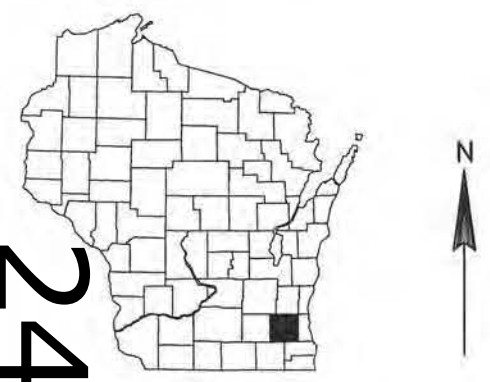


SEL
PROJECT ID: 2718-11-70, 2718-11-71
WITH: N/A
COUNTY: WAUKESHA

MAY 2013
ORDER OF SHEETS

Section No. 1	Title
Section No. 2	Typical Sections and Details
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
Section No. 4	Right of Way Plat
Section No. 5	Plan and Profile
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plates
Section No. 8	Structure Plans
Section No. 9	Computer Earthwork Data
Section No. 9	Cross Sections

TOTAL SHEETS = 232



DESIGN DESIGNATION

A.A.D.T. 2013	=	10,000
A.A.D.T. 2033	=	11,000
D.H.V. 2033	=	1,155
D.D.	=	58/42
T.	=	2.7%
DESIGN SPEED	=	30 MPH
ESALS	=	657,000

CONVENTIONAL SYMBOLS

COUNTY LINE	
CORPORATE LIMITS	
PROPERTY LINE	
LIMITED EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
FENCE	
GUARD RAIL	
SLOPE INTERCEPT	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
MARSH AREA	
WOODED OR SHRUB AREA	
STREAM OR WATER EDGE	
BUSH	
PINE TREE	
TREE	
TRAFFIC SIGNAL CONTROL CABINET	
TRAFFIC SIGNAL	
TRAFFIC SIGNAL MAST-ARM	
TRAFFIC SIGNAL WITH LIGHT	
EXISTING PULL BOX	
BOLLARD	

COMBUSTIBLE FLUIDS

UNDERGROUND UTILITIES	
GAS	
SANITARY SEWER	
STORM SEWER	
WATER	
ELECTRIC	
TELEPHONE	
FIBER OPTIC	
CABLE TELEVISION	
FORCE MAIN	
MANHOLE	
UTILITY PEDESTAL	
FIBER OPTIC HAND HOLE	
POWER POLE	
TELEPHONE POLE	
RAILROAD	
HYDRANT	
LIGHT POLE	
RAILROAD SIGNAL	
SIGN	
TRANSMISSION TOWER	
VALVE	
CURB STOP	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	



(SIZE) G	
(SIZE) SAN	
(SIZE) SS	
(SIZE) W	
E	
T	
FO	
TV	
FM	
MH	
HH	
Ø	
Ø	
Ø	
Ø	
Ø	
Ø	
Ø-X	
Ø	
Ø (TYPE)	
Ø CS	
Ø (SIZE, TYPE)	
Ø	
Ø	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

S EAST AVENUE

ESTBERG AVENUE TO COLLEGE AVENUE

LOCAL STREET

WAUKESHA COUNTY

STATE PROJECT NUMBER
2718-11-70
2718-11-71

(WATERMAIN)

R-19-E

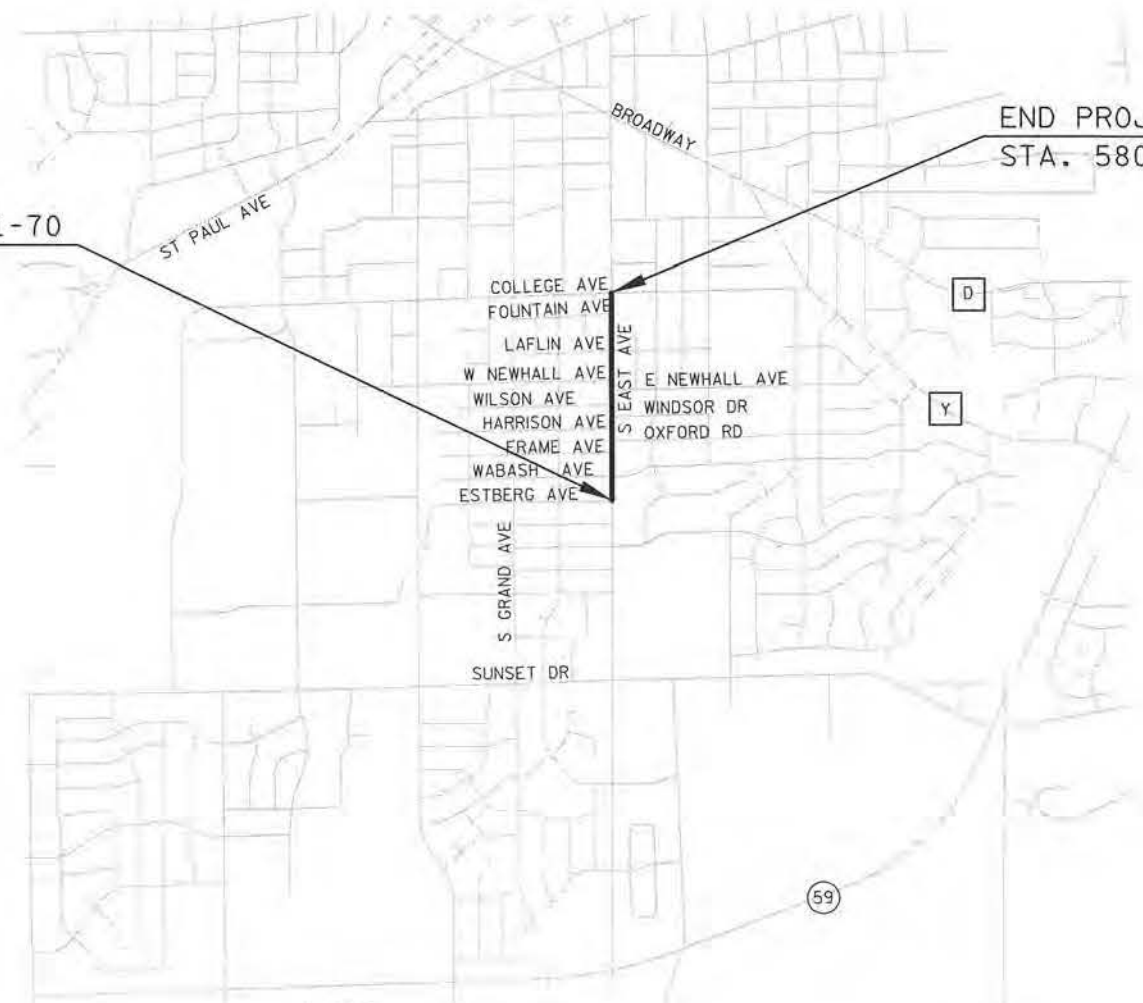
BEGIN PROJECT 2718-11-70

STA. 550+00

N = 367,630.8436
E = 2,474,548.1456

END PROJECT 2718-11-70

STA. 580+70



LAYOUT

SCALE 0 1/2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.581 MI.

HORIZONTAL DATUM: SEWRPC WISCONSIN STATE PLANE COORDINATE SYSTEM, GROUND, SOUTH ZONE-NAD 1927

VERTICAL DATUM: CITY OF WAUKESHA DATUM CONVERSION FROM CITY TO NGVD 1929: CITY OF WAUKESHA + 780.55 = NGVD 1929

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2718-11-70	WISC 2013271	1
2718-11-71		
-----	-----	---
-----	-----	---

ACCEPTED FOR

CITY of WAUKESHA

1-2-13 Fred Abadi
DPW Director
(Date) (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY
R.A. Smith National

Beyond Surveying
and Engineering

16745 W. Bluemound Road, Brookfield WI 53005
262-781-1000 Fax 262-781-8466
www.rasmithnational.com



1/2/2013 John A. Elkin
(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	GAK (R.A.SMITH NATIONAL)
Designer	JAE/JRI (R.A.SMITH NATIONAL)
Management Consultant	DAAR ENGINEERING, INC.
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 1/29/2013 Ted Beck
(Management Consultant Signature)

E

STANDARD ABBREVIATIONS			
AP	ACCESS POINT	NOM	NOMINAL
AC	ACRE	NC	NORMAL CROWN
ADJ	ADJUST	N	NORTH
AECPRC	APRON ENDWALLS FOR CULVERT	Y	NORTH GRID COORDINATE
	PIPE REINFORCED CONCRETE	NB	NORTHBOUND
AH	AHEAD	NO	NUMBER
AC	ASPHALT CEMENT	OPT	OPTIONAL
ASPH	ASPHALTIC	OD	OUTSIDE DIAMETER
ACP	ASPHALTIC CONCRETE PAVEMENT	PAVT	PAVEMENT
AVG	AVERAGE	PLE	PERMANENT LIMITED EASEMENT
ADT	AVERAGE DAILY TRAFFIC	PACS	PIPE ARCH CORRUGATED STEEL
BK	BACK	PT	POINT
BAD	BASE AGGREGATE DENSE	PC	POINT OF CURVATURE
BM	BENCHMARK	PI	POINT OF INTERSECTION
CB	CATCH BASIN	PT	POINT OF TANGENCY
C/L	CENTER LINE	PVC	POINT OF VERTICAL CURVE
C/L CONST	CENTER LINE CONSTRUCTION	PVI	POINT OF VERTICAL INTERSECTION
Δ	CENTRAL ANGLE OR DELTA	PVT	POINT OF VERTICAL TANGENCY
CL	CLASS	PVC	POLYVINYL CHLORIDE
CONC	CONCRETE	PCC	PORTLAND CEMENT CONCRETE
CONST	CONSTRUCTION	LB	POUND
CMCP	CORRUGATED METAL CULVERT PIPE	PSF	POUNDS PER SQUARE FOOT
CTH	COUNTY TRUNK HIGHWAY	PSI	POUNDS PER SQUARE INCH
CABC	CRUSHED AGGREGATE BASE COURSE	PE	PRIVATE ENTRANCE
CFS	CUBIC FEET PER SECOND	PGL	PROFILE GRADE LINE
CY	CUBIC YARD	PL	PROPERTY LINE
CP	CULVERT PIPE	Q100	100-YEAR FLOW RATE
CPCS	CULVERT PIPE CORRUGATED STEEL	R	RADIUS
CPRC	CULVERT PIPE REINFORCED CONCRETE	RR	RAILROAD
CPRCHE	CULVERT PIPE REINFORCED CONCRETE	R	RANGE
	HORIZONTAL ELLIPTICAL	R/L	R/L
C & G	CURB AND GUTTER	REINF	REINFORCING OR REINFORCEMENT
D	DEGREE OF CURVE	REQD	REQUIRED
DHV	DESIGN HOUR VOLUME	RT	RIGHT
DIA	DIAMETER	R/W	RIGHT-OF-WAY
DD	DIRECTIONAL DISTRIBUTION	RD	ROAD
DWY	DRIVEWAY	RDWY	ROADWAY
E	EAST	SEC	SECTION
X	EAST GRID COORDINATE	SHLDR	SHOULDER
EB	EASTBOUND	S	SOUTH
EL	ELEVATION	SB	SOUTHBOUND
ESALS	EQUIVALENT SINGLE AXLE LOADS	SQ	SQUARE
EXC	EXCAVATION	SF	SQUARE FEET
EBS	EXCAVATION BELOW SUBGRADE	SW	SIDEWALK
EXIST	EXISTING	SY	SQUARE YARD
FPS	FEET PER SECOND	SDD	STANDARD DETAIL DRAWINGS
FERT	FERTILIZE	STH	STATE TRUNK HIGHWAYS
FE	FIELD ENTRANCE	STA	STATION
FL	FLOW LINE	SS	STORMSEWER
FT	FOOT	SSPRC	STORMSEWER PIPE REINFORCED CONCRETE
GN	GRID NORTH	ST	STREET
HES	HIGH EARLY STRENGTH	STR	STRUCTURE OR STRUCTURAL
HP HW	HIGH POINT	SEC	SUPERELEVATION
HW	HIGH WATER	T	TANGENT
HMA	HOT MIX ASPHALT	TEMP	TEMPORARY
CWT	HUNDREDWEIGHT	TI	TEMPORARY INTEREST
HWD	HYDRANT	TLE	TEMPORARY LIMITED EASEMENT
INL	INLET	t	TON
ID	INSIDE DIAMETER	T	TOWN
I	INTERSECTION ANGLE	T/L	TRANSIT LINE
INV	INVERT	T	TRUCKS (PERCENT OF)
IP	IRON PIPE OR PIN	TYP	TYPICAL
JT	JOINT	USH	UNITED STATES HIGHWAY
LT	LEFT	VAR	VARIABLE
LT	LENGTH OF CURVE	V	VELOCITY OF DESIGN SPEED
LF	LINEAR FOOT	VERT	VERTICAL
LP	LOW POINT	VC	VERTICAL CURVE
LS	LUMP SUM	VOL	VOLUME
MH	MANHOLE	WM	WATERMAIN
MAX	MAXIMUM	WV	WATER VALVE
Mgal	MEGAGALLON	W	WEST
MPH	MILES PER HOUR	WB	WESTBOUND
MIN	MINIMUM	YD	YARD
MON	MONUMENT		

GENERAL NOTES

- 1NO SHRUBS OR TREES ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER. WITHIN DRIP LINE OF TREES, EXCAVATION BEHIND THE BACK OF CURB IS LIMITED TO 1'. SEE TYPICAL FINISHED SECTIONS AND PLAN AND PROFILE SHEETS FOR LOCATIONS. CONTACT THE CITY OF WAUKESHA FORESTRY DEPARTMENT - PETE TRACZEK (262) 524-3710 FOR QUESTIONS REGARDING TREES ALONG S EAST AVENUE.
- 2EROSION CONTROL DEVICES SHALL BE PLACED IN SEQUENCE WITH CONSTRUCTION OPERATIONS OR AS DETERMINED BY THE ENGINEER
- 3ALL OPENINGS OF HOLES BELOW SUBGRADE RESULTING FROM REMOVALS OR ABANDONMENTS SHALL BE BACKFILLED WITH GRANULAR BACKFILL. GRANULAR BACKFILL SHALL BE INCIDENTAL TO THE REMOVAL ITEM.
- 4STATIONING, DISTANCES AND OFFSETS FOR SIGNS SHOWN ON THE PLANS ARE APPROXIMATE AND THE LOCATIONS OF SIGNS ARE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 5THE HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 110 LBS / SY / IN.
- 6HMA PAVEMENT TYPE E-1 SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

		NOM MAX SIZE GRADATION	ASPHALTIC MATERIAL
5.5-INCH	ONE 2" UPPER LAYER	12.5 mm	PG 64-28
	ONE 3.5" LOWER LAYER	19.0 mm	PG 64-22
- 7SEE SUBSURFACE EXPLORATION REPORTS FROM PROFESSIONAL SERVICE INDUSTRIES, INC., PEWAUKEE. REPORTS ARE AVAILABLE FROM DAAR ENGINEERING AT 414-225-9817
- 8CURB AND GUTTER STATION/OFFSETS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
- 9THE 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.
- 10THE LOCATIONS OF SIDEWALK AND DRIVEWAY REMOVALS ARE APPROXIMATE. FINAL LOCATIONS TO BE DETERMINED BY THE ENGINEER.
- 11CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE AND ALL UTILITIES LISTED TO VERIFY UTILITY WORK STATUS PRIOR TO BIDDING.
- 12FROM EDGE OF S EAST AVENUE PAVEMENT TO SIDE STREET MATCH POINT THE PAVEMENT STRUCTURE SHALL CONSIST OF 5.5" HMA PAVEMENT TYPE E-1 OVER 11" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB & GUTTER 30-INCH TYPE D UNLESS OTHERWISE NOTED.
- 13TRAFFIC SIGNALS, LIGHT POLES, SIGN POSTS AND SIGN PLATES SHALL BE PLACED IN THE TERRACE BEYOND THE LATERAL CLEARANCE.
- 14PAVEMENT CROSS SLOPE IN MARKED OR UNMARKED CROSSWALKS ON SIDEROADS SHALL BE 2.0% MAX.
- 15FINAL LOCATION OF CURB RAMP OPENINGS, SIGNALS, LIGHTING BASES, HYDRANTS AND STORM SEWER INLETS TO BE VERIFIED BY FIELD ENGINEER PRIOR TO INSTALLATION.

ORDER OF SECTION 2 SHEETS

- Project Overview
- Typical Sections
- Construction Details
- Intersections
- Erosion Control & Drainage (On Storm Sewer Plan)
- Storm Sewer
- Water Main
- Signing
- Lighting
- Traffic Signals
- Pavement Marking
- Traffic Control and Construction Staging

- 16RE-TOPSOIL OF GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. SEED, FERTILIZE, AND MULCH/EROSION MAT TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITH FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.
- 17STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED.
- 18EROSION CONTROL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTORS ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE SMP IS NO LONGER REQUIRED.



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

DESIGNER

R.A SMITH NATIONAL, INC
16745 W BLUEMOUND ROAD
BROOKFIELD, WI 53005-5938
JOHN ELKIN
(262) 781-1000
john.elkin@rasmithnational.com

CITY OF WAUKESHA CONTACT

CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
130 DELAFIELD STREET
WAUKESHA, WI 53188-3616
MS. MARGARET LIEDTKE
(262) 524-3589
mliedtke@ci.waukesha.wi.us

DNR LIAISON

WIS DNR SERVICE CENTER
141 NW BARSTOW, RM 180
WAUKESHA, WI 53188
MR. CRAIG WEBSTER
(262) 574-2141
Craig.Webster@Wisconsin.gov

CITY FORESTER

CITY OF WAUKESHA PARKS, RECREATION AND
FORESTRY DEPARTMENT
1400 AVIATION DRIVE
WAUKESHA, WI 53188
MR. PETE TRACZEK
(262) 524-3710
Ptraczek@ci.waukesha.wi.us

UTILITIES

GAS
WE ENERGIES
333 W. EVERETT ST - A279
MILWAUKEE, WI 53203
MR. DAN SANDE
(414) 221-4578
dan.sande@we-energies.com

ELECTRIC
WE ENERGIES
333 W. EVERETT ST - A279
MILWAUKEE, WI 53203
MR. DAN SANDE
(414) 221-4578
dan.sande@we-energies.com

TELEPHONE / FIBER OPTIC
TDS METROCOM
20875 CROSSROADS CIRCLE, SUITE 800
WAUKESHA, WI 53186
MR. MICHAEL JOHNSON
(262) 754-3052

TELEPHONE / FIBER OPTIC
AT&T WISCONSIN
2005 PEWAUKEE ROAD
WAUKESHA, WI 53188
MR. TOM CROWLEY
(262) 896-7427
tc1657@att.com

CABLE TV
TIME WARNER CABLE
1320 N MARTIN LUTHER KING JR DRIVE
MILWAUKEE, WI 53212
MR. STEVE CRAMER
(414) 277-4045
steve.cramer@twcable.com

TELEPHONE / FIBER OPTIC
AT&T LEGACY T/TCG (TCG MILWAUKEE)
383 WILLIAMSTOWNE SUITE B
DELAFIELD, WI 53018
MR. DON DIETSCH
(262) 646-5602
d.dietsch@northwindtech.com

WATER
WAUKESHA WATER UTILITY
115 DELAFIELD STREET
WAUKESHA, WI 53188
MR. THOMAS KRAUSE
(262) 521-5272
TKrause@waukesha-water.com

SANITARY SEWER
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
130 DELAFIELD STREET
WAUKESHA, WI 53188
MR. CHRIS LANGEMAK
(262) 524-3600
clangema@ci.waukesha.wi.us

LIGHTING / FIBER OPTIC
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
130 DELAFIELD STREET
WAUKESHA, WI 53188
MR. DALE EVANS
(262) 524-3600
devans@ci.waukesha.wi.us

SIGNALS
CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS
130 DELAFIELD STREET
WAUKESHA, WI 53188
MS. MARGARET LIEDTKE
(262) 524-3589
mliedtke@ci.waukesha.wi.us

THE FOLLOWING ENTITIES HAVE PREPARED
PLANS FOR THIS PROJECT:

POWRTEK ENGINEERING, INC: LIGHTING
GREG SADOWSKI, P.E.
20711 WATERTOWN ROAD, SUITE C
WAUKESHA, WI 53186
(262) 827-9575

TRAFFIC ANALYSIS AND DESIGN, INC.: PERMANENT
TRAFFIC SIGNALS
JEFF FAIT, P.E., PTOE
N36 W7505 BUCHANAN COURT
CEDARBURG, WI 53012
(800) 605-3091 EXT. 81

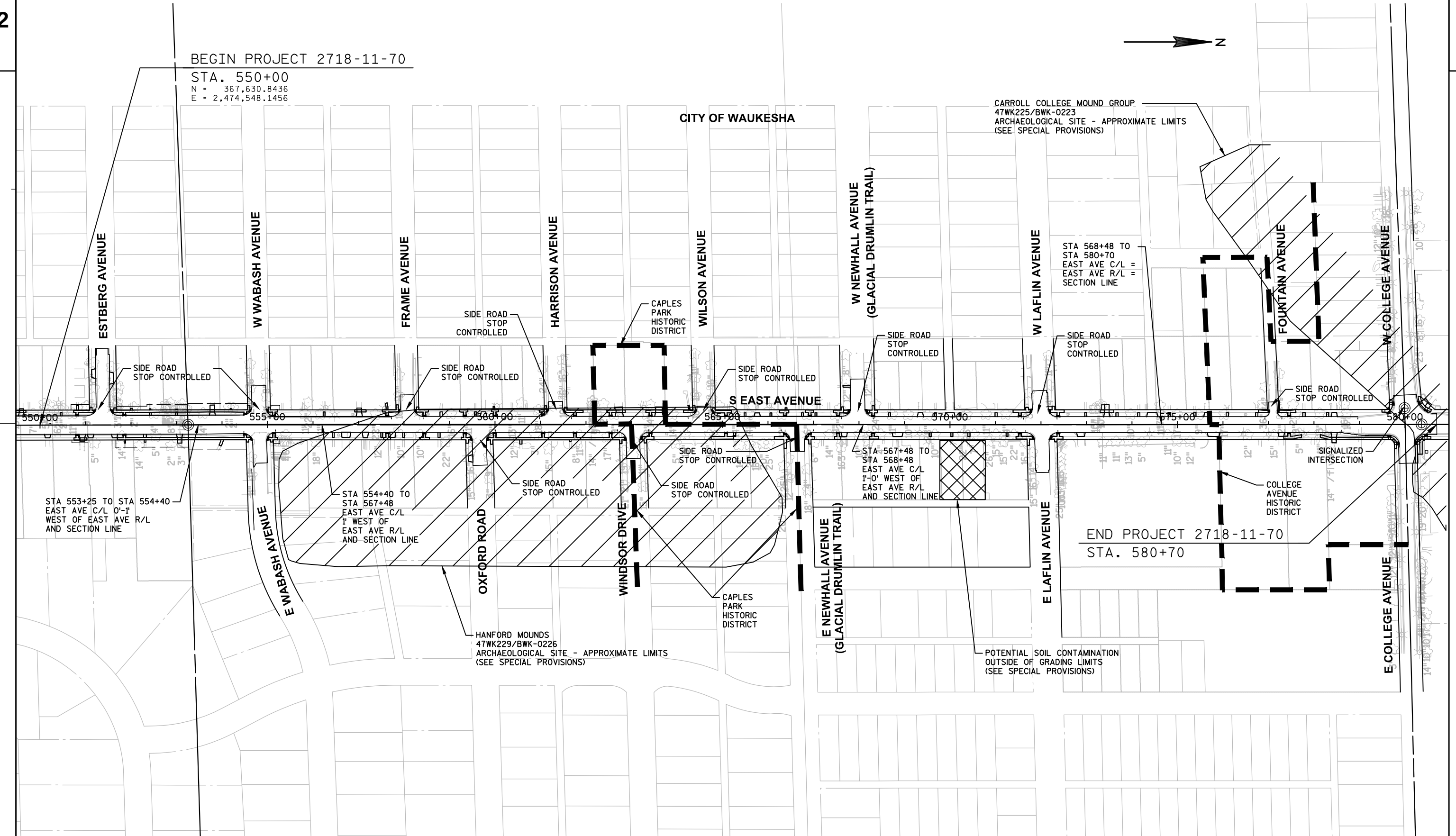
WAUKESHA WATER UTILITY: WATER MAIN
TOM KRAUSE
115 DELAFIELD STREET
WAUKESHA, WI 53188
(262) 521-5272

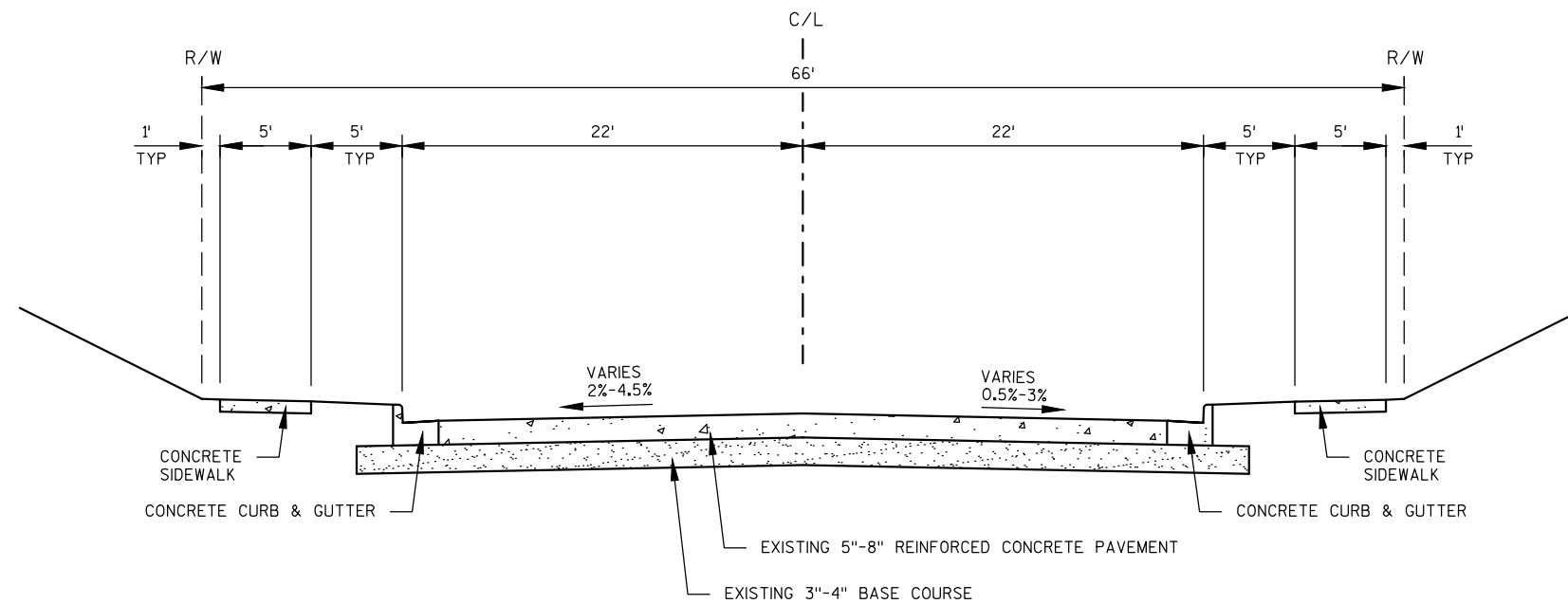
BEGIN PROJECT 2718-11-70

STA. 550+00

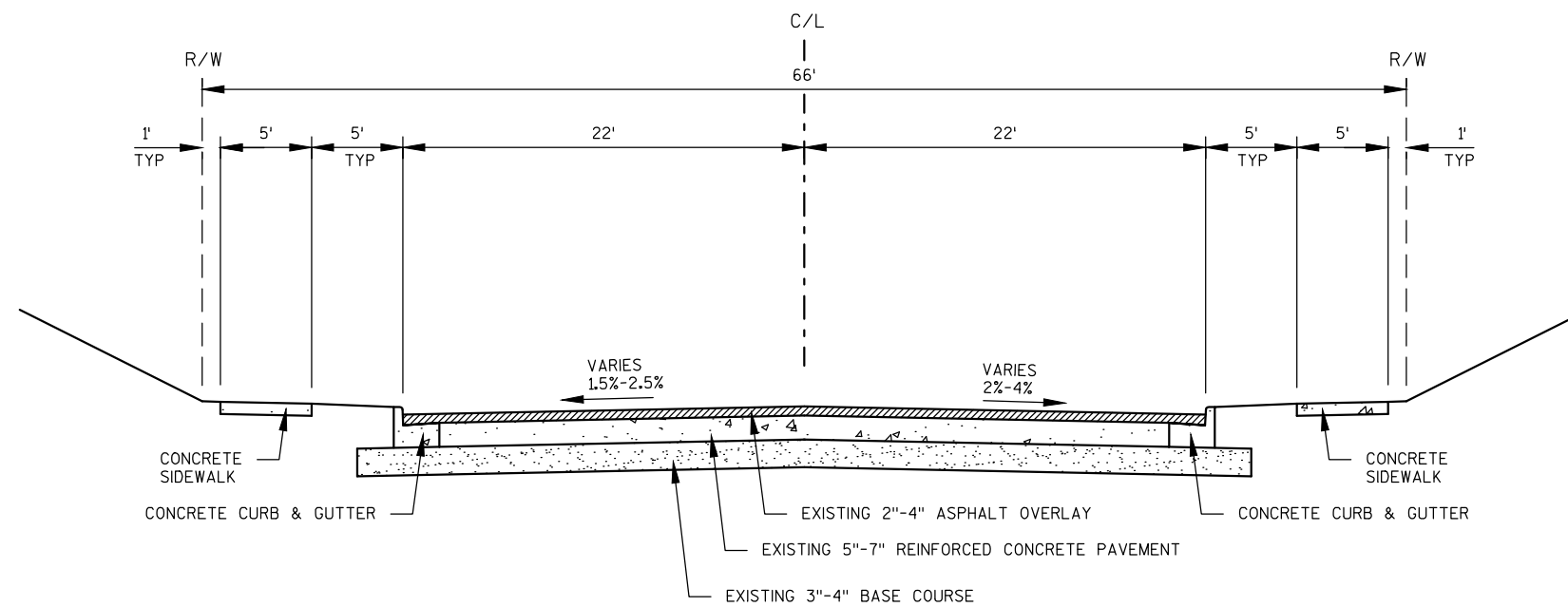
N = 367,630.8436
E = 2,474,548.1456

CITY OF WAUKESHA

CARROLL COLLEGE MOUND GROUP
47WK225/BWK-0223
ARCHAEOLOGICAL SITE - APPROXIMATE LIMITS
(SEE SPECIAL PROVISIONS)STA 568+48 TO
STA 580+70
EAST AVE C/L =
EAST AVE R/L =
SECTION LINEEND PROJECT 2718-11-70
STA. 580+70



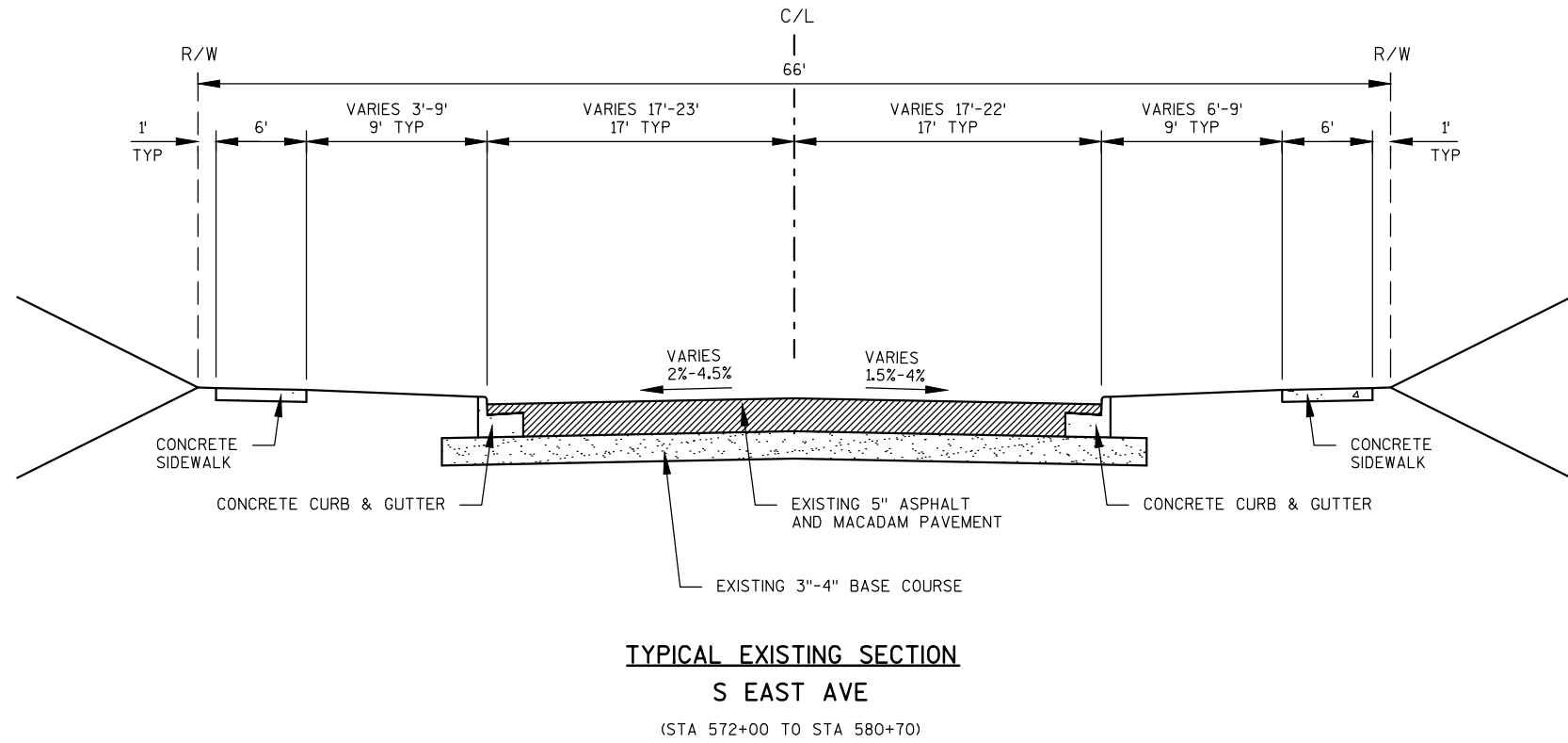
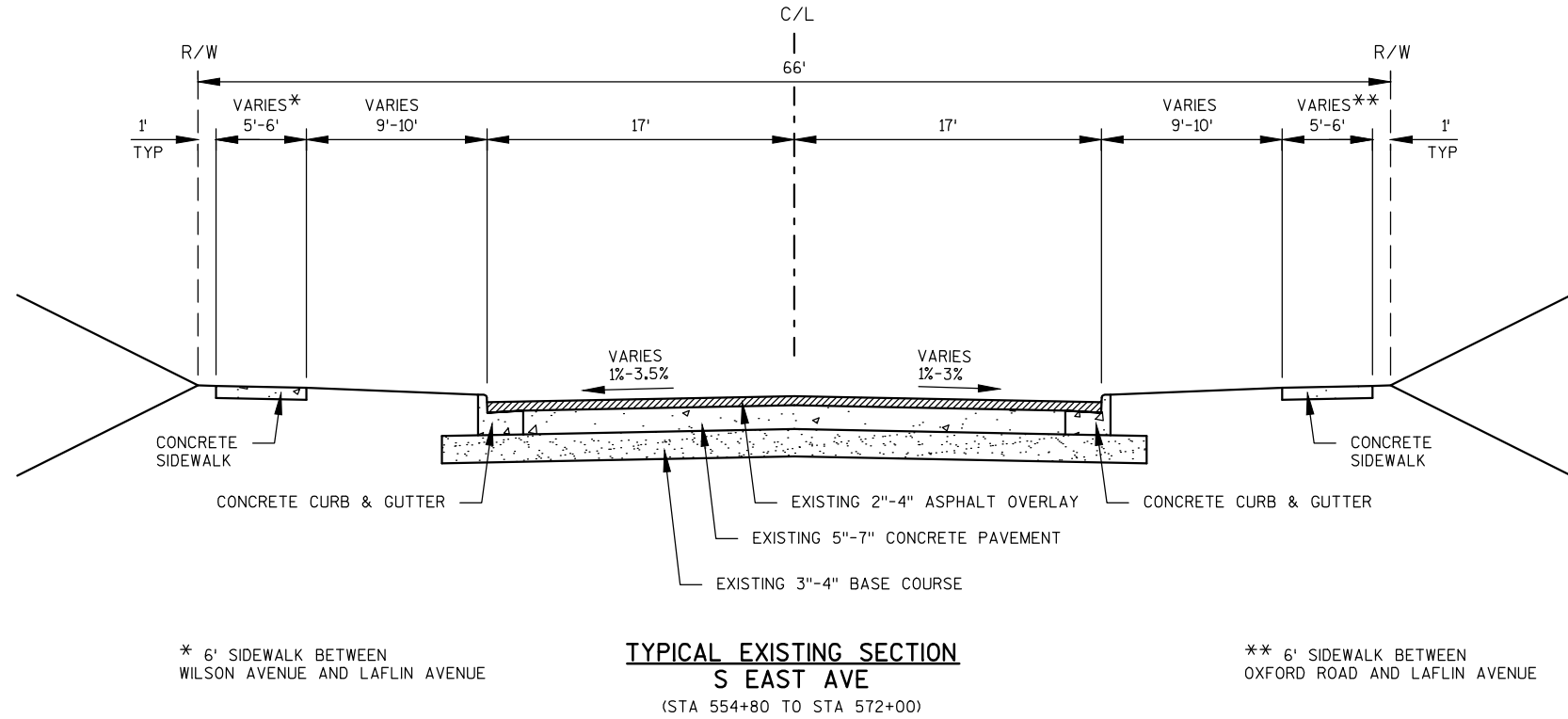
TYPICAL EXISTING SECTION
S EAST AVE
(STA 550+00 TO STA 553+25)



TYPICAL EXISTING SECTION
S EAST AVE
(STA 553+25 TO STA 554+80)

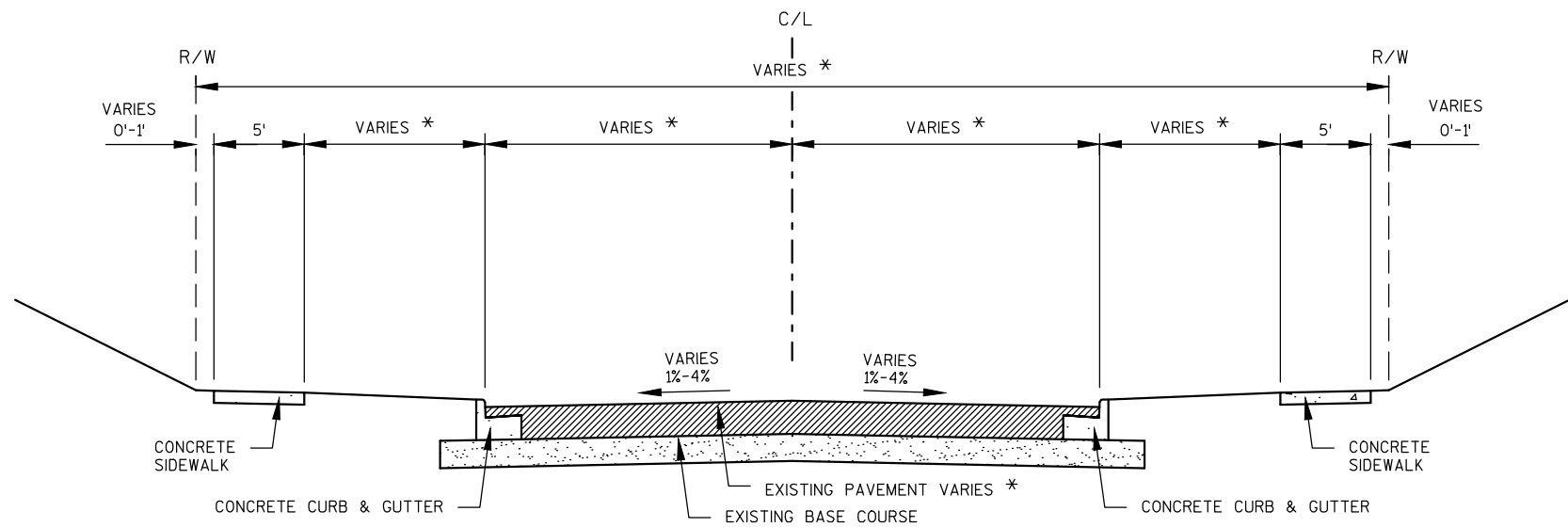
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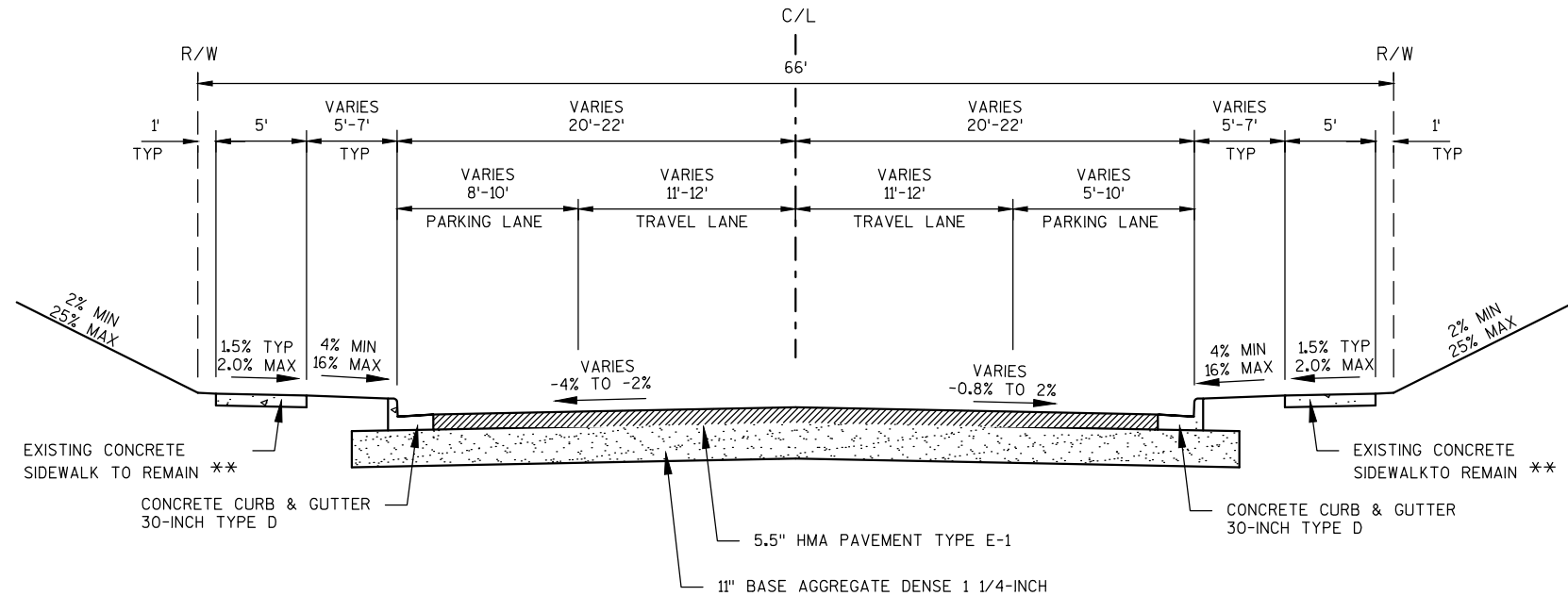
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TYPICAL EXISTING SECTION
SIDE STREETS

* SEE TABLE

SIDE STREET	R/W WIDTH	EXISTING PAVEMENT	TERRACE LEFT	LANE LEFT	LANE RIGHT	TERRACE RIGHT
ESTBERG AVENUE	60'	CONCRETE	9'	14.8'	14.8'	9.4'
WEST WABASH AVE	50'	CONCRETE/ASPHALT	4.7'	15.2'	15'	4.7'
EAST WABASH AVE	60'	CONCRETE	9'	14.8'	15.1'	9'
FRAME AVENUE	50'	ASPHALT	5.3'	14.8'	14.8'	4.8'
OXFORD ROAD	60'	CONCRETE/ASPHALT	9.2'	14.5'	14.5'	9.2'
HARRISON AVENUE	50'	CONCRETE/ASPHALT	4.6'	15.1'	15.2'	4.5'
WINDSOR DRIVE	60'	CONCRETE/ASPHALT	10'	14.5'	14.5'	10'
WILSON AVENUE	50'	CONCRETE/ASPHALT	4.5'	14.9'	14.9'	4.5'
E NEWHALL AVENUE	60'	ASPHALT	10'	15.2'	15.2'	9.5'
W NEWHALL AVENUE	75'	CONCRETE/ASPHALT	16.5'	15.1'	15.1'	16.5'
W LAFLIN AVENUE	68'	ASPHALT	9'	16.3'	17.7'	9.5'
E LAFLIN AVENUE	66'	CONCRETE/ASPHALT	13'	15.8'	14.6'	12.5'

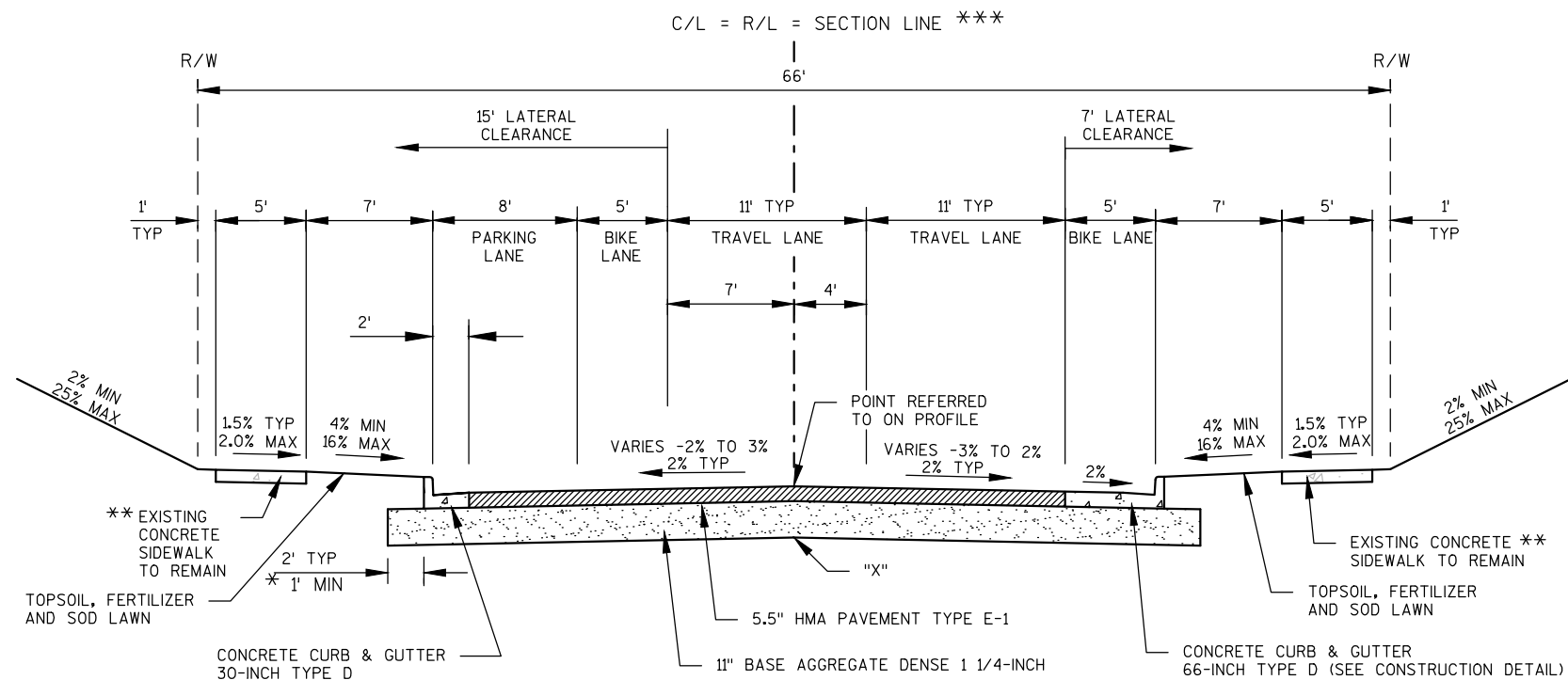


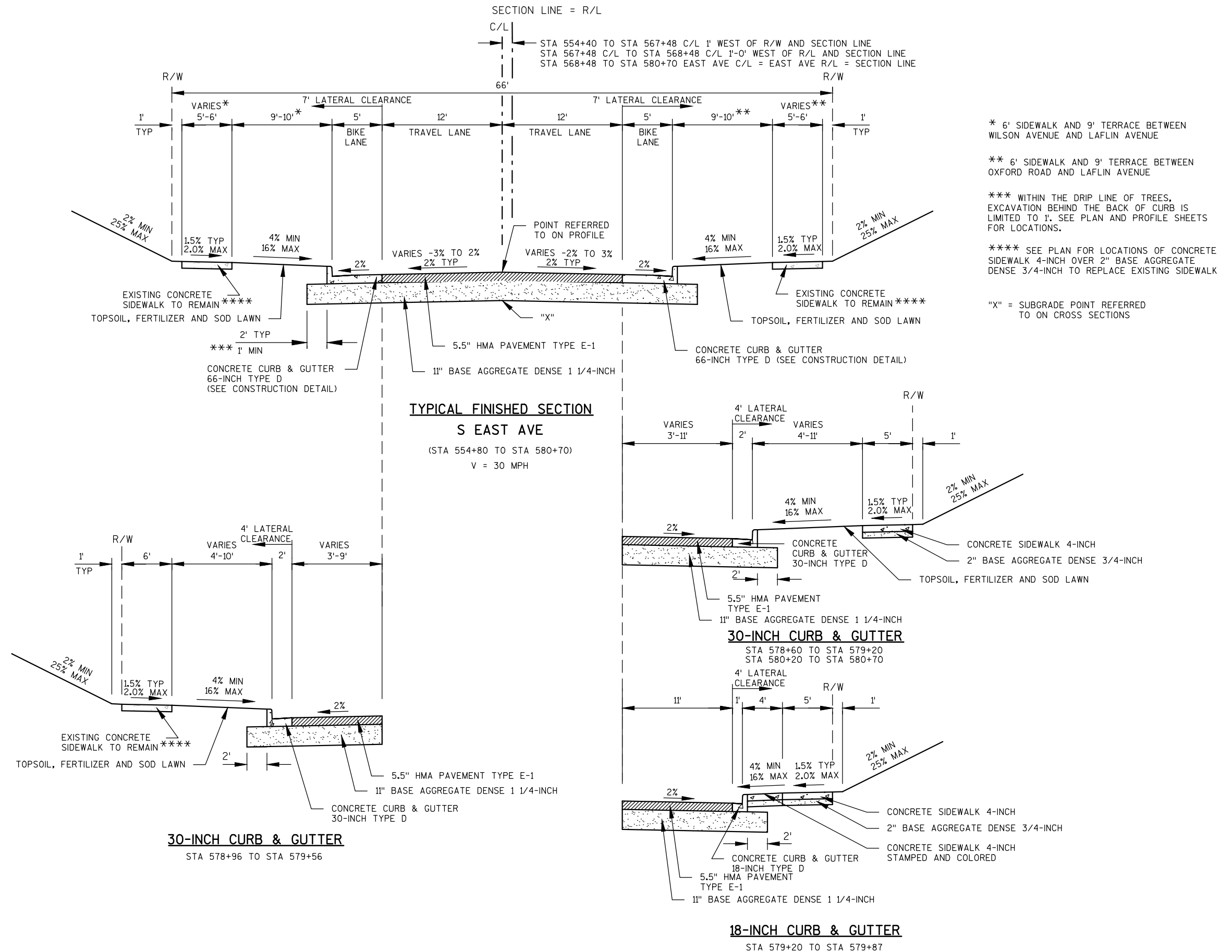
* WITHIN THE DRIP LINE OF TREES, EXCAVATION BEHIND THE BACK OF CURB IS LIMITED TO 1'. SEE PLAN AND PROFILE SHEETS FOR LOCATIONS.

** SEE PLAN FOR LOCATIONS OF CONCRETE SIDEWALK 4-INCH OVER 2-INCH BASE AGGREGATE DENSE 3/4-INCH TO REPLACE EXISTING SIDEWALK

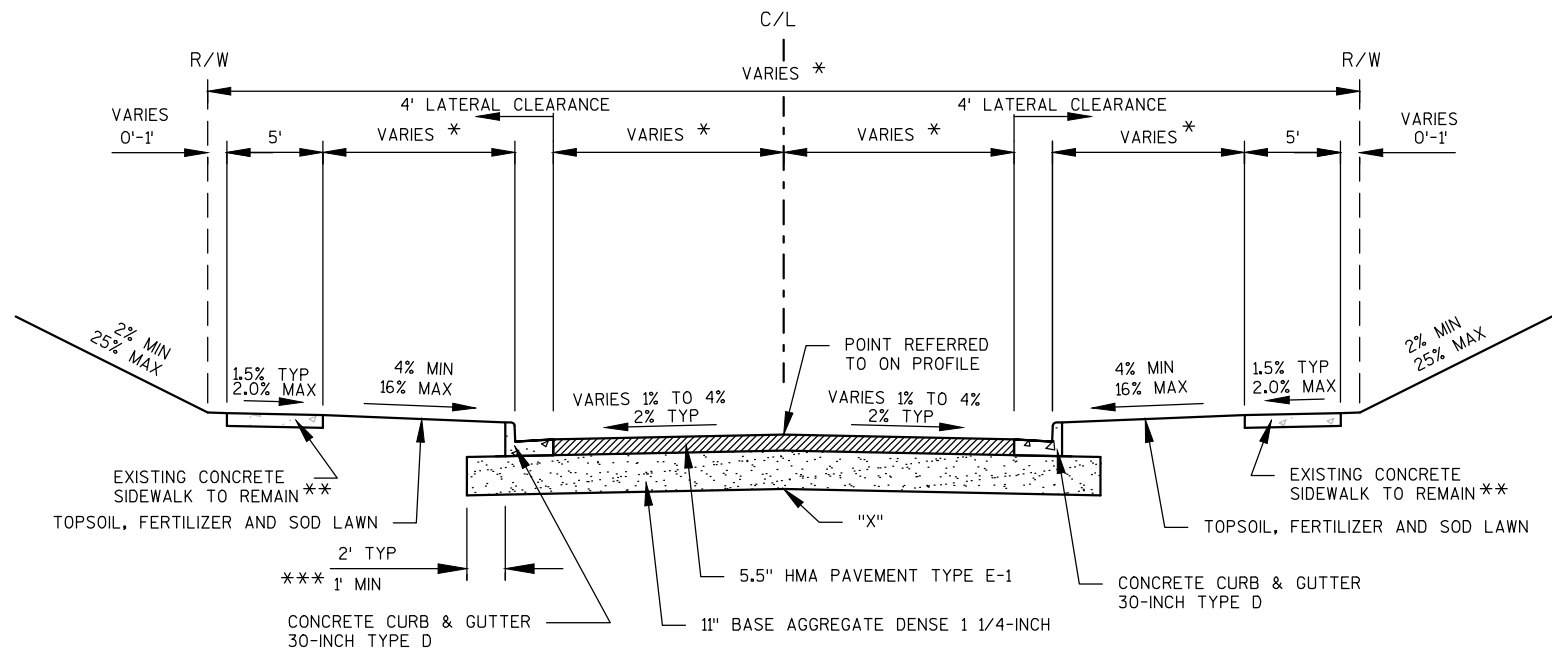
*** STA 553+25 TO STA 554+40 C/L VARIES 0'-1' WEST OF R/L AND SECTION LINE. STA 554+40 TO STA 554+80 C/L 1' WEST OF R/L AND SECTION LINE.

"X" = SUBGRADE POINT REFERRED TO ON CROSS SECTIONS





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TYPICAL FINISHED SECTION
SIDE STREETS

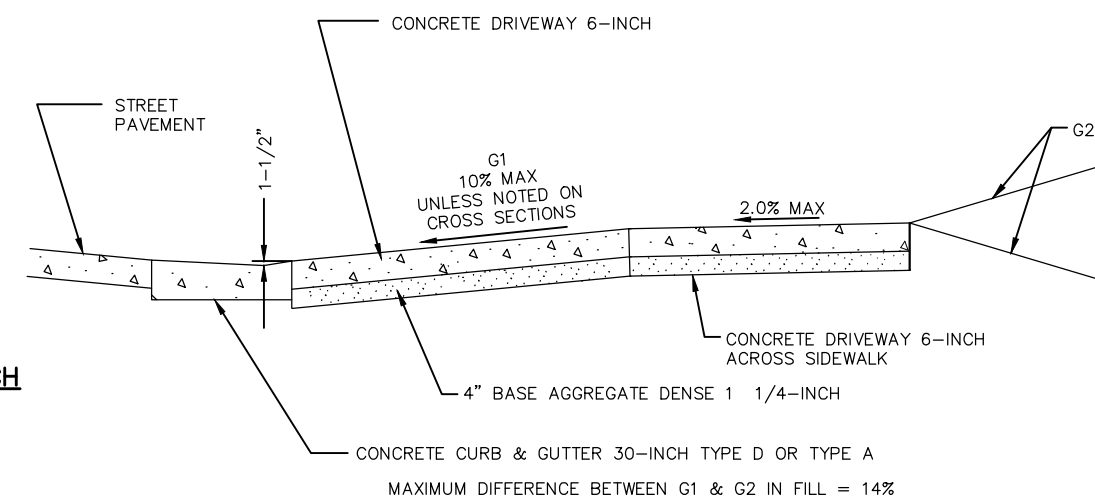
SIDE STREET	R/W WIDTH	TERRACE LEFT	LANE LEFT	LANE RIGHT	TERRACE RIGHT
ESTBERG AVENUE	60'	9'	12.8'	12.8'	9.4'
WEST WABASH AVENUE	50'	4.7'	13.2'	13'	4.7'
EAST WABASH AVENUE	60'	9'	12.8'	13.1'	9'
FRAME AVENUE	50'	5.3'	12.8'	12.8'	4.8'
OXFORD ROAD	60'	9.2'	12.5'	12.5'	9.2'
HARRISON AVENUE	50'	4.6'	13.1'	13.2'	4.5'
WINDSOR DRIVE	60'	10'	12.5'	12.5'	10'
WILSON AVENUE	50'	4.5'	12.9'	12.9'	4.5'
E NEWHALL AVENUE	60'	10'	13.2'	13.2'	9.5'
W NEWHALL AVENUE	75'	16.5'	13.1'	13.1'	16.5'
W LAFLIN AVENUE	68'	9'	14.3'	15.7'	9.5'
E LAFLIN AVENUE	66'	13'	13.8'	12.6'	12.5'

* SEE TABLE

** SEE PLAN FOR LOCATIONS OF CONCRETE SIDEWALK 4-INCH OVER 2" BASE AGGREGATE DENSE 3/4-INCH TO REPLACE EXISTING SIDEWALK

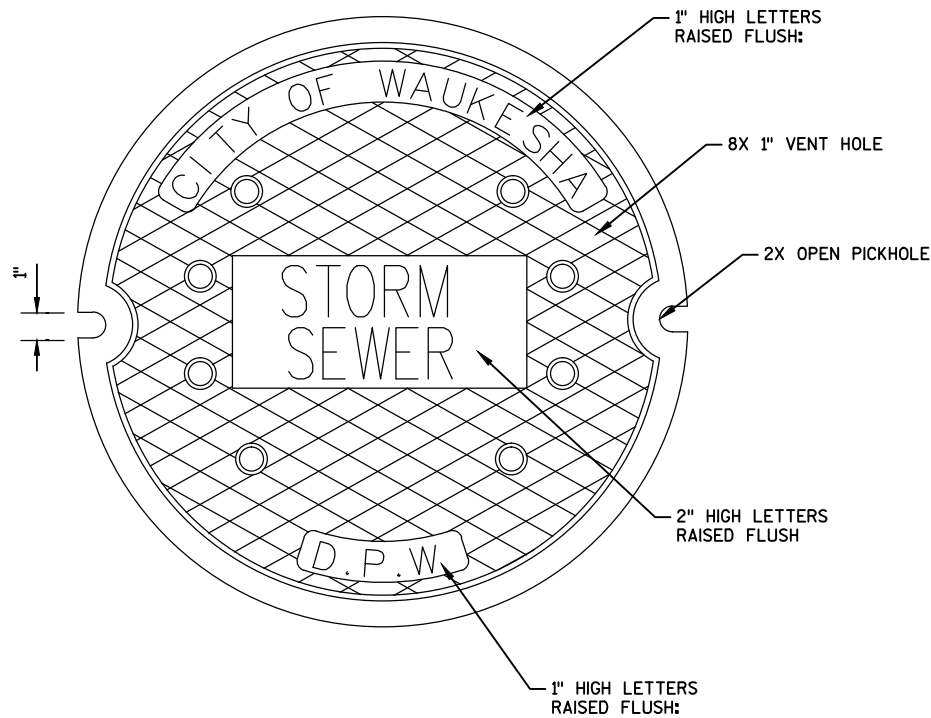
*** WITHIN THE DRIP LINE OF THE TREES EXCAVATION BEHIND THE BACK OF CURB IS LIMITED TO 1'. SEE PLAN AND PROFILE SHEETS FOR LOCATIONS.

"X" = SUBGRADE POINT REFERRED TO ON CROSS SECTIONS
W NEWHALL AVENUE
LAFLIN AVENUE



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2



MANHOLE COVER SPECIAL

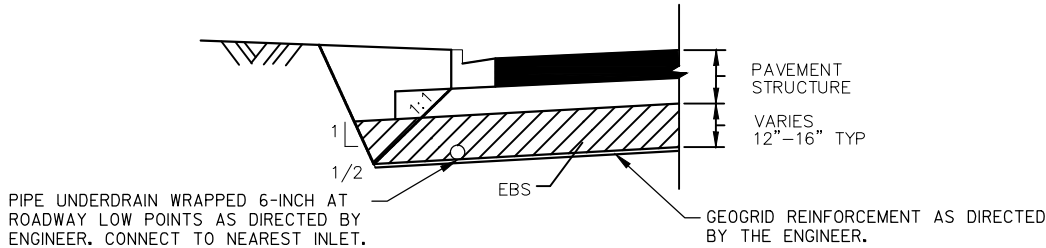
SEE STORM SEWER PLAN AND MISC QUANTITIES TABLE FOR LOCATIONS

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32				.27 .34				.28 .36	.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											

TOTAL PROJECT AREA = 6.19 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 3.36 ACRES

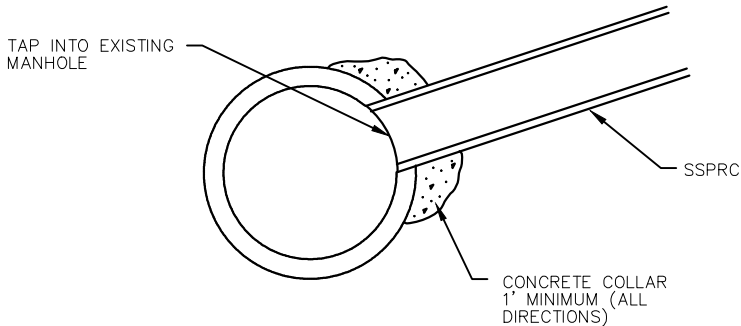
2



- NOTES:
1. USE AS DIRECTED BY ENGINEER FOR AREAS OF UNSTABLE SUBGRADE.
 2. EBS SHALL BE PAID FOR AS COMMON EXCAVATION.
 3. FILL VOID WITH SELECT CRUSHED MATERIAL.

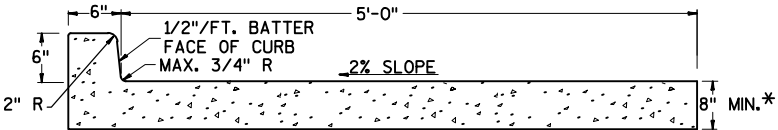
EXCAVATION BELOW SUBGRADE (EBS)

LOCATIONS TO BE DETERMINED BY THE ENGINEER



CONCRETE COLLAR AT EXISTING MANHOLE DETAIL

SEE STORM SEWER PLAN FOR LOCATIONS
(INCIDENTAL TO STORM SEWER PIPE REINFORCED CONCRETE)



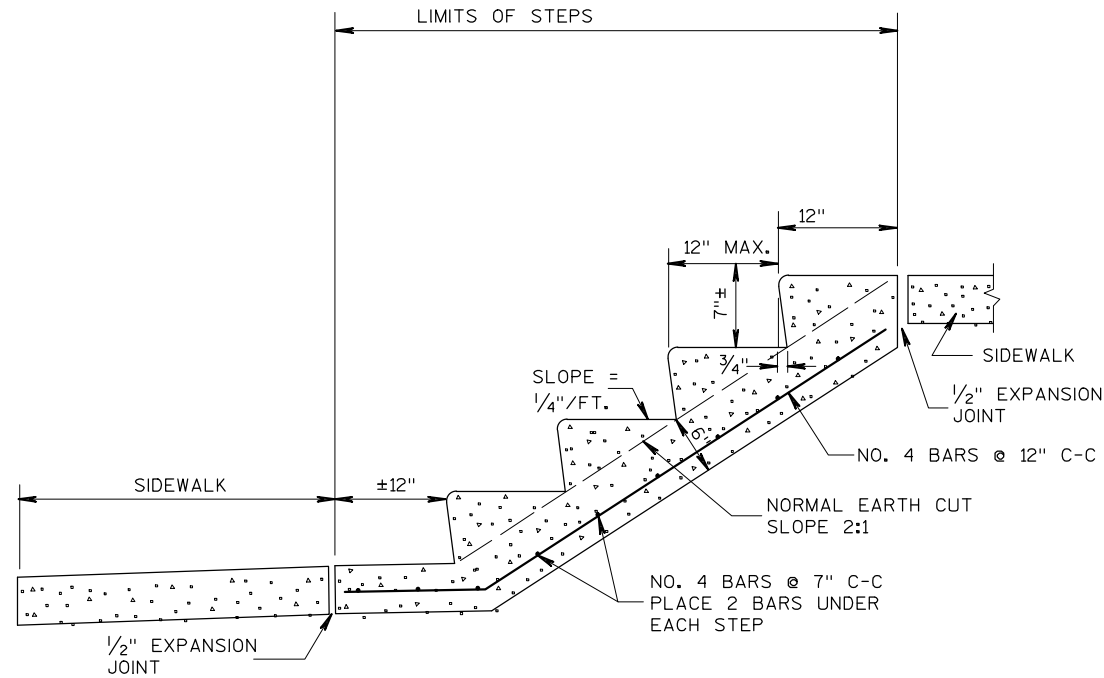
* THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED

CONCRETE CURB & GUTTER 66-INCH
TYPE D

SEE SDD CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

T:\1102728\Cadd\Civil3D\27181170\SheetsPlan\021001_cd.dwg, 11x17 (3), 1/28/2013 4:31:42 PM, trg

2



CONCRETE STEPS DETAIL
400 S. EAST AVE

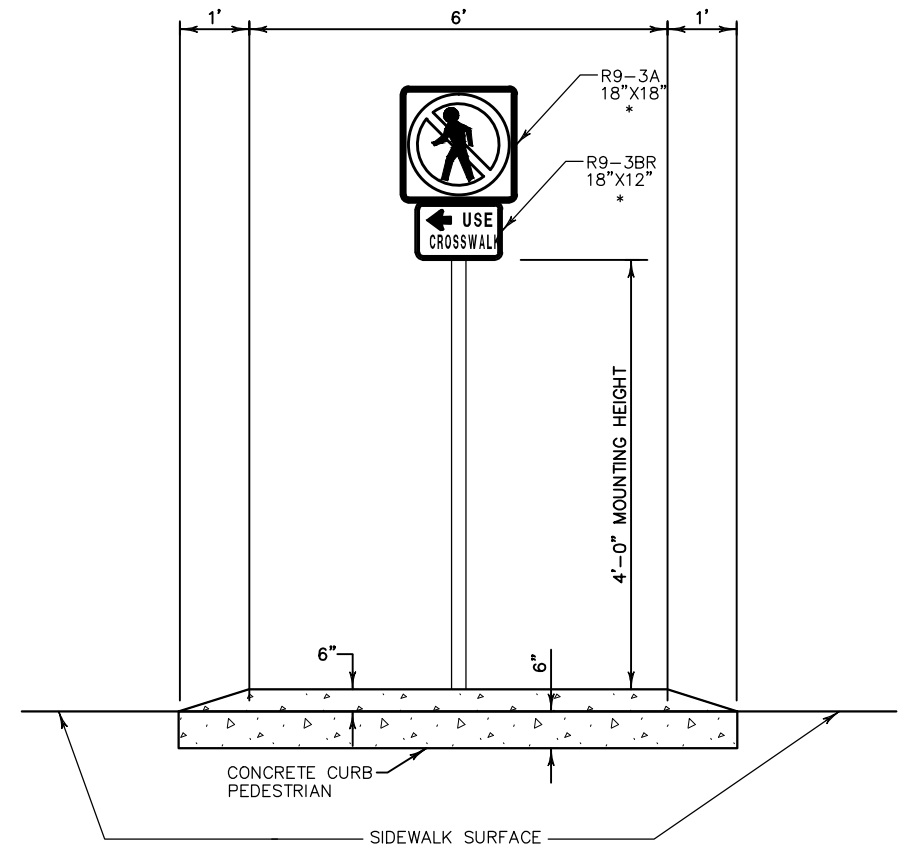
NOTE:
THE EXACT LOCATION, WIDTHS, & NUMBER
OF STEPS TO BE DETERMINED BY THE
ENGINEER IN THE FIELD.
STEEL REINFORCEMENT AND PIPE RAILING
NOT REQUIRED ON STEPS WITH 2 RISERS
OR LESS.
MINIMUM WIDTH OF STEP EQUALS 4 FEET.

CONTROL POINTS

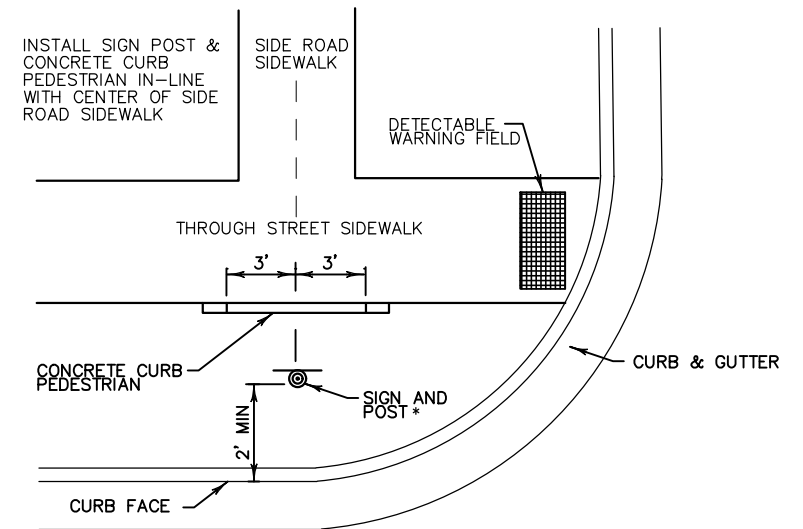
POINT NUMBER	NORTHING	EASTING	STATION	OFFSET	RAW DESCRIPTION
110	367956.125	2474547.569	553+25.28	0.00	W. SEC-11/CONC MONT
208	368628.292	2474561.138	559+97.45	14.73 RT	HUB/PK
209	369105.749	2474527.121	564+74.92	19.18 LT	HUB/PK
210	369857.409	2474569.809	572+26.57	22.68 RT	HUB/"T"
108	370630.019	2474510.913	579+99.19	36.03 LT	W. WITNESS COR NW.SEC-11/CONC MONT
103	370667.103	2474546.739	580+36.27	0.05 RT	N. WITNESS COR NW.SEC-11/CONC MONT
211	370675.026	2474506.349	580+44.37	40.40 LT	HUB/8" SPIKE

SEE PLAN/PROFILE SHEETS FOR CONTROL POINT LOCATIONS

2



CONCRETE CURB PEDESTRIAN DETAIL
CURB ELEVATION VIEW



CURB AND SIGN LOCATION DETAIL

PEDESTRIAN BARRIER DETAIL

NOT TO SCALE
STA 564+35, 25' LT
* SEE SIGNING PLAN

PROJECT NO:2718-11-70

HWY:S EAST AVENUE

COUNTY:WAUKESHA

CONSTRUCTION DETAILS

SHEET

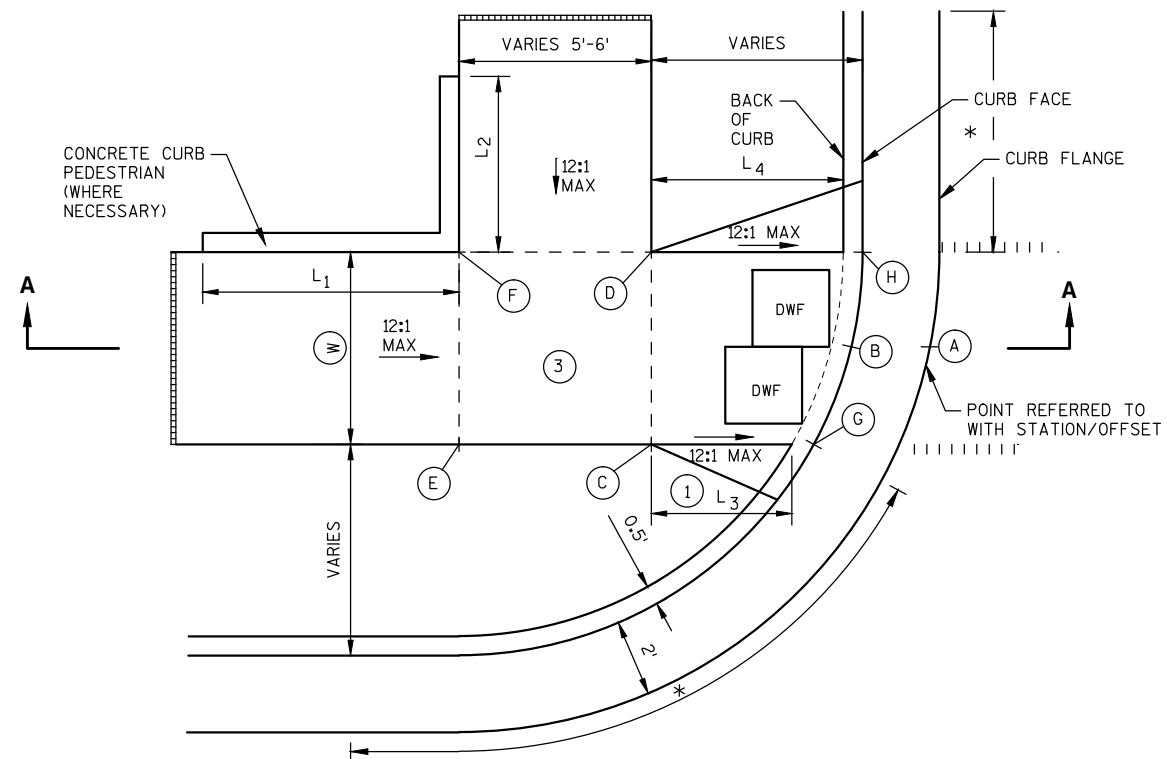
E

FILE NAME : T:\1102728\CADD\Civil3D\27181170\SheetsPlan\021001_CD.DWG

PLOT DATE : 1/28/2013 4:31 PM

PLOT BY : CIVIL3D TTNIA

PLOT NAME :



TYPE 2 OR MODIFIED TYPE 2 PEDESTRIAN RAMP

GENERAL NOTES

CONCRETE CURB PEDESTRIAN WILL TRANSITION FROM FULL HEIGHT (SEE TABLE) TO ZERO HEIGHT IN 4'.

SEE SDD CURB RAMPS TYPE 2 & 3 FOR ADDITIONAL DETAILS NOT SHOWN HERE

- ① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.
- ③ PROVIDE LANDING AT TOP OF RAMP WITH NO MORE THAN 2% SLOPE IN ANY DIRECTION.

LEGEND

DWF = CURB RAMP DETECTABLE WARNING FIELD YELLOW

⊖ = REFER TO GRADES ON TABLE

L₁/L₂ = LENGTH OF CONCRETE CURB PEDESTRIAN - SEE TABLE.

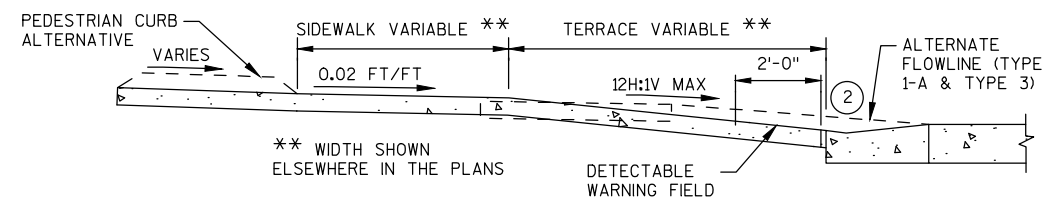
L₃/L₄ = LENGTH OF PEDESTRIAN RAMP

* = TRANSITION GUTTER PAN CROSS SLOPE FROM 6.25% TO 2% AND MAINTAIN CONTINUOUS FLOW LINE (FL) PROFILE AT A MINIMUM OF 0.5%

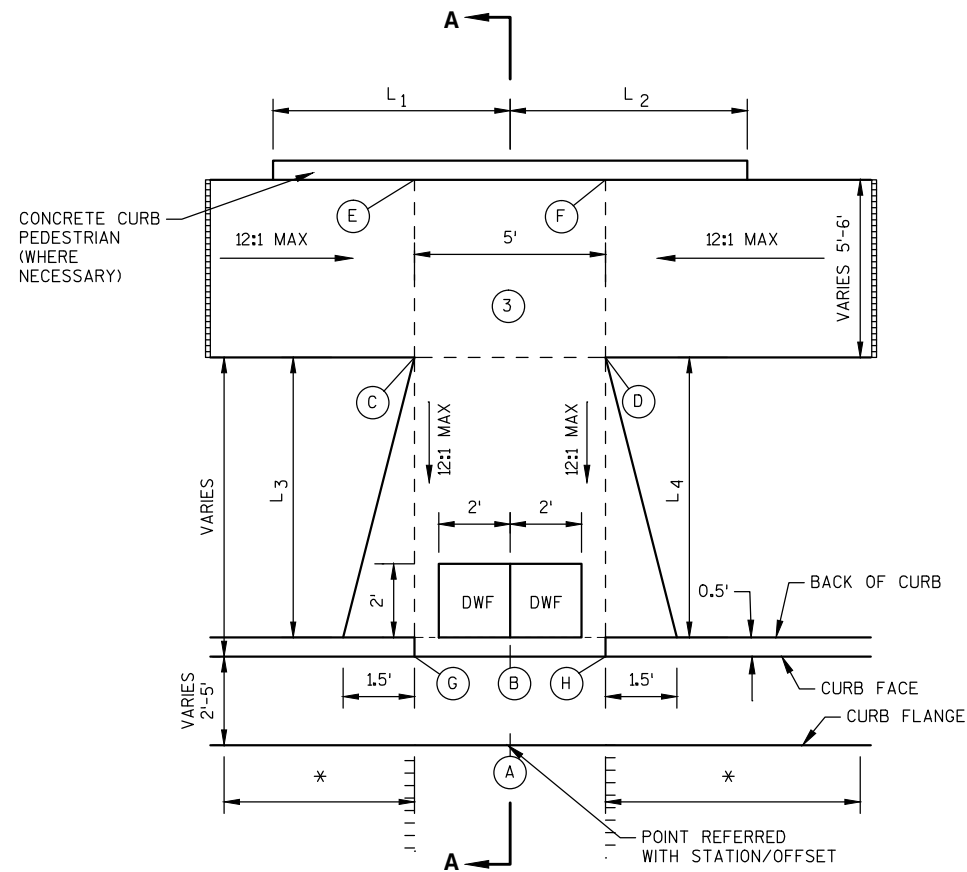
===== 1/2" EXPANSION JOINT-SIDEWALK

--- = CONTRACTION JOINT FIELD LOCATION

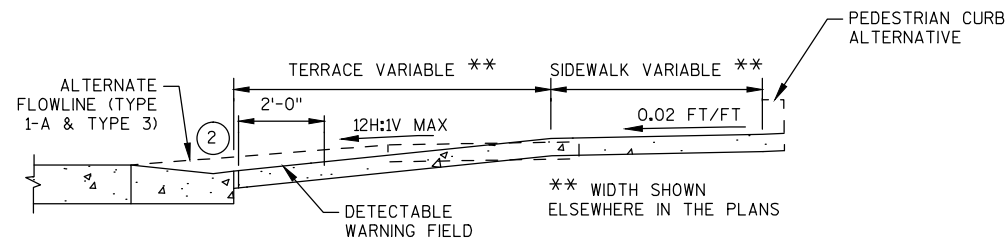
J I I I I I I I I I = PAVEMENT MARKING CROSSWALK (WHITE)



SECTION A-A



MODIFIED TYPE 3 PEDESTRIAN RAMP



SECTION A-A

GENERAL NOTES

CONCRETE CURB PEDESTRIAN WILL TRANSITION FROM FULL HEIGHT (SEE TABLE) TO ZERO HEIGHT IN 4'.

SEE SDD CURB RAMPS TYPE 2 & 3 FOR ADDITIONAL DETAILS NOT SHOWN HERE

- ① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP, REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 1%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.
- ③ PROVIDE LANDING AT TOP OF RAMP WITH NO MORE THAN 2% SLOPE IN ANY DIRECTION.

LEGEND

- DWF = CURB RAMP DETECTABLE WARNING FIELD YELLOW
- = REFER TO GRADES ON TABLE
- L_1/L_2 = LENGTH OF CONCRETE CURB PEDESTRIAN - SEE TABLE.
- L_3/L_4 = LENGTH OF PEDESTRIAN RAMP
- * = TRANSITION GUTTER PAN CROSS SLOPE FROM 6.25% TO 2% AND MAINTAIN CONTINUOUS FLOW LINE (FL) PROFILE AT A MINIMUM OF 0.5%
- ===== = 1/2" EXPANSION JOINT-SIDEWALK
- = CONTRACTION JOINT FIELD LOCATION
- ||||||| = PAVEMENT MARKING CROSSWALK (WHITE)

LOCATION	STATION / OFFSET	RAMP TYPE	FLANGE WIDTH	GRADES								RAMP			DWF		CONCRETE CURB PEDESTRIAN			
				A	B	C	D	E	F	G	H	W	L3	L4	AMOUNT	DIMENSIONS	(Y/N)	L1	L2	HEIGHT
<u>EAST AVE / ESTBERG AVE INTERSECTION</u>																				
SW QUADRANT CROSSING EAST AVENUE	550+81.6, 18' LT	M3	2'	85.92	85.88	86.49	86.45	86.59	86.54	85.90	85.86	5'	7.45	7.44	2.00	2' X 2'	NO	--	--	--
SW QUADRANT CROSSING ESTBERG AVENUE	551+22.8, 28.7' LT	2	2'	85.18	85.14	85.60	85.70	85.70	85.80	85.22	85.15	5'	4.79	7.79	2.00	2' X 2'	NO	--	--	--
SE QUADRANT CROSSING EAST AVENUE	550+81.6, 15' RT	M3	5'	86.58	86.48	87.09	87.13	87.19	87.23	86.46	86.50	5'	7.94	7.94	2.00	2' X 2'	NO	--	--	--
NW QUADRANT CROSSING EAST AVENUE	551+85.4, 18' LT	M3	2'	85.01	84.97	85.43	85.41	85.53	85.51	84.98	84.95	5'	7.63	7.60	2.00	2' X 2'	NO	--	--	--
NW QUADRANT CROSSING ESTBERG AVENUE	551+54.5, 28.8' LT	2	2'	85.07	85.03	85.40	85.50	85.50	85.60	85.04	85.01	5'	4.48	7.41	2.00	2' X 2'	NO	--	--	--
NE QUADRANT CROSSING EAST AVENUE	551+85.4, 15' RT	M3	5'	85.63	85.53	86.12	86.18	86.22	86.28	85.50	85.56	5'	7.76	7.77	2.00	2' X 2'	NO	--	--	--
<u>EAST AVE / WABASH AVE INTERSECTION</u>																				
SW QUADRANT CROSSING EAST AVENUE	554+51.8, 18.7' LT	M3	2'	85.21	85.09	85.25	85.15	85.35	85.25	85.08	85.08	5'	6.92	5.69	2.00	2' X 2'	NO	--	--	--
SW QUADRANT CROSSING WABASH AVENUE	554+64.9, 28.5' LT	2	2'	85.10	84.98	85.00	85.10	85.10	85.20	85.00	84.97	5'	0.00	3.00	2.00	2' X 2'	NO	--	--	--
SE QUADRANT CROSSING EAST AVENUE	554+51.6, 18.3' RT	M3	2'	85.22	85.18	85.56	85.46	85.66	85.56	85.18	85.19	5'	7.62	8.57	2.00	2' X 2'	NO	--	--	--
SE QUADRANT CROSSING WABASH AVENUE	554+67.6, 30.0' RT	2	2'	85.13	85.09	85.46	85.56	85.56	85.66	85.10	85.07	5'	5.43	8.03	2.00	2' X 2'	NO	--	--	--
NW QUADRANT CROSSING EAST AVENUE	555+13.7, 15.2' LT	M3	2'	85.75	85.69	85.86	85.96	85.96	85.06	85.68	85.73	5'	9.22	9.83	2.00	2' X 2'	NO	--	--	--
NW QUADRANT CROSSING WABASH AVENUE	554+96.1, 28.6' LT	2	2'	85.21	85.17	85.36	85.46	85.46	85.56	85.22	85.12	5'	2.15	4.25	2.00	2' X 2'	NO	--	--	--
NE QUADRANT CROSSING EAST AVENUE	555+13.9, 15.4' RT	M3	2'	85.73	85.69	85.89	85.79	85.99	85.89	85.72	85.65	5'	11.73	10.75	2.00	2' X 2'	YES	5.1'	10.1'	4"
NE QUADRANT CROSSING WABASH AVENUE	554+96.9, 30.5' RT	M2	2'	85.20	85.16	85.69	85.79	85.79	85.89	85.19	85.12	5'	7.04	8.56	2.00	2' X 2'	YES	7.6'	2.5'	4"

LOCATION	STATION / OFFSET	RAMP TYPE	FLANGE WIDTH	GRADES								RAMP			DWF		CONCRETE CURB PEDESTRIAN			
				A	B	C	D	E	F	G	H	W	L3	L4	AMOUNT	DIMENSION	(Y/N)	L1	L2	HEIGHT
EAST AVE / FRAME AVE INTERSECTION																				
SW QUADRANT CROSSING EAST AVENUE	577+63.0, 12.0' LT	M3	5'	88.28	88.18	88.97	89.02	89.07	89.12	88.15	88.20	5'	10.26	10.22	2.00	2' X 2'	NO	--	--	--
SW QUADRANT CROSSING FRAME AVENUE	557+93.0, 28.8' LT	2	2'	88.28	88.24	88.43	88.53	88.53	88.63	88.26	88.22	5'	2.18	4.16	2.00	2' X 2'	NO	--	--	--
SE QUADRANT CROSSING EAST AVENUE	577+63.0, 12.0' RT	M3	5'	88.28	88.18	89.12	89.02	89.22	89.12	88.20	88.15	5'	11.79	11.83	2.00	2' X 2'	NO	--	--	--
NW QUADRANT CROSSING EAST AVENUE	558+44.7, 12.0' LT	M3	5'	88.90	88.80	89.44	89.54	89.54	89.64	88.78	88.81	5'	10.00	10.00	2.00	2' X 2'	NO	--	--	--
NW QUADRANT CROSSING FRAME AVENUE	558+21.8, 28.7' RT	2	2'	88.39	88.35	88.65	88.75	88.75	88.85	88.44	88.41	5'	2.73	4.77	2.00	2' X 2'	NO	--	--	--
NE QUADRANT CROSSING EAST AVENUE	558+44.7, 12.0' RT	M3	5'	88.90	88.80	89.73	89.63	89.83	89.73	88.81	88.78	5'	11.57	11.64	2.00	2' X 2'	NO	--	--	--
EAST AVE / OXFORD RD INTERSECTION																				
SW QUADRANT CROSSING EAST AVENUE	559+33.5, 12.0' LT	M3	5'	89.25	89.15	89.72	89.82	89.82	89.92	89.14	89.15	5'	10.00	10.00	2.00	2' X 2'	NO	--	--	--
SE QUADRANT CROSSING EAST AVENUE	559+33.5, 15.2' RT	M3	2'	89.68	89.64	90.45	90.55	90.55	90.65	89.69	89.62	5'	10.90	11.65	2.00	2' X 2'	NO	--	--	--
SE QUADRANT CROSSING OXFORD ROAD	559+51.6, 30.6' RT	2	2'	89.98	89.94	90.35	90.45	90.45	90.55	89.91	89.97	5'	7.43	8.98	2.00	2' X 2'	NO	--	--	--
NW QUADRANT CROSSING EAST AVENUE	559+99.4, 12.0' LT	M3	5'	89.60	89.50	90.29	90.34	90.37	90.44	89.49	89.51	5'	10.00	10.00	2.00	2' X 2'	NO	--	--	--
NE QUADRANT CROSSING EAST AVENUE	559+99.4, 15.0' RT	M3	2' *	90.14	90.10	90.70	90.60	90.80	90.70	90.11	90.08	5'	12.00	11.64	2.00	2' X 2'	NO	--	--	--
NE QUADRANT CROSSING OXFORD ROAD	559+79.6, 30.8' RT	2	2'	89.89	89.85	90.47	90.57	90.57	90.67	89.86	89.83	5'	7.79	9.23	2.00	2' X 2'	NO	--	--	--
EAST AVE / HARRISON AVE INTERSECTION																				
SW QUADRANT CROSSING EAST AVENUE	561+06.7, 16.8' LT	M3	2'	90.80	90.76	91.27	91.17	91.37	91.27	90.71	90.81	5'	9.28	7.40	2.00	2' X 2'	NO	--	--	--
SW QUADRANT CROSSING HARRISON AVENUE	561+18.4, 28.8' LT	2	2'	90.96	90.92	91.07	91.17	91.17	91.27	90.90	90.93	5'	2.18	4.07	2.00	2' X 2'	NO	--	--	--
SE QUADRANT CROSSING EAST AVENUE	561+05.9, 12.0' RT	M3	5'	91.33	91.23	92.24	92.14	92.34	92.24	91.28	91.18	5'	12.00	12.00	2.00	2' X 2'	NO	--	--	--
NW QUADRANT CROSSING EAST AVENUE	561+75.9, 12.0' LT	M3	5'	92.44	92.34	92.48	92.58	92.58	92.68	92.30	92.40	5'	9.35	9.16	2.00	2' X 2'	NO	--	--	--
NW QUADRANT CROSSING HARRISON AVENUE	561+48.3, 28.0' LT	2	2'	91.15	91.11	91.27	91.37	91.37	91.47	91.16	91.06	5'	1.52	3.89	2.00	2' X 2'	NO	--	--	--
NE QUADRANT CROSSING EAST AVENUE	561+75.9, 12.0' RT	M3	5'	92.92	92.82	93.82	93.72	93.92	93.82	92.88	92.78	5'	12.00	12.00	2.00	2' X 2'	NO	--	--	--

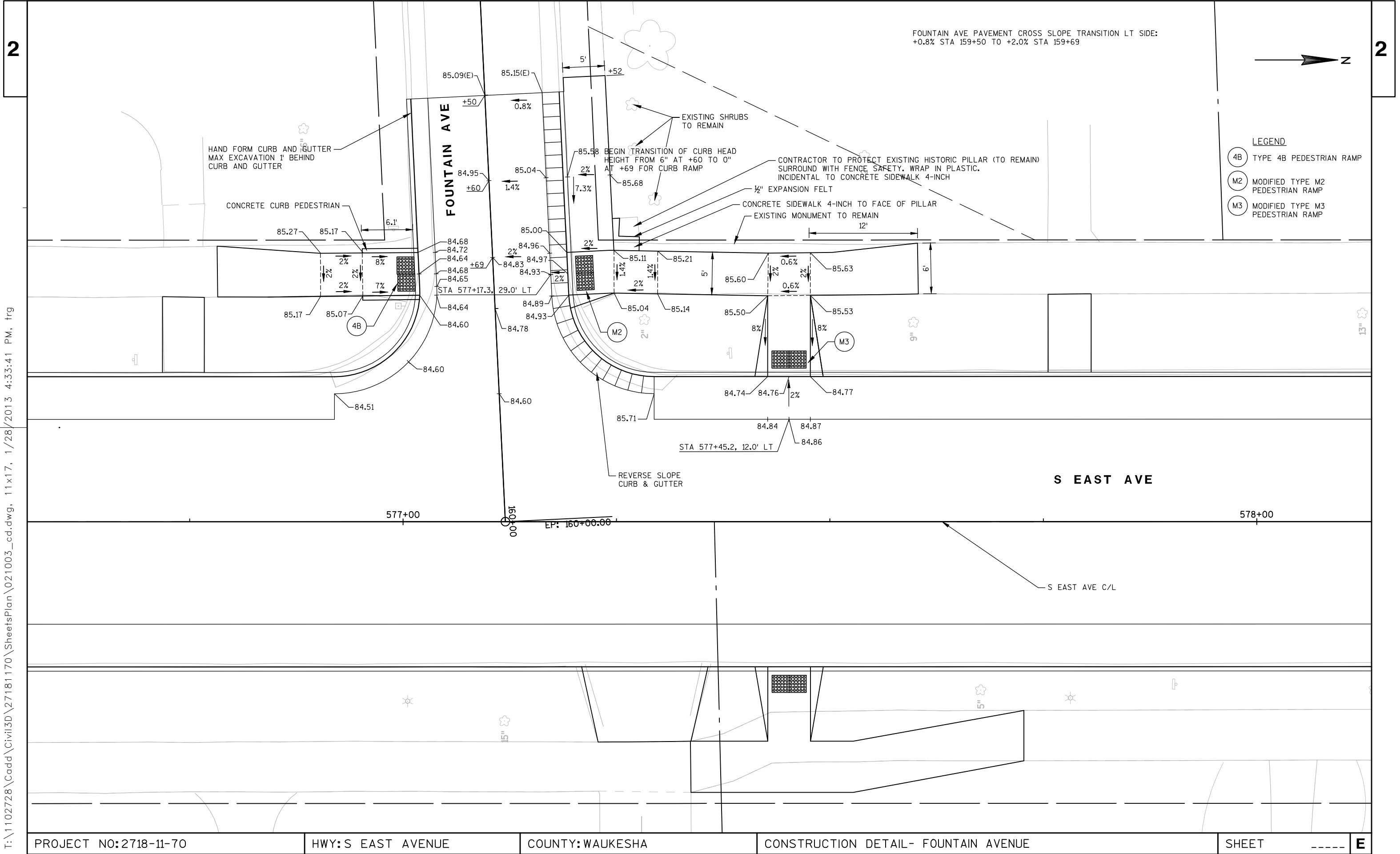
* 5' CURB FLANGE MATCH AT STA 560+00.8, 15.0' RT

LOCATION	STATION / OFFSET	RAMP TYPE	FLANGE WIDTH	GRADES								RAMP			DWF		CONCRETE CURB PEDESTRIAN			
				A	B	C	D	E	F	G	H	W	L3	L4	AMOUNT	DIMENSION	(Y/N)	L1	L2	HEIGHT
EAST AVE / WINDSOR DR INTERSECTION																				
SW QUADRANT CROSSING EAST AVENUE	562+54.0, 12.0' LT	M3	5'	94.60	94.50	95.16	95.26	95.26	95.36	94.42	94.57	5'	9.21	9.19	2.00	2' X 2'	NO	--	--	--
SE QUADRANT CROSSING EAST AVENUE	562+54.0, 12.0' RT	M3	5'	95.08	94.98	95.96	95.86	96.06	95.96	95.05	94.90	5'	12.00	12.00	2.00	2' X 2'	NO	--	--	--
SE QUADRANT CROSSING WINDSOR DRIVE	562+90.1, 30.9' RT	2	2'	96.63	96.59	96.76	96.86	96.86	96.96	96.54	96.64	5'	8.17	9.61	2.00	2' X 2'	NO	--	--	--
NW QUADRANT CROSSING EAST AVENUE	563+41.7, 12.0' LT	M3	5'	96.55	96.45	97.16	97.21	97.26	97.31	96.42	96.47	5'	9.23	9.24	2.00	2' X 2'	NO	--	--	--
NE QUADRANT CROSSING EAST AVENUE	563+41.7, 12.0' RT	M3	5'	97.15	97.05	97.86	97.81	97.98	97.93	97.07	97.02	5'	9.92	9.87	2.00	2' X 2'	NO	--	--	--
NE QUADRANT CROSSING WINDSOR DRIVE	563+17.3, 29.4' RT	M2	2'	96.91	96.87	97.44	97.56	97.54	97.66	96.88	96.85	6'	7.06	9.48	2.00	2' X 2.5'	NO	--	--	--
EAST AVE / WILSON AVE INTERSECTION																				
SW QUADRANT CROSSING WILSON AVENUE	564+43.9, 26.9' LT	M2	2'	95.52	95.48	95.53	95.63	95.63	95.73	95.53	95.42	5'	0.00	3.14	2.00	2' X 2'	YES	6'	11.4'	8"
NW QUADRANT CROSSING EAST AVENUE	565+07.5, 12.0' LT	M3	5'	93.76	93.66	93.92	93.82	94.02	93.92	93.76	93.55	5'	8.07	8.10	2.00	2' X 2'	NO	--	--	--
NW QUADRANT CROSSING WILSON AVENUE	564+74.6, 27.0' LT	M2	2'	94.54	94.50	94.56	94.67	94.66	94.77	94.56	94.44	6'	0.00	3.48	2.00	2' X 2.5'	NO	--	--	--
NE QUADRANT CROSSING EAST AVENUE	565+07.5, 12.0' RT	M3	5'	94.36	94.26	94.93	95.03	95.05	95.15	94.15	94.36	5'	9.83	9.81	2.00	2' X 2'	NO	--	--	--
EAST AVE / E NEWHALL AVE INTERSECTION																				
SW QUADRANT CROSSING EAST AVENUE	566+37.4, 12.0' LT	M3	5'	88.29	88.19	88.85	88.75	88.97	88.87	88.26	88.11	5'	8.04	8.07	2.00	2' X 2'	NO	--	--	--
SE QUADRANT CROSSING EAST AVENUE	566+38.3, 17.0' RT	2	2'	89.04	89.00	89.45	89.55	89.57	89.67	88.98	89.01	5'	6.76	9.06	2.00	2' X 2'	NO	--	--	--
SE QUADRANT CROSSING E NEWHALL AVENUE	566+49.8, 29.1' RT	M2	2'	88.95	88.91	89.45	89.57	89.55	89.67	88.93	88.89	6'	6.64	8.79	2.00	2' X 2.5'	NO	--	--	--
NW QUADRANT CROSSING EAST AVENUE	566+91.9, 12.0' LT	M3	5'	86.91	86.81	87.52	87.42	87.64	87.54	86.86	86.76	5'	8.27	8.20	2.00	2' X 2'	NO	--	--	--
NE QUADRANT CROSSING EAST AVENUE	566+91.0, 16.8' RT	2	2'	87.54	87.50	88.07	88.17	88.19	88.29	87.57	87.42	5'	7.13	9.37	2.00	2' X 2'	NO	--	--	--
NE QUADRANT CROSSING E NEWHALL AVENUE	566+79.1, 29.2' RT	M2	2'	87.94	87.90	88.07	88.19	88.17	88.29	87.83	87.97	6'	6.96	9.23	2.00	2' X 2.5'	NO	--	--	--

				GRADES								RAMP			DWF		CONCRETE CURB PEDESTRIAN			
LOCATION	STATION / OFFSET	RAMP TYPE	FLANGE WIDTH	A	B	C	D	E	F	G	H	W	L3	L4	AMOUNT	DIMENSION	(Y/N)	L1	L2	HEIGHT
EAST AVE / W NEWHALL AVE INTERSECTION																				
SW QUADRANT CROSSING EAST AVENUE	567+54.2, 12.0' LT	M3	5'	85.90	85.80	86.48	86.41	86.60	86.53	85.83	85.76	5'	8.14	8.15	2.00	2' X 2'	NO	--	--	--
SW QUADRANT CROSSING W NEWHALL AVENUE	567+31.8, 27.4' LT	M2	2'	85.14	85.10	86.14	86.26	86.24	86.36	85.15	85.05	6'	12.57	15.55	2.00	2' X 2.5'	NO	--	--	--
SE QUADRANT CROSSING EAST AVENUE	567+54.5, 12.0' RT	M3	5'	86.50	86.40	87.16	87.23	87.28	87.35	86.36	86.43	5'	10.03	10.10	2.00	2' X 2'	NO	--	--	--
NW QUADRANT CROSSING EAST AVENUE	568+31.0, 15.0' LT	2	2' **	85.02	84.98	85.57	85.67	85.69	85.79	85.00	84.96	5'	8.54	8.92	2.00	2' X 2'	NO	--	--	--
NW QUADRANT CROSSING W NEWHALL AVENUE	568+12.2, 27.8' LT	M2	2'	85.11	85.07	85.47	85.59	85.57	85.69	85.08	85.09	6'	7.89	10.58	2.00	2' X 2.5'	NO	--	--	--
NE QUADRANT CROSSING EAST AVENUE	568+31.1, 12.0' RT	M3	5'	85.35	85.25	85.93	86.00	86.05	86.12	85.21	85.28	5'	9.02	9.12	2.00	2' X 2'	NO	--	--	--
EAST AVE / LAFLIN AVE INTERSECTION																				
SW QUADRANT CROSSING EAST AVENUE	571+53.8, 12.0' LT	M3	5'	78.56	78.46	78.72	78.62	78.84	78.74	78.48	78.43	5'	9.42	9.43	2.00	2' X 2'	NO	--	--	--
SW QUADRANT CROSSING LAFLIN AVENUE	571+81.9, 28.8' LT	M2	2'	77.63	77.59	78.08	78.20	78.20	78.32	77.65	77.52	6'	6.17	8.56	2.00	2' X 2.5'	NO	--	--	--
SE QUADRANT CROSSING EAST AVENUE	571+53.8, 12.0' RT	M3	5'	78.55	78.45	79.10	79.20	79.22	79.32	78.42	78.48	5'	8.91	8.98	2.00	2' X 2'	YES	16'	8.5'	6"
SE QUADRANT CROSSING LAFLIN AVENUE	571+86.8, 27.7' RT	M2	2'	77.99	77.95	78.67	78.79	78.77	78.89	77.98	77.92	6'	8.58	11.32	2.00	2' X 2.5'	YES	24.5'	6'	6"
NW QUADRANT CROSSING EAST AVENUE	572+38.1, 12.0' LT	M3	5'	78.35	78.25	78.42	78.52	78.54	78.64	78.23	78.26	5'	9.41	9.51	2.00	2' X 2'	NO	--	--	--
NW QUADRANT CROSSING LAFLIN AVENUE	572+15.2, 28.6' LT	M2	2'	77.70	77.66	78.14	78.26	78.26	78.38	77.72	77.59	6'	5.95	8.45	2.00	2' X 2.5'	NO	--	--	--
NE QUADRANT CROSSING EAST AVENUE	572+38.1, 12.0' RT	M3	5' ***	78.35	78.25	78.92	78.82	79.04	78.94	78.26	78.22	5'	8.79	8.71	2.00	2' X 2'	NO	--	--	--
NE QUADRANT CROSSING LAFLIN AVENUE	572+17.3, 27.8' RT	M2	2'	77.98	77.94	78.72	78.84	78.82	78.94	77.96	77.91	6'	9.47	12.21	2.00	2' X 2.5'	NO	--	--	--
EAST AVE / FOUNTAIN AVE INTERSECTION																				
SW QUADRANT CROSSING FOUNTAIN AVENUE	577+03.9, 29.6' LT	4B	2'	SEE CONSTRUCTION DETAIL - FOUNTAIN AVENUE								5'	6.67	6.50	2.00	2' X 2'	YES	6.1*	6.1*	6"
NW QUADRANT CROSSING EAST AVENUE	577+45.2, 12.0' LT	M3	5'	SEE CONSTRUCTION DETAIL - FOUNTAIN AVENUE								5'	9.47	9.51	2.00	2' X 2'	NO	--	--	--
NW QUADRANT CROSSING FOUNTAIN AVENUE	577+17.3, 29.2' LT	M2	2'	SEE CONSTRUCTION DETAIL - FOUNTAIN AVENUE								5'	5.31	5.53	2.00	2' X 2'	NO	--	--	--
NE QUADRANT CROSSING EAST AVENUE	577+45.2, 12.0' RT	M3	5'	84.86	84.76	85.46	85.36	85.58	85.48	84.77	84.74	5'	8.71	8.71	2.00	2' X 2'	NO	--	--	--

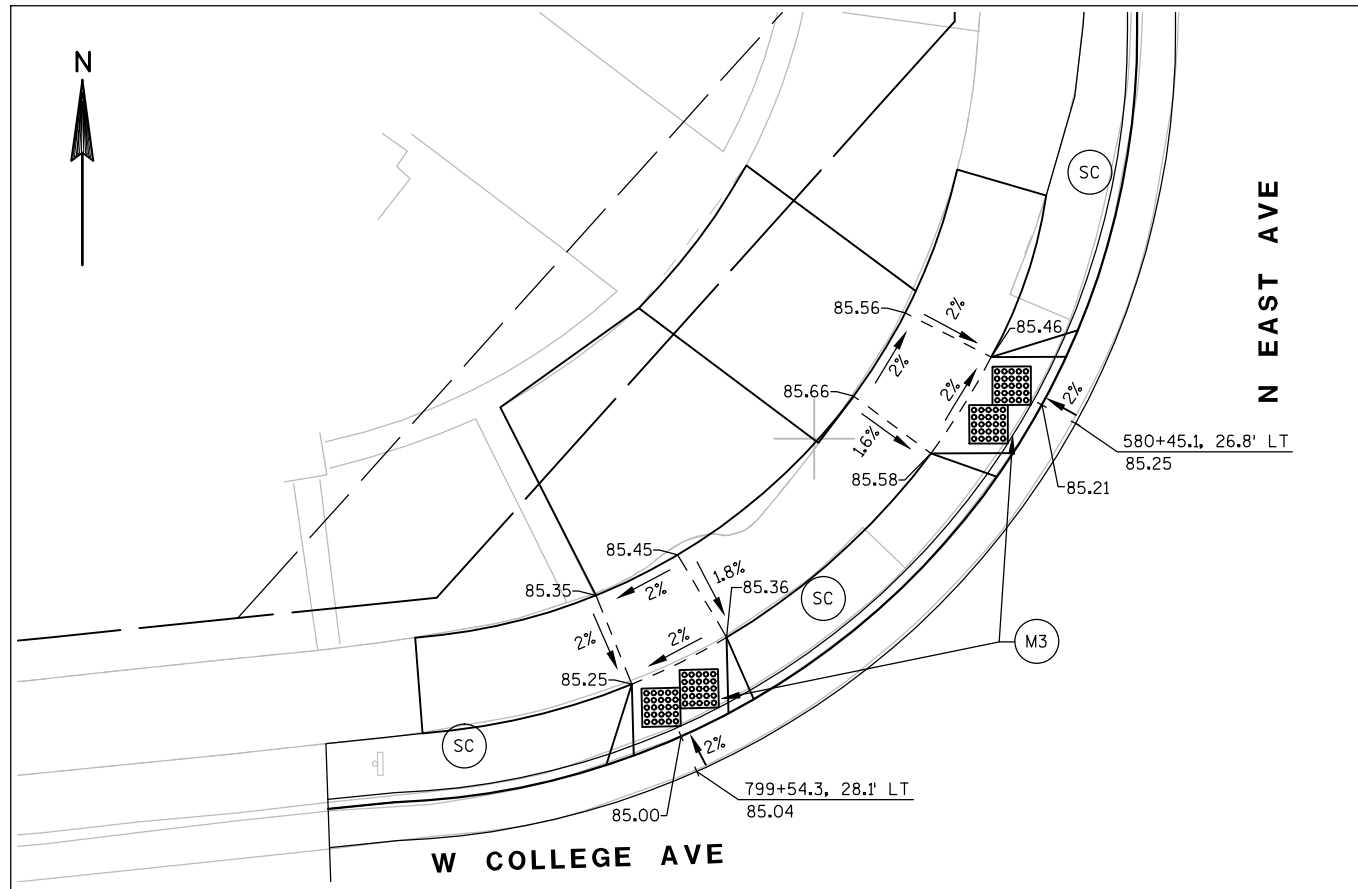
* L1 & L2 SHOWN FOR EACH SIDE OF TYPE 4B RAMP
** 5' CURB FLANGE MATCH AT STA 568+32.2, 15.0' LT

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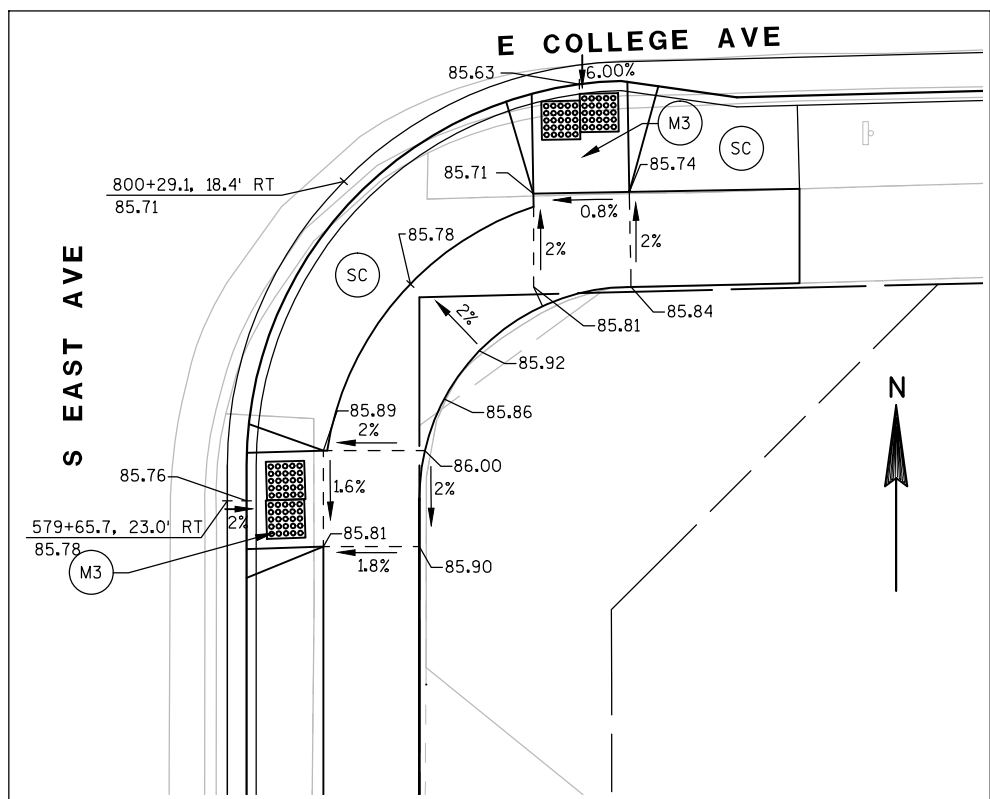
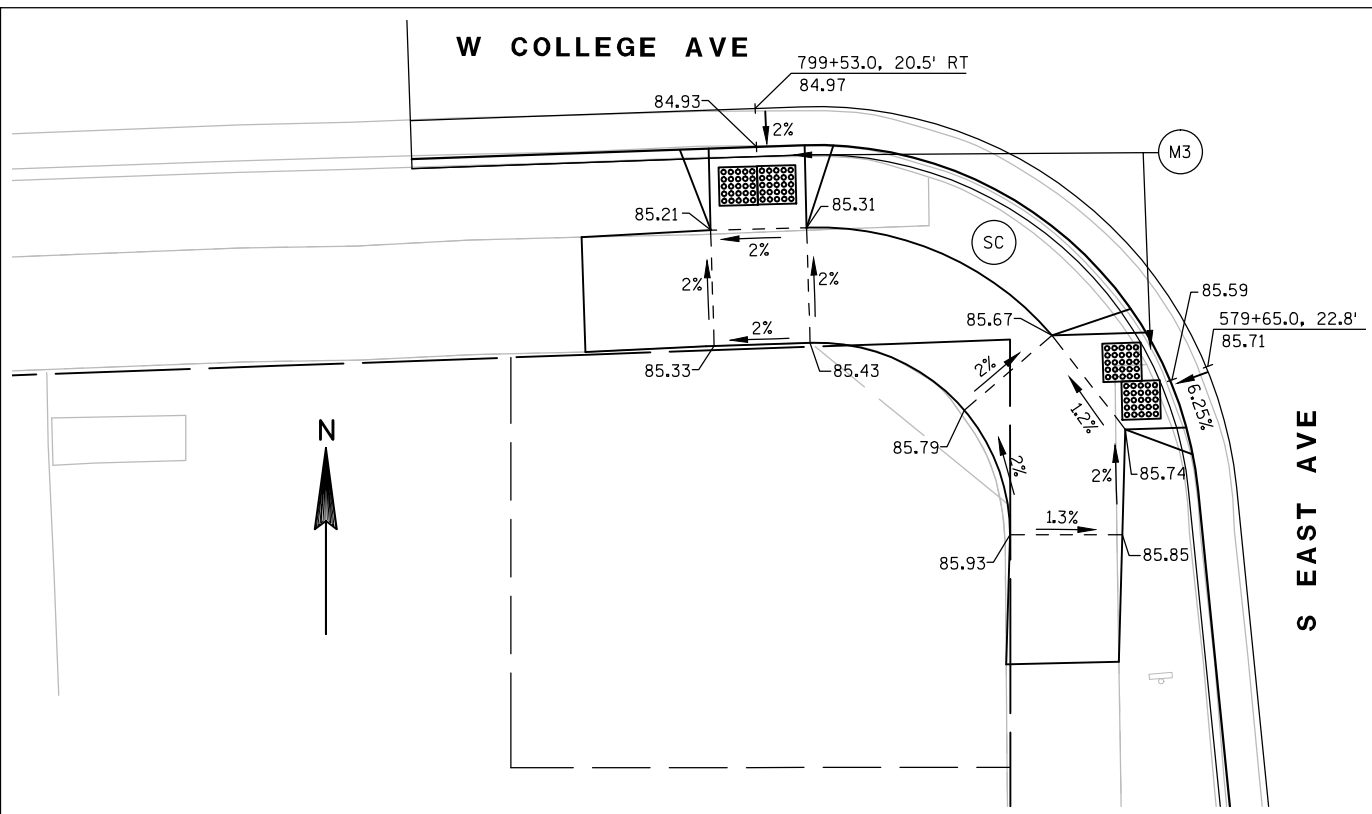
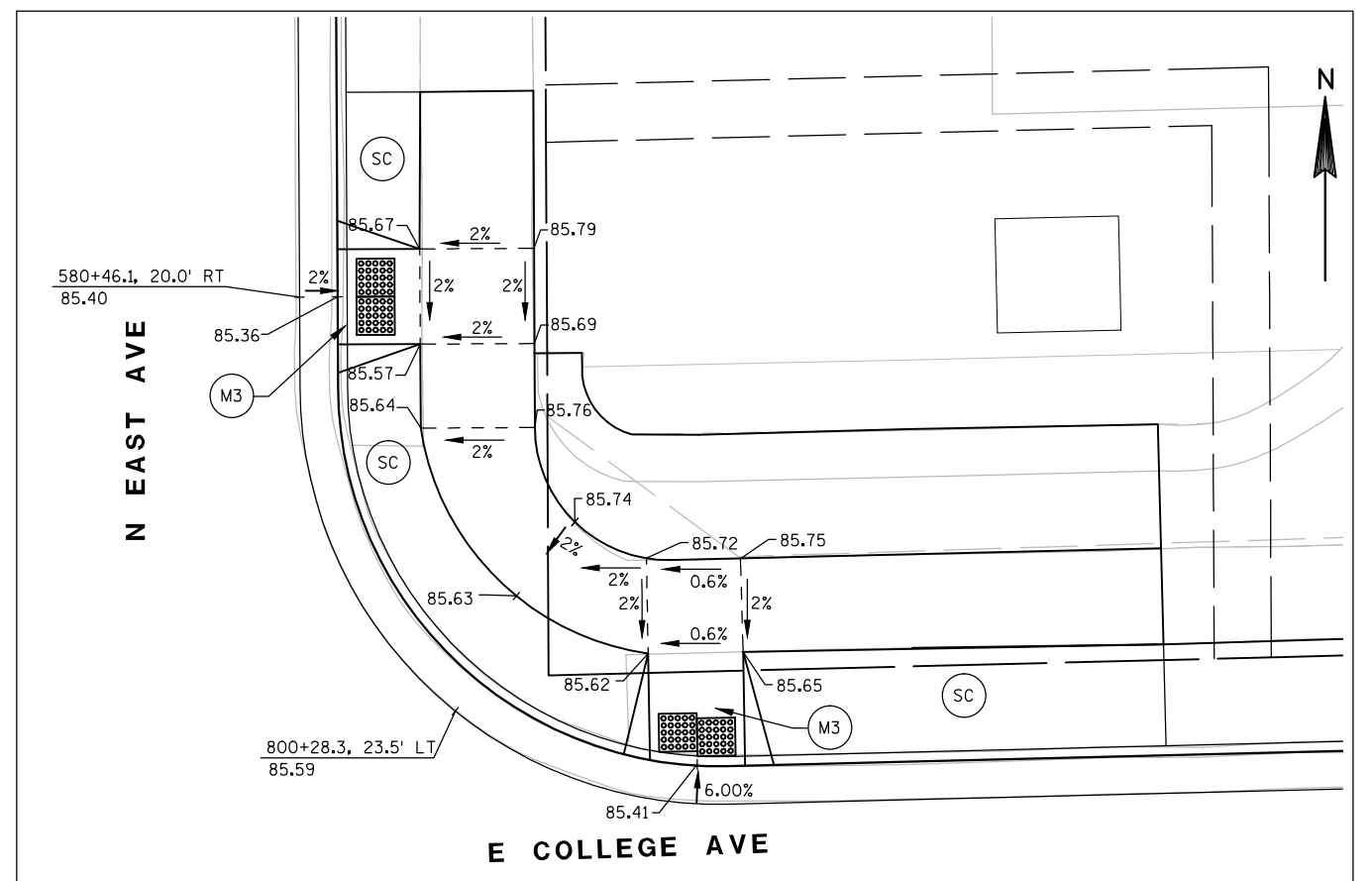


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2



2



- LEGEND**
- (M3) MODIFIED TYPE 3 PEDESTRIAN RAMP
 - (SC) CONCRETE SIDEWALK 4-INCH STAMPED AND COLORED

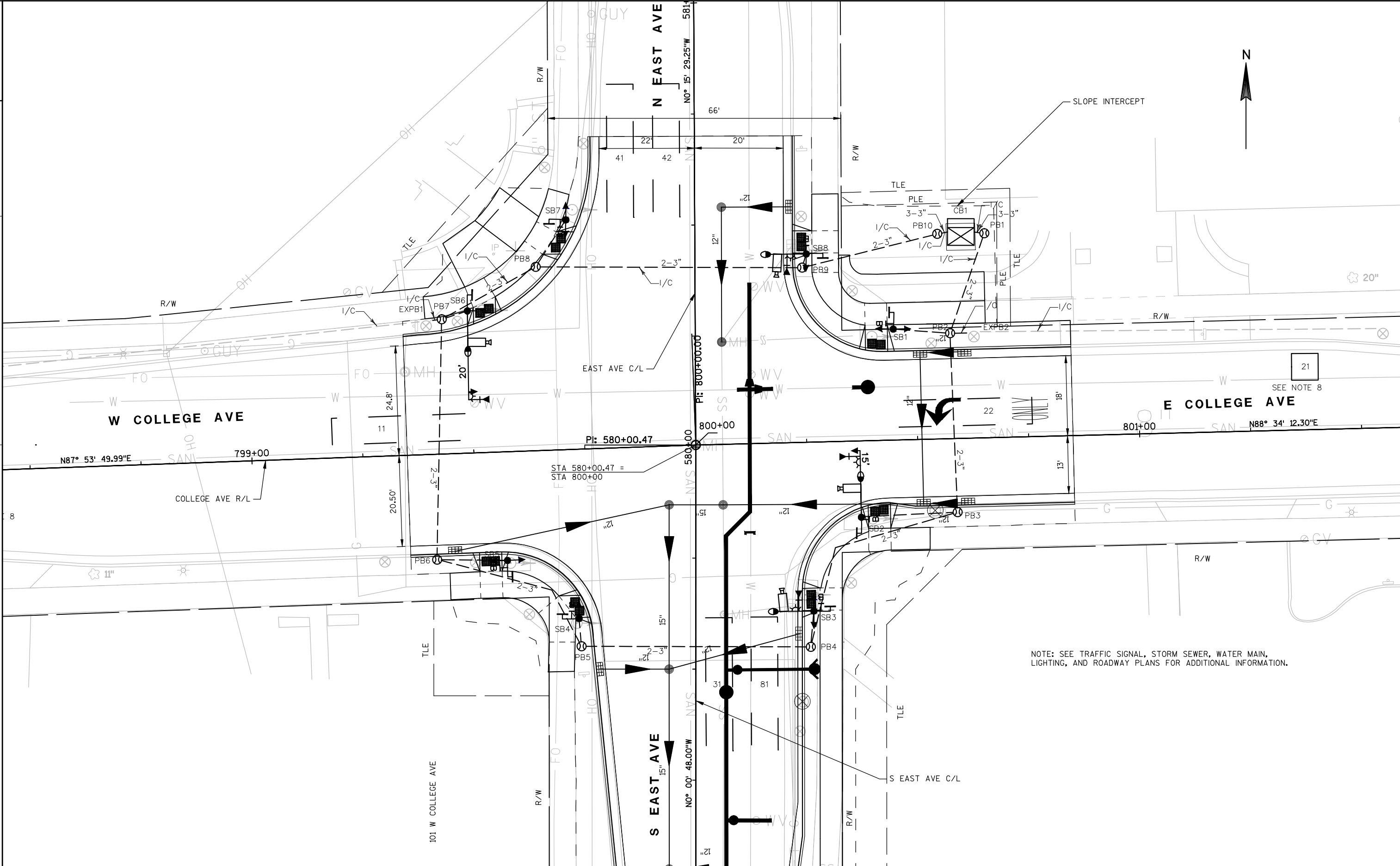
NOTE:
CONTRACTOR TO VERIFY ELEVATIONS, GRADES, AND SLOPES PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.

DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT NECESSARILY INDICATE JOINT LOCATIONS.

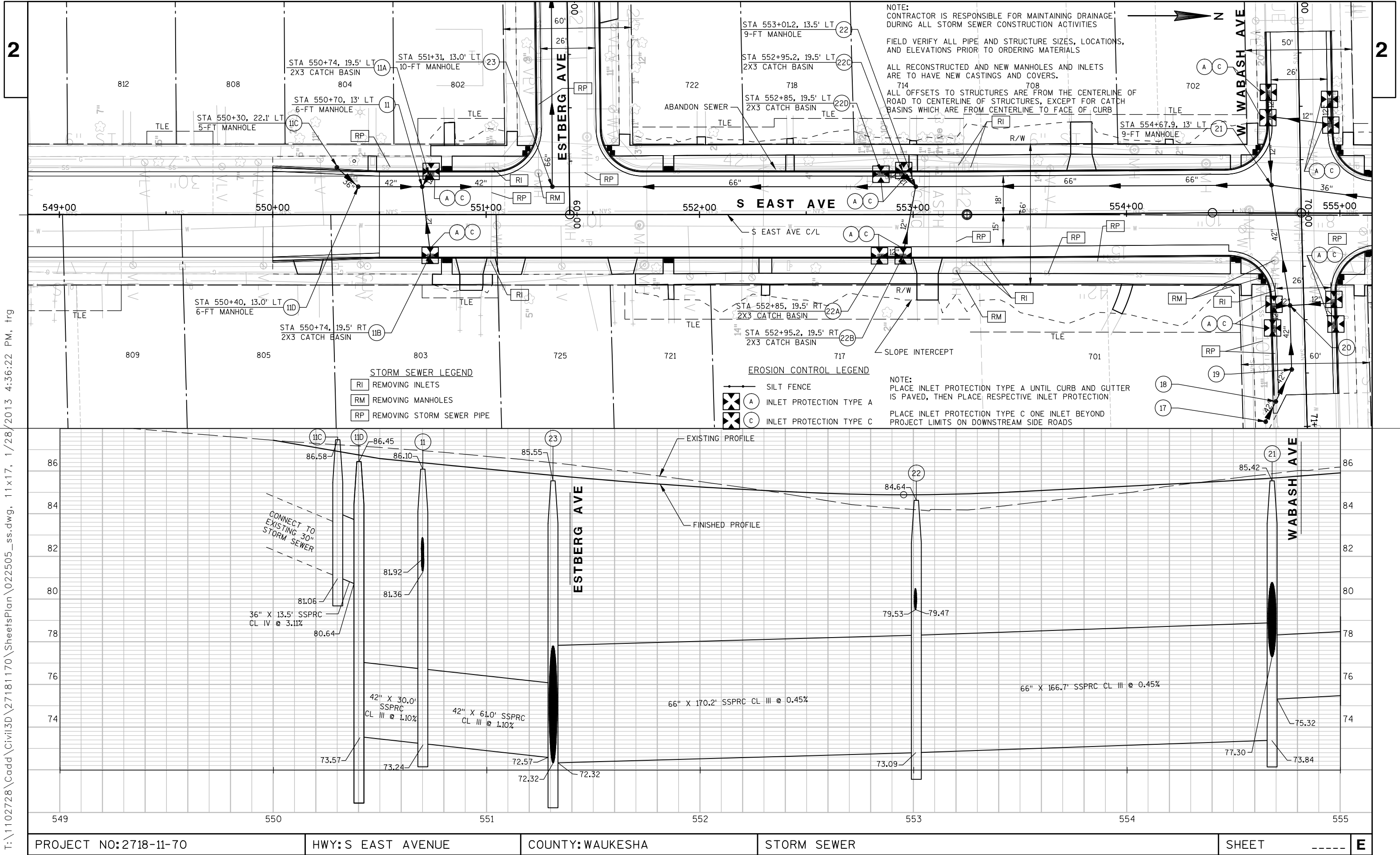
FINAL LOCATIONS OF CURB RAMP OPENINGS, SIGNALS, LIGHTING BASES, HYDRANTS AND STORM SEWER INLETS TO BE VERIFIED BY FIELD ENGINEER PRIOR TO INSTALLATION.

