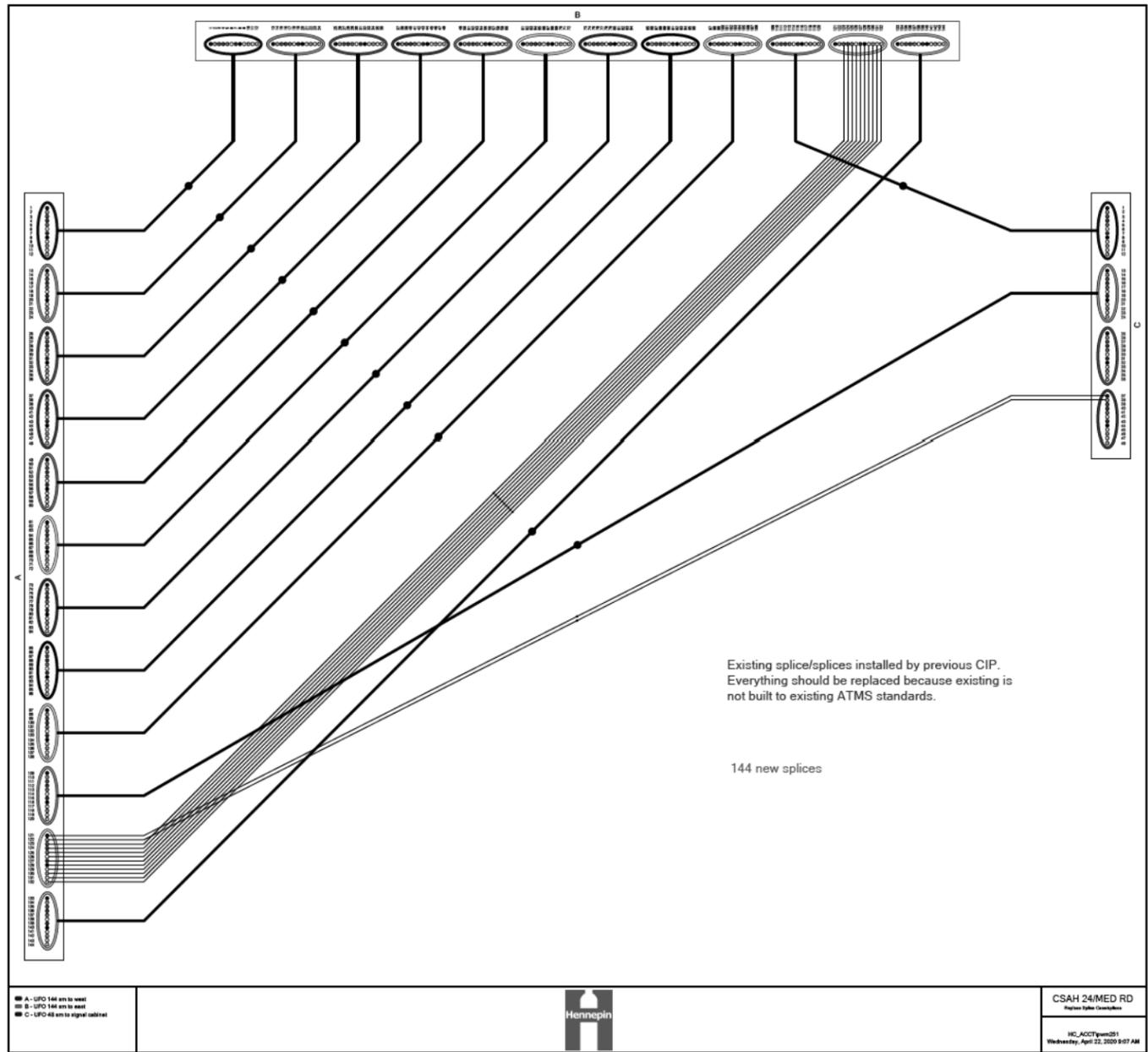
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13
 104



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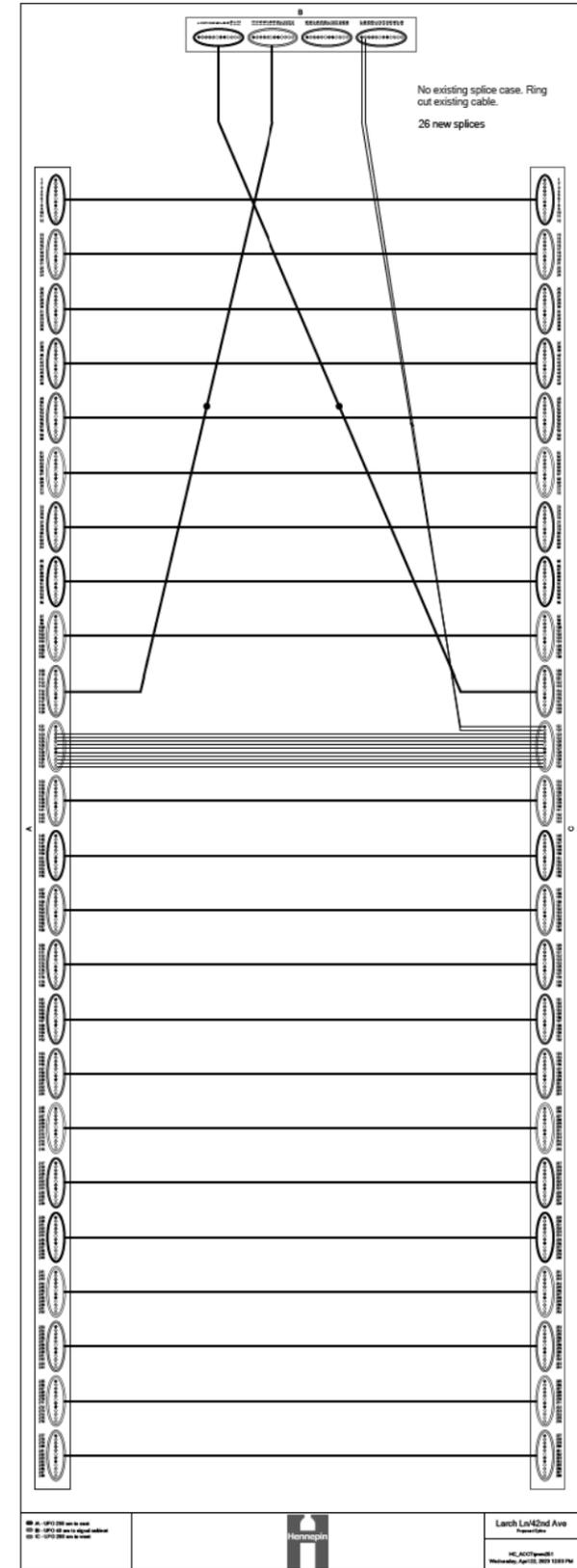
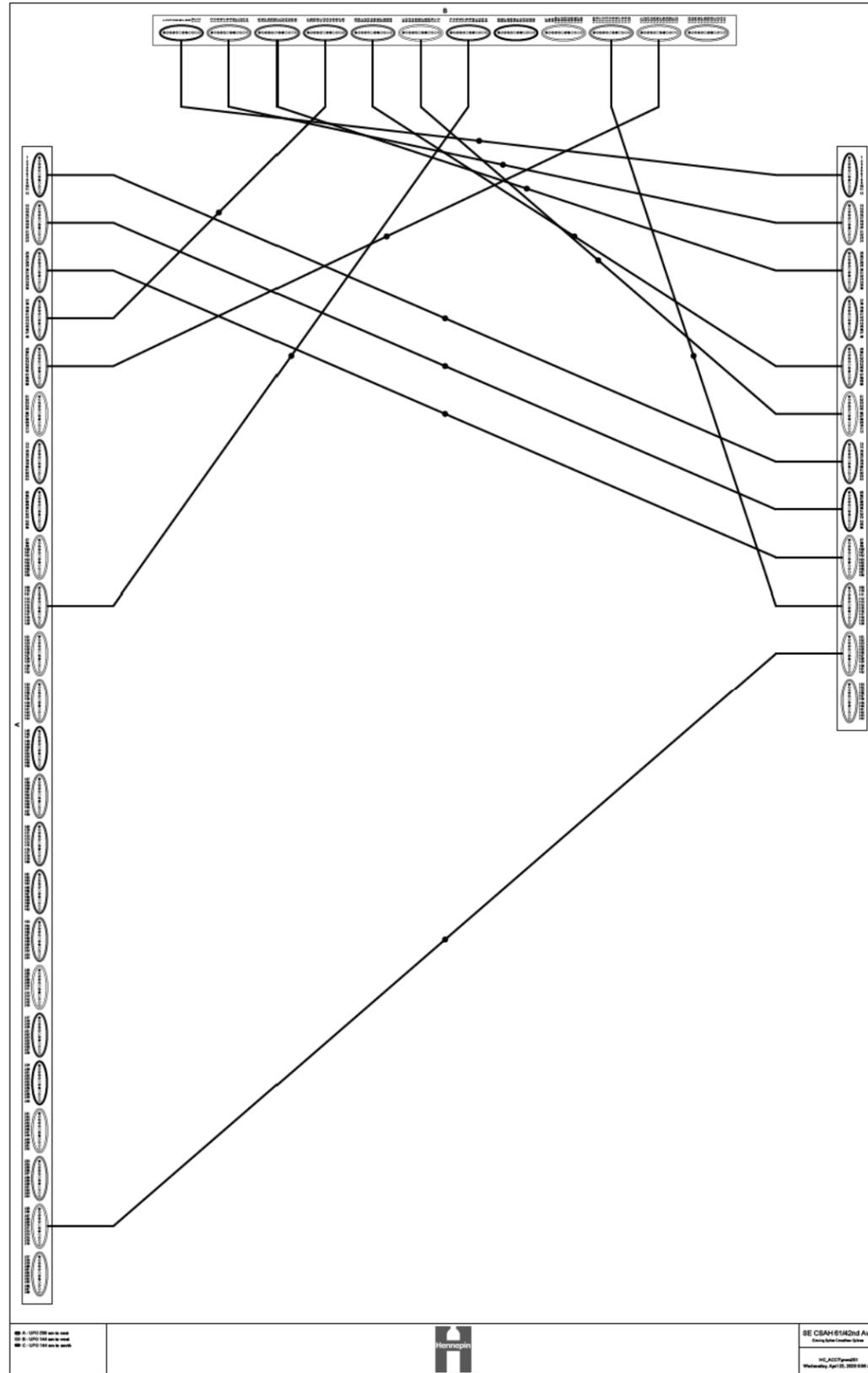
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14
 104



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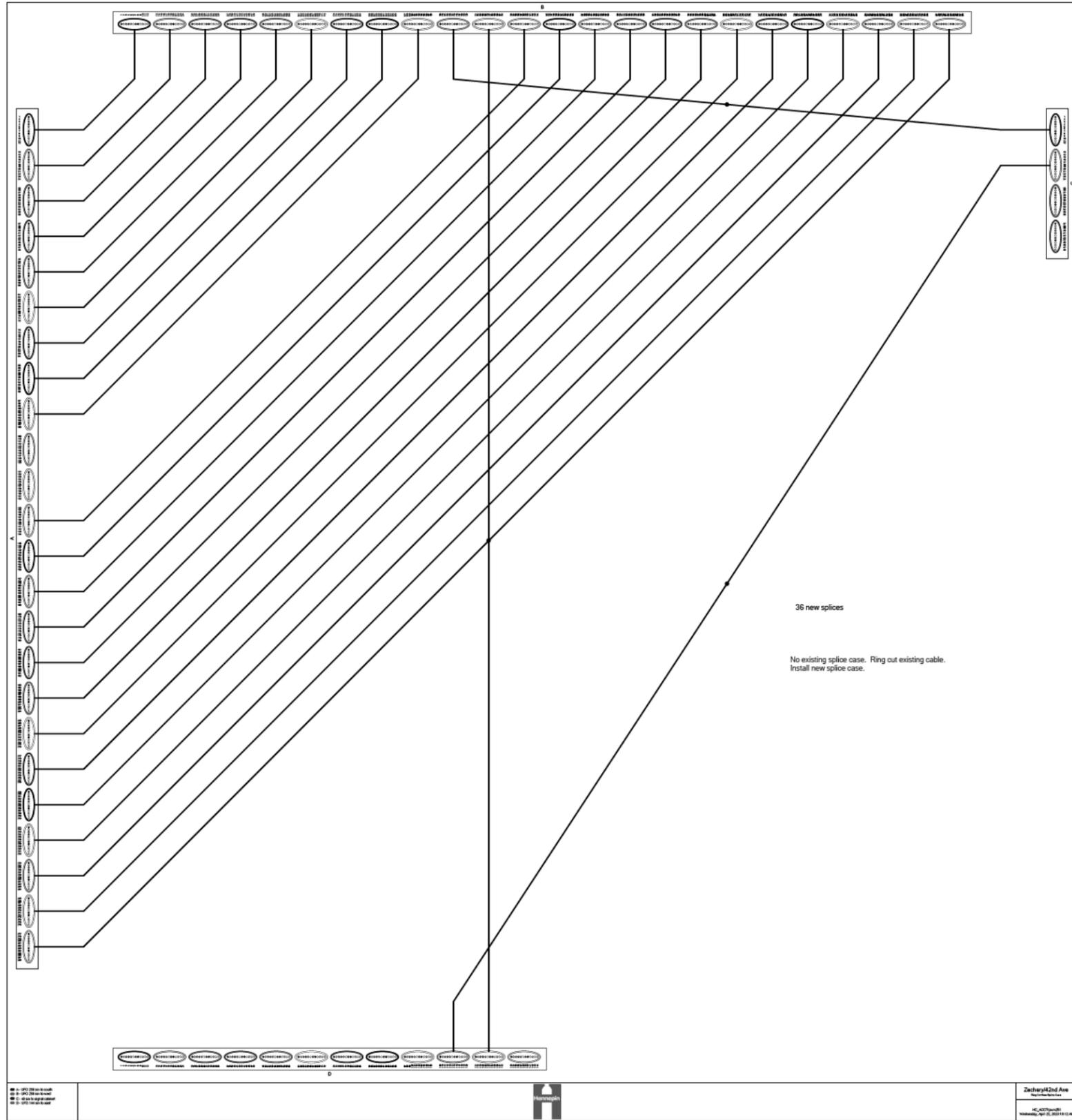
2020 ATMS / HENNEPIN COUNTY PROJECT 164402

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15

104



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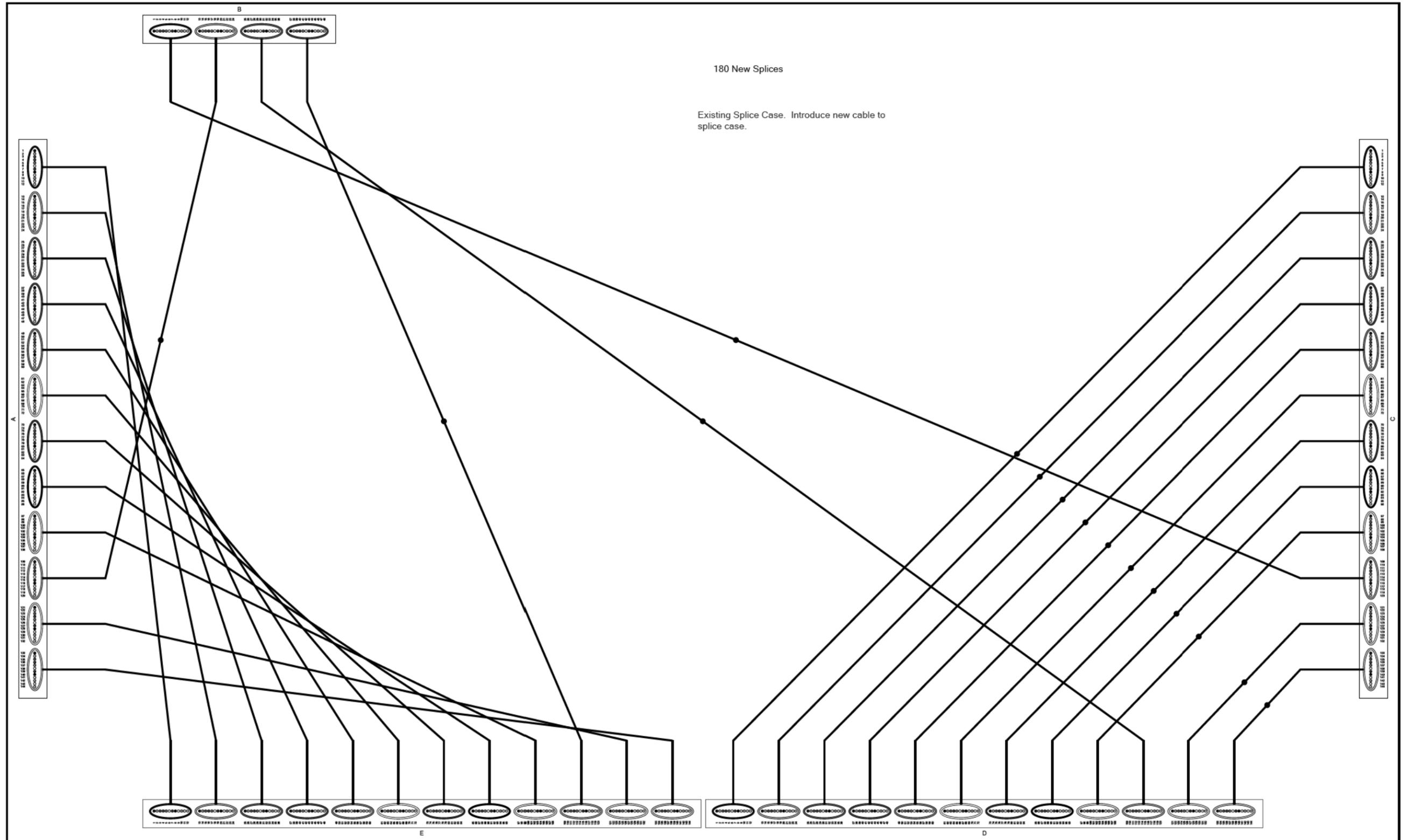
DETAIL SHEET

2020 ATMS / HENNEPIN COUNTY PROJECT 164402

S.P. 027-030-047

SHEET

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 104



■ A - LFO 144 wire to north
 ■ B - LFO 48 wire to signal cabinet
 ■ C - LFO 144 wire to west
 ■ D - LFO 144 wire to east
 ■ E - LFO 144 wire to south



Winnetka/42nd Ave
 Existing Splice Case
 H:\ADCT\winnetka
 Wednesday, April 22, 2020 10:22 AM

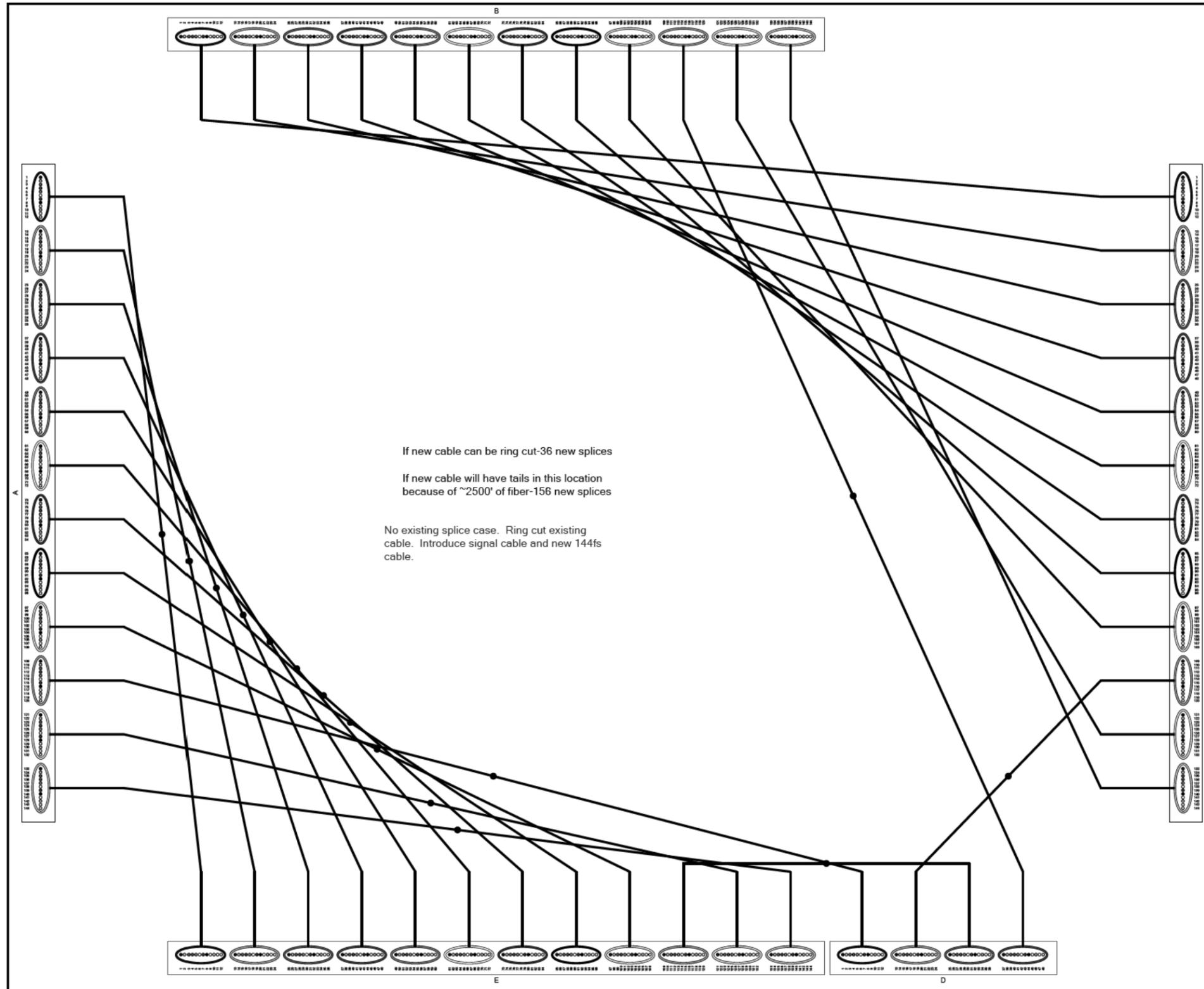


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 45896 06/01/2020
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DETAIL SHEET
 2020 ATMS / HENNEPIN COUNTY PROJECT 164402
 S.P. 027-030-047

SHEET
 17
 104



If new cable can be ring cut-36 new splices
 If new cable will have tails in this location because of ~2500' of fiber-156 new splices
 No existing splice case. Ring cut existing cable. Introduce signal cable and new 144fs cable.

