SEL

PROJECT ID: 2722-11-70

WITH: N/A

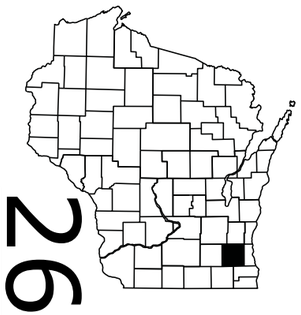
COUNTY: WAUKESHA

FEB 2014

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 = 250



26

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

LINCOLN AVENUE

CALHOUN RD TO CTH O (MOORLAND RD)

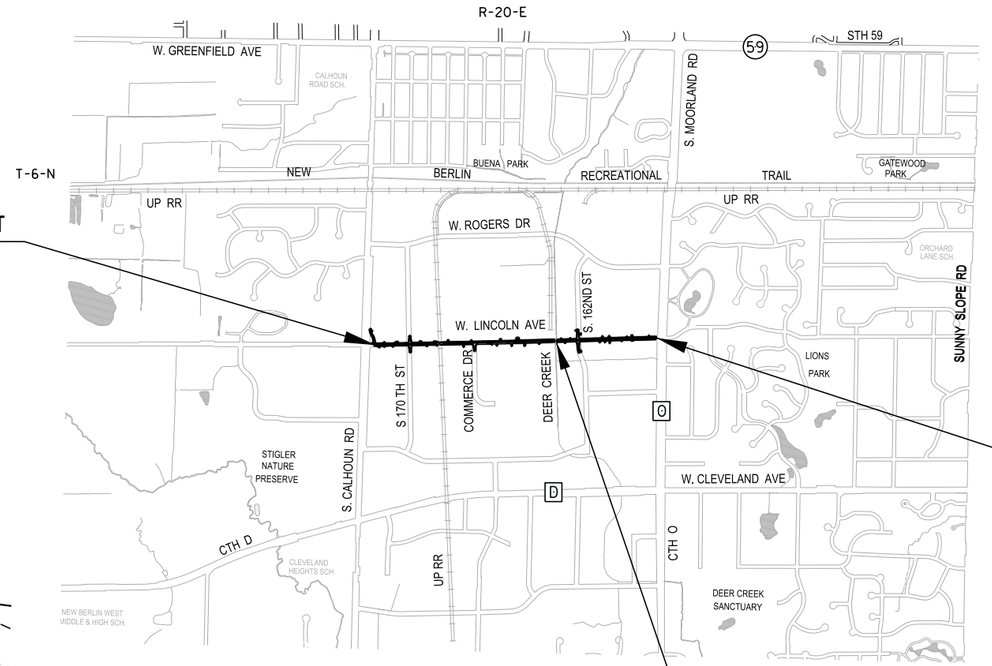
LOCAL STREET

WAUKESHA COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2722-11-70	WISC 2014003	1

STATE PROJECT NUMBER

2722-11-70



BEGIN PROJECT

STA 201+80.00

Y = 371,013.07

X = 501,079.75

END PROJECT

STA 251+20.37

EXCEPTION TO NET CENTERLINE

STA 233+40.29 TO STA 233+62.56

N

LAYOUT

SCALE 0 0.25 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.932 URBAN MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), WAUKESHA COUNTY, NAD 1983(97)

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

DESIGN DESIGNATION

A.A.D.T.	2014	=	5,400
A.A.D.T.	2034	=	5,900
D.H.V.	2034	=	861
D.D.		=	58/42
T.		=	12%
DESIGN SPEED		=	40 MPH
ESALS		=	1,912,600

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (336.45)
- CULVERT (Profile View)

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

ACCEPTED FOR CITY OF NEW BERLIN

9/23/13 (Date) J. P. Walker (City Engineer)

ORIGINAL PLANS PREPARED BY

BLOOM COMPANIES, LLC
Infrastructure Innovation and Ingenuity

WISCONSIN
SUSAN M. COOK
E-23367
MENOMONEE FALLS, WI
PROFESSIONAL ENGINEER

9/21/13 (Date) Susan Cook (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	BLOOM COMPANIES
Designer	BLOOM COMPANIES
Management Consultant	DAAR CORPORATION
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 9/24/2013 (Management Consultant Signature)

E

2

GENERAL NOTES

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

PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT DIGGERS HOTLINE AND NON-MEMBER UTILITIES FOR FIELD LOCATIONS FOR ALL FACILITIES IN THE AREA OF THE PROJECT. THE LOCATION OF EXISTING AND PROPOSED UTILITY FACILITIES AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY FACILITIES WITH IN THE PROJECT AREA THAT ARE NOT SHOWN.

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS INDICATED FOR REMOVAL BY THE ENGINEER.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM THE ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES OR FROM GRUBBING OF TREES OR STUMPS SHALL BE BACKFILLED WITH GRANULAR BACKFILL, WHICH SHALL BE INCLUDED IN THE COST OF THE ITEM.

PAVEMENTS ARE TO BE SAWN OR MILLED TO PROVIDE A BUTT JOINT AT ALL ASPHALTIC INTERSECTIONS OR DRIVEWAYS.

WHEN THE QUANTITY OF ITEMS OF BASE AGGREGATE DENSE OR HMA PAVEMENT IS MEASURED FOR BY THE TON, THE DEPTH OF THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

RADII SHOWN ARE TO FACE OF CURB.

DISTURBED DRIVEWAYS SHALL BE REPLACED IN KIND. BASE AGGREGATE DENSE WILL BE USED UNDER ALL DRIVEWAYS.

THE EROSION CONTROL ITEMS SHOWN IN THE PLANS AND QUANTITIES ARE TO BE INSTALLED PRIOR TO CONSTRUCTION. THE EXACT LOCATIONS AND DIMENSIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD. ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DEEMS THE DEVICE IS NO LONGER NECESSARY.

ALL EXISTING AND PROPOSED DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS THAT WILL BE ADJUSTED OR RECONSTRUCTED SHALL BE CLEANED TO THE SATISFACTION OF THE ENGINEER. ALL COSTS ASSOCIATED WITH THIS SHALL BE INCLUDED IN THE APPLICABLE UNIT PRICES.

MANHOLE RIM ELEVATIONS ARE PROVIDED TO ASSIST THE CONTRACTOR IN ORDERING MATERIALS. THESE ELEVATIONS ARE FOR INFORMATION ONLY, AND FINAL ADJUSTMENT OF STRUCTURES TO MEET SITE CONDITIONS WILL BE NECESSARY. NO PAYMENT WILL BE MADE FOR FINAL ADJUSTMENT OF STRUCTURES, AND THE COST THEREOF SHALL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE FOR SAID STRUCTURE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ALL STREETS USED BY THE CONTRACTOR, SUBCONTRACTOR, AND SUPPLIERS CLEAN AND FREE OF ALL DIRT, MUD, AND OTHER CONSTRUCTION DEBRIS. ALL STREETS SHALL BE THROUGHLY CLEANED AT THE END OF EACH WORKDAY OR AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY AND SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE SODDED AREAS AND AREAS WITHIN THE BIOSWALES, SHALL BE RESTORED WITH SALVAGED TOPSOIL FERTILIZER AND SEED AS DIRECTED BY THE ENGINEER. QUANTITIES FOR FINISHED ITEMS INCLUDE RESTORATION EXTENDING 3 FEET BEYOND THE SLOPE INTERCEPT.

A CONVERSTION FACTOR OF 2.1 TONS/CY WAS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE AND 1.8 TONS/CY WAS USED FOR SELECT CRUSHED MATERIAL.

ALL TYPES OF HMA PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS.

TOTAL LAYER PAVEMENT THICKNESS	LAYERS	NOMINAL MAXIMUM SIZE GRADATIONS	ASPHALTIC MATERIAL
6"	1 3/4" UPPER LAYER 2" LOWER LAYER 2 1/4" LOWER LAYER	12.5 mm 12.5 mm 19.0 mm	PG 58-28 PG 58-28 PG 58-28

UTILITY CONTACTS

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

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

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

AT&T WISCONSIN
MR. JOEL OSTRENGRA
2005 PEWAUKEE RD.
WAUKESHA, WI 53188
(262) 896-6527
jo4761@att.com

MIDWEST FIBER NETWORKS
MR. RICHARD TRGOVEC
3701 W. BURNHAM ST., SUITE C
MILWAUKEE, WI 53215
(414) 672-5612
rtrgovec@midwestfibernetworks.com

MI-TECH
MS. LORI WITTHUHN
16510 W. ROGER DR.
NEW BERLIN, WI 53151
(920) 655-7258
lwitthuh@mi-tech.us

CITY OF NEW BERLIN SANITARY AND WATER
MR. JIM HART
3805 S. CASPER DRIVE
NEW BERLIN, WI 53151-0921
(262) 786-7086
jHART@newberlin.org

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

TW TELECOM
MR. BRAHIM GADDOUR
3235 INTERTECH DR., SUITE 600
BROOKFIELD, WI 53045-5140
(414) 908-1027
brahimgaddour@twtelecom.com

UNION PACIFIC RAILROAD COMPANY
MR. JOHN VENICE
101 NORTH WACKER DRIVE, SUITE 1920
CHICAGO IL 60606
(312) 777-2043
jvenice@up.com

WE ENERGIES GAS OPERATIONS
MR. JOE DABLE
1830 S. WEST AVENUE
WAUKESHA, WI 53189
(414) 944-5543
joe.dable@we-energies.com

WE ENERGIES ELECTRIC
MR. RICHARD WROBELESKI
1830 S. WEST AVENUE
WAUKESHA, WI 53189
(414) 588-5435
richard.wrobeleski@we-energies.com

OTHER AGENCIES

CITY OF NEW BERLIN ENGINEERING DEPARTMENT
MR. J.P. WALKER, P.E.
3805 S. CASPER DRIVE
NEW BERLIN, WI 53151-0921
(262) 797-2445
jwalker@newberlin.org

WAUKESHA COUNTY DEPT. OF PUBLIC WORKS
MR. GARY EVANS
ENGINEERING SERVICE MANAGER
515 W. MORELAND RD.
WAUKESHA, WI 53188-3677
(262) 548-7740
gevans@waukeshacounty.gov

DISTRICT DNR AREA LIAISON WISCONSIN DEPARTMENT OF NATURAL RESOURCES
MR. CRAIG WEBSTER
141 NW BARSTOW STREET
WAUKESHA, WI 53188
(262) 574-2136
craig.webster@wisconsin.gov

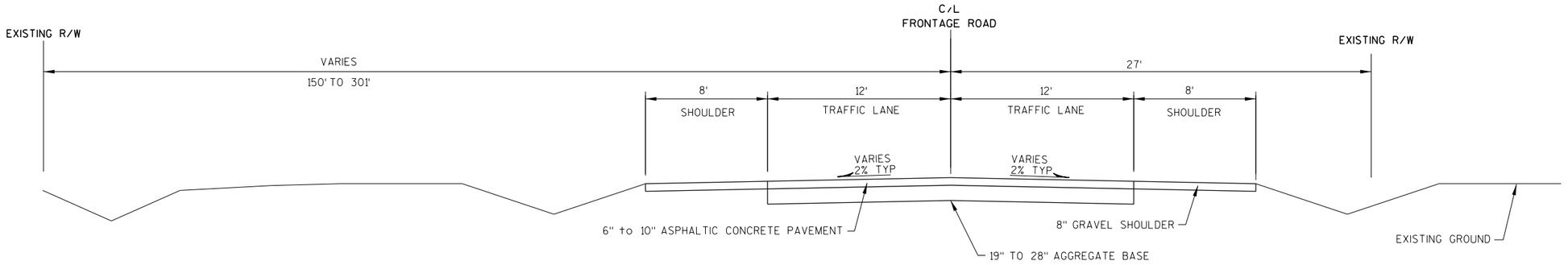
CITY OF NEW BERLIN FIRE DEPARTMENT
16300 W. NATIONAL AVE.
NEW BERLIN, WI 53151
(262) 785-6120

ABBREVIATIONS

AEW	APRON END WALL
AV	AIR VALVE
B	BEND
BOC	BACK OF CURB
BUS	BUSINESS
CABC	CRUSHED AGGREGATE BASE COURSE
CB	CATCH BASIN
CE	COMMERCIAL ENTRANCE
C/L	CENTERLINE
CMPA	CORRUGATED METAL PIPE ARCH
CMP	CORRUGATED METAL PIPE
CPCS	CULVERT PIPE CORRUGATED STEEL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CTR	CENTER
DIA	DIAMETER
E	ELLIPTICAL
G	GARAGE
H	HOUSE
HMA	HOT MIX ASPHALT
HP	HIGH POINT
LOC	LOCATION
MH	MANHOLE
PACS	PIPE ARCH CORRUGATED STEEL
PL	PROPERTY LINE
POC	POINT OF CURVE
PP	POWER POLE
PC	POINT OF CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PT	POINT OF TANGENCY
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RO	RUN OUT
R/W	RIGHT-OF-WAY
S	SOUTH OR SHED
SS	STORM SEWER
STA	STATION
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
TLE	TEMPORARY LIMITED EASEMENT
VC	VERTICAL CURVE

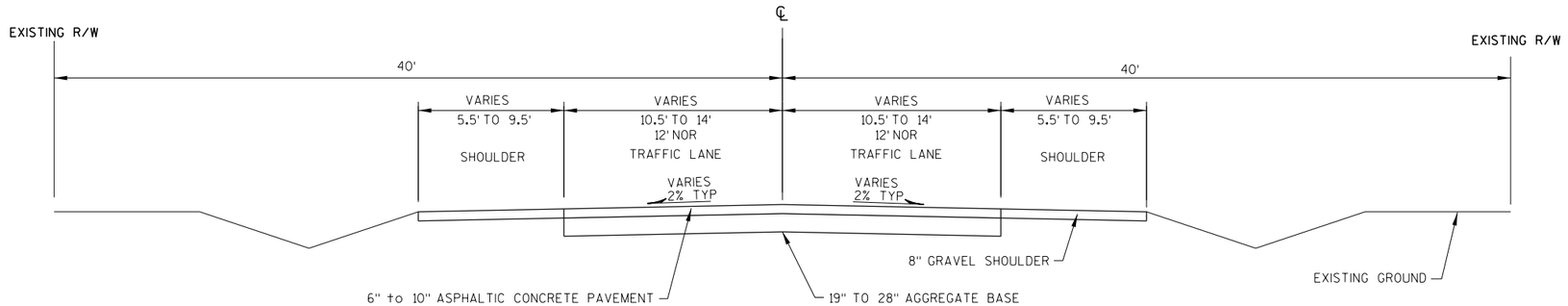
ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PAVING DETAILS
EROSION CONTROL PLANS
STORM SEWER PLANS
SANITARY & WATER MAIN ADJUSTMENT PLANS
BIOSWALE PLANS
PAVEMENT MARKING PLANS
TRAFFIC CONTROL PLANS
DETOUR PLAN
ALIGNMENT PLANS



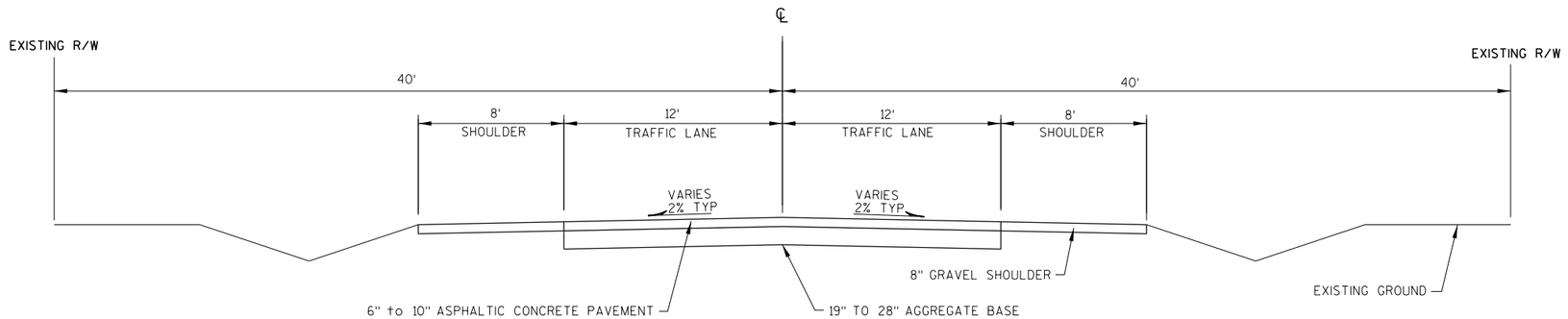
TYPICAL EXISTING SECTION

FRONTAGE ROAD



TYPICAL EXISTING SECTION SIDE ROADS

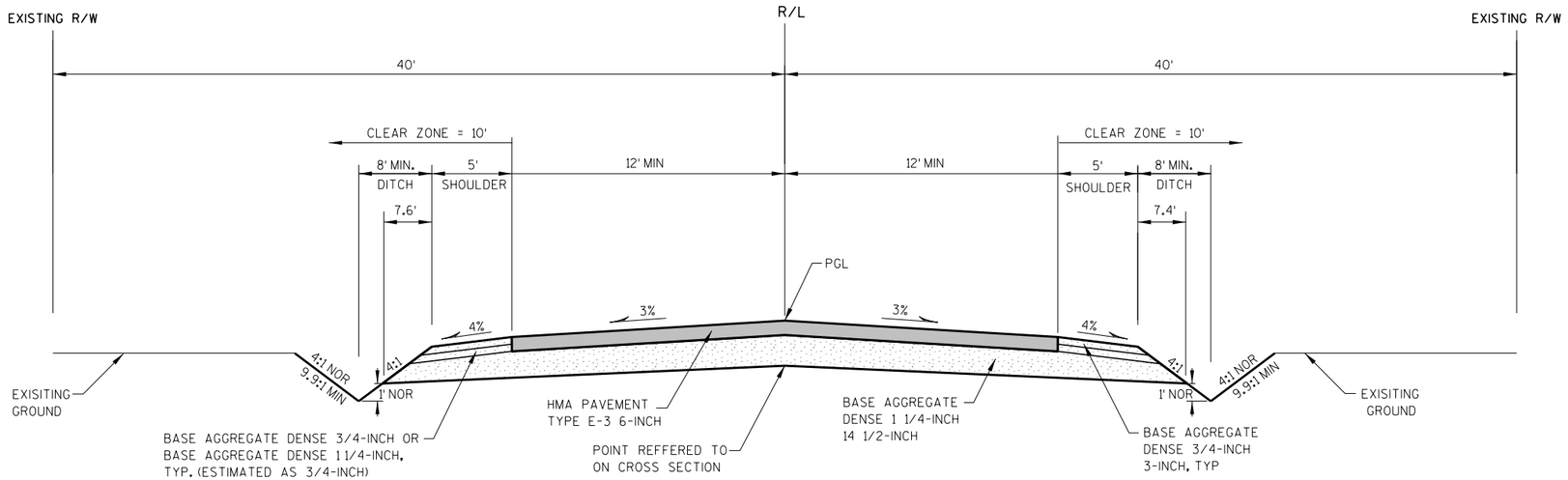
S. 170TH STREET
S. COMMERCE DRIVE
S. 162ND STREET



TYPICAL EXISTING SECTION

STA 201+80 TO 233+40
STA 233+63 TO 251+20

PROJECT NO: 2722-11-70	HWY: WEST LINCOLN AVENUE	COUNTY: WAUKESHA	TYPICAL EXISTING SECTIONS	SCALE: NTS	SHEET 3	E

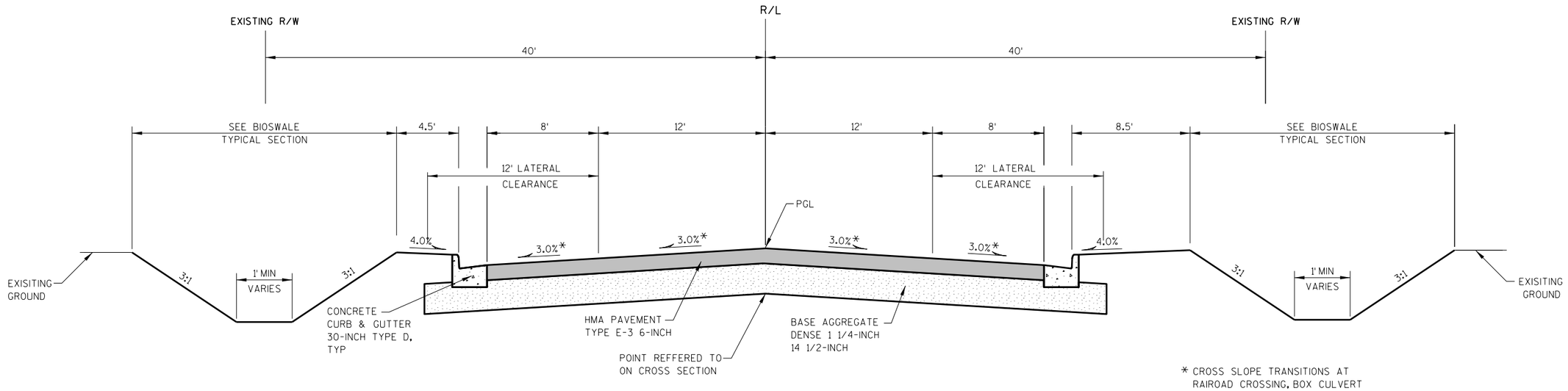


TYPICAL FINISHED SECTION
SIDE ROADS

S. 170TH ST STA 18+49 TO STA 21+50
S. COMMERCE DR STA 43+50 TO STA 21+50
S. 162ND ST STA 57+73 TO STA 61+95

NOTE

1) FOR FINISHING ITEMS SEE CONSTRUCTION DETAIL "FINISHING ITEMS AND SLOPE ROUNDING DETAIL"

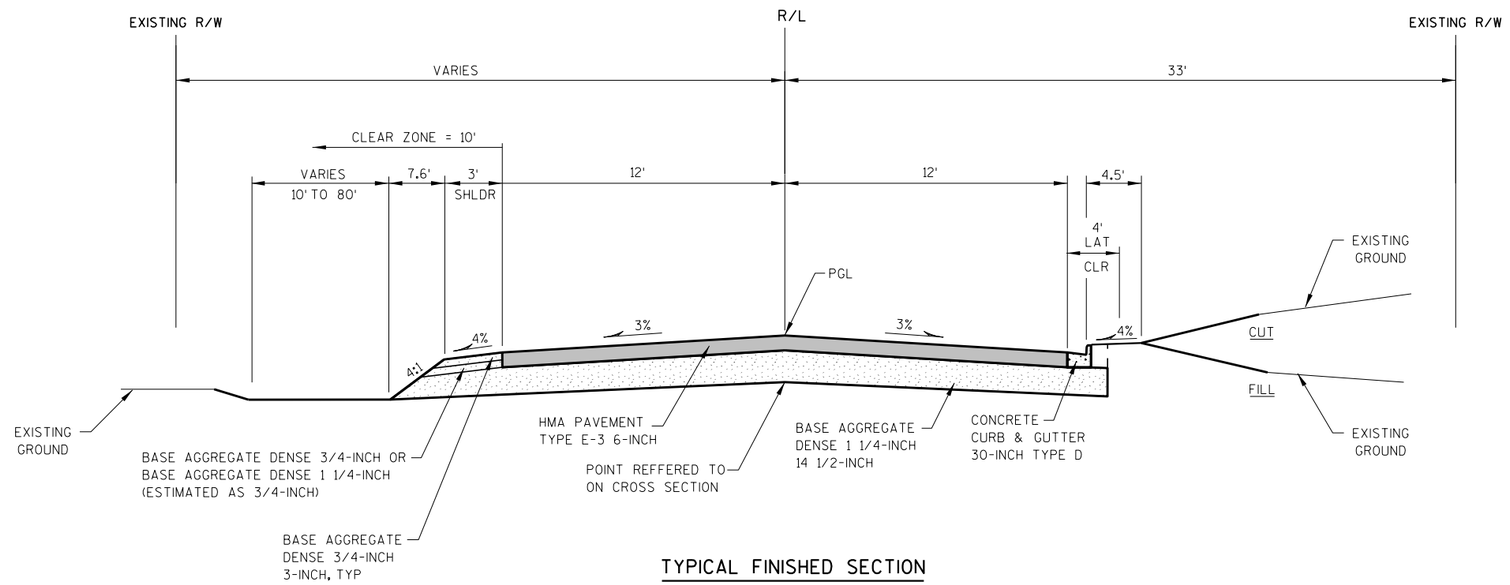


TYPICAL FINISHED SECTION
W. LINCOLN AVENUE
STA 201+80 TO STA 251+20

* CROSS SLOPE TRANSITIONS AT RAIROAD CROSSING, BOX CULVERT AND SIDE ROADS. SEE PAVEMENT DETAIL PLANS

PROJECT NO: 2722-11-70	HWY: WEST LINCOLN AVENUE	COUNTY: WAUKESHA	TYPICAL FINISHED SECTIONS	SCALE: NTS	SHEET 4	E

2



TYPICAL FINISHED SECTION

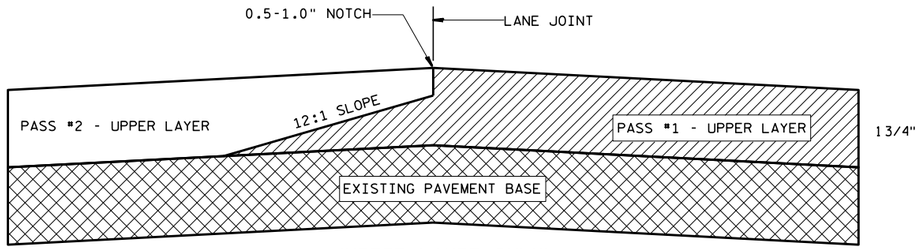
FRONTAGE ROAD

STA 400+23 TO STA 403+00

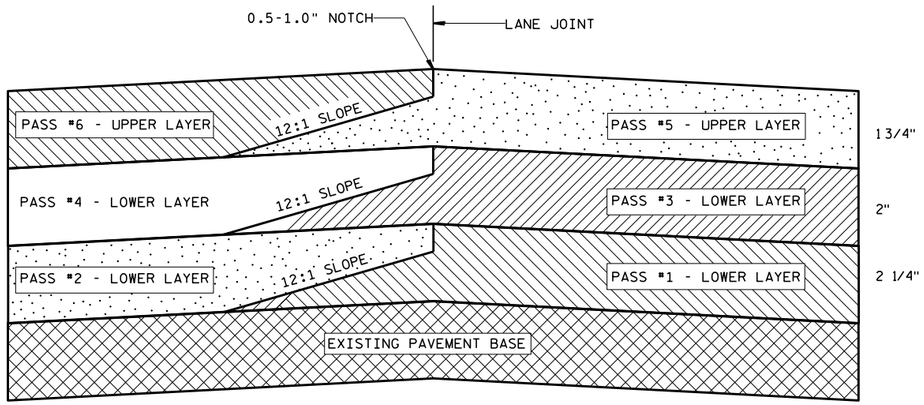
NOTE

1) FOR FINISHING ITEMS SEE CONSTRUCTION DETAIL

PROJECT NO: 2722-11-70	HWY: WEST LINCOLN AVENUE	COUNTY: WAUKESHA	TYPICAL FINISHED SECTIONS	SCALE: NTS	SHEET 5	E

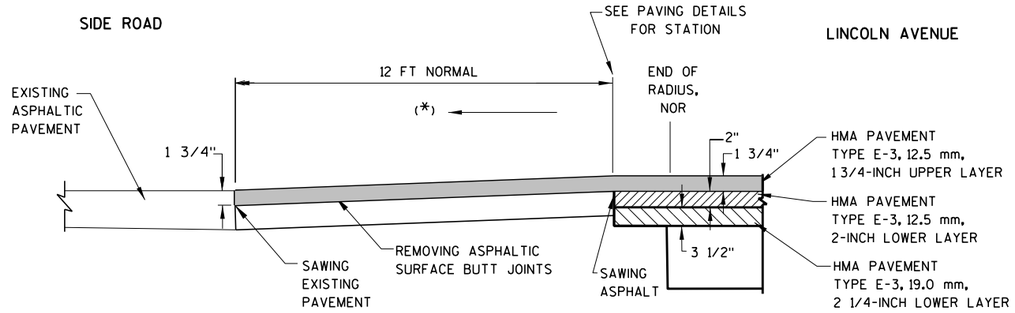


(UPPER LAYER ONLY)



(LOWER AND UPPER LAYERS)

TAPERED AND NOTCHED LONGITUDINAL PAVEMENT JOINT DETAIL

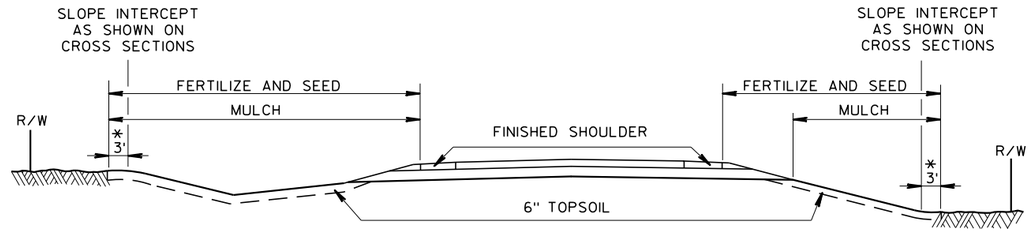


(*) OR AS DIRECTED BY THE ENGNEER

NOTE

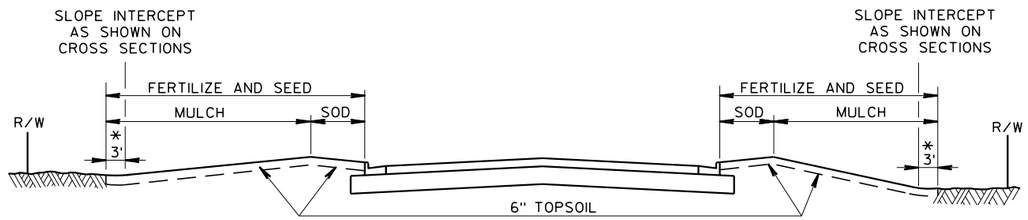
1) ADDITIONAL AREA ON LINCOLN AVE. STA 201+07 TO 201+80, AS SHOWN ON THE PAVING DETAILS

BUTTED JOINT DETAIL



RURAL SECTION

* EXTEND FINISHING ITEMS 3' BEYOND SLOPE INTERCEPT EXCEPT AT WETLANDS



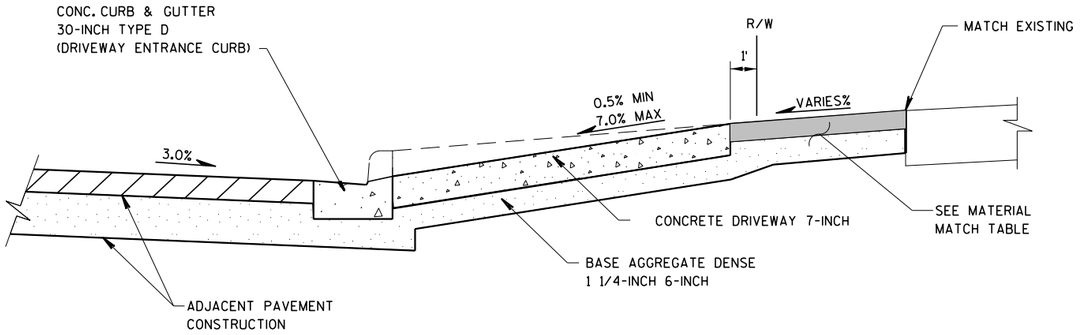
URBAN SECTION

NOTES

1) USE SEED MIXTURE #20 EXCEPT WHEN ADJACENT TO WETLANDS USE SEED MIXTURE # 80. USE FERTILIZER TYPE B.

2) DO NOT APPLY FINISHING ITEMS TO THE BIOSWALES.