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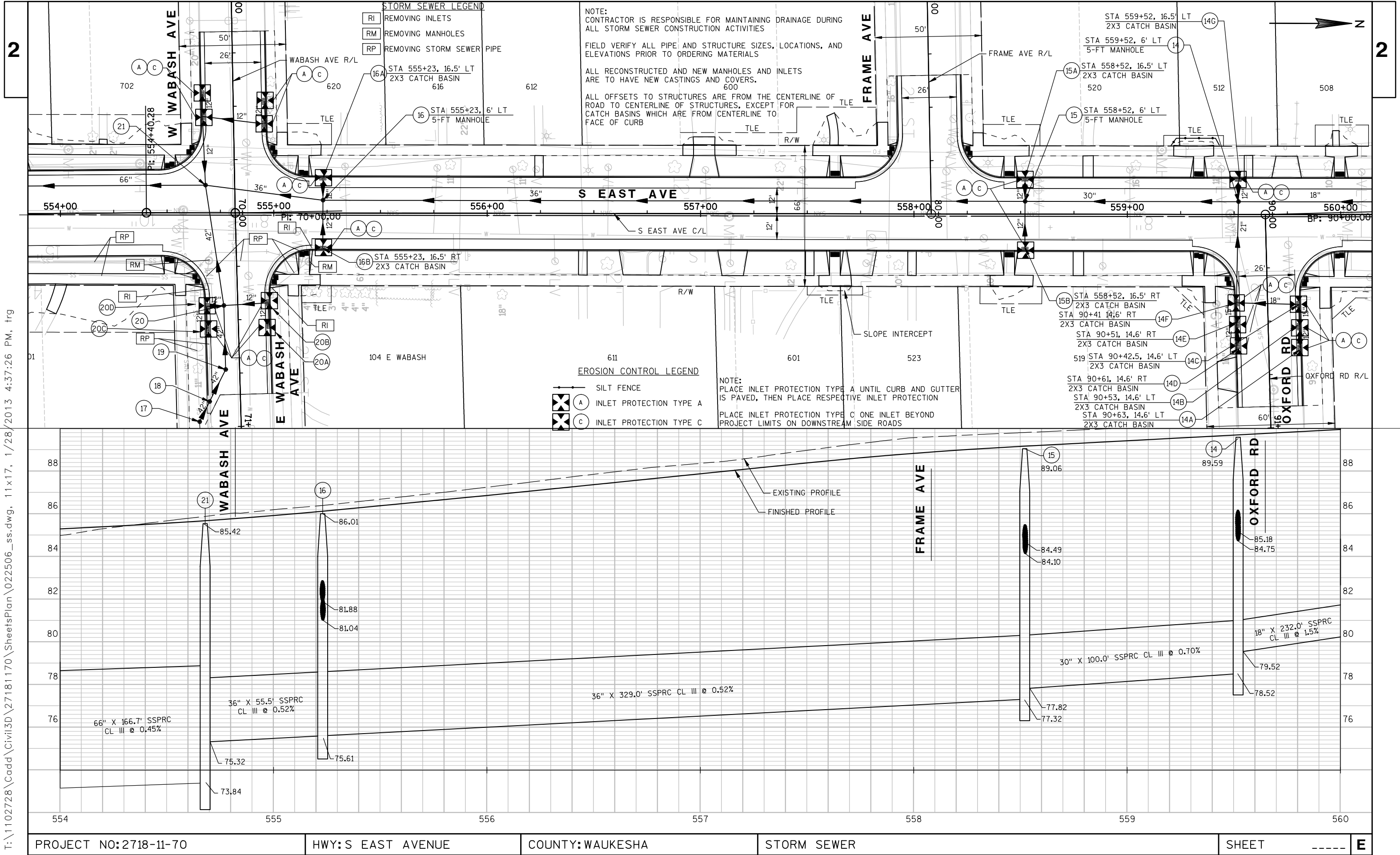
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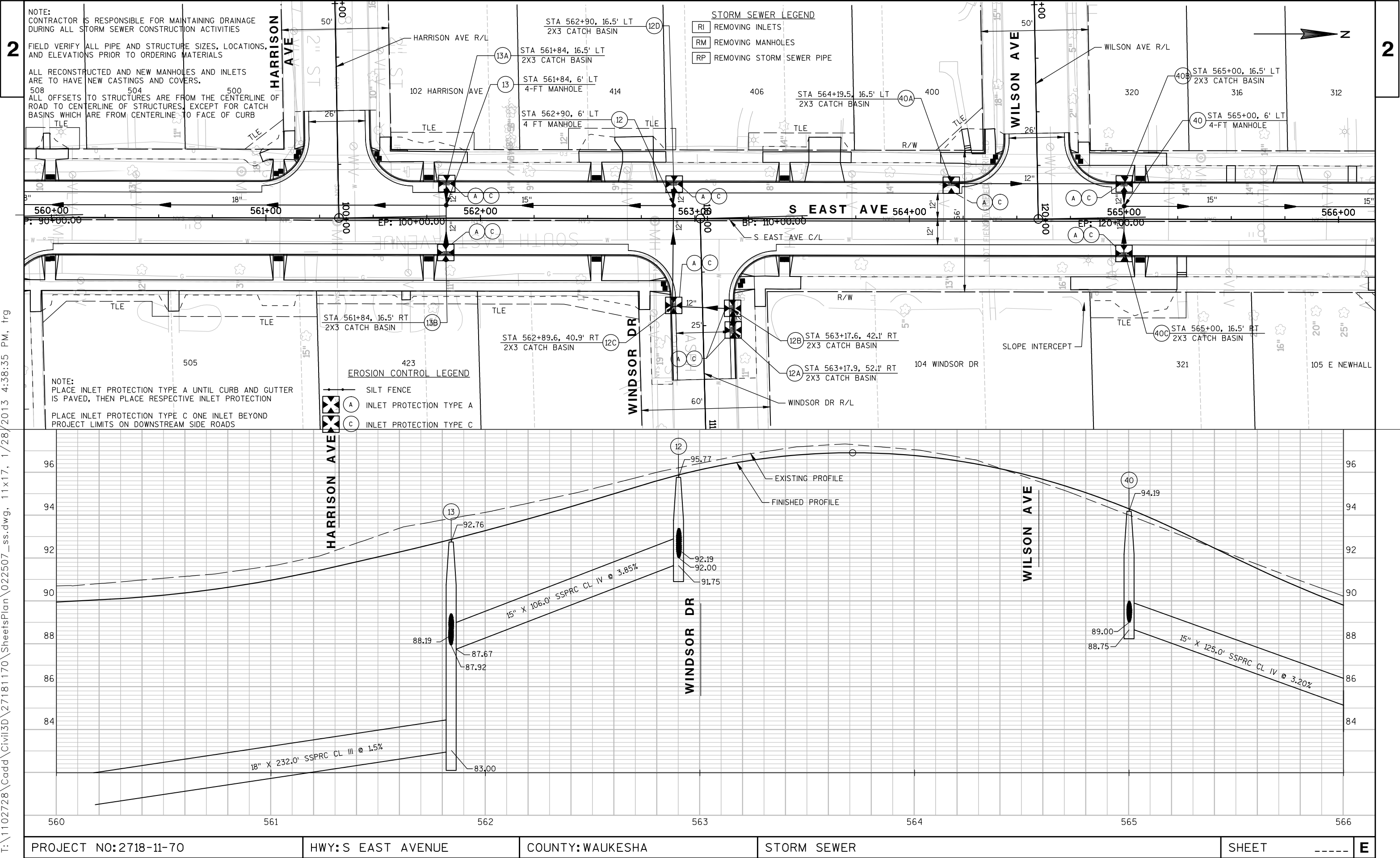
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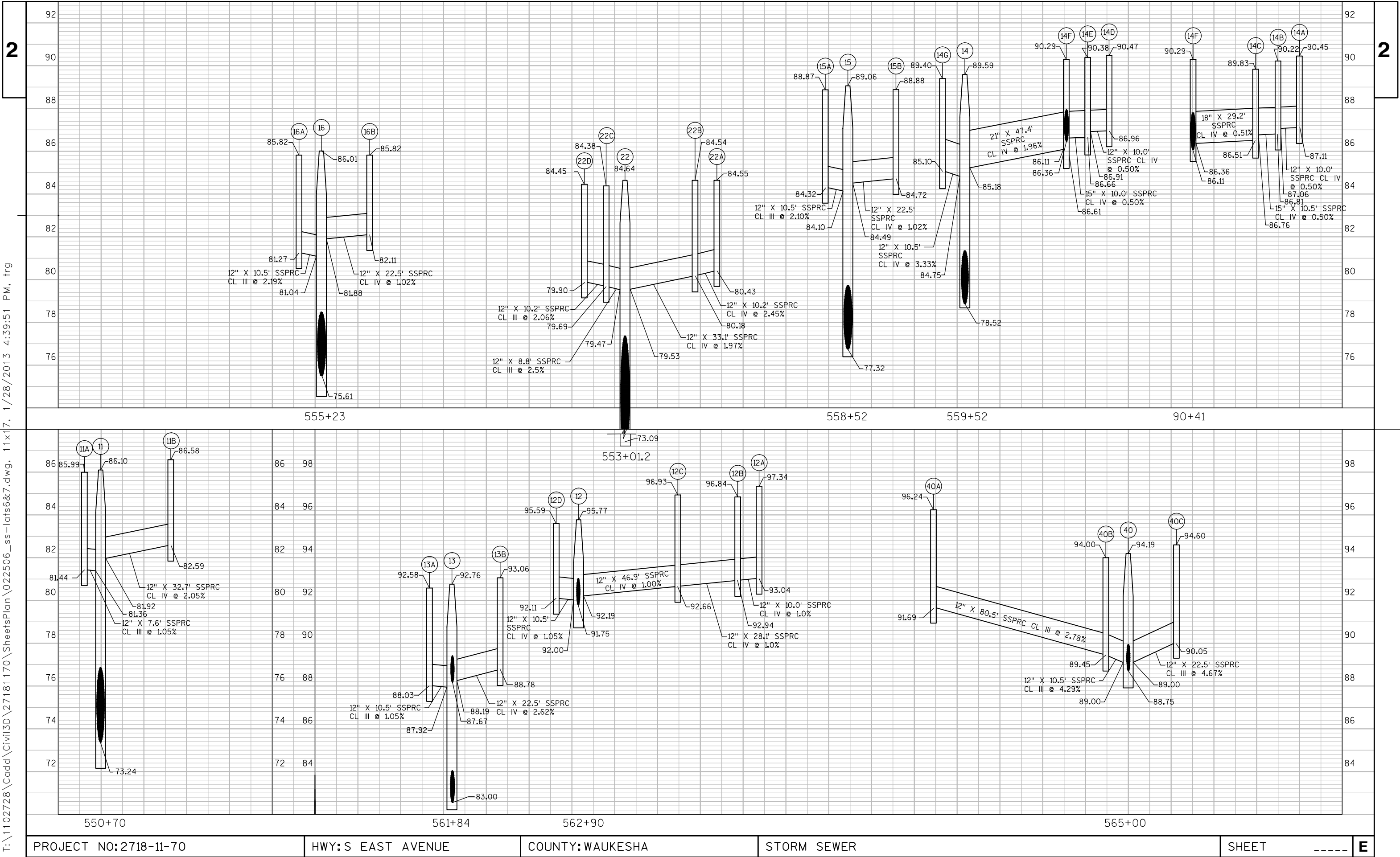
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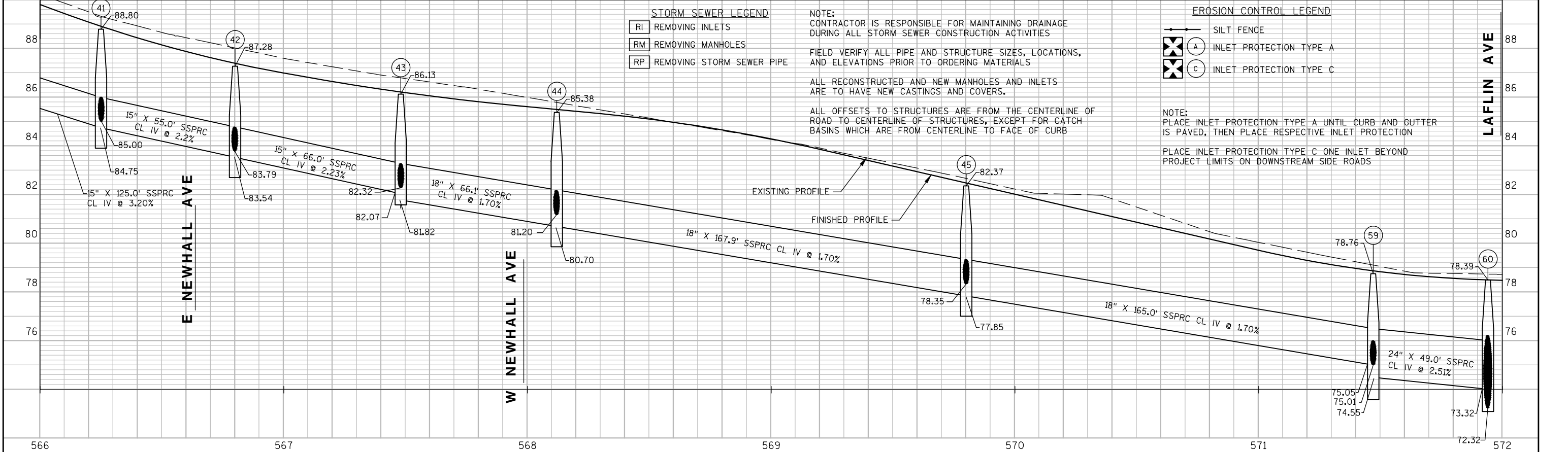
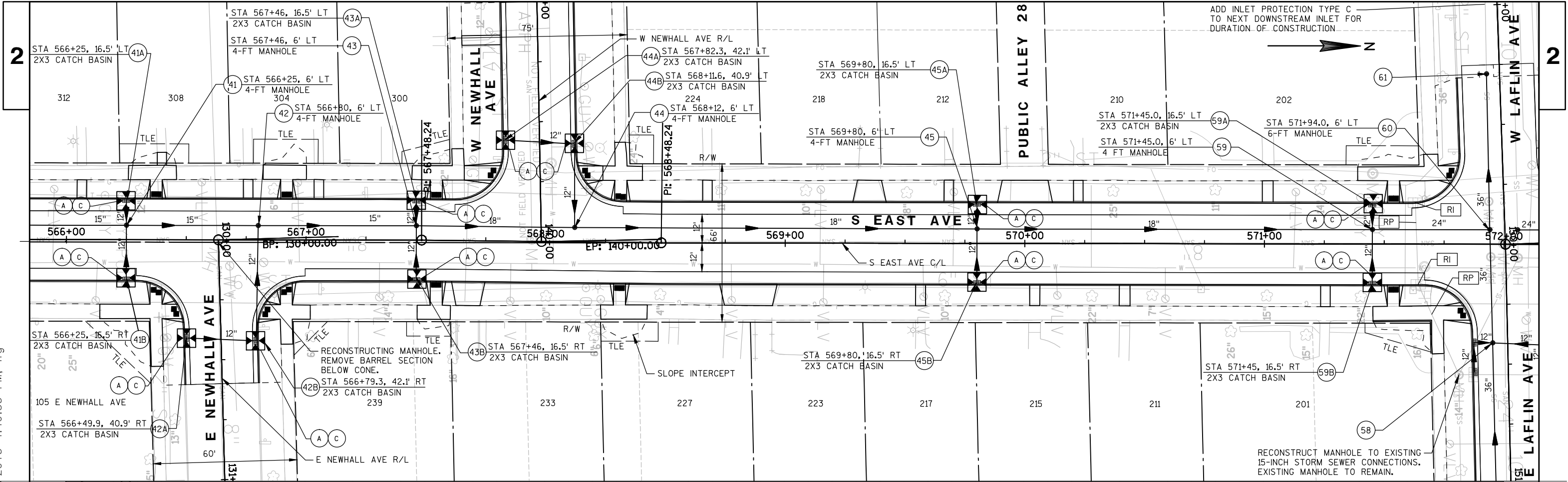
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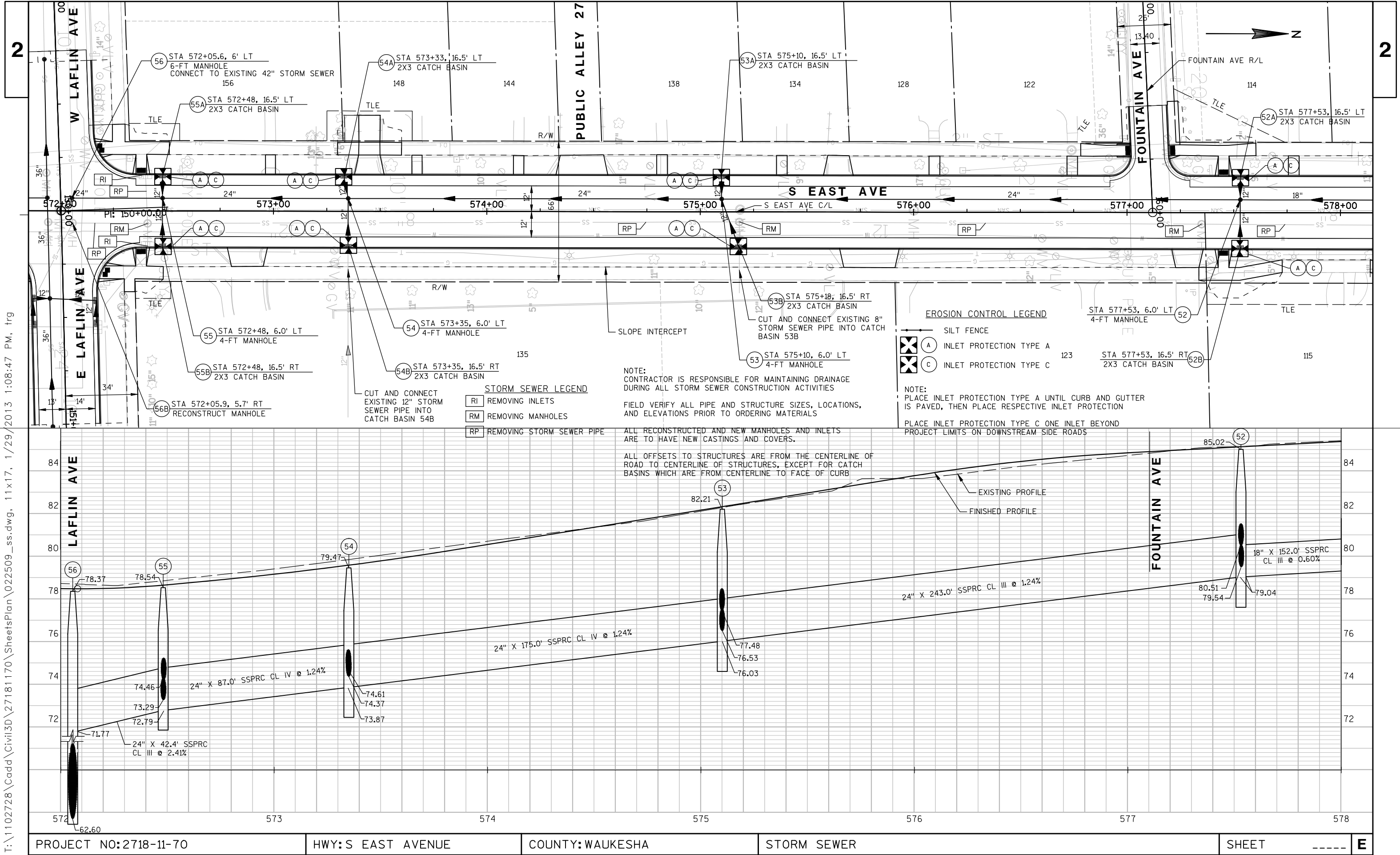
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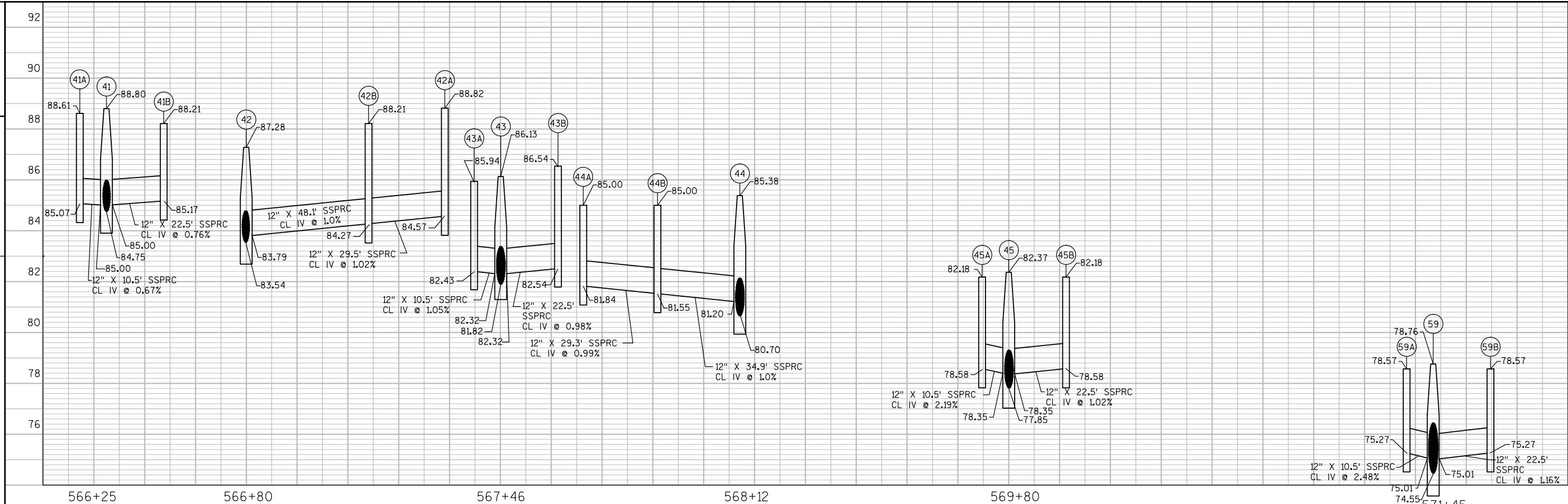


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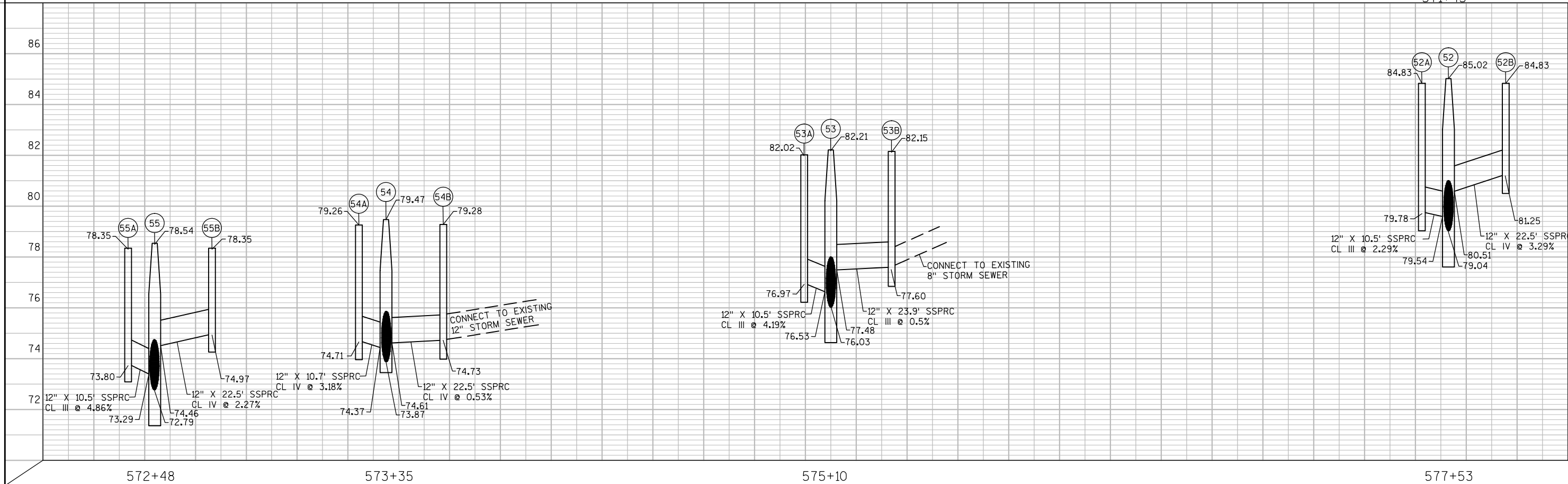


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2



2



PROJECT NO:2718-11-70

HWY:S EAST AVENUE

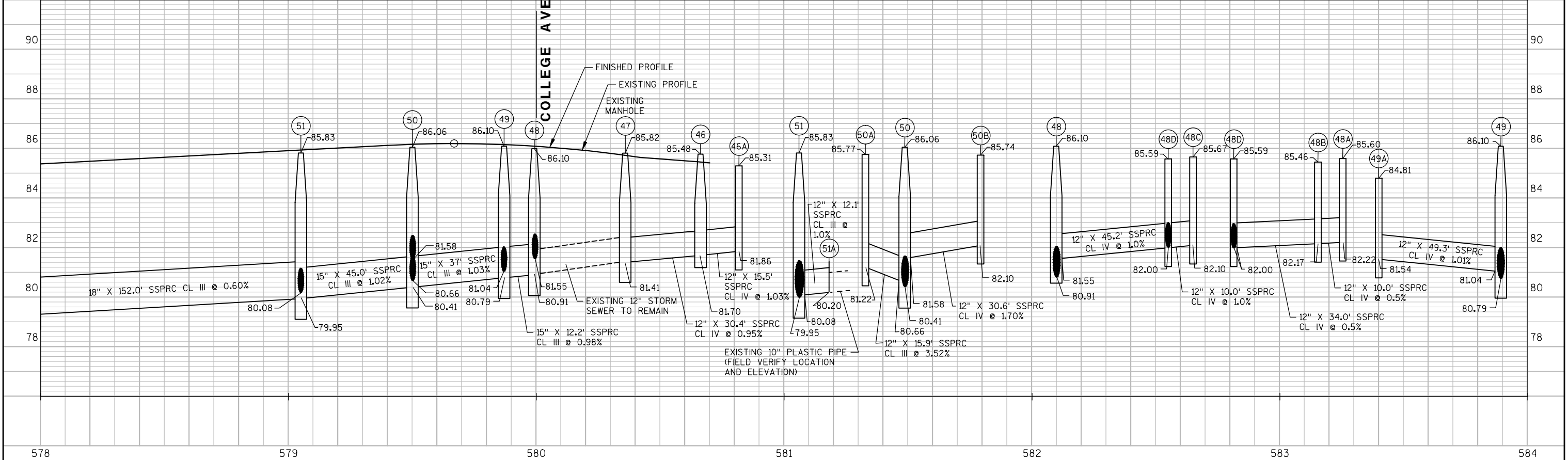
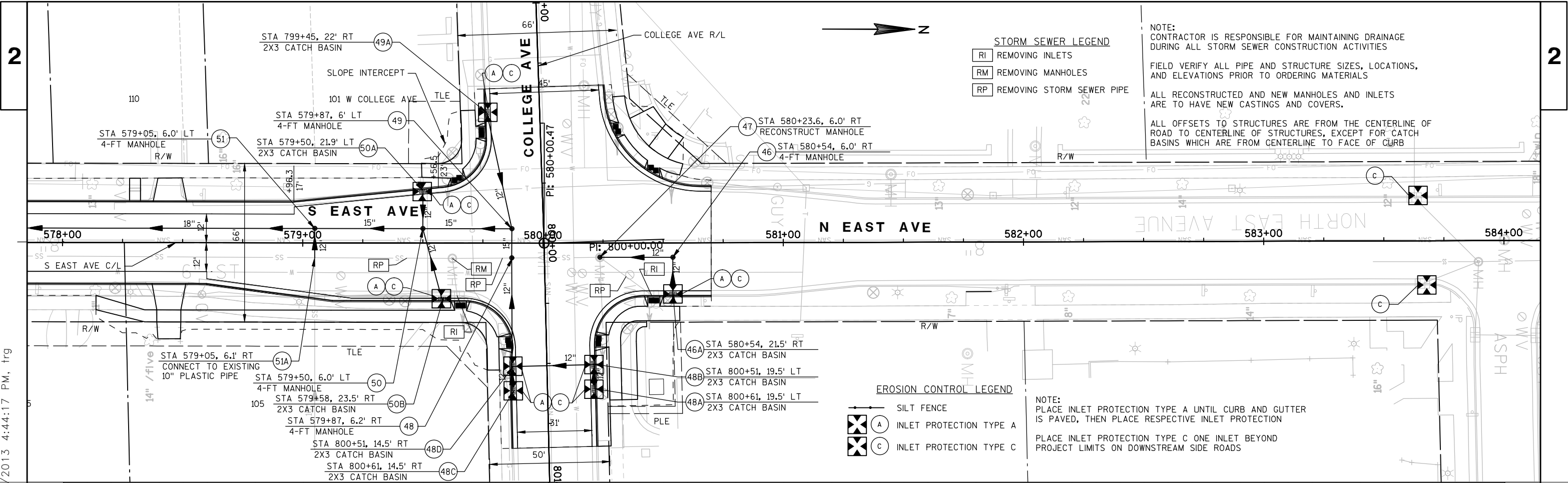
COUNTY:WAUKESHA

STORM SEWER

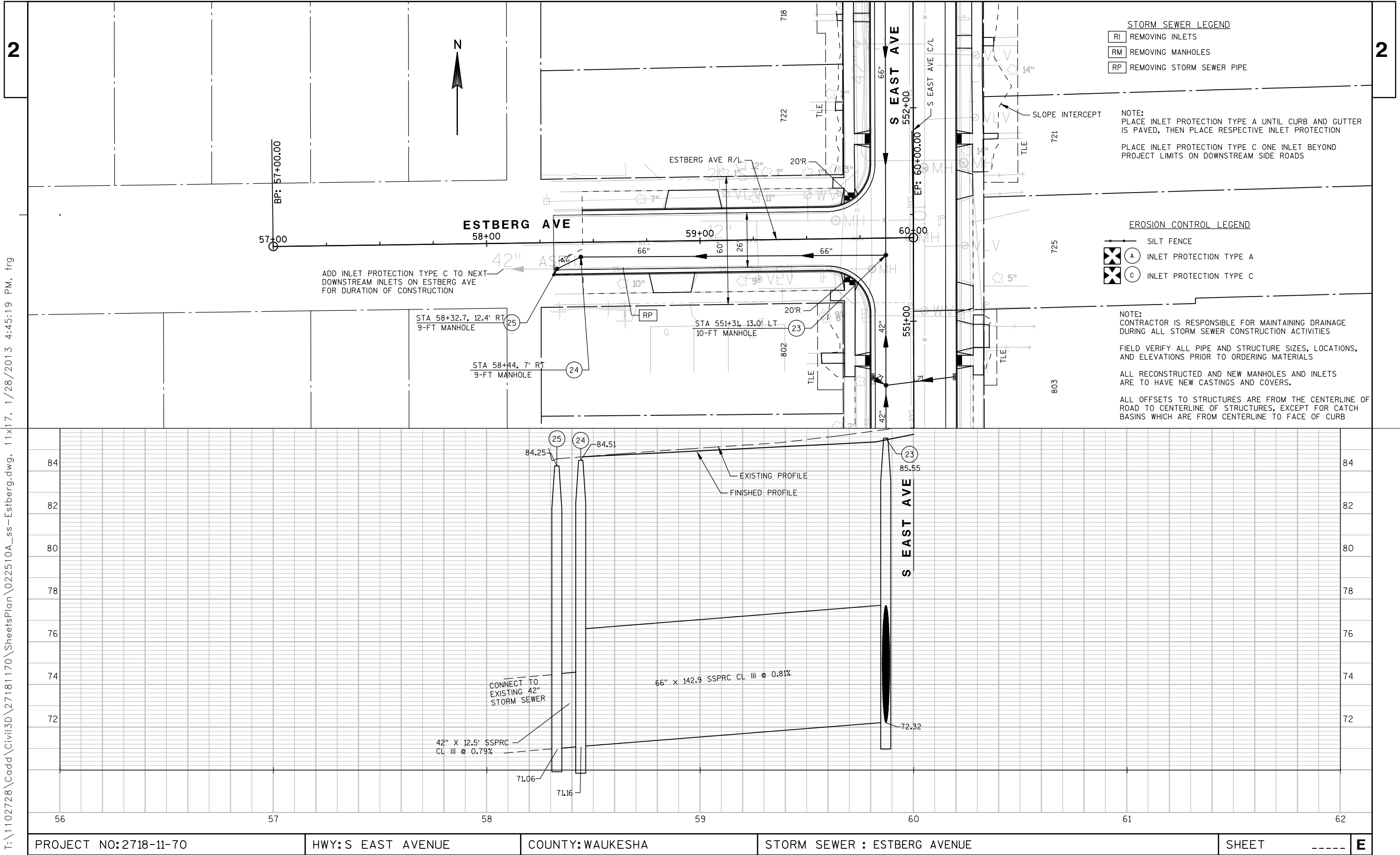
SHEET

E

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2

- STORM SEWER LEGEND**
- RI REMOVING INLETS
 - RM REMOVING MANHOLES
 - RP REMOVING STORM SEWER PIPE

NOTE:
CONTRACTOR IS RESPONSIBLE FOR MAINTAINING DRAINAGE DURING ALL STORM SEWER CONSTRUCTION ACTIVITIES

FIELD VERIFY ALL PIPE AND STRUCTURE SIZES, LOCATIONS, AND ELEVATIONS PRIOR TO ORDERING MATERIALS

ALL RECONSTRUCTED AND NEW MANHOLES AND INLETS ARE TO HAVE NEW CASTINGS AND COVERS.

ALL OFFSETS TO STRUCTURES ARE FROM THE CENTERLINE OF ROAD TO CENTERLINE OF STRUCTURES, EXCEPT FOR CATCH BASINS WHICH ARE FROM CENTERLINE TO FACE OF CURB

EROSION CONTROL LEGEND

- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (C) INLET PROTECTION TYPE C

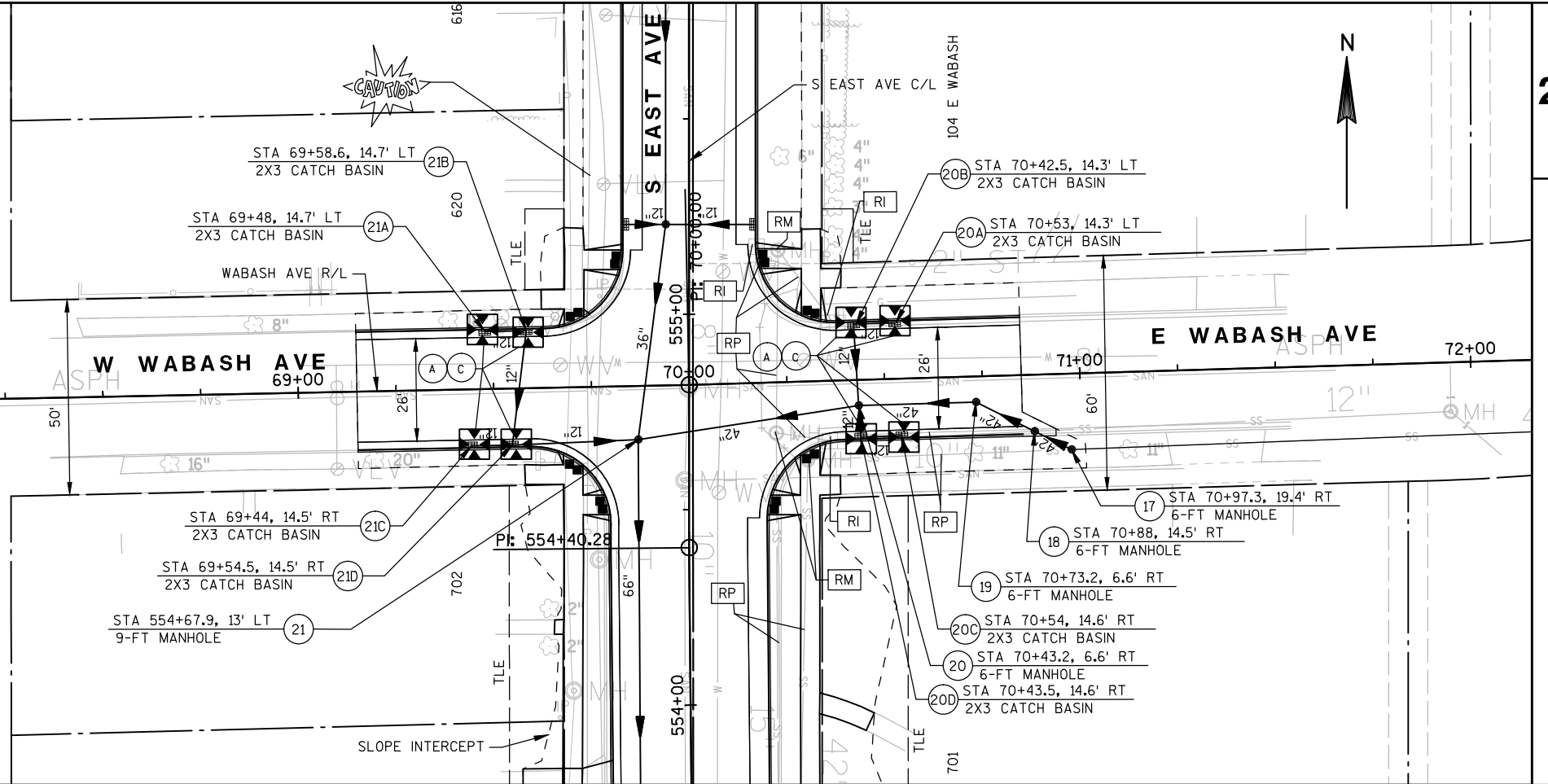
NOTE:
PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED, THEN PLACE RESPECTIVE INLET PROTECTION

PLACE INLET PROTECTION TYPE C ONE INLET BEYOND PROJECT LIMITS ON DOWNSTREAM SIDE ROADS

BP: 67+50.00

67+50

68+00



2

88

86

84

82

80

78

76

66

67

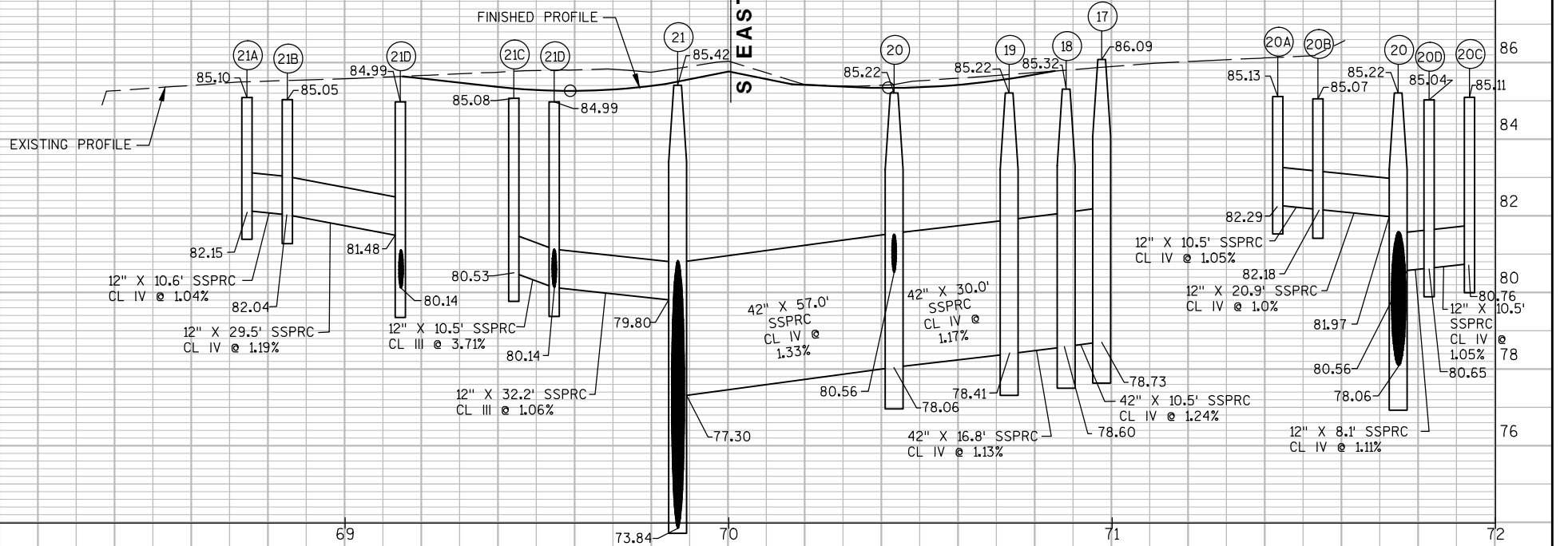
68

69

70

71

72



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2

2

STORM SEWER LEGEND
RI REMOVING INLETS
RM REMOVING MANHOLES
RP REMOVING STORM SEWER PIPE

NOTE:
CONTRACTOR IS RESPONSIBLE FOR MAINTAINING DRAINAGE DURING ALL STORM SEWER CONSTRUCTION ACTIVITIES

FIELD VERIFY ALL PIPE AND STRUCTURE SIZES, LOCATIONS, AND ELEVATIONS PRIOR TO ORDERING MATERIALS

ALL RECONSTRUCTED AND NEW MANHOLES AND INLETS ARE TO HAVE NEW CASTINGS AND COVERS.

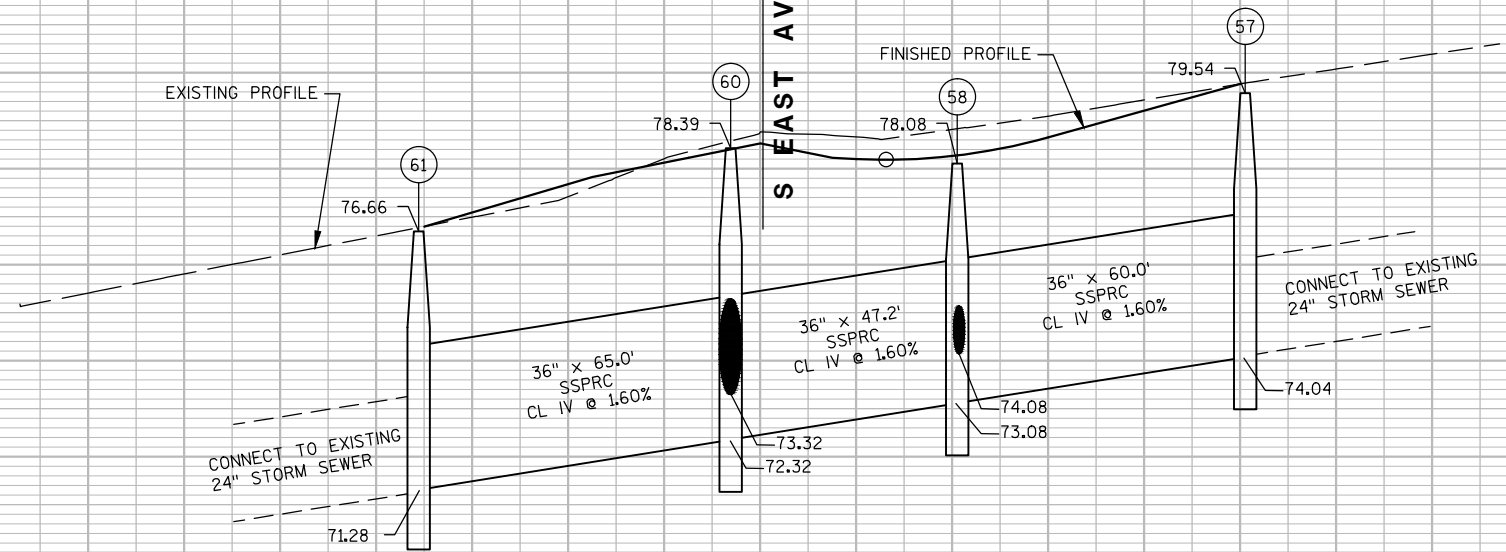
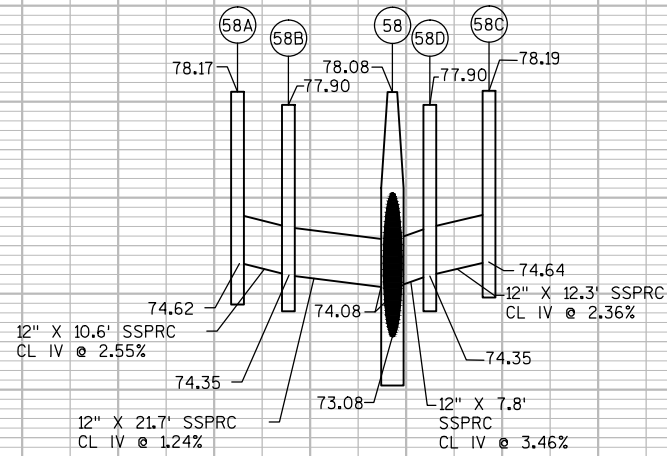
ALL OFFSETS TO STRUCTURES ARE FROM THE CENTERLINE OF ROAD TO CENTERLINE OF STRUCTURES, EXCEPT FOR CATCH BASINS WHICH ARE FROM CENTERLINE TO FACE OF CURB

EROSION CONTROL LEGEND

SILT FENCE
(A) INLET PROTECTION TYPE A
(C) INLET PROTECTION TYPE C

NOTE:
PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED, THEN PLACE RESPECTIVE INLET PROTECTION

PLACE INLET PROTECTION TYPE C ONE INLET BEYOND PROJECT LIMITS ON DOWNSTREAM SIDE ROADS



PROP. 6" MJ CAP W/MEGA-LUG (SOUTH)
& 6" MJ CAP (NORTH) WITH
CONCRETE BLOCKING BETWEEN CAPS

PROP. 6"x6" TAPPING SLEEVE WITH 6" TAPPING
VALVE & BOX (MATERIALS TO BE PROVIDED AND
INSTALLED BY THE WAUKESHA WATER UTILITY,
CONTRACTOR TO PROVIDE TRENCH, SHIELD AND
MEANS FOR LOWERING TAPPING MACHINE)

NOTE:
EXISTING 6" C.I. WATER MAIN MIGHT BE OVERSIZED.

EXIST. 6" C.I. WATER MAIN
(TO BE ABANDONED)

ABANDON VALVE BOX

CAUTION
TELEPHONE CROSSING
(FIELD VERIFY DEPTH)

PROP. 16" D.I. WATER MAIN

PROP. 16"x6" REDUCER (16" MJ/6" PE)
PROP. 16" - 90° BEND
PROP. 1" TAP TO BE MADE BETWEEN
BEND AND REDUCER FOR AIR RELEASE
(TO BE ABANDONED AFTER
WATER MAIN IS FILLED)

THE CONTRACTOR SHALL PROVIDE THE NECESSARY MATERIALS, EXCAVATION,
BACKFILL, COMPACTION AND MAINTENANCE OF DITCHES FOR THE FOLLOWING
WORK, AFTER THE BACTI SAMPLE RESULTS ARE SAFE ON THE NEW WATER MAIN.
EXISTING COPPER/PE SERVICE LATERAL TO BE CONNECTED TO
THE NEW WATER MAIN WITH A 1" CORPORATION, ~8.0' OF
1" PE(CTS) PIPE AND A 1" OR 1"x3/4" STRAIGHT COUPLING.
(3/4" COPPER) = INDICATES SIZE & MAT'L FOR SERVICE CONNECTION.
EXISTING 3/4" COPPER SERVICE LATERAL TO BE CONNECTED
TO THE NEW WATER MAIN WITH A 3/4" CORPORATION AND
BEND EXISTING COPPER PIPE INTO NEW CORPORATION.

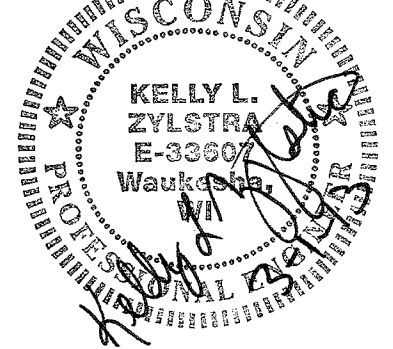
PROP. 16"x8" TEE

PROP. 16" BUTTERFLY VALVE & BOX

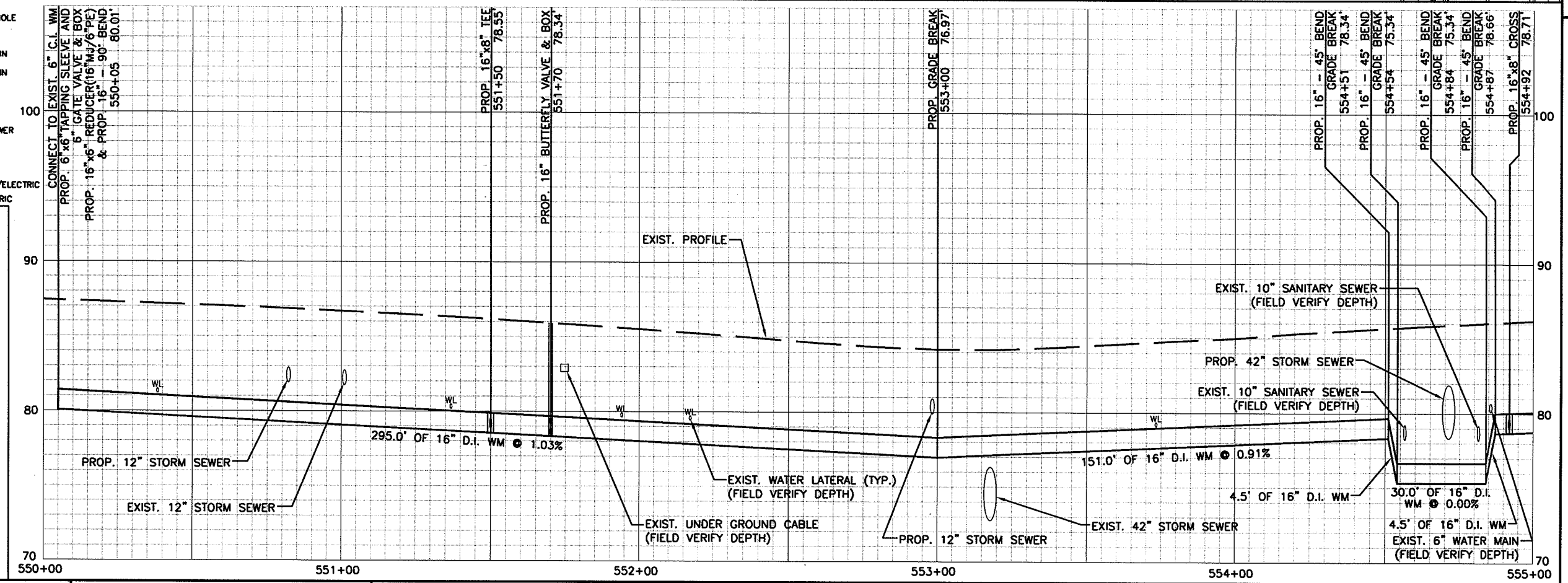
LEGEND

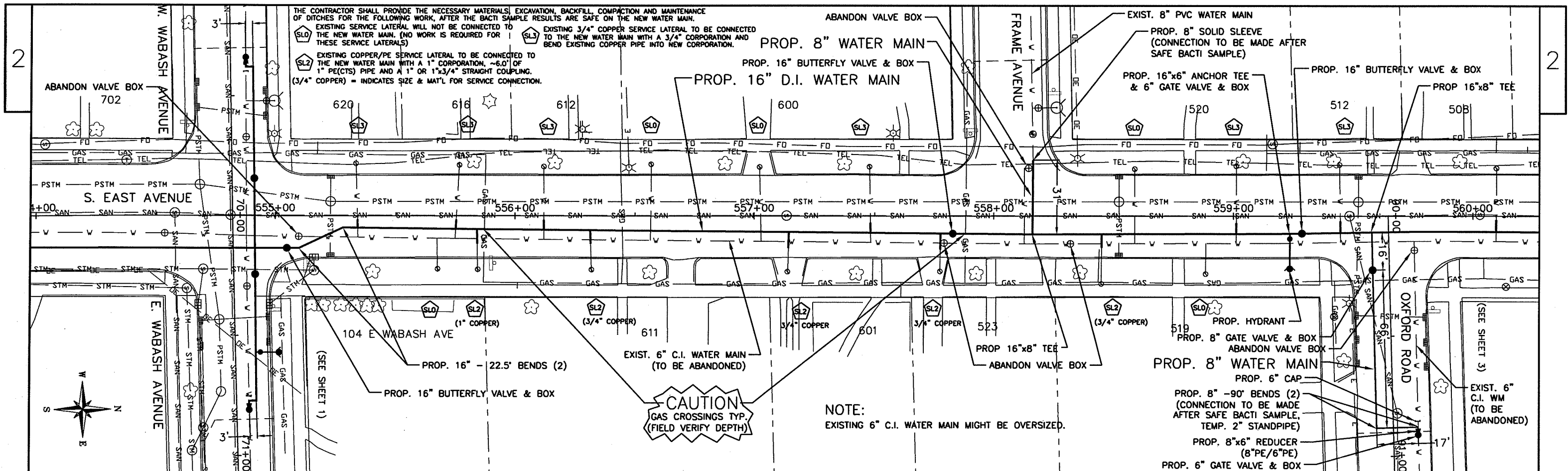
- ⊙ - EXIST. WATER MANHOLE
- ⊕ - EXIST. WATER VALVE
- ⊙ - EXIST. HYDRANT
- - PROP. WATER VALVE
- ⊙ - PROP. HYDRANT
- - POWER POLE
- ⊙ - LIGHT POLE
- ⊙ - GAS VALVE BOX
- ⊙ - SEWER MANHOLE
- ⊙ - STORM INLET
- ① - TELEPHONE MANHOLE
- ⊙ - TREES
- V — - EXIST. WATER MAIN
- SAN — - SANITARY SEWER
- STM — - STORM SEWER
- PSTM — - PROP. STORM SEWER
- GAS — - GAS MAIN
- FO — - FIBER OPTIC
- E — - STREET CONDUIT/ELECTRIC
- OE — - OVERHEAD ELECTRIC

Waukesha Water Utility
115 Delafield Street, Waukesha, WI 53188
Phone 262-521-5272 Fax 262-521-5265

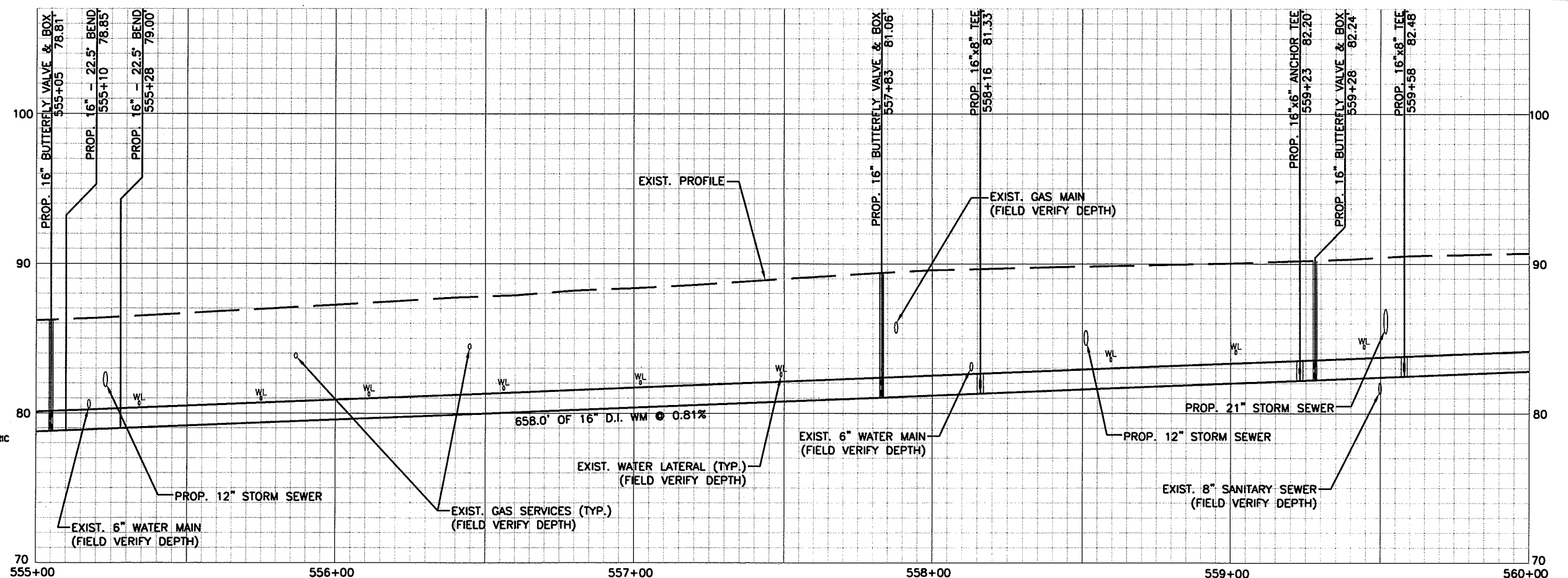


THIS STAMP APPLIES TO THE WATER MAIN PLANS
(SHEETS 1 TO 8 OF 8)





- LEGEND**
- ⊙ - EXIST. WATER MANHOLE
 - ⊕ - EXIST. WATER VALVE
 - ⊙ - EXIST. HYDRANT
 - - PROP. WATER VALVE
 - ▼ - PROP. HYDRANT
 - - POWER POLE
 - ⊗ - LIGHT POLE
 - ⊗ - GAS VALVE BOX
 - ⊙ - SEWER MANHOLE
 - ⊞ - STORM INLET
 - ① - TELEPHONE MANHOLE
 - ★ - TREES
 - W — EXIST. WATER MAIN
 - SAN — SANITARY SEWER
 - STM — STORM SEWER
 - PSTM — PROP. STORM SEWER
 - GAS — GAS MAIN
 - FO — FIBER OPTIC
 - E — STREET CONDUIT/ELECTRIC
 - OE — OVERHEAD ELECTRIC



PROJECT NO: 2718-11-71

HWY: S. EAST AVENUE

COUNTY: WAUKESHA

WATER MAIN (SHEET 2 OF 8)

SCALE, FEET 0 20 40

SHEET NO:

E

FILE NAME : \$\$\$...designfile...\$\$\$

PLOT DATE : \$\$\$...plottingdate...\$\$\$

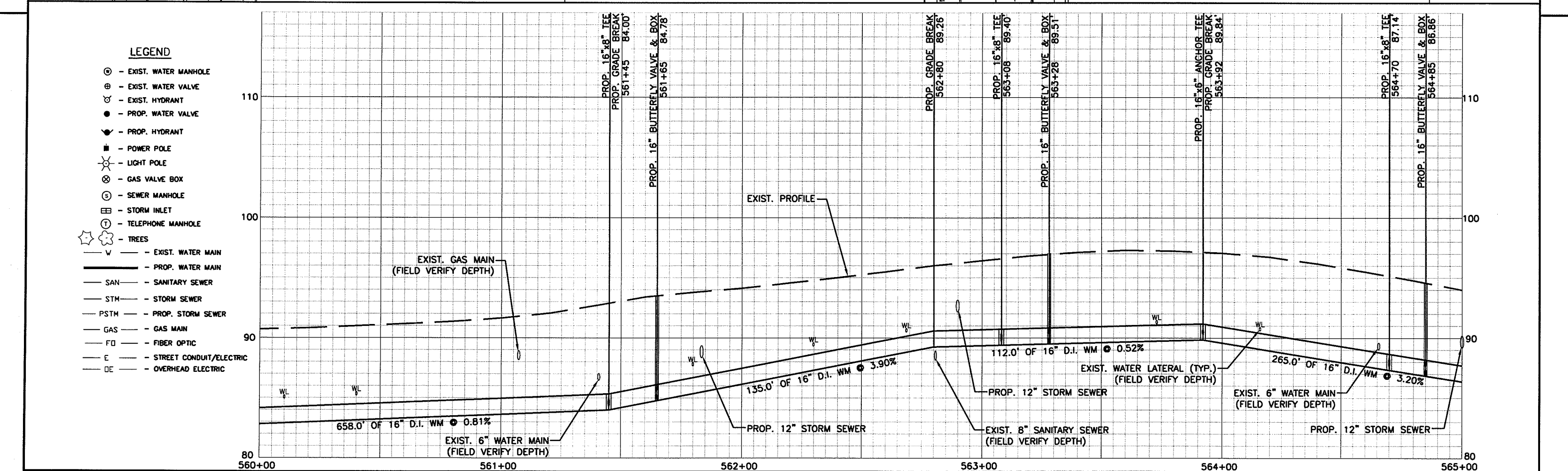
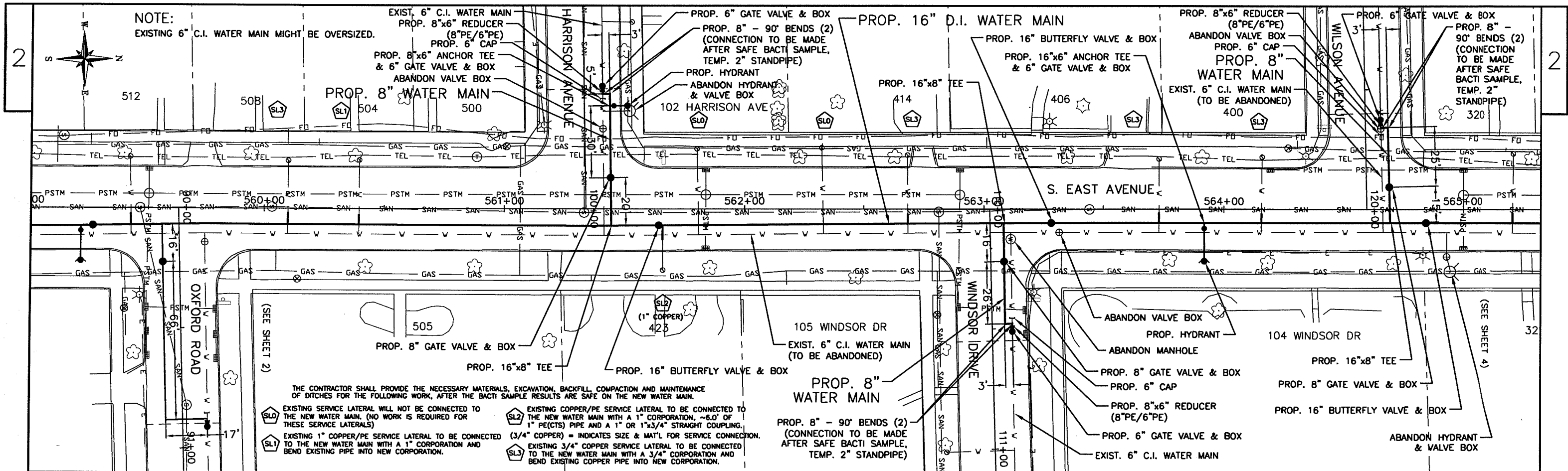
ORG DATE :

PLOT NAME :

Originator :

PLOT SCALE : \$\$\$...plotscale...\$\$\$

WISDOT/CADDs SHEET 42



PROJECT NO: 2718-11-71

HWY: S. EAST AVENUE

COUNTY: WAUKESHA

WATER MAIN (SHEET 3 OF 8)

SCALE, FEET 0 20 40

SHEET NO:

E

FILE NAME : \$\$\$...designfile....\$\$

PLOT DATE : \$\$\$...plottingdate...\$\$

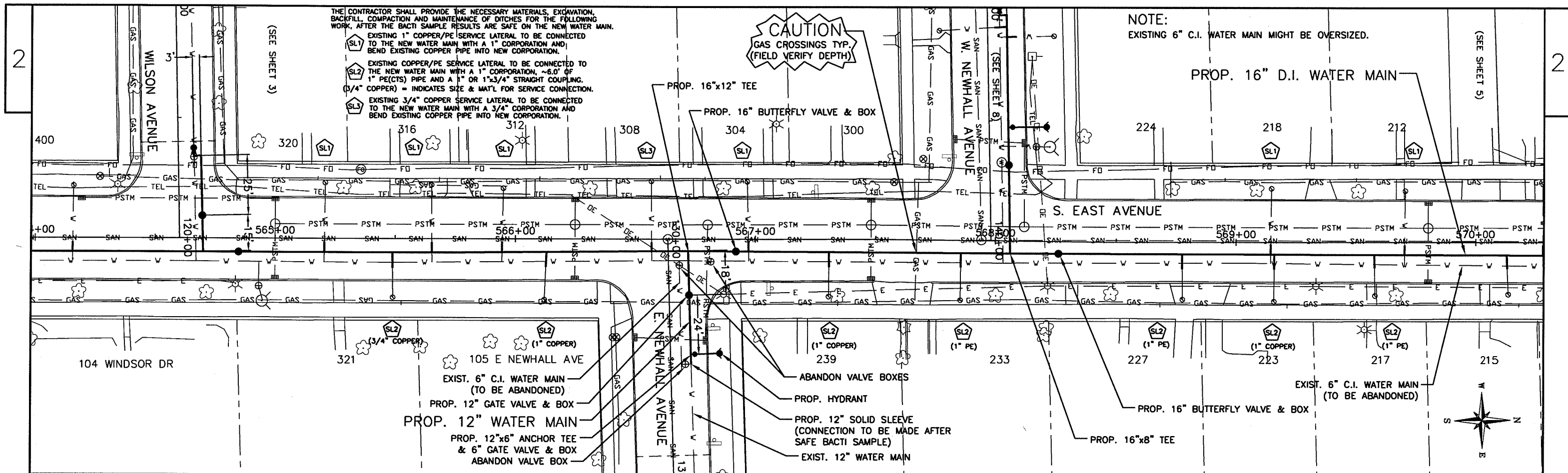
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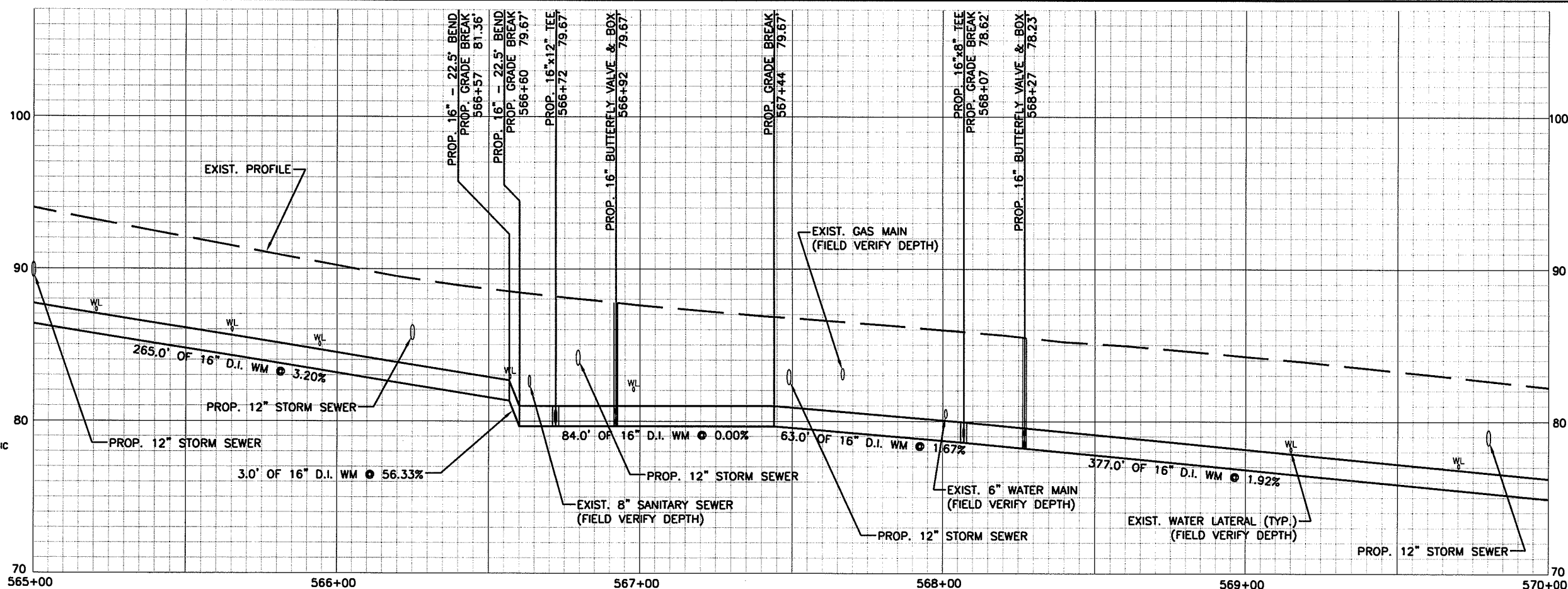
Originator :

PLOT SCALE : \$\$\$...plotscale....\$\$

WISDOT/CADDs SHEET 42



- LEGEND**
- ⊙ - EXIST. WATER MANHOLE
 - ⊕ - EXIST. WATER VALVE
 - ⊗ - EXIST. HYDRANT
 - - PROP. WATER VALVE
 - ▼ - PROP. HYDRANT
 - - POWER POLE
 - ⊛ - LIGHT POLE
 - ⊗ - GAS VALVE BOX
 - ⊙ - SEWER MANHOLE
 - ⊞ - STORM INLET
 - ⊙ - TELEPHONE MANHOLE
 - ⊙ - TREES
 - W — EXIST. WATER MAIN
 - — — PROP. WATER MAIN
 - SAN — SANITARY SEWER
 - STM — STORM SEWER
 - PSTM — PROP. STORM SEWER
 - GAS — GAS MAIN
 - FO — FIBER OPTIC
 - E — STREET CONDUIT/ELECTRIC
 - OE — OVERHEAD ELECTRIC



PROJECT NO: 2718-11-71

HWY: S. EAST AVENUE

COUNTY: WAUKESHA

WATER MAIN (SHEET 4 OF 8)

SCALE, FEET 0 20 40

SHEET NO:

E

FILE NAME : \$\$....designfile....\$\$

PLOT DATE : \$\$....plottingdate....\$\$

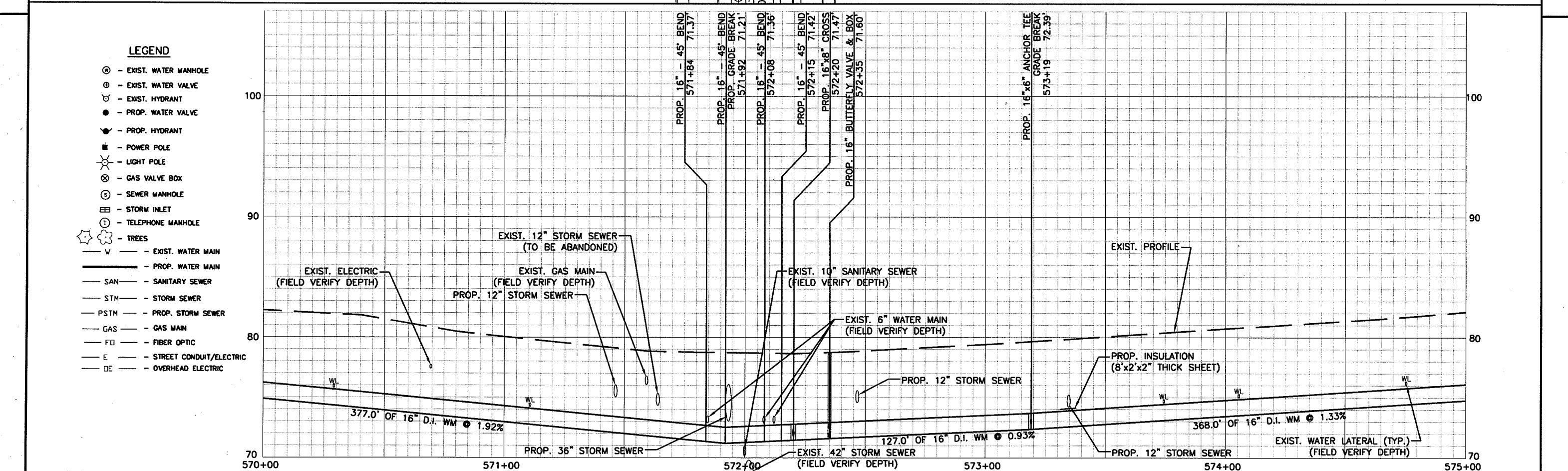
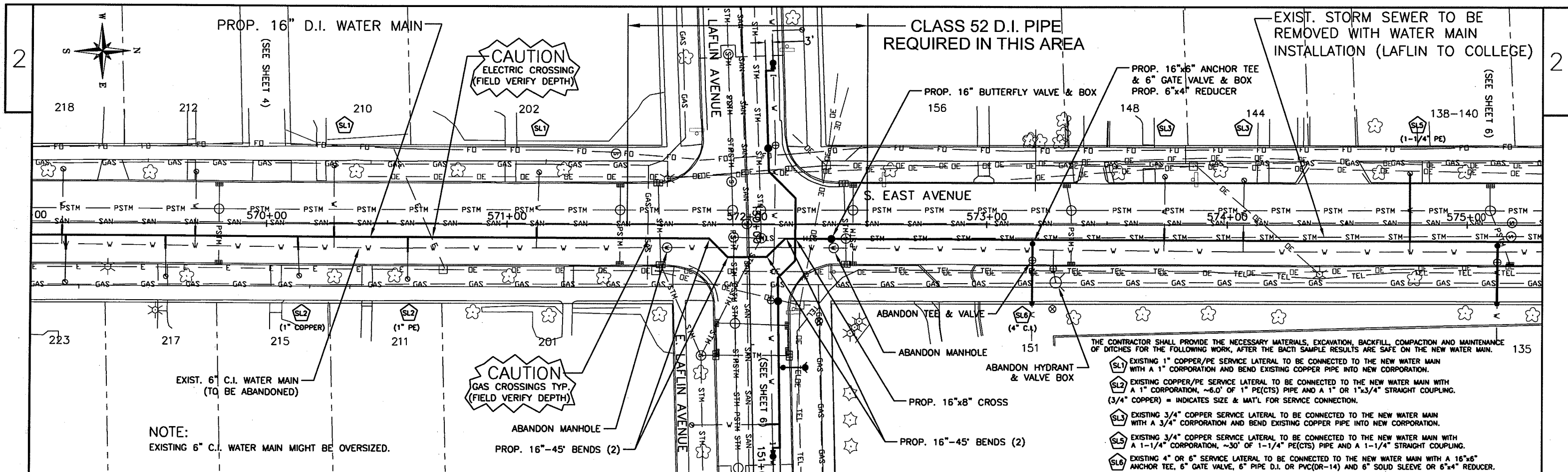
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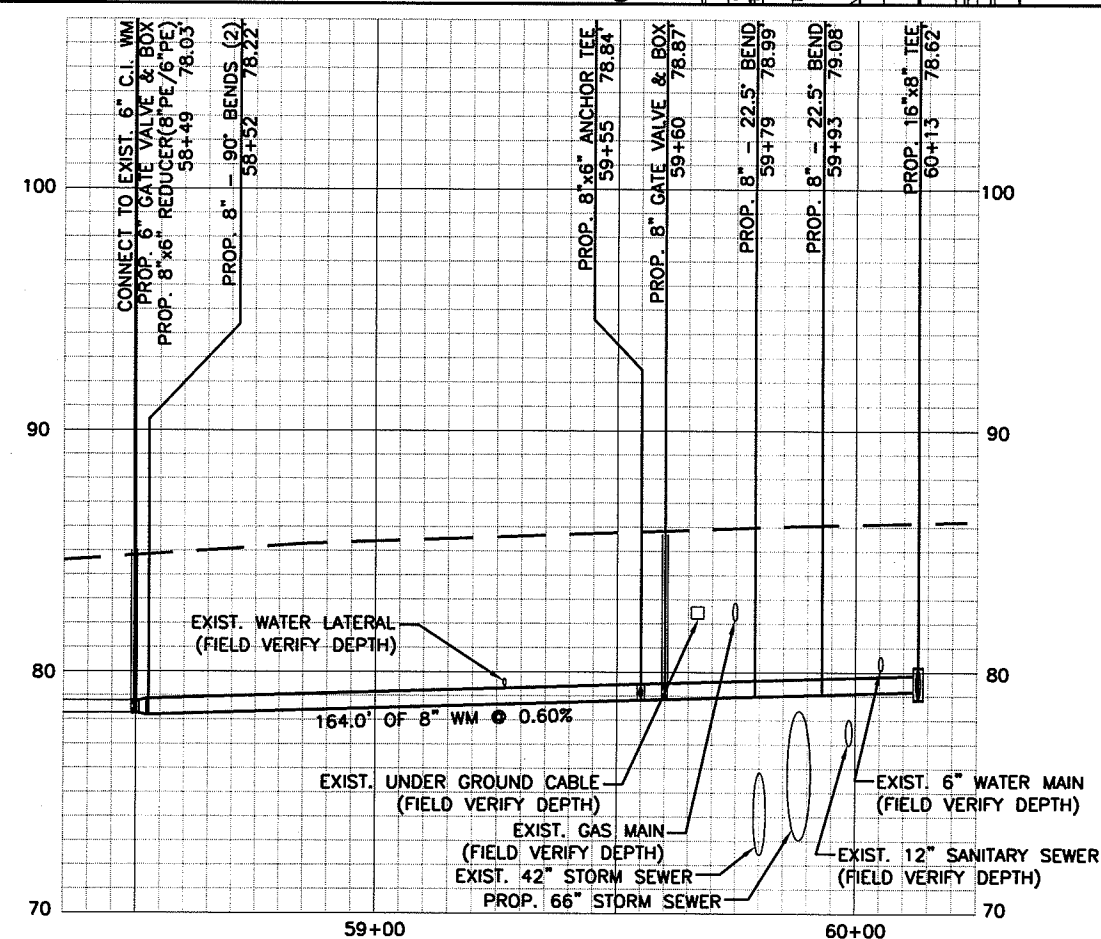
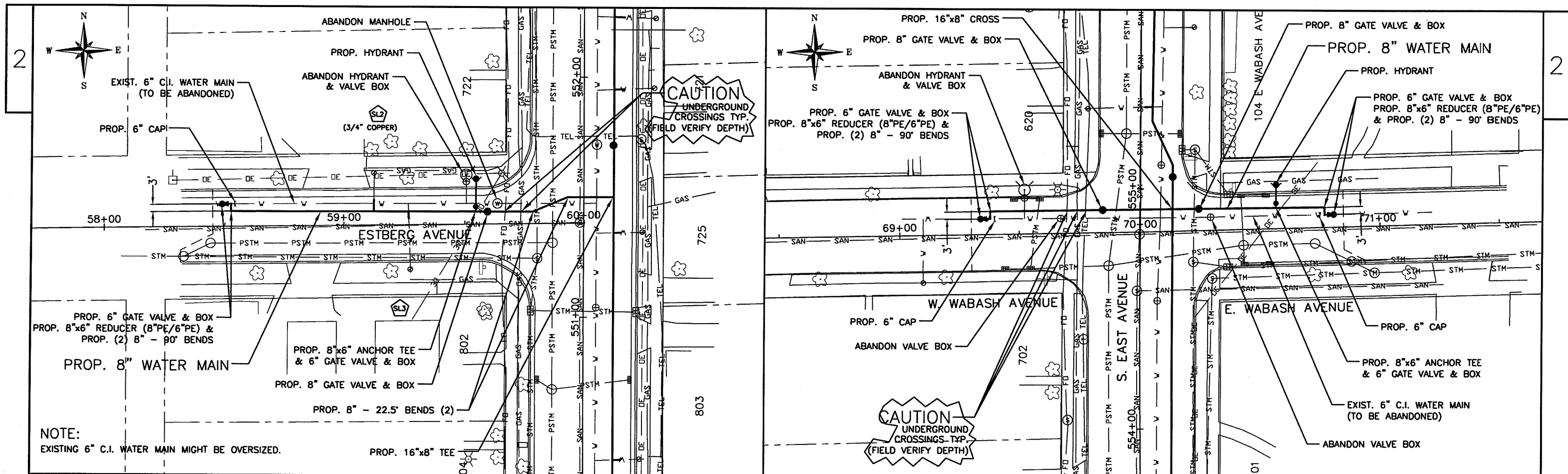
PLOT NAME :

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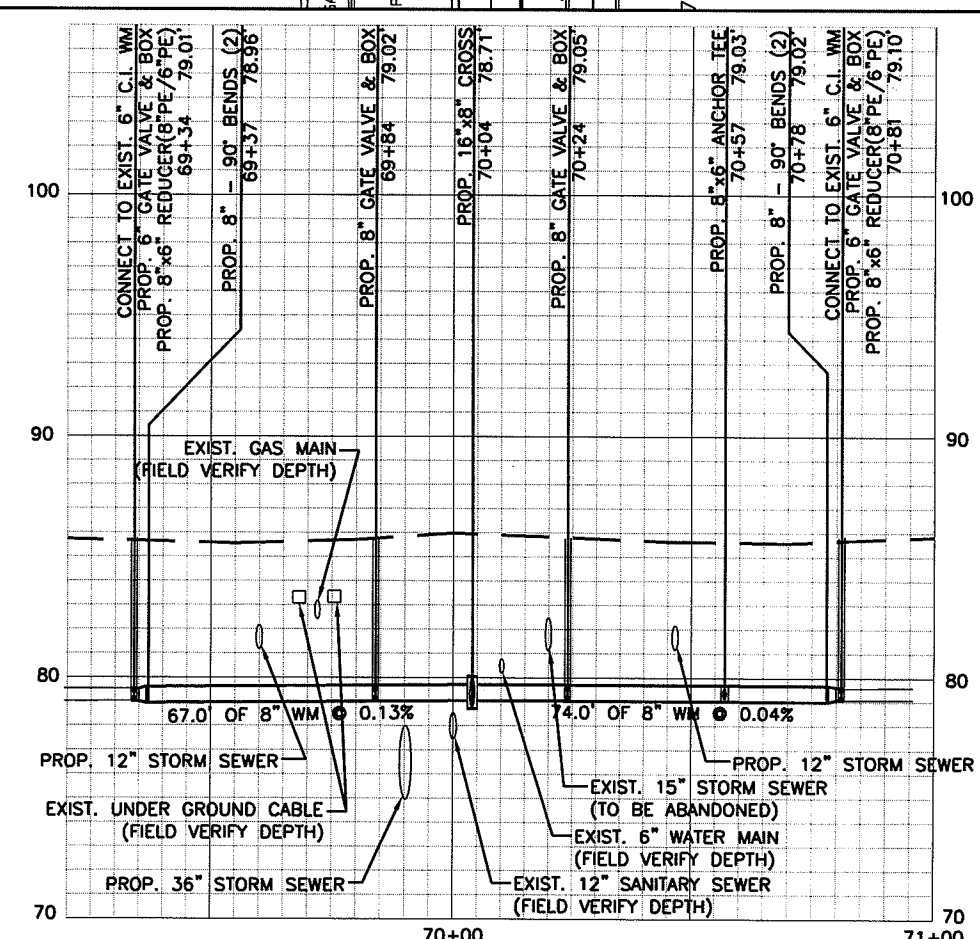
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WISDOT/CADDs SHEET 42





- LEGEND**
- ⊙ - EXIST. WATER MANHOLE
 - ⊕ - EXIST. WATER VALVE
 - ⊗ - EXIST. HYDRANT
 - - PROP. WATER VALVE
 - ⚡ - PROP. HYDRANT
 - ⬤ - POWER POLE
 - ⚡ - LIGHT POLE
 - ⊗ - GAS VALVE BOX
 - ⊙ - SEWER MANHOLE
 - ⊕ - STORM INLET
 - ⊗ - TELEPHONE MANHOLE
 - ⬤ - TREES
 - — — — — EXIST. WATER MAIN
 - — — — — PROP. WATER MAIN
 - — — — — SAN — — — — — SANITARY SEWER
 - — — — — STM — — — — — STORM SEWER
 - — — — — PSTM — — — — — PROP. STORM SEWER
 - — — — — GAS — — — — — GAS MAIN
 - — — — — FD — — — — — FIBER OPTIC
 - — — — — E — — — — — STREET CONDUIT/ELECTRIC
 - — — — — OE — — — — — OVERHEAD ELECTRIC



PROJECT NO: 2718-11-71

HWY: S. EAST AVENUE

COUNTY: WAUKESHA

WATER MAIN (SHEET 7 OF 8)

SCALE, FEET 0 20 40

SHEET NO:

E

FILE NAME : \$\$\$...designfile...\$\$\$

PLOT DATE : \$\$\$...plottingdate...\$\$\$

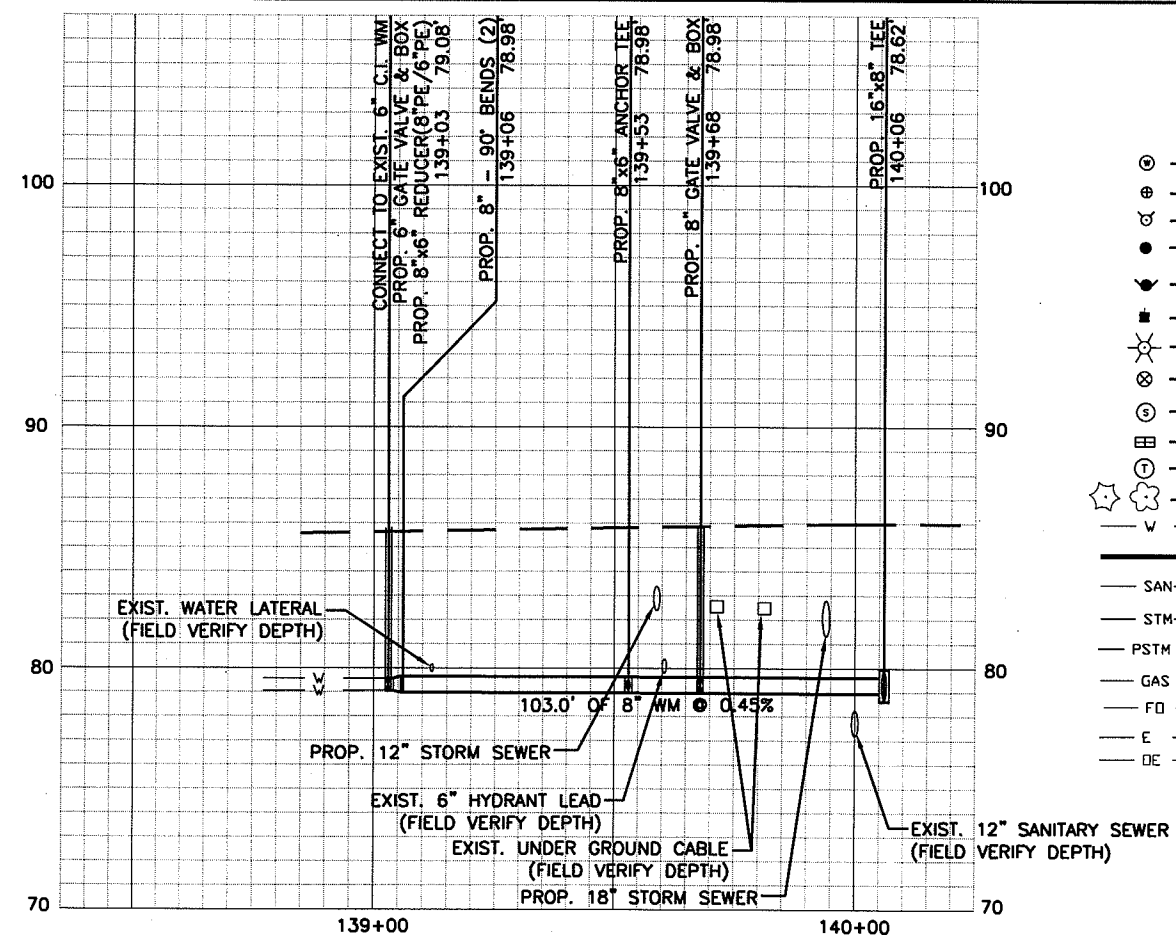
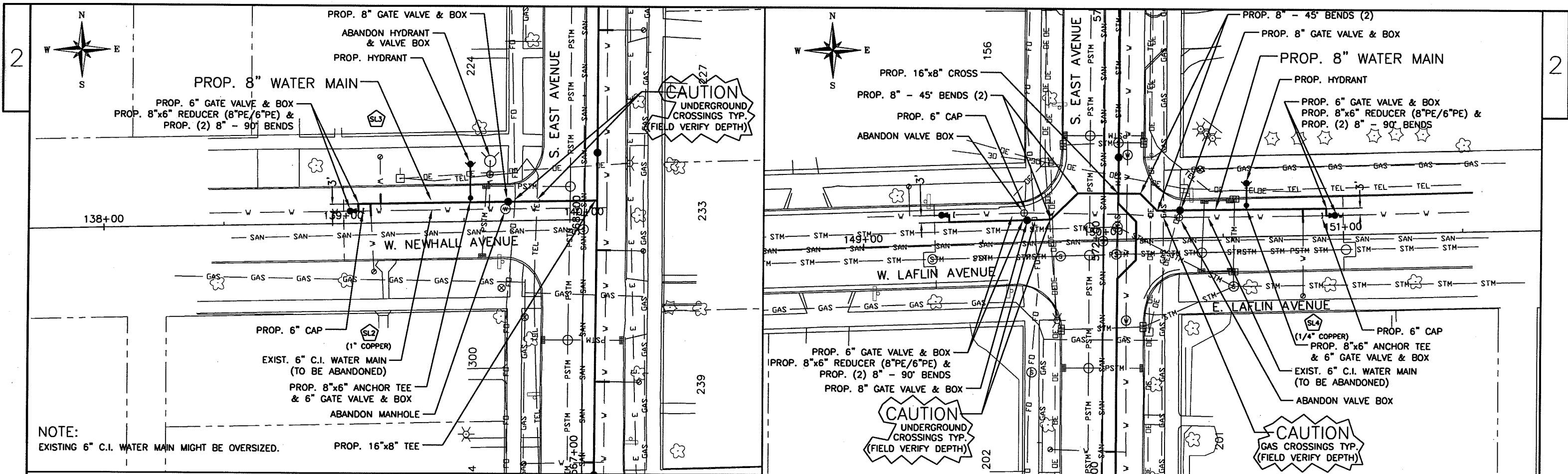
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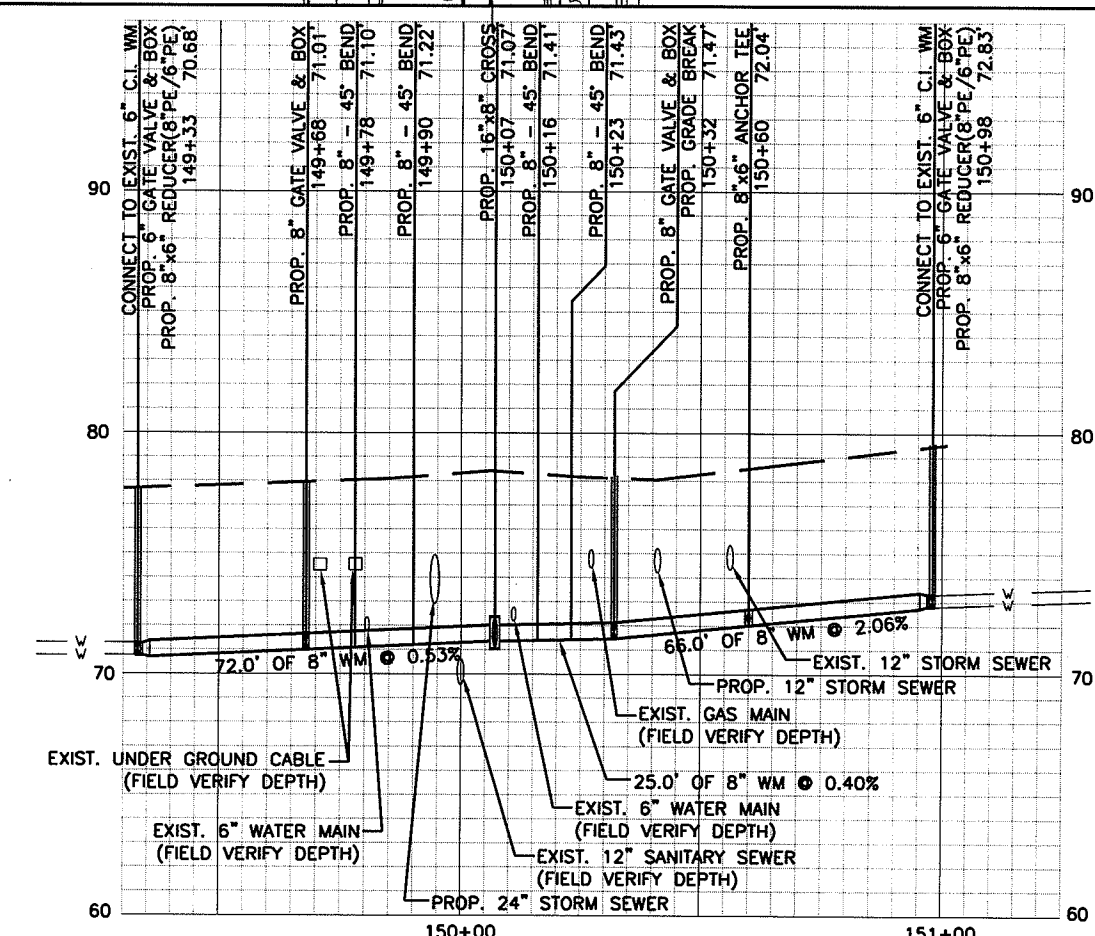
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WISDOT/CADDs SHEET 42



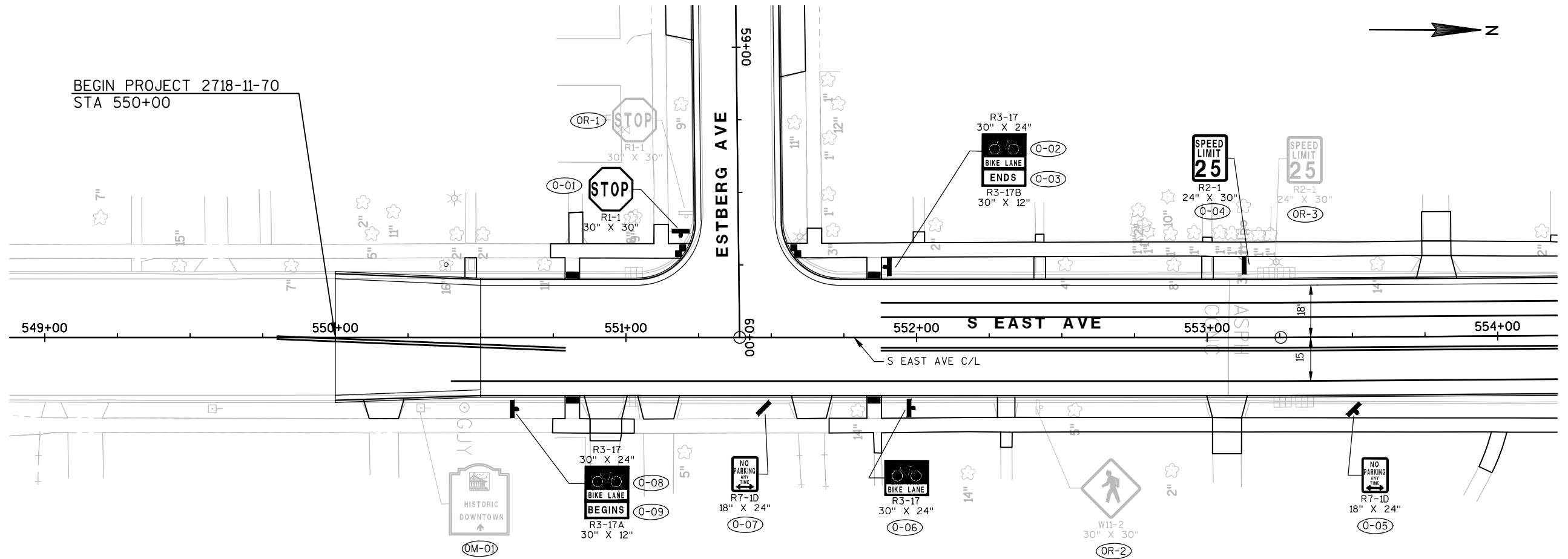
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 - GAS — - GAS MAIN
 - FO — - FIBER OPTIC
 - E — - STREET CONDUIT/ELECTRIC
 - DE — - OVERHEAD ELECTRIC



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2

2



SIGNING LEGEND

- (X-XX) SIGN NUMBER
- PROPOSED SIGN MOUNTED ON POST
- EXISTING SIGN ON POST
- PROPOSED SIGN MOUNTED ON LIGHT POLE OR SIGNAL

SHEET 0 OF 3

PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

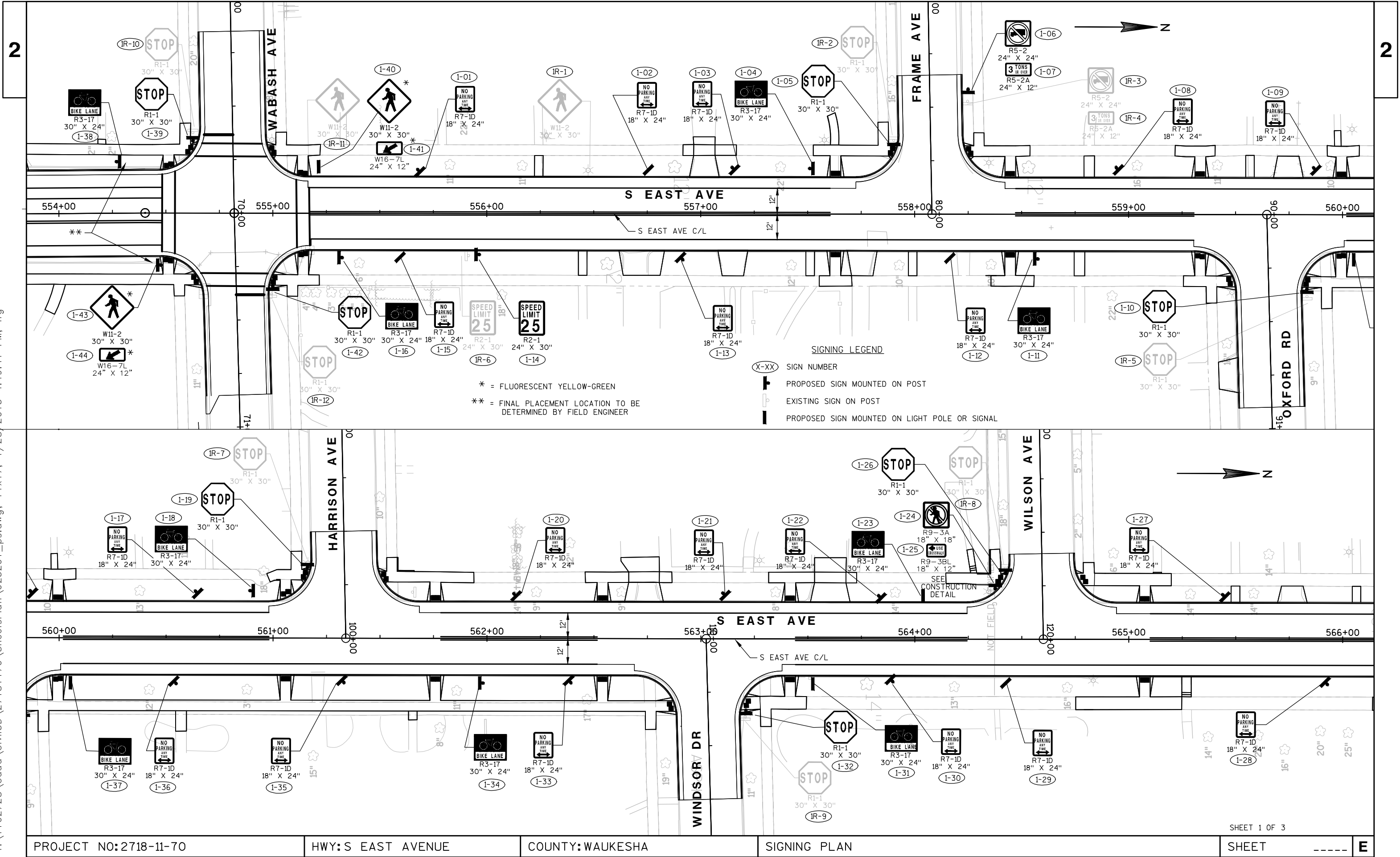
COUNTY: WAUKESHA

SIGNING PLAN

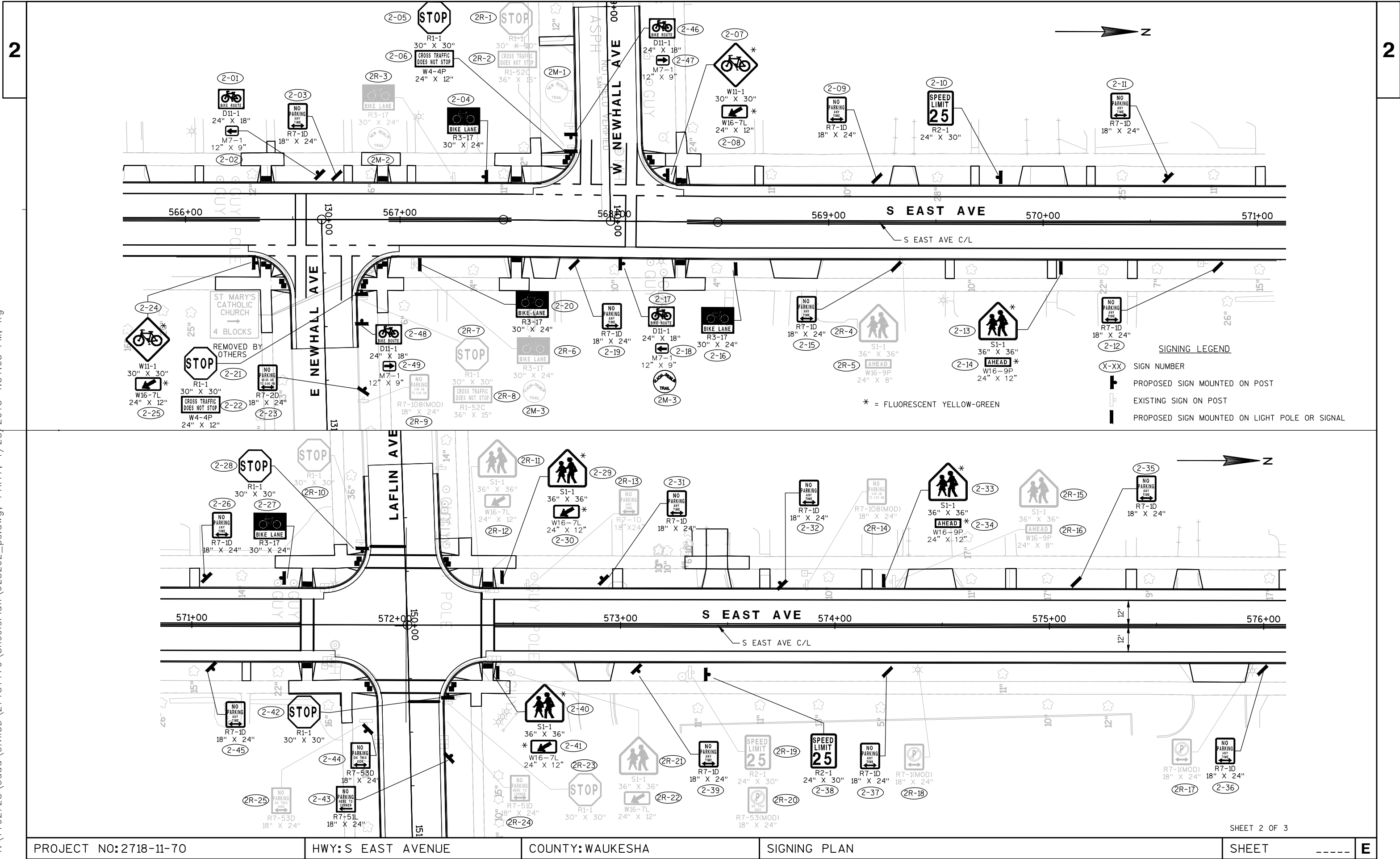
SHEET

E

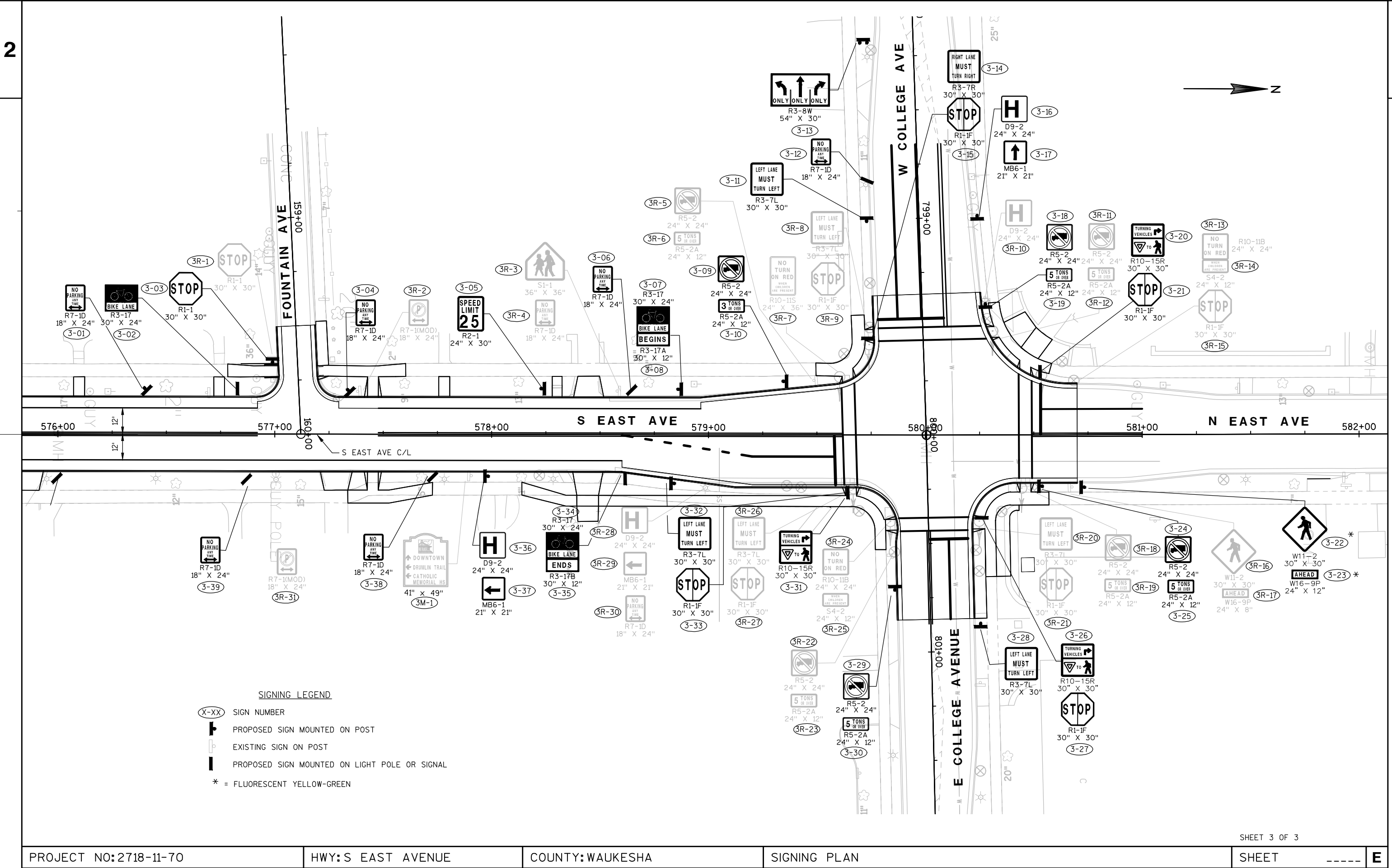
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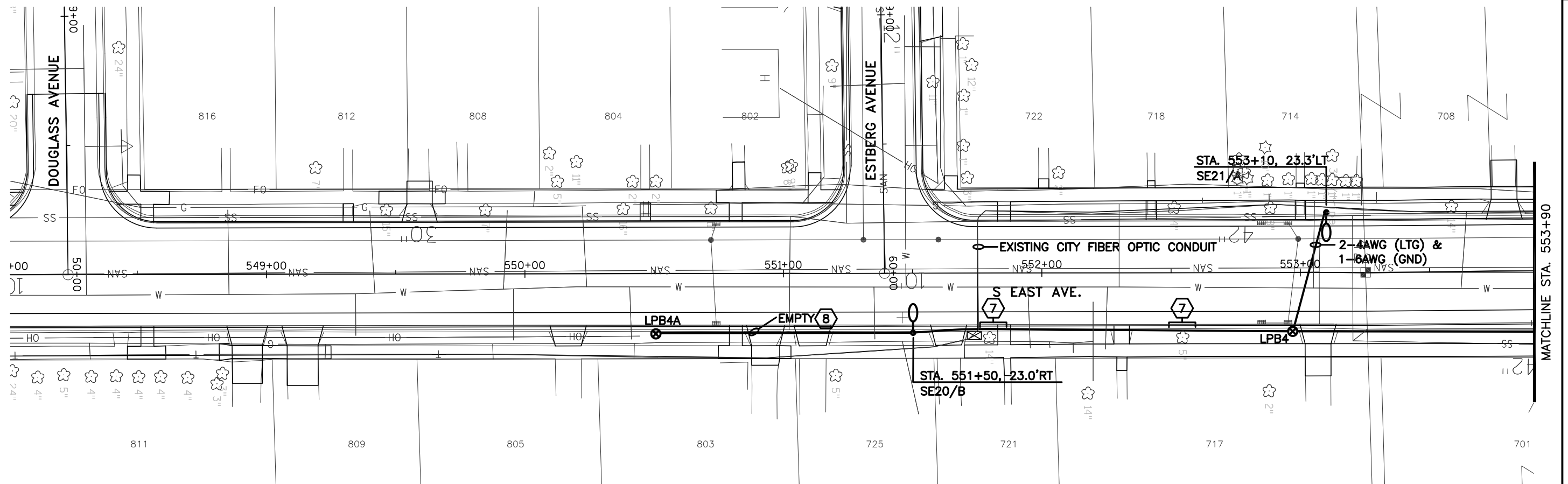


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**LEGEND:**

- ⊙ EXISTING DECORATIVE LIGHTING UNIT WITH HPS LUMINAIRE
- ⊙ PROPOSED DECORATIVE LIGHTING UNIT WITH LED LUMINAIRE
- ⊙ EXISTING 24x36-INCH PULL BOX.
- ⊙ PROPOSED 24x36-INCH PULL BOX.
- ⊗ EXISTING 15x30-INCH PULL BOX.
- ⊗ PROPOSED 15x30-INCH PULL BOX.
- PROPOSED CONDUCTORS IN CONDUIT: 3-4AWG (LTG) & 1-6AWG (GND) IN 2-INCH SCH.40 NONMETALLIC CONDUIT UNLESS NOTED
- EXISTING CONDUCTORS IN CONDUIT
- //// EXISTING LIGHTING CONDUCTORS TO BE REMOVED/ CONDUIT ABANDONED

- ⊙ PROPOSED STANDARD LIGHTING UNIT WITH LED LUMINAIRE
- ETR EXISTING TO REMAIN
- ERL EXISTING TO BE RELOCATED
- REM REMOVE
- ⊙ TEMPORARY LIGHTING UNIT
- A — TEMPORARY AERIAL CABLE
- ⊗ PROPOSED CITY FIBER SYSTEM PULL BOX (24X36X42-INCH)

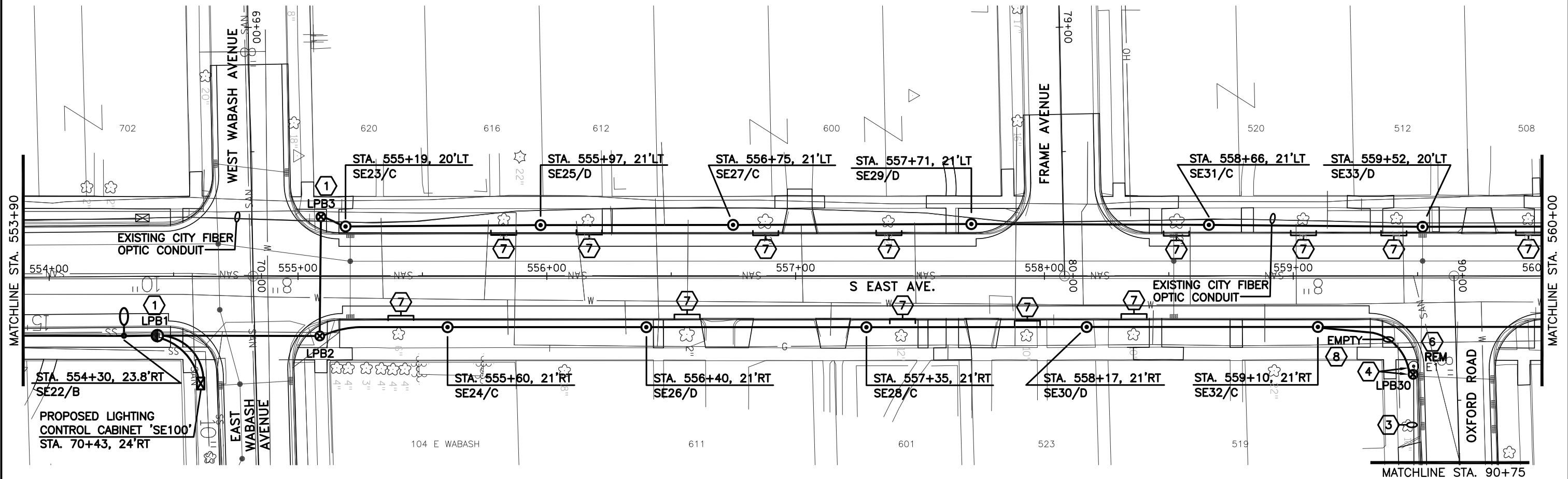
STA. 559+00, 25.0'LT
E9 — STATION (LOCATION) - CENTER OF POLE

— POLE NUMBER
— CIRCUIT

KEYED NOTES:

- 1 NO SPLICES ALLOWED IN PULL BOX
- 2 ROUTE AERIAL CABLE DOWN WOOD POLE IN 2-INCH CONDUIT UNDERGROUND AND CONNECT IN EXISTING PULL BOX.
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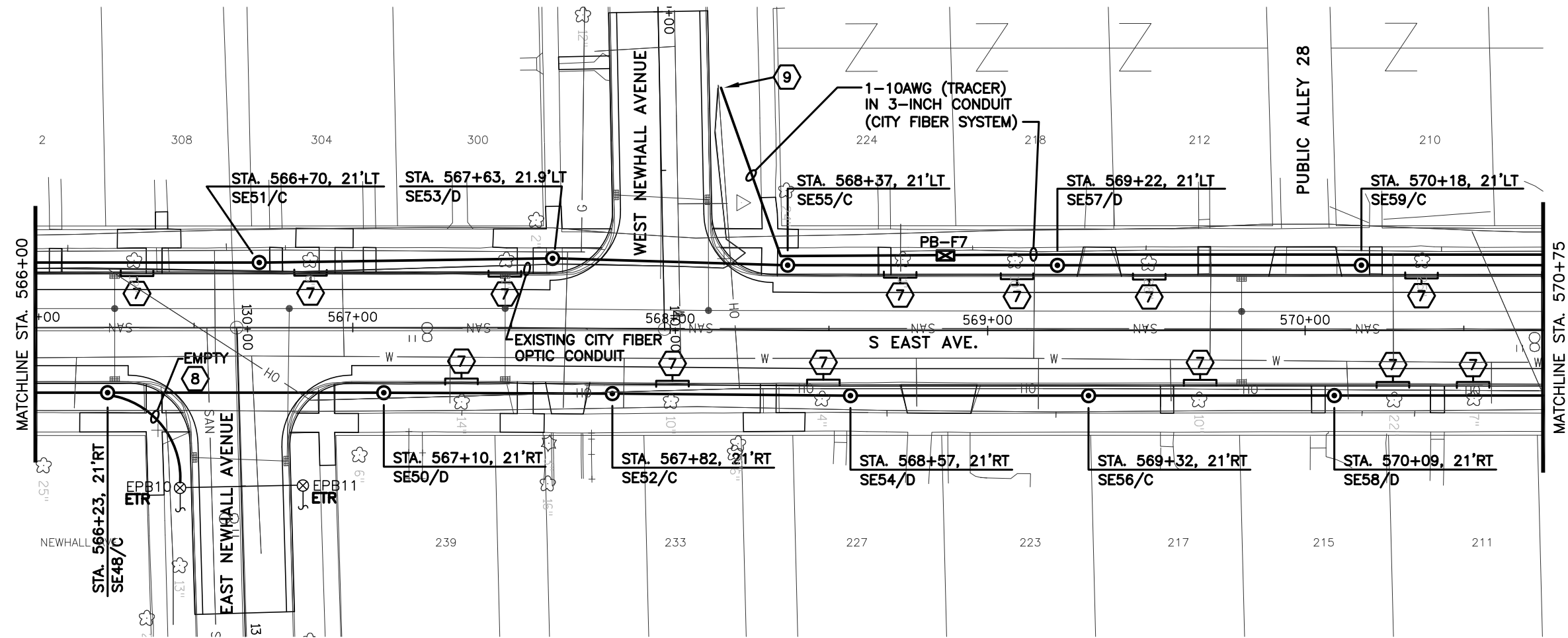
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DESIGNED BY: POWRTEK ENGINEERING, INC. SHEET 2 OF 12



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STA. 559+00, 25.0'LT
E9

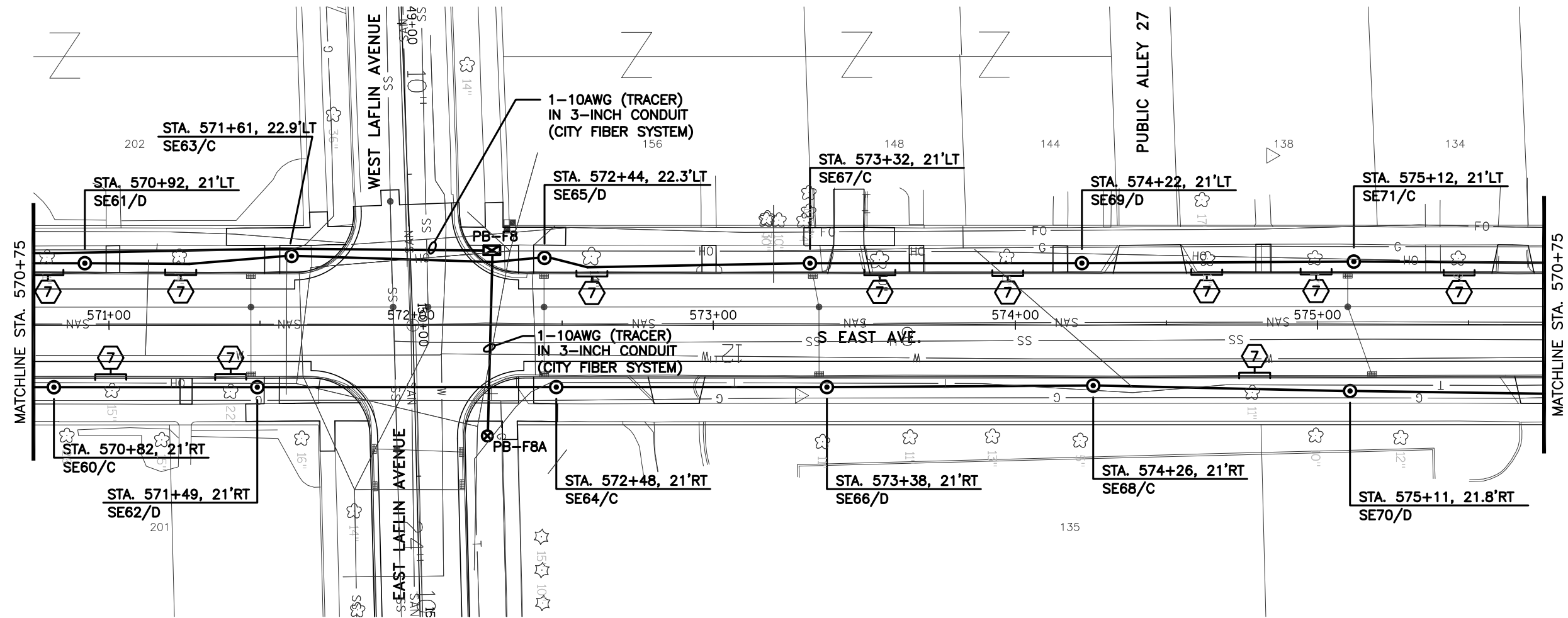
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DESIGNED BY: POWRTEK ENGINEERING, INC. SHEET 4 OF 12

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STA. 559+00, 25.0'LT
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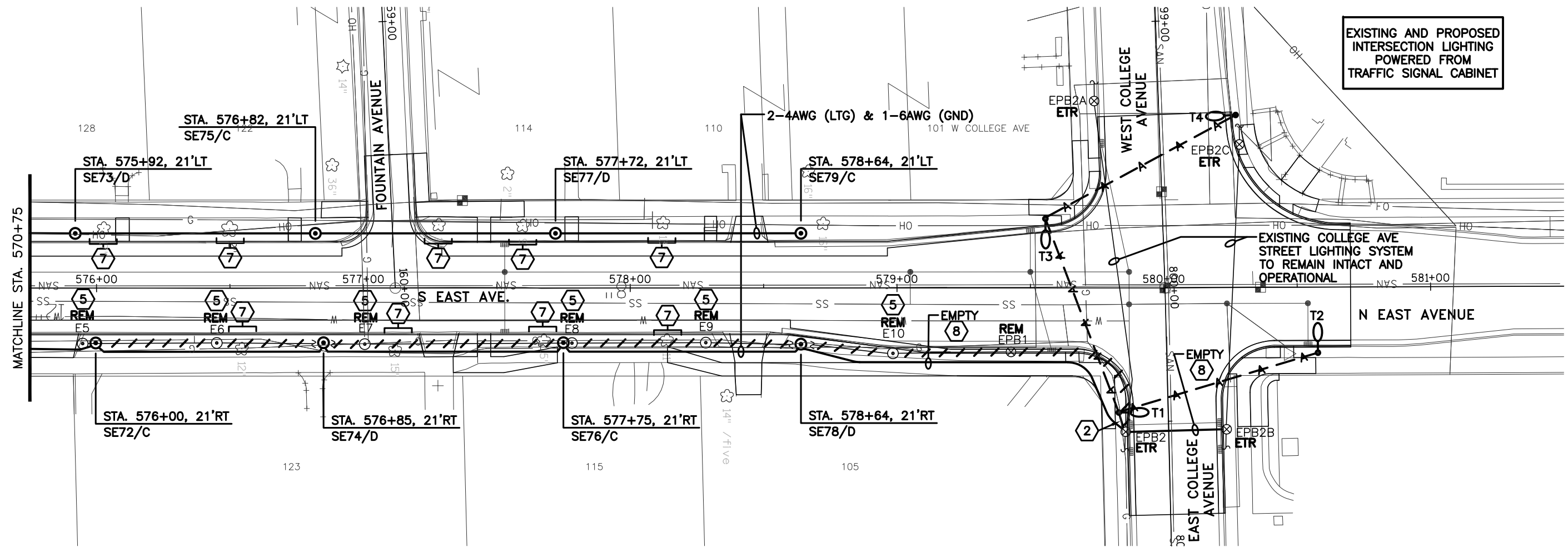
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DESIGNED BY: POWRTEK ENGINEERING, INC. SHEET 5 OF 12



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STA. 559+00, 25.0'LT
E9

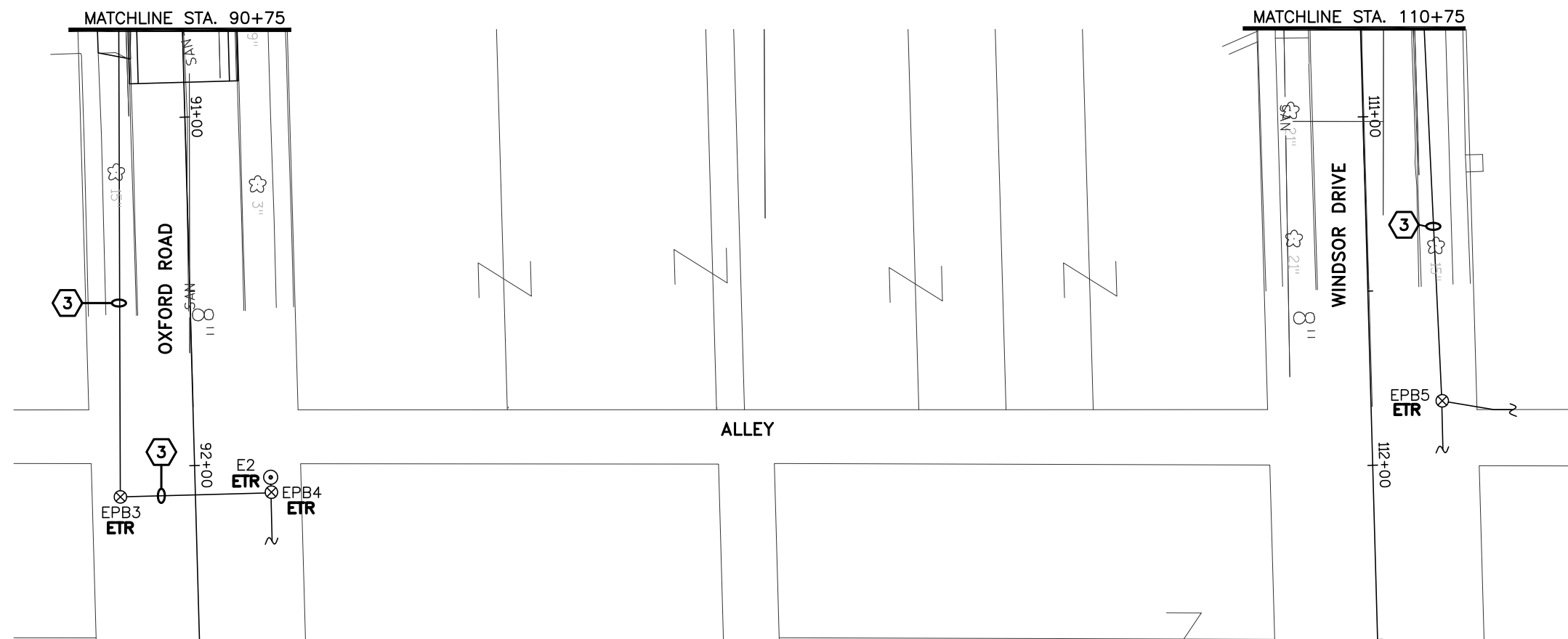
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DESIGNED BY: POWRTEK ENGINEERING, INC. SHEET 6 OF 12

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STA. 559+00, 25.0' LT ← STATION (LOCATION) - CENTER OF POLE

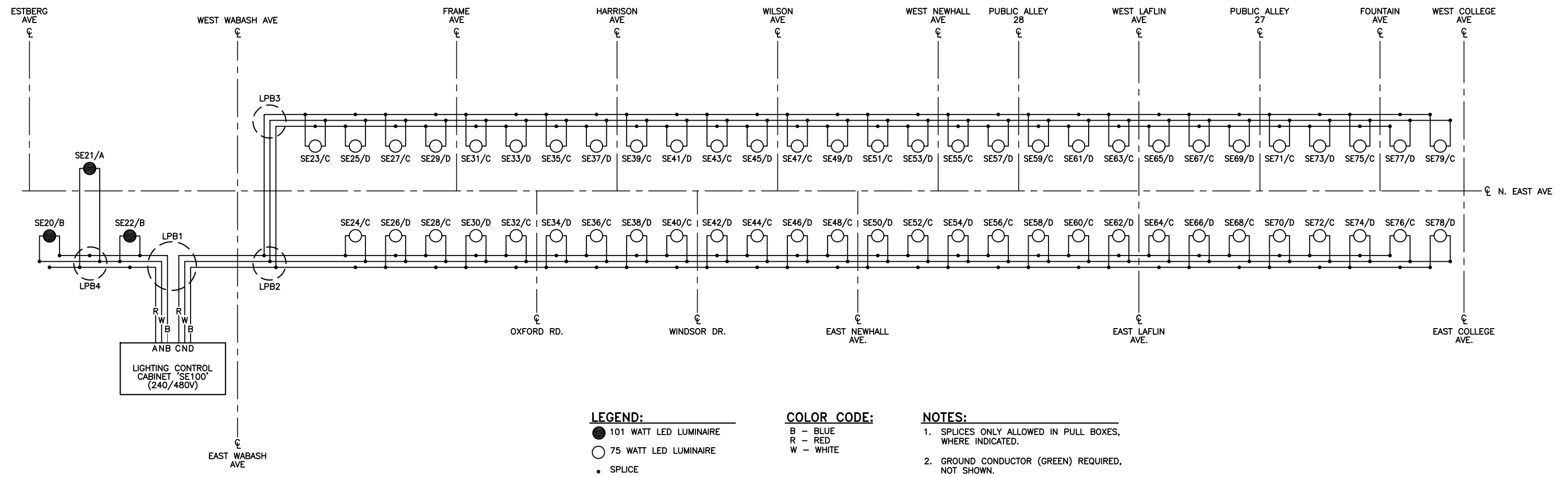
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DESIGNED BY: POWRTEK ENGINEERING, INC. SHEET 7 OF 12



LEGEND:

- 101 WATT LED LUMINAIRE
- 75 WATT LED LUMINAIRE
- SPLICE

COLOR CODE:

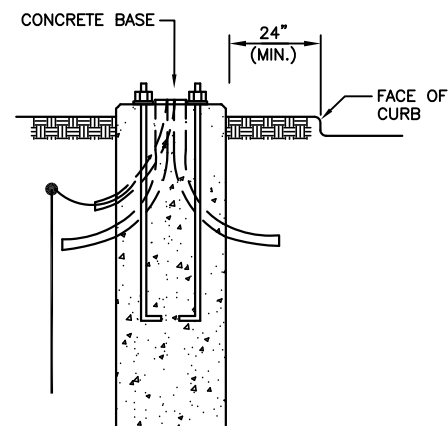
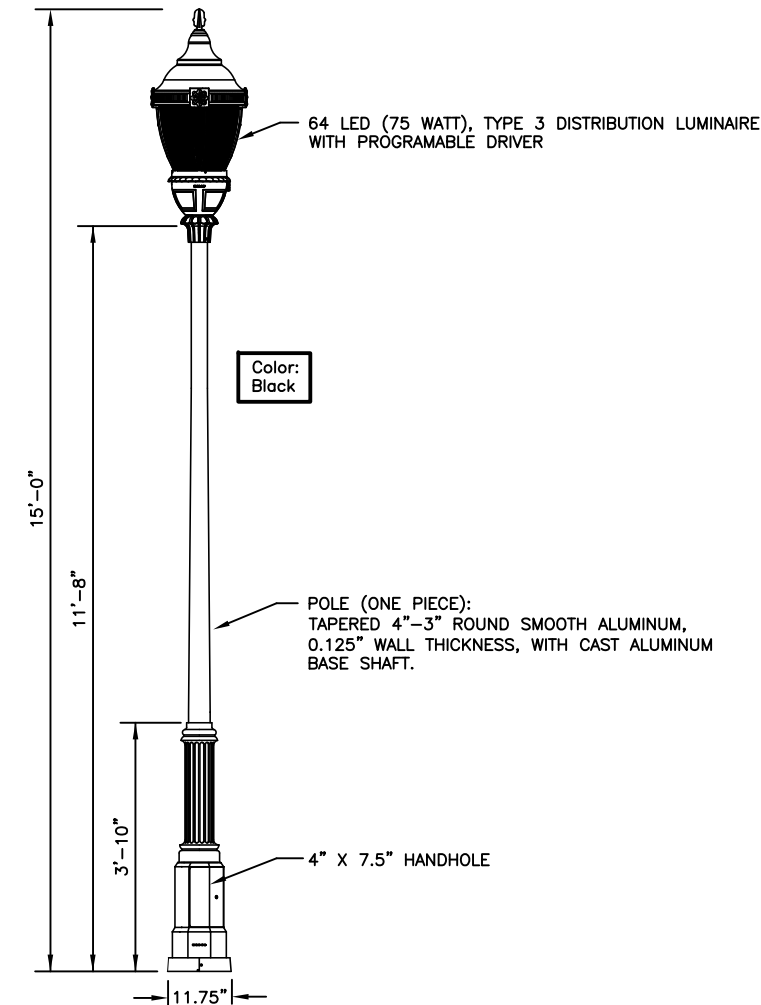
- B - BLUE
- R - RED
- W - WHITE

NOTES:

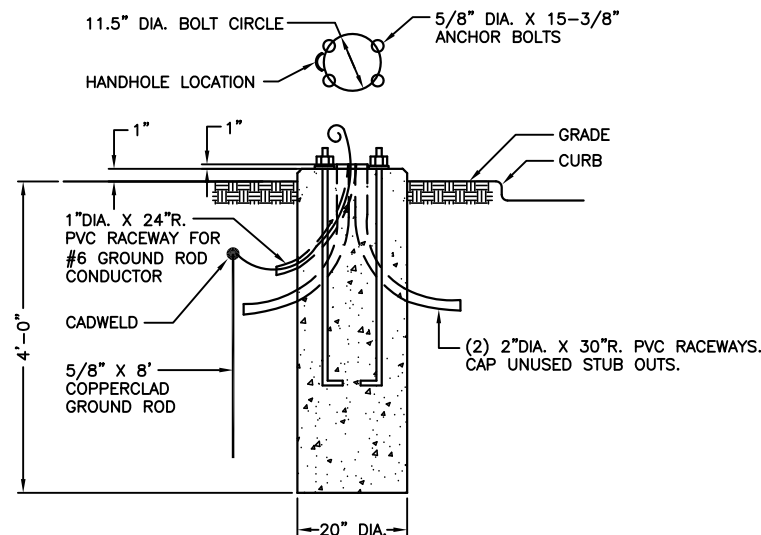
1. SPLICES ONLY ALLOWED IN PULL BOXES, WHERE INDICATED.
2. GROUND CONDUCTOR (GREEN) REQUIRED, NOT SHOWN.

FIELD WIRING DIAGRAM 'SE100' → **z**
NOT TO SCALE

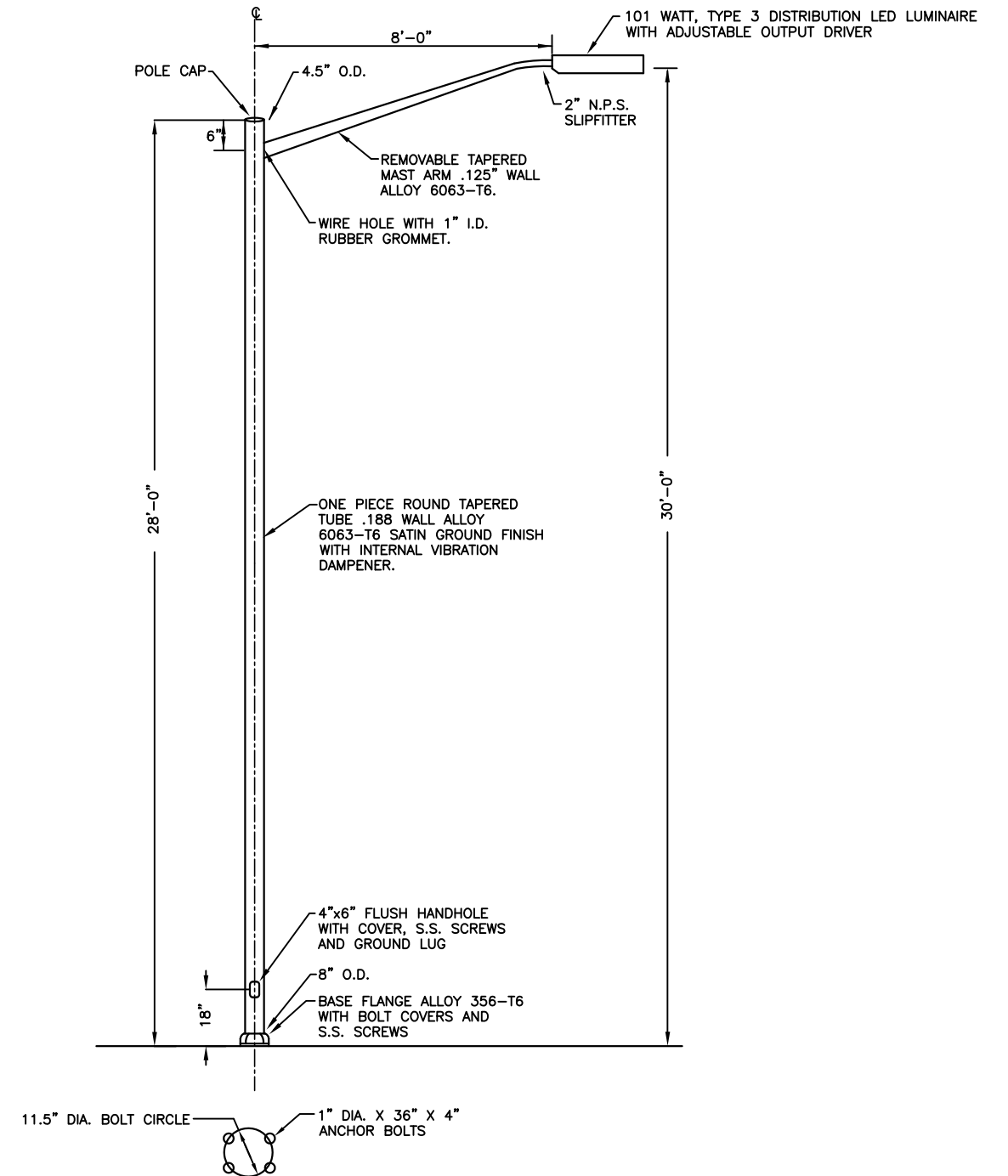
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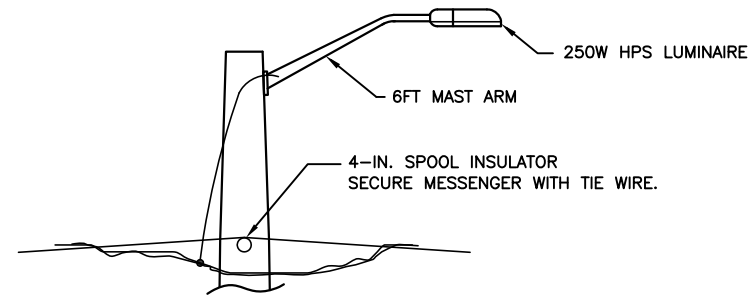
**LIGHTING UNIT LOCATION
MINIMUM REQUIREMENTS DETAIL**
NO SCALE



DECORATIVE LIGHTING UNIT DETAIL
NO SCALE



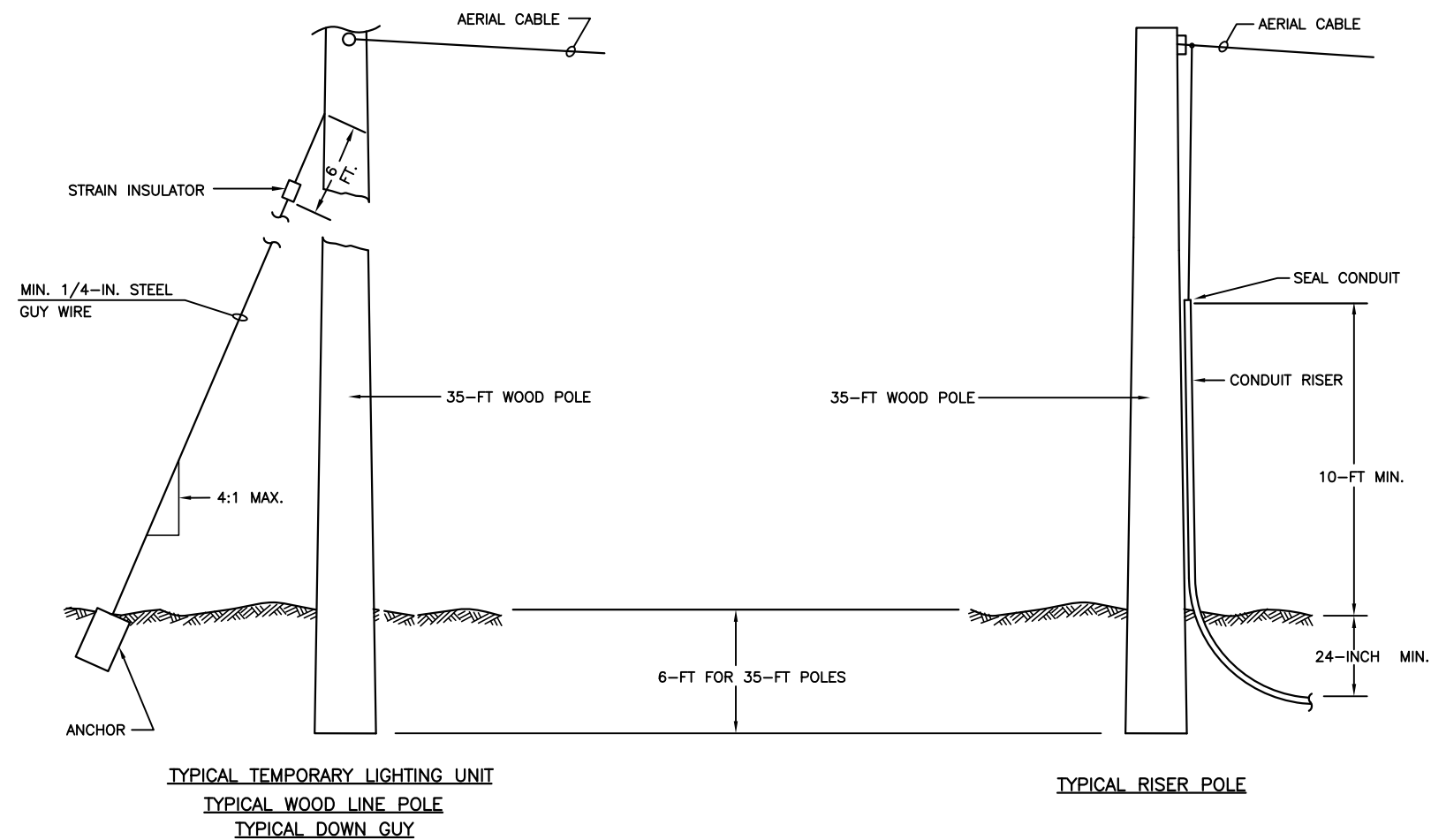
STANDARD LIGHTING UNIT DETAIL
NO SCALE



CONSTRUCTION DETAIL

NOTES:

- (1) MINIMUM CLEARANCE CENTER OF SPAN:
20-FT ABOVE ROADWAY OR GRADE
- (2) CONSTRUCT DEAD ENDS WITH SECONDARY
RACK, CLEVISES, OR OTHER APPROVED
METHODS.
- (3) SECURELY BAND OR CLAMP RISERS TO
POLE. FOR RISERS USE PVC CONDUIT
OR APPROVED EQUAL. GROUND WIRE
SHALL BE IN A RISER.
- (4) PROVIDE GUY WIRES, AS REQUIRED.



TEMPORARY LIGHTING & WOOD POLE DETAIL
N.T.S.



- Ⓐ UTILITY APPROVED 0-200A, 1PH, 3W, 240/480V METER PEDESTAL.
- Ⓑ 100A/2P, 480V., 18k AIC CB.
- Ⓒ 100A, 2P, 600V ELECTRICALLY HELD CONTACTOR, WITH 240V CONTROL COIL (OPEN).
- Ⓓ 240V. BUTTON TYPE PHOTOCELL INSTALLED IN OVERHANG OF CABINET.
- Ⓔ NEUTRAL BUS - (10) #14-2/0 LUGS.
- Ⓕ 2-POLE POWER DISTRIBUTION BLOCK - (1) #14-2/0 MAIN TO (4) #14-4 BRANCH.
- Ⓖ HAND-OFF-AUTO SELECTOR SWITCH IN NEMA 1 ENCLOSURE.
- Ⓗ GROUND BUS - (8) #14-2/0 LUGS.
- Ⓙ (4) 30A./1P, 480V. 18K AIC CBs.
- Ⓚ 10A. CONTROL FUSE.

1. ALL CONTROL WIRING TO BE COLOR CODED #14 AWG.
UNLESS OTHERWISE NOTED.
2. ALL POWER AND CONTROL WIRING TO BE NEATLY LABELED,
TRAINED AND SUPPORTED.
3. THE CONTRACTOR SHALL COMPLY WITH UTILITY REQUIREMENTS.
4. SEAL CONDUIT OPENINGS WITH DUCT SEAL.
5. ENCLOSURE SHALL BE GROUNDED.
6. CABINET SHALL BE ASSEMBLED BY A UL LISTED 508A PANEL BUILDER.
CABINET SHALL BE SERVICE ENTRANCE RATED.