- A - UFO 144 am to west
- B - UFO 144 am to south
- C - UFO 144 am to north
- D - UFO 48 am to signal cabinet
- E - UFO 144 am to east



Douglas Dr/42nd Ave
 Project Splice
 HC_A027pwm281
 Wednesday, April 22, 2020 10:24 AM



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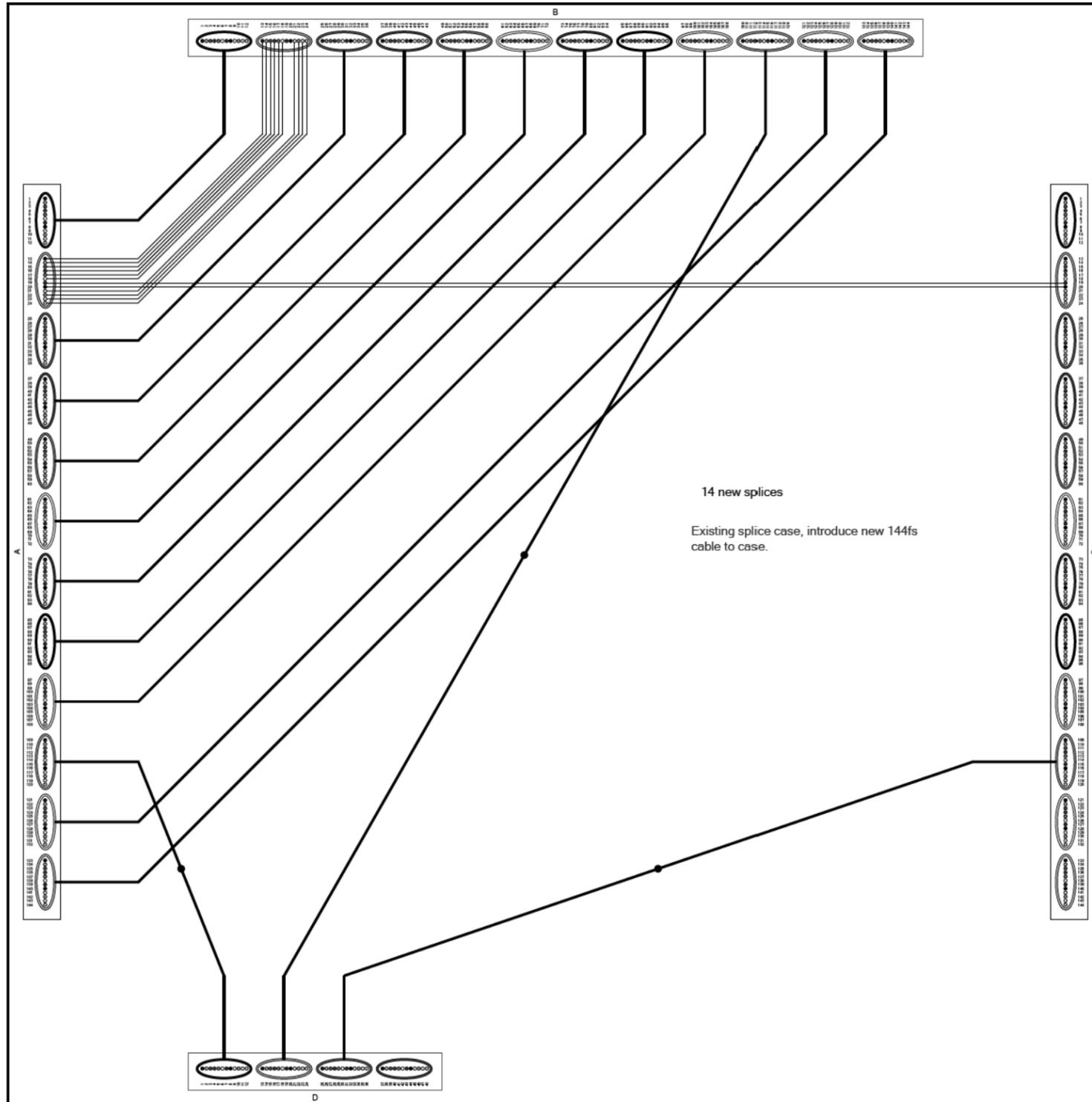
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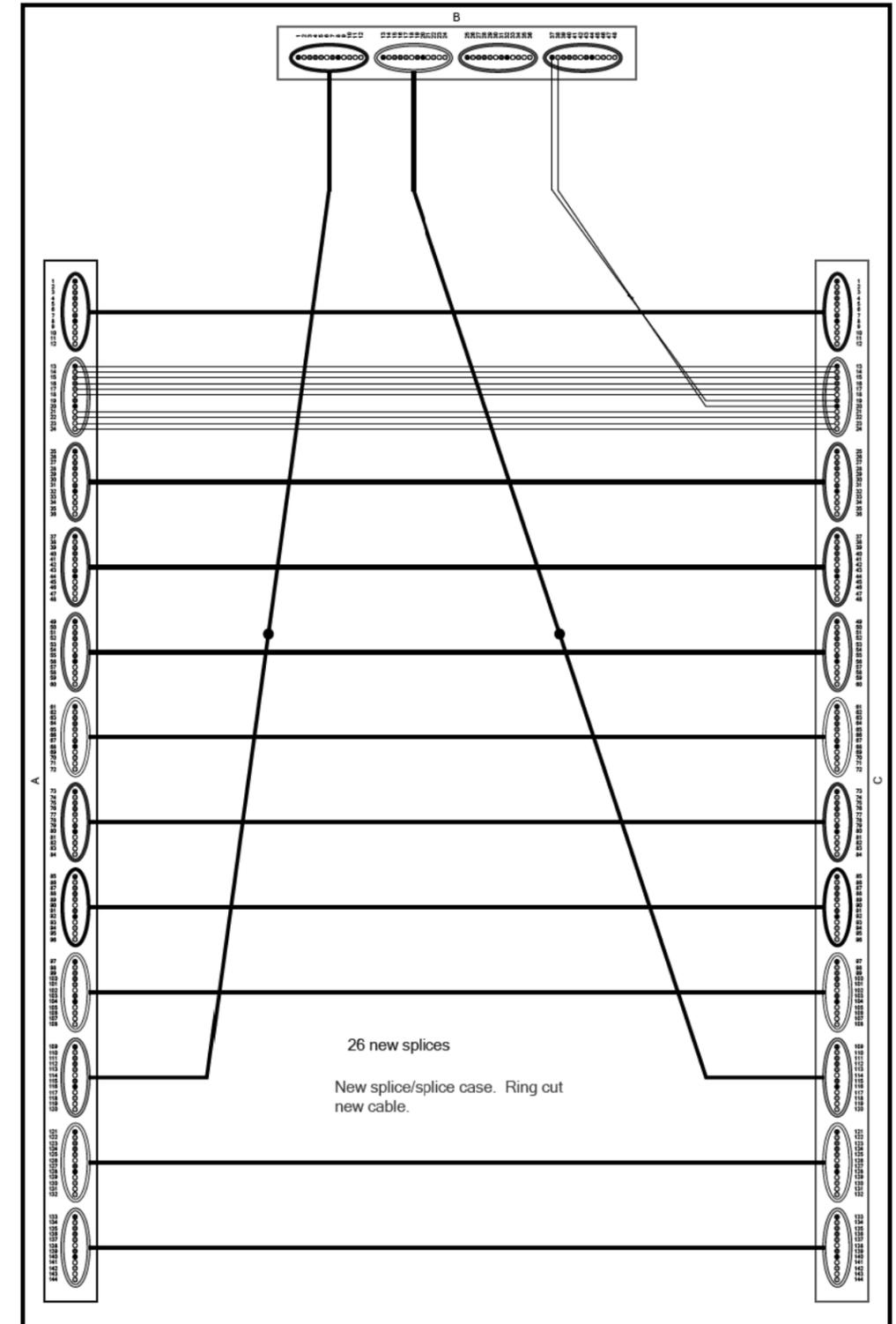
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- A - UFO 144 sm to north
- B - UFO 144 sm to south
- C - UFO 144 sm to west
- D - UFO 48 sm to signal cabinet



CSAH 81/42nd Ave
 Project: 164402
 HC_ACC16wm051
 Wednesday, April 22, 2020 11:01 AM



- A - UFO 144 sm to west
- B - 48 sm to signal cabinet
- C - UFO 144 sm to east



Broadway/42nd Ave
 Project: 164402
 HC_ACC16wm051
 Wednesday, April 22, 2020 11:24 AM



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DETAIL SHEET

2020 ATMS / HENNEPIN COUNTY PROJECT 164402

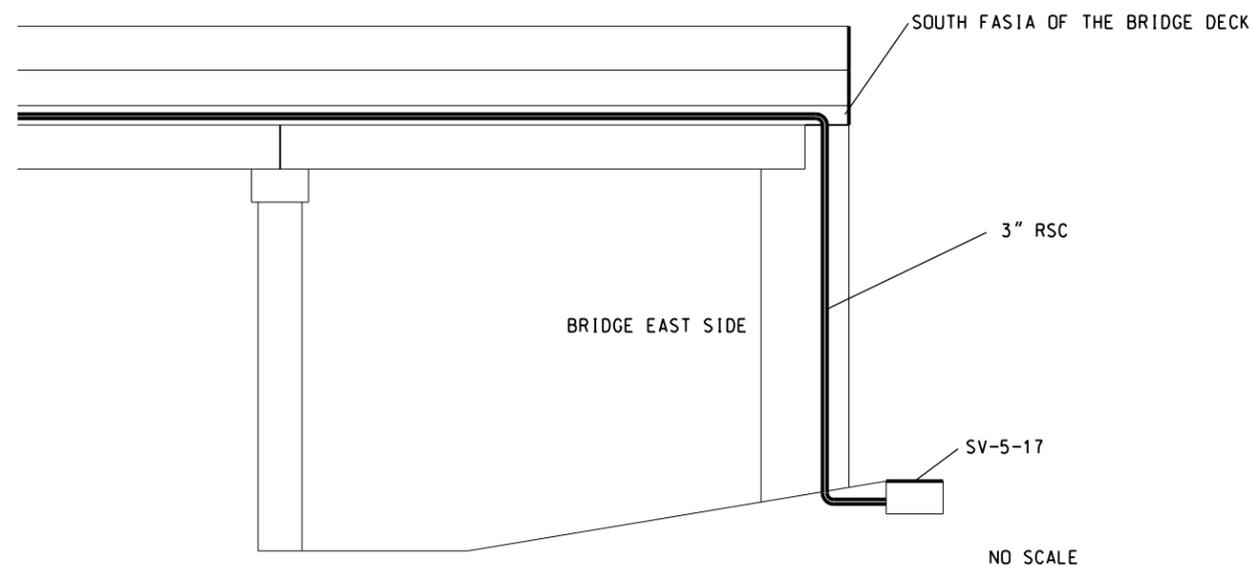
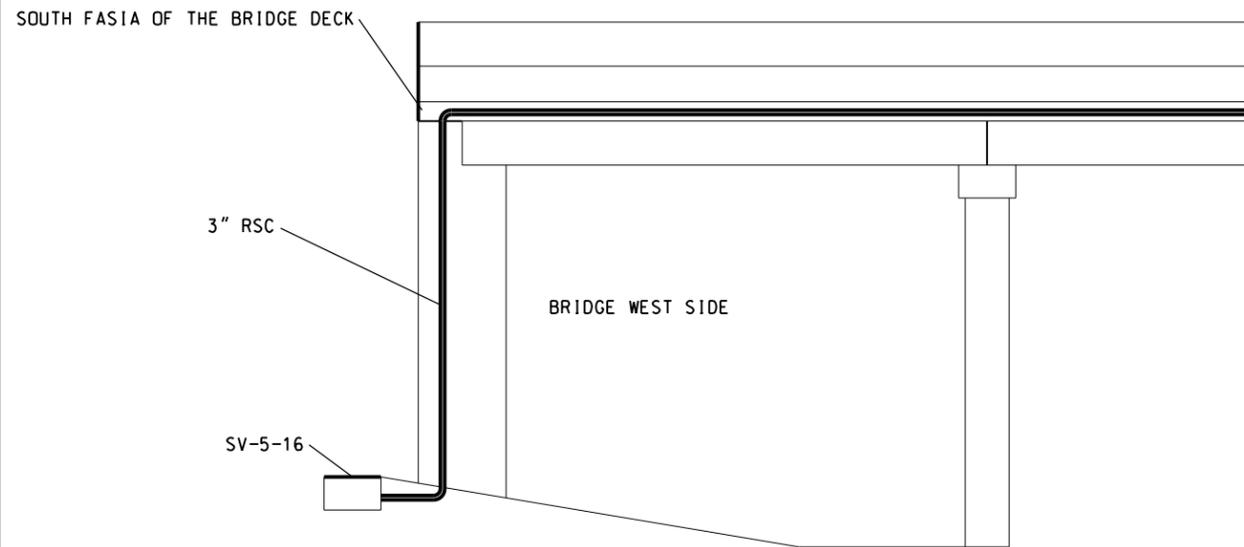
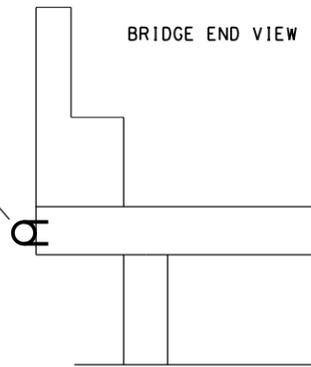
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CONDUIT DETAIL AT IN PLACE BRIDGE

* MOUNT THE CONDUIT TO THE EXTERIOR SOUTH FASIA OF THE BRIDGE DECK.
 1/8" X 1 1/2" GALVANIZED STRAPS WITH 2 - 3/8" X 1.5" GALVANIZED
 EXPANSION ANCHORS SPACED AT 5'-0" ON CENTER HOLES TO BE DRILLED
 AND ANCHORS SET IN EPOXY.



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Ryan T. Allers

RYAN T. ALLERS, LICENSED PROFESSIONAL ENGINEER 45896 06/01/2020

LICENSE NO. DATE

DESIGN BY: J WANNER

CAD BY: J WANNER

CHECKED BY: R ALLERS

LAST REVISION: / /

DETAIL SHEET	SHEET
2020 ATMS / HENNEPIN COUNTY PROJECT 164402	20
S.P. 027-030-047	104

COMPANY	CONTACT	EMAIL	PHONE	UTILITIES
ARVIG	CURT OLSON	curtis.olson@arvig.com	218-346-5500	FIBER OPTICS
AT&T TRANSMISSION	DAVID ROTERT	dr2945@att.com	612-804-1797	FIBER OPTICS
BEST BUY COMPANY	AMANDA GOELZ	agoelz@mpotech.biz	320-963-2400	PHONE
BLOOMINGTON SCHOOLS ISD 271	LOCATOR		218-346-5500	FIBER OPTICS
CITY OF BLOOMINGTON UTILITIES	BEN WHITCOMB	bwhitcomb@BloomingtonMN.gov	952-217-2258	STORM, SANITARY, AND WATER
CITY OF BLOOMINGTON TRAFFIC	MARK TOWNSEND	mtownsend@BloomingtonMN.gov	952-563-4505	TRAFFIC
COMCAST	LYNNE	usicprintrequests@gmail.com	612-919-0760	PHONE/CABLE/INT
CENTURYLINK - CTLQL	KIM VANDERWERFF	Kim.Vanderwerff@centurylink.com	800-667-9963	PHONE/CABLE/INT
CONSOLIDATED COMMUNICATIONS I	TRUDY BOELTER	Trudy.Boelter@consolidated.com	701-356-6003	FIBER OPTICS
HENNEPIN COUNTY PUBLIC WORKS	BRANT KOUGH	brant.kough@hennepin.us	612-596-0339	TRAFFIC SIGNALS/FIBER
METRO TRANSIT	AL PROPER	Al.Proper@metrotransit.org	612-341-5739	ELECTRICAL/RAIL
FLINT HILLS RESOURCES	LOCATOR		800-688-7594	PILELINE
METROPOLITAN AIRPORT COMM	ALLEN DYE	al.dye@mspmac.org	612-726-5111	ELECTRIC, WATER,SEWER,FIBER OPTIC
METROPOLITAN COUNCIL	MANKING LEE	Manking.Lee@metc.state.mn.us	651-602-4313	SEWER
MIDWEST FIBER NETWORKS			800-778-9140	FIBER OPTICS
CENTER POINT ENERGY	CATHY FRAUTSCHI	Cathy.Frautschi@centerpointenergy.com	763-559-5185	GAS
MNDOT	TYLER MONSON	tyler.monson@state.mn.us	651-366-5750	LIGHTING/SIGNALS/FIBER
CHARTER COMMUNICATIONS	CHARLES SNYDER	Charles.Snyder@charter.com	800-778-9140	PHONE/CABLE/INT
SPRINT/LONG DISTANCE	KEVIN PERSON	Kevin.K.Person@sprint.com	800-521-0579	FIBER OPTICS
WINDSTREAM COMMUNICATIONS	DAVID ACKERMAN	David.F.Ackerman@windstream.com	800-289-1901	PHONE/CABLE/INT
XCEL ENERGY	SAM RICHERT	Samuel.L.Richert@xcelenergy.com	612-499-1303	POWER



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Ryan T. Allers
 RYAN T. ALLERS, LICENSED PROFESSIONAL ENGINEER
 LICENSE NO. 45896 DATE 06/01/2020

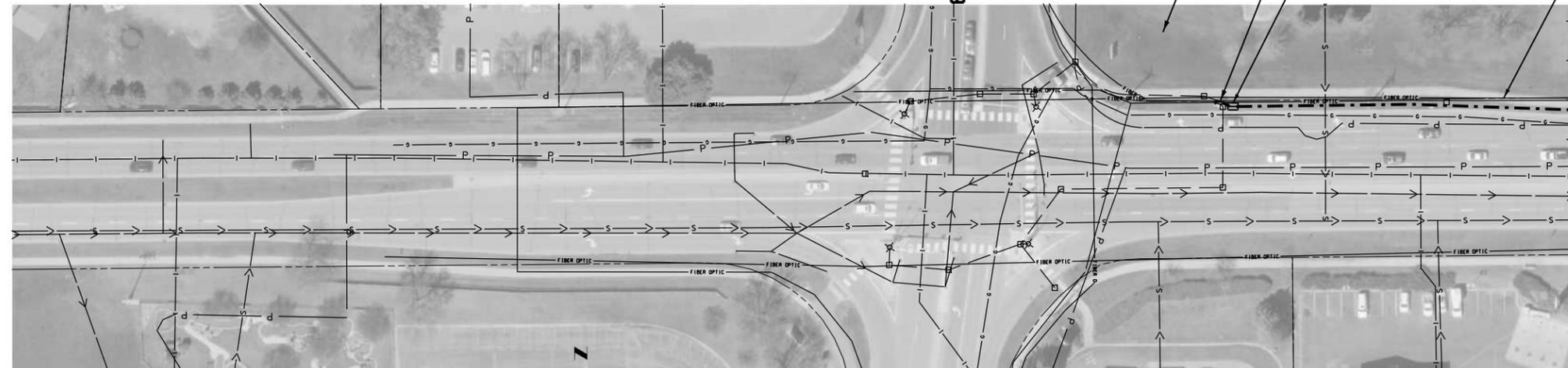
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CSAH 1 UTILITY CONTACT INFORMATION

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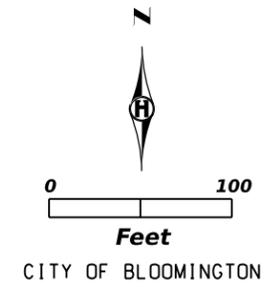
SHEET
 22
 104

C.S.A.H. NO. 1

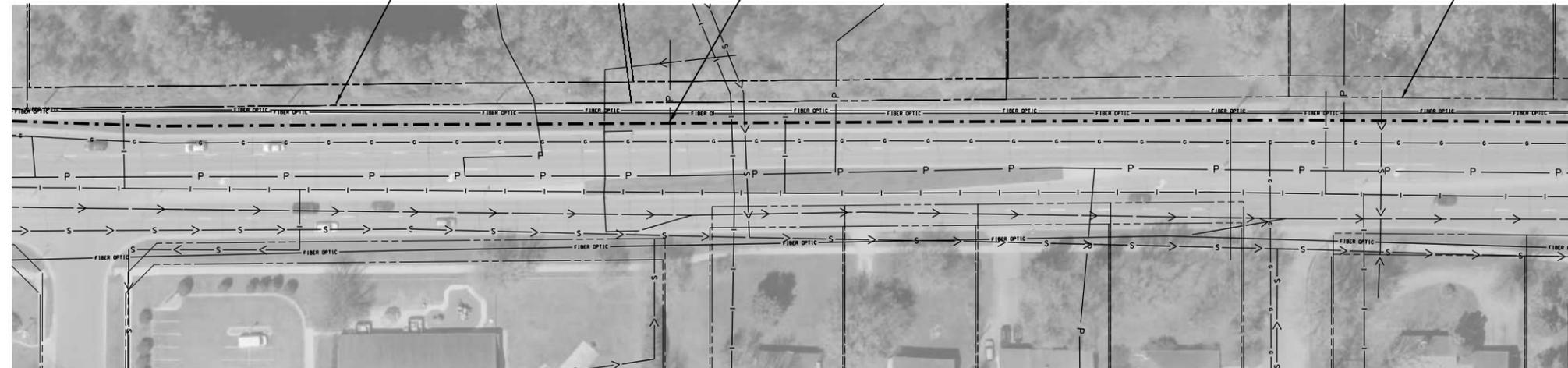


C.S.A.H. 1 (BEGIN SEGMENT 1)
 MILE PT. 8.12
 STA. 428+73.60

CAC-1-A TO SV-1-1
 1-1 1/4" NMC HDPE (CORE DRILL)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12
SV-1-1
 X: 500019.202
 Y: 160212.652



C.S.A.H. NO. 1



SV-1-1 TO SV-1-2
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

SEE SHEET 3 FOR GENERAL NOTES.



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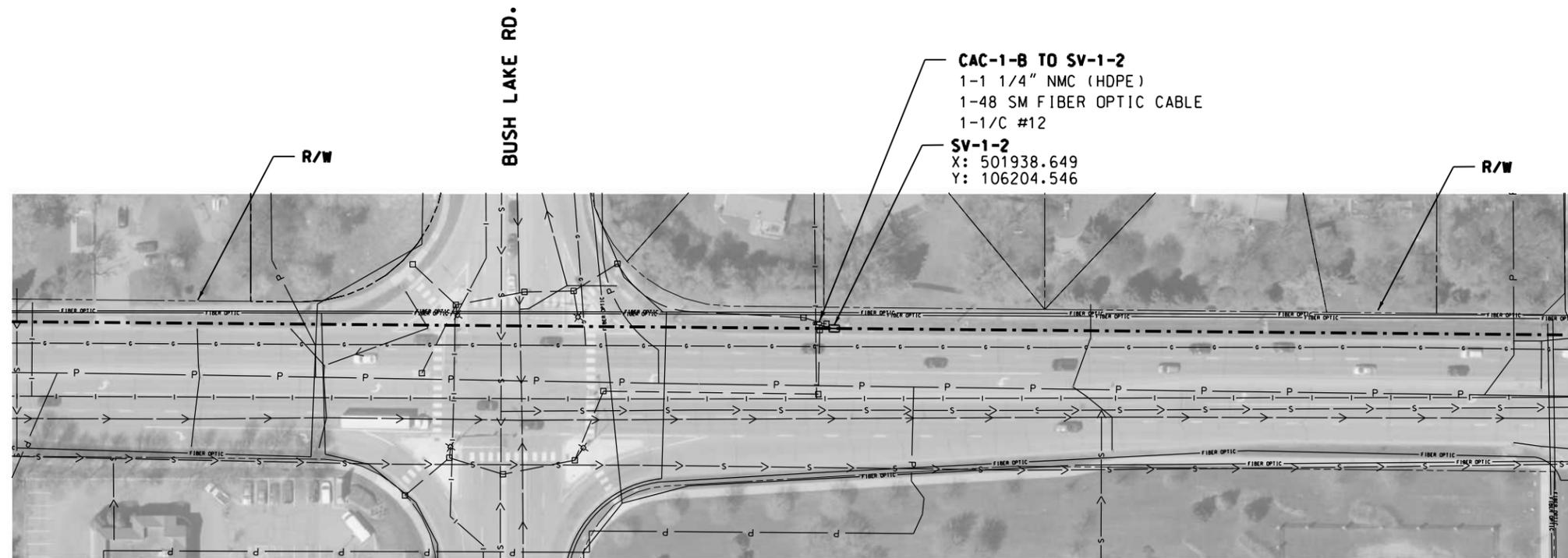
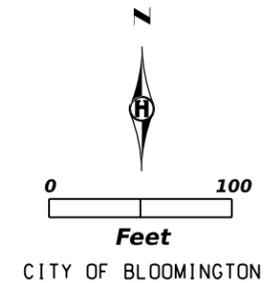
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2020 ATMS / HENNEPIN COUNTY PROJECT 164402

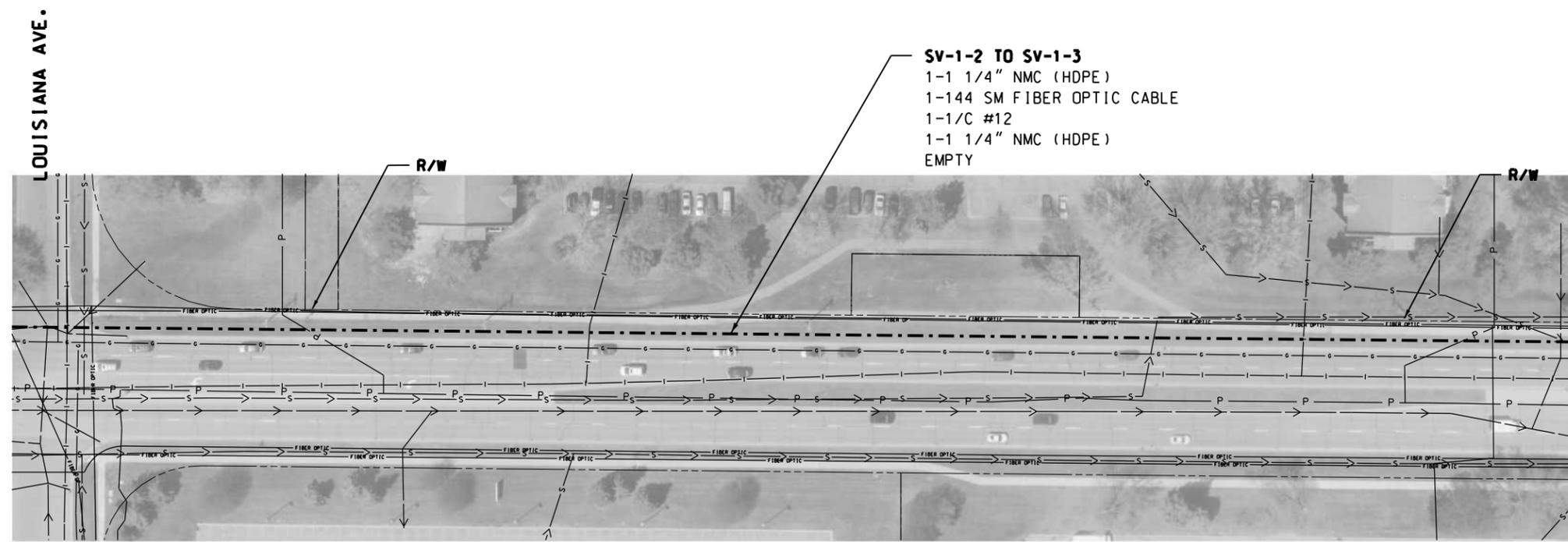
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C.S.A.H. NO. 1