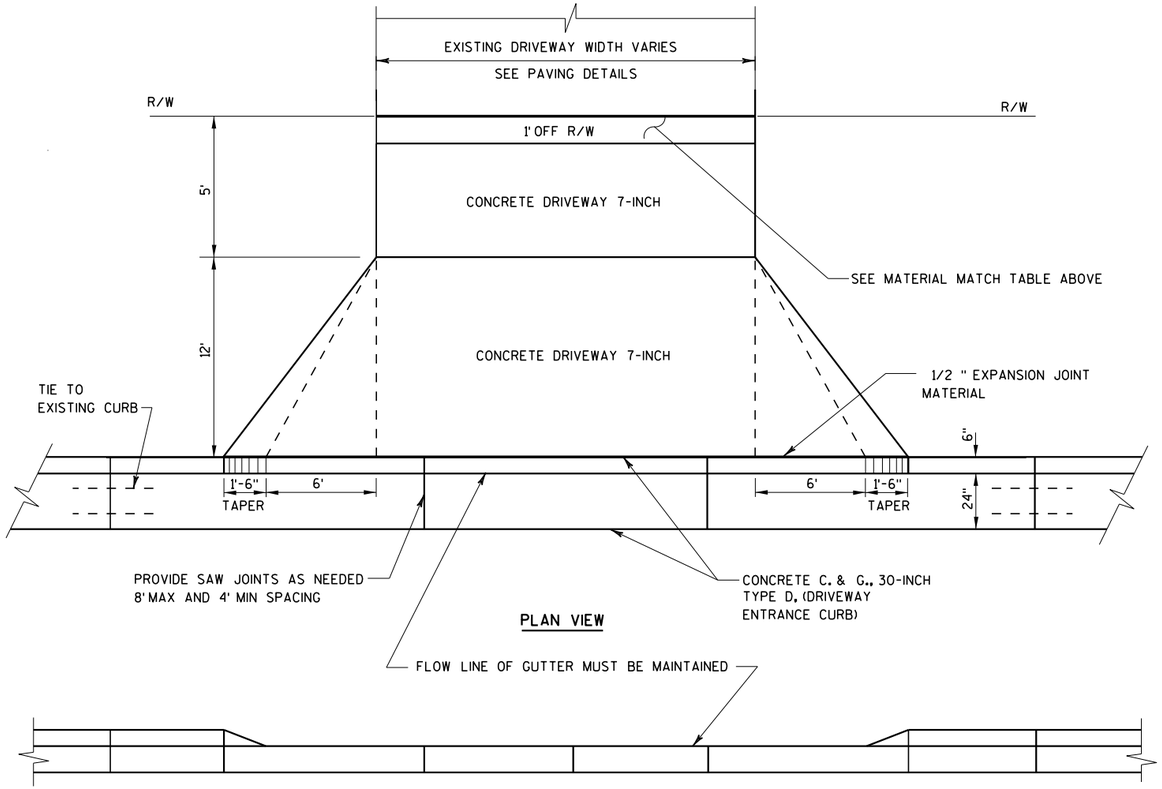
FINISHING ITEMS AND SLOPE ROUNDING DETAIL



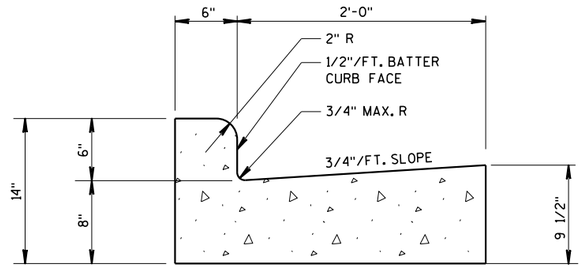
SECTION

DRIVEWAY MATERIAL MATCH TABLE

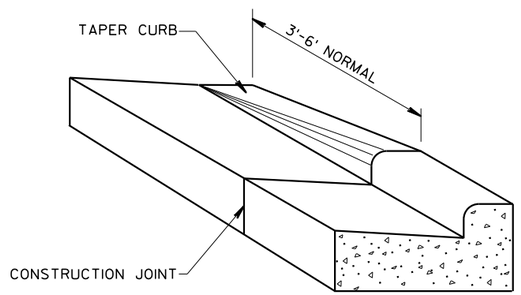
EXISTING	NEW
ASPHALT	4" ASPHALTIC SURFACE DRIVEWAYS 6" BASE AGGREGATE DENSE 1 1/4-INCH
GRAVEL	6" BASE AGGREGATE DENSE 1 1/4-INCH
CONCRETE	CONCRETE DRIVEWAY 7-INCH OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH



URBAN DRIVEWAY ENTRANCE DETAIL



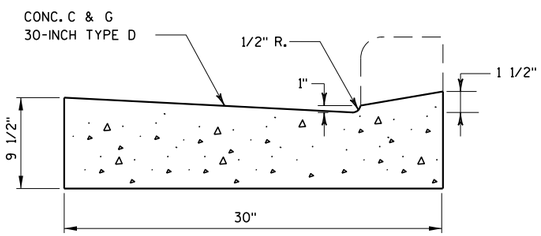
CONCRETE CURB & GUTTER 30-INCH TYPE D DETAIL



CURB & GUTTER TERMINI DETAIL

NOTE

1) PAID FOR AS CONCRETE CURB & GUTTER TYPE D 30-INCH

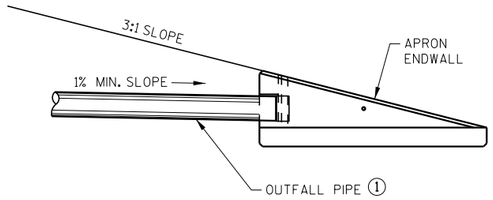


DRIVEWAY ENTRANCE CURB DETAIL

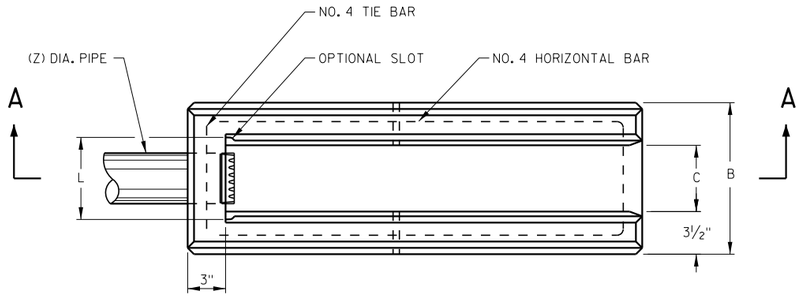
(ALL DRIVEWAYS)

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SCALE: NTS	SHEET 7	E

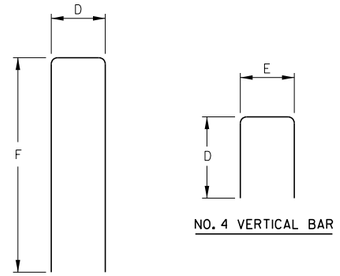
DIMENSIONS IN INCHES											
PIPE DIA.	A	B	C	D	E	F	G	H	J	L	Z
8	10	16	9 1/4	13	12	48	52	15	4 7/8	10 1/2	8
12	14	18	11 1/4	15	14	54	60	17	6 1/8	12 1/2	12



INSTALLATION DETAIL



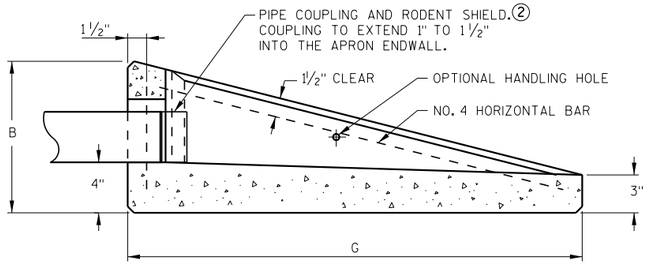
PLAN VIEW



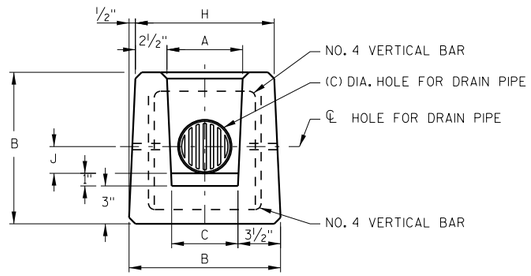
NO. 4 HORIZONTAL BAR

NO. 4 VERTICAL BAR

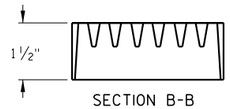
BAR STEEL REINFORCEMENT DETAILS



SECTION A-A



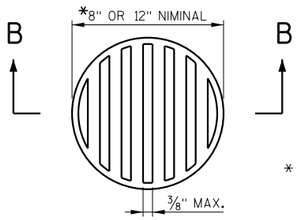
END VIEW



SECTION B-B

NOTE

1) ORIENT SHEILD SO SLOTS ARE VERTICAL.



* DIMENSIONS ARE APPROXIMATE, THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

(2)

RODENT SHIELD

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.

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ADJACENT SLOPE. SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE BIOSWALES.

(1) THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHLORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHLORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE. ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

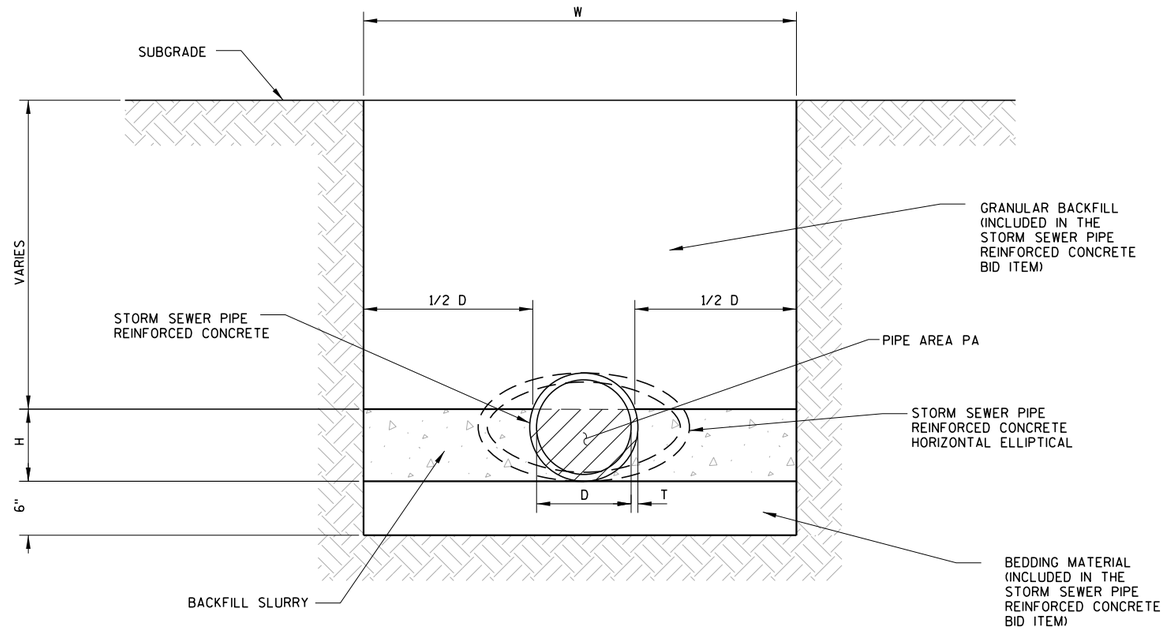
(2) THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 8-INCH AND 12-INCH DETAIL

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SCALE: NTS	SHEET 8	E

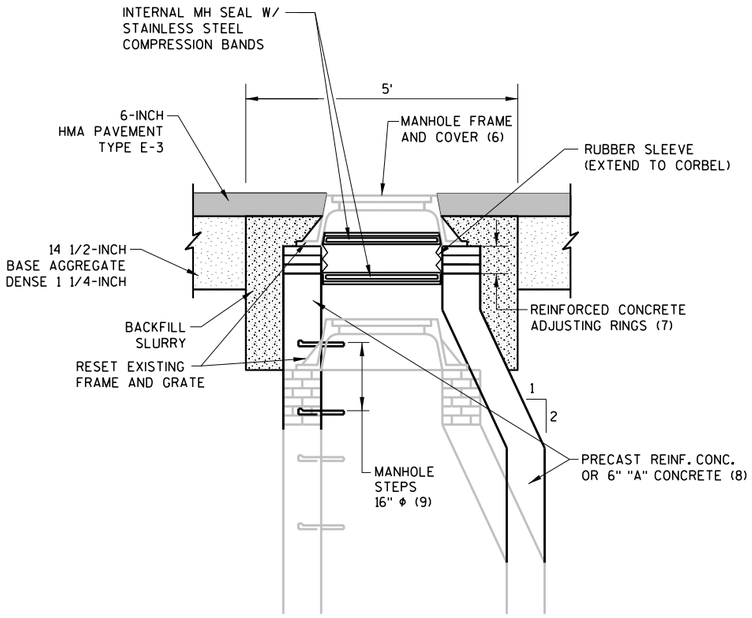
BACKFILL SLURRY AREA (FOR INFORMATION ONLY)						
D	T	H	W	PA	TA	SA
PIPE SIZE INCHES DIAMETER IN	THICKNESS IN	2/3(D+2T) HEIGHT SLURRY BACKFILL	(2x1/2D)+(2xT)+D TRENCH WIDTH LF	PIPE AREA IN SLURRY BACKFILL SF	H x W TRENCH AREA IN SLURRY BACKFILL SF	TA-PA SLURRY AREA SF
12	2.00	0.89	2.33	0.99	2.07	1.08
15	2.25	1.09	2.88	1.49	3.14	1.65
18	2.50	1.28	3.42	2.05	4.38	2.33
24	3.00	1.67	4.50	3.50	7.52	4.02
30	3.50	2.05	5.58	5.29	11.44	6.15
36	4.00	2.45	6.67	7.55	16.34	8.79
42	4.50	2.83	7.75	10.08	21.93	11.85
48	5.00	3.22	8.83	13.07	28.43	15.36
54	5.50	3.61	9.92	16.40	35.81	19.41
60	6.00	4.00	11.00	20.17	44.00	23.83
72	7.00	4.78	13.17	28.81	62.95	34.14

BACKFILL SLURRY VOLUME (CUBIC YARDS) = $\frac{\text{SLURRY AREA (SA) X PIPE PLAN LENGTH}}{27}$



BACKFILL SLURRY DETAIL-TRENCH

(FOR STORM SEWER TRENCHES)



EXISTING FRAMES & COVERS TO BE SET TO NEW GRADE

0" TO 12" OF ADJUSTMENT WILL BE PAID AS ITEM OF "ADJUSTING SANITARY MANHOLES."

MORE THAN 12" OF ADJUSTMENT WILL BE PAID AS ITEM OF "RECONSTRUCTING SANITARY MANHOLES."

NOTES

1) IF ANY REQUIRED ADJUSTMENT (0" TO >12") EXTENDS INTO THE CORBEL, THE ADJUSTMENT SHALL BE PAID AS ITEM OF "RECONSTRUCTING SANITARY MANHOLES."

2) IF THE ENGINEER IN THE FIELD, UPON INSPECTING THE EXISITNG STRUCTURE, DEEMS THE EXISITNG STRUCTURE TO BE IN A POOR CONDITION THE STRUCTURE SHALL BE RECONSTRUCTED AND PAID UNDER THE ITEM OF "RECONSTRUCTING SANITARY MANHOLES."

3) FOR ALL RECONSTRUCTING/ADJUSTING SANITARY MANHOLES SUBJECTED TO TRUCK TRAFFIC LOADING, ADJUSTMENT SHALL BE MADE USING GRADE "A" CONCRETE.

4) PROVIDE INTERNAL MANHOLE SEAL CONSISTING OF A RUBBER SLEEVE AND COMPRESSION BANDS AS SHOWN IN THE DETAIL.

5) SEE MISCELLANEOUS QUANTITIES FOR AMOUNT OF ADJUSTMENTS AND LOCATIONS.

6) ADJUST 3/8-INCH TO 1/2-INCH BELOW FINAL PAVEMENT GRADE. PER CITY OF NEW BERLIN SPECS.

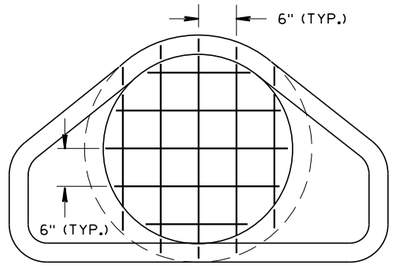
7) 26-INCH INSIDE DIAMETER MINIMUM. 22-INCH MAXIMUM ADJUSTMENT FOR EXISTING MANHOLES. SEE CITY OF NEW BERLIN SPECS.

8) BARREL/CHIMNEY SECTION IF GREATER THAN 22-INCH DEPTH. SEE CITY OF NEW BERLIN SPECS.

9) PER SWS SECTION 8.40.0 A OR B. SEE CITY OF NEW BERLIN SPECS.

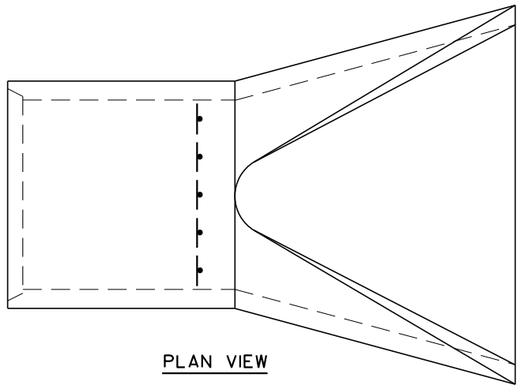
RECONSTRUCTING OR ADJUSTING SANITARY MANHOLE DETAIL

STA 202+51	STA 228+72
STA 205+01	STA 231+74
STA 207+85	STA 233+73
STA 211+12	STA 234+71
STA 214+12	STA 237+41
STA 217+10	STA 239+62
STA 219+18	STA 242+12
STA 220+19	STA 245+12
STA 223+10	STA 248+11
STA 225+90	STA 251+11

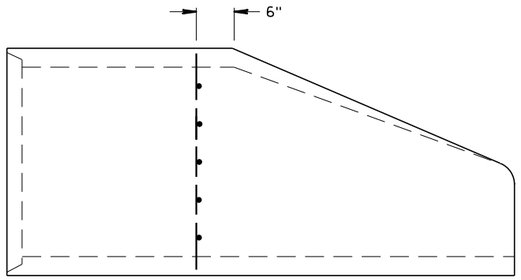


END VIEW

NOTE: 1) DRILL HOLES THROUGH ENDWALL TO PROVIDE FOR VERTICAL #3 BARS. WELD HORIZONTAL #3 BARS TO VERTICAL BARS.



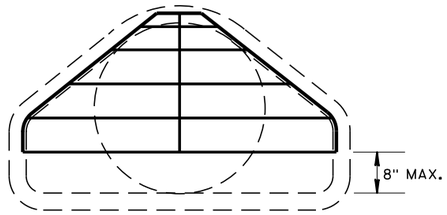
PLAN VIEW

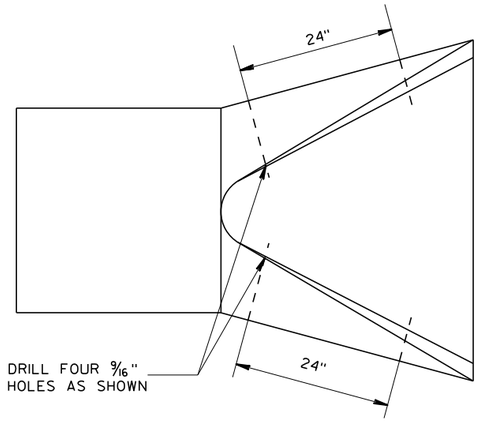


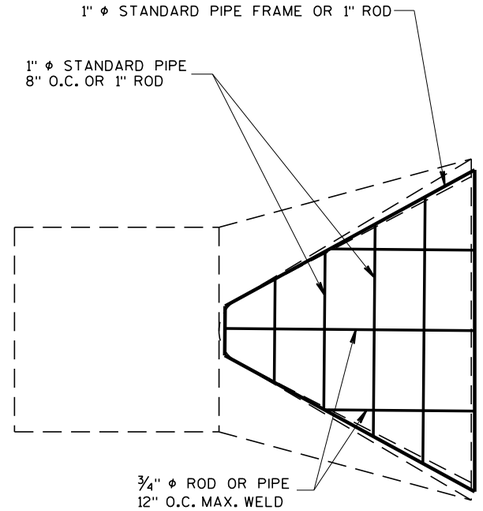
SIDE VIEW

PIPE GRATE DETAIL

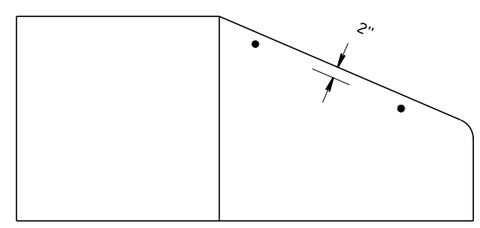
(FOR CIRCULAR PIPE 24" AND LARGER)

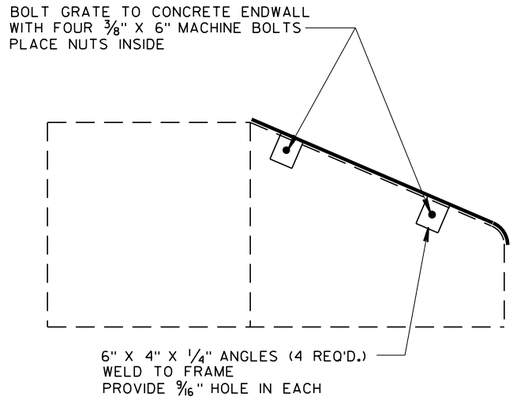






AT EACH PIPE

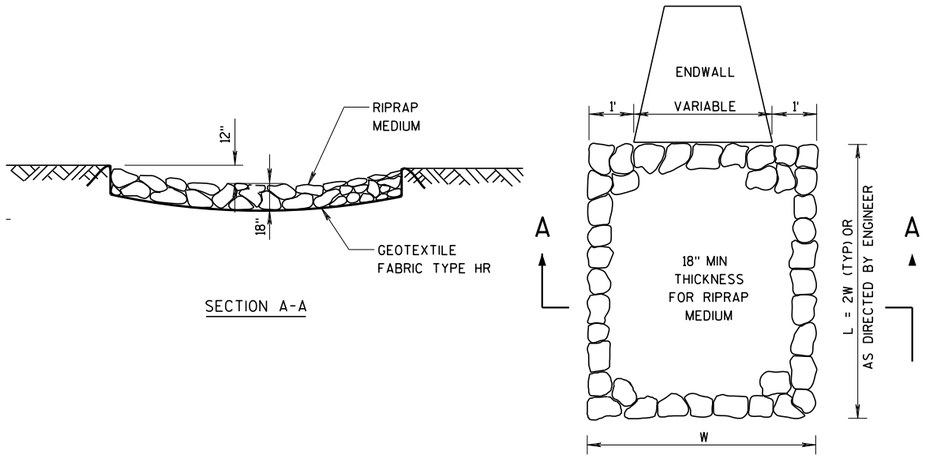




LARGE PIPE GRATE DETAIL

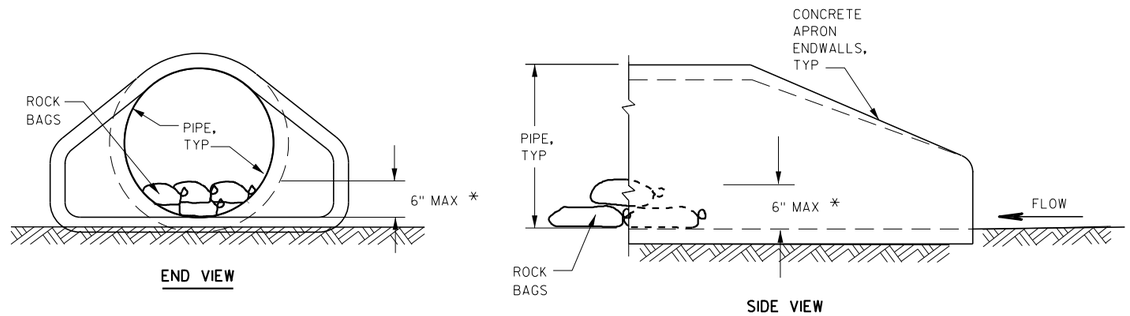
(FOR HORIZONTAL ELLIPTICAL PIPES)
PRECAST OUTFALL 16.1
STA 233+15.5, 28.5' LT

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SCALE: NTS	SHEET 11	E



RIPRAP MEDIUM INSTALLATION DETAIL

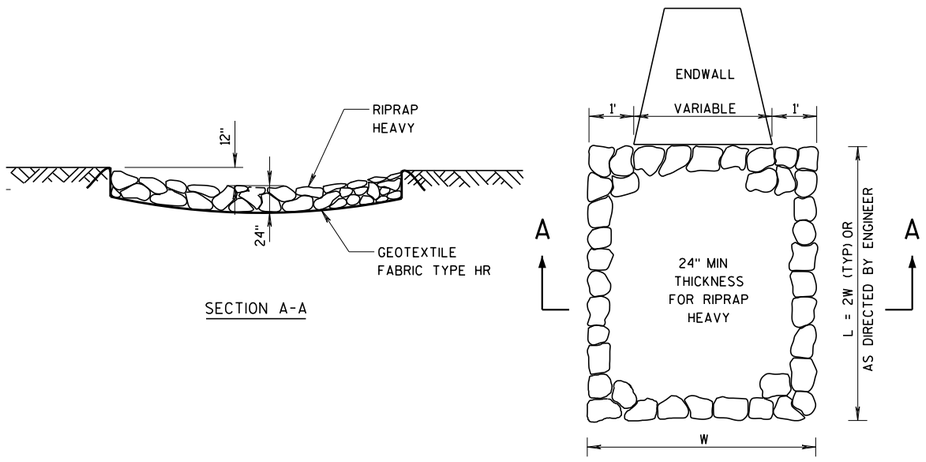
STA 207+54 RT	STA 219+35 RT
STA 207+55 LT	STA 219+32 RT
STA 208+13 LT	STA 237+12 LT
STA 208+14 RT	STA 237+14 RT
STA 213+50 LT/RT	STA 237+69 RT
STA 219+01 RT	STA 237+75 LT



* OR AS DIRECTED BY THE ENGINEER

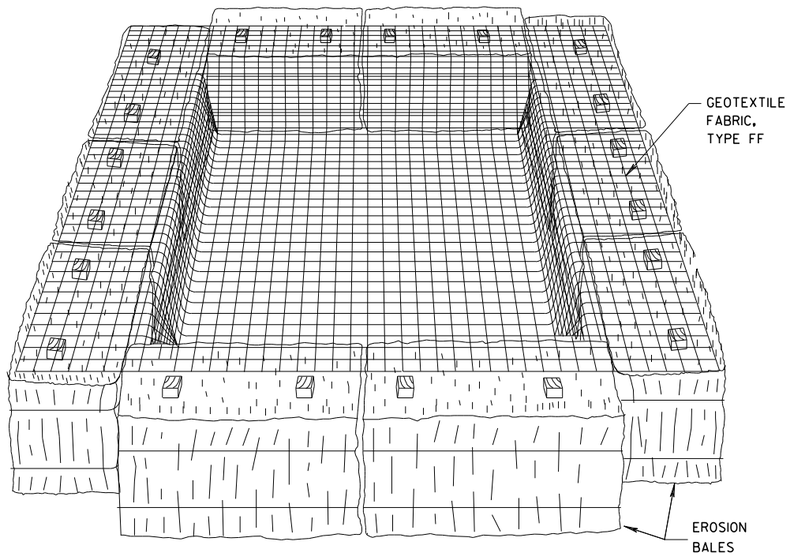
CULVERT PIPE CHECKS DETAIL

(INSTALL AT INLET END ONLY)



RIPRAP HEAVY INSTALLATION DETAIL

STA 233+07 RT
STA 233+19 LT
STA 233+84 RT



TEMPORARY SEDIMENT BASIN DETAIL

EXAMPLE:
CONTRACTOR INDICATES PUMP CAPABLE OF 50 GPM
HEIGHT OF BALES = 1.5 FT.
SOLUTION:
SV (C.F.) = 16 X 50

SV = 800 C.F.

$$\frac{800 \text{ C.F.}}{1.5 \text{ FT.}} = 533 \text{ S.F.}$$

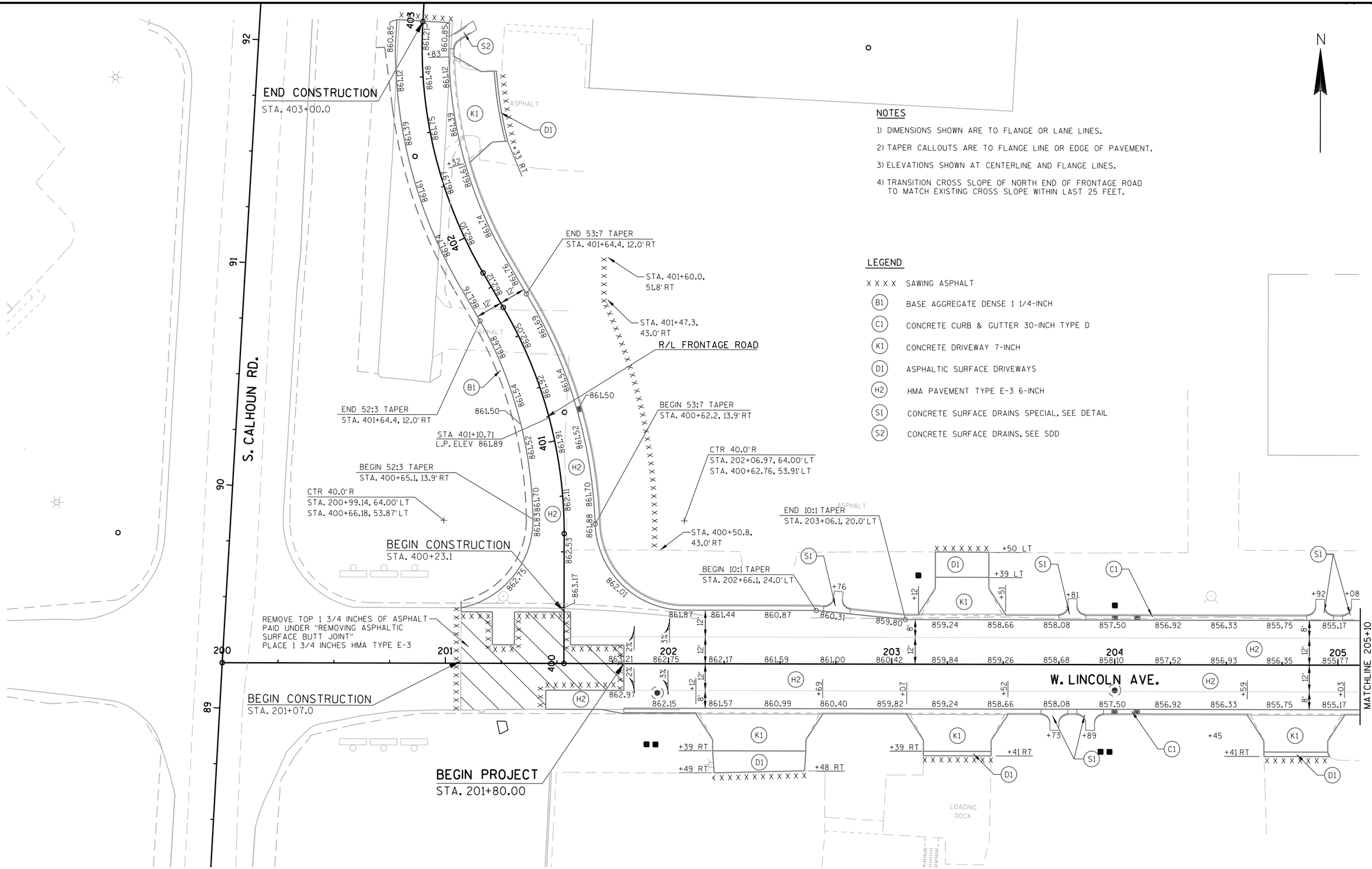
USE A 20 FT. X 27 FT. BASIN

NOTES

1) SEE EROSION CONTROL PLANS FOR LOCATION OF TEMPORARY SEDIMENT BASINS. ADDITIONALLY, THE CONTRACTOR SHALL PUMP WATER FROM DEWATERING OPERATIONS INTO TEMPORARY SEDIMENT BASINS PRIOR TO DISCHARGING INTO ROADSIDE DITCHES.

2) BASIN SHALL BE KEPT LESS THAN 10% FULL OF SEDIMENT. GEOTEXTILE FABRIC AND SEDIMENTS SHALL BE DISPOSED BY THE CONTRACTOR OFF OF THE PROJECT SITE.

3) TEMPORARY SETTLING BASIN SHALL BE PAID FOR AS EROSION BALES AND GEOTEXTILE FABRIC TYPE FF.