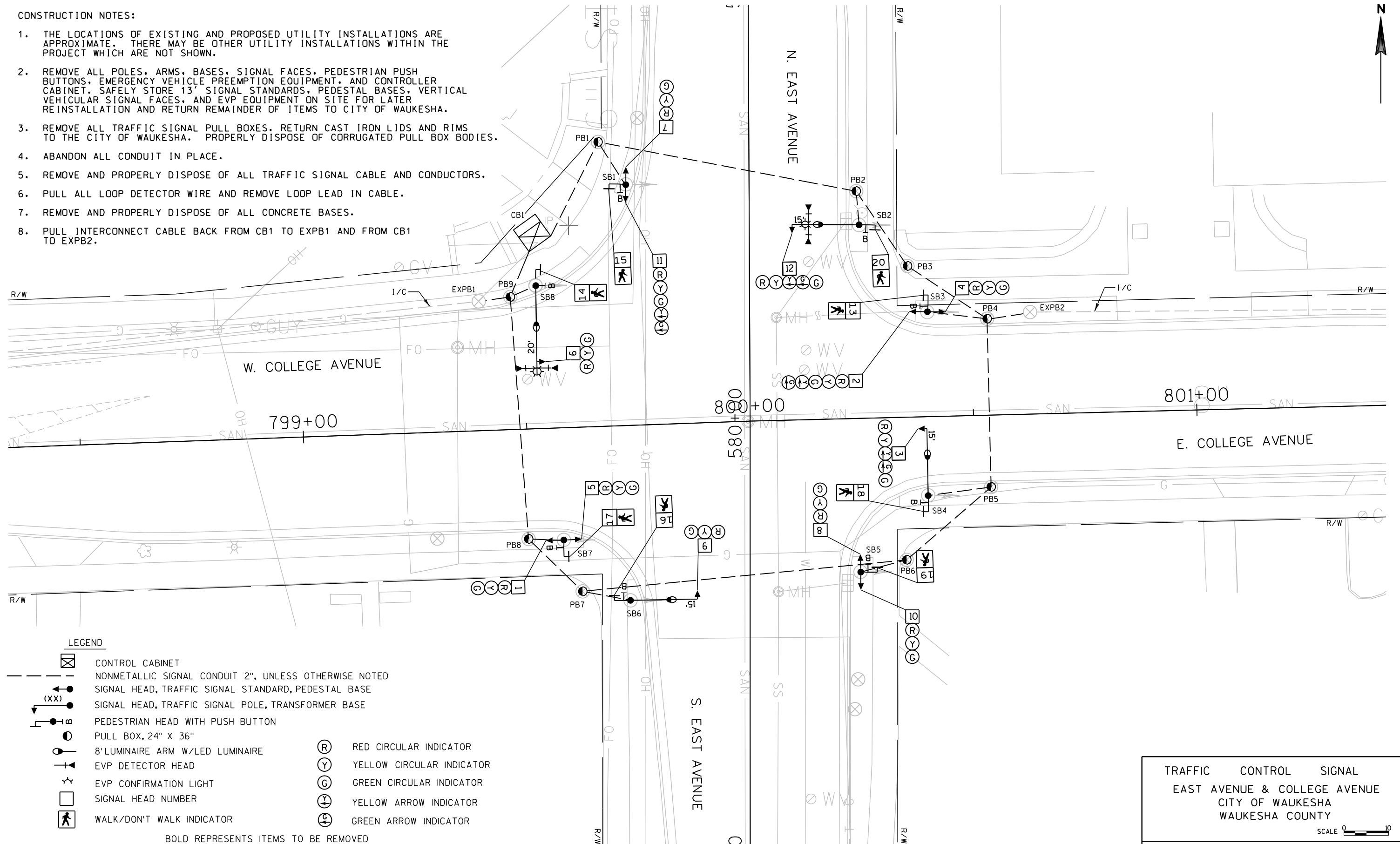


1. CONTRACTOR TO PROVIDE GRAVEL BASE AS REQUIRED FOR STRUCTURAL INTEGRITY OF CONCRETE FOUNDATION
2. CAP (2) SPARE 2" CONDUITS.
3. COORDINATE SIDE TO INSTALL METER PEDESTAL BASED ON DIRECTION OF UTILITY LATERAL.

NO SCALE

CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. REMOVE ALL POLES, ARMS, BASES, SIGNAL FACES, PEDESTRIAN PUSH BUTTONS, EMERGENCY VEHICLE PREEMPTION EQUIPMENT, AND CONTROLLER CABINET. SAFELY STORE 13' SIGNAL STANDARDS, PEDESTAL BASES, VERTICAL VEHICULAR SIGNAL FACES, AND EVP EQUIPMENT ON SITE FOR LATER REINSTALLATION AND RETURN REMAINDER OF ITEMS TO CITY OF WAUKESHA.
3. REMOVE ALL TRAFFIC SIGNAL PULL BOXES. RETURN CAST IRON LIDS AND RIMS TO THE CITY OF WAUKESHA. PROPERLY DISPOSE OF CORRUGATED PULL BOX BODIES.
4. ABANDON ALL CONDUIT IN PLACE.
5. REMOVE AND PROPERLY DISPOSE OF ALL TRAFFIC SIGNAL CABLE AND CONDUCTORS.
6. PULL ALL LOOP DETECTOR WIRE AND REMOVE LOOP LEAD IN CABLE.
7. REMOVE AND PROPERLY DISPOSE OF ALL CONCRETE BASES.
8. PULL INTERCONNECT CABLE BACK FROM CB1 TO EXPB1 AND FROM CB1 TO EXPB2.



TRAFFIC CONTROL SIGNAL
EAST AVENUE & COLLEGE AVENUE
CITY OF WAUKESHA
WAUKESHA COUNTY

SCALE 0 10

CITY CONTACT:
DESIGNED BY: TAD, INC.

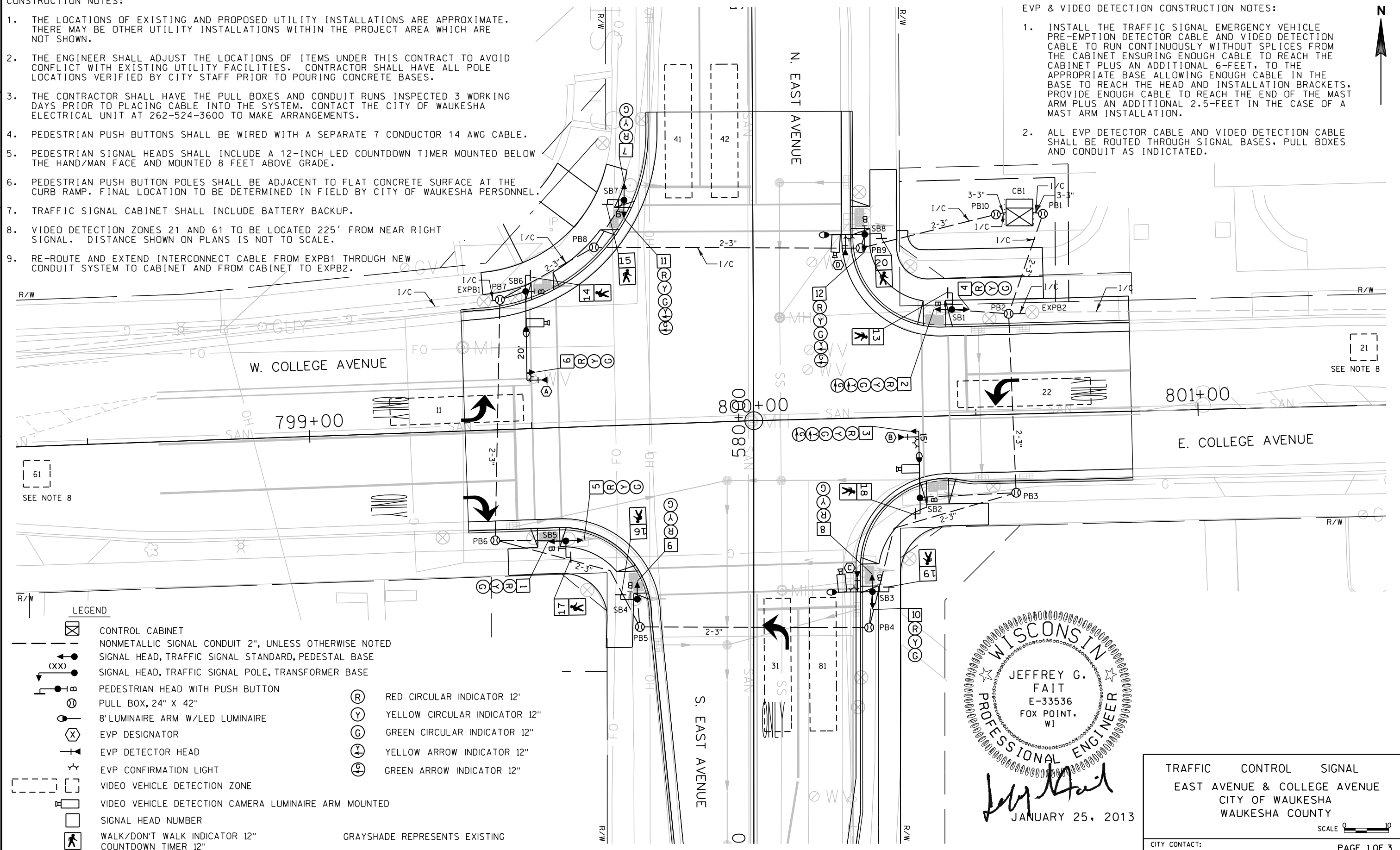
PAGE 1 OF 1

CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2. THE ENGINEER SHALL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES. CONTRACTOR SHALL HAVE ALL POLE LOCATIONS VERIFIED BY CITY STAFF PRIOR TO POURING CONCRETE BASES.
3. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 3 WORKING DAYS PRIOR TO PLACING CABLE INTO THE SYSTEM. CONTACT THE CITY OF WAUKESHA ELECTRICAL UNIT AT 262-524-3600 TO MAKE ARRANGEMENTS.
4. PEDESTRIAN PUSH BUTTONS SHALL BE WIRED WITH A SEPARATE 7 CONDUCTOR 14 AWG CABLE.
5. PEDESTRIAN SIGNAL HEADS SHALL INCLUDE A 12-INCH LED COUNTDOWN TIMER MOUNTED BELOW THE HAND/MAN FACE AND MOUNTED 8 FEET ABOVE GRADE.
6. PEDESTRIAN PUSH BUTTON POLES SHALL BE ADJACENT TO FLAT CONCRETE SURFACE AT THE CURB RAMP. FINAL LOCATION TO BE DETERMINED IN FIELD BY CITY OF WAUKESHA PERSONNEL.
7. TRAFFIC SIGNAL CABINET SHALL INCLUDE BATTERY BACKUP.
8. VIDEO DETECTION ZONES 21 AND 61 TO BE LOCATED 225' FROM NEAR RIGHT SIGNAL. DISTANCE SHOWN ON PLANS IS NOT TO SCALE.
9. RE-ROUTE AND EXTEND INTERCONNECT CABLE FROM EXPB1 THROUGH NEW CONDUIT SYSTEM TO CABINET AND FROM CABINET TO EXPB2.

EVP & VIDEO DETECTION CONSTRUCTION NOTES:

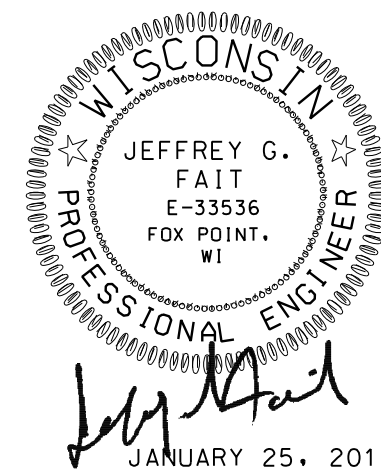
1. INSTALL THE TRAFFIC SIGNAL EMERGENCY VEHICLE PRE-EMPTION DETECTOR CABLE AND VIDEO DETECTION CABLE TO RUN CONTINUOUSLY WITHOUT SPLICES FROM THE CABINET ENSURING ENOUGH CABLE TO REACH THE CABINET PLUS AN ADDITIONAL 6-FEET, TO THE APPROPRIATE BASE ALLOWING ENOUGH CABLE IN THE BASE TO REACH THE HEAD AND INSTALLATION BRACKETS. PROVIDE ENOUGH CABLE TO REACH THE END OF THE MAST ARM PLUS AN ADDITIONAL 2.5-FEET IN THE CASE OF A MAST ARM INSTALLATION.
2. ALL EVP DETECTOR CABLE AND VIDEO DETECTION CABLE SHALL BE ROUTED THROUGH SIGNAL BASES, PULL BOXES AND CONDUIT AS INDICATED.



LEGEND

- | | | | |
|--|---|--|-------------------------------|
| | CONTROL CABINET | | RED CIRCULAR INDICATOR 12" |
| | NONMETALLIC SIGNAL CONDUIT 2", UNLESS OTHERWISE NOTED | | YELLOW CIRCULAR INDICATOR 12" |
| | SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE | | GREEN CIRCULAR INDICATOR 12" |
| | SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE | | YELLOW ARROW INDICATOR 12" |
| | PEDESTRIAN HEAD WITH PUSH BUTTON | | GREEN ARROW INDICATOR 12" |
| | PULL BOX, 24" X 42" | | |
| | 8' LUMINAIRE ARM W/LED LUMINAIRE | | |
| | EVP DESIGNATOR | | |
| | EVP DETECTOR HEAD | | |
| | EVP CONFIRMATION LIGHT | | |
| | VIDEO VEHICLE DETECTION ZONE | | |
| | VIDEO VEHICLE DETECTION CAMERA LUMINAIRE ARM MOUNTED | | |
| | SIGNAL HEAD NUMBER | | |
| | WALK/DON'T WALK INDICATOR 12" | | |
| | COUNTDOWN TIMER 12" | | |

GRAYSHADE REPRESENTS EXISTING



JANUARY 25, 2013

TRAFFIC CONTROL SIGNAL
EAST AVENUE & COLLEGE AVENUE
CITY OF WAUKESHA
WAUKESHA COUNTY

SCALE 0" = 10'

CITY CONTACT:
DESIGNED BY: TAD, INC.

PAGE 1 OF 3

PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

TRAFFIC SIGNAL PLAN

SHEET

E

FILE NAME : Proposed Signals.DGN

PLOT DATE : 1/25/2013

PLOT BY : JFAIT-TADI

PLOT NAME :

PLOT SCALE : 20.00 sf / in.

WISDOT/CADDS SHEET 42

CONTROLLER LOGIC

[illegible]

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

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

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

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

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

EMERGENCY
EMERGENCY VEHICLE DETECTOR

EMERGENCY VEHICLE DETECTOR	A	B	C	D
MOVEMENT				
PHASE	2	6+1	4	8+3

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

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

CHART 1

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

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 1 AT LEFT.)
3. RETAIN EXISTING TRAFFIC SIGNAL TIMING.

EAST AVENUE & COLLEGE AVENUE
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL	NO.
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
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91	91
92	92
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94	94
95	95
96	96
97	97
98	98
99	99
100	100

CONTROLLER TYPE: EPAC

DATE 10/12

PAGE NO. 2 OF 3

SHEET

T

PROJECT ID:	2718-11-70
INTERSECTION:	EAST AVE AT COLLEGE AVE

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

CB1 TO	JUMPER	# OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR								PED BUTTON	OTHER
					RED	YELLOW	GREEN	<RED	<YELLOW>	<GREEN>	D/WALK	WALK		
SB1		12	2	6+1	RED	ORG	GRN		BLU/BLK	BLK/WHT				
			4	2	RED/BLK	ORG/BLK	GRN/BLK							
			13	2							BLK	BLU		
SB2		12	3	6+1	RED	ORG	GRN		BLU/BLK	BLK/WHT				
			18	6							BLK	BLU		
SB3		12	10	8	RED	ORG	GRN							
			8	4	RED/BLK	ORG/BLK	GRN/BLK							
			19	8							BLK	BLU		
SB4		12	9	4	RED	ORG	GRN							
			16	4							BLK	BLU		
SB5		12	1	6	RED	ORG	GRN							
			5	2	RED/BLK	ORG/BLK	GRN/BLK							
			17	6							BLK	BLU		
SB6		12	6	2	RED	ORG	GRN							
			14	2							BLK	BLU		
SB7		12	11	8+3	RED	ORG	GRN		BLU/BLK	BLK/WHT				
			7	4	RED/BLK	ORG/BLK	GRN/BLK							
			15	4							BLK	BLU		
SB8		12	12	8+3	RED	ORG	GRN		BLU/BLK	BLK/WHT				
			20	8							BLK	BLU		

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
CB1	PB1
SB1	PB2
SB2	PB3
SB3	PB4
SB4	PB5
SB5	PB6
SB6	PB7
SB7	PB8
SB8	PB9
CB1	PB10

VIDEO VEHICLE DETECTOR CABLE	
FROM	TO
CB1	SB2
CB1	SB3
CB1	SB6
CB1	SB8

PEDESTRIAN PUSH BUTTONS IMSA 20-1 14 AWG 7 CONDUCTOR			
FROM	TO	PHASE	PED BUTTON
CB1	SB1	8	ORG
SB1	SB2	8	ORG
SB2	SB3	6	RED
SB3	SB4	6	RED
SB4	SB5	4	BLU
SB5	SB6	4	BLU
SB6	SB7	2	GRN
SB7	SB8	2	GRN
SB8	CB1		

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB6 (HEAD 'A')
CB1	SB2 (HEAD 'B')
CB1	SB3 (HEAD 'C')
CB1	SB8 (HEAD 'D')

LIGHTING UF 12 AWG W/GROUND	
FROM	TO
CB1	SB2
SB2	SB3
CB1	SB8
SB8	SB6

- NOTES:
- 1. USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
 - 2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.

TRAFFIC CONTROL SIGNAL
EAST AVENUE & COLLEGE AVENUE
CITY OF WAUKESHA
WAUKESHA COUNTY

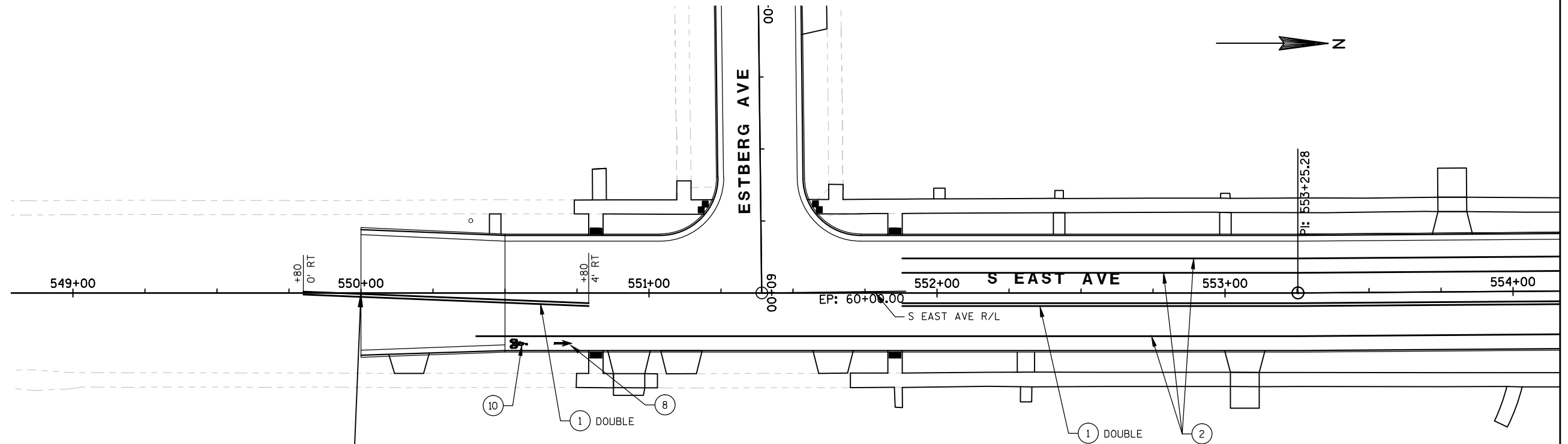
CITY CONTACT:
DESIGNED BY: TAD, INC.

PAGE 3 OF 3

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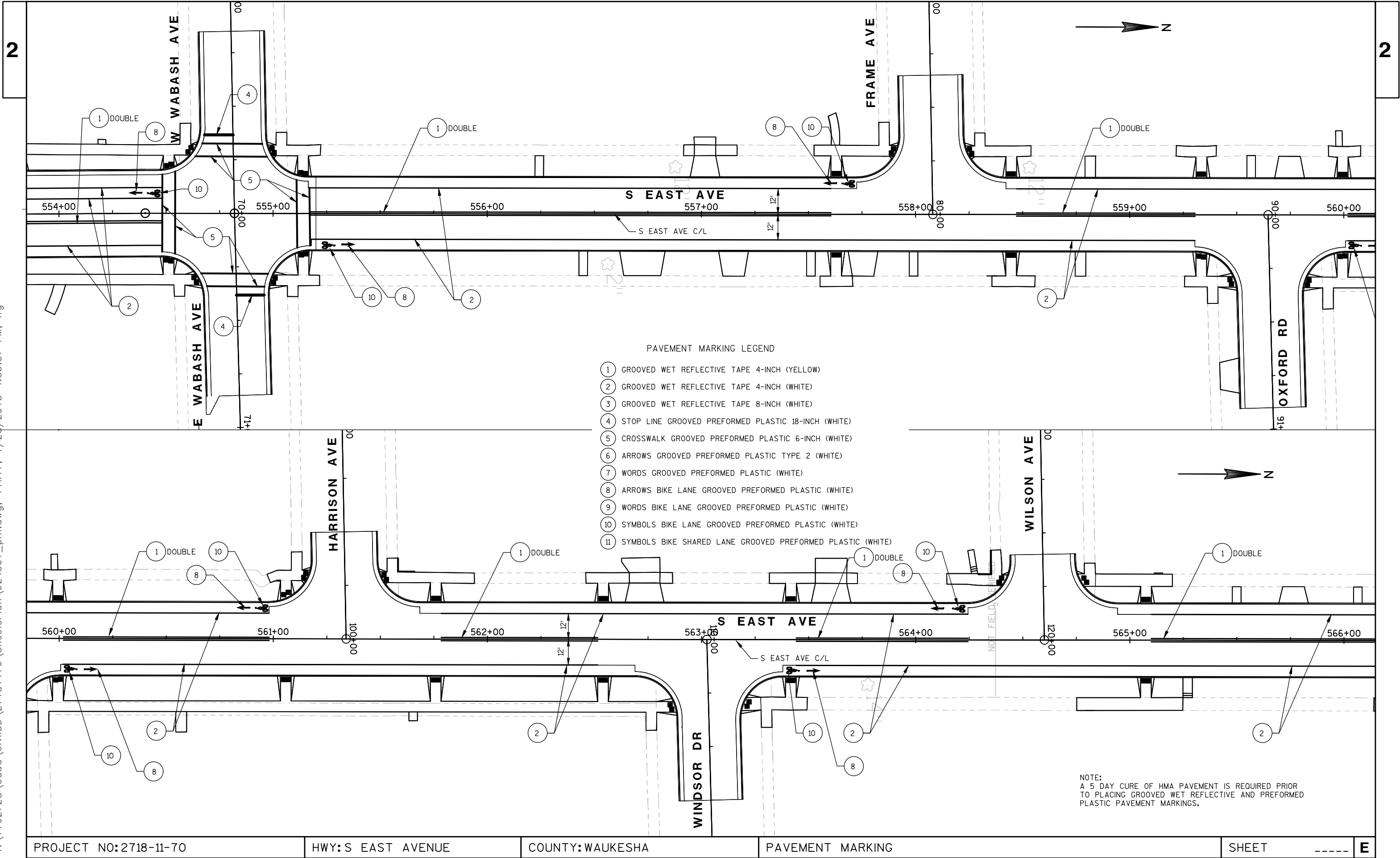
BEGIN PROJECT 2718-11-70
STA. 550+00

PAVEMENT MARKING LEGEND

- ① GROOVED WET REFLECTIVE TAPE 4-INCH (YELLOW)
- ② GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE)
- ③ GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE)
- ④ STOP LINE GROOVED PREFORMED PLASTIC 18-INCH (WHITE)
- ⑤ CROSSWALK GROOVED PREFORMED PLASTIC 6-INCH (WHITE)
- ⑥ ARROWS GROOVED PREFORMED PLASTIC TYPE 2 (WHITE)
- ⑦ WORDS GROOVED PREFORMED PLASTIC (WHITE)
- ⑧ ARROWS BIKE LANE GROOVED PREFORMED PLASTIC (WHITE)
- ⑨ WORDS BIKE LANE GROOVED PREFORMED PLASTIC (WHITE)
- ⑩ SYMBOLS BIKE LANE GROOVED PREFORMED PLASTIC (WHITE)
- ⑪ SYMBOLS BIKE SHARED LANE GROOVED PREFORMED PLASTIC (WHITE)

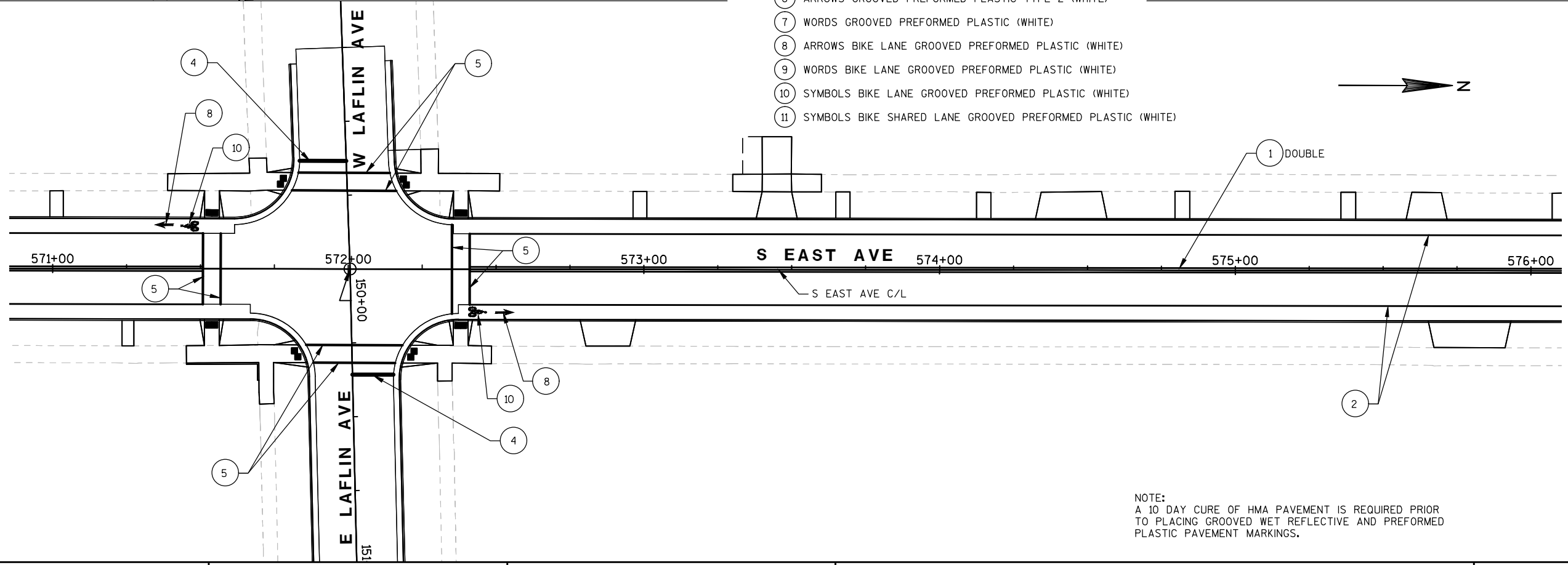
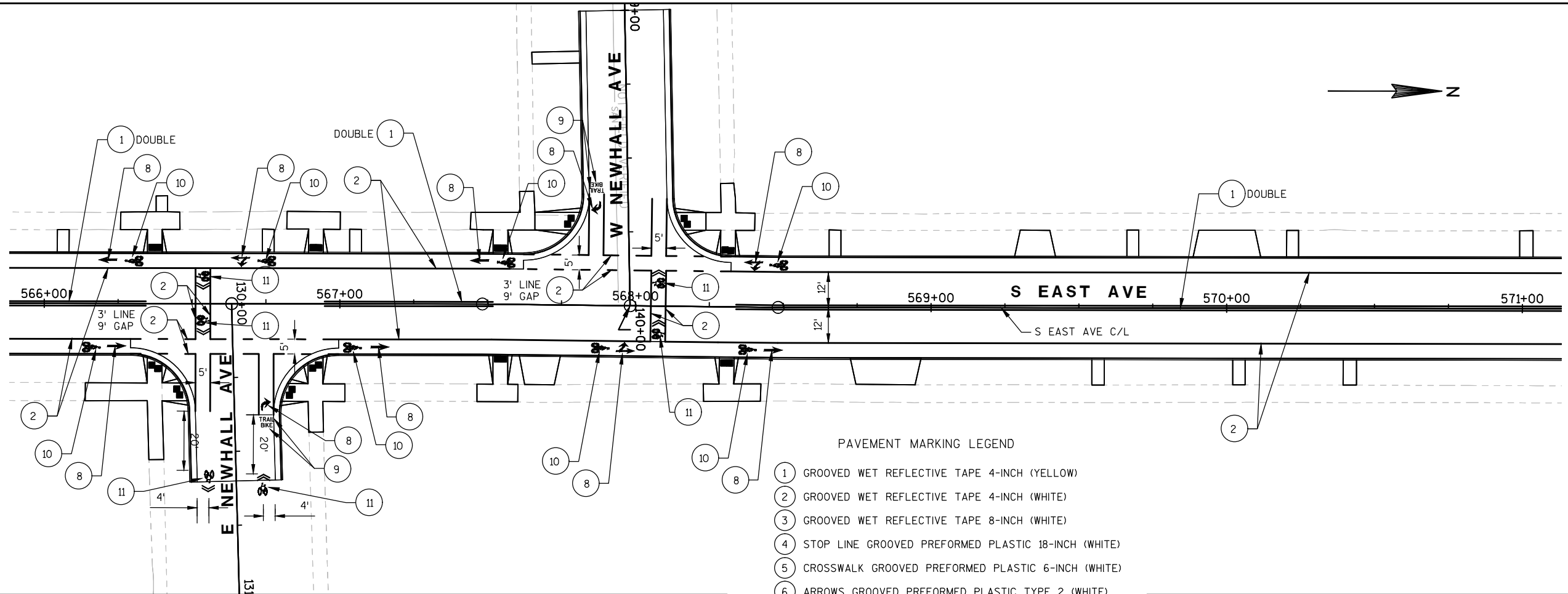
NOTE:
A 10 DAY CURE OF HMA PAVEMENT IS REQUIRED PRIOR
TO PLACING GROOVED WET REFLECTIVE AND PREFORMED
PLASTIC PAVEMENT MARKINGS.

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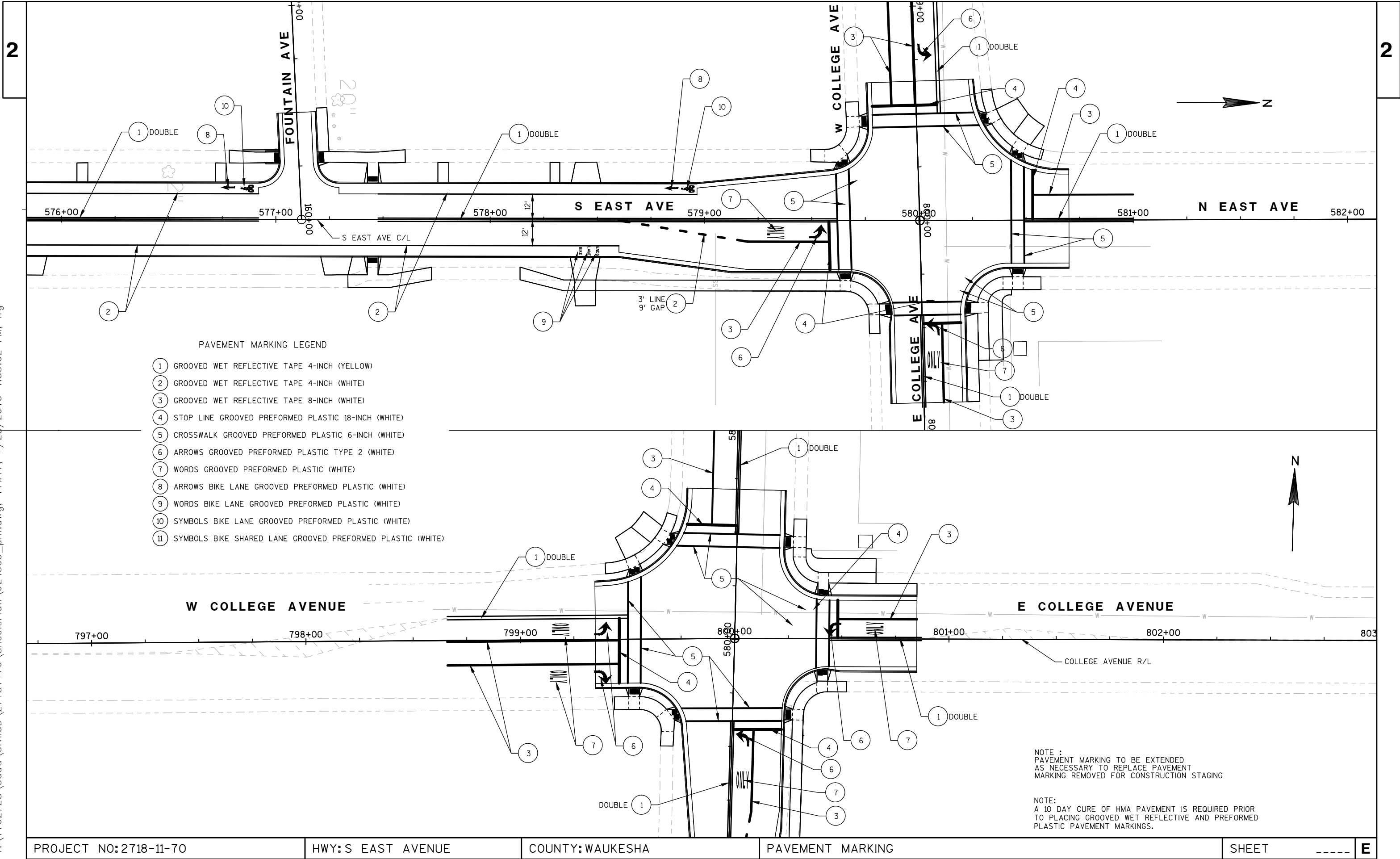


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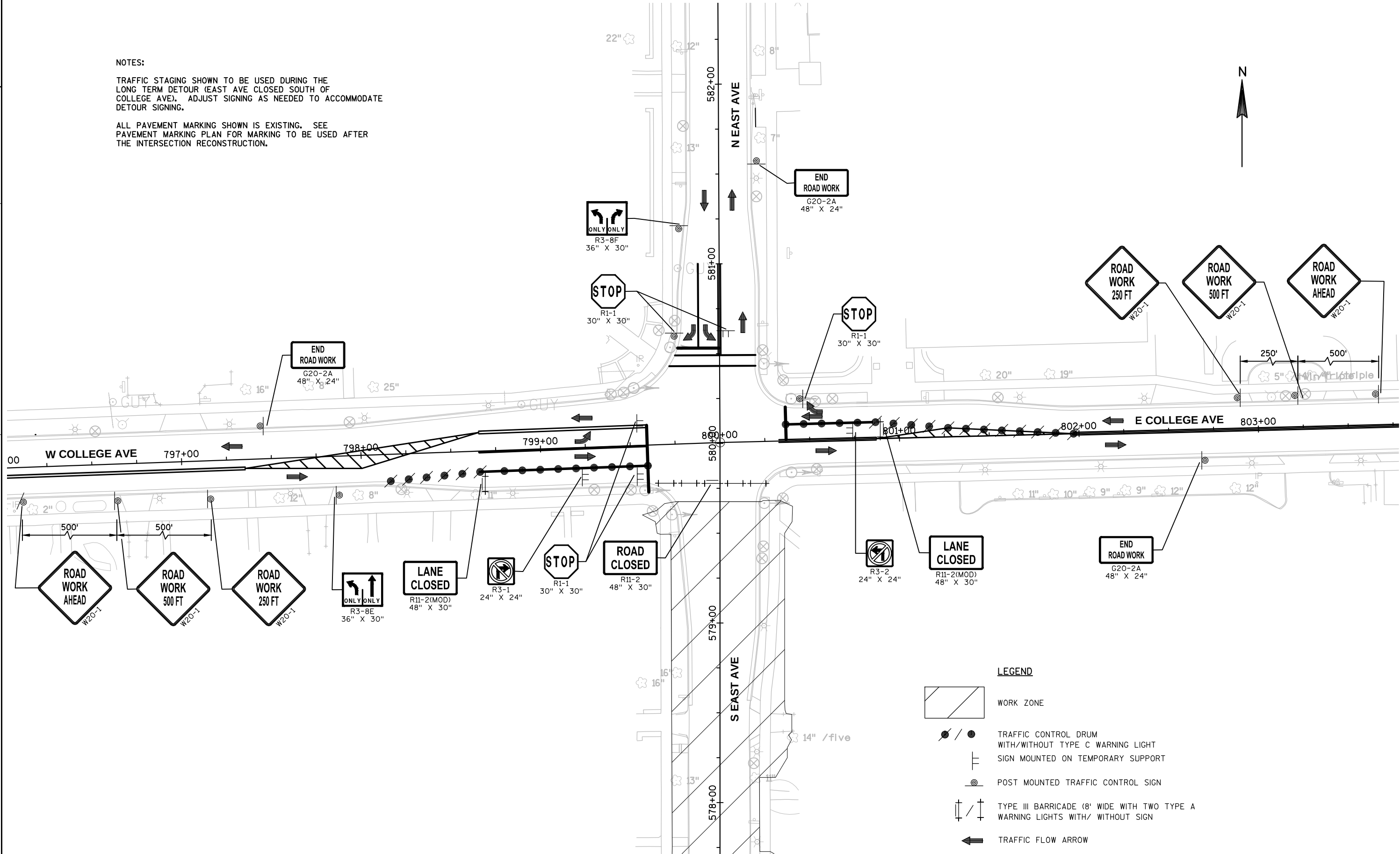
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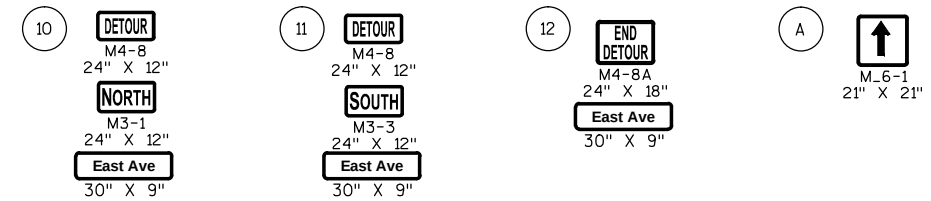
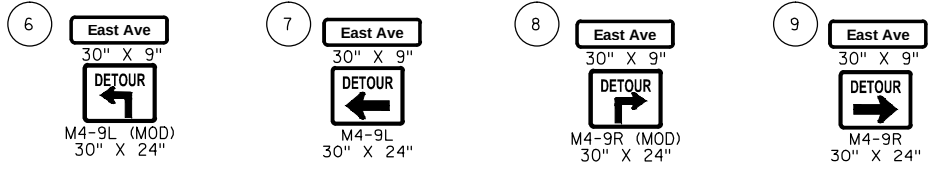
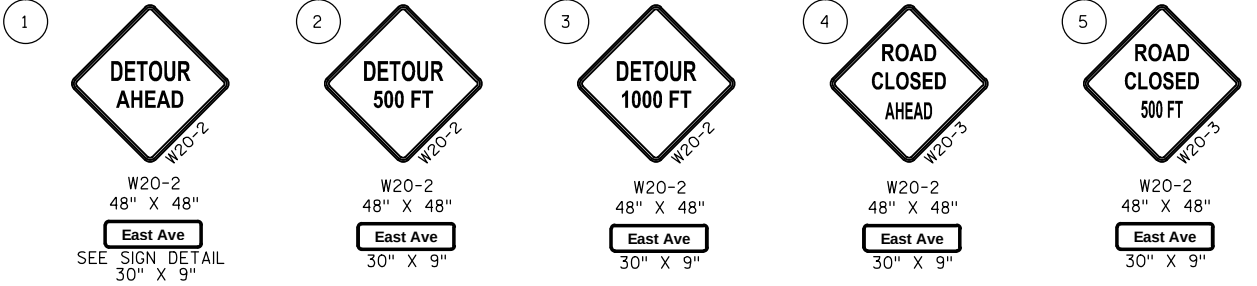
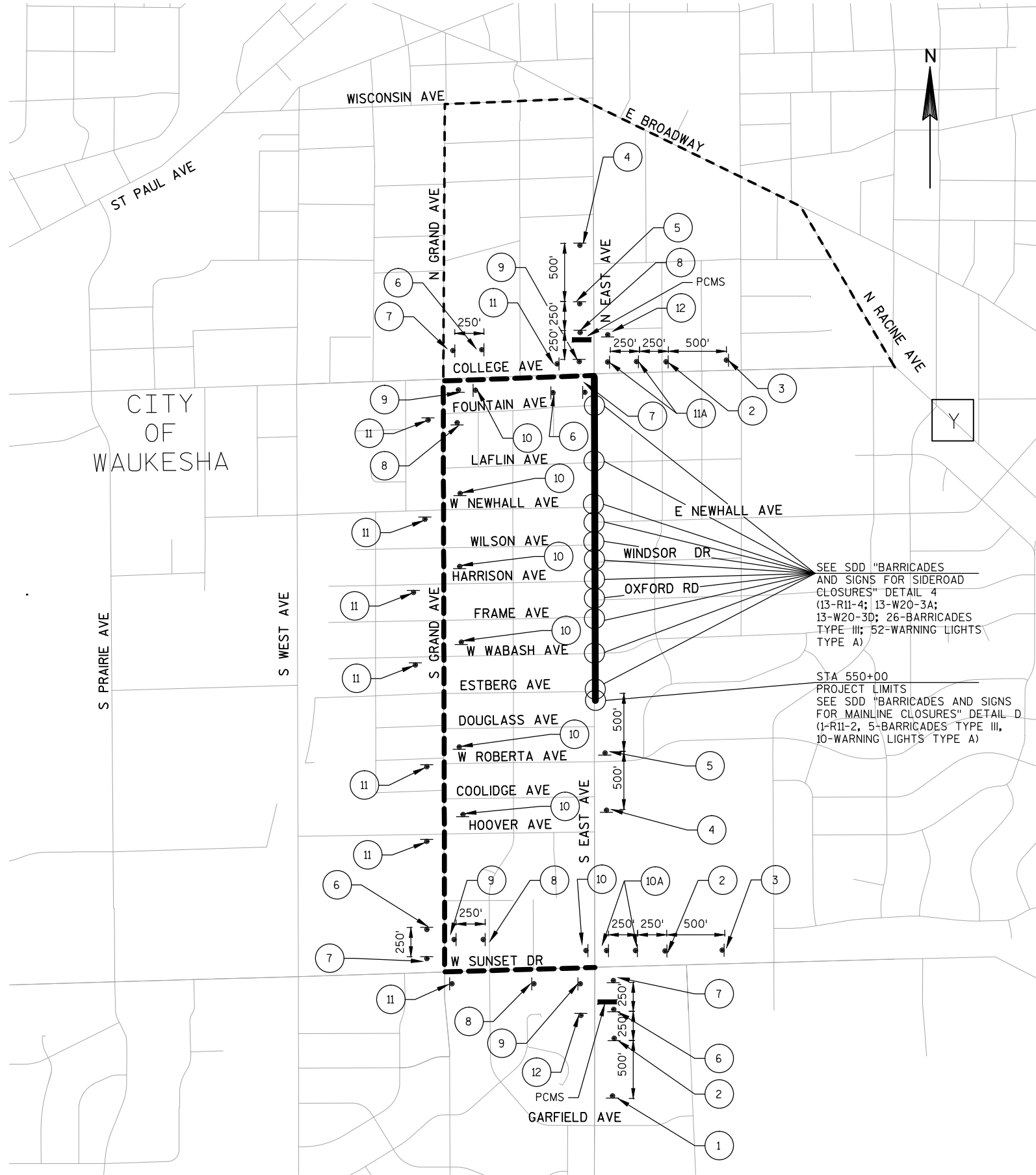
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NOTES:
TRAFFIC STAGING SHOWN TO BE USED DURING THE LONG TERM DETOUR (EAST AVE CLOSED SOUTH OF COLLEGE AVE). ADJUST SIGNING AS NEEDED TO ACCOMMODATE DETOUR SIGNING.
ALL PAVEMENT MARKING SHOWN IS EXISTING. SEE PAVEMENT MARKING PLAN FOR MARKING TO BE USED AFTER THE INTERSECTION RECONSTRUCTION.



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2



NOTES:

SEE SHEET 2 OF 2 FOR ADDITIONAL SIGNAGE NEEDED DURING THE CLOSURE OF THE EAST AVENUE/COLLEGE AVENUE INTERSECTION

PCMS TO BE USED BEGINNING 14 CALENDAR DAYS PRIOR TO CONSTRUCTION AND ENDING ON THE BEGINNING DAY OF CONSTRUCTION



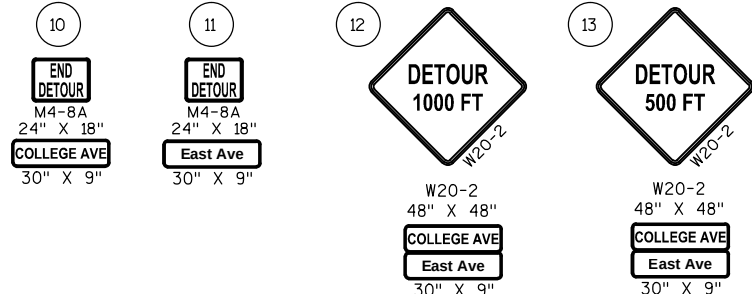
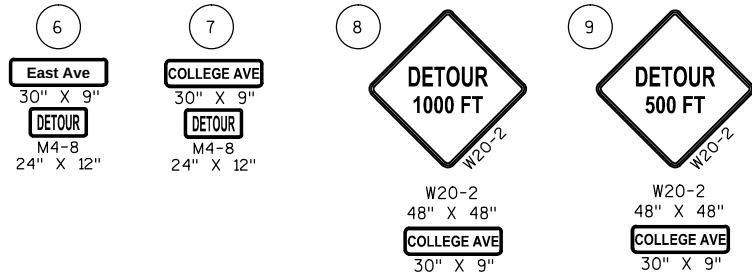
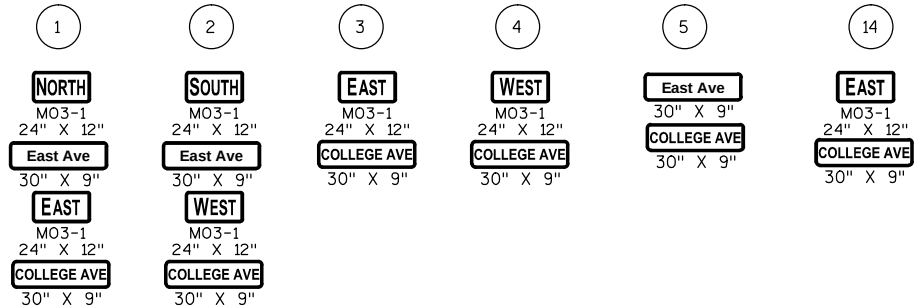
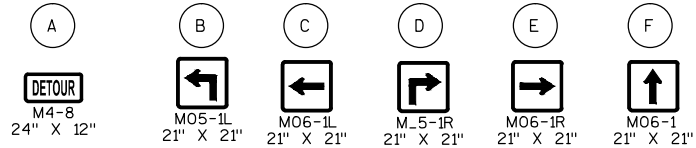
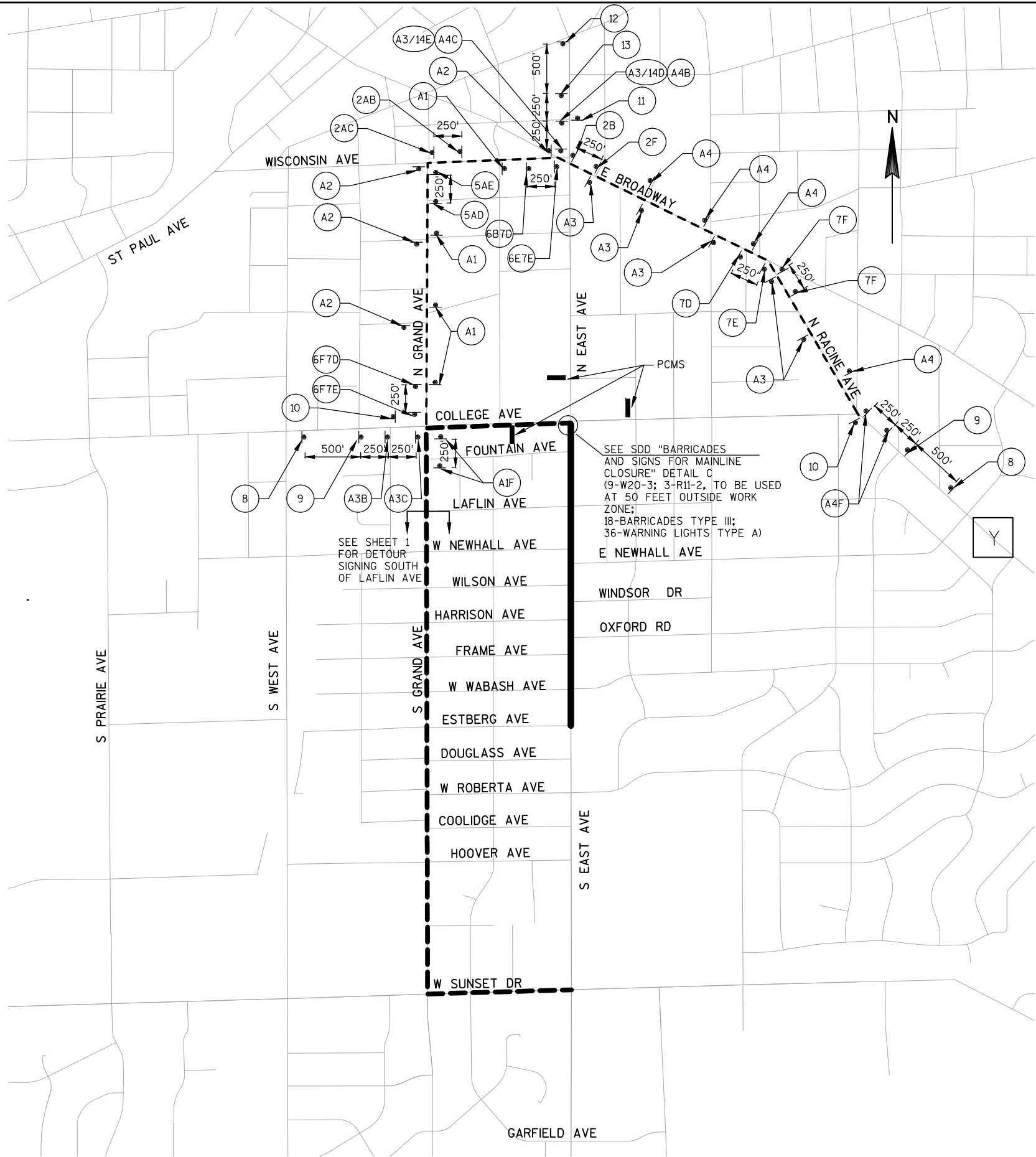
- NOTES:
- COLOR:
 - BACKGROUND - REFLECTORIZED ORANGE
 - LETTERS - BLACK
 - FACE MATERIAL - REFLECTORIZED SHEETING
 - ALL LETTERS ARE SERIES "C"
 - PAID FOR AS TRAFFIC CONTROL SIGNS FIXED MESSAGE

SIGN DETAIL

- LEGEND
- PROJECT LIMITS
 - LONG TERM EAST AVE DETOUR ROUTE
 - SHORT TERM COLLEGE AVE DETOUR ROUTE (SEE SHEET 2 OF 2)
 - SIGN ON WOOD POST

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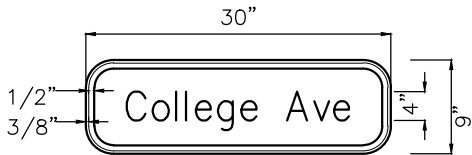


NOTES:

DETOUR SHOWN TO BE USED DURING THE CLOSURE OF THE EAST AVENUE/COLLEGE AVENUE INTERSECTION FOR A MAXIMUM OF 14 CALENDAR DAYS

SEE LONG TERM DETOUR PLAN FOR SIGNING SOUTH OF LAFLIN AVENUE AND SIDE ROAD CLOSURES (SHEET 1 OF 2)

PCMS TO BE USED BEGINNING 14 CALENDAR DAYS PRIOR TO S EAST AVENUE/COLLEGE AVENUE INTERSECTION BEING CLOSED AND ENDING ON THE BEGINNING DAY OF THE INTERSECTION CLOSURE



NOTES:

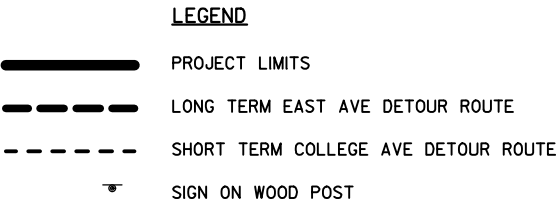
1. COLOR:
BACKGROUND - REFLECTORIZED ORANGE
LETTERS - BLACK

2. FACE MATERIAL - REFLECTORIZED SHEETING

3. ALL LETTERS ARE SERIES "C"

4. PAID FOR AS TRAFFIC CONTROL SIGNS FIXED MESSAGE

SIGN DETAIL



SHEET 2 OF 2

PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

DETOUR PLAN - S. EAST AVE/COLLEGE AVE INTERSECTION CLOSED

SHEET

E

FILE NAME: T:\1102728\CADD\CIVIL3D\27181170\SheetsPlan\027002_df.dwg

PLOT DATE: 1/28/2013 4:55:40 PM

PLOT BY: CIVIL3D

PLOT NAME:

DATE 13MAR13		E S T I M A T E O F Q U A N T I T I E S				2718-11-71 QUANTITY
LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2718-11-70 QUANTITY	
0010	201.0105	CLEARING	STA	1.000	1.000	
0020	201.0120	CLEARING	ID	6.000	6.000	
0030	201.0205	GRUBBING	STA	1.000	1.000	
0040	201.0220	GRUBBING	ID	6.000	6.000	
0050	204.0100	REMOVING PAVEMENT	SY	11,390.000	11,390.000	
0060	204.0150	REMOVING CURB & GUTTER	LF	3,100.000	3,100.000	
0070	204.0155	REMOVING CONCRETE SIDEWALK	SY	1,905.000	1,905.000	
0080	204.0195	REMOVING CONCRETE BASES	EACH	9.000	9.000	
0090	204.0210	REMOVING MANHOLES	EACH	11.000	11.000	
0100	204.0220	REMOVING INLETS	EACH	17.000	17.000	
0110	204.0245	REMOVING STORM SEWER (SIZE) 01. 8-INCH	LF	12.000	12.000	
0120	204.0245	REMOVING STORM SEWER (SIZE) 02. 12-INCH	LF	1,079.000	1,079.000	
0130	204.0245	REMOVING STORM SEWER (SIZE) 03. 15-INCH	LF	231.000	231.000	
0140	204.0245	REMOVING STORM SEWER (SIZE) 04. 24-INCH	LF	147.000	147.000	
0150	204.0245	REMOVING STORM SEWER (SIZE) 05. 30-INCH	LF	103.000	103.000	
0160	204.0245	REMOVING STORM SEWER (SIZE) 06. 42-INCH	LF	555.000	555.000	
0170	204.0291.S	ABANDONING SEWER	CY	300.000	300.000	
0180	204.9090.S	REMOVING (ITEM DESCRIPTION) 01. WOOD RETAINING WALL	LF	13.000	13.000	
0190	205.0100	EXCAVATION COMMON	CY	10,389.000	10,389.000	
0200	213.0100	FINISHING ROADWAY (PROJECT) 01. 2718-11-70	EACH	1.000	1.000	
0210	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	255.000	255.000	
0220	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	11,876.000	11,876.000	
0230	312.0110	SELECT CRUSHED MATERIAL	TON	1,124.000	1,124.000	
0240	416.0160	CONCRETE DRIVEWAY 6-INCH	SY	559.000	559.000	
0250	416.0610	DRILLED TIE BARS	EACH	68.000	68.000	
0260	455.0115	ASPHALTIC MATERIAL PG64-22	TON	146.000	146.000	
0270	455.0120	ASPHALTIC MATERIAL PG64-28	TON	84.000	84.000	
0280	455.0605	TACK COAT	GAL	347.000	347.000	
0290	460.1101	HMA PAVEMENT TYPE E-1	TON	4,005.000	4,005.000	
0300	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	2,560.000	2,560.000	
0310	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	6.000	6.000	
0320	520.8000	CONCRETE COLLARS FOR PIPE	EACH	1.000	1.000	
0330	601.0407	CONCRETE CURB & GUTTER 18-INCH TYPE D	LF	80.000	80.000	
0340	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE D	LF	2,735.000	2,735.000	
0350	601.0600	CONCRETE CURB PEDESTRIAN	LF	120.000	120.000	
0360	602.0405	CONCRETE SIDEWALK 4-INCH	SF	18,150.000	18,150.000	
0370	602.0505	CURB RAMP DETECTABLE WARNING FIELD YELLOW	SF	612.000	612.000	
0380	602.1500	CONCRETE STEPS	SF	18.000	18.000	
0390	608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	298.000	298.000	
0400	608.0315	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	LF	94.000	94.000	
0410	608.0318	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	LF	384.000	384.000	
0420	608.0324	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	285.000	285.000	
0430	608.0330	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH	LF	100.000	100.000	
0440	608.0336	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH	LF	385.000	385.000	
0450	608.0342	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 42-INCH	LF	104.000	104.000	

DATE 13MAR13		E S T I M A T E O F Q U A N T I T I E S				
LINE					2718-11-70	2718-11-71
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY	QUANTITY
0460	608.0366	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 66-INCH	LF	480.000	480.000	
0470	608.0412	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH	LF	1,026.000	1,026.000	
0480	608.0415	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH	LF	373.000	373.000	
0490	608.0418	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH	LF	428.000	428.000	
0500	608.0421	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 21-INCH	LF	47.000	47.000	
0510	608.0424	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH	LF	311.000	311.000	
0520	608.0436	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 36-INCH	LF	186.000	186.000	
0530	608.0442	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 42-INCH	LF	114.000	114.000	
0540	611.0420	RECONSTRUCTING MANHOLES	EACH	3.000	3.000	
0550	611.1230	CATCH BASINS 2X3-FT	EACH	66.000	66.000	
0560	611.2004	MANHOLES 4-FT DIAMETER	EACH	18.000	18.000	
0570	611.2005	MANHOLES 5-FT DIAMETER	EACH	5.000	5.000	
0580	611.2006	MANHOLES 6-FT DIAMETER	EACH	10.000	10.000	
0590	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	800.000	800.000	
0600	616.0700.S	FENCE SAFETY	LF	100.000	100.000	
0610	619.1000	MOBILIZATION	EACH	1.000	1.000	
0620	621.0100	LANDMARK REFERENCE MONUMENTS	EACH	4.000	4.000	
0630	623.0200	DUST CONTROL SURFACE TREATMENT	SY	24,430.000	24,430.000	
0640	624.0100	WATER	MGAL	50.000	50.000	
0650	625.0100	TOPSOIL	SY	7,120.000	7,120.000	
0660	628.1104	EROSION BALES	EACH	100.000	100.000	
0670	628.1504	SILT FENCE	LF	220.000	220.000	
0680	628.1520	SILT FENCE MAINTENANCE	LF	110.000	110.000	
0690	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	10.000	10.000	
0700	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	5.000	5.000	
0710	628.2004	EROSION MAT CLASS I TYPE B	SY	100.000	100.000	
0720	628.7005	INLET PROTECTION TYPE A	EACH	82.000	82.000	
0730	628.7015	INLET PROTECTION TYPE C	EACH	82.000	82.000	
0740	628.7560	TRACKING PADS	EACH	2.000	2.000	
0750	628.7570	ROCK BAGS	EACH	50.000	50.000	
0760	629.0210	FERTILIZER TYPE B	CWT	8.000	8.000	
0770	630.0300	SEEDING BORROW PIT	LB	200.000	200.000	
0780	631.0300	SOD WATER	MGAL	210.000	210.000	
0790	631.1000	SOD LAWN	SY	7,120.000	7,120.000	
0800	634.0812	POSTS TUBULAR STEEL 2X2-INCH X 12-FT	EACH	1.000	1.000	
0810	634.0814	POSTS TUBULAR STEEL 2X2-INCH X 14-FT	EACH	75.000	75.000	
0820	637.0202	SIGNS REFLECTIVE TYPE II	SF	527.460	527.460	
0830	637.0402	SIGNS REFLECTIVE FOLDING TYPE II	SF	20.720	20.720	
0840	638.2102	MOVING SIGNS TYPE II	EACH	5.000	5.000	
0850	638.2602	REMOVING SIGNS TYPE II	EACH	71.000	71.000	
0860	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	31.000	31.000	
0870	638.4000	MOVING SMALL SIGN SUPPORTS	EACH	3.000	3.000	
0880	642.5201	FIELD OFFICE TYPE C	EACH	1.000	1.000	
0890	643.0100	TRAFFIC CONTROL (PROJECT) 01.	EACH	1.000	1.000	2718-11-70
0900	643.0300	TRAFFIC CONTROL DRUMS	DAY	5,036.000	5,036.000	
0910	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	6,266.000	6,266.000	

DATE 13MAR13		E S T I M A T E O F Q U A N T I T I E S				2718-11-71 QUANTITY
LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2718-11-70 QUANTITY	
0920	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	12,522.000	12,522.000	
0930	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	2,834.000	2,834.000	
0940	643.0900	TRAFFIC CONTROL SIGNS	DAY	3,313.000	3,313.000	
0950	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	257.000	257.000	
0960	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	90.000	90.000	
0970	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 01. 2718-11-70	EACH	1.000	1.000	
0980	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	18,824.000	18,824.000	
0990	646.0600	REMOVING PAVEMENT MARKINGS	LF	100.000	100.000	
1000	646.0881.S	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH	LF	9,605.000	9,605.000	
1010	646.0883.S	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH	LF	285.000	285.000	
1020	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	106.000	106.000	
1030	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	3,635.000	3,635.000	
1040	650.5000	CONSTRUCTION STAKING BASE	LF	3,635.000	3,635.000	
1050	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	7,400.000	7,400.000	
1060	650.8500	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01. 2718-11-70	LS	1.000	1.000	
1070	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01 2718-11-70	LS	1.000	1.000	
1080	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	4,486.000	4,486.000	
1090	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	1,202.000	1,202.000	
1100	652.0605	CONDUIT SPECIAL 2-INCH	LF	1,240.000	1,240.000	
1110	652.0615	CONDUIT SPECIAL 3-INCH	LF	120.000	120.000	
1120	653.0135	PULL BOXES STEEL 24X36-INCH	EACH	1.000	1.000	
1130	653.0140	PULL BOXES STEEL 24X42-INCH	EACH	10.000	10.000	
1140	653.0905	REMOVING PULL BOXES	EACH	1.000	1.000	
1150	654.0101	CONCRETE BASES TYPE 1	EACH	4.000	4.000	
1160	654.0102	CONCRETE BASES TYPE 2	EACH	4.000	4.000	
1170	654.0105	CONCRETE BASES TYPE 5	EACH	3.000	3.000	
1180	654.0217	CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL	EACH	1.000	1.000	
1190	655.0240	CABLE TRAFFIC SIGNAL 7-14 AWG	LF	1,615.000	1,615.000	
1200	655.0260	CABLE TRAFFIC SIGNAL 12-14 AWG	LF	1,305.000	1,305.000	
1210	655.0305	CABLE TYPE UF 2-12 AWG GROUNDED	LF	565.000	565.000	
1220	655.0410	COMMUNICATION CABLE INSTALLED IN CONDUIT	LF	210.000	210.000	
1230	655.0515	ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	LF	1,040.000	1,040.000	
1240	655.0610	ELECTRICAL WIRE LIGHTING 12 AWG	LF	440.000	440.000	
1250	655.0615	ELECTRICAL WIRE LIGHTING 10 AWG	LF	526.000	526.000	
1260	655.0625	ELECTRICAL WIRE LIGHTING 6 AWG	LF	5,766.000	5,766.000	
1270	655.0630	ELECTRICAL WIRE LIGHTING 4 AWG	LF	17,046.000	17,046.000	
1280	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. INTERSECTION OF EAST AVENUE & COLLEGE AVENUE	LS	1.000	1.000	
1290	656.0400	ELECTRICAL SERVICE MAIN LUGS ONLY METER PEDESTAL (LOCATION) 01. CABINET SE100	LS	1.000	1.000	
1300	657.0100	PEDESTAL BASES	EACH	4.000	4.000	
1310	657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	EACH	4.000	4.000	
1320	657.0310	POLES TYPE 3	EACH	2.000	2.000	
1330	657.0315	POLES TYPE 4	EACH	2.000	2.000	
1340	657.0425	TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT	EACH	4.000	4.000	

DATE 13MAR13		E S T I M A T E O F Q U A N T I T I E S				2718-11-71 QUANTITY
LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2718-11-70 QUANTITY	
1350	657.0585	TROMBONE ARMS 15-FT	EACH	1.000	1.000	
1360	657.0590	TROMBONE ARMS 20-FT	EACH	1.000	1.000	
1370	657.0615	LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT	EACH	4.000	4.000	
1380	658.0110	TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL	EACH	8.000	8.000	
1390	658.0120	TRAFFIC SIGNAL FACE 5-12 INCH VERTICAL	EACH	4.000	4.000	
1400	658.0215	BACKPLATES SIGNAL FACE 3 SECTION 12-INCH	EACH	8.000	8.000	
1410	658.0225	BACKPLATES SIGNAL FACE 5 SECTION 12-INCH	EACH	4.000	4.000	
1420	658.0412	PEDESTRIAN SIGNAL FACE 12-INCH	EACH	16.000	16.000	
1430	658.0600	LED MODULES 12-INCH RED BALL	EACH	12.000	12.000	
1440	658.0605	LED MODULES 12-INCH YELLOW BALL	EACH	12.000	12.000	
1450	658.0610	LED MODULES 12-INCH GREEN BALL	EACH	12.000	12.000	
1460	658.0620	LED MODULES 12-INCH YELLOW ARROW	EACH	4.000	4.000	
1470	658.0625	LED MODULES 12-INCH GREEN ARROW	EACH	4.000	4.000	
1480	658.0660	LED MODULES COUNTDOWN TIMER 12-INCH	EACH	8.000	8.000	
1490	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 01. INTERSECTION OF EAST AVENUE & COLLEGE AVENUE	LS	1.000	1.000	
1500	690.0150	SAWING ASPHALT	LF	630.000	630.000	
1510	690.0250	SAWING CONCRETE	LF	675.000	675.000	
1520	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT \$5.00/HR ON-THE-JOB TRAINING APPRENTICE	HRS	200.000	200.000	
1530	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT \$5.00/HR ON-THE-JOB TRAINING GRADUATE	HRS	1,100.000	1,100.000	
1540	SPV.0060	SPECIAL 01. MANHOLE COVERS SPECIAL	EACH	39.000	39.000	
1550	SPV.0060	SPECIAL 02. INLET COVERS SPECIAL	EACH	66.000	66.000	
1560	SPV.0060	SPECIAL 03. MANHOLE 9-FT DIAMETER	EACH	4.000	4.000	
1570	SPV.0060	SPECIAL 04. GROOVED PREFORMED PLASTIC ARROWS TYPE 2 WHITE	EACH	4.000	4.000	
1580	SPV.0060	SPECIAL 05. GROOVED PREFORMED PLASTIC WORDS WHITE	EACH	4.000	4.000	
1590	SPV.0060	SPECIAL 06. GROOVED PREFORMED PLASTIC ARROWS BIKE LANE	EACH	22.000	22.000	
1600	SPV.0060	SPECIAL 07. GROOVED PREFORMED PLASTIC WORDS BIKE LANE	EACH	7.000	7.000	
1610	SPV.0060	SPECIAL 08. GROOVED PREFORMED PLASTIC SYMBOLS BIKE LANE	EACH	20.000	20.000	
1620	SPV.0060	SPECIAL 09. GROOVED PREFORMED PLASTIC SYMBOLS BIKE SHARED LANE	EACH	6.000	6.000	
1630	SPV.0060	SPECIAL 10. TRAFFIC SIGNAL CONTROLLER & CABINET, 8-PHASE FULLY ACTUATED	EACH	1.000	1.000	
1640	SPV.0060	SPECIAL 11. PEDESTRIAN PUSH BUTTONS, SPECIAL	EACH	8.000	8.000	
1650	SPV.0060	SPECIAL 12. VIDEO MONITOR	EACH	1.000	1.000	
1660	SPV.0060	SPECIAL 13. LED LUMINARIES	EACH	4.000	4.000	
1670	SPV.0060	SPECIAL 14. REMOVING LIGHTING UNITS	EACH	9.000	9.000	
1680	SPV.0060	SPECIAL 15. LIGHTING CONTROL CABINET	EACH	1.000	1.000	
1690	SPV.0060	SPECIAL 16. DECORATIVE LIGHTING UNITS	EACH	57.000	57.000	
1700	SPV.0060	SPECIAL 17. DECORATIVE LIGHTING UNITS CONCRETE BASES	EACH	57.000	57.000	
1710	SPV.0060	SPECIAL 18. LIGHTING PULL BOXES 15X30-INCH	EACH	7.000	7.000	
1720	SPV.0060	SPECIAL 19. PULL BOXES COMPOSITE 24X36X42-INCH	EACH	2.000	2.000	
1730	SPV.0060	SPECIAL 20. TEMPORARY LIGHTING UNITS SINGLE	EACH	4.000	4.000	

DATE 13MAR13			E S T I M A T E O F Q U A N T I T I E S			2718-11-71 QUANTITY
LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2718-11-70 QUANTITY	
1740	SPV.0060	SPECIAL 21. REMOVING TEMPORARY LIGHTING UNITS	EACH	4.000	4.000	
1750	SPV.0060	SPECIAL 22. FURNISH AND INSTALL GATE VALVE AND VALVE BOX 6-INCH	EACH	11.000		11.000
1760	SPV.0060	SPECIAL 23. FURNISH AND INSTALL GATE VALVE AND VALVE BOX 8-INCH	EACH	11.000		11.000
1770	SPV.0060	SPECIAL 24. FURNISH AND INSTALL GATE VALVE AND VALVE BOX 12-INCH	EACH	2.000		2.000
1780	SPV.0060	SPECIAL 25. FURNISH AND INSTALL BUTTERFLY VALVE AND VALVE BOX 16-INCH	EACH	12.000		12.000
1790	SPV.0060	SPECIAL 26. RECONNECT 1-INCH COPPER WATER SERVICE TYPE SL1	EACH	11.000		11.000
1800	SPV.0060	SPECIAL 27. RECONNECT 1-INCH COPPER WATER SERVICE TYPE SL2	EACH	21.000		21.000
1810	SPV.0060	SPECIAL 28. RECONNECT 3/4-INCH COPPER WATER SERVICE TYPE SL3	EACH	23.000		23.000
1820	SPV.0060	SPECIAL 29. RECONNECT 1-1/4-INCH COPPER WATER SERVICE TYPE SL4	EACH	3.000		3.000
1830	SPV.0060	SPECIAL 30. RECONNECT 1-1/4-INCH COPPER WATER SERVICE TYPE SL5	EACH	1.000		1.000
1840	SPV.0060	SPECIAL 31. RECONNECT 4-INCH OR 6-INCH WATER SERVICE TYPE SL6	EACH	3.000		3.000
1850	SPV.0060	SPECIAL 32. HYDRANT ASSEMBLY	EACH	10.000		10.000
1860	SPV.0060	SPECIAL 33. ABANDON HYDRANT	EACH	8.000		8.000
1870	SPV.0060	SPECIAL 34. STANDARD LIGHTING UNITS	EACH	3.000	3.000	
1880	SPV.0060	SPECIAL 35. MANHOLE 10-FT DIAMETER	EACH	1.000	1.000	
1890	SPV.0060	SPECIAL 36. CONSTRUCTION STAKING CURB RAMPS	EACH	74.000	74.000	
1900	SPV.0060	SPECIAL 37. INTERNAL MANHOLE SEALING SYSTEM	EACH	12.000	12.000	
1910	SPV.0060	SPECIAL 38. CONSTRUCTION STAKING RIGHT-OF-WAY	EACH	3.000	3.000	
1920	SPV.0060	SPECIAL 39. RECONSTRUCTING SANITARY MANHOLES	EACH	2.000	2.000	
1930	SPV.0060	SPECIAL 40. ADJUSTING SANITARY MANHOLE COVERS	EACH	13.000	13.000	
1940	SPV.0090	SPECIAL 01. GROOVED PREFORMED PLASTIC STOP LINE 18-INCH WHITE	LF	155.000	155.000	
1950	SPV.0090	SPECIAL 02. GROOVED PREFORMED PLASTIC CROSSWALK 6-INCH WHITE	LF	830.000	830.000	
1960	SPV.0090	SPECIAL 03. AERIAL CABLE ALUMINUM TRIPLEX 2 AWG	LF	165.000	165.000	
1970	SPV.0090	SPECIAL 04. AERIAL CABLE ALUMINUM QUADPLEX 2 AWG	LF	120.000	120.000	
1980	SPV.0090	SPECIAL 05. REMOVING AERIAL CABLE	LF	285.000	285.000	
1990	SPV.0090	SPECIAL 06. FURNISH AND INSTALL WATER MAIN AND FITTINGS 8-INCH	LF	883.000		883.000
2000	SPV.0090	SPECIAL 07. FURNISH AND INSTALL WATER MAIN AND FITTINGS 12-INCH	LF	71.000		71.000
2010	SPV.0090	SPECIAL 08. FURNISH AND INSTALL WATER MAIN AND FITTINGS 16-INCH (CLASS 50)	LF	2,908.000		2,908.000
2020	SPV.0090	SPECIAL 09. FURNISH AND INSTALL WATER MAIN AND FITTINGS 16-INCH (CLASS 52)	LF	100.000		100.000
2030	SPV.0090	SPECIAL 10. TREE ROOT SAWING	LF	1,186.000	1,186.000	
2040	SPV.0090	SPECIAL 11. CONCRETE CURB & GUTTER 66-INCH TYPE D	LF	4,465.000	4,465.000	
2050	SPV.0105	SPECIAL 01. VIDEO VEHICLE DETECTION SYSTEM, (EAST AVE & COLLEGE AVE)	LS	1.000	1.000	

DATE 13MAR13		E S T I M A T E O F Q U A N T I T I E S				
LINE				2718-11-70	2718-11-71	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY	QUANTITY
2060	SPV.0105	SPECIAL 02. MODIFY TRAFFIC SIGNALS AND STREET LIGHTING, (EAST AVE & COLLEGE AVE)	LS	1.000	1.000	
2070	SPV.0105	SPECIAL 03. EMERGENCY VEHICLE PREEMPTION SYSTEM	LS	1.000	1.000	
2080	SPV.0105	SPECIAL 04. CUT-IN 12-INCH VALVE ON COLLEGE AVENUE	LS	1.000		1.000
2090	SPV.0105	SPECIAL 05. ABANDON VALVE BOX AND MANHOLES	LS	1.000		1.000
2100	SPV.0165	SPECIAL 01. CONCRETE SIDEWALK 4-INCH STAMPED & COLORED	SF	610.000	610.000	
2110	SPV.0170	SPECIAL 01. TEST ROLLING	STA	31.000	31.000	
2120	SPV.0180	SPECIAL 01. GEOGRID REINFORCEMENT	SY	1,289.000	1,289.000	

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CLEARING AND GRUBBING				
	201.0105	201.0120	201.0205	201.0220
	CLEARING	CLEARING	GRUBBING	GRUBBING
LOCATION	STA	ID	STA	ID
S EAST AVE				
562+00 - 563+00 RT	1	---	1	---
573+32, 38' LT	---	6	---	6
TOTALS	1	6	1	6

REMOVING PAVEMENT

	204.0100
LOCATION	SY
S EAST AVENUE	
550+00 - 554+00	2,200
554+00 - 560+00	3,350
560+00 - 566+00	2,800
566+00 - 572+00	2,650
572+00 - 578+00	110
578+00 - 580+70	30
E LAFLIN AVENUE	
150+40 - 151+05	250
TOTAL	11,390

REMOVING CURB & GUTTER

	204.0150
LOCATION	LF
S EAST AVENUE	
550+00 - 554+00	240
554+00 - 560+00	370
560+00 - 566+00	100
566+00 - 572+00	130
572+00 - 578+00	1,250
578+00 - 580+70	650
W NEWHALL AVE	
139+00 - 139+60	140
LAFLIN AVE	
150+40 - 151+00	130
COLLEGE AVE	
800+50 - 800+85	90
TOTAL	3,100

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REMOVING CONCRETE SIDEWALK

	204.0155
LOCATION	SY
S EAST AVENUE	
550+00 - 554+00	340
554+00 - 560+00	295
560+00 - 566+00	440
566+00 - 572+00	310
572+00 - 578+00	200
578+00 - 580+70	320
TOTAL	1,905

REMOVING MANHOLES

	204.0210
LOCATION	EACH
S EAST AVENUE	
551+25, 20' LT	1
553+20, 25' RT	1
554+63, 30' RT	1
554+70, 22' RT	1
555+17, 22' RT	1
572+40, 6' RT	1
575+18, 6' RT	1
577+35, 6' RT	1
579+62, 6' RT	1
LAFLIN AVENUE	
149+82, 6' RT	1
150+05, 6' RT	1
TOTAL	11

REMOVING INLETS

	204.0220
LOCATION	EACH
S EAST AVENUE	
551+02, 21' RT/L	2
553+24, 22' LT	2
553+29, 22' RT	2
554+67, 37' RT	1
554+97, 37' RT	1
555+17, 17' RT	1
571+63, 17' LT	1
571+64, 17' RT	1
572+39, 17' LT	1
572+40, 17' RT	1
579+64, 22' RT	1
580+45, 22' RT	1
LAFLIN AVENUE	
150+54, 15' RT	1
150+55, 16' LT	1
TOTAL	17

ALL ITEMS CATEGORY 0010 UNLESS NOTED

PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET NO:

E

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REMOVING STORM SEWER								
LOCATION	FROM	TO	204.0245.01	204.0245.02	204.0245.03	204.0245.04	204.0245.05	204.0245.06
	STATION / OFFSET	STATION / OFFSET	8-INCH LF	12-INCH LF	15-INCH LF	24-INCH LF	30-INCH LF	42-INCH LF
S EAST AVENUE								
	550+00, 22' LT	551+03, 22' LT	---	---	---	---	103	---
	551+03, 22' LT	551+03, 22' RT	---	44	---	---	---	---
	551+25, 19' LT	551+25, 189' LT	---	---	---	---	---	170
	551+25, 19' LT	551+68, 19' LT	---	---	---	---	---	43
	552+32, 19' LT	553+20, 22' LT	---	---	---	---	---	88
	553+20, 22' LT	553+20, 26' RT	---	---	---	---	---	48
	553+20, 26' RT	554+63, 30' RT	---	---	---	---	---	142
	553+34, 22' RT	554+69, 22' RT	---	---	136	---	---	---
	554+67, 30' RT	554+67, 94' RT	---	---	---	---	---	64
	554+69, 22' RT	554+67, 37' RT	---	15	---	---	---	---
	554+67, 37' RT	554+67, 94' RT	---	57	---	---	---	---
	554+69, 22' RT	555+17, 23' RT	---	---	47	---	---	---
	554+99, 37' RT	555+17, 23' RT	---	23	---	---	---	---
	555+17, 17' RT	555+17, 23' RT	---	6	---	---	---	---
	571+63, 17' LT	571+64, 17' LT	---	34	---	---	---	---
	571+64, 17' RT	571+82, 55' RT	---	---	42	---	---	---
	571+82, 55' RT	571+87, 54' RT	---	---	6	---	---	---
	571+87, 54' RT	572+18, 54' RT	---	30	---	---	---	---
	572+06, 6' RT	572+41, 6' RT	---	35	---	---	---	---
	572+40, 17' LT	572+41, 6' RT	---	23	---	---	---	---
	572+41, 6' RT	572+41, 16' RT	---	11	---	---	---	---
	572+41, 6' RT	575+18, 5' RT	---	277	---	---	---	---
	573+35, 5' RT	573+35, 17' RT	---	12	---	---	---	---
	575+18, 5' RT	577+35, 5' RT	---	217	---	---	---	---
	575+18, 5' RT	575+18, 17' RT	12	---	---	---	---	---
	577+35, 5' RT	579+62, 6' RT	---	227	---	---	---	---
	579+62, 6' RT	579+64, 22' RT	---	16	---	---	---	---
	579+62, 6' RT	579+87, 6' RT	---	25	---	---	---	---
	580+24, 6' RT	580+45, 22' RT	---	27	---	---	---	---
LAFLIN AVENUE								
	149+54, 6' RT	149+82, 6' RT	---	---	---	28	---	---
	149+82, 6' RT	150+05, 6' RT	---	---	---	23	---	---
	150+05, 6' RT	151+01, 6' RT	---	---	---	96	---	---
TOTALS			12	1,079	231	147	103	555

ABANDONING SEWER

LOCATION	204.0291.S CY
S EAST AVENUE STA 551+68 TO STA 553+70, 19' LT	300
TOTALS	300

REMOVING WOOD RETAINING WALL

LOCATION	204.9090.S.01 LF
S EAST AVENUE 573+34, 45' LT TO 32' LT	13
TOTAL	13

FINISHING ROADWAY

LOCATION	213.0100 EACH
S EAST AVENUE (I.D. 2718-11-70)	1
TOTAL	1

ALL ITEMS CATEGORY 0010 UNLESS NOTED

EARTHWORK SUMMARY

CATEGORY 0010			A	B	C	D	E	F	G	H	I	J
			ITEM # 205.0100		*	*	*	*	*	*	*	ITEM # 208.0100
Division	From/To Station	Location	Common Excavation (1) (CY)		Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Expanded EBS Backfill (6) CY	Unexpanded Fill	Expanded Fill (7) CY	Mass Ordinate +/- (8)	Waste (9)	Borrow
			Cut (CY)	EBS Excavation (2)(3) CY			Factor		Factor			
Division 1					CY	CY	1.25	CY	1.11	CY	CY	CY
	550+00-580+70	East Avenue	9,038	520	520	8,518	650	119	132	8,386	8,906	
	58+45-59+50	Estberg Avenue	207	8	65	142	10	0	0	199	207	
	69+15-70+85	Wabash Avenue	145	12	85	60	15	0	0	133	145	
	139+00-139+50	W Newhall Avenue	122	8	85	37	10	1	1	113	121	
	149+30-151+00	Lafin Avenue	151	8	70	81	10	0	0	143	151	
	799+35-800+85	College Avenue	164	6	50	114	8	0	0	158	164	
Division 1 Subtotal			9,827	562	875	8,952	703	121	134	9,131	9,693	
Grand Total			9,827	562	875	8,952	703	121	134	9,131	9,693	0
Total Common Excavation			10,389									

- 1) Common Excavation is the sum of the Cut (A) and EBS Excavation (B) columns. Item number 205.0100
- 2) EBS Excavation (B) to be backfilled with Select Crushed Material (Item #312.0110). See Select Crushed Material Table for quantity.
- 3) EBS Quantity is estimated to be 10% of total pavement area at a 16" excavation depth. It is assumed that all EBS will be wasted because there are no fill slopes available for disposal on the project.
- 4) Salvaged/Unusable Pavement Material (C) is included in Cut (A). This assumes the existing pavement is salvaged or wasted by the contractor.
- The existing pavement structure is not shown on the cross sections.
- 5) Available Material = Cut - Salvaged/Unusable Pavement Material
- 6) Expanded EBS Backfill (E) - This is to be filled with Select Crushed Material. EBS Backfill Factor = 1.25
- 7) Expanded Fill (G) = Unexpanded Fill (F) * Fill Factor (1.11)
- 8) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.
- 9) Waste is the sum of EBS Excavation (B) plus the mass ordinate (H) and excludes salvaged/unusable pavement (C).
- * FOR INFORMATION ONLY

ALL ITEMS CATEGORY 0010 UNLESS NOTED

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DRILLED TIE BARS

LOCATION	416.0610 EACH
550+00 LT/RT	4
ESTBERG AVE	4
WABASH AVE	8
FRAME AVE	4
OXFORD RD	4
HARRISON AVE	4
WINDSOR DR	4
WILSON AVE	4
E NEWHALL AVE	4
W NEWHALL AVE	4
LAFLIN AVE	8
FOUNTAIN AVE	4
COLLEGE AVE	8
580+70 LT/RT	4
TOTAL	68
*USE 2 EACH FOR CONCRETE CURB & GUTTER CONNECTIONS	

CONCRETE DRIVEWAY ITEMS

LOCATION	416.0160 CONCRETE DRIVEWAY 6-INCH SY
S EAST AVENUE	
550+00 - 554+00	100
554+00 - 560+00	110
560+00 - 566+00	85
566+00 - 572+00	70
572+00 - 578+00	115
578+00 - 580+70	34
ESTBERG AVENUE	
58+45 - 59+60	45
TOTAL	559

BASE COURSE ITEMS

LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
S EAST AVENUE		
550+00 - 554+00	45	1,500
554+00 - 560+00	40	2,200
560+00 - 566+00	55	1,950
566+00 - 572+00	40	1,750
572+00 - 578+00	30	1,800
578+00 - 580+70	45	1,200
ESTBERG AVENUE		
58+45 - 59+60	---	170
WABASH AVENUE		
69+15 - 70+85	---	230
W NEWHALL AVENUE		
139+00 - 139+60	---	180
LAFLIN AVENUE		
149+55 - 151+00	---	210
COLLEGE AVENUE		
799+35 - 800+85	---	120
UNDISTRIBUTED	---	566
TOTALS	255	11,876

SELECT CRUSHED MATERIAL

LOCATION	312.0110 SELECT CRUSHED MATERIAL TON
UNDISTRIBUTED - EBS BACKFILL	1124
TOTAL	1124

HMA PAVEMENT ITEMS

LOCATION	455.0115 ASPHALTIC MATERIAL PG64-22 TON	455.0120 ASPHALTIC MATERIAL PG64-28 TON	455.0605 TACK COAT GAL	460.1101 HMA PAVEMENT TYPE E-1 TON	460.2000 INCENTIVE DENSITY HMA PAVEMENT DOL	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON
S EAST AVE						
550+00 - 554+00	20.0	11.0	50	545	349	1
554+00 - 560+00	27.0	15.0	60	745	477	---
560+00 - 566+00	24.0	14.0	60	660	423	---
566+00 - 572+00	24.0	14.0	60	665	426	---
572+00 - 578+00	21.0	12.0	50	590	378	3
578+00 - 580+70	17.0	10.0	40	470	301	2
ESTBERG AVE						
58+45 - 59+60	3.0	2.0	6	75	48	---
WABASH AVE						
69+15 - 69+60	2.0	1.0	4	45	29	---
70+40 - 70+85	2.0	1.0	4	45	29	---
W NEWHALL AVE						
139+00 - 139+60	2.1	1.2	5	60	39	---
LAFLIN AVE						
150+40 - 151+00	2.3	1.3	5	65	42	---
COLLEGE AVE						
800+50 - 800+85	1.4	0.8	3	40	26	---
TOTALS	146	84	347	4,005	2,570	6

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ALL ITEMS CATEGORY 0010 UNLESS NOTED

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CONCRETE CURB & GUTTER ITEMS

	601.0407 CONCRETE CURB & GUTTER 18-INCH TYPE D LF	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	601.0600 CONCRETE CURB PEDESTRIAN LF	SPV.0090.11 CONCRETE CURB & GUTTER 66-INCH TYPE D LF	650.5500 CONSTRUCTION STAKING CURB, GUTTER, CURB & GUTTER LF
LOCATION	LF	LF	LF	LF	LF
S EAST AVE					
550+00 - 554+00	---	550	---	350	900
554+00 - 560+00	---	510	30	875	1,415
560+00 - 566+00	---	275	20	990	1,285
566+00 - 572+00	---	115	55	990	1,160
572+00 - 578+00	---	85	15	1,100	1,200
578+00 - 580+70	80	290	---	160	530
W NEWHALL AVE					
139+00 - 140+00	---	195	---	---	195
LAFLIN AVE					
149+60 - 151+00	---	280	---	---	280
COLLEGE AVE					
799+35 - 800+85	---	110	---	---	110
ESTBERG AVE					
56+45 - 59+60	---	145	---	---	145
WABASH AVE					
69+15 - 69+60	---	90	---	---	90
70+40 - 70+85	---	90	---	---	90
TOTALS	80	2,735	120	4,465	7,400

CONCRETE STEPS

	602.1500 CONCRETE STEPS SF
LOCATION	SF
S EAST AVENUE	
564+27 LT	9
565+26 RT	9
TOTALS	18

CONCRETE SIDEWALK

	602.0405 CONCRETE SIDEWALK 4-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	SPV.0165.01 CONCRETE SIDEWALK 4-INCH STAMPED & COLORED SF	SPV.0060.36 CONSTRUCTION STAKING CURB RAMPS EACH
LOCATION	SF	SF	SF	EACH
S EAST AVE				
550+00 - 554+00	3,300	48	---	6
554+00 - 560+00	3,300	160	---	20
560+00 - 566+00	4,100	132	---	16
566+00 - 572+00	3,050	140	---	16
572+00 - 578+00	1,900	68	---	8
578+00 - 580+70	2,500	64	610	8
TOTALS	18,150	612	610	74

ADJUSTING MANHOLE COVERS

	* CHIMNEY HEIGHT INCHES	SPV.0060.39 RECONSTRUCTING SANITARY MANHOLES EACH	SPV.0060.40 ADJUSTING SANITARY MANHOLE COVERS EACH	SPV.0060.37 INTERNAL SANITARY SEALING SYSTEM EACH
LOCATION	INCHES	EACH	EACH	EACH
CATEGORY 0040 S EAST AVENUE				
551+39, C/L	---	---	1	1
554+81, C/L	---	---	1	1
557+13, C/L	25	---	1	1
559+48, C/L	15	---	1	1
560+03, C/L	11	---	1	1
561+33, C/L	8	---	1	1
562+81, C/L	18	---	1	1
563+44, C/L	16	---	1	1
566+62, C/L	0	1	---	---
567+94, C/L	15	---	1	1
572+00, C/L	16	---	1	1
575+18, C/L	10	1	---	---
576+00, C/L	14	---	1	1
580+00, C/L	3	---	1	1
OXFORD ROAD				
90+83, 2' LT	12	---	1	---
TOTAL		2	13	12

* FOR INFORMATION PURPOSES ONLY

ALL ITEMS CATEGORY 0010 UNLESS NOTED

PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET NO:

E

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STORM SEWER ITEMS

					608.0312	608.0315	608.0318	608.0324	608.0330	608.0336	608.0342	608.0366	608.0412	608.0415	608.0418	608.0421	608.0424	608.0436	608.0442
					STORM SEWER PIPE REINFORCED CONCRETE														
FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE (FT/FT)	CLASS III					CLASS IV									
					12" (LF)	15" (LF)	18" (LF)	24" (LF)	30" (LF)	36" (LF)	42" (LF)	66" (LF)	12" (LF)	15" (LF)	18" (LF)	21" (LF)	24" (LF)	36" (LF)	42" (LF)
11A	11	81.44	81.36	0.0105	7.6	---	---	---	---	---	---	---	---	---	---	---	---	---	---
11B	11	82.59	81.92	0.0205	---	---	---	---	---	---	---	---	32.7	---	---	---	---	---	---
11C	11D	81.06	80.64	0.0311	---	---	---	---	---	---	---	---	---	---	---	---	---	13.5	---
11D	11	73.57	73.24	0.0110	---	---	---	---	---	---	30.0	---	---	---	---	---	---	---	---
11	23	73.24	72.57	0.0110	---	---	---	---	---	---	61.0	---	---	---	---	---	---	---	---
12A	12B	93.04	92.94	0.0100	---	---	---	---	---	---	---	---	10.0	---	---	---	---	---	---
12B	12C	92.94	92.66	0.0100	---	---	---	---	---	---	---	---	28.1	---	---	---	---	---	---
12C	12	92.66	92.19	0.0100	---	---	---	---	---	---	---	---	46.9	---	---	---	---	---	---
12D	12	92.11	92.00	0.0105	---	---	---	---	---	---	---	---	10.5	---	---	---	---	---	---
12	13	91.75	87.67	0.0385	---	---	---	---	---	---	---	---	---	106.0	---	---	---	---	---
13A	13	88.03	87.92	0.0105	10.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---
13B	13	88.78	88.19	0.0262	---	---	---	---	---	---	---	---	22.5	---	---	---	---	---	---
13	14	83.00	79.52	0.0150	---	---	232.0	---	---	---	---	---	---	---	---	---	---	---	---
14A	14B	87.11	87.06	0.0050	---	---	---	---	---	---	---	---	10.0	---	---	---	---	---	---
14B	14C	86.81	86.76	0.0048	---	---	---	---	---	---	---	---	---	10.5	---	---	---	---	---
14C	14F	86.51	86.36	0.0051	---	---	---	---	---	---	---	---	---	---	29.2	---	---	---	---
14D	14E	86.96	86.91	0.0050	---	---	---	---	---	---	---	---	10.0	---	---	---	---	---	---
14E	14F	86.66	86.61	0.0050	---	---	---	---	---	---	---	---	---	10.0	---	---	---	---	---
14F	14	86.11	85.18	0.0196	---	---	---	---	---	---	---	---	---	---	---	47.4	---	---	---
14G	14	85.10	84.75	0.0333	---	---	---	---	---	---	---	---	10.5	---	---	---	---	---	---
14	15	78.52	77.82	0.0070	---	---	---	---	100.0	---	---	---	---	---	---	---	---	---	---
15A	15	84.32	84.10	0.0210	10.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---
15B	15	84.72	84.49	0.0102	---	---	---	---	---	---	---	---	22.5	---	---	---	---	---	---
15	16	77.32	75.61	0.0052	---	---	---	---	---	329.0	---	---	---	---	---	---	---	---	---
16A	16	81.27	81.04	0.0219	10.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---
16B	16	82.11	81.88	0.0102	---	---	---	---	---	---	---	---	22.5	---	---	---	---	---	---
16	21	75.61	75.32	0.0052	---	---	---	---	---	55.5	---	---	---	---	---	---	---	---	---
17	18	78.73	78.60	0.0124	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10.5
18	19	78.60	78.41	0.0113	---	---	---	---	---	---	---	---	---	---	---	---	---	---	16.8
19	20	78.41	78.06	0.0117	---	---	---	---	---	---	---	---	---	---	---	---	---	---	30.0
20A	20B	82.29	82.18	0.0105	---	---	---	---	---	---	---	---	10.5	---	---	---	---	---	---
20B	20	82.18	81.97	0.0100	---	---	---	---	---	---	---	---	20.9	---	---	---	---	---	---
20C	20D	80.76	80.65	0.0105	---	---	---	---	---	---	---	---	10.5	---	---	---	---	---	---
20D	20	80.65	80.56	0.0111	---	---	---	---	---	---	---	---	8.1	---	---	---	---	---	---
20	21	78.06	77.30	0.0133	---	---	---	---	---	---	---	---	---	---	---	---	---	---	57.0
21A	21B	82.15	82.04	0.0104	---	---	---	---	---	---	---	---	10.6	---	---	---	---	---	---
21B	21D	82.04	81.48	0.0119	---	---	---	---	---	---	---	---	29.5	---	---	---	---	---	---
21C	21D	80.53	80.14	0.0371	10.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---
21D	21	80.14	79.80	0.0106	32.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---
21	22	73.84	73.09	0.0045	---	---	---	---	---	---	---	166.7	---	---	---	---	---	---	---
22A	22B	80.43	80.18	0.0245	---	---	---	---	---	---	---	---	10.2	---	---	---	---	---	---
22B	22	80.18	79.53	0.0197	---	---	---	---	---	---	---	---	33.1	---	---	---	---	---	---
22D	22C	79.90	79.69	0.0206	10.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22C	22	79.69	79.47	0.0250	8.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22	23	73.09	72.32	0.0045	---	---	---	---	---	---	---	170.2	---	---	---	---	---	---	---
SUBTOTALS					101	0	232	0	100	385	91	337	360	127	29	47	0	14	114

ALL ITEMS CATEGORY 0010 UNLESS NOTED

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STORM SEWER ITEMS

					608.0312	608.0315	608.0318	608.0324	608.0330	608.0336	608.0342	608.0366	608.0412	608.0415	608.0418	608.0421	608.0424	608.0436	608.0442
					STORM SEWER PIPE REINFORCED CONCRETE														
					CLASS III					CLASS IV									
FROM	TO	INLET	DISCH	SLOPE	12"	15"	18"	24"	30"	36"	42"	66"	12"	15"	18"	21"	24"	36"	42"
STR	STR	ELEV	ELEV	(FT/FT)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)	(LF)
23	24	72.32	71.16	0.0081	---	---	---	---	---	---	---	142.9	---	---	---	---	---	---	---
24	25	71.16	71.06	0.0079	---	---	---	---	---	---	12.5	---	---	---	---	---	---	---	---
25	EXIST	71.06	71.06	0.0000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
40A	40B	91.69	89.45	0.0278	80.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---
40B	40	89.45	89.00	0.0429	10.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---
40C	40	90.05	89.00	0.0467	22.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---
40	41	88.75	84.75	0.0320	---	---	---	---	---	---	---	---	---	125.0	---	---	---	---	---
41A	41	85.07	85.00	0.0067	---	---	---	---	---	---	---	---	10.5	---	---	---	---	---	---
41B	41	85.17	85.00	0.0076	---	---	---	---	---	---	---	---	22.5	---	---	---	---	---	---
41	42	84.75	83.54	0.0220	---	---	---	---	---	---	---	---	---	55.0	---	---	---	---	---
42A	42B	84.57	84.27	0.0102	---	---	---	---	---	---	---	---	29.5	---	---	---	---	---	---
42B	42	84.27	83.79	0.0100	---	---	---	---	---	---	---	---	48.1	---	---	---	---	---	---
42	43	83.54	82.07	0.0223	---	---	---	---	---	---	---	---	---	66.0	---	---	---	---	---
43A	43	82.43	82.32	0.0105	---	---	---	---	---	---	---	---	10.5	---	---	---	---	---	---
43B	43	82.54	82.32	0.0098	---	---	---	---	---	---	---	---	22.5	---	---	---	---	---	---
43	44	81.82	80.70	0.0170	---	---	---	---	---	---	---	---	---	---	66.1	---	---	---	---
44A	44B	81.84	81.55	0.0099	---	---	---	---	---	---	---	---	29.3	---	---	---	---	---	---
44B	44	81.55	81.20	0.0100	---	---	---	---	---	---	---	---	34.9	---	---	---	---	---	---
44	45	80.70	77.85	0.0170	---	---	---	---	---	---	---	---	---	---	167.9	---	---	---	---
45A	45	78.58	78.35	0.0219	---	---	---	---	---	---	---	---	10.5	---	---	---	---	---	---
45B	45	78.58	78.35	0.0102	---	---	---	---	---	---	---	---	22.5	---	---	---	---	---	---
45	59	77.85	75.05	0.0170	---	---	---	---	---	---	---	---	---	---	165.0	---	---	---	---
46A	46	81.86	81.70	0.0103	---	---	---	---	---	---	---	---	15.5	---	---	---	---	---	---
46	47	81.70	81.41	0.0095	---	---	---	---	---	---	---	---	30.4	---	---	---	---	---	---
47	48	81.41	80.91	0.0136	---	---	---	---	---	---	---	---	36.7	---	---	---	---	---	---
48A	48B	82.22	82.17	0.0050	---	---	---	---	---	---	---	---	10.0	---	---	---	---	---	---
48B	48D	82.17	82.00	0.0050	---	---	---	---	---	---	---	---	34.0	---	---	---	---	---	---
48C	48D	82.10	82.00	0.0100	---	---	---	---	---	---	---	---	10.0	---	---	---	---	---	---
48D	48	82.00	81.55	0.0100	---	---	---	---	---	---	---	---	45.2	---	---	---	---	---	---
48	49	80.91	80.79	0.0098	---	12.2	---	---	---	---	---	---	---	---	---	---	---	---	---
49A	49	81.54	81.04	0.0101	---	---	---	---	---	---	---	---	49.3	---	---	---	---	---	---
49	50	80.79	80.41	0.0103	---	37.0	---	---	---	---	---	---	---	---	---	---	---	---	---
50A	50	81.22	80.66	0.0352	15.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---
50B	50	82.10	81.58	0.0170	---	---	---	---	---	---	---	---	30.6	---	---	---	---	---	---
50	51	80.41	79.95	0.0102	---	45.0	---	---	---	---	---	---	---	---	---	---	---	---	---
51A	51	80.20	80.08	0.0100	12.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---
51	52	79.95	79.04	0.0060	---	---	152.0	---	---	---	---	---	---	---	---	---	---	---	---
52A	52	79.78	79.54	0.0229	10.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---
52B	52	81.25	80.51	0.0329	---	---	---	---	---	---	---	---	22.5	---	---	---	---	---	---
52	53	79.04	76.03	0.0124	---	---	---	243.0	---	---	---	---	---	---	---	---	---	---	---
53A	53	76.97	76.53	0.0419	10.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---
53B	53	77.60	77.48	0.0050	23.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---
53	54	76.03	73.87	0.0124	---	---	---	---	---	---	---	---	---	---	---	---	175.0	---	---
54A	54	74.71	74.37	0.0318	---	---	---	---	---	---	---	---	10.7	---	---	---	---	---	---
SUBTOTALS					101	0	232	0	100	385	91	337	360	127	29	47	0	14	114
					ALL ITEMS CATEGORY 0010 UNLESS NOTED														

PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET NO:

E

STORM SEWER ITEMS

					608.0312	608.0315	608.0318	608.0324	608.0330	608.0336	608.0342	608.0366	608.0412	608.0415	608.0418	608.0421	608.0424	608.0436	608.0442
					STORM SEWER PIPE REINFORCED CONCRETE														
FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE (FT/FT)	CLASS III					CLASS IV									
					12" (LF)	15" (LF)	18" (LF)	24" (LF)	30" (LF)	36" (LF)	42" (LF)	66" (LF)	12" (LF)	15" (LF)	18" (LF)	21" (LF)	24" (LF)	36" (LF)	42" (LF)
54B	54	74.73	74.61	0.0053	---	---	---	---	---	---	---	---	22.5	---	---	---	---	---	---
54	55	73.87	72.79	0.0124	---	---	---	---	---	---	---	---	---	---	---	---	87.0	---	---
55A	55	73.80	73.29	0.0486	10.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---
55B	55	74.97	74.46	0.0227	---	---	---	---	---	---	---	---	22.5	---	---	---	---	---	---
55	56	72.79	71.77	0.0241	---	---	---	42.4	---	---	---	---	---	---	---	---	---	---	---
56A	56B	---	0.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
56B	56	---	0.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
56	EXIST	71.77	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
57	58	74.04	73.08	0.0160	---	---	---	---	---	---	---	---	---	---	---	---	---	60.0	---
58A	58B	74.62	74.35	0.0255	---	---	---	---	---	---	---	---	10.6	---	---	---	---	---	---
58B	58	74.35	74.08	0.0124	---	---	---	---	---	---	---	---	21.7	---	---	---	---	---	---
58C	58D	74.64	74.35	0.0236	---	---	---	---	---	---	---	---	12.3	---	---	---	---	---	---
58D	58	74.35	74.08	0.0346	---	---	---	---	---	---	---	---	7.8	---	---	---	---	---	---
58	60	73.08	72.32	0.0160	---	---	---	---	---	---	---	---	---	---	---	---	---	47.2	---
59A	59	75.27	75.01	0.0248	---	---	---	---	---	---	---	---	10.5	---	---	---	---	---	---
59B	59	75.27	75.01	0.0116	---	---	---	---	---	---	---	---	22.5	---	---	---	---	---	---
59	60	74.55	73.32	0.0251	---	---	---	---	---	---	---	---	---	---	---	---	49.0	---	---
60	61	72.32	71.28	0.0160	---	---	---	---	---	---	---	---	---	---	---	---	---	65.0	---
61	EXIST	71.28	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SUBTOTALS					11	0	0	42	0	0	0	0	130	0	0	0	136	172	0
TOTALS					298	94	384	285	100	385	104	480	1026	373	428	47	311	186	114

1. PIPE LENGTHS ARE MEASURED TO THE CENTER OF STRUCTURES.

ALL ITEMS CATEGORY 0010 UNLESS NOTED

STORM SEWER ITEMS

STRUCTURE NUMBER	STATION	OFFSET	611.2004	611.2005	611.2006	SPV.0060.03	SPV.0060.35	611.1230	611.0420	SPV.0060.01	SPV.0060.02	520.8000	RIM OR FLANGE ELEV	STR DEPTH FEET
			MANHOLE 4-FT DIAMETER EACH	MANHOLE 5-FT DIAMETER EACH	MANHOLE 6-FT DIAMETER EACH	MH 9-FT DIAMETER EACH	MH 10-FT DIAMETER EACH	CATCH BASIN 2X3-FT EACH	RECONSTRUCTING MANHOLES EACH	MANHOLE COVER SPECIAL EACH	INLET COVER SPECIAL EACH	CONCRETE COLLARS FOR PIPE EACH		
11A	550+74	19.5' LT	---	---	---	---	---	1	---	---	1	---	85.99	3.7
11B	550+74	19.5' RT	---	---	---	---	---	1	---	---	1	---	86.58	3.2
11C	550+30	22.1' LT	---	1	---	---	---	---	---	1	---	---	86.58	4.4
11D	550+40	13' LT	---	---	1	---	---	---	---	1	---	---	86.45	11.7
11	550+70	13' LT	---	---	1	---	---	---	---	1	---	---	86.10	11.7
12A	563+17.9	52.1' RT	---	---	---	---	---	1	---	---	1	---	97.34	3.5
12B	563+17.6	42.1' RT	---	---	---	---	---	1	---	---	1	---	96.84	3.1
12C	562+89.6	40.9' RT	---	---	---	---	---	1	---	---	1	---	96.93	3.4
12D	562+90	16.5' LT	---	---	---	---	---	1	---	---	1	---	95.59	2.6
12	562+90	6' LT	1	---	---	---	---	---	---	1	---	---	95.77	2.9
13A	561+84	16.5' LT	---	---	---	---	---	1	---	---	1	---	92.58	3.7
13B	561+84	16.5' RT	---	---	---	---	---	1	---	---	1	---	93.06	3.4
13	561+84	6' LT	1	---	---	---	---	---	---	1	---	---	92.76	8.6
14A	90+63	14.6' LT	---	---	---	---	---	1	---	---	1	---	90.45	2.5
14B	90+53	14.6' LT	---	---	---	---	---	1	---	---	1	---	90.22	2.6
14C	90+42.5	14.6' LT	---	---	---	---	---	1	---	---	1	---	89.83	2.5
14D	90+61	14.6' RT	---	---	---	---	---	1	---	---	1	---	90.47	2.7
14E	90+51	14.6' RT	---	---	---	---	---	1	---	---	1	---	90.38	2.9
14F	90+41	14.6' RT	---	---	---	---	---	1	---	---	1	---	90.29	3.3
14G	559+52	16.5' LT	---	---	---	---	---	1	---	---	1	---	89.40	3.5
14	559+52	6' LT	---	1	---	---	---	---	---	1	---	---	89.59	9.9
15A	558+52	16.5' LT	---	---	---	---	---	1	---	---	1	---	88.87	3.7
15B	558+52	16.5' RT	---	---	---	---	---	1	---	---	1	---	88.88	3.3
15	558+52	6' LT	---	1	---	---	---	---	---	1	---	---	89.06	10.6
16A	555+23	16.5' LT	---	---	---	---	---	1	---	---	1	---	85.82	3.7
16B	555+23	16.5' RT	---	---	---	---	---	1	---	---	1	---	85.82	2.9
16	555+23	6' LT	---	1	---	---	---	---	---	1	---	---	86.01	9.2
17	70+97.3	19.4' RT	---	---	1	---	---	---	---	1	---	---	86.09	6.2
18	70+88	14.5' RT	---	---	1	---	---	---	---	1	---	---	85.32	5.6
19	70+73.2	6.6' RT	---	---	1	---	---	---	---	1	---	---	85.22	5.6
20A	70+53	14.3' LT	---	---	---	---	---	1	---	---	1	---	85.13	2.0
20B	70+42.5	14.3' LT	---	---	---	---	---	1	---	---	1	---	85.07	2.1
20C	70+54	14.6' RT	---	---	---	---	---	1	---	---	1	---	85.11	3.5
20D	70+43.5	14.6' RT	---	---	---	---	---	1	---	---	1	---	85.04	3.6
20	70+43.2	6.6' RT	---	---	1	---	---	---	---	---	---	---	85.22	6.8
21A	69+48	14.7' LT	---	---	---	---	---	1	---	---	1	---	85.10	2.1
21B	69+58.6	14.7' LT	---	---	---	---	---	1	---	---	1	---	85.05	2.2
21C	69+44	14.5' RT	---	---	---	---	---	1	---	---	1	---	85.08	3.7
21D	69+54.5	14.5' RT	---	---	---	---	---	1	---	---	1	---	84.99	4.0
21	554+67.9	13' LT	---	---	---	1	---	---	---	---	---	---	85.42	11.2
22A	552+85	19.5' RT	---	---	---	---	---	1	---	---	1	---	84.55	3.3
22B	552+95.2	19.5' RT	---	---	---	---	---	1	---	---	1	---	84.54	3.5
22D	552+85	19.5' LT	---	---	---	---	---	1	---	---	1	---	84.45	3.7
22C	552+95.2	19.5' LT	---	---	---	---	---	1	---	---	1	---	84.38	3.9
22	553+01.2	13.5' LT	---	---	---	1	---	---	---	1	---	---	84.64	10.4
SUBTOTALS			2	4	6	2	0	31	0	12	31	0	ALL ITEMS CATEGORY 0010 UNLESS NOTED	

PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET NO:

E

3

STORM SEWER ITEMS

STRUCTURE NUMBER	STATION	OFFSET	611.2004 MANHOLE	611.2005 MANHOLE	611.2006 MANHOLE	SPV.0060.03 MH	SPV.0060.35 MH	611.1230 CATCH	611.0420 RECONSTRUCTING	SPV.0060.01 MANHOLE	SPV.0060.02 INLET	520.8000 CONCRETE	RIM OR FLANGE ELEV	STR DEPTH FEET
			4-FT DIAMETER EACH	5-FT DIAMETER EACH	6-FT DIAMETER EACH	9-FT DIAMETER EACH	10-FT DIAMETER EACH	2X3-FT EACH	MANHOLES EACH	COVER SPECIAL EACH	COVER SPECIAL EACH	COLLARS FOR PIPE EACH		
23	551+31	13.0' LT	---	---	---	---	1	---	---	1	---	---	85.55	12.1
24	58+44	7.0' RT	---	---	---	1	---	---	---	1	---	---	84.51	12.2
25	58+32.7	12.4' RT	---	---	---	1	---	---	---	1	---	---	84.25	12.0
40A	564+19.5	16.5' LT	---	---	---	---	---	1	---	---	1	---	96.24	3.7
40B	565+00	16.5' LT	---	---	---	---	---	1	---	---	1	---	94.00	3.7
40C	565+00	16.5' RT	---	---	---	---	---	1	---	---	1	---	94.60	3.7
40	565+00	6' LT	1	---	---	---	---	---	---	1	---	---	94.19	4.3
41A	566+25	16.5' LT	---	---	---	---	---	1	---	---	1	---	88.61	2.7
41B	566+25	16.5' RT	---	---	---	---	---	1	---	---	1	---	88.21	2.2
41	566+25	6' LT	1	---	---	---	---	---	---	1	---	---	88.80	2.9
42A	566+49.9	40.9' RT	---	---	---	---	---	1	---	---	1	---	88.82	3.4
42B	566+79.3	42.1' RT	---	---	---	---	---	1	---	---	1	---	88.21	3.1
42	566+80	6' LT	1	---	---	---	---	---	---	1	---	---	87.28	2.6
43A	567+46	16.5' LT	---	---	---	---	---	1	---	---	1	---	85.94	2.7
43B	567+46	16.5' RT	---	---	---	---	---	1	---	---	1	---	86.54	3.2
43	567+46	6' LT	1	---	---	---	---	---	---	1	---	---	86.13	3.1
44A	567+82.3	42.1' LT	---	---	---	---	---	1	---	---	1	---	85.00	2.3
44B	568+11.6	40.9' LT	---	---	---	---	---	1	---	---	1	---	85.00	2.6
44	568+12	6' LT	1	---	---	---	---	---	---	1	---	---	85.38	3.5
45A	569+80	16.5' LT	---	---	---	---	---	1	---	---	1	---	82.18	2.8
45B	569+80	16.5' RT	---	---	---	---	---	1	---	---	1	---	82.18	2.8
45	569+80	6' LT	1	---	---	---	---	---	---	1	---	---	82.37	3.4
46A	580+54	21.5' RT	---	---	---	---	---	1	---	---	1	---	85.31	2.6
46	580+54	6' RT	1	---	---	---	---	---	---	1	---	---	85.48	2.6
47	580+23.6	6' RT	---	---	---	---	---	---	1	1	---	---	85.82	3.2
48A	800+61	19.5' LT	---	---	---	---	---	1	---	---	1	---	85.60	2.5
48B	800+51	19.5' LT	---	---	---	---	---	1	---	---	1	---	85.46	2.5
48C	800+61	14.5' RT	---	---	---	---	---	1	---	---	1	---	85.67	2.7
48D	800+51	14.5' RT	---	---	---	---	---	1	---	---	1	---	85.59	2.8
48	579+87	6.2' RT	1	---	---	---	---	---	---	1	---	---	86.10	4.0
49A	799+45	22' RT	---	---	---	---	---	1	---	---	1	---	84.81	2.4
49	579+87	6' LT	1	---	---	---	---	---	---	1	---	---	86.10	4.1
50A	579+50	21.9' LT	---	---	---	---	---	1	---	---	1	---	85.77	3.7
50B	579+58	23.5' RT	---	---	---	---	---	1	---	---	1	---	85.74	2.8
50	579+50	6' LT	1	---	---	---	---	---	---	1	---	---	86.06	4.5
51A	579+05	6.1' RT	---	---	---	---	---	---	---	---	---	1	---	---
51	579+05	6' LT	1	---	---	---	---	---	---	1	---	---	85.83	4.7
52A	577+53	16.5' LT	---	---	---	---	---	1	---	---	1	---	84.83	4.2
52B	577+53	16.5' RT	---	---	---	---	---	1	---	---	1	---	84.83	2.7
52	577+53	6' LT	1	---	---	---	---	---	---	1	---	---	85.02	4.8
53A	575+10	16.5' LT	---	---	---	---	---	1	---	---	1	---	82.02	4.2
53B	575+18	16.5' RT	---	---	---	---	---	1	---	---	1	---	82.15	3.7
53	575+10	6' LT	1	---	---	---	---	---	---	1	---	---	82.21	5.0
54A	573+33	16.5' LT	---	---	---	---	---	1	---	---	1	---	79.26	3.7
SUBTOTALS			13	0	0	2	1	26	1	17	26	1	ALL ITEMS CATEGORY 0010 UNLESS NOTED	

PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET NO:

E

STORM SEWER ITEMS

STRUCTURE NUMBER	STATION	OFFSET	611.2004	611.2005	611.2006	SPV.0060.03	SPV.0060.35	611.1230	611.0420	SPV.0060.01	SPV.0060.02	520.8000	RIM OR FLANGE ELEV	STR DEPTH FEET
			MANHOLE 4-FT DIAMETER EACH	MANHOLE 5-FT DIAMETER EACH	MANHOLE 6-FT DIAMETER EACH	MH 9-FT DIAMETER EACH	MH 10-FT DIAMETER EACH	CATCH BASIN 2X3-FT EACH	RECONSTRUCTING MANHOLES EACH	MANHOLE COVER SPECIAL EACH	INLET COVER SPECIAL EACH	CONCRETE COLLARS FOR PIPE EACH		
54B	573+35	16.5' RT	---	---	---	---	---	1	---	---	1	---	79.28	3.7
54	573+35	6' LT	1	---	---	---	---	---	---	1	---	---	79.47	4.4
55A	572+48	16.5' LT	---	---	---	---	---	1	---	---	1	---	78.35	3.7
55B	572+48	16.5' RT	---	---	---	---	---	1	---	---	1	---	78.35	2.5
55	572+48	6' LT	1	---	---	---	---	---	---	1	---	---	78.54	4.6
56A	150+54	20.6' RT	---	---	---	---	---	---	1	1	---	---	79.14	78.0
56B	572+05.9	5.7' RT	---	---	---	---	---	---	1	1	---	---	78.37	77.2
56	572+05.6	6' LT	---	---	1	---	---	---	---	1	---	---	78.37	5.4
57	151+01	6.2' RT	---	1	---	---	---	---	---	1	---	---	79.54	4.3
58A	150+53	15.3' LT	---	---	---	---	---	1	---	---	1	---	78.17	2.7
58B	150+42.4	15.3' LT	---	---	---	---	---	1	---	---	1	---	77.90	2.7
58C	150+53	14.1' RT	---	---	---	---	---	1	---	---	1	---	78.19	2.7
58D	150+40.7	14.1' RT	---	---	---	---	---	1	---	---	1	---	77.90	2.7
58	150+41	6.3' RT	---	---	1	---	---	---	---	1	---	---	78.08	3.8
59A	571+45	16.5' LT	---	---	---	---	---	1	---	---	1	---	78.57	2.5
59B	571+45	16.5' RT	---	---	---	---	---	1	---	---	1	---	78.57	2.5
59	571+45	6' LT	1	---	---	---	---	---	---	1	---	---	78.76	3.0
60	571+94	6' LT	---	---	1	---	---	---	---	1	---	---	78.39	4.9
61	149+28.8	5.4' RT	---	---	1	---	---	---	---	1	---	---	76.66	4.2
SUBTOTALS			3	1	4	0	0	9	2	10	9	0		
TOTALS			18	5	10	4	1	66	3	39	66	1		

1. RIM ELEVATIONS ARE GIVEN AT THE FLANGE LINE FOR INLET GRATES OR THE CENTER OF THE MANHOLE STRUCTURE FOR MANHOLES.
2. ALL OFFSETS TO STRUCTURES ARE FROM CENTERLINE OF ROAD TO CENTER OF STRUCTURE, EXCEPT FOR CATCH BASINS WHICH ARE FROM CENTERLINE TO FACE OF CURB.
3. STR DEPTH = RIM ELEV - INV - CASTING HEIGHT - ADJUSTMENT + 24" SUMP FOR CATCH BASINS
CASTING HEIGHT = 10" FOR MANHOLE COVERS, 6" FOR INLET COVERS
ADJUSTMENT = 4" TYPICAL

ALL ITEMS CATEGORY 0010 UNLESS NOTED

3

EROSION CONTROL ITEMS

	628.1104	628.1504	628.1520	628.1905	628.1910	628.2004	628.7005	628.7015	628.7560	628.7570
	EROSION	SILT	FENCE	MOBILIZATIONS	MOBILIZATIONS	EROSION	INLET	INLET	TRACKING	ROCK
	BALES	FENCE	MAINTENANCE	EROSION	EMERGENCY	MAT	PROTECTION	PROTECTION	PADS	BAGS
				CONTROL	EROSION	CLASS I	TYPE A	TYPE C		
					CONTROL	TYPE B				
LOCATION	EACH	LF	LF	EACH	EACH	SY	EACH	EACH	EACH	EACH
S. East Ave										
550+00 - 554+00	---	---	---	---	---	---	14	14	---	---
554+00 - 560+00	---	20	10	---	---	---	11	11	---	---
560+00 - 566+00	---	---	---	---	---	---	9	9	---	---
566+00 - 572+00	---	---	---	---	---	---	12	12	---	---
572+00 - 578+00	---	---	---	---	---	---	8	8	---	---
578+00 - 581+00	---	---	---	---	---	---	8	8	---	---
UNDISTRIBUTED	100	200	100	10	5	100	20	20	2	50
TOTALS	100	220	110	10	5	100	82	82	2	50

DUST CONTROL SURFACE TREATMENT

	623.0200
LOCATION	SY
S EAST AVENUE	
STA 550+00 - STA 554+00	3360
STA 554+00 - STA 560+00	4920
STA 560+00 - STA 566+00	4360
STA 566+00 - STA 572+00	3920
STA 572+00 - STA 578+00	4030
STA 578+00 - STA 580+70	2690
W NEWHALL AVENUE	
STA 139+00 - STA 139+60	410
LAFLIN AVENUE	
STA 149+55 - STA 151+00	470
COLLEGE AVENUE	
STA 799+35 - STA 800+85	270
TOTAL	
	24,430
NOTE: TO BE PLACED AS DIRECTED BY THE ENGINEER FOR DUST CONTROL.	

3

PIPE UNDERDRAIN

	*
	612.0406
	PIPE
	UNDERDRAIN
	WRAPPED
	6-INCH
LOCATION	LF
S EAST AVENUE	
553+00 LT	200
553+00 RT	200
571+50 LT	200
571+50 RT	200
TOTALS	
	800
*FOR USE AT ROADWAY LOWPOINTS IN EBS AREAS AS DIRECTED BY ENGINEER. CONNECT TO NEAREST INLET (INCIDENTAL TO PIPE UNDERDRAIN 6-INCH).	