C.S.A.H. NO. 1

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CSAH 1 PLAN

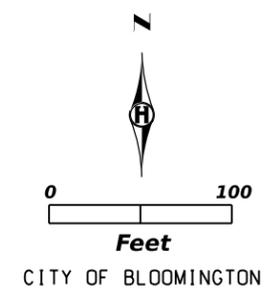
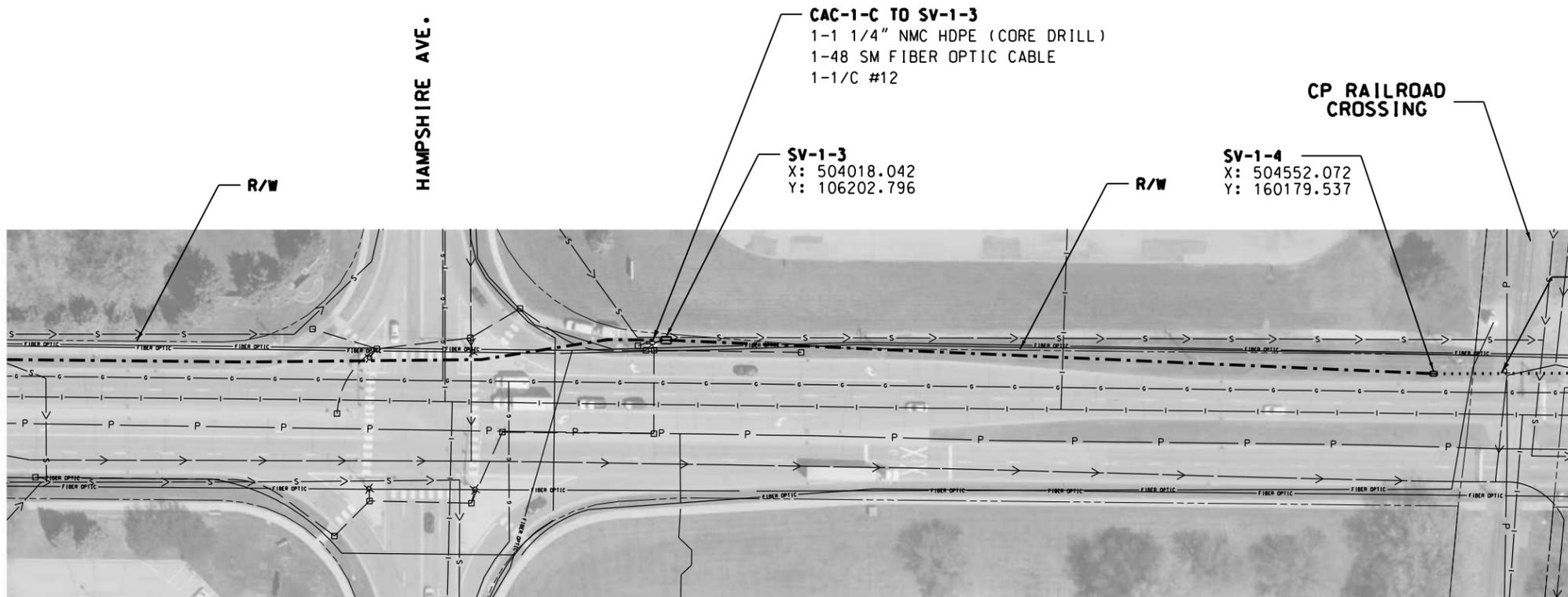
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24 / 104

C.S.A.H. NO. 1



SV-1-4 TO SV-1-5
 1-4" NMC (HDPE) (MIN. 10 FEET DEEP)
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY
 1-4" NMC (HDPE) (MIN. 10 FEET DEEP)
 2-1 1/4" NMC (HDPE)
 EMPTY

C.S.A.H. NO. 1



SV-1-5 TO SV-1-6
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

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CSAH 1 PLAN

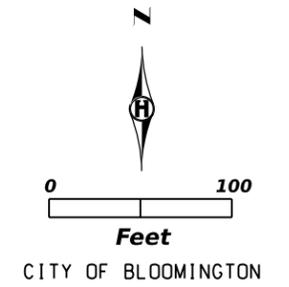
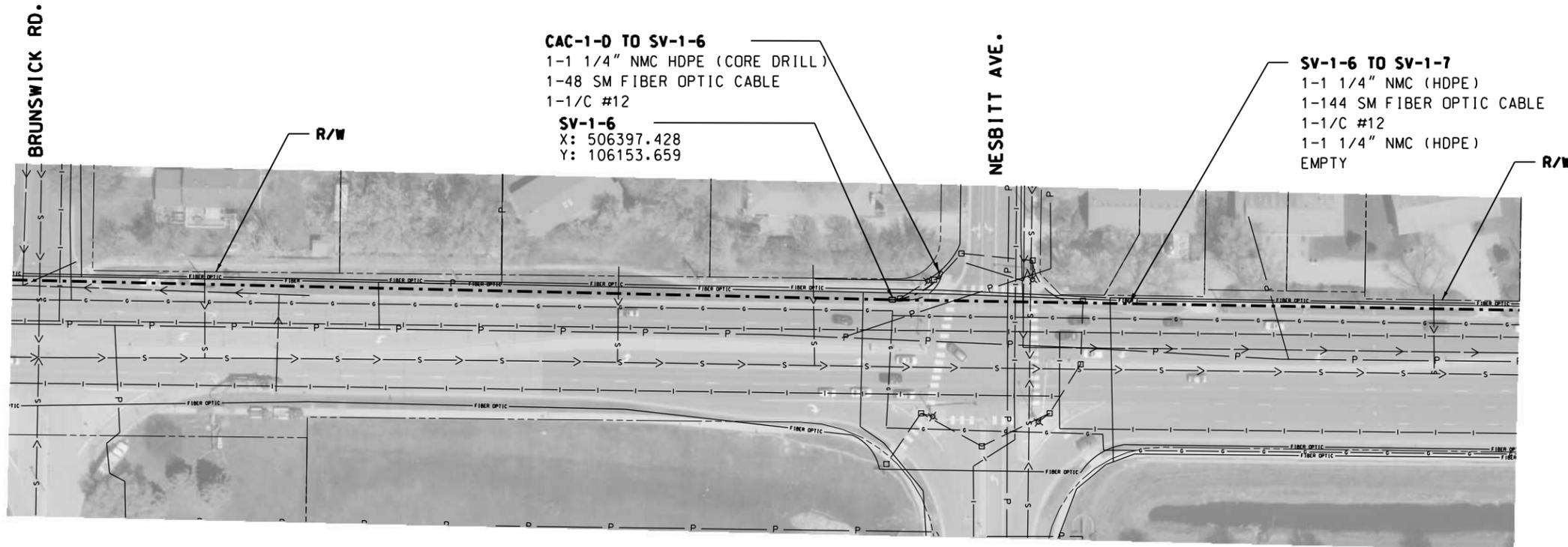
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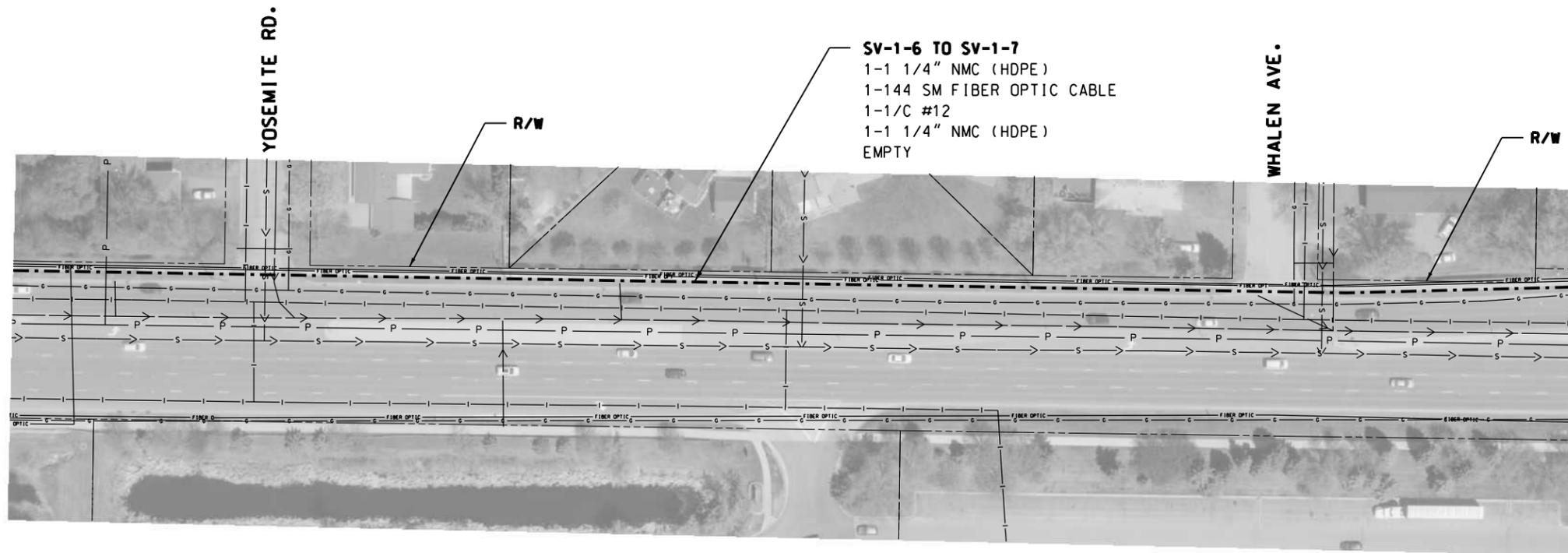
SHEET

25 / 104

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CSAH 1 PLAN	SHEET
2020 ATMS / HENNEPIN COUNTY PROJECT 164402	26
S.P. 027-030-047	104

W OLD SHAKOPEE CIR.

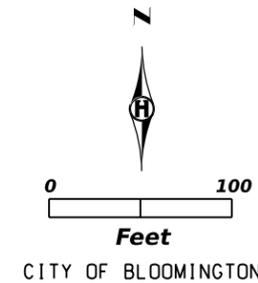
CAC-1-E TO SV-1-7
1-1 1/4" NMC HDPE (CORE DRILL)
1-48 SM FIBER OPTIC CABLE
1-1/C #12
SV-1-7
X: 508421.583
Y: 106163.633

CSAH 34

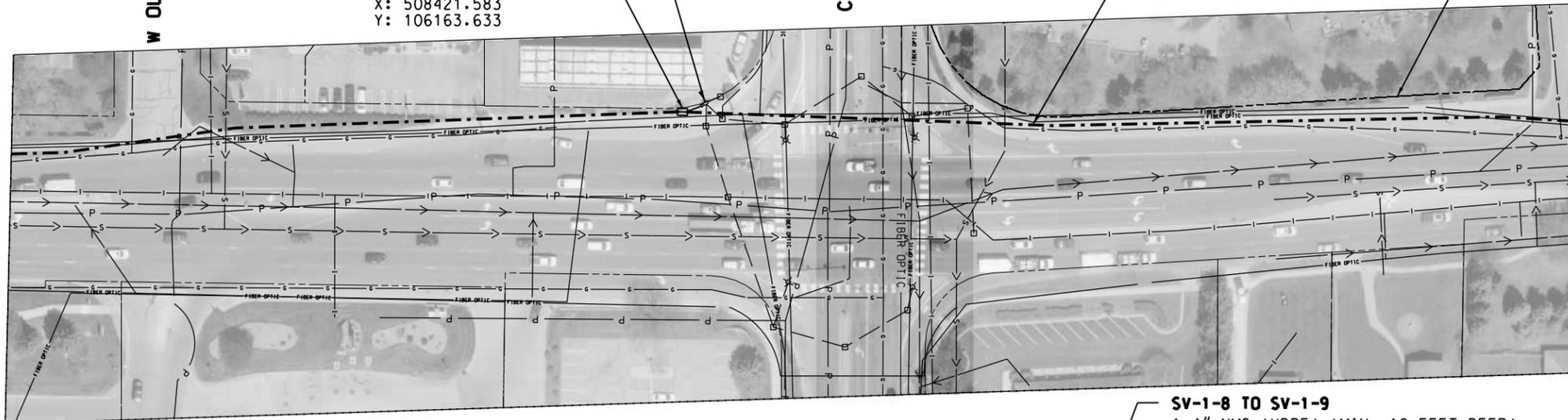
SV-1-7 TO SV-1-8
1-1 1/4" NMC (HDPE)
1-144 SM FIBER OPTIC CABLE
1-1/C #12
1-1 1/4" NMC (HDPE)
EMPTY

R/W

TOLEDO CRV.



C.S.A.H. NO. 1



SV-1-8 TO SV-1-9
1-4" NMC (HDPE) (MIN. 10 FEET DEEP)
1-1 1/4" NMC (HDPE)
1-144 SM FIBER OPTIC CABLE
1-1/C #12
1-1 1/4" NMC (HDPE)
EMPTY
1-4" NMC (HDPE) (MIN. 10 FET DEEP)
2-1 1/4" NMC (HDPE)
EMPTY

SV-1-9
X: 509795.496
Y: 106189.341

R/W

SV-1-9 TO SV-1-10
1-1 1/4" NMC (HDPE)
1-144 SM FIBER OPTIC CABLE
1-1/C #12
1-1 1/4" NMC (HDPE)
EMPTY

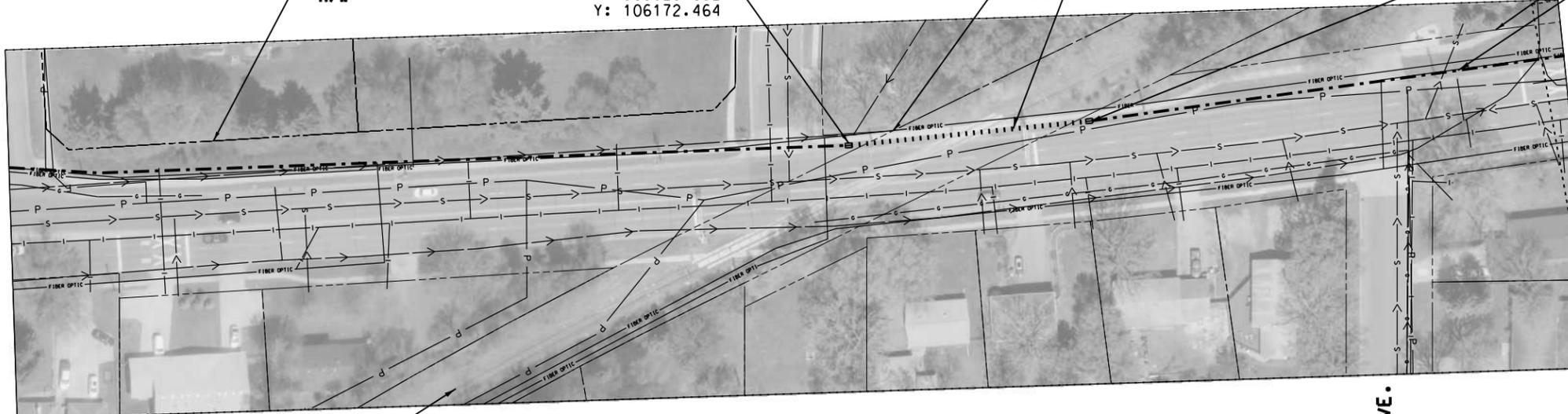
SV-1-8
X: 509628.052
Y: 106172.464

RICH RD.

R/W

R/W

C.S.A.H. NO. 1



PROGRESSIVE
RAILROAD CROSSING
(LEASED FROM
CP RAILROAD)

RICH AVE.

SEE SHEET 3 FOR
GENERAL NOTES.



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Ryan T. Allers
RYAN T. ALLERS, LICENSED PROFESSIONAL ENGINEER

45896 06/01/2020
LICENSE NO. DATE

DESIGN BY: J WANNER
CAD BY: J WANNER
CHECKED BY: R ALLERS
LAST REVISION: / /

CSAH 1 PLAN

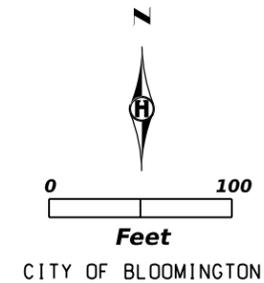
2020 ATMS / HENNEPIN COUNTY PROJECT 164402

S.P. 027-030-047

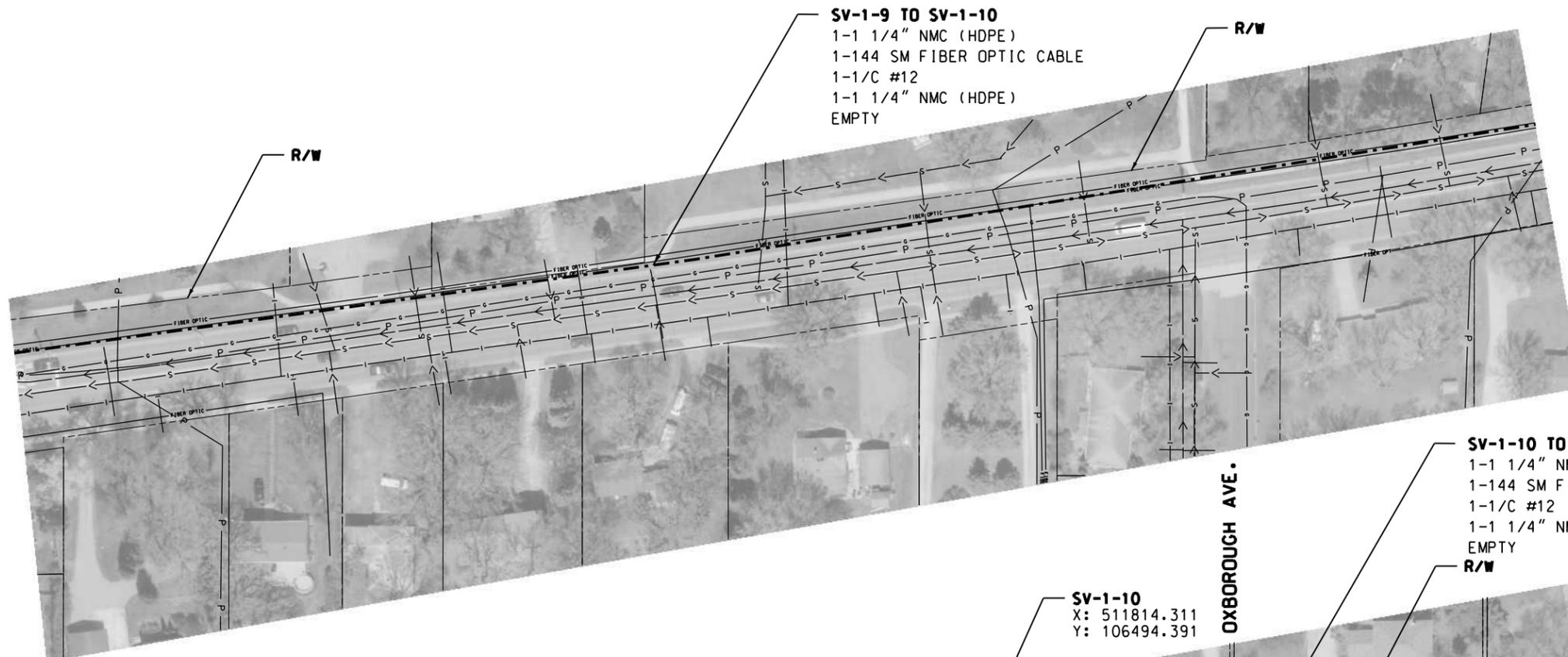
SHEET

27

104



C.S.A.H. NO. 1



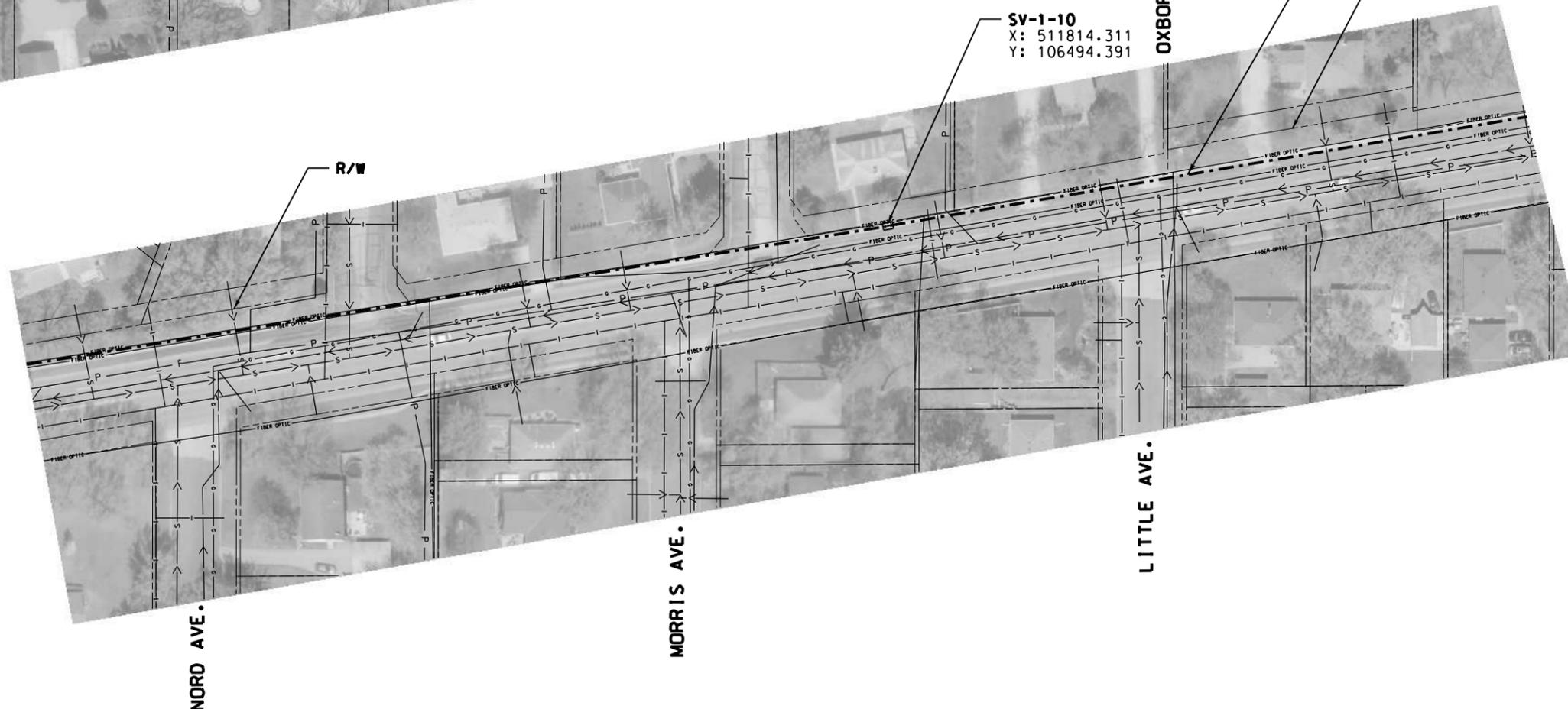
SV-1-9 TO SV-1-10
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

OXBOROUGH AVE.

SV-1-10 TO SV-1-11
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

SV-1-10
 X: 511814.311
 Y: 106494.391

C.S.A.H. NO. 1



NORD AVE.

MORRIS AVE.

LITTLE AVE.

SEE SHEET 3 FOR GENERAL NOTES.



