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CO

PLAN

MAY 2014

Section No. 1 Title Section No. 2 Typical Sections and Details Estimate of Quantities Section No. 3 Miscellaneous Quantities Right of Way Plat

Plan and Profile Standard Detail Drawings Sign Plates

Section No. 8 Structure Plans Section No. 9 Computer Earthwork Data Section No. 9 Cross Sections

TOTAL SHEETS = 536

ORDER OF SHEETS

DEPARTMENT OF TRANSPORTATION

STATE OF WISCONSIN

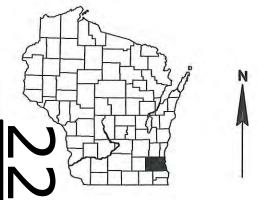
PLAN OF PROPOSED IMPROVEMENT

IC - INTEGRATED CORRIDORS **Z00**

VARIOUS INTERSECTIONS, MILWAUKEE & WAUKESHA COUNTIES

IH 94 MILWAUKEE/WAUKESHA COUNTIES

> STATE PROJECT NUMBER 1060-33-97



DESIGN DESIGNATION

A.A.D.T. 2015	= N/A
A.A.D.T. 2035	= N/A
D.H.V. 2035	= N/A
D.D.	= N/A
T.	= N/A
DESIGN SPEED	= N/A
ESALS	= N/A

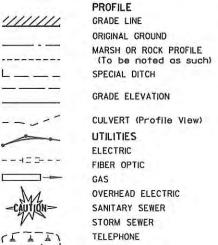
CONVENTIONAL SYMBOLS

CORPORATE LIMITS PROPERTY LINE LIMITED HIGHWAY EASEMENT EXISTING RIGHT OF WAY PROPOSED OR NEW R/W LINE SLOPE INTERCEPT

REFERENCE LINE EXISTING CULVERT PROPOSED CULVERT (Box or Pipe) COMBUSTIBLE FLUIDS

MARSH AREA

WOODED OR SHRUB AREA



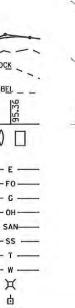
WATER

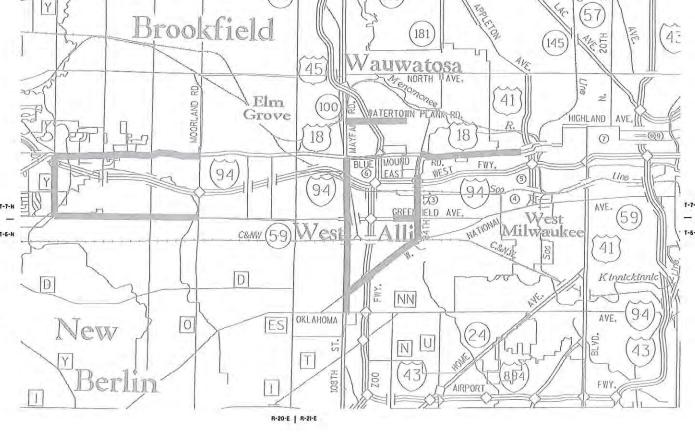
UTILITY PEDESTAL

TELEPHONE POLE

POWER POLE

_ LABEL _ _ 0 X _Q Ø





TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007) UNLESS OTHERWISE NOTED ON THE PLAN SHEET

CAPITOL

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007)

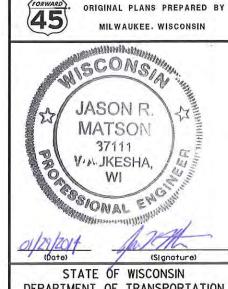
COORDINATES ON THIS PLAN ARE REFERENCED

PLOT NAME :

FEDERAL PROJECT STATE PROJECT PROJECT CONTRACT 1060-33-97

SIGN STRUCTURES

S-40-416 S-40-447 S-40-449 S-67-413



DEPARTMENT OF TRANSPORTATION

PREPARED BY FORWARD 45 Designer Protect Manager

FORWARD 45 CHRISTOPHER HAGER Regional Examiner

Regional Supervisor C.O. Examiner

1.0 MI

LAYOUT

TOTAL NET LENGTH OF CENTERLINE = 0.0 MI.

UTILITY CONTACTS

ATC MR. BRIAN BLACK

PO BOX 47 WAUKESHA, WI 53187 PHONE: (262)506-6907

N19 W23993 RIDGEVIEW PKWY. W.

bblack@atcllc.com

AT&T CORPORATION

MR. KEN NINE JMC ENGINEERS & ASSOCIATES, INC. 110 NORTH MAIN STREET **CULVER. IN 46511** PHONE: (574) 842-8830 CELL: (574) 904-6336 kennethnine@att.net

AT&T WISCONSIN

MR. JAY BULANEK 7721 W. FOND DU LAC AVENUE MILWAUKEE. WI 53218 PHONE: (414) 535-7407 ib5175@att.com

BROOKFIELD, CITY OF

MR. TOM GRISA, DIRECTOR OF PUBLIC WORKS 2000 N. CALHOUN ROAD BROOKFIELD, WI 53005-5095 PHONE: (262) 796-6644 FAX: (262) 782-1323 grisa@ci.brookfield.wi.us

BROOKFIELD, TOWN OF

MR. JEFF GOLNER HIGHWAY SUPERINTENDENT 645 N. JANACEK ROAD BROOKFIELD, WI 53045 PHONE: (262) 796-3795 dpw@townofbrookfield.com

ELM GROVE, VILLAGE OF

MR. RICHARD PAUL JR, DIRECTOR OF PUBLIC WORKS 13600 JUNEAU BOULEVARD ELM GROVE, WI 53212 PHONE: (262) 782-6700 rpaulir@elmgrovewi.org

LEVEL 3 COMMUNICATIONS, LLC

MR. MARK DECHANT FIELD TECHNICIAN 411 E. WISCONSIN AVENUE MILWAUKEE, WI 53202 CELL: (414) 426-1857 mark.dechant@level3.com

MIDWEST FIBER NETWORKS

MR. RICHARD TRGOVEC 3701 W. BURNHAM STREET, SUITE C MILWAUKEE, WI 53215 PHONE: (414) 459-3554 rtrgovec@midwestfibernetworks.com

MILWAUKEE METRO SEWERAGE

MS. DEBRA JENSEN 260 W. SEEBOTH STREET MILWAUKEE, WI 53204 PHONE: (414) 225-2143 diensen@mmsd.com

MILWAUKEE, CITY OF -**LIGHTING/SIGNALS**

MR. DENNIS MILLER 841 N. BROADWAY, ROOM 920 MILWAUKEE, WI 53202 PHONE: (414) 708- 4251 dennis.miller@milwaukee.gov

MILWAUKEE, CITY OF - CABLE

MR. BRYAN PAWLAK 841 N. BROADWAY MILWAUKEE, WI 53202 PHONE: (414) 286-5970 brvan.pawlak@milwaukee.gov

MILWAUKEE, CITY OF - CONDUIT

MRS. KAREN ROGNEY 841 N. BROADWAY MILWAUKEE, WI 53202 PHONE: (414) 286- 3243 karen.rogney@milwaukee.gov

MILWAUKEE, CITY OF - SEWERS

MR. JASON BARMAN 841 N. BROADWAY, ROOM 821 MILWAUKEE, WI 53202 PHONE: (414) 286-3267 jason.barman@milwaukee.gov

MILWAUKEE, CITY OF - WATER

MR. JOSHUA IWEN 841 N. BROADWAY, ROOM 409 MILWAUKEE, WI 53202 PHONE: (414) 286-3640 joshua.iwen@milwaukee.gov

PHONE: (414) 459-3569 CELL: (414) 651-2862 d.dietsch@northwindtech.com

NEW BERLIN, CITY OF

MR. J.P. WALKER, CITY ENGINEER 3805 S. CASPER DRIVE P.O. BOX 510921 NEW BERLIN, WI 53151-0921 PHONE: (262)797-2445 X453 CELL: (262) 613-2025 jwalker@newberlin.org

SPRINT

MR. GERRY CRAIN 5600 N. RIVER ROAD, SUITE 200 ROSEMONT, IL 60018 PHONE: (630) 660-9626 gerry.a.crain@sprint.com

DON DIETSCH. PROJECT MANAGER NORTHWIND TECHNICAL SERVICES 3701 W. BURNHAM STREET, SUITE C MILWAUKEE, WI 53215 PHONE: (414) 459-3569 CELL: (414) 651-2862 d.dietsch@northwindtech.com

TDS METROCOM

MR. MICHAEL JOHNSON 20875 CROSSROADS CIRCLE, SUITE 800 WAUKESHA, WI 53186 PHONE: (262) 754-3052 michael.johnson@tdstelecom.com

TIME WARNER CABLE

MR. LUKAS LACROSSE 1320 N. MARTIN LUTHER KING JR. DRIVE MILWAUKEE. WI 53212 PHONE: (414) 908-4766 lukas.lacrosse@twcable.com

TW TELECOM

MR. BRAHIM GADDOUR ENGINEERING DEPT. 3235 INTERTECH DRIVE, SUITE 600 BROOKFIELD, WI 53045 PHONE: (414) 908-1027 CELL: (414) 704-1026 brahim.gaddour@twtelecom.com

WAUKESHA COUNTY **DEPARTMENT OF PUBLIC WORKS**

MR. GARY EVANS, ENGINEERING SERVICES MANAGER 1320 PEWAUKEE ROAD WAUKESHA, WI 53188 PHONE: (262) 548-7740 CELL: (262) 424-3415 FAX: (262) 896-8097 gevans@waukeshacounty.gov

(CONTINUED ON NEXT SHEET)

STATE AGENCIES

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

MR. MICHAEL THOMPSON - ENVIRONMENTAL **SPECIALIST** 2300 N. MARTIN LUTHER KING JR. DRIVE MILWAUKEE, WI 53212 CELL: (414) 303-3408

WISCONSIN DEPARTMENT OF **TRANSPORTATION**

michaelc.thompson@wisconsin.gov

MS. KARLA LEITHOFF - WETLAND ECOLOGIST 141 NW BARSTOW STREET WAUKESHA. WI 53187-0798 PHONE: (262) 548-6709 karla.leithoff@dot.wi.gov

WISCONSIN DEPARTMENT OF **TRANSPORTATION**

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WISCONSIN DEPARTMENT OF **TRANSPORTATION**

MR. GREG BERRY – UTILITY COORDINATOR 141 NW BARSTOW STREET WAUKESHA, WI 53187-0798 CELL: (414) 750-7828 gregory.berry@dot.wi.gov

OTHER AGENCIES

BROOKFIELD, CITY OF

MR. JEFF CHASE, CITY ENGINEER 2000 N. CALHOUN ROAD BROOKFIELD, WI 53005-5095 PHONE: (262) 787-3524 FAX: (262) 782-1323 chase@ci.brookfield.wi.us

MILWAUKEE, CITY OF

MR. JEFF POLENSKE, CITY ENGINEER 841 N. BROADWAY, ROOM 701 MILWAUKEE. WI 53202 PHONE: (414) 286-3701 FAX: (414) 286-5994 jeffrey.polenske@milwaukee.gov

MILWAUKEE COUNTY DPW

MR. GREG HEISEL, HWY MAINT. MANAGER 10190 W. WATERTOWN PLANK ROAD MILWAUKEE. WI 53226 PHONE: (414) 257-6566 gheisel@milwcnty.com

MILWAUKEE COUNTY TRANSIT SYSTEM

MR. DAVE ZIAREK 1942 N. 17TH STREET MILWAUKEE, WI 53205 PHONE: (414) 343-1764 dziarek@mcts.org

MILWAUKEE COUNTY

MR. AZIZ ALEIOW 2711 W. WELLS STREET. 2ND FLOOR MILWAUKEE, WI 53208 PHONE: (414) 278-4911 aziz.aleiow@milwcnty.com

SOUTHEASTERN WISCONSIN **REGIONAL PLANNING**

COMMISSION MR. DONALD P. SIMON W239 N1812 ROCKWOOD DRIVE P.O. BOX 1607 WAUKESHA, WI 53187-1607 PHONE: (262) 547-6722 EXT. 249 dsimon@sewrpc.org

UNION PACIFIC RAILROAD COMPANY

MR. JOHN VENICE 101 N. WACKER DRIVE, SUITE 1920 CHICAGO, IL 60606 PHONE: (312) 777-2043 invenice@up.com

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND **FACILITIES BEFORE** YOU DIG IN WISCONSIN

WIS. STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORK DAYS NOTICE **BEFORE YOU** EXCAVATE.



Call 811 3 Work Days Before You Dig Or Toll Free (800) 242-8511 Hearing Impaired TDD (800) 542-2289 www.DiggersHotline.com

SHEET:

Ε

PROJECT NO: 1060-33-97

HWY: IH 894/IH 94/USH 45

COUNTY: MILWAUKEE/WAUKESHA

PLOT BY : MSCD1S

WAUWATOSA, CITY OF – LIGHTING & SIGNALS

MR. BILL WEHRLEY, CITY ENGINEER 7725 W. NORTH AVENUE WAUWATOSA, WI 53213 PHONE: (414) 479-8929 wwehrley@wauwatosa.net

WAUWATOSA, CITY OF -SEWER

MR. MIKE MAKI 7725 W. NORTH AVENUE WAUWATOSA, WI 53213 PHONE: (414) 479-8991 mmaki@wauwatosa.net

WAUWATOSA, CITY OF -

<u>WATER</u>

MR. JIM WOJCEHOWICZ WATER SUPERINTENDENT 7725 W. NORTH AVENUE WAUWATOSA, WI 53213 PHONE: (414) 479-8965 jwojcehowicz@wauwatosa.net

WE ENERGIES – ELECTRIC

SEND ALL CORRESPONDENCE TO:
MR. DAN SANDE
333 W. EVERETT STREET - A299
MILWAUKEE, WI 53203
PHONE: (414) 221-4578
dan.sande@we-energies.com

CONSTRUCTION FIELD CONTACT:
MR. JOHN BEVER
500 S. 116TH STREET
WEST ALLIS, WI 53214
PHONE: (414) 221-3529
john.bever@we-energies.com

WE ENERGIES - GAS

SEND ALL CORRESPONDENCE TO: MR. DAN SANDE 333 W. EVERETT STREET - A299 MILWAUKEE, WI 53203 PHONE: (414) 221-4578 dan.sande@we-energies.com

CONSTRUCTION FIELD CONTACT: MR. JOHN BEVER 500 S. 116TH STREET WEST ALLIS, WI 53214 PHONE: (414) 221-3529 john.bever@we-energies.com

WEST ALLIS, CITY OF – LIGHTING & SIGNALS

MR. PETER DANIELS 7525 W. GREENFIELD AVENUE WEST ALLIS, WI 53214 PHONE: (414) 302-8374 pdaniels@westalliswi.gov

WEST ALLIS, CITY OF – SEWER & WATER

MR. JOE BURTCH 7525 W. GREENFIELD AVENUE WEST ALLIS, WI 53214 PHONE: (414) 302-8379 jburtch@westalliswi.gov

WEST SHORE PIPELINE COMPANY

MR. ARIC AUFDERMAUER,
PIPELINE TECHNICIAN
11115 W. COUNTY LINE ROAD
MILWAUKEE, WI 53224
CELL: (414) 391-8102
aaufdermauer@buckeye.com

WINDSTREAM

MR. JAMES KOSTUCH 13935 BISHOPS DRIVE BROOKFIELD, WI 53005 PHONE: (262) 792-7938 james.kostuch@windstream.com

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MR. ERIC PEREA 141 NW BARSTOW WAUKESHA, WI 53187 PHONE: (262) 574-5422 CELL: (414) 750-0935 eric.perea@dot.wi.gov

WISDOT - SIGNALS

DUTY ENGINEER 141 NW BARSTOW STREET WAUKESHA, WI 53187 PHONE: (414) 750-2605

ELECTRICAL FIELD UNIT 935 S. 60TH STREET WEST ALLIS, WI 53214 PHONE: (414) 266-1170

WISDOT STOC

MR. JEFFREY MADSON 433 W ST. PAUL AVE, SUITE 300 MILWAUKEE, WI 53203 PHONE: (414) 225-3723 jeffrey.madson@dot.wi.gov

PROJECT NO: 1060-33-97 HWY: IH 894/IH 94/USH 45 COUNTY: MILWAUKEE/WAUKESHA GENERAL NOTES SHEET: **E**

2

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE FILLED WITH COMPACTED BACKFILL GRANULAR UNLESS REGULATIONS REQUIRE OTHERWISE. BACKFILL GRANULAR MATERIAL IS INCIDENTAL TO THE REMOVAL ITEM

USE STANDARD DETAIL DRAWING FOR LANE CLOSURE AND SHOULDER CLOSURE FOR TRAFFIC CONTROL SIGNS AND DEVICES..

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

CURB AND GUTTER AND SIDEWALK SHALL BE REMOVED TO THE NEAREST JOINT IF THE NEAREST JOINT IS 4-FEET OR LESS. IF THIS NEAREST JOINT IS GREATER THAN 4-FEET IT SHALL BE RETURNED TO THE LOCATION SHOWN ON THE PLAN (SAWCUT).

REMOVAL OF EROSION CONTROL DEVICES ARE INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.

THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

RESTORE DISTURBED URBAN AREAS WITH SOD LAWN. SEED OR SOD AND FERTILIZE ALL TOPSOILED AREAS WITHIN 5 DAYS AFTER PLACEMENT.

NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

STANDARD ABBREVIATIONS APRON END WALL AGG AGGREGATE **ASPH ASPHALTIC** BASE AGGREGATE DENSE BAD BM **BENCH MARK** C&G **CURB AND GUTTER** C/L CENTER OR CONSTRUCTION LINE CMCP CULVERT PIPE CORRUGATED METAL CONC CONCRETE **CULVERT PIPE** CPRC CULVERT PIPE REINFORCED CONCRETE CSD CONCRETE SURFACE DRAIN CUBIC YARD CY DEGREE OF CURVE D DMS DYNAMIC MESSAGE SIGN DELTA DISCH DISCHARGE EΒ **EASTBOUND** FC FACE OF CURB FΕ FIELD ENTRANCE FLOW LINE FL **FTMS** FREEWAY TRAFFIC MANAGEMENT SYSTEM HMA HOT MIX ASPHALT INV INVERT LENGTH OF CURVE LEFT HAND FORWARD LHF ΙP LOW POINT LT LEFT

LP LOW POINT
LT LEFT
MIN MINIMUM
M/L MATCHLINE
NB NORTHBOUND
NC NORMAL CROWN
PAVT PAVEMENT
PC POINT OF CURVE

PCC POINT OF COMPOUND CURVE
PE PRIVATE ENTRANCE
PGL PROFILE GRADE LINE
PI POINT OF INTERSECTION

PLE PERMANENT LIMITED EASEMENT
PRC POINT OF REVERSE CURVE
PT POINT OF TANGENT
R RADIUS OF CURVE
R/L REFERENCE LINE
R/W RIGHT OF WAY
RC REVERSE CROWN

RCAEW APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE

REQD REQUIRED

RHF RIGHT HAND FORWARD
RO RUN OFF LENGTH
RRSP RAILROAD SPIKE
RT RIGHT
SALVAGED

SALV SALVAGED
SB SOUTHBOUND

SDD STANDARD DETAIL DRAWING

SE SUPER ELEVATION SF SQUARE FOOT

SSPRC STORM SEWER PIPE REINFORCED CONCRETE

STA STATION
SY SQUARE YARD
T TANGENT LENGTH

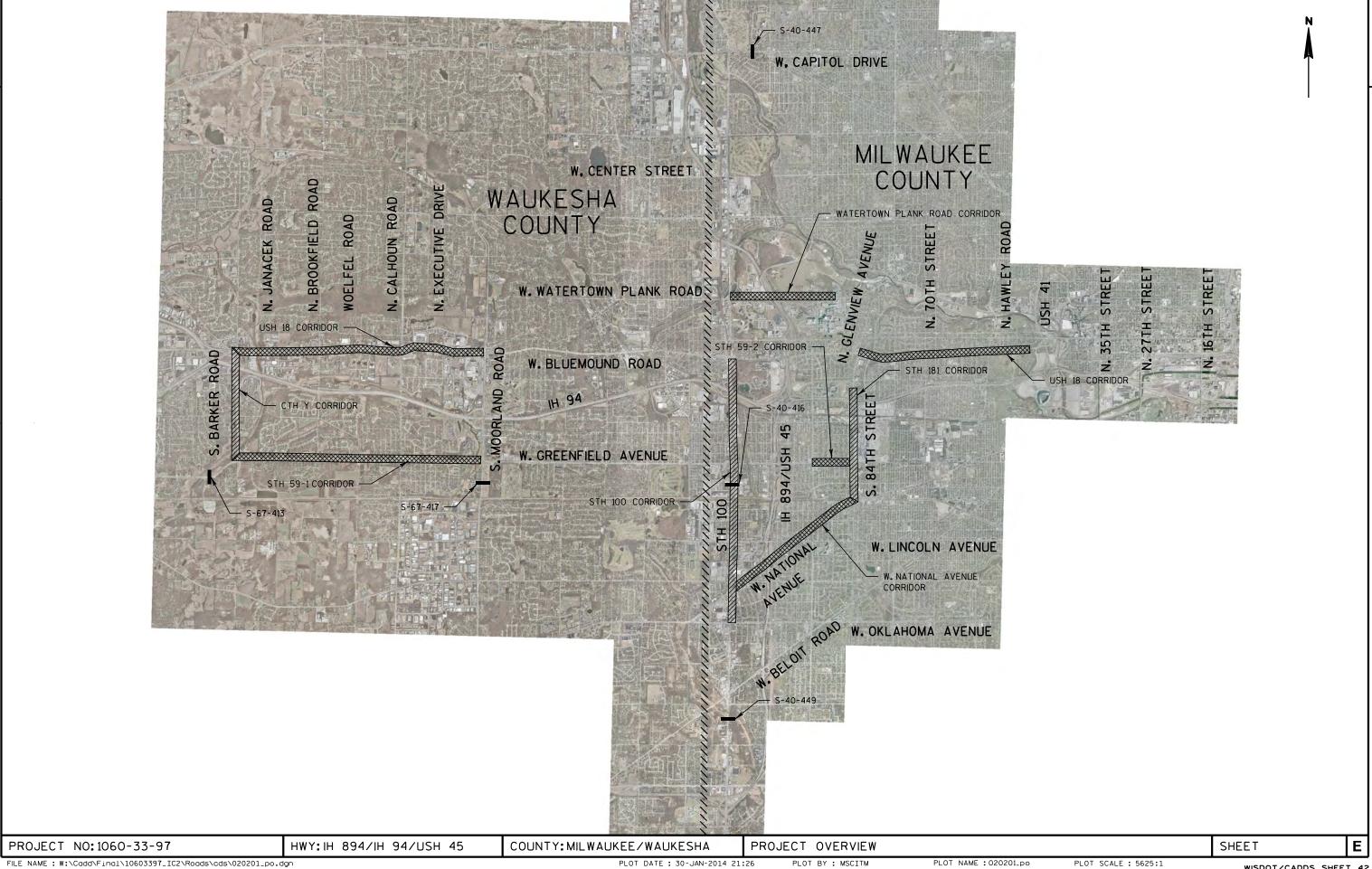
TLE TEMPORARY LIMITED EASEMENT
VCL VERTICAL CURVE LENGTH
VPC POINT OF VERTICAL CURVE
VPI POINT OF VERTICAL INTERSECTION
VPT POINT OF VERTICAL TANGENT

WB WESTBOUND

ORDER OF SECTION 2 DETAIL SHEETS

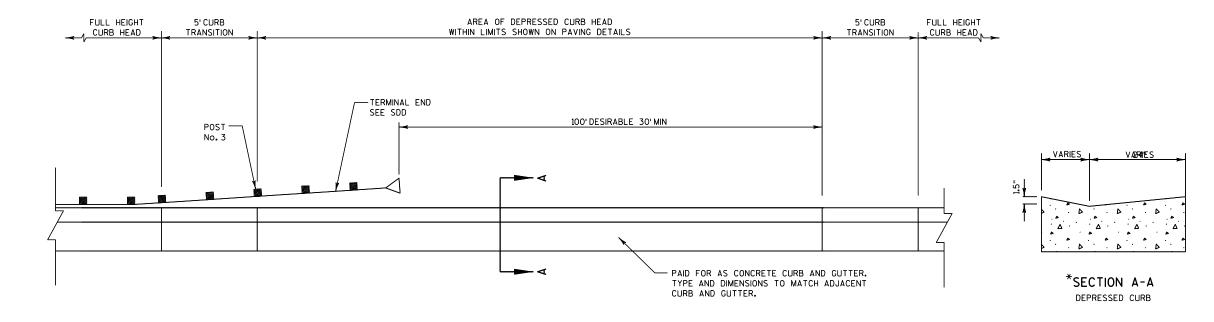
GENERAL NOTES
PROJECT OVERVIEW
CONSTRUCTION DETAILS
PLAN DETAILS
ITS
EROSION CONTROL
PERMANENT SIGNING
TRAFFIC SIGNALS
COMMUNICATIONS

PROJECT NO: 1060-33-97 HWY: IH 894/IH 94/USH 45 COUNTY: MILWAUKEE/WAUKESHA GENERAL NOTES SHEET: **E**



2

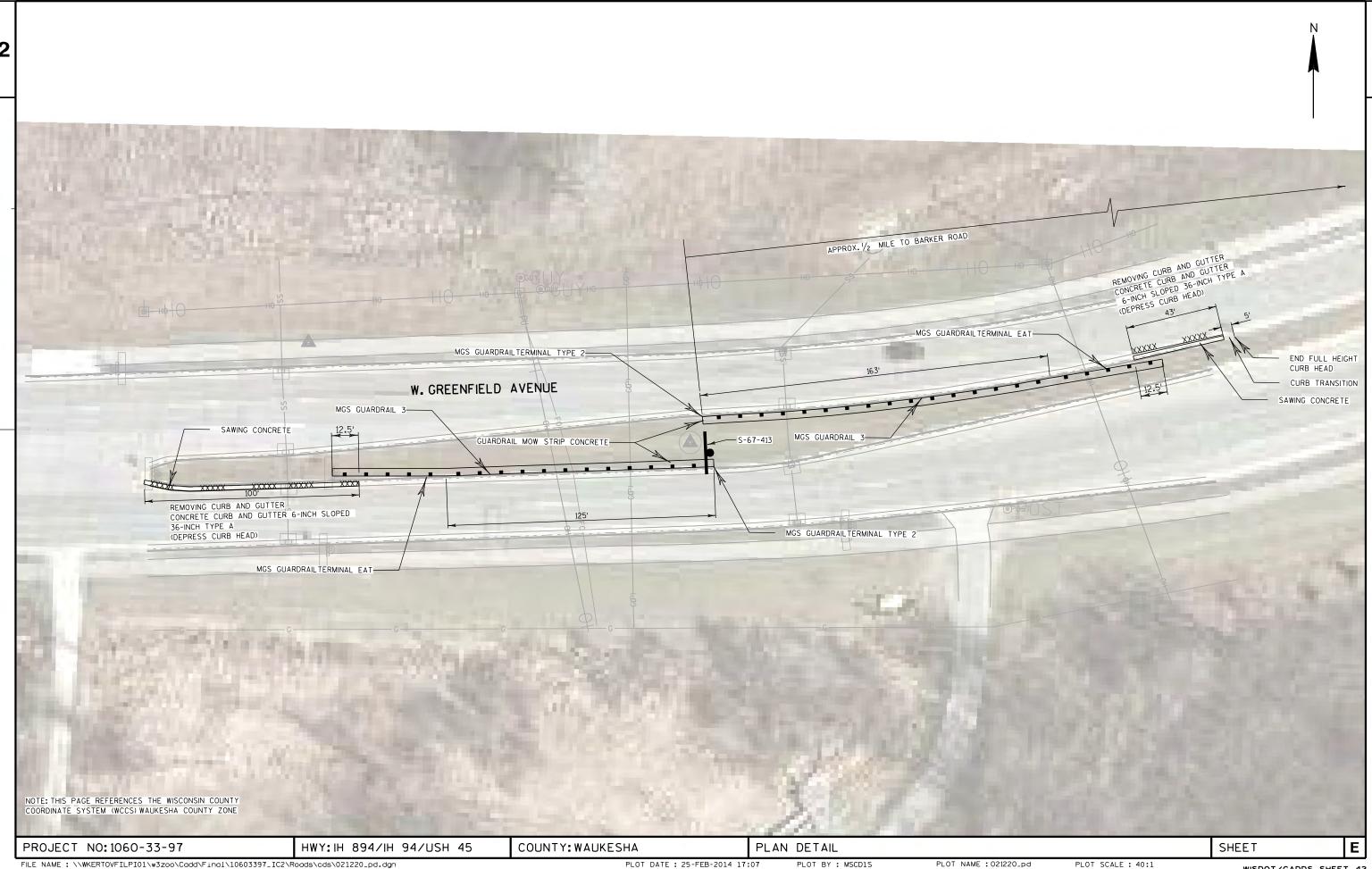
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DEPRESSED CURB HEAD AT BEAM GUARD TERMINAL

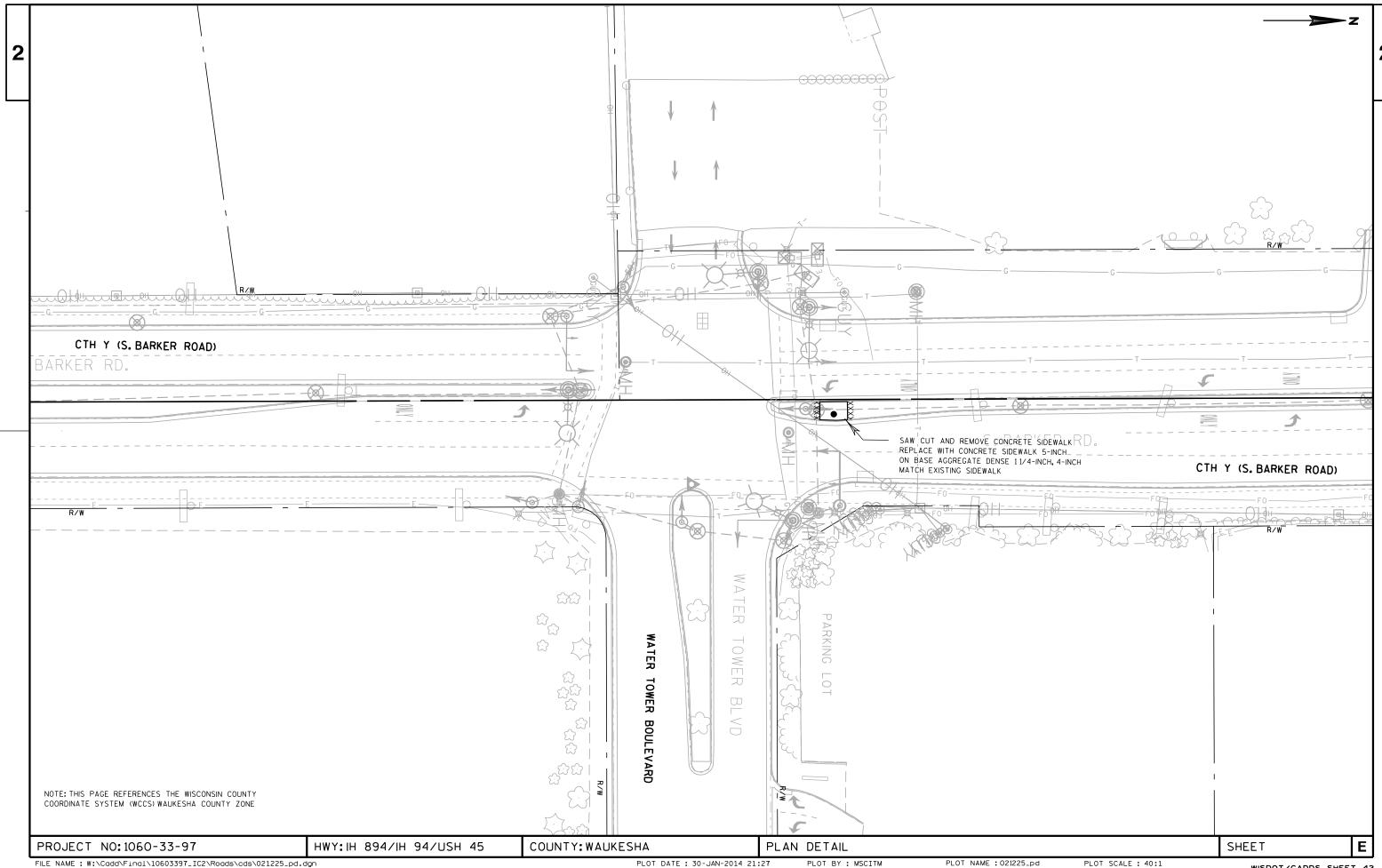
PROJECT NO:1060-33-97 HWY: IH 894/IH 94/USH 45 COUNTY: MILWAUKEE/WAUKESHA CONSTRUCTION DETAILS SHEET **E**

PLOT NAME : 021001_cd



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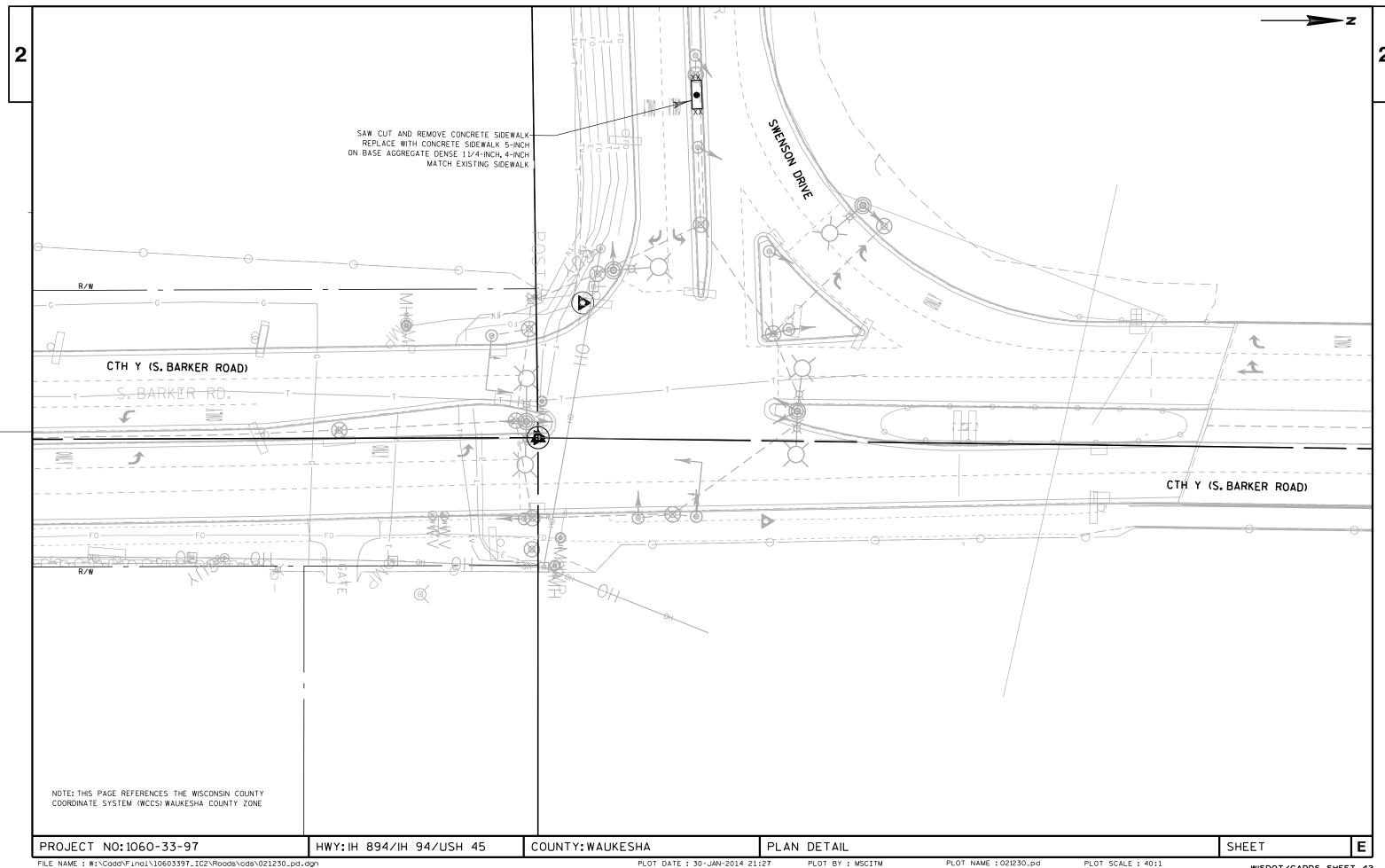
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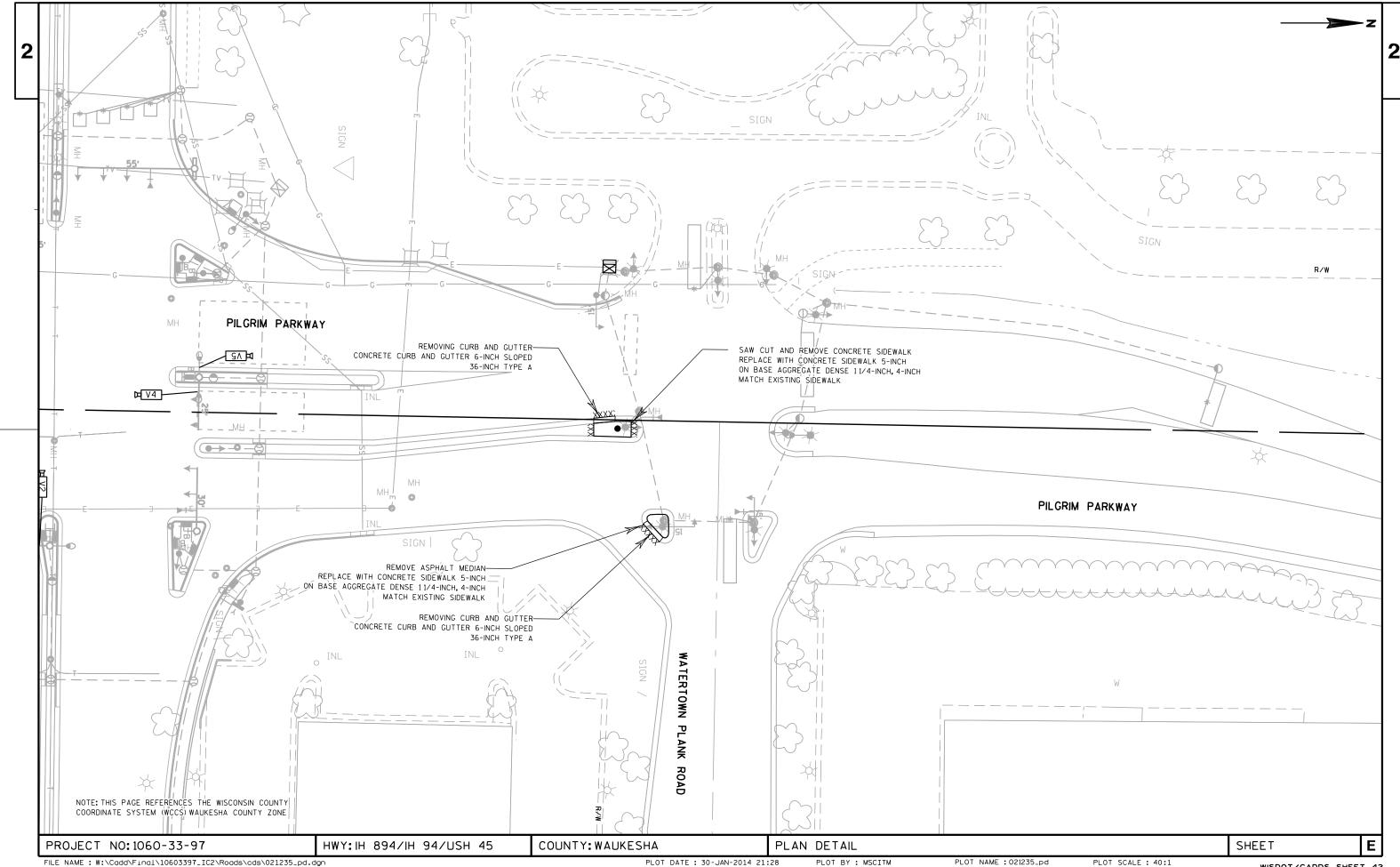
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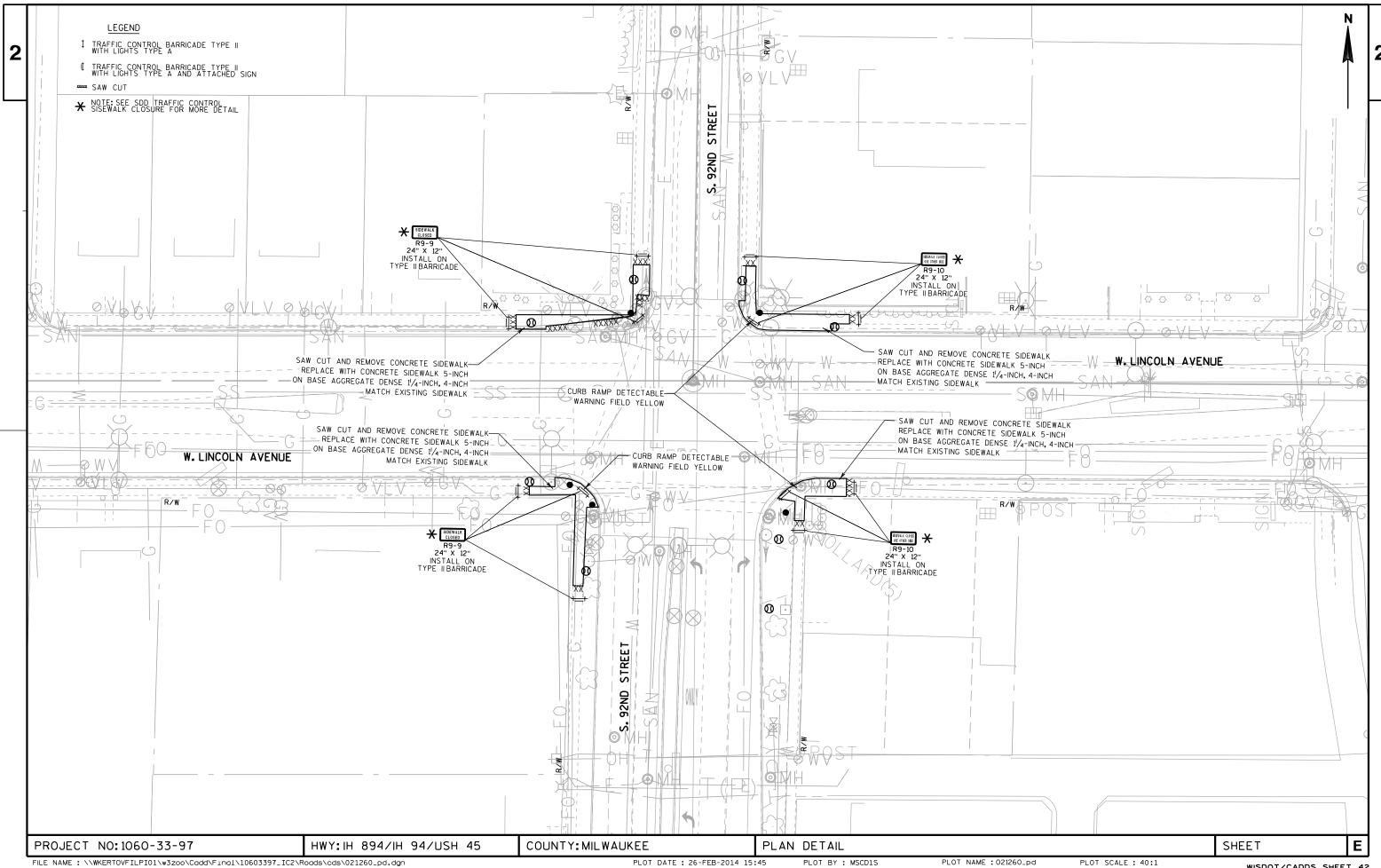
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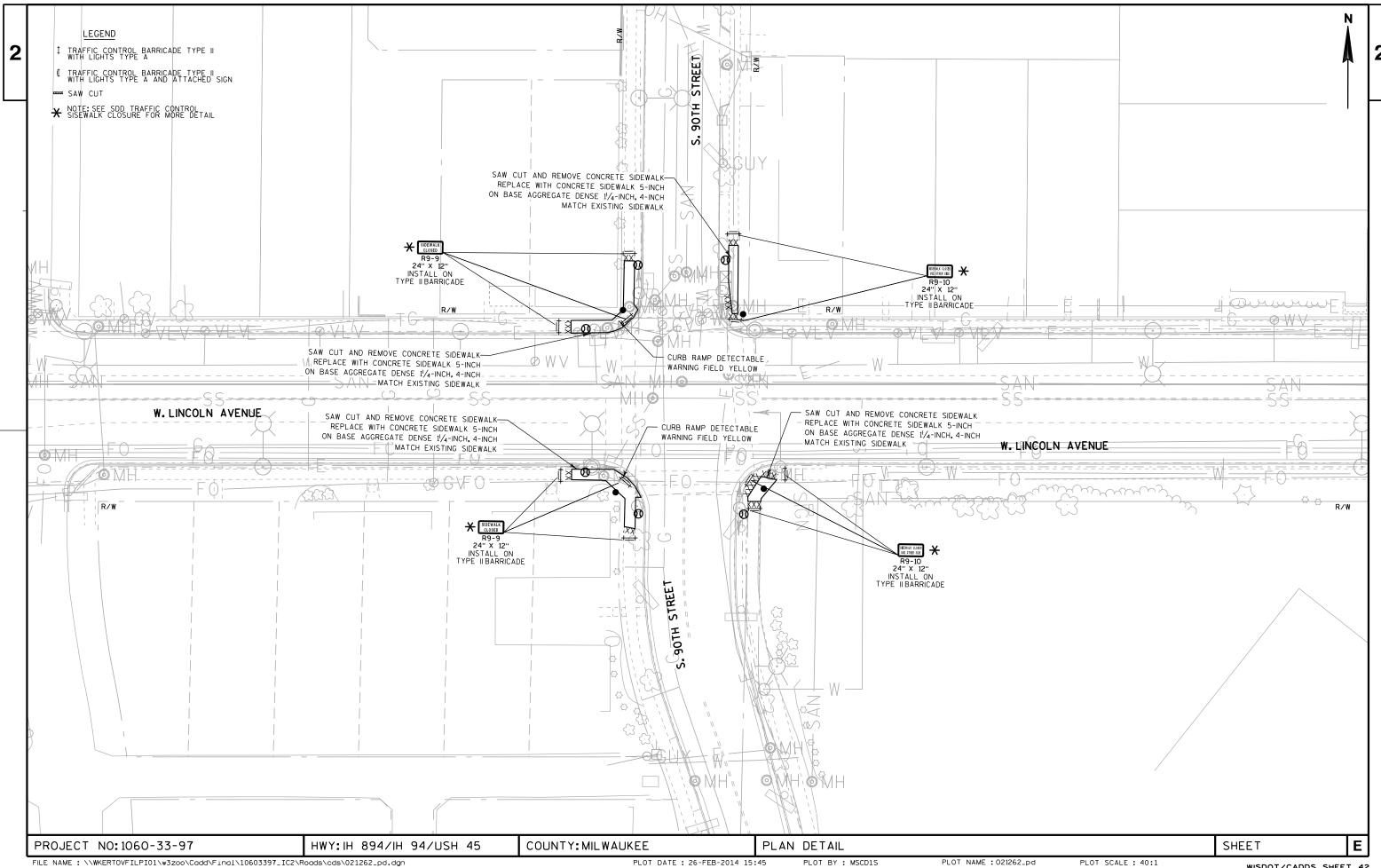
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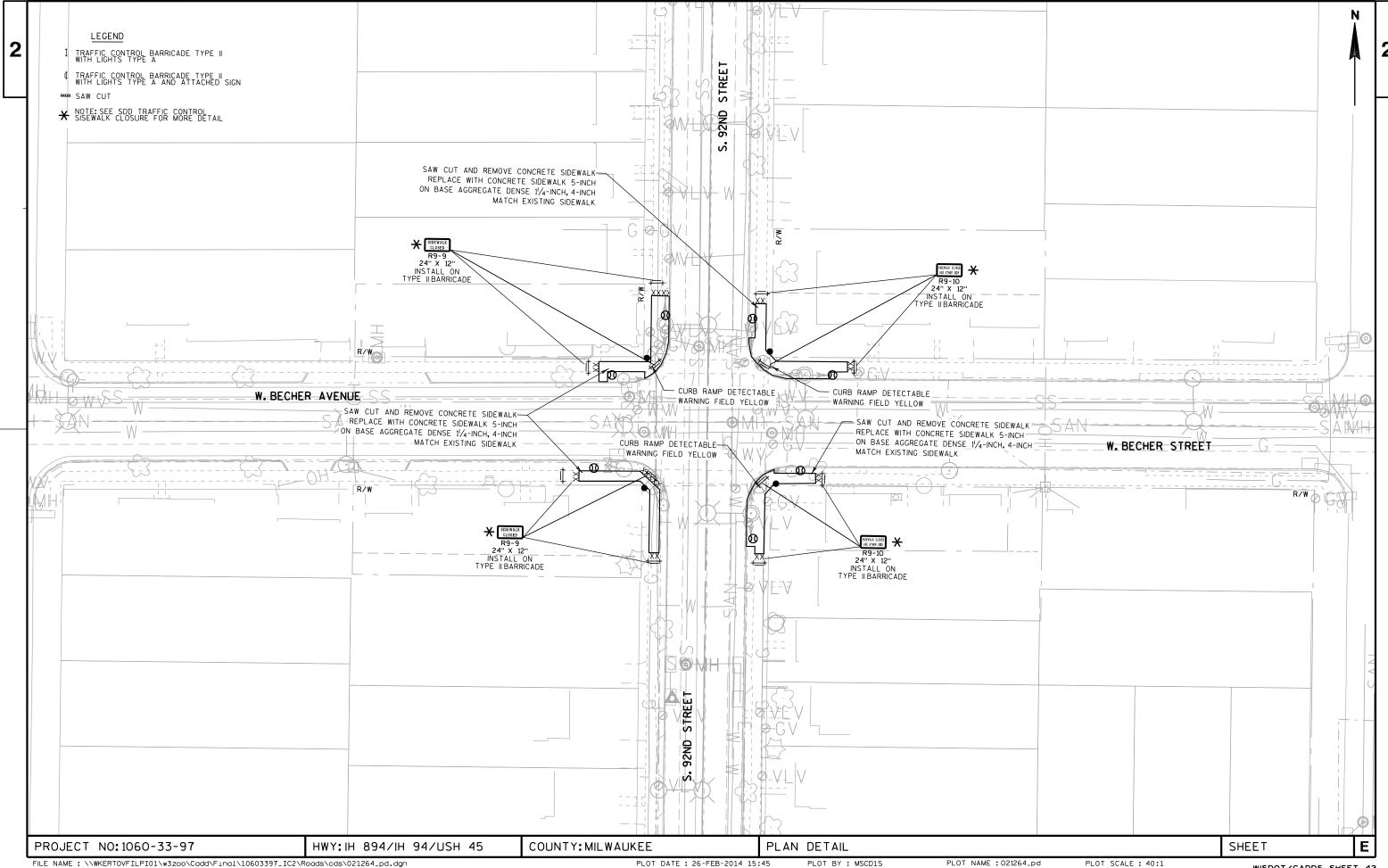


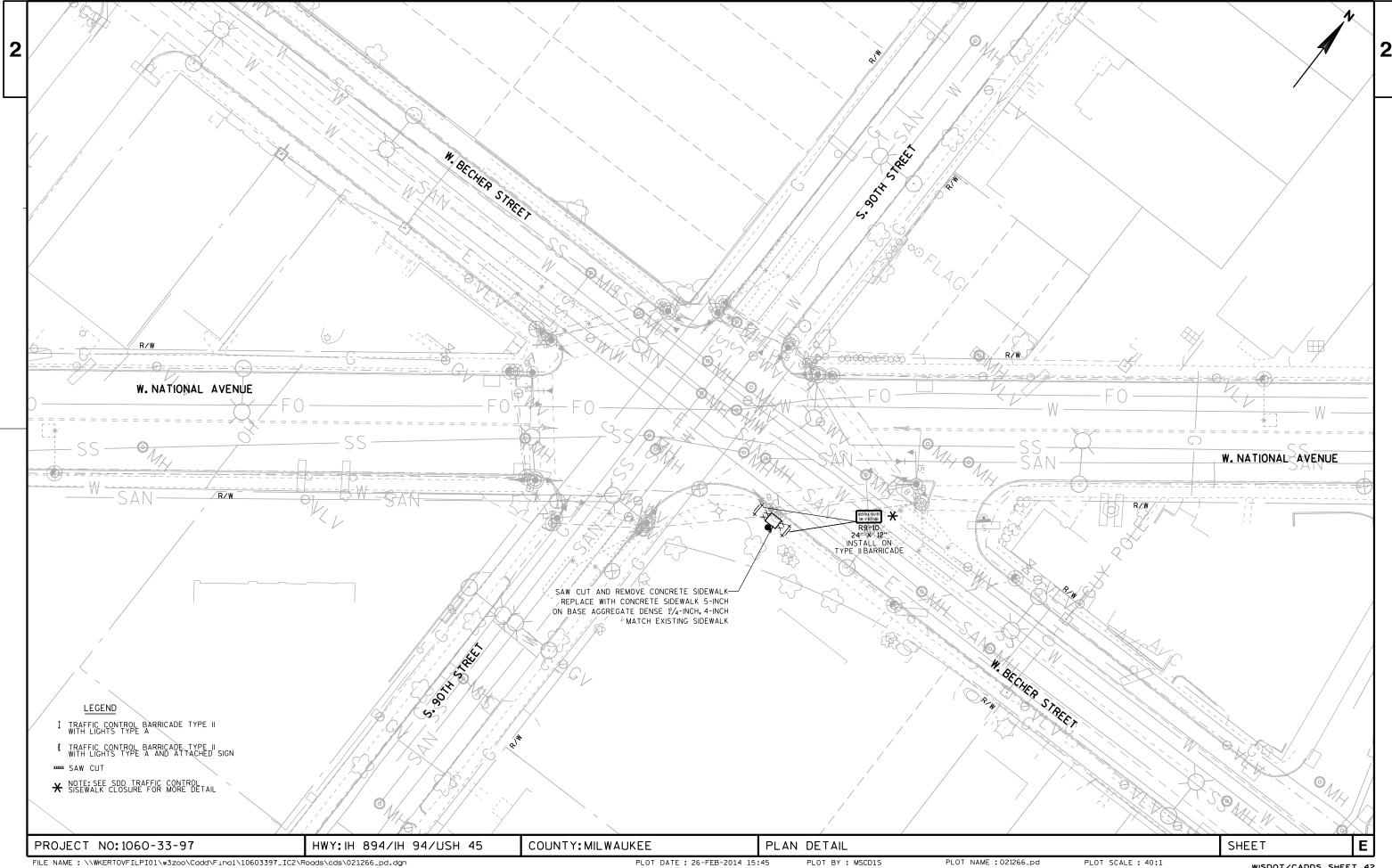
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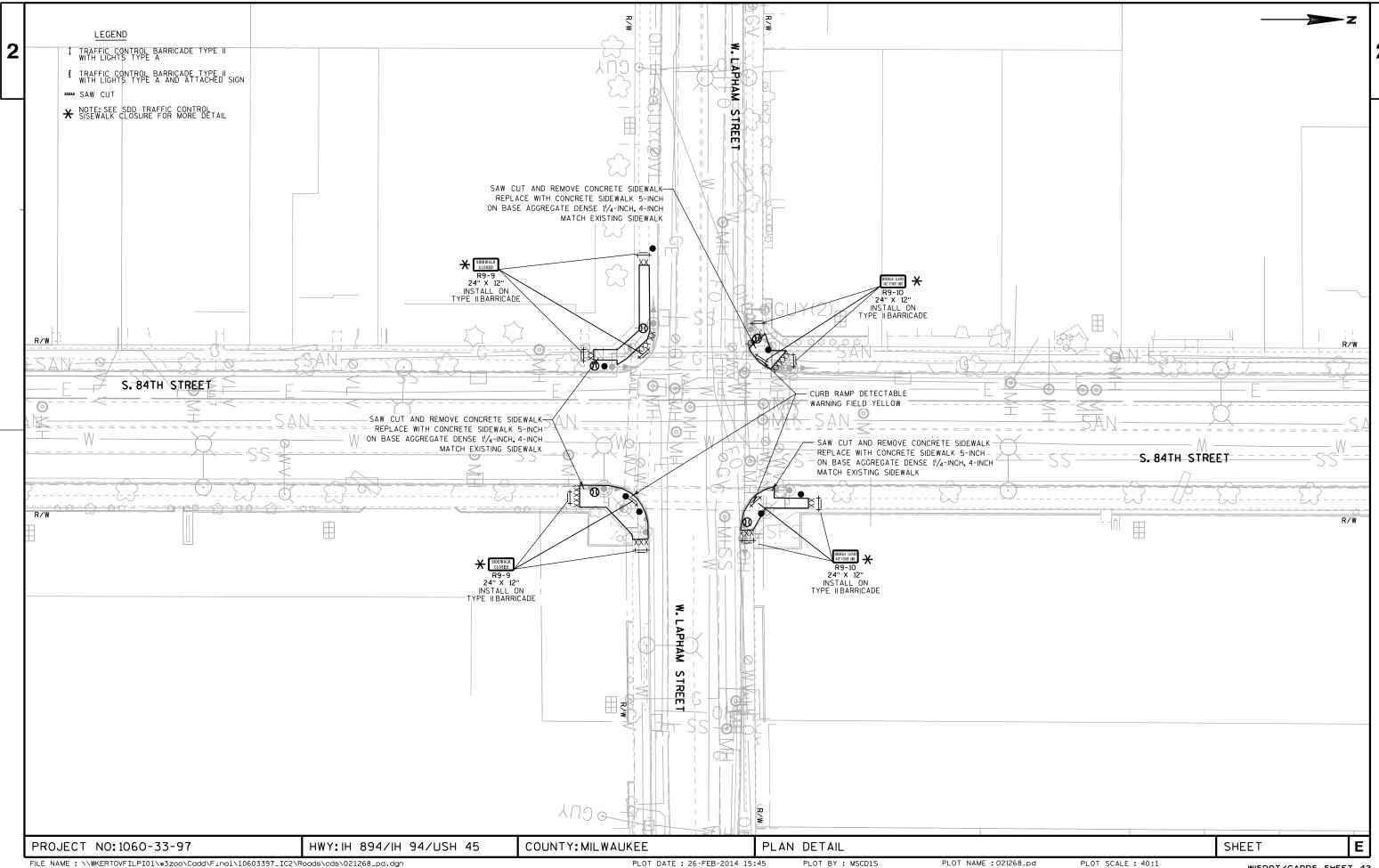












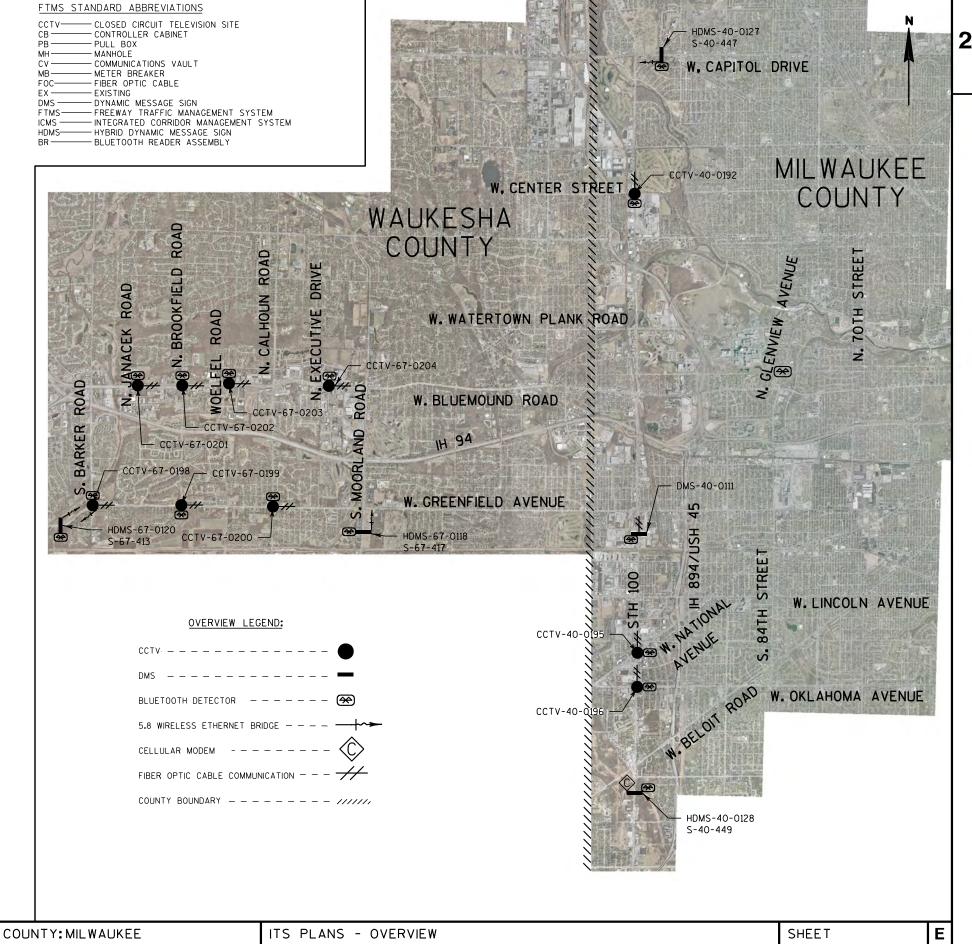
LEGEND	EXISTING	PROPOSED
FTMS CONVENTIONAL SYMBOLS CCTV CAMERA AND POLE	- 480	←Ⅲ
ITS FIELD CABINET AND BASE	_ [▶◄]	
POLE MOUNTED CABINET:	- 🗵	H
METER BREAKER PEDESTAL	- 🖂	\boxtimes
24"X36" STEEL PULL BOX	- ①	•
5.8 WIRELESS ETHERNET BRIDGE	_	\dashv
MANHOLE	- 🔘	Ø
FTMS (ITS) CONDUIT $$		
BREAKER DISCONNECT BOX	- 🖽	⊞
COMMUNICATIONS VAULT, TYPE 1 $-$	- 🔻	V
SOLAR PANEL	_	\blacksquare

FTMS GENERAL NOTES

- THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND TECHNICAL SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE APPLICATION OF ALL WORKSHOWN IN THE PLANS TO THE ACTUAL PHYSICAL FIELD CONDITIONS TO PROVIDE A COMPLETE AND ACCEPTED PROJECT. IN THE EVENT THAT ACTUAL PHYSICAL FIELD CONDITIONS AFFECT OR PREVENT THE APPLICATION OR PROGRESSION OF ANY WORK SHOWN IN THE PLANS OR TECHNICAL SPECIAL PROVISIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, AND PRIOR TO ANY FURTHER WORK ACTIVITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY LOCATION CHANGES OTHER THAN MINOR ADJUSTMENTS.
- BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.
- 3. BE AWARE THAT NO TEST BORINGS WERE MADE WHERE CONDUITS, PULLBOXES, POLES, CABINET FOUNDATIONS, OR OTHER EQUIPMENT IS TO BE INSTALLED. THE CONTRACTOR IS FULLY RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.
- 4. RESTORATION OF LANDSCAPE TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER, SEED, AND EROSION MAT IS INCIDENTAL TO THE COST OF INSTALLING FTMS ITEMS.
- THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- 6. DUE TO RAMP, LANE, SHOULDER CLOSURE RESTRICTIONS, AND WORK UNDER OTHER CONTRACTS, SOME WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT.
- 7. THE CONTRACTOR IS FULLY RESPONSIBLE FOR COORDINATING RAMP, LANE, SHOULDER, AND ROADWAY CLOSURES WITH OTHER CONTRACTS IN THE AREA.
- 8. THE CONTRACTOR SHALL CONTACT THE WISDOT STATEWIDE TRAFFIC OPERATIONS CENTER AT (414) 227-2166 FIVE (5) WORKING DAYS PRIOR TO ENTERING ANY EXISTING WISDOT FTMS OR ITS CABINET.
- 9. HAND DIG TRENCHES CROSSING EXISTING CONDUIT CONTAINING FIBER OPTIC CABLE.
- 10. VISUALLY VERIFY DEPTHS OF EXISTING CONDUITS CONTAINING FIBER OPTIC CABLE PRIOR TO CROSSING BY DIRECTIONAL BORE OR SPECIAL METHOD.

HWY: IH 894/IH 94/USH 45

11. RIGHT OF WAY AND PROPERTY LINES DEPICTED ARE BASED ON RECORD INFORMATION WITHOUT THE BENEFIT OF FIELD EVIDENCE.



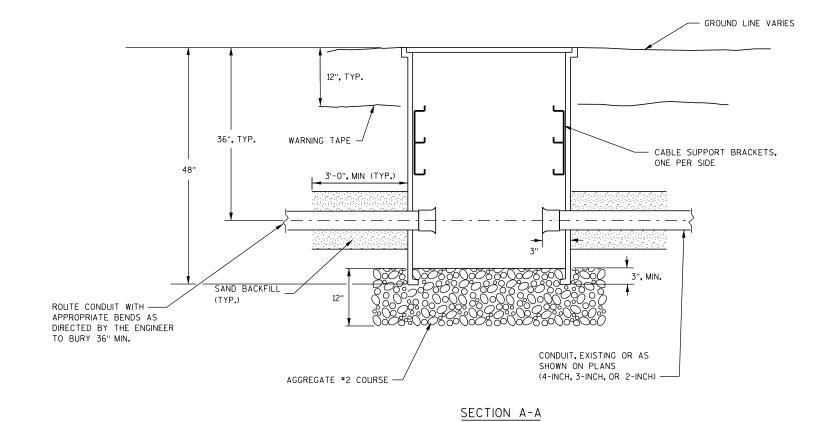
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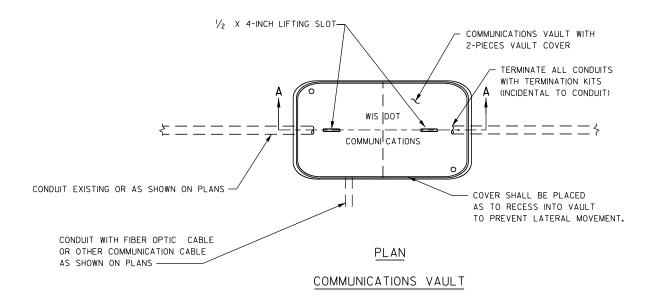
PROJECT NO: 1060-33-97

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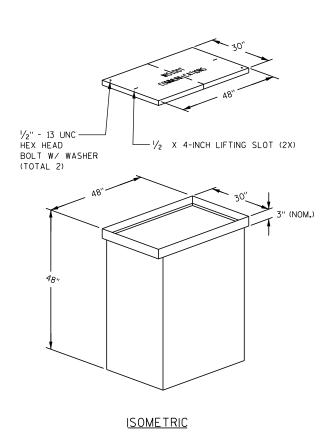
PLOT BY: MSCITM PLOT NAME: 021400_fm

PLOT SCALE: 5625:1





HWY: IH 894/IH 94/USH 45



NOTES

- 1) BOX SHALL HAVE AN OPEN BASE.
- 2) COVER SHALL HAVE A MINIMUM DESIGN LOAD OF 15,000 LBS AND SHALL LOCK.
- 3) ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION, OR PUNCH DRIVEN AT TIME OF PLACEMENT.
- 4) VAULTS SHALL BE OF ONE-PIECE CONSTRUCTION. TWO-PIECE/STACKABLE VAULTS WILL NOT BE PERMITTED.
- 5) FIELD PLACEMENT OF COMMUNICATIONS VAULTS SHALL BE AS DIRECTED BY THE ENGINEER.

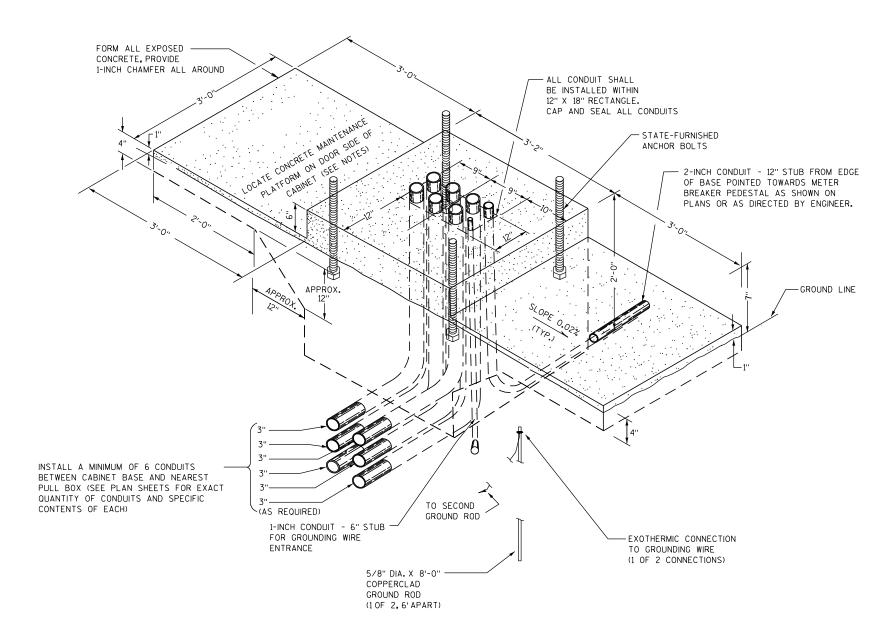
NOT TO SCALE

SHEET PLOT NAME : 021401_fm

PROJECT NO: 1060-33-97

COUNTY: MILWAUKEE

ITS DETAILS



BASE ITS CONTROLLER CABINET

NOTES

- 1) DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
- 2) WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L.LISTED FOR ELECTRICAL USE, SHALL BE USED.
- 3) CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 3-INCHES.
- 4) DEPTH OF CONDUIT SHALL BE 24-INCHES MINIMUM AND 36-INCHES MAXIMUM.
- 5) ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.
- 6) CONTROLLER CABINET BASE TOP SURFACES SHALL BE TROWEL FINISHED AND LEVEL, PRIOR TO CABINET INSTALLATION. LEVELING OF TOP SURFACES AFTER CONCRETE BASE HAS CURED SHALL ONLY BE ACCOMPLISHED BY GRINDING.
- 7) MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.
- 8) MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.
- 9) ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.
- 10) CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.
- 11) PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.
- 12) ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC, IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS PLACED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.
- 13) CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6-INCH MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.
- 14) ALL METALLIC CONDUIT ENDS AT TOP OF CONCRETE BASES SHALL HAVE BUSHINGS IF WIRE IS INSTALLED.
- 15) ALL NONMETALLIC CONDUIT ENDS AT TOP OF CONCRETE BASES SHALL HAVE END BELLS IF WIRE IS INSTALLED.
- 16) ANCHOR BOLTS TO ANCHOR THE FIELD CABINET TO THE CABINET BASE SHALL BE STATE FURNISHED WITH THE FIELD CABINET.
- 17) CONFIRM BOLT PATTERN OF CABINET PRIOR TO CONSTRUCTION OF CONCRETE BASE.

PROJECT NO: 1060-33-97

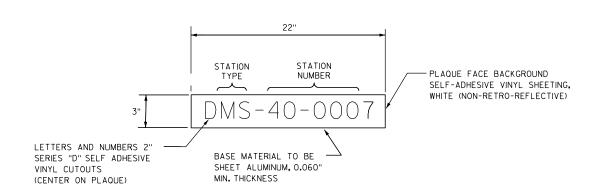
HWY: IH 894/IH 94/USH 45

COUNTY: MILWAUKEE

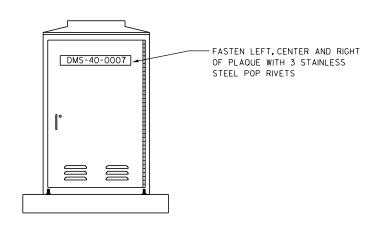
ITS DETAILS

PLOT NAME : 021401_fm1

SHEET

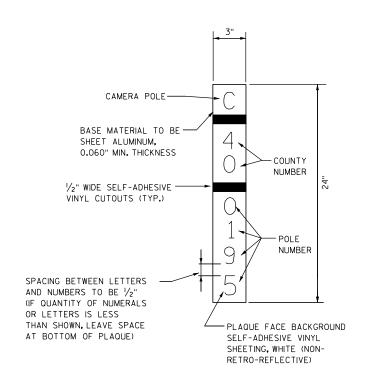


ITS FIELD CABINET IDENTIFICATION PLAQUE DETAIL



ITS FIELD CABINET IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

(TYPICAL ALL CONTROL CABINETS)



POLE IDENTIFICATION PLAQUE DETAIL

LEGEND STATION TYPE

RM - RAMP METER
CCTV - CLOSED CIRCUIT TELEVISION
ATR - AUTOMATIC TRAFFIC RECORDER
SDS - SYSTEM DETECTOR STATION
MD - MICROWAVE DETECTOR

NOTES

- TWO PLAQUES PER CABINET REQUIRED ON CONTROL CABINET.
- 2) FASTEN ONE PLAQUE ON FRONT DOOR, UPPER HALF.
- 3) FASTEN ONE PLAQUE ON SIDE FACING LOCAL STREET. IF NO LOCAL STREET NEARBY, OR IF SUCH LOCATION COINCIDES WITH LOCATION OF PLAQUE IN NOTE 2, FASTEN PLAQUE ON REAR OF CABINET, UPPER HALF.
- 4) COUNTY NUMBER NOT REQUIRED ON RAMP METER CABINETS.

PROJECT NO: 1060-33-97

HWY: IH 894/IH 94/USH 45

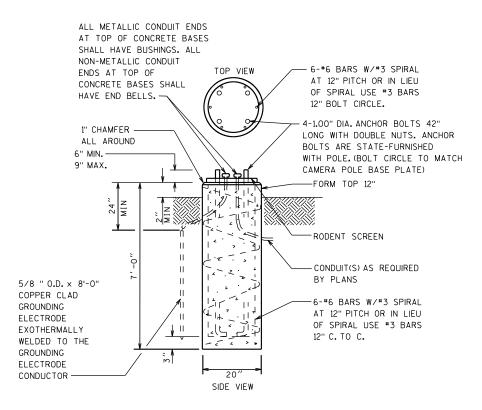
COUNTY: MILWAUKEE

ITS DETAILS

PLOT BY : MSCITM

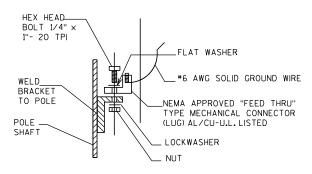
PLOT NAME : 021401_fm2

SHEET



CONCRETE BASE, 30' CAMERA POLE

NOT TO SCALE



FIELD INSTALLED GROUNDING LUG

CAMERA POLES & FOUNDATIONS

NOTES

- 1) ALL HARDWARE AND FASTENERS SHALL BE STAINLESS STEEL
- 2) POLE DRAWINGS SHOWN FOR BIDDING INFORMATION PURPOSES ONLY. POLES WILL BE STATE FURNISHED. BASE TO BE CONTRACTOR DESIGNED.
- 3) CONTRACTOR SHALL CONFIRM BOLT PATTERN OF CAMERA POLE PRIOR TO CONSTRUCTION OF CONCRETE BASE.
- 4) CONTRACTOR SHALL INSTALL GROUNDING LUG AS SHOWN

PROJECT NO: 1060-33-97

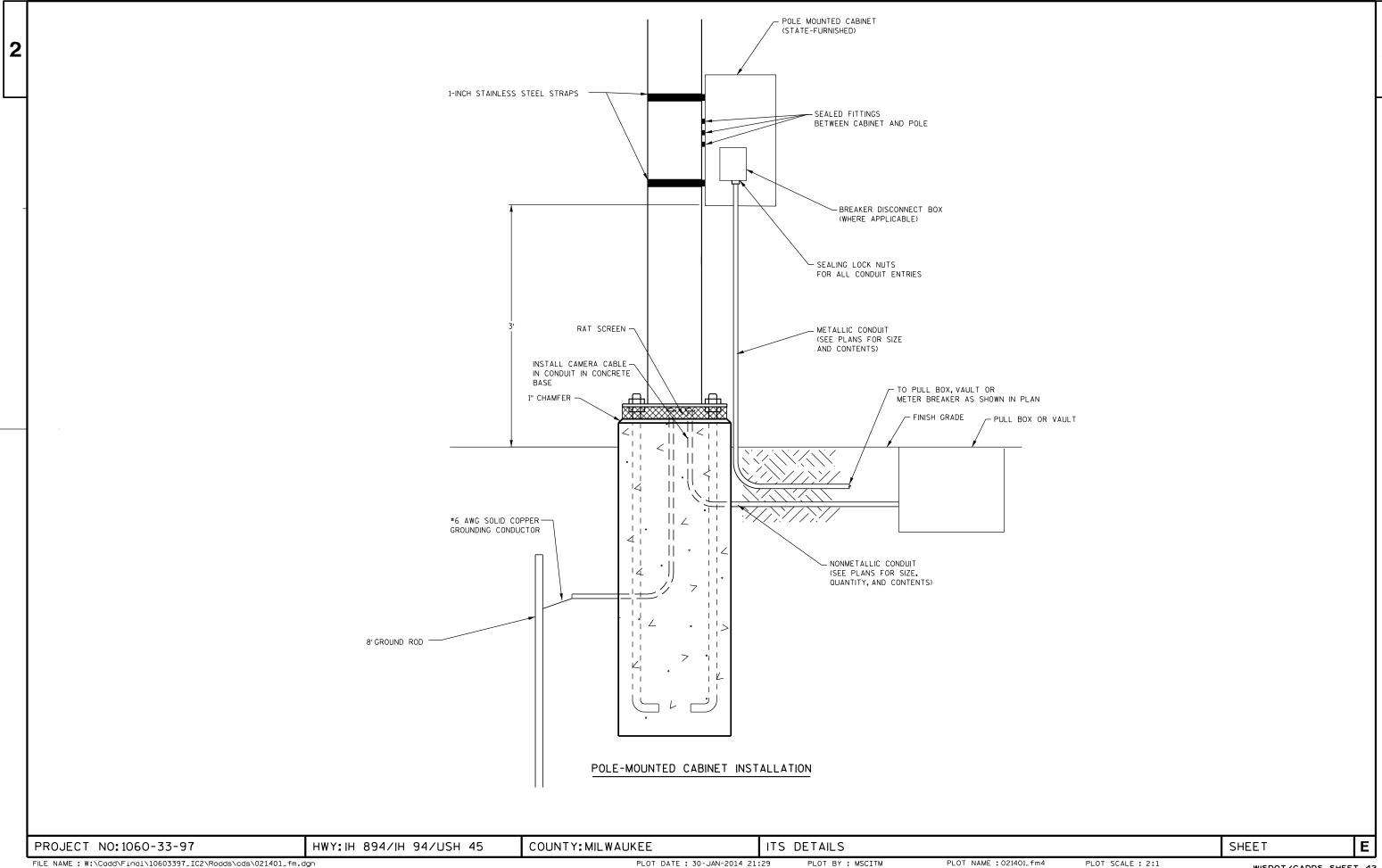
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COUNTY: MILWAUKEE

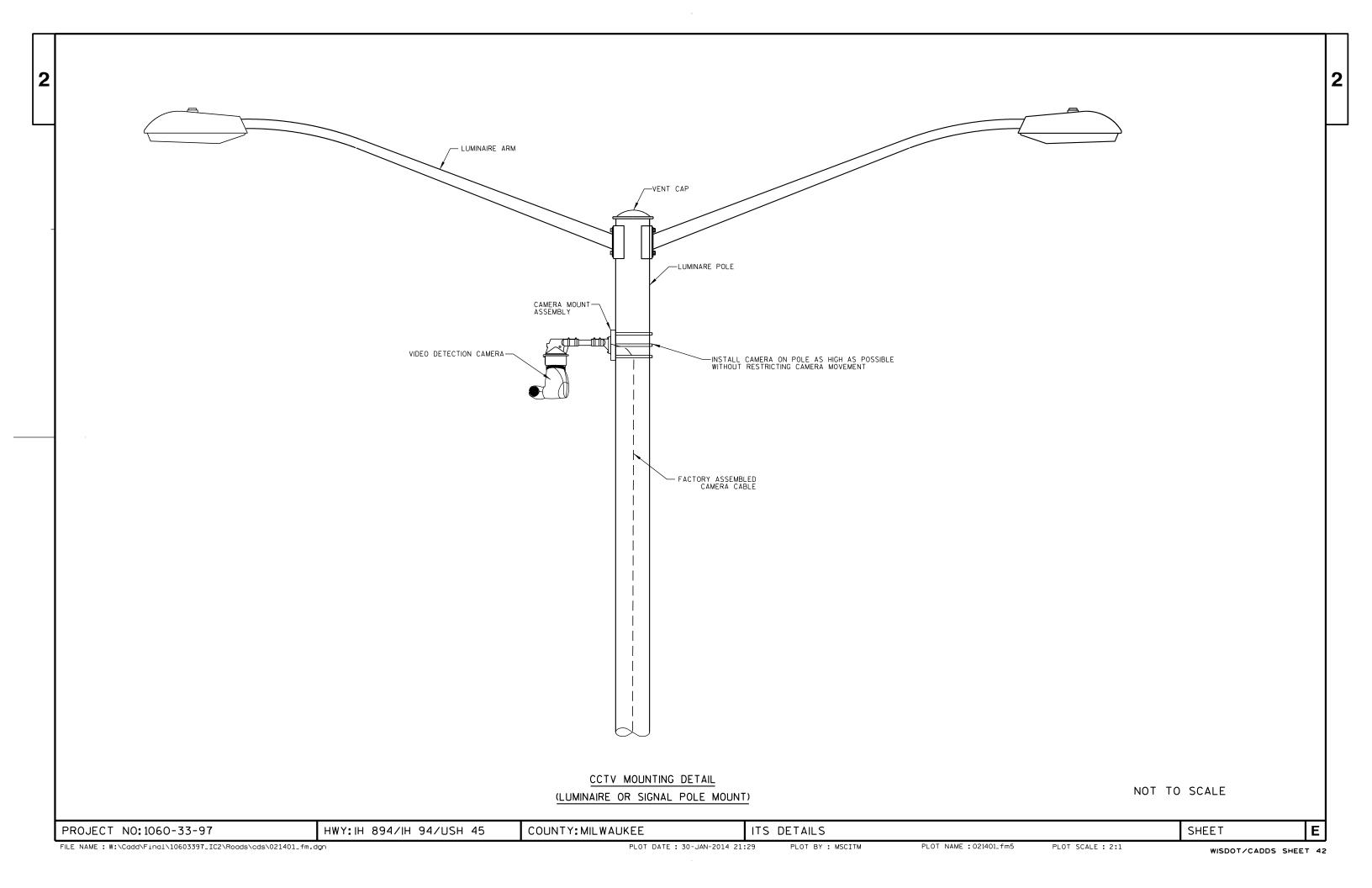
ITS DETAILS

PLOT BY : MSCITM

SHEET



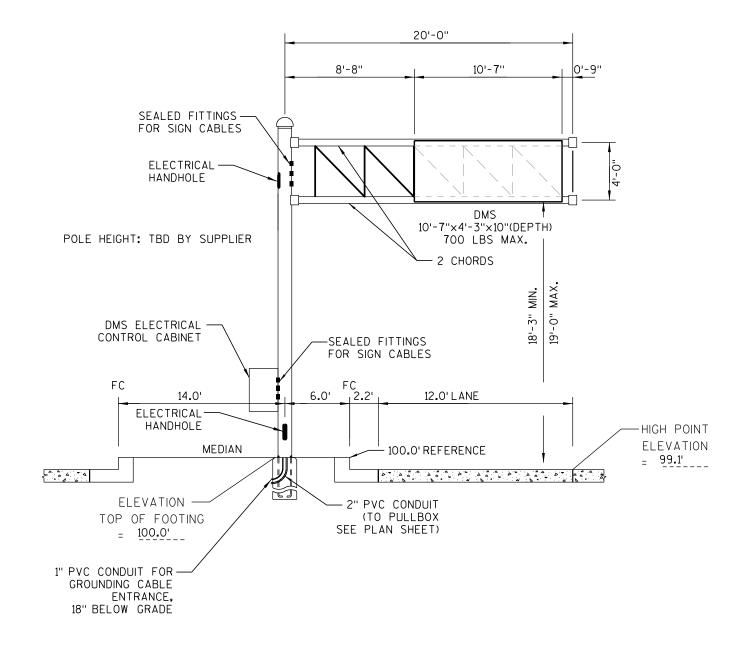
PLOT SCALE: 2:1



2

NOTES, CONTRACTOR SHALL:

- SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
- 2. PROVIDE DESIGN CALCULATIONS.
- 3. SHOW SIGN ON SHOP DRAWINGS.
- 4. I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT.
- 5. 6 ANCHOR RODS SHALL BE USED PER SDD.



OVERHEAD SIGN SUPPORTS DETAIL

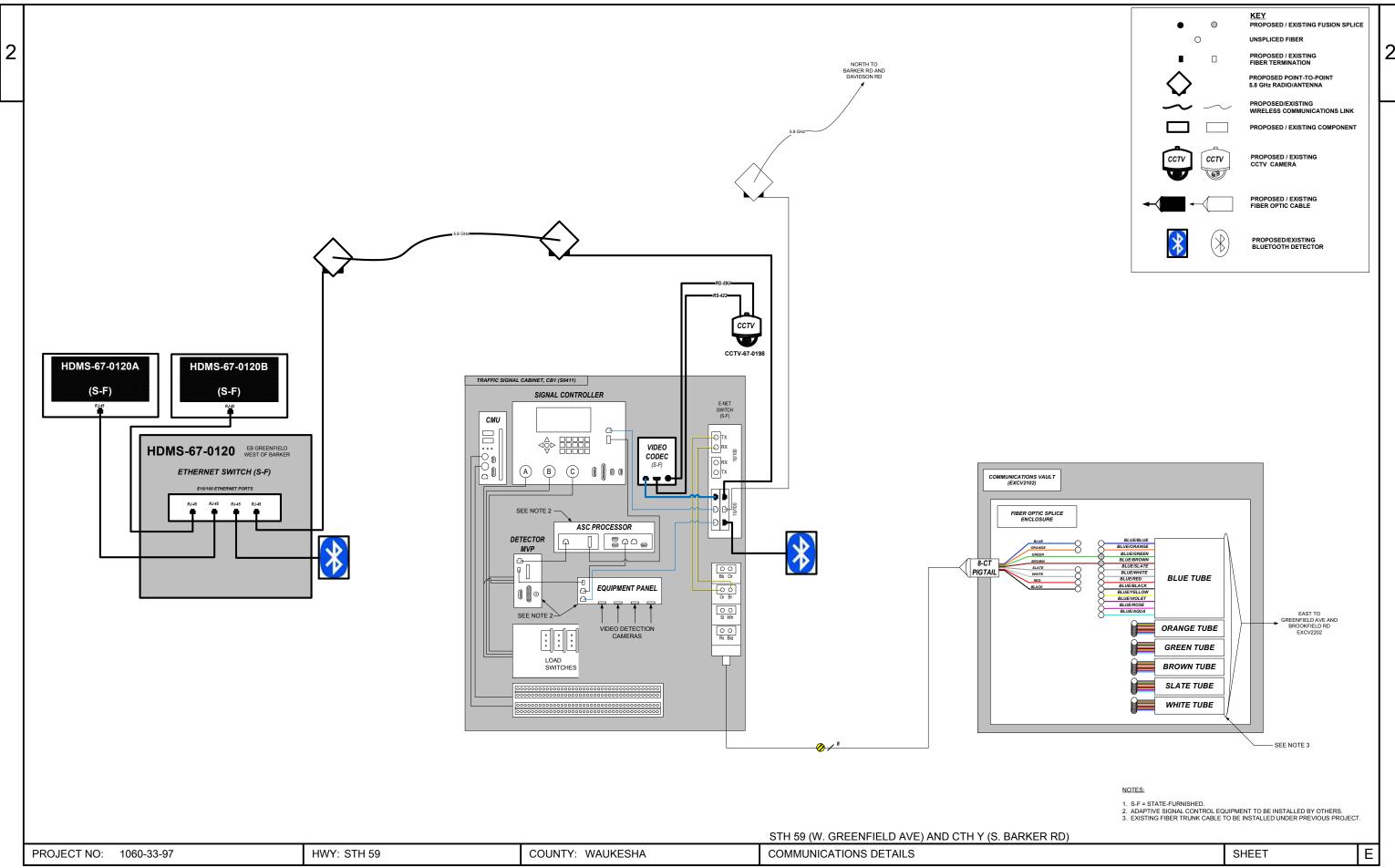
S-40-416

STH 100 NORTHBOUND

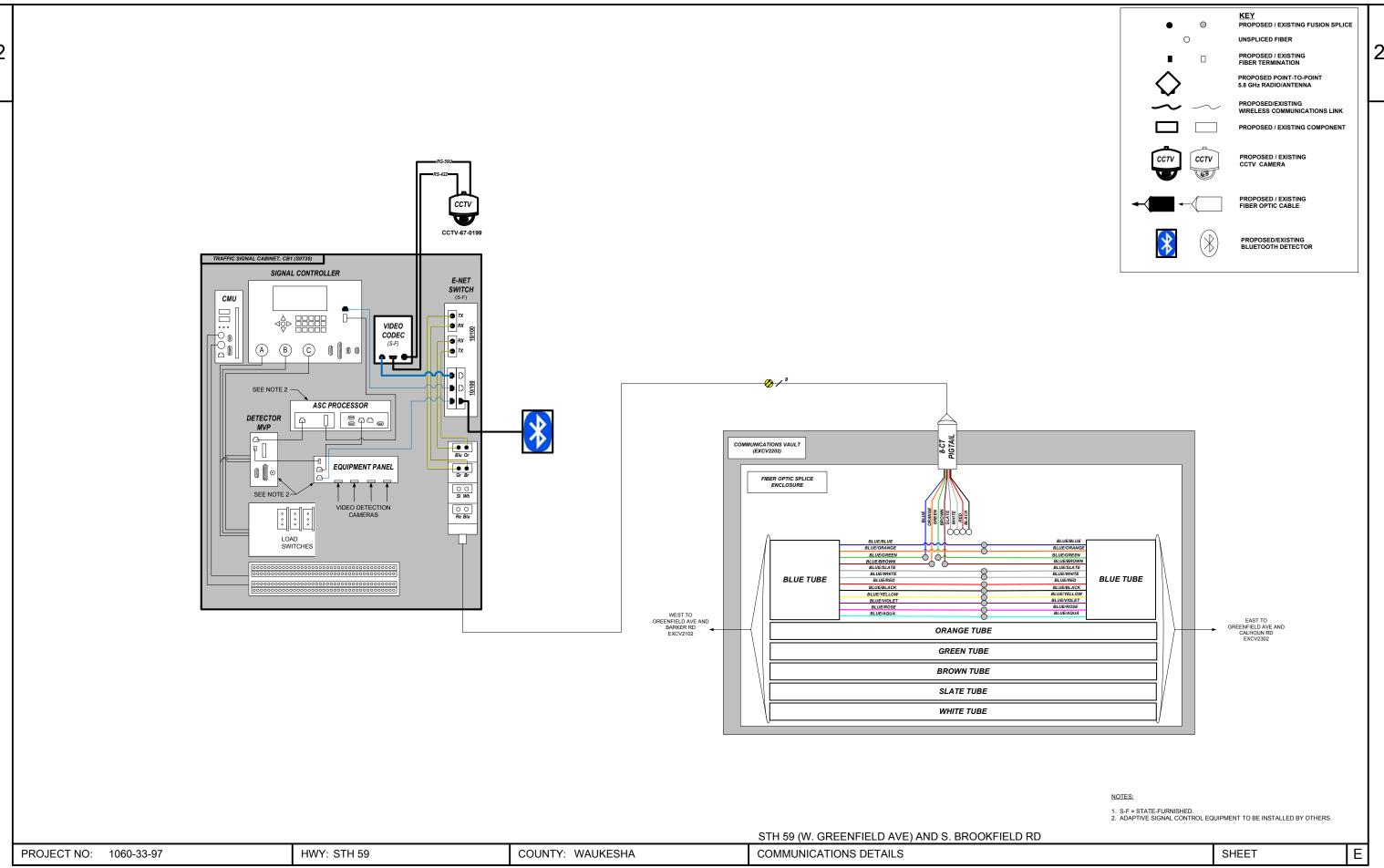
LOCATED 275-FT SOUTH OF W. LAPHAM STREET

NOTE: SEE SDD DETAIL 15C24, "36-INCH DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE" FOR FOOTING DETAIL INCIDENTAL TO STRUCTURE

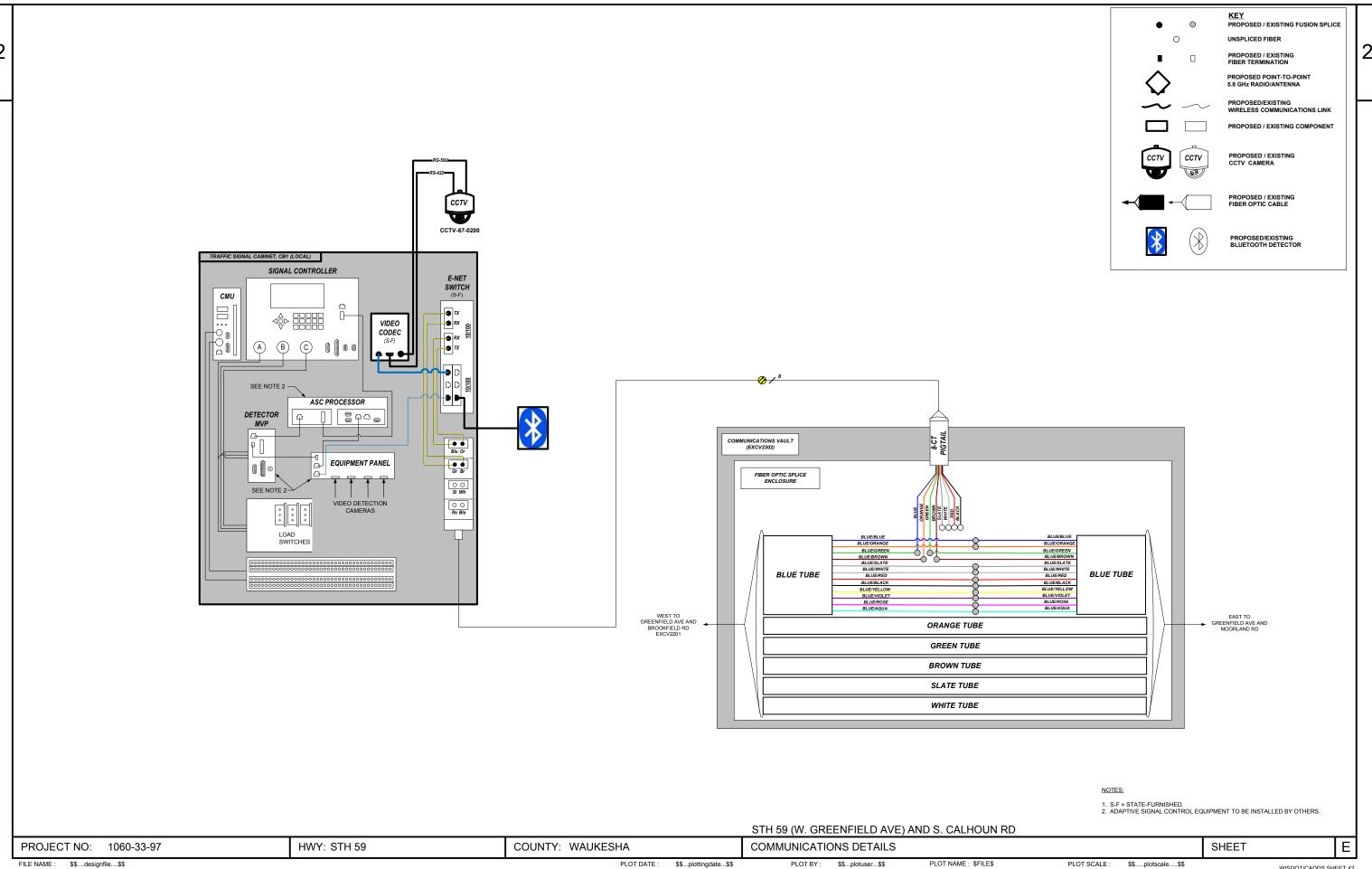
IBEAMS: IBEAMS ON SALVAGED DMS ARE NOT TO BE RE-USED. PROVIDE NEW IBEAMS AND MOUNTING HARDWARE WITH NEW OVERHEAD SIGN SUPPORT.
WEIGHT OF NEW IBEAMS AND MOUNTING HARDWARE IS NOT INCLUDED IN 700 POUND WEIGHT OF SALVAGED DMS AND MUST BE ACCOUNTED FOR IN OVERHEAD SIGN SUPPORT DESIGN.

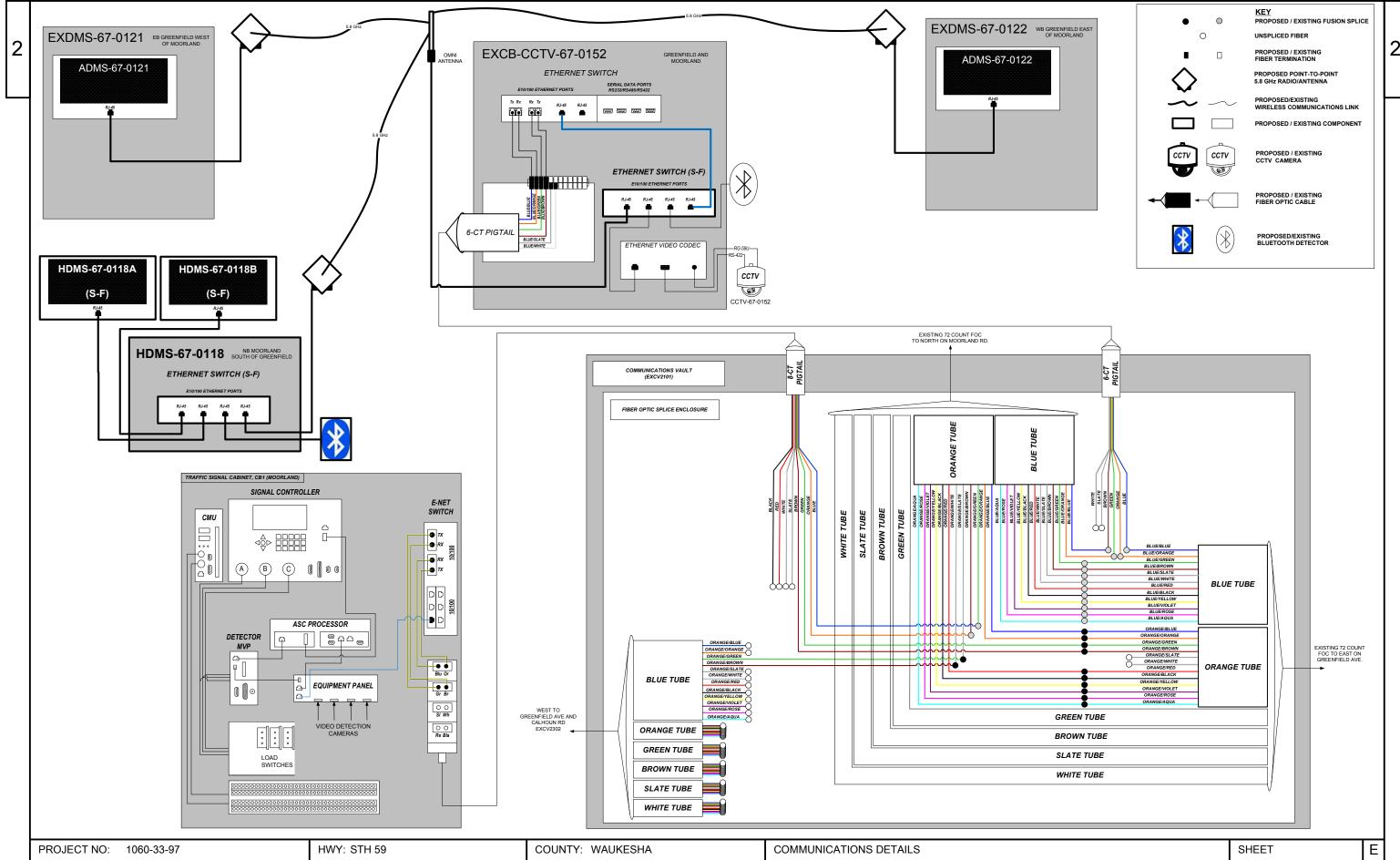


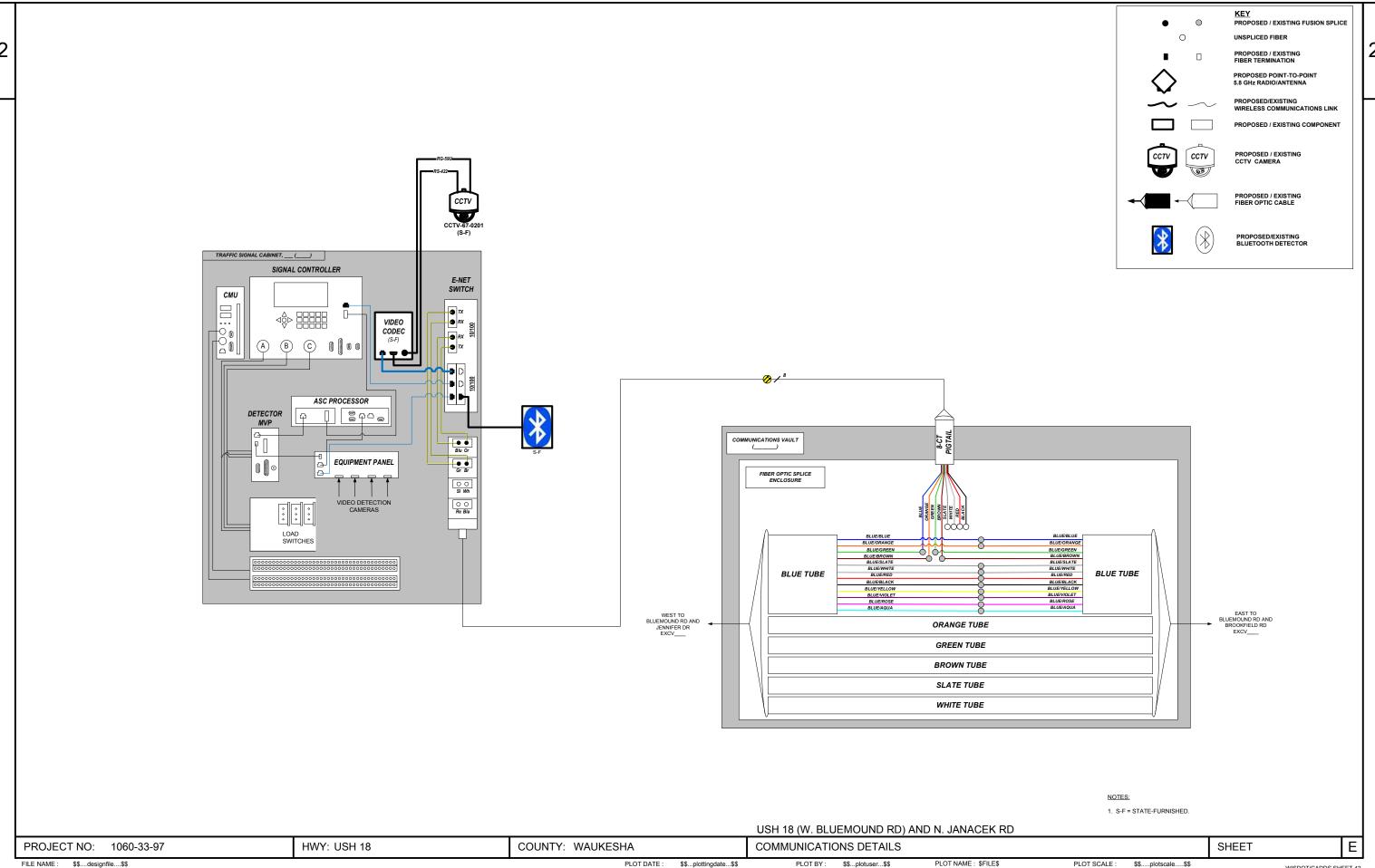
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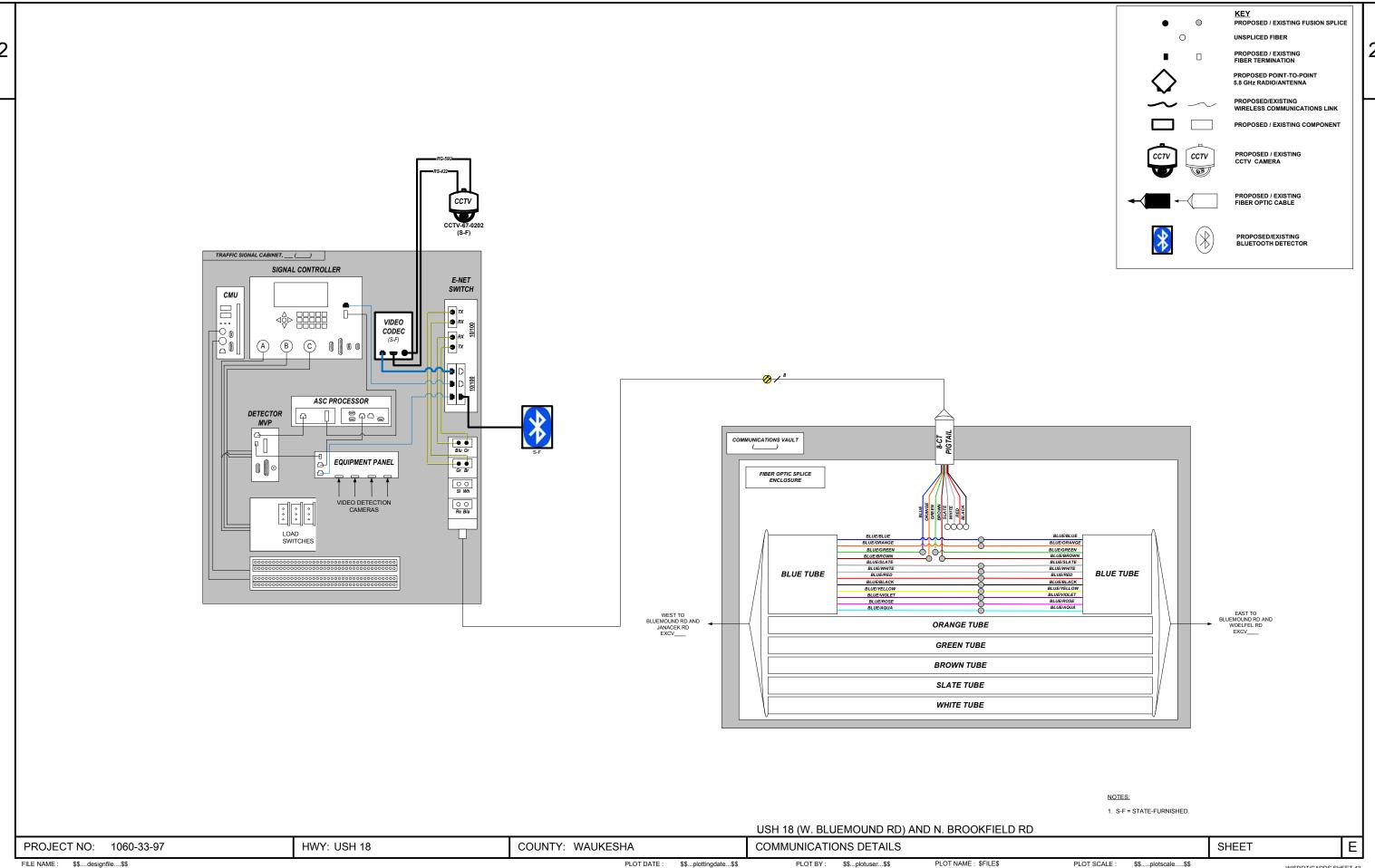


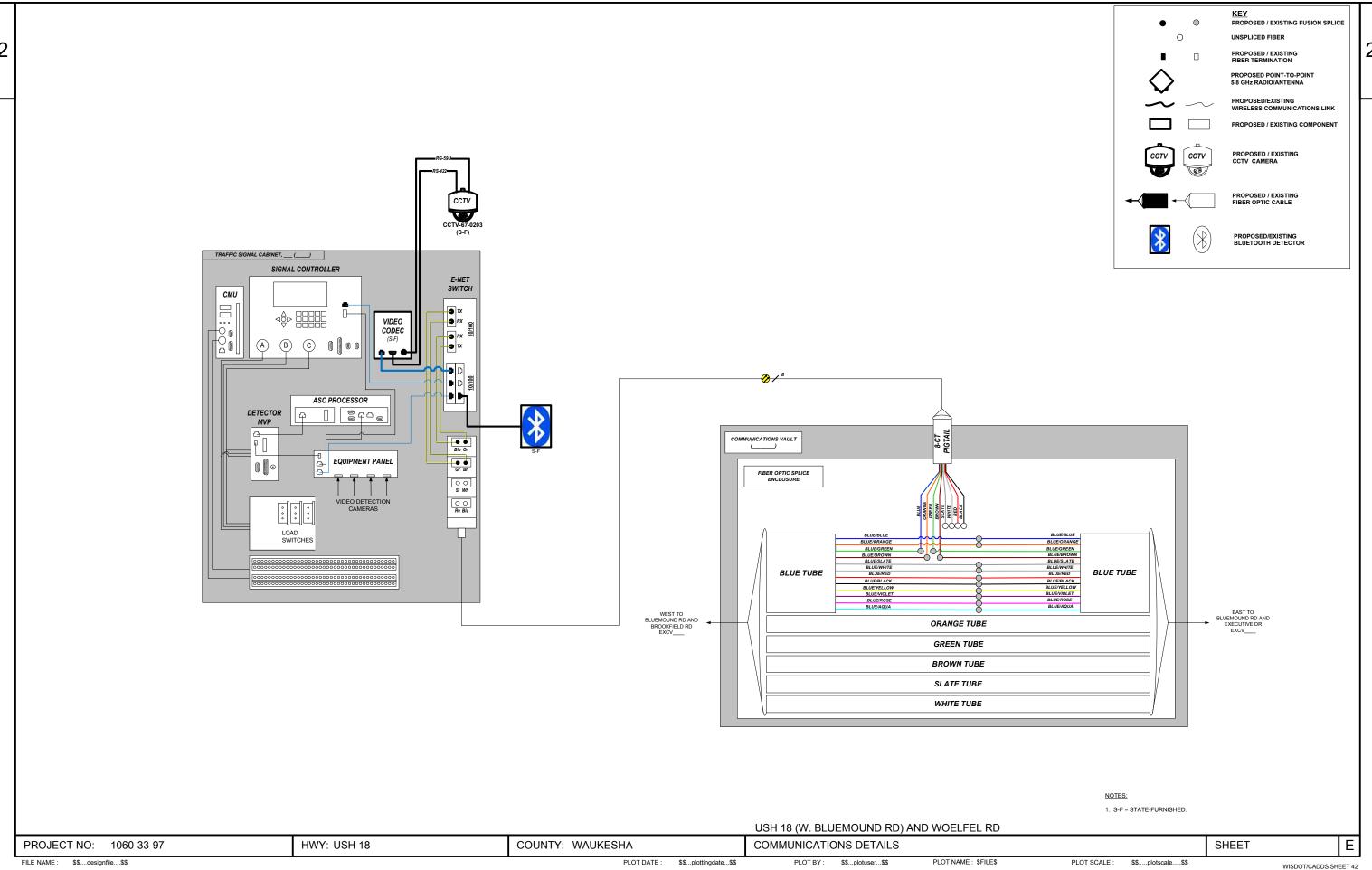
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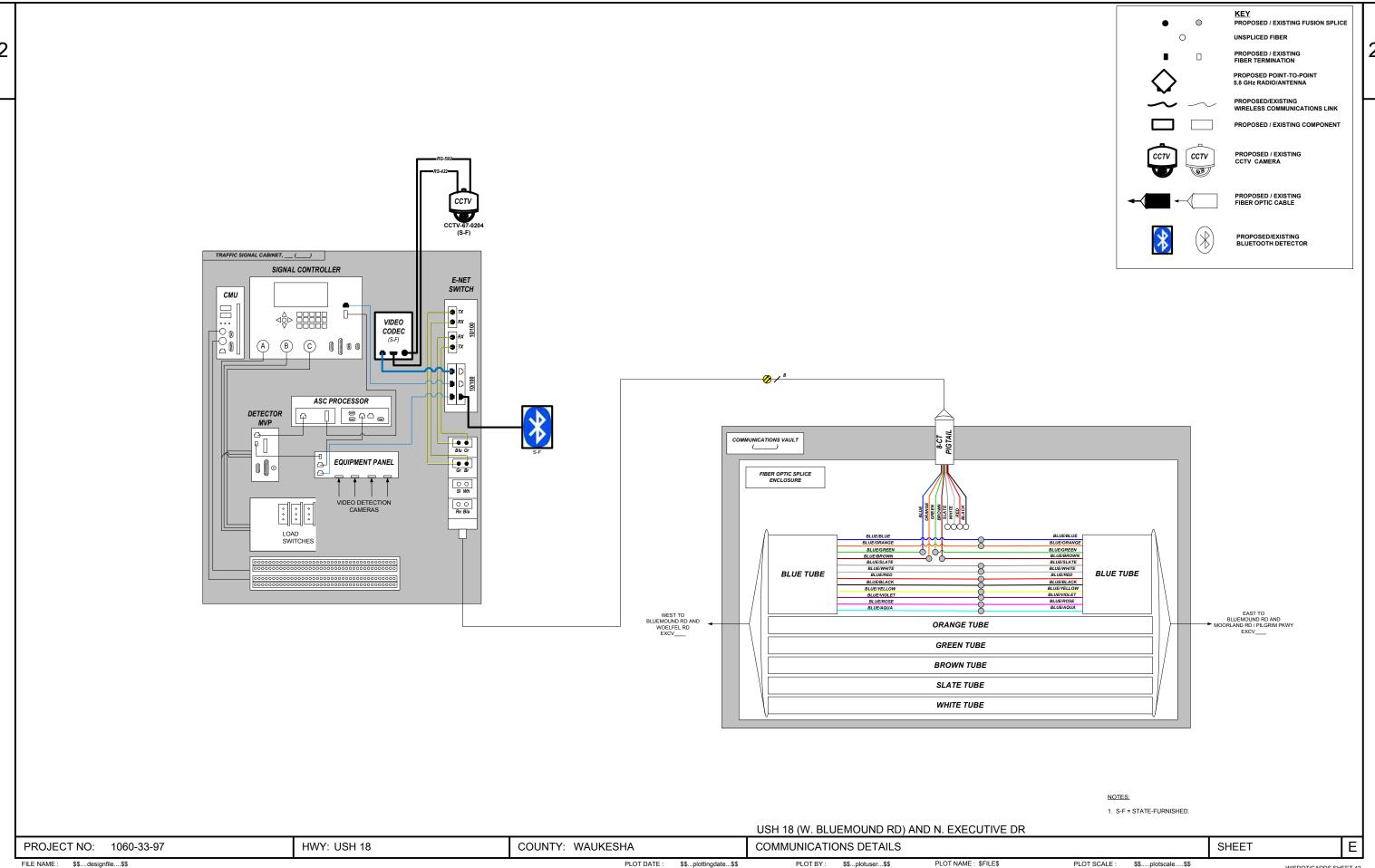


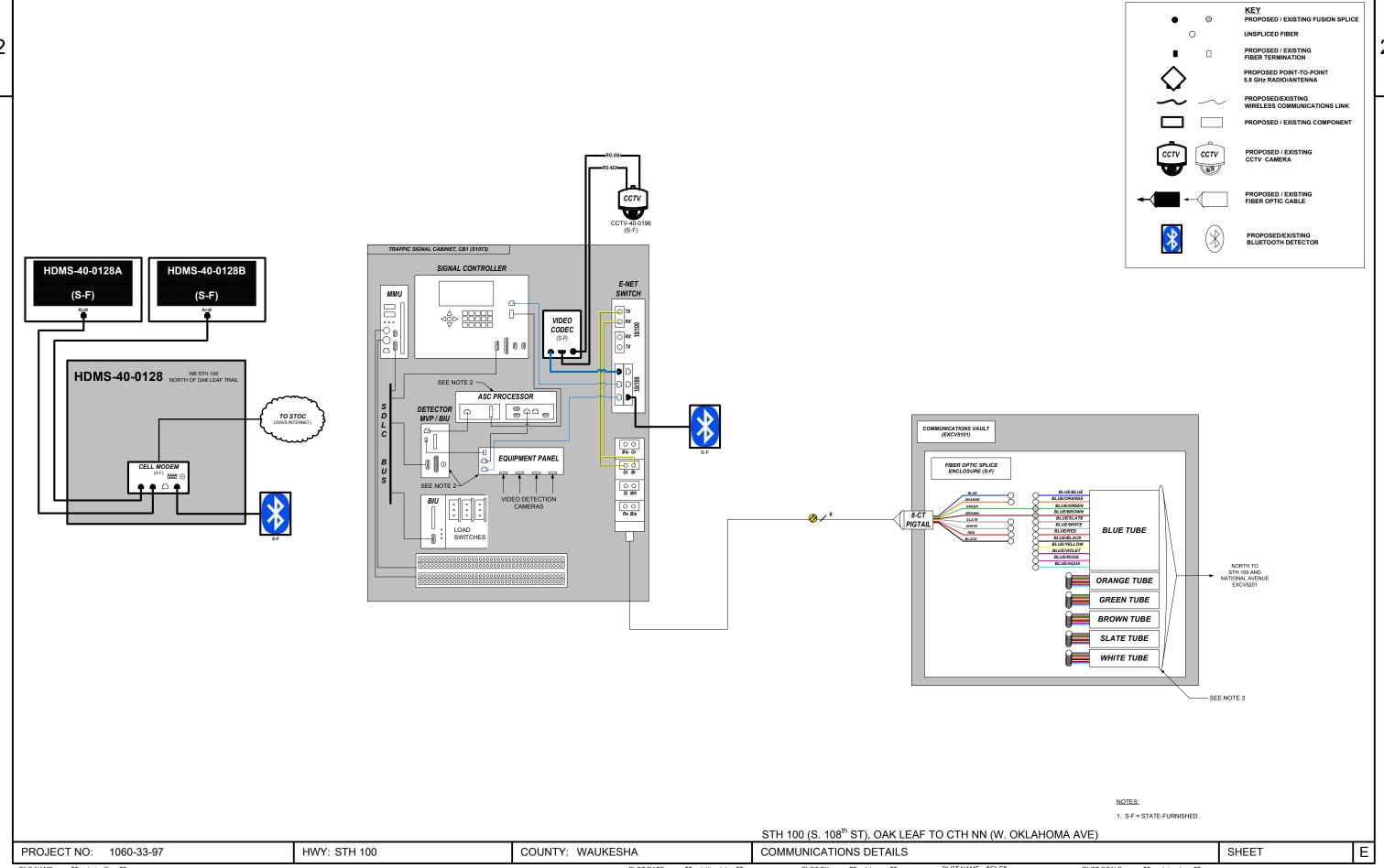




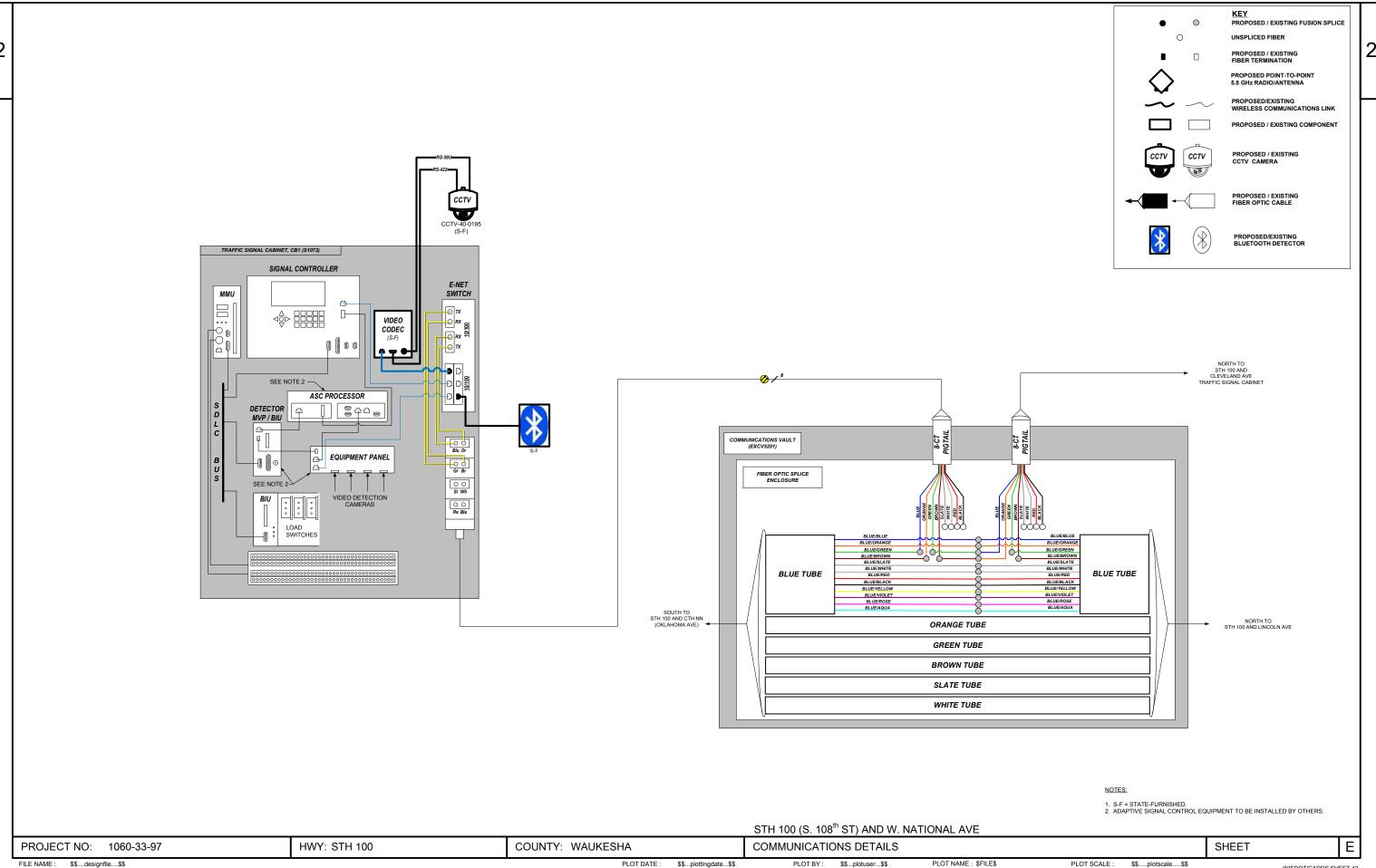


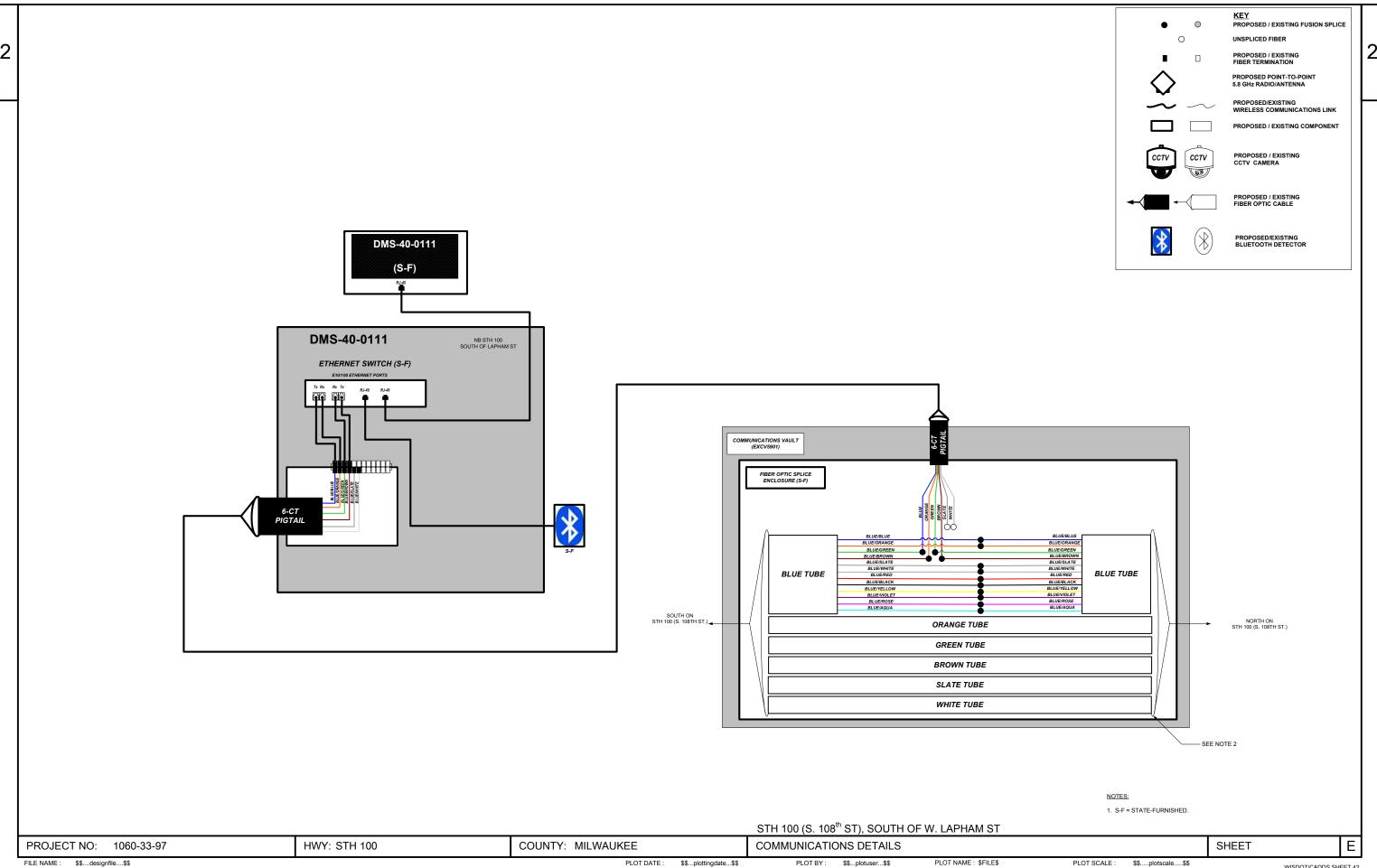


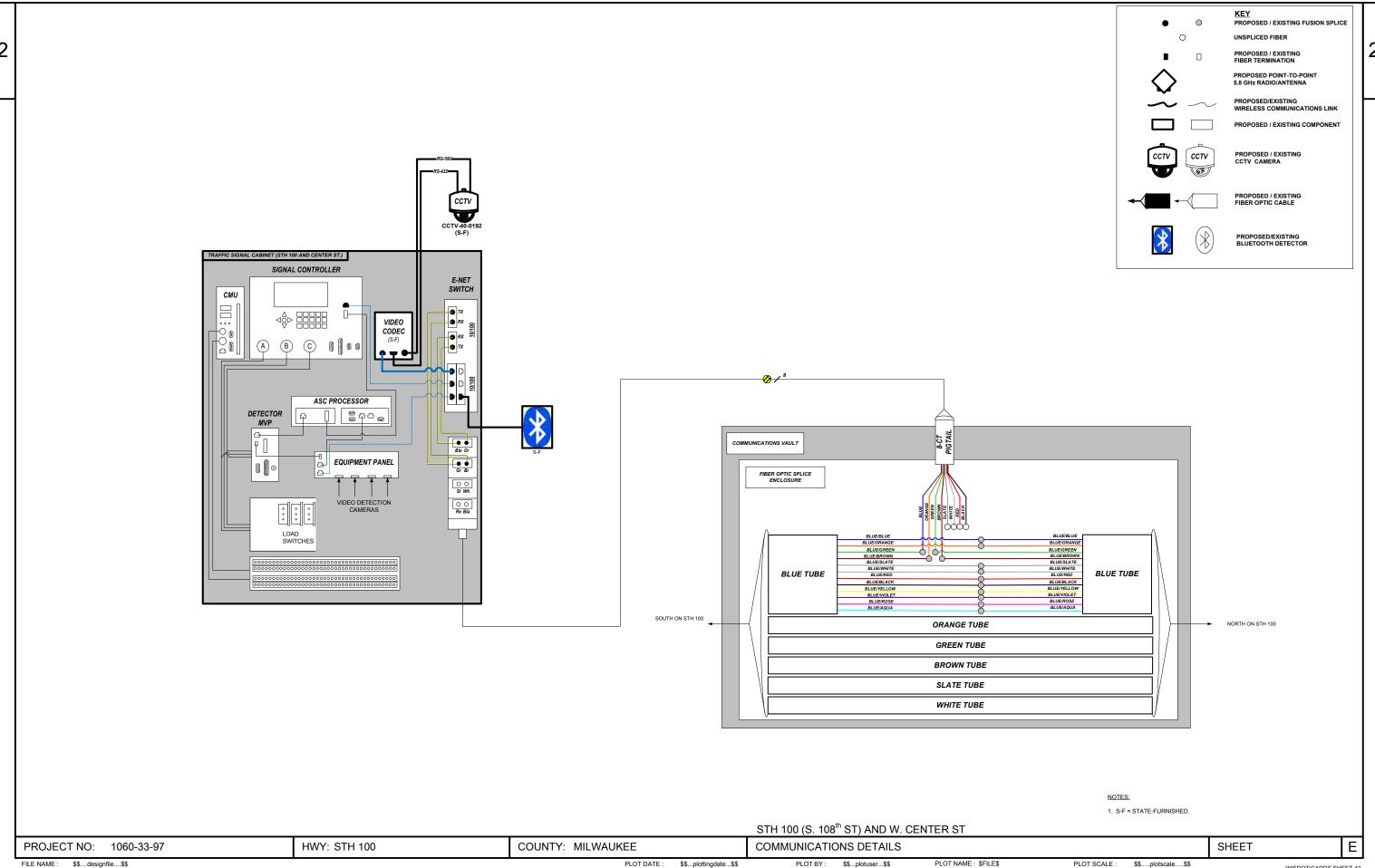


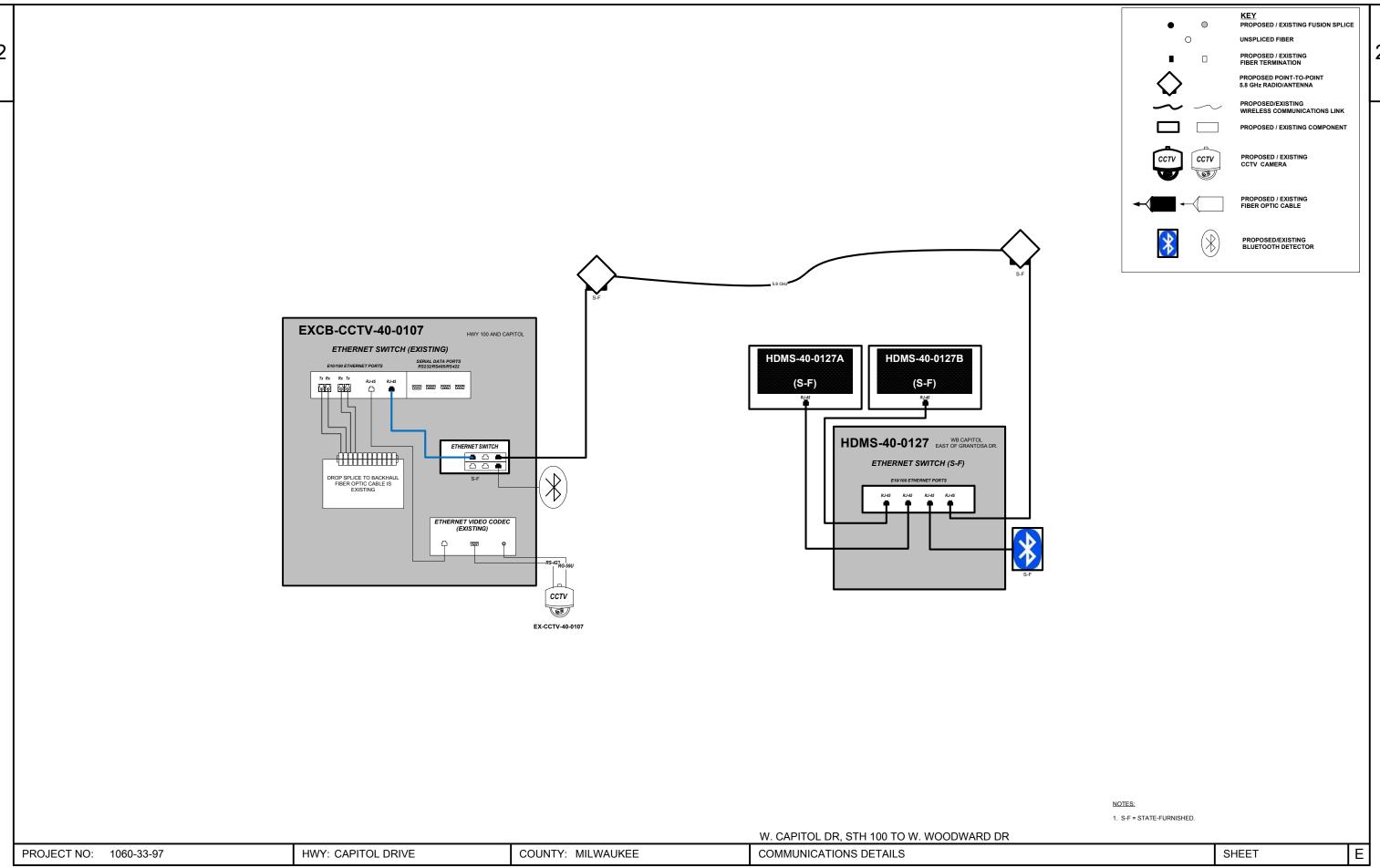


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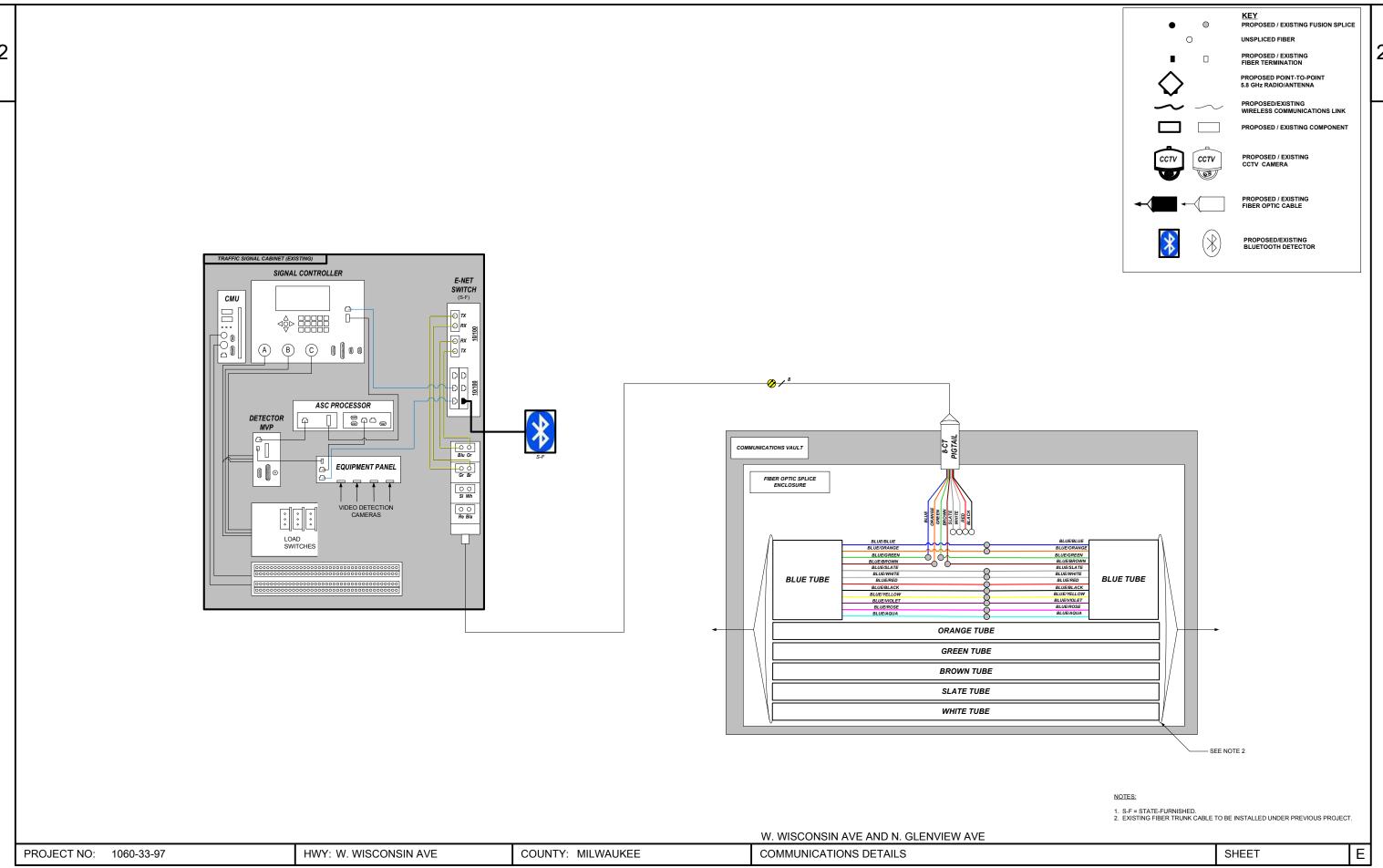




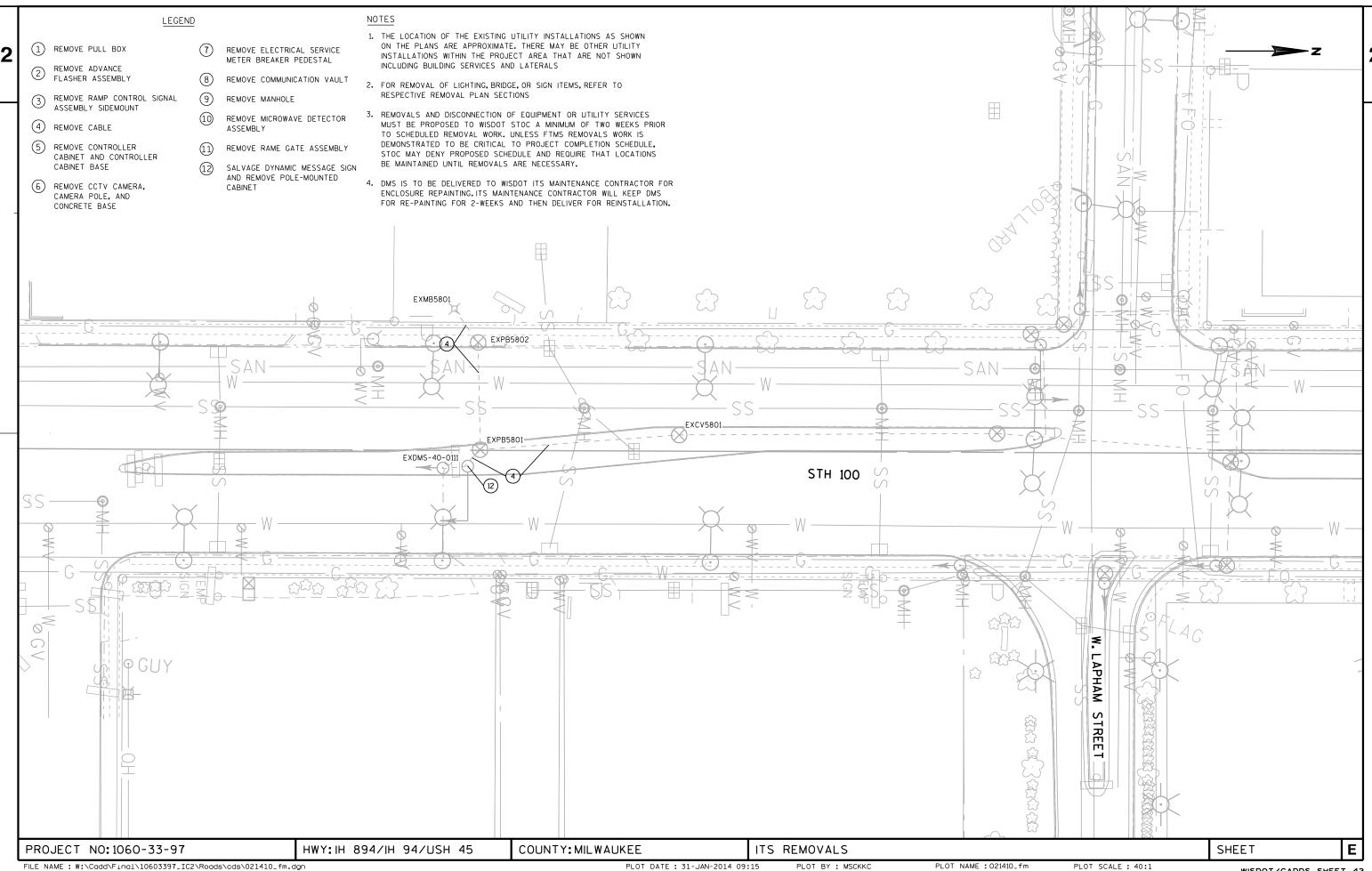




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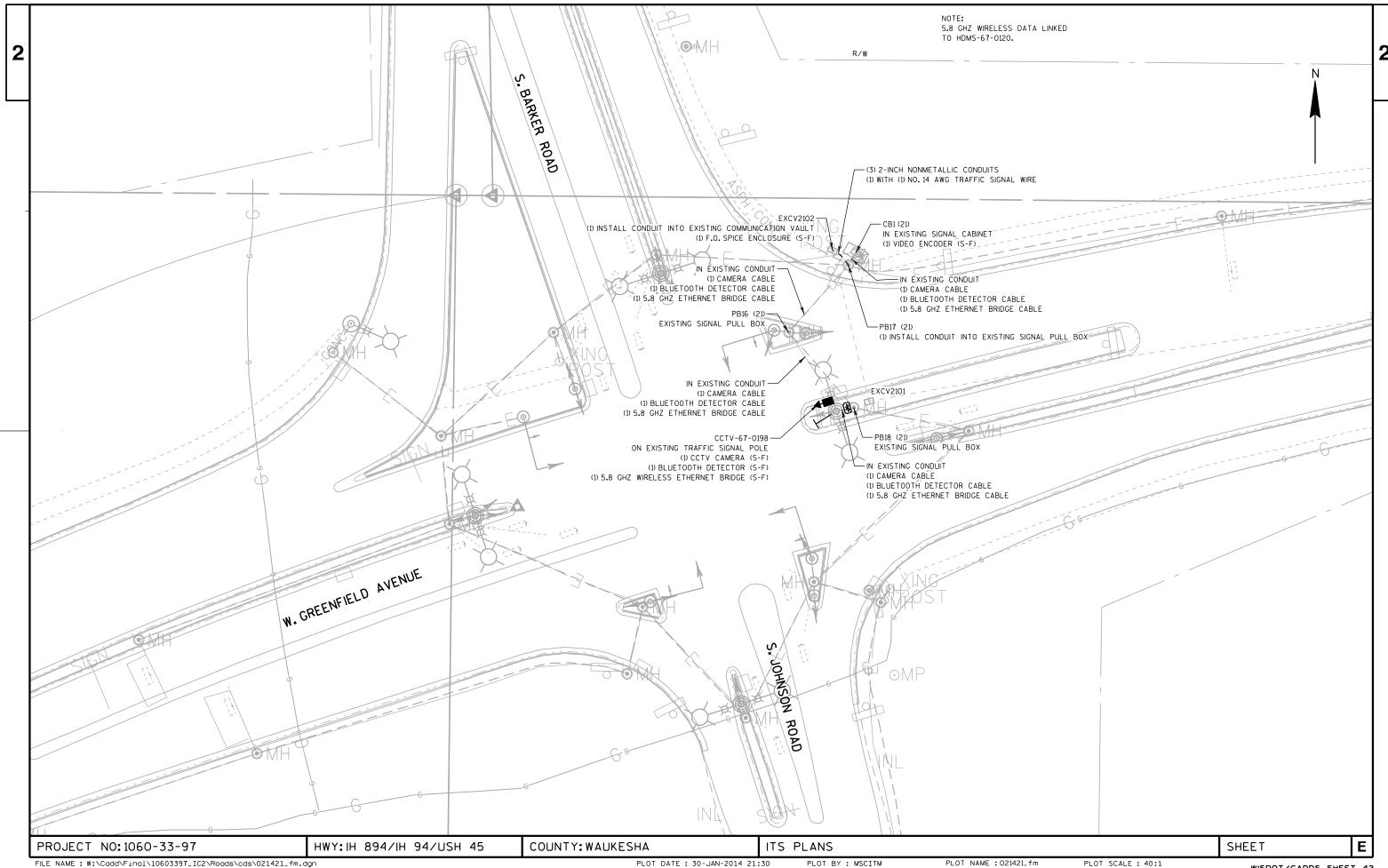
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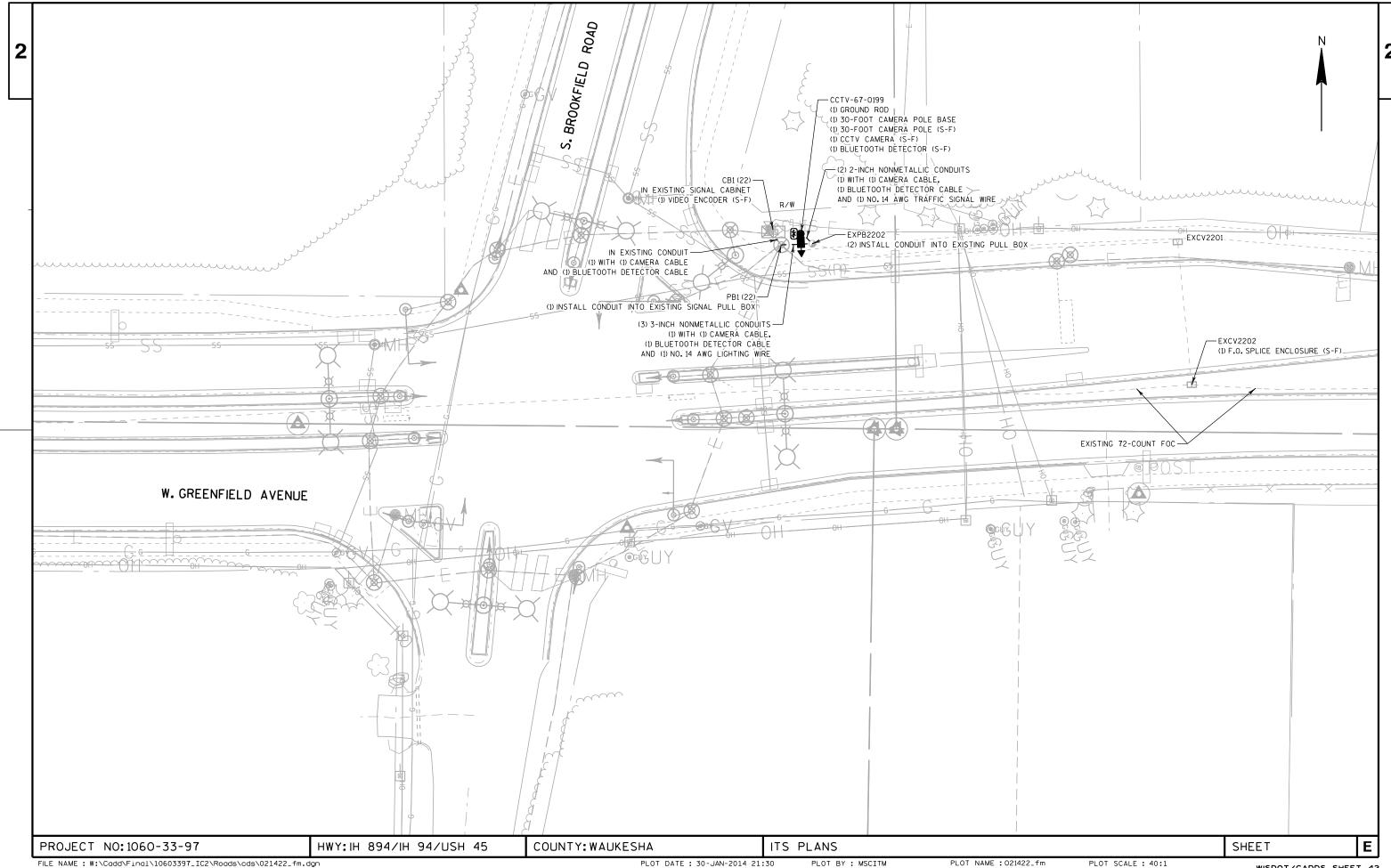
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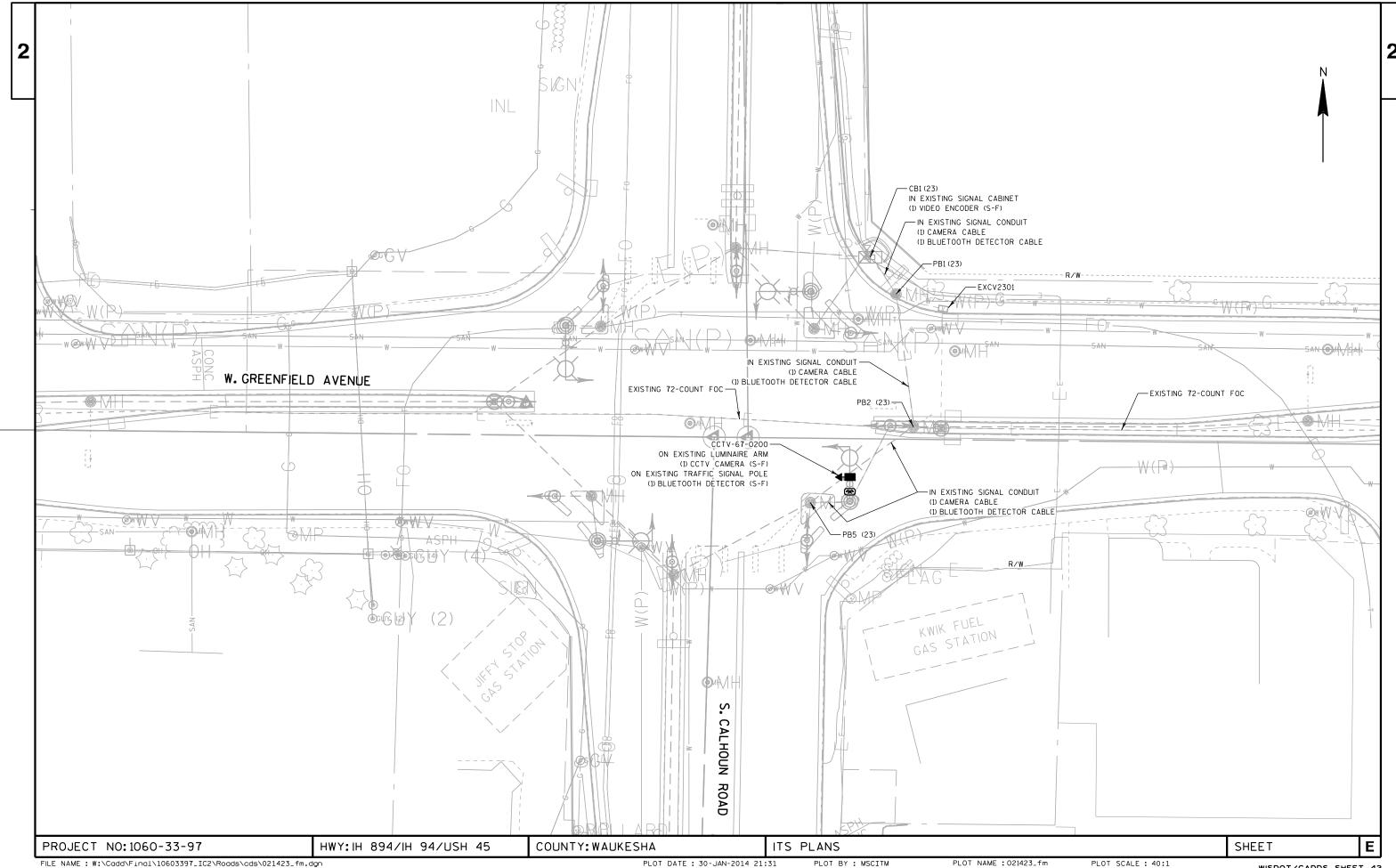
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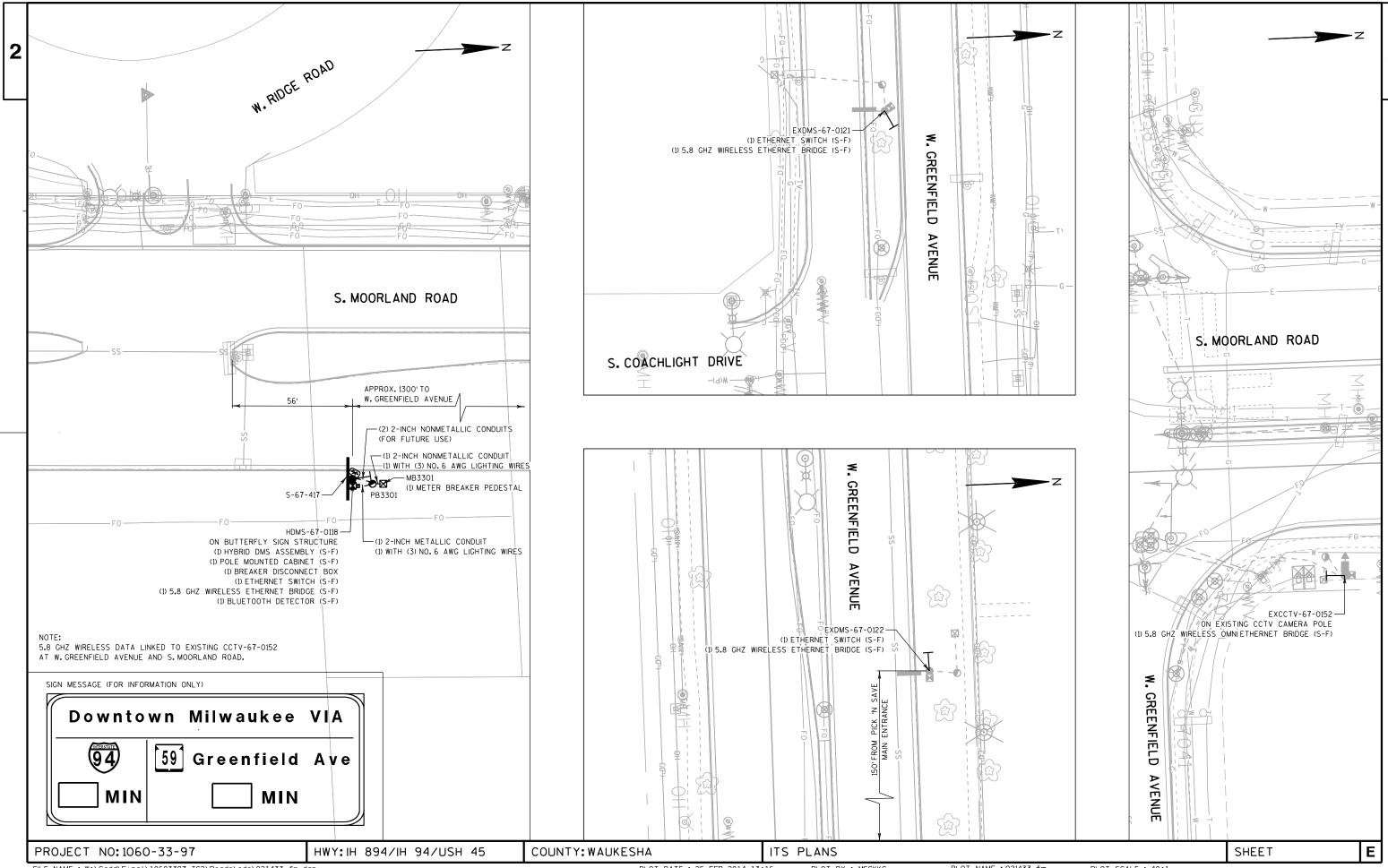
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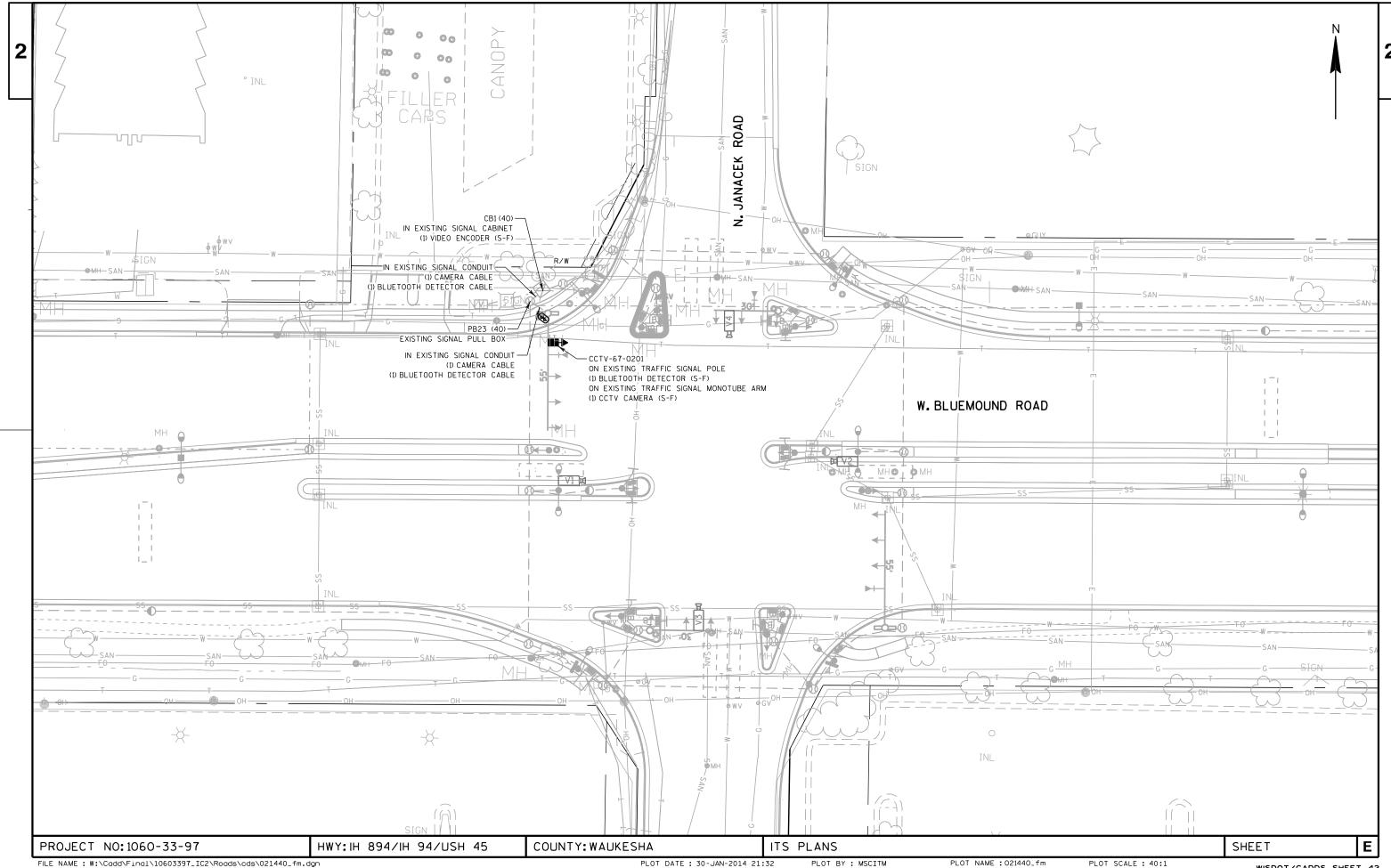
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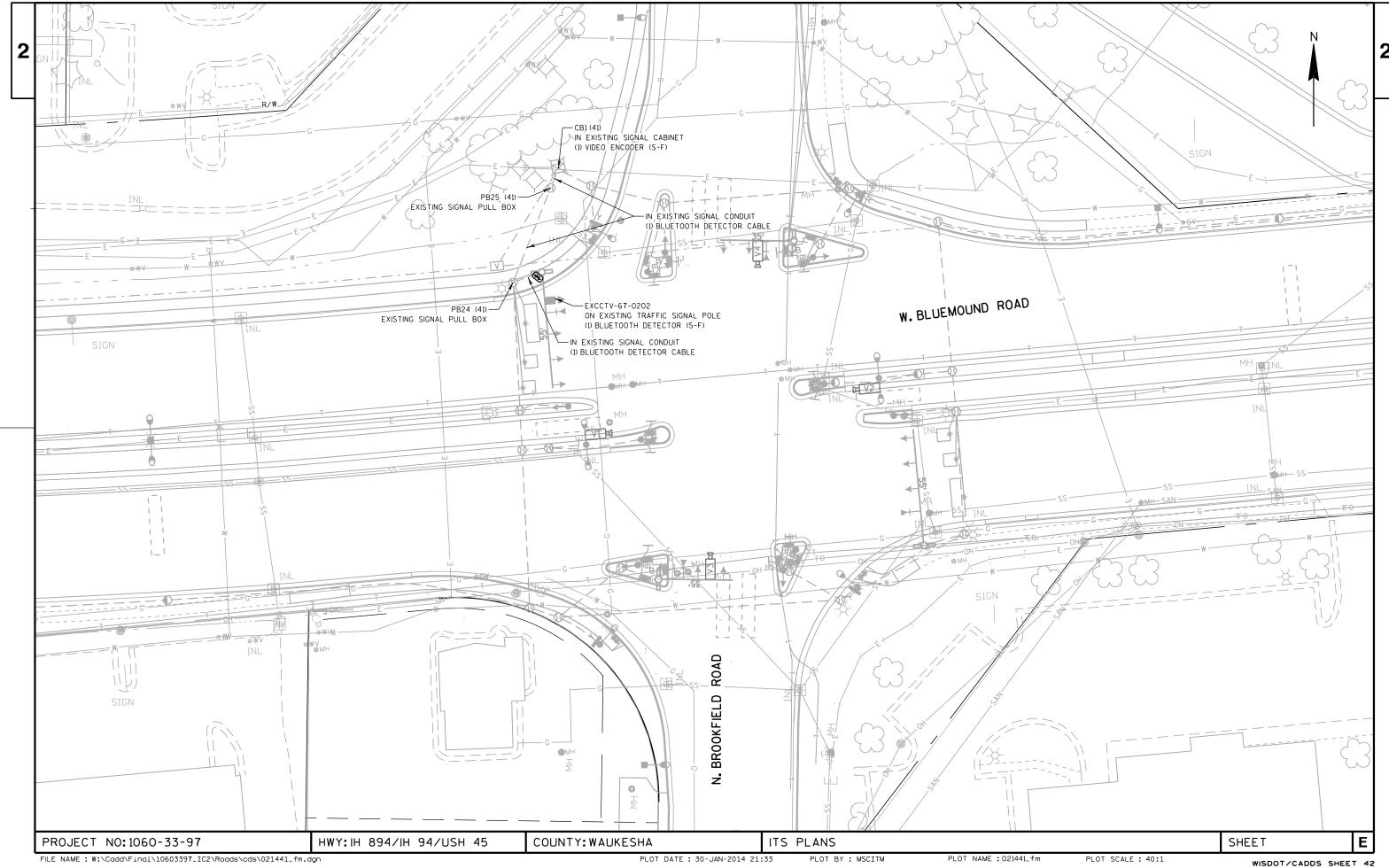


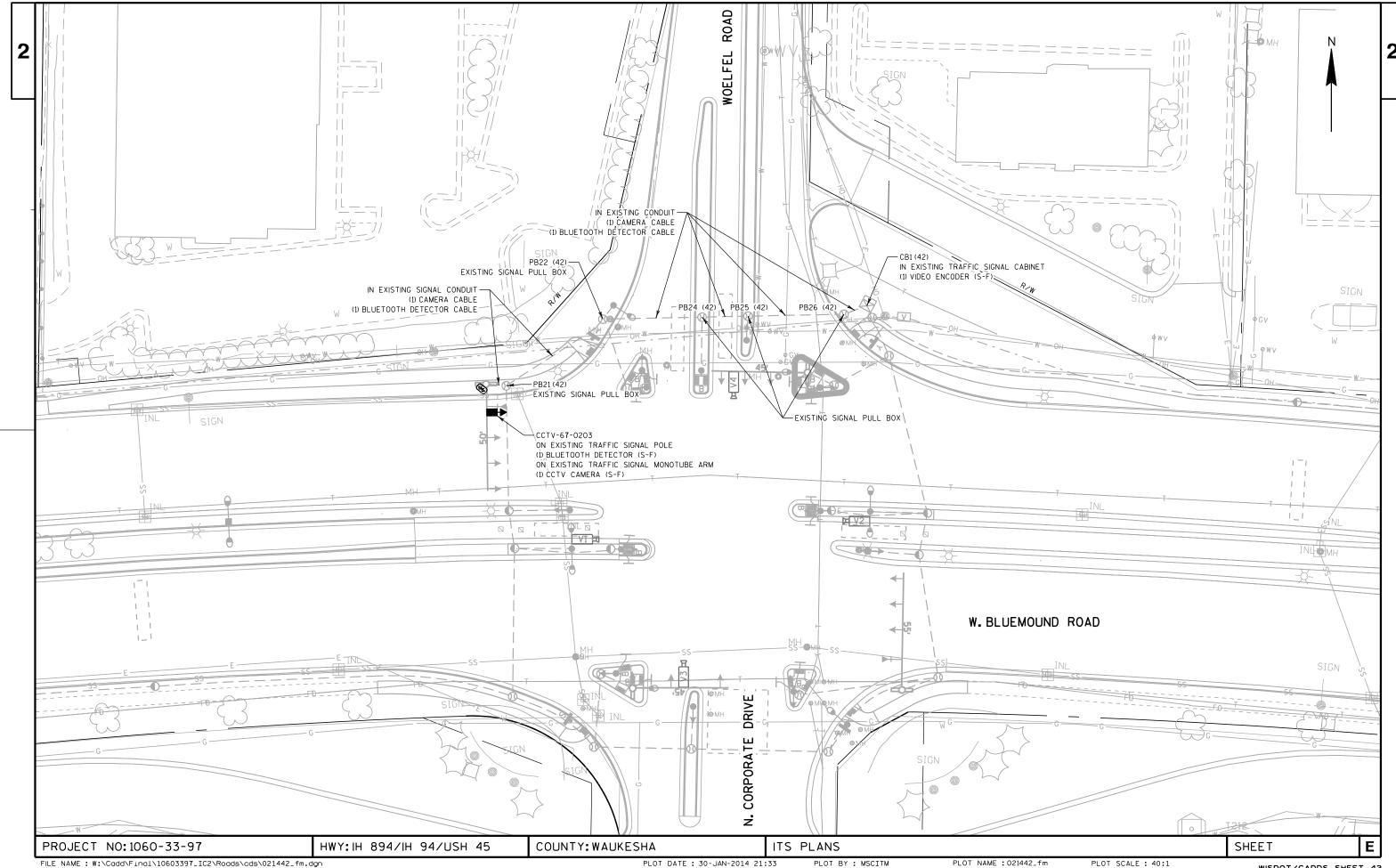


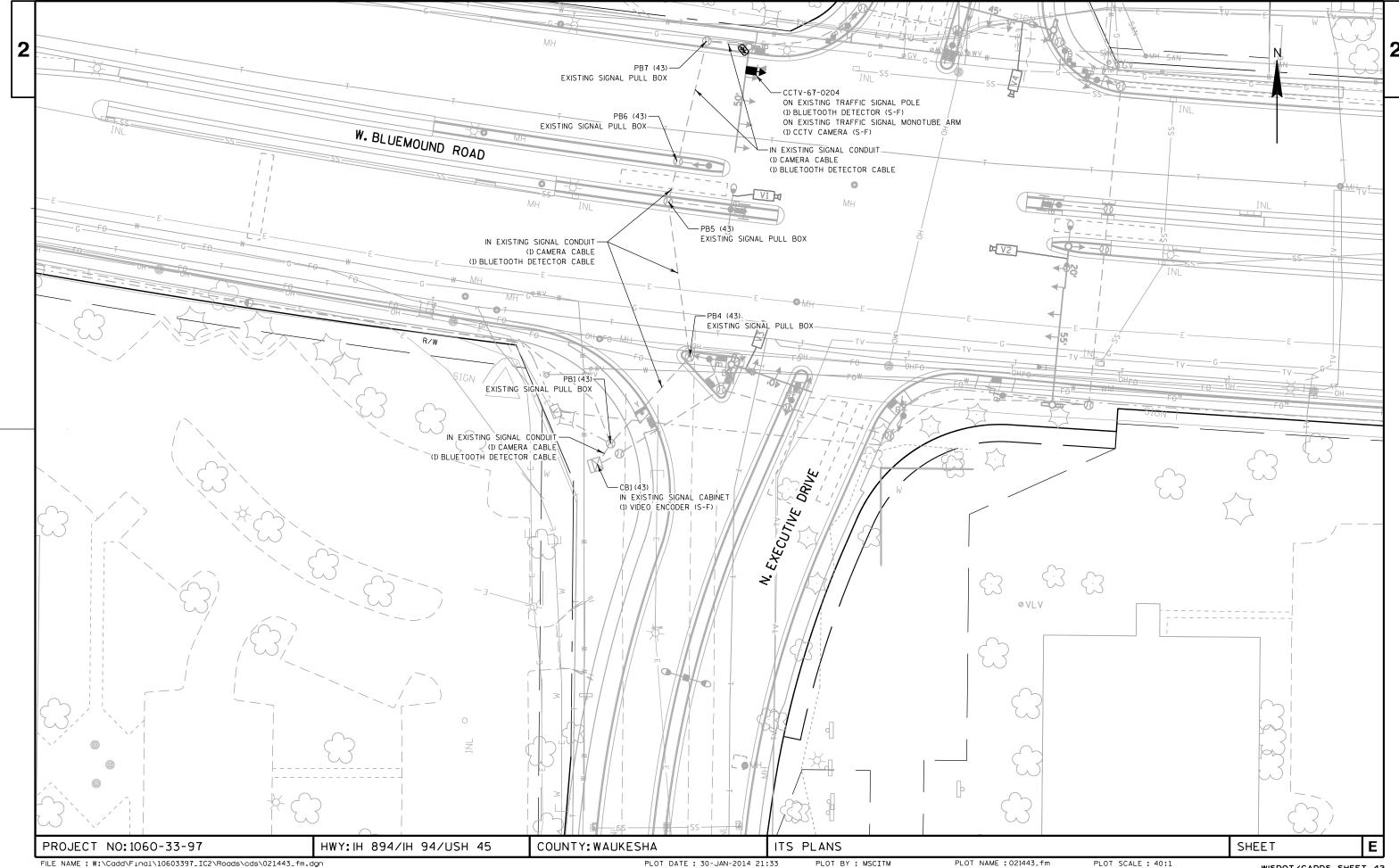


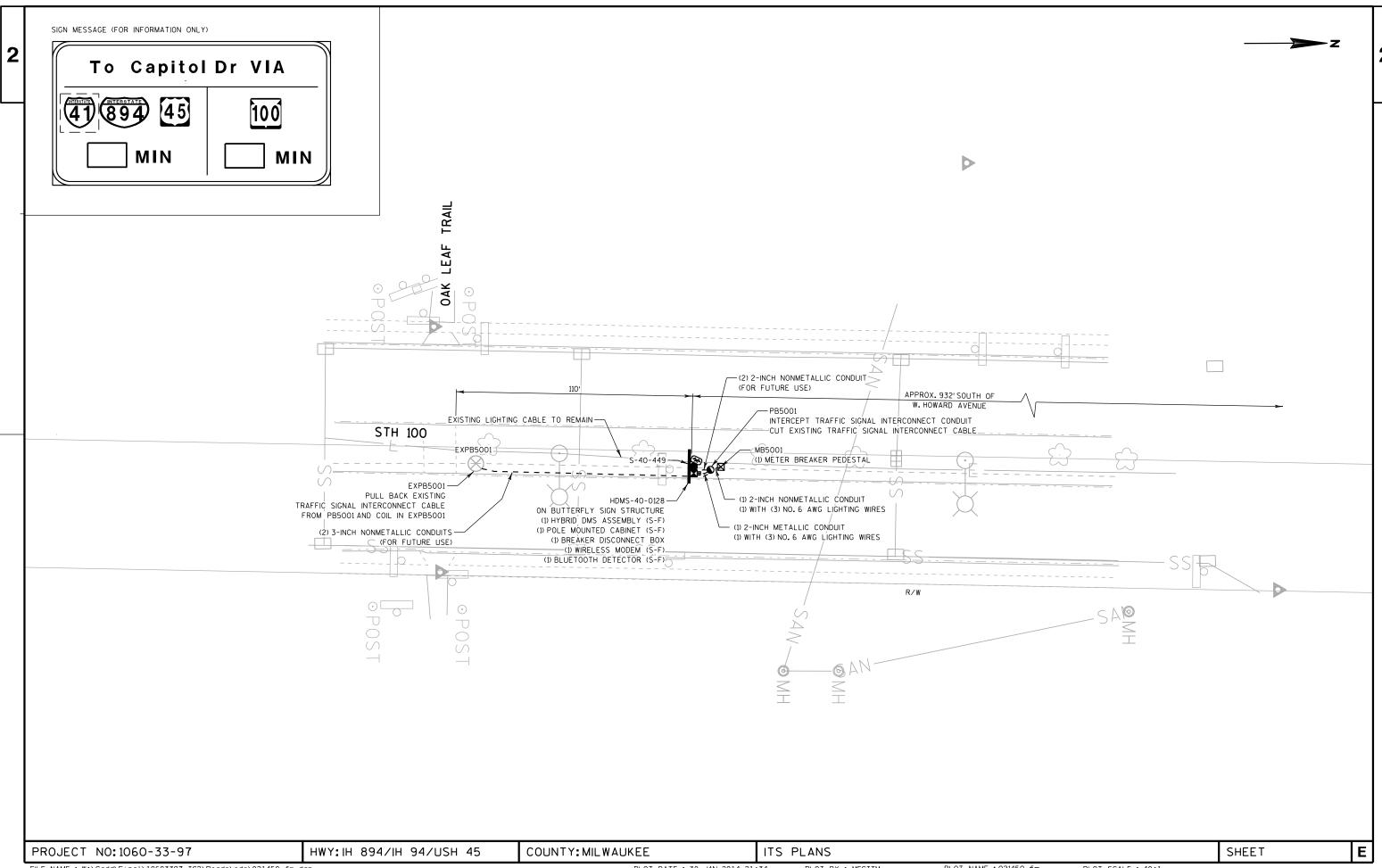










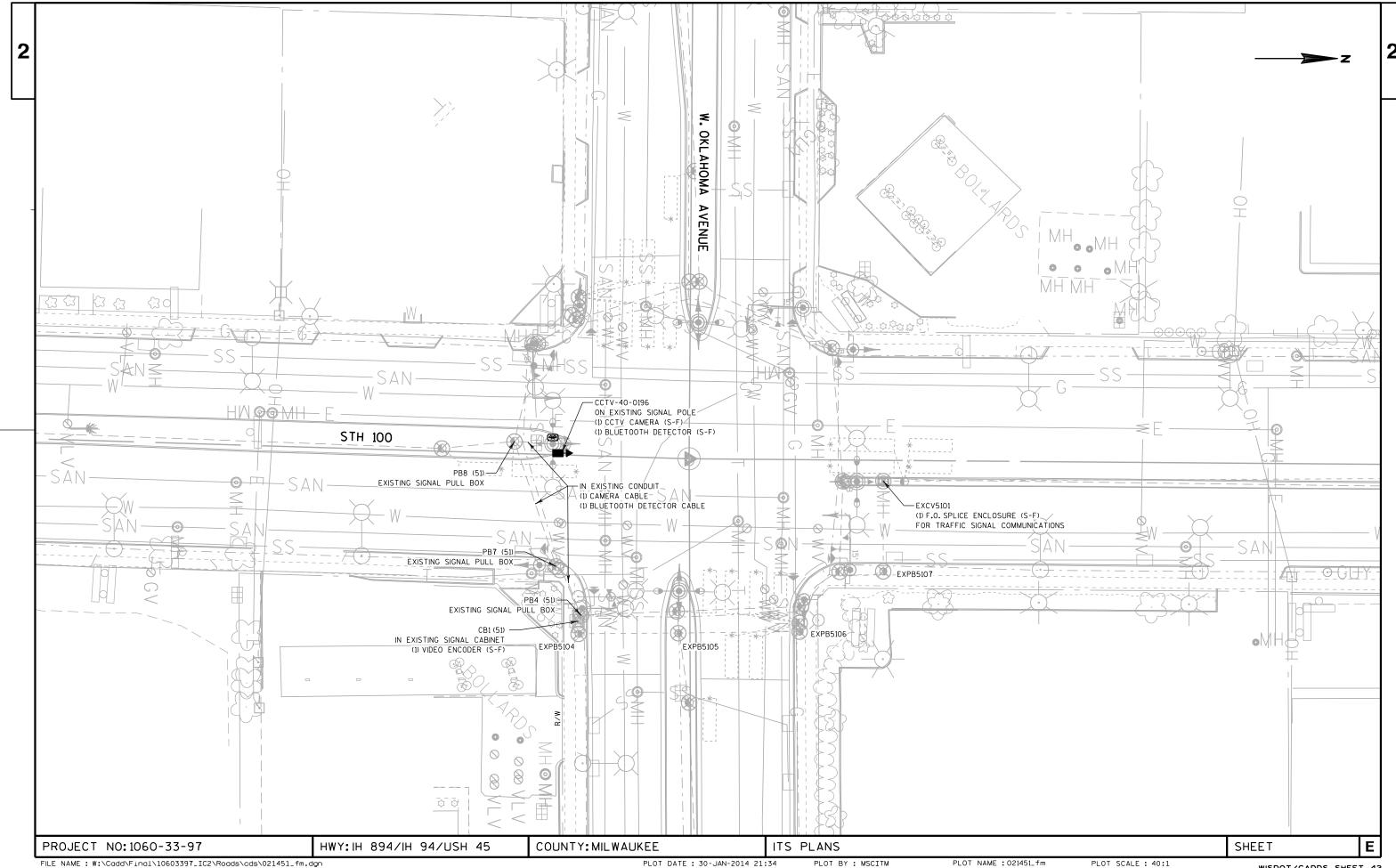


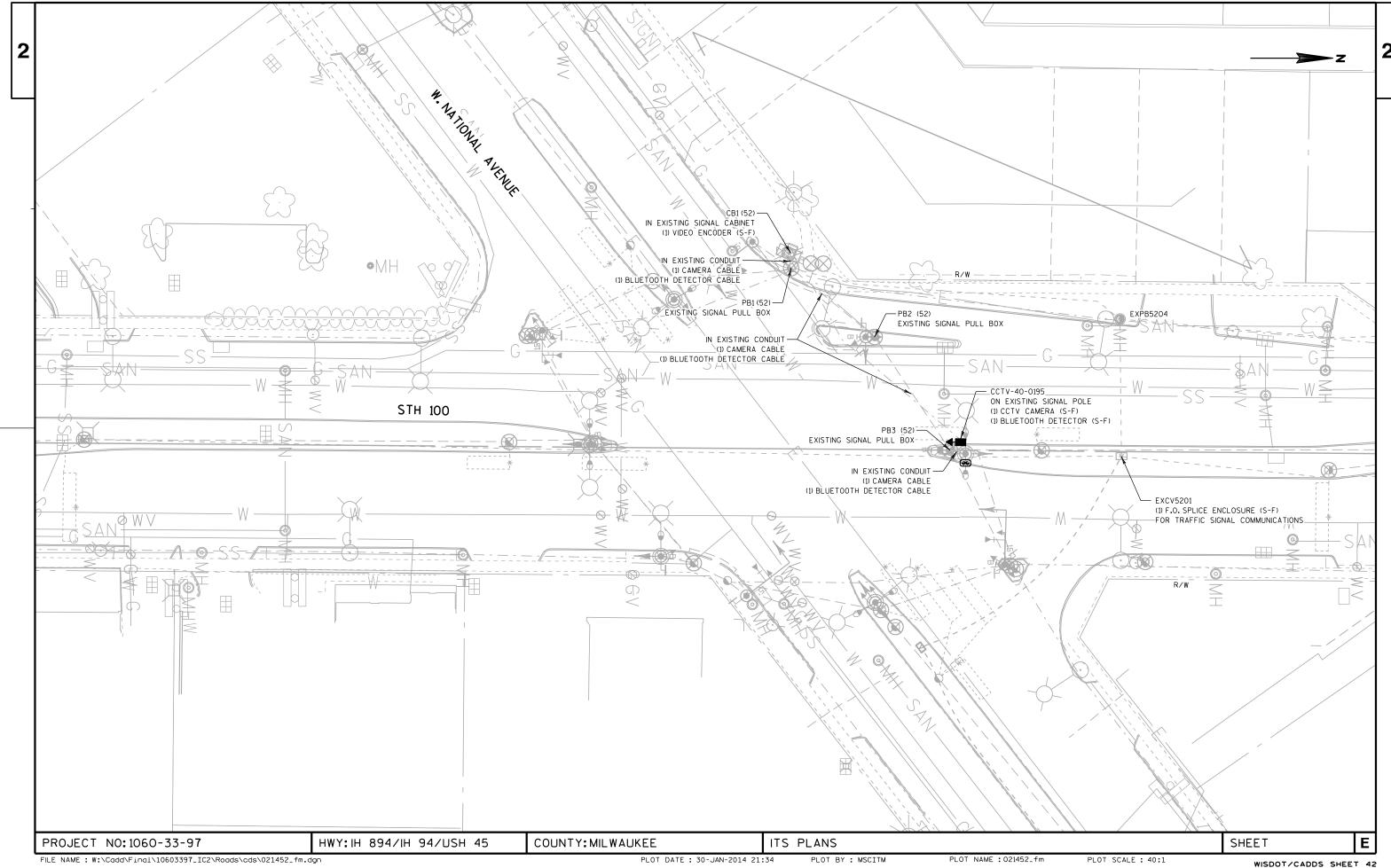
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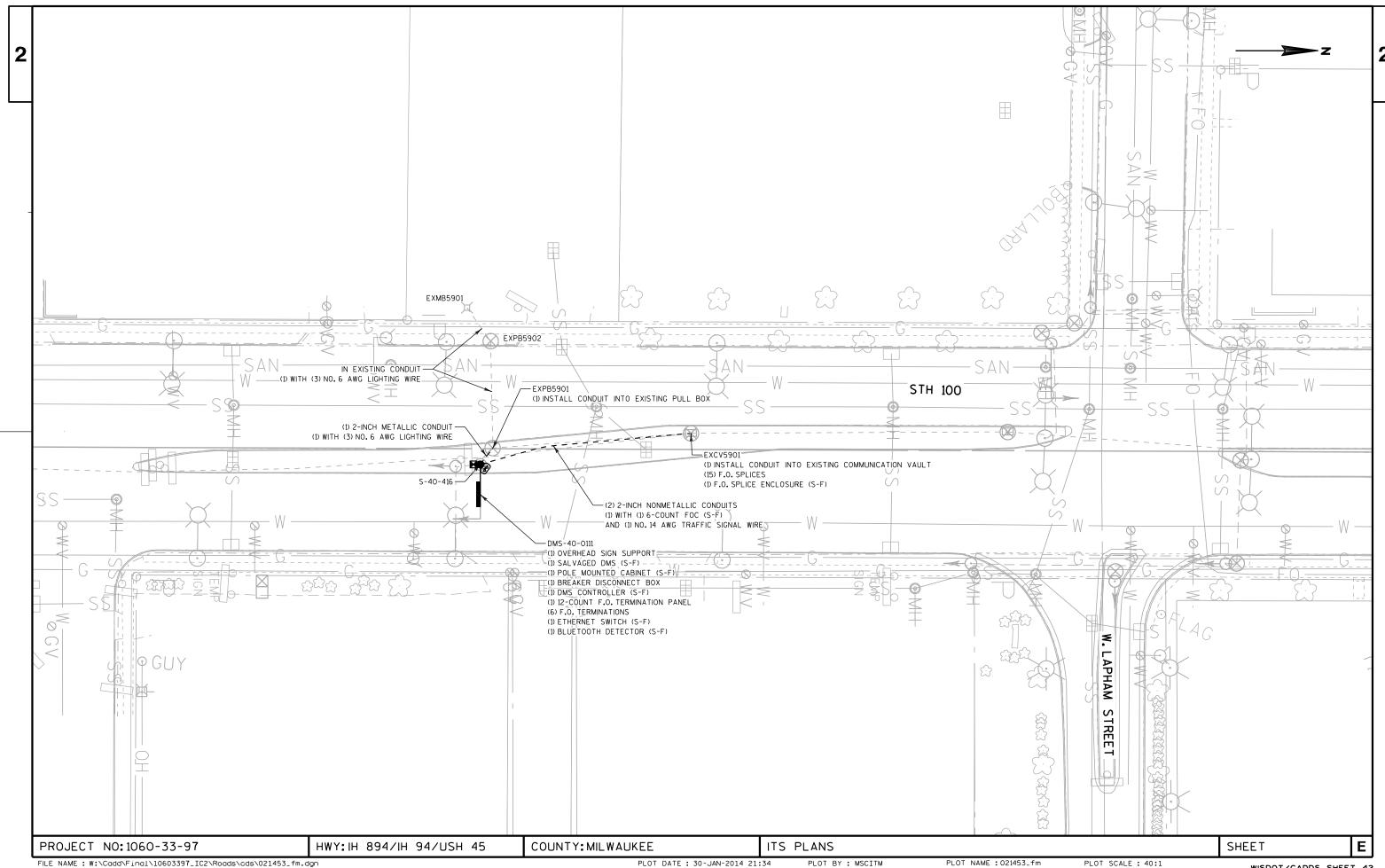
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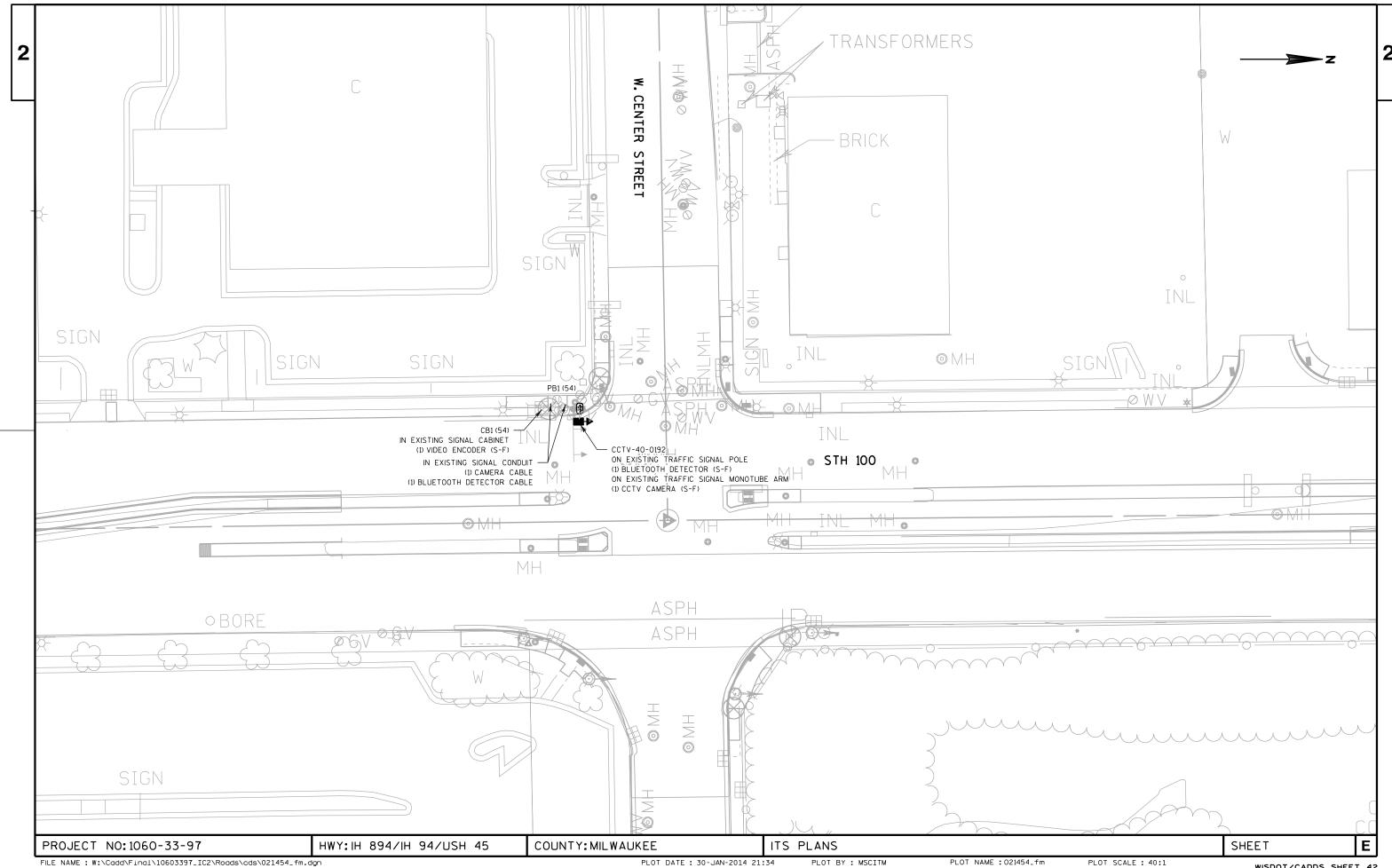
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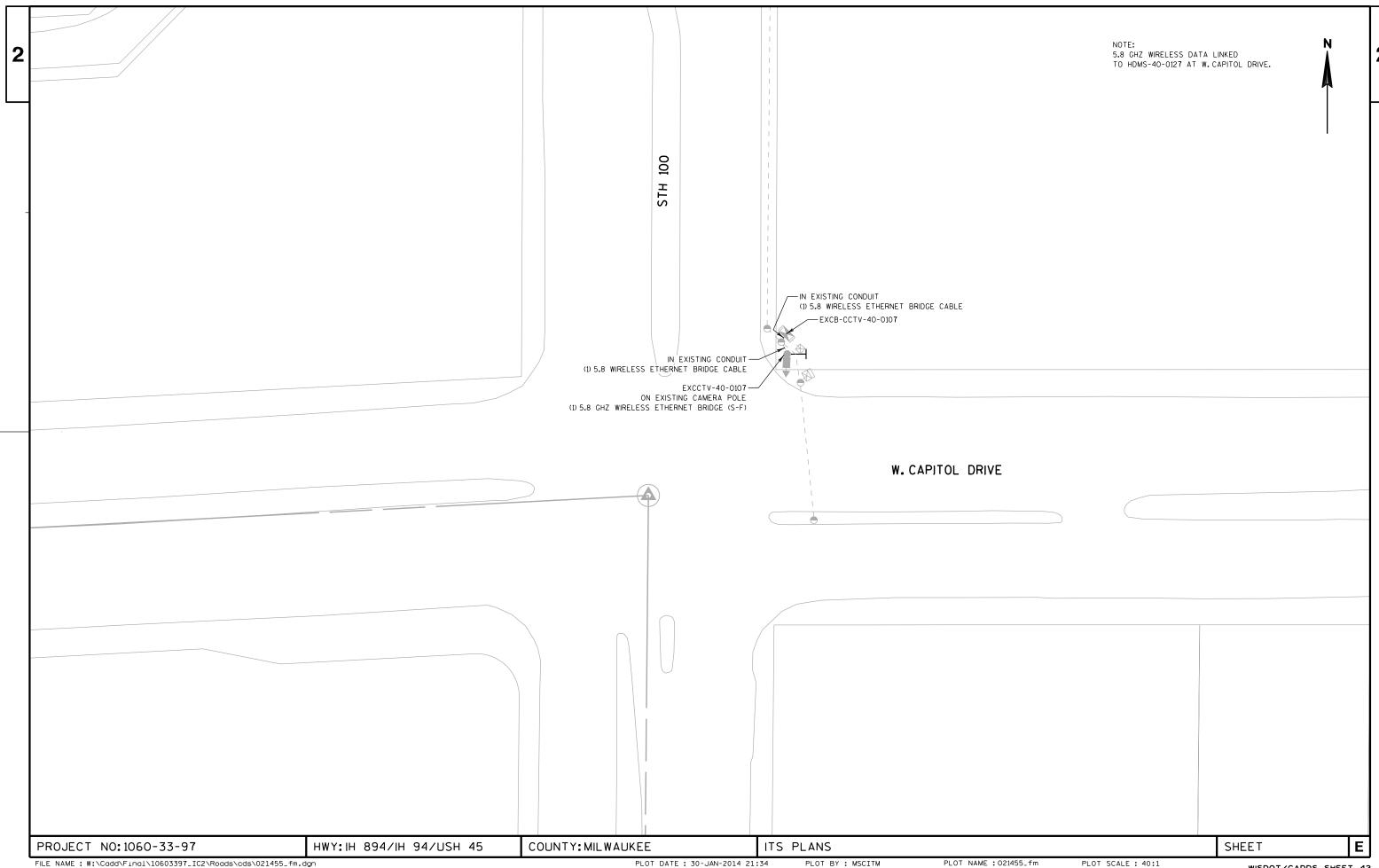
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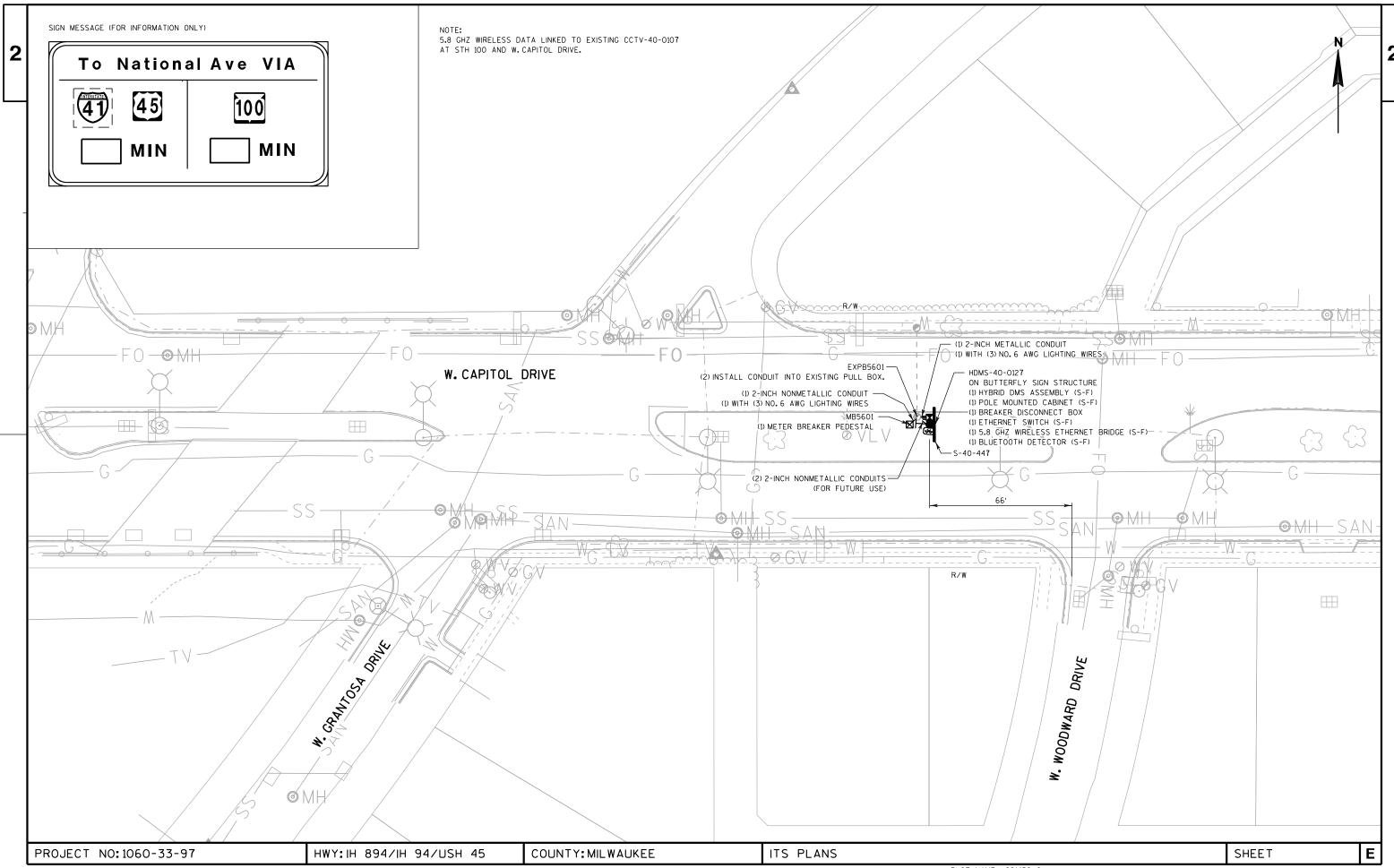






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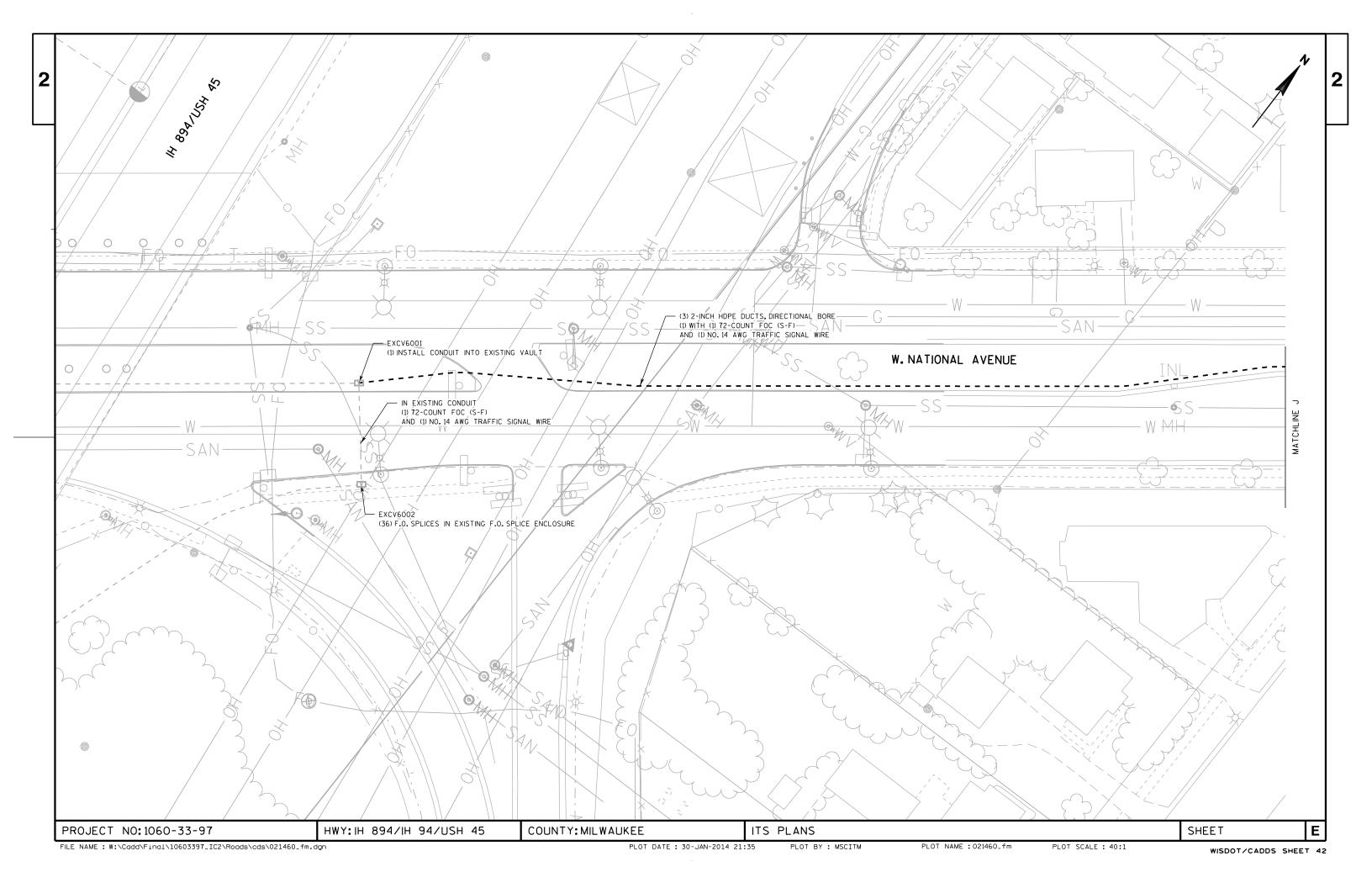