RESTORATION ITEMS

	625.0100	629.0210	630.0300	631.0300	631.1000
	TOPSOIL	FERTILIZER	SEEDING	SOD	SOD
		TYPE B	BORROW	WATER	LAWN
			PIT		
LOCATION	SY	CWT	LB	MGAL	SY
S. East Ave					
550+00 - 554+00	970	1.0	---	30	970
554+00 - 560+00	1,300	1.0	---	40	1,300
560+00 - 566+00	1,300	1.0	---	40	1,300
566+00 - 572+00	1,350	1.0	---	40	1,350
572+00 - 578+00	1,150	1.0	---	30	1,150
578+00 - 581+00	400	1.0	---	10	400
WASTE SITE					
	0	0	200	0	0
UNDISTRIBUTED					
	650	1.5	0	20	650
TOTALS					
	7,120	8	200	210	7,120

WATER

	624.0100
LOCATION	MGAL
UNDISTRIBUTED	50
TOTAL	
	50

LANDMARK REFERENCE MONUMENTS

	621.0100	
	LANDMARK	
	REFERENCE	
	MONUMENTS	
LOCATION	DESCRIPTION	EACH
S EAST AVE		
STA 553+25.28	QUARTER CORNER	1
W QUARTER CORNER		
SEC 11, T6N, R19E		
STA 580+00.46	SECTION CORNER	1
STA 580+36.26	WITNESS MONUMENT	1
STA 579.99.18	WITNESS MONUMENT	1
NE 1/4 SEC 11, T6N, R19E		
TOTAL		4

ALL ITEMS CATEGORY 0010 UNLESS NOTED

PERMANENT SIGNING									
		637.0202		637.0402		634.0812		634.0814	
		SIGN		SIGN		POST TUBULAR		POST TUBULAR	
		TYPE II		REFLECTIVE		STEEL POSTS		STEEL POSTS	
		SIGN		FOLDING		2X2-INCH		2X2-INCH	
		SIZE		SIGN AREA		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	
		(in)		(SF)		(EACH)		(EACH)	
		SIGN		SIGN		SIGN		SIGN	
		CODE		TYPE II		X 12 FT		X 14 FT	
		SIZE		TYPE II		X 12 FT		X 14 FT	

PERMANENT SIGNING (CONT'D)

SIGN #	SIGN CODE	SIGN SIZE	SIGN SIZE (in)	637.0202	637.0402	634.0812	634.0814	SIGN MOUNTED ON SAME POST AS #	REMARKS
				SIGNS, TYPE II REFLECTIVE SIGN AREA (SF)	SIGNS REFLECTIVE FOLDING TYPE II (SF)	POST TUBULAR STEEL POSTS 2X2-INCH X 12 FT (EACH)	POST TUBULAR STEEL POSTS 2X2-INCH X 14 FT (EACH)		
2-01	D11-1	(2)	24X18	3.00	---	---	1	2-02	BIKE ROUTE WITH SYMBOL
2-02	M7-1	(2)	12X9	0.75	---	---	---	2-01	ARW LEFT OR RIGHT (BIKE ROUTE)
2-03	R7-1D	(2)	18X24	3.00	---	---	---	ON LIGHT POLE	NO PARKING ANY TIME DOUBLE ARROW
2-04	R3-17	(2)	30X24	5.00	---	---	1	---	BIKE LANE (BIKE SYMBOL)
2-05	R1-1	(2)	30X30	5.18	---	---	1	2-06	STOP SIGN
2-06	W4-4P	(2)	24X12	2.00	---	---	---	2-05	CROSS TRAFFIC DOES NOT STOP
2-07	W11-1	(2)	30X30	6.25	---	---	1	2-08	BICYCLE SYMBOL (BLACK MESSAGE WITH FLUORESCENT YELLOW-GREEN BACKGROUND)
2-08	W16-7L	(2)	24X12	2.00	---	---	---	2-07	LEFT DIAGONAL DOWNWARD POINTING ARROW (BLACK MESSAGE WITH FLUORESCENT YELLOW-GREEN BACKGROUND)
2-09	R7-1D	(2)	18X24	3.00	---	---	---	ON LIGHT POLE	NO PARKING ANY TIME DOUBLE ARROW
2-10	R2-1	(2)	24X30	5.00	---	---	1	---	SPEED LIMIT 25 MPH
2-11	R7-1D	(2)	18X24	3.00	---	---	1	---	NO PARKING ANY TIME DOUBLE ARROW
2-12	R7-1D	(2)	18X24	3.00	---	---	---	ON LIGHT POLE	NO PARKING ANY TIME DOUBLE ARROW
2-13	S1-1	(2)	36X36	6.75	---	---	---	ON LIGHT POLE	SCHOOL ADVANCE SYMBOL (BLACK MESSAGE WITH FLUORESCENT YELLOW-GREEN BACKGROUND)
2-14	W16-9P	(2)	24X12	2.00	---	---	---	ON LIGHT POLE	AHEAD PLAQUE (BLACK MESSAGE WITH FLUORESCENT YELLOW-GREEN BACKGROUND)
2-15	R7-1D	(2)	18X24	3.00	---	---	---	ON LIGHT POLE	NO PARKING ANY TIME DOUBLE ARROW
2-16	R3-17	(2)	30X24	5.00	---	---	---	ON LIGHT POLE	BIKE LANE (BIKE SYMBOL)
2-17	D11-1	(2)	24X18	3.00	---	---	1	2-18	BIKE ROUTE WITH SYMBOL
2-18	M7-1	(2)	12X9	0.75	---	---	---	2-17	ARW LEFT OR RIGHT (BIKE ROUTE)
2M-3	---	---	---	---	---	---	---	2-17	GLACIAL DRUMLIN TRAIL
2-19	R7-1D	(2)	18X24	3.00	---	---	---	ON LIGHT POLE	NO PARKING ANY TIME DOUBLE ARROW
2-20	R3-17	(2)	30X24	5.00	---	---	---	ON LIGHT POLE	BIKE LANE (BIKE SYMBOL)
2-21	R1-1	(2)	30X30	5.18	---	---	1	2-22	STOP SIGN
2-22	W4-4P	(2)	24X12	2.00	---	---	---	2-21	CROSS TRAFFIC DOES NOT STOP
2-23	R7-2D	(2)	18X24	3.00	---	---	1	---	NO PARKING TIME TO TIME DOUBLE ARROW
2-24	W11-1	(2)	30X30	6.25	---	---	1	2-25	BICYCLE SYMBOL (BLACK MESSAGE WITH FLUORESCENT YELLOW-GREEN BACKGROUND)
2-25	W16-7L	(2)	24X12	2.00	---	---	---	2-24	LEFT DIAGONAL DOWNWARD POINTING ARROW (BLACK MESSAGE WITH FLUORESCENT YELLOW-GREEN BACKGROUND)
2-26	R7-1D	(2)	18X24	3.00	---	---	1	---	NO PARKING ANY TIME DOUBLE ARROW
2-27	R3-17	(2)	30X24	5.00	---	---	1	---	BIKE LANE (BIKE SYMBOL)
2-28	R1-1	(2)	30X30	5.18	---	---	1	---	STOP SIGN
2-29	S1-1	(2)	36X36	6.75	---	---	---	ON LIGHT POLE	SCHOOL ADVANCE SYMBOL (BLACK MESSAGE WITH FLUORESCENT YELLOW-GREEN BACKGROUND)
2-30	W16-7L	(2)	24X12	2.00	---	---	---	ON LIGHT POLE	LEFT DIAGONAL DOWNWARD POINTING ARROW (BLACK MESSAGE WITH FLUORESCENT YELLOW-GREEN BACKGROUND)
2-31	R7-1D	(2)	18X24	3.00	---	---	1	---	NO PARKING ANY TIME DOUBLE ARROW
2-32	R7-1D	(2)	18X24	3.00	---	---	1	---	NO PARKING ANY TIME DOUBLE ARROW
2-33	S1-1	(2)	36X36	6.75	---	---	---	ON LIGHT POLE	SCHOOL ADVANCE SYMBOL (BLACK MESSAGE WITH FLUORESCENT YELLOW-GREEN BACKGROUND)
2-34	W16-9P	(2)	24X12	2.00	---	---	---	ON LIGHT POLE	AHEAD PLAQUE (BLACK MESSAGE WITH FLUORESCENT YELLOW-GREEN BACKGROUND)
2-35	R7-1D	(2)	18X24	3.00	---	---	---	ON LIGHT POLE	NO PARKING ANY TIME DOUBLE ARROW
2-36	R7-1D	(2)	18X24	3.00	---	---	---	ON LIGHT POLE	NO PARKING ANY TIME DOUBLE ARROW
2-37	R7-1D	(2)	18X24	3.00	---	---	---	ON LIGHT POLE	NO PARKING ANY TIME DOUBLE ARROW
2-38	R2-1	(2)	24X30	5.00	---	---	---	ON LIGHT POLE	SPEED LIMIT __ MPH
2-39	R7-1D	(2)	18X24	3.00	---	---	1	---	NO PARKING ANY TIME DOUBLE ARROW
2-40	S1-1	(2)	36X36	6.75	---	---	---	ON LIGHT POLE	SCHOOL ADVANCE SYMBOL (BLACK MESSAGE WITH FLUORESCENT YELLOW-GREEN BACKGROUND)
2-41	W16-7L	(2)	24X12	2.00	---	---	---	ON LIGHT POLE	LEFT DIAGONAL DOWNWARD POINTING ARROW (BLACK MESSAGE WITH FLUORESCENT YELLOW-GREEN BACKGROUND)
2-42	R1-1	(2)	30X30	5.18	---	---	1	---	STOP SIGN
2-43	R7-51L	(2)	18X24	3.00	---	---	1	---	NO PARKING HERE TO CORNER LEFT ARROW
2-44	R7-53D	(2)	18X24	3.00	---	---	1	---	NO PARKING ON THIS SIDE DOUBLE ARROW
2-45	R7-1D	(2)	18X24	3.00	---	---	1	---	NO PARKING ANY TIME DOUBLE ARROW
2-46	D11-1	(2)	24X18	3.00	---	---	1	2-47	BIKE ROUTE WITH SYMBOL
2-47	M7-1	(2)	12X9	0.75	---	---	---	2-46	ARW LEFT OR RIGHT (BIKE ROUTE)
2-48	D11-1	(2)	24X18	3.00	---	---	1	2-49	BIKE ROUTE WITH SYMBOL
2-49	M7-1	(2)	12X9	0.75	---	---	---	2-48	ARW LEFT OR RIGHT (BIKE ROUTE)
3-01	R7-1D	(2)	18X24	3.00	---	---	1	---	NO PARKING ANY TIME DOUBLE ARROW
3-02	R3-17	(2)	30X24	5.00	---	---	---	ON LIGHT POLE	BIKE LANE (BIKE SYMBOL)
3-03	R1-1	(2)	30X30	5.18	---	---	1	---	STOP SIGN
3-04	R7-1D	(2)	18X24	3.00	---	---	1	---	NO PARKING ANY TIME DOUBLE ARROW

SUBTOTAL 188.40 0.00 0 25

ALL ITEMS CATEGORY 0010 UNLESS NOTED

PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET NO:

E

PERMANENT SIGNING (CONT'D)

				637.0202	637.0402	634.0812	634.0814		
				SIGNS,	SIGNS	POST TUBULAR	POST TUBULAR		
				TYPE II	REFLECTIVE	STEEL POSTS	STEEL POSTS		
				REFLECTIVE	FOLDING	2X2-INCH	2X2-INCH		
				SIGN AREA	TYPE II	X 12 FT	X 14 FT		
				(SF)	(SF)	(EACH)	(EACH)		
SIGN #	SIGN CODE	SIGN SIZE	SIGN SIZE (in)					SIGN MOUNTED ON SAME POST AS #	REMARKS
3-05	R2-1	(2)	24X30	5.00	---	---	1	---	SPEED LIMIT 25 MPH
3-06	R7-1D	(2)	18X24	3.00	---	---	---	ON LIGHT POLE	NO PARKING ANY TIME DOUBLE ARROW
3-07	R3-17	(2)	30X24	5.00	---	---	1	3-08	BIKE LANE (BIKE SYMBOL)
3-08	R3-17A	(2)	30X12	2.50	---	---	---	3-07	BIKE LANE AHEAD PLAQUE
3-09	R5-2	(2)	24X24	4.00	---	---	1	3-10	NO TRUCKS SYMBOL
3-10	R5-2A	(2)	24X12	2.00	---	---	---	3-09	3 TONS OR OVER
3-11	R3-7L	(2)	30X30	6.25	---	---	1	---	LEFT LANE MUST TURN LEFT
3-12	R7-1D	(2)	18X24	3.00	---	---	---	ON LIGHT POLE	NO PARKING ANY TIME DOUBLE ARROW
3-13	R3-8W	(2)	30X54	11.25	---	---	2	---	LEFT ONLY / AHEAD ONLY / RIGHT ONLY
3-14	R3-7R	(2)	30X30	6.25	---	---	---	ON SIGNAL POLE	RIGHT LANE MUST TURN RIGHT
3-15	R1-1F	(2)	30X30	---	5.18	---	---	ON SIGNAL POLE	STOP SIGN (FOLDING)
3-16	D9-2	(2)	24X24	4.00	---	---	1	3-17	H (HOSPITAL)
3-17	MB6-1	(2)	21X21	3.06	---	---	---	3-16	ARW RIGHT LEFT OR AHEAD, BLUE
3-18	R5-2	(2)	24X24	4.00	---	---	1	3-19	NO TRUCKS SYMBOL
3-19	R5-2A	(2)	24X12	2.00	---	---	---	3-18	5 TONS OR OVER
3-20	R10-15R	(2)	30X30	6.25	---	---	---	ON SIGNAL POLE	RIGHT TURN YIELD TO PEDESTRIANS (SYMBOL)
3-21	R1-1F	(2)	30X30	---	5.18	---	---	ON SIGNAL POLE	STOP SIGN (FOLDING)
3-22	W11-2	(2)	30X30	6.25	---	---	1	3-23	PEDESTRIAN CROSSING SYMBOL (BLACK MESSAGE WITH FLUORESCENT YELLOW-GREEN BACKGROUND)
3-23	W16-9P	(2)	24X12	2.00	---	---	---	3-22	AHEAD PLAQUE (BLACK MESSAGE WITH FLUORESCENT YELLOW-GREEN BACKGROUND)
3-24	R5-2	(2)	24X24	4.00	---	---	1	3-25	NO TRUCKS SYMBOL
3-25	R5-2A	(2)	24X12	2.00	---	---	---	3-24	5 TONS OR OVER
3-26	R10-15R	(2)	30X30	6.25	---	---	---	ON SIGNAL POLE	RIGHT TURN YIELD TO PEDESTRIANS (SYMBOL)
3-27	R1-1F	(2)	30X30	---	5.18	---	---	ON SIGNAL POLE	STOP SIGN (FOLDING)
3-28	R3-7L	(2)	30X30	6.25	---	---	1	---	LEFT LANE MUST TURN LEFT
3-29	R5-2	(2)	24X24	4.00	---	---	1	3-30	NO TRUCKS SYMBOL
3-30	R5-2A	(2)	24X12	2.00	---	---	---	3-29	5 TONS OR OVER
3-31	R10-15R	(2)	30X30	6.25	---	---	---	ON SIGNAL POLE	RIGHT TURN YIELD TO PEDESTRIANS (SYMBOL)
3-32	R3-7L	(2)	30X30	6.25	---	---	1	---	LEFT LANE MUST TURN LEFT
3-33	R1-1F	(2)	30X30	---	5.18	---	---	ON SIGNAL POLE	STOP SIGN (FOLDING)
3-34	R3-17	(2)	30X24	5.00	---	---	---	ON LIGHT POLE	BIKE LANE (BIKE SYMBOL)
3-35	R3-17B	(2)	30X12	2.50	---	---	---	ON LIGHT POLE	BIKE LANE ENDS PLAQUE
3-36	D9-2	(2)	24X24	4.00	---	---	1	3-37	H (HOSPITAL)
3-37	MB6-1	(2)	21X21	3.06	---	---	---	3-36	ARW RIGHT LEFT OR AHEAD, BLUE
3-38	R7-1D	(2)	18X24	3.00	---	---	---	ON LIGHT POLE	NO PARKING ANY TIME DOUBLE ARROW
3-39	R7-1D	(2)	18X24	3.00	---	---	---	ON LIGHT POLE	NO PARKING ANY TIME DOUBLE ARROW
SUBTOTAL				133.37	20.72	0	14		
TOTALS				527.46	20.72	1	75		

ALL ITEMS CATEGORY 0010 UNLESS NOTED

3

REMOVING SIGNS							
SIGN #	SIGN CODE	SIGN MOUNTED ON SAME POST AS #	638.2602	638.3000	638.2102	638.4000	REMARKS
			REMOVING	REMOVING	MOVING	MOVING	
			SIGNS TYPE II (EACH)	SMALL SIGN SUPPORTS (EACH)	SIGNS TYPE II (EACH)	SMALL SIGN SUPPORTS (EACH)	
0R-1	R1-1	---	1	1	---	---	STOP SIGN
0R-2	W11-2	---	1	1	---	---	PEDESTRIAN CROSSING SYMBOL
0R-3	R2-1	ON LIGHT POLE	1	---	---	---	SPEED LIMIT __ MPH
0M-1	---	ON POWER POLE	---	---	1	---	CITY OF WAUKESHA "HISTORIC DOWNTOWN" AHEAD ARROW
1R-1	W11-2	ON LIGHT POLE	1	---	---	---	PEDESTRIAN CROSSING SYMBOL
1R-2	R1-1	---	1	1	---	---	STOP SIGN
1R-3	R5-2	1R-4	1	---	---	---	NO TRUCKS SYMBOL
1R-4	R5-2A	1R-3	1	1	---	---	OVER 3 TONS
1R-5	R1-1	---	1	1	---	---	STOP SIGN
1R-6	R2-1	---	1	1	---	---	SPEED LIMIT 25 MPH
1R-7	R1-1	ON LIGHT POLE	1	---	---	---	STOP SIGN
1R-8	R1-1	---	1	1	---	---	STOP SIGN
1R-9	R1-1	---	1	1	---	---	STOP SIGN
1R-10	R1-1	---	1	1	---	---	STOP SIGN
1R-11	W11-2	---	1	1	---	---	PEDESTRIAN CROSSING SYMBOL
1R-12	R1-1	---	1	1	---	---	STOP SIGN
2R-1	R1-1	2R-2	1	---	---	---	STOP SIGN
2R-2	R1-52C	2R-1	1	1	---	---	CROSS TRAFFIC DOES NOT STOP
2M-1	---	---	---	---	1	1	NEW BERLIN TRAIL
2R-3	R3-17	2M-2	1	---	---	---	BIKE LANE
2M-2	---	2R-3	---	---	1	1	NEW BERLIN TRAIL
2R-4	S1-1	ON LIGHT POLE	1	---	---	---	SCHOOL ADVANCE ZONE
2R-5	W16-9P	ON LIGHT POLE	1	---	---	---	AHEAD
2R-6	R3-17	2M-3	1	---	---	---	BIKE LANE
2M-3	---	2R-6	---	1	1	---	GLACIAL DRUMLIN TRAIL
2R-7	R1-1	2R-8	1	---	---	---	STOP SIGN
2R-8	R1-52C	2R-7	1	1	---	---	CROSS TRAFFIC DOES NOT STOP
2R-9	R7-108(MOD)	---	1	1	---	---	NO PARKING 2 AM TO 6 AM
2R-10	R1-1	---	1	1	---	---	STOP SIGN
2R-11	S1-1	ON POWER POLE	1	---	---	---	SCHOOL ADVANCE ZONE
2R-12	W16-7L	ON POWER POLE	1	---	---	---	LEFT DIAGONAL DOWNWARD POINTING ARROW
2R-13	R7-1D	---	1	1	---	---	NO PARKING ANY TIME DOUBLE ARROW
2R-14	R7-108(MOD)	---	1	1	---	---	NO PARKING SEPT 1 TO JUNE 1 EXCEPT HOLIDAYS
2R-15	S1-1	2R-16	1	---	---	---	SCHOOL ADVANCE ZONE
2R-16	W16-9P	2R-15	1	1	---	---	AHEAD
2R-17	R7-1(MOD)	ON LIGHT POLE	1	---	---	---	NO PARKING SYMBOL DOUBLE ARROW
2R-18	R7-1(MOD)	ON LIGHT POLE	1	---	---	---	NO PARKING SYMBOL DOUBLE ARROW
2R-19	S1-1	2R-20	1	---	---	---	SPEED LIMIT 25 MPH
2R-20	R7-53(MOD)	2R-19	1	1	---	---	NO PARKING SYMBOL ON THIS SIDE
2R-21	S1-1	2R-22	1	---	---	---	SCHOOL ADVANCE ZONE
2R-22	W16-7L	2R-21	1	1	---	---	LEFT DIAGONAL DOWNWARD POINTING ARROW
2R-23	R1-1	---	1	1	---	---	STOP SIGN
2R-24	R7-51	---	1	1	---	---	NO PARKING HERE TO CORNER
2R-25	R7-53	---	1	1	---	---	NO PARKING ON THIS SIDE
SUBTOTAL			40	24	4	2	

3

REMOVING SIGNS							
SIGN #	SIGN CODE	SIGN MOUNTED ON SAME POST AS #	638.2602	638.3000	638.2102	638.4000	REMARKS
			REMOVING	REMOVING	MOVING	MOVING	
			SIGNS TYPE II (EACH)	SMALL SIGN SUPPORTS (EACH)	SIGNS TYPE II (EACH)	SMALL SIGN SUPPORTS (EACH)	
3R-1	R1-1	---	1	1	---	---	STOP SIGN
3R-2	R7-1(MOD)	---	1	1	---	---	NO PARKING SYMBOL DOUBLE ARROW
3R-3	S1-1	3R-4	1	---	---	---	SCHOOL ADVANCE ZONE
3R-4	R7-1	3R-3	1	1	---	---	NO PARKING ANY TIME
3R-5	R5-2	3R-6	1	---	---	---	NO TRUCKS SYMBOL
3R-6	R5-2A	3R-5	1	1	---	---	OVER 5 TONS
3R-7	R10-11S(MOD)	ON SIGNAL POLE	1	---	---	---	NO TURN ON RED WHEN PEDESTRIANS ARE PRESENT
3R-8	R3-7L	ON SIGNAL POLE	1	---	---	---	LEFT LANE MUST TURN LEFT
3R-9	R1-1F	ON SIGNAL POLE	1	---	---	---	STOP SIGN (FOLDING)
3R-10	D9-2	---	1	1	---	---	H (HOSPITAL)
3R-11	R5-2	ON SIGNAL POLE	1	---	---	---	NO TRUCKS SYMBOL
3R-12	R5-2A	ON SIGNAL POLE	1	---	---	---	OVER 5 TONS
3R-13	R10-11B	ON SIGNAL POLE	1	---	---	---	NO TURN ON RED
3R-14	S4-2(MOD)	ON SIGNAL POLE	1	---	---	---	WHEN PEDESTRIANS ARE PRESENT
3R-15	R1-1F	ON SIGNAL POLE	1	---	---	---	STOP SIGN (FOLDING)
3R-16	W11-2	3R-17	1	---	---	---	PEDESTRIAN CROSSING SYMBOL
3R-17	W16-9P	3R-16	1	1	---	---	AHEAD
3R-18	R5-2	ON SIGNAL POLE	1	---	---	---	NO TRUCKS SYMBOL
3R-19	R5-2A	ON SIGNAL POLE	1	---	---	---	OVER 5 TONS
3R-20	R3-7L	ON SIGNAL POLE	1	---	---	---	LEFT LANE MUST TURN LEFT
3R-21	R1-1F	ON SIGNAL POLE	1	---	---	---	STOP SIGN (FOLDING)
3R-22	R5-2	3R-23	1	---	---	---	NO TRUCKS SYMBOL
3R-23	R5-2A	3R-22	1	1	---	---	OVER 5 TONS
3R-24	R10-11B	ON SIGNAL POLE	1	---	---	---	NO TURN ON RED
3R-25	S4-2(MOD)	ON SIGNAL POLE	1	---	---	---	WHEN PEDESTRIANS ARE PRESENT
3R-26	R3-7L	ON SIGNAL POLE	1	---	---	---	LEFT LANE MUST TURN LEFT
3R-27	R1-1F	ON SIGNAL POLE	1	---	---	---	STOP SIGN (FOLDING)
3R-28	D9-2	ON LIGHT POLE	1	---	---	---	H (HOSPITAL)
3R-29	D9-2(MOD)	ON LIGHT POLE	1	---	---	---	HOSPITAL LEFT ARROW
3R-30	R7-1(MOD)	ON LIGHT POLE	1	---	---	---	NO PARKING SYMBOL DOUBLE ARROW
3R-31	R7-1(MOD)	ON LIGHT POLE	1	---	---	---	NO PARKING SYMBOL DOUBLE ARROW
3M-1	---	---	---	---	1	1	CITY OF WAUKESHA DIRECTIONAL SIGN
SUBTOTAL			31	7	1	1	
TOTALS			71	31	5	3	

ALL ITEMS CATEGORY 0010 UNLESS NOTED

3

PAVEMENT MARKING

646.0600 646.0881.S 646.0883.S SPV.0060.04 SPV.0060.05 SPV.0060.06 SPV.0060.07 SPV.0060.08 SPV.0060.09 SPV.0090.01 SPV.0090.02												
REMOVING PAVEMENT MARKINGS	GROOVED WET REFLECTIVE TAPE				GROOVED PREFORMED PLASTIC							
	4-INCH		8-INCH	ARROWS TYPE 2	WORDS PLASTIC	ARROWS BIKE LANE	WORDS BIKE LANE	SYMBOLS BIKE LANE	SYMBOLS BIKE SHARED LANE	STOP LINE 18-INCH WHITE	CROSSWALK 6-INCH WHITE	
	WHITE	YELLOW	WHITE									
	LF	LF	LF	WHITE EACH	WHITE EACH	LANE EACH	LANE EACH	LANE EACH	EACH	LF	LF	
S EAST AVE												
550+00 - 554+00	---	985	585	---	---	1	---	1	---	---	---	---
554+00 - 560+00	---	985	750	---	---	3	---	3	---	30	255	
560+00 - 566+00	---	940	680	---	---	4	---	4	---	---	---	
566+00 - 571+00	---	835	715	---	---	10	4	8	6	---	---	
571+00 - 576+00	---	820	820	---	---	2	---	2	---	30	230	
576+00 - 581+00	---	520	715	85	1	1	2	3	2	45	185	
COLLEGE AVE												
798+50 - 801+00	---	---	255	200	3	3	---	---	---	50	160	
UNDISTRIBUTED	100	---	---	---	---	---	---	---	---	---	---	
		5,085	4,520									
TOTALS	100	9,605	285	4	4	22	7	20	6	155	830	

CONSTRUCTION STAKING STORM SEWER SYSTEM

DESCRIPTION	650.4000 EACH
MANHOLE 4-FT DIAMETER	18
MANHOLE 5-FT DIAMETER	5
MANHOLE 6-FT DIAMETER	10
MANHOLE 9-FT DIAMETER	3
MANHOLE 10-FT DIAMETER	1
CATCH BASIN 2X3-FT	66
RECONSTRUCTING MANHOLES	3
TOTAL	106

FIELD OFFICE TYPE C

LOCATION	642.5201 EACH
S. EAST AVENUE (I.D. 2718-11-70)	1
TOTAL	1

TRAFFIC CONTROL

		643.0100 TRAFFIC CONTROL	643.2000 TRAFFIC CONTROL DETOUR
PROJECT	EACH	EACH	
ID 2718-11-70	1	1	
TOTAL	1	1	

MOBILIZATION

LOCATION	619.1000 EACH
S. EAST AVENUE (I.D. 2718-11-70)	1
TOTAL	1

FENCE SAFETY

LOCATION	616.0700.S LF
UNDISTRIBUTED	100
TOTAL	100

CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS

LOCATION	650.8500 LS
S. EAST AVENUE (I.D. 2718-11-70)	1
TOTAL	1

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

LOCATION	650.9910 LS
S. EAST AVENUE (I.D. 2718-11-70)	1
TOTAL	1

CONSTRUCTION STAKING RIGHT-OF-WAY

DESCRIPTION	SPV.0060.38 EACH
104 Windsor Drive	1
320 South East Avenue	1
122 South East Avenue	1
TOTAL	3

SAWING CONCRETE

LOCATION	690.0250 LF
S. EAST AVENUE	
550+00 - 554+00	110
554+00 - 560+00	145
560+00 - 566+00	150
566+00 - 572+00	130
572+00 - 578+00	75
578+00 - 580+70	65
PROJECT TOTAL	675

ALL ITEMS CATEGORY 0010 UNLESS NOTED

TREE ROOT SAWING					
STATION	OFFSET	TREE DIAMETER (INCHES)	EXCAVATION LIMITS BEHIND CURB	HAND FORM CURB (YES OR NO)	SPV.0090.10 TREE ROOT SAWING (LF)
S EAST AVE					
550+38	25' LT	16	2'	NO	14
550+72	25' LT	11	2'	NO	14
551+80	25' RT	14	2'	NO	14
552+51	25' LT	4	2'	NO	14
552+54	25' RT	5	2'	NO	14
552+89	25' LT	8	2'	NO	14
553+59	25' LT	14	2'	NO	14
555+40	23' RT	6	2'	NO	14
555+82	23' LT	11	2'	NO	14
556+16	22' LT	11	2'	NO	14
556+56	23' RT	2	2'	NO	14
556+88	22' LT	12	2'	NO	14
557+37	22' LT	22	1'	YES	20
557+42	24' RT	12	1'	NO	14
557+92	24' RT	10	2'	NO	14
558+36	24' RT	10	2'	NO	14
558+53	22' LT	12	1'	NO	14
559+04	23' LT	16	1'	NO	14
559+41	23' LT	11	2'	NO	14
559+95	23' LT	10	1'	NO	14
560+38	22' LT	13	2'	NO	14
560+42	24' RT	12	2'	NO	14
560+88	24' RT	3	2'	NO	14
561+86	25' RT	11	2'	NO	14
562+23	22' LT	9	1'	NO	14
562+63	22' LT	9	1'	NO	14
563+34	22' LT	8	1'	NO	14
563+78	21' RT	14	1'	YES	14
563+90	22' LT	14	1'	NO	14
564+19	22' RT	13	1'	YES	14
564+71	22' RT	16	1' BY HAND	YES	22
565+25	21' LT	14	1' BY HAND	YES	14
565+58	22' LT	14	1' BY HAND	YES	14
566+31	21' LT	12	1' BY HAND	YES	14
566+87	21' LT	6	1'	NO	14
567+34	23' RT	14	1'	NO	14
567+48	21' LT	11	1'	NO	14
568+00	23' RT	10	2'	NO	14
568+48	22' RT	4	2'	NO	14
568+73	22' LT	11	2'	NO	14
569+09	22' LT	10	1'	YES	14
569+50	21' LT	28	1' BY HAND	YES	30
569+67	22' RT	10	1'	NO	14
570+28	22' RT	22	1'	YES	14
570+31	22' LT	25	1' BY HAND	YES	30
SUBTOTAL					676

TREE ROOT SAWING					
STATION	OFFSET	TREE DIAMETER (INCHES)	EXCAVATION LIMITS BEHIND CURB	HAND FORM CURB (YES OR NO)	SPV.0090.10 TREE ROOT SAWING (LF)
570+53	22' RT	7	1'	NO	14
570+80	23' LT	11	2'	NO	14
571+01	22' RT	15	1'	YES	20
571+23	23' LT	14	2'	NO	14
571+40	22' RT	22	1'	YES	14
572+60	23' LT	14	2'	NO	14
573+55	22' LT	10	2'	NO	14
573+97	23' LT	10	2'	NO	14
574+64	22' LT	11	1'	NO	14
574+78	22' RT	11	2'	NO	14
574+99	22' LT	17	1'	YES	14
575+47	22' LT	9	2'	NO	14
576+03	22' LT	17	2'	NO	14
576+50	21' LT	2	2'	NO	14
576+55	23' RT	12	2'	NO	14
577+12	23' RT	15	2'	NO	14
577+28	24' LT	2	1'	NO	14
577+60	23' LT	9	2'	NO	14
577+68	20' RT	5	1'	NO	14
577+78	20' RT	5	1'	NO	14
578+12	24' LT	13	2'	NO	14
578+13	20' RT	11	1'	NO	14
578+72	24' LT	16	2'	NO	14
ESTBERG AVE					
58+63	20' RT	10	2'	NO	14
58+73	20' LT	7	2'	NO	14
59+19	19' RT	9	2'	NO	14
59+26	20' LT	11	2'	NO	14
WABASH AVE					
69+19	17' RT	20	2'	NO	14
69+39	18' LT	18	2'	NO	14
70+72	19' RT	11	2'	NO	14
FRAME AVE					
79+37	18' RT	16	2'	NO	14
OXFORD AVE					
90+60	20' RT	16	2'	NO	14
90+72	20' LT	9	2'	NO	14
W NEWHALL AVE					
139+00	24' RT	12	2'	NO	14
LAFLIN AVE					
150+61	21' RT	14	2'	NO	14
150+94	21' RT	16	2'	NO	14
SUBTOTAL					510
TOTAL					1,186

TEST ROLLING

SPV.0170.01
TEST
ROLLING

LOCATION	STA
N. EAST AVENUE	
550+00 - 554+0	4
554+00 - 560+0	6
560+00 - 566+0	6
566+00 - 572+0	6
572+00 - 578+0	6
578+00 - 580+7	3

TOTALS 31

GEOGRID REINFORCEMENT

*
SPV.0180.01
GEOGRID
REINFORCEMENT

LOCATION	SY
S EAST AVENUE	1,200
ESTBERG AVENUE	13
WABASH AVENUE	27
W NEWHALL AVENUE	18
LAFLIN AVENUE	18
COLLEGE AVENUE	13

TOTALS 1,289

*FOR USE AS DIRECTED BY THE
ENGINEER IN EBS AREAS.

ALL ITEMS CATEGORY 0010 UNLESS NOTED

3

NON-METALLIC CONDUIT

LOCATION	LOCATION	652.0225	652.0235	CONSTRUCTION
		CONDUIT RIGID NONMETALLIC SCHEDULE 40, 2-INCH LF	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	
EAST AVE AT COLLEGE AVE	CB1-PB1	-	15	TRENCH
	PB1-PB2	-	50	TRENCH
	PB2-EXPB2	10	-	TRENCH
	PB2-SB1	25	-	TRENCH
	PB2-PB3	-	80	TRENCH
	PB3-SB2	25	-	TRENCH
	PB3-PB4	-	110	TRENCH
	PB4-SB3	10	-	TRENCH
	PB4-PB5	-	110	TRENCH
	PB5-SB4	10	-	TRENCH
	PB5-PB6	-	90	TRENCH
	PB6-SB5	15	-	TRENCH
	PB6-PB7	-	110	TRENCH
	EXPB1-PB7	10	-	TRENCH
	PB7-SB6	10	-	TRENCH
	PB7-PB8	-	50	TRENCH
	PB8-SB7	15	-	TRENCH
	PB8-PB9	-	120	TRENCH
	PB9-SB8	5	-	TRENCH
	PB9-PB10	-	60	TRENCH
	PB10-CB1	-	15	TRENCH
TOTAL		135	810	

CONCRETE BASES

LOCATION	SB NO.	(1)	(1)	654.0101	654.0102	654.0217
		STATION	OFFSET	CONCRETE BASES TYPE 1 EACH	CONCRETE BASES TYPE 2 EACH	CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
EAST AVE AT COLLEGE AVE	CB1	800+60.0	44.3 LT	-	-	1
	SB1	800+44.7	23.9 LT	1	-	-
	SB2	800+37.3	18.3 RT	-	1	-
	SB3	800+26.5	39.1 RT	-	1	-
	SB4	799+72.3	39.2 RT	1	-	-
	SB5	799+56.8	25.6 RT	1	-	-
	SB6	799+49.7	30.9 LT	-	1	-
	SB7	799+72.6	50.6 LT	1	-	-
		SB8	800+25.2	41.3 LT	1	-
TOTAL				4	4	1
(1) STATION/OFFSET ARE APPROXIMATE.						

3

PULL BOXES

LOCATION	PB NO.	(1)	(1)	653.0140
		STATION	OFFSET	PULLBOXES, STEEL, 24X42-INCH EACH
EAST AVE AT COLLEGE AVE	PB1	800+65.3	44.9 LT	1
	PB2	800+57.5	22.6 LT	1
	PB3	800+59.0	17.7 RT	1
	PB4	800+25.8	47.2 RT	1
	PB5	799+72.7	45.5 RT	1
	PB6	799+40.9	24.9 RT	1
	PB7	799+43.9	29.2 LT	1
	PB8	799+65.4	40.3 LT	1
	PB9	800+24.2	38.2 LT	1
	PB10	800+54.7	45.0 LT	1
TOTAL				10
(1) STATION/OFFSET ARE APPROXIMATE.				

TRAFFIC SIGNAL CABLE

LOCATION	LOCATION	655.0240 *	655.0260
		CABLE TRAFFIC SIGNAL 7-14 AWG LF	CABLE TRAFFIC SIGNAL 12-14 AWG LF
EAST AVE AT COLLEGE AVE	CB1-SB1	-	100
	CB1-SB2	-	140
	CB1-SB3	-	180
	CB1-SB4	-	235
	CB1-SB5	-	235
	CB1-SB6	-	175
	CB1-SB7	-	155
	CB1-SB8	-	85
INSIDE POLES		800	-
TOTAL		800	1,305
* ADDITIONAL QUANTITIES SHOWN ELSEWHERE			

PEDESTRIAN TRAFFIC SIGNAL CABLE

LOCATION	LOCATION	655.0240 *
		CABLE TRAFFIC SIGNAL 7-14 AWG LF
EAST AVE AT COLLEGE AVE	CB1-SB1	80
	SB1-SB2	110
	SB2-SB3	110
	SB3-SB4	95
	SB4-SB5	90
	SB5-SB6	100
	SB6-SB7	70
	SB7-SB8	100
SB8-CB1		60
TOTAL		815
* ADDITIONAL QUANTITIES SHOWN ELSEWHERE		

SIGNAL FACES

			658.0110 TRAFFIC SIGNAL FACES, 3-12 INCH VERTICAL R-Y-G	658.0120 TRAFFIC SIGNAL FACES, 5-12 INCH VERTICAL R-Y-G<-Y<-G	658.0215 BACKPLATES, SIGNAL FACE 3-SECTION 12-INCH	658.0225 BACKPLATES, SIGNAL FACE 5-SECTION 12-INCH	658.0412 PEDESTRIAN SIGNAL FACE 12-INCH	658.0600 LED MODULES 12-INCH RED BALL	658.0605 LED MODULES 12-INCH YELLOW BALL	658.0610 LED MODULES 12-INCH GREEN BALL	658.0620 LED MODULES 12-INCH YELLOW ARROW	658.0625 LED MODULES 12-INCH GREEN ARROW	658.0660 LED MODULES PEDESTRIAN COUNTDOWN TIMER 12-INCH EACH
LOCATION	SB NO.	HEAD NO.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
EAST AVE AT COLLEGE AVE	SB1	2	-	1	-	1	-	1	1	1	1	1	-
		4	1	-	1	-	-	1	1	1	-	-	-
		13	-	-	-	-	2	-	-	-	-	-	1
	SB2	3	-	1	-	1	-	1	1	1	1	1	-
		18	-	-	-	-	2	-	-	-	-	-	1
	SB3	8	1	-	1	-	-	1	1	1	-	-	-
		10	1	-	1	-	-	1	1	1	-	-	-
		19	-	-	-	-	2	-	-	-	-	-	1
	SB4	9	1	-	1	-	-	1	1	1	-	-	-
		16	-	-	-	-	2	-	-	-	-	-	1
	SB5	1	1	-	1	-	-	1	1	1	-	-	-
		5	1	-	1	-	-	1	1	1	-	-	-
		17	-	-	-	-	2	-	-	-	-	-	1
	SB6	6	1	-	1	-	-	1	1	1	-	-	-
		14	-	-	-	-	2	-	-	-	-	-	1
	SB7	7	1	-	1	-	-	1	1	1	-	-	-
11		-	1	-	1	-	1	1	1	1	1	-	
15		-	-	-	-	2	-	-	-	-	-	1	
SB8	12	-	1	-	1	-	1	1	1	1	1	-	
	20	-	-	-	-	2	-	-	-	-	-	1	
TOTAL			8	4	8	4	16	12	12	12	4	4	8

SIGNAL BASES, MAST ARMS, AND LUMINAIRES

			657.0100 PEDESTAL BASES	657.0255 TRANSFORMER BASES, BREAKAWAY 11 1/2-INCH BOLT CIRCLE	657.0310 POLES, TYPE 3	657.0315 POLES, TYPE 4	657.0425 TRAFFIC SIGNAL STANDARDS, ALUMINUM, 15-FT	657.0585 TROMBONE ARMS, 15-FT	657.0590 TROMBONE ARMS, 20-FT	SPV.0060.11 PEDESTRIAN PUSH BUTTONS, SPECIAL	SPV.0060.13 LED LUMINAIRES	657.0615 LUMINAIRE ARMS, SINGLE MEMBER, 4 1/2-INCH CLAMP, 8-FT
LOCATION	SB NO.		EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
EAST AVE AT COLLEGE AVE	SB1		1	-	-	-	1	-	-	1	-	-
	SB2		-	1	1	-	-	1	-	1	1	1
	SB3		-	1	-	1	-	-	-	1	1	1
	SB4		1	-	-	-	1	-	-	1	-	-
	SB5		1	-	-	-	1	-	-	1	-	-
	SB6		-	1	1	-	-	-	1	1	1	1
	SB7		1	-	-	-	1	-	-	1	-	-
	SB8		-	1	-	1	-	-	-	1	1	1
TOTAL			4	4	2	2	4	1	1	8	4	4

EQUIPMENT GROUNDING CONDUCTORS

		655.0515 * ELECTRICAL WIRE, TRAFFIC SIGNALS, 10 AWG (GREEN) LF
LOCATION	LOCATION	
EAST AVE AT COLLEGE AVE	CB1-SB1	70
	SB1-SB2	105
	SB2-SB3	105
	SB3-SB4	90
	SB4-SB5	85
	SB5-SB6	95
	SB6-SB7	65
	SB7-SB8	95
	SB8-CB1	55
TOTAL		765
* ADDITIONAL QUANTITIES SHOWN ELSEWHERE		

LIGHTING ELECTRICAL WIRE

		655.0305 CABLE TYPE UF, 2-12 AWG GROUNDED LF	655.0610 ELECTRICAL WIRE, LIGHTING, 12 AWG LF
LOCATION	LOCATION		
EAST AVE AT COLLEGE AVE	CB1-SB2	155	-
	SB2-LUMINAIRE 1	-	110
	SB2-SB3	150	-
	SB3-LUMINAIRE 1	-	110
	CB1-SB8	100	-
	SB8-LUMINAIRE 1	-	110
	SB8-SB6	160	-
	SB6-LUMINAIRE 1	-	110
TOTAL		565	440

PULL BOX BONDING JUMPERS

		655.0515 * ELECTRICAL WIRE, TRAFFIC SIGNALS, 10 AWG (GREEN) LF
LOCATION	LOCATION	
EAST AVE AT COLLEGE AVE	CB1-PB1	20
	SB1-PB2	40
	SB2-PB3	40
	SB3-PB4	25
	SB4-PB5	25
	SB5-PB6	30
	SB6-PB7	25
	SB7-PB8	30
	SB8-PB9	20
	CB1-PB10	20
TOTAL		275
* ADDITIONAL QUANTITIES SHOWN ELSEWHERE		

TRAFFIC SIGNAL INTERCONNECT

		655.0410 COMMUNICATIONS CABLE INSTALLED IN CONDUIT L.F.
LOCATION	LOCATION	
EAST AVE AT COLLEGE AVE	EXPB1-PB7	10
	PB7-PB8	30
	PB8-PB9	65
	PB9-PB10	40
	PB10-CB1	10
	CB1-PB1	10
	PB1-PB2	35
	PB2-EXPB2	10
TOTAL		210

MISCELLANEOUS ITEMS

LOCATION	ITEM NUMBER	UNIT	QUANTITY	DESCRIPTION
EAST AVE AT COLLEGE AVE	656.0200.01	LS	1	ELECTRICAL SERVICE METER BREAKER PEDESTAL
	658.5069.01	LS	1	SIGNAL MOUNTING HARDWARE
	SPV.0060.10	EACH	1	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 8-PHASE
	SPV.0060.12	EACH	1	VIDEO MONITOR
	SPV.0105.01	LS	1	VIDEO VEHICLE DETECTION SYSTEM
	SPV.0105.02	LS	1	MODIFY TRAFFIC SIGNALS AND STREET LIGHTING
	SPV.0105.03	LS	1	EMERGENCY VEHICLE PREEMPTION SYSTEM

TEMPORARY LIGHTING UNIT QUANTITIES
COLLEGE AVE

LABEL	LOCATION*	SPV.0060.20	SPV.0060.21
		TEMPORARY	REMOVING TEMPORARY
		LIGHTING UNITS	LIGHTING UNITS
		EACH	EACH
T1	800+46, 18'RT	1	1
T2	580+57, 24'RT	1	1
T3	579+55, 26'LT	1	1
T4	799+36, 29'LT	1	1
TOTALS		4	4

*EXACT LOCATION TO BE VERIFIED IN THE FIELD AND
ADJUSTED AS NEEDED.

AERIAL CABLE QUANTITIES
COLLEGE AVE

LOCATION TO LOCATION	SPV.0090.03	SPV.0090.04	SPV.0090.05
	AERIAL CABLE	AERIAL CABLE	REMOVING
	ALUMINUM TRIPLEX	ALUMINUM QUADPLEX	AERIAL CABLE
	2 AWG	2 AWG	
	LF	LF	LF
EPB2 TO T1		40	40
T1 TO T2	80		80
T1 TO T3		80	80
T3 TO T4	85		85
TOTALS	165	120	285

LIGHTING CONTROL QUANTITIES

SYSTEM	LABEL	656.0400.01	SPV.0060.15
		ELECTRICAL SERVICE	LIGHTING
		MAIN LUGS ONLY	CONTROL
		METER PEDESTAL	CABINET
		EACH	EACH
SE100	CABINET SE100	1	1
TOTALS		1	1

LIGHTING UNIT REMOVAL QUANTITIES

LABEL	204.0195	SPV.0060.14
	REMOVING	REMOVING
	CONCRETE BASES	LIGHTING UNITS
	EACH	EACH
E1	1	1
E3	1	1
E4	1	1
E5	1	1
E6	1	1
E7	1	1
E8	1	1
E9	1	1
E10	1	1
TOTALS	9	9

LIGHTING PULL BOX REMOVAL QUANTITIES

LABEL	653.0905
	REMOVING
	PULL BOXES
	EACH
EPB1	1
TOTAL	1

LIGHTING PULL BOX QUANTITIES

LOCATION	LABEL	653.0135	SPV.0060.18	SPV.0060.19
		PULL BOXES	PULL BOXES	PULL BOXES
		STEEL	PVC	COMPOSITE
		24X36-INCH	15X30-INCH	24X36X42-INCH
		EACH	EACH	EACH
554+43, 24'RT	LPB1	1		
555+09, 24'RT	LPB2		1	
555+09, 24'LT	LPB3		1	
552+97, 23' RT	LPB4		1	
550+50, 24' RT	LPB4A		1	
90+36,18'RT*	LPB30		1	
100+35, 18'LT*	LPB40		1	
568+86, 23.6'LT	PB-F7			1
572+27, 24.8'LT	PB-F8			1
572+25, 36' RT	PB-F8A		1	
TOTALS		1	7	2

*LOCATION TO BE ADJUSTED IN FIELD AS NEEDED TO INTERCEPT EXISTING CONDUIT

LIGHTING UNIT QUANTITIES (1 OF 2)

SYSTEM (CIRCUIT)	LABEL	LUMINAIRE VOLTAGE	654.0105 CONCRETE BASES TYPE 5 EACH	SPV.0060.16 DECORATIVE LIGHTING UNITS EACH	SPV.0060.17 DECORATIVE LIGHTING UNIT CONCRETE BASES EACH	SPV.0060.34 STANDARD LIGHTING UNITS EACH
SE100	SE24/C	240 VAC		1	1	
SE100	SE26/D	240 VAC		1	1	
SE100	SE28/C	240 VAC		1	1	
SE100	SE30/D	240 VAC		1	1	
SE100	SE32/C	240 VAC		1	1	
SE100	SE34/D	240 VAC		1	1	
SE100	SE36/C	240 VAC		1	1	
SE100	SE38/D	240 VAC		1	1	
SE100	SE40/C	240 VAC		1	1	
SE100	SE42/D	240 VAC		1	1	
SE100	SE44/C	240 VAC		1	1	
SE100	SE46/D	240 VAC		1	1	
SE100	SE48/C	240 VAC		1	1	
SE100	SE50/D	240 VAC		1	1	
SE100	SE52/C	240 VAC		1	1	
SE100	SE54/D	240 VAC		1	1	
SE100	SE56/C	240 VAC		1	1	
SE100	SE58/D	240 VAC		1	1	
SE100	SE60/C	240 VAC		1	1	
SE100	SE62/D	240 VAC		1	1	
SE100	SE64/C	240 VAC		1	1	
SE100	SE66/D	240 VAC		1	1	
SE100	SE68/C	240 VAC		1	1	
SE100	SE70/D	240 VAC		1	1	
SE100	SE72/C	240 VAC		1	1	
SE100	SE74/D	240 VAC		1	1	
SE100	SE76/C	240 VAC		1	1	
SE100	SE78/D	240 VAC		1	1	
		SUBTOTALS		28	28	0

LIGHTING UNIT QUANTITIES (2 OF 2)

SYSTEM (CIRCUIT)	LABEL	LUMINAIRE VOLTAGE	654.0105 CONCRETE BASES TYPE 5 EACH	SPV.0060.16 DECORATIVE LIGHTING UNITS EACH	SPV.0060.17 DECORATIVE LIGHTING UNIT CONCRETE BASES EACH	SPV.0060.34 STANDARD LIGHTING UNITS EACH
SE100	SE23/C	240 VAC		1	1	
SE100	SE25/D	240 VAC		1	1	
SE100	SE27/C	240 VAC		1	1	
SE100	SE29/D	240 VAC		1	1	
SE100	SE31/C	240 VAC		1	1	
SE100	SE33/D	240 VAC		1	1	
SE100	SE35/C	240 VAC		1	1	
SE100	SE37/D	240 VAC		1	1	
SE100	SE39/C	240 VAC		1	1	
SE100	SE41/D	240 VAC		1	1	
SE100	SE43/C	240 VAC		1	1	
SE100	SE45/D	240 VAC		1	1	
SE100	SE47/C	240 VAC		1	1	
SE100	SE49/D	240 VAC		1	1	
SE100	SE51/C	240 VAC		1	1	
SE100	SE53/D	240 VAC		1	1	
SE100	SE55/C	240 VAC		1	1	
SE100	SE57/D	240 VAC		1	1	
SE100	SE59/C	240 VAC		1	1	
SE100	SE61/D	240 VAC		1	1	
SE100	SE63/C	240 VAC		1	1	
SE100	SE65/D	240 VAC		1	1	
SE100	SE67/C	240 VAC		1	1	
SE100	SE69/D	240 VAC		1	1	
SE100	SE71/C	240 VAC		1	1	
SE100	SE73/D	240 VAC		1	1	
SE100	SE75/C	240 VAC		1	1	
SE100	SE77/D	240 VAC		1	1	
SE100	SE79/C	240 VAC		1	1	
SE100	SE20/B	240 VAC	1			1
SE100	SE21/A	240 VAC	1			1
SE100	SE22/B	240 VAC	1			1
		SUBTOTALS	3	29	29	3
		TOTALS	3	57	57	3

LIGHTING CONDUIT QUANTITIES (1 OF 2)

LIGHTING CONDUIT QUANTITIES (2 OF 2)

SYSTEM (CIRCUIT)	LOCATION TO LOCATION	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH** LF	652.0615 CONDUIT SPECIAL 3-INCH** LF
SE100	CAB. SE100 TO LPB1 (2-2 INCH)	50			
SE100	LPB1 TO LPB2	65			
SE100	LPB2 TO SE24/C	25		20	
SE100	SE24/C TO SE26/D	80			
SE100	SE26/D TO SE28/C	75		20	
SE100	SE28/C TO SE30/D	42		40	
SE100	SE30/D TO SE32/C	73		20	
SE100	SE32/C TO LPB30	40			
SE100	SE32/C TO SE34/D	96			
SE100	SE34/D TO SE36/C	52		20	
SE100	SE36/C TO SE38/D	72		20	
SE100	SE38/D TO SE40/C	53		40	
SE100	SE40/C TO SE42/D	90			
SE100	SE42/D TO LPB40	40			
SE100	SE42/D TO SE44/C	50		40	
SE100	SE44/C TO SE46/D	70		20	
SE100	SE46/D TO SE48/C	90			
SE100	SE48/C TO SE50/D	87			
SE100	SE50/D TO SE52/C	52		20	
SE100	SE52/C TO SE54/D	35		40	
SE100	SE54/D TO SE56/C	75			
SE100	SE56/C TO SE58/D	57		20	
SE100	SE58/D TO SE60/C	33		40	
SE100	SE60/C TO SE62/D	27		40	
SE100	SE62/D TO SE64/C	99			
SE100	SE64/C TO SE66/D	90			
SE100	SE66/D TO SE68/C	88			
SE100	SE68/C TO SE70/D	65		20	
SE100	SE70/D TO SE72/C	89			
SE100	SE72/C TO SE74/D	65		20	
SE100	SE74/D TO SE76/C	50		40	
SE100	SE76/C TO SE78/D	69		20	
SE100	SE78/D TO EPB2	130			
SUBTOTALS		2,174	0	500	0

SYSTEM (CIRCUIT)	LOCATION TO LOCATION	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH** LF	652.0615 CONDUIT SPECIAL 3-INCH** LF
SE100	LPB2 TO LPB3	47			
SE100	LPB3 TO SE23/C	10			
SE100	SE23/C TO SE25/D	58		20	
SE100	SE25/D TO SE27/C	58		20	
SE100	SE27/C TO SE29/D	56		40	
SE100	SE29/D TO SE31/C	75		20	
SE100	SE31/C TO SE33/D	46		40	
SE100	SE33/D TO SE35/C	53		20	
SE100	SE35/C TO SE37/D	55		20	
SE100	SE37/D TO SE39/C	70			
SE100	SE39/C TO SE41/D	58		20	
SE100	SE41/D TO SE43/C	53		20	
SE100	SE43/C TO SE45/D	49		40	
SE100	SE45/D TO SE47/C	90			
SE100	SE47/C TO SE49/D	50		40	
SE100	SE49/D TO SE51/C	60		20	
SE100	SE51/C TO SE53/D	52		40	
SE100	SE53/D TO SE55/C	75			
SE100	SE55/C TO SE57/D	45		40	
SE100	SE57/D TO SE59/C	76		20	
SE100	SE59/C TO SE61/D	34		40	
SE100	SE61/D TO SE63/C	48		20	
SE100	SE63/C TO SE65/D	84			
SE100	SE65/D TO SE67/C	68		20	
SE100	SE67/C TO SE69/D	50		40	
SE100	SE69/D TO SE71/C	50		40	
SE100	SE71/C TO SE73/C	60		20	
SE100	SE73/D TO SE75/C	50		40	
SE100	SE75/C TO SE77/D	50		40	
SE100	SE77/D TO SE79/C	72		20	
SE100	LPB4A TO SE20/B	100			
SE100	SE20/B TO LPB4	106		40	
SE100	LPB4 TO SE21/A	48			
SE100	LPB4 TO SE22/B	133			
SE100	SE22/B TO LPB1	13			
SE100	SE48/C TO EPB10	38			
FIBER	UTIL POLE TO PB-F7		91		20
FIBER	PB-F7 TO PB-F8		240		100
FIBER	PB-F8 TO PB-F8A		61		
COLLEGE	EPB2 TO EPB2A	37			
SUBTOTALS		2,177	392	740	120

TOTALS 4,351 392 1,240 120

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.
**CONDUIT SHALL BE RIGID NONMETALLIC SCHEDULE 40

LIGHTING BRANCH CIRCUIT WIRE QUANTITIES (1 OF 2)

SYSTEM (CIRCUIT)	LOCATION TO LOCATION	DISTANCE	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	655.0630 ELECTRICAL WIRE LIGHTING 4 AWG LF
SE100	CAB. SE100 TO LPB1	50		116	348
SE100	LPB1 TO LPB2	65		71	213
SE100	LPB2 TO SE24/C	45		52	156
SE100	SE24/C TO SE26/D	80		88	264
SE100	SE26/D TO SE28/C	95		103	309
SE100	SE28/C TO SE30/D	82		90	270
SE100	SE30/D TO SE32/C	93		101	303
SE100	SE32/C TO SE34/D	96		104	312
SE100	SE34/D TO SE36/C	72		80	240
SE100	SE36/C TO SE38/D	92		100	300
SE100	SE38/D TO SE40/C	93		101	303
SE100	SE40/C TO SE42/D	90		98	294
SE100	SE42/D TO SE44/C	90		98	294
SE100	SE44/C TO SE46/D	90		98	294
SE100	SE46/D TO SE48/C	90		98	294
SE100	SE48/C TO SE50/D	87		95	285
SE100	SE50/D TO SE52/C	72		80	240
SE100	SE52/C TO SE54/D	75		83	249
SE100	SE54/D TO SE56/C	75		83	249
SE100	SE56/C TO SE58/D	77		85	255
SE100	SE58/D TO SE60/C	73		81	243
SE100	SE60/C TO SE62/D	67		75	225
SE100	SE62/D TO SE64/C	99		107	321
SE100	SE64/C TO SE66/D	90		98	294
SE100	SE66/D TO SE68/C	88		96	288
SE100	SE68/C TO SE70/D	85		93	279
SE100	SE70/D TO SE72/C	89		97	291
SE100	SE72/C TO SE74/D	85		93	279
SE100	SE74/D TO SE76/C	90		98	294
SE100	SE76/C TO SE78/D	89		97	194
SUB-TOTALS			0	2,759	8,180

LIGHTING BRANCH CIRCUIT WIRE QUANTITIES (2 OF 2)

SYSTEM (CIRCUIT)	LOCATION TO LOCATION	DISTANCE	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	655.0630 ELECTRICAL WIRE LIGHTING 4 AWG LF
SE100	LPB2 TO LPB3	47		53	159
SE100	LPB3 TO SE23/C	10		17	51
SE100	SE23/C TO SE25/D	78		86	258
SE100	SE25/D TO SE27/C	78		86	258
SE100	SE27/C TO SE29/D	96		104	312
SE100	SE29/D TO SE31/C	95		103	309
SE100	SE31/C TO SE33/D	86		94	282
SE100	SE33/D TO SE35/C	73		81	243
SE100	SE35/C TO SE37/D	75		83	249
SE100	SE37/D TO SE39/C	70		78	234
SE100	SE39/C TO SE41/D	78		86	258
SE100	SE41/D TO SE43/C	73		81	243
SE100	SE43/C TO SE45/D	89		97	291
SE100	SE45/D TO SE47/C	90		98	294
SE100	SE47/C TO SE49/D	90		98	294
SE100	SE49/D TO SE51/C	80		88	264
SE100	SE51/C TO SE53/D	92		100	300
SE100	SE53/D TO SE55/C	75		83	249
SE100	SE55/C TO SE57/D	85		93	279
SE100	SE57/D TO SE59/C	96		104	312
SE100	SE59/C TO SE61/D	74		82	246
SE100	SE61/D TO SE63/C	68		76	228
SE100	SE63/C TO SE65/D	84		92	276
SE100	SE65/D TO SE67/C	88		96	288
SE100	SE67/C TO SE69/D	90		98	294
SE100	SE69/D TO SE71/C	90		98	294
SE100	SE71/C TO SE73/C	80		88	264
SE100	SE73/D TO SE75/C	90		98	294
SE100	SE75/C TO SE77/D	90		98	294
SE100	SE77/D TO SE79/C	92		100	200
SE100	SE20/B TO LPB4	146		153	459
SE100	LPB4 TO SE21/A	48		55	110
SE100	LPB4 TO SE22/B	133		140	420
SE100	SE22/B TO LPB1	13		20	60
FIBER	UTIL POLE TO PB-F7	111	115		
FIBER	PB-F7 TO PB-F8	340	346		
FIBER	PB-F8 TO PB-F8A		65		
SUBTOTALS			526	3,007	8,866
TOTALS			526	5,766	17,046

3

FURNISH AND INSTALL BUTTERFLY VALVE AND VALVE BOX 16-INCH

SPV.0060.25 FURNISH AND INSTALL BUTTERFLY VALVE AND VALVE BOX 16-INCH EACH		
STATION	LOCATION	EACH
551+70	S. EAST AVE, 12.25' RT	1
555+28	S. EAST AVE, 4.85' RT	1
557+83	S. EAST AVE, 7.30' RT	1
559+28	S. EAST AVE, 7.20' RT	1
561+65	S. EAST AVE, 6.80' RT	1
563+28	S. EAST AVE, 5.75' RT	1
564+85	S. EAST AVE, 5.70' RT	1
566+92	S. EAST AVE, 5.10' RT	1
568+27	S. EAST AVE, 5.10' RT	1
572+35	S. EAST AVE, 6.00' RT	1
576+92	S. EAST AVE, 7.10' RT	1
579+45	S. EAST AVE, 6.85' RT	1
TOTAL		12

Furnish and Install Gate Valve and Valve Box 8-Inch

SPV.0060.23 Furnish and Install Gate Valve and Valve Box 8-Inch EACH		
STATION	LOCATION	EACH
59+60	ESTBERG AVE, 5.20' LT	1
69+84	W. WABASH AVE, 9.45' LT	1
70+24	E. WABASH AVE, 9.00' LT	1
90+22	OXFORD RD, 7.10' RT	1
99+87	HARRISON AVE, 10.60' LT	1
110+22	WINDSOR DR, 5.50' LT	1
119+91	WILSON AVE, 9.60' LT	1
139+68	W. NEWHALL AVE, 8.00' LT	1
149+68	W. LAFLIN AVE, 9.15 LT	1
150+32	E. LAFLIN AVE, 11.55' LT	1
577+14	S. EAST AVE, 13.00' LT	1
TOTAL		11

HYDRANT ASSEMBLY

SPV.0060.32 HYDRANT ASSEMBLY EACH		
STATION	LOCATION	EACH
59+55	ESTBERG AVE, 18.90' LT	1
70+57	E. WABASH AVE, 18.30' LT	1
559+23	S. EAST AVE, 22.00' RT	1
99+57	HARRISON AVE, 18.10' LT	1
563+92	S. EAST AVE, 21.65' RT	1
130+47	E. NEWHALL AVE, 20.50' LT	1
139+53	W. NEWHALL AVE, 24.00' LT	1
150+60	E. LAFLIN AVE, 22.30' LT	1
576+87	S. EAST AVE, 20.00' RT	1
579+16	S. EAST AVE, 26.70' RT	1
TOTAL		10

3

FURNISH AND INSTALL GATE VALVE AND VALVE BOX 12-INCH

SPV.0060.24 FURNISH AND INSTALL GATE VALVE AND VALVE BOX 12-INCH EACH		
STATION	LOCATION	EACH
130+23	E. NEWHALL AVE, 8.30' LT	1
800+39	E. COLLEGE AVE, 12.00' LT	1
TOTAL		2

Furnish and Install Gate Valve and Valve Box 6-Inch

SPV.0060.22 Furnish and Install Gate Valve and Valve Box 6-Inch EACH		
STATION	LOCATION	EACH
58+49	ESTBERG AVE, 9.30' LT	1
69+34	W. WABASH AVE, 9.50' LT	1
70+78	E. WABASH AVE, 9.00' LT	1
90+91	OXFORD RD, 10.30' LT	1
99+48	HARRISON AVE, 7.70' LT	1
110+51	WINDSOR DR, 8.30' LT	1
119+62	WILSON AVE, 6.40' LT	1
139+03	W. NEWHALL AVE, 5.15' LT	1
149+63	W. LAFLIN AVE, 12.15' LT	1
150+96	E. LAFLIN AVE, 8.15' LT	1
577+18	S. EAST AVE, 46.75' LT	1
TOTAL		11

ABANDON HYDRANT

SPV.0060.33 ABANDON HYDRANT EACH		
STATION	LOCATION	EACH
59+51	ESTBERG AVE, 20.60' LT	1
69+52	W. WABASH AVE, 18.40' LT	1
99+59	HARRISON AVE, 19.00' LT	1
564+93	S. EAST AVE, 26.00' RT	1
139+60	W. NEWHALL AVE, 25.00' LT	1
573+28	S. EAST AVE, 24.00' RT	1
576+93	S. EAST AVE, 20.30' RT	1
580+47	S. EAST AVE, 25.30' RT	1
TOTAL		8

ALL ITEMS CATEGORY 0010 UNLESS NOTED

PROJECT NO: 2718-11-71

HWY: S EAST AVENUE

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET NO:

E

3

RECONNECT 3/4-INCH COPPER WATER SERVICE TYPE SL3

SPV.0060.28
RECONNECT 3/4-INCH
COPPER WATER SERVICE
TYPE SL3

STATION	LOCATION	EACH
550+40	803 S. EAST AVE.	1
551+35	725 S. EAST AVE.	1
551+94	721 S. EAST AVE.	1
552+26	717 S. EAST AVE.	1
553+74	701 S. EAST AVE.	1
555+34	620 S. EAST AVE.	1
555+75	616 S. EAST AVE.	1
556+12	612 S. EAST AVE.	1
557+48	600 S. EAST AVE.	1
559+01	520 S. EAST AVE.	1
559+44	512 S. EAST AVE.	1
560+10	508 S. EAST AVE.	1
562+68	414 S. EAST AVE.	1
563+73	406 S. EAST AVE.	1
564+16	400 S. EAST AVE.	1
566+57	308 S. EAST AVE.	1
573+74	148 S. EAST AVE.	1
574+07	144 S. EAST AVE.	1
575+39	134 S. EAST AVE.	1
576+12	128 S. EAST AVE.	1
576+70	122 S. ESAT AVE.	1
59+27	802 S. EAST AVE.	1
139+15	224 S. EAST AVE.	1

TOTAL23

RECONNECT 1-INCH COPPER WATER SERVICE TYPE SL2

SPV.0060.27
RECONNECT 1-INCH
COPPER WATER
SERVICE TYPE SL2

STATION	LOCATION	EACH
550+24	804 S. EAST AVE.	1
552+30	718 S. EAST AVE.	1
553+05	714 S. EAST AVE	1
553+58	708 S. EAST AVE	1
555+84	104 E. WABASH AVE	1
556+31	611 S. ESAT AVE	1
557+15	601 S. EAST AVE	1
557+75	523 S. EAST AVE	1
558+45	519 S. EAST AVE	1
561+66	423 S. EAST AVE.	1
565+49	321 S. EAST AVE	1
566+13	105 E. NEWHALL AVE.	1
567+31	239 S. EAST AVE.	1
567+86	233 S. EAST AVE	1
568+77	227 S. EAST AVE.	1
569+16	223 S. EAST AVE.	1
569+57	217 S. EAST AVE	1
570+13	215 S. EAST AVE.	1
570+59	211 S. EAST AVE	1
59+12	722 S. EAST AVE	1
139+11	300 S. EAST AVE	1

TOTAL21

RECONNECT 1-INCH COPPER WATER SERVICE TYPE SL1

SPV.0060.26
RECONNECT 1-INCH
COPPER WATER
SERVICE TYPE SL1

STATION	LOCATION	EACH
560+39	504 S. EAST AVE.	1
565+21	320 S. EAST AVE.	1
565+65	316 S. EAST AVE.	1
565+94	312 S. EAST AVE.	1
566+97	304 S. EAST AVE.	1
569+15	218 S. EAST AVE	1
569+70	212 S. EAST AVE	1
570+28	210 S. EAST AVE	1
571+12	202 S. EAST AVE.	1
577+68	114 S. EAST AVE.	1
578+24	110 S. EAST AVE.	1

TOTAL11

3

RECONNECT 1-1/4-INCH COPPER WATER SERVICE TYPE SL5

SPV.0060.30
RECONNECT 1-1/4-INCH
COPPER WATER SERVICE
TYPE SL5

STATION	LOCATION	EACH
574+76	138-140 S. EAST AVE.	1

TOTAL1

RECONNECT 1-1/4-INCH COPPER WATER SERVICE TYPE SL4

SPV.0060.29
RECONNECT 1-1/4-INCH
COPPER WATER SERVICE
TYPE SL4

STATION	LOCATION	EACH
150+83	201 S. EAST AVE.	1
576+67	123 S. EAST AVE.	1
577+39	115 S. EAST AVE.	1

TOTAL3

RECONNECT 4-Inch OR 6-Inch WATER SERVICE TYPE SL6

SPV.0060.31
RECONNECT 4-Inch
OR 6-Inch WATER
SERVICE TYPE SL6

STATION	LOCATION	EACH
573+19	151 S. EAST AVE.	1
575+13	135 S. EAST AVE.	1
579+16	105 S. EAST AVE.	1

TOTAL3

ALL ITEMS CATEGORY 0010 UNLESS NOTED

3

FURNISH AND INSTALL WATER MAIN AND FITTINGS 16-INCH (CLASS 52)

		SPV.0090.09
		FURNISH AND INSTALL
		WATER MAIN AND FITTINGS
		16-INCH (CLASS 52)
STATION TO STATION	LOCATION	LF
571+50 TO 572+50	S. EAST AVE - ESTBERG TO COLLEGE	100
TOTAL		100

CUT-IN 12-IN VALVE

ITEM	DESCRIPTION	LS
SPV.0105.04	Cut-in 12" Valve on E. College Ave.	1
Total		1

3

FURNISH AND INSTALL WATER MAIN AND FITTINGS 16-INCH (CLASS 50)

		SPV.0090.08
		FURNISH AND INSTALL
		WATER MAIN AND FITTINGS
		16-INCH (CLASS 50)
STATION TO STATION	LOCATION	LF
550+05 TO 571+50	S. EAST AVE - ESTBERG TO COLLEGE	2145
572+50 TO 580+13	S. EAST AVE - ESTBERG TO COLLEGE	763
TOTAL		2908

ABANDON VALVE BOXES & MANHOLES

ITEM	DESCRIPTION	LS
SPV.0105.05	ABANDON VALVE BOXES AND MANHOLES	1
Total		1

FURNISH AND INSTALL WATER MAIN AND FITTINGS 12-INCH

		SPV.0090.07
		FURNISH AND INSTALL
		WATER MAIN AND FITTINGS
		12-INCH
STATION TO STATION	LOCATION	LF
130+05 TO 130+52	E. NEWHALL AVE	47
580+13 TO 580+37	S. EAST AVE AT COLLEGE AVE	24
TOTAL		71

FURNISH AND INSTALL WATER MAIN AND FITTINGS 8-INCH

		SPV.0090.06
		FURNISH AND INSTALL
		WATER MAIN AND FITTINGS
		8-INCH
STATION TO STATION	LOCATION	LF
58+49 TO 60+13	ESTBERG AVE	164
69+34 TO 70+81	W. & E. WABASH AVE	147
558+16, 23.00' LT TO 8.00' RT	FRAME AVE	31
90+07 TO 90+89	OXFORD RD	82
99+51 TO 100+07	HARRISON AVE	56
110+06 TO 110+48	WINDSOR DR	42
119+65 TO 120+05	WILSON AVE	40
139+03 TO 140+06	W. NEWHALL AVE	103
149+35 TO 150+98	W. & E. LAFLIN AVE	163
577+14, 47.00' LT TO 7.00' RT	FOUNTAIN AVE	55
TOTAL		883

ALL ITEMS CATEGORY 0010 UNLESS NOTED

PROJECT NO: 2718-11-71

HWY: S EAST AVENUE

COUNTY: WAUKESHA

MISCELLANEOUS QUANTITIES

SHEET NO:

E

CONVENTIONAL ABBREVIATIONS			
ACCESS POINT/ DRIVEWAY CONNECTION	AP	REFERENCE LINE	R/L
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	REMAINING	REM.
AND OTHERS	ET.AL.	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	SQUARE FEET	S.F.
CORNER	COR.	STATION	STA.
DOCUMENT	DOC.	TEMPORARY LIMITED EASEMENT	TLE
EASEMENT	EASE.	VOLUME	V.
HIGHWAY EASEMENT	H.E.	CURVE DATA	
LAND CONTRACT	LC	LONG CHORD	LCH
MONUMENT	MON.	LONG CHORD BEARING	LCB
PAGE	P.	RADIUS	R
PERMANENT LIMITED EASEMENT	PLE	DEGREE OF CURVE	D
PROPERTY LINE	PL	CENTRAL ANGLE OR DELTA	DELTA
RECORDED AS	(100')	LENGTH OF CURVE	L
		TANGENT	TAN

CONVENTIONAL SYMBOLS		
FOUND IRON PIPE/PIN	IP (1" UNLESS NOTED)	PROPOSED R/W LINE
R/W MONUMENT	o (SET)	EXISTING H.E. LINE
R/W STANDARD	Δ (SET)	PROPERTY LINE
SIGN	ISIGN	LOT & TIE LINES
SECTION CORNER MONUMENT	⊕	SLOPE INTERCEPTS
SECTION CORNER SYMBOL	⊕	CORPORATE LIMITS
FEE (HATCH VARIES)		NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY ACQUISITION)
PERMANENT LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)
R/W BOUNDARY POINT	RWB20	SECTION LINE
PARCEL NUMBER	102	QUARTER LINE
UTILITY PARCEL NUMBER	92	SIXTEENTH LINE
SIGN NUMBER (OFF PREMISE)	21-1	EXISTING CENTERLINE
BUILDING	⌂	PROPOSED REFERENCE LINE
		PARALLEL OFFSET

CONVENTIONAL UTILITY SYMBOLS	
WATER	—W—
GAS	—G—
TELEPHONE	—T—
OVERHEAD TRANSMISSION LINES	—OH—
ELECTRIC	—E—
CABLE TELEVISION	—TV—
FIBER OPTIC	—FO—
SANITARY SEWER	—SAN—
STORM SEWER	—SS—

	NON COMPENSABLE	COMPENSABLE
POWER POLE	⊙	⊙
TELEPHONE POLE	⊙	⊙
TELEPHONE PEDESTAL	⊙	⊙
ELECTRIC TOWER	⊙	⊙

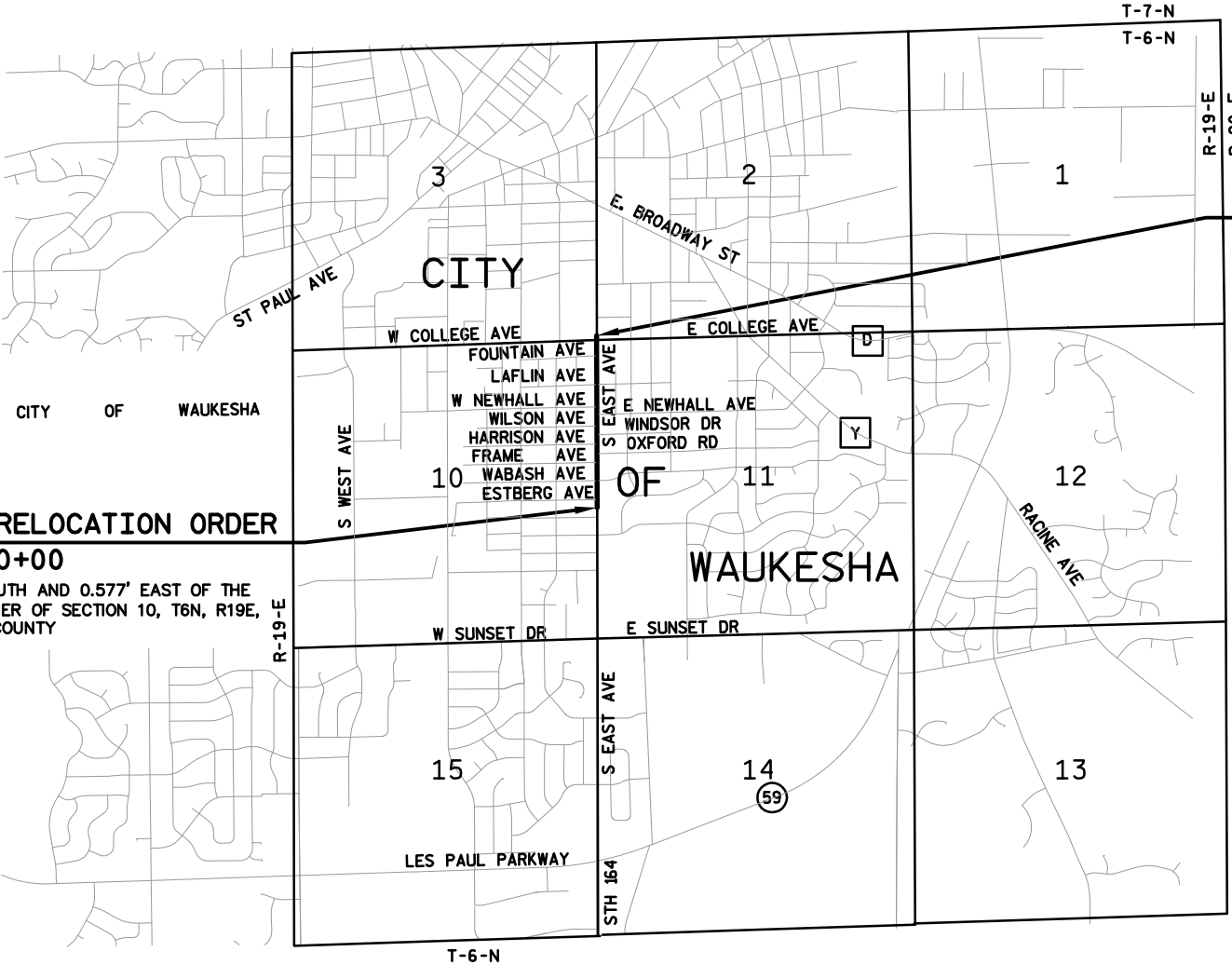
NOTES

COORDINATES AND BEARINGS ON THIS PLAT ARE REFERENCED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM (WSPCS), SOUTH ZONE, (NAD-27). ALL PLAT COORDINATES AND DISTANCES ARE GROUND AND MAY BY CONVERTED TO GRID BY APPLYING THE COMBINED CONVERSION FACTOR OF (0.99991453) AS PUBLISHED ON SEWRPC CONTROL SURVEY SUMMARY DIAGRAM DATED FEBRUARY 2004.

RIGHT OF WAY MONUMENTS ARE TYPE 2 MONUMENTS TYPICALLY 3/4" X 24" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT, BY OTHERS.

RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE OF U.S. PUBLIC LAND SURVEY OR OTHER SURVEYS OF PUBLIC RECORD.

BEGIN RELOCATION ORDER
STA 550+00
325.278' SOUTH AND 0.577' EAST OF THE
E. 1/4 CORNER OF SECTION 10, T6N, R19E,
WAUKESHA COUNTY



LAYOUT
NO SCALE
TOTAL NET LENGTH OF CENTERLINE = 0.581 MI.

R/W PROJECT NUMBER 2718-11-00	SHEET NUMBER	TOTAL SHEETS
FEDERAL PROJECT NUMBER	4.1	5
PLAT OF RIGHT OF WAY REQUIRED FOR S EAST AVENUE 480' SOUTH OF WABASH AVE TO COLLEGE AVENUE S. EAST AVENUE WAUKESHA CO. CONSTRUCTION NO. 2718-11-70		

END RELOCATION ORDER
STA 580+70
69.539' NORTH AND 0.313' WEST OF THE
NE CORNER OF SECTION 10, T6N, R19E,
WAUKESHA COUNTY

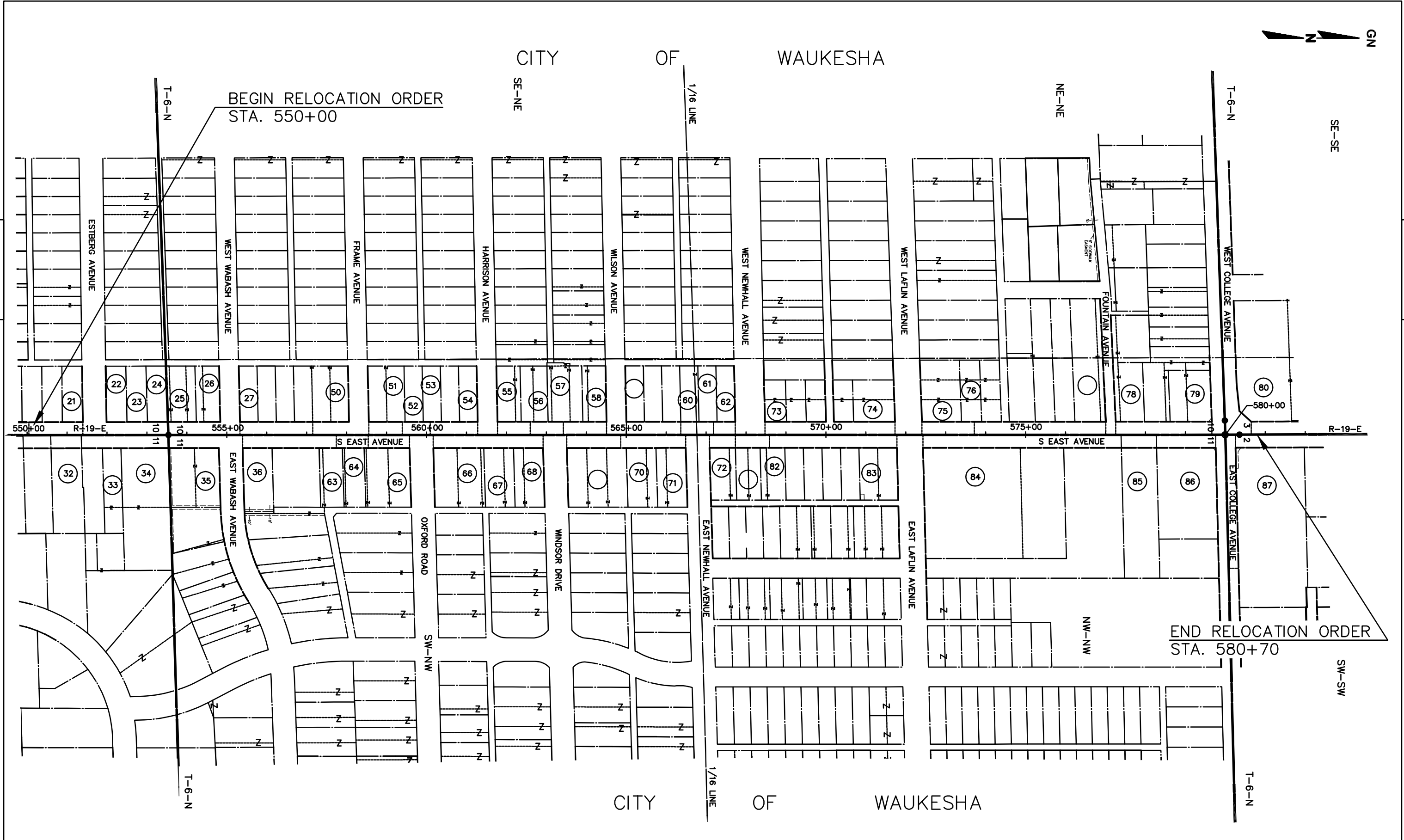


ACCEPTED FOR THE CITY OF WAUKESHA 6/13/12 DATE: 6/13/12 Signature: Fred Abade TITLE OF OFFICIAL: DPW Director	ORIGINAL PLAT PREPARED BY R.A. Smith National Beyond Surveying and Engineering 18745 W. Bluemound Road, Brookfield, WI 53005 262.781-1000 Fax: 262.781-4444 www.rasmithnational.com
DATE: 6/08/2012 Signature: Gregory A. Kunz LAND SURVEYOR	WISCONSIN GREGORY A. KUNZ S-1346 WAUKESHA WI LAND SURVEYOR
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION APPROVED FOR DISTRICT OFFICE: DATE: N/A N/A (Signature)	REVISION DATE: 11/19/2012 12/14/2012 01/04/2013

SCHEDULE OF LANDS & INTERESTS REQUIRED

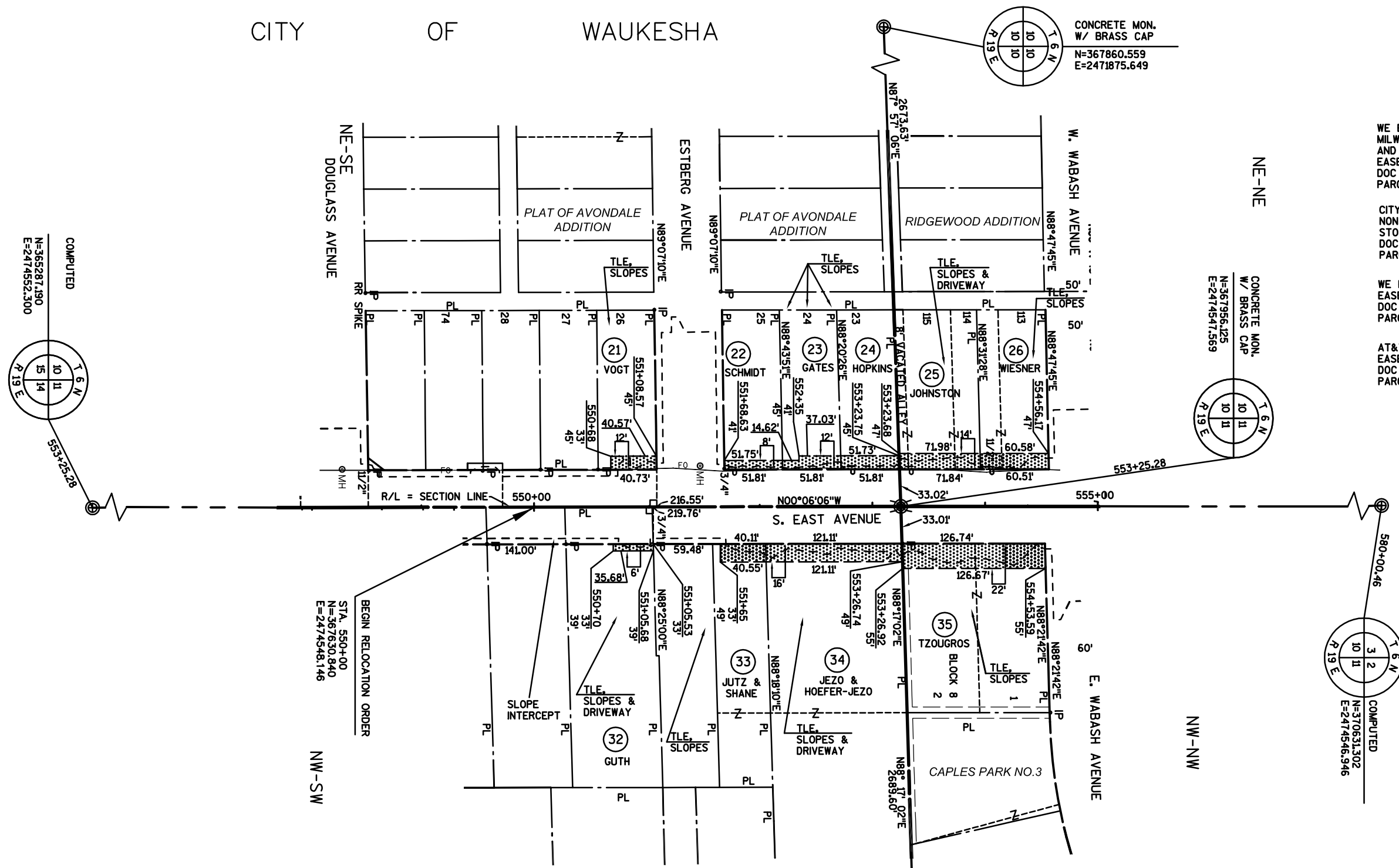
AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

PARCEL NUMBER	SHEET NUMBER	OWNER(S)	INTEREST REQUIRED	TOTAL S.F.	R/W REQUIRED (S.F.)			TOTAL REMAINING S.F.	T.L.E. TEMP. S.F.	P.L.E. PERM. S.F.	PARCEL NUMBER
					NEW	EXISTING	TOTAL				
21(2)	4.4	RONALD H. & CYNTHIA L. VOGT	TLE						488 S.F.		21
22(2)	4.4	JEREMY J. & EMILY M. SCHMIDT	TLE						414 S.F.		22
23(2)	4.4	LAWRENCE R. & KATHLEEN A. GATES	TLE						563 S.F.		23
24(2)	4.4	RONALD W. & CHRISTINE A. HOPKINS	TLE						621 S.F.		24
25(2)	4.4	THOMAS HOWARD JOHNSTON JR. & KATHERINE K. JOHNSTON	TLE						1,007 S.F.		25
26(3)	4.4	ELLEN WIESNER	TLE						848 S.F.		26
27(2)	4.5	RYAN J. WILSON & MARY COURTNEY ERNSTER	TLE						206 S.F.		27
32(2)	4.4	WILLIAM H. & LAURIE ANN GUTH	TLE						214 S.F.		32
33(2)	4.4	SHERRI L. SHANE & RICHARD JUTZ	TLE						645 S.F.		33
34(2)	4.4	MICHAEL F. JEZO & ELIZABETH A. HOEFER-JEZO	TLE						1,938 S.F.		34
35(2)	4.4	JOSEPH J. & VASILIKI M. TZOUGROS	TLE						2,787 S.F.		35
36(2)	4.5	PAUL ALGIERS	TLE						111 S.F.		36
50	4.5	DAVID R. & NANCY J. MARKIEWICZ	TLE						1,000 S.F.		50
51	4.5	DAVID M. CORNALE	TLE						303 S.F.		51
52	4.5	CHRISTOPHER RUCK & TANYA V. KRUSE	TLE						103 S.F.		52
53	4.5	ISABEL BARRON JR. & JUNITA BARRON	TLE						250 S.F.		53
54	4.5	HAROLD L. & MARCELLA HOEFT & LUELLA FREDRICKSON	TLE						128 S.F.		54
55	4.5	SHOENBERGER FAMILY LIMITED PARTNERSHIP	TLE						310 S.F.		55
56(3)	4.5	BRIAN P. KAPELLUSCH	TLE						452 S.F.		56
57	4.5	FREDERICK PERILLO	TLE						442 S.F.		57
58	4.5	GARY J. & JODEE A. LIEDTKE	TLE						220 S.F.		58
59(4)	4.5	ELIMINATED	-						-		59
60	4.5	AMILCAR U. ALARCON	TLE						231 S.F.		60
61	4.5	TONI M. PEREA	TLE						270 S.F.		61
62	4.5	ANDREW & JULIE RAMIREZ	TLE						150 S.F.		62
63(2)	4.5	ALAN C. & JULIE A. MOE	TLE						62 S.F.		63
64	4.5	BRADLEY S. JOSTSONS	TLE						42 S.F.		64
65	4.5	VICTOR K. & CAROL L. BOOR	TLE						320 S.F.		65
66	4.5	MARIO P. & HEATHER A. BERKEC	TLE						1,234 S.F.		66
67	4.5	RICHARD C. & SALLY H. PRUST	TLE						450 S.F.		67
68(3)	4.5	JASON D. & CHARLOTTE T. ALLEN	TLE						572 S.F.		68
69(3)	4.5	ELIMINATED	-						-		69
70(3)	4.5	TRUSTEES of the ROYANNA BENJAMIN REVOCABLE TRUST	TLE						536 S.F.		70
71	4.5	TERENCE P. & ANN L. WELCH	TLE						346 S.F.		71
72	4.5	JEFF & RACHEL KRUEGER	TLE						211 S.F.		72
73	4.6	ADAM T. WIESE & ALISON PEARCE WIESE	TLE						121 S.F.		73
74	4.6	JEFFREY C. & MICHELE L. JOHNSON	TLE						243 S.F.		74
75	4.6	WILLIAM G. & PHYLLIS LOSCH	TLE						291 S.F.		75
76	4.6	JAY G. & LAURA L. WOODARD	TLE						458 S.F.		76
77(2)	4.6	ELIMINATED	-						-		77
78	4.6	TRUSTEE of the H & B CLEVELAND JOINT REVOCABLE TRUST	TLE						639 S.F.		78
79	4.6	ANDREW C. LADD	TLE						567 S.F.		79
80	4.6	THE BOARD OF TRUSTEES OF CARROLL COLLEGE	TLE						336 S.F.		80
81	4.6	ELIMINATED	-						-		81
82	4.6	NANCY J. WERNER REVOCABLE TRUST DTD	TLE						192 S.F.		82
83	4.6	DAVID L.R. SMART & LISA J. VANDERGALIEN	TLE						219 S.F.		83
84	4.6	THE BOARD OF TRUSTEES OF CARROLL COLLEGE	TLE						133 S.F.		84
85	4.6	THE BOARD OF TRUSTEES OF CARROLL COLLEGE, INC	TLE						893 S.F.		85
86	46	THE BOARD OF TRUSTEES OF CARROLL COLLEGE	TLE						1,638 S.F.		86
87	4.6	THE BOARD OF TRUSTEES OF CARROLL COLLEGE	PLE, TLE						198 S.F.	980 S.F.	87
100	4.5,4.6	TDS METROCOM	RELEASE OF RIGHTS								



REVISION DATE: November 19, 2012 December 14, 2012 January 04, 2013	DATE: June 08, 2012	SCALE, FEET 0 100 200	HWY: S EAST AVENUE	STATE R/W PROJECT NUMBER: 2718-11-00	PLAT SHEET 4.3	E
	GRID FACTOR N/A		COUNTY: WAUKESHA	CONSTRUCTION PROJECT NUMBER: 2718-11-70	PS&E SHEET	

CITY OF WAUKESHA



WE ENERGIES- ELECTRIC
MILWAUKEE ELECTRIC RAILWAY
AND LIGHT COMPANY
EASEMENT
DOC 166362 V.221 P.269
PARCEL 21 &22

CITY OF WAUKESHA
NON DESCRIPT
STORM SEWER EASEMENT
DOC 319319 V.478 P.287
PARCEL 25

WE ENERGIES- ELECTRIC
EASEMENT
DOC 302374 V.441 P.532
PARCEL 35

AT&T WISCONSIN
EASEMENT
DOC 302374 V.441 P.532
PARCEL 35

TITLE REPORT STATEMENT:
ONLY THE LAND PARCELS SHOWN ON THIS PLAT WITH A PLAT PARCEL NUMBER
WERE AFFECTED BY A PROJECT IMPACT AND WERE RESEARCHED WITH A TITLE REPORT.

COORDINATES AND BEARINGS ON THIS PLAT ARE REFERENCED TO
THE WISCONSIN STATE PLANE COORDINATE SYSTEM (WSPCS), GROUND, SOUTH ZONE, (NAD-27).
THE COMBINED CONVERSION FACTOR IS (0.99991453) AS PUBLISHED
ON SEWRPC CONTROL SURVEY SUMMARY DIAGRAM DATED REVISED FEBRUARY 2004.

	BASIS OF EXISTING R/W	R/W WIDTH	DATE
W WABASH AVE	RIDGEWOOD EDITION	50'	1913
FRAME AVE	RIDGEWOOD EDITION	50'	1913
HARRISON AVE	RIDGEWOOD EDITION	50'	1913
WILSON AVE	RIDGEWOOD EDITION	50'	1913
OXFORD RD	CAPLES PARK NO. 2	60'	
WINDSOR DR	CAPLES PARK SUBDIVISION	60'	
E NEWHALL AVE	COLLEGE EDITION	60'	1913

REVISION DATE:
November 19, 2012
December 14, 2012
January 04, 2013 N/C

DATE: June 08, 2012
GRID FACTOR: 0.99991453

SCALE, FEET
0 50 100

HWY: S EAST AVENUE
COUNTY: WAUKESHA

STATE R/W PROJECT NUMBER: 2718-11-00
CONSTRUCTION PROJECT NUMBER: 2718-11-70

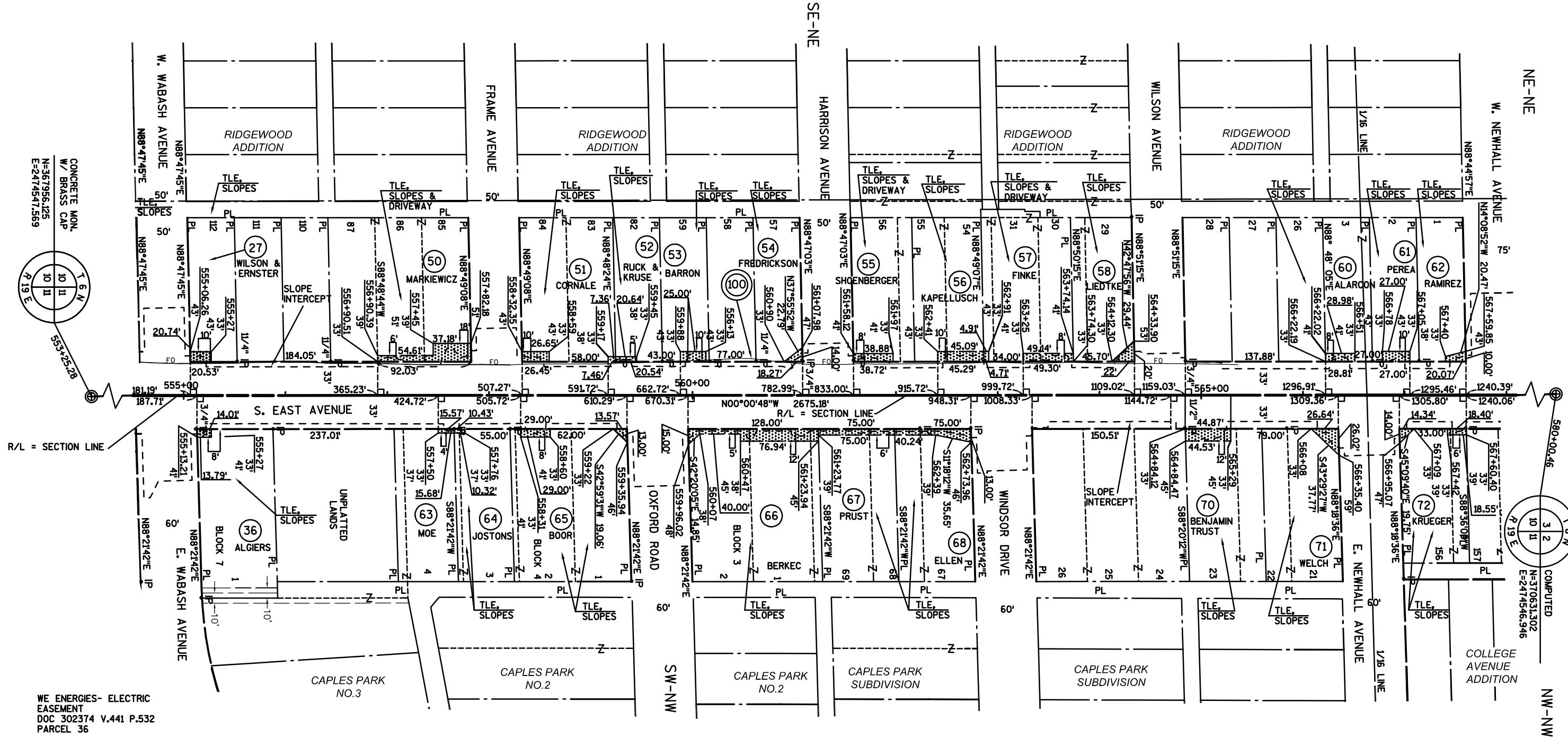
PLAT SHEET 4.4
PS&E SHEET

E

CITY OF WAUKESHA



4



WE ENERGIES- ELECTRIC EASEMENT
DOC 302374 V.441 P.532
PARCEL 36

AT&T WISCONSIN EASEMENT
DOC 302374 V.441 P.532
PARCEL 36

CITY OF WAUKESHA
STORM SEWER EASEMENT
DOC 355794 V.555 P.53
PARCEL 36

TITLE REPORT STATEMENT:
ONLY THE LAND PARCELS SHOWN ON THIS PLAT WITH A PLAT PARCEL NUMBER
WERE AFFECTED BY A PROJECT IMPACT AND WERE RESEARCHED WITH A TITLE REPORT.

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	BASIS OF EXISTING R/W	R/W WIDTH	DATE
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WILSON AVE	RIDGEWOOD EDITION	50'	1913
OXFORD RD	CAPLES PARK NO. 2	60'	
WINDSOR DR	CAPLES PARK SUBDIVISION	60'	
E NEWHALL AVE	COLLEGE EDITION	60'	1913

REVISION DATE:
November 19, 2012
December 14, 2012
January 04, 2013

DATE: June 08, 2012

GRID FACTOR: 0.99991453

SCALE, FEET

0 50 100

HWY: S EAST AVENUE

COUNTY: WAUKESHA

STATE R/W PROJECT NUMBER: 2718-11-00

CONSTRUCTION PROJECT NUMBER: 2718-11-70

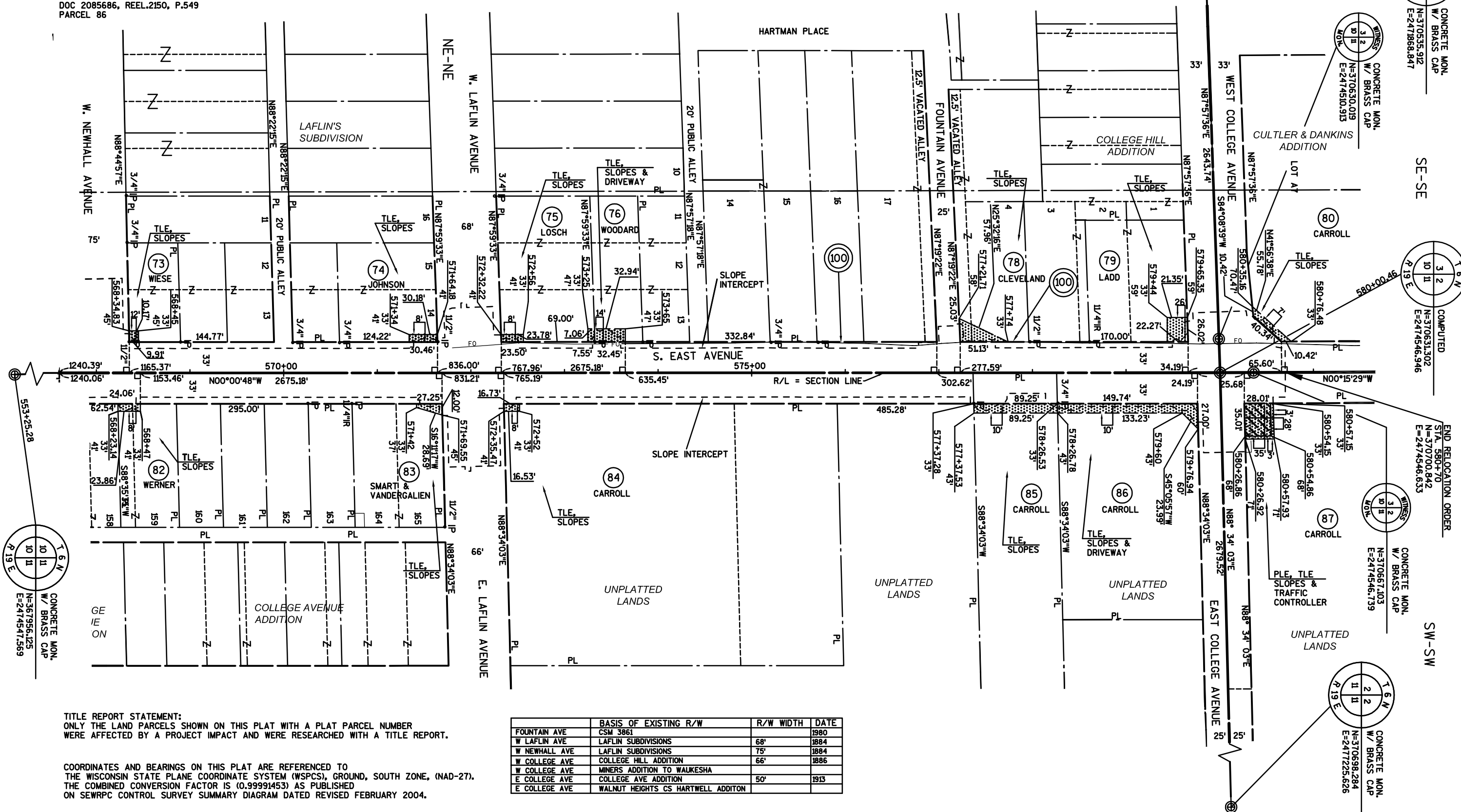
PLAT SHEET 4.5

PS&E SHEET

E

WISCONSIN DEPARTMENT OF TRANSPORTATION
PERMANENT LIMITED EASEMENT PER
DOC 2085687, REEL.2150, P.550
PARCEL 87

CITY OF WAUKESHA



TITLE REPORT STATEMENT:
ONLY THE LAND PARCELS SHOWN ON THIS PLAT WITH A PLAT PARCEL NUMBER
WERE AFFECTED BY A PROJECT IMPACT AND WERE RESEARCHED WITH A TITLE REPORT.

COORDINATES AND BEARINGS ON THIS PLAT ARE REFERENCED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM (WSPCS), GROUND, SOUTH ZONE, (NAD-27). THE COMBINED CONVERSION FACTOR IS (0.99991453) AS PUBLISHED ON SEWRPC CONTROL SURVEY SUMMARY DIAGRAM DATED REVISED FEBRUARY 2004.

	BASIS OF EXISTING R/W	R/W WIDTH	DATE
FOUNTAIN AVE	CSM 3861		1980
W LAFLIN AVE	LAFLIN SUBDIVISIONS	68'	1884
W NEWHALL AVE	LAFLIN SUBDIVISIONS	75'	1884
W COLLEGE AVE	COLLEGE HILL ADDITION	66'	1886
W COLLEGE AVE	MINERS ADDITION TO WALKESHA		
E COLLEGE AVE	COLLEGE AVE ADDITION	50'	1913
E COLLEGE AVE	WALNUT HEIGHTS CS HARTWELL ADDITION		

REVISION DATE:
November 19, 2012
December 14, 2012 N/C
January 04, 2013 N/C

DATE: June 08, 2012
GRID FACTOR: 0.99991453

SCALE, FEET

0 50 100

A horizontal scale bar with alternating black and white segments. It is marked with the numbers 0, 50, and 100 at the top. The bar represents a total length of 100 feet.

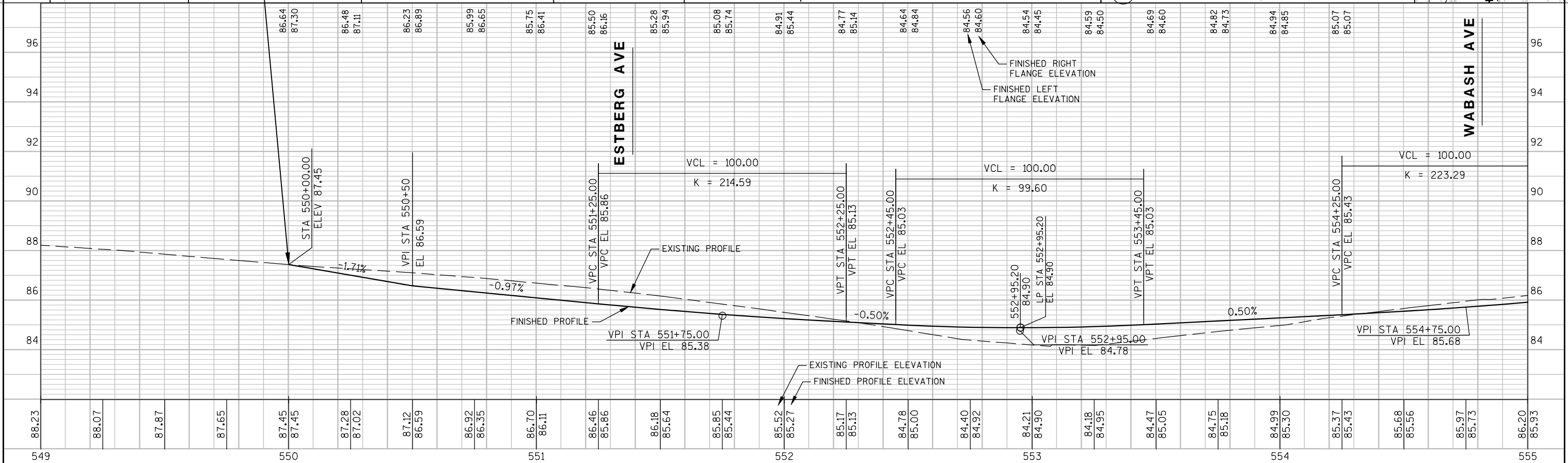
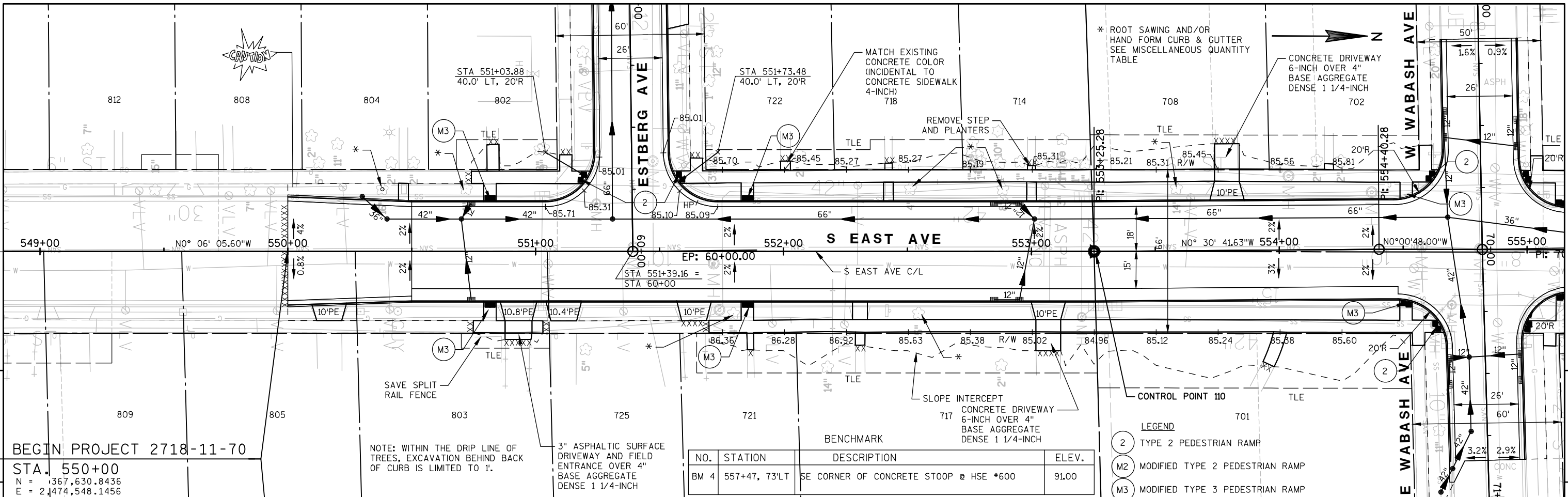
HWY: S EAST AVENUE
COUNTY: WAUKESHA

STATE R/W PROJECT NUMBER: 2718-11-00
CONSTRUCTION PROJECT NUMBER: 2718-11-70

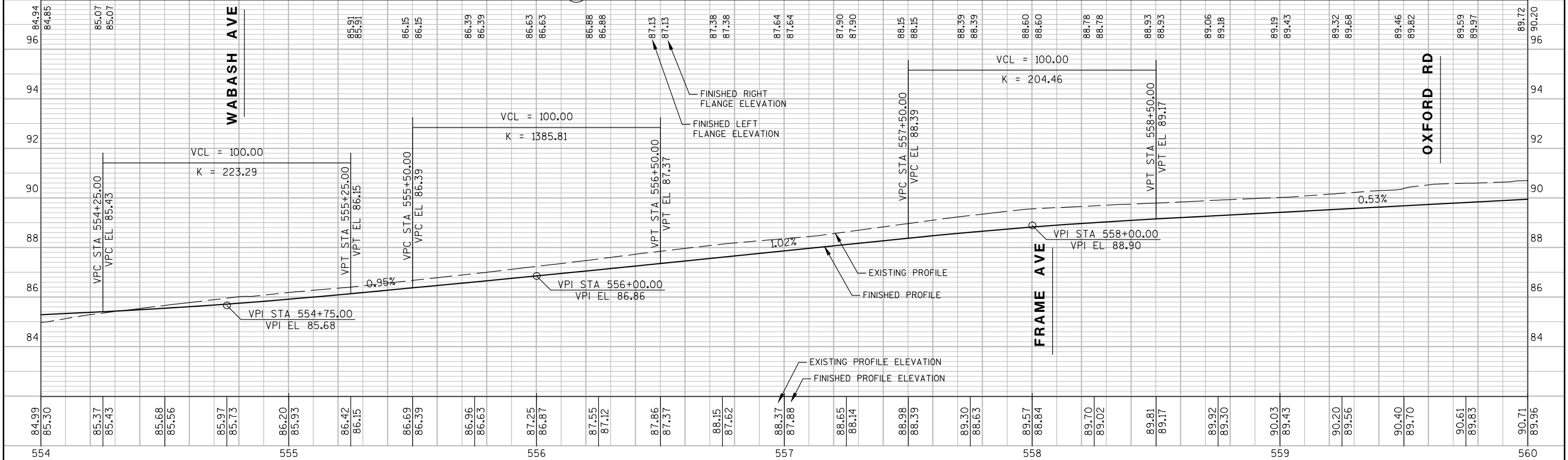
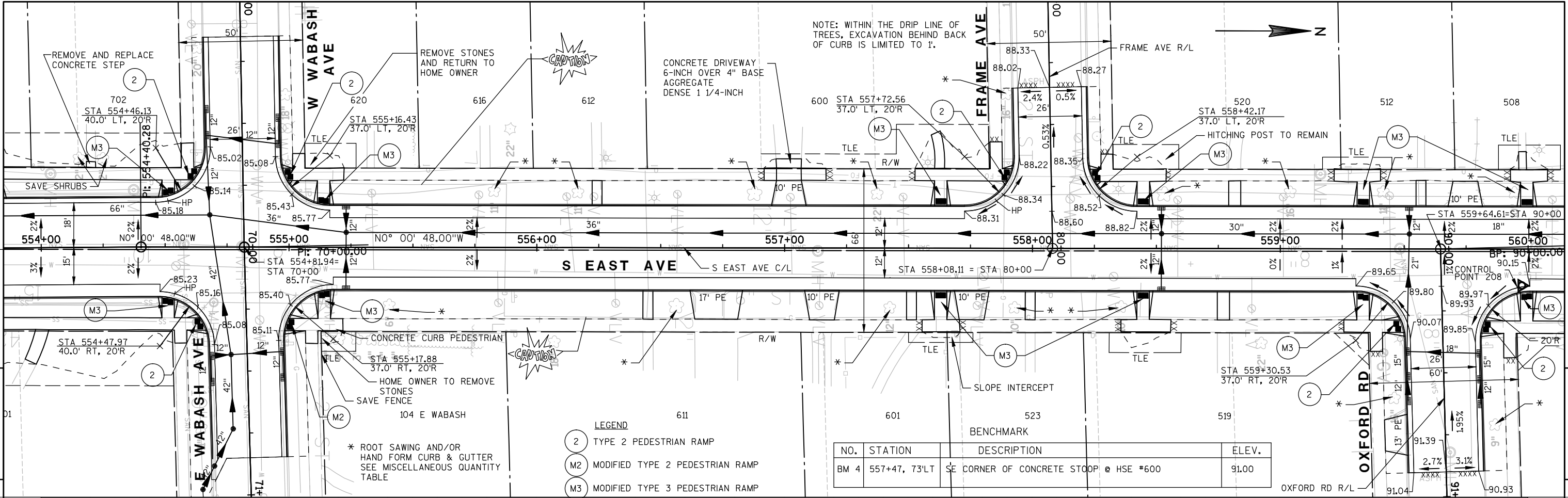
PLAT SHEET 4.6
PS&E SHEET

E

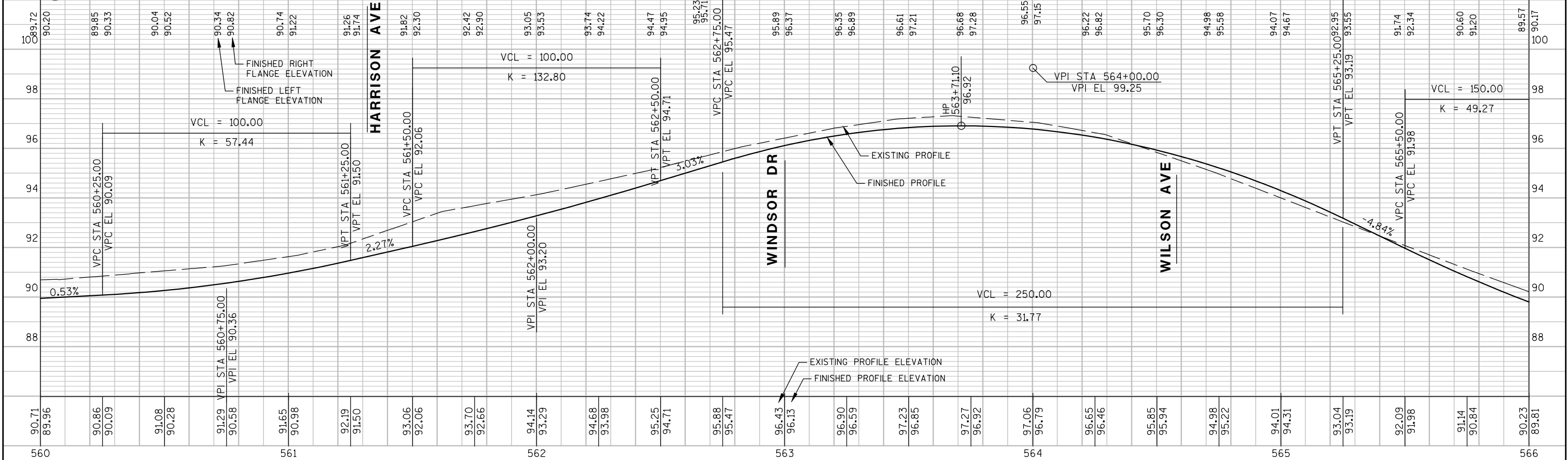
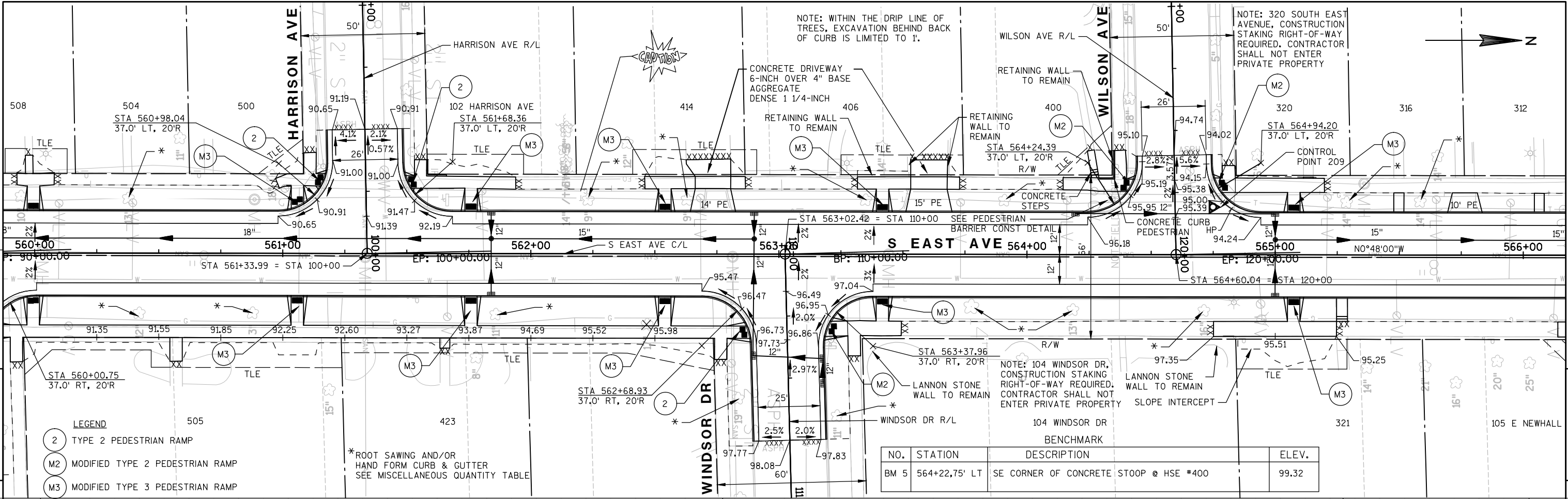
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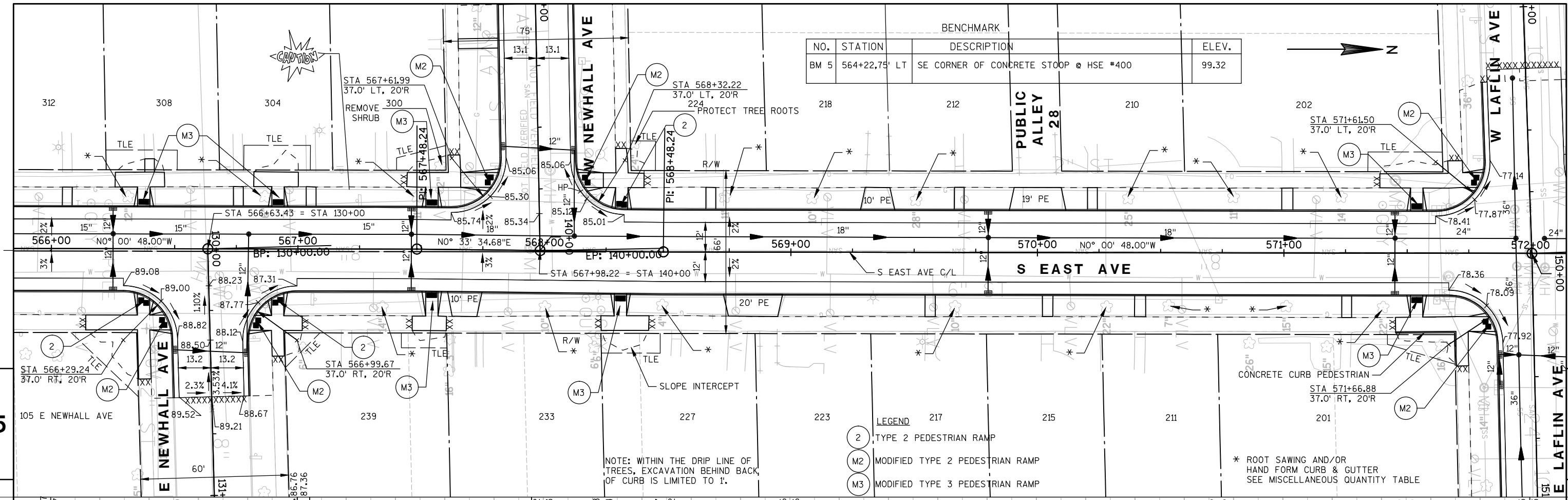


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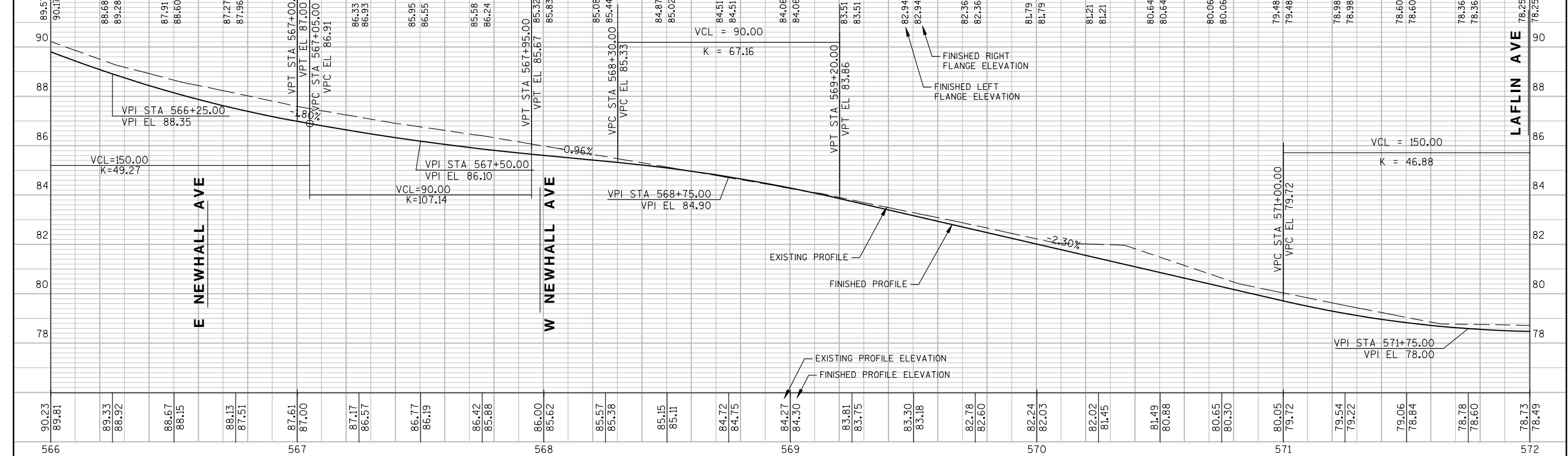


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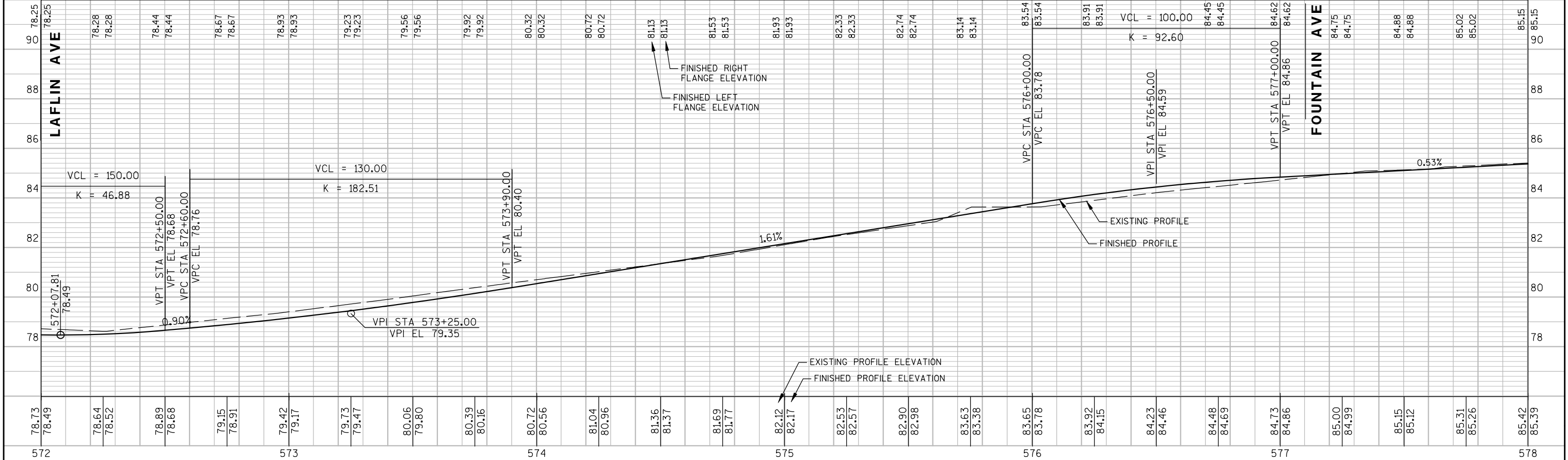
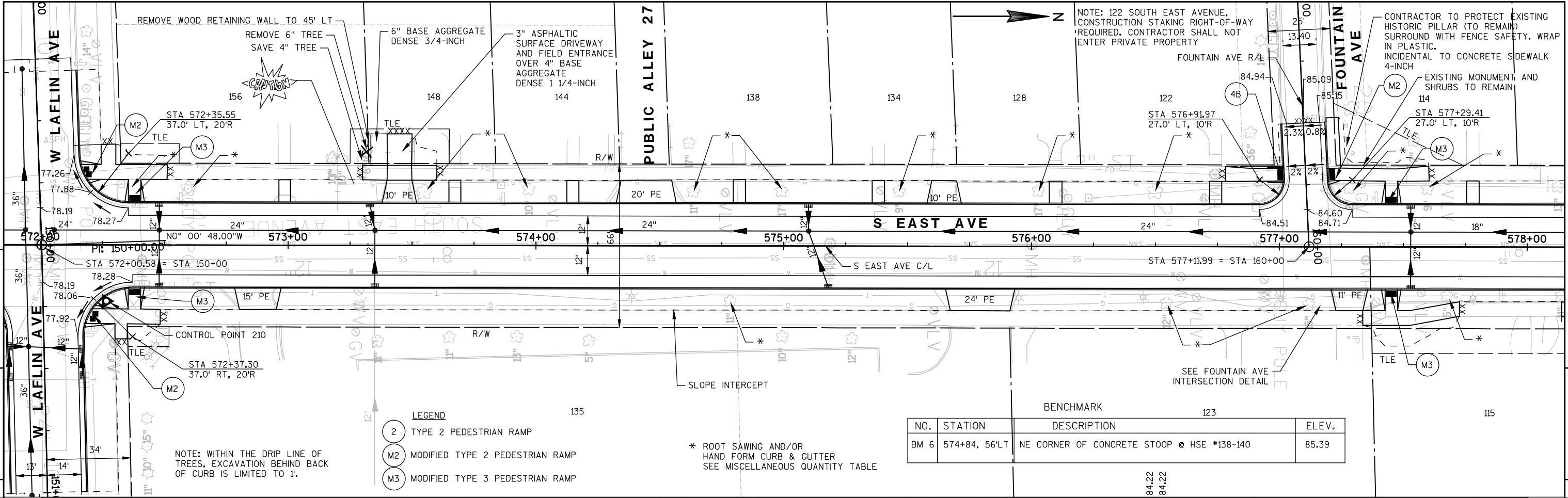
5



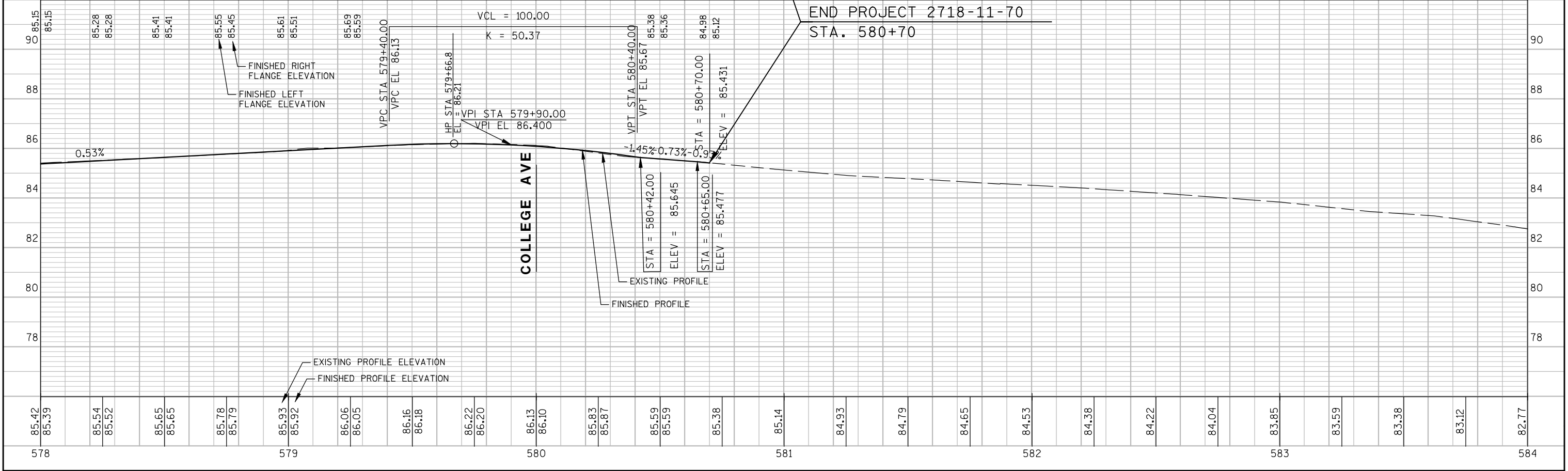
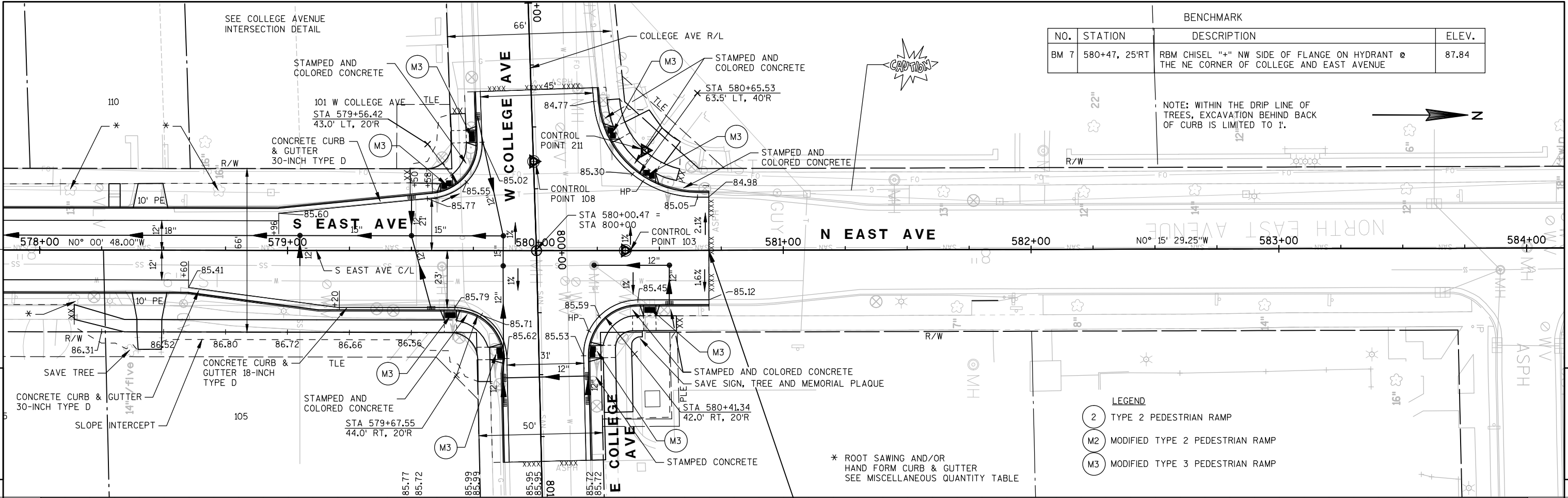
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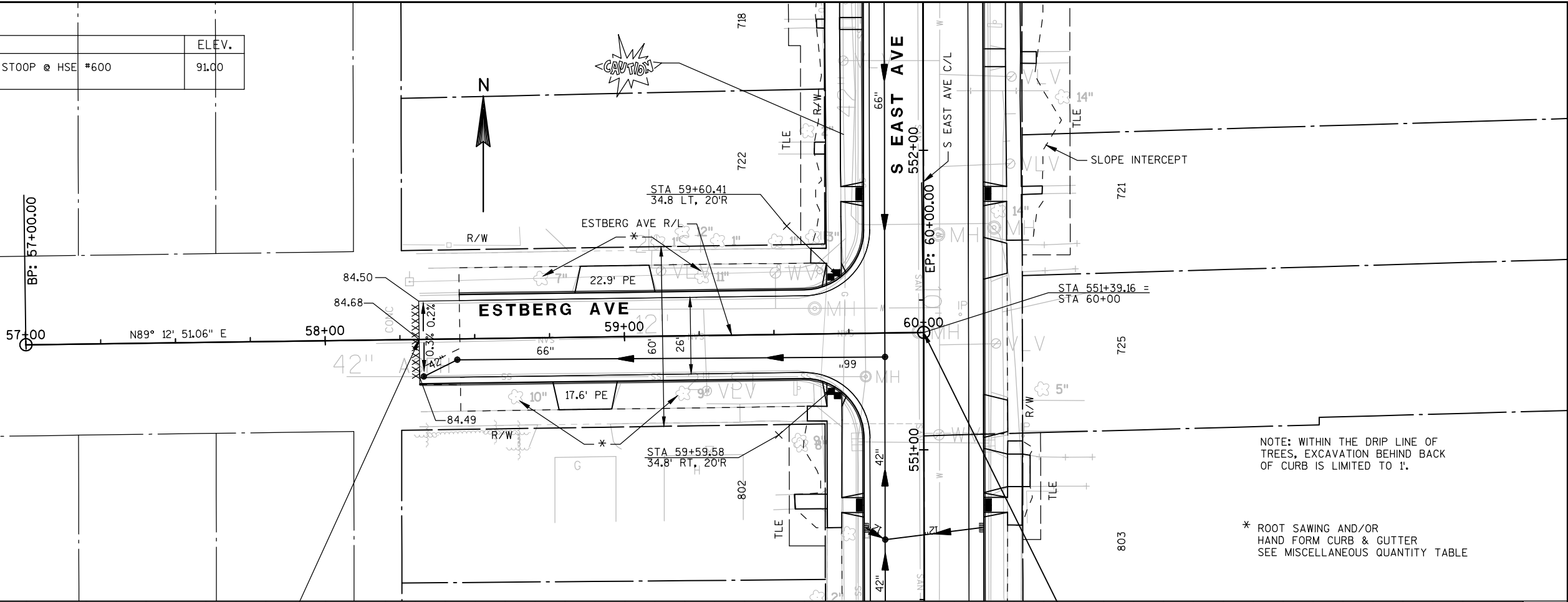


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BENCHMARK					
NO.	STATION		DESCRIPTION		ELEV.
BM 4	557+47.73	LT	SE CORNER OF CONCRETE STOOP @ HSE #600		91.00



BEGIN CONSTRUCTION
STA. 58+31

END CONSTRUCTION
STA. 60+00

STA = 58+45.00
ELEV = 84.682

STA = 59+82.00
ELEV = 85.374
STA = 60+00.00
ELEV = 85.732

EXISTING PROFILE ELEVATION
FINISHED PROFILE ELEVATION

84.72
84.71

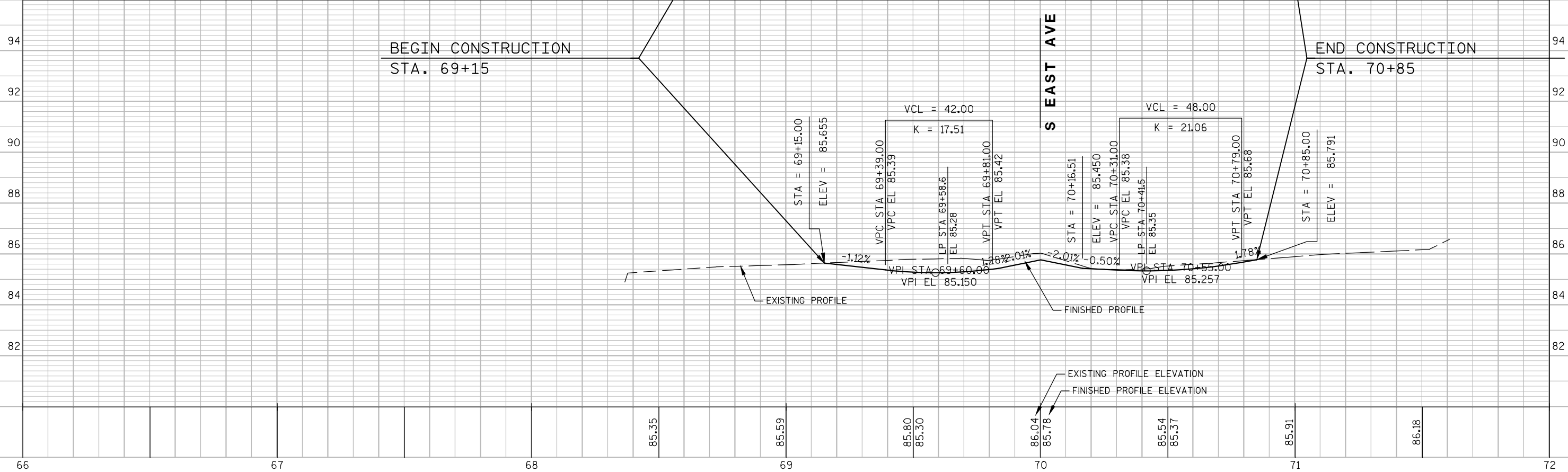
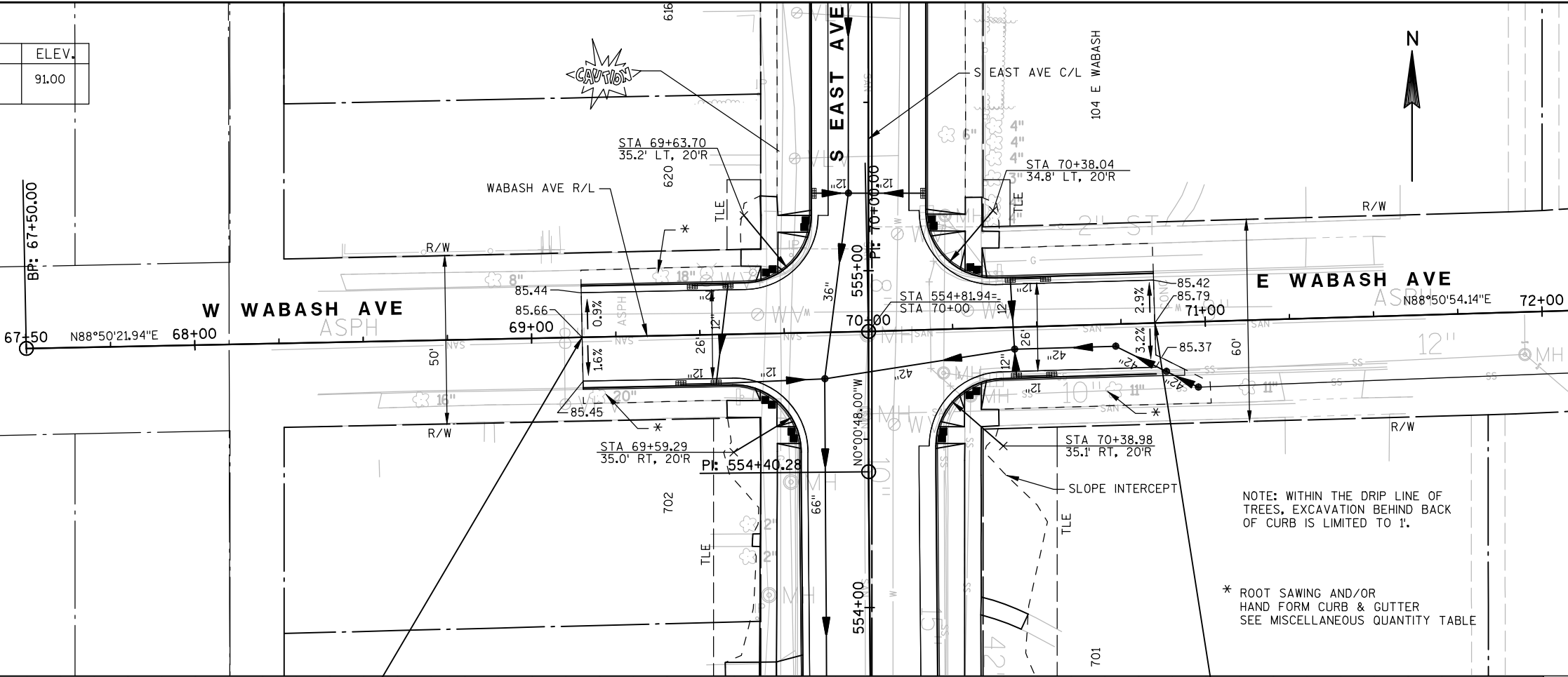
85.09
84.96

85.49
85.21

86.31
85.73

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BENCHMARK			
NO.	STATION	DESCRIPTION	ELEV.
BM 4	557+47, 73'LT	SE CORNER OF CONCRETE STOOP @ HSE #600	91.00



T:\1102728\Cadd\Civil3D\27181170\SheetsPlan\050111_pp-WNewhall.dwg, 11x17, 1/28/2013 5:04:53 PM, trg

5

BENCHMARK			
NO.	STATION	DESCRIPTION	ELEV.
BM 5	564+22.75' LT	SE CORNER OF CONCRETE STOOP @ HSE #400	99.32

BP: 137+00.00

N 88°50'21.83" E

138+00

W NEWHALL AVE

139+00

PI: 568+48.24

EP: 140+00.00

STA 567+98.22 =
STA 140+00

NOTE: WITHIN THE DRIP LINE OF
TREES, EXCAVATION BEHIND BACK
OF CURB IS LIMITED TO 1'.