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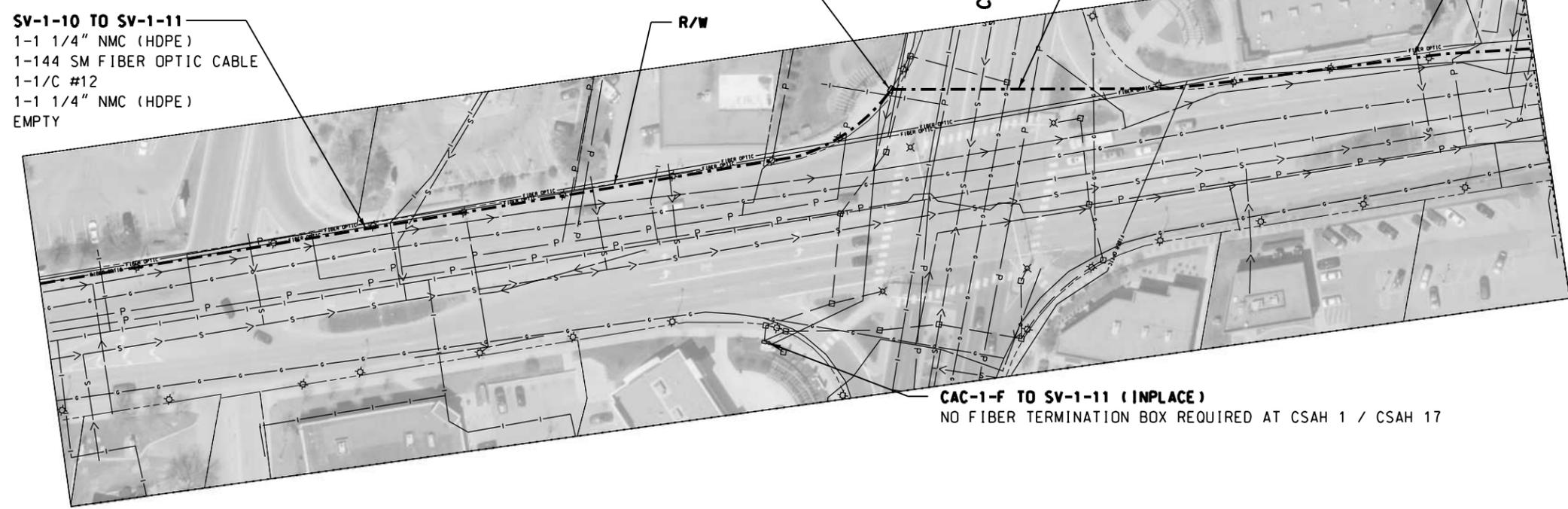
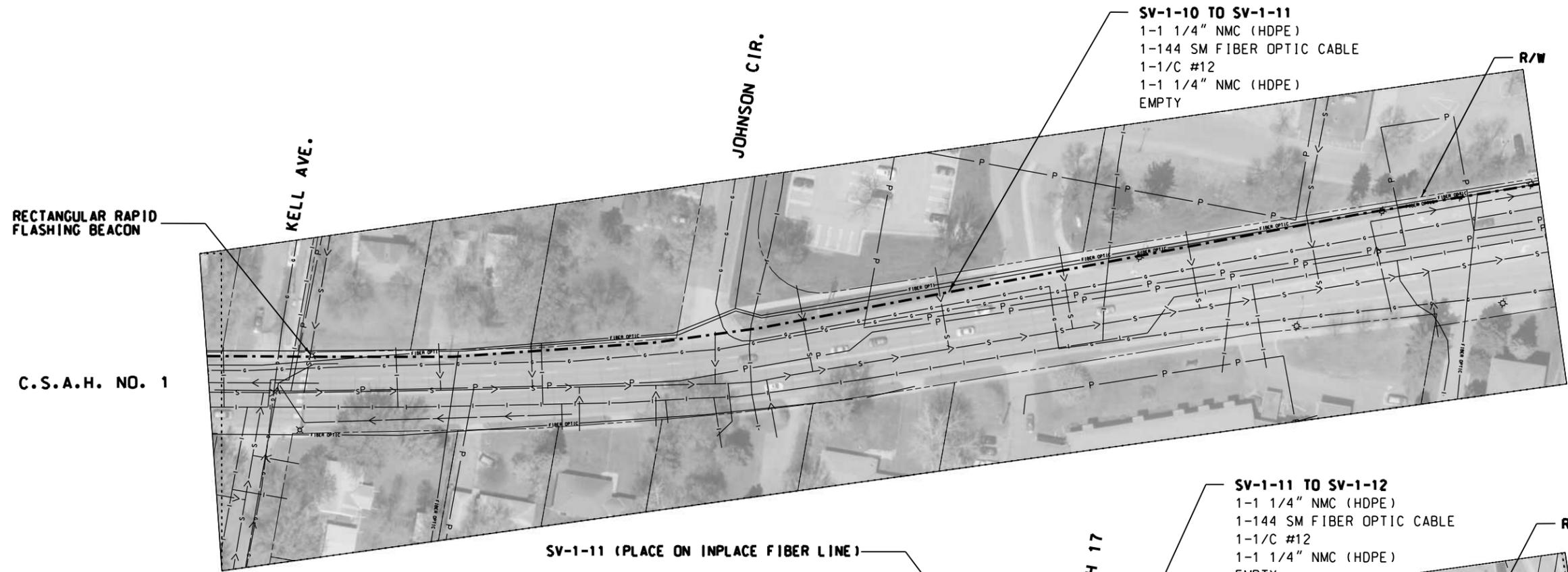
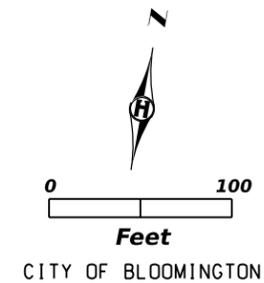
CSAH 1 PLAN

2020 ATMS / HENNEPIN COUNTY PROJECT 164402

S.P. 027-030-047

SHEET

28 / 104



CAC-1-F TO SV-1-11 (INPLACE)
NO FIBER TERMINATION BOX REQUIRED AT CSAH 1 / CSAH 17

SEE SHEET 3 FOR
GENERAL NOTES.



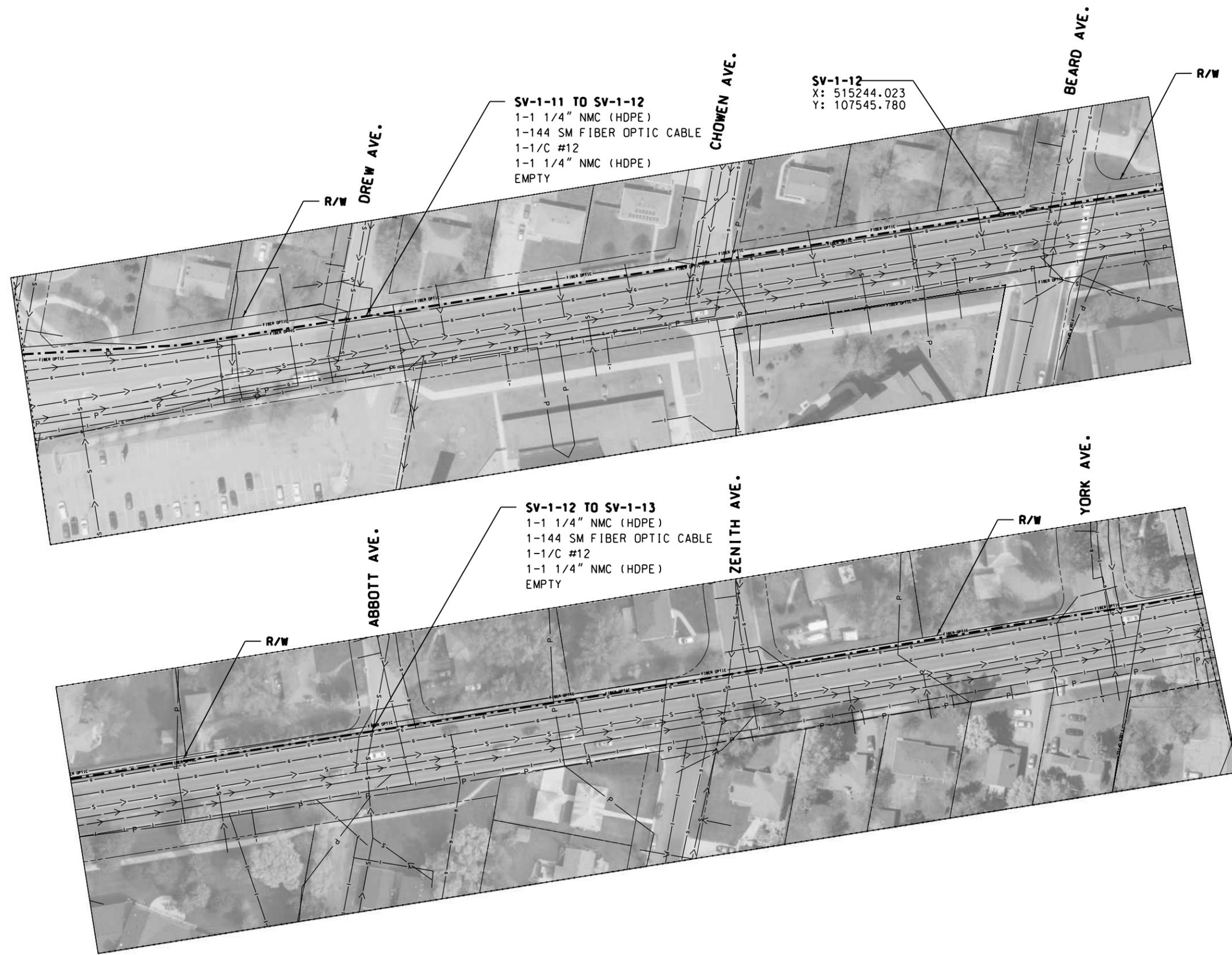
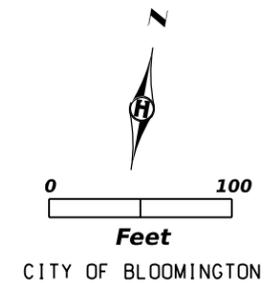
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Ryan T. Allers
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 45896 LICENSE NO. 06/01/2020 DATE

DESIGN BY: J WANNER
 CAD BY: J WANNER
 CHECKED BY: R ALLERS
 LAST REVISION: / /

CSAH 1 PLAN
 2020 ATMS / HENNEPIN COUNTY PROJECT 164402
 S.P. 027-030-047

SHEET
 29
 104



C.S.A.H. NO. 1

C.S.A.H. NO. 1

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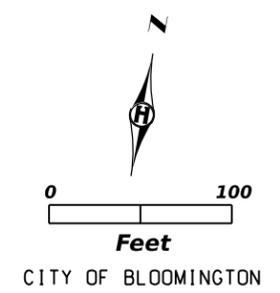
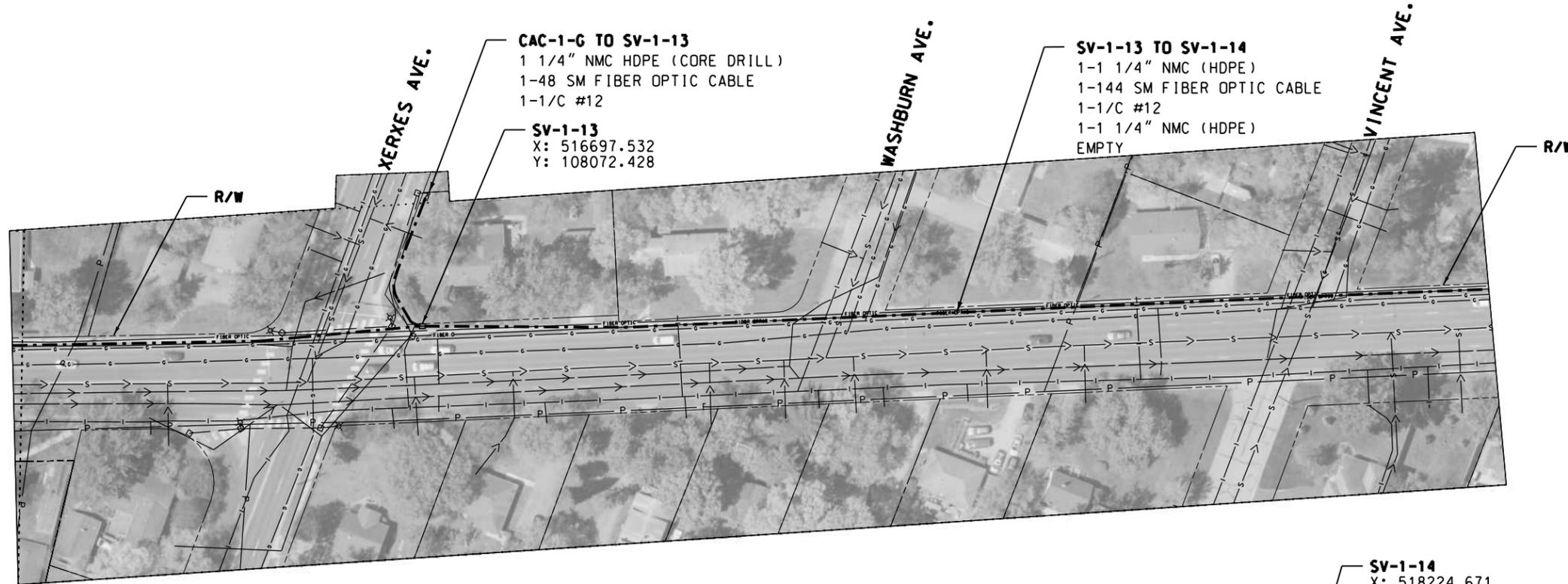
45896 06/01/2020
 LICENSE NO. DATE

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 CAD BY: J WANNER
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 LAST REVISION: / /

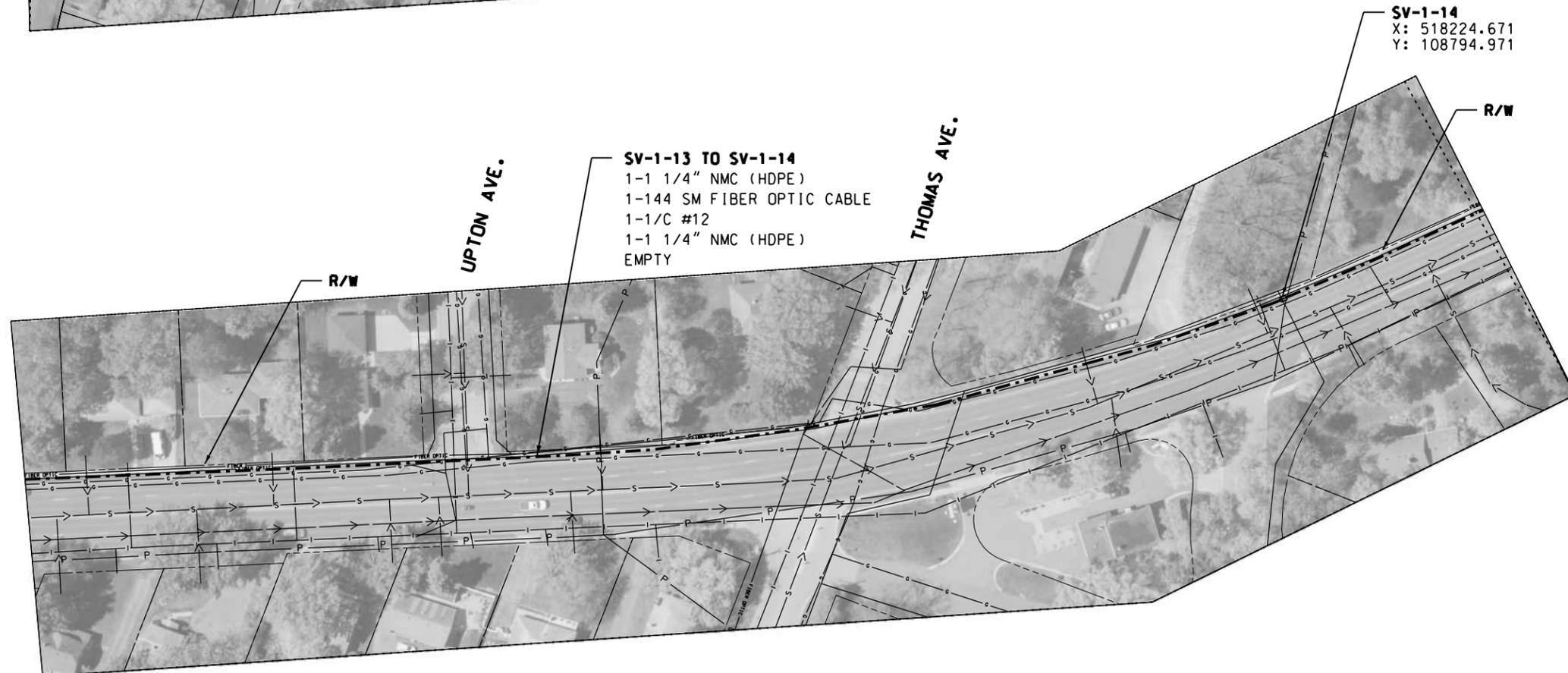
CSAH 1 PLAN
 2020 ATMS / HENNEPIN COUNTY PROJECT 164402
 S.P. 027-030-047

SHEET
 30 / 104

C.S.A.H. NO. 1



C.S.A.H. NO. 1



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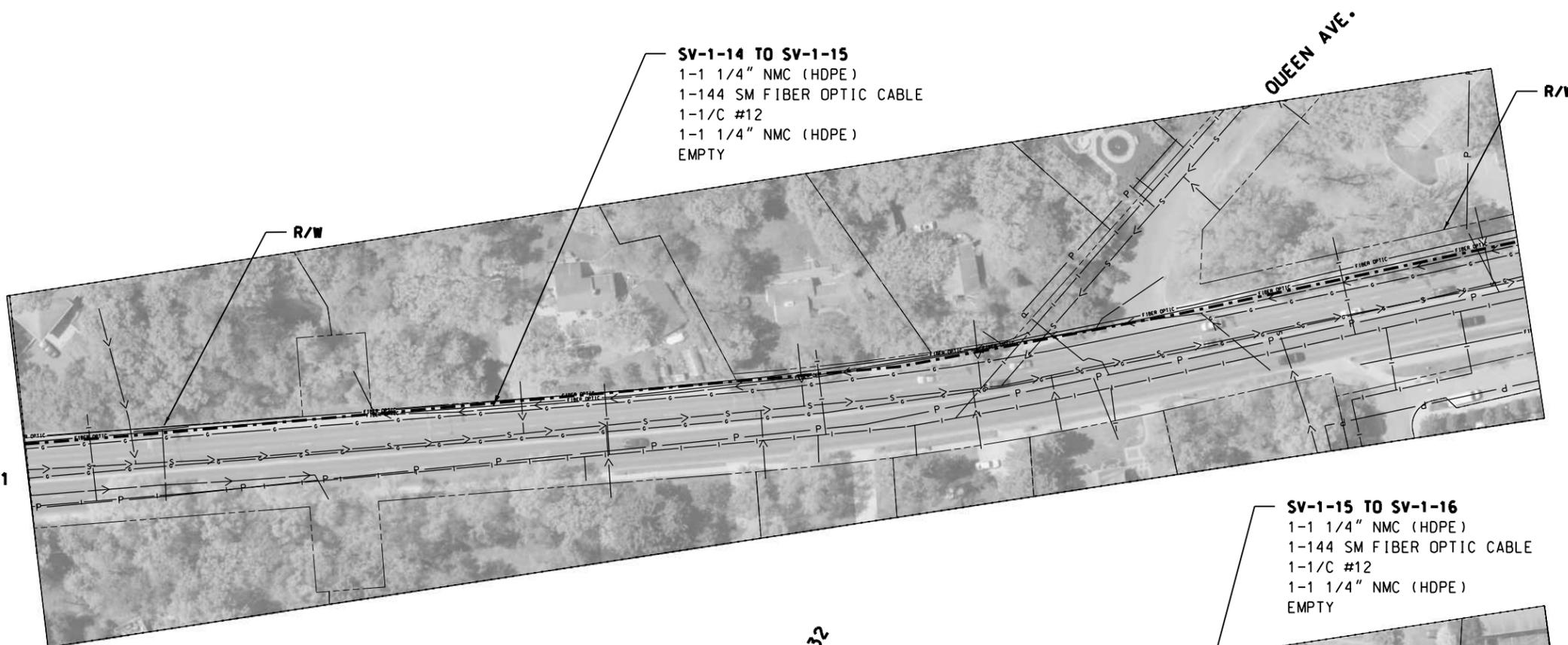
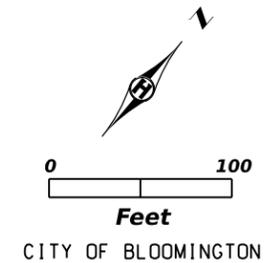
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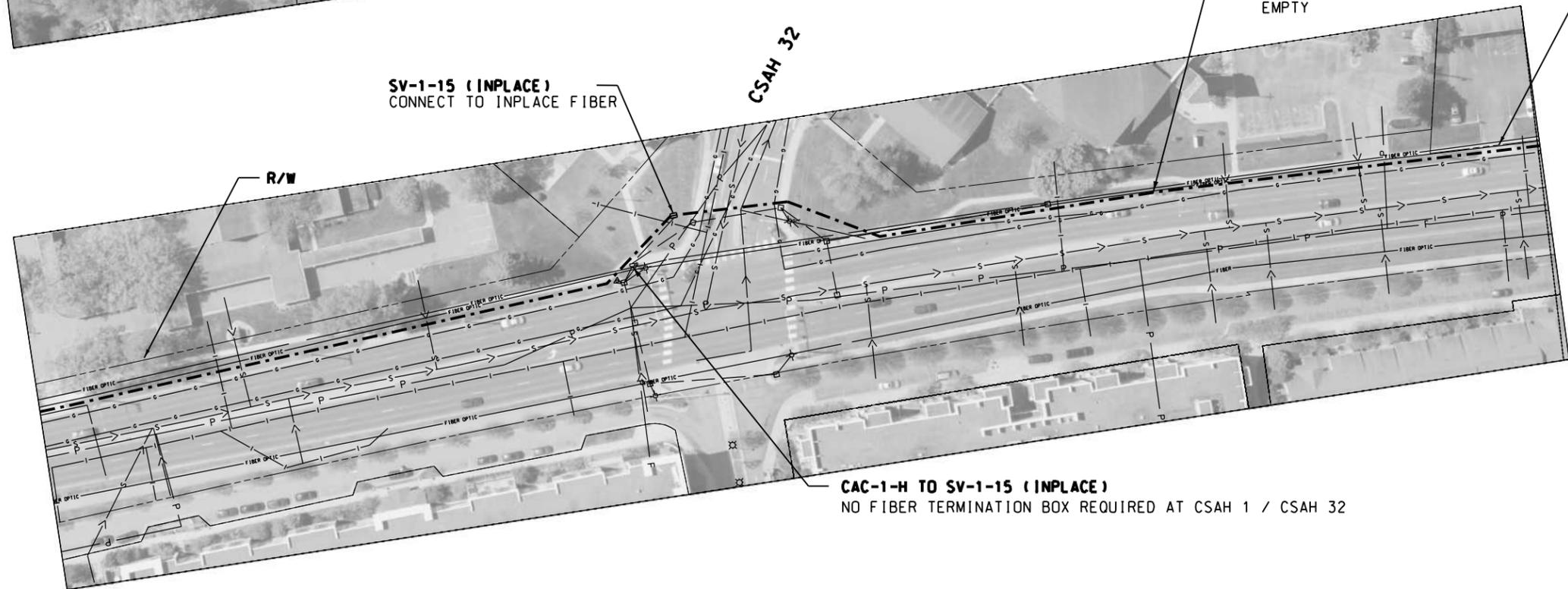
CSAH 1 PLAN
 2020 ATMS / HENNEPIN COUNTY PROJECT 164402
 S.P. 027-030-047