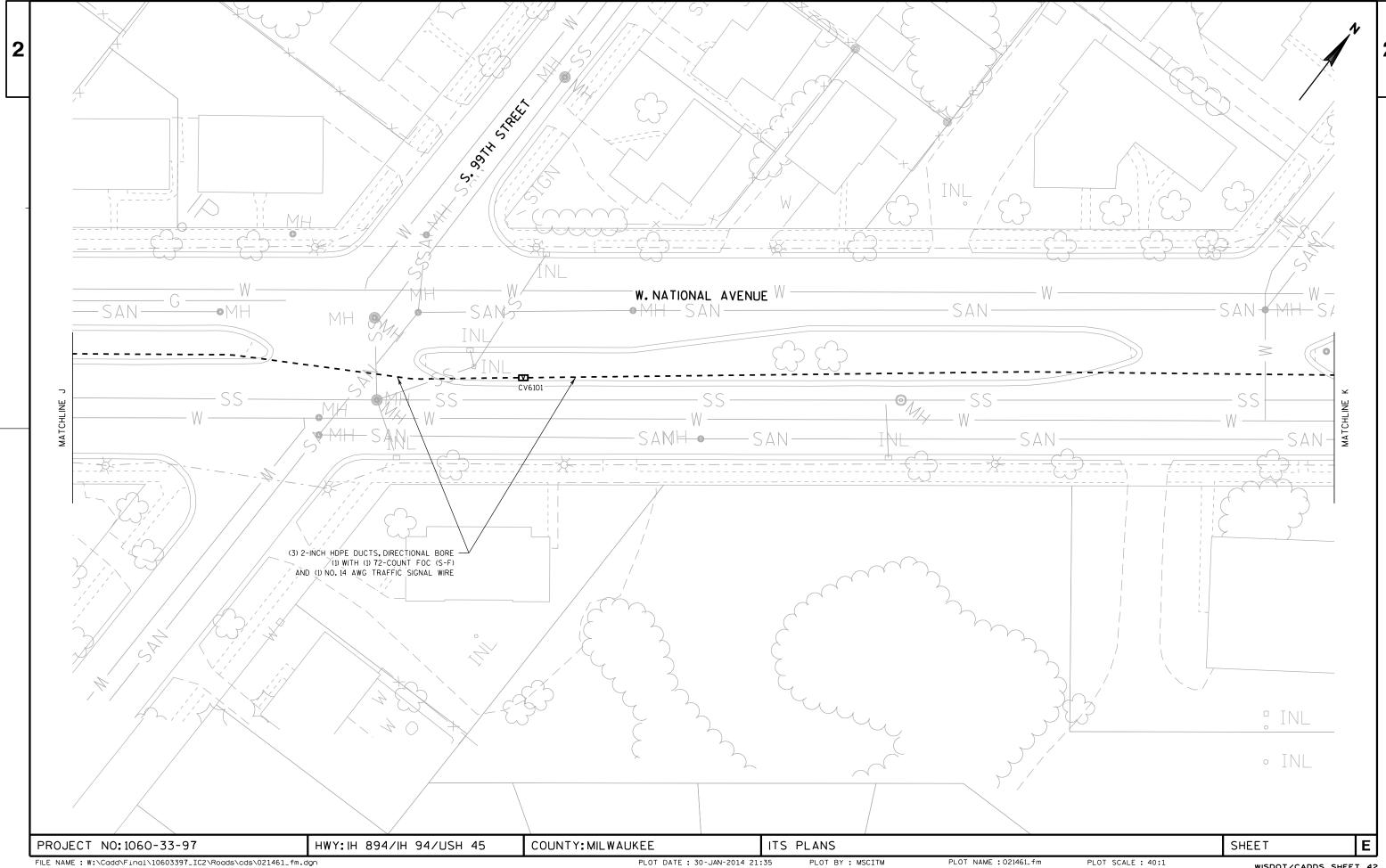
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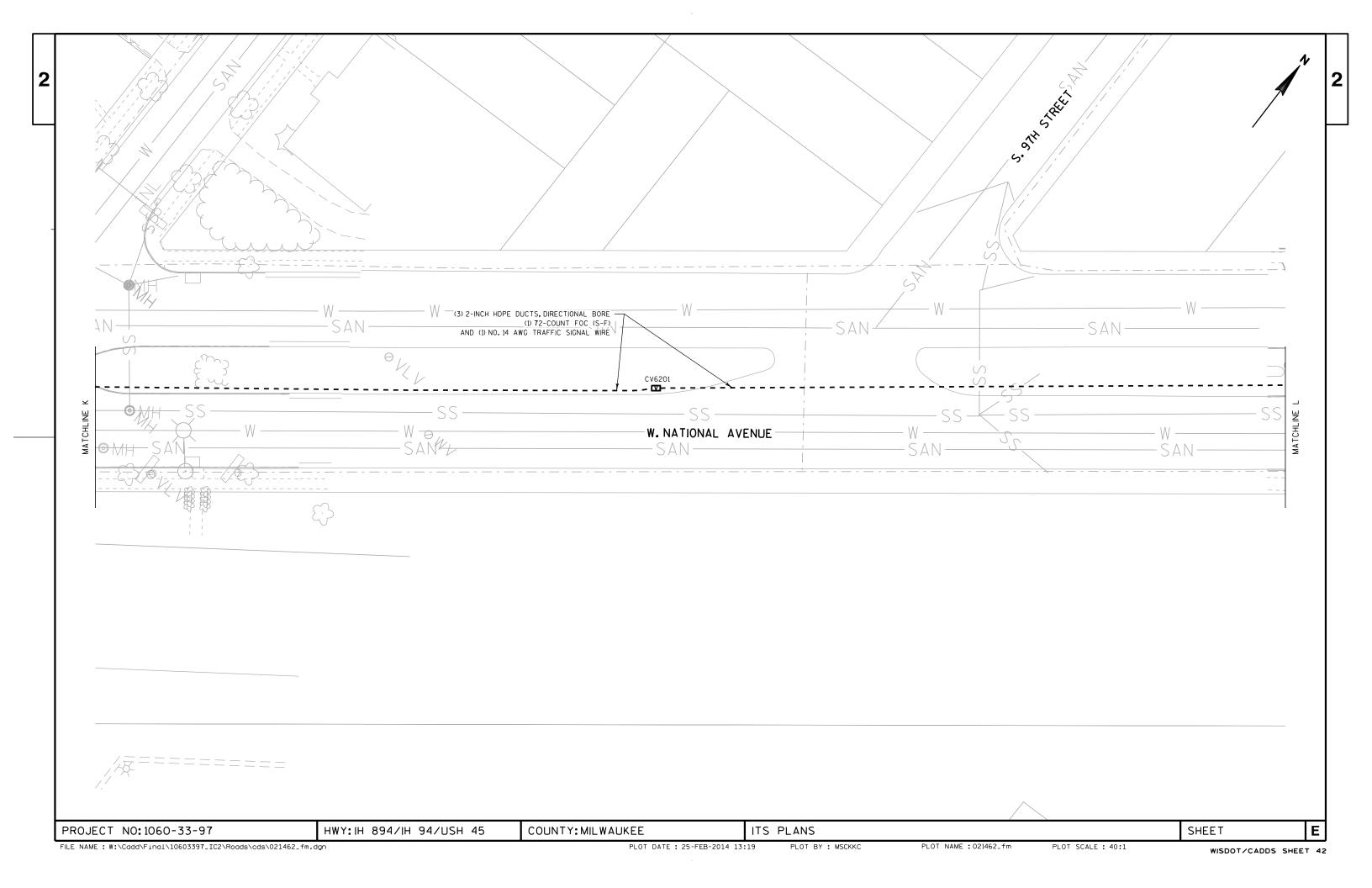
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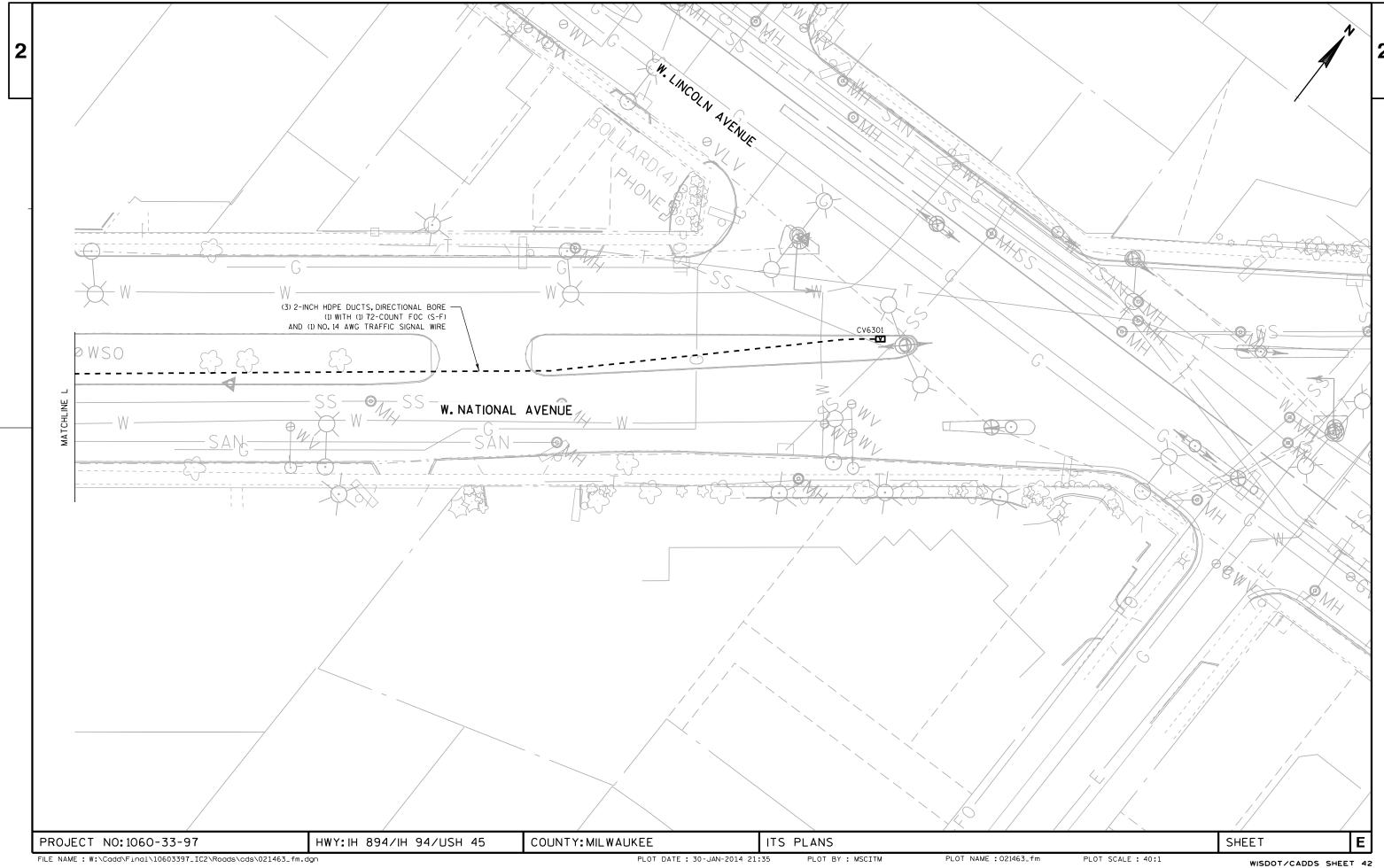
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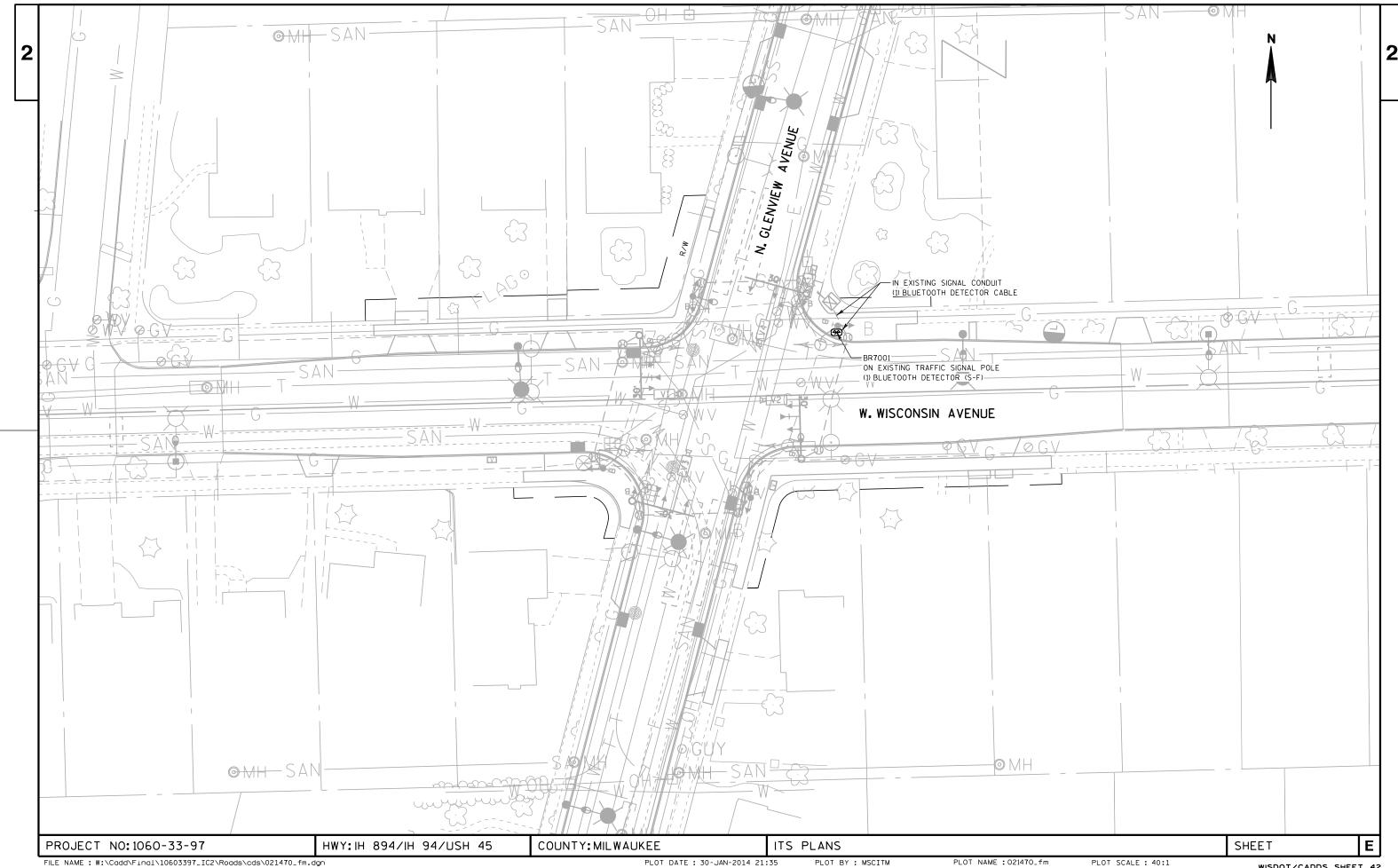
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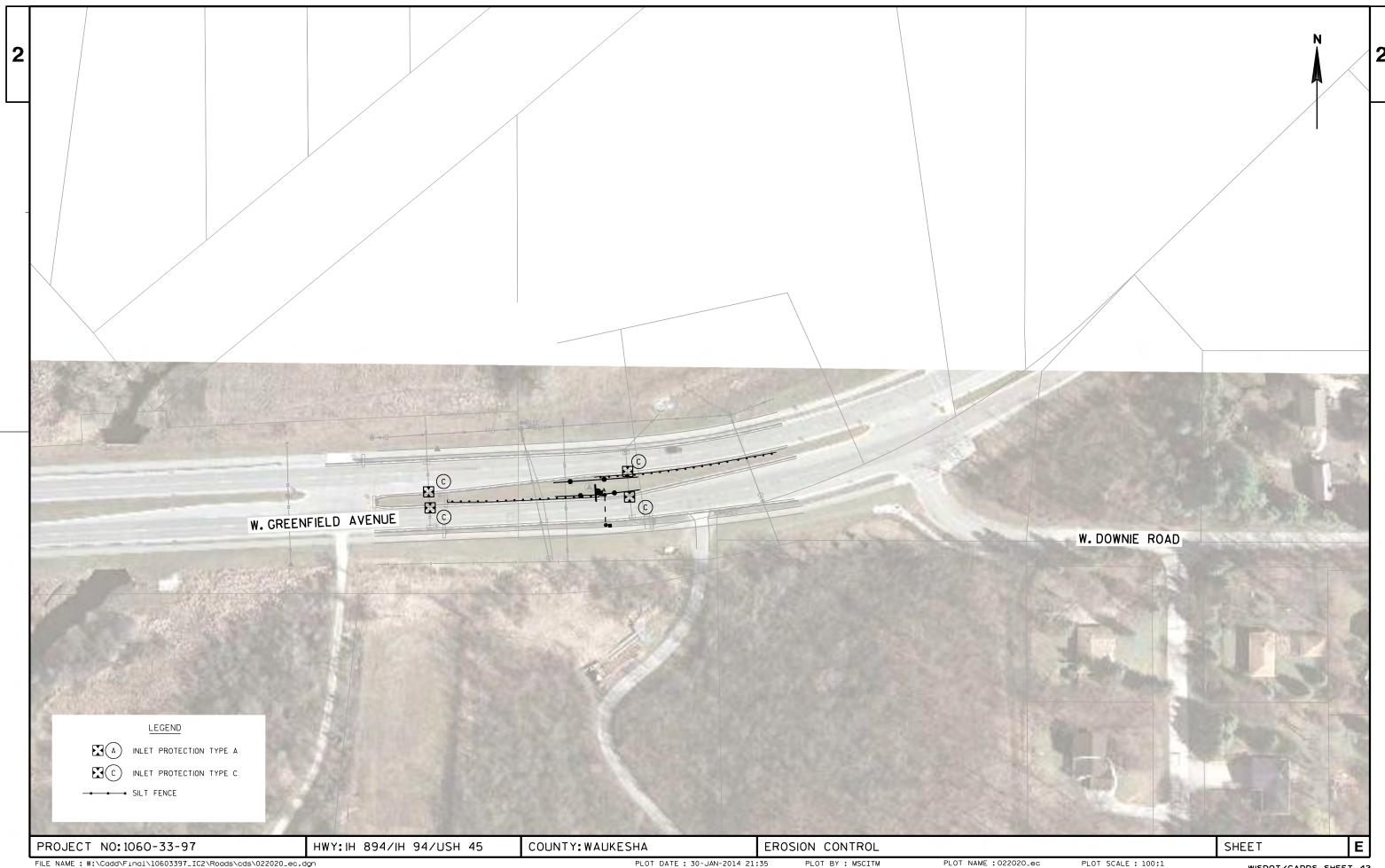














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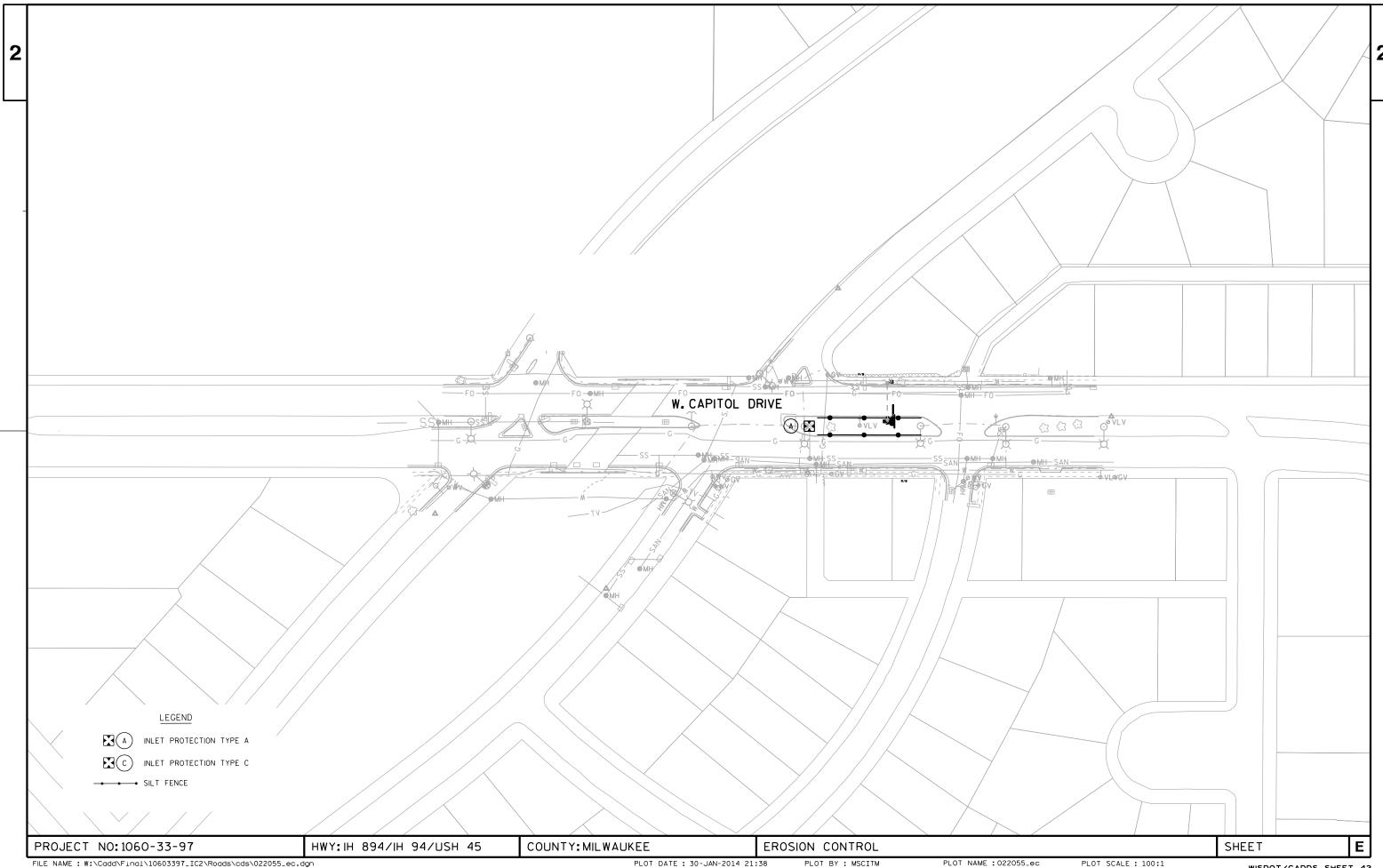


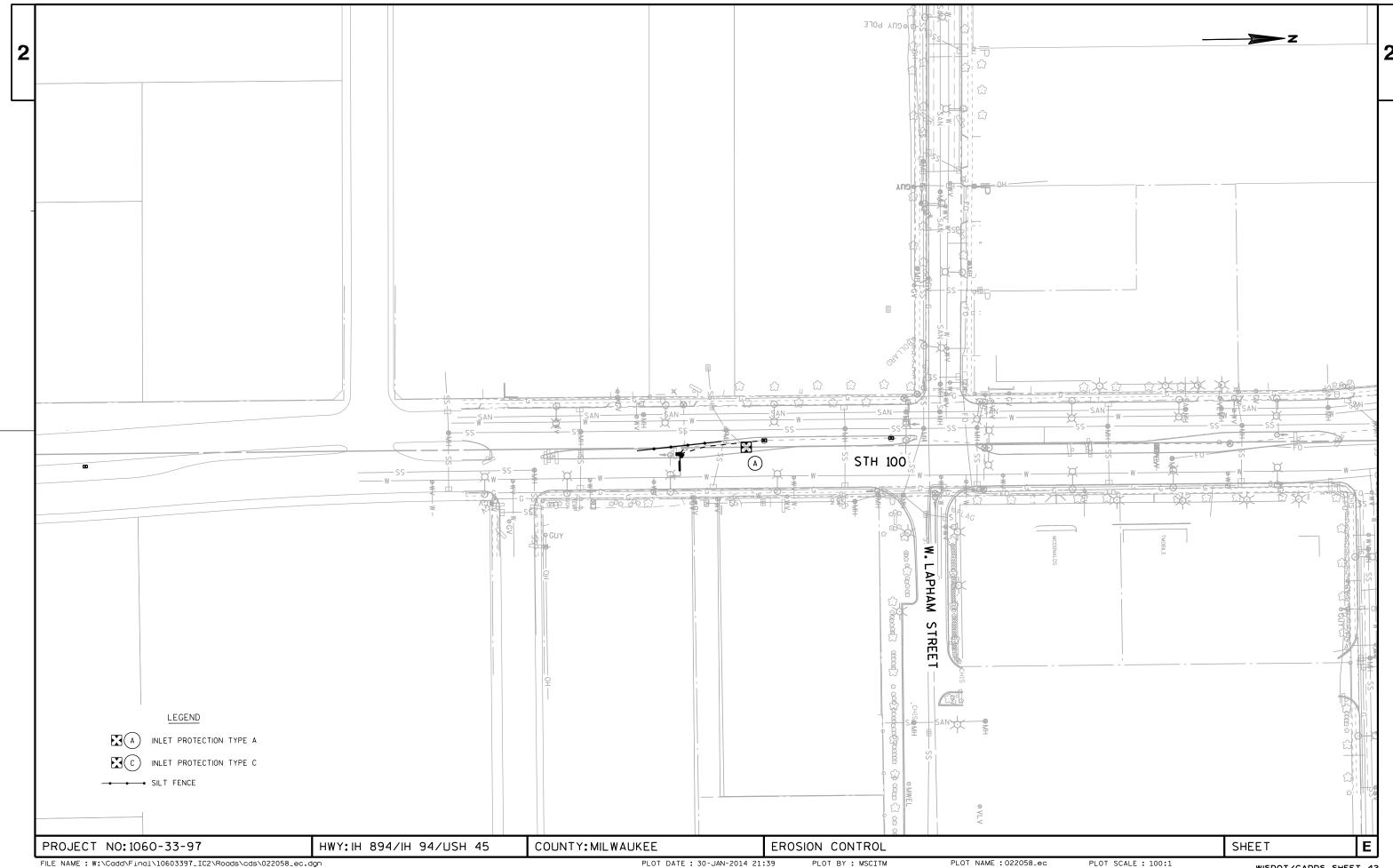
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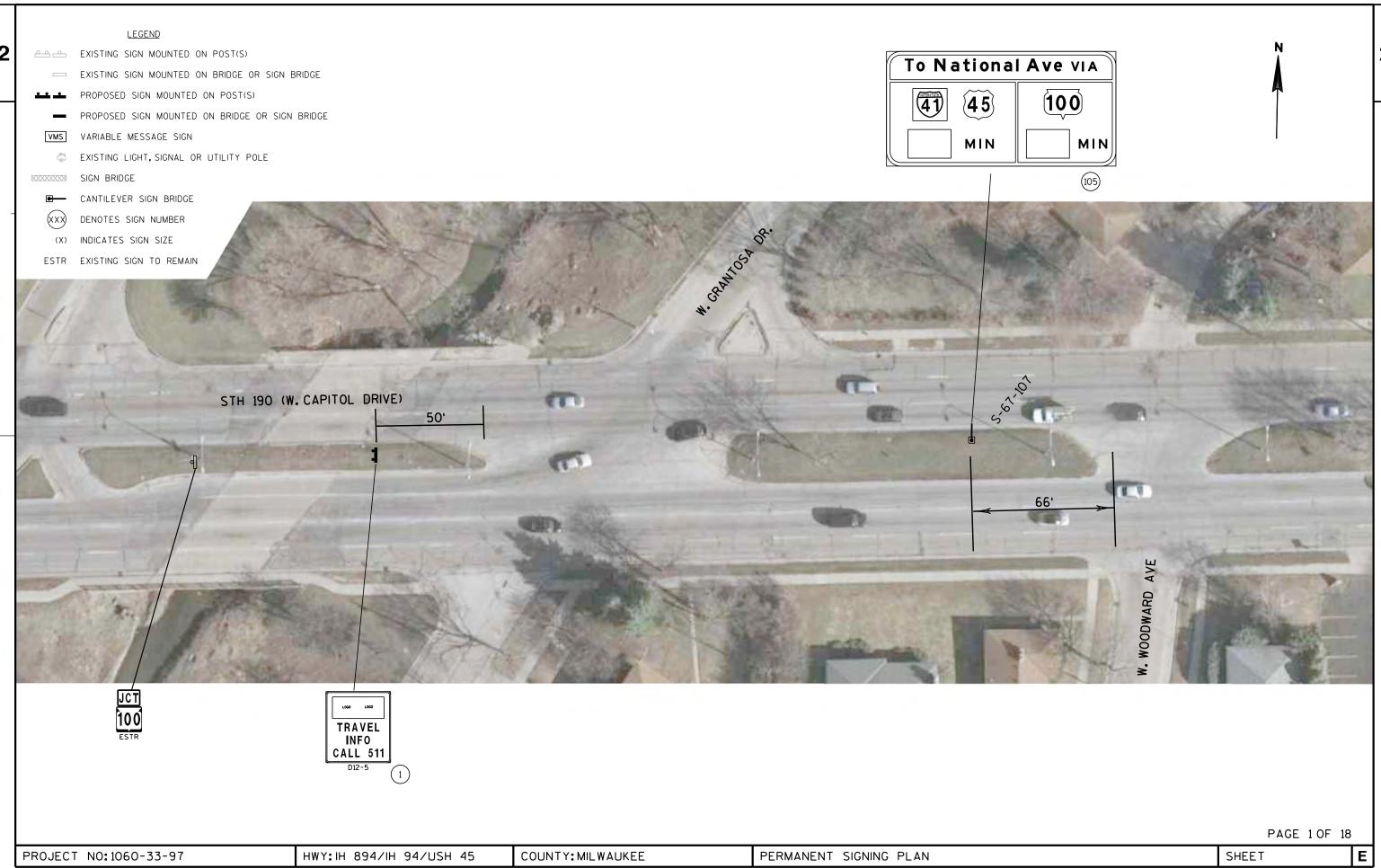
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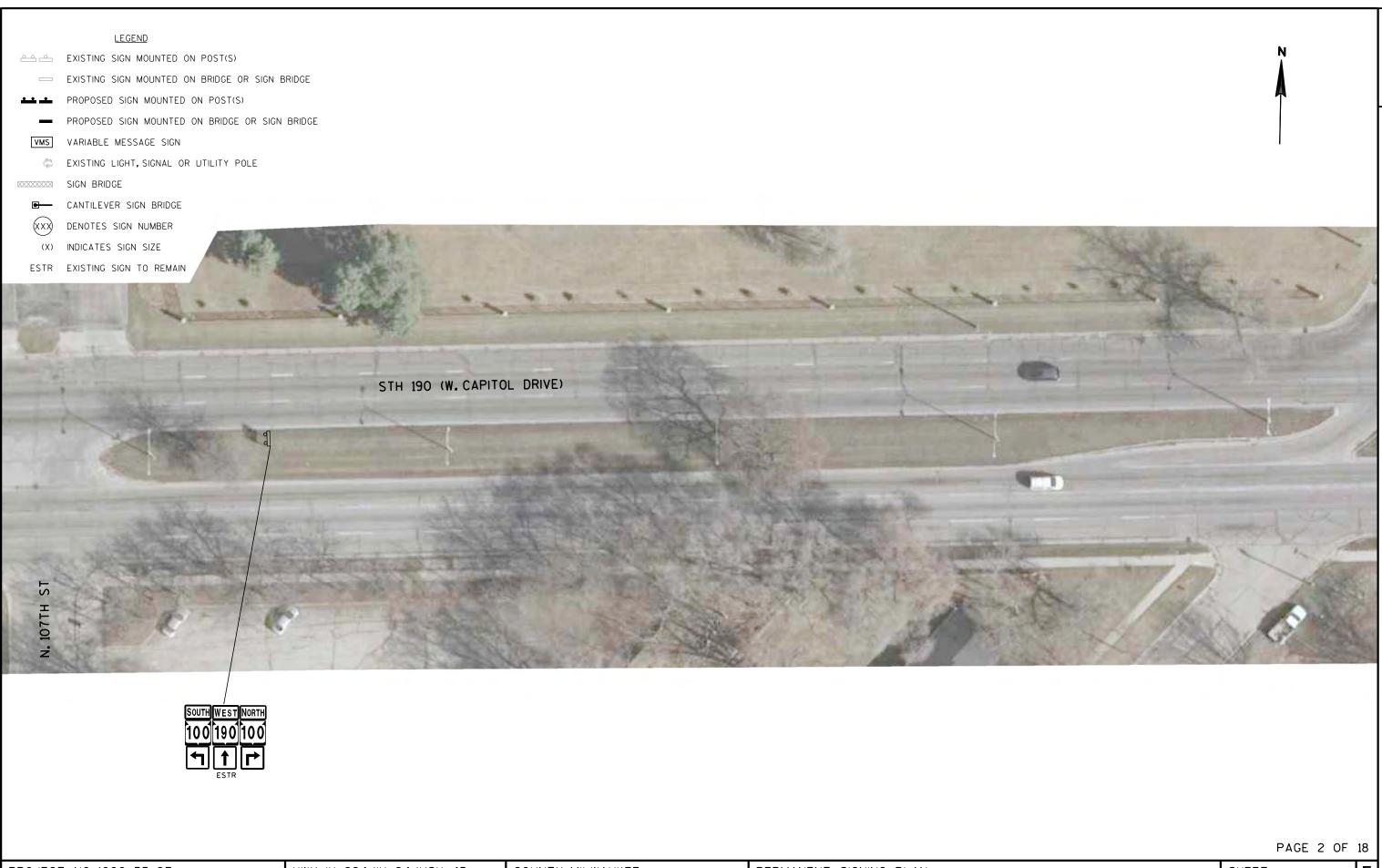
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PLOT NAME: \$FILE\$

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WISDOT/CADDS SHEET 42



PROJECT NO:1060-33-97 HWY: IH 894/IH 94/USH 45 COUNTY: MILWAUKEE PERMANENT SIGNING PLAN SHEET I

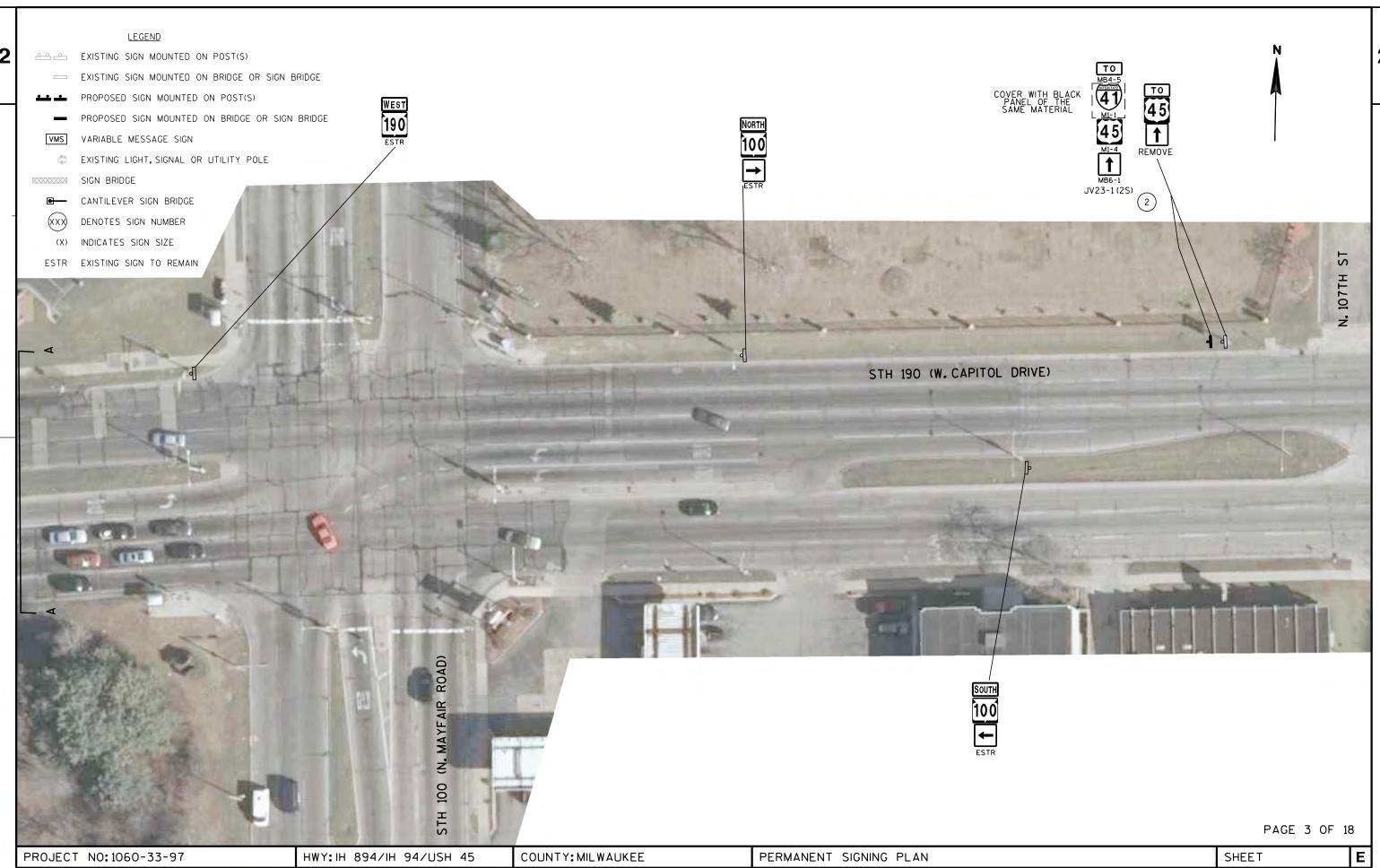
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PLOT SCALE: 40:1



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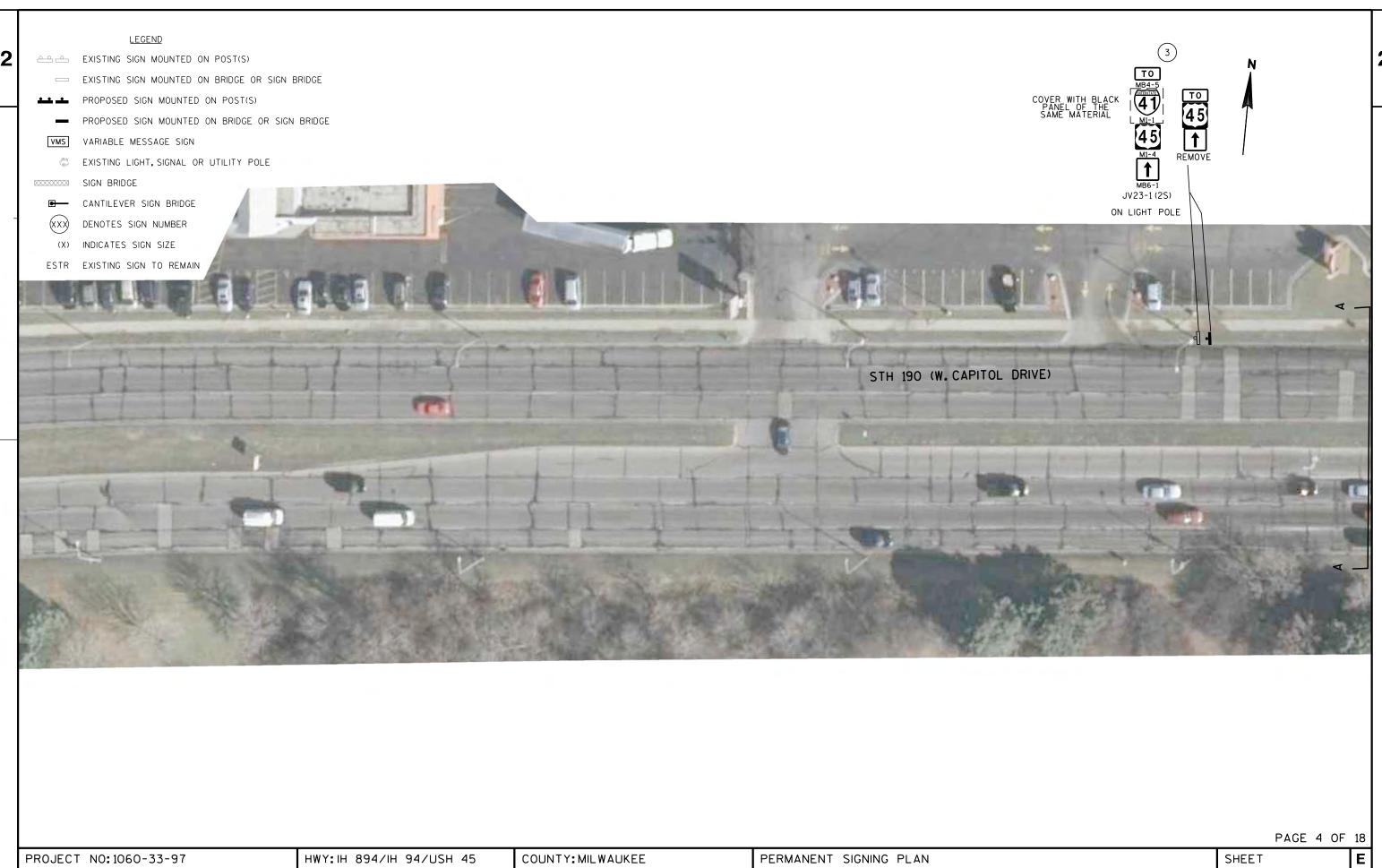
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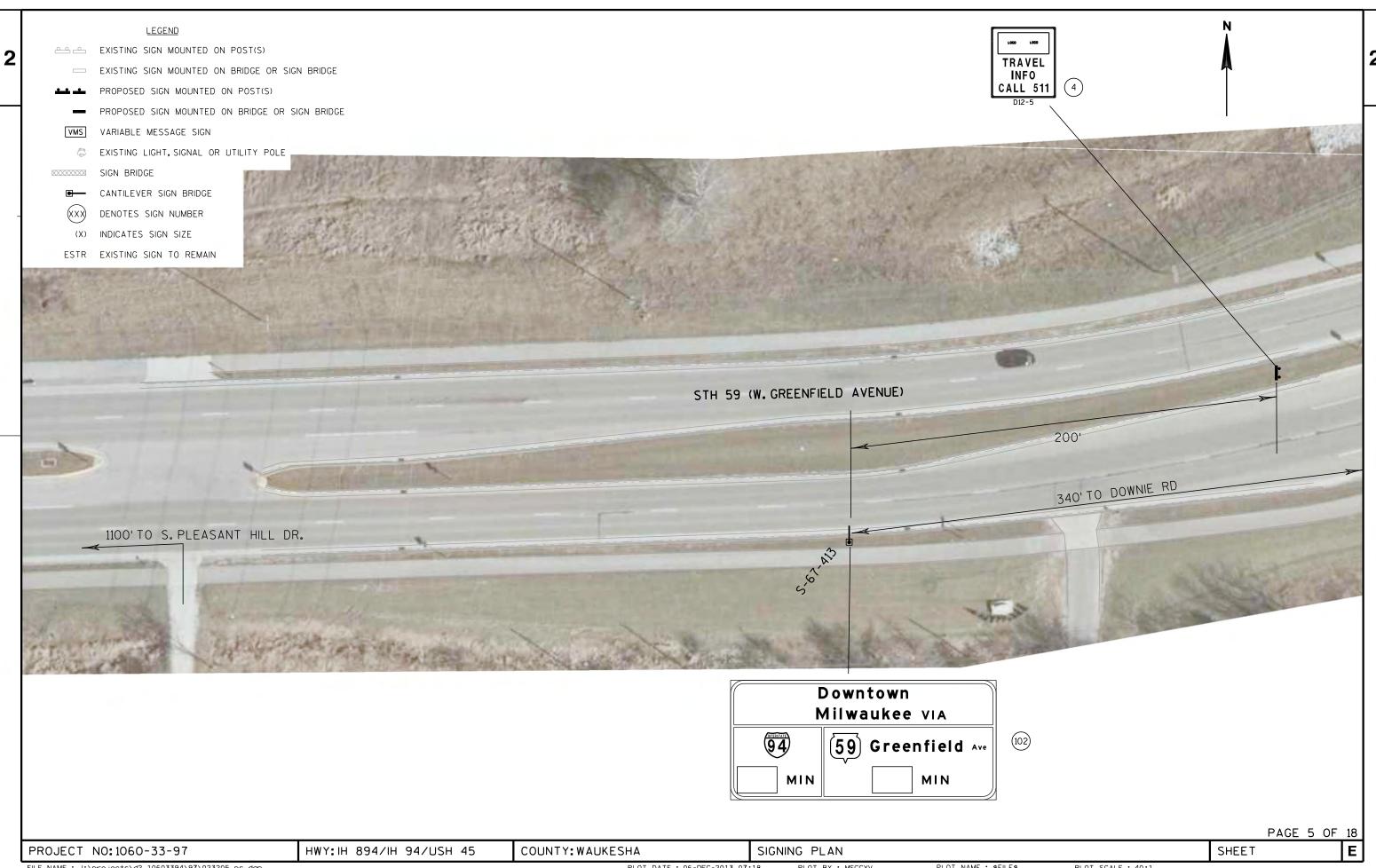
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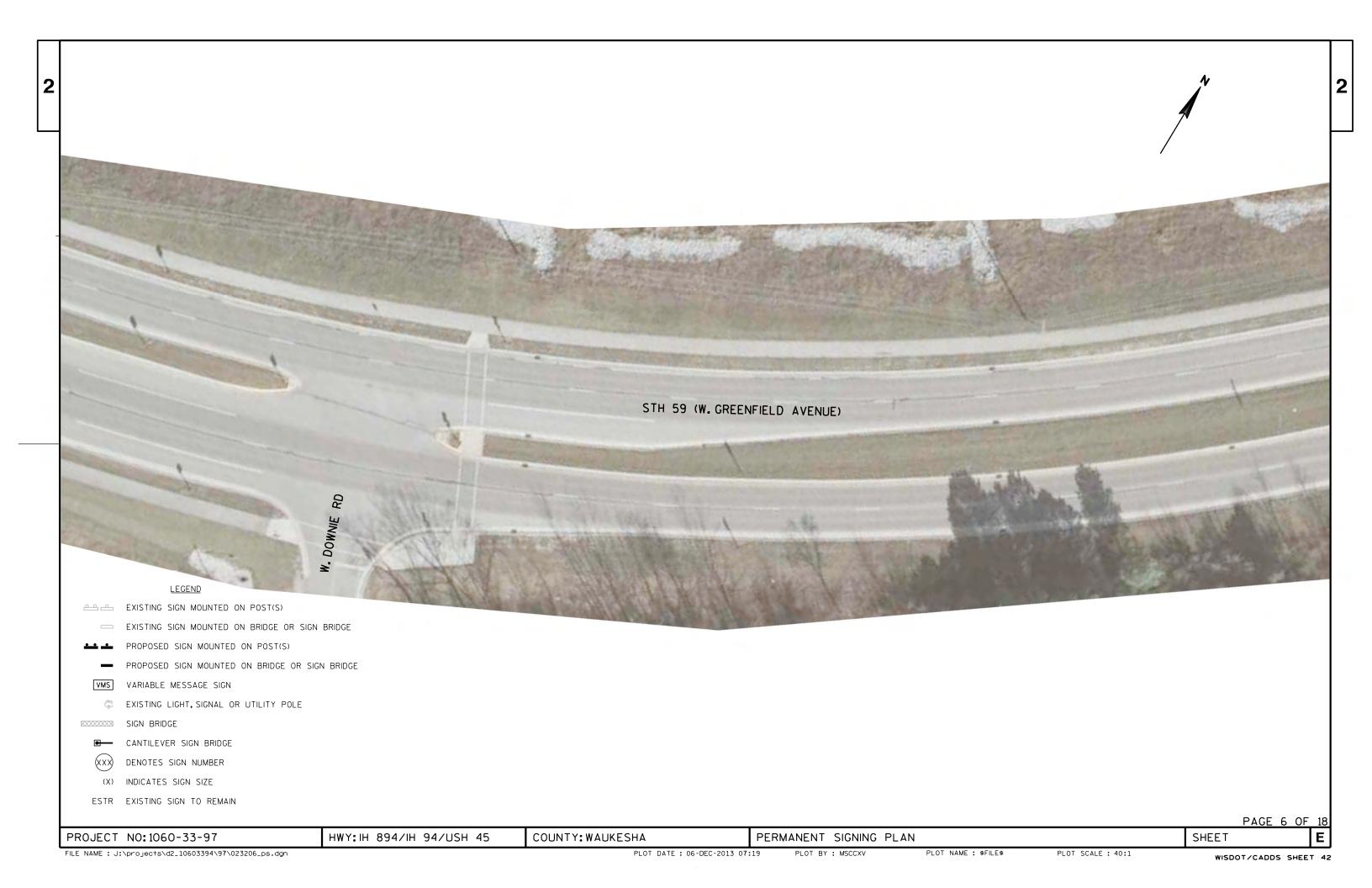
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PLOT DATE: 06-DEC-2013 07:18



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2





PROPOSED SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

VMS VARIABLE MESSAGE SIGN

EXISTING LIGHT, SIGNAL OR UTILITY POLE

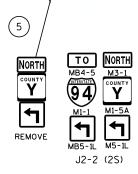
SIGN BRIDGE

CANTILEVER SIGN BRIDGE

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

ESTR EXISTING SIGN TO REMAIN



PAGE 7 OF 18

PROJECT NO:1060-33-97 HWY:H 894/H 94/USH 45 COUNTY:WAUKESHA PERMANENT SIGNING PLAN SHEET **E**

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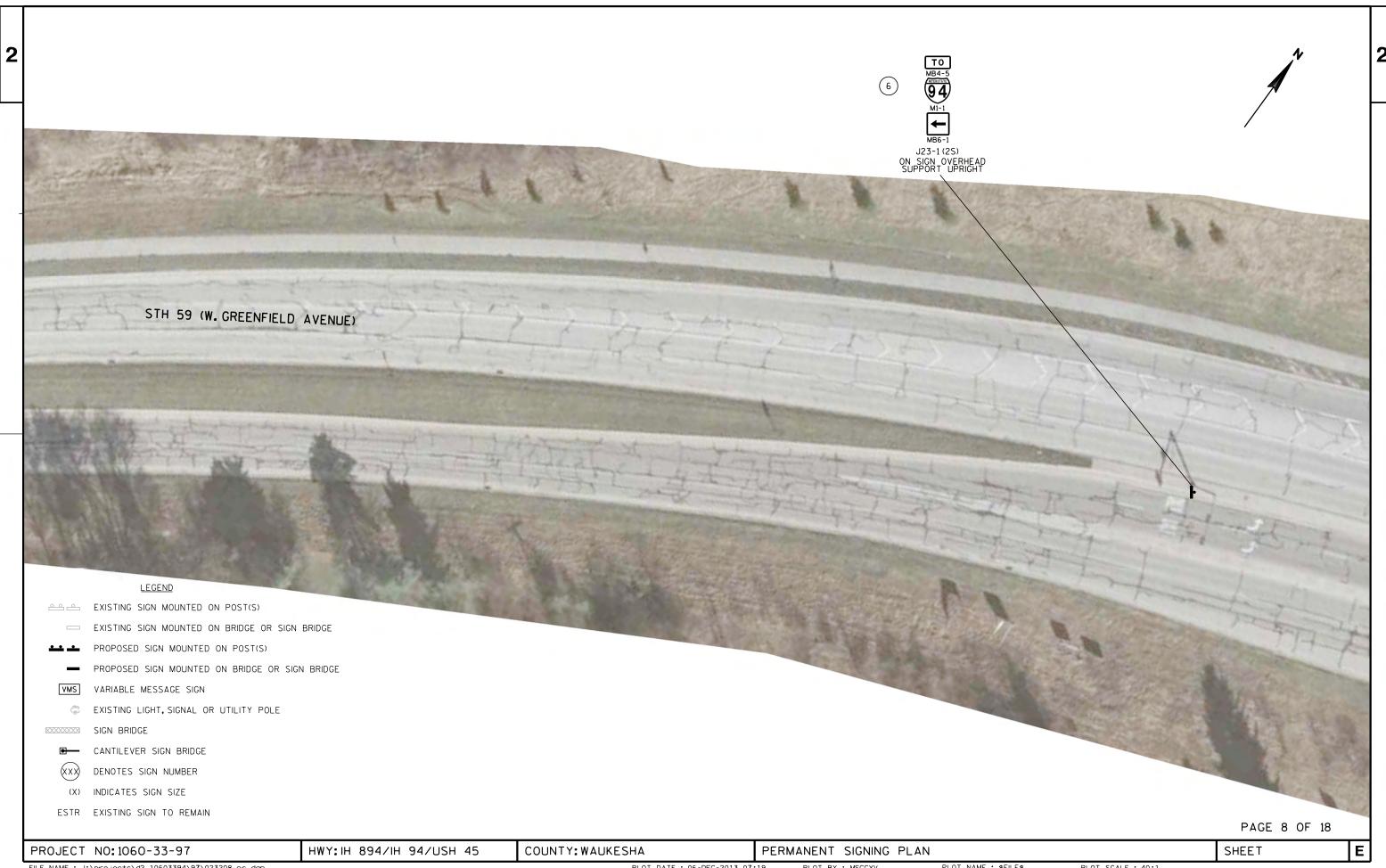
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WISDOT/CADDS SHEET 42



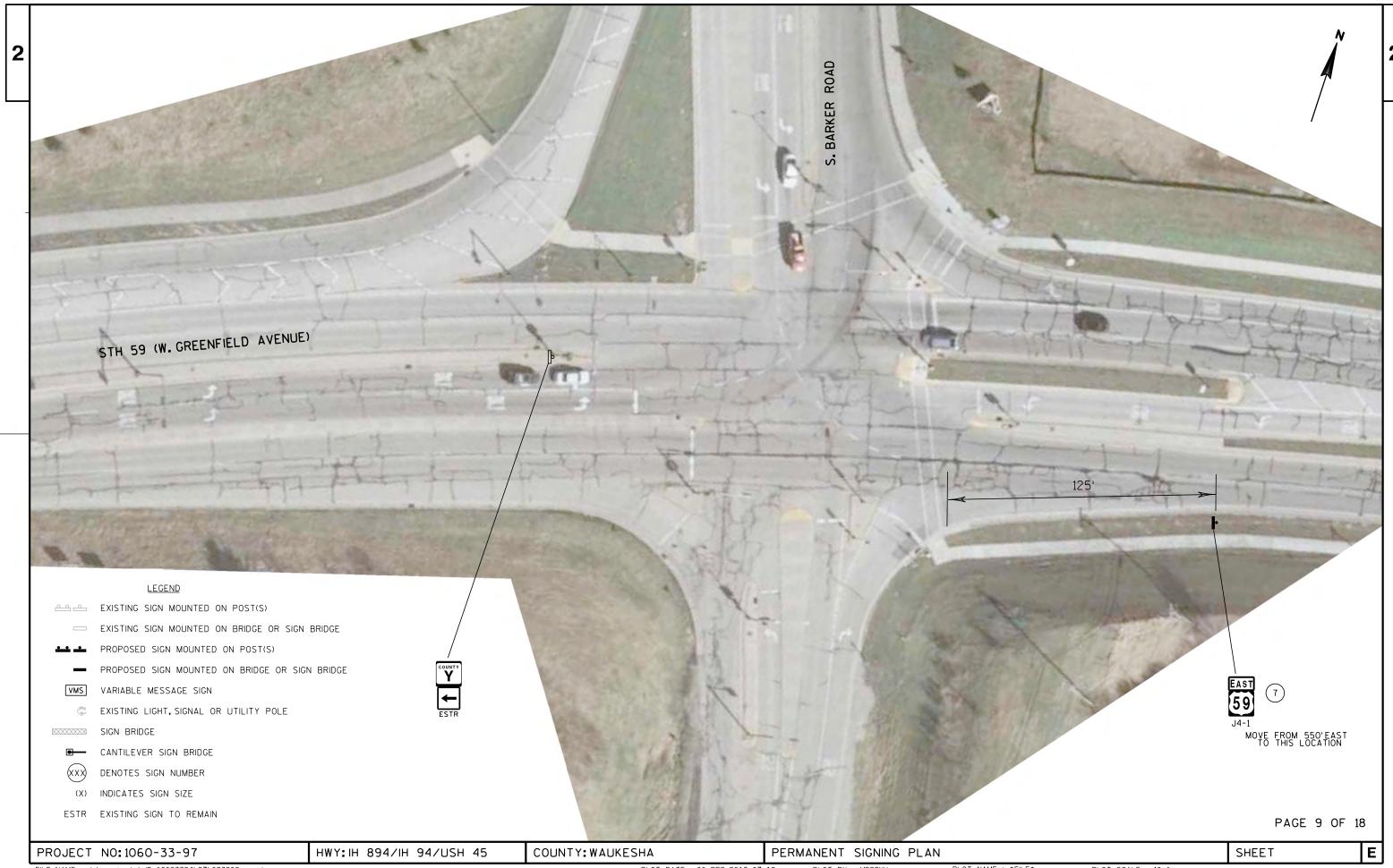
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PLOT DATE: 06-DEC-2013 07:19

PLOT NAME: \$FILE\$

PLOT SCALE: 40:1

WISDOT/CADDS SHEET 42



EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

PROPOSED SIGN MOUNTED ON POST(S)

LEGEND

- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

VMS VARIABLE MESSAGE SIGN

EXISTING LIGHT, SIGNAL OR UTILITY POLE

SIGN BRIDGE

CANTILEVER SIGN BRIDGE

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

ESTR EXISTING SIGN TO REMAIN

S. BARKER ROAD

J23-1 (2S)

PAGE 10 OF 18

PROJECT NO: 1060-33-97

HWY: IH 894/IH 94/USH 45

COUNTY: WAUKESHA

PERMANENT SIGNING PLAN

PLOT SCALE: 40:1

WISDOT/CADDS SHEET 42

SHEET

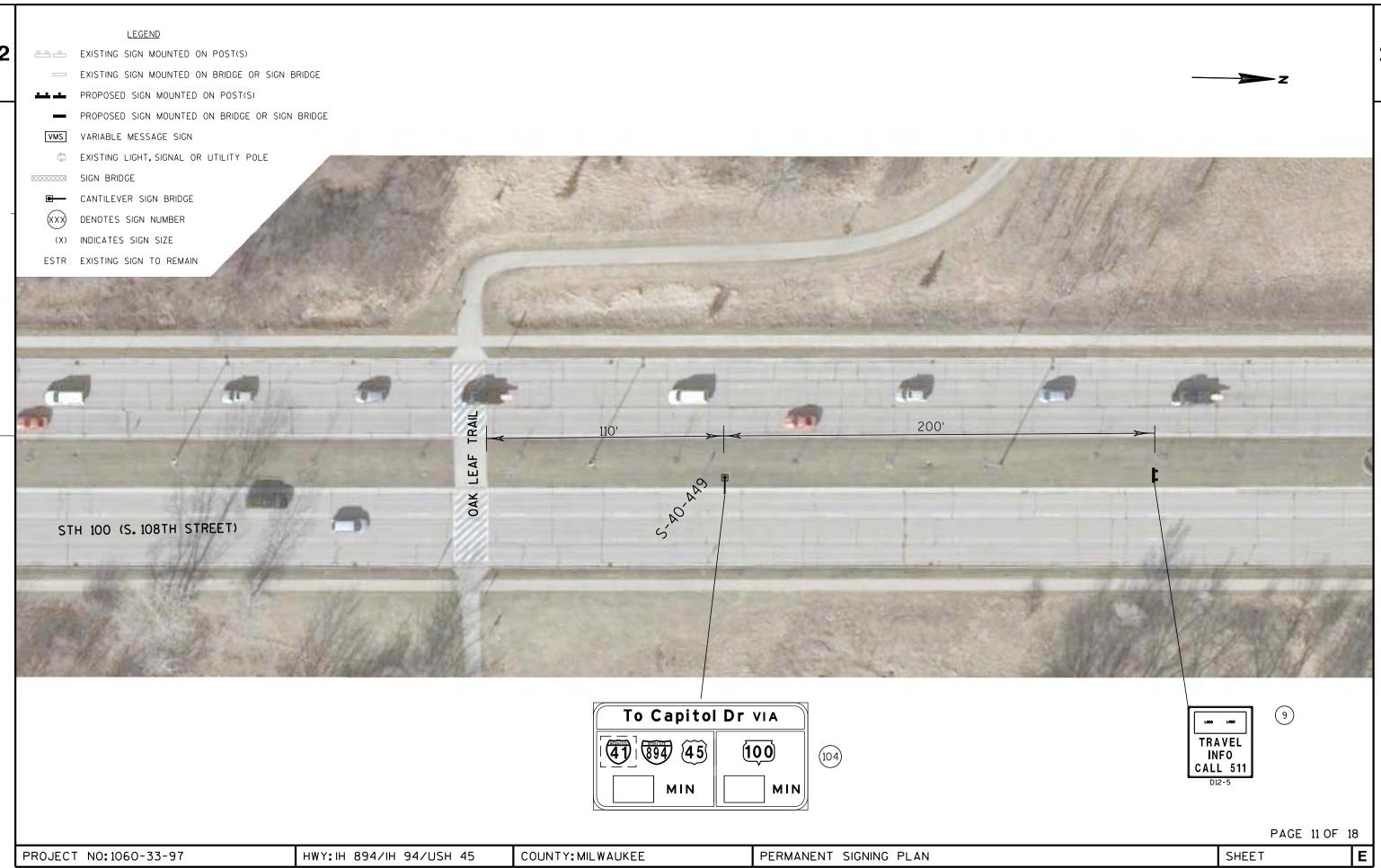
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PLOT BY : MSCCXV

PLOT NAME : \$FILE\$



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LEGEND EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

PROPOSED SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

VMS VARIABLE MESSAGE SIGN

EXISTING LIGHT, SIGNAL OR UTILITY POLE

SIGN BRIDGE

CANTILEVER SIGN BRIDGE

DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

ESTR EXISTING SIGN TO REMAIN



PAGE 12 OF 18

COUNTY: MILWAUKEE PROJECT NO: 1060-33-97 HWY: IH 894/IH 94/USH 45 PERMANENT SIGNING PLAN

FILE NAME : J:\projects\d2_10603394\97\023212_ps.dgn

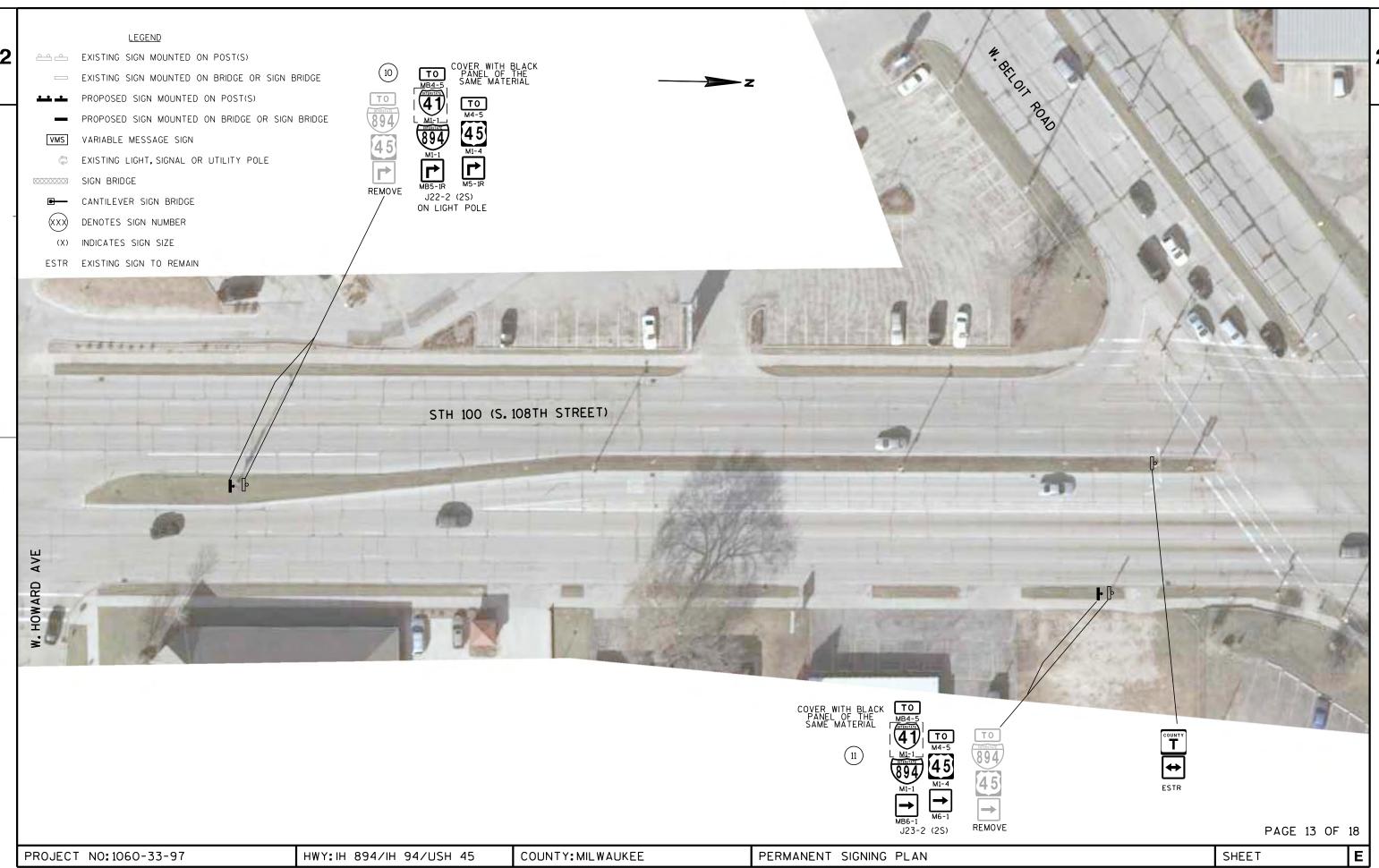
PLOT DATE: 06-DEC-2013 07:19

PLOT BY : MSCCXV PLOT NAME : \$FILE\$

PLOT SCALE: 40:1

WISDOT/CADDS SHEET 42

SHEET



FILE NAME: J:\projects\d2_10603394\97\023213_ps.dgn

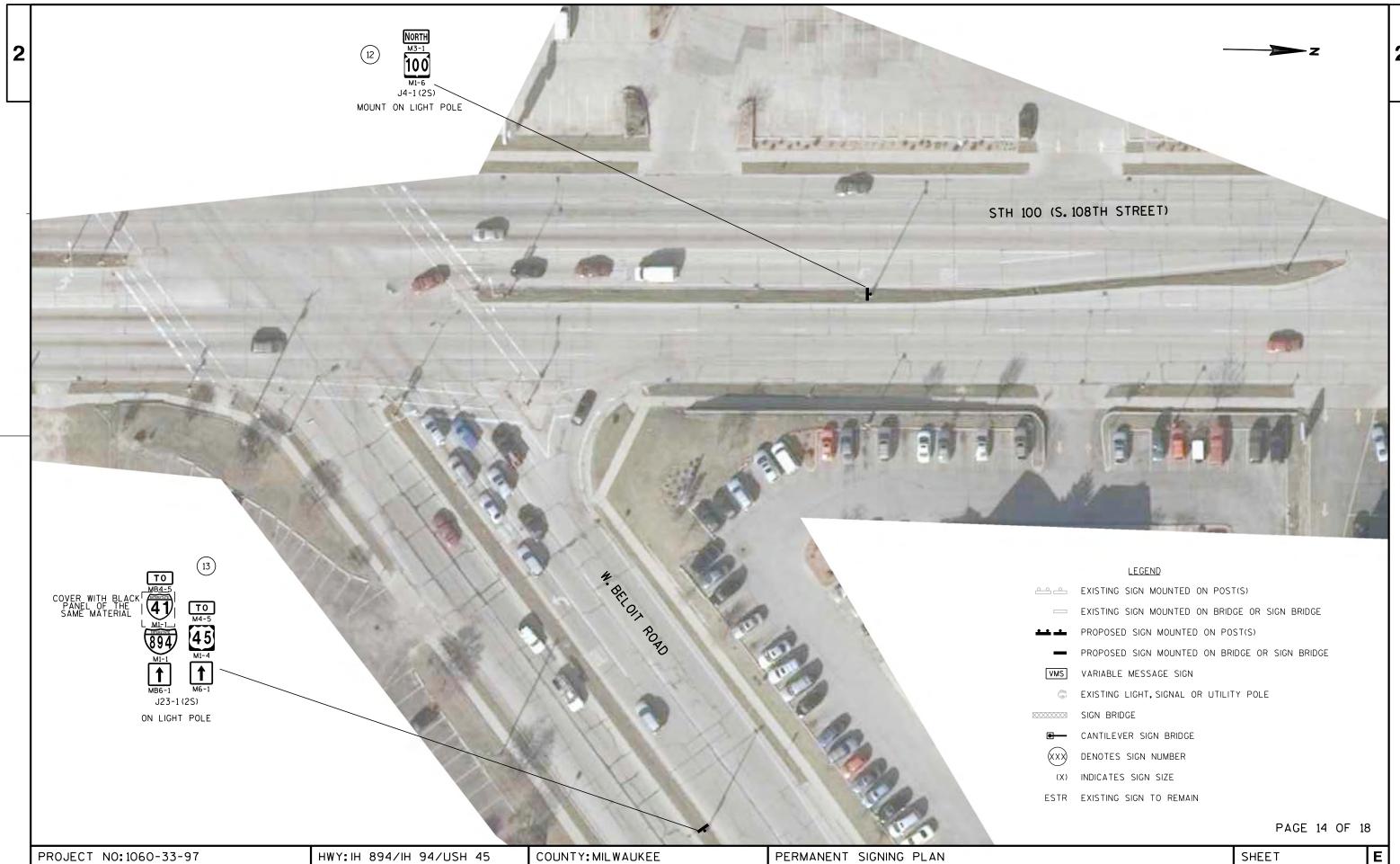
PLOT DATE: 06-DEC-2013 07:20

PLOT BY: MSCCXV

PLOT NAME: \$FILE\$

PLOT SCALE: 40:1

WISDOT/CADDS SHEET 42



FILE NAME: J:\projects\d2_10603394\97\023214_ps.dgn

PLOT DATE: 06-DEC-2013 07:20

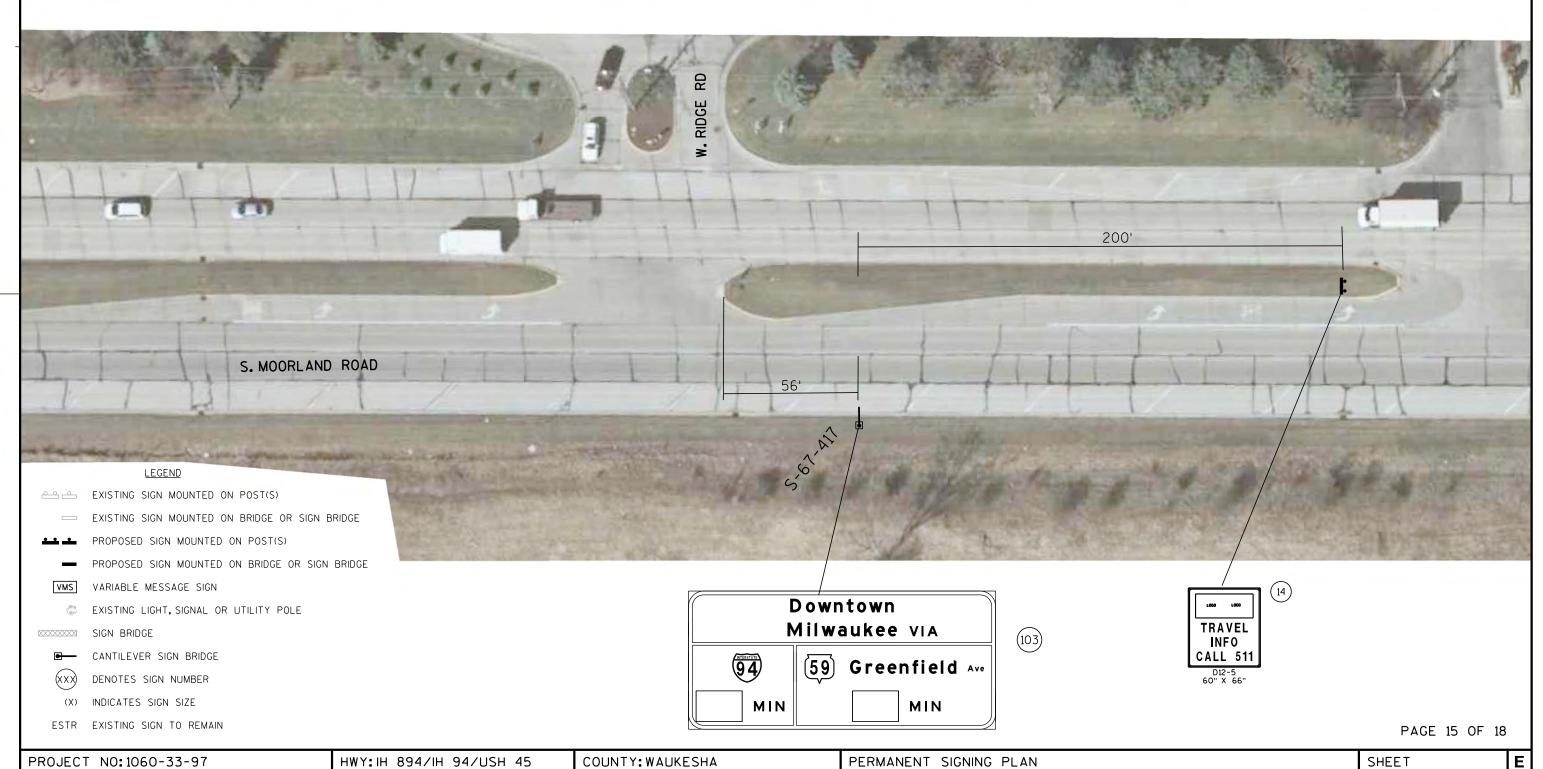
PLOT BY: MSCCXV

PLOT NAME: \$FILE\$

PLOT SCALE: 40:1

WISDOT/CADDS SHEET 42

2



FILE NAME: J:\projects\d2_10603394\97\023215_ps.dgn

PLOT DATE: 06-DEC-2013 07:20 PLOT BY: MSCCXV PLOT NAME: \$FILE\$ PLOT SCALE: 40:1

WISDOT/CADDS SHEET 42



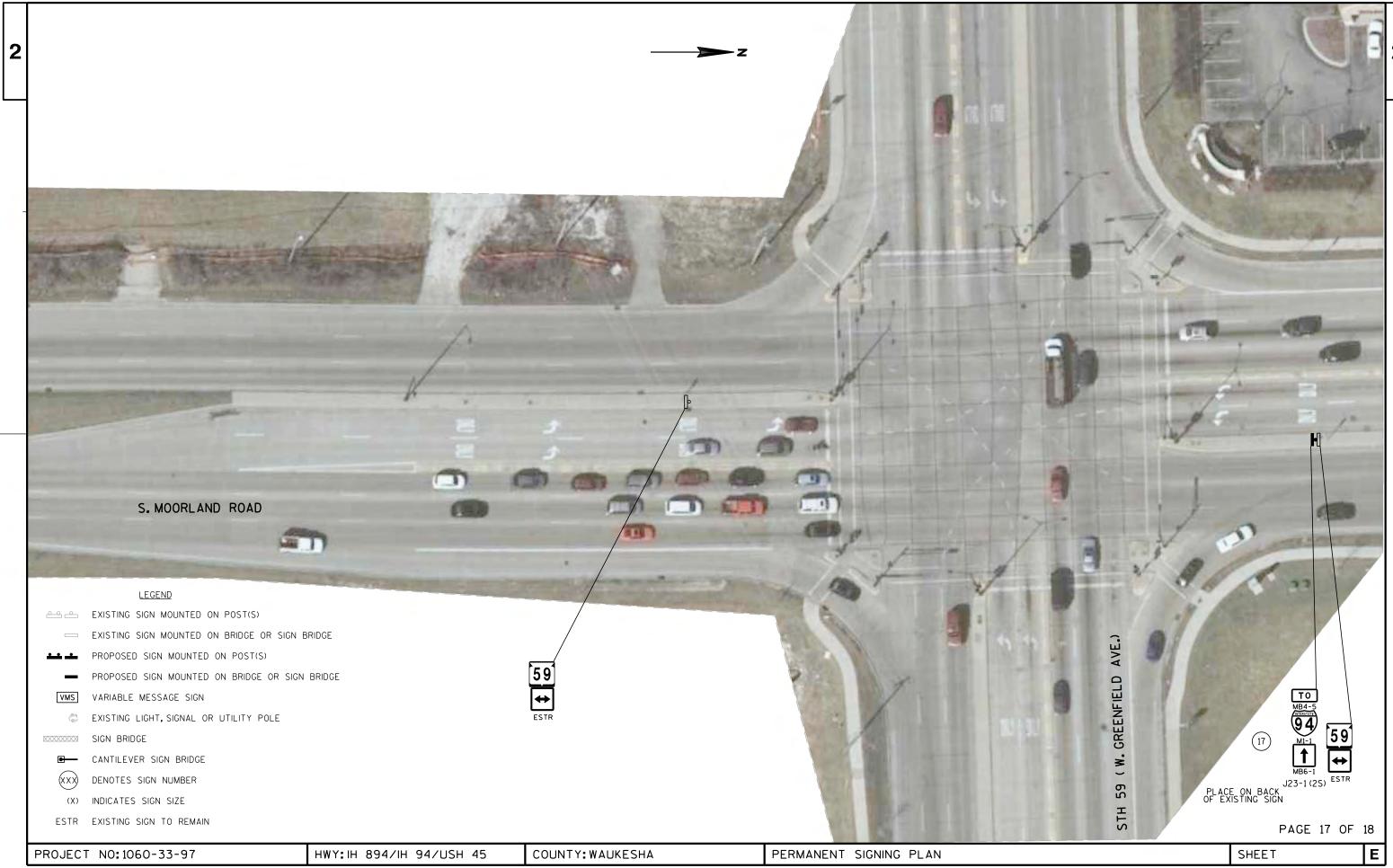
FILE NAME: J:\projects\d2_10603394\97\023216_ps.dgn

PLOT DATE: 06-DEC-2013 07:20

PLOT NAME: \$FILE\$

PLOT SCALE: 40:1

WISDOT/CADDS SHEET 42



FILE NAME: J:\projects\d2_10603394\97\023217_ps.dgn

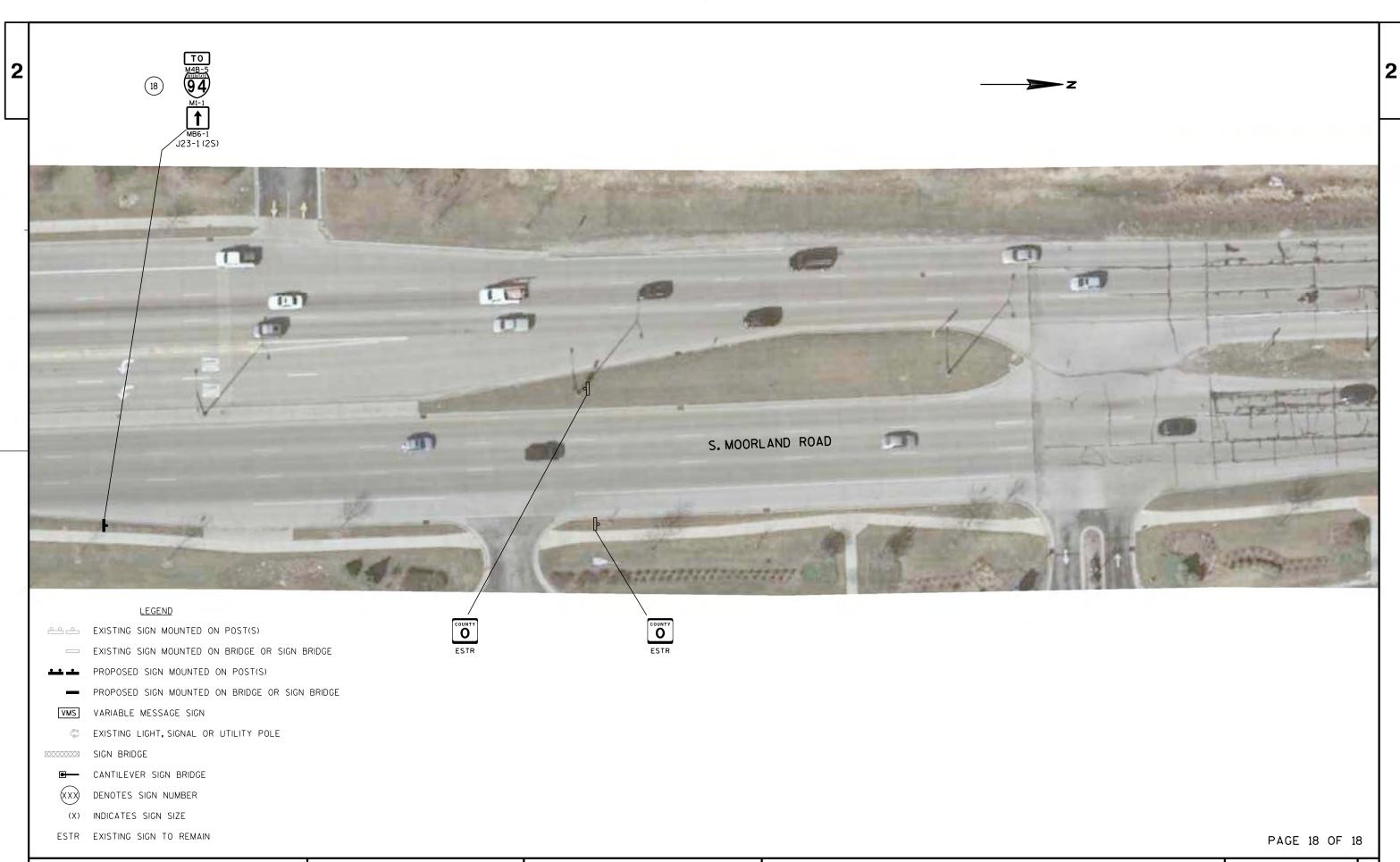
PLOT DATE: 06-DEC-2013 07:20

PLOT BY: MSCCXV

PLOT NAME: \$FILE\$

PLOT SCALE: 40:1

WISDOT/CADDS SHEET 42



PROJECT NO:1060-33-97 HWY: IH 894/IH 94/USH 45 COUNTY: WAUKESHA PERMANENT SIGNING PLAN SHEET **E**

FILE NAME: J:\projects\d2_10603394\97\023218_ps.dgn

PLOT DATE: 06-DEC-2013 07:21

PLOT BY: MSCCXV

PLOT NAME: \$FILE\$

PLOT SCALE: 40:1

WISDOT/CADDS SHEET 42

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

GENERAL NOTES

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT

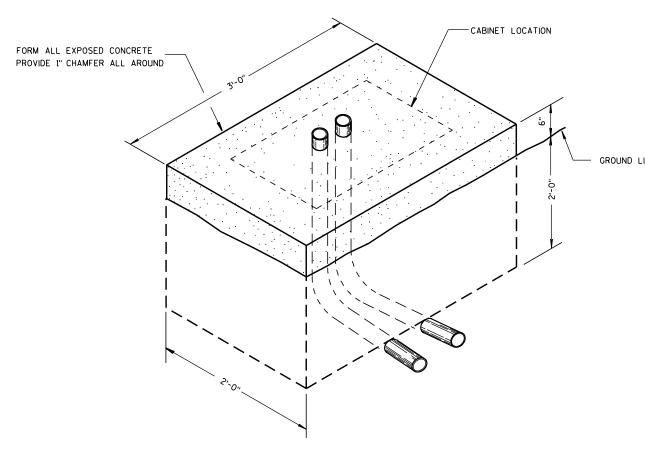
GROUND LINE PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

> ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

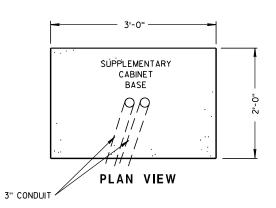
CONDUIT EXITING THE CONCRETE BASE (TWO THREE INCH) SHALL TERMINATE AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.



ISOMETRIC VIEW



SUPPLEMENTARY CABINET CONCRETE BASE

(C.Y. CONCRETE = APPROX. 0.56)

PROJECT NO: 1060-33-97 HWY: IH 894/IH 94/USH 45

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\024100_sp_cd.dgn

COUNTY: MILWAUKEE

TRAFFIC SIGNAL DETAILS PLOT BY : MSCITM

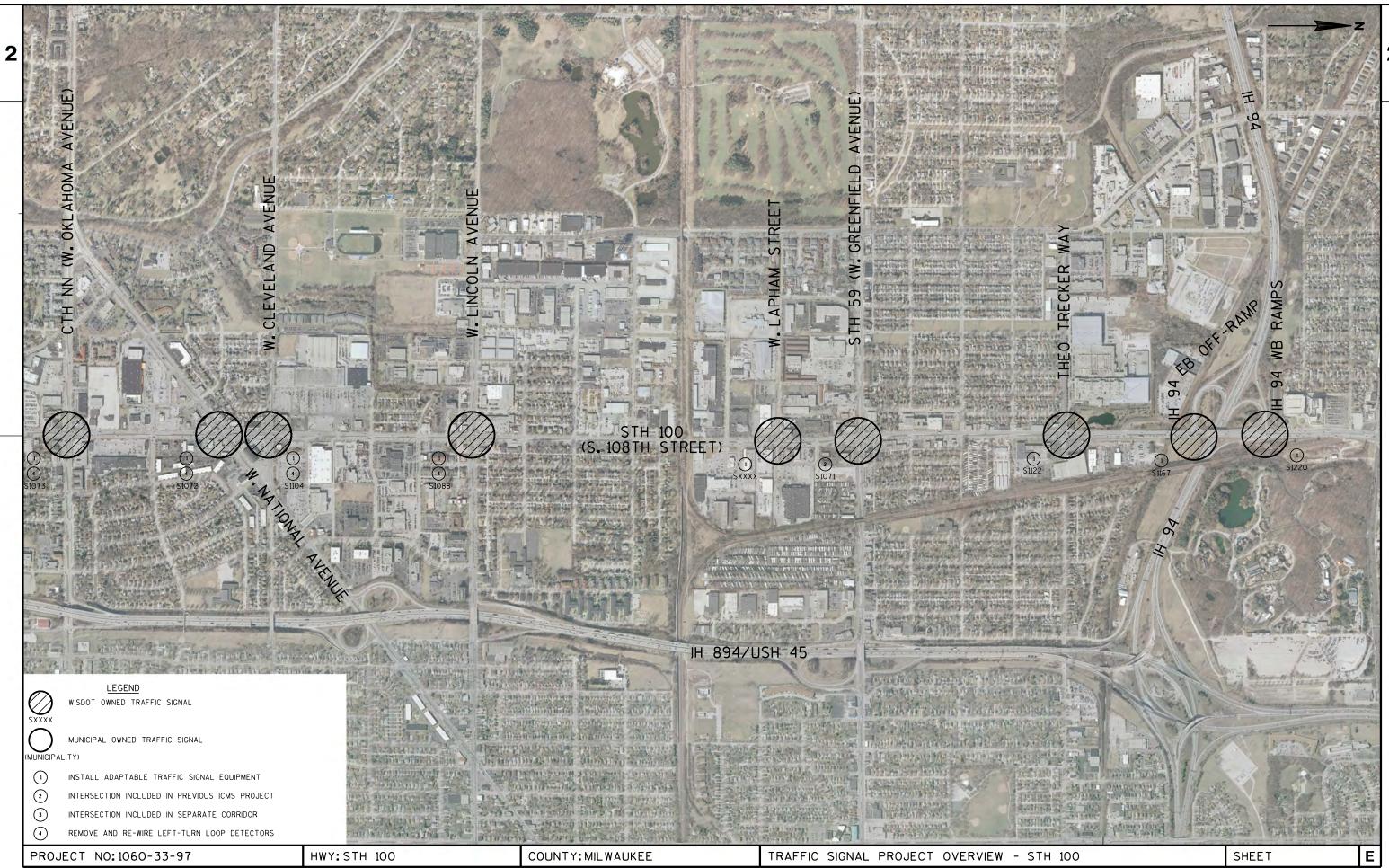
PLOT NAME :

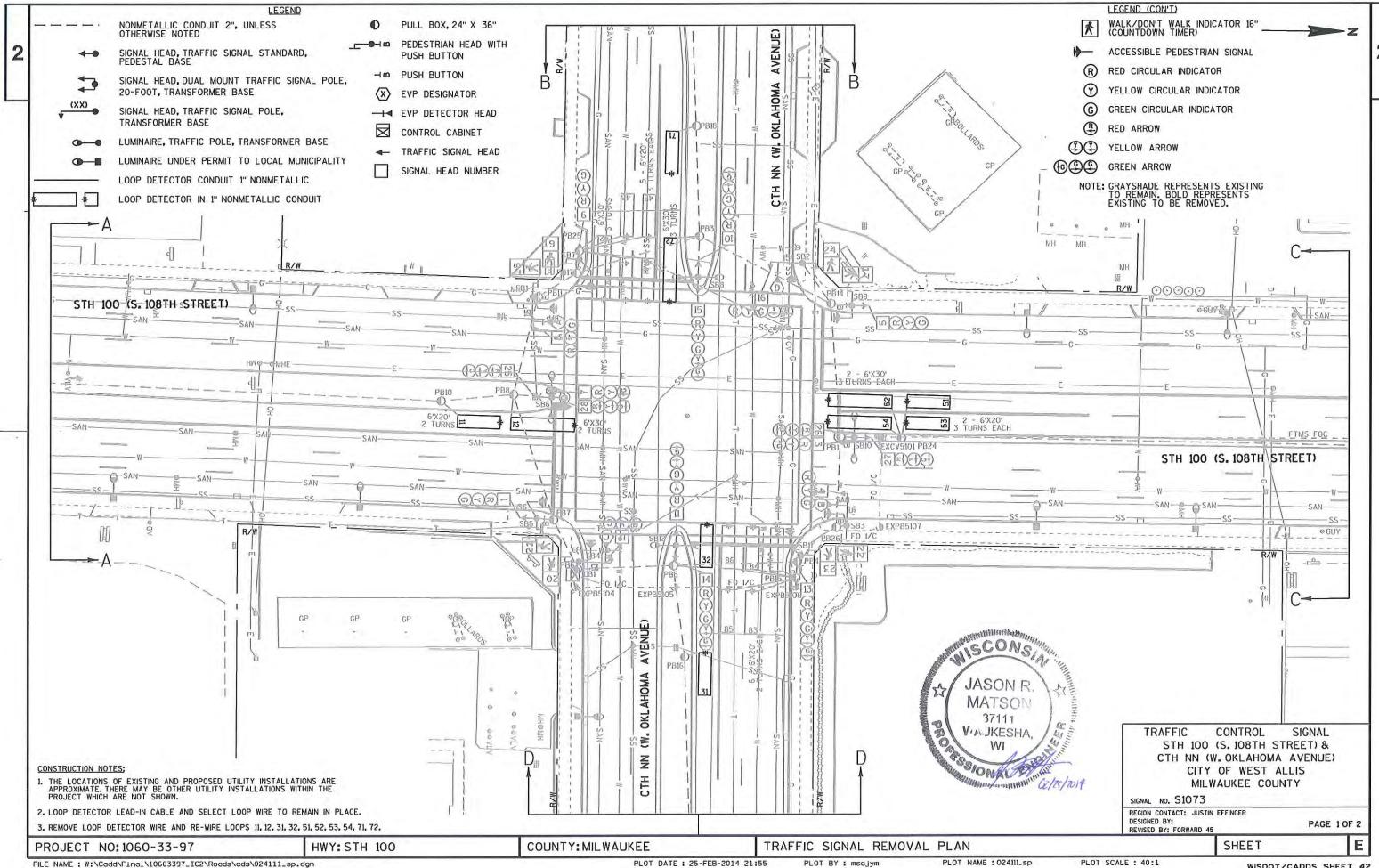
PLOT SCALE : 200:1

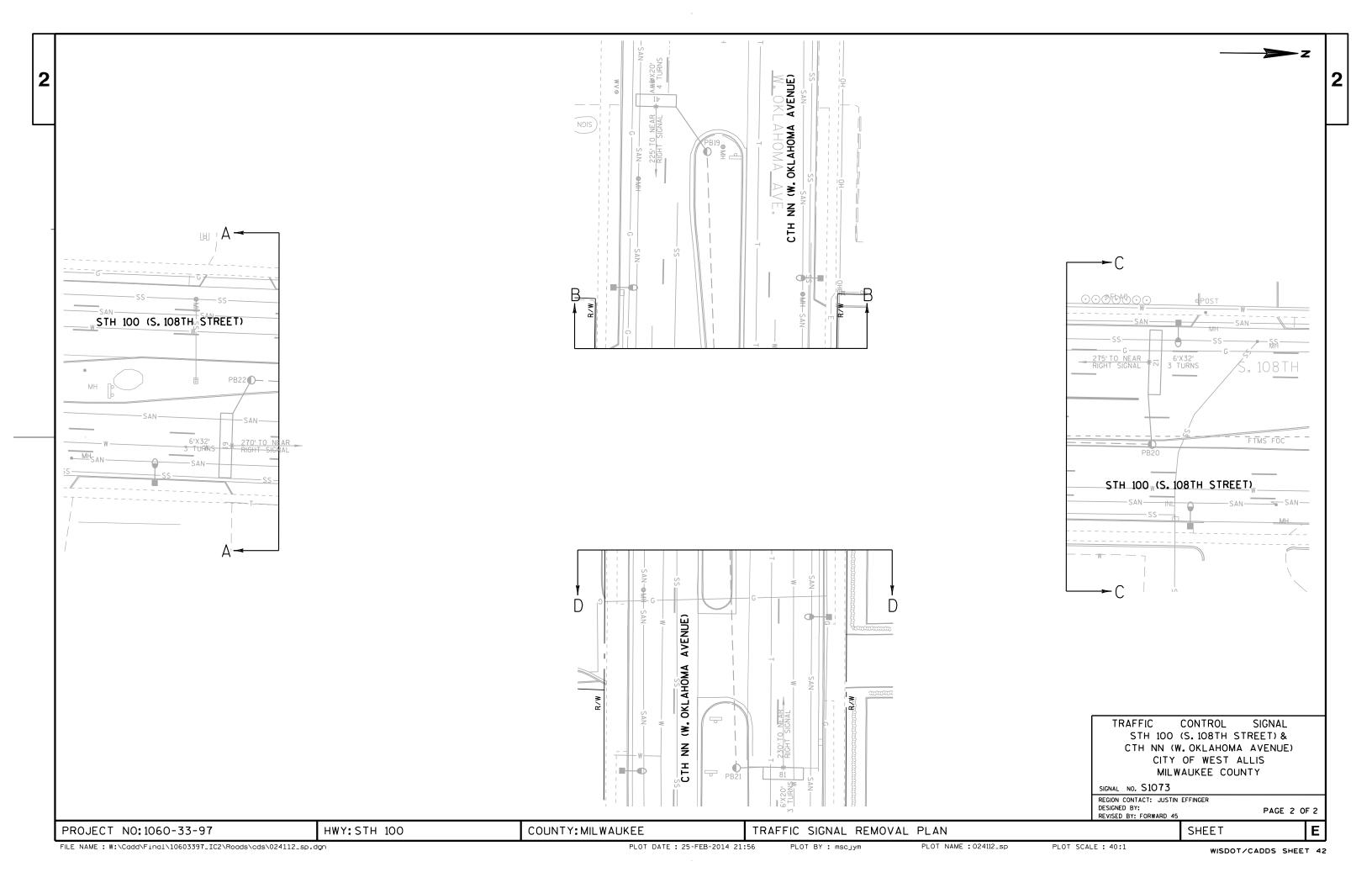
WISDOT/CADDS SHEET 42

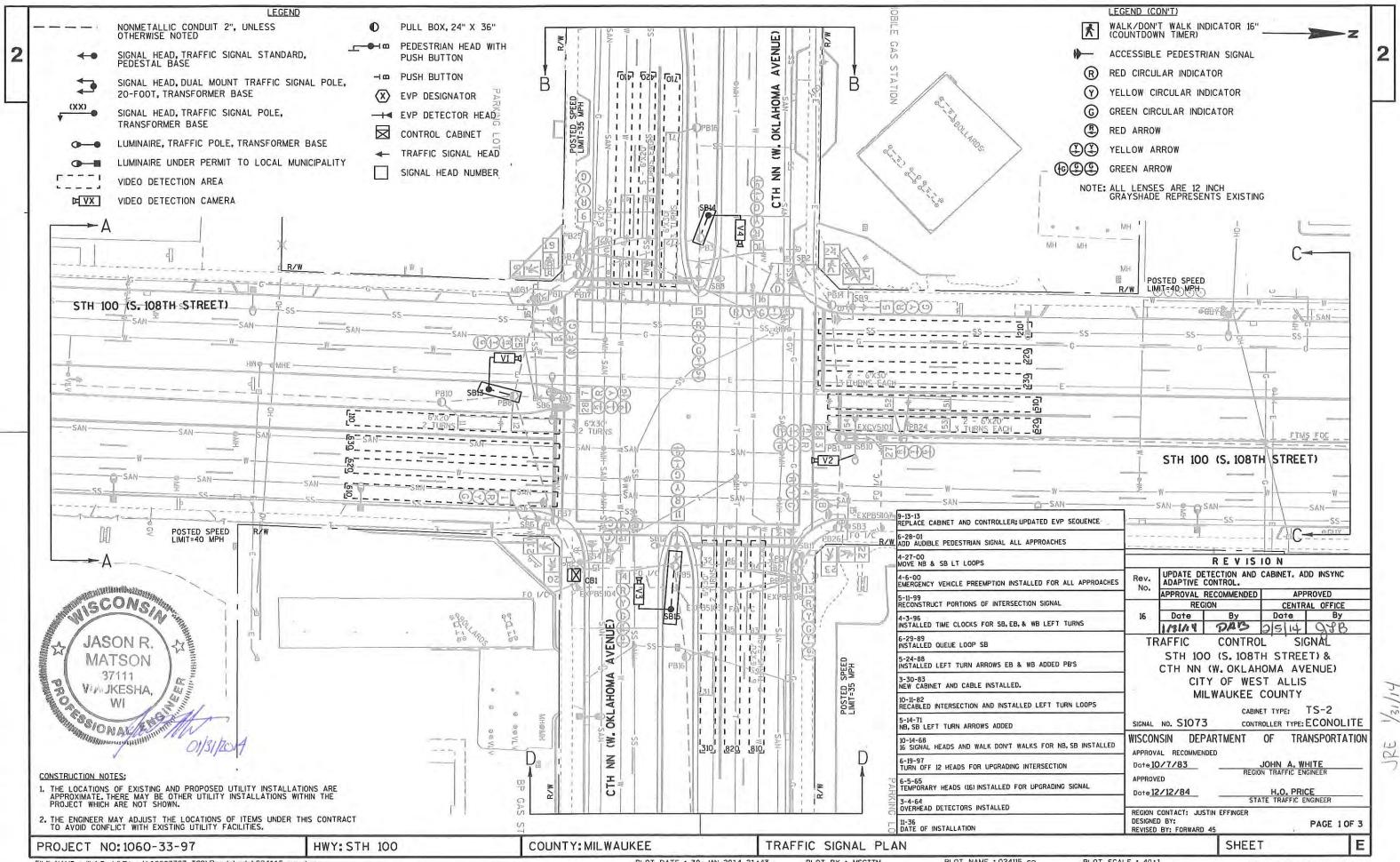
PLOT DATE: 30-JAN-2014 21:40

SHEET









FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\024115_sp.dgn

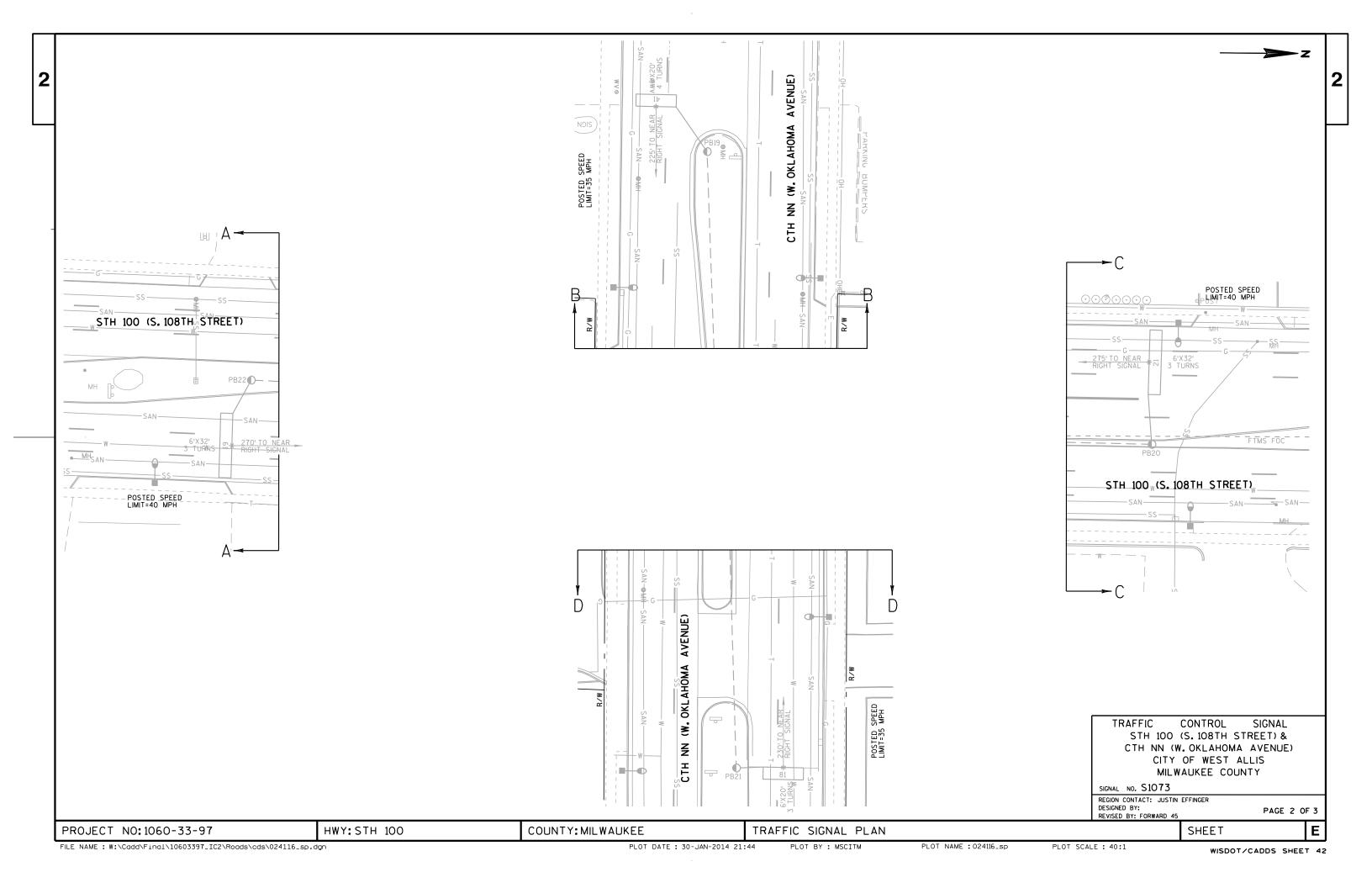
PLOT DATE: 30-JAN-2014 21:43

PLOT BY : MSCITM

PLOT NAME : 024115_sp

PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42



TYPE OF INTERCONNECT/COMMI	JNICATION
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	X

TYPE OF COORDINA	TION	
NONE		Ī.
TBC		1.7
TRAFFIC RESPONSIVE		57
ADAPTIVE		X
*LOCATION OF MASTER CONTROLLER NO:	S-	
SIGNAL SYSTEM ":	SS- 00 -	14

RADIO

BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	-

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	В	С	D
MOVEMENT	-		↓ ↑	↓ ↑
PHASE	2+5	6+1	4+8	8+4

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

STF	1 100 (S. 108TH STREET) &
CTH	NN (W. OKLAHOMA AVENUE
	CITY OF WEST ALLIS
	MILWAUKEE COUNTY

SHEET

SIGNAL NO. S1073 CABINET TYPE: TS2 CONTROLLER TYPE: ECONOLITE

DATE 02/14 PAGE NO. 3 OF 3

COUNTY: MILWAUKEE SEQUENCE OF OPERATIONS PLOT DATE: 30-JAN-2014 21:47

PLOT NAME : 024119_sp_ph

CONTROLLER LOGIC

ENTRY W / 0

6

6

8

2

2

4

PHASE RECALL

MIN

MIN

ACTIVE

X

X

X

X

X

PHASE

NUMBER

1

2

3

4

5

6

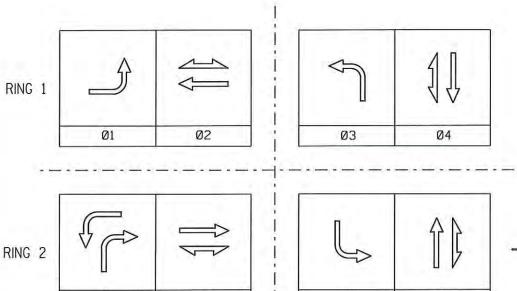
7

8

LOCKING

PLOT SCALE : 40:1

	HEAD NUMBERS	Ā S H
01	25,26	R
02	5,7,8	R
03	14,15	-
04	9,10,11,12	R
05	13,16,27,28	R,R
06	1,3,4	R
07	10,11	12
Ø8	13,14,15,16	R
Ø2P	17,18	
Ø4P	19,20	
Ø6P	21,22	
Ø8P	23,24	
OLE		7
OLF		
OLG		
OLH		1



			n	A N
2				
	Ц	i		Цν
_([]	Ø5	06	07	08

DET	FCTOR	LOGIC

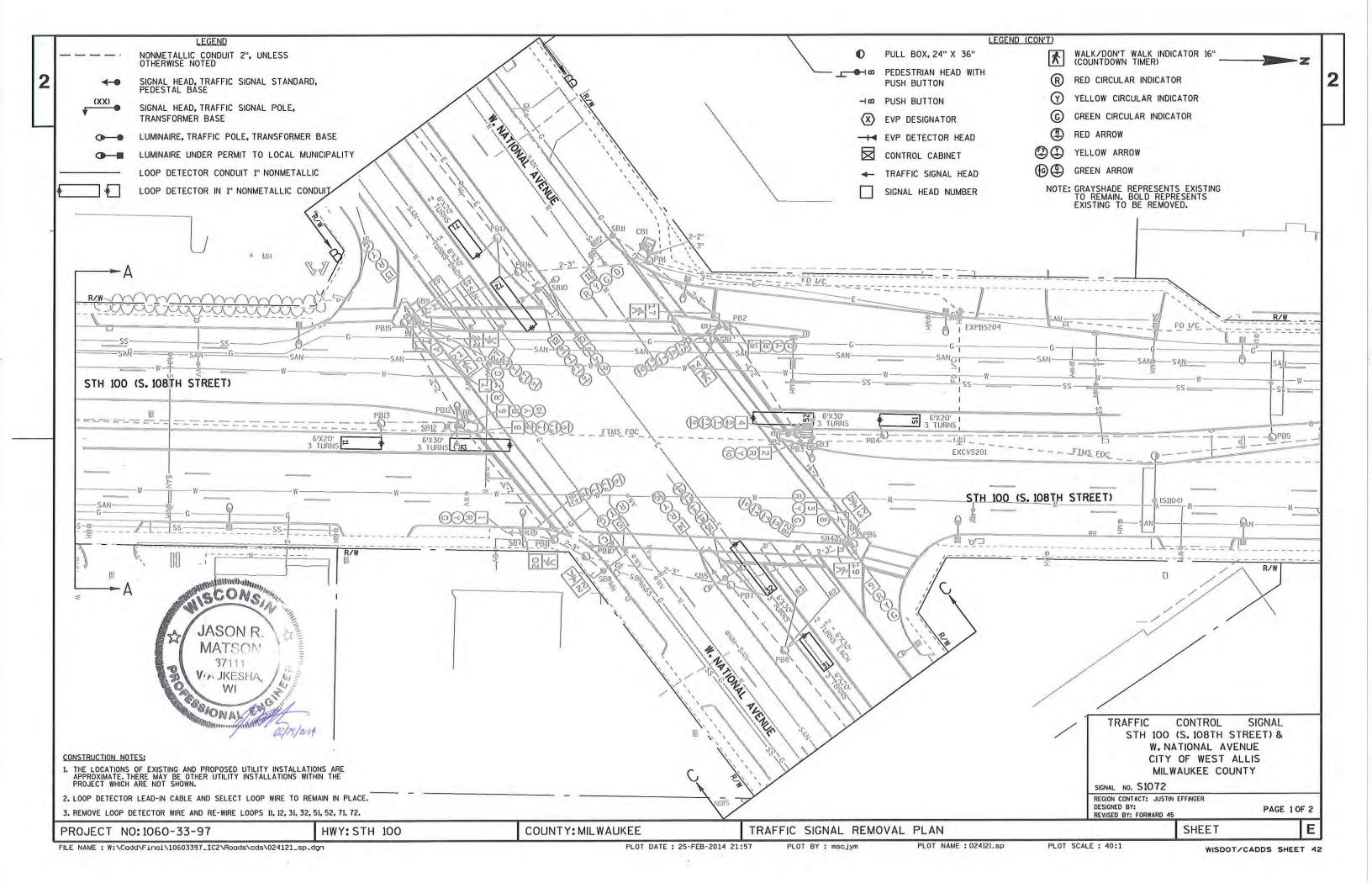
DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR *(S)	11/12	31/32	42	45/46	53/54	71/72	82	85/86
CALLED PHASE	1	3	4	4	5	7	8	8
CALL OPTION	Χ	Х	X	X	×	X	X	X
DELAY TIME			X		1 - 1		X	
EXTEND OPTION	Х	X	X	X	Х	X	X	X
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE		8				4		

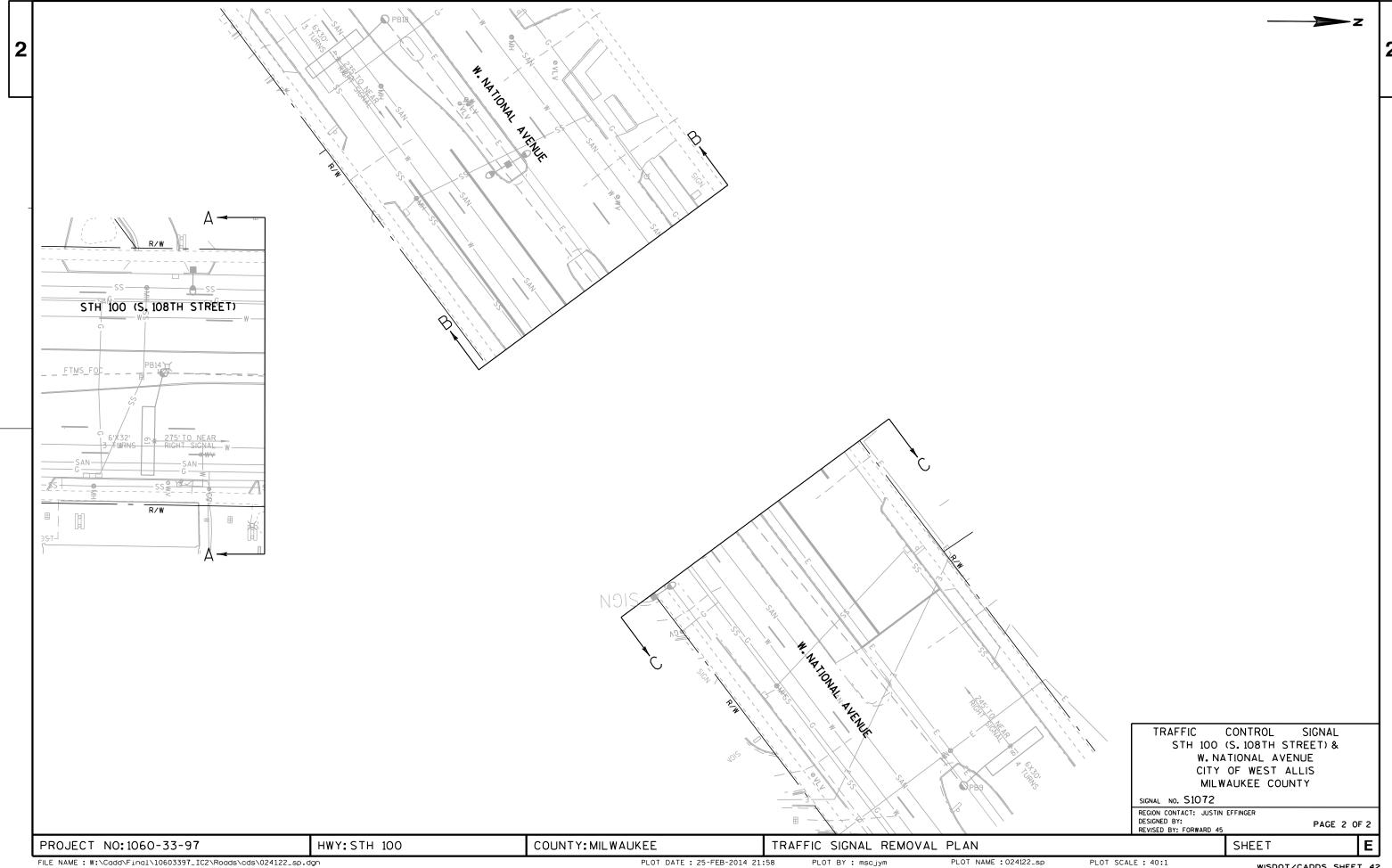
DETECTOR INPUT	4	2	8	6	12	10	16	14
LAN LOOP DETECTOR *(S)	21	41	43/44	51/52	61	81	83/84	
CALLED PHASE	2	4	4	5	6	8	8	
CALL OPTION	X		X	X	X		X	
DELAY TIME			LET					
EXTEND OPTION	X	X	X	X	Х	X	X	
EXTEND TIME		X				X		
USE ADDED INITIAL	Х				X			
CROSS SWITCH PHASE								

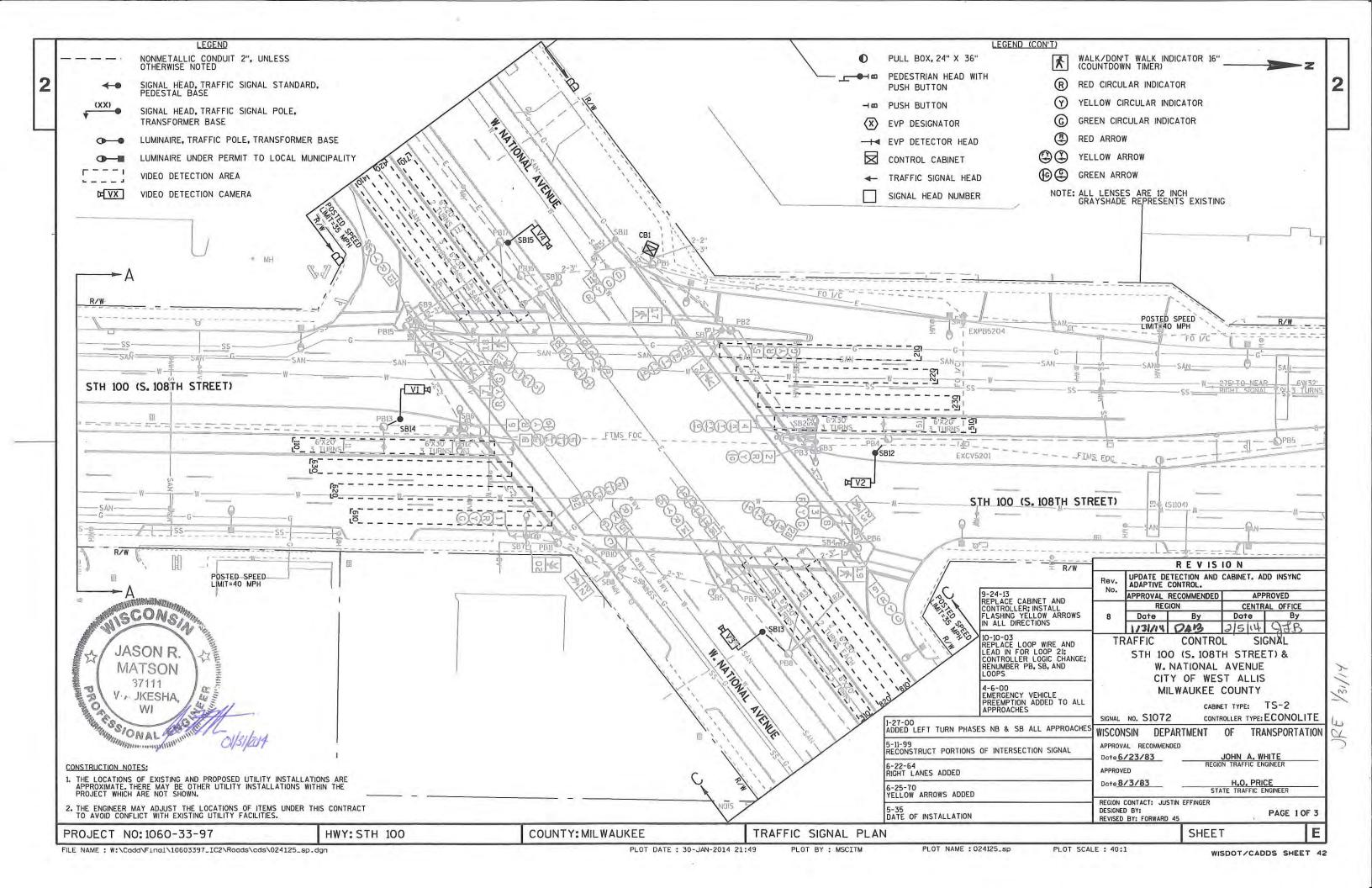
								DETECTOR INPUT
110	220	310	420	520	620	710	820	PLAN LOOP DETECTOR *(S)
1	2	3	4	5	6	7	8	CALLED PHASE
X	X	×	X	X	X	X	X	CALL OPTION
								DELAY TIME
X	X	X	X	X	X	Х	Х	EXTEND OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

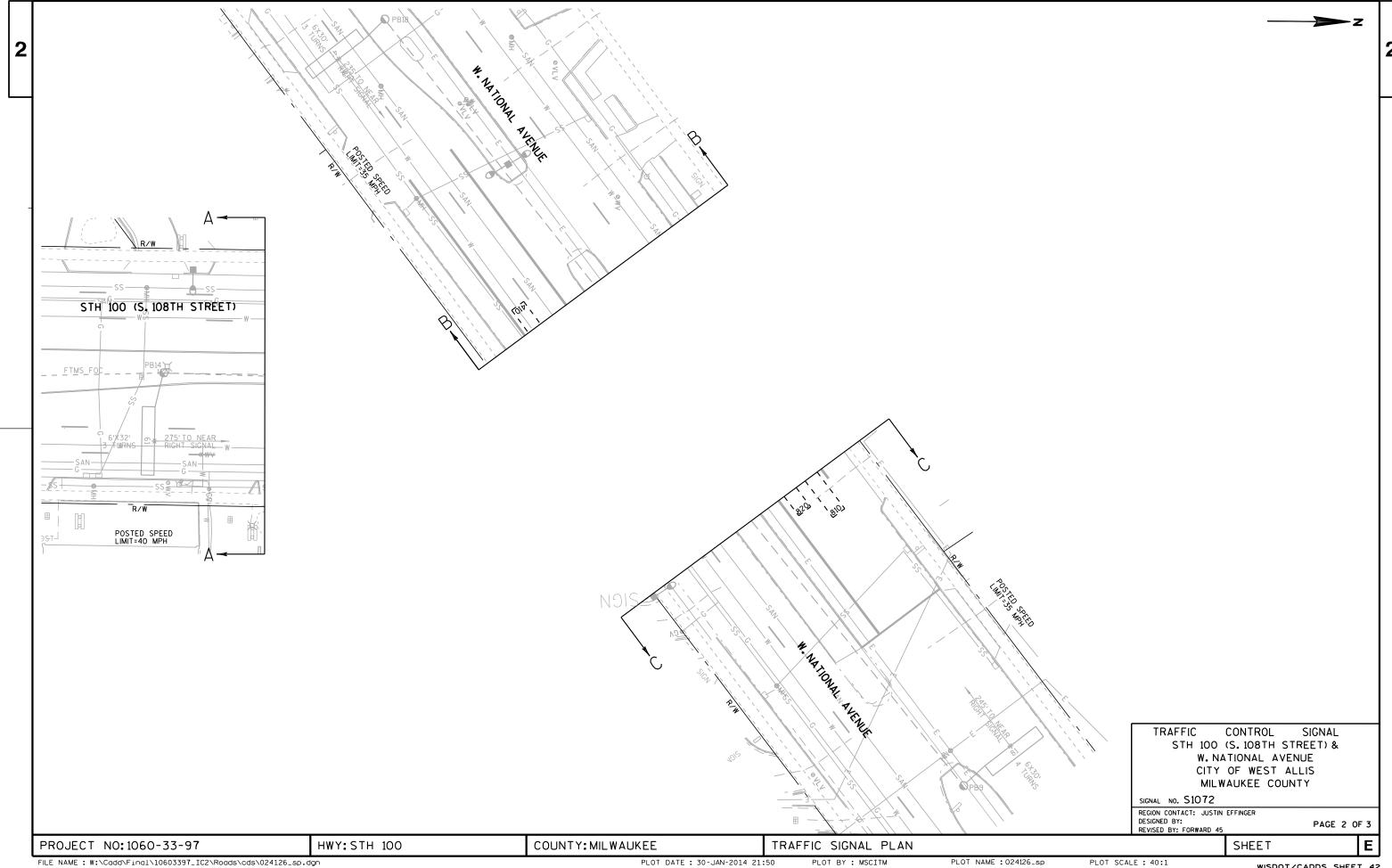
							DETECTOR INPUT
210	230	410	510	610	630	810	PLAN LOOP DETECTOR TO
2	2	4	5	6	6	8	CALLED PHASE
X	X	Х	X	X	X	X	CALL OPTION
				42.00			DELAY TIME
X	X	X	X	X	X	X	EXTEND OPTION
					V = 0		EXTEND TIME
							USE ADDED INITIAL
							CROSS SWITCH PHASE

SA









NONE CLOSED LOOP

TWISTED PAIR*
FIBER OPTIC* FIBER OPTIC (ETHERNET) RADIO

TYPE OF INTERCONNECT/COMMUNICATION

TYPE OF COORDINA	TION	
NONE		T
TBC		
TRAFFIC RESPONSIVE		
ADAPTIVE		×
*LOCATION OF MASTER CONTROLLER NO:	S-	
SIGNAL SYSTEM #:	SS-00-	14

DV ATHER ACENOV	T
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET IN SEPARATE DOT LIGHTING CABINE	X
IN SEPARATE DOT LIGHTING CABINE	T

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	1
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	В	С	D
MOVEMENT	V 1	\$ A	15	171
PHASE	2+5	6+1	4+7	8+3

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+7 OR 8+3. CONTROLLER SHALL RETURN TO PHASES 4+8.

STH	100	(S.	108TH	STREET) &
	W. N.	OITA	NAL A	VENUE
	CITY	OF	WEST	ALLIS
	MIL	NAU	KEE CO	YTMUC

SIGNAL NO. S1072 CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE PAGE NO. 3 OF 3

DATE 02/14

SHEET

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		×
2		6	MIN	х
3		8	_	×
4		8		×
5		2		×
6		2	MIN	х
7		4	- 1	х
8		4		×

			111	Λ 1		- 1 - 11
4,25		RING 1		O.L. E		14
5,6,7	R			0000	_	
12,27	100	+	Ø1	02	Ø3	-
13,14,15	R	L	Ø1	02	23	
8,26	(Je	1.50	خناد ساد خان			
1,2,3	R					
16,28	•	F		4000		1
9,10,11	R			Д О.L. G		n
17,18						0000
21,22		RING 2	47			Q.
19,20		0.000	V			
23,24		-	05		0.7	
4,25	R	1	05	06	07	
12,27	R					
8,26	R			BARR	IER	

08

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR *(S)	11	21	32	42	51	61	72	82
CALLED PHASE	1	2	3	4	5	6	7	8
CALL OPTION	Х	X	Х	X	X	X	X	X
DELAY TIME								
EXTEND OPTION	X	X	X	X	X	X	X	X
EXTEND TIME								
USE ADDED INITIAL		X		1	J 1	X		
CROSS SWITCH PHASE	6		8		2		4	

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR *(S)	12	31	41	43	52	71	81	83
CALLED PHASE	1	3	4	4	5	7	8	8
CALL OPTION	X	X		X	X	X	1	X
DELAY TIME							1	
EXTEND OPTION	X	X	X	X	X	X	X	Х
EXTEND TIME			Х				X	
USE ADDED INITIAL								
CROSS SWITCH PHASE	6	8			2	4		

							DETECTOR INPUT
110	220	310	420	610	630	810	PLAN LOOP DETECTOR *(S)
1	2	3	4	6	6	8	CALLED PHASE
X	X	Х	X	Х	X	Х	CALL OPTION
							DELAY TIME
X	Х	X	Х	X	X	X	EXTEND OPTION
							EXTEND TIME
		15					USE ADDED INITIAL
							CROSS SWITCH PHASE

04

	7-1-						DETECTOR INPUT
210	230	410	510	620	710	820	PLAN LOOP DETECTOR "(S
2	2	4	5	6	6	8	CALLED PHASE
X	X	X	×	X	X	Х	CALL OPTION
4				W			DELAY TIME
Х	X	X	X	×	×	X	EXTEND OPTION
							EXTEND TIME
							USE ADDED INITIAL
							CROSS SWITCH PHASE

PROJECT NO: 1060-33-97

HEAD NUMBERS

4,25 12,27 8,26 16,28

01

02

03

04 05

06

07

08

Ø2P

04P

Ø6P

Ø8P

HWY: STH 100

COUNTY: MILWAUKEE

SEQUENCE OF OPERATIONS

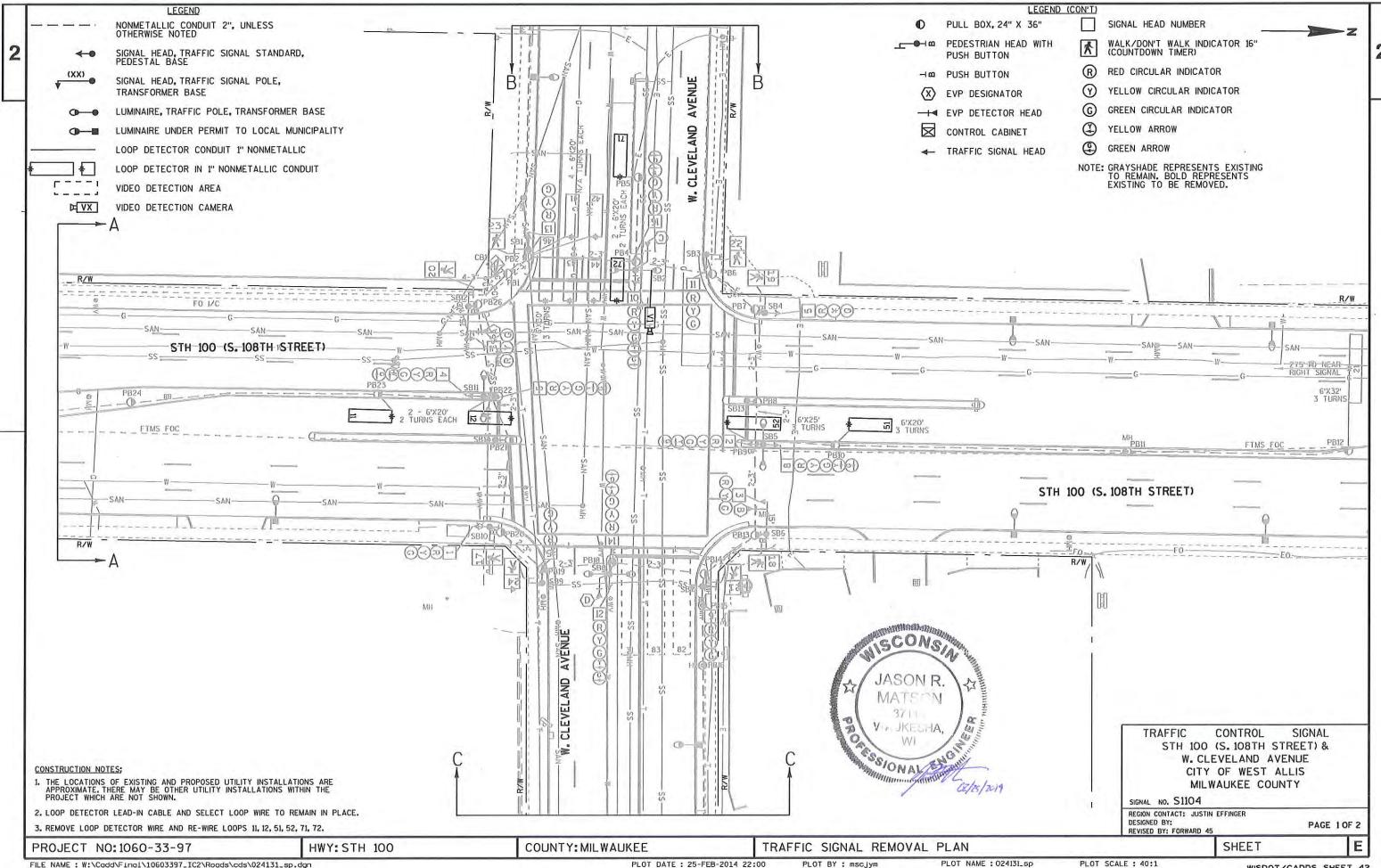
PLOT NAME : 024129_sp_ph

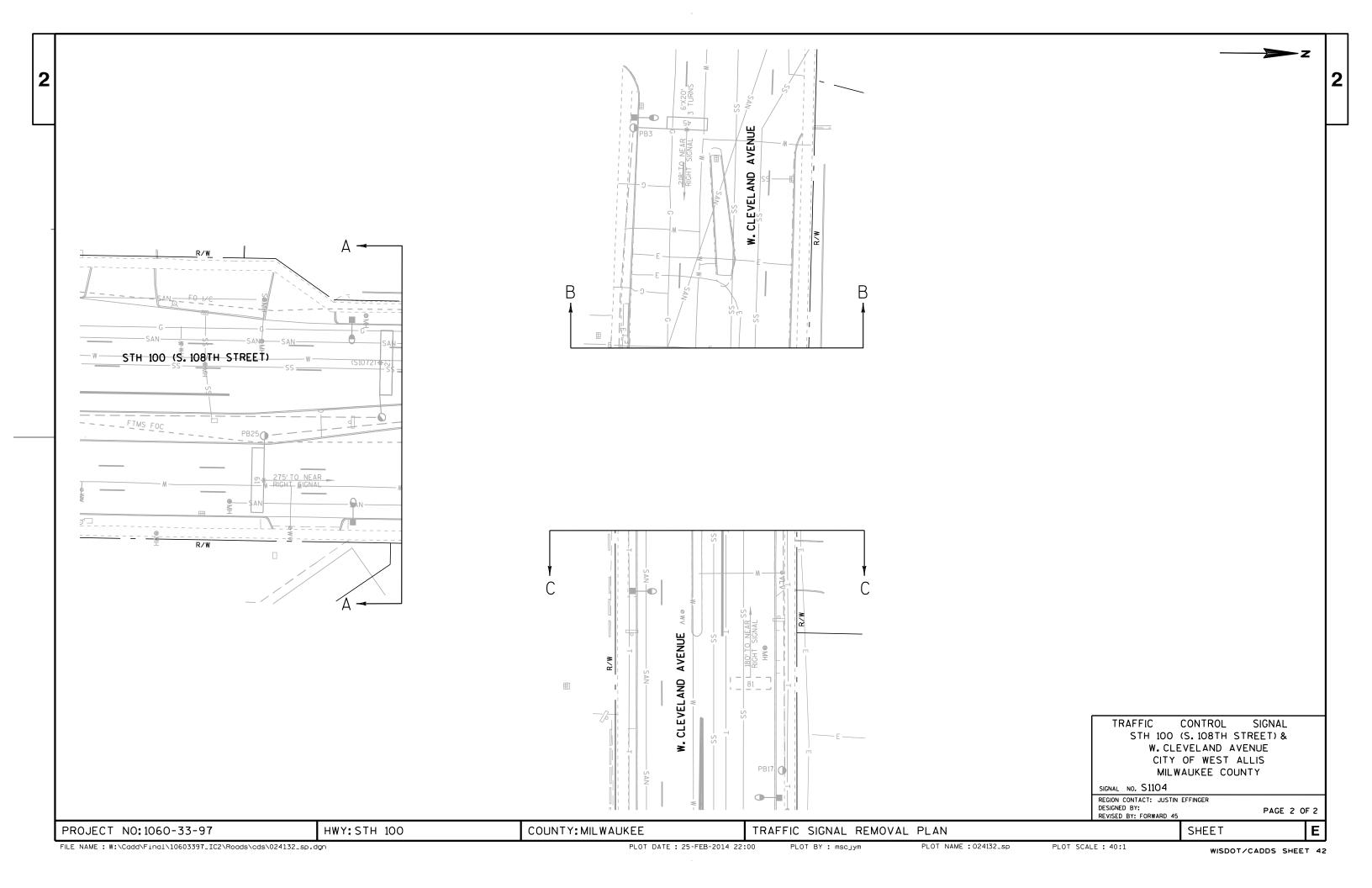
FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\024129_sp_ph.dgn

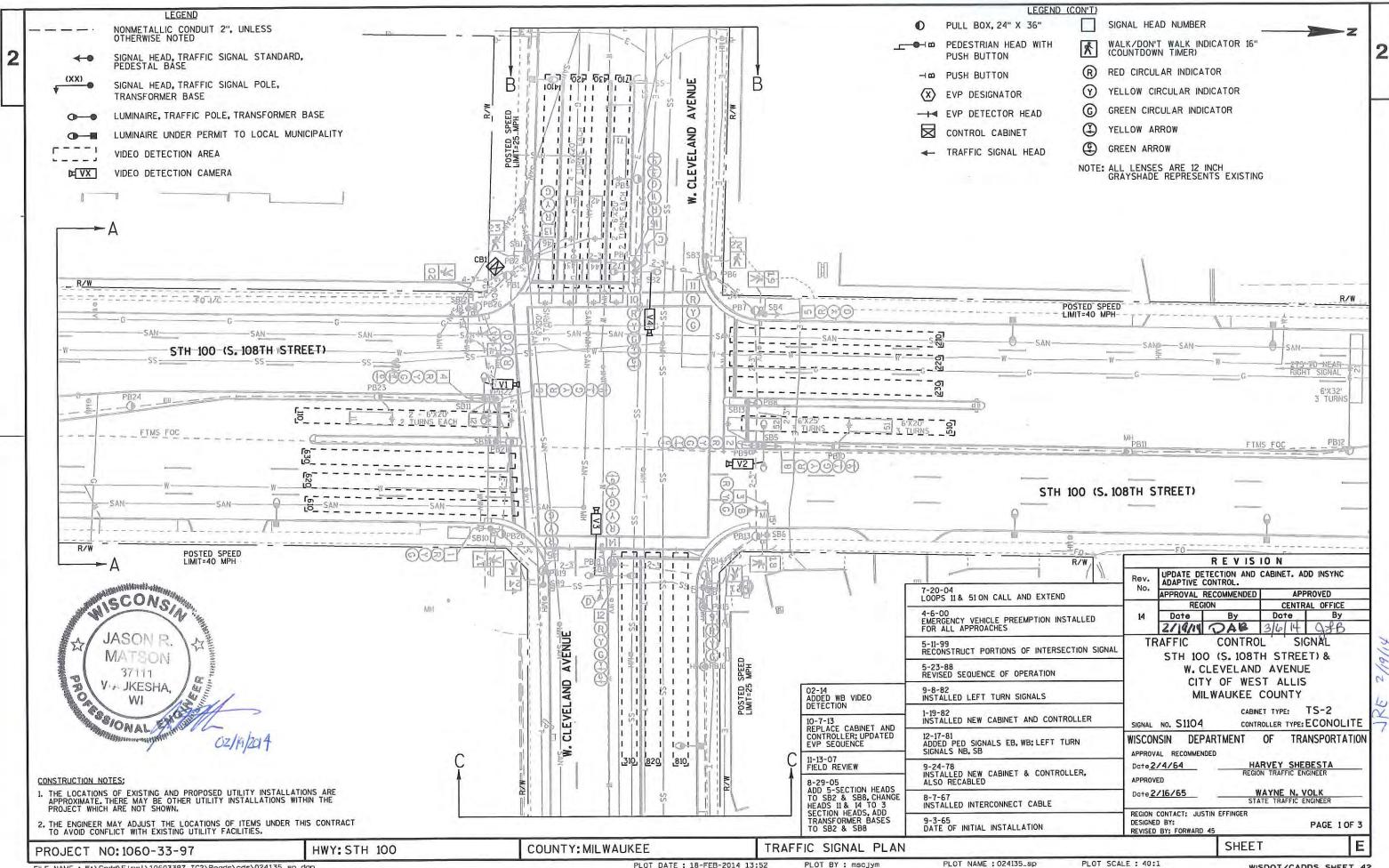
PLOT DATE: 30-JAN-2014 21:52

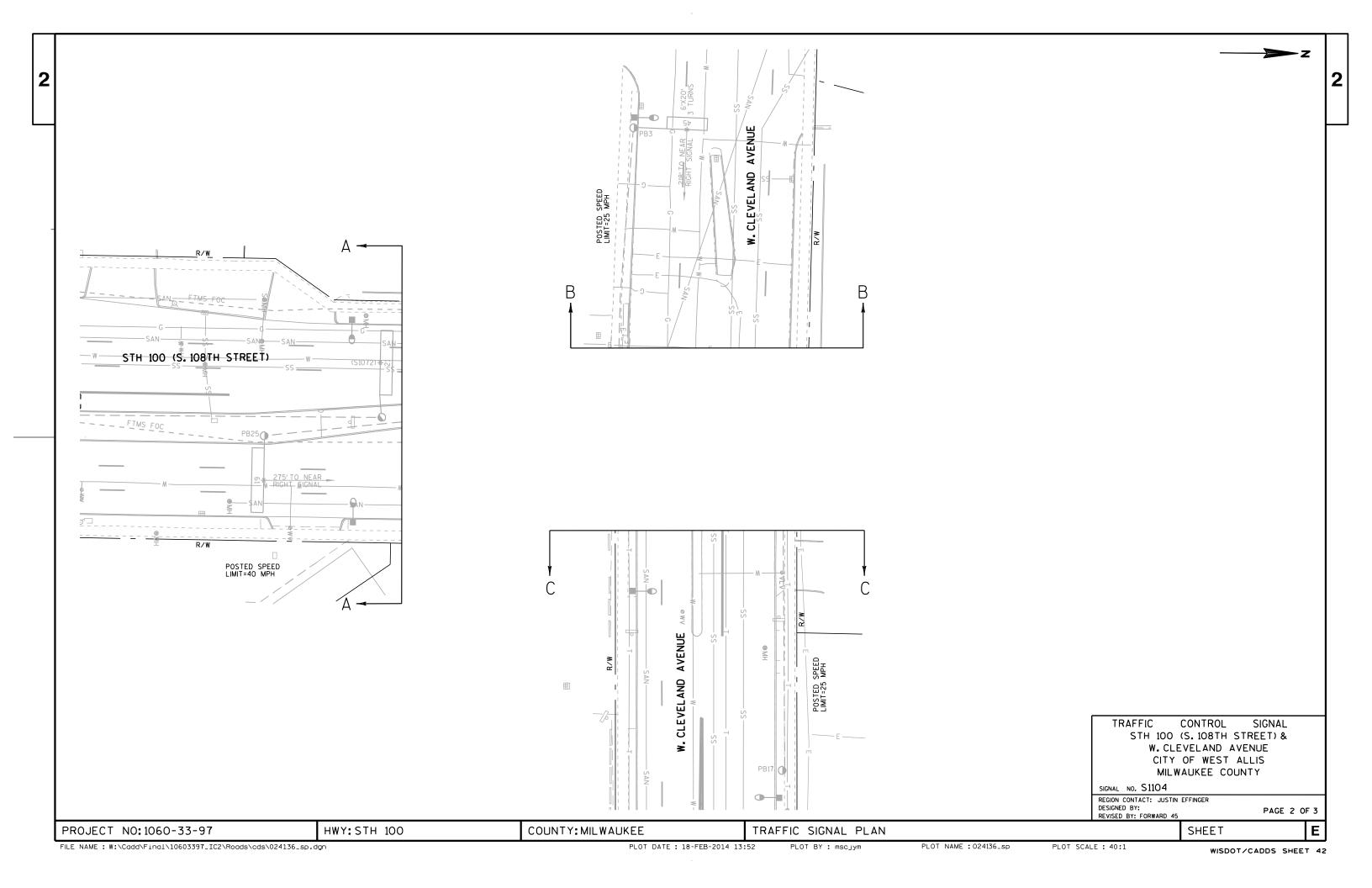
PLOT BY : MSCITM

PLOT SCALE : 40:1









CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1	Tay'	6		x
2		6	MIN	×
3		8		×
4		8		×
5		2		×
6		2	MIN	X
7		4		X
8		4		×

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		×
2		6	MIN	×
3		8		×
4		8		×
5		2		×
6		2	MIN	x
7		4		×
8		4		×

NONE	- 5
CLOSED LOOP	-/-
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	×
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	X
*LOCATION OF MASTER CONTROLLER NO: S-	
SIGNAL SYSTEM *: SS-00-	14

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET IN SEPARATE DOT LIGHTING CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
OPTICOM	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
OUEUE DETECTOR	

DETECTOR LOGIC

BARRIER

02

06

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR *(S)	11/12	41/43	45	51/52	71/72			
CALLED PHASE	1	4	4	5	7			
CALL OPTION	X	Х		X	X			
DELAY TIME								
EXTEND OPTION	X	X	Х	X	X			
EXTEND TIME		- = 1	X		-			
USE ADDED INITIAL		i = ()						
CROSS SWITCH PHASE	6			2	4			

RING 1

RING 2

01

05

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR *(S)	21	42/44	46	61				
CALLED PHASE	2	4	4	6				
CALL OPTION	X	X	X	X				
DELAY TIME			Х					
EXTEND OPTION	X	X	X	X				
EXTEND TIME								
USE ADDED INITIAL	Х			Х				
CROSS SWITCH PHASE								

						b - 1		DETECTOR INPUT
110	220	310	420	510	620	710	820	PLAN LOOP DETECTOR "(S
1	2	3	4	5	6	7	8	CALLED PHASE
X	X	X	X	X	X	X	X	CALL OPTION
								DELAY TIME
X	Х	X	X	X	X	X	X	EXTEND OPTION
-2.1								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

04

08

03

07

DETECTOR INPUT							
PLAN LOOP DETECT	810	630	610	430	410	230	210
CALLED PHASE	8	6	6	4	4	2	2
CALL OPTION	X	X	X	X	X	Х	X
DELAY TIME	X				X		
EXTEND OPTION	X	X	X	X	Х	X	X
EXTEND TIME					-		
USE ADDED INITIAL							
CROSS SWITCH PHA							

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	Α	В	c	D
MOVEMENT	<	<u>←</u>	↓ ↑	↓ ↑
PHASE	2+6	6+2	4+8	8+4

AFTER PREEMPTION SEQUENCE 2+6 OR 2+6, CONTROLLER SHALL RETURN TO PHASES 2+6. AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

> STH 100 (S. 108TH STREET) & W. CLEVELAND AVENUE CITY OF WEST ALLIS MILWAUKEE COUNTY

SIGNAL	NO. 51104	CABINET	TYPE:	TS2
		CONTROLLER	TYPE: E	CONOLITE
	00.414		Total state	

SHEET

DATE 02/14

PAGE NO. 3 OF 3

PROJECT NO: 1060-33-97 FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\024139_sp_ph.dgn

HEAD NUMBERS

5,6,7,8 10,12

13,14,15,16

6,8

1,2,3,4

14,16

9,10,11,12

19,20

23,24

17,18

21,22

01 02

04

05

06

07

Ø8

Ø2P

Ø4P

Ø6P

Ø8P

OLF OLG

OLH

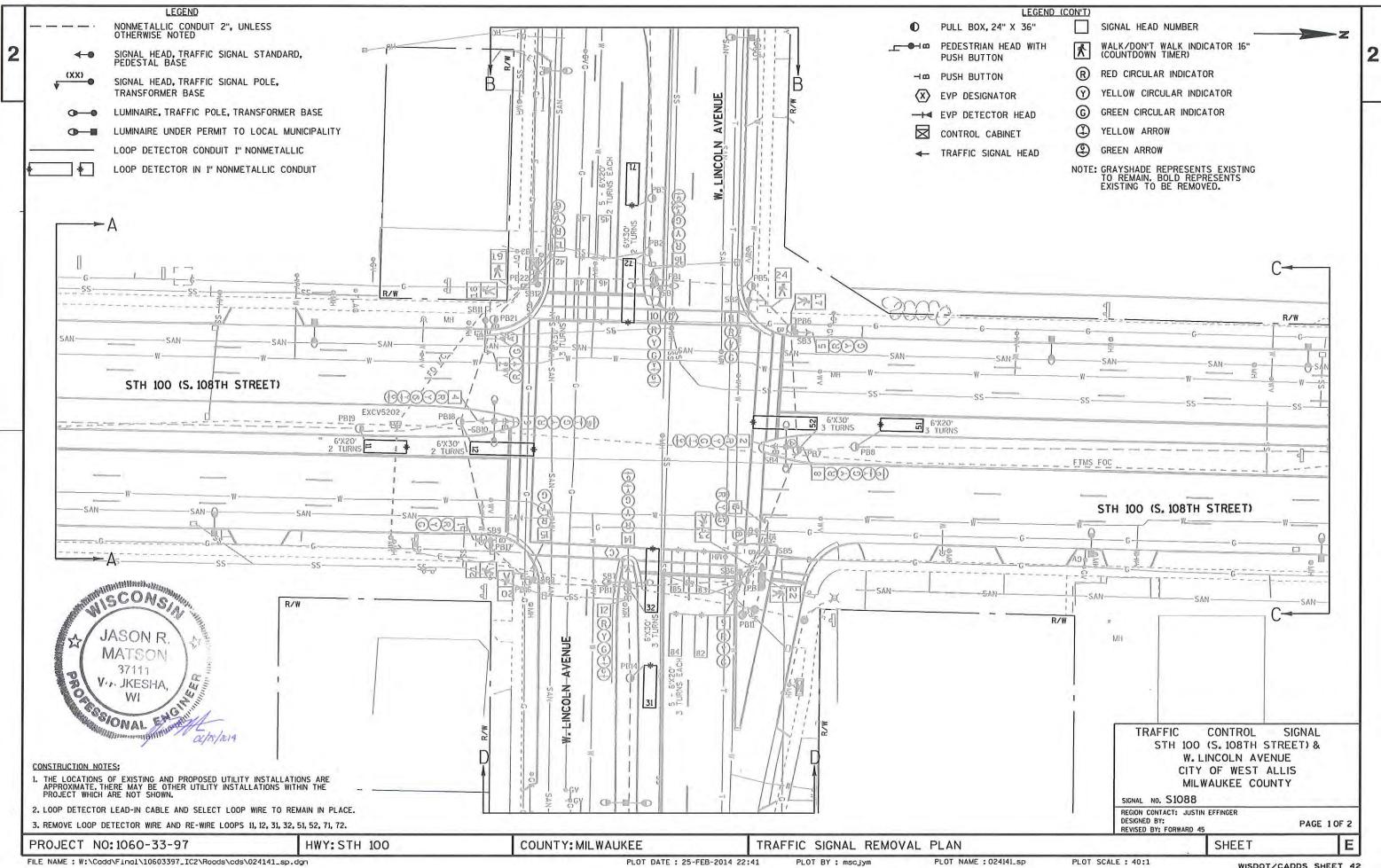
HWY: STH 100

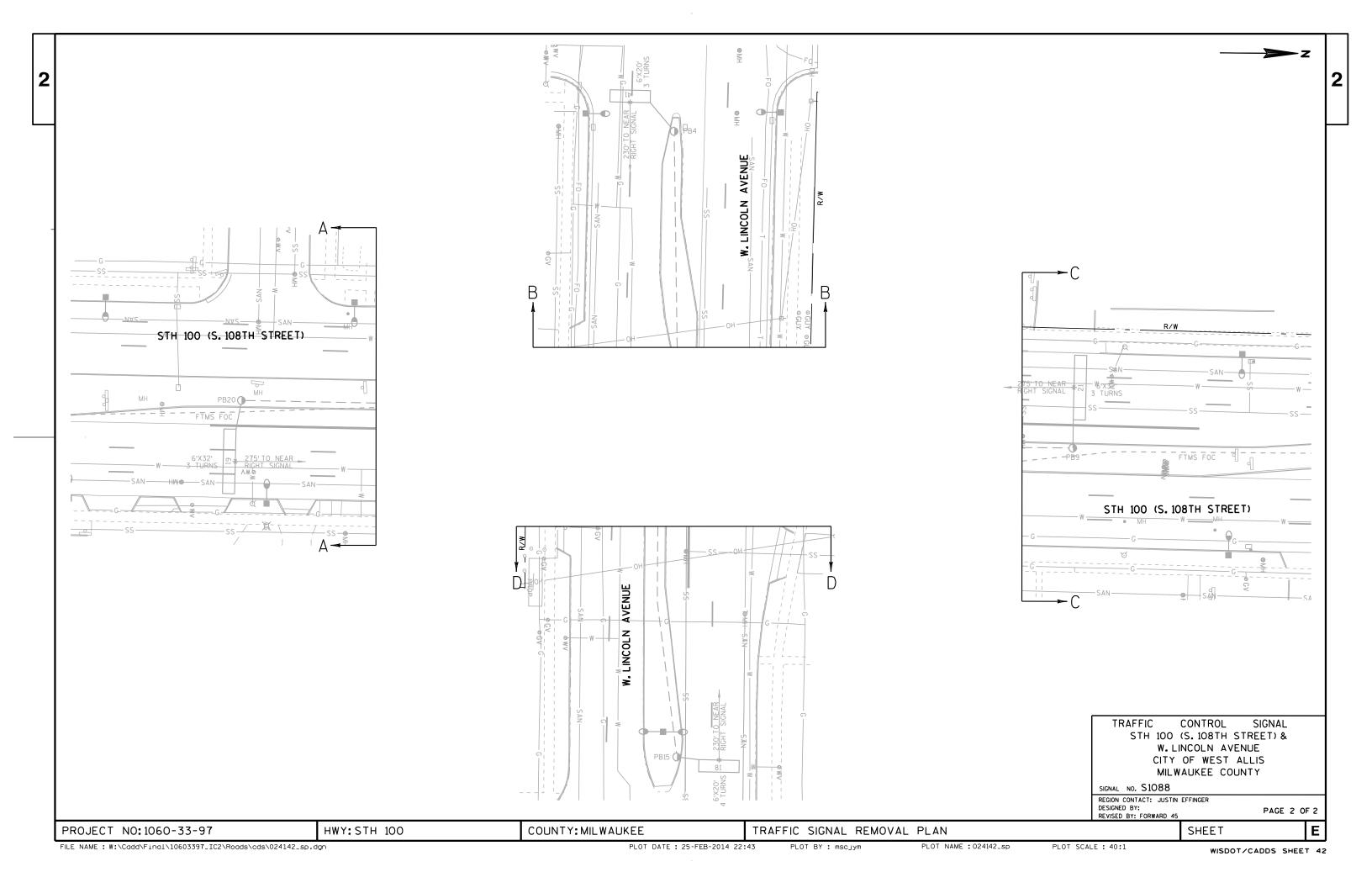
COUNTY: MILWAUKEE

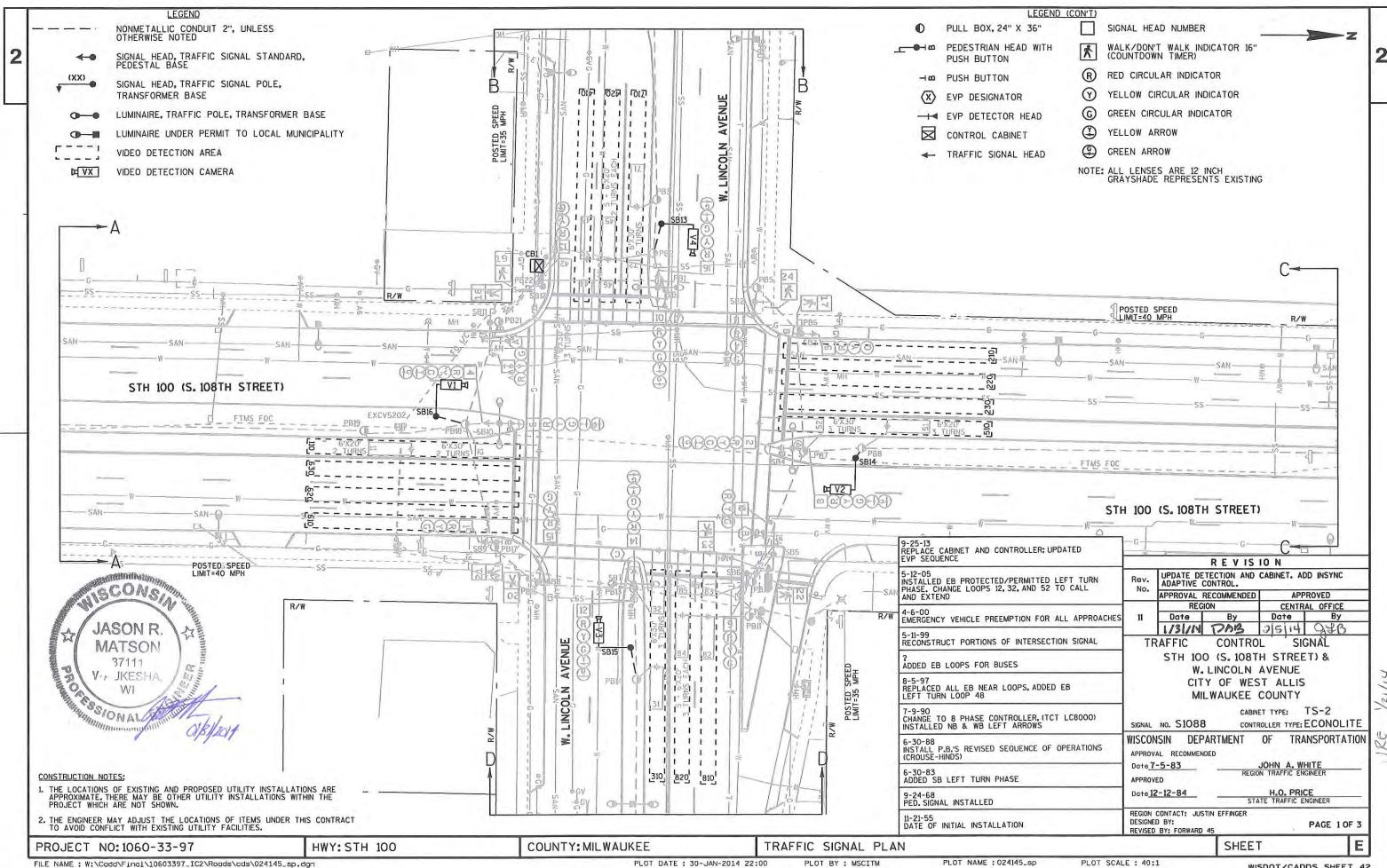
SEQUENCE OF OPERATIONS PLOT BY: mscjym

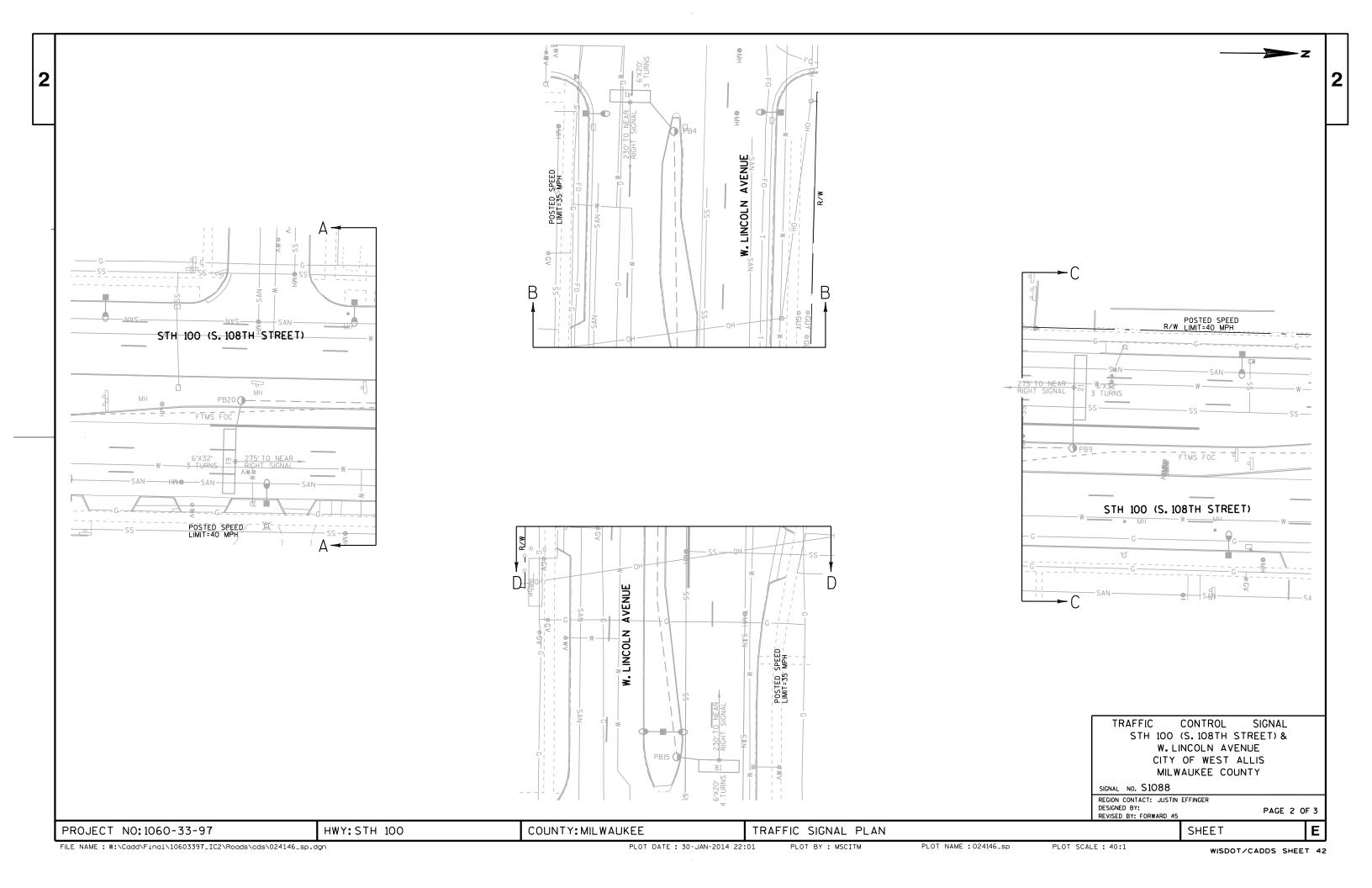
PLOT NAME : 024139_sp_ph

PLOT SCALE : 40:1









CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		×
2		6	MIN	×
3		8		×
4		8		x
5		2		×
6		2	MIN	×
7		4		×
8		4		×

TYPE OF INTERCONNECT/COMML	INICATION
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	×
RADIO	

TYPE OF COORDINA	TION	
NONE		
TBC		
TRAFFIC RESPONSIVE		H
ADAPTIVE		X
*LOCATION OF MASTER		
CONTROLLER NO:	S-	
SIGNAL SYSTEM ":	SS- 00 -	14

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET IN SEPARATE DOT LIGHTING CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR	LOGIC

BARRIER

02

DETECTOR INPUT	3	1	7	5	11	9	15	13
LAN LOOP DETECTOR "(S)	11/12	31/32	42	45/46	61	81	84/85	
CALLED PHASE	1	3	4	4	6	8	8	
CALL OPTION	X	Х	X	X	X		X	
DELAY TIME			Χ					
EXTEND OPTION	X	X	X	X	X	Х	X	
EXTEND TIME						X		
USE ADDED INITIAL					X			
CROSS SWITCH PHASE	6	8						

6

51/52

X

X

RING 1

RING 2

01

							DETECTOR INPUT
110	220	310	420	610	630	810	PLAN LOOP DETECTOR "(S
1	2	3	4	6	6	8	CALLED PHASE
X	X	×	X	Х	X	X	CALL OPTION
		-				7.7	DELAY TIME
X	Х	X	X	X	X	X	EXTEND OPTION
							EXTEND TIME
					-		USE ADDED INITIAL
							CROSS SWITCH PHASE

04

08

03

12	10	16	14
71/72	82/83		
7	8		
X	X		
Х	Х		
4			

							DETECTOR INPUT
210	230	410	510	620	710	820	PLAN LOOP DETECTOR "(S.
2	2	4	5	6	7	8	CALLED PHASE
X	X	Х	X	Х	X	X	CALL OPTION
							DELAY TIME
X	X	X	X	X	X	X	EXTEND OPTION
						1 - 26	EXTEND TIME
							USE ADDED INITIAL
							CROSS SWITCH PHASE

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	A	В	c	D
MOVEMENT	← →	← →	↓ ↑	↓ ↑
PHASE	2+6	6+2	4+8	8+4

AFTER PREEMPTION SEQUENCE 2+6 OR 6+2, CONTROLLER SHALL RETURN TO PHASES 2+6. AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

> STH 100 (S. 108TH STREET) & W. LINCOLN AVENUE CITY OF WEST ALLIS MILWAUKEE COUNTY

SIGNAL NO. S1088 CABINET TYPE: TS2

DATE 02/14 PAGE NO. 3 OF 3

PROJECT NO: 1060-33-97

HEAD NUMBERS

2.4

5,6,7,8

10,12

13,14,15,16

6,8 1,2,3,4

14,16

9,10,11,12 17,18

19,20

21,22

23,24

01

02

03

04

05

07

08

Ø4P

Ø6P

Ø8P

HWY: STH 100

COUNTY: MILWAUKEE

SEQUENCE OF OPERATIONS PLOT BY : MSCITM

PLOT NAME : 024149_sp_ph

PLOT SCALE : 40:1

SHEET

CONTROLLER TYPE: ECONOLITE

JRE

4

21

2

DETECTOR INPUT

CALLED PHASE

CALL OPTION DELAY TIME

EXTEND OPTION

EXTEND TIME

USE ADDED INITIAL

CROSS SWITCH PHASE

PLAN LOOP DETECTOR *(S)

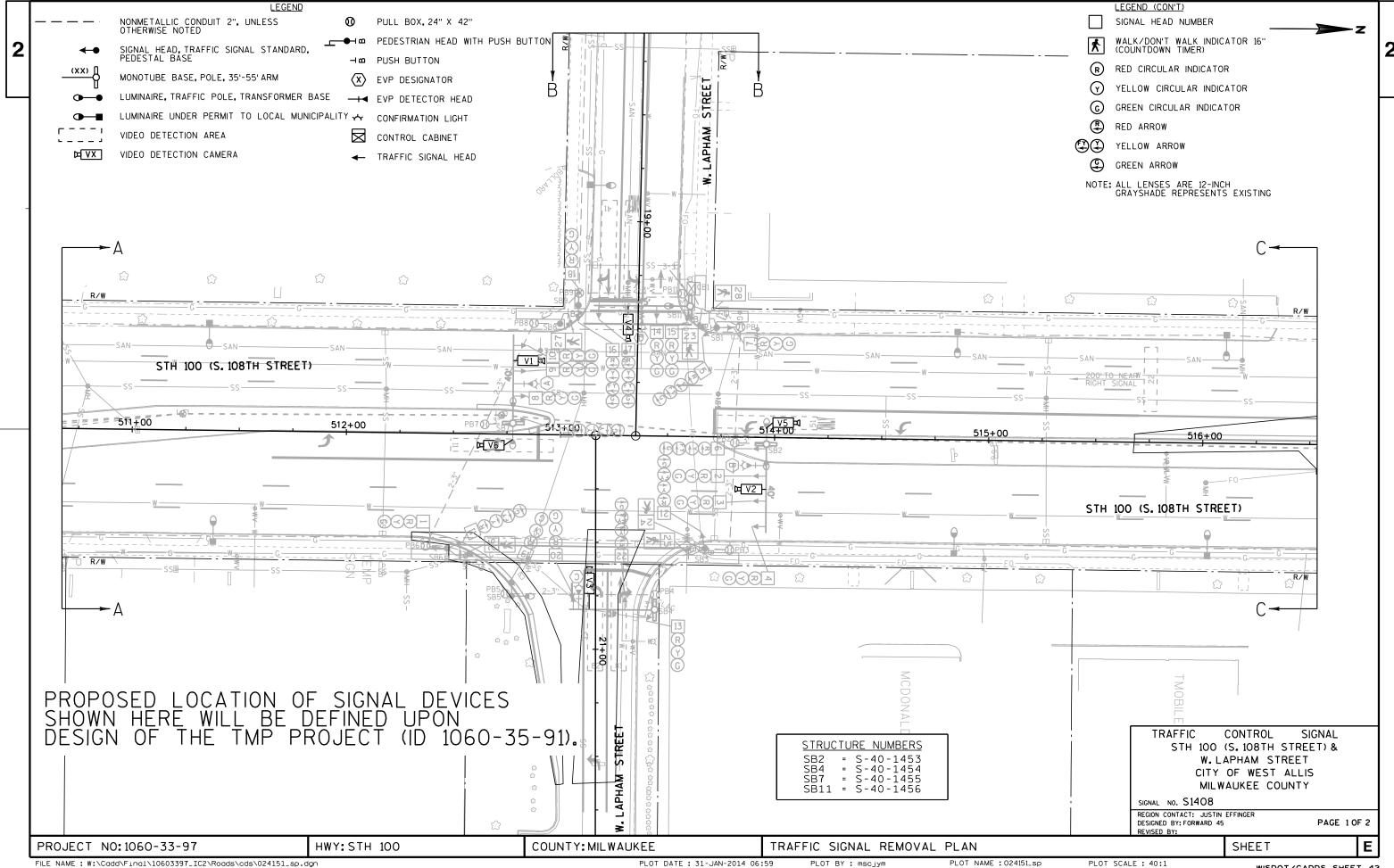
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41

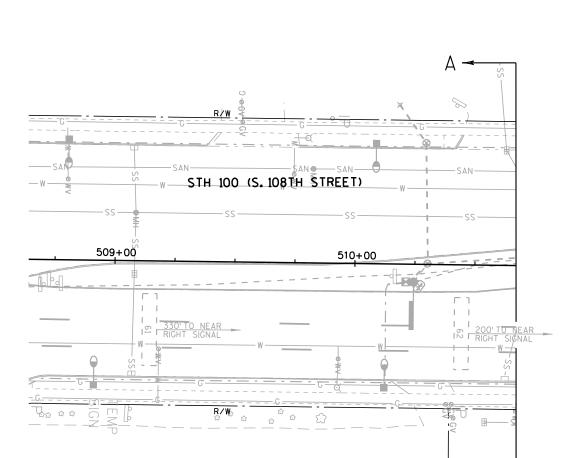
43/44

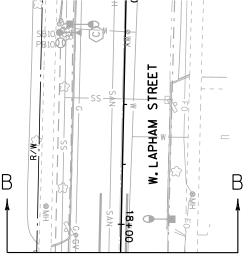
X

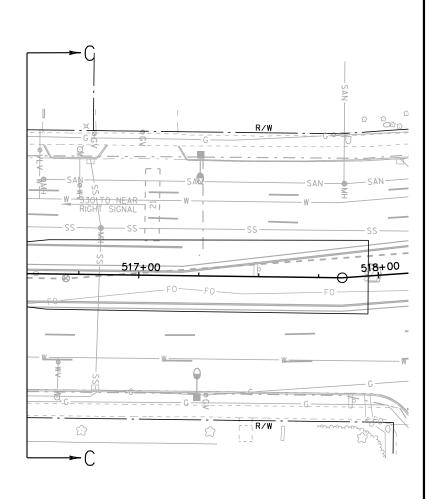
X











PROPOSED LOCATION OF SIGNAL DEVICES SHOWN HERE WILL BE DEFINED UPON DESIGN OF THE TMP PROJECT (ID 1060-35-91).

TRAFFIC CONTROL SIGNAL STH 100 (S. 108TH STREET) & W. LAPHAM STREET CITY OF WEST ALLIS MILWAUKEE COUNTY

SIGNAL NO. S1408

REGION CONTACT: JUSTIN EFFINGER DESIGNED BY: FORWARD 45 REVISED BY:

PAGE 2 OF 2

PROJECT NO: 1060-33-97

HWY:STH 100

COUNTY: MILWAUKEE

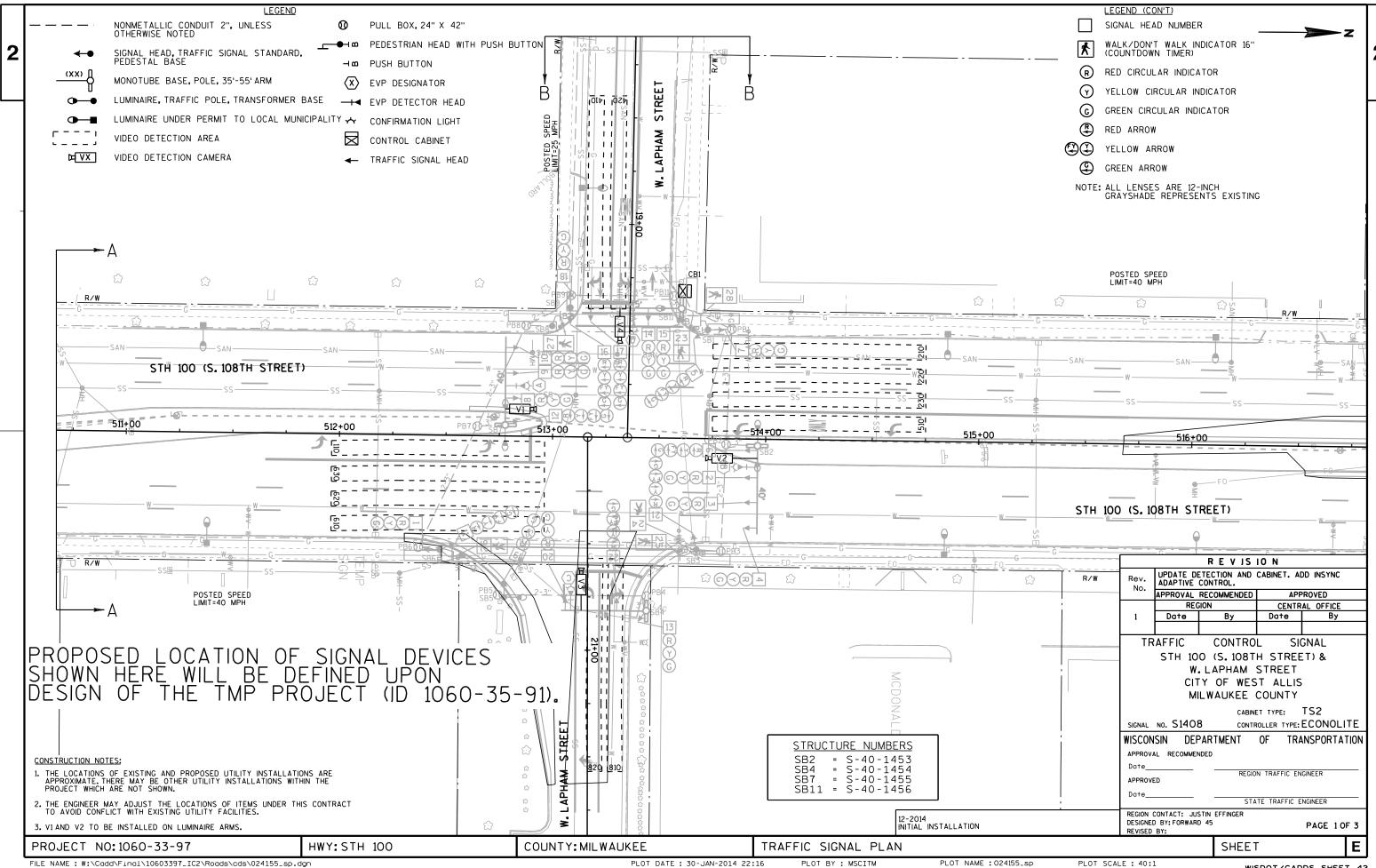
TRAFFIC SIGNAL REMOVAL PLAN

PLOT BY: mscjym

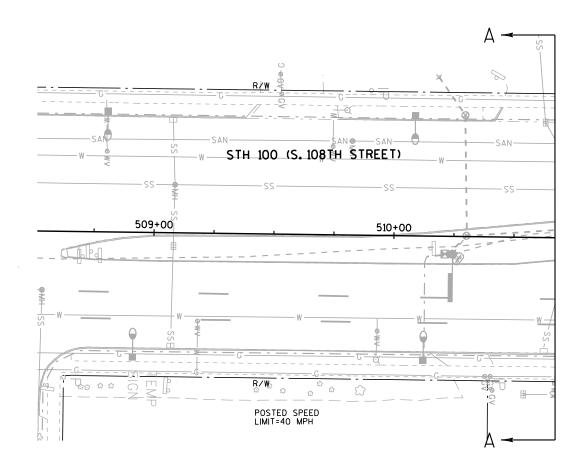
PLOT NAME: 024152_sp

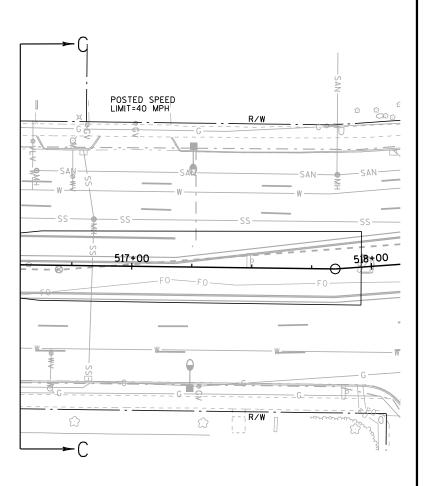
PLOT SCALE: 40:1

SHEET WISDOT/CADDS SHEET 42









PROPOSED LOCATION OF SIGNAL DEVICES SHOWN HERE WILL BE DEFINED UPON DESIGN OF THE TMP PROJECT (ID 1060-35-91).

TRAFFIC CONTROL SIGNAL STH 100 (S. 108TH STREET) & W. LAPHAM STREET CITY OF WEST ALLIS MILWAUKEE COUNTY

SIGNAL NO. S1408

REGION CONTACT: JUSTIN EFFINGER DESIGNED BY: FORWARD 45 REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1060-33-97

HWY:STH 100

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

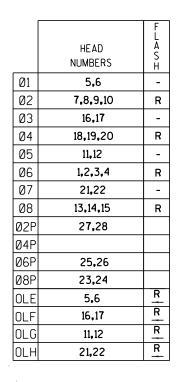
PLOT BY : MSCITM

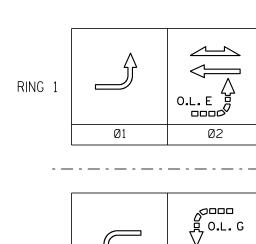
PLOT NAME : 024156_sp

SHEET

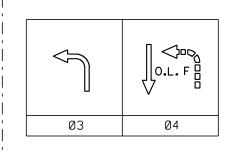
WISDOT/CADDS SHEET 42

-	_
4	_





05



] ;	Ø7	Ø8
 BARRIER		

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		×
2		6	MIN	×
3				
4		8		×
5		2		×
6		2	MIN	×
7				
8		4		×

NICATION
×

TYPE OF COORDINA	TION	
NONE		
TBC		
TRAFFIC RESPONSIVE		
ADAPTIVE		Х
*LOCATION OF MASTER		
CONTROLLER NO:	S-	
SIGNAL SYSTEM *:	SS- 00 - 1	3

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	Х
GTT	Х
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

Ø6

DETECTOR INPUT								
PLAN LOOP DETECTOR *(S)	110	220	410	510	620	810		
CALLED PHASE	1	2	4	5	6	8		
CALL OPTION	X	Х	X	X	Х	Х		
DELAY TIME			Х			Х		
EXTEND OPTION	Х	Х	Х	Х	Х	Х		
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								
,				1		•	•	

RING 2

210	230	420	610	630	820		
2	2	4	6	6	8		
X	Х	Х	X	X	Х		
X	Х	Х	X	Х	Х		
	2 X	2 2 X X	2 2 4 X X X	2 2 4 6 X X X X	2 2 4 6 6 X X X X X X	2 2 4 6 6 8 X X X X X X X	2 2 4 6 6 8 X X X X X X X

						DETECTOR INPUT
						PLAN LOOP DETECTOR *(S)
						CALLED PHASE
						CALL OPTION
						DELAY TIME
						EXTEND OPTION
						EXTEND TIME
						USE ADDED INITIAL
						CROSS SWITCH PHASE
 •	•	•	•	•	•	•

				,
				DETECTOR INPUT
				PLAN LOOP DETECTOR *(S)
				CALLED PHASE
				CALL OPTION
				DELAY TIME
				EXTEND OPTION
				EXTEND TIME
				USE ADDED INITIAL
				CROSS SWITCH PHASE

EMERGENCY VEHICLE PREEMPTION SEQUENCE

		CHA	NNEL	
EMERGENCY VEHICLE PREEMPTOR	A	В	С	D
MOVEMENT			↓	71
PHASE	2+5	6+1	4+7	8+3

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

STH 100 (S.108TH STREET) & W.LAPHAM STREET CITY OF WEST ALLIS MILWAUKEE COUNTY

SIGNAL NO. S1408 CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 02/14

PAGE NO. 3 OF 3

WISDOT/CADDS SHEET 42

PROJECT NO: 1060-33-97 HWY: STH 100

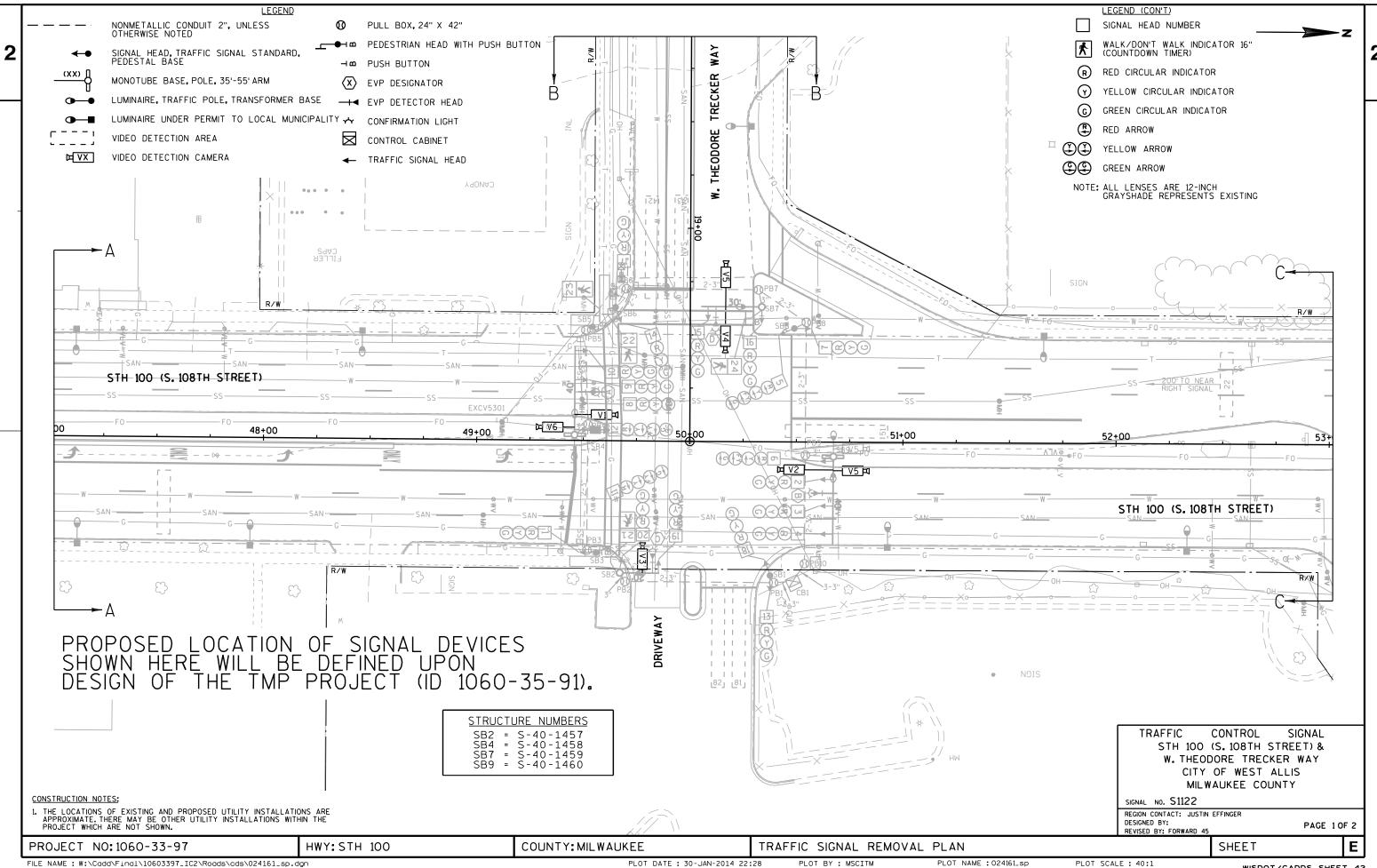
COUNTY: MILWAUKEE

SEQUENCE OF OPERATIONS

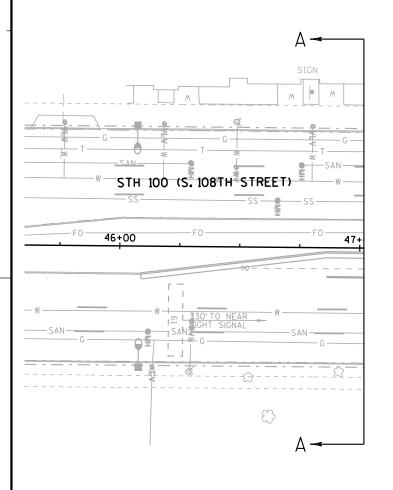
PLOT NAME: 024159_sp_ph

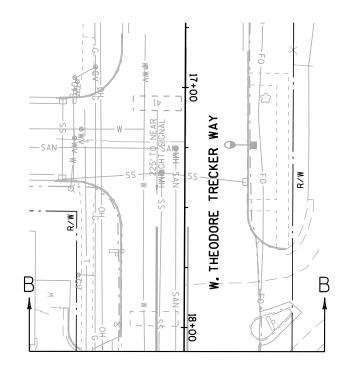
OT SCALE . 40.1

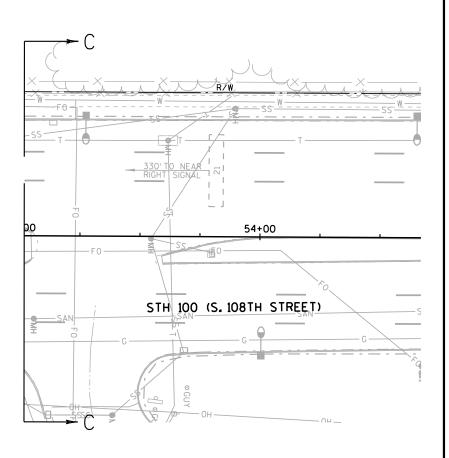
SHEET











PROPOSED LOCATION OF SIGNAL DEVICES SHOWN HERE WILL BE DEFINED UPON DESIGN OF THE TMP PROJECT (ID 1060-35-91).

TRAFFIC CONTROL SIGNAL STH 100 (S. 108TH STREET) & W. THEODORE TRECKER WAY CITY OF WEST ALLIS MILWAUKEE COUNTY

SHEET

SIGNAL NO. S1122

REGION CONTACT: JUSTIN EFFINGER DESIGNED BY: FORWARD 45 REVISED BY:

PAGE 2 OF 2

HWY:STH 100 PROJECT NO: 1060-33-97

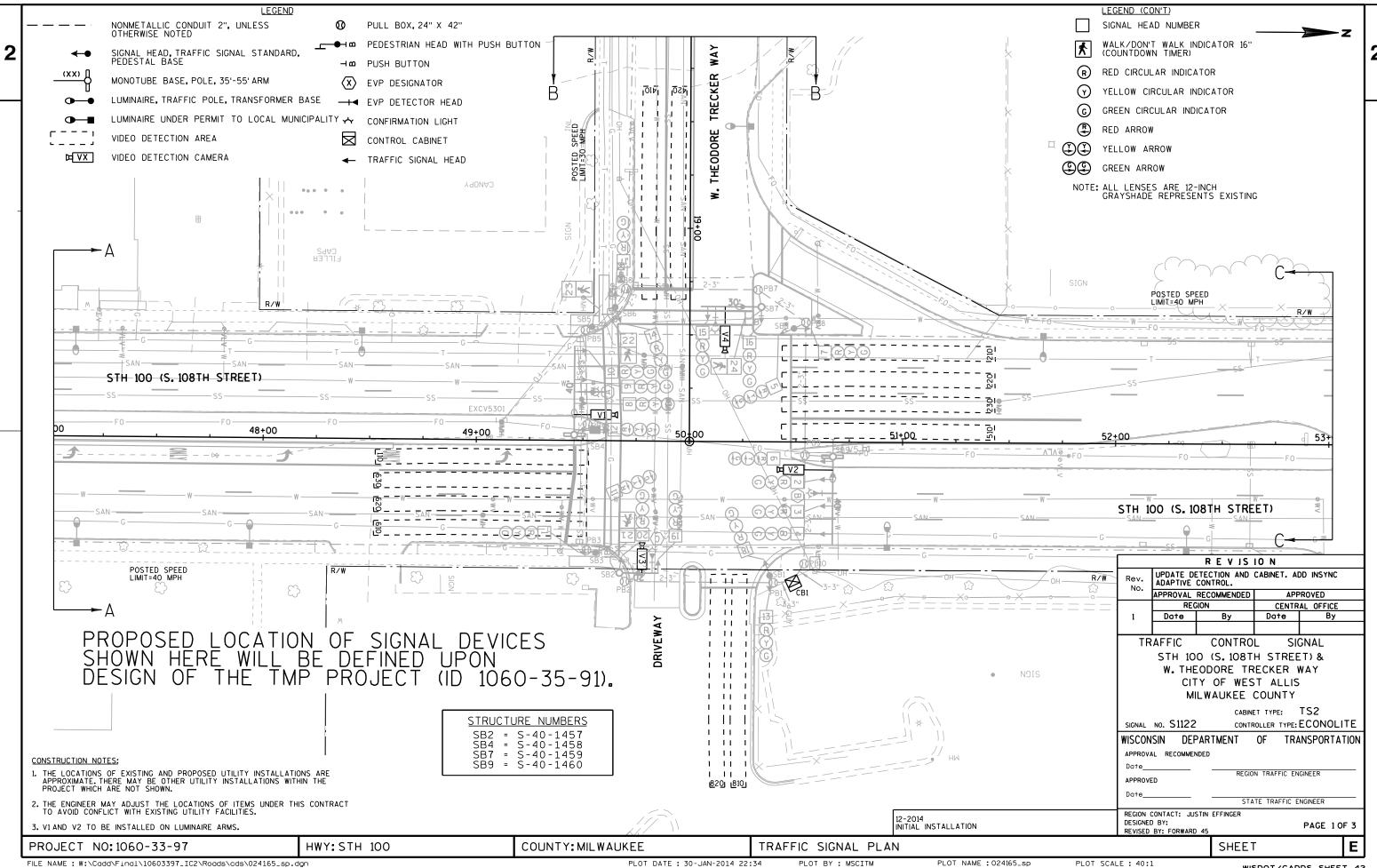
COUNTY: MILWAUKEE

TRAFFIC SIGNAL REMOVAL PLAN

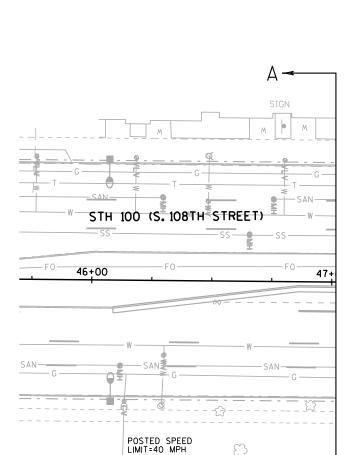
PLOT BY : MSCITM

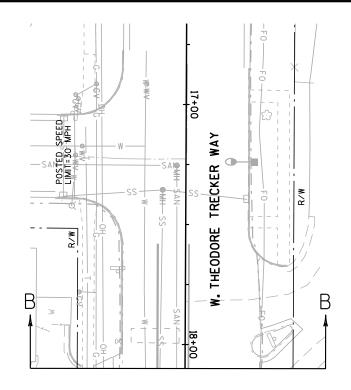
PLOT NAME : 024162_sp

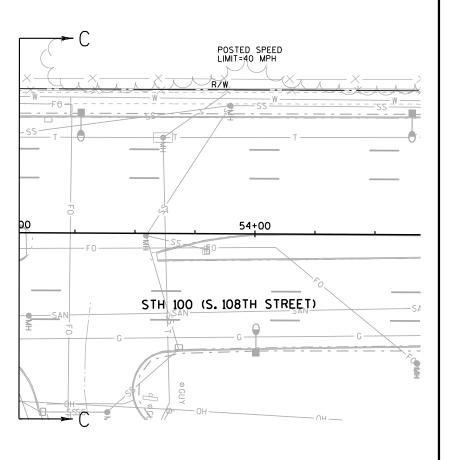
WISDOT/CADDS SHEET 42











PROPOSED LOCATION OF SIGNAL DEVICES SHOWN HERE WILL BE DEFINED UPON DESIGN OF THE TMP PROJECT (ID 1060-35-91).

TRAFFIC CONTROL SIGNAL STH 100 (S. 108TH STREET) & W. THEODORE TRECKER WAY CITY OF WEST ALLIS MILWAUKEE COUNTY

SIGNAL NO. S1122

PLOT SCALE: 40:1

REGION CONTACT: JUSTIN EFFINGER DESIGNED BY: FORWARD 45 REVISED BY:

PAGE 2 OF 3

HWY:STH 100

COUNTY: MILWAUKEE

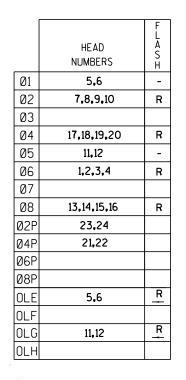
TRAFFIC SIGNAL PLAN

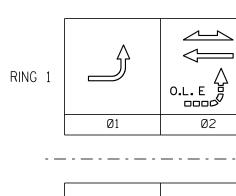
PLOT BY : MSCITM

SHEET

PROJECT NO: 1060-33-97

-	_
4	_





05

 	NOT USED	11
: 	Ø3	04
 1		

0.L. G		NOT USED	
Ø6	i	Ø7	Ø8
	; i BARRIER		

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		х
2		6	MIN	х
3				
4		8		х
5		2		х
6		2	MIN	х
7				
8		4		х

TYPE OF INTERCONNECT/COMMI	JNICATIO
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	×
RADIO	

X
13

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	Х
GTT	х
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

DETECTOR INPUT							
PLAN LOOP DETECTOR *(S)	110	220	410	510	620	810	
CALLED PHASE	1	2	4	5	6	8	
CALL OPTION	X	X	X	Х	X	Х	
DELAY TIME			X			X	
EXTEND OPTION	X	X	Х	Х	X	Х	
EXTEND TIME							
USE ADDED INITIAL				·			
CROSS SWITCH PHASE							

RING 2

DETECTOR INPUT							
PLAN LOOP DETECTOR *(S)	210	230	420	610	630	820	
CALLED PHASE	2	2	4	6	6	8	
CALL OPTION	X	Х	Х	Х	X	X	
DELAY TIME							
EXTEND OPTION	X	Х	Х	Х	X	X	
EXTEND TIME							
USE ADDED INITIAL							
CROSS SWITCH PHASE							

HWY:STH 100

				DETECTOR INPUT
				PLAN LOOP DETECTOR #(S)
				CALLED PHASE
				CALL OPTION
				DELAY TIME
				EXTEND OPTION
				EXTEND TIME
				USE ADDED INITIAL
				CROSS SWITCH PHASE

				DETECTOR INPUT
				PLAN LOOP DETECTOR *(S)
				CALLED PHASE
				CALL OPTION
				DELAY TIME
				EXTEND OPTION
				EXTEND TIME
				USE ADDED INITIAL
				CROSS SWITCH PHASE

EMERGENCY VEHICLE PREEMPTION SEQUENCE

	CHANNEL						
EMERGENCY VEHICLE PREEMPTOR	A	В	С	D			
MOVEMENT	~	= \$	↓↑	↓↑			
PHASE	2+5	6+1	4+8	8+4			

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

STH 100 (S. 108TH STREET) & W. THEODORE TRECKER WAY CITY OF WEST ALLIS MILWAUKEE COUNTY

SIGNAL NO. S1122 CABINET TYPE: TS2 CONTROLLER TYPE: ECONOLITE

02/14 DATE

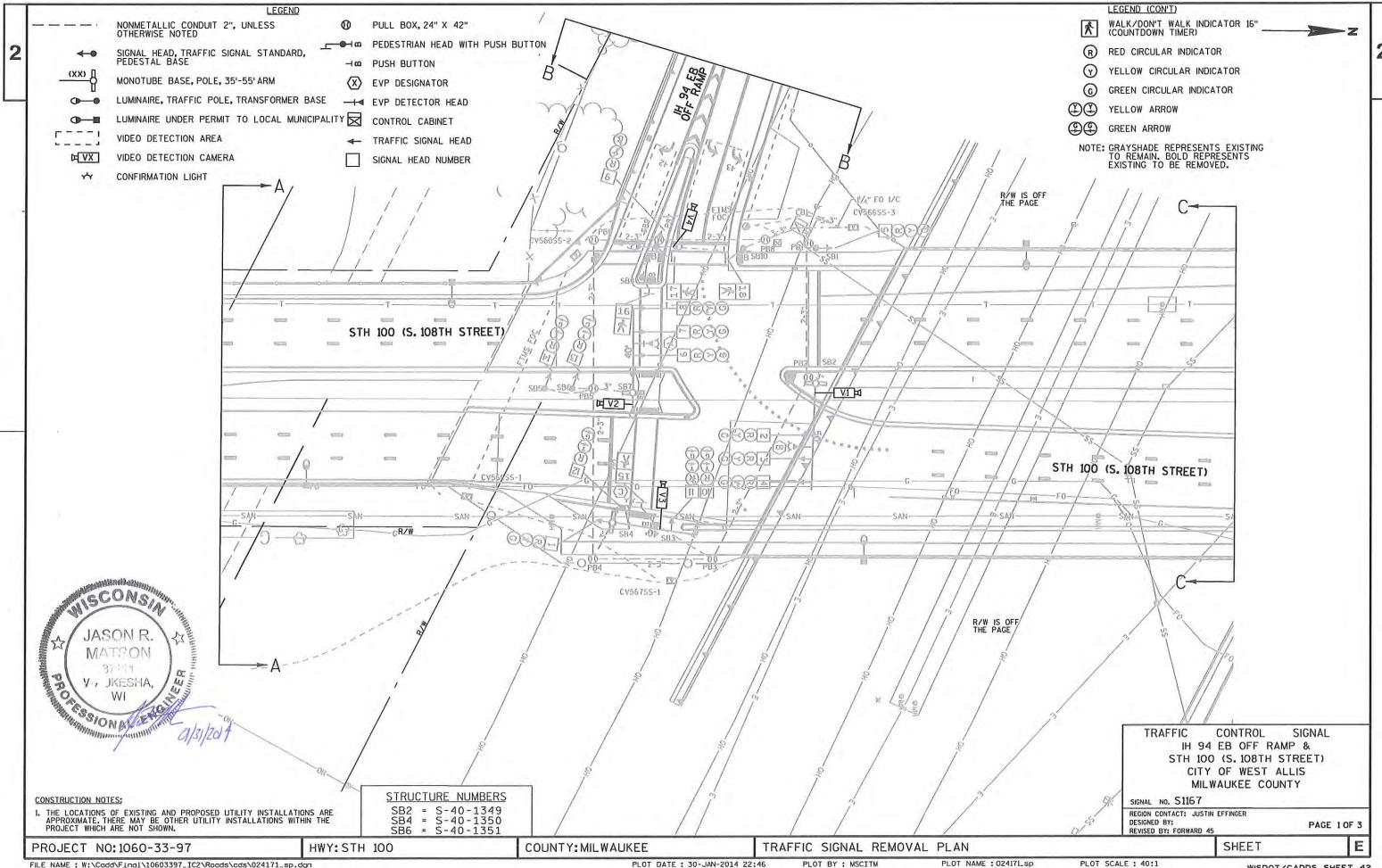
PAGE NO. 3 OF 3 SHEET

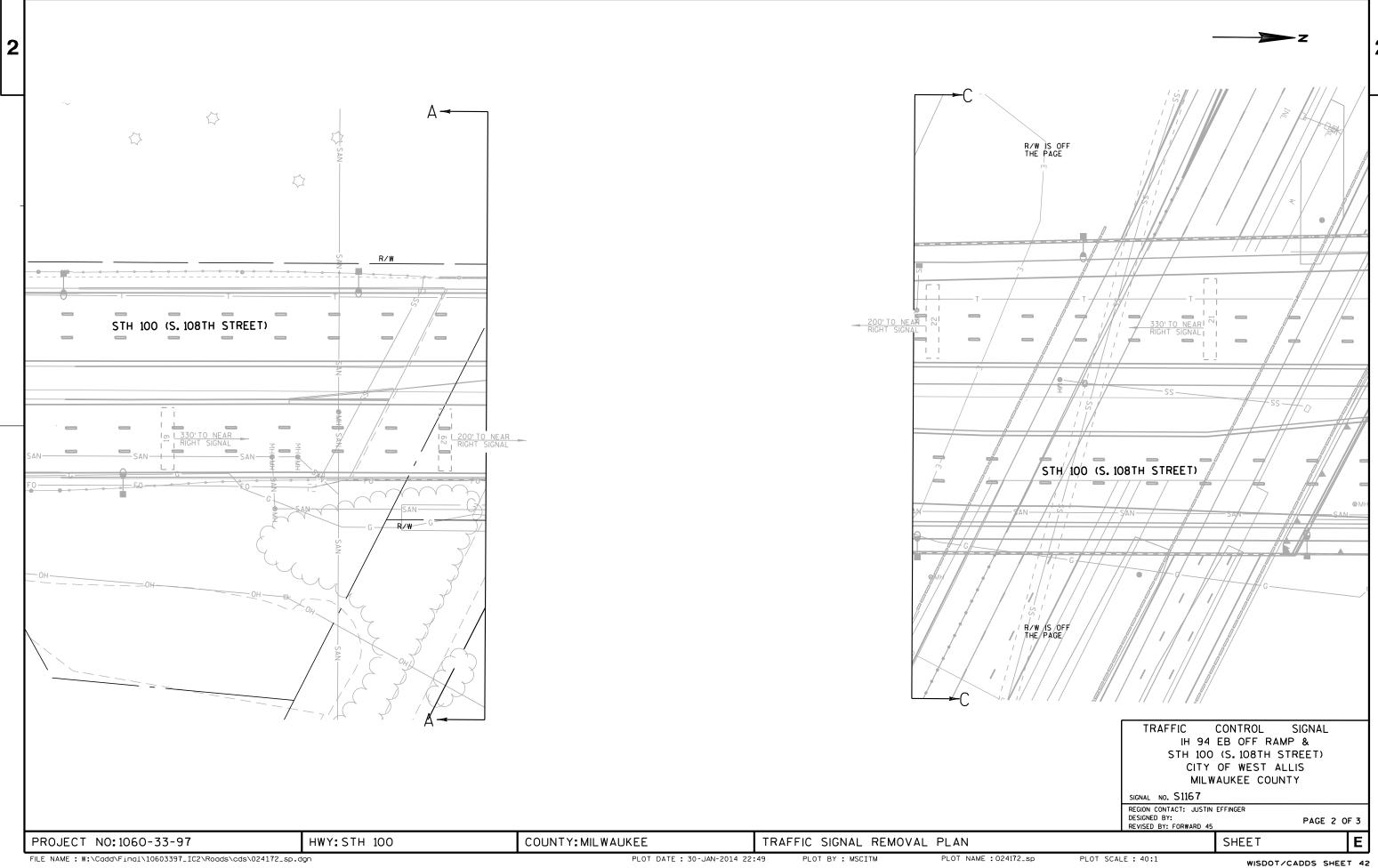
PROJECT NO: 1060-33-97

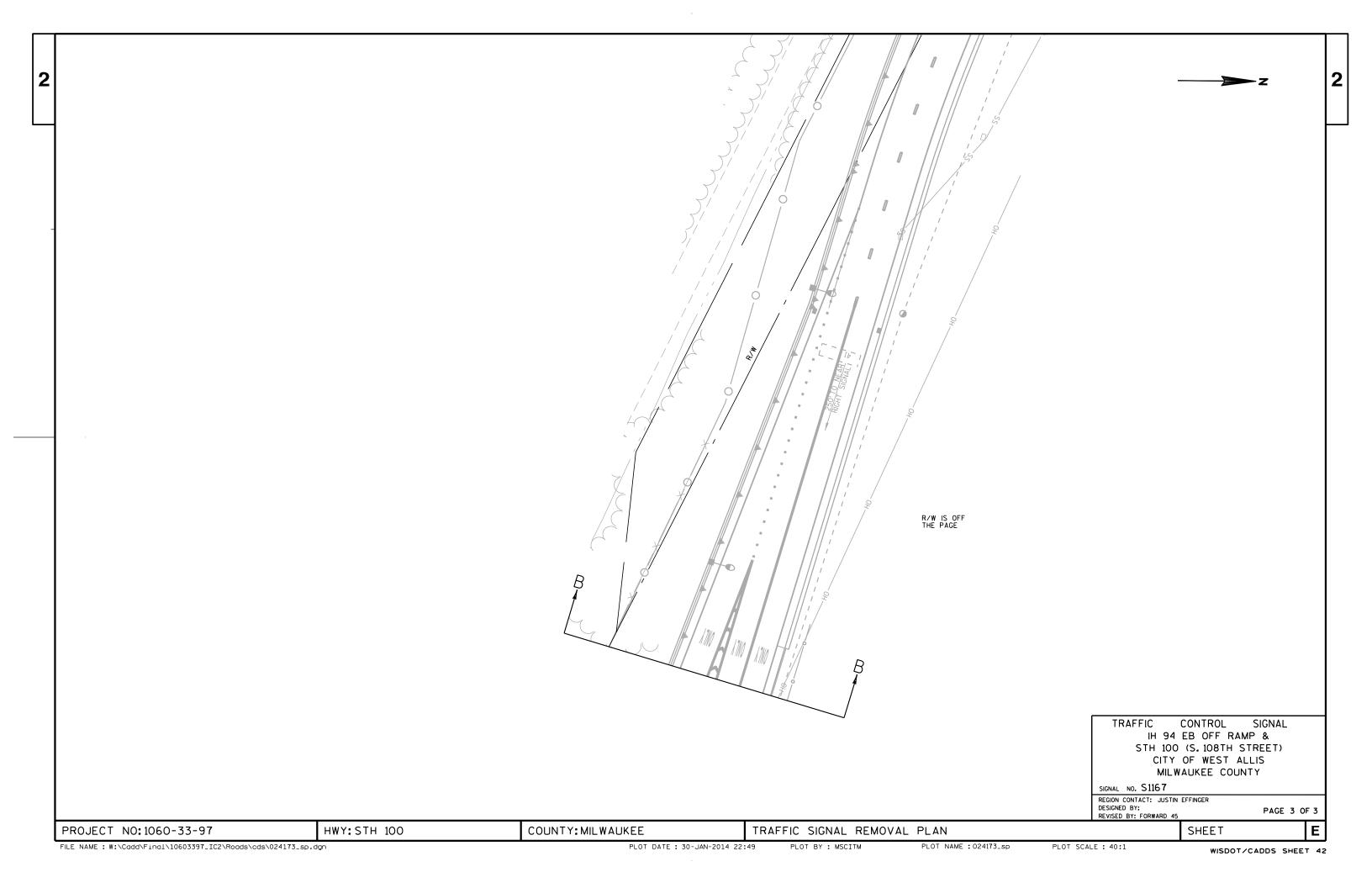
COUNTY: MILWAUKEE

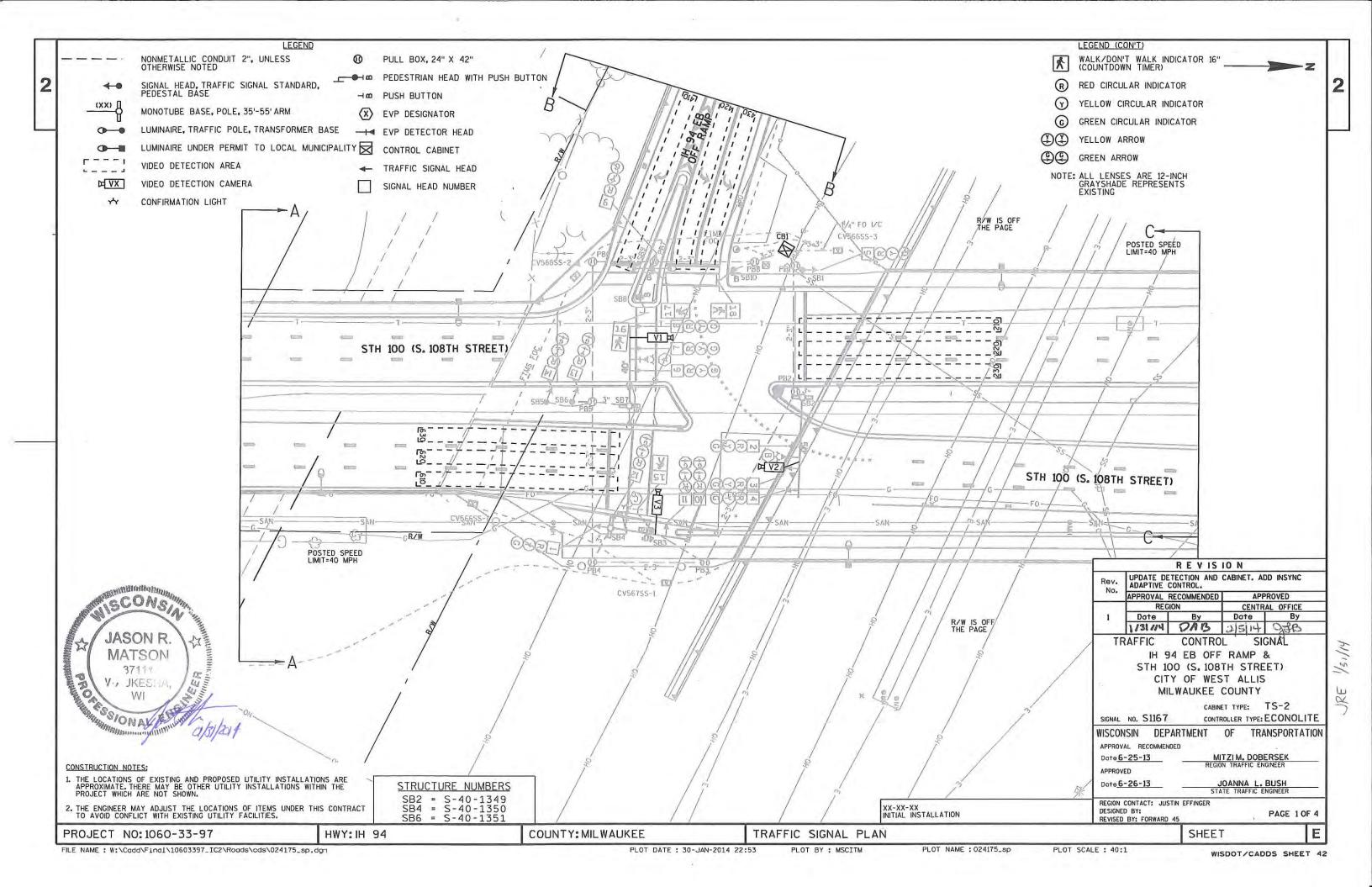
SEQUENCE OF OPERATIONS

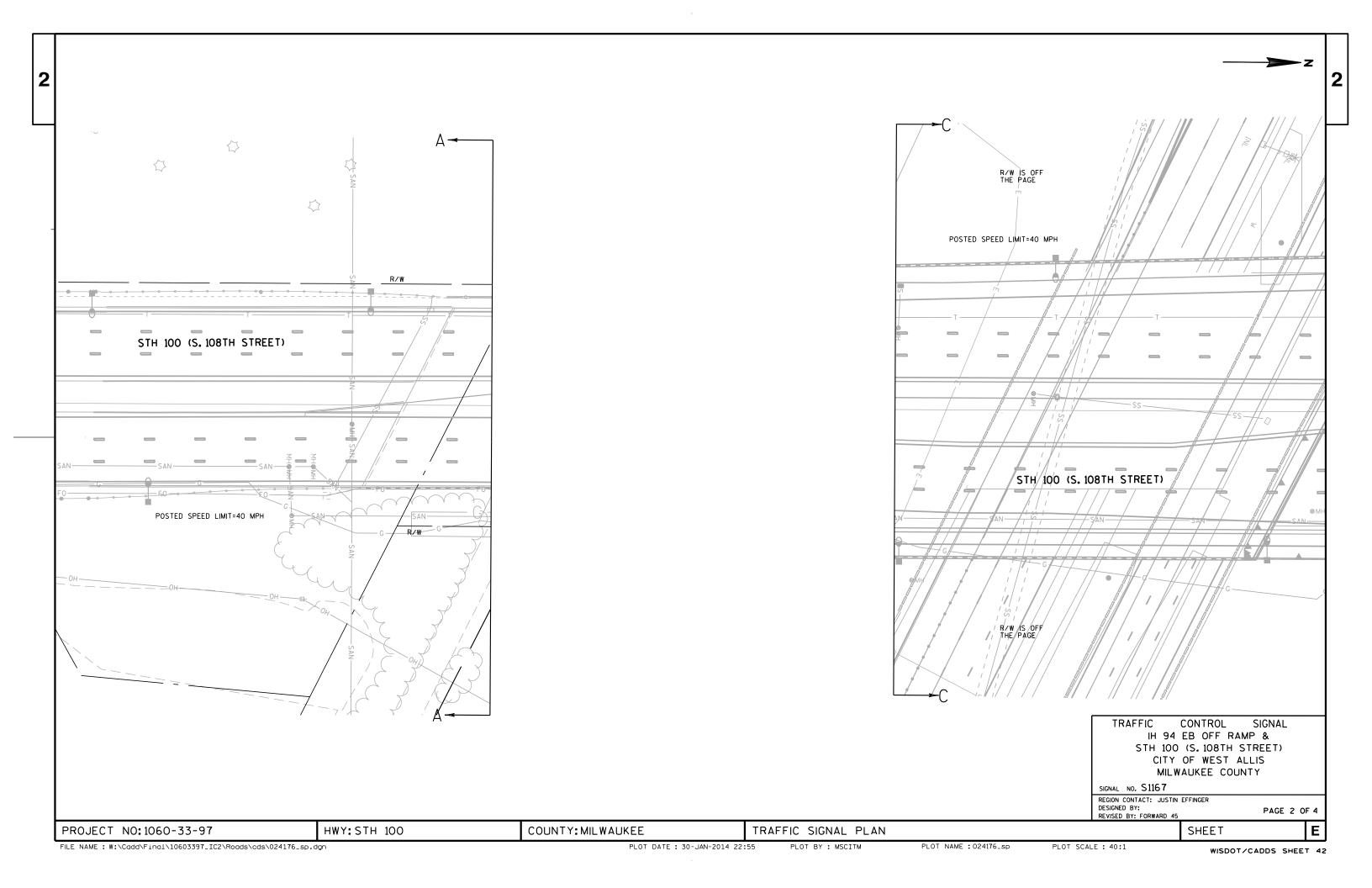
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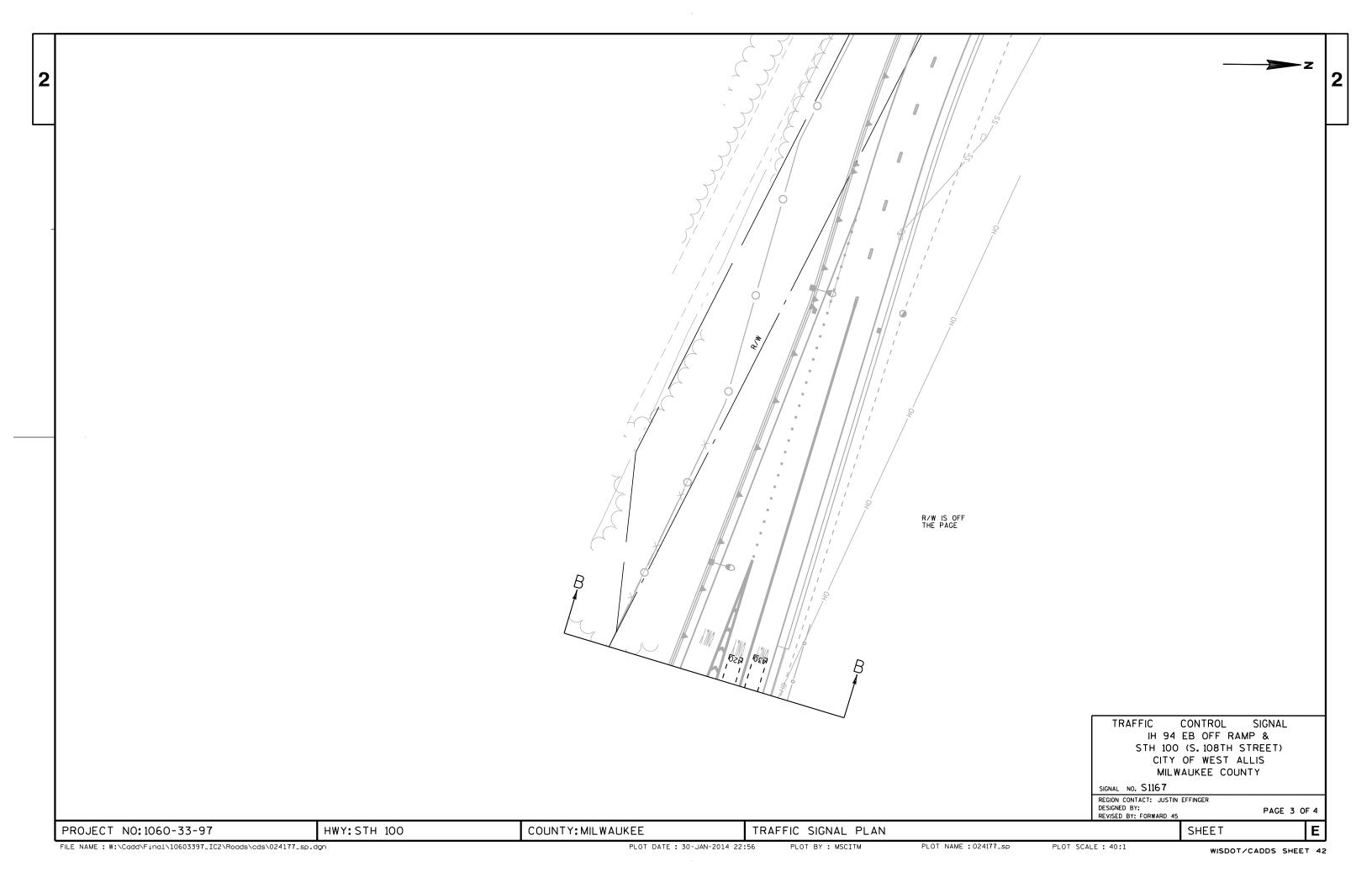












CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2		6	MIN	х
3	2 == 1	1,	00 1	
4				×
5				
6		2	MIN	×
7				
8				

INICATION
X

TYPE OF COORDINA	TION	
NONE		
TBC		
TRAFFIC RESPONSIVE		
ADAPTIVE		X
*LOCATION OF MASTER CONTROLLER NO:	S-	
SIGNAL SYSTEM ":	SS- 00 -	13

	TYPE OF LIGHTING	
BY	OTHER AGENCY	
IN	TRAFFIC SIGNAL CABINET SEPARATE DOT LIGHTING CABINET	X
IN	SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	T
RAILROAD	
EMERGENCY VEHICLE	×
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR I	OGIC
------------	------

BARRIER

NOT

USED

03

NOT

USED

07

04

NOT

USED

Ø8

1

02

06

NOT

USED

01

NOT

USED

05

630

RING 1

RING 2

CALLED PHASE	2	2	4	6	6	1			120		
CALL OPTION	X	Х	X	X	Х		1				
DELAY TIME											
EXTEND OPTION	X	X	X	X	X					1	
EXTEND TIME						1	1		1	1	
USE ADDED INITIAL											
CROSS SWITCH PHASE							1	1			
DETECTOR INPUT	220	410	470	C20						+	
LAN LOOP DETECTOR *(S)	220	410	430	620							
AN LOOP DETECTOR *(S)	2	4	4	6							
LAN LOOP DETECTOR =(S) CALLED PHASE CALL OPTION		4 X									
AN LOOP DETECTOR =(S) CALLED PHASE CALL OPTION DELAY TIME	2 X	4 X X	4 X	6 X							
AN LOOP DETECTOR *(S) CALLED PHASE CALL OPTION	2	4 X	4	6							
AN LOOP DETECTOR =(S) CALLED PHASE CALL OPTION DELAY TIME EXTEND OPTION	2 X	4 X X	4 X	6 X							

HWY: IH 94

EMERGENCY VEHICLE PREEMPTION SEQUENCE

Surfragile (Asiana)	CHANNEL				
PREEMPTOR	A	В	С		
MOVEMENT	← —>	← →	Į		
PHASE	2+6	6+2	4		

AFTER PREEMPTION SEQUENCE 2+6 OR 6+2, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4, CONTROLLER SHALL RETURN TO PHASE 4.