* ROOT SAWING AND/OR
HAND FORM CURB & GUTTER
SEE MISCELLANEOUS QUANTITY TABLE

N

5

94

92

90

88

86

84

82

BEGIN CONSTRUCTION
STA. 139+00

EXISTING PROFILE

FINISHED PROFILE

EXISTING PROFILE ELEVATION
FINISHED PROFILE ELEVATION

VCL = 50.00
K = 27.02

STA = 139+00.00
ELEV = 85.842

VPC STA 139+25.00
VPC EL 85.50

LP STA 139+61.5
EL = 85.26

VPT STA 139+75.00
VPT EL 85.29

STA = 140+00.00
ELEV = 85.637

VPI STA 139+50.00
VPI EL 85.166

-1.35%

0.50% 1.91%

85.52

85.84

85.91

86.03

136

137

138

139

140

141

142

PROJECT NO:2718-11-70

HWY:S EAST AVENUE

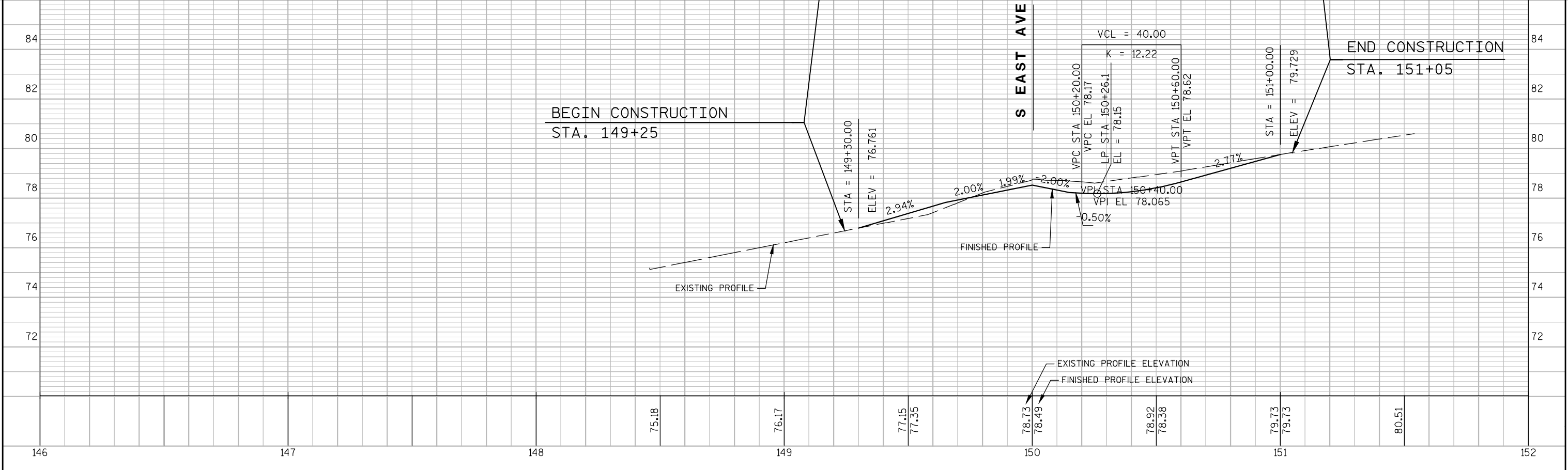
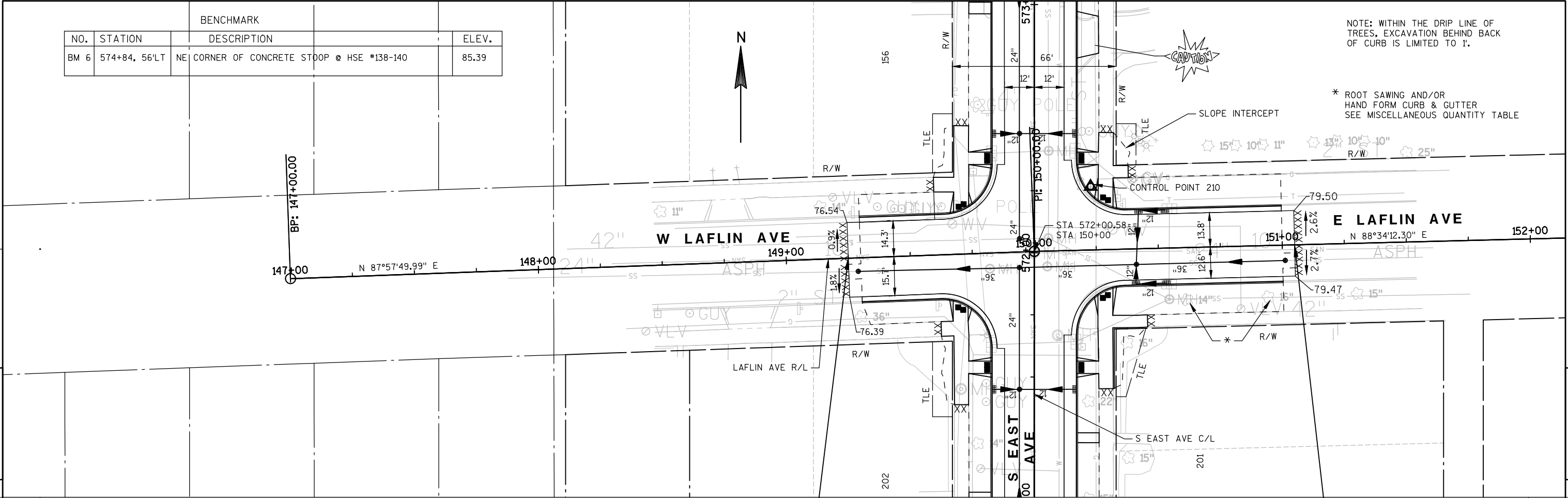
COUNTY:WAUKESHA

PLAN AND PROFILE - W NEWHALL AVE

SHEET

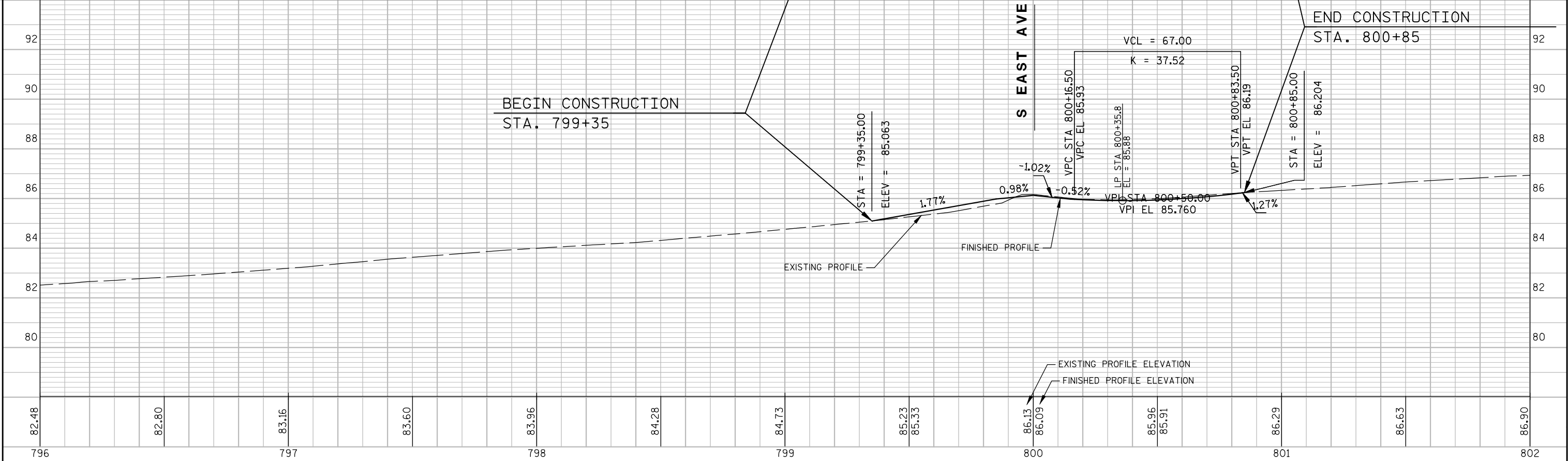
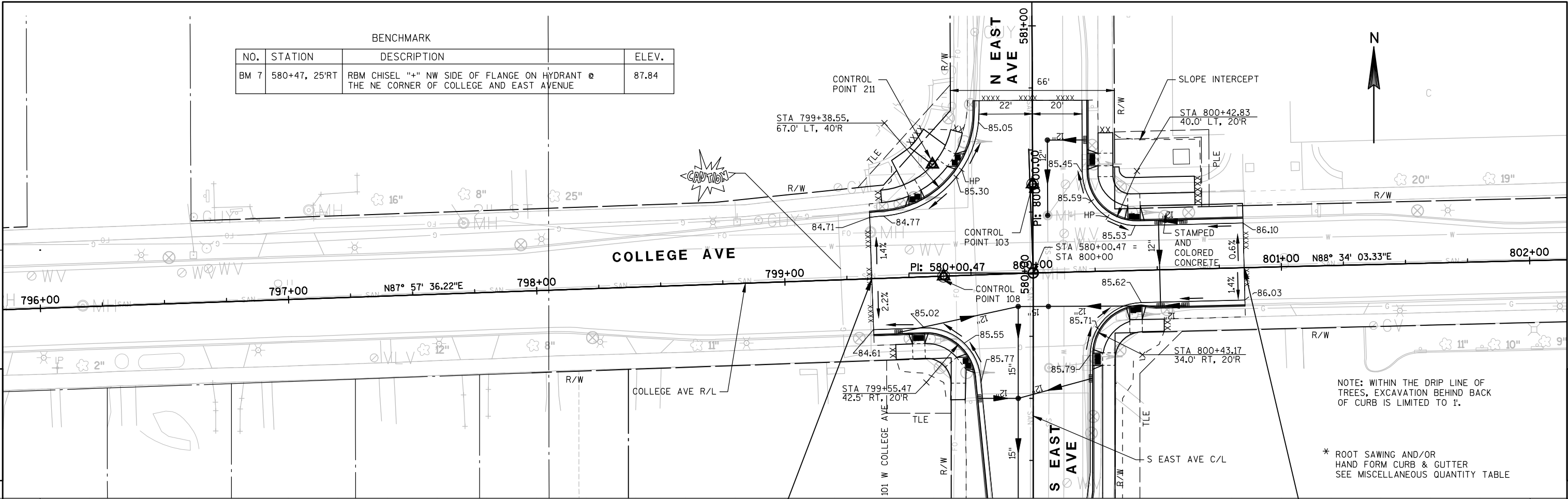
E

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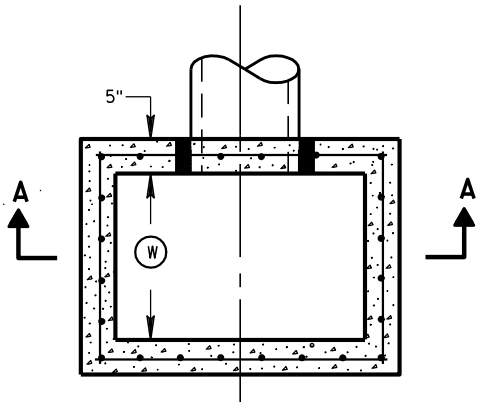
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BENCHMARK			
NO.	STATION	DESCRIPTION	ELEV.
BM 7	580+47, 25'RT	RBM CHISEL "+" NW SIDE OF FLANGE ON HYDRANT @ THE NE CORNER OF COLLEGE AND EAST AVENUE	87.84

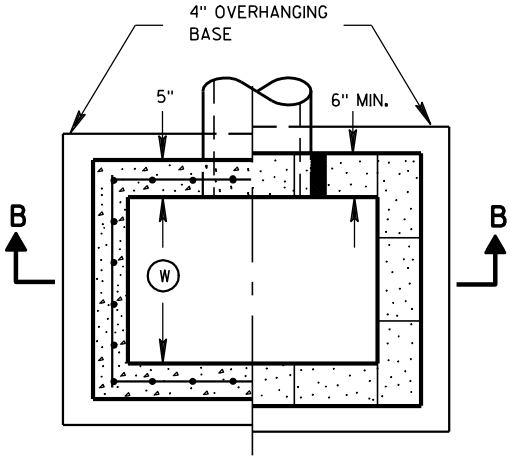


Standard Detail Drawing List

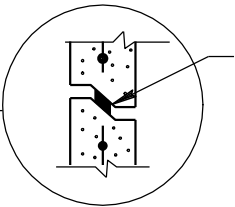
08A09-01	CATCH BASINS 2X3-FT AND 2.5X3-FT
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08D05-14A	CURB RAMPS TYPES 1 AND 1-A
08D05-14B	CURB RAMPS TYPES 2 AND 3
08D05-14C	CURB RAMPS TYPE 4A
08D05-14D	CURB RAMPS TYPE 4B
08D05-14E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-07	CONDUIT
09B04-09	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09C03-03	TRANSFORMER/PEDESTAL BASES
09C06-05	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09D01-04	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-02	SIGNAL OR LIGHTING CONTROL CABINET
09D03-02	POST MOUNTED CONTROLLER SERVICE INSTALLATION
09E01-11B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-11C	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4
09E01-11G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-04	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E05-05	TRAFFIC SIGNAL STANDARD ORNAMENTAL BRACKET MOUNTINGS TYPICAL FOR 13 FT. OR 15 FT.
09E06-04	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
15C02-04A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-01	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-14A	PAVEMENT MARKING (MAINLINE)
15C08-14F	PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)
15C08-15B	PAVEMENT MARKING (INTERSECTIONS)
15C29-02A	BICYCLE LANE MARKING
15C29-02B	BICYCLE LANE MARKING
15C29-02C	URBAN BICYCLE LANE MARKING
15C29-02E	PAVEMENT MARKING FOR BIKE LANES
15C29-02F	PAVEMENT MARKING FOR SHARED LANE
16A01-06	LANDMARK REFERENCE MONUMENTS AND COVERS



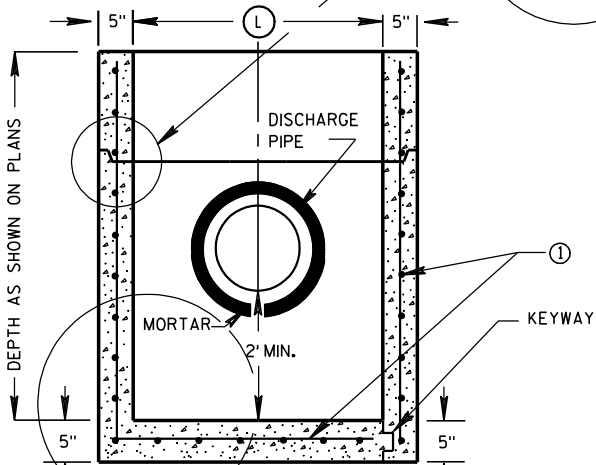
PLAN VIEW



PLAN VIEW



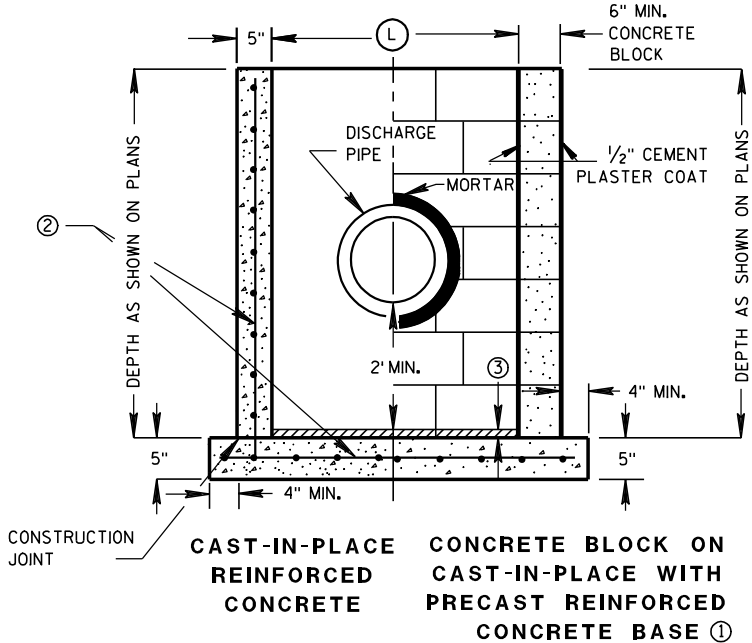
RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



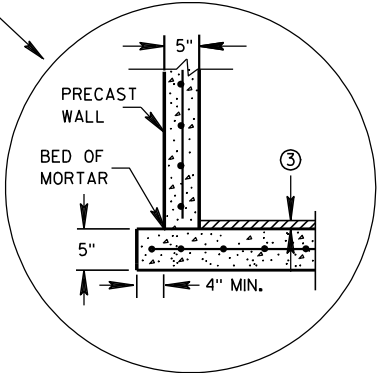
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

SECTION A-A



SECTION B-B



SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION

CATCH BASINS 2X3-FT AND 2.5X3-FT

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST CATCH BASIN UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPERATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

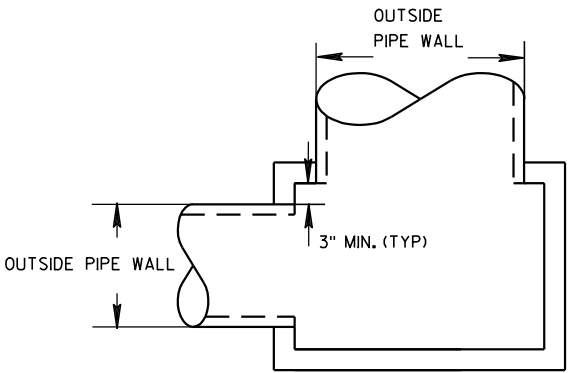
- ① FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.
- ③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER MATRIX

CATCH BASIN SIZE	WIDTH ① (FT)	LENGTH ② (FT)	F	ALL H'S
2X3-FT	2	3		X
2.5X3-FT	2.5	3	X	

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2X3-FT	12	24
2.5X3-FT	18	24

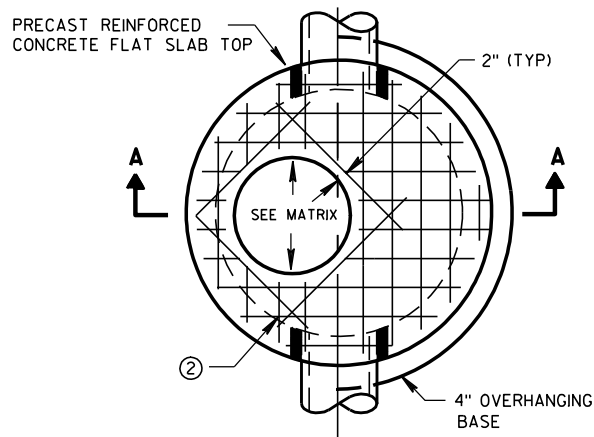


DETAIL "A"

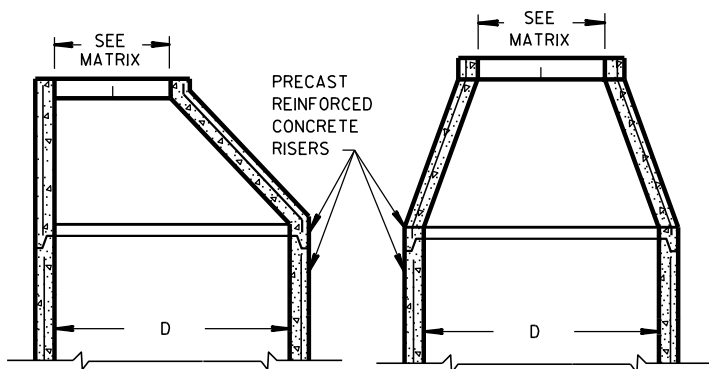
CATCH BASINS 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 DATE /S/ Jerry H. Zogg
FHWA ROADWAY STANDARDS DEVELOPMENT ENGINEER

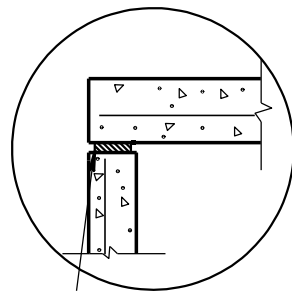


PLAN VIEW CIRCULAR OPENING

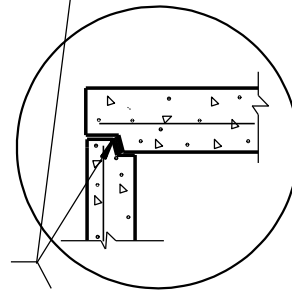


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

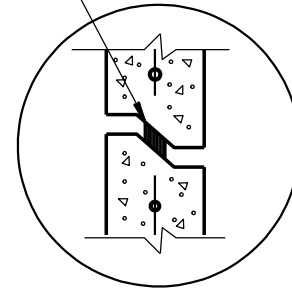
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



TOP WITH PLAIN END JOINT



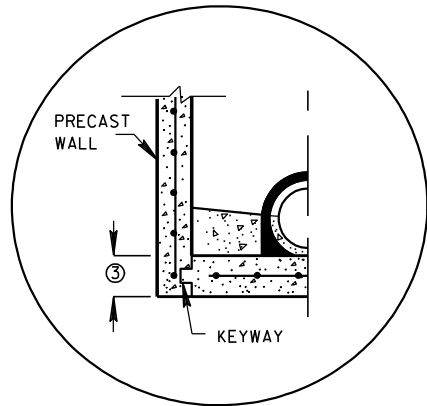
TOP WITH TONGUE AND GROOVE JOINT



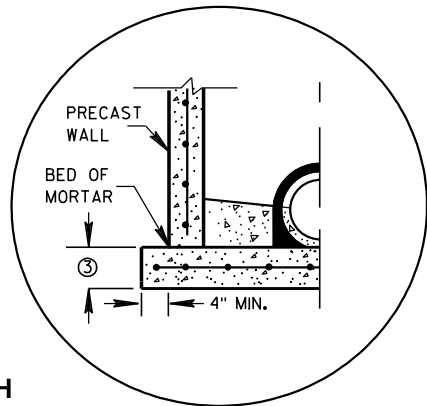
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

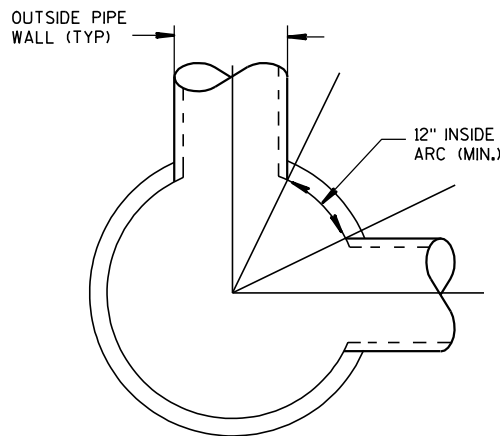


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

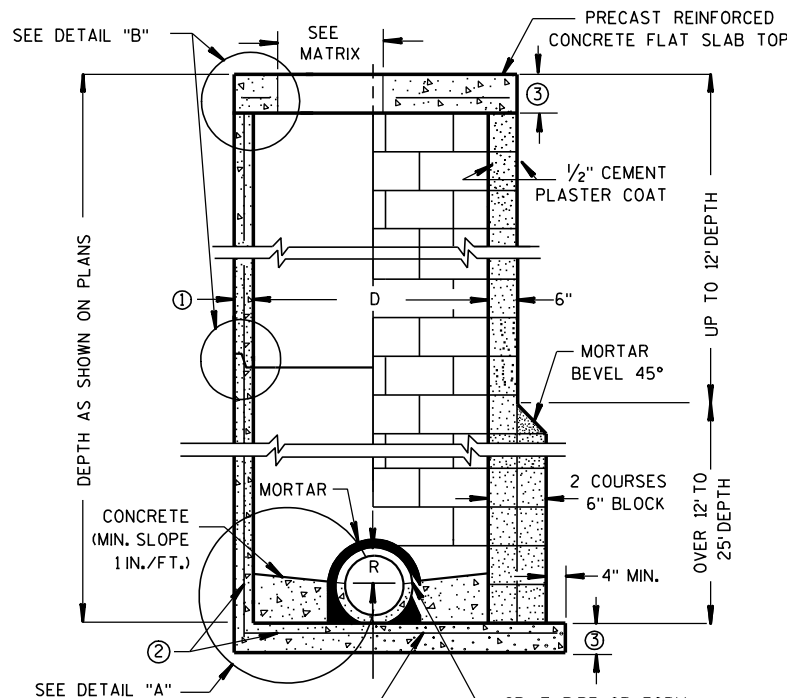


SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"



CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

PRECAST REINFORCED CONCRETE BLOCK WITH CONCRETE WITH MONOLITHIC BASE CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS. UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED. CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPERATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

- ① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.
- ② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

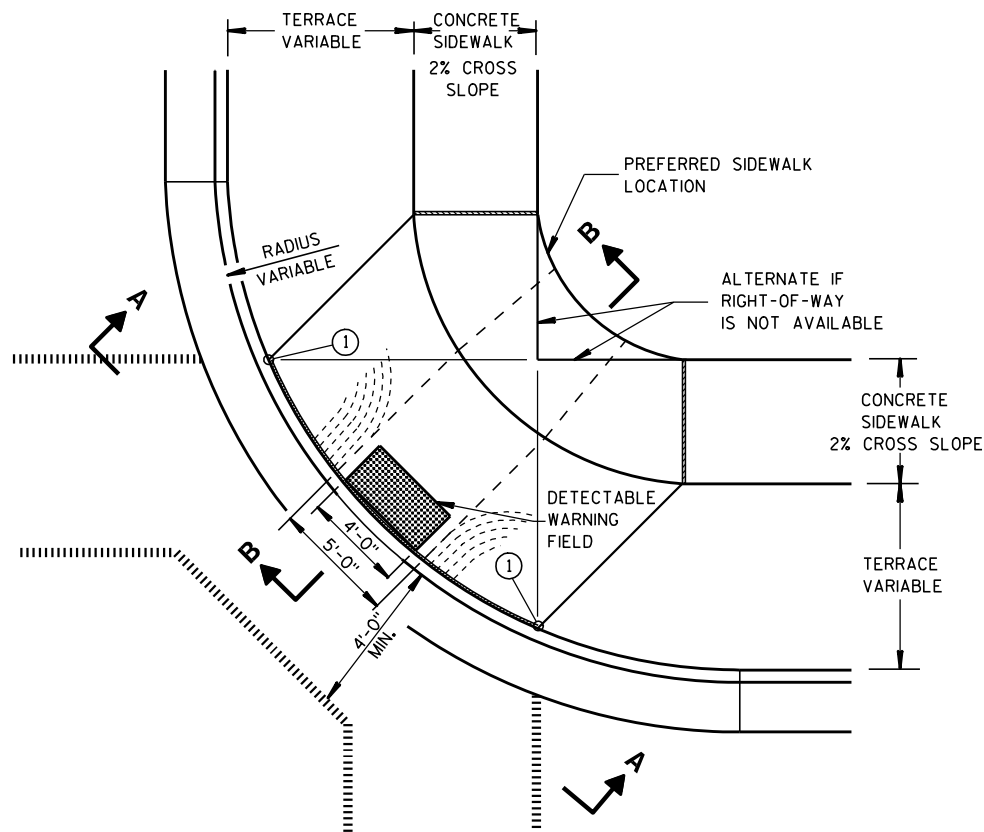
PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

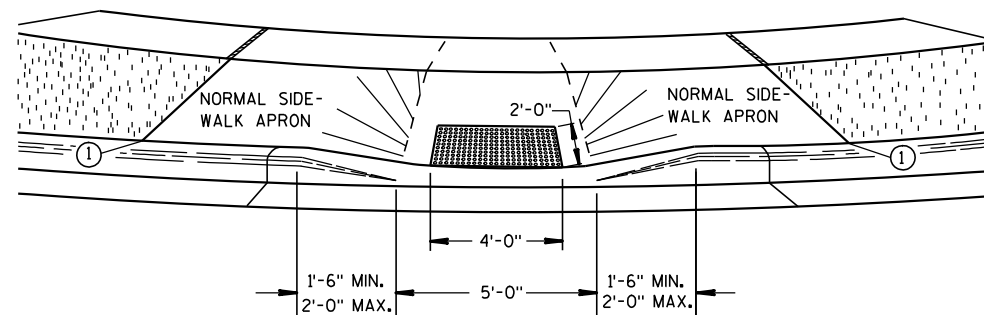
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

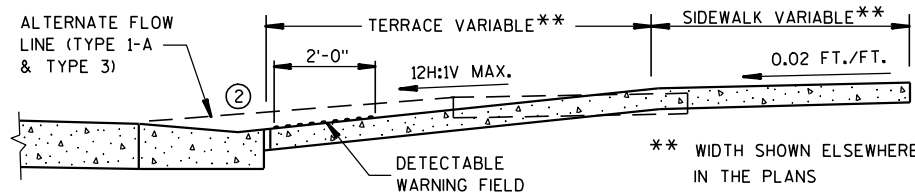
APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA ENGINEER



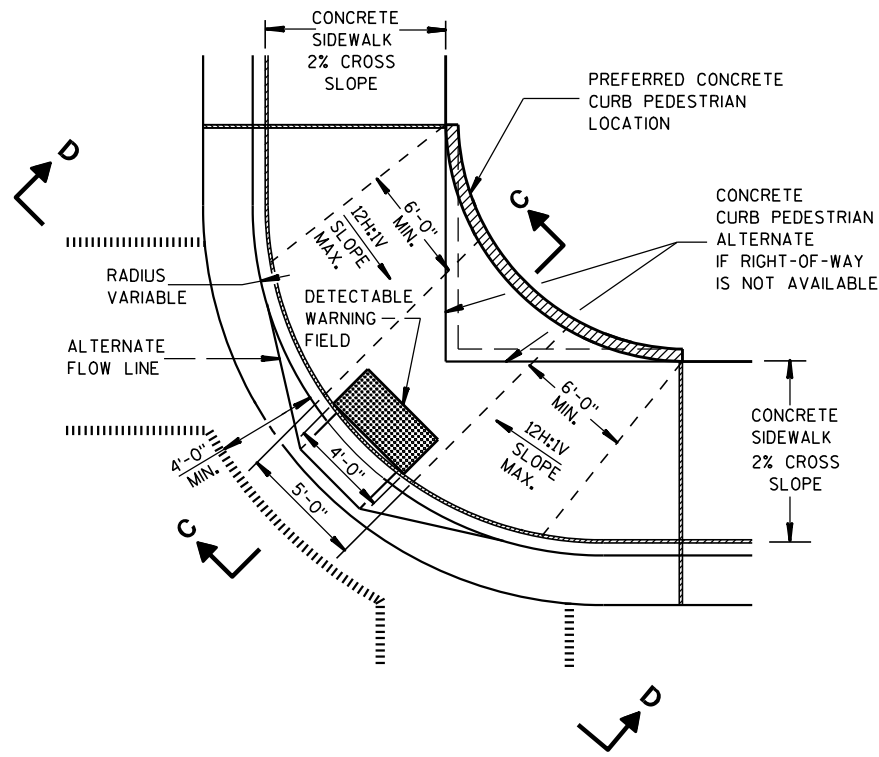
PLAN VIEW
TYPE 1 RAMP
(CENTER OF CORNER RADIUS)



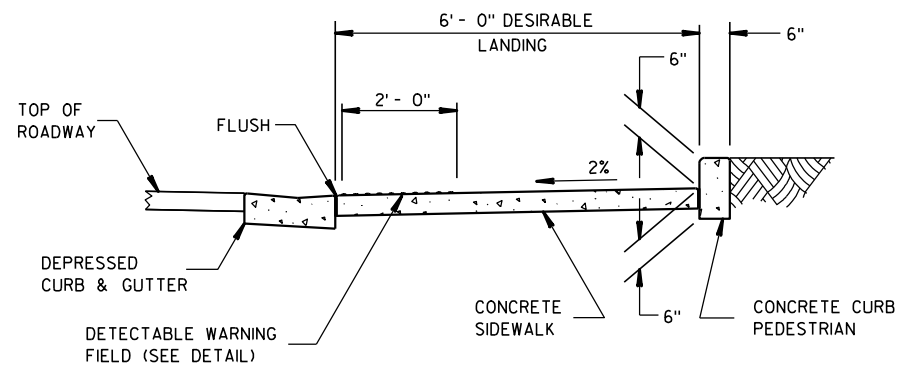
VIEW A-A



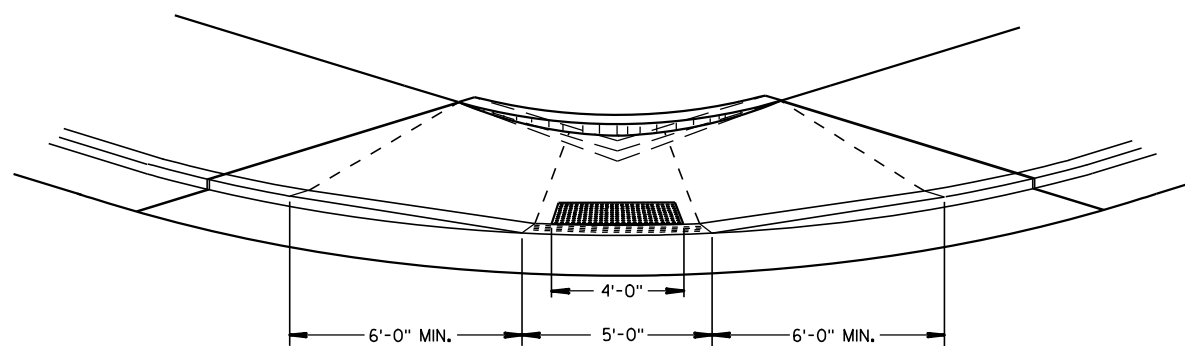
SECTION B-B



PLAN VIEW
TYPE 1-A RAMP
(NO TERRACE)



SECTION C-C



VIEW D-D

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

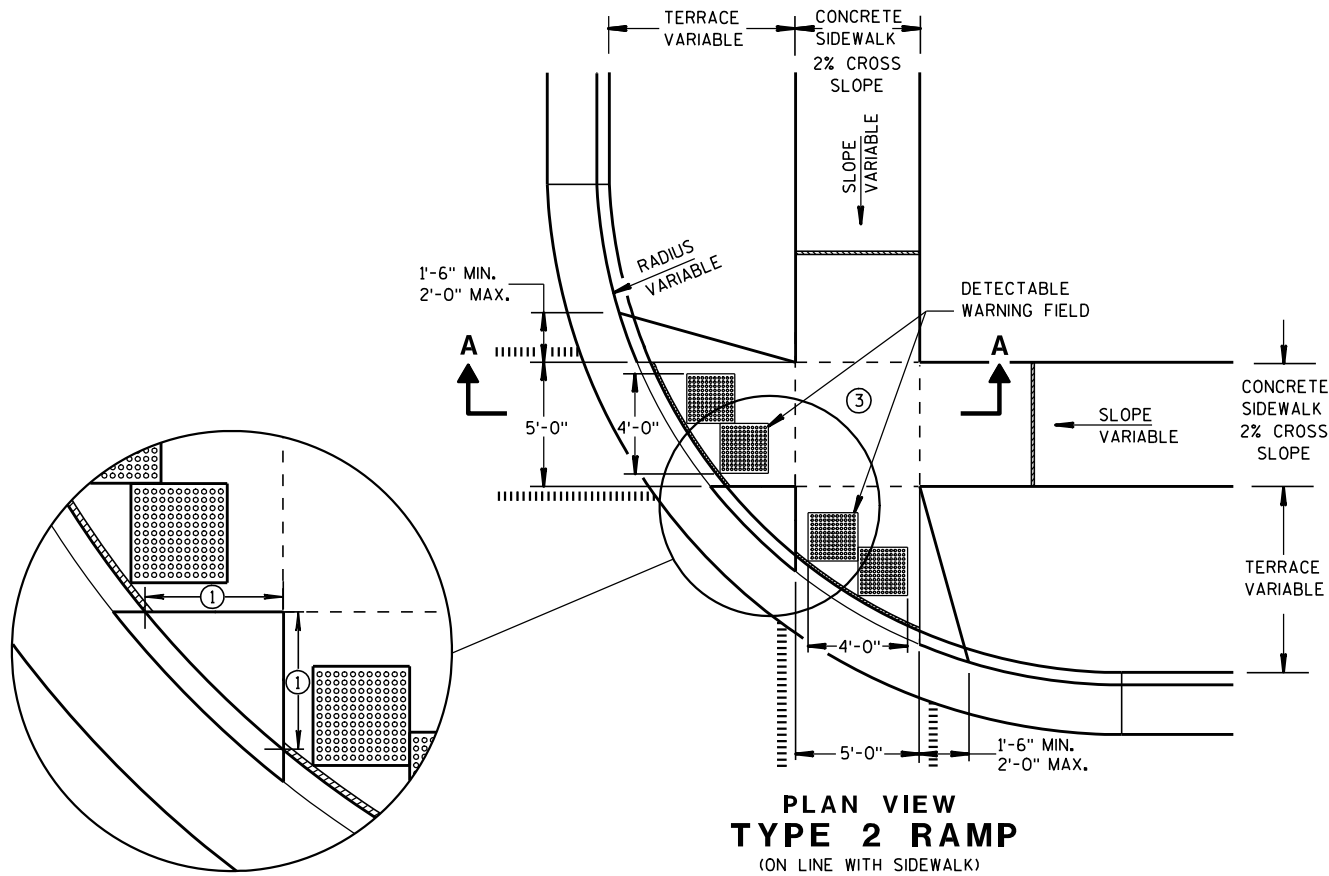
- THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

LEGEND

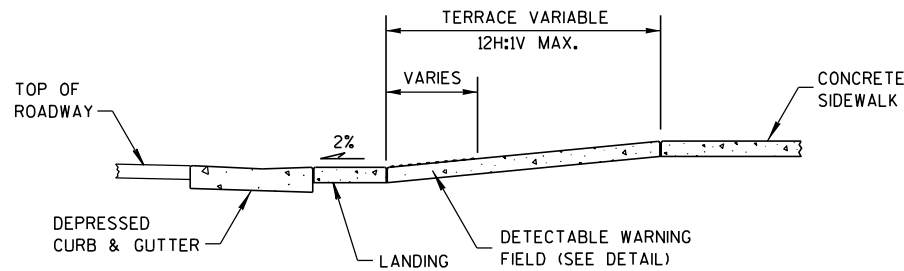
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS
TYPES 1 AND 1-A

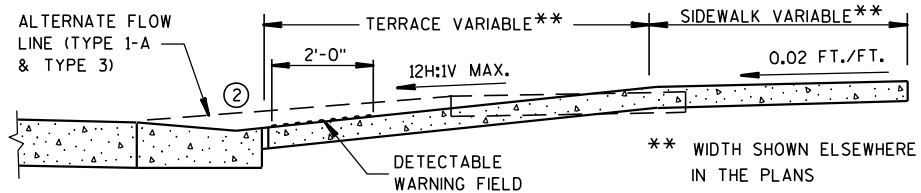
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

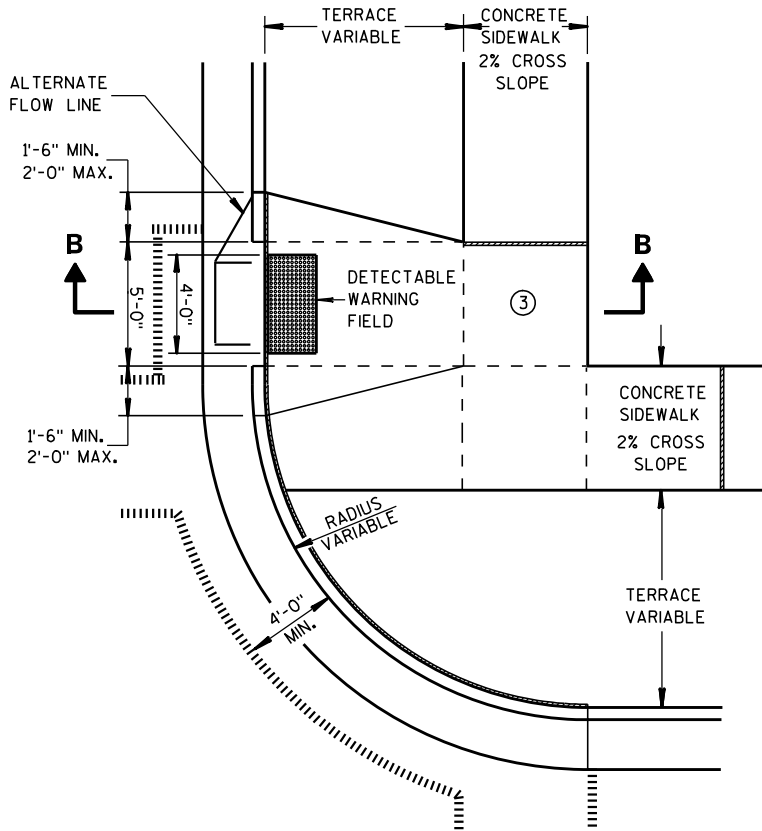
GENERAL NOTES

USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

- ① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP, REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.
- ③ PROVIDE LANDING AT TOP OF RAMP WITH NO MORE THAN 2% SLOPE IN ANY DIRECTION.

LEGEND

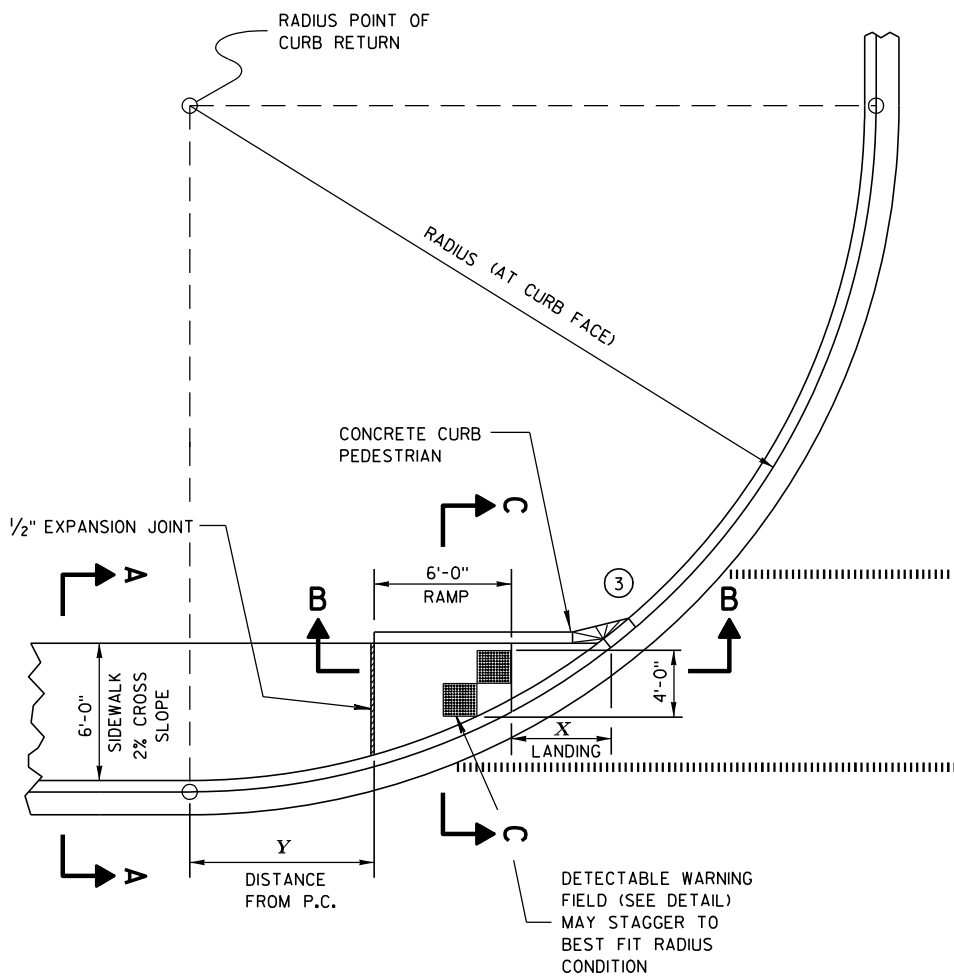
- ===== 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



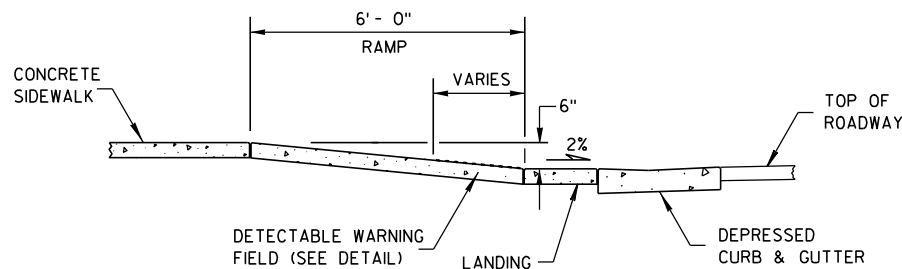
PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS
TYPES 2 AND 3

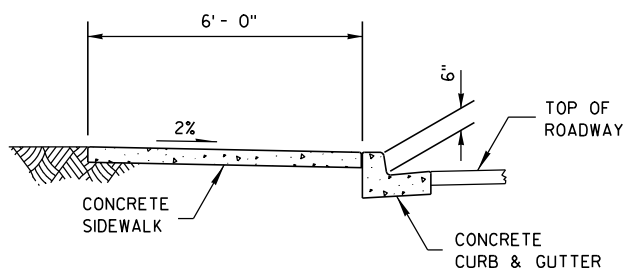
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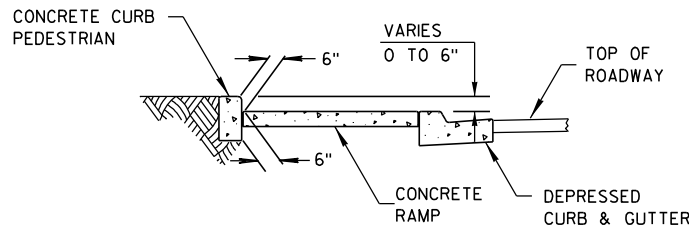
CURB RAMP TYPE 4A
PLAN VIEW



SECTION B-B



SECTION A-A



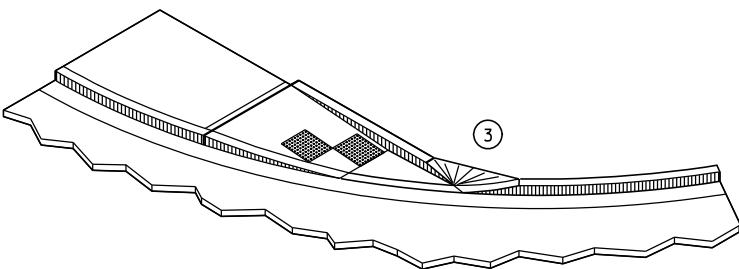
SECTION C-C

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-13/4"	2'-7 1/4"
30 FEET	7'-11 3/4"	4'-8 1/4"
40 FEET	9'-5 1/4"	6'-5"
50 FEET	10'-8 3/4"	7'-11 1/4"
60 FEET	11'-10 1/4"	9'-3 1/2"

INTERMEDIATE RADII CAN BE INTERPOLATED

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.
- SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- ③ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.)
DO NOT MARK TRANSITION NOSE.

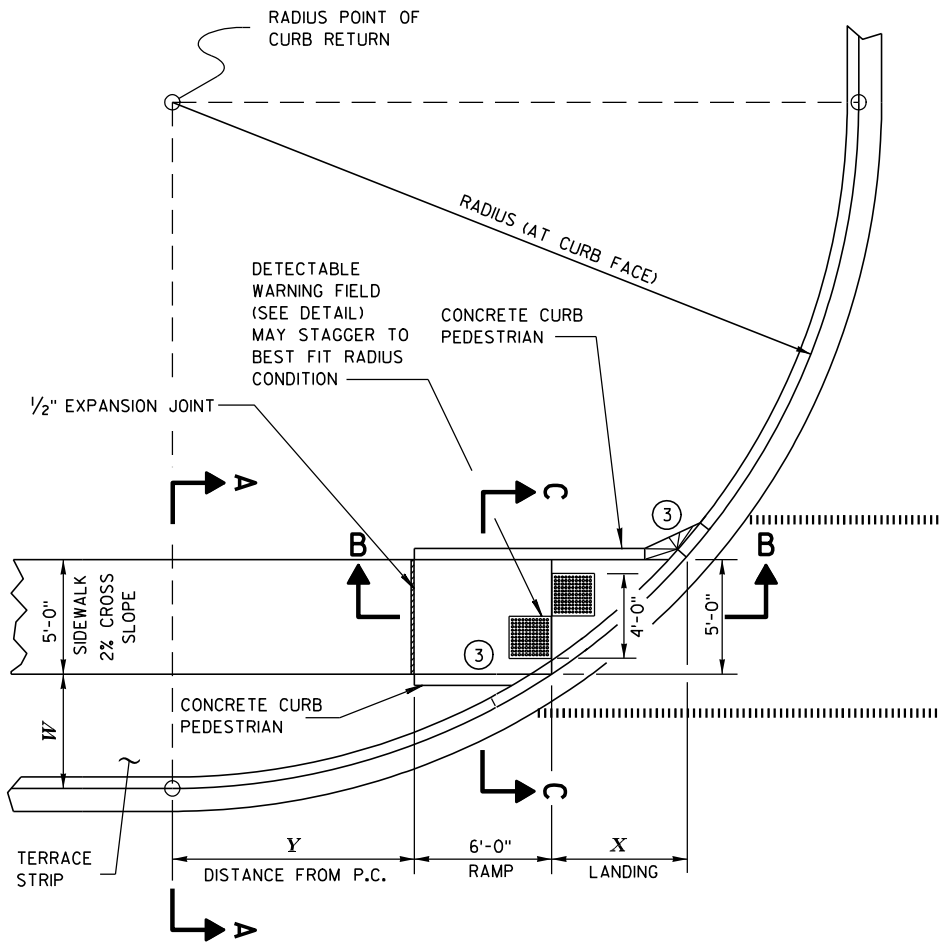


ISOMETRIC VIEW

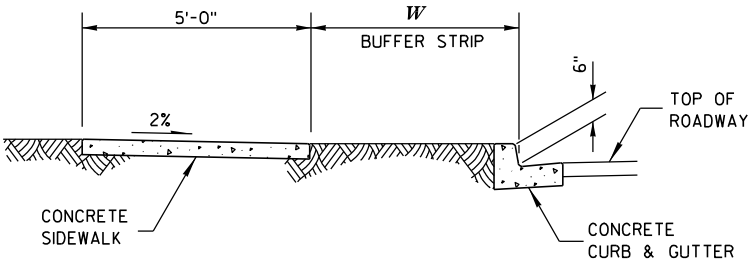
- LEGEND**
- 1/2" EXPANSION JOINT-SIDEWALK
 - CONTRACTION JOINT FIELD LOCATED
 - PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 4A

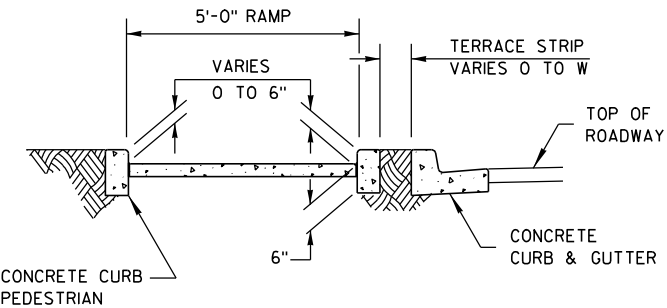
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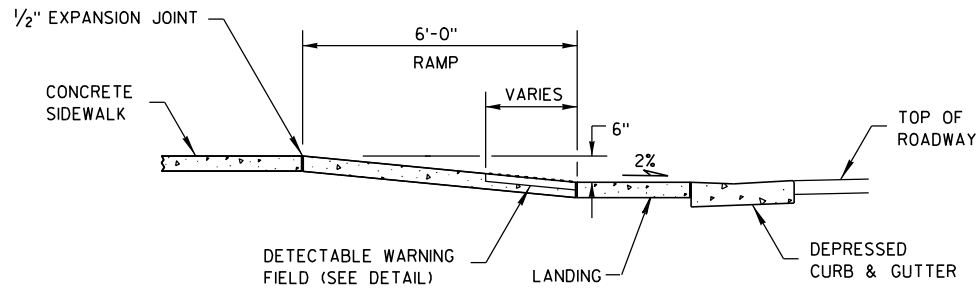
CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A



SECTION C-C



SECTION B-B

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

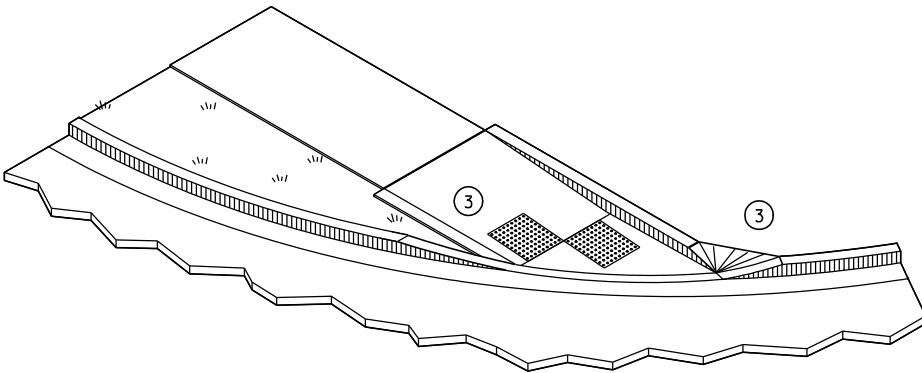
RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

- ③ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS).
DO NOT MARK TRANSITION NOSE.

RADIUS (AT CURB FACE)	W = 3'- 0"		W = 4'- 0"		W = 5'- 0"		W = 6'- 0"		W = 7'- 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5 1/2"	4'-6 1/2"	4'-8 1/2"	6'-0"	4'-1"	7'-2 3/4"	3'-7"	8'-3 1/2"	3'-1 1/2"	9'-2 1/2"
30 FEET	7'-3 3/4"	7'-1"	6'-5 1/2"	8'-11 1/2"	5'-9 1/4"	10'-7"	5'-2 1/2"	12'-0"	4'-8 3/4"	13'-3 1/4"
40 FEET	8'-9 1/2"	9'-2 1/2"	7'-10"	11'-5 1/4"	7'-1"	13'-4 1/2"	6'-5 3/4"	15'-3 1/4"	5'-11 1/2"	16'-7 1/4"
50 FEET	10'-3 1/4"	11'-3 1/4"	9'-1 1/4"	13'-7 1/4"	8'-2 1/2"	15'-9 1/2"	7'-6 1/2"	17'-9"	6'-11 3/4"	19'-6 1/4"
60 FEET	11'-2 1/2"	12'-8 3/4"	10'-3 1/4"	15'-6 1/2"	9'-2 1/4"	17'-11 3/4"	8'-5 3/4"	20'-1 3/4"	7'-10 1/2"	22'-1 1/2"
70 FEET	12'-2 3/4"	14'-3 1/4"	11'-1 1/4"	17'-4"	10'-1"	19'-11 3/4"	9'-3 3/4"	22'-4 1/4"	8'-8 1/4"	24'-6 1/4"
80 FEET	13'-2"	15'-8 1/2"	11'-10 1/2"	18'-11 3/4"	10'-10 3/4"	21'-10"	10'-1"	24'-4 3/4"	9'-5"	26'-8 3/4"
90 FEET	14'-1 1/2"	17'-1 1/2"	12'-8 1/4"	20'-6 1/2"	11'-7 3/4"	23'-7"	10'-9 3/4"	26'-3 3/4"	10'-1 1/4"	28'-9 1/2"
100 FEET	14'-10 1/2"	18'-3 3/4"	13'-5 1/2"	22'-0"	12'-4 1/4"	25'-2 3/4"	11'-5 3/4"	28'-1 1/2"	10'-9"	30'-9"

INTERMEDIATE RADII CAN BE INTERPOLATED



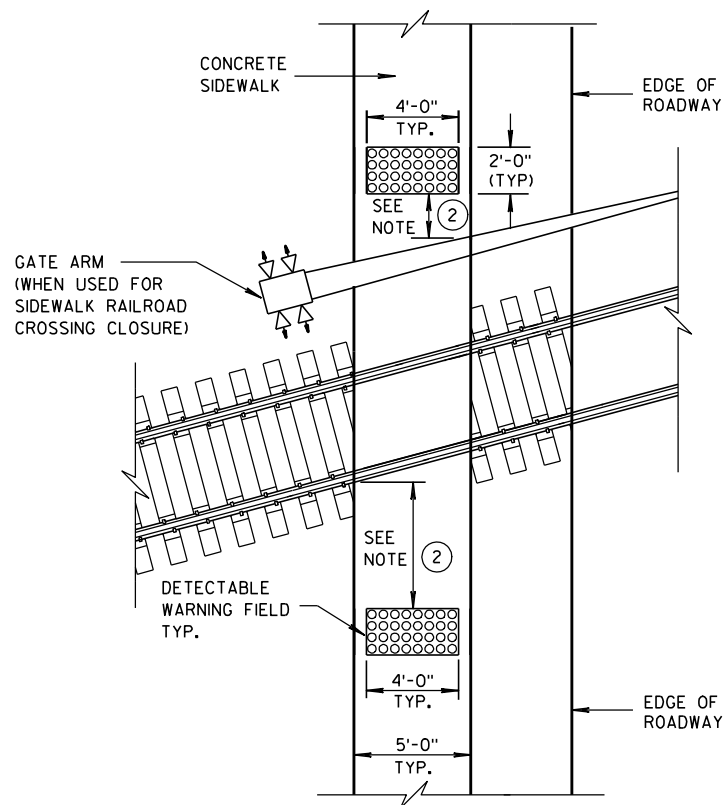
ISOMETRIC VIEW

LEGEND

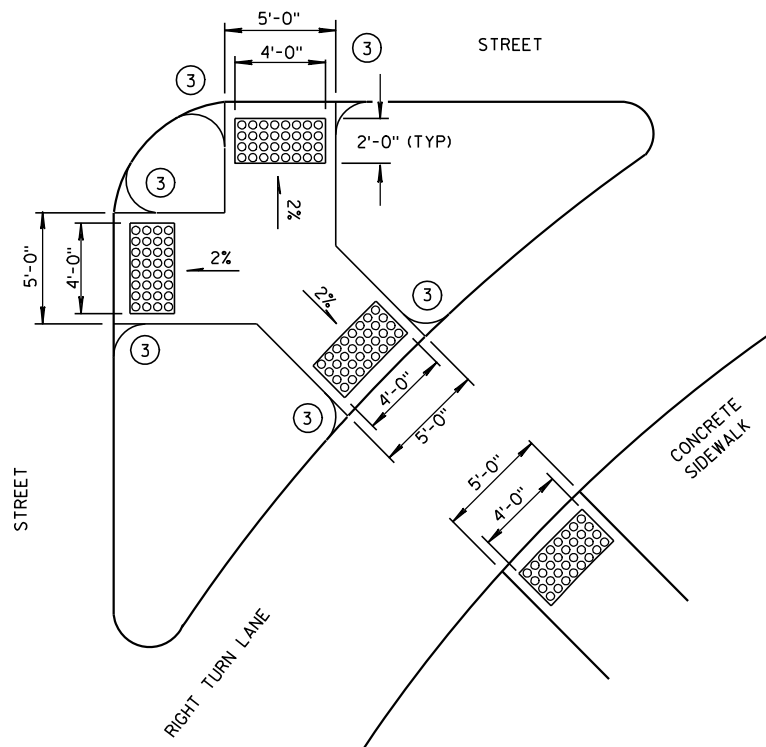
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 4B

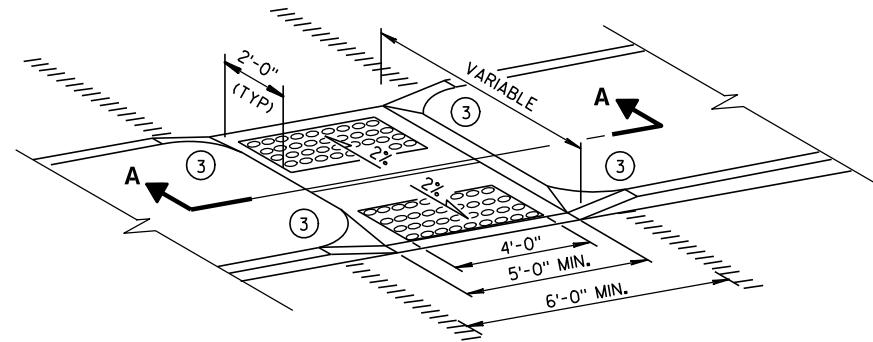
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



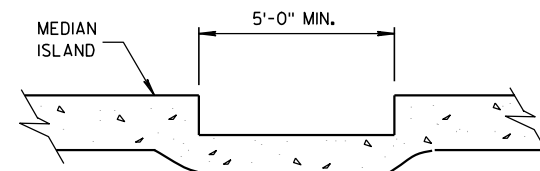
TYPE 8
DETECTABLE WARNINGS
AT RAILROAD CROSSING



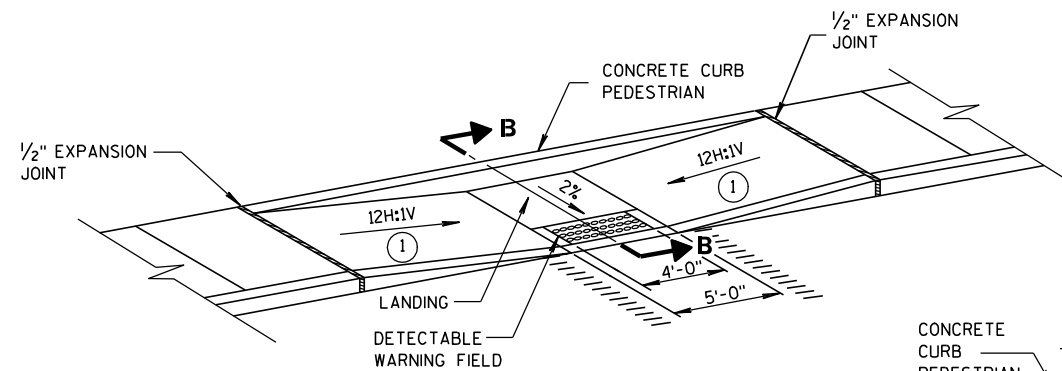
TYPE 6
DETECTABLE WARNING AT ISLANDS



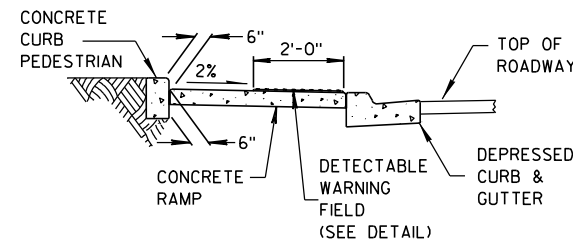
MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5



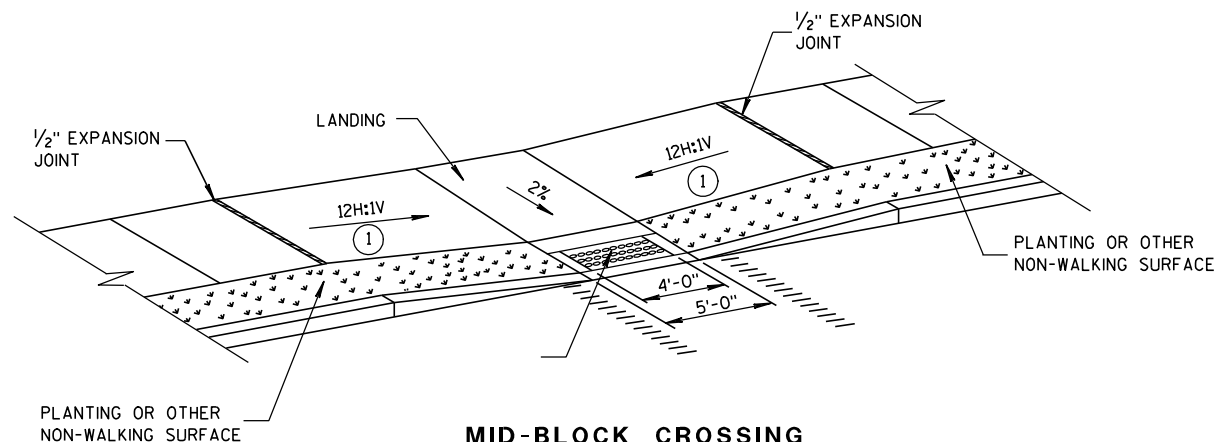
SECTION A-A



MID-BLOCK CROSSING
TYPE 7A



SECTION B-B



MID-BLOCK CROSSING
TYPE 7B

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS
MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

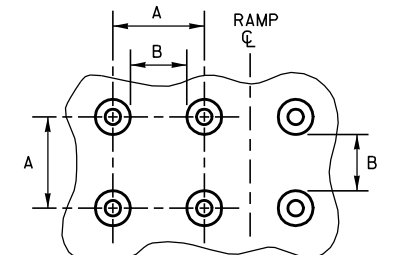
GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

- 1 SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- 2 THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET $\pm$ 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- 3 INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

LEGEND

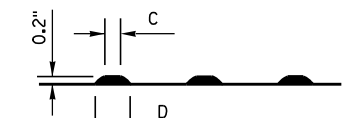
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



PLAN VIEW

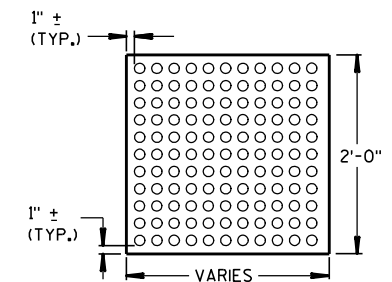
	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

TRUNCATED DOMES DETECTABLE WARNING PATTERN DETAIL



PLAN VIEW
DETECTABLE WARNING
FIELD (TYPICAL)

CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

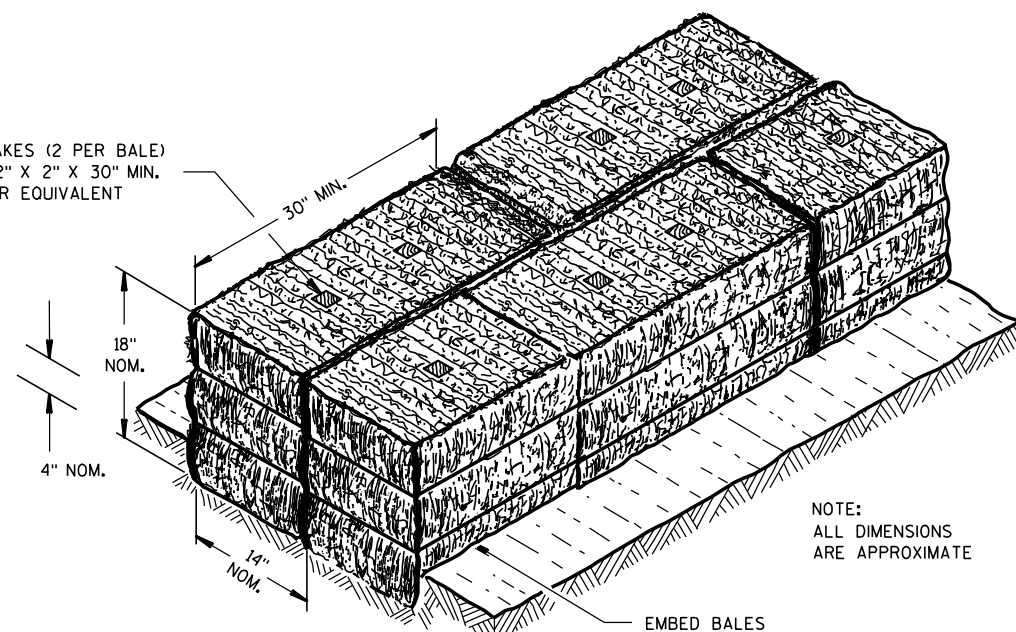
APPROVED

2-9-10
DATE

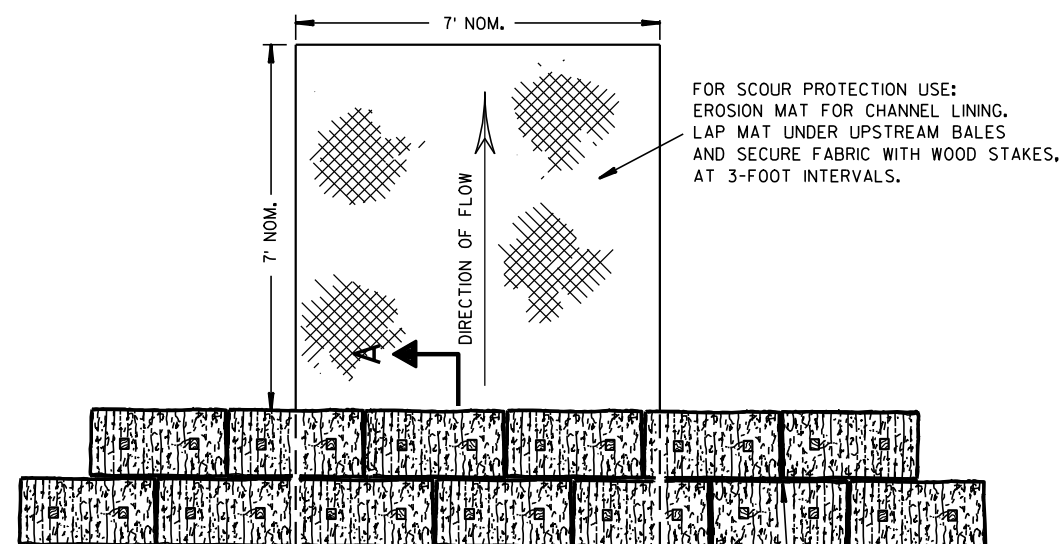
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

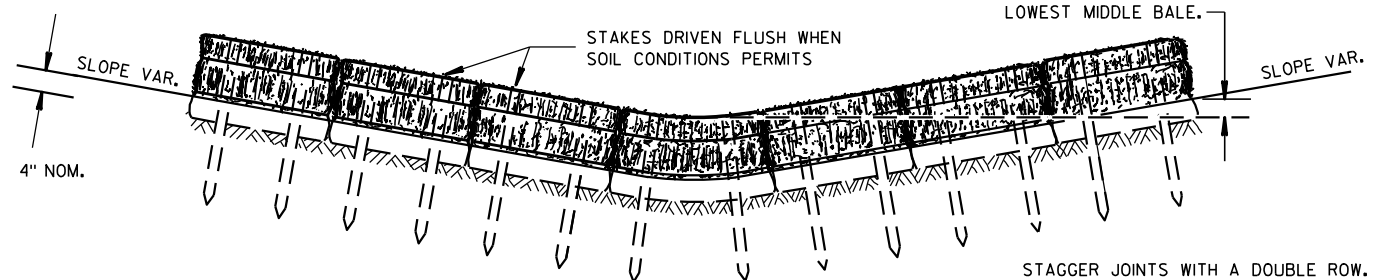
WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT



SECTION A-A



PLAN VIEW



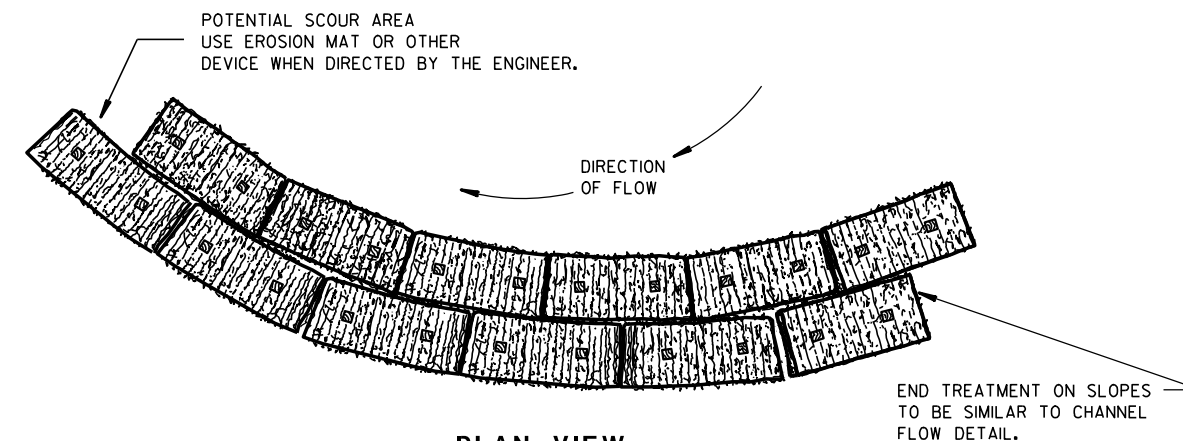
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

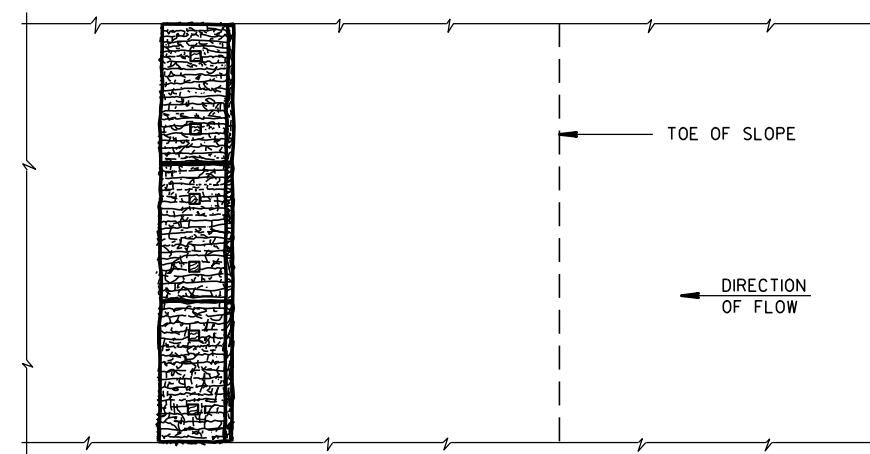
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

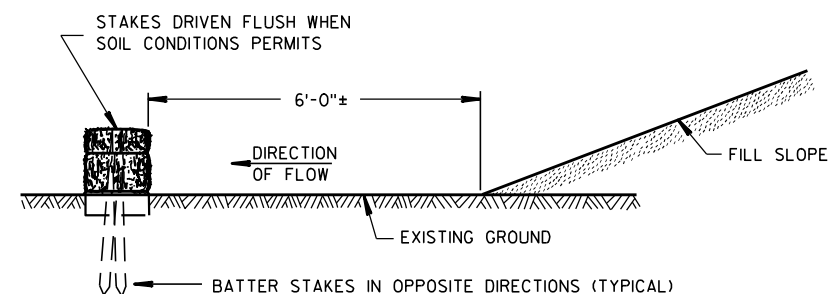


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

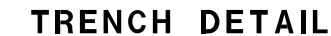
6/04/02
DATE

FHWA

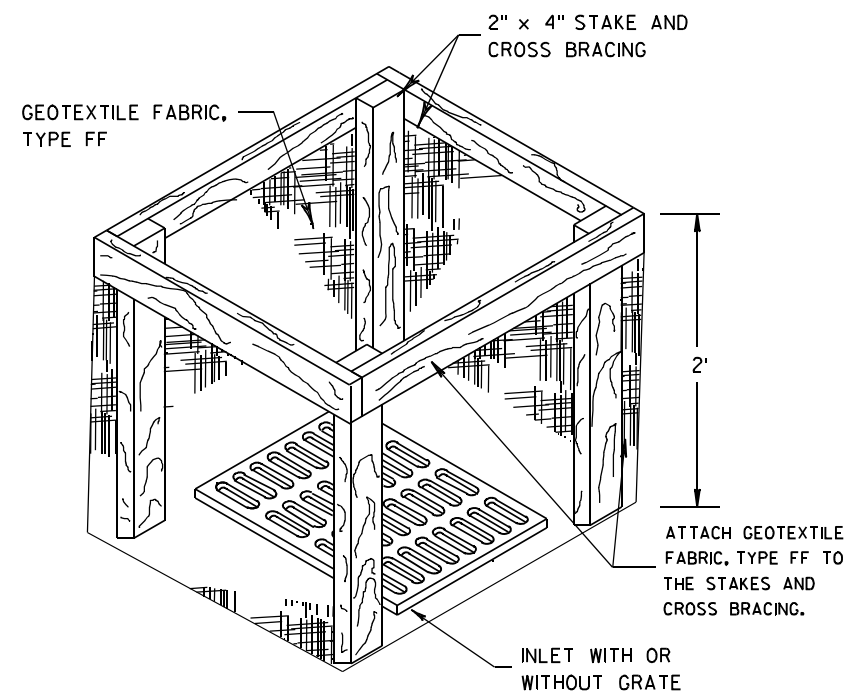
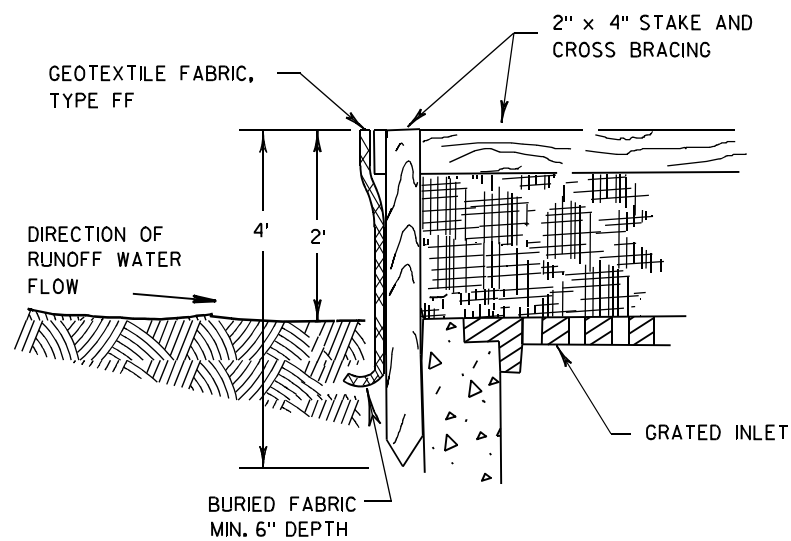
/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



- 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 1½" X 1½" 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.



SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED <u>4-29-05</u> DATE	<u>/S/ Beth Cannestra</u> CHIEF ROADWAY DEVELOPMENT ENGINEER



INLET PROTECTION, TYPE A

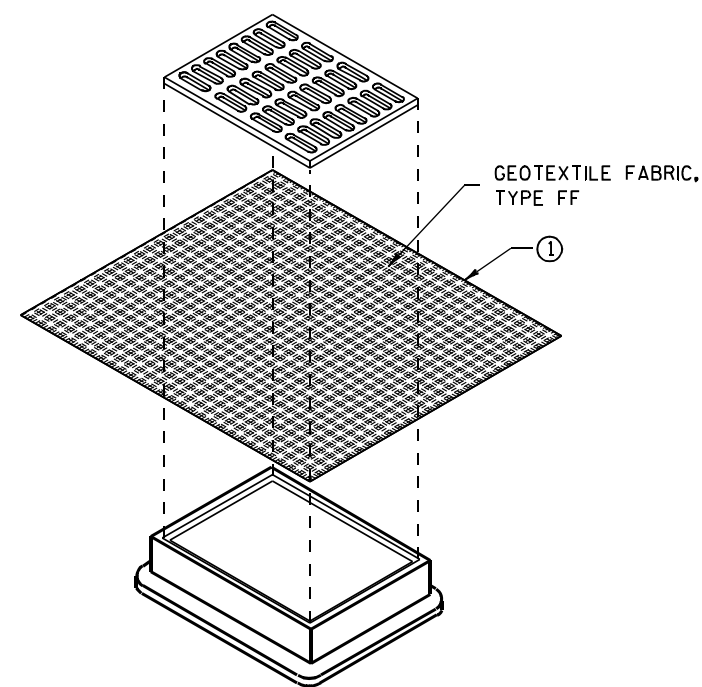
GENERAL NOTES

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 SUBSTITUTED.

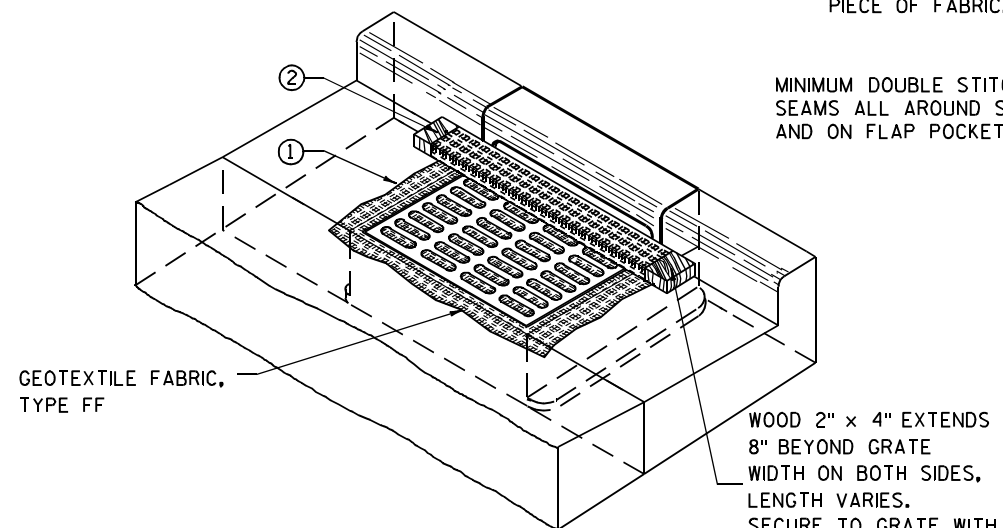
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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 B
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



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.

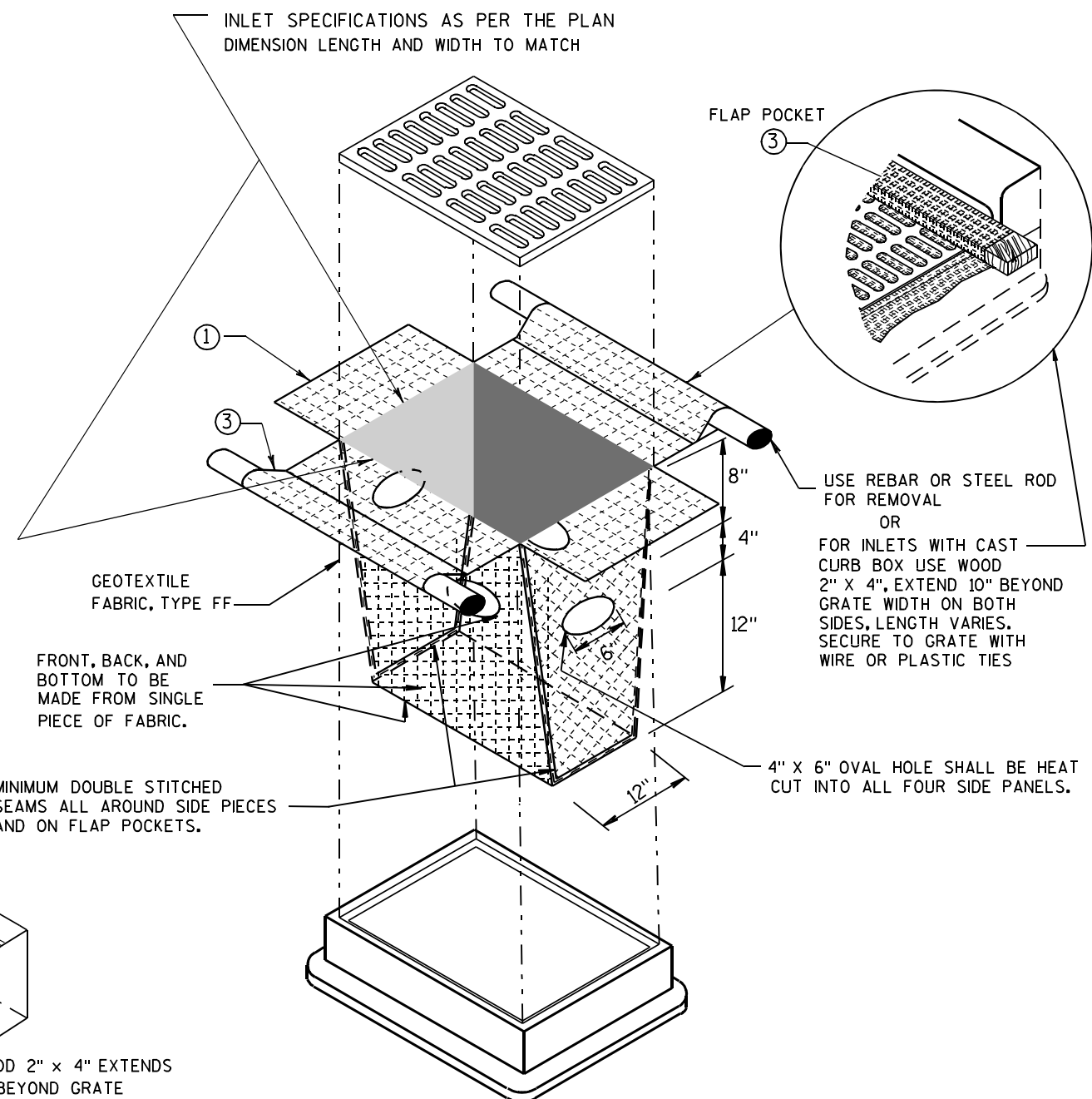
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

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.



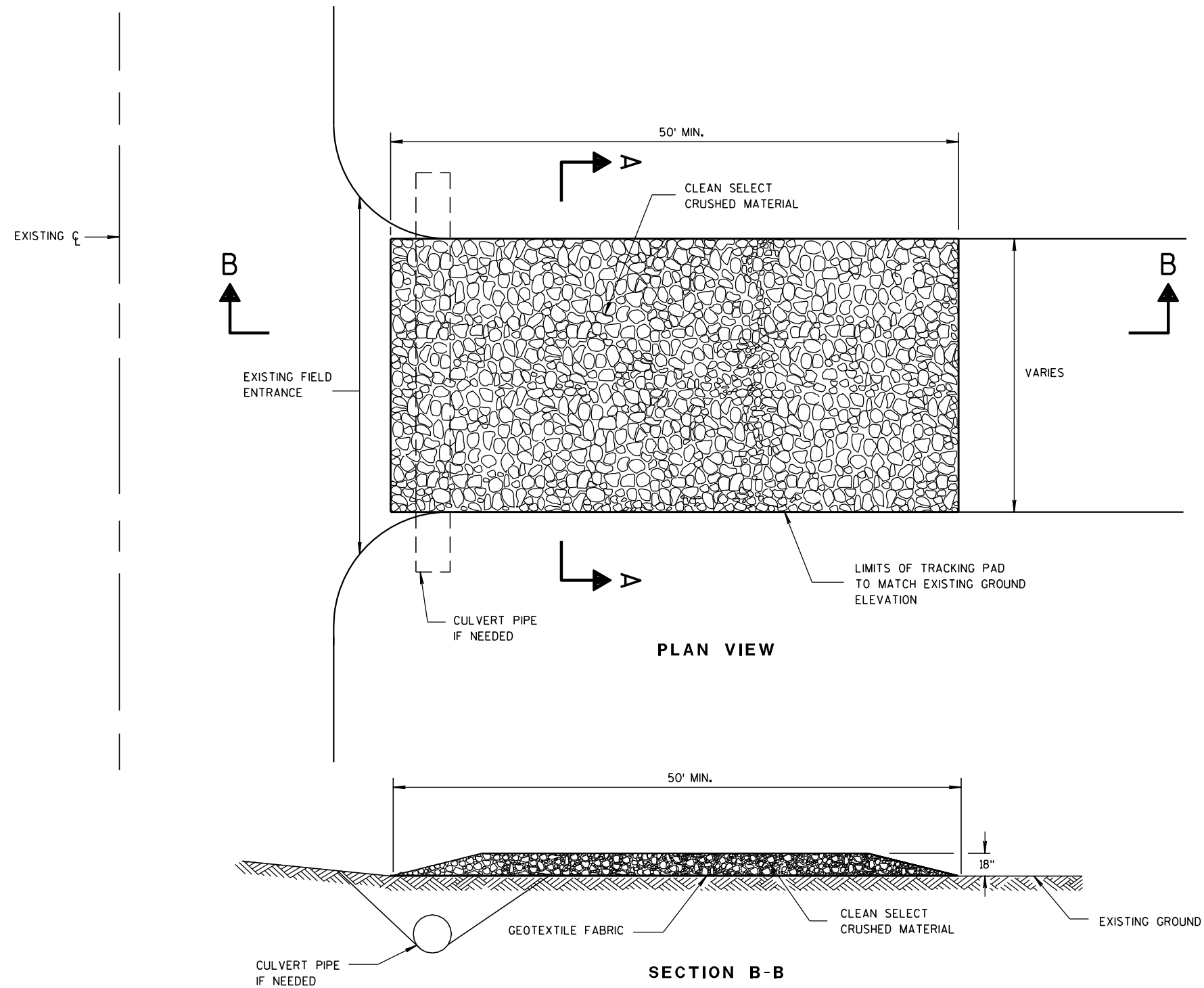
INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Cannestra
DATE
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



TRACKING PAD

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

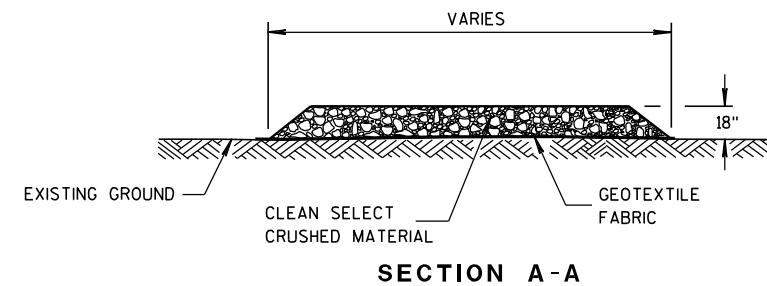
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A-A

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2011

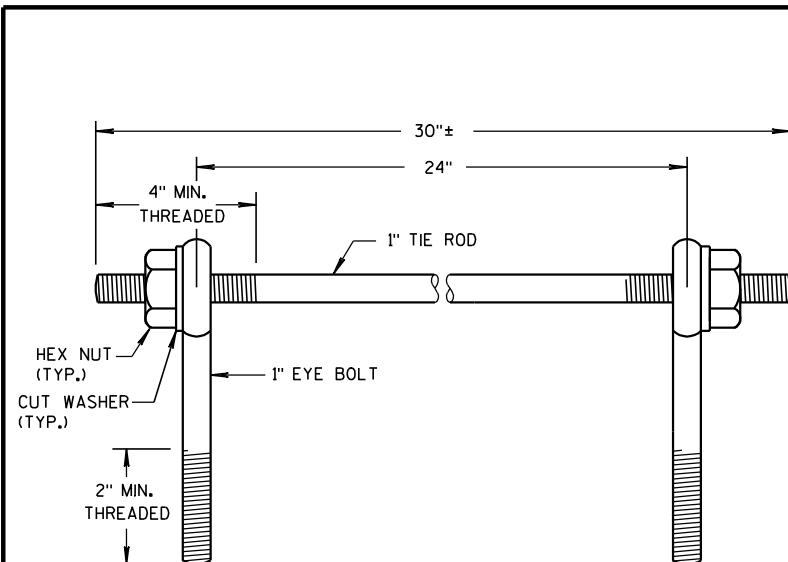
DATE

FHWA

/S/ Jerry H. Zogg

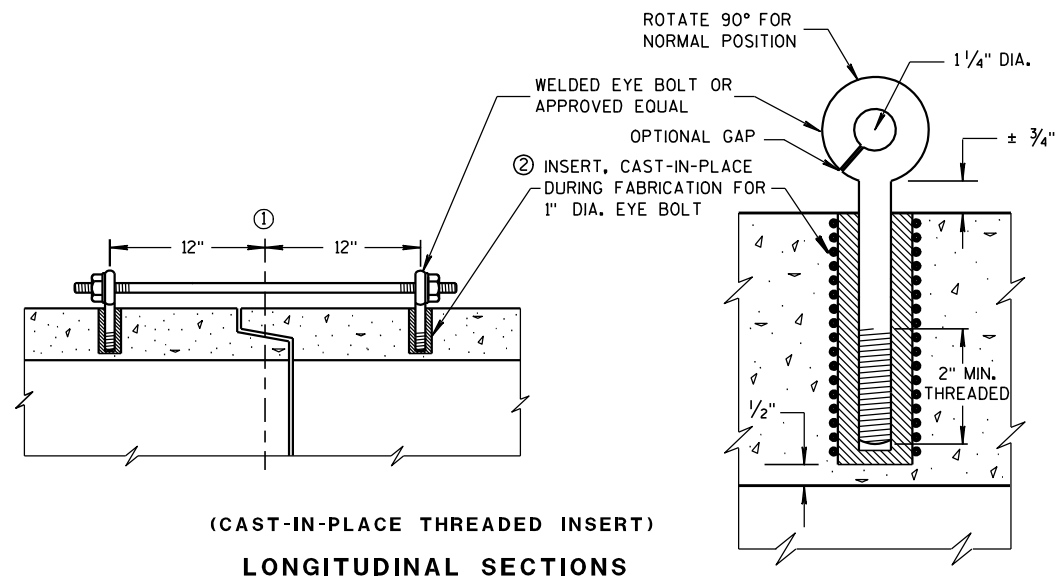
ROADWAY STANDARDS DEVELOPMENT

ENGINEER



EYE BOLTS AND TIE ROD

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

(CAST-IN-PLACE THREADED INSERT)
LONGITUDINAL SECTIONS

GENERAL NOTES

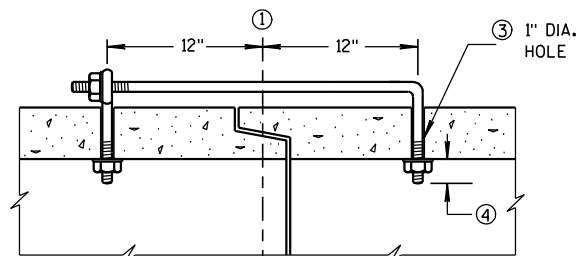
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

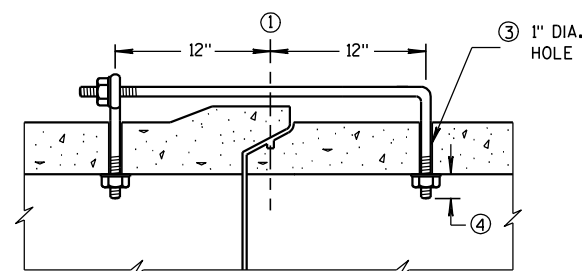
DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- ① ϕ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ϕ OF TONGUE AND GROOVE.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN $\frac{1}{2}$ INCH OF THE INNER SURFACE OF THE PIPE.

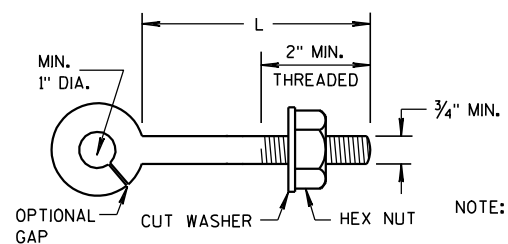


(TONGUE & GROOVE PIPE)

(MODIFIED BELL PIPE)
LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	

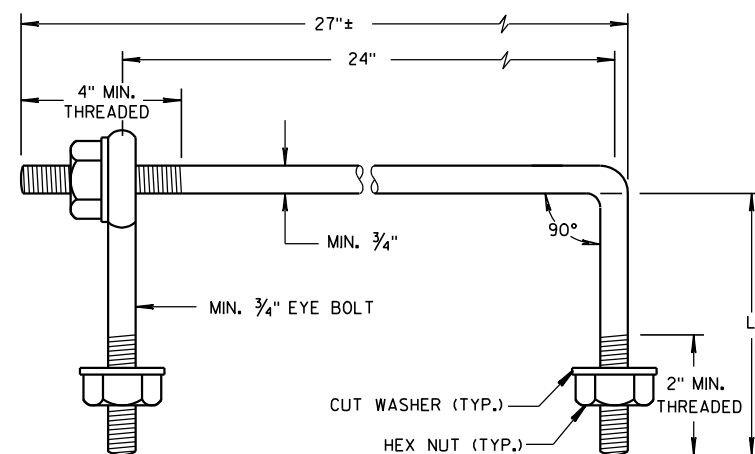


EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.

(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

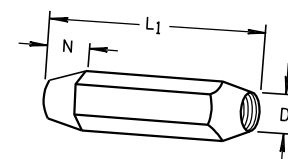


EYE BOLT AND TIE ROD

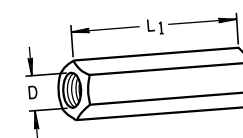
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



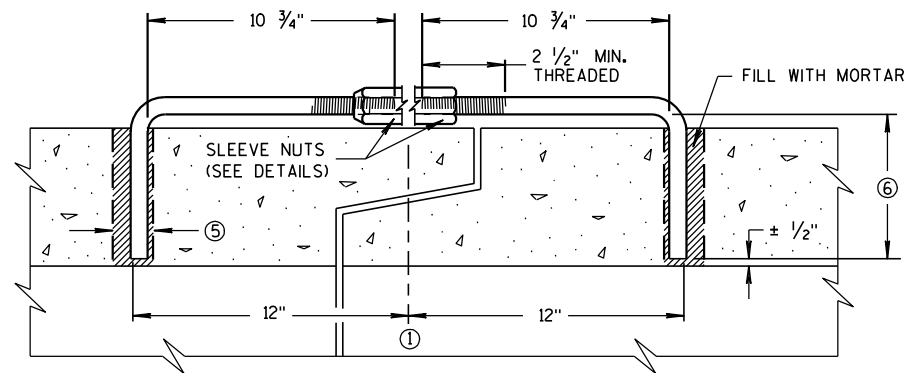
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PLAIN

RIGHT AND LEFT THREADS

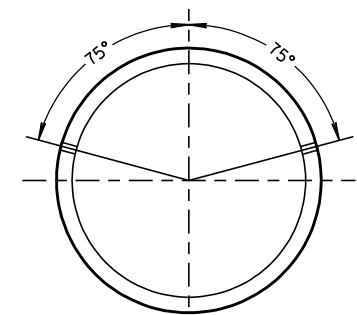
SLEEVE NUTS



LONGITUDINAL SECTION

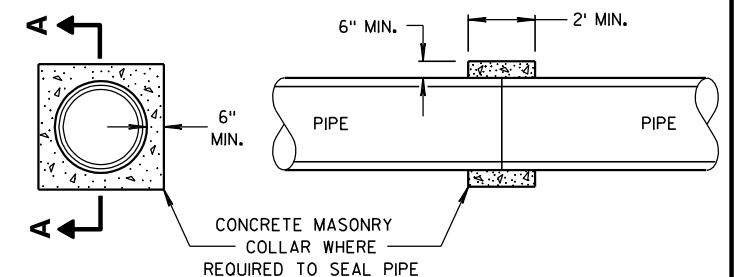
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE
PIPE AND CONCRETE
COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

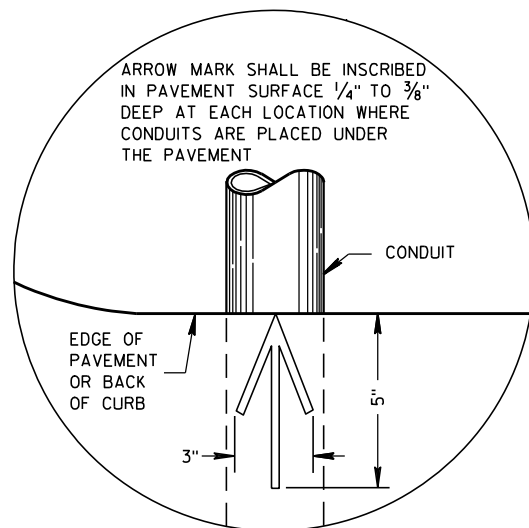
APPROVED

6/5/2012

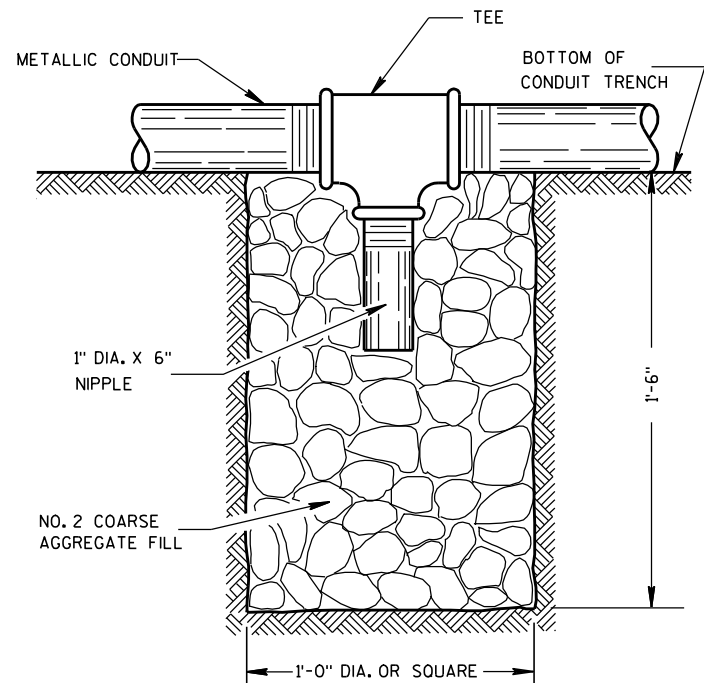
DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

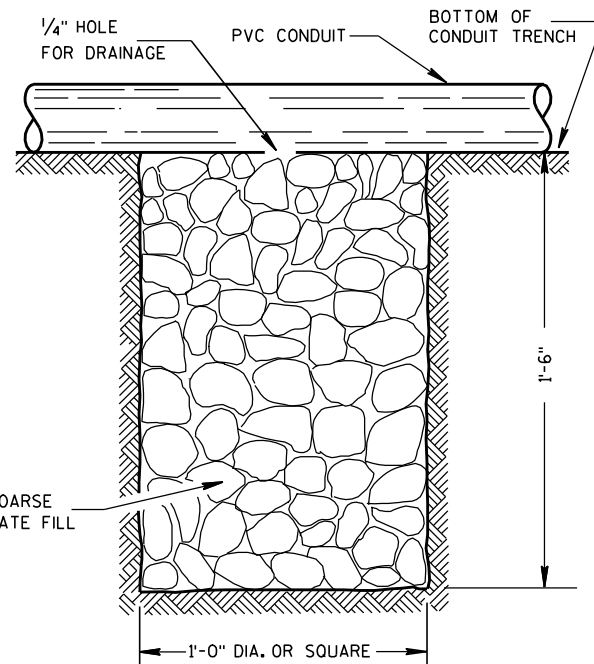


PLAN VIEW
ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

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 CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSON 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.

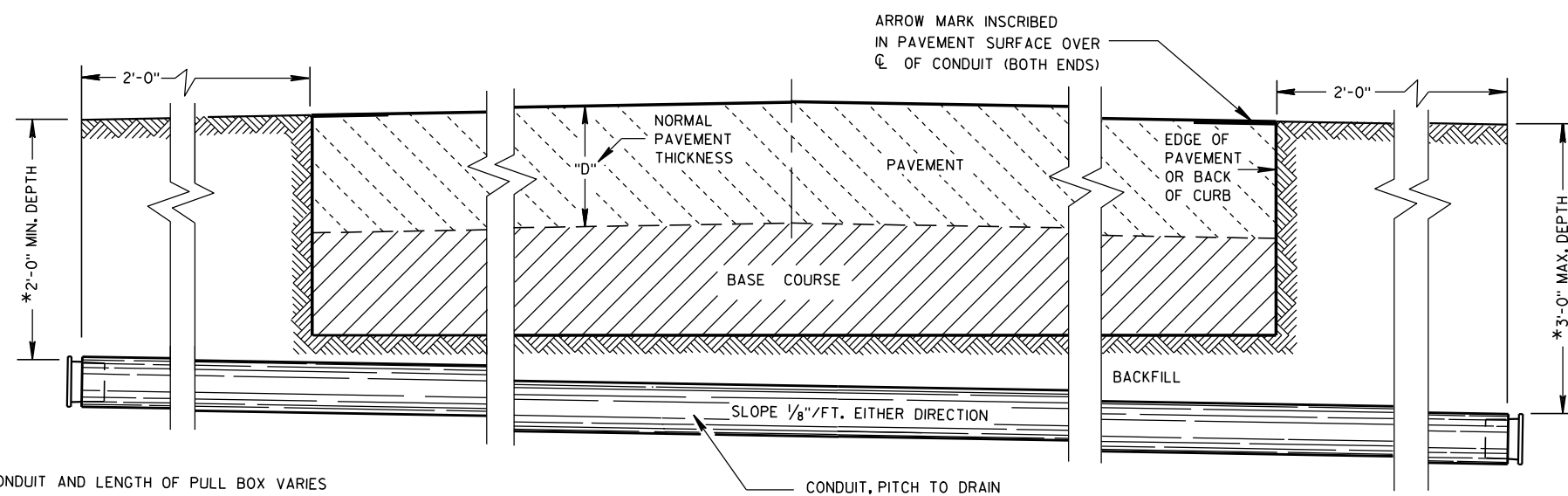
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/23/03

DATE

FHWA

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGINEER FOR HWYS

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* 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 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 FOR USE WITH COPPER WIRE. THE MECHANICAL CONNECTION (INSIDE AND OUTSIDE) TO THE PULL BOX, SHALL BE TOTALLY AND PERMANENTLY SEALED WITH A SILICONE OR RUBBERIZED CAULKING COMPOUND AS APPROVED BY THE ENGINEER.

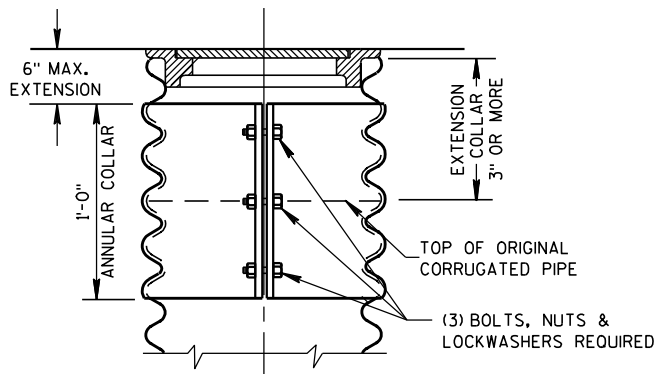
GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

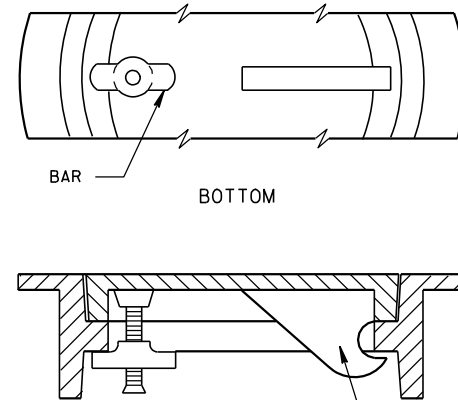
S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

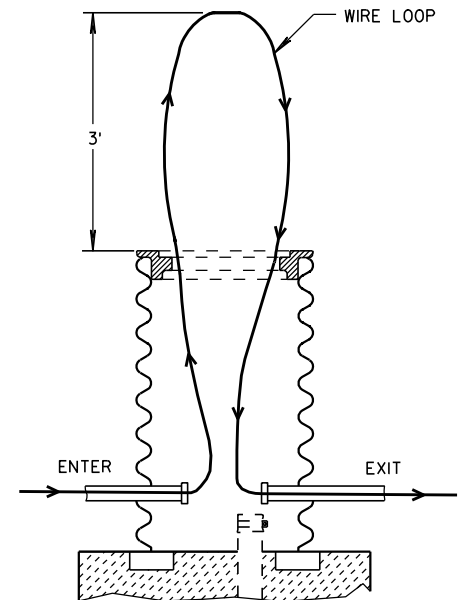
IF PULL BOX EQUIPMENT GROUNDING IS REQUIRED USING AN EQUIPMENT GROUNDING ELECTRODE IN EACH PULL BOX, THE EQUIPMENT GROUNDING ELECTRODE SHALL BE 5/8" X 8'-0", COPPERCLAD AND BE EXOTHERMICALLY WELDED TO A #4 AWG, COPPER, STRANDED WIRE (BARE OR GREEN INSULATED). THE #4 AWG WIRE SHALL BE 4 FEET IN LENGTH, NEATLY COILED, TAPED AND AVAILABLE FOR USE WHEN REQUIRED.



CORRUGATED PIPE EXTENDER

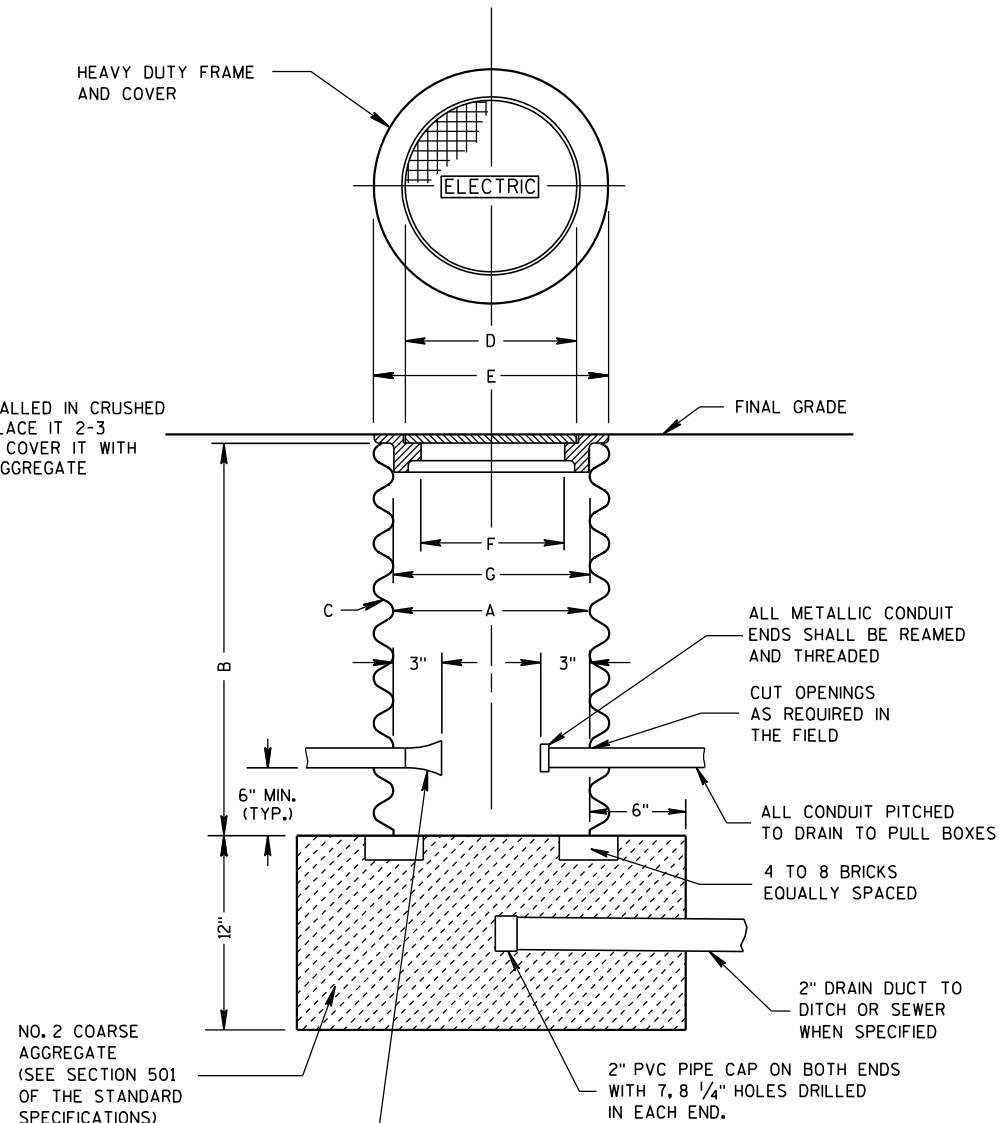


ALTERNATE COVER (LOCKING)
TIGHTENING BAR TYPE

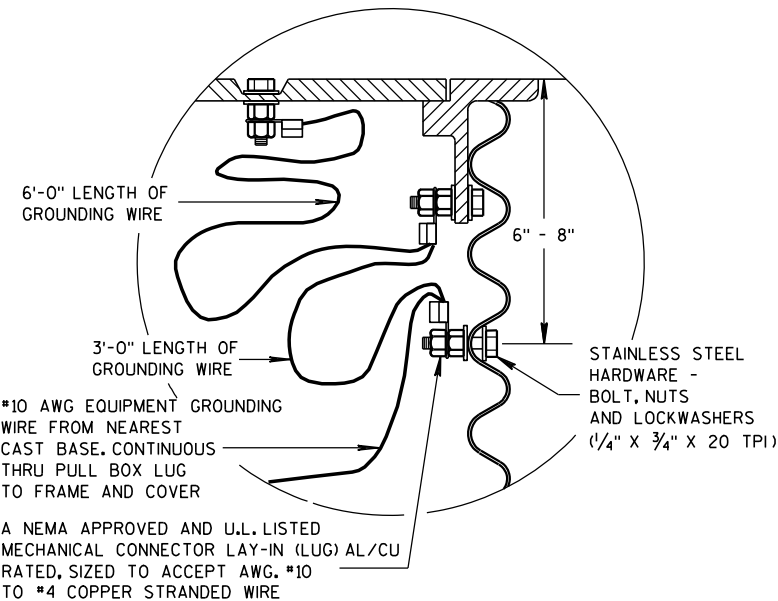


MEASUREMENT DETAIL FOR
WIRE/CABLE IN THE PULL BOX

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



PULL BOX



EQUIPMENT GROUNDING LUG AND
LOCATION IN STEEL PULL BOXES

PULL BOX

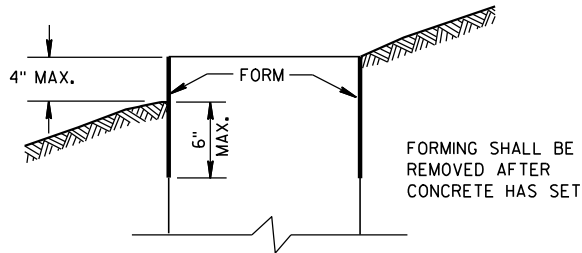
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/27/06
DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGINEER FOR HWYS

FHWA

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	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

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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.

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 USED.

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 1 FOOT 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.

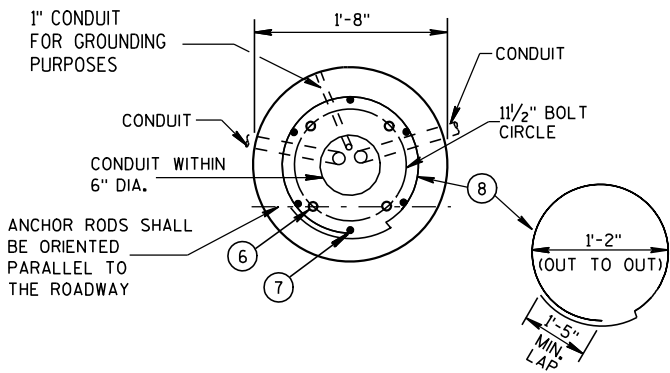
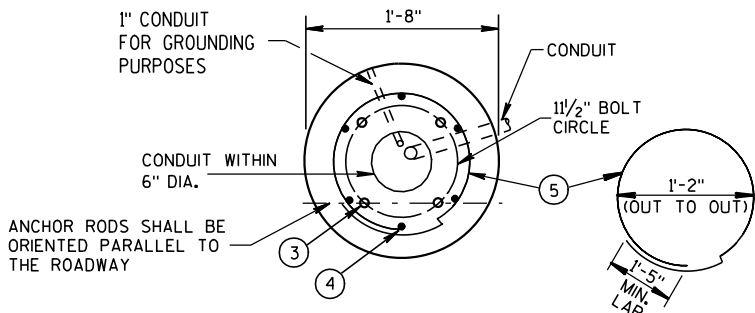
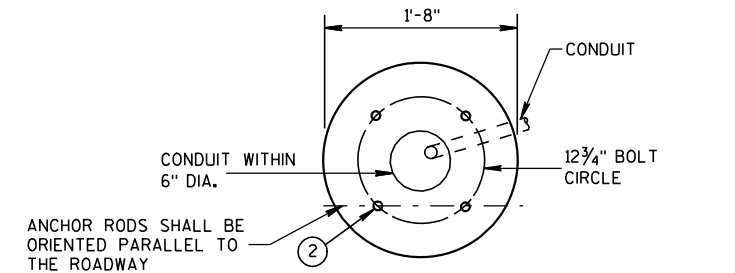
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

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).

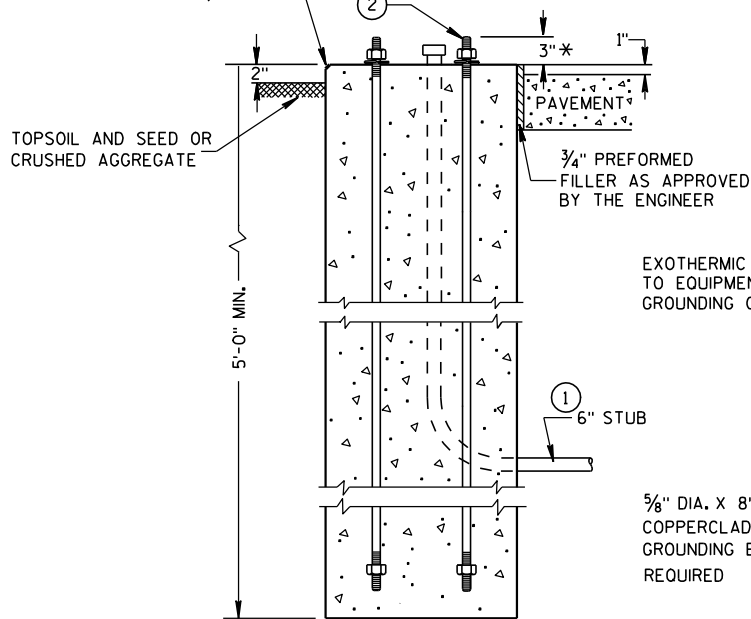
- 1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN 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.



FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

HALF SECTION IN UNPAVED AREA (TYPICAL FOR TYPES 1, 2 & 5)

HALF SECTION IN PAVEMENT (TYPICAL FOR TYPES 1, 2 & 5)



TYPE 1

TYPE 2

TYPE 5

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/4" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2 & 5

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/3/10

DATE

FHWA

/S/ Joanna L. Bush
STATE ELECTRICAL ENGINEER FOR HWYS

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-325, (92,000 YIELD) HEAVY HEX NUT AND BE GALVANIZED IN ACCORDANCE WITH ASTM A-153, CLASS C.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED AND U.L. LISTED MECHANICAL CONNECTOR (LUG) AL/CU RATED AND SIZED TO ACCEPT #10 AWG STRANDED WIRE, SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

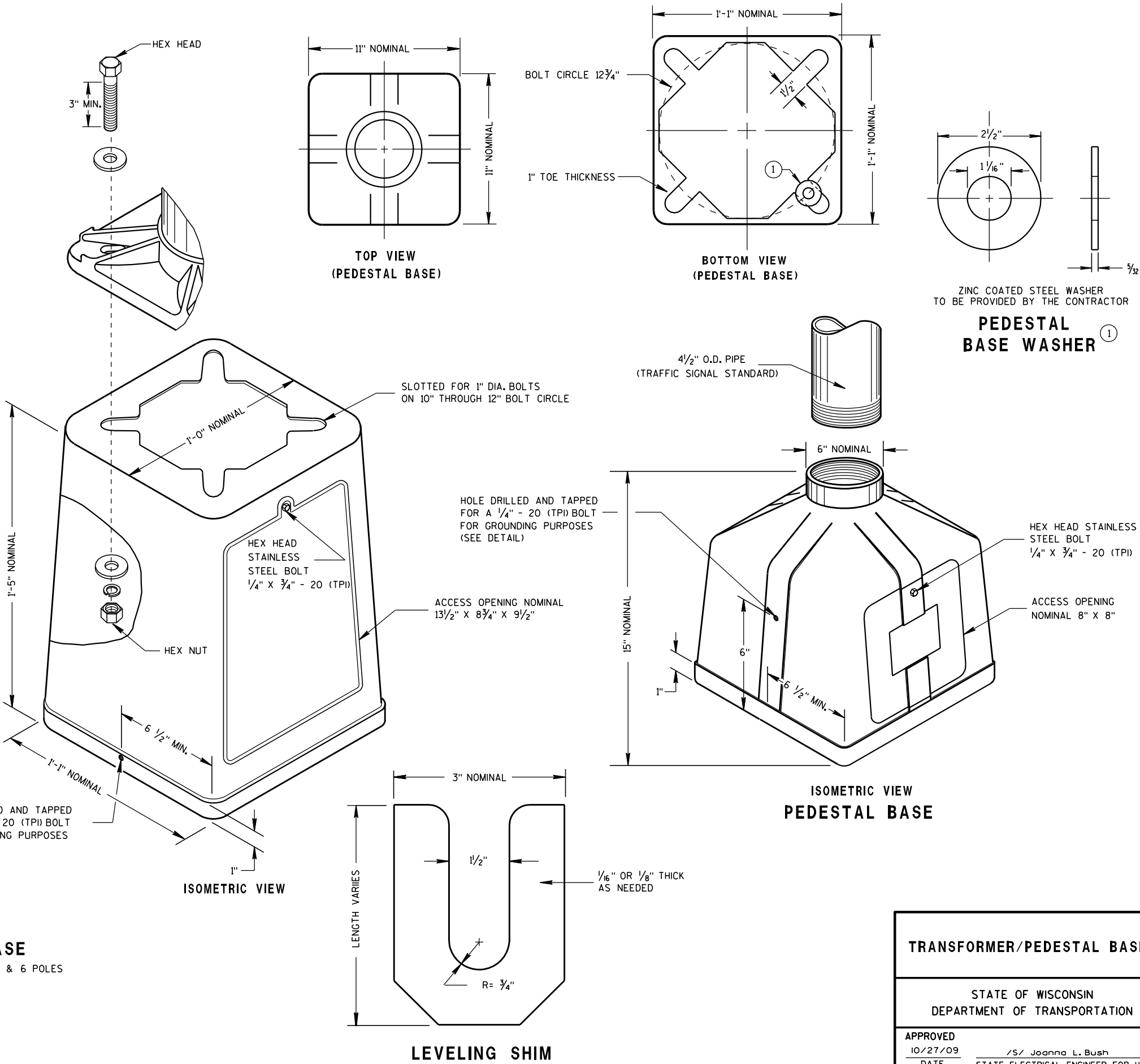
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.



TYPICAL MECHANICAL CONNECTOR LUG
TO BE FURNISHED WITH EACH BASE

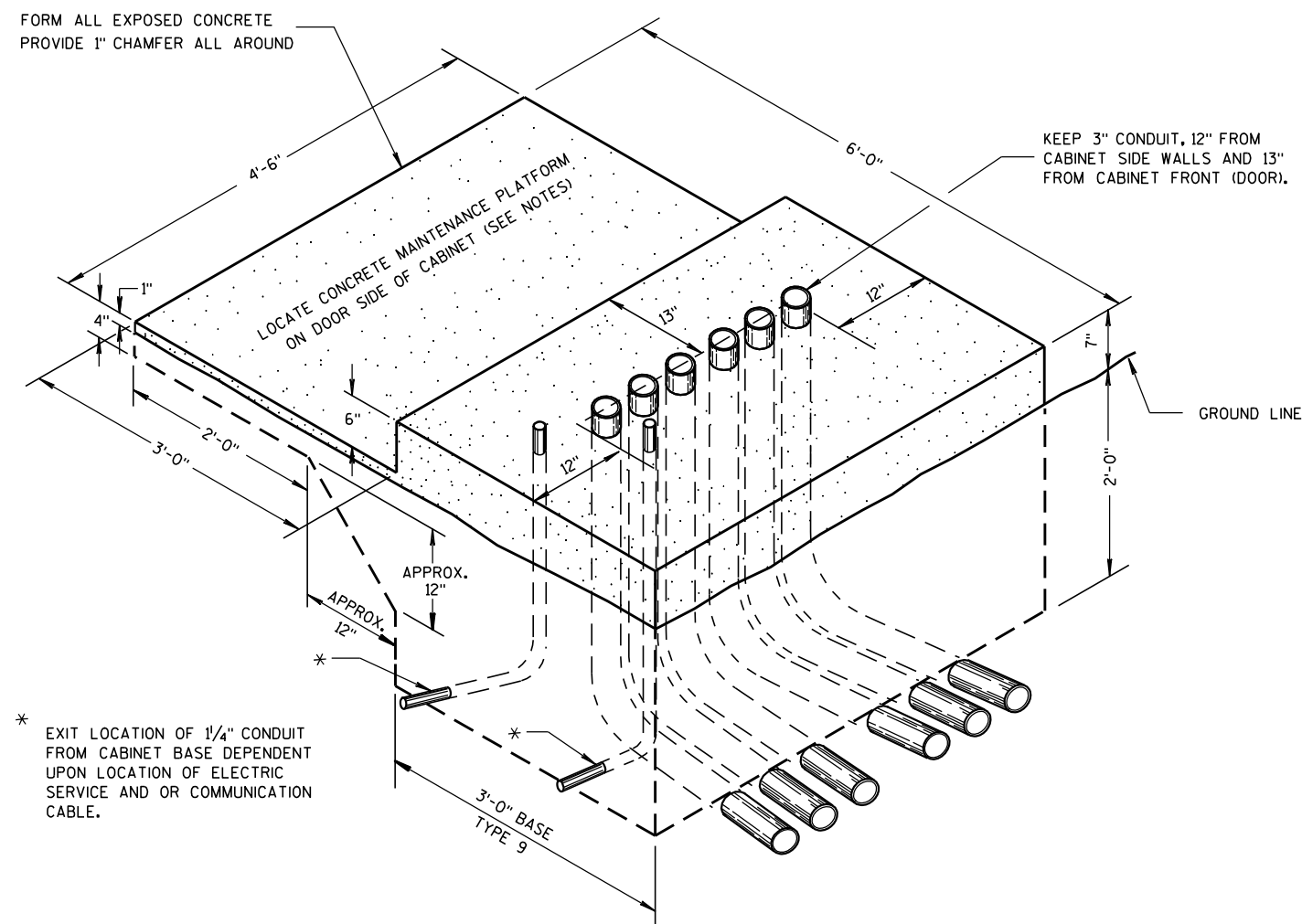
TRANSFORMER BASE
INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES

ISOMETRIC VIEW
PEDESTAL BASE

TRANSFORMER/PEDESTAL BASES

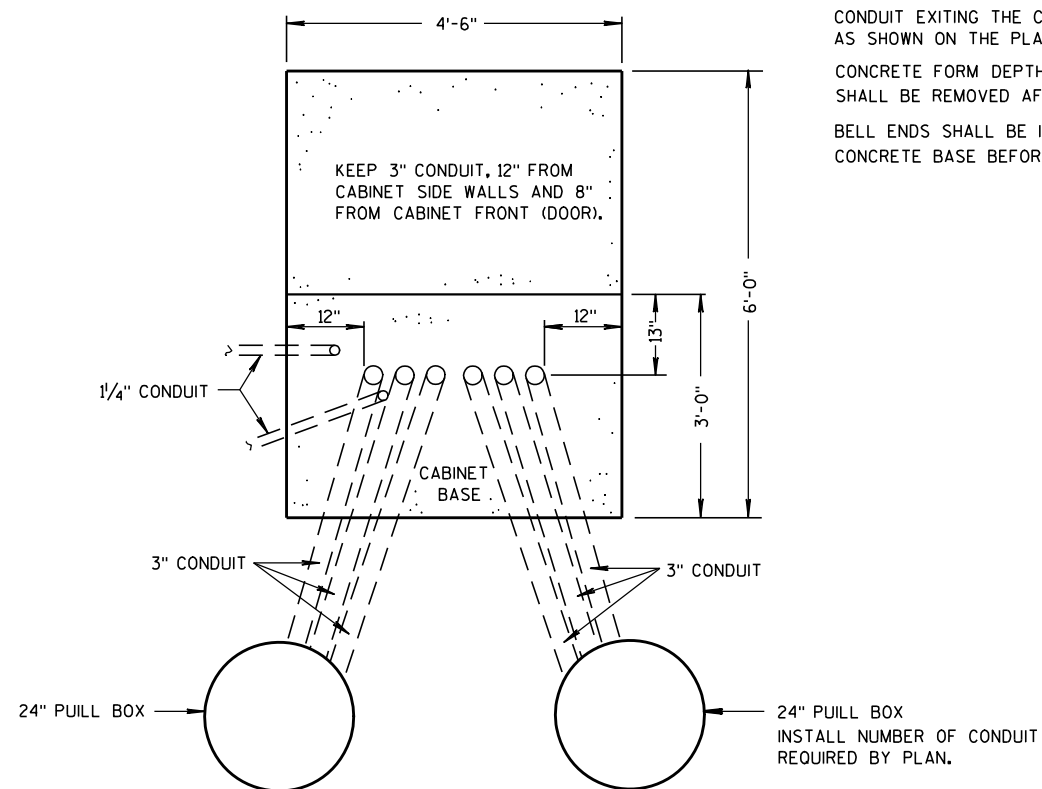
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/27/09
DATE /S/ Joanna L. Bush
STATE ELECTRICAL ENGINEER FOR HWYS
FHWA



**ISOMETRIC VIEW
TYPE 9, SPECIAL**

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

INSTALL FOUR 1/2 INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

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.

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.

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

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

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 BEING INSTALLED.

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 (SIX THREE INCH) SHALL TERMINATE IN PULL BOXES 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.

**CONCRETE CONTROL CABINET
BASE, TYPE 9, SPECIAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

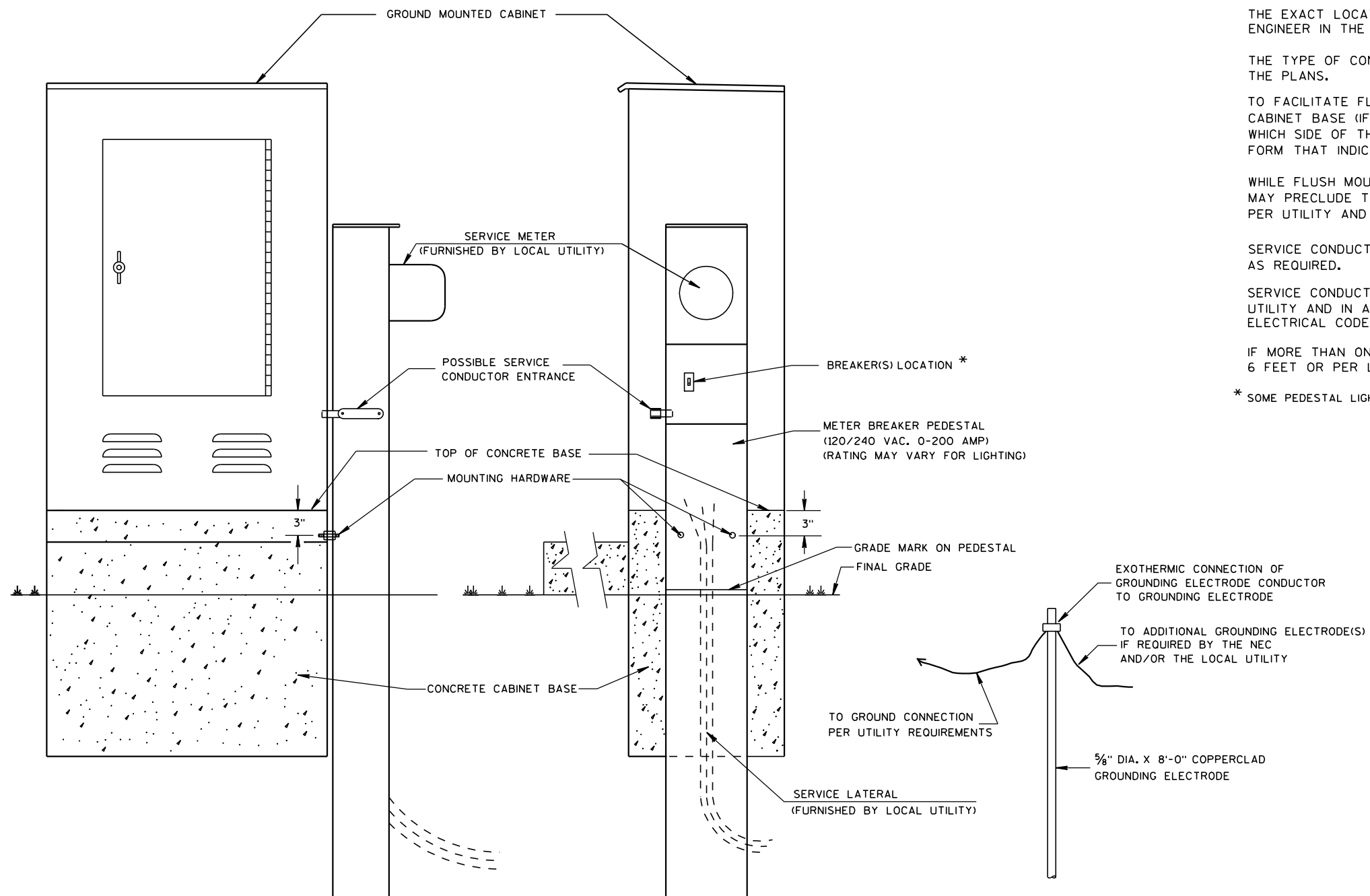
APPROVED

2/27/07

DATE

FHWA

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGINEER FOR HWYS



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE, CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH, THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

CABINET SERVICE INSTALLATION
(METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

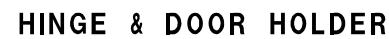
APPROVED

10/27/09

DATE

FHWA

/S/ Joanna L. Bush
STATE ELECTRICAL ENGINEER FOR HWYS



MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16½	16½	24
D	26½	34¾	33¾
E	38¾	38¾	38¾
F	26½	34¾	33¾
G	19	19	25
H	16½	16½	24
$\frac{H}{2}$	8¼	8¼	12
J	30	38	38
$\frac{J}{2}$	15	19	19
K	13¾	13¾	21¼
L	27½	35½	35½



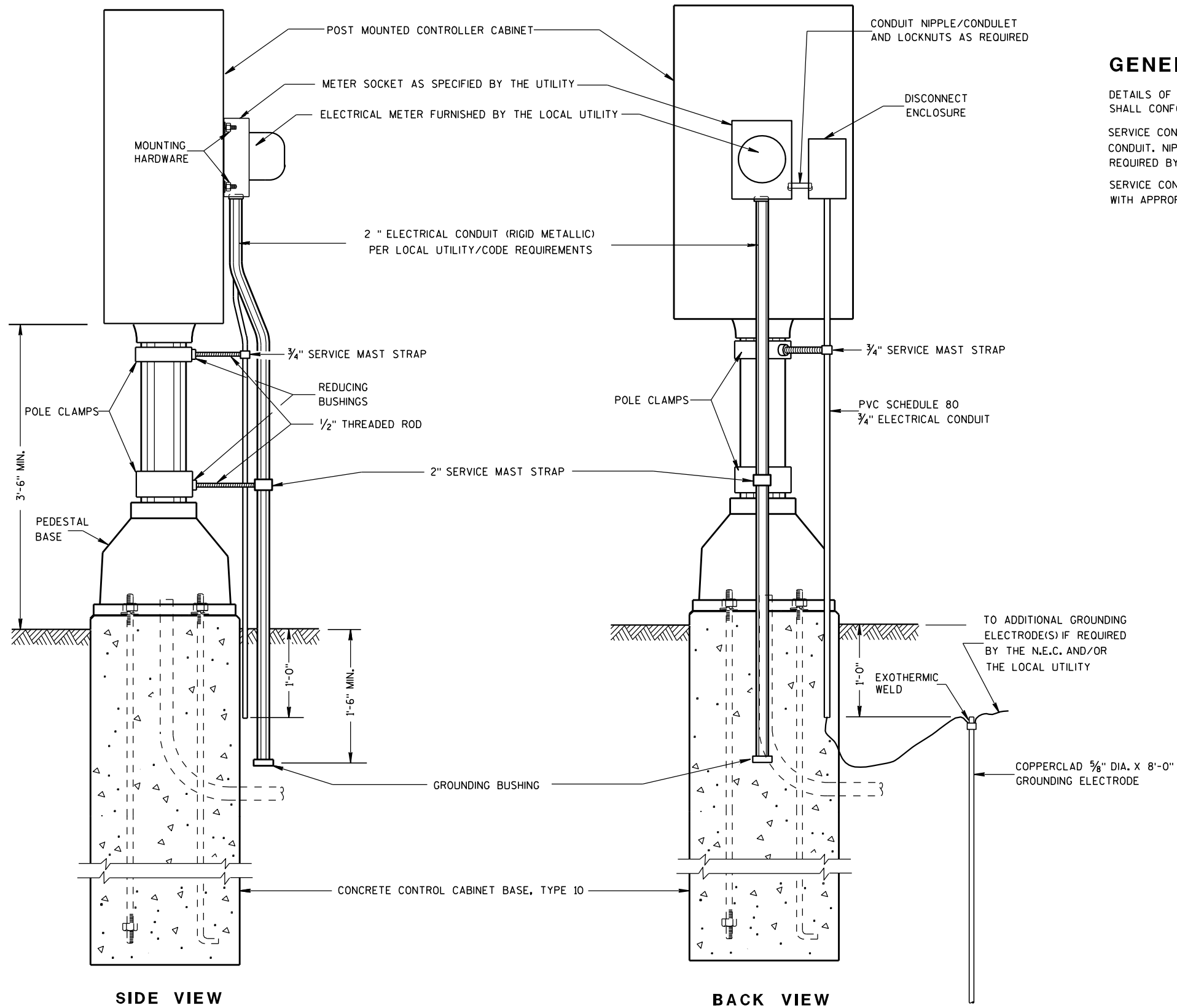
LATCH ASSEMBLY



LOCK NO. 2510
WITH 2 KEYS AND
DUST CAP.
KEY NO. IR6380

3/4" SOLID STAINLESS STEEL
INWARD-TURNING HANDLE WITH
PROVISIONS FOR PADLOCKING

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGINEER FOR HWYS



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID STEEL OR SCHEDULE 80 PVC ELECTRICAL CONDUIT, NIPPLES AND/OR CONDULETS, WITH LOCK NUTS AND GROUNDING BUSHINGS AS REQUIRED BY THE N.E.C. OR THE LOCAL UTILITY.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AS REQUIRED AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED ELECTRICAL CODE.

POST MOUNTED CONTROLLER SERVICE INSTALLATION

POST MOUNTED CONTROLLER SERVICE INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2003

DATE

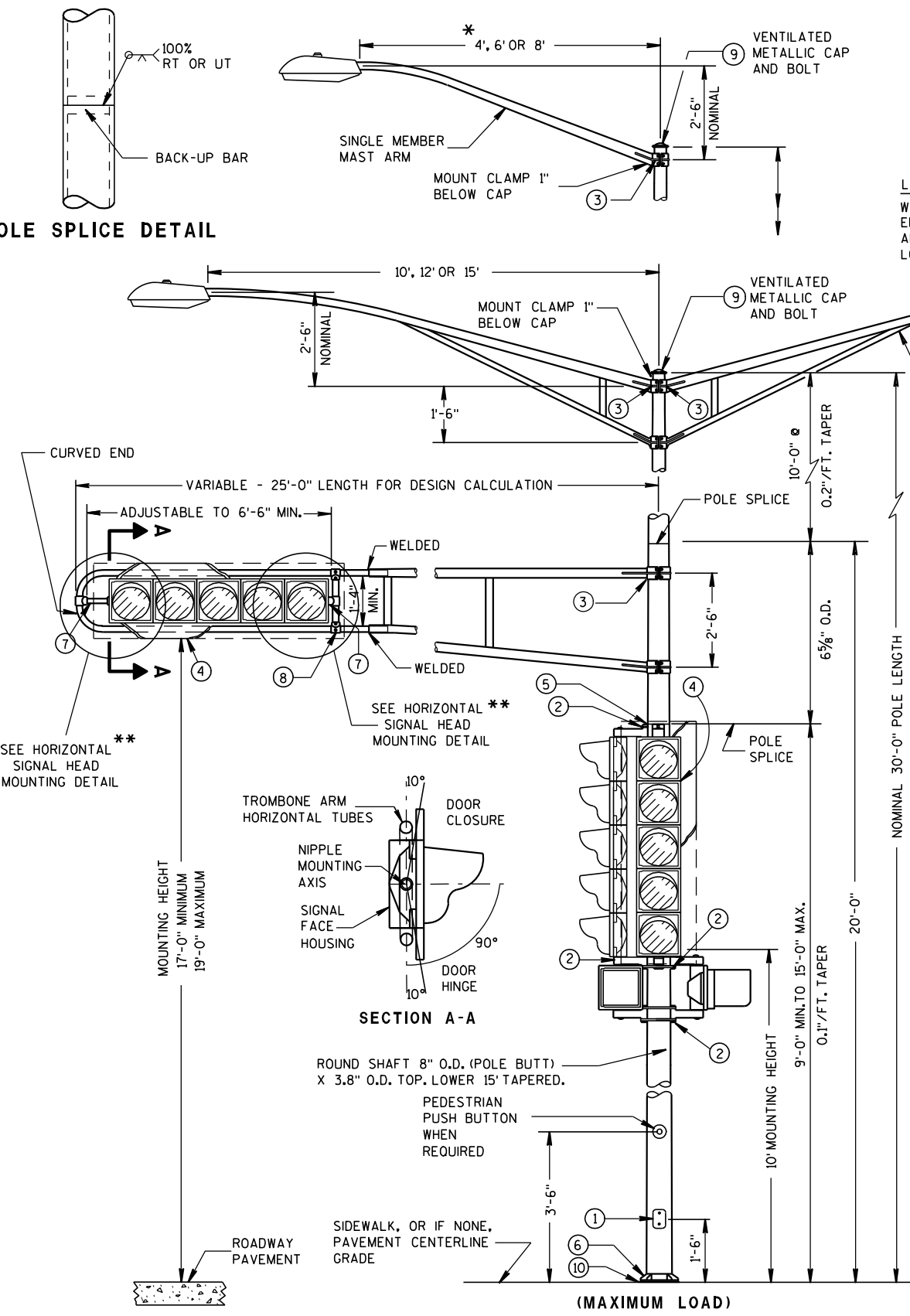
FHWA

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGINEER FOR HWYS

FOR MANUFACTURERS USE ONLY

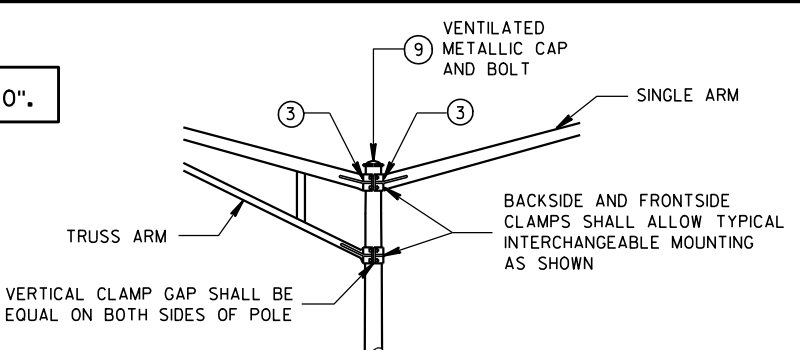
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.