SHEET
 31
 104



SV-1-14 TO SV-1-15
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

C.S.A.H. NO. 1



SV-1-15 TO SV-1-16
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

SV-1-15 (INPLACE)
 CONNECT TO INPLACE FIBER

CAC-1-H TO SV-1-15 (INPLACE)
 NO FIBER TERMINATION BOX REQUIRED AT CSAH 1 / CSAH 32

C.S.A.H. NO. 1

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45896 06 / 01 / 2020
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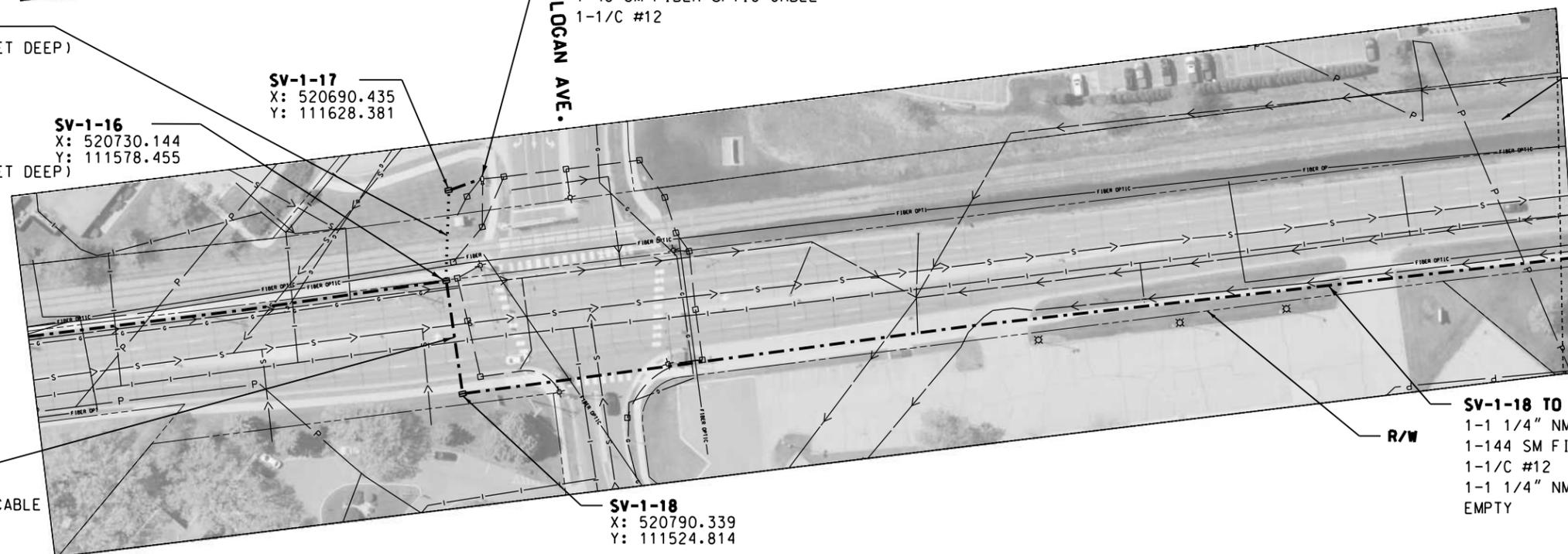
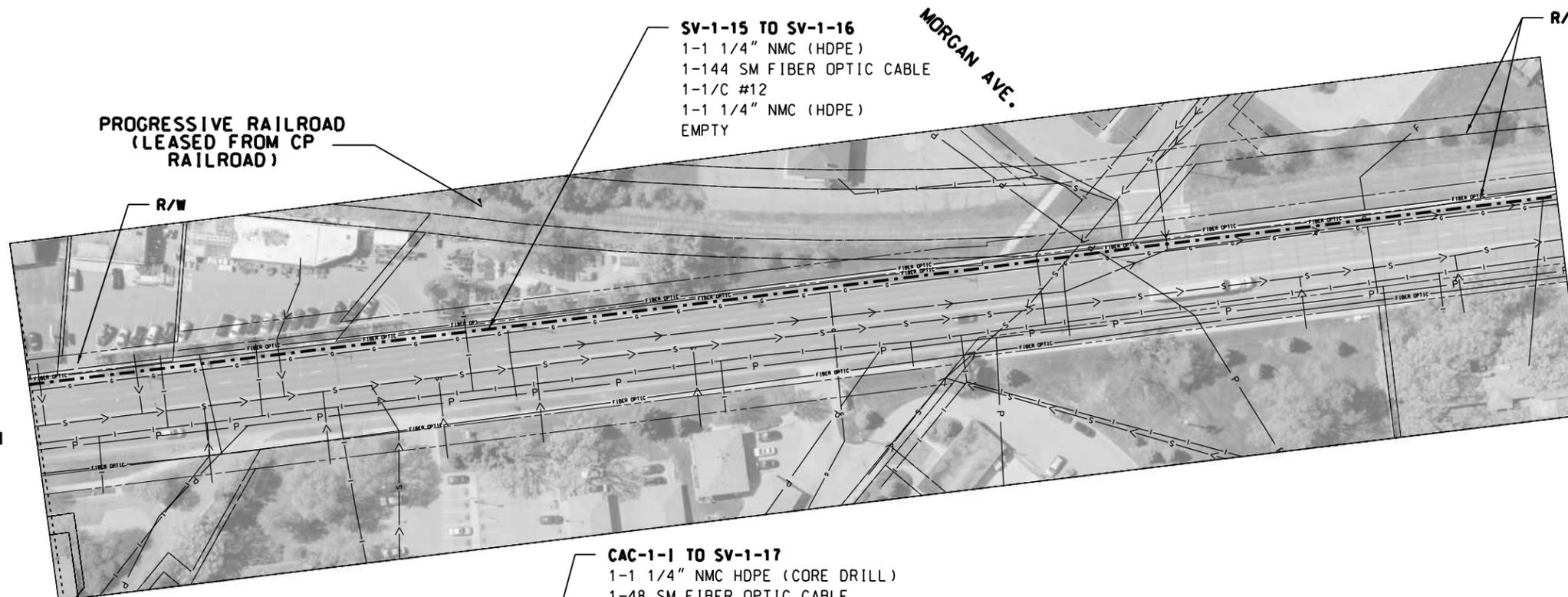
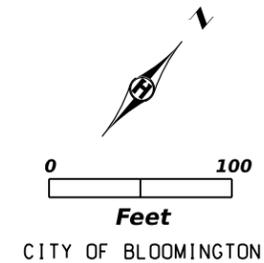
CSAH 1 PLAN

2020 ATMS / HENNEPIN COUNTY PROJECT 164402

S.P. 027-030-047

SHEET

32 / 104



PROGRESSIVE RAILROAD
(LEASED FROM CP
RAILROAD)

SV-1-18 TO SV-1-19
1-1 1/4" NMC (HDPE)
1-144 SM FIBER OPTIC CABLE
1-1/C #12
1-1 1/4" NMC (HDPE)
EMPTY

SEE SHEET 3 FOR
GENERAL NOTES.



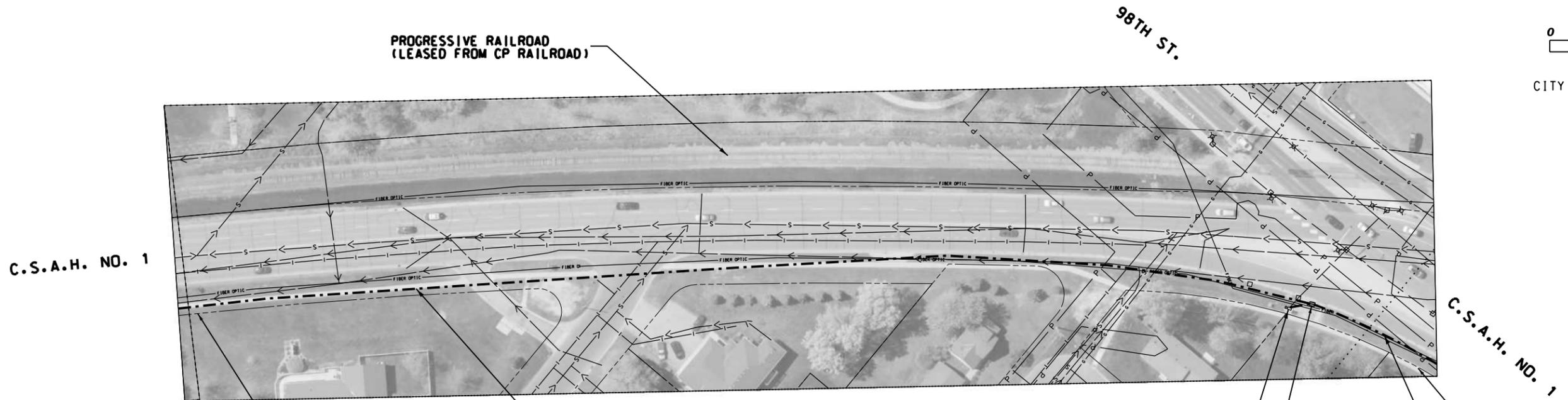
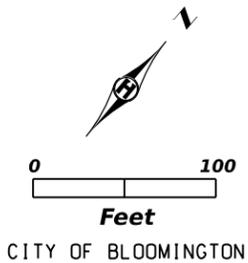
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Ryan T. Allers
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 45896 LICENSE NO. 06/01/2020 DATE

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CSAH 1 PLAN
 2020 ATMS / HENNEPIN COUNTY PROJECT 164402
 S.P. 027-030-047

SHEET
 33
 104



C.S.A.H. NO. 1

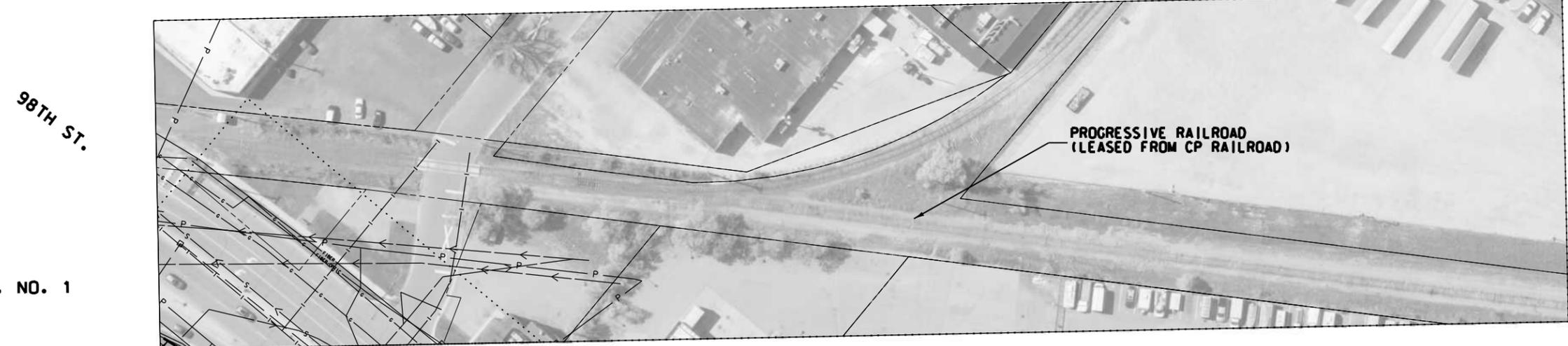
C.S.A.H. NO. 1

R/W

SV-1-18 TO SV-1-19
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

CAC-1-J TO SV-1-19
 1-1 1/4" NMC HDPE (CORE DRILL)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12
SV-1-19
 X: 522081.123
 Y: 112738.220

R/W
SV-1-19 TO SV-1-20
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY



98TH ST.

PROGRESSIVE RAILROAD
(LEASED FROM CP RAILROAD)

C.S.A.H. NO. 1

C.S.A.H. NO. 1

SV-1-19 TO SV-1-20
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

SEE SHEET 3 FOR
GENERAL NOTES.

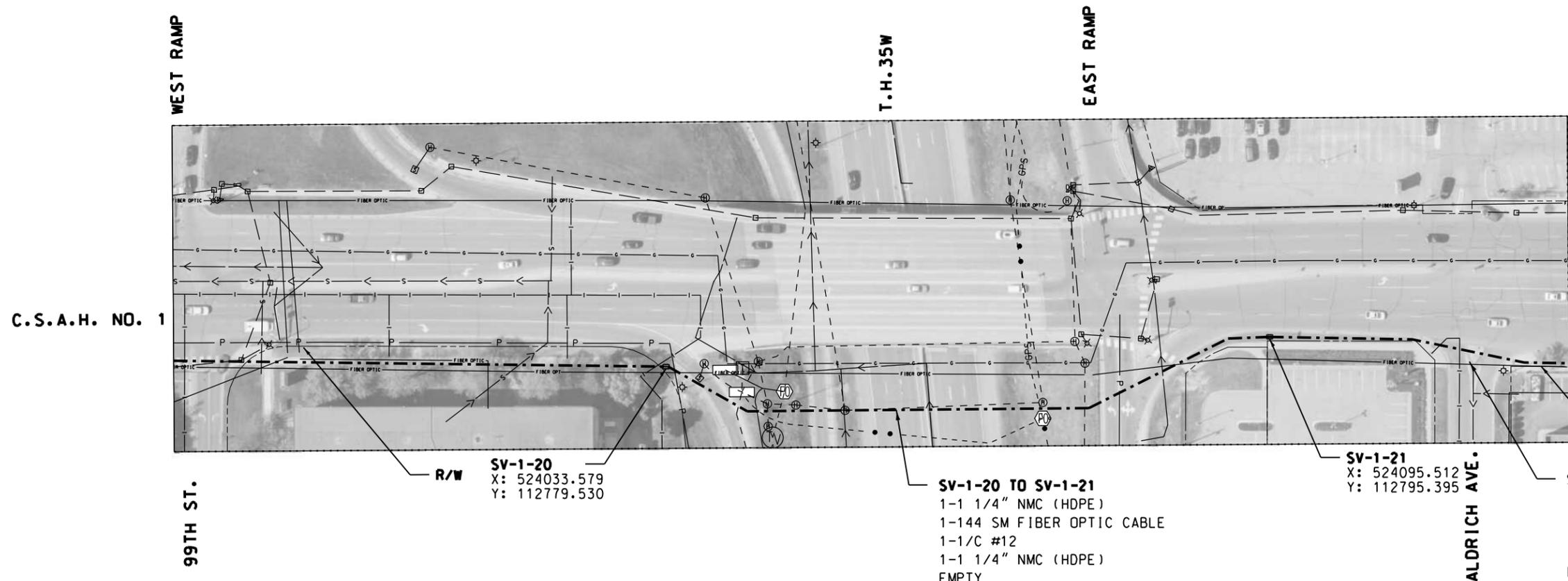
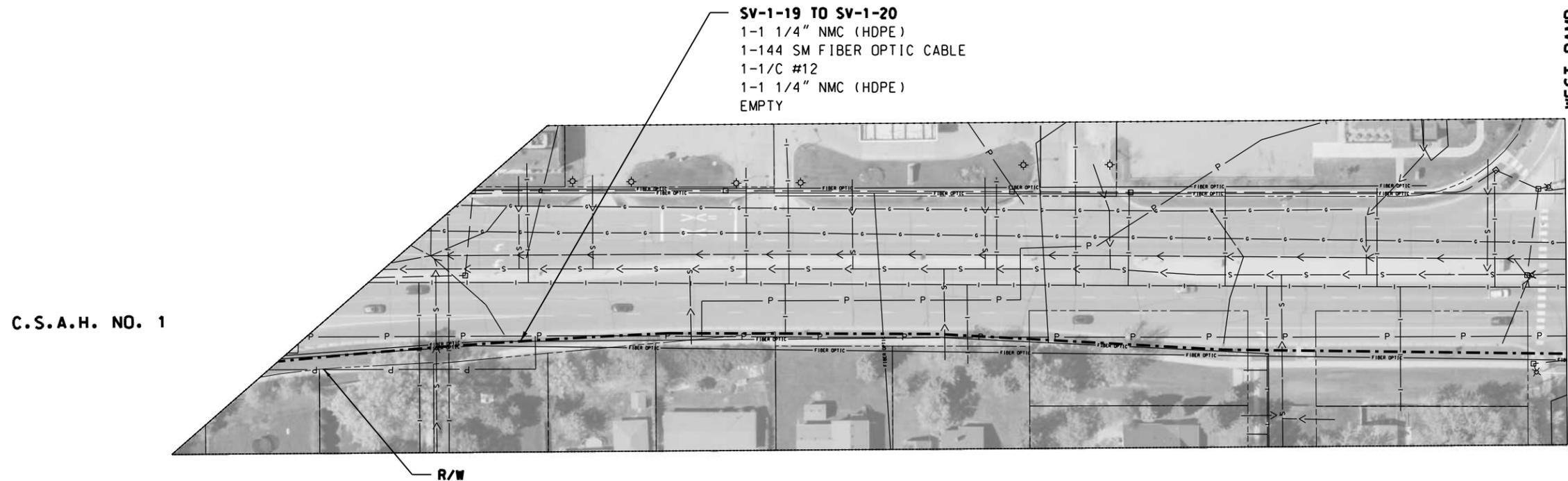
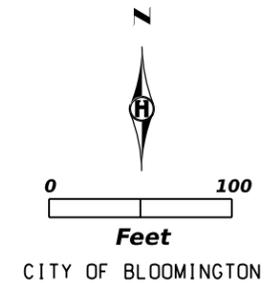


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Ryan T. Allers
 RYAN T. ALLERS, LICENSED PROFESSIONAL ENGINEER
 45896 LICENSE NO. 06/01/2020 DATE

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 LAST REVISION: / /

CSAH 1 PLAN
 2020 ATMS / HENNEPIN COUNTY PROJECT 164402
 S.P. 027-030-047

SHEET
 34
 104



SEE SHEET 3 FOR GENERAL NOTES.



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CSAH 1 PLAN

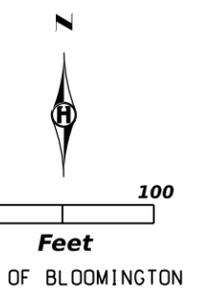
2020 ATMS / HENNEPIN COUNTY PROJECT 164402

S.P. 027-030-047

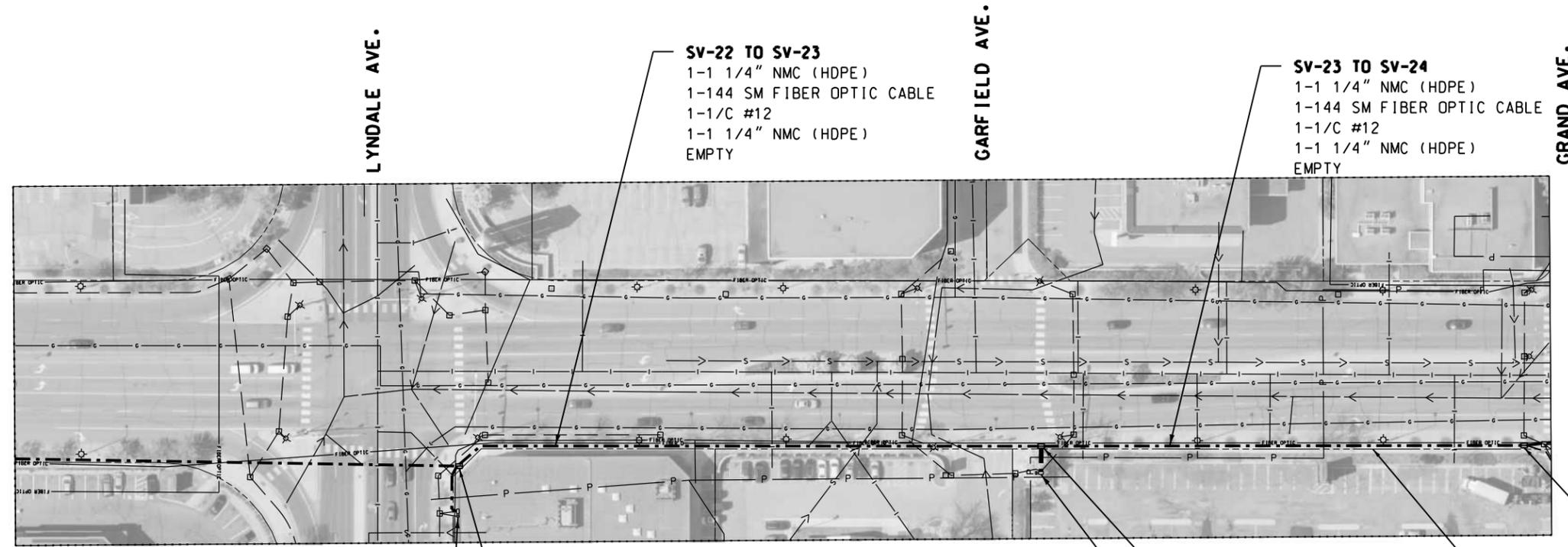
SHEET

35

104



C.S.A.H. NO. 1



SV-22 TO SV-23
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

SV-23 TO SV-24
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

SV-1-22
 X: 524649.514
 Y: 112769.466

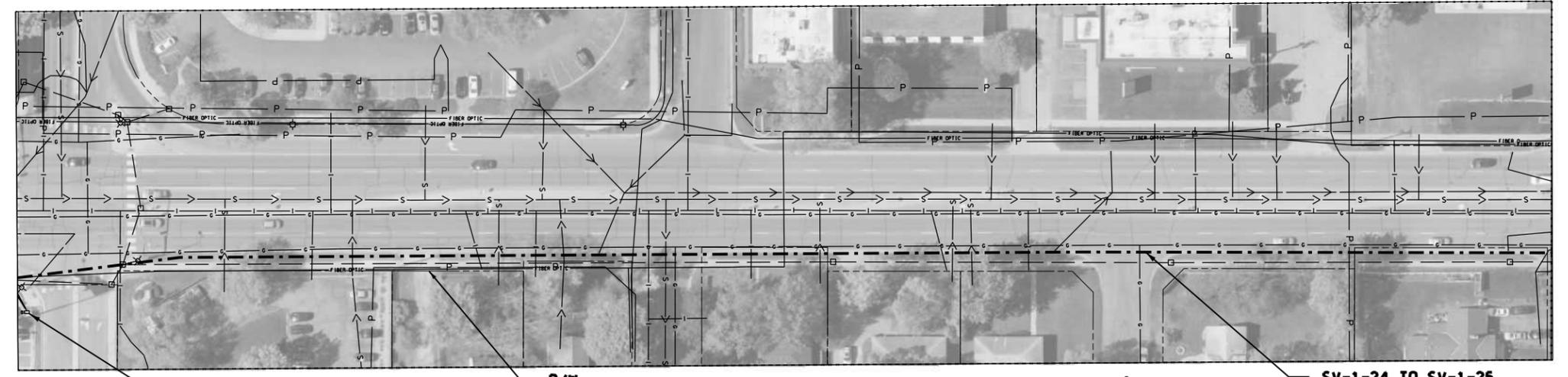
SV-1-23
 X: 525066.070
 Y: 112783.663

SV-1-24
 X: 525411.770
 Y: 112784.179

CAC-1-K TO SV-1-22
 1-1 1/4" NMC HDPE (CORE DRILL)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12

CAC-1-L TO SV-1-23
 1-1 1/4" NMC HDPE (CORE DRILL)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12

C.S.A.H. NO. 1



CAC-1-M TO SV-1-24
 1-1 1/4" NMC HDPE (CORE DRILL)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12

SV-1-24 TO SV-1-25
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

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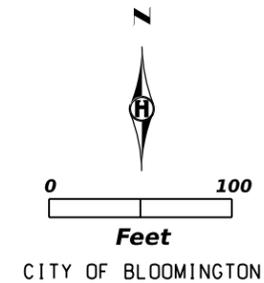
Ryan T. Allers
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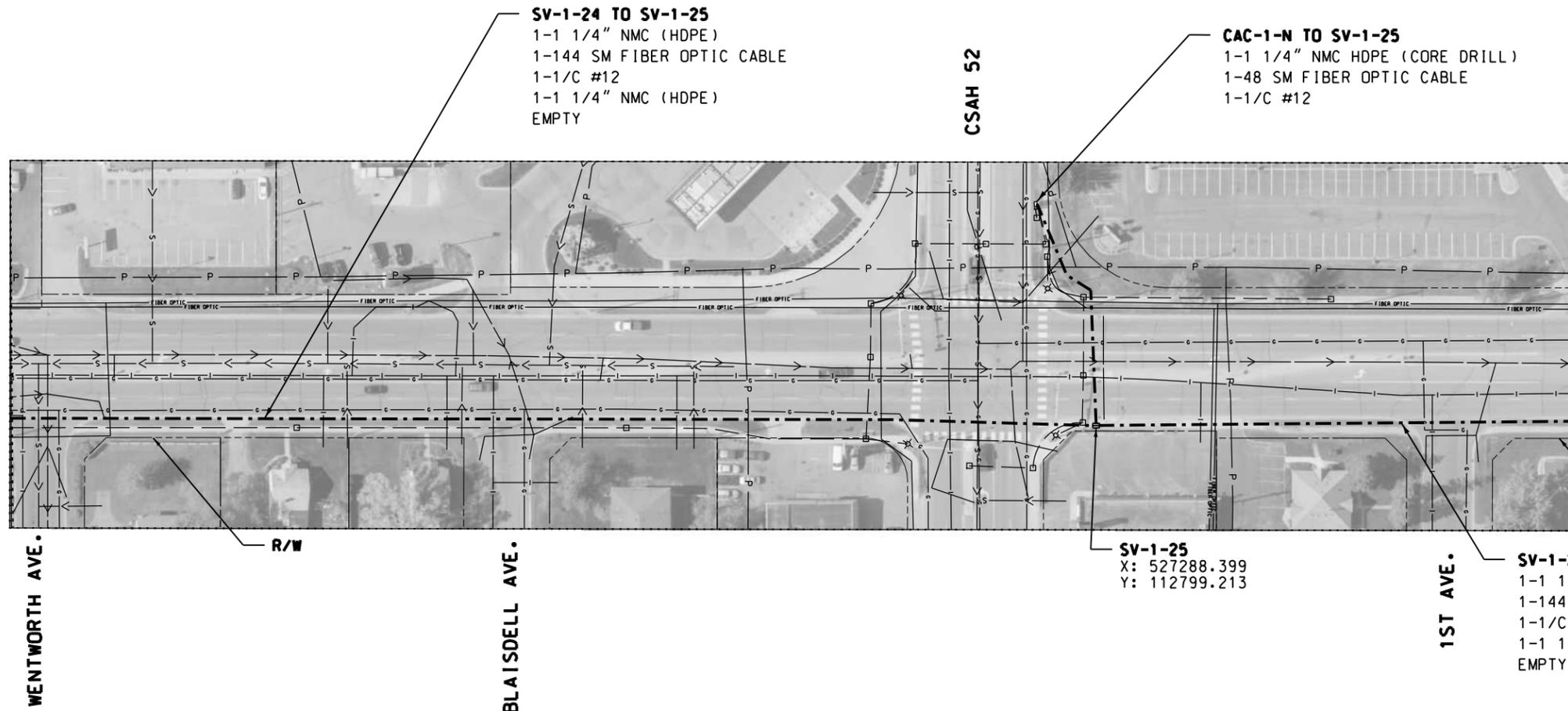
DESIGN BY: J WANNER
 CAD BY: J WANNER
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 2020 ATMS / HENNEPIN COUNTY PROJECT 164402
 S.P. 027-030-047