N

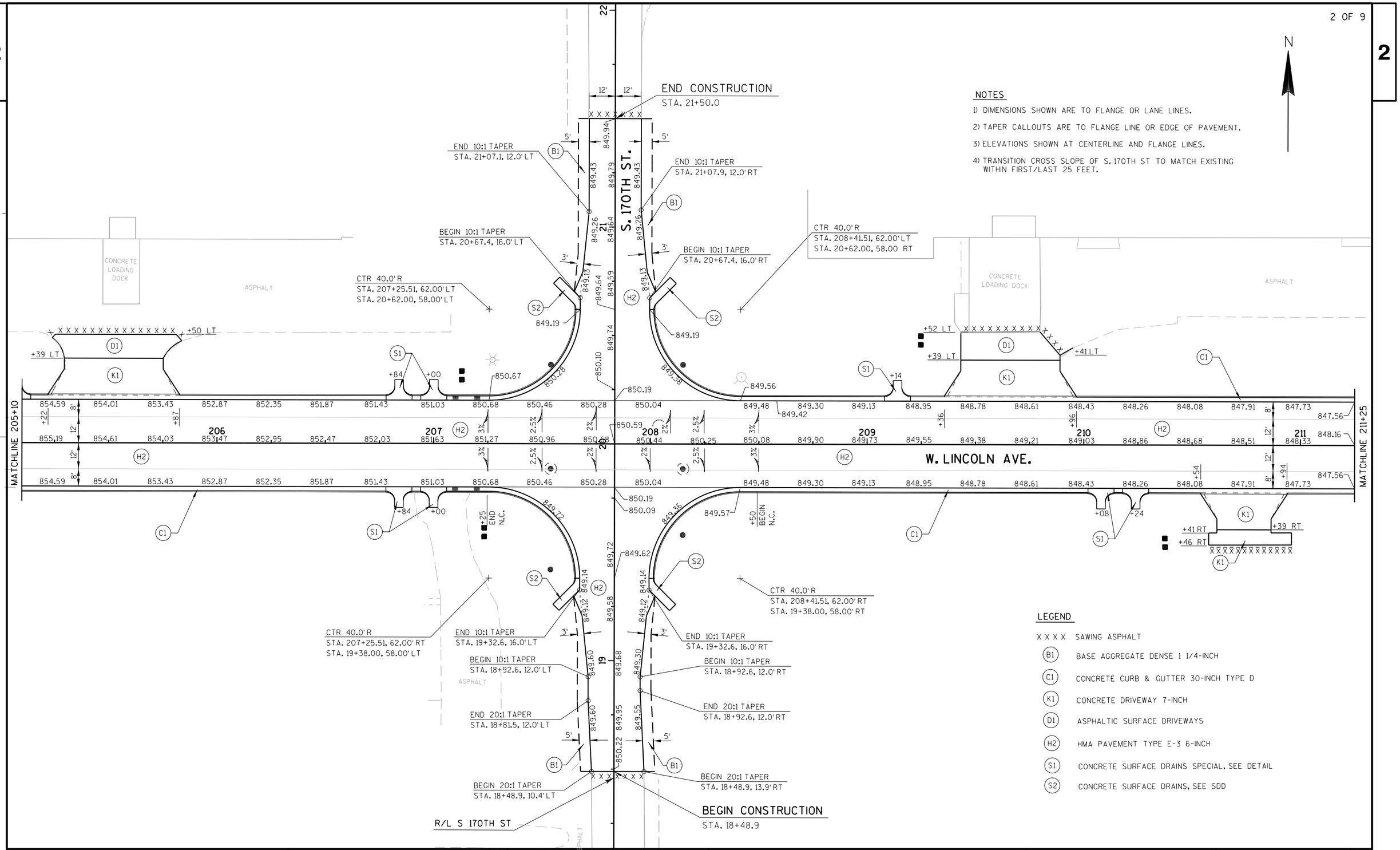
NOTES

1) DIMENSIONS SHOWN ARE TO FLANGE OR LANE LINES.
2) TAPER CALLOUTS ARE TO FLANGE LINE OR EDGE OF PAVEMENT.
3) ELEVATIONS SHOWN AT CENTERLINE AND FLANGE LINES.
4) TRANSITION CROSS SLOPE OF NORTH END OF FRONTAGE ROAD TO MATCH EXISTING CROSS SLOPE WITHIN LAST 25 FEET.

LEGEND

X X X X	SAWING ASPHALT
B1	BASE AGGREGATE DENSE 1 1/4-INCH
C1	CONCRETE CURB & GUTTER 30-INCH TYPE D
K1	CONCRETE DRIVEWAY 7-INCH
D1	ASPHALTIC SURFACE DRIVEWAYS
H2	HMA PAVEMENT TYPE E-3 6-INCH
S1	CONCRETE SURFACE DRAINS SPECIAL, SEE DETAIL
S2	CONCRETE SURFACE DRAINS, SEE SDD

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	PAVING DETAIL	SCALE, FEET 0 20 40	SHEET 13	E



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	PAVING DETAIL	SCALE, FEET 0 20 40	SHEET 14	E

2

2

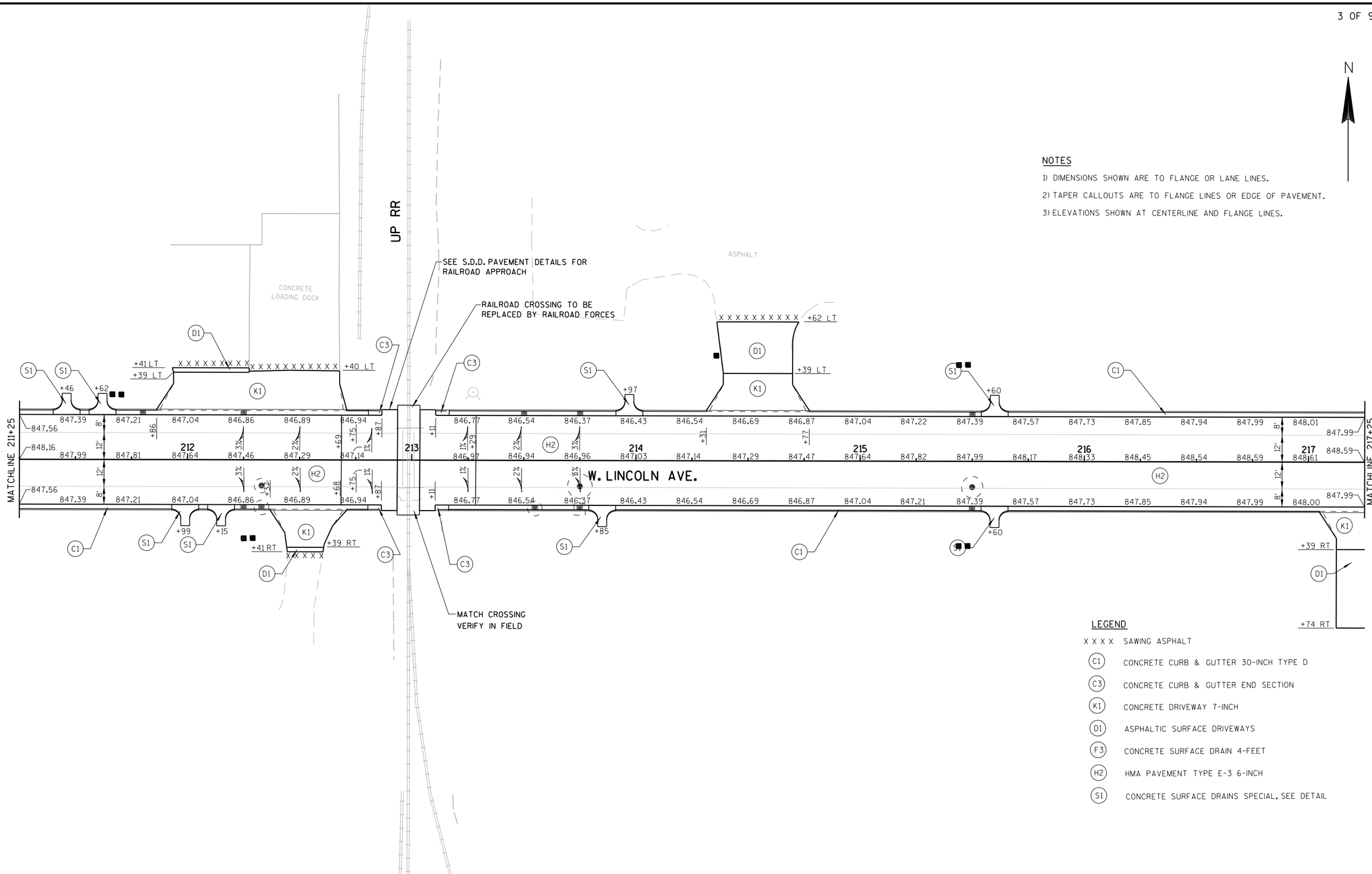
N

NOTES

1) DIMENSIONS SHOWN ARE TO FLANGE OR LANE LINES.

2) TAPER CALLOUTS ARE TO FLANGE LINES OR EDGE OF PAVEMENT.

3) ELEVATIONS SHOWN AT CENTERLINE AND FLANGE LINES.



LEGEND

X X X X	SAWING ASPHALT
(C1)	CONCRETE CURB & GUTTER 30-INCH TYPE D
(C3)	CONCRETE CURB & GUTTER END SECTION
(K1)	CONCRETE DRIVEWAY 7-INCH
(D1)	ASPHALTIC SURFACE DRIVEWAYS
(F3)	CONCRETE SURFACE DRAIN 4-FEET
(H2)	HMA PAVEMENT TYPE E-3 6-INCH
(S1)	CONCRETE SURFACE DRAINS SPECIAL, SEE DETAIL

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	PAVING DETAIL	SCALE, FEET 0 20 40	SHEET 15	E

2

2

N

NOTES

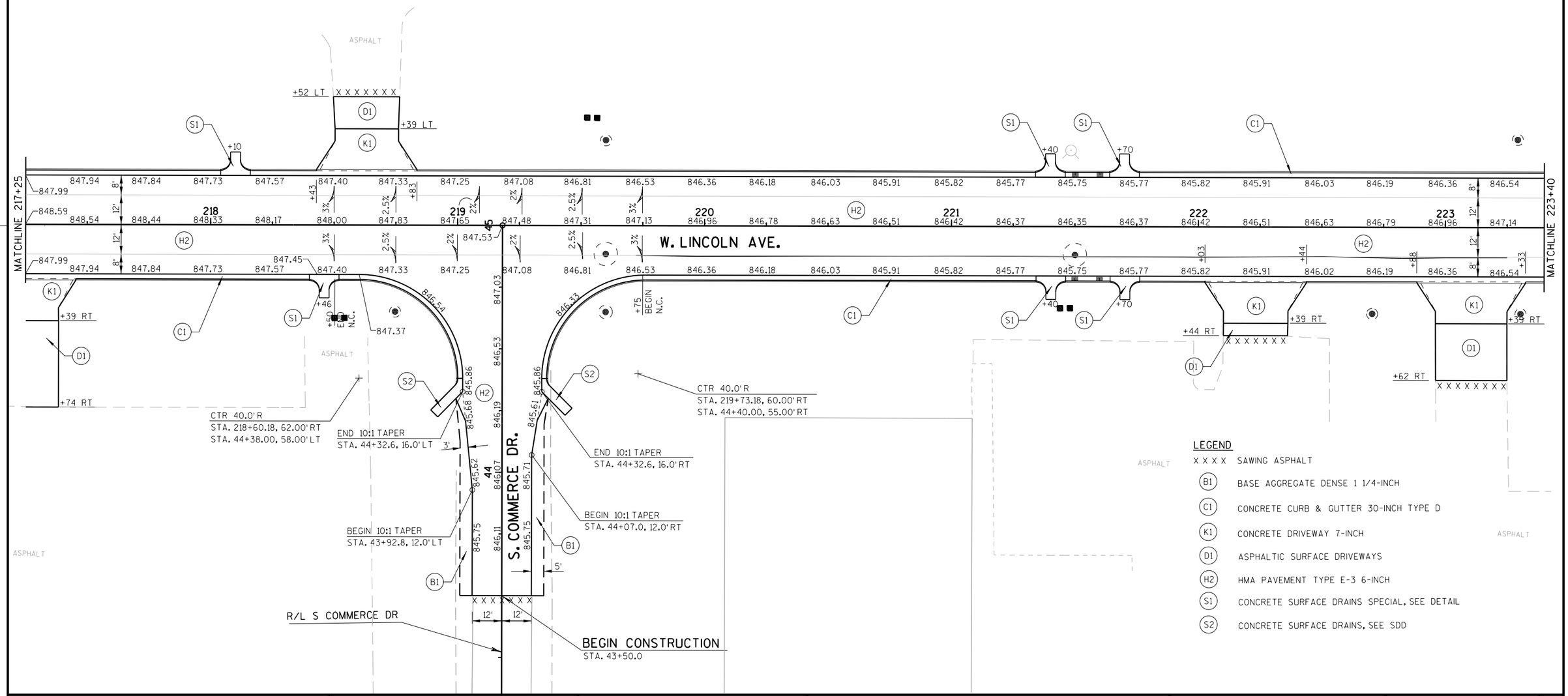
1) DIMENSIONS SHOWN ARE TO FLANGE OR LANE LINES.

2) TAPER CALLOUTS ARE TO FLANGE LINES OR EDGE OF PAVEMENT.

3) ELEVATIONS SHOWN AT CENTERLINE AND FLANGE LINES.

4) CURB & GUTTER RADII CALLOUTS ARE TO FLANGE LINE.

5) TRANSITION CROSS SLOPE OF S. COMMERCE DR TO MATCH EXISTING WITHIN FIRST 25 FEET.



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	PAVING DETAIL	SCALE, FEET 0 20 40	SHEET 16	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc021304_pd.dgn PLOT DATE : 18-SEP-2013 00:26 PLOT BY : scook PLOT NAME : PLOT NAME : lc021304_pd PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

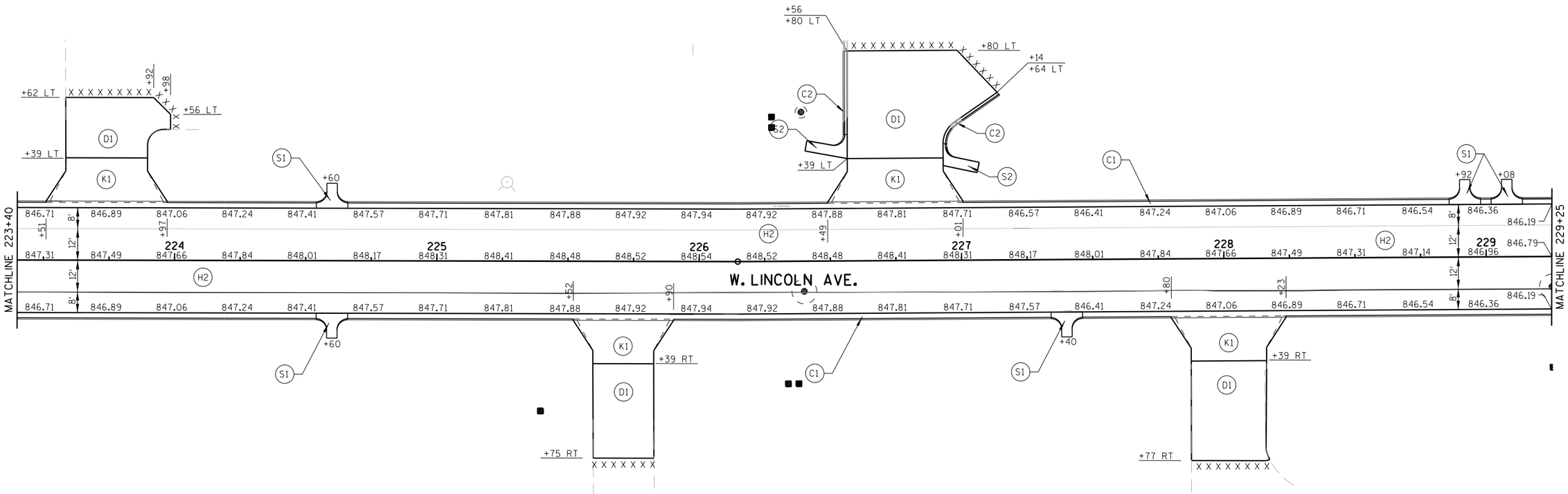
NOTES

1) DIMENSIONS SHOWN ARE TO FLANGE OR LANE LINES.

2) TAPER CALLOUTS ARE TO FLANGE LINES OR EDGE OF PAVEMENT.

3) ELEVATIONS SHOWN AT CENTERLINE AND FLANGE LINES.

N



LEGEND

X X X X	SAWING ASPHALT
C1	CONCRETE CURB & GUTTER 30-INCH TYPE D
C2	CONCRETE CURB & GUTTER 18-INCH TYPE D
K1	CONCRETE DRIVEWAY 7-INCH
D1	ASPHALTIC SURFACE DRIVEWAYS
H2	HMA PAVEMENT TYPE E-3 6-INCH
S1	CONCRETE SURFACE DRAINS SPECIAL, SEE DETAIL
S2	CONCRETE SURFACE DRAINS, SEE SDD

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	PAVING DETAIL	SCALE, FEET 0 20 40	SHEET 17	E

2

2

N

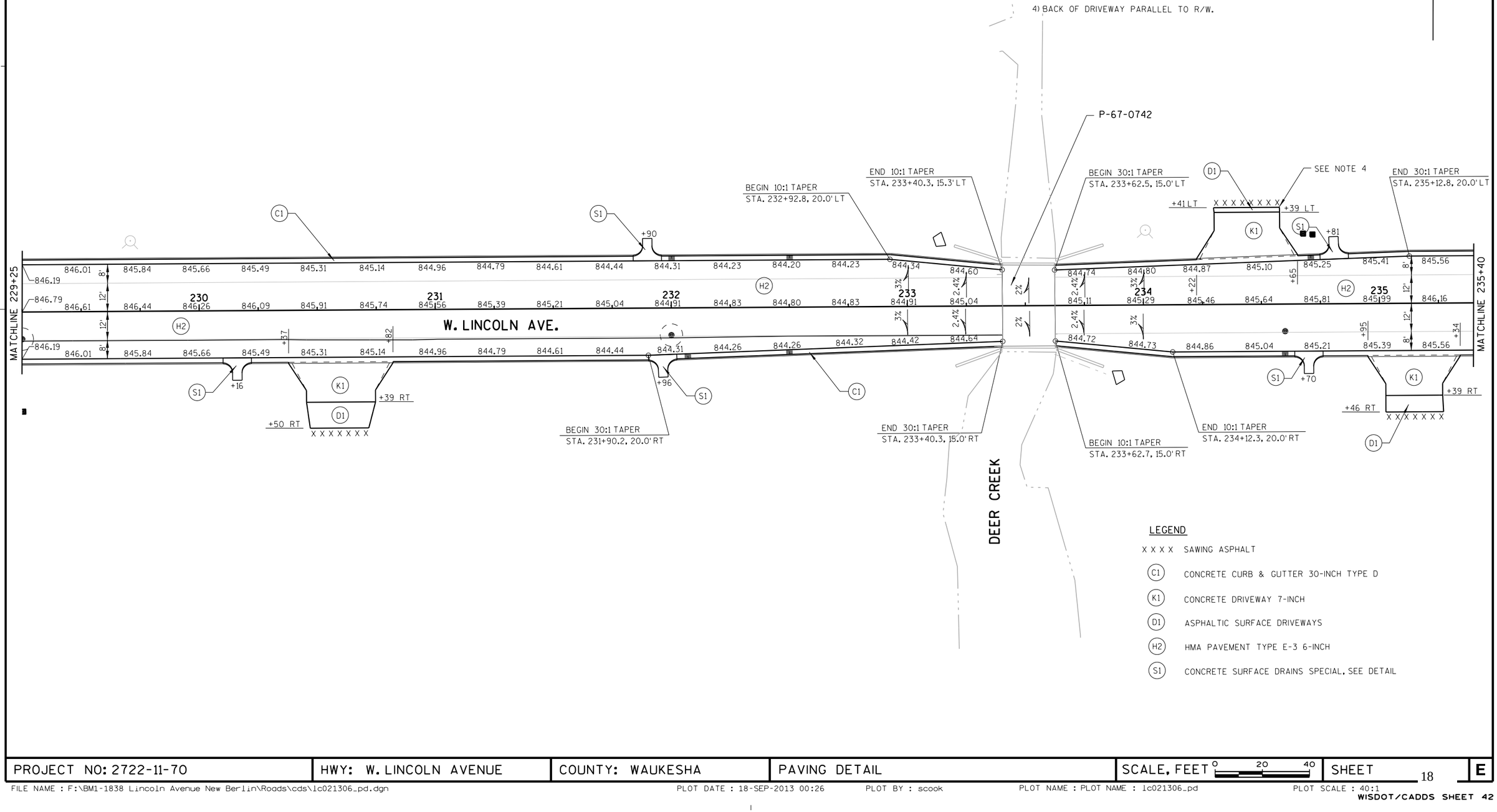
NOTES

1) DIMENSIONS SHOWN ARE TO FLANGE OR LANE LINES.

2) TAPER CALLOUTS ARE TO FLANGE LINES OR EDGE OF PAVEMENT.

3) ELEVATIONS SHOWN AT CENTERLINE AND FLANGE LINES.

4) BACK OF DRIVEWAY PARALLEL TO R/W.



LEGEND

X X X X SAWING ASPHALT

(C1) CONCRETE CURB & GUTTER 30-INCH TYPE D

(K1) CONCRETE DRIVEWAY 7-INCH

(D1) ASPHALTIC SURFACE DRIVEWAYS

(H2) HMA PAVEMENT TYPE E-3 6-INCH

(S1) CONCRETE SURFACE DRAINS SPECIAL, SEE DETAIL

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	PAVING DETAIL	SCALE, FEET 0 20 40	SHEET 18	E

2

2

END CONSTRUCTION
STA.61+95.0

NOTES

1) DIMENSIONS SHOWN ARE TO FLANGE OR LANE LINES.
2) TAPER CALLOUTS ARE TO FLANGE LINES OR EDGE OF PAVEMENT.
3) ELEVATIONS SHOWN AT CENTERLINE AND FLANGE LINES.
4) CURB & GUTTER RADII CALLOUTS ARE TO FLANGE LINE.
5) TRANSITION CROSS SLOPE OF S. 162ND ST TO MATCH EXISTING WITHIN THE FIRST/LAST 25 FEET.

LEGEND

X X X X	SAWING ASPHALT
B1	BASE AGGREGATE DENSE 1 1/4-INCH
C1	CONCRETE CURB & GUTTER 30-INCH TYPE D
K1	CONCRETE DRIVEWAY 7-INCH
D1	ASPHALTIC SURFACE DRIVEWAYS
H2	HMA PAVEMENT TYPE E-3 6-INCH
S1	CONCRETE SURFACE DRAINS SPECIAL, SEE DETAIL
S2	CONCRETE SURFACE DRAINS, SEE SDD

N

S. 162ND ST.

W. LINCOLN AVE.

END 10:1 TAPER
STA. 61+22.6, 10.5'RT

END 10:1 TAPER
STA. 60+87.4, 14.0'LT

BEGIN 10:1 TAPER
STA. 60+67.4, 16.0'LT

CTR 40.0'R
STA. 236+83.64, 62.00'LT
STA. 60+62.00, 58.00'LT

CTR 40.0'R
STA. 237+99.64, 62.00'LT
STA. 60+62.00, 58.00'RT

BEGIN 10:1 TAPER
STA. 60+67.4, 16.0'RT

CTR 40.0'R
STA. 236+83.64, 62.00'RT
STA. 59+39.05, 58.00'LT

CTR 40.0'R
STA. 237+99.71, 62.00'RT
STA. 59+38.00, 58.07'RT

END 10:1 TAPER
STA. 59+32.61, 16.0'LT

END 10:1 TAPER
STA. 59+32.6, 15.7'RT

R/L S 162ND ST

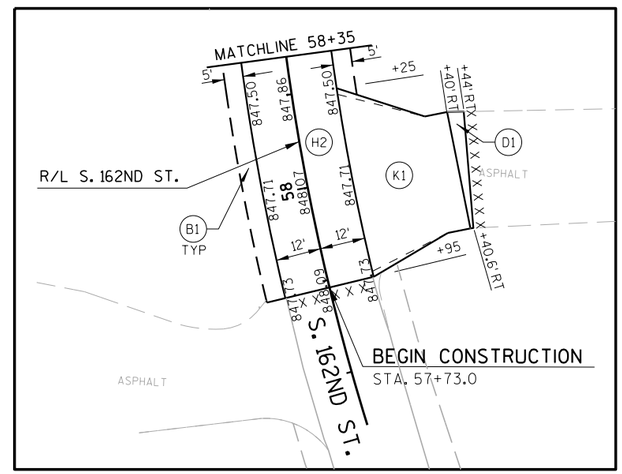
BEGIN 10:1 TAPER
STA. 58+93.9, 12.0'LT

BEGIN 10:1 TAPER
STA. 58+93.5, 12.0'RT

MATCHLINE 58+35

MATCHLINE 235+40

MATCHLINE 241+50



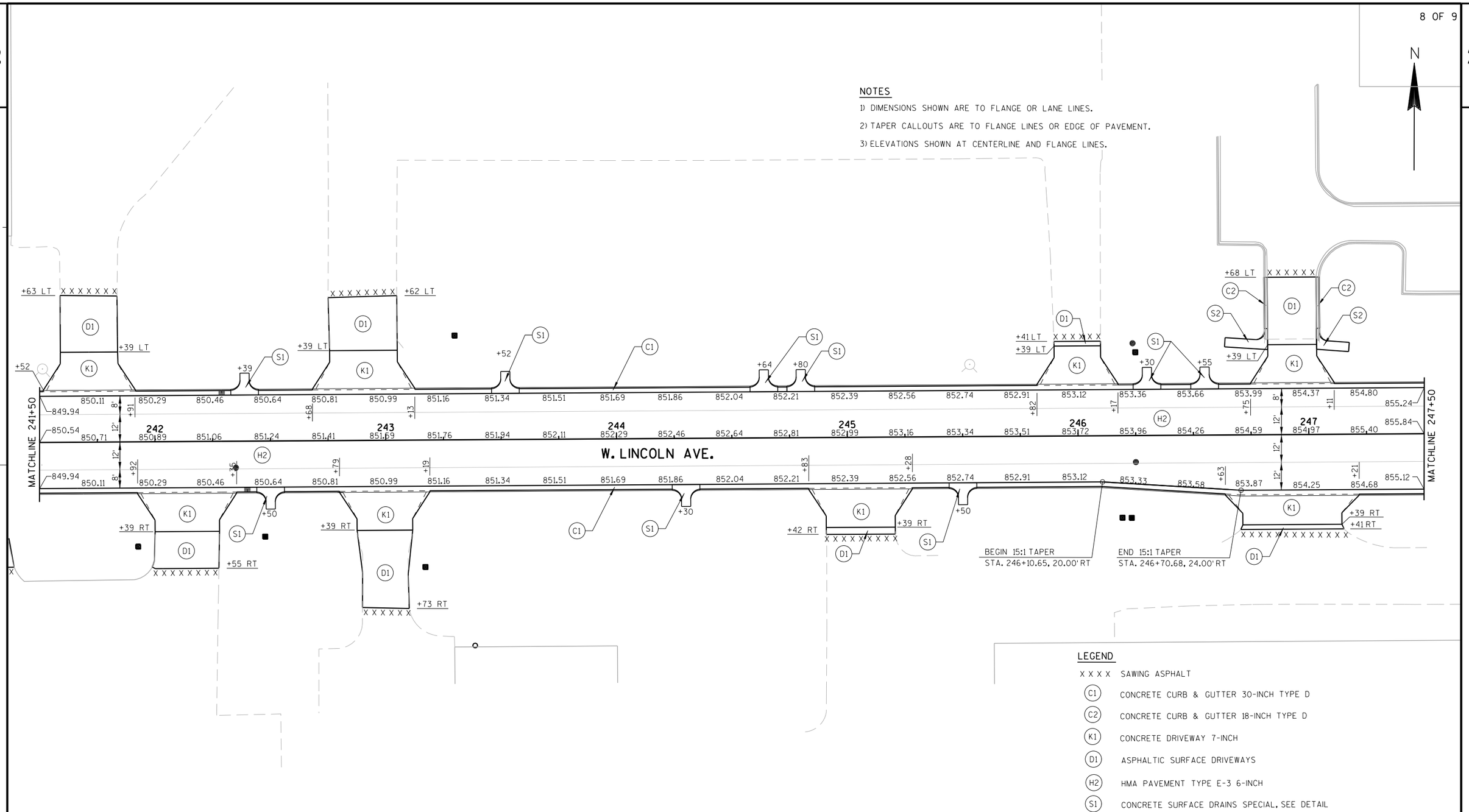
PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	PAVING DETAIL	SCALE, FEET 0 20 40	SHEET 19	E

NOTES

1) DIMENSIONS SHOWN ARE TO FLANGE OR LANE LINES.

2) TAPER CALLOUTS ARE TO FLANGE LINES OR EDGE OF PAVEMENT.

3) ELEVATIONS SHOWN AT CENTERLINE AND FLANGE LINES.



LEGEND

X X X X	SAWING ASPHALT
C1	CONCRETE CURB & GUTTER 30-INCH TYPE D
C2	CONCRETE CURB & GUTTER 18-INCH TYPE D
K1	CONCRETE DRIVEWAY 7-INCH
D1	ASPHALTIC SURFACE DRIVEWAYS
H2	HMA PAVEMENT TYPE E-3 6-INCH
S1	CONCRETE SURFACE DRAINS SPECIAL, SEE DETAIL
S2	CONCRETE SURFACE DRAINS, SEE SDD

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	PAVING DETAIL	SCALE, FEET 0 20 40	SHEET 20	E

2

2

NOTES

1) DIMENSIONS SHOWN ARE TO FLANGE OR LANE LINES.

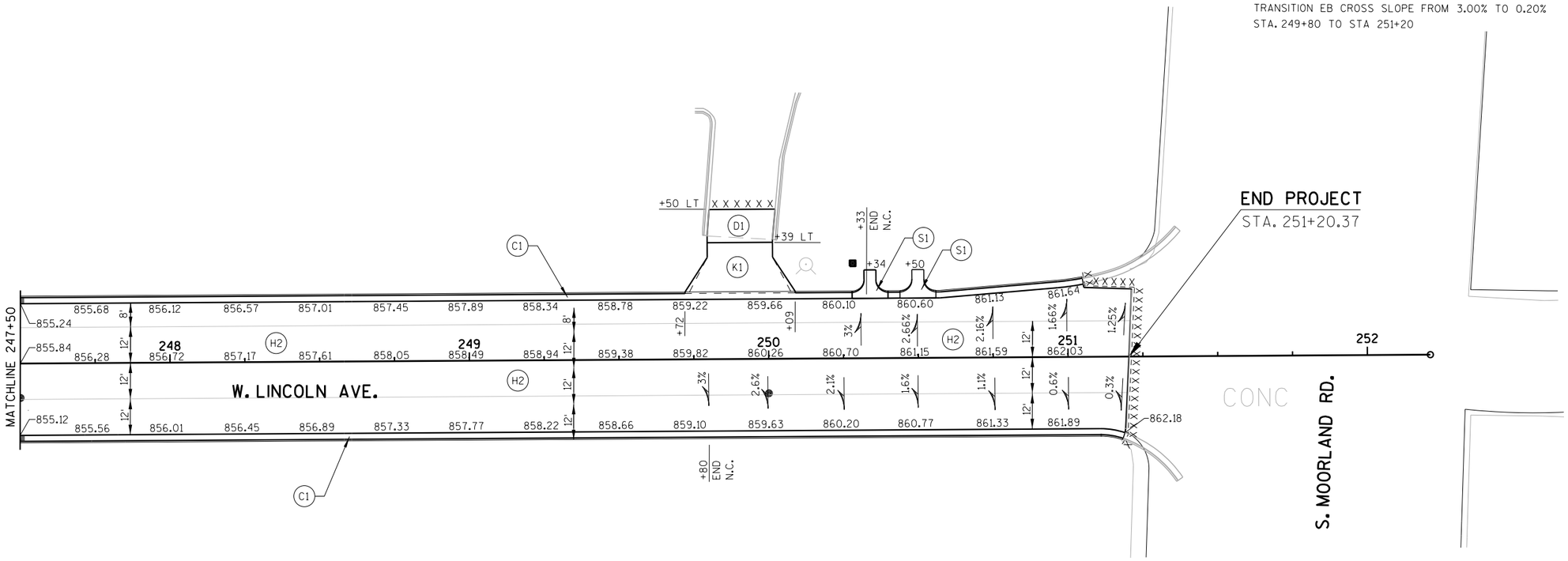
2) TAPER CALLOUTS ARE TO FLANGE LINES OR EDGE OF PAVEMENT.