IH 94 EB OFF RAMP & STH 100 (S. 108TH STREET) CITY OF WEST ALLIS MILWAUKEE COUNTY

SIGNAL NO. S1167 CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 02/14

PAGE NO. 4 OF 4

JRE

PROJECT NO: 1060-33-97

HEAD

NUMBERS

5,6,7,8

9,10,11,12,13,14

1,2,3,4

17,18

15,16

R

02

03

04

05 06

07 08

Ø2P

Ø4P

Ø6P Ø8P

OLF OLG

OLH

DETECTOR INPUT

PLAN LOOP DETECTOR *(S)

210

230

420

610

COUNTY: MILWAUKEE

SEQUENCE OF OPERATIONS PLOT BY : MSCITM

DETECTOR INPUT

CALLED PHASE

DETECTOR INPUT PLAN LOOP DETECTOR "(S)

CALLED PHASE CALL OPTION DELAY TIME

EXTEND OPTION

USE ADDED INITIAL CROSS SWITCH PHASE

EXTEND TIME

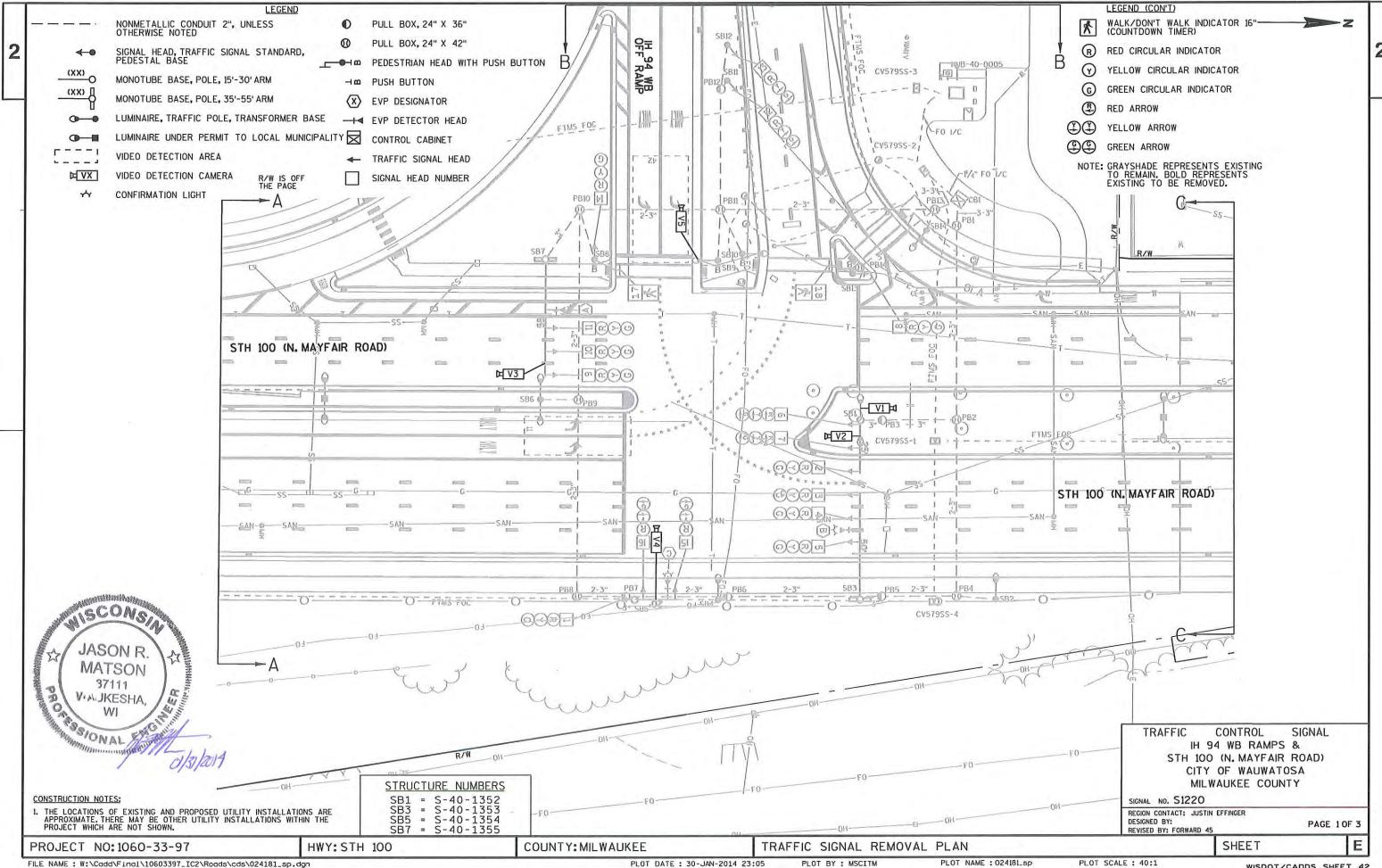
PLOT DATE: 30-JAN-2014 23:01

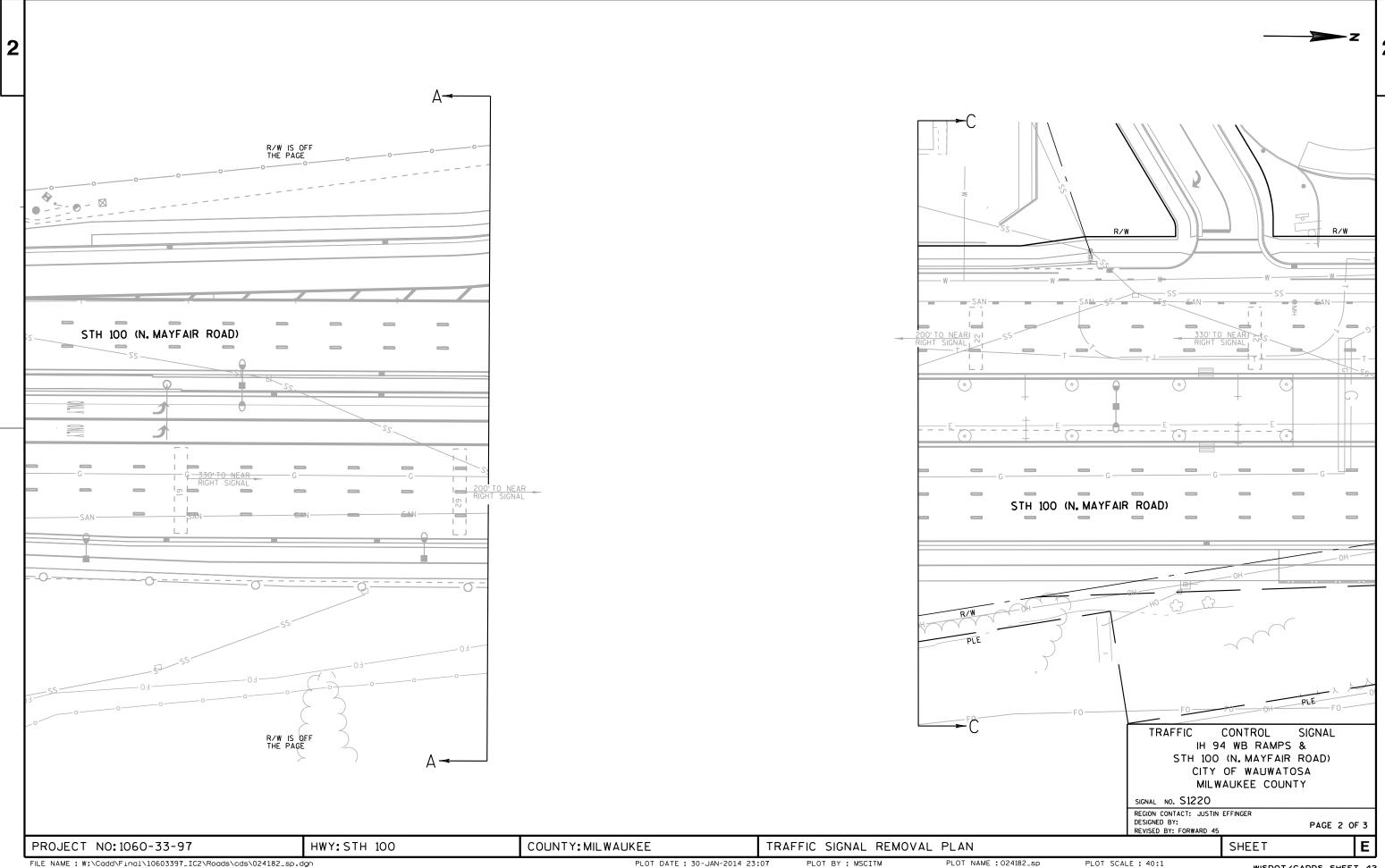
CALL OPTION DELAY TIME EXTEND OPTION EXTEND TIME USE ADDED INITIAL CROSS SWITCH PHASE

PLAN LOOP DETECTOR "(S)

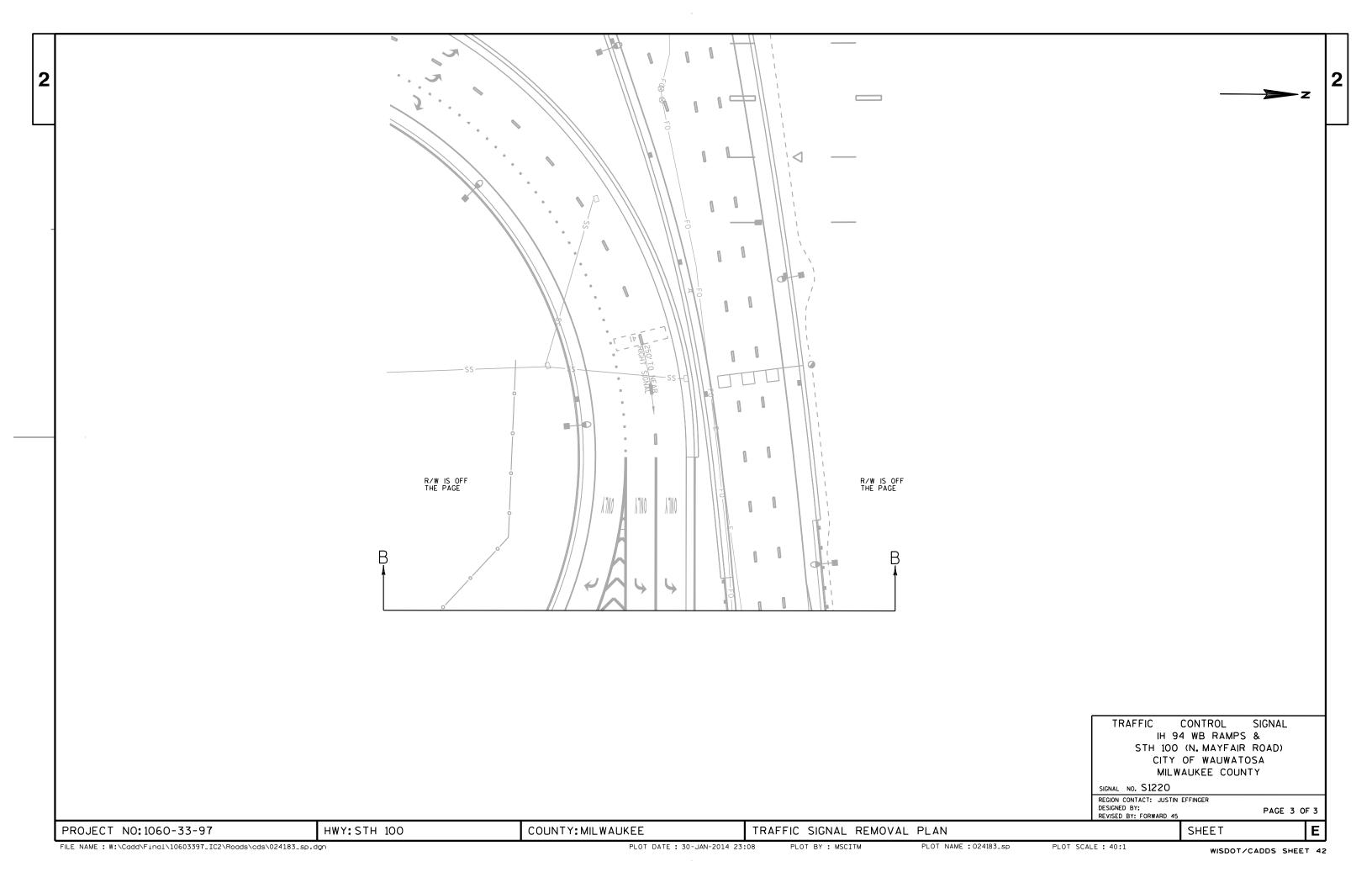
PLOT NAME : 024179_sp_ph

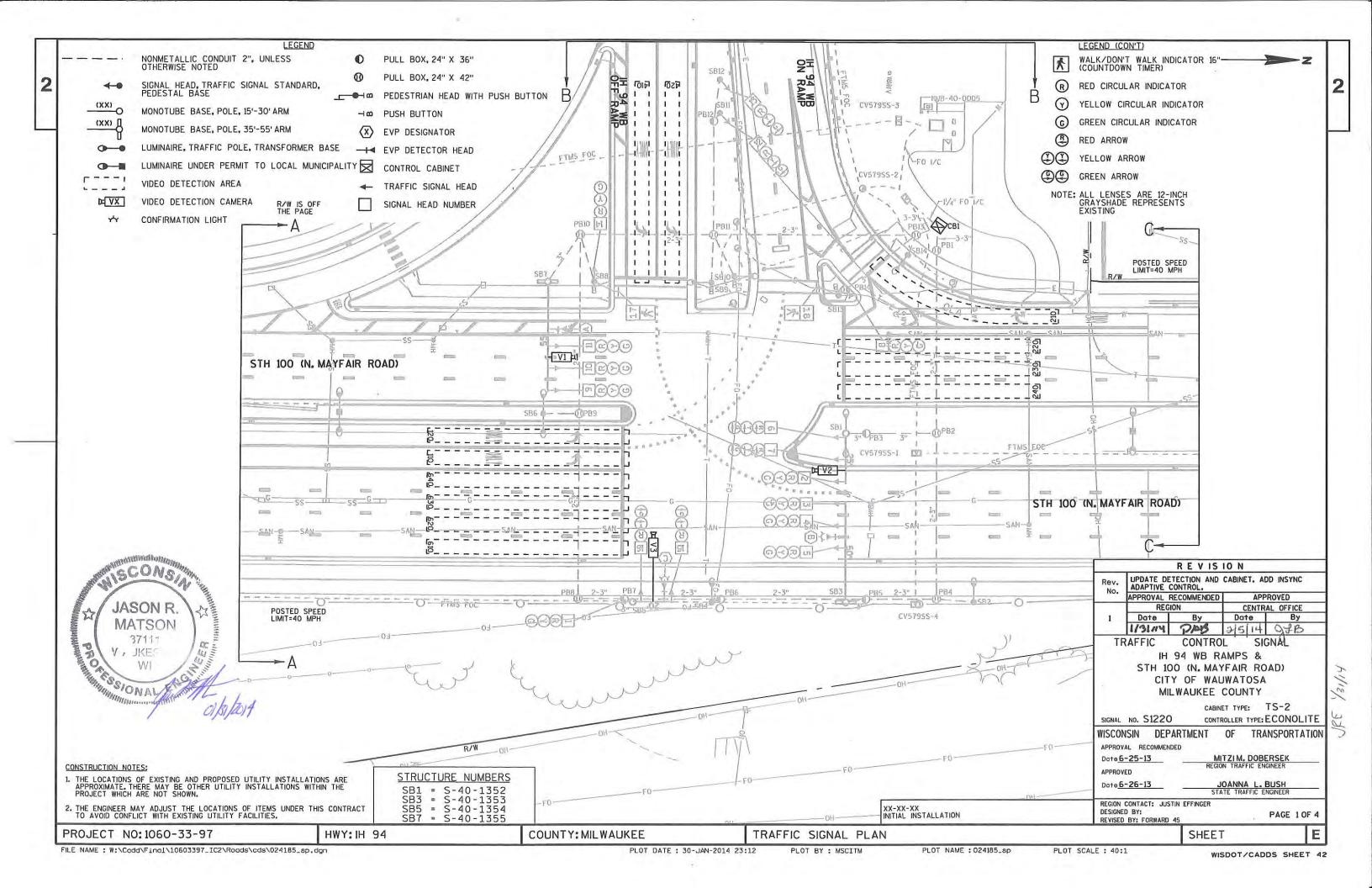
SHEET

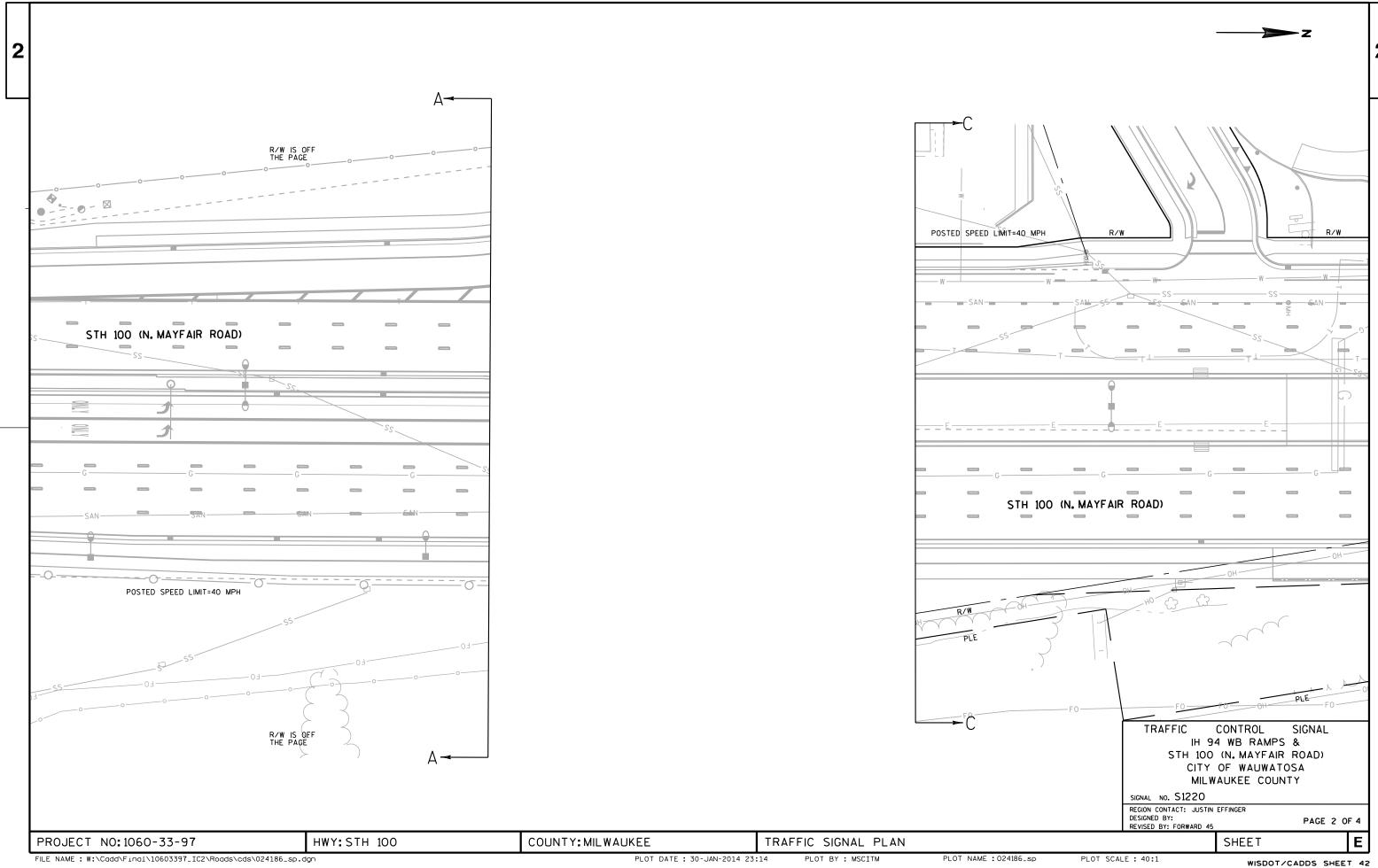


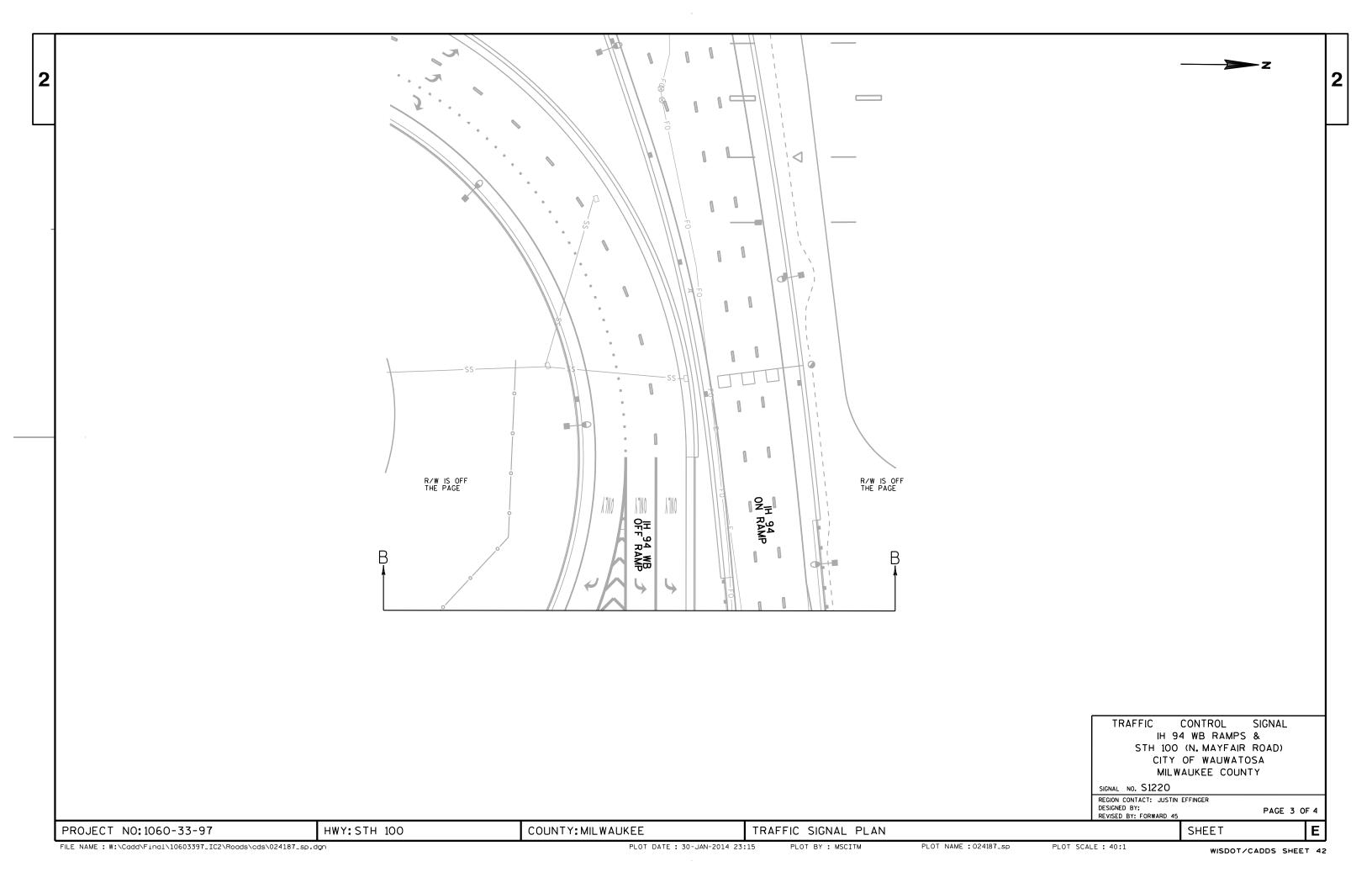


WISDOT/CADDS SHEET 42

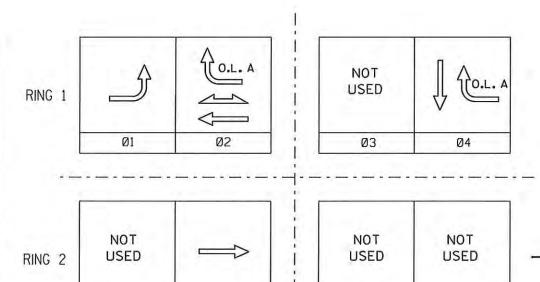








	HEAD NUMBERS	F L A S H
01	6,7	R
02	8,9,10,11	R
03		
04	14,15,16	R
05		
Ø6	1,2,3,4,5	R
07		
08		
Ø2P	17,18	
Ø4P		
Ø6P		
Ø8P		
OLA	12,13	R
OLE		
OLF) je
OLG		
OLH		



06

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		×
2		6	MIN	×
3				
4				×
5				
6		2	MIN	×
7				
8				

CONTROLLER LOGIC

TYPE OF COORDINATION NONE TBC TRAFFIC RESPONSIVE ADAPTIVE *LOCATION OF MASTER CONTROLLER NO: SIGNAL SYSTEM ": SS- 00 - 13

NONE

RADIO

CLOSED LOOP TWISTED PAIR* FIBER OPTIC*

FIBER OPTIC (ETHERNET)

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET IN SEPARATE DOT LIGHTING CABINE	X
IN SEPARATE DOT LIGHTING CABINE	ī

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

BARRIER

07

08

AN LOOP DETECTOR "(S)	110	210	230	410	610	630	
CALLED PHASE	1	2	2	4	6	6	
CALL OPTION	X	Х	×	Х	Х	Х	
DELAY TIME		X					
EXTEND OPTION	X	Х	Х	X	Х	Х	
EXTEND TIME							
USE ADDED INITIAL							
CROSS SWITCH PHASE							

05

DETECTOR INPUT							
PLAN LOOP DETECTOR =(S)	120	220	240	420	620	640	
CALLED PHASE	1	2	2	4	6	6	
CALL OPTION	X	X	X	X	X	×	
DELAY TIME							
EXTEND OPTION	X	X	X	X	X	×	
EXTEND TIME				1			
USE ADDED INITIAL							
CROSS SWITCH PHASE				11			

DETECTOR INPUT
PLAN LOOP DETECTOR *(S)
CALLED PHASE
CALL OPTION
DELAY TIME
EXTEND OPTION
EXTEND TIME
USE ADDED INITIAL
CROSS SWITCH PHASE

DETECTOR INPUT
PLAN LOOP DETECTOR "(S
CALLED PHASE
CALL OPTION
DELAY TIME
EXTEND OPTION
EXTEND TIME
USE ADDED INITIAL
CROSS SWITCH PHASE

EMERGENCY VEHICLE PREEMPTION SEQUENCE

	CHANNEL			
PREEMPTOR	A	В	C	
MOVEMENT		_1	↓	
PHASE	2+6	6+1	4	

AFTER PREEMPTION SEQUENCE 2+6 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4, CONTROLLER SHALL RETURN TO PHASE 4.

IH 94 WB RAMPS & STH 100 (N. MAYFAIR ROAD) CITY OF WAUWATOSA MILWAUKEE COUNTY

SIGNAL NO. S1220

CABINET TYPE: TS2

URE

CONTROLLER TYPE: ECONOLITE

DATE 02/14

PAGE NO. 4 OF 4

PROJECT NO: 1060-33-97

HWY: IH 94

COUNTY: MILWAUKEE

SEQUENCE OF OPERATIONS

PLOT NAME : 024189_sp_ph

SHEET

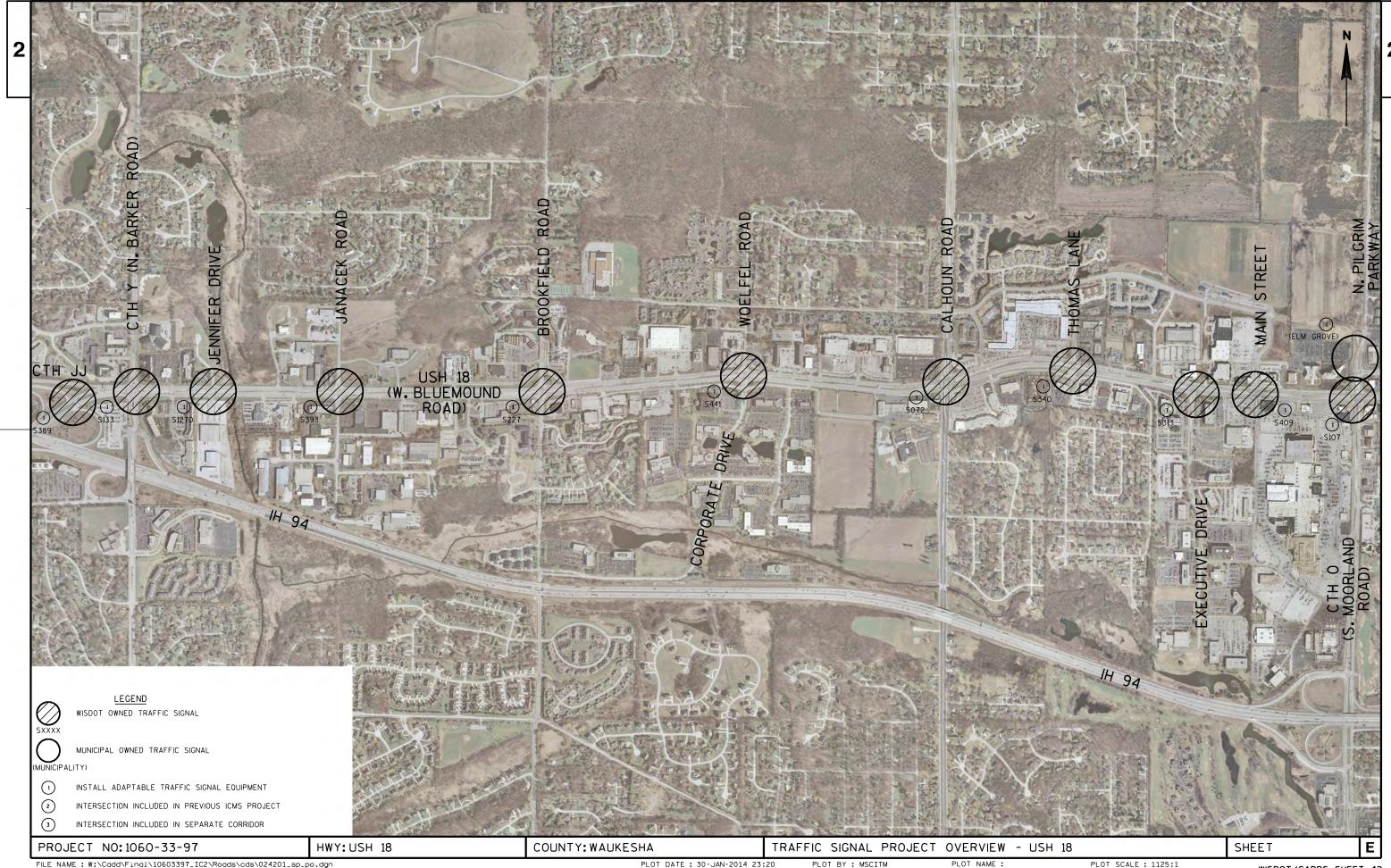
WISDOT/CADDS SHEET 42

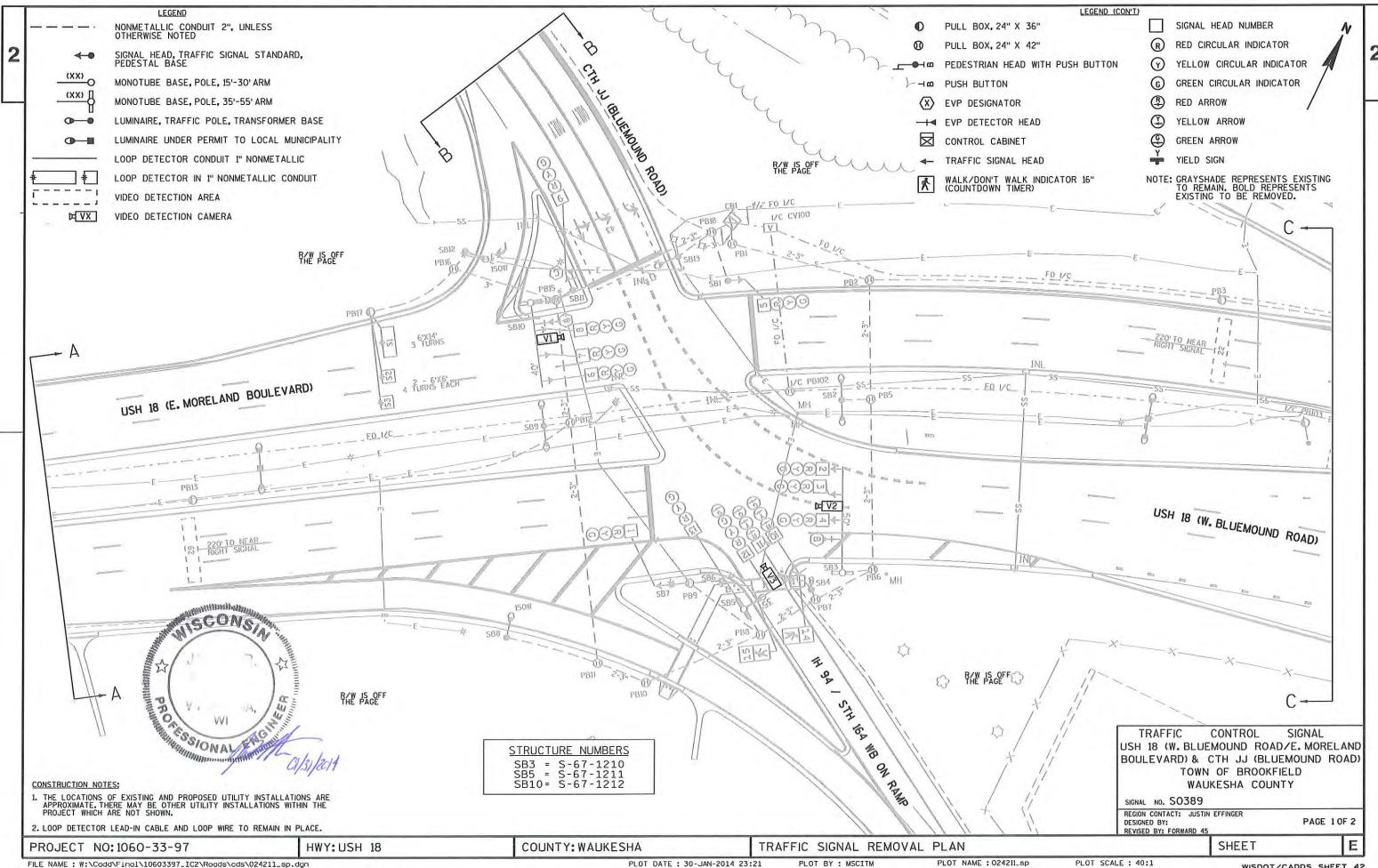
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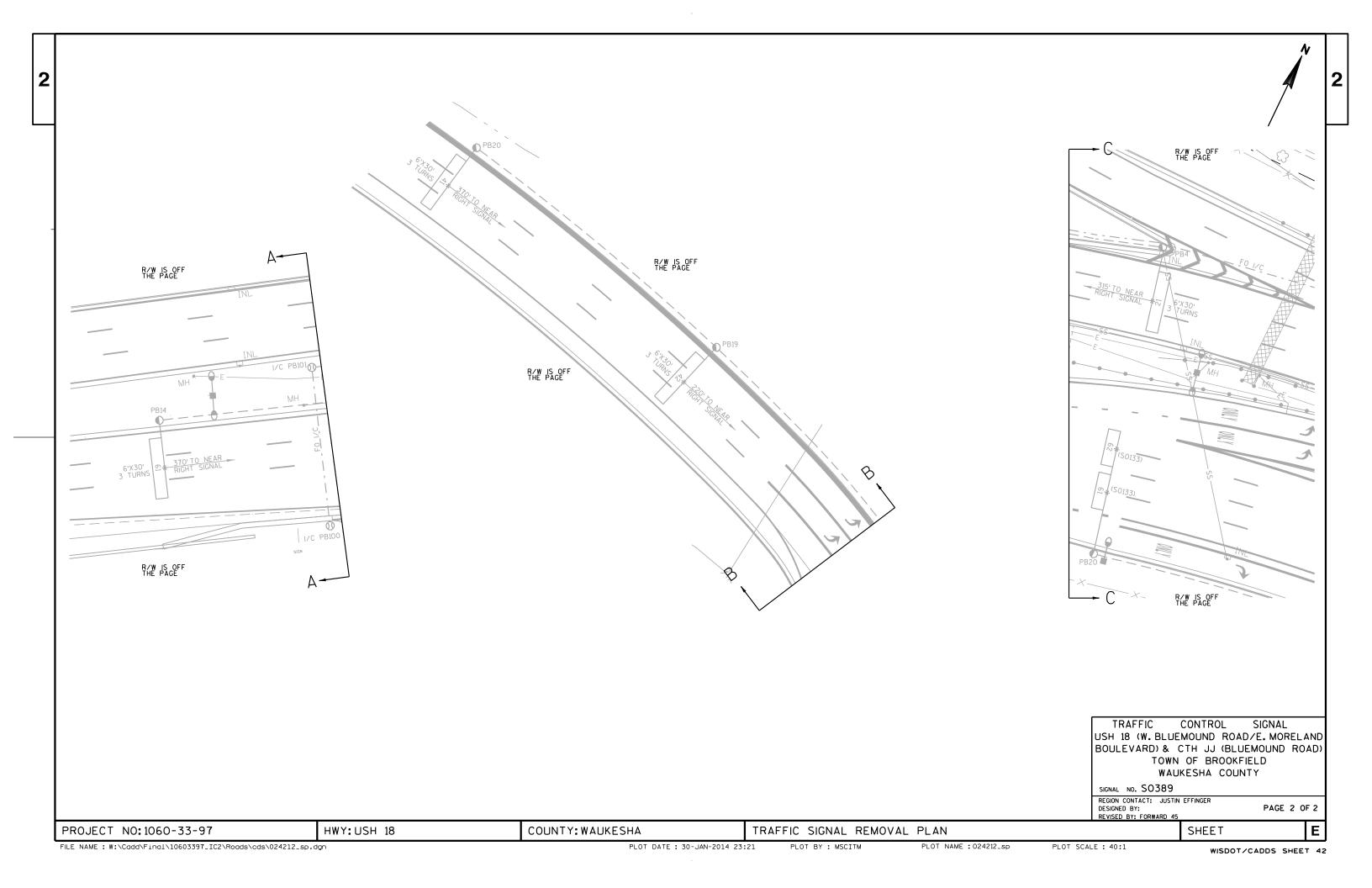
PLOT DATE: 30-JAN-2014 23:20

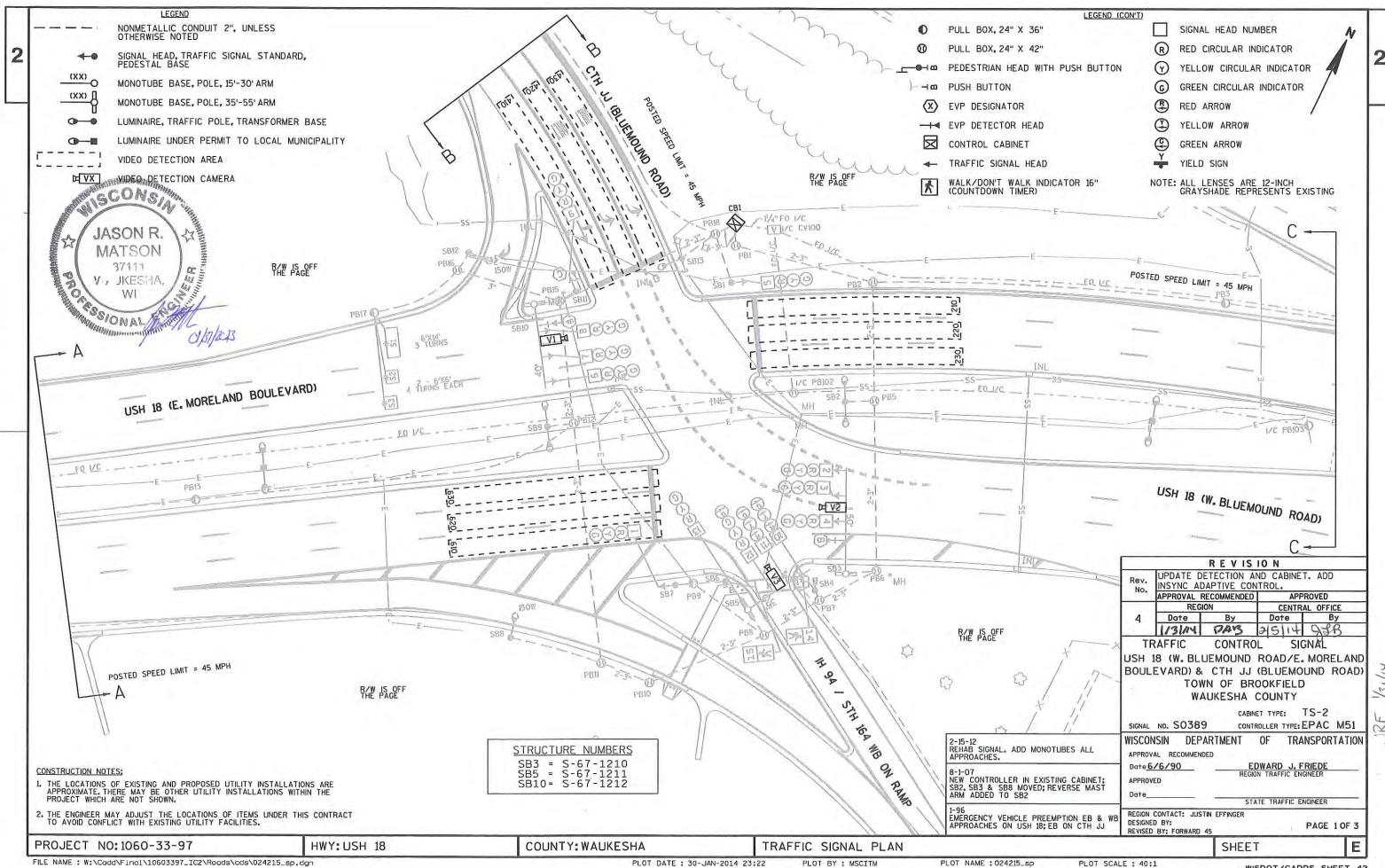
PLOT BY : MSCITM

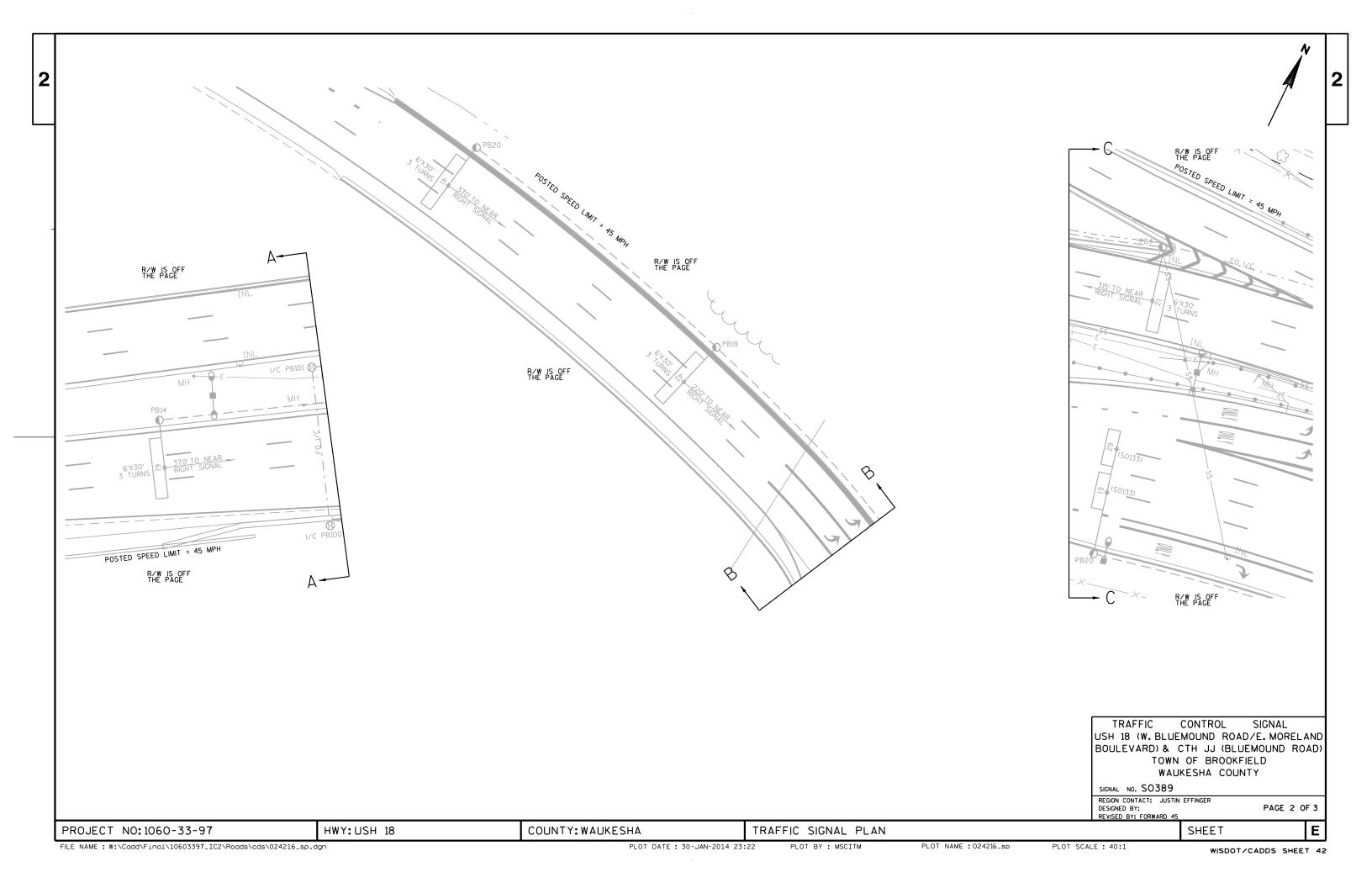
PLOT SCALE : 40:1



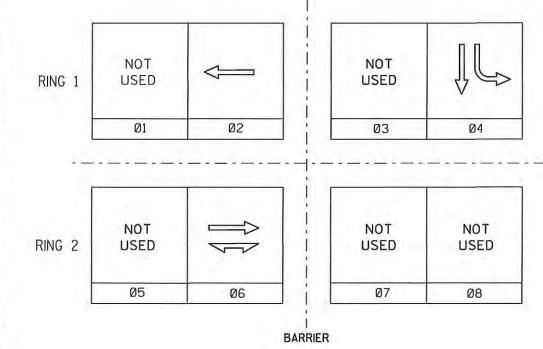








 $A = R \cdot R$



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2		6	MIN.	X
3				
4				X
5				
6		2	MIN.	X
7				1"
8				

TYPE OF INTERCONNECT/COMMUNIC	ATIO
NONE	
CLOSED LOOP	
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	X
RADIO	

TYPE OF COORDIN	NATION
NONE	
TBC	1.81
TRAFFIC RESPONSE	
ADAPTIVE	×
*LOCATION OF MASTER CONTROLLER NO:	S- 0072
SIGNAL SYSTEM *:	SS- 00 - 44

				N
			1	
		1		
	/	/\		
1				
/				

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	×
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	T
RAILROAD	
EMERGENCY VEHICLE	X
3M	
TOMAR	1
HARDWIRE	
GTT	X
LIFT BRIDGE	
OUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE		CHANNEL	
PREEMPTOR	A	В	C
MOVEMENT	->	->	↓
PHASE	2 AND 6	6 AND 2	4

AFTER PREEMPTION SEQUENCE 2 AND 6 OR 6 AND 2, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4, CONTROLLER SHALL RETURN TO PHASE 4.

USH 18 (W. BLUEMOUND ROAD /E. MORELAND BOULEVARD) CTH JJ (BLUEMOUND) TOWN OF BROOKFIELD WAUKESHA COUNTY

SIGNAL	NO.	S0389	CABINET	TYPE:	TS2	
			CONTROLLER	TYPE:	EPAC	1

DATE 02/14 PAGE NO. 3 OF 3

DETECTOR LOGIC

DETECTOR INPUT	3	1 -	7	5	11	9	15	13
PLAN LOOP DETECTOR =(S)	21	42					S1	S3
ASSIGNED PHASE	2	4						
OPERATION MODE	VEH	VEH			U			
SWITCH								
EXTEND	X	X						
DELAY			-					

DETECTOR INPUT	4	2	8	6	12	10	16	14
AN LOOP DETECTOR *(S)	41	61					S2	
ASSIGNED PHASE	4	6						
OPERATION MODE	VEH	VEH						ų.
SWITCH								
EXTEND	X	X						
1 1 2 A 1 W 1 4								

			4 1		DETECTOR INPUT
210	230	420	610	630	PLAN LOOP DETECTOR #(S
2	2	4	6	6	ASSIGNED PHASE
VEH	VEH	VEH	VEH	VEH	OPERATION MODE
					SWITCH
					EXTEND
			-		DELAY

				DETECTOR INPUT
220	410	430	620	PLAN LOOP DETECTOR *(S
2	4	4	6	ASSIGNED PHASE
VEH	VEH	VEH	VEH	OPERATION MODE
				SWITCH
				EXTEND
				DELAY

PROJECT NO: 1060-33-97

HWY: USH 18

COUNTY: WAUKESHA

SEQUENCE OF OPERATIONS PLOT BY : MSCDYB

PLOT SCALE : 40:1

SHEET

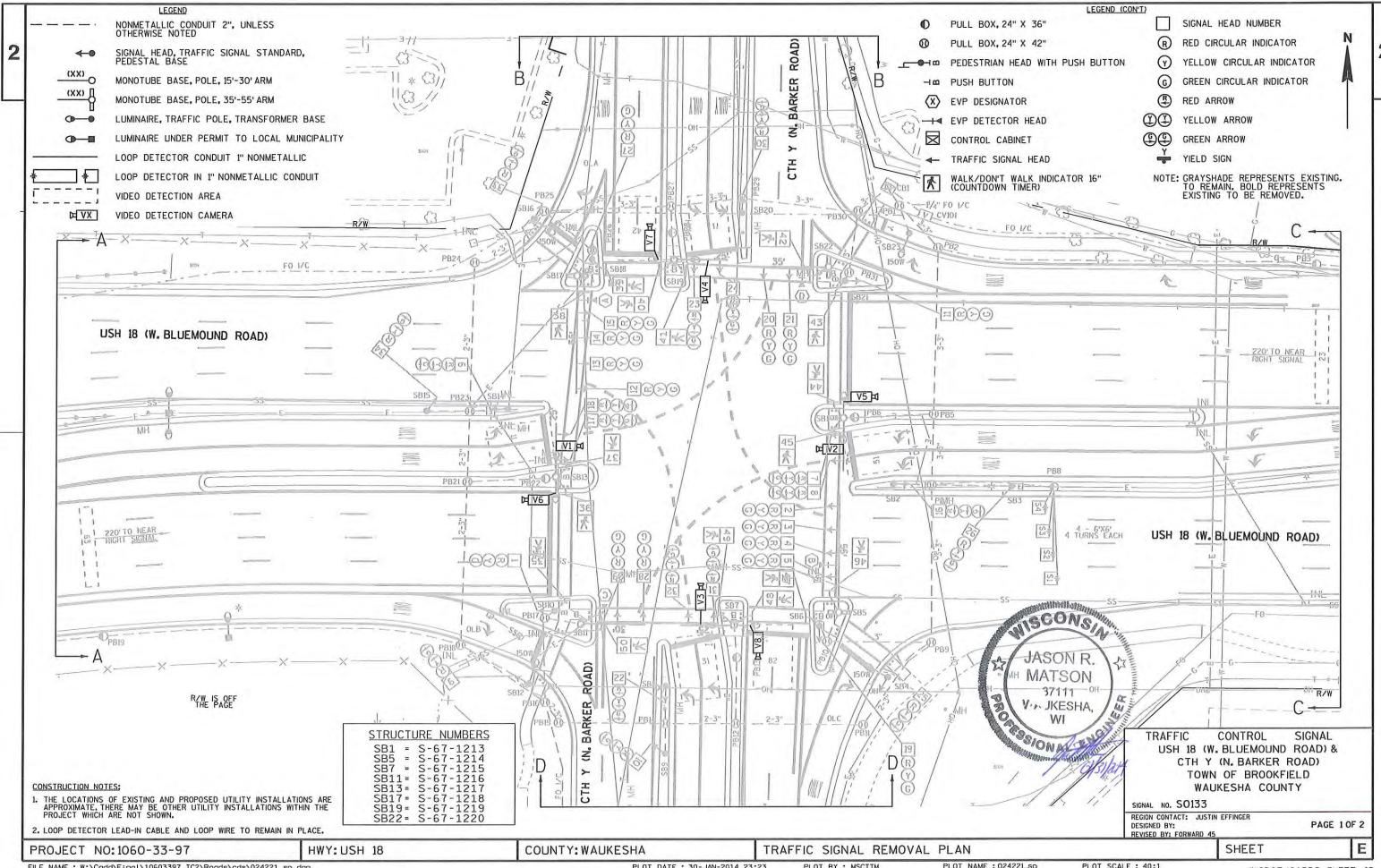
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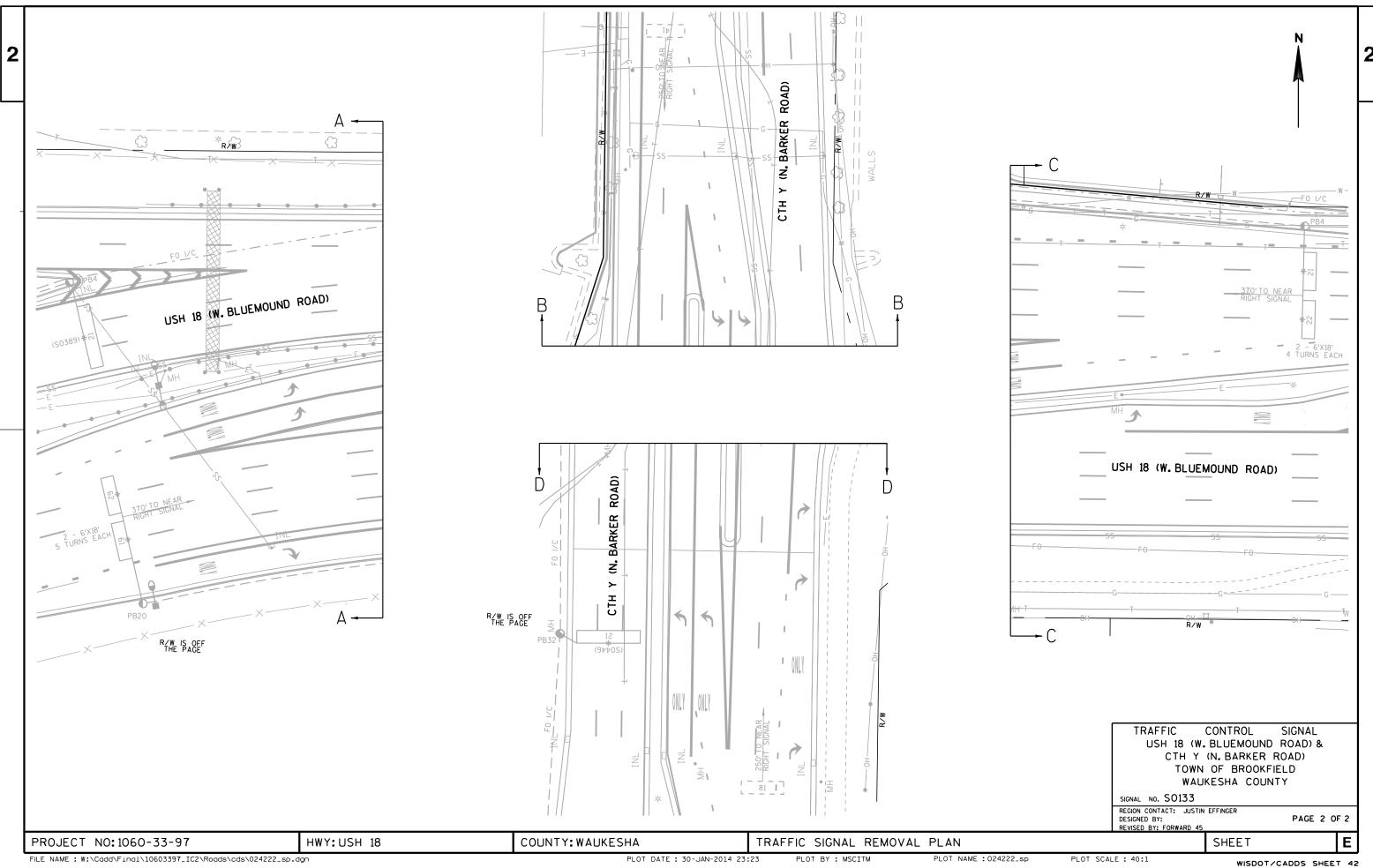
FILE NAME: W:\Codd\Final\10603397_IC2\Roads\cds\024219_sp_ph.dgn

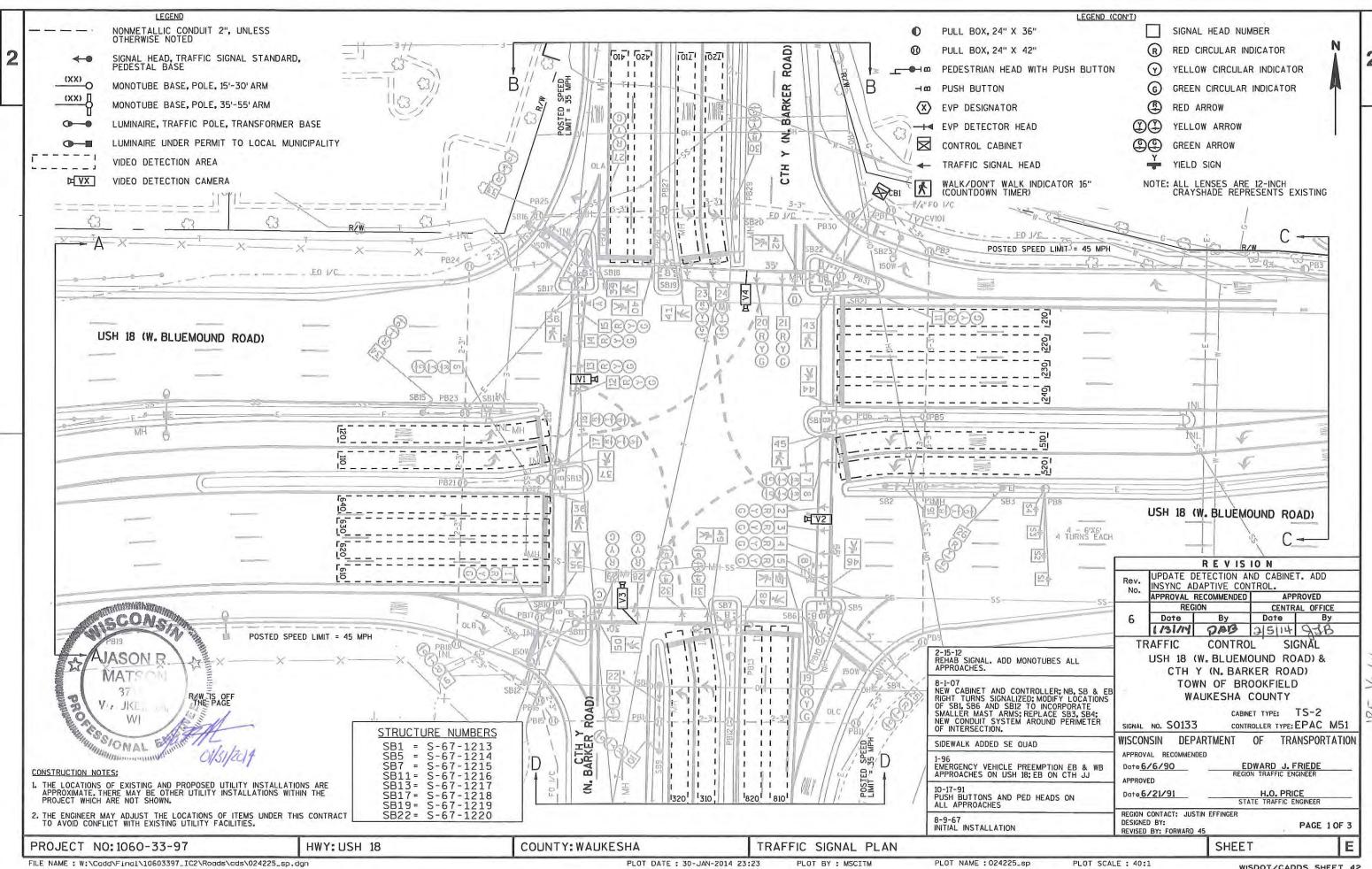
PLOT DATE: 31-JAN-2014 07:07

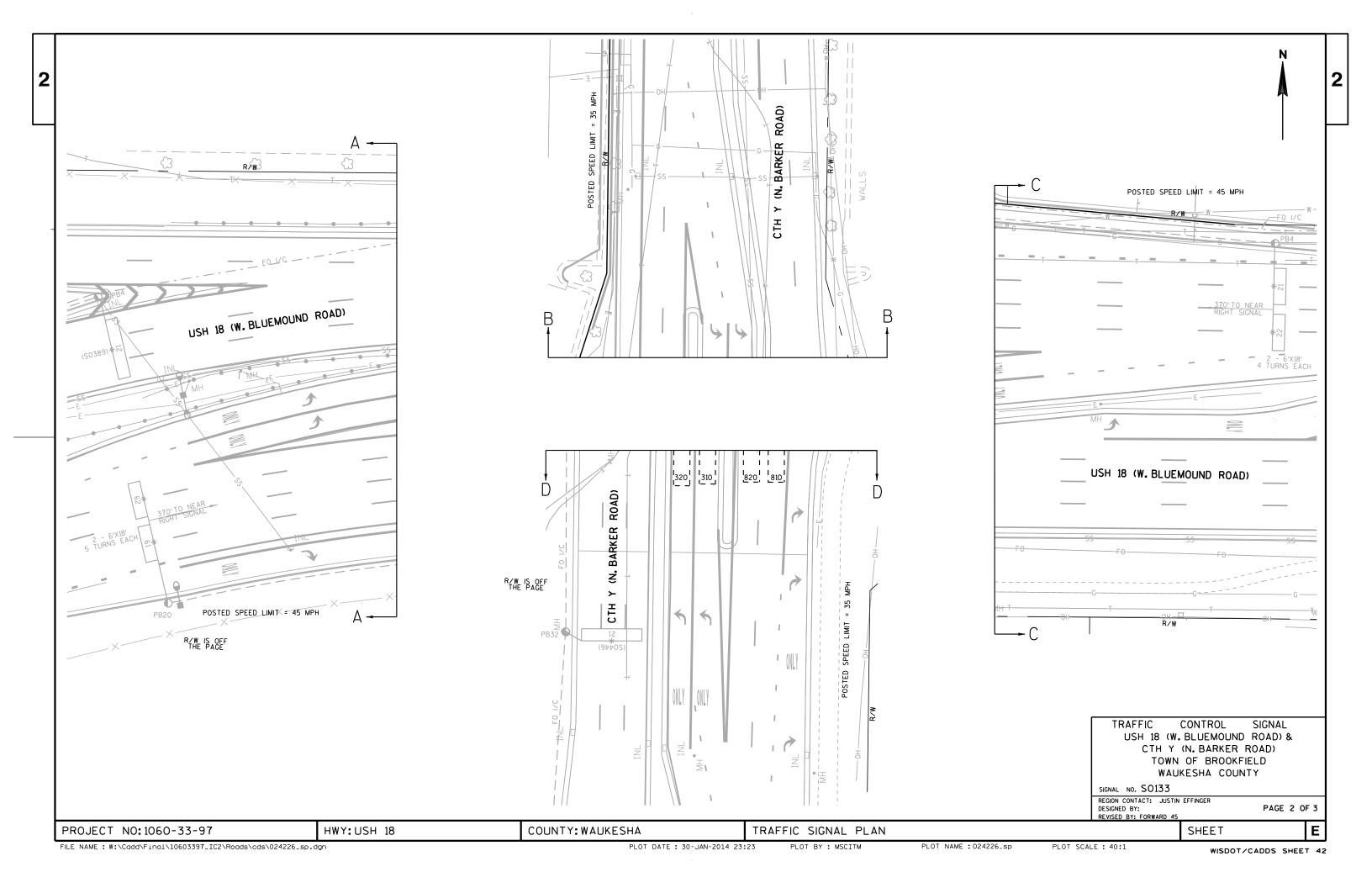
PLOT NAME : 024219_sp_ph

WISDOT/CADDS SHEET 42









CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		×
2		6	MIN.	×
3	[- J	8		×
4		8		×
5	LT = 1/	2		х
6		2	MIN.	×
7		4		×
8		4		X

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		×
2		6	MIN.	×
3	[- J	8		×
4		8		X
5	1	2		X
6		2	MIN.	X
7		4		×
8		4		х

NONE	
CLOSED LOOP	
TWISTED PAIR*	- 1
FIBER OPTIC*	- 70
FIBER OPTIC (ETHERNET)	X
RADIO	

TYPE OF COORDINA	TION	
NONE		
TBC		
TRAFFIC RESPONSIVE		1
ADAPTIVE		X
*LOCATION OF MASTER CONTROLLER NO:	S- 007	
SIGNAL SYSTEM ":	SS- 00 - 4	4

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET IN SEPARATE DOT LIGHTING CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	Т
EMERGENCY VEHICLE	X
GTT	×
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

		CHAN	MEL	
EMERGENCY VEHICLE PREEMPTOR	Á	В	c	D
MOVEMENT	~	OLB V	OLA] [11 Por
PHASE	2+5	1+6	4+7	3+8

AFTER PREEMPTION SEQUENCE 2+5 OR 1+6, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+7 OR 3+8, CONTROLLER SHALL RETURN TO PHASE 4+8.

USH 18 (W. BLUEMOUND ROAD) & CTH Y (N. BARKER ROAD) TOWN OF BROOKFIELD WAUKESHA COUNTY

SIGNAL	NO.	S0133	CABINET	TYPE:	TS2
		cor	NTROLLER	TYPE:	EPAC

DATE 02/14 PAGE NO. 3 OF 3

						1		
	HEAD NUMBERS	F L A S H		0.L. A	4			O.L. A
Ø1	6,7,8	R	RING 1			Ť	о. г. в 🕽 🗓	
02	11,12,13,14,15	R				7	V	1
03	22,23,24	R		Ø1	02	1	92	0.4
04	27,28,29	R		Ø1	VZ.	1 1	03	04
05	16,17,18	R		0.0000000000000000000000000000000000000		-1		
06	1,2,3,4,5	R				7:=		
07	30,31,32	R				1 [
08	19,20,21	R				1		11
Ø2P	39,40,41,42			17 ~		1		1 17 17 (
Ø4P	35,36,37,38		RING 2	V (~	5	1	C	
Ø6P	47,48,49,50			O.L. C	O.L. B	1		
Ø8P	43,44,45,46	HEIL		-	V	1		
OLA	33,34	R		05	Ø6	1	07	08
OLB	9,10	R				1		
OLC	25,26	R			В	ARRIER		
OLD								

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11		
PLAN LOOP DETECTOR *(S)	21/22			S1	S3	110	210
ASSIGNED PHASE	2					1	2
OPERATION MODE	VEH					VEH	VEH
SWITCH			1 -				
EXTEND	X						
DELAY							

DETECTOR INPUT	4	2	8	6	12		
PLAN LOOP DETECTOR "(S)	61/62			S2	54	120	220
ASSIGNED PHASE	6					1	2
OPERATION MODE	VEH					VEH	VEH
SWITCH							
EXTEND	Х						
DELAY		7 7 7					

230	310	410	510	610	630	710	810	DETECTOR INPUT
2	3	4	5	6	6	7	8	ASSIGNED PHASE
VEH	OPERATION MODE							
						/		SWITCH
								EXTEND
					1 -			DELAY

		right						DETECTOR INPUT
240	320	420	520	620	640	720	820	PLAN LOOP DETECTOR "(S)
2	3	4	5	6	6	7	8	ASSIGNED PHASE
VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
								SWITCH
				l ===				EXTEND
			-					DELAY

PROJECT NO: 1060-33-97

HWY: USH 18

COUNTY: WAUKESHA

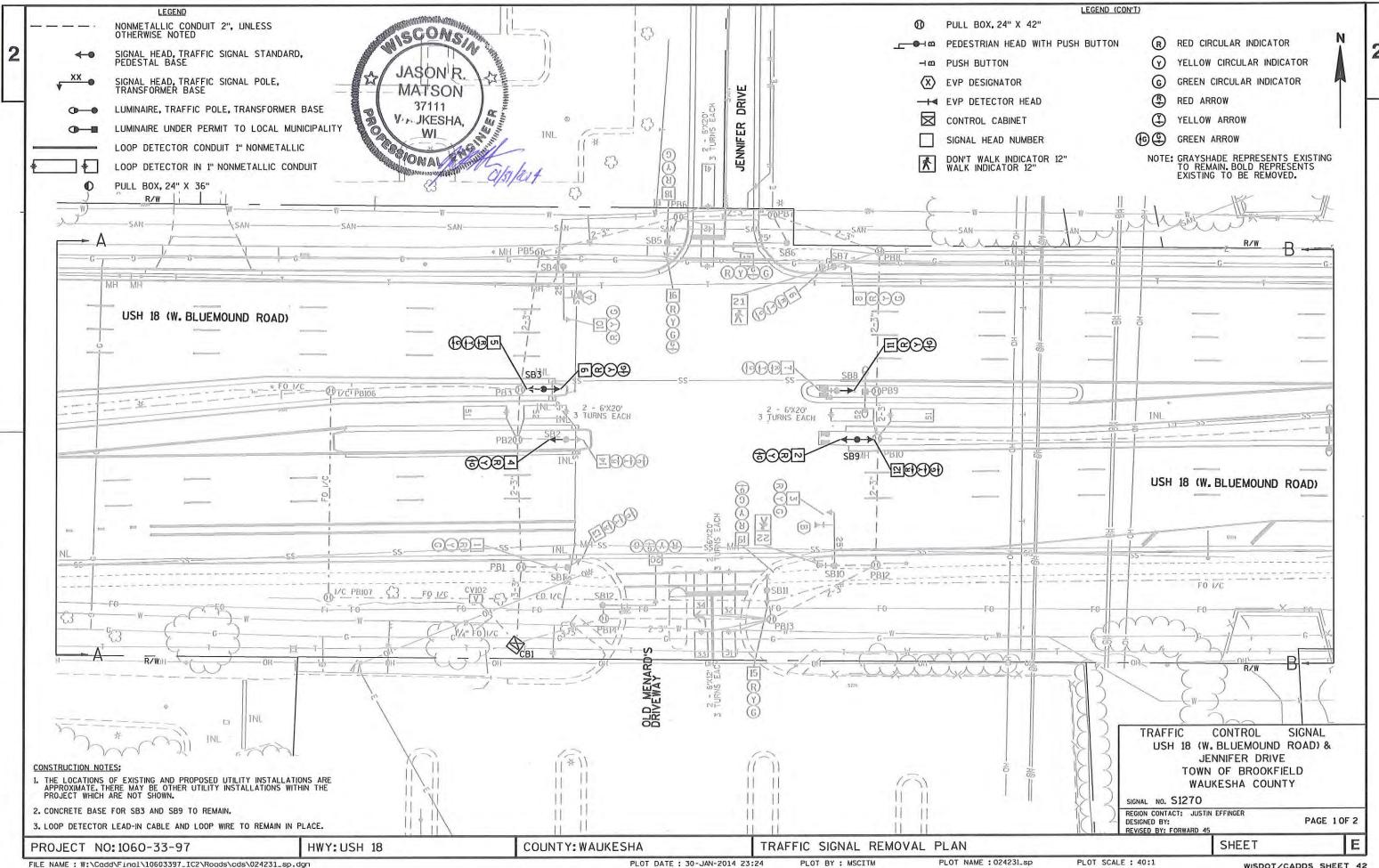
SEQUENCE OF OPERATIONS

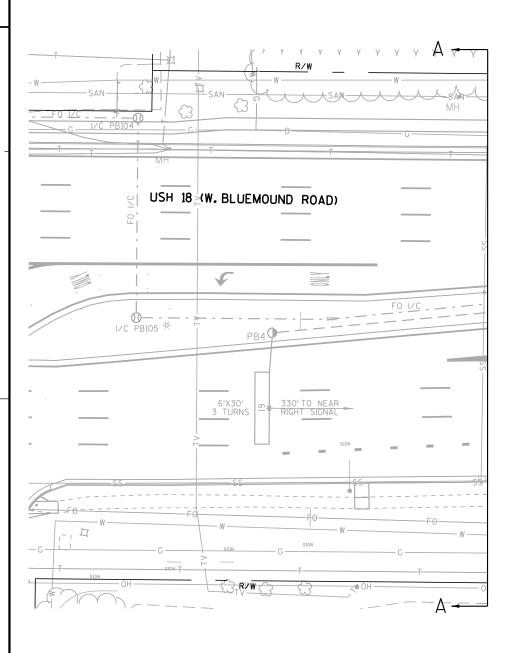
PLOT BY : MSCITM

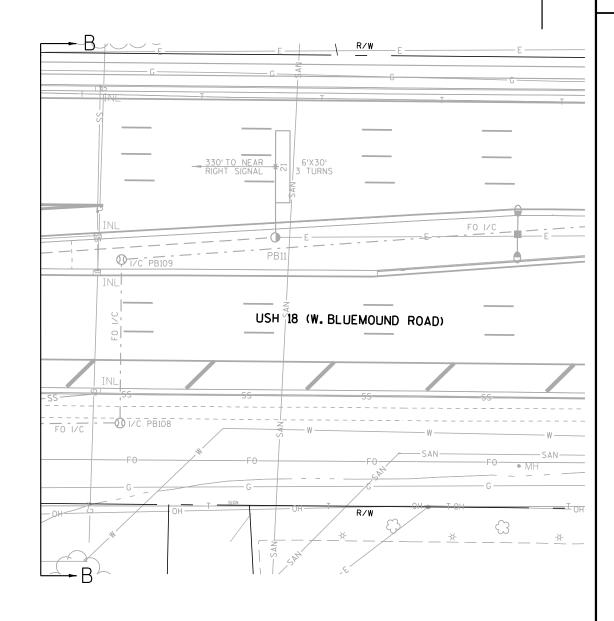
PLOT NAME : 024229_sp_ph

PLOT SCALE: 40:1

SHEET







TRAFFIC CONTROL SIGNAL USH 18 (W. BLUEMOUND ROAD) & JENNIFER DRIVE TOWN OF BROOKFIELD WAUKESHA COUNTY

SIGNAL NO. S1270

REGION CONTACT: JUSTIN EFFINGER DESIGNED BY: REVISED BY: FORWARD 45 PAGE 2 OF 2

HWY: USH 18

COUNTY: WAUKESHA

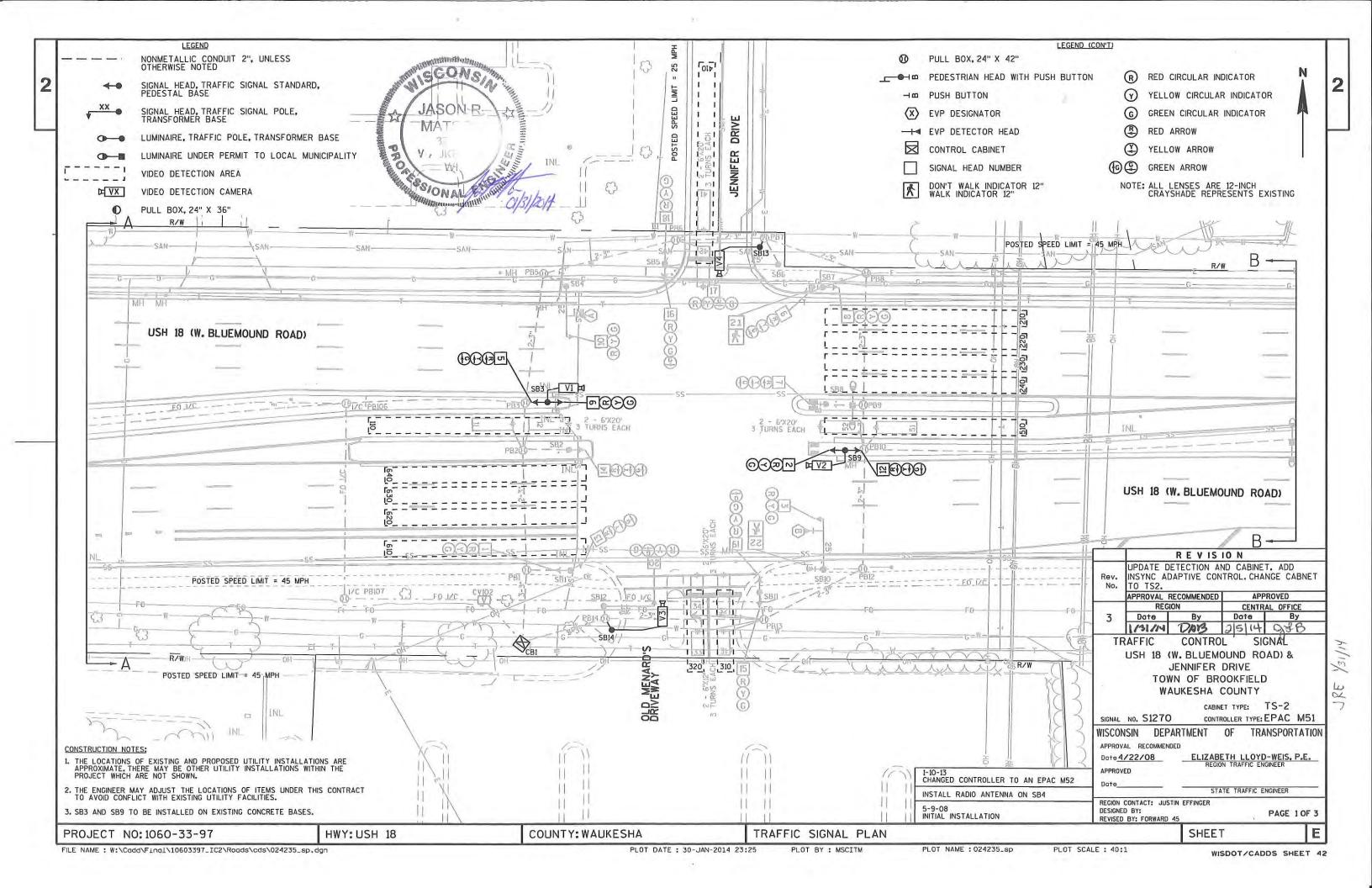
TRAFFIC SIGNAL REMOVAL PLAN

PLOT BY : MSCITM

PLOT NAME: 024232_sp

SHEET PLOT SCALE : 40:1

PROJECT NO: 1060-33-97





USH 18 (W. BLUEMOUND ROAD) POSTED SPEED LIMIT = 45 MPH

POSTED SPEED LIMIT = 45 MPH ₩ FO I/C PB109 USH 18 (W. BLUEMOUND ROAD) FO I/C - - 0 I/C PB108

TRAFFIC CONTROL SIGNAL
USH 18 (W. BLUEMOUND ROAD) &
JENNIFER DRIVE
TOWN OF BROOKFIELD
WAUKESHA COUNTY

SIGNAL NO. S1270

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY:
REVISED BY: FORWARD 45

PAGE 2 OF 3

COUNTY: WAUKESHA

TRAFFIC SIGNAL PLAN

PLOT BY : MSCITM

PLOT NAME: 024236_sp

SHEET

HWY: USH 18

PROJECT NO: 1060-33-97

ENTRY

6

2

2

RECALL

MIN.

MIN.

PHASE

ACTIVE

X

X

×

×

X

X

PHASE

NUMBER

1

2

3

4

5

6

7

8

PHASE

LOCKING

TYPE OF COORDINA	TION
NONE	
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	×
*LOCATION OF MASTER CONTROLLER NO:	S- 0072
SIGNAL SYSTEM #:	SS- 00 - 44

BY OTHER AGENCY	X
IN TRAFFIC SIGNAL CABINET IN SEPARATE DOT LIGHTING CABINET	
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	-
NONE	T
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	
HARDWIRE	
3M	X
LIFT BRIDGE	
QUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

	CHA	NNEL
PREEMPTOR	A	В
MOVEMENT	=	=
PHASE	2+5	6+1

AFTER PREEMPTION SEQUENCE 2+5 OR 1+6, CONTROLLER SHALL RETURN TO PHASES 2+6.

USH 18 (W. BLUEMOUND ROAD) & JENNIFER DRIVE TOWN OF BROOKFIELD WAUKESHA COUNTY

CABINET TYPE: TS2 SIGNAL NO. S1270 CONTROLLER TYPE: EPAC

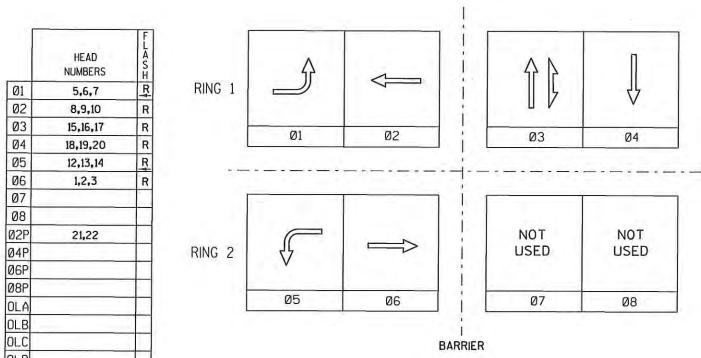
DATE 02/14

PAGE NO. 3 OF 3

COUNTY: WAUKESHA

SEQUENCE OF OPERATIONS PLOT NAME : 024239_sp_ph

SHEET WISDOT/CADDS SHEET 42



RING 1				
	Ø1	Ø2	03	04
	× — +, —, +, —, +,			
RING 2			NOT USED	NOT USED

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR *(S)	11	21	31	33	41	51	61	
ASSIGNED PHASE	1	2	3	3	4	5	6	
OPERATION MODE	VEH							
SWITCH								
EXTEND	X	X	X	×	×	×	Х	
DELAY			X		X			

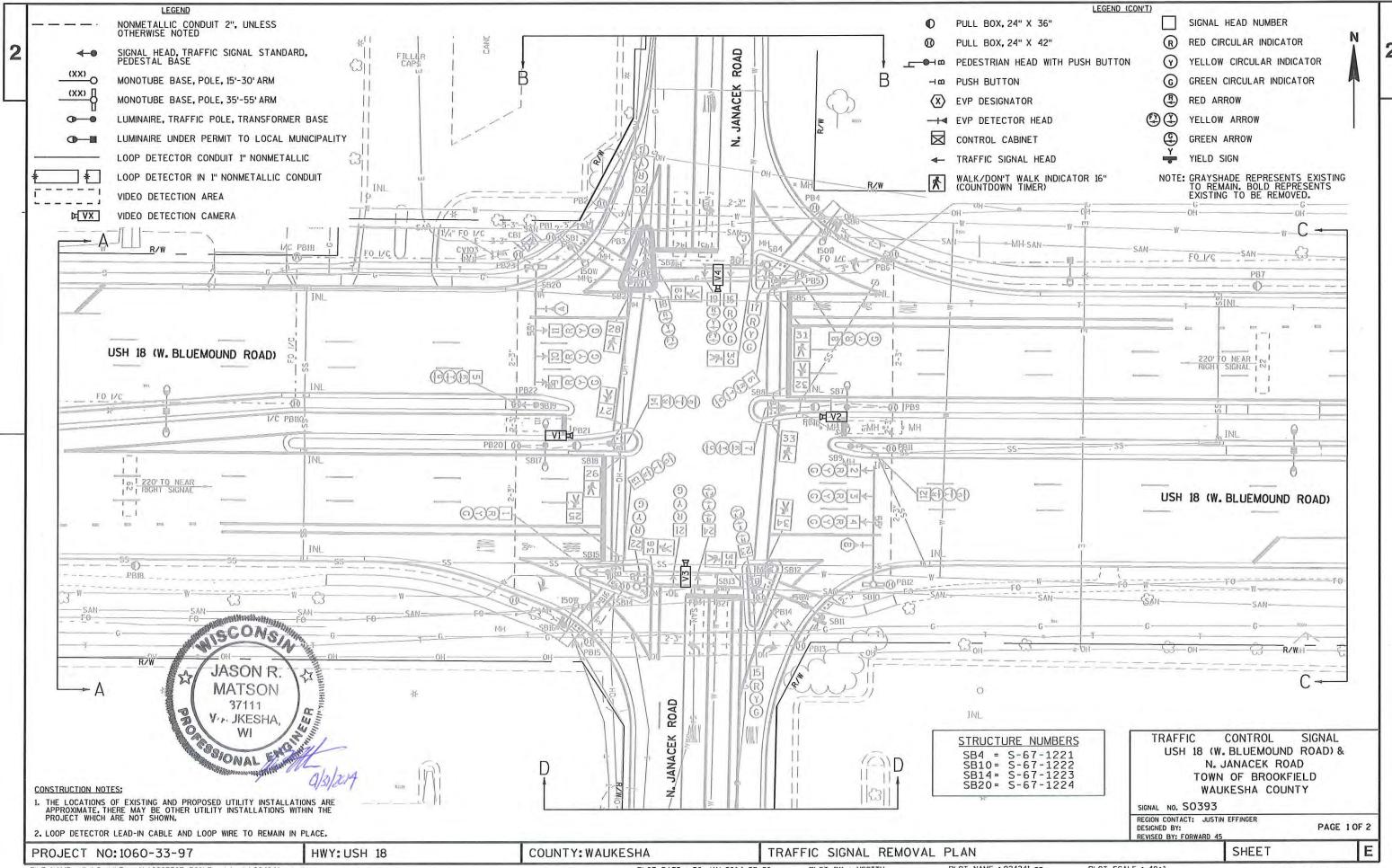
DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR *(S)	12		32	34	42	52		1
ASSIGNED PHASE	1		3	3	4	5		
OPERATION MODE	VEH		VEH	VEH	VEH	VEH		
SWITCH			W					
EXTEND	X		X	X	X	Х		
DELAY			X		X			-

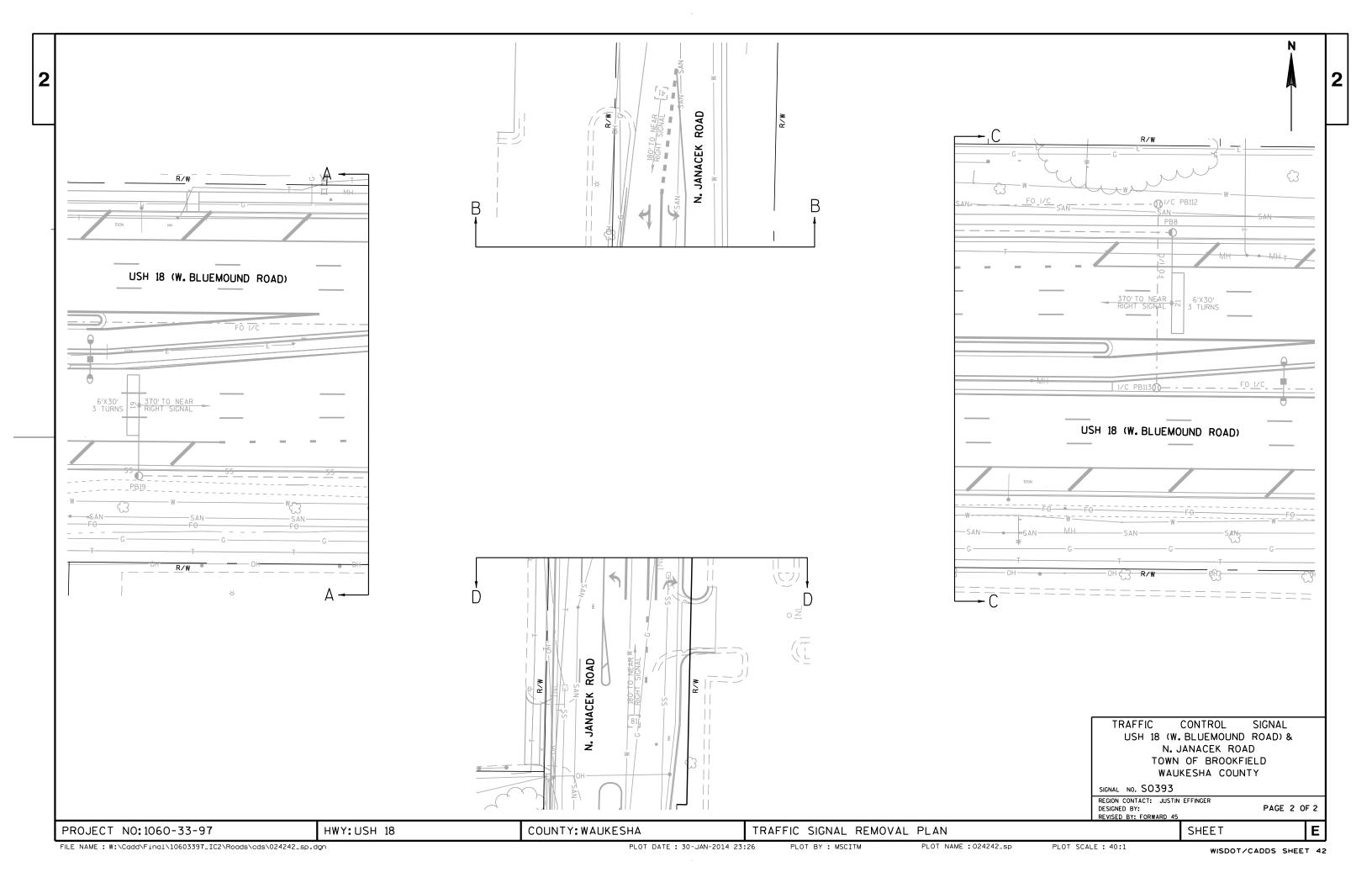
							DETECTOR INPUT
110	220	240	320	510	620	640	PLAN LOOP DETECTOR "C
1	2	2	3	5	6	6	ASSIGNED PHASE
VEH	OPERATION MODE						
							SWITCH
							EXTEND
							DELAY

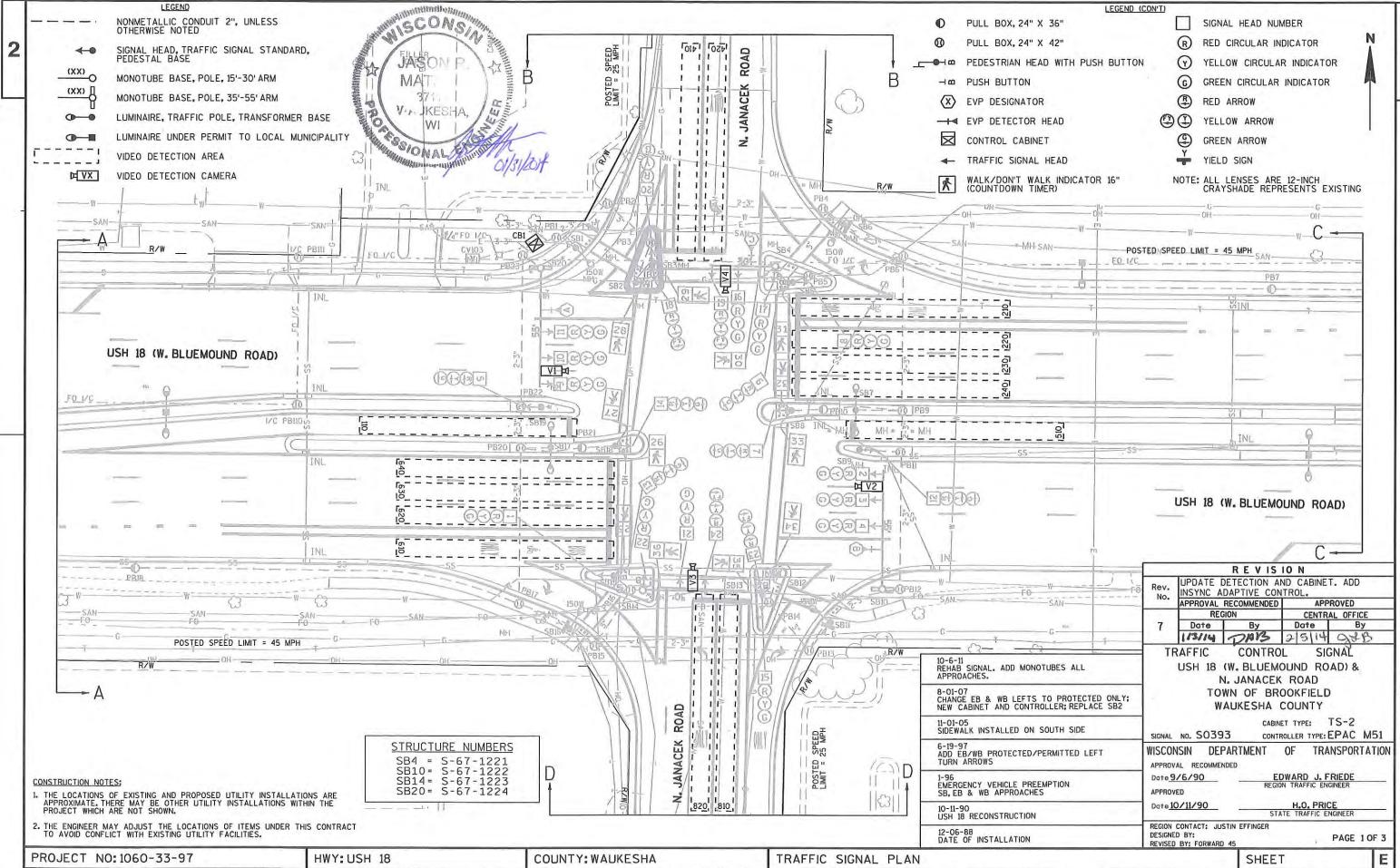
				7.2	71.11	DETECTOR INPUT
210	230	310	410	610	630	PLAN LOOP DETECTOR "C
2	2	3	4	6	6	ASSIGNED PHASE
VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
			1			SWITCH
						EXTEND
		X	X	×		DELAY

JRE

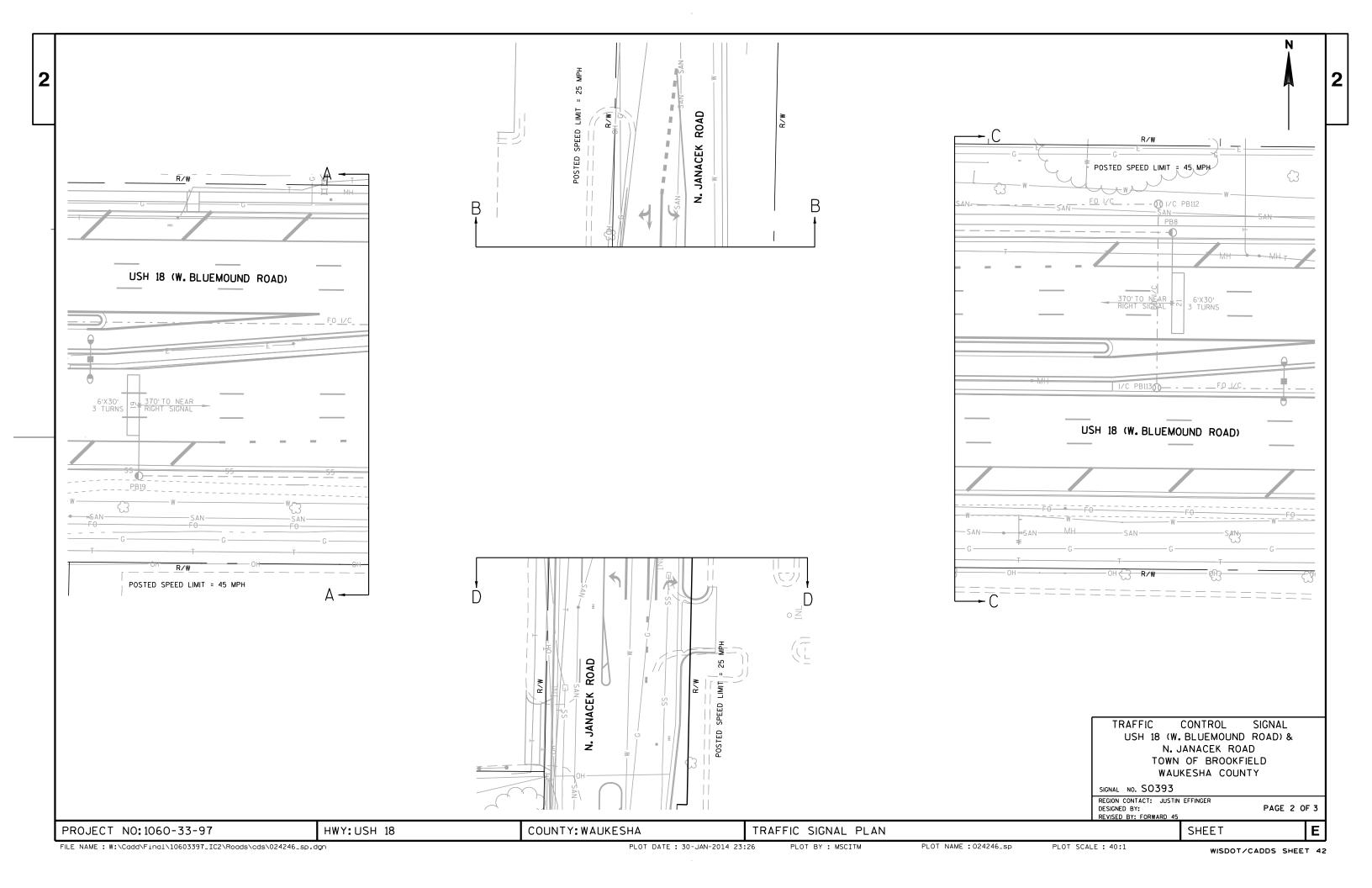
DAB







2



RECALL

MIN.

MIN.

ACTIVE

X

X

X

X

X

X

DUAL

ENTRY

6

6

8

2

2

4

PHASE

NUMBER

2

3

4

5

6

7 8 PHASE

LOCKING

TYPE OF COORDINA	TION
NONE	
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	X
*LOCATION OF MASTER CONTROLLER NO:	S- 0072
SIGNAL SYSTEM ":	SS- 00 - 44

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET IN SEPARATE DOT LIGHTING CABINET	X
IN SEPARATE DOT LIGHTING CABINET	Ī

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

PREEMPTOR	A	В	c
MOVEMENT	*		11
PHASE	2+5	1+6	4 AND 8

AFTER PREEMPTION SEQUENCE 2+5 OR 1+6, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4 AND 8, CONTROLLER SHALL RETURN TO PHASE 4+8.

USH 18 (W. BLUEMOUND ROAD) & N. JANACEK ROAD TOWN OF BROOKFIELD WAUKESHA COUNTY

SIGNAL NO. SO393 CABINET TYPE: TS2 CONTROLLER TYPE: EPAC

DATE 02/14

	PAGE	NO.	3 of	3
SHEET				E

	HEAD NUMBERS	F L A S H		A		NOT	1 0 8
Ø1	5,6,7	R	RING 1		—	USED	
02	8,9,10,11	R				7	V V
03	9	321	-	Ø1	02		
04	20,21,22	R	L	NI NI	02	03	04
05	12,13,14	R		والتناوي والمناورة			
06	1,2,3,4	R		20-12-13-13-13-13-13-13-13-13-13-13-13-13-13-			
07			T				1
08	15,16,17	R					- AA
Ø2P	29,30					NOT	Bo.L. of
Ø4P	25,26,27,28		RING 2	47	V-V	USED	805
Ø6P	35,36			V			-51
Ø8P	31,32,33,34		-	05			
OLA			Ļ	05	Ø6	07	Ø8
OLB	18,19	R					
OLC					BARI	RIER	
OLD	23,24	R			2000	77.07.0	

RING 1			NOT USED	
	01	Ø2 :	03	04
RING 2			NOT USED	
			07	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR *(S)	21							
ASSIGNED PHASE	2							
OPERATION MODE	VEH							
SWITCH								
EXTEND	X							
DELAY								

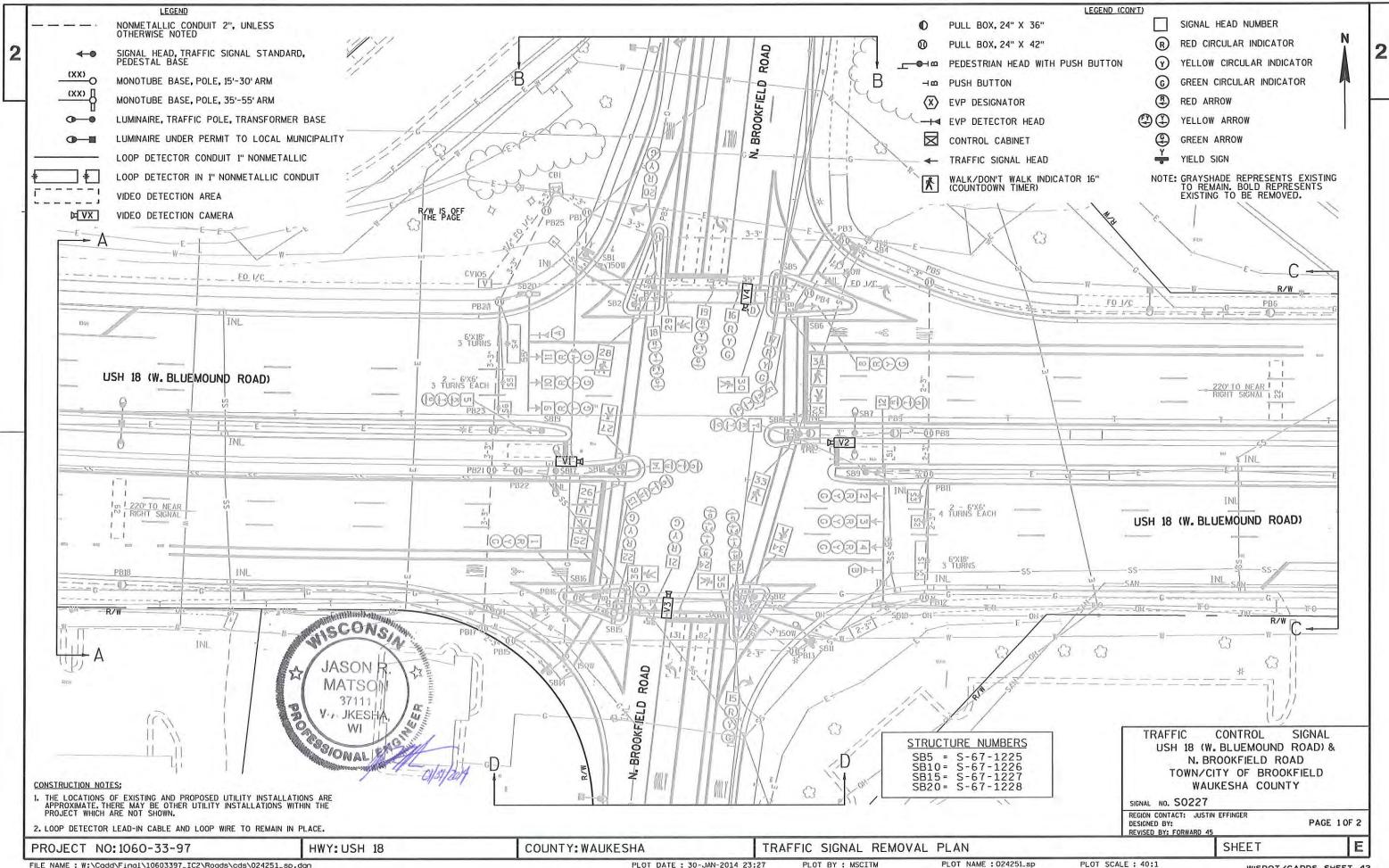
							DETECTOR INPUT
110	220	240	420	610	630	810	PLAN LOOP DETECTOR
1	2	2	4	6	6	8	ASSIGNED PHASE
VEH	OPERATION MODE						
							SWITCH
							EXTEND
				X			DELAY

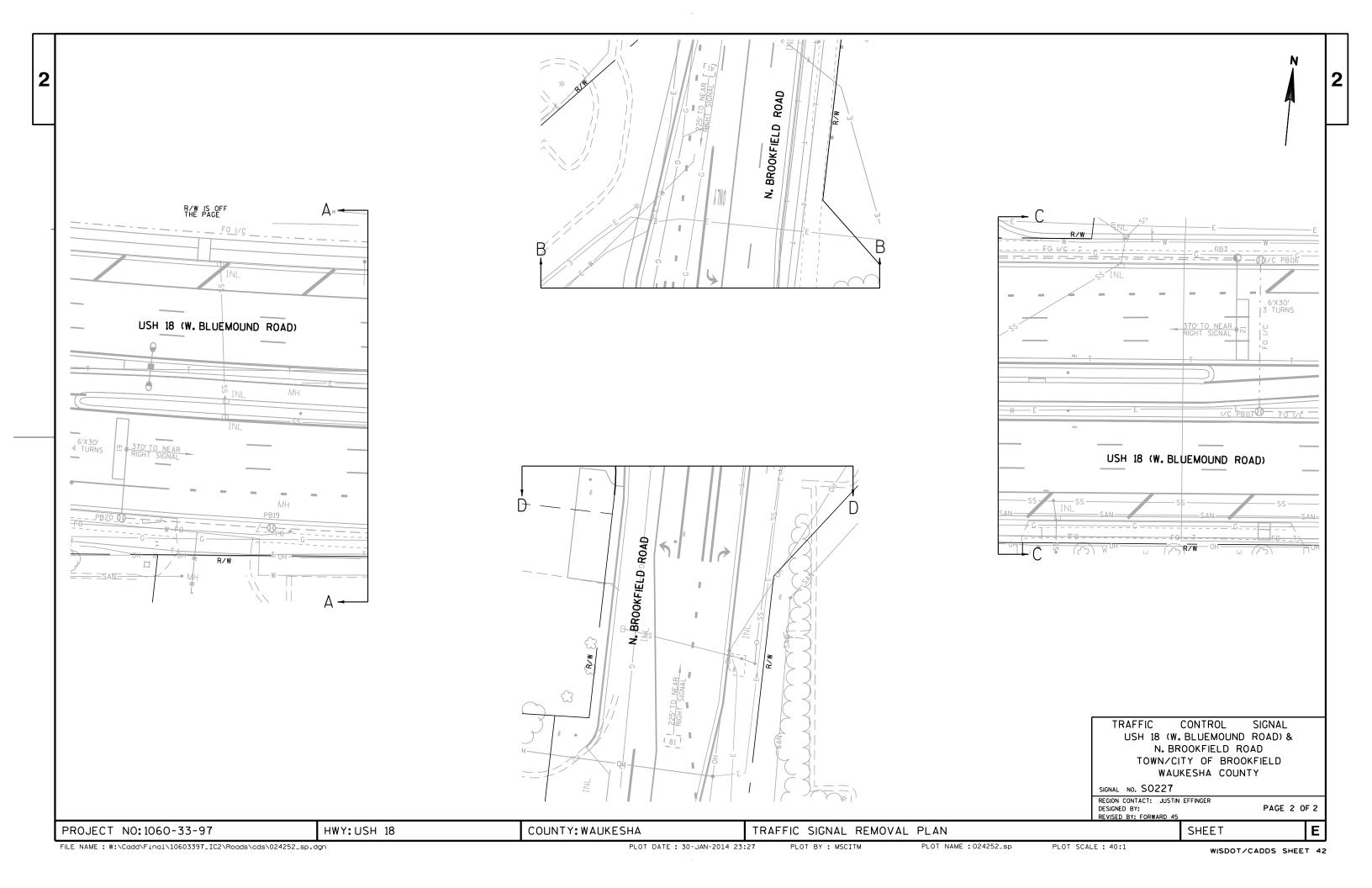
DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR "(S)	61							
ASSIGNED PHASE	6							
OPERATION MODE	VEH							
SWITCH								
EXTEND	X							
DELAY								

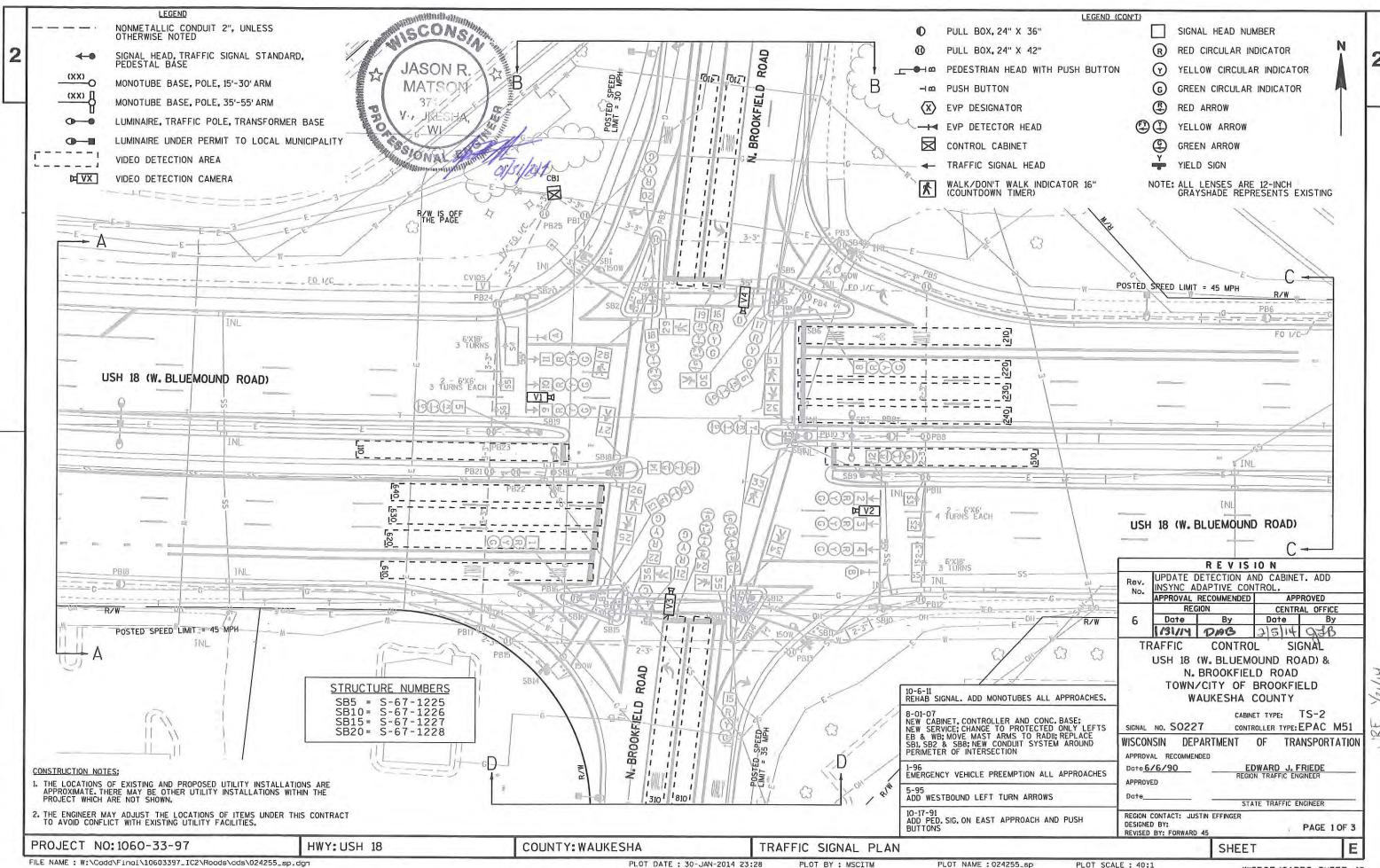
210	230	410	510	620	640	820	DETECTOR INPUT
2	2	4	5	6	6	8	ASSIGNED PHASE
VEH	OPERATION MODE						
							SWITCH
							EXTEND
Χ							DELAY

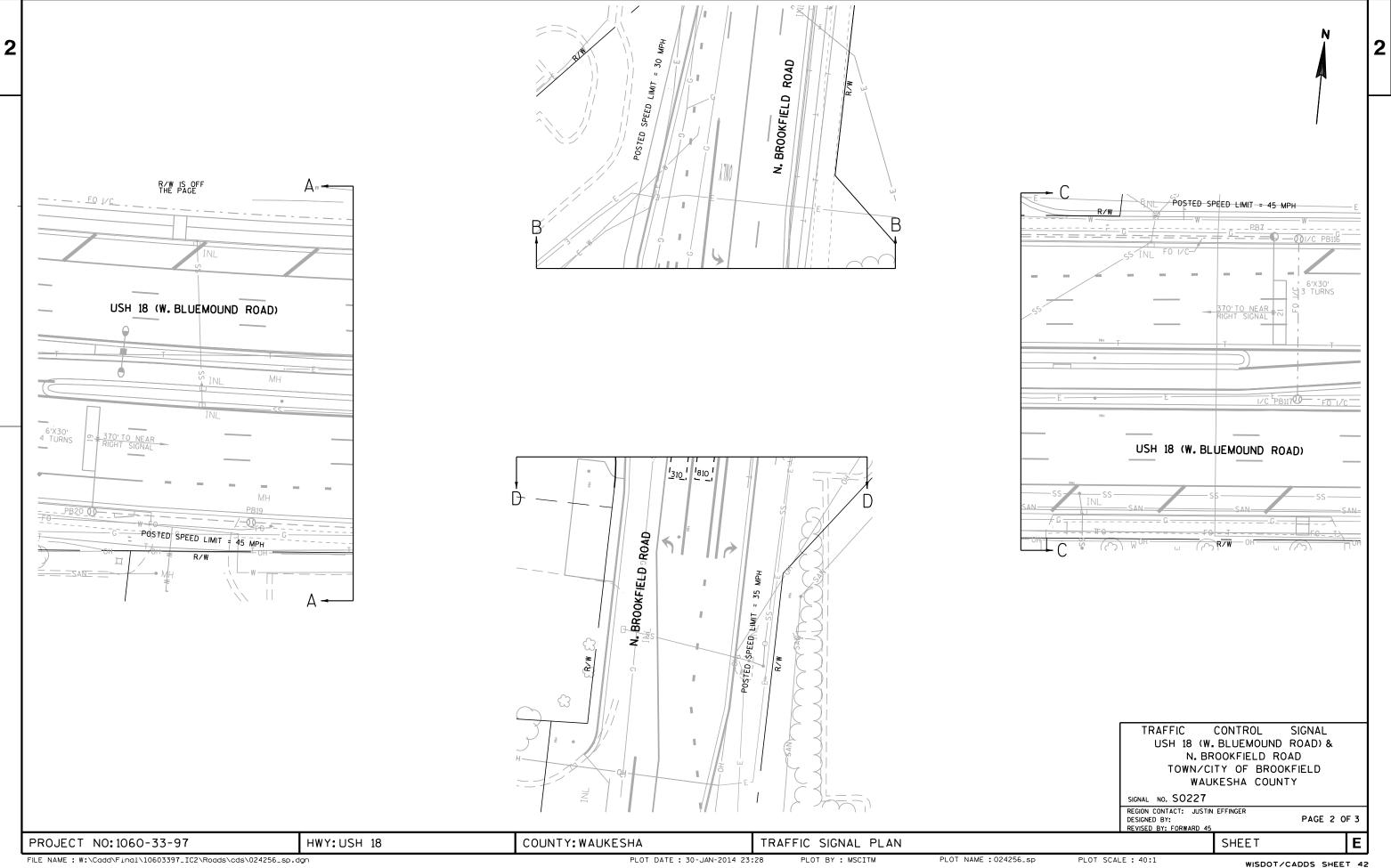
PLOT DATE: 30-JAN-2014 23:27

K









PHASE

RECALL

MIN.

MIN.

PHASE

ACTIVE

X

X

X

X

X

X

X

X

DUAL

ENTRY

6

6

8

2

2

4

4

PHASE

NUMBER

2

3

5

6

8

PHASE

LOCKING

TYPE OF COORDINA	TION
NONE	
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	7
*LOCATION OF MASTER CONTROLLER NO:	S- 0072
SIGNAL SYSTEM #:	SS- 00 - 44

	TYPE OF LIGHTING	
	OTHER AGENCY	
IN	TRAFFIC SIGNAL CABINET SEPARATE DOT LIGHTING CABINET	×
IN	SEPARATE DOT LIGHTING CABINET	ī

TYPE OF PRE-EMPT	
NONE	1
RAILROAD	T
EMERGENCY VEHICLE	1
GTT	1
TOMAR	1
HARDWIRE	
OTHER	
LIFT BRIDGE	T
OUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

	CHANNEL							
PREEMPTOR	A	В	c	D				
MOVEMENT	=	=\$	1	1 71				
PHASE	2+5	1+6	4+7	3+8				

AFTER PREEMPTION SEQUENCE 2+5 OR 1+6, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+7 OR 3+8, CONTROLLER SHALL RETURN TO PHASE 4+8.

USH 18 (W. BLUEMOUND ROAD) & N. BROOKFIELD ROAD TOWN/CITY OF BROOKFIELD WAUKESHA COUNTY

SIGNAL NO. SO227 CABINET TYPE: TS2 CONTROLLER TYPE: EPAC

SHEET

DATE 02/14

PAGE NO. 3 OF 3

HWY: USH 18

COUNTY: WAUKESHA

SEQUENCE OF OPERATIONS

PLOT NAME : 024259_sp_ph

WISDOT/CADDS SHEET 42

JRE

	HEAD NUMBERS	F L A S H		Ą		5	∫ Choo
01	5,6,7	Ŗ	RING 1				
02	8,9,10,11	R	10.00				4 V
03	18,19	-	· · · · · · · · · · · · · · · · · · ·	Ø1	00		24
04	20,21,22	R	L	01	02	Ø3	04
05	12,13,14	B	1700				
06	1,2,3,4	R	4.35				
07	23,24	3	A - F				
08	15,16,17	R			C 1/18		_ ^ ^
Ø2P	29,30						
Ø4P	25,26,27,28		RING 2	47		6	0.1.
Ø6P	35,36			V			
Ø8P	31,32,33,34		-				
OLA				05	06	07	Ø8
OLB	18,19	Ŗ					
OLC					BARF	RIER	
OLD	23,24	R			Drill in	H=: .	

RING 1				J Joan B
<u>.</u>	Ø1	02	Ø3	Ø4
RING 2	•	1		

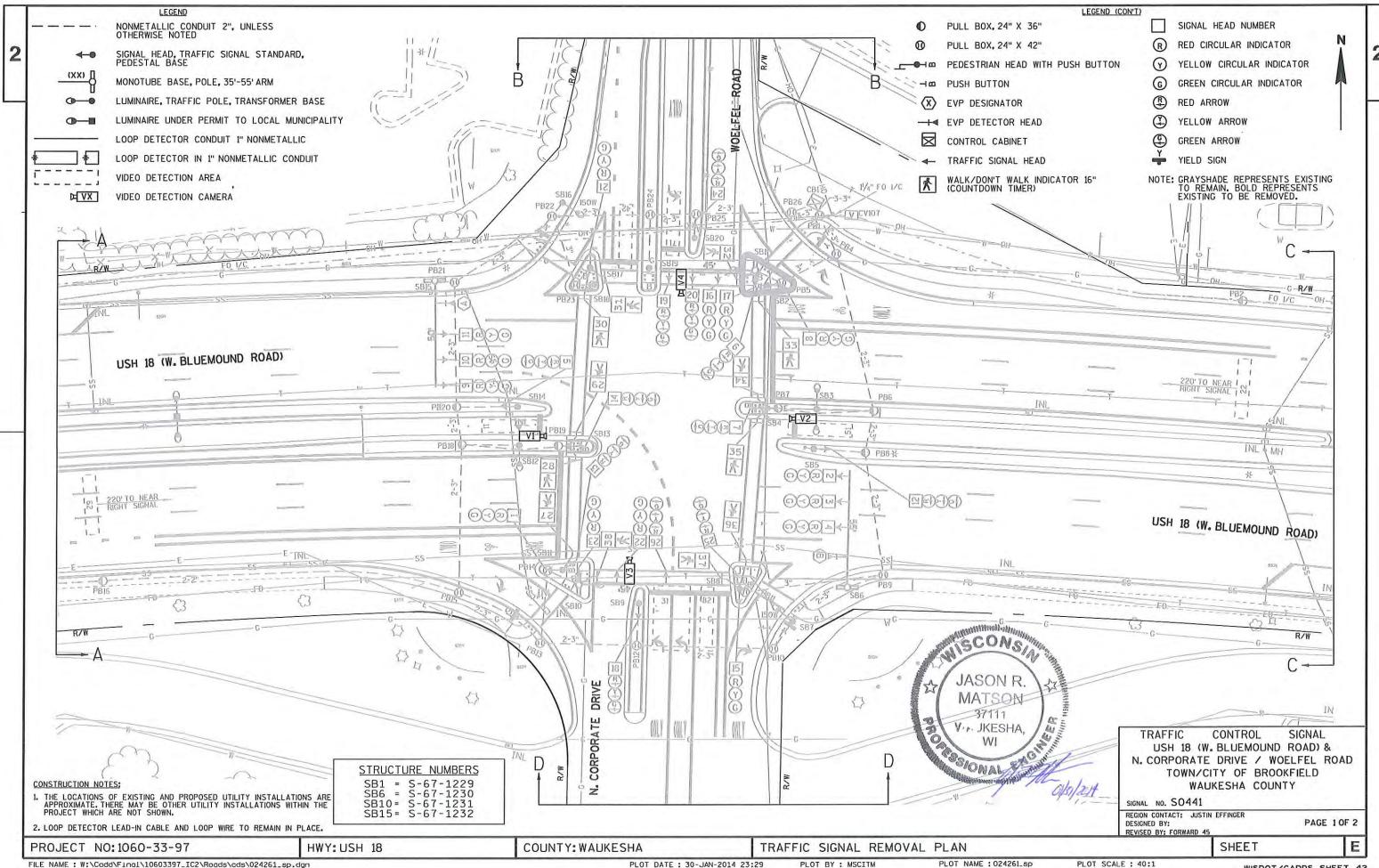
DETECTOR LOGIC

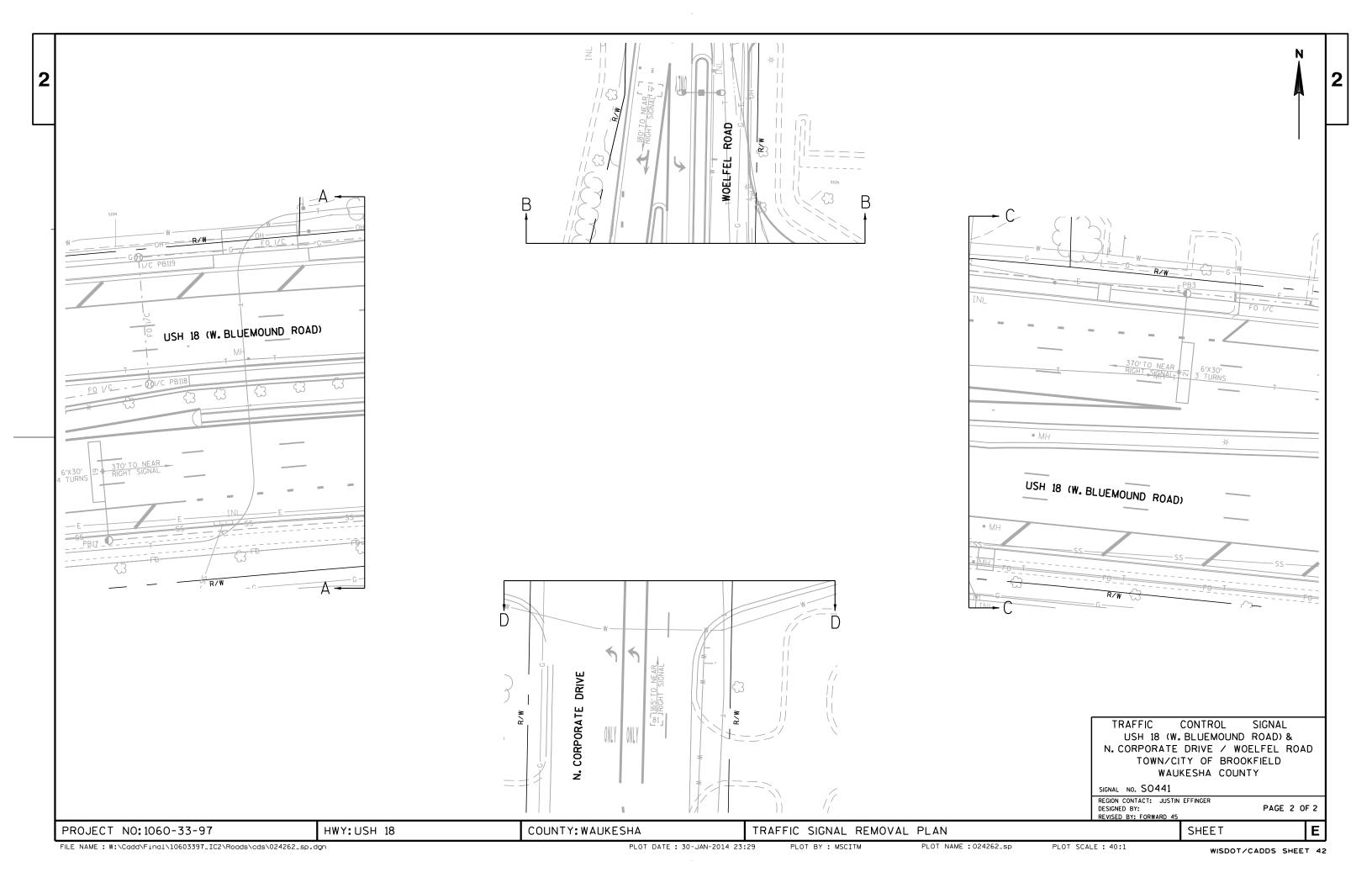
DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR *(S)	21					S1	S3	S5
ASSIGNED PHASE	2							
OPERATION MODE	VEH							
SWITCH								
EXTEND	X							
DELAY								

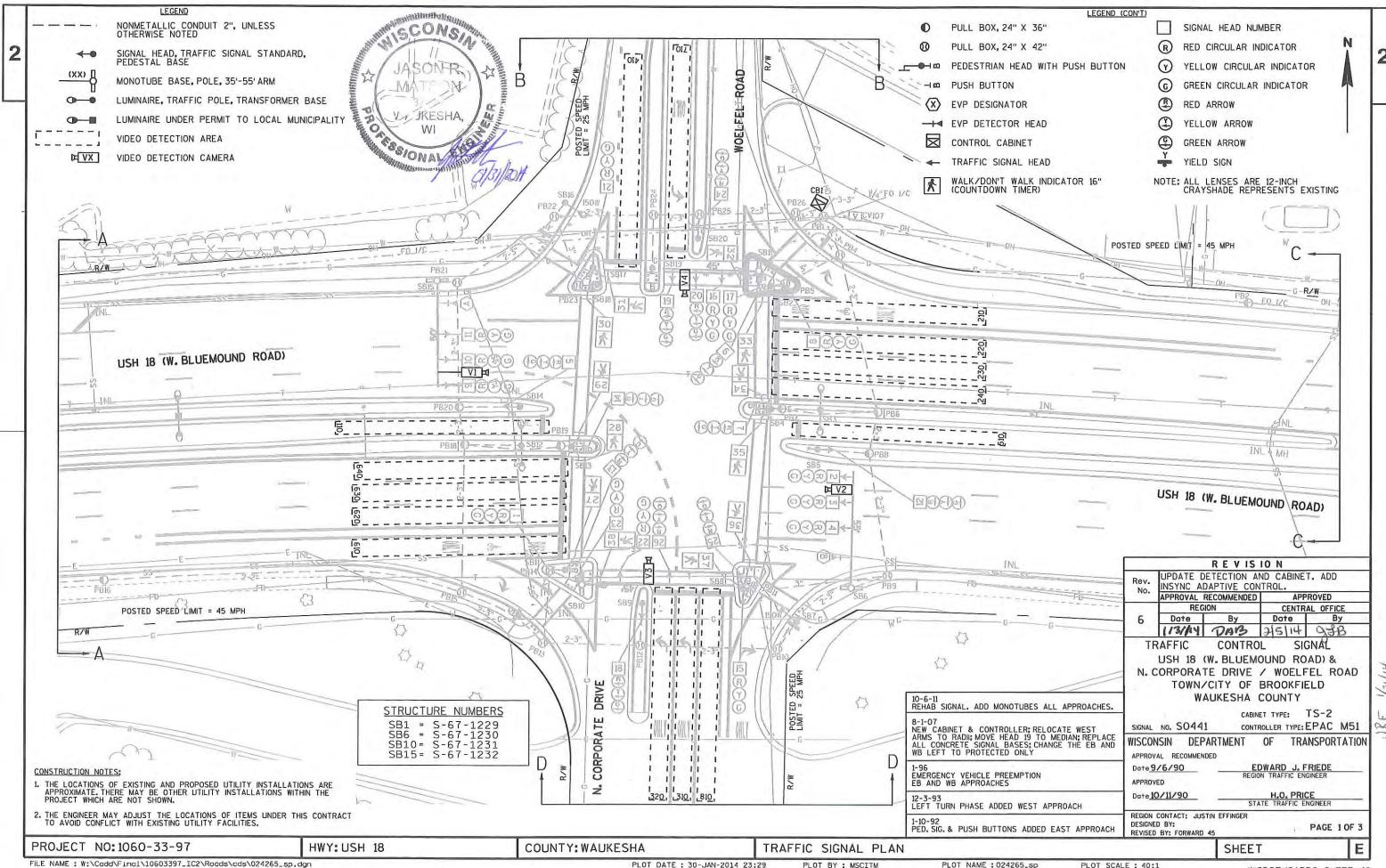
DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR *(S)	61					S2	S4	S6
ASSIGNED PHASE	6							
OPERATION MODE	VEH				r = =			
SWITCH								
EXTEND	Х							
DELAY			2 2		-			

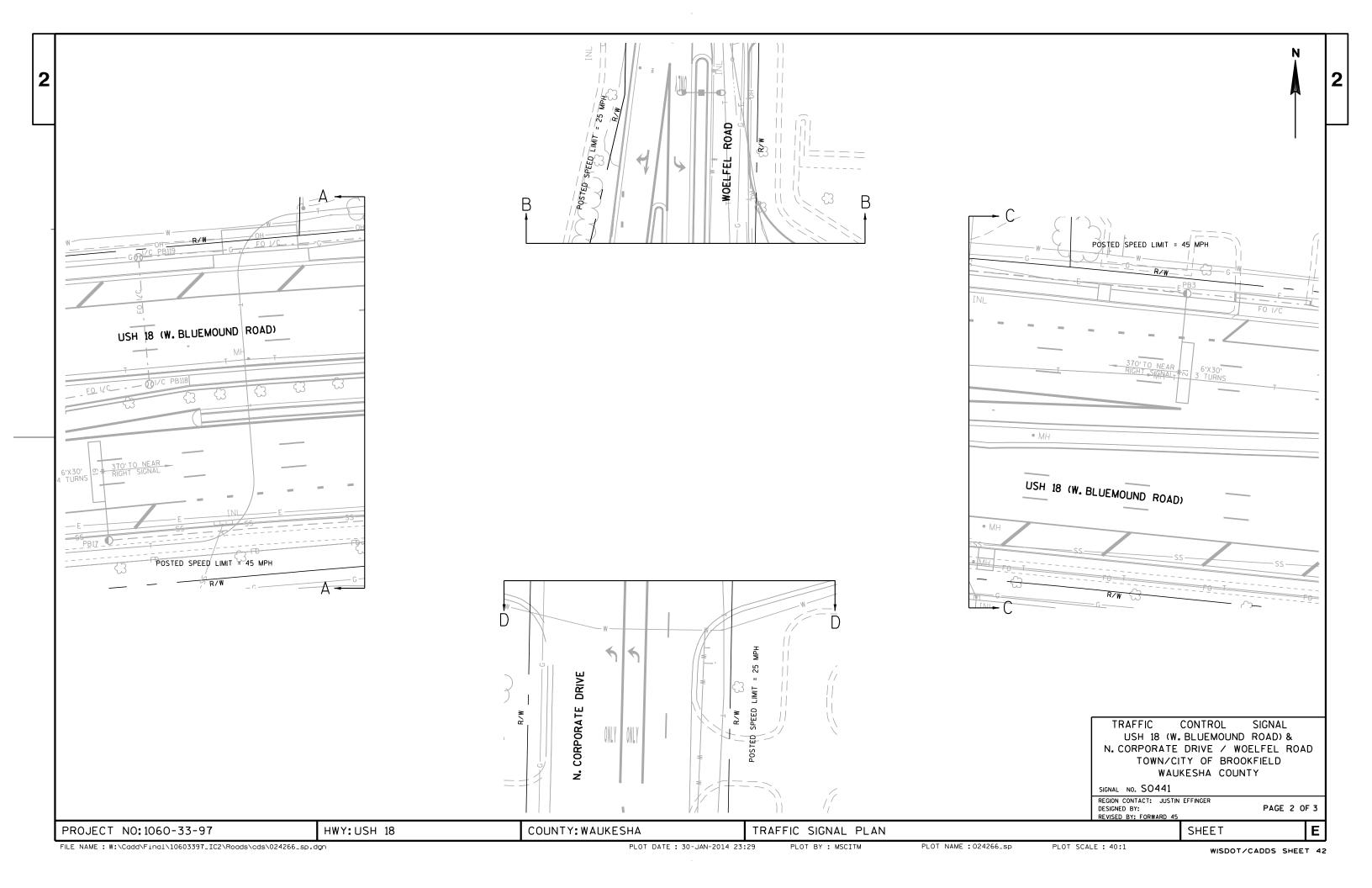
	-222	7-22		-112			DETECTOR INPUT
110	220	240	410	610	630	710	PLAN LOOP DETECTOR =(5
1	2	2	4	6	6	7	ASSIGNED PHASE
VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
		- 31				4	SWITCH
							EXTEND
		1 - 1		X			DELAY

							DETECTOR INPUT
210	230	310	510	620	640	810	PLAN LOOP DETECTOR *(S)
2	2	3	5	6	6	8	ASSIGNED PHASE
VEH	OPERATION MODE						
	1	8		1		4	SWITCH
							EXTEND
X							DELAY









N

	HEAD NUMBERS	F L A S H
01	5,6,7	R
02	8,9,10,11	R
03	18,19,20	R
Ø4	21,22,23	R
05	12,13,14	R
Ø6	1,2,3,4	R
07	24,25,26	R
08	15,16,17	R
Ø2P	31,32	
Ø4P	27,28,29,30	
06P	37,38	
Ø8P	33,34,35,36	
OLA		
OLB		100
OLC		
OLD		11

DETECTOR INPUT

ASSIGNED PHASE

OPERATION MODE

DETECTOR INPUT

ASSIGNED PHASE

OPERATION MODE

SWITCH

EXTEND

DELAY

PLAN LOOP DETECTOR "(S)

SWITCH

EXTEND

DELAY

21

2

VEH

X

61

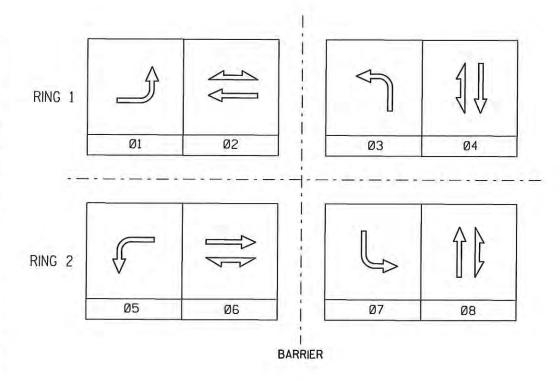
6

VEH

X

2

PLAN LOOP DETECTOR *(S)



DETECTOR LOGIC

110

VEH

210

VEH

220

2

VEH

230

VEH

240

2

VEH

310

VEH

320

VEH

410

VEH

510

VEH

610

VEH

620

VEH

630

VEH

640

VEH

710

VEH

810

VEH

13

14

9

10

15

16

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		x
2		6	MIN.	×
3		8		X
4		8		x
5		2		х
6		2	MIN.	×
7		4		×
8		4		X

NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	X
RADIO	

TYPE OF COORDINA	TION
NONE	
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	×
*LOCATION OF MASTER CONTROLLER NO:	S- 0072
SIGNAL SYSTEM ":	SS- 00 - 44

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	À

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE	CHA	NNEL
PREEMPTOR	Α	В
MOVEMENT	7	
PHASE	2+5	1+6

AFTER PREEMPTION SEQUENCE 2+5 OR 1+6, CONTROLLER SHALL RETURN TO PHASES 2+6.

USH 18 (W. BLUEMOUND ROAD) & N. CORPORATE DRIVE/WOELFEL ROAD TOWN/CITY OF BROOKFIELD WAUKESHA COUNTY

SIGNAL	NO.	S0441	CABINET	TYPE:	TS2
			CONTROLLER	TYPE:	EPAC
DATE	02,	/14	PΔ	GE NO.	3 of 3

SHEET

PROJECT NO: 1060-33-97

HWY: USH 18

5

12

COUNTY: WAUKESHA

SEQUENCE OF OPERATIONS PLOT BY : MSCDYB

DETECTOR INPUT

ASSIGNED PHASE

OPERATION MODE

DETECTOR INPUT

ASSIGNED PHASE

OPERATION MODE

SWITCH

EXTEND

DELAY

PLAN LOOP DETECTOR "(S)

SWITCH

EXTEND

DELAY

PLAN LOOP DETECTOR *(S)

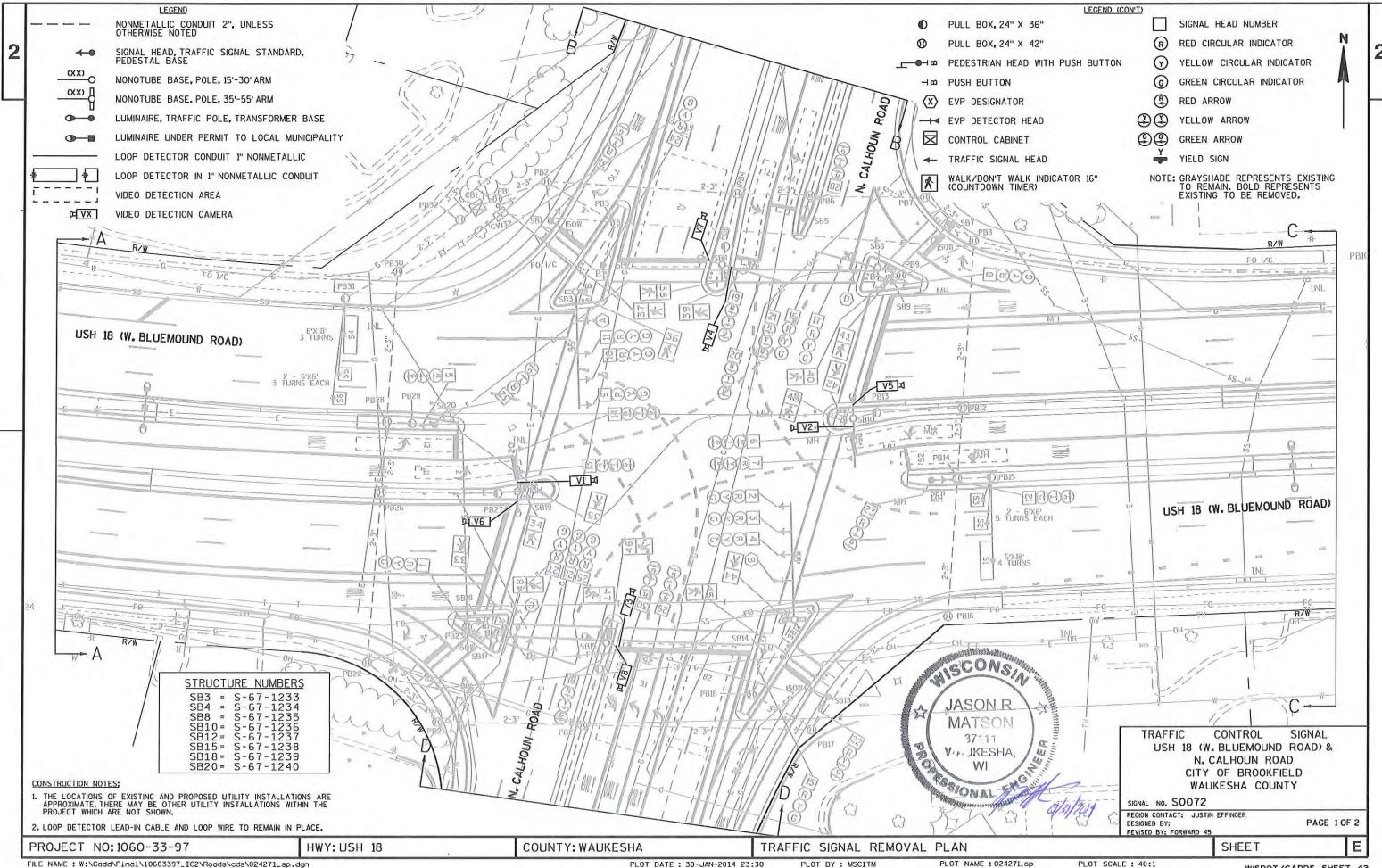
PLOT NAME : 024269_sp_ph

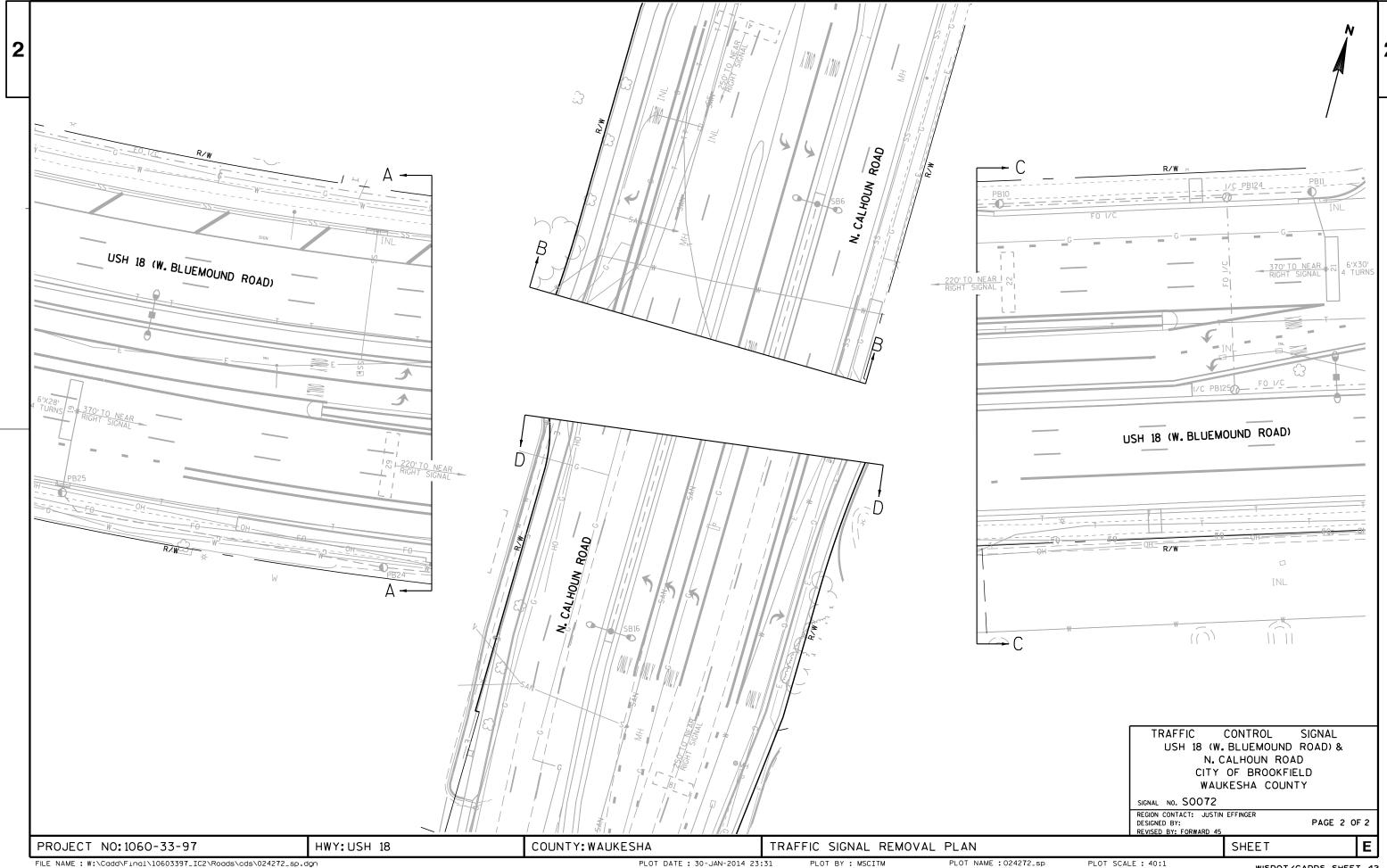
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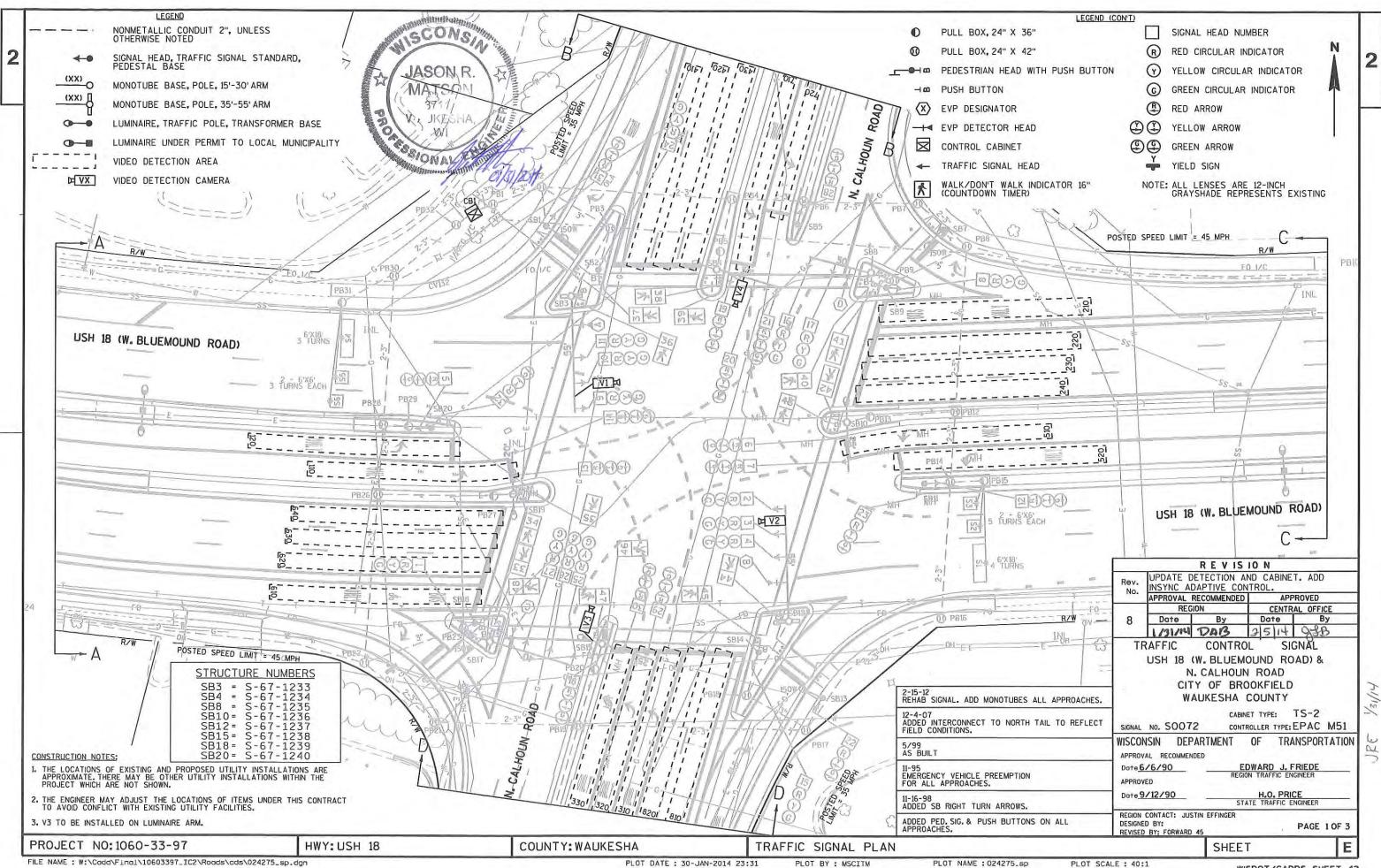
WISDOT/CADDS SHEET 42

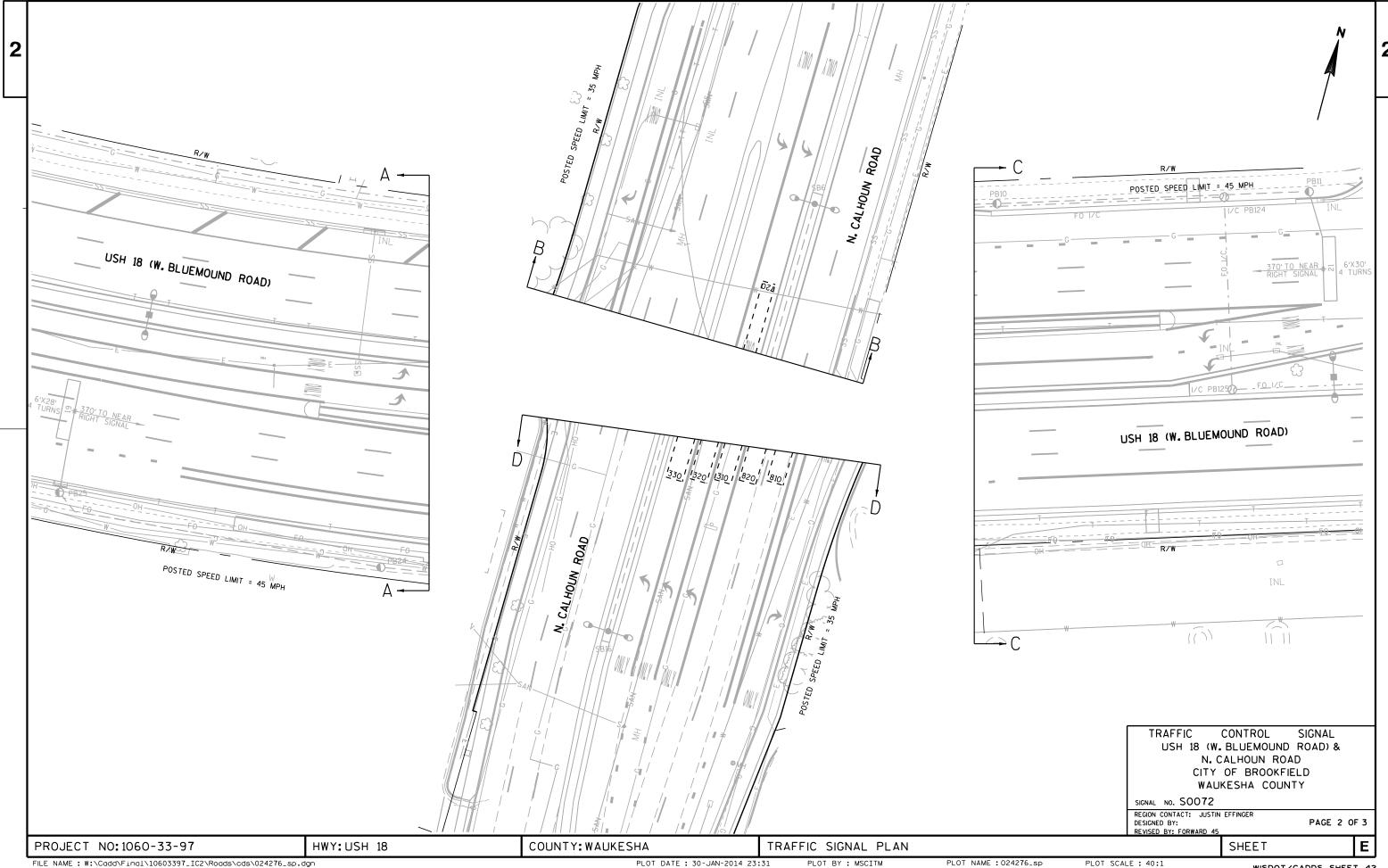
PLOT DATE: 31-JAN-2014 07:07

PLOT SCALE : 40:1









FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\024276_sp.dgn

PLOT DATE: 30-JAN-2014 23:31

PLOT NAME: 024276_sp

PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

HEAD

NUMBERS

5,6,7

8,9,10,11

18,19,20,21

24,25,26,27

12,13,14

1,2,3,4

28,29,30

15,16,17 37,38,39,40

33,34,35,36 45,46,47,48

41,42,43,44 31,32 22,23

01

02

03

04

05

06

07

Ø8

Ø4P

Ø8P

ENTRY

6

8

8

2

2

4

4

PHASE

ACTIVE

X

X

X

X

X

X

X

PHASE RECALL

MIN.

MIN.

PHASE

NUMBER

1

2

3

4

5

6

7

8

PHASE

LOCKING

TYPE OF COORDINA	TION	
NONE	171	
TBC		
TRAFFIC RESPONSIVE		
ADAPTIVE	×	
*LOCATION OF MASTER		
CONTROLLER NO:	S- 0072	
SIGNAL SYSTEM ":	SS-00-44	

BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET IN SEPARATE DOT LIGHTING CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

EMERGENCY VEHICLE DETECTOR	A	В	С	D
MOVEMENT	<		OLA)	716
PHASE	2+5	1+6	4+7	3+8

AFTER PREEMPTION SEQUENCE 2+5 OR 1+6. CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 3+8 OR 4+7, CONTROLLER SHALL RETURN TO PHASES 4+8.

USH 18 (W. BLUEMOUND RD) & N. CALHOUN ROAD CITY OF BROOKFIELD

CONTROLLER TYPE:

TPE OF PRE-EMPT	
E	
.ROAD	
RGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	A	В	с	D
MOVEMENT	<u> </u>		OLA)	7160
PHASE	2+5	1+6	4+7	3+8

WAUKESHA COUNTY

IGNAL	NO.	S0072	CABINET	TYPE:	TS2
			CONTROLLER	TYPE:	EPAC

DATE 02/14 PAGE NO. 3 OF 3

RING 1	0.L. A			O.L. A
-	01	02	03	04
RING 2	O.L. B			O.L. B
	05	Ø6 i	07	Ø8

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11			
PLAN LOOP DETECTOR =(S)	21		S1	S3	S5	110	210	230
ASSIGNED PHASE	2					1	2	2
OPERATION MODE	VEH					VEH	VEH	VEH
SWITCH								
EXTEND	X							
DELAY							X	

DETECTOR INPUT	4	2	8	6	12			
PLAN LOOP DETECTOR "(S)	61	11	S2	S4	S6	120	220	240
ASSIGNED PHASE	6					1	2	2
OPERATION MODE	VEH					VEH	VEH	VEH
SWITCH								
EXTEND	X							
DELAY								

								DETECTOR INPUT
310	330	420	510	610	630	710	810	PLAN LOOP DETECTOR MIS
3	3	4	5	6	6	7	8	ASSIGNED PHASE
VEH	VEH	OPERATION MODE						
								SWITCH
								EXTEND
				Х		100000		DELAY

			19.73					DETECTOR INPUT
320	410	430	520	620	640	720	820	PLAN LOOP DETECTOR MIS
3	4	4	5	6	6	7	8	ASSIGNED PHASE
VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OPERATION MODE
								SWITCH
								EXTEND
								DELAY

PROJECT NO: 1060-33-97

HWY: USH 18

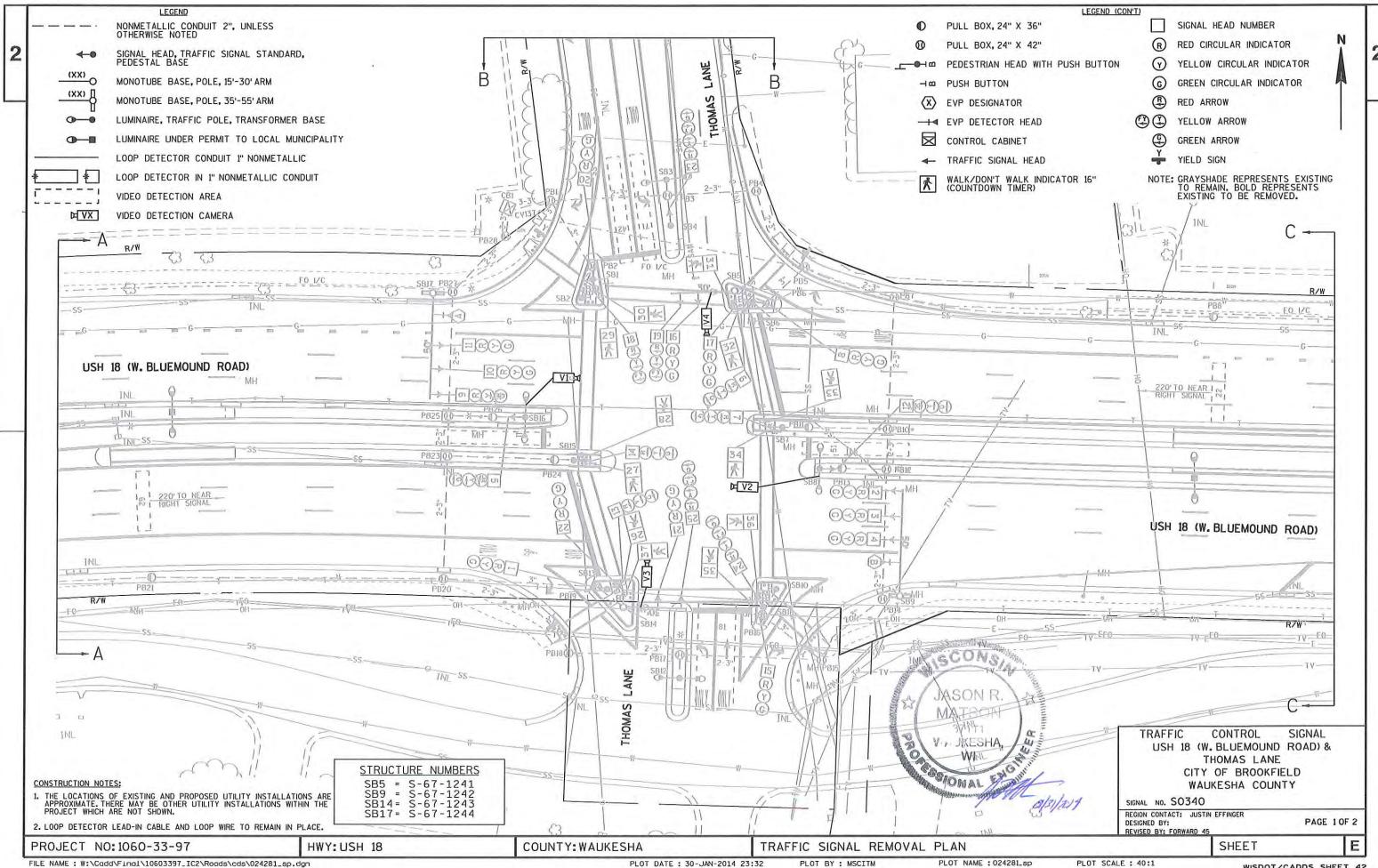
COUNTY: WAUKESHA

SEQUENCE OF OPERATIONS PLOT BY : MSCITM

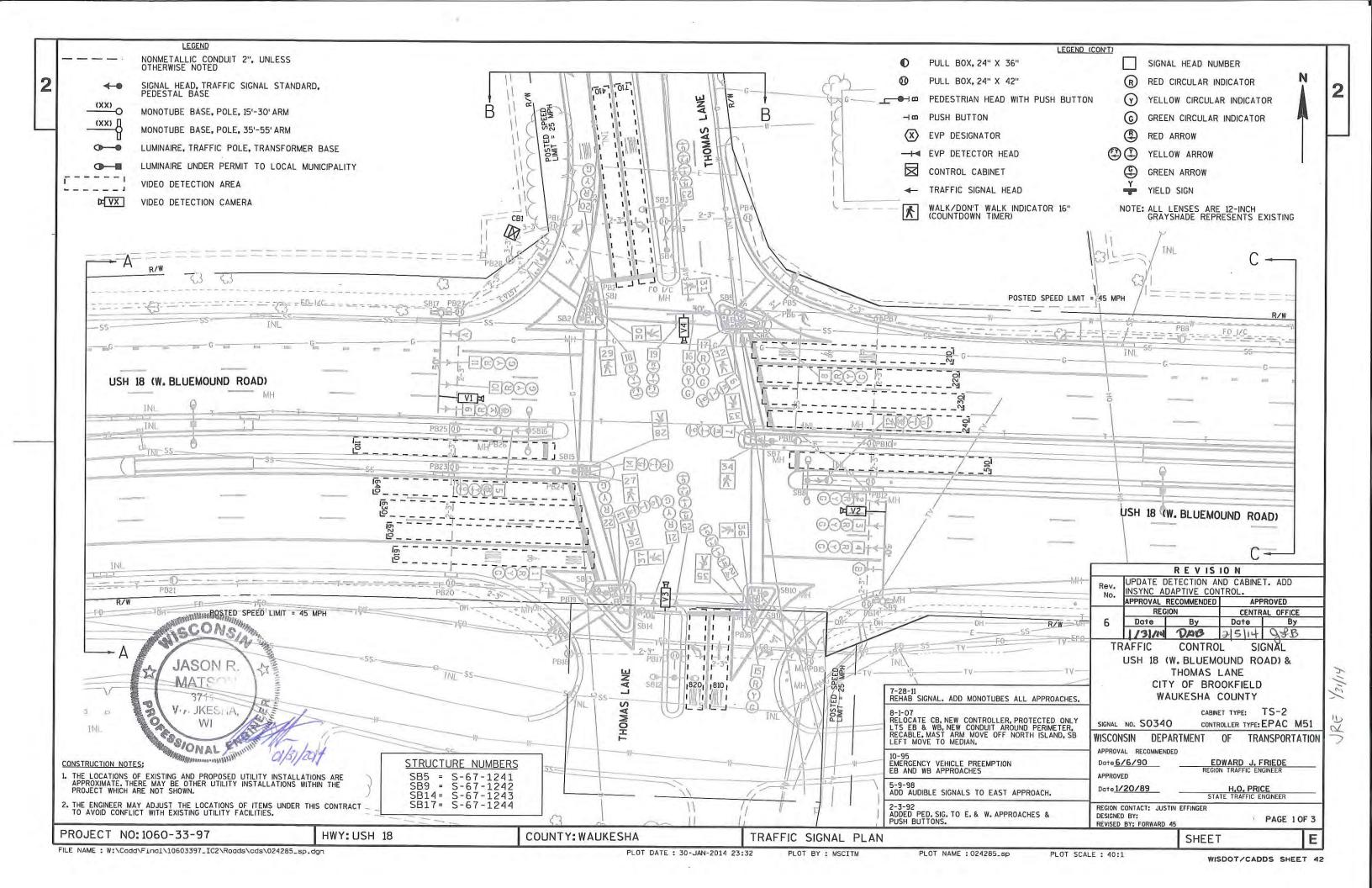
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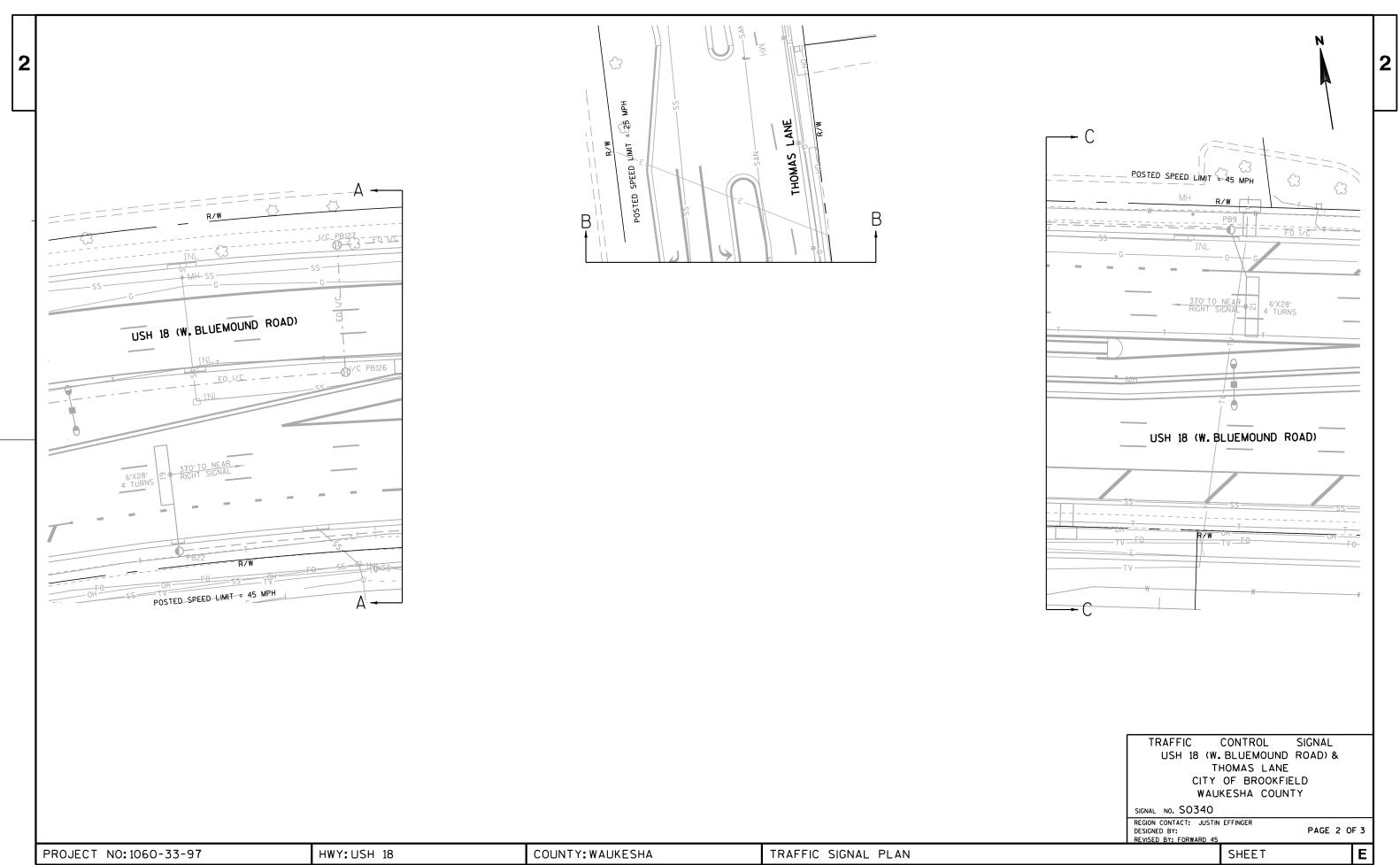
SHEET

JRE









FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\024286_sp.dgn

PLOT DATE: 30-JAN-2014 23:33

PLOT BY : MSCITM

PLOT NAME: 024286_sp Pl

PLOT SCALE: 40:1

WISDOT/CADDS SHEET 42

DUAL

ENTRY

W / Ø

6

6

2

2

4

RECALL

MIN.

MIN.

ACTIVE

X

X

X

X

X

X

X

PHASE

NUMBER

1

2

3

4

5

6

7

8

PHASE

LOCKING

TYPE OF COORDINA	TION
NONE	
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE)
*LOCATION OF MASTER CONTROLLER NO:	S- 0072
SIGNAL SYSTEM *:	SS- 00 - 44

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET IN SEPARATE DOT LIGHTING CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	×
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE	CHA	NNEL
PREEMPTOR	A	В
MOVEMENT	<u>~</u>	
PHASE	2+5	1+6

AFTER PREEMPTION SEQUENCE 2+5 OR 1+6, CONTROLLER SHALL RETURN TO PHASES 2+6.

USH 18 (W. BLUEMOUND ROAD) & THOMAS LANE CITY OF BROOKFIELD WAUKESHA COUNTY

SIGNAL NO. SO340 CABINET TYPE: TS2

SHEET

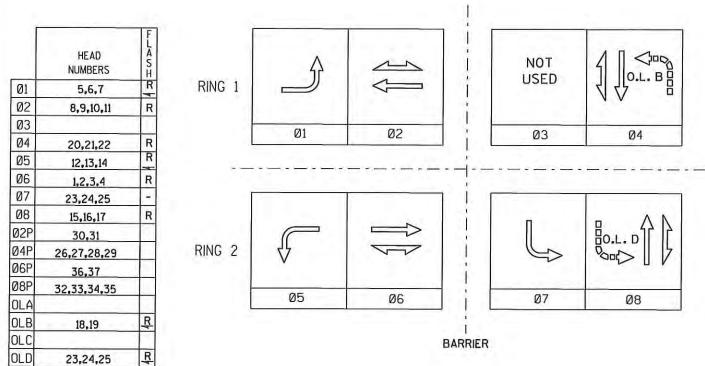
CONTROLLER TYPE: EPAC PAGE NO. 3 OF 3

COUNTY: WAUKESHA

PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

JRE



RING 1		1	NOT USED	
	Ø1	02	03	04
RING 2				

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR "(S)	21							
ASSIGNED PHASE	2							
OPERATION MODE	VEH		- = -					
SWITCH								
EXTEND	X							
DELAY								

			111		
220	240	510	620	640	810
2	2	5	6	6	8
VEH	VEH	VEH	VEH	VEH	VEH
	2	2 2	2 2 5	2 2 5 6	2 2 5 6 6

DETECTOR INPUT	4	2	8	6	12	10	16	14
AN LOOP DETECTOR "(S)	61							
ASSIGNED PHASE	6							
OPERATION MODE	VEH							
SWITCH								
EXTEND	X							
DELAY								

		4					
							DETECTOR INPUT
210	230	410	610	630	710	820	PLAN LOOP DETECTOR "(S
2	2	4	6	6	7	8	ASSIGNED PHASE
VEH	OPERATION MODE						
					4		SWITCH
							EXTEND
X			X				DELAY

HWY: USH 18

SEQUENCE OF OPERATIONS

DETECTOR INPUT

ASSIGNED PHASE OPERATION MODE SWITCH EXTEND DELAY

PLAN LOOP DETECTOR "(S)

PLOT BY : MSCITM

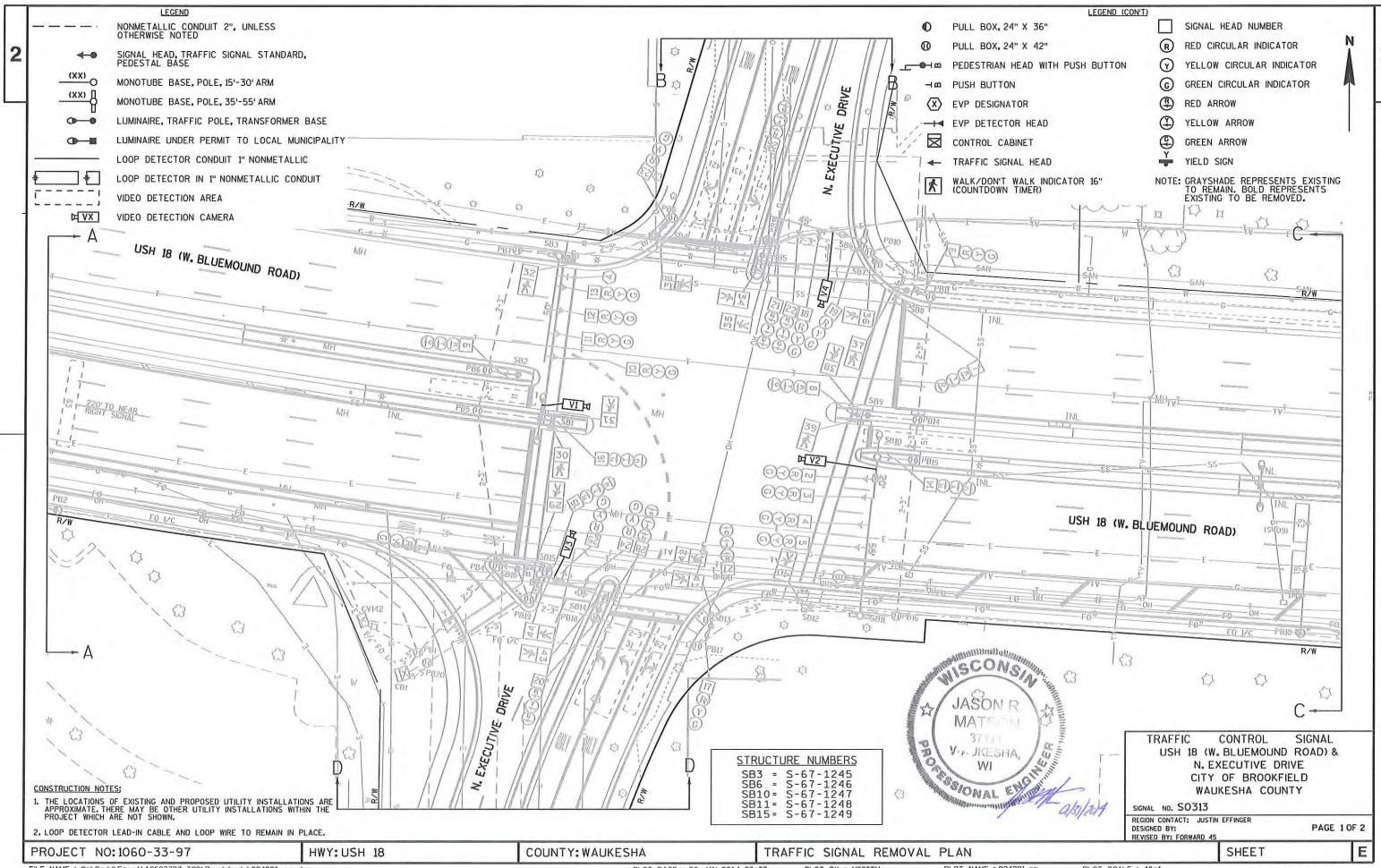
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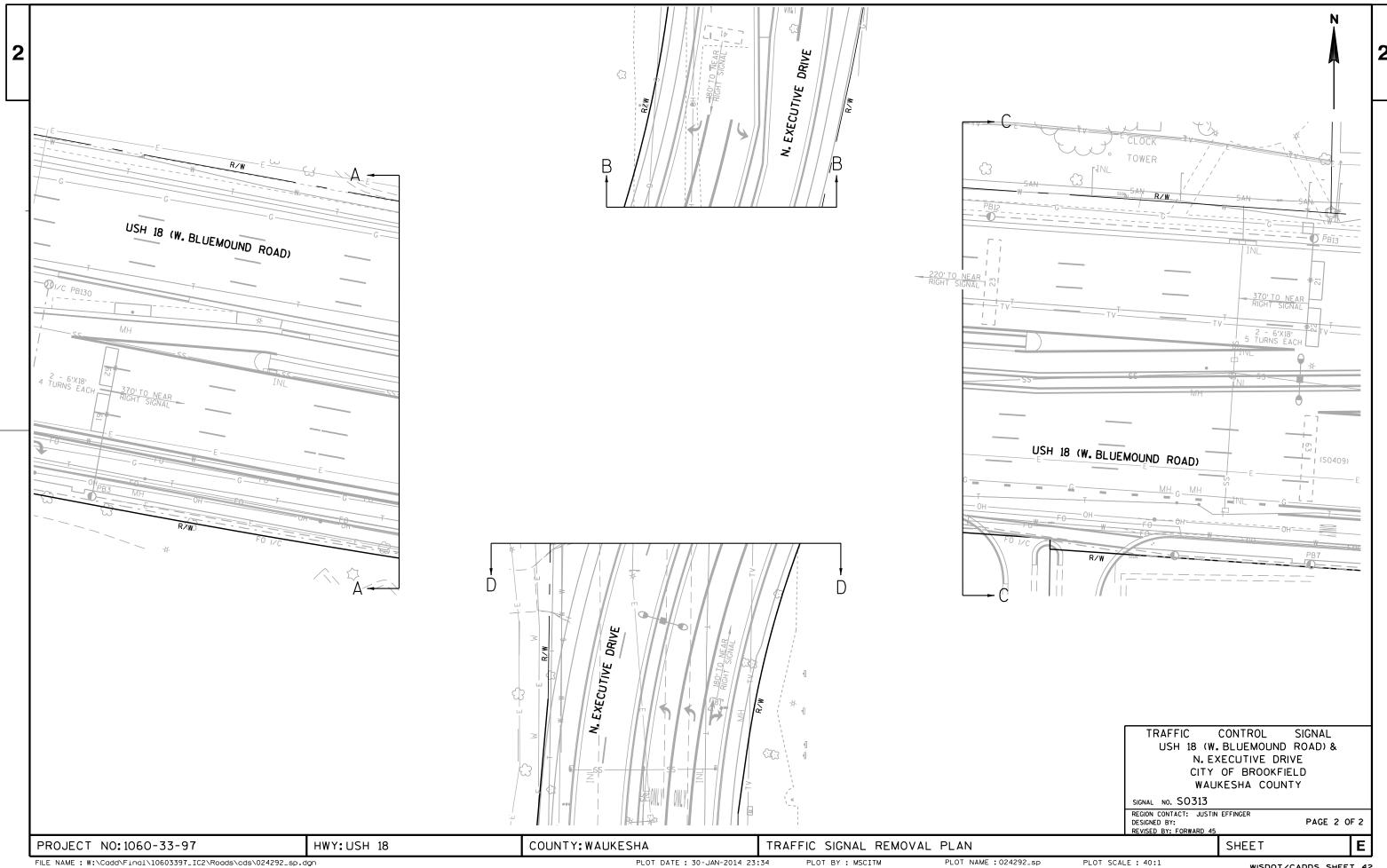
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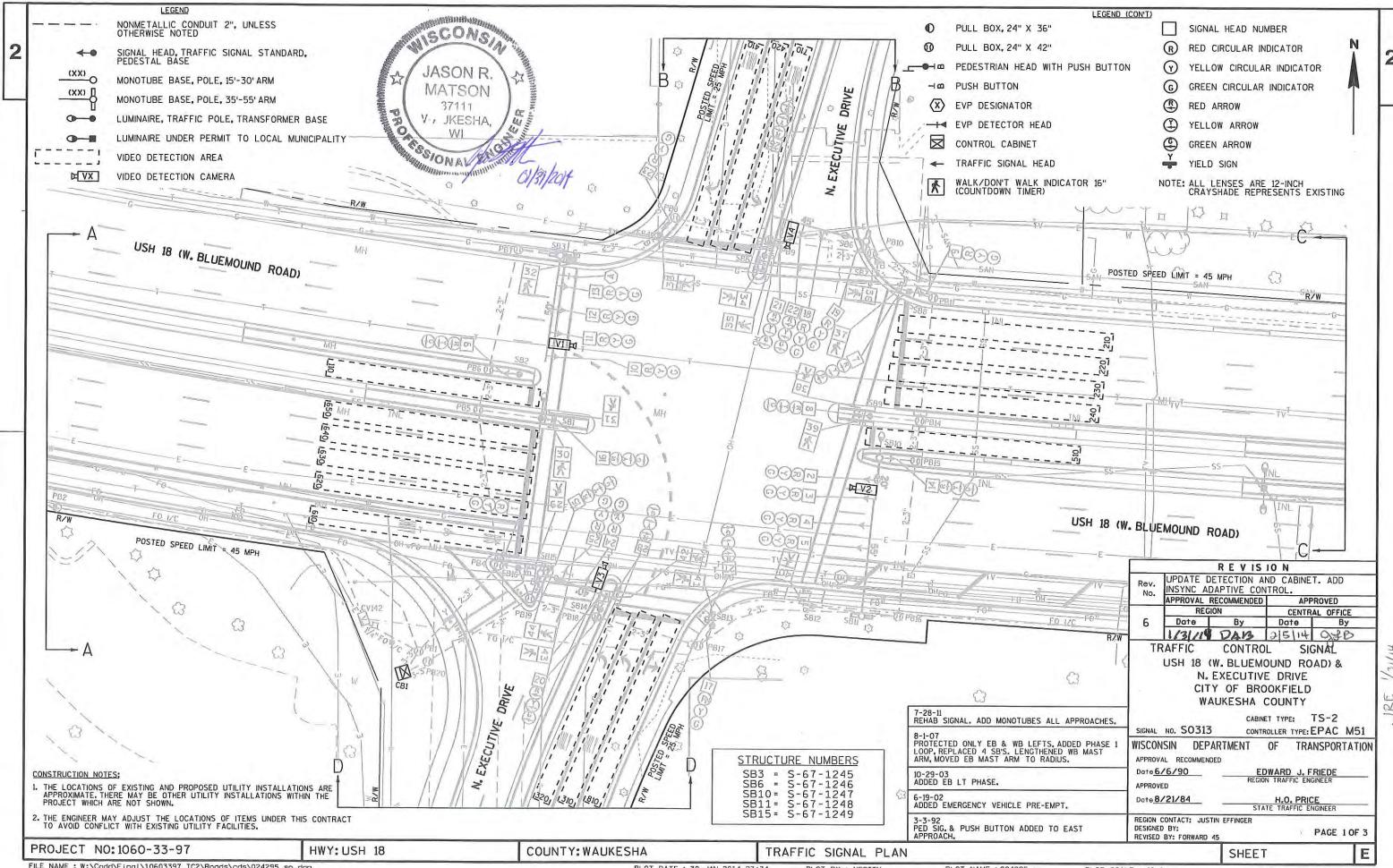
PROJECT NO: 1060-33-97

PLOT DATE: 30-JAN-2014 23:33

DATE 02/14









DETECTOR INPUT

ASSIGNED PHASE OPERATION MODE

DETECTOR INPUT

ASSIGNED PHASE

OPERATION MODE

EXTEND

DELAY

PLAN LOOP DETECTOR "(S)

SWITCH EXTEND

DELAY

PLAN LOOP DETECTOR "(S)

3

21

VEH

X

22

VEH

X

61

VEH

X

62

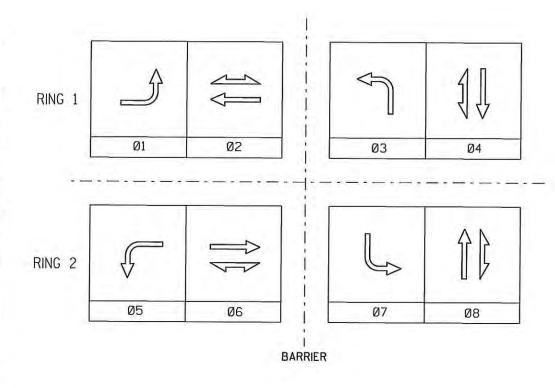
VEH

X

6

12

10



DETECTOR LOGIC

230

2

VEH

310

3

VEH

410

4

VEH

510

5

VEH

620

VEH

15

16

110

VEH

210

VEH

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		×
2	11	6	MIN.	X
3		8		x
4		8		×
5		2		×
6		2	MIN.	×
7		4		х
8		4		×

NONE	
CLOSED LOOP	32
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	X
RADIO	

TYPE OF COORDINA	ATION
NONE	
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S- 0072
SIGNAL SYSTEM #:	SS- 00 - 44

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET IN SEPARATE DOT LIGHTING CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	=
EMERGENCY VEHICLE	X
GTT	×
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

			_	d
				I
	77	DETECTOR INPUT	.9	E
			1	í

220	240	320	420	610	630	650	810	PLAN LOOP DETECTOR "(S
2	2	3	4	6	6	6	8	ASSIGNED PHASE
/EH	VEH	OPERATION MODE						
								SWITCH
								EXTEND
		7		X			×	DELAY

640

VEH

710

VEH

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EVEROFINON DEUR E	CHA	NNEL
EMERGENCY VEHICLE PREEMPTOR	A	В
MOVEMENT	*	_
PHASE	2+5	1+6

AFTER PREEMPTION SEQUENCE 2+5 OR 1+6. CONTROLLER SHALL RETURN TO PHASES 2+6.

USH 18 (W. BLUEMOUND ROAD) & N. EXECUTIVE DRIVE CITY OF BROOKFIELD WAUKESHA COUNTY

SIGNAL NO. SO313 CABINET TYPE: TS2

CONTROLLER TYPE: EPAC

DATE 02/14 PAGE NO. 3 OF 3

PROJECT NO: 1060-33-97

HWY: USH 18

COUNTY: WAUKESHA

SEQUENCE OF OPERATIONS PLOT BY : MSCITM

DETECTOR INPUT

ASSIGNED PHASE

OPERATION MODE SWITCH

EXTEND

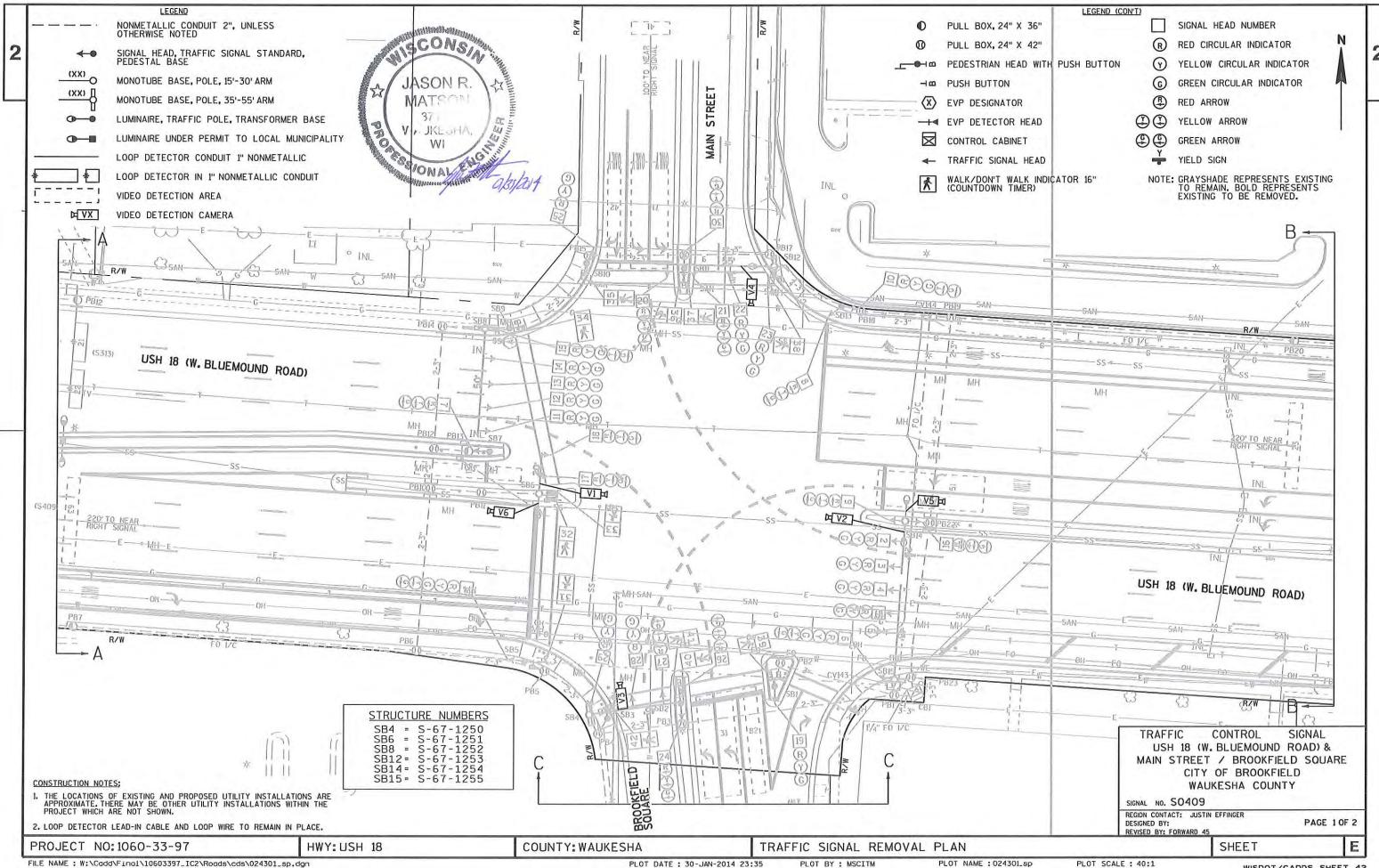
DELAY

PLAN LOOP DETECTOR *(S)

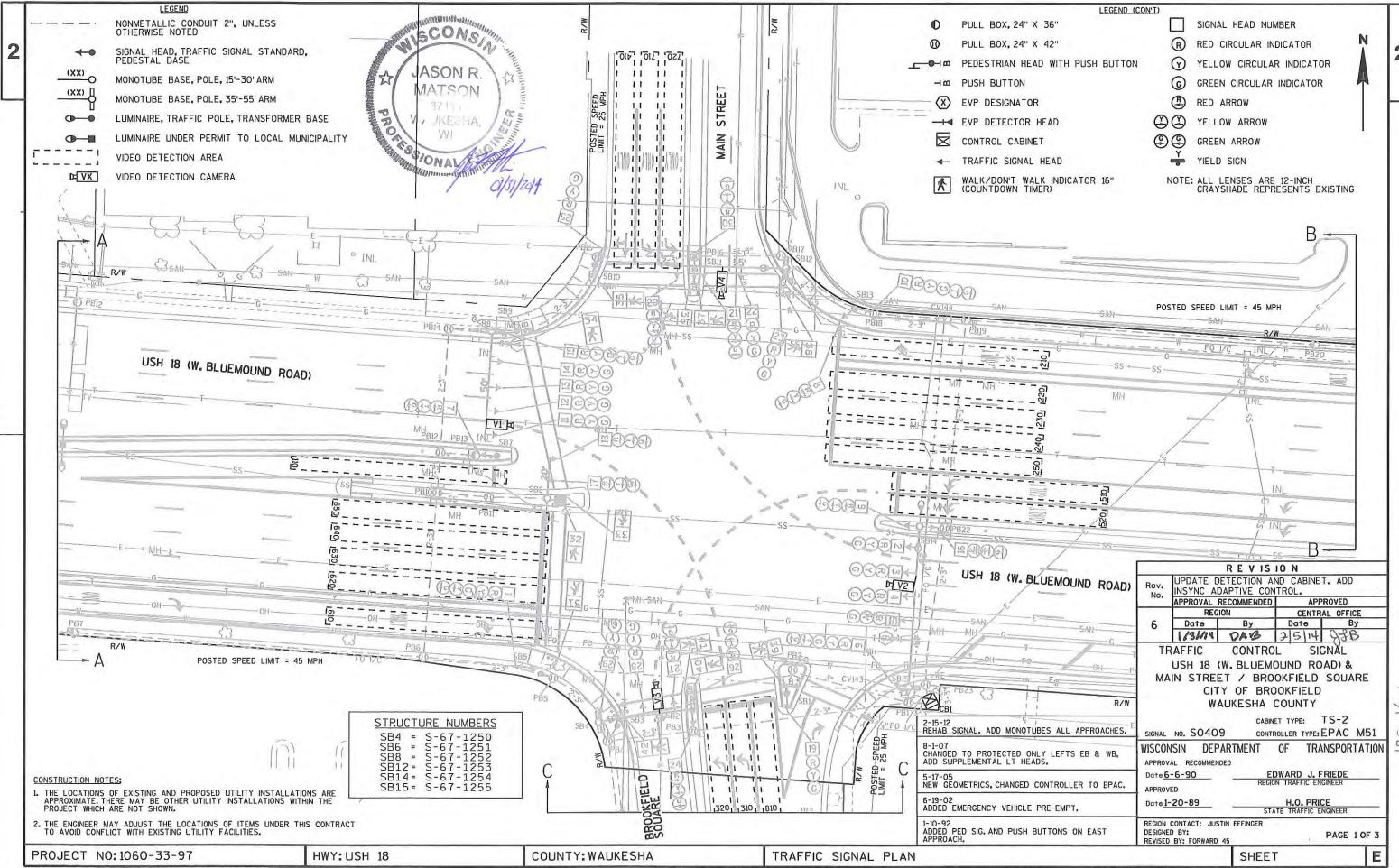
PLOT NAME : 024299_sp_ph

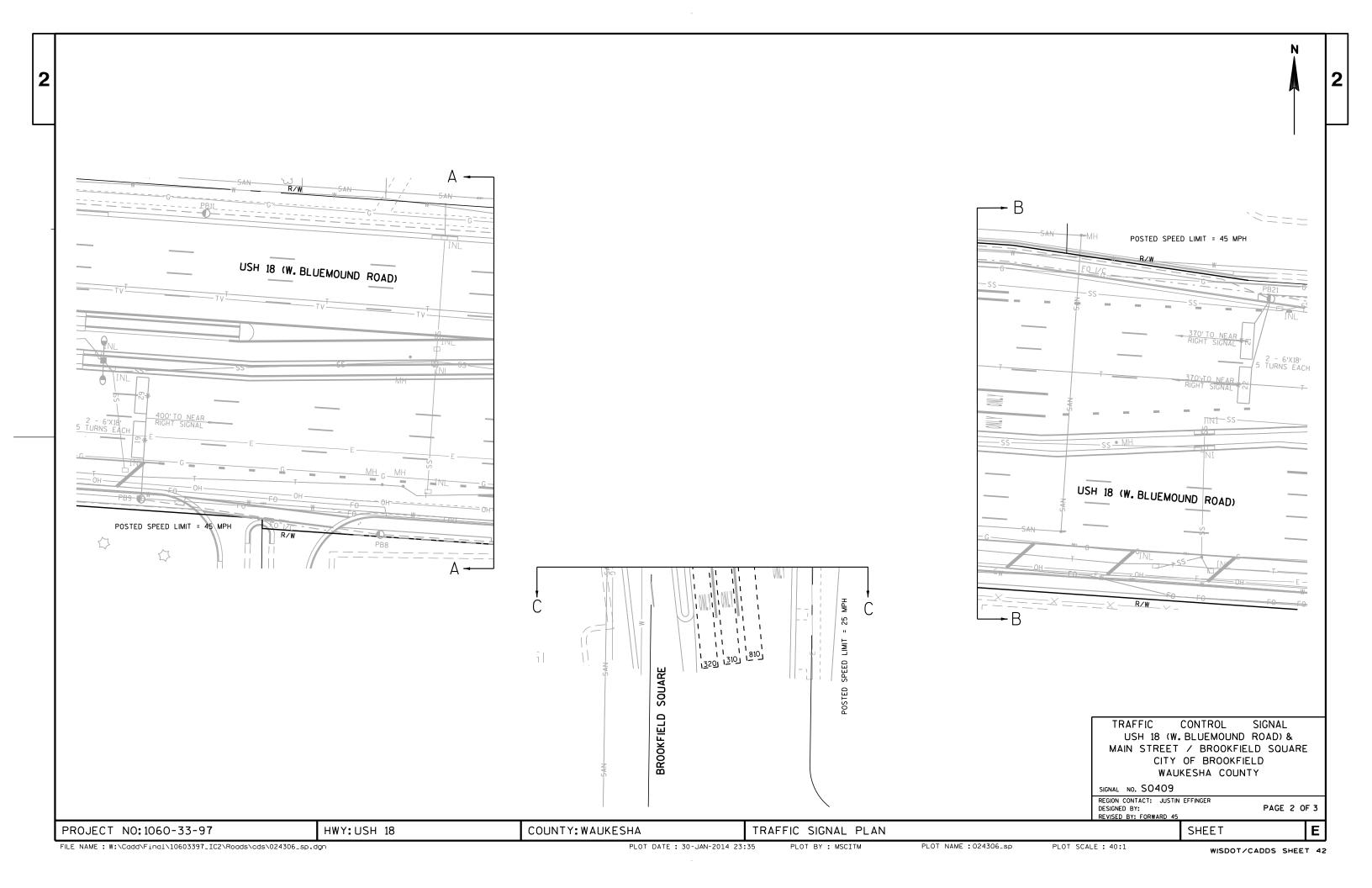
SHEET

W









A= R. -

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		×
2		6	MIN.	×
3		8		×
4		8		×
5		2		×
6		2	MIN.	x
7		4		×
8		4	=	X

NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	×
RADIO	

TYPE OF COORDINA	TION				
NONE					
TBC					
TRAFFIC RESPONSIVE					
ADAPTIVE	×				
*LOCATION OF MASTER CONTROLLER NO:	S- 0072				
SIGNAL SYSTEM #: SS-00-					

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET IN SEPARATE DOT LIGHTING CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE	CHA	NNEL
PREEMPTOR	A	В
MOVEMENT	*	
PHASE	2+5	1+6

AFTER PREEMPTION SEQUENCE 2+5 OR 1+6, CONTROLLER SHALL RETURN TO PHASES 2+6.