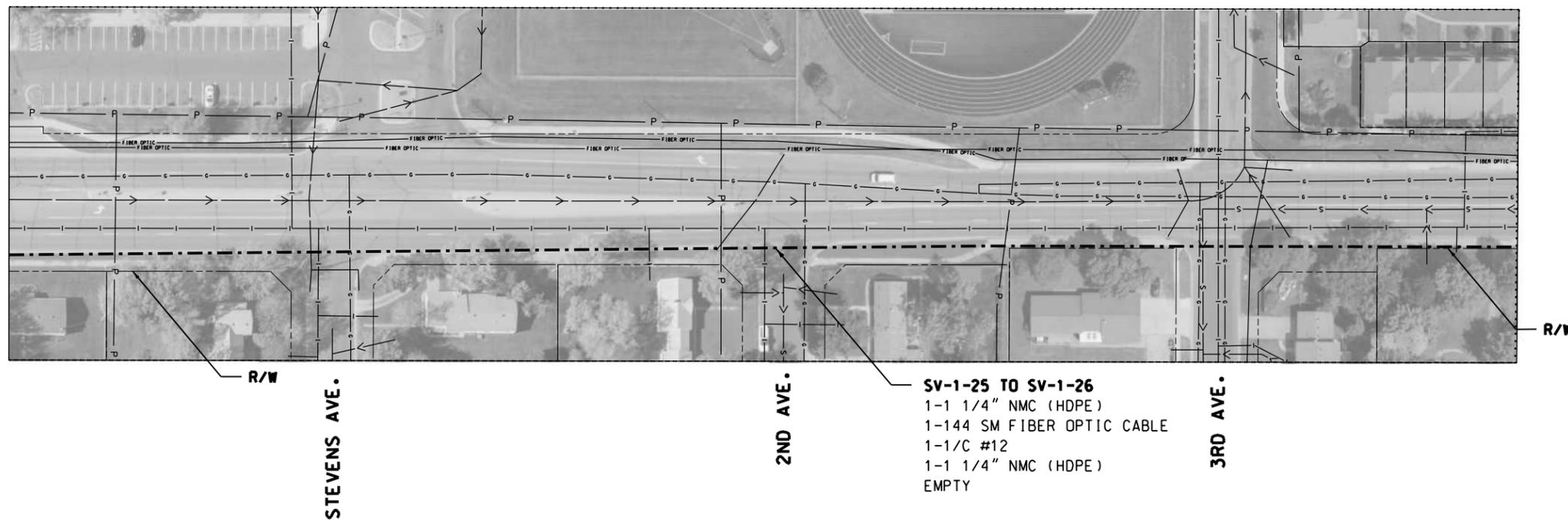
SHEET
 36
 104



C.S.A.H. NO. 1



C.S.A.H. NO. 1



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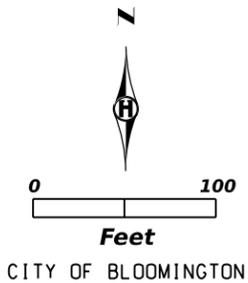
CSAH 1 PLAN

2020 ATMS / HENNEPIN COUNTY PROJECT 164402

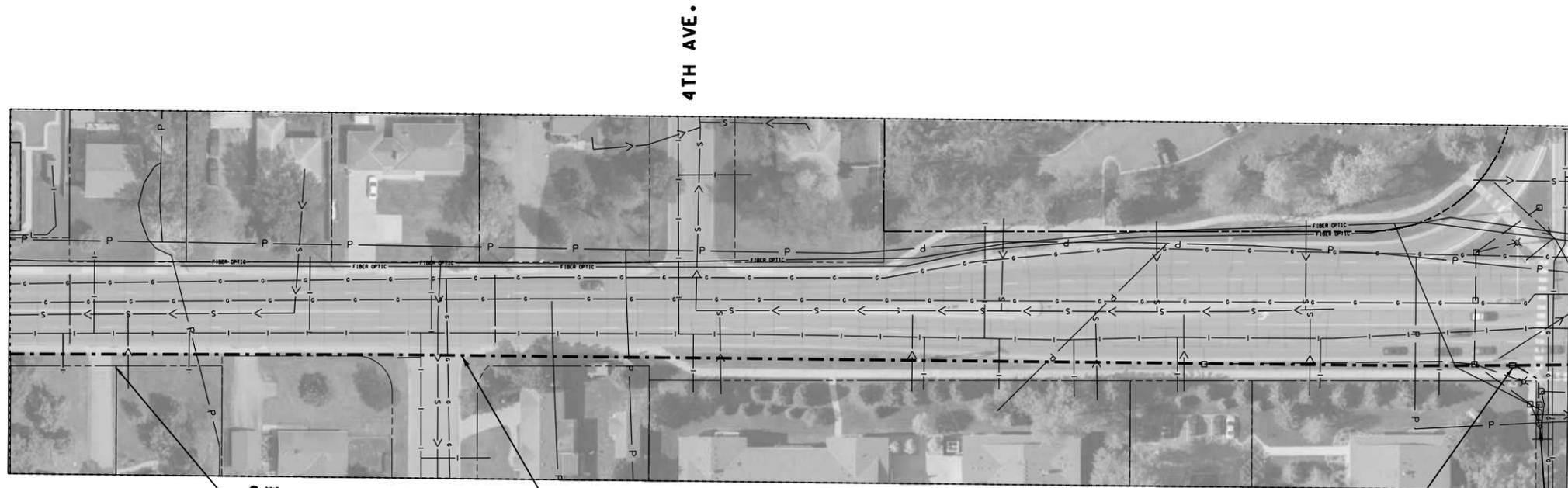
S.P. 027-030-047

SHEET

37 / 104



C.S.A.H. NO. 1



CSAH 35

R/W

4TH AVE.

OAKLAND AVE.

SV-1-25 TO SV-1-26
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

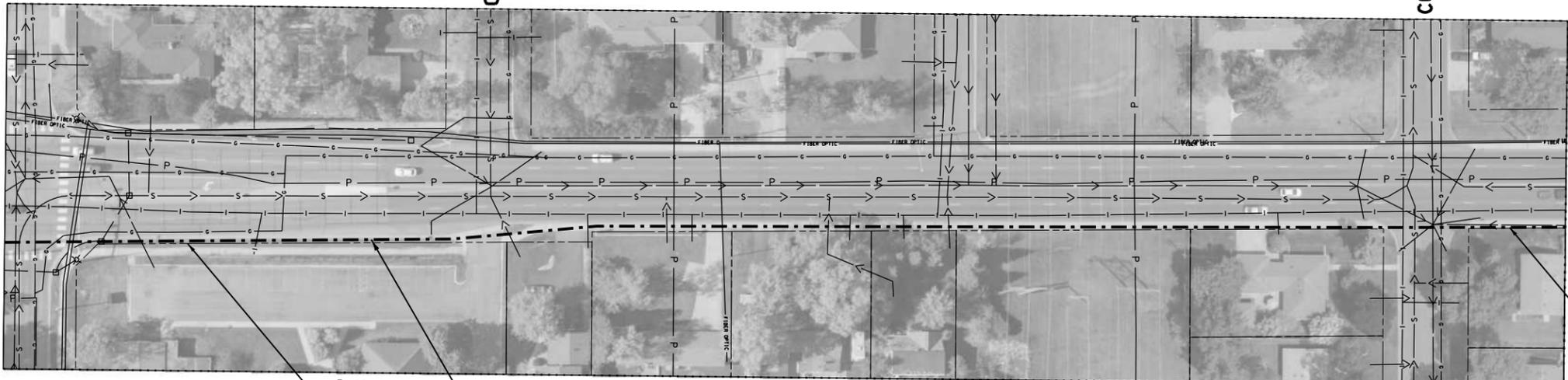
PARK AVE.

SV-1-26
 X: 529787.198
 Y: 112799.988

COLUMBUS AVE.

CAC-1-0 TO SV-1-26
 1-1 1/4" NMC HDPE (CORE DRILL)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12

C.S.A.H. NO. 1



R/W

SV-1-26 TO SV-1-27
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

R/W

SEE SHEET 3 FOR GENERAL NOTES.



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CSAH 1 PLAN
 2020 ATMS / HENNEPIN COUNTY PROJECT 164402
 S.P. 027-030-047

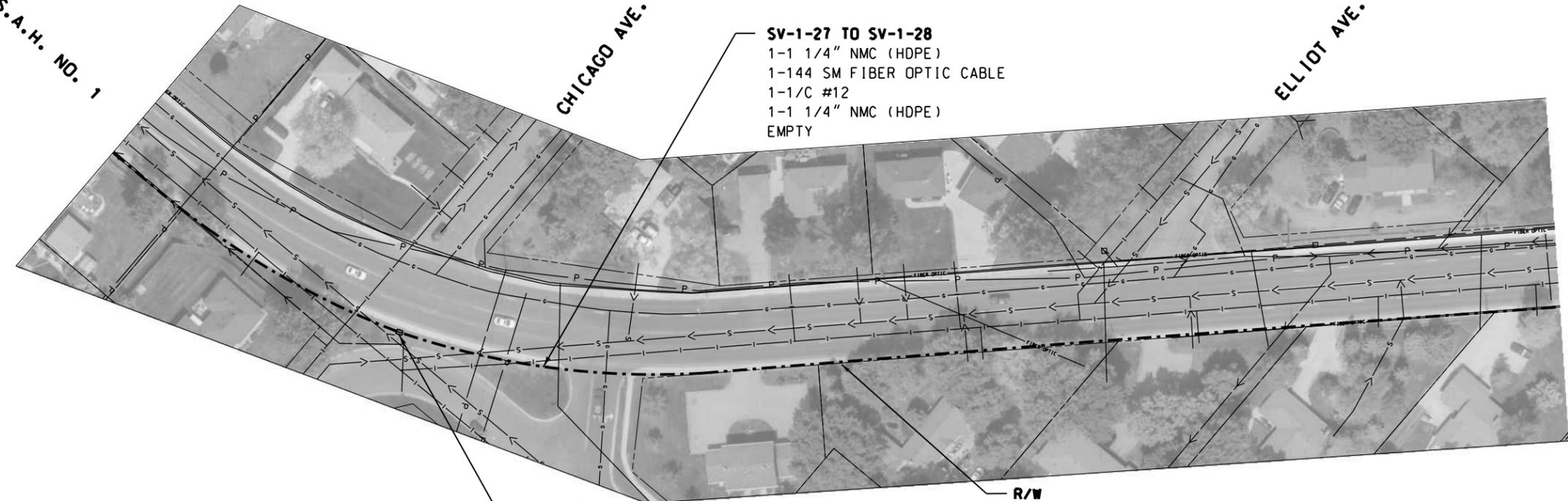
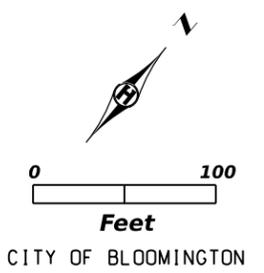
SHEET
 38
 104

C.S.A.H. NO. 1

CHICAGO AVE.

ELLIOT AVE.

SV-1-27 TO SV-1-28
1-1 1/4" NMC (HDPE)
1-144 SM FIBER OPTIC CABLE
1-1/C #12
1-1 1/4" NMC (HDPE)
EMPTY

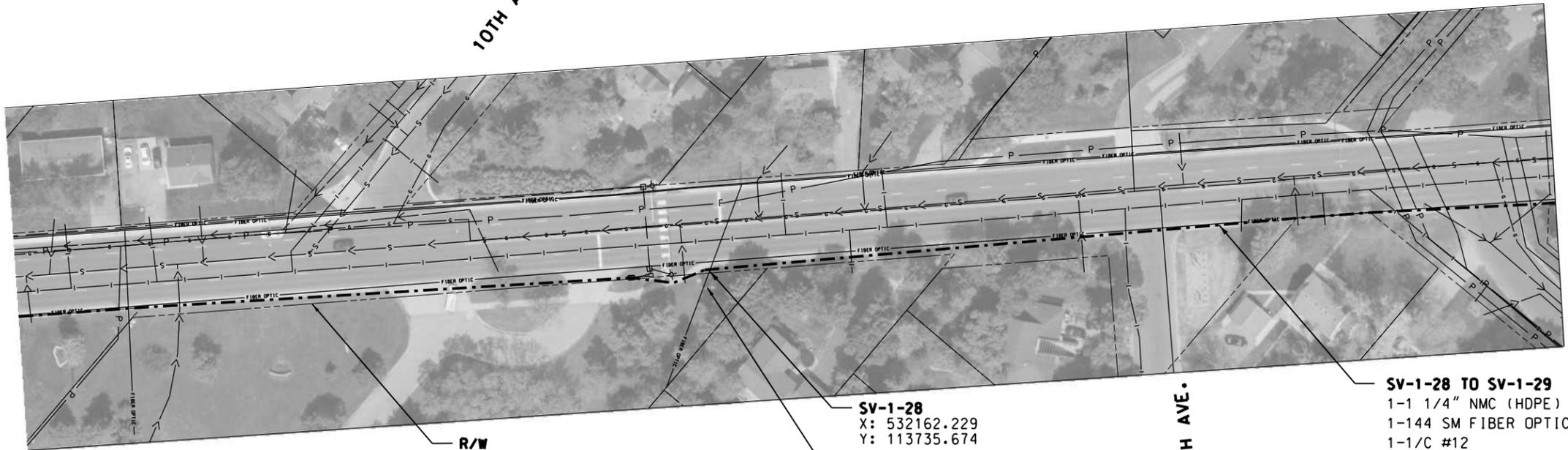


SV-1-27
X: 531176.395
Y: 112845.978

R/W

10TH AVE.

C.S.A.H. NO. 1



96TH ST.

SV-1-28
X: 532162.229
Y: 113735.674

CAC-1-P TO SV-1-28
1-1 1/4" NMC HDPE (CORE DRILL)
1-48 SM FIBER OPTIC CABLE
1-1/C #12

SV-1-28 TO SV-1-29
1-1 1/4" NMC (HDPE)
1-144 SM FIBER OPTIC CABLE
1-1/C #12
1-1 1/4" NMC (HDPE)
EMPTY

12TH AVE.

R/W

SEE SHEET 3 FOR GENERAL NOTES.

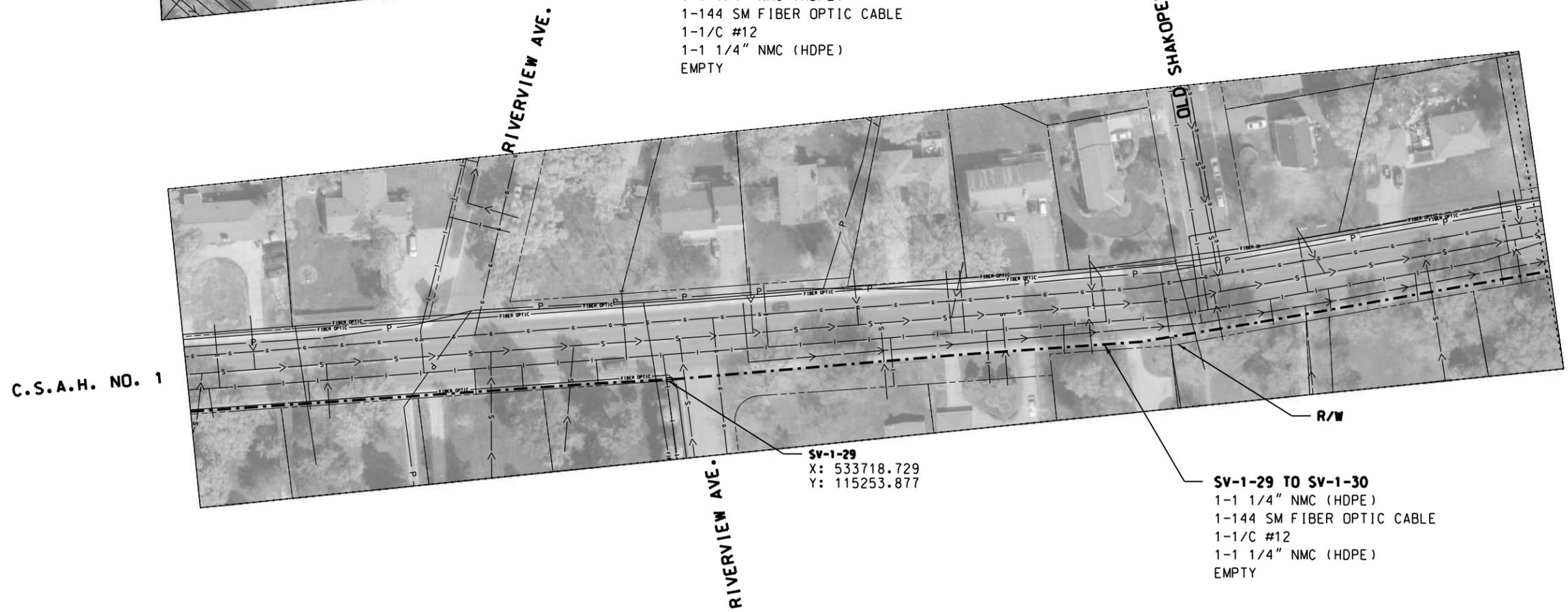
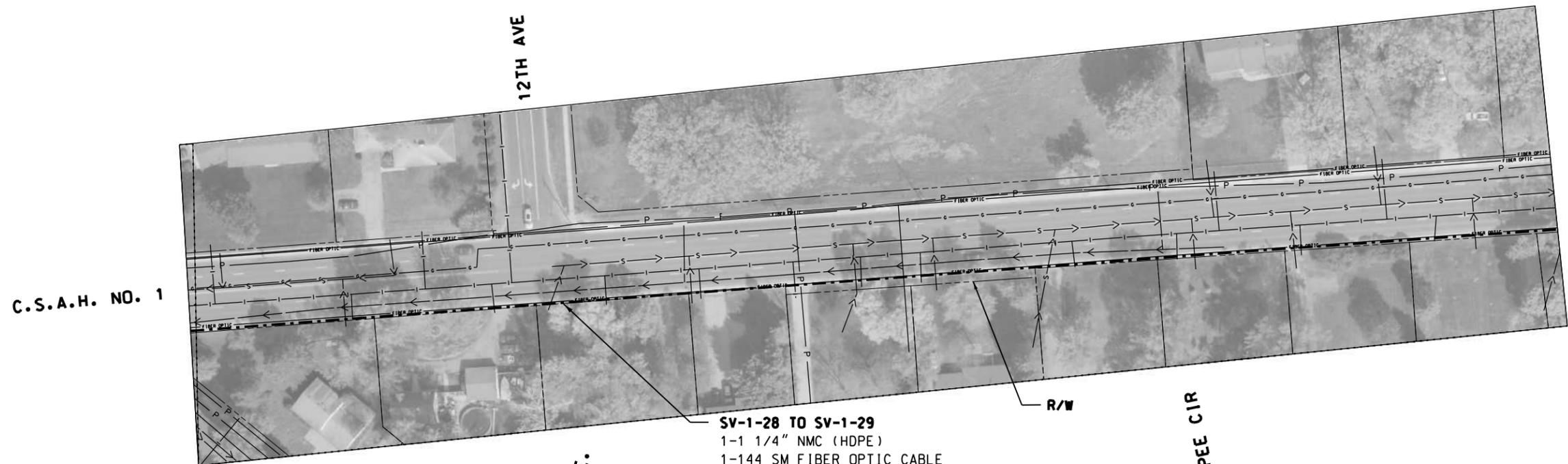
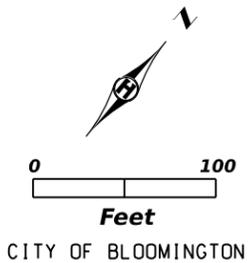


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Ryan T. Allers
RYAN T. ALLERS, LICENSED PROFESSIONAL ENGINEER
45896 LICENSE NO. 06/01/2020 DATE

DESIGN BY: J WANNER
CAD BY: J WANNER
CHECKED BY: R ALLERS
LAST REVISION: / /

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S.P. 027-030-047

SHEET
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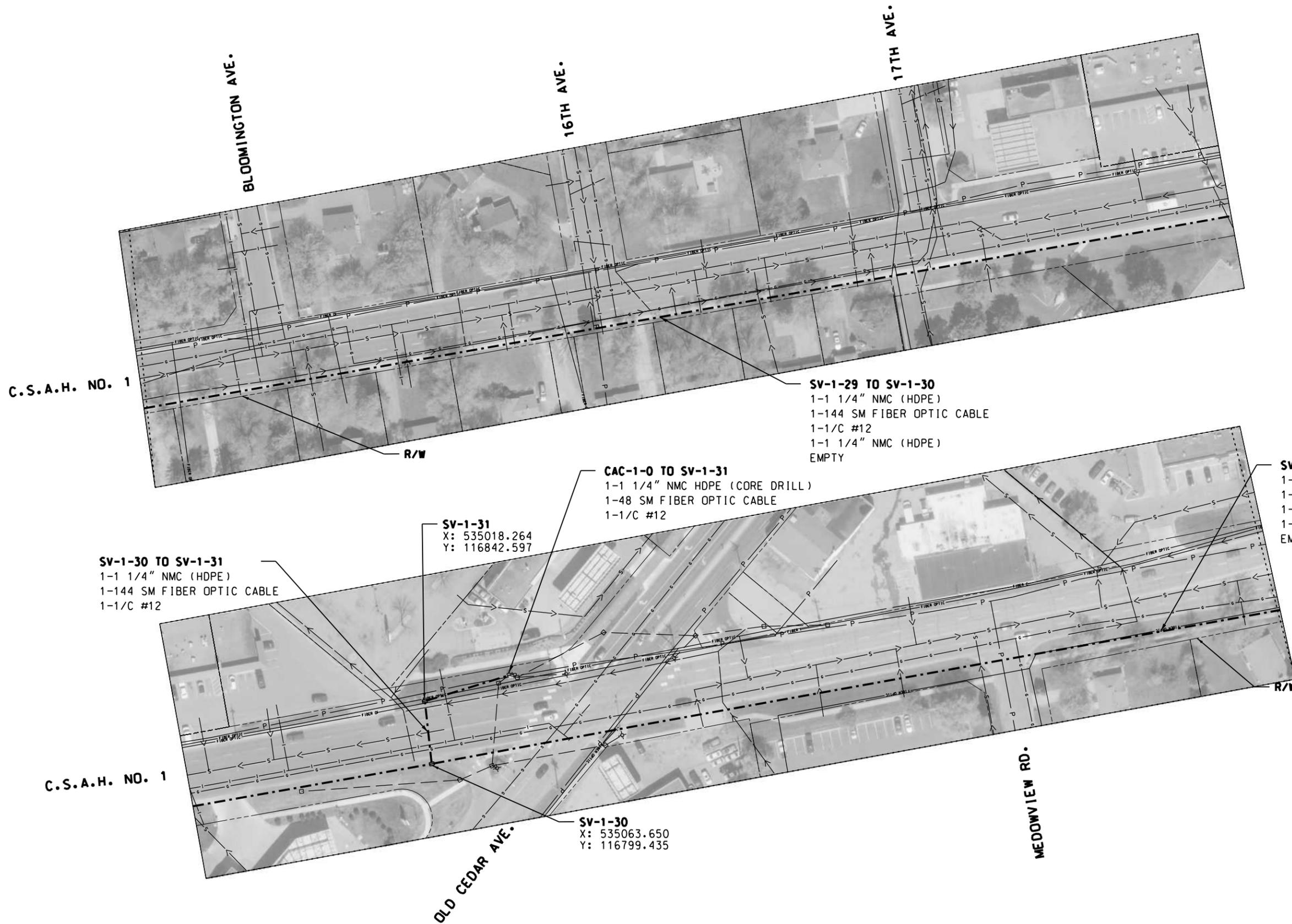
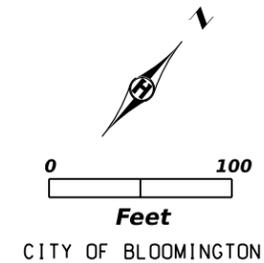
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SV-1-30 TO SV-1-31
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12

SV-1-31
 X: 535018.264
 Y: 116842.597

CAC-1-0 TO SV-1-31
 1-1 1/4" NMC HDPE (CORE DRILL)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12

SV-1-29 TO SV-1-30
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

SV-1-30 TO SV-1-32
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

SV-1-30
 X: 535063.650
 Y: 116799.435

SEE SHEET 3 FOR
 GENERAL NOTES.