3) ELEVATIONS SHOWN AT CENTERLINE AND FLANGE LINES.

4) TRANSITION WB CROSS SLOPE FROM 3.00% TO 1.75%
STA. 250+33 TO STA. 25+20

TRANSITION EB CROSS SLOPE FROM 3.00% TO 0.20%
STA. 249+80 TO STA 251+20

N



LEGEND

XXXX	SAWING ASPHALT
XXXX	SAWING CONCRETE
C1	CONCRETE CURB & GUTTER 30-INCH TYPE D
K1	CONCRETE DRIVEWAY 7-INCH
D1	ASPHALTIC SURFACE DRIVEWAYS
H2	HMA PAVEMENT TYPE E-3 6-INCH
S1	CONCRETE SURFACE DRAINS SPECIAL, SEE DETAIL

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	PAVING DETAIL	SCALE, FEET 0 20 40	SHEET 21	E

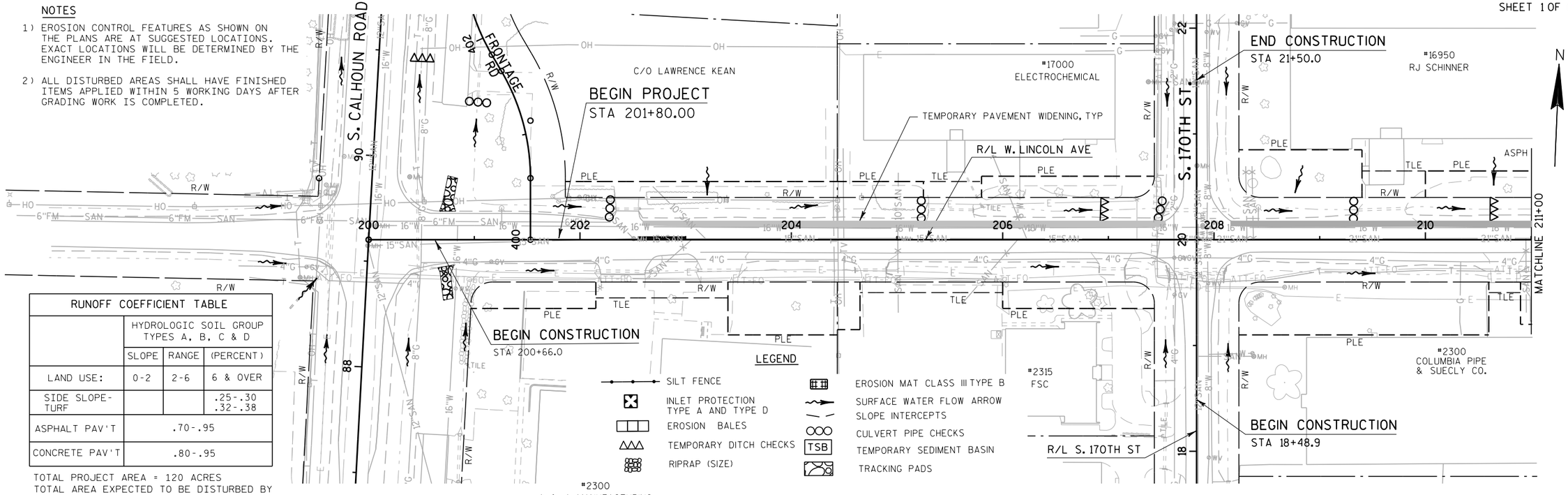
NOTES

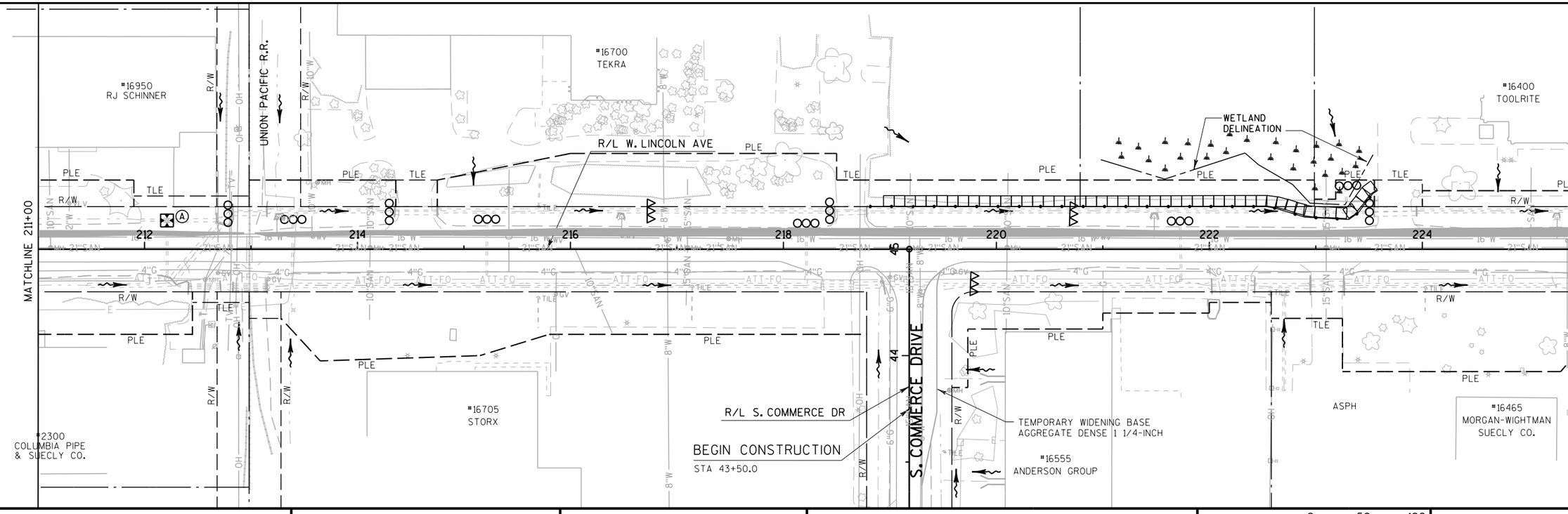
1) EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

2) ALL DISTURBED AREAS SHALL HAVE FINISHED ITEMS APPLIED WITHIN 5 WORKING DAYS AFTER GRADING WORK IS COMPLETED.

RUNOFF COEFFICIENT TABLE			
	HYDROLOGIC SOIL GROUP TYPES A, B, C & D		
	SLOPE	RANGE	(PERCENT)
LAND USE:	0-2	2-6	6 & OVER
SIDE SLOPE-TURF			.25-.30 .32-.38
ASPHALT PAV'T	.70-.95		
CONCRETE PAV'T	.80-.95		

TOTAL PROJECT AREA = 120 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 15 ACRES





PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: EROSION CONTROL PLANS - STAGE 1	SCALE, FEET 0 50 100	SHEET 22	E

NOTES

1) EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

2) ALL DISTURBED AREAS SHALL HAVE FINISHED ITEMS APPLIED WITHIN 5 WORKING DAYS AFTER GRADING WORK IS COMPLETED.

R/L W. LINCOLN AVE

TEMPORARY PAVEMENT WIDENING, TYP

#16300 CHR HANSON

22 CY RIPRAP HEAVY

WETLAND DELINEATION

#16230 GLASS DOCTOR

#16150 SCHROEDER SOLUTIONS

END CONSTRUCTION
STA 61+95.0

S. 162ND ST.

MATCHLINE 225+50

MATCHLINE 239+75

STORM SEWER CONVEYANCE OUTFALL

ABANDONED COAX AND FO

#16255-16351 LINCOLN SERVICE CTR

DEER CREEK

WETLAND DELINEATION

WETLAND DELINEATION

R/L S. 162ND ST

#16211 TAYLOR DYNAMETER

BEGIN CONSTRUCTION
STA 57+73.0

#16155 BSI SCALE

ASPH

LEGEND

- SILT FENCE
- INLET PROTECTION TYPE A AND TYPE D
- EROSION BALES
- TEMPORARY DITCH CHECKS
- RIPRAP (SIZE)
- EROSION MAT CLASS III TYPE B
- SURFACE WATER FLOW ARROW
- SLOPE INTERCEPTS
- CULVERT PIPE CHECKS
- TSB TEMPORARY SEDIMENT BASIN
- TRACKING PADS

#15700 SCHROEDER SOLUTIONS

SLOPE INTERCEPT, TYP

R/L W. LINCOLN AVE

POND

#15905 ARROWHEAD

#15600 HADER

S. MOORLAND ROAD

END PROJECT
STA 251+20.37

#15601 JORGENSON

TEMPORARY PAVEMENT WIDENING, TYP

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: EROSION CONTROL PLANS - STAGE 1	SCALE, FEET 0 50 100	SHEET 23	E

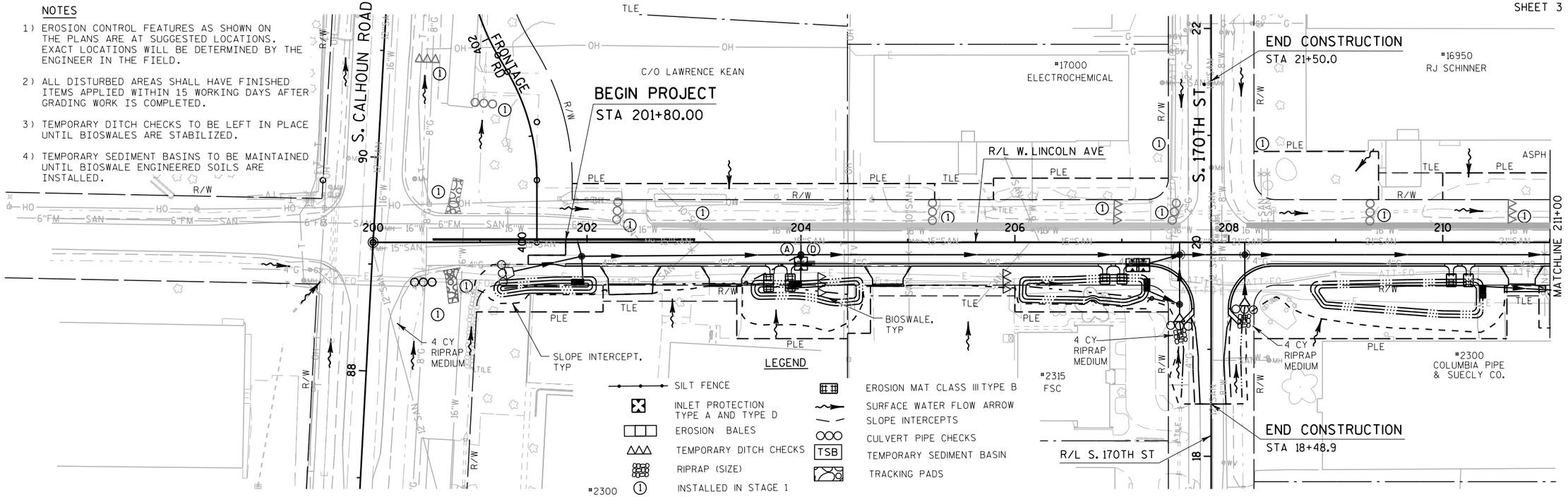
NOTES

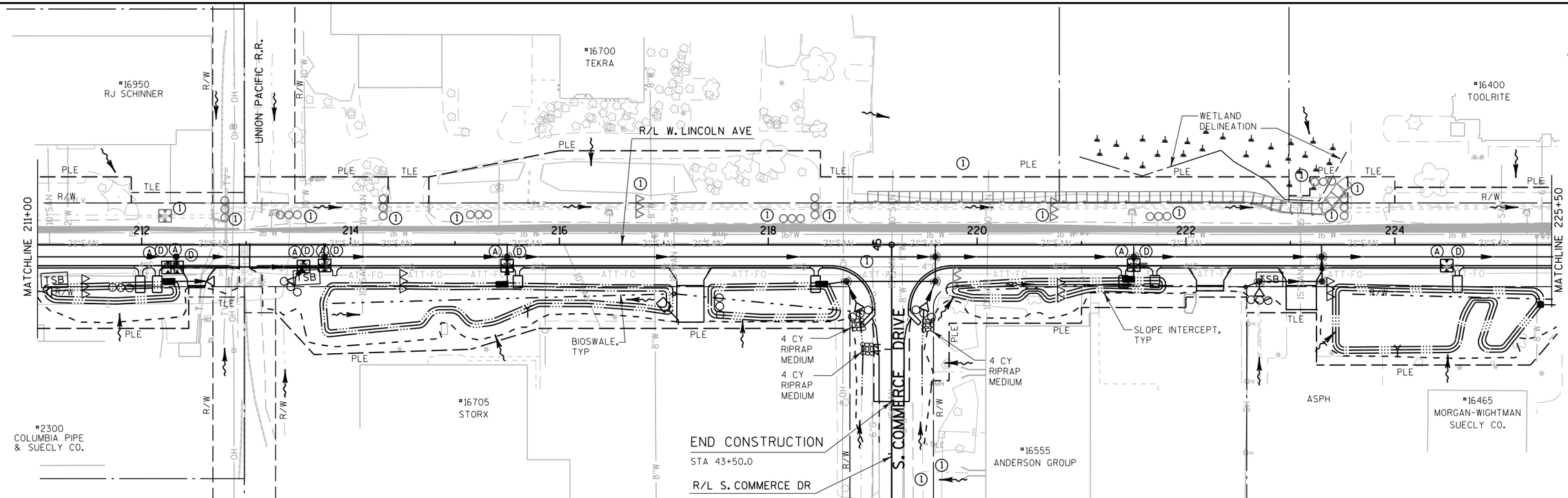
1) EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

2) ALL DISTURBED AREAS SHALL HAVE FINISHED ITEMS APPLIED WITHIN 15 WORKING DAYS AFTER GRADING WORK IS COMPLETED.

3) TEMPORARY DITCH CHECKS TO BE LEFT IN PLACE UNTIL BIOSWALES ARE STABILIZED.

4) TEMPORARY SEDIMENT BASINS TO BE MAINTAINED UNTIL BIOSWALE ENGINEERED SOILS ARE INSTALLED.





PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: EROSION CONTROL PLANS - STAGE 2	SCALE, FEET 0 50 100	SHEET 24	E

NOTES

1) EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

2) ALL DISTURBED AREAS SHALL HAVE FINISHED ITEMS APPLIED WITHIN 5 WORKING DAYS AFTER GRADING WORK IS COMPLETED.

3) TEMPORARY DITCH CHECKS TO BE LEFT IN PLACE UNTIL BIOSWALES ARE STABILIZED.

4) TEMPORARY SEDIMENT BASINS TO BE MAINTAINED UNTIL BIOSWALE ENGINEERED SOILS ARE INSTALLED.

LEGEND

- SILT FENCE
- INLET PROTECTION TYPE A AND TYPE D
- EROSION BALES
- TEMPORARY DITCH CHECKS
- RIPRAP (SIZE)
- (1) INSTALLED IN STAGE 1
- EROSION MAT CLASS III TYPE B
- SURFACE WATER FLOW ARROW
- SLOPE INTERCEPTS
- CULVERT PIPE CHECKS
- TSB TEMPORARY SEDIMENT BASIN
- TRACKING PADS

#16300 CHR HANSON

#16255-16351 LINCOLN SERVICE CTR

#16230 GLASS DOCTOR

#16150 SCHROEDER SOLUTIONS

#16155 BSI SCALE

#16211 TAYLOR DYNAMETER

#15700 SCHROEDER SOLUTIONS

#15600 HADER

#15905 ARROWHEAD

#15601 JORGENSON

R/L W. LINCOLN AVE

R/L S. 162ND ST

S. 162ND ST.

S. MOORLAND ROAD

MATCHLINE 225+50

MATCHLINE 239+75

END CONSTRUCTION
STA 61+95.0

END CONSTRUCTION
STA 57+73.0

END PROJECT
STA 251+20.37

WETLAND DELINEATION

DEER CREEK

5 CY RIPRAP MEDIUM

18 CY RIPRAP HEAVY

4 CY RIPRAP MEDIUM

SLOPE INTERCEPT, TYP

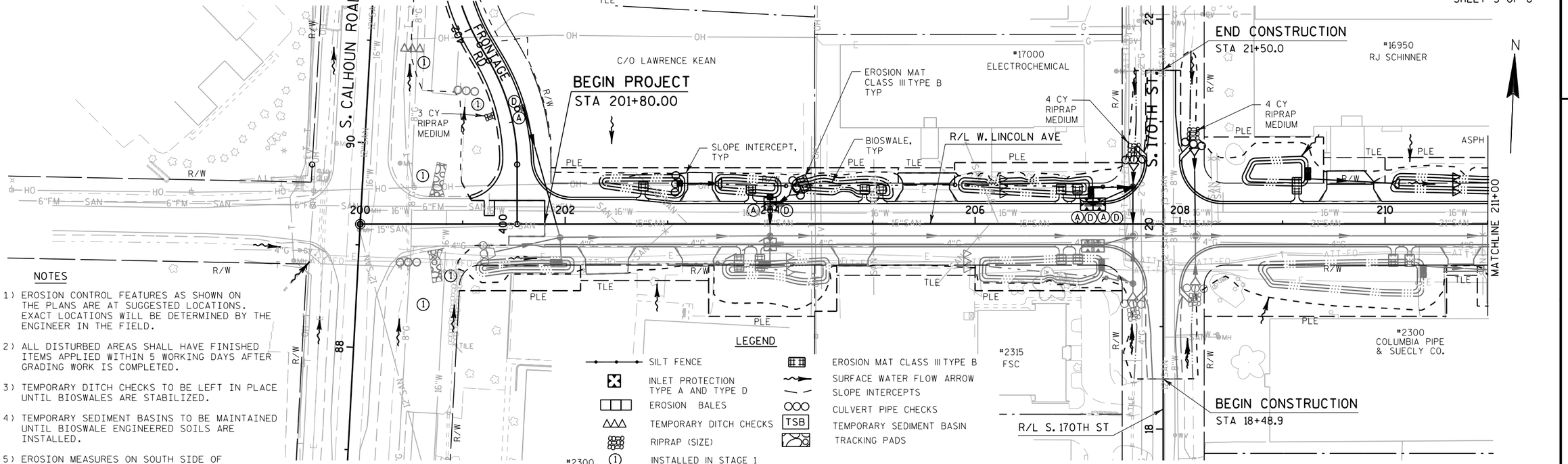
BIOSWALE, TYP

POND

ASPH

CAUTION

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: EROSION CONTROL PLANS - STAGE 2	SCALE, FEET 0 50 100	SHEET 25	E



NOTES

1) EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

2) ALL DISTURBED AREAS SHALL HAVE FINISHED ITEMS APPLIED WITHIN 5 WORKING DAYS AFTER GRADING WORK IS COMPLETED.

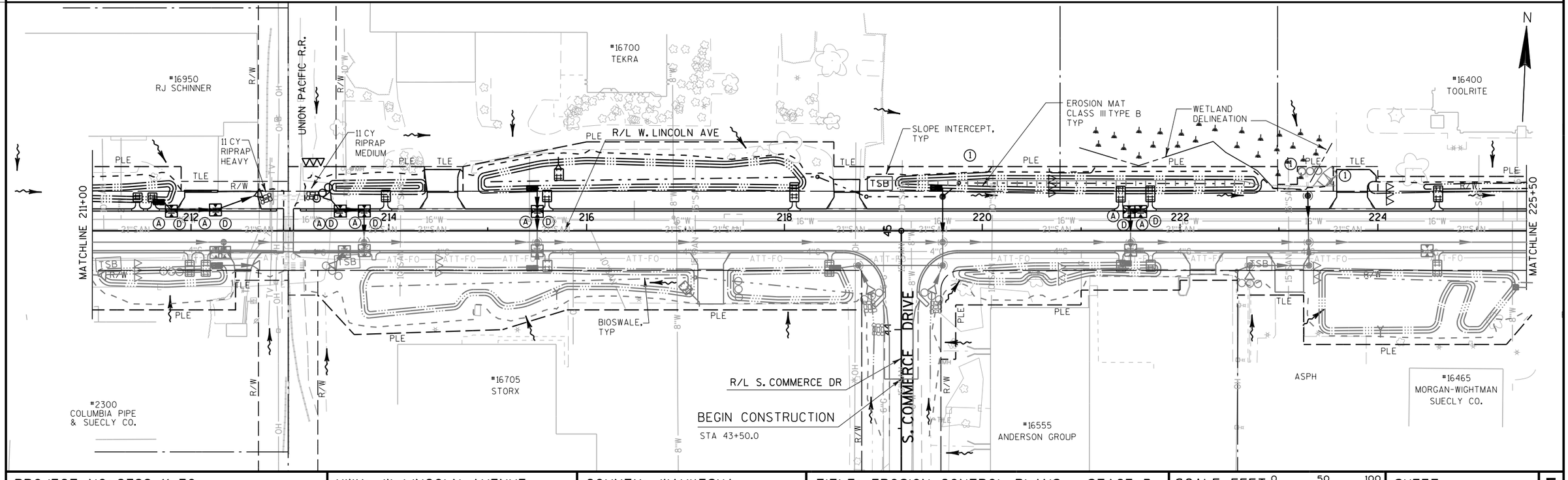
3) TEMPORARY DITCH CHECKS TO BE LEFT IN PLACE UNTIL BIOSWALES ARE STABILIZED.

4) TEMPORARY SEDIMENT BASINS TO BE MAINTAINED UNTIL BIOSWALE ENGINEERED SOILS ARE INSTALLED.

5) EROSION MEASURES ON SOUTH SIDE OF PROJECT INSTALLED IN STAGE 2

LEGEND

- SILT FENCE
- INLET PROTECTION TYPE A AND TYPE D
- EROSION BALES
- TEMPORARY DITCH CHECKS
- RIPRAP (SIZE)
- #2300 A & A MANUFACTURING
- (1) INSTALLED IN STAGE 1
- EROSION MAT CLASS III TYPE B
- SURFACE WATER FLOW ARROW
- SLOPE INTERCEPTS
- CULVERT PIPE CHECKS
- TSB TEMPORARY SEDIMENT BASIN
- TRACKING PADS



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: EROSION CONTROL PLANS - STAGE 3	SCALE, FEET 0 50 100	SHEET	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc022005_ec.dgn PLOT DATE : 20-SEP-2013 12:36 PLOT BY : scook PLOT NAME : PLOT NAME : lc022005_ec PLOT SCALE : 100:1
WISDOT/CADDS SHEET 42

NOTES

1) EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

2) ALL DISTURBED AREAS SHALL HAVE FINISHED ITEMS APPLIED WITHIN 5 WORKING DAYS AFTER GRADING WORK IS COMPLETED.

3) TEMPORARY DITCH CHECKS TO BE LEFT IN PLACE UNTIL BIOSWALES ARE STABILIZED.

4) TEMPORARY SEDIMENT BASINS TO BE MAINTAINED UNTIL BIOSWALE ENGINEERED SOILS ARE INSTALLED.

5) EROSION MEASURES ON SOUTH SIDE OF PROJECT INSTALLED IN STAGE 2

LEGEND

- SILT FENCE
- INLET PROTECTION TYPE A AND TYPE D
- EROSION BALES
- TEMPORARY DITCH CHECKS
- RIPRAP (SIZE)
- ① INSTALLED IN STAGE 1
- EROSION MAT CLASS III TYPE B
- SURFACE WATER FLOW ARROW
- SLOPE INTERCEPTS
- CULVERT PIPE CHECKS
- TSB TEMPORARY SEDIMENT BASIN
- TRACKING PADS

END CONSTRUCTION
STA 61+95.0

S. 162ND ST.

#16230
GLASS DOCTOR

#16150
SCHROEDER SOLUTIONS

#16300
CHR HANSON

R/L W. LINCOLN AVE

4 CY RIPRAP MEDIUM

WETLAND DELINEATION

SLOPE INTERCEPT, TYP

MATCHLINE 225+50

MATCHLINE 239+75

#16255-16351
LINCOLN SERVICE CTR

BIOSWALE, TYP

DEER CREEK

R/L S. 162ND ST

#16211
TAYLOR DYNAMETER

ASPH

#16155
BSI SCALE

BEGIN CONSTRUCTION
STA 57+73.0

#15700
SCHROEDER SOLUTIONS

#15600
HADER

S. MOORLAND ROAD

POND

#15905
ARROWHEAD

#15601
JORGENSON

END PROJECT
STA 251+20.37

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: EROSION CONTROL PLANS - STAGE 3	SCALE, FEET 0 50 100	SHEET 27	E

BEGIN PROJECT
STA 201+80.00

R/L W. LINCOLN AVE

R/L FRONTAGE RD

90 S. CALHOUN RD

W. LINCOLN AVE

BEGIN CONSTRUCTION
STA 201+23.8

NOTES

1) OFFSETS ARE MEASURED TO THE CENTER OF STRUCTURES
2) RIM ELEVATIONS AT CURB & GUTTER ARE THE FLANGE ELEVATIONS
3) ENDWALL OFFSETS ARE TO APRON END OF ENDWALL
4) PIPE LENGTHS INCLUDE LENGTH OF ENDWALLS

BENCHMARKS

NO.	STATION	DESCRIPTION	ELEV.
9	200+88.27, RT	CHISEL SQ. IN N.W. CONC SLAB	866.97
RBM3	201+25.95, LT	RBM3 N.W. HYD FLANGE BOLT	865.65
20	203+24.29, RT	SET "X" IN TOP OF CONC CURB	864.63
HBM12	208+41.94, LT	HBM12 N.W. HYD FLANGE BOLT	850.34
HBM13	204+42.80, LT	HBM13 N.W. HYD FLANGE BOLT	858.12
21	210+63.23, RT	CHISEL SQ. IN BOT CONC STEP	849.68

3.0 401+11.0, 14.0' RT
2X2.5-FT WM INLET

204+10.0, 21.3' LT
6.3 4-FT DIA WM INLET

5.0 201+95.0, 13.0' RT
5-FT DIA Q MH

204+00.0, 21.3' LT
6.2 4-FT DIA WM INLET

204+00.0, 26.5' LT
6.5 ATRIUM ASSEMBLY 12-INCH

P-6.3
P-3.1
P-6.5
P-6.2
P-6.4
P-5.1
P-6.6
P-6.7
P-4.1
P-5.2
P-6.8

BIOSWALE, TYP

PIPE UNDERDRAIN, TYP

203+11.9, 39.5' LT
ATRIUM ASSEMBLY 12-INCH

APRON ENDWALLS FOR UNDERDRAIN REINF. CONC. 6-INCH

5.2 201+94.2, 36.2' RT
ATRIUM ASSEMBLY 24-INCH

5.2A 201+90.2, 36.2' RT
ATRIUM ASSEMBLY 12-INCH

4.0 201+23.8, 28.7' RT
APRON ENDWALL CPRC PIPE GRATE REOD

BM#9
BM#20

CAUTION

RBM3
HBM13

C/O LAWRENCE KEAN
#17000 ELECTROCHEMICAL

6.4 204+24.5, 33.0' LT
APRON ENDWALL

CONC SURFACE DRAINS SPECIAL, TYP

ELECTRIC

12" DRAIN TILE CONNECTION & CLEANOUT

6.7 204+10.0, 21.3' RT
2X2.5-FT WM INLET

6.0 204+00.0, 11.5' RT
5-FT DIA Q MH

6.6 204+00.0, 21.3' RT
2X2.5-FT WM INLET

6.8 203+97.7, 39.1' RT
ATRIUM ASSEMBLY 24-INCH

6.8A 203+93.7, 39.0' RT
ATRIUM ASSEMBLY 12-INCH

#2300
A & A MANUFACTURING

#2315
FSC

20+59.2, 28.5' LT
7.3 APRON ENDWALL

207+54.0, 36.5' LT
7.2 4-FT DIA J MH

207+20.0, 21.3' LT
7.5 2X2.5-FT WM INLET

207+12.9, 33.4' LT
7.4 ATRIUM ASSEM. 24-IN

207+12.7, 32.9' LT
7.4A ATRIUM ASSEM. 12-IN

207+10.0, 21.3' LT
7.6 2X2.5-FT WM INLET

207+10.0, 21.3' RT
7.8 2X2.5-FT WM INLET

207+20.0, 21.3' RT
7.7 2X2.5-FT WM INLET

207+23.4, 38.9' RT
7.11A ATRIUM ASSEMBLY 12-INCH

207+23.4, 42.9' RT
7.11 ATRIUM ASSEMBLY 24-INCH

19+26.0, 29.5' LT
7.10 APRON ENDWALL

P-7.3
P-7.4
P-7.6
P-7.5
P-7.7
P-7.2
P-7.8
P-7.9
P-7.11
P-7.10

R/L S. 170TH ST

END CONSTRUCTION
STA 21+50.0

#16950
RJ SCHINNER

8.2 20+74.3, 30.0' RT
APRON ENDWALL

APRON ENDWALLS FOR UNDERDRAIN REINF. CONC. 6-INCH

209+24.8, 43.3' LT
ATRIUM ASSEM. 12-INCH

NEW HYDRANT, SEE WATERMAIN PLANS

HBM12

P-8.2
P-8.1
P-8.3

8.0 208+15.0, 11.5' RT
5-FT DIA Q MH

8.3 19+41.0, 31.5' RT
APRON ENDWALL

7.0 207+54.0, 11.5' RT
5-FT DIA Q MH

7.9 207+54.0, 58.0' RT
4-FT DIA J MH

P-7.10

BM L #21

APRON ENDWALLS FOR UNDERDRAIN REINF. CONC. 12-INCH

210+37.6, 47.0' LT
ATRIUM ASSEM. 12-INCH

210+37.5, 43.0' LT
ATRIUM ASSEM. 24-INCH

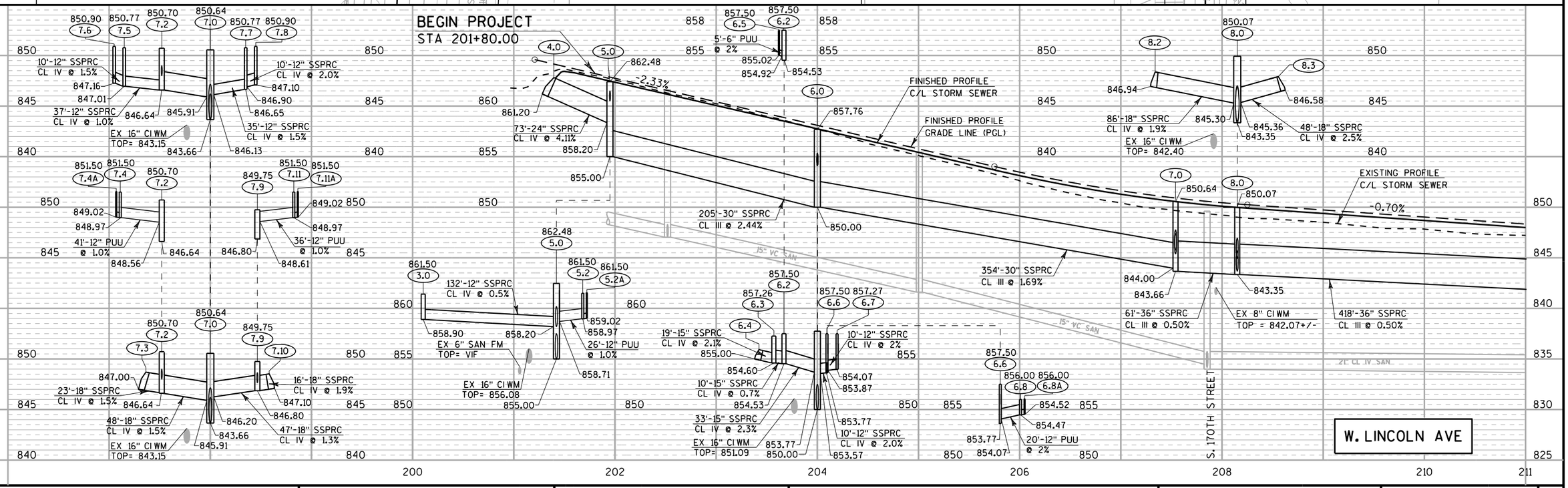
MATCHLINE 211+15

BEGIN CONSTRUCTION
STA 18+48.9

#2300
COLUMBIA PIPE & SUPPLY CO.