USH 18 (W. BLUEMOUND ROAD) & MAIN STREET / BROOKFIELD SOUARE CITY OF BROOKFIELD WAUKESHA COUNTY

SIGNAL	NO.	S0409	CABINET	TYPE:	TS2
			70/0700700	37.5.757	02.1.2

CONTROLLER TYPE: EPAC DATE 02/14 PAGE NO. 3 OF 3

COUNTY: WAUKESHA

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	F L A S H		٨			4 1
01	7,8,9	R	RING 1				41 47
02	10,11,12,13,14,15	R					VV
03	1,6,20,21,24	Α		Ø1	an a	1 00	
04	25,28,29	R	L	Ø1	02	03	04
05	16,17,18	R				4	
06	1,2,3,4,5,6	R				1	
07	10,15,26,27,30	Α	Γ				
Ø8	19,22,23	R				\perp Δ	۸
02P	35,36,37,38				\Longrightarrow	1 1	42
04P	31,32,33,34		RING 2	47			
76P	39,40,41,42			V			Ш
78P				ar.			
DLA			L	05	Ø6	07	Ø8
DLB						b D	
OLC					BAI	RRIER	
OLD		17			DAI	MILIT	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9		
PLAN LOOP DETECTOR *(S)	21	61					110	220
ASSIGNED PHASE	2	6					1	2
OPERATION MODE	VEH	VEH					VEH	VEH
SWITCH								
EXTEND	X	X						
DELAY					7			

DETECTOR INPUT	4	2	8	6	12	10		13
PLAN LOOP DETECTOR "(S)	22	62					210	230
ASSIGNED PHASE	2	6					2	2
OPERATION MODE	VEH	VEH					VEH	VEH
SWITCH								
EXTEND	X	X						
DELAY			1				X	

HWY: USH 18

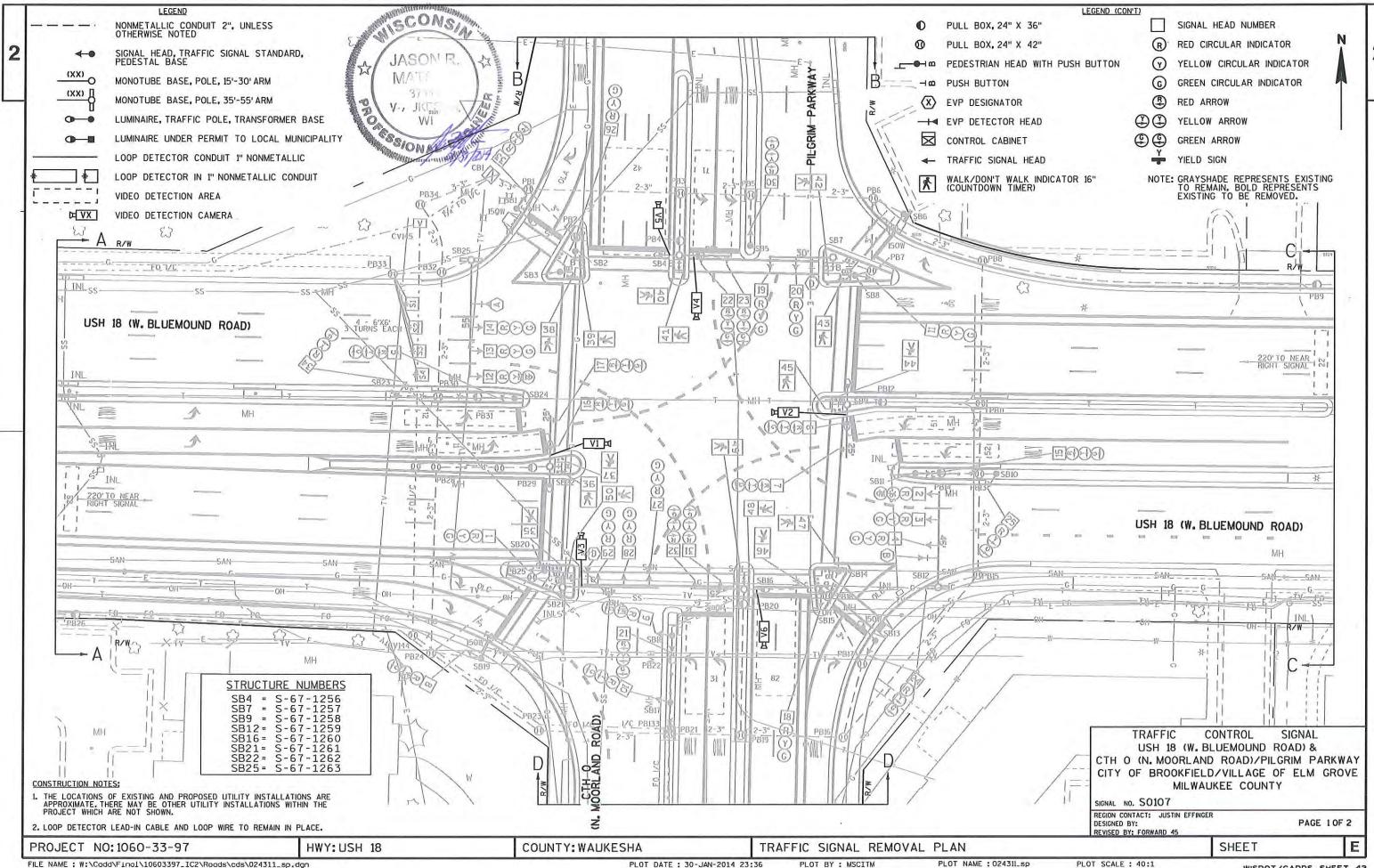
240	310	410	520	620	640	710	810	DETECTOR INPUT PLAN LOOP DETECTOR =(S
2	3	4	5	6	6	7	8	ASSIGNED PHASE
VEH	OPERATION MODE							
								SWITCH
								EXTEND
		X						DELAY

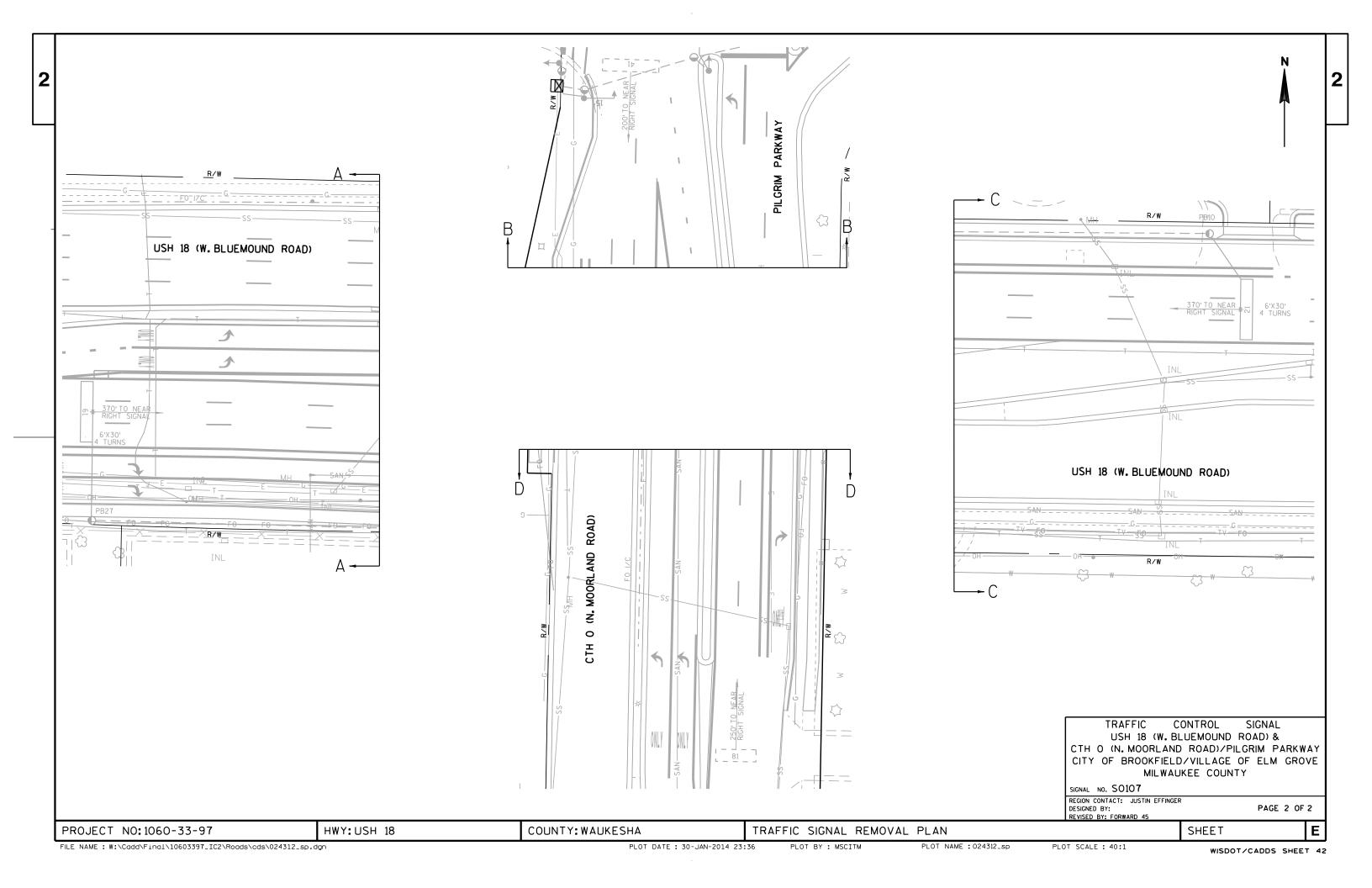
							DETECTOR INPUT
250	320	510	610	630	650	720	PLAN LOOP DETECTOR "(S
2	3	5	6	6	6	7	ASSIGNED PHASE
VEH	OPERATION MODE						
	2.4	-			7		SWITCH
							EXTEND
			X				DELAY

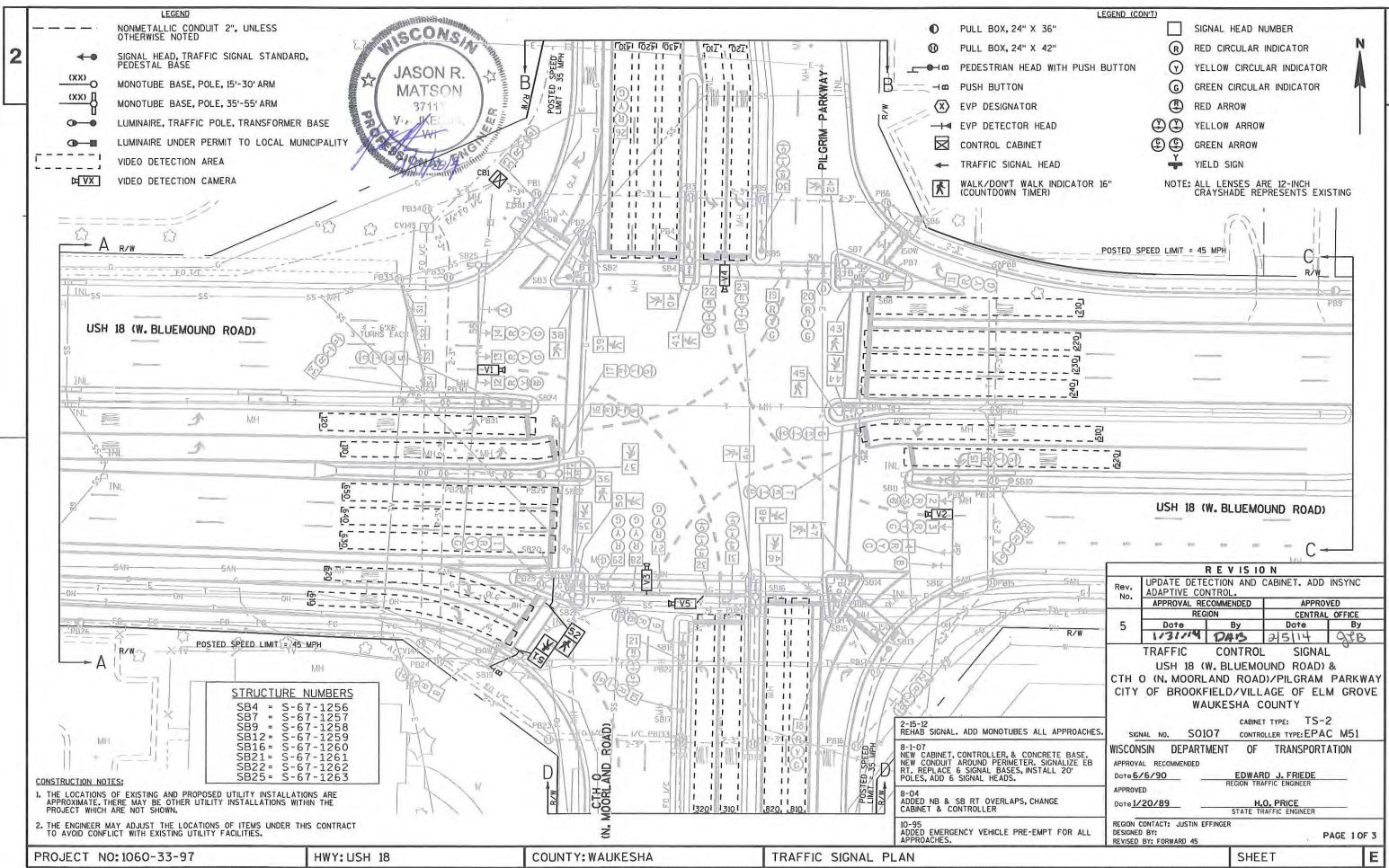
PROJECT NO: 1060-33-97

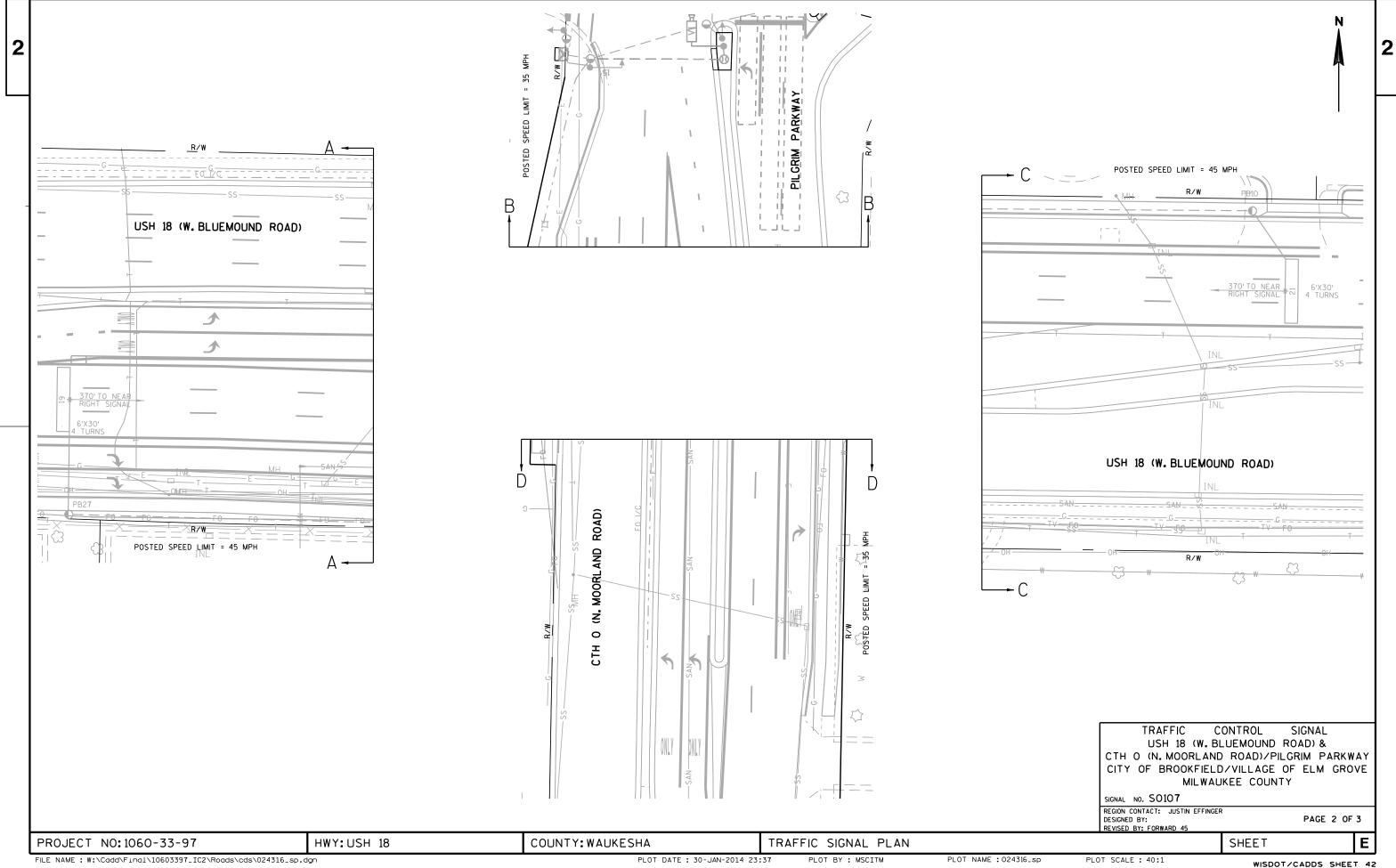
13,114

SEQUENCE OF OPERATIONS SHEET PLOT BY : MSCITM PLOT NAME: 024309_sp_ph PLOT SCALE : 40:1









HEAD NUMBERS

5,6,7

11,12,13,14

21,22,23

26,27,28,29

15,16,17 1,2,3,4 30,31,32 18,19,20

39,40,41,42

35,36,37,38,51,52 47,48,49,50

> 43,44,45,46 33,34 24,25 8,9,10

02

Ø3

04

05

Ø2P

Ø8P

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6	6	
2		6 MIN.		×
3		8		×
4		8		×
5		2		×
6		2	MIN.	×
7		4		×
8		4		X

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		×
2		6	MIN.	×
3		8		×
4		8		×
5		2		X
6		2	MIN.	×
7		4		×
8		4		X

TYPE OF INTERCONNECT/COMMI	JNICATIO
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	×
RADIO	

TYPE OF COORDINA	TION	
NONE		
TBC		
TRAFFIC RESPONSIVE		
ADAPTIVE		X
*LOCATION OF MASTER CONTROLLER NO:	S- 00°	72
SIGNAL SYSTEM ":	SS- 00 - 4	14

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN TRAFFIC SIGNAL CABINET IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE DETECTOR	A	В	С	D
MOVEMENT	*	OLC V	OLAJ J L	716
PHASE	2+5	1+6	4+7	3+8

AFTER PREEMPTION SEQUENCE 2+5 OR 1+6, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 3+8 OR 4+7, CONTROLLER SHALL RETURN TO PHASES 4+8.

USH 18 (W. BLUEMOUND RD) & CTH O (N. MOORLAND ROAD)/PILGRIM PARKWAY CITY OF BROOKFIELD/VILLAGE OF ELM GROVE WAUKESHA COUNTY

IGNAL	NO.	S0107	CABINET	TYPE:	TS2
-------	-----	-------	---------	-------	-----

CONTROLLER TYPE: EPAC

DATE 02/14 PAGE NO. 3 OF 3

PROJECT NO: 1060-33-97

HWY: USH 18

COUNTY: WAUKESHA

SEQUENCE OF OPERATIONS

PLOT BY : MSCITM

PLOT NAME: 024319_sp_ph

PLOT SCALE: 40:1

SHEET

IC

BARRIER

03

04

02

DETECTOR INPUT	3	1	7	5	11			
PLAN LOOP DETECTOR *(S)	21		S1	S3		110	210	230
ASSIGNED PHASE	2					1	2	2
OPERATION MODE	VEH					VEH	VEH	VEH
SWITCH			1					
EXTEND	X							
DELAY	_						X	

RING 1

RING 2

DETECTOR INPUT	4	2	8	6	12			
AN LOOP DETECTOR *(S)	61		S2	S4		120	220	240
ASSIGNED PHASE	6					1	2	2
OPERATION MODE	VEH					VEH	VEH	VEH
SWITCH								
EXTEND	X							
DELAY								

								DETECTOR INPUT
310	410	430	520	620	640	710	810	PLAN LOOP DETECTOR *(S
3	4	4	5	6	6	7	8	ASSIGNED PHASE
VEH	OPERATION MODE							
								SWITCH
								EXTEND
				1				DELAY

								DETECTOR INPUT
320	420	510	610	630	650	720	820	PLAN LOOP DETECTOR "(S
3	4	5	6	6	6	7	8	ASSIGNED PHASE
VEH	VEH	OPERATION MODE						
						Jan 1		SWITCH
								EXTEND
			X					DELAY

E

PROJECT ID:	1060-33-97
INTERSECTION:	USH 18 (W. BLUEMOUND ROAD) & CTH O (N. MOORLAND ROAD) / PILGRIM PARKWAY

SIGNAL WIRE	BLK-BLACK	RED-RED	GRN-GREEN
COLOR CODING	WHT-WHITE	BLU-BLUE	ORG-ORANGE

FROM	то	NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<red></red>	<yellow></yellow>	<green></green>	<flashing> <yellow></yellow></flashing>	D/WALK	WALK	PED BUTTON
CB1	SB19	EXISTING	51								BLK	BLU	
			В										WHT/BLK
CB1	SB20	EXISTING	52								**	**	

VI	DEO
DETE	ECTION
C/	BLE
FROM	ТО
CB1	SB25 (V1)
CB1	SB12 (V2)
CB1	SB21 (V3)
CB1	SB4 (V4)
CB1	SB16 (V5)
	02.0(.0)

USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS. AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

NOTES:

**USE SAME COLORED CONDUCTORS AS EXISTING PED HEAD 35



PROJECT NO: 1060-33-97

HWY: USH 18

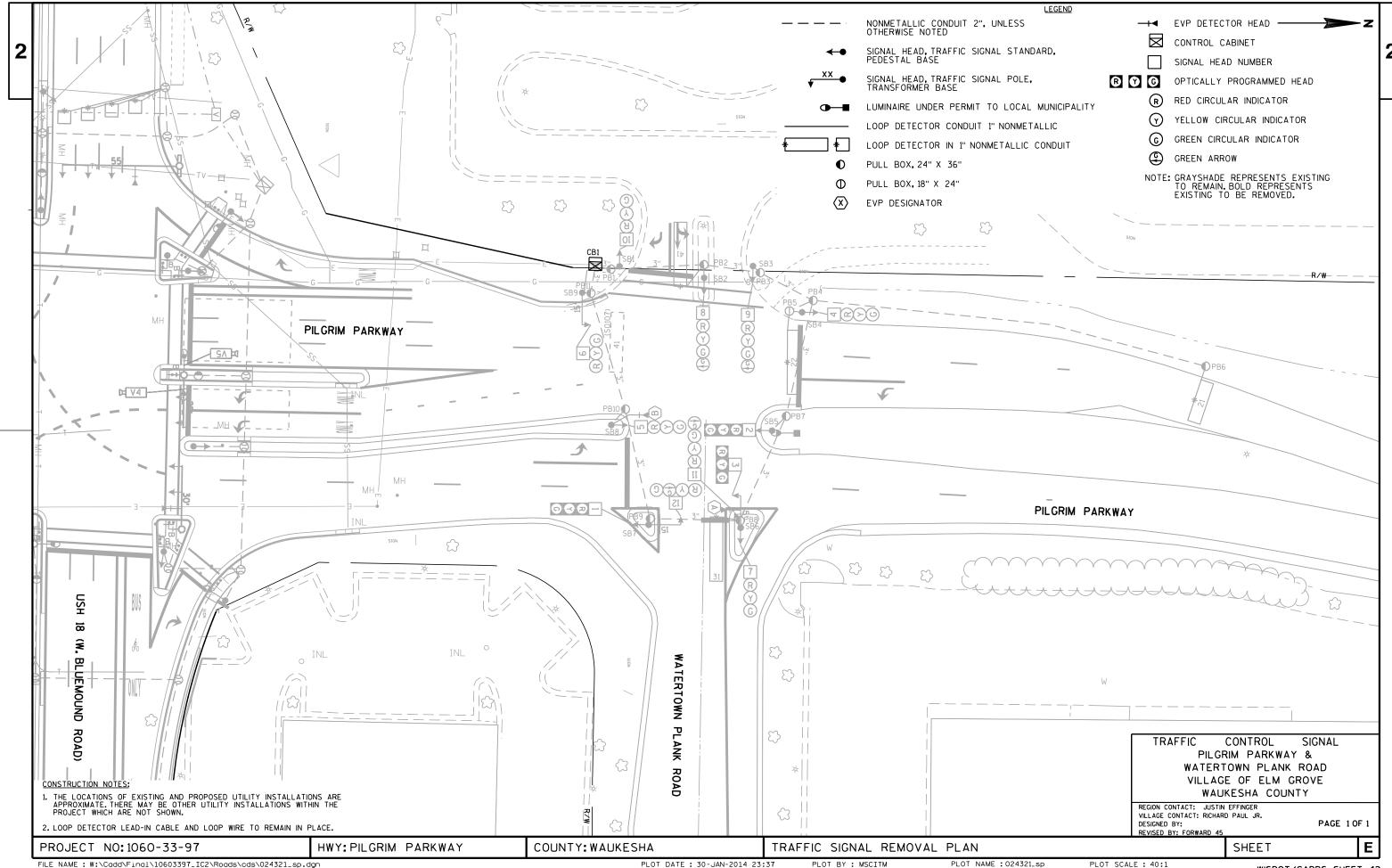
COUNTY: WAUKESHA

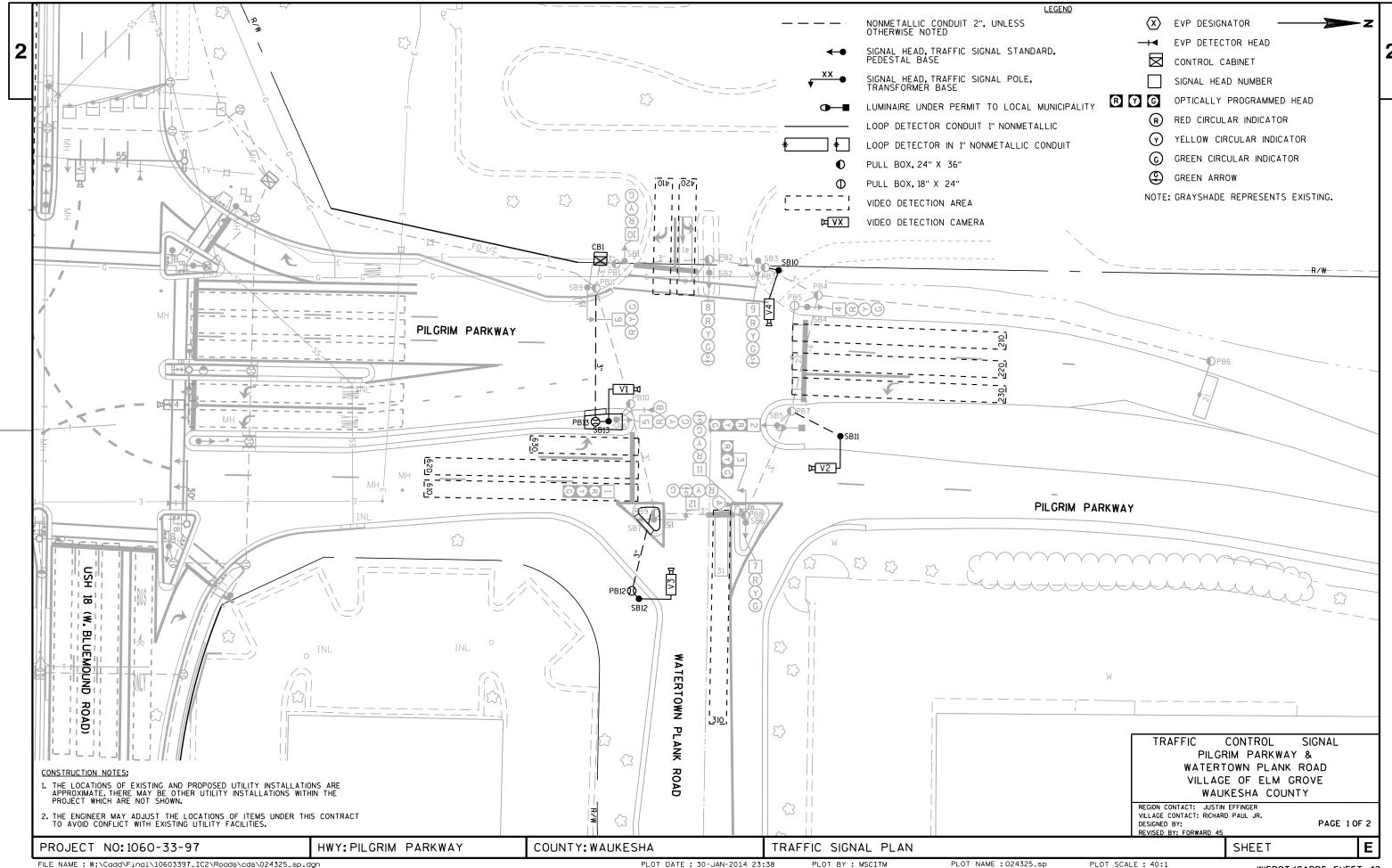
CABLE ROUTING

SHEET:

PLOT SCALE: 1:1

PLOT BY: MSCD1S





DUAL

ENTRY W / Ø

6

2

OVERLAPS

TYPE OF PRE-EMPT

TOMAR HARDWIRE GTT

PHASE

MIN.

MIN.

RECALL ACTIVE

PHASE

Х

Χ

Х

TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1AT LEFT.)

PILGRIM PARKWAY & WATERTOWN PLANK ROAD VILLAGE OF ELM GROVE WAUKESHA COUNTY

SIGNAL NO.

CONTROLLER TYPE: EPAC

DATE 02/14

PAGE NO. 2 OF 2

HWY: PILGRIM PARKWAY

04

05

06

07 Ø8

COUNTY: WAUKESHA

NONE

2

SEQUENCE OF OPERATIONS

PLOT BY : MSCITM

SHEET

В

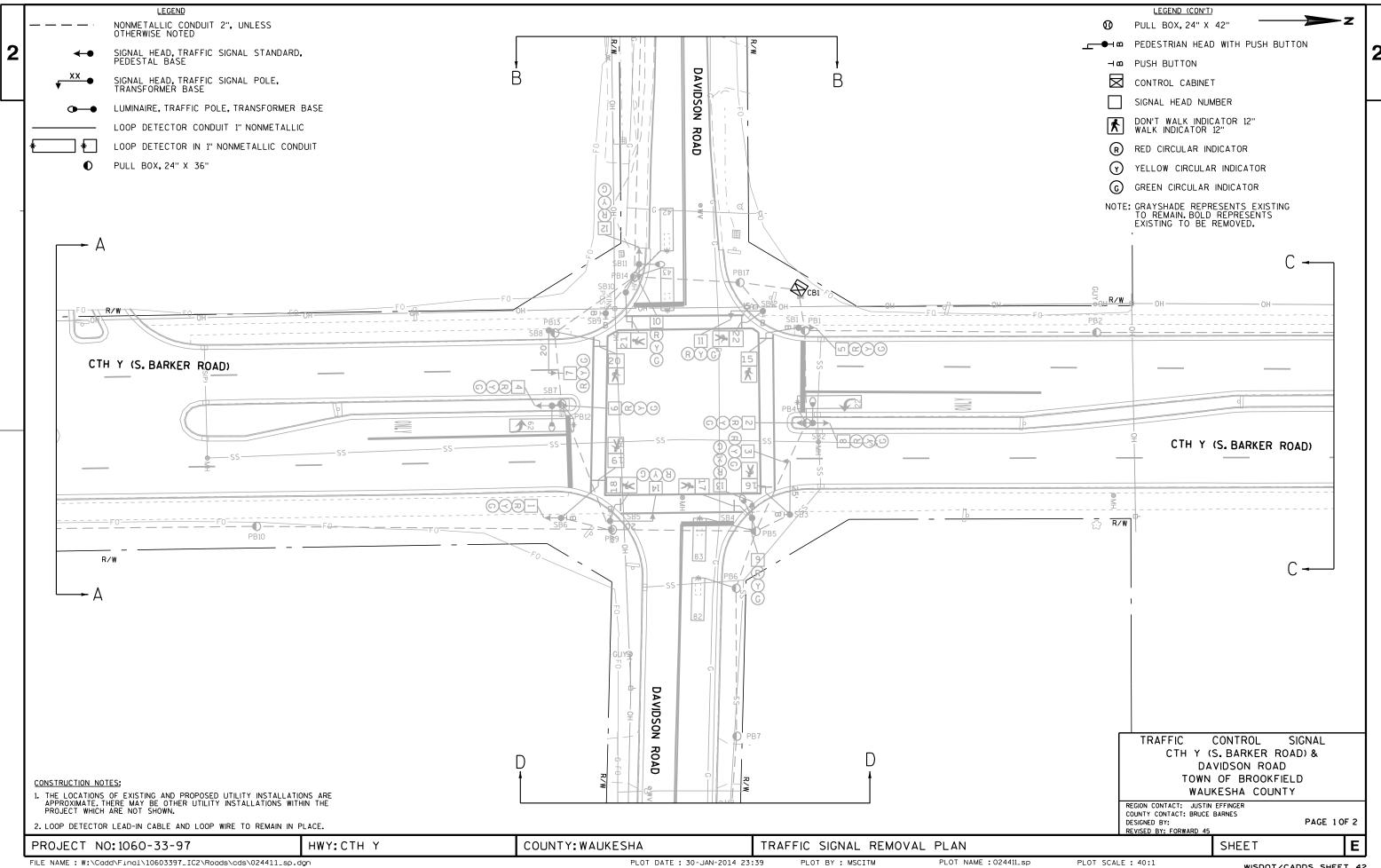
2 AND 6 6 AND :

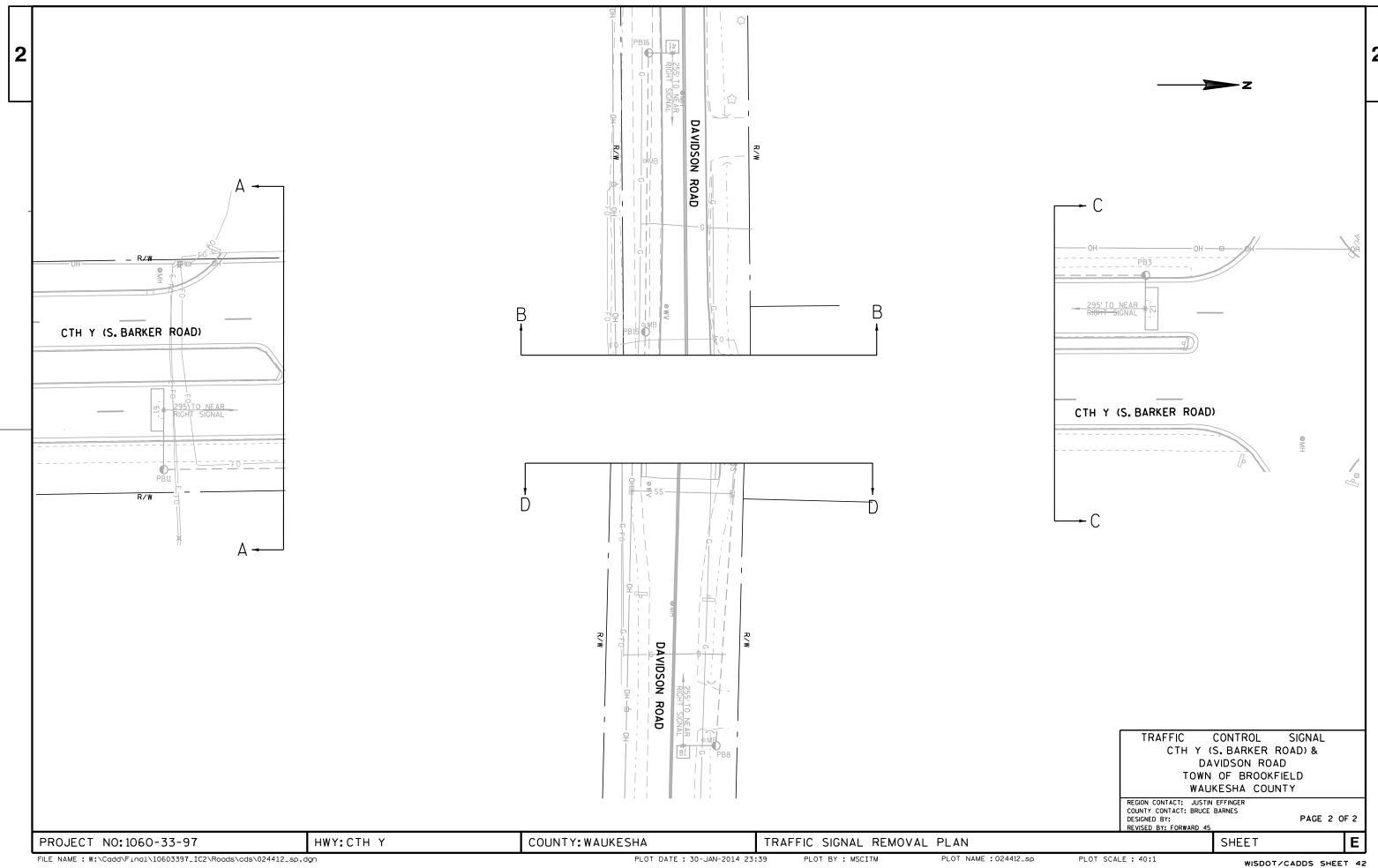
2.3.6

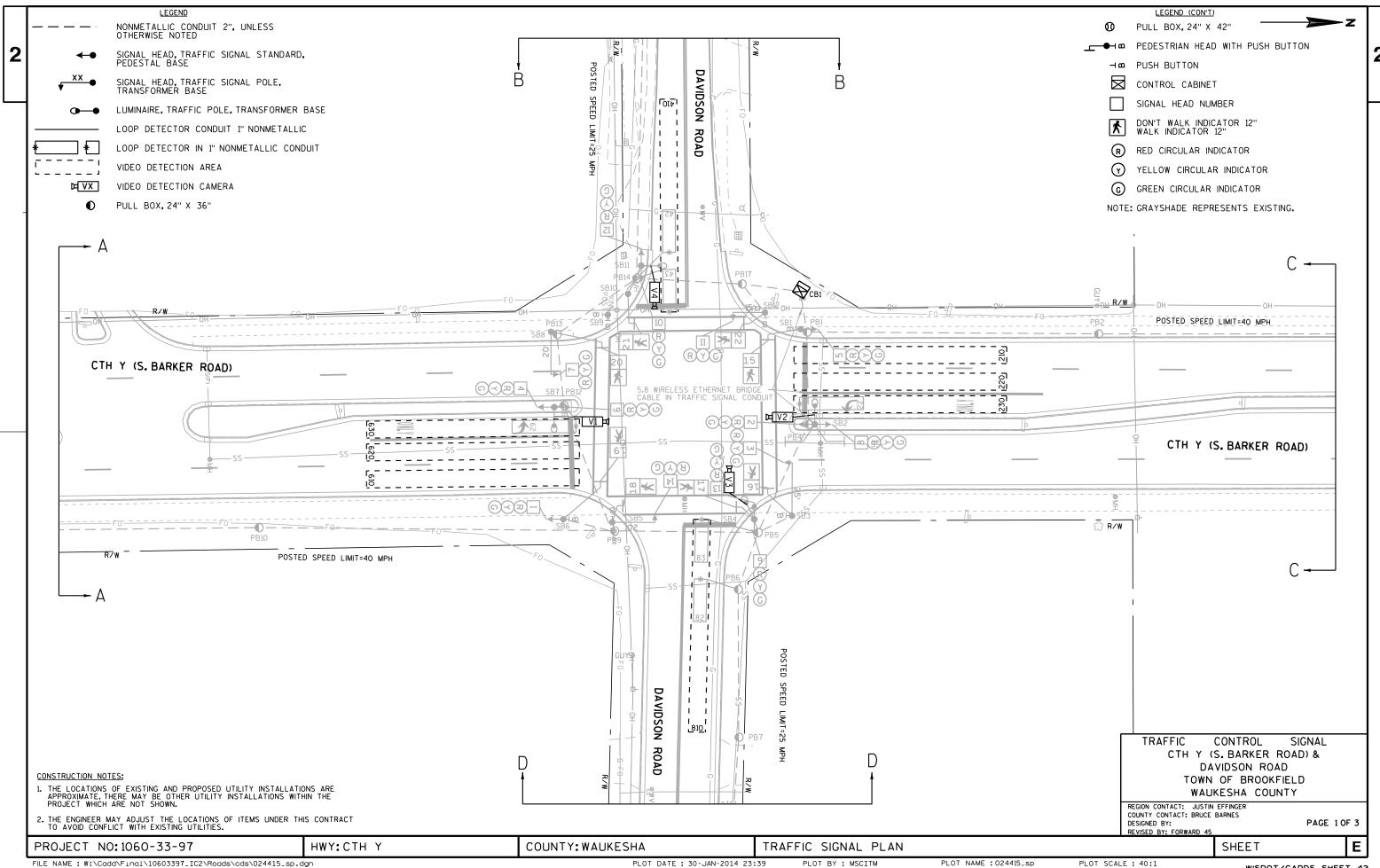
3,4

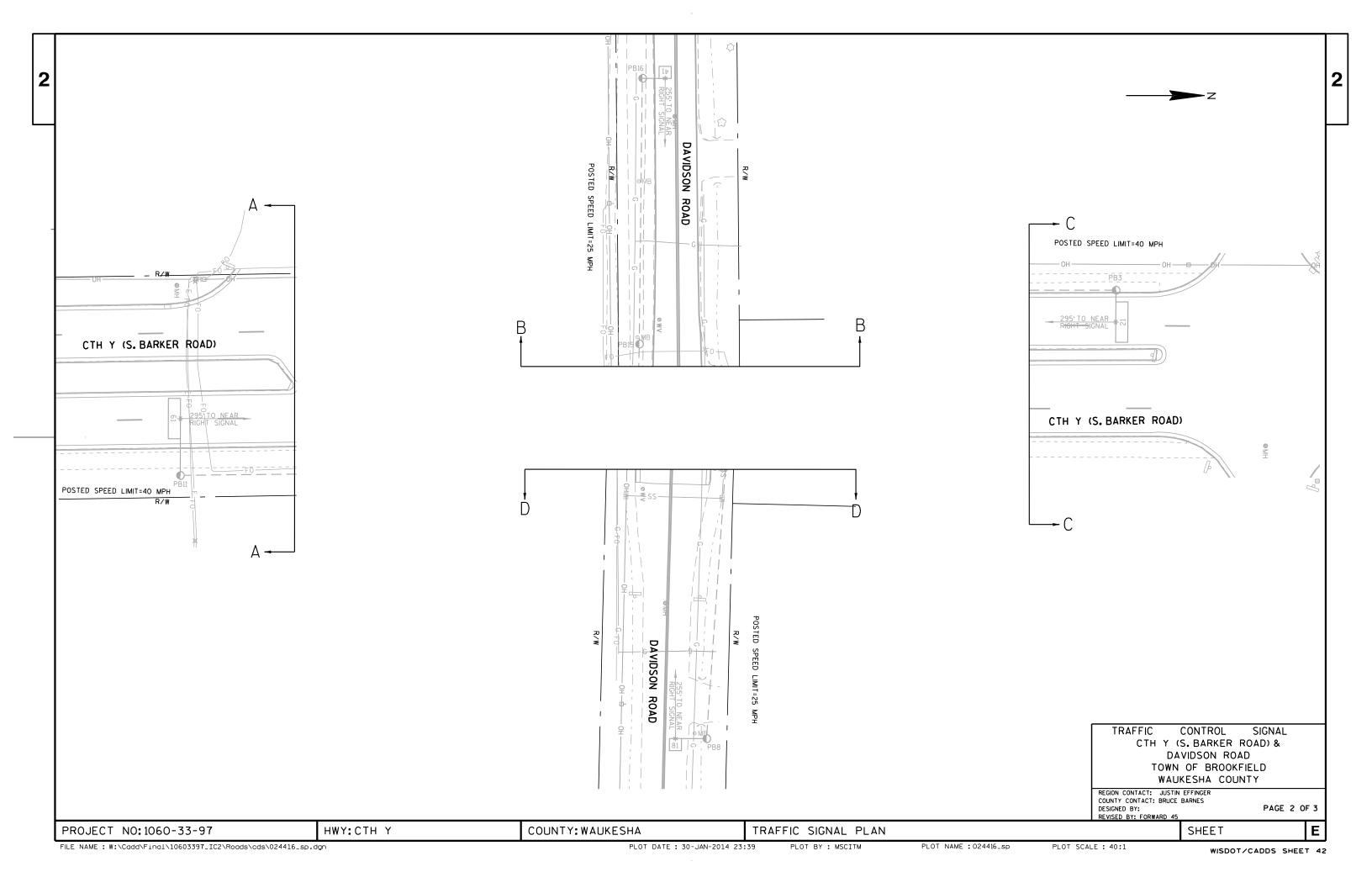
PROJECT NO: 1060-33-97











PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2		6	MIN.	Х
3				
4		8		Х
5				
6		2	MIN.	Х
7				
8		4		Х

OVERLAPS

O.L. "A" =

O.L. "B" = O.L. "C" =

O.L. "D" =

VIDEO

VIDEO

VIDEO

		DETEC	TOR OPE	RATION							
DETECTOR NUMBER	DETECTOR INPUT	CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
21	1	Х			2	2				6X20	EXIST
22	2	Х			2	2				6X30	EXIST
41	3			х		4			х	6X6	EXIST
42	4	х			4	4				6X20	EXIST
43	4	х			4	4		x		6X20	EXIST
61	5	х			6	6				6X20	EXIST
62	6	х			6	6				6X30	EXIST
81	7			х		8			х	6X6	EXIST
82	8	х			8	8				6X20	EXIST
83	8	×			8	8		X		6X20	EXIST
210		×			2	2					VIDEO
220		х			2	2					VIDEO
230		х			2	2					VIDEO
410		х			4	4		Х			VIDEO
610		Х			6	6					VIDEO

Χ

Х

Χ

TYPE OF COMMUNICATION		TYPE OF	F
NONE		NONE	=
TBC		TBC	
CLOSED LOOP TWISTED PAIR*		TRAFFIC RESPO	۸(
CLOSED LOOP FIBER OPTIC*		ADAPTIVE	
FIBER OPTIC			_
RADIO	х		
*LOCATION OF MASTER CONTROLLER NO: S-			

SS- -

620

630

810

SIGNAL SYSTEM #:

TYPE OF COORDINATION	
NONE	\top
TBC	П
TRAFFIC RESPONSIVE	
ADAPTIVE	x

6

6

8

6

6

8

Х

TYPE OF LIGHTING	
BY OTHERS	
IN TRAFFIC SIGNAL CABINET	×
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	7
RAILROAD	
EMERGENCY VEHICLE	
3M	
TOMAR	
HARDWIRE	
OTHER	
QUEUE DETECTOR	
LIFT BRIDGE	

BARRIER

SEQUENCE OF OPERATION

∠__

 \leftarrow

Ø2

R/W | X X |

G YR

R | R | R |

R RR

R RR

* | D | D

D |D |D

R/W | X X |

R RR

RRR

G YR

R RRR

* D D

D D D

HWY: CTH Y

 $\overline{}$

06

CLEAR TO

CLEAR TO

NOT

USED

03

NOT

USED

07

R/W X

CLEAR TO

R/W X

CLEAR TO

04

 $R/W \mid X \mid X$

G YR

R RR

R |R|R|

* |D|D|

08

* *

R RR

| R | R |

| Y | R |

D D D

D D D

D D

R/W

R

G

CLEAR TO

CLEAR TO

NOT

USED

01

NOT

USED

05

 $R/W \mid X \mid X$

CLEAR TO

R/W X

HEAD NUMBERS

5,6,7,8

12.13.14

1,2,3,4

9,10,11

21,22

19,20

17,18

15,16

HEAD

NUMBERS

5,6,7,8

12,13,14

1,2,3,4

9,10,11

21,22

19,20

17,18

15,16

01 02

03

04

[| Ø5

Ø6

07

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Ø2P

Ø4P

Ø6P

Ø8P

01 02

Ø3

05 Ø6

07 Ø8

Ø2P

Ø4P

Ø6P

PROJECT NO: 1060-33-97

RING 2 04

RING

CLEAR TO

- ** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)
- * WHEN CALLED, TIMED STEADY WALK, THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1		
2	6	4,8
3		
4	8	2,6
5		
6	2	4,8
7		
8	4	2,6

COUNTY: WAUKESHA

GENERAL NOTES:

- 1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
- 2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1AT LEFT.)
- 3. IF ANY OPPOSING THRU PHASES ARE TIMING CONCURRENTLY, THEY SHALL TERMINATE TOGETHER DUE TO PERMISSIVE LEFT TURN CONFLICT.

CTH Y (S. BARKER ROAD) & DAVIDSON ROAD TOWN OF BROOKFIELD WAUKESHA COUNTY

SHEET

SIGNAL NO.

CONTROLLER TYPE: EPAC

DATE 02/14

PAGE NO. 3 OF 3

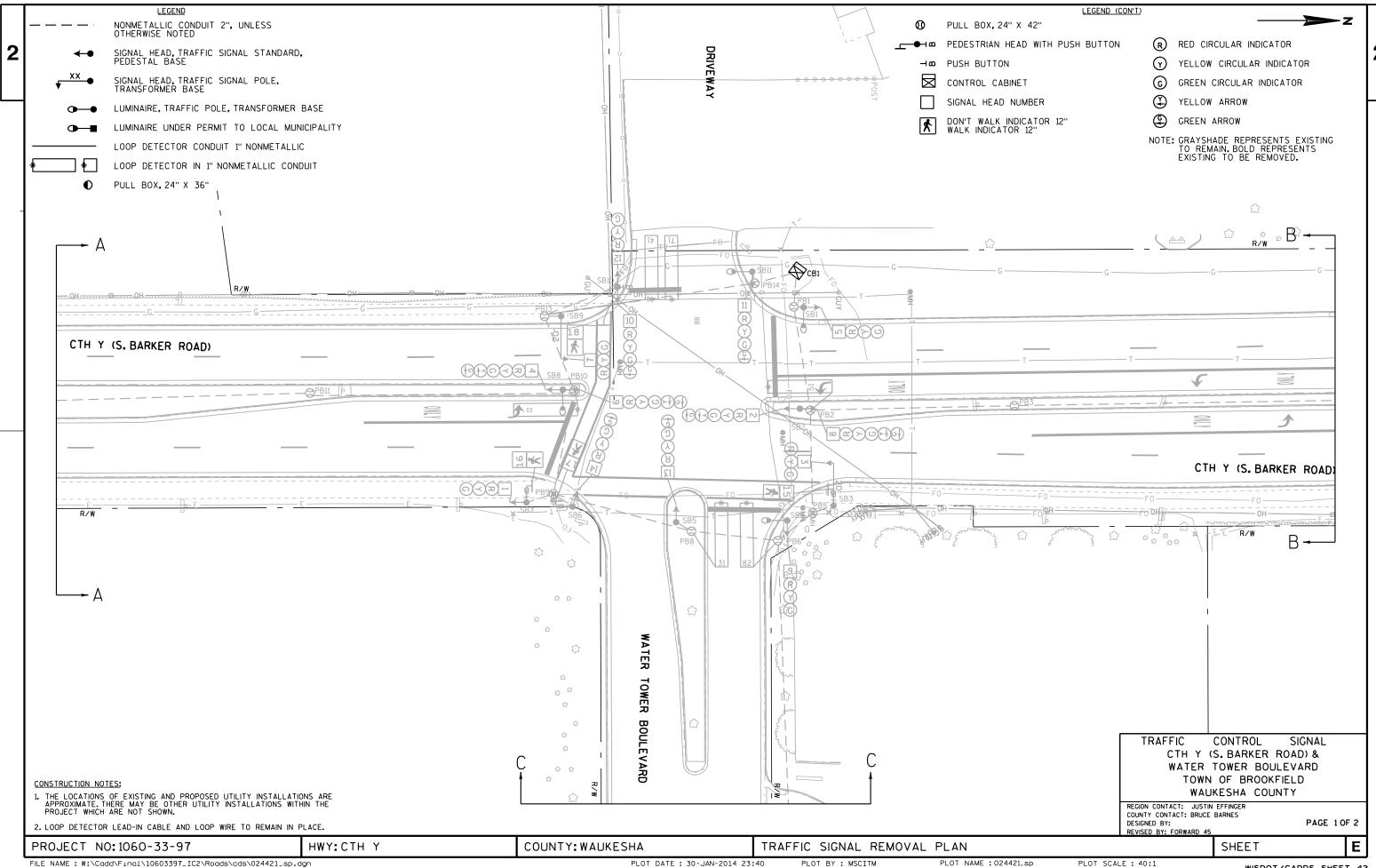
PLOT DATE: 30-JAN-2014 23:39

PLOT BY : MSCITM

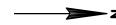
SEQUENCE OF OPERATIONS

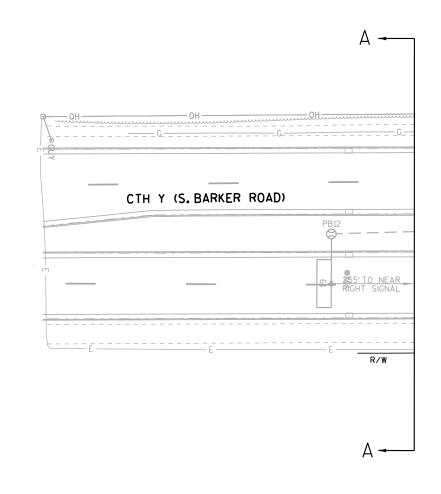
PLOT NAME: 024419_sp_ph

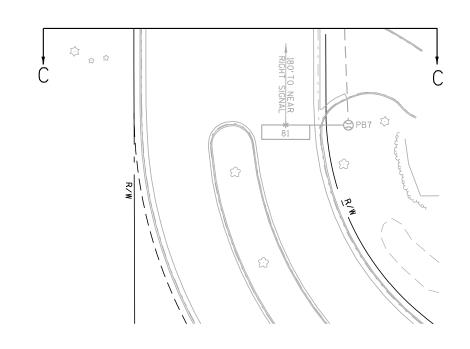
WISDOT/CADDS SHEET 42

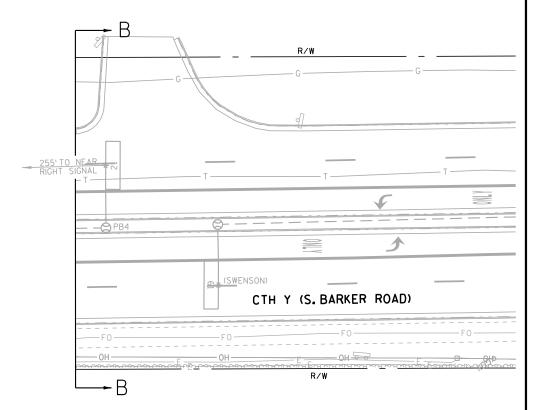


2









TRAFFIC CONTROL SIGNAL
CTH Y (S. BARKER ROAD) &
WATER TOWER BOULEVARD
TOWN OF BROOKFIELD
WAUKESHA COUNTY

REGION CONTACT: JUSTIN EFFINGER COUNTY CONTACT: BRUCE BARNES DESIGNED BY: REVISED BY: FORWARD 45

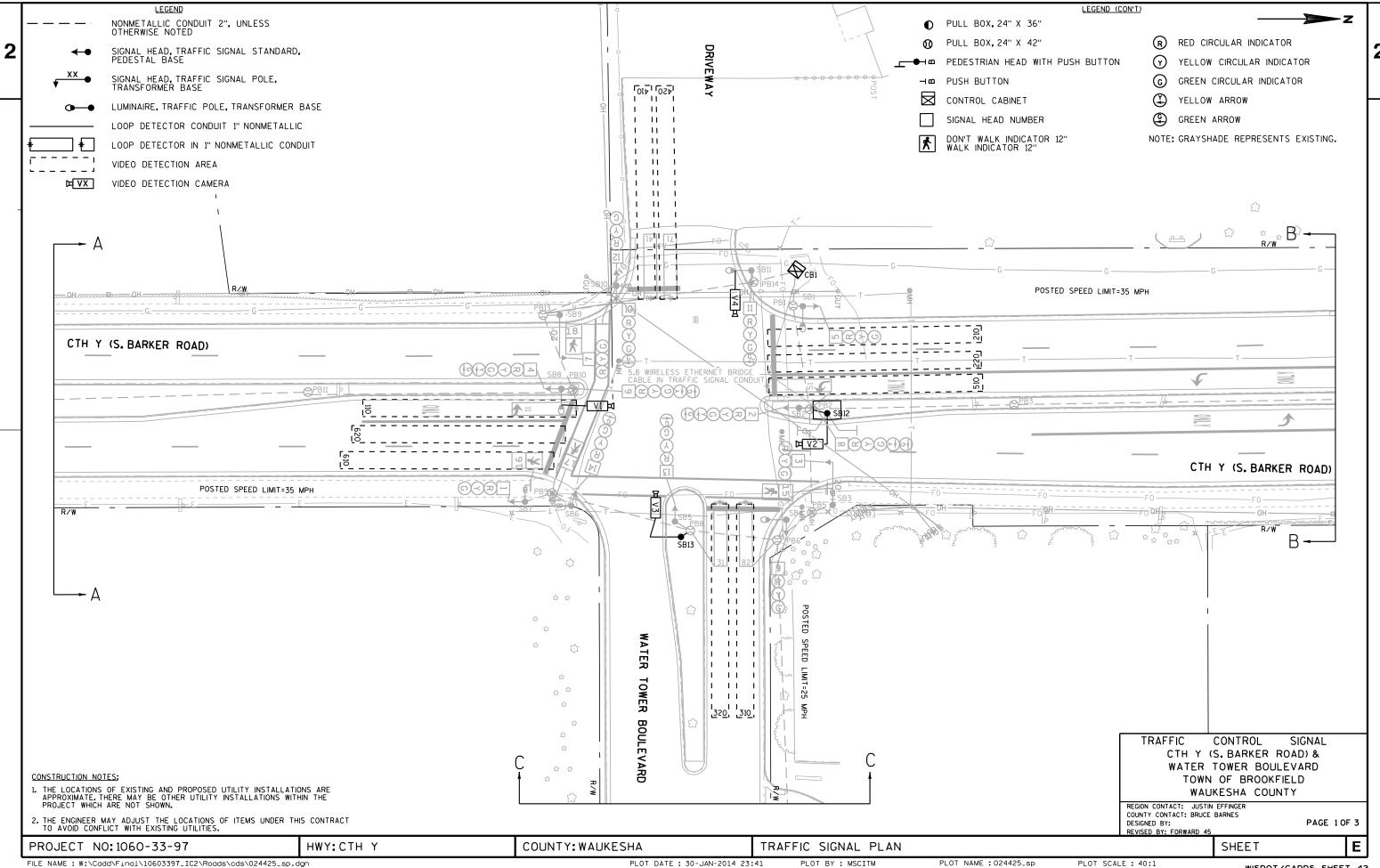
PAGE 2 OF 2

HWY: CTH Y COUNTY: WAUKESHA

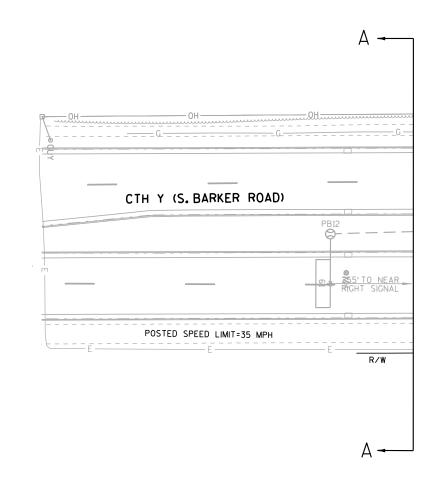
TRAFFIC SIGNAL REMOVAL PLAN

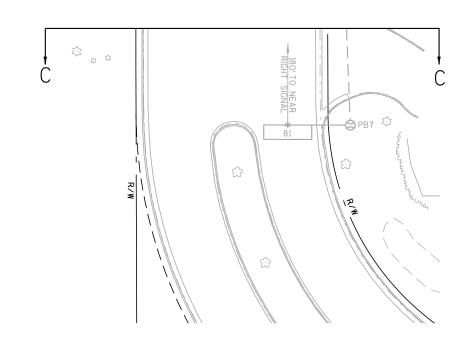
PLOT BY : MSCITM

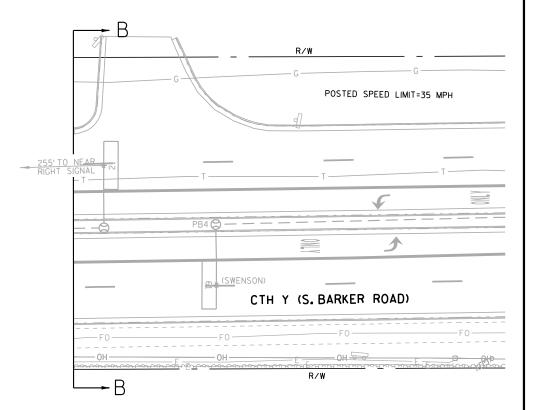
PROJECT NO: 1060-33-97



2







TRAFFIC CONTROL SIGNAL
CTH Y (S. BARKER ROAD) &
WATER TOWER BOULEVARD
TOWN OF BROOKFIELD
WAUKESHA COUNTY

REGION CONTACT: JUSTIN EFFINGER COUNTY CONTACT: BRUCE BARNES DESIGNED BY: REVISED BY: FORWARD 45

PAGE 2 OF 3

PROJECT NO: 1060-33-97

HWY: CTH Y

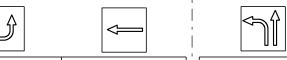
COUNTY: WAUKESHA

TRAFFIC SIGNAL PLAN

PLOT NAME: 024426_sp

REVISED BY: FORWARD 45
SHEET

SEQUENCE OF OPERATION



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		01				02					1	03				04					F								
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	HEAD	R/W	X	*	_			R/W	X	*					1	R/W	*	*				R/W	*	*	L				H
	NUMBERS																												
01	2,4	G	Y	-				-	-	-					i	-	-	-				-	-	-					-
02	5,6,7,8	R	R	R				G	Υ	R					,	R	R	R				R	R	R					R
03	9,10,11	R	R	R				R	R	R						G,G	Υ	R				R	R	R					R
04	12,13,14	R	R	R				R	R	R					i	R	R	R				G,G	Y	R					R
05	6,8	-	-	-				-	-	-					;	-	-	-				-	-	-					-
Ø6	1,2,3,4	R	R	R				R	R	R						R	R	R				R	R	R					R
07															i														
08															1														
Ø2P																													
Ø4P	17,18	D	D	D				D	D	D					i	D	D	D				*	D	D					
Ø6P	15,16	D	D	D				D	D	D						D	D	D				D	D	D					
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		HEAD	R/W	*	*				R/W	*	X] ;	R/W	*	*		
		NUMBERS]					
	01	2,4	-	-	-				ı	-	ı]					
	02	5,6,7,8	R	R	R				R	R	R					ľ					
	Ø3	9,10,11	R	R	R				R	R	R]					
RING 2	04	12,13,14	R	R	R				R	R	R										
	Ø5	6,8	G	Y	1				ı	-] <u> </u>					
	Ø6	1,2,3,4	R	R	R				G	Υ	R										
	Ø7																				
	Ø8]					
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	Ø4P	17,18	D	D	D				D	D	D										
	Ø6P	15,16	D	D	D				*	D	D] ;					
	Ø8P]¦					

<u> </u>							N8							
	CLEAR TO					CLEAR TO								
R/W	*	X					R/W	X	*					
·														
	R/W	R/W *	CL	CLEAF	CLEAR	CLEAR TO CL	CLEAR TO CLEAR	CLEAR TO CLEAR	CLEAR TO CLEAR TO					

DETECTOR LOGIC

		DETEC	TOR OPER	RATION							
DETECTOR NUMBER	DETECTOR INPUT	CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11	1	Х			1	1				6X30	EXIST
21	2	X			2	2				6X20	EXIST
31	3	X			3	3				6X30	EXIST
41	4	X			4	4		Х		6X30	EXIST
51	5	×			5	5				6X30	EXIST
61	6	X			6	6				6X20	EXIST
71	7	Х			4	4				6X30	EXIST
81	8			X		3			Х	6X20	EXIST
82	9	X			3	3		X		6X30	EXIST
110		X			1	1					VIDEO
210		×			2	2					VIDEO
220		X			2	2					VIDEO
310		X			3	3		X			VIDEO
320		X			3	3					VIDEO
410		X			4	4		X			VIDEO
420		X			4	4					VIDEO
510		X			5	5					VIDEO
610		Х			6	6					VIDEO
620		X			6	6					VIDEO

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		х
2		6	MIN.	Х
3				Х
4				Х
5		2		Х
6		2	MIN.	Х
7				
8				

OVERLAPS

0.L.	"A"	=
------	-----	---

0.L. "B" =

O.L. "C" = O.L. "D" =

TYPE OF COMMUNICATION	
NONE	
TBC	
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
FIBER OPTIC	
RADIO	Х
*LOCATION OF MASTER	
CONTROLLER NO: S-	
SIGNAL SYSTEM *: SS	

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	×

TYPE OF LIGHTING	
BY OTHERS	
IN TRAFFIC SIGNAL CABINET	х
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	,
RAILROAD	
EMERGENCY VEHICLE	
3M	
TOMAR	
HARDWIRE	
OTHER	
QUEUE DETECTOR	
LIFT BRIDGE	

BARRIER

HWY: CTH Y

- ** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)
- * WHEN CALLED, TIMED STEADY WALK, THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

CHART 1

USED

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1	5 OR 6	2,3,4
2	5 OR 6	1,3,4
3	NONE	1,2,4,5,6
4	NONE	1,2,3,5,6
5	1 OR 2	3,4,6
6	1 OR 2	3,4,5
7		
8		

GENERAL NOTES:

- 1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
- 2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1AT LEFT.)
- 3. IF ANY OPPOSING THRU PHASES ARE TIMING CONCURRENTLY, THEY SHALL TERMINATE TOGETHER DUE TO PERMISSIVE LEFT TURN CONFLICT.

CTH Y (S. BARKER ROAD) & WATER TOWER BOULEVARD TOWN OF BROOKFIELD WAUKESHA COUNTY

SIGNAL NO.

CONTROLLER TYPE: EPAC

DATE 02/14

PAGE NO. 3 OF 3

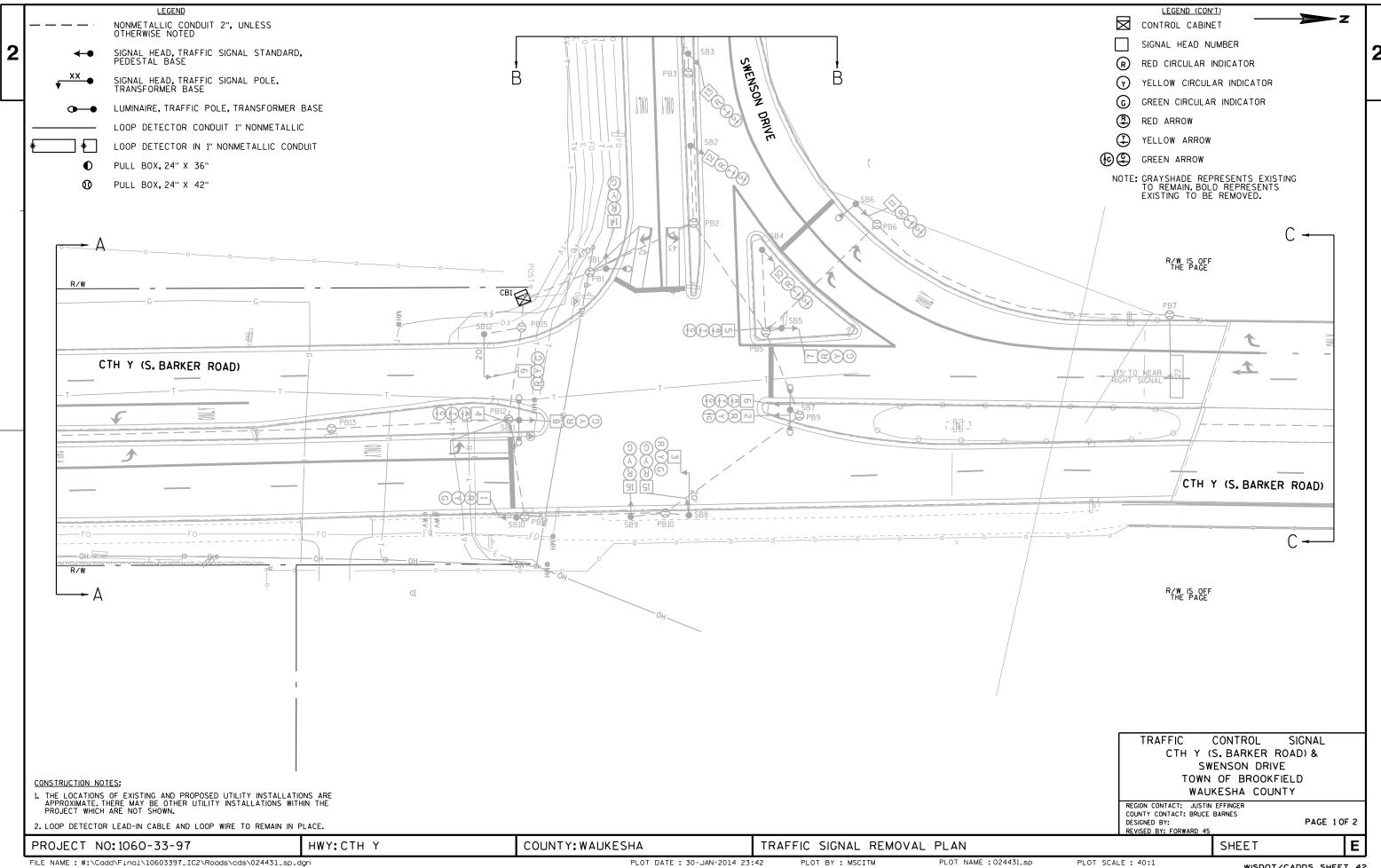
PROJECT NO: 1060-33-97

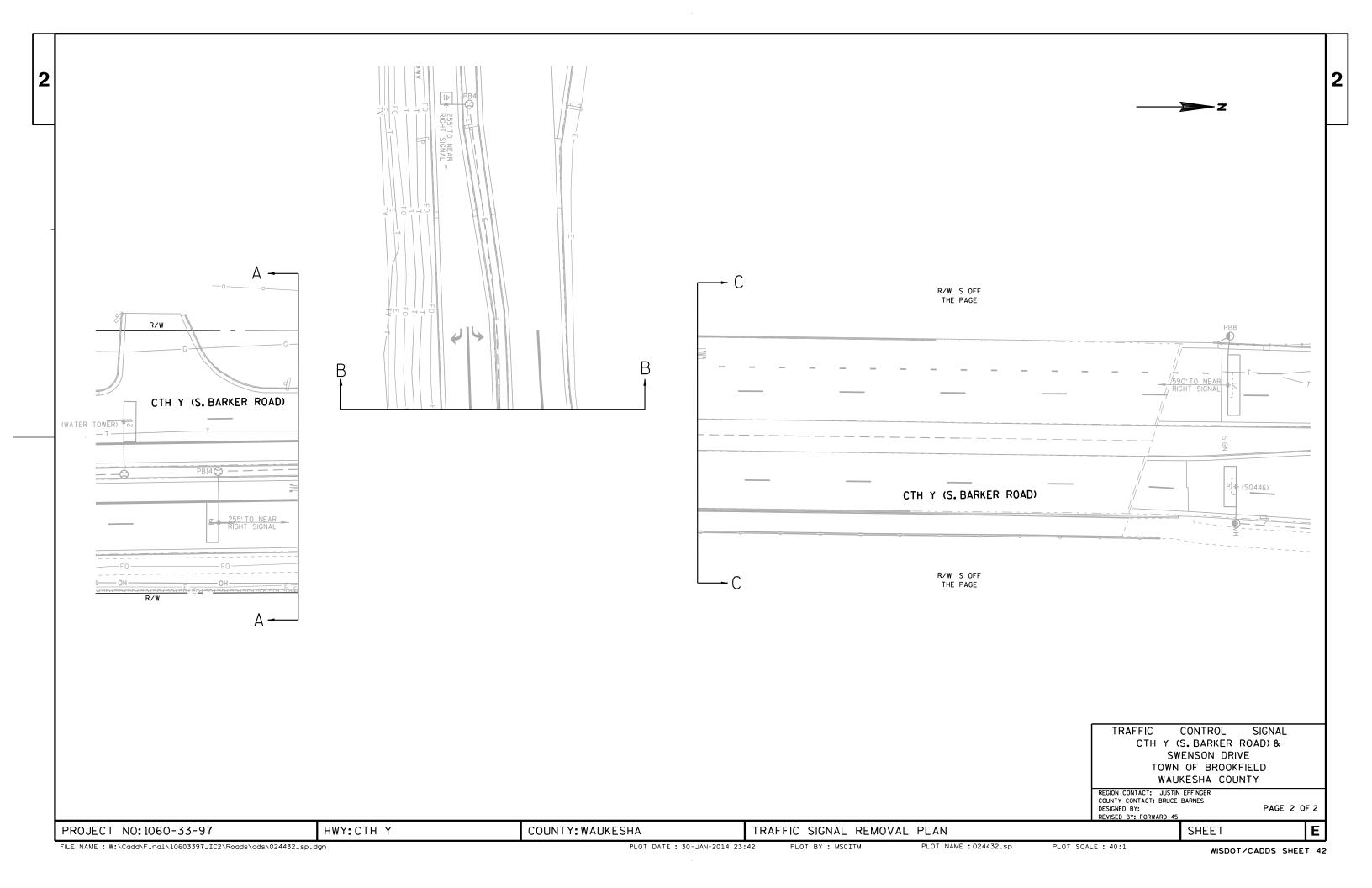
RING 1

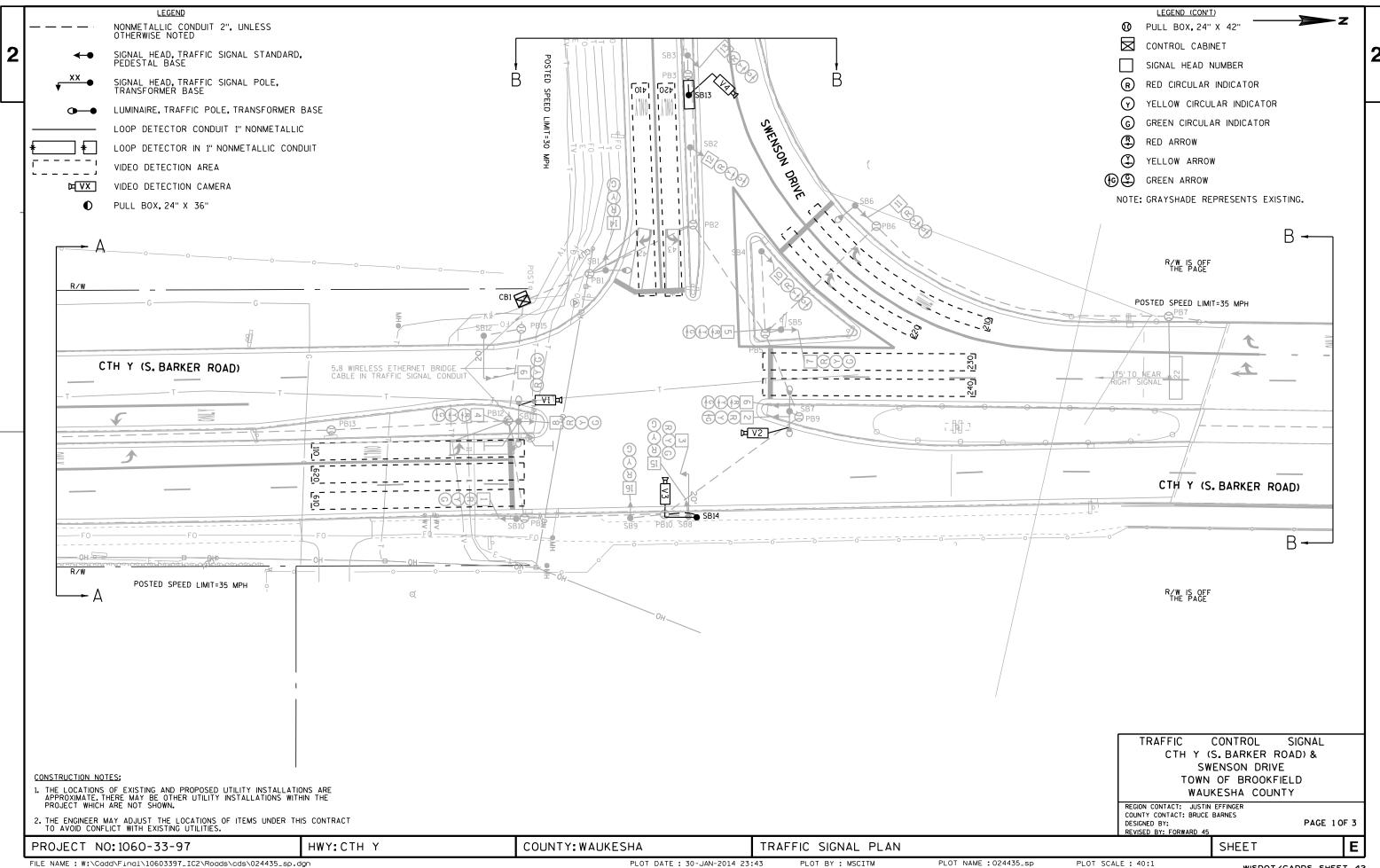
COUNTY: WAUKESHA

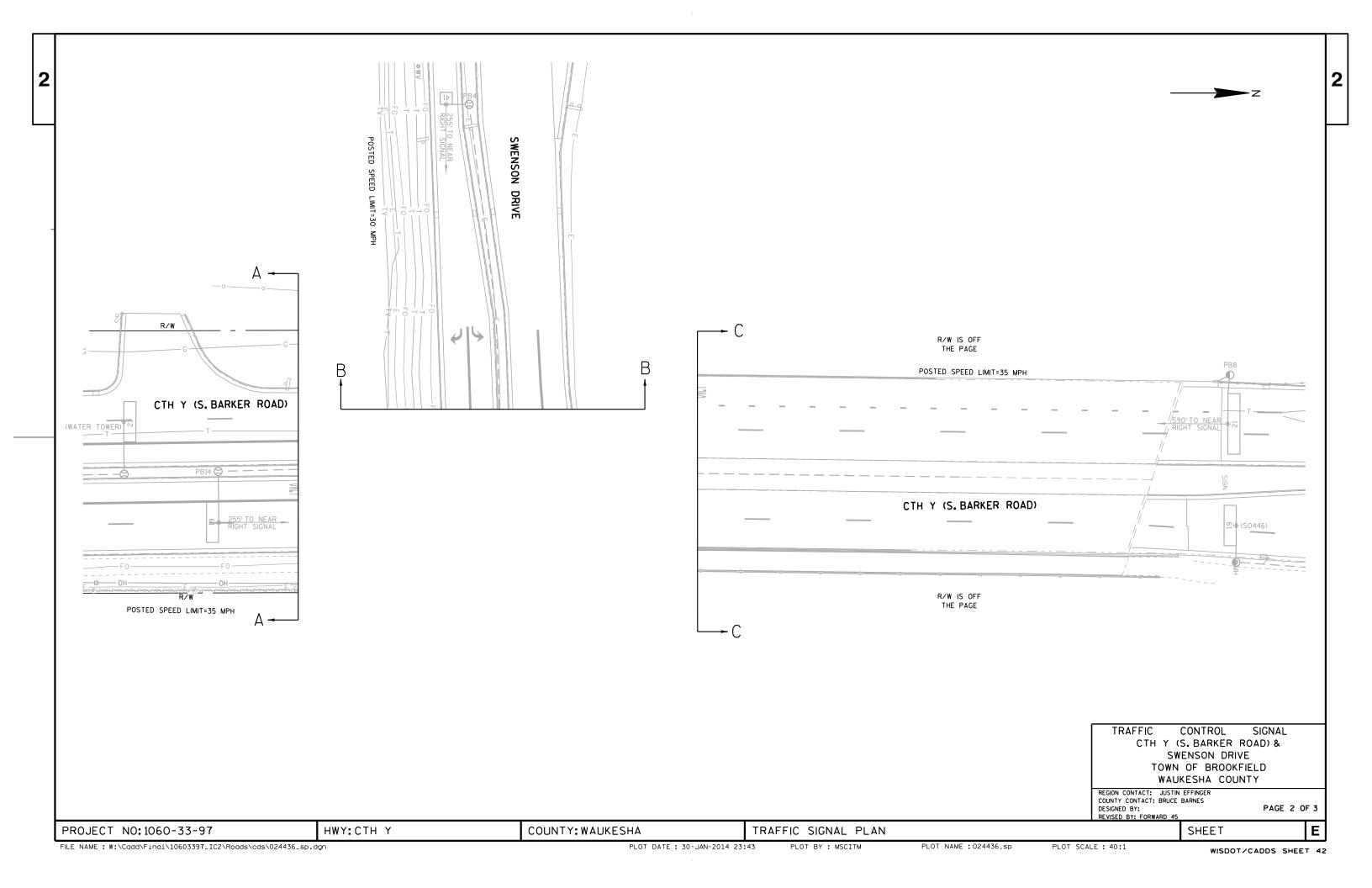
SEQUENCE OF OPERATIONS

PLOT NAME: 024429_sp_ph









GENERA	LN	UIE	. 3:

- 1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
- WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1.)
- 3. IF ANY OPPOSING THRU PHASES ARE TIMING CONCURRENTLY, THEY SHALL TERMINATE TOGETHER DUE TO PERMISSIVE LEFT TURN CONFLICT.

CTH Y (S.BARKER ROAD) &
SWENSON DRIVE
TOWN OF BROOKFIELD
WAUKESHA COUNTY

SIGNAL NO.

CONTROLLER TYPE: EPAC

DATE 02/14

PAGE NO. 3 OF 3

HWY: CTH Y COUNTY: WAUKESHA

BARRIER

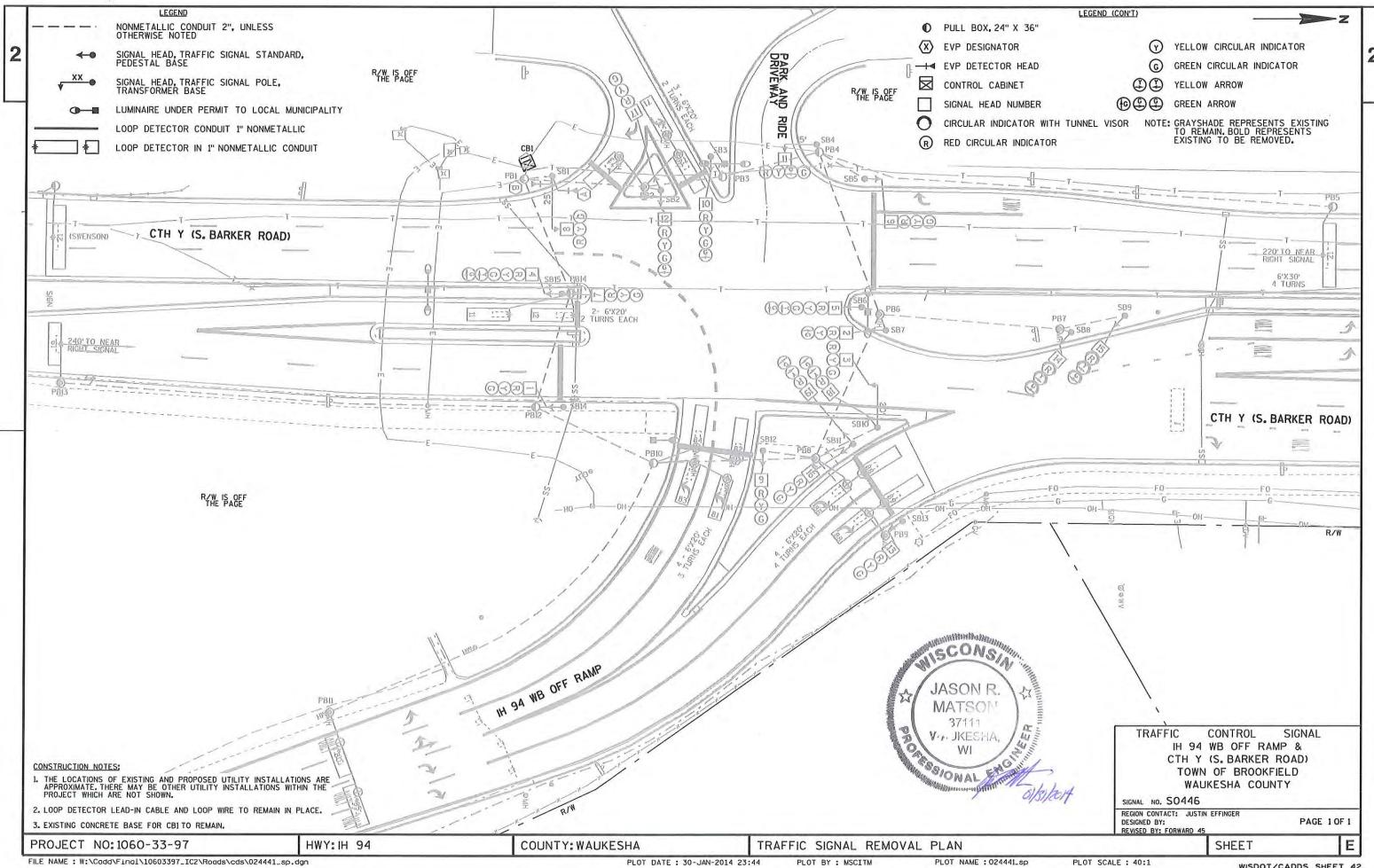
SEQUENCE OF OPERATIONS
3:44 PLOT BY: MSCITM

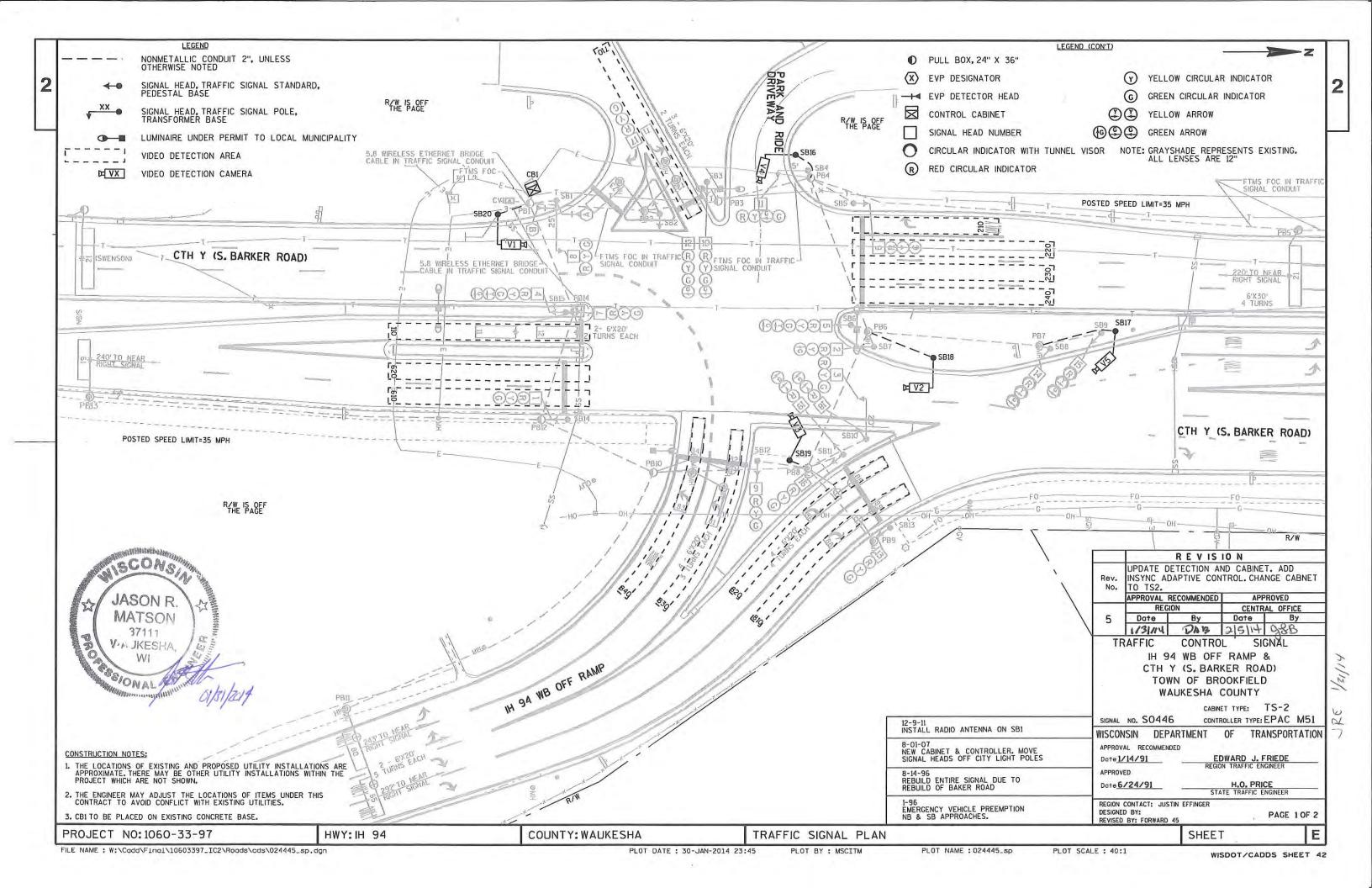
PLOT NAME: 024439_sp_ph

SHEET

PROJECT NO: 1060-33-97

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)





CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6	0	х
2		6	MIN.	х
3				
4				
5				
6		2	MIN.	×
7				×
8				×

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6	6	х
2		6	MIN.	х
3				
4				
5				
6		2	MIN.	×
7				×
8				X

TYPE OF INTERCONNECT/COMMU	INICATIO
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	X
RADIO	X

TYPE OF COORDINA	TION	
NONE		
TBC		
TRAFFIC RESPONSIVE		
ADAPTIVE)	
*LOCATION OF MASTER CONTROLLER NO:	S- 0072	
SIGNAL SYSTEM ::	SS- 00 - 44	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE DOT LIGHTING CABINET	X

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	X
HARDWIRE	
3M	
LIFT BRIDGE	
QUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

ELEGACTION VEHICLE	CHANNEL		
EMERGENCY VEHICLE PREEMPTOR	A	В	
MOVEMENT	< >		
PHASE	2 AND 6	6 AND 2	

AFTER PREEMPTION SEQUENCE 2 AND 6 OR 6 AND 2, CONTROLLER SHALL RETURN TO PHASES 2+6.

> IH 94 WB OFF RAMP & CTH Y (S. BARKER ROAD) TOWN OF BROOKFIELD WAUKESHA COUNTY

SIGNAL NO. SO446

CONTROLLER TYPE: EPAC

DATE 02/14

PAGE NO. 2 OF 2

PROJECT NO: 1060-33-97

HEAD

NUMBERS

4,5

6,7,8

1,2,3,4,5

17,18,19 Ø8 9,10,11,12,13,14,15,16 R

02

03

04 05 06

07

Ø4P Ø6P Ø8P

OLB

DETECTOR INPUT

ASSIGNED PHASE

OPERATION MODE

SWITCH

EXTEND

DELA

PLAN LOOP DETECTOR "(S)

PLAN LOOP DETECTOR "(S)

ASSIGNED PHASE

OPERATION MODE

SWITCH

EXTEND

DELAY

3

11

VEH

6

12

VEH

21

2

VEH

2

61

6

VEH

RING 1

RING 2

5

73

VEH

X

6

80

VEH

X

71

7

VEH

8

72

VEH

01

NOT USED

05

11

81

8

VEH

12

82

VEH

9

83

VEH

10

84

VEH

15

85

VEH

X

16

86/87

VEH

13

88

8

VEH

14

89

VEH

02

06

BARRIER

DETECTOR LOGIC

HWY: IH 94

COUNTY: WAUKESHA

SEQUENCE OF OPERATIONS

PLOT NAME : 024449_sp_ph

SHEET

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\024449_sp_ph.dgn

PLOT DATE: 30-JAN-2014 23:45

PLOT BY : MSCITM

PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

23 19 17 110 220 240 620 VEH VEH VEH VEH

NOT

USED

07

NOT

USED

08

20 24 DETECTOR INPUT 210 230 610 710 820 840 PLAN LOOP DETECTOR *(S) VEH VEH VEH VEH VEH VEH

DETECTOR INPUT 810 830 PLAN LOOP DETECTOR *(S) ASSIGNED PHASE VEH VEH OPERATION MODE SWITCH

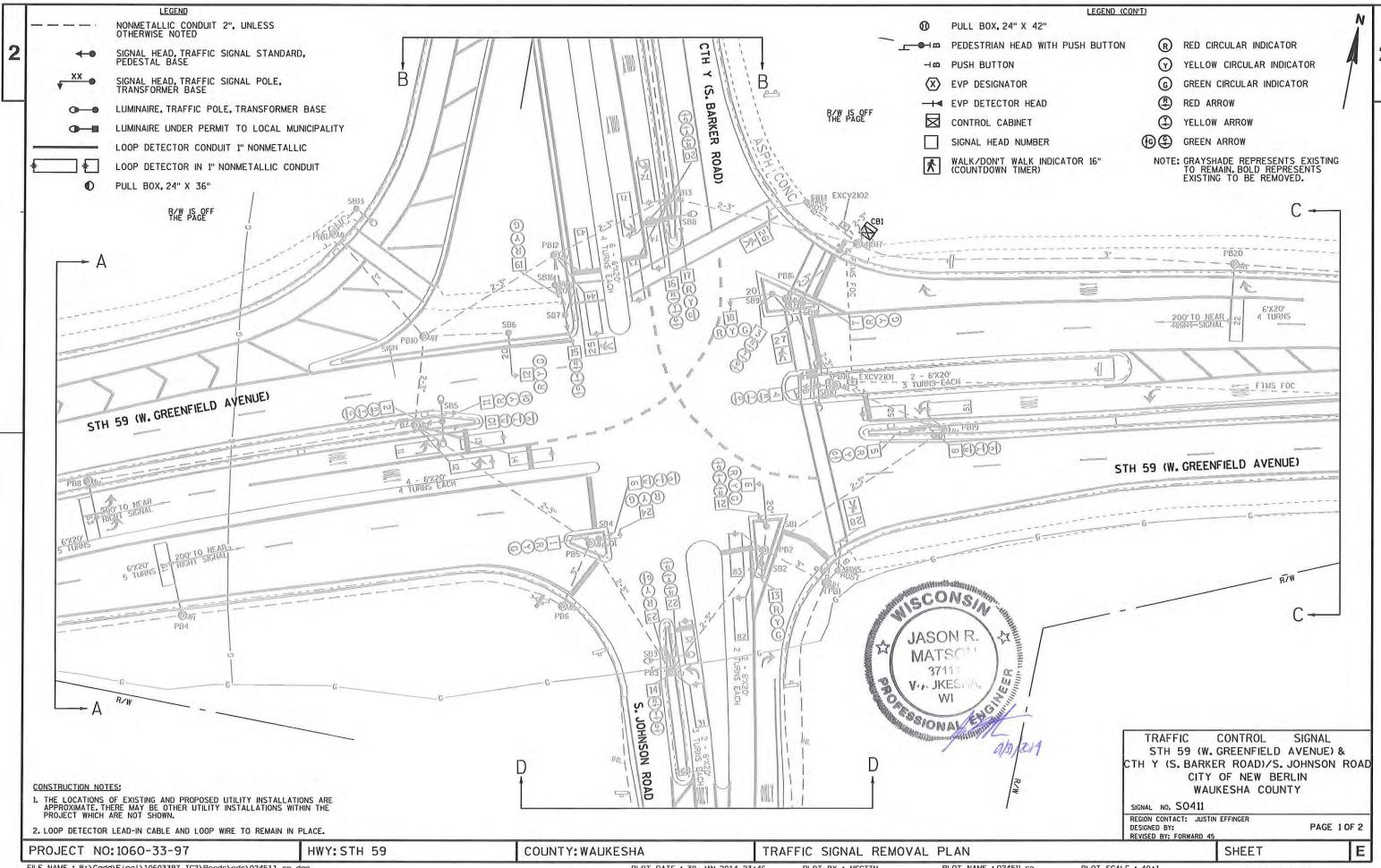
EXTEND DELAY

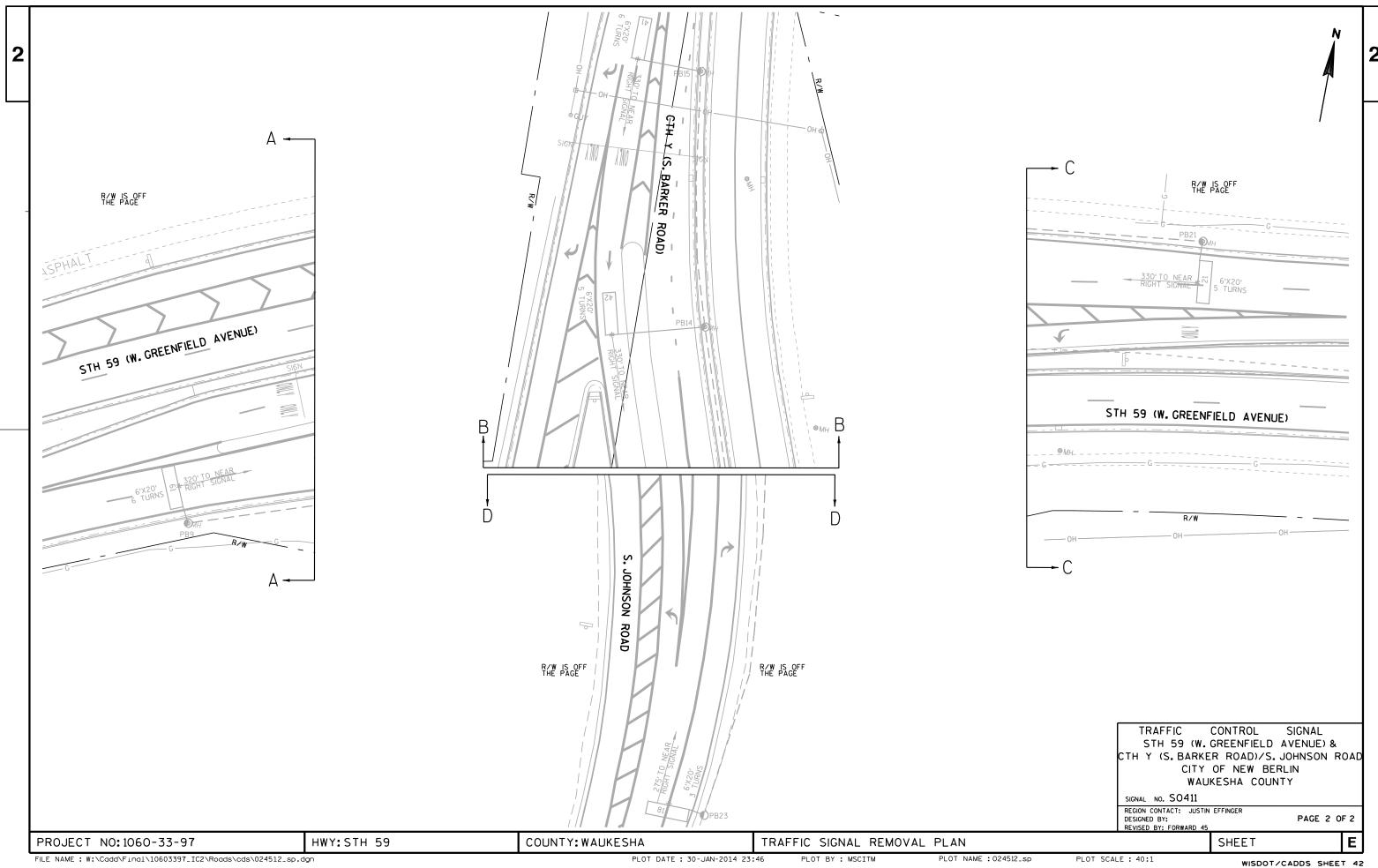
ASSIGNED PHASE OPERATION MODE SWITCH EXTEND DELAY

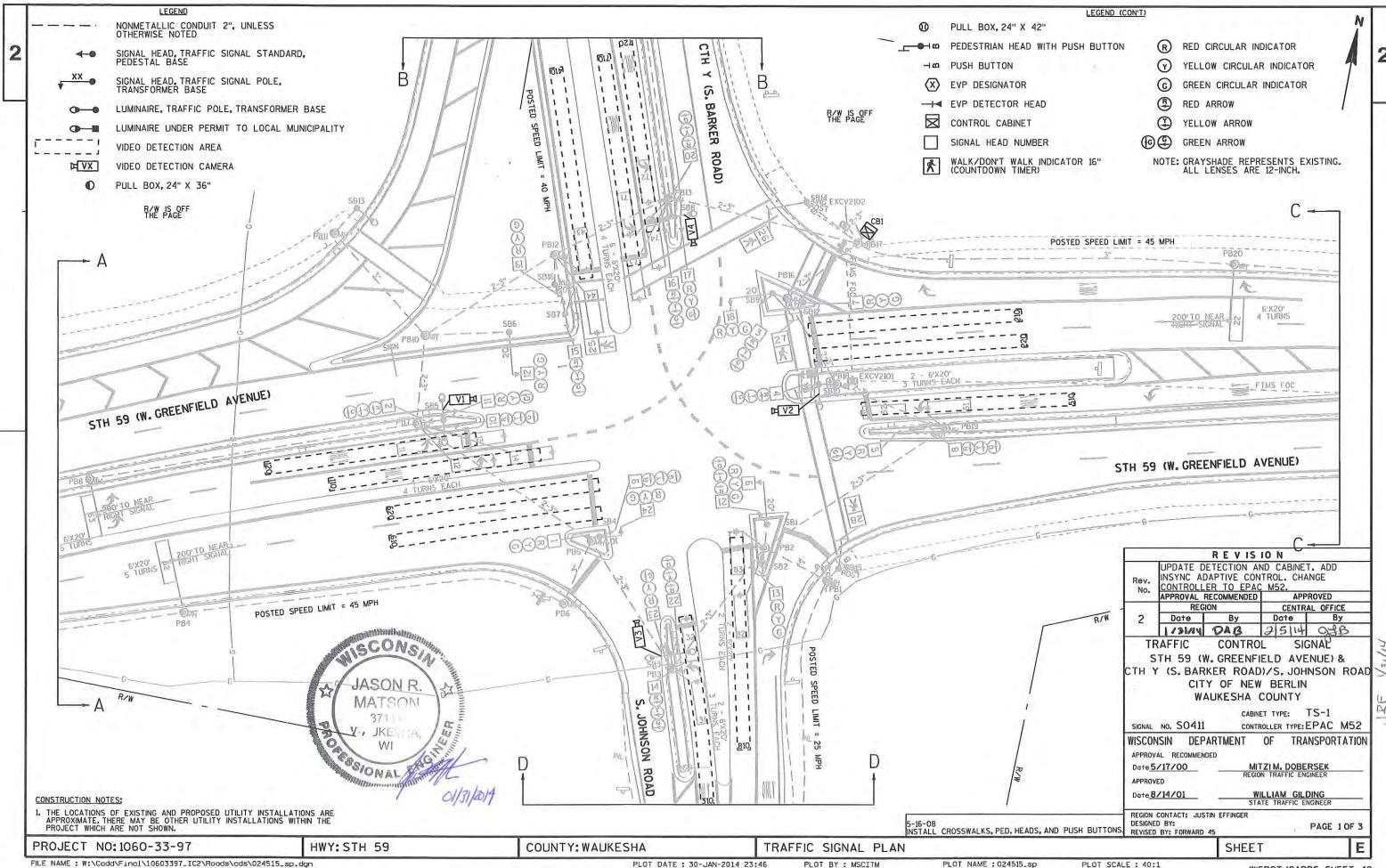
JRE

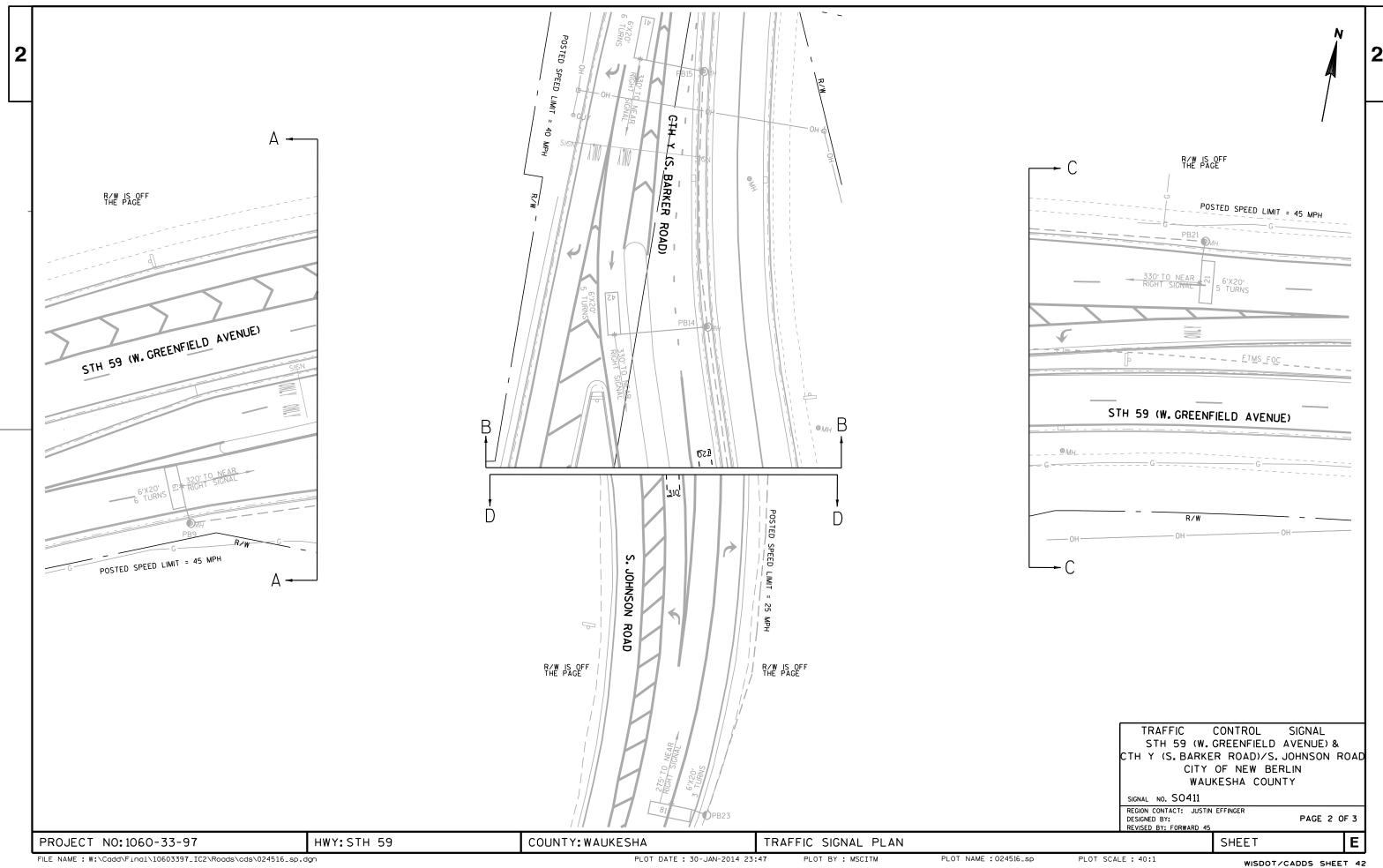
131/14











FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\024519_sp_ph.dgn

HWY: STH 59

PROJECT NO: 1060-33-97

PLOT DATE: 30-JAN-2014 23:47

COUNTY: WAUKESHA

SEQUENCE OF OPERATIONS

47 PLOT BY: MSCITM

PLOT NAME : 024519_sp_ph F

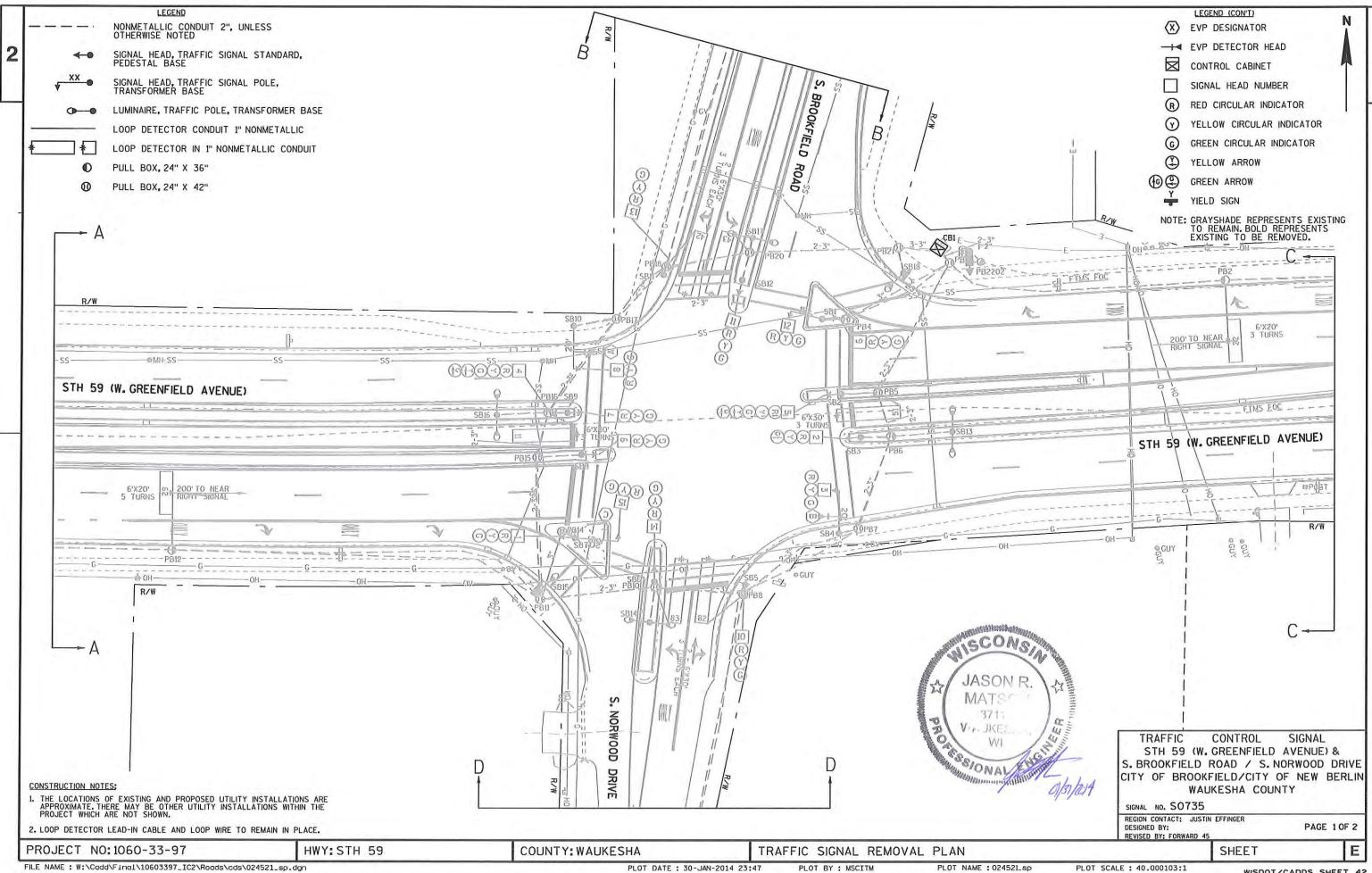
PLOT SCALE : 40:1

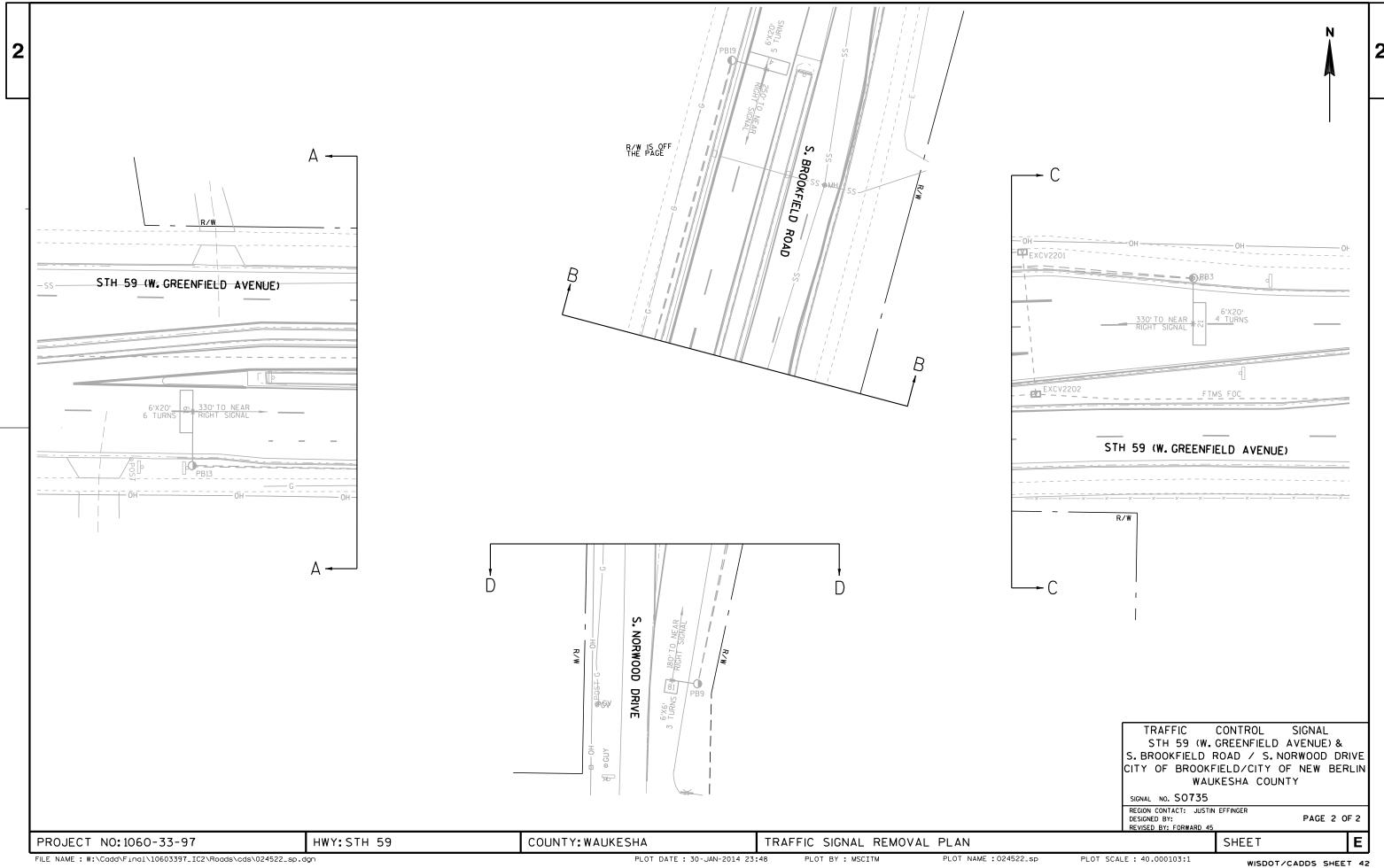
WISDOT/CADDS SHEET 42

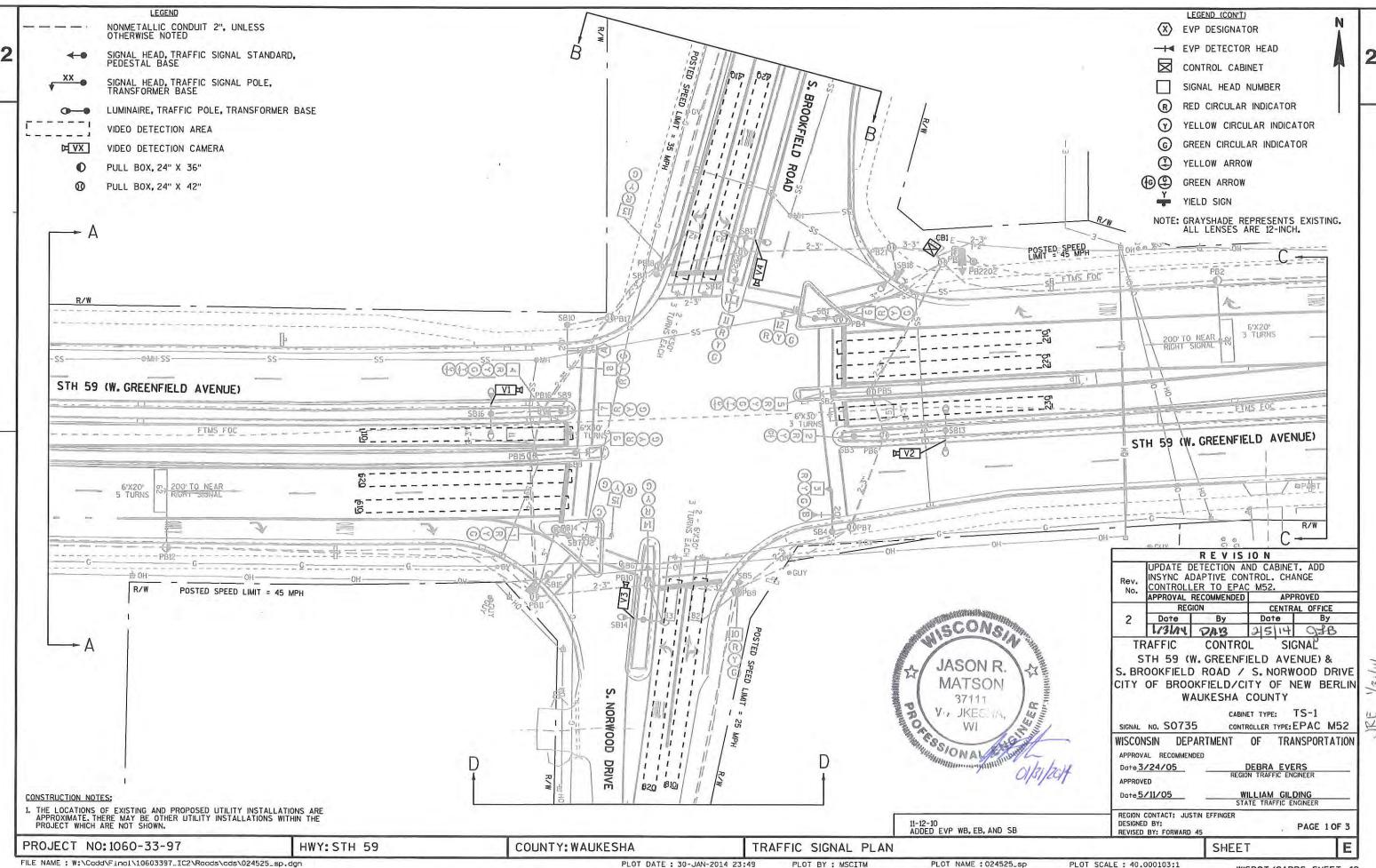
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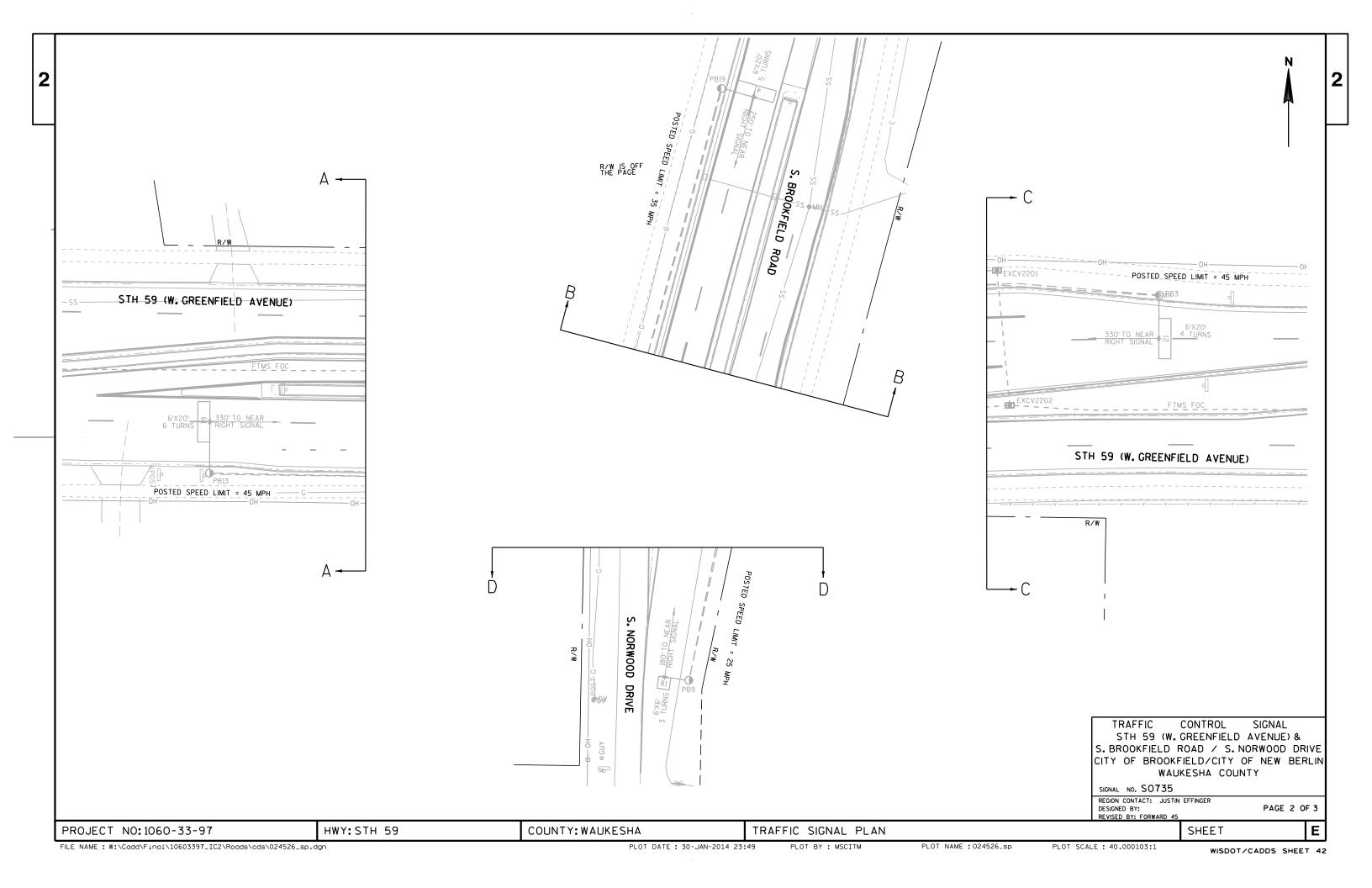
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	02	6,7,8,9	R	R	P		G	_	R		H	$\dashv!$		+	H	+	R		R	H	+	+	
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	07											Ti	i i									П	H
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	Ø2P																						
	04P											٦i											
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	Ø8P]¦											
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		HEAD NUMBERS	R/W	*	X		R/W	-X	*			∃i	R/W	**			R/I	y -	* *	H			
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	02	6,7,8,9					R	R	R								R	F	R				
	03																	1					
RING 2	01	13,14,15					R	R	R			1					R	F	R				
	05											-li											
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	02P	10,11,12		\vdash			R	K	R			-1				+	G	Y	R	\vdash	-		
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** CLE	08P	TO A PHASE IN (CONFLICT	WIT	'H THIS	S PHAS	SE ON (S	EE (CHAR	T 1)	В	ARR		cel	NONC	ONE	CHA			_	Р⊔	۸۶Ες	- IM
** CLE		TO A PHASE IN (CONFLICT	WIT	'H THIS	S PHAS	SE ON (S	EE (CHAR	Т 1)	В	ARR	PHA ON		NONC AL	CONC	CHA ICTINO ED TO URREN	PH	IASE		PH CONF PH	ASES LICT ASE 2,4,	ON

HWY: STH 59

06

07

08

10R 2

COUNTY: WAUKESHA

DETECTOR LOGIC

DETECTOR DETECTO NUMBER INPUT		DETECTOR OPERATION			1	4 2 4	i.			-	
		CALLS AND EXTENDS	CALLS	EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11	1	Х			1	1				6X30	3
21	2	X			2	2	7 1			6X20	4
22	2	X			2	2				6X20	3
41	3			X		4			X	6X20	5
42	4	X			4	4		X		6X30	3
43	5	х			4	4				6X30	3
51	FUTURE						DET			6X30	3
61	6	x			6	6				6X20	6
62	6	X			6	6				6X20	5
81	7			Х		8			х	6X6	6
82	8	X			8	8		Х		6X20	3
83	9	х			8	8				6X20	3
110		X			1	1					VIDEO
210		X			2	2					VIDEO
220		X			2	2					VIDEO
230		X			2	2					VIDEO
410		х			4	4		X			VIDEO
420		X			4	4					VIDEO
610		×			6	6					VIDEO
620		х		1 4	6	6					VIDEO
810		x			8	8		X			VIDEO
820		Х			8	8					VIDEO

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		х
2		6	MIN.	X
3				
4		8		X
5			- 1	
6		2	MIN.	X
7				
8		4		X

OVERLAPS

O.L. "A" O.L. "B"		
O.L. "B"	=	
O.L. "C" O.L. "D"	=	
O.L. "D"	=	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET IN SEPARATE DOT LIGHTING CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	10
RAILROAD	
EMERGENCY VEHICLE	X
3M	
TOMAR	
HARDWIRE	
GTT	X
LIFT BRIDGE	
OUEUE DETECTOR	1

TYPE OF INTERCONNECT/COMMUNICATION

NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	- 1
FIBER OPTIC (ETHERNET))
RADIO	

TYPE OF COORDINA	ATION	
NONE		
TBC		
TRAFFIC RESPONSIVE		
ADAPTIVE		X
*LOCATION OF MASTER CONTROLLER NO:	S-	
SIGNAL SYSTEM ":	SS	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	В	c
MOVEMENT	~		↓↑
PHASE	2+6	6+2	4+8

AFTER PREEMPTION SEQUENCE 2+6 OR 6+2, CONTROLLER SHALL RETURN TO PHASES 2+6. AFTER PREEMPTION SEQUENCE 4+8, CONTROLLER SHALL RETURN TO PHASES 4+8.

GENERAL NOTES:

- 1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
- 2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1AT LEFT.)
- 3. IF ANY OPPOSING THRU PHASES ARE TIMING CONCURRENTLY, THEY SHALL TERMINATE TOGETHER DUE TO PERMISSIVE LEFT TURN CONFLICT.

STH 59 (W. GREENFIELD AVENUE) & S. BROOKFIELD ROAD/S. NORWOOD DRIVE CITY OF NEW BERLIN WAUKESHA COUNTY

SIGNAL NO. SO735

CONTROLLER TYPE: EPAC

DATE 02/14

PAGE NO. 3 OF 3

SEQUENCE OF OPERATIONS

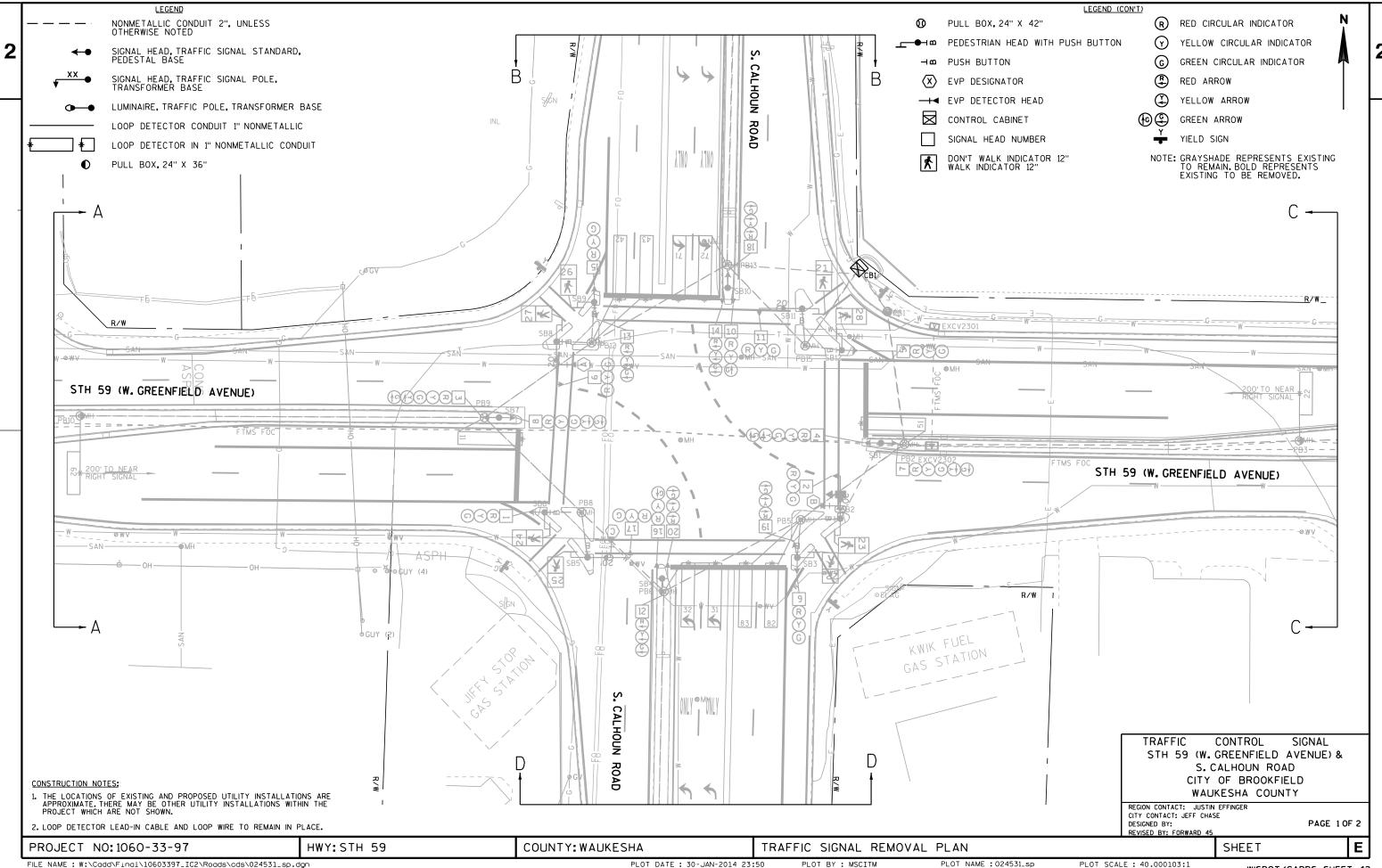
PLOT BY ; MSCITM

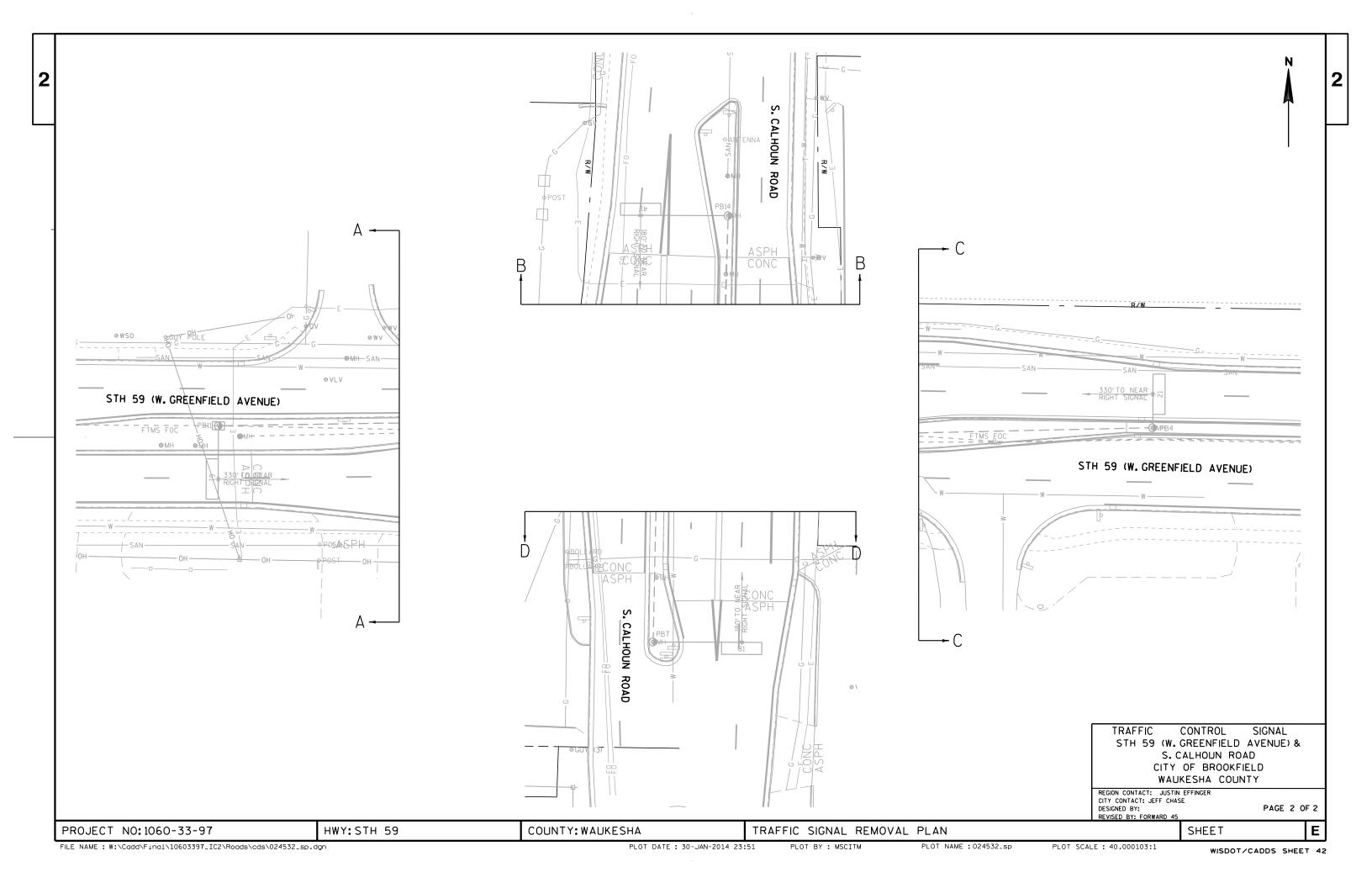
SHEET

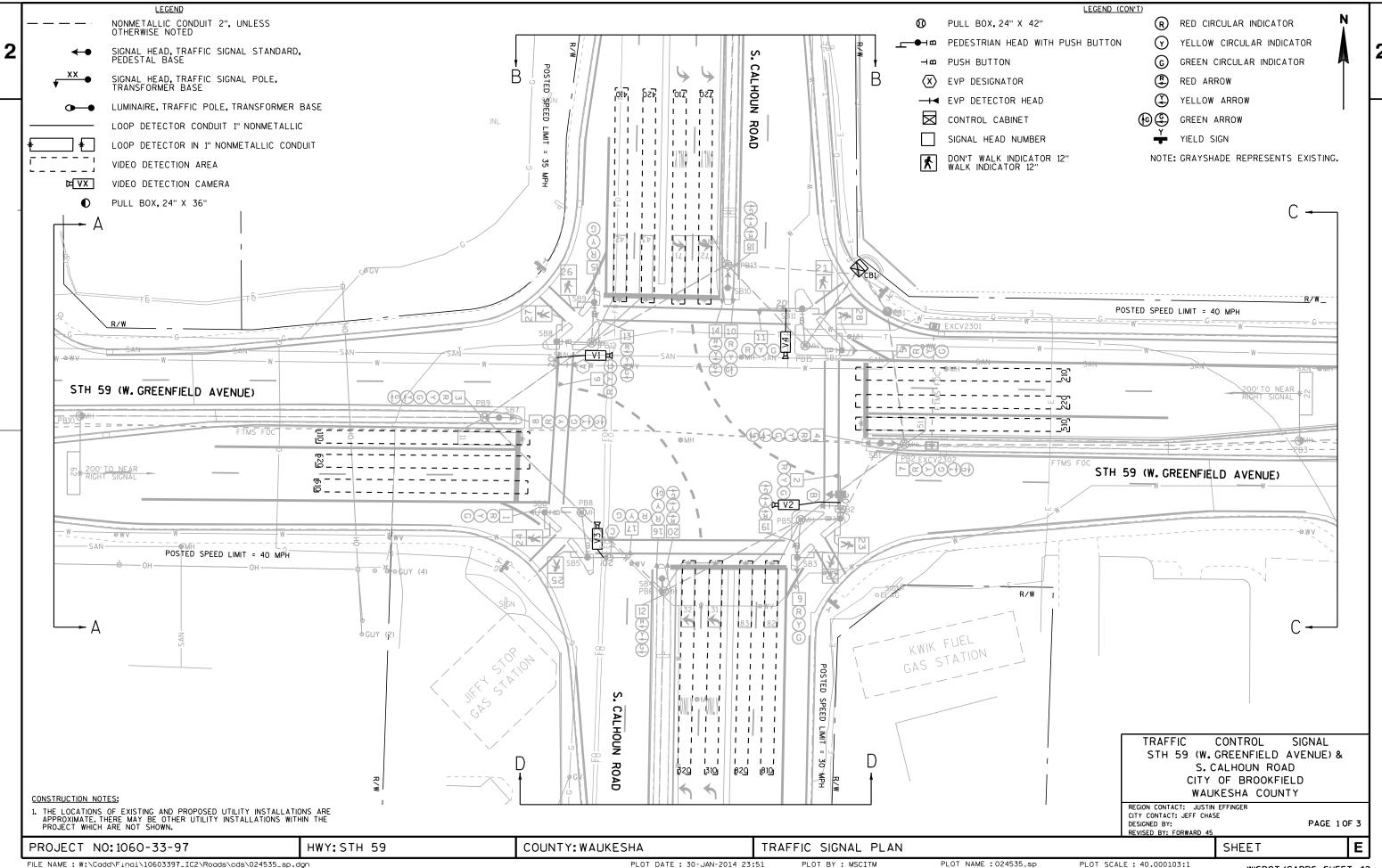
PROJECT NO: 1060-33-97

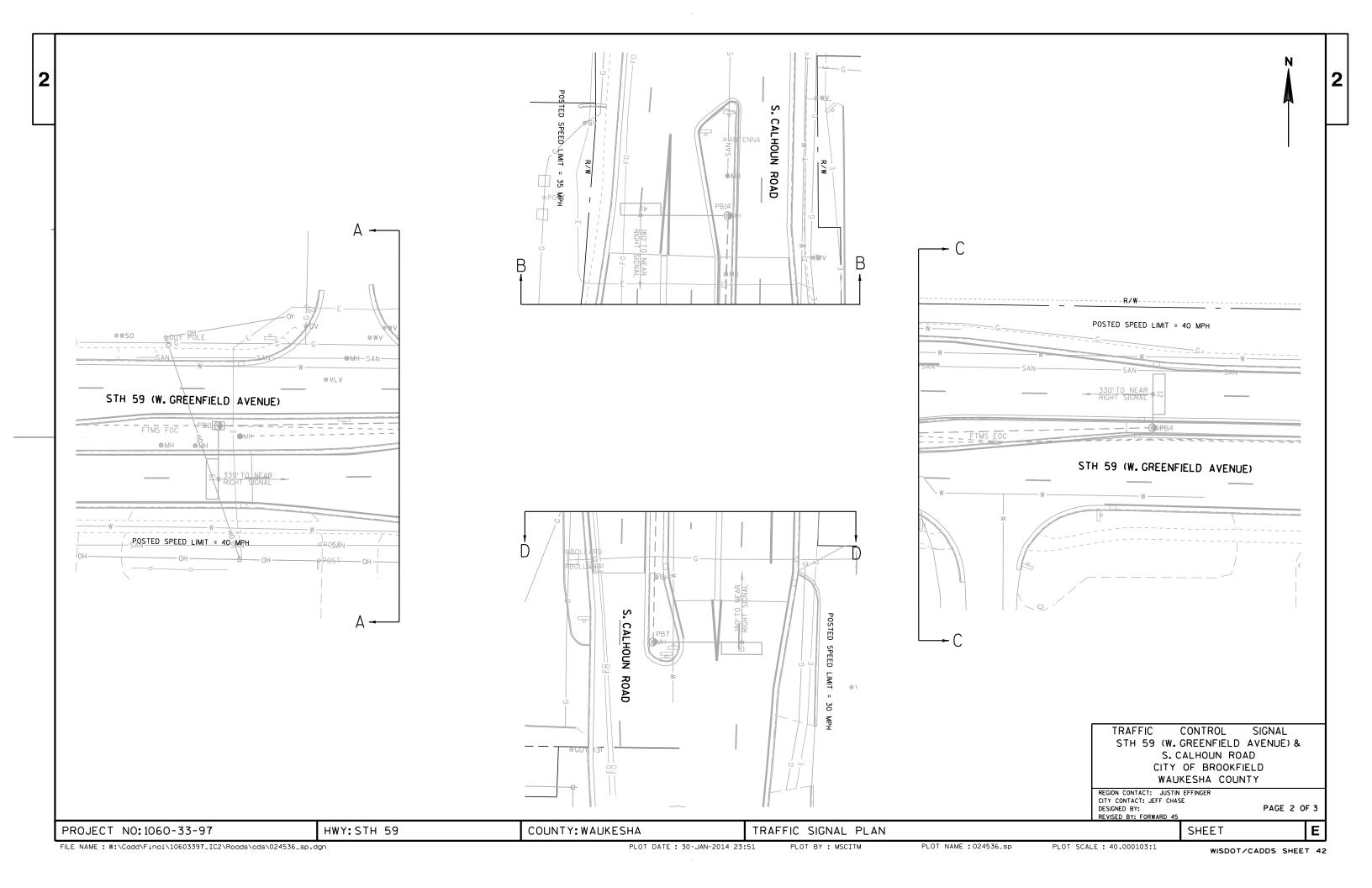
4,8

1,2,6



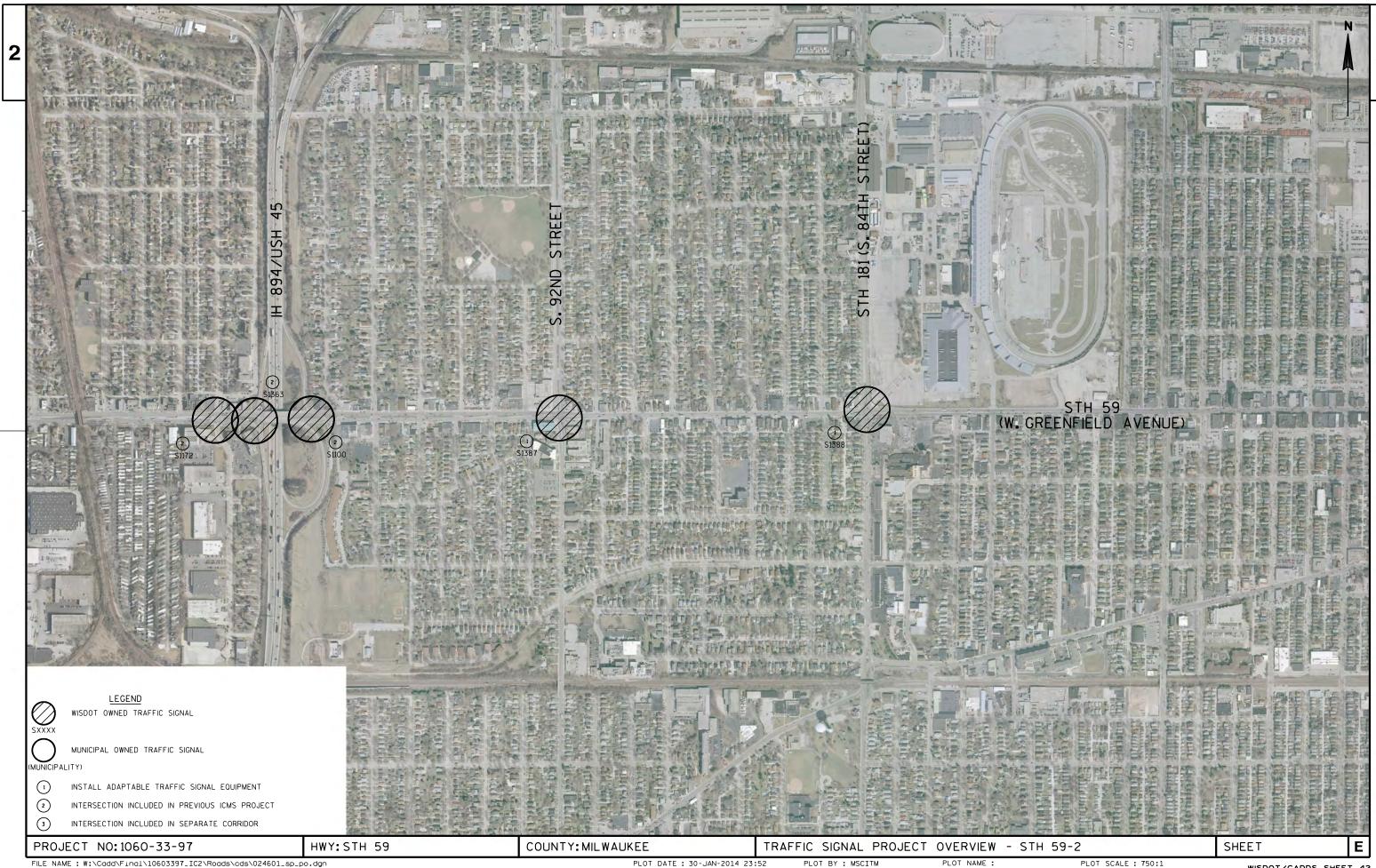


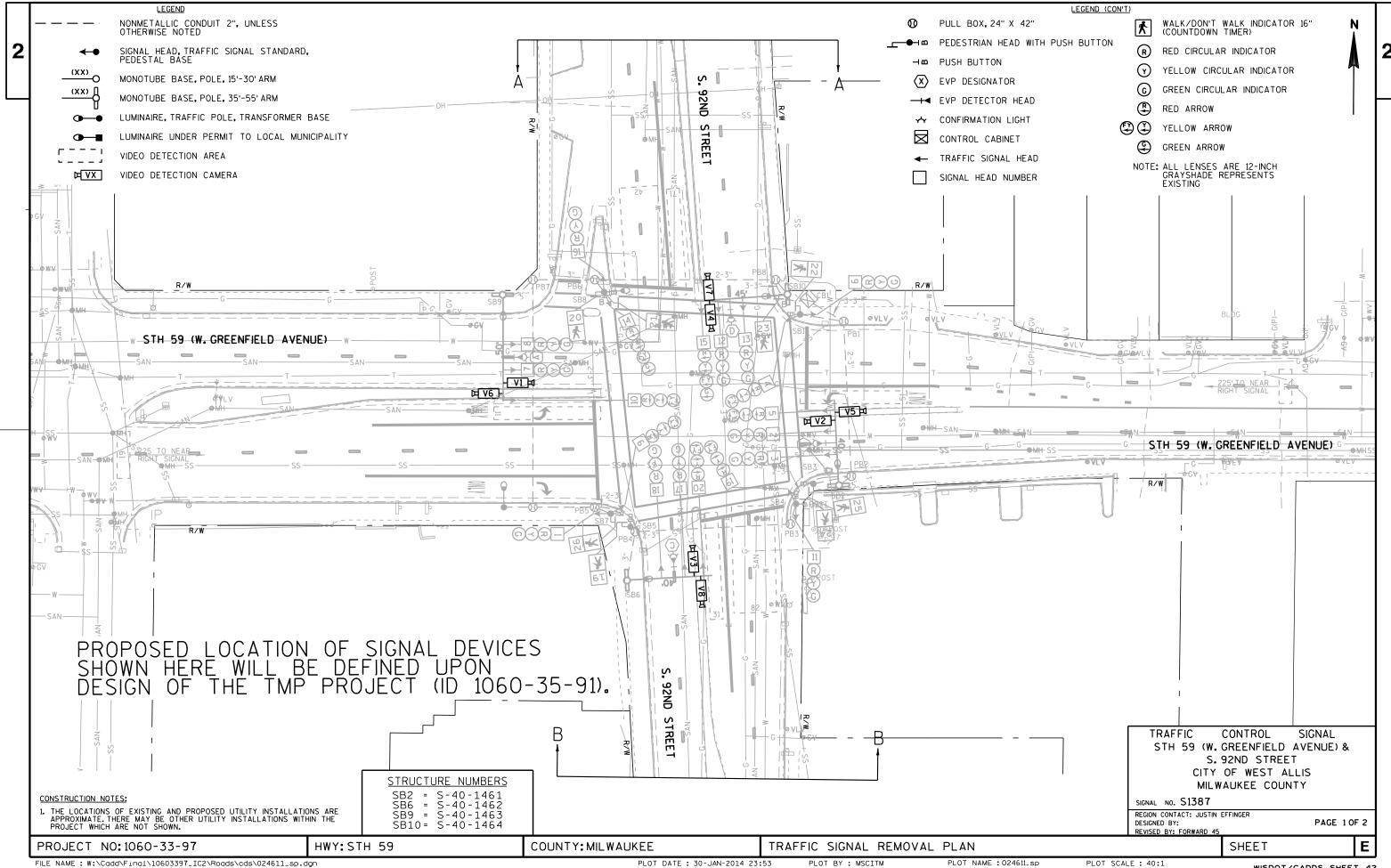




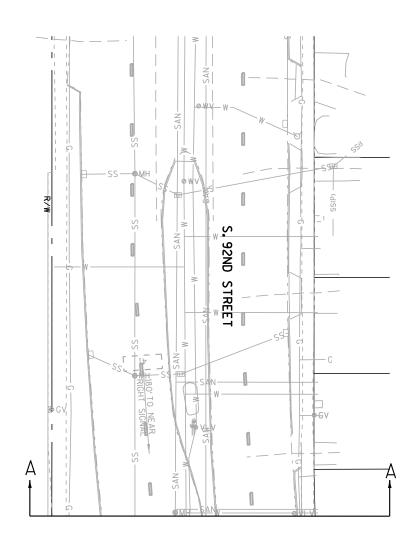
		DETECTOR LOGIC	CONTROLLER LOGIC
		DETECTOR OPERATION DETECTOR DETECTOR OPERATION DETECTOR DETECTOR CALLS EXTENDS PHASE PHASE DETECTOR CALLING EXTENSION SIZE NUMBER INPUT AND ONLY ONLY CALLED EXTENDED DISCONNECT DELAY STRETCH FYRENDS PHASE PHASE PHASE DETECTOR CALLING EXTENSION SIZE ONLY ONLY ONLY ONLY ONLY ONLY ONLY ONLY	OF NUMBER LOCKING ENTRY RECALL ACTIVE
HEAD NUMBERS NUMBERS	03	11 1 X 1 1 1 6X30 21 2 X 2 2 6X20 22 3 X 2 2 6X20 31 4 X 3 3 6X30 32 4 X 3 3 6X30 41 5 X 4 4 X 6X20 42 6 X 4 4 6X30 43 6 X 4 4 6X30 51 7 X 5 5 6X30 61 8 X 6 6 6 6X20 62 9 X 6 6 6 6X20	OF TURNS
Ø2P 27.28 D D D X D </th <th>D D D D D D D D D D D D D D D D D D D</th> <th>83 12 X 8 8 6 6X30</th> <th>O EXIST O EXIST O EXIST O EXIST TYPE OF LIGHTING</th>	D D D D D D D D D D D D D D D D D D D	83 12 X 8 8 6 6X30	O EXIST O EXIST O EXIST O EXIST TYPE OF LIGHTING
05 06	07 08 CLEAR TO R/W ** R	110 X 1 1 1 210 X 2 2 2 220 X 2 2 2 310 X 3 3 3 320 X 3 3 3 410 X 4 4 4 420 X 4 4 4 510 X 5 5 5 610 X 6 6 6 620 X 6 6 6	VIDEO
RING 2 04 15,16,17 R R R R R R R R R R R R R R R R R R R	R R R R R R R R R R R R R R R R R R R	710 X 7 7 720 X 7 7 810 X 8 8 820 X 8 8 TYPE OF INTERCONNECT/COMMUNICATION TYPE OF COORDINATION NONE	VIDEO VIDEO VIDEO VIDEO VIDEO VIDEO VIDEO VIDEO EMERGENCY VEHICLE PREEMPTION SEQUENCE EMERGENCY VEHICLE PREEMPTION SEQUENCE CHANNEL PREEMPTOR A B C D
Ø6P 23,24 D D D * D D Ø8P 21,22 D D D D D D D BARR		CLOSED LOOP TWISTED PAIR* FIBER OPTIC* RADIO TBC TRAFFIC RESPONSIVE ADAPTIVE X *LOCATION OF MASTER CONTROLLER NO: S- SIGNAL SYSTEM *: SS	MOVEMENT PHASE 2 AND 6 6 AND 2 4+7 3+8 AFTER PREEMPTION SEQUENCE 2 AND 6 OR 6 AND 2, CONTROLLER SHALL RETURN TO PHASES 2+6.
* WHEN CALLED, TIMED STEADY WALK, THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK ** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)	PHASE ON NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY PHASES IN CONFLICT WITH PHASE ON Ø1 5 OR 6 2,3,4,7,8 Ø2 5 OR 6 1,3,4,7,8 Ø3 7 OR 8 1,2,4,5,6 Ø4 7 OR 8 1,2,3,5,6 Ø5 1 OR 2 3,4,6,7,8 Ø6 1 OR 2 3,4,5,7,8 Ø7 3 OR 4 1,2,5,6,8 Ø8 3 OR 4 1,2,5,6,7	GENERAL NOTES: 1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED. 2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART LATLEET)	AFTER PREEMPTION SEQUENCE 4+7 OR 3+8, CONTROLLER SHALL RETURN TO PHASE 4+8. STH 59 (W. GREENFIELD AVENUE) & S. CALHOUN ROAD CITY OF BROOKFIELD WAUKESHA COUNTY IGNAL NO. ONTROLLER TYPE: EPAC
PROJECT NO:1060-33-97 HWY:STH 59	COUNTY: WAUKESHA		PAGE NO. 3 OF 3 SHEET
FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\024539_sp_ph.dgn			CALE : 40:1 WISDOT/CADDS SHEET 42

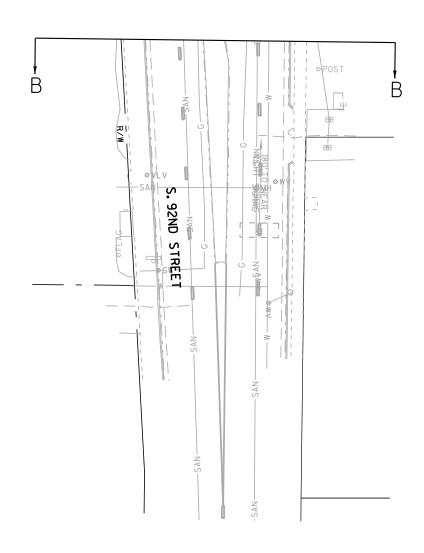
SEQUENCE OF OPERATION











PROPOSED LOCATION OF SIGNAL DEVICES SHOWN HERE WILL BE DEFINED UPON DESIGN OF THE TMP PROJECT (ID 1060-35-91).

TRAFFIC CONTROL SIGNAL
STH 59 (W. GREENFIELD AVENUE) &
S. 92ND STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S1387

REGION CONTACT: JUSTIN EFFINGER DESIGNED BY: REVISED BY: FORWARD 45

PAGE 2 OF 2

PROJECT NO: 1060-33-97

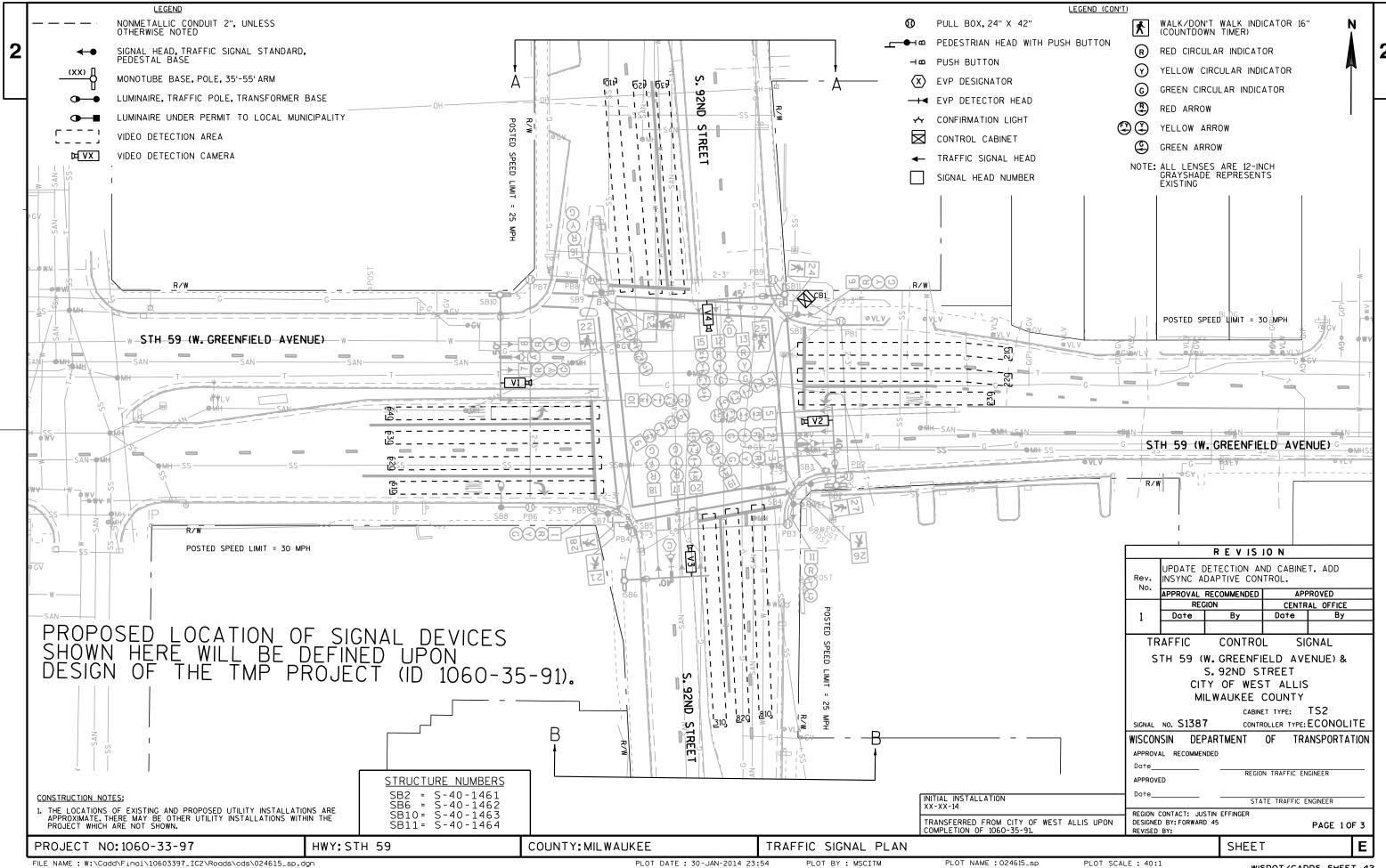
HWY:STH 59

COUNTY: MILWAUKEE

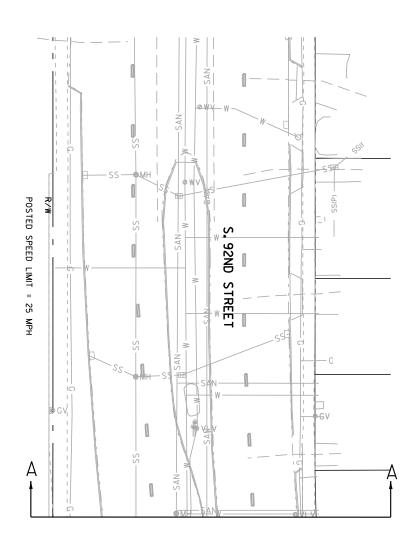
TRAFFIC SIGNAL REMOVAL PLAN

PLOT BY : MSCITM

PLOT NAME : 024612_sp







PROPOSED LOCATION OF SIGNAL DEVICES SHOWN HERE WILL BE DEFINED UPON DESIGN OF THE TMP PROJECT (ID 1060-35-91).

TRAFFIC CONTROL SIGNAL
STH 59 (W. GREENFIELD AVENUE) &
S. 92ND STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SHEET

SIGNAL NO. S1387

REGION CONTACT: JUSTIN EFFINGER DESIGNED BY: FORWARD 45 REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1060-33-97

HWY:STH 59

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

55 PLOT BY: MSCITM

PLOT NAME: 024616_sp

PLOT SCALE: 40:1

WISDOT/CADDS SHEET 42

HEAD NUMBERS

6,7,8

14,15

16,17,18

1,2,3

11,12,13

23,24

21,22

27,28

25,26 4,5

> 14,15 9,10

19,20

210

2

230

2

Χ

410

4

Χ

430

4

Χ

620

6

Χ

DETECTOR INPUT

CALLED PHASE

USE ADDED INITIAL CROSS SWITCH PHASE

CALL OPTION DELAY TIME

PLAN LOOP DETECTOR *(S)

R

01 02

Ø3

04

05 06

07 Ø8

Ø2P

Ø4P

Ø6P

Ø8P

OLF

OLH

RING 1	NOT USED Ø1	0.L. E 5 002	·	Ø3	04
			- - -	— . — . — .	
RING 2	NOT USED	O.L. G	 	NOT USED	O.L. H
	Ø 5	Ø6	¦	Ø 7	Ø8

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2		6	MIN.	×
3		8		х
4		8		х
5				
6		2	MIN.	х
7				
8		4	·	х

TYPE OF INTERCONNECT/COMMUNICATION NONE CLOSED LOOP TWISTED PAIR* FIBER OPTIC* FIBER OPTIC (ETHERNET) RADIO

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	×
*LOCATION OF MASTER	
CONTROLLER NO: S-	
SIGNAL SYSTEM *: SS	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	х
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	Х
GTT	Х
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

640

Χ

820

8

Χ

EXTEND OPTION	X	X	X	Х	X	X	X	
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								
						-		
DETECTOR INPUT								
PLAN LOOP DETECTOR *(S)	220	310	420	610	630	810		
CALLED PHASE	2	3	4	6	6	8		
CALL OPTION	Х	Х	Х	Х	Х	Х		
DELAY TIME				Х		Х		
EXTEND OPTION	Х	Х	Х	Х	Х	Х		
EXTEND TIME								

				DETECTOR INPUT
				PLAN LOOP DETECTOR *(S)
				CALLED PHASE
				CALL OPTION
				DELAY TIME
				EXTEND OPTION
				EXTEND TIME
				USE ADDED INITIAL
				CROSS SWITCH PHASE

				DETECTOR INPUT
				PLAN LOOP DETECTOR *(S)
				CALLED PHASE
				CALL OPTION
				DELAY TIME
				EXTEND OPTION
				EXTEND TIME
				USE ADDED INITIAL
				CROSS SWITCH PHASE
				•

EMERGENCY VEHICLE PREEMPTION SEQUENCE

	CHANNEL						
EMERGENCY VEHICLE PREEMPTOR	A	В	С	D			
MOVEMENT	⁴	ا ادنا امنا	¥	1			
PHASE	2+6	6+2 4+8		3+8			

AFTER PREEMPTION SEQUENCE 2+6 OR 6+2, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+8 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

STH 59 (W. GREENFIELD AVENUE) & S. 92ND STREET CITY OF WEST ALLIS MILWAUKEE COUNTY

SIGNAL NO. S1387 CABINET TYPE: TS2 CONTROLLER TYPE: ECONOLITE

02/14

SHEET

DATE

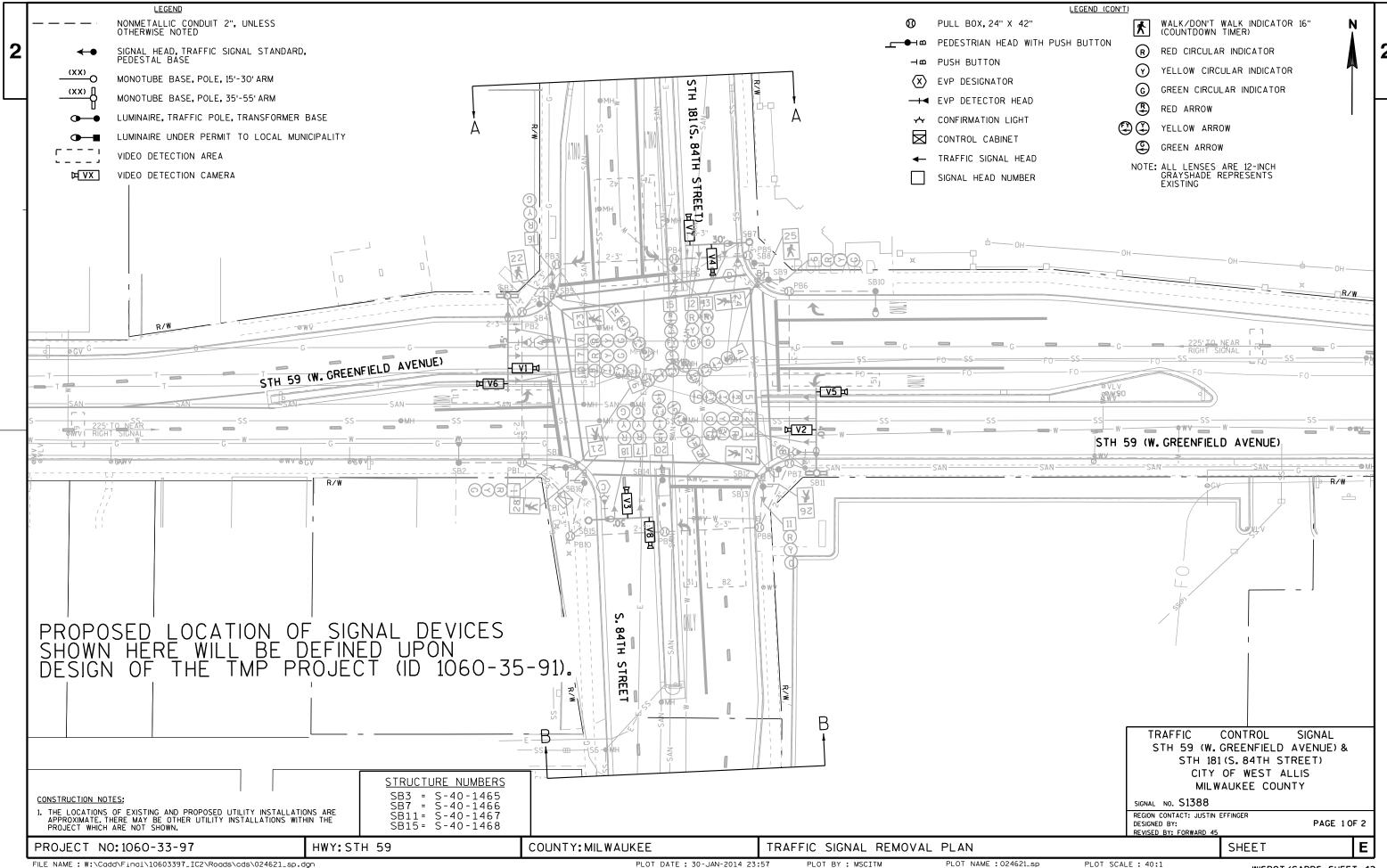
PAGE NO. 3 OF 3

PROJECT NO: 1060-33-97 HWY:STH 59 COUNTY: MILWAUKEE

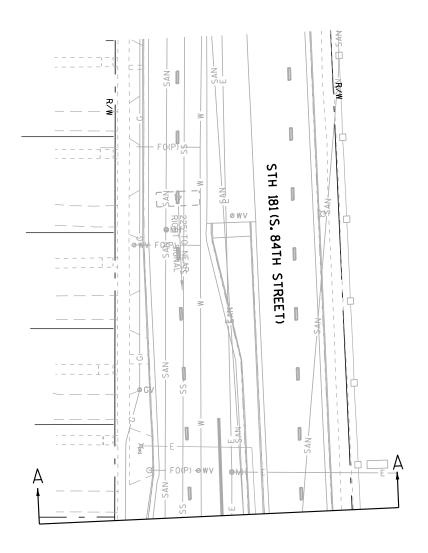
SEQUENCE OF OPERATIONS

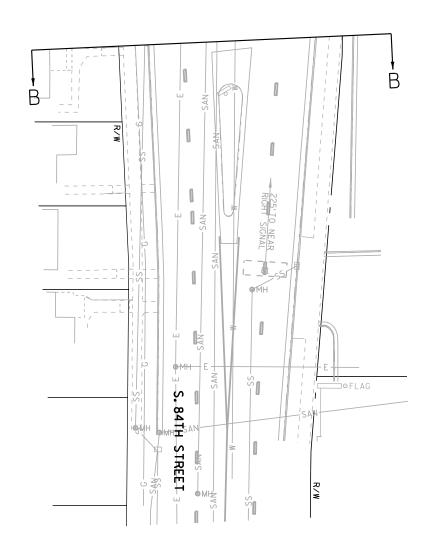
PLOT BY : MSCITM

PLOT NAME: 024619_sp_ph









PROPOSED LOCATION OF SIGNAL DEVICES SHOWN HERE WILL BE DEFINED UPON DESIGN OF THE TMP PROJECT (ID 1060-35-91).

PLOT DATE: 30-JAN-2014 23:58

TRAFFIC CONTROL SIGNAL
STH 59 (W. GREENFIELD AVENUE) &
STH 181 (S. 84TH STREET)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S1388

PLOT SCALE: 40:1

REGION CONTACT: JUSTIN EFFINGER DESIGNED BY: REVISED BY: FORWARD 45

PAGE 2 OF 2

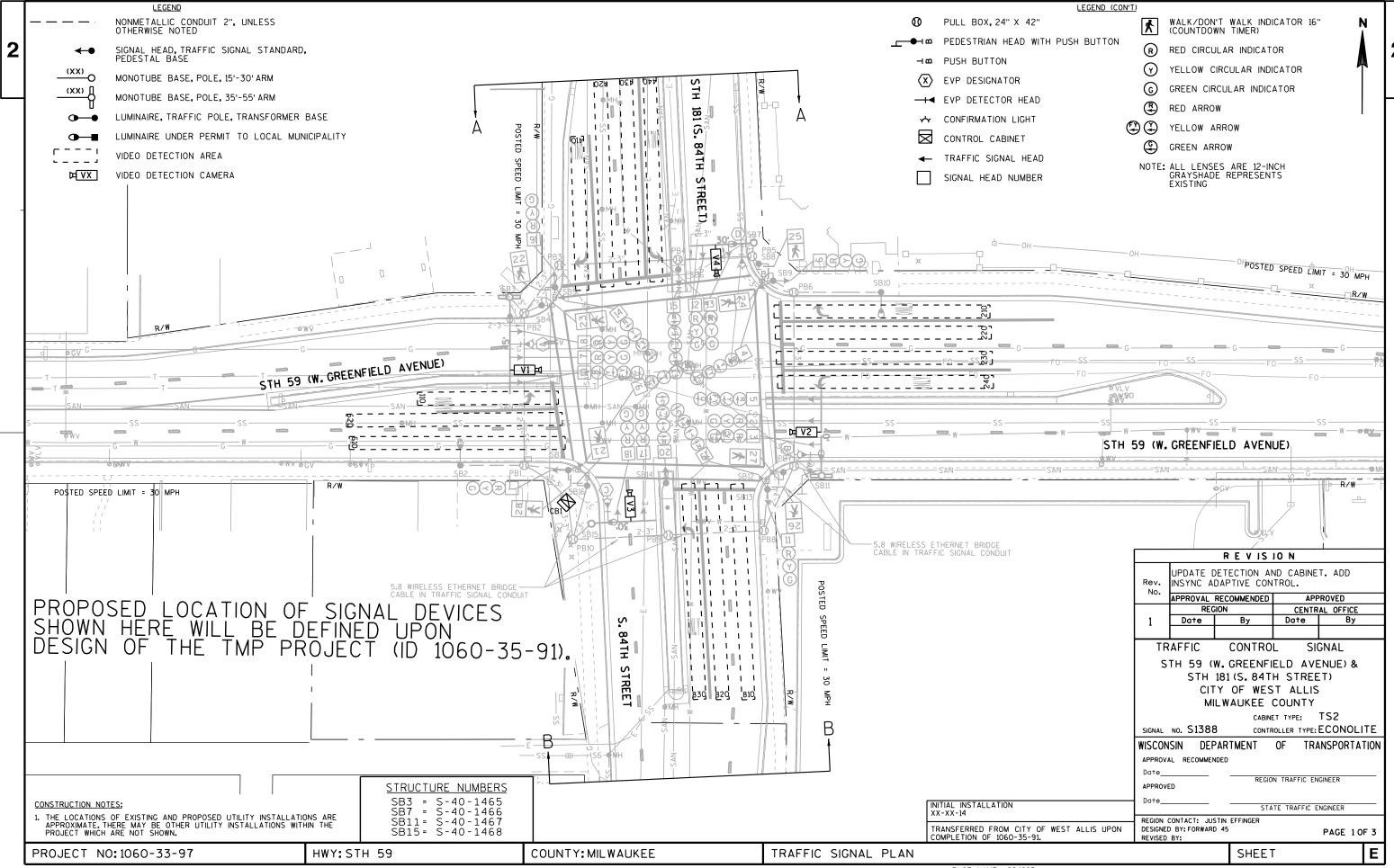
PROJECT NO: 1060-33-97

HWY:STH 59

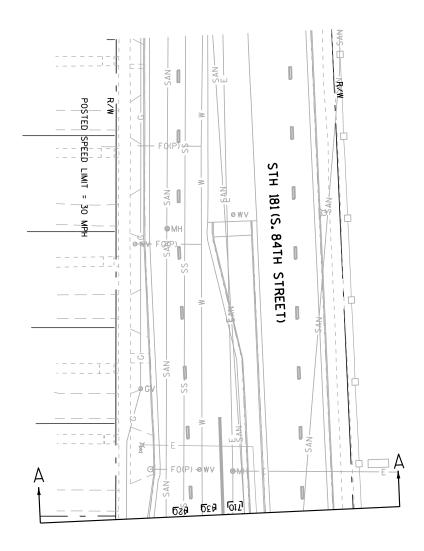
COUNTY: MILWAUKEE

TRAFFIC SIGNAL REMOVAL PLAN

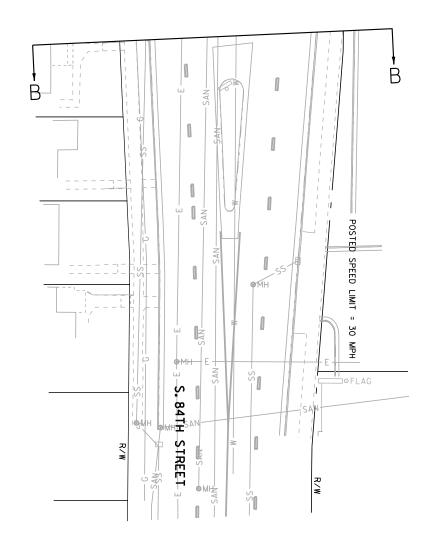
PLOT NAME : 024622_sp







PROPOSED LOCATION OF SIGNAL DEVICES SHOWN HERE WILL BE DEFINED UPON DESIGN OF THE TMP PROJECT (ID 1060-35-91).



TRAFFIC CONTROL SIGNAL
STH 59 (W. GREENFIELD AVENUE) &
STH 181 (S. 84TH STREET)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S1388

REGION CONTACT: JUSTIN EFFINGER DESIGNED BY: FORWARD 45 REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1060-33-97

HWY:STH 59

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

PLOT BY: MSCITM

PLOT NAME : 024626_sp

HEAD NUMBERS

4,5

6,7,8

16,17,18

1,2,3

11,12,13

23,24

21,22

27,28

25**,**26

14**,**15 9**,**10

19,20

DETECTOR INPUT

01

02

Ø3 Ø4

Ø5 Ø6

Ø7 Ø8

Ø2P

Ø4P

Ø6P

Ø8P

OLF

OLH

RING 1	Ø1	O.L. E 5		NOT USED 03	04
RING 2	NOT USED Ø5	0.L. G		NOT USED	0.L. H
	9 3		 BARRIER	<i>W</i> 7	00

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		х
2		6	MIN.	х
3				
4		8		х
5				
6		2	MIN.	х
7				
8		4		х

TYPE OF INTERCONNECT/COMMUNICATION

NONE
CLOSED LOOP
TWISTED PAIR*
FIBER OPTIC*
FIBER OPTIC (ETHERNET) X
RADIO

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	Х
*LOCATION OF MASTER	
CONTROLLER NO: S-	
SIGNAL SYSTEM #: SS	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	х
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	Х
GTT	х
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

PLAN LOOP DETECTOR *(S)	110	220	240	420	440	620	820	
CALLED PHASE	1	2	2	4	4	6	8	
CALL OPTION	X	Х	Х	Х	Х	Х	Х	
DELAY TIME								
EXTEND OPTION	Х	Х	Х	Х	Х	Х	Х	
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE	6							
DETECTOR INPUT								
PLAN LOOP DETECTOR *(S)	210	230	410	430	610	810	830	

DETECTOR INPUT								
PLAN LOOP DETECTOR #(S)	210	230	410	430	610	810	830	
CALLED PHASE	2	2	4	4	6	8	8	
CALL OPTION	Х	X	Х	X	Х	Х	Х	
DELAY TIME	Х		Х		Х	X		
EXTEND OPTION	Х	X	X	X	Х	X	X	
EXTEND TIME								
USE ADDED INITIAL	·	·						
CROSS SWITCH PHASE		·						

				DETECTOR INPUT
				PLAN LOOP DETECTOR *(S)
				CALLED PHASE
				CALL OPTION
				DELAY TIME
				EXTEND OPTION
				EXTEND TIME
				USE ADDED INITIAL
				CROSS SWITCH PHASE
				•

				DETECTOR INPUT
				PLAN LOOP DETECTOR #(S)
				CALLED PHASE
				CALL OPTION
				DELAY TIME
				EXTEND OPTION
				EXTEND TIME
				USE ADDED INITIAL
				CROSS SWITCH PHASE
				1

EMERGENCY VEHICLE PREEMPTION SEQUENCE

	CHANNEL							
EMERGENCY VEHICLE PREEMPTOR	A	В	С	D				
MOVEMENT	¥ ¥		¥	¥				
PHASE	2+6	6+1	4+8	8+4				

AFTER PREEMPTION SEQUENCE 2+6 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

STH 59 (W. GREENFIELD AVENUE) &
STH 181 (S. 84 STREET)
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S1388 CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 02/14

PAGE NO. 3 OF 3

PROJECT NO: 1060-33-97

HWY:STH 59

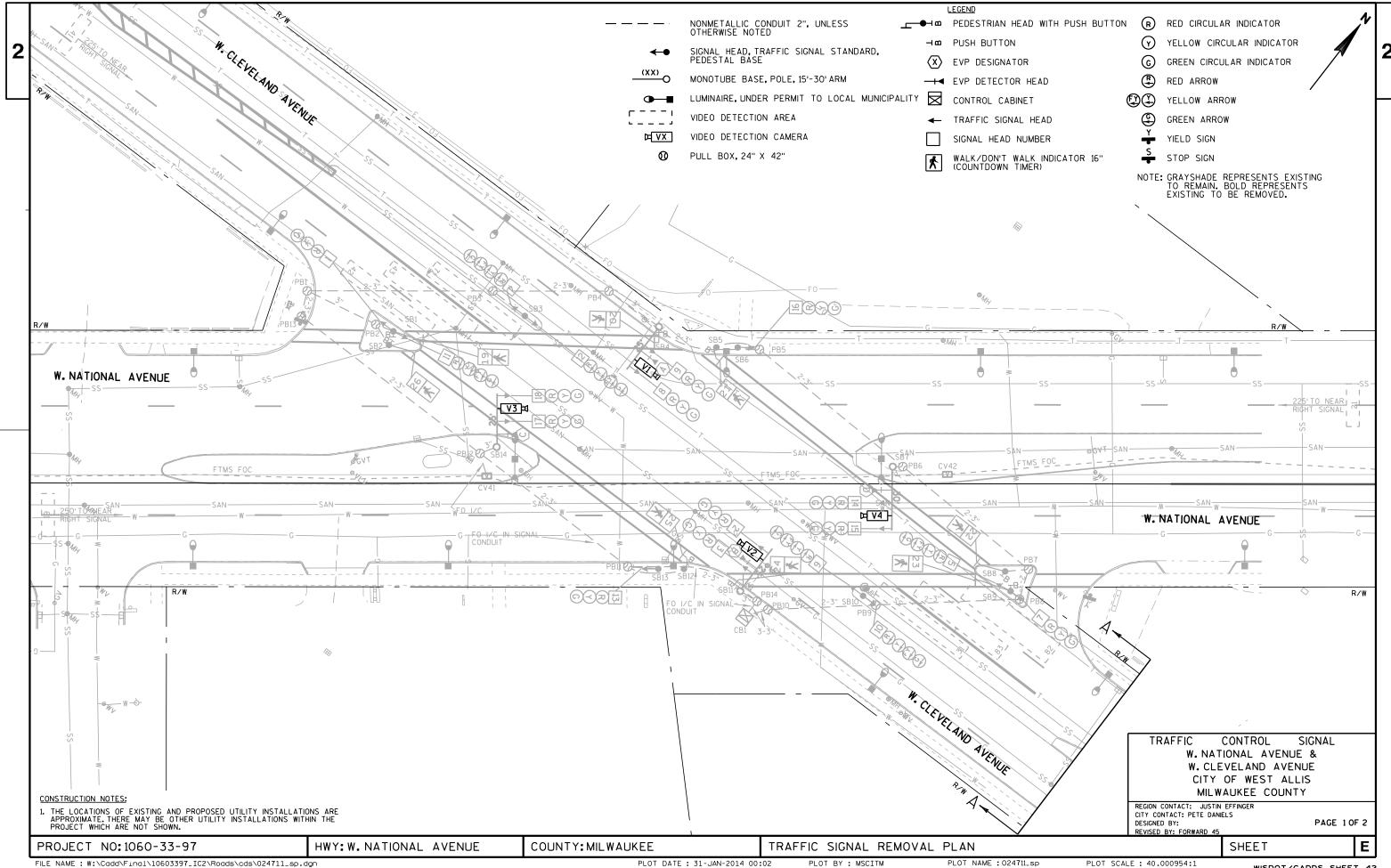
COUNTY: MILWAUKEE

SEQUENCE OF OPERATIONS

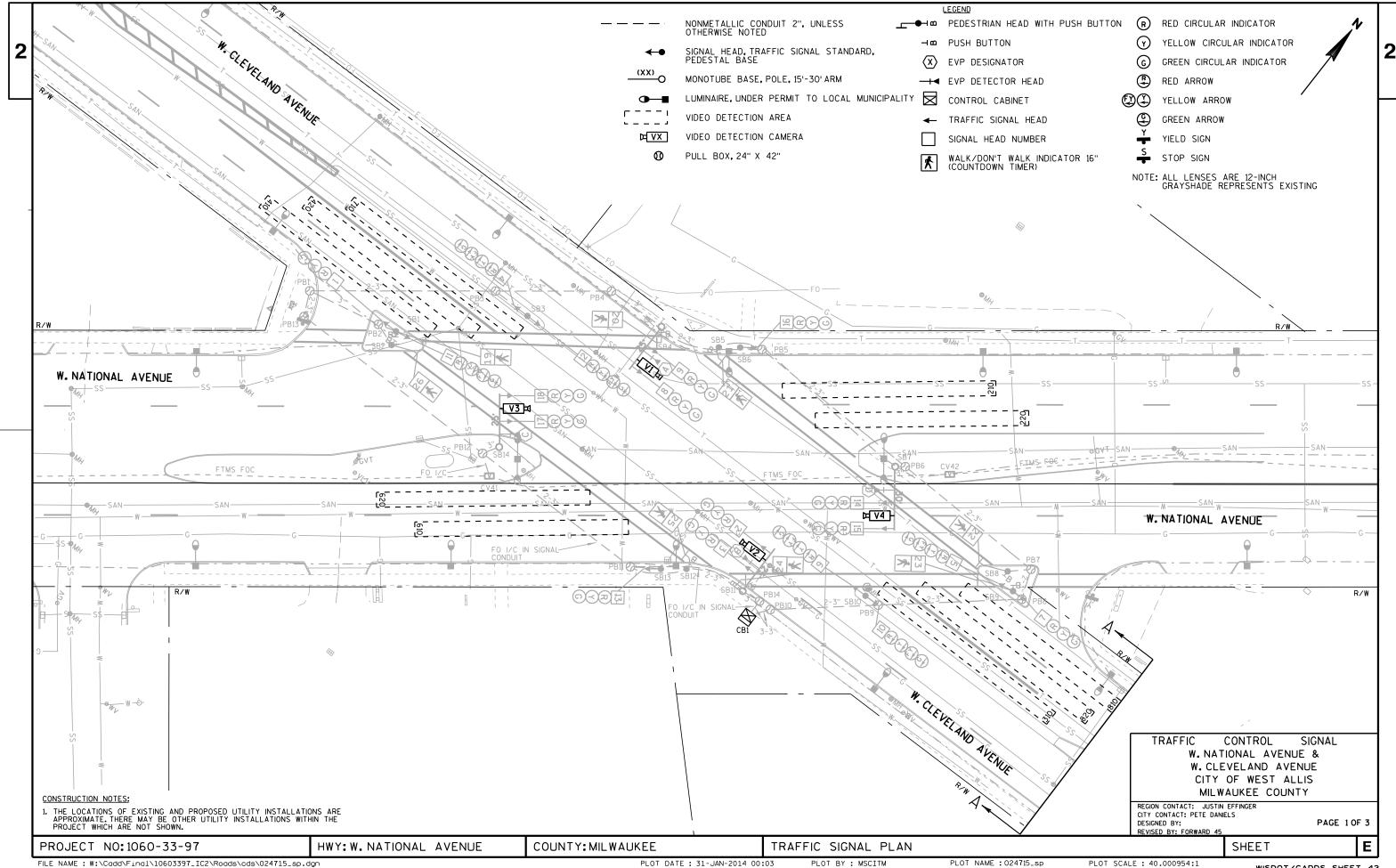
1 PLOT BY: MSCITM

PLOT NAME : 024629_sp_ph





TRAFFIC CONTROL SIGNAL W. NATIONAL AVENUE & W. CLEVELAND AVENUE CITY OF WEST ALLIS MILWAUKEE COUNTY REGION CONTACT: JUSTIN EFFINGER CITY CONTACT: PETE DANIELS DESIGNED BY: REVISED BY: FORWARD 45 PAGE 2 OF 2 PROJECT NO: 1060-33-97 HWY: W. NATIONAL AVENUE COUNTY: MILWAUKEE TRAFFIC SIGNAL REMOVAL PLAN SHEET PLOT DATE: 31-JAN-2014 00:03 FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\024712_sp.dgn PLOT BY : MSCITM PLOT NAME: 024712_sp PLOT SCALE: 40.000954:1



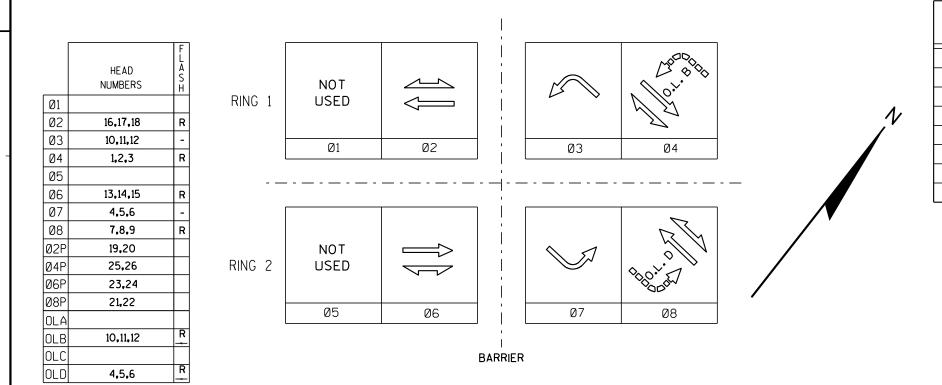
W. CLEVELAND AVENUE TRAFFIC CONTROL SIGNAL W. NATIONAL AVENUE & W. CLEVELAND AVENUE CITY OF WEST ALLIS MILWAUKEE COUNTY REGION CONTACT: JUSTIN EFFINGER CITY CONTACT: PETE DANIELS DESIGNED BY: REVISED BY: FORWARD 45 PAGE 2 OF 3 PROJECT NO: 1060-33-97 HWY: W. NATIONAL AVENUE COUNTY: MILWAUKEE TRAFFIC SIGNAL PLAN SHEET PLOT NAME: 024716_sp PLOT SCALE: 40.000954:1

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\024716_sp.dgn

PLOT DATE: 31-JAN-2014 00:03

PLOT BY : MSCITM

CONTROLLER LOGIC



PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2		6	MIN	×
3		8		×
4		8		×
5				
6		2	MIN	×
7		4		×
8		4		×

TYPE OF INTERCONNECT/COMMUNICATION					
NONE					
CLOSED LOOP					
TWISTED PAIR*					
FIBER OPTIC*					
FIBER OPTIC (ETHERNET)	X				
RADIO					

TYPE OF COORDINA	TION	
NONE		
TBC		
TRAFFIC RESPONSIVE		
ADAPTIVE		X
*LOCATION OF MASTER		
CONTROLLER NO:	S-	
SIGNAL SYSTEM *:	SS	

TYPE OF LIGHTING	
BY OTHER AGENCY	х
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
HONE	_
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

SWITCH		8					
EXTEND							
DELAY					Х		
DETECTOR INPUT							
PLAN LOOP DETECTOR *(S)	220	410	610	710	820		
ASSIGNED PHASE	2	4	6	7	8		
OPERATION MODE	VEH	VEH	VEH	VEH	VEH		
SWITCH				4			
EXTEND							

							DETECTOR INPUT
							PLAN LOOP DETECTOR *(S
							ASSIGNED PHASE
							OPERATION MODE
							SWITCH
							EXTEND
							DELAY
 •	•	•	•	•	•	•	•

				DETECTOR INPUT
				PLAN LOOP DETECTOR *(S)
				ASSIGNED PHASE
				OPERATION MODE
				SWITCH
				EXTEND
				DELAY

EMERGENCY VEHICLE PREEMPTION SEQUENCE

	CHANNEL						
EMERGENCY VEHICLE PREEMPTOR	A	В	С	D			
MOVEMENT		E.,	← →	← →			
PHASE	3+8	4+7	6+2	2+6			

AFTER PREEMPTION SEQUENCE 2+6 OR 6+2, CONTROLLER SHALL RETURN TO PHASES 2+6. AFTER PREEMPTION SEQUENCE 3+8 OR 4+7, CONTROLLER SHALL RETURN TO PHASE 4+8.

> W. NATIONAL AVENUE & W. CLEVELAND AVENUE CITY OF WEST ALLIS MILWAUKEE COUNTY

SIGNAL	NO.	CABINET TYPE:	TS2
		CONTROLLER TYPE:	EPAC
DATE	02/14	PAGE NO.	3 OF 3

SHEET

PROJECT NO: 1060-33-97 HWY: W. NATIONAL AVENUE

COUNTY: MILWAUKEE

SEQUENCE OF OPERATIONS

PLOT NAME: 024719_sp_ph

WISDOT/CADDS SHEET 42

DETECTOR INPUT PLAN LOOP DETECTOR *(S)

ASSIGNED PHASE

OPERATION MODE

210

2

VEH

310

3

VEH

420

4

VEH

620

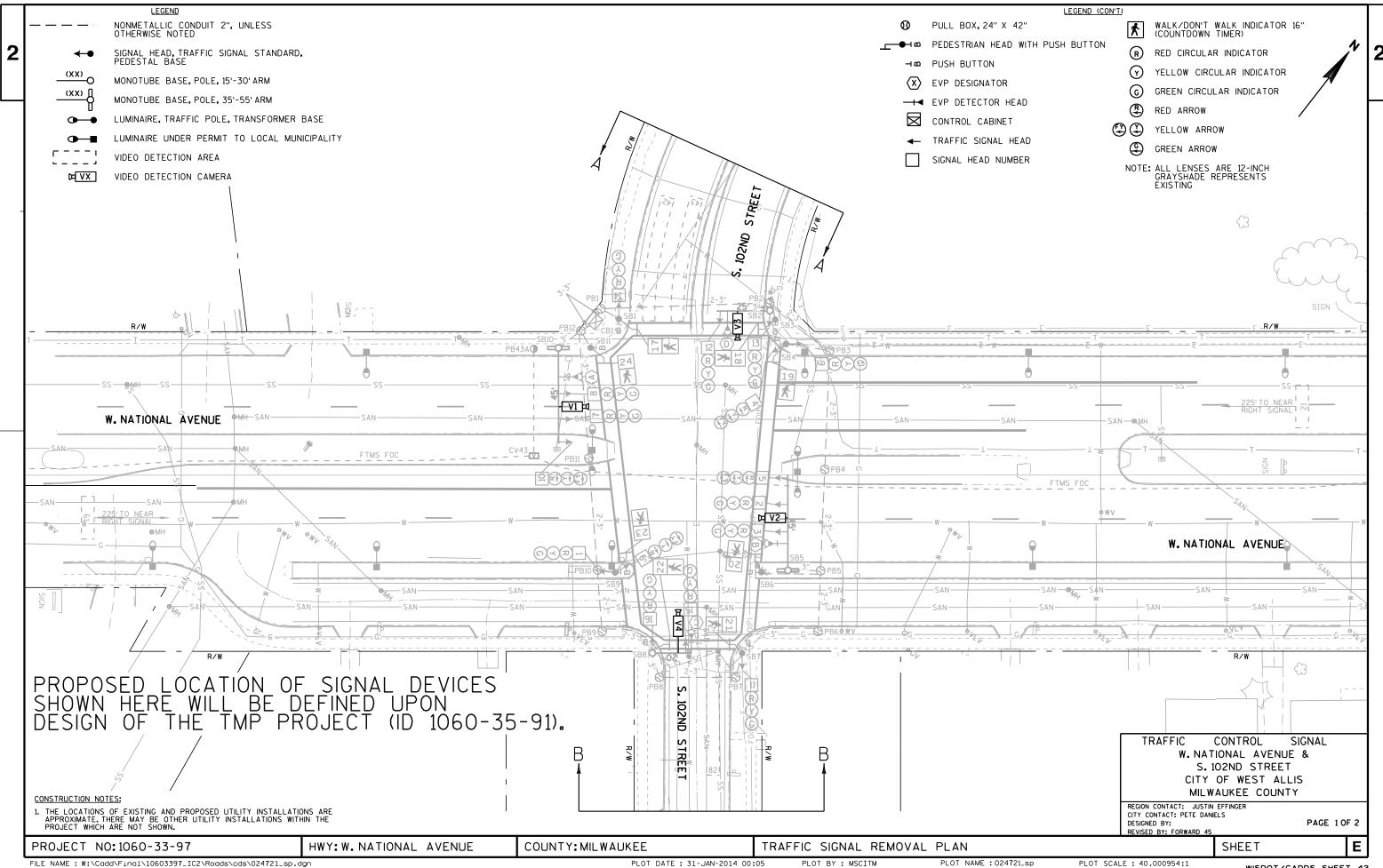
6

VEH

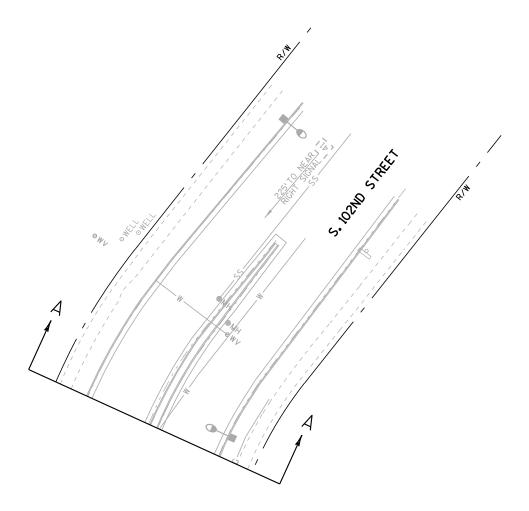
810

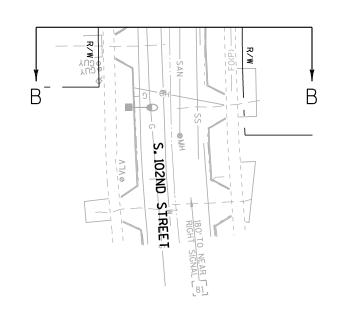
8

VEH









PROPOSED LOCATION OF SIGNAL DEVICES SHOWN HERE WILL BE DEFINED UPON DESIGN OF THE TMP PROJECT (ID 1060-35-91).

TRAFFIC CONTROL SIGNAL
W. NATIONAL AVENUE &
S. 102ND STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

REGION CONTACT: JUSTIN EFFINGER CITY CONTACT: PETE DANIELS DESIGNED BY: REVISED BY: FORWARD 45

PAGE 2 OF 2

PROJECT NO: 1060-33-97

HWY: W. NATIONAL AVENUE

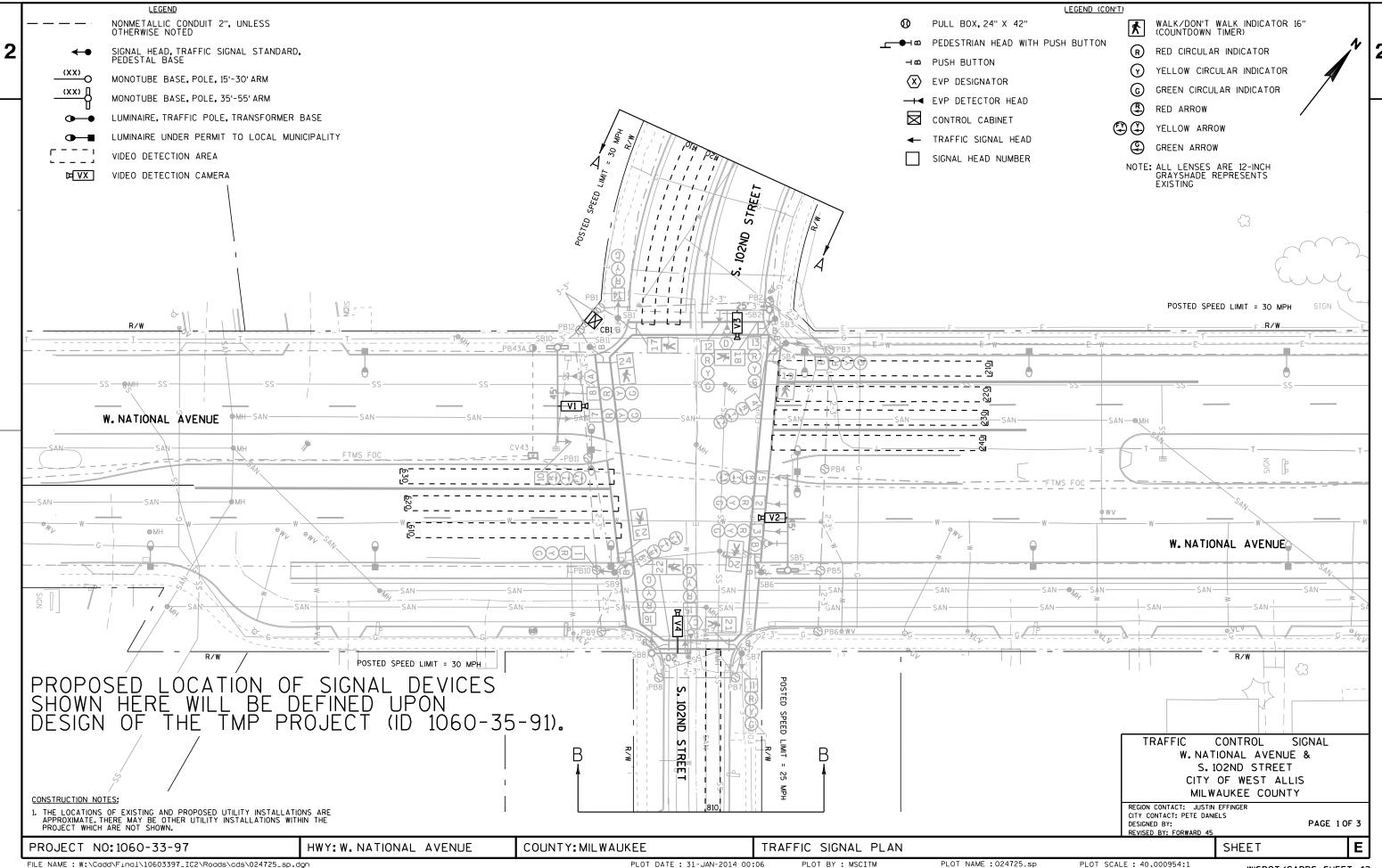
COUNTY: MILWAUKEE

TRAFFIC SIGNAL REMOVAL PLAN

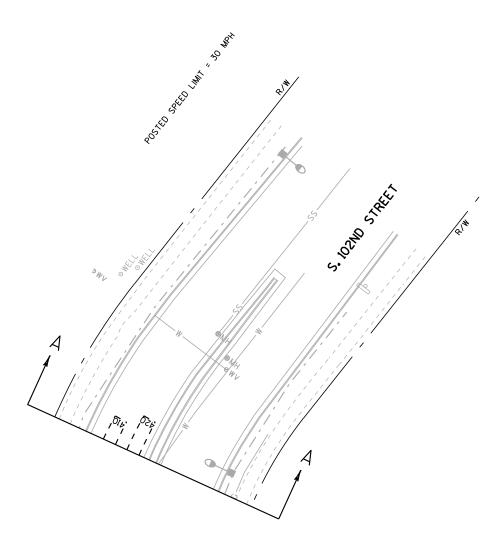
PLOT BY : MSCITM

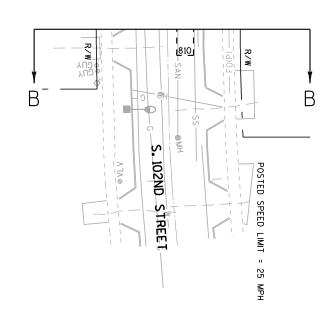
PLOT NAME: 024722_sp

SHEET |









PROPOSED LOCATION OF SIGNAL DEVICES SHOWN HERE WILL BE DEFINED UPON DESIGN OF THE TMP PROJECT (ID 1060-35-91).