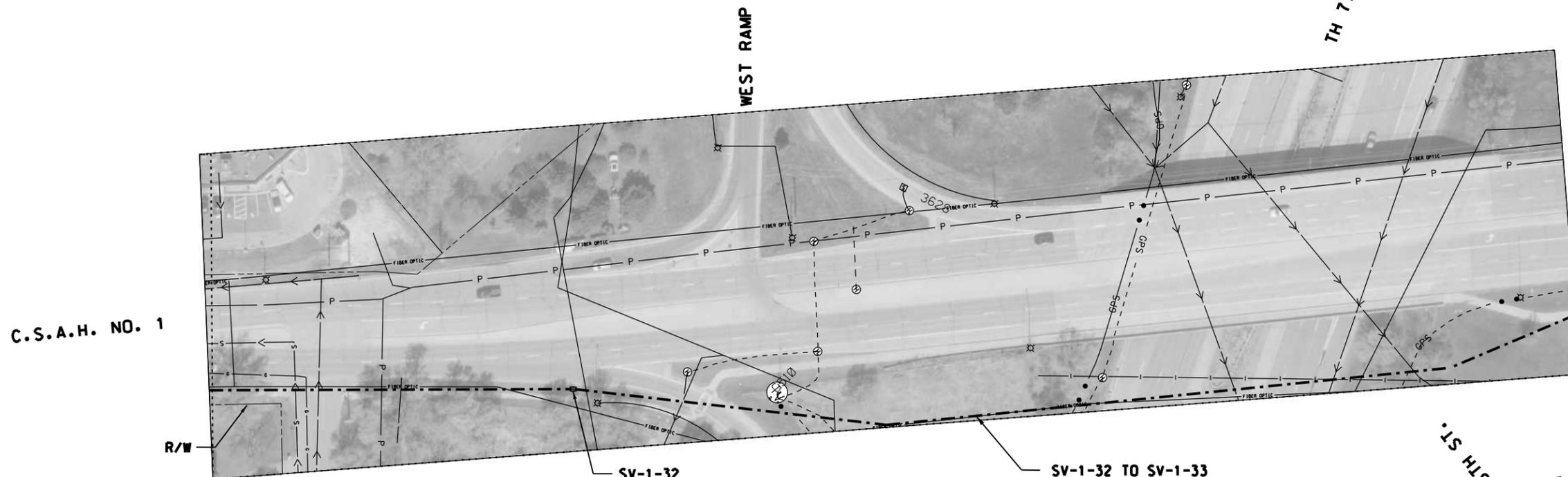
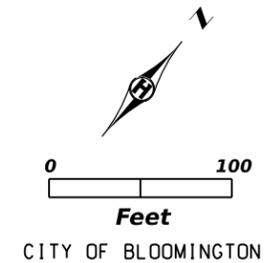
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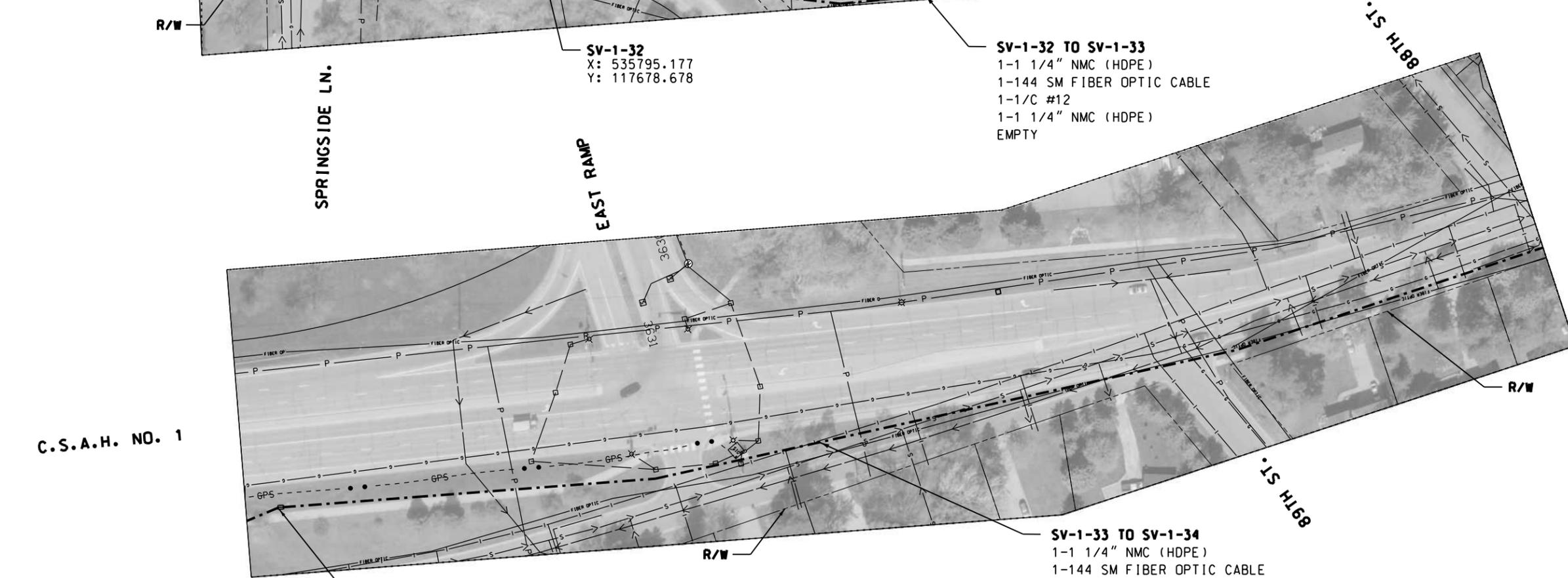
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CSAH 1 PLAN		SHEET
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SV-1-32
X: 535795.177
Y: 117678.678

SV-1-32 TO SV-1-33
1-1 1/4" NMC (HDPE)
1-144 SM FIBER OPTIC CABLE
1-1/C #12
1-1 1/4" NMC (HDPE)
EMPTY



SV-1-33
X: 536269.188
Y: 118352.296

SV-1-33 TO SV-1-34
1-1 1/4" NMC (HDPE)
1-144 SM FIBER OPTIC CABLE
1-1/C #12
1-1 1/4" NMC (HDPE)
EMPTY

SEE SHEET 3 FOR GENERAL NOTES.



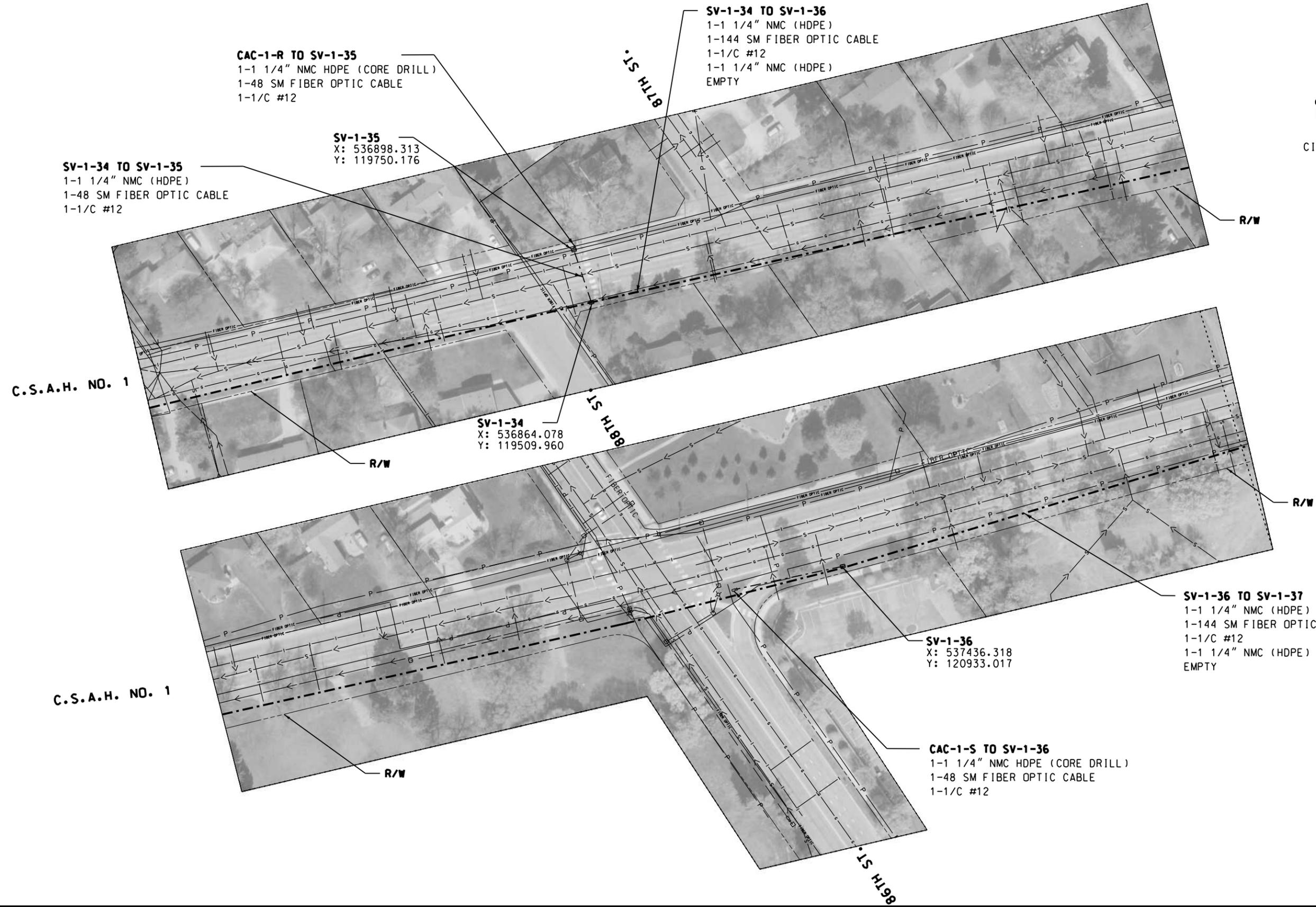
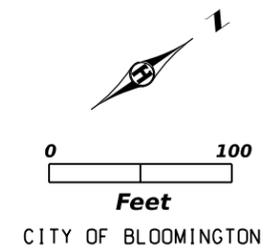
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CAC-1-R TO SV-1-35
 1-1 1/4" NMC HDPE (CORE DRILL)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12

SV-1-35
 X: 536898.313
 Y: 119750.176

SV-1-34 TO SV-1-35
 1-1 1/4" NMC (HDPE)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12

SV-1-34 TO SV-1-36
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

SV-1-34
 X: 536864.078
 Y: 119509.960

SV-1-36
 X: 537436.318
 Y: 120933.017

SV-1-36 TO SV-1-37
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

CAC-1-S TO SV-1-36
 1-1 1/4" NMC HDPE (CORE DRILL)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12

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 GENERAL NOTES.



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CSAH 1 PLAN

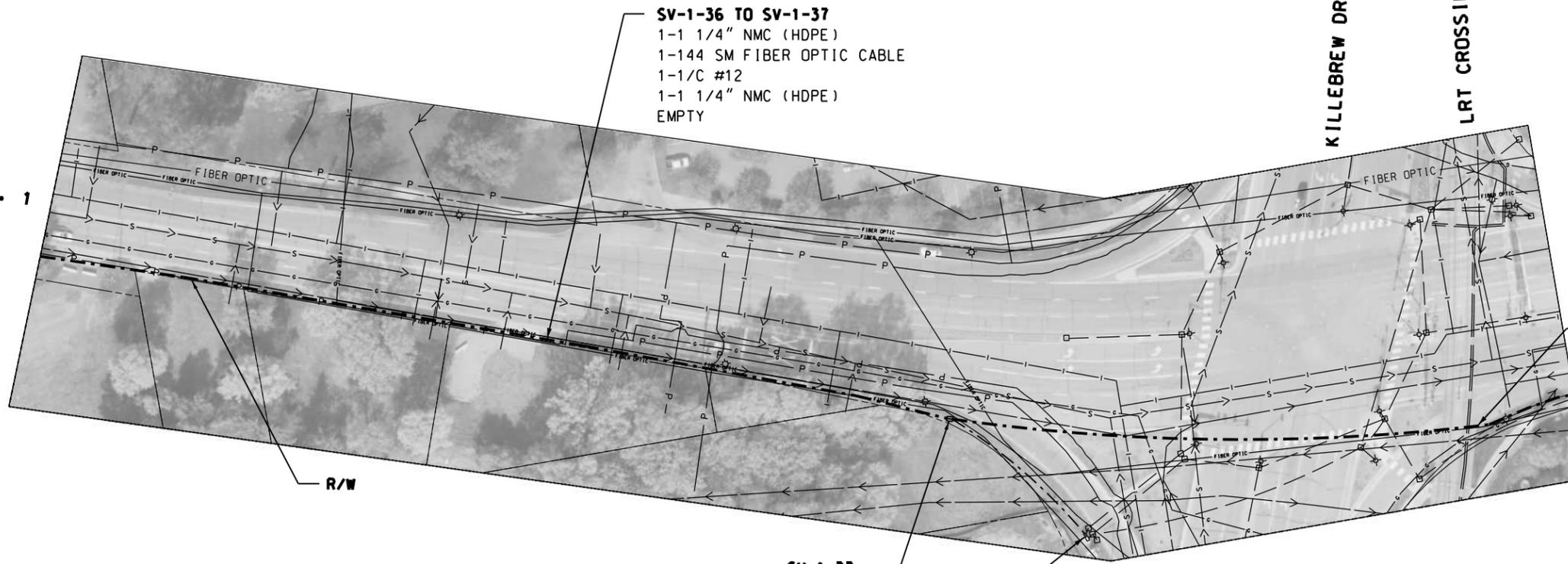
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S.P. 027-030-047

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C.S.A.H. NO. 1

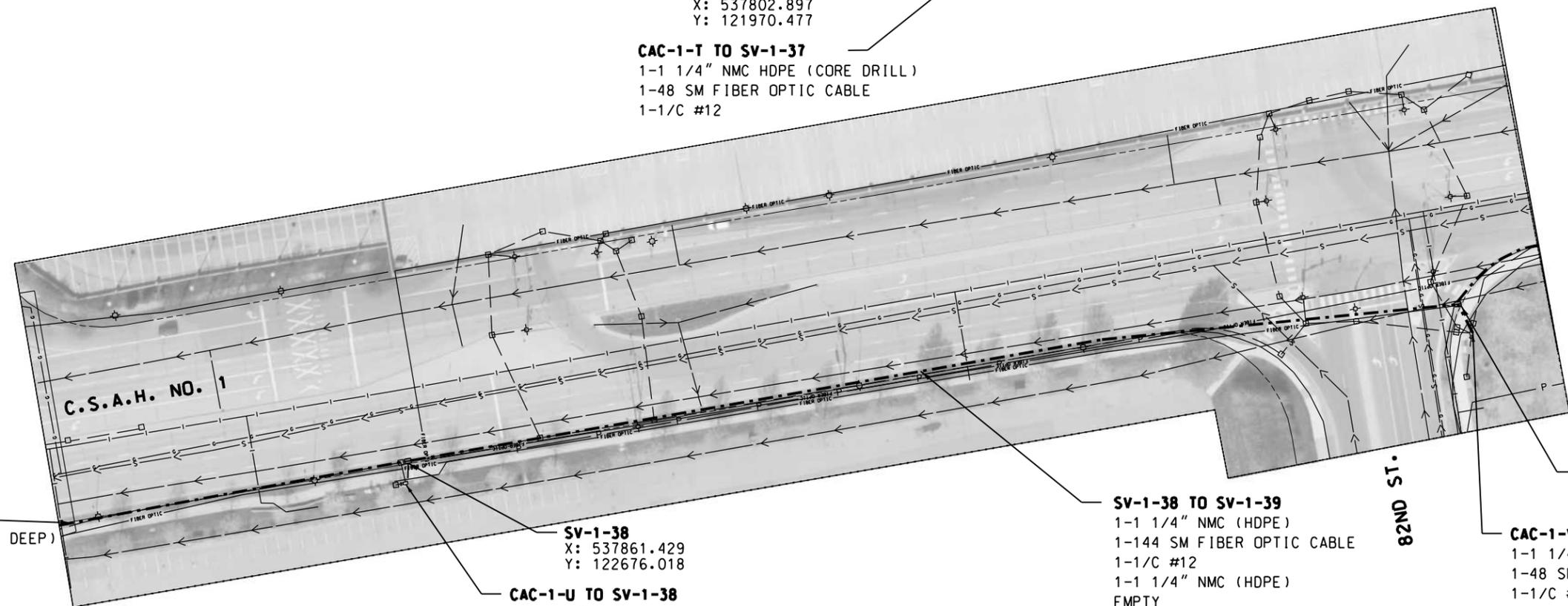


SV-1-36 TO SV-1-37
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

SV-1-37 TO SV-1-38
 1-4" NMC (HDPE) (MIN 10 FEET DEEP)
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY
 1 4" NMC (HDPE) (MIN 10 FEET DEEP)
 2-1 1/4" NMC (HDPE)

SV-1-37
 X: 537802.897
 Y: 121970.477

CAC-1-T TO SV-1-37
 1-1 1/4" NMC HDPE (CORE DRILL)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12



SV-1-37 TO SV-1-38
 1-4" NMC (HDPE) (MIN 10 FEET DEEP)
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY
 1 4" NMC (HDPE) (MIN 10 FEET DEEP)
 2-1 1/4" NMC (HDPE)

SV-1-38
 X: 537861.429
 Y: 122676.018

CAC-1-U TO SV-1-38
 1-1 1/4" NMC HDPE (CORE DRILL)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12

SV-1-38 TO SV-1-39
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

SV-1-39
 X: 537872.120
 Y: 123507.108

CAC-1-V TO SV-1-39
 1-1 1/4" NMC HDPE (CORE DRILL)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12

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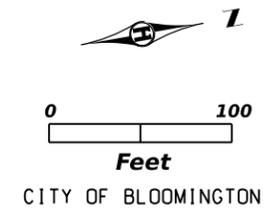
Ryan T. Allers
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C.S.A.H. NO. 1

SV-1-39 TO SV-40
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

CAC-1-W TO SV-1-41
 1-1 1/4" NMC HDPE (CORE DRILL)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12

SV-1-41
 X: 537689.932
 Y: 124154.822

SV-1-40 TO SV-1-41
 1-1 1/4" NMC (HDPE)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12

SV-1-40
 X: 537853.835
 Y: 124143.248

SV-1-40 TO SV-1-42
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

CAC-1-Y TO SV-1-45
 1-1 1/4" NMC HDPE (CORE DRILL)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12

SV-1-45
 X: 537680.501
 Y: 125119.268

C.S.A.H. 1 (END SEGMENT 1)
 MILE PT. 17.16
 STA. 906+04.80

SV-1-43
 X: 537647.482
 Y: 124869.166

CAC-1-X TO SV-1-43
 1-1 1/4" NMC HDPE (CORE DRILL)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12

SV-1-42 TO SV-1-43
 1-1 1/4" NMC (HDPE)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12

C.S.A.H. NO. 1

SV-1-42
 X: 537846.666
 Y: 124854.385

SV-1-42 TO SV-1-44
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

SV-1-44 TO SV-1-45
 1-1 1/4" NMC (HDPE)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12

SV-1-44
 X: 537847.154
 Y: 125118.225

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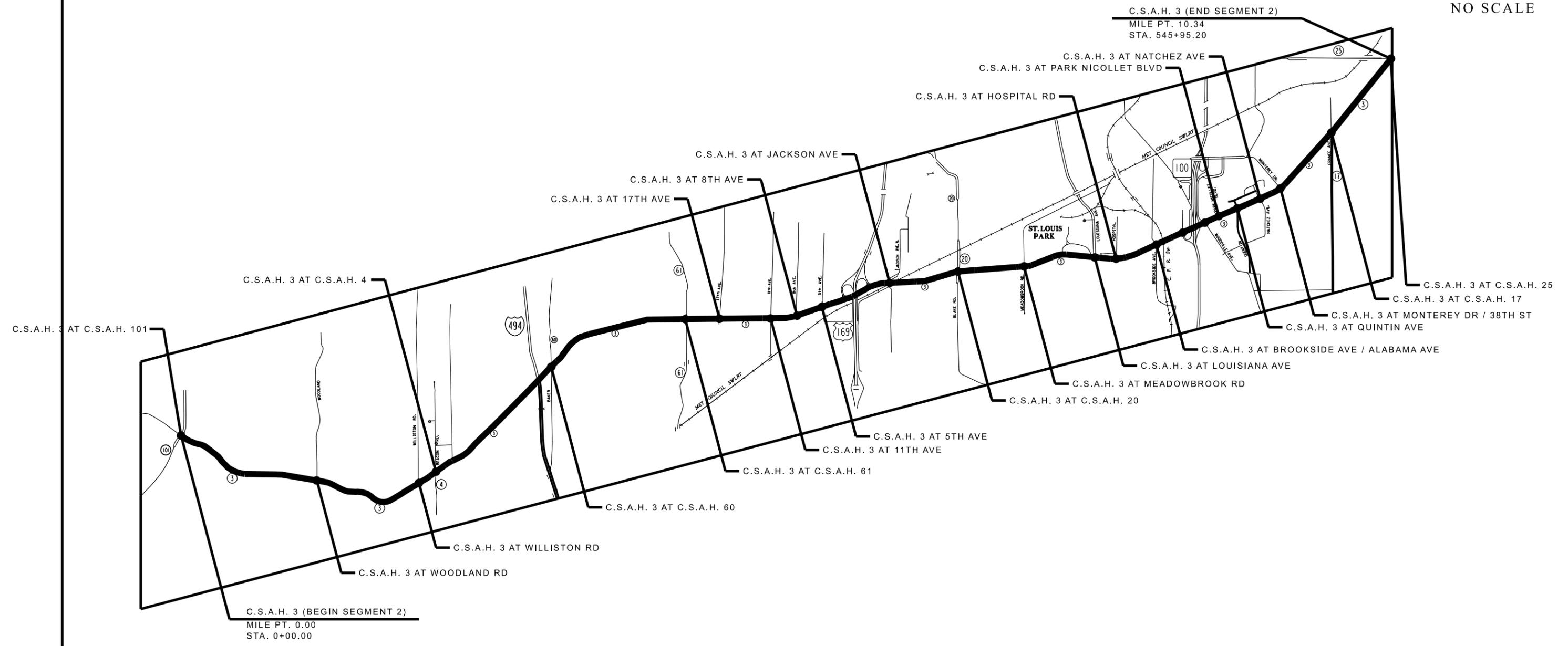
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 CAD BY: J WANNER
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 2020 ATMS / HENNEPIN COUNTY PROJECT 164402
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 45
 104



NO SCALE



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CSAH 3 LOCATION MAP

2020 ATMS / HENNEPIN COUNTY PROJECT 164402

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COMPANY	CONTACT	EMAIL	PHONE	UTILITIES
ARVIG	CURT OLSON	curtis.olson@arvig.com	218-346-5500	FIBER OPTICS
AT&T TRANSMISSION	MICHAEL ZUMWALDE	mz2973@att.com	763-559-5957	PHONE/CABLE/INT
CITY OF EDINA	CHAD MILLER	cmiller@edinamn.gov	952-826-0375	STORM, SANITARY, WATER, ELECTRIC, AND FIBER OPTIC
CITY OF HOPKINS	VANCE CAMPBELL	vCampbell@HOPKINSmn.com	952-548-6361	STORM, SANITARY, WATER, AND FIBER OPTIC
CITY OF MINNETONKA	SCOTT ORNAT	miadministrator@eminnetonka.com	952-988-8400	STORM, SANITARY, AND WATER
CITY OF ST LOUIS PARK WATER	NICK BUSTROM	nbustrom@stlouispark.org	952-928-1323	STORM, SANITARY, AND WATER
CITY OF MINNEAPOLIS TRAFFIC	ROSS BLONIGEN	ross.blonigen@minneapolismn.gov	612-673-5516	
CITY OF MINNEAPOLIS SEWER	JOHN STUJTMANN	John.Studtmann@minneapolismn.gov	612-673-5600	
COMCAST	LYNNE	usicprintrequests@gmail.com	612-919-0760	PHONE/CABLE/INT
CENTURYLINK - CTLQL	KIM VANDERWERFF	Kim.Vanderwerff@centurylink.com	800-667-9963	PHONE/CABLE/INT
EDCO PRODUCTS INC	LOCATOR		320-963-2400	PHONE
HENNEPIN COUNTY PUBLIC WORKS	BRANT KOUGH	brant.kough@hennepin.us	612-596-0339	TRAFFIC SIGNALS/FIBER
METROPOLITAN COUNCIL	MANKING LEE		651-602-4313	SEWER
CENTER POINT ENERGY	CATHY FRAUTSCHI	Cathy.Frautschi@centerpointenergy.com	763-559-5185	GAS
MNDOT	TYLER MONSON	tyler.monson@state.mn.us	651-366-5750	LIGHTING/SIGNALS/FIBER
MINNEAPOLIS PARK AND REC	BARBARA SCHOMMER	Barbara.Schommer@minneapolismn.gov	612-499-9090	ELECTRICAL
NEUTRAL PATH COMMUNICATIONS	DARYL RENAUD	daryl.renaud@vanguardup.com	515-250-6998	FIBER OPTICS
PARK NICOLLET MEDICAL CENTER	BARB	privloc@yahoo.com	952-993-5103	FIBER OPTICS
ST LOUIS PARK SCHOOL DISTRICT	LOCATOR		218-346-5500	FIBER OPTICS
SUPER VALU	LOCATOR		406-541-9571	FIBER OPTICS
US INTERNET CORP	DYLAN OSBORN	dosborn@usinternet.com	612-417-1266	FIBER OPTICS
SPRINT/LONG DISTANCE	DAN HILLARD	Brett.D.Gjemse@sprint.com	612-217-3526	FIBER OPTICS
WINDSTREAM COMMUNICATIONS	DAVID ACKERMAN	David.F.Ackerman@windstream.com	800-289-1901	PHONE/CABLE/INT
XCEL ENERGY	SAM RICHERT	Samuel.L.Richert@xcelenergy.com	612-499-1303	POWER



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CSAH 3 UTILITY CONTACT INFORMATION

2020 ATMS / HENNEPIN COUNTY PROJECT 164402
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 104

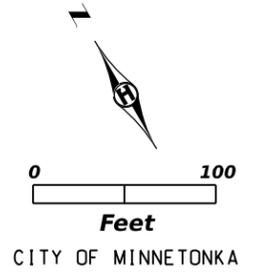
C.S.A.H. 3 (BEGIN SEGMENT 2)
 MILE PT. 0.00
 STA. 0+00.00

CSAH 101

CAC-3-A TO SV-3-1
 1-1 1/4" NMC HDPE (CORE DRILL)
 1-48 SM FIBER OPTIC CABLE
 1-1/C #12
SV-3-1
 X: 468861.180
 Y: 142869.375

SV-3-1 TO SV-3-2
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

CEDAR SPRINGS RD.