S. 170TH ST.

N



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	STORM SEWER PLAN	SCALE, FEET 0 50 100	SHEET 28	E

BENCHMARKS

NO.	STATION	DESCRIPTION	ELEV.
22	215+69.0, RT	CUT SQ. IN NO. EDGE CONC. WALK	850.18
23	221+16.4, RT	CUT SQ. IN N.E. COR CONC. RAMP	846.46
RBM2	226+10.0, LT	RBM2 SEC/WITNESS COR. MONUMENT	844.55

NOTES

1) OFFSETS ARE MEASURED TO THE CENTER OF STRUCTURES
2) RIM ELEVATIONS AT CURB & GUTTER ARE THE FLANGE ELEVATIONS
3) ENDWALL OFFSETS ARE TO APRON END OF ENDWALL
4) PIPE LENGTHS INCLUDE LENGTH OF ENDWALLS

N

2

NORTH CULVERT PIPE AND ENDWALLS TO REMAIN UNDER UP RR

UNION PACIFIC R.R.

ELECTRIC

*16700 TEKRA

212+71.0, 34.7' LT APRON ENDWALL 2.1
212+25.0, 21.3' LT 2X2.5-FT WM INLET 2.0
211+80.0, 21.3' LT 2X2.5-FT WM INLET 1.0
211+70.4, 29.0' LT ATRIUM ASSEM. 24-INCH 1.2
211+66.4, 29.1' LT ATRIUM ASSEM. 12-INCH 1.2A

213+36.0, 34.7' LT APRON ENDWALL 10.4
213+50.0, 21.3' LT 2X2.5-FT WM INLET 10.3
213+75.0, 21.3' LT 2X2.5-FT WM INLET 10.2
214+35.7, 46.9' LT ATRIUM ASSEMBLY 12-INCH

APRON ENDWALLS FOR UNDERDRAIN REINF. CONC. 12-INCH

215+44.0, 43.0' LT ATRIUM ASSEMBLY 12-INCH 11.3A
215+48.0, 43.0' LT ATRIUM ASSEMBLY 24-INCH 11.3
215+50.0, 21.3' LT 2X2.5-FT WM INLET 11.2

12" DRAIN TILE CONNECTION & CLEANOUT

217+25.5, 56.5 RT 12" CPRC CL IV 2-APRON ENDWALLS

NEW HYDRANT, SEE WATERMAIN PLANS

CONCRETE SURFACE DRAINS SPECIAL, TYP

CAUTION

WETLAND DELINEATION, TYP

219+52.4, 43.7' LT ATRIUM ASSEMBLY 12-INCH 12.3A
219+56.4, 43.6' LT ATRIUM ASSEMBLY 24-INCH 12.3
219+60.0, 34.6' LT 4-FT DIA J MH 12.2
219+60.0, 11.5' RT 8-FT DIA Q MH 12.0

221+50.0, 21.3' LT 2X2.5-FT WM INLET 13.2
221+50.0, 11.5' RT 8-FT DIA Q MH 13.0
221+60.0, 21.3' LT 2X2.5-FT WM INLET 13.3

PIPE UNDERDRAIN, TYP

CONC. COLLAR 14.3 223+29.40.5' LT

223+29.3, 35.5' LT 4-FT DIA Q MH 14.2

*16400 TOOLRITE

MATCHLINE 211+15

MATCHLINE 225+00

212+33.0, 11.5' RT 5-FT DIA Q MH 9.0
212+25.0, 21.3' RT 2X2.5-FT WM INLET 9.4
212+25.1, 35.0' RT ATRIUM ASSEMBLY 12-INCH
212+29.1, 34.9' RT ATRIUM ASSEMBLY 24-INCH
212+33.0, 21.3' RT 5-FT DIAM WM MH 9.2

213+75.0, 11.5' RT 8-FT DIA Q MH 10.0
213+75.0, 21.3' RT 4X4-FT WM MH 10.5
213+55.0, 21.3' RT 5-FT DIAM WM MH 10.6
213+46.5, 32.3' RT APRON ENDWALL 10.7

215+50.0, 11.5' RT 8-FT DIA Q MH 11.0
215+50.0, 21.3' RT 2X2.5-FT WM INLET 11.4
215+48.0, 37.8' RT ATRIUM ASSEMBLY 24-INCH 11.5
215+44.0, 37.8' RT ATRIUM ASSEMBLY 12-INCH 11.5A

219+50.2, 37.7' RT ATRIUM ASSEMBLY 12-INCH 12.7A
219+54.2, 37.6' RT ATRIUM ASSEMBLY 24-INCH 12.7

219+60.0, 35.0' RT 4-FT DIA Q MH 12.4
44+38.0, 30.7' RT APRON ENDWALL 12.8
219+60.0, 35.0' RT 4-FT DIA Q MH 12.5
44+38.0, 31.1' LT APRON ENDWALL 12.6

221+60.0, 21.3' RT 2X2.5-FT WM INLET 13.5
221+50.0, 21.3' RT 2X2.5-FT WM INLET 13.4
221+48.0, 33.0' RT ATRIUM ASSEMBLY 24-INCH 13.6
221+44.0, 33.1' RT ATRIUM ASSEMBLY 12-INCH 13.6A

223+30.5, 35.0' RT 4-FT DIA Q MH 14.4
223+30.0, 11.5' RT 8-FT DIA Q MH 14.0
222+70.4, 35.0' RT 4-FT DIA Q MH 14.5
222+70.4, 49.0' RT APRON ENDWALL 14.6

CONNECT 8" DRAIN TILE & CLEANOUT

BIOSWALE, TYP

W. LINCOLN AVE

R/L W. LINCOLN AVE

S. COMMERCE DR.

BEGIN CONSTRUCTION
STA 43+50.0

R/L S. COMMERCE DR

BM #22

BM #23

*2300 COLUMBIA PIPE & SUPPLY CO.

APRON ENDWALLS FOR UNDERDRAIN REINF. CONC. 12-INCH

CULVERT PIPES AND ENDWALLS TO REMAIN UNDER UP RR

*16705 STORX

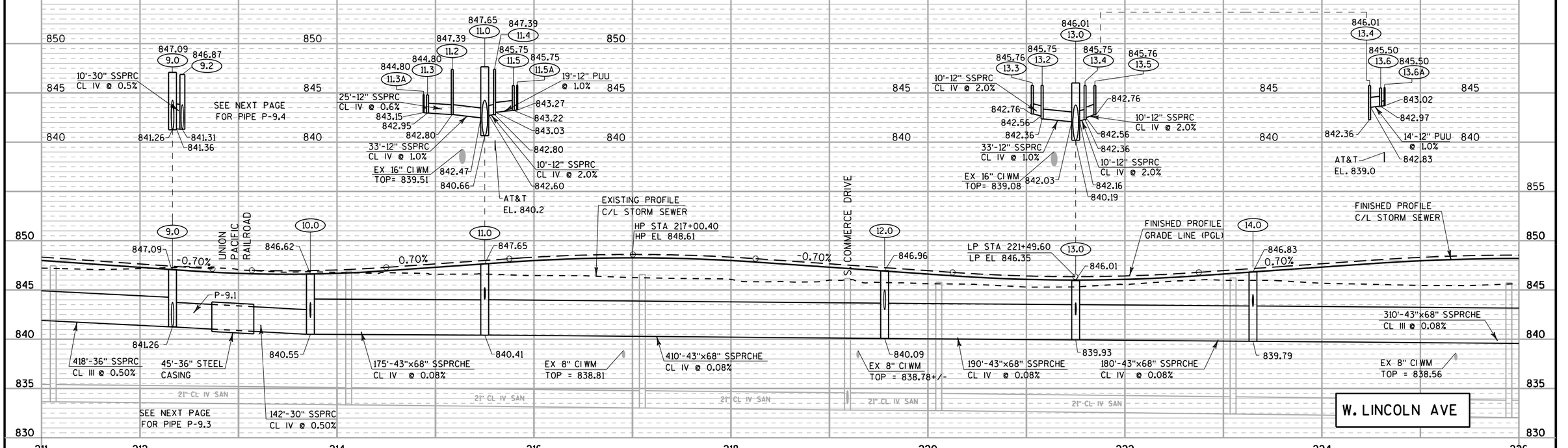
*16555 ANDERSON GROUP

*16465 MORGAN-WIGHTMAN SUPPLY CO.

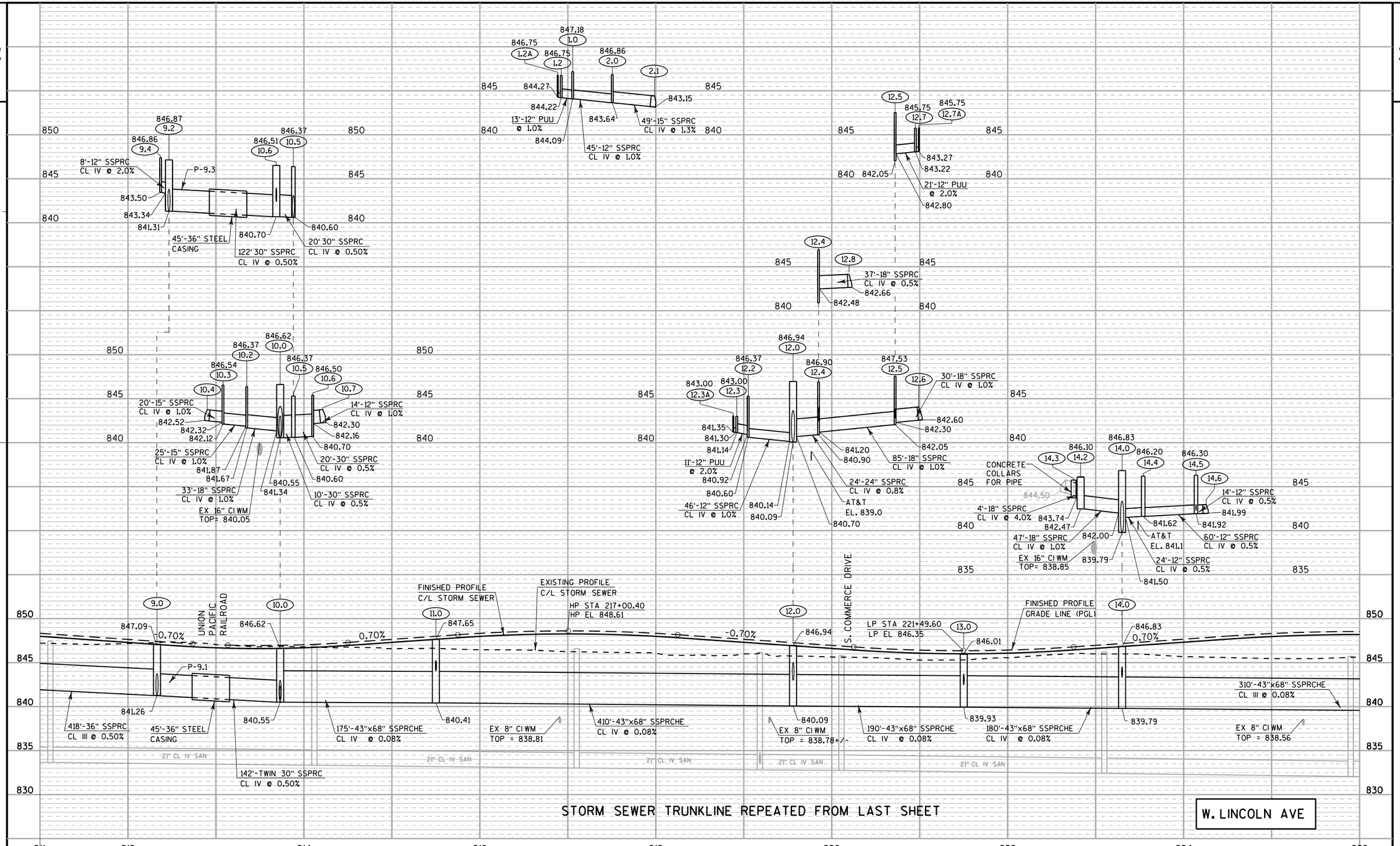
P-1.2 P-2 P-8.1 P-9.2 P-9.1 P-9.3 P-9.4 P-10.7 P-10.4 P-10.3 P-10.6 P-10.2 P-10.5 P-10.1 P-11.3 P-11.2 P-11.4 P-11.5 P-11.1 P-12.7 P-12.5 P-12.3 P-12.2 P-12.1 P-12.4 P-12.6 P-13.2 P-13.4 P-13.3 P-13.6 P-13.5 P-13.1 P-14.6 P-14.5 P-14.3 P-14.2 P-14.4 P-14.1

212.1 212 214 216 218 220 222 224

PLE TLE R/W TH



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	STORM SEWER PLAN	SCALE, FEET 0 50 100	SHEET 29	E



STORM SEWER TRUNKLINE REPEATED FROM LAST SHEET

W. LINCOLN AVE

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	STORM SEWER PLAN	SCALE, FEET 0 50 100	SHEET 30	E

NOTES

1) OFFSETS ARE MEASURED TO THE CENTER OF STRUCTURES
2) RIM ELEVATIONS AT CURB & GUTTER ARE THE FLANGE ELEVATIONS
3) ENDWALL OFFSETS ARE TO APRON END OF ENDWALL
4) PIPE LENGTHS INCLUDE LENGTH OF ENDWALLS

#16400 TOOLRITE
APRON ENDWALLS FOR UNDERDRAIN REINF. CONC. 12-INCH
12" DRAIN TILE CONNECTION & CEANOUT
CONCRETE SURFACE DRAINS SPECIAL, TYP
#16300 CHR HANSON
EXCEPTION TO NET C/L LENGTH STA 233+32.30 TO STA 233+70.59
233+15.5, 28.5' LT (16.1) APRON ENDWALL CPRCHE LARGE PIPE GRATE REOD
232+50.0, 21.3' LT (16.3) 2X2.5-FT WM INLET
232+00.0, 21.3' LT (16.2) 2X2.5-FT WM INLET
15.0A 229+25.0, 11.5' RT 8-FT DIA Q MH
R/L W. LINCOLN AVE
ABANDONED COMX AND FO
HBM8
MATCHLINE 225+00
MATCHLINE 240+00
P-15.1
P-15.1A
P-15.0B
P-16.1
P-16.2
P-16.3
P-16.4
P-16.5
15.1 226+38.6, 56.8' LT 4-FT DIA J MH
15.3 226+27.5, 54.4' LT ATRIUM ASSEM. 24-INCH
15.3A 226+27.5, 50.4' LT ATRIUM ASSEM. 12-INCH
15.0 226+40.0, 11.5' RT 8-FT DIA Q MH
15.4 226+38.1, 46.7' RT ATRIUM ASSEMBLY 24-INCH
15.4A 226+34.1, 46.7' RT ATRIUM ASSEMBLY 12-INCH
225+39.6, 57.0' RT ATRIUM ASSEMBLY 12-INCH
#16465 MORGAN-WIGHTMAN SUPPLY CO.
229+25.0, 42.2' RT (15.0B) ATRIUM ASSEMBLY 12-INCH
PIPE UNDERDRAIN, TYP
NEW HYDRANT, SEE WATERMAIN PLANS
BIOSWALE, TYP
16.5 232+50.0, 19.1' RT 2X2.5-FT WM INLET
16.4 232+07.0, 20.7' RT 2X2.5-FT WM INLET
16.0 232+00.0, 11.5' RT 8-FT DIA Q MH
DEER CREEK
WETLAND DELINEATION
#16255-16351 LINCOLN SERVICE CTR
RBM2

BENCHMARKS

NO.	STATION	DESCRIPTION	ELEV.
HBM8	229+71.00, LT	HBM8 N.W. HYD FLANGE BOLT	847.48
HBM7	237+71.60, LT	HBM7 N.W. HYD FLANGE BOLT	850.66
26	236+46.79, RT	CUT SQ. IN N.E. COR. CONC. WALK	848.36

END CONSTRUCTION
STA 61+95.0
17.2 234+69.0, 19.9' LT 2X2.5-FT WM INLET
17.3A 234+67.8, 29.8' LT ATRIUM ASSEMBLY 12-INCH
17.3 234+71.8, 29.4' LT ATRIUM ASSEMBLY 24-INCH
18.3 60+58.5, 31.7' LT APRON ENDWALL
18.2 237+13.0, 40.0' LT 4-FT DIA Q MH
18.4 237+04.7, 40.1' LT ATRIUM ASSEMBLY 24-INCH
61+69.2, 27.7 LT 12" CPRC CL IV 2-APRON ENDWALLS
61+05.8, 26.8 RT 12" CPRC CL IV 2-APRON ENDWALLS
#16150 SCHROEDER SOLUTIONS
19.3 60+78.4, 33.1' RT APRON ENDWALL
19.2 237+75.0, 40.0' LT 4-FT DIA Q MH
19.4 237+92.5, 44.6' LT ATRIUM ASSEMBLY 24-INCH
19.4A 237+95.8, 42.2' LT ATRIUM ASSEMBLY 12-INCH
19.5 238+03.0, 21.3' LT 2X2.5-FT WM INLET
19.6 238+03.0, 21.3' RT 2X2.5-FT WM INLET
19.0 237+75.0, 11.5' RT 5-FT DIA Q MH
19.9 237+91.6, 55.0' RT ATRIUM ASSEMBLY 12-INCH
19.7 237+71.0, 50.0' RT 4-FT DIA Q MH
19.8 59+38.2, 27.8' RT APRON ENDWALL
57+97.3, 29.2 RT 18" CPRC CL IV 2-APRON ENDWALLS
S. 162ND ST.
HBM7
P-18.1
P-18.2
P-18.3
P-18.4
P-18.5
P-19.1
P-19.2
P-19.3
P-19.4
P-19.5
P-19.6
P-19.7
P-19.8
P-20.1
W. LINCOLN AVE
242+32.0, 55.3 RT 15" CPRC CL IV 2-APRON ENDWALLS
236+83.9, 38.3' RT ATRIUM ASSEMBLY 24-INCH
237+13.0, 11.5' RT 5-FT DIA Q MH
59+15.8, 29.9' LT APRON ENDWALL 12-INCH
17.0 234+60.0, 11.5' RT 5-FT DIA Q MH
17.4 234+60.0, 21.3' RT 2X2.5-FT WM INLET
17.1 233+87.5, 30.8' RT APRON ENDWALL CPRC PIPE GRATE REOD
R/L S. 162ND ST
#16211 TAYLOR DYNAMETER
BM#26
BEGIN CONSTRUCTION
STA 57+73.0
#16155 BSI SCALE
N

845.00 15.2 | 844.00 15.3 | 844.00 15.3A | 848.15 15.0 | 843.75 15.4 | 843.75 15.4A
841.52 | 841.47 | 841.34 | 841.19 | 840.62 | 839.54 | 841.27 | 841.22 | 840.75
13'-12" PUU @ 1.0%
57'-18" SSPRC CL IV @ 1.0%
47'-12" PUU @ 1.0%
AT&T EL. 839.0

846.43 15.0A | 844.00 15.0B | 839.32 | 841.52 | 841.21
31'-6" PUU @ 1.0%
AT&T EL. 837.0

844.75 17.3 | 844.75 17.3A | 845.21 17.2 | 845.37 17.0 | 845.11 17.4 | 842.27 | 842.22 | 842.11 | 842.05 | 842.00 | 841.84 | 840.00
12'-12" PUU @ 1.0%
10'-15" SSPRC CL IV @ 0.6%
33'-15" SSPRC CL IV @ 0.5%
EX 16" CI WM TOP= 835.51

18.4 845.80 | 847.32 | 843.94 | 843.80 | 847.04 18.0 | 18.2 847.32 | 18.3 | 844.06 | 843.77 | 843.40 | 18.5 843.85 | 842.89 | 842.00 | 842.92 | 840.90
7'-12" PUU @ 2.0%
19'-15" SSPRC CL IV @ 1.5%
62'-15" SSPRC CL IV @ 1.5%
51'-15" SSPRC CL IV @ 1.0%
EX 16" CI WM TOP= 839.74

847.04 18.0 | 845.25 18.6 | 842.72 | 842.33
39'-12" PUU @ 1.0%

848.15 | 839.54 | 839.31 | 846.43 | 844.51 | 839.09 | 839.00 | 839.25 | 845.30 | 840.00 | 842.00 | 842.94 | 847.62
FINISHED PROFILE C/L STORM SEWER
FINISHED PROFILE GRADE LINE (PGL)
EXISTING PROFILE C/L STORM SEWER
LP STA 232+50.00 LP EL 844.80
-0.70% | 0.70% | -0.03% | 0.70%
EX 8" CI WM TOP = 838.56
285'- 43"x68" SSPRCHE CL III @ 0.08%
310'-43"x68" SSPRCHE CL III @ 0.08%
275'-43"x68" SSPRCHE CL IV @ 0.08%
118'-43"x68" SSPRCHE CL IV @ 0.08%
EX 16" CI WM TOP = 835.89+/-
STRUCTURE P-67-074 TWIN CELL 62"X120" INV EL 839.0
253'- 24"SSPRC CL III @ 0.79%
75'- 24" SSPRC CL III @ 1.00%
62'- 24" SSPRC CL III @ 1.52%
460'- 24" SSPRC CL III @ 0.54%
EX 8" CI WM TOP = 839.38+/-
21" CL IV SAN
12" VC SAN
W. LINCOLN AVE

225 226 228 230 232 234 236 238 240
825 830 835 840 845 850

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	STORM SEWER PLAN	SCALE, FEET 0 50 100	SHEET 31	E

2

847.68 (19.0) 847.61 (19.6)
844.60
30'-12" SSPRCHE CL IV @ 1.0%
844.30
842.94

847.07 (19.7) 847.50 (19.9)
845.02
843.23
844.81
21'-6" PUU @ 1.0%

847.25 (19.2) 847.61 (19.5)
847.50 (19.4A) 847.50 (19.4)
845.02
844.97
17'-12" PUU @ 1.0%
844.80
843.55
844.26
844.60
34'-12" SSPRCHE CL IV @ 1.0%

50'-15" SSPRC CL IV @ 1.0%
844.20 (16.3)
844.31 (16.2)
844.57 (16.0)
844.31 (16.4)
844.26 (16.5)
45'-15" SSPRC CL IV @ 1.5%
841.65
841.15
840.82
841.10
841.01
839.32
841.77
33'-15" SSPRC CL IV @ 1.0%
EX 16" CI WM TOP= 838.21
10'-15" SSPRC CL IV @ 0.9%

847.68 (19.0) 847.25 (19.2) 847.07 (19.7)
(19.3) (19.8)
844.90
844.04
843.98
843.55
843.77
843.03
843.37
843.84
27'-15" SSPRC CL IV @ 1.0%
52'-15" SSPRC CL IV @ 1.0%
842.94
12'-15" SSPRC CL IV @ 1.2%
39'-15" SSPRCHE CL IV @ 1.2%
EX 16" CI WM TOP= 840.08

FINISHED PROFILE C/L STORM SEWER
FINISHED PROFILE GRADE LINE (PGL)
EXISTING PROFILE C/L STORM SEWER
DEER CREEK
S. 162ND ST
15.0 848.15
15.0A 846.43
-0.70%
16.0 844.51
LP STA 232+50.00
LP EL 844.80
16.1
0.70%
-0.03%
17.1
17.0 845.30
18.0 846.98
0.70%
19.0 847.68
842.94
460'- 24" SSPRC CL III @ 0.54%
839.54
EX 8" CI WM TOP = 838.56
285'- 43"x68" SSPRCHE CL III @ 0.08%
310'-43"x68" SSPRCHE CL III @ 0.08%
839.31
275'-43"x68" SSPRCHE CL IV @ 0.08%
839.09
839.00
118'-43"x68" SSPRCHE CL IV @ 0.08%
EX 16" CI WM TOP = 835.89+/-
839.25
840.00
75'- 24" SSPRC CL III @ 1.00%
253'- 24"SSPRC CL III @ 0.79%
842.00
62'- 24" SSPRC CL III @ 1.52%
EX 8" CI WM TOP = 839.38+/-
STRUCTURE P-67-074 TWIN CELL 62"X120" INV EL 839.0
21" CL IV SAN
12" VC SAN

STORM SEWER TRUNKLINE REPEATED FROM LAST SHEET

W. LINCOLN AVE

850 845 840 835 830 825

225 226 228 230 232 234 236 238 240

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	STORM SEWER PLAN	SCALE, FEET 0 50 100	SHEET 32	E

2

242+29.0, 21.3' LT
2X2.5-FT WM INLET (20.2)

242+41.7, 48.5' LT
APRON ENDWALLS
FOR UNDERDRAIN
REINF. CONC. 6-INCH

#15700
SCHROEDER
SOLUTIONS

242+70.3, 59.1 LT
12" CPRC CL IV
2-APRON ENDWALLS

243+30.0, 45.3' LT
ATRIUM ASSEMBLY 12-INCH

246+23.6, 40.0' LT (21.2)
4-FT DIA Q MH
CONNECT EX. 18" CPRC

246+25.0, 36.0' LT (21.3)
ATRIUM ASSEMBLY 12-INCH

#15600
HADER

247+50.0, 31.8' LT (22.3)
APRON ENDWALL

250+28.2, 31.7' LT (23.2)
ATRIUM ASSEMBLY 12-INCH

241+92.4, 45.4' RT
ATRIUM ASSEMBLY
12-INCH

246+25.0, 11.5' RT (21.0)
5-FT DIA Q MH

247+50.0, 21.3' LT (22.2)
2X2.5-FT WM INLET

NEW HYDRANT,
SEE WATERMAIN
PLANS

BIOSWALE, TYP

END PROJECT
STA 251+20.37

CAUTION

POND

HBM5

BM#29

HBM4

HBM6

MATCHLINE 240+00

W. LINCOLN AVE

P-20.1 P-20.2 P-20.3 P-20.4 P-21.1 P-21.2 P-21.3 P-22.1 P-22.2 P-22.3 P-23.1 P-23.2 P-21.4 P-22.4

242+40.0, 21.3' RT
2X2.5-FT WM INLET (20.3)

BM #28

R/L W. LINCOLN AVE

PIPE UNDERDRAIN,
TYP

247+50.0, 11.5' RT (22.0)
4-FT DIA Q MH

247+50.0, 25.3' RT (22.4)
2X2.5-FT WM INLET

CONCRETE
SURFACE
DRAINS
SPECIAL,
TYP

242+47.5, 58.6' RT
APRON ENDWALLS
FOR UNDERDRAIN
REINF. CONC. 6-INCH

246+23.0, 35.7' RT (21.4)
ATRIUM ASSEMBLY 24-INCH

250+00.0, 11.5' RT (23.0)
4-FT DIA Q MH

242+46.9, 39.9' RT
ATRIUM ASSEMBLY 24-INCH (20.4)

243+16.9, 55.0' RT
ATRIUM ASSEMBLY 12-INCH

#15601
JORGENSON

246+19.0, 35.6' RT (21.4A)
ATRIUM ASSEMBLY 12-INCH

242+71.4, 54.7' RT
APRON ENDWALLS
FOR UNDERDRAIN
REINF. CONC. 6-INCH

242+35.0, 11.5' RT (20.0)
5-FT DIA Q MH

S. MOORLAND RD

#16155
BSI SCALE

#15905
ARROWHEAD

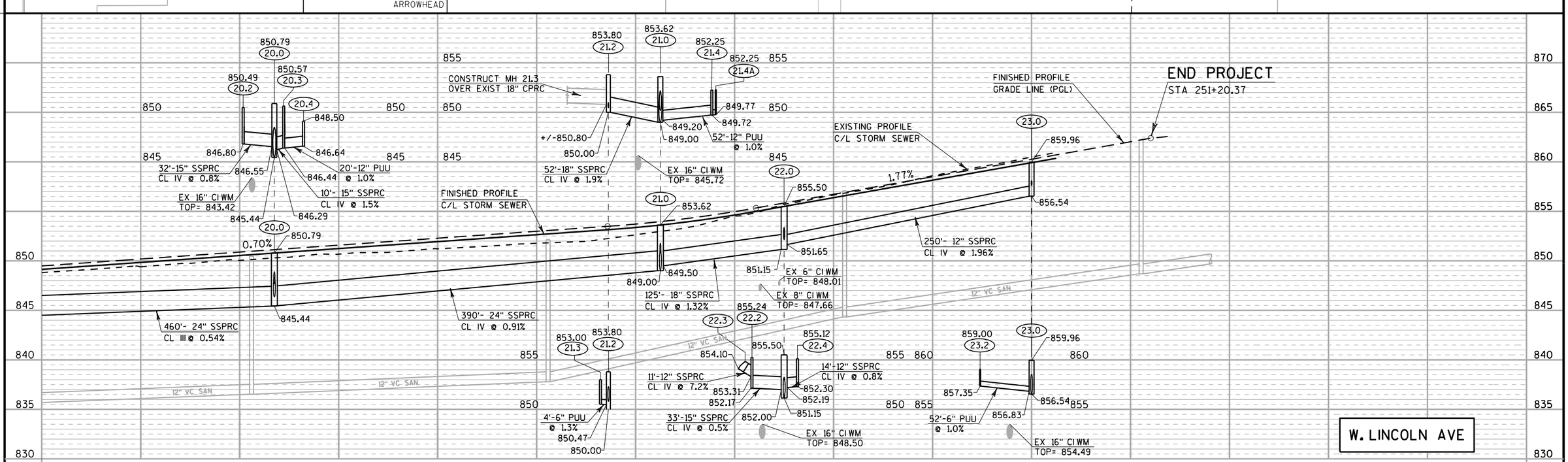
N

NOTES

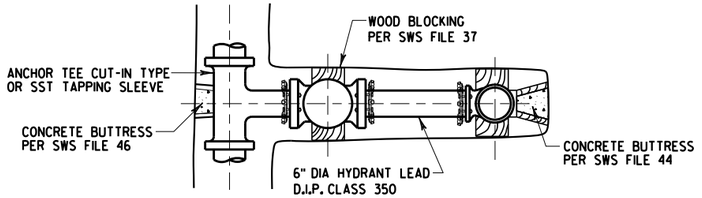
1) OFFSETS ARE MEASURED TO THE CENTER OF STRUCTURES
2) RIM ELEVATIONS AT CURB & GUTTER ARE THE FLANGE ELEVATIONS
3) ENDWALL OFFSETS ARE TO APRON END OF ENDWALL
4) PIPE LENGTHS INCLUDE LENGTH OF ENDWALLS

BENCHMARKS

NO.	STATION	DESCRIPTION	ELEV.
HBM6	241+51.50, LT	HBM6 N.W. HYD FLANGE BOLT	850.67
28	250+12.60, RT	CUT SQ. N.W. COR. CONC. WALK	852.00
HBM5	245+53.30, LT	HBM5 N.W. HYD FLANGE BOLT	853.52
29	248+32.0, RT	CUT SQ. BACK OF CONC. CURB	858.18
HBM4	250+12.60, LT	HBM4 N.W. HYD FLANGE BOLT	862.27

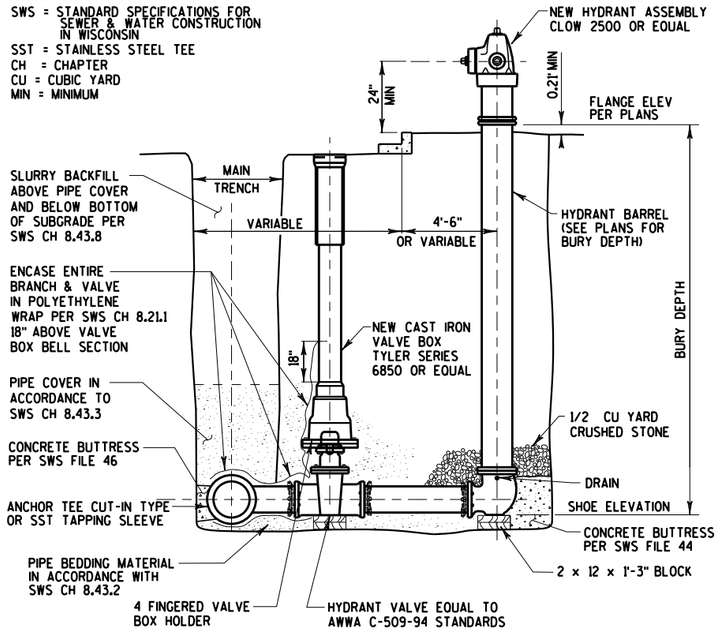


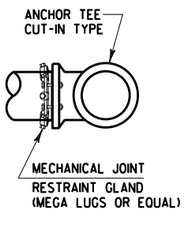
PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	STORM SEWER PLAN	SCALE, FEET 0 50 100	SHEET 33	E