POLE SPLICE DETAIL



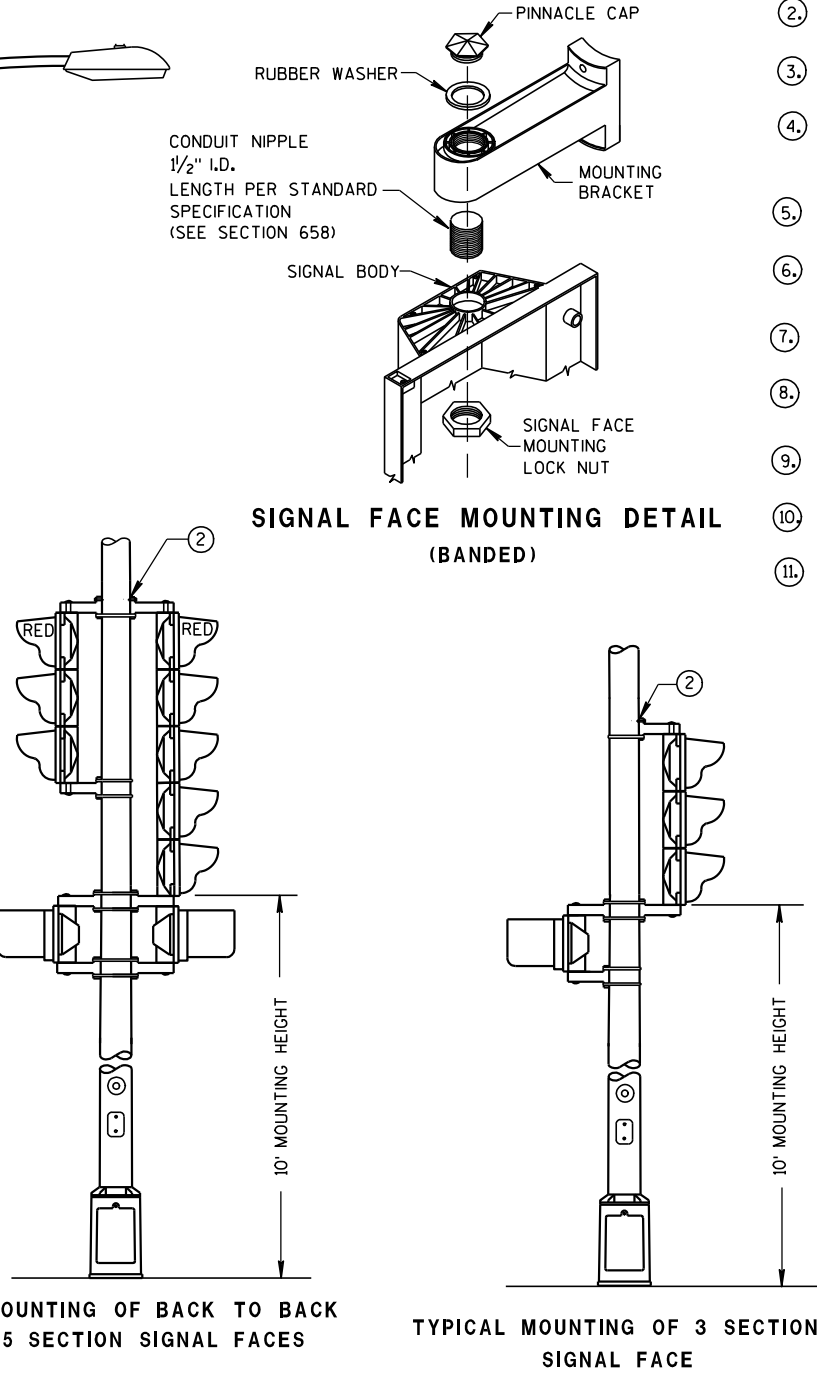
* RISE FOR 4' ARM SHALL BE 2'-0".

INTERCHANGEABLE MOUNTING DETAIL



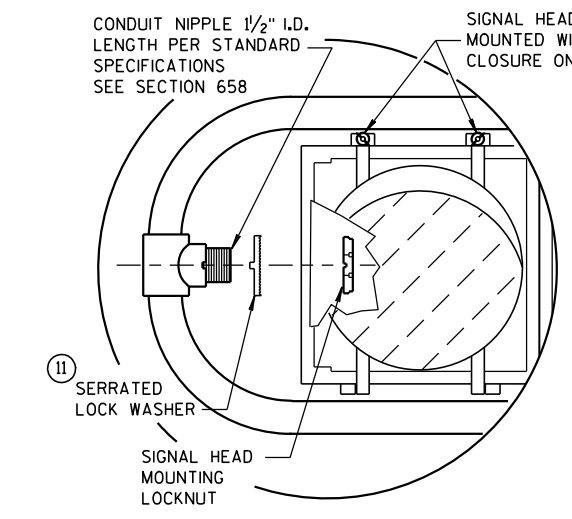
LUMINAIRE
WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.

SIGNAL FACE MOUNTING DETAIL (BANDED)



GENERAL NOTES

- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
- ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.
- POLES SHALL BE GALVANIZED STEEL.
- SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.
- A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652, SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.
- THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8" INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.
- WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.
- 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) 1/4" X 3/4" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.
 - SIGNAL FACE MOUNTING BRACKETS, MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)
 - GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
 - SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.
 - POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.
 - TYPE 3 POLE CONFIGURATIONS SHALL BE MOUNTED DIRECTLY TO THEIR CONCRETE BASES.
 - MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1 1/2" INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658)
 - VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (1/4" X 3/4" - 20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.
 - FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
 - SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.
 - USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.



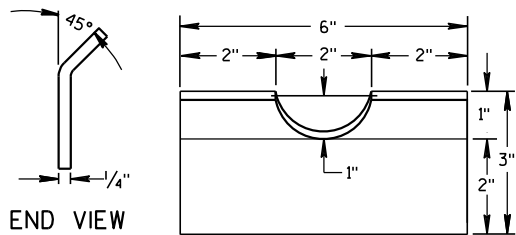
HORIZONTAL SIGNAL HEAD MOUNTING DETAIL **

** SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR

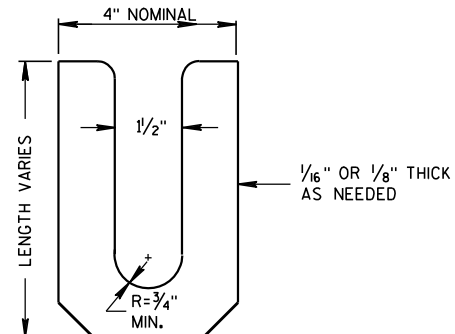
POLE MOUNTINGS FOR
TRAFFIC SIGNALS AND
LIGHTING UNITS, TYPE 3
(HEAVY DUTY)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

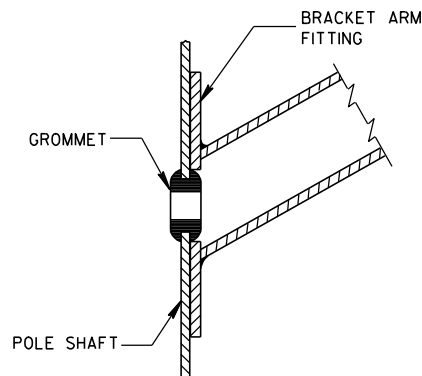




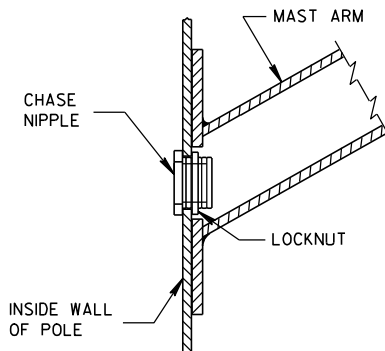
FRONT VIEW
RECTANGULAR CLAMP SHIM
(4 TO A SET)



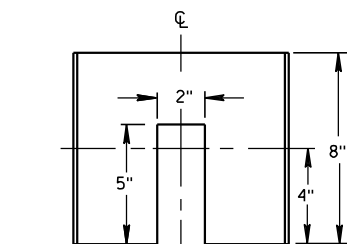
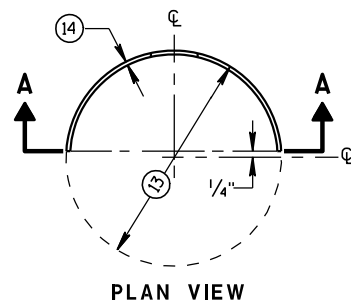
LEVELING SHIM
SHALL BE ALUMINUM



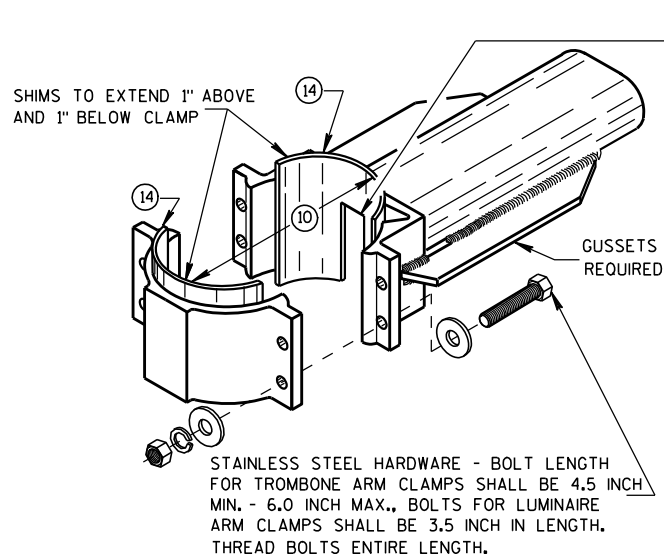
TYPICAL APPLICATION OF
GROMMET IN POLE SHAFT



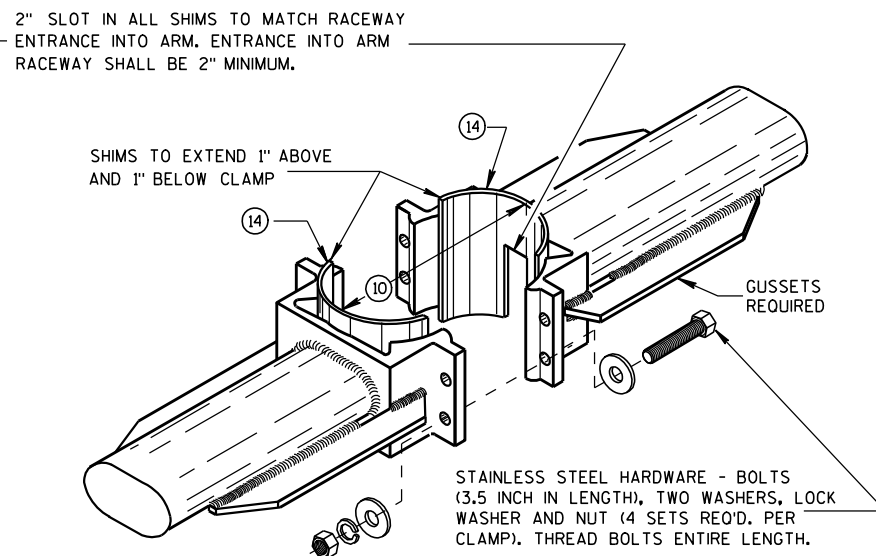
TYPICAL APPLICATION OF
CHASE NIPPLE IN POLE SHAFT



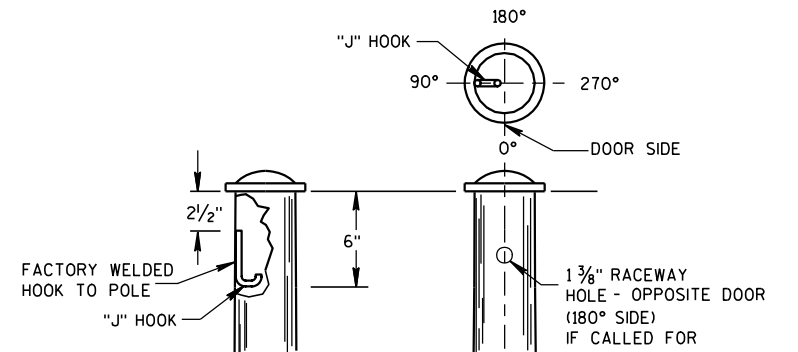
SECTION A-A
CIRCULAR CLAMP SHIM
(2 TO A SET)



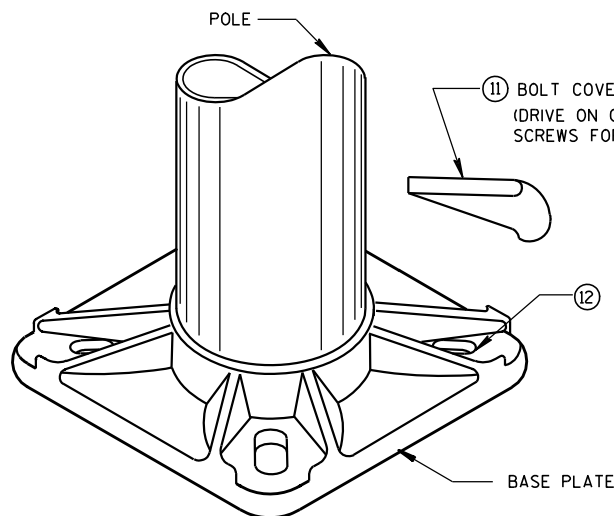
TYPICAL TROMBONE MAST ARM AND SINGLE
LUMINAIRE MAST ARM MOUNTING CLAMP



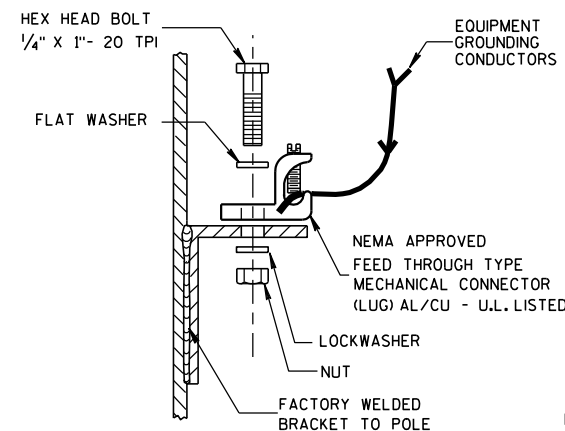
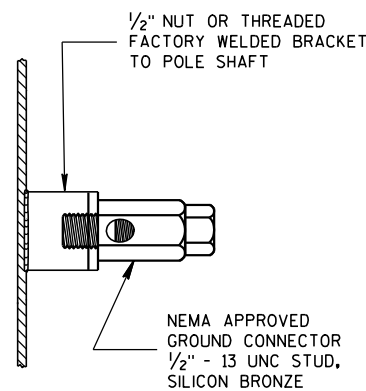
TYPICAL LUMINAIRE MAST ARM
(DOUBLE) MOUNTING BRACKETS



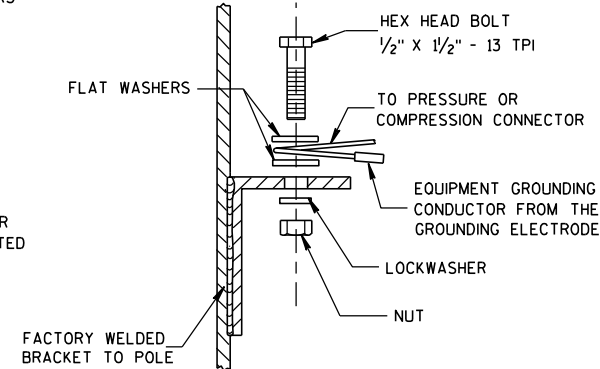
TYPICAL "J" HOOK LOCATION



BASE PLATE



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL
BE STAINLESS STEEL



GENERAL NOTES

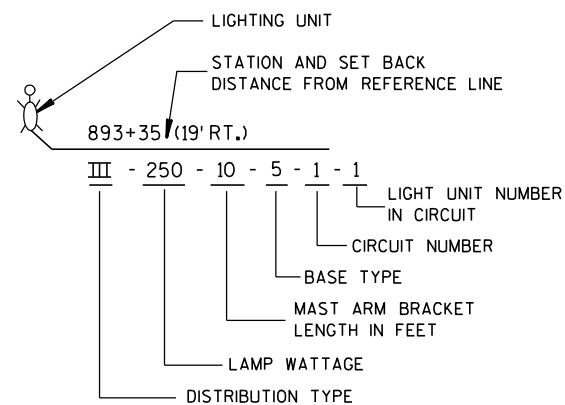
CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

10. 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
11. INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
12. BASE PLATE SLOTTED TO ACCEPT 1" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.
13. OUTSIDE SHIM DIAMETER - (4.5" O.D. FOR LUMINAIRE MAST ARM)
(6.625" O.D. FOR TROMBONE MAST ARM)
14. VARIABLE SHIM THICKNESS - (0.10", 0.25", 0.35", 0.53" OR 0.70")
SHIM THICKNESS FOR TROMBONE MAST ARMS MAY BE TYPICALLY 0.25", 0.35", 0.53" OR 0.70".
SHIM THICKNESS FOR LUMINAIRE MAST ARMS MAY BE TYPICALLY 0.10", 0.25" OR 0.35".
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.
SHIM THICKNESS SHALL BE IMPRESSED INTO EACH SHIM. NUMERALS SHALL BE 1/4" HIGH AND LEGIBLE.
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.
15. LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

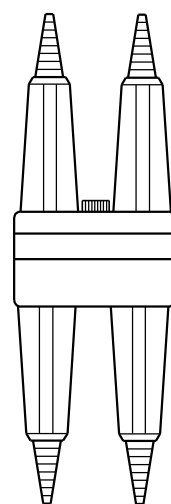
HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

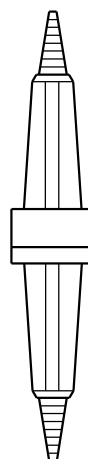
APPROVED
3/2/11
DATE
/S/ Thomas J. Goring
STATE ELECTRICAL ENGINEER FOR HWYS
FHWA



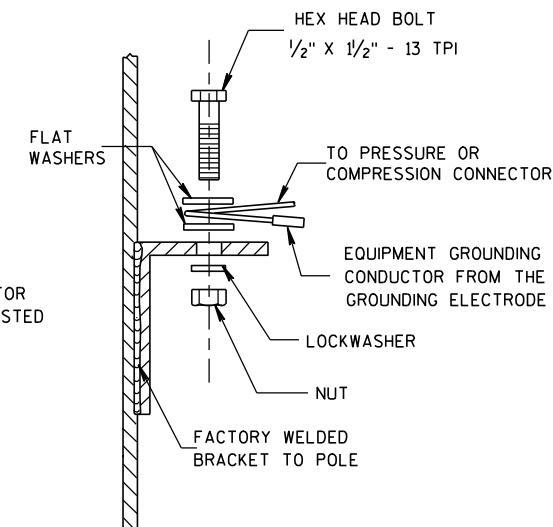
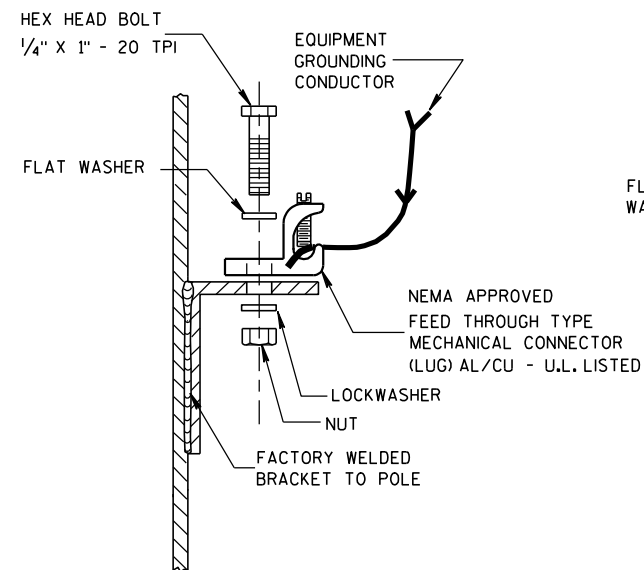
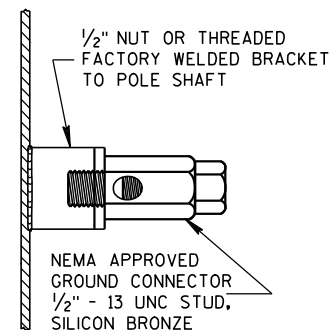
LIGHTING UNIT CODE
(TYPICAL)



DETAIL "A"
BREAKAWY
DOUBLE POLE WITH
WATERPROOF
INSULATING BOOT



DETAIL "B"
BREAKAWY
SINGLE POLE WITH
WATERPROOF
INSULATING BOOT



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

ADDITIONAL CONDUCTORS
AND FUSE FOR TWIN
LIGHTING UNITS

EQUIPMENT GROUNDING
CONDUCTOR(S) TO LUMINAIRE(S)

APPROVED MECHANICAL TYPE
CONNECTOR FOR EQUIPMENT
GROUNDING CONDUCTORS.
COMPRESSION, CRIMP OR
WIRE NUT CONNECTORS ARE
NOT ALLOWED.

TYPICAL GROUNDING CONNECTION -
STAINLESS STEEL BOLT,
NUT AND WASHERS
1/2" X 1/2" - 13 TPI

AWG #4 (MIN.) BARE EQUIPMENT
GROUNDING CONDUCTOR.
NOTE: THIS WIRE SHALL BE
CONTINUOUS WITHOUT SPLICES
FROM THE GROUNDING ELECTRODE
TO THE EQUIPMENT GROUNDING
CONDUCTOR SPLICE CONNECTOR.

INSULATED EQUIPMENT GROUNDING
CONDUCTORS FROM SYSTEM RACEWAY

EXOTHERMICALLY WELDED
TO GROUNDING ELECTRODE

CONDUCTORS TO
LUMINAIRES SHALL BE #12 AWG,
COPPER STRANDED, U.S.E. RATED,
XLP INSULATED. SINGLE
LIGHTING UNIT SHOWN

CIRCUIT TAGS, BOTH SIDES
OF ALL FUSES (TYPICAL)

IN LINE SINGLE POLE FUSE ASSEMBLY.
600 VAC, WITH 5 AMP FNO FUSE
(SEE DETAIL "B")
TAPE AND VARNISH
CRIMPED END FERRULES

HANDHOLE & COVER

18" PIGTAIL BETWEEN
CONNECTOR AND FUSEHOLDER

APPROVED INSULATED MULTITAP
TERMINAL BLOCK TYPE CONNECTORS.
COMPRESSION, CRIMP OR WIRE NUT
CONNECTORS ARE NOT ALLOWED.

INSULATED UNGROUNDED CIRCUIT
CONDUCTORS FROM SYSTEM RACEWAY

ALTERNATE PHASE UNGROUNDED
CIRCUIT CONDUCTOR PASSING
THROUGH THIS POLE

3 WIRE - 120, 240 OR 480 VAC (UNGROUND CONDUCTOR)
WITH GROUNDED CONDUCTOR AND
WITH EQUIPMENT GROUNDING CONDUCTOR

UNGROUND CONDUCTORS TO
LUMINAIRES SHALL BE #12 AWG,
COPPER STRANDED, U.S.E.
RATED, XLP INSULATED.
SINGLE LIGHTING UNIT SHOWN

TWIN LIGHTING UNITS REQUIRE
INDIVIDUAL SETS OF UNGROUNDED
CONDUCTORS AND FUSE ASSEMBLY.

AWG #4 (MIN.) BARE EQUIPMENT
GROUNDING CONDUCTOR.
NOTE: THIS WIRE SHALL BE
CONTINUOUS WITHOUT SPLICES
FROM THE GROUNDING ELECTRODE
TO THE EQUIPMENT GROUNDING
CONDUCTOR SPLICE CONNECTOR.

EQUIPMENT GROUNDING
CONDUCTOR(S) TO LUMINAIRE(S)
TYPICAL GROUNDING CONNECTION -
STAINLESS STEEL BOLT,
NUT AND WASHERS
1/2" X 1/2" - 13 TPI

APPROVED MECHANICAL TYPE
CONNECTOR FOR EQUIPMENT
GROUNDING CONDUCTORS.
COMPRESSION, CRIMP OR
WIRE NUT CONNECTORS ARE
NOT ALLOWED.

INSULATED EQUIPMENT GROUNDING
CONDUCTORS FROM SYSTEM RACEWAY

EXOTHERMICALLY WELDED
TO GROUNDING ELECTRODE

2 WIRE - 240 OR 480 VAC (UNGROUND CONDUCTORS)
WITH EQUIPMENT GROUNDING CONDUCTOR

CIRCUIT TAGS, BOTH SIDES
OF ALL FUSES (TYPICAL)

IN LINE FUSE ASSEMBLY
TWO POLE, 600 VAC,
WITH 5 AMP FNO FUSES
(SEE DETAIL "A")
TAPE AND VARNISH
CRIMPED END FERRULES

HANDHOLE & COVER

18" PIGTAIL BETWEEN
CONNECTORS AND FUSEHOLDERS

APPROVED INSULATED MULTITAP
TERMINAL BLOCK TYPE CONNECTORS.
COMPRESSION, CRIMP OR WIRE NUT
CONNECTORS ARE NOT ALLOWED.

INSULATED UNGROUNDED CIRCUIT
CONDUCTORS FROM SYSTEM RACEWAY

NON-FREWAY LIGHTING UNIT
POLE WIRING

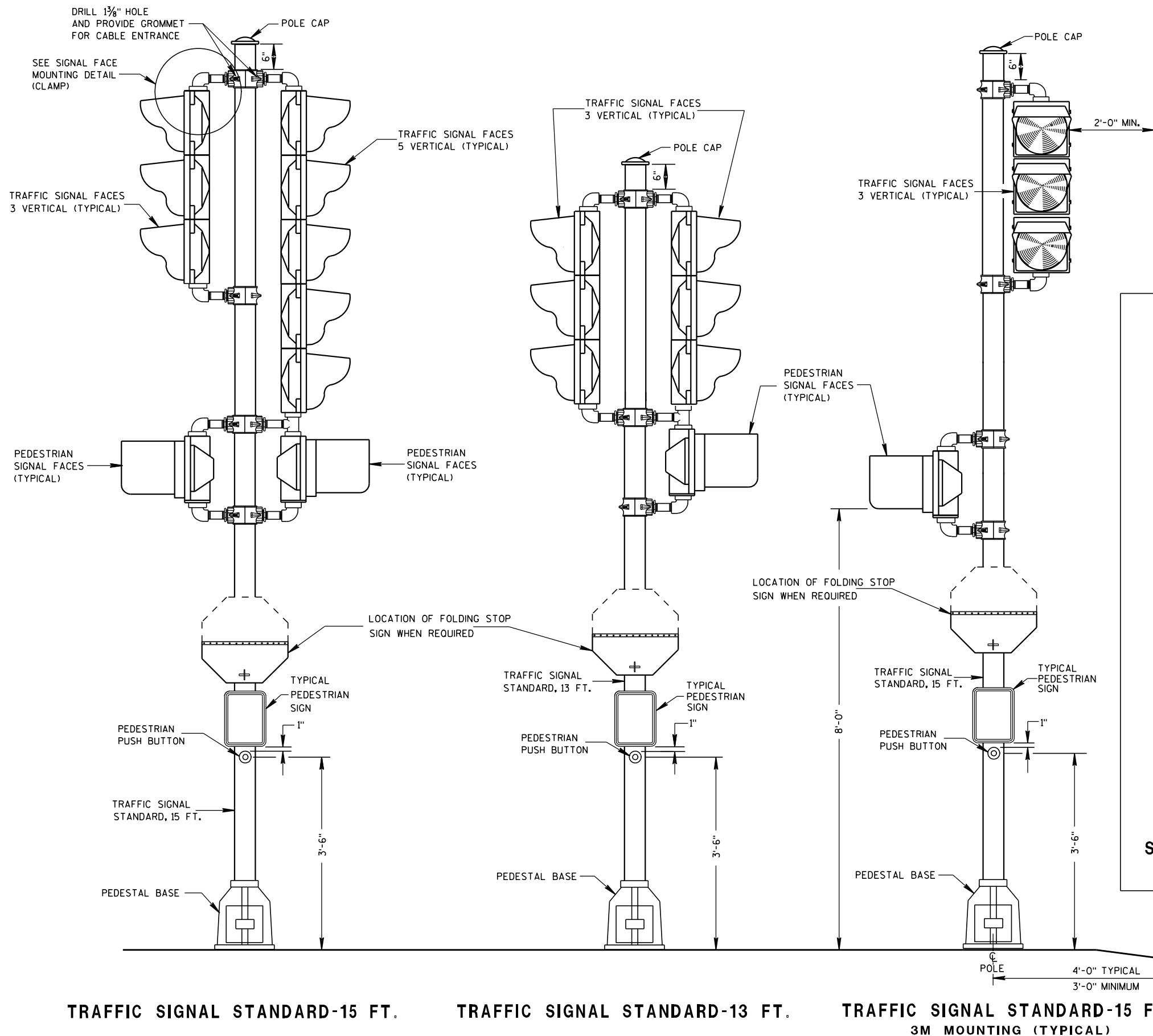
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011
DATE

FHWA

/S/ Thomas J. Goring
STATE ELECTRICAL ENGINEER FOR HWYS



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLE CLAMP (AS SHOWN) MOUNTING BRACKETS SHALL BE USED.

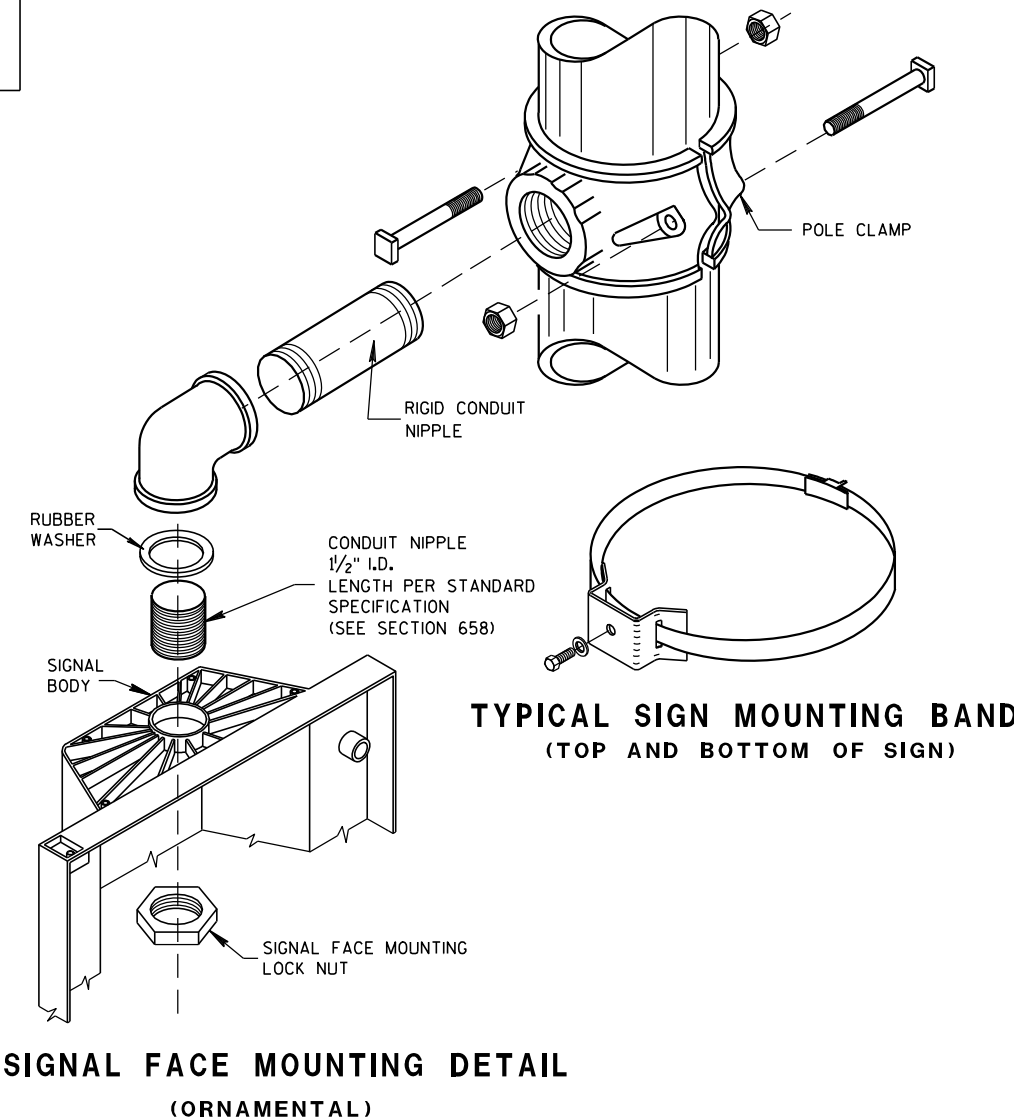
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE DISTRICT TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

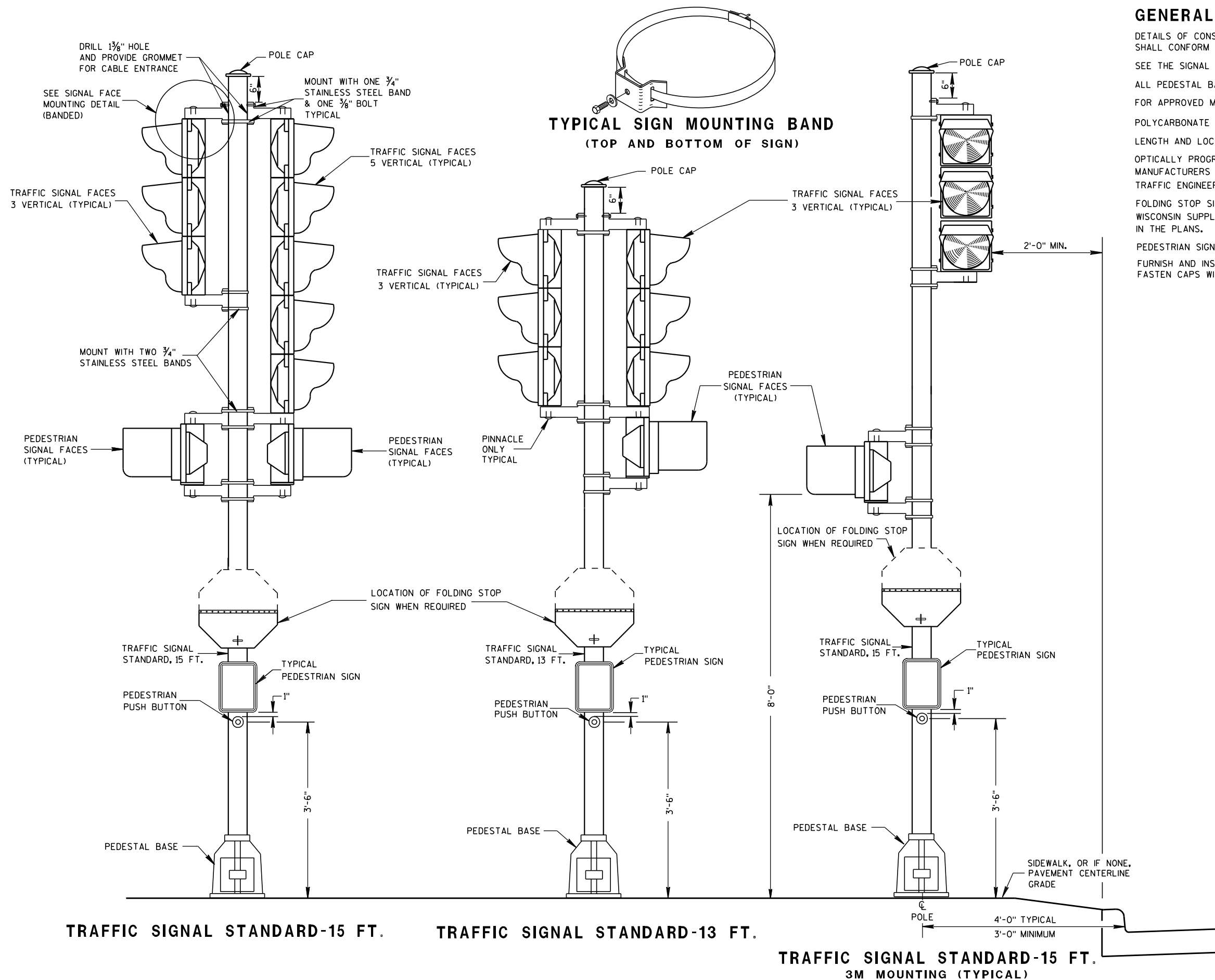
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) $\frac{1}{4}$ " X $\frac{3}{4}$ " - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



TRAFFIC SIGNAL STANDARD ORNAMENTAL BRACKET MOUNTINGS TYPICAL FOR 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/11/10 DATE /S/ John Corbin
STATE ELECTRICAL ENGINEER FOR HWYS
FHWA



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

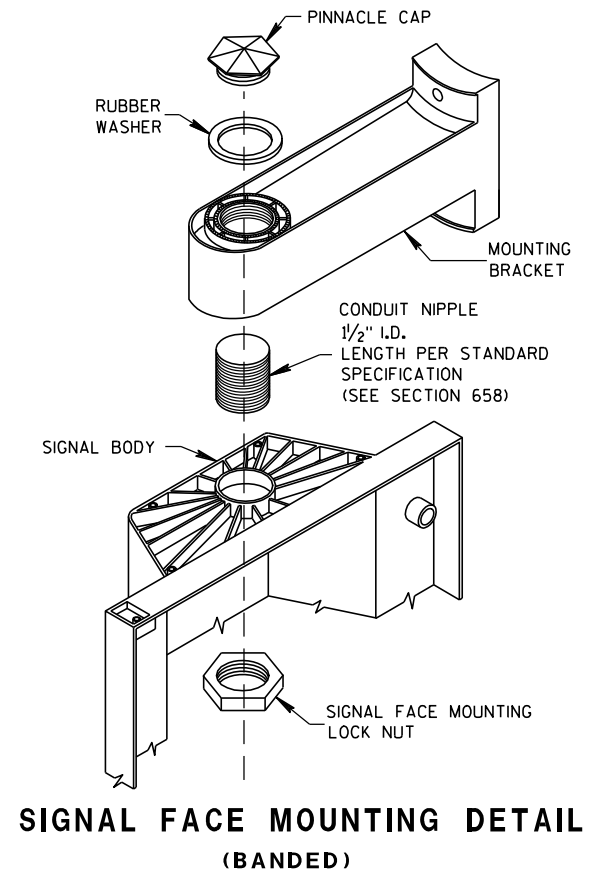
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE DISTRICT TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) $\frac{1}{4}$ " x $\frac{3}{4}$ " - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



**TRAFFIC SIGNAL STANDARD
POLY BRACKET MOUNTINGS
(TYPICAL) 13 FT. OR 15 FT.**

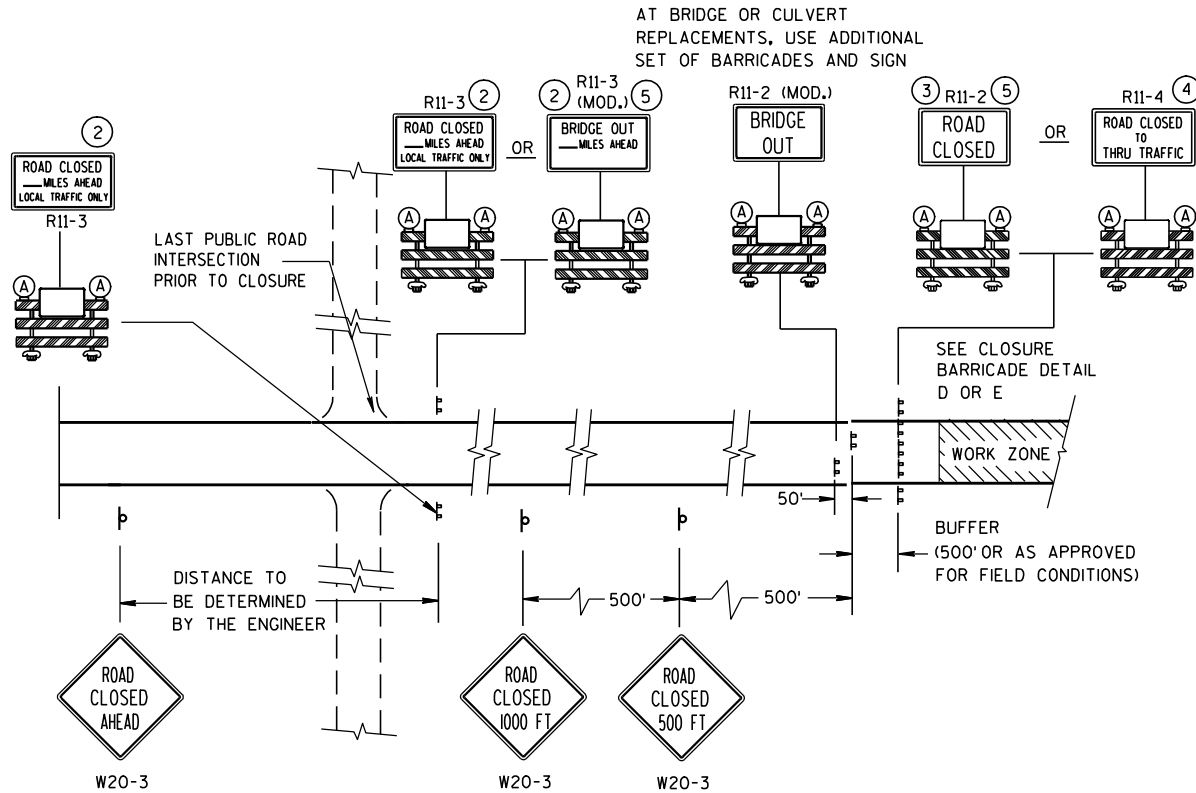
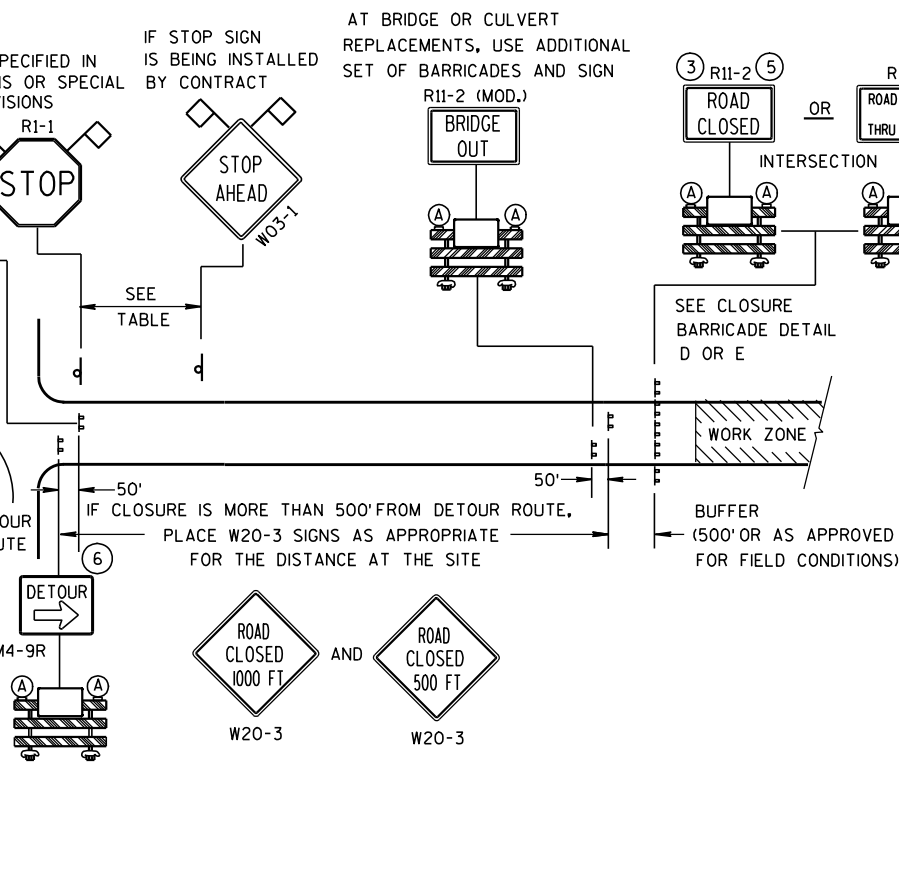
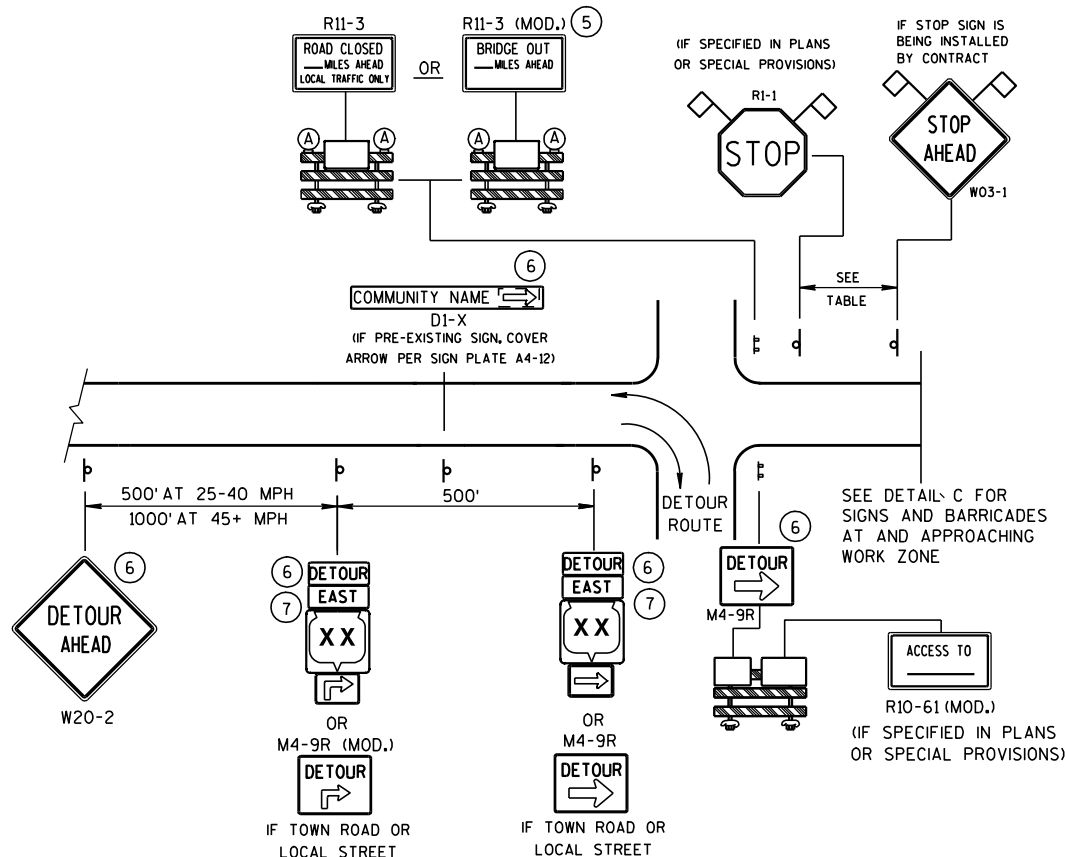
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/11/10
DATE

FHWA

/S/ John Corbin
STATE ELECTRICAL ENGINEER FOR HWYS



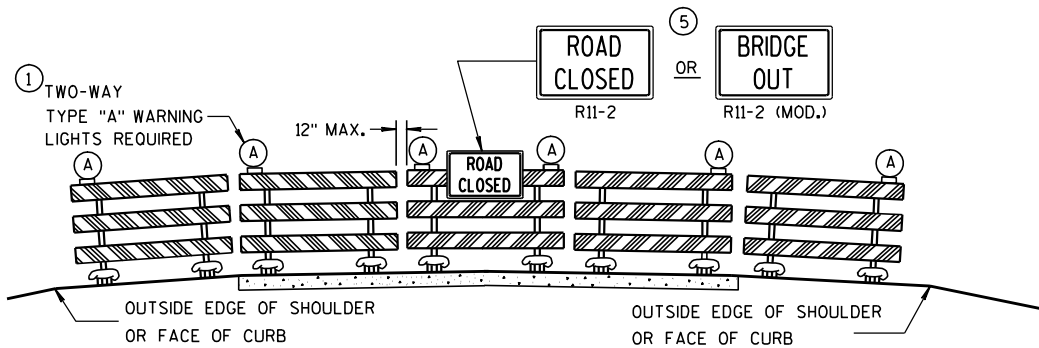
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-4b
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

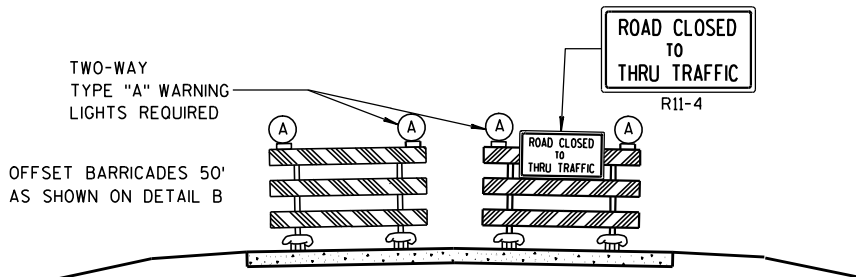
- LEGEND**
- POST MOUNTED SIGN
 - TYPE III BARRICADES
 - TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
 - WORK ZONE
 - DETOUR EAST M4-8 M3-X
 - MI-4 OR MI-5A OR MI-6
 - MO5-1 OR MO6-1
 - FLAGS, 16" X 16" MIN., (ORANGE)

**BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-4a FOR LEGEND

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

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.

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.

BARRICADES 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.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3, R11-4, R10-61 AND R1-1 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

"WO AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
9/16/03 DATE	/S/ Thomas N. Notbohm CHIEF SIGNS AND MARKING ENGINEER
FHWA	



R11-4 AND R11-3 SHALL BE 60" X 30".

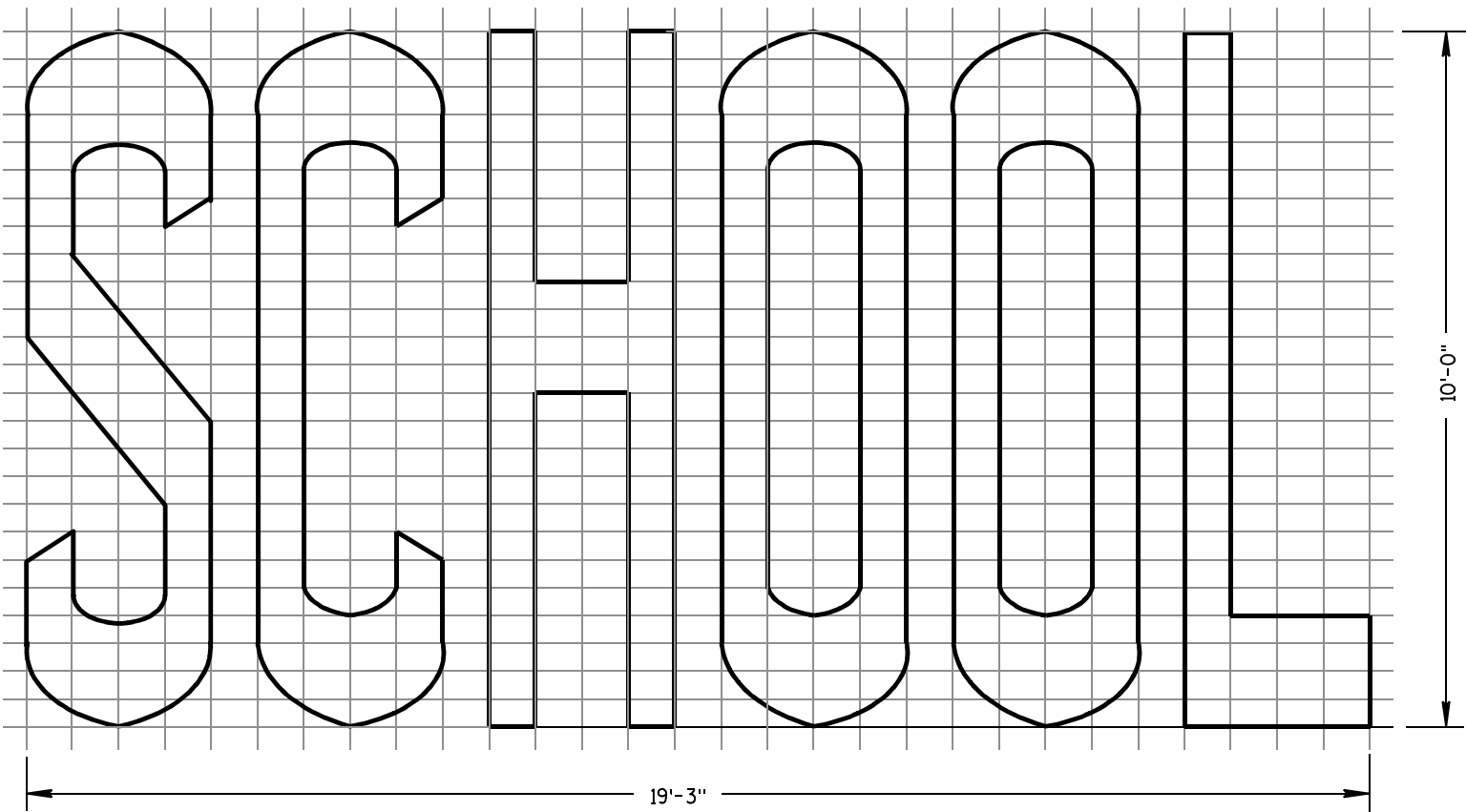
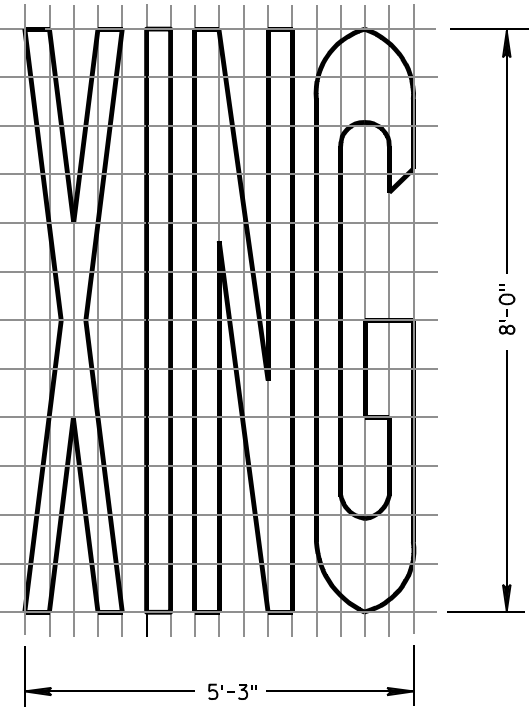
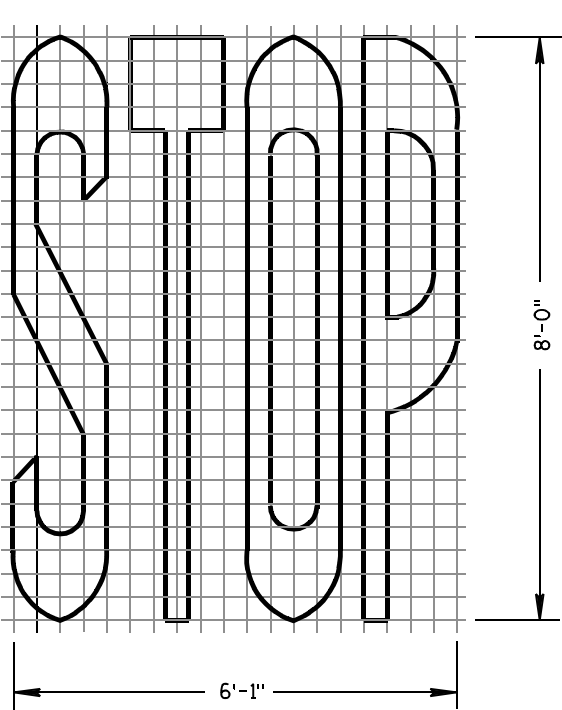
 WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED <u>9-16-03</u> DATE	<u>/S/ Thomas N. Notbohm</u> CHIEF SIGNS AND MARKING ENGINEER

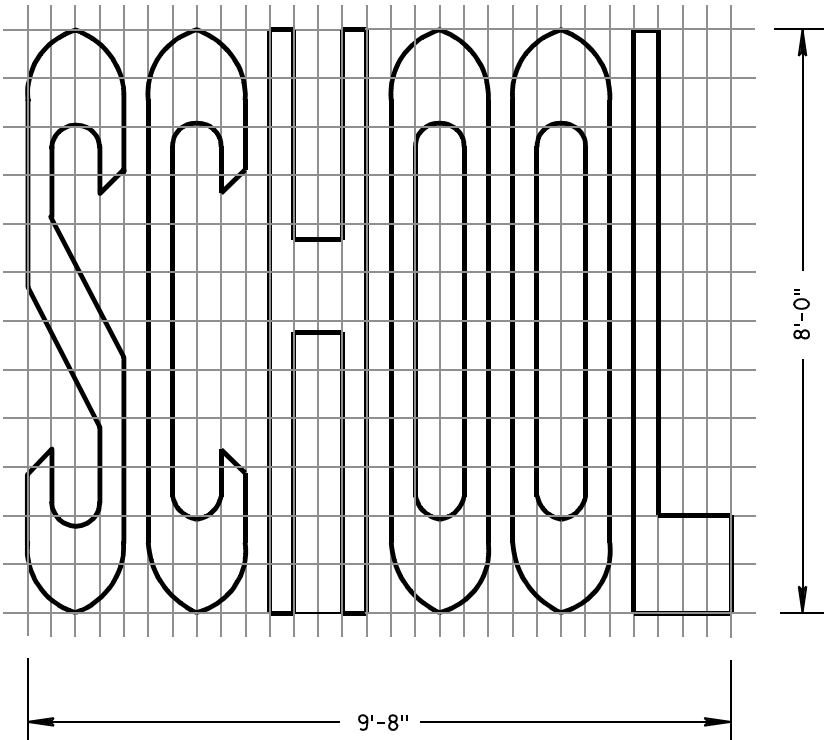
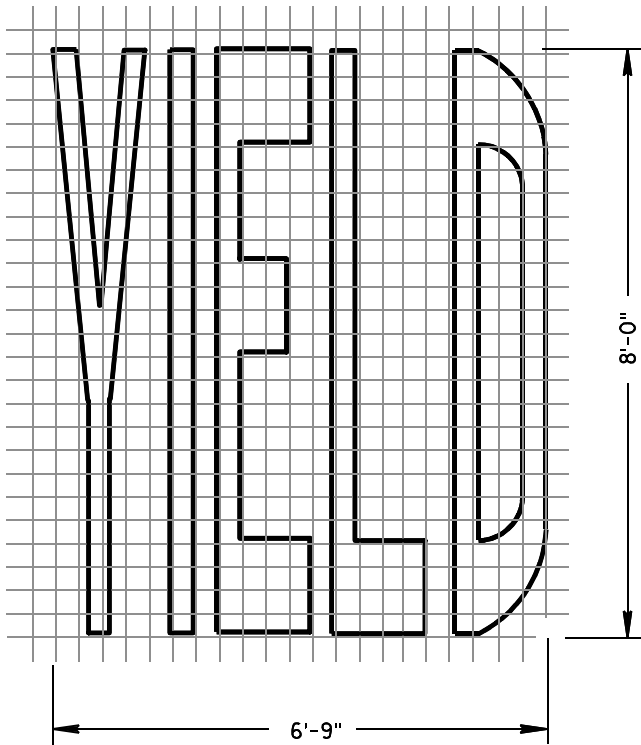
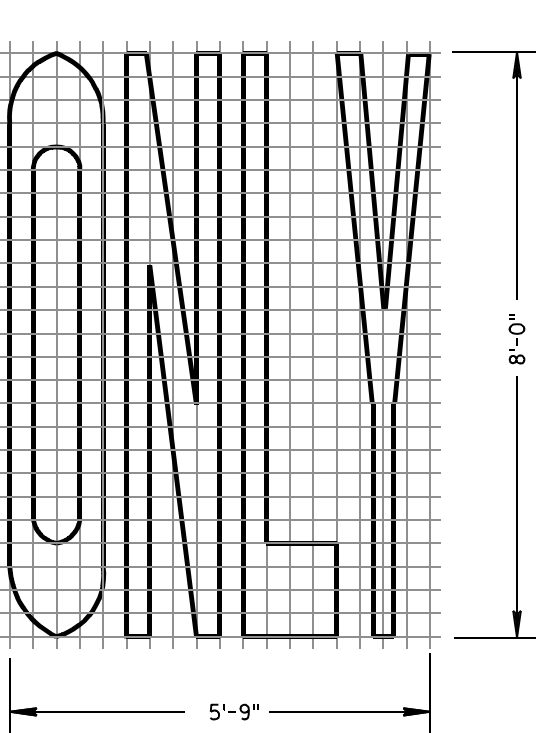
GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

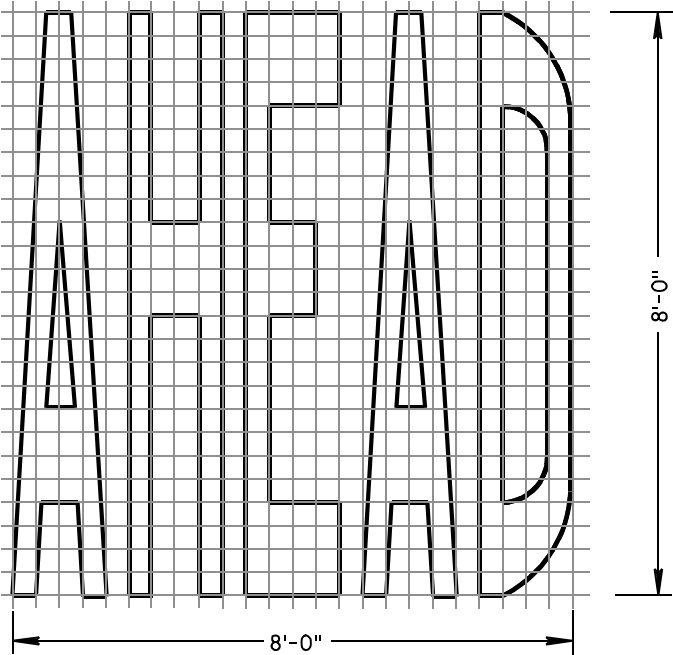
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



TWO-LANE



SINGLE-LANE



PAVEMENT MARKING WORDS

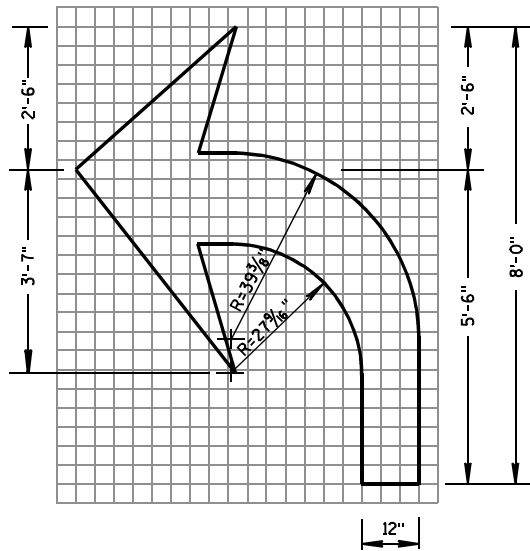
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

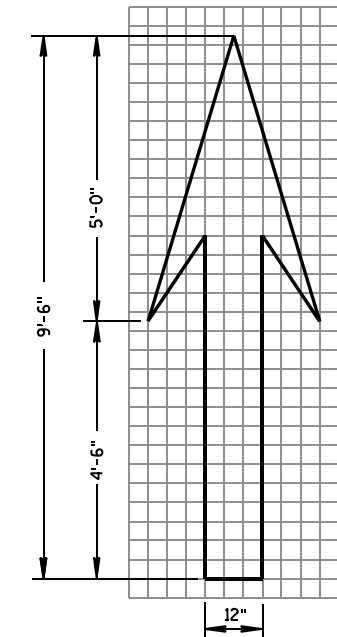
7-1-11
DATE

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

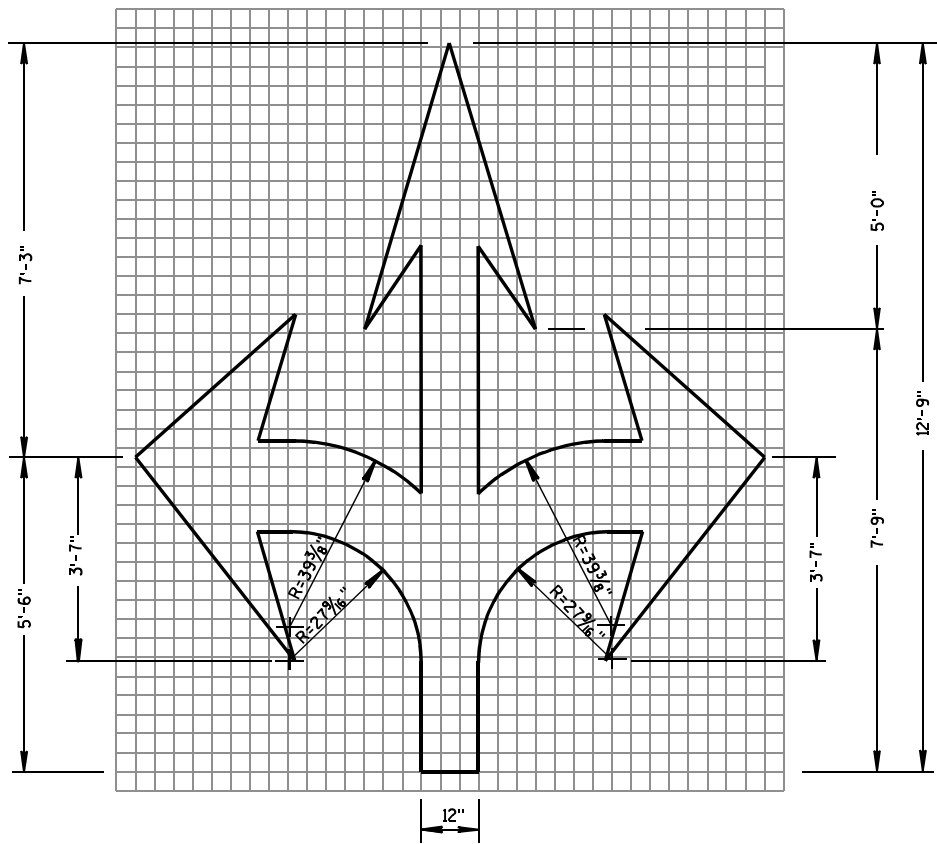
FHWA



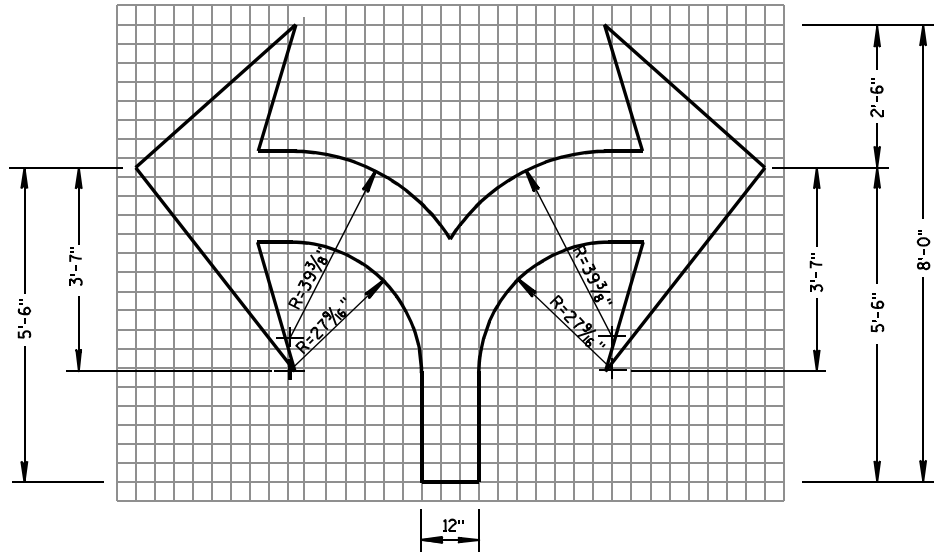
TYPE 2



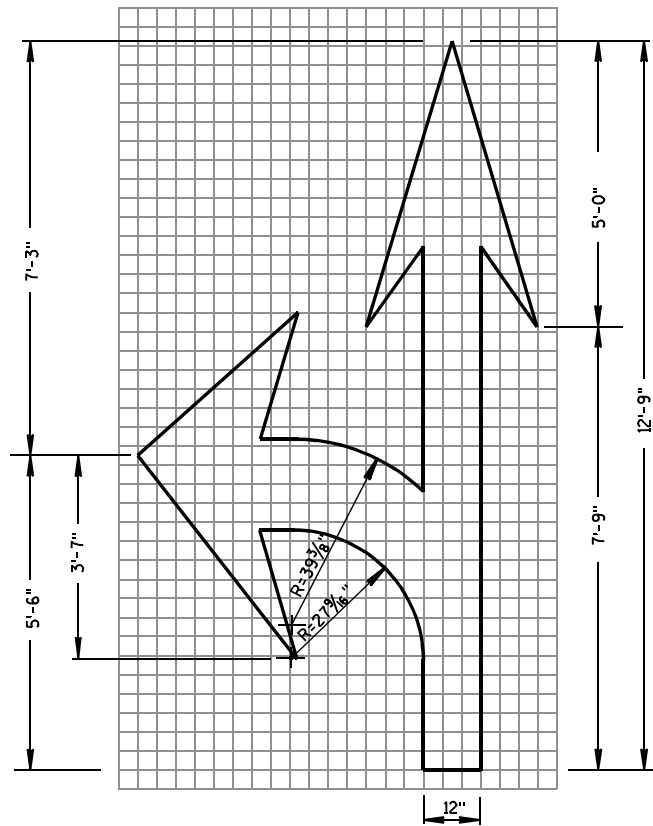
TYPE 1



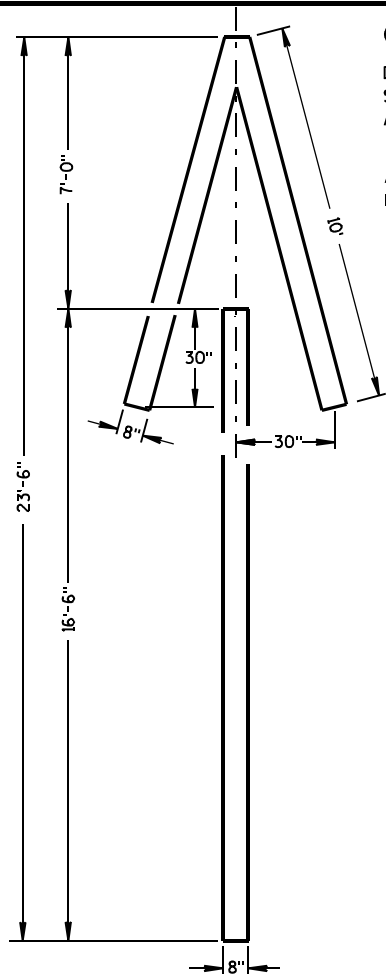
TYPE 6



TYPE 7



TYPE 3

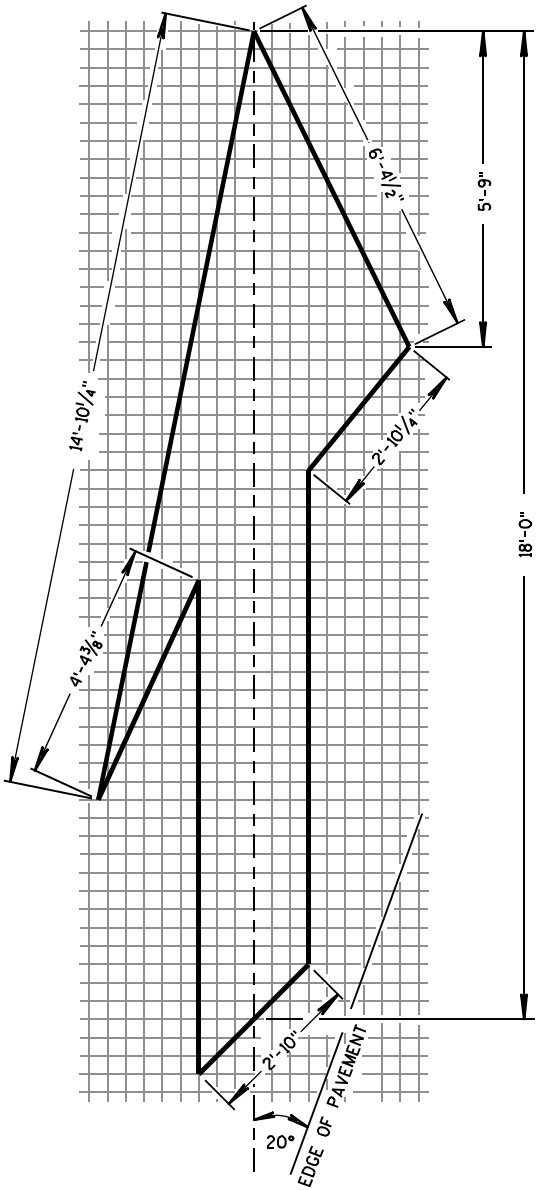


TYPE 4

GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



TYPE 5 LANE DROP ARROW

PAVEMENT MARKING ARROWS

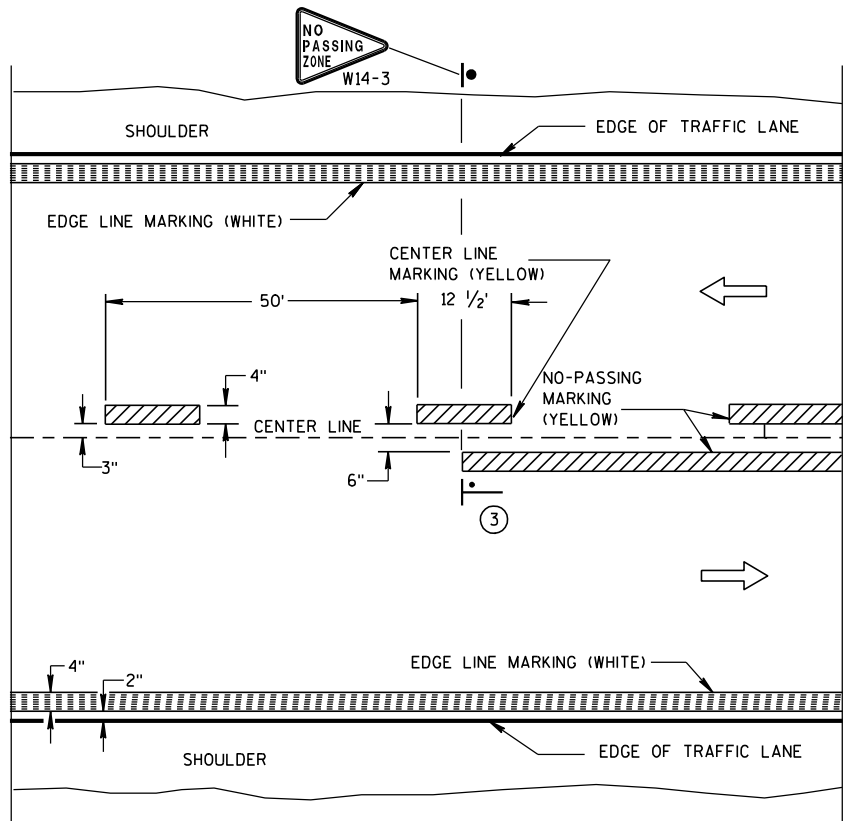
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

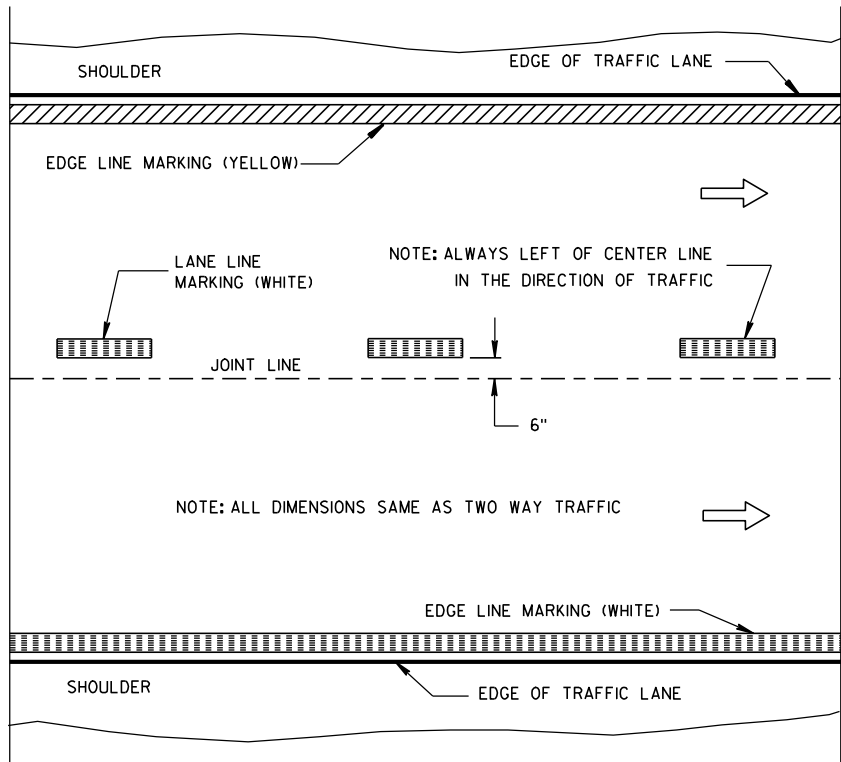
7/1/11
DATE

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

FHWA

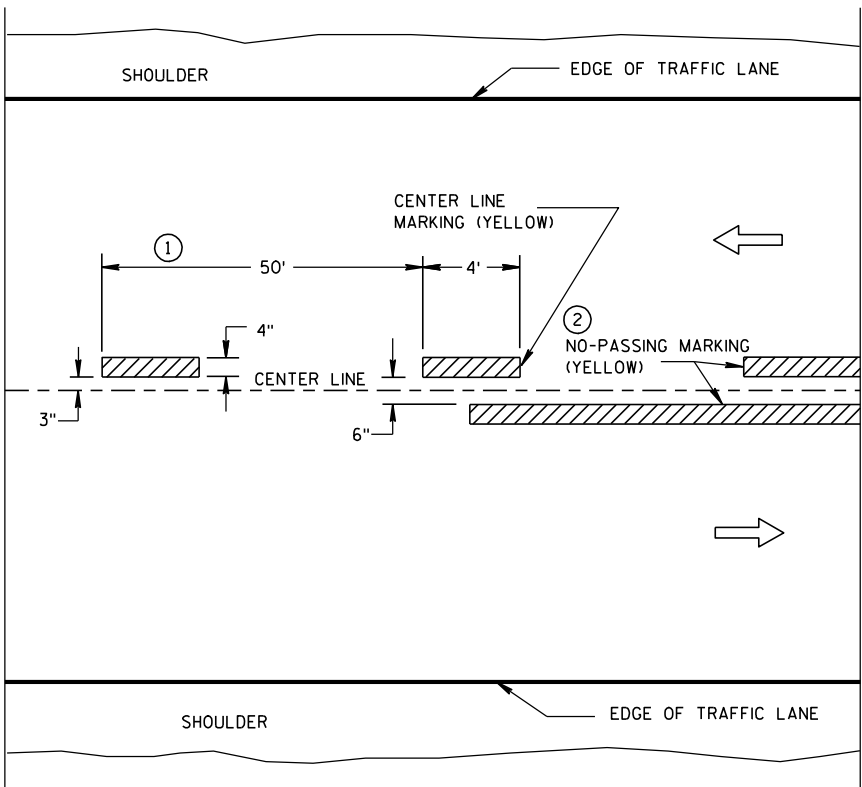


TWO WAY TRAFFIC

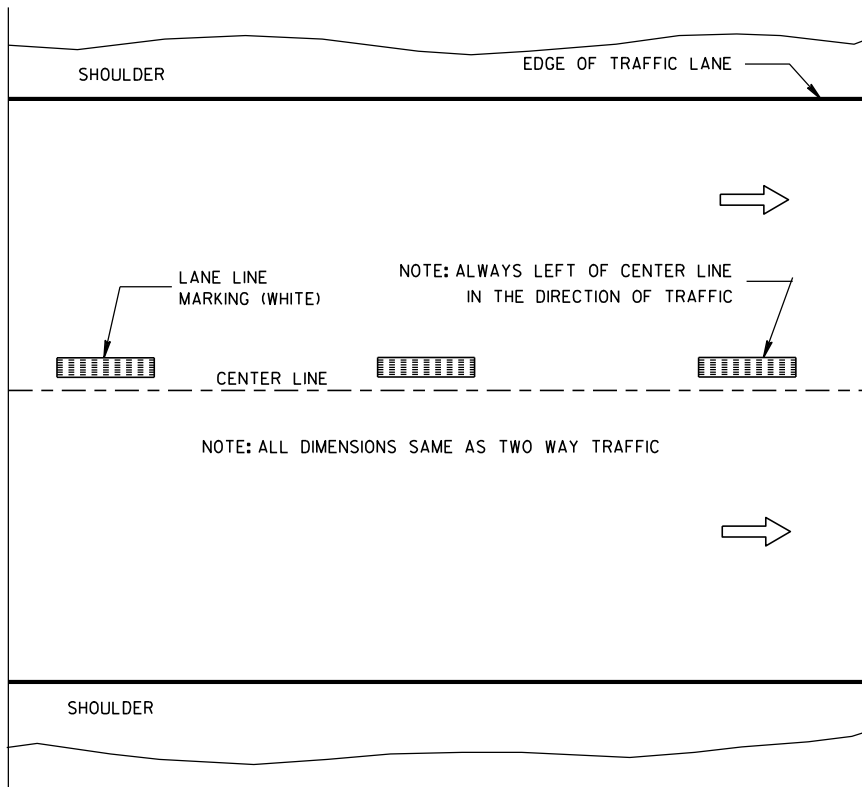


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

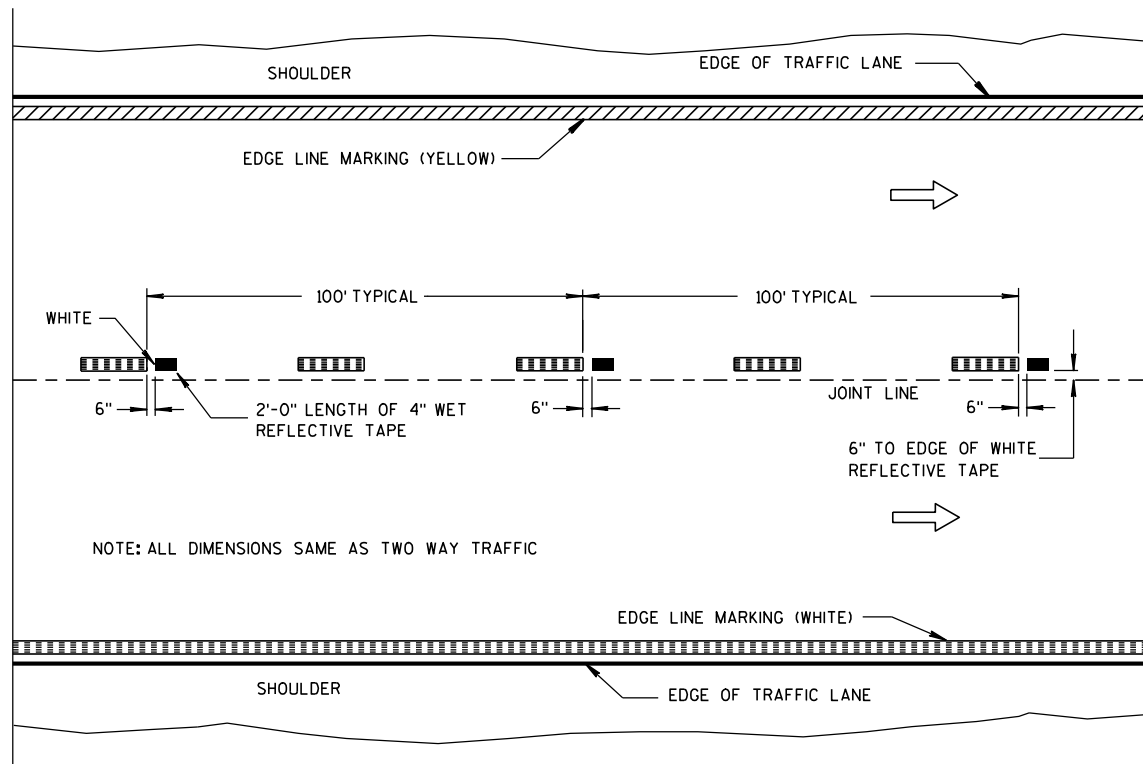
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- 1 HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- 2 NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- 3 NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

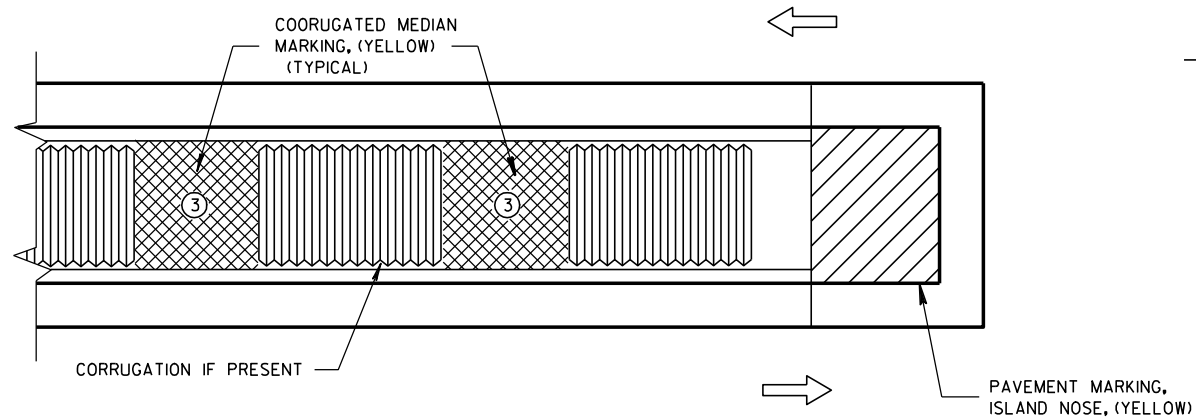
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

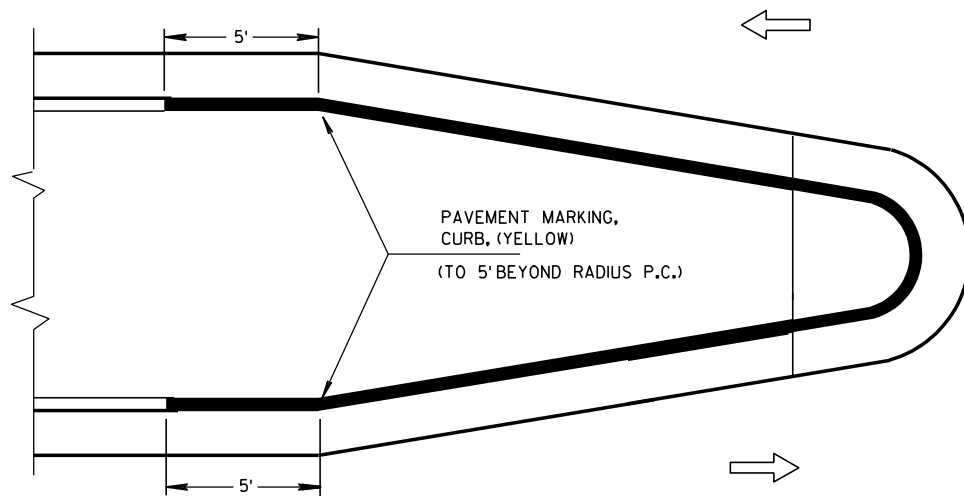
PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

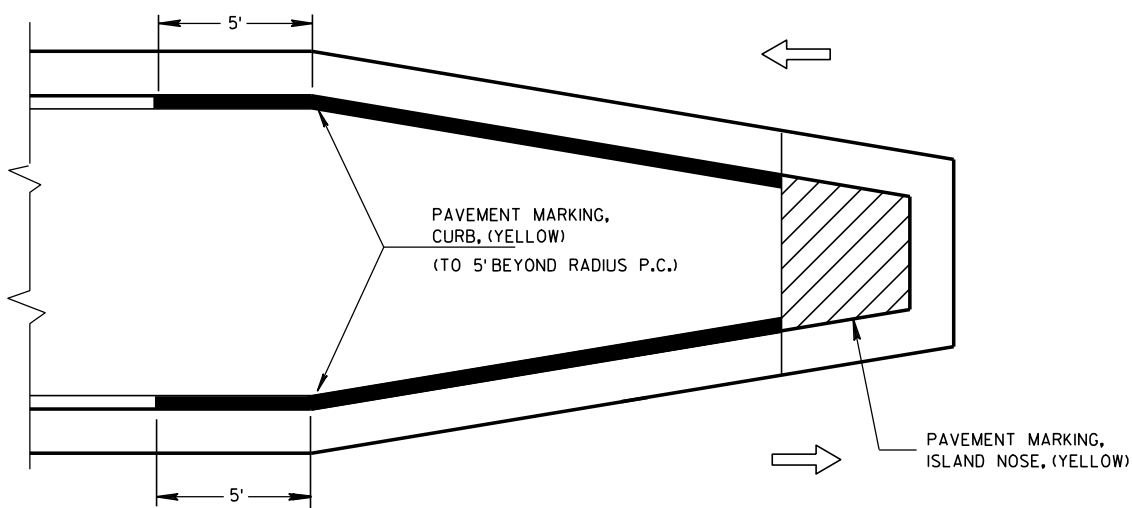
APPROVED
6-23-11 /S/ Thomas N. Notbohm
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

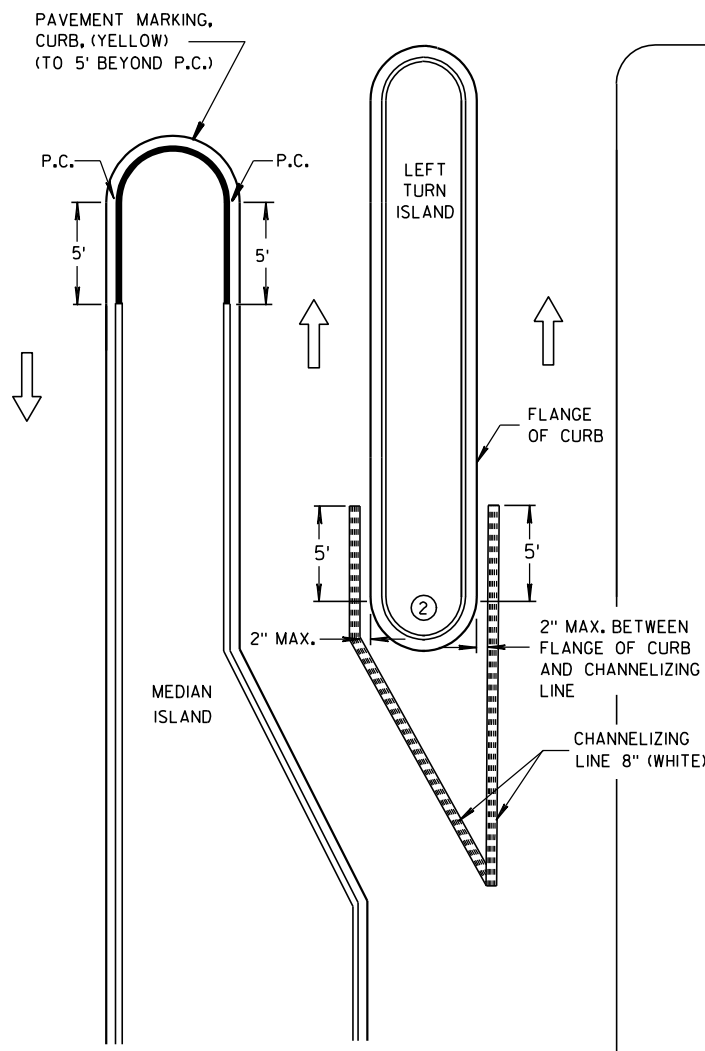


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

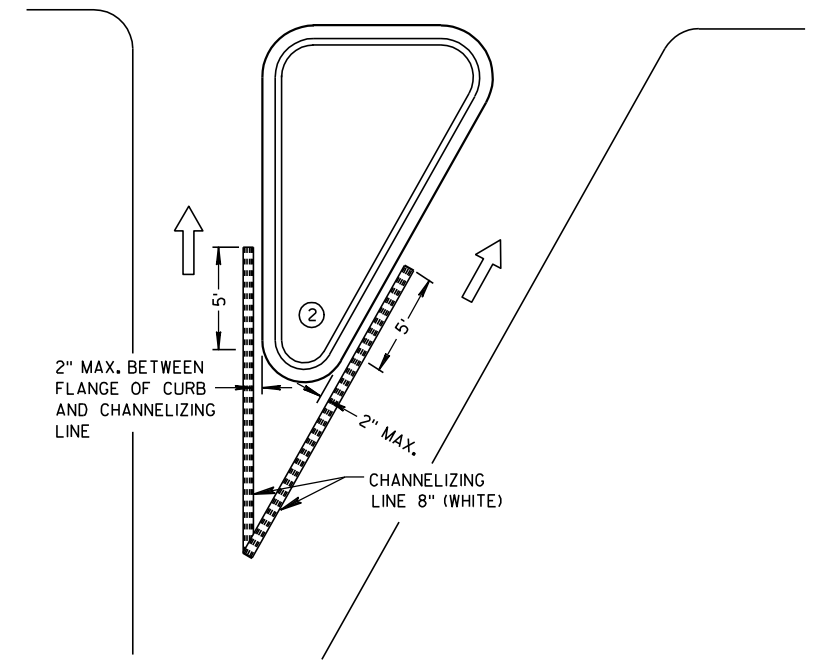
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



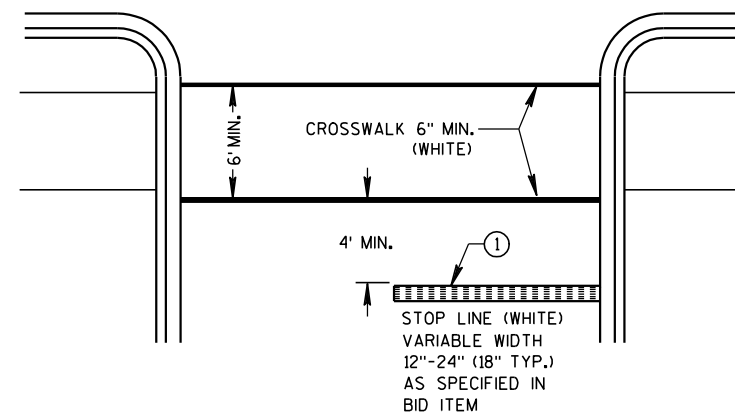
LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

- ① STOP LINE IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
- ② DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
- ③ WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND



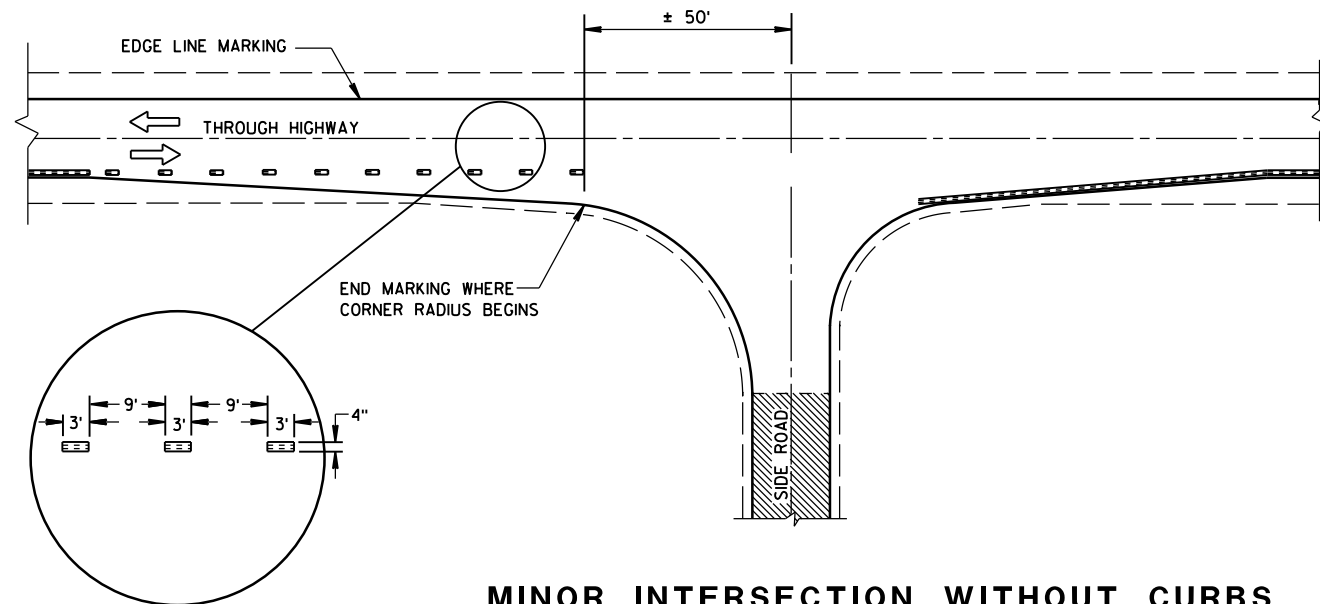
STOP LINE AND CROSSWALK

LEGEND

- ISLAND NOSE MARKING
- CURB MAKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)

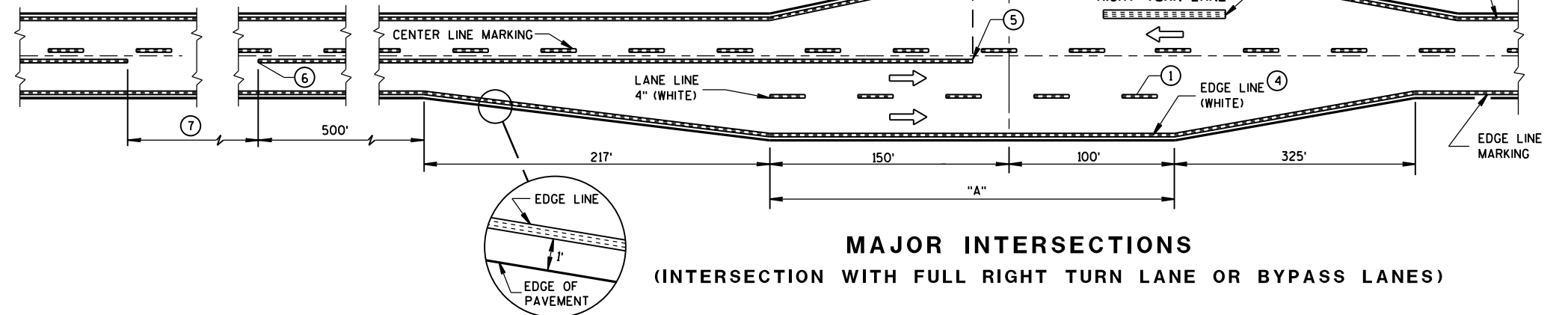
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



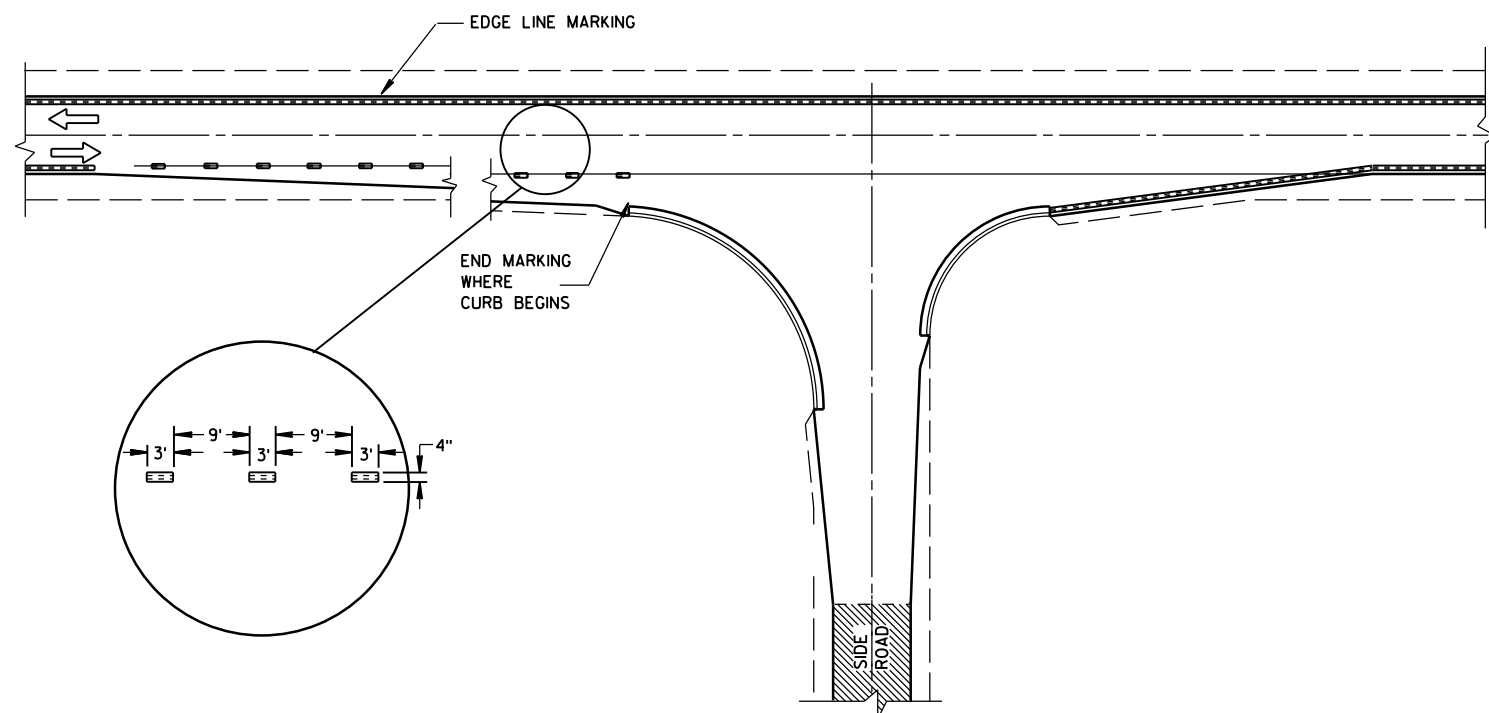
MINOR INTERSECTION WITHOUT CURBS

⑦

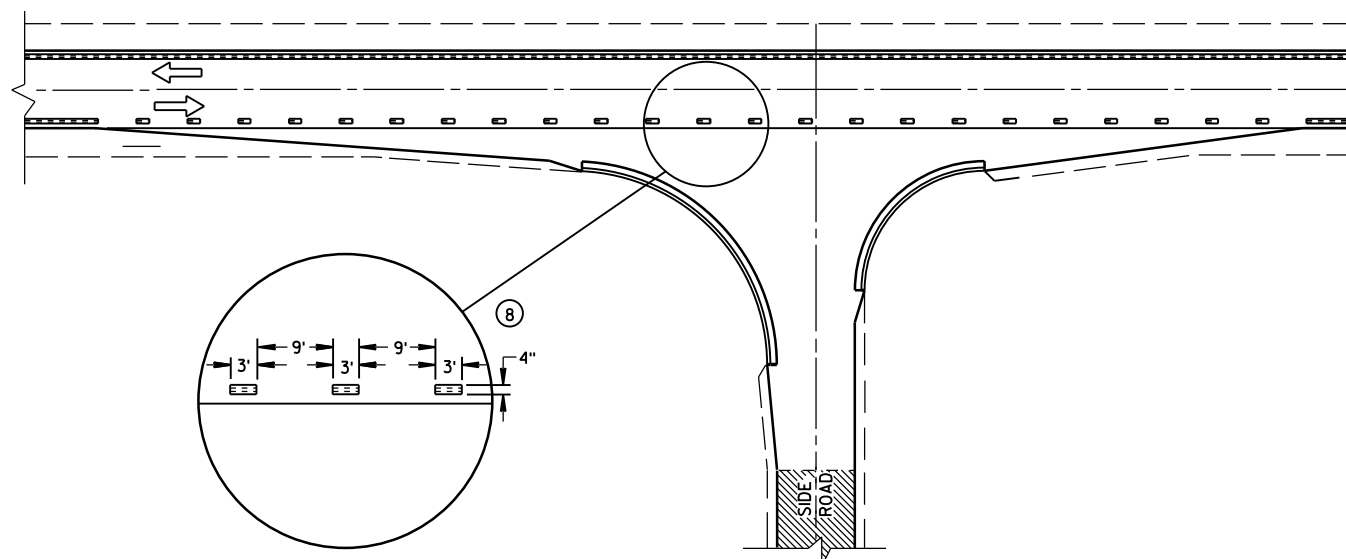
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



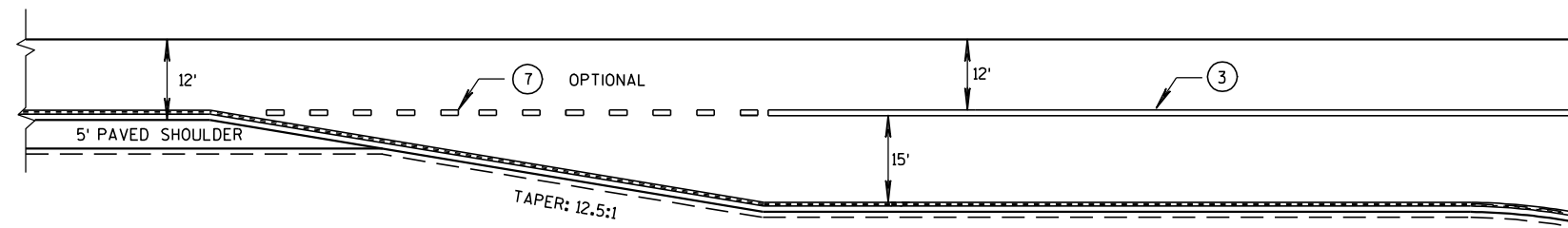
MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



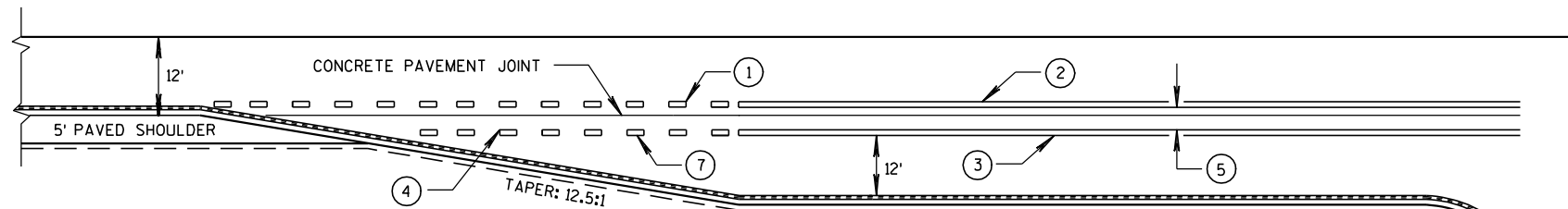
MINOR INTERSECTION WITH CURBS
③ (FOR SPECIAL CONDITIONS AS SPECIFIED)

GENERAL NOTES

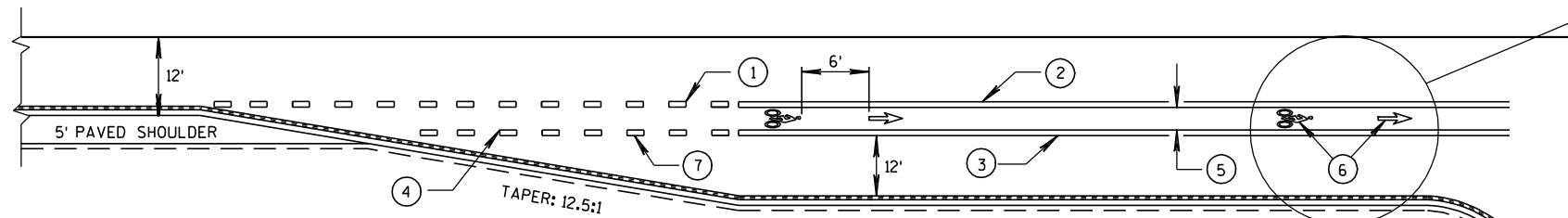
- EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
 - ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
 - ③ ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
 - ④ THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.
 - ⑤ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
 - ⑥ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
 - ⑦ IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.
 - ⑧ 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WIDER TURN LANE



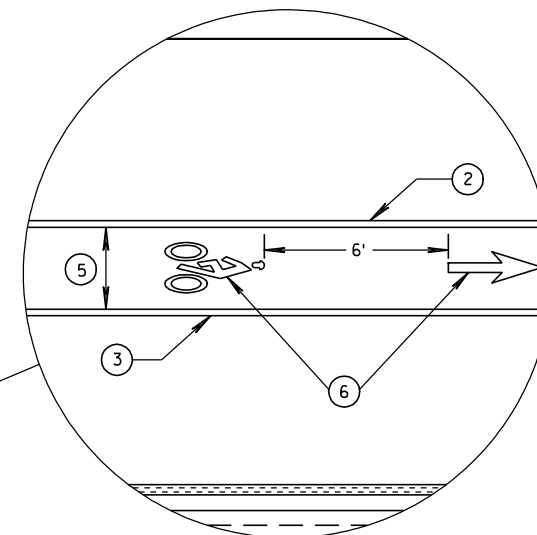
BIKE SLIP LANE ONLY WITHOUT SYMBOLS



BIKE LANE WITH SYMBOLS

GENERAL NOTES

- ① 3' LINE, 9' GAP - 4-INCH WIDE, WHITE.
- ② 4-INCH, WHITE.
- ③ 8-INCH, WHITE.
- ④ IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.
- ⑤ BIKE ACCOMMODATION FOR CONCRETE PAVEMENT IS 5' WIDE.
2 LANE (3' LEFT, 2' RIGHT OF JOINT).
4 LANE (2' LEFT, 3' RIGHT OF JOINT).
BIKE ACCOMMODATION FOR ASPHALT PAVEMENT IS A MINIMUM OF 4',
5' AT ≥ 45 MPH.
- ⑥ REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
- ⑦ 3' LINE, 9' GAP - 8-INCH WIDE, WHITE.



BICYCLE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2/6/2012

DATE

FHWA

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

GENERAL NOTES

- ① 3' LINE, 9' GAP - 4-INCH WIDE, WHITE.

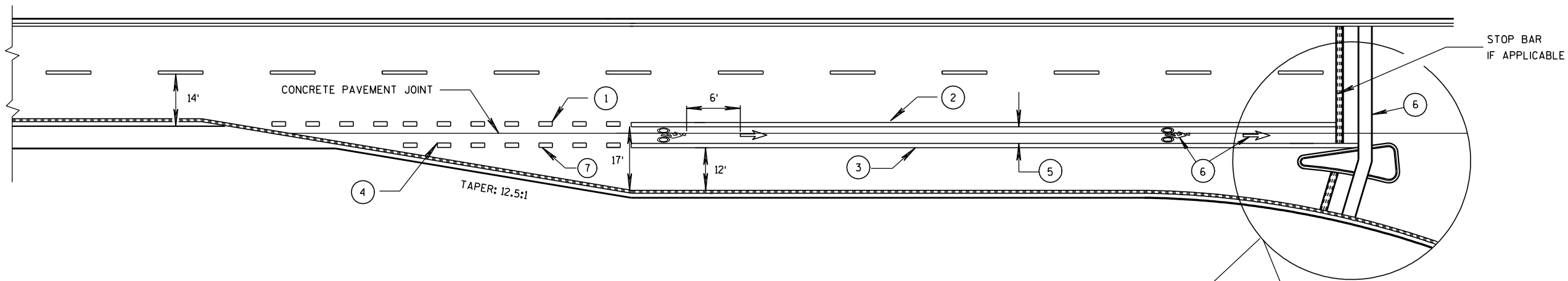
② 4-INCH, WHITE.

③ 8-INCH, WHITE.

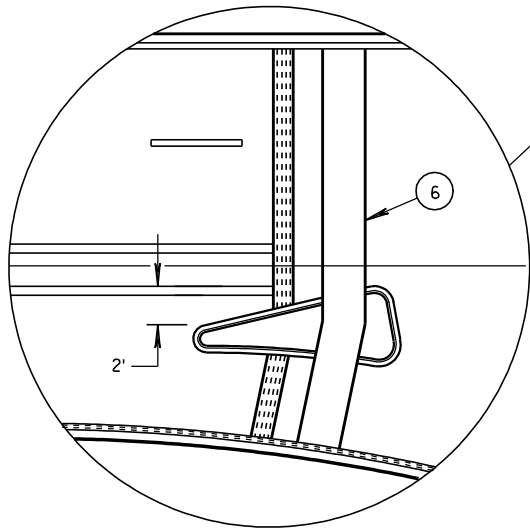
④ IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.
- ⑤ BIKE ACCOMMODATION FOR CONCRETE PAVEMENT IS 5' WIDE.
2 LANE (3' LEFT, 2' RIGHT OF JOINT).
4 LANE (2' LEFT, 3' RIGHT OF JOINT).
BIKE ACCOMMODATION FOR ASPHALT PAVEMENT IS A MINIMUM OF 4',
5' AT ≥ 45 MPH.

⑥ REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

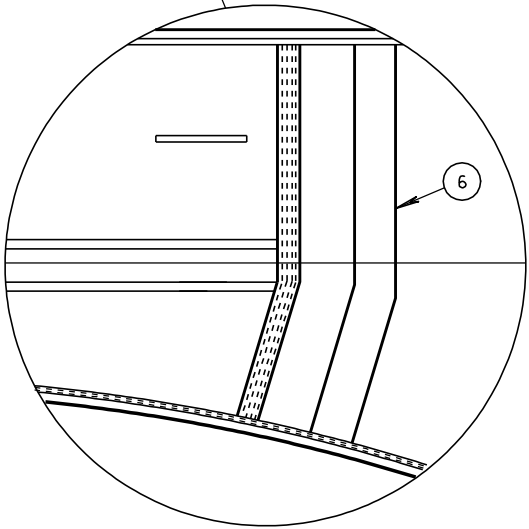
⑦ 3' LINE, 9' GAP - 8-INCH WIDE, WHITE.



BIKE LANE - 4-LANE DIVIDED WITH RIGHT TURN LANE



4 LANE DIVIDED WITH ISLAND

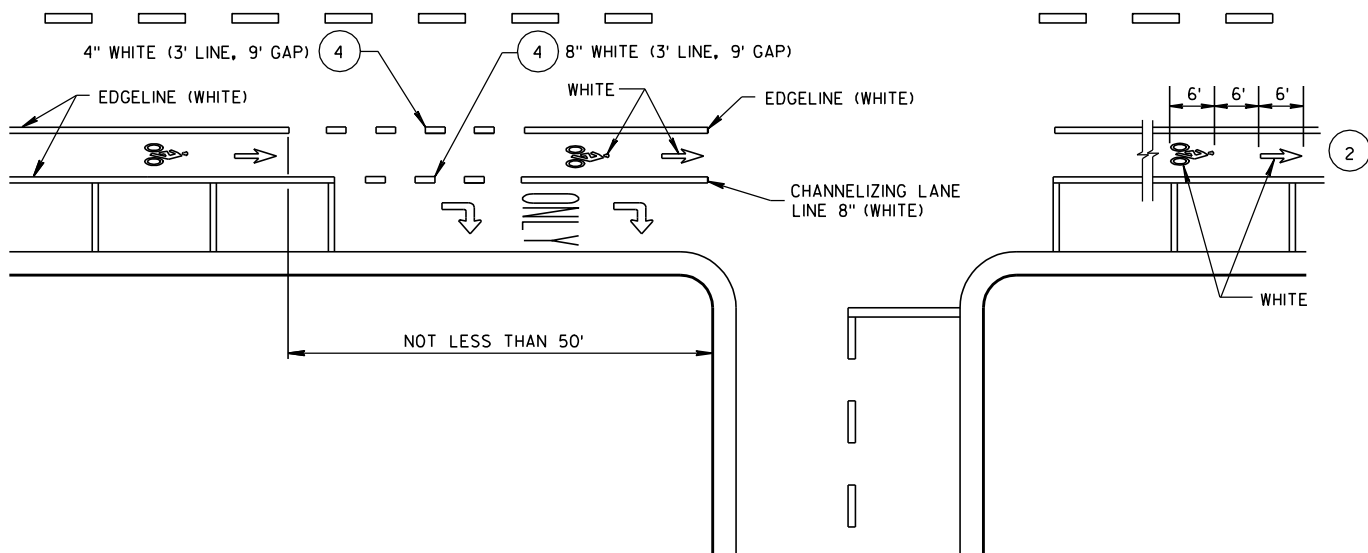


4 LANE DIVIDED WITHOUT ISLAND

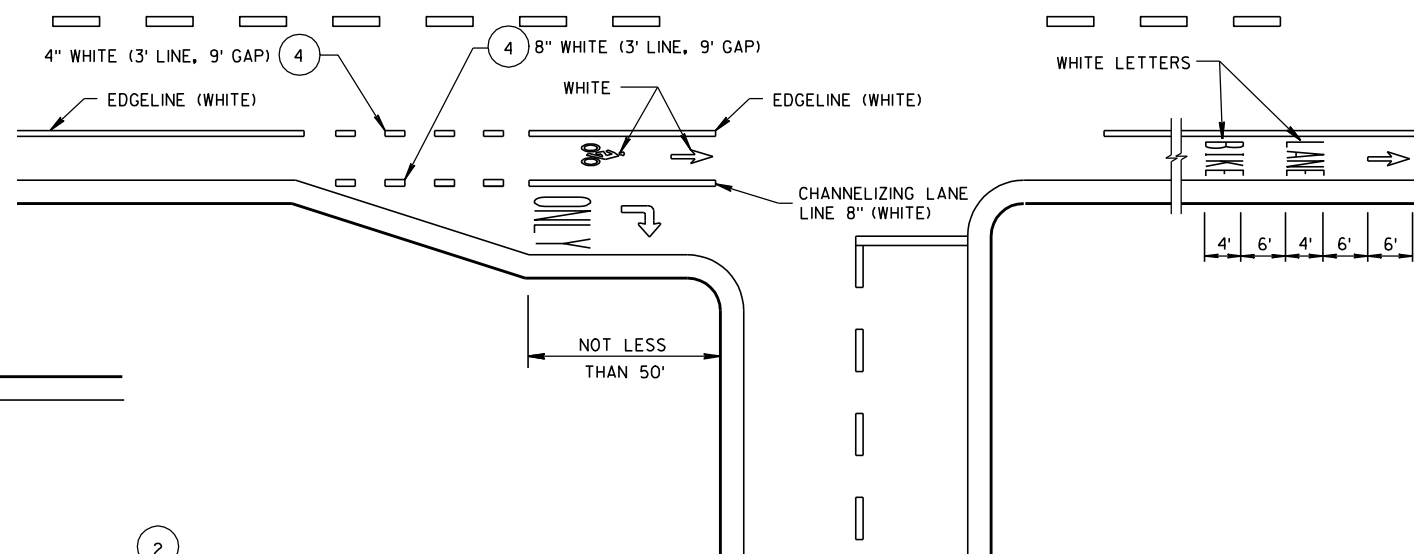
BICYCLE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

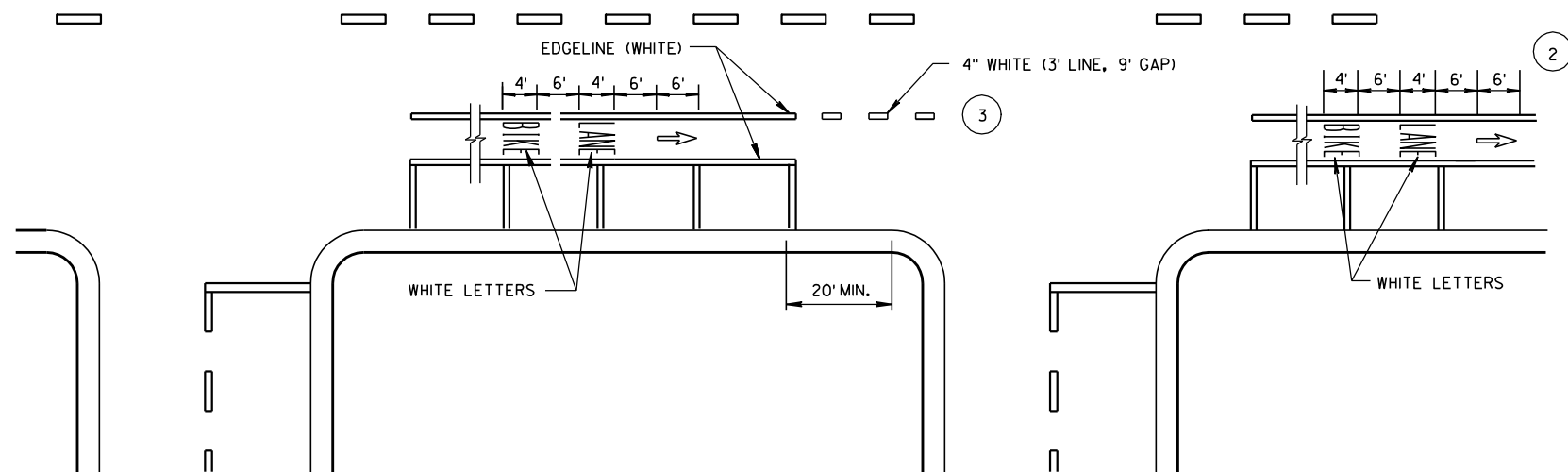
APPROVED
2/6/2012 DATE /S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN
FHWA



DESIGNATED BICYCLE LANE



**DESIGNATED BICYCLE LANE
NO PARKING, RIGHT TURN LANE**



**DESIGNATED BICYCLE LANE
WITH PARKING, NO RIGHT TURN LANE**

GENERAL NOTES

- ① DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
- ② THE SERIES OF PAVEMENT MARKING SYMBOLS SHALL BE REPEATED AFTER INTERSECTIONS AND SPACED A MAXIMUM OF 250'. NO PAVEMENT MARKING WILL TAKE PLACE IN THE CROSSWALK.
- ③ DOTTED LINES SHOULD BE USED 50' TO 200' IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
- ④ WHEN SPECIFIED IN THE CONTRACT.

**URBAN BICYCLE LANE
MARKING**

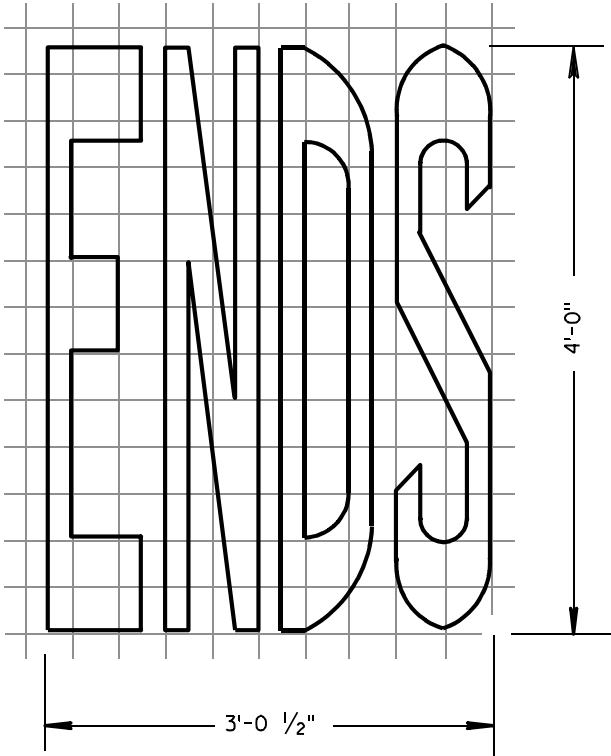
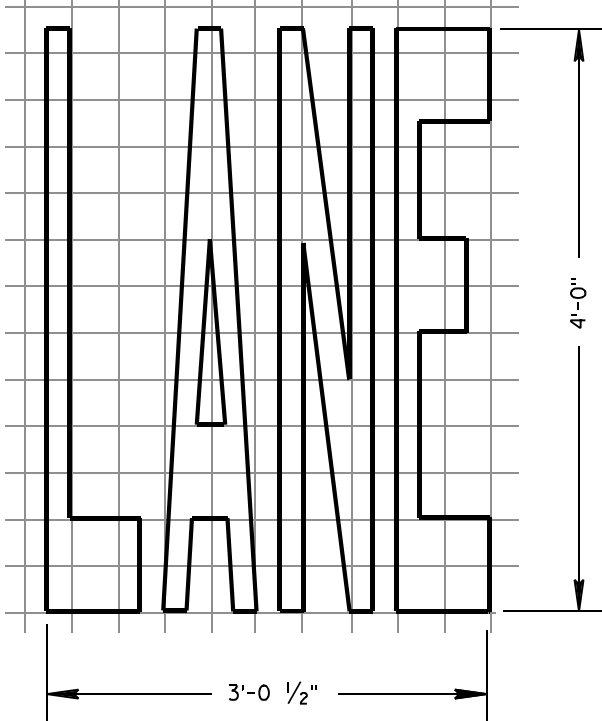
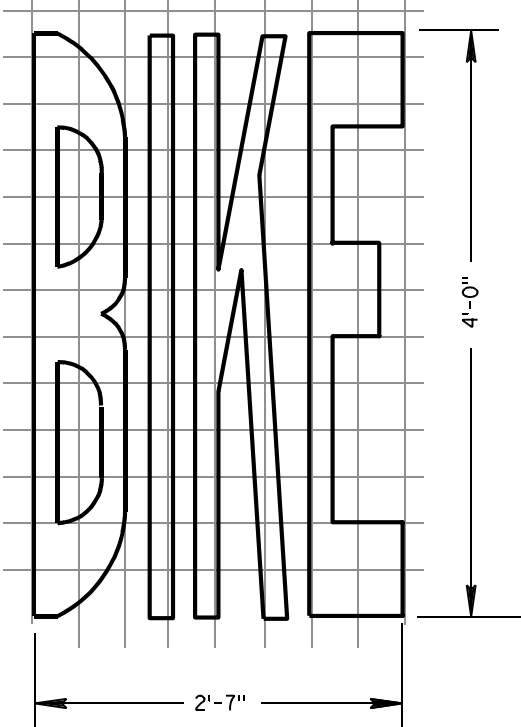
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 2/6/2012 /S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN
FHWA

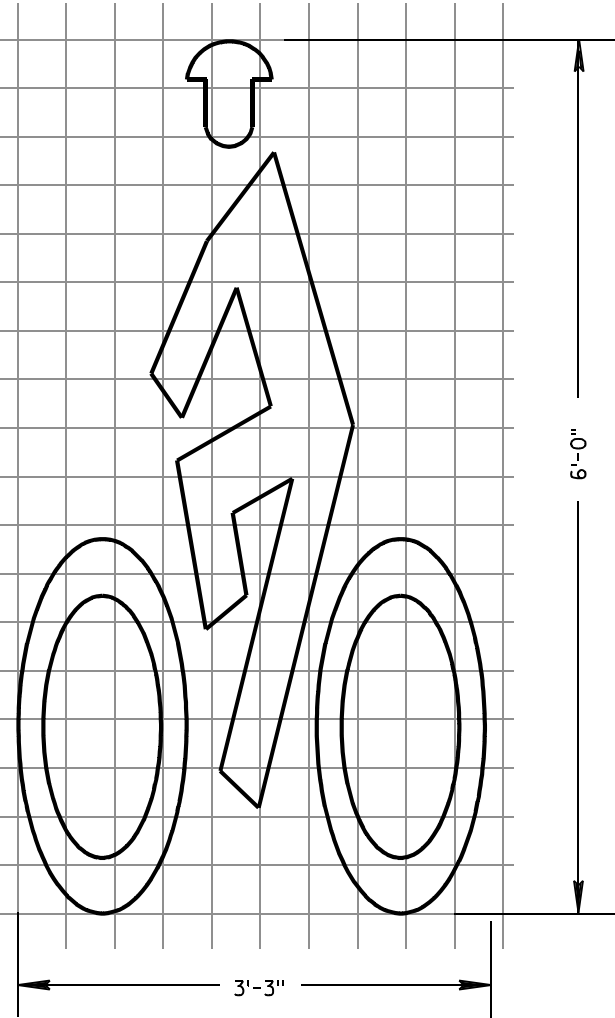
GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

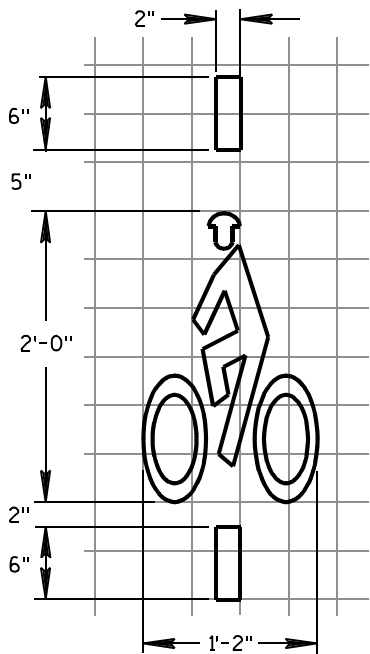
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



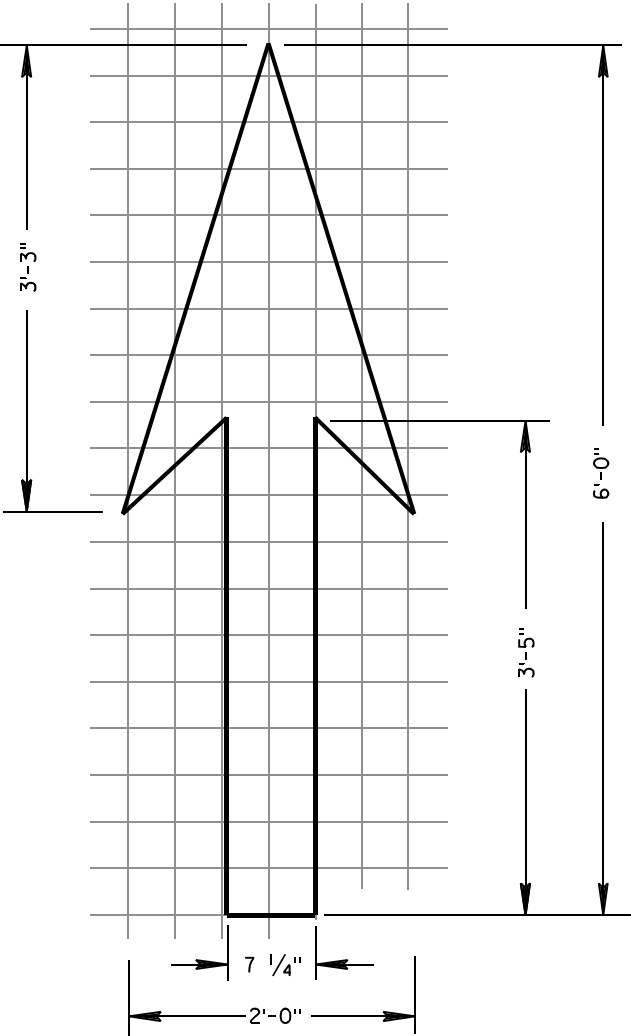
BIKE LANE WORDS



BIKE LANE SYMBOL

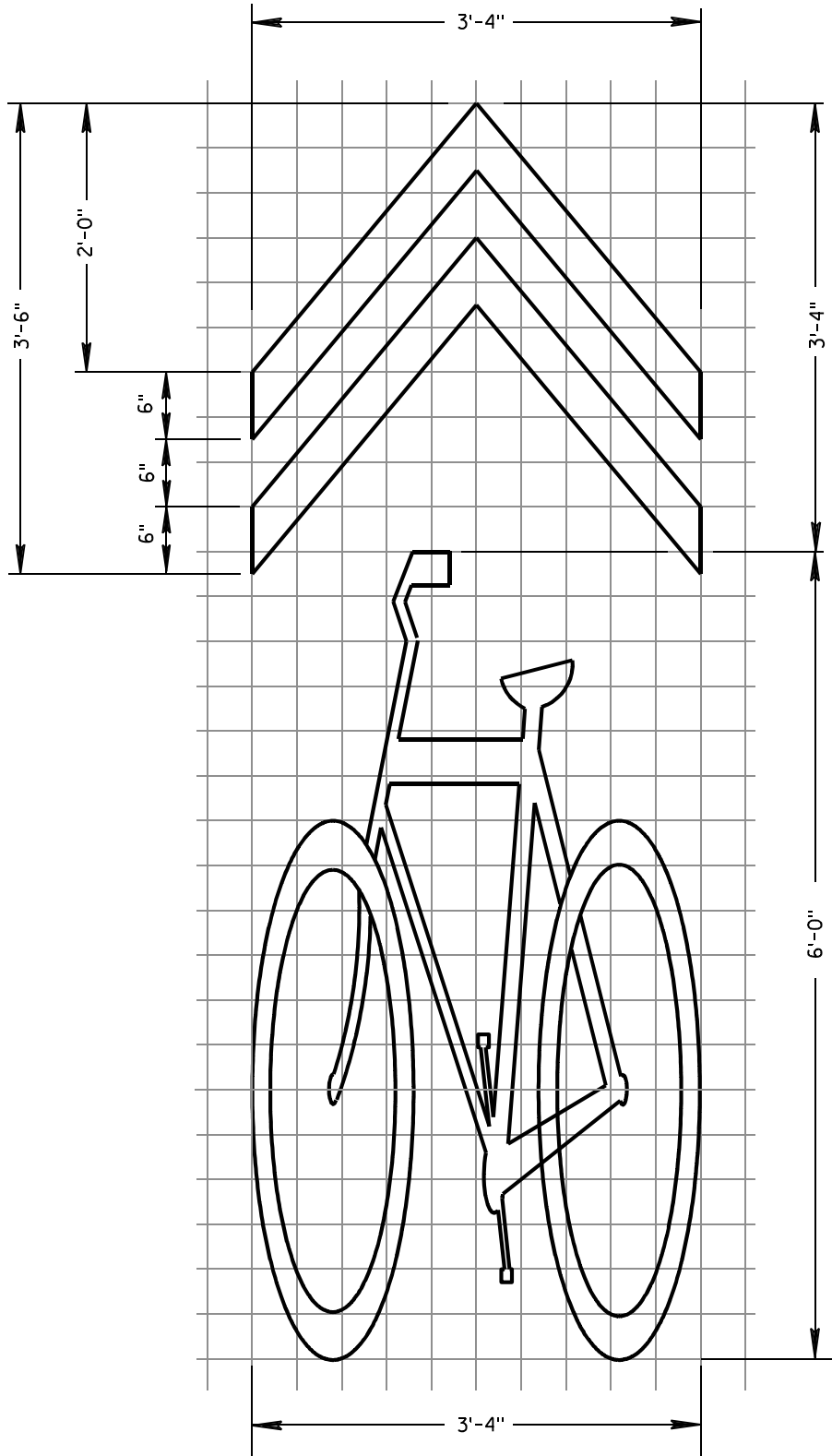


BICYCLE DETECTOR
PAVEMENT MARKING



BIKE LANE ARROW

PAVEMENT MARKING FOR BIKE LANES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-6-2012 DATE	/S/ Thomas N. Notbohm STATE TRAFFIC ENGINEER OF DESIGN
FHWA	

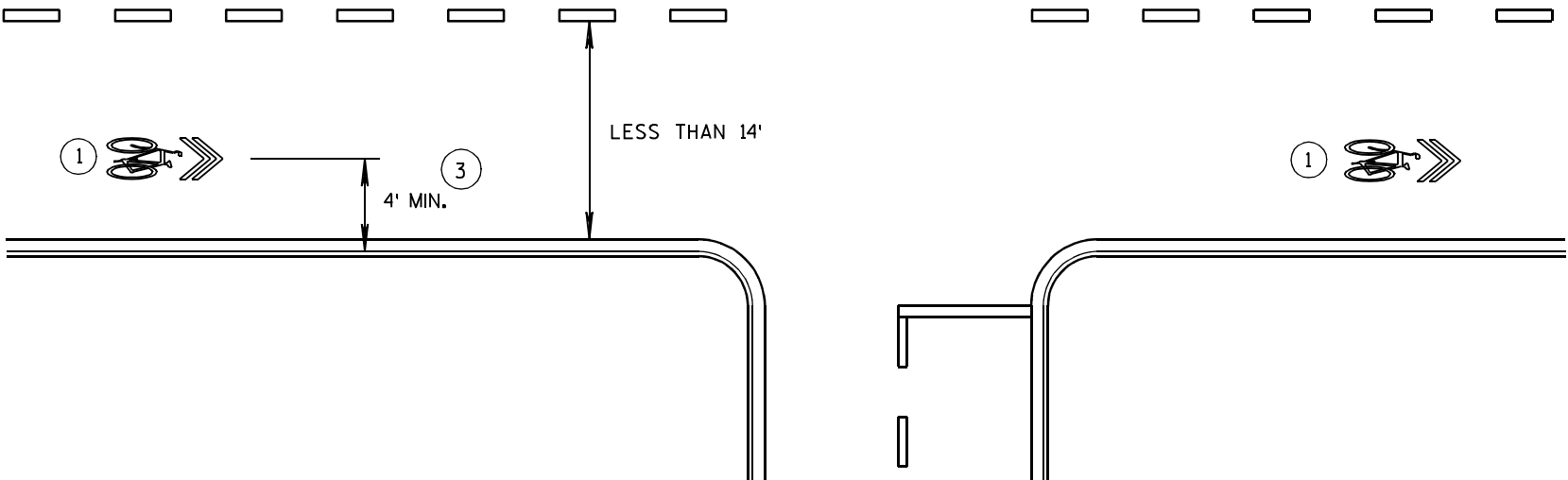


BIKE SYMBOL FOR SHARED LANE

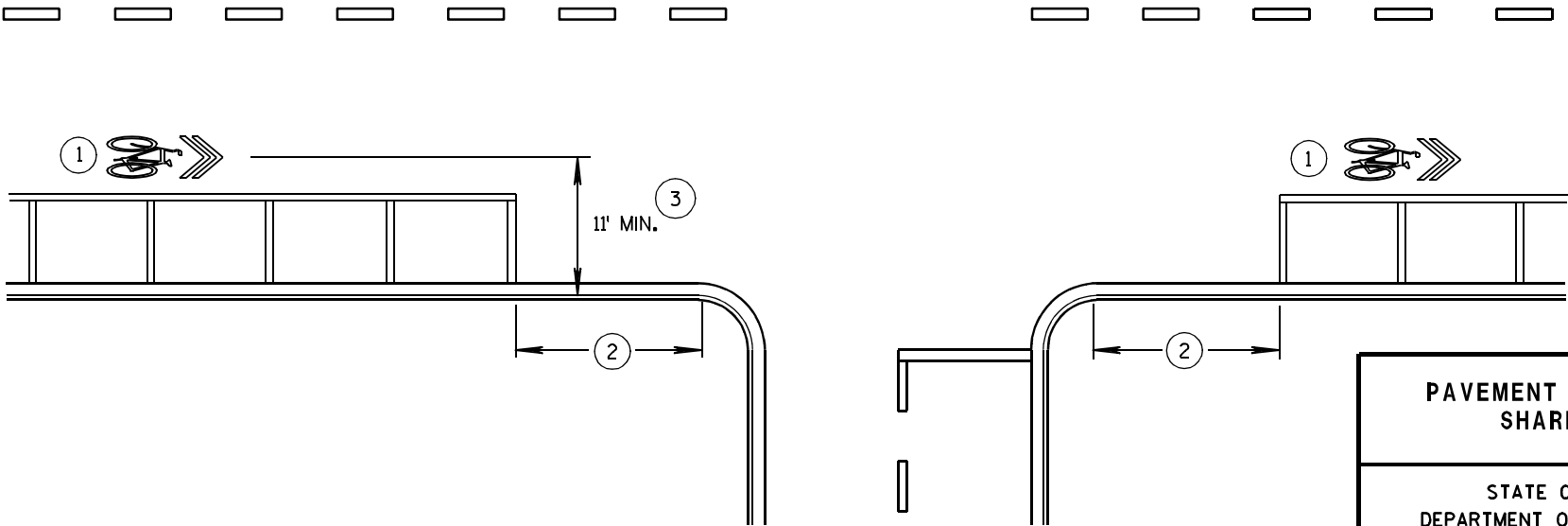
GENERAL NOTES

ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

- ① SPACED A MAXIMUM OF 250 FEET.
- ② 20 FOOT MINIMUM FROM CURB RADIUS.
- ③ OR TO EDGE OF PAVEMENT WITHOUT CURB.