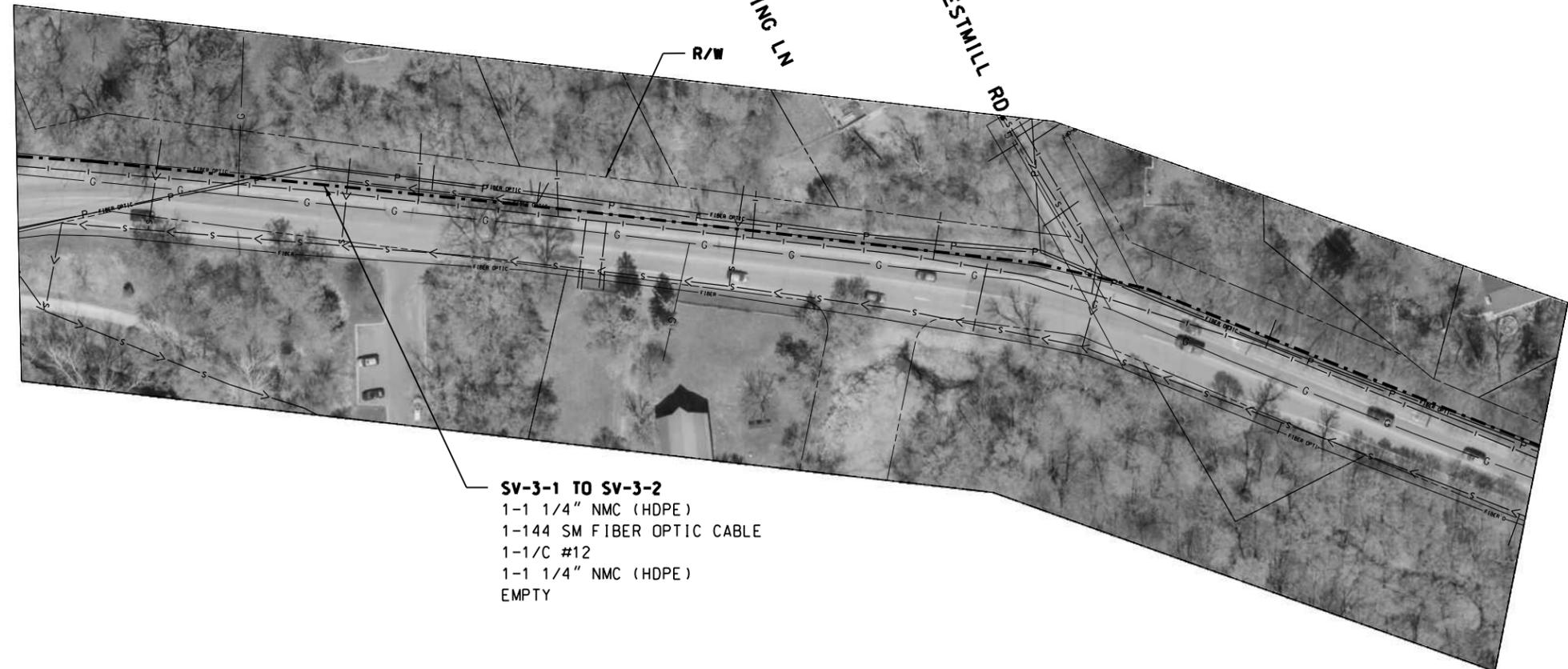
C.S.A.H. NO. 3



C.S.A.H. NO. 3

SPRING LN
 WESTMILL RD

SV-3-1 TO SV-3-2
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY



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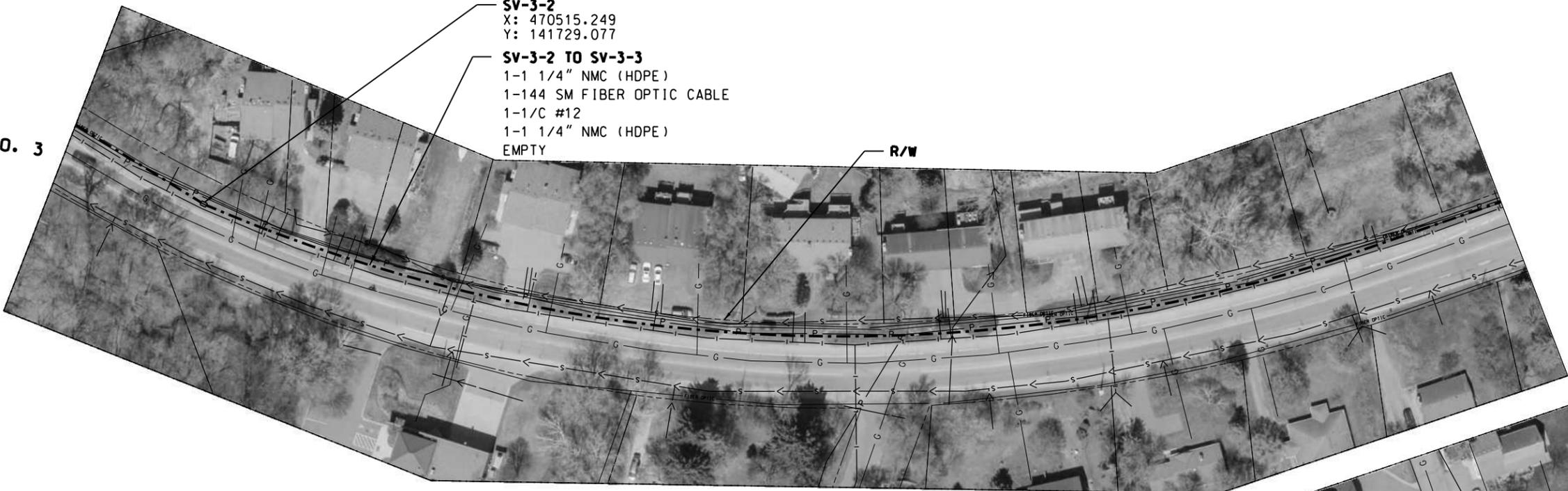
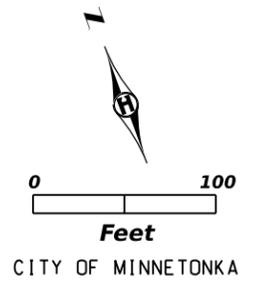
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C.S.A.H. NO. 3

SV-3-2
X: 470515.249
Y: 141729.077
SV-3-2 TO SV-3-3
1-1 1/4" NMC (HDPE)
1-144 SM FIBER OPTIC CABLE
1-1/C #12
1-1 1/4" NMC (HDPE)
EMPTY

R/W



R/W

SV-3-3
X: 472233.577
Y: 141370.811

SV-3-3 TO SV-3-4
1-1 1/4" NMC (HDPE)
1-144 SM FIBER OPTIC CABLE
1-1/C #12
1-1 1/4" NMC (HDPE)
EMPTY

C.S.A.H. NO. 3

NANTUCKET RD.

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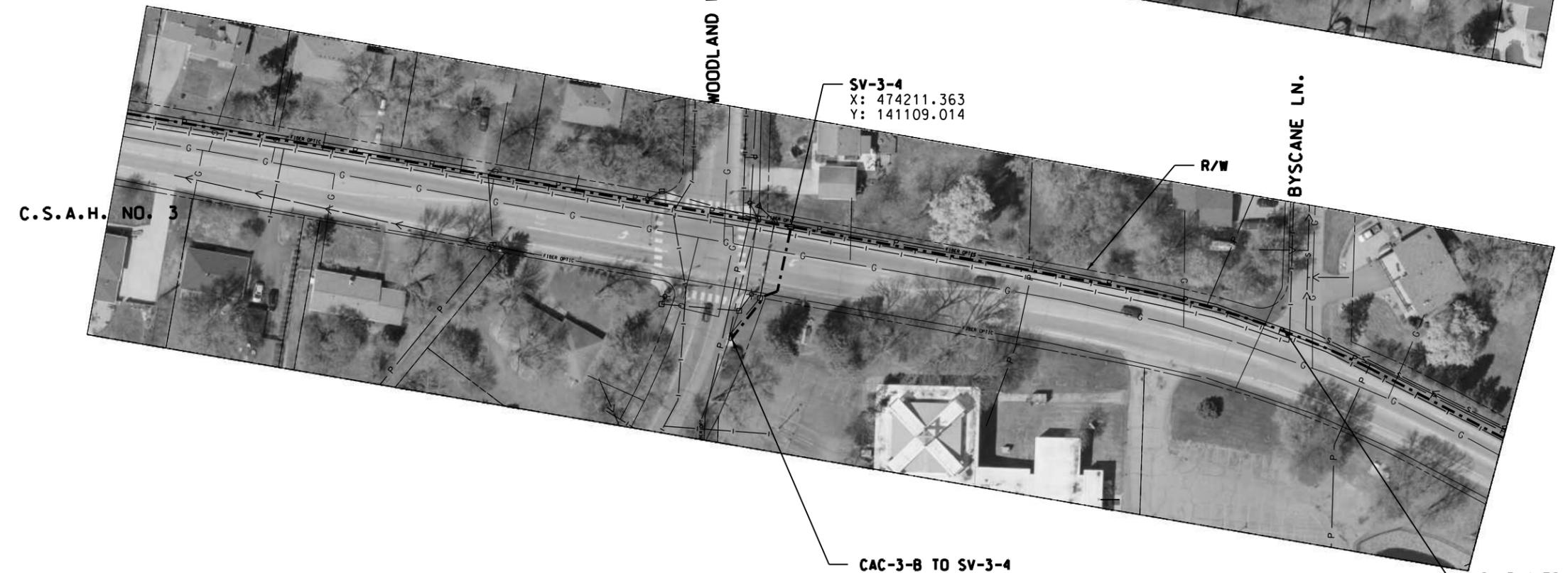
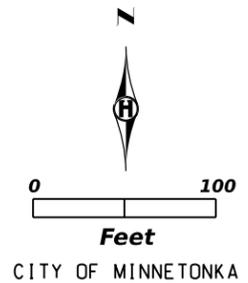


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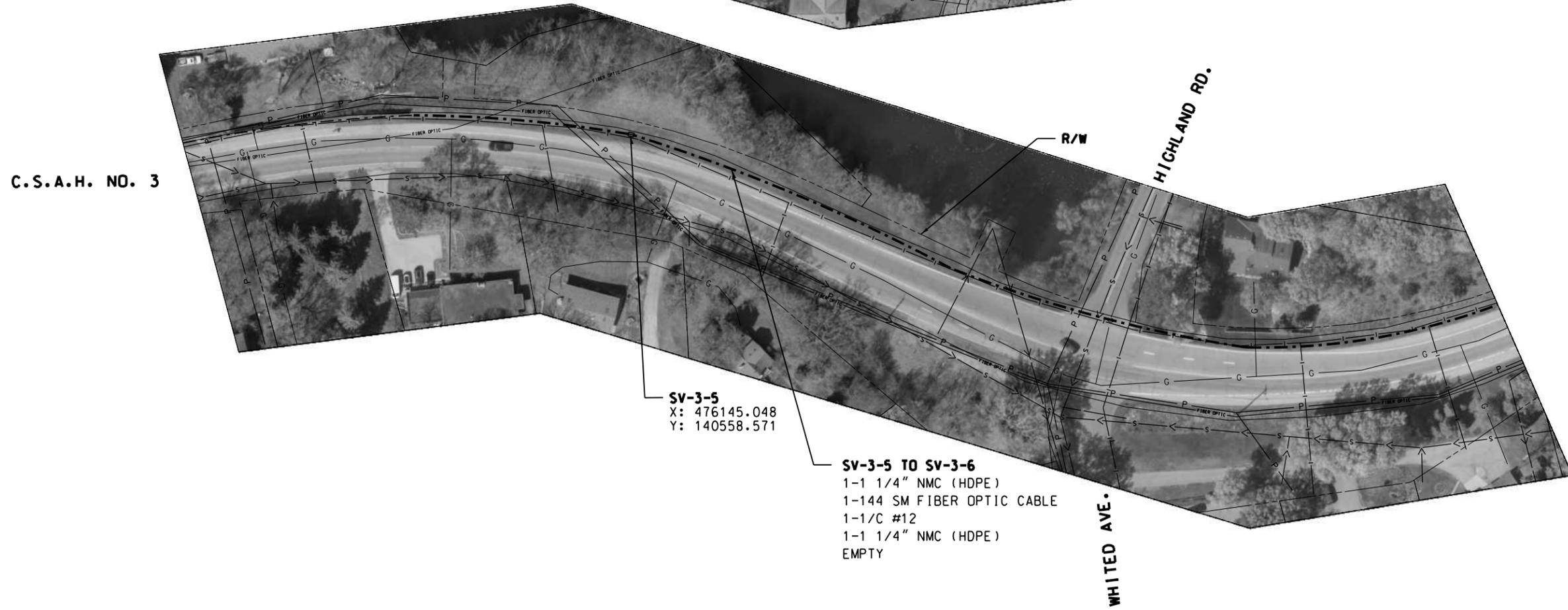
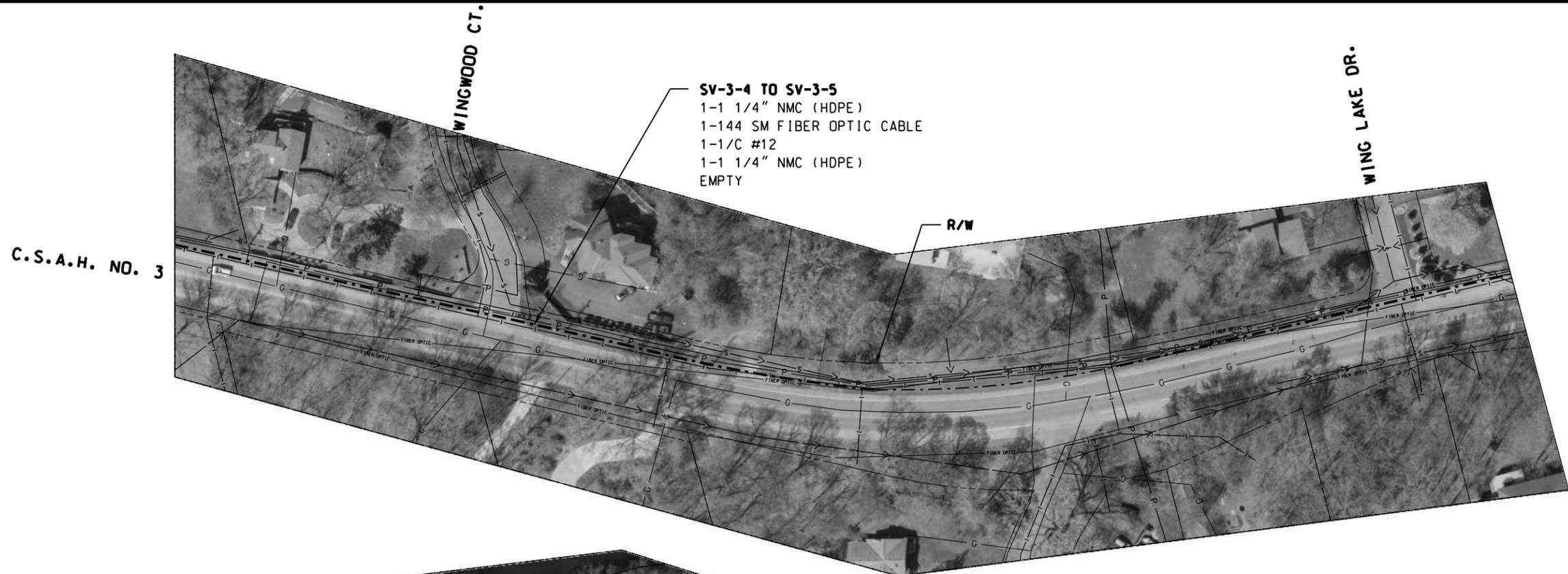
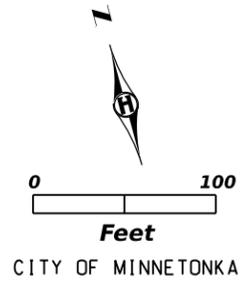
CSAH 3 PLAN

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S.P. 027-030-047

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SEE SHEET 3 FOR
GENERAL NOTES.



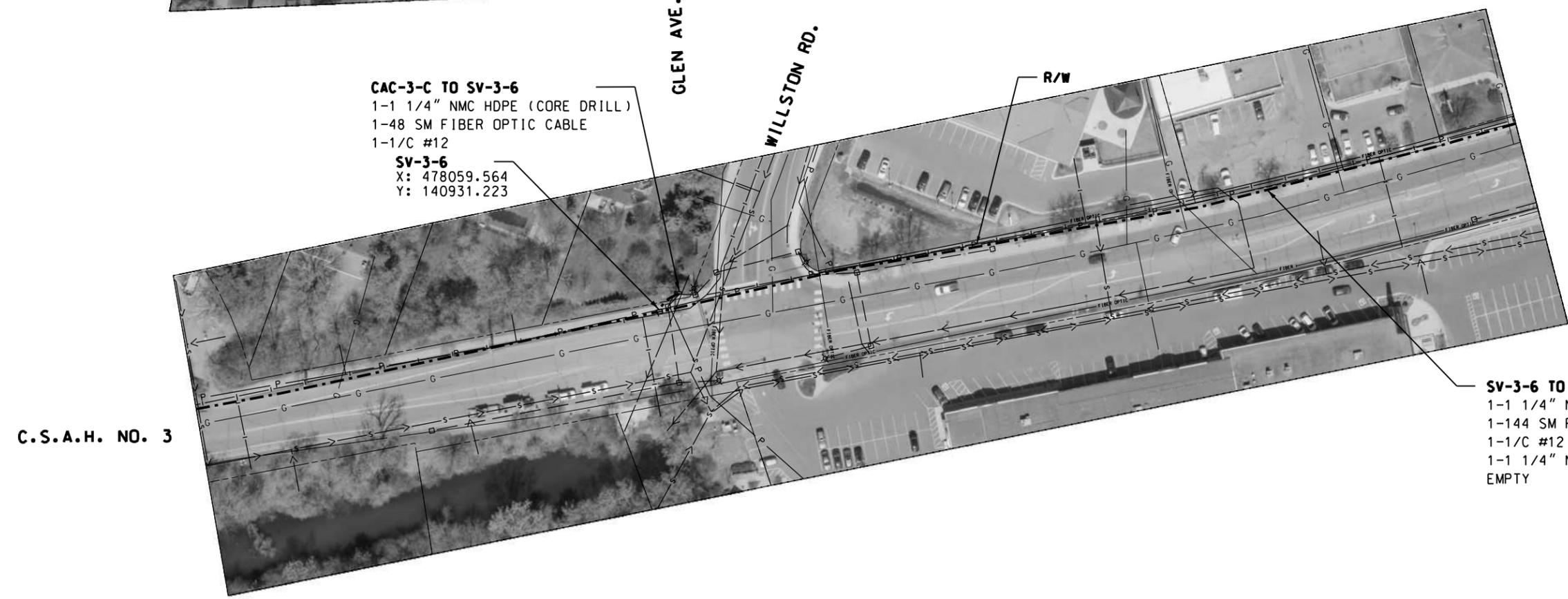
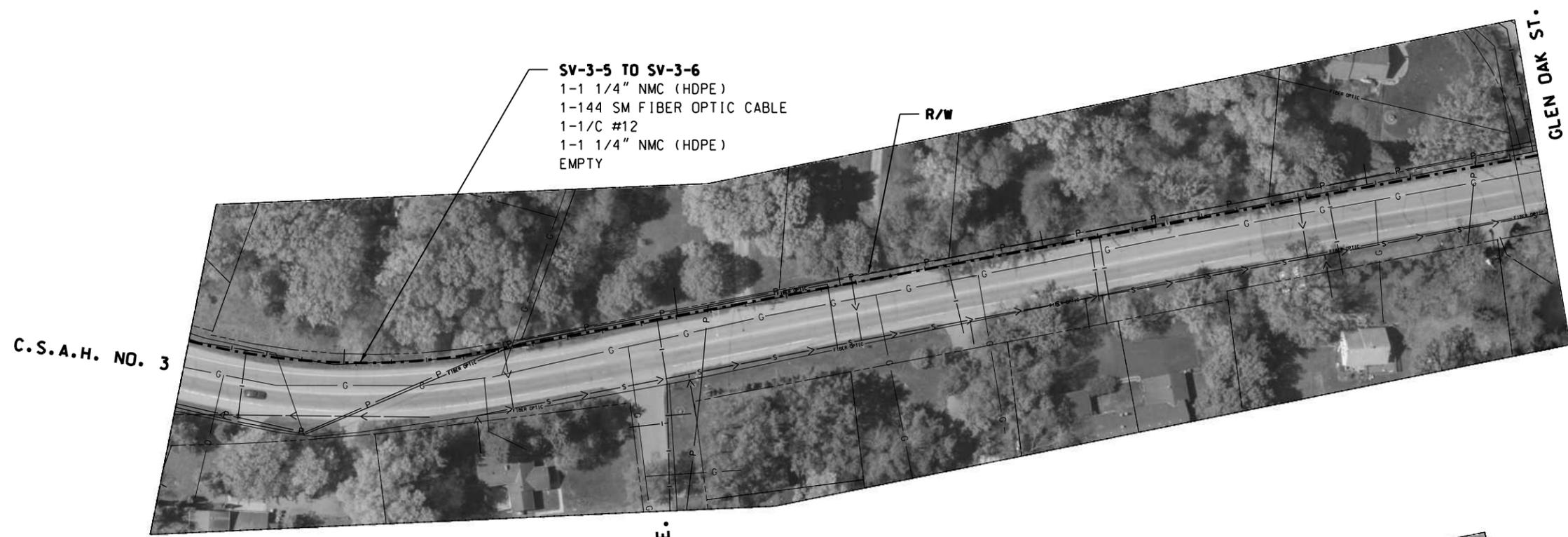
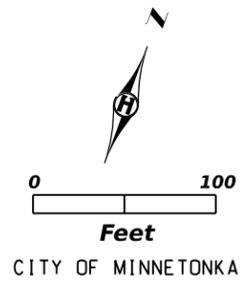
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Ryan T. Allers
 RYAN T. ALLERS, LICENSED PROFESSIONAL ENGINEER
 LICENSE NO. 45896 DATE 06/01/2020

DESIGN BY: J WANNER
 CAD BY: J WANNER
 CHECKED BY: R ALLERS
 LAST REVISION: / /

CSAH 3 PLAN
 2020 ATMS / HENNEPIN COUNTY PROJECT 164402
 S.P. 027-030-047

SHEET
 51 / 104



SV-3-6 TO SV-3-7
 1-1 1/4" NMC (HDPE)
 1-144 SM FIBER OPTIC CABLE
 1-1/C #12
 1-1 1/4" NMC (HDPE)
 EMPTY

SEE SHEET 3 FOR
 GENERAL NOTES.



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Ryan T. Allers
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CSAH 3 PLAN	SHEET
2020 ATMS / HENNEPIN COUNTY PROJECT 164402	52
S.P. 027-030-047	104