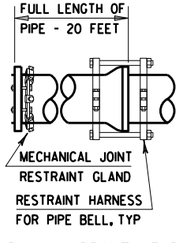
DETAIL ABBREVIATIONS

SWS = STANDARD SPECIFICATIONS FOR SEWER & WATER CONSTRUCTION IN WISCONSIN
SST = STAINLESS STEEL TEE
CH = CHAPTER
CU = CUBIC YARD
MIN = MINIMUM



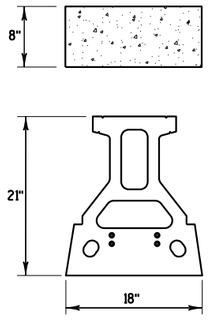


ROADWAY HYDRANT LEAD
(FOR LEADS LESS THAN ONE COMPLETE LENGTH OF PIPE FROM VALVE TO TEE)



ROADWAY HYDRANT LEAD
(FOR LEADS MORE THAN ONE COMPLETE LENGTH OF PIPE FROM VALVE TO TEE)

HYDRANT SETTING DETAIL

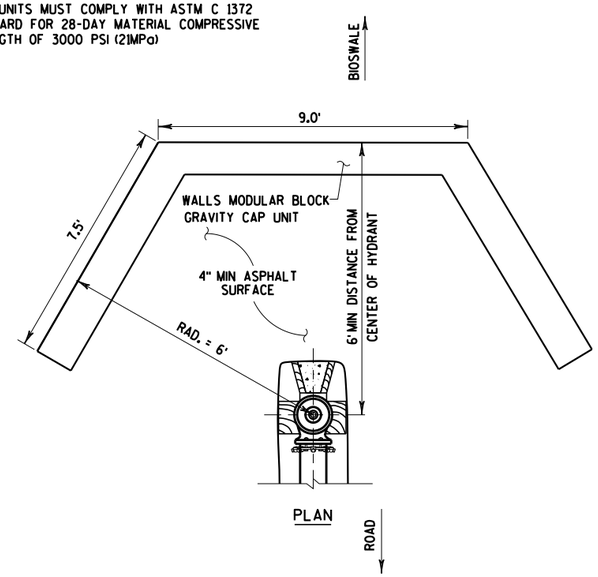


PLAN

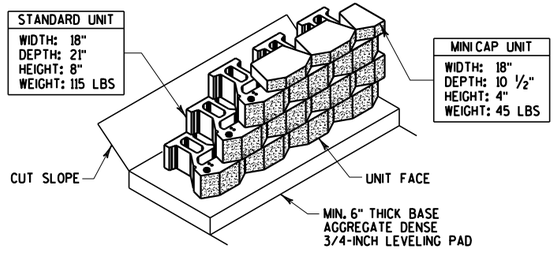
STANDARD UNIT
STRAIGHT FACED

STANDARD UNIT NOTE

1) WALL UNITS MUST COMPLY WITH ASTM C 1372 STANDARD FOR 28-DAY MATERIAL COMPRESSIVE STRENGTH OF 3000 PSI (21MPa)



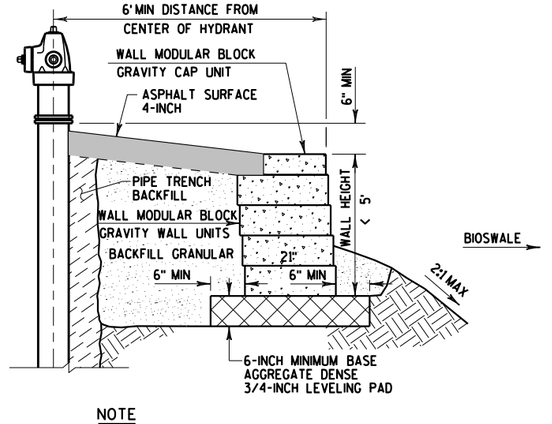
PLAN



BASE PAD ISOMETRIC VIEW

BASE LEVELING PAD NOTES

1) THE LEVELING PAD IS TO BE CONSTRUCTED OF BASE AGGREGATE DENSE, 3/4-INCH
2) STANDARD UNIT SHOWN WITH CUT ANGLED FACE. USE STRAIGHT FACED WISDOT SPEC UNIT FOR APPLICATION



NOTE

1) GRANULAR BACKFILL IS INCLUDED IN THE WALLS MODULAR BLOCK GRAVITY BID ITEM

ELEVATION

WALLS MODULAR BLOCK GRAVITY SPECIAL DETAIL

STA 204+75 LT
STA 217+60 LT
STA 221+25 LT
STA 226+00 LT
STA 235+00 LT
STA 245+30 LT
STA 249+60 LT

2

2

S. CALHOUN ROAD

FRONTAGE ROAD

R/L FRONTAGE ROAD

C/O LAWRENCE KEAN

#17000
ELECTROCHEMICAL

N

STA 201+87.8, 12.8'LT
4" INSULATION REQD
OVER 16" WM

CONNECT TO EX. 16" WM
STA 201+60.8, 12.8'LT
BREAK IN GRADE; 2-NEW
VERT 16"x22 1/2°\BENDS
VERIFY IN FIELD (V.I.F.)
IE= 855.21 & IE= 853.78

STA 202+25, 30.5' LT
NEW HYDRANT ASSEMBLY
18 LF - 6" D.I.P. HYD LEAD
HYD IE = 854.76
FLG. EL = 862.26
BURY = 7.5'

SALVAGE FIRE HYDRANT AND
ABANDON HYDRANT TEE

STA 204+75.0, 26.5'LT
NEW HYDRANT ASSEMBLY
16 LF - 6" D.I.P. HYD LEAD
HYD IE - 848.57
FLG EL = 856.57
BURY = 8.0'
RETAINING WALL REQD
WALL TOP EL = 856.07
WALL BTM EL = 853.07

FOLLOWING THE INSTALLATION
OF NEW HYDRANT,
SALVAGE FIRE HYDRANT AND
ABANDON HYDRANT TEE

BM #03
EL = 865.65

R/L W. LINCOLN AVE

STA 204+00, 11.0'LT
4" INSULATION REQD
OVER 16" WM

BM #13
EL = 858.12

77 LF 16" D.I.P. WM

W. LINCOLN AVE

MATCHLINE 206+00

BEGIN PROJECT
STA. 201+80.00

STA 202+25.0, 12.5'LT
NEW 6"x16" ANCHOR TEE
OR TAPPING SLEEVE
NEW 6" VALVE W/ V. BOX
16" IE E & W = 853.55
6" VALVE = 853.97

CONNECT TO EX. 16" WM
STA 202+38.0, 12.4'LT
1-NEW 16" PIPE SLEEVE
IE= 853.50 +- V.I.F.

SA-2 STA 202+50.8, 1.0'LT
ADJUSTING SANITARY MH COVER
NEW SAN MH FRAME AND LID REQD
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 861.64
PROP RIM EL= 861.56

BM #20
EL = 864.63

#2300
A & A MANUFACTURING

SA-3 STA 205+00.8, 1.3'LT
ADJUSTING SANITARY MH COVER
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 855.42
PROP RIM EL= 855.74

STA 204+75.0, 10.8'LT
NEW 6"x16" ANCHOR TEE
OR TAPPING SLEEVE
NEW 6" VALVE W/ V. BOX
16" IE E & W = 847.92+-V.I.F.
6" VALVE = 848.34

NOTE

1) THE 6"x16" ANCHOR TEE OR TAPPING SLEEVE IS INCLUDED IN THE BID ITEM "HYDRANT LEADS DUCTILE IRON 6-INCH".

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	SANITARY & WATER MAIN ADJUSTMENT PLAN	SCALE, FEET 0 20 40	SHEET 35	E

2

2

N

#17000
ELECTROCHEMICAL

#16950
RJ SCHINNER

R/L S 170TH ST

S. 170TH ST.

R/W

CAUTION

STA 206+16.5, 27'LT TO 41'LT
4" INSULATION REQD OVER
6" WATER SERVICE

STA 207+93.3, 7.5'LT
BREAK IN GRADE;
2-NEW 8"x22 1/2° BENDS
IE= 841.36 & IE= 839.03

STA 207+54, 12'LT
4" INSULATION REQD
OVER 16" WM

PLE

SA-1 STA 20+70.0, 0.3'RT
ADJUSTING SANITARY MH COVER
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 849.49
PROP RIM EL= 849.56

REMOVE WATER
VALVE VAULT

STA 208+15, 12.0'LT
4" INSULATION REQD
OVER 16" WM

SALVAGE FIRE HYDRANT AND
ABANDON HYDRANT TEE

BM #12
EL = 850.34

8 LF
16" D.I.P. WM

60 LF 8" D.I.P. WM

STA 209+25.0, 26.5'LT
NEW HYDRANT ASSEMBLY
15 LF - 6" D.I.P. HYD LEAD
HYD IE = 841.66
FLG. EL = 849.66
BURY = 8.0'

STA 211+29.2, 55.0'LT
20 LF WATER SERVICES
OPEN CUT 2-INCH
NEW CURB STOP
AND VALVE BOX

4" INSULATION REQD
OVER 2" WATER SERVICE
30.5'LT TO 45.5'LT

R/L W. LINCOLN AVE

TLE

W. LINCOLN AVE

MATCHLINE 206+00

MATCHLINE 212+00

207 208 209 210 211

20 19

ADJUST WATER
VALVE BOX

SA-4 STA 207+85.2, 0.7'LT
ADJUSTING SANITARY MH COVER
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 849.68
PROP RIM EL= 850.53

#2315
FSC

STA 207+94, 12.0'RT
4" INSULATION REQD
OVER 8" WM

R/L S 170TH ST

STA 207+93.3, 11.8'LT
2- NEW 16" BUTTERFLY VALVES
1- NEW 8" GATE VALVE
NEW 8"X16" ANCHOR CROSS
3- NEW VALVE BOXES
2- NEW 16" PIPE SLEEVES
1- NEW 8" PIPE SLEEVES
8 LF 16" D.I.P. WM
16" D.I.P. WM
16" IE E & W= 841.03+_V.I.F.
8" IE N & S= 841.36+_V.I.F.

INSTALL BUTTERFLY VALVE OPERATING
NUT IN THE NORTH OR EAST DIRECTION
PER CITY WATER UTILITY SPECIFICATIONS.

STA 207+94.4, 49.2'RT
SALVAGE EXISTING 8" VALVE FOLLOWING
INSTALLATION OF NEW 8"x16" CROSS
BREAK IN GRADE; 2- NEW 8'x22 1/2° BENDS
60 LF 8" D.I.P. IE= 841.18 & IE= 838.75

STA 209+25.0, 11.4'LT
NEW 6"x16" ANCHOR TEE
OR TAPPING SLEEVE
NEW 6" VALVE W/ V. BOX
16" IE E & W = 840.79+_V.I.F.
6" VALVE = 841.21

EXIST. BM #21
EL = 848.68

SA-5 STA 211+11.9, 1.4'LT
ADJUSTING SANITARY MH COVER
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 847.42
PROP RIM EL= 848.22

NOTE

1) THE 6"x16" ANCHOR TEE OR TAPPING SLEEVE IS INCLUDED IN THE BID ITEM "HYDRANT LEADS DUCTILE IRON 6-INCH".

#2300
COLUMBIA PIPE
& SUPPLY CO.

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	SANITARY & WATER MAIN ADJUSTMENT PLAN	SCALE, FEET 0 20 40	SHEET 36	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc023002_up.dgn PLOT DATE : 28-OCT-2013 15:39 PLOT BY : scook PLOT NAME : PLOT NAME : lc023002_up PLOT SCALE : 40:1

2

N

#16700
TEKRA

SALVAGE FIRE HYDRANT AND
ABANDON HYDRANT TEE
NOZZLE EL = 848.19

UNION PACIFIC R.R.

FIRE HYDRANT
TO REMAIN
BM #11
EL = 848.39

ADJUST WATER
VALVE BOX

STA 213+57.2, 21.3' LT,
& 36.0' TO 51.0' LT
4" INSULATION REQD
OVER 10" WM

STA 213+83.0, 26.5' LT
NEW HYDRANT ASSEMBLY
15 LF - 6" D.I.P. HYD LEAD
HYD IE = 839.21
FLG. EL = 847.21
BURY = 8.0'

BM #11
EL = 848.39

R/L W. LINCOLN AVE

STA 215+50, 11.3' LT
4" INSULATION REQD
OVER 8" WM

STA 216+90.9, 7.6' LT
SALVAGE EXISTING 8" VALVE
NEW 8"x16" ANCHOR TEE
OR TAPPING SLEEVE
40 LF 8" D.I.P. WM
NEW 8" VALVE W/ V. BOX
16" IE E & W = 837.77+_V.I.F.
8" VALVE = 838.12
BREAK IN GRADE; 2-NEW
VERT 8"x22 1/2° BENDS
IE= 838.13 & IE= 835.78

STA 216+87.7, 43.5' TO 70.0' LT
4" INSULATION REQD OVER
8" WATER SERVICE

ADJUST WATER
VALVE BOX

STA 217+60.0, 26.5' LT
NEW HYDRANT ASSEMBLY
16 LF - 6" D.I.P. HYD LEAD
HYD IE = 838.60
FLG. EL = 848.60
BURY = 10.0'
RETAINING WALL REQD
WALL TOP EL = 838.10
WALL BTM EL = 835.10

SALVAGE FIRE HYDRANT AND
ABANDON HYDRANT TEE
NOZZLE EL = 847.66

BM #10
EL = 847.99

MATCHLINE 212+00

213 214 215 216 217

W. LINCOLN AVE

MATCHLINE 218+00

24 LF 16" D.I.P. WM

29 LF 16" D.I.P. WM

40.0 LF 8" D.I.P. WM

STA 216+91, 12.0' RT
4" INSULATION REQD
OVER 8" WM

EXIST. BM #22
EL = 850.18

STA 216+91.2, 34.6' RT
BREAK IN GRADE; 2-NEW
VERT 8"x22 1/2° BENDS
IE= 835.92 & IE= 838.35 V.I.F.

STA 217+48.6, 10.0' LT
REMOVE WATER
VALVE VAULT

STA 217+60.0, 10.0' LT
NEW 6"X16" ANCHOR TEE
OR TAPPING SLEEVE
NEW 6" VALVE W/ VALVE BOX
16" IE E & W= 837.76+_V.I.F.
6" VALVE = 838.18

CONNECT TO EX. 16"x10" TEE
STA 213+38.4, 11.7' LT
1-NEW 16" PIPE SLEEVE;
24 LF 16" D.I.P. WM
BREAK IN GRADE; 2-NEW
VERT 16"x22 1/2° BENDS
VERIFY IN FIELD (V.I.F.)
IE= 838.64 & IE= 836.73

STA 213+75, 12.0' LT
4" INSULATION REQD
OVER 16" WM

STA 213+83.0, 11.7' LT
NEW 6"x16" ANCHOR TEE OR
TAPPING SLEEVE
NEW 6" VALVE W/ V. BOX
16" IE E & W = 838.57+_V.I.F.
6" VALVE = 838.99
BREAK IN GRADE; 2-NEW
VERT 16"x22 1/2° BENDS
CONNECT TO TEE/SLEEVE
IE= 836.65 & IE= 838.57

SA-6 STA 214+11.8, 1.4' LT
ADJUSTING SANITARY MH COVER
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 846.92
PROP RIM EL= 847.06

#16705
STORX

ADJUST WATER
VALVE BOX

SA-7 STA 217+10.0, 1.4' LT
RECONSTRUCTING SANITARY MH
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 846.57
PROP RIM EL= 848.56

NOTES

1) THE 6"x16" ANCHOR TEE OR TAPPING SLEEVE IS INCLUDED IN THE BID ITEM "HYDRANT LEADS DUCTILE IRON 6-INCH".

2) THE 8"x16" ANCHOR TEE OR TAPPING SLEEVE IS INCLUDED IN THE BID ITEM "WATER MAINS DUCTILE IRON 8-INCH'.

STA 217+68.0, 10.0' LT
1- NEW 16" BUTTERFLY VALVE
1- NEW VALVE BOX
2- NEW 16" PIPE SLEEVES
29 LF 16" D.I.P. WM
16" IE E & W= 837.76+_V.I.F.

INSTALL BUTTERFLY VALVE OPERATING NUT IN THE NORTH OR EAST DIRECTION PER CITY WATER UTILITY SPECIFICATIONS.

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	SANITARY & WATER MAIN ADJUSTMENT PLAN	SCALE, FEET 0 20 40	SHEET 37	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc023003_up.dgn PLOT DATE : 28-OCT-2013 15:39 PLOT BY : scook PLOT NAME : PLOT NAME : lc023003_up PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

2

2

N

SA-8 STA 219+18.3, 1.6'LT
RECONSTRUCTING SANITARY MH
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 846.16
PROP RIM EL= 847.47

CONNECT TO EX. 16"x8" TEE
STA 219+60.8, 10.0'LT
1-NEW 8" PIPE SLEEVE
BREAK IN GRADE; 2-NEW
VERT 8"x22 1/2° BENDS
VERIFY IN FIELD (V.I.F.)
IE= 838.18 & IE= 835.54

STA 219+30.7, 10.0'RT
42 LF 16" D.I.P. WM
BREAK IN GRADE; 2-NEW
VERT 16"x22 1/2° BENDS
VERIFY IN FIELD (V.I.F.)
IE= 835.66 & IE= 837.80

STA 219+70.2, 10.5'RT
BREAK IN GRADE; 2-NEW
VERT 16"x22 1/2° BENDS
1-16" PIPE SLEEVE
IE= 835.50 & IE= 837.76 V.I.F.

SA-9 STA 220+10.1, 1.6'LT
RECONSTRUCTING SANITARY MH
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 845.78
PROP RIM EL= 846.85

STA 220+94.7, 11.5'LT
SALVAGE EXISTING 16" VALVE
STOCKPILE SALVAGED MATERIALS
IN CONSTRUCTION STAGING AREA
1- NEW 16" PIPE SLEEVE
24 LF 16" D.I.P. WM
16" IE W= 837.79+_V.I.F.

STA 221+25.0, 26.5'LT
NEW HYDRANT ASSEMBLY
16 LF - 6" D.I.P. HYD LEAD
HYD IE = 838.54
FLG. EL = 846.54
BURY = 8.0'
RETAINING WALL REQD
WALL TOP EL = 846.04
WALL BTM EL =843.04

SALVAGE FIRE HYDRANT AND
ABANDON HYDRANT TEE
NOZZLE EL = 845.99

BM #09
EL = 846.19

WETLAND
BOUNDARY

SA-10 STA 223+09.8, 0.1'LT
ADJUSTING SANITARY MH COVER
REPLACE ALL CHIMNEY RINGS
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 846.22
PROP RIM EL= 847.03

STA 223+29.6, 10.3'LT
4" INSULATION REQD
OVER 16" WM

STA 221+50, 10.0'LT
4" INSULATION REQD
OVER 16" WM

MATCHLINE 218+00

MATCHLINE 224+00

W. LINCOLN AVE

S. COMMERCE DRIVE

42 LF 16" D.I.P. WM

32 LF 16" D.I.P. WM

60 LF 8" D.I.P. WM

STA 219+60, 10.4'LT
4" INSULATION REQD
OVER 16" WM

STA 219+28, 12.0'RT
4" INSULATION REQD
OVER 8" WM

STA 44+60.7, 10.3'RT
SALVAGE EXISTING 8' VALVE

STA 44+49.5, 10.6'RT
1- NEW 8" GATE VALVE/ V. BOX
60 LF 8" D.I.P. WM
8" VALVE = 838.20+_V.I.F.
BREAK IN GRADE; 2-NEW
VERT 8"x22 1/2° BENDS
IE= 838.20 & IE= 835.84

R/L W. LINCOLN AVE

R/L S COMMERCE DR

EXIST. BM #23
EL = 846.46

STA 221+25.0, 10.5'LT
NEW 6"x16" ANCHOR TEE
OR TAPPING SLEEVE
NEW 6" VALVE W/ V. BOX
16" IE E & W = 837.73+_V.I.F.
6" VALVE = 838.15

STA 221+17.0, 10.5'LT
1- NEW 16" BUTTERFLY VALVE
1- NEW VALVE BOX
8 LF 16" D.I.P. WM
16" IE E & W= 837.74+_V.I.F.

INSTALL BUTTERFLY VALVE OPERATING
NUT IN THE NORTH OR EAST DIRECTION
PER CITY WATER UTILITY SPECIFICATIONS.

8" STL DRAIN
INV 842.64

NOTE

1) THE 6"x16" ANCHOR TEE OR TAPPING SLEEVE IS INCLUDED IN THE BID ITEM "HYDRANT LEADS DUCTILE IRON 6-INCH".

#16555
ANDERSON GROUP

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	SANITARY & WATER MAIN ADJUSTMENT PLAN	SCALE, FEET 0 20 40	SHEET 38	E

2

N

#16400
TOOLRITE

SA-11 STA 225+89.9, 1.8'LT
RECONSTRUCTING SANITARY MH
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 845.73
PROP RIM EL= 848.47

STA 225+36.1, 10.0'LT
SALVAGE EXISTING 8" VALVE
NEW 8"x16" ANCHOR TEE OR
TAPPING SLEEVE
40 LF 8" D.I.P. WM
8" VALVE W/ V. BOX
16" IE E & W = 837.56+_V.I.F.
8" VALVE = 837.89
BREAK IN GRADE; 2-NEW
VERT 8"x22 1/2° BENDS
IE= 838.13 & IE= 837.89

STA 226+00.0, 26.5'LT
NEW HYDRANT ASSEMBLY
17 LF - 6" D.I.P. HYD LEAD
HYD IE = 838.20
FLG. EL = 848.70
BURY = 10.5'
RETAINING WALL REQD
WALL TOP EL = 848.20
WALL BTM EL =845.20

#16300
CHR HANSON

SALVAGE FIRE HYDRANT AND
ABANDON HYDRANT TEE
NOZZLE EL = 847.11

STA 228+92.6, 40.0' TO 66'.0 LT &
STA 229+01.8, 40.0' TO 70.0'LT
4" INSULATION OVER 4" & 10"
WATER SERVICES

STA 229+45.0, 10.0'LT
SALVAGE EXISTING 8" VALVE
NEW 8"x16" ANCHOR TEE
OR TAPPING SLEEVE
40 LF 8" D.I.P. WM
VALVE W/ V. BOX
16" IE E & W = 837.26+_V.I.F.
8" VALVE = 837.61
BREAK IN GRADE; 2-NEW
VERT 8"x22 1/2° BENDS
IE= 837.61 & IE= 834.80

R/L W. LINCOLN AVE

EXIST. BM#24
EL = 845.84

SA-12 STA 228+72.2, 0.1'LT
RECONSTRUCTING SANITARY MH
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 845.67
PROP RIM EL= 847.12

STA 226+39.7, 9.8'LT
4" INSULATION REQD
OVER 16" WM

SALVAGE FIRE HYDRANT AND
ABANDON HYDRANT TEE
NOZZLE EL = 846.22

ADJUST WATER
VALVE BOX

BM #01
EL = 846.25

MATCHLINE 224+00

MATCHLINE 230+00

W. LINCOLN AVE

STA 225+36, 12.0'RT
4" INSULATION REQD
OVER 8" WM

STA 225+36.1, 35.2'RT
BREAK IN GRADE; 2-NEW
VERT 8"x22 1/2° BENDS
IE= 835.26 & IE= 838.06 V.I.F.

STA 226+00.0, 9.9'LT
NEW 6"x16" ANCHOR TEE
OR TAPPING SLEEVE
NEW 6" VALVE W/ V. BOX
16" IE E & W = 837.5+_V.I.F.
6" VALVE = 837.92

#16465
MORGAN-WIGHTMAN
SUPPLY CO.

STA 226+08.0, 9.9'LT
1- NEW 16" BUTTERFLY VALVE
1- NEW VALVE BOX
8.0 LF 16" D.I.P. WM
16" IE E & W= 837.5+_V.I.F.

INSTALL BUTTERFLY VALVE OPERATING
NUT IN THE NORTH OR EAST DIRECTION
PER CITY WATER UTILITY SPECIFICATIONS.

BM# H-3 (AKA RBM2)
EL = 844.548

STA 226+28.3, 9.8'LT
REMOVE WATER VALVE VAULT

1- NEW 16" PIPE SLEEVE
24.0 LF 16" D.I.P. WM
16" IE E = 837.5+_V.I.F.

NOTES

1) THE 6"x16" ANCHOR TEE OR
TAPPING SLEEVE IS INCLUDED
IN THE BID ITEM "HYDRANT
LEADS DUCTILE IRON 6-INCH".

2) THE 8"x16" ANCHOR TEE OR
TAPPING SLEEVE IS INCLUDED
IN THE BID ITEM "WATER MAINS
DUCTILE IRON 8-INCH'.

ADJUST WATER
VALVE BOXES

STA 226+45.0, 11.5'RT
4" INSULATION REQD
OVER 16" WM

STA 229+45.0, 40.0' TO 71.0'RT
4" INSULATION REQD
OVER 8' WATER SERVICE

STA 229+45.0, 35.2'RT
BREAK IN GRADE; 2-NEW
VERT 8"x22 1/2° BENDS
IE= 834.94 & IE= 837.79 V.I.F.

#16255-16351
LINCOLN SERVICE CTR

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	SANITARY & WATER MAIN ADJUSTMENT PLAN	SCALE, FEET 0 20 40	SHEET 39	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc023005_up.dgn PLOT DATE : 28-OCT-2013 15:39 PLOT BY : scook PLOT NAME : PLOT NAME : lc023005_up PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

2

N

#16300
CHR HANSON

#16230
GLASS DOCTOR

STA 230+50.0, 26.5'LT
NEW HYDRANT ASSEMBLY
16 LF - 6" D.I.P. HYD LEAD
HYD IE = 838.05
FLG. EL = 846.05
BURY = 8.0

SA-13 STA 231+73.6, 1.6'LT
RECONSTRUCTING SANITARY MH
REPLACE ALL CHIMNEY RINGS
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 846.03
PROP RIM EL= 845.03

STA 232+60.9, 25.5'LT
15 LF WATER SERVICES
4-INCH OPEN CUT
NEW 4"x16" ANCHOR TEE
OR TAPPING SLEEVE
16" IE E & W = 834.53+-V.I.F.
4" VALVE = 835.05

STA 232+00, 10.0'LT
4" INSULATION REQD
OVER 16" WM

BM #25
EL = 846.58

SA-14 STA 233+73.4, 0.1'LT
ADJUSTING SANITARY MH COVER
REPLACE ALL CHIMNEY RINGS
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 845.20
PROP RIM EL= 845.10

REMOVE HYDRANT RETAINING WALL,
SALVAGE FIRE HYDRANT AND
ABANDON HYDRANT TEE
NOZZLE EL = 845.79

SA-15 STA 234+71.3, 0.3'LT
ADJUSTING SANITARY MH COVER
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 845.97
PROP RIM EL= 845.79

STA 235+00.0, 26.5'LT
NEW HYDRANT ASSEMBLY
17 LF - 6" D.I.P. HYD LEAD
HYD IE = 835.65
FLG. EL = 846.15
BURY = 10.5'
RETAINING WALL REQD
WALL TOP EL = 845.65
WALL BTM EL = 842.65

STA 234+67.5, 9.9'LT
4" INSULATION REQD
OVER 16" WM

STA 235+78.6, 11.5'RT
4" INSULATION REQD
OVER 2" WM

DEER CREEK

DEER CREEK

ABANDONED COAX AND FO

R/L W. LINCOLN AVE

W. LINCOLN AVE

MATCHLINE 230+00

MATCHLINE 236+00

231 232 233 234 235

BM #07
EL = 850.66

STA 230+50.0, 10.1'LT
NEW 6"x16" ANCHOR TEE
OR TAPPING SLEEVE
NEW 6" VALVE W/ V. BOX
16" IE E & W = 837.19+-V.I.F.
6" VALVE = 837.61

STA 232+61, 9.0'LT
4" INSULATION REQD
OVER 16" WM

WETLAND BOUNDARY,
TYP.

STA 235+00.0, 9.9'LT
NEW 6"x16" ANCHOR TEE
OR TAPPING SLEEVE
NEW 6" VALVE W/ V. BOX
16" IE E & W = 834.80+-V.I.F.
6" VALVE = 835.22

ADJUST WATER
VALVE BOX

STA 235+79.5, 63.0'RT
30 LF WATER SERVICES
2-INCH OPEN CUT
NEW CURB STOP
AND SERVICE BOX

4" PIPE INSULATION REQD
FOR BIOSWALE EXCAVATION
36.0'RT TO 59.5'RT

#16211
METCAST

CAUTION

NOTES

1) THE 6"x16" ANCHOR TEE OR TAPPING SLEEVE IS INCLUDED IN THE BID ITEM "HYDRANT LEADS DUCTILE IRON 6-INCH".

2) NEW 4"x16" ANCHOR TEE OR TAPPING SLEEVE IS INCLUDED IN THE BID ITEM "WATER SERVICES OPEN CUT 4-INCH".

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	SANITARY & WATER MAIN ADJUSTMENT PLAN	SCALE, FEET 0 20 40	SHEET 40	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc023006_up.dgn
PLOT DATE : 28-OCT-2013 15:39
PLOT BY : scook
PLOT NAME : PLOT NAME : lc023006_up
PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

2

2

N

R/L S 162ND ST

S. 162ND ST.

*16230
GLASS DOCTOR

CAUTION

*16150
SCHROEDER SOLUTIONS

STA 60+53.5, 9.1'RT
NEW 6"x8" ANCHOR TEE
OR TAPPING SLEEVE
NEW 6" VALVE W/ V. BOX
8" IE N & S = 838.62+_V.I.F.
6" VALVE = 838.70

STA 60+53.5, 24.0'RT
NEW HYDRANT ASSEMBLY
17 LF - 6" D.I.P. HYD LEAD
HYD IE = 839.12
FLG. EL = 847.62
BURY = 8.5'

STA 239+60.7, 58.0' TO 75.5'LT
4" INSULATION REQD OVER
WATER SERVICE

SALVAGE FIRE HYDRANT AND
ABANDON HYDRANT TEE
NOZZLE EL = 850.36

SA-17 STA 239+62.0, 0.1'LT
ADJUSTING SANITARY MH COVER
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 848.88
PROP RIM EL= 849.22

STA 241+40.0, 26.5'LT
NEW HYDRANT ASSEMBLY
15 LF - 6" D.I.P. HYD LEAD
HYD IE = 842.15
FLG. EL = 850.65
BURY = 8.5'

EXIST. BM*27
EL = 849.91

PLE

SALVAGE FIRE HYDRANT AND
ABANDON HYDRANT TEE
NOZZLE EL = 847.87

BM *HBM7
EL = 850.66

R/L W. LINCOLN AVE

SA-16 STA 237+40.9, 0.2'LT
ADJUSTING SANITARY MH COVER
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 847.72
PROP RIM EL= 847.68

STA 237+50.8, 39.9'LT
SALVAGE EXISTING 8" VALVE FOLLOWING
INSTALLATION OF NEW 8"x16" CROSS
INSTALL 36 LF 8" D.I.P. WM TO HYDRANT

ADJUST WATER
VALVE BOX

BM *06
EL = 850.67

STA 237+13, 10.0'LT
4" INSULATION REQD
OVER 16" WM

STA 237+75, 10.0'LT
4" INSULATION REQD
OVER 16" WM

36 LF 8" D.I.P. WM

8 LF 16" D.I.P. WM

8 LF 16" D.I.P. WM

8 LF 16" D.I.P. WM

MATCHLINE 236+00

237

238

239

240

241

MATCHLINE 242+00

W. LINCOLN AVE

4 LF 8" D.I.P. WM

STA 237+82.0, 10.3'LT
REMOVE WATER VALVE VAULT

2- NEW 16" PIPE SLEEVES
8.0 LF 16" D.I.P. WM
16" IE E & W= 838.8+_V.I.F.

EXIST. BM*26
EL = 848.36

STA 237+51.6, 10.0'LT
2- NEW 16" BUTTERFLY VALVES
2- NEW 8" GATE VALVES
NEW 8"X16" ANCHOR CROSS
8 LF 16" D.I.P. WM
4- NEW VALVE BOXES
2- NEW 16" PIPE SLEEVES
1- NEW 8" PIPE SLEEVE
16" IE E & W= 838.62+_V.I.F.
8" IE N & S= 838.95+_V.I.F.

INSTALL BUTTERFLY VALVE OPERATING
NUT IN THE NORTH OR EAST DIRECTION
PER CITY WATER UTILITY SPECIFICATIONS.