TRAFFIC CONTROL SIGNAL
W. NATIONAL AVENUE &
S. 102ND STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY

REGION CONTACT: JUSTIN EFFINGER CITY CONTACT: PETE DANIELS DESIGNED BY: REVISED BY: FORWARD 45

PAGE 2 OF 3

PROJECT NO: 1060-33-97

HWY: W. NATIONAL AVENUE

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

PLOT NAME: 024726_sp

CONTROLLER LOGIC

Ø1 Ø2	HEAD NUMBERS 6.7.8	F A S H	RING 1	NOT USED	0.L. A		NOT USED	11	1
03			-	Q1			22	2.4	
04	14,15,16	R	L	Ø1	02	ĺ	03	04	
05						_			
Ø6	1,2,3	R				7			
07					₩				1
Ø8	11,12,13	R			7 O.L. C	i			
Ø2P	17,18			NOT	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	l I	NOT	17 }	
Ø4P	23,24		RING 2	USED			USED	>	
Ø6P	21,22					İ		" "	
Ø8P	19,20		-	ΩE.		1	0.7	30	-
OLA	4,5	R	L	Ø5	Ø6		07	Ø8	J
OLB						i			
OLC	9,10	R			BA	ARRIER			
OLD									

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2		6	MIN	×
3				
4		8		×
5				
6		2	MIN	×
7				
8		4		×

TYPE OF INTERCONNECT/COMMUI	NICATION
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	×
RADIO	

TYPE OF COORDINA	TION	
NONE		
TBC		
TRAFFIC RESPONSIVE		
ADAPTIVE		X
*LOCATION OF MASTER		
CONTROLLER NO:	S-	
SIGNAL SYSTEM *:	SS	

TYPE OF LIGHTING	
BY OTHER AGENCY	х
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE DOT LIGHTING CABINET	

х
х

EMERGENCY VEHICLE PREEMPTION SEQUENCE

	CHANNEL						
EMERGENCY VEHICLE PREEMPTOR	A	В	С	D			
MOVEMENT		: - ```	↓ ↑	↓↑			
PHASE	2+6	6+2	4+8	8+4			

AFTER PREEMPTION SEQUENCE 2+6 OR 6+2, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

W. NATIONAL AVENUE & S. 102ND STREET CITY OF WEST ALLIS MILWAUKEE COUNTY

SIGNAL	NO.	CABINET TYPE: TS	2
		CONTROLLER TYPE: EPA	С
DATE	02/14	PAGE NO. 3 OF	3

SHEET

DETECTOR LOGIC

OPERATION MODE	VEH	VEH	VEH	VEH	VEH		
SWITCH							
EXTEND							
DELAY	Х		Х				
DETECTOR INPUT							
PLAN LOOP DETECTOR *(S)	220	240	420	620	810		
ASSIGNED PHASE	2	2	4	6	8		
OPERATION MODE	VEH	VEH	VEH	VEH	VEH		
SWITCH							

410

4

630

6

610

6

230

2

210

2

				PLAN LOOP DETECTOR *(S)
				ASSIGNED PHASE
				OPERATION MODE
				SWITCH
				EXTEND
				DELAY
				•
1	I	1		1
				DETECTOR INPUT
				PLAN LOOP DETECTOR *(S)
				ASSIGNED PHASE
				OPERATION MODE
				SWITCH
				EXTEND

PROJECT NO: 1060-33-97

EXTEND

DETECTOR INPUT

ASSIGNED PHASE

PLAN LOOP DETECTOR *(S)

HWY: W. NATIONAL AVENUE

COUNTY: MILWAUKEE

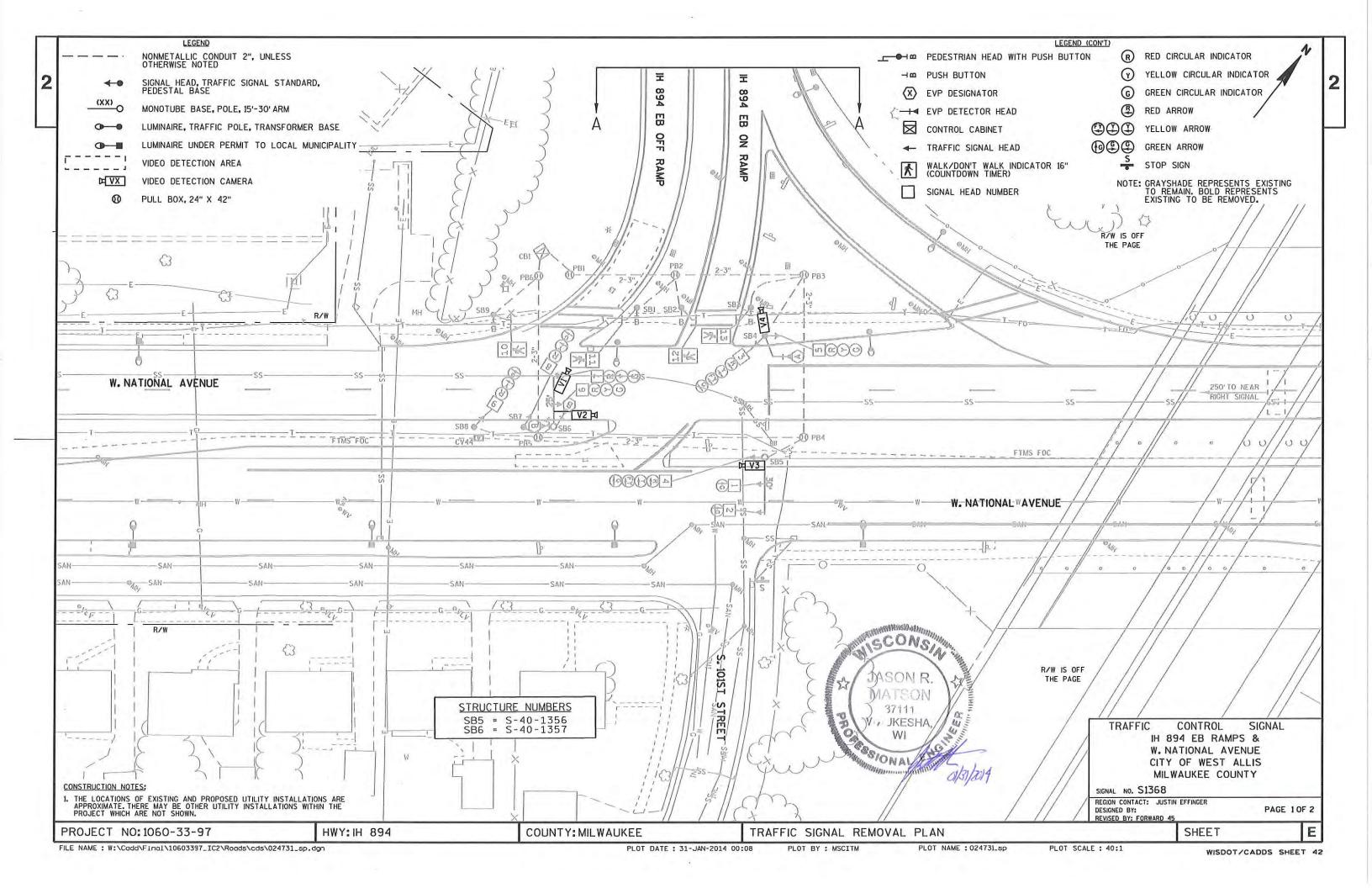
SEQUENCE OF OPERATIONS

PLOT BY : MSCITM

DETECTOR INPUT

PLOT NAME: 024729_sp_ph

WISDOT/CADDS SHEET 42



Ξ

EB

OFF

RAMP

IH 894

EΒ

9

RAMP

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TRAFFIC CONTROL SIGNAL
IH 894 EB RAMPS &
W.NATIONAL AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S1368

REGION CONTACT: JUSTIN EFFINGER DESIGNED BY: REVISED BY: FORWARD 45

PAGE 2 OF 2

PROJECT NO: 1060-33-97

HWY: IH 894

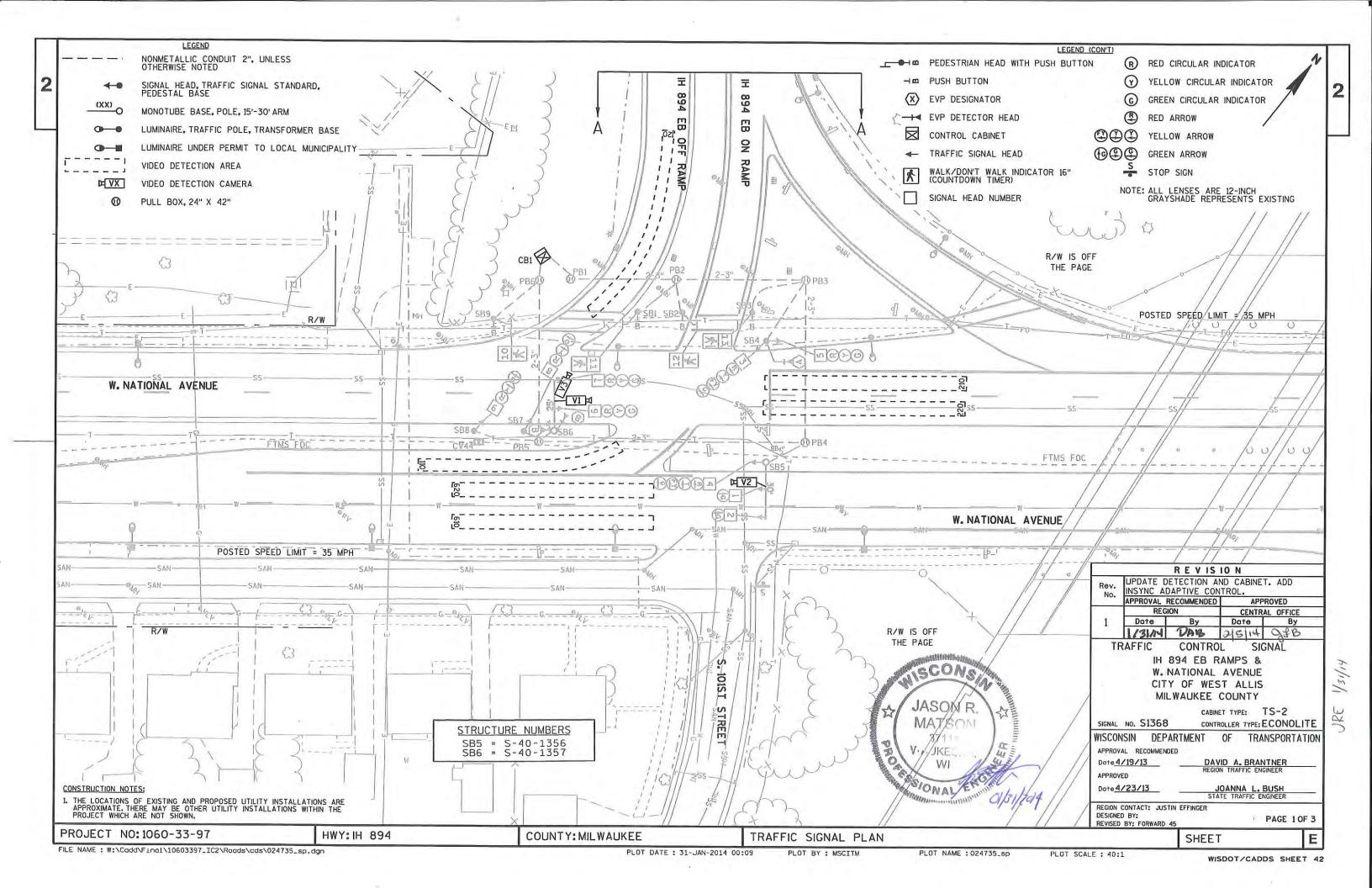
COUNTY: MILWAUKEE

TRAFFIC SIGNAL REMOVAL PLAN

PLOT BY : MSCITM

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PLOT NAME: 024732_sp



R/W IS OFF
THE PAGE

TRAFFIC CONTROL SIGNAL
IH 894 EB RAMPS &
W.NATIONAL AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SHEET

SIGNAL NO. S1368

REGION CONTACT: JUSTIN EFFINGER DESIGNED BY: REVISED BY: FORWARD 45

PAGE 2 OF 3

PROJECT NO: 1060-33-97

HWY: IH 894

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

OP PLOT BY: MSCITM

PLOT NAME : 024736_sp

	MEAD NUMBERS	A S H		A		NOT	NOT	
01	3,4,8,9	-,R	RING 1		∆ i	USED	USED	
02	5,6,7	R			0.L. A 5			
03			1	Ø1	Ø2	00	94	
04			L	61	02	03	04	
05			1.02					
06	1,2	-						
07			F					
18		7						
2P	10,11,12,13			NOT		NOT	NOT	
4P			RING 2	USED		USED	USED	
6P		7						
8P			1					
LA	3,4	R		05	Ø6	07	Ø8	
LB		-JEH			1			
LC					BARF	RIER		/
LD								

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		х
2		6	MIN	х
3				
4				
5				
6		2	MIN	×
7				
8				

NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	×
RADIO	

TYPE OF COORDINA	TION	
NONE		
TBC		
TRAFFIC RESPONSIVE		
ADAPTIVE		X
*LOCATION OF MASTER		
CONTROLLER NO:	S-	
SIGNAL SYSTEM #:	SS	

TYPE OF LIGHTING	
BY OTHER AGENCY	×
IN TRAFFIC SIGNAL CABINET IN SEPARATE DOT LIGHTING CABINET	
IN SEPARATE DOT LIGHTING CABINET	X

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	×
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	17
OUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

FUEDOS1104 1151401 5	CHANNEL				
PREEMPTOR	A	В			
MOVEMENT		21			
PHASE	2+6	6+1			

AFTER PREEMPTION SEQUENCE 2+6 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

IH 894 EB RAMPS & W. NATIONAL AVENUE CITY OF WEST ALLIS MILWAUKEE COUNTY

SIGNAL NO. S1368 CABINET TYPE: TS2

CONTROLLER TYPE: ECONOLITE

DATE 02/14

PAGE NO. 3 OF 3 SHEET

DETECTOR LOGIC

CONTRACTOR AND CONTRACTOR			- CT			
CALL OPTION	X	Х	X			
DELAY TIME	X					
EXTEND OPTION	X	X	X		1 1	
EXTEND TIME						
USE ADDED INITIAL						
CROSS SWITCH PHASE	6					
DETECTOR INPUT						
AN LOOP DETECTOR "(S)	120	220	620			
CALLED PHASE	1	2	6			

610

				4 200 C S C C C C C C C C C C C C C C C C C
				PLAN LOOP DETECTOR *(S)
		!		CALLED PHASE
				CALL OPTION
				DELAY TIME
				EXTEND OPTION
				EXTEND TIME
			T = T	USE ADDED INITIAL
				CROSS SWITCH PHASE

		ſ
		1
		- 1
		-
_		-
-		1

-		- 11		DETECTOR INPUT
				PLAN LOOP DETECTOR #(S)
				CALLED PHASE
				CALL OPTION
				DELAY TIME
				EXTEND OPTION
			 	EXTEND TIME
				USE ADDED INITIAL
				CROSS SWITCH PHASE

PROJECT NO: 1060-33-97

EXTEND OPTION

EXTEND TIME

USE ADDED INITIAL CROSS SWITCH PHASE

DETECTOR INPUT

110

210

PLAN LOOP DETECTOR *(S)

HWY: IH 894

COUNTY: MILWAUKEE

SEQUENCE OF OPERATIONS

PLOT NAME : 024739_sp_ph

PLOT SCALE : 40.000954:1

WISDOT/CADDS SHEET 42

8 VC

P11871

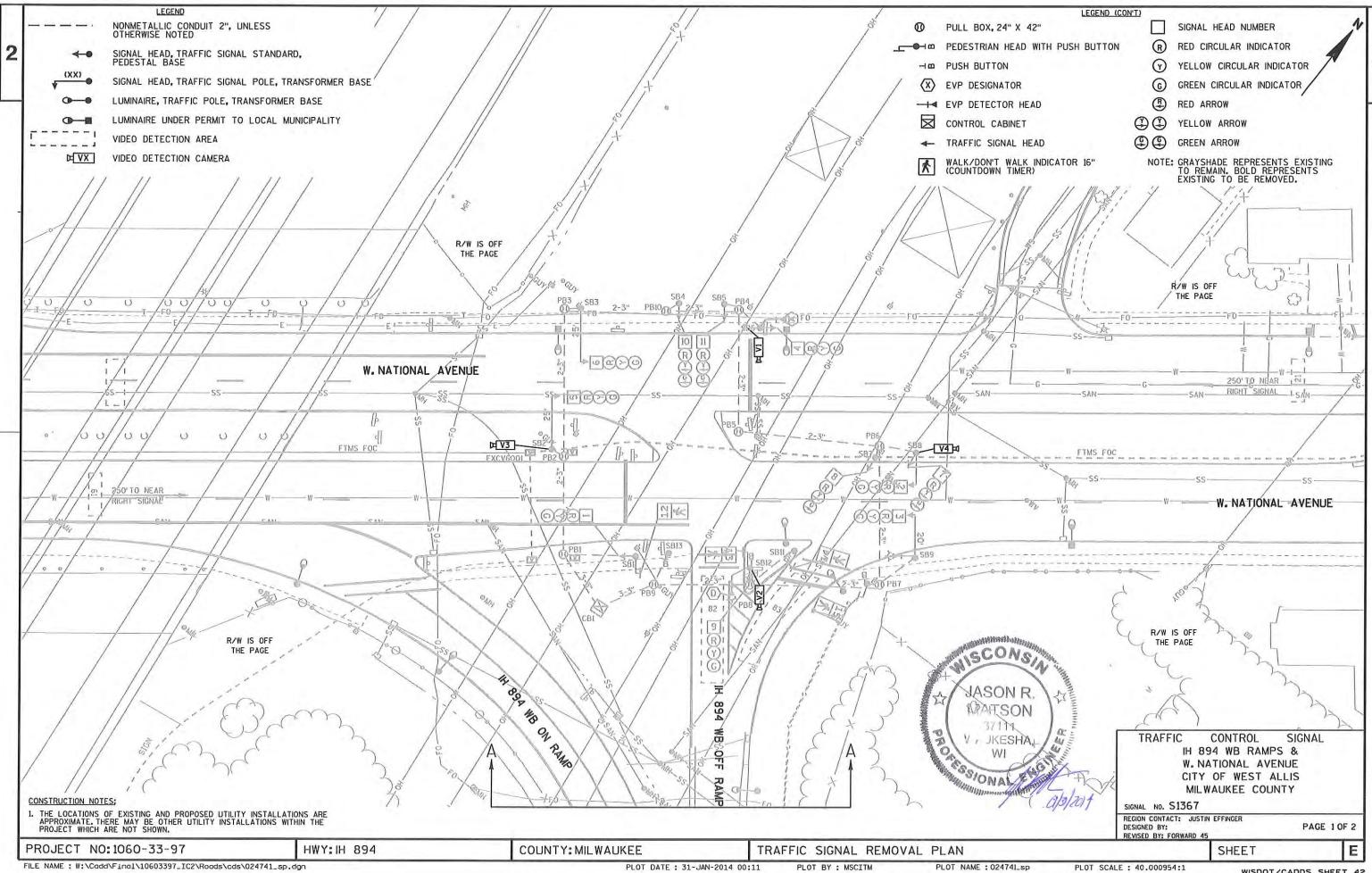
JRE

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\024739_sp_ph.dgn

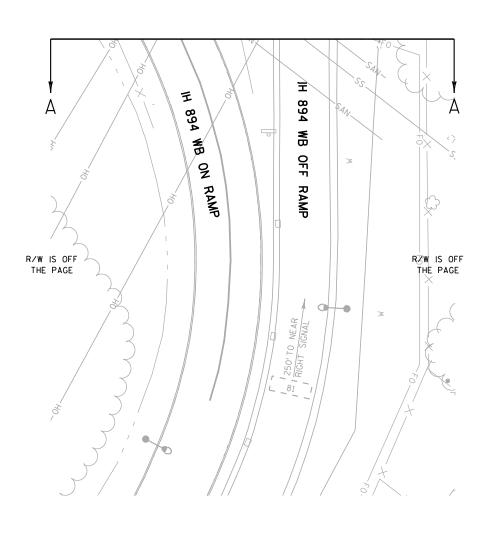
PLOT DATE : 31-JAN-2014 00:10

PLOT BY : MSCITM

DETECTOR INPUT







TRAFFIC CONTROL SIGNAL
IH 894 WB RAMPS &
W.NATIONAL AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S1367

REGION CONTACT: JUSTIN EFFINGER DESIGNED BY: REVISED BY: FORWARD 45

PAGE 2 OF 2

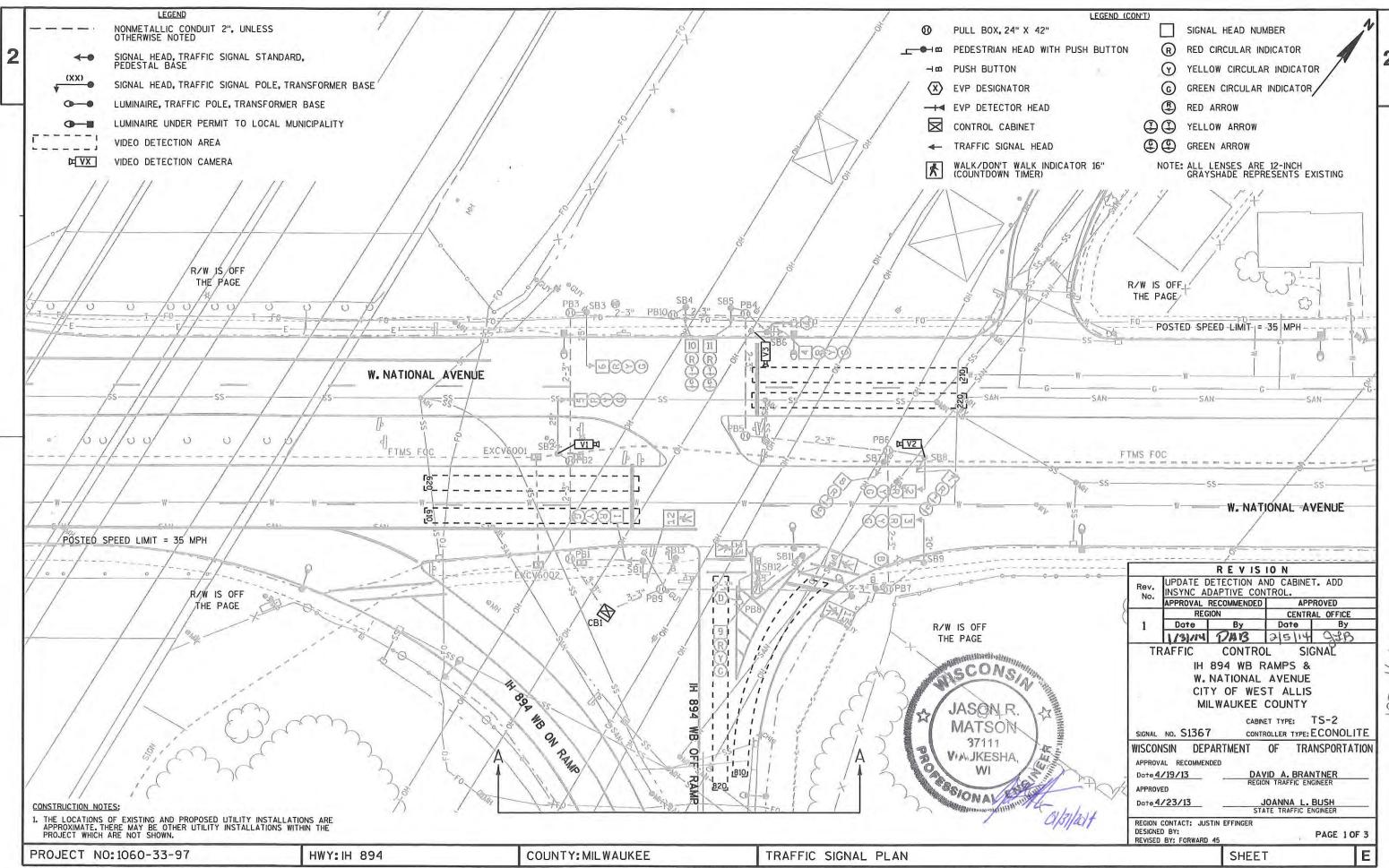
PROJECT NO: 1060-33-97

HWY: IH 894

COUNTY: MILWAUKEE

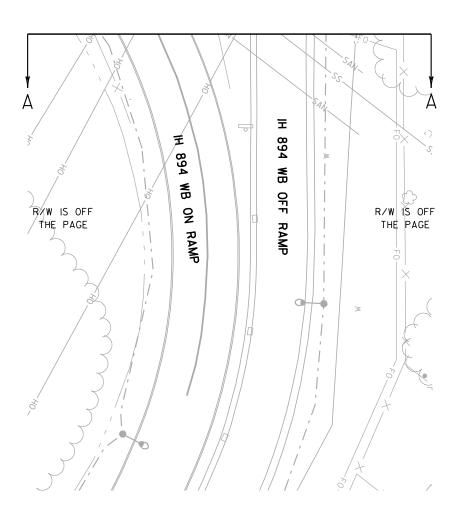
TRAFFIC SIGNAL REMOVAL PLAN

PLOT NAME: 024742_sp



2





TRAFFIC CONTROL SIGNAL
IH 894 WB RAMPS &
W.NATIONAL AVENUE
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S1367

REGION CONTACT: JUSTIN EFFINGER DESIGNED BY: REVISED BY: FORWARD 45

PAGE 2 OF 3

PROJECT NO: 1060-33-97

HWY: IH 894

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

PLOT BY : MSCITM

PLOT NAME: 024746_sp

PLOT SCALE: 40.000954:1

RE

TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	×
RADIO	

TYPE OF INTERCONNECT/COMMUNICATION

TYPE OF COORDINA	TION	
NONE		
TBC		
TRAFFIC RESPONSIVE		
ADAPTIVE		X
*LOCATION OF MASTER CONTROLLER NO:	S-	
SIGNAL SYSTEM ":	SS	

	TYPE OF LIGHTING	
BY	OTHER AGENCY	
IN	TRAFFIC SIGNAL CABINET	I
IN	TRAFFIC SIGNAL CABINET SEPARATE DOT LIGHTING CABINET	X

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	>
GTT	1
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

Land State of the Control	CHANNEL				
EMERGENCY VEHICLE PREEMPTOR	A	D			
MOVEMENT	<	17			
PHASE	2+6	8			

AFTER PREEMPTION SEQUENCE 2+6, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 8, CONTROLLER SHALL RETURN TO PHASE 8.

			KEE COUNTY	
SIGNAL	NO.	S1367	CABINET TYPE:	TS2

IH 894 WB RAMPS &

W. NATIONAL AVENUE

CONTROLLER TYPE: ECONOLITE

DATE 02/14 PAGE NO. 3 OF 3

CONTROLLER LOGIC

PHASE

X

X

X

DUAL

ENTRY

6

2

MIN

MIN

PHASE

NUMBER

1

2

3

4

5

6

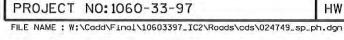
7

8

PHASE

LOCKING

SHEET



HEAD

NUMBERS

4,5,6

1,2,3

7,8,9,10,11

12,13,14,15

DETECTOR INPUT

CALLED PHASE CALL OPTION

DELAY TIME

EXTEND OPTION

EXTEND TIME USE ADDED INITIAL CROSS SWITCH PHASE

PLAN LOOP DETECTOR *(S)

220

X

X

620

X

X

820

X

X

01

02

03

04

05

06

07 Ø8

Ø4P

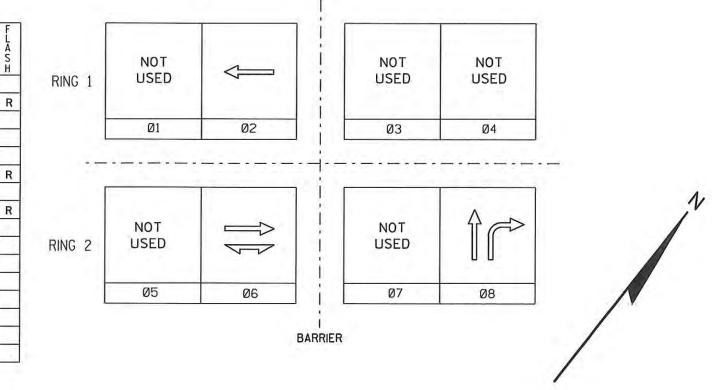
Ø6P

Ø8P

OLG

PLOT DATE: 31-JAN-2014 00:12

PLOT NAME : 024749_sp_ph



DETECTOR LOGIC

DETECTOR INPUT										DETECTOR INPUT
N LOOP DETECTOR *(S)	210	610	810				Je - J			PLAN LOOP DETECTOR
CALLED PHASE	2	6	8					9 1		CALLED PHASE
CALL OPTION	X	X	X						T []	CALL OPTION
DELAY TIME	200		X							DELAY TIME
EXTEND OPTION	X	X	X							EXTEND OPTION
EXTEND TIME										EXTEND TIME
USE ADDED INITIAL										USE ADDED INITIAL
CROSS SWITCH PHASE		1								CROSS SWITCH PHASE

			DETECTOR INPUT
			PLAN LOOP DETECTOR "(S)
			CALLED PHASE
			CALL OPTION
			DELAY TIME
			EXTEND OPTION
			EXTEND TIME
			USE ADDED INITIAL
			 CROSS SWITCH PHASE

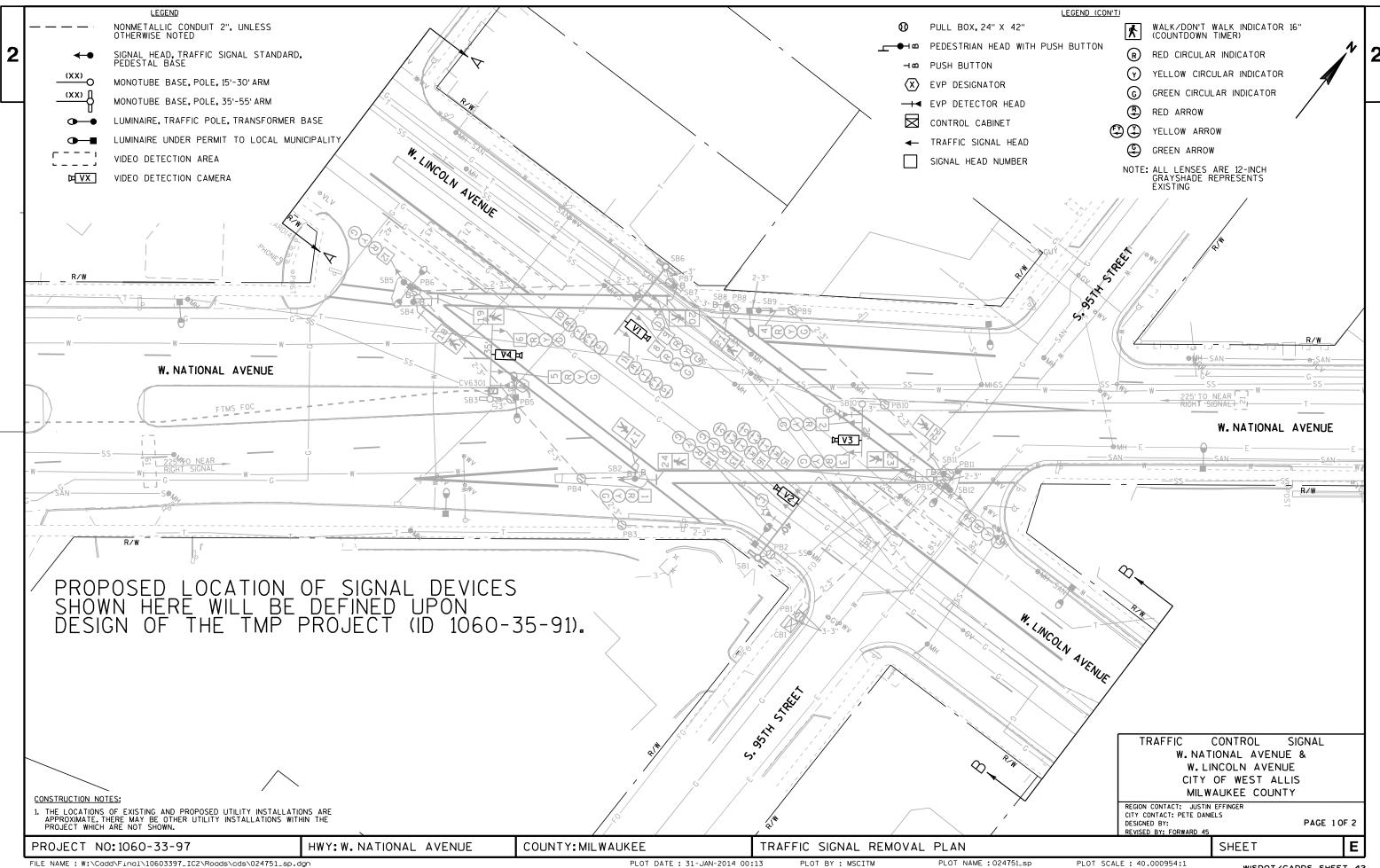
HWY: IH 894

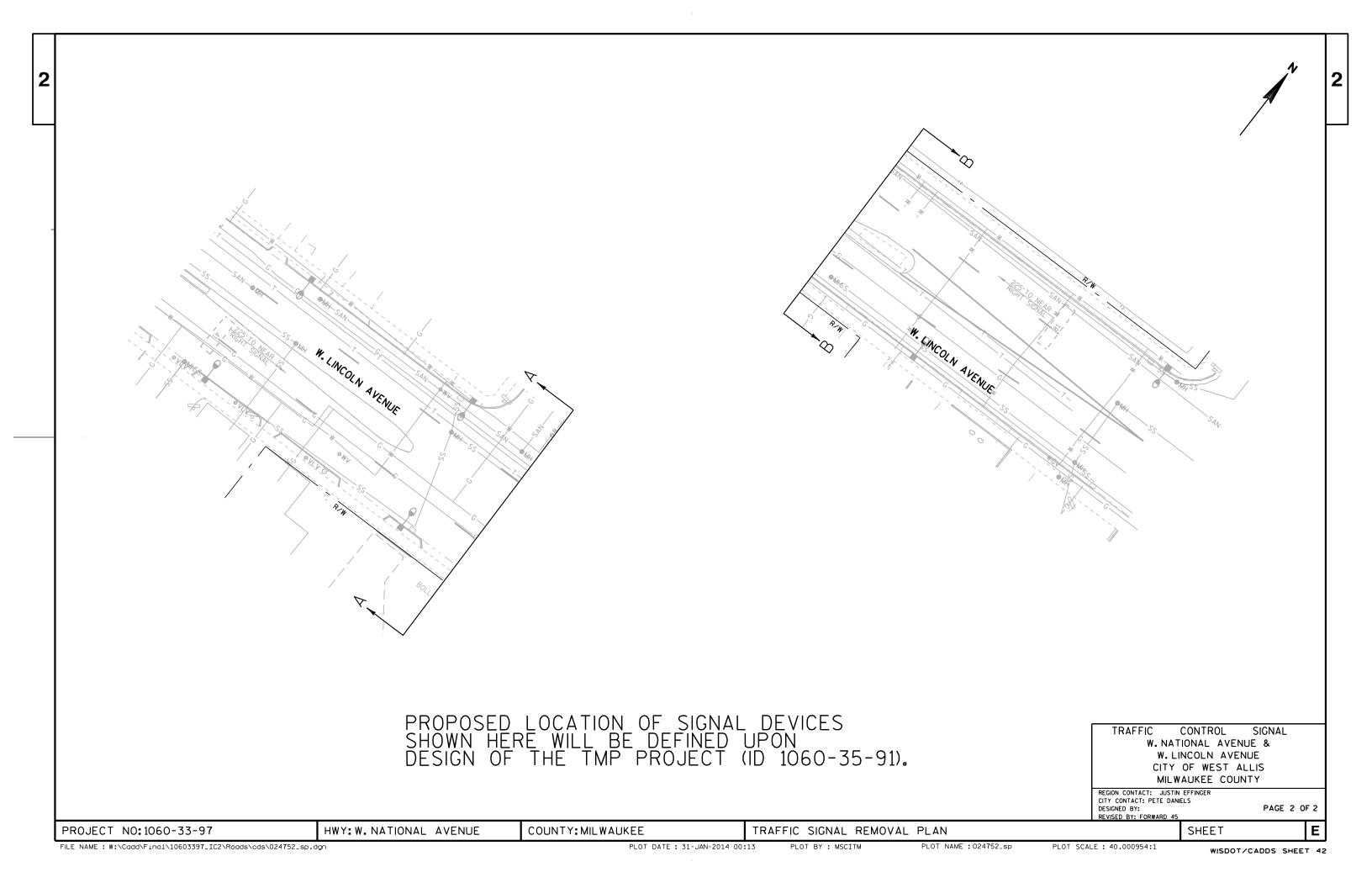
COUNTY: MILWAUKEE

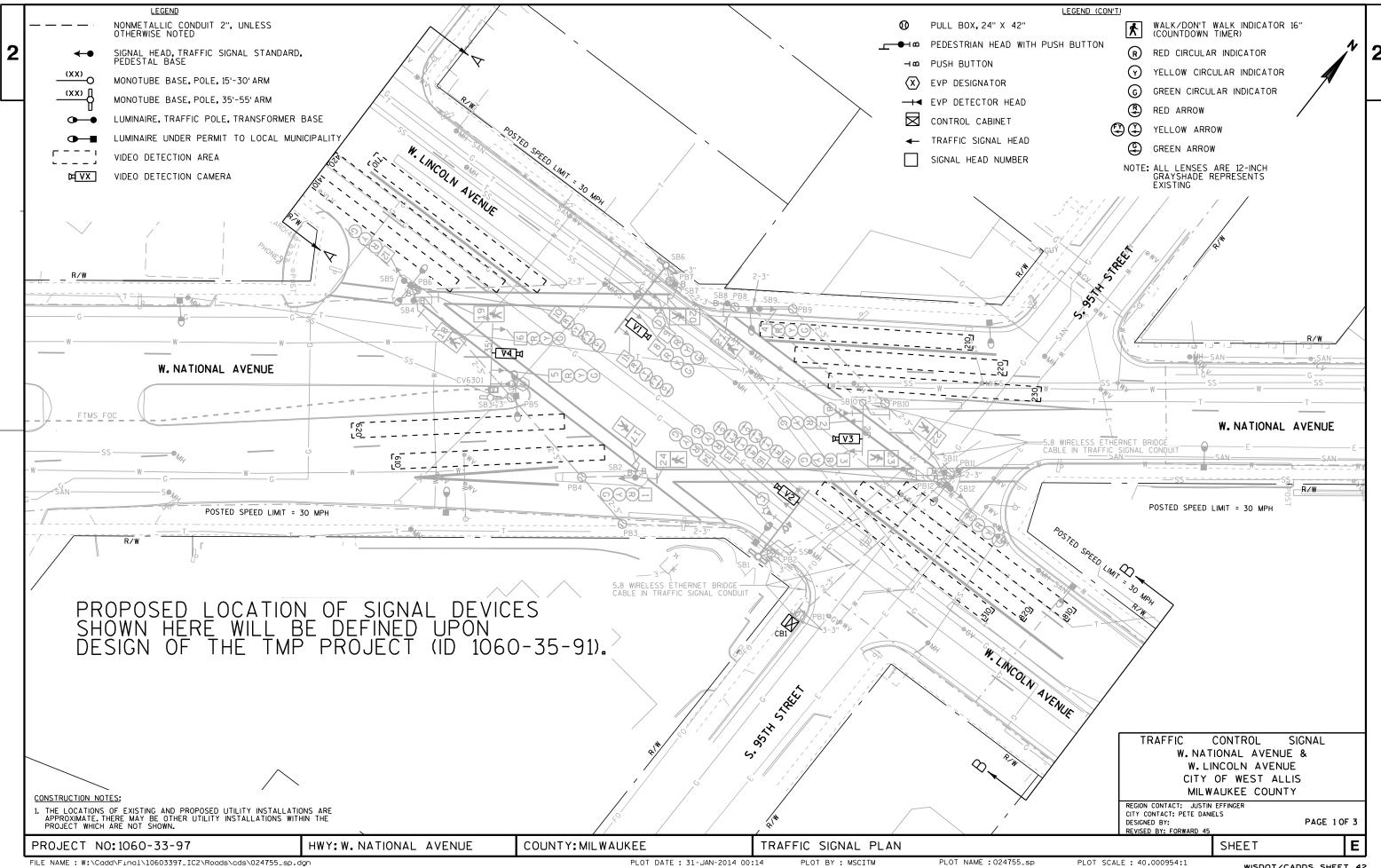
SEQUENCE OF OPERATIONS PLOT BY : MSCITM

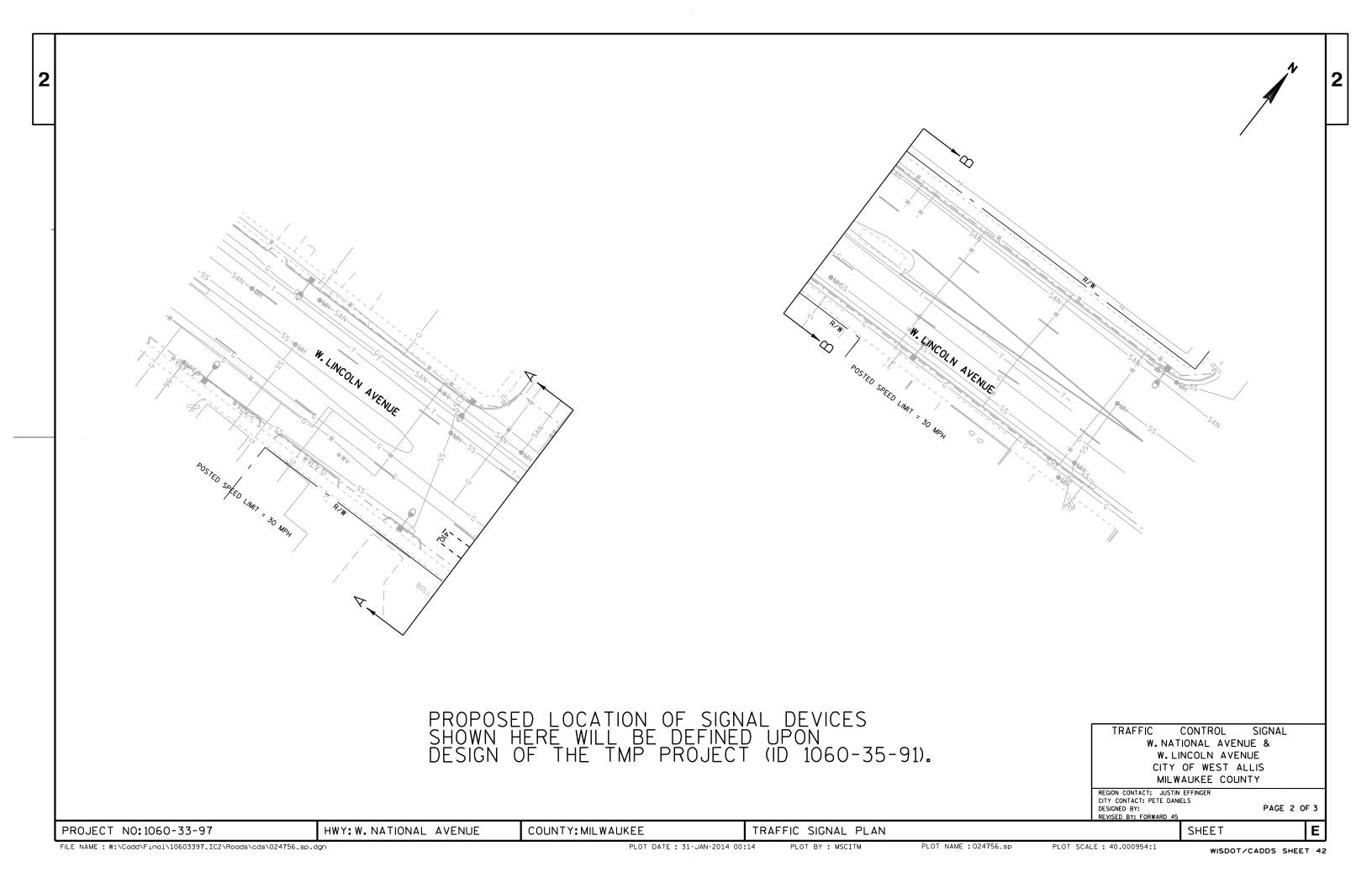
PLOT SCALE: 40.000954:1

WISDOT/CADDS SHEET 42









HEAD NUMBERS

4,5,6

10,11

12,13,14

1,2,3

15,16

7,8,9

19,20

17,18

23,24

21,22

10,11

15,16

210

2

VEH

220

VEH

230

2

VEH

310

VEH

410

4

VEH

420

VEH

610

VEH

620

VEH

DETECTOR INPUT

ASSIGNED PHASE

OPERATION MODE SWITCH

DETECTOR INPUT

ASSIGNED PHASE

OPERATION MODE

SWITCH

EXTEND

DELAY

PROJECT NO: 1060-33-97

PLAN LOOP DETECTOR *(S)

EXTEND

DELAY

PLAN LOOP DETECTOR *(S)

01 02

Ø3

04

05 06

07

Ø8

Ø2P

Ø4P

Ø6P

Ø8P

OLA OLB

OLC

NOT

USED

Ø1

NOT

USED

05

710

VEH

810

8

VEH

820

8

VEH

02

06

BARRIER

DETECTOR LOGIC

Ø3

Ø7

04

Ø8

RING 1

RING 2

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2		6	MIN	×
3		8		×
4		8		×
5				
6		2	MIN	×
7		4		×
8		4		х

TYPE OF INTERCONNECT/COMMUNI	CATION
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	×
RADIO	

TYPE OF COORDINA	TION	
NONE		
TBC		
TRAFFIC RESPONSIVE		
ADAPTIVE		×
*LOCATION OF MASTER		
CONTROLLER NO:	S-	
SIGNAL SYSTEM #:	SS-	-

TYPE OF LIGHTING	
BY OTHER AGENCY	х
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE DOT LIGHTING CABINET	

х
х

EMERGENCY VEHICLE PREEMPTION SEQUENCE

		CHAI	NNEL	
PREEMPTOR	A	В	С	D
MOVEMENT	←	← →	E.,	
PHASE	2+6	6+2	4+7	3+8

AFTER PREEMPTION SEQUENCE 2+6 OR 6+2, CONTROLLER SHALL RETURN TO PHASES 2+6. AFTER PREEMPTION SEQUENCE 3+8 OR 4+7, CONTROLLER SHALL RETURN TO PHASE 4+8.

> W. LINCOLN AVENUE CITY OF WEST ALLIS MILWAUKEE COUNTY CABINET TYPE: TS2 SIGNAL NO. CONTROLLER TYPE: EPAC

W. NATIONAL AVENUE &

02/14 DATE PAGE NO. 3 OF 3 SHEET

HWY: W. NATIONAL AVENUE

COUNTY: MILWAUKEE

SEQUENCE OF OPERATIONS

WISDOT/CADDS SHEET 42

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\024759_sp_ph.dgn

PLOT DATE: 31-JAN-2014 00:15

PLOT BY : MSCITM

DETECTOR INPUT PLAN LOOP DETECTOR *(S)

ASSIGNED PHASE

OPERATION MODE

DETECTOR INPUT

ASSIGNED PHASE

OPERATION MODE

SWITCH

EXTEND

DELAY

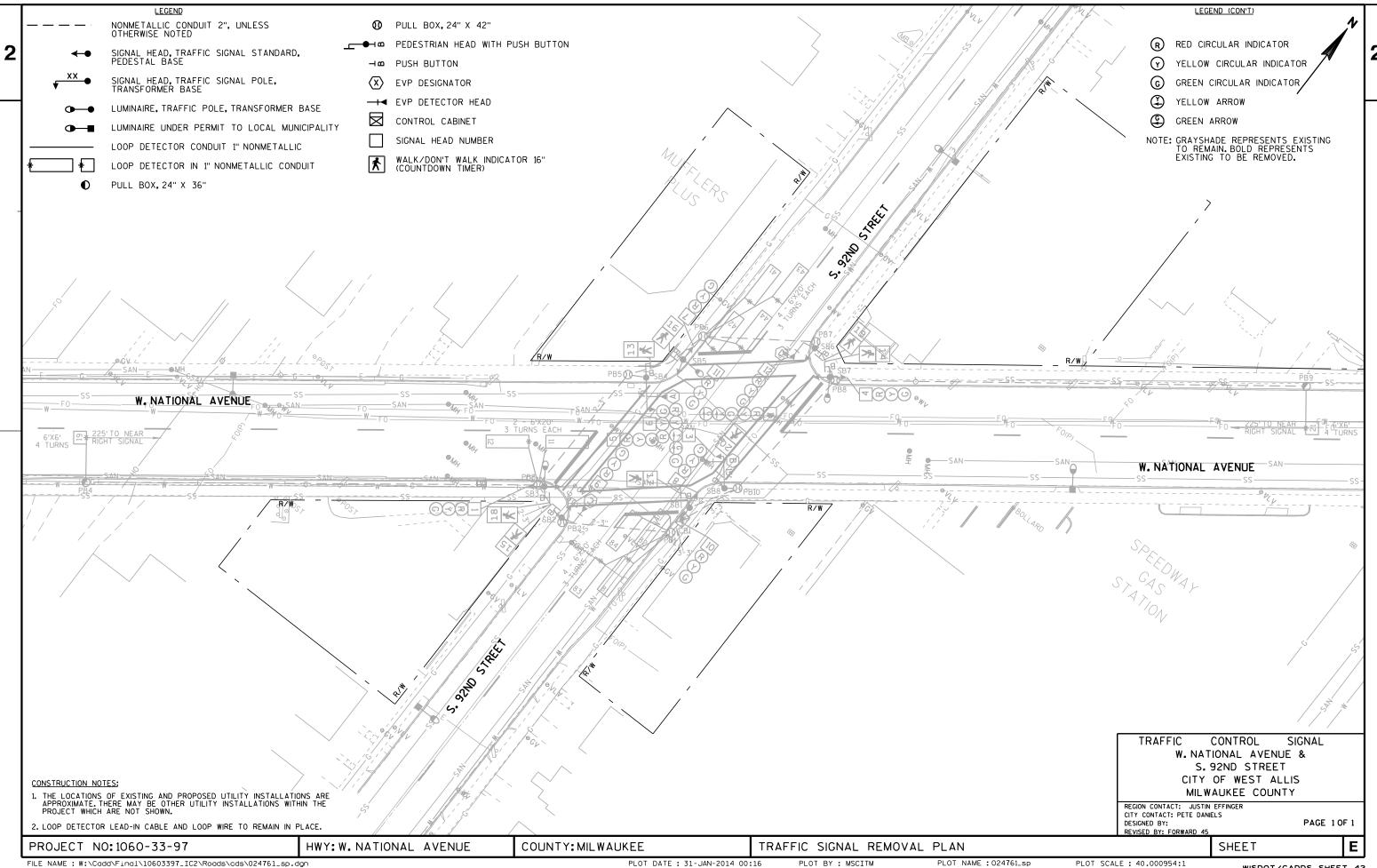
PLAN LOOP DETECTOR *(S)

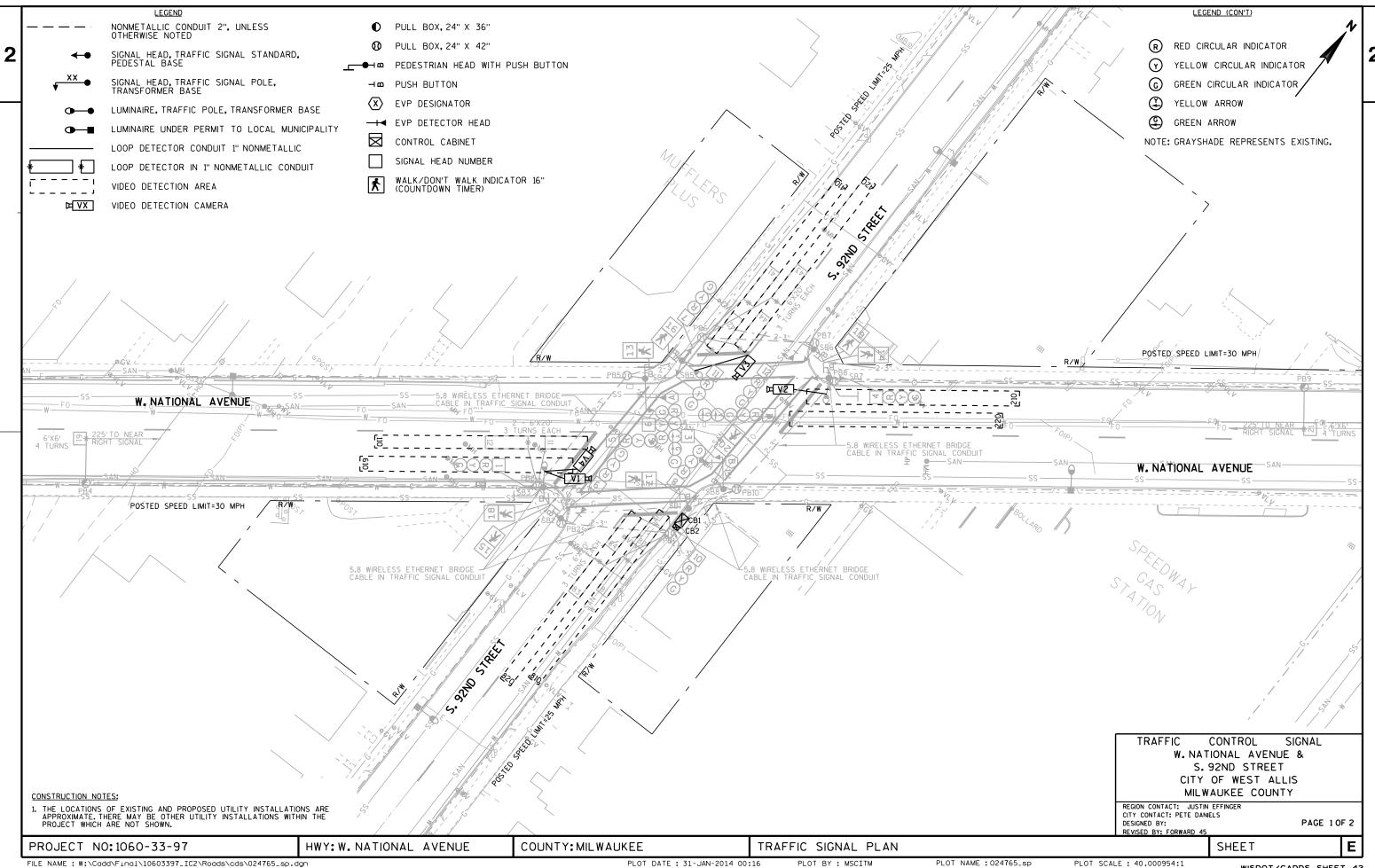
SWITCH

EXTEND

DELAY

PLOT NAME: 024759_sp_ph PLOT SCALE: 40.000954:1







 $R/W \mid X \mid X$

G YR

R RR

R RR

R RR

* | D | D |

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Ø1

 $R/W \mid X \mid X \mid$

R R R

R RR

R RR

R RR

NOT

USED

05

HEAD NUMBERS 2,3

4,5,6

7,8,9

1.2.3

10,11,12

13,14

15,16

17,18

19,20

02

03 04

06

07

08

Ø2P

Ø4P

Ø6P

lø8P

Ø1 02 Ø3

05 Ø6 Ø7

Ø8 Ø2P |04P|

Ø6P

PROJECT NO: 1060-33-97

RING 2 04

RING 1 05

CLEAR TO

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NUMBERS																									
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4,5,6						R	R	R				-							R	R	R				
7,8,9						R	R	R											R	R	R				
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1,2,3						G	Υ	R				1							R	R	R				
10,11,12						R	R	R				1							G	Y	R				
13,14						D	D	D				-							D	D	D				
15,16						D	D	D											D	D	D				
17,18						*	D	D				i							D	D	D				
19,20						D	D	D											*	D	D				

BARRIER

CHART 1

f * WHEN CALLED, TIMED STEADY WALK, THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
01	6	2,4,8
02	6	1,4,8
Ø3		
04	8	1,2,6
05		
Ø6	1 OR 2	4,8
07		
Ø8	4	1,2,6

DETECTOR LOGIC

		DETEC	TOR OPER	RATION							
DETECTOR NUMBER	DETECTOR INPUT	CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11	1	Х			1	1				6X20	3
12	1	X			1	1				6X20	3
21	2	×			2	2				6X6	4
41	3	X			4	4				6X20	3
42	3	×			4	4				6X20	3
43	4	×			4	4				6X20	3
44	4	X			4	4				6X20	3
61	5	×			6	6				6X6	4
81	6	X			8	8				6X20	3
82	6	X			8	8				6X20	3
83	7	X			8	8				6X20	3
84	7	×			8	8				6X20	3
110		X			1	1					VIDEO
210		×			2	2					VIDEO
220		×			2	2					VIDEO
410		X			4	4		X			VIDEO
420		×			4	4					VIDEO
610		X			6	6					VIDEO
810		X			8	8		Х			VIDEO
820		Х			8	8					VIDEO

TYPE OF INTERCONNECT/COMMUNICA	TION
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	Х

TYPE OF COORDINA	TION		
NONE			┪
TBC			
TRAFFIC RESPONSIVE			
ADAPTIVE			x
*LOCATION OF MASTER			
CONTROLLER NO:	S-		
SIGNAL SYSTEM #:	SS-	-	

TYPE OF LIGHTING BY OTHER AGENCY IN TRAFFIC SIGNAL CABINET IN SEPARATE DOT LIGHTING CABINET

GENERAL NOTES:

PLOT BY : MSCITM

- 1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
- 2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1AT LEFT.)
- 3. IF ANY OPPOSING THRU PHASES ARE TIMING CONCURRENTLY, THEY SHALL TERMINATE TOGETHER DUE TO PERMISSIVE LEFT TURN CONFLICT.

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / 0	PHASE RECALL	PHASE ACTIVE
1		6		х
2		6	MIN.	Х
3				
4		8		Х
5				
6		2	MIN.	х
7				
8		4		Х

OVERLAPS

D.L. "A"	=
D.L. "B"	=
D.L. "C"	=
"ח" . ו.כ	=

NONE RAILROAD EMERGENCY VEHICLE 3M TOMAR HARDWIRE GTT LIFT BRIDGE OUEUE DETECTOR	TYPE OF PRE-EMPT	
EMERGENCY VEHICLE 3M TOMAR HARDWIRE GTT LIFT BRIDGE	NONE	
3M TOMAR HARDWIRE GTT LIFT BRIDGE	RAILROAD	
TOMAR HARDWIRE GTT LIFT BRIDGE	EMERGENCY VEHICLE	7
HARDWIRE GTT LIFT BRIDGE	3M	
GTT LIFT BRIDGE	TOMAR	
LIFT BRIDGE	HARDWIRE	
	GTT	
QUEUE DETECTOR	LIFT BRIDGE	
	QUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	В	С
MOVEMENT	*		↓↑
PHASE	2 AND 6	1+6	4+8

AFTER PREEMPTION SEQUENCE 2 AND 6 OR 1+6, CONTROLLER SHALL RETURN TO PHASES 2+6. AFTER PREEMPTION SEQUENCE 4+8. CONTROLLER SHALL RETURN TO PHASES 4+8.

> W. NATIONAL AVENUE & S. 92ND STREET CITY OF WEST ALLIS MILWAUKEE COUNTY

SIGNAL NO.

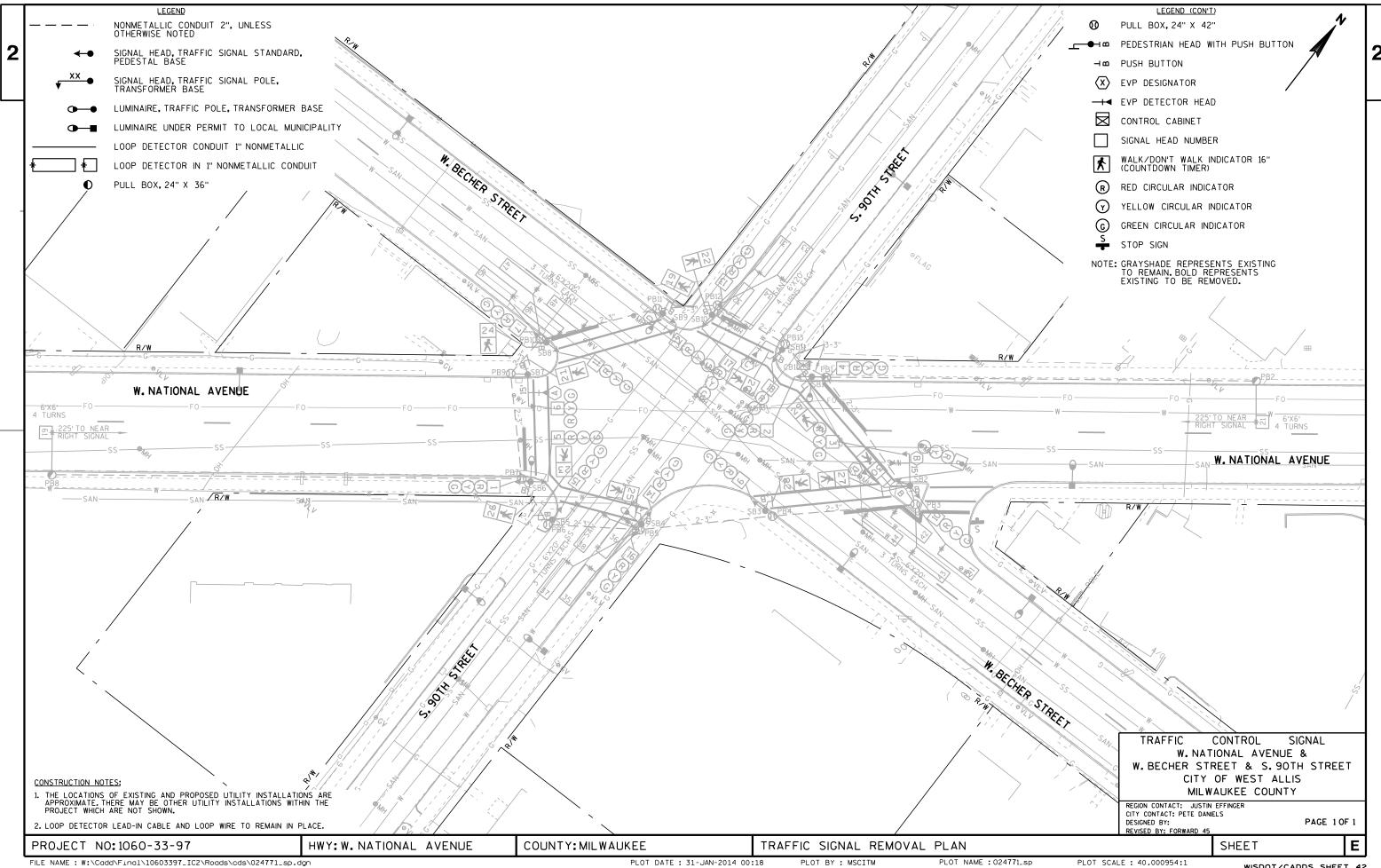
CONTROLLER TYPE: EPAC

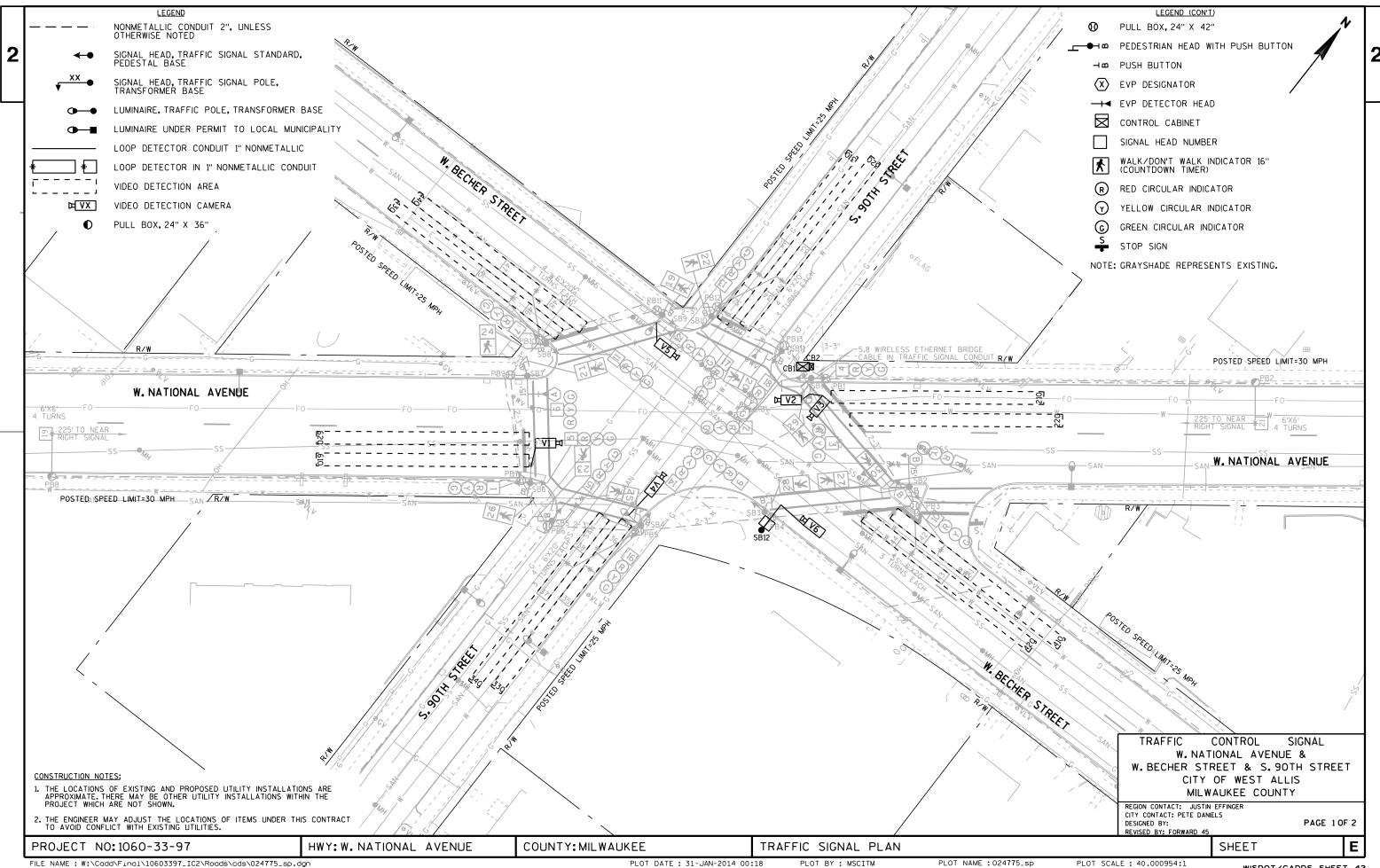
DATE 02/14 PAGE NO. 2 OF 2

SHEET

HWY: W. NATIONAL AVENUE

COUNTY: MILWAUKEE SEQUENCE OF OPERATIONS PLOT DATE: 31-JAN-2014 00:17





EXTENSION STRETCH

SIZE

6X6

6X20

6X6

NUMBER

4

3

3

3

3

3

3

3

3

3

3

3

3

3

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4

VIDEO

VIDEO

VIDEO

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DETECTOR

DISCONNECT

NOT **USED**

SEQUENCE OF OPERATION





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		01 02					03					04					F									
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HEAD	R/W	* *			R/W	*	X					1	R/W	*	*				R/W	X	- X				Н	
NUMBERS																										1
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4,5,6					G	Υ	R					1	R	R	R				R	R	R				R	1
13,14,15,16,17,18					R	R	R						G	Υ	R				R	R	R				R	1
7,8,9,10,11,12					R	R	R					i	R	R	R				G	Υ	R				R	
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1,2,3					R	R	R						R	R	R				R	R	R				R	
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10,11,12												1														
19,20,25,26					*	D	D						D	D	D				D	D	D					
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21,22,27,28					D	D	۵					1	۵	D	D				D	D	D					
23,24,29,30					D	D	D						D	D	D				D	D	D					
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		HEAD	R/W	*	X					R/W	*	*				'
		NUMBERS														1
	01															
	02	4,5,6								R	R	R				
	Ø3	13,14,15,16,17,18								R	R	R				1
2	04	7,8,9,10,11,12								R	R	R				
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1								D	D	D			
								D	D	D			
								*	D	D			

USED

07

BARRIER

HWY: W. NATIONAL AVENUE

CHART 1

- ** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)
- * WHEN CALLED, TIMED STEADY WALK, THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

	HASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
	21		
	0 2	6	3,4
(0 3	NONE	2,4,6
	24	NONE	2,3,6
	25		
	26	2	3,4
	27		
(2 8		
			·

COUNTY: MILWAUKEE

NONE RAILROAD EMERGENCY VEHICLE 3M TOMAR HARDWIRE GTT

LIFT BRIDGE

OUEUE DETECTOR

TYPE OF PRE-EMPT

EMERGENCY VEHICLE PREEMPTOR 1/1 MOVEMENT PHASE 2 AND 6 6 AND 2

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.

2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START

EMERGENCY VEHICLE PREEMPTION SEQUENCE

AFTER PREEMPTION SEQUENCE 2 AND 6 OR 6 AND 2, CONTROLLER SHALL RETURN TO PHASES 2+6. AFTER PREEMPTION SEQUENCE 3. CONTROLLER SHALL RETURN TO PHASES 3. AFTER PREEMPTION SEQUENCE 4, CONTROLLER SHALL RETURN TO PHASES 4.

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / 0	PHASE RECALL	PHASE ACTIVE
1				
2		6	MIN.	Х
3				Х
4				Х
5				
6		2	MIN.	Х
7				
8				

OVERLAPS

TYPE OF LIGHTING							
BY OTHER AGENCY							
IN TRAFFIC SIGNAL CABINET IN SEPARATE DOT LIGHTING CABINET	Х						
IN SEPARATE DOT LIGHTING CABINET							

TYPE OF INTERCONNECT/COMMUNICA	TION
NONE	
CLOSED LOOP	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	Х
	NONE CLOSED LOOP TWISTED PAIR* FIBER OPTIC* FIBER OPTIC (ETHERNET)

\top
X

W. NATIONAL AVENUE & W. BECHER STREET & S. 90TH STREET CITY OF WEST ALLIS MILWAUKEE COUNTY

SIGNAL NO. CONTROLLER TYPE: EPAC

DATE 02/14 PAGE NO. 2 OF 2

SEQUENCE OF OPERATIONS PLOT BY : MSCITM

DETECTOR OPERATION

EXTENDS Х

Х

Х

Х

Х

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PHASE CALLED

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4

4

4

4

4

4

4

4

6

2

2

3

3

3

3

4

4

4

4

6

6

(SEE CHART 1AT LEFT.)

PHASE EXTENDED

2

3

3

3

3

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4

4

4

4

4

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4

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6

2

2

3

3

3

3

4

4

4

4

6

6

TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL.

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DETECTOR DETECTOR NUMBER INPUT

2

2

3

3

4

4

5

5

6

6

7

7

8

8

9

9

10

21

31

32

33

34

35

36

37

38

41

42

43

44

45

46

47

48

61

210

220

310

320

330

340

410

420

430

440

610

620

PLOT NAME: 024779_sp_ph

PLOT SCALE: 40.000954:1

SHEET

02

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04

06

07

08

Ø4P

108P

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07

08

Ø2P

04P

Ø6P

PROJECT NO: 1060-33-97

1,2,3

10,11,12

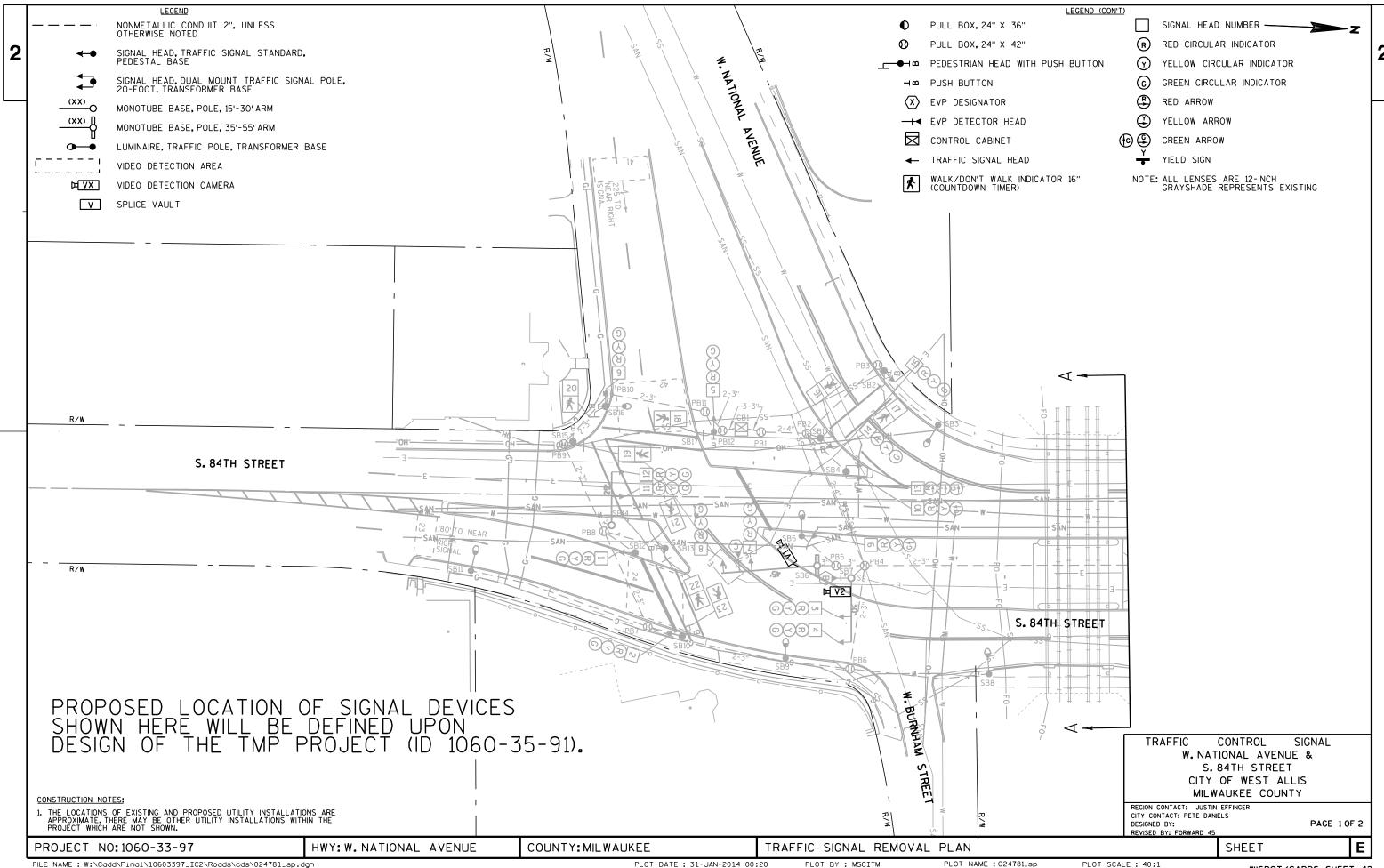
19,20,25,26

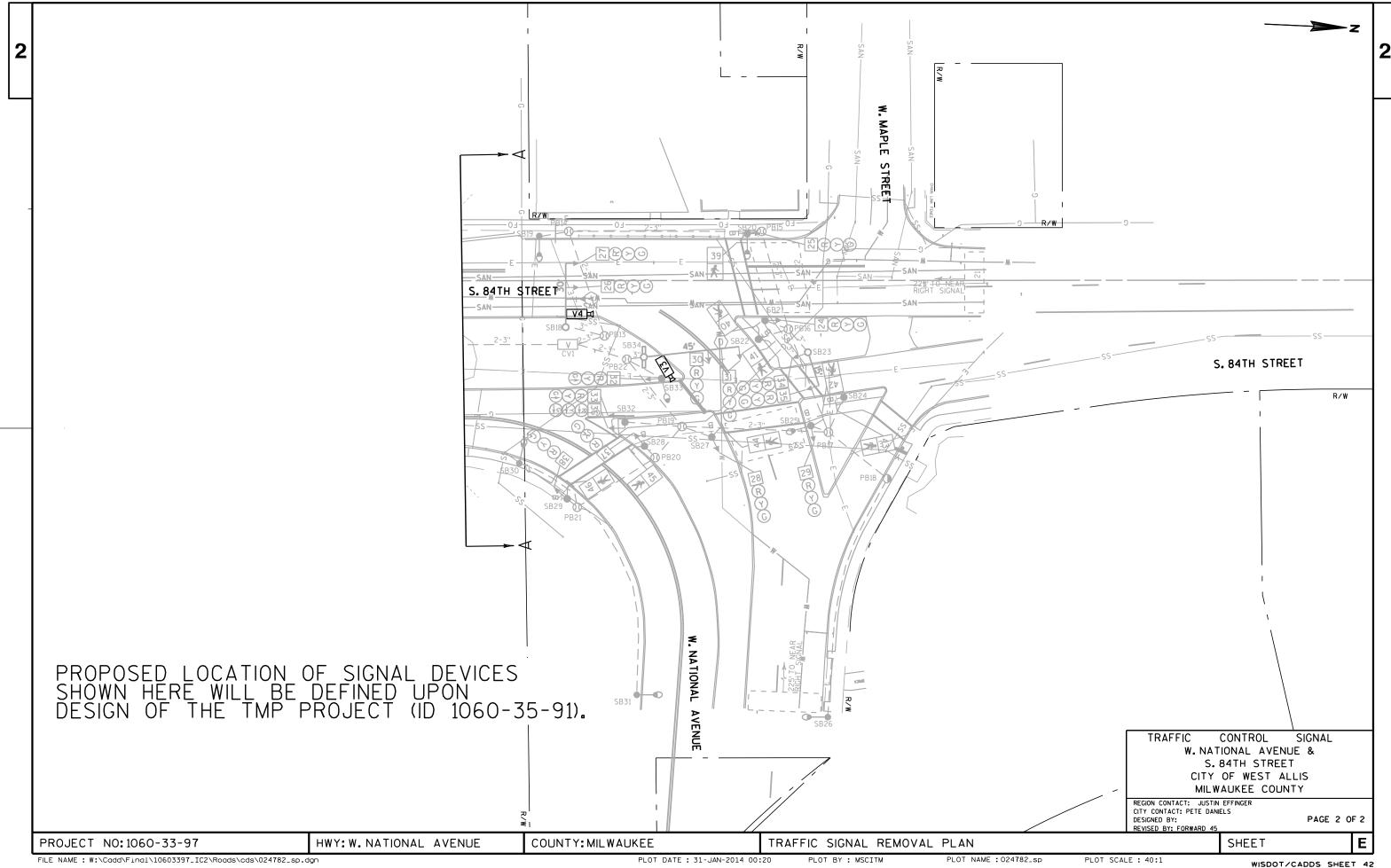
21,22,27,28

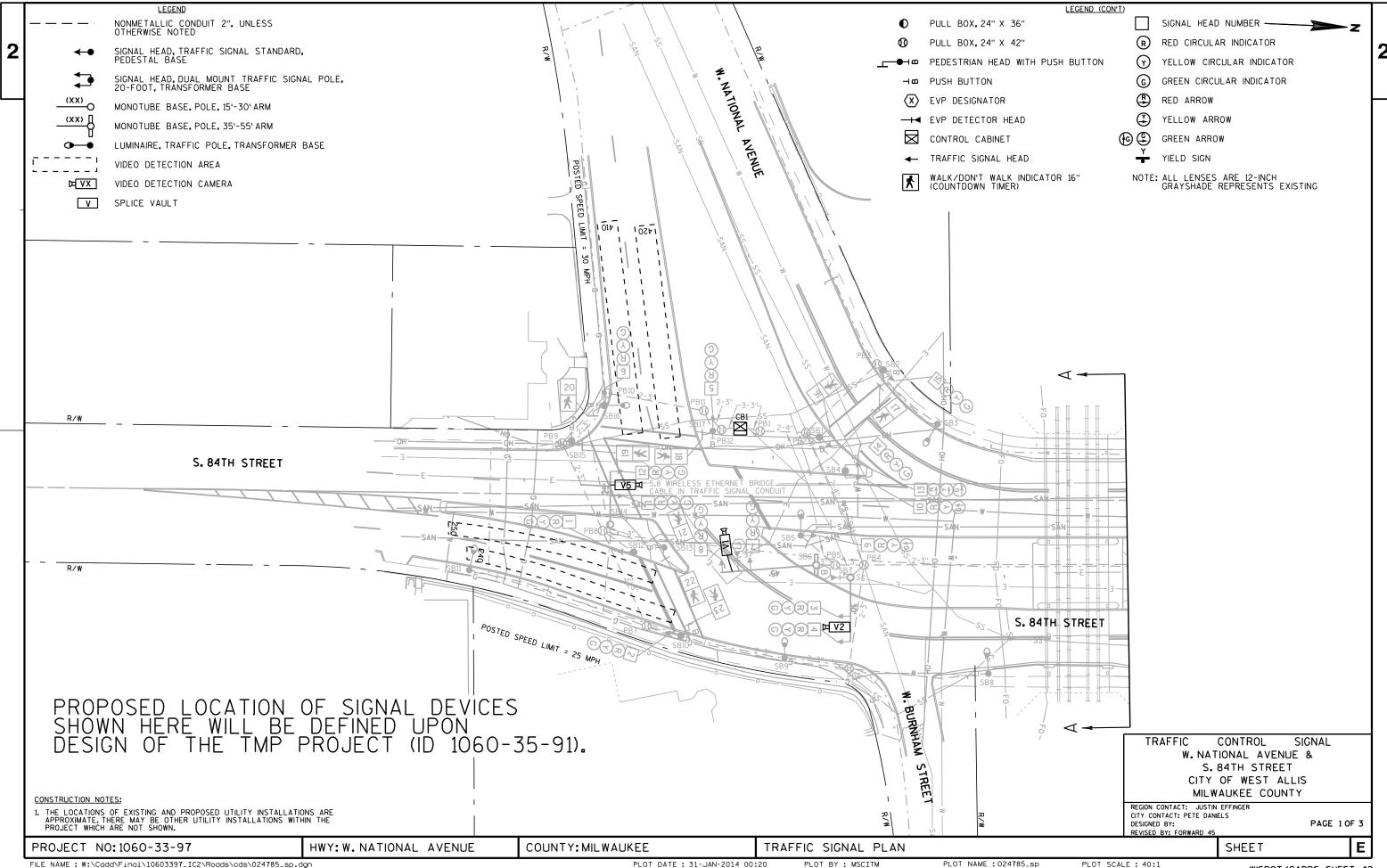
23,24,29,30

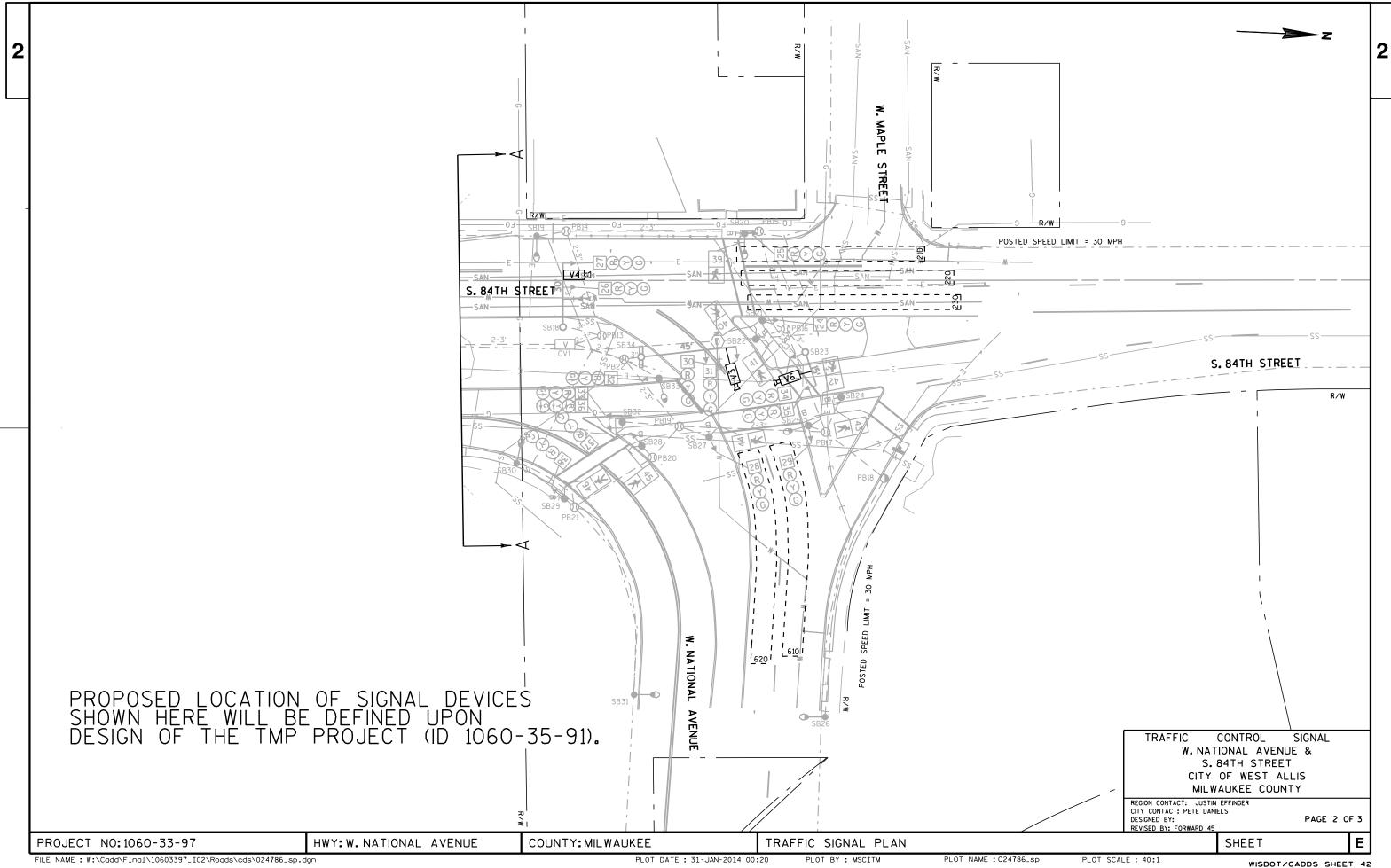
RING 1 05

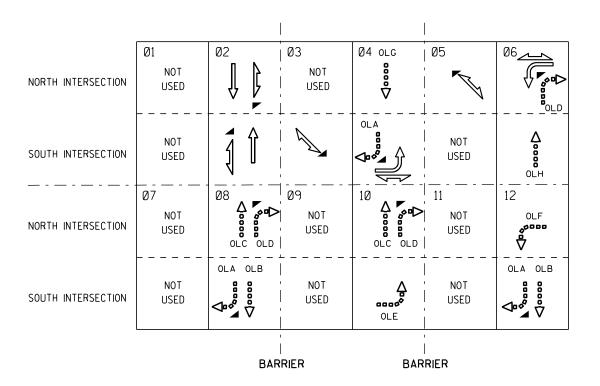
RING











	HEAD NUMBERS
Ø1	
Ø2	1, 2, 3, 4, 24, 25, 26, 27
Ø3	
04	5, 6, 7, 8
Ø5	
Ø6	28, 29, 30, 31
07	
Ø8	
Ø2P	18, 19, 43, 44
Ø3P	16, 17
Ø4P	20, 21, 22, 23
Ø5P	45, 46
Ø6P	39, 40, 41, 42
Ø8P	
OLA	13, 14, 15
OLB	9, 10, 11, 12
OLC	32, 33, 34, 35
OLD	36, 37, 38
OLE	5, 6, 7, 8
OLF	28, 29, 30, 31
OLG	24, 25, 26, 27
OLH	1, 2, 3, 4

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TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	Х
GTT	Х
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

TYPE OF INTERCONNECT COMMUNICA	TION
NONE	Х
TBC	
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
FIBER OPTIC	
RADIO	
*LOCATION OF MASTER	
CONTROLLER NO: S-	
SIGNAL SYSTEM #: SS	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	Х
IN SEPARATE LIGHTING CABINET	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	Α	В	С	D
MOVEMENT	_ ↓↑7 J.↓↑	_ ↓^ ? \^ \^	√17 23	 1 V L
PHASE	2+8	2+8	4+10	6+12
PHASE	2+8	2+8	4+10	6+

NORTH INTERSECTION SOUTH INTERSECTION

AFTER PREEMPTION SEQUENCE 2+8, CONTROLLER SHALL RETURN TO PHASES 2+8
AFTER PREEMPTION SEQUENCE 4+10, CONTROLLER SHALL RETURN TO PHASES 4+10

AFTER PREEMPTION SEQUENCE 6+12, CONTROLLER SHALL RETURN TO PHASES 6+12

W.NATIONAL AVENUE &
S.84TH STREET
CITY OF WEST ALLIS
MILWAUKEE COUNTY
SIGNAL NO.
CONTROLLER TYPE: EPAC
DATE 02/14 PAGE NO. 3 OF 3
SHFFT F

DETECTOR INPUT							
DETECTOR *	210	230	250	420	620		
PHASE ASSIGNED	2	2	2	4	6		
PHASE CALLED	2	2	2	4	6		
PHASE SWITCHED							

				DETECTOR INPUT
				DETECTOR #
				PHASE ASSIGNED
				PHASE CALLED
				PHASE SWITCHED
				,

DETECTOR INPUT						
DETECTOR *	220	240	410	610		
PHASE ASSIGNED	2	2	4	6		
PHASE CALLED	2	2	4	6		
PHASE SWITCHED						

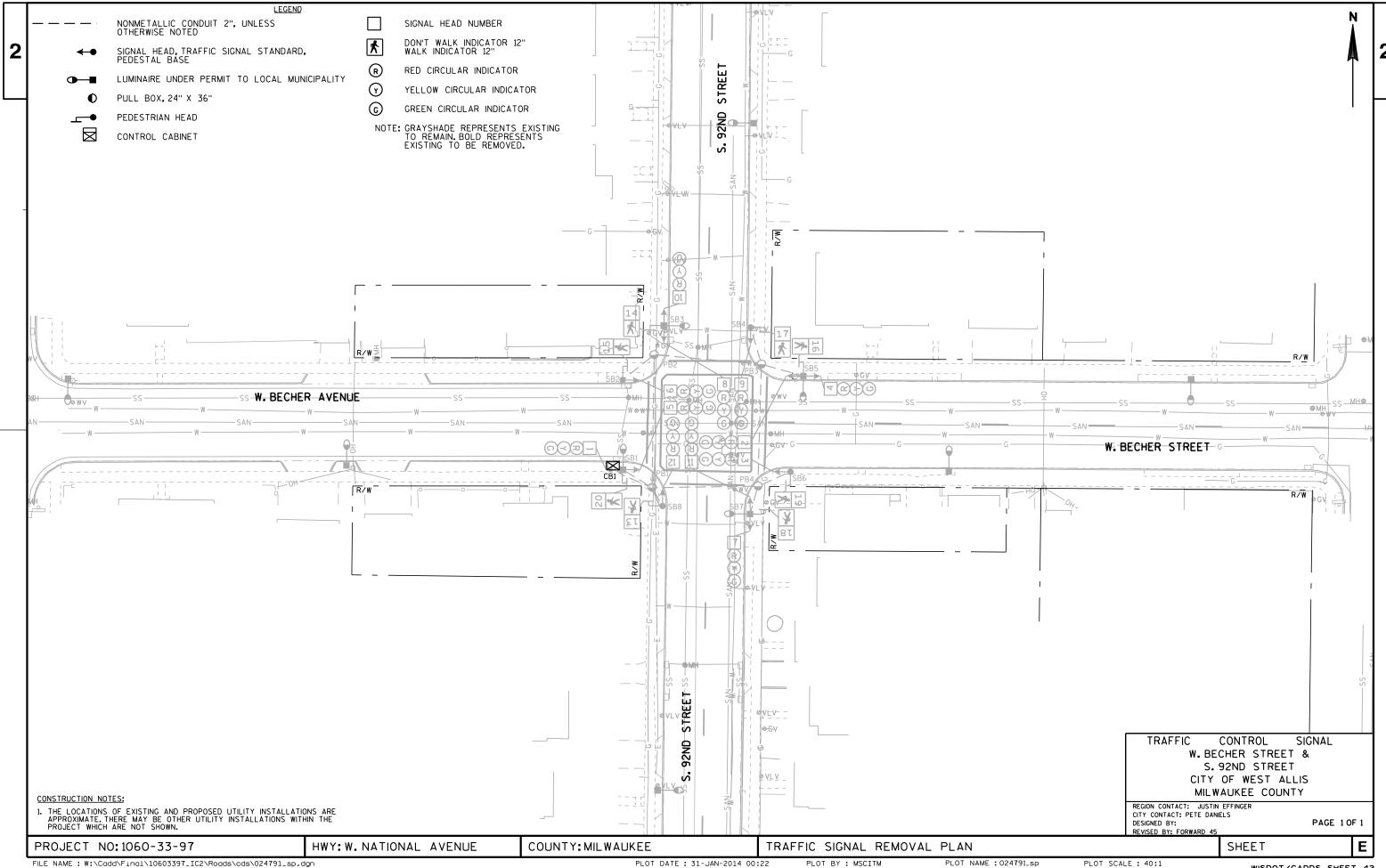
			DETECTOR INPUT
			DETECTOR *
			PHASE ASSIGNED
			PHASE CALLED
			PHASE SWITCHED

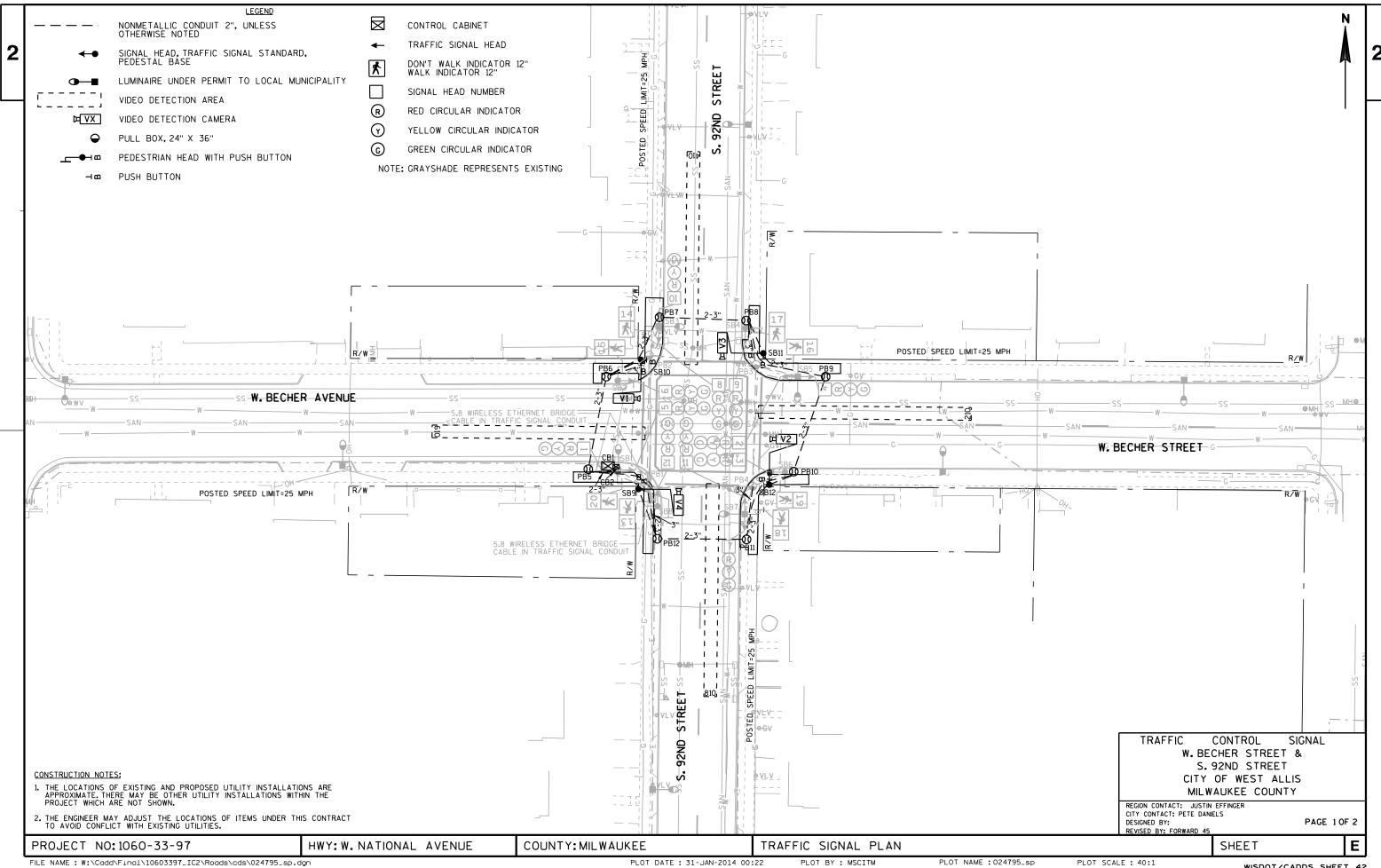
PROJECT NO: 1060-33-97

HWY: W. NATIONAL AVENUE

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN PLOT BY : MSCITM





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R/W	**		R/W	*	*								
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							D	D	D				
							D	D	D				

NOT USED $R \mid R \mid R$

D D D

D D D

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BARRIER

HWY: W. NATIONAL AVENUE

CHART 1

* | D | D |

* WHEN CALLED, TIMED STEADY WALK, THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
01		
02	6	4,8
03		
04	8	2,6
Ø 5		
Ø6	2	4,8
07		
Ø8	4	2,6

COUNTY: MILWAUKEE

DETECTOR LOGIC

·		DETEC	TOR OPER	RATION				•		·	
DETECTOR NUMBER	DETECTOR INPUT	CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
210		Х			2	2					VIDEO
410		х			4	4					VIDEO
610		х			6	6					VIDEO
810		Х			8	8					VIDEO

TYPE OF INTERCONNECT/COMMUNICA	TION
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	Х

R

R

R

R

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	X
*LOCATION OF MASTER	
CONTROLLER NO: S-	
SIGNAL SYSTEM *: SS	

TYPE OF LIGHTING	
BY OTHER AGENCY	×
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE DOT LIGHTING CABINET	

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2		6	MIN.	х
3				
4		8		х
5				
6		2	MIN.	Х
7				
8		4		Х

OVERLAPS

O.L. "A" = 0.L. "B" = O.L. "C" =

O.L. "D" =

TYPE OF PRE-EMPT NONE RAILROAD EMERGENCY VEHICLE 3M TOMAR HARDWIRE GTT LIFT BRIDGE QUEUE DETECTOR

GENERAL NOTES:

- 1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
- 2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1AT LEFT.)

W. BECHER STREET & S. 92ND STREET CITY OF WEST ALLIS MILWAUKEE COUNTY

SHEET

SIGNAL NO.

CONTROLLER TYPE: EPAC

DATE 02/14

PAGE NO. 2 OF 2

SEQUENCE OF OPERATIONS

PLOT NAME: 024799_sp_ph

PLOT SCALE: 40:1

PLOT DATE: 31-JAN-2014 00:23

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Ø4P

Ø6P

Ø8P

01

02

03

05 Ø6

07 Ø8

Ø2P

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PROJECT NO: 1060-33-97

RING 2 04

7,8,9

15,16

13,14

19,20

17,18

HEAD

NUMBERS

4,5,6

10,11,12

1,2,3

7,8,9

15,16

13.14

19,20

17,18

4

W. BECHER AVENUE & S. 92ND STREET

PROJECT ID:	1060-33-97
INTERSECTION:	W. BECHER AVENUE & S. 92ND STREET

SIGNAL WIRE	BLK-BLACK	RED-RED	GRN-GREEN
COLOR CODING	WHT-WHITE	BLU-BLUE	ORG-ORANGE

PLOT NAME: 024800_sp_cr1

PLOT SCALE : 1:1

		NO. OF								<flashing></flashing>			PED
FROM	ТО	CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<red></red>	<yellow></yellow>	<green></green>	<yellow></yellow>	D/WALK	WALK	BUTTON
CB1	SB9	7	В										WHT/BLK
			В										BLK/WHT
CB1	SB10	7	В										WHT/BLK
			В										BLK/WHT
CB1	SB11	7	В										WHT/BLK
			В										BLK/WHT
CB1	SB12	7	В										WHT/BLK
			В										BLK/WHT

EQUIPMENT					
GROUNDING	CONDUCTOR				
10 AWG	GRN XLP				
FROM	TO				
CB1	SB9				
SB9	SB10				
SB10	SB11				
SB11	SB12				
SB12	CB1				

PULL BOX BONDING				
JUM	IPER .			
10 AWG	GRN XLP			
FROM	TO			
PB5	CB1			
PB6	SB10			
PB7	SB10			
PB8	SB11			
PB9	SB11			
PB10	SB12			
PB11	SB12			
PB12	SB9			

VI	VIDEO							
DETE	DETECTION							
CA	ABLE							
FROM	TO							
CB1	SB10 (V1)							
CB1	SB12 (V2)							
CB1	SB11 (V3)							
CB1	SB9 (V4)							
	•							

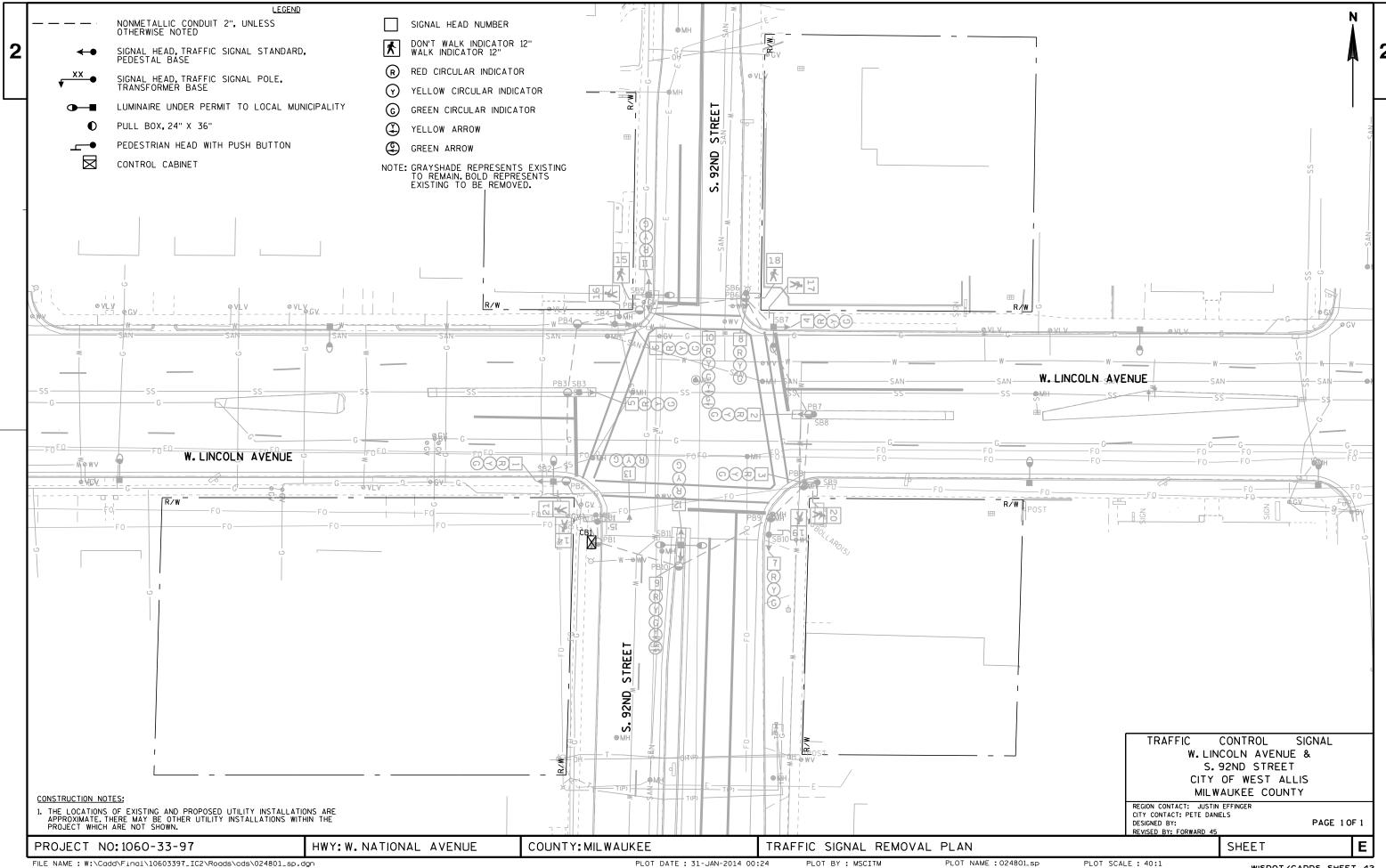
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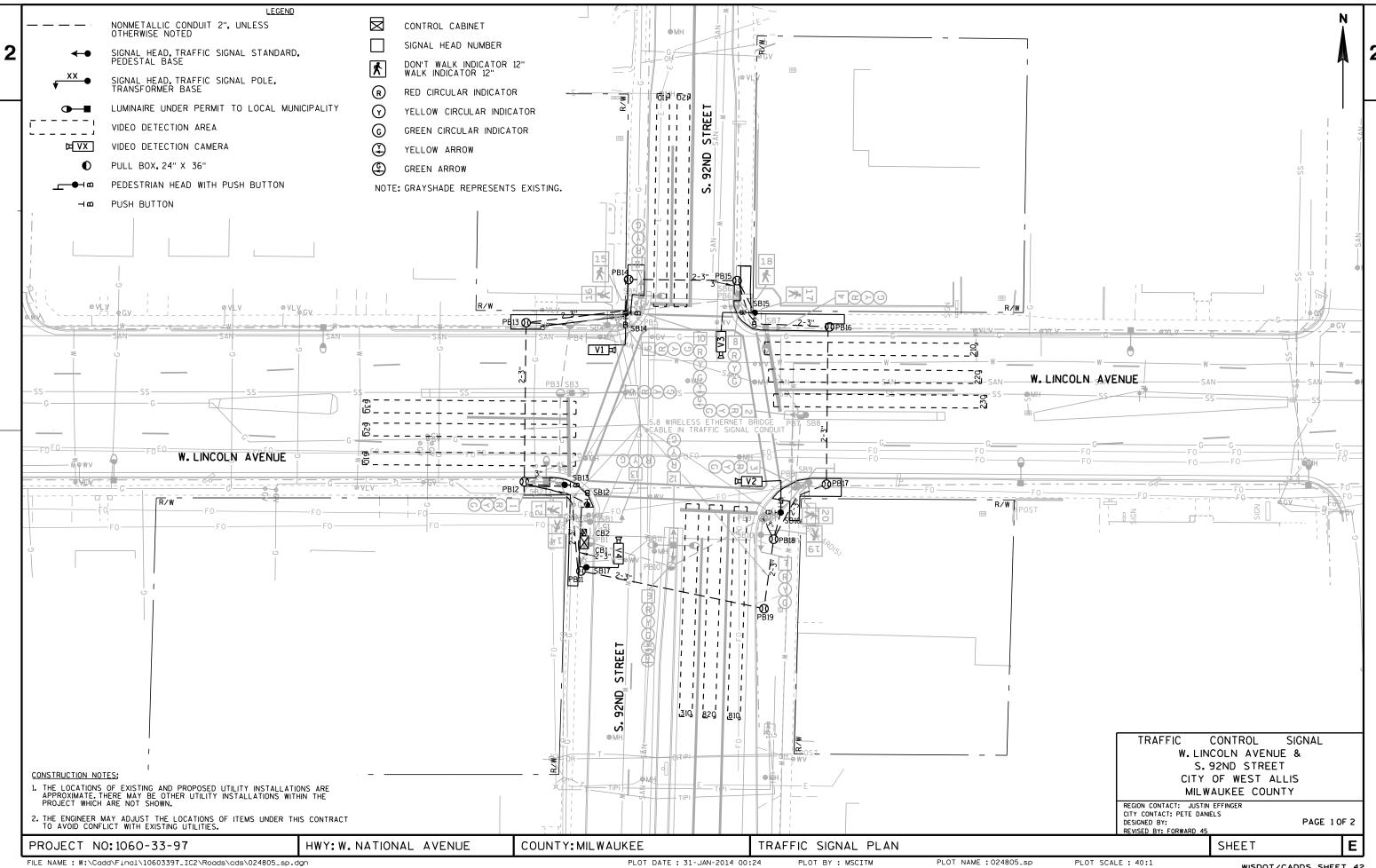
USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.

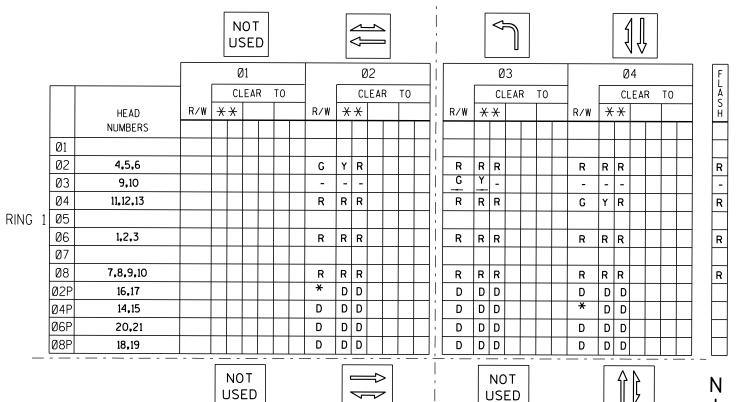
ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.

AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

PROJECT NO: 1060-33-97 HWY: W. NATIONAL AVENUE COUNTY: MILWAUKEE CABLE ROUTING SHEET:







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		HEAD	R/W	* *	<u>:</u>					R/W	X	*				;	R/W
		NUMBERS															
	01																
	02	4,5,6								R	R	R					
	Ø3	9,10								-	-	-					
RING 2	04	11,12,13								R	R	R					
	05															[
	Ø6	1,2,3								G	Υ	R					
	07																
	Ø8	7,8,9,10								R	R	R					
	Ø2P	16,17								D	D	D					
	Ø4P	14,15								D	D	D					
	Ø6P	20,21								*	D	D					
	Ø8P	18,19								D	D	D				$ \cdot $	

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BARRIER

HWY: W. NATIONAL AVENUE

CHART 1

* WHEN CALLED, TIMED STEADY WALK, THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)

$\overline{}$		
PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
01		
10		
02	6	3,4,8
03	8	2,4,6
04	8	2,3,6
Ø5		
Ø6	2	3,4,8
07		
Ø8	3 OR 4	2,6

DETECTOR LOGIC

		DETEC	TOR OPE	RATION							
DETECTOR NUMBER	DETECTOR INPUT	CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE		EXTENSION STRETCH	SIZE	NUMBER OF TURNS
210		Х			2	2					VIDEO
220		×			2	2					VIDEO
230		х			2	2					VIDEO
310		Х			3	3					VIDEO
410		Х			4	4		Х			VIDEO
420		Х			4	4					VIDEO
610		X			6	6					VIDEO
620		Х			6	6					VIDEO
630		Х			6	6					VIDEO
810		Х			8	8		Х			VIDEO
820		Х	·		8	8					VIDEO

TYPE OF INTERCONNECT/COMMUNICATION						
NONE						
CLOSED LOOP						
TWISTED PAIR*						
FIBER OPTIC*						
FIBER OPTIC (ETHERNET)						
RADIO	Х					

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	×
*LOCATION OF MASTER	•
CONTROLLER NO:	S-
SIGNAL SYSTEM #: SS-	-

TYPE OF LIGHTING	
BY OTHER AGENCY	х
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE DOT LIGHTING CABINET	

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / 0	PHASE RECALL	PHASE ACTIVE
1				
2		6	MIN.	Х
3		8		Х
4		8		Х
5				
6		2	MIN.	Х
7				
8		4		Х

OVERLAPS

O.L. "A" = O.L. "B" = O.L. "C" = O.L. "D" =	
O.L. "B" =	
O.L. "C" =	
O.L. "D" =	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	
3M	
TOMAR	
HARDWIRE	
GTT	
LIFT BRIDGE	
OUEUE DETECTOR	

GENERAL NOTES:

- 1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
- 2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1AT LEFT.)
- 3. IF ANY OPPOSING THRU PHASES ARE TIMING CONCURRENTLY, THEY SHALL TERMINATE TOGETHER DUE TO PERMISSIVE LEFT TURN CONFLICT.

W. LINCOLN AVENUE & S. 92ND STREET CITY OF WEST ALLIS MILWAUKEE COUNTY

SIGNAL NO.

CONTROLLER TYPE: EPAC

DATE 02/14

PAGE NO. 2 OF 2

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\024809_sp_ph.dgn

PROJECT NO: 1060-33-97

COUNTY: MILWAUKEE

PLOT DATE: 31-JAN-2014 00:25

SEQUENCE OF OPERATIONS PLOT BY : MSCITM

PLOT NAME: 024809_sp_ph

PLOT SCALE: 40:1

SHEET WISDOT/CADDS SHEET 42

W. LINCOLN AVENUE & S. 92ND STREET

PROJECT ID:	1060-33-97
INTERSECTION:	W. LINCOLN AVENUE & S. 92ND STREET

SIGNAL WIRE	BLK-BLACK	RED-RED	GRN-GREEN
COLOR CODING	WHT-WHITE	BLU-BLUE	ORG-ORANGE

		NO. OF								<flashing></flashing>			PED
FROM	TO	CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<red></red>	<yellow></yellow>	<green></green>	<yellow></yellow>	D/WALK	WALK	BUTTON
CB1	SB12	7	В										WHT/BLK
	SB13												WHT/BLK
CB1	SB14	7	В										WHT/BLK
			В										BLK/WHT
CB1	SB15	7	В										WHT/BLK
		7	В										BLK/WHT
CB1	SB16	7	В										WHT/BLK
			В										BLK/WHT

EQUIPMENT					
GROUNDING	CONDUCTOR				
10 AWG GRN XLP					
FROM	TO				
CB1	SB12				
SB12	SB13				
SB13	SB14				
SB14	SB15				
SB15	SB16				
SB16	CB1				

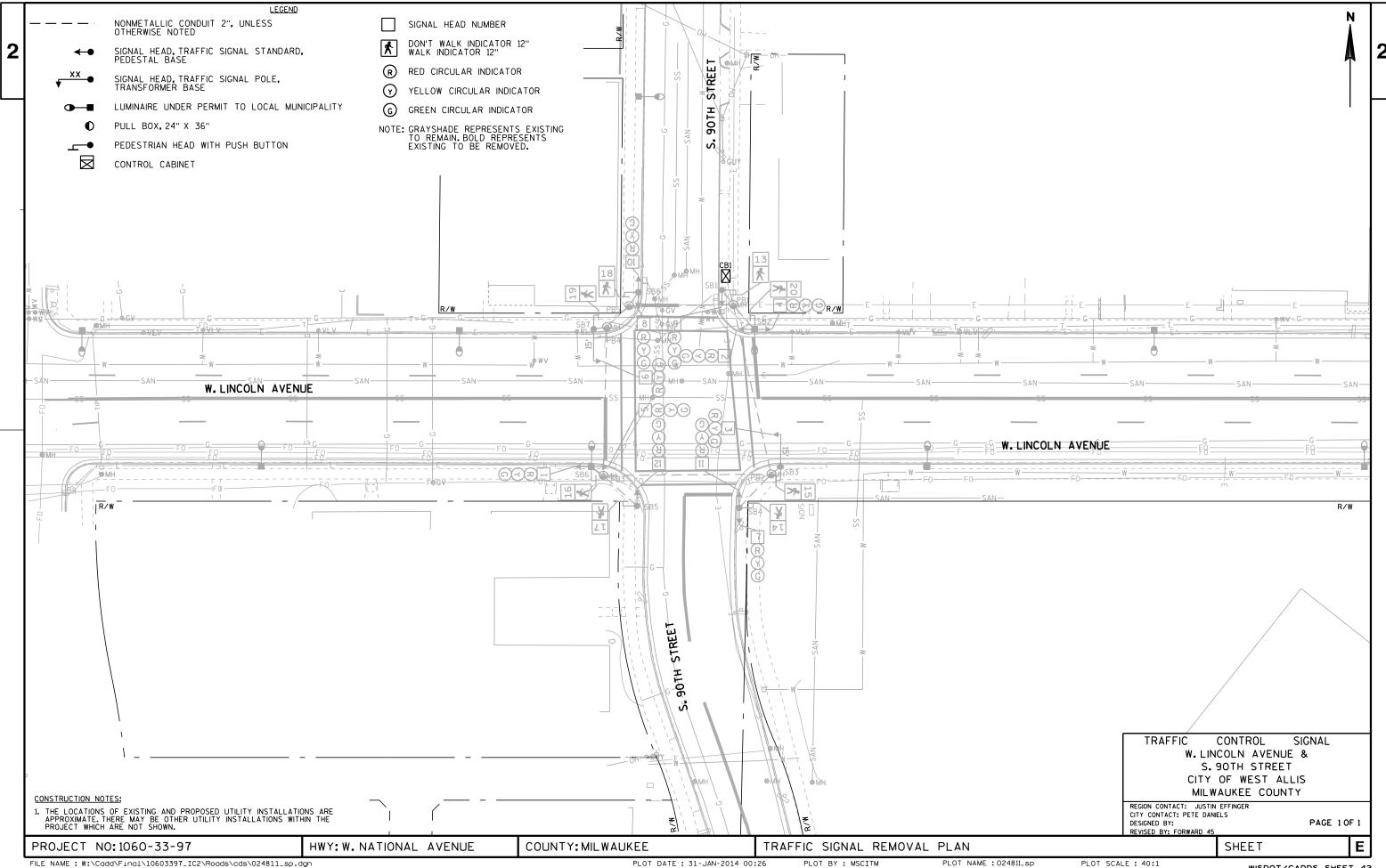
PULL BOX BONDING					
JUIV	IPER				
10 AWG GRN XLP					
FROM	TO				
PB11	CB1				
PB12	SB13				
PB13	SB14				
PB14	SB14				
PB15	SB15				
PB16	SB15				
PB17	SB16				
PB18	SB16				

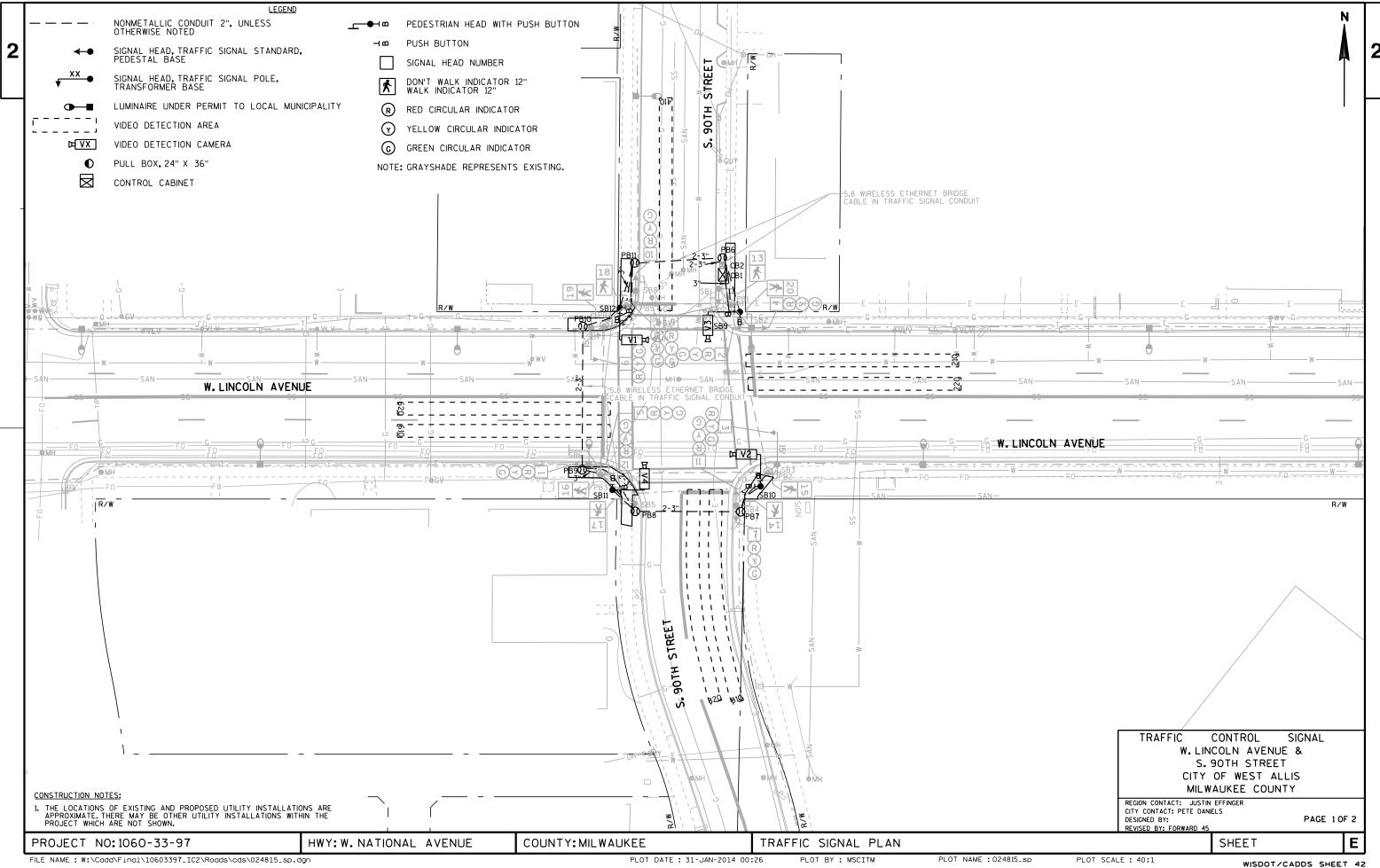
VIDEO							
DETEC	CTION						
CABLE							
FROM	TO						
CB1	SB14 (V1)						
CB1	SB16 (V2)						
CB1	SB15 (V3)						
CB1	SB12 (V4)						

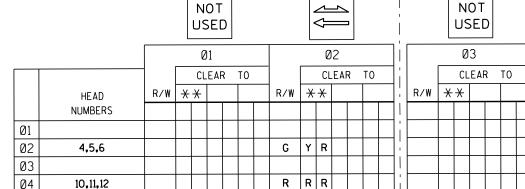
NOTES:

USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS. AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

HWY: W. NATIONAL AVENUE COUNTY: MILWAUKEE CABLE ROUTING SHEET: Е PROJECT NO: 1060-33-97







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HEAD NUMBERS

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	DETECTOR INPUT	DETECTOR OPERATION									
DETECTOR NUMBER		CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
210		Х			2	2					VIDEO
220		Х			2	2					VIDEO
410		Х			4	4					VIDEO
610		х			6	6					VIDEO
620		Х			6	6					VIDEO
810		Х			8	8		X			VIDEO
820		Х			8	8				·	VIDEO

DETECTOR LOGIC

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2		6	MIN.	Х
3				
4		8		Х
5				
6		2	MIN.	Х
7				
8	·	4		Х

TYPE OF INTERCONNECT/COMMUNICATION NONE CLOSED LOOP TWISTED PAIR* FIBER OPTIC* FIBER OPTIC (ETHERNET)

RADIO

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	×
*LOCATION OF MASTER	
CONTROLLER NO: S-	
SIGNAL SYSTEM *: SS-	-

TYPE OF LIGHTING	
BY OTHER AGENCY	•
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE DOT LIGHTING CABINET	Г

OVERLAPS

0.L. "A" =

O.L. "B" =

O.L. "C" =

O.L. "D" =

TYPE OF PRE-EMPT	
NONE	t
RAILROAD	Ι
EMERGENCY VEHICLE	Ī
3M	Ī
TOMAR	I
HARDWIRE	
GTT	
LIFT BRIDGE	
QUEUE DETECTOR	

BARRIER

- ** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)
- * WHEN CALLED, TIMED STEADY WALK, THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

NOT

USED

Ø5

R/W | X X

CLEAR TO

R		CHART 1	
	PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
	01		
	02	6	4,8
	Ø3		
	04	8	2,6
	05		
	Ø6	2	4,8
	07		
	Ø8	4	2,6

GENERAL NOTES:

- 1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
- 2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1AT LEFT.)

SEQUENCE OF OPERATIONS

W. LINCOLN AVENUE & S. 90TH STREET CITY OF WEST ALLIS MILWAUKEE COUNTY

SHEET

SIGNAL NO.

CONTROLLER TYPE: EPAC

DATE 02/14

PAGE NO. 2 OF 2

PROJECT NO: 1060-33-97

HWY: W. NATIONAL AVENUE

COUNTY: MIL WAUKEE

PLOT NAME: 024819_sp_ph

PLOT SCALE: 40:1

WISDOT/CADDS SHEET 42

W. LINCOLN AVENUE & S. 90TH STREET

PROJECT ID:	1060-33-97
INTERSECTION:	W. LINCOLN AVENUE & S. 90TH STREET

SIGNAL WIRE	BLK-BLACK	RED-RED	GRN-GREEN
COLOR CODING	WHT-WHITE	BLU-BLUE	ORG-ORANGE

		NO. OF								<flashing></flashing>			PED
FROM	TO	CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<red></red>	<yellow></yellow>	<green></green>	<yellow></yellow>	D/WALK	WALK	BUTTON
CB1	SB9	7	В										WHT/BLK
			В										BLK/WHT
CB1	SB10	7	В										WHT/BLK
			В										BLK/WHT
CB1	SB11	7	В										WHT/BLK
			В										BLK/WHT
CB1	SB12	7	В										WHT/BLK
			В										BLK/WHT

EQUIF	PMENT									
GROUNDING CONDUCTOR										
10 AWG	GRN XLP									
FROM	TO									
CB1	SB9									
SB9	SB12									
SB12	SB11									
SB11	SB10									
SB10	CB1									

PULL BOX	BONDING									
JUMPER										
	GRN XLP									
FROM	TO									
PB6	CB1									
PB7	SB10									
PB8	SB11									
PB9	SB11									
PB10	SB12									
PB11	SB12									

VIDEO DETECTION CABLE											
FROM	TO										
CB1	SB12 (V1)										
CB1	SB10 (V2)										
CB1	SB9 (V3)										
CB1	SB11 (V4)										

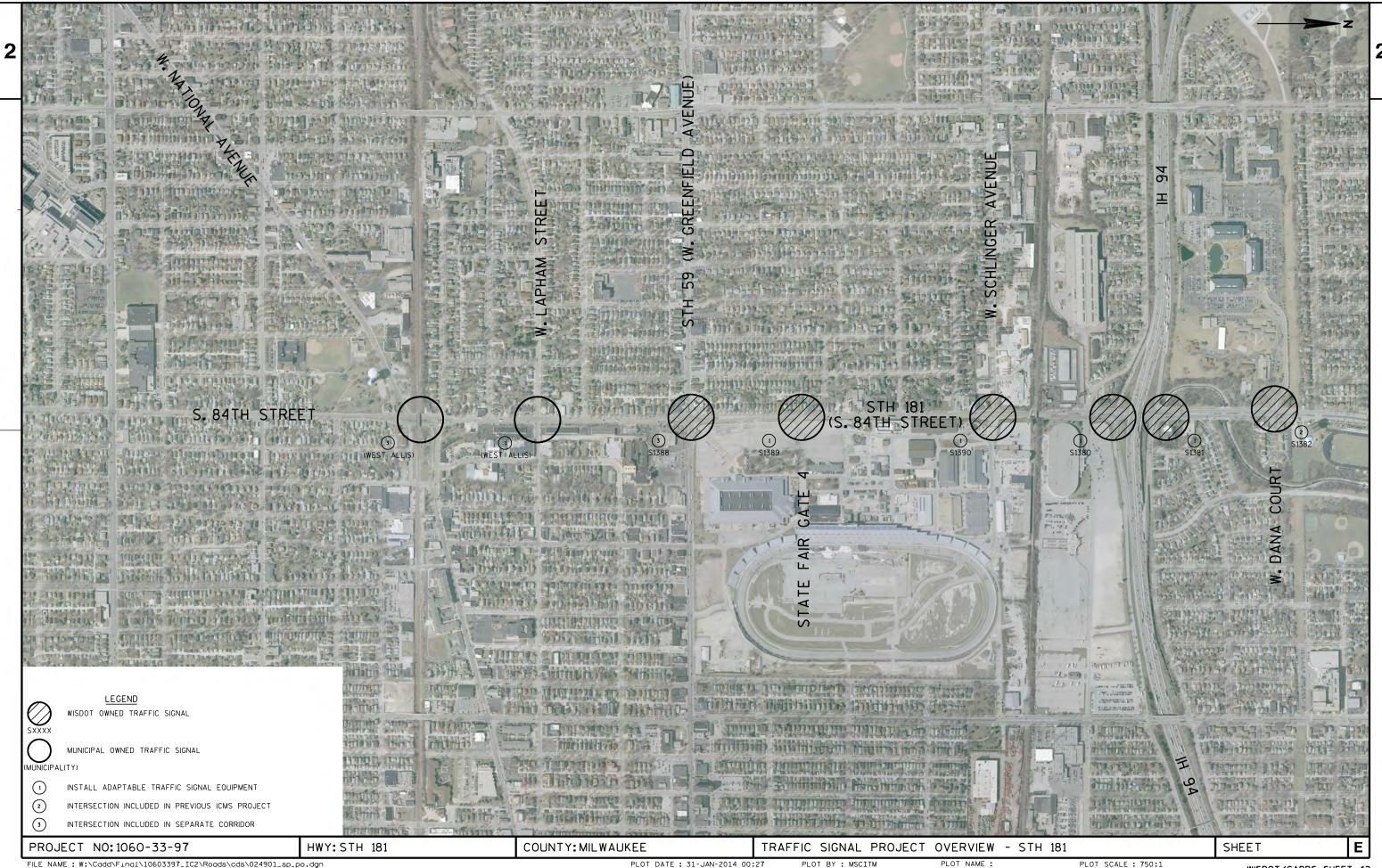
NOTES:

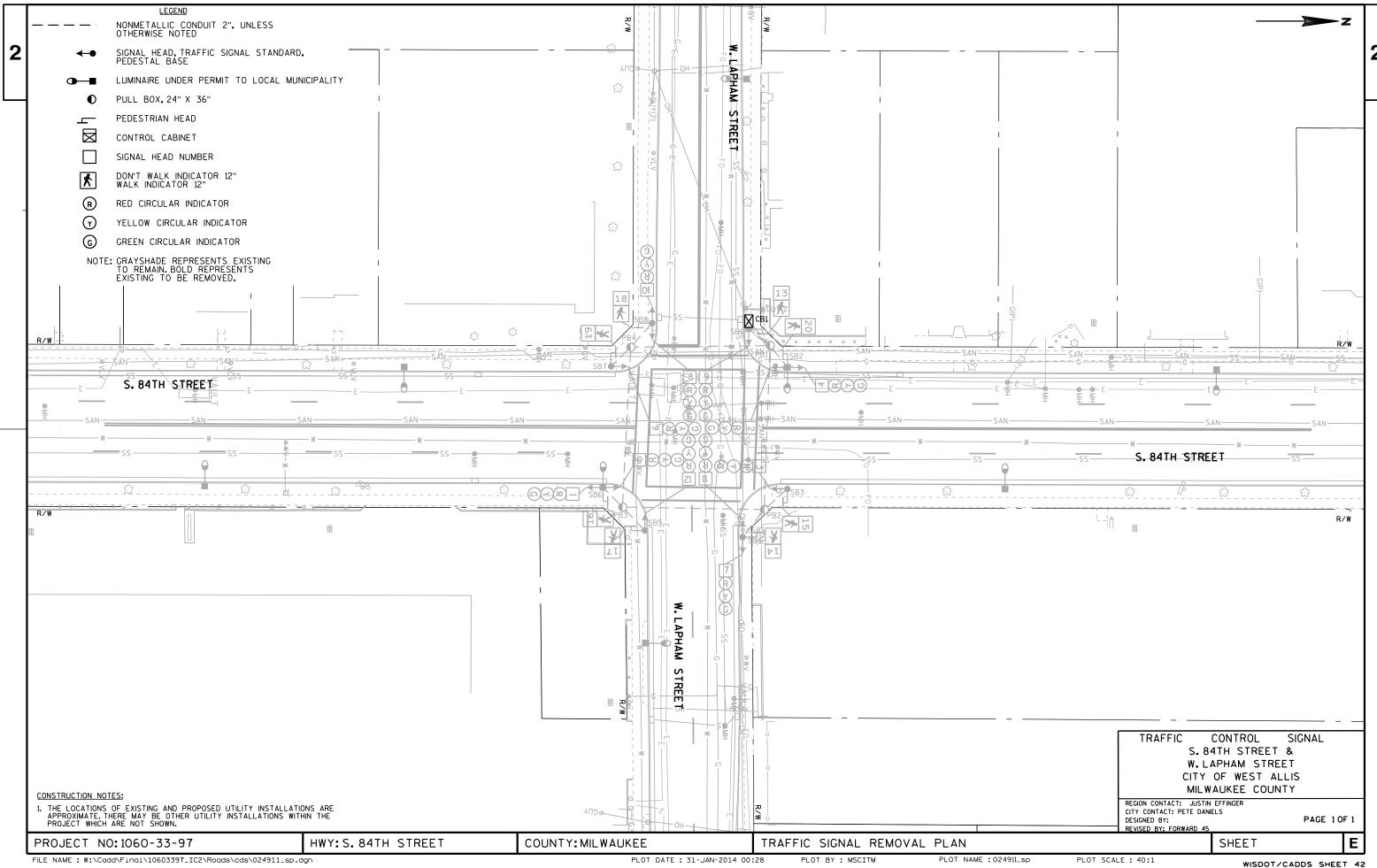
USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.

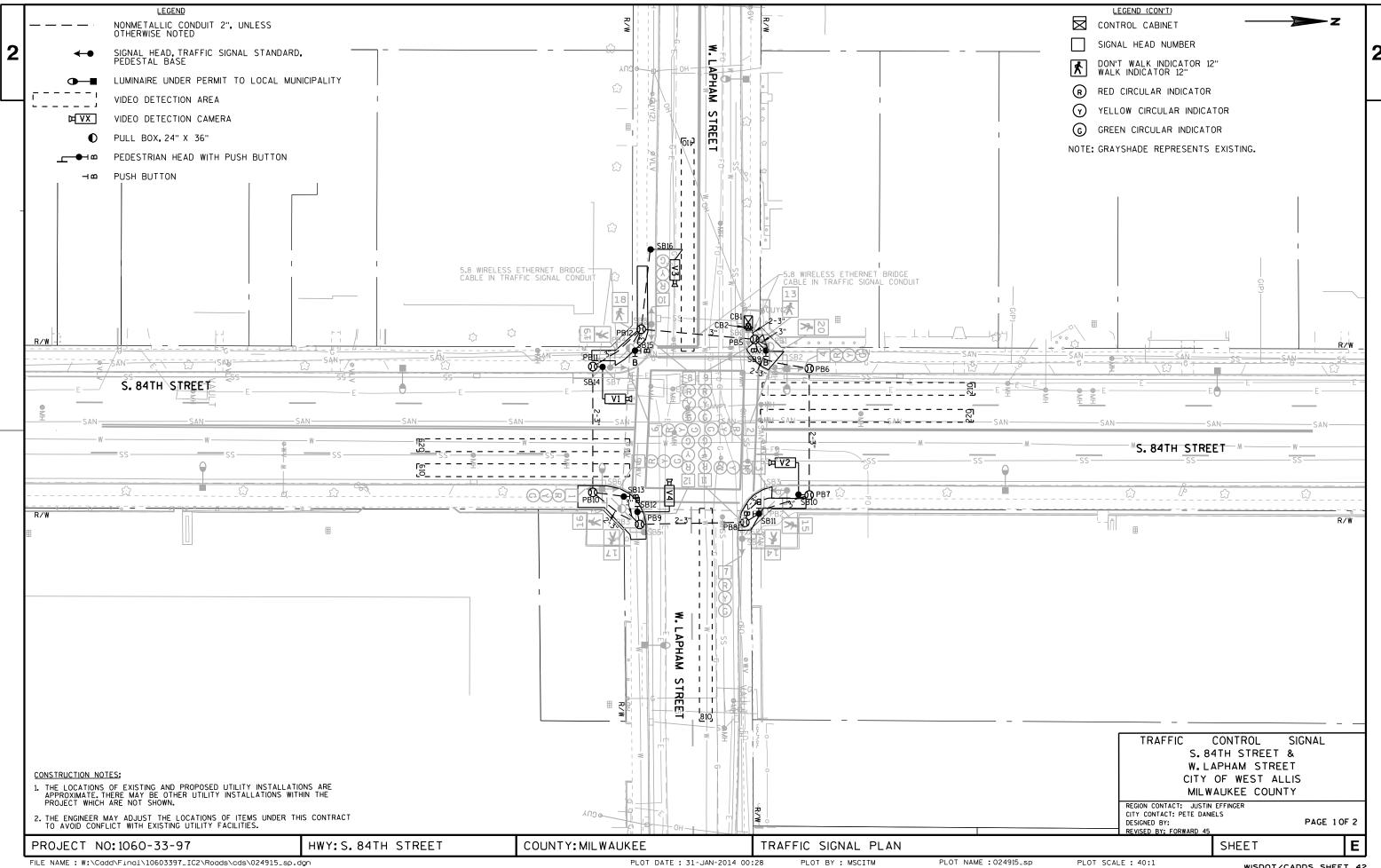
ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.

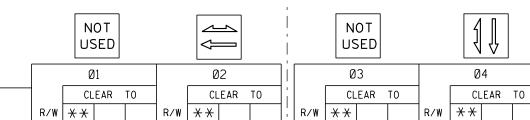
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

PROJECT NO: 1060-33-97 HWY: W. NATIONAL AVENUE COUNTY: MILWAUKEE CABLE ROUTING SHEET: **E**









					CLL	113	10		CLLAN 10		П		CLLAN 10				CLLAN TO				S	:				
		HEAD	R/W	* 7	+			R/\	y [-	X	+		! [R/W	* >	-			R/W	X	*				Н	i
		NUMBERS											۱[
	01												¦[
	02	4,5,6						G	,	Y F	₹		! [R	R	R				R	
	Ø3												l													1
	04	10,11,12						R	F	R F	₹		ίſ						G	Υ	R				R	7
RING 1	05												۱ [1
	Ø6	1,2,3						R	F	R F	₹		[R	R	R				R	
	07												ίſ													1
	08	7,8,9						R	F	R F	₹		; [R	R	R				R	:
	Ø2P	19,20						*	I	D [o∏		[D	D	D					1
	Ø4P	17,18						D		D [)		ίſ						*	D	D					1
	Ø6P	15,16						D	ı	D [)								D	D	D					
	Ø8P	13,14						D	I	D [)		[D	D	D					

										Ц					1			
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		HEAD	R/W	X	*				R/W	*	*				- 1	R/W	*	*
		NUMBERS													1			
	01																	
	02	4,5,6							R	R	R				1			
	03														1			
RING 2	04	10,11,12							R	R	R				1			
	05														ı			
	Ø6	1,2,3							G	Υ	R							
	07														1			
	08	7,8,9							R	R	R				ı			
	Ø2P	19,20							D	۵	D				1			
	Ø4P	17,18							D	D	D							

NOT

USED

		Ø	7			08									
		CL	E A F	₹	TO		CLEAR TO								
R/W	*	*				R/W	*	*							
						R	R	R							
						R	R	R							
												Γ			
						R	R	R							
						G	Υ	R							
						D	D	D							
						D	D	D							
						D	D	D							
						*	D	D							

NOT USED

BARRIER

CHART 1

- ** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)
- f * WHEN CALLED, TIMED STEADY WALK, THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

_			
F	PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
F	01		
	Ø2	6	4,8
	03		
	04	8	2,6
	Ø5		
	Ø6	2	4,8
	07		
	Ø8	4	2,6

DETECTOR LOGIC

		DETEC	TOR OPE	RATION							
DETECTOR NUMBER	DETECTOR INPUT	CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
210		Х			2	2					VIDEO
220		Х			2	2					VIDEO
410		X			4	4					VIDEO
610		×			6	6					VIDEO
620		x			6	6					VIDEO
810		Х			8	8					VIDEO



TYPE OF INTERCONNECT/COMMUNICATION			
NONE			
CLOSED LOOP			
TWISTED PAIR*			
FIBER OPTIC*			
FIBER OPTIC (ETHERNET)			
RADIO	х		

TYPE OF COORDINA	TION	
NONE		
TBC		
TRAFFIC RESPONSIVE		
ADAPTIVE		×
*LOCATION OF MASTER CONTROLLER NO:	Ş-	
SIGNAL SYSTEM *:	SS-	-

TYPE OF LIGHTING BY OTHER AGENCY IN TRAFFIC SIGNAL CABINET
IN SEPARATE DOT LIGHTING CABINET

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / 0	PHASE RECALL	PHASE ACTIVE
1				
2		6	MIN.	х
3				
4		8		х
5				
6		2	MIN.	Х
7				
8		4		х

OVERLAPS

O.L. "A" =	
0.L. "B" =	
0.L. "C" =	
O.L. "D" =	

TYPE OF PRE-EMPT	
NONE	,
RAILROAD	
EMERGENCY VEHICLE	
3M	
TOMAR	
HARDWIRE	
GTT	
LIFT BRIDGE	
QUEUE DETECTOR	

GENERAL NOTES:

- 1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
- 2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1AT LEFT.)

S.84TH STREET & W.LAPHAM STREET CITY OF WEST ALLIS MILWAUKEE COUNTY

SIGNAL NO.

CONTROLLER TYPE: EPAC

DATE 11/13

PAGE NO. 2 OF 2

HWY: S. 84TH STREET

* D D

COUNTY: MILWAUKEE

SEQUENCE OF OPERATIONS PLOT BY : MSCITM

PLOT NAME: 024919_sp_ph

SHEET

Ø6P

PROJECT NO: 1060-33-97

15,16 13,14 4

S. 84TH STREET & W. LAPHAM STREET

PROJECT ID:	1060-33-97
INTERSECTION:	S. 84TH STREET & W. LAPHAM STREET

SIGNAL WIRE	BLK-BLACK	RED-RED	GRN-GREEN
COLOR CODING	WHT-WHITE	BLU-BLUE	ORG-ORANGE

		NO. OF								<flashing></flashing>			PED
FROM	TO	CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<red></red>	<yellow></yellow>	<green></green>	<yellow></yellow>	D/WALK	WALK	BUTTON
CB1	SB9	7	В										WHT/BLK
			В										BLK/WHT
CB1	SB11	7	В										WHT/BLK
			В										BLK/WHT
CB1	SB12	7	В										WHT/BLK
CB1	SB13	7	В										WHT/BLK
CB1	SB15	7	В										WHT/BLK
			В										BLK/WHT

EQUIPMENT			
GROUNDING CONDUCTOR			
10 AWG GRN XLP			
FROM	TO		
CB1	SB9		
SB9	SB10		
SB10	SB11		
SB11	SB12		
SB12	SB13		
SB13	SB14		
SB14	SB15		
SB15	SB16		
SB16	CB1		

PULL BOX BONDING				
JUMPER				
10 AWG GRN XLP				
FROM	TO			
PB5	CB1			
PB6	SB9			
PB7	SB10			
PB8	SB11			
PB9	SB12			
PB10	SB13			
PB11	SB14			
PB12	SB15			

VIDEO				
DETECTION				
CA	BLE			
FROM	TO			
CB1	SB14 (V1)			
CB1	SB10 (V2)			
CB1	SB16 (V3)			
CB1	SB12 (V4)			
·				

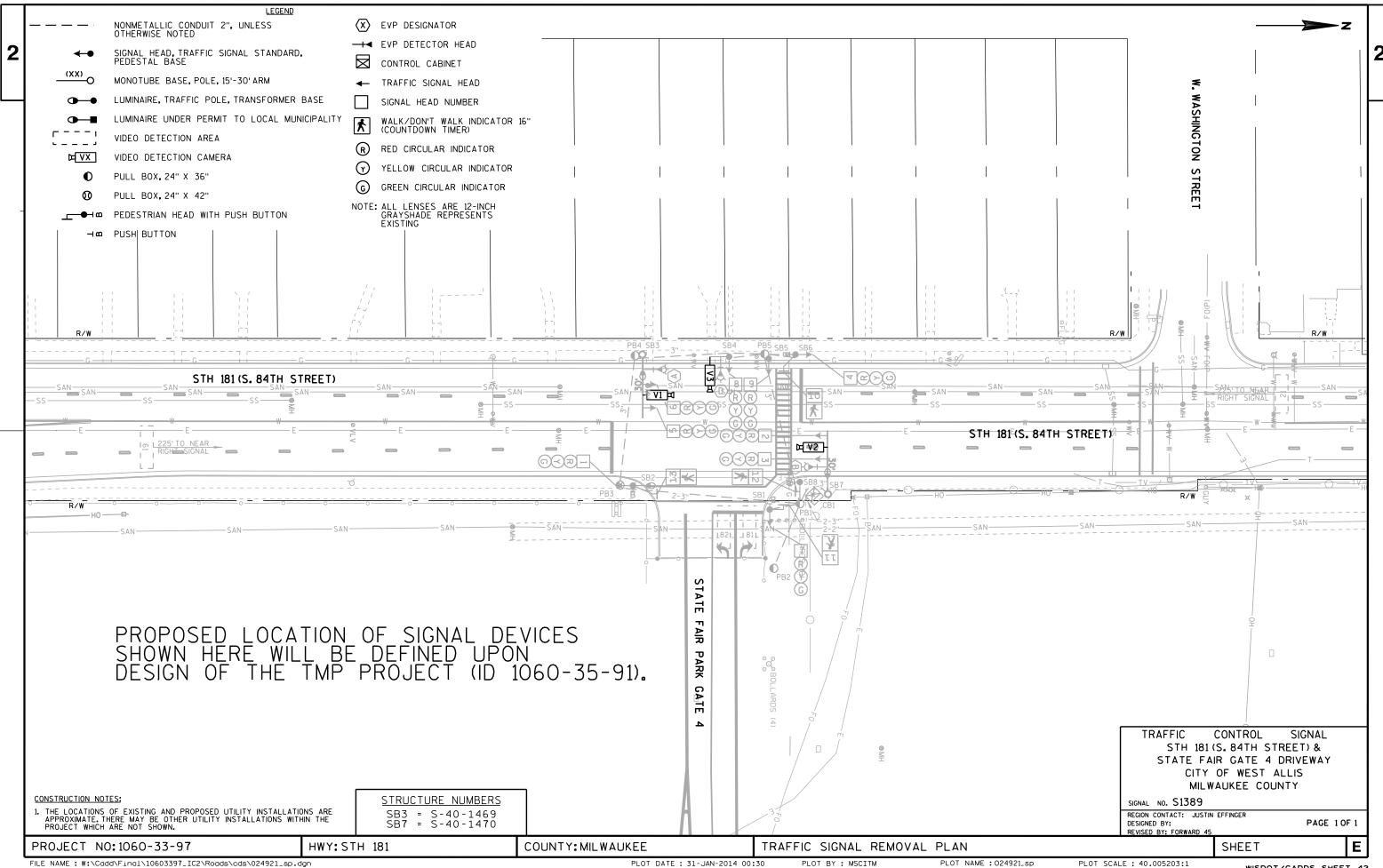
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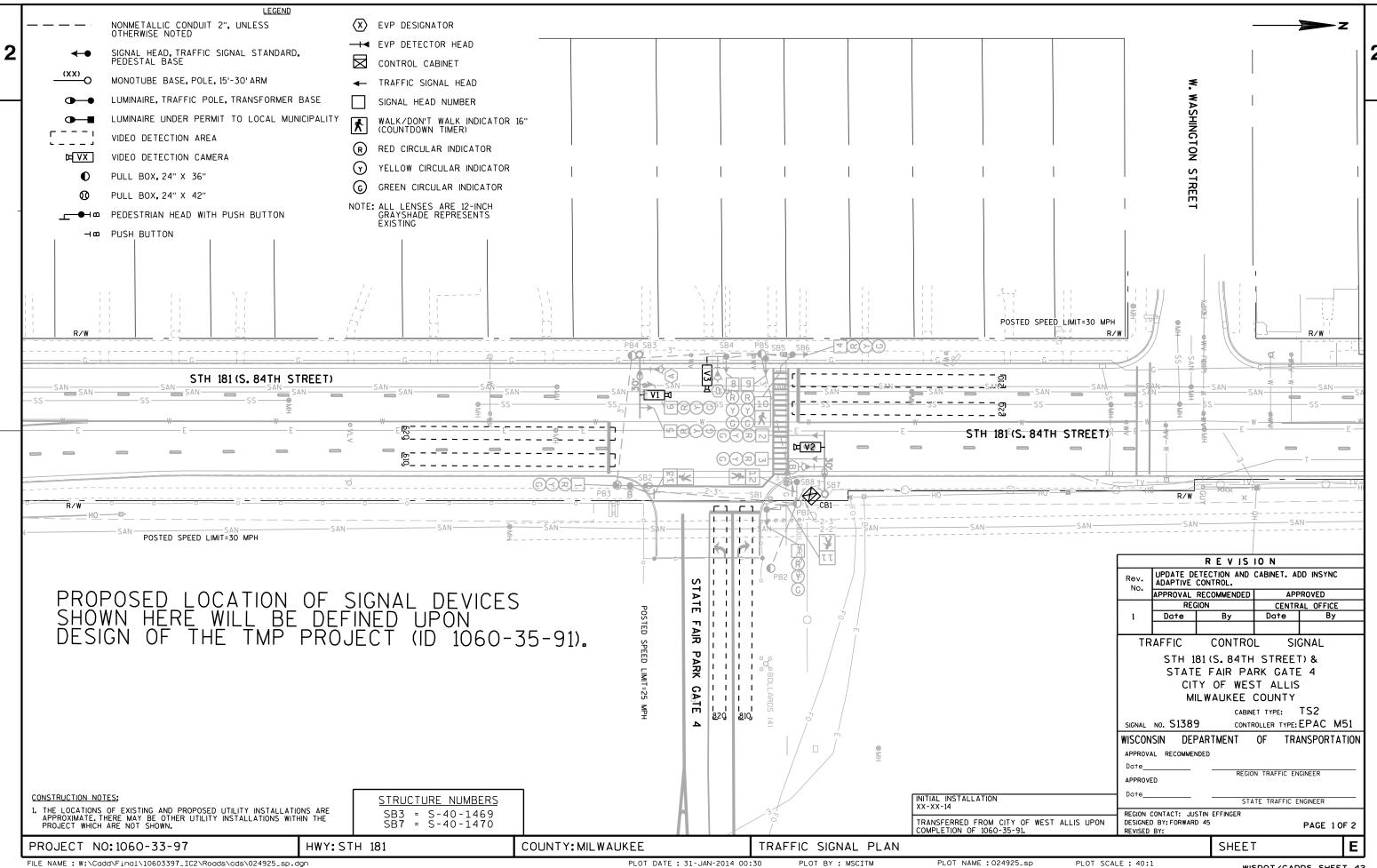
USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.

ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.

AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

PROJECT NO: 1060-33-97 HWY: S. 84TH STREET COUNTY: MILWAUKEE CABLE ROUTING SHEET: **E**





HEAD NUMBERS

4,5,6

1,2,3

7,8,9

12,13

10,11

02

Ø3Ø4Ø5Ø6

Ø7 Ø8

Ø4P Ø6P

Ø8P

OLA OLB OLC

CONTROLLER LOGIC

RING 1	NOT USED			NOT USED	NOT USED
	Ø1	Ø2		Ø3	04
			, 1		
RING 2	NOT USED			NOT USED	

Ø6

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2		6	MIN	×
3				
4				
5				
6		2	MIN	×
7				
8				x

TYPE OF INTERCONNECT/COMMUNICATION					
NONE					
CLOSED LOOP					
TWISTED PAIR*					
FIBER OPTIC*					
FIBER OPTIC (ETHERNET)	X				
RADIO					

X

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	Х
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	х
GTT	×
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

		CHANNEL					
EMERGENCY VEHI PREEMPTOR	CLE A	В	D				
MOVEMENT	<	←	1				
PHASE	2+6	6+2	8				

AFTER PREEMPTION SEQUENCE 2+6 OR 6+2, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 8, CONTROLLER SHALL RETURN TO PHASE 8.

STH 181 (S. 84TH STREET) &
STATE FAIR PARK GATE 4
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S1389 CABINET TYPE: TS2

CONTROLLER TYPE: EPAC

DATE 02/14

PAGE NO. 2 OF 2

DETECTOR LOGIC

BARRIER

Ø7

Ø8

DETECTOR INPUT						
PLAN LOOP DETECTOR *(S)	210	610	810			
ASSIGNED PHASE	2	6	8			
OPERATION MODE	VEH	VEH	VEH			
SWITCH						
EXTEND						
DELAY			X			

Ø5

DETECTOR INPUT						
PLAN LOOP DETECTOR #(S)	220	620	820			
ASSIGNED PHASE	2	6	8			
OPERATION MODE	VEH	VEH	VEH			
SWITCH						
EXTEND						
DELAY						

				DETECTOR INPUT
				PLAN LOOP DETECTOR *(S)
				ASSIGNED PHASE
				OPERATION MODE
				SWITCH
				EXTEND
				DELAY

				DETECTOR INPUT
				PLAN LOOP DETECTOR *(S
				ASSIGNED PHASE
				OPERATION MODE
				SWITCH
				EXTEND
				DELAY
				'

PROJECT NO: 1060-33-97

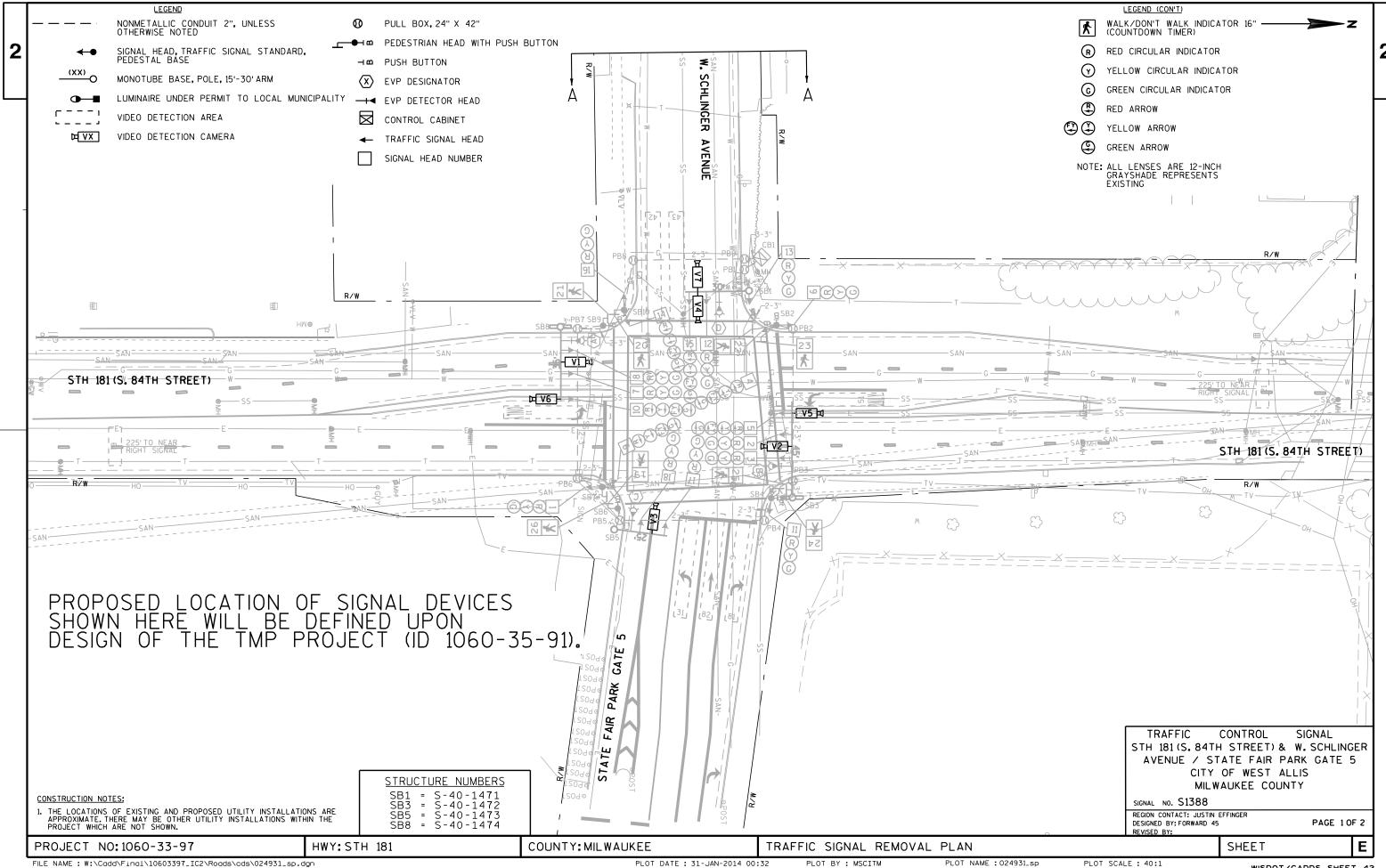
HWY: STH 181

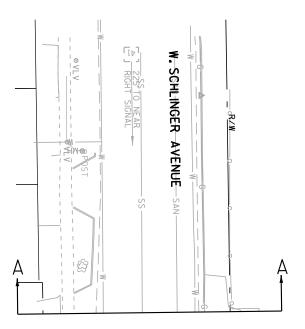
COUNTY: MILWAUKEE

SEQUENCE OF OPERATIONS

31 PLOT BY: MSCITM

PLOT NAME : 024929_sp_ph





PROPOSED LOCATION OF SIGNAL DEVICES SHOWN HERE WILL BE DEFINED UPON DESIGN OF THE TMP PROJECT (ID 1060-35-91).

TRAFFIC CONTROL SIGNAL STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE / STATE FAIR PARK GATE 5 CITY OF WEST ALLIS MILWAUKEE COUNTY

SIGNAL NO. S1388

REGION CONTACT: JUSTIN EFFINGER DESIGNED BY: FORWARD 45 REVISED BY:

PAGE 2 OF 2

PROJECT NO: 1060-33-97

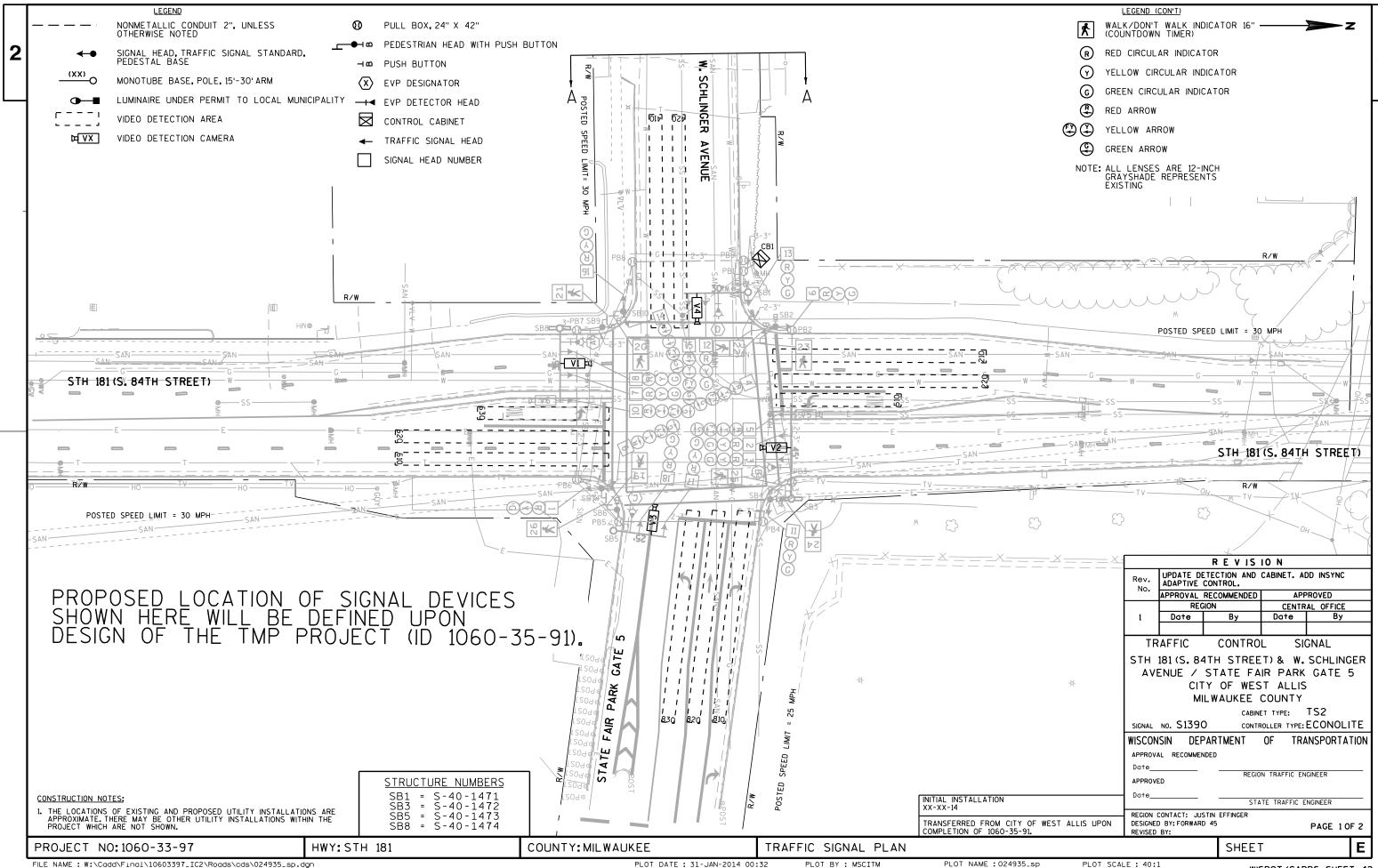
HWY:STH 181

COUNTY: MILWAUKEE

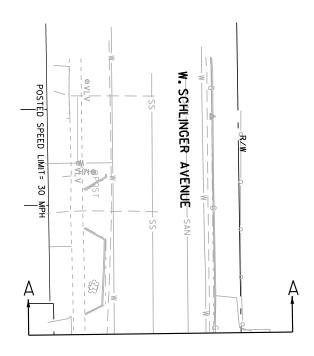
TRAFFIC SIGNAL REMOVAL PLAN

PLOT BY : MSCITM

PLOT NAME: 024932_sp



2



PROPOSED LOCATION OF SIGNAL DEVICES SHOWN HERE WILL BE DEFINED UPON DESIGN OF THE TMP PROJECT (ID 1060-35-91).

TRAFFIC CONTROL SIGNAL
STH 181 (S. 84TH STREET) & W. SCHLINGER
AVENUE / STATE FAIR PARK GATE 5
CITY OF WEST ALLIS
MILWAUKEE COUNTY

SIGNAL NO. S1388

REGION CONTACT: JUSTIN EFFINGER DESIGNED BY: FORWARD 45 REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1060-33-97

HWY:STH 181

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

32 PLOT BY: MSCITM

PLOT NAME : 024936_sp

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2		6	MIN	×
3				
4		8		×
5		2		×
6		2	MIN	×
7		·		
8		4		X

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2		6	MIN	х
3				
4		8		×
5		2		х
6		2	MIN	x
7				
8		4		х

NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	X
RADIO	

TION	
	×
S-	
SS	
	S- SS

TYPE OF LIGHTING	
BY OTHER AGENCY	х
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	×
GTT	×
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
OUEUE DETECTOR	

DETECTOR LOGIC

BARRIER

NOT

USED

Ø3

NOT

USED

07

04

Ø8

DETECTOR INPUT							
PLAN LOOP DETECTOR *(S)	210	410	510	620	810	830	
CALLED PHASE	2	4	4	6	8	8	
CALL OPTION	X	Х	Х	Х	Х	Х	
DELAY TIME		X			Х		
EXTEND OPTION	Х	X	X	Х	Х	Х	
EXTEND TIME							
USE ADDED INITIAL							
CROSS SWITCH PHASE			2				
		•					
DETECTOR INPUT							
PLAN LOOP DETECTOR *(S)	220	420	610	630	820		
CALLED PHASE	2	4	Δ	6	Я		

NOT

USED

Ø1

05

0.L. E

02

№000

츳 O.L. G

 $\overline{}$

06

RING 1

RING 2

R

R

R

R

DETECTOR INPUT							
PLAN LOOP DETECTOR *(S)	220	420	610	630	820		
CALLED PHASE	2	4	4	6	8		
CALL OPTION	Χ	X	Х	Х	Х		
DELAY TIME							
EXTEND OPTION	Х	X	Х	Х	Х		
EXTEND TIME							
USE ADDED INITIAL							
CROSS SWITCH PHASE							

				DETECTOR INPUT
				PLAN LOOP DETECTOR #(S)
				CALLED PHASE
				CALL OPTION
				DELAY TIME
				EXTEND OPTION
				EXTEND TIME
				USE ADDED INITIAL
				CROSS SWITCH PHASE
 •				,

				DETECTOR INPUT
				PLAN LOOP DETECTOR *(S)
				CALLED PHASE
				CALL OPTION
				DELAY TIME
				EXTEND OPTION
				EXTEND TIME
				USE ADDED INITIAL
				CROSS SWITCH PHASE
			lI	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

	CHANNEL						
EMERGENCY VEHICLE PREEMPTOR	A	В	С	D			
MOVEMENT	A F	—————————————————————————————————————	↓ ":↑	↓ "↑			
PHASE	2+5	6+2	4+8	8+4			

AFTER PREEMPTION SEQUENCE 2+5 OR 6+2. CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

STH 181(S.84TH STREET) & W.SCHLINGER AVENUE / STATE FAIR GATE 5 CITY OF WEST ALLIS MILWAUKEE COUNTY

SIGNAL NO. S1388 CABINET TYPE: TS2 CONTROLLER TYPE: ECONOLITE

DATE 02/14

PAGE NO. 3 OF 3

PROJECT NO: 1060-33-97 HWY: STH 181 COUNTY: MILWAUKEE

SEQUENCE OF OPERATIONS PLOT BY : MSCITM

PLOT NAME: 024939_sp_ph

SHEET

HEAD

NUMBERS

6,7,8

16,17,18

9,10

1,2,3

11,12,13

21,22

19,20

25,26

23,24

4,5

14,15

9,10

01 02

03

04

Ø5

Ø6

07

Ø8

Ø4P

Ø6P

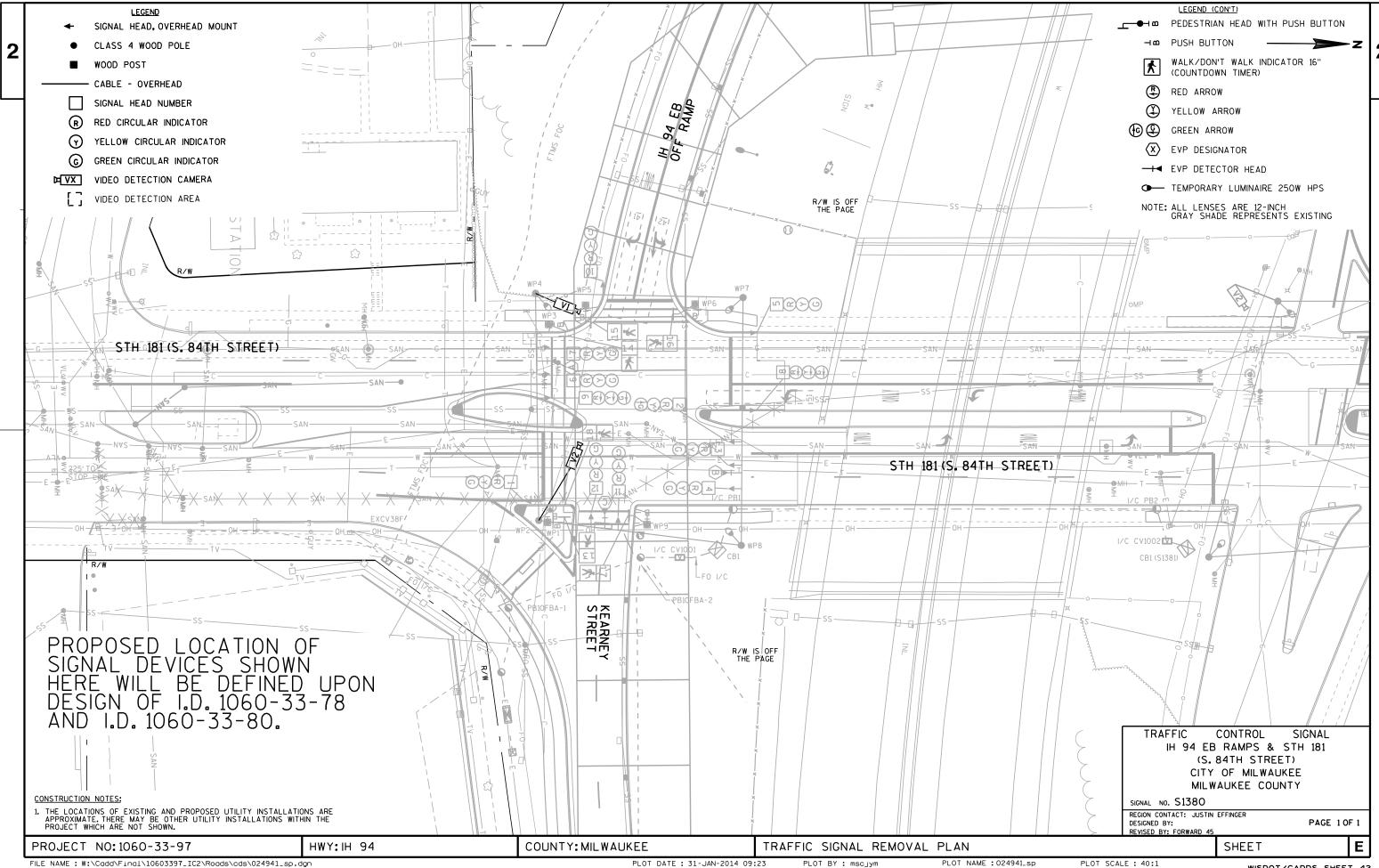
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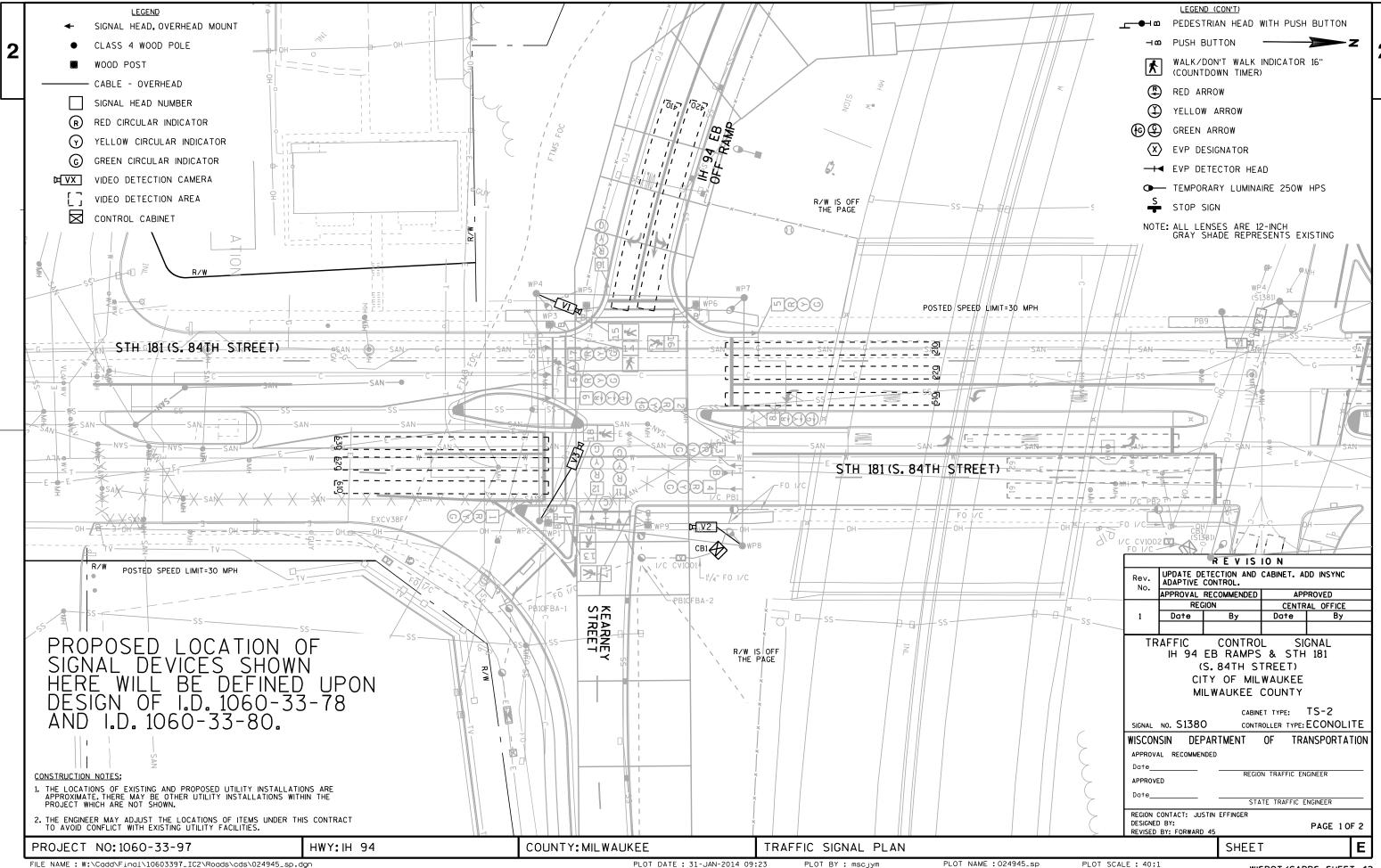
OLE

OLF

OLG

OLH





03

04

05

Ø6

07 Ø8 Ø2P

Ø4P

Ø6P

Ø8P

OLA OLB OLC

HEAD

NUMBERS

5,6,7

10,11,12

8,9

1,2,3,4

15,16

13,14

17,18

DETECTOR INPUT PLAN LOOP DETECTOR *(S)

210

410

510

620

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2		6	MIN	×
3				
4				×
5		2		×
6		2	MIN	×
7	·			
8				

TYPE OF INTERCONNECT/COMMUNICA	TION
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	Х
RADIO	

TYPE OF COORDINAT	ON	
NONE		
TBC		
TRAFFIC RESPONSIVE		
ADAPTIVE		×
*LOCATION OF MASTER		
CONTROLLER NO:	S-	
SIGNAL SYSTEM *:	SS	

TYPE OF LIGHTING	
BY OTHER AGENCY	х
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	х
GTT	Х
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

DETECTOR LOGIC

BARRIER

NOT

USED

Ø3

NOT

USED

07

04

NOT

USED

Ø8

ASSIGNED THASE			ر ا	0		1	
OPERATION MODE	VEH	VEH	VEH	VEH			
SWITCH							
EXTEND							
DELAY							
DETECTOR INPUT							
PLAN LOOP DETECTOR *(S)	220	420	610	630			
ASSIGNED PHASE	2	4	6	6			
OPERATION MODE	VEH	VEH	VEH	VEH			
SWITCH							
EXTEND							
DELAY							
·							

NOT

USED

Ø1

Ø5

HWY:IH 94

02

Ø6

RING 1

RING 2

R

R

R

				DETECTOR INPUT
				PLAN LOOP DETECTOR *(S)
				ASSIGNED PHASE
				OPERATION MODE
				SWITCH
				EXTEND
				DELAY
				DETECTOR INPUT

				DETECTOR INPUT
				PLAN LOOP DETECTOR *(S)
				ASSIGNED PHASE
				OPERATION MODE
				SWITCH
				EXTEND
				DELAY

PLOT DATE: 31-JAN-2014 09:24

EMERGENCY VEHICLE PREEMPTION SEQUENCE

		CHANNEL	
EMERGENCY VEHICLE PREEMPTOR	A	В	С
MOVEMENT	<u> </u>	√	V
PHASE	2+5	6+2	4

AFTER PREEMPTION SEQUENCE 2+5 OR 6+2, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4, CONTROLLER SHALL RETURN TO PHASE 4.

IH 94 EB RAMPS & STH 181 (S. 84TH STREET) CITY OF MILWAUKEE MILWAUKEE COUNTY

SIGNAL NO. S1380 CABINET TYPE: TS2 CONTROLLER TYPE: EPAC

DATE 02/14

PAGE NO. 2 OF 2

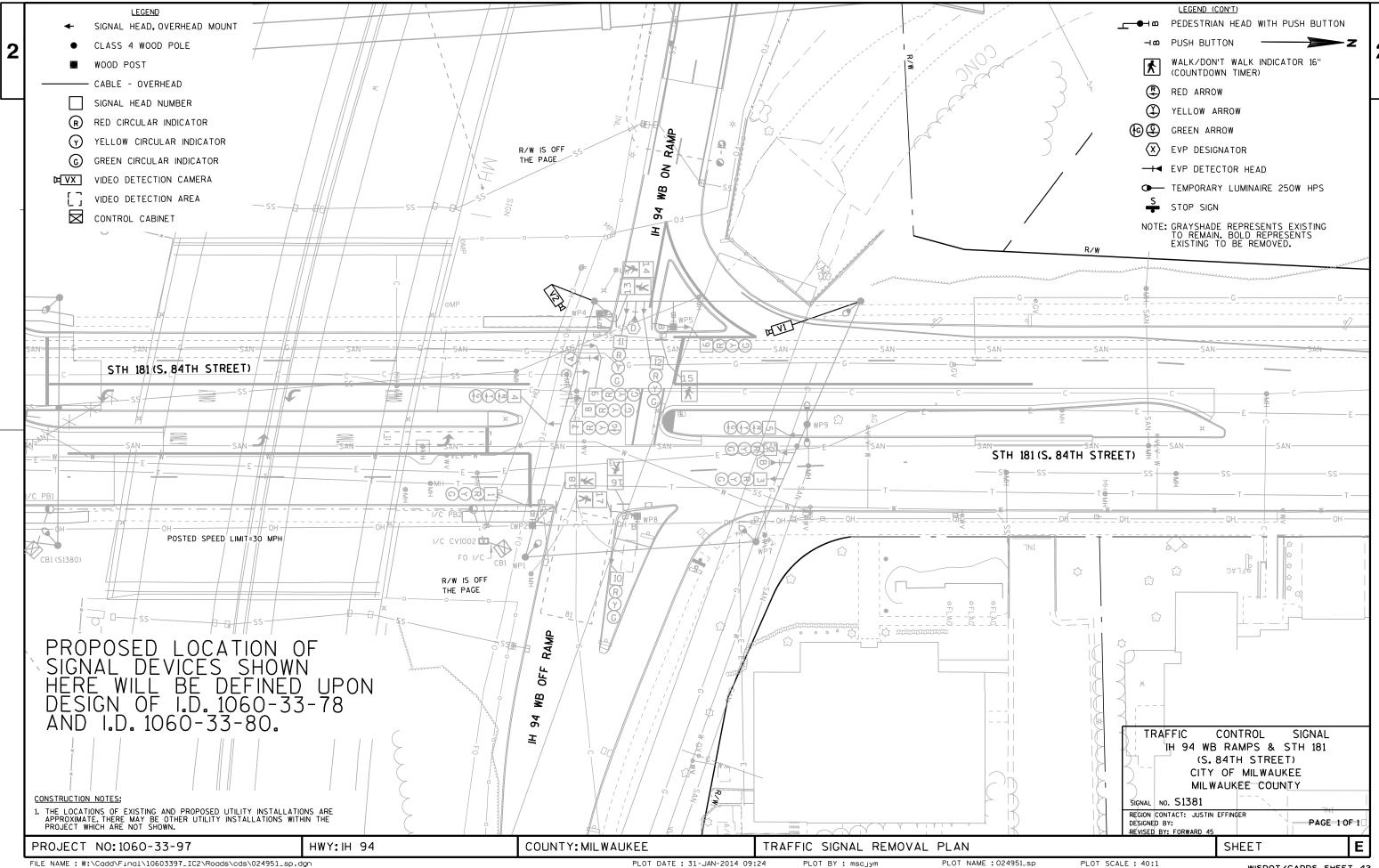
PROJECT NO: 1060-33-97

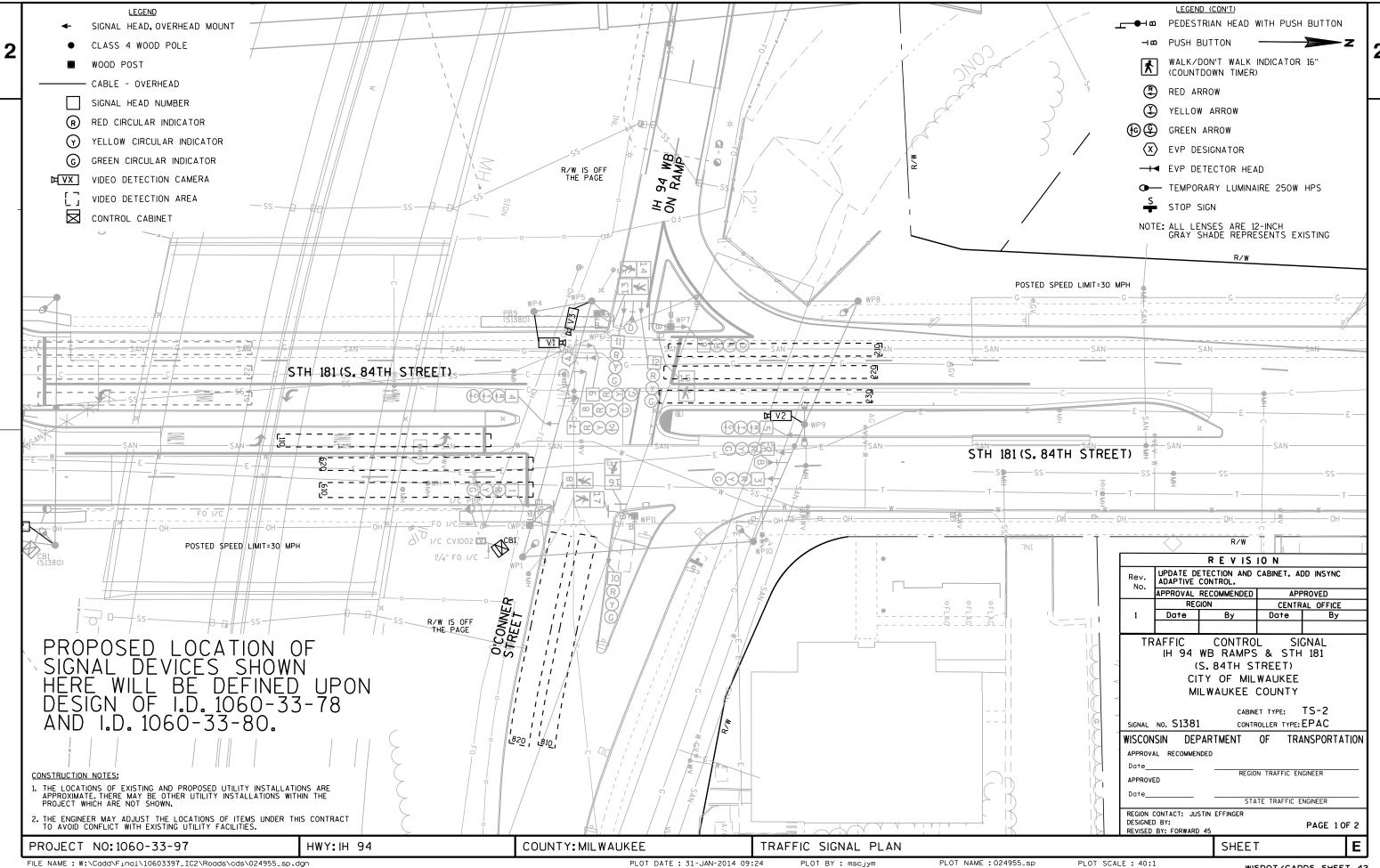
COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

____Z

PLOT NAME: 024949_sp_ph





PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				x
2		6	MIN	×
3				
4				
5				
6		2	MIN	×
7				
8				×

NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	

TYPE OF COORDINA	TION	
NONE		
TBC		
TRAFFIC RESPONSIVE		
ADAPTIVE		,
*LOCATION OF MASTER		
CONTROLLER NO:	S-	
SIGNAL SYSTEM *:	SS	

TYPE OF LIGHTING	
BY OTHER AGENCY	х
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	×
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
OUEUE DETECTOR	
,	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

	CHANNEL					
EMERGENCY VEHICLE PREEMPTOR	A	В	D			
MOVEMENT	*		1			
PHASE	2+6	6+1	8			

AFTER PREEMPTION SEQUENCE 2+6 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 8, CONTROLLER SHALL RETURN TO PHASE 8.

IH 94 WB RAMPS & STH 181 (S. 84TH STREET) CITY OF MILWAUKEE MILWAUKEE COUNTY

SIGNAL NO. S1381 CABINET TYPE: TS2 CONTROLLER TYPE: EPAC DATE 02/14 PAGE NO. 2 OF 2

_									
	HEAD NUMBERS	F L A S H		$\hat{\gamma}$			NOT	NOT	
Ø1	4,5	R	RING 1				USED	USED	
Ø2	6,7,8,9	R				1			
Ø3				Ø1	Ø2		a 2	0.4	-
04				01	02		Ø3	Ø4	_
Ø5			_ <u>_</u>	. 					
Ø6	1,2,3	R							
Ø7]
Ø8	10,11,12	R				1		۸ ۸	
Ø2P	13,14			NOT		l '	NOT	{} {}	
Ø4P			RING 2	USED			USED		
Ø6P	17,18					<u> </u>		U V	
Ø8P	15,16			95		l ı			4
OLA			l	0 5	Ø6		07	Ø8	
OLB						ı İ			
OLC					[BARRIER			
OLD		\Box							

DETECTOR	LOGIC
----------	-------

ASSIGNED PHASE	1	2	6	8			
OPERATION MODE	VEH	VEH	VEH	VEH			
SWITCH							
EXTEND							
DELAY							
DETECTOR INPUT							
PLAN LOOP DETECTOR *(S)	210	230	620	820			
ASSIGNED PHASE	2	2	6	8			
OPERATION MODE	VEH	VEH	VEH	VEH			
SWITCH							
EXTEND							
DELAY							

810

				DETECTOR INPUT
				PLAN LOOP DETECTOR *(S)
				ASSIGNED PHASE
				OPERATION MODE
				SWITCH
				EXTEND
				DELAY
				,

				DETECTOR INPUT
				PLAN LOOP DETECTOR *(S)
				ASSIGNED PHASE
				OPERATION MODE
				SWITCH
				EXTEND
				DELAY
				,

PROJECT NO: 1060-33-97

DETECTOR INPUT PLAN LOOP DETECTOR *(S)

110

220

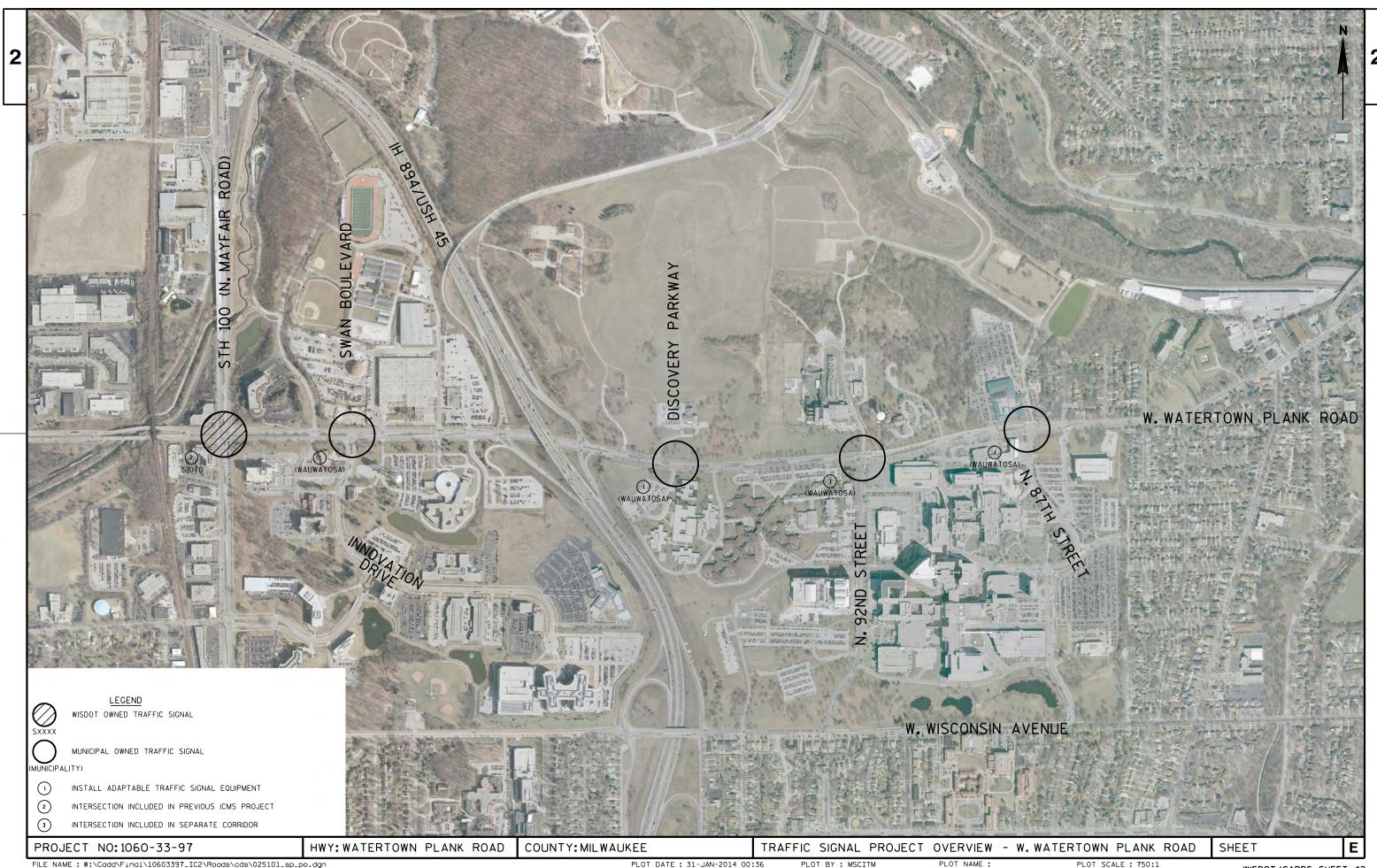
610

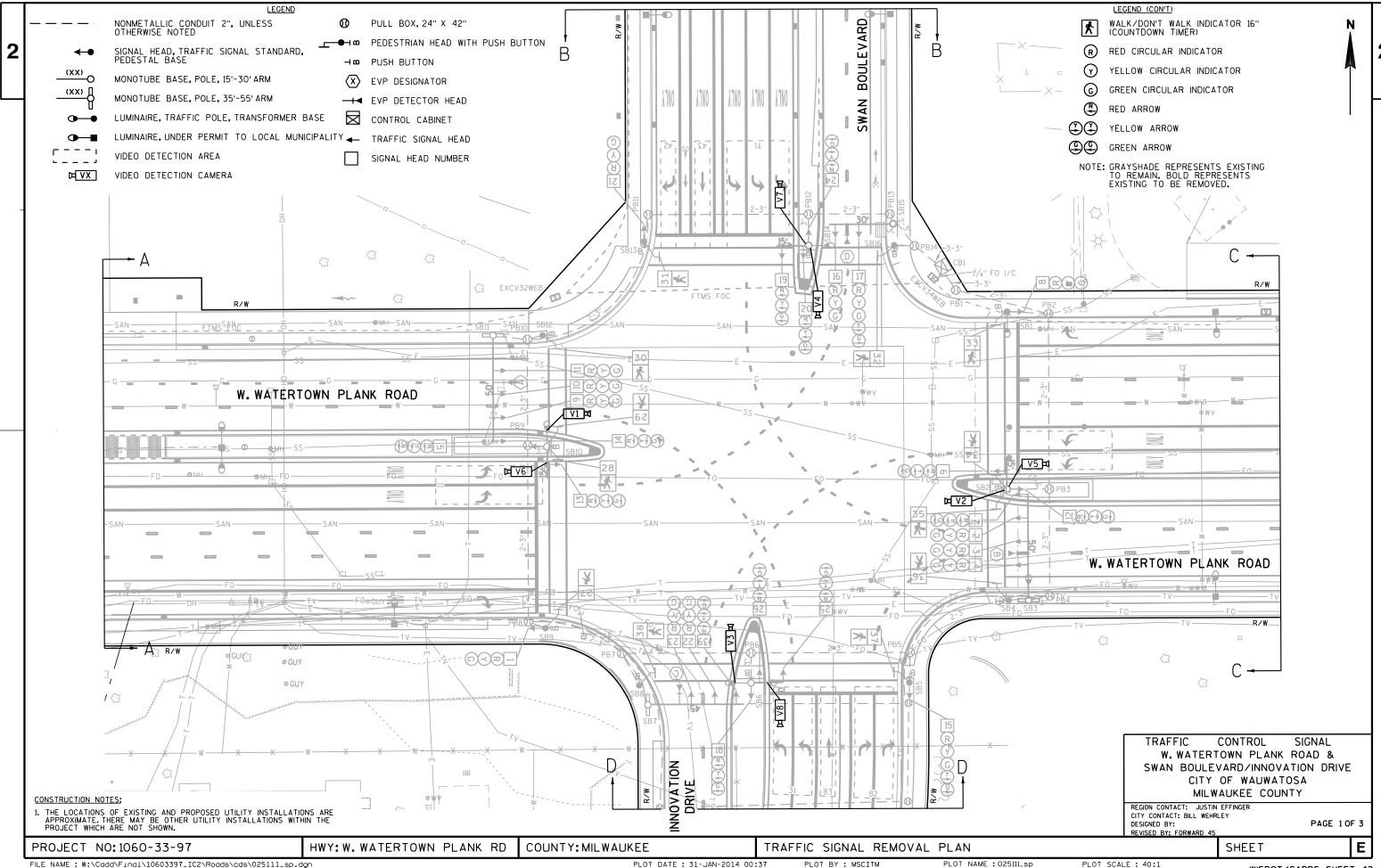
HWY:IH 94

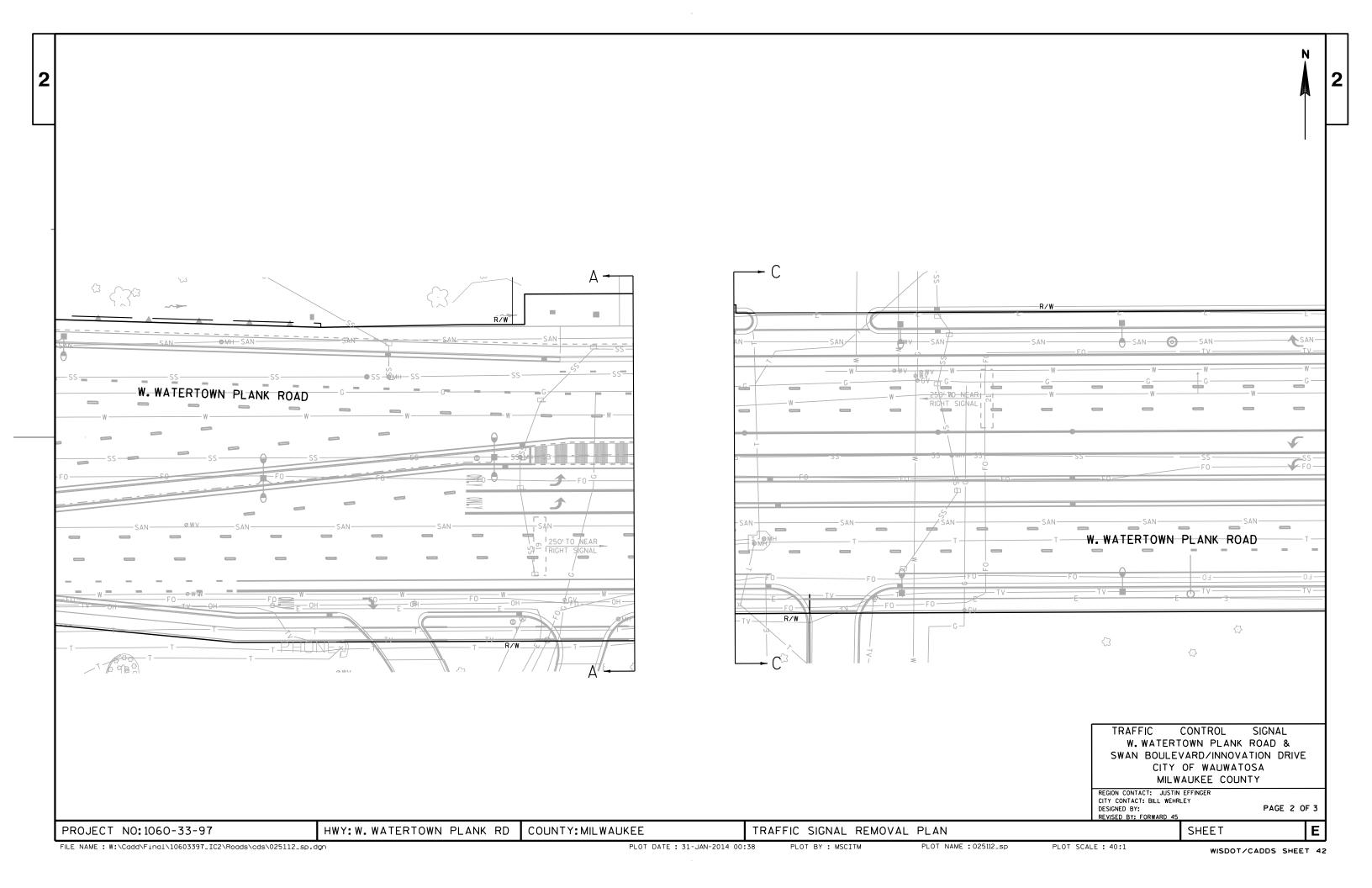
COUNTY: MILWAUKEE

SEQUENCE OF OPERATIONS PLOT BY: mscjym

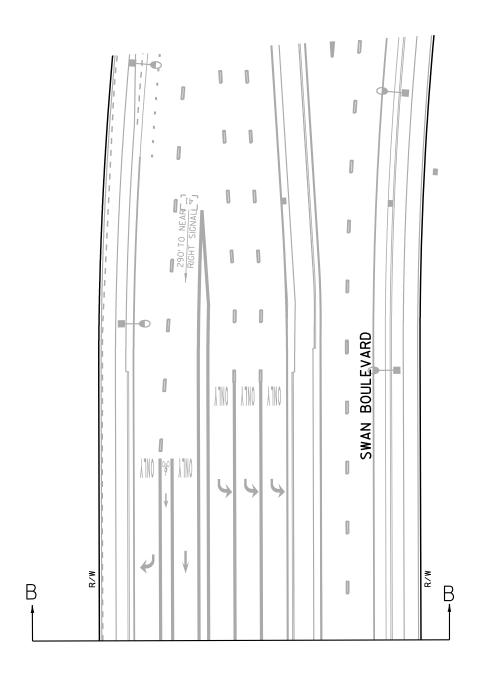
PLOT NAME: 024959_sp_ph

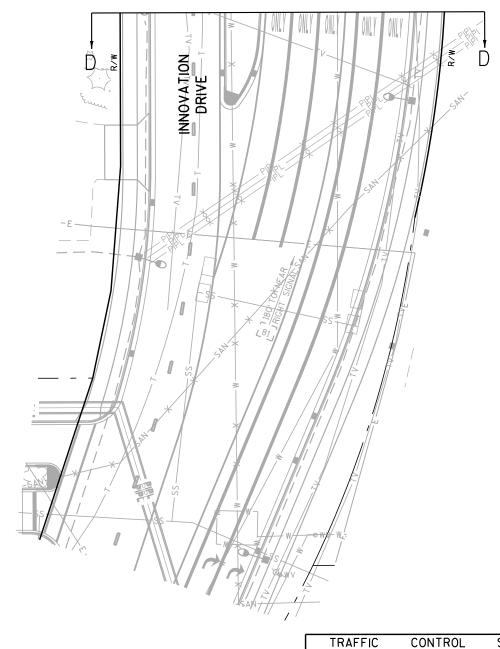












W. WATERTOWN PLANK ROAD &
SWAN BOULEVARD/INNOVATION DRIVE
CITY OF WAUWATOSA
MILWAUKEE COUNTY

REGION CONTACT: JUSTIN EFFINGER CITY CONTACT: BILL WEHRLEY DESIGNED BY: REVISED BY: FORWARD 45

PAGE 3 OF 3

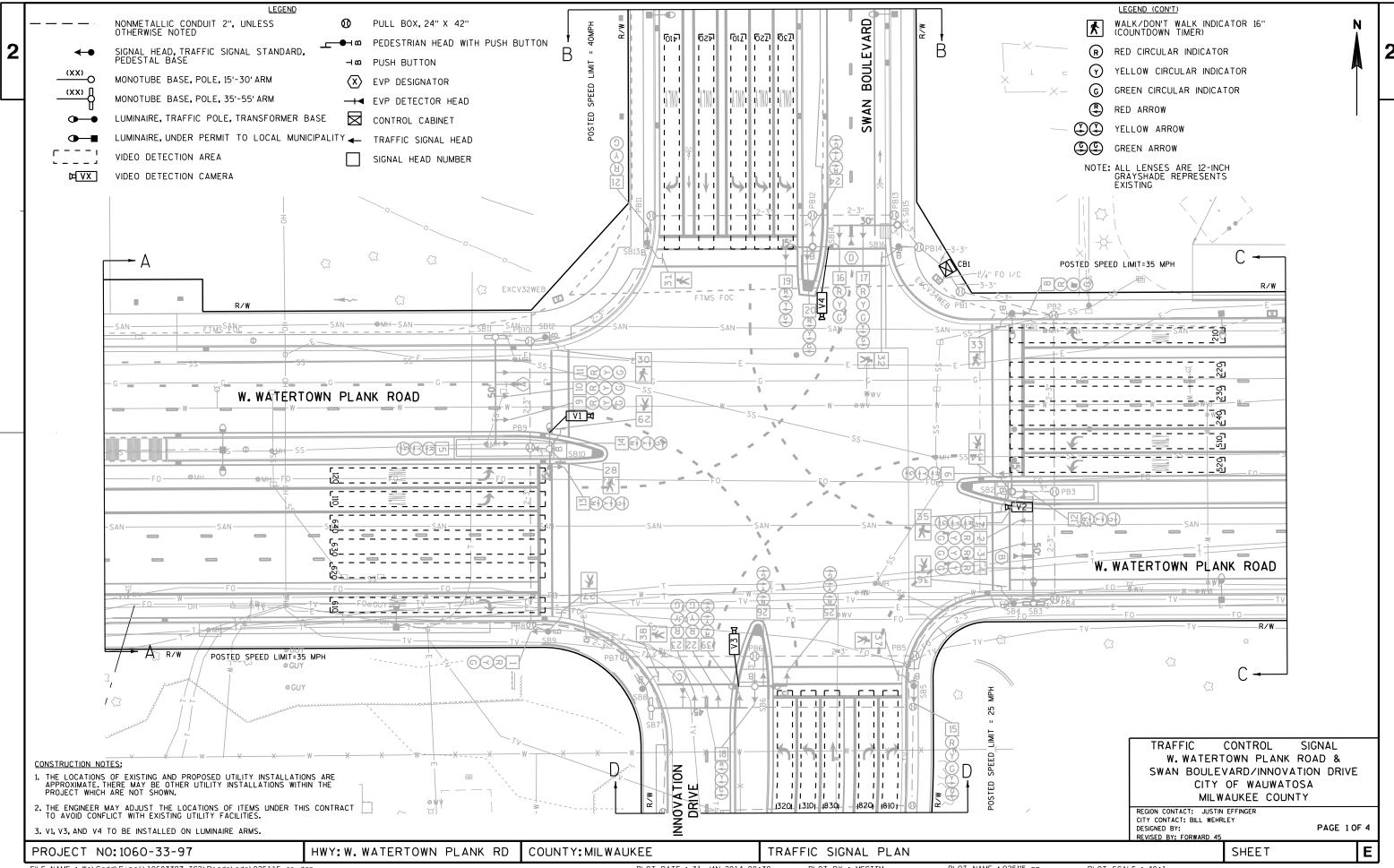
PROJECT NO: 1060-33-97

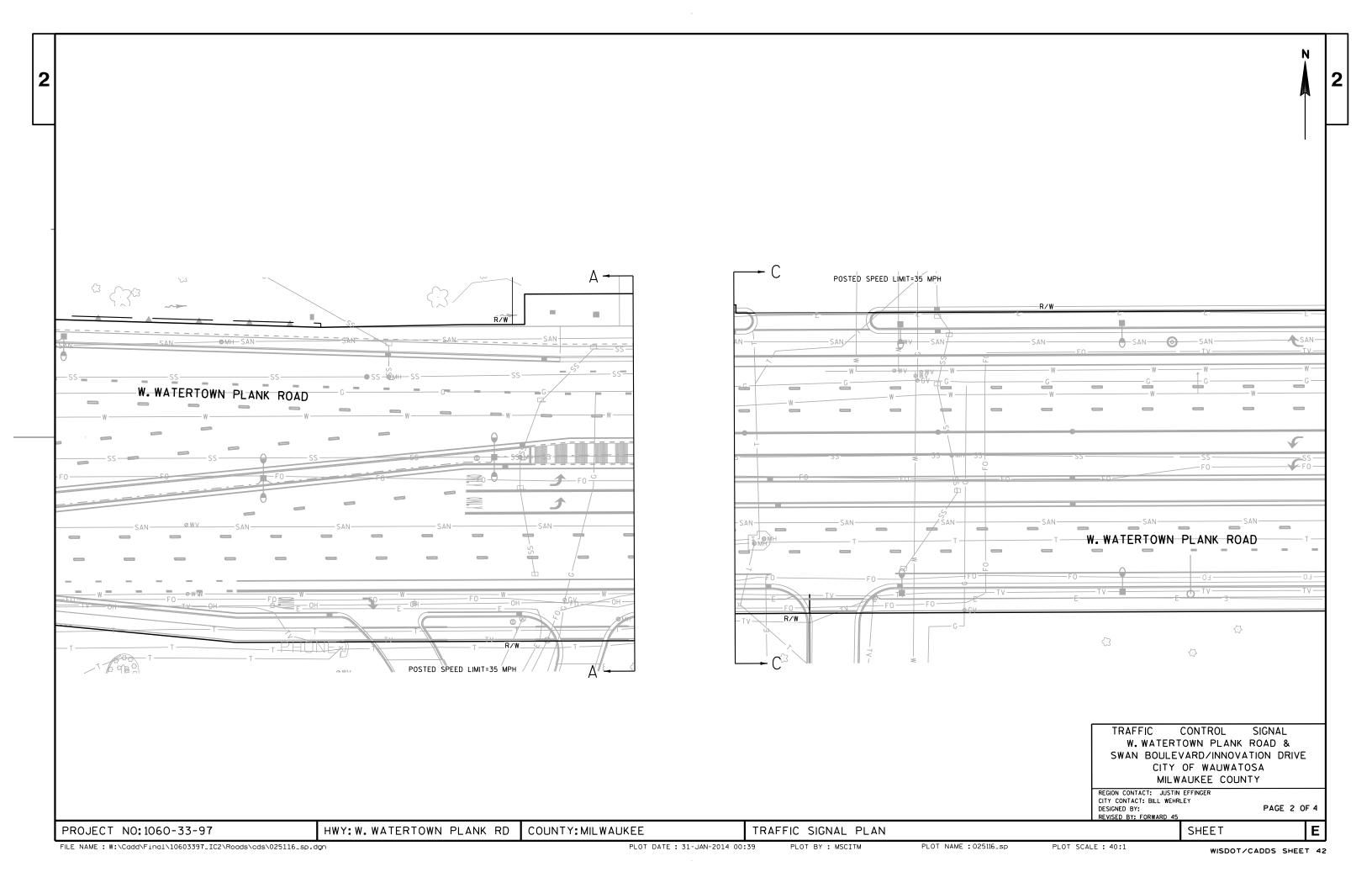
HWY: W. WATERTOWN PLANK RD

COUNTY: MILWAUKEE

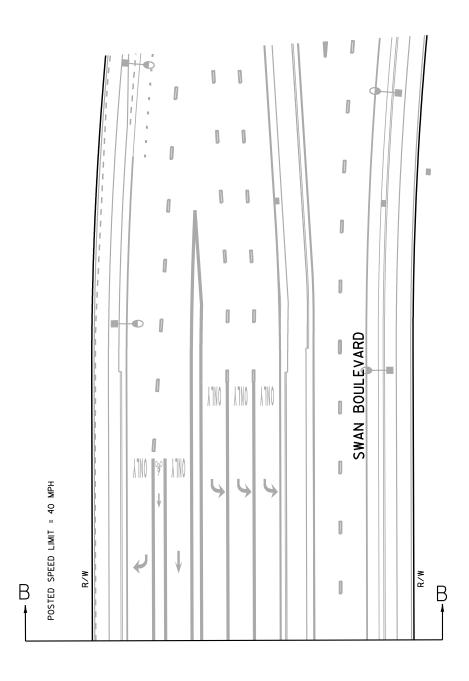
TRAFFIC SIGNAL REMOVAL PLAN

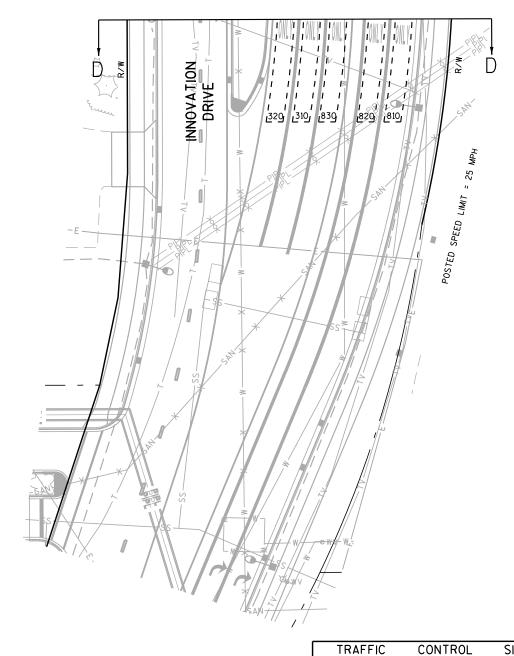
PLOT BY : MSCITM











W. WATERTOWN PLANK ROAD &
SWAN BOULEVARD/INNOVATION DRIVE
CITY OF WAUWATOSA
MILWAUKEE COUNTY

REGION CONTACT: JUSTIN EFFINGER CITY CONTACT: BILL WEHRLEY DESIGNED BY: REVISED BY: FORWARD 45

PLOT SCALE: 40:1

PAGE 3 OF 4

PROJECT NO: 1060-33-97

HWY: W. WATERTOWN PLANK RD

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

PLOT NAME: 025117_sp

NUMBERS

5,6,7

8,9,10,11

18,19,20

21,22,23

12,13,14,15,17

1,2,3,4

24,25,26,39

15,16,17

31,32

27,28,29,30

37,38

33,34,35,36

Ø1

02

Ø3

04

Ø5

Ø6

07

Ø8

Ø2P

Ø4P

Ø6P

Ø8P

OLB

CONTROLLER LOGIC

PHASE	PHASE	DUAL	PHASE	PHASE
NUMBER	LOCKING	ENTRY W / Ø	RECALL	ACTIVE
1		6		×
2		6	MIN	×
3		8		×
4		8		×
5		2		×
6		2	MIN	×
7		4		×
8		4		×

RING 1		1				
	Ø1	Ø2	 	Ø3	04	
- —			- 			- —
RING 2						
			l .			