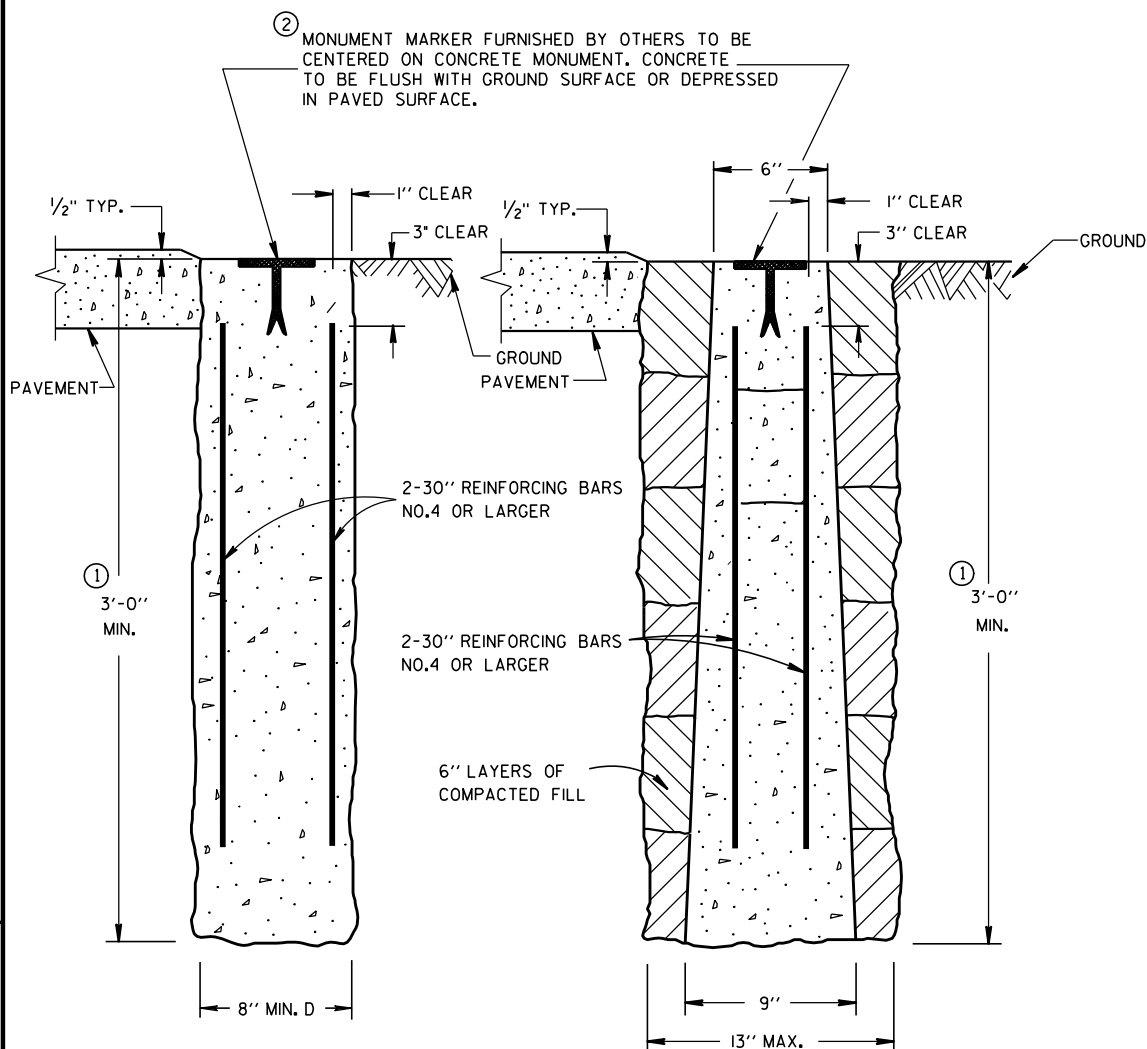


WITHOUT PARKING



WITH PARKING

PAVEMENT MARKING FOR SHARED LANE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-6-2012 DATE	/S/ Thomas N. Notbohm STATE TRAFFIC ENGINEER OF DESIGN
FHWA	

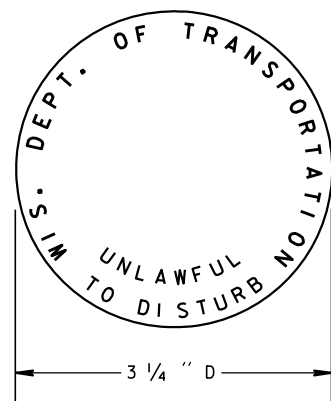


CAST-IN-PLACE

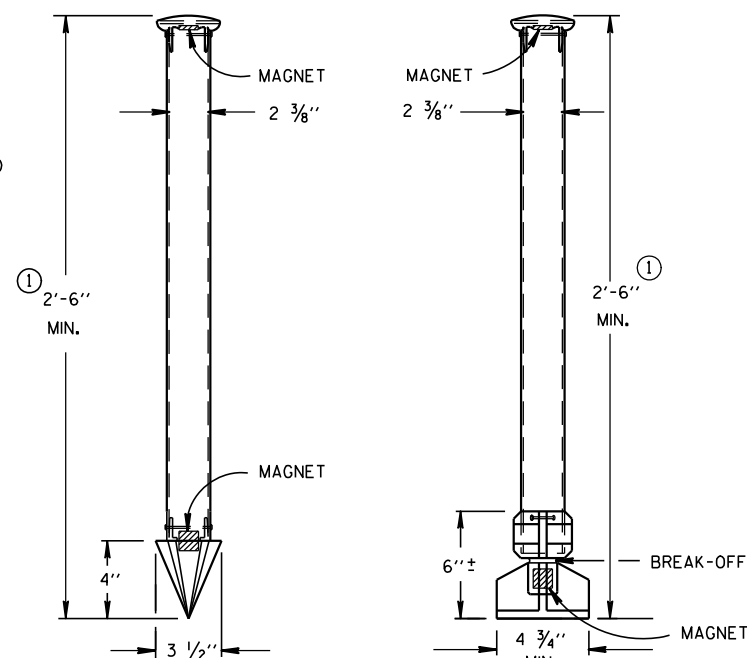
PRECAST

CONCRETE MONUMENTS

TYPE A



② WIS DOT MONUMENT MARKER LOGO
FOR TYPES "A", "C" & "D"



TYPE C

TYPE D

DRIVE-IN MONUMENT

BREAK-OFF MONUMENT

ALUMINUM MONUMENTS

(INCLUDES MARKER)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

INSTALLED METAL MONUMENTS MUST BE EASILY DETECTED WITH A DIP NEEDLE. INSERT PERMANENT MAGNETS SHALL BE ATTACHED NEAR THE TOP AND BOTTOM OF THOSE MONUMENTS CONSTRUCTED OF A METAL ALLOY WHICH IS NOT ATTRACTIVE TO A DIP NEEDLE.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

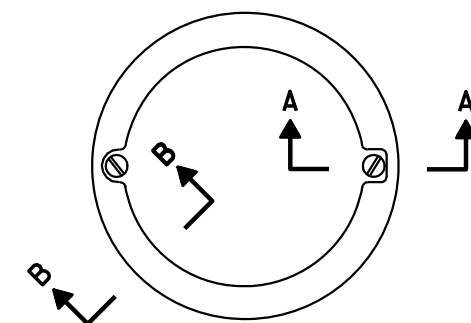
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

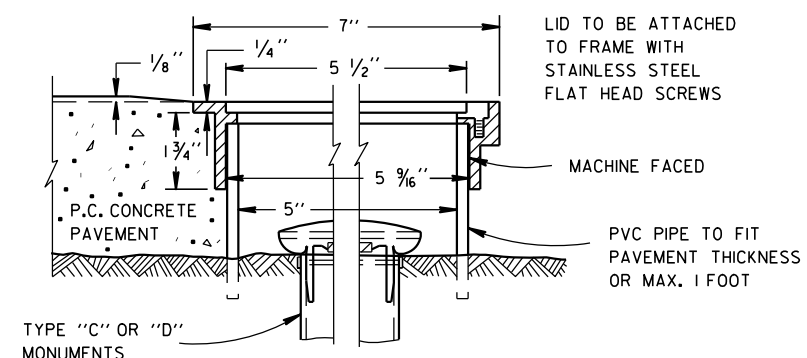
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

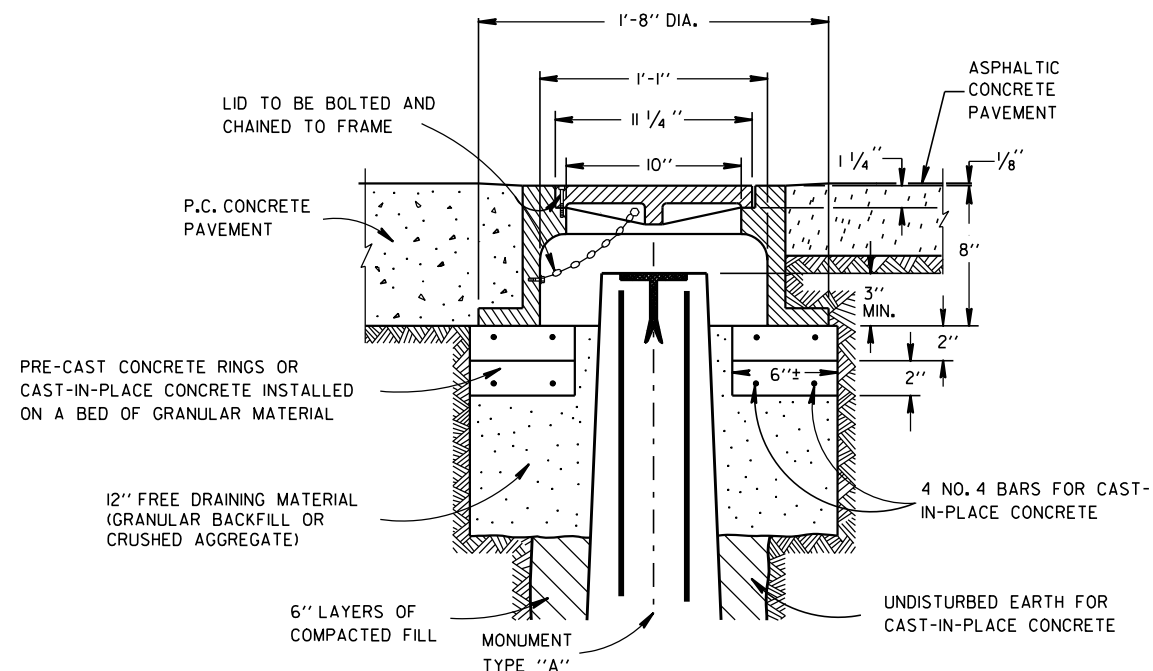
② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.



TOP VIEW

TYPE "C" OR "D"
MONUMENTSSECTION B-B SECTION A-A
ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)



CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT - 95 LBS.)

LANDMARK REFERENCE
MONUMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/22/1999

DATE

FHWA

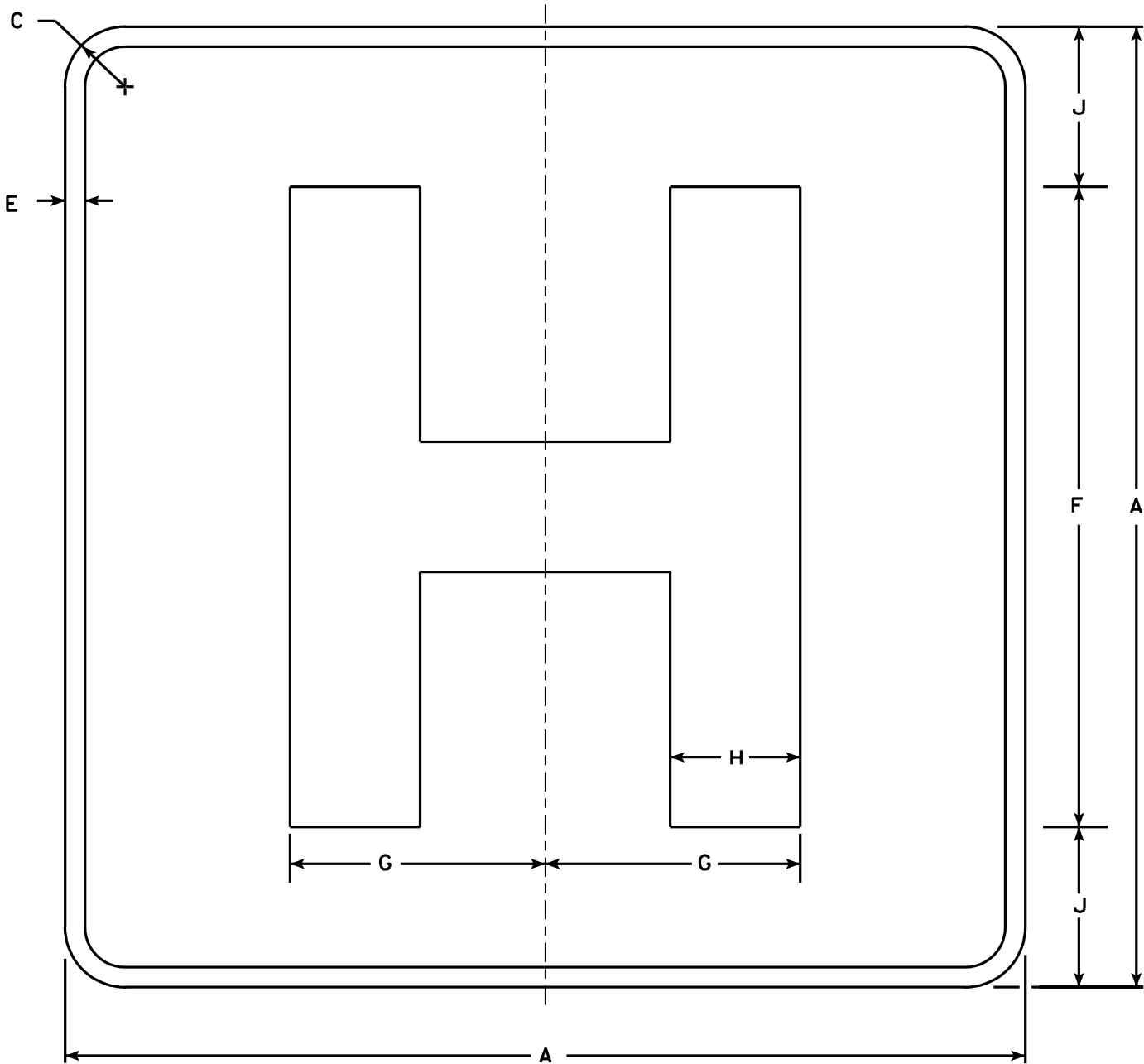
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER

7

Metric equivalent
for this sign is:

SIZE	
1	450 mmX 450 mm
2	600 mmX 600 mm
3	900 mmX 900 mm
4	X
5	X

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/8		1/2	12	4 3/4	2 3/8		3																	4.0
2	24		1 1/2		1/2	16	6 3/8	3 1/4		4																	4.0
3	36		2 1/4		3/4	24	9 1/2	4 7/8		6																	9.0
4																											
5																											



D9-2

NOTES

- Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Blue
Message - White - Type H Reflective
- Message Series - E Modified
- 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.

STANDARD SIGN
D9-2

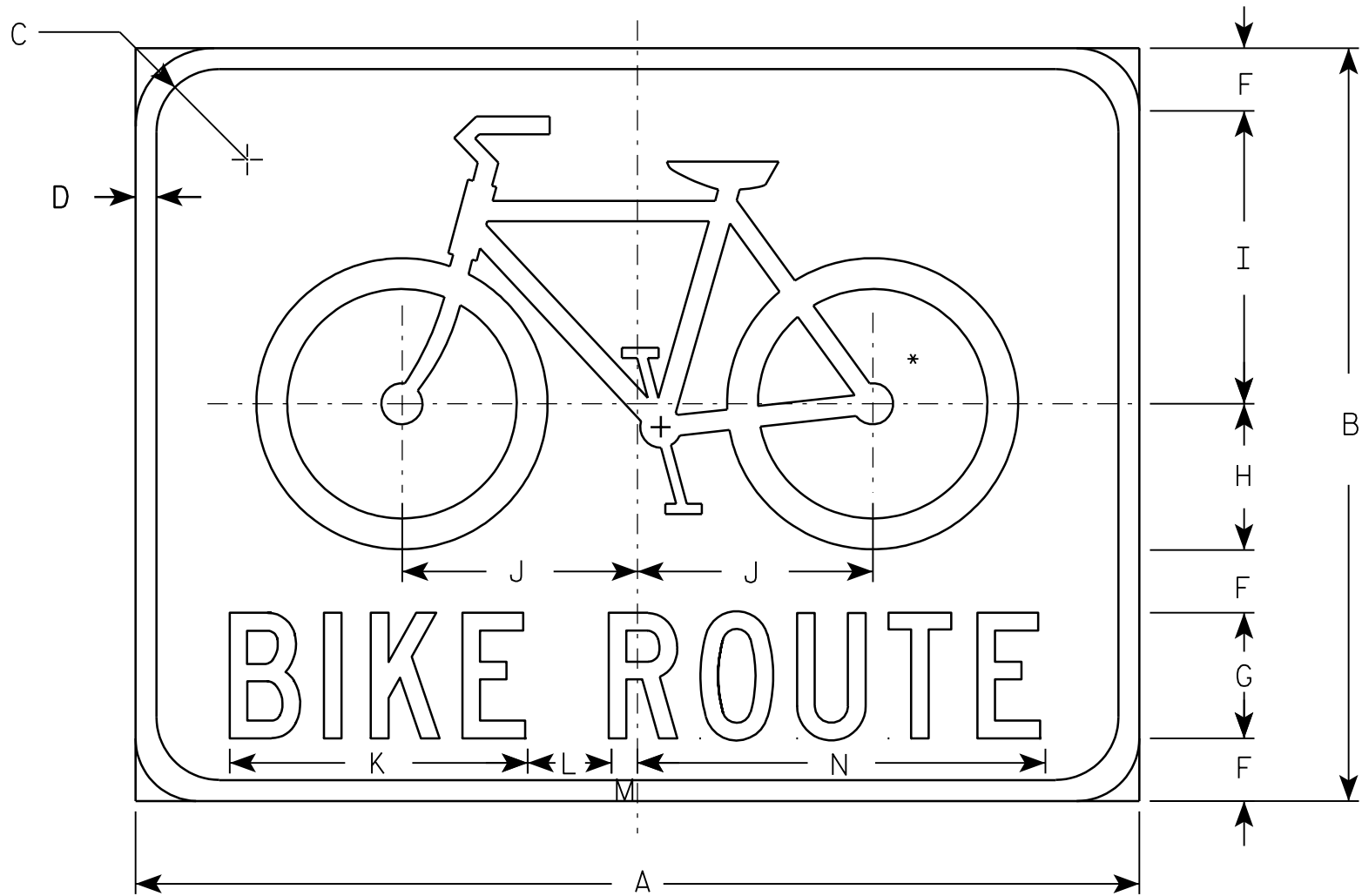
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Chester J. Spang
for State Traffic Engineer

DATE 1/15/02 PLATE NO. D9-2.4

7

7



D11-1

Metric equivalent
for this sign is:

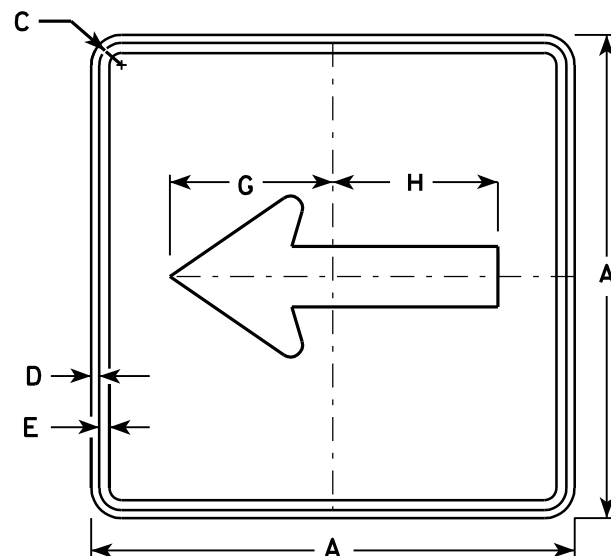
SIZE	
1	
2	600 mm X 450 mm
3	750 mm X 600 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	24	18	1 1/2	1/2		1 1/2	3	3 1/2	7	5 5/8	7 1/8	2	5/8	9 3/4													3.0	0.27
3	30	24	1 1/4	5/8		2	4	4 3/4	9 1/4	7 1/2	9 1/2	2 5/8	7/8	13													5.0	0.45
4																												
5																												

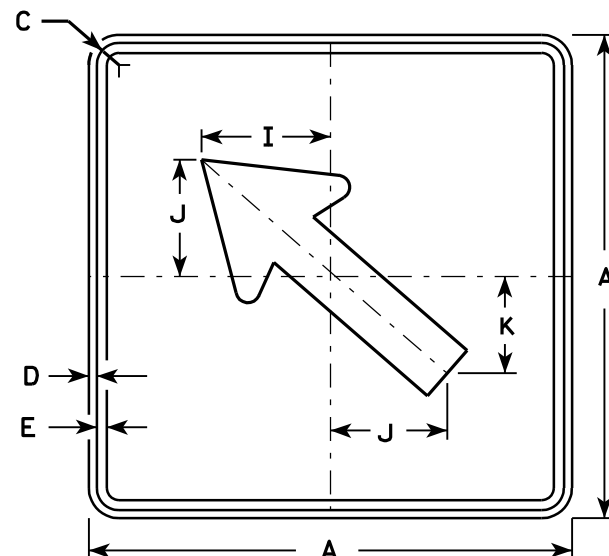
NOTES

1. Sign is Type II - Type H Reflective - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - GREEN
Message - WHITE
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.

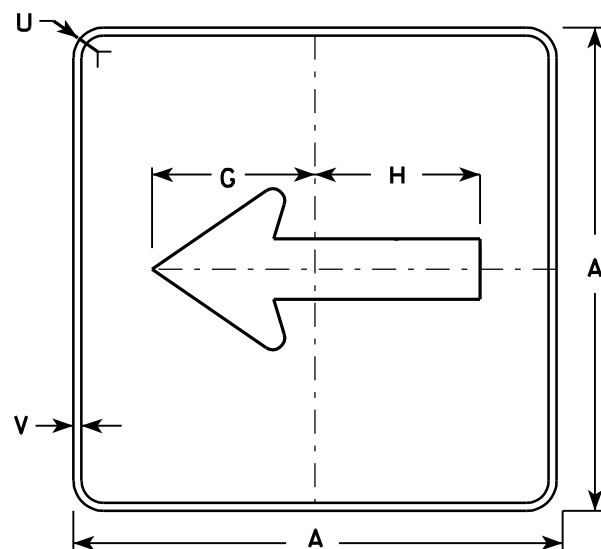
* See W11-1 for symbol design



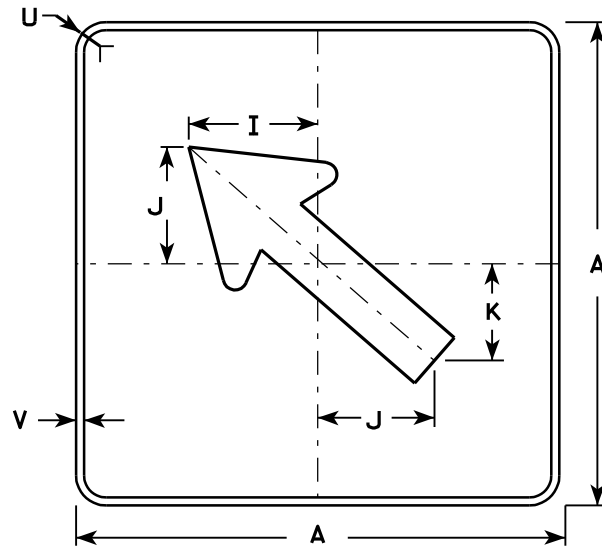
M6-1
MK6-1
MM6-1
MO6-1
MR6-1



M6-2
MK6-2
MM6-2
MO6-2
MR6-2



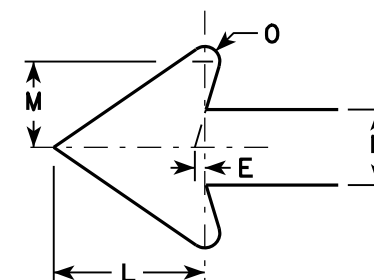
MB6-1
MG6-1
MN6-1



MB6-2
MG6-2
MN6-2

NOTES

- Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - See note 4
Message - See note 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.
- M6-1 and M6-2 Background - White - Type H Reflective
(Detour or temporary Signs - Reflective)
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White - Type H Reflective
(Detour or temporary Signs - 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
MO6-1 and MO6-2 Background - Orange - Reflective
Message - Black
MR6-1 and MR6-2 Background - Brown
Message - Yellow - Type H Reflective

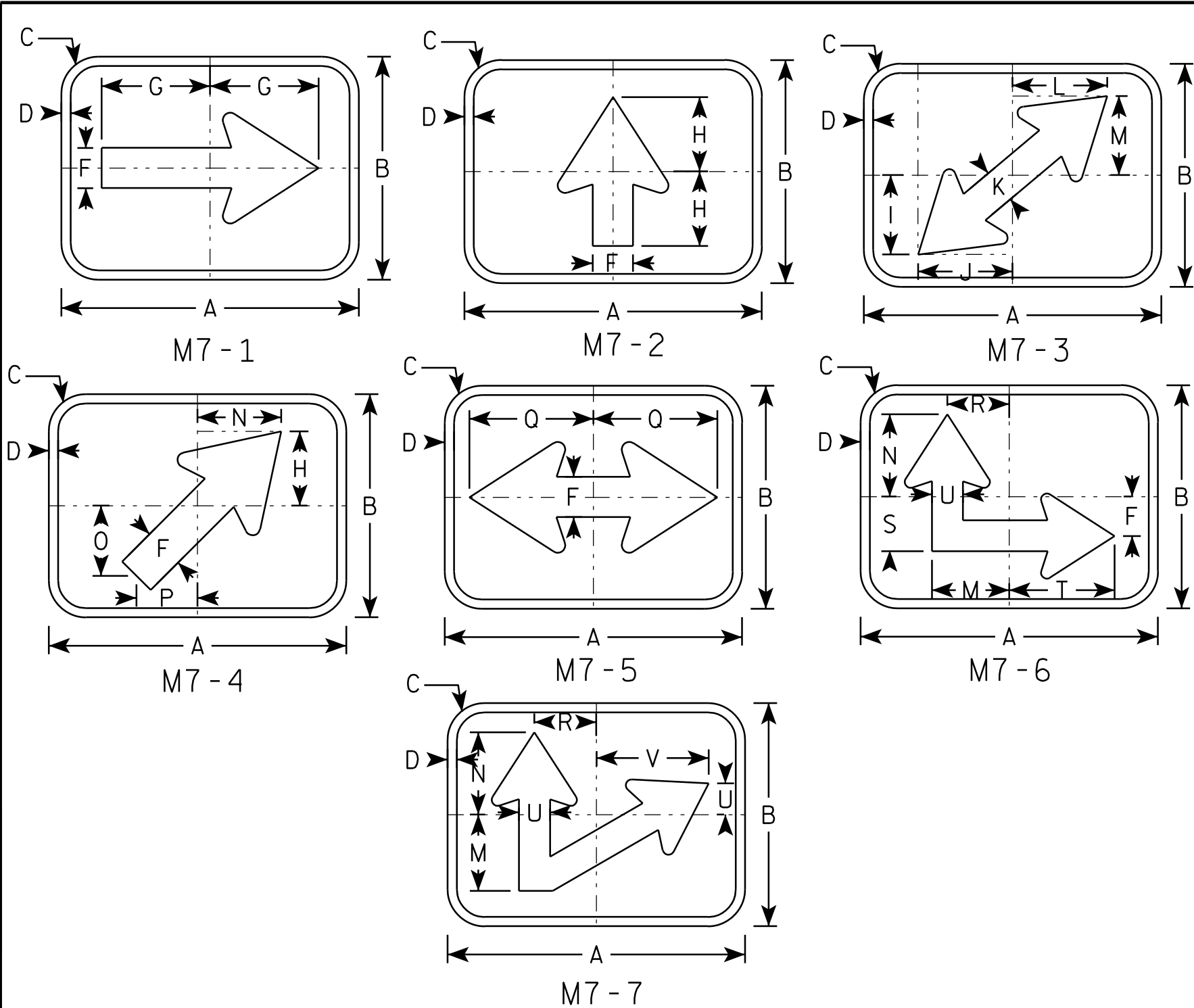


Metric equivalent
for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06	0.28
3	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 7/8	1/2					6.25	0.56
4	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 7/8	1/2					6.25	0.56
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 7/8	1/2					6.25	0.56

PROJECT NO: HWY: COUNTY: SHEET NO: E



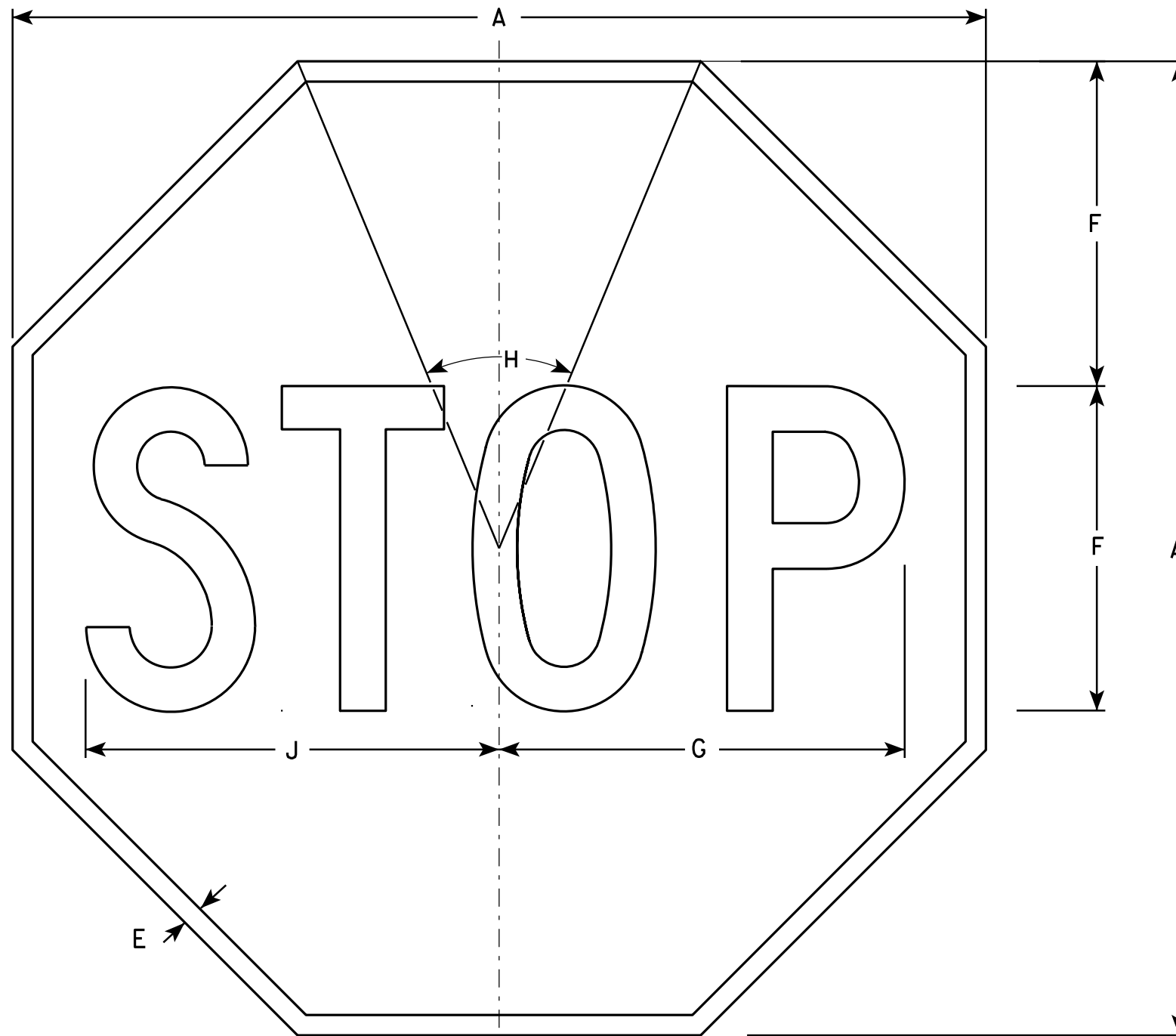
NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White
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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	12	9	1½	¾		1 ⅝	4 ⅜	3	3 ¼	3 ¾	1 ⅜	3 ⅞	3 ⅛	3 ⅜	2 ⅞	2 ½	5	2 ½	2 ¼	4 ¼	1 ¼	4 ½					.75
3																											
4																											
5																											

STANDARD SIGN
M7 SERIES

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 05/04/10 PLATE NO. M7-1.1



NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - Red
 - Message - White
- 3. Message Series - C

R1-1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24				3/8	8	10	45°		10 1/4																	3.31
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

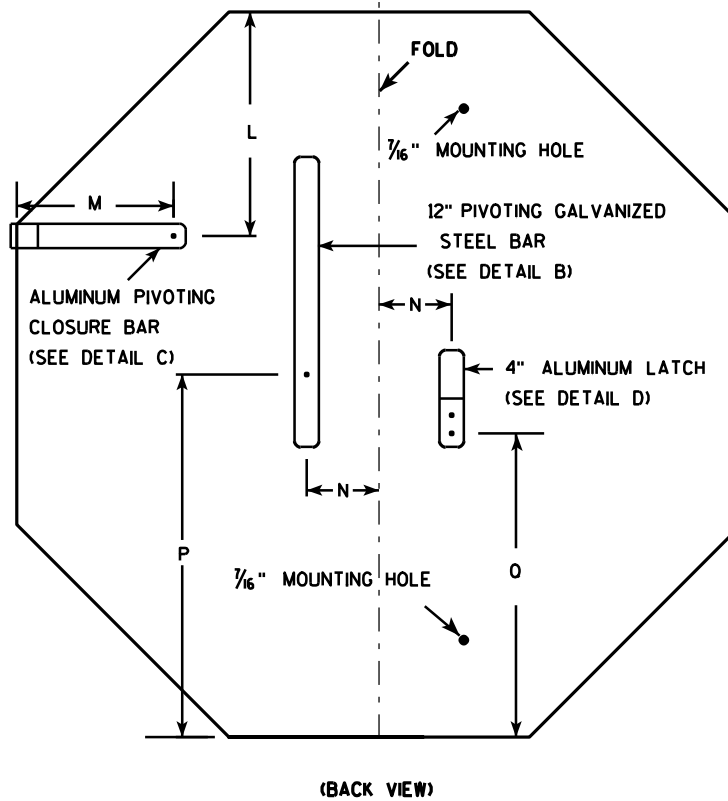
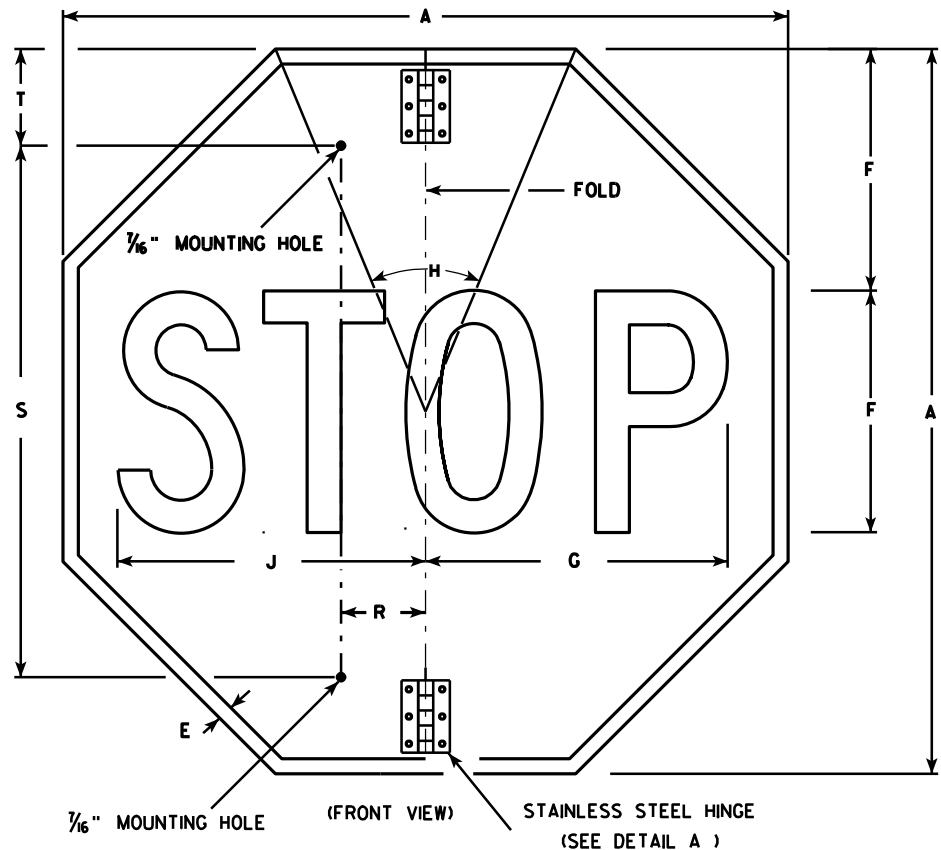
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

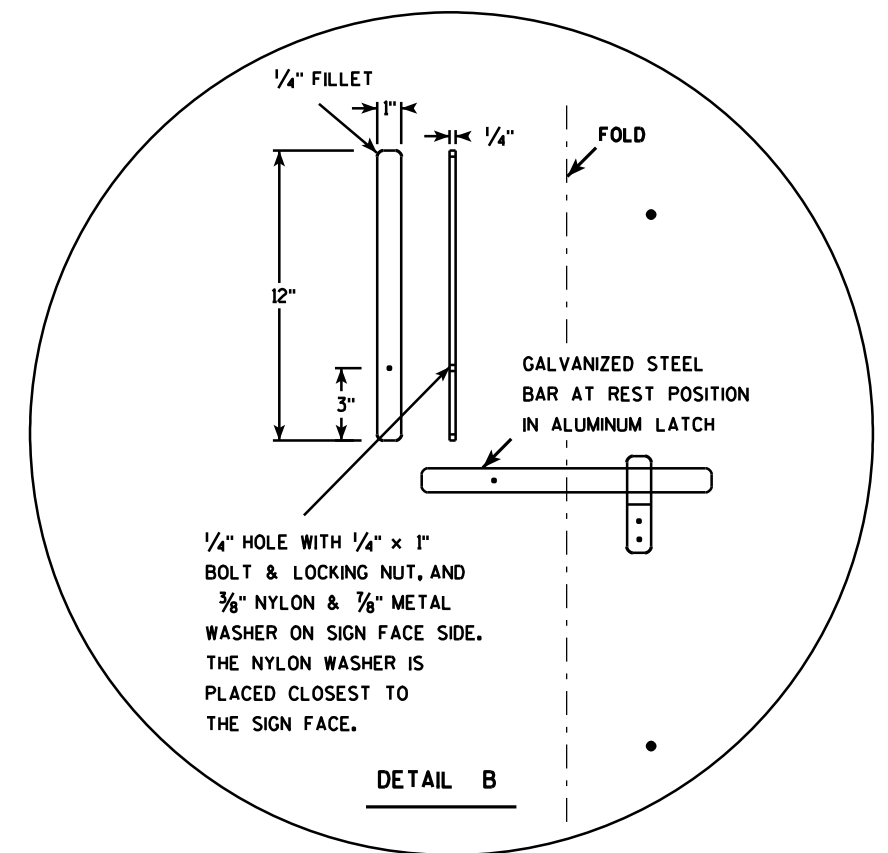
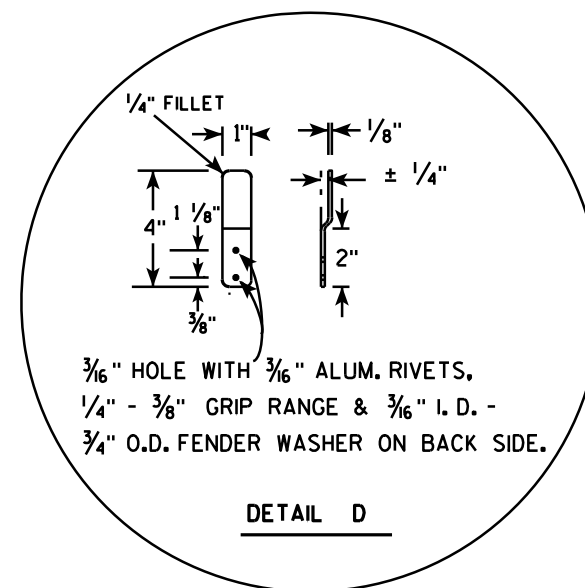
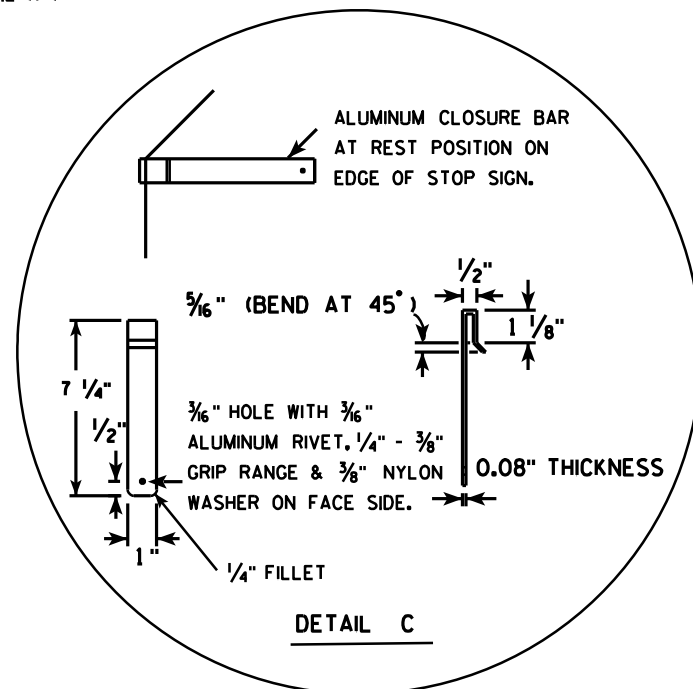
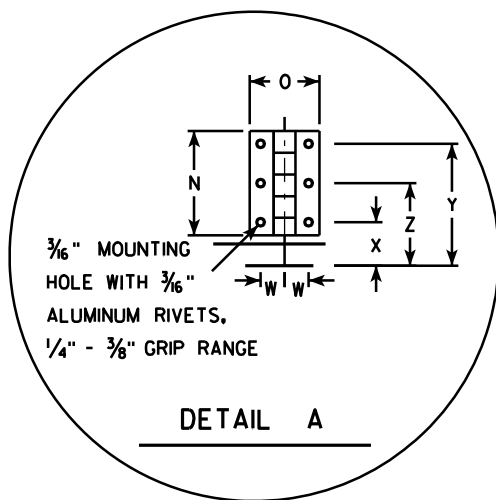
DATE 12/03/10 PLATE NO. R1-1.12

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Red
Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				$\frac{5}{8}$	10	12 $\frac{1}{2}$	45		12 $\frac{3}{4}$		9 $\frac{1}{4}$	6 $\frac{1}{2}$	3	2	15	12 $\frac{3}{8}$	2 $\frac{1}{2}$	22	5			$\frac{11}{16}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$	2 $\frac{3}{8}$	5.18
2M	36				$\frac{3}{4}$	12	15	45		15 $\frac{3}{8}$		11	6 $\frac{1}{2}$	3	2	18	15 $\frac{3}{8}$	2 $\frac{1}{2}$	26	5			$\frac{11}{16}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$	2 $\frac{3}{8}$	7.46
3	36				$\frac{3}{4}$	12	15	45		15 $\frac{3}{8}$		11	6 $\frac{1}{2}$	3	2	18	15 $\frac{3}{8}$	2 $\frac{1}{2}$	26	5			$\frac{11}{16}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$	2 $\frac{3}{8}$	7.46
4																											
5																											

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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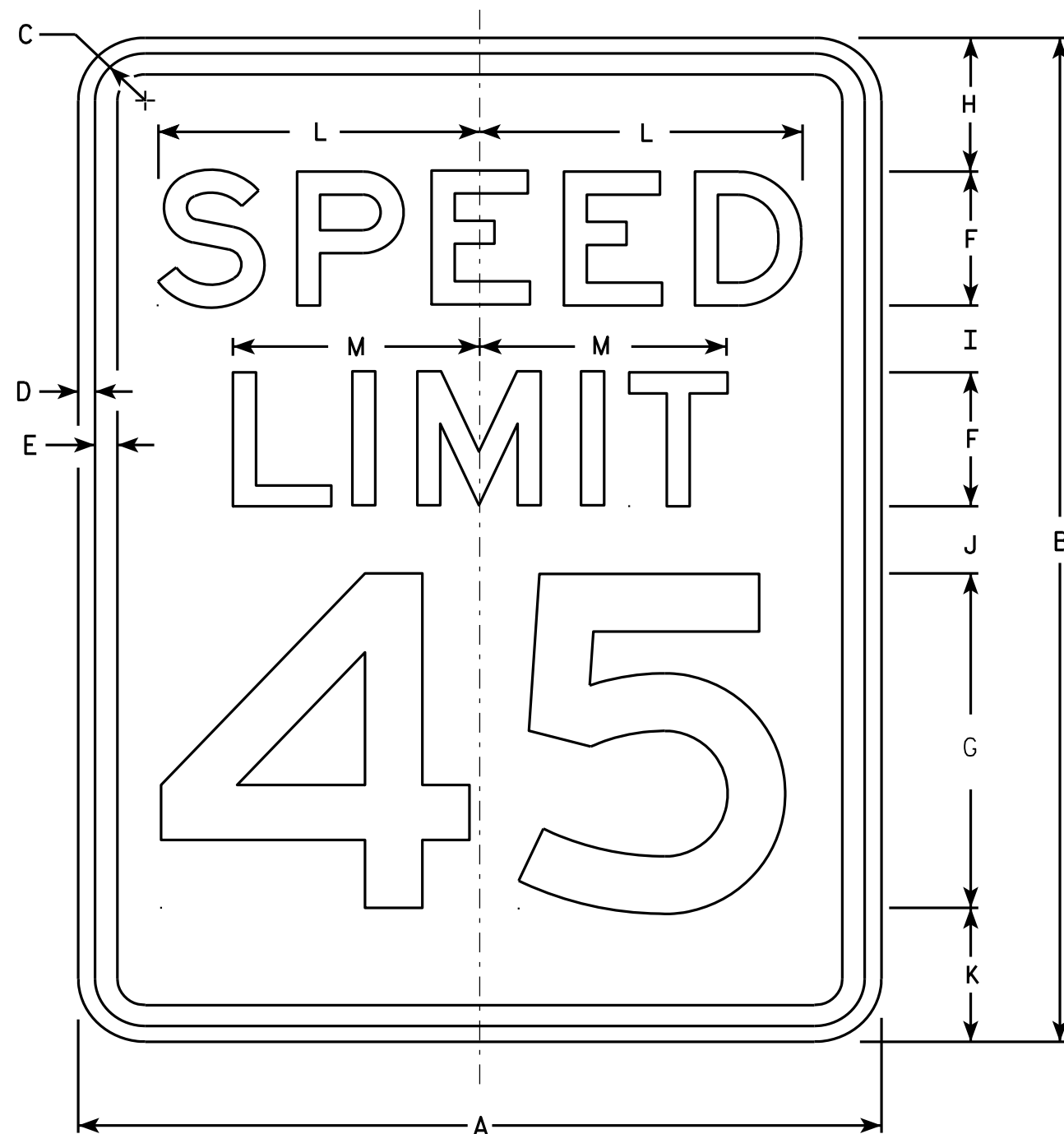
STANDARD SIGN

R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
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. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

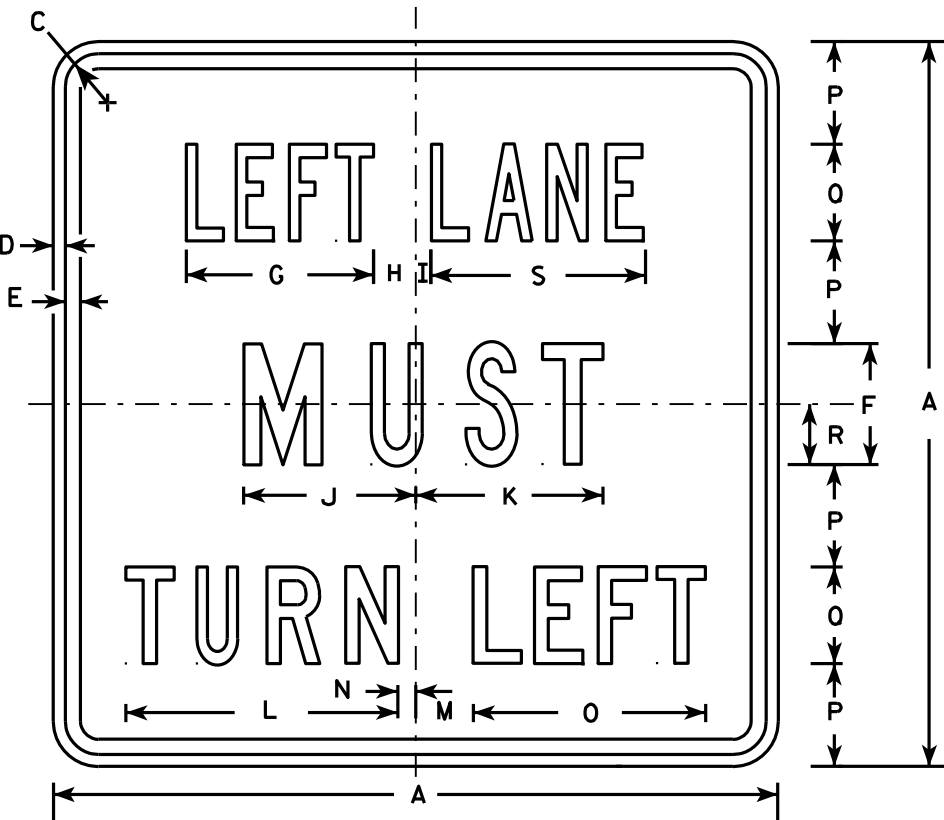
PROJECT NO:

HWY:

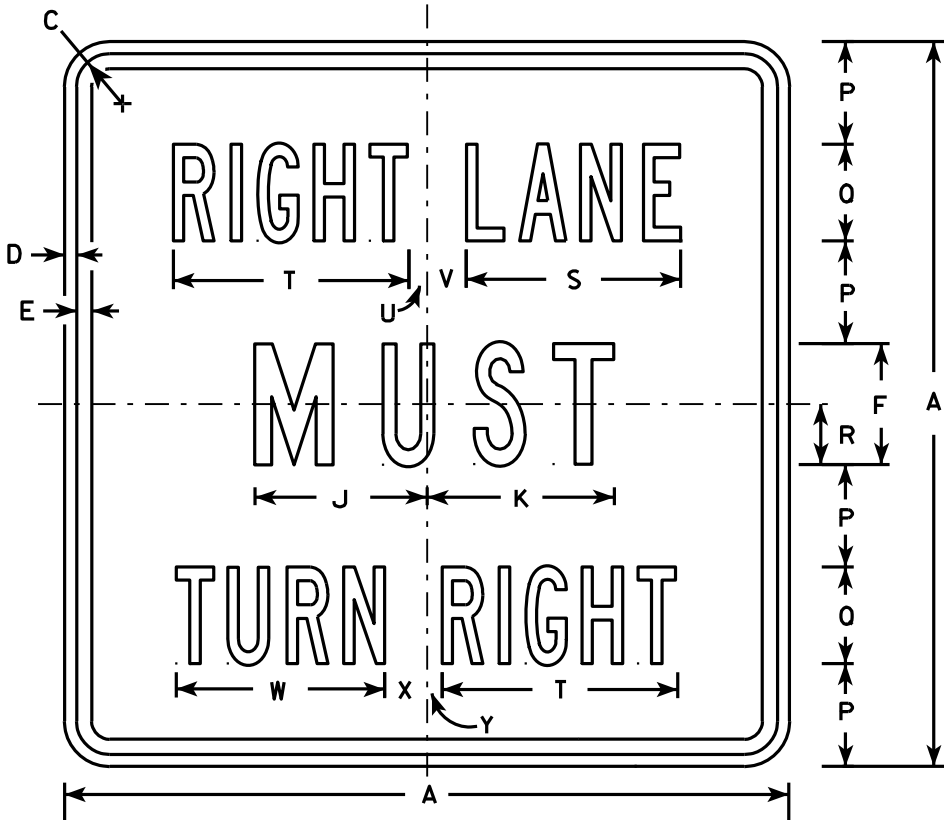
COUNTY:

SHEET NO:

E



R3-7L



R3-7R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - Line 1 is Series B.
Line 2 is Series C.
Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

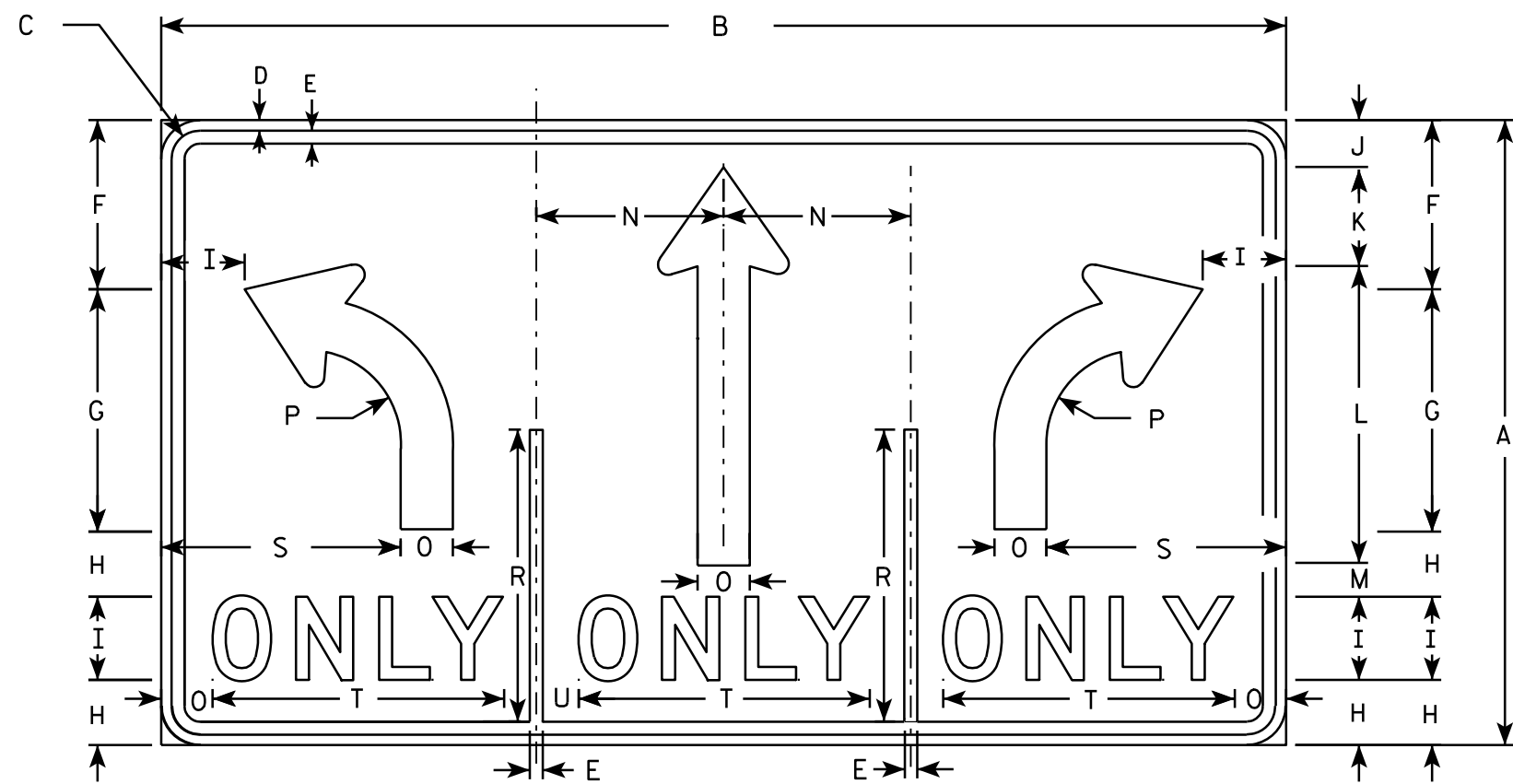
E

STANDARD SIGN
R3-7L & R3-7R

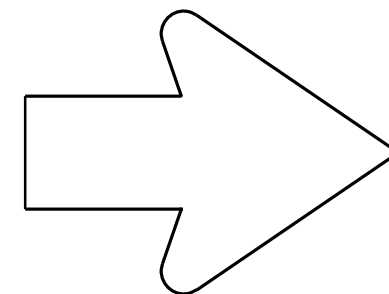
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3



R3-8W



SEE R3-8 FOR ARROW DETAIL

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - WHITE
Message - BLACK
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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	54	1 3⁄8	1⁄2	5⁄8	8 1⁄8	11 5⁄8	3 1⁄8	4	2 1⁄4	4 3⁄4	14 1⁄4	1 5⁄8	9	2 1⁄2	4 1⁄2		14	11 1⁄2	14	2						11.25
2M	30	54	1 3⁄8	1⁄2	5⁄8	8 1⁄8	11 5⁄8	3 1⁄8	4	2 1⁄4	4 3⁄4	14 1⁄4	1 5⁄8	9	2 1⁄2	4 1⁄2		14	11 1⁄2	14	2						11.25
3																											
4	48	84	2 1⁄4	3⁄4	1	13	18 1⁄2	5 1⁄4	6	3 3⁄4	7	29 1⁄8	2 3⁄8	14	3 3⁄4	7 1⁄4		22 3⁄8	17 1⁄4	20 1⁄2	3 1⁄4						28.0
5	48	84	2 1⁄4	3⁄4	1	13	18 1⁄2	5 1⁄4	6	3 3⁄4	7	29 1⁄8	2 7⁄8	14	3 3⁄4	7 1⁄4		22 3⁄8	17 1⁄4	20 1⁄2	3 1⁄4						28.0

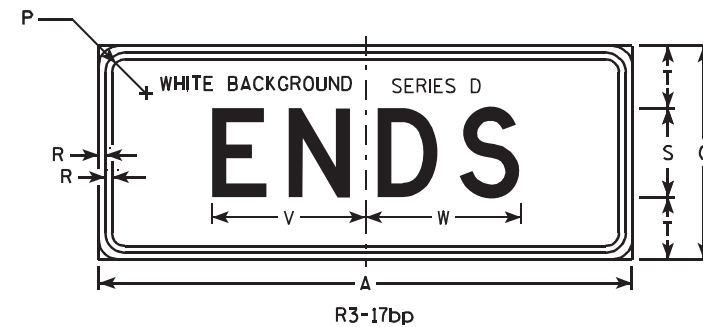
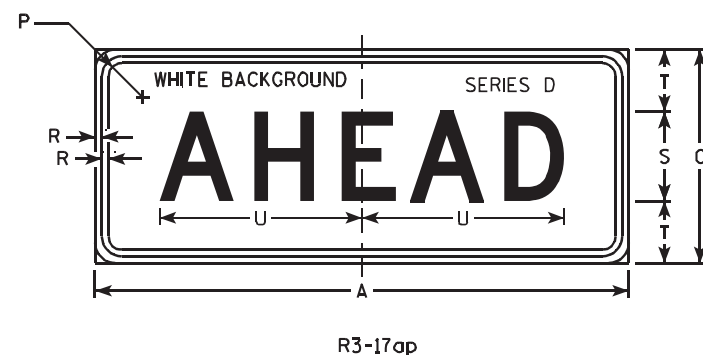
PROJECT NO:																											SHEET NO:	E
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STANDARD SIGN
R3-8W

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-8W.4



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - AS SHOWN
Message - BLACK
3. Message Series - C or as noted on the Signs.
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.

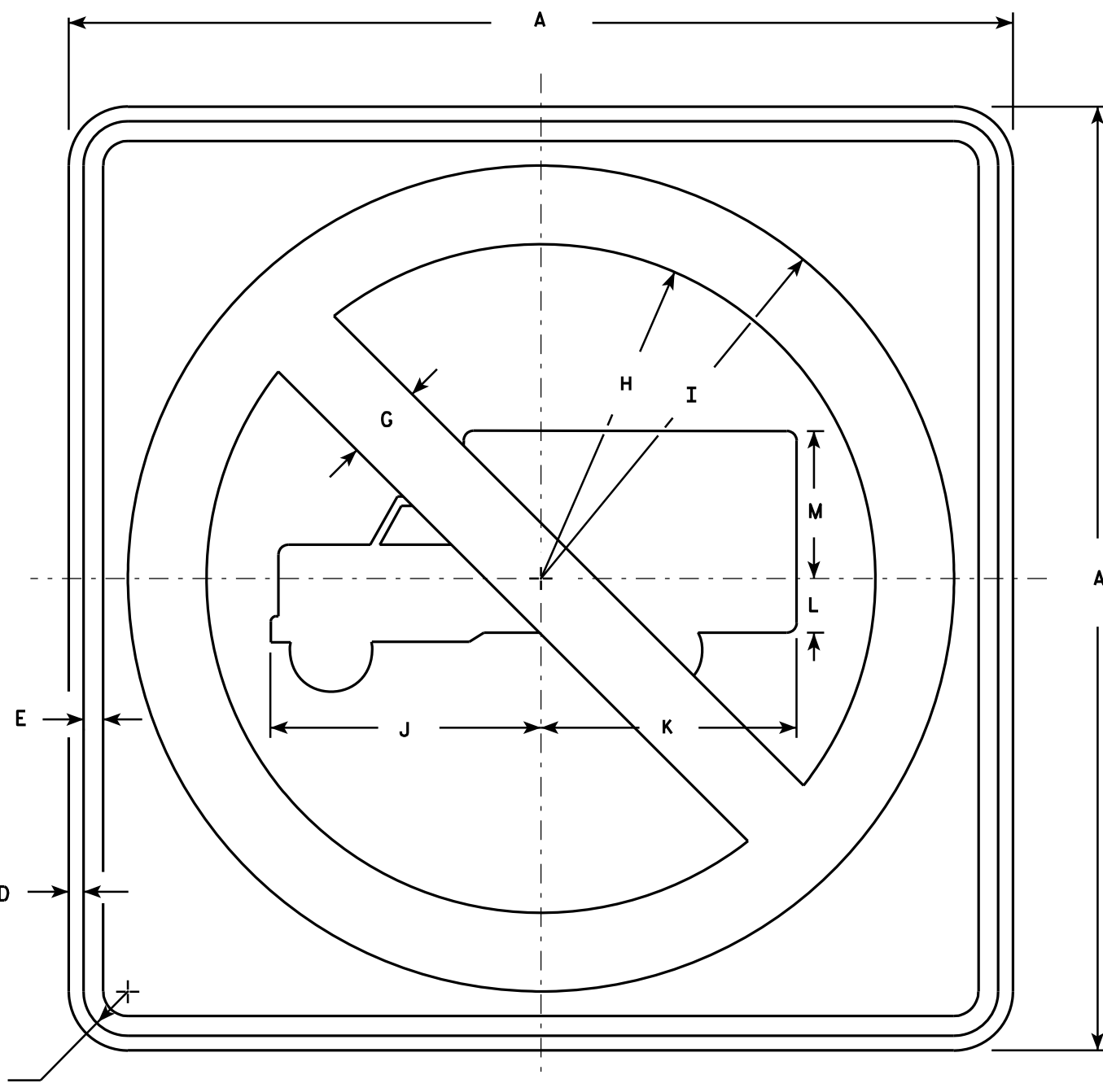
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	R3-17 Area sq. ft.	R3-17ap Area sq. ft.	R3-17bp Area sq. ft.
1																													
2S	30	24	1 1/8	3/8	1/2	2	4	4 1/8	7 7/8	6 3/8	9 1/2	2 5/8	7/8	13	12	1 1/8	3 3/8	3/8	5	3 1/2	11 3/8	8 5/8	8 3/4	2 3/8	15 5/8	8	5.0	2.5	2.5
2M	30	24	1 1/8	3/8	1/2	2	4	4 1/8	7 7/8	6 3/8	9 1/2	2 5/8	7/8	13	12	1 1/8	3 3/8	3/8	5	3 1/2	11 3/8	8 5/8	8 3/4	2 3/8	15 5/8	8	5.0	2.5	2.5
3																													
4																													
5																													

STANDARD SIGN
R3-17 & R3-17a&bp

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/12/2011 PLATE NO. R3-17.2



NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - White
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. Circle & Diagonal - Reflective red.
Truck Symbol & Border - Non-reflective black.

R5-2

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
2M	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
3	30		1 3/8	1/2	5/8		2 1/2	10 5/8	13 1/8	8 1/2	8 1/8	1 5/8	4 3/4														6.25
4	36		1 5/8	5/8	3/4		3	12 3/4	15 3/4	10 1/4	9 3/4	2	5 3/4														9.0
5	48		2 1/4	3/4	1		4	17	21	13 5/8	13	2 5/8	7 5/8														16.0

STANDARD SIGN

R5-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-2.6

PROJECT NO:

HWY:

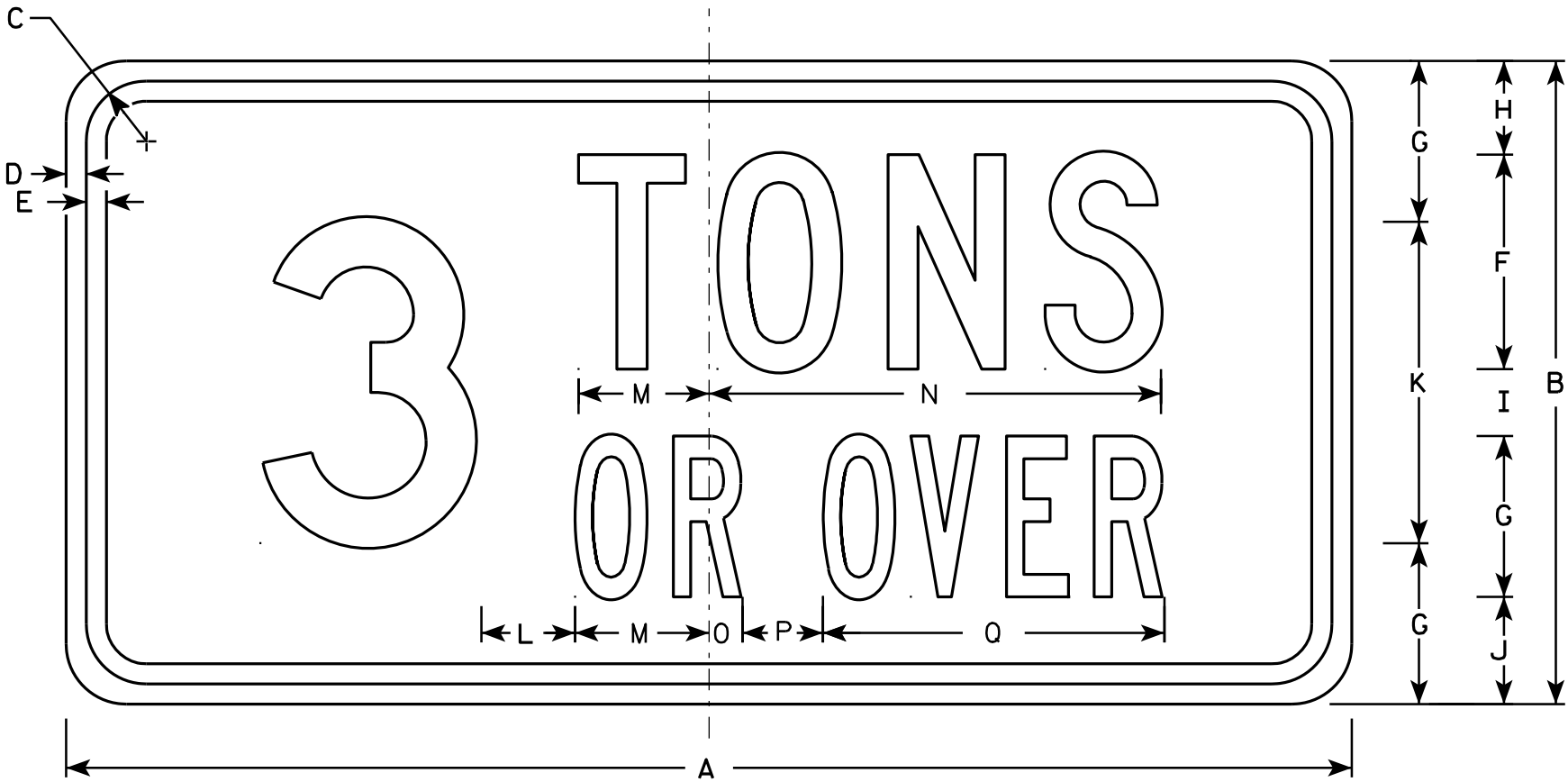
COUNTY:

SHEET NO:

E

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - White
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. Line 1 is Series "C"
Line 2 is Series "B"
Numeral is Series "D"
- 6. Substitute appropriate numerals.



R5-2A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	4	3	1 3/4	1 1/4	2	6	1 3/4	2 1/2	8 1/2	5/8	1 1/2	6 3/8										2.0
2M	24	12	1 1/8	3/8	3/8	4	3	1 3/4	1 1/4	2	6	1 3/4	2 1/2	8 1/2	5/8	1 1/2	6 3/8										2.0
3	30	15	1 1/8	3/8	1/2	5	4	2 1/8	1 3/8	2 1/2	7	2 1/4	3 1/8	10 1/2	1	2 3/8	8 1/2										2.25
4	36	18	1 1/8	3/8	1/2	6	5	2 5/8	1 3/8	3	9	2 1/2	3 3/4	12 5/8	1 3/8	3 1/8	10 1/2										4.5
5	48	24	1 3/8	3/8	5/8	8	6	3 1/2	2 1/2	4	12	3 1/2	4 7/8	16 7/8	1 1/4	3	12 3/4										8.0

STANDARD SIGN
R5-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

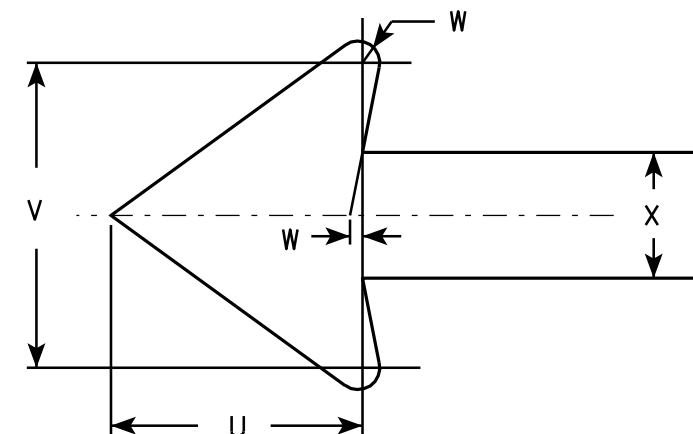
DATE 3/29/2011 PLATE NO. R5-2A.7



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Red
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. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
R7-1L (left arrow)
R7-1R (right arrow)



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

STANDARD SIGN R7-1	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 3/31/2011	PLATE NO. R7-1.9

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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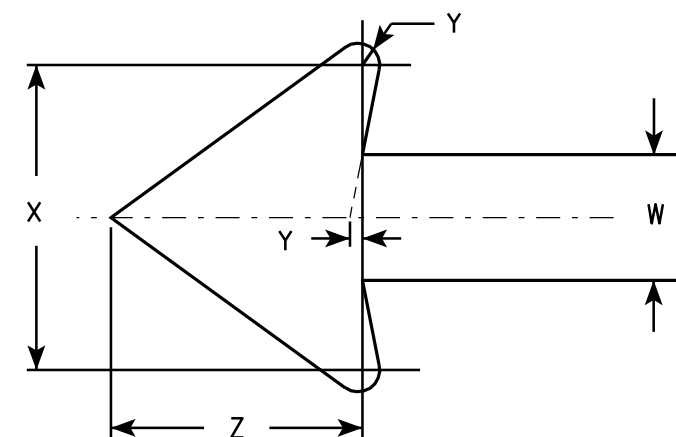
7



R7-51

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Red
3. Message Series - See Note 6
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. R7-51D (double arrow)
R7-51R (right arrow)
R7-51L (left arrow)
6. Lines 1, 3 and 4 are Series C.
Line 2 is Series B.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	4 7/8	5/8	1 3/4	2 1/2	4 3/8	3 7/8	3/4	1 3/4	1/8	1 1/2	1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	5 3/4	1 1/8	1 1/2	3 1/8	5 1/2	5 7/8	1 1/8	2 5/8	1/4	2 1/4	3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	7 1/8	1 1/4	2	3 3/4	6 1/2	7 3/4	1 1/2	3 1/2	1/4	3	5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	7 1/8	1 1/4	2	3 3/4	6 1/2	7 3/4	1 1/2	3 1/2	1/4	3	5.0
4																											
5																											

STANDARD SIGN R7-51	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/31/2011	PLATE NO. R7-51.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E
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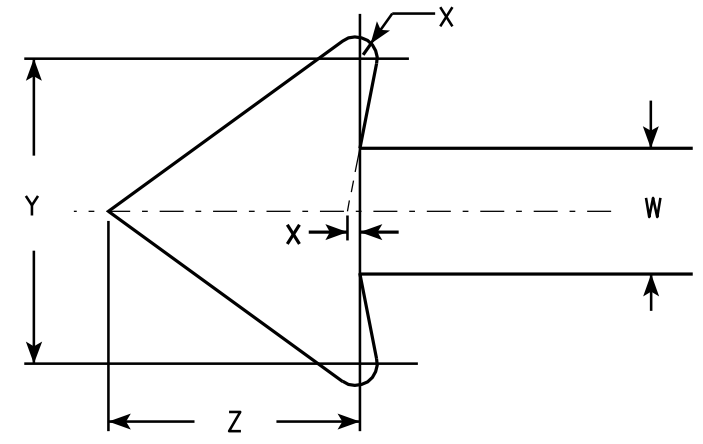
7



R7-53

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Red
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. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-53D (double arrow)
R7-53L (left arrow)
R7-53R (right arrow)

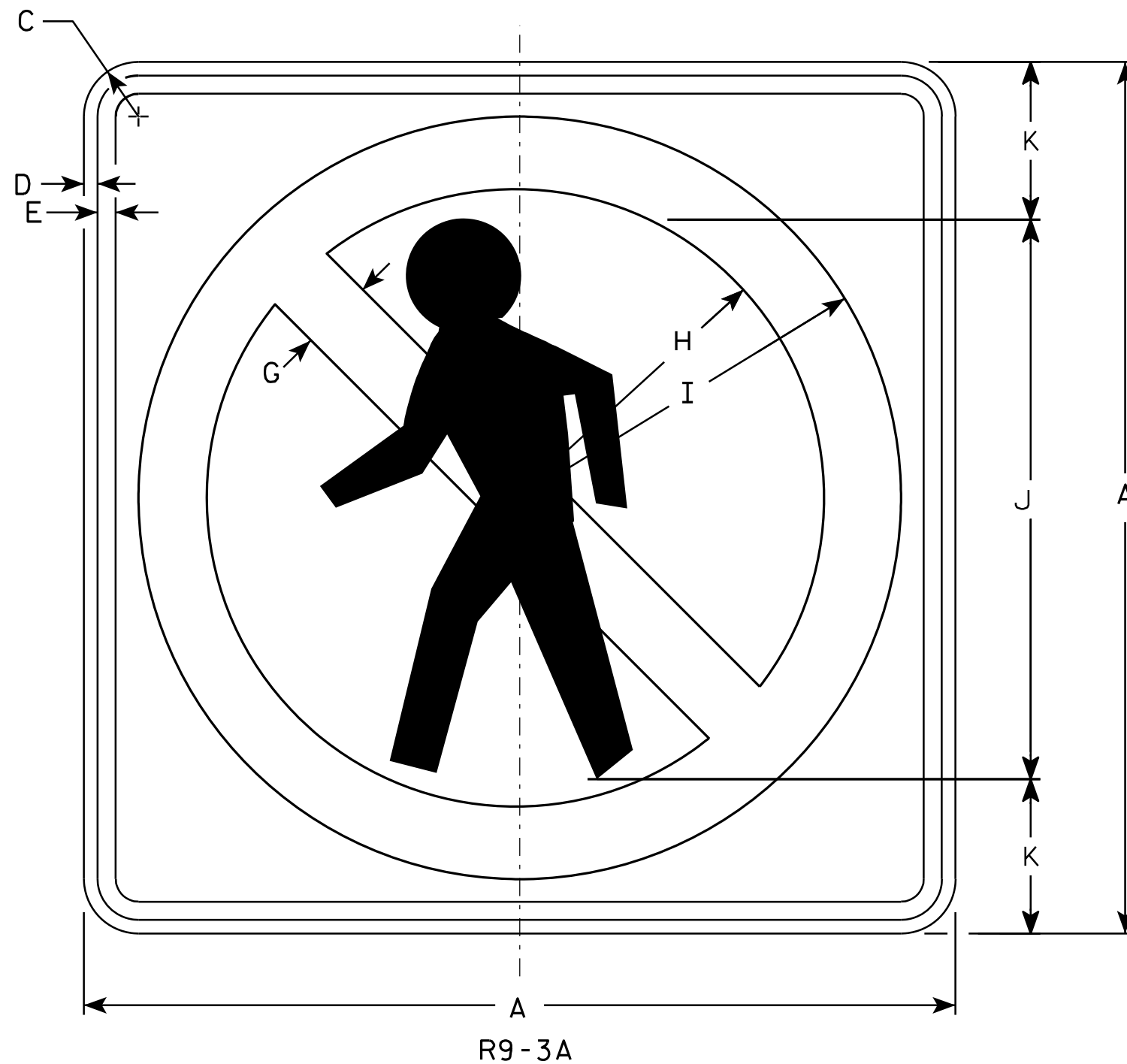


ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 5/8	1 3/4	1/4	4 1/2	2 3/8	3 7/8	3/4	1/8	1 3/4	1 1/2	1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	3 3/8	1 1/2	5/8	5 3/8	3	5 7/8	1 1/8	1/4	2 5/8	2 1/4	3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	4	2	5/8	6 5/8	3 5/8	7 3/4	1 1/2	1/4	3 1/2	3	5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	4	2	5/8	6 5/8	3 5/8	7 3/4	1 1/2	1/4	3 1/2	3	5.0
4																											
5																											

STANDARD SIGN R7-53	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 3/31/2011	PLATE NO. R7-53.6

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
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. Border & Pedistrian are non-reflective black. Circle with diagonal bar is reflective red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	18		1 1/8	3/8	3/8		1 1/2	6 1/4	7 7/8	12	3																2.25
2M	18		1 1/8	3/8	3/8		1 1/2	6 1/4	7 7/8	12	3																2.25
3																											
4	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	15	4																4.00
5																											

STANDARD SIGN R9-3A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/4/10 PLATE NO. R9-3A.2

PROJECT NO:

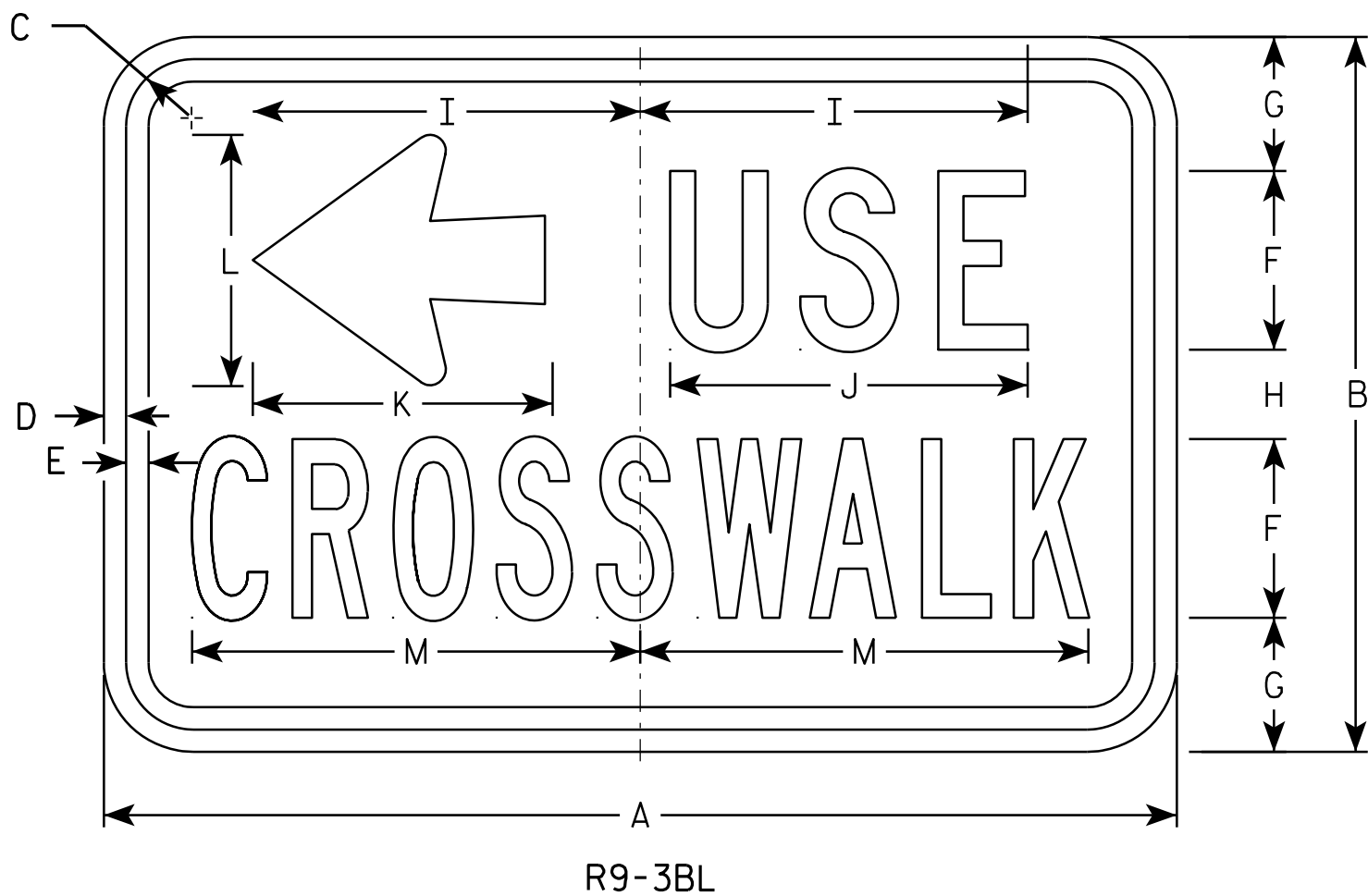
HWY:

COUNTY:

SHEET NO:

E

7



NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - White
Message - Black
- 3. Message Series - C Line 1, Series B Line 2
- 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.

7

Metric equivalent
for this sign is:

SIZE	
1	
2	450 mm X 300 mm
3	
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq. m.
1																												
2	18	12	1 1/8	3/8	3/8	3	2 1/4	1 1/2	6 1/2	6	5	4 1/4	7 1/2														1.5	0.14
3																												
4																												
5																												

STANDARD SIGN
R9 - 3BL

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/05/09 PLATE NO. R9-3BL.1

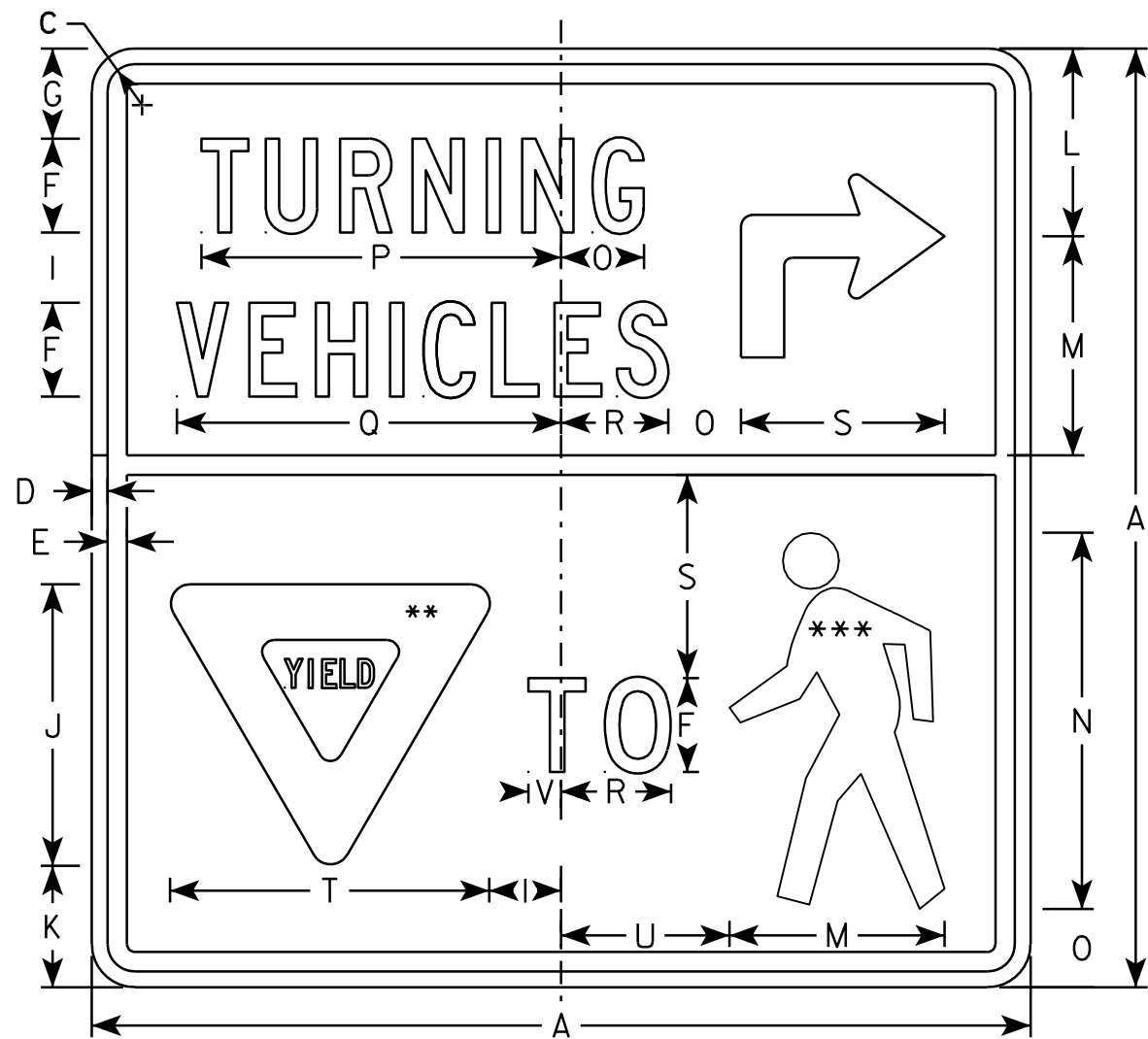
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

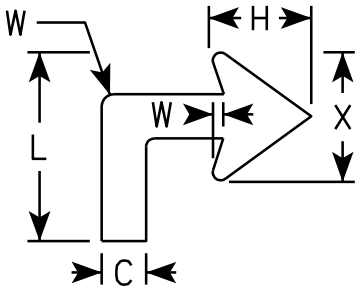


R10-15R

NOTES

- 1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - Top Half- Yellow
 - Bottom Half - WHITE
 - Message - BLACK
 - YIELD SYMBOL - RED ON WHITE
 - PED SYMBOL - BLACK ON WHITE
- 3. Message Series - C except "T0" 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.

** INSERT R1-2 AND SIZE TO FIT
*** INSERT W11-2 AND SIZE TO FIT



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 3⁄8	1⁄2	5⁄8	3	2 7⁄8	3	2 1⁄4	9	3 7⁄8	6	7	12	2 1⁄2	11 1⁄2	12 1⁄4	3 1⁄2	6 1⁄2	10 1⁄4	5 3⁄8	1	3⁄8	4			6.25
2M	30		1 3⁄8	1⁄2	5⁄8	3	2 7⁄8	3	2 1⁄4	9	3 7⁄8	6	7	12	2 1⁄2	11 1⁄2	12 1⁄4	3 1⁄2	6 1⁄2	10 1⁄4	5 3⁄8	1	3⁄8	4			6.25
3																											
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

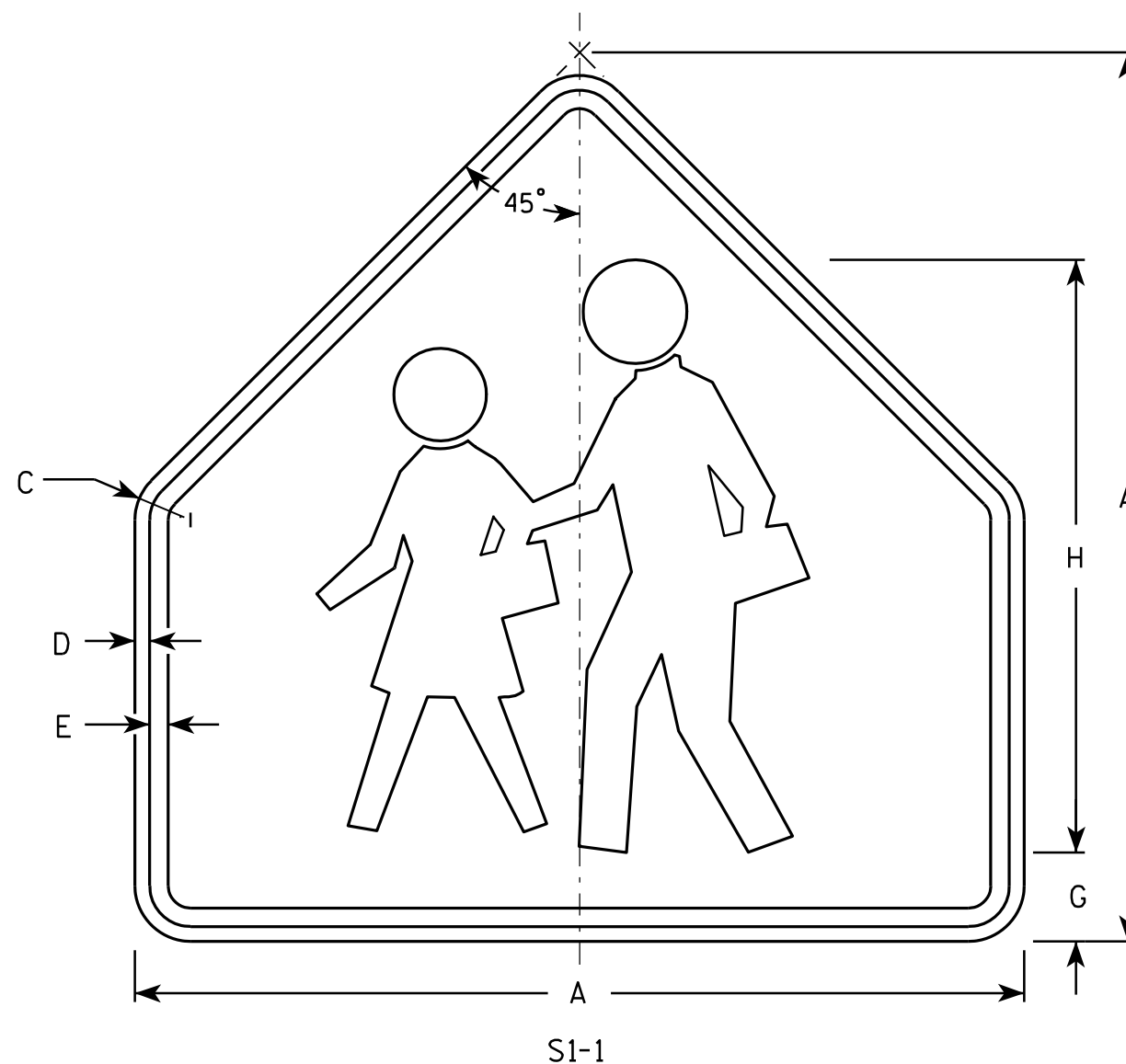
E

STANDARD SIGN
R10-15R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 6/2/10 PLATE NO. R10-15R.1



- NOTES**
1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - Yellow-Green
Message - Black
 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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		3	20																			4.69
2	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
3	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
4	48		2 1/4	3/4	1		4 3/4	32																			12
5																											

STANDARD SIGN
S1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
for State Traffic Engineer
DATE 6/30/05 PLATE NO. S1-1.8

PROJECT NO: HWY: COUNTY: SHEET NO: E



W4-4P

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Message Series - B
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.

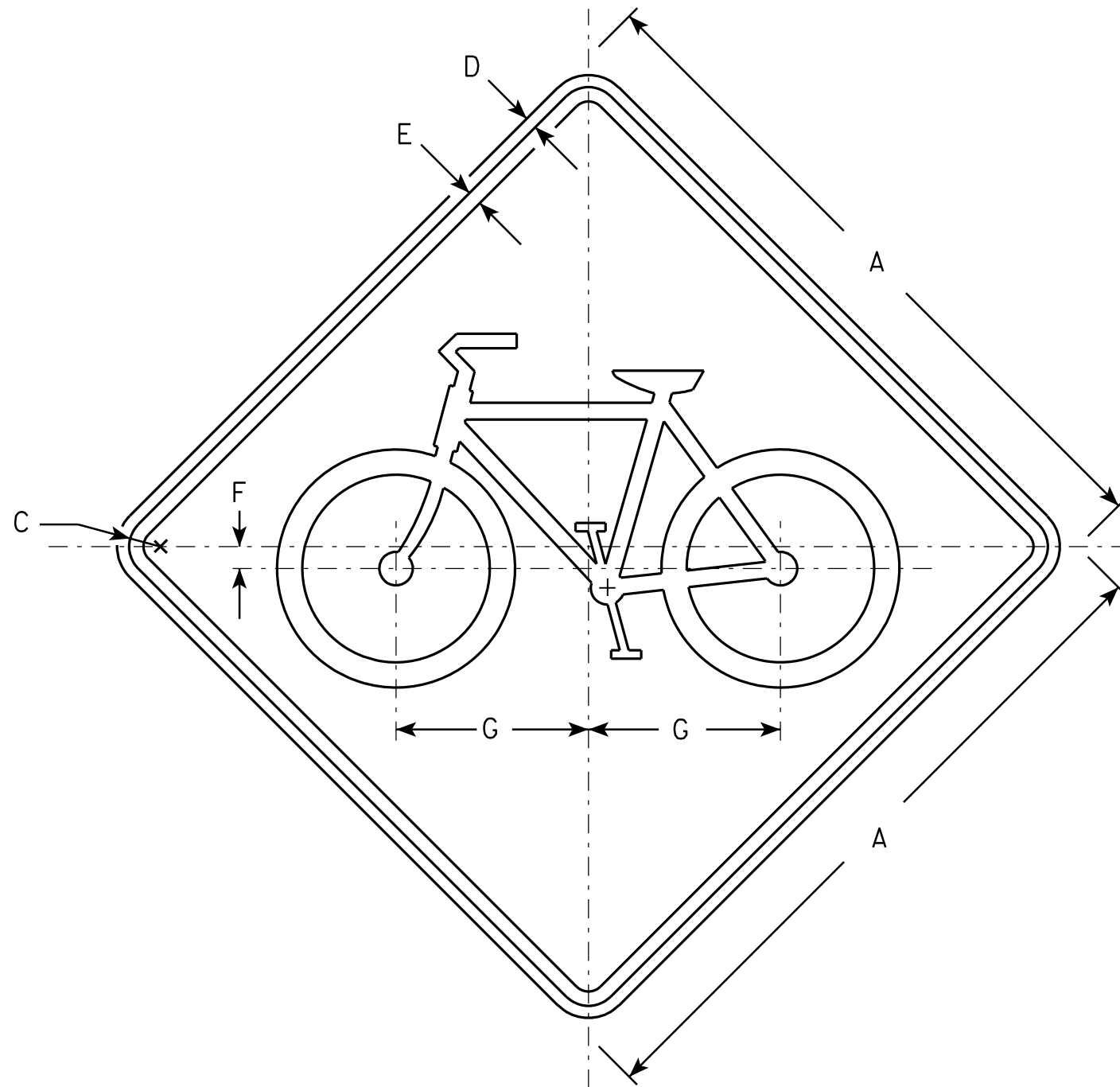
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	3	2 1/4	1 1/2	8	1 1/2	3/8	10	6 1/4	2 1/4	2 1/4	6 1/4											2.0
2M	24	12	1 1/8	3/8	3/8	3	2 1/4	1 1/2	8	1 1/2	3/8	10	6 1/4	2 1/4	2 1/4	6 1/4											2.0
3	36	15	1 1/8	3/8	1/2	4	2 5/8	1 3/4	10 3/4	2 3/8	3/8	13 1/2	8 3/8	3	3 1/8	8 3/8											3.75
4	42	18	1 1/8	3/8	1/2	5	3	2	13 3/8	3 1/8	3/8	16 7/8	10 1/2	3 5/8	3 7/8	10 3/8											5.25
5																											

STANDARD SIGN
W4-4P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/04/10 PLATE NO. W4-4P.1



W11-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/4	1/2	3/4	6 5/8																				4.0
2S	30		1 3/8	1/2	5/8	1	8 1/2																				6.25
2M	36		1 5/8	5/8	3/4	1 1/4	10																				9.0
3	36		1 5/8	5/8	3/4	1 1/4	10																				9.0
4	48		2 1/4	3/4	1	1 5/8	13 3/8																				16.0
5																											16.0

STANDARD SIGN W11-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/21/10 PLATE NO. W11-1.9

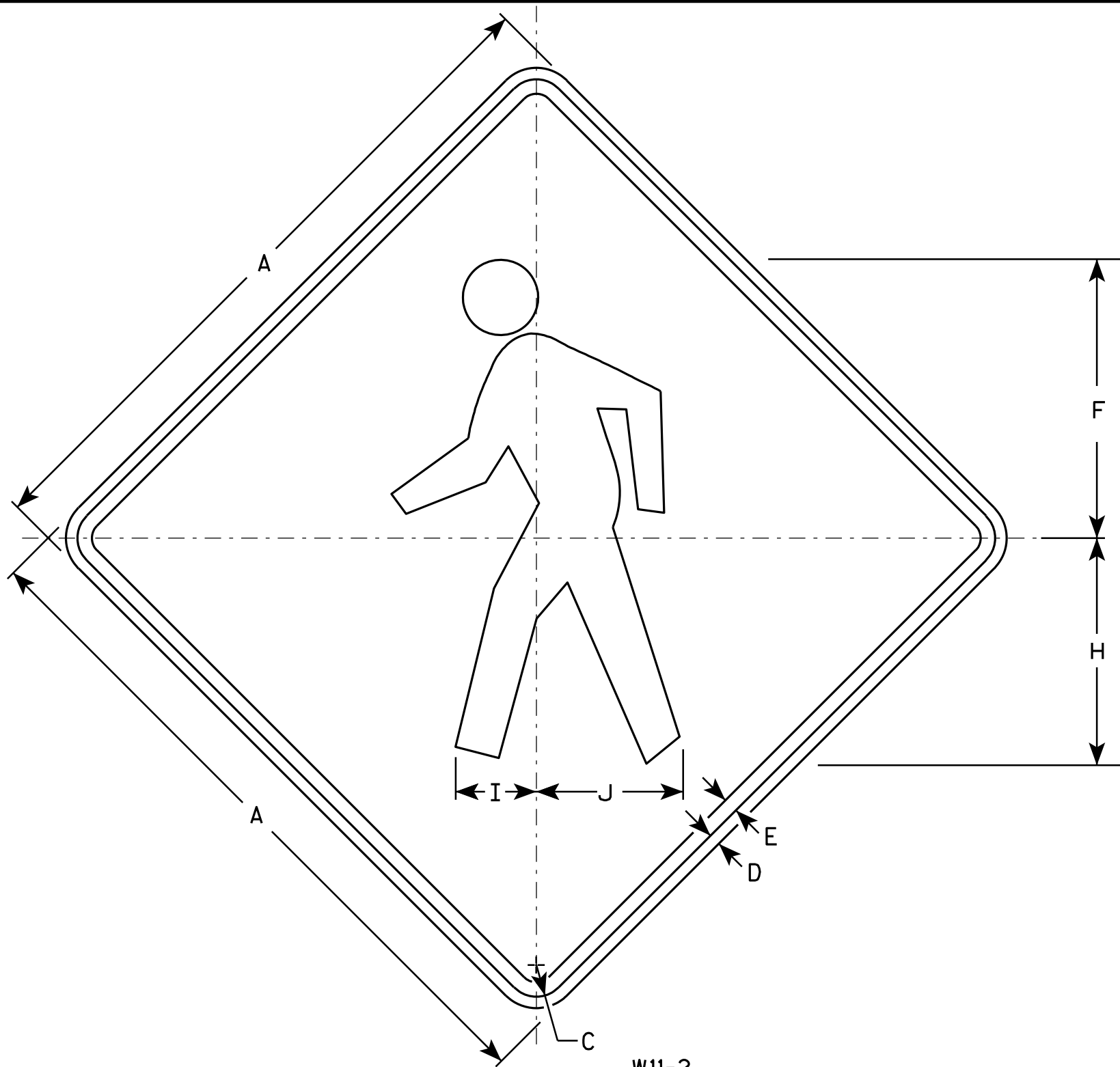
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



W11-2

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

STANDARD SIGN W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W11-2.7

PROJECT NO:

HWY:

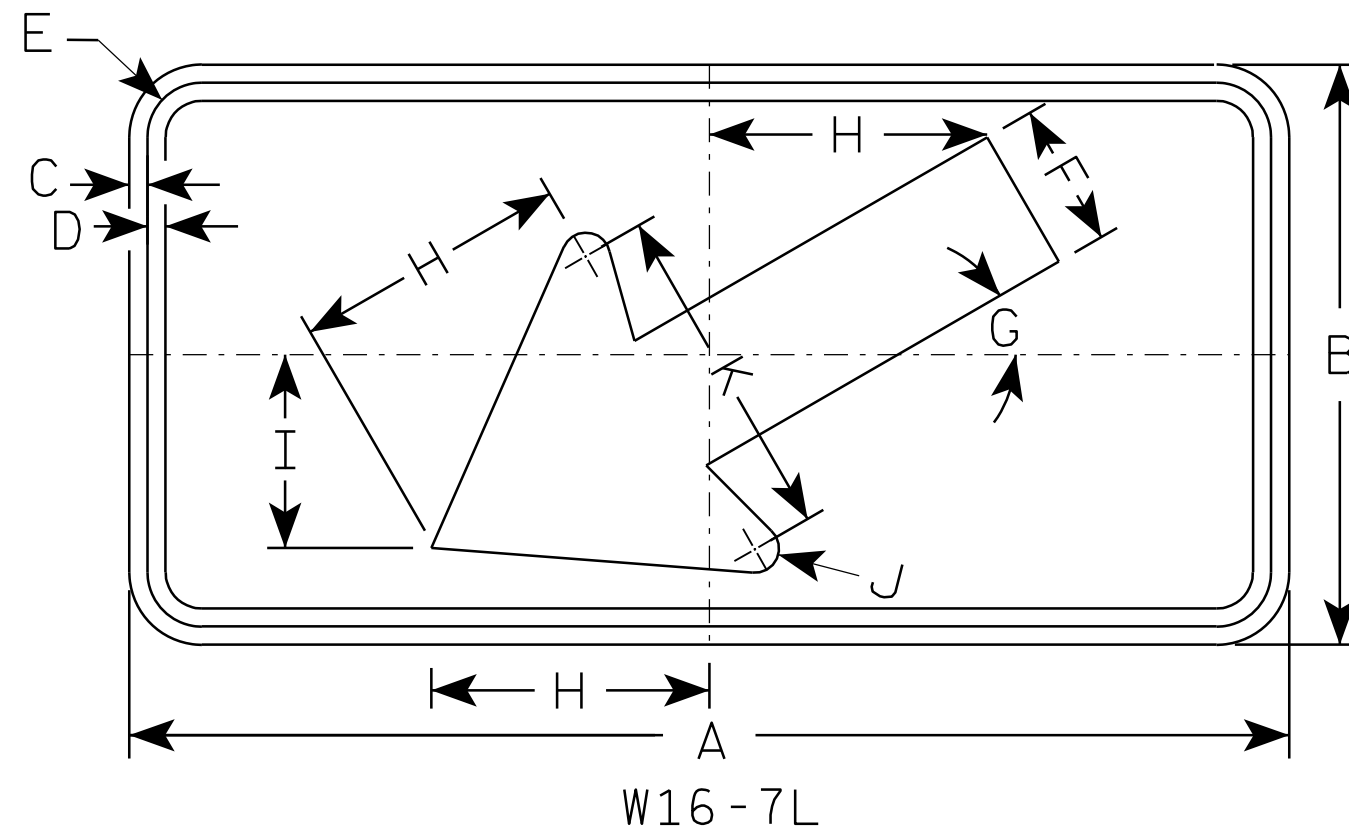
COUNTY:

SHEET NO:

E

NOTES

1. Sign is Type II - Type F Reflective -
reference WIS DOT Standard Specification for
HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
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. W16-7R is the same as W16-L
except the arrow is reversed along
the vertical centerline.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	$\frac{3}{8}$	$\frac{3}{8}$	1 $\frac{1}{8}$	3	30°	5 $\frac{3}{4}$	4	$\frac{1}{2}$	7																2.0
2M	30	18	$\frac{3}{8}$	$\frac{1}{2}$	1 $\frac{1}{8}$	4 $\frac{1}{2}$	30°	8 $\frac{1}{2}$	6	$\frac{5}{8}$	10 $\frac{1}{4}$																3.75
3	30	18	$\frac{3}{8}$	$\frac{1}{2}$	1 $\frac{1}{8}$	4 $\frac{1}{2}$	30°	8 $\frac{1}{2}$	6	$\frac{5}{8}$	10 $\frac{1}{4}$																3.75
4																											8
5																											8

STANDARD SIGN	
W16-7	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 11/02/10	PLATE NO. W16-7.5

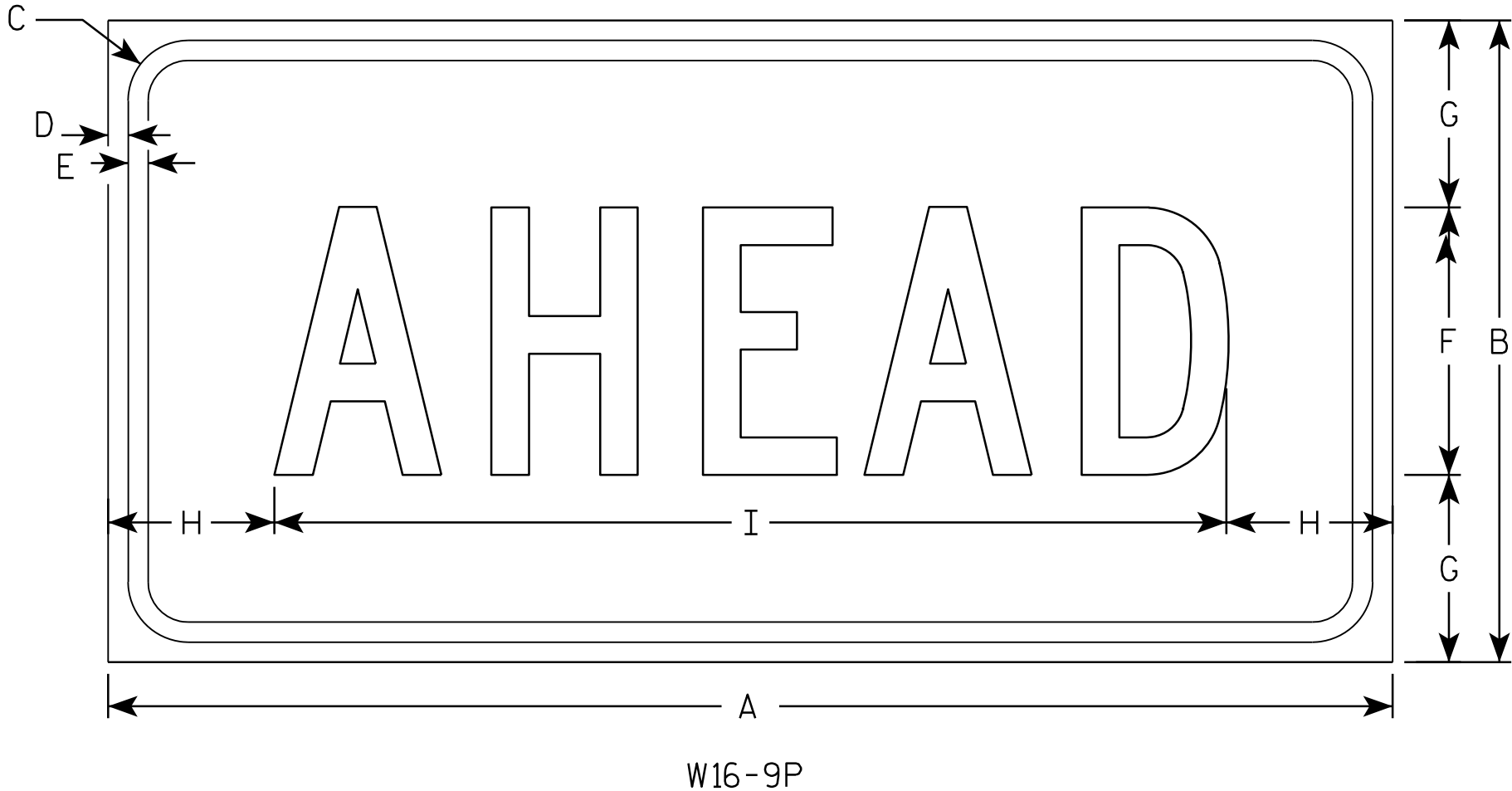
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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7

7

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Yellow
Message - Black
- 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.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

STANDARD SIGN

W16 - 9P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/28/10 PLATE NO. W16-9P.6

EAST AVENUE

STATION	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
	Cut	Salvaged / Unusable Pavement Material	Fill	Cut	Salvaged / Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.11	
550+00 AH	71.13	0.00	0.09	0	0	0	0	0	0
550+50	74.64	0.00	0.15	135	0	0	135	0	135
551+00	91.13	0.00	0.03	153	0	0	288	0	288
551+50	124.24	0.00	0.28	199	0	0	488	1	487
552+00	63.43	0.00	4.13	174	0	4	662	5	656
552+50	50.42	0.00	4.69	105	0	8	767	14	753
553+00	33.59	0.00	8.15	78	0	12	845	28	817
553+50	32.99	0.00	13.17	62	0	20	907	49	857
554+00	52.89	0.00	8.37	80	0	20	986	72	914
554+50	62.04	0.00	0.00	106	0	8	1,092	80	1,012
554+81.94	164.47	0.00	0.00	134	0	0	1,226	80	1,146
555+00	131.88	0.00	0.00	99	0	0	1,326	80	1,245
555+50	63.34	0.00	0.83	181	0	1	1,506	81	1,425
556+00	70.25	0.00	0.00	124	0	1	1,630	82	1,548
556+50	73.29	0.00	0.00	133	0	0	1,763	82	1,681
557+00	78.21	0.00	0.00	140	0	0	1,903	82	1,821
557+50	78.01	0.00	0.00	145	0	0	2,048	82	1,966
558+00	163.17	0.00	0.00	223	0	0	2,271	82	2,189
558+08.11	162.14	0.00	0.00	49	0	0	2,320	82	2,238
558+50	88.55	0.00	0.00	194	0	0	2,514	82	2,433
559+00	77.00	0.00	0.06	153	0	0	2,668	82	2,586
559+50	200.86	0.00	0.00	257	0	0	2,925	82	2,843
559+64.61	199.69	0.00	0.00	108	0	0	3,033	82	2,951
560+00	81.44	0.00	0.00	184	0	0	3,218	82	3,136
560+50	85.77	0.00	0.30	155	0	0	3,372	82	3,290
561+00	74.41	0.00	0.76	148	0	1	3,521	83	3,437
561+33.99	126.05	0.00	0.02	126	0	0	3,647	84	3,563
561+50	142.76	0.00	0.01	80	0	0	3,727	84	3,643
562+00	85.60	0.00	0.12	211	0	0	3,938	84	3,854
562+50	89.61	0.00	0.00	162	0	0	4,100	84	4,016
563+00	140.34	0.00	0.17	213	0	0	4,313	84	4,229
563+02.42	140.35	0.00	0.06	13	0	0	4,326	84	4,241
563+50	64.43	0.00	0.03	180	0	0	4,506	85	4,422
564+00	56.92	0.00	1.19	112	0	1	4,619	86	4,533
564+50	70.64	0.00	3.08	118	0	4	4,737	90	4,647
564+60.04	63.80	0.00	3.58	25	0	1	4,762	92	4,670

SUBTOTAL 4,762 0 82

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EAST AVENUE

STATION	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
	Cut	Salvaged / Unusable Pavement Material	Fill	Cut	Salvaged / Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.11	
565+00	51.03	0.00	1.70	85	0	4	4,847	96	4,751
565+50	48.45	0.00	1.96	92	0	3	4,939	100	4,839
566+00	60.56	0.00	0.20	101	0	2	5,040	102	4,938
566+50	120.48	0.00	0.00	168	0	0	5,207	102	5,105
566+63.43	126.94	0.00	0.00	62	0	0	5,269	102	5,167
567+00	73.44	0.00	0.39	136	0	0	5,405	102	5,302
567+50	76.73	0.00	1.48	139	0	2	5,544	104	5,439
567+98.22	127.00	0.00	0.08	182	0	1	5,726	106	5,620
568+00	128.01	0.00	0.00	8	0	0	5,734	106	5,628
568+50	58.70	0.00	0.09	173	0	0	5,907	106	5,801
569+00	57.04	0.00	0.36	107	0	0	6,014	106	5,908
569+50	61.10	0.00	0.00	109	0	0	6,123	107	6,017
570+00	62.12	0.00	0.00	114	0	0	6,238	107	6,131
570+50	72.74	0.00	0.00	125	0	0	6,362	107	6,256
571+00	66.42	0.00	0.78	129	0	1	6,491	108	6,384
571+50	70.93	0.00	0.23	127	0	1	6,618	109	6,510
572+00	152.99	0.00	0.00	207	0	0	6,826	109	6,717
572+50	60.07	0.00	0.14	197	0	0	7,023	109	6,914
573+00	63.39	0.00	0.15	114	0	0	7,137	109	7,028
573+50	76.18	0.00	0.00	129	0	0	7,267	109	7,157
574+00	62.64	0.00	0.00	129	0	0	7,395	109	7,286
574+50	51.60	0.00	0.83	106	0	1	7,501	110	7,391
575+00	51.09	0.00	1.12	95	0	2	7,596	112	7,484
575+50	50.03	0.00	0.33	94	0	1	7,690	114	7,576
576+00	47.58	0.00	0.90	90	0	1	7,780	115	7,665
576+50	45.17	0.00	1.00	86	0	2	7,866	117	7,749
577+00	104.48	0.00	0.71	139	0	2	8,004	119	7,886
577+11.99	95.57	0.00	0.09	44	0	0	8,049	119	7,930
577+50	73.69	0.00	0.03	119	0	0	8,168	119	8,049
578+00	53.89	0.00	0.73	118	0	1	8,286	120	8,166
578+50	51.75	0.00	4.82	98	0	5	8,384	126	8,258
579+00	65.99	0.00	0.49	109	0	5	8,493	131	8,362
579+50	76.86	0.00	0.09	132	0	1	8,625	132	8,494
580+00	116.17	0.00	0.00	179	0	0	8,804	132	8,672
580+50	76.94	0.00	0.08	179	0	0	8,983	132	8,851
580+70 BK	72.45	0.00	0.00	55	0	0	9,038	132	8,906

SUBTOTAL	4,276	0	36
TOTAL	9,038	0	119

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ESTBERG AVENUE

STATION	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
	Cut	Salvaged / Unusable Pavement Material	Fill	Cut	Salvaged / Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.11	
58+45 AH	49.71	0.00	0.15	0	0	0	0	0	0
58+50	50.20	0.00	0.07	9	0	0	9	0	9
59+00	52.48	0.00	0.00	95	0	0	104	0	104
59+50 BK	58.53	0.00	0.00	103	0	0	207	0	207

207 0 0

WABASH AVENUE

STATION	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
	Cut	Salvaged / Unusable Pavement Material	Fill	Cut	Salvaged / Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.11	
69+15 AH	49.58	0.00	0.08	0	0	0	0	0	0
69+50 BK	66.96	0.00	0.00	76	0	0	76	0	75
70+50 AH	56.05	0.00	0.00	0	0	0	76	0	75
70+85 BK	51.05	0.00	0.00	69	0	0	145	0	145

145 0 0

WEST NEWHALL AVENUE

STATION	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
	Cut	Salvaged / Unusable Pavement Material	Fill	Cut	Salvaged / Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.11	
139+00 AH	53.09	0.00	1.45	0	0	0	0	0	0
139+50 BK	78.78	0.00	0.00	122	0	1	122	1	121

122 0 1

LAFLIN AVENUE

STATION	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
	Cut	Salvaged / Unusable Pavement Material	Fill	Cut	Salvaged / Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.11	
149+30 AH	56.15	0.00	0.00	0	0	0	0	0	0
149+50 BK	46.94	0.00	0.58	38	0	0	38	0	38
150+50 AH	70.72	0.00	0.00	0	0	0	38	0	38
151+00 BK	51.18	0.00	0.22	113	0	0	151	0	151

151 0 0

9

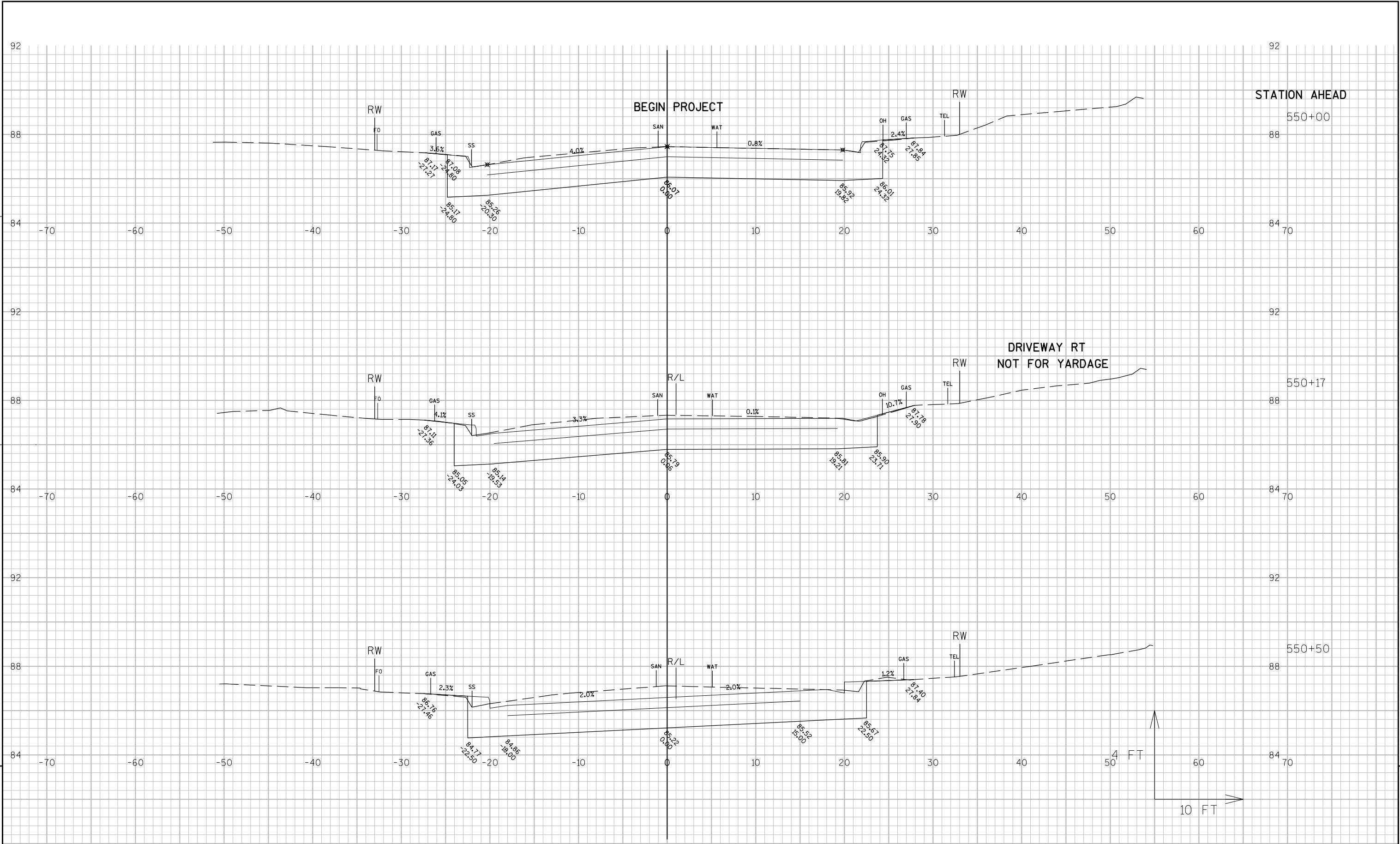
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COLLEGE AVENUE

STATION	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
	Cut	Salvaged / Unusable Pavement Material	Fill	Cut	Salvaged / Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.11	
799+35 AH	77.46	0.00	0.01	0	0	0	0	0	0.00
799+50	78.73	0.00	0.00	43	0	0	43	0	43.38
799+55 BK	79.74	0.00	0.02	15	0	0	58	0	58.05
800+43 AH	70.70	0.00	0.00	0	0	0	58	0	58.05
800+50	76.61	0.00	0.00	19	0	0	77	0	77.15
800+85 BK	56.68	0.00	0.00	86	0	0	164	0	163.54

164 0 0

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PROJECT NO:2718-11-70

HWY:S EAST AVENUE

COUNTY:WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

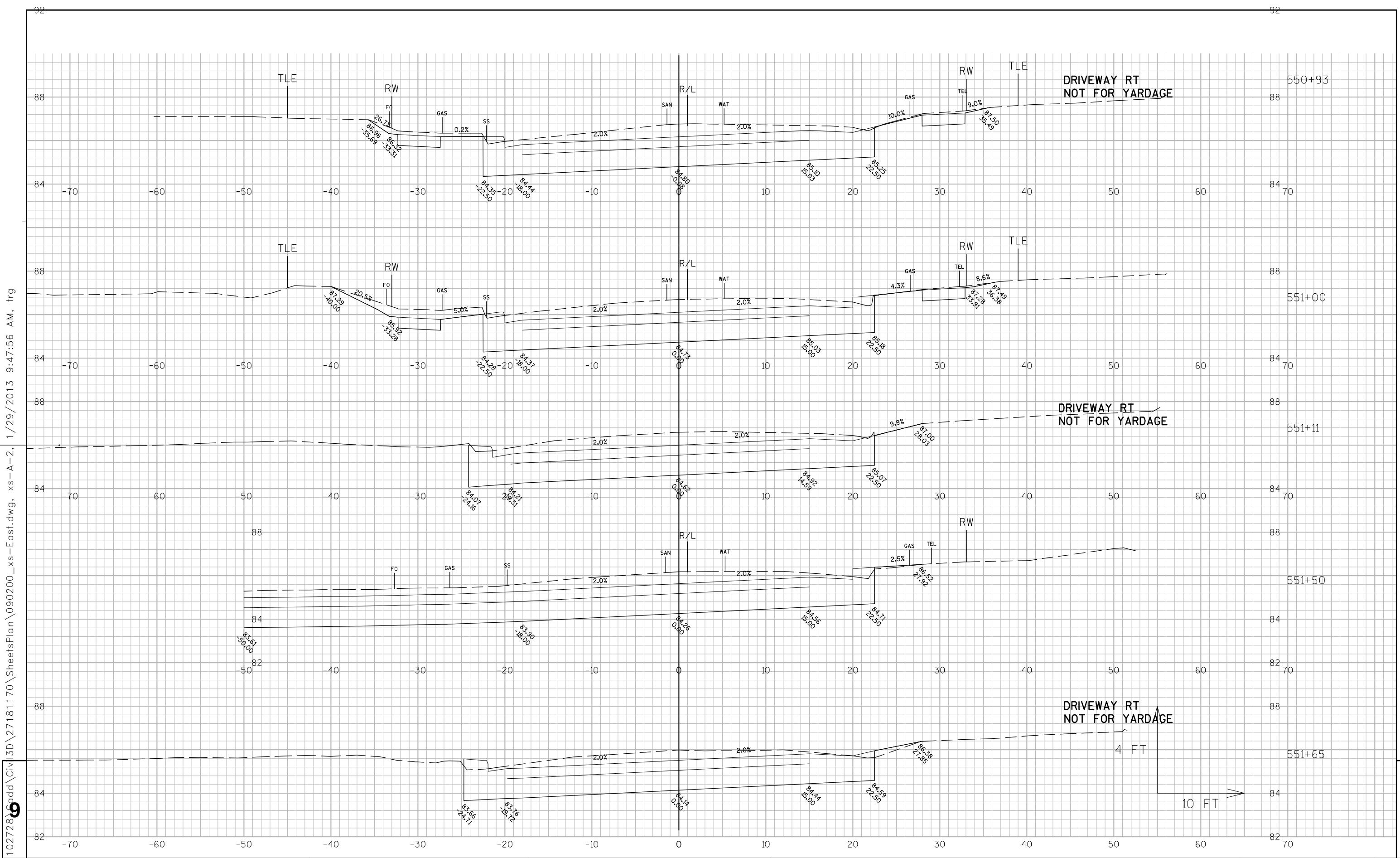
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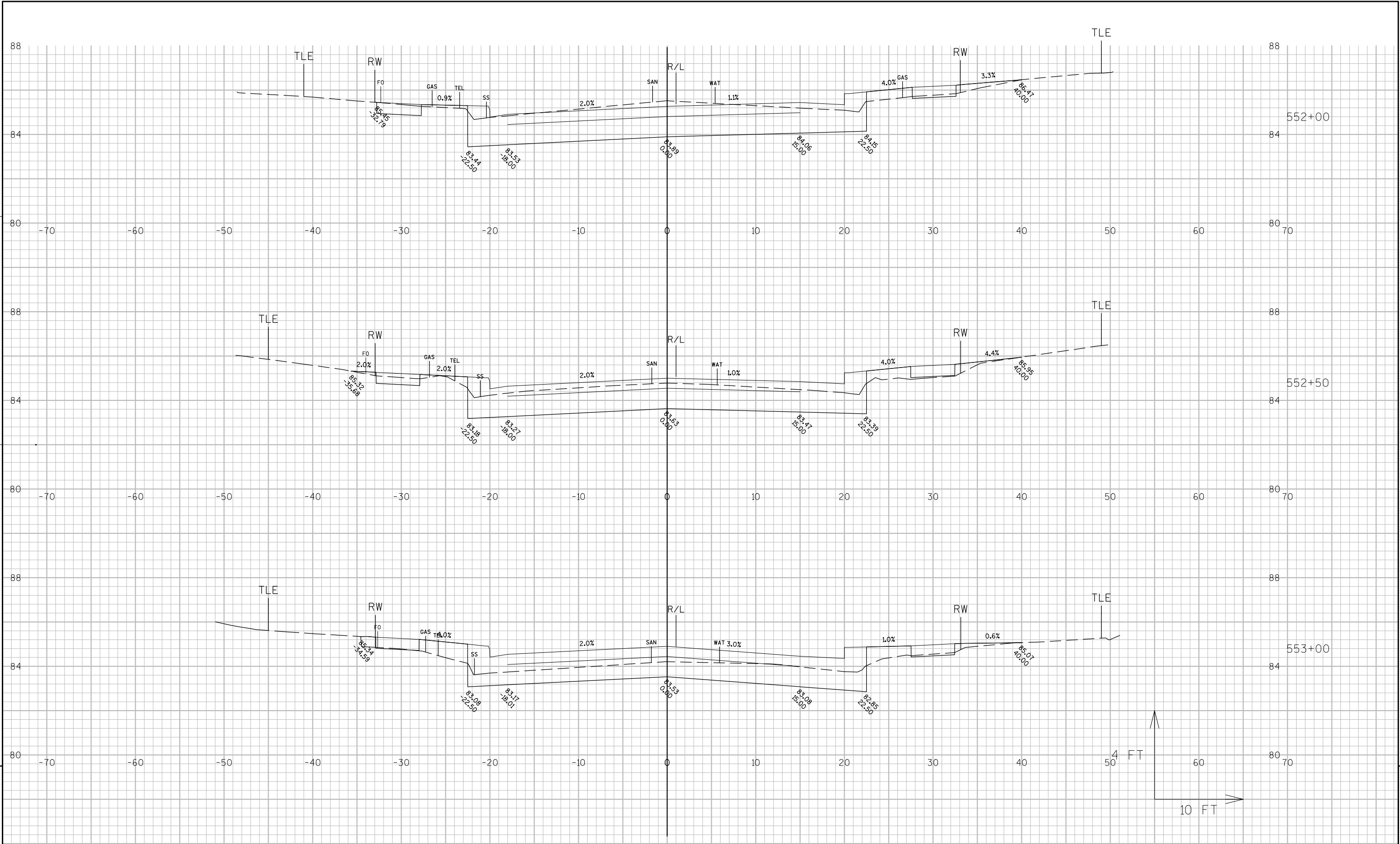
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PLOT BY : GIULIA M. TITNA R.