STA 239+96.1, 11.5'LT
4" INSULATION REQD
OVER 4" WM

STA 239+97.2, 40.0'LT
30 LF WATER SERVICES
OPEN CUT 4-INCH
4-NEW VERT 4"x22½? BENDS
NO INVERT DATA AVAILABLE
VERIFY 4" INVERT IN FIELD (V.I.F.)
BOTTOM OF SWALE ELEV= 844.50
MAINTAIN MIN. 4' COVER
BOTTOM ELEV= 840.10

4" INSULATION REQD
OVER 4" WATER SERVICE
55'RT TO 65'RT

STA 241+40.0, 11.2'LT
NEW 6"x16" ANCHOR TEE
OR TAPPING SLEEVE
NEW 6" VALVE W/ V. BOX
16" IE E & W = 841.54+_V.I.F.
6" VALVE = 841.96

NOTE

1) THE 6"x16" ANCHOR TEE OR TAPPING SLEEVE IS INCLUDED IN THE BID ITEM "HYDRANT LEADS DUCTILE IRON 6-INCH".

STA 237+00.9, 9.6'LT
REMOVE WATER VALVE VAULT

2- NEW 16" PIPE SLEEVES
8.0 LF 16" D.I.P. WM
16" IE E & W= 838.3+_V.I.F.

STA 237+53, 12.0'RT
4" INSULATION REQD
OVER 8" WM

STA 237+53.5, 36.6'RT
SALVAGE EXISTING 8" VALVE FOLLOWING
INSTALLATION OF NEW 8"x16" CROSS
4 LF 8" D.I.P. WM AND
2 - NEW 8" PIPE SLEEVES

*16211
TAYLOR DYNAMETER

R/L S 162ND ST

ADJUST WATER
VALVE BOX

SA-22 STA 52+77.0, 2.0'LT
ADJUSTING SANITARY MH COVER
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 848.10
PROP RIM EL= 848.09

*16155
BSI SCALE

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	SANITARY & WATER MAIN ADJUSTMENT PLAN	SCALE, FEET 0 20 40	SHEET 41	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc023007_up.dgn PLOT DATE : 28-OCT-2013 15:39 PLOT BY : scook PLOT NAME : PLOT NAME : lc023007_up PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

2

2

N

#15700
SCHROEDER SOLUTIONS

#15600
HADER

#15905
ARROWHEAD

#15601
JORGENSON

W. LINCOLN AVE

R/L W. LINCOLN AVE

MATCHLINE 242+00

MATCHLINE 248+00

SA-18 STA 242+12.0, 0.1'LT
ADJUSTING SANITARY MH COVER
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 850.50
PROP RIM EL= 850.97

STA 242+30.9, 11.1'LT
4" INSULATION REQD
OVER 16" WM

STA 243+55.6, 11.5'RT
4" INSULATION REQD
OVER 1 1/4" WM

STA 243+55.6, 26.5'RT
50 LF WATER SERVICES
OPEN CUT 1 1/4-INCH
NEW CURB STOP
AND SERVICE BOX

4" PIPE INSULATION
REQD OVER WATER SERVICE
36.0'RT TO 59.5'RT

EXIST. BM#28
EL = 852.00

SALVAGE FIRE HYDRANT AND
ABANDON HYDRANT TEE
NOZZLE EL = 853.21

STA 245+30.0, 26.5'LT
NEW HYDRANT ASSEMBLY
16 LF - 6" D.I.P. HYD LEAD
HYD IE = 843.85
FLG. EL = 853.35
BURY = 9.5'
RETAINING WALL REQD
WALL TOP EL = 852.85
WALL BTM EL =849.85

BM #05
EL = 853.52

SA-19 STA 245+11.6, 0.1'LT
ADJUSTING SANITARY MH COVER
REPLACE ALL CHIMNEY RINGS
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 852.17
PROP RIM EL= 853.07

STA 245+30.0, 10.9'LT
NEW 6"x16" ANCHOR TEE
OR TAPPING SLEEVE
NEW 6" VALVE W/ V. BOX
16" IE E & W = 843.48+_V.I.F.
6" VALVE = 843.90

ADJUST WATER
VALVE BOX

STA 246+24.5, 10.8'LT
4" INSULATION REQD
OVER 16" WM

STA 247+26.5, 10.7'LT
SALVAGE EXISTING 8" VALVE
NEW 8"x16" ANCHOR TEE
OR TAPPING SLEEVE
NEW 8" FIRE SERV. VALVE W/ V. BOX
16" IE E & W = 846.64+_V.I.F.
8" VALVE = 846.97

STA 247+26.5, 11.5'RT
4" INSULATION REQD
OVER 8" WM

STA 247+45.6, 11.5'RT
4" INSULATION REQD
OVER 6" WM

STA 247+50, 11.0'LT
4" INSULATION REQD
OVER 16" WM

ADJUST WATER
VALVE BOXES

NOTE

1) THE 6"x16" ANCHOR TEE OR TAPPING SLEEVE IS INCLUDED IN THE BID ITEM "HYDRANT LEADS DUCTILE IRON 6-INCH".

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	SANITARY & WATER MAIN ADJUSTMENT PLAN	SCALE, FEET 0 20 40	SHEET 42	E

2

N

#15600
HADER

STA 249+60.0, 26.5'LT
NEW HYDRANT ASSEMBLY
16 LF - 6" D.I.P. HYD LEAD
HYD IE - 852.70
FLG EL = 859.70
BURY = 7.0'
RETAINING WALL REQD
WALL TOP EL = 859.20
WALL BTM EL = 856.87

SALVAGE FIRE HYDRANT AND
ABANDON HYDRANT TEE
NOZZLE EL = 861.99

PLE

BM #28
EL = 858.18

R/L W. LINCOLN AVE

S. MOORLAND ROAD

TLE

STA 250+25, 11.0'LT
4" INSULATION REQD
OVER 16" WM

R/W

BM #04
EL = 862.27

SA-21 STA 251+10.7, 0.7'RT
ADJUSTING SANITARY MH COVER
NEW SAN MH FRAME AND LID REQD
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 862.22
PROP RIM EL= 862.19

14 LF 16" D.I.P. WM

8 LF 16" D.I.P. WM

MATCHLINE 248+00

249

250

251

252

W. LINCOLN AVE

END PROJECT
STA 251+20.37

SA-20 STA 248+11.1, 0.5'LT
ADJUSTING SANITARY MH COVER
NEW INTERNAL CHIMNEY SEAL REQD
EXIST RIM EL= 857.05
PROP RIM EL= 856.87

STA 249+60.0, 10.5'LT
NEW 6"x16" ANCHOR TEE
OR TAPPING SLEEVE
NEW 6" VALVE W/ V. BOX
16" IE E & W = 851.82+-V.I.F.
6" VALVE = 852.24

STA 249+68.0, 10.5'LT
1- NEW 16" BUTTERFLY VALVE
1- NEW VALVE BOX
1- NEW 16" PIPE SLEEVE
14.0 LF 16" D.I.P. WM
16" IE E & W= 852.00+-V.I.F.

INSTALL BUTTERFLY VALVE OPERATING
NUT IN THE NORTH OR EAST DIRECTION
PER CITY WATER UTILITY SPECIFICATIONS.

STA 250+96.7, 10.2'LT
REMOVE WATER VALVE VAULT

PROVIDE TEMPORARY 2" AIR RELEASE VALVE
ON EAST SLEEVE CONNECTION (INCIDENTAL)
8.0 LF 16" D.I.P. WM
2 - NEW 16" PIPE SLEEVES
16" IE E & W= 854.10

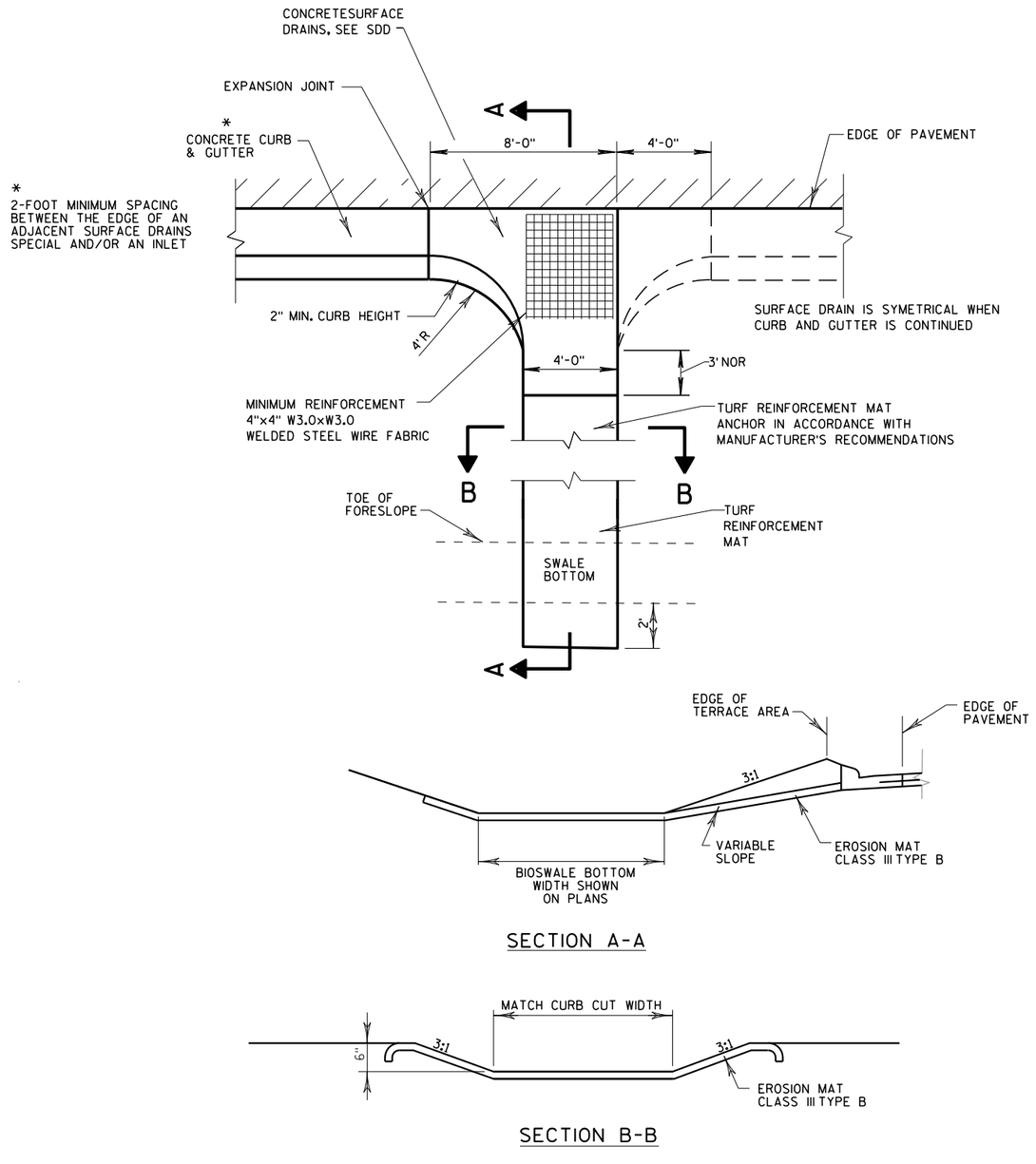
#15601
JORGENSON

NOTE

1) THE 6"x16" ANCHOR TEE OR TAPPING SLEEVE IS INCLUDED IN THE BID ITEM "HYDRANT LEADS DUCTILE IRON 6-INCH".

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	SANITARY & WATER MAIN ADJUSTMENT PLAN	SCALE, FEET 0 20 40	SHEET 43	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc023009_up.dgn PLOT DATE : 28-OCT-2013 15:39 PLOT BY : scook PLOT NAME : PLOT NAME : lc023009_up PLOT SCALE : 40:1

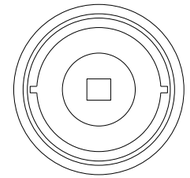


SECTION A-A

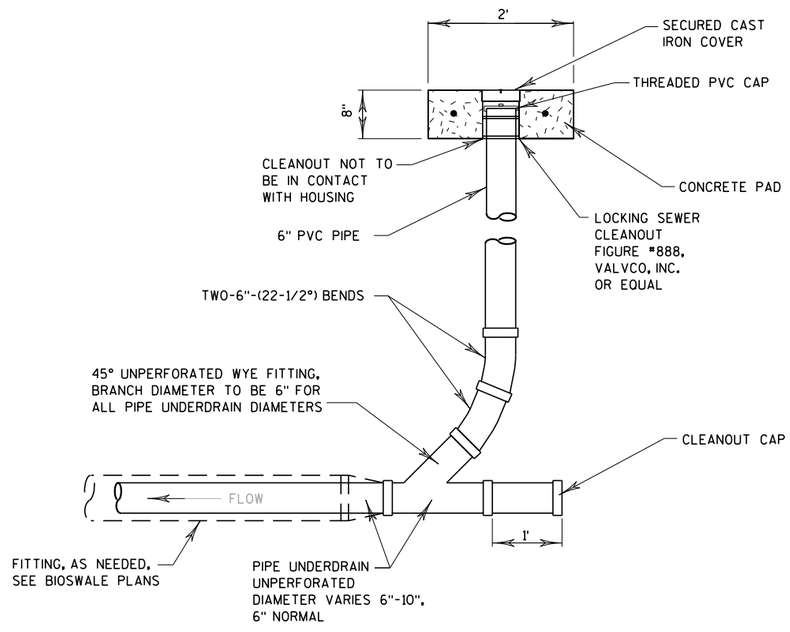
SECTION B-B

CONCRETE SURFACE DRAINS SPECIAL DETAIL

(SEE PAVING DETAILS FOR STATIONS)



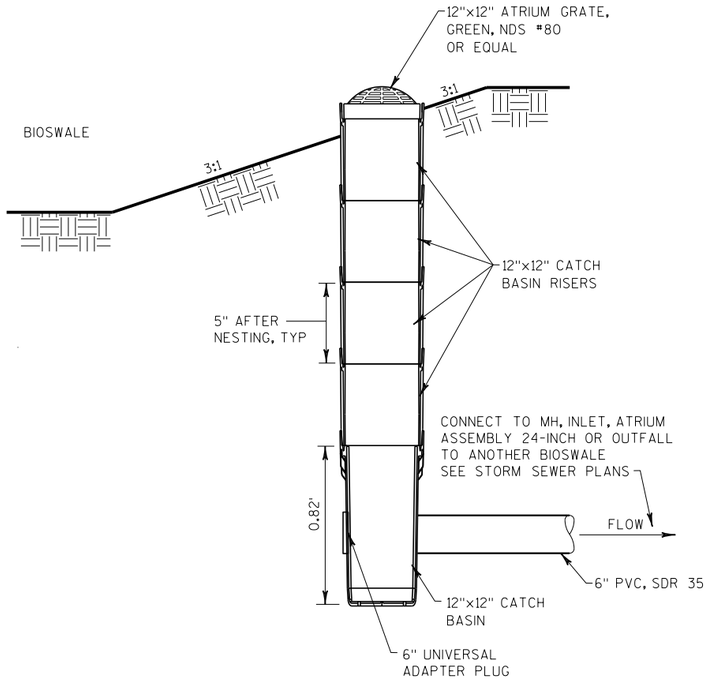
SEWER CLEANOUT - ENLARGED TOP INTERIOR VIEW



PIPE UNDERDRAIN CLEANOUT DETAIL

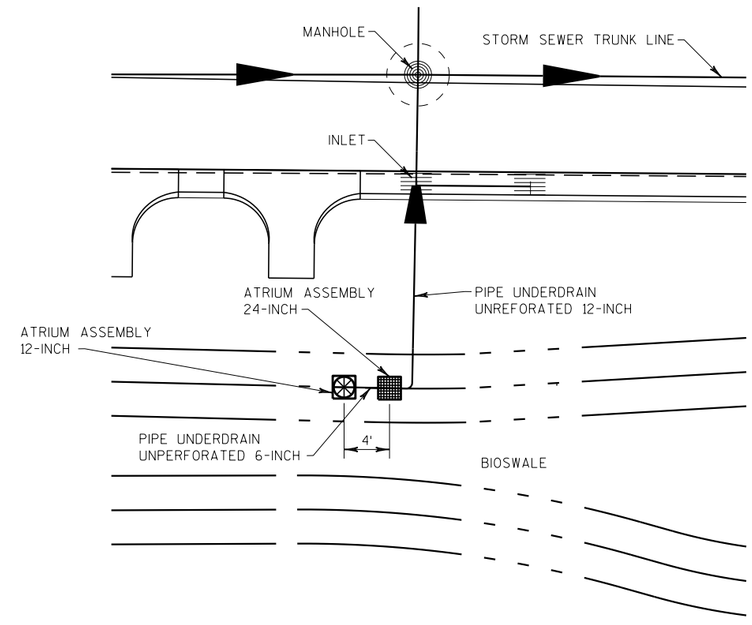
(SEE BIOSWALE PLANS FOR LOCATIONS)

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: BIOSWALE DETAILS	SCALE : NTS	SHEET 44	E

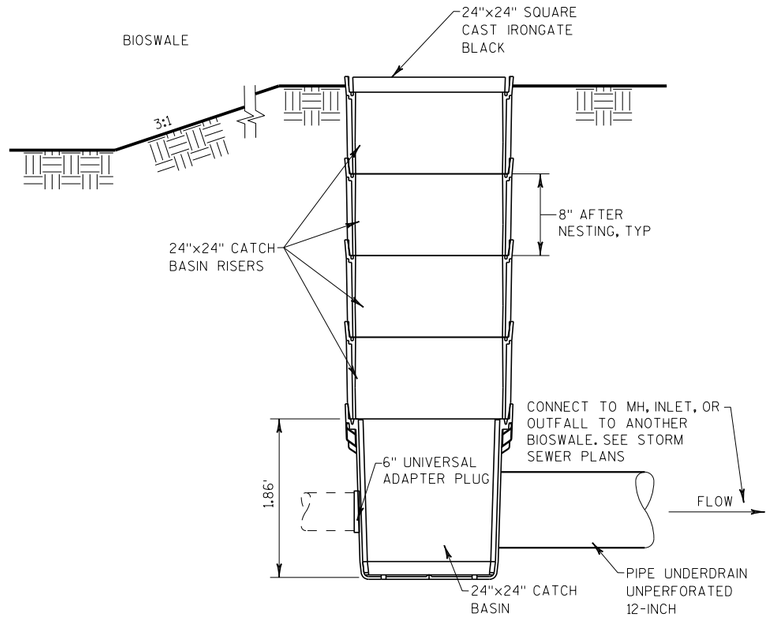


ATRIUM ASSEMBLY 12-INCH

(SEE STORM SEWER AND BIOSWALE PLANS FOR LOCATIONS)



PLAN OF ATRIUM ASSEMBLY 12-INCH CONNECTED TO ATRIUM ASSEMBLY 24-INCH



ATRIUM ASSEMBLY 24-INCH

(SEE STORM SEWER AND BIOSWALE PLANS FOR LOCATIONS)

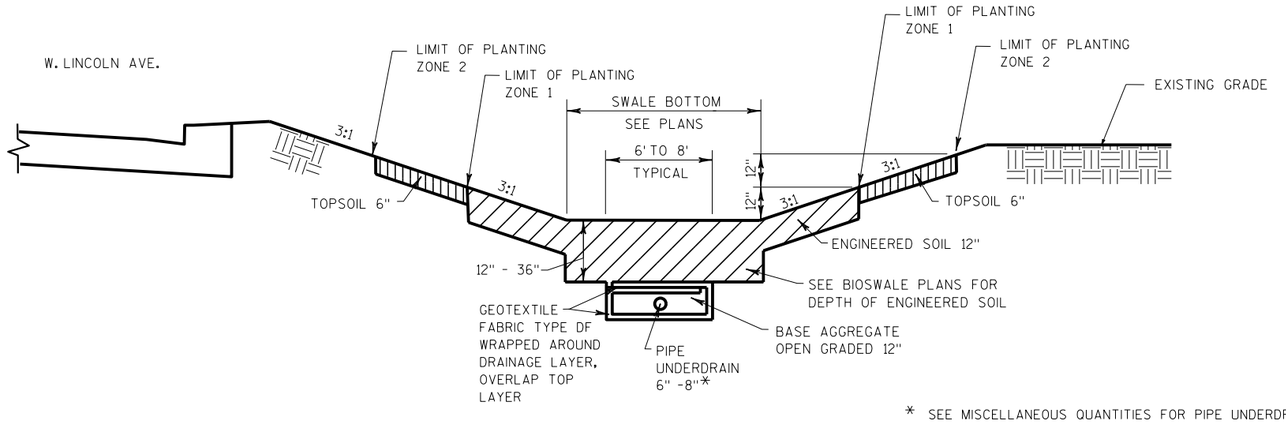
NOTES

1. NUMBER OF 24"x24" RISERS CAN VARY FROM 1 TO 4 (4 SHOWN IN DETAIL) SEE MISCELLANEOUS QUANTITY SHEETS FOR ADDITIONAL INFORMATION
2. ATRIUM ASSEMBLY 24-INCH WHEN IT'S INSTALLED WITH AN ATRIUM ASSEMBLY 12-INCH CONNECT WITH 4 LF 6" PVC.

BIOSWALE OUTLET DETAILS

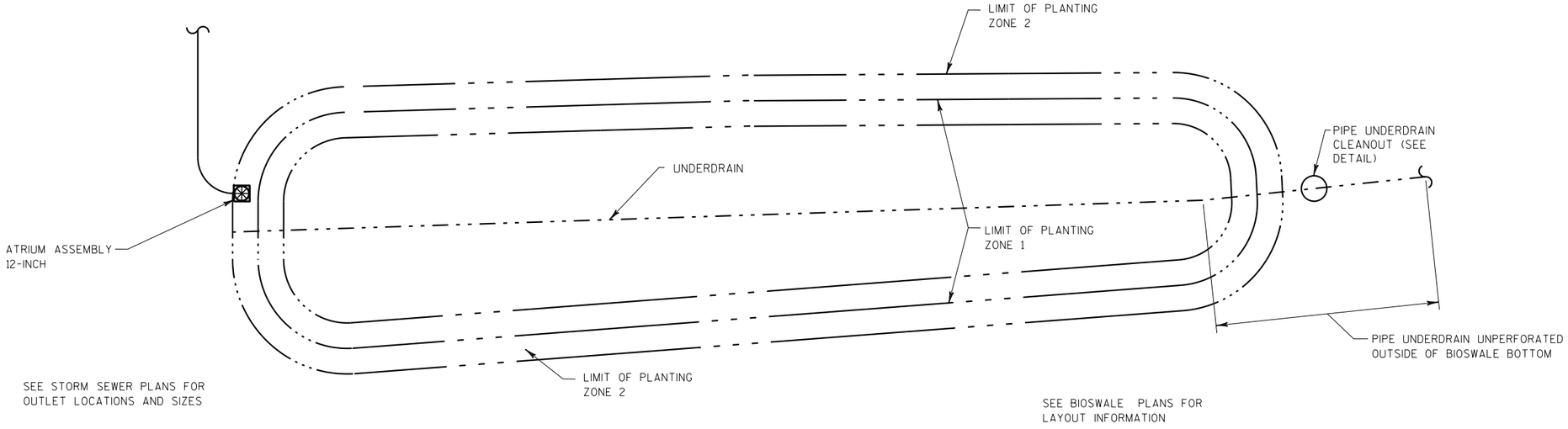
PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: BIOSWALE DETAILS	SCALE : NTS	SHEET 45	E

2



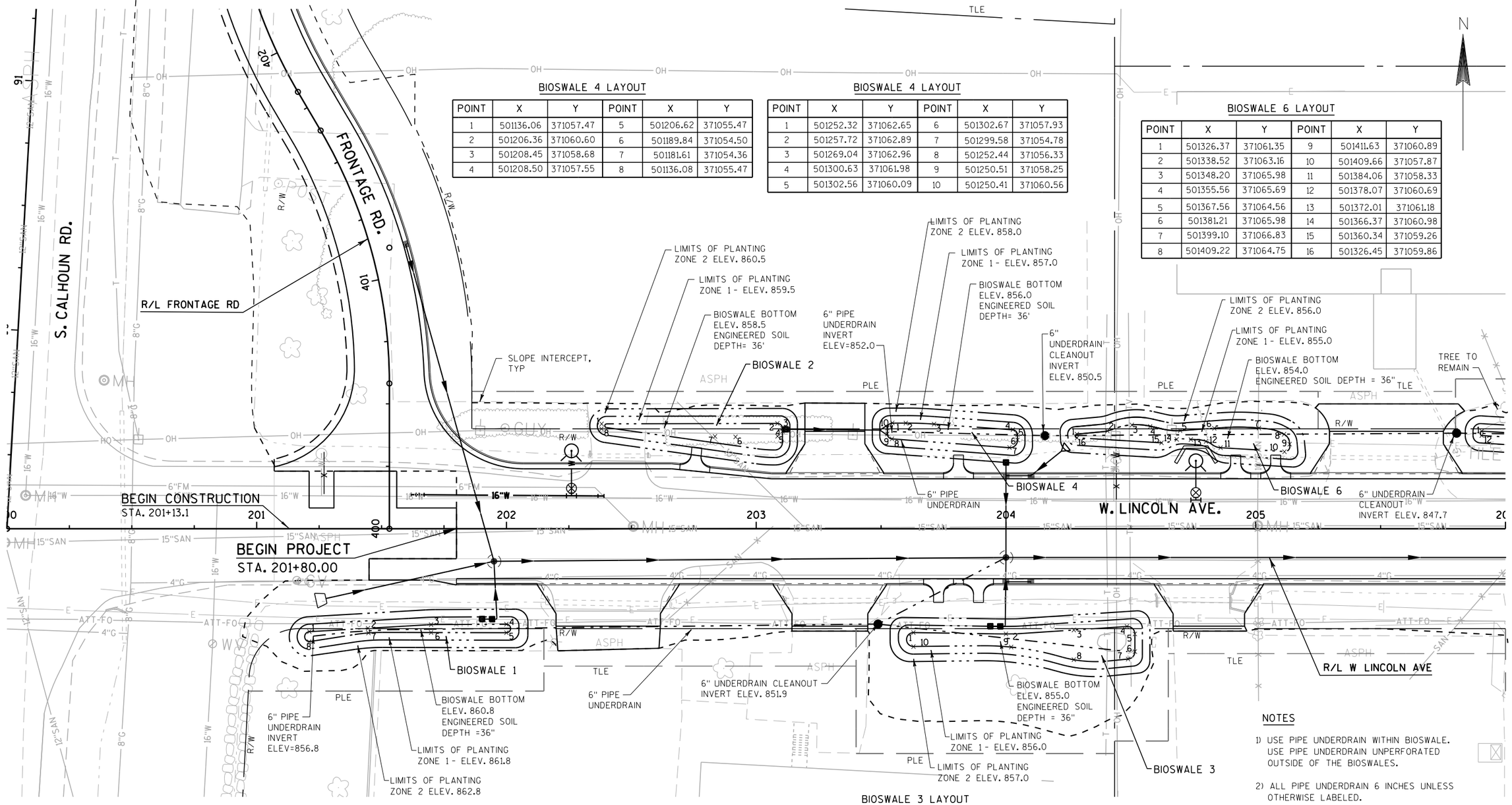
* SEE MISCELLANEOUS QUANTITIES FOR PIPE UNDERDRAIN SIZES.
NO PIPE UNDERDRAIN IN BIOSWALES BETWEEN S. 170TH ST. AND THE UP RAILROAD.
NO PIPE UNDERDRAIN IN NORTH BIOSWALES BETWEEN S. 162ND ST. AND S. MOORLAND RD.

BIOSWALE INFILTRATION AREA DETAIL



BIOSWALE PLANTING LIMITS DETAIL

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: BIOSWALE DETAILS	SCALE : NTS	SHEET 46	E



BIOSWALE 4 LAYOUT

POINT	X	Y	POINT	X	Y
1	501136.06	371057.47	5	501206.62	371055.47
2	501206.36	371060.60	6	501189.84	371054.50
3	501208.45	371058.68	7	501181.61	371054.36
4	501208.50	371057.55	8	501136.08	371055.47

BIOSWALE 4 LAYOUT

POINT	X	Y	POINT	X	Y
1	501252.32	371062.65	6	501302.67	371057.93
2	501257.72	371062.89	7	501299.58	371054.78
3	501269.04	371062.96	8	501252.44	371056.33
4	501300.63	371061.98	9	501250.51	371058.25
5	501302.56	371060.09	10	501250.41	371060.56

BIOSWALE 6 LAYOUT

POINT	X	Y	POINT	X	Y
1	501326.37	371061.35	9	501411.63	371060.89
2	501338.52	371063.16	10	501409.66	371057.87
3	501348.20	371065.98	11	501384.06	371058.33
4	501355.56	371065.69	12	501378.07	371060.69
5	501367.56	371064.56	13	501372.01	371061.18
6	501381.21	371065.98	14	501366.37	371060.98
7	501399.10	371066.83	15	501360.34	371059.26
8	501409.22	371064.75	16	501326.45	371059.86

BIOSWALE 1 LAYOUT

POINT	X	Y	POINT	X	Y
1	501022.62	370969.40	5	501101.46	370972.32
2	501045.98	370971.76	6	501071.33	370971.24
3	501071.20	370974.27	7	501046.28	370696.91
4	501101.31	370975.70	8	501022.73	370965.43

BIOSWALE 3 LAYOUT

POINT	X	Y	POINT	X	Y
1	501264.28	370979.21	6	501353.20	370975.31
2	501301.33	370980.22	7	501350.59	370972.18
3	501328.41	370982.93	8	501328.91	370971.04
4	501349.58	370985.23	9	501303.63	370975.04
5	501352.90	370982.37	10	501264.53	370973.65

NOTES

1) USE PIPE UNDERDRAIN WITHIN BIOSWALE. USE PIPE UNDERDRAIN UNPERFORATED OUTSIDE OF THE BIOSWALES.

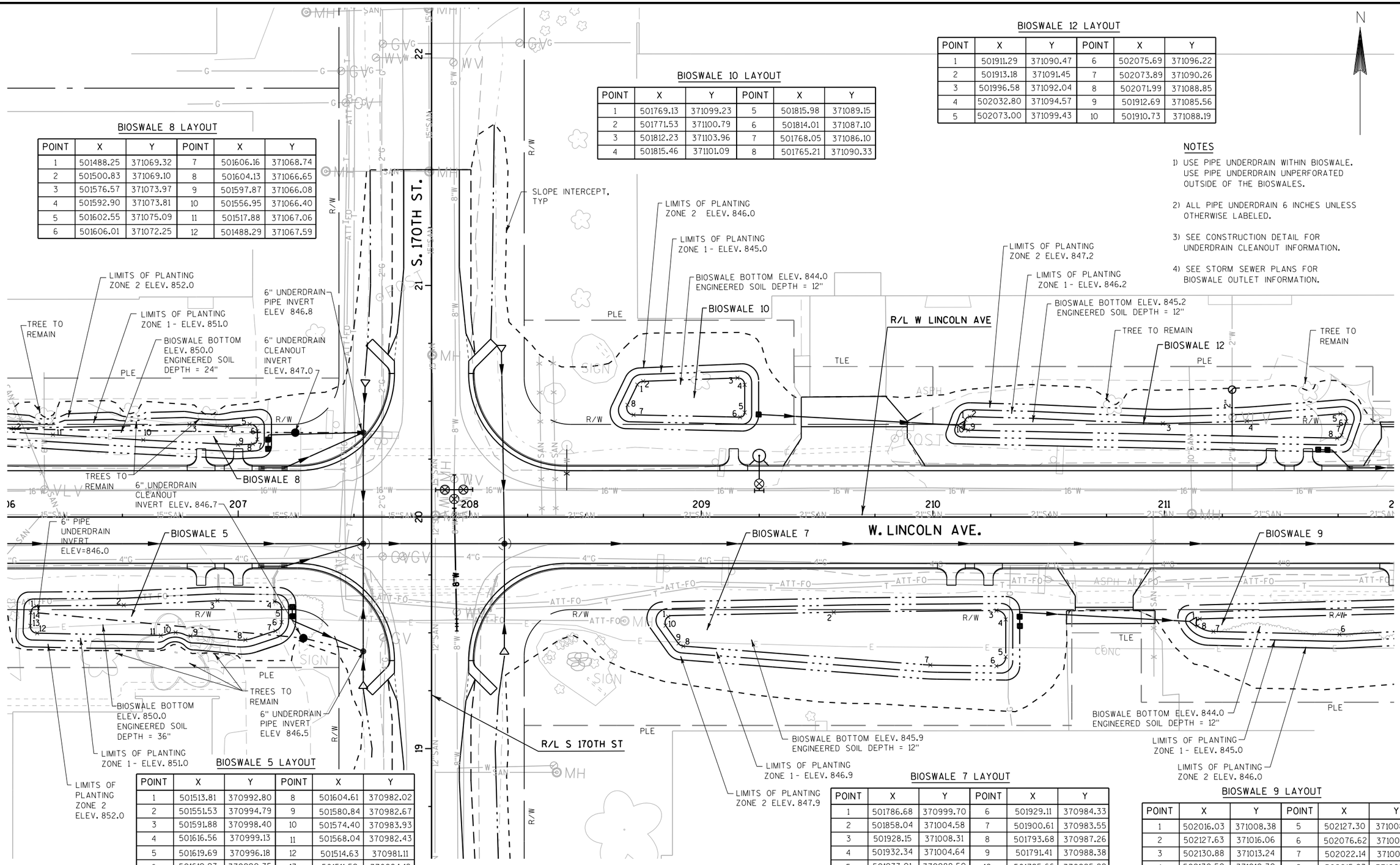
2) ALL PIPE UNDERDRAIN 6 INCHES UNLESS OTHERWISE LABELED.