Ø6

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	×
*LOCATION OF MASTER	
CONTROLLER NO: S-	-
SIGNAL SYSTEM #: SS-	-

TYPE OF INTERCONNECT/COMMUNICATION

FIBER OPTIC (ETHERNET)

NONE
CLOSED LOOP
TWISTED PAIR*
FIBER OPTIC*

RADIO

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	Х
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	Х
GTT	Х
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

DETECTOR	LOGIC

BARRIER

07

Ø8

DETECTOR INPUT								
PLAN LOOP DETECTOR *(S)	110	210	230	310	410	510	610	630
ASSIGNED PHASE	1	2	2	3	4	5	6	6
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND								
DELAY		Х			Х		Х	

05

					DETECTOR INPUT
7 10	730	820			PLAN LOOP DETECTOR *(
7	7	8			ASSIGNED PHASE
√EH	VEH	VEH			OPERATION MODE
					SWITCH
					EXTEND
					DELAY

	CHANNEL					
EMERGENCY VEHICLE PREEMPTOR	A	В	С	D		
MOVEMENT	~		\downarrow	71		
PHASE	2+5	6+1	4+7	8+3		

DETECTOR INPUT								
PLAN LOOP DETECTOR *(S)	120	220	240	320	420	520	620	640
ASSIGNED PHASE	1	2	2	3	4	5	6	6
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND								
DELAY								

					DETECTOR INPUT
720	810	830			PLAN LOOP DETECTOR *(S
7	8	8			ASSIGNED PHASE
VEH	VEH	VEH			OPERATION MODE
					SWITCH
					EXTEND
	Х				DELAY

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

W.	WATERTOWN PLANK ROAD &
SWAN	BOULEVARD/INNOVATION DRIVE
	CITY OF WAUWATOSA
	MILWAUKEE COUNTY

SIGNAL	NO.	CABINET TYPE: TS2
		CONTROLLER TYPE: EPAC
DATE	02/14	PAGE NO. 4 OF 4

PROJECT NO: 1060-33-97

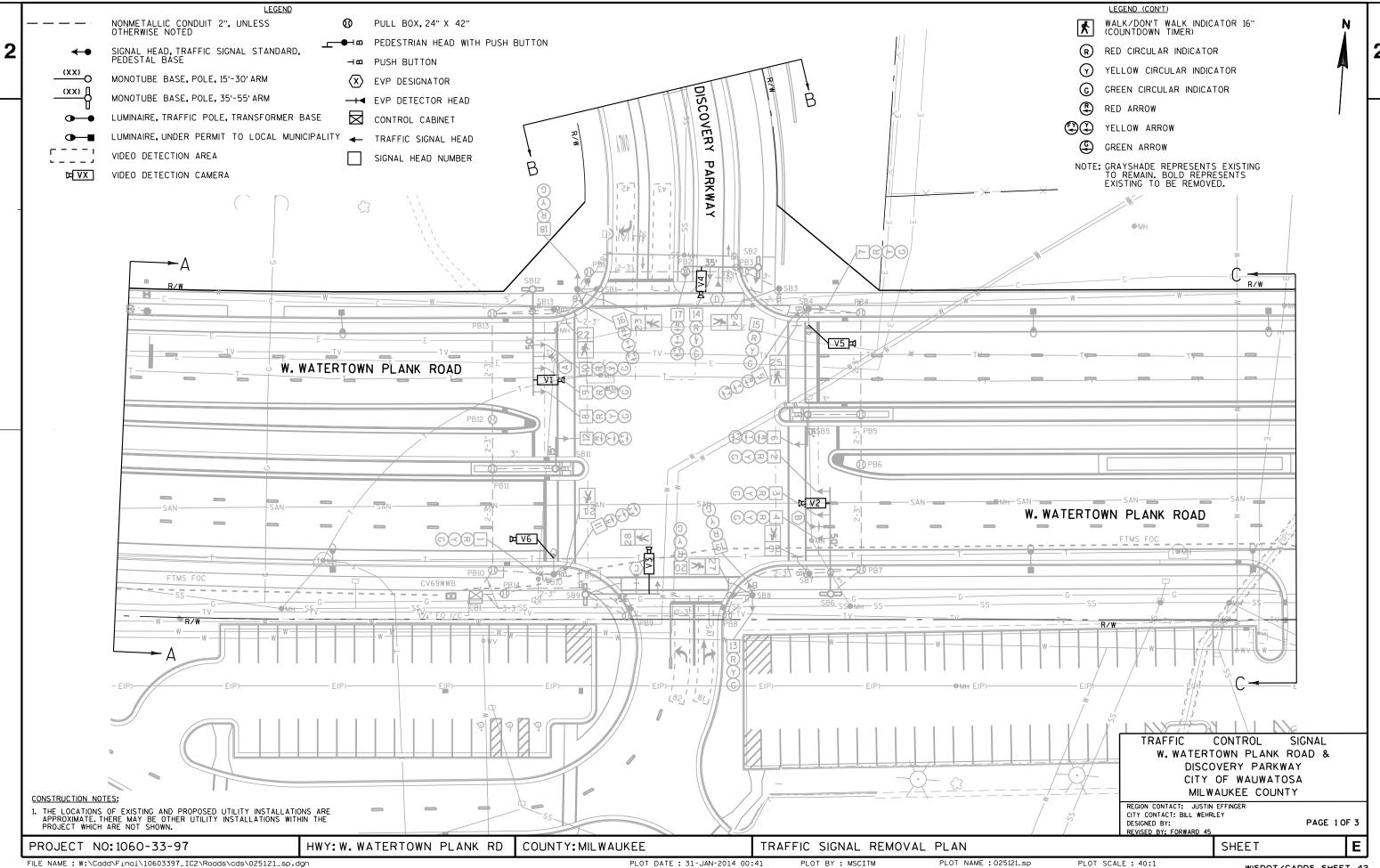
HWY: W. WATERTOWN PLANK RD

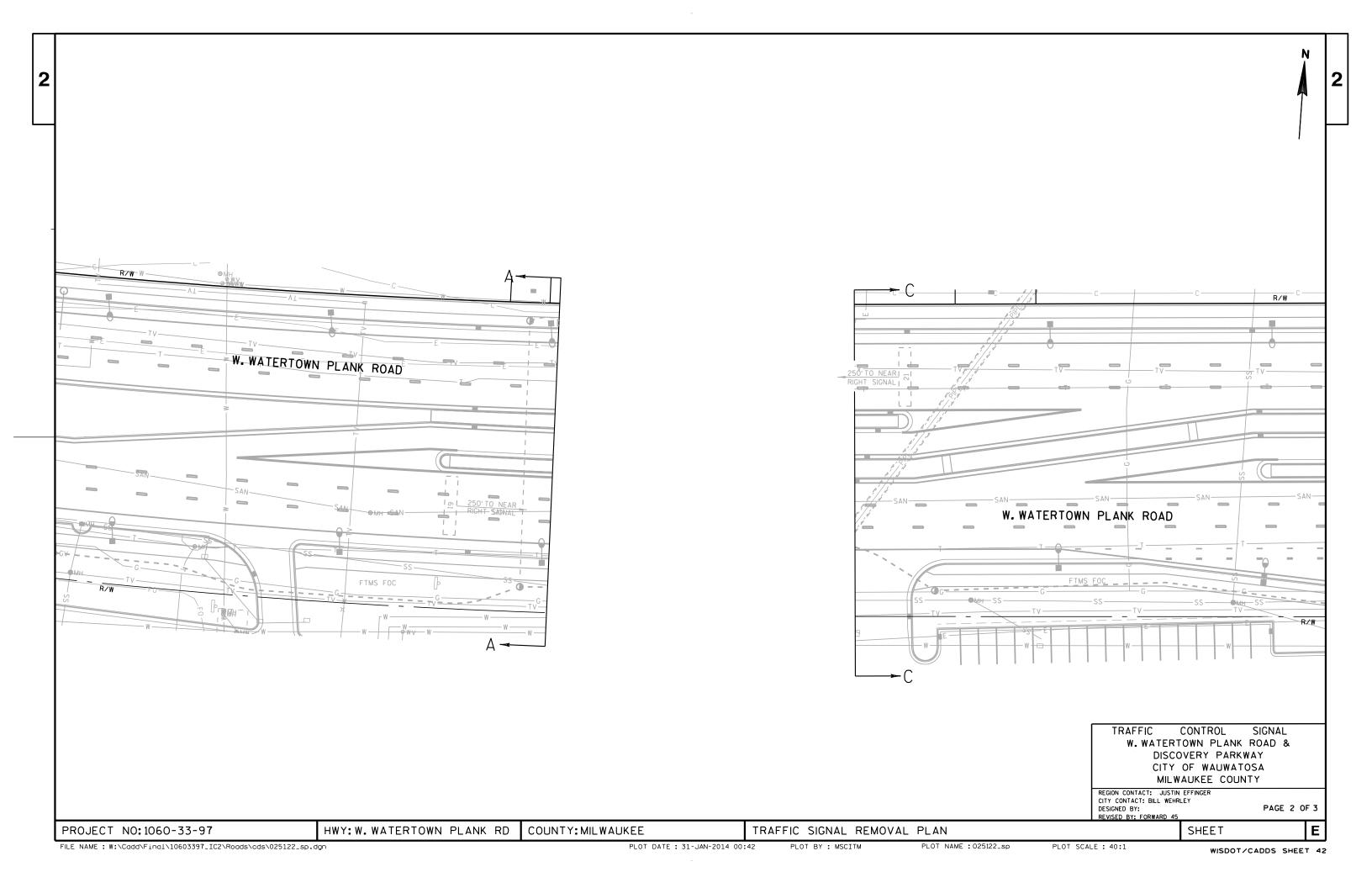
COUNTY: MILWAUKEE

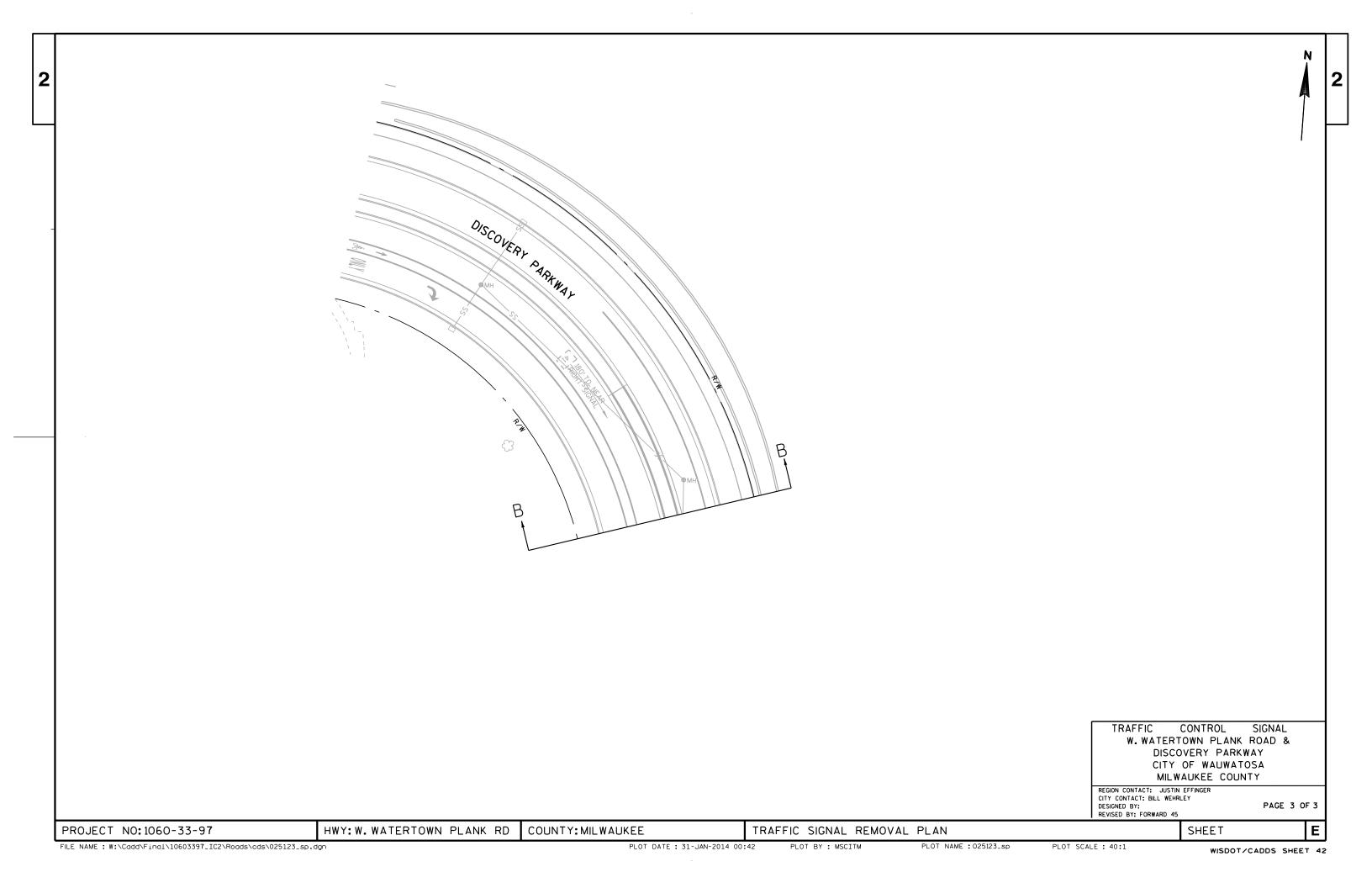
TRAFFIC SIGNAL PLAN

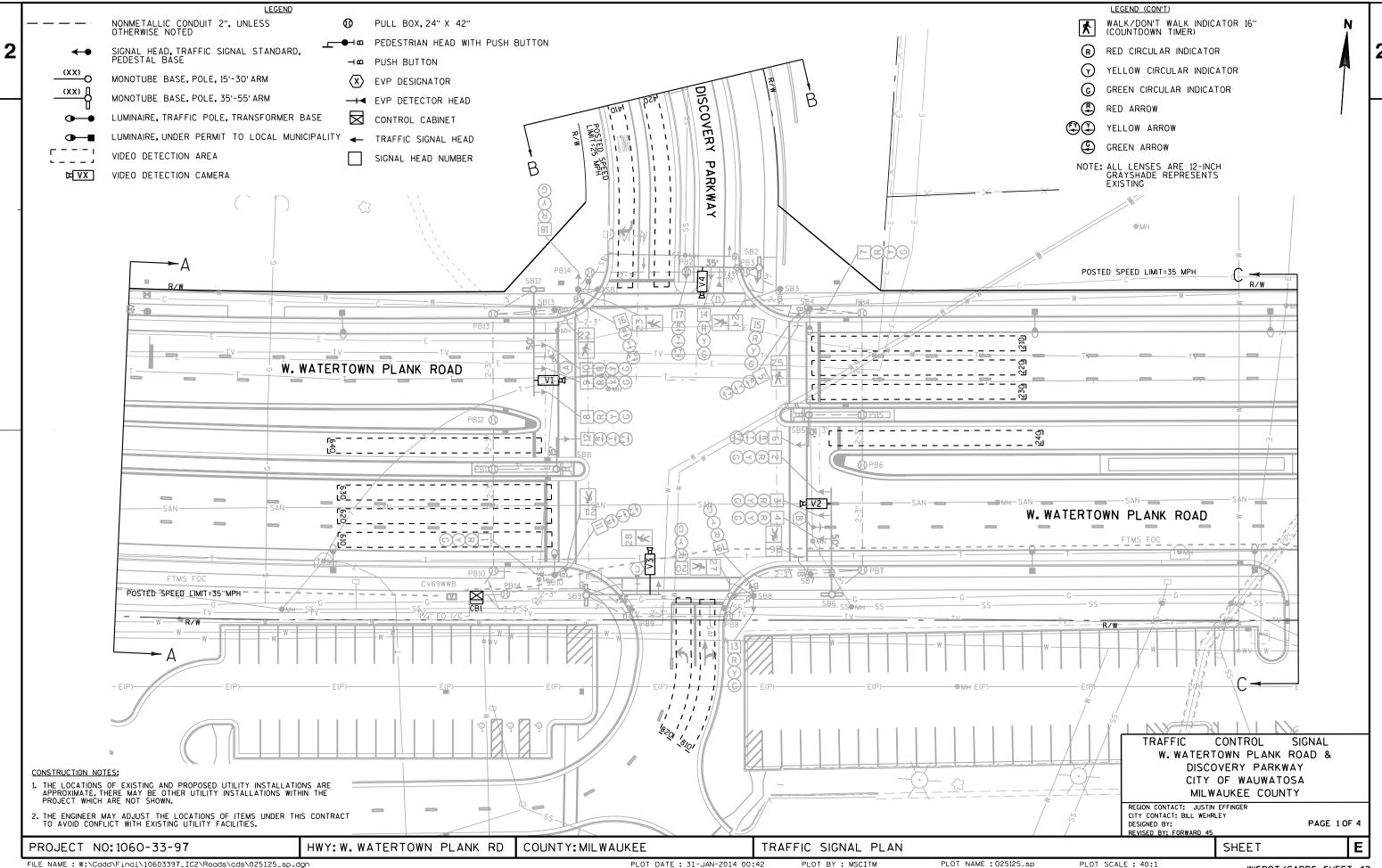
40 PLOT BY : MSCITM

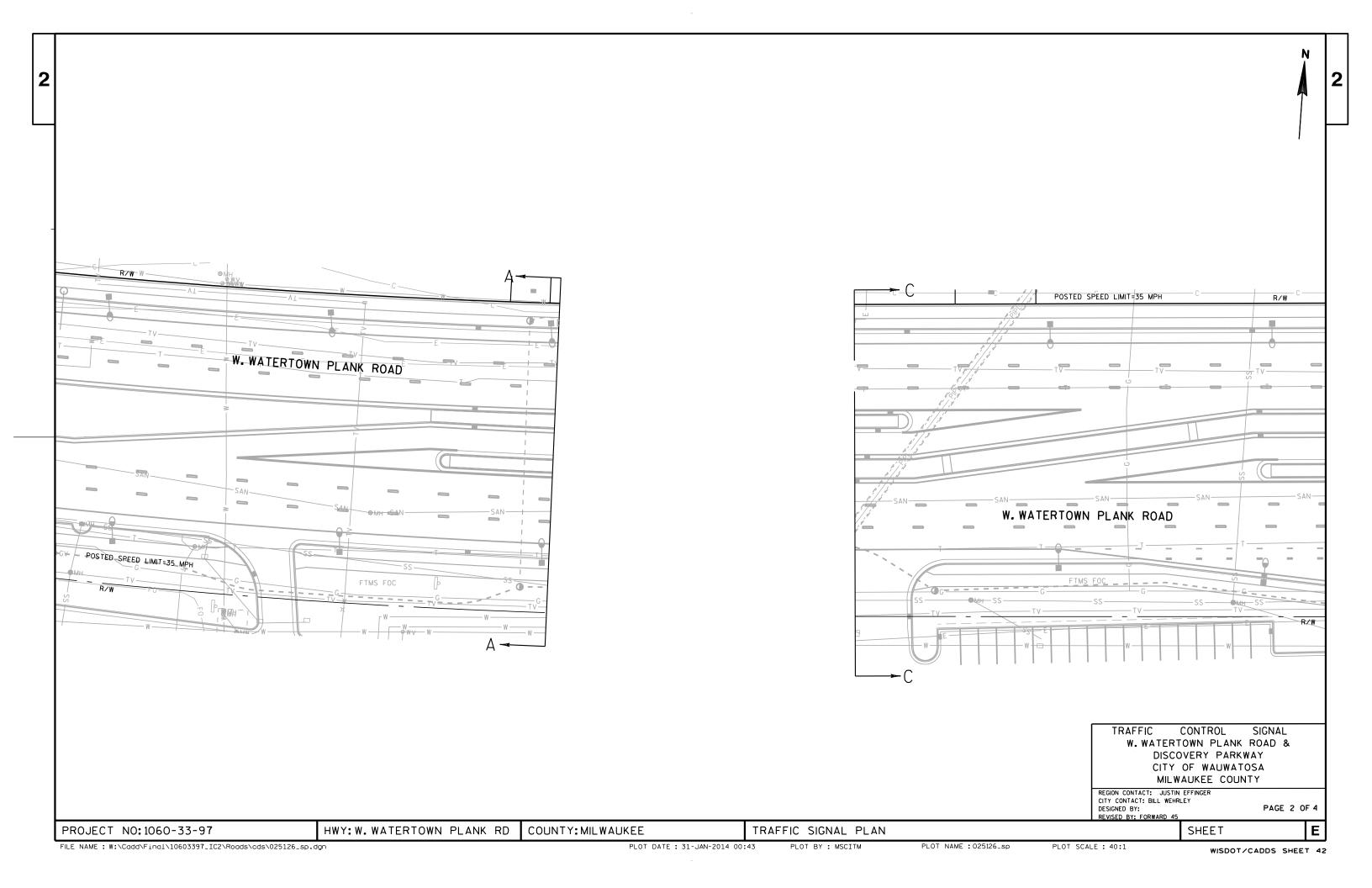
PLOT NAME: 025119_sp_ph

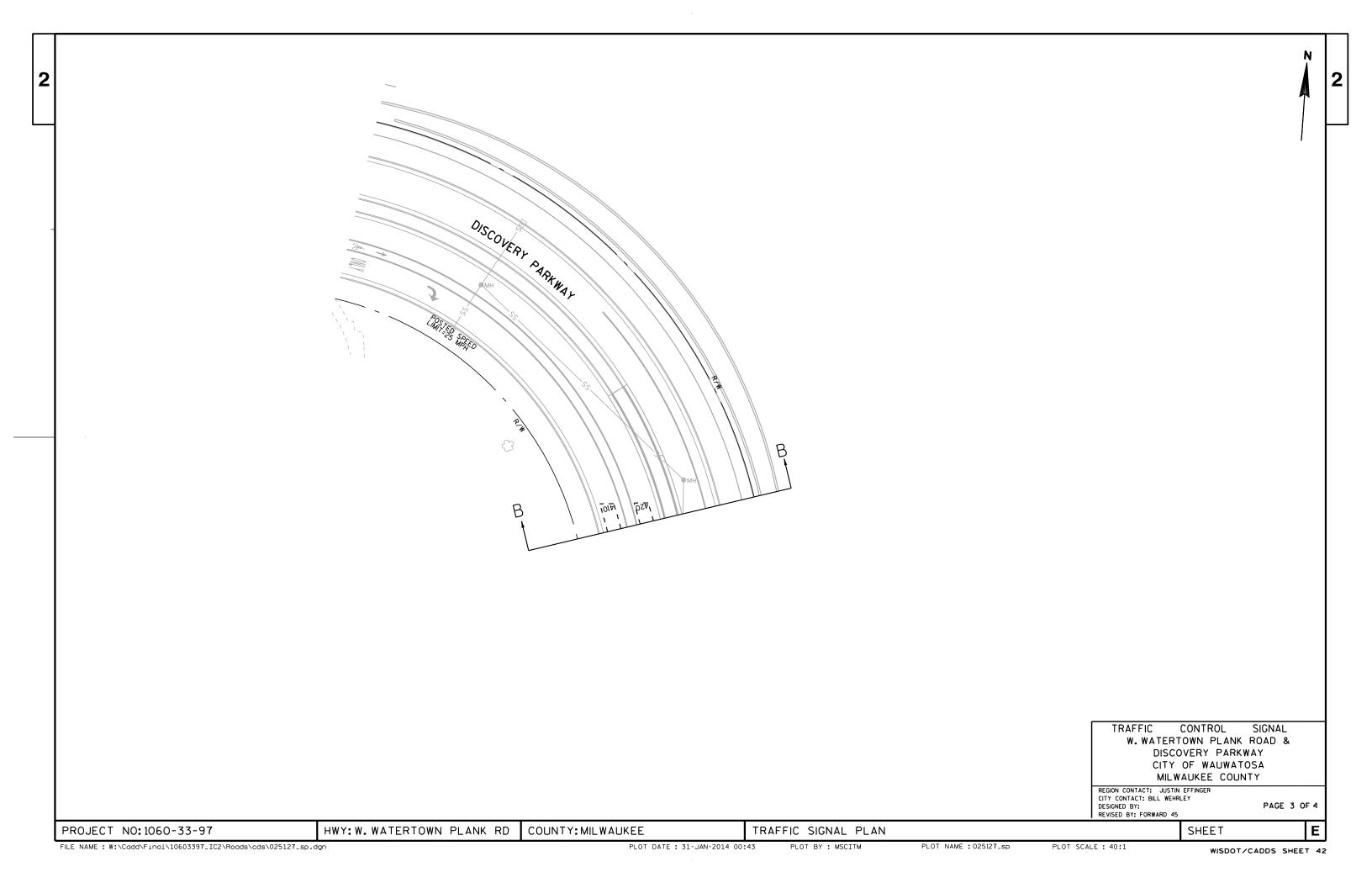












PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2		6	MIN	×
3				
4		8		×
5				
6		2	MIN	x
7				
8		4		x

TYPE OF INTERCONNECT/COMMU	NICATION
NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	×
RADIO	

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	×
*LOCATION OF MASTER	
CONTROLLER NO: S-	
SIGNAL SYSTEM *: SS	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	Х
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	х
GTT	×
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

		CHANNE	L	
EMERGENCY VEHICLE PREEMPTOR	A	В	С	D
MOVEMENT	\$	Â	V	V V
PHASE	2+6	6+2	4+8	8+4

AFTER PREEMPTION SEQUENCE 2+6 OR 6+2, CONTROLLER SHALL RETURN TO PHASES 2+6. AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASE 4+8.

W. WATERTOWN PLANK ROAD & DISCOVERY PARKWAY CITY OF WAUWATOSA MILWAUKEE COUNTY

SIGNAL	NO.	CABINET TYPE:	TS2
		CONTROLLER TYPE:	EPAC
DATE	02/14	PAGE NO.	4 OF 4

SHEET

	HEAD NUMBERS	FLASH		NOT	<
Ø1			RING 1	USED	0.
Ø2	7,8,9,10	R			
Ø3				Ø1	
04	18,19,20	R		61	
Ø5					
Ø6	1,2,3,4	R			
Ø7					
Ø8	13,14,15	R			
Ø2P	23,24			NOT	7
04P	21,22		RING 2	USED	
76P	27,28				٠,
78P	25,26			Q.F.	

		_\	; 		
RING 1	NOT USED			NOT USED	O.L. B
	Ø1	Ø2	-	Ø3	04
RING 2	NOT USED	0.L. C		NOT USED	
	Ø5	Ø6	i	07	Ø8
			; I BARRIER		

DETECTOR	LOGIC

									1					
ASSIGNED PHASE	2	2	4	6	6	8								
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH]					
SWITCH]					
EXTEND]					
DELAY			Х			Х]					
DETECTOR INPUT														
PLAN LOOP DETECTOR *(S)	220	240	420	620	640	820								
ASSIGNED PHASE	2	2	4	6	6	8								
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH								
SWITCH														
EXTEND														
									1					

PROJECT NO: 1060-33-97

5,6 16,17 11,12

DETECTOR INPUT

PLAN LOOP DETECTOR *(S) 210 230

OLD

HWY: W. WATERTOWN PLANK RD

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN PLOT BY : MSCITM

DETECTOR INPUT

EXTEND DELAY

DETECTOR INPUT

ASSIGNED PHASE OPERATION MODE

SWITCH

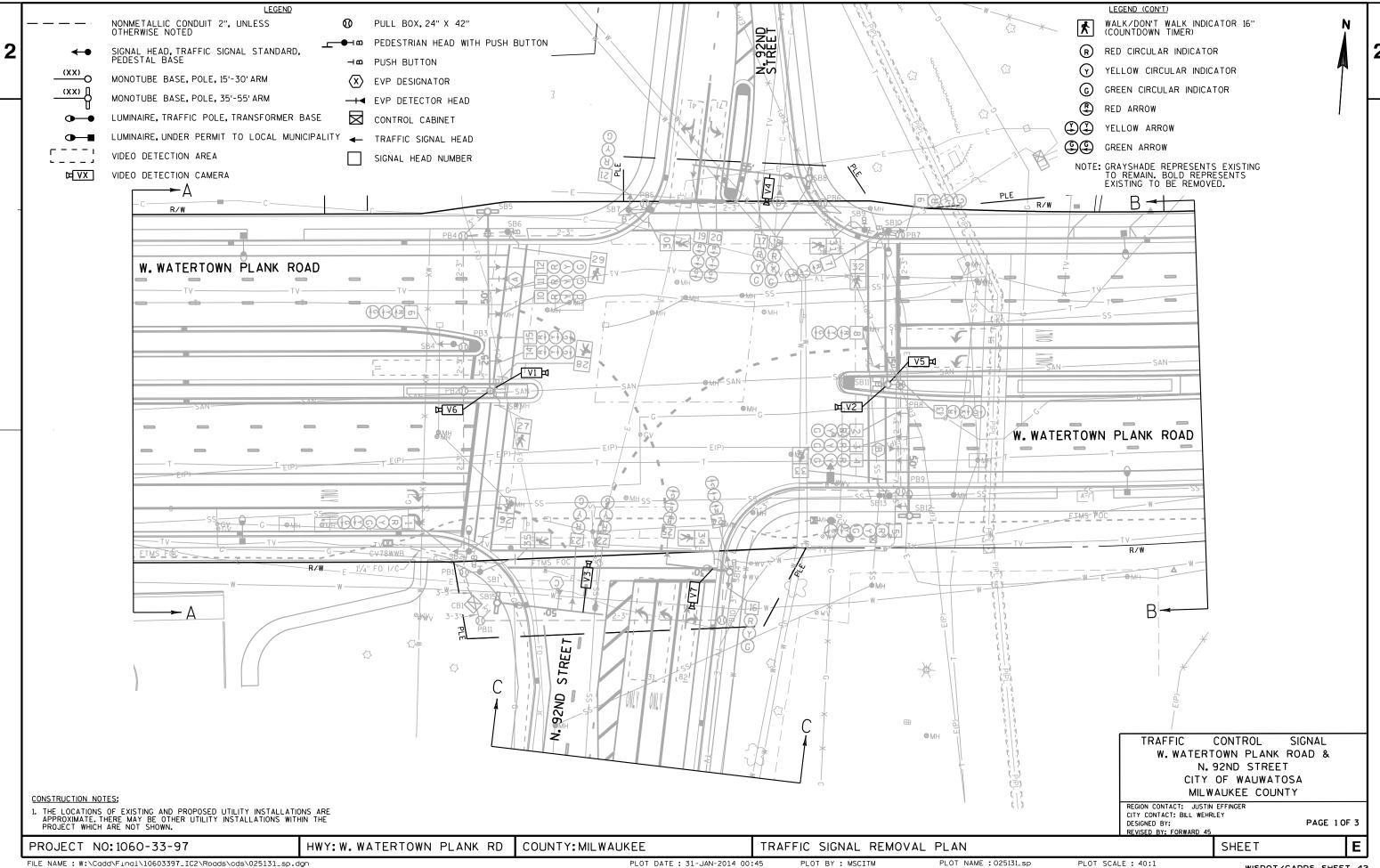
EXTEND

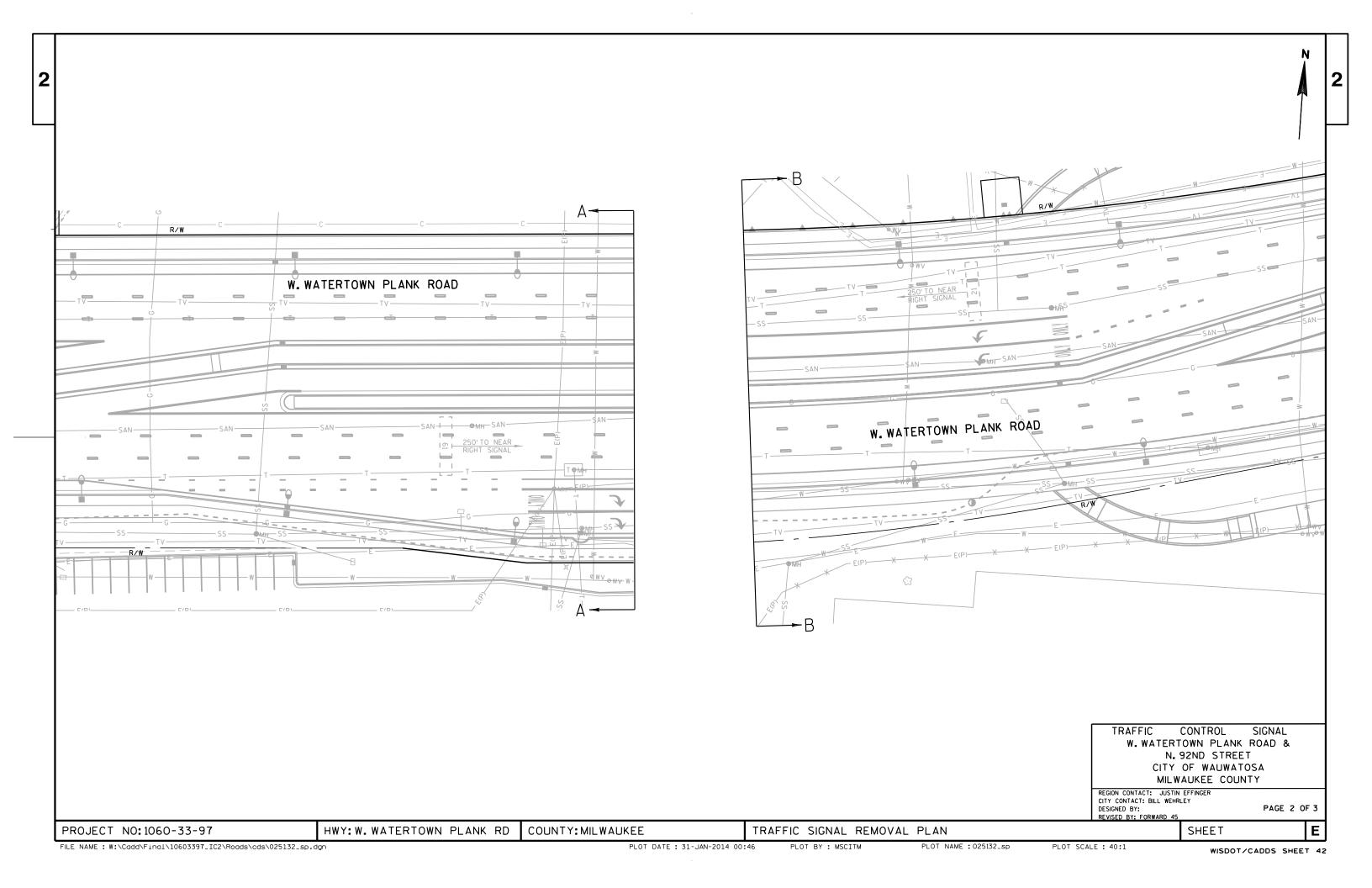
PLAN LOOP DETECTOR *(S)

PLAN LOOP DETECTOR #(S) ASSIGNED PHASE OPERATION MODE SWITCH

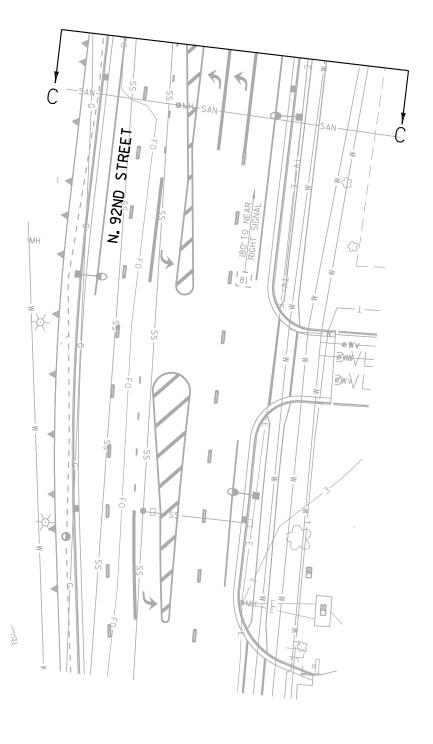
PLOT NAME: 025129_sp_ph

WISDOT/CADDS SHEET 42









TRAFFIC CONTROL SIGNAL
W. WATERTOWN PLANK ROAD &
N. 92ND STREET
CITY OF WAUWATOSA
MILWAUKEE COUNTY

REGION CONTACT: JUSTIN EFFINGER CITY CONTACT: BILL WEHRLEY DESIGNED BY: REVISED BY: FORWARD 45

PAGE 3 OF 3

PROJECT NO: 1060-33-97

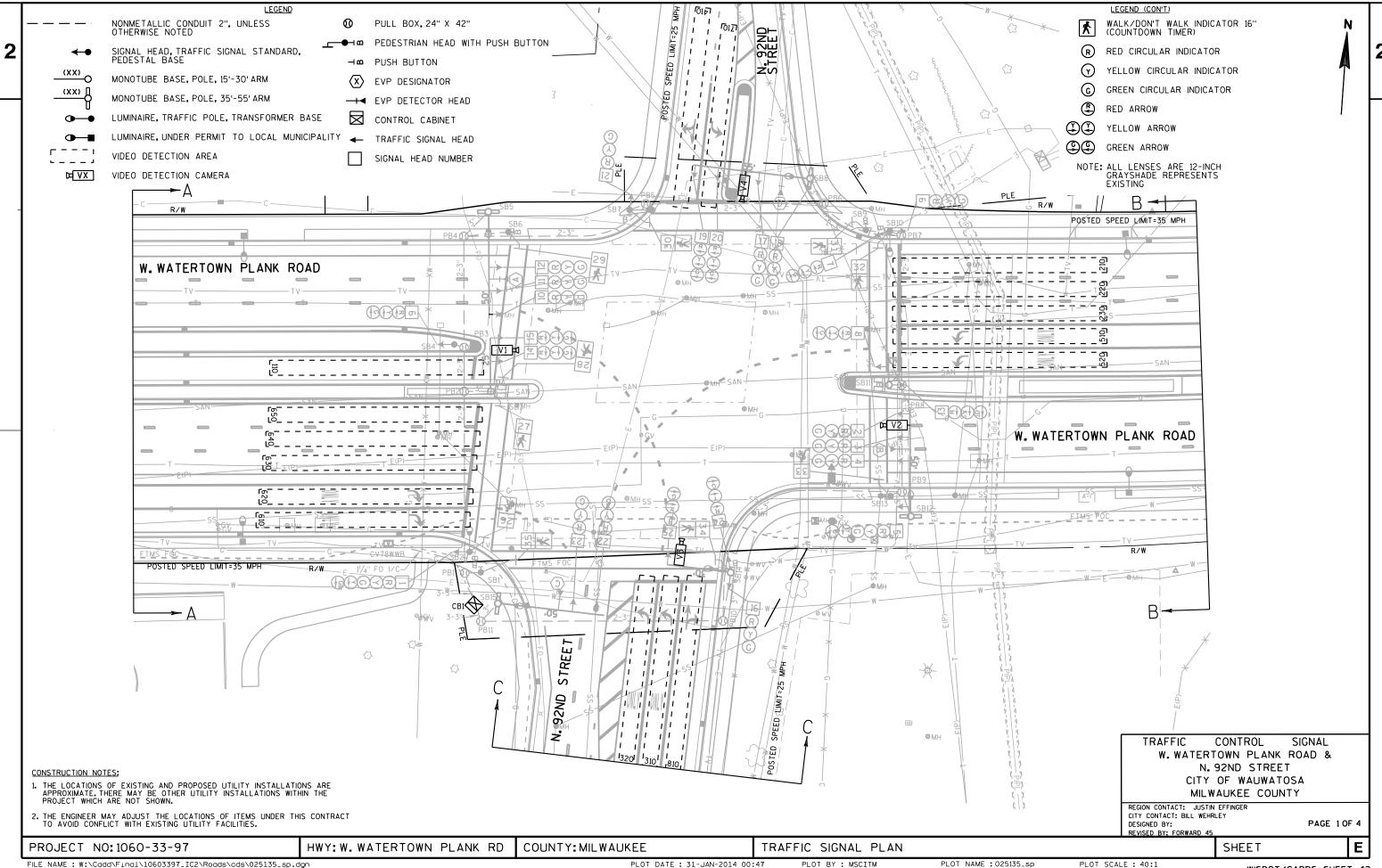
HWY: W. WATERTOWN PLANK RD

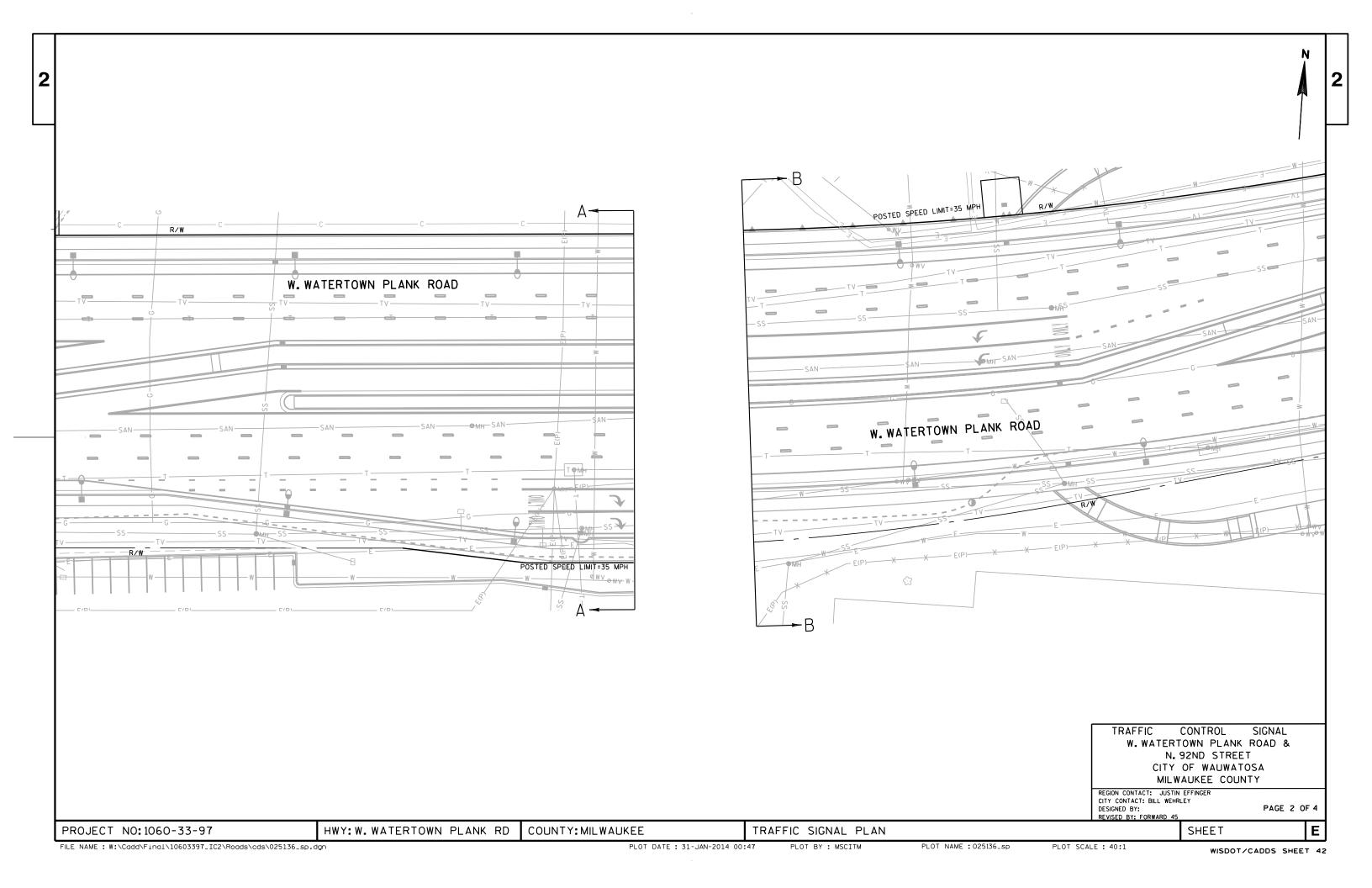
COUNTY: MILWAUKEE

TRAFFIC SIGNAL REMOVAL PLAN

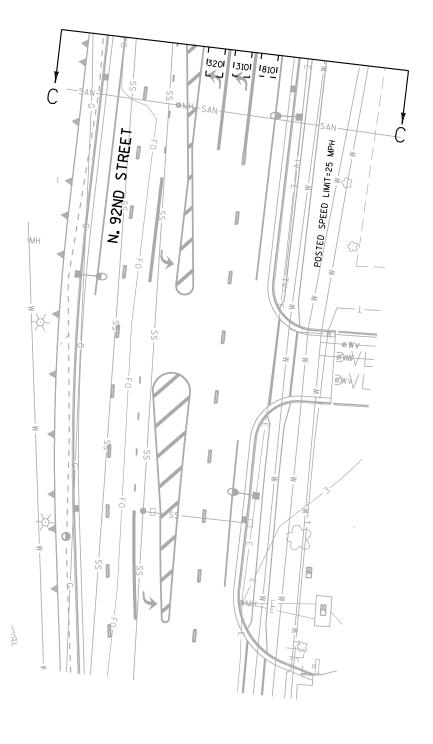
PLOT BY : MSCITM

PLOT NAME: 025133_sp









TRAFFIC CONTROL SIGNAL
W. WATERTOWN PLANK ROAD &
N. 92ND STREET
CITY OF WAUWATOSA
MILWAUKEE COUNTY

REGION CONTACT: JUSTIN EFFINGER CITY CONTACT: BILL WEHRLEY DESIGNED BY: REVISED BY: FORWARD 45

PAGE 3 OF 4

PROJECT NO: 1060-33-97

HWY: W. WATERTOWN PLANK RD

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

48 PLOT BY: MSCITM

PLOT NAME: 025137_sp

REVISED BY: FORWARD 45
SHEET

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		×
2		6	MIN	×
3		8		×
4		8		×
5		2		×
6		2	MIN	×
7		4		×
8		4		x

PHASE NUMBER	PHASE LOCKING
1	
2	
3	
4	
5	
6	
7	
8	

NONE	
CLOSED LOOP	
TWISTED PAIR*	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	×
RADIO	

TYPE OF COORDINA	TION		
NONE			
TBC			
TRAFFIC RESPONSIVE			
ADAPTIVE			Х
*LOCATION OF MASTER			
CONTROLLER NO:	S-	-	
SIGNAL SYSTEM *:	SS-	-	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	х
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	x
GTT	x
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	
,	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

	CHANNEL							
EMERGENCY VEHICLE PREEMPTOR	A	В	С	D				
MOVEMENT	<u> </u>	1	$\stackrel{\textstyle J}{\rightarrow}$	1				
PHASE	2+5	6+1	4+7	8+3				

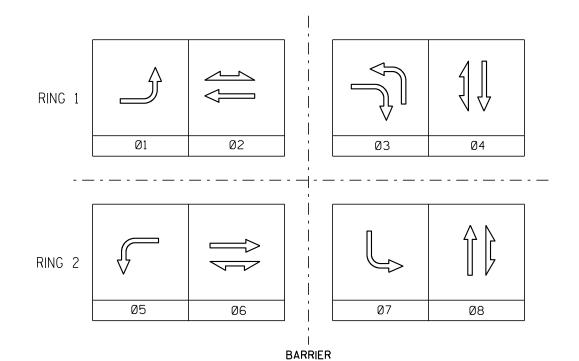
AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

W. WATERTOWN PLANK ROAD & N. 92ND STREET CITY OF WAUWATOSA MILWAUKEE COUNTY

SIGNAL	NO.	CABINET TYPE: TS2
		CONTROLLER TYPE: EPAC
DATE	02/14	PAGE NO. 4 OF 4

	HEAD NUMBERS	F L A S H
Ø1	6,7,8	R
Ø2	9,10,11,12	R
Ø3	1,5,19,20	R,F
04	21,22,23	R
Ø5	13,14,15	R
Ø6	1,2,3,4,5	R
Ø7	24,25	R
Ø8	16,17,18	R
Ø2P	30,31	
Ø4P	26,27,28,29	
Ø6P	34,35	
Ø8P	32,33	
OLA		
OLB		
OLC		
OLD		



DETECTOR LOGIC

HWY: W. WATERTOWN PLANK RD

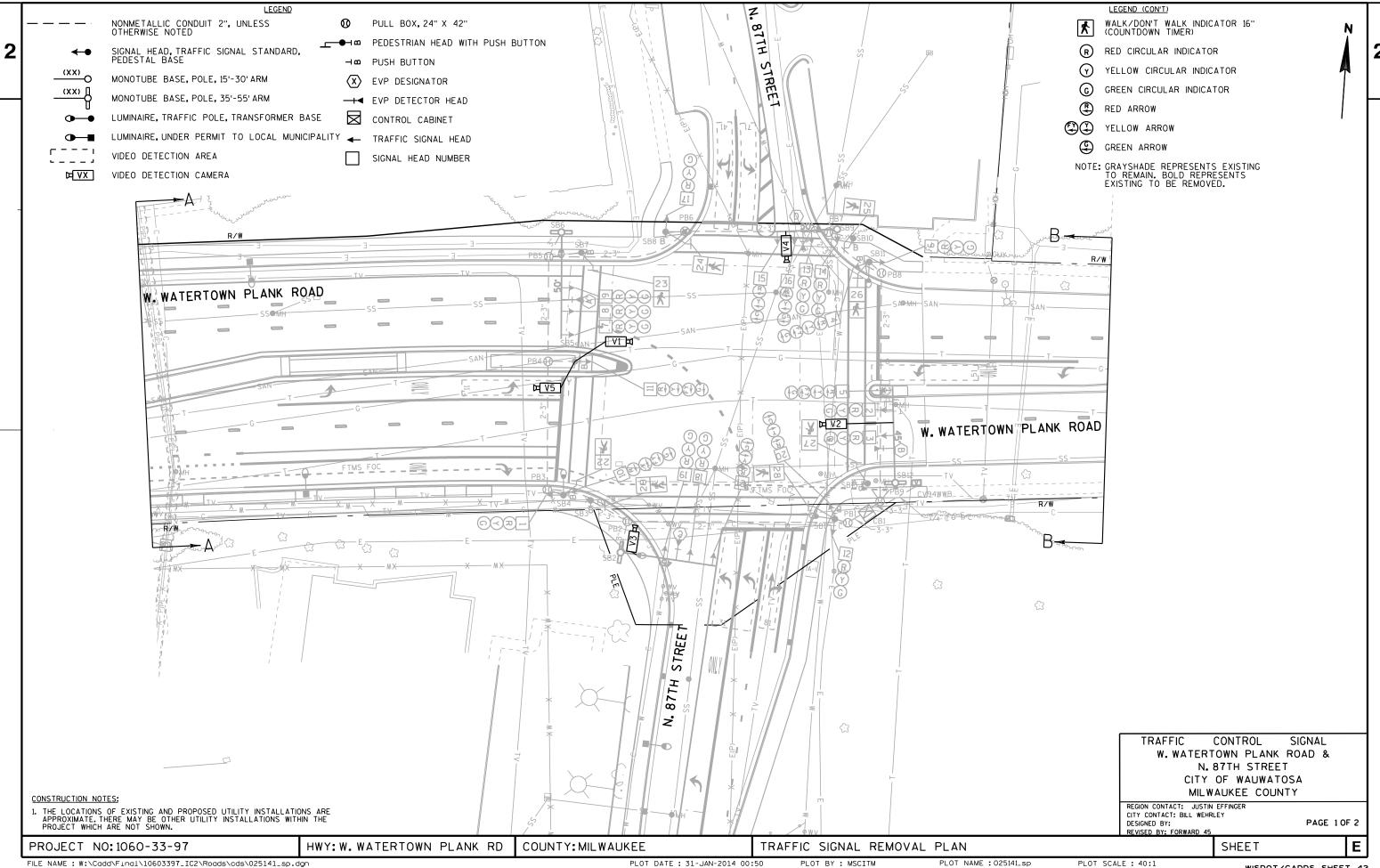
110	220	310	410	520	620	640	710
1	2	3	4	5	6	6	7
VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
			Х				
	1	1 2	1 2 3	1 2 3 4	1 2 3 4 5	1 2 3 4 5 6	1 2 3 4 5 6 6

DETECTOR INPUT								
PLAN LOOP DETECTOR *(S)	210	230	320	510	610	630	650	810
ASSIGNED PHASE	2	2	3	5	6	6	6	8
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND								
DELAY					Х			Х

				DETECTOR INPUT
				PLAN LOOP DETECTOR *(S)
				ASSIGNED PHASE
				OPERATION MODE
				SWITCH
				EXTEND
				DELAY
				•

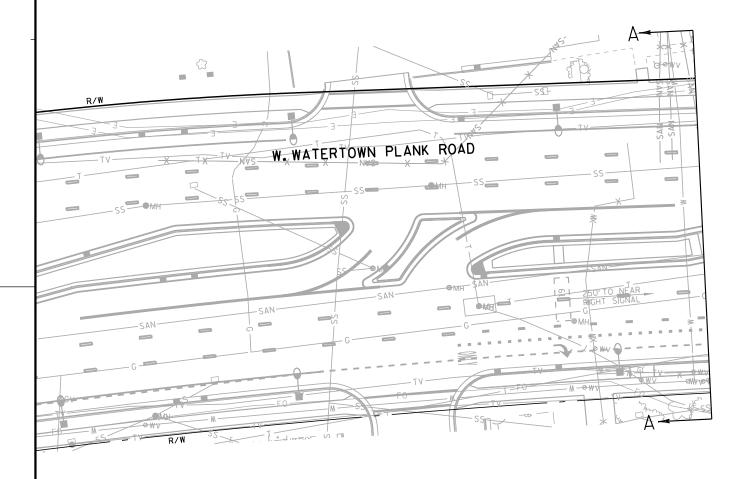
				DETECTOR INPUT
				PLAN LOOP DETECTOR *(S
				ASSIGNED PHASE
				OPERATION MODE
				SWITCH
				EXTEND
				DELAY
				1

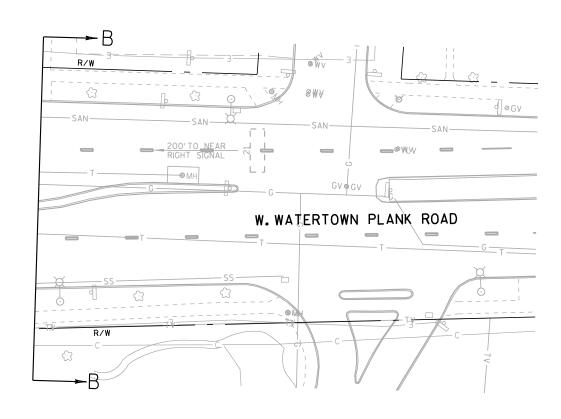
PROJECT NO: 1060-33-97



2







TRAFFIC CONTROL SIGNAL
W. WATERTOWN PLANK ROAD &
N. 87TH STREET
CITY OF WAUWATOSA
MILWAUKEE COUNTY

REGION CONTACT: JUSTIN EFFINGER CITY CONTACT: BILL WEHRLEY DESIGNED BY: REVISED BY: FORWARD 45

PAGE 2 OF 2

PROJECT NO: 1060-33-97

HWY: W. WATERTOWN PLANK RD

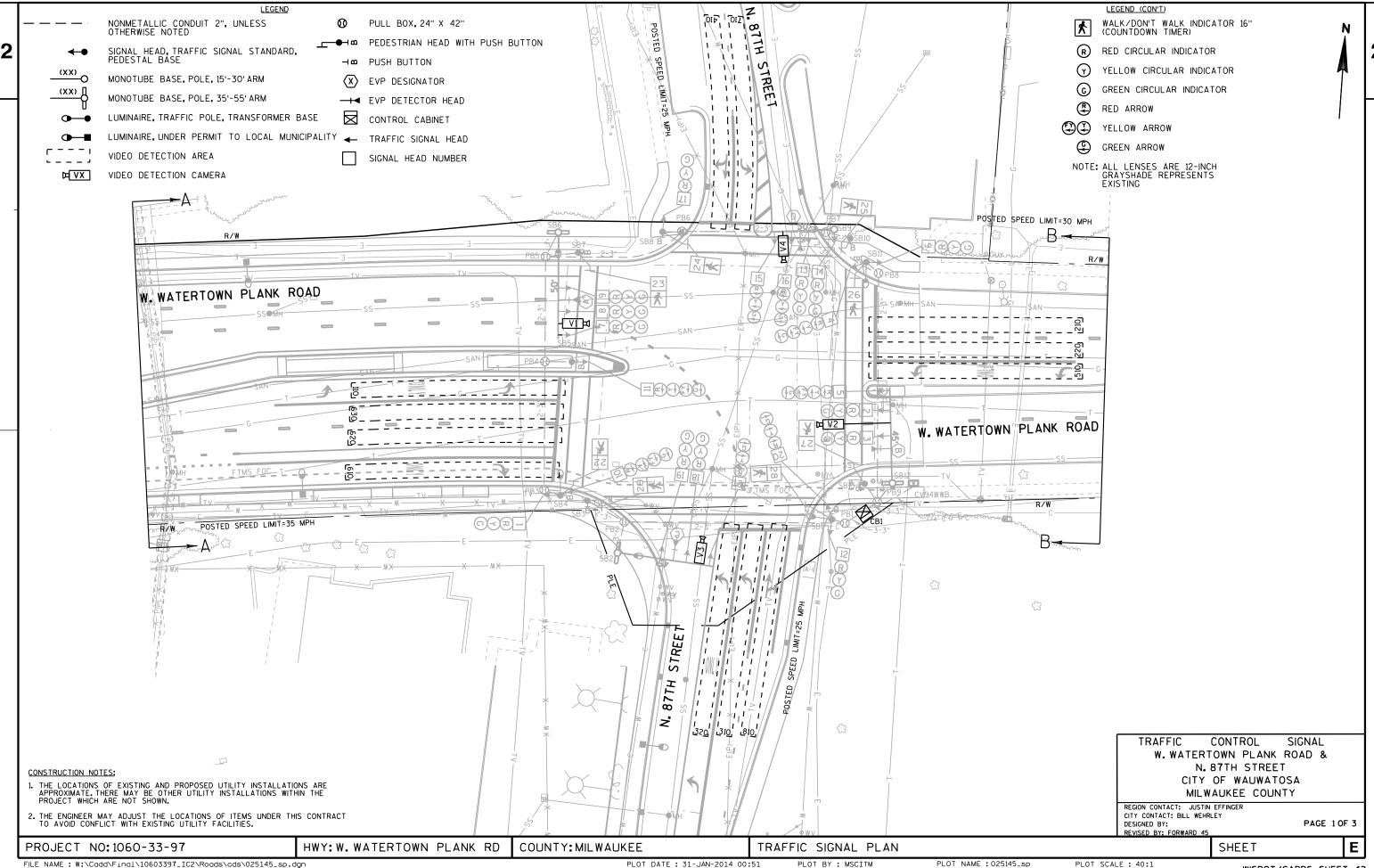
COUNTY: MILWAUKEE

TRAFFIC SIGNAL REMOVAL PLAN

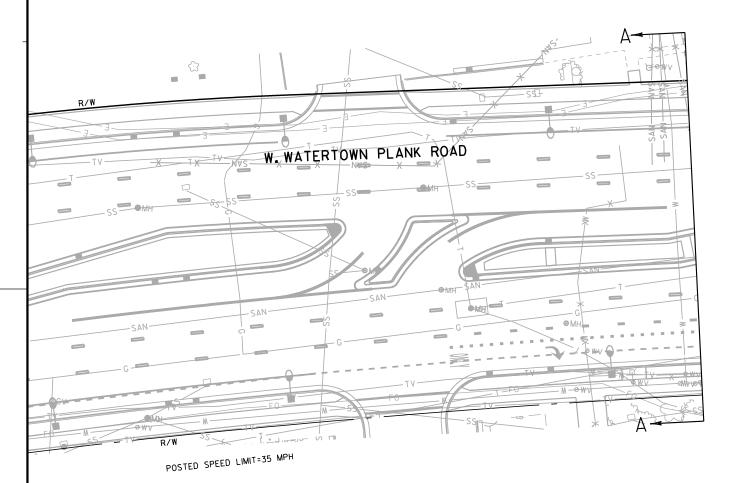
PLOT BY : MSCITM

PLOT NAME: 025142_sp

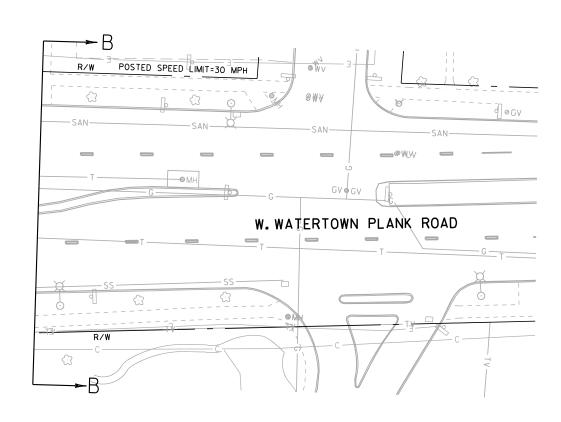
SHEET







HWY: W. WATERTOWN PLANK RD



TRAFFIC CONTROL SIGNAL
W. WATERTOWN PLANK ROAD &
N. 87TH STREET
CITY OF WAUWATOSA
MILWAUKEE COUNTY

SHEET

REGION CONTACT: JUSTIN EFFINGER CITY CONTACT: BILL WEHRLEY DESIGNED BY: REVISED BY: FORWARD 45

PAGE 2 OF 3

TRAFFIC SIGNAL PLAN

PLOT BY : MSCITM

PROJECT NO: 1060-33-97

COUNTY: MILWAUKEE

CONTROLLER LOGIC

PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
	6		×
	6	MIN	×
	8		×
	8		×
	2		×
	2	MIN	×
·	4		×
	4		×
		LOCKING	COCKING

TYPE OF INTERCONNECT/COMMUNICATION						
NONE						
CLOSED LOOP						
TWISTED PAIR*						
FIBER OPTIC*						
FIBER OPTIC (ETHERNET)	×					
RADIO						

TYPE OF COORDINATION	
NONE	
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	×
*LOCATION OF MASTER	
CONTROLLER NO: S-	
SIGNAL SYSTEM *: SS	

TYPE OF LIGHTING						
BY OTHER AGENCY						
IN TRAFFIC SIGNAL CABINET						
IN SEPARATE DOT LIGHTING CABINET						

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	х
GTT	х
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

	CHANNEL									
EMERGENCY VEHICLE PREEMPTOR	A	В	С	D						
MOVEMENT	A	<i>ÿ</i>		1						
PHASE	2+5	6+1	4+7	8+3						

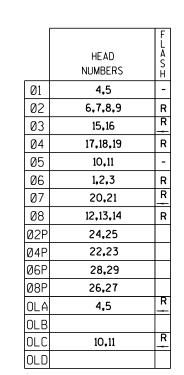
AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6. AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASE 4+8.

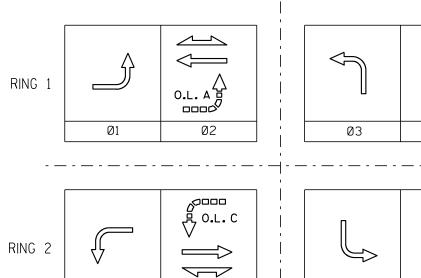
W. WATERTOWN PLANK ROAD & N. 87TH STREET CITY OF WAUWATOSA MILWAUKEE COUNTY

SIGNAL	NO.	CABINET TYPE:	TS2
		CONTROLLER TYPE:	EPAC
DATE	02/14	PAGE NO.	3 OF 3

SHEET

		_	<u> </u>				





	0.L. c			
Ø 5	Ø6	1 ¦	07	Ø8
		BARRIER		

<u></u>				
Ø6		07	Ø8	
	i			
	BARRIER			

04

)E	ΓEC	TOR	LOGIC

PLAN LOOP DETECTOR *(S)	110	220	320	510	620	710					
ASSIGNED PHASE	1	2	3	5	6	7					Ī
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH					Ī
SWITCH	6			2							Ī
EXTEND											Ī
DELAY											Ī
·											
DETECTOR INPUT											Γ
PLAN LOOP DETECTOR *(S)	210	310	410	610	630	810					Ī
ASSIGNED PHASE	2	3	4	6	6	8					Ī
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH					Ī
SWITCH											Ī
EXTEND											Ī
DELAY			Х	Х		Х					Ī

HWY: W. WATERTOWN PLANK RD

COUNTY: MILWAUKEE

PLOT BY : MSCITM

TRAFFIC SIGNAL PLAN

DETECTOR INPUT PLAN LOOP DETECTOR *(S) ASSIGNED PHASE OPERATION MODE SWITCH

EXTEND DELAY

DETECTOR INPUT

ASSIGNED PHASE OPERATION MODE

SWITCH

EXTEND DELAY

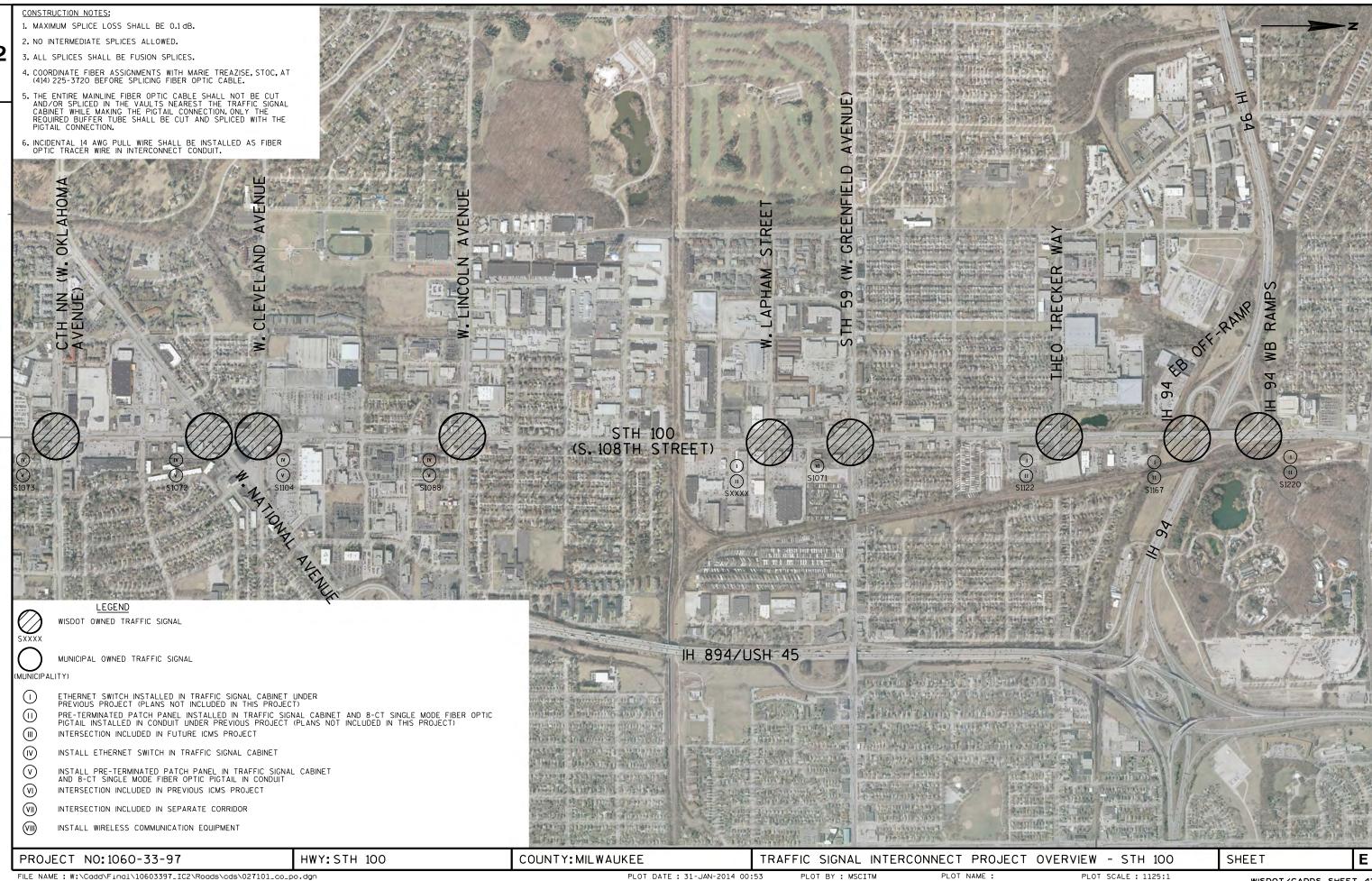
PLAN LOOP DETECTOR *(S)

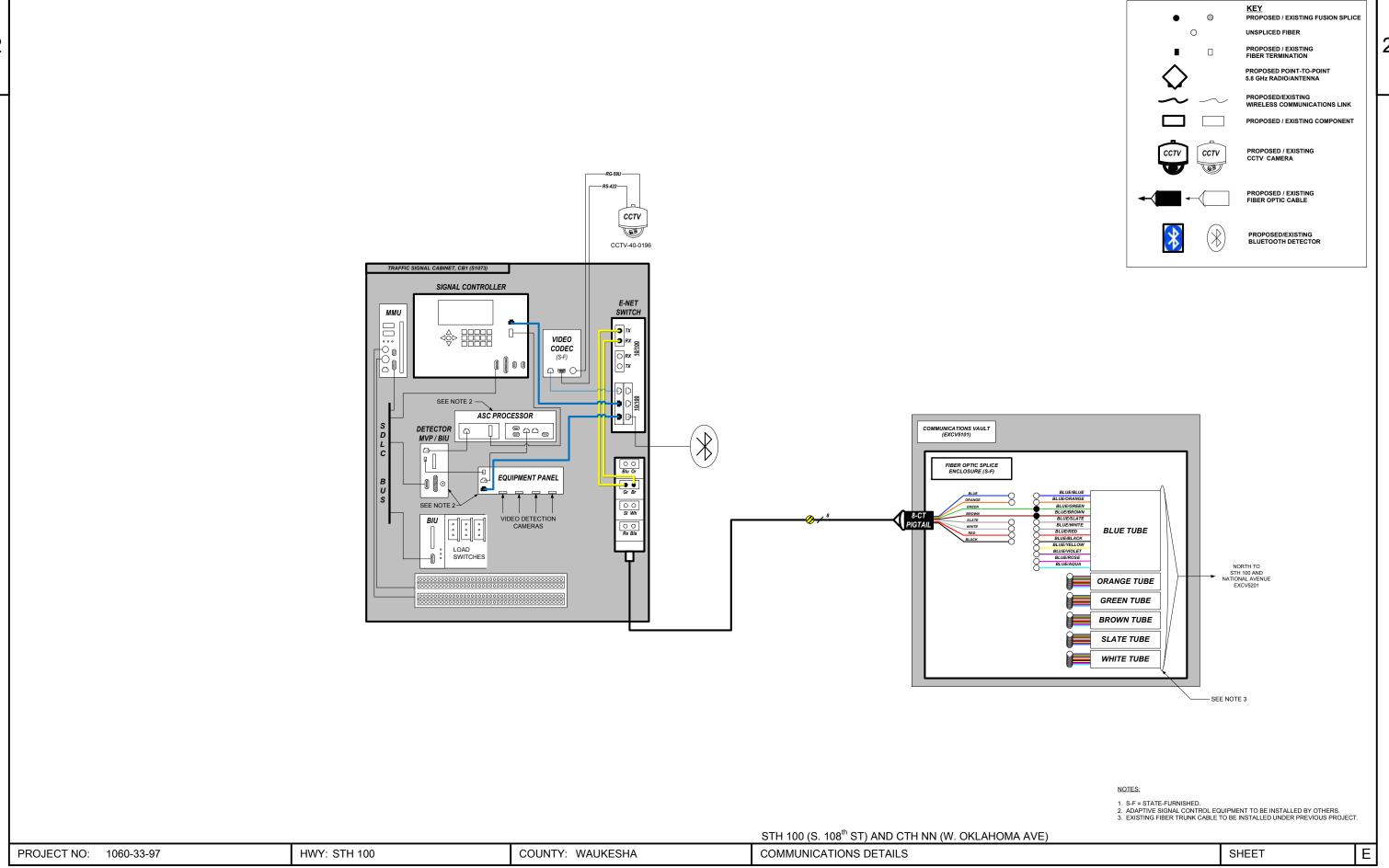
PLOT NAME: 025149_sp_ph

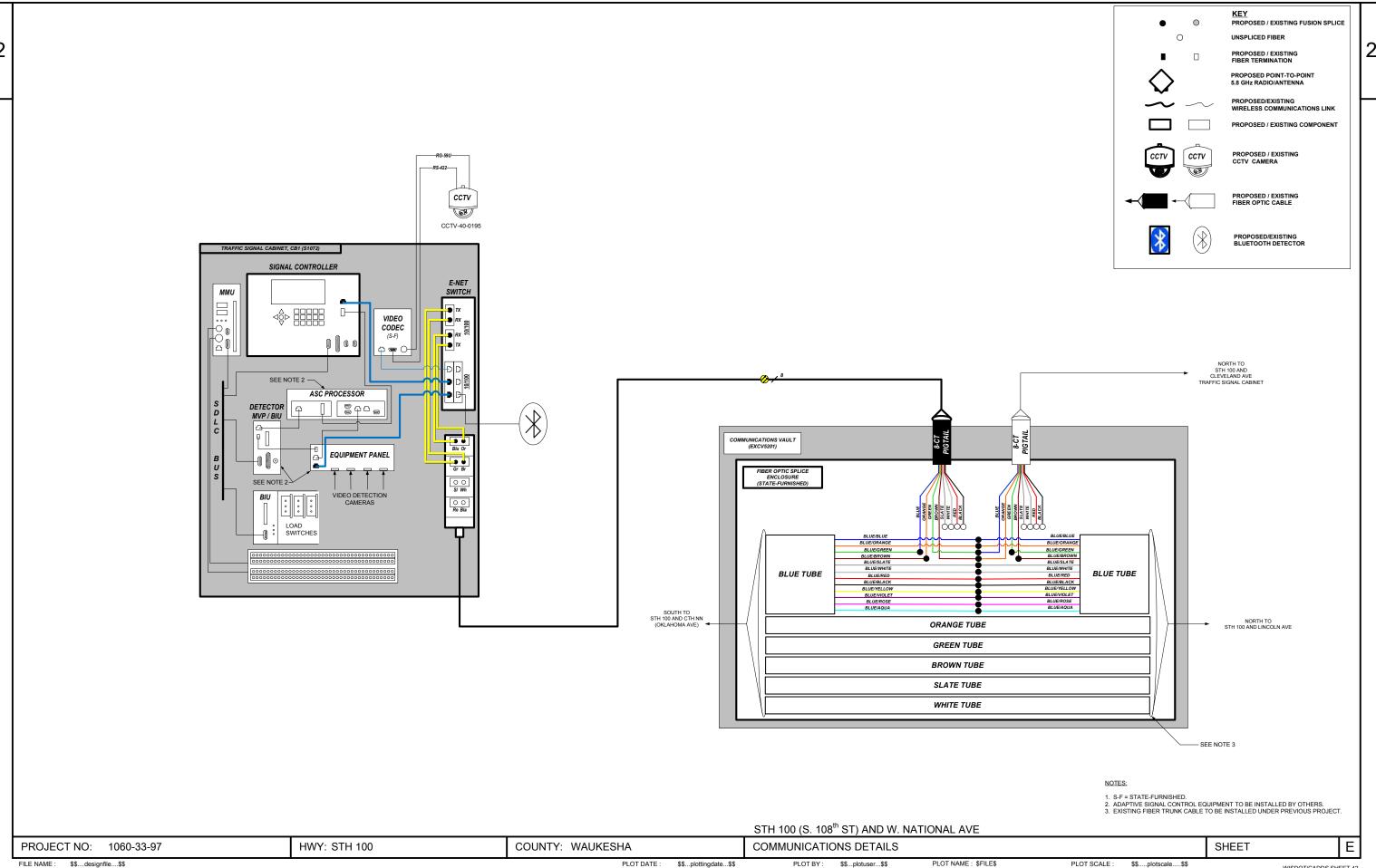
FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\025149_sp_ph.dgn

PROJECT NO: 1060-33-97

PLOT DATE: 31-JAN-2014 00:53









PROPOSED / EXISTING FIBER TERMINATION

PROPOSED POINT-TO-POINT 5.8 GHz RADIO/ANTENNA PROPOSED/EXISTING
WIRELESS COMMUNICATIONS LINK

PROPOSED / EXISTING COMPONENT

0

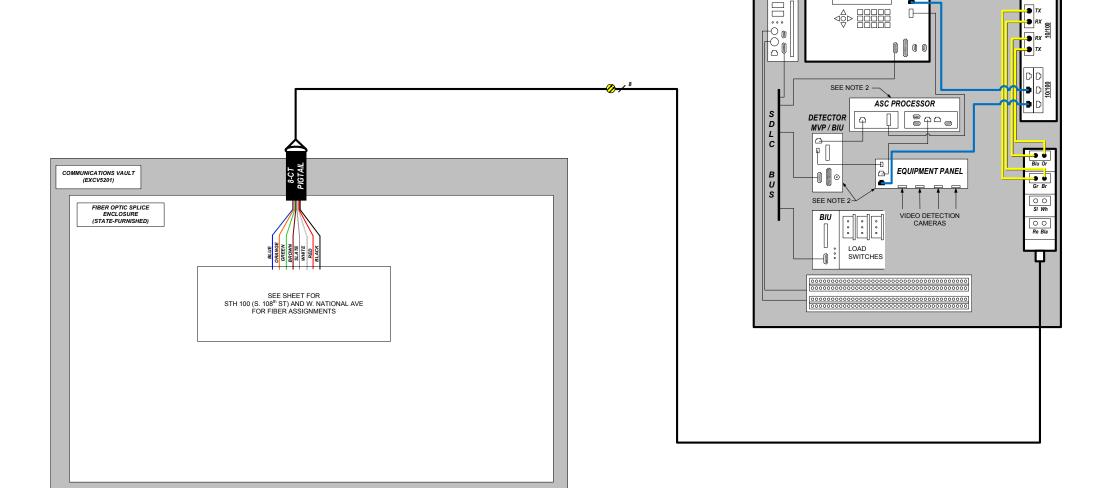
> PROPOSED / EXISTING CCTV CAMERA CCTV

ССТУ

PROPOSED / EXISTING FIBER OPTIC CABLE



PROPOSED/EXISTING BLUETOOTH DETECTOR



- S-F = STATE-FURNISHED.
 ADAPTIVE SIGNAL CONTROL EQUIPMENT TO BE INSTALLED BY OTHERS.

STH 100 (S. 108th ST) AND W. CLEVELAND AVE

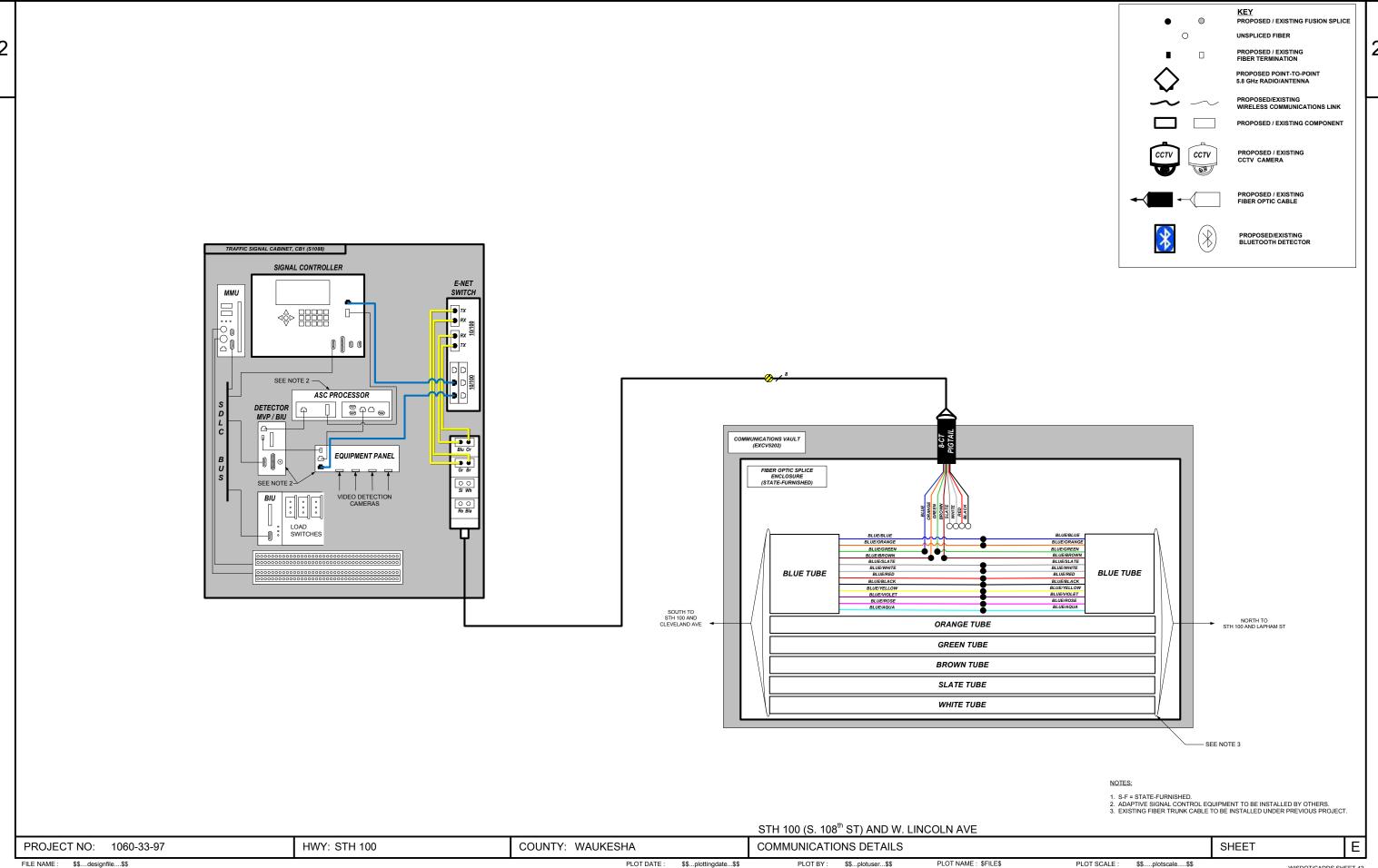
TRAFFIC SIGNAL CABINET, CB1 (S1104)

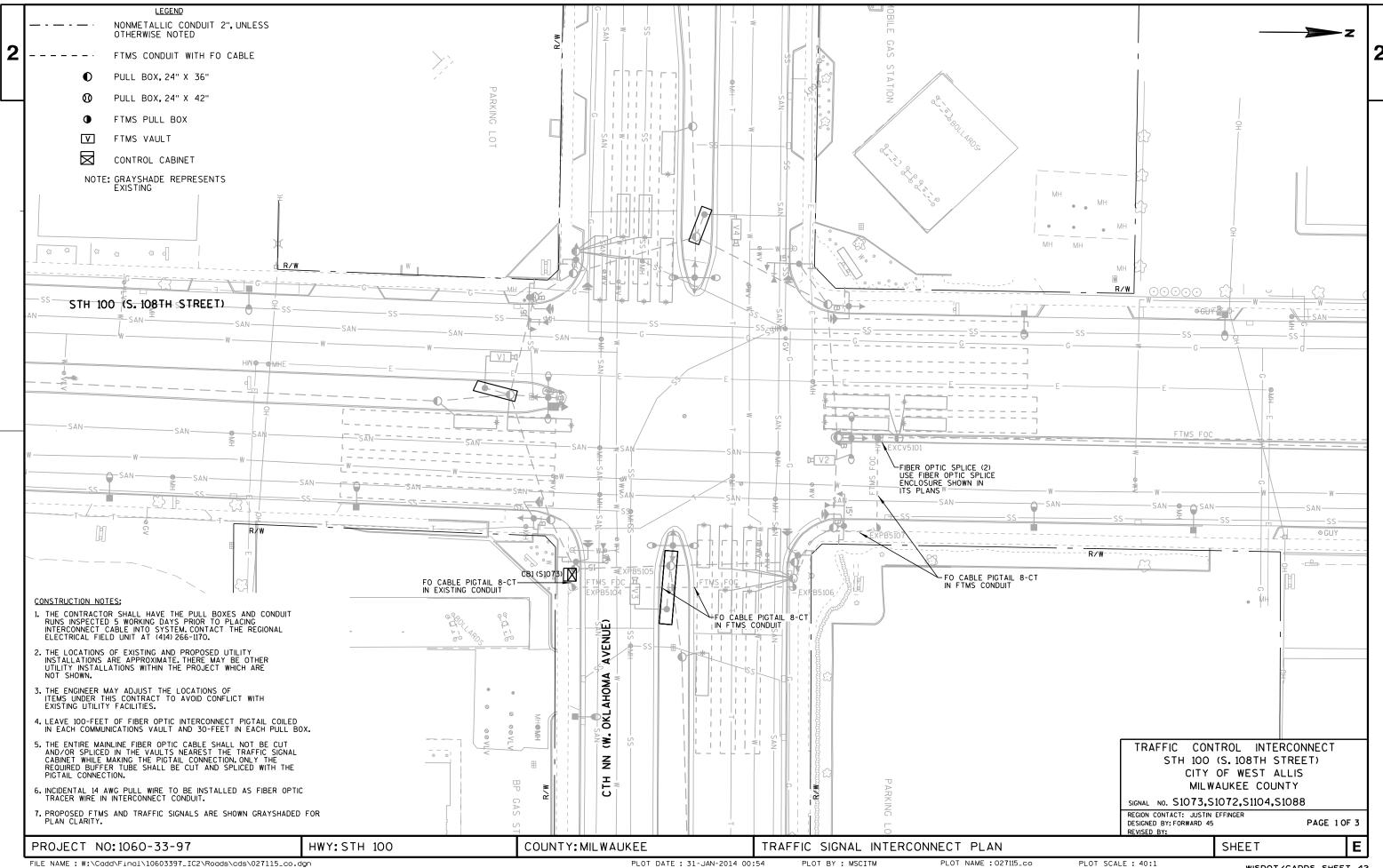
MMU

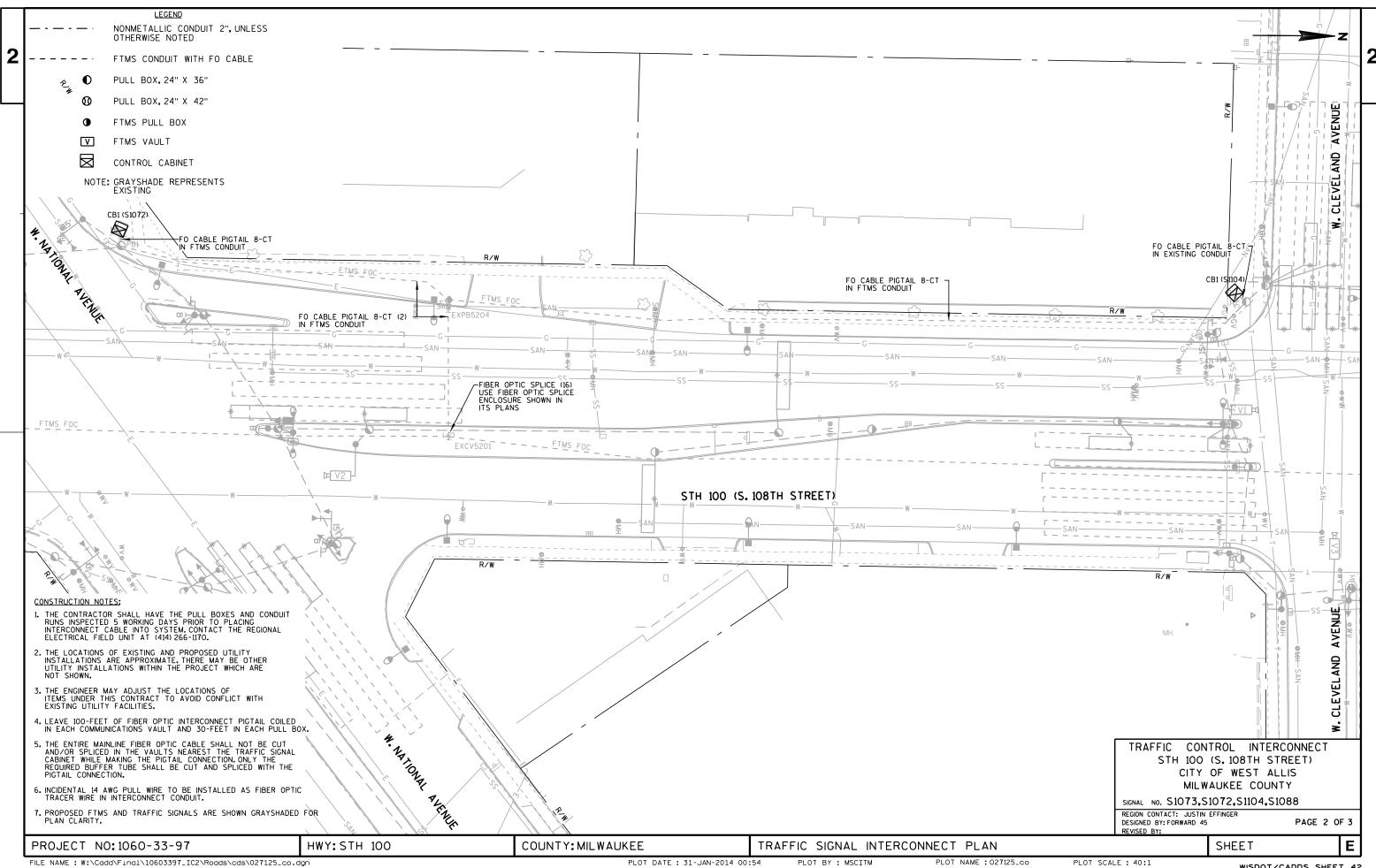
SIGNAL CONTROLLER

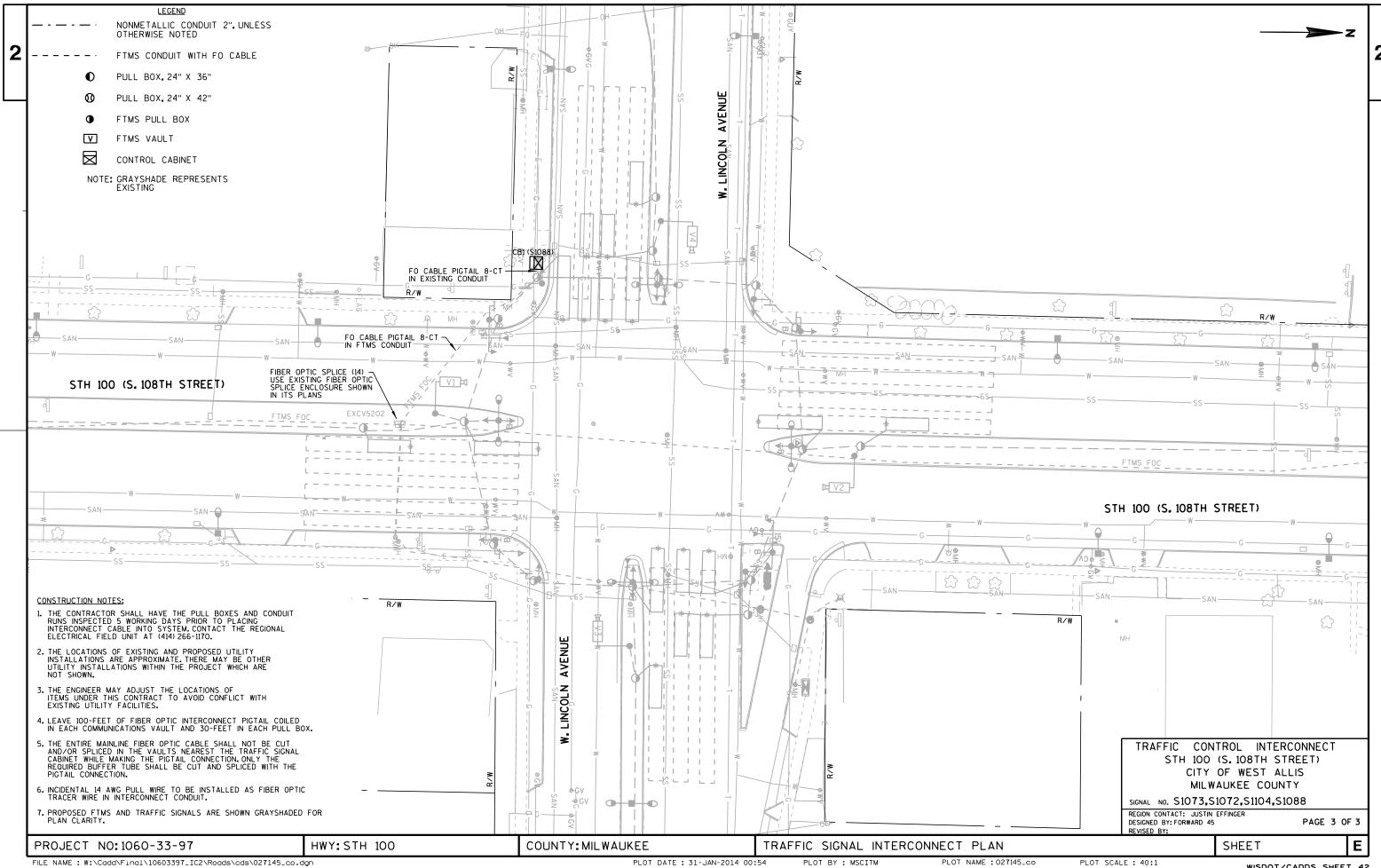
E-NET SWITCH

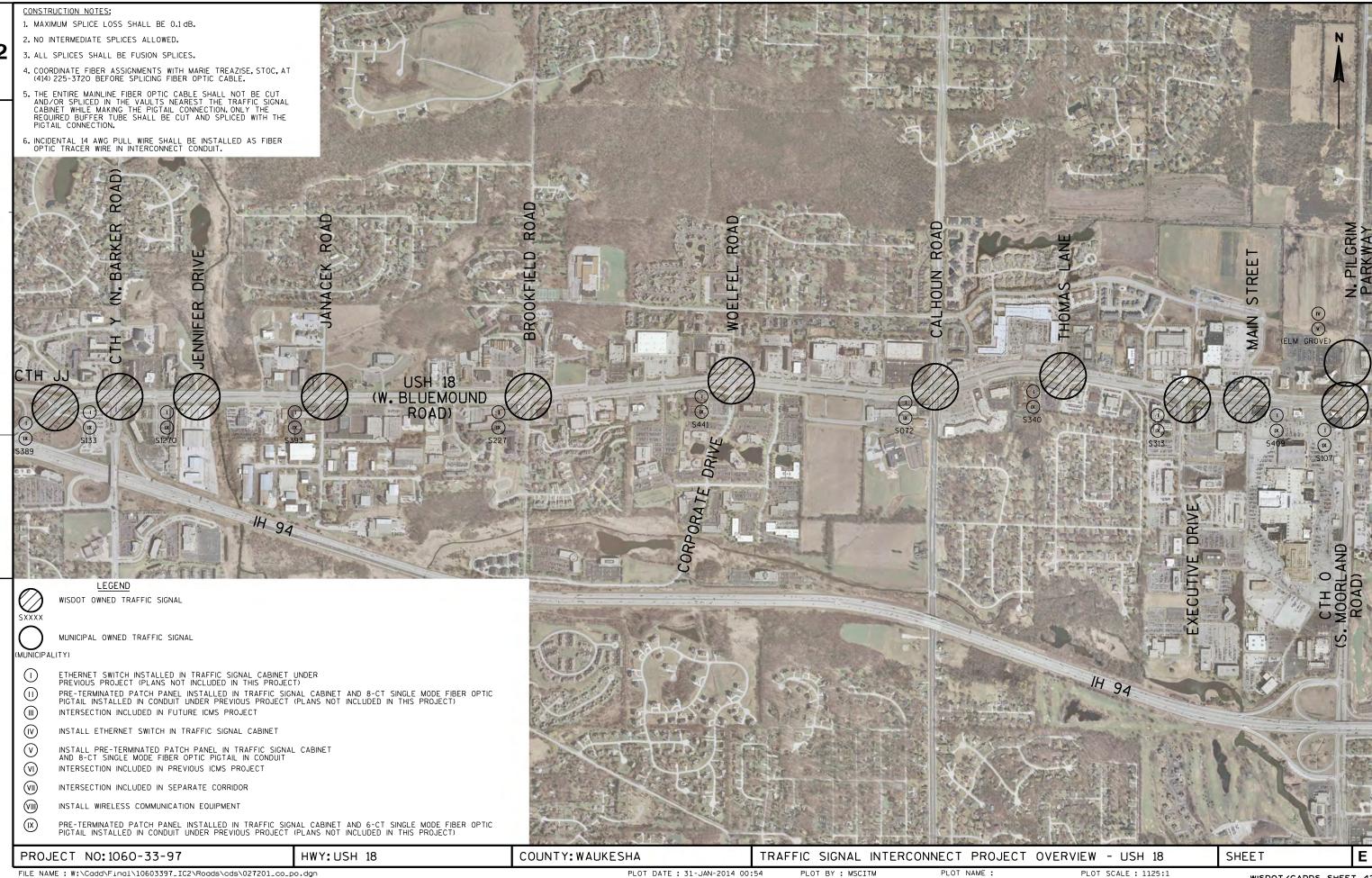
HWY: STH 100 COUNTY: WAUKESHA COMMUNICATIONS DETAILS PROJECT NO: 1060-33-97 SHEET FILE NAME: \$\$....designfile....\$\$ PLOT DATE : \$\$...plottingdate...\$\$ PLOT BY: \$\$...plotuser...\$\$ PLOT NAME: \$FILE\$ PLOT SCALE : \$\$.....plotscale.....\$\$













0

PROPOSED / EXISTING FIBER TERMINATION

PROPOSED POINT-TO-POINT 5.8 GHz RADIO/ANTENNA

PROPOSED/EXISTING
WIRELESS COMMUNICATIONS LINK PROPOSED / EXISTING COMPONENT



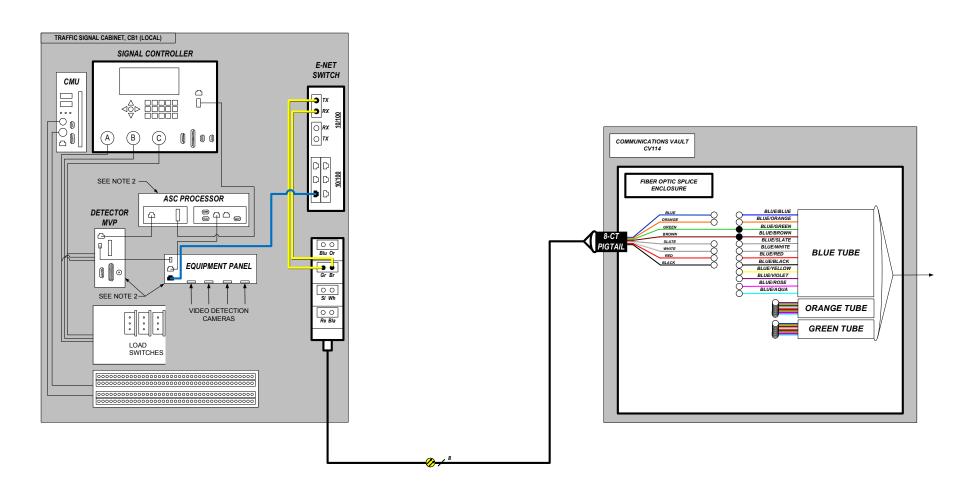
CCTV

PROPOSED / EXISTING CCTV CAMERA



PROPOSED / EXISTING FIBER OPTIC CABLE

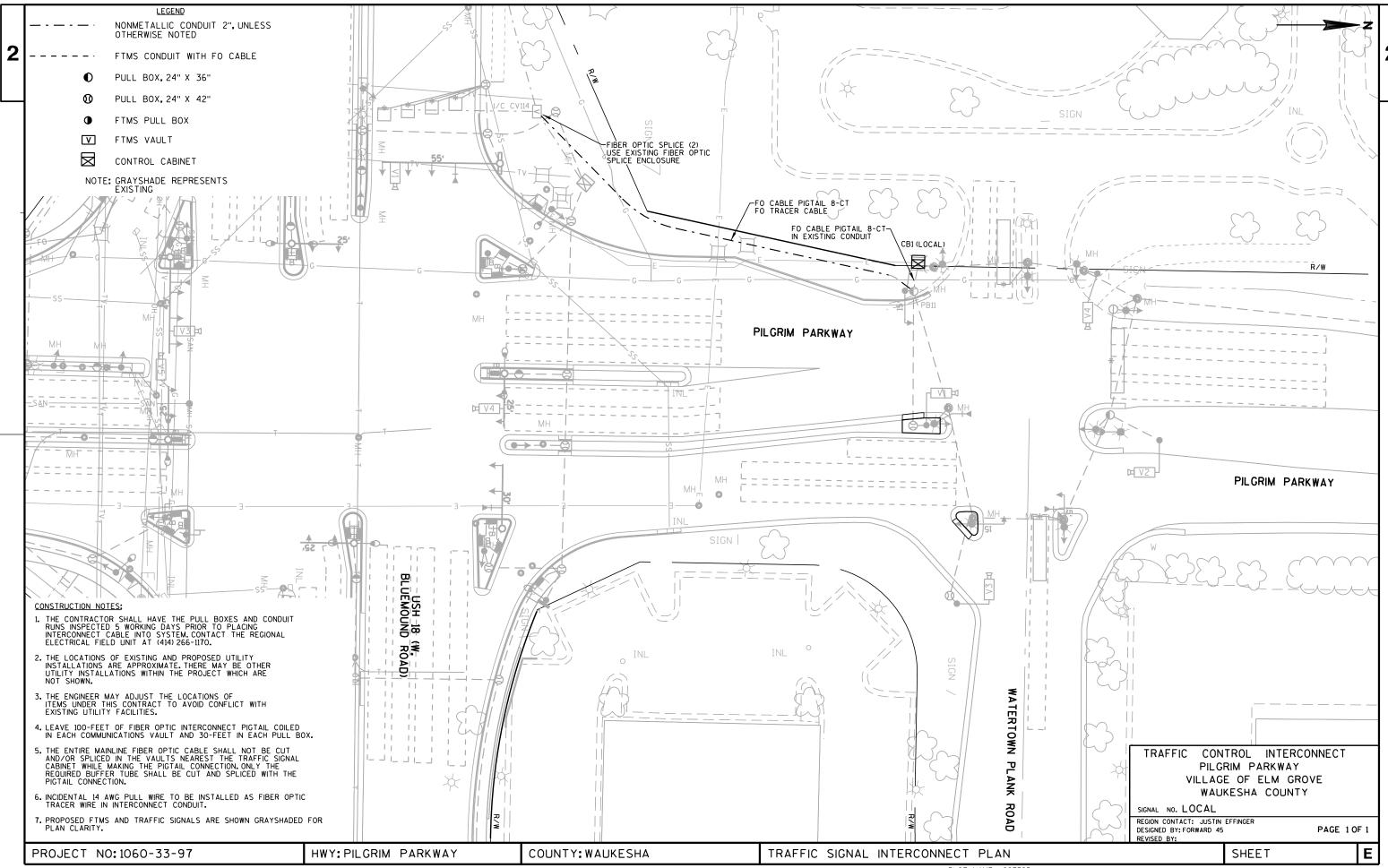
PROPOSED/EXISTING BLUETOOTH DETECTOR

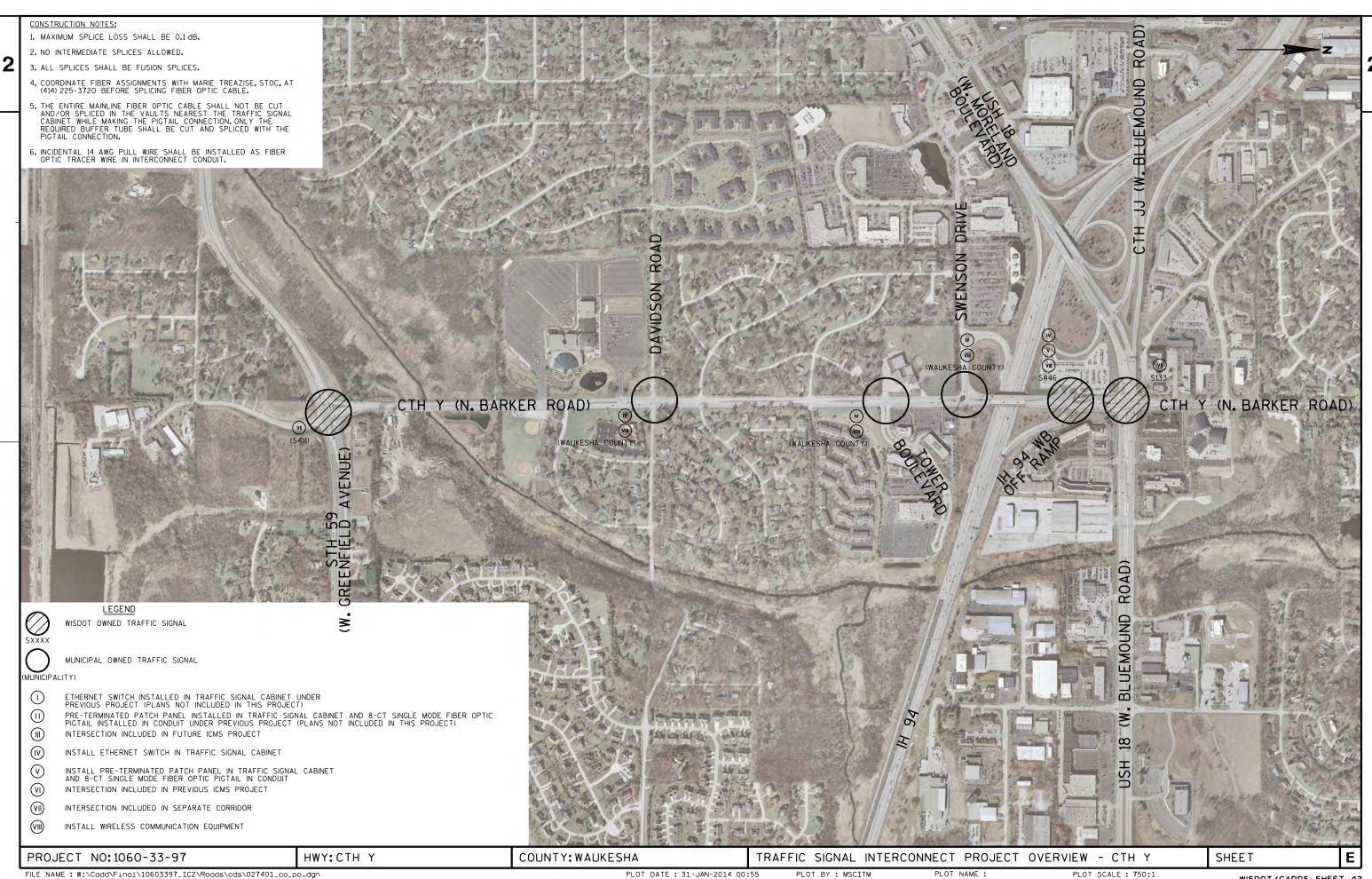


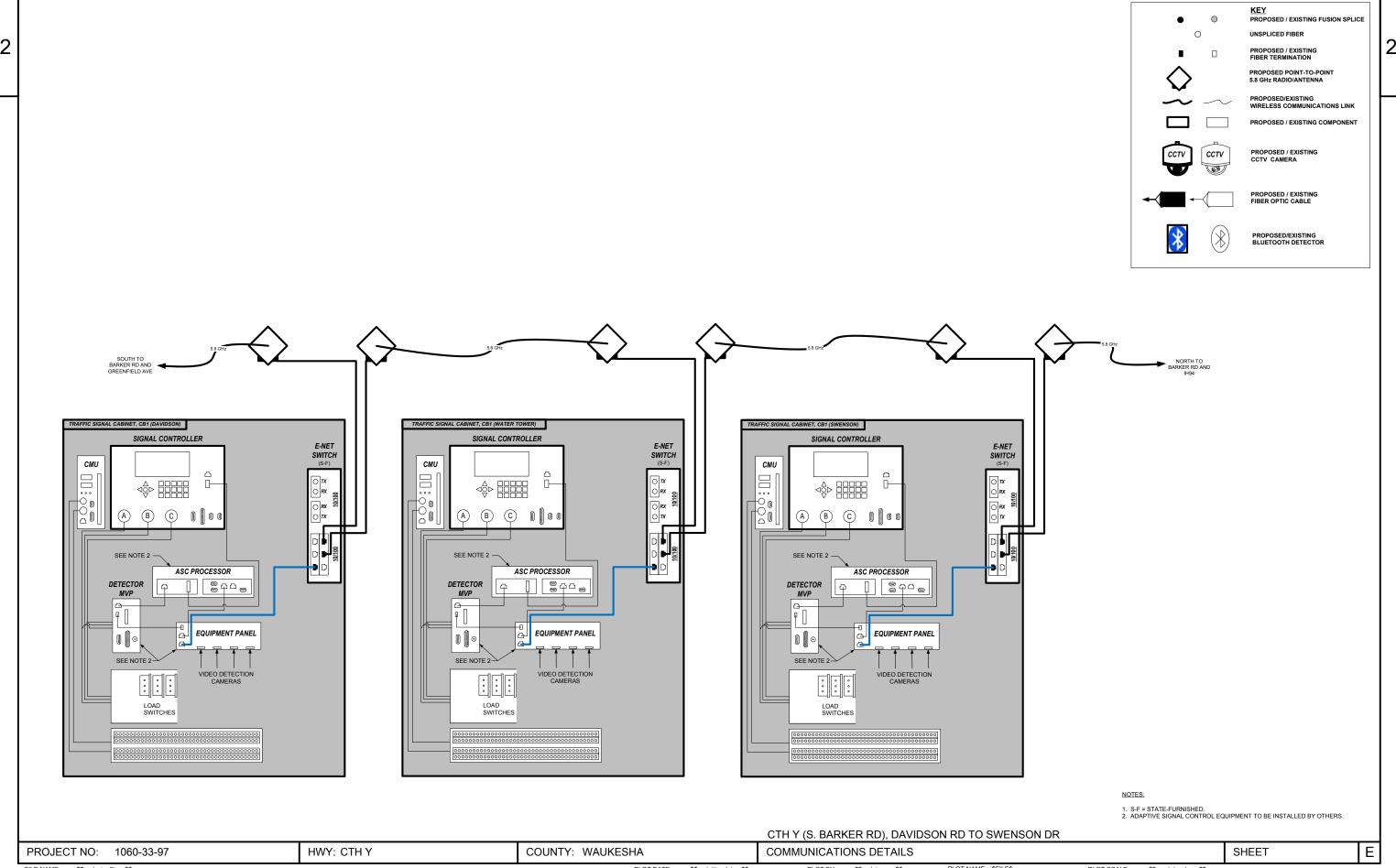
S-F = STATE-FURNISHED.
 ADAPTIVE SIGNAL CONTROL EQUIPMENT TO BE INSTALLED BY OTHERS.

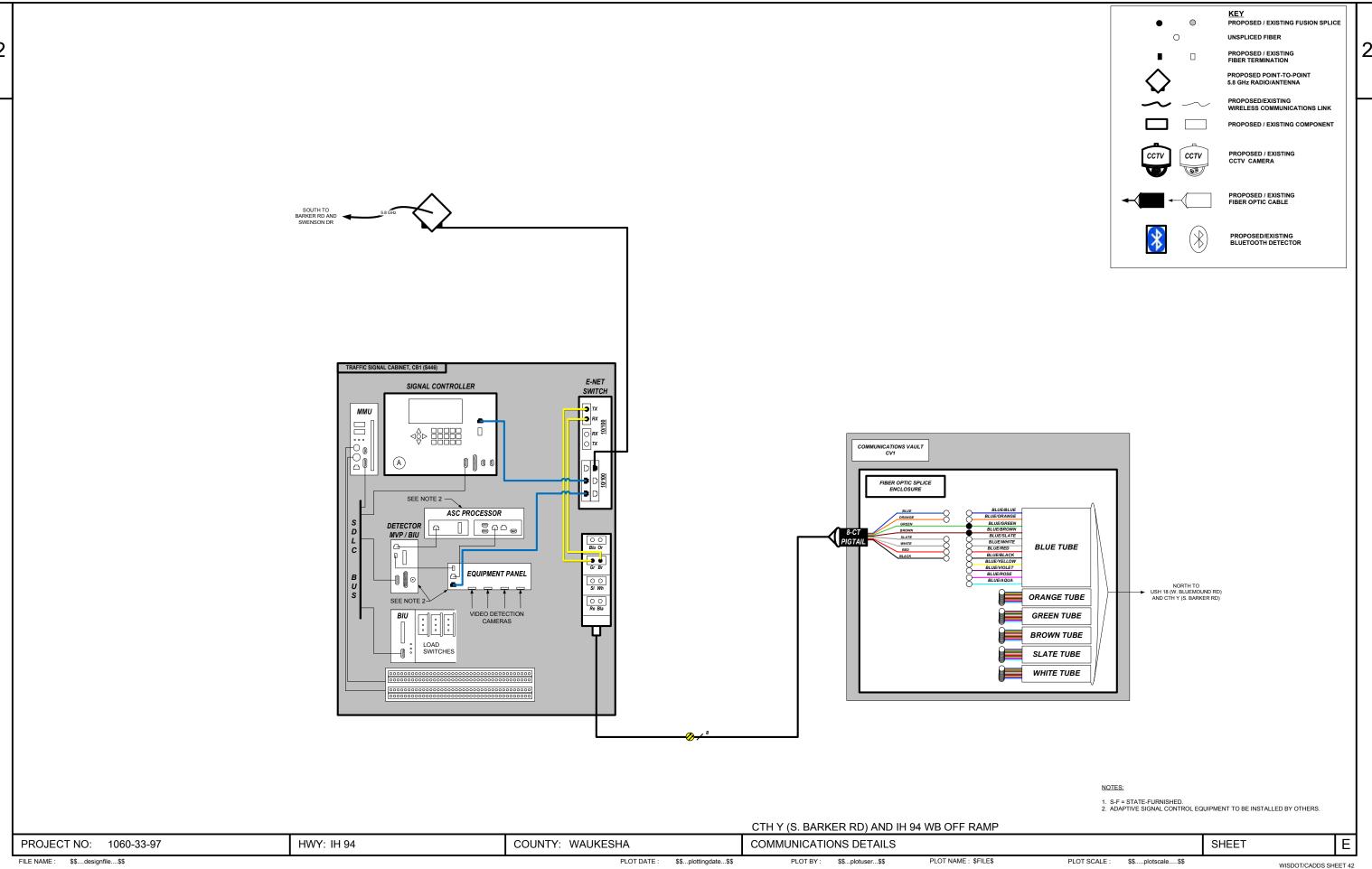
PILGRIM PKWY, WATERTOWN PLANK RD TO USH 18 (W. BLUEMOUND RD)

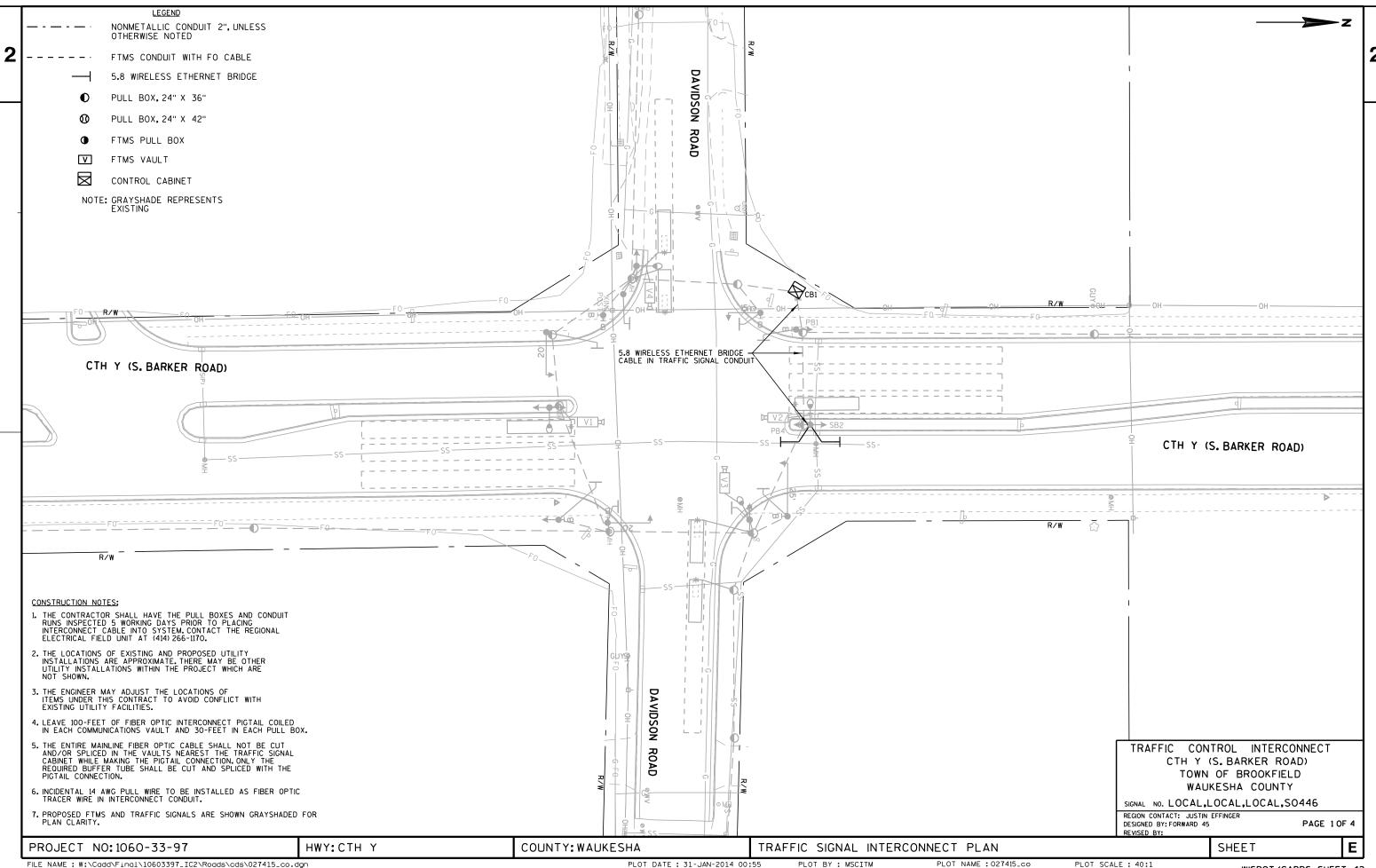
HWY: USH 18 PROJECT NO: 1060-33-97 COUNTY: WAUKESHA **COMMUNICATIONS DETAILS** SHEET FILE NAME: \$\$....designfile....\$\$ PLOT DATE : \$\$...plottingdate...\$\$ PLOT BY: \$\$...plotuser...\$\$ PLOT SCALE : \$\$.....plotscale.....\$\$

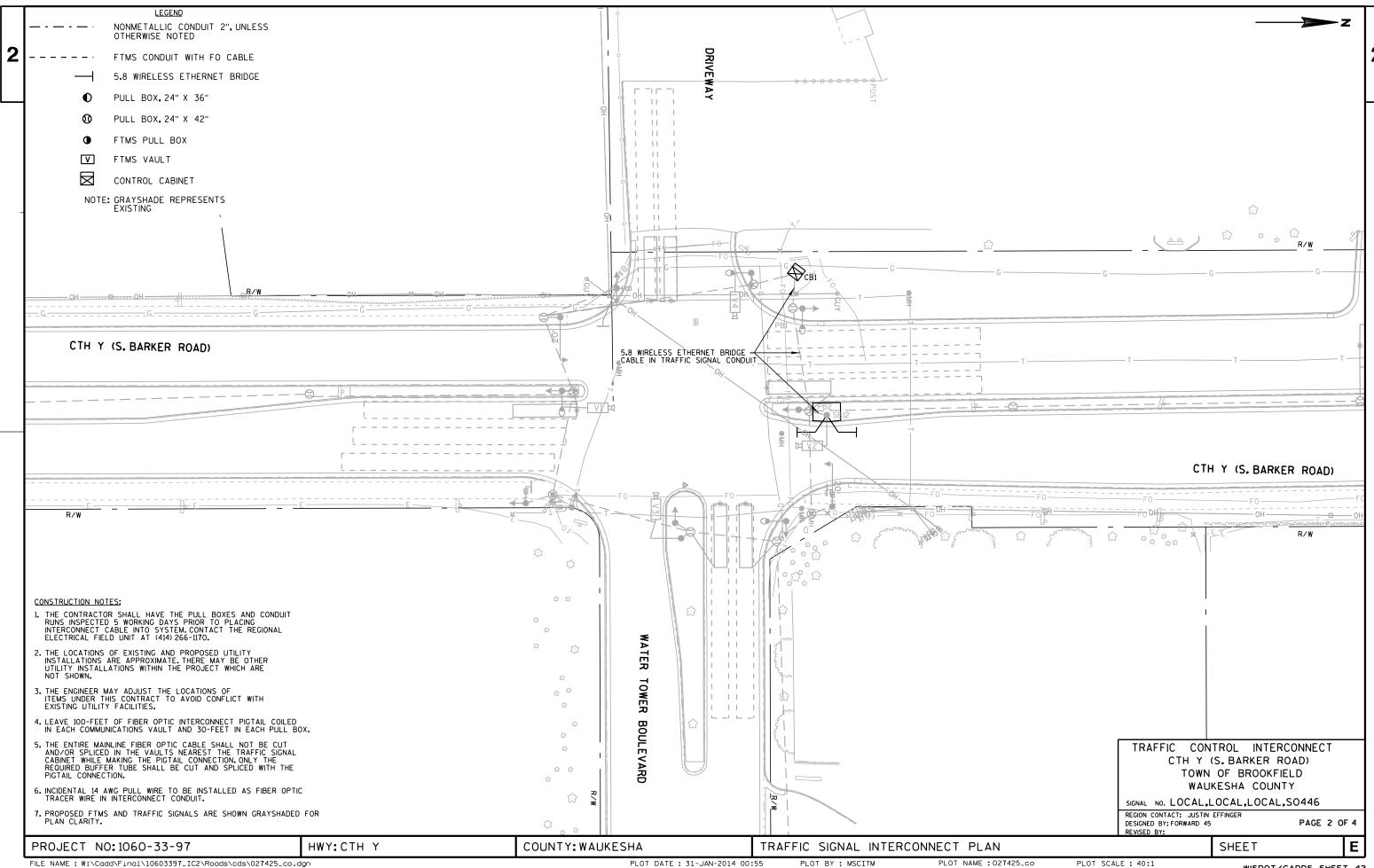


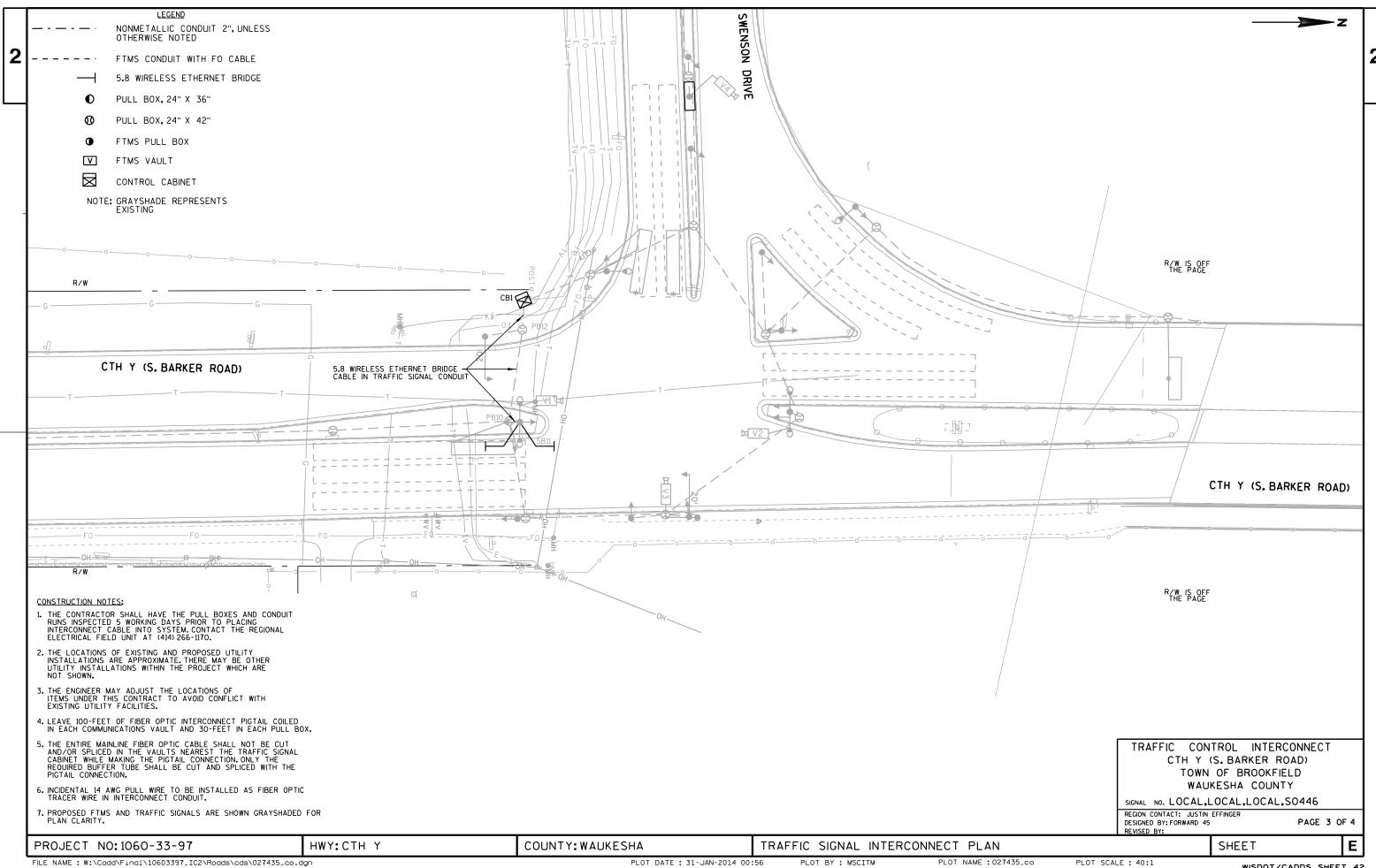


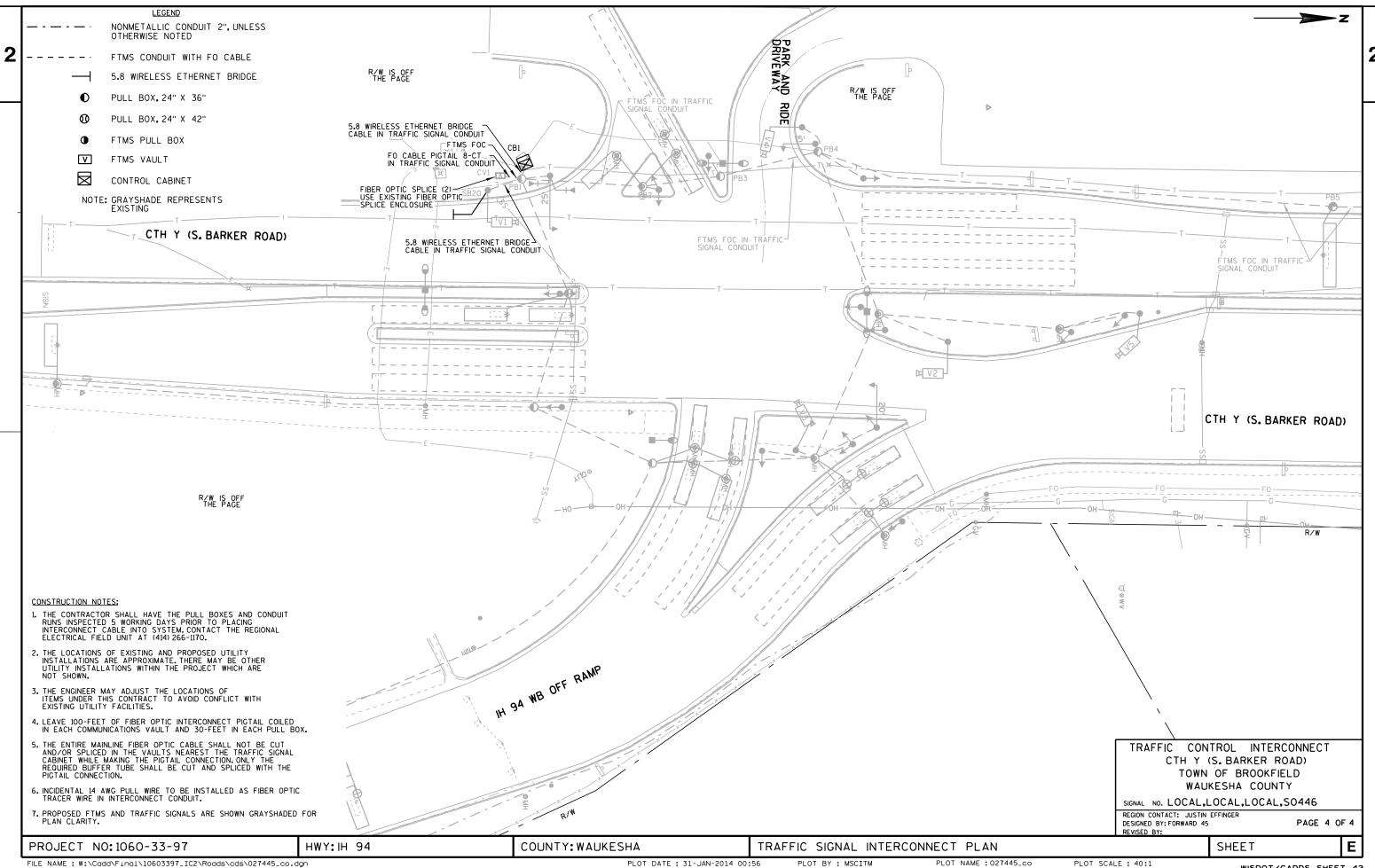


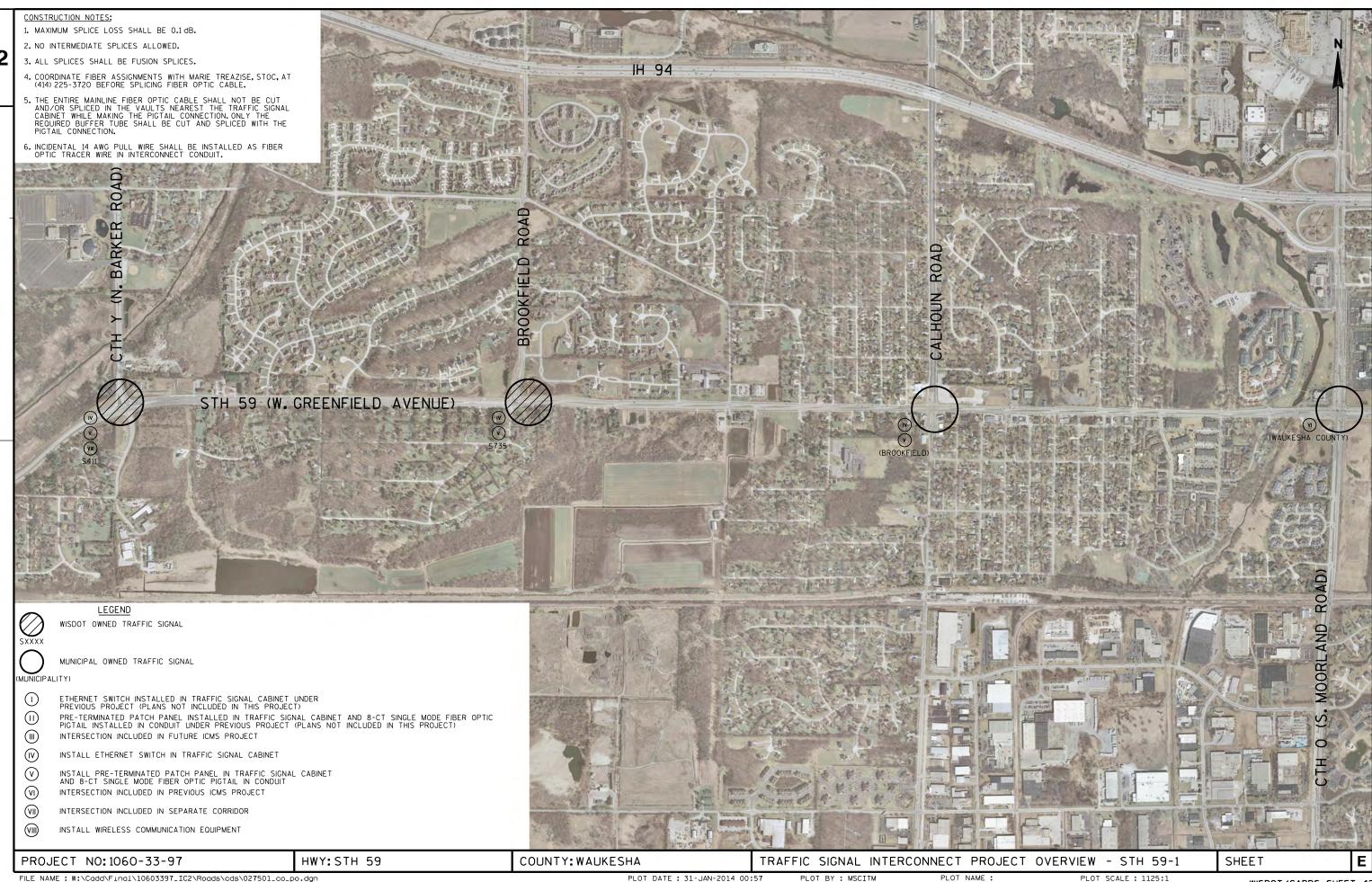


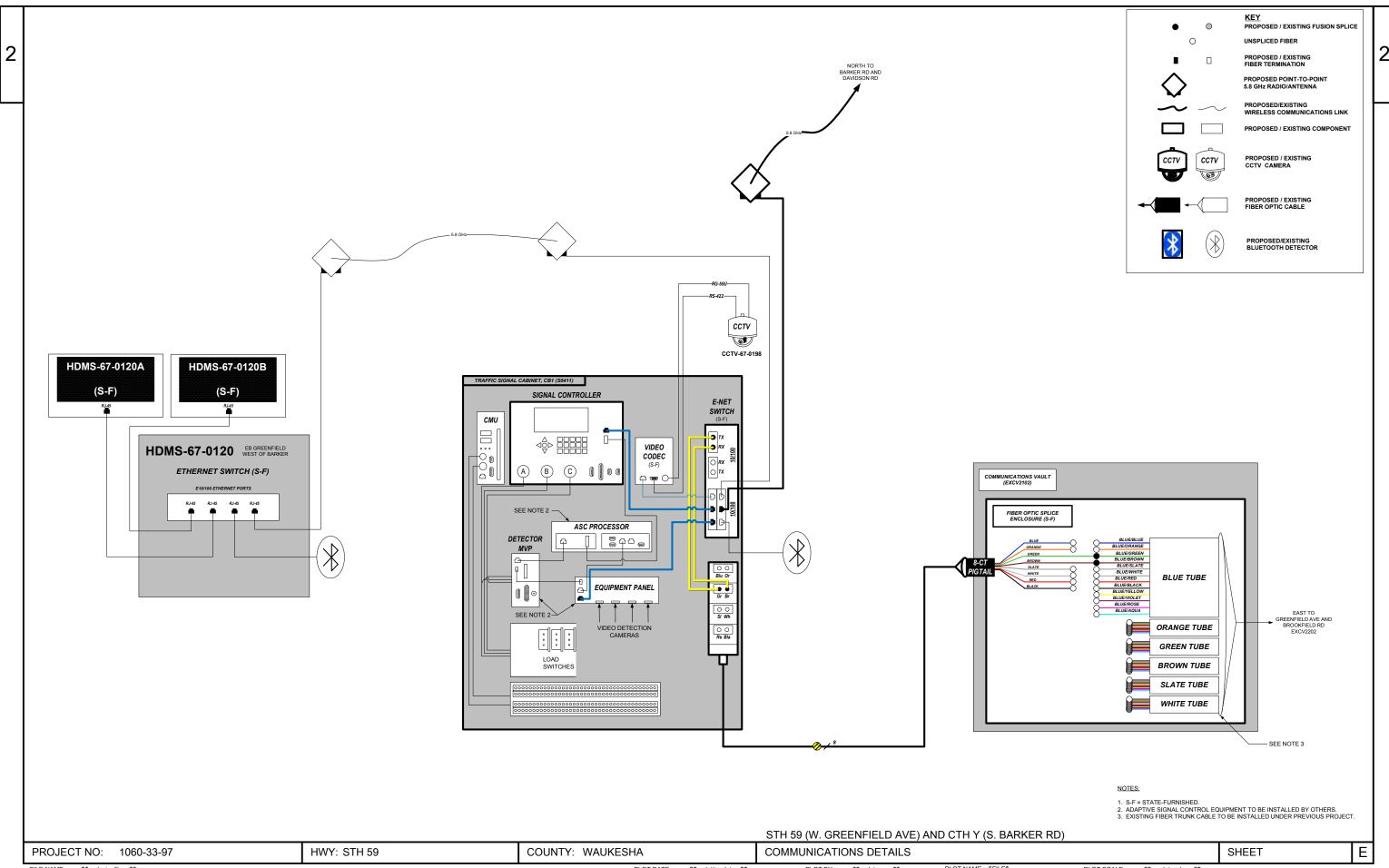


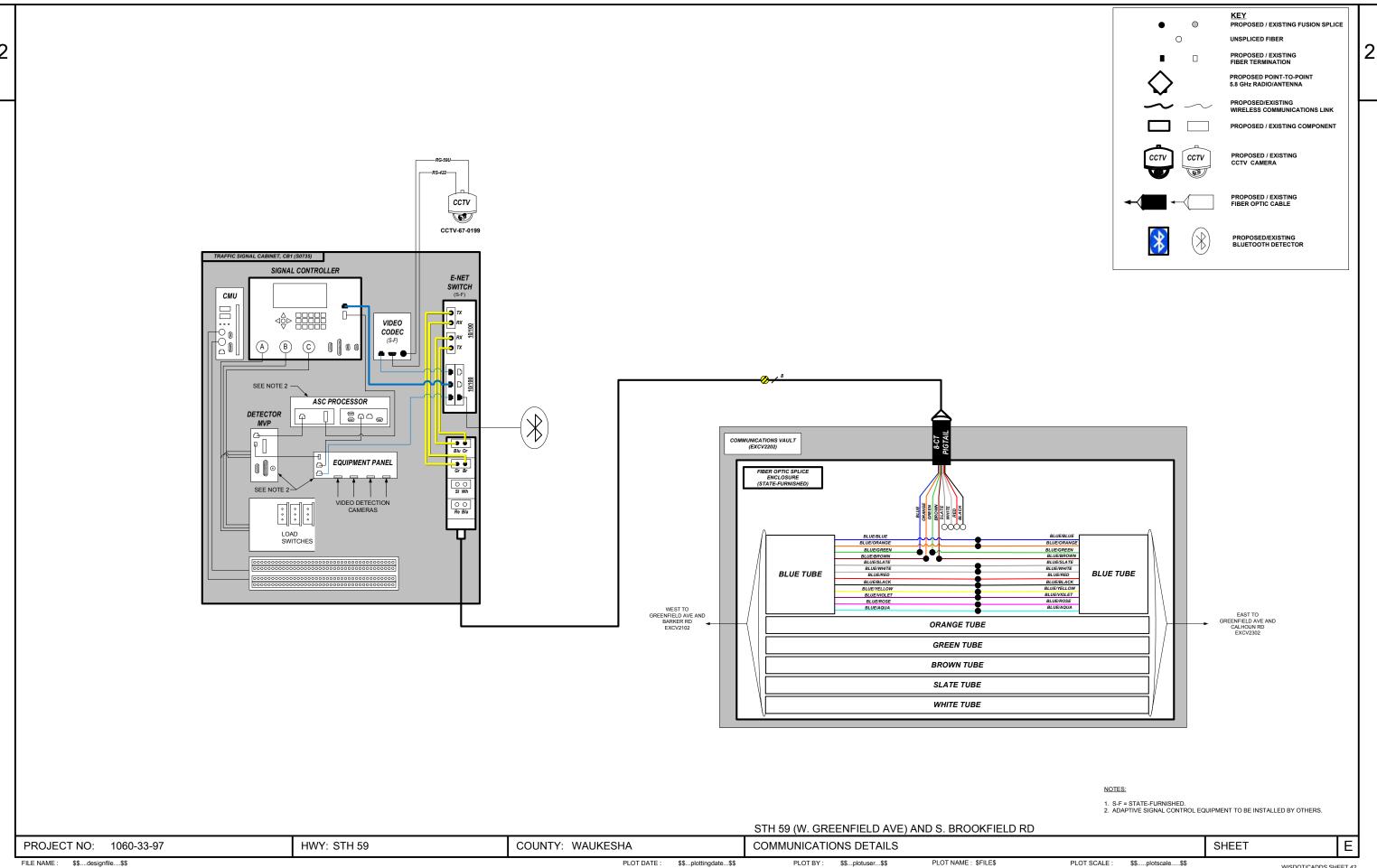


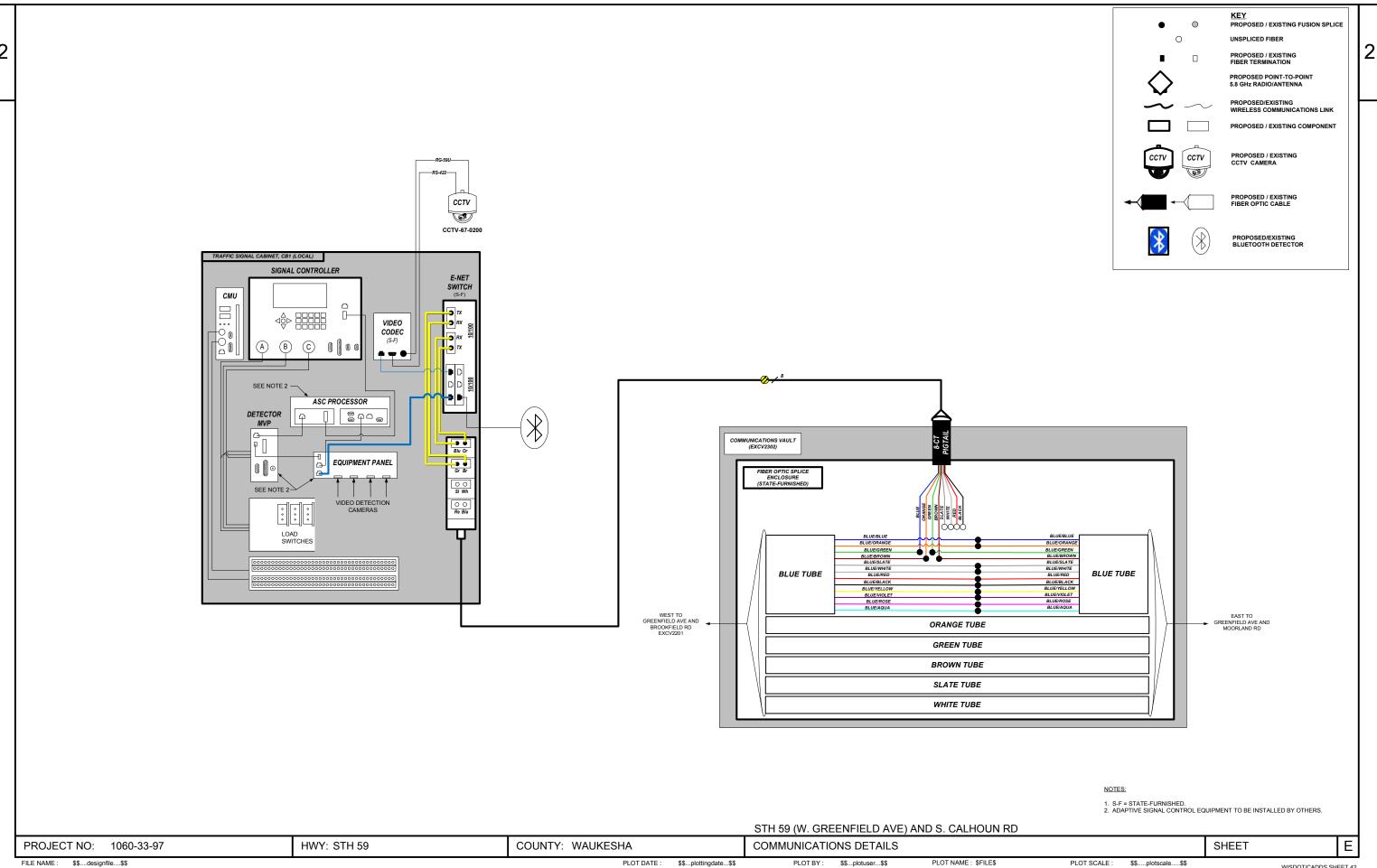


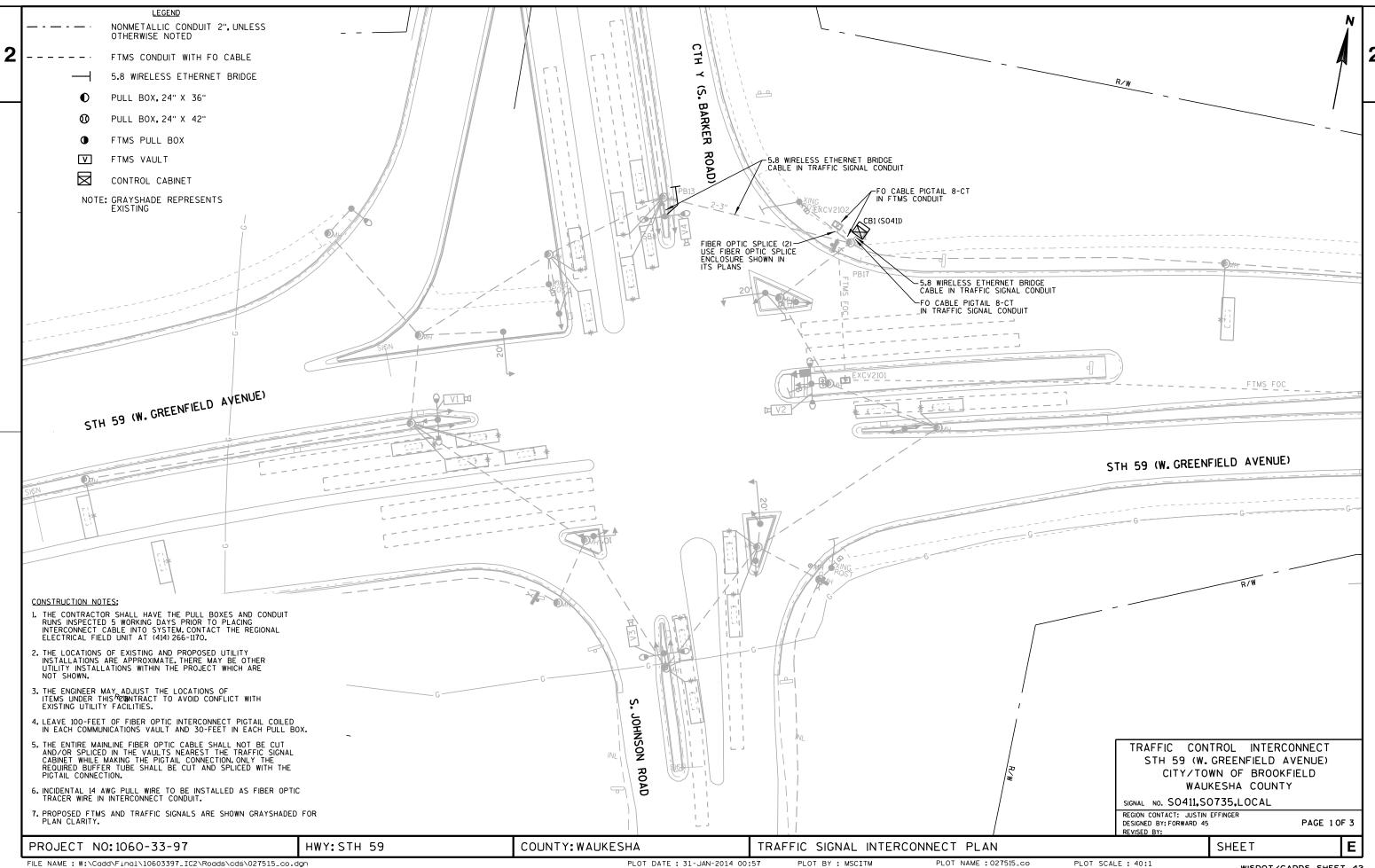


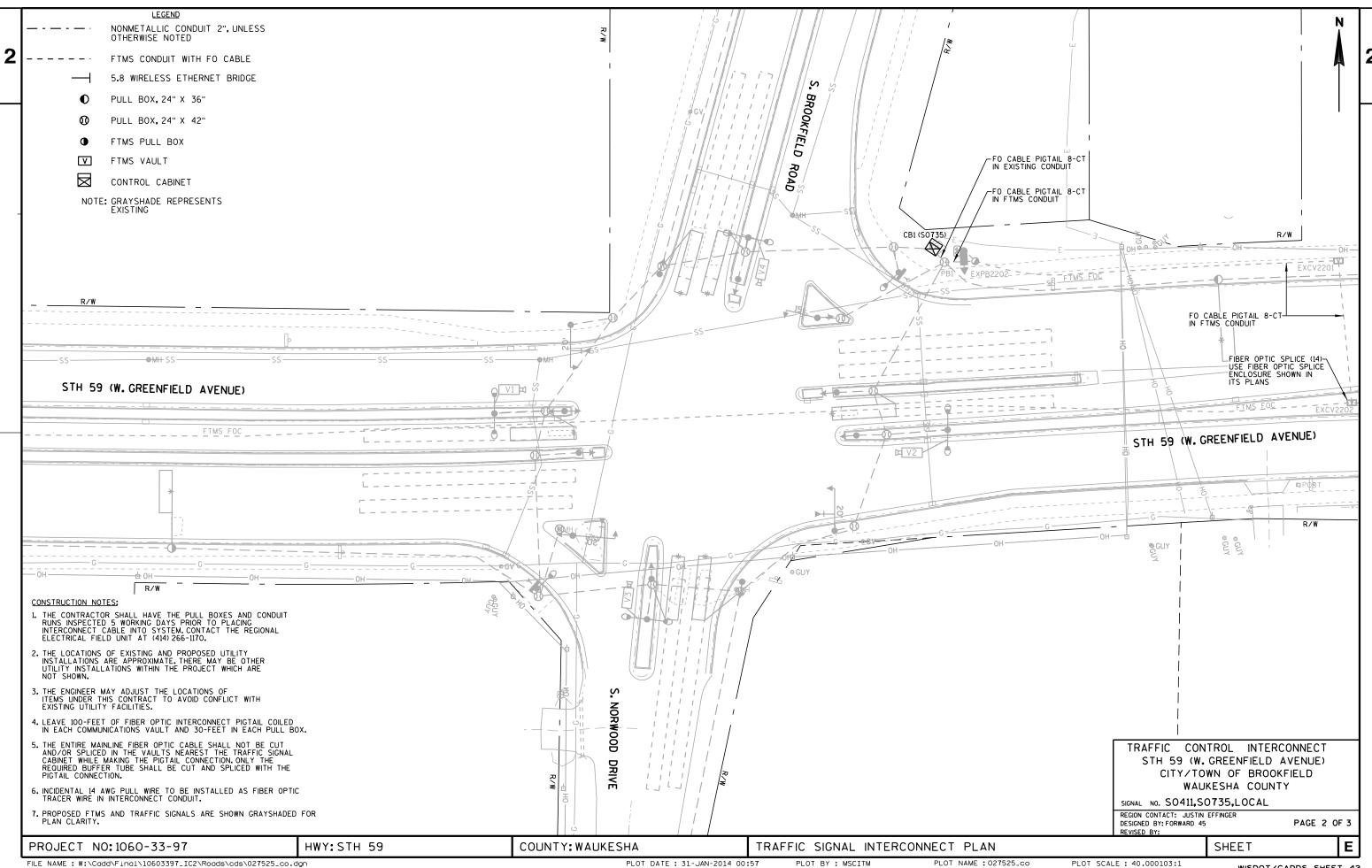


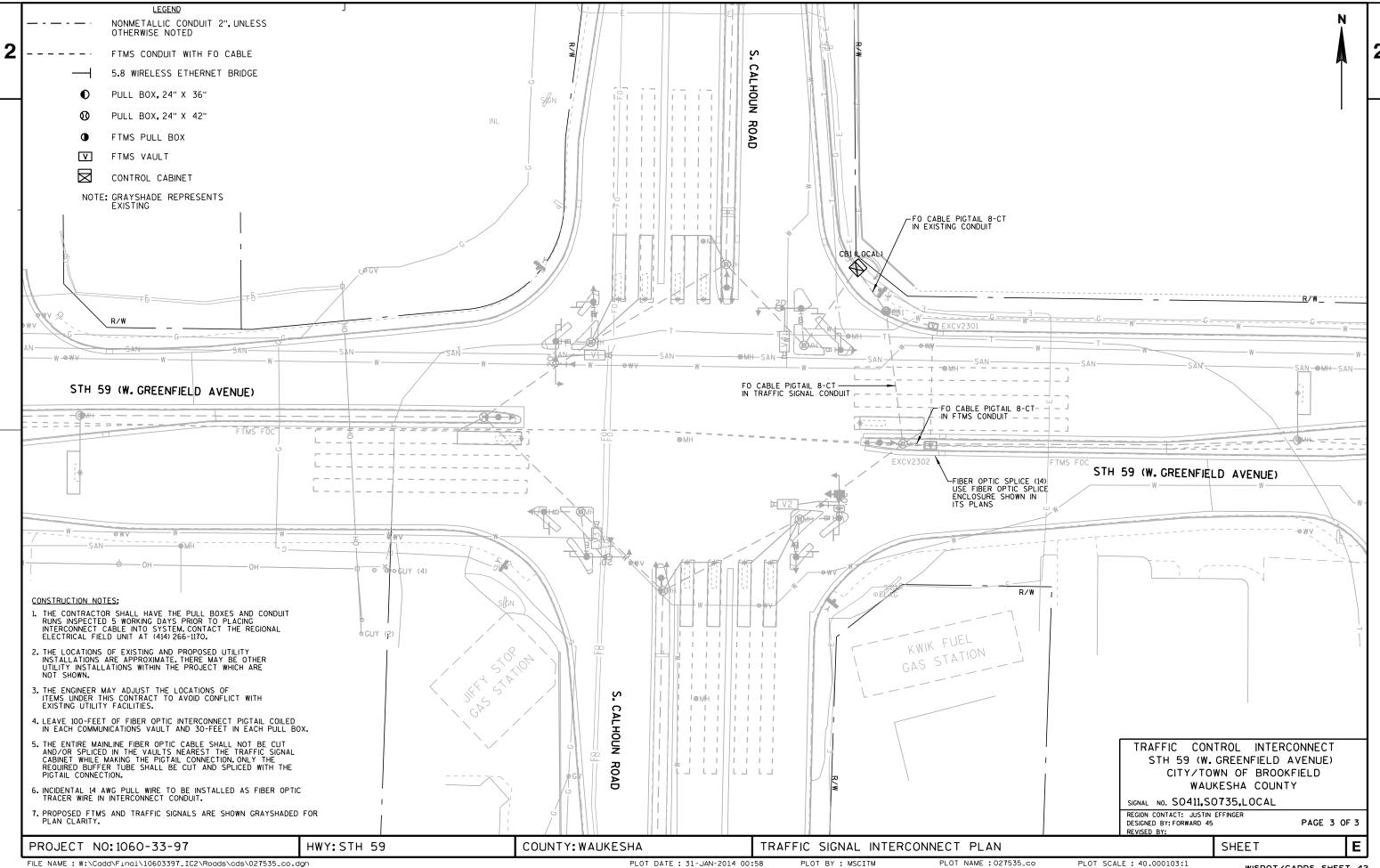


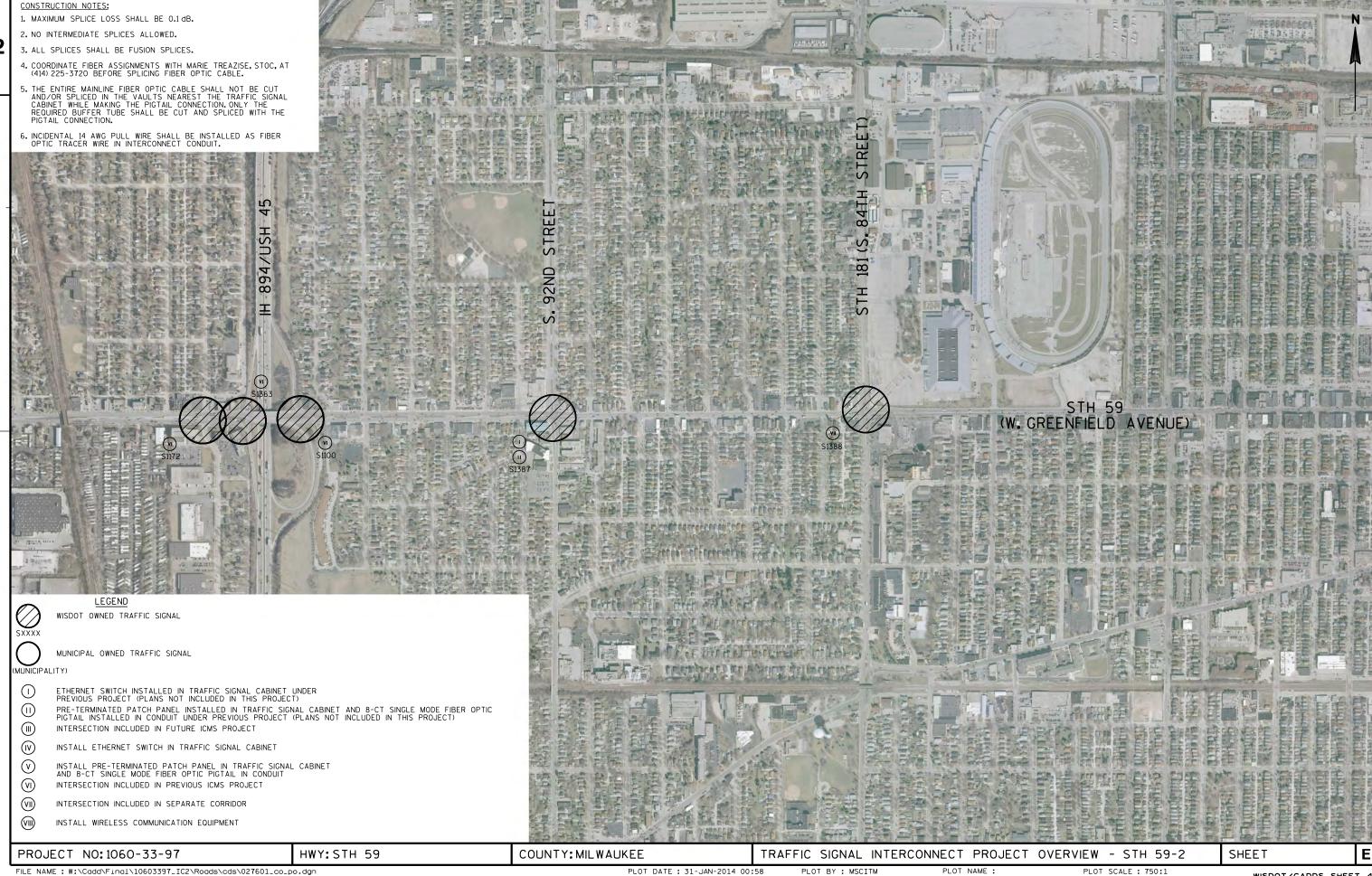


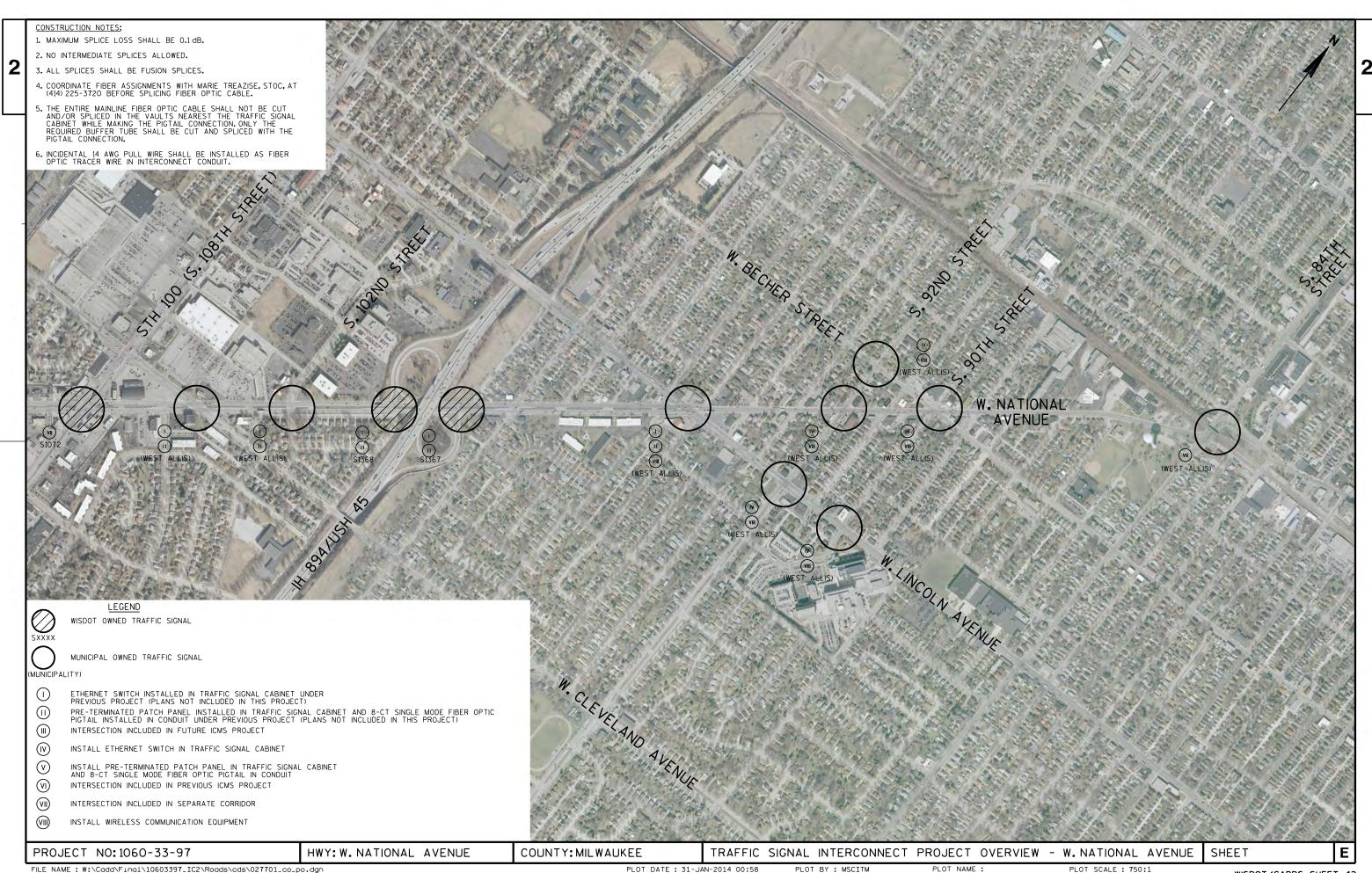


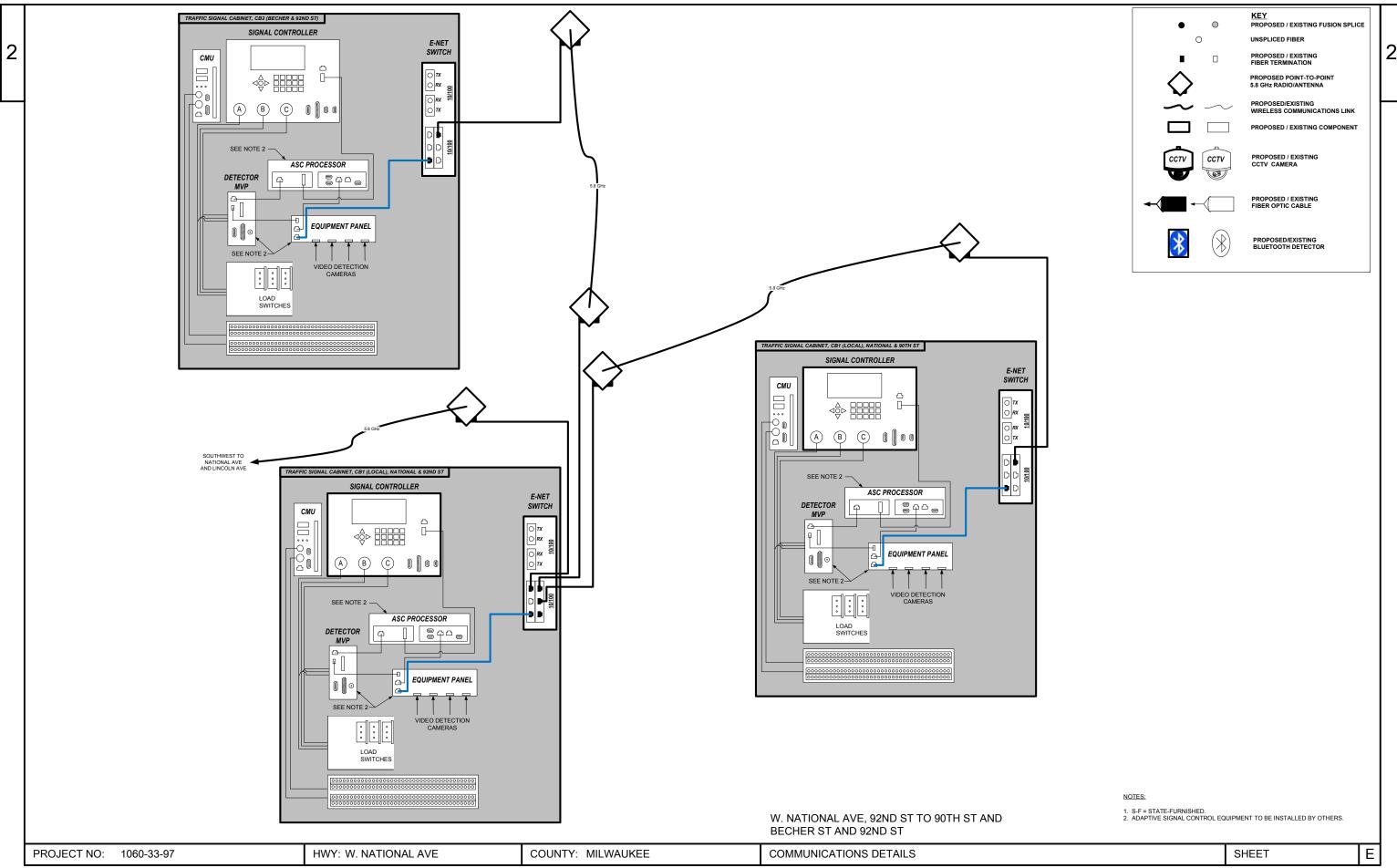


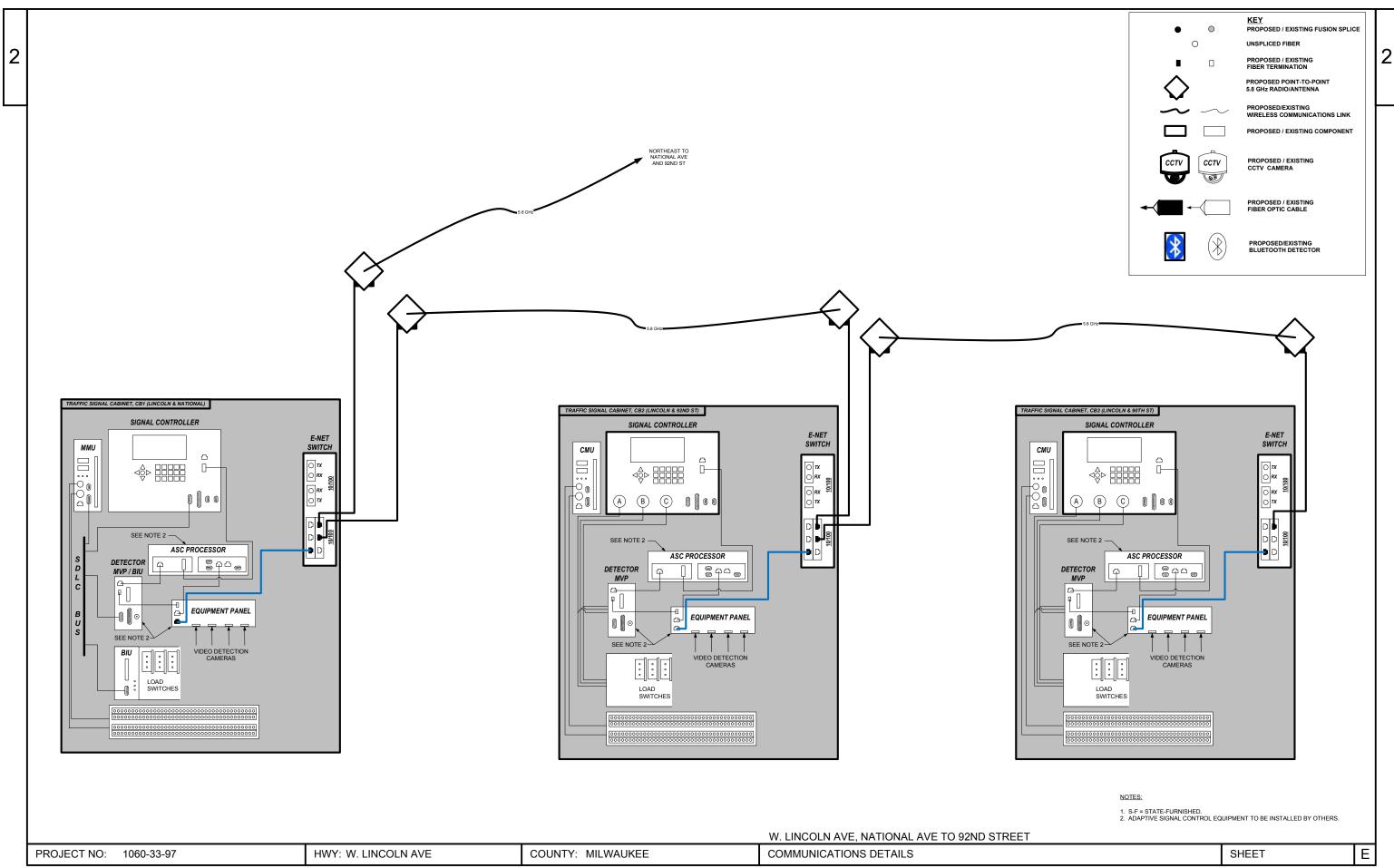


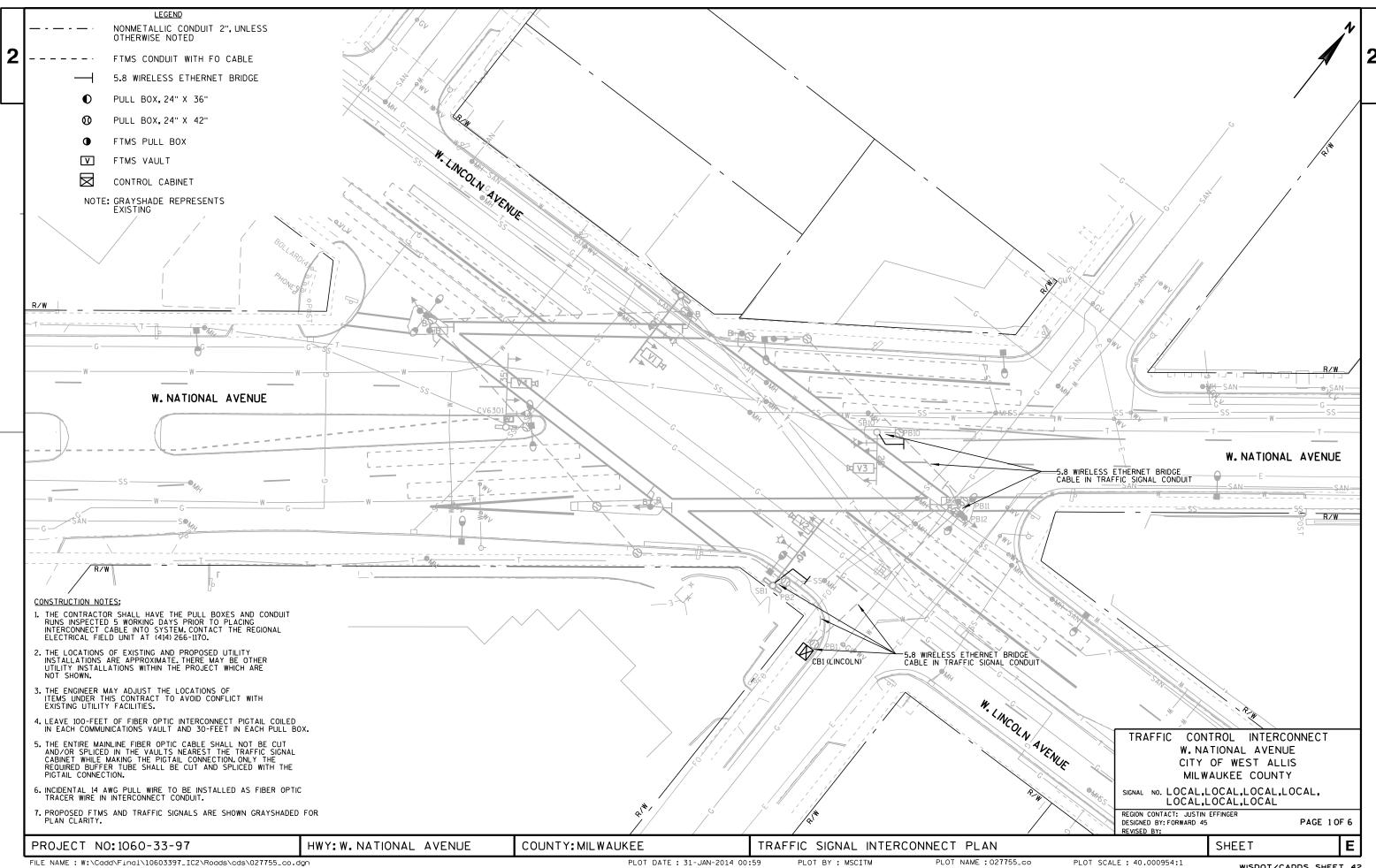


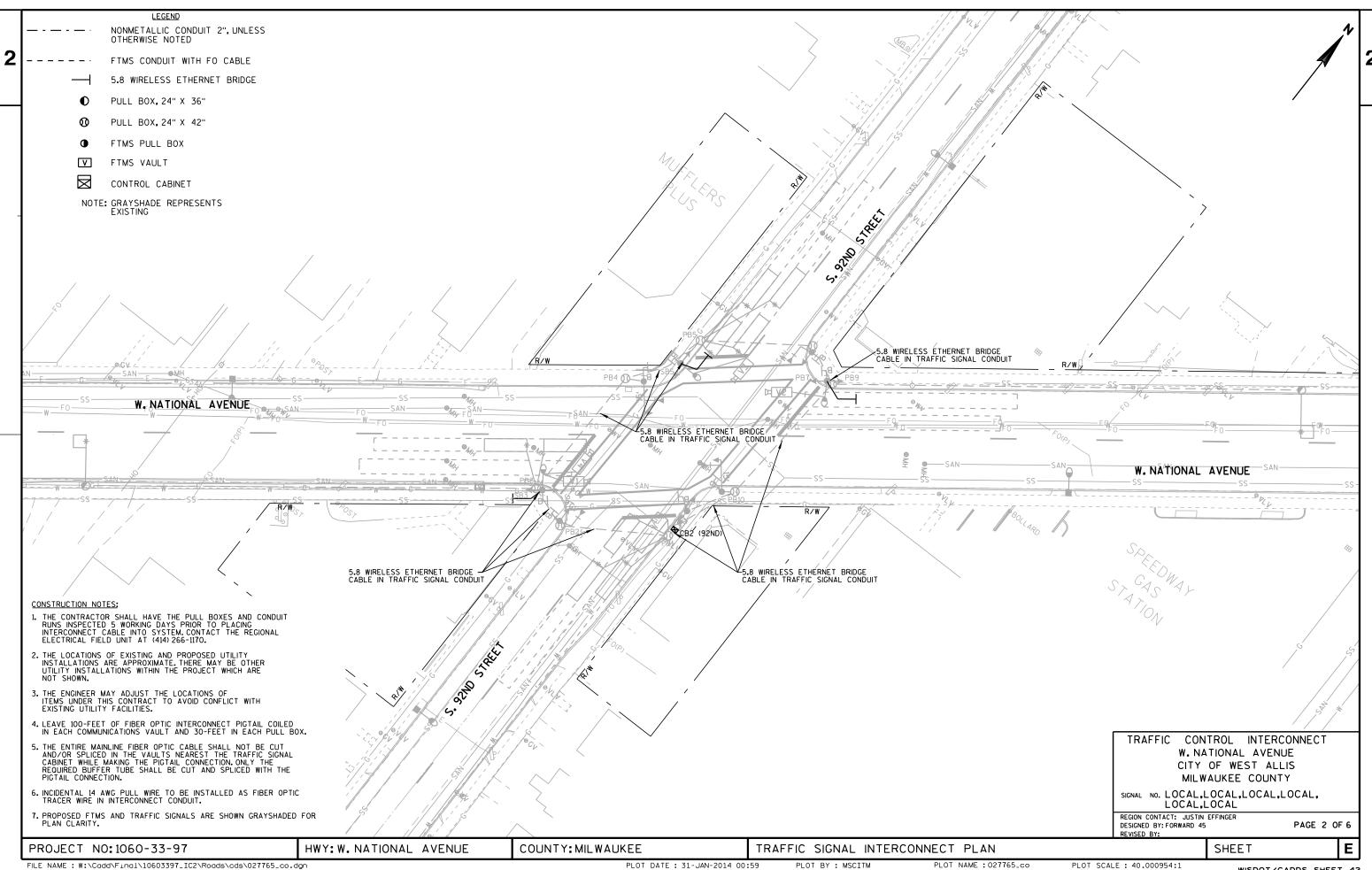


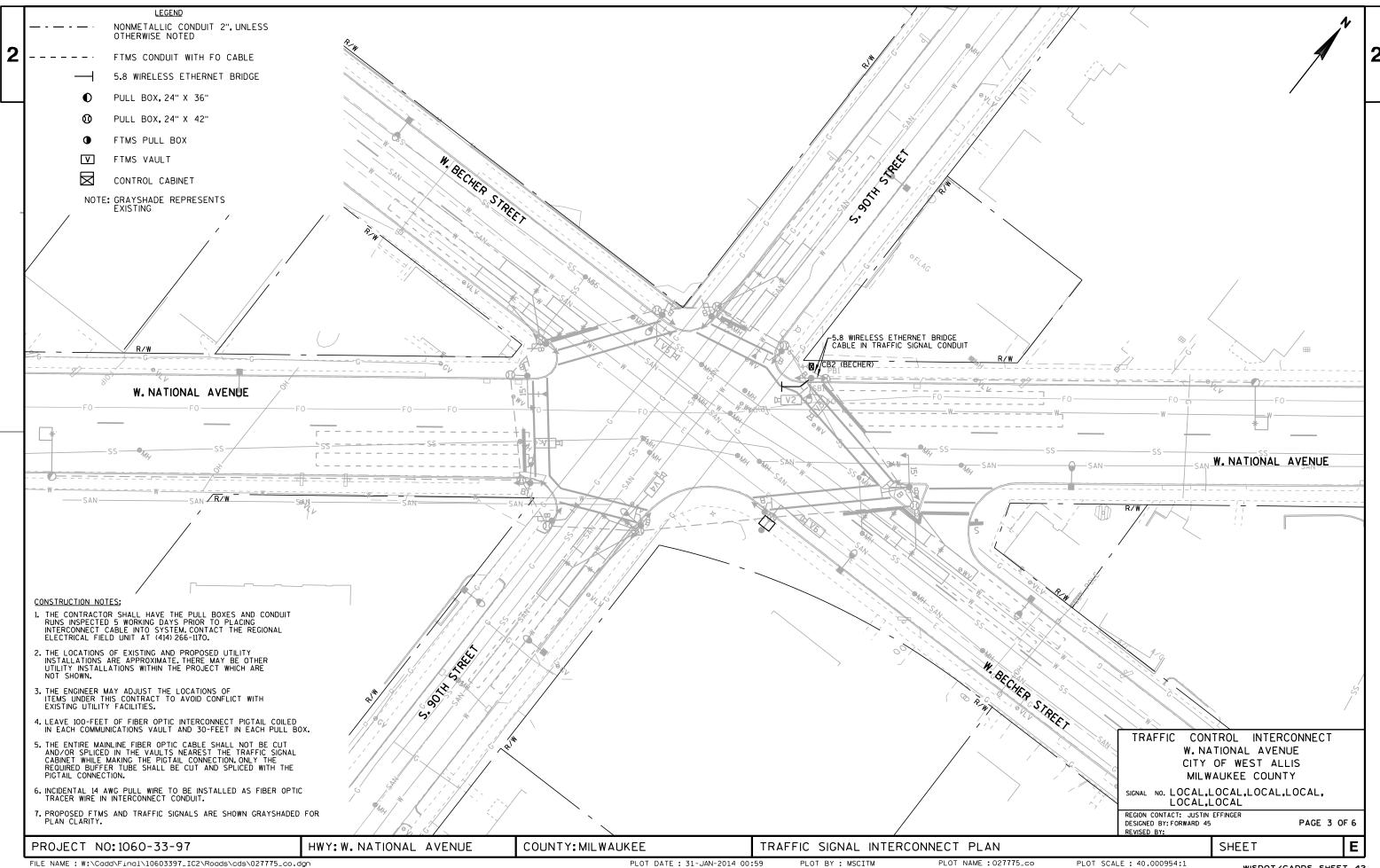


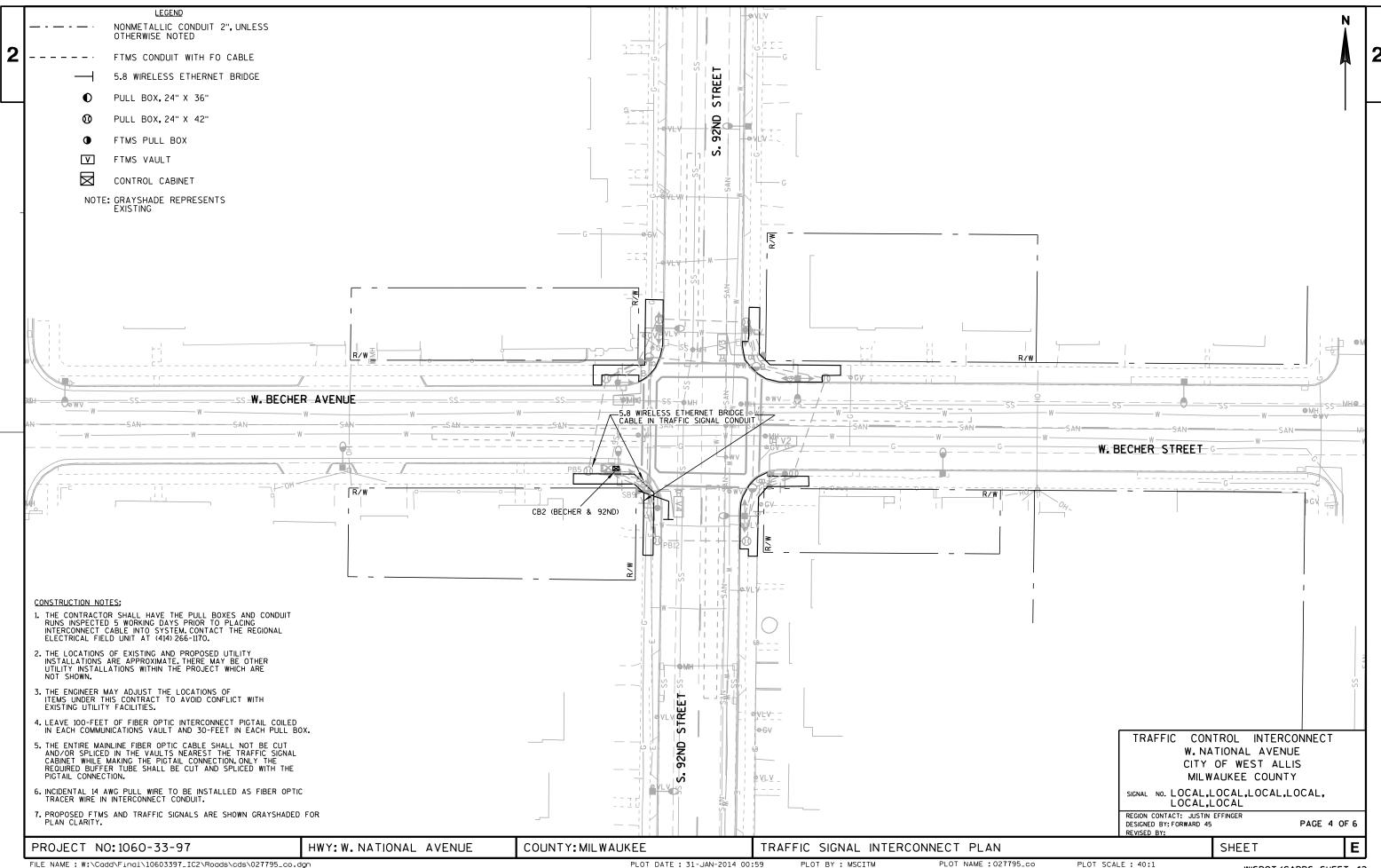


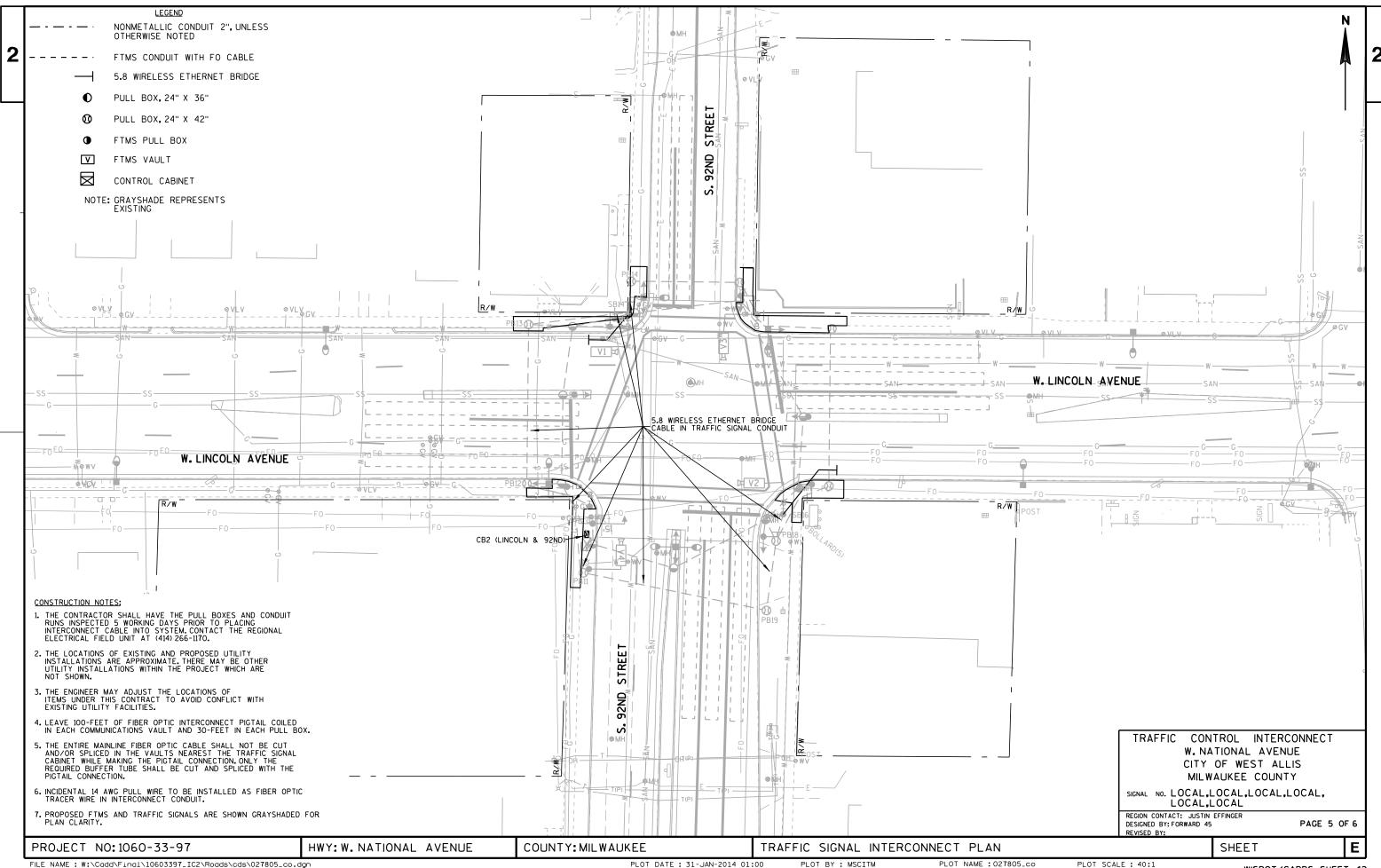


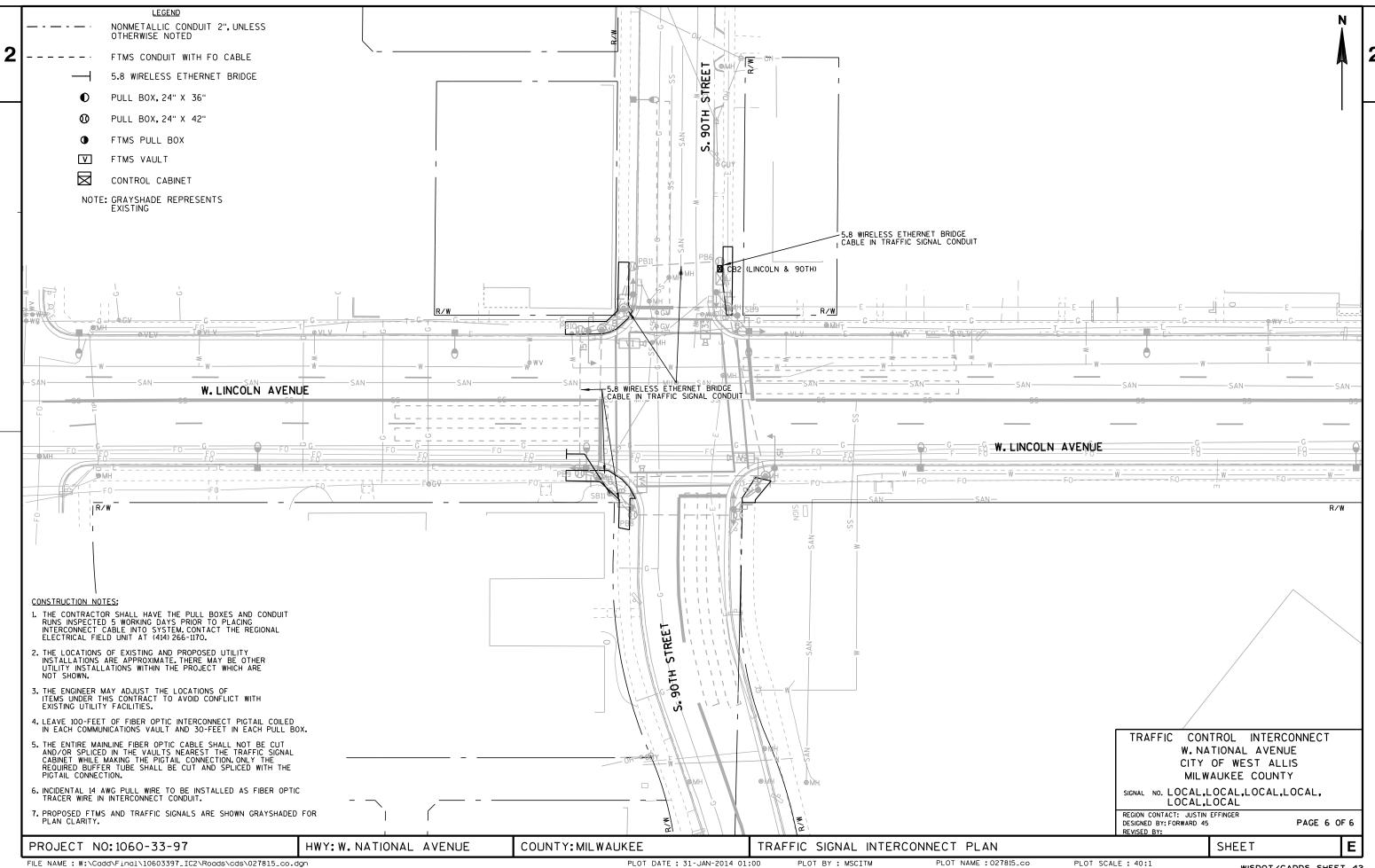


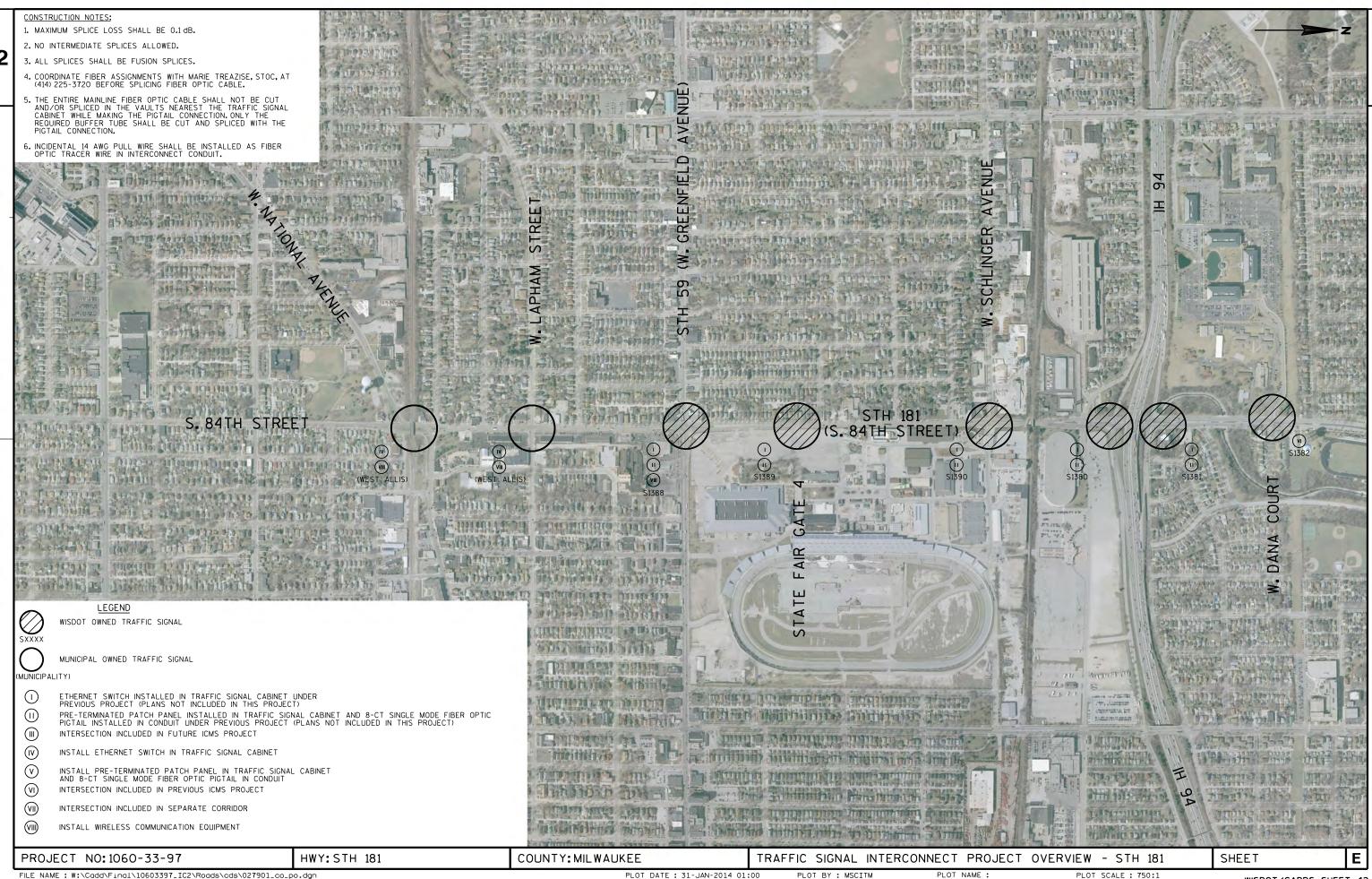


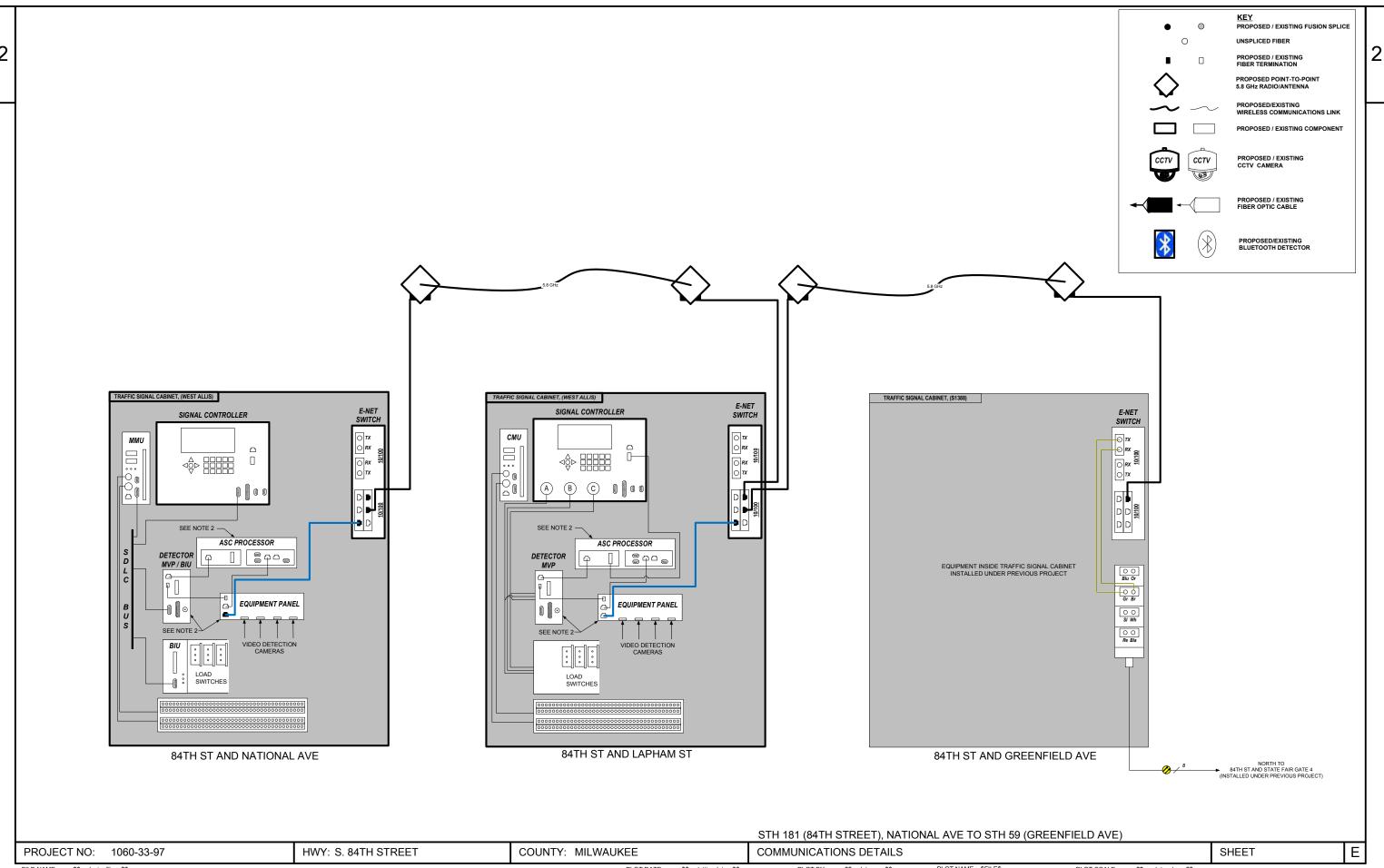




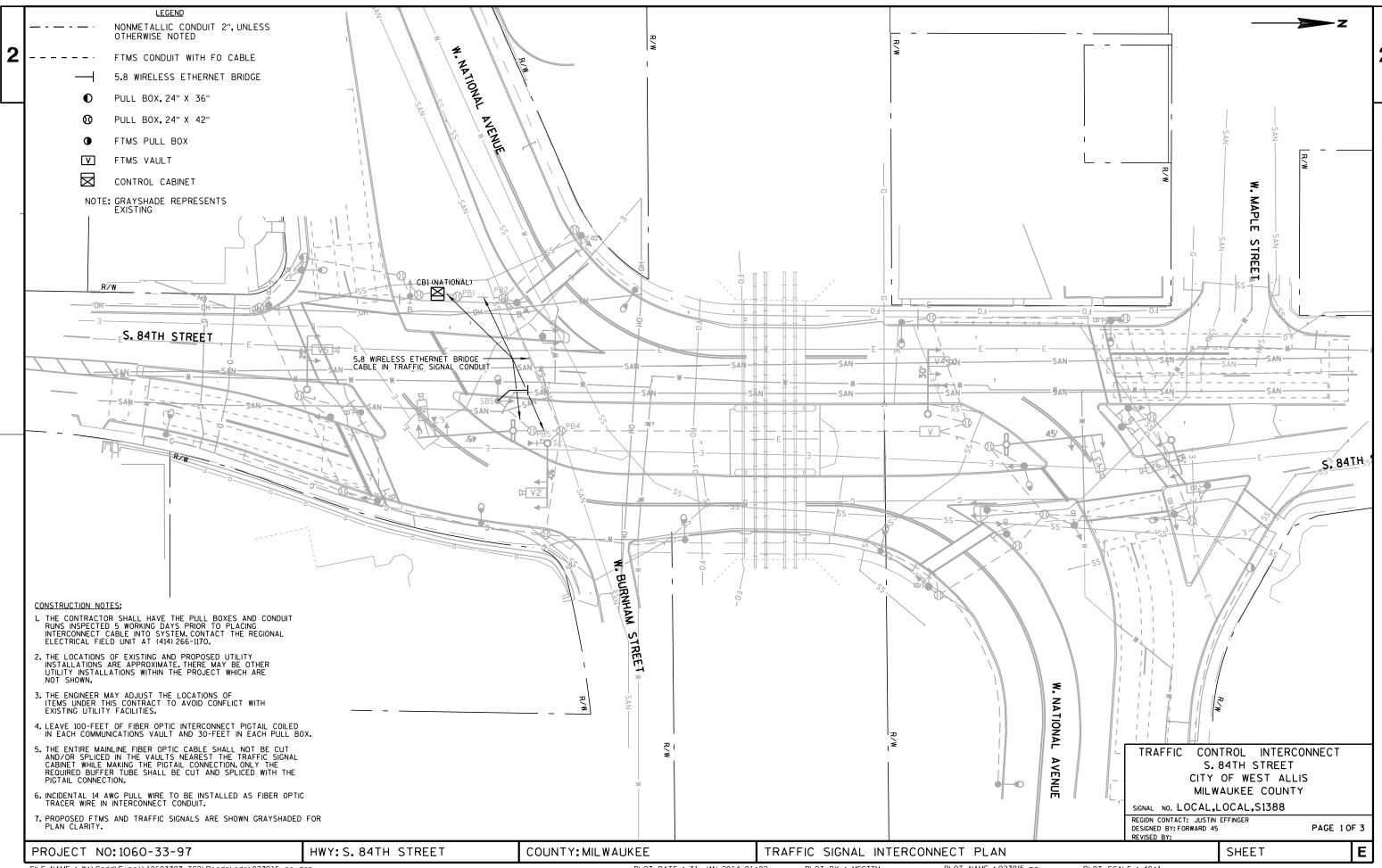


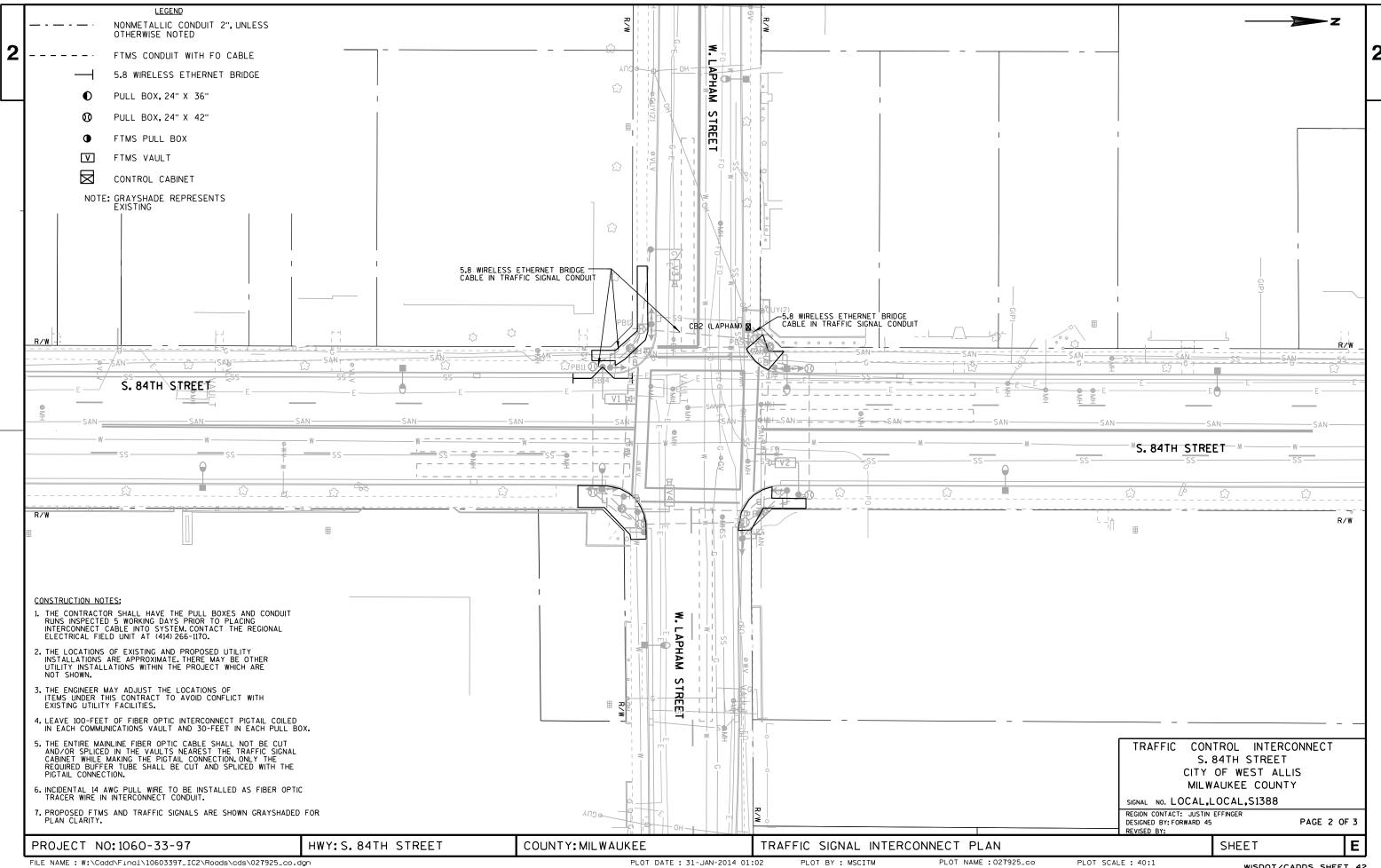


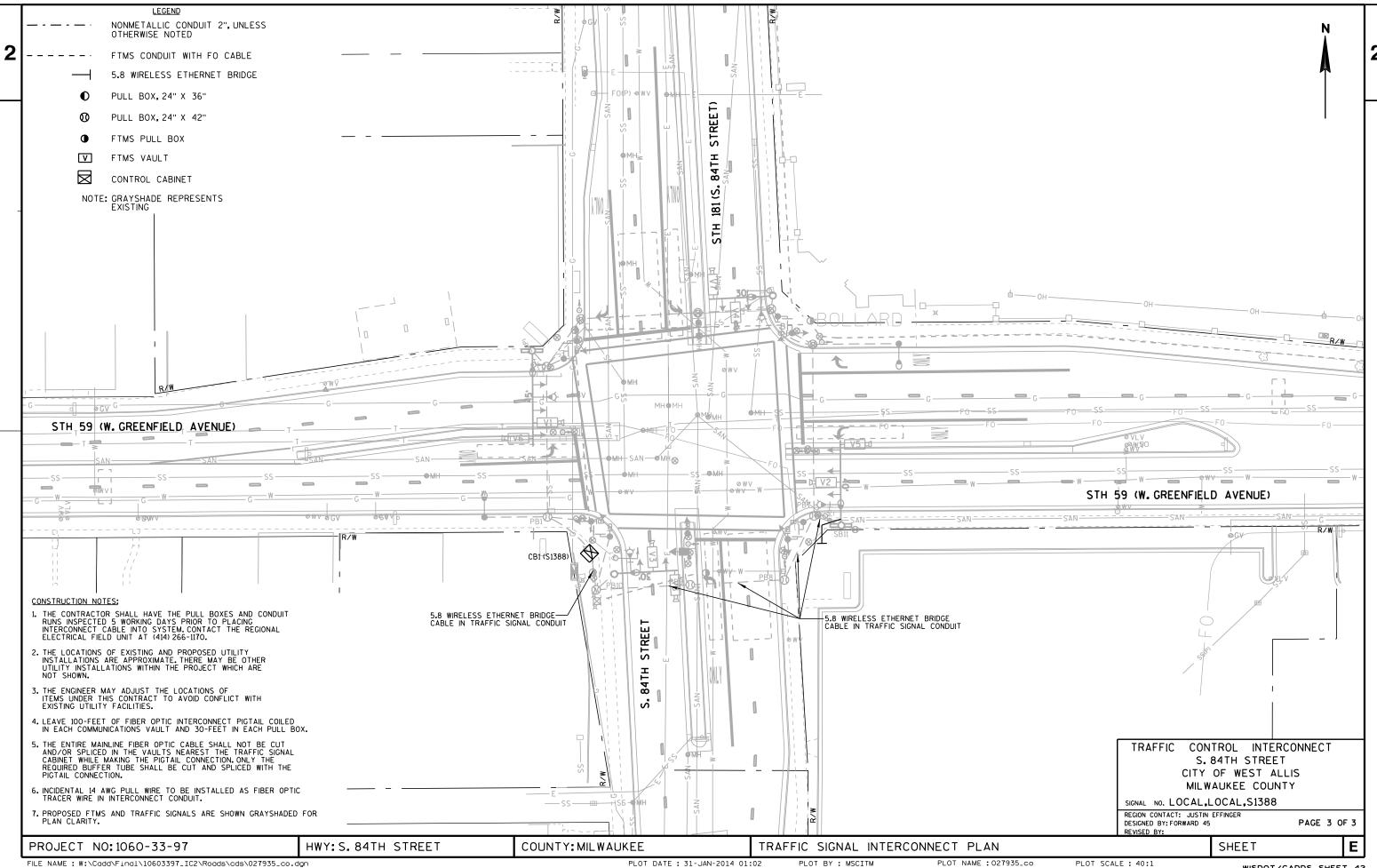


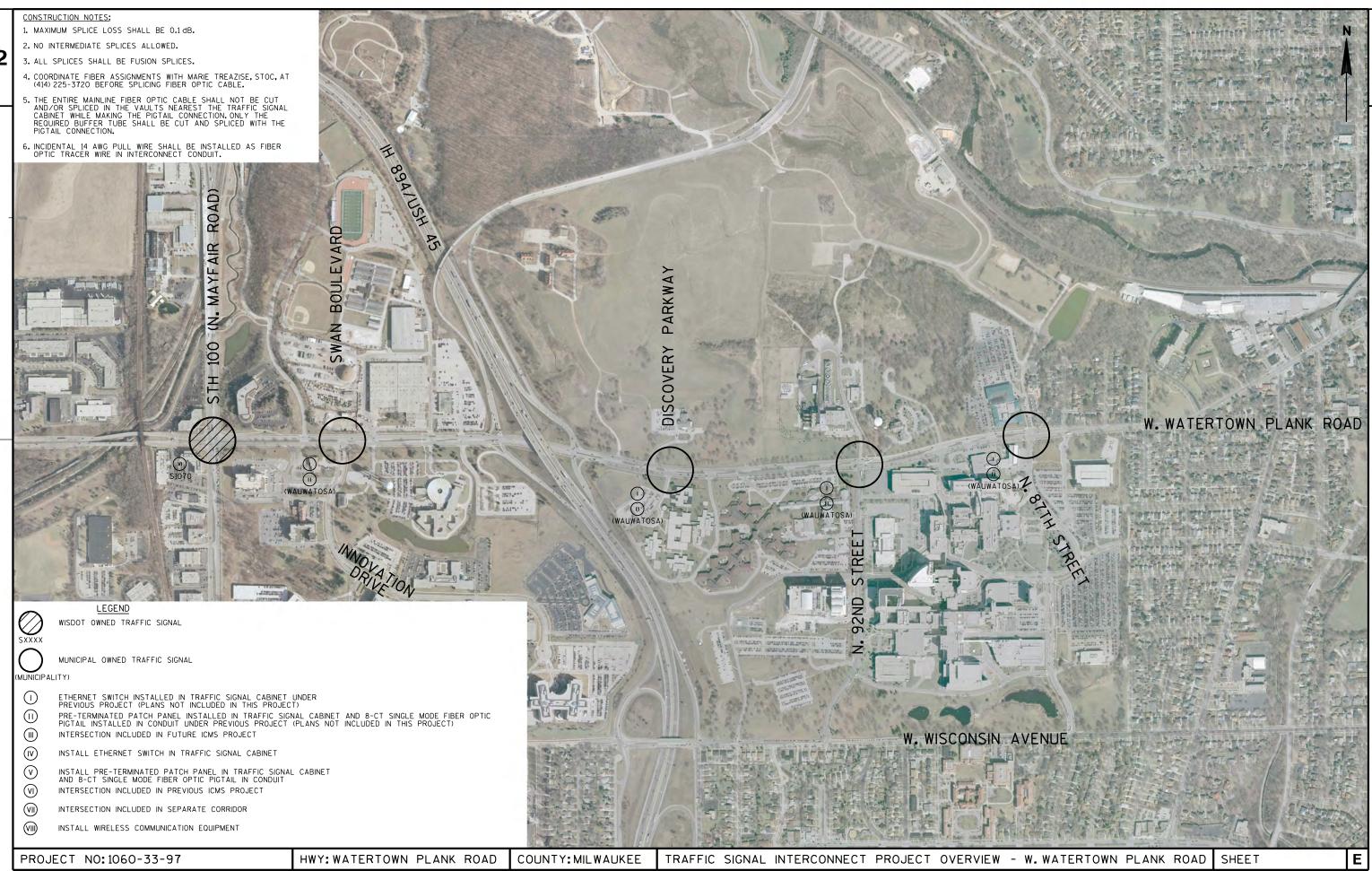


FILE NAME: \$\$....designfile...\$\$ PLOT BY: \$\$...plottser...\$\$ PLOT NAME: \$FILE\$ PLOT SCALE: \$\$....plotscale....\$\$ WISDOT/CADDS SHEET 42