PLOT NAME : PLOT SCALE : 1:10 XREF



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PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

9

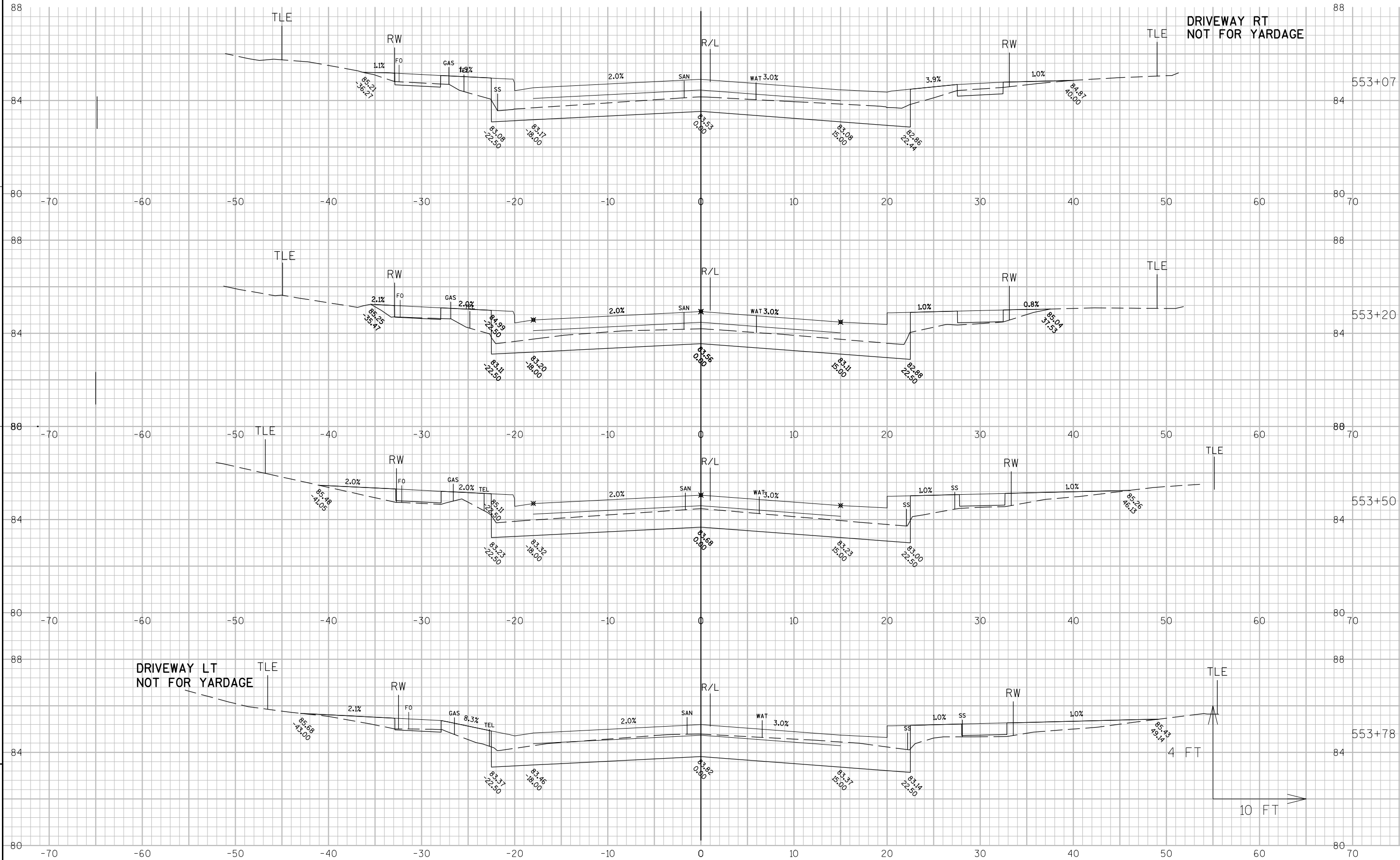
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PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

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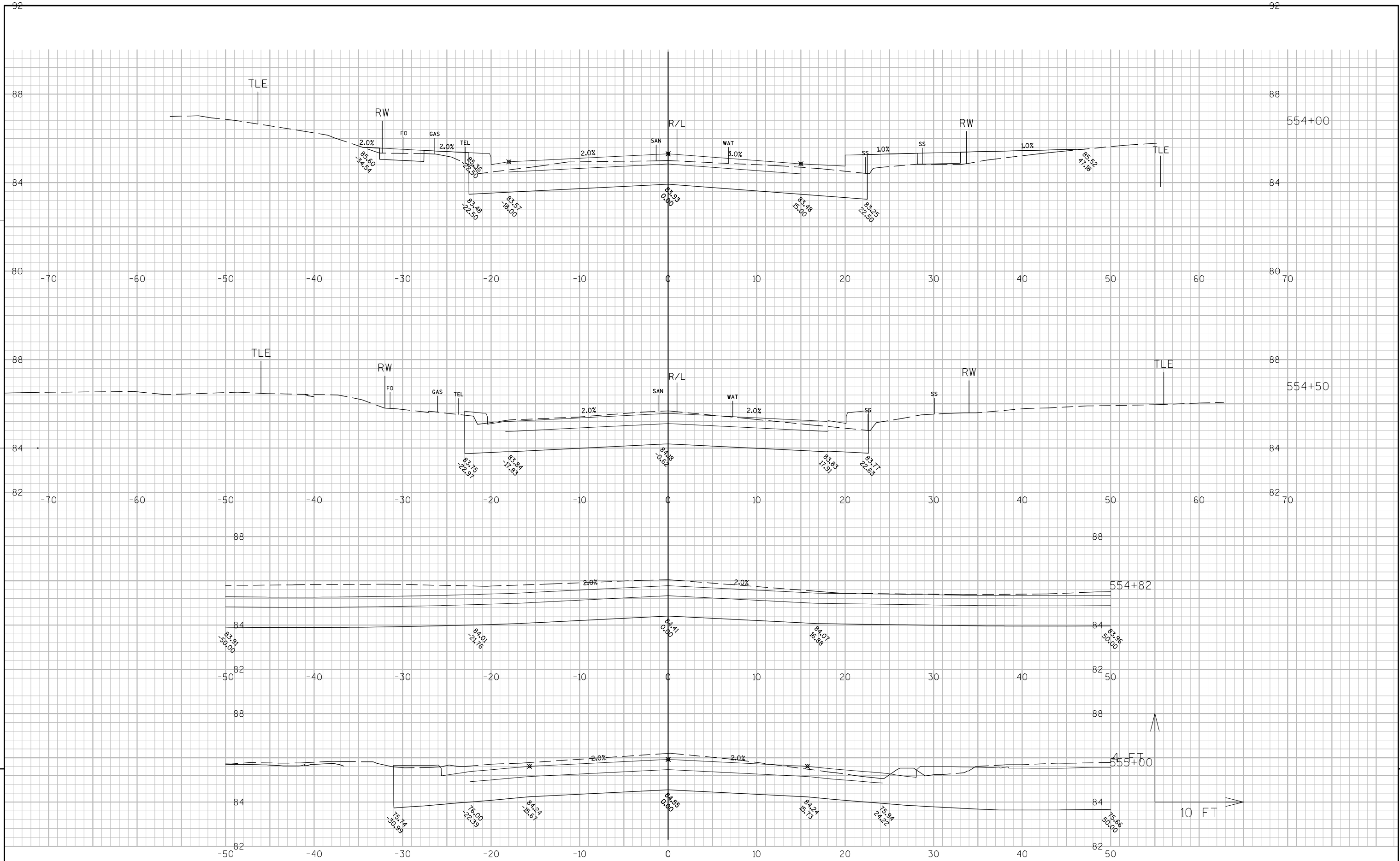
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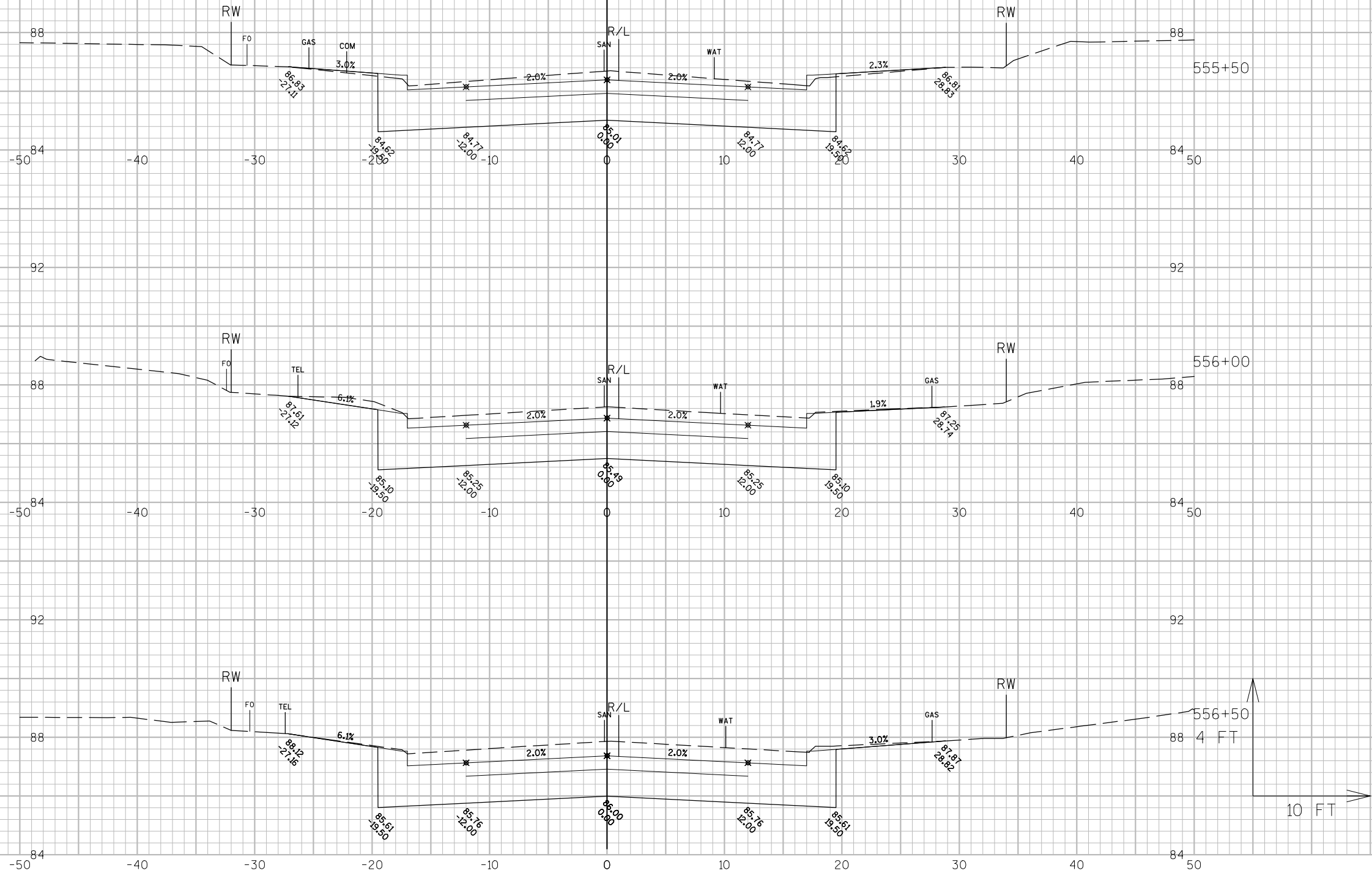
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PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

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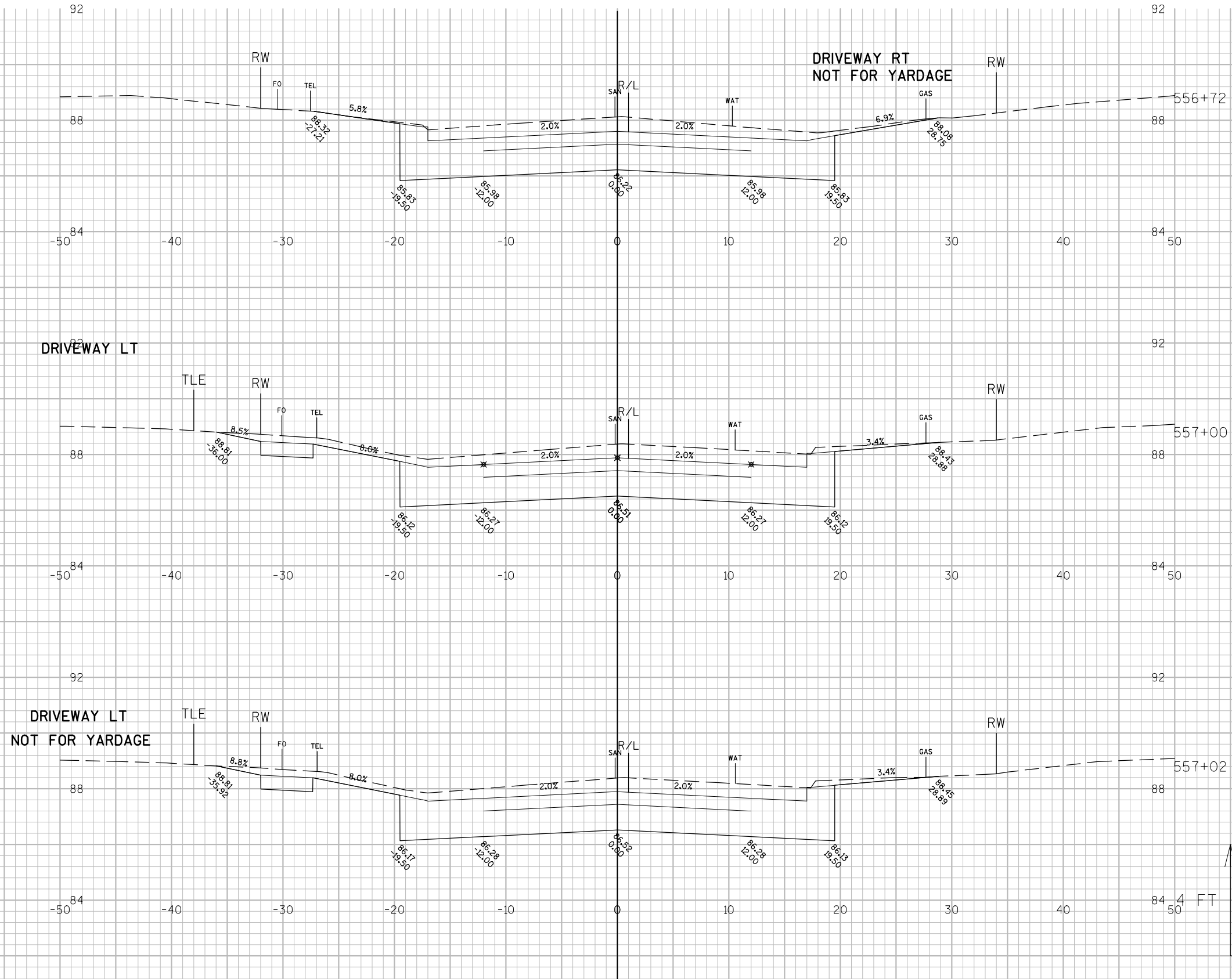
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PLOT NAME : SHEET 9 OF 9 PLOT SCALE : 1:10 XREF

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PROJECT NO:2718-11-70

HWY:S EAST AVENUE

COUNTY:WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

9

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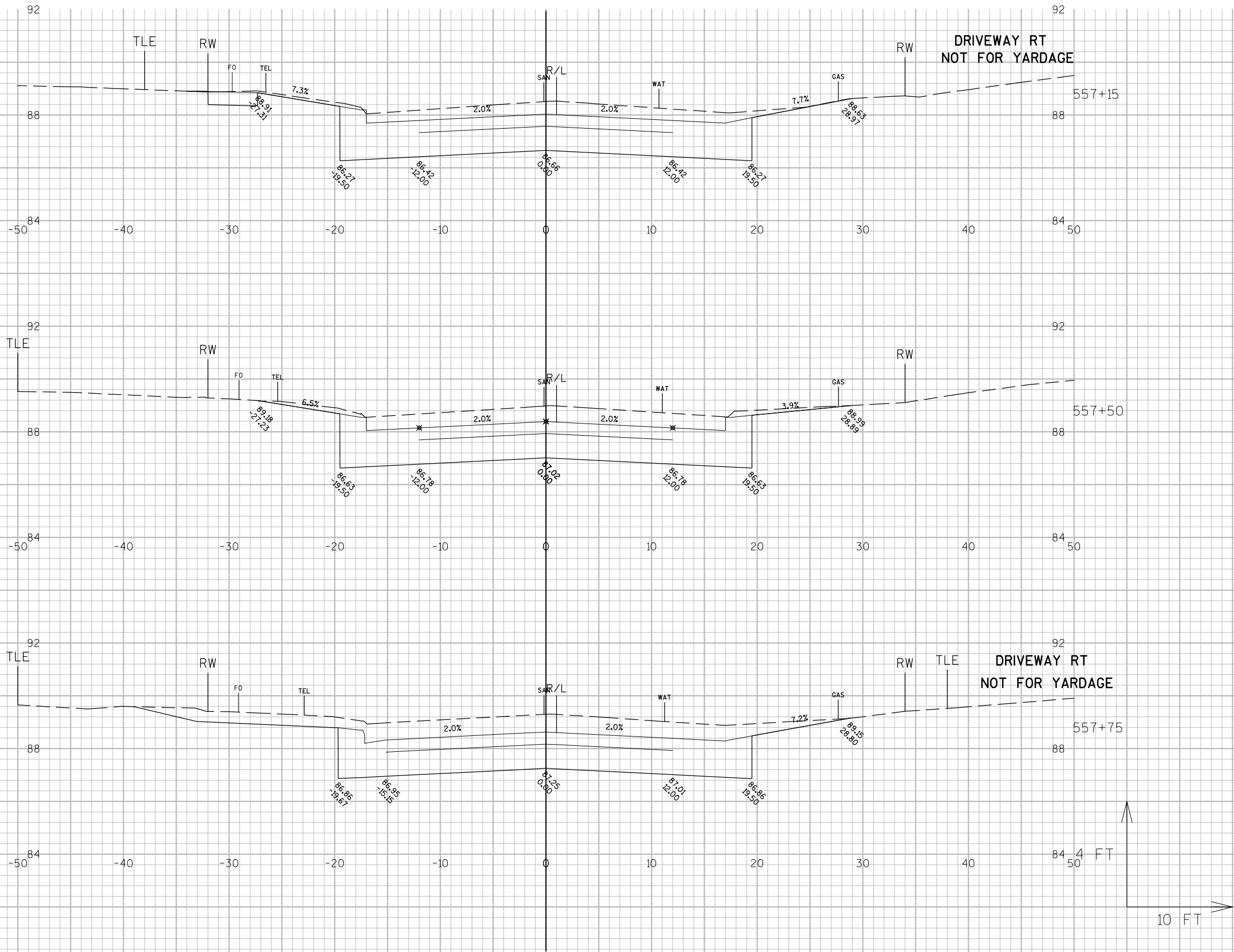
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9



10 FT

9

PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

E

FILE NAME : T:\1102728\Add\Civil\3D\27181170\SheetsPlan\090201 XS-EAST.DWG

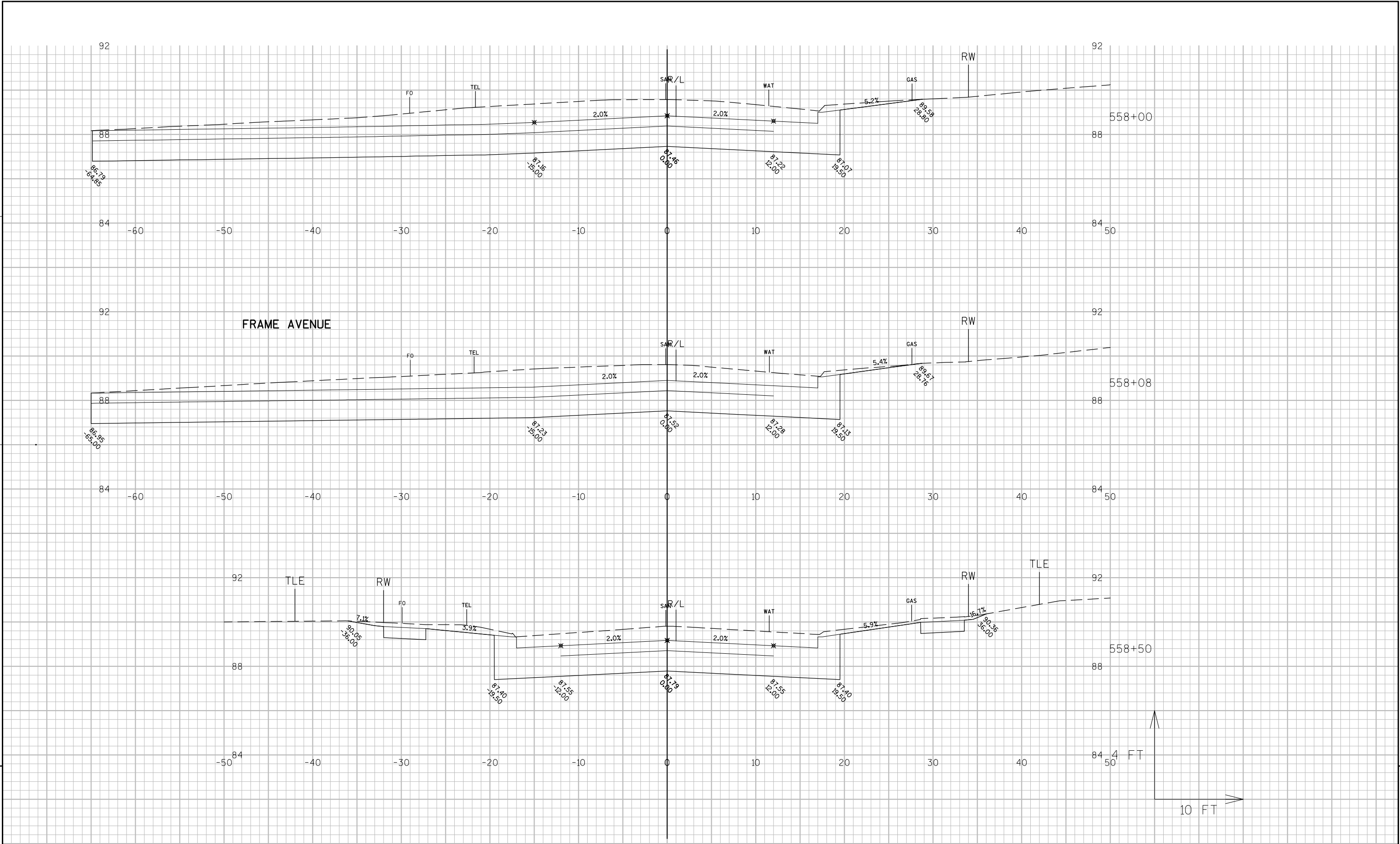
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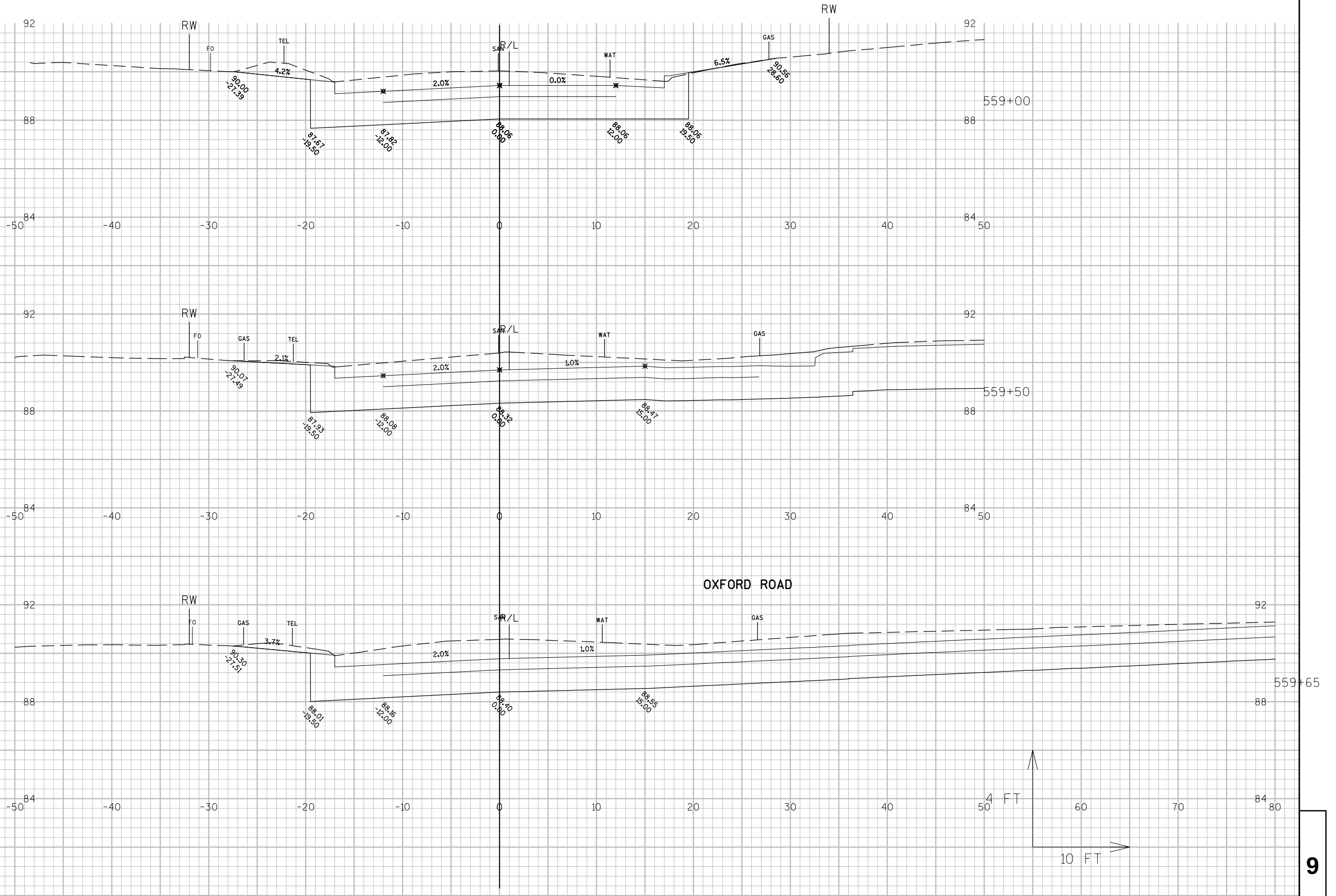


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PROJECT NO: 2718-11-70	HWY: S EAST AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: S EAST AVENUE	SHEET	E
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9

PROJECT NO:2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

E

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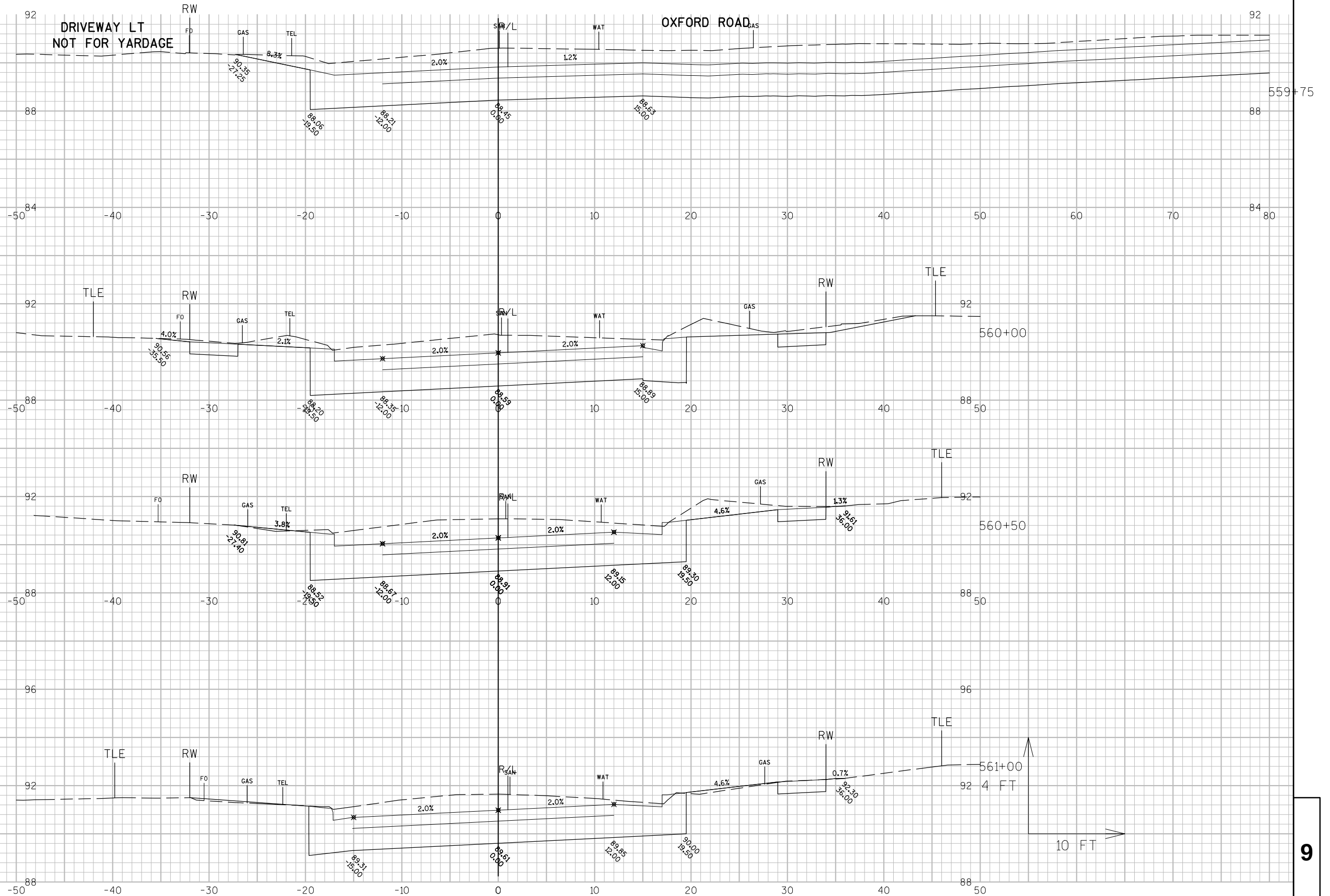
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9

PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

E

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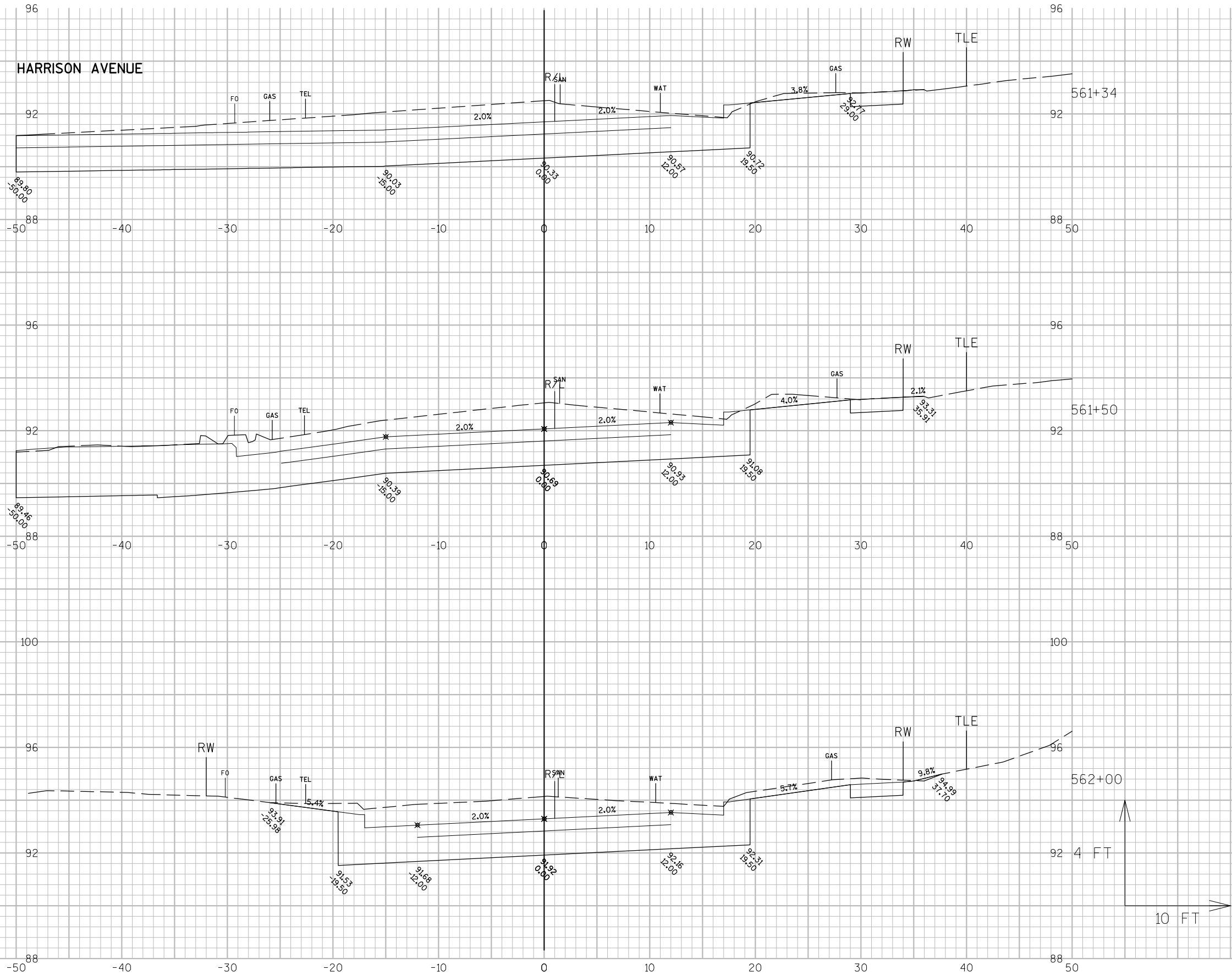
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PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

9

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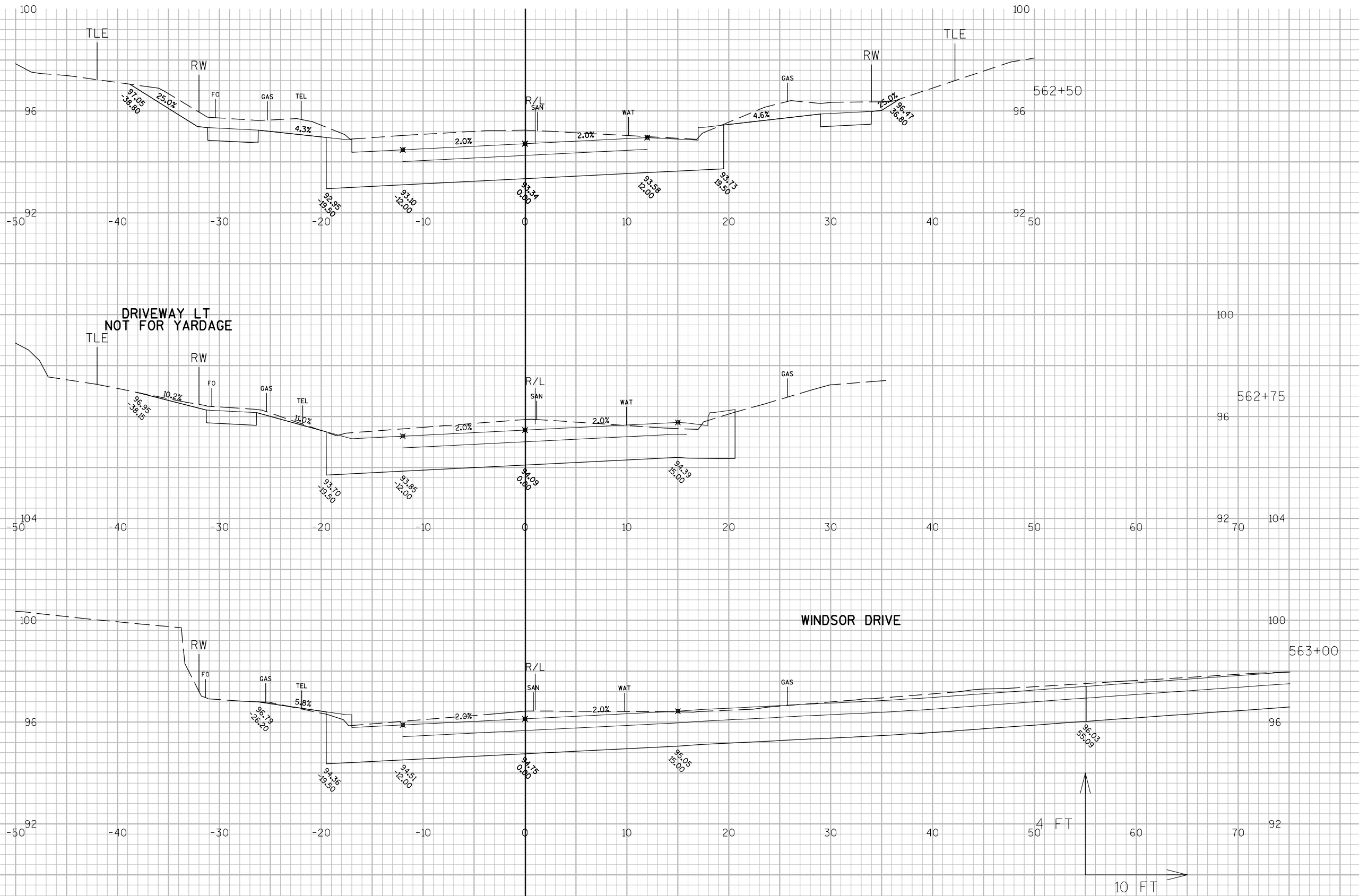
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PLOT NAME : PLOT SCALE : 1:10 XREF

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9

PROJECT NO:2718-11-70

HWY:S EAST AVENUE

COUNTY:WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

E

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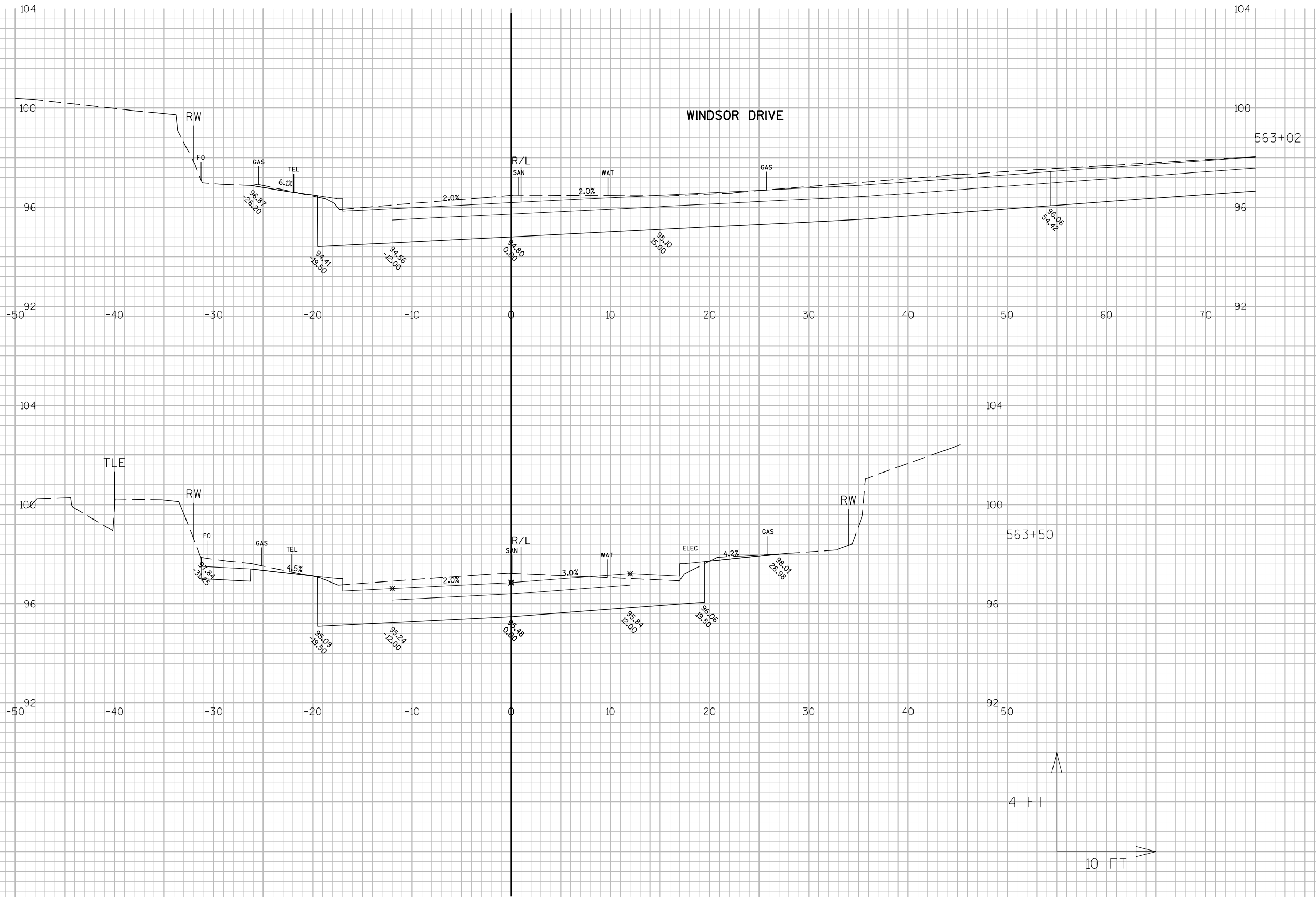
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PLOT BY : GIULIA M. TTNA R.

PLOT NAME : PLOT SCALE : 1:10 XREF

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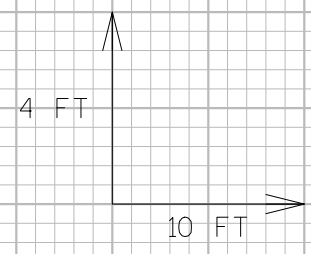
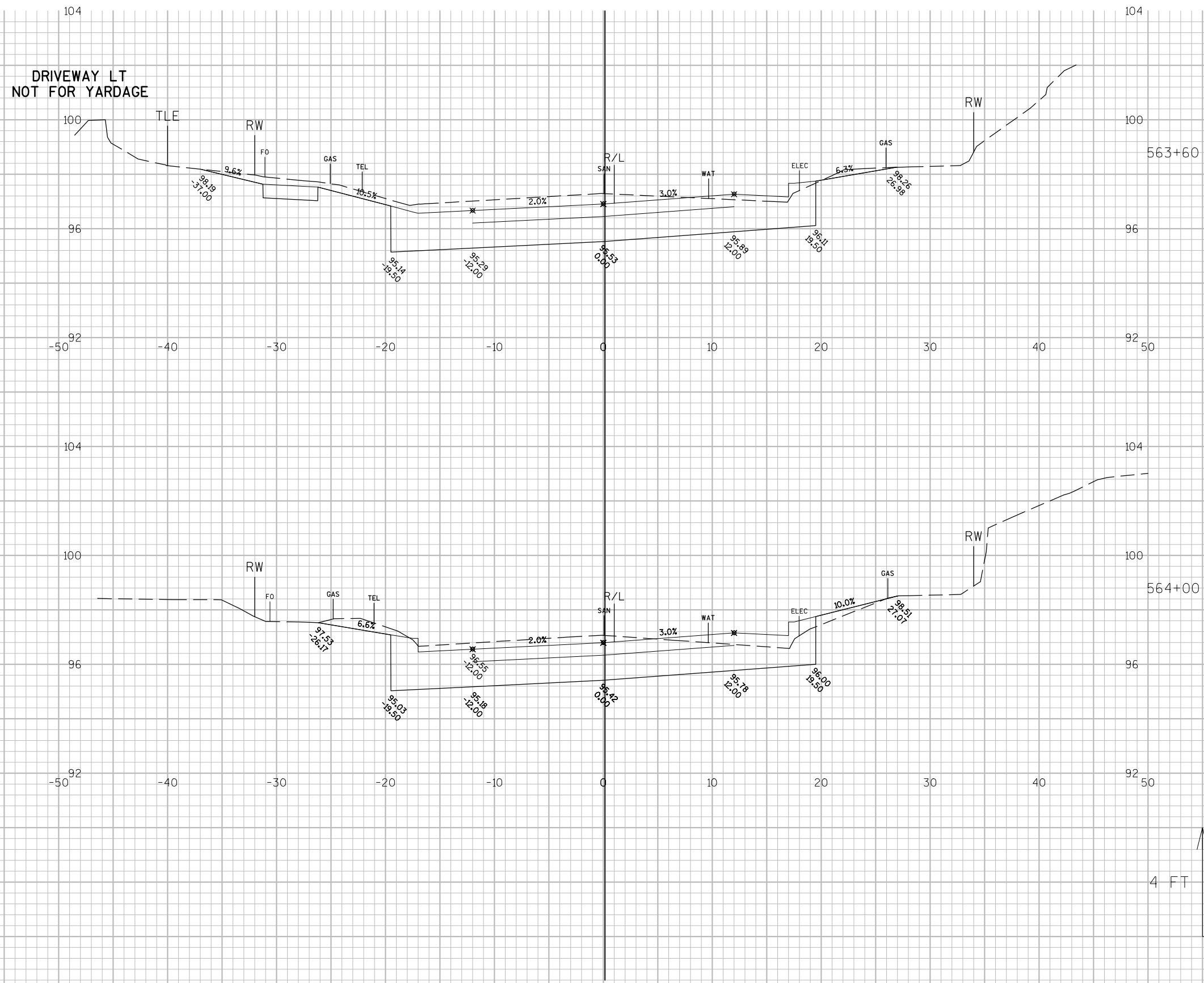
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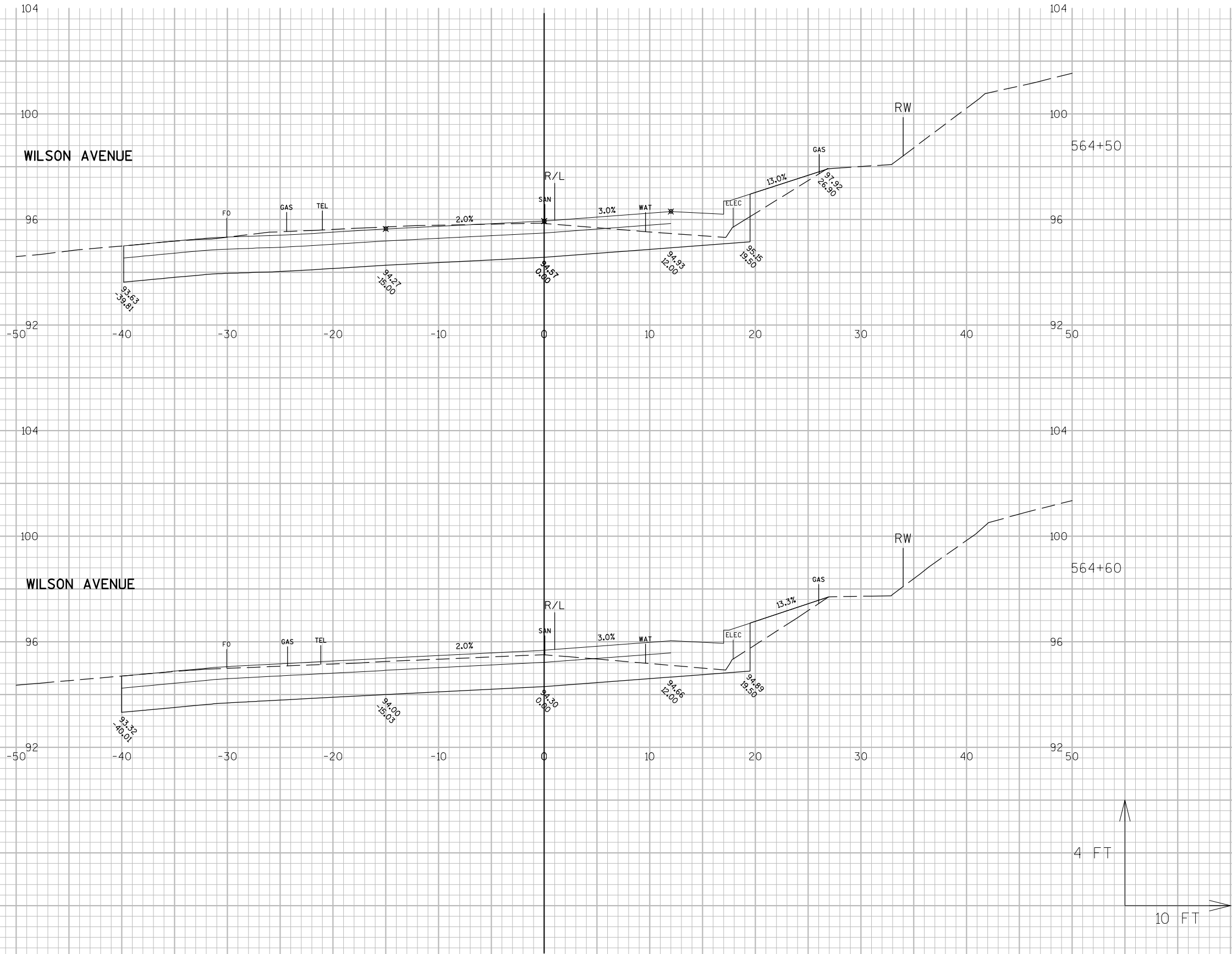
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9

PROJECT NO:2718-11-70

HWY:S EAST AVENUE

COUNTY:WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

E

FILE NAME : T:\1102728\Add\Civil\3D\27181170\SheetsPlan\090201 XS-EAST.DWG

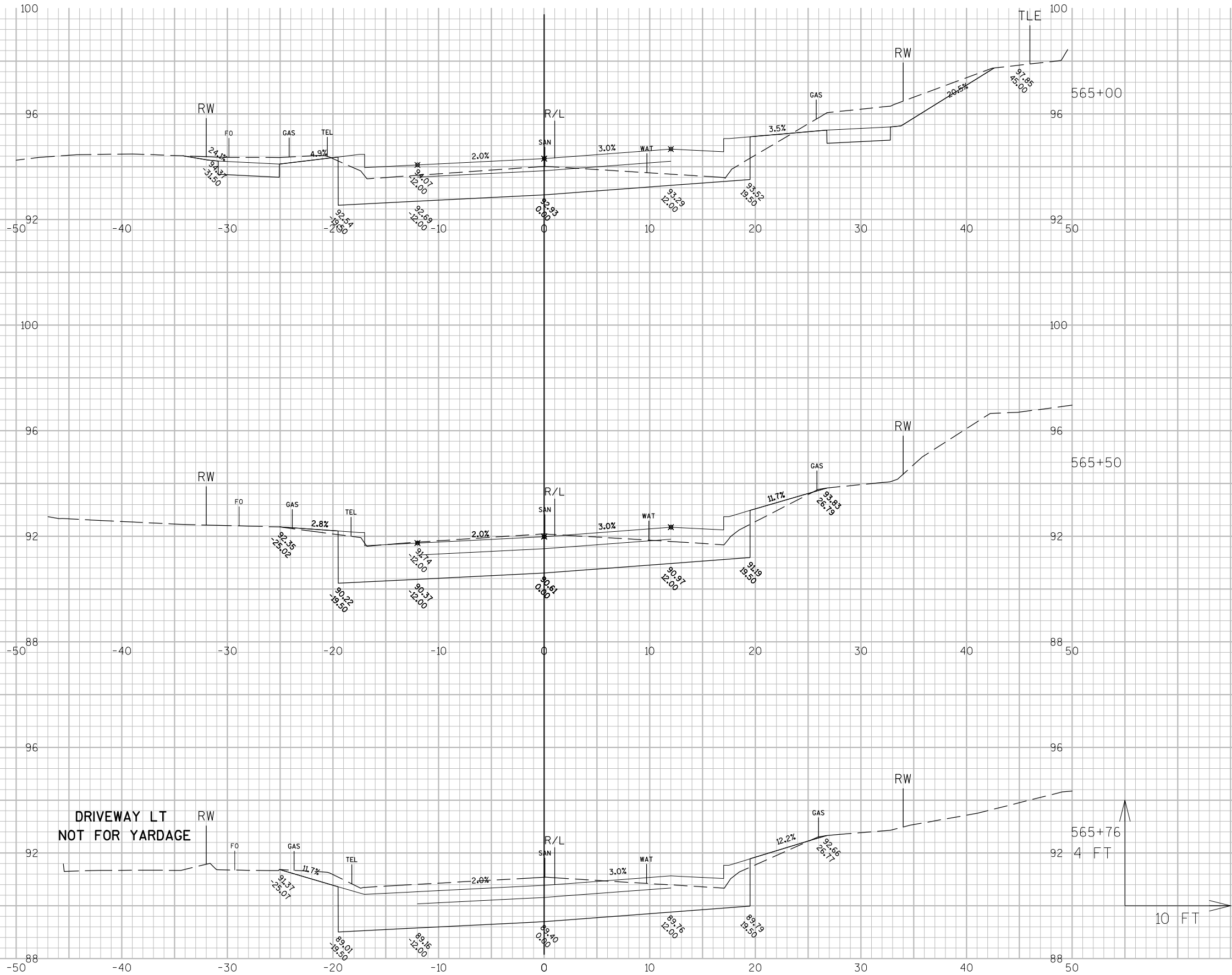
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PLOT BY : GIULIA M. TTNA R.

PLOT NAME : PLOT SCALE : 1:10 XREF

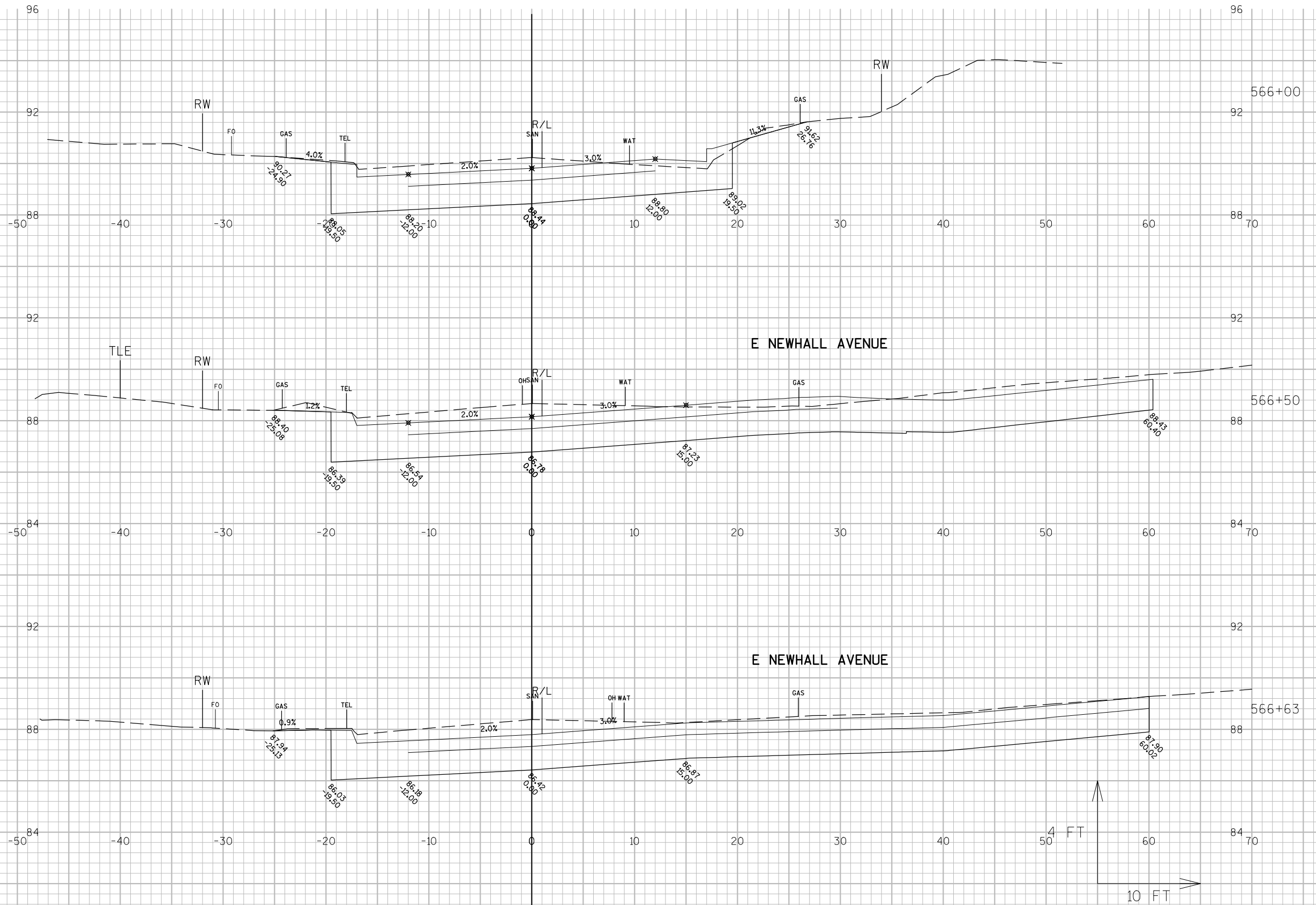
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9

PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

E

FILE NAME : T:\1102728\Add\Civil\3D\27181170\SheetsPlan\090201 XS-EAST.DWG

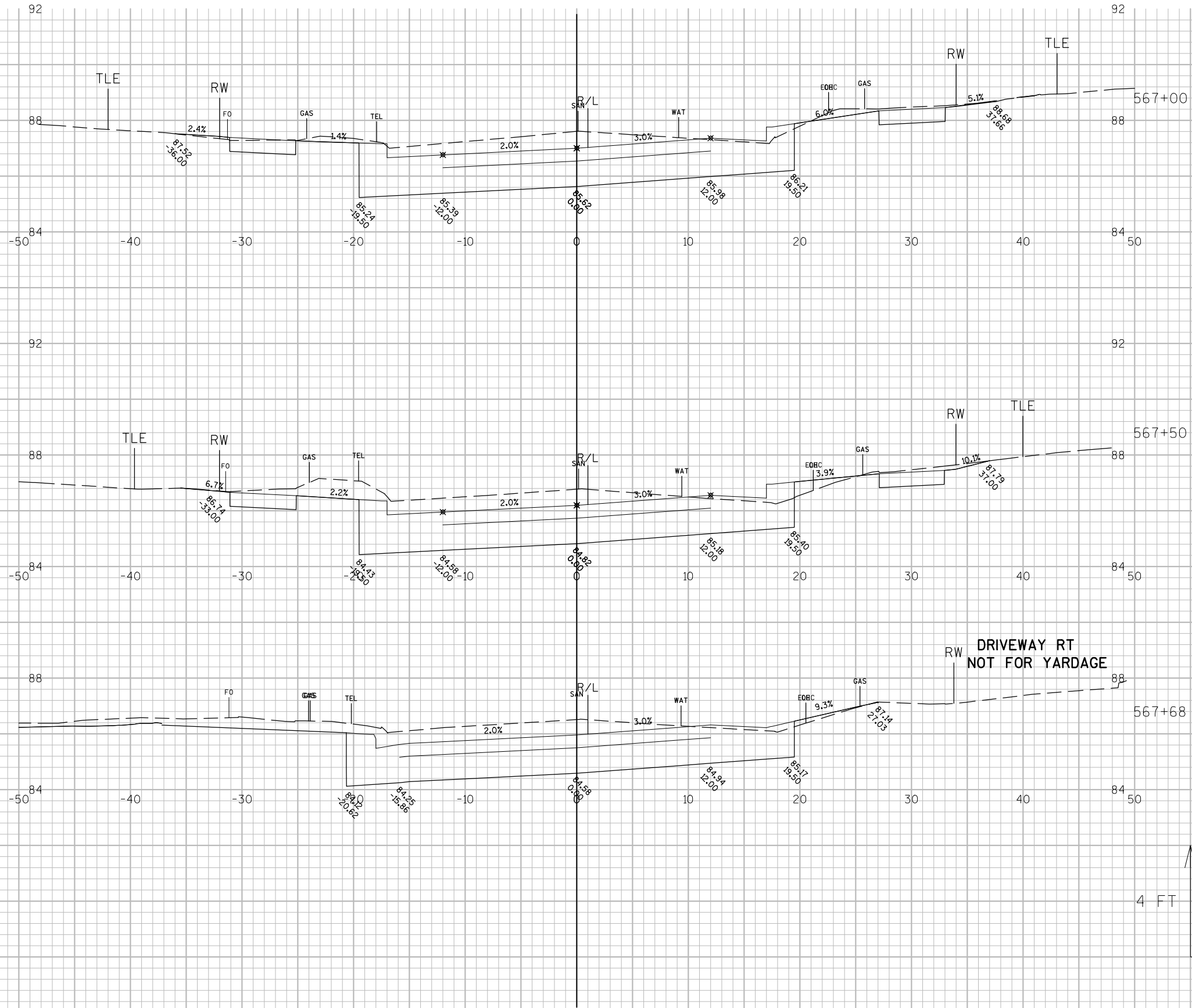
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PLOT NAME : PLOT SCALE : 1:10 XREF

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9

PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

E

FILE NAME : T:\1102728\Add\Civil\3D\27181170\SheetsPlan\090201 XS-EAST.DWG

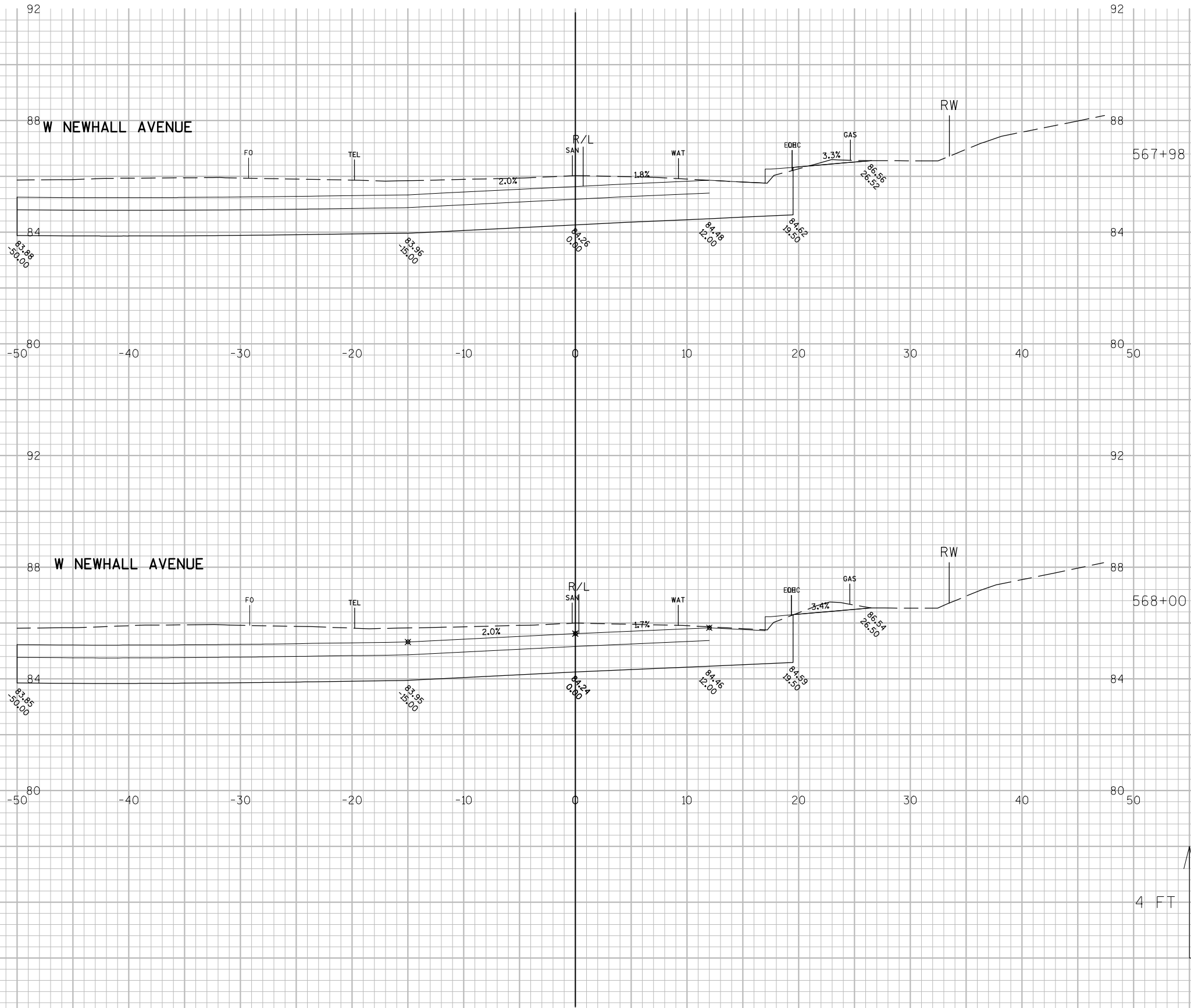
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9



PROJECT NO:2718-11-70

HWY:S EAST AVENUE

COUNTY:WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

9

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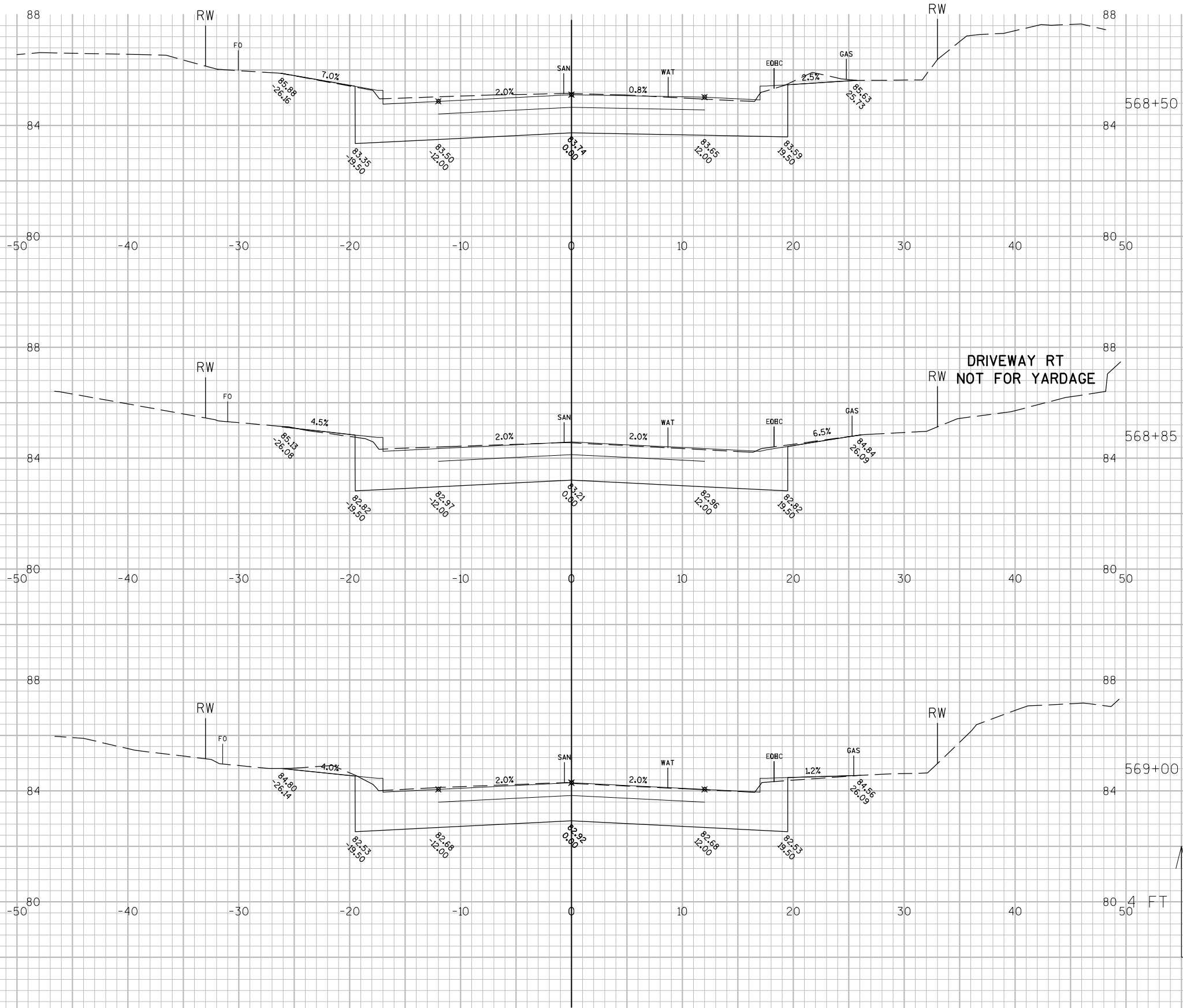
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PLOT NAME : PLOT SCALE : 1:10 XREF

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10 FT

PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

9

FILE NAME : T:\1102728\Add\Civil\3D\27181170\SheetsPlan\090201 XS-EAST.DWG

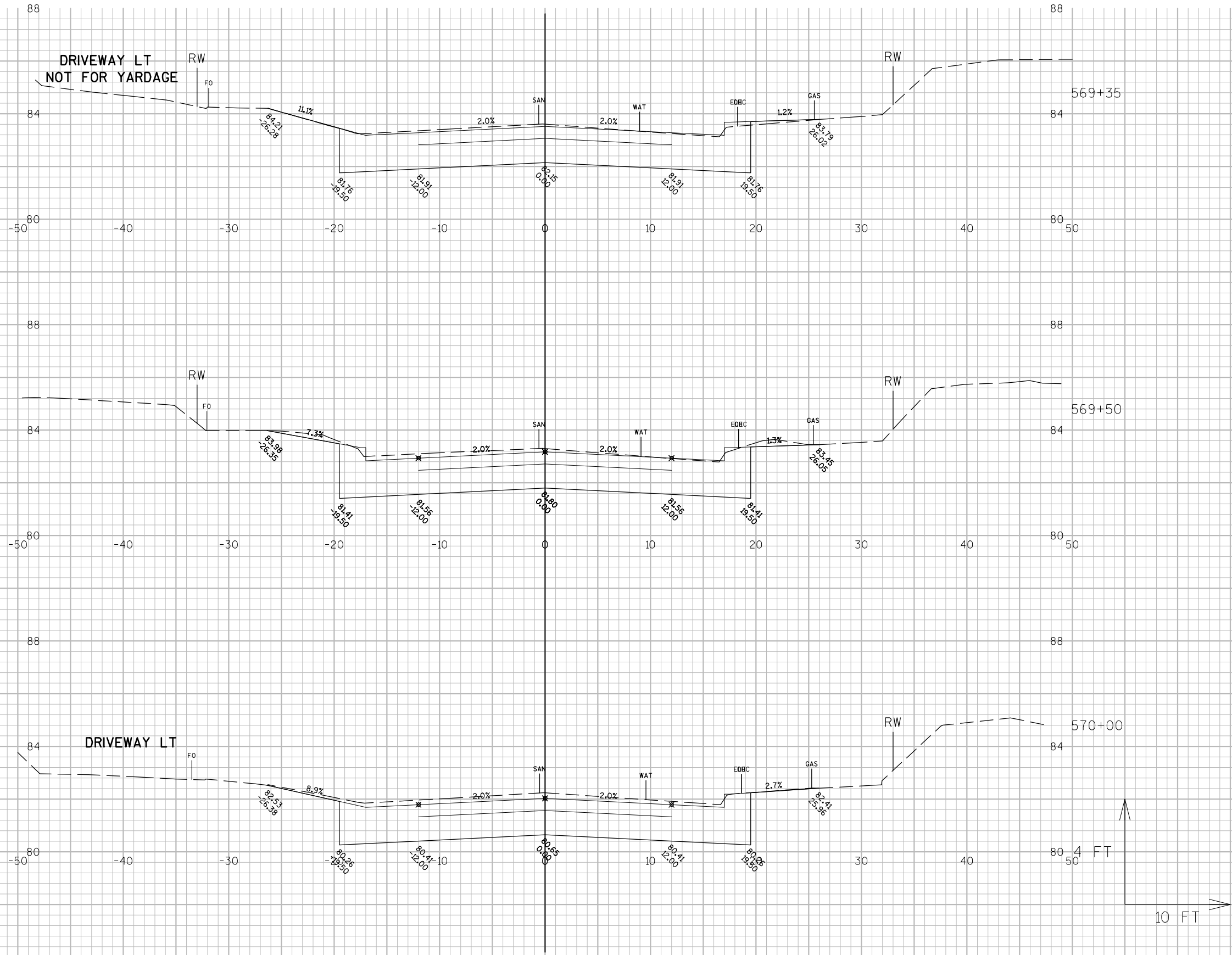
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9

PROJECT NO:2718-11-70

HWY:S EAST AVENUE

COUNTY:WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

E

FILE NAME : T:\1102728\CADD\CTVTI\3D\27181170\SHETSPLAN\090201 XS-EAST.DWG

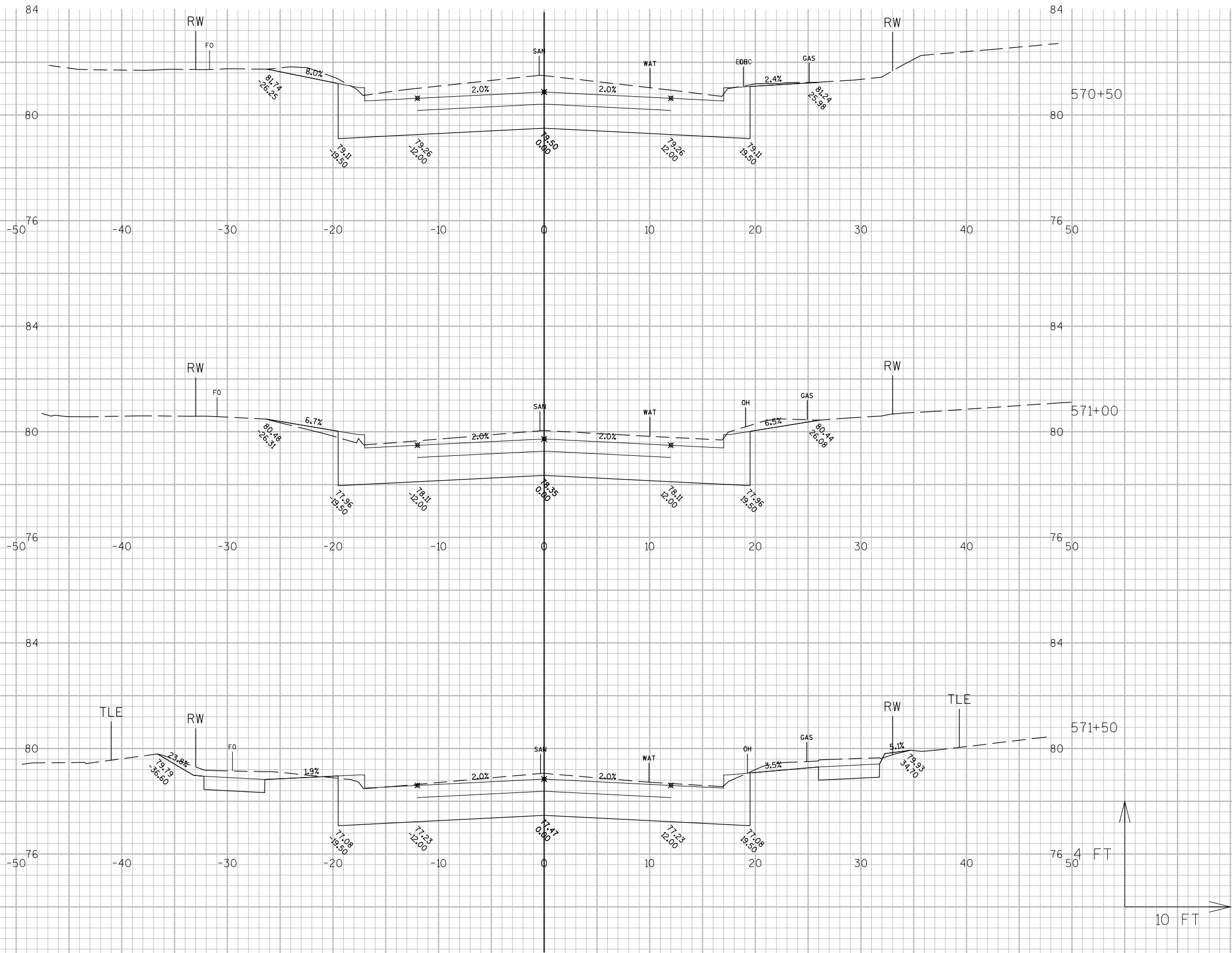
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9

PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

E

FILE NAME : T:\1102728\Add\Civil\3D\27181170\SheetsPlan\090201 XS-EAST.DWG

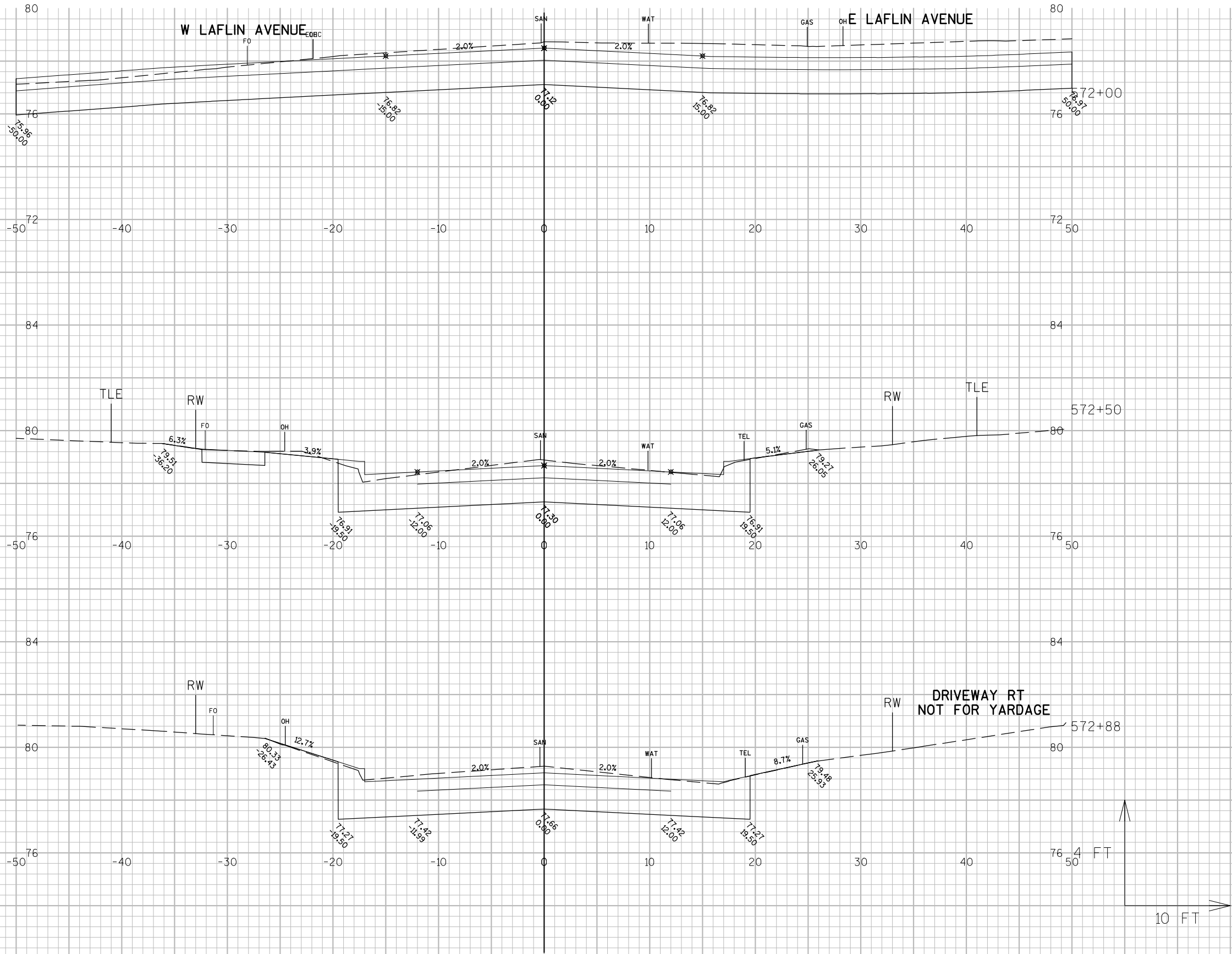
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PLOT BY : GIULIA M. TTNA R.

PLOT NAME : PLOT SCALE : 1:10 XREF

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9

PROJECT NO:2718-11-70

HWY:S EAST AVENUE

COUNTY:WAUKESHA

CROSS SECTIONS:S EAST AVENUE

SHEET

E

FILE NAME : T:\1102728\Add\Civil\3D\27181170\SheetsPlan\090201_xs-East.dwg

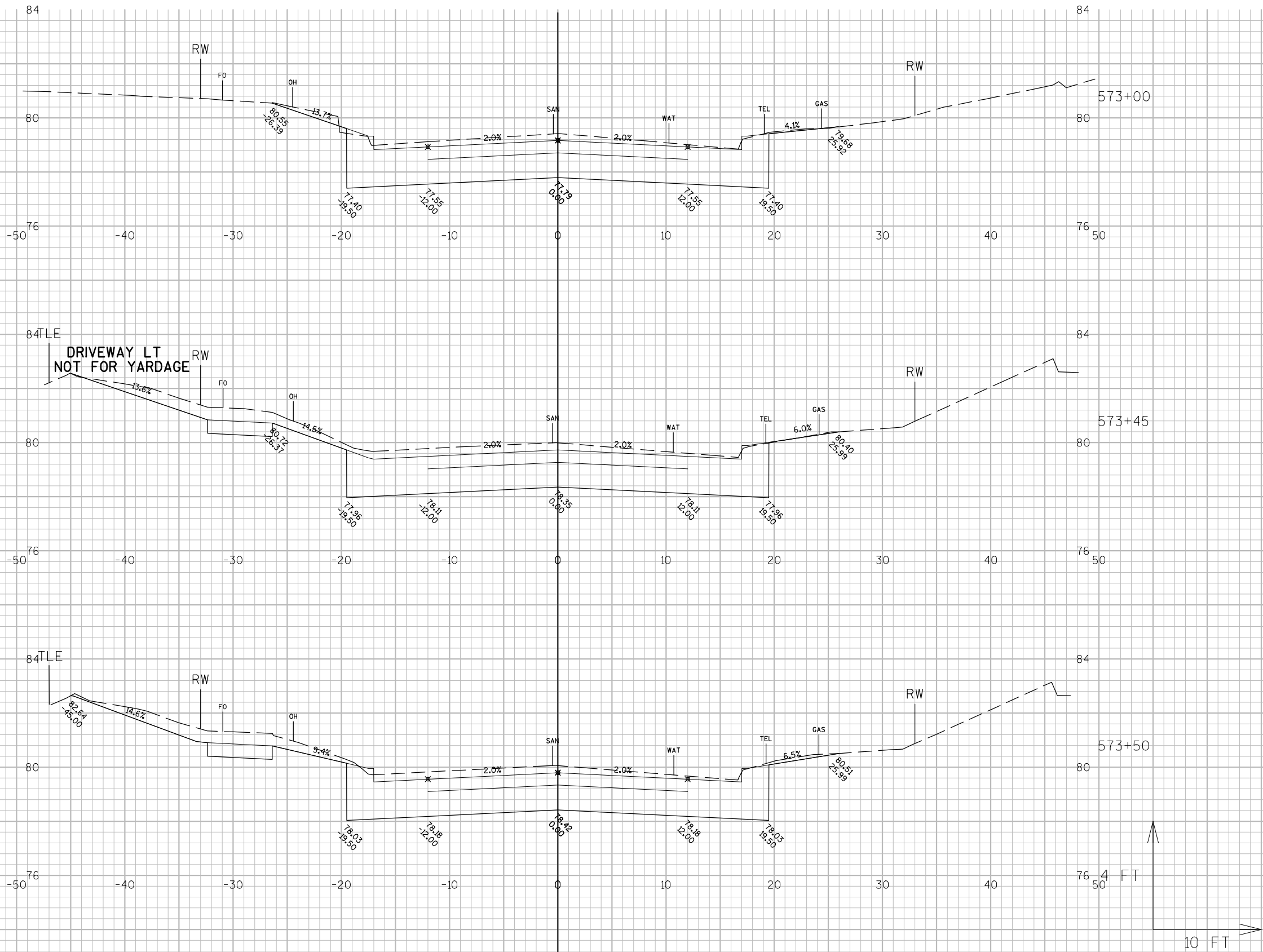
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9

PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

E

FILE NAME : T:\1102728\Add\Civil\3D\27181170\SheetsPlan\090201 XS-EAST.DWG

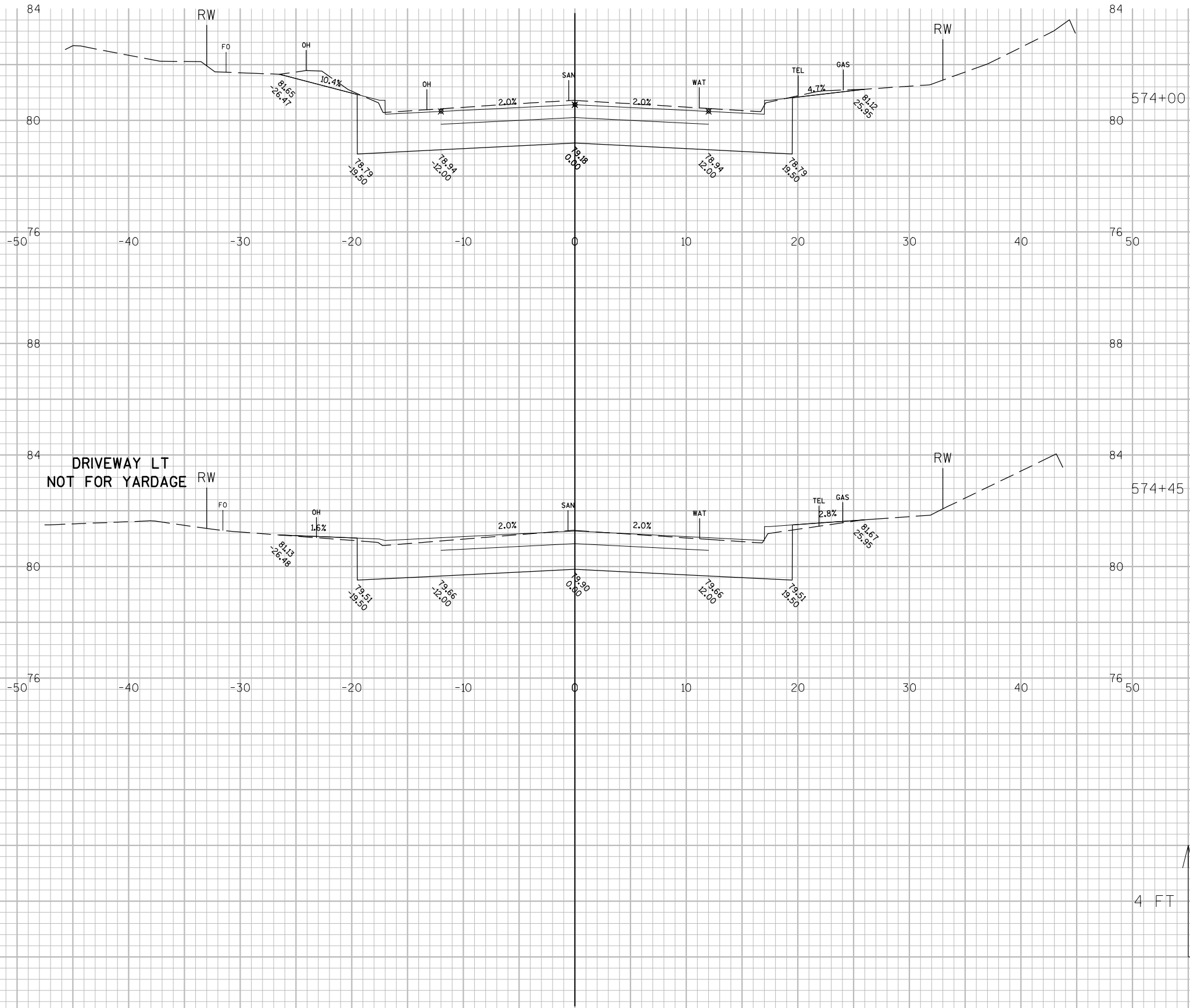
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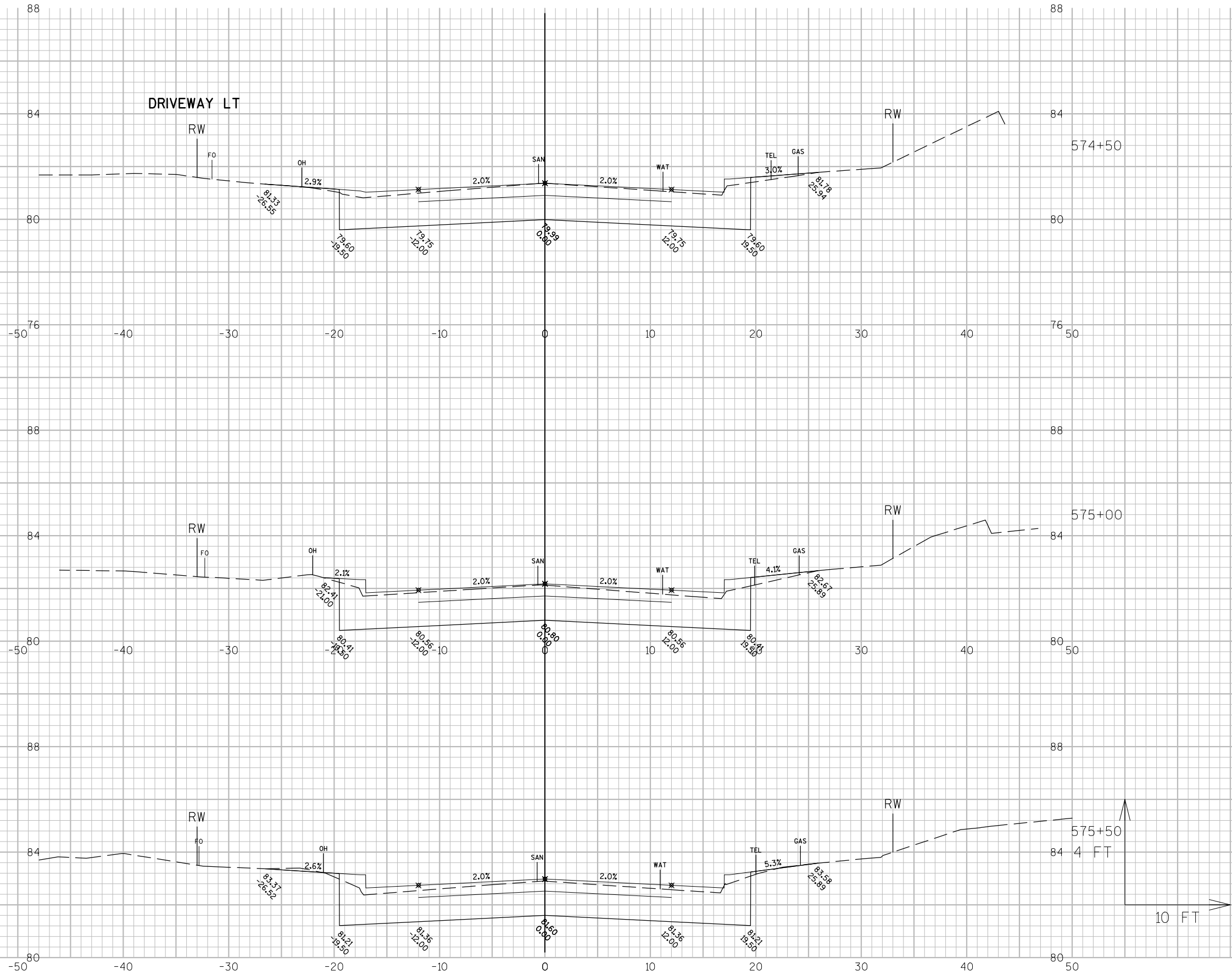
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9

PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

E

FILE NAME : T:\1102728\Add\Civil\3D\27181170\SheetsPlan\090201 XS-EAST.DWG

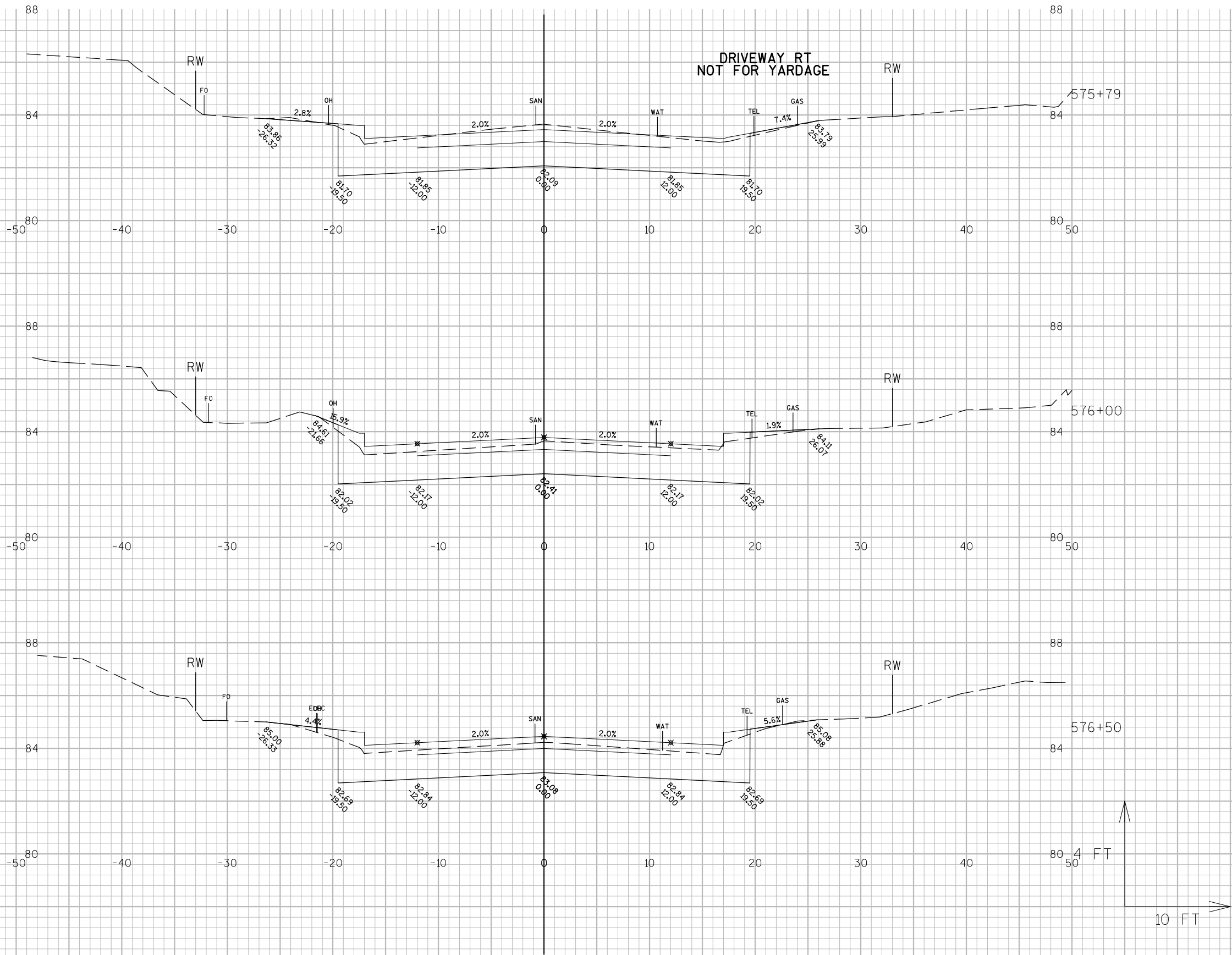
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PLOT NAME : PLOT SCALE : 1:10 XREF

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9

PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

E

FILE NAME : T:\1102728\Add\Civil\3D\27181170\SheetsPlan\090201 XS-EAST.DWG

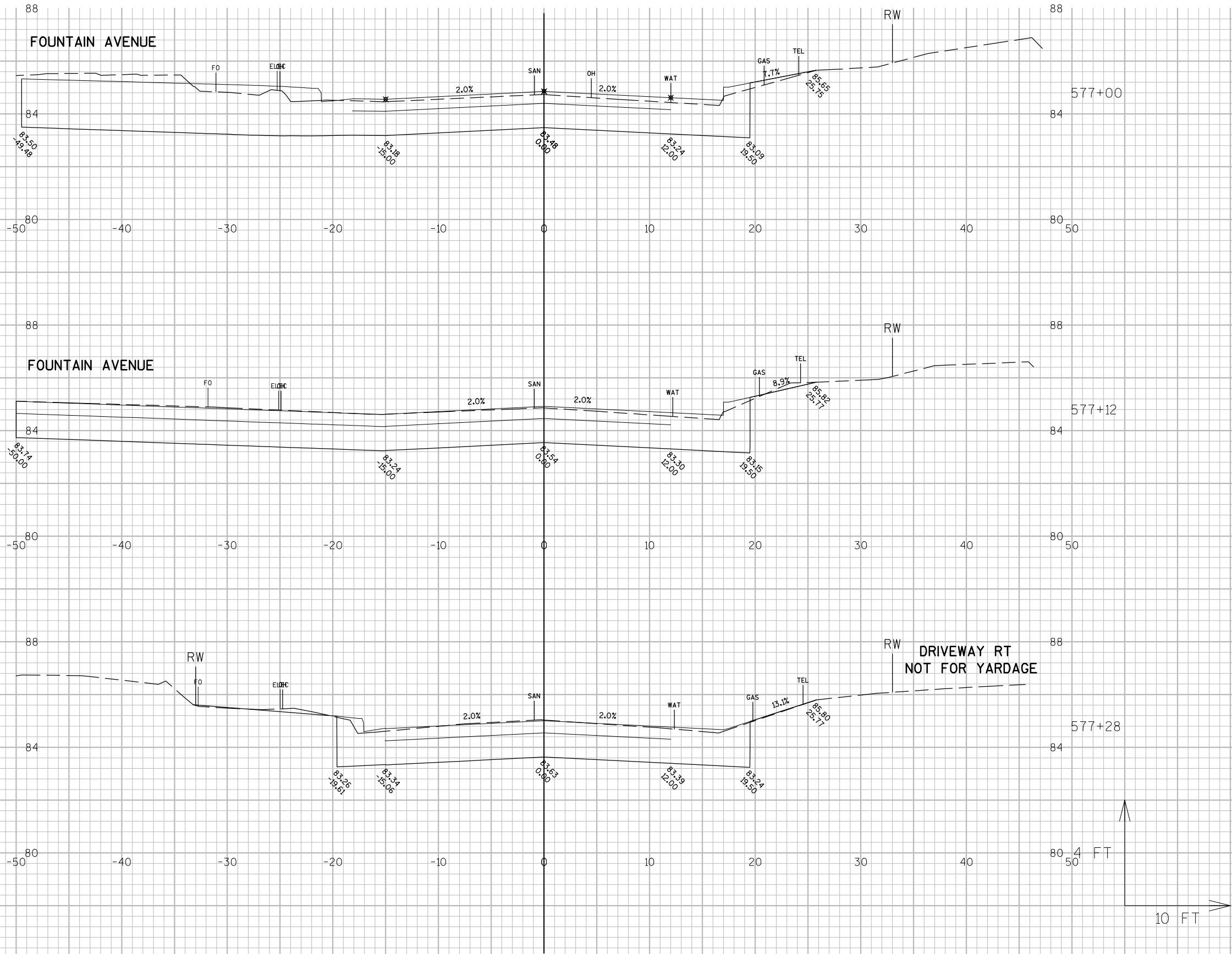
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PROJECT NO:2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

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FILE NAME : T:\1102728\cadd\Civil\3D\27181170\SheetsPlan\090201 XS-EAST.DWG

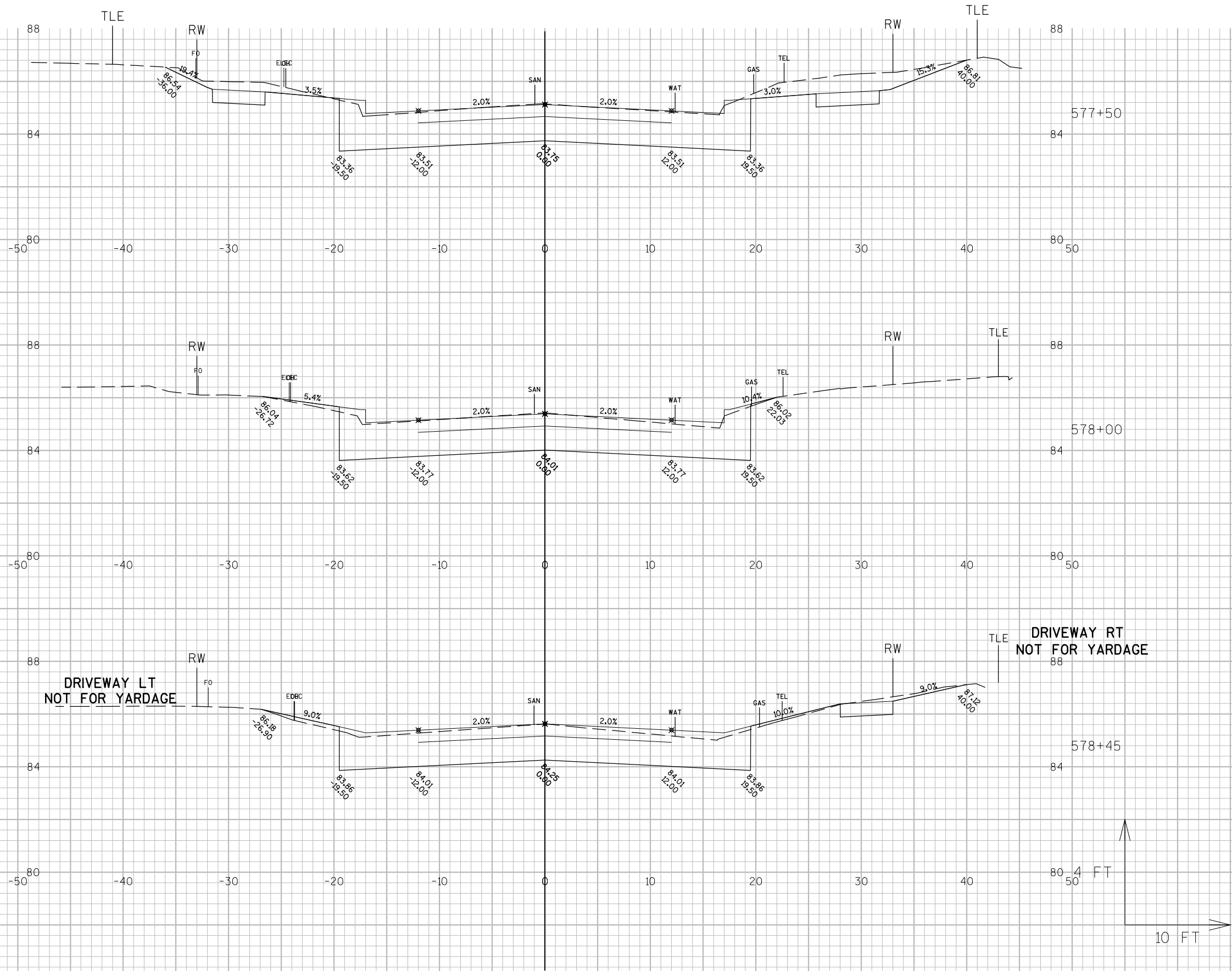
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PLOT NAME : PLOT SCALE : 1:10 XREF

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PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

E

FILE NAME : T:\1102728\CADD\CTVTI\3D\27181170\SheetsPlan\090201 XS-EAST.DWG

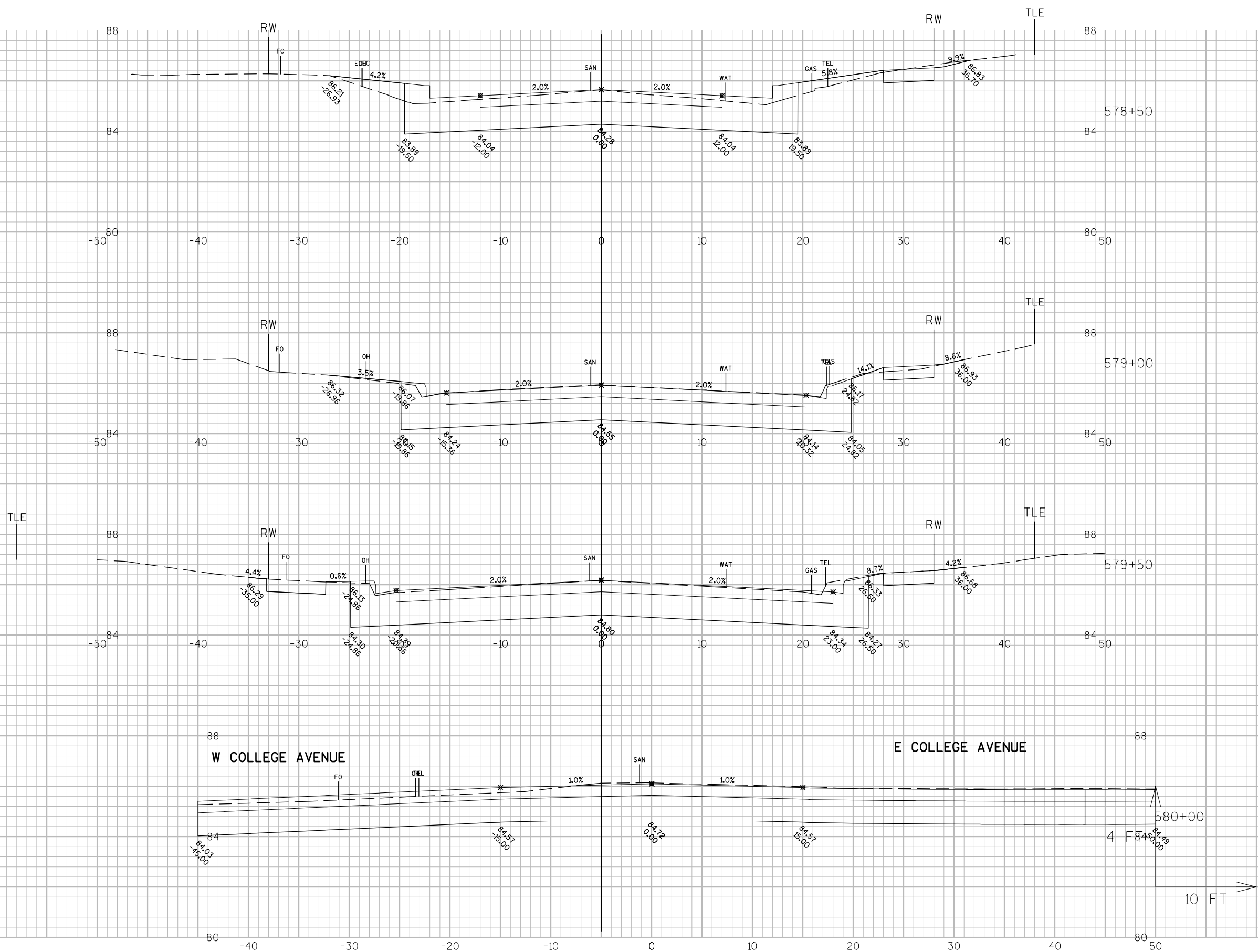
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9

PROJECT NO:2718-11-70

HWY:S EAST AVENUE

COUNTY:WAUKESHA

CROSS SECTIONS: S EAST AVENUE

SHEET

E

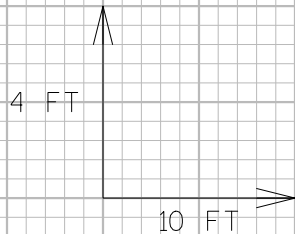
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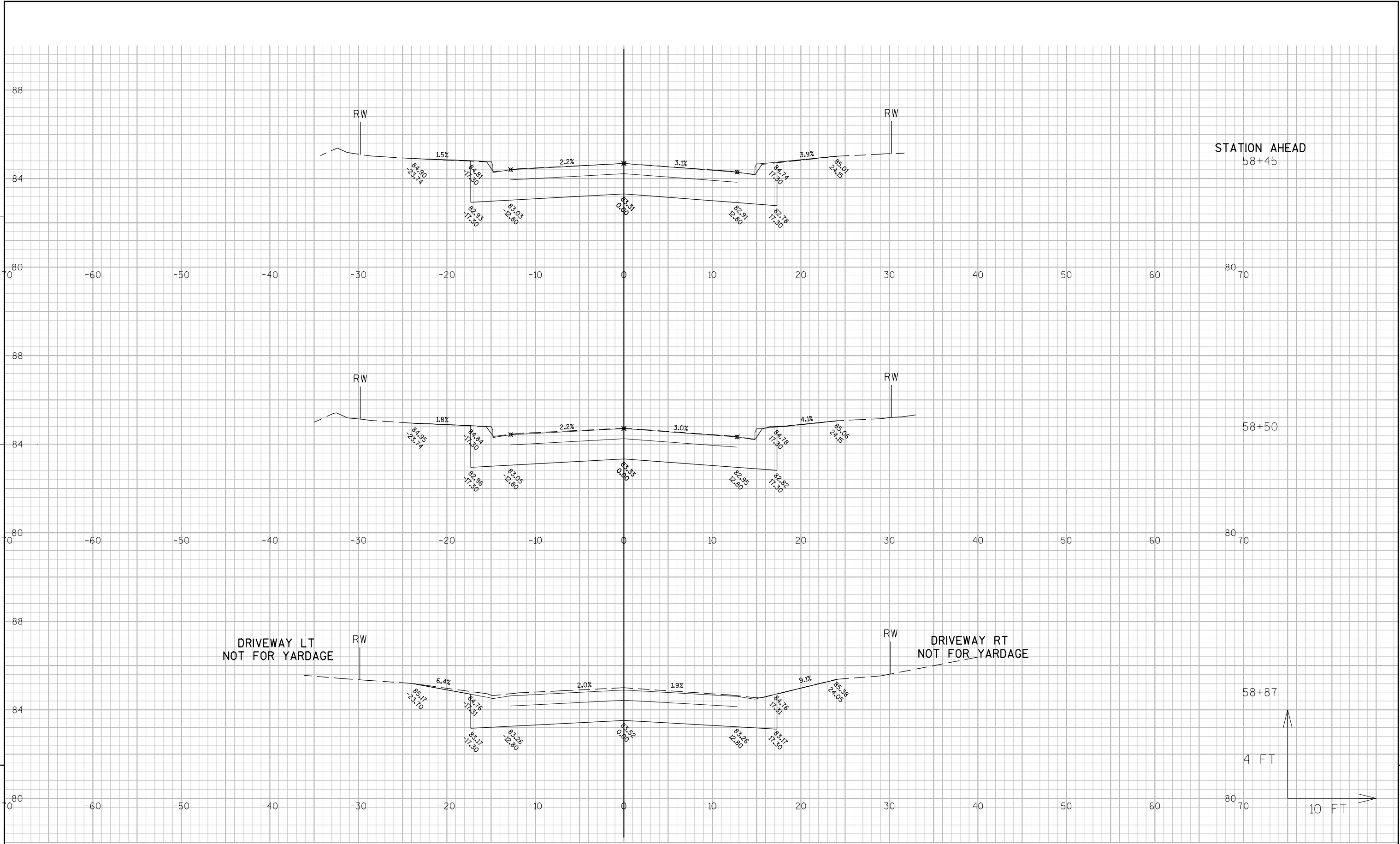
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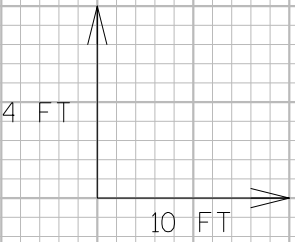
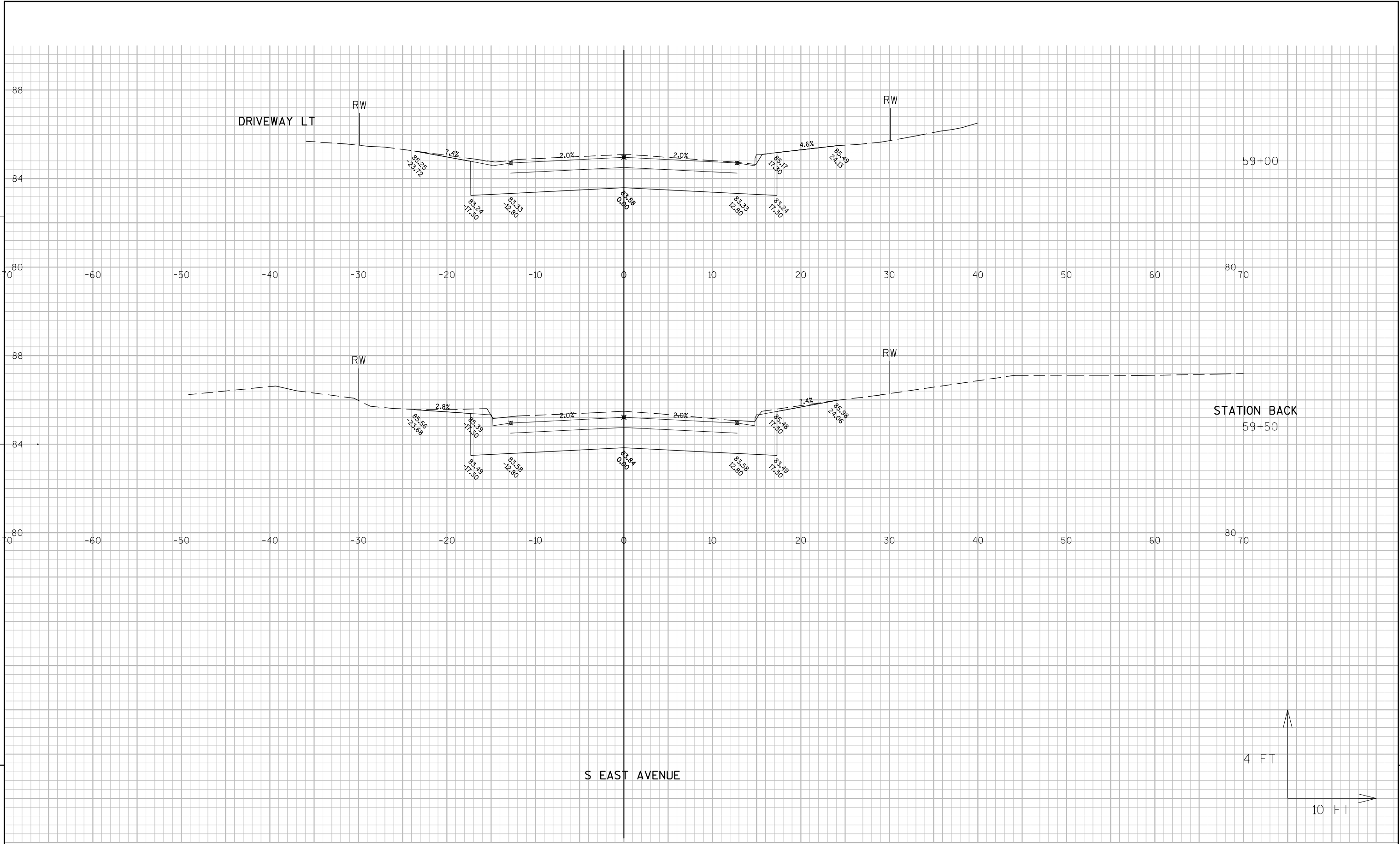


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PROJECT NO:2718-11-70	HWY:S EAST AVENUE	COUNTY:WAUKESHA	CROSS SECTIONS: S EAST AVENUE : ESTBERG AVENUE	SHEET	-----	E
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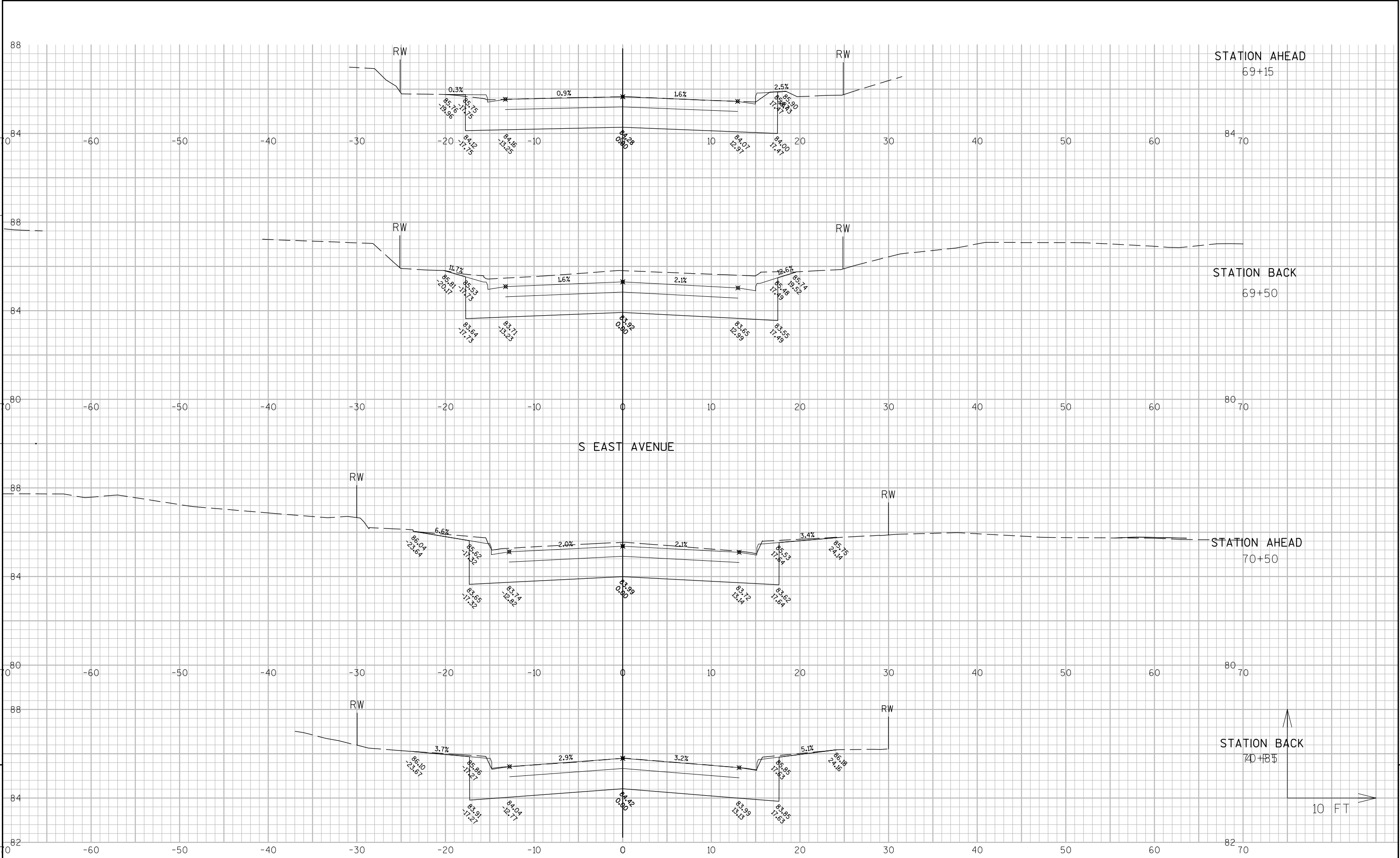
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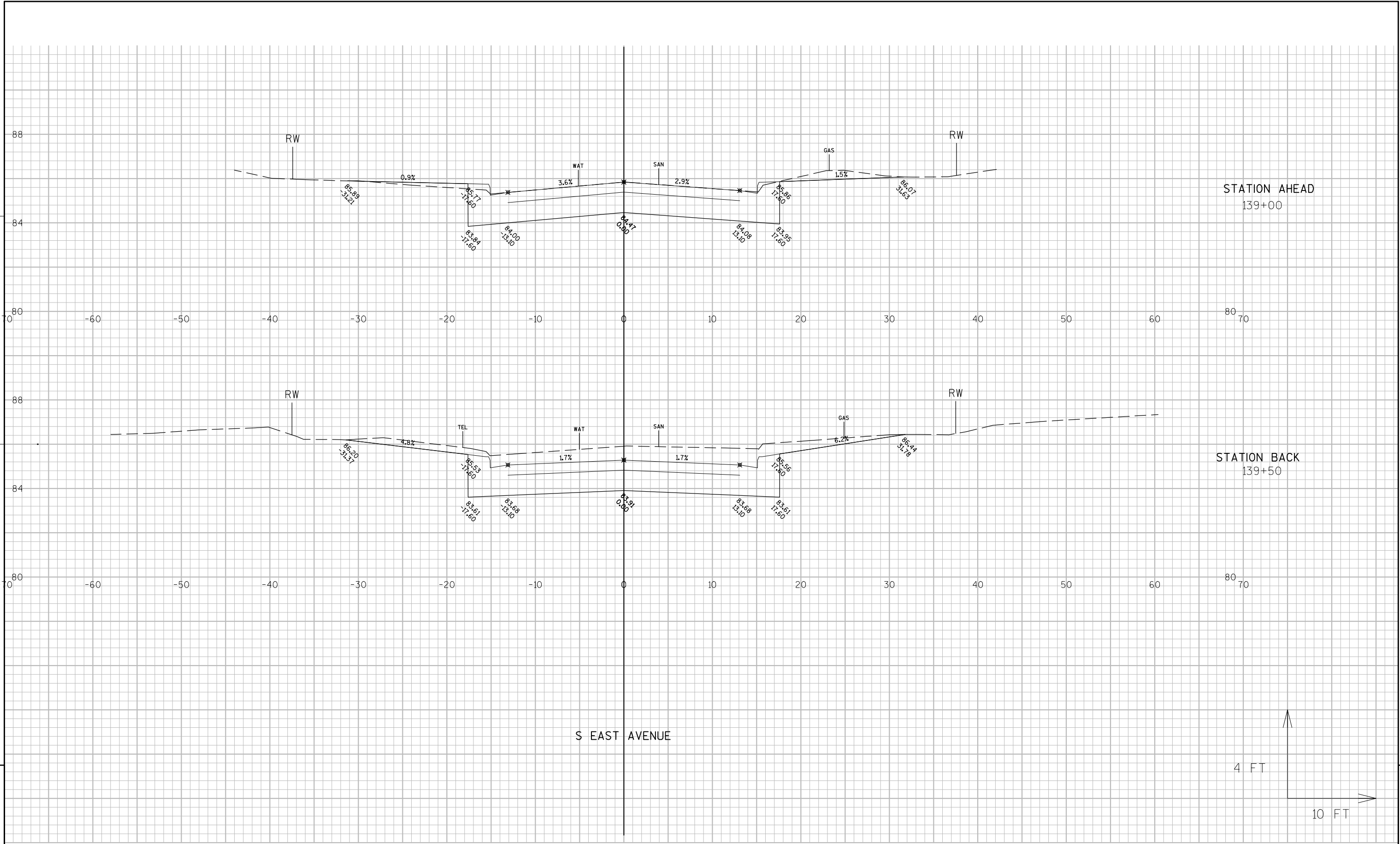
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4 FT

10 FT

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PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

CROSS SECTIONS: S EAST AVENUE: WEST NEWHALL AVENUE

SHEET

E

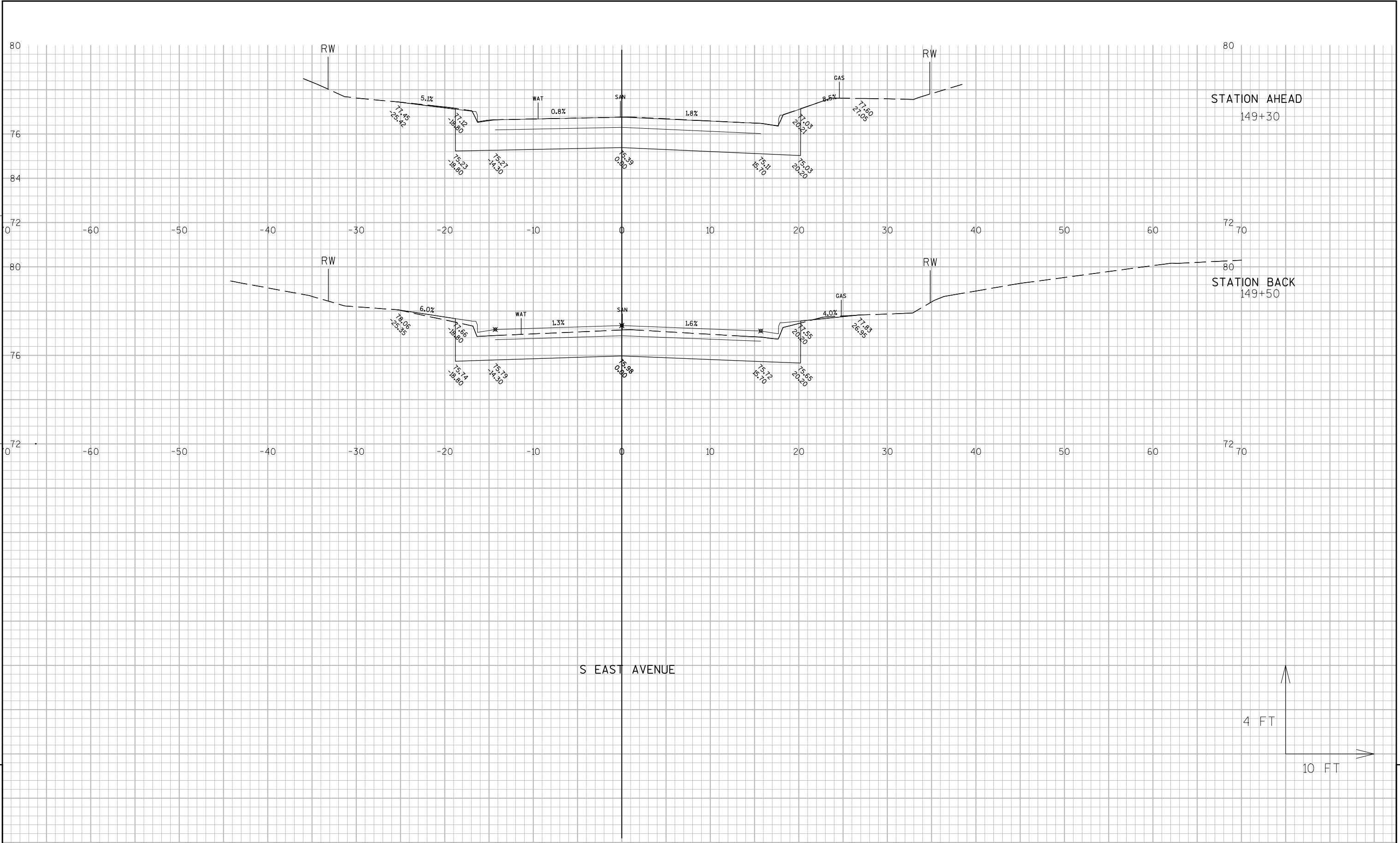
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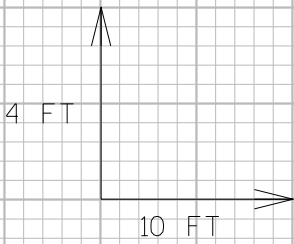
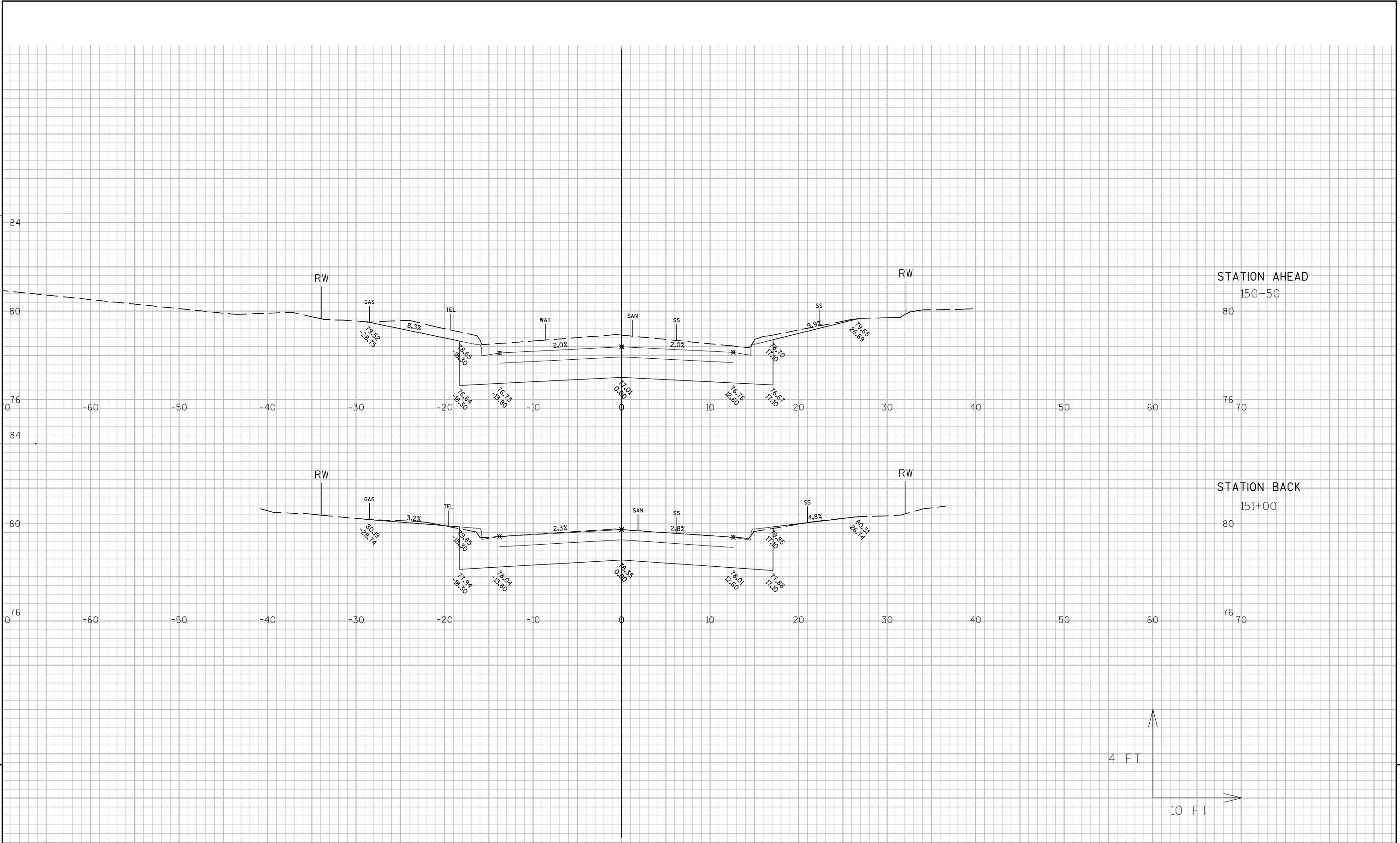
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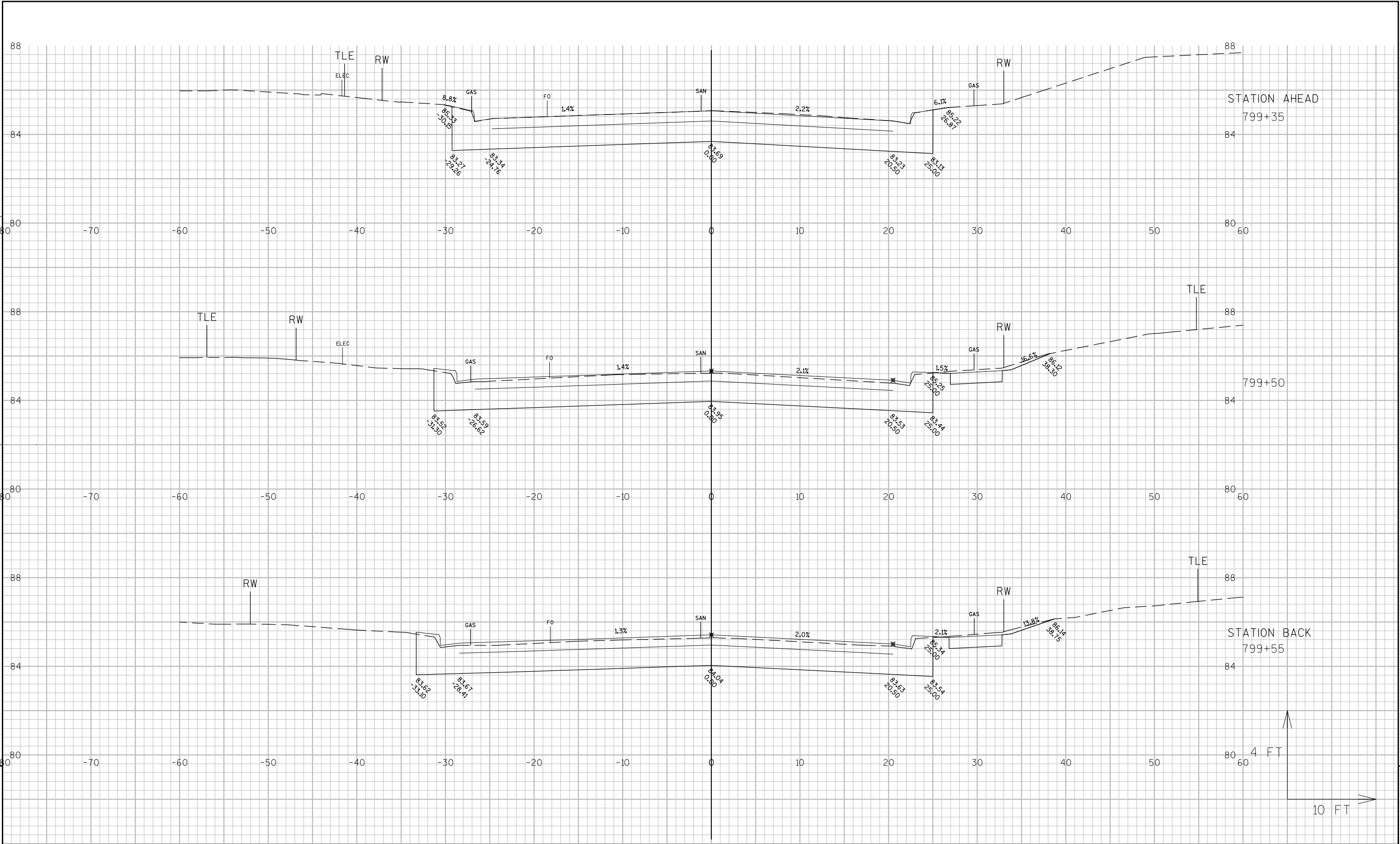
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PROJECT NO: 2718-11-70

HWY: S EAST AVENUE

COUNTY: WAUKESHA

CROSS SECTIONS: COLLEGE AVENUE

SHEET

9

FILE NAME : T:\1102728\add\Civil\3D\27181170\SheetsPlan\090208 XS-COLLEGE.DWG

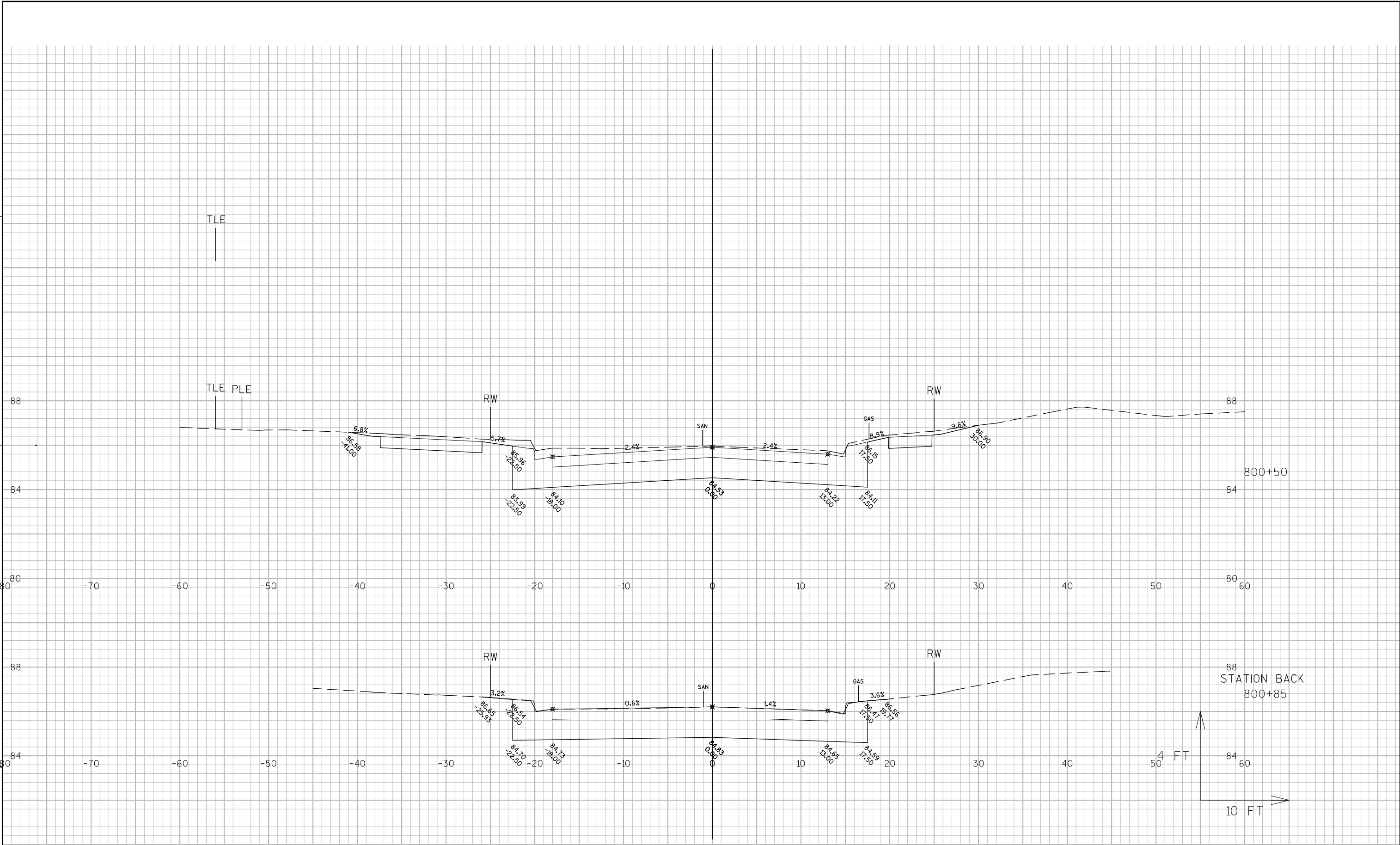
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PLOT BY : GUTIERREZ, TINA R.

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PROJECT NO:2718-11-70

HWY:S EAST AVENUE

COUNTY:WAUKESHA

CROSS SECTIONS: COLLEGE AVENUE

SHEET

9

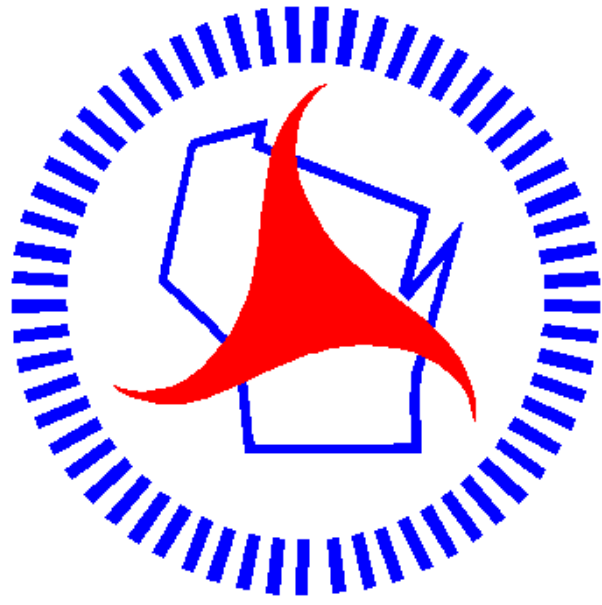
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PLOT DATE : 1/29/2013 10:16 AM

PLOT BY : GUTIERREZ, TINA R.

PLOT NAME : PLOT SCALE : 1:10 XREF

Notes



Wisconsin Department of Transportation

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