3) SEE CONSTRUCTION DETAIL FOR UNDERDRAIN CLEANOUT INFORMATION.

4) SEE STORM SEWER PLANS FOR BIOSWALE OUTLET INFORMATION.

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: BIOSWALE PLANS	SCALE, FEET 0 20 40	SHEET 47	E

2



BIOSWALE 8 LAYOUT

POINT	X	Y	POINT	X	Y
1	501488.25	371069.32	7	501606.16	371068.74
2	501500.83	371069.10	8	501604.13	371066.65
3	501576.57	371073.97	9	501597.87	371066.08
4	501592.90	371073.81	10	501556.95	371066.40
5	501602.55	371075.09	11	501517.88	371067.06
6	501606.01	371072.25	12	501488.29	371067.59

BIOSWALE 10 LAYOUT

POINT	X	Y	POINT	X	Y
1	501769.13	371099.23	5	501815.98	371089.15
2	501771.53	371100.79	6	501814.01	371087.10
3	501812.23	371103.96	7	501768.05	371086.10
4	501815.46	371101.09	8	501765.21	371090.33

BIOSWALE 12 LAYOUT

POINT	X	Y	POINT	X	Y
1	501911.29	371090.47	6	502075.69	371096.22
2	501913.18	371091.45	7	502073.89	371090.26
3	501996.58	371092.04	8	502071.99	371088.85
4	502032.80	371094.57	9	501912.69	371085.56
5	502073.00	371099.43	10	501910.73	371088.19

NOTES

1) USE PIPE UNDERDRAIN WITHIN BIOSWALE. USE PIPE UNDERDRAIN UNPERFORATED OUTSIDE OF THE BIOSWALES.

2) ALL PIPE UNDERDRAIN 6 INCHES UNLESS OTHERWISE LABELED.

3) SEE CONSTRUCTION DETAIL FOR UNDERDRAIN CLEANOUT INFORMATION.

4) SEE STORM SEWER PLANS FOR BIOSWALE OUTLET INFORMATION.

BIOSWALE 5 LAYOUT

POINT	X	Y	POINT	X	Y
1	501513.81	370992.80	8	501604.61	370982.02
2	501551.53	370994.79	9	501580.84	370982.67
3	501591.88	370998.40	10	501574.40	370983.93
4	501616.56	370999.13	11	501568.04	370982.43
5	501619.69	370996.18	12	501514.63	370981.11
6	501619.93	370990.35	13	501511.52	370984.18
7	501617.37	370986.46	14	501511.55	370989.91

BIOSWALE 7 LAYOUT

POINT	X	Y	POINT	X	Y
1	501786.68	370999.70	6	501929.11	370984.33
2	501858.04	371004.58	7	501900.61	370983.55
3	501928.15	371008.31	8	501793.68	370987.26
4	501932.34	371004.64	9	501791.41	370988.38
5	501933.01	370988.50	10	501785.66	370995.82

BIOSWALE 9 LAYOUT

POINT	X	Y	POINT	X	Y
1	502016.03	371008.38	5	502127.30	371008.97
2	502127.63	371016.06	6	502076.62	371004.21
3	502130.88	371013.24	7	502022.14	371003.19
4	502130.50	371010.30	8	502015.23	371005.29

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: BIOSWALE PLANS	SCALE, FEET	SHEET 48	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc023104_p1.dgn PLOT DATE : 30-OCT-2013 12:41 PLOT BY : scook PLOT NAME : PLOT NAME : lc023104_p1 PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

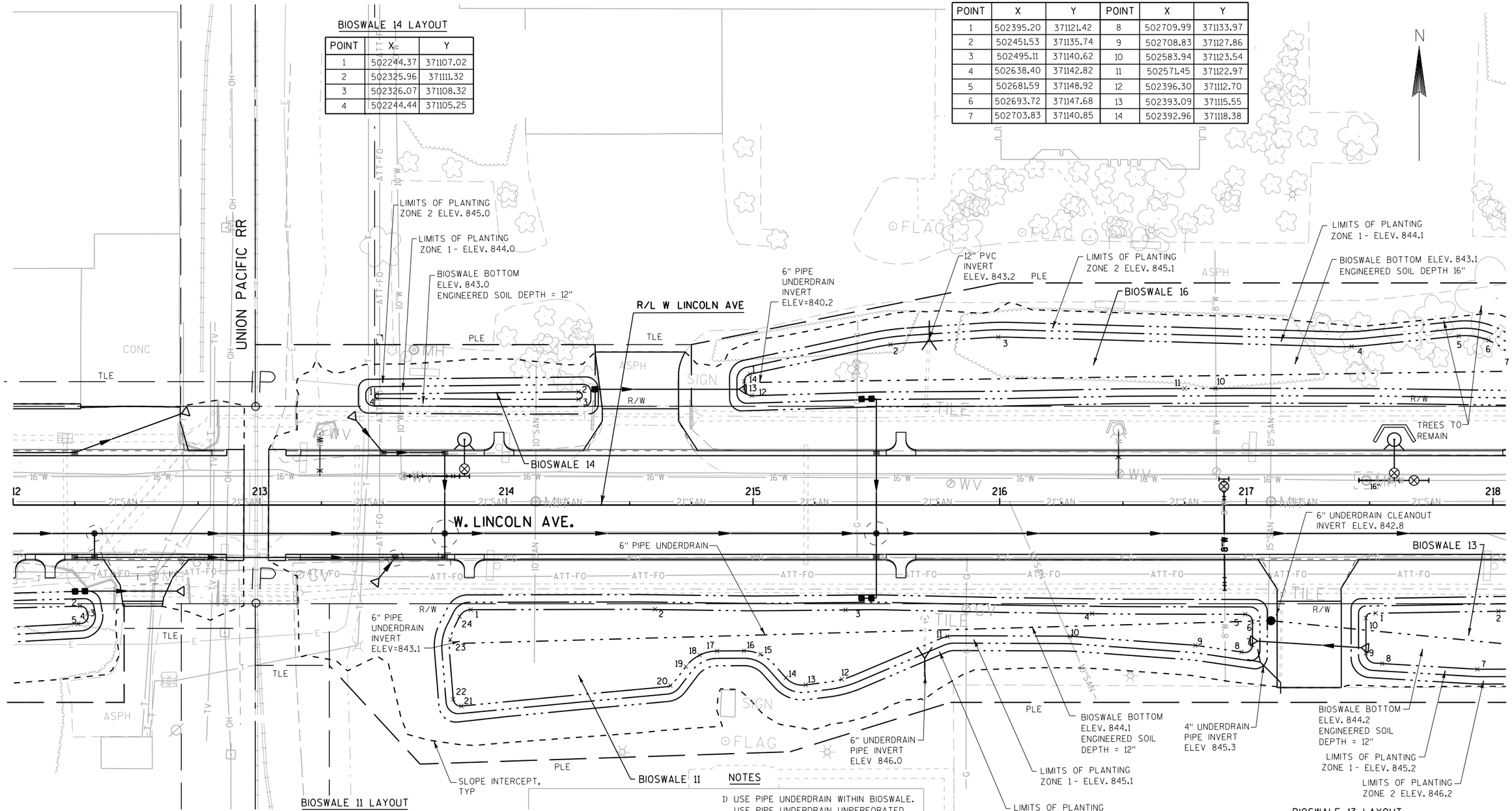
2

BIOSWALE 14 LAYOUT

POINT	X	Y
1	502244.37	371107.02
2	502325.96	371111.32
3	502326.07	371108.32
4	502244.44	371105.25

BIOSWALE 16 LAYOUT

POINT	X	Y	POINT	X	Y
1	502395.20	371121.42	8	502709.99	371133.97
2	502451.53	371135.74	9	502708.83	371127.86
3	502495.11	371140.62	10	502583.94	371123.54
4	502638.40	371142.82	11	502571.45	371122.97
5	502681.59	371148.92	12	502396.30	371112.70
6	502693.72	371147.68	13	502393.09	371115.55
7	502703.83	371140.85	14	502392.96	371118.38



BIOSWALE 11 LAYOUT

POINT	X	Y	POINT	X	Y	POINT	X	Y	POINT	X	Y
1	502285.99	371021.27	7	502603.29	371020.25	13	502423.03	370996.53	19	502374.15	371001.91
2	502360.61	371024.46	8	502598.98	371017.24	14	502414.87	370999.02	20	502368.19	370993.95
3	502437.84	371027.55	9	502580.15	371019.15	15	502404.01	371008.16	21	502283.85	370982.10
4	502537.82	371030.25	10	502529.23	371020.69	16	502397.38	371009.26	22	502280.46	370984.70
5	502599.78	371032.58	11	502479.59	371018.56	17	502386.53	371008.75	23	502278.22	371008.90
6	502602.90	371029.70	12	502437.53	370999.39	18	502379.54	371006.77	24	502281.65	371018.33

NOTES

1) USE PIPE UNDERDRAIN WITHIN BIOSWALE. USE PIPE UNDERDRAIN UNPERFORATED OUTSIDE OF THE BIOSWALES.

2) ALL PIPE UNDERDRAIN 6 INCHES UNLESS OTHERWISE LABELED.

3) SEE CONSTRUCTION DETAIL FOR UNDERDRAIN CLEANOUT INFORMATION.

4) SEE STORM SEWER PLANS FOR BIOSWALE OUTLET INFORMATION.

BIOSWALE 13 LAYOUT

POINT	X	Y	POINT	X	Y
1	502652.66	371035.24	6	502758.06	371017.21
2	502702.40	371038.12	7	502694.80	371014.28
3	502752.15	371041.01	8	502656.20	371014.97
4	502755.02	371039.33	9	502649.39	371018.85
5	502762.32	371024.40	10	502648.80	371033.04

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: BIOSWALE PLANS	SCALE, FEET 0 20 40	SHEET 49	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc023105_pl.dgn
PLOT DATE : 30-OCT-2013 12:41
PLOT BY : scook
PLOT NAME : PLOT NAME : lc023105_pl
PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

BIOSWALE 18 LAYOUT

POINT	X	Y	POINT	X	Y
1	502815.54	371135.37	4	503171.38	371149.37
2	502901.13	371142.54	5	503168.83	371145.08
3	503169.27	371152.60	6	502815.64	371133.33

N

TREE TO REMAIN
6" UNDERDRAIN CLEANOUT INVERT ELEV. 840.7
6" UNDERDRAIN CLEANOUT INVERT ELEV. 840.65
6" UNDERDRAINS PIPE INVERT ELEV. 840.6
6" UNDERDRAIN CLEANOUT INVERT ELEV. 840.7
LIMITS OF PLANTING ZONE 2 - ELEV. 844.1
LIMITS OF PLANTING ZONE 1 - ELEV. 843.1
BIOSWALE BOTTOM ELEV. 842.1 ENGINEERED SOIL DEPTH = 12"
WETLAND BOUNDARY
BIOSWALE 18
CONCRETE COLLARS FOR PIPE
6" PIPE UNDERDRAIN
6" PIPE UNDERDRAIN INVERT ELEV=840.8
BIOSWALE 14
BIOSWALE 13
6" PIPE UNDERDRAIN INVERT ELEV=842.4
W. LINCOLN AVE.
BIOSWALE 17
8" PIPE UNDERDRAIN
TREE TO REMAIN
SLOPE INTERCEPT, TYP
R/L W LINCOLN AVE
6" UNDERDRAIN CLEANOUT INVERT ELEV. 842.3 CONNECT 8" DRAIN TILE WITH WYE FITTING
8" STL DRAIN INV 842.64
6" PIPE UNDERDRAIN INV=841.6
BIOSWALE BOTTOM ELEV. 844.2 ENGINEERED SOIL DEPTH = 12"
LIMITS OF PLANTING ZONE 1 - ELEV. 845.2
LIMITS OF PLANTING ZONE 2 ELEV. 846.2
6" UNDERDRAIN PIPE INVERT ELEV 842.6
S. COMMERCE DR.
R/L S COMMERCE DR
TREE TO REMAIN
BIOSWALE BOTTOM ELEV. 844.0 ENGINEERED SOIL DEPTH = 12"
LIMITS OF PLANTING ZONE 1 - ELEV. 845.0
LIMITS OF PLANTING ZONE 2 ELEV. 846.0
BIOSWALE 15
BIOSWALE BOTTOM ELEV. 843.0 ENGINEERED SOIL DEPTH = 12"
LIMITS OF PLANTING ZONE 1 - ELEV. 844.0
LIMITS OF PLANTING ZONE 2 ELEV. 845.0

BIOSWALE 15 LAYOUT

POINT	X	Y	POINT	X	Y
1	502883.68	371046.89	8	502967.84	371044.41
2	502949.71	371053.33	9	502962.44	371048.89
3	503017.79	371056.62	10	502953.84	371049.48
4	503072.15	371059.45	11	502945.66	371048.40
5	503072.45	371056.96	12	502939.54	371043.47
6	503014.44	371055.78	13	502895.35	371041.72
7	502970.96	371043.59	14	502883.54	371043.93

NOTES

1) USE PIPE UNDERDRAIN WITHIN BIOSWALE. USE PIPE UNDERDRAIN UNPERFORATED OUTSIDE OF THE BIOSWALES.

2) ALL PIPE UNDERDRAIN 6 INCHES UNLESS OTHERWISE LABELED.

3) SEE CONSTRUCTION DETAIL FOR UNDERDRAIN CLEANOUT INFORMATION.

4) SEE STORM SEWER PLANS FOR BIOSWALE OUTLET INFORMATION.

BIOSWALE 17 LAYOUT

POINT	X	Y	POINT	X	Y
1	503246.29	371057.68	10	503397.97	371052.63
2	503249.24	371060.46	11	503393.04	371059.04
3	503299.44	371061.46	12	503375.24	371058.55
4	503429.41	371064.45	13	503371.04	371056.02
5	503434.40	371054.92	14	503364.12	371042.09
6	503405.93	371015.90	15	503359.82	371018.22
7	503402.14	371013.86	16	503352.30	371011.36
8	503394.76	371013.49	17	503353.49	371006.41
9	503388.71	371021.18	18	503248.24	371011.19

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: BIOSWALE PLANS	SCALE, FEET 0 20 40	SHEET 50 E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc023106_pl.dgn PLOT DATE : 30-OCT-2013 12:41 PLOT BY : scook PLOT NAME : PLOT NAME : lc023106_pl PLOT SCALE : 40:1

2

2

BIOSWALE 20 LAYOUT

POINT	X	Y	POINT	X	Y
1	503486.30	371162.45	5	503520.22	371172.70
2	503504.07	371172.35	6	503520.61	371164.85
3	503509.42	371174.31	7	503517.66	371161.72
4	503516.63	371175.49	8	503486.81	371160.36

NOTES

1) USE PIPE UNDERDRAIN WITHIN BIOSWALE. USE PIPE UNDERDRAIN UNPERFORATED OUTSIDE OF THE BIOSWALES.

2) ALL PIPE UNDERDRAIN 6 INCHES UNLESS OTHERWISE LABELED.

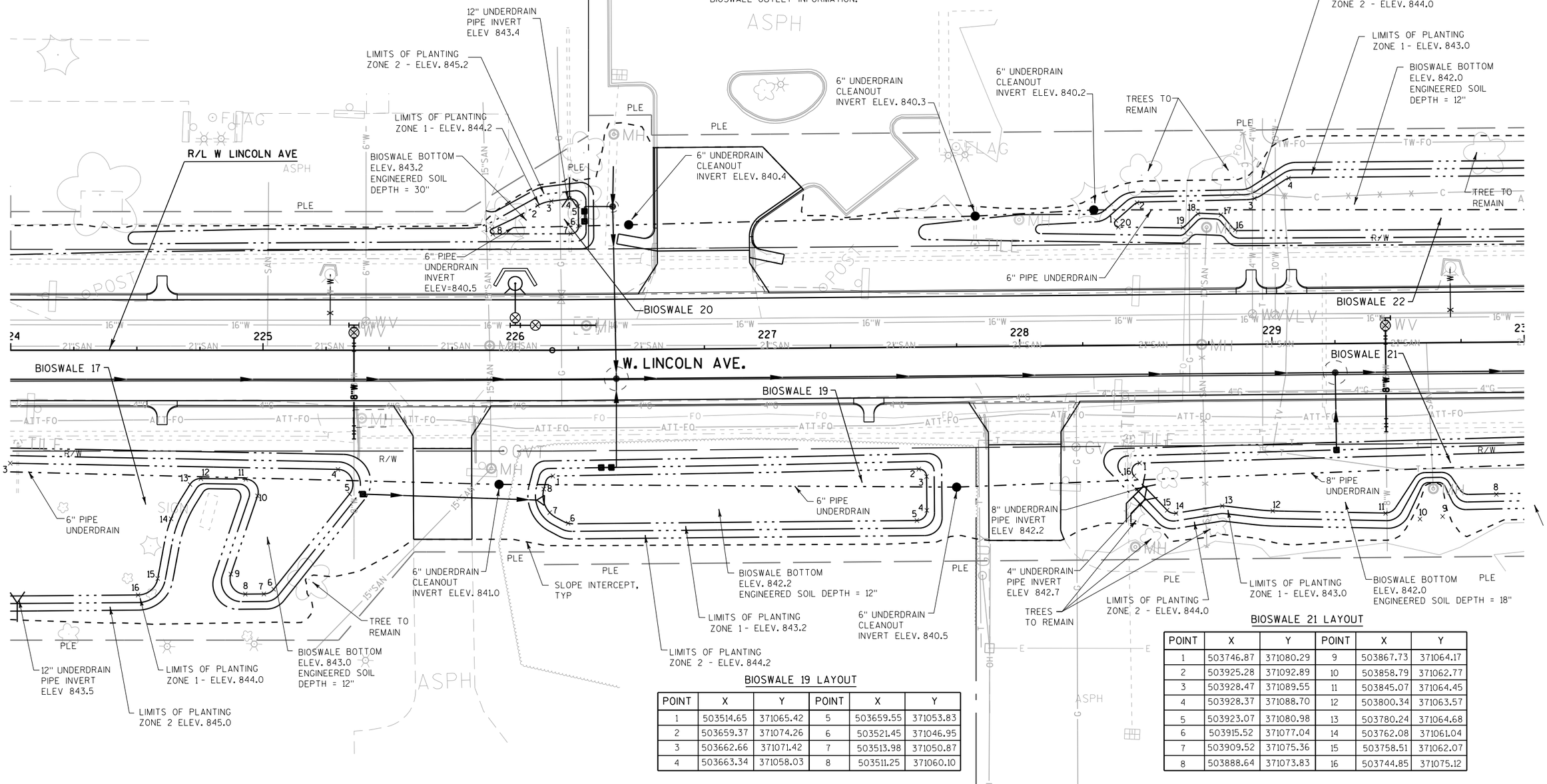
3) SEE CONSTRUCTION DETAIL FOR UNDERDRAIN CLEANOUT INFORMATION.

4) SEE STORM SEWER PLANS FOR BIOSWALE OUTLET INFORMATION.

BIOSWALE 22 LAYOUT (WEST)

POINT	X	Y	POINT	X	Y
1	503733.36	371176.05	16	503780.80	371174.31
2	503741.47	371183.44	17	503774.90	371180.05
3	503787.96	371187.13	18	503765.78	371180.05
4	503801.09	371195.68	19	503760.05	371174.44
15	503970.17	371182.89	20	503734.44	371173.47

N



BIOSWALE 19 LAYOUT

POINT	X	Y	POINT	X	Y
1	503514.65	371065.42	5	503659.55	371053.83
2	503659.37	371074.26	6	503521.45	371046.95
3	503662.66	371071.42	7	503513.98	371050.87
4	503663.34	371058.03	8	503511.25	371060.10

BIOSWALE 21 LAYOUT

POINT	X	Y	POINT	X	Y
1	503746.87	371080.29	9	503867.73	371064.17
2	503925.28	371092.89	10	503858.79	371062.77
3	503928.47	371089.55	11	503845.07	371064.45
4	503928.37	371088.70	12	503800.34	371063.57
5	503923.07	371080.98	13	503780.24	371064.68
6	503915.52	371077.04	14	503762.08	371061.04
7	503909.52	371075.36	15	503758.51	371062.07
8	503888.64	371073.83	16	503744.85	371075.12

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: BIOSWALE PLANS	SCALE, FEET 0 20 40	SHEET 51	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc023107_pl.dgn PLOT DATE : 30-OCT-2013 12:41 PLOT BY : scook PLOT NAME : PLOT NAME : lc023107_pl PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

BIOSWALE 22 LAYOUT (EAST)

POINT	X	Y	POINT	X	Y
5	504046.19	371208.13	10	504094.28	371200.91
6	504055.76	371204.88	11	504097.11	371197.61
7	504064.74	371202.59	12	504098.29	371193.13
8	504073.99	371203.05	13	504095.53	371189.99
9	504086.56	371204.77	14	504045.08	371186.72

NOTES

1) USE PIPE UNDERDRAIN WITHIN BIOSWALE. USE PIPE UNDERDRAIN UNPERFORATED OUTSIDE OF THE BIOSWALES.

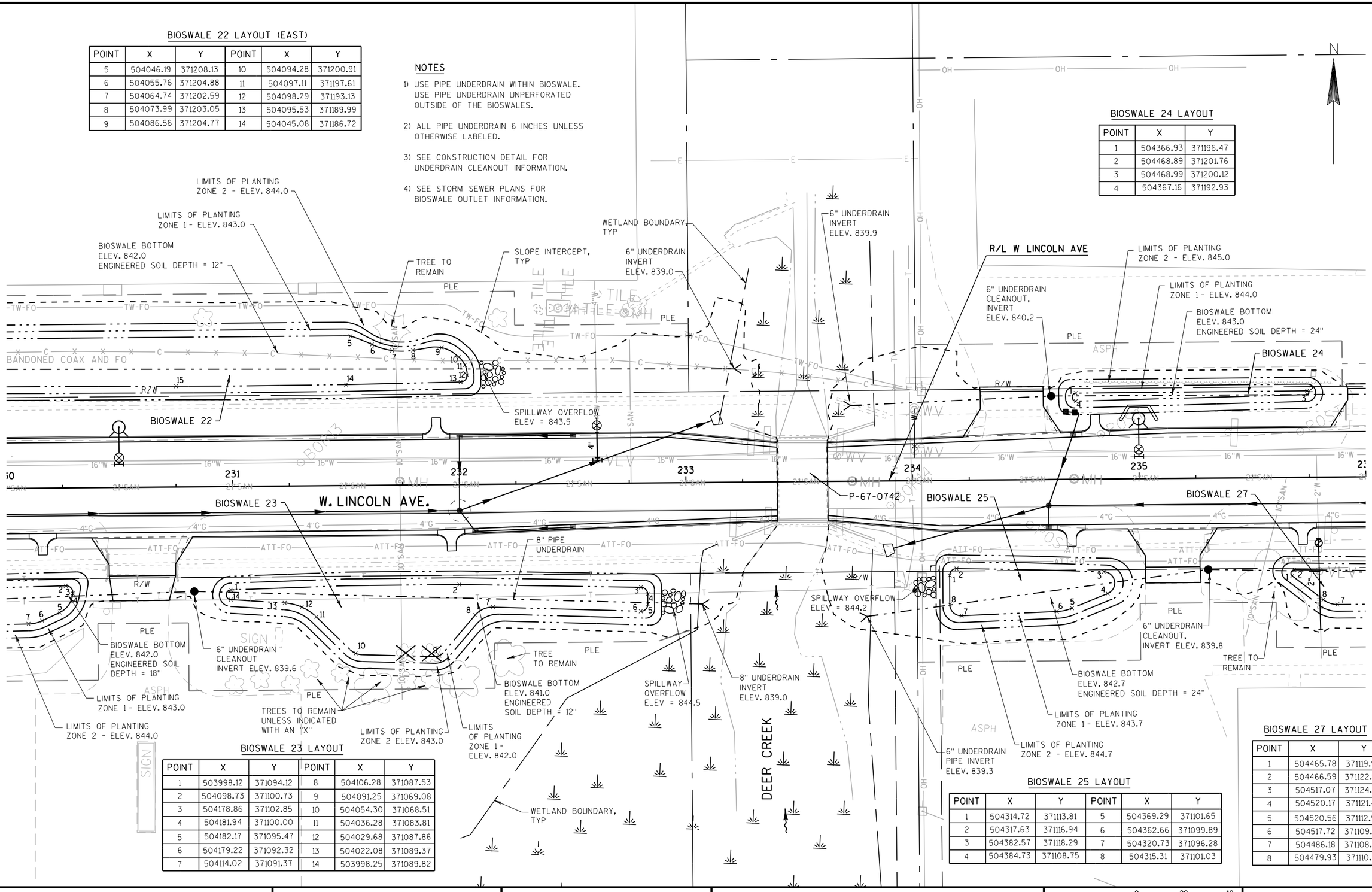
2) ALL PIPE UNDERDRAIN 6 INCHES UNLESS OTHERWISE LABELED.

3) SEE CONSTRUCTION DETAIL FOR UNDERDRAIN CLEANOUT INFORMATION.

4) SEE STORM SEWER PLANS FOR BIOSWALE OUTLET INFORMATION.

BIOSWALE 24 LAYOUT

POINT	X	Y
1	504366.93	371196.47
2	504468.89	371201.76
3	504468.99	371200.12
4	504367.16	371192.93



BIOSWALE 23 LAYOUT

POINT	X	Y	POINT	X	Y
1	503998.12	371094.12	8	504106.28	371087.53
2	504098.73	371100.73	9	504091.25	371069.08
3	504178.86	371102.85	10	504054.30	371068.51
4	504181.94	371100.00	11	504036.28	371083.81
5	504182.17	371095.47	12	504029.68	371087.86
6	504179.22	371092.32	13	504022.08	371089.37
7	504114.02	371091.37	14	503998.25	371089.82

BIOSWALE 25 LAYOUT

POINT	X	Y	POINT	X	Y
1	504314.72	371113.81	5	504369.29	371101.65
2	504317.63	371116.94	6	504362.66	371099.89
3	504382.57	371118.29	7	504320.73	371096.28
4	504384.73	371108.75	8	504315.31	371101.03

BIOSWALE 27 LAYOUT

POINT	X	Y
1	504465.78	371119.96
2	504466.59	371122.68
3	504517.07	371124.34
4	504520.17	371121.48
5	504520.56	371112.92
6	504517.72	371109.79
7	504486.18	371108.20
8	504479.93	371110.01

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: BIOSWALE PLANS	SCALE, FEET 0 20 40	SHEET 52	E

BIOSWALE 26 LAYOUT

POINT	X	Y
1	504532.05	371218.91
2	504534.94	371221.37
3	504557.10	371221.82
4	504562.94	371220.97
5	504587.17	371213.23
6	504586.47	371207.38
7	504533.08	371203.56
8	504529.92	371207.08

BIOSWALE 28 LAYOUT

POINT	X	Y	POINT	X	Y
1	504676.82	371243.05	10	504875.91	371223.10
2	504862.15	371254.44	11	504867.36	371230.49
3	504885.16	371232.14	12	504867.36	371233.49
4	504900.50	371232.79	13	504855.08	371244.10
5	504925.79	371252.06	14	504844.42	371231.84
6	505023.87	371258.87	15	504844.66	371228.85
7	505029.97	371254.16	16	504837.25	371220.33
8	505034.55	371239.38	17	504708.35	371211.65
9	505031.02	371234.21	18	504674.33	371233.92

NOTES

1) USE PIPE UNDERDRAIN WITHIN BIOSWALE. USE PIPE UNDERDRAIN UNPERFORATED OUTSIDE OF THE BIOSWALES.
2) ALL PIPE UNDERDRAIN 6 INCHES UNLESS OTHERWISE LABELED.
3) SEE CONSTRUCTION DETAIL FOR UNDERDRAIN CLEANOUT INFORMATION.
4) SEE STORM SEWER PLANS FOR BIOSWALE OUTLET INFORMATION.

N

S. 162ND ST.

R/L W LINCOLN AVE

W. LINCOLN AVE.

R/L S 162ND ST

BIOSWALE 26

BIOSWALE 28

BIOSWALE 29

BIOSWALE 31

BIOSWALE 33

LIMITS OF PLANTING ZONE 2 - ELEV. 845.5

LIMITS OF PLANTING ZONE 1 - ELEV. 844.5

BIOSWALE BOTTOM ELEV. 843.5 ENGINEERED SOIL DEPTH = 24"

6"UNDERDRAIN CLEANOUT, INVERT ELEV. 840.8

LIMITS OF PLANTING ZONE 2 - ELEV. 847.2

LIMITS OF PLANTING ZONE 1- ELEV. 846.2

BIOSWALE BOTTOM ELEV. 845.2 ENGINEERED SOIL DEPTH = 24"

CONNECT 6" ROOF DRAIN

SLOPE INTERCEPT, TYP

SLOPE DOWN 2:1 BEHIND MH

TREES TO REMAIN

CONNECT 6" ROOF DRAIN

6" UNDERDRAIN CLEANOUT INVERT ELEV. 844.1

6" PIPE UNDERDRAIN INVERT ELEV=840.5

LIMITS OF PLANTING ZONE 2 - ELEV. 845.2

LIMITS OF PLANTING ZONE 1 - ELEV. 844.2

BIOSWALE BOTTOM ELEV. 843.2 ENGINEERED SOIL DEPTH = 24"

LIMITS OF PLANTING ZONE 1 - ELEV. 844.2

LIMITS OF PLANTING ZONE 2 - ELEV. 845.2

6" PIPE UNDERDRAIN INVERT ELEV=840.2

6" UNDERDRAIN PIPE INVERT ELEV. 842.0

6" UNDERDRAIN CLEANOUT INVERT ELEV. 843.0

LIMITS OF PLANTING ZONE 1 - ELEV. 845.5

LIMITS OF PLANTING ZONE 2 - ELEV. 846.5

BIOSWALE BOTTOM ELEV. 844.5 ENGINEERED SOIL DEPTH = 12"

SLOPE DOWN 2:1 BEHIND MANHOLE

TREES TO REMAIN

6" UNDERDRAIN CLEANOUT INVERT ELEV. 843.8

6" UNDERDRAIN CLEANOUT INVERT ELEV. 844.0

BIOSWALE BOTTOM ELEV. 847.0 ENGINEERED SOIL DEPTH = 24"

LIMITS OF PLANTING ZONE 1 - ELEV. 848.0

LIMITS OF PLANTING ZONE 2 - ELEV. 849.0

TREES TO REMAIN

BIOSWALE 29 LAYOUT

POINT	X	Y
1	504541.04	371122.08
2	504543.94	371125.22
3	504571.85	371126.13
4	504574.31	371121.31
5	504568.24	371113.38
6	504565.79	371112.21
7	504544.57	371111.14
8	504541.42	371114.00

BIOSWALE 31 LAYOUT

POINT	X	Y	POINT	X	Y
1	504711.24	371134.98	9	504916.28	371125.43
2	504881.64	371137.11	10	504884.71	371119.95
3	504886.18	371134.34	11	504876.59	371111.98
4	504899.33	371126.32	12	504760.41	371105.12
5	504914.09	371136.75	13	504723.80	371114.08
6	504946.32	371137.92	14	504700.55	371115.39
7	504947.49	371132.14	15	504698.35	371120.23
8	504924.80	371123.18	16	504708.91	371133.82

BIOSWALE 33 LAYOUT

POINT	X	Y
1	505046.93	371151.01
2	505083.91	371152.58
3	505084.02	371149.90
4	505047.04	371148.45

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: BIOSWALE PLANS	SCALE, FEET 0 20 40	SHEET 53	E

2

BIOSWALE 30 LAYOUT