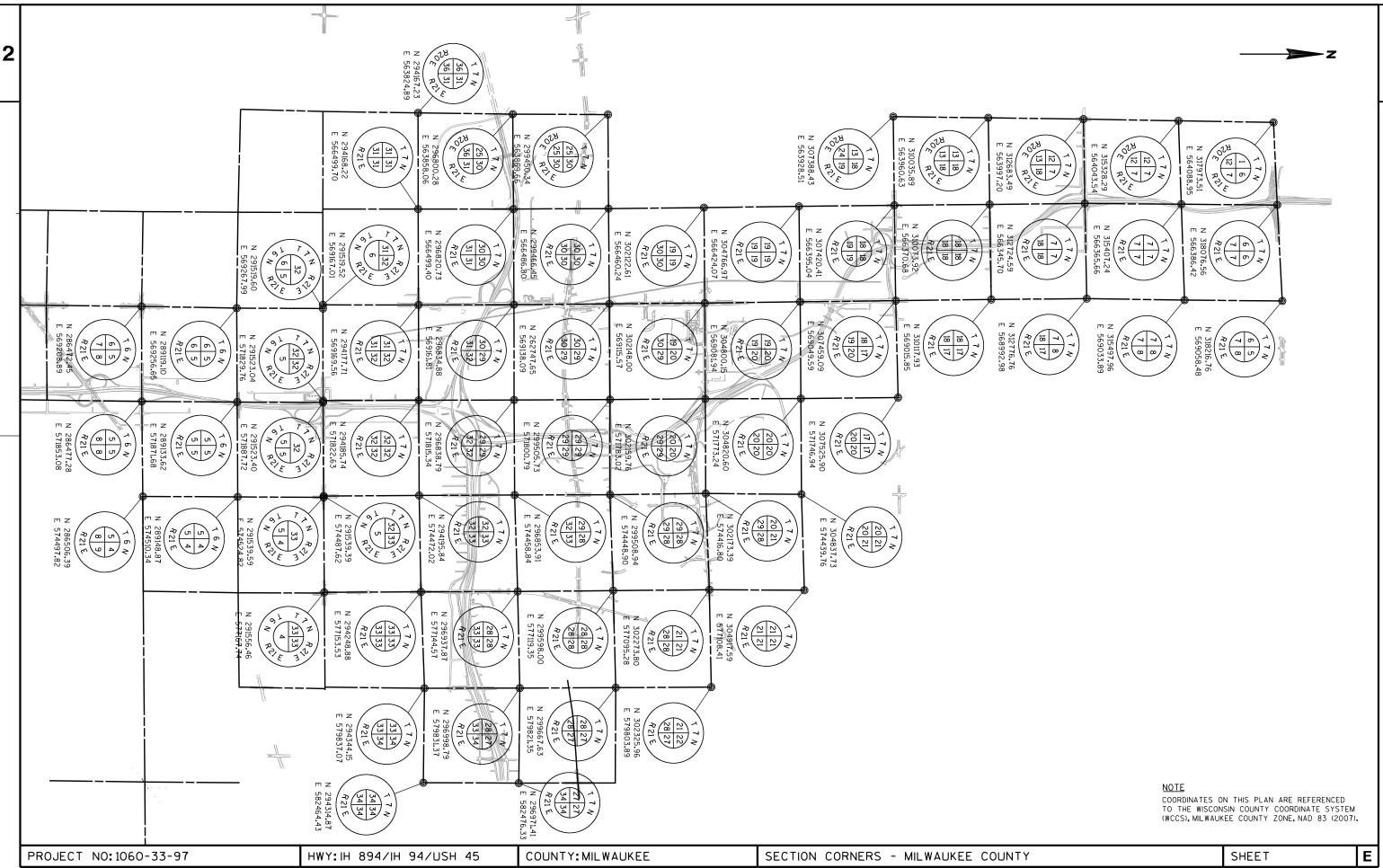




FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\028101_co_po.dgn

PLOT DATE: 31-JAN-2014 01:02

WISDOT/CADDS SHEET 42



FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\029201_ad.dgn

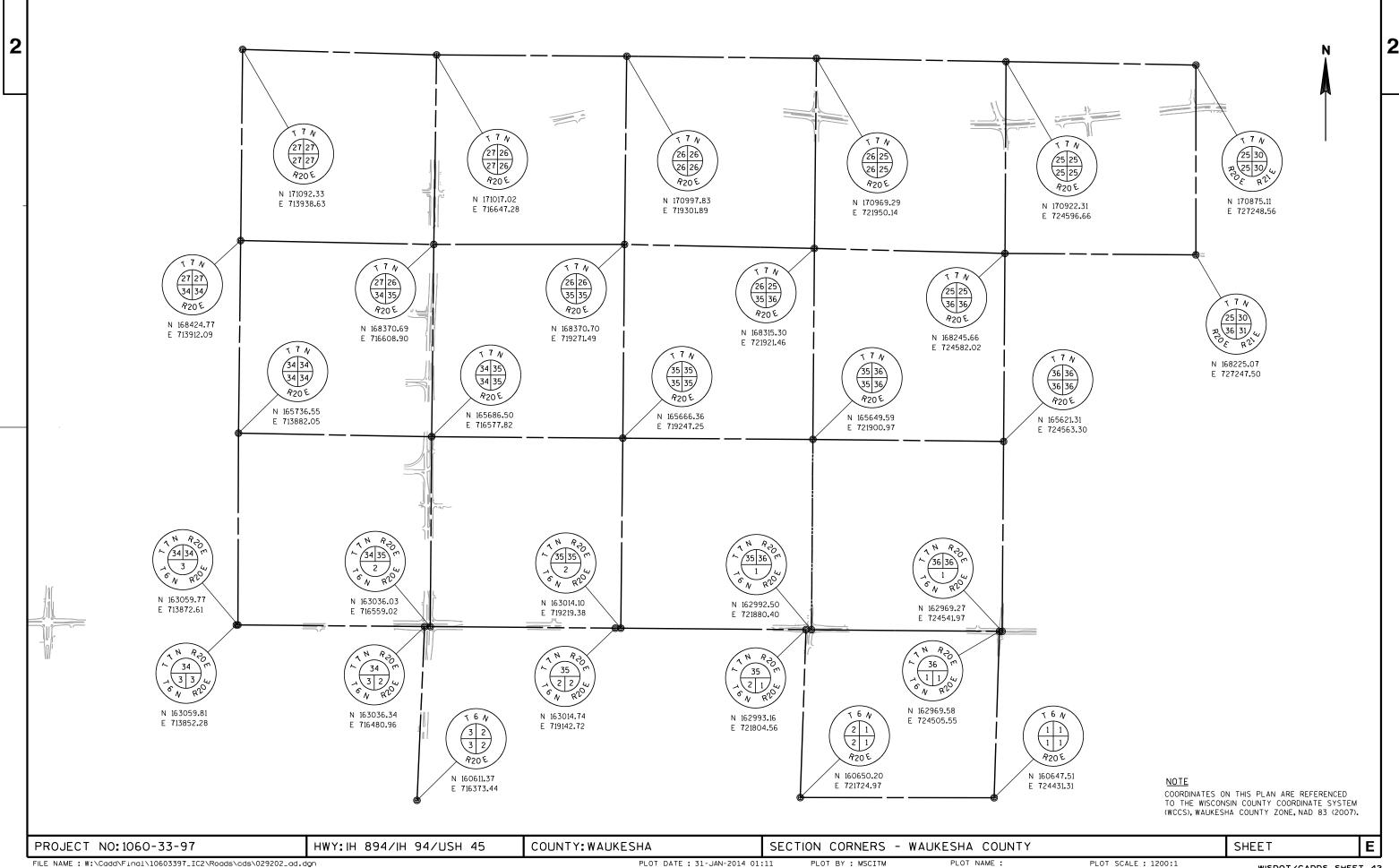
PLOT DATE: 31-JAN-2014 01:03

PLOT BY: MSCITM

PLOT NAME :

PLOT SCALE: 2400:1

WISDOT/CADDS SHEET 42



DATE 1	7MAR14	E S	TIMAT	E O F Q U A N	TITIES
LINE	LTEM	LTEM DECODEDTION		TOTAL	1060-33-97
NUMBER		I TEM DESCRIPTION	UNIT	TOTAL	QUANTI TY
0010	108. 4400	CPM PROGRESS SCHEDULE	EACH	1.000	1.000
0020	204. 0150	REMOVING CURB & GUTTER	LF CV	170.000	170.000
0030	204. 0155	REMOVING CONCRETE SIDEWALK	SY	5, 227. 000	5, 227. 000
0040	213. 0100	FINISHING ROADWAY (PROJECT) 0001. 1060-33-97	EACH	1. 000	1. 000
0050	305. 0120	BASE AGGREGATE DENSE 1 1/4-I NCH	TON	138. 000	138. 000
0060	601. 0551	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE A	LF	148. 000	148. 000
0070	601. 0555	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A	LF	22. 000	22. 000
0800	602. 0410	CONCRETE SI DEWALK 5-I NCH	SF	5, 303. 000	5, 303. 000
0090	602. 0505	CURB RAMP DETECTABLE WARNING FIELD	SF	88. 000	88. 000
-		YELLOW			
0100	614. 0395	GUARDRAIL MOW STRIP CONCRETE	SY	153. 000	153. 000
0110	614. 2300	MGS GUARDRAIL 3	LF	287. 500	287. 500
0120	614. 2610	MGS GUARDRAIL TERMINAL EAT	EACH	2.000	2.000
0130	614. 2620	MGS GUARDRAIL TERMINAL TYPE 2	EACH	2.000	2.000
0140	619. 1000	MOBI LI ZATI ON	EACH	1.000	1.000
0150	625. 0500	SALVAGED TOPSOIL	SY	845. 000	845. 000
0160	627. 0200	MULCHI NG	SY	100.000	100.000
0170	628. 1504	SILT FENCE	LF	1, 065. 000	1, 065. 000
0180	628. 1520	SILT FENCE MAINTENANCE	LF	1, 065. 000	1, 065. 000
0190	628. 1905	MOBILIZATIONS EROSION CONTROL	EACH	4. 000	4. 000
0200	628. 1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	4. 000	4. 000
0210	628. 7005	INLET PROTECTION TYPE A	EACH	10.000	10. 000
0210	628. 7015	INLET PROTECTION TYPE C	EACH	15. 000	15. 000
0230	629. 0210	FERTILIZER TYPE B	CWT	2. 000	2. 000
0240	630. 0120	SEEDING MIXTURE NO. 20	LB	25. 000	25. 000
0250	631. 0300	SOD WATER	MGAL	19. 000	19. 000
0260	631. 1000	SOD LAWN	SY	845. 000	845. 000
0200	634. 0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	19. 000	19. 000
0270	636. 0100	SIGN SUPPORTS CONCRETE MASONRY	CY	28. 000	28. 000
0280	636. 1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	4, 880. 000	4, 880. 000
0300	637. 1220	SIGNS TYPE I REFLECTIVE SH	SF	4, 880. 000 616. 000	616. 000
			JI		
0310	637. 2210	SIGNS TYPE II REFLECTIVE H	SF	348. 125	348. 125
0320	638. 2102	MOVING SIGNS TYPE II	EACH	1.000	1.000
0330	638. 2602	REMOVING SIGNS TYPE II	EACH	5.000	5.000
0340	638. 3000	REMOVING SMALL SIGN SUPPORTS	EACH	4.000	4.000
0350	641. 0100	SIGN BRIDGE SINGLE POLE SIGN SUPPORT	LS	1. 000	1. 000
		ONE SIGN (STRUCTURE) 0001. S-40-447			
0360	641. 0100	SIGN BRIDGE SINGLE POLE SIGN SUPPORT	LS	1. 000	1. 000
2200	5 . 7. 5 100	ONE SIGN (STRUCTURE) 0002. S-40-449		1.000	1. 500
0370	641. 0100	SIGN BRIDGE SINGLE POLE SIGN SUPPORT	LS	1.000	1.000
		ONE SIGN (STRUCTURE) 0003. S-67-413	-		
0380	641.0100	SIGN BRIDGE SINGLE POLE SIGN SUPPORT	LS	1.000	1.000
		ONE SIGN (STRUCTURE) 0004. S-67-417			
0390	641. 8100	OVERHEAD SIGN SUPPORT (STRUCTURE) 0015.	LS	1. 000	1.000
		S-40-416			
0400	643. 0100	TRAFFIC CONTROL (PROJECT) 0001.	EACH	1. 000	1. 000
		1060-33-97			
0410	643. 0300	TRAFFIC CONTROL DRUMS	DAY	213. 000	213. 000
0420	643. 0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	761. 000	761. 000
0430	643. 0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	1, 521. 000	1, 521. 000
0440	643. 0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	57. 000	57. 000
		TRAFFIC CONTROL ARROW BOARDS	DAY	9. 000	9. 000
0450	643. 0800				

DATE 17	MAR14	E S 1	IMAT	E O F Q U A N	TITIES
LINE		LTEM DECORURTION		T07.1	1060-33-97
NUMBER	I TEM	I TEM DESCRIPTION	UNI T	TOTAL	QUANTI TY
0460 0470	643. 0900 643. 0920	TRAFFIC CONTROL SIGNS TRAFFIC CONTROL COVERING SIGNS TYPE II	DAY EACH	811. 000 15. 000	811. 000 15. 000
0470	652. 0125	CONDUIT RIGID METALLIC 2-INCH	LF	60. 000	60. 000
0490	652. 0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40	LF	1, 099. 000	1, 099. 000
0500	652. 0235	2-INCH CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	1, 755. 000	1, 755. 000
0510	652. 0605	CONDUIT SPECIAL 2-INCH	LF	80.000	80. 000
0520	652. 0615	CONDUIT SPECIAL 3-INCH	LF	1, 931. 000	1, 931. 000
0530		S INSTALL CONDUIT INTO EXISTING ITEM	EACH	54. 000	54. 000
0540	653. 0135	PULL BOXES STEEL 24X36-INCH	EACH	4.000	4.000
0550	653. 0140	PULL BOXES STEEL 24X42-INCH	EACH	33. 000	33. 000
0560	654. 0101	CONCRETE BASES TYPE 1	EACH	6. 000	6. 000
0570	654. 0102	CONCRETE BASES TYPE 2	EACH	43.000	43. 000
0580	655. 0230	CABLE TRAFFIC SIGNAL 5-14 AWG	LF	104.000	104.000
0590	655. 0240	CABLE TRAFFIC SIGNAL 7-14 AWG ELECTRICAL WIRE TRAFFIC SIGNALS 14 AWG	LF	3, 633. 000	3, 633. 000
0600	655. 0505	ELECTRICAL WIRE TRAFFIC SIGNALS 14 AWG	LF 	2, 350. 000	2, 350. 000
0610	655. 0515	ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	LF	11, 963. 000	11, 963. 000
0620	655.0625	ELECTRICAL WIRE LIGHTING 6 AWG	LF	870.000	870.000
0630	655. 0800	LOOP DETECTOR WIRE ELECTRICAL SERVICE METER BREAKER	LF LS	6, 936. 000 1. 000	6, 936. 000 1. 000
0640	656. 0200	PEDESTAL (LOCATION) 0001. HDMS-67-0120	LS	1.000	1.000
0650	656. 0200	ELECTRICAL SERVICE METER BREAKER	LS	1. 000	1. 000
-		PEDESTAL (LOCATION) 0002. HDMS-67-0118		-	
0660	656. 0200	ELECTRICAL SERVICE METER BREAKER	LS	1. 000	1. 000
		PEDESTAL (LOCATION) 0020. HDMS-40-0128			
0670	656. 0200	ELECTRICAL SERVICE METER BREAKER	LS	1. 000	1. 000
0680	656. 0500	PEDESTAL (LOCATION) 0021. HDMS-40-0127 ELECTRICAL SERVICE BREAKER DISCONNECT	LS	1. 000	1. 000
0000	000.0000	BOX (LOCATION) 0001. CB-HDMS-67-0120	LJ	1.000	1.000
0690	656. 0500	ELECTRICAL SERVICE BREAKER DISCONNECT	LS	1. 000	1.000
		BOX (LOCATION) 0002. CB-HDMS-67-0118			
0700	656. 0500	ELECTRICAL SERVICE BREAKER DISCONNECT	LS	1. 000	1.000
		BOX (LOCATION) 0020. HDMS-40-0128			
0710	656. 0500	ELECTRICAL SERVICE BREAKER DISCONNECT	LS	1. 000	1.000
		BOX (LOCATION) 0021. HDMS-40-0127			
0720	656. 0500	ELECTRICAL SERVICE BREAKER DISCONNECT	LS	1. 000	1. 000
0720	657 O100	BOX (LOCATION) 0024. DMS-40-0111	EVCH	4 000	4 000
0730 0740	657. 0100 657. 0255	PEDESTAL BASES TRANSFORMER BASES BREAKAWAY 11 1/2-INCH	EACH EACH	6. 000 45. 000	6. 000 45. 000
0/40	007.0200	BOLT CIRCLE	LAUT	45.000	45.000
0750	657. 0310	POLES TYPE 3	EACH	45. 000	45. 000
0760	457 040F	TDATELO CLONAL CTANDADDO ALUMINUM O F FT		/ 000	/ 000
0760	657. 0405	TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT LUMINAIRE ARMS TRUSS TYPE 4-INCH CLAMP	EACH	6. 000 45. 000	6. 000 45. 000
0770	657. 0714	15-FT	EACH	45. 000	45. 000
0780	658. 0110	TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL	EACH	4. 000	4. 000
0790	658. 0215	BACKPLATES SIGNAL FACE 3 SECTION 12-INCH	EACH	4. 000	4. 000
0800	658. 0416	PEDESTRIAN SIGNAL FACE 16-INCH	EACH	2. 000	2. 000
		DEDECTED AN DUOL DUTTOWS			02.225
0810	658. 0500	PEDESTRI AN PUSH BUTTONS	EACH	33.000	33.000
0820	658. 0600	LED MODULES 12-INCH RED BALL	EACH	2.000	2.000
0830	658. 0605	LED MODULES 12-INCH CREEN BALL	EACH	2.000	2.000
0840 0850	658. 0610 658. 0615	LED MODULES 12-INCH GREEN BALL LED MODULES 12-INCH RED ARROW	EACH EACH	2. 000 2. 000	2. 000 2. 000
					2.000
0860	658. 0620	LED MODULES 12-INCH YELLOW ARROW	EACH	2. 000	2.000
0870	658. 0625	LED MODULES 12-INCH GREEN ARROW	EACH	2. 000	2.000

DATE 17 LINE	MAR14	E S	TIMAT	E O F Q U A N	T I T I E S 1060-33-97
NUMBER 0880	I TEM 658. 0635	ITEM DESCRIPTION LED MODULES PEDESTRIAN COUNTDOWN TIMER	UNI T EACH	TOTAL 2. 000	QUANTI TY 2. 000
390	658. 5069	16-INCH SIGNAL MOUNTING HARDWARE (LOCATION)	LS	1. 000	1. 000
0900	658. 5069	3001. USH 18 & JENNIFER DR SIGNAL MOUNTING HARDWARE (LOCATION) 3002. CTH Y & USH 18 & CTH O	LS	1. 000	1. 000
 0910	659. 0802	PLAQUES SEQUENCE IDENTIFICATION	EACH	11. 000	11. 000
0920	670. 0100	FIELD SYSTEM INTEGRATOR 0001. ITS	LS	1. 000	1. 000
0930	670. 0100	FIELD SYSTEM INTEGRATOR 3001. STH 100	LS	1. 000	1.000
0940	670. 0100	FIELD SYSTEM INTEGRATOR 3002. USH 18	LS	1. 000	1.000
0950 	670. 0100	FIELD SYSTEM INTEGRATOR 3003. CTH Y	LS	1. 000	1. 000
0960	670. 0100	FIELD SYSTEM INTEGRATOR 3004. STH 59 - 1		1. 000	1. 000
0970	670. 0100	FIELD SYSTEM INTEGRATOR 3005. STH 59 - 2		1. 000	1.000
0980	670. 0100	FIELD SYSTEM INTEGRATOR 3006. W. NATIONAL AVE	LS	1. 000	1. 000
0990	670. 0100	FIELD SYSTEM INTEGRATOR 3007. STH 181	LS	1. 000	1. 000
1000	670. 0100	FIELD SYSTEM INTEGRATOR 3008. W.	LS	1. 000	1. 000
		WATERTOWN PLANK RD			
1010	670. 0200	ITS DOCUMENTATION 0001. ITS	LS	1. 000	1. 000
1020	670. 0200	ITS DOCUMENTATION 3001. STH 100	LS	1.000	1. 000
1030	670. 0200	ITS DOCUMENTATION 3002. USH 18	LS	1. 000	1.000
1040	670. 0200	ITS DOCUMENTATION 3003. CTH Y	LS	1.000	1.000
1050	670. 0200	ITS DOCUMENTATION 3004. STH 59 - 1	LS 	1. 000	1. 000
1060	670. 0200	ITS DOCUMENTATION 3005. STH 59 - 2	LS	1. 000	1. 000
1070	670. 0200	ITS DOCUMENTATION 3006. W. NATIONAL AVE	LS	1.000	1.000
1080	670. 0200	ITS DOCUMENTATION 3007. STH 181	LS	1.000	1.000
1090	670. 0200	ITS DOCUMENTATION 3008. W. WATERTOWN PLANK RD	LS	1. 000	1. 000
1100	671. 0232	CONDUIT HDPE DIRECTIONAL BORE 3-DUCT 2-IN	LF	2, 025. 000	2, 025. 000
1110	672. 0230	BASE CAMERA POLE 30-FT	EACH	1. 000	1. 000
1110 1120	672. 0230	COMMUNI CATION VAULT TYPE 1	EACH	3. 000	3. 000
1130		INSTALL POLE MOUNTED CABINET	EACH	5. 000	5. 000
1140	674. 0300	REMOVE CABLE	LF	255. 000	255. 000
1150		INSTALL ETHERNET SWITCH	EACH	18. 000	18. 000
1160	677. 0100	INSTALL CAMERA POLE	EACH	1. 000	1. 000
1170	677. 0200	INSTALL CAMERA ASSEMBLY	EACH	9. 000	9. 000
1180	677. 0300. S	INSTALL VIDEO ENCODER	EACH	10.000	10.000
1190	678. 0006	INSTALL FIBER OPTIC CABLE OUTDOOR PLANT	LF	205. 000	205. 000
1200	678. 0072	6-CT INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 72-CT	LF	2, 480. 000	2, 480. 000
1210	678. 0300	FIBER OPTIC SPLICE	EACH	117. 000	117. 000
1220	678.0400	FIBER OPTIC TERMINATION	EACH	6. 000	6. 000
1230	678. 0500	COMMUNICATION SYSTEM TESTING 0001. ITS	LS	1. 000	1.000
1240	678. 0500	COMMUNICATION SYSTEM TESTING 3001. STH	LS	1. 000	1. 000
1250	678. 0500	COMMUNICATION SYSTEM TESTING 3002. USH 18	LS	1. 000	1. 000
1260	678. 0500	COMMUNICATION SYSTEM TESTING 3003. CTH Y	LS	1. 000	1. 000
1270	678. 0500	COMMUNICATION SYSTEM TESTING 3004. STH	LS	1. 000	1. 000
1280	678. 0500	59 - 1 COMMUNICATION SYSTEM TESTING 3005. STH	LS	1.000	1. 000
1290	678. 0500	59 - 2 COMMUNICATION SYSTEM TESTING 3006. W. NATIONAL AVE	LS	1.000	1. 000

DATE 17 LINE	7MAR14	E S T	ГІМАТЕ	E OF QUAN	ITITIES 1060-33-97	
	I TEM 678. 0500	ITEM DESCRIPTION COMMUNICATION SYSTEM TESTING 3007. STH 181	UNI T LS	TOTAL 1. 000	QUANTI TY 1. 000	
1310	678. 0500	COMMUNICATION SYSTEM TESTING 3008. W. WATERTOWN PLANK RD	LS	1. 000	1. 000	
1320 1330	690. 0250 SPV. 0060	SAWING CONCRETE SPECIAL 0001. EXPOSING EXISTING UTILITY	LF EACH	525. 000 15. 000	525. 000 15. 000	
1340	SPV. 0060	UNPAVED AREA SPECIAL 0002. EXPOSING EXISTING UTILITY PAVED AREA	EACH	15. 000	15. 000	
1350	SPV. 0060	SPECIAL 2001. INSTALL HYBRID DYNAMIC MESSAGE SIGN	EACH	4. 000	4. 000	
1360	SPV. 0060	SPECIAL 2002. INSTALL DYNAMIC MESSAGE SIGN	EACH	1. 000	1. 000	
1370	SPV. 0060	SPECIAL 2003. INSTALL 5.8 GHZ ETHERNET BRIDGE	EACH	30. 000	30.000	
1380	SPV. 0060	SPECIAL 2004. INSTALL WIRELESS MODEM	EACH	1. 000	1. 000	
1390	SPV. 0060	SPECIAL 2005. INSTALL BLUETOOTH DETECTOR		16. 000	16. 000	
1400	SPV. 0060	SPECIAL 2006. GROUND ROD	EACH	6. 000	6. 000	
1410	SPV. 0060	SPECIAL 2007. SALVAGE DMS	EACH	1. 000	1.000	
1420	SPV. 0060	SPECIAL 3001. REMOVE, SALVAGE, AND	EACH	7. 000	7. 000	
		INSTALL TRAFFIC SIGNAL CONTROLLER				
1430	SPV. 0060	SPECIAL 3002. SUPPLEMENTARY TRAFFIC SIGNAL CABINET CONCRETE BASE	EACH	4. 000	4. 000	
1440	SPV. 0060	SPECIAL 3003. TRAFFIC SIG CABINET &	EACH	4. 000	4. 000	
1450	SPV. 0090	CONTROLLER FULLY ACTUATED 4 PHASE SPECIAL 3001. INSTALL CAMERA POWER CABLE	LF	53, 854. 000	53, 854. 000	
1460	SPV. 0090	SPECIAL 3002. INSTALL CAT- 5E CABLE	LF	55, 145. 000	55, 145. 000	
1470	SPV. 0105	SPECIAL 0001. PAVEMENT CLEANUP	LS	1. 000	1. 000	
1480	SPV. 0105	SPECIAL 0002. SURVEY PROJECT 1060-33-97	LS	1. 000	1. 000	
1490	SPV. 0105	SPECIAL 0003. REMOVING OVERHEAD SIGN	LS	1. 000	1. 000	
, 0	0 0.00	SUPPORT S-40-416				
1500	SPV. 0105	SPECIAL 3010. REMOVE VIDEO DETECTION EQUIPMENT STH 100 & W. LAPHAM ST	LS	1.000	1. 000	
1510	SPV. 0105	SPECIAL 3011. REMOVE VIDEO DETECTION	LS	1. 000	1. 000	
	2. 1. 0.00	EOUIPMENT STH 100 & W. THEODORE TRECKER WAY		555	555	
1520	SPV. 0105	SPECIAL 3012. REMOVE VIDEO DETECTION EQUIPMENT IH 94 EB-OFF RAMP & STH 100	LS	1. 000	1. 000	
1530	SPV. 0105	SPECIAL 3013. REMOVE VIDEO DETECTION EQUIPMENT IH 94 WB RAMPS & STH 100	LS	1. 000	1. 000	
1540	SPV. 0105	SPECIAL 3014. REMOVE VIDEO DETECTION	LS	1. 000	1. 000	
1550	SPV. 0105	EQUIPMENT USH 18 & CTH JJ SPECIAL 3015. REMOVE VIDEO DETECTION EQUIPMENT USH 18 & CTH Y	LS	1. 000	1. 000	
1560	SPV. 0105	SPECIAL 3016. REMOVE VIDEO DETECTION	LS	1. 000	1. 000	
1570	SPV. 0105	EQUIPMENT USH 18 & JANACEK RD SPECIAL 3017. REMOVE VIDEO DETECTION	LS	1. 000	1. 000	
1580	SPV. 0105	EQUIPMENT USH 18 & BROOKFIELD RD SPECIAL 3018. REMOVE VIDEO DETECTION	LS	1. 000	1. 000	
1590	SPV. 0105	EQUIPMENT USH 18 & WOELFEL RD SPECIAL 3019. REMOVE VIDEO DETECTION	LS	1. 000	1. 000	
1600	SPV. 0105	EQUIPMENT USH 18 & CALHOUN RD SPECIAL 3020. REMOVE VIDEO DETECTION FOLLOMENT USH 18 & THOMAS LANE	LS	1.000	1. 000	
1/10	CDV 0105	EQUI PMENT USH 18 & THOMAS LANE	1.0	1 000	1 000	
1610	SPV. 0105	SPECIAL 3021. REMOVE VIDEO DETECTION EQUIPMENT USH 18 & EXECUTIVE DR	LS	1. 000	1. 000	

)ATE 17 .INE	IVIAK 14	E 5	IIWIAI	E OF QUAN	1060-33-97	
IUMBER 620	I TEM SPV. 0105	ITEM DESCRIPTION SPECIAL 3022. REMOVE VIDEO DETECTION EQUIPMENT USH 18 & MAIN ST	UNIT LS	TOTAL 1.000	QUANTI TY 1. 000	
630	SPV. 0105	SPECIAL 3023. REMOVE VIDEO DETECTION EQUIPMENT USH 18 & CTH 0	LS	1.000	1.000	
640	SPV. 0105	SPECIAL 3024. REMOVE VIDEO DETECTION	LS	1.000	1.000	
650	SPV. 0105	EQUIPMENT STH 59 & S. 92ND ST SPECIAL 3025. REMOVE VIDEO DETECTION EQUIPMENT STH 59 & STH 181	LS	1.000	1. 000	
660	SPV. 0105	SPECIAL 3026. REMOVE VIDEO DETECTION EQUIPMENT W NATIONAL AVE & W. CLEVELAND	LS	1.000	1. 000	
670	SPV. 0105	AVE SPECIAL 3027. REMOVE VIDEO DETECTION EQUIPMENT W. NATIONAL AVE & S. 102ND ST	LS	1.000	1.000	
680	SPV. 0105	SPECIAL 3028. REMOVE VIDEO DETECTION EQUIPMENT IH 894/USH 45 EB RAMPS & W. NATIONAL AVE	LS	1. 000	1. 000	
690	SPV. 0105	SPECIAL 3029. REMOVE VIDEO DETECTION EQUIPMENT IH 894/USH 45 WB RAMPS & W.	LS	1.000	1. 000	
700	SPV. 0105	NATIONAL AVE SPECIAL 3030. REMOVE VIDEO DETECTION EQUIPMENT STH 181 & STATE FAIR GATE 4 DRIVEWAY	LS	1. 000	1.000	
710	SPV. 0105	SPECIAL 3031. REMOVE VIDEO DETECTION	LS	1.000	1.000	
720	SPV. 0105	EQUIPMENT STH 181 & W. SCHLINGER AVE SPECIAL 3032. REMOVE VIDEO DETECTION	LS	1.000	1. 000	
730	SPV. 0105	EQUIPMENT IH 94 EB RAMPS & STH 181 SPECIAL 3033. REMOVE VIDEO DETECTION	LS	1.000	1. 000	
740	SPV. 0105	EQUIPMENT IH 94 WB RAMPS & STH 181 SPECIAL 3034. REMOVE VIDEO DETECTION EQUIPMENT W WATERTOWN PLK RD & SWAN	LS	1.000	1. 000	
750	SPV. 0105	BLVD/INNOVA DR SPECIAL 3035. REMOVE VIDEO DETECTION EQUIPMENT W WATERTOWN PLANK ROAD & DISCOVERY PKY	LS	1.000	1.000	
760	SPV. 0105	SPECIAL 3036. REMOVE VIDEO DETECTION EQUIPMENT W WATERTOWN PLANK RD & N.	LS	1. 000	1. 000	
770	SPV. 0105	92ND ST SPECIAL 3037. REMOVE VIDEO DETECTION EQUIPMENT W WATERTOWN PLANK RD & N.	LS	1. 000	1. 000	
780	SPV. 0105	87TH ST SPECIAL 3038. REMOVE VIDEO DETECTION EQUIPMENT W. NATIONAL AVE & W. LINCOLN	LS	1. 000	1. 000	
790	SPV. 0105	AVE SPECIAL 3039. REMOVE VIDEO DETECTION	LS	1.000	1. 000	
800	SPV. 0105	EQUIPMENT W. NATIONAL AVE & S. 84TH ST SPECIAL 3040. REMOVE VIDEO DETECTION EQUIPMENT STH 100 & CLEVELAND AVE	LS	1. 000	1. 000	
10	SPV. 0105	SPECIAL 3045. REMOVE TRAFFIC SIGNALS	LS	1.000	1. 000	
820	SPV. 0105	USH 18 & JENNIFER DR SPECIAL 3075. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 100 &	LS	1. 000	1. 000	
830	SPV. 0105	CTH NN SPECIAL 3076. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 100 & W	LS	1. 000	1. 000	
840	SPV. 0105	CLEVELAND AVE SPECIAL 3077. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 100 & W.	LS	1.000	1.000	

INE	LTCM	LTEM DECCRIPTION	IINU T	TOTAL	1060-33-97	
350	I TEM SPV. 0105	ITEM DESCRIPTION SPECIAL 3078. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 100 & W. LINCOLN AVE	UNI T LS	TOTAL 1. 000	QUANTI TY 1. 000	
860	SPV. 0105	SPECIAL 3079. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 100 & W. LAPHAM ST	LS	1. 000	1.000	
870	SPV. 0105	SPECIAL 3080. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 100 & W. THEO TRECKER	LS	1.000	1. 000	
1880	SPV. 0105	SPECIAL 3081. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS IH94 EB OFFRAMP & STH 100	LS	1.000	1. 000	
1890	SPV. 0105	SPECIAL 3082. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS IH 94 WB RAMPS & STH 100	LS	1.000	1.000	
1900	SPV. 0105	SPECIAL 3083. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & CTH JJ	LS	1. 000	1.000	
1910	SPV. 0105	SPECIAL 3084. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & CTH Y	LS	1. 000	1. 000	
1920	SPV. 0105	SPECIAL 3085. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & JENNIFER DR	LS	1. 000	1. 000	
1930	SPV. 0105	SPECIAL 3086. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & JANACEK RD	LS	1. 000	1. 000	
1940	SPV. 0105	SPECIAL 3087. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & BROOKFIELD RD	LS	1. 000	1. 000	
1950	SPV. 0105	SPECIAL 3088. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & WOELFEL RD	LS	1. 000	1.000	
1960	SPV. 0105	SPECIAL 3089. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & CALHOUN RD	LS	1. 000	1. 000	
1970	SPV. 0105	SPECIAL 3090. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & THOMAS LANE	LS	1.000	1.000	
1980	SPV. 0105	SPECIAL 3091. TRNSP & INST S-F ADAPTABLE	LS	1. 000	1.000	
1990	SPV. 0105	TRAF SIG CAMERAS USH 18 & EXECUTIVE DR SPECIAL 3092. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & MAIN ST	LS	1.000	1. 000	
2000	SPV. 0105	SPECIAL 3093. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & CTH O	LS	1. 000	1.000	
2010	SPV. 0105	SPECIAL 3094. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS PILGRIM PKWY & WTP RD	LS	1. 000	1.000	
2020	SPV. 0105	SPECIAL 3095. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS CTH Y & DAVIDSON RD	LS	1. 000	1. 000	
2030	SPV. 0105	SPECIAL 3096. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS CTH Y & WATER TOWER BLVD	LS	1. 000	1. 000	
2040	SPV. 0105	SPECIAL 3097. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS CTH Y & SWENSON DR	LS	1. 000	1. 000	

LINE					1060-33-97	
IUMBER :050	I TEM SPV. 0105	ITEM DESCRIPTION SPECIAL 3098. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS IH 94 WB OFF-RAMP & CTH Y	UNI T LS	TOTAL 1. 000	QUANTITY 1. 000	
2060	SPV. 0105	SPECIAL 3099. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 59 & CTH Y	LS	1. 000	1.000	
2070	SPV. 0105	SPECIAL 3100. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 59 &	LS	1. 000	1. 000	
2080	SPV. 0105	BROOKFIELD RD SPECIAL 3101. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 59 &	LS	1. 000	1.000	
2090	SPV. 0105	CALHOUN RD SPECIAL 3102. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 59 & S.	LS	1. 000	1. 000	
2100	SPV. 0105	92ND ST SPECIAL 3103. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 59 & STH 181	LS	1. 000	1. 000	
2110	SPV. 0105	SPECIAL 3104. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS NATIONAL AVE	LS	1. 000	1. 000	
2120	SPV. 0105	& CLEVE AVE SPECIAL 3105. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS NATIONAL AVE & 102ND ST	LS	1. 000	1. 000	
2130	SPV. 0105	SPECIAL 3106. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM IH894 EB RAMPS & NATIONAL AVE	LS	1. 000	1.000	
2140	SPV. 0105	SPECIAL 3107. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM IH894 WB RAMPS &	LS	1. 000	1. 000	
2150	SPV. 0105	NATIONAL AVE SPECIAL 3108. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM NATIONAL AVE & LINCOLN AVE	LS	1. 000	1. 000	
2160	SPV. 0105	SPECIAL 3109. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM W. NATIONAL AVE & S. 92ND ST	LS	1. 000	1. 000	
2170	SPV. 0105	SPECIAL 3110. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM NATIONAL AV/BECHER ST/90TH ST	LS	1. 000	1. 000	
2180	SPV. 0105	SPECIAL 3111. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS NATIONAL AVE	LS	1. 000	1. 000	
2190	SPV. 0105	ADAPTABLE TRAF SIG CAMERAS BECHER ST &	LS	1. 000	1.000	
2200	SPV. 0105	92ND ST SPECIAL 3113. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS LINCOLN AVE & 92ND ST	LS	1. 000	1.000	
2210	SPV. 0105	SPECIAL 3114. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS LINCOLN AVE & 90TH ST	LS	1. 000	1. 000	
2220	SPV. 0105	SPECIAL 3115. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS S. 84TH ST & W. LAPHAM ST	LS	1. 000	1.000	
2230	SPV. 0105	W. LAPHAW SI SPECIAL 3116. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM STH 181 & STATE FAIR GATE 4	LS	1. 000	1. 000	
2240	SPV. 0105	SPECIAL 3117. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 181 & SCHLINGER AVE	LS	1. 000	1.000	

DATE 17 LINE	MAR14	E S T	ГІМАТЕ	O F Q U A N	T I T I E S 1060-33-97	
NUMBER 2250	I TEM SPV. 0105	ITEM DESCRIPTION SPECIAL 3118.TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS IH 94 EB RAMPS & STH 181	UNI T LS	TOTAL 1. 000	QUANTI TY 1. 000	
2260	SPV. 0105	SPECIAL 3119. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS IH 94 WB RAMPS & STH 181	LS	1. 000	1. 000	
2270	SPV. 0105	SPECIAL 3120.TRNSP & INST S-F ADAPTABLE TRAF SIG CAM WTP RD/SWAN BLVD/INNOVATION DR	LS	1. 000	1. 000	
2280	SPV. 0105	SPECIAL 3121. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM WATERTOWN PLK RD & DISC PKWY	LS	1. 000	1. 000	
2290	SPV. 0105	SPECIAL 3122. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM WATERTOWN PLANK RD & 92ND ST	LS	1. 000	1. 000	
2300	SPV. 0105	SPECIAL 3123. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM WATERTOWN PLANK RD & 87TH ST	LS	1. 000	1. 000	
2310	SPV. 0105	SPECIAL 3130. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET STH 100 & CTH	LS	1.000	1.000	
2320	SPV. 0105	NN SPECIAL 3131. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET STH 100 & W. NATIONAL AVE	LS	1.000	1.000	
2330	SPV. 0105	SPECIAL 3132. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET STH 100 & W. CLEVELAND AVE	LS	1. 000	1. 000	
2340	SPV. 0105	SPECIAL 3133. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET STH 100 & W. LINCOLN AVE	LS	1. 000	1. 000	
2350	SPV. 0105	SPECIAL 3134. INST FIBER OPTIC COMM. IN CABINET PILGRIM PKWY & WATERTOWN PLANK RD	LS	1. 000	1. 000	
2360	SPV. 0105	SPECIAL 3135. INST FIBER OPTIC COMM. IN	LS	1. 000	1. 000	
2370	SPV. 0105	CABINET IH 94 WB OFF RAMP & CTH Y SPECIAL 3136. INST FIBER OPTIC COMM. IN CABINET STH 59 & CTH Y	LS	1. 000	1. 000	
2380	SPV. 0105	SPECIAL 3137. INST FIBER OPTIC COMM. IN CABINET STH 59 & S. BROOKFIELD RD	LS	1. 000	1. 000	
2390	SPV. 0105	SPECIAL 3138. INST FIBER OPTIC COMM. IN CABINET STH 59 & S. CALHOUN RD	LS	1. 000	1. 000	
2400	SPV. 0105	SPECIAL 3145. INSTALL STATE FURNISHED TRAFFIC SIG CABINET USH 18 & JENNIFER DR	LS	1. 000	1. 000	
2410	SPV. 0105	SPECIAL 3146. INSTALL STATE FURNISHED TRAFFIC SIG CABINET IH 94 WB OFF-RAMP & CTH Y	LS	1. 000	1. 000	
2420	SPV. 0105	SPECIAL 3160. REMOVE LOOP DETECTOR WIRE STH 100 & CTH NN	LS	1. 000	1. 000	
2430	SPV. 0105	SPECIAL 3161. REMOVE LOOP DETECTOR WIRE STH 100 & W NATIONAL AVE	LS	1.000	1. 000	
2440	SPV. 0105	SPECIAL 3162. REMOVE LOOP DETECTOR WIRE STH 100 & CLEVELAND AVE	LS	1.000	1. 000	
2450	SPV. 0105	SPECIAL 3163. REMOVE LOOP DETECTOR WIRE STH 100 & W LINCLON AVE	LS	1. 000	1.000	

	REMOVALS 204.0155 204.0150 REMOVING REMOVING CONCRETE CURB AND GUTTER SIDEWALK	
<u>CPM SCHEDULE</u>	CATEGORY ROADWAY LOCATION LF SY	_
108.4400	1000 GREENFIELD AVE WEST OF BARKER RD S-67-413 170 -	
CPMPROGRESS	S. BARKER RD & WATER TOWER BLVD INTERSECTION - 112 S. BARKER RD & SWENSON DR INTERSECTION - 64	
SCHEDULE CATEGORY LOCATION EACH	PILGRIM PRKWY & WATERTOWN PLANK RD INTERSECTION - 112	
1000 <u>UNDISTRIBUTED</u> 1	W. LINCOLN AVE & S. 92ND ST INTERSECTION - 1473	
	W. LINCOLN AVE & S. 90TH ST INTERSECTION - 783 W. BECHER ST & S. 92ND ST INTERSECTION - 1545	
TOTALS 1	W. NATIONAL AVE & W. BECHER ST & S. 90TH ST INTERSECTION - 30	
	S. 84TH ST & LAPHAM ST INTERSECTION - 1108	
	TOTALS 170 5227	=
	REMOVING OVERHEAD SIGN SUPPORT	
FINISHING ROADWAY PROJECT 1060-33-97	REMOVING OVERHEAD SIGN SUPPORT SPV.0105.0003	
213.0100.0001	SPV.0105.0003 REMOVING	
CATEGORY STAGE EACH	SPV.0105.0003	
CATEGORY STAGE 213.0100.0001 EACH 1000 ALL PROJECT 1	SPV.0105.0003 REMOVING OVERHEAD SIGN SUPPORT LOCATION (S-40-416)	
CATEGORY STAGE EACH	SPV.0105.0003 REMOVING OVERHEAD SIGN SUPPORT LOCATION (S-40-416) CATEGORY ROADWAY ITEM DESCRIPTION X Y LS	
CATEGORY STAGE 213.0100.0001 EACH 1000 ALL PROJECT 1	SPV.0105.0003 REMOVING OVERHEAD SIGN SUPPORT LOCATION (S-40-416)	
CATEGORY STAGE 213.0100.0001 EACH 1000 ALL PROJECT 1	SPV.0105.0003 REMOVING OVERHEAD SIGN SUPPORT LOCATION (S-40-416) CATEGORY ROADWAY ITEM DESCRIPTION X Y LS 1000	

BASE AGGREGATE ITEMS

305.0120 BASE AGGREGATE DENSE 1 1/4-INCH CATEGORY ROADWAY TON 1000 S. BARKER RD & WATER TOWER BLVD 3 S. BARKER RD & SWENSON DR PILGRIM PRKWY & WATERTOWN PLANK RD W. LINCOLN AVE & S. 92ND ST 38 W. LINCOLN AVE & S. 90TH ST 20 W. BECHER ST & S. 92ND ST 40 W. NATIONAL AVE & W. BECHER ST & S. 90TH ST S. 84TH ST & LAPHAM ST 29 TOTALS 138

AGGREGATE UNIT WEIGHTS USED	
Base Aggregate Dense	2.1 TONS/CY

CONCRETE

			601.0551 CONCRETE	601.0555 CONCRETE	602.0410	602.0505
			CURB & GUTTER 4-INCH SLOPED	CURB & GUTTER 6-INCH SLOPED	CONCRETE	CURB RAMP DETECTABLE
			36-INCH	36-INCH	SIDEWALK	WARNING FIELD
			TYPE A	TYPE A	5-INCH	YELLOW
CATEGORY	ROADWAY	LOCATION	LF	LF	SF	SF
1000	GREENFIELD AVE WEST OF BARKER RD	S-67-413	148	-	-	-
	S. BARKER RD & WATER TOWER BLVD	INTERSECTION	-	-	112	-
	S. BARKER RD & SWENSON DR	INTERSECTION	-	-	64	-
	PILGRIM PRKWY & WATERTOWN PLANK RD	INTERSECTION	-	22	188	-
	W. LINCOLN AVE & S. 92ND ST	INTERSECTION	-	-	1473	24
	W. LINCOLN AVE & S. 90TH ST	INTERSECTION	-	-	783	16
	W. BECHER ST & S. 92ND ST	INTERSECTION	-	-	1545	24
	W. NATIONAL AVE & W. BECHER ST & S. 90TH ST	INTERSECTION	-	-	30	-
	S. 84TH ST & LAPHAM ST	INTERSECTION	-	-	1108	24
	TOTALS		148	22	5303	88

BEAM GUARD ITEMS

			614.2300	614.2610	614.2620	614.0395 GUARDRAIL
			MGS	MGS GUARDRAIL	MGS GUARDRAIL	MOW STRIP
			GUARDRAIL 3	TERMINAL EAT	TERMINAL TYPE 2	CONCRETE
CATEGORY	ROADWAY	SIGN	LF	EACH	EACH	SY
1000	GREENFIELD AVE WEST OF BARKER RD	S-67-413	287.5	2	2	153
	TOTALS		287.5	2	2	153

MOBILIZATION

			619.1000	J
CATEGORY	STAGE		EACH	
1000	ALL	PROJECT	1	
	TOTAL		1	

PROJECT NO: 1060-33-97

HWY: IH 894/IH 94/USH 45

COUNTY: MILWAUKEE/WAUKESHA

MISCELLANEOUS QUANTITIES

PLOT BY : MSCKKC

SHEET:

PLOT NAME: 030201_pav2

3

3

RESTORATION ITEMS

CATEGORY	ROADWAY	LOCATION		625.0500 SALVAGED TOPSOIL SY		629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY
1000	W. GREENFIELD AVENUE	S-67-413	WEST OF BARKER ROAD	17		0.1			17
	S. BARKER ROAD	INTERSECTION	WATER TOWER BLVD	19		0.1			19
		INTERSECTION	SWENSON DRIVE	16		0.1			16
		INTERSECTION	IH 94WB OFF RAMP	193		0.2		5	193
	W. BLUEMOUND ROAD	INTERSECTION	W. BLUEMOUND RD & JENNIFER DR	31		0.1		1	31
	<u>CORRIDOR</u>	INTERSECTION	PILGRIM PRKWY & WATERTOWN PLANK RD	82		0.1		2	82
	S. MOORLAND RD	S-67-417	W. RIDGE RD	13		0.1			13
	STH 100	S-40-449	OAK LEAF TRAIL	12		0.1			12
		INTERSECTION	W. OKLAHOMA AVENUE	44		0.1		1	44
		INTERSECTION	W. NATIONAL AVENUE	57		0.1		1	57
		INTERSECTION	W. LINCOLN AVENUE	65		0.1		2	65
		S-40-416	SOUTH OF LAPHAM STREET	16		0.1			16
									0
	W. NATIONAL AVENUE	INTERSECTION	W. LINCOLN AVE & S. 92ND ST	76		0.1		2	76
	CORRIDOR	INTERSECTION	W. LINCOLN AVE & S. 90TH ST	45		0.1		1	45
		INTERSECTION	W. BECHER ST & S. 92ND ST	37		0.1		1	37
		INTERSECTION	W. BECHER ST & S. 90TH ST	12		0.1			12
									0
	STH 181 CORRIDOR	INTERSECTION	S. 84TH ST & LAPHAM ST	36		0.1		1	36
									0
	CAPITOL DRIVE	S-40-447	EAST OF GRANTOSA DRIVE	18		0.1			18
	SUBTOTAL			789	0	2	0	17	789
	<u>UNDISTRIBUTED</u>			56	100	0.2	25	2	56
	TOTALS			845	100	2	25	19	845

PROJECT NO: 1060-33-97 HWY: IH 894/IH 94/USH 45 COUNTY: MILWAUKEE/WAUKESHA MISCELLANEOUS QUANTITIES SHEET: **E**

FILE NAME : W:\Cadd\Final\10603397_IC2\Roads\cds\030201_pav.ppt PLOT BY : MSCKKC PLOT NAME : 030201_pav3 PLOT SCALE : 1:1

EROSION CONTROL ITEMS

			628.1504	628.1520	628.1905	628.1910
						MOBILIZATIONS
				SILT	MOBILIZATIONS	EMERGENCY
			SILT	FENCE	EROSION	EROSION
			FENCE	MA INTENANCE	CONTROL	CONTROL
CATEGORY	LOCATION	SIGN	LF	LF	EACH	EACH
1000	GREENFIELD AVE WEST OF BARKER RD	S-67-416	265	265		
	MOORLAND RD AT RIDGE RD	S-67-417	150	150		
	STH 100 NORTH OF OAK LEAF TRAIL	S-40-449	300	300		
	CAPITOL DR EAST OF GRANTOSA	S-40-447	100	100		
	STH 100 SOUTH OF LAPHAM ST	S-40-416	100	100		
	SUBTOTAL		915	915		
	<u>UNDISTRIBUTED</u>		150	150	4	4
	TOTAL	·	1,065	1,065	4	4

INLET PROTECTION

			628.7005 INLET PROTECTION TY PE A	628.7015 INLET PROTECTION TYPE C
CATEGOR'	Y LOCATION	SIGN	EACH	EACH
1000	GREENFIELD AVE WEST OF BARKER RD	S-67-416		4
	MOORLAND RD AT RIDGE RD	S-67-417		1
	STH 100 NORTH OF OAK LEAF TRAIL	S-40-449	1	
	CAPITOL DR EAST OF GRANTOSA	S-40-447	1	
	STH 100 SOUTH OF LAPHAM ST	S-40-416	1	
	SUBTOTAL		3	5
	UNDISTRIBUTED		7	10
	TOTALS		10	15

PROJECT NO: 1060-33-97 HWY: IH 894/IH 94/USH 45 COUNTY: MILWAUKEE/WAUKESHA MISCELLANEOUS QUANTITIES SHEET: **E**

3

TRAFFIC CONTROL

																	**
				643.0100.0001	643.	.0300	643.	0420	643	.0705	643.0	0715	643.	0800	643.	0900	643.0920
									TRA	AFFIC	TRA	FFIC					TRAFFIC
				TRAFFIC			TRA	FFIC	CON	ΠROL	CONT	ΓROL	TRA	FFIC			CONTROL
				CONTROL	TRA	AFFIC	CON	TROL	WAF	RNING	WAR	NING	CON	TROL	TRA	FFIC	COVERING
			STAGE	PROJECT	CON	TROL	BARR	CADES	LIG	SHTS	LIGI	HTS	ARI	ROW	CON	TROL	TYPE II
			DURATION	1060-33-97	DR	UMS	TY	PE III	TY	PE A	TYF	PEC	BOA	ARDS	SIG	SNS	SIGNS
CATEGORY	SIGN	LOCATION	DAYS	EACH	EACH*	DAYS	EACH*	DAYS	EACH*	DAYS	EACH*	DAYS	EACH*	DAYS	EACH*	DAYS	EACH
1000	S-67-416	GREENFIELD AVE WEST OF BARKER RD	1		90	90	2	2	4	4	24	24	4	4	20	20	
	S-67-414	MOORLAND RD AT RIDGE RD	1		20	20							1	1	7	7	
	S-40-449	STH 100 NORTH OF OAK LEAF TRAIL	1		26	26	1	1	2	2	8	8	1	1	8	8	
	S-40-447	CAPITOL DR EAST OF GRANTOSA	1		33	33	1	1	2	2	11	11	1	1	8	8	
	S-40-416	STH 100 SOUTH OF LAPHAM ST	1		24	24	1	1	2	2	8	8	1	1	8	8	
		W. LINCOLN AVE & S. 92ND ST	14				12	168	24	336					12	168	
		W. LINCOLN AVE & S. 90TH ST	14				11	154	22	308					11	154	
		W. BECHER ST & S. 92ND ST	14				12	168	24	336					12	168	
		W. NATIONAL AVE & W. BECHER ST & S. 90TH ST	14				2	28	4	56					2	28	
		S. 84TH ST & LAPHAM ST	14				12	168	24	336					12	168	
		SUBTOTAL		1		193		691		1,382		51		8		737	-
		UNDISTRIBUTED				20		70		139		6		1		74	10
		TOTALS		1		213		761		1,521		57		9		811	10

^{*} FOR INFORMATION ONLY

PROJECT NO: 1060-33-97 HWY: IH 894/IH 94/USH 45 COUNTY: MILWAUKEE/WAUKESHA MISCELLANEOUS QUANTITIES SHEET: **E**

^{**} ADDITIONAL QUANTITIES LOCATED ELSEWHERE - SEE "TYPE II PERMANENT SIGNING" TABLE

		SAWING CONCRETE
OVERHEAD SIGN STRUCTURE SUPPORT (M	MII WALIKEE COUNTY)	690.0250 SAWING CONCRETE
OVERVIEW SIGN STRUCTURE SOLVENIL	MEVINOREE GOOKITY	CATEGORY ROADWAY SIGN LF REMARKS
	641.8100.0015 OVERHEAD SIGN SUPPORT STRUCTURE	1000 GREENFIELD AVE WEST OF BARKER RD S-67-413 143 MEDIAN S. BARKER RD & WATER TOWER BLVD 16 S. BARKER RD & SWENSON DR 10
CATEGORY EQUIPMENT ID X 1000	N S-40-416 Y LS	PILGRIM PRKWY & WATERTOWN PLANK RD 35
	290149.3237 1	W. LINCOLN AVE & S. 92ND ST 104
		W. LINCOLN AVE & S. 92ND ST 70
TOTALS	1	W. BECHER ST & S. 92ND ST 55
		W. NATIONAL AVE & W. BECHER ST & S. 90TH ST 10
		S. 84TH ST & LAPHAM ST 82
		TOTALS 525
		PAVEMENT CLEANUP
		SPV.0105.0001
EXPOSING EXISTING UTIL	ILITIES	CATEGORY STAGE LOCATION LS
<u> </u>	<u> </u>	1000 ALL <u>PROJECT</u> 1
UTILITY UNPAV	XISTING EXPOSING EXISTING VED AREA UTILITY PAVED AREA	TOTAL 1
1000 <u>UNDISTRIBUTED</u>	H EACH	
15	15	SURVEY PROJECT
TOTALS 15	15	SPV.0105.0002
		SURVEY PROJECT 1060-33-97
		CATEGORY STAGE LOCATION LS
		TOTAL 1

ITS PULL BOXES & COMMUNICATION VAULTS (WAUKESHA COUNTY)

					653.0135*	673.0105	652.0700.S INSTALL
					PULL BOXES	COMMUNICATION	CONDUIT
					STEEL	VAULT TYPE 1	INTO EXISTING
			LOCA	ATION	24 X 36 - INCH	ITEM	ΠEM
CATEGORY	ROADWAY	EQUIPMENT ID	Х	Υ	EACH	EACH	EACH
1300							
	GREENFIELD AVE AND DOWNIE RD	PB2001	698772.8489	161934.2913	1		
	GREENFIELD AVE AND DOWNIE RD	PB2002	698772.0734	161969.7986	1		
	GREENFIELD AVE AND BARKER RD	PB17 (21)	700794.9434	163156.9463			1
	GREENFIELD AVE AND BARKER RD	EXCV2102	700787.5339	163163.8734			1
	GREENFIELD AVE AND BROOKFIELD RD	PB1 (22)	705870.2510	163230.5572			1
	GREENFIELD AVE AND BROOKFIELD RD	EXPB2202	705884.6990	163231.0745			2
	MOORLAND RD AND RIDGE RD	PB3301	716532.3253	161699.9084	1		
			TOTALS		3		5

PROJECT TOTALS

ITS CONDUIT, TRACER WIRE (WAUKESHA COUNTY)

		LINEAR	652.0125 CONDUIT RIGID METALLIC 2-INCH		652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	652.0605 CONDUIT SPECIAL 2-INCH	655.0505 ELECTRICAL WIRE TRAFFIC SIGNALS 14 AWG	671.0232 CONDUIT HDPE DIRECTIONAL BORE 3-DUCT 2-INCH
CATEGORY	EQUIPMENT ID	DISTANCE	LF	LF	LF	LF	LF	LF
1300								
	HDMS-67-0120 - PB2002	15	15	30			15	
	PB2002 - PB2001	40				80		
	PB2001 - MB2001	5		5				
	EXCV2102 - PB17 (21)	15		45			15	
	CCTV-67-0199 - EXPB2202	10		20			10	
	EXPB2202 - PB1 (22)	15			45		15	
	HDMS-67-0118 - PB3301	15	15	30				
	PB3301 - MB3301	5		5				
	TOTALS		30	135	45	80	55	
	PROJECT T	OTALS	60	400	265	80	2,350	2,025

ITS PULL BOXES & COMMUNICATION VAULTS (MILWAUKEE COUNTY)

					653.0135*	673.0105	652.0700.S INSTALL
					PULL BOXES	COMMUNICATION	CONDUIT
					STEEL	VAULT TYPE 1	INTO EXISTING
			LOCA	ATION	24 X 36 - INCH	ITEM	ITEM
CATEGORY	' ROADWAY	EQUIPMENT ID	Х	Υ	EACH	EACH	EACH
1300							
	STH 100 AND OAK LEAF TRAIL	PB5001	568999.1465	274985.6880	1		
	STH 100 AND OAK LEAF TRAIL	EXPB5001	568996.1170	274876.0782			1
	CAPITOL DR AND GRANTOSA DR	EXPB5601	570600.1773	318226.4663			2
	STH 100 AND LAPHAM ST	EXPB5901	569261.1800	290149.3302			1
	STH 100 AND LAPHAM ST	EXCV5901	569254.4100	290242.6102			1
	IH 894 AND NATIONAL AVE	EXCV6001	571722.4676	285187.0199			1
	NATIONAL AVE AND 99TH ST	CV6101	572255.7511	285592.7949		1	
	NATIONAL AVE AND 97TH ST	CV6201	572776.4688	285993.6782		1	
	NATIONAL AVE AND LINCOLN AVI	CV6301	573313.7630	286428.5149		1	
			TOTALS		1	3	6

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

ITS CONDUIT, TRACER WIRE (MILWAUKEE COUNTY)

			652.0125	652.0225	652.0235	655.0505	671.0232
			CONDUIT	CONDUIT RIGID	CONDUIT RIGID	ELECTRICAL	CONDUIT HDPE
			RIGID	NONMETALLIC	NONMETALLIC	WIRE	DIRECTIONAL
			METALLIC	SCHEDULE 40	SCHEDULE 40	TRAFFIC SIGNALS	BORE
		LINEAR	2-INCH	2-INCH	3-INCH	14 AWG	3-DUCT 2-INCH
CATEGORY	Z EQUIPMENT ID	DISTANCE	LF	LF	LF	LF	LF
1300							
	EXPB5001 - PB5001	110			220	110	
	HDMS-40-0128 - PB5001	10	10	20			
	PB5001 - MB5001	5		5			
	HDMS-40-0127 - EXPB5601	10	10	20			
	EXPB5601 - MB5601	10		10			
	EXPB5901 - DMS-40-0111	10	10				
	DMS-40-0111 - EXCV5901	105		210		105	
	EXCV6001 - EXCV6002	55				55	
	EXCV6001 - CV6101	670				670	670
	CV6101 - CV6201	660				660	660
	CV6201 - CV6301	695				695	695
	TOTALS		30	265	220	2,295	2,025

HWY: IH 894/IH 94/USH 45 COUNTY: WAUKESHA / MILWAUKEE PROJECT NO: 1060-33-97

MISCELLANEOUS QUANTITIES

SHEET:

FILE NAME : W:\Cadd\Final\10603399_IC1\Roads\cds\030214_mq_fm.ppt

PLOT DATE: 2/27/2014 9:18:40 AM

PLOT BY : MSCKKC

PLOT NAME: 030214_mq_fm1

655.0625 **ELECTRICAL**

ITS WIRE (WAUKESHA COUNTY)

655.0625 ELECTRICAL WIRE

870

LIGHTING LINEAR 6 AWG EQUIPMENT ID DISTANCE LF CATEGORY HDMS-67-0120 - PB2002 15 75 150 PB2002 - PB2001 40 30 PB2001 - MB2001 HDMS-67-0118 - PB3301 75 15 PB3301 - MB3301 5 30

TOTALS 360

PROJECT TOTALS

ITS WIRE (MILWAUKEE COUNTY)

WIRE LIGHTING

LINEAR 6 AWG CATEGORY EQUIPMENT ID DISTANCE LF HDMS-40-0128 - PB5001 10 60 30 PB5001 - MB5001 HDMS-40-0127 - EXPB5601 10 60 EXPB5601 - MB5601 10 45 EXMB5901 - EXPB5902 20 75 55 EXPB5902 - EXPB5901 180 10 EXPB5901 - DMS-40-0111 60 TOTALS 510

ITS CABLE (MILWAUKEE COUNTY)

			678.0006 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT	678.0072 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT
		LINEAR	6-CT	72-CT
CATEGORY	EQUIPMENT ID	DISTANCE	LF	LF
1300				
	DMS-40-0111 - EXCV5901	105	205	
	EXCV6001 - EXCV6002	55		155
	EXCV6001 - CV6101	670		770
	CV6101 - CV6201	660		760
	CV6201 - CV6301	695		795
_	PROJECT TOTALS		205	2,480

Ε HWY: IH 894/IH 94/USH 45 COUNTY: WAUKESHA / MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: PROJECT NO: 1060-33-97

ITS ELECTRICAL SERVICE (WAUKESHA COUNTY) 656.0200.0001 656.0200.0002 ELECTRICAL ELECTRICAL SERVICE SERVICE METER BREAKER METER BREAKER PEDESTAL PEDESTAL **EQUIPMENT** LOCATION (HDMS-67-0120) (HDMS-67-0118) CATEGORY ROADWAY ID LS LS Χ 1300 GREENFIELD AVE AND DOWNIE RD MB2001 698777.7872 161933.5080 MOORLAND RD AND RIDGE RD MB3301 716532.5417 161704.9038 TOTALS ITS ELECTRICAL SERVICE (MILWAUKEE COUNTY)

656.0200.0020 656.0200.0021 ELECTRICAL SERVICE ELECTRICAL SERVICE METER BREAKER METER BREAKER PEDESTAL PEDESTAL **EQUIPMENT** (HDMS-40-0128) (HDMS-40-0127) LOCATION CATEGORY ROADWAY ID LS LS 1300 STH 100 AND OAK LEAF TRAIL MB5001 568997.7892 274990.5002 CAPITOL DR AND GRANTOSA DR MB5601 570596.7152 318222.8596 TOTALS

PROJECT NO: 1060-33-97 HWY: IH 894/IH 94/USH 45 COUNTY: WAUKESHA / MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: **E**

<u>!</u>	TS ELECTRICAL SERVICE (WAUKE	SHA COUNTY)		
		ELECTRICAL SERVICE BREAKER	656.0500.0002 ELECTRICAL SERVICE BREAKER ISCONNECT BOX	
	LOCATION		B-HDMS-67-0118)	
	TOTALS	1	1	
	ITS ELECTRICAL SERVICE (MILV	'AUKEE COUNTY)		
	ITS ELECTRICAL SERVICE (MILV	656.0500.0020 656. ELECTRICAL SERVICE ELECTR BREAKER B	0500.0021 656.0500.0024 ICAL SERVICE ELECTRICAL SERVICE REAKER BREAKER INNECT BOX DISCONNECT BOX	
CATEGORY ROADWAY	ITS ELECTRICAL SERVICE (MILVER) EQUIPMENT LOCATION ID X Y	656.0500.0020 656. ELECTRICAL SERVICE ELECTR BREAKER B DISCONNECT BOX DISCO	ICAL SERVICE ELECTRICAL SERVICE REAKER BREAKER	
1300 STH 100 AND OAK LEAF TRAIL CAPITOL DR AND GRANTOSA DR	EQUIPMENT LOCATION	656.0500.0020 656. ELECTRICAL SERVICE ELECTR BREAKER B DISCONNECT BOX DISCO (HDMS-40-0128) (HDM	ICAL SERVICE ELECTRICAL SERVICE REAKER BREAKER INNECT BOX DISCONNECT BOX IS-40-0127) (DMS-40-0111)	

FILE NAME: W:\Cadd\Final\10603399_IC1\Roads\cds\030214_mq_fm.ppt

PLOT DATE : 2/25/2014 1:07:48 PM

PLOT BY : MSCKKC

PLOT NAME: 030214_mq_fm4

			LOCA	ATION	675.0400.S INSTALL ETHERNET SWITCH	677.0300.S INSTALL VIDEO ENCODER	678.0300 FIBER OPTIC SPLICE	678.0400 FIBER OPTIC TERMINATION	SPV.0060.2003 INSTALL 5.8 GHZ ETHERNET BRIDGE	SPV.0060.2004 INSTALL WIRELESS MODEM	SPV.0060.2005 INSTALL BLUETOOTH DETECTOR
CATEGORY	ROADWAY	EQUIPMENT ID	Х	Υ	EACH	EACH	EACH	EACH	EACH	EACH	EACH
1300											
	GREENFIELD AVE AND DOWNIE RD	HDMS-67-0120	698763.2378	161973.9132	1				1		1
	GREENFIELD AVE AND BARKER RD	CCTV-67-0198	700789.3385	163088.4279					1		1
	GREENFIELD AVE AND BARKER RD	CB1 (21)	700798.4423	163162.6632		1					
	GREENFIELD AVE AND BROOKFIELD RD	CB1 (22)	705866.4700	163236.5600		1					
	GREENFIELD AVE AND BROOKFIELD RD	CCTV-67-0199	705879.2080	163235.7351							1
	GREENFIELD AVE AND CALHOUN RD	CCTV-67-0200	711288.2390	163058.4037							1
	GREENFIELD AVE AND CALHOUN RD	CB1 (23)	711297.8300	163172.6717		1					
	MOORLAND RD AND RIDGE RD	HDMS-67-0118	716529.6550	161690.5923	1				1		1
	GREENFIELD AVE AND MOORLAND RD	EXCCTV-67-0152	716611.9481	163207.5352					1		
	GREENFIELD AVE AND COACHLIGHT DR	EXDMS-67-0121	714891.1405	163042.8991	1				1		
	GREENFIELD AVE AND PICK 'N SAVE	EXDMS-67-0122	718110.9124	163097.6111	1				1		
	BLUEMOUND RD AND JANACEK RD	CB1 (40)	703181.9791	170177.7064		1					
	BLUEMOUND RD AND JANACEK RD	CCTV-67-0201	703184.3173	170167.1533							1
	BLUEMOUND RD AND BROOKFIELD RD	CB1 (41)	705843.6953	170226.5917		1					
	BLUEMOUND RD AND BROOKFIELD RD	EXCCTV-67-0202	705835.8157	170177.7300							1
	BLUEMOUND RD AND WOELFEL RD	CB1 (42)	708653.1797	170440.0617		1					
	BLUEMOUND RD AND WOELFEL RD	CCTV-67-0203	708474.9095	170403.4333							1
	BLUEMOUND RD AND EXECUTIVE DR	CB1 (43)	714417.1360	170062.0458		1					
	BLUEMOUND RD AND EXECUTIVE DR	CCTV-67-0204	714487.9795	170257.0906							1
		TOTALS			4	7			6		9
		PROJECT TOTALS	<u> </u>		6	10	51	6	•		16
		PROJECT TOTALS	,		6	10	91	6	8	ı	10

ITS COMMUNICATIONS (CABINETS) (MILWAUKEE COUNTY)

					675.0400.S	677.0300.S	678.0300	678.0400	SPV.0060.2003	SPV.0060.2004	SPV.0060.2005
					INSTALL	INSTALL	FIBER	FIBER	INSTALL	INSTALL	INSTALL
					ETHERNET	VIDEO	OPTIC	OPTIC	5.8 GHZ	WIRELESS	BLUETOOTH
			LOCA	ATION	SWITCH	ENCODER	SPLICE	TERMINATION	ETHERNET BRIDGE	MODEM	DETECTOR
CATEGORY	Y ROADWAY	EQUIPMENT ID	Χ	Υ	EACH	EACH	EACH	EACH	EACH	EACH	EACH
1300											
	STH 100 AND OAK LEAF TRAIL	HDMS-40-0128	568997.5940	274977.8401						1	1
	STH 100 AND OKLAHOMA AVE	CB1 (51)	569229.8317	281131.0609		1					
	STH 100 AND OKLAHOMA AVE	CCTV-40-0196	569146.7975	281119.1964							1
	STH 100 AND NATIONAL AVE	CB1 (52)	569080.4528	283234.1872		1					
	STH 100 AND NATIONAL AVE	CCTV-40-0195	569174.7738	283317.0741							1
	STH 100 AND CENTER ST	CCTV-40-0192	568963.4419	310073.5423							1
	STH 100 AND CENTER ST	CB1 (54)	568963.8766	310058.8320		1					
	STH 100 AND CAPITOL DR	EXCCTV-40-0107	569123.7108	318283.2079					1		
	CAPITOL DR AND GRANTOSA DR	HDMS-40-0127	570606.0046	318222.8492	1				1		1
	STH100 AND LAPHAM ST	DMS-40-0111	569268.8987	290143.5531	1			6			1
	STH100 AND LAPHAM ST	EXCV5901	569254.4100	290242.6102			15				
	IH 894 AND NATIONAL AVE	EXCV6002	571753.9992	285147.9412			36				
	WISCONSIN AVE AND GLENVIEW AVE	BR7001	577769.3851	299646.8379							1
		TOTALS			2	3	51	6	2	1	7

PROJECT NO: 1060-33-97

HWY: IH 894/IH 94/USH 45

COUNTY: WAUKESHA / MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET:

 $FILE\ NAME: W: \ Cadd \ Final \ 10603399_IC1 \ Roads \ cds \ 030214_mq_fm.ppt$

PLOT DATE : 2/25/2014 1:07:48 PM

PLOT BY : MSCKKC

PLOT NAME: 030214_mq_fm5

CATEGORY	EQUIPMENT ID	LOCA	ATION Y	659.0802* PLAQUES SEQUENCE IDENTIFICATION EACH	672.0230 BASE CAMERA POLE 30-FT EACH	673.0225.S INSTALL POLE MOUNTED CABINET EACH	677.0100 INSTALL CAMERA POLE EACH	677.0200 INSTALL CAMERA ASSEMBLY EACH	SPV.0060.2006 GROUND ROD EACH	SPV.0060.2001 INSTALL HYBRID DYNAMIC MESSAGE SIGN EACH	SPV.0060.2002 INSTALL DYNAMIC MESSAGE SIGN EACH
1300			•								
	HDMS-67-0120	698763.2378	161973.9132	2		1			1	1	
	CCTV-67-0198	700789.3385	163088.4279					1			
	CCTV-67-0199	705879.2080	163235.7351	1	1		1	1	1		
	CCTV-67-0200	711288.2390	163058.4037					1			
	HDMS-67-0118	716529.6550	161690.5923	2		1			1	1	
_	CCTV-67-0201	703184.3173	170167.1533					1			
	CCTV-67-0203	708474.9095	170403.4333					1			
	CCTV-67-0204	714487.9795	170257.0906					1			
=		TOTALS		5	1	2	1	6	3	2	
=	P	ROJECT TOTAL	_S	11	1	5	1	9	6	4	1

ITS BASES, POLES AND EQUIPMENT (MILWAUKEE COUNTY)

				658.0802*	672.0230	673.0225.S	677.0100	677.0200	SPV.0060.2006	SPV.0060.2001	SPV.0060.2002
					BASE	INSTALL					INSTALL
				PLAQUES	CAMERA	POLE	INSTALL	INSTALL		INSTALL	DYNAMIC
				SEQUENCE	POLE	MOUNTED	CAMERA	CAMERA	GROUND	HYBRID DYNAMIC	MESSAGE
		LOCA	ATION	IDENTIFICATION	30-FT	CABINET	POLE	ASSEMBLY	ROD	MESSAGE SIGN	SIGN
CATEGORY	EQUIPMENT ID	Χ	Υ	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
1300											
	HDMS-40-0128	568997.5940	274977.8401	2		1			1	1	
	CCTV-40-0196	569146.7975	281119.1964					1			
	CCTV-40-0195	569174.7738	283317.0741					1			
	CCTV-40-0192	568963.4419	310073.5423					1			
_	HDMS-40-0127	570606.0046	318222.8492	2		1			1	1	
	DMS-40-0111	569268.8987	290143.5531	2		1			1		1
_											
=		TOTALS	·	6		3		3	3	2	1

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

PROJECT NO: 1060-33-97 HWY: IH 894/IH 94/USH 45 COUNTY: WAUKESHA / MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: **E**

ITS REMOVALS SPV.0060.2007 SALVAGE LOCATION DMS CATEGORY ROADWAY DESCRIPTION EACH ITEM 1300 STH100 AND LAPHAM ST EXDMS-40-0111 DMS 569261.1203 290149.3237 1 TOTALS **ITS REMOVALS ITS MISCELLANEOUS ITEMS** 674.0300 REMOVE 670.0100.0001 670.0200.0001 678.0500.0001 CABLE FIELD SYSTEM ITS COMMUNICATION ROADWAY ITEM ID LF CATEGORY INTEGRATOR DOCUMENTATION SYSTEM TESTING 1300 (ITS) (ITS) (ITS) STH100 AND OAK LEAF TRAIL EXPB5001 - PB5001 75 CATEGORY ROADWAY LS LS LS STH100 AND LAPHAM ST EXDMS-40-0111 - EXCV5801 10 1300 EXDMS-40-0111 - EXPB5801 95 IH 894/IH 94/USH 45 1 1 1 EXPB5801 - EXPB5802 55 20 EXPB5802 - EXMB5801 TOTALS TOTALS 255 HWY: IH 894/IH 94/USH 45 COUNTY: WAUKESHA / MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: PROJECT NO: 1060-33-97

FILE NAME: W:\Cadd\Fina\110603399_IC1\Roads\cds\030214_mq_fm.ppt

PLOT DATE: 1/31/2014 1:32:50 AM

PLOT BY : MSCKKC

PLOT NAME: 030214_mq_fm7

TYPE I SIGN QUANTITIES 1060-33-97 INTEGRATED CORRIDORS

	1								1000-33-37 INTEGRATED CORRIDORS
							637.1220	638.2601	
					TYPE	I	SIGNS	REM	
	SIGN				SIGN		TYPE I	SIGNS	
SIGN	CODE	SIGN	SIGN		SIZE		REFLECTIVE	TYPE	
NO.	& SIZE	TYPE	MESSAGE	W	х	Н	SH	I	
				[FT]	Х	[FT]	[SF]	[EA]	REMARKS / NEW SIGN LOCATION
101	*NOT USED*				Х				
102	NONE	I	DOWNTOWN MILWAUKEE VIA	20	Х	9	180.0		I BEAMS INCIDENTAL TO SIGN
			94						PLACE ON S-67-413
			59 GREENFIELD AVE						BLANK OUT FOR DMS ELECTRONIC SIGN
103	NONE	I	DOWNTOWN MILWAUKEE VIA	20	Х	9	180.0		I BEAMS INCIDENTAL TO SIGN
			94						PLACE ON S-67-417
			59 GREENFIELD AVE						BLANK OUT FOR DMS ELECTRONIC SIGN
104	NONE	I	TO CAPITOL DRIVE VIA	16	Х	8	128.0		I BEAMS INCIDENTAL TO SIGN
			<u>41 894 45</u>						PLACE ON S-40-449
			94						BLANK OUT FOR DMS ELECTRONIC SIGN
105	NONE	I	TO NATIONAL AVE VIA	16	Х	8	128.0		I BEAMS INCIDENTAL TO SIGN
			41 45						PLACE ON S-40-447
			100						BLANK OUT FOR DMS ELECTRONIC SIGN
	TOTALS						616.0	0	

SHEET 1 OF 1

PROJECT NO: 1060-33-97 HWY: IH-94 COUNTY: MILWAUKEE PERMANENT SIGNING QUANTITIES SHEET: **E**

	T	70	1						V			<u> </u>	1060-33-97 IH894/IH94/USH
						637.2210	634.0618	643.0920	638.2602	638.3000	638.2102		
SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	W	SIGN SIZE x	Н	SIGNS TYPE II REFLECTIVE H			REMOVING SIGNS TYPE II	REMOVING SMALL SIGN SUPPORTS	MOVING SIGNS TYPE II	MOUNT ON SAME POST AS	
			[IN.]	Х	[IN.]	[SF]	[EA]	[EA]	[EA]	[EA]	[EA]	SIGN #	REMARKS / NEW SIGN LOCATION
1	D12-5		60	Х	66	27.500	2						
2	JV23-1 (2S)		24	X	81	13.500	1	1	1	1			
_	MB4-5	TO (BLUE)	24	x	12				<u>.</u>				
	M1-1	41	24	x	24								COVER WITH BLACK PANEL OF SAME MATERIAL
	M1-4	45	24	x	24								
	MB6-1	(AHEAD ARROW) (BLUE)	21	x	21								
3	JV23-1 (2S)		24	х	81	13.500	1	1	1	1			ON LIGHT POLE
	MB4-5	TO (BLUE)	24	х	12								
	M1-1	41	24	х	24								COVER WITH BLACK PANEL OF SAME MATERIAL
	M1-4	45	24	х	24								
	MB6-1	(AHEAD ARROW) (BLUE)	21	х	21								
4	D12-5		60	х	66	27.500	2						
5	J2-2 (2S)		48	х	57	19.000	2		1	1			
	MB4-5	TO (BLUE)	24	х	12								
	M1-1	94	24	х	24								
	MB5-1L	(AHEAD LEFT ARROW) (BLUE)	21	х	21								
	M3-1	NORTH	24	х	12								
	M1-5A	Υ	24	х	24								
	M5-1L	(AHEAD LEFT ARROW)	21	х	21								
6	J23-1(2S)		24	х	57	9.500							MOUNT ON OVERHEAND SIGN SUPPORT UPRIGHT
	MB4-5	TO (BLUE)	24	х	12								
	M1-1	94	24	х	24								
	MB6-1	(LEFT ARROW) (BLUE)	21	х	21								
7	J4-1	EAST 59		х			1			1	1		MOVE FROM 550' EAST TO NOTED LOCATION
8	J23-2 (2S)		24	х	57	9.500	1						
	MB4-5	TO (BLUE)	24	х	12								
	M1-1	94	24	х	24								
	MB6-1	(AHEAD ARROW) (BLUE)	21	х	21								
9	D12-5		60	х	66	27.500	2				-		

SHEET 1 OF 3

SHEET:

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PROJECT NO: 1060-33-97 HWY: 894/45 FILE NAME: \\WKE31FP1\n3public\SPO\Operations\Traffic_Ops\Signing\Miscellaneous Quantities\1060-33-97\030501_mq.pptx COUNTY: MILWAUKEE

PLOT DATE : 22-NOV-2013

PERMANENT SIGNING QUANTITIES

PLOT NAME: 030501_mq.pdf

TYPE II PERMANENT SIGNING - CATEGORY CODE 1000 1060-33-97 IH894/IH94/USH45

						637.2210	634.0618	643.0920	638.2602	638.3000	638.2102		1000-33-97 10094/1094/03043
SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	W [IN.]	SIGN SIZE x x		SIGNS TYPE II REFLECTIVE H	POSTS WOOD 4X6- INCH X 18-FT		REMOVING SIGNS TYPE II	REMOVING SMALL SIGN SUPPORTS	MOVING SIGNS TYPE II	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
						[SF]	[EA]	[EA]	[EA]	[EA]	[EA]		
10	J22-2 (2S)		54	х	81	30.375		1	1				ON LIGHT POLE
	MB4-5	TO (BLUE)	24	х	12								
	M1-1	41	24	х	24								COVER WITH BLACK PANEL OF SAME MATERIAL
	M1-1	894	30	х	24								
	MB5-1R	(AHEAD RIGHT ARROW) (BLUE)	21	х	21								
	M4-5	то	24	х	12								
	M1-4	45	24	х	24								
	M5-1R	(AHEAD RIGHT ARROW)	21	х	21								
11	J23-2 (2S)		54	Х	81	30.375		1	1				ON LIGHT POLE
	MB4-5	TO (BLUE)	24	х	12								
	M1-1	41	24	х	24								COVER WITH BLACK PANEL OF SAME MATERIAL
	M1-1	894	30	х	24								
	MB6-1	(AHEAD ARROW) (BLUE)	21	х	21								
	M4-5	то	24	х	12								
	M1-4	45	24	х	24								
	M5-1R	(AHEAD ARROW)	21	х	21								
12	J4-1 (2S)		24	х	36	6.000							ON LIGHT POLE
	M3-1	NORTH	24	х	12								
	M1-6	100	24	х	24								
13	J23-1 (2S)		54	Х	81	30.375		1					ON LIGHT POLE
	MB4-5	TO (BLUE)	24	х	12								
	M1-1	41	24	х	24								COVER WITH BLACK PANEL OF SAME MATERIAL
	M1-1	894	30	х	24								
	MB6-1	(AHEAD ARROW) (BLUE)	21	х	21								
	M4-5	то	24	x	12								
	M1-4	45	24	х	24								
	M6-1	(AHEAD ARROW)	21	х	21								
14	D12-5		60	х	66	27.500	2						

SHEET 2 OF 3

PROJECT NO: 1060-33-97 HWY: 894/45 COUNTY: MILWAUKEE PERMANENT SIGNING QUANTITIES SHEET: **E**

		t

TYPE II PERMANENT SIGNING - CATEGORY CODE 1000 1060-33-97 IH894/IH94/USH	TYPE II PERMANENT SIGNING -	CATEGORY CODE 1000	1060-33-97	IH894/IH94/USH45
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SIGN SIGN SIGN SIGN SIGN SIGN SIGN MESSAGE M X M M M M M M M M							637.2210	634.0618	643.0920	638.2602	638.3000	638.2102		1060-33-97 10694/1094/0504
18		CODE			SIZE x	Н	REFLECTIVE H	WOOD 4X6- INCH X 18-FT	CONTROL COVERING SIGNS TYPE II	SIGNS TYPE II	SMALL SIGN SUPPORTS	SIGNS TYPE II	ON SAME POST AS	REMARKS / NEW SIGN LOCATION
M9-4 WEST 24 X 12									[EA]	[EA]	[EA]	[EA]		
M1-6 59	15						28.500	2						
M6-1L (AHEAD LEFT ARROW)														
MB4-5														
M1-1 94 24 x 24														
MB6-1					Х									
M3-2 EAST					Х									
M1-6 59				21	Х	21								
MS-1R		M3-2	EAST	24	Х	12								
16		M1-6	59	24	Х	24								
M3-4 WEST		M5-1R	(AHEAD RIGHT ARROW)	21	Х	21								
M1-6 59	16	J2-3 (2S)		72	Х	57	28.500	2						
M5-1L		M3-4	WEST	24	Х	12								
MB4-5 TO (BLUE)		M1-6	59	24	Х	24								
M1-1 94 24 x 24		M5-1L	(AHEAD LEFT ARROW)	21	х	21								
MB6-1 (AHEAD ARROW) (BLUE) 21 x 21		MB4-5	TO (BLUE)	24	х	12								
M3-2 EAST		M1-1	94	24	Х	24								
M1-6 59		MB6-1	(AHEAD ARROW) (BLUE)	21	х	21								
M5-1R		M3-2	EAST	24	х	12								
17 J23-1 (2S)		M1-6	59	24	х	24								
MB4-5 TO (BLUE) M1-1 94 (AHEAD ARROW) (BLUE) 24 x 24		M5-1R	(AHEAD RIGHT ARROW)	21	х	21								
M1-1 94 24 x 24	17	J23-1 (2S)		24	Х	57	9.500							MOUNT ON BACK OF EXISTING SIGN
M1-1 94 24 x 24			TO (BLUE)	24	х	12								
MB6-1 (AHEAD ARROW) (BLUE) 21 x 21		M1-1		24	х	24								
18 J23-1 (2S) 24 x 57 9.500 1		MB6-1	(AHEAD ARROW) (BLUE)	21	х	21								
MB4-5 TO (BLUE) 24 x 12	18						9.500	1						
M1-1 94 24 x 24			TO (BLUE)											
MB6-1 (AHEAD ARROW) (BLUE) 21 x 21														
- x														
TOTALS 348.125 19 5 5 4 1		TOTALS												

SHEET 3 OF 3

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PROJECT NO: 1060-33-97 HWY: 894/45 COUNTY: MILWAUKEE PERMANENT SIGNING QUANTITIES SHEET:

STH 100 & CTH NN **ALL ITEMS ARE CATEGORY 1500**

BASE NO.	** NORTHING	** EASTING	654.0102 CONCRETE BASES TYPE 2 EACH
SB13	281100.6	570500.5	1
SB14	281202.8	570418.2	1
SB15	281186.7	570603.6	1
		*** TOTAL	3

- * FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
- ** COORDINATES REFERENCED TO MILWAUKEE COUNTY COORDINATE SYSTEM
- *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE BASES

929	LF	CAMERA POWER CABLE	
967	LF	CAT-5E CABLE	
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS	

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

DESCRIPTION

CONDUIT

UNIT

QUANTITY

652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40

		2-INCH
FROM	TO	LF
PB8	SB13	12
PB3	SB14	12
PB5	SB15	20
	*** TOTALS	44

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS

		10 AWG
FROM	ТО	LF
CB1	SB13	131
SB13	SB14	184
SB14	SB15	332
SB15	CB1	91
	*** TOTAL	738

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL CONDUIT INTO EXISTING ITEM

STRUCTURE NO.	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
PB3	1
PB5	1
PB8	1
*** TOTAL	3

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE



COUNTY: MILWAUKEE

HWY: STH 100 PROJECT NO: 1060-33-97

MISCELLANEOUS QUANTITIES

PAGE 1 OF 2

SHEET:

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030115_mq_sp.ppt

PLOT BY : MSCCEJ

PLOT SCALE: 1:1

PLOT DATE: 2/25/2014 3:17:29 PM

PLOT NAME: 030115_mq_sp1

STH 100 & CTH NN **ALL ITEMS ARE CATEGORY 1500**

LOOP DETECTOR SCHEDULE

LOOP NUMBER	HOMERUN PB	STATION	LOCATION	SIZE (FT)X(FT)	NO. OF TURNS	655.0800 LOOP DETECTOR WIRE LF
11	PB10	EXIS	STING	6X20	2	154
12	PB8	EXIS	STING	6X30	2	198
31	PB16	EXIS	STING	6X20	2	142
32	PB6	EXIS	STING	6X20	2	162
51	PB24	EXIS	STING	6X20	3	250
52	PB24	EXIS	STING	6X30	3	316
53	PB24	EXIS	STING	6X20	3	184
54	PB1	EXIS	STING	6X30	3	268
71	PB18	EXIS	STING	6X20	3	220
72	PB3	EXIS	STING	6X30	3	292
					_	
	*** TOTALS				-	2186

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CAST BASES AND POLES

	657.0255 TRANSFORMER		657.0714 LUMINA IRE A RMS
	BASES BREAKAWAY	657.0310	TRUSS TYPE
	11 1/2-INCH	POLES	4-INCH
SIGNAL	BOLT CIRCLE	TYPE3	CLAMP 15-FT
BASE NO.	EACH	EACH	EACH
SB13	1	1	1
SB13 SB14	1 1	1 1	1 1
	1 1 1	1 1 1	1 1 1
SB14	1 1 1	1 1 1	1 1 1

HWY: STH 100

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE FROM TO LF CB1 SB13 (V1) 186 CB1 SB10 (V2) 265 CB1 SB15 (V3) 146 CB1 SB14 (V4) 332 *** TOTAL 929

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	ТО	SPV.0090.3002 INSTALL CAT-5E CABLE LF
CB1	SB13 (V1)	186
CB1	SB10 (V2)	265
CB1	SB15 (V3)	146
CB1	SB13 (R1)	131
SB13 (R1)	SB14 (V4)	239
	*** TOTAL	967

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS STH 100 & CTH NN

> SPV.0105.3075 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS LS

LOCATION STH 100 (S. 108TH STREET) & CTH NN (W. OKLAHOMA AVENUE) 1 TOTAL

REMOVE LOOP DETECTOR WIRE STH 100 & CTH NN

LOCATION	SPV.0105.3160 REMOVE LOOP DETECTOR WIRE LS
STH 100 (S. 108TH STREET) & CTH NN (W. OKLAHOMA AVENUE)	1
TOTAL	1

PAGE 2 OF 2

PROJECT NO: 1060-33-97

COUNTY: MILWAUKEE

PLOT DATE: 2/25/2014 3:17:29 PM

MISCELLANEOUS QUANTITIES

PLOT BY : MSCCEJ

SHEET:

PLOT NAME: 030115_mq_sp2

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION	
1189	LF	CAMERA POWER CABLE	
1291	LF	CAT-5E CABLE	
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS	

CONDUIT

652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40

		2-INCH
FROM	ТО	LF
PB4	SB12	9
PB8	SB13	17
PB13	SB14	9
PB17	SB15	4
	*** TOTALS	39

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL CONDUIT INTO EXISTING ITEM

STRUCTURE NO.	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
PB4	(4)
PB8	1
PB13	1
PB17	1
*** TOTAL —	4

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE



STH 100 & W. NATIONAL AVENUE ALL ITEMS ARE CATEGORY 1500

CONCRETE BASES

BASE NO.	** NORTHING	** EASTING	654.0102 CONCRETE BASES TYPE 2 EACH
SB12	283082.5	570442.5	1
SB13	283027.3	570531.9	1
SB14	282846.8	570427.5	Ti-
SB15	282899.7	570339.4	1
		*** TOTAL	4

- * FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
- ** COORDINATES REFERENCED TO MILWAUKEE COUNTY COORDINATE SYSTEM
- *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS

		10 AWG
FROM	TO	LF
CB1	SB12	209
SB12	SB13	274
SB13	SB14	317
SB14	SB15	231
SB15	CB1	125
	*** TOTAL -	1156

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAGE 1 OF 2

PROJECT NO: 1060-33-97

HWY: STH 100

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET:

FILE NAME ; W:\Cadd\Final\10603397_IC2\Roads\cds\030125_mq_sp.ppt

PLOT DATE: 2/25/2014 3:18:59 PM

PLOT BY : MSCCEJ

PLOT NAME: 030125_mq_sp1

3 |

STH 100 & W. NATIONAL AVENUE ALL ITEMS ARE CATEGORY 1500

CAST BASES AND POLES

	657.0255		657.0714
	TRANSFORMER		LUMINA IRE A RMS
	BASES BREAKAWAY	657.0310	TRUSS TYPE
	11 1/2-INCH	POLES	4-INCH
SIGNAL	BOLT CIRCLE	TYPE3	CLAMP 15-FT
BASENO.	EACH	EACH	EACH
SB12	1	1	1
SB13	1	1	1
SB14	1	1	1
SB15	1	1	1
*** TOTALS	4	4	4

^{***} ADDITIONAL QUANTITIES SHOWN ELS

LOOP DETECTOR SCHEDULE

						655.0800 LOOP DETECTOR
LOOP	HOMERUN			SIZE	NO. OF	WIRE
NUMBER	R PB	STATION	LOCATION	(FT)X(FT)	TURNS	LF
11	PB13	EXIS	STING	6X20	3	208
12	PB12	EXIS	STING	6X30	3	280
31	PB8	EXIS	STING	6X20	3	220
32	PB7	EXIS	STING	6X30	3	340
51	PB4	EXIS	STING	6X20	3	196
52	PB3	EXIS	STING	6X30	3	280
71	PB17	EXIS	STING	6X20	2	154
72	PB17	EXIS	STING	6X30	2	230
					_	
	*** TOTALS				·-	1908

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

		SPV.0090.3001 INSTALL CAMERA POWER CABLE	
 FROM	TO	LF	
CB1	SB14 (V1)	337	
CB1	SB12 (V2)	264	
CB1	SB13 (V3)	408	
CB1	SB15 (V4)	180	
	*** TOTAL	1189	

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

	FROM	TO	SPV.0090.3002 INSTALL CAT-5E CABLE LF
•	004	OD45 (D4)	105
	CB1	SB15 (R1)	125
	SB15 (R1)	SB14 (V1)	286
	CB1	SB12 (V2)	264
-	CB1	SB3 (R2)	158
	SB3 (R2)	SB13 (V3)	278
	CB1	SB14 (V4)	180
		*** TOTAL	1291

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS STH 100 & W. NATIONAL AVENUE

LOCATION	SPV.0105.3077 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS LS
STH 100 (S. 108TH STREET) & W. NATIONAL AVENUE	1
TOTAL	1

REMOVE LOOP DETECTOR WIRE STH 100 & W. NATIONAL AVENUE

	SPV.0105.3161 REMOVE LOOP DETECTOR WIRE
LOCATION	LS LS
STH 100 (S. 108TH STREET) & W. NATIONAL AVENUE	1
TOTAL	1

PAGE 2 OF 2

PROJECT NO: 1060-33-97 HWY: STH 100 COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: I

3

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
890	LF	CAMERA POWER CABLE
890	LF	CAT-5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS

LOOP DETECTOR SCHEDULE

LOOP NUMBER	HOMERUN PB	STATION	LOCATION	SIZE (FT)X(FT)	NO. OF TURNS	655.0800 PETECTOR WIRE LF
11	PB23	EXISTING		6X20	2	154
12	PB22	EXISTING		6X20	2	166
51	PB10	EXI	STING	6X20	3	220
52	PB9	EXI	STING	6X25	3	286
71	PB5	EXISTING		6X20	2	138
72	PB4	EXI	STING	6X20	2	138
	*** TOTALS					1102

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	то	INSTALL CAMERA POWER CABLE LF
CB1	SB11 (V1)	149
CB1	SB5 (V2)	297
CB1	SB8 (V3)	296
CB1	SB2 (V4)	148
	*** TOTAL	890

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

		SPV.0090.3002 INSTALL CAT-5E CABLE
FROM	TO	LF
CB1	SB11 (V1)	149
CB1	SB5 (V2)	297
CB1	SB8 (V3)	296
CB1	SB2 (V4)	148
	*** TOTAL	890

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STH 100 & W. CLEVELAND AVENUE ALL ITEMS ARE CATEGORY 1500

REMOVE VIDEO DETECTION EQUIPMENT STH 100 & W. CLEVELAND A VENUE

	SPV.0105.3040 REMOVE VIDEO DETECTION EQUIPMENT
LOCATION	LS
STH 100 (S. 108TH STREET) & W. CLEVELAND AVENUE	1
TOTAL	1

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS STH 100 & W. CLEVELAND AVENUE

LOCATION	SPV.0105.3076 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS LS
STH 100 (S. 108TH STREET) & W. CLEVELAND AVENUE	1
TOTAL	1

REMOVE LOOP DETECTOR WIRE STH 100 & W. CLEVELAND AVENUE

LOCATION	SPV.0105.3162 REWOVE LOOP DETECTOR WIRE LS
STH 100 (S. 108TH STREET) & W. CLEVELAND AVENUE	à
TOTAL	

PAGE 1 OF 1

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030135_mq_sp.ppt

PROJECT NO: 1060-33-97

HWY: STH 100

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET:

EFT.

PLOT BY : MSCCEJ PLOT NAME : 030135_mq_sp1

PLOT DATE: 2/25/2014 2:51:30 PM

0135_mq_sp1 PLOT SCALE : 1:1

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION		
1071	LF	CAMERA POWER CABLE		
1195	LF	CAT-5E CABLE		
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS	, A	

CONDUIT

652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40

FDOM	70	2-INCH		
FROM	ТО	LF		
PB2	SB13	14		
PB8	SB14	6		
PB14	SB15	15		
PB18	SB16	14		
	*** TOTALS —	49		

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL CONDUIT INTO EXISTING ITEM



	652.0700.S INSTALL CONDUIT	
STRUCTURE NO.	INTO EXISTING ITEM EACH	
PB2	1	
PB8	1	
PB14	1	
PB18	1	
*** TOTAL -	4	

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STH 100 & W. LINCOLN AVENUE **ALL ITEMS ARE CATEGORY 1500**

CONCRETE BASES

BASE NO.	** NORTHING	** EASTING	654.0102 CONCRETE BASES TYPE 2 EACH
SB13	286478.8	570361.1	1
SB14	286570.6	570470.6	1
SB15	286465.7	570560.8	1
SB16	286373.5	570452.3	1
		*** TOTAL	4

- * FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
- ** COORDINATES REFERENCED TO MILWAUKEE COUNTY COORDINATE SYSTEM
- *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

		TOAWG	
FROM	TO	LF	
155.1	2262	42.5	
CB1	SB13	120	
SB13	SB14	234	
SB14	SB15	251	
SB15	SB16	241	
SB16	CB1	128	
	*** TOTAL	974	-

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAGE 1 OF 2

PROJECT NO: 1060-33-97

HWY: STH 100

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

LOOP DETECTOR SCHEDULE

	LOOP NUMBER	HOMERUN PB	STATION	LOCATION	SIZE (FT)X(FT)	NO. OF TURNS	655.0800 LOOP DETECTOR WIRE LF
_							
	11	PB19	EXIS	STING	6X20	2	138
	12	PB18	EXIS	STING	6X30	2	194
	31	PB14	EXISTING		6X20	3	220
_	32	PB13	EXIS	STING	6X30	3	310
	51	PB8	EXIS	STING	6X20	3	250
	52	PB7	EXIS	STING	6X30	3	304
_	71	PB3	EXIS	STING	6X20	2	142
	72	PB2	EXISTING		6X30	2	182
		*** TOTALS				-	1740

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CAST BASES AND POLES

	657.0255		657.0714
	TRANSFORMER		LUMINA IRE A RMS
	BASES BREAKAWAY	657.0310	TRUSS TYPE
	11 1/2-INCH	POLES	4-INCH
SIGNAL	BOLT CIRCLE	TYPE3	CLAMP 15-FT
BASE NO.	EACH	EACH	EACH
SB13	1	1	1
SB14	1	1	1
SB15	1	1	1
SB16	1	1	1
*** TOTALS	4	4	4

^{***} ADDITIONAL QUANTITIES SHOWN ELS

STH 100 & W. LINCOLN AVENUE ALL ITEMS ARE CATEGORY 1500

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	ТО	SPV.0090.3001 INSTALL CAMERA POWER CABLE LF
	0510 (111)	405
CB1	SB16 (V1)	185
CB1	SB14 (V2)	329
CB1	SB15 (V3)	382
CB1	SB13 (V4)	175
	*** TOTAL	1071

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	ТО	SPV.0090.3002 INSTALL CAT-5E CABLE LF
CB1	SB16 (V1)	185
CB1	SB13 (R1)	120
SB13 (R1)	SB14 (V2)	289
CB1	SB16 (R2)	130
SB16 (R1)	SB15 (V3)	296
CB1	SB13 (V4)	175
	*** TOTAL	1195
*** ^ DDITIONA		OWN ELSEWHERE

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS STH 100 & W. LINCOLN AVENUE

LOCATION	SPV.0105.3078 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS LS
STH 100 (S. 108TH STREET) & W. LINCOLN AVENUE	1
TOTAL	1

REMOVE LOOP DETECTOR WIRE STH 100 & W. LINCOLN AVENUE

LOCATION	SPV.0105.3163 REMOVE LOOP DETECTOR WIRE LS
STH 100 (S. 108TH STREET) & W. LINCOLN AVENUE	1
TOTAL	1

PAGE 2 OF 2

PROJECT NO: 1060-33-97 HWY: STH 100 COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030145_mq_sp.ppt

PLOT DATE: 2/25/2014 3:20:19 PM

PLOT BY : MSCCEJ

PLOT NAME: 030145_mq_sp2

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY	REMOVE VIDEO DETECTION EQUIPMENT
	STH 100 & LAPHAM STREET

QUANTITY	UNIT	DESCRIPTION			
					SPV.0105.3010
900	LF	CAMERA POWER CABLE			REMOVE VIDEO
900	LF	CAT 5E CABLE			DETECTION EQUIPMENT
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS	_	LOCATION	LS
			_	STH 100 (S. 108TH STREET) & W. LAPHAM STREET	1
				TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	ТО	SPV.0090.3001 INSTALL CAMERA POWER CABLE LF	
CB1	SB7 (V1)	265	
CB1	SB2 (V2)	208	
CB1	SB4 (V3)	308	
CB1	SB11 (V4)	119	
	*** TOTAL	900	
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE			

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

		INSTALL CAT 5E CABLE		
FROM	TO	LF		
CB1	SB7 (V1)	265		
CB1	SB2 (V2)	208		
CB1	SB4 (V3)	308		
CB1	SB11 (V4)	119		
	_			
	*** TOTAL	900		
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE				

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS STH 100 & W. LAPHAM STREET

SPV.0105.3079
TRANSPORTING AND INSTALLING
STATE FURNISHED ADAPTABLE
TRAFFIC SIGNAL CAMERAS

LOCATION
LS

STH 100 (S. 108TH STREET) & W. LAPHAM STREET

1

TOTAL
1

ADDITIONAL GOVERNMENT DESCRIPTION

SPV.0090.3002

PAGE 1 OF 1

PROJECT NO: 1060-33-97 HWY: STH 100 COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: **E**

FILE NAME : W:\Cadd\Final\10603397_IC2\Roads\cds\030155_mq_sp.ppt

PLOT DATE: 1/31/2014 4:11:54 AM

PLOT BY : MSCCEJ

PLOT NAME: 030155_mq_sp1

SUMMARY OF S	STATE FURNISHED MATE	-RIA I.S FOR INFORMATION	ONLY

QUANTITY	UNIT	DESCRIPTION	
917	LF	CAMERA POWER CABLE	
917	LF	CAT 5E CABLE	
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS	

REMOVE VIDEO DETECTION EQUIPMENT STH 100 & THEODORE TRECKER WAY

		SPV.0105.3011
		REMOVE VIDEO
		DETECTION EQUIPMENT
_	LOCATION	LS
•	STH 100 (S. 108TH STREET) & W. THEODORE TRECKER WAY	1
	TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE FROM TO LF CB1 SB4 (V1) 295 SB9 (V2) 182 CB1 CB1 SB2 (V3) 172 CB1 SB7 (V4) 268 *** TOTAL 917 *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	ТО	INSTALL CAT 5E CABLE LF	
CB1	SB4 (V1)	295	
CB1	SB9 (V2)	182	
CB1	SB2 (V3)	172	
CB1	SB7 (V4)	268	
	*** TOTAL	917	
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE			

SPV.0090.3002

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS STH 100 & W. THEODORE TRECKER WAY

SPV.0105.3080
TRANSPORTING AND INSTALLING
STATE FURNISHED ADAPTABLE
TRAFFIC SIGNAL CAMERAS
LOCATION
LS

STH 100 (S. 108TH STREET) & W. THEODORE TRECKER WAY

1

TOTAL
1

PAGE 1 OF 1

PROJECT NO: 1060-33-97 HWY: STH 100 COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: E

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

UNIT	DESCRIPTION
LF	CAMERA POWER CABLE
LF	CAT-5E CABLE
LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS
	LF LF



REMOVE VIDEO DETECTION EQUIPMENT IH 94 EB OFF-RAMP & STH 100

LOGATION	REMOVE VIDEO DETECTION EQUIPMENT
IH 94 EB OFF-RAMP & STH 100 (S. 108TH STREET)	LS 1
TOTAL	-1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	то	SPV.0090.3001 INSTALL CAMERA POWER CABLE LF
CB1	SB7 (V1)	299
CB1	SB2 (V2)	194
CB1	SB4 (V3)	363
	*** TOTAL	856

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

		INSTALL CAT-5E CABLE
FROM	TO	LF
CB1	SB7 (V1)	299
CB1	SB2 (V2)	194
CB1	SB7 (R1)	214
SB7 (R1)	SB4 (V3)	222
	*** TOTAL	929

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS IH 94 EB OFF-RAMP & STH 100

		SPV.0105.3081
		TRANSPORTING AND INSTALLING
		STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS
-	LOCATION	LS
	IH 94 EB OFF-RAMP & STH 100 (S. 108TH STREET)	1
	TOTAL	1

PAGE 1 OF 1

PROJECT NO: 1060-33-97

HWY: IH 94

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET:

FT.

 $FILE \ NAME: W: \ Ladd \ Final \ 10603397 \ LC2 \ Roads \ Lcds \ 1030175 \ mq_sp.ppt$

PLOT DATE: 1/31/2014 4:12:36 AM

PLOT BY : MSCCEJ

PLOT NAME: 030175_mq_sp1

QUANTITY UNIT DESCRIPTION

1040 LF CAMERA POWER CABLE
1075 LF CAT-5E CABLE
1 LS ADAPTABLE TRAFFIC SIGNAL CAMERAS



REMOVE VIDEO DETECTION EQUIPMENT IH 94 WB RAMPS & STH 100

SPV.0105.3013
REMOVE VIDEO
DETECTION EQUIPMENT
LS

IH 94 WB RAMPS & STH 100 (N. MAYFAIR ROAD)

TOTAL

1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE FROM TO LF SB7 (V1) CB1 306 CB1 SB1 (V2) 277 CB1 SB5 (V3) 457 *** TOTAL 1040

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

		SPV.0090.3002 INSTALL CAT-5E CABLE
FROM	ТО	LF
CB1	SB7 (V1)	306
CB1	SB1 (V2)	277
CB1	SB3 (R1)	266
SB3 (R1)	SB5 (V3)	226
	*** TOTAL	1075

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS IH 94 WB RAMPS & STH 100

TRANSPORTING AND INSTALLING
STATE FURNISHED ADAPTABLE
TRAFFIC SIGNAL CAMERAS
LOCATION
LS

IH 94 WB RAMPS & STH 100 (N. MAYFAIR ROAD)
1
TOTAL
1

PAGE 1 OF 1

E

SHEET:

PROJECT NO: 1060-33-97

HWY: IH 94

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030185_mq_sp.ppt

PLOT DATE: 1/31/2014 4:12:58 AM

PLOT BY: MSCCEJ

PLOT NAME: 030185_mq_sp1

PLOT SCALE: 1:1

SPV.0105.3082

=	QUANTITY	UNIT	DESCRIPTION	-
	983	LF	CAMERA POWER CABLE	
	891	LF	CAT-5E CABLE	
	1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS	



REMOVE VIDEO DETECTION EQUIPMENT USH 18 & CTH JJ

LOCATION	SPV.0105.3014 REMOVE VIDEO DETECTION EQUIPMENT LS
USH 18 (W. BLUEMOUND ROAD/E. MORELAND BOULEVARD) & CTH JJ (BLUEMOUND ROAD)	Ť
TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE TO FROM LF SB10 (V1) CB1 210 CB1 SB3 (V2) 358 CB1 SB5 (V3) 415 *** TOTAL 983

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	ТО	SPV.0090.3002 INSTALL CAT-5E CABLE LF
FROIVI	10	LF
CB1	SB10 (V1)	210
CB1	SB2 (R1)	176
SB2 (R1)	SB3 (V2)	224
SB2 (R1)	SB5 (V3)	281
	*** TOTAL	891

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS USH 18 & CTH JJ

LOCATION	SPV.0105.3083 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS LS
USH 18 (W. BLUEMOUND ROAD/E. MORELAND BOULEVARD) & CTH JJ (BLUEMOUND ROAD)	1
TOTAL	1

PAGE 1 OF 1

E

PROJECT NO: 1060-33-97

HWY: USH 18

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET:

FILE NAME : W:\Cadd\Final\10603397_IC2\Roads\cds\030215_mq_sp.ppt

PLOT DATE: 1/31/2014 4:13:19 AM

PLOT BY : MSCCEJ

PLOT NAME : 030215_mq_sp1 PLOT SCALE : 1:1

QUANTITY	UNIT	DESCRIPTION
1547	LF	CAMERA POWER CABLE
1827	LF	CAT-5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS



SPV.0090.3002

REMOVE VIDEO DETECTION EQUIPMENT USH 18 & CTH Y

	SPV.0105.3015 REMOVE VIDEO DETECTION EQUIPMENT
LOCATION	LS
USH 18 (W. BLUEMOUND ROAD) & CTH Y (N. BARKER ROAD)	1
TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE FROM TO LF SB17 (V1) CB₁ 349 CB₁ SB5 (V2) 433 CB1 SB11 (V3) 605 CB1 SB22 (V4) 160 *** TOTAL 1547

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

INSTALL CAT-5E CABLE FROM TO LF CB1 SB19 (R1) 172 SB17 (V1) 259 SB19 (R1) SB4 (R2) 289 CB1 CB1 SB4 (R3) 289 SB4 (R2) SB5 (V2) 210 SB12 (R4) 297 SB4 (R3) SB11 (V3) 151 SB12 (R4) SB22 (V4) 160 CB1 *** TOTAL 1827

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS USH 18 & CTH Y

SPV.0105.3084
TRANSPORTING AND INSTALLING
STATE FURNISHED ADAPTABLE
TRAFFIC SIGNAL CAMERAS
LOCATION
LS

USH 18 (W. BLUEMOUND ROAD) & CTH Y (N. BARKER ROAD)
1

TOTAL
1

PAGE 1 OF 1

PROJECT NO: 1060-33-97

HWY: USH 18

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET:

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030225_mq_sp.ppt

PLOT DATE: 1/31/2014 4:13:40 AM

PLOT BY : MSCCEJ

PLOT NAME: 030225_mq_sp1

PLOT SCALE: 1:1

PAGE TOF

E

30225 mg sp1 PLOT SCA

USH 18 & JENNIFER DRIVE ALL ITEMS ARE CATEGORY 1500

CONCRETE BASES

BASE NO.	** NORTHING	** EASTING	654.0102 CONCRETE BASES TY PE 2 EACH
SB13	170189.4	701637.5	1
SB14	169998.8	701565.0	1
		*** TOTAL	2

- * FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
- ** COORDINATES REFERENCED TO WAUKESHA COUNTY COORDINATE SYSTEM
- *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONDUIT

UNIT

EACH

LF

LF

LS

QUANTITY

1070

1158

1

652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

TRAFFIC SIGNAL CONTROLLER AND CABINET

ADAPTABLE TRAFFIC SIGNAL CAMERAS

DESCRIPTION

CAT-5E CABLE

CAMERA POWER CABLE

		2-INCH
FROM	ТО	LF
PB7	SB13	5
PB14	SB14	6
	*** TOTALS	11

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

655.0230 CABLE TRAFFIC SIGNAL

		5-14 AWG
FROM	ТО	LF
SB3	HEAD 5	19
SB3	HEAD 9	19
SB9	HEAD 2	19
SB9	HEAD 12	19
	*** TOTALS	76

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL CONDUIT INTO EXISTING ITEM

STRUCTURE NO.	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH	
PB7	1	
PB14	1	
*** TOTAL	2	

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE



ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS

		10 AVVG
FROM	ТО	LF
CB1	SB13	347
SB13	SB14	395
SB14	CB1	65
	*** TOTAL	807

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAGE 1 OF 3

E

SHEET:

PROJECT NO: 1060-33-97

HWY: USH 18

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030235_mq_sp.ppt

PLOT DATE: 1/31/2014 4:14:02 AM

PLOT BY : MSCCEJ

PLOT NAME: 030235_mq_sp1

USH 18 & JENNIFER DRIVE ALL ITEMS ARE CATEGORY 1500

CAST BASES AND POLES

	657.0255		657.0714
	TRANSFORMER		LUMINAIRE ARMS
	BASES BREAKAWAY	657.0310	TRUSS TYPE
	11 1/2-INCH	POLES	4-INCH
SIGNAL	BOLT CIRCLE	TYPE3	CLAMP 15-FT
BASE NO.	EACH	EACH	EACH
SB3	1	1	1
SB9	1	1	1
SB13	1	1	1
SB14	1	1	1
*** TOTALS	4	4	4

*** ADDITIONAL QUANTITIES SHOWN ELS

TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES

SIGNAL HEAD NO.	SIGNAL BASENO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH
2	SB9	1	1	1	1	1			
5	SB3	1	1	•	·	•	1	1	1
9	SB3	1	1	1	1	1			
12	SB9	1	1				1	1	1
	*** TOTALS	4	4	2	2	2	2	2	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SIGNAL MOUNTING HARDWARE USH 18 & JENNIFER DRIVE

> 658.5069.3001 SIGNAL MOUNTING HARDWARE

LOCATION LS USH 18 (W. BLUEMOUND ROAD) & JENNIFER DRIVE

TOTAL

PAGE 2 OF 3

SHEET:

HWY: USH 18 COUNTY: WAUKESHA MISCELLANEOUS QUANTITIES PROJECT NO: 1060-33-97 FILE NAME : W:\Cadd\Final\10603397_IC2\Roads\cds\030235_mq_sp.ppt

PLOT DATE: 1/31/2014 4:14:02 AM

PLOT BY : MSCCEJ

PLOT NAME: 030235_mq_sp2

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA

	POWER CABLE
TO	<u>LF</u>
SB3 (V1)	214
SB9 (V2)	334
SB14 (V3)	120
SB13 (V4)	402
_	
*** TOTAL	1070
	SB3 (V1) SB9 (V2) SB14 (V3) SB13 (V4)

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3002 INSTALL CAT-5E

		CABLE
FROM	TO	LF
•		
CB1	SB3 (V1)	214
CB1	SB10 (R1)	224
SB10 (R1)	SB9 (V2)	162
CB1	SB14 (V3)	120
CB1	SB3 (R2)	159
SB3 (R2)	SB13 (V4)	279
	*** TOTAL	1158

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS USH 18 & JENNIFER DRIVE

> SPV.0105.3085 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS

USH 18 & JENNIFER DRIVE

ALL ITEMS ARE CATEGORY 1500

LOCATION LS USH 18 (W. BLUEMOUND ROAD) & JENNIFER DRIVE 1 TOTAL

REMOVE TRAFFIC SIGNALS USH 18 & JENNIFER DRIVE

> SPV.0105.3045 REMOVE TRAFFIC SIGNALS

LOCATION	LS
USH 18 (W. BLUEMOUND ROAD) & JENNIFER DRIVE	1
TOTAL	1

INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET USH 18 & JENNIFER DRIVE

SPV.0105.3145 INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET LOCATION LS USH 18 (W. BLUEMOUND ROAD) & JENNIFER DRIVE 1 TOTAL

PAGE 3 OF 3

PROJECT NO: 1060-33-97

HWY: USH 18

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

PLOT BY : MSCCEJ

PLOT NAME: 030235_mq_sp3

SHEET:

FILE NAME : W:\Cadd\Final\10603397_IC2\Roads\cds\030235_mq_sp.ppt

PLOT DATE: 1/31/2014 4:14:02 AM

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1358	LF	CAMERA POWER CABLE
1494	LF	CAT-5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS



REMOVE VIDEO DETECTION EQUIPMENT USH 18 & JANACEK ROAD

LOCATION	SPV.0105.3016 REMOVE VIDEO DETECTION EQUIPMENT LS
USH 18 (W. BLUEMOUND ROAD) & JANACEK ROAD	1
TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE TO LF SB20 (V1) 135 SB10 (V2) 500

366

357

1358

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SB14 (V3)

SB4 (V4)

*** TOTAL

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3002 INSTALL CAT-5E CABLE

		CADLL
FROM	ТО	LF
CB1	SB20 (V1)	135
CB1	SB7 (R1)	319
SB6 (R1)	SB10 (V2)	237
CB1	SB17 (R2)	139
SB17 (R2)	SB14 (V3)	269
CB1	SB6 (R3)	178
SB6 (R3)	SB4 (V4)	217
	*** TOTAL	1494

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS USH 18 & JANACEK ROAD

	SPV.0105.3086 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS
LOCATION	LS
USH 18 (W. BLUEMOUND ROAD) & JANACEK ROAD	1
TOTAL	1

PAGE 1 OF 1

PROJECT NO: 1060-33-97

FROM

CB1

CB1

CB1

CB1

HWY: USH 18

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

PLOT BY: MSCCEJ

SHEET:

E

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030245_mq_sp.ppt

PLOT DATE: 1/31/2014 4:14:23 AM

PLOT NAME: 030245_mq_sp1

_	QUANTITY	UNIT	DESCRIPTION
	1407	LF	CAMERA POWER CABLE
	1523	LF	CAT-5E CABLE
	1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS
	1523 1		CAT-5E CABLE



REMOVE VIDEO DETECTION EQUIPMENT USH 18 & N. BROOKFIELD ROAD

LOCATION	SPV.0105.3017 REMOVE VIDEO DETECTION EQUIPMENT LS
USH 18 (W. BLUEWOUND ROAD) & N. BROOKFIELD ROAD	1
TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090,3001 INSTALL CAMERA

FROM	то	POWER CABLE LF
CB1	SB20 (V1)	195
CB1	SB10 (V2)	504
CB1	SB15 (V3)	413
CB1	SB5 (V4)	295
	*** TOTAL	1407

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3002 INSTALL CAT-5E

		CABLE
FROM	TO	LF
		and a
CB1	SB20 (V1)	195
CB1	SB4 (R1)	173
SB4 (R1)	SB10 (R2)	255
SB10 (R2)	SB10 (V2)	104
CB1	SB17 (R3)	209
SB17 (R3)	SB15 (V3)	292
CB1	SB5 (V4)	295
	*** TOTAL	1523

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS USH 18 & N. BROOKFIELD ROAD

LOCATION	SPV.0105.3087 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS LS
USH 18 (W. BLUEMOUND ROAD) & N. BROOKFIELD ROAD	1
TOTAL	1

PAGE 1 OF 1

E

PROJECT NO: 1060-33-97

HWY: USH 18

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

PLOT BY : MSCCEJ

SHEET:

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030255_mq_sp.ppt

PLOT DATE: 1/31/2014 4:14:45 AM

PLOT NAME : 030255_mq_sp1

QUANTITY	UNIT	DESCRIPTION
1411	LF	CAMERA POWER CABLE
1342	LF	CAT-5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS



REMOVE VIDEO DETECTION EQUIPMENT USH 18 & WOELFEL ROAD

	SPV.0105.3018 REMOVE VIDEO DETECTION EQUIPMENT
LOCATION	LS
USH 18 (W. BLUEMOUND ROAD) & N. CORPORATE DRIVE / WOELFEL ROAD	1
TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	ТО	INSTALL CAMERA POWER CABLE LF
CB1	SB15 (V1)	323
CB1	SB6 (V2)	339
CB1	SB10 (V3)	561
CB1	SB1 (V4)	188
	*** TOTAL	1411

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

		SPV.0090.3002 INSTALL CAT-5E CABLE
FROM	TO	LF
CB1	SB15 (R2)	228
SB15 (R2)	SB15 (V1)	99
CB1	SB7 (R1)	309
SB7 (R1)	SB6 (V2)	220
SB7 (R1)	SB10 (V3)	298
CB1	SB1 (V4)	188
	*** TOTAL	1342

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS USH 18 & WOELFEL ROAD

LOCATION	SPV.0105.3088 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS LS
USH 18 (W. BLUEMOUND ROAD) & N. CORPORATE DRIVE / WOELFEL ROAD	
TOTAL	1

PAGE 1 OF 1

PROJECT NO: 1060-33-97

HWY: USH 18

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

PLOT BY: MSCCEJ

PLOT NAME : 030265_mq_sp1

SHEET:

 $FILE \ NAME: W: \ Cadd \ Final \ 10603397 \ [C2\ Roads \ Cds \ 030265 \ mq_sp.ppt]$

PLOT DATE: 1/31/2014 4:15:06 AM

QUANTITY	UNIT	DESCRIPTION
1701	LF	CAMERA POWER CABLE
2169	LF	CAT-5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS



REMOVE VIDEO DETECTION EQUIPMENT USH 18 & N. CALHOUN ROAD

	SPV.0105.3019
	REMOVE VIDEO
	DETECTION EQUIPMENT
LOCATION	LS
USH 18 (W. BLUEMOUND ROAD) & N. CALHOUN ROAD	1
TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE FROM TO LF CB1 SB3 (V1) 238 SB12 (V2) 688 CB1 CB1 SB15 (V3) 507 CB1 SB4 (V4) 268 *** TOTAL 1701

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3002 INSTALL CAT-5E CABLE

FROM	то	LF
CB1	SB3 (V1)	238
CB1	SB7 (R1)	304
SB7 (R1)	SB13 (R2)	330
SB13 (R2)	SB12 (V2)	210
CB1	SB19 (R3)	256
SB19 (R3)	SB17 (R4)	239
SB17 (R4)	SB15 (V3)	324
CB1	SB4 (V4)	268
	*** TOTAL	2169

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS USH 18 & CALHOUN ROAD

SPV.0105.3089
TRANSPORTING AND INSTALLING
STATE FURNISHED ADAPTABLE
TRAFFIC SIGNAL CAMERAS

LOCATION	LS
USH 18 (W. BLUEMOUND ROAD) & N. CALHOUN ROAD	1
TOTAL	.1

PAGE 1 OF 1

E

PROJECT NO: 1060-33-97

HWY: USH 18

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEE

SHEET:

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030275_mq_sp.ppt

PLOT DATE: 1/31/2014 4:15:27 AM

PLOT BY: MSCCEJ

PLOT NAME: 030275_mq_sp1

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

=	QUANTITY	UNIT	DESCRIPTION
	1396	LF	CAMERA POWER CABLE
	1614	LF	CAT-5E CABLE
	1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS
		LF	CAT-5E CABLE



SPV.0090.3002

REMOVE VIDEO DETECTION EQUIPMENT USH 18 & THOMAS LANE

	SPV.0105.3020 REMOVE VIDEO DETECTION EQUIPMENT
LOCATION	LS
USH 18 (W. BLUEMOUDN ROAD) & THOMAS LANE	11
TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	то	SPV.0090.3001 INSTALL CAMERA POWER CABLE LF
CB1	SB17 (V1)	176
CB1	SB9 (V2)	508
CB1	SB14 (V3)	394
CB1	SB5 (V4)	318
	*** TOTAL	1396

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	ТО	INSTALL CAT-5E CABLE LF
CB1	SB17 (V1)	176
CB1	SB3 (R1)	105
SB3 (R1)	SB8 (R2)	299
SB8 (R2)	SB8 (V2)	222
CB1	SB16 (R3)	179
SB16 (R3)	SB14 (V3)	315
CB1	SB5 (V4)	318
	*** TOTAL	1614

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS USH 18 & THOMAS LANE

1	LOCATION	SPV.0105.3090 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS LS	
	USH 18 (W. BLUEMOUND ROAD) & THOMAS LANE	À	
	TOTAL	1	

PAGE 1 OF 1

E

PROJECT NO: 1060-33-97

HWY: USH 18

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

PLOT BY: MSCCEJ

SHEET:

PLOT DATE: 1/31/2014 4:15:49 AM

PLOT NAME: 030285_mq_sp1 PLOT SCALE: 1:1

UNIT	DESCRIPTION
LF	CAMERA POWER CABLE
LF	CAT-5E CABLE
LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS
	LF LF



SPV.0090.3002

REMOVE VIDEO DETECTION EQUIPMENT USH 18 & N. EXECUTIVE DRIVE

	SPV.0105.3021 REMOVE VIDEO DETECTION EQUIPMENT
LOCATION	LS
USH 18 (W. BLUEMOUND ROAD) & N. EXECUTIVE DRIVE	1
TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE TO LF FROM SB3 (V1) CB1 372 CB1 SB10 (V2) 485 CB1 SB15 (V3) 188 CB1 SB6 (V4) 537 *** TOTAL 1582

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

INSTALL CAT-5E CABLE TO LF FROM CB1 SB3 (R1) 277 SB3 (R1) SB3 (V1) 99 CB1 SB11 (R2) 305 SB11 (R2) SB10 (V2) 191 SB15 (V3) 188 CB1 SB3 (R1) SB6 (V4) 318 *** TOTAL 1378

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS USH 18 & N. EXECUTIVE DRIVE

SPV.0105.3091
TRANSPORTING AND INSTALLING
STATE FURNISHED ADAPTABLE
TRAFFIC SIGNAL CAMERAS
LOCATION
LS

USH 18 (W. BLUEMOUND ROAD) & N. EXECUTIVE DRIVE

1

TOTAL
1

PAGE 1 OF 1

E

PROJECT NO: 1060-33-97

HWY: USH 18

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

PLOT NAME : 030295_mq_sp1

SHEET:

EET:

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030295_mq_sp.ppt

PLOT DATE: 1/31/2014 4:16:10 AM

PLOT BY: MSCCEJ

QUANTITY	UNIT	DESCRIPTION
1411	LF	CAMERA POWER CABLE
1485	LF	CAT-5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS



REMOVE VIDEO DETECTION EQUIPMENT USH 18 & MAIN STREET

	SPV.0105.3022 REMOVE VIDEO DETECTION EQUIPMENT
LOCATION	LS
USH 18 (W. BLUEMOUND ROAD) & MAIN STREET / BROOKFIELD SQUARE	4.
TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE

		POWER CABLE
FROM	TO	LF
CB1	SB8 (V1)	576
CB1	SB14 (V2)	185
CB1	SB4 (V3)	294
CB1	SB12 (V4)	419
	*** TOTAL	1474

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3002 INSTALL CAT-5E

		CABLE
FROM	ТО	LF
62.	2212121	202
CB1	SB12 (R1)	319
CB1	SB12 (R2)	319
SB12 (R2)	SB8 (R3)	228
SB12 (R3)	SB8 (V1)	99
CB1	SB14 (V2)	185
CB1	SB4 (V3)	294
SB12 (R1)	SB12 (V4)	104
	*** TOTAL	1548

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS USH 18 & MAIN STREET

LOCATION	SPV.0105.3092 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS LS
USH 18 (W. BLUEMOUND ROAD) & MAIN STREET / BROOKFIELD SQUARE	1
TOTAL	1

PAGE 1 OF 1

E

PROJECT NO: 1060-33-97

HWY: USH 18

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET:

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030305_mq_sp.ppt

PLOT DATE: 1/31/2014 4:16:31 AM

PLOT BY: MSCCEJ

PLOT NAME: 030305_mq_sp1

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

_	QUANTITY	UNIT	DESCRIPTION
	2022	LF	CAMERA POWER CABLE
	2222	LF	CAT-5E CABLE
	1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS



TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES

SIGNAL	SIGNAL	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH
HEAD NO.	BASE NO.	EACH	EACH
51	SB19	1	1
52	SB20	1	1
	*** TOTALS	2	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG

FROM	ТО	LF
SB19	HEAD 51	14
SB20	HEAD 52	14
	*** TOTALS	28

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CAST BASES AND POLES

	658.0500 PEDESTRIAN
SIGNAL BASE NO.	PUSH BUTTONS EACH
SB19	1
*** TOTALS	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAGE 1 OF 2

E

PROJECT NO: 1060-33-97

HWY: USH 18

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET:

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030315_mq_sp.ppt

PLOT DATE: 1/31/2014 4:16:53 AM

PLOT BY : MSCCEJ

PLOT NAME ; 030315_mq_sp1

ALL ITEMS ARE CATEGORY 1500

USH 18 & CTH O

SIGNAL MOUNTING HARDWARE USH 18 & CTH O

REMOVE VIDEO DETECTION EQUIPMENT USH 18 & CTH O

SPV.0105.3023 REMOVE VIDEO DETECTION EQUIPMENT

HARDWARE LOCATION LS USH 18 (W. BLUEMOUND ROAD) & CTH O (N. MOORLAND ROAD) / PILGRIM PARKWAY 1

TOTAL

HWY: USH 18

LOCATION LS USH 18 (W. BLUEMOUND ROAD) & CTH O (N. MOORLAND ROAD) / PILGRIM PARKWAY 1 TOTAL

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE FROM TO LF CB1 SB25 (V1) 207 SB12 (V2) CB1 558 CB1 SB21 (V3) 458 CB1 SB4 (V4) 218 CB1 SB16 (V5) 581 *** TOTAL 2022

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SPV.0090.3002 INSTALL CAT-5E

658.5069.3002

SIGNAL MOUNTING

CABLE FROM LF TO CB1 SB25 (V1) 207 CB1 SB6 (R1) 232 SB6 (R1) SB12 (R2) 282 SB12 (R2) SB12 (V2) 94 SB19 (R3) CB1 311 CB1 SB19 (R4) 311 SB19 (R3) SB21 (V3) 207 SB19 (R4) SB16 (R5) 286 SB4 (V4) CB1 218 SB16 (R5) SB16 (V5) 74 *** TOTAL 2222

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS USH 18 & CTH O

SPV.0105.3093 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS LOCATION LS USH 18 (W. BLUEMOUND ROAD) & CTH O (S. MOORLAND ROAD) / PILGRIM PARKWAY TOTAL

PLOT SCALE: 1:1

PAGE 2 OF 2

PROJECT NO: 1060-33-97

COUNTY: WAUKESHA

PLOT DATE: 1/31/2014 4:16:53 AM

MISCELLANEOUS QUANTITIES

PLOT BY : MSCCEJ

PLOT NAME: 030315_mq_sp2

PILGRIM PARKWAY & WATERTOWN PLANK ROAD

ALL ITEMS ARE CATEGORY 1500

SUMMARY OF	STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CONTROLLER (EPAC M52)
867	LF	CAMERA POWER CABLE
867	LF	CAT-5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS

PULL BOXES STEEL

			653.0140
			PULL BOXES
PULL			STEEL
BOX			24X42-INCH
NO.	** NORTHING	** EASTING	EACH
PB12	170368.9	718244.2	1
PB13	170351.6	718165.2	1
		_	
		*** TOTAL	2

- * FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
- ** COORDINATES REFERENCED TO WAUKESHA COUNTY COORDINATE SYSTEM
- *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONDUIT

		652.0225	
		CONDUIT	652.0615
		RIGID NONMETALLIC	CONDUIT
		SCHEDULE 40	SPECIAL
		2-INCH	3-INCH
FROM	TO	LF	LF
-			
PB9	PB12		38
PB11	PB13		63
PB3	SB10	6	
PB7	SB11	26	
PB12	SB12	5	
PB13	SB13	6	
	*** TOTALS	43	101

CONCRETE BASES

	BASE NO.	** NORTHING	** EASTING	654.0102 CONCRETE BASES TY PE 2 EACH
=				
	SB10	170437.0	718094.0	1
	SB11	170466.2	718171.5	1
	SB12	170372.3	718247.9	1
	SB13	170357.8	718164.9	1
			*** TOTAL	4

- * FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
- ** COORDINATES REFERENCED TO WAUKESHA COUNTY COORDINATE SYSTEM
- *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL CONDUIT INTO EXISTING ITEM

	652.0700.S
	INSTALL CONDUIT
STRUCTURE	INTO EXISTING ITEM
NO.	EACH
PB3	1
PB7	1
PB9	1
PB11	1
*** TOTAL	4

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

LF FROM TO CB1 SB10 113 SB10 SB11 142 SB11 SB12 197 SB12 CB1 201 CB1 SB13 105 *** TOTAL

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAGE 1 OF 2

FILE NAME : W:\Cadd\Final\10603397_IC2\Roads\cds\030325_mq_sp.ppt

PROJECT NO: 1060-33-97

HWY: PILGRIM PARKWAY

COUNTY: WAUKESHA

PLOT DATE: 1/31/2014 4:17:14 AM

MISCELLANEOUS QUANTITIES
PLOT BY: MSCCEJ

						I	& WATERTOWN PLANK ROAD RE CATEGORY 1500
CAST BASES AND POLES 657.0255 TRANSFORMER BASES BREAKAW 11 1/2-INCH			INSTALL STAT	E SUPPLIED VIDEO	O DETECTION CABLE SPV.0090.3001 INSTALL CAMERA		SPV.0090.3002 INSTALL CAT-5E
SIGNAL BOLT CIRCLE BASE NO. BOLT CIRCLE EACH SB10 1 SB11 1 SB12 1 SB13 1 *** TOTALS 4 *** ADDITIONAL QUANTITIES SHOWN	EACH EACH 1 1 1 1 1 1 1 1 1 1 4 4		FROM CB1 CB1 CB1 CB1 CB1	TO SB13 (V1) SB11 (V2) SB12 (V3) SB10 (V4) *** TOTAL	POWER CABLE LF 160 284 256 167 867 OWN ELSEWHERE	FROM TO CB1 SB13 (CB1 SB11 (CB1 SB12 (CB1 SB10 (**** TO **** ADDITIONAL QUANTIT	CABLE LF V1) 160 V2) 284 V3) 256 V4) 167
REMOVE, SALVAGE, AND INSTALL T	TRAFFIC SIGNAL CONTROLLER		TRAN	SPORTING AND IN	NSTALLING STATE FURNISHE	D ADAPTABLE TRAFFIC SIGNAL CAMERAS	
LOCATION CB1 *** TOTAL *** ADDITIONAL QUANTITIES SHOWN	SPV.0060.300 REMOVE, SALVAGE INSTALL TRAFFIC S CONTROLLER EACH 1 1	E, AND SIGNAL			WATERTOWN PLANK ROAD LOCATIO PILGRIM PARKWAY & WATE TOTAL	ON ERTOWN PLANK ROAD	SPV.0105.3094 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS LS 1
ADDITIONAL QUANTITIES SHOWN	LLOLVVIIENE						PAGE 2 OF 2
PROJECT NO: 1060-33-97	HWY: PILGRIM PARKWAY	COUNTY: WAUKESHA			NEOUS QUANTITIES TBY: MSCCEJ P	LOT NAME : 030325_mq_sp2	SHEET:

										CTHY&	DAVIDSON	ROAD	
										ALL ITEMS A	ARE CATEGO	RY 1500	
3	QUANTITY	SUMMARY UNIT	OF STATE FURNISHED MATERIALS - FOR INF DESCRIPTION	FORMATION ONLY		INSTALL STA	TE SUPPLIED VIDEO	SPV.0090 INSTALL C	0.3001 CAMERA	INSTALL ST	ATE SUPPLIED VIDEO	SPV.0090.3	3002 AT-5E
	1	EACH	TRAFFIC SIGNAL CONTROLLER (EPAC ME	52)		FROM	ТО	POWER (FROM	ТО	CABLE LF	<u> </u>
	730 730 1	LF LF LS	CAMERA POWER CABLE CAT-5E CABLE ADAPTABLE TRAFFIC SIGNAL CAMERAS	:		CB1 CB1 CB1 CB1	SB7 (V1) SB2 (V2) SB4 (V3) SB11 (V4)	244 134 199 153	4	CB1 CB1 CB1 CB1	SB7 (V1) SB2 (V2) SB4 (V3) SB11 (V4)	244 134 199 153	
						*** A DDITION/	AL QUANTITIES SH			*** A DDITION	IAL QUANTITIES SH		RF
	RE	MOVE, SALVAGE	E, AND INSTALL TRAFFIC SIGNAL CONTROLLE	SPV.0060.3001 REMOVE, SALVAGE, AND INSTALL TRAFFIC SIGNAL CONTROLLER				ING AND INSTA / IDSON ROAD	ALLING STATE FURNISH	TRANSF	SPV.0105.3095 ORTING AND INSTA	LLING	
	_		LOCATION CB1	EACH 1	=			LOO	CATION		FURNISHED ADAPT/ FIC SIGNAL CAMER LS		
			*** TOTAL	1	_		CTHY		OAD) & DAVIDSON ROA	۸D	1		
	***	ADDITIONAL QUA	ANTITIES SHOWN ELSEWHERE						OTAL		1		
													PAGE 1 OF 1
I PROJEC	CT NO: 1060-33-97		HWY: CTH Y	LOCUMEN	/: WAUKESHA	LAUGOE	LLANEOUS QU					SHEET:	l E

		CTH Y & WATER TOWER BOULEVARD
		ALL ITEMS ARE CATEGORY 1500
	SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY	CONCRETE BASES
3	QUANTITY UNIT DESCRIPTION 1 EACH TRAFFIC SIGNAL CONTROLLER (EPAC M52) 735 LF CAMERA POWER CABLE 735 LF CAT-5E CABLE 1 LS ADAPTABLE TRAFFIC SIGNAL CAMERAS	654.0102 CONCRETE BASES BASE NO. ** NORTHING ** EASTING EACH SB12 168039.8 700566.1 1 SB13 167971.6 700624.2 1
		*** TOTAL 2 * FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD ** COORDINATES REFERENCED TO WAUKESHA COUNTY COORDINATE SYSTEM *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE
	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH FROM TO LF PB2 SB12 9 PB8 SB13 5 *** TOTALS 14 *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE	ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG 655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG FROM TO LF CB1 SB12 97 CB1 SB13 221 **** TOTAL 318 **** ADDITIONAL QUANTITIES SHOWN ELSEWHERE
	INSTALL CONDUIT INTO EXISTING ITEM 652.0700.S INSTALL CONDUIT STRUCTURE INTO EXISTING ITEM NO. EACH PB2 1 PB8 1 *** TOTAL 2 *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE	CAST BASES AND POLES 657.0255

PROJECT NO: 1060-33-97

HWY: CTH Y

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

CTH Y & WATER TOWER BOULEVARD ALL ITEMS ARE CATEGORY 1500

REMOVE, SALVAGE, AND INSTALL TRAFFIC SIGNAL CONTROLLER

SPV.0060.3001 REMOVE, SALVAGE, AND INSTALL TRAFFIC SIGNAL CONTROLLER

 LOCATION
 EACH

 CB1
 1

 **** TOTAL
 1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE FROM TO LF CB1 SB8 (V1) 236 CB1 SB12 (V2) 143 CB1 SB13 (V3) 267 CB1 SB11 (V4) 89 *** TOTAL 735

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

INSTALL CAT-5E CABLE FROM TO LF CB1 SB8 (V1) 236 CB1 SB12 (V2) 143 CB1 SB13 (V3) 267 CB1 SB11 (V4) 89 *** TOTAL 735 *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS CTH Y & WATER TOWER BOULEVARD

SPV.0105.3096
TRANSPORTING AND INSTALLING
STATE FURNISHED ADAPTABLE
TRAFFIC SIGNAL CAMERAS

LOCATION LS

CTH Y (S. BARKER ROAD) & WATER TOWER BOULEVARD 1

TOTAL 1

PAGE 2 OF 2

PROJECT NO: 1060-33-97 HWY: CTH Y COUNTY: WAUKESHA MISCELLANEOUS QUANTITIES SHEET: E

FILE NAME : W:\Cadd\Final\10603397_IC2\Roads\cds\030425_mq_sp.ppt PLOT NAME : 030425_mq_sp2 PLOT SCALE : 1:1

SPV.0090.3002

3

CTHY & SWENSON DRIVE ALL ITEMS ARE CATEGORY 1500 CONCRETE BASES SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

UNIT	DESCRIPTION
EACH	TRAFFIC SIGNAL CONTROLLER (EPAC M52)
LF	CAMERA POWER CABLE
LF	CAT-5E CABLE
LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS
	EACH LF LF

654.0102 CONCRETE BASES BASE TYPE 2 NO. ** NORTHING ** EASTING **EACH** SB13 168673.3 700393.8 SB14 168677.8 700592.3 *** TOTAL 2

- * FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
- ** COORDINATES REFERENCED TO WAUKESHA COUNTY COORDINATE SYSTEM
- *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONDUIT

652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40

		2-INCH
FROM	TO	LF
PB3	SB13	10
PB10	SB14	15
	*** TOTALS	25

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

		TO AVVG
FROM	TO	LF
CB1	SB13	204
SB13	SB14	315
SB14	CB1	219
	*** TOTAL	738

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL CONDUIT INTO EXISTING ITEM

652.0700.S INSTALL CONDUIT STRUCTURE INTO EXISTING ITEM NO. EACH PB3 PB10 *** TOTAL

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

HWY: CTH Y

CAST BASES AND POLES

	657.0255		657.0714
	TRANSFORMER		LUMINA IRE A RMS
	BASES BREAKAWAY	657.0310	TRUSS TYPE
	11 1/2-INCH	POLES	4-INCH
SIGNAL	BOLT CIRCLE	TYPE3	CLAMP 15-FT
BASE NO.	EACH	EACH	EACH
SB13	1	1	1
SB14	1	1	1
*** TOTALS	2	2	2

^{***} ADDITIONAL QUANTITIES SHOWN ELS

PAGE 1 OF 2

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030435_mq_sp.ppt

PROJECT NO: 1060-33-97

COUNTY: WAUKESHA

PLOT DATE: 1/31/2014 4:18:18 AM

MISCELLANEOUS QUANTITIES

PLOT BY : MSCCEJ

PLOT NAME: 030435_mq_sp1

SHEET:

CTH Y & SWENSON DRIVE **ALL ITEMS ARE CATEGORY 1500**

REMOVE, SALVAGE, AND INSTALL TRAFFIC SIGNAL CONTROLLER

LOCATION

*** TOTAL

SPV.0060.3001 REMOVE, SALVAGE, AND INSTALL TRAFFIC SIGNAL CONTROLLER EACH

CB1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

		SPV.0090.3001
		INSTALL CAMERA
		POWER CABLE
FROM	ТО	LF
CB1	SB11 (V1)	131
CB1	SB7 (V2)	277
CB1	SB14 (V3)	274
CB1	SB13 (V4)	250
	*** TOTAL	932
*** ADDITIONA	L QUANTITIES SHO	OWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	ТО	SPV.0090.3002 INSTALL CAT-5E CABLE LF
CB1	SB11 (V1)	131
CB1	SB7 (V2)	277
CB1	SB14 (V3)	274
CB1	SB13 (V4)	250
	*** TOTAL	932

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS CTHY & SWENSON DRIVE

> SPV.0105.3097 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS

LOCATION LS CTHY (S. BARKER ROAD) & SWENSON DRIVE 1 TOTAL

PAGE 2 OF 2

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030435_mq_sp.ppt

PROJECT NO: 1060-33-97

HWY: CTH Y

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

PLOT BY : MSCCEJ

PLOT NAME: 030435_mq_sp2

SHEET:

PLOT SCALE : 1:1

PLOT DATE: 1/31/2014 4:18:18 AM

IH 94 WB OFF-RAMP & CTH Y **ALL ITEMS ARE CATEGORY 1500**

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION	
1	EACH	TRAFFIC SIGNAL CONTROLLER AND CABINET	
1528	LF	CAMERA POWER CABLE	
1312	LF	CAT-5E CABLE	
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS	

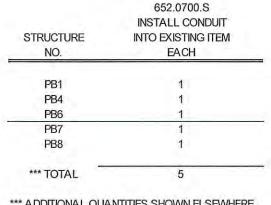
CONDUIT

652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40

FROM	ТО	2-INCH LF
200	12201	
PB4	SB16	14
PB7	SB17	38
PB6	SB18	35
PB8	SB19	10
PB1	SB20	17
	*** TOTALS	114

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL CONDUIT INTO EXISTING ITEM



*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE BASES

BASE NO.	** NORTHING	** EASTING	654.0102 CONCRETE BASES TYPE 2 EACH
SB16	169593.3	700469.7	1
SB17	169752.3	700556.7	1
SB18	169662.2	700570.3	11
SB19	169591.0	700621.6	1
SB20	169445.8	700499.9	1
		*** TOTAL	5

- * FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
- ** COORDINATES REFERENCED TO WAUKESHA COUNTY COORDINATE SYSTEM
- *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	ТО	LF	
3.5	10000		
CB1	SB16	197	
SB16	SB17	245	
SB17	SB18	178	
SB18	SB19	139	
SB19	SB20	316	
SB20	CB1	41	
	*** TOTAL	1116	_

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAGE 1 OF 2

PROJECT NO: 1060-33-97

SONAL

HWY: IH 94

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET:

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030445_mq_sp.ppt

PLOT DATE: 1/31/2014 4:18:40 AM

PLOT BY: MSCCEJ

PLOT NAME: 030445_mq_sp1

IH 94 WB OFF-RAMP & CTH Y **ALL ITEMS ARE CATEGORY 1500**

CAST BASES AND POLES

	657.0255		657.0714
	TRANSFORMER		LUMINA IRE A RMS
	BASES BREAKAWAY	657.0310	TRUSS TYPE
	11 1/2-INCH	POLES	4-INCH
SIGNAL	BOLT CIRCLE	TYPE3	CLAMP 15-FT
BASE NO.	EACH	EACH	EACH
SB16	1	1	1
SB17	1	1	1
SB18	1	1	1
SB19	1	1	1
SB20	1	1	1
*** TOTALS	5	5	5

HWY: IH 94

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SPV.0090.3001

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS IH 94 WB OFF-RAMP & CTH Y

> SPV.0105.3098 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS

LOCATION LS IH 94 WB OFF-RAMP & CTH Y (S. BARKER ROAD) 1 TOTAL

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

		INSTALL CAMERA POWER CABLE
FROM	TO	LF
CB1	SB20 (V1)	96
CB1	SB18 (V2)	361
CB1	SB19 (V3)	364
CB1	SB16 (V4)	252
CB1	SB17 (V5)	455
	*** TOTAL	1528

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

		CABLE
FROM	TO	LF
·		
CB1	SB20 (V1)	96
SB16 (R1)	SB18 (V2)	206
SB16 (R1)	SB19 (V3)	261
CB1	SB16 (V4)	252
CB1	SB16 (R1)	197
SB16 (R1)	SB17 (V5)	300
	*** TOTAL	1312

*** A DDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET IH 94 WB OFF-RAMP & CTH Y

	SPV.0105.3146
	INSTALL STATE FURNISHED
	TRAFFIC SIGNAL CABINET
LOCATION	LS
IH 94 WB OFF-RAMP & CTH Y (S. BARKER ROAD)	1
TOTAL	1

PLOT SCALE : 1:1

PAGE 2 OF 2

PROJECT NO: 1060-33-97

COUNTY: WAUKESHA

SPV.0090.3002

INSTALL CAT-5E

MISCELLANEOUS QUANTITIES

SHEET:

PLOT DATE: 1/31/2014 4:18:40 AM PLOT BY : MSCCEJ PLOT NAME: 030445_mq_sp2

STH 59 & CTH Y

QUANTITY	UNIT	DESCRIPTION	
1	EACH	TRAFFIC SIGNAL CONTROLLER (EPAC M52)	
1148	LF	CAMERA POWER CABLE	
1278	LF	CAT-5E CABLE	
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS	

REMOVE, SALVAGE, AND INSTALL TRAFFIC SIGNAL CONTROLLER

SPV.0060.3001 REMOVE, SALVAGE, AND INSTALL TRAFFIC SIGNAL

LOCATION	CONTROLLER EACH
CB1	1
*** TOTAL	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CARLE

		POWER CABLE	
FROM	ТО	LF	:
CB1	SB5 (V1)	371	•
CB1	SB10 (V2)	178	
CB1	SB3 (V3)	424	
CB1	SB8 (V4)	175	
	*** TOTAL	1148	

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3002 INSTALL CAT-5E

		CABLE
FROM	ТО	LF
CB1	SB6 (R1)	304
SB6 (R1)	SB5 (V1)	161
CB1	SB10 (V2)	178
CB1	SB1 (R2)	304
SB1 (R2)	SB3 (V3)	156
CB1	SB8 (V4)	175
	*** TOTAL	1278

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS STH 59 & CTHY

> SPV.0105.3099 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS

LOCATION	LS
STH 59 (W. GREENFIELD AVENUE) & CTHY (S. BARKER ROAD)	1
TOTAL	1

PAGE 1 OF 1

E

PROJECT NO: 1060-33-97

SSIONAL

HWY: STH 59

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET:

PLOT BY: MSCCEJ

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030515_mq_sp.ppt

PLOT DATE: 1/31/2014 4:19:01 AM

PLOT NAME: 030515_mq_sp1

STH 59 & BROOKFIELD ROAD **ALL ITEMS ARE CATEGORY 1500**

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

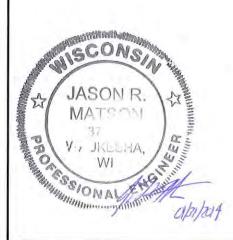
QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CONTROLLER (EPAC M52)
1051	LF	CAMERA POWER CABLE
1059	LF	CAT-5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS

REMOVE, SALVAGE, AND INSTALL TRAFFIC SIGNAL CONTROLLER

SPV.0060.3001 REMOVE, SALVAGE, AND INSTALL TRAFFIC SIGNAL CONTROLLER LOCATION EACH CB₁ *** TOTAL

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE



		INSTALL CAMERA POWER CABLE
FROM	ТО	LF
CB1	SB16 (V1)	327
CB1	SB13 (V2)	202
CB1	SB14 (V3)	358
CB1	SB17 (V4)	164
	*** TOTAL	1051

SPV.0090.3001

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3002 **INSTALL CAT-5E** CARLE

		CABLE
FROM	ТО	LF
CB1	SB16 (R1)	281
SB16 (R1)	SB16 (V1)	50
CB1	SB13 (V2)	202
CB1	SB14 (R2)	312
SB14 (R2)	SB14 (V3)	50
CB1	SB17 (V4)	164
	*** TOTAL	1059

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS STH 59 & BROOKFIELD ROAD

> SPV.0105.3100 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS

LOCATION	LS
STH 59 (W. GREENFIELD AVENUE) & S. BROOKFIELD ROAD	1
TOTAL	1

PAGE 1 OF 1

E

PROJECT NO: 1060-33-97

HWY: STH 59

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET:

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030525_mq_sp.ppt

PLOT DATE: 1/31/2014 4:19:22 AM

PLOT BY: MSCCEJ

PLOT NAME : 030525_mq_sp1

STH 59 & CALHOUN ROAD	
ALL ITEMS ARE CATEGORY 1500	į

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	то	SPV.0090.3002 INSTALL CAT-5E CABLE LF
00.4	000 (1/4)	
CB1	SB8 (V1)	260
CB1	SB2 (V2)	241
CB1	SB2 (R1)	195
SB2 (R1)	SB5 (V3)	237
CB1	SB11 (V4)	123
	*** TOTAL	1056

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

INSTALL CAMERA POWER CABLE FROM TO LF CB1 SB8 (V1) 260 CB1 SB2 (V2) 241 CB1 SB5 (V3) 380 CB1 SB11 (V4) 123 *** TOTAL

SPV.0090.3001

1004

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS STH 59 & CALHOUN ROAD

SPV.0105.3101 TRANSPORTING AND INSTALLING STATE FURNISHED A DA PTA BLE TRAFFIC SIGNAL CAMERAS LOCATION LS STH 59 (W. GREENFIELD AVENUE) & S. CALHOUN ROAD 1 TOTAL

PAGE 1 OF 1

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

_	QUANTITY	UNIT	DESCRIPTION							
	1	EACH	TRAFFIC SIGNAL CONTROLLER (EPAC M52)							
	1004	LF	CAMERA POWER CABLE							
	1056	LF	CAT-5E CABLE							
	1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS							

REMOVE, SALVAGE, AND INSTALL TRAFFIC SIGNAL CONTROLLER

SPV.0060.3001 REMOVE, SALVAGE, AND INSTALL TRAFFIC SIGNAL

	CONTROLLER
LOCATION	EACH
CB1	1
*** TOTAL	1

HWY: STH 59

PROJECT NO: 1060-33-97

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

PLOT BY : MSCCEJ

SHEET:

PLOT NAME : 030535_mq_sp1 PLOT SCALE : 1:1

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030535_mq_sp.ppt

PLOT DATE: 1/31/2014 4:19:44 AM

^{***} A DDITIONAL QUANTITIES SHOWN ELSEWHERE

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVE VIDEO DETECTION EQUIPMENT

STH 59 & S. 92ND STREET

SPV.0105.3024 REMOVE VIDEO DETECTION EQUIPMENT

LOCATION

STH 59 (W. GREENFIELD AVENUE) & S. 92ND STREET

LS 1

TOTAL

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

QUANTITY

971

975

UNIT

LF

LF

LS

SPV.0090.3001 INSTALL CAMERA POWER CABLE FROM TO LF CB1 SB10 (V1) 275 CB1 SB2 (V2) 208 CB1 SB6 (V3) 352 CB1 SB11 (V4) 136 *** TOTAL 971

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3002 INSTALL CAT 5E CABLE FROM TO LF CB1 SB10 (V1) 275 CB1 SB2 (V2) 208 CB1 SB6 (R1) 267 SB6 (R1) SB6 (V3) 89 SB11 (V4) 136 *** TOTAL 975

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS

LOCATION

TOTAL

STH 59 & S. 92ND STREET

SPV.0105.3102 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS LS

1

STH 59 (W. GREENFIELD AVENUE) & S. 92ND STREET

PAGE 1 OF 1

PROJECT NO: 1060-33-97

HWY: STH 59

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

ADAPTABLE TRAFFIC SIGNAL CAMERAS

DESCRIPTION

CAT 5E CABLE

CAMERA POWER CABLE

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

PLOT BY : MSCCEJ

SHEET:

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030615_mq_sp.ppt

PLOT DATE: 1/31/2014 4:20:05 AM

PLOT NAME: 030615_mq_sp1

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QUANTITY	UNIT	DESCRIPTION
1073	LF	CAMERA POWER CABLE
1077	LF	CAT 5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS

REMOVE VIDEO DETECTION EQUIPMENT STH 59 & STH 181

SPV.0105.3025
REMOVE VIDEO
DETECTION EQUIPMENT
LOCATION
LS

STH 59 (W. GREENFIELD AVENUE) & STH 181 (S. 84TH STREET)
1
TOTAL
1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	то	SPV.0090.3001 INSTALL CAMERA POWER CABLE LF
CB1	SB3 (V1)	241
CB1	SB11 (V2)	313
CB1	SB15 (V3)	131
CB1	SB7 (V4)	388
	*** TOTAL	1073

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	TO	SPV.0090.3002 INSTALL CAT 5E CABLE LF
CB1	SB3 (V1)	241
CB1	SB11 (V2)	313
CB1	SB15 (V3)	131
CB1	SB7 (R1)	313
SB7 (R1)	SB7 (V4)	79
	*** TOTAL	1077

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS STH 59 & STH 181

SPV.0105.3103
TRANSPORTING AND INSTALLING
STATE FURNISHED ADAPTABLE
TRAFFIC SIGNAL CAMERAS
LOCATION
LS

STH 59 (W. GREENFIELD AVENUE) & STH 181 (S. 84TH STREET)
1

TOTAL
1

PAGE 1 OF 1

PROJECT NO: 1060-33-97

HWY: STH 59

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

PLOT BY: MSCCEJ

SHEET:

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PLOT DATE: 1/31/2014 4:20:26 AM

PLOT NAME: 030625_mq_sp1

STIMMIND BY	OF STATE FLIB	NISHED MATERIALS.	- FOR INFORMATION ONLY	

HWY: W. NATIONAL AVENUE

QUANTITY	UNIT	DESCRIPTION
1251	LF	CAMERA POWER CABLE
1013	LF	CAT-5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS

REMOVE VIDEO DETECTION EQUIPMENT
W. NATIONAL AVENUE & W. CLEVELAND AVENUE

LOCATION	SPV.0105.3026 REMOVE VIDEO DETECTION EQUIPMENT LS
W. NATIONAL AVENUE & W. CLEVELAND AVENUE	1
TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE FROM TO LF CB1 SB4 (V1) 537 CB1 SB11 (V2) 105 CB1 SB14 (V3) 268 CB1 SB7 (V4) 341 *** TOTAL 1251

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3002

COUNTY: MILWAUKEE

FROM	ТО	INSTALL CAT-5E CABLE LF
SB7 (R1)	SB4 (V1)	295
CB1	SB11 (V2)	105
CB1	SB14 (V3)	268
CB1	SB7 (R1)	266
SB7 (R1)	SB7 (V4)	79
	*** TOTAL	1013

*** A DDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS W. NATIONAL AVENUE & W. CLEVELAND AVENUE

TOTAL

SPV.0105.3104
TRANSPORTING AND INSTALLING
STATE FURNISHED ADAPTABLE
TRAFFIC SIGNAL CAMERAS
LOCATION
LS

W. NATIONAL AVENUE & W. CLEVELAND AVENUE

1

PAGE 1 OF 1

SHEET:

17.62 1 61 1

PROJECT NO: 1060-33-97

MISCELLANEOUS QUANTITIES

a	
SUMMARY OF STATE FURNISHED MATERIALS -	FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
990	LF	CAMERA POWER CABLE
994	LF	CAT 5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS

REMOVE VIDEO DETECTION EQUIPMENT
NATIONAL AVENUE & 102ND STREET

	SPV.0105.3027 REMOVE VIDEO DETECTION EQUIPMENT
LOCATION	LS
W. NATIONAL AVENUE & S. 102ND STREET	1
TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE FROM TO LF SB10 (V1) CB1 128 SB5 (V2) CB1 372 CB1 SB2 (V3) 183 CB1 SB8 (V4) 307 *** TOTAL

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

		INSTALL CAT 5E CABLE		
FROM	TO	<u>LF</u>		
-				
CB1	SB10 (V1)	128		
CB1	SB5 (R1)	282		
SB5 (R1)	SB5 (V2)	94		
CB1	SB2 (V3)	183		
CB1	SB8 (V4)	307		
	` <i>,</i>			
	*** TOTAL	994		
*** A DDITIONA I	*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE			

NATIONAL AVENUE & S. 102ND STREET

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS

LOCATION LS

W. NATIONAL AVENUE & S. 102ND STREET 1

TOTAL 1

PAGE 1 OF 1

PROJECT NO: 1060-33-97

HWY: W. NATIONAL AVENUE

COUNTY: MILWAUKEE

SPV.0090.3002

MISCELLANEOUS QUANTITIES

SHEET:

SPV.0105.3105

FILE NAME : W:\Cadd\Final\10603397_IC2\Roads\cds\030725_mq_sp.ppt

PLOT DATE : 1/31/2014 4:21:09 AM PLOT BY : MSCCEJ

PLOT NAME: 030725_mq_sp1

QUANTITY UNIT DESCRIPTION

732 LF CAMERA POWER CABLE
736 LF CAT-5E CABLE
1 LS ADAPTABLE TRAFFIC SIGNAL CAMERAS



REMOVE VIDEO DETECTION EQUIPMENT
IH 894/USH 45 EB RAMPS & W. NATIONAL AVENUE

	SPV.0105.3028 REMOVE VIDEO DETECTION EQUIPMENT
LOCATION	LS
IH 894/USH 45 EB RAMPS & W. NATIONAL AVENUE	1
TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	то	INSTALL CAMERA POWER CABLE LF
CB1	SB6 (V1)	193
CB1	SB5 (V2)	346
CB1	SB6 (V3)	193
	*** TOTAL	732

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	то	SPV.0090.3002 INSTALL CAT-5E CABLE LF
CB1	SB6 (V1)	193
CB1	SB5 (R1)	271
SB5 (R1)	SB5 (V2)	79
CB1	SB6 (V3)	193
	*** TOTAL	736

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS IH 894/USH 45 EB RAMPS & W. NATIONAL AVENUE

	TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS
LOCATION	LS
IH 894/USH 45 EB RAMPS & W. NATIONAL AVENUE	1
TOTAL	1

PAGE 1 OF 1

PROJECT NO: 1060-33-97

HWY: IH 894

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

PLOT BY: MSCCEJ

SHEET:

CDV 0105 2106

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FILE NAME : W:\Cadd\Final\10603397_IC2\Roads\cds\030735_mq_sp.ppt

PLOT DATE: 1/31/2014 4:21:30 AM

PLOT NAME: 030735_mq_sp1

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
774	LF	CAMERA POWER CABLE
774	LF	CAT-5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS



REMOVE VIDEO DETECTION EQUIPMENT
IH 894/USH 45 WB RAMPS & W. NATIONAL AVENUE

	SPV.0105.3029 REMOVE VIDEO DETECTION EQUIPMENT
LOCATION	LS
IH 894/USH 45 WB RAMPS & W. NATIONAL AVENUE	1
TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	то	SPV.0090.3001 INSTALL CAMERA POWER CABLE LF
CB1	SB2 (V1)	226
CB1	SB8 (V2)	228
CB1	SB6 (V3)	320
	*** TOTAL	774

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

		INSTALL CAT-5E CABLE
FROM	TO	LF
CB1	SB2 (V1)	226
CB1	SB8 (V2)	228
CB1	SB6 (V3)	320
	*** TOTAL	774

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS IH 894/USH 45 WB RAMPS & W. NATIONAL AVENUE

	SPV.0105.3107 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS
LOCATION	LS
IH 894/USH 45 WB RAMPS & W. NATIONAL AVENUE	1
TOTAL	1

PAGE 1 OF 1

PROJECT NO: 1060-33-97

HWY: IH 894

COUNTY: MILWAUKEE

SPV.0090.3002

MISCELLANEOUS QUANTITIES

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 $FILE \ NAME: W: \ Cadd \ Final \ 10603397 \ LC2 \ Roads \ Cds \ 030745 \ mq_sp.ppt$

PLOT DATE: 1/31/2014 4:21:52 AM

PLOT BY : MSCCEJ

PLOT NAME: 030745_mq_sp1

W. NATIONAL AVENUE & W. LINCOLN AVENUE

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

 QUANTITY	UNIT	DESCRIPTION
 4454		CAMEDA POMED CARLE
1151	LF	CAMERA POWER CABLE
1187	LF	CAT 5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS

REMOVE VIDEO DETECTION EQUIPMENT
W. NATIONAL AVENUE & W. LINCOLN AVENUE

		SPV.0105.3038 REMOVE VIDEO DETECTION EQUIPMENT
_	LOCATION	LS
_	W. NATIONAL AVENUE & W. LINCOLN AVENUE	1
	TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE FROM TO LF SB6 (V1) CB1 419 CB1 SB1 (V2) 149 CB1 SB10 (V3) 264 SB3 (V4) CB1 319

1151

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

*** TOTAL

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3002

FROM	ТО	INSTALL CAT 5E CABLE LF
CB1	SB10 (R1)	194
SB10 (R1)	SB6 (V1)	261
CB1	SB1 (V2) SB10 (V3)	149 264
CB1	SB3 (V4)	319
	*** TOTAL	1187

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS NATIONAL AVENUE & W. LINCOLN AVENUE

SPV.0105.3108
TRANSPORTING AND INSTALLING
STATE FURNISHED ADAPTABLE
TRAFFIC SIGNAL CAMERAS
LOCATION
LS

W. NATIONAL AVENUE & W. LINCOLN AVENUE 1

TOTAL 1

PAGE 1 OF 1

PROJECT NO: 1060-33-97 HWY: W. NATIONAL AVENUE COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: **E**

QUANTITY	UNIT	DESCRIPTION
752	LF	CAMERA POWER CABLE
752	LF	CAT-5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3002 INSTALL CAT-5E

		CABLE
FROM	TO	LF
CB1	SB3 (V1)	158
CB1	SB7 (V2)	170
CB1	SB5 (V3)	266
CB1	SB3 (V4)	158
	*** TOTAL	752

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE

		POWER CABLE
FROM	TO	LF
CB1	SB3 (V1)	158
CB1	SB7 (V2)	170
CB1	SB5 (V3)	266
CB1	SB3 (V4)	158
	*** TOTAL	752

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS W. NATIONAL AVENUE & S. 92ND STREET

LOCATION

SPV.0105.3109
TRANSPORTING AND INSTALLING
STATE FURNISHED ADAPTABLE
TRAFFIC SIGNAL CAMERAS

LS

W. NATIONAL AVENUE & S. 92ND STREET 1

TOTAL 1

PAGE 1 OF 1

PROJECT NO: 1060-33-97 HWY: W. NATIONAL AVENUE COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: **E**

FILE NAME : W:\Cadd\Final\10603397_IC2\Roads\cds\030765_mq_sp.ppt PLOT NAME : 030765_mq_sp1 PLOT SCALE : 1:1

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W. NATIONAL AVENUE & W. BECHER AVENUE & S. 90TH STREET **ALL ITEMS ARE CATEGORY 1500** SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY CONCRETE BASES QUANTITY UNIT DESCRIPTION 654.0102 1157 LF CAMERA POWER CABLE CONCRETE BASES 1157 LF CAT-5E CABLE BASE TYPE 2 LS ADAPTABLE TRAFFIC SIGNAL CAMERAS ** NORTHING ** EASTING EACH NO. SB12 287789.0 575195.4 1 *** TOTAL * FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD ** COORDINATES REFERENCED TO MILWAUKEE COUNTY COORDINATE SYSTEM *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE CONDUIT ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG 652.0225 CONDUIT 655.0515 RIGID NONMETALLIC ELECTRICAL WIRE SCHEDULE 40 TRAFFIC SIGNALS 2-INCH 10 AWG FROM TO LF LF FROM TO PB4 SB12 8 CB1 SB12 189 *** TOTALS *** TOTAL 189 *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE CAST BASES AND POLES INSTALL CONDUIT INTO EXISTING ITEM 657.0255 657.0714 **TRANSFORMER** LUMINAIRE ARMS BASES BREAKAWAY TRUSS TYPE 652.0700.S 657.0310 INSTALL CONDUIT **POLES** 11 1/2-INCH 4-INCH STRUCTURE INTO EXISTING ITEM SIGNAL **BOLT CIRCLE** TYPE 3 CLAMP 15-FT NO. EACH BASE NO. EACH EACH EACH PB4 SB12 1 *** TOTALS *** TOTAL *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE PAGE 1 OF 2

HWY: W. NATIONAL AVENUE

PROJECT NO: 1060-33-97

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET:

2

W. NATIONAL AVENUE & W. BECHER AVENUE & S. 90TH STREET

ALL ITEMS ARE CATEGORY 1500

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE

		POWER CABLE
FROM	TO	LF
CB1	SB6 (V1)	303
CB1	SB1 (V2)	82
CB1	SB1 (V3)	82
CB1	SB4 (V4)	299
CB1	SB9 (V5)	156
CB1	SB12 (V6)	235
	*** TOTAL	1157

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3002 INSTALL CAT-5E

		CABLE
FROM	TO	LF
CB1	SB6 (V1)	303
CB1	SB1 (V2)	82
CB1	SB1 (V3)	82
CB1	SB4 (V4)	299
CB1	SB9 (V5)	156
CB1	SB12 (V6)	235
	*** TOTAL	1157

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS W. NATIONAL AVENUE & W. BECHER STREET & S. 90TH STREET

SPV.0105.3110
TRANSPORTING AND INSTALLING
STATE FURNISHED ADAPTABLE
TRAFFIC SIGNAL CAMERAS

W. NATIONAL AVENUE & W. BECHER STREET & S. 90TH STREET

TOTAL

1

PAGE 2 OF 2

PROJECT NO: 1060-33-97 HWY: W. NATIONAL AVENUE COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: **E**

FILE NAME : W:\Cadd\Final\10603397_IC2\Roads\cds\030775_mq_sp.ppt PLOT NAME : 030775_mq_sp2 PLOT SCALE : 1:1

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SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ON	LY		W. NATIONAL AVENUE & S ALL ITEMS ARE CATEG	
QUANTITY UNIT DESCRIPTION 2176 LF CAMERA POWER CABLE 2306 LF CAT 5E CABLE 1 LS ADAPTABLE TRAFFIC SIGNAL CAMERAS				
SPV.0090.3001 INSTALL CAMERA POWER CABLE		REMOVE VIDEO DETECTION EQUIPMENT W. NATIONAL AVENUE & S. 84TH STREET LOCATION W. NATIONAL AVENUE & TOTAL	REN DETECT N	/.0105.3039 //OVE VIDEO FION EQUIPMENT LS 1 1
SPV.0090.3002 INSTALL CAT 5E CABLE FROM TO LF CB1 SB6 (V1) 246 CB1 SB7 (V2) 212 CB1 SB7 (R1) 137 CB1 SB7 (R2) 137 CB1 SB7 (R3) 137 SB7 (R1) SB34 (R4) 244 SB7 (R2) SB34 (R5) 244 SB7 (R2) SB34 (R5) 244 SB34 (R4) SB34 (V3) 94 SB7 (R3) SB18 (V4) 319 CB1 SB14 (V5) 260 SB34 (R5) SB23 (V6) 276 **** TOTAL 2306 **** ADDITIONAL QUANTITIES SHOWN ELSEWHERE		TRANSPORTING AND INSTALLING STATE FUNATIONAL AVENUE & 84TH STREET LOCATION W. NATIONAL AVENUE & TOTAL	TRANSPORT STATE FUR TRAFFIC:	S V.0105.3111 TING AND INSTALLING NISHED ADAPTABLE SIGNAL CAMERAS LS 1 1 PAGE 1 OF 1
PROJECT NO: 1060-33-97 HWY: W. NATIONAL AVENUE	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	DIOTOCAL F. 444	SHEET: E

FILE NAME : W:\Cadd\Final\10603397_IC2\Roads\cds\030785_mq_sp.ppt

PLOT DATE: 1/31/2014 4:23:17 AM

PLOT BY : MSCCEJ

PLOT NAME: 030785_mq_sp1

SUMMARY O	OF STATE FURNISHED MATERIALS - FC	OR INFORMATION ONLY

 QUANTITY	UNIT	DESCRIPTION
 004		CAMEDA POMED CADI E
821	LF	CAMERA POWER CABLE
821	LF	CAT-5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS

CONDUIT

CONDUIT CONDUIT CONDUIT CONDUIT RIGID NONMETALLIC SCHEDULE 40 SPECIAL			652.0225	652.0235	
FROM TO SCHEDULE 40 2-INCH SCHEDULE 40 3-INCH SPECIAL 3-INCH CB1 PB5 30 PB1 PB12 24 PB2 PB6 23 PB3 PB8 21 PB4 PB11 25 PB5 PB6 88 PB5 PB6 84 PB6 PB7 78 PB7 PB8 82 PB8 PB9 104 PB9 PB10 94 PB10 PB11 88 PB1 PB12 84 PB12 SB9 25 84 PB6 SB10 18			CONDUIT	CONDUIT	652.0615
FROM TO LF LF LF LF CB1 PB5 30 PB1 PB12 24 PB2 PB6 23 PB3 PB8 21 PB4 PB11 25 PB5 PB6 88 PB5 PB12 84 PB6 PB7 78 PB7 PB8 82 PB8 PB9 104 PB9 PB10 94 PB10 PB11 88 PB1 PB12 84 PB6 SB10 18 PB8 SB11 17 PB10 SB12 13			RIGID NONMETALLIC	RIGID NONMETALLIC	CONDUIT
FROM TO LF LF LF CB1 PB5 30 PB1 PB12 24 PB2 PB6 23 PB3 PB8 21 PB4 PB11 25 PB5 PB6 88 PB5 PB12 84 PB6 PB7 78 PB7 PB8 82 PB8 PB9 104 PB9 PB10 94 PB10 PB11 88 PB11 PB12 84 PB6 SB10 18 PB8 SB11 17 PB10 SB12 13			SCHEDULE 40	SCHEDULE 40	SPECIAL
CB1 PB5 30 PB1 PB12 24 PB2 PB6 23 PB3 PB8 21 PB4 PB11 25 PB5 PB6 88 PB5 PB6 84 PB6 PB7 78 PB7 PB8 82 PB8 PB9 104 PB9 PB10 94 PB10 PB11 88 PB11 PB12 84 PB6 SB10 18 PB8 SB11 17 PB10 SB12 13			2-INCH	3-INCH	3-INCH
PB1 PB12 24 PB2 PB6 23 PB3 PB8 21 PB4 PB11 25 PB5 PB6 88 PB5 PB12 84 PB6 PB7 78 PB7 PB8 82 PB8 PB9 104 PB9 PB10 94 PB10 PB11 88 PB11 PB12 84 PB6 SB10 18 PB8 SB11 17 PB10 SB12 13	FROM	TO	LF	LF	LF
PB1 PB12 24 PB2 PB6 23 PB3 PB8 21 PB4 PB11 25 PB5 PB6 88 PB5 PB12 84 PB6 PB7 78 PB7 PB8 82 PB8 PB9 104 PB9 PB10 94 PB10 PB11 88 PB11 PB12 84 PB6 SB10 18 PB8 SB11 17 PB10 SB12 13					
PB2 PB6 23 PB3 PB8 21 PB4 PB11 25 PB5 PB6 88 PB5 PB12 84 PB6 PB7 78 PB7 PB8 82 PB8 PB9 104 PB9 PB10 94 PB10 PB11 88 PB11 PB12 84 PB6 SB10 18 PB8 SB11 17 PB10 SB12 13	_	_			
PB3 PB8 21 PB4 PB11 25 PB5 PB6 88 PB5 PB12 84 PB6 PB7 78 PB7 PB8 82 PB8 PB9 104 PB9 PB10 94 PB10 PB11 88 PB11 PB12 84 PB12 SB9 25 PB6 SB10 18 PB8 SB11 17 PB10 SB12 13	PB1	PB12		24	
PB4 PB11 25 PB5 PB6 88 PB5 PB12 84 PB6 PB7 78 PB7 PB8 82 PB8 PB9 104 PB9 PB10 94 PB10 PB11 88 PB11 PB12 84 PB6 SB10 18 PB8 SB11 17 PB10 SB12 13	PB2	PB6		23	
PB5 PB6 88 PB5 PB12 84 PB6 PB7 78 PB7 PB8 82 PB8 PB9 104 PB9 PB10 94 PB10 PB11 88 PB11 PB12 84 PB12 SB9 25 PB6 SB10 18 PB8 SB11 17 PB10 SB12 13	PB3	PB8		21	
PB5 PB12 84 PB6 PB7 78 PB7 PB8 82 PB8 PB9 104 PB9 PB10 94 PB10 PB11 88 PB11 PB12 84 PB12 SB9 25 PB6 SB10 18 PB8 SB11 17 PB10 SB12 13	PB4	PB11		25	
PB6 PB7 78 PB7 PB8 82 PB8 PB9 104 PB9 PB10 94 PB10 PB11 88 PB11 PB12 84 PB12 SB9 25 PB6 SB10 18 PB8 SB11 17 PB10 SB12 13	PB5	PB6			88
PB7 PB8 82 PB8 PB9 104 PB9 PB10 94 PB10 PB11 88 PB11 PB12 84 PB12 SB9 25 PB6 SB10 18 PB8 SB11 17 PB10 SB12 13	PB5	PB12			84
PB8 PB9 104 PB9 PB10 94 PB10 PB11 88 PB11 PB12 84 PB12 SB9 25 PB6 SB10 18 PB8 SB11 17 PB10 SB12 13	PB6	PB7		78	
PB9 PB10 94 PB10 PB11 88 PB11 PB12 84 PB12 SB9 25 PB6 SB10 18 PB8 SB11 17 PB10 SB12 13	PB7	PB8			82
PB10 PB11 88 PB11 PB12 84 PB12 SB9 25 PB6 SB10 18 PB8 SB11 17 PB10 SB12 13	PB8	PB9		104	
PB11 PB12 84 PB12 SB9 25 PB6 SB10 18 PB8 SB11 17 PB10 SB12 13	PB9	PB10			94
PB12 SB9 25 PB6 SB10 18 PB8 SB11 17 PB10 SB12 13	PB10	PB11		88	
PB6 SB10 18 PB8 SB11 17 PB10 SB12 13	PB11	PB12			84
PB8 SB11 17 PB10 SB12 13	PB12	SB9	25		
PB10 SB12 13	PB6	SB10	18		
PB10 SB12 13	PB8	SB11	17		
*** TOTALS 73 393 432	PB10		13		
101/120 10 000 102		*** TOTALS	73	393	432

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL CONDUIT INTO EXISTING ITEM

	652.0700.S			
	INSTALL CONDUIT			
STRUCTURE	INTO EXISTING ITEM			
NO.	EACH			
PB1	1			
PB2	1			
PB3	1			
PB4	1			
*** TOTAL	4			

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

W. BECHER STREET & S. 92ND STREET ALL ITEMS ARE CATEGORY 1500

PULL BOXES STEEL

			653.0140
			PULL BOXES
PULL			STEEL
BOX			24X42-INCH
NO.	** NORTHING	** EASTING	EACH
PB5	287796.3	574451.3	1
PB6	287839.9	574459.4	1
PB7	287867.9	574484.2	1
PB8	287866.7	574524.9	1
PB9	287840.6	574562.4	1
PB10	287795.9	574547.7	1
PB11	287763.9	574525.8	1
PB12	287763.9	574483.9	1
		*** TOTAL	8

- * FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
- ** COORDINATES REFERENCED TO MILWAUKEE COUNTY COORDINATE SYSTEM
- *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE BASES

_	BASE NO.	** NORTHING	** EASTING	654.0102 CONCRETE BASES TYPE 2 EACH	SPV.0060.3002 SUPPLEMENTARY TRAFFIC SIGNAL CABINET CONCRETE BASE EACH
-					
	SB9	287787.2	574474.9	1	
	SB10	287847.9	574475.7	1	
	SB11	287851.4	574533.0	1	
_	SB12	287789.7	574536.3	1	
	CB2*				1
			*** TOTAL	4	1

- * FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
- ** COORDINATES REFERENCED TO MILWAUKEE COUNTY COORDINATE SYSTEM
- *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAGE 1 OF 2

PROJECT NO: 1060-33-97 HWY: W. NATIONAL AVENUE COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET:

 $\label{file:name:w:load} FILE \ NAME: W: \ Cadd \ Final \ 10603397 \ LC2 \ Roads \ Cds \ 030795 \ mq_sp.ppt$

PLOT DATE: 1/31/2014 4:23:39 AM

PLOT BY : MSCCEJ

PLOT NAME: 030795_mq_sp1

FROM

CB1 CB1

CB1

CB1

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS

10 AWG

1424

FROM	TO	LF
CB1	SB9	140
SB9	SB10	200
SB10	SB11	171
SB11	SB12	185
SB12	CB1	246
PB5	CB1	38
PB6	SB10	38
PB7	SB10	93
PB8	SB11	37
PB9	SB11	105
PB10	SB12	33
PB11	SB12	93
PB12	SB9	45

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

*** TOTAL

CAST BASES AND POLES

TO

SB9

SB10

SB11

SB12

*** TOTALS

	657.0255 TRANSFORMER		657.0714 LUMINA IRE A RMS	
	BASES BREAKAWAY	657.0310	TRUSS TYPE	658.0500
	11 1/2-INCH	POLES	4-INCH	PEDESTRIAN
SIGNAL	BOLT CIRCLE	TYPE 3	CLAMP 15-FT	PUSH BUTTONS
BASE NO.	EACH	EACH	EACH	EACH
SB9	1	1	1	2
SB10	1	1	1	2
SB11	1	1	1	2
SB12	1	1	1	2
*** TOTALS	4	4	4	8

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

655.0240

CABLE TRAFFIC SIGNAL

7-14 AWG

LF

140

120

231 246

737

W. BECHER STREET & S. 92ND STREET **ALL ITEMS ARE CATEGORY 1500**

TRAFFIC SIGNAL CABINET AND CONTROLLER FULLY ACTUATED 4-PHASE

SPV.0060.3003 TRAFFIC SIGNAL CABINET AND CONTROLLER FULLY

ACTUATED 4-PHASE LOCATION EACH CB1 1

*** TOTAL

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE

FROM TO CB1 SB10 (V1) 151 CB1 SB12 (V2) 257 CB1 SB11 (V3) 242 CB1 SB9 (V4) 171 *** TOTAL 821

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3002 INSTALL CAT-5E CABLE FROM TO LF CB1 SB10 (V1) 151 257 CB1 SB12 (V2) CB1 SB11 (V3) 242 CB1 SB9 (V4) 171 *** TOTAL 821

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS BECHER STREET & 92ND STREET

LOCATION

TOTAL

SPV.0105.3112 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS LS

1

W. BECHER STREET & S. 92ND STREET

PAGE 2 OF 2

PROJECT NO: 1060-33-97

HWY: W. NATIONAL AVENUE

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET:

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030795_mq_sp.ppt

PLOT DATE: 1/31/2014 4:23:39 AM

PLOT BY : MSCCEJ

PLOT NAME : 030795_mq_sp2

QUANTITY	UNIT	DESCRIPTION
975	LF	CAMERA POWER CABLE
979	LF	CAT-5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS

CONDUIT

		652.0225	652.0235	
		CONDUIT	CONDUIT	652.0615
		RIGID NONMETALLIC	RIGID NONMETALLIC	CONDUIT
		SCHEDULE 40	SCHEDULE 40	SPECIAL
		2-INCH	3-INCH	3-INCH
FROM	ТО	LF	LF	LF
00.4	55.44		40	
CB1	PB11		40	
PB2	PB12		17	
PB4	PB13		21	
PB6	PB15		9	
PB9	PB18		11	
PB11	PB12		116	
PB11	PB18			176
PB12	PB13			150
PB13	PB14		124	
PB14	PB15			102
PB15	PB16		112	
PB16	PB17			148
PB17	PB18		76	
PB18	PB19			66
PB12	SB12	31		
PB12	SB13	19		
PB14	SB14	16		
PB15	SB15	17		
PB17	SB16	25		
	*** TOTALS	108	526	642

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL CONDUIT INTO EXISTING ITEM

		652.0700.S	
		INSTALL CONDUIT	STALL CONDUIT
	STRUCTURE	INTO EXISTING ITEM	TO EXISTING ITEM
	NO.	EACH	EACH
	PB2	1	1
	PB4	1	1
	PB6	1	1
	PB9	1	1
	*** TOTAL	4	4

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

W. LINCOLN AVENUE & S. 92ND STREET ALL ITEMS ARE CATEGORY 1500

PULL BOXES STEEL

PULL BOX NO.	** NORTHING	** EASTING	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB11	286416.5	574448.6	1
PB12	286458.1	574421.5	1
PB13	286532.8	574421.5	1
PB14	286553.6	574469.5	1
PB15	286553.6	574520.4	1
PB16	286532.4	574564.0	1
PB17	286458.5	574563.4	1
PB18	286432.4	574538.9	1
PB19	286399.7	574534.7	1
		*** TOTAL	9

^{*} FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

CONCRETE BASES

BASE NO.	** NORTHING	** EASTING	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TY PE 2 EACH	SPV.0060.3002 SUPPLEMENTARY TRAFFIC SIGNAL CABINET CONCRETE BASE EACH
SB12	286447.6	574451.1	1		
SB13	286456.9	574440.5	1		
SB14	286537.9	574468.3		1	
SB15	286538.6	574528.8		1	
SB16	286445.0	574542.1		1	
SB17	286418.3	574451.1		1	
CB2*					1
		*** TOTAL	2	4	1

^{*} FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

PAGE 1 OF 2

PROJECT NO: 1060-33-97 HWY: W. NATIONAL AVENUE COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET:

^{**} COORDINATES REFERENCED TO MILWAUKEE COUNTY COORDINATE SYSTEM

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

^{**} COORDINATES REFERENCED TO MILWAUKEE COUNTY COORDINATE SYSTEM

^{***} A DDITIONAL QUANTITIES SHOWN ELSEWHERE

UNDERGE FRC CB CB CB CB	11 SB12	655.0240 CABLE TRAFFIC SIGN 7-14 AWG LF 152 140	AL	CB1 SB12 SB13 SB14 SB15 SB16 SB16	655.051 ELECTRICAL TRAFFIC SIC 10 AWI TO LF SB12 152 SB13 74 SB14 228 SB15 124 SB16 228 SB17 177 CB1 50	_ WIRE GNALS	TRAFFIC SIGNA		т	ATEGORY 1	0003 CABINET ER FULLY
CB CB		213	_	PB12 5 PB13 5 PB14 5 PB15 5	SB17 23 SB13 39 SB14 114 SB14 36 SB15 37		*** ADDITIONAL	*** TOTAL L QUANTITIES SHOWN ELSEW	/HERE	1	_ _
*** A DDITI	IONAL QUANTITIES :	SHOWN ELSEWHERE		PB17 S PB18 S PB19 S	SB15 109 SB16 87 SB16 33 SB16 82 TOTAL 1593 JANTITIES SHOWN ELSEW		INSTALL STATE SUPPLIED VIDE	SPV.0090.3001 INSTALL CAMERA POWER CABLE LF	INSTALL STATE	E SUPPLIED VIDEO	O DETECTION CABLE SPV.0090.3002 INSTALL CAT-5E CABLE LF
CAST BASES AND		657.0255 TRANSFORMER		657.0405 TRAFFIC SIGNAL	657.0714 LUMINA IRE ARMS		CB1 SB14 (V1) CB1 SB16 (V2) CB1 SB15 (V3) CB1 SB12 (V4) *** TOTAL *** ADDITIONAL QUANTITIES SH	183 234 375 183 ———————————————————————————————————	CB1 CB1 CB1 SB15 (R1) CB1	SB14 (V1) SB16 (V2) SB15 (R1) SB15 (V3) SB12 (V4) *** TOTAL QUANTITIES SHC	183 234 324 55 183 979 OWN ELSEWHERE
SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0310 POLES TYPE 3 EACH	STANDARDS ALUMINUM 3.5-FT EACH	TRUSS TYPE 4-INCH CLAMP 15-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH					
SB12 SB13 SB14	1 1 	 1	 1	1 1	 1	1 1 2	TRANSPORTING AND INST LINCOLN AVENUE & 92ND	TALLING STATE FURNISHED A O STREET	\DAPTABLE TRAFFIC SK	∋NAL CAMERAS	
SB14 SB15 SB16 SB17	 	1 1 1	1 1 1	 	1 1 1	2 2				TRANSPORTIN STATE FURNIS	.0105.3113 NG AND INSTALLING ISHED ADAPTABLE IGNAL CAMERAS
*** TOTALS	2	4	4	2	4	8	<u> </u>	LOCATION			LS
*** ADDITIONAL QU	IANTITIES SHOWN EI	LSEWHERE					W. LIN	ICOLN A VENUE & S. 92ND STF	REET		1
								TOTAL	-		1
											PAGE 2 C

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

W. LINCOLN AVENUE & S. 92ND STREET

	UNIT	QUANTITY
CAMERA POWER CABLE	LF	898
CAT-5E CABLE	LF	902
ADAPTABLE TRAFFIC SIGNAL CAMERAS	LS	1
CAT-5E CABLE	LF	

CONDUIT

		652.0225	652.0235	
		CONDUIT	CONDUIT	652.0615
		RIGID NONMETALLIC	RIGID NONMETALLIC	CONDUIT
		SCHEDULE 40	SCHEDULE 40	SPECIAL
		2-INCH	3-INCH	3-INCH
FROM	ТО	LF	LF	LF
CB1	PB6		10	
PB1	PB6		22	
PB2	PB7		23	
PB3	PB9		9	
PB5	PB11		40	
PB6	PB11			82
PB7	PB8			100
PB8	PB9		70	
PB9	PB10			134
PB10	PB11		92	
PB6	SB9	24		
PB7	SB10	16		
PB8	SB11	15		
PB11	SB12	22		
	*** TOTALS	77	266	316

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL CONDUIT INTO EXISTING ITEM

	652.0700.S
	INSTALL CONDUIT
STRUCTURE	INTO EXISTING ITEM
NO.	EACH
PB1	1
PB2	1
PB3	1
PB5	1
*** TOTAL	4

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

W. LINCOLN AVENUE & S. 90TH STREET **ALL ITEMS ARE CATEGORY 1500**

PULL BOXES STEEL

			653.0140
			PULL BOXES
PULL			STEEL
BOX			24X42-INCH
NO.	** NORTHING	** EASTING	EACH
PB6	286567.7	575145.0	1
PB7	286448.4	575154.2	1
PB8	286448.4	575104.6	1
PB9	286467.8	575079.6	1
PB10	286535.2	575079.6	1
PB11	286565.2	575103.9	1
		*** TOTAL	6

^{*} FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

CONCRETE BASES

BASE NO.	** NORTHING	** EASTING	654.0102 CONCRETE BASES TYPE 2 EACH	SPV.0060.3002 SUPPLEMENTARY TRAFFIC SIGNAL CABINET CONCRETE BASE EACH
SB9	286542.3	575153.4	1	
SB10	286460.4	575163.4	1	
SB11	286458.4	575093.9	1	
SB12	286544.0	575096.9	1	
CB2*				1
		*** TOTAL	4	1

^{*} FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

PAGE 1 OF 2

SHEET: HWY: W. NATIONAL AVENUE COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES PROJECT NO: 1060-33-97 PLOT SCALE : 1:1

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030815_mq_sp.ppt

PLOT DATE: 1/31/2014 4:24:21 AM

PLOT BY : MSCCEJ

PLOT NAME: 030815_mq_sp1

^{**} COORDINATES REFERENCED TO MILWAUKEE COUNTY COORDINATE SYSTEM

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

^{**} COORDINATES REFERENCED TO MILWAUKEE COUNTY COORDINATE SYSTEM

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

42

1259

		1071110
FROM	TO	LF
CB1	SB9	56
SB9	SB12	127
SB12	SB11	257
SB11	SB10	121
SB10	CB1	367
PB6	CB1	28
PB7	SB10	36
PB8	SB11	35
PB9	SB11	86
PB10	SB12	104

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SB12

*** TOTAL

PB11

CAST BASES AND POLES

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

TO

SB9

SB10

SB11

SB12

*** TOTALS

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FROM

CB1

CB1

CB1

CB1

655.0240

CABLE TRAFFIC SIGNAL

7-14 AWG

LF

56

367

300

111

834

	657.0255 TRANSFORMER		657.0714 LUMINA IRE A RMS	
	BASES BREAKAWAY	657.0310	TRUSS TYPE	658.0500
	11 1/2-INCH	POLES	4-INCH	PEDESTRIAN
SIGNAL	BOLT CIRCLE	TYPE 3	CLAMP 15-FT	PUSH BUTTONS
BASE NO.	EACH	EACH	EACH	EACH
SB9	1	1	1	2
SB10	1	1	1	2
SB11	1	1	1	2
SB12	1	1	1	2
*** TOTALS	4	4	4	8

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

W. LINCOLN AVENUE & S. 90TH STREET ALL ITEMS ARE CATEGORY 1500

TRAFFIC SIGNAL CABINET AND CONTROLLER FULLY ACTUATED 4-PHASE

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SPV.0060.3003
TRAFFIC SIGNAL CABINET
AND CONTROLLER FULLY
ACTUATED 4-PHASE
EACH

CB1

*** TOTAL

1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001				
	INSTALL CAMERA			
	POWER CABLE			
TO	<u>LF</u>			
SB12 (V1)	142			
SB10 (V2)	358			
SB9 (V3)	97			
SB11 (V4)	301			
_				
*** TOTAL	898			
	SB12 (V1) SB10 (V2) SB9 (V3) SB11 (V4)			

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

			INSTALL CAT-5E CABLE
_	FROM	TO	<u>L</u> F
_			
	CB1	SB12 (V1)	142
	CB1	SB10 (R1)	307
	SB10 (R1)	SB10 (V2)	55
	CB1	SB9 (V3)	97
	CB1	SB11 (V4)	301
		*** TOTAL	902

SPV.0090.3002

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS LINCOLN AVENUE & 90TH STREET

SPV.0105.3114
TRANSPORTING AND INSTALLING
STATE FURNISHED ADAPTABLE
TRAFFIC SIGNAL CAMERAS
LOCATION
LS

W. LINCOLN AVENUE & S. 90TH STREET
1

TOTAL
1

PAGE 2 OF 2

PROJECT NO: 1060-33-97 HWY: W. NATIONAL AVENUE COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: **E**

B28	QUANTITY	UNIT	DESCRIPTION			
CONDUIT CON				E		
RIGID NONNETALLIC RIGID NONNETALLIC CONDUIT CONDUIT CONDUIT CONDUIT CONDUIT CONDUIT SCHEDULE 40 SPECIAL 2-INCH 3-INCH 3-INCH 3-INCH EF LF LF LF LF LF LF LF	1	LS	ADAPTABLE TRAFFIC S	SIGNAL CAMERAS		
CONDUIT RIGID NONMETALLIC SCHEDULE 40 SPECIAL	CONDUIT					
CONDUIT RIGID NONMETALLIC SCHEDULE 40 SPECIAL			652 0225	652 0235		
FROM TO LF LF LF CB1 PB5 18 PB1 PB5 8 PB2 PB7 23 PB3 PB9 11 PB4 PB12 11 PB5 PB6 64 PB5 PB12 106 PB6 PB7 118 PB6 PB7 118 PB7 PB8 74 PB8 PB9 98 PB9 PB10 46 PB10 PB11 118 PB11 PB12 50 PB7 SB10 5 PB8 SB11 8			CONDUIT RIGID NONMETALLIC	CONDUIT RIGID NONMETALLIC	CONDUIT	
FROM TO LF LF LF CB1 PB5 18 PB1 PB5 8 PB2 PB7 23 PB3 PB9 11 PB4 PB12 11 PB5 PB6 64 PB5 PB12 106 PB6 PB7 118 PB7 PB8 118 PB7 PB8 98 PB9 PB10 46 PB10 PB11 118 PB11 PB12 50 PB5 SB9 7 PB7 SB10 5 PB9 SB12 6						
PB1 PB5 8 PB2 PB7 23 PB3 PB9 11 PB4 PB12 11 PB5 PB6 64 PB5 PB12 106 PB6 PB7 118 PB7 PB8 98 PB7 PB8 98 PB9 PB10 46 PB10 PB11 118 PB11 PB12 50 PB5 SB9 7 PB6 SB10 5 PB8 SB11 8 PB9 SB12 6 PB10 SB13 15 PB11 SB14 5 PB12 </td <td>FROM</td> <td>TO</td> <td></td> <td></td> <td></td> <td></td>	FROM	TO				
PB1 PB5 8 PB2 PB7 23 PB3 PB9 11 PB4 PB12 11 PB5 PB6 64 PB5 PB12 106 PB6 PB7 118 PB7 PB8 98 PB7 PB8 98 PB9 PB10 46 PB10 PB11 118 PB11 PB12 50 PB5 SB9 7 PB6 SB10 5 PB8 SB11 8 PB9 SB12 6 PB10 SB13 15 PB11 SB14 5 PB12 </td <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td>	-					
PB2 PB7 23 PB3 PB9 11 PB4 PB12 11 PB5 PB6 64 PB5 PB12 106 PB6 PB7 118 PB7 PB8 118 PB7 PB8 98 PB9 PB10 98 98 PB10 PB11 118 PB11 PB12 118 PB5 SB9 7 PB7 SB10 5 PB8 SB11 8 PB9 SB12 6 PB11 SB14 5 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
PB3 PB9 11 PB4 PB12 11 PB5 PB6 64 PB5 PB12 106 PB6 PB7 118 PB7 PB8 118 PB7 PB8 98 PB9 PB10 98 PB10 PB11 118 PB11 PB12 118 PB5 SB9 7 PB7 SB10 5 PB8 SB11 8 PB9 SB12 6 PB10 SB13 15 PB11 SB14 5						
PB4 PB12 11 PB5 PB6 64 PB5 PB12 106 PB6 PB7 118 PB7 PB8 118 PB7 PB8 98 PB9 PB10 46 PB10 PB11 118 PB11 PB12 50 PB5 SB9 7 PB7 SB10 5 PB8 SB11 8 PB9 SB12 6 PB10 SB13 15 PB11 SB14 5 PB12 SB15 10 PB12 SB16 38 **** TOTALS 94 305 440						
PB5 PB6 64 PB5 PB12 106 PB6 PB7 118 PB7 PB8 74 PB8 PB9 98 PB9 PB10 46 PB10 PB11 118 PB11 PB12 50 PB5 SB9 7 PB7 SB10 5 PB8 SB11 8 PB9 SB12 6 PB10 SB13 15 PB11 SB14 5 PB12 SB15 10 PB12 SB16 38 **** TOTALS 94 305 44						
PB5 PB12 106 PB6 PB7 118 PB7 PB8 74 PB8 PB9 98 PB9 PB10 46 PB10 PB11 118 PB11 PB12 PB5 SB9 7 PB7 SB10 5 PB8 SB11 8 PB9 SB12 6 PB10 SB13 15 PB11 SB14 5 PB12 SB15 10 PB12 SB16 38 **** TOTALS 94 305 440						
PB7 PB8 74 PB8 PB9 98 PB9 PB10 46 PB10 PB11 118 PB11 PB12 PB5 SB9 7 PB7 SB10 5 PB8 SB11 8 PB9 SB12 6 PB10 SB13 15 PB11 SB14 5 PB12 SB15 10 PB12 SB16 38 **** TOTALS 94 305 440					106	
PB8 PB9 98 PB9 PB10 46 PB10 PB11 118 PB11 PB12 50 PB5 SB9 7 PB7 SB10 5 PB8 SB11 8 PB9 SB12 6 PB10 SB13 15 PB11 SB14 5 PB12 SB15 10 PB12 SB16 38 **** TOTALS 94 305 440	PB6	PB7			118	
PB9 PB10 46 PB10 PB11 118 PB11 PB12 50 PB5 SB9 7 PB7 SB10 5 PB8 SB11 8 PB9 SB12 6 PB10 SB13 15 PB11 SB14 5 PB12 SB15 10 PB12 SB16 38 **** TOTALS 94 305 440	PB7	PB8		74		
PB10 PB11 118 PB11 PB12 50 PB5 SB9 7 PB7 SB10 5 PB8 SB11 8 PB9 SB12 6 PB10 SB13 15 PB11 SB14 5 PB12 SB15 10 PB12 SB16 38 **** TOTALS 94 305 440		PB9			98	
PB11 PB12 50 PB5 SB9 7 PB7 SB10 5 PB8 SB11 8 PB9 SB12 6 PB10 SB13 15 PB11 SB14 5 PB12 SB15 10 PB12 SB16 38 **** TOTALS 94 305 440				46		
PB5 SB9 7 PB7 SB10 5 PB8 SB11 8 PB9 SB12 6 PB10 SB13 15 PB11 SB14 5 PB12 SB15 10 PB12 SB16 38 **** TOTALS 94 305 440						
PB7 SB10 5 PB8 SB11 8 PB9 SB12 6 PB10 SB13 15 PB11 SB14 5 PB12 SB15 10 PB12 SB16 38 **** TOTALS 94 305 440	PB11	PB12		50		
PB8 SB11 8 PB9 SB12 6 PB10 SB13 15 PB11 SB14 5 PB12 SB15 10 PB12 SB16 38 **** TOTALS 94 305 440	PB5	SB9	7			
PB9 SB12 6 PB10 SB13 15 PB11 SB14 5 PB12 SB15 10 PB12 SB16 38 **** TOTALS 94 305 440	PB7	SB10	5			
PB10 SB13 15 PB11 SB14 5 PB12 SB15 10 PB12 SB16 38 **** TOTALS 94 305 440	PB8	SB11				
PB11 SB14 5 PB12 SB15 10 PB12 SB16 38 **** TOTALS 94 305 440						
PB12 SB15 10 PB12 SB16 38						
PB12 SB16 38						
*** TOTALS 94 305 440						
	PB12	SB16	38			
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE		*** TOTALS	94	305	440	
	*** A DDITIONA	AL QUANTITIES	SHOWN ELSEWHERE			

	652.0700.S INSTALL CONDUIT
STRUCTURE	INTO EXISTING ITEM
NO.	EACH
PB1	1
PB2	1
PB3	1
PB4	1
*** TOTAL	4

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

S. 84TH STREET & W. LAPHAM STREET
ALL ITEMS ARE CATEGORY 1500

PULL BOXES STEEL

PULL			653.0140 PULL BOXES STEEL
BOX			24X42-INCH
NO.	** NORTHING	** EASTING	EACH
			-
PB5	290264.4	577154.0	1
PB6	290290.0	577167.6	1
PB7	290290.0	577227.0	1
PB8	290259.9	577239.9	1
PB9	290210.4	577240.8	1
PB10	290188.4	577225.8	1
PB11	290188.4	577166.7	1
PB12	290211.2	577149.1	1
		*** TOTAL	8

^{*} FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

CONCRETE BASES

BASE NO.	** NORTHING	** EASTING	654.0101 CONCRETE BASES TY PE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	SPV.0060.3002 SUPPLEMENTARY TRAFFIC SIGNAL CABINET CONCRETE BASE EACH
SB9	290269.7	577159.2	1		
			ı		
SB10	290285.1	577226.8		1	
SB11	290266.4	577235.8	1		
SB12	290209.4	577234.9		1	
SB13	290203.0	577227.7	1		
SB14	290193.0	577166.9		1	
SB15	290208.3	577159.2	1		
SB16	290215.6	577111.7		1	
CB2	290261.5	577148.1			1
		*** TOTAL	4	4	1

^{*} FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

PAGE 1 OF 2

PROJECT NO: 1060-33-97 HWY: S. 84TH STREET COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET:

FILE NAME : W:\Cadd\Final\10603397_IC2\Roads\cds\030915_mq_sp.ppt

PLOT DATE: 1/31/2014 4:24:43 AM

PLOT BY : MSCCEJ

PLOT NAME: 030915_mq_sp1

^{**} COORDINATES REFERENCED TO MILWAUKEE COUNTY COORDINATE SYSTEM

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

^{**} COORDINATES REFERENCED TO MILWAUKEE COUNTY COORDINATE SYSTEM

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

655.0515

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

655.0240 CABLE TRAFFIC SIGNAL

			7-14 AWG
_	FROM	TO	LF
_			
	CB1	SB9	43
	CB1	SB11	210
_	CB1	SB12	273
	CB1	SB13	236
	CB1	SB15	115
		*** TOTALS	877

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

		10 AWG
FROM	ТО	LF
CB1	SB9	43
SB9	SB10	159
SB10	SB11	90
SB11	SB12	103
SB12	SB13	84
SB13	SB14	119
SB14	SB15	80
SB15	SB16	72
SB16	CB1	143
PB5	CB1	32
PB6	SB9	75
PB7	SB10	25
PB8	SB11	28
PB9	SB12	26
PB10	SB13	35
PB11	SB14	25
PB12	SB15	30
	_	
	*** TOTAL	893

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CAST BASES AND POLES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0310 POLES TYPE 3 EACH	657.0405 TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT EACH	657.0714 LUMINA IRE ARMS TRUSS TY PE 4-INCH CLAMP 15-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH
SB9	1			1		2
SB10		1	1		1	
SB11	1			1		2
SB12		1	1		1	1
SB13	1			1		1
SB14		1	1		1	
SB15	1			1		2
SB16		1	1		1	
*** TOTALS	4	4	4	4	4	8

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

S. 84TH STREET & W. LAPHAM STREET ALL ITEMS ARE CATEGORY 1500

TRAFFIC SIGNAL CABINET AND CONTROLLER FULLY ACTUATED 4-PHASE

LOCATION

SPV.0060.3003 TRAFFIC SIGNAL CABINET AND CONTROLLER FULLY ACTUATED 4-PHASE EACH

CB1 *** TOTAL

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001

		INSTALL CAMERA POWER CABLE	
FROM	TO	LF	F
CB1	SB14 (V1)	166	
CB1	SB10 (V2)	179	
CB1	SB16 (V3)	199	
CB1	SB12 (V4)	284	
	_		
	*** TOTAL	828	
*** A DDITIONA	L QUANTITIES SHO	OWN ELSEWHERE	*** AI

	FROM	TO	SPV.0090.3002 INSTALL CAT-5E CABLE LF
Т			
Т	CB1	SB14 (V1)	166
Т	CB1	SB10 (V2)	179
Т	CB1	SB16 (V3)	199
Т	CB1	SB12 (V4)	284
Т		_	
Т		*** TOTAL	828
	*** A DDITIONA	L QUANTITIES SHO	OWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS S. 84TH STREET & W. LAPHAM STREET

> SPV.0105.3115 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS LS 1

S. 84TH STREET & W. LAPHAM STREET

LOCATION

TOTAL

PAGE 2 OF 2

PROJECT NO: 1060-33-97

HWY: S. 84TH STREET

COUNTY: MILWAUKEE

PLOT DATE: 1/31/2014 4:24:43 AM

MISCELLANEOUS QUANTITIES

PLOT NAME: 030915_mq_sp2

SHEET:

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030915_mq_sp.ppt

PLOT BY : MSCCEJ

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION	
559	LF	CAMERA POWER CABLE	
559	LF	CAT 5E CABLE	
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS	

REMOVE VIDEO DETECTION EQUIPMENT STH 181 & STATE FAIR GATE 4 DRIVEWAY

	SPV.0105.3030 REMOVE VIDEO DETECTION EQUIPMENT
LOCATION	LS
STH 181 (S. 84TH STREET) & STATE FAIR GATE 4 DRIVEWAY	1
TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE FROM TO LF CB1 SB3 (V1) 260 SB7 (V2) 119 CB1 CB1 SB4 (V3) 180 *** TOTAL 559 *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

		INSTALL CAT 5E CABLE	
FROM	TO	<u>LF</u>	
CB1 CB1 CB1	SB3 (V1) SB7 (V2) SB4 (V3)	260 119 180	
	*** TOTAL	559	
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE			

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS STH 181 & STATE FAIR GATE 4 DRIVEWAY

	SPV.0105.3116
	TRANSPORTING AND INSTALLING
	STATE FURNISHED ADAPTABLE
	TRAFFIC SIGNAL CAMERAS
LOCATION	LS
STH 181 (S. 84TH STREET) & STATE FAIR GATE 4 DRIVEWAY	1
TOTAL	1

PAGE 1 OF 1

PROJECT NO: 1060-33-97

HWY: STH 181

COUNTY: MILWAUKEE

SPV.0090.3002

MISCELLANEOUS QUANTITIES

PLOT BY : MSCCEJ

SHEET:

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\030925_mq_sp.ppt

PLOT DATE: 1/31/2014 4:25:04 AM

PLOT NAME: 030925_mq_sp1

STH 181 & W. SCHLINGER AVENUE / STATE

^	
u	
	3

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY	
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	QUANTITY	UNIT	DESCRIPTION
•			
	918	LF	CAMERA POWER CABLE
	922	LF	CAT 5E CABLE
	1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS

REMOVE VIDEO DETECTION EQUIPMENT STH 181 & SCHLINGER AVENUE / STATE FAIR GATE 5 DRIVEWAY

	SPV.0105.3031 REMOVE VIDEO DETECTION EQUIPMENT
LOCATION	LS
STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE / STATE FAIR GATE 5 DRIVEWAY	1
TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM

CB1 CB1 CB1

	SPV.0090.3001 INSTALL CAMERA POWER CABLE
ТО	LF
SB8 (V1)	228
SB3 (V2)	250
SB5 (V3)	329

111

918

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SB1 (V4)

*** TOTAL

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3002

		INSTALL CAT 5E
		CABLE
FROM	TO	LF
CB1	SB8 (V1)	228
CB1	SB3 (V2)	250
CB1	SB5 (R1)	259
SB5 (R1)	SB5 (V3)	74
CB1	SB1 (V4)	111
	*** TOTAL	922

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS STH 181 & SCHLINGER AVENUE / STATE FAIR GATE 5 DRIVEWAY

	SPV.0105.3117
	TRANSPORTING AND INSTALLING
	STATE FURNISHED ADAPTABLE
	TRAFFIC SIGNAL CAMERAS
LOCATION	LS
STH 181 (S. 84TH STREET) & W. SCHLINGER AVENUE / STATE FAIR GATE 5 DRIVEWAY	1
TOTAL	1

PAGE 1 OF 1

HWY: STH 181 SHEET: COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES PROJECT NO: 1060-33-97

	UMMARY (OF STATE FL	JRNISHED MATERIA	ALS - FOR INFORM	/ATION ONLY
--	----------	-------------	------------------	------------------	-------------

QUANTITY	UNIT	DESCRIPTION
505	LF	CAMERA POWER CABLE
505	LF	CAT-5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS

REMOVE VIDEO DETECTION EQUIPMENT IH 94 EB RAMPS & STH 181

	LOCATION	SPV.0105.3032 REMOVE VIDEO DETECTION EQUIPMENT LS
=	IH 94 EB RAMPS & STH 181 (S. 84TH STREET)	1
	TOTAL	

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	ТО	SPV.0090.3001 INSTALL CAMERA POWER CABLE LF
004	\\/\D4 (\\/4\)	074
CB1	WP4 (V1)	271
CB1	WP8 (V2)	69
CB1	WP2 (V3)	165
	*** TOTAL	505

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

		SPV.0090.3002 INSTALL CAT-5E CABLE
FROM	TO	LF
CB1	WP4 (V1)	271
CB1	WP8 (V2)	69
CB1	WP2 (V3)	165
	*** TOTAL	505
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE		

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS IH 94 EB RAMPS & STH 181

	SPV.0105.3118
	TRANSPORTING AND INSTALLING
	STATE FURNISHED ADAPTABLE
	TRAFFIC SIGNAL CAMERAS
LOCATION	LS
IH 94 EB RAMPS & STH 181 (S. 84TH STREET)	1
TOTAL	1

PAGE 1 OF 1

HWY: IH 94 MISCELLANEOUS QUANTITIES SHEET: COUNTY: MILWAUKEE PROJECT NO: 1060-33-97

FILE NAME : W:\Cadd\Final\10603397_IC2\Roads\cds\030945_mq_sp.ppt

PLOT DATE: 1/31/2014 4:25:47 AM

PLOT BY : MSCCEJ

PLOT NAME: 030945_mq_sp1

REMOVE VIDEO DETECTION EQUIPMENT
IH 94 WB RAMPS & STH 181

SPV.0090.3002

QUANTITY	UNIT	DESCRIPTION	
648	LF	CAMERA POWER CABLE	
648	LF	CAT-5E CABLE	
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS	

	SPV.0105.3033
	REMOVE VIDEO
	DETECTION EQUIPMENT
LOCATION	LS
IH 94 WB RAMPS & STH 181	1
TOTAL	1

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

FROM	TO	SPV.0090.3001 INSTALL CAMERA POWER CABLE LF
FROIVI	10	LF
CB1 CB1 CB1	WP4 (V1) WP9 (V2) WP5 (V3)	220 236 192
	*** TOTAL	648

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

	INSTALL CAT-5E
	INSTALL CAT-SE
	CABLE
TO	LF
WP4 (V1)	220
WP9 (V2)	236
WP5 (V3)	192
_	
*** TOTAL	648
QUANTITIES SHO	OWN ELSEWHERE
	WP4 (V1) WP9 (V2) WP5 (V3) *** TOTAL

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS IH 94 WB RAMPS & STH 181

	SPV.0105.3119
	TRANSPORTING AND INSTALLING
	STATE FURNISHED ADAPTABLE
	TRAFFIC SIGNAL CAMERAS
LOCATION	LS
IH 94 WB RAMPS & STH 181	1
TOTAL	1

PAGE 1 OF 1

PROJECT NO: 1060-33-97 HWY: IH 94 COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: **E**

					1ATION ONLY	

QUANTITY	UNIT	DESCRIPTION	
1330	LF	CAMERA POWER CABLE	
1198	LF	CAT-5E CABLE	
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS	

REMOVE VIDEO DETECTION EQUIPMENT WATERTOWN PLANK ROAD & SWAN BOULEVARD / INNOVATION DRIVE

SPV.0105.3034 REMOVE VIDEO DETECTION EQUIPMENT LOCATION LS W. WATERTOWN PLANK ROAD & SWAN BOULEVARD / INNOVATION DRIVE 1 TOTAL

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE FROM TO LF 391 CB1 SB10 (V1) CB1 SB3 (V2) 329 CB1 447 SB6 (V3) CB1 SB14 (V4) 163 *** TOTAL 1330

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3002

INSTALL CAT-5E CABLE LF FROM TO CB1 SB11 (R1) 296 SB11 (R1) SB10 (V1) 150 CB1 SB3 (R2) 234 SB3 (R2) SB3 (V2) 99 SB3 (R2) SB6 (V3) 256 CB1 SB14 (V4) 163 *** TOTAL 1198 *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS WATERTOWN PLANK ROAD & SWAN BOULEVARD / INNOVATION DRIVE

SPV.0105.3120 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS LOCATION LS W. WATERTOWN PLANK ROAD & SWAN BOULEVARD / INNOVATION DRIVE 1 TOTAL

PAGE 1 OF 1

PROJECT NO: 1060-33-97

HWY: W. WATERTOWN PLANK ROAD COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

PLOT BY : MSCCEJ

SHEET:

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\031115_mq_sp.ppt

PLOT DATE: 1/31/2014 4:26:30 AM

PLOT NAME: 031115_mq_sp1

W. WATERTOWN PLANK ROAD &

	TE ELIDAJOLIED MA TEDIA I C	COD INTEGRAL TION CALLY
SUMMARY OF STA	TE FURNISHED MATERIALS	S - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
4222	15	CAMERA POWER CARLE
1223	LF	CAMERA POWER CABLE
1294	LF	CAT-5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS

REMOVE VIDEO DETECTION EQUIPMENT W. WATERTOWN PLANK ROAD & DISCOVERY PARKWAY

LOCATION	SPV.0105.3035 REMOVE VIDEO DETECTION EQUIPMENT LS
W. WATERTOWN PLANK ROAD & DISCOVERY PARKWAY	1
TOTAL	

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE FROM TO LF CB1 SB12 (V1) 286 CB1 SB6 (V2) 340 SB9 (V3) CB1 201 CB1 SB2 (V4) 406 *** TOTAL 1233

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

INSTALL CAT-5E CABLE FROM TO LF CB1 SB12 (V1) 286 CB1 SB6 (R1) 245 SB6 (R1) SB6 (V2) 99 201 CB1 SB9 (V3) CB1 SB12 (R2) 191 SB12 (R2) SB2 (V4) 272 *** TOTAL 1294

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS W. WATERTOWN PLANK ROAD & DISCOVERY PARKWAY

SPV.0105.3121 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS LOCATION LS W. WATERTOWN PLANK ROAD & DISCOVERY PARKWAY TOTAL

PAGE 1 OF 1

PROJECT NO: 1060-33-97

HWY: W. WATERTOWN PLANK ROAD COUNTY: MILWAUKEE

SPV.0090.3002

MISCELLANEOUS QUANTITIES

SHEET:

PLOT SCALE: 1:1

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\031125_mq_sp.ppt

PLOT DATE: 1/31/2014 4:26:51 AM

PLOT BY : MSCCEJ

PLOT NAME: 031125_mq_sp1

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SUMMART UFSTA	LE LOKINIOUED INV LEKIATO	- FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1340	LF	CAMERA POWER CABLE
1155	LF	CAT-5E CABLE
1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS

REMOVE VIDEO DETECTION EQUIPMENT W. WATERTOWN PLANK ROAD & N. 92ND STREET

SPV.0105.3036 REMOVE VIDEO DETECTION EQUIPMENT LOCATION LS W. WATERTOWN PLANK ROAD & N. 92ND STREET 1 TOTAL

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

		SPV.0090.3001 INSTALL CAMERA POWER CABLE		
FROM	ТО	LF		
CB1	SB3 (V1)	205		
CB1	SB12 (V2)	385		
CB1	SB14 (V3)	243		
CB1	SB8 (V4)	507		
	*** TOTAL	1340		
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE				

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

CABLE FROM TO LF CB1 SB3 (V1) 205 CB1 SB12 (R1) 290 SB12 (R1) SB12 (V2) 99 CB1 SB14 (V3) 243 SB12 (R1) SB8 (V4) 318 *** TOTAL 1155

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS W. WATERTOWN PLANK ROAD & N. 92ND STREET

> SPV.0105.3122 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS

LOCATION LS W. WATERTOWN PLANK ROAD & N. 92ND STREET 1 TOTAL

PAGE 1 OF 1

PROJECT NO: 1060-33-97

HWY: W. WATERTOWN PLANK ROAD COUNTY: MILWAUKEE

SPV.0090.3002

INSTALL CAT-5E

MISCELLANEOUS QUANTITIES

SHEET:

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\031135_mq_sp.ppt

PLOT DATE: 1/31/2014 4:27:12 AM

PLOT BY : MSCCEJ

PLOT NAME: 031135_mq_sp1

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

	QUANTITY	UNIT	DESCRIPTION
•			
	1034	LF	CAMERA POWER CABLE
	1064	LF	CAT-5E CABLE
	1	LS	ADAPTABLE TRAFFIC SIGNAL CAMERAS

REMOVE VIDEO DETECTION EQUIPMENT W. WATERTOWN PLANK ROAD & N. 87TH STREET

> SPV.0105.3037 REMOVE VIDEO DETECTION EQUIPMENT

> > 1

LOCATION LS

W. WATERTOWN PLANK ROAD & N. 87TH STREET

TOTAL

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3001 INSTALL CAMERA POWER CABLE LF FROM TO CB1 SB6 (V1) 412 CB1 SB12 (V2) 126 CB1 SB2 (V3) 241 CB1 SB9 (V4) 255 *** TOTAL 1034 *** A DDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE SUPPLIED VIDEO DETECTION CABLE

SPV.0090.3002 INSTALL CAT-5E CARLE

			CABLE
	FROM	TO	LF
•			
	CB1	SB4 (R1)	191
	SB4 (R1)	SB6 (V1)	251
	CB1	SB12 (V2)	126
	CB1	SB2 (V3)	241
	CB1	SB9 (V4)	255
		*** TOTAL	1064

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS W. WATERTOWN PLANK ROAD & N. 87TH STREET

> SPV.0105.3123 TRANSPORTING AND INSTALLING STATE FURNISHED ADAPTABLE TRAFFIC SIGNAL CAMERAS

> > LS

W. WATERTOWN PLANK ROAD & N. 87TH STREET 1 TOTAL

PAGE 1 OF 1

PROJECT NO: 1060-33-97

HWY: W. WATERTOWN PLANK ROAD COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET:

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\031145_mq_sp.ppt

PLOT DATE: 1/31/2014 4:27:34 AM

PLOT BY : MSCCEJ

PLOT NAME: 031145_mq_sp1

LOCATION

1	
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STH 100 COMMUNICATIONS **ALL ITEMS ARE CATEGORY 1500** INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET STH 100 & CTH NN *** SPV.0105.3130 LOCATION LS TRAFFIC SIGNAL INTERCONNECT CB1 (S1073) 670.0100.3001 678.0500.3001 TOTAL FIELD SYSTEM COMMUNICATION 670.0200.3001 ITS DOCUMENTATION SYSTEM TESTING INTEGRATOR *** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS LOCATION LS LS LS SUMMARY OF STATE FURNISHED MATERIALS 1060-33-97 CATEGORY 1500 STH 100 QUANTITY UNIT DESCRIPTION *** TOTALS PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT 432 EACH ETHERNET SWITCH *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE SUMMARY OF CONTRACTOR FURNISHED MATERIALS QUANTITY UNIT DESCRIPTION LF ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT 2 242 LF TRACER WIRE EACH CAT-5E CABLE 1-METER INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET STH 100 & W. NATIONAL AVENUE *** SPV.0105.3131 LOCATION LS FIBER OPTIC CB1 (S1072) 678.0300 TOTAL FIBER OPTIC SPLICE *** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS LOCATION **EACH** SUMMARY OF STATE FURNISHED MATERIALS EXCV5101 2 EXCV5201 16 QUANTITY UNIT DESCRIPTION EXCV5202 14 PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT 398 LF *** TOTAL 32 EACH ETHERNET SWITCH *** ADDITIONAL QUANTITIES SHOWN ELSEWHERE SUMMARY OF CONTRACTOR FURNISHED MATERIALS DESCRIPTION QUANTITY UNIT 2 LF ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT 256 LF TRACER WIRE EACH CAT-5E CABLE 1-METER PAGE 1 OF 2

PROJECT NO: 1060-33-97

HWY: STH 100

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

STH 100 COMMUNICATIONS

ALL ITEMS ARE CATEGORY 1500

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET STH 100 & W. CLEVELAND AVENUE

TRACER WIRE

CAT-5E CABLE 1-METER

	*** SPV.0105.3132
LOCATION	LS
CB1 (S1104)	1
TOTAL	1

2

477

LF

EACH

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

	QUANTITY	UNIT	DESCRIPTION
	619 1	LF EACH	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT ETHERNET SWITCH
		SUM	IMARY OF CONTRACTOR FURNISHED MATERIALS
_	QUANTITY	UNIT	DESCRIPTION

ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET STH 100 & W. LINCOLN AVENUE

		*** SPV.0105.3133
	LOCATION	LS
•	CB1 (S1088)	1
	TOTAL	1

122

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
240 1	LF EACH	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT ETHERNET SWITCH
	SUN	IMARY OF CONTRACTOR FURNISHED MATERIALS
QUANTITY	UNIT	DESCRIPTION
2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT

TRACER WIRE

CAT-5E CABLE 1-METER

EACH

PAGE 2 OF 2

SHEET: HWY: STH 100 MISCELLANEOUS QUANTITIES PROJECT NO: 1060-33-97 COUNTY: MILWAUKEE

FILE NAME: W:\Cadd\Final\10603397_IC2\Roads\cds\032100_co_sp.ppt PLOT DATE: 1/31/2014 4:47:53 AM PLOT BY : MSCCEJ PLOT NAME : 032100_co_sp2 PLOT SCALE : 1:1

ALL ITEMS ARE CATEGORY 1500

USH 18 COMMUNICATIONS

3

TRAFFIC SIGNAL INTERCONNECT

LOCATION	670.0100.3002 FIELD SYSTEM INTEGRATOR LS	670.0200.3002 ITS DOCUMENTATION LS	678.0500.3002 COMMUNICATION SYSTEM TESTING LS
1060-33-97 CATEGORY 1500 USH 18	1	1	1
*** TOTALS	1	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FIBER OPTIC

LOCATION	678.0300 FIBER OPTIC SPLICE EACH	
VC CV114	2	
*** TOTAL	2	

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET PILGRIM PARKWAY & WATERTOWN PLANK ROAD

	*** SPV.0105.3134
LOCATION	LS
CB1 (LOCAL)	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

 QUANTITY	UNIT	DESCRIPTION
350	LF	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT
1	EACH	ETHERNET SWITCH

SUMMARY OF CONTRACTOR FURNISHED MATERIALS

 QUANTITY	UNIT	DESCRIPTION
2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT
232	LF	TRACER WIRE
2	EACH	CAT-5E CABLE 1-METER

PAGE 1 OF 1

PROJECT NO: 1060-33-97

HWY: USH 18

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET:

FILE NAME : W:\Cadd\Final\10603397_IC2\Roads\cds\032200_co_sp.ppt

PLOT DATE: 1/31/2014 4:48:15 AM

PLOT BY : MSCCEJ

PLOT NAME: 032200_co_sp1

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CTH Y COMMUNICATIONS **ALL ITEMS ARE CATEGORY 1500**

	670.0100.3003		678.0500.3003
	FIELD SYSTEM	670.0200.3003	COMMUNICATION
	INTEGRATOR	ITS DOCUMENTATION	SYSTEM TESTING
LOCATION	LS	LS	LS
1060-33-97 CATEGORY 1500 CTH Y	1	1	1
*** TOTALS	1	1	1

*** A DDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL 5.8 GHZ ETHERNET BRIDGE

SPV.0060.2003 INSTALL 5.8 GHZ ETHERNET BRIDGE LOCATION EACH SB2 (DAVIDSON) SB12 (WATER TOWER) 2 SB11 (SWENSON) SB20 (S0446)

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL ETHERNET SWITCH

675.0400.S
INSTALL ETHERNET SWITCH

LOCATION	EACH
CD4 (D4) (IDCON)	4
CB1 (DAVIDSON) CB1 (WATER TOWER)	1
CB1 (SWENSON)	1
*** TOTAL	3

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FIBER OPTIC

	678.0300			
	FIBER OPTIC			
	SPLICE			
LOCATION	EACH			
CV1	2			
*** TOTAL	2			
** A DOMINAL OLIANT	THE CHOWN ELCENTIEDE			

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

HWY: CTH Y

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET IH 94 WB OFF RAMP & CTH Y

	*** SPV.0105.3135
LOCATION	LS
CB1 (S0446)	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
154	LF	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT
1	EACH	ETHERNET SWITCH

SUMMARY OF CONTRACTOR FURNISHED MATERIALS

_	QUANTITY	UNIT	DESCRIPTION
	2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT
	36	LF	TRACER WIRE
	2	EACH	CAT-5E CABLE 1-METER

PAGE 1 OF 1

FILE NAME : W:\Cadd\Final\10603397_IC2\Roads\cds\032400_co_sp.ppt

PROJECT NO: 1060-33-97

COUNTY: WAUKESHA PLOT DATE: 1/31/2014 4:48:36 AM

MISCELLANEOUS QUANTITIES

PLOT NAME: 032400_co_sp1

SHEET:

PLOT BY : MSCCEJ

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								ALL ITEMS ARE CATEGORY	1500
						INSTALL FIBER OPT	TC COMMUNICA	ATIONS IN CABINET STH 59 & CTH Y	
						LOCATION	** SPV.0105.31 LS	136 	
TRAFFIC	C SIGNAL INTERCONNECT					CB1 (S0411)	1		
		670.0100.3004 FIELD SYSTEM	670.0200.3004	678.0500.3004 COMMUNICATION		TOTAL	1		
	LOCATION	INTEGRATOR ITS	DOCUMENTATION LS	SYSTEM TESTING LS		*** PAY ITEM INCLUI	DES INSTALLA	TION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIAL	.S
1060	0-33-97 CATEGORY 1500						:	SUMMARY OF STATE FURNISHED MATERIALS	<u></u>
	STH 59 - 1	1	1	1		QUANTITY	UNIT	DESCRIPTION	
*** ADD	*** TOTALS ITIONAL QUANTITIES SHOWN	1 I ELSEWHERE	1	1		154 1	LF EACH	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT ETHERNET SWITCH	
							SUM	/IMARY OF CONTRACTOR FURNISHED MATERIALS	
						QUANTITY	UNIT	DESCRIPTION	
						2 36 2	LF LF EACH	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT TRACER WIRE CAT-5E CABLE 1-METER	
	FIBER OPTIC								
			.0300			INSTALL FIBER OPTION	C COMMUNICAT	TIONS IN CABINET STH 59 & S. BROOKFIELD ROAD	
	LOCA	SP	OPTIC LICE ACH			LOCATION	* SPV.0105.313 LS	= =	
	EXCV2		2			CB1 (S0735)	1		
	EXCV2 EXCV2		14 14			TOTAL	1	_	
	*** TO	TAL S	30			*** PAY ITEM INCLUD	ES INSTALLAT	TION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIAL:	5
	*** A DDITION	IAL QUANTITIES SHOWN E	ELSEWHERE				S	SUMMARY OF STATE FURNISHED MATERIALS	<u> </u>
						QUANTITY	UNIT	DESCRIPTION	_
	INSTALL 5.8	GHZ ETHERNET BRIDGE SPV.0060	2003			532 1	LF EACH	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT ETHERNET SWITCH	
		INSTALL 5. ETHERNET E	8 GHZ				SUMI	MARY OF CONTRACTOR FURNISHED MATERIALS	
	LOCATIO					QUANTITY	UNIT	DESCRIPTION	<u> </u>
	SB8 (S04	11) 1				2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT	
		1				296 2	LF EACH	TRACER WIRE CAT-5E CABLE 1-METER	
	*** A DDITION	IAL QUANTITIES SHOWN E	ELSEWHERE						PAGE 1 OF 2
PROJECT NO: 1060-33-9	7	HWY: STH 59 - 1		COUNTY: WAL	JKESHA	MISCELLANEC	US QUANT	SH SHOTNIME COSESS AS AND SHOT SOME AND	EET: E

STH 59 - 1 COMMUNICATIONS

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET STH 59 & S. CALHOUN ROAD

	*** SPV.0105.3138
LOCATION	LS
CB1 (LOCAL)	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
384	LF	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT
1	EACH	ETHERNET SWITCH
	SUN	MMARY OF CONTRACTOR FURNISHED MATERIALS
QUANTITY	UNIT	DESCRIPTION
2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT
148	LF	TRACER WIRE

CAT-5E CABLE 1-METER

PAGE 2 OF 2

HWY: STH 59 - 1 MISCELLANEOUS QUANTITIES SHEET: COUNTY: WAUKESHA PROJECT NO: 1060-33-97 PLOT NAME: 032500_co_sp2

TRAFFIC SIGNAL INTERCONNECT

LOCATION	670.0100.3005 FIELD SYSTEM INTEGRATOR LS	670.0200.3005 ITS DOCUMENTATION LS	678.0500.3005 COMMUNICATION SYSTEM TESTING LS
1060-33-97 CATEGORY 1500 STH 59 - 2	1	1	1
*** TOTALS	1	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAGE 1 OF 1

PROJECT NO: 1060-33-97 HWY: STH 59 - 2 COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: I

PLOT NAME: 032600_co_sp1

W. NATIONAL AVENUE COMMUNICATIONS
ALL ITEMS ARE CATEGORY 1500

TRAFFIC SIGNAL II	NTERCONNECT
-------------------	-------------

		670.0100.3006 FIELD SYSTEM INTEGRATOR	670.0200.3006	678.0500.3006 COMMUNICATION SYSTEM TESTING
_	LOCATION	LS	LS	LS
	1060-33-97 CATEGORY 1500 W. NATIONAL AVENUE	1	1	1
	*** TOTALS	1	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL ETHERNET SWITCH

675.0400.S INSTALL ETHERNET SWITCH

	INSTALL ETHERNET SWITCH
LOCATION	EACH
CB1 (LINCOLN)	1
CB2 (92ND)	1
CB2 (BECHER)	1
CB2 (BECHER & 92ND)	1
CB2 (LINCOLN & 92ND)	1
CB2 (LINCOLN & 90TH)	1
*** TOTAL	6

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL 5.8 GHZ ETHERNET BRIDGE

SPV.0060.2003 INSTALL 5.8 GHZ ETHERNET BRIDGE

LOCATION	EACH
SB1 (LINCOLN)	1
SB10 (LINCOLN)	1
SB3 (92ND)	1
SB5 (92ND)	1
SB7 (92ND)	1
SB1 (BECHER)	1
SB9 (BECHER & 92ND)	1
SB14 (LINCOLN & 92ND)	1
SB16 (LINCOLN & 92ND)	1
SB11 (LINCOLN & 90TH)	1
	10

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAGE 1 OF 1

SHEET:

PROJECT NO: 1060-33-97 HWY: W, NATIONAL AVENUE COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES

STH 181 COMMUNICATIONS **ALL ITEMS ARE CATEGORY 1500**

TRAFFIC SIGNAL INTERCONNECT

	670.0100.3007 FIELD SYSTEM INTEGRATOR	670.0200.3007 ITS DOCUMENTATION	678.0500.3007 COMMUNICATION SYSTEM TESTING
LOCATION	LS	LS	LS
1060-33-97 CATEGORY 1500 STH 181	1	1	1
*** TOTALS	1	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL ETHERNET SWITCH

675.0400.S INSTALL ETHERNET SWITCH

	INDIALL LITILITIAL TOWN OF
LOCATION	EACH
CB1 (NATIONAL)	1
CB2 (LAPHAM)	1
CB1 (S1388)	1
*** TOTAL	3

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL 5.8 GHZ ETHERNET BRIDGE

	SPV.0060.2003 INSTALL 5.8 GHZ ETHERNET BRIDGE
LOCATION	EACH EACH
SB5 (NATIONAL)	1
SB14 (LAPHAM)	2
SB11 (S1388)	1
	4

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAGE 1 OF 1

PROJECT NO: 1060-33-97

HWY: STH 181

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET:

FILE NAME : W:\Cadd\Final\10603397_IC2\Roads\cds\032800_co_sp.ppt

PLOT DATE: 1/31/2014 4:50:01 AM

PLOT BY : MSCCEJ

PLOT NAME: 032800_co_sp1

PLOT SCALE: 1:1

W. WATERTOWN PLANK ROAD COMMUNICATIONS

ALL ITEMS ARE CATEGORY 1500

3

TRAFFIC SIGNAL INTERCONNECT

LOCATION	670.0100.3008 FIELD SYSTEM INTEGRATOR LS	670.0200.3008 ITS DOCUMENTATION LS	678.0500.3008 COMMUNICATION SYSTEM TESTING LS
1060-33-97 CATEGORY 1500 W. WATERTOWN PLANK ROAD	1	1	1
*** TOTALS	1	1	1

^{***} ADDITIONAL QUANTITIES SHOWN ELSEWHERE

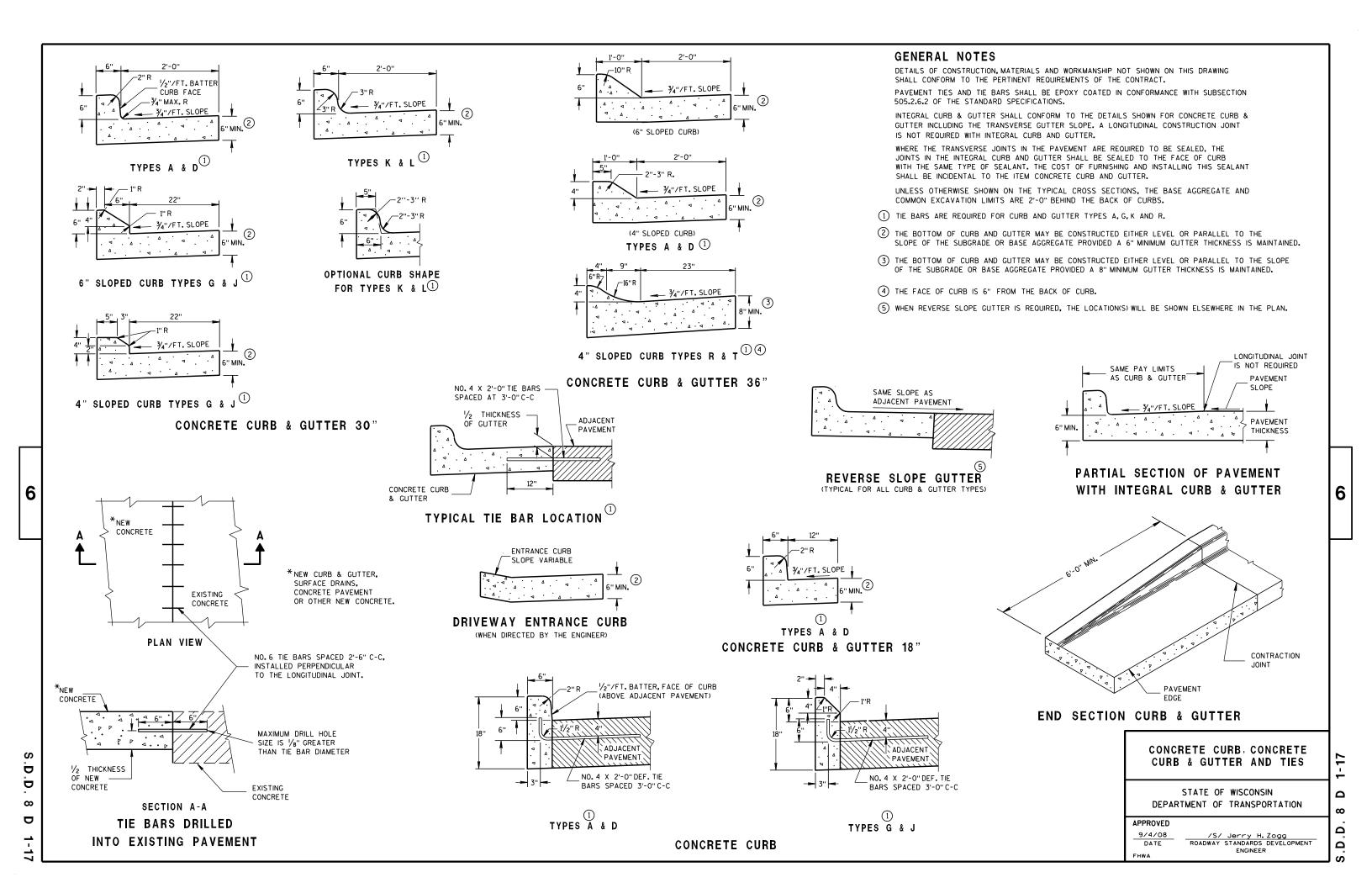
PAGE 1 OF 1

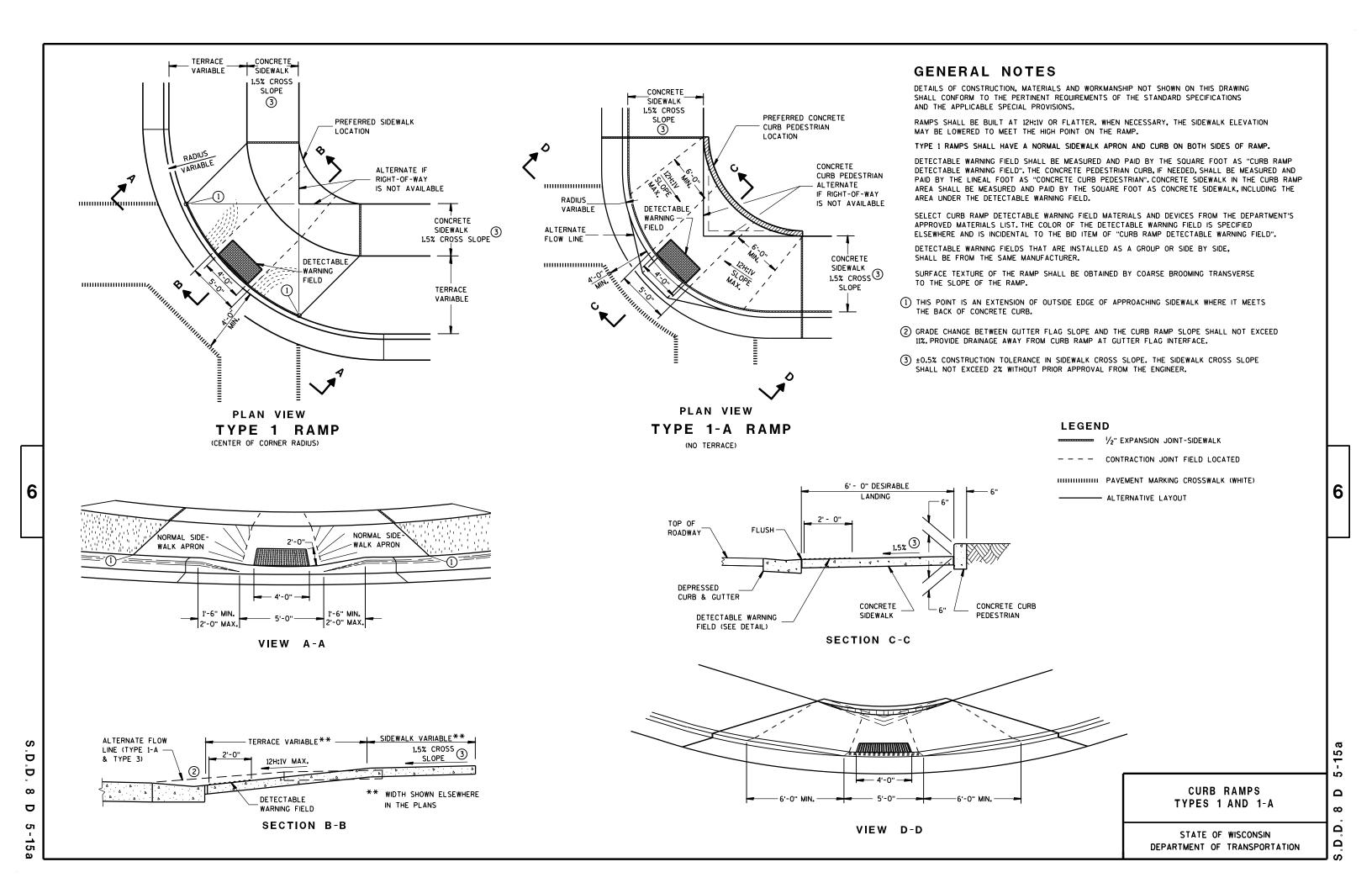
PROJECT NO: 1060-33-97 HWY: W. WATERTOWN PLANK ROAD COUNTY: MILWAUKEE MISCELLANEOUS QUANTITIES SHEET: I

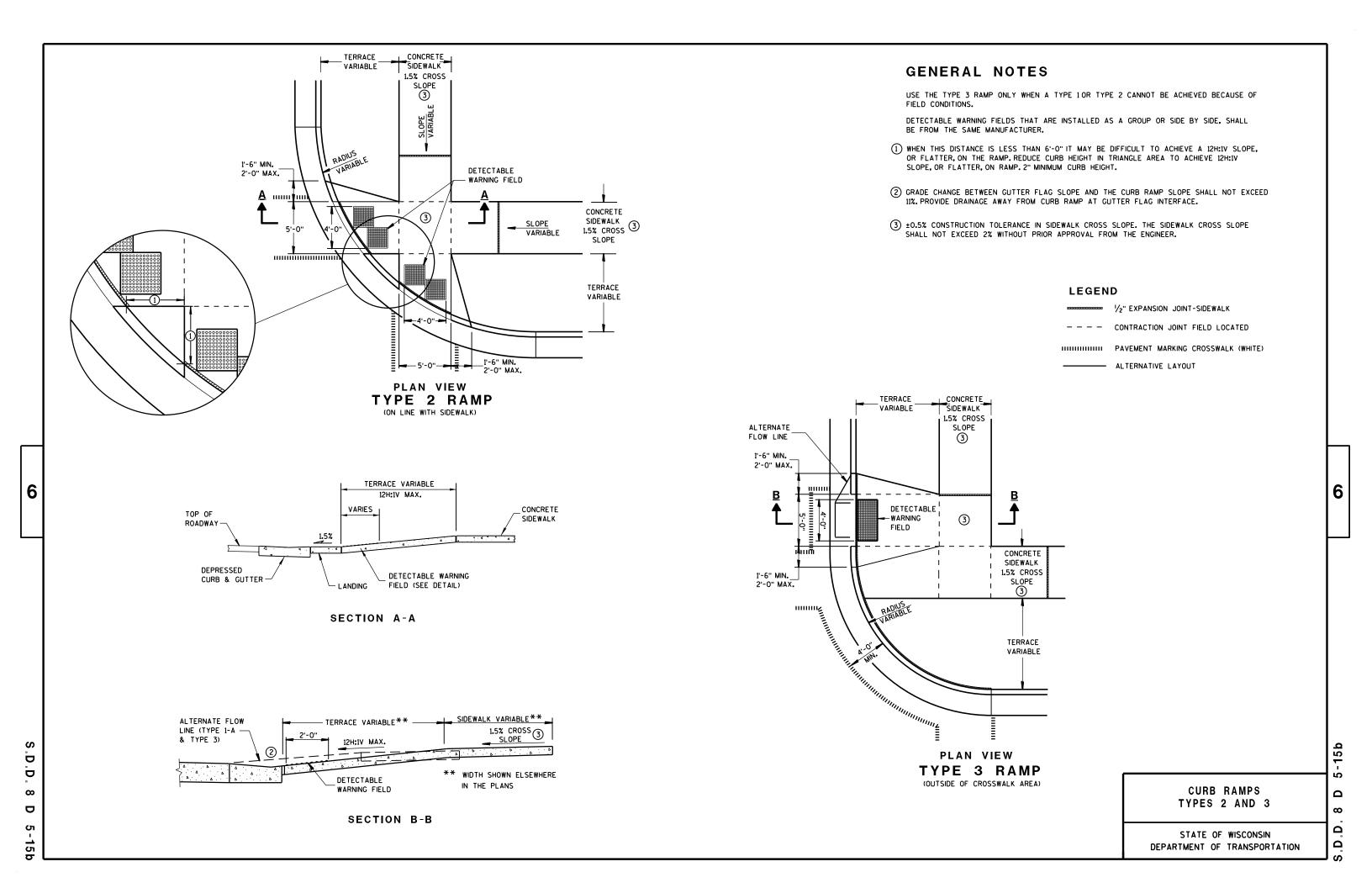
PLOT NAME: 032900_co_sp1

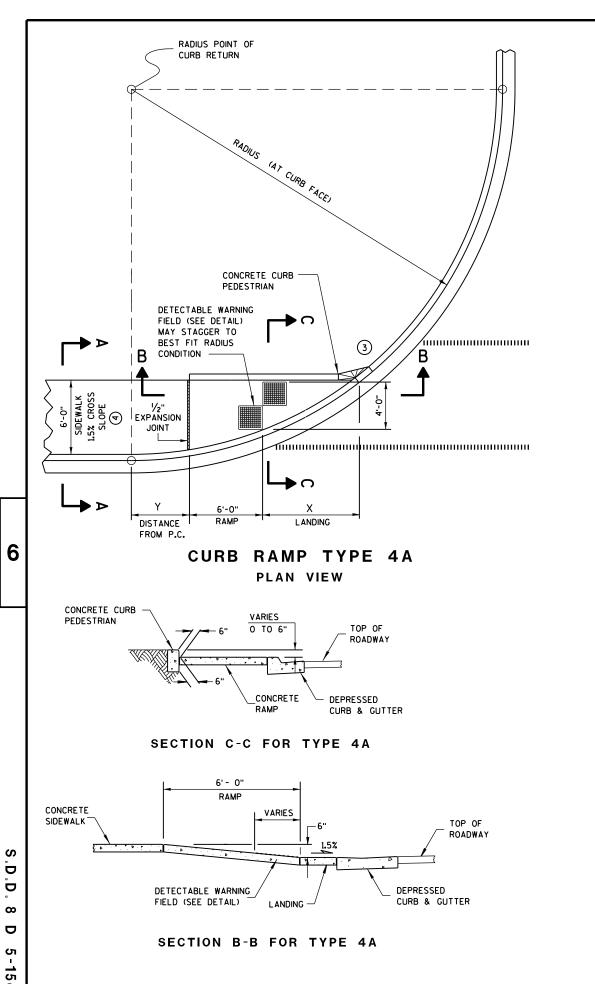
Standard Detail Drawing List

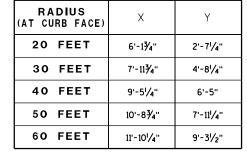
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-07	CONDUI T
09B04-10	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09C03-03	TRANSFORMER/PEDESTAL BASES
09D01-04	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-02	SIGNAL OR LIGHTING CONTROL CABINET
09E01-12B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-12G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E07-05	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B47-01A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-01B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-01C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C24-02	36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE
15C27-01	DOUBLE ARROW WARNING SIGN PLACEMENT
15C28-02	SIGNING AND MARKING FOR COMBINATION RIGHT TURN AND BYPASS LANE
15D12-03	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.
15D20-02	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE











GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE.

4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS

SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

ISOMETRIC VIEW FOR TYPE 4A

ISOMETRIC VIEW FOR TYPE 4A1

₩ 1/2" EXPANSION JOINT-SIDEWALK

HIHIHIHIH PAVEMENT MARKING CROSSWALK (WHITE)

CONTRACTION JOINT FIELD LOCATED

CURB RAMPS

TYPES 4A AND 4A1

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

LEGEND

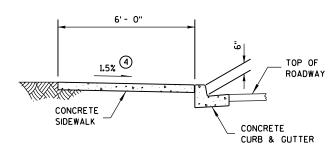
OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

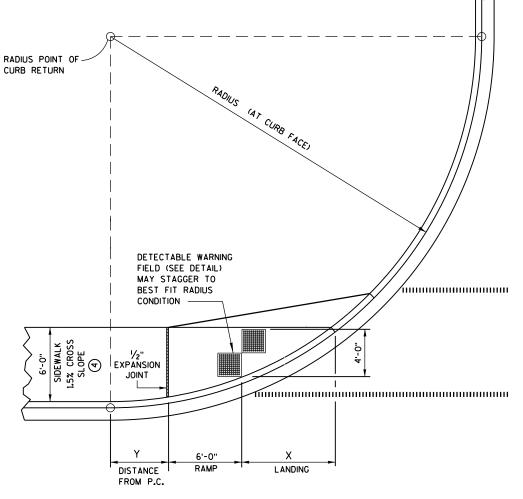
(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

SHALL BE FROM THE SAME MANUFACTURER.

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

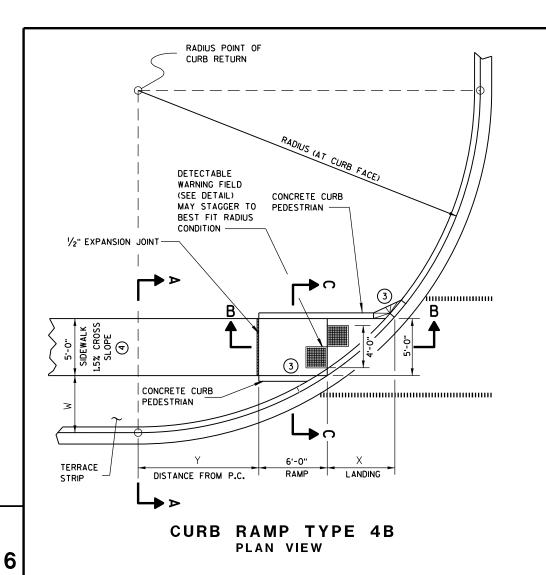


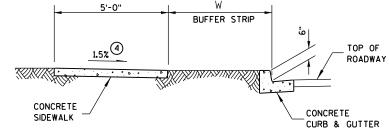
CURB RAMP TYPE 4A1
PLAN VIEW

15c

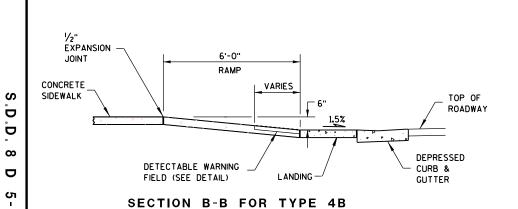
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D.D. 8 D 5





SECTION A-A FOR TYPE 4B



LEGEND

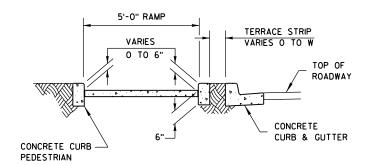
1/2" EXPANSION JOINT-SIDEWALK

---- CONTRACTION JOINT FIELD LOCATED

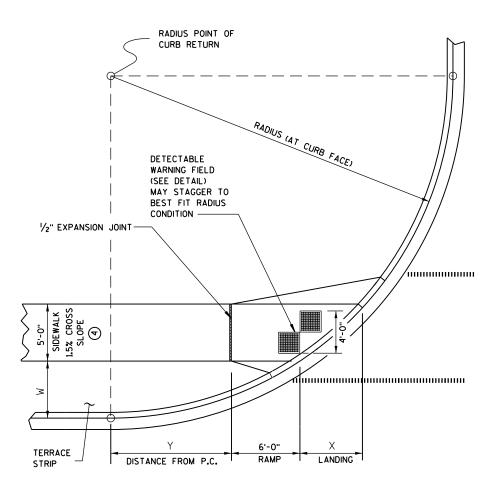
HIHIHIHIH PAVEMENT MARKING CROSSWALK (WHITE)

RADIUS	W =	3' - 0"	W =	4' - Ø"	W =	5′ - 0"	W =	6′ - Ø"	W =	7' - 0"
(AT CURB FACE)	Х	Y	X	Y	Х	Y	X	Y	X	Y
20 FEET	5'-51/2"	4'-6'/2"	4'-81/2"	6'-0"	4'-1"	7'-2¾"	3'-7"	8'-3 ¹ /2"	3'-11/2"	9'-21/2"
30 FEET	7'-3¾"	7'-1"	6'-51/2"	8'-11'/2"	5'-91/4"	10'-7"	5'-21/2"	12'-0"	4'-8¾"	13'-3'/4"
40 FEET	8'-91/2"	9'-21/2"	7'-10"	11'-5'/4"	7'-1"	13'-41/2"	6'-5¾"	15'-¾"	5'-111/2"	16'-7'/4"
50 FEET	10'-¾"	11'-¾"	9'-1/4"	13'-7'/4"	8'-21/2"	15'-91/2"	7'-61/2"	17'-9"	6'-11¾"	19'-6'/4"
60 FEET	11'-2'/2"	12'-8¾"	10'-¾"	15'-61/2"	9'-21/4"	17'-11¾"	8'-5 ¾ "	20'-1¾"	7'-101/2"	22'-11/2"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION C-C FOR TYPE 4B



CURB RAMP TYPE 4B1 **PLAN VIEW**

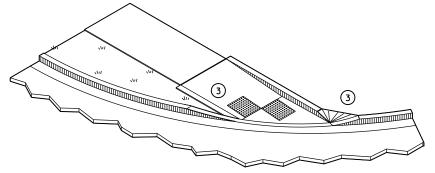
GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

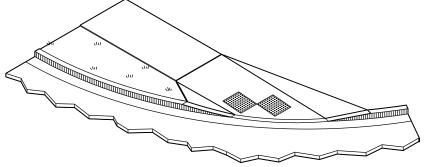
RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE. SHALL BE FROM THE SAME MANUFACTURER.

- (3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.
- 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

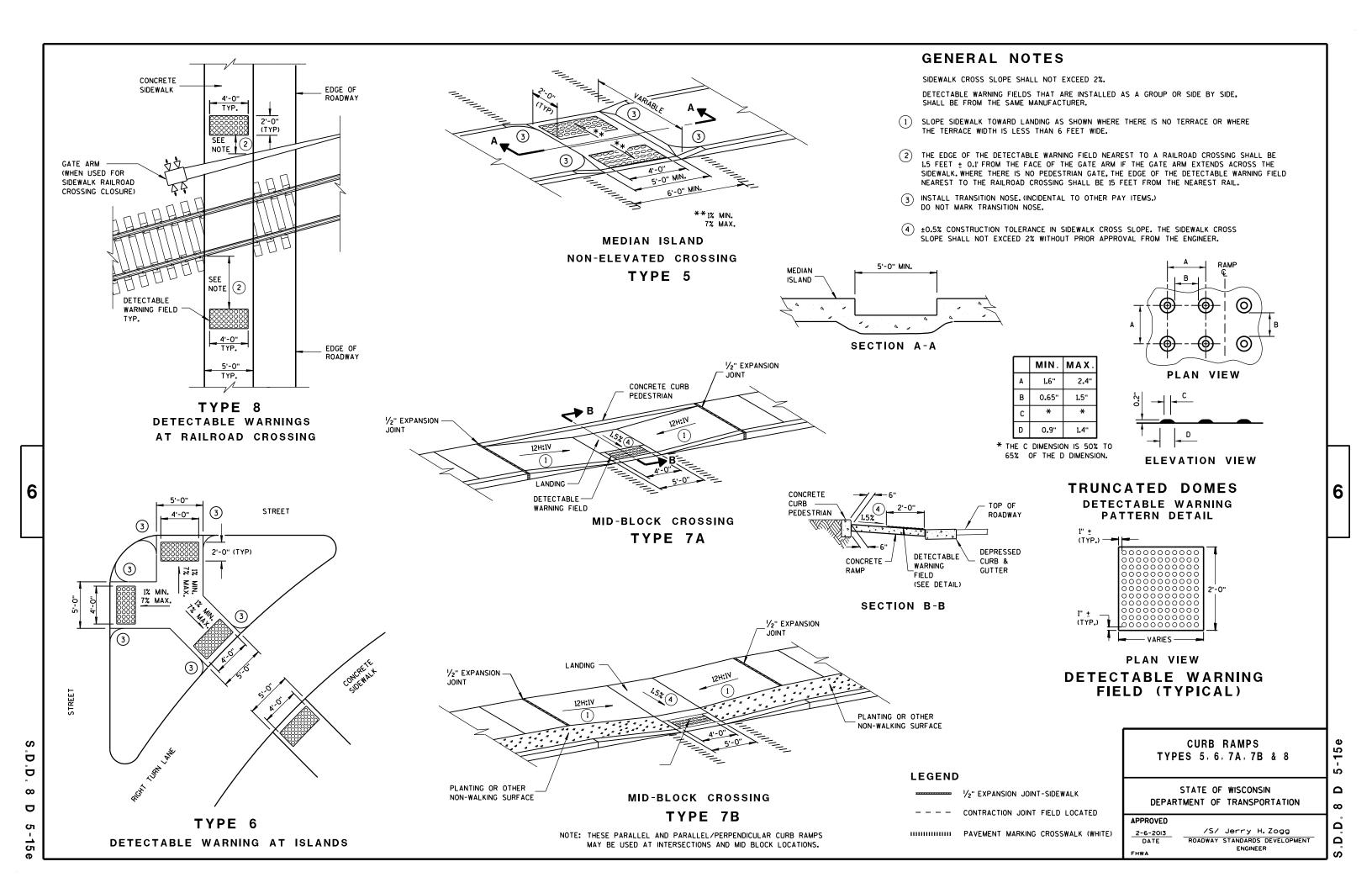
CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION 6

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TYPICAL APPLICATION OF SILT FENCE

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PLAN VIEW SILT FENCE AT MEDIAN SURFACE DRAINS



GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- 2 FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- 3 WOOD POSTS SHALL BE A MINIMUM SIZE OF 11/8" X 11/8" OF OAK OR HICKORY.
- 4) SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- (5) CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)



SILT FENCE

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INLET PROTECTION, TYPE A

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 1) FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- (2) FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- (3) FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE, THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION TYPE A, B, C, AND D

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02

/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER 6

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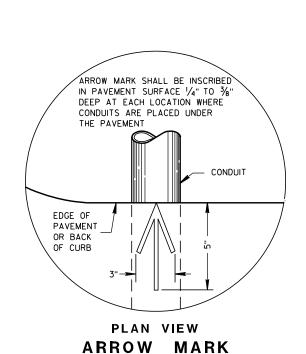
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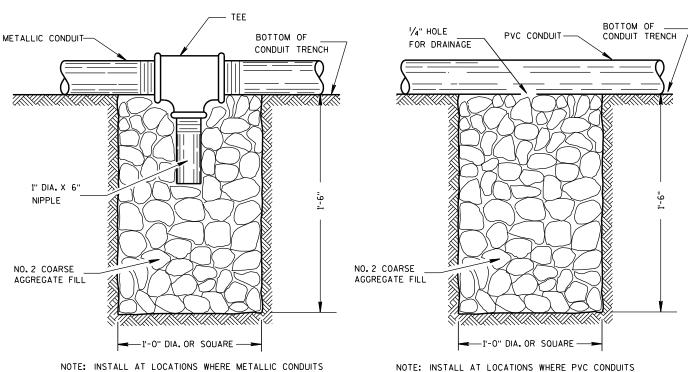
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DRAIN SUMP FOR METALLIC CONDUIT

CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

ARROW MARK INSCRIBED IN PAVEMENT SURFACE OVER ← OF CONDUIT (BOTH ENDS) NORMAL EDGE ÒF PAVEMENT PAVEMENT **PAVEMENT** OR BACK OF CURB BASE COURSE BACKFILL SLOPE 1/8"/FT. EITHER DIRECTION *DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES CONDUIT, PITCH TO DRAIN WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652,2,2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REIN-STALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

POLY ROPE OR A PULL WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

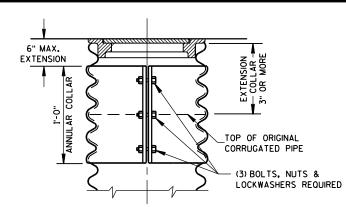
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

/S/ Balu Ananthanarayanan 10/23/03 STATE ELECTRICAL ENGINEER FOR HWYS

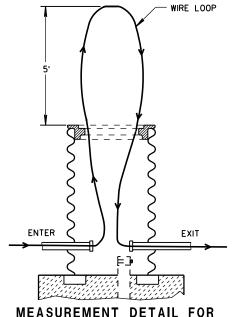
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- * THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.
- NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL



CORRUGATED PIPE EXTENDER

HEAVY DUTY FRAME -

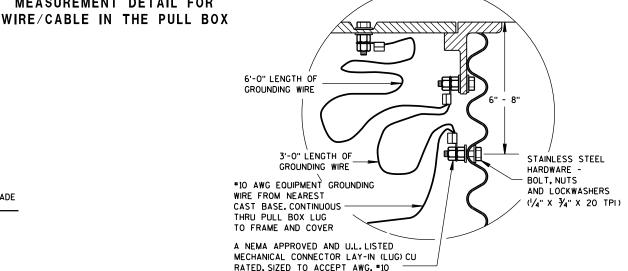


ALTERNATE COVER (LOCKING)

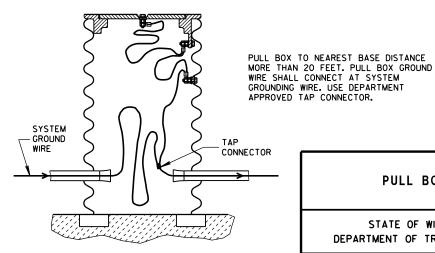
SECTION

воттом

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



EQUIPMENT GROUNDING LUG AND

LOCATION IN STEEL PULL BOXES

TO #4 COPPER STRANDED WIRE

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

FHWA

2-7-2013 /S/ Ahmet Demirbilek DATE STATE ELECTRICAL ENGINEER

PULL BOX

TO THE PULL BOX BID PRICE.

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED

GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED. SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

S.D.D. 9B2. "CONDUIT". APPLIES TO THIS DRAWING.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

AND COVER ELECTRIC WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE FINAL GRADE ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED CUT OPENINGS AS REQUIRED IN THE FIELD 6" MIN. ALL CONDUIT PITCHED (TYP.) TO DRAIN TO PULL BOXES 4 TO 8 BRICKS **EQUALLY SPACED** 2" DRAIN DUCT TO DITCH OR SEWER NO. 2 COARSE WHEN SPECIFIED AGGREGATE 2" PVC PIPE CAP ON BOTH ENDS (SEE SECTION 501 WITH 7,8 1/4" HOLES DRILLED OF THE STANDARD IN EACH END. SPECIFICATIONS) INSTALL END BELLS (U.L. LISTED FOR ELECTRICAL USE) ON ALL NONMETALLIC CONDUIT BEFORE INSTALLATION OF WIRE AND/OR CABLE.

PULL BOX

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CONDUIT WITHIN

6" DIA.

ANCHOR RODS SHALL BE

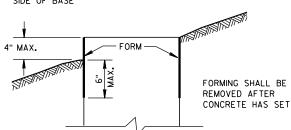
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QUANTITY	CONCRETE BASE TYP				
REQUIREMENTS	1	2	5		
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40		
LBS. OF HOOP BAR STEEL	NONE	23	16		
LBS. OF VERTICAL BAR STEEL	NONE	60	18		

FORMING DETAIL

1'-8"

-CONDUIT

123/4" BOLT

CIRCLE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

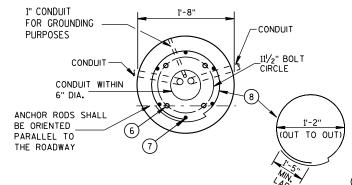
THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

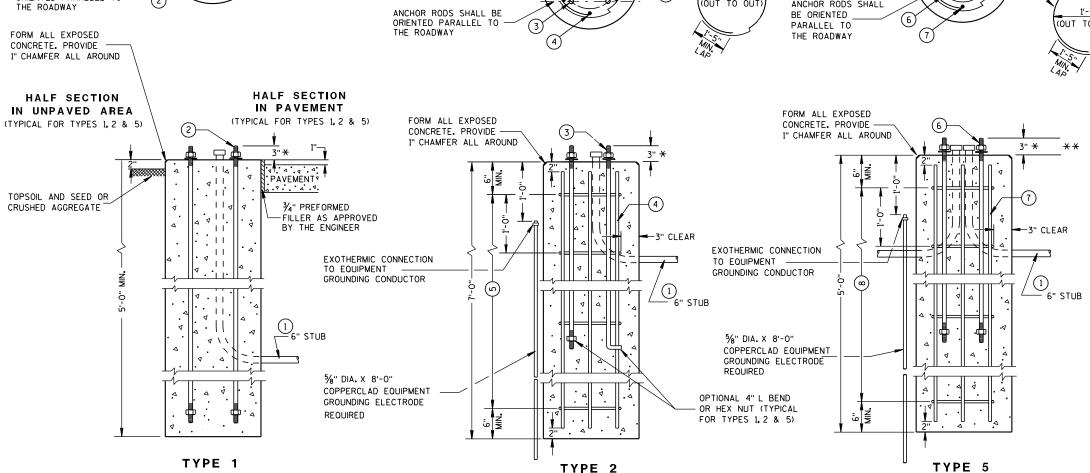
MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

1" CONDUIT FOR GROUNDING -CONDUIT PURPOSES 111/2" BOLT CIRCLE CONDUIT WITHIN 6" DIA. THE ROADWAY





CONCRETE BASES

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USFD.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1FOOT OR LESS.

A NO. 4 AWG. STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2 AND TYPE 5 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD, ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED. THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH, THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

- 1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES, THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.
- (2) (4) 1" DIA. X 3'-6" ANCHOR RODS.
- (3) (4) 1" DIA. X 5'-0" ANCHOR RODS.
- (4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.
- (5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.
- (6) (4) 1" DIA. X 3'-6" ANCHOR RODS.
- (7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.
- (8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

CONCRETE BASES, TYPES 1, 2 & 5

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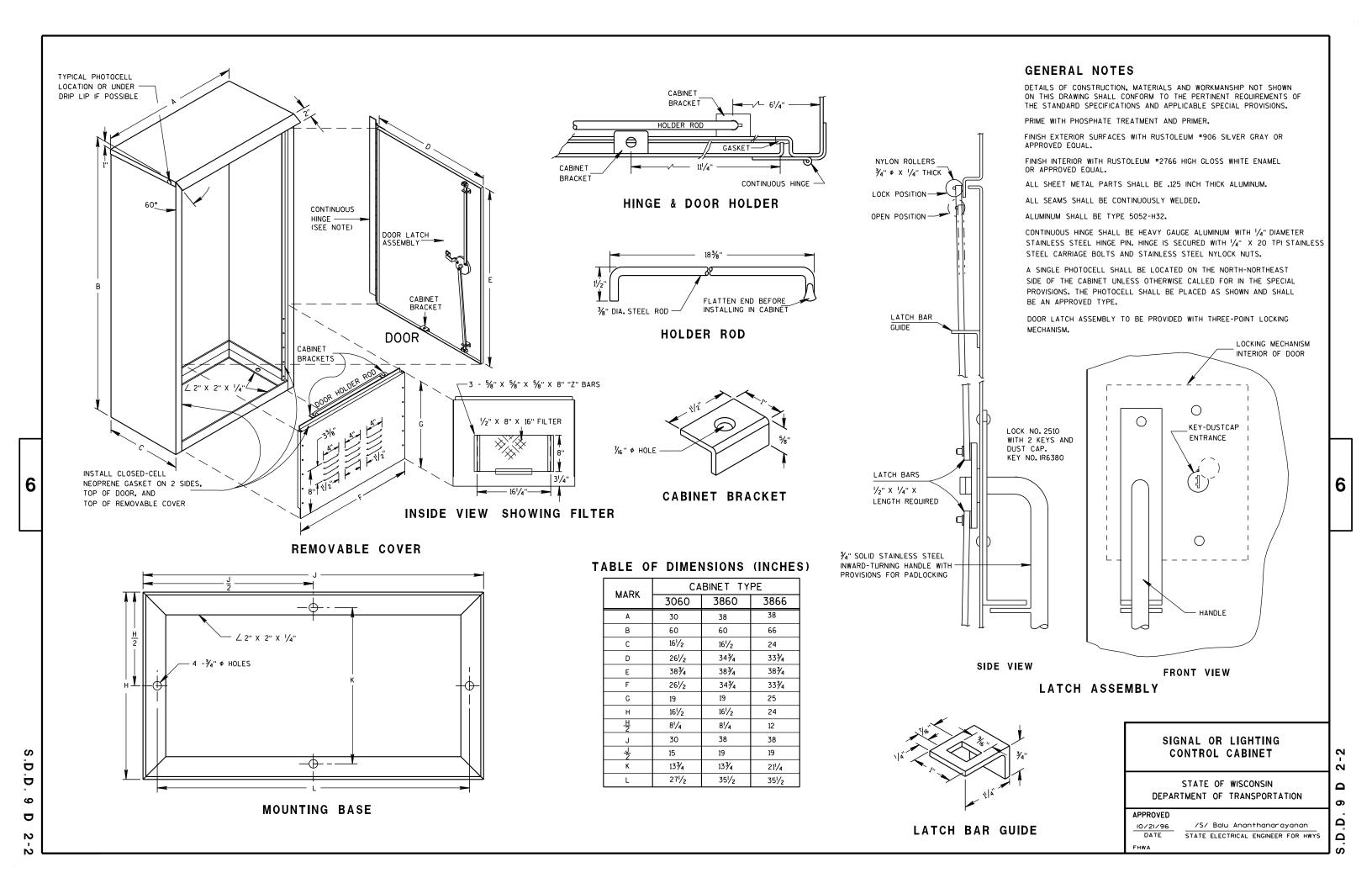
APPROVED 3/3/10 /S/ Joanna L. Bush

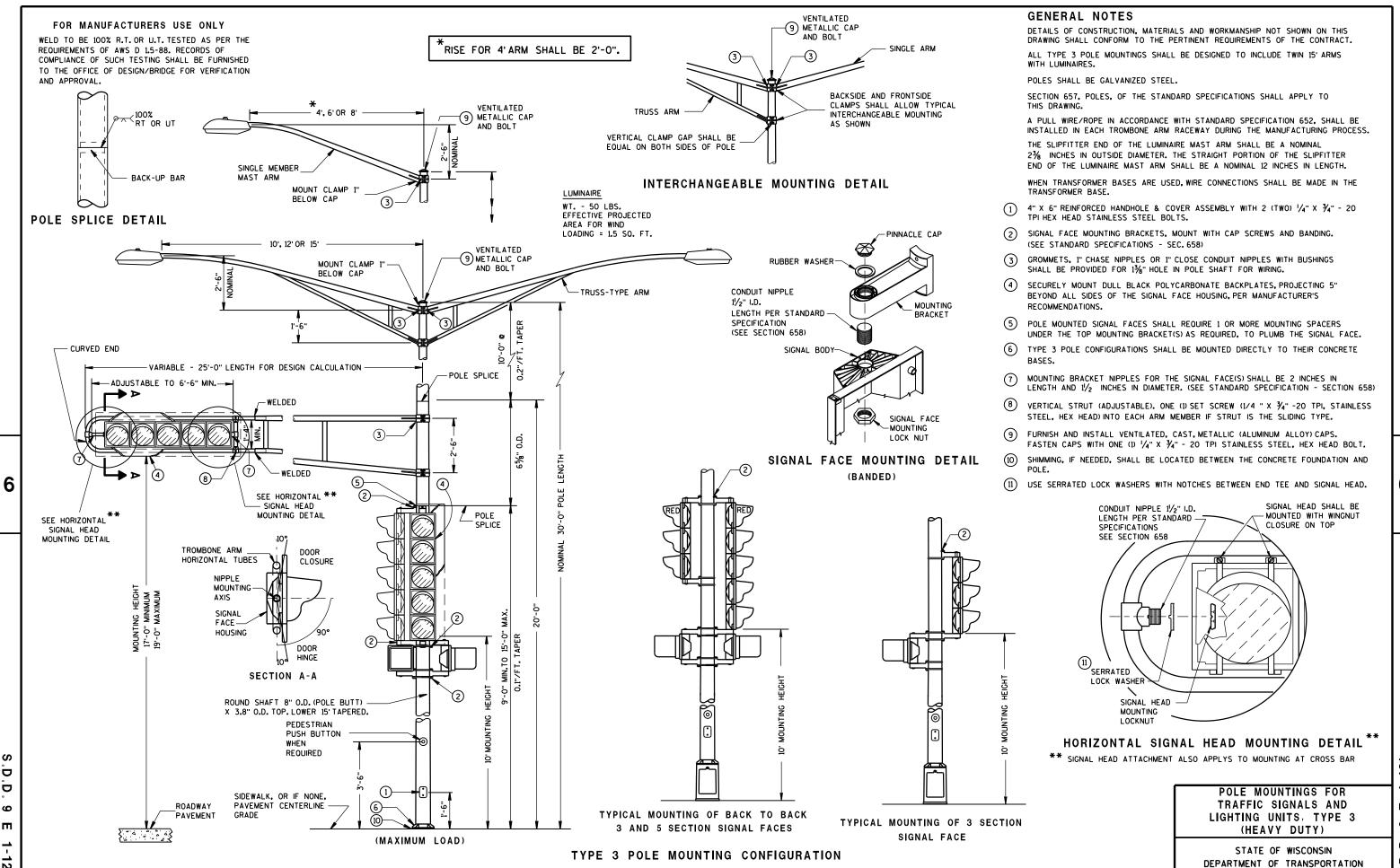
STATE ELECTRICAL ENGINEER FOR HWYS

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^{*} ANY ANCHOR ROD PROJECTION SHORTER THAN 23/4" OR LONGER THAN 31/4" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

 $^{^{\}star\star}$ for nonbreakaway installations, 4 $^{\prime}\!\!/_2$ " * anchor rod projection with the USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

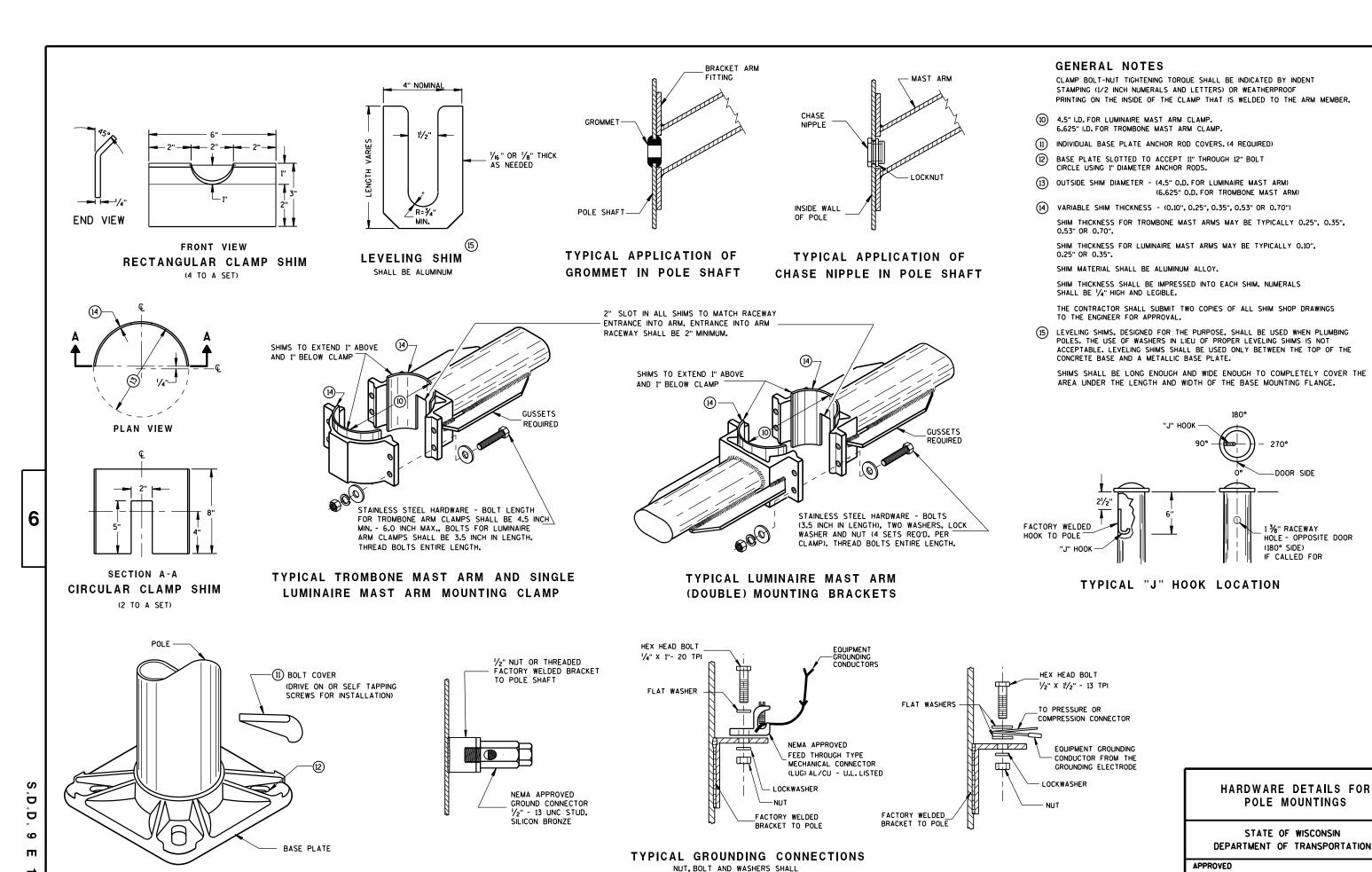




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BE STAINLESS STEEL

BASE PLATE

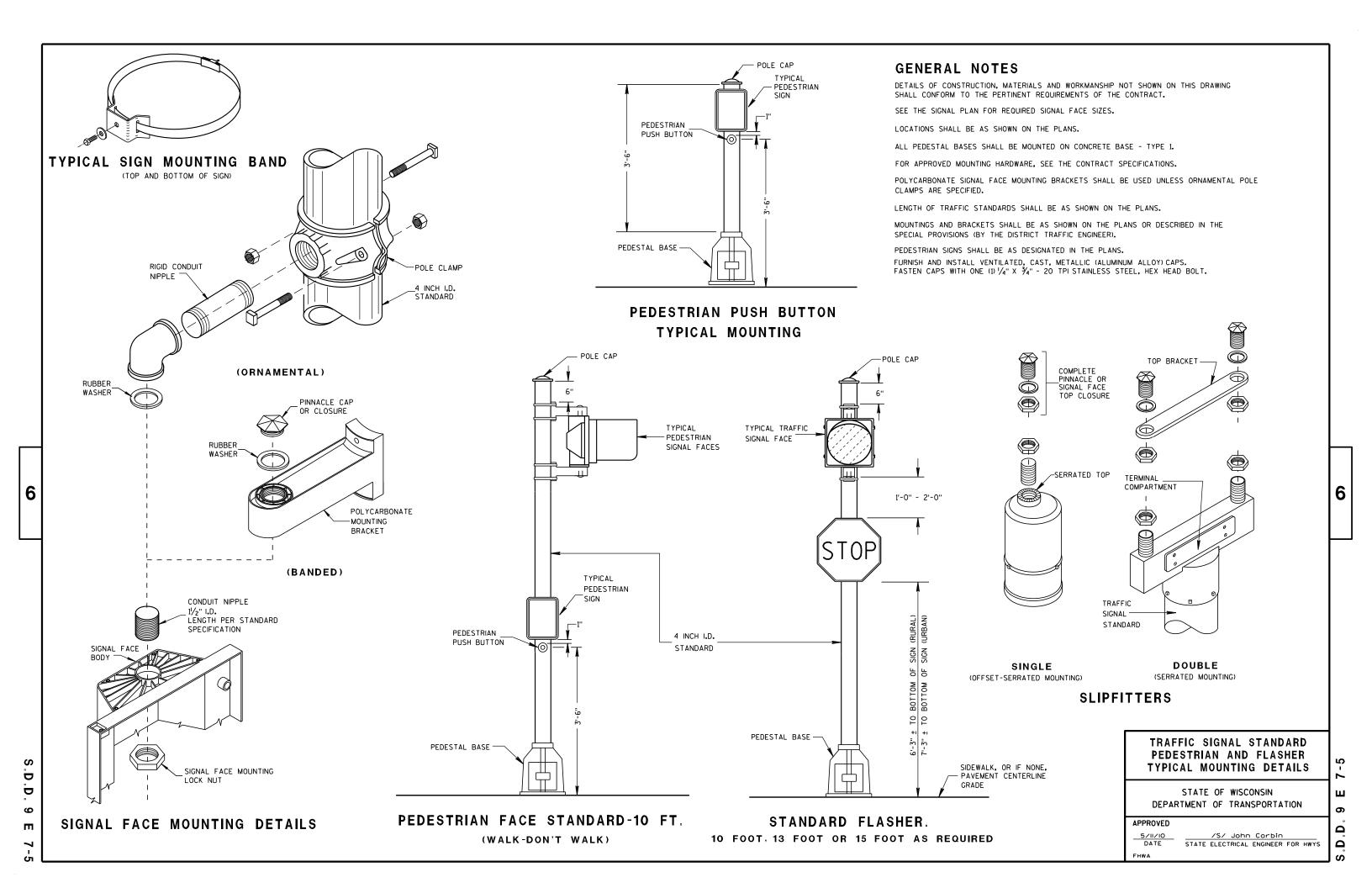
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STATE ELECTRICAL ENGINEER

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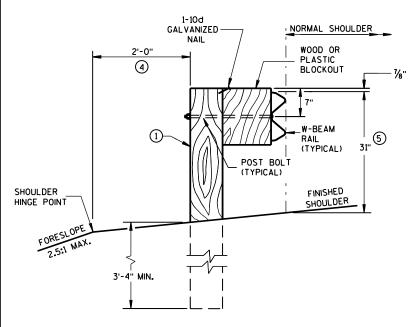
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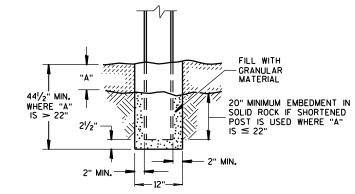
GENERAL NOTES

- (1) WOOD OR STEEL POSTS (W6X9 OR W6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- (3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 21/2INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- (4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- (5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

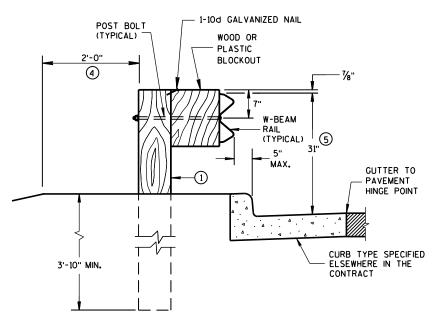


END VIEW

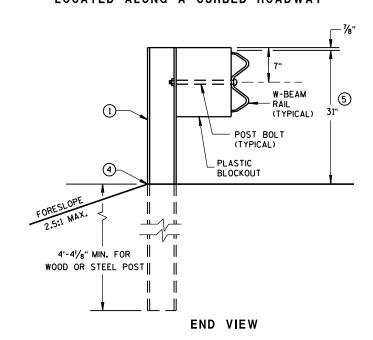
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



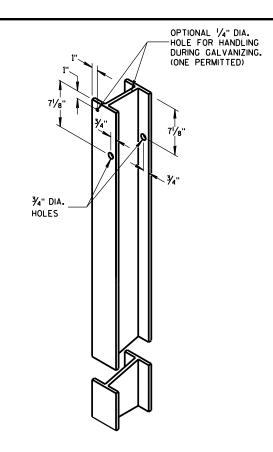
SETTING STEEL OR WOOD POST IN ROCK $^{\scriptsize{\textcircled{3}}}$



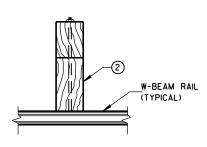
END VIEW
LOCATED ALONG A CURBED ROADWAY



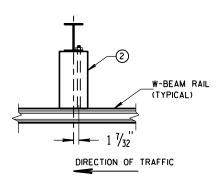
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



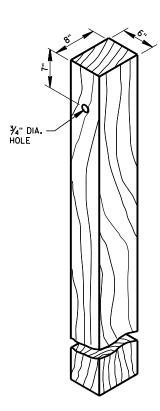
STEEL POST & HOLE PUNCHING DETAIL (w6X9)



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM



WOOD POST (6" X 8") NOMINAL



WOOD OR PLASTIC BLOCKOUT

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

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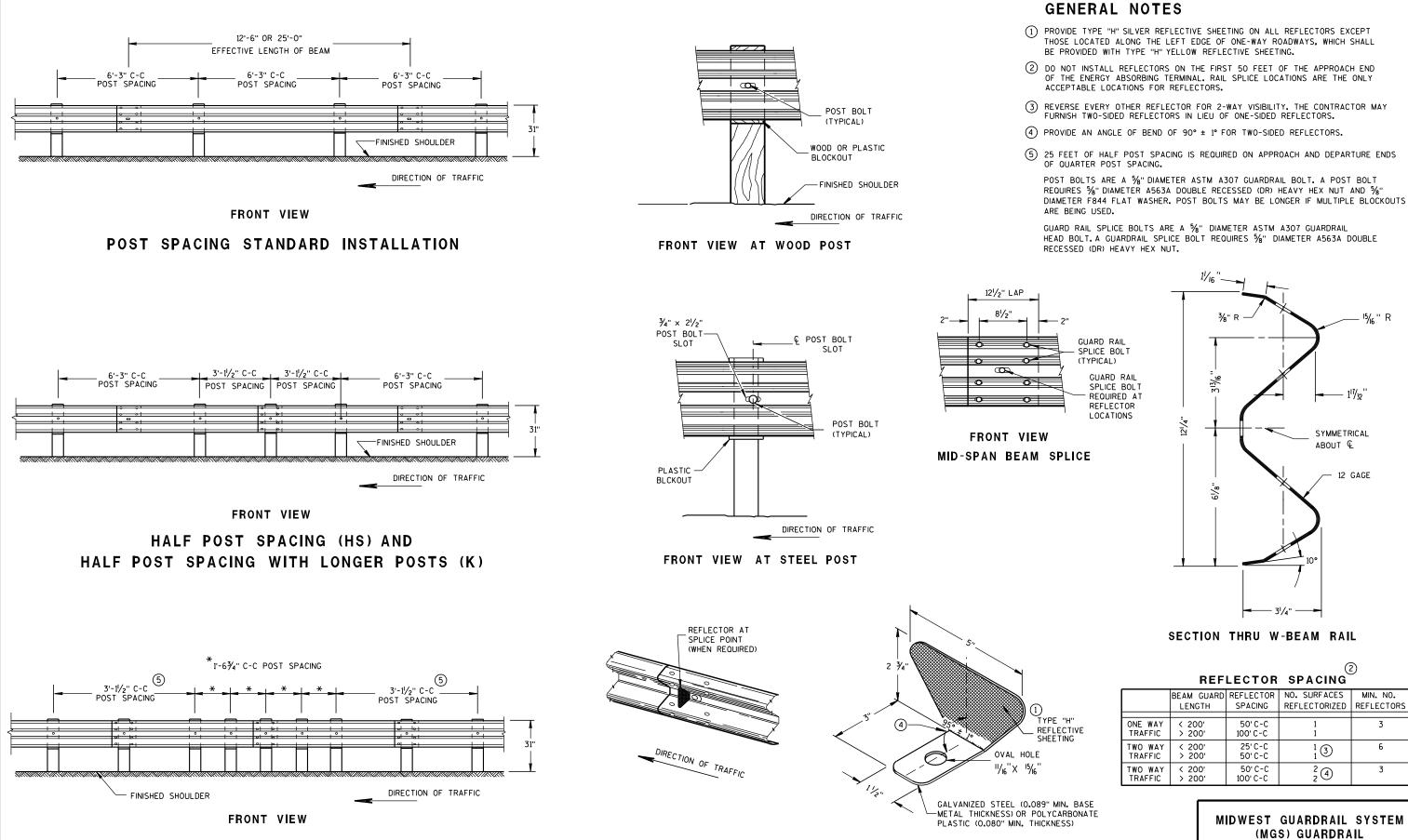
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ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

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QUARTER POST SPACING (QS)

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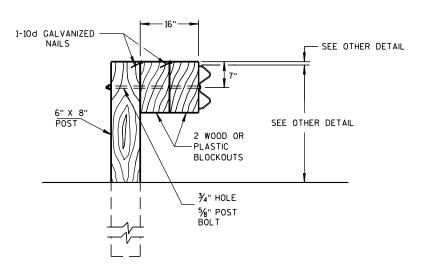
BEAM GUARD REFLECTOR NO. SURFACES MIN. NO.

SPACING | REFLECTORIZED | REFLECTORS 3 6 1 3 24 3

> MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

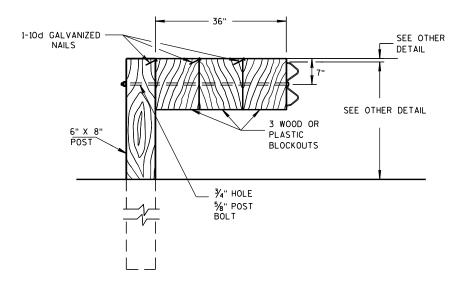
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION Ω Δ

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DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



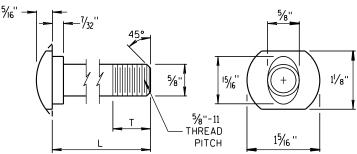
DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

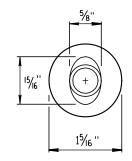
NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".

2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

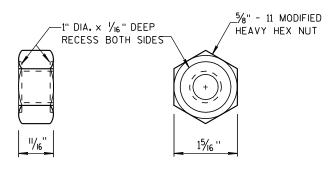


POST BOLT TABLE

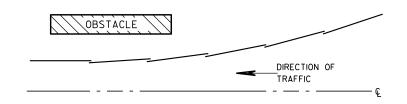
L	T (MIN.)
11/4"	1 1/8"
2"	13/4"
10"	4"
14"	4½ ₆ "
18"	4"
21"	4½ "
25"	4"



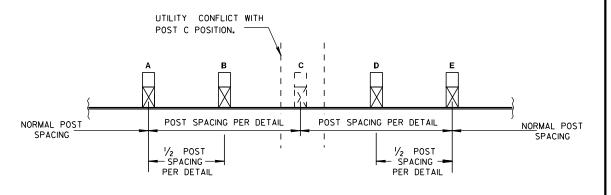
ALTERNATE BOLT HEAD



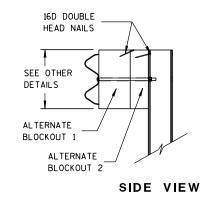
POST BOLT AND RECESS NUT

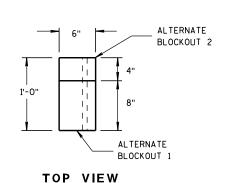


PLAN VIEW BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION





ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

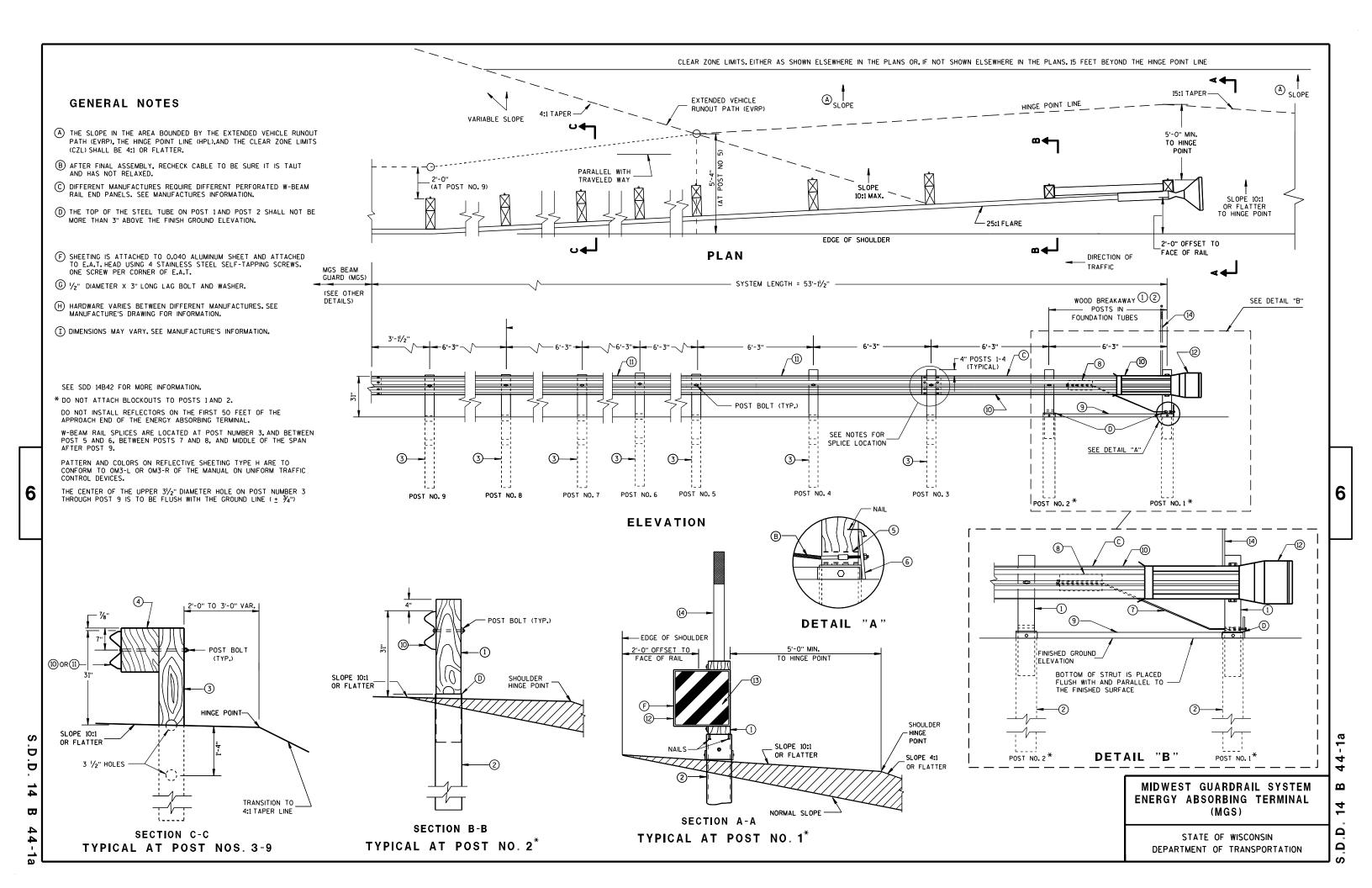
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

II/15/20II /S/ Jerry H. Zogg

DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

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GENERIC ANCHOR CABLE BOX

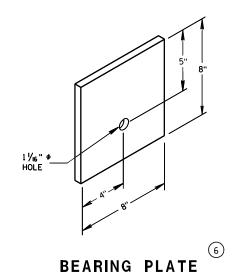
GENERIC GROUND STRUT

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PLAN VIEW

BILL OF MATERIALS

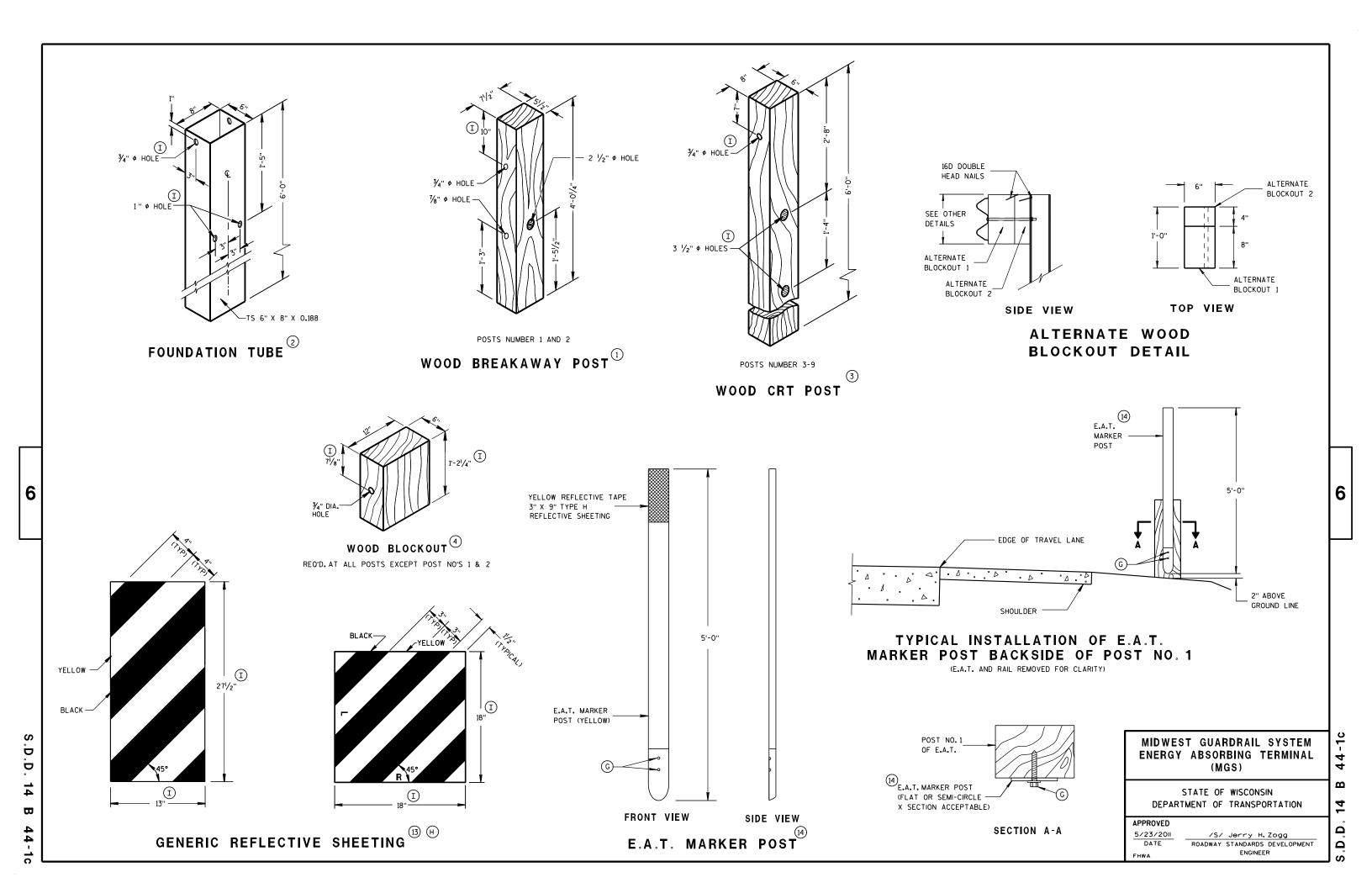
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
1	WOOD BREAKAWAY POST
@	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1AND 2
3	WOOD CRT
4	WOOD BLOCKOUT
(5)	PIPE SLEEVE
6	BEARING PLATE
7	BCT CABLE ASSEMBLY
8	ANCHOR CABLE BOX
9	GROUND STRUT
10	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(1)	STANDARD W-BEAM RAIL.MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(2)	END SECTION EAT
13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE H (ONLY THE SHEETING IS SUPPLIED BY THE MANUFACTURER)
14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

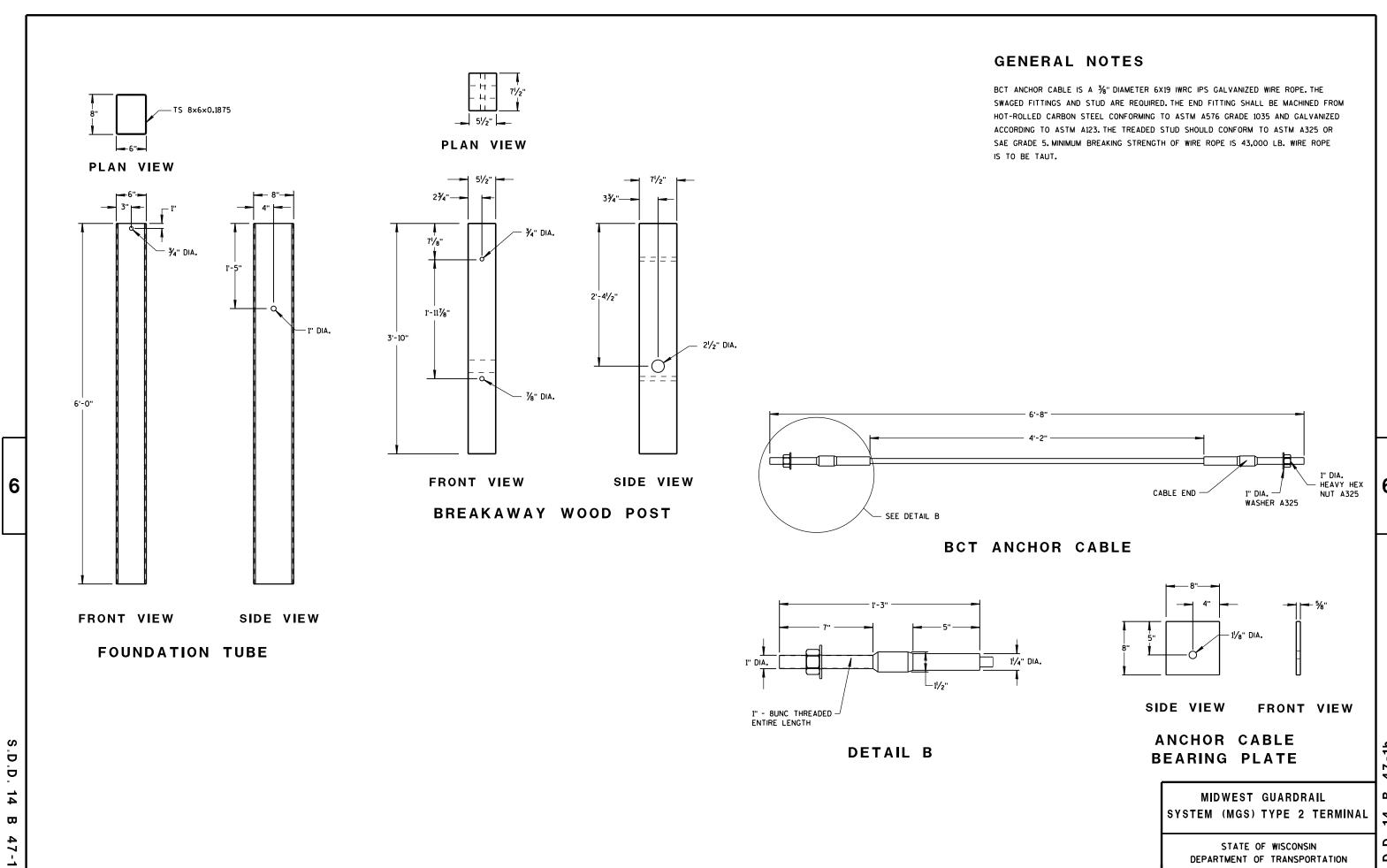
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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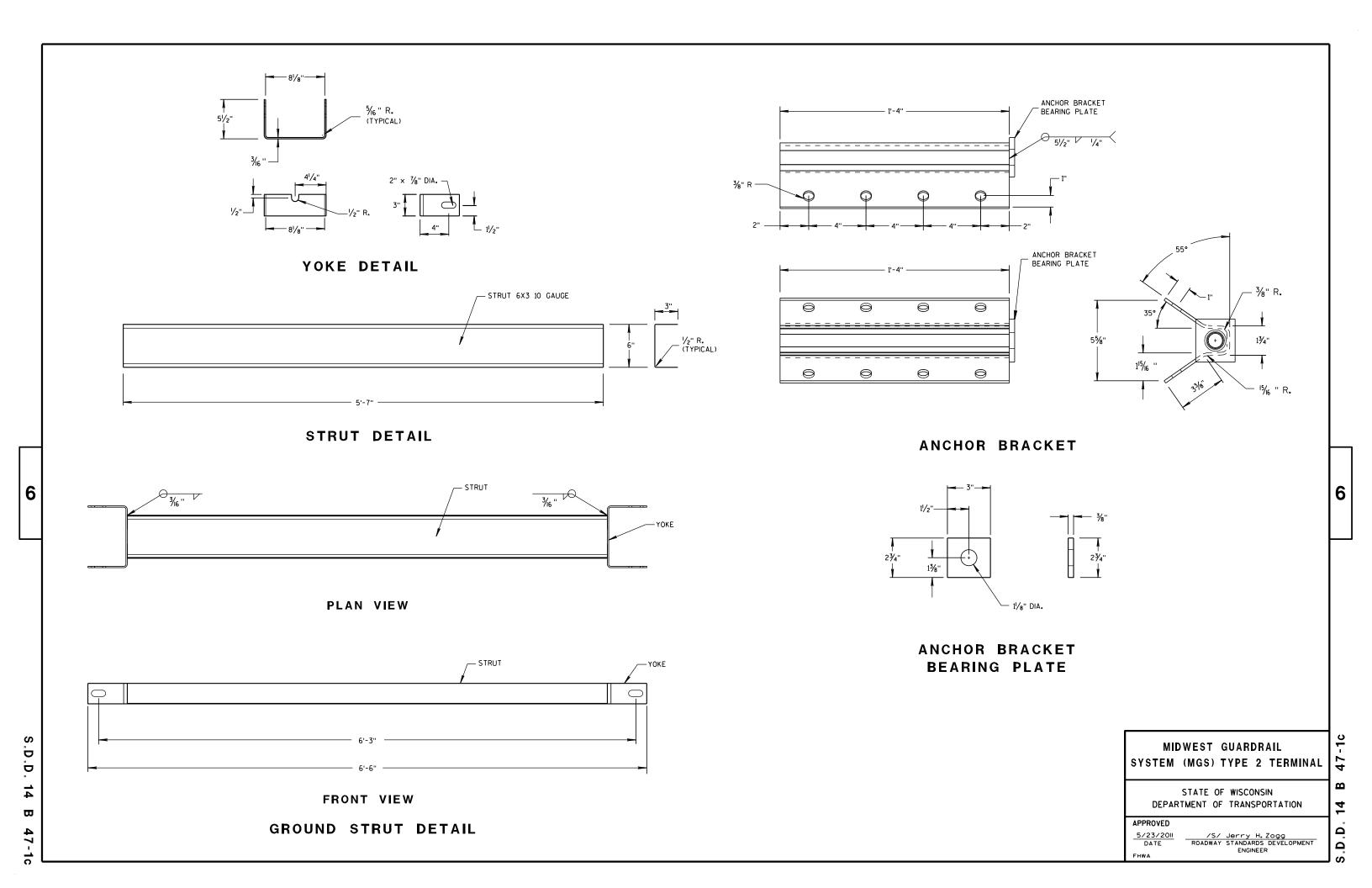


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DEPARTMENT OF TRANSPORTATION



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TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

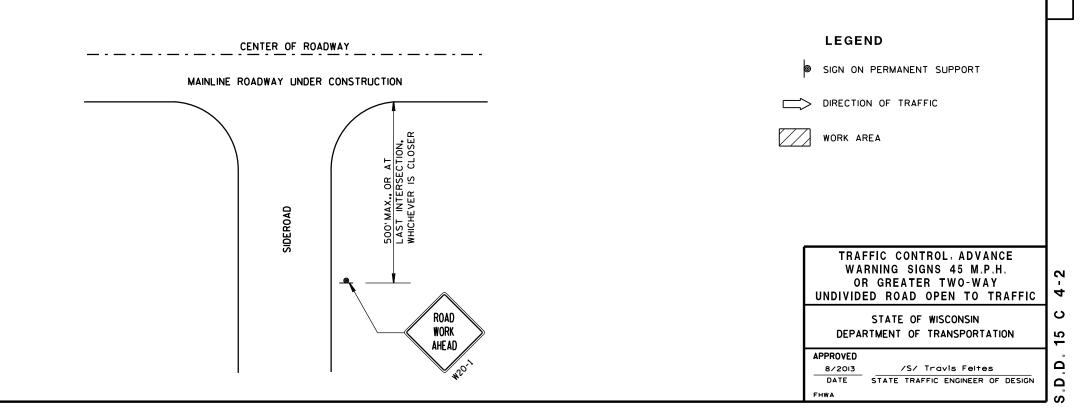
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"×48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- * PLACE ADDITIONAL W20-1 "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

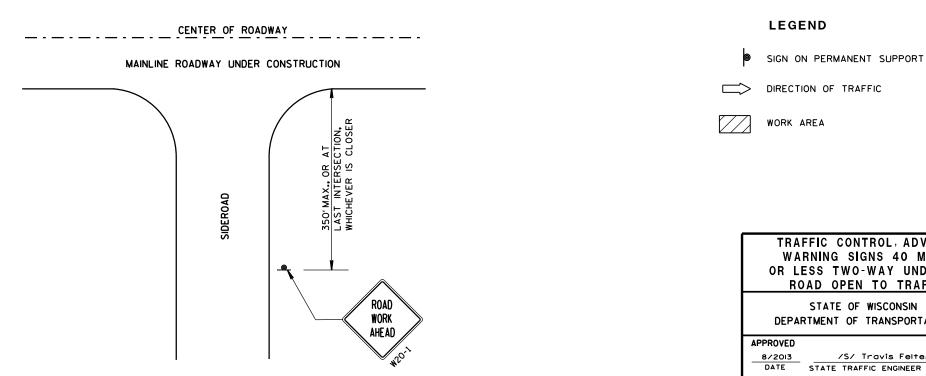
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"×48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48"

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN

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D Ö 15 C BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

SIGN SUPPORTS SHALL BE LOCATED NORMAL TO ROADWAY.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR BOLTS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR CAGE TO BE ASSEMBLED USING TIE WIRES ONLY, NO WELDING.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER, IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACK FILLING AROUND THE BASE. ANY REQUIRED BACKFILL SHALL BE WELL COMPACTED IN LAYERS OF 1 FOOT OR LESS. COMPACTION SHALL BE BY MECHANICAL MEANS. CARE SHALL BE TAKEN SO NO DAMAGE OCCURS TO THE CONCRETE BASE DURING COMPACTION.

EXCAVATION OF MATERIALS NOT OCCUPIED BY CONCRETE SHALL BE MINIMIZED TO REDUCE DISTURBANCE OF THE SURROUNDING SOILS.

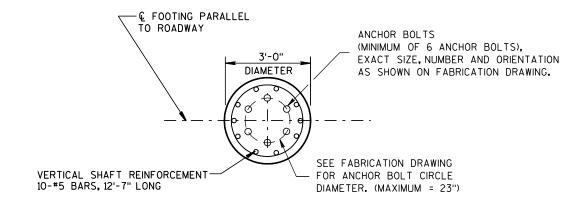
THE BOTTOM OF THE DRILLED HOLE SHALL BE FIRM AND THOROUGHLY CLEANED SO NO LOOSE OR COMPRESSIBLE MATERIALS ARE PRESENT AT THE TIME OF THE CONCRETE PLACEMENT.

IF THE DRILLED HOLE CONTAINS STANDING WATER, THE CONCRETE SHALL BE PLACED USING A TREMIE TO DISPLACE THE WATER.

THE REINFORCEMENT AND ANCHOR BOLTS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

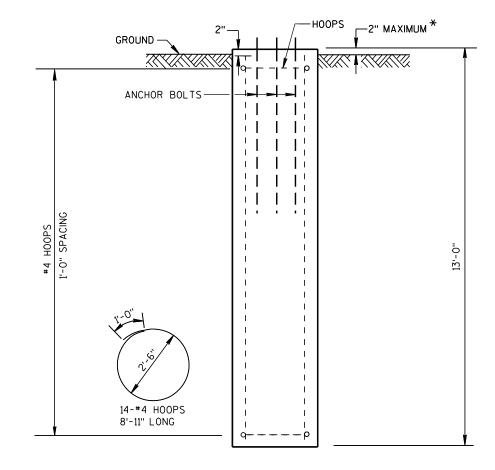
ANY DAMAGE TO THE CONCRETE BASE DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

THIS FOOTING HAS BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 20 DEGREES (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 350 PSF (COHESIVE SOILS).



PLAN VIEW

FOR OVERHEAD SIGN SUPPORTS THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE BASE SHALL BE POURED FLUSH WITH THE GROUND.



ELEVATION VIEW

CONCRETE - 3.4 C.Y. PER FOOTING
H.S. REINFORCEMENT - 215 LBS. PER FOOTING

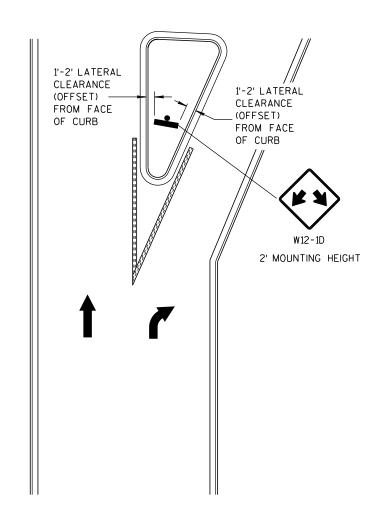
36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

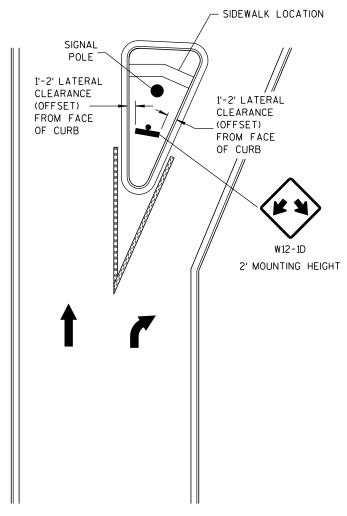
APPROVED

4/17/2009
DATE
STATE TRAFFIC ENGINEER OF DESIGN

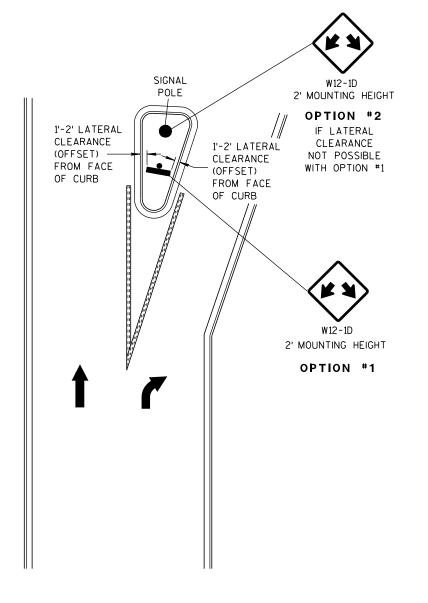
S.D.D. 15 C



LARGE RIGHT TURN ISLAND



LARGE RIGHT TURN ISLAND WITH SIGNAL POLE



SMALL RIGHT TURN ISLAND

DOUBLE ARROW WARNING SIGN PLACEMENT

DOUBLE ARROW WARNING SIGN PLACEMENT

27

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Ω

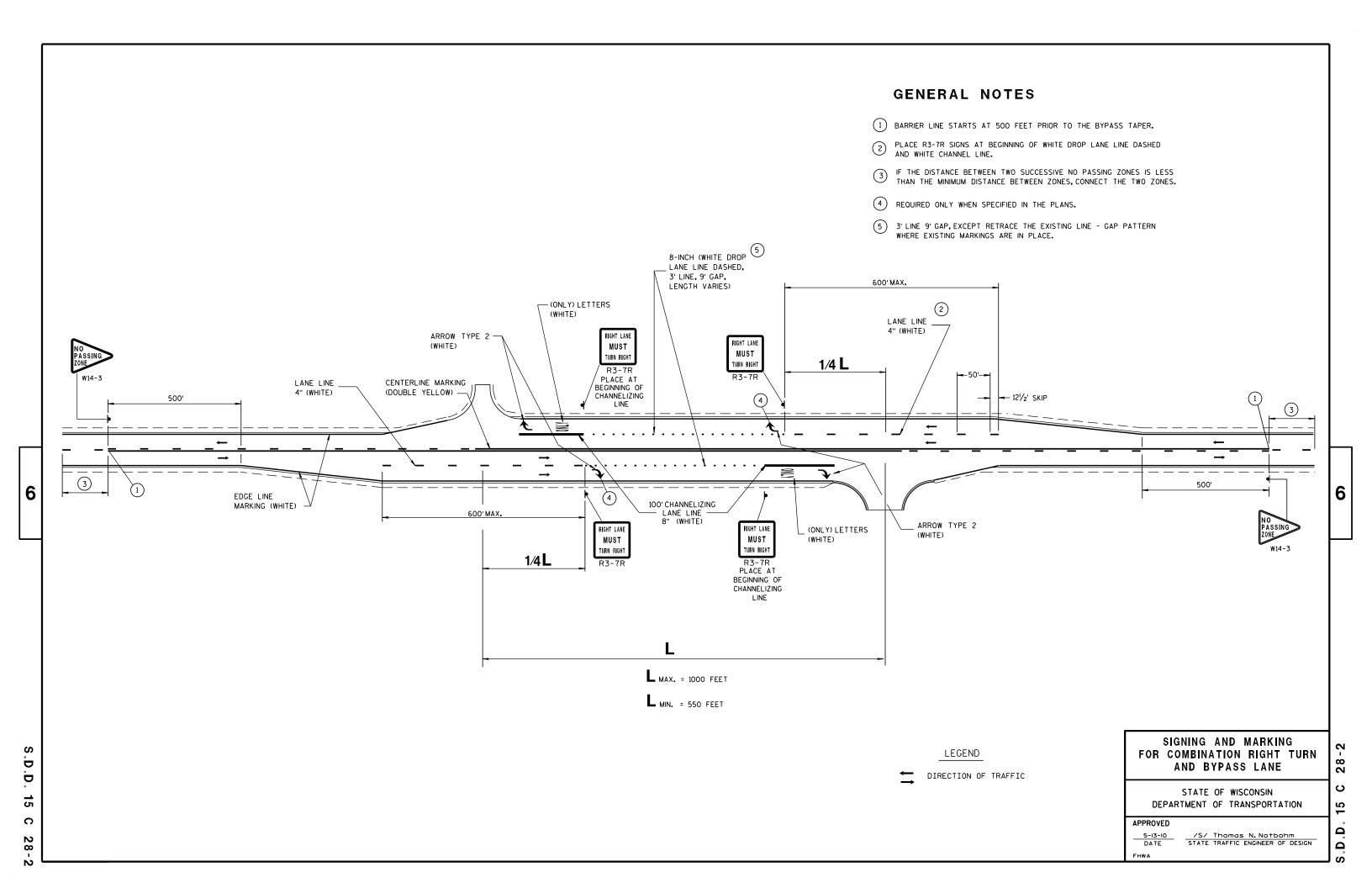
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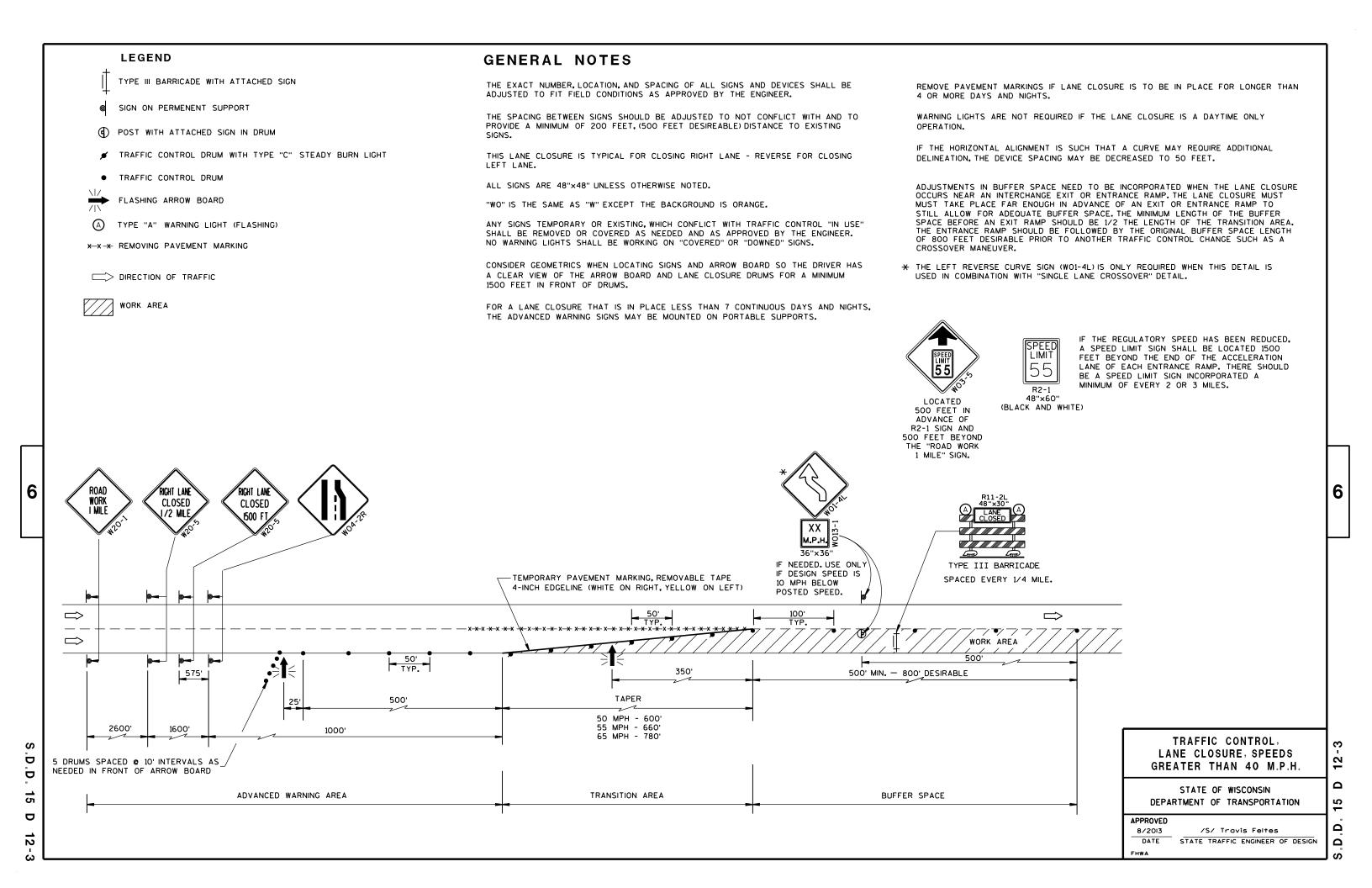
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

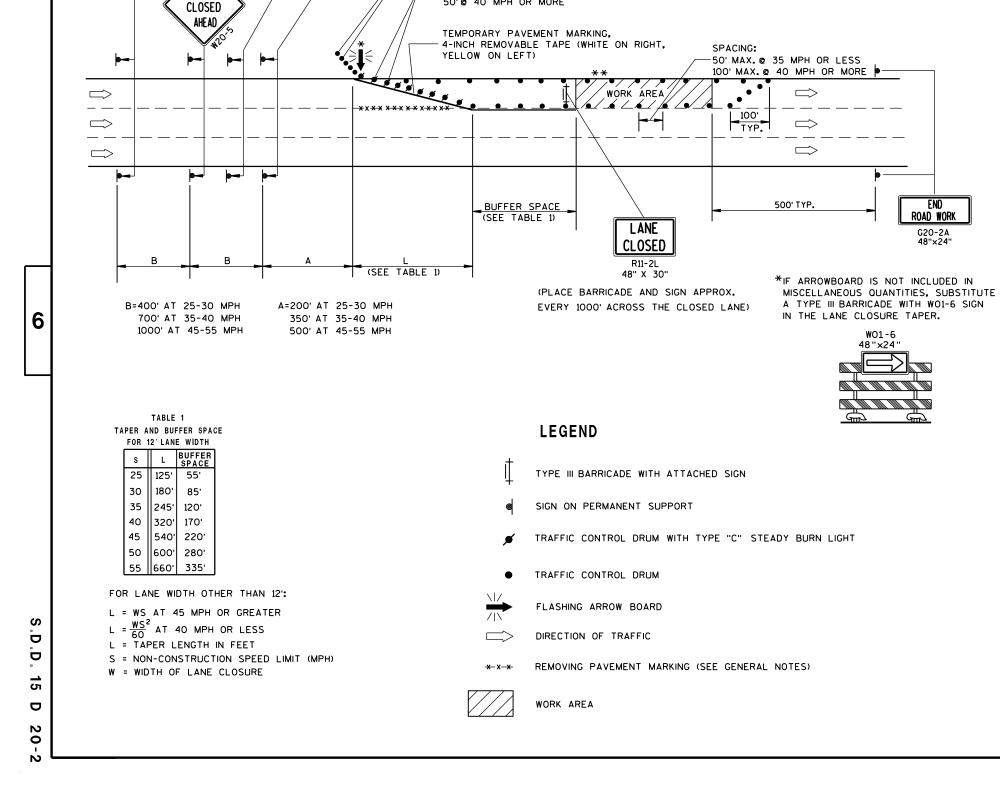
/S/ Thomas N. Notbohm STATE TRAFFIC ENGINEER OF DESIGN 10-22-08

Ū b C









(5) DRUMS SPACED @ 10'

INTERVALS AS NEEDED IN

FRONT OF ARROW BOARD

25' @ 35 MPH OR LESS 50' @ 40 MPH OR MORE

SPACING:

ROAD WORK

NEXT___MILES

G20-1

60" X 24"

AHEAD

GENERAL NOTES

**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE

ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL

W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF

IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC

TRAFFIC. IN ADVANCE OF THE WORK AREA.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE, FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"×48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W2O-1, G2O-1 AND G2O-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

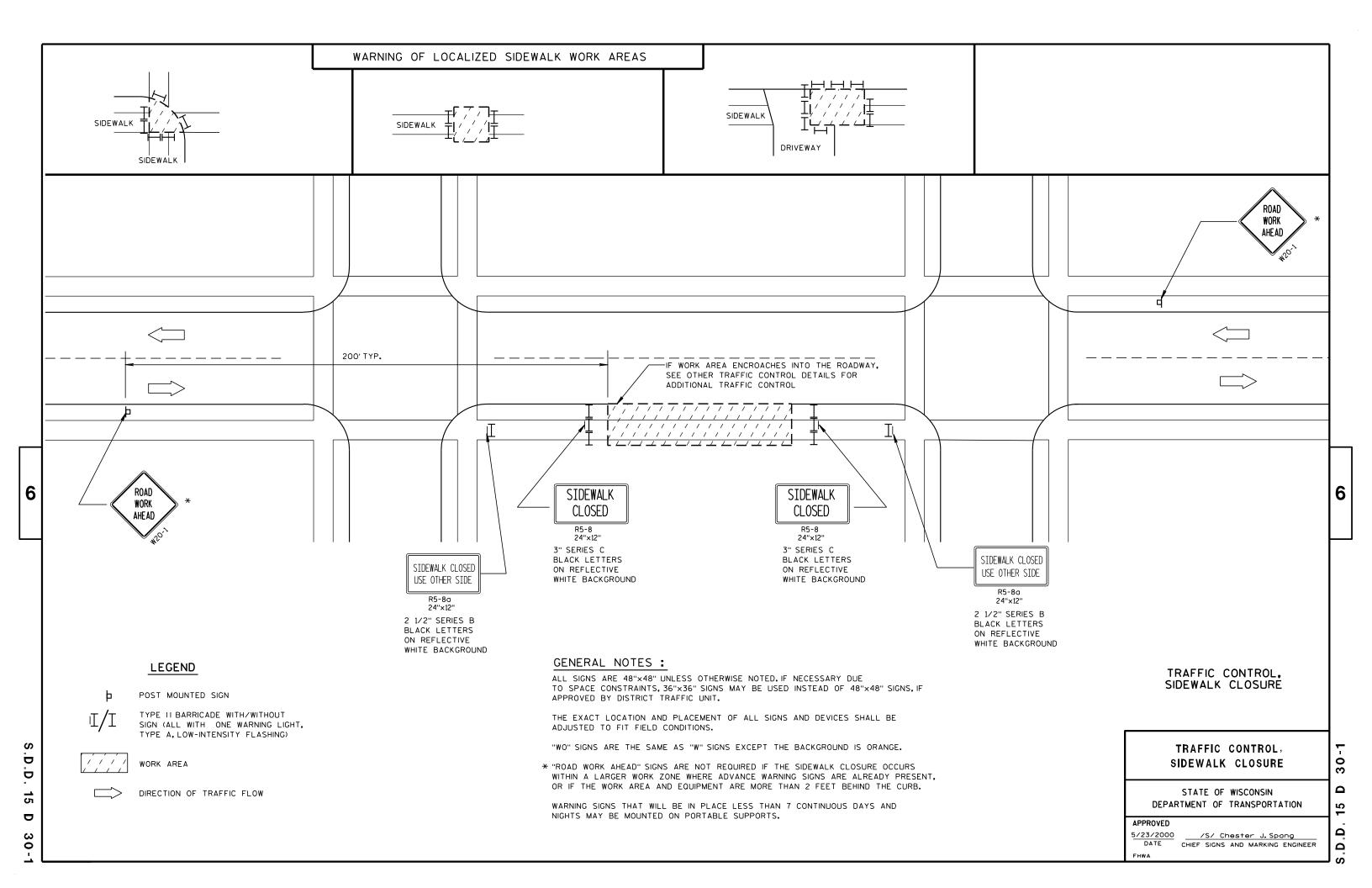
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

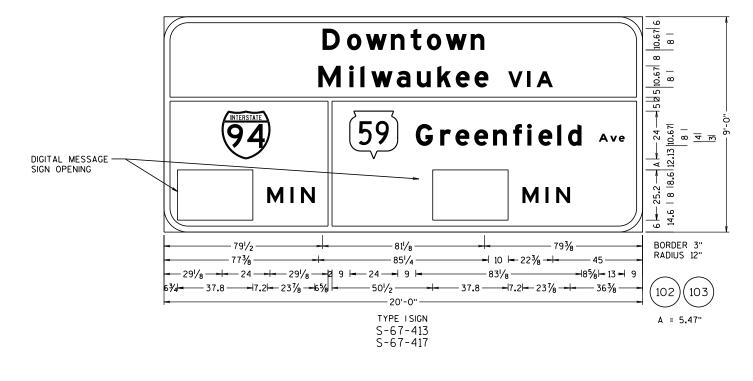
APPROVED

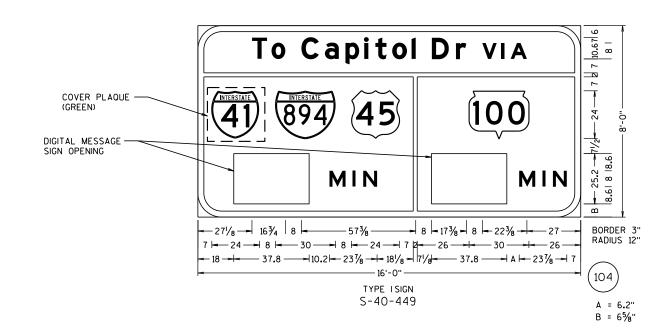
8/2013 /S/ Travis Feites

DATE TRAFFIC ENGINEER OF DESIGN

S.D.D. 15 D 2







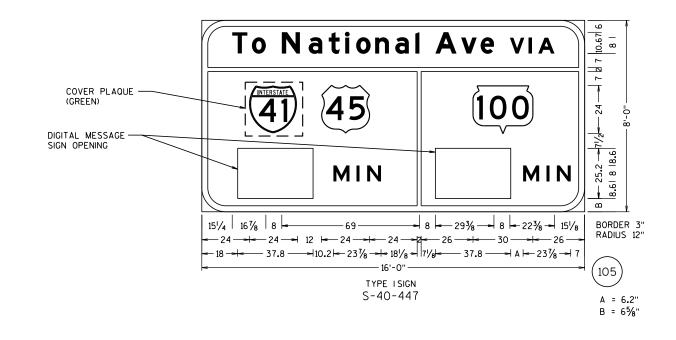
GENERAL NOTES:

- 1. DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE PLANS.
- 2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".
- 3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND. "TYPE H MESSAGE MATERIAL". TYPE ISIGNS SHALL HAVE TYPE SH REFLECTIVE SHEETING.
- 4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.
- 5. TYPE IISIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.
- 6. TYPE ISIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED. ALL CAP WORDS ARE "SERIES E"

HWY: IH-94

- 7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.
- 8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.
- 9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH
- 10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10
- 11. DO NOT SCALE.

PROJECT NO: 1060-33-97



COUNTY: MILWAUKEE SIGNING DETAIL - TYPE ISIGNS SHEET

FILE NAME: J:\projects\d2_10603394\97\070101_ms.dgn PLOT DATE: 09-DEC-2013 07:54 PLOT BY : MSCCXV

SHEET 1 OF 1

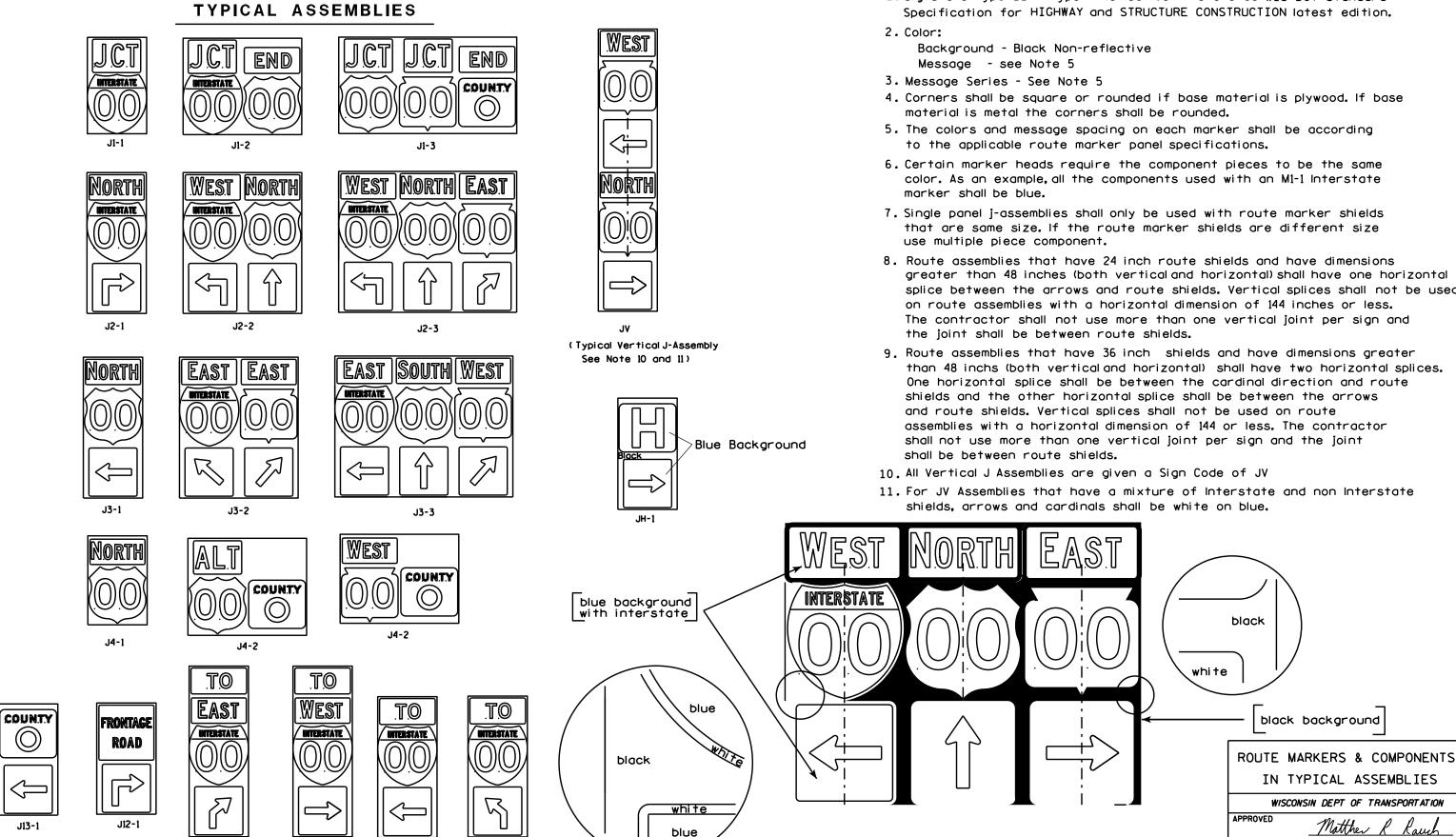
SCALE:

PLOT SCALE: 48.125:1

WISDOT/CADDS SHEET 47

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard

areater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.



PROJECT NO:

J32-1

J22-1

J23-1

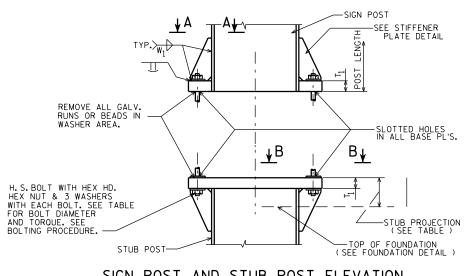
J33-1

PLOT BY: mscsja

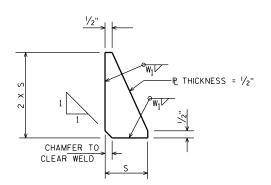
PLATE NO. __A2-15.8

DATE 2/06/14

SHEET NO:

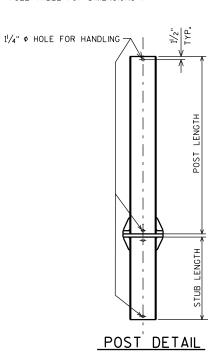


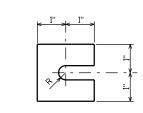
SIGN POST AND STUB POST ELEVATION



STIFFENER PLATE DETAIL

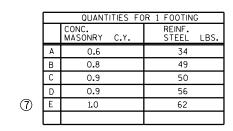
(SEE TABLE FOR DIMENSIONS)



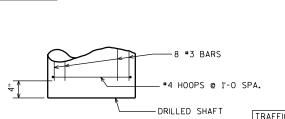


FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST, SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T. M.- B36.

SHIM DETAIL



		TYPE	#3	#4
		Α	8 @ 4'-5	5 @ 6'-3
	١.٠	В	8 @ 6'-5	7
	REINF.	С	8 @ 6'-11	7 @ 6'-3
	~	D	8 @ 7 '-5	8 @ 6'-3
7		Ē	8 @ 7'-11	9 @ 6'-3



-STUB POST

FTG. T + 1/16 |

(5)

SECTION A-A

SHAFT PLACEMENT

FTG. T + 1/16

-1'-0 MIN. LAP

8 #3 BARS

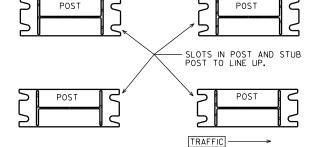
SECTION

FINISHED GRADE

LENGTH (SEE

#4 HOOPS @ 1'-0 SPA.

TRAFFIC FOUNDATION DETAIL



POST ON THE LEFT POST ON THE RIGHT POST SLOT ORIENTATION

				BA	SE CON	INECT	ION D	ΑΤΑ	TABI	LE					FOUNDATION	I DATA		2	
	TYPE	DIMENSION POST SIZE	BOLT SIZE & TORQUE	А	В	С	D	Ε	т ₁	T ₄	w ₁	R	S	STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	К	
4	Α	W10"X12.0 #/FT.	¾" ¢ @ 75#-FT.	51/4"	1'-03/8	½″'	31/2"	1∕8′	1"	3/16"	5/16 "	13/32 "	21/8"	3'-6	3"	2'-0 φ	5'-0	76.0#	4
<u>(4)</u>	В	W12"X16.0 #/FT.	½" Φ @ 85#-FT.	51/2"	1'-41/4	1"	31/2"	1''	11/4"	1/4"	5/16"	15/32 ''	3''	5'-6	3"	2'-0 φ	7'-0	146.5#	4
	С	W12"X19.0 #/FT.	½" ¢ @ 85#-FT.	51/2"	1'-41/4	1''	3 ¹ /2"			5/16"			3''	6'-0	3"	2'-0 ø	7'-6	182.1#	_
	D	W12"X22.0 #/FT.	½" ¢ @ 85#-FT.	51/2"	1'-41/4	1''	31/2"	1''	11/2"	3/8"	5/16"	15/32 "	3''	6'-6	3"	2'-0 ø	8'-0	210.5#	
3	E	W12"X26.0 #/FT.	1" ¢ @ 90#-FT.	7"	1'-41/4	11/4"	4"	11/2"	11/2"	3/8"	5/16 "	17/32 "	3"	7 '-0	3"	2'-0 ø	8'-6	293.0#	3

1 6 1

PLOT BY: mscsja

STRUCTURAL CARBON STEEL PAY WTS. (1POST) = K+ (POST LENGTH X POST WT.) "K" INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

PROJECT NO: HWY: COUNTY:

DESIGN DATA

WIND PRESSURE = 75 M.P.H. WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0 ICE LOAD = 3 P.S.F.

GROUP LOADS 1. DEAD PERCENT OF ALLOWABLE STRESS

2. DEAD & WIND 3. DEAD, ICE & 1/2 WIND **△**25 P.S.F. MIN. 140 ALLOWABLE SOIL PRESSURE = 11/2T / SO.FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND

TO THE SUPPORTING MEMBERS.

ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED. DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50.

THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.

H.S. BOLTS, WASHERS & NUTS SHALL BE A325 GALVANIZED WHEN POSTS, POST STUBS AND ATTACHMENTS ARE A709 GRADE 50 AND GALVANIZED.

BOLTING PROCEDURE - BASE CONNECTION

- 1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
- 2. SHIM AS REQ'D. TO PLUMB POST.
- 3. PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
- 4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
- 5. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

-PLATE THICKNESS = T

∠STUB POST

SECTION B-B

74

985

TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.

> WISCONSIN DEPT OF TRANSPORTATION APPROVED For State Traffic Engineer

PLATE NO. __A3-1.14 DATE 2/06/14

(1) 1-21-14 LUBRICATION OF BASE BOLTS 4-26-11 REMOVE NON-GALVANIZED

8 10-30-96 NOT GALVANIZED/GALVANIZED (7) 10-30-92 QUANT., A588 EXCEPT., ADD SLOT VIEW

6) 8-24-87 BASE CONN. WELD

10-13-81 BASE CONN. WELD & FUSE & WASHERS

10-19-79 POST A & B, A572 GR. 50, & K

11-28-78 "K" 3.4-23-79 TYPE "E" 5-4-78 T_1 , T_2 & W_1

DATE REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

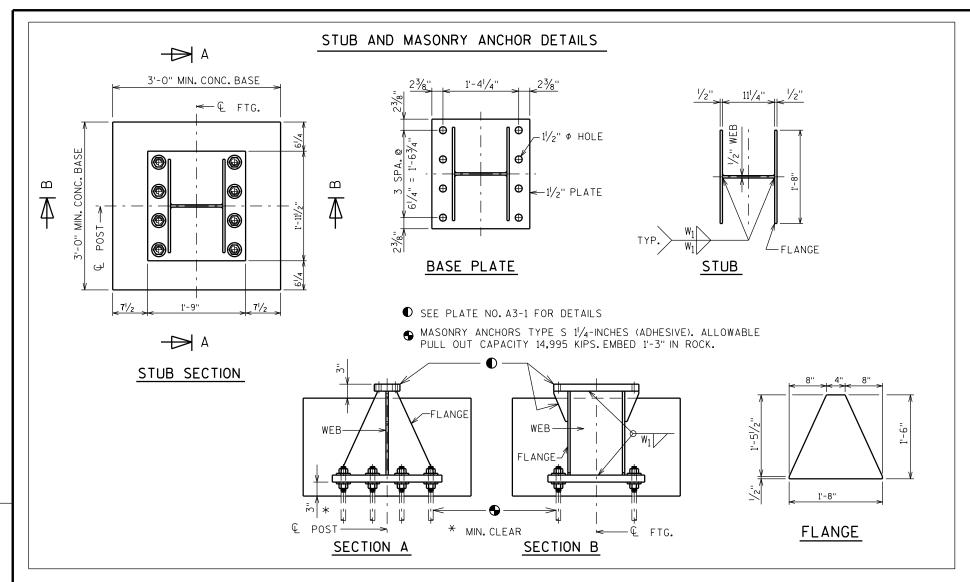
DRAWN BY JPH 2011 FTG. & SIGN SUPPORT SHEET DETAILS

GROUND MOUNT BREAK-AWAY SIGNS

SHEET NO:

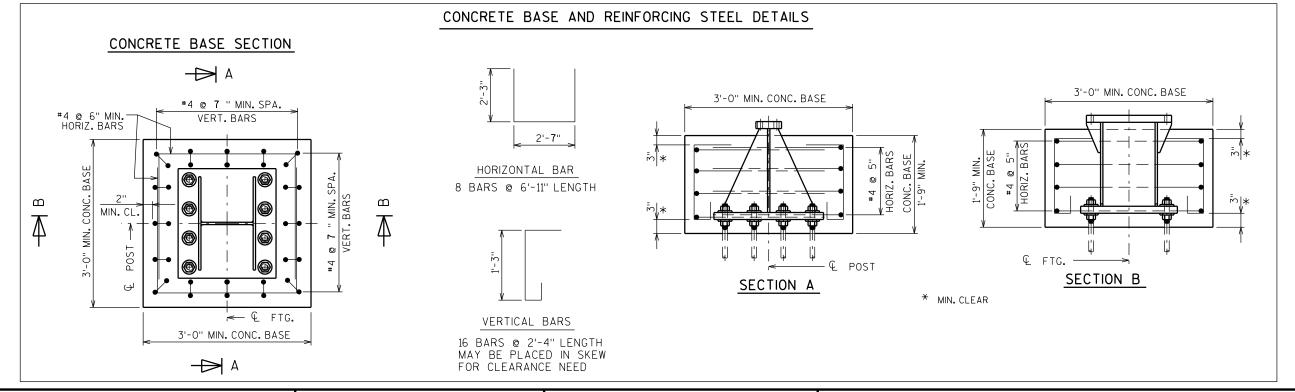
PLOT NAME :

PLOT SCALE: 85617.058824:1.000000



GENERAL NOTES

- 1. Quantities per Base:
 - REINFORCING BAR STEEL = 62 LBS
 - CONCRETE = 0.6 C.Y.
 - STEEL WEIGHT = 335 LBS
- 2. All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
- 3. If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.



COUNTY:

ALTERNATE BREAK-AWAY
BASE ON ROCK
A3-1M

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R Lauch

For State Traffic Engineer

DATE 2/06/2014 PLATE NO. A3-1M.1

SHEET NO:

SHEET

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A31M.dgn

HWY:

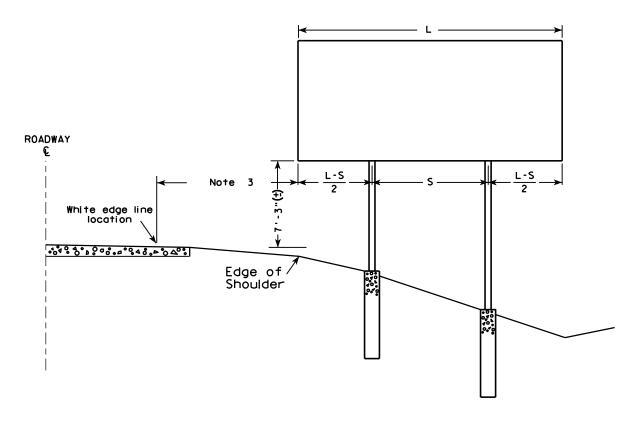
PROJECT NO:

PLOT DATE: 06-FEB-2014 13:46

PLOT NAME :

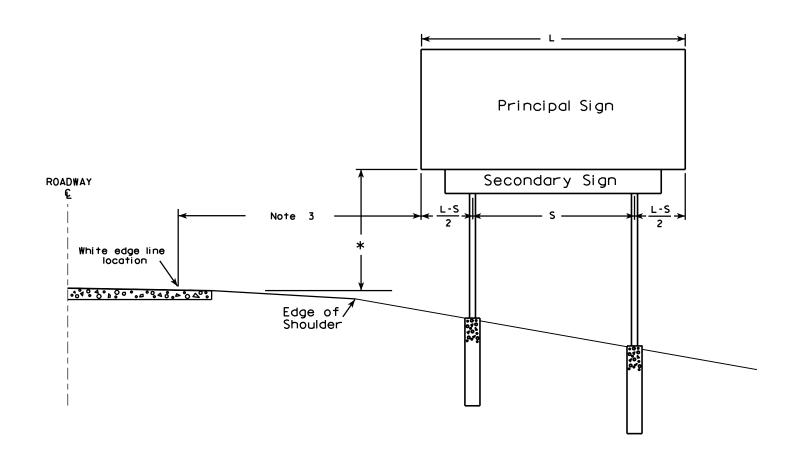
PLOT BY: mscsja

PLOT SCALE: 1.556674:1.000000



GENERAL NOTES

- 1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
- 2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
- 3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
- 4. The (\pm) tolerance shown on this sheet is 3 in.
- 5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
- 6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
- 7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.



* Clearance is 8'-3"(\pm) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(\pm).

TYPICAL INSTALLATION
OF TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew & Rauch

For State Traffic Engineer

DATE 4/02/08 PLATE NO. A4-1.9

SHEET NO:

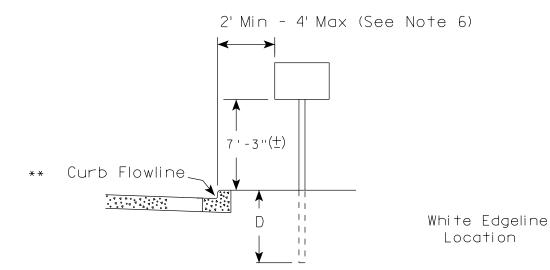
PLOT BY : ditjph

PLOT DATE: 02-APR-2008 15:49

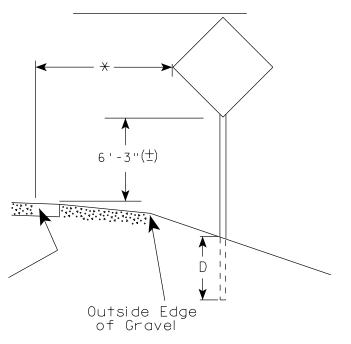
PROJECT NO:



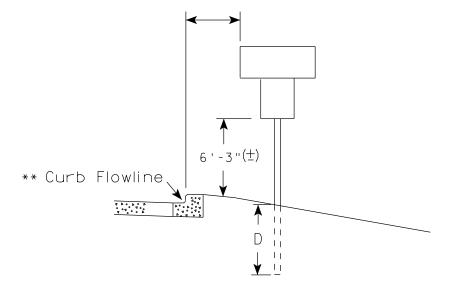
urban area



RURAL AREA (See Note 2)



2' Min - 4' Max (See Note 6)



White Edgeline
Location

Outside Edge
of Gravel

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated.

That height is typically measured where

there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

HWY:

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

PLOT BY : mscj9h

GENERAL NOTES

- 1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- 2. If signs are mounted on barrier wall, see A4-10 sign plate.
- 3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
- 4. Minimum mounting height for J assemblies (A4-5) is 7'-3'' (\pm) or 6'-3'' (\pm) per urban or rural detail respectively.
- 5. Minimum mounting height for signs mounted on traffic signal poles is $5'-3''(\underline{+})$.
- 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
- 7. The (\pm) tolerance for mounting height is 3 inches.
- 8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (\pm) or as directed by the Engineer.
- 9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

Area of Sign	
Installation	D
(Sq. Ft.)	(Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matther & Rauh
For State Traffic Engineer

DATE 9/30/13

SHEET NO:

COUNTY:

JN I Y:

PLOT DATE: 30-SEP-2013 13:25

PLOT NAME :

PLOT SCALE: 99.237937:1.000000

WISDOT/CADDS SHEET 42

PROJECT NO:



NOTES: 1. ALL MATERIAL TO BE APPROVED

BY ENGINEER PRIOR TO INSTALLATION

- 2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
- 3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

HWY:



PLAN VIEW

COUNTY:

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

For State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

SHEET NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN

PROJECT NO:

PLOT DATE: 27-JAN-2014 09:48

PLOT NAME :

PLOT BY: mscsja

PLOT SCALE: 13.659812:1.000000

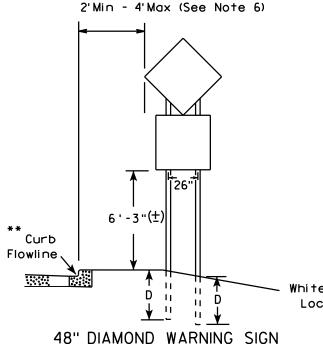
APPROVED

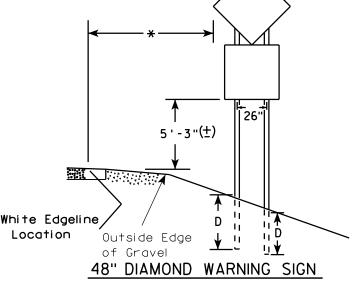
WISDOT/CADDS SHEET 42

GENERAL NOTES

- 1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
- 2. See tables below for required number of posts.
- 3. For expressways and freeways, mounting height is 7'-3'' (±) or 6'-3'' (±) depending upon existence of sub-sign.
- 4. The (±) tolerance for mounting height is 3 inches.
- 5. Minimum mounting height for J assemblies (A4-5) is 7'-3" (\pm) or 6'-3" (\pm) per urban or rural detail respectively.
- 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
- 7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
- 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B). Clearance Markers (W5-52). Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4"-3" (\pm).
- * 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.
- ** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.
- ** See A4-3 sign plate for signs 4' or less in width or 20 S.F. or less in area.

URBAN AREA RURAL AREA (See Note 3) 2' Min - 4' Max (See Note 6) ₩E# FF# 6'-3"(±) 6'-3"(±) 7'-3"(±) ** Curb ****\ Flowline D 700 M White Edgeline D 11 White Edgeline, Location Outside Edae Location Outside Edge of Gravel





COUNTY:

of Gravel

	SIGN SHAPE OTHER THAN (TWO POSTS REQUIRED	
	L	E
* * *	Greater than 48" Less than 60"	12"
	60" to 120"	L/5

SIGN SHAPE OTHER THAN (THREE POSTS REQUIR	
L	E
Greater than 120" less than 168"	12"

HWY:

SIGN SHAPE OTHER THAN (FOUR POSTS REQUIRE	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

Area of Sign	
Installation	D
(Sq. Ft.)	(Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

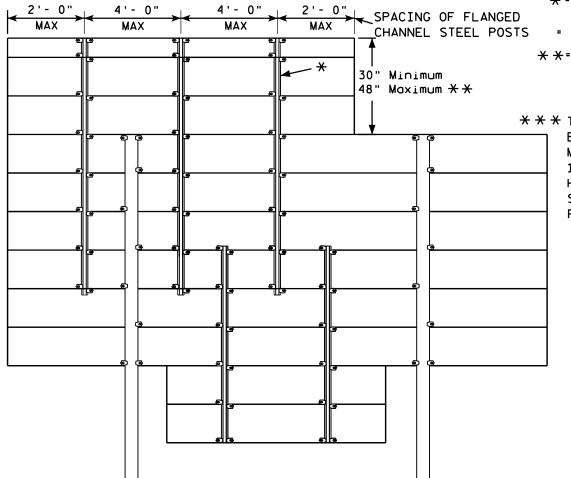
APPROVED Matther For State Traffic Engineer

PLATE NO. A4-4.12 DATE 9/30/13

SHEET NO: PLOT BY: mscj9h

PROJECT NO:





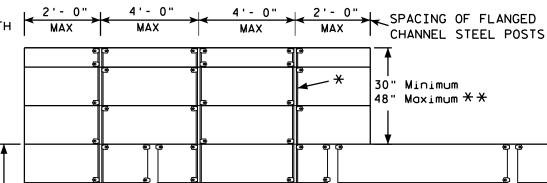
*=2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH

CHANNEL STEEL POSTS = 60,000 PSI (GRADE 60) GALVANIZED

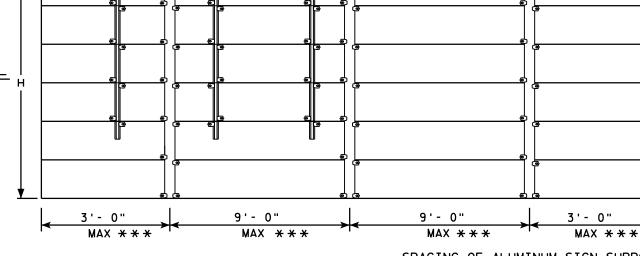
SIGN BRIDGE MOUNTED SIGN

* *= FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

* * THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.



FLANGE CHANNEL DETAIL 1/₄ → 1/₄ → NOT TO SCALE



SPACING OF ALUMINUM SIGN SUPPORTS 5" X 3.5" X 3.7 LBS./ft.

GENERAL NOTES

- 1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
- 2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.

3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.

2'- 0"

- 4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
- 5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
- 6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

For State Traffic Engineer

DATE 12/05/13

PLATE NO. A4-6.12

SHEET NO:

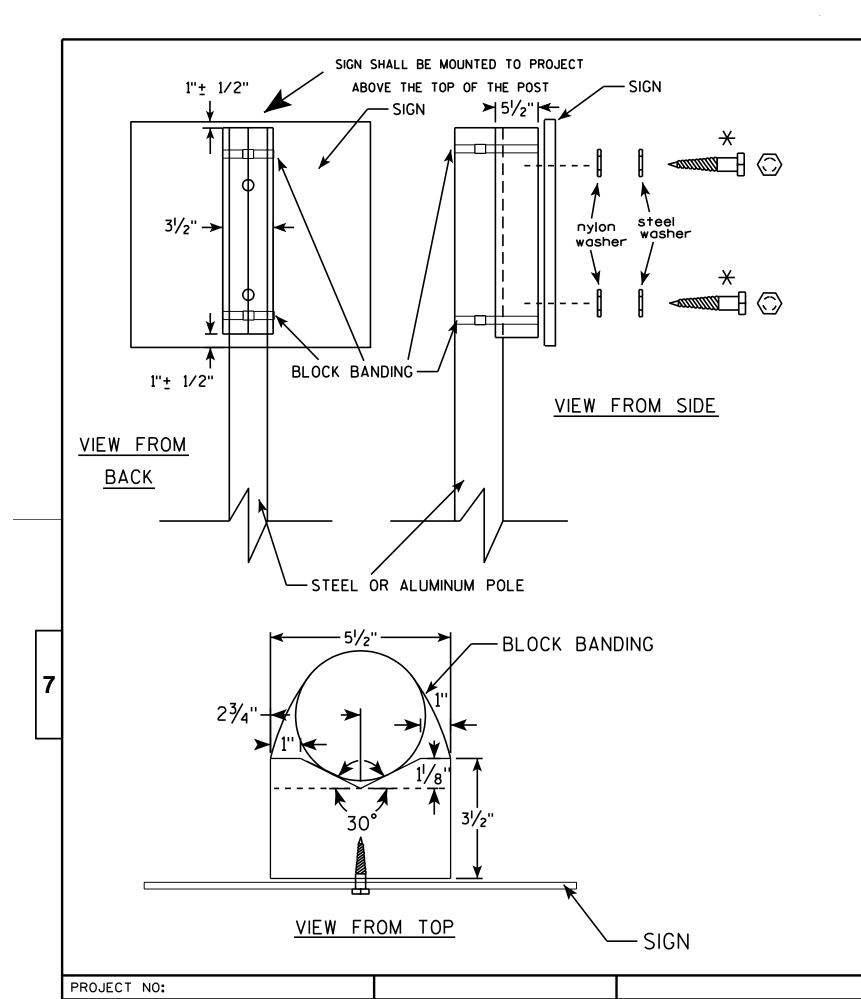
PROJECT NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A46.DGN

PLOT DATE: 05-DEC-2013 12:47

PLOT BY: mscs.ja





GENERAL NOTES

- 1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
- 2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, 3/4" WIDTH AND 0.025" THICKNESS
- 3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
- 4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
- 5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
 - b. Cadmium plated in accordance with ASTM Designation: B 766 TYPE 3, Class 12, or
 - c. Electro-galvanized in accordance with ASTM Designation: B 633, TYPE III, SC 3.
- 6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
- 7. STEEL WASHERS SHALL BE 11/4" O.D. X 3/8" I.D. X 1/16"
- 8. NYLON WASHERS SHALL BE $1^{1}/_{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

X LAG BOLTS SHALL BE 3/8" X 21/2"

BLOCK BANDING DETAIL (V-BLOCK OPTION) WISCONSIN DEPT OF TRANSPORTATION APPROVED For State Traffic Engineer PLATE NO. <u>A5-10.1</u>

DATE 7/12/07

SHEET NO:

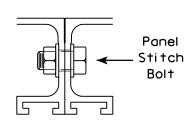
STITCH BOLT, WASHER & NUT

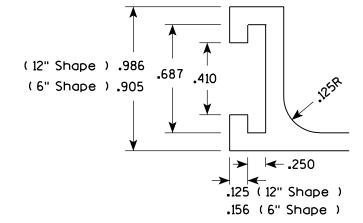
The hardware includes:

3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy

3/8 " - Stainless steel stop nut

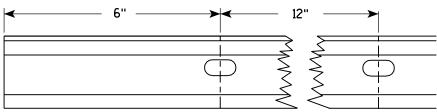
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy







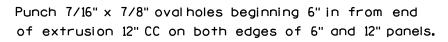
←.125

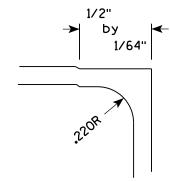


.078

← 2" →

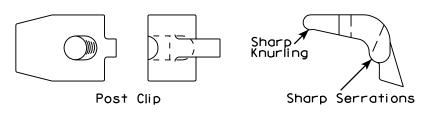
6" Extrusion Minimum Weight 1.1 lb./ft.

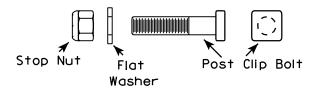




POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6 Post Clip Bolt shall be Stainless Steel. Flat washer shall be 3/8" X .091, Stainless Steel. Stop nut shall be stainless steel.





NOTES

- 1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
- 2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
- 3. Post Clips shall be used to attach the sign panel to the sign support.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED hester J Spang For State Traffic Engineer PLATE NO. 45-2.9

DATE 11/18/99

SHEET NO:

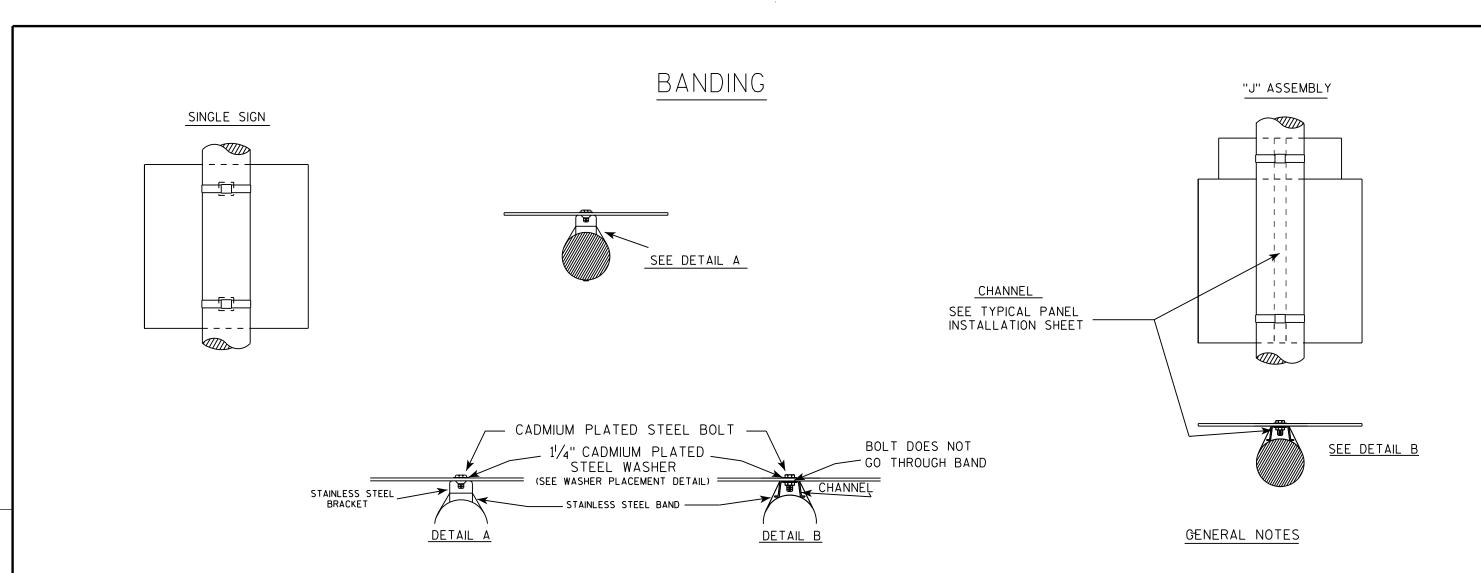
PROJECT NO:

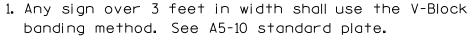
PLOT DATE: 28-SEP-2005 07:20 PLOT BY : DOTDZK

12" Extrusion

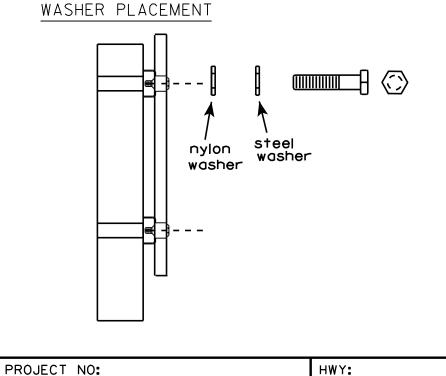
Minimum Weight

2.45 lb./ft.





- 2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
- 3. Banding and assembly bracket shall be stainless steel. All bands shall be $\frac{3}{4}$ " in width and 0.025" thickness.



WASHERS (ALL POSTS) -

COUNTY:

1-1/4" O.D. X3/8" I.D. X1/16" STEEL 1-1/4" O.D. X3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

STANDARD SIGN SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

State Traffic Engineer DATE 8/16/13

SHEET NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A59.DGN

PLOT DATE: 16-AUG-2013 13:27

PLOT BY: mscsja

PLOT NAME :

PLOT SCALE: 33.740899:1.000000

WISDOT/CADDS SHEET 42

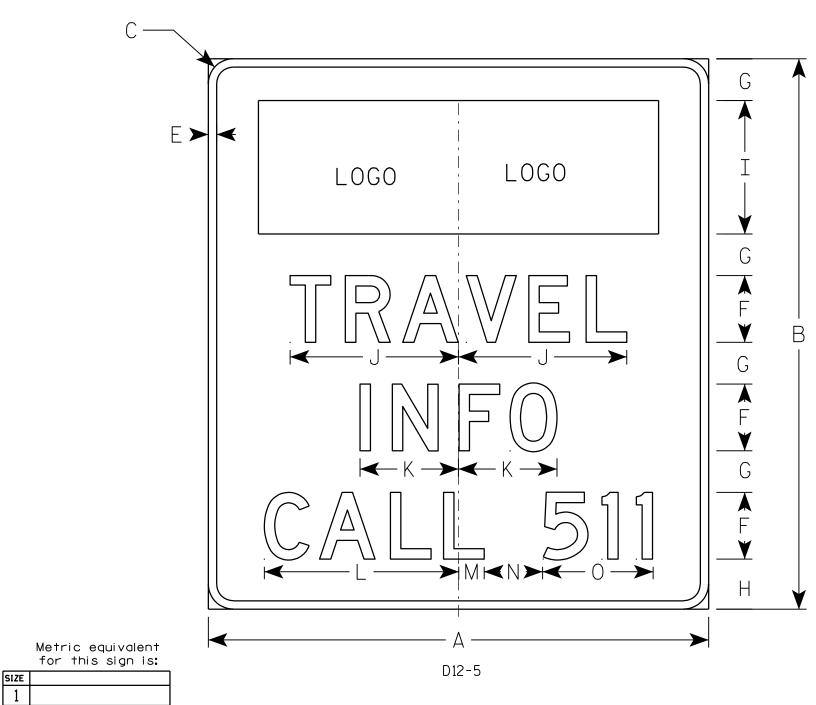
PLATE NO. A5-9.3



- 1. Sign is Type II Type SH Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - Blue Message - White - Type H Reflective

- 3. Message Series D
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



PROJECT NO:

SIZE					
1					
Ω	1500	mm	Χ	1650	mm
3					
4					
5					

SIZE	A	В	С	D	Е	F	G	Н	I	J	K	L	М	N	0	Р	0	R	S	T	U	٧	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	60	66	2 1/4		1	8	5	6	16	20 1/4	11 1/8	23 ¾	3 1/8	7	13 1/4												27.5	2.48
3																												
4																												
5																												

STANDARD SIGN D12-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED For State Traffic Engineer

DATE 12/5/08 PLATE NO. D12-5.2

SHEET NO:

FILE NAME : C:\Users\Projects\tr_stdplate\D125.DGN

PLOT DATE: 05-DEC-2008 10:57

PLOT BY : ditjph

NOTES

- 1. Sign is Type II See Note 6 reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - Top Red - Bottom Blue (See Note 6) Message - White - See Note 6

- 3. Message Series See note 5
- 4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
- 5. M1-1 Numerals D Interstate - C

M1-1A - All copy - C

6. Permanent Signs

Message - Type H Reflective

Detour or other temporary signs

Background - Reflective Message - Reflective

7

Metric equivalent for these signs are:

M1-1

HWY:

SIZE	M1 - 1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

																	M1 - 1	W1-1A	M1 - 1	W1-1A									
SIZE	Α	В	С	D	E	F	G	Н	I	J	К	L	М	N	0	Р	Q	R	S	T	U	٧	W	Х	Y	Area sq. ft.	Area sq. ft.	Area m2	Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 ½	15	24	17	7 1/8								30			3.13	3.91	. 36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36		·		3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4	·						·	45			7.03	8.79	. 81	1.05
5	36		·		3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 ½	11 3/4								45			7.03	8.79	. 81	1.05

COUNTY:

INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew A

 f_{or} State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

SHEET NO:

FILE NAME : C:\Users\Projects\tr_stdplate\M11.DGN

PROJECT NO:

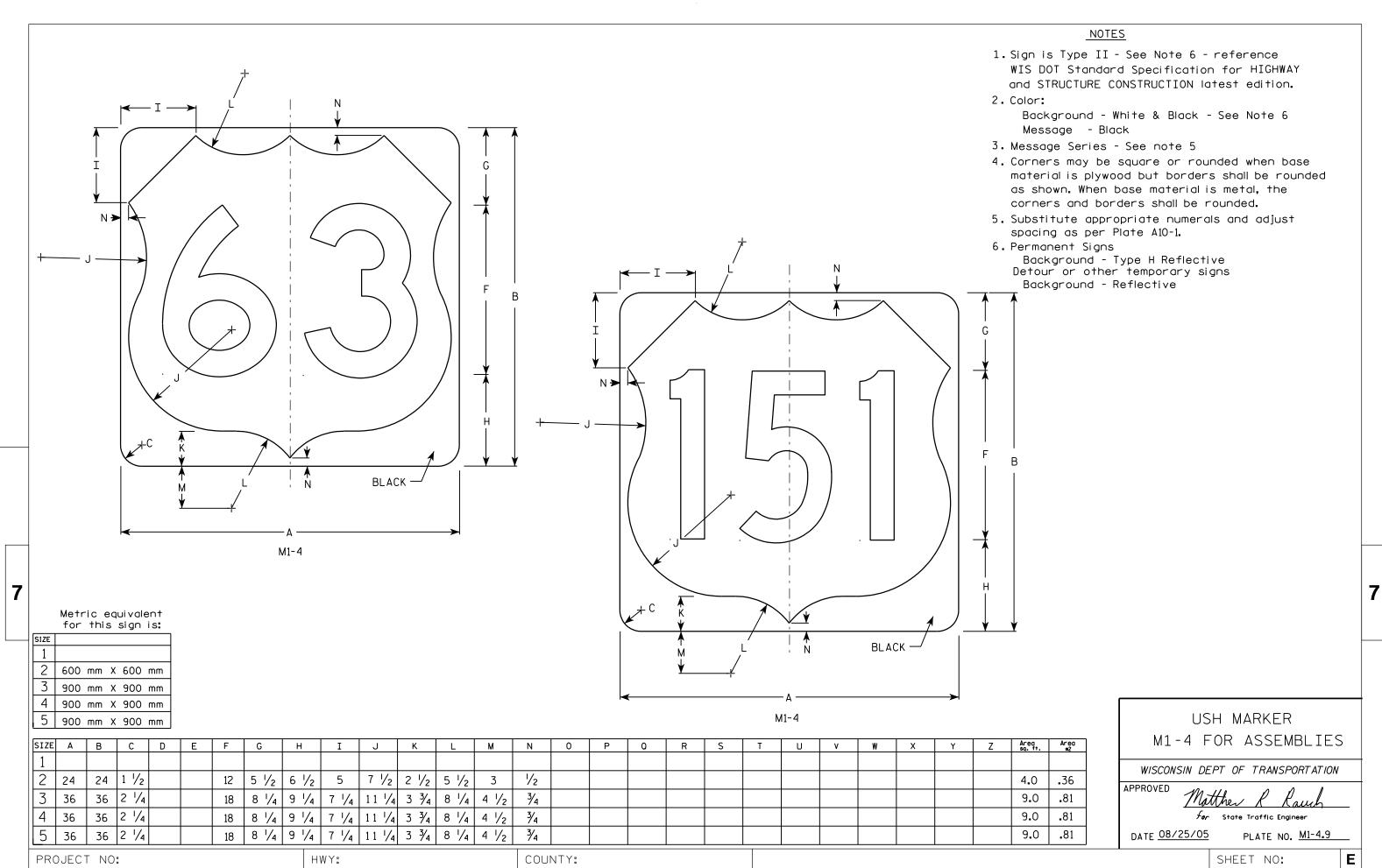
PLOT DATE: 13-0CT-2005 14:49

M1-1A

PLOT BY : DITJPH PLOT NAME :

PLOT SCALE: 7.947778:1.000000

00 WISDOT/CADDS SHEET 42



FILE NAME : C:\Users\Projects\tr_stdplate\M14.DGN

PLOT DATE: 13-OCT-2005 14:52

PLOT NAME :

PLOT BY : DITJPH

PLOT SCALE: 5.960833:1.000000

NOTES

- Sign is Type II see Note 7 reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

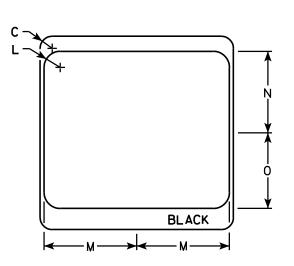
Background - White & Black - See Note 7 Message - Black

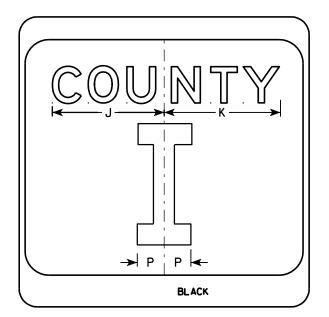
- 3. Message Series see Note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Message Series E for 1 letter.

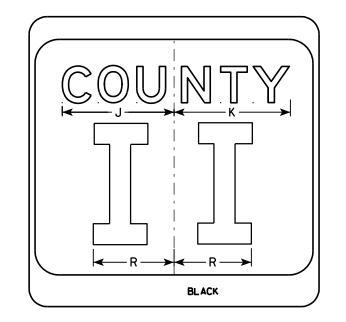
 Message Series D for 2 letters unless
 message is too big then Series C.

 Message Series C for 3 letters unless
 message is too big then Series B.
- 6. Substitute appropriate letters & optically center to achieve proper balance.
- 7. Permanent Signs

Background - Type H Reflective Detour or temporary Signs Background - Reflective







PLOT NAME :

SIZE	Α	В	С	D	E	F	G	Н	I	J	К	L	М	N	0	Р	0	R	S	Т	U	V	W	Х	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 %									4.0
3	36		2 1/4			16	4	7 %	5 %	12 1/4	12 1/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 %	5 %	12 1/4	12 1/8	3	17 1/8	15 1/4	14	3 %		10									9.0
5	36		2 1/4			16	4	7 5/8	5 %	12 1/4	12 1/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
DDO	IECT	NO.					111						COUN	TV.													
FRU	JECT	NO.					HV	V I .						I I .					I								

CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

PROVED

Matthew Rauch

Forstate Traffic Engineer

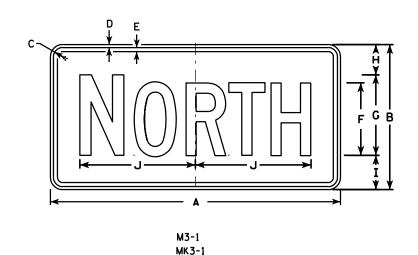
MATE 9/27/11 PLATE NO. M1-5A.8

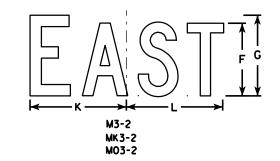
DATE 9/27/11

SHEET NO:

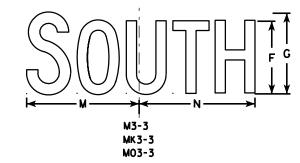
BLACK

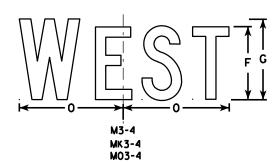
M1-5A



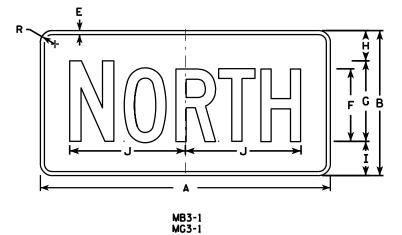


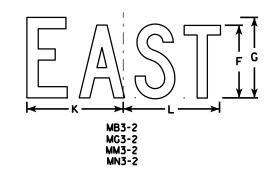
MO3-1





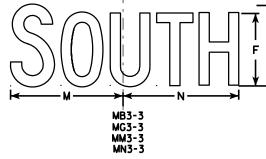
HWY:

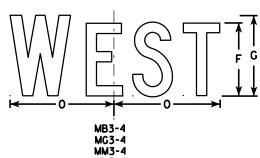




MM3-1

MN3-1





<u>NOTES</u>

- 1. All Signs Type II See Note 5 reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - See note 5 Message - See note 5

- 3. Message Series C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. M3-1 thru M3-4 Background White Type H Reflective (Detour or temporary signs Reflective) Message Black
 - MB3-1 thru MB3-4 Background Blue Message - White - Type H Reflective (Detour or temporary signs - Reflective)
 - MG3-1 thru MG3-4 Background Green

 Message White Type H Reflective
 - MK3-1 thru MK3-4 Background Green

 Message White Type H Reflective
 - MM3-1 thru MM3-4 Background White Type H Reflective Message Green
 - MN3-1 thru MN3-4 Background Brown
 Message White Type H Reflective
 - M03-1 thru M03-4 Background Orange Reflective Message Black
- 6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р	0	R	S	Т	כ	٧	W	X	Y	Z	Areg sq. ft.
1																											
2	24	12	1 1/8	3/8	3⁄8	6	7	2 1/4	2 3/4	10 1/4	7 1/8	8 3/8	10 1/4	9 ¾	8 ¾			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

COUNTY:

STANDARD SIGNS M3-1 thur M3-4 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

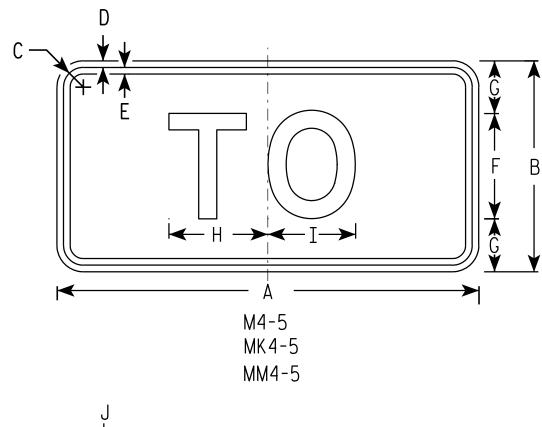
For State Traffic Engineer

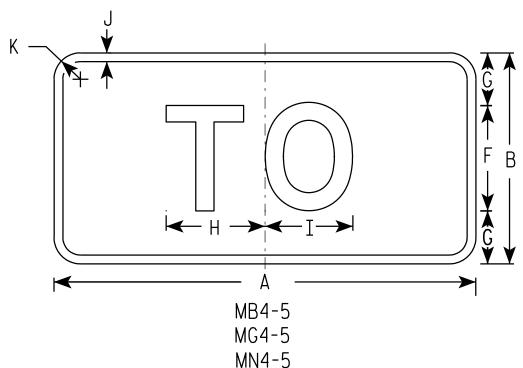
DATE 11/10/10 PLATE NO. M3-1.12

SHEET NO: E

PROJECT NO:

PLOT NAME :





HWY:

NOTES

- 1. Sign is Type II See Note 5 reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - See note 5 Message - See note 5

- 3. Message Series E
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. M4-5 Background White Type H Reflective
 (Detour or temporary Signs Reflective)

 Message Black
 - MB4-5 Background Blue Message - White - Type H Reflective (Detour or temporary Signs - Reflective)
 - MG4-5 Background Green
 Message White Type H Reflective
 - MK4-5 Background Green
 Message White Type H Reflective
 - MM4-5 Background White Type H Reflective Message Green
 - MN4-5 Background Brown
 Message White Type H Reflective

SIZE	Α	В	С	D	Ε	F	G	Н	I	J	К	L	М	N	0	Р	0	R	S	T	U	٧	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 %	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

COUNTY:

STANDARD SIGN M4-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthe R Rauch

DATE 11/10/10

SHEET NO:

FILE NAME : C:\Users\PROJECTS\tr_stdplate\M45.DGN

PROJECT NO:

PLOT DATE: 10-NOV-2010 12:48

PLOT BY : ditjph PLOT NAME :

PLOT SCALE: 5.462457:1.000000

WISDOT/CADDS SHEET 42

PLATE NO. M4-5.6

NOTES

- Signs are Type II See Note 4 reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - See note 4 Message - See note 4

- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. M5-1 and M5-2 Background White Type H Reflective Message Black
 - MB5-1 and MB5-2 Background Blue

 Message White Type H Reflective
 - MG5-1 and MG5-2 Background Green

 Message White Type H Reflective
 - MK5-1 and MK5-2 Background Green
 - Message White Type H Reflective
 - MM5-1 and MM5-2 Background White Type H Reflective Message Green
- MN5-1 and MN5-2 Background Brown

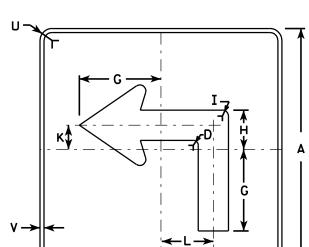
Message - White - Type H Reflective

- M05-1 and M05-2 Background Orange Type F Reflective Message - Black
- MP5-1 and MP5-2 Background White Type H Reflective Message Blue
- MR5-1 and MR5-2 Background Brown
 - Message Yellow Type H Reflective
- 5. M5-1R same as M5-1L except arrow points right.
- 6. M5-2R same as M5-2L except arrow tilts right.

c —	
D → E →	
Į.	←
·	M5-2L
	MK5-2L

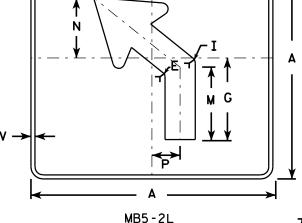
MK5-1L MM5-1L MO5-1L MP5-1L MR5-1L

M5-1L



MB5-1L MG5-1L MN5-1L

HWY:



MG5-2L

MN5-2L

MM5-2L

M05-2L

MP5-2L

MR5-2L

T A S

SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	M	N	0	Р	0	R	S	T	U	٧	₩	Х	Y	Z	Areo sq. fi
1																											
2	21		1 1/8	3%	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 %	5 1/4	5	2 1/2		1/2	2 %	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7 /8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 1/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7 /8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 1/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 1/8	½		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 1/8	1/2					6.25

COUNTY:

STANDARD SIGN M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

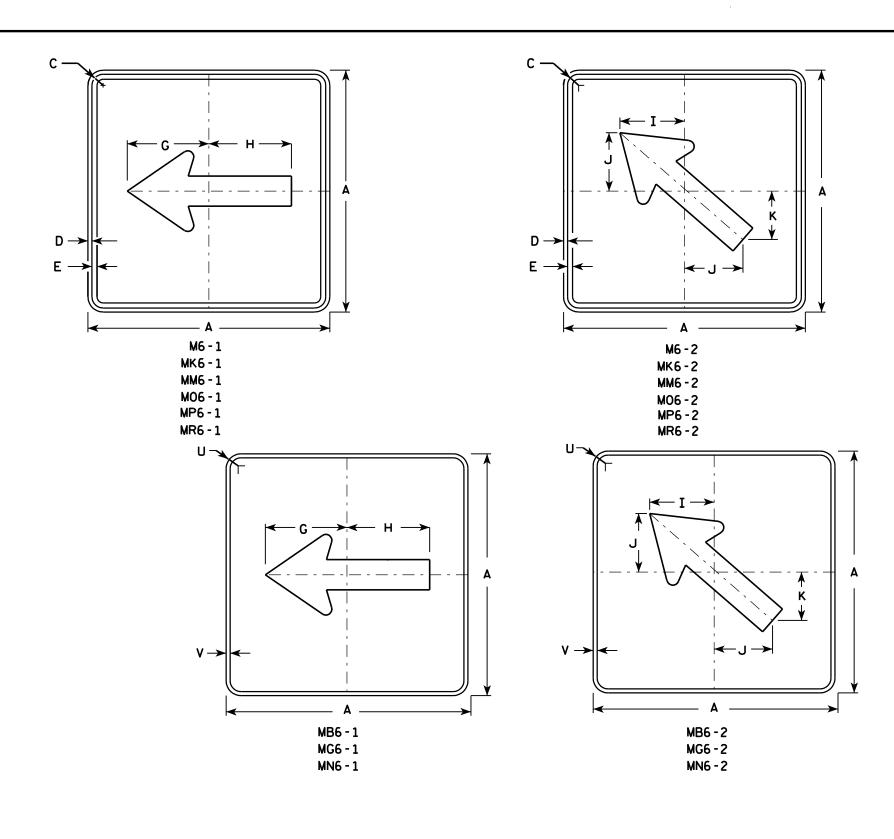
APPROVED

For State Traffic Engineer
DATE 7/29/13 PLATE NO. M5-1.12

SHEET NO:

PROJECT NO:

PLOT NAME :



NOTES

- 1. Signs are Type II See Note 4 reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

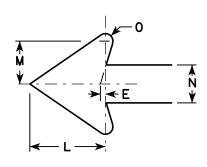
Background - See note 4 Message - See note 4

- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. M6-1 and M6-2 Background White Type H Reflective Message Black
 - MB6-1 and MB6-2 Background Blue Message - White - Type H Reflective
 - MG6-1 and MG6-2 Background Green
 Message White Type H Reflective
 - MK6-1 and MK6-2 Background Green

 Message White Type H Reflective
 - MM6-1 and MM6-2 Background White Type H Reflective Message Green
 - MN6-1 and MN6-2 Background Brown

 Message White Type H Reflective
 - M06-1 and M06-2 Background Orange Type F Reflective Message - Black
 - MP6-1 and MP6-2 Background White Type H Reflective Message Blue
 - MR6-1 and MR6-2 Background Brown

 Message Yellow Type H Reflective



PLOT NAME :

SIZE	Α	В	С	D	Е	F	G	Н	I	J	К	L	М	N	0	Р	0	R	S	T	U	٧	₩	Х	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 %	5	4 1/4	5 1/4	3	2 %	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 ¾	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 1/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 ¾	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 1/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 1/8	1/2					6.25

COUNTY:

STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matther R Rauch

DATE 7/29/13 PLATE NO. M6-1.13

SHEET NO:

HWY:

PROJECT NO:

1060-33-97

LIST OF DRAWINGS

1. GENERAL NOTES & DESIGN DATA
2. S-40-447 AND S-40-449 LAYOUT
3. S-67-413 AND S-67-417 LAYOUT
4. FOOTING DETAILS
5. BUTTERFLY DETAILS
6. HANDHOLE DETAILS

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE IDENTIFICATION PLAQUES SHALL BE CONSIDERED INCIDENTAL TO "SIGN BRIDGE SINGLE POLE SIGN SUPPORT, STRUCTURE S-XX-YYY", LOCATE PLAQUE ON HIGHWAY SIDE OF THE COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY. FABRICATE IN ACCORDANCE WITH S.D.D. 12 A 4-3.

CENTER SIGNS VERTICALLY ON TRUSS UNLESS OTHERWISE SHOWN OR NOTED.

ALL STATIONS AND ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

FOR JUNCTION BOXES, WIRING REQUIREMENTS, AND ELECTRIC SERVICE, SEE LIGHTING PLANS & FTMS PLANS.

CROUNDING RODS SHALL BE PROVIDED IN ACCORDANCE WITH SDD 10 HL 16-1 "SIGN BRIDGE STRUCTURE GROUNDING".

ALL BARS CONTAINED IN BELOW-GRADE FOOTINGS ARE TO BE UNCOATED REINFORCING STEEL.

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

SIGNS OR BLANKS SHALL BE INSTALLED ON THE SIGN BRIDGE AT THE TIME OF ERECTION, BLANKS, IF USED SHALL BE OF THE SAME SIZE AND LOCATION AS PERMANENT SIGNS.

CONTRACTOR SHALL SHOW SIGNS ON SHOP DRAWINGS.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO TRAFFIC OPS SE REGION TOM HEYDEL AND THE PROJECT ENGINEER FOR APPROVAL,

DESIGN DATA

SIGN STR.	DESIGN SIGN AREA	MAX. SIGN DEPT
5-40-447	128 SF	8'-0"
S-40-449	128 SF	8'-0"
S-67-413	180 SF	9'-0"
S-67-417	180 SF	9'-0"

DESIGNED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 6TH EDITION, WITH 2013 INTERIMS, WISDOT BRIDGE MANUAL & SE FREEWAYS DESIGN MANUAL

DEAD LOAD - WT. OF SIGN, SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF TO ONE FACE OF SIGN & AROUND SURFACE OF MEMBERS.
WIND PRESSURE - 90 MPH (3-SEC.GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1 COMBINATION 2	1.0 0.6	0.2 0.3
GROUP LOADS	% OF AL	LOWABLE STRESS
I. DEAD		100
II. DEAD + WIND III. DEAD + ICE + 1/2WIND		133 133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 PSF.

SEAN T.
BLACK
E-42904
WAUKESHA,
WI

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE: WILLIAM DREHER CONSULTANT: SEAN BLACK

NO. DATE

(608) 266-8489 (262) 548-6407

35751 5 14 (4 14)

BY

FORWARD 45

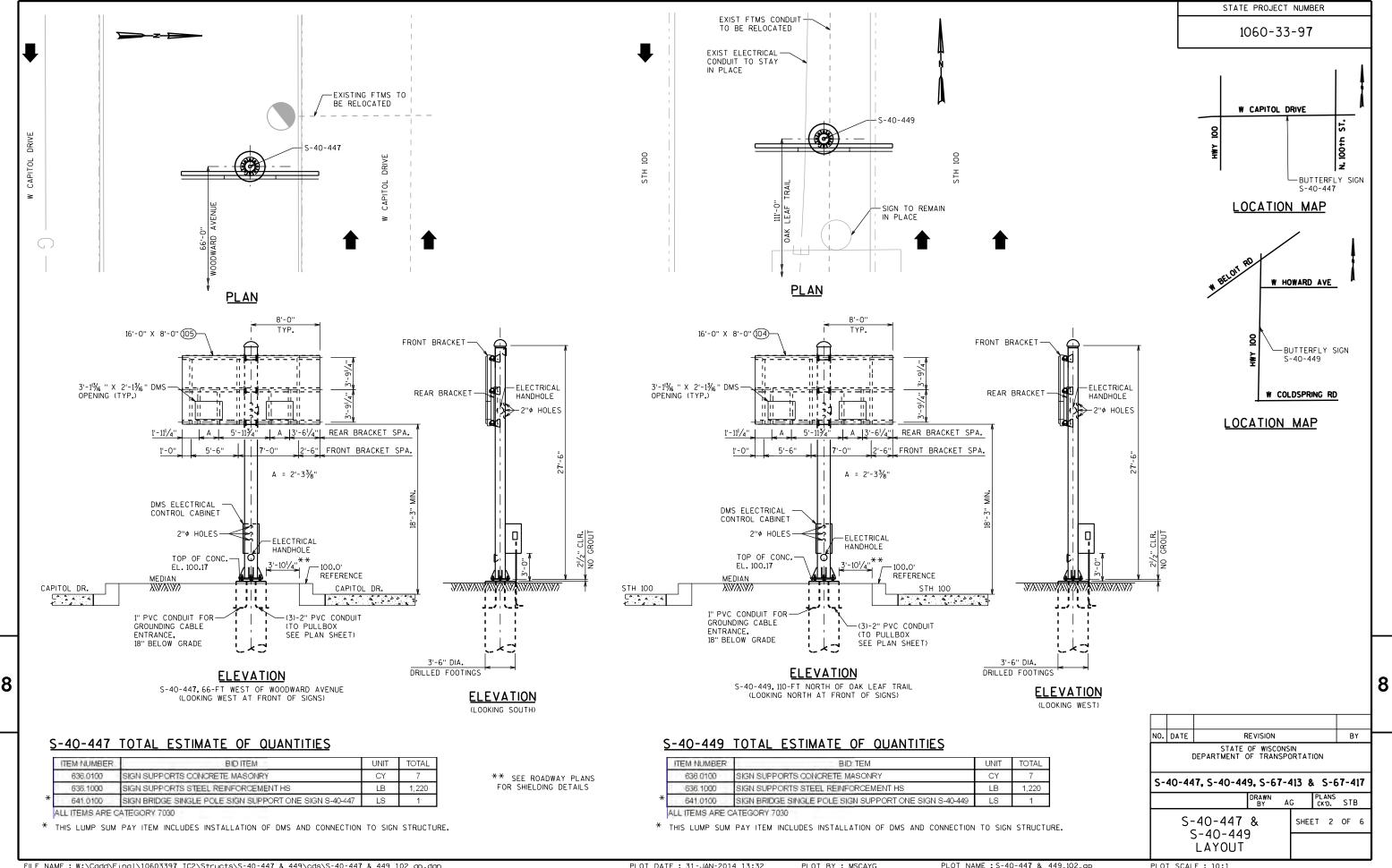
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

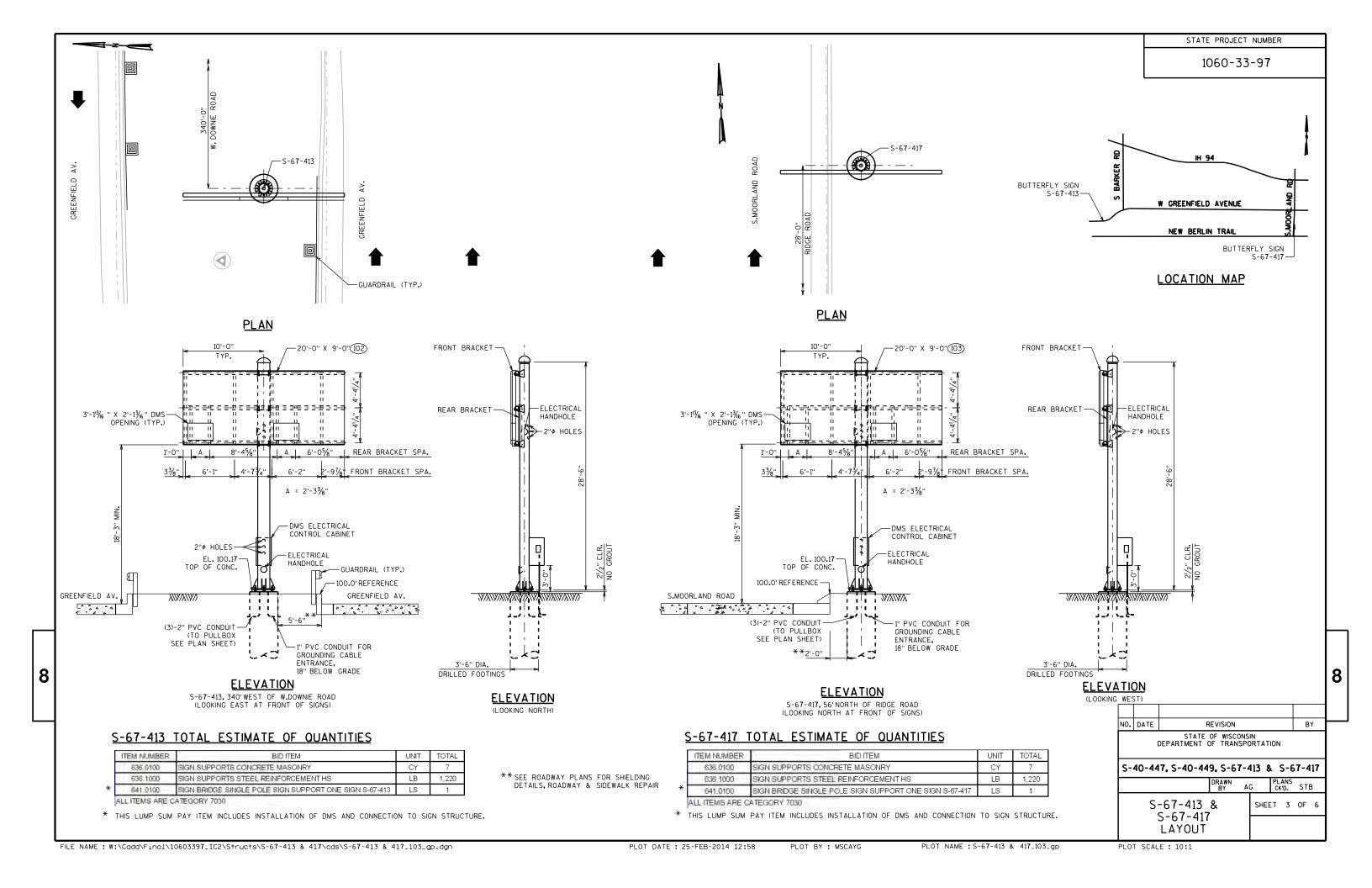
ACCEPTED William C. Duche KAR 03/03/1.
CHIEF STRUCTURES DESIGN ENGINEER DATE

S-40-447, S-40-449, S-67-413 & S-67-417

COUNTY MILWAUKEE/WAUKESHA NB/MILWAUKEE/CREENFIELD NB/M

GENERAL NOTES & DESIGN DATA



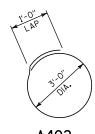


1060-33-97

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	C047	NO. REQ'D	LENGTH	1.2	CUT. DIAG.	BUN- DLE	LOCATION
A1001		12	16'-6"				DRILLED SHAFT
A402		24	10'-6"	Х			DRILLED SHAFT



NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR FOR DRILLED FOOTINGS AND 3" CLEAR FOR PORTION OF FOOTING ABOVE DRILLED FOOTINGS.

BILL OF BARS SHOWN IS ONLY FOR ONE SIGN STRUCTURE. APPLIES TO S-40-447/449 & S-67-413/417 FOOTINGS.

FOR STRUCTURE S-67-413, DUE TO EXPECTED WET, GRANULAR SOIL, TEMPORARY FULL DEPTH STEEL LINERS/CASING AND WET DRILLING METHODS USING SLURRY ARE REQUIRED TO PREVENT CAVING AND LOOSENING OF THE SOIL AROUND THE SHAFT AND AN UNSTABLE EXCAVATION BOTTOM. THE LINERS/CASING SHALL BE REMOVED AS THE CONCRETE IS POURED MAINTAINING SEVERAL FEET OF CONCRETE HEAD ABOVE THE BASE OF THE CASING TO MAINTAIN AN STABLE EXCAVATION AND PREVENT INFLOW OF WATER. THE DRILLING SLURRY CAN BE MINERAL OR POLYMER SLURRY. DUE TO EXPECTED WATER IN THE SHAFT EXCAVATIONS AND USE OF DRILLING SLURRY, TREMIE CONCRETE PLACEMENT FROM THE BASE OF THE SHAFT IS REQUIRED TO DISPLACE SLURRY, AND WATER, DISPLACED SLURRY. REQUIRED TO DISPLACE SLURRY AND WATER DISPLACED SLURRY, WATER AND ANY CONTAMINATED CONCRETE SHALL BE COLLECTED AS THE SHAFT CONCRETE IS PLACED AND PROPERLY DISPOSED. INCIDENTAL TO "SIGN SUPPORTS CONCRETE MASONRY"

ULTIMATE DESIGN STRESSES

CONCRETE MASONRY
HIGH STRENGTH BAR STEEL REINFORCEMENT, f'c=4,000 psi GRADE 60 fy=60,000 psi

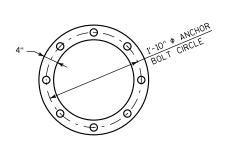
FOUNDATION DATA

THE FOLLOWING ASSUMPTIONS WERE USED FOR THE DESIGN OF THE FOUNDATION SYSTEM. IF VARIATIONS IN THE ASSUMED DESIGN PARAMETERS ARE FOUND DURING CONSTRUCTION, NOTIFY PROJECT ENGINEER FOR REQUIRED MODIFICATION TO THE FOUNDATION SYSTEM.

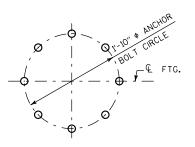
ALLOWABLE SOIL END BEARING CAPACITY - 3,000 PSF ALLOWABLE SOIL SKIN FRICTION - 300 PSF SOIL COHESION - 1,000 PSF ASSUMED SOIL FRICTION ANGLE - 30 DEGREES

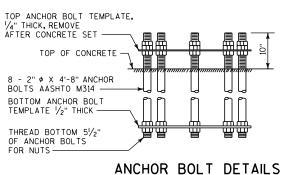
N0.	DATE	F	REVISION				В	Υ
	ĺ	STATE DEPARTMENT (OF WISC OF TRAN			ION		
S-	40-44	7, S-40-44	9 , S-6	7-4	113 8	k S-6	57-4	17
			DRAWN BY	А	G	PLANS CK'D.	STI	В
	В	UTTERFL	Υ		SHEE	ET 4	OF	6
	TRU	SS FOO						

8



TOP VIEW OF TOP & **BOTTOM TEMPLATES**





ELEVATION

_ A 4 ∩ 2 (TYP.)

DIΔ.

11 1 11

CAP OR SEAL WITH SUITABLE

REMOVABLE PLUG. (TYP.)

PLACE A1001 BARS TO MISS ANCHOR BOLTS

A1001-(TYP.)

-8 - 2" ¢ X 4'-8" ANCHOR BOLTS A.A.S.H.T.O. M314. THREAD TOP

TOP 12" ASTM A153, CLASS C

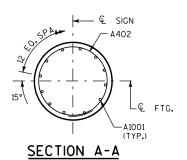
-PVC CONDUIT SEE CORRESPONDING LAYOUT SHEETS FOR NUMBER, SIZE AND DEPTH OF CONDUITS (5'-0" INCIDENTAL TO "SIGN SUPPORTS

¾" CHAMFER - TYP. ALL EXPOSED CORNERS

CONCRETE MASONRY")

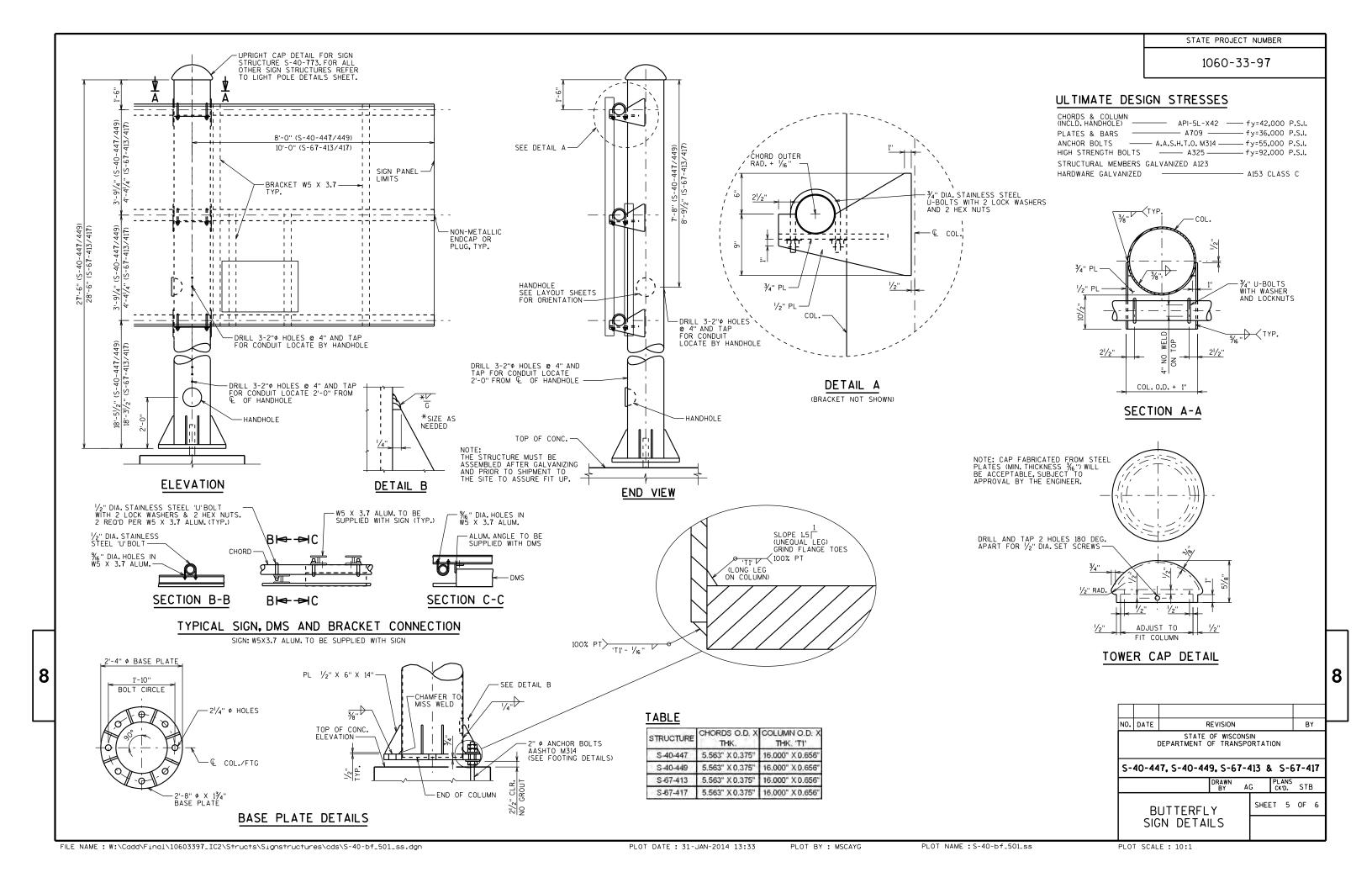
10" (3 NUTS, 2 WASHERS) AND BOTTOM 51/2" (2 NUTS). GALVANIZE

- GROUND LINE



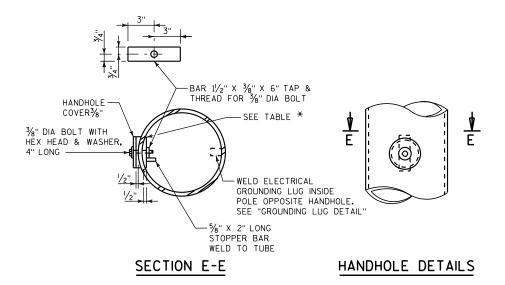
8

PLOT DATE: 31-JAN-2014 13:33



STATE PROJECT NUMBER

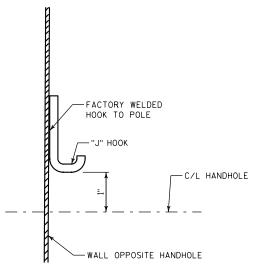
1060-33-97



HANDHOLE NOTES

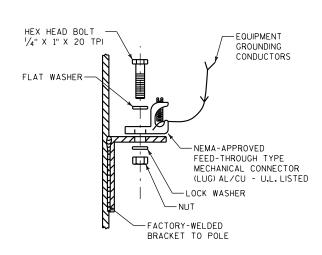
HANDHOLES SHALL BE LOCATED IN THE COLUMN OF THE BUTTERFLY SIGN STRUCTURE FOR ELECTRICALLY OPERATED DEVICES INSTALLED ON/IN THE STRUCTURE IN THE FUTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE FUTURE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE FUTURE ELECTRICAL SERVICE ENTRANCE WITH THE DISTRICT TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN BRIDGE COLUMNS AND MEMBERS. CONDUIT (AS REO'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL DETAIL PLAN SHEETS.

*	UPRIGHT DIAM. SIZE	HANDHOLE PIPE O.D. X MIN. THK.
	UP TO AND INCLD. 16" X .375"	5.562" X .500"
	GREATER THAN 16" X .375" TO AND INCLD. 24" X .562"	6.625" X .562"



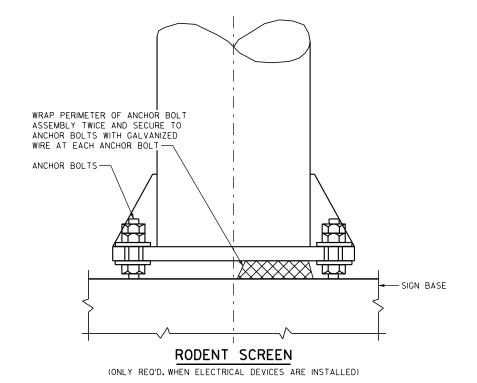
TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



GROUNDING LUG DETAIL

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



NO. DATE REVISION BY

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

S-40-447, S-40-449, S-67-413 & S-67-417

DRAWN BY AG PLANS CKD. STB

SHEET 6 OF 6

8

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

http://www.dot.wisconsin.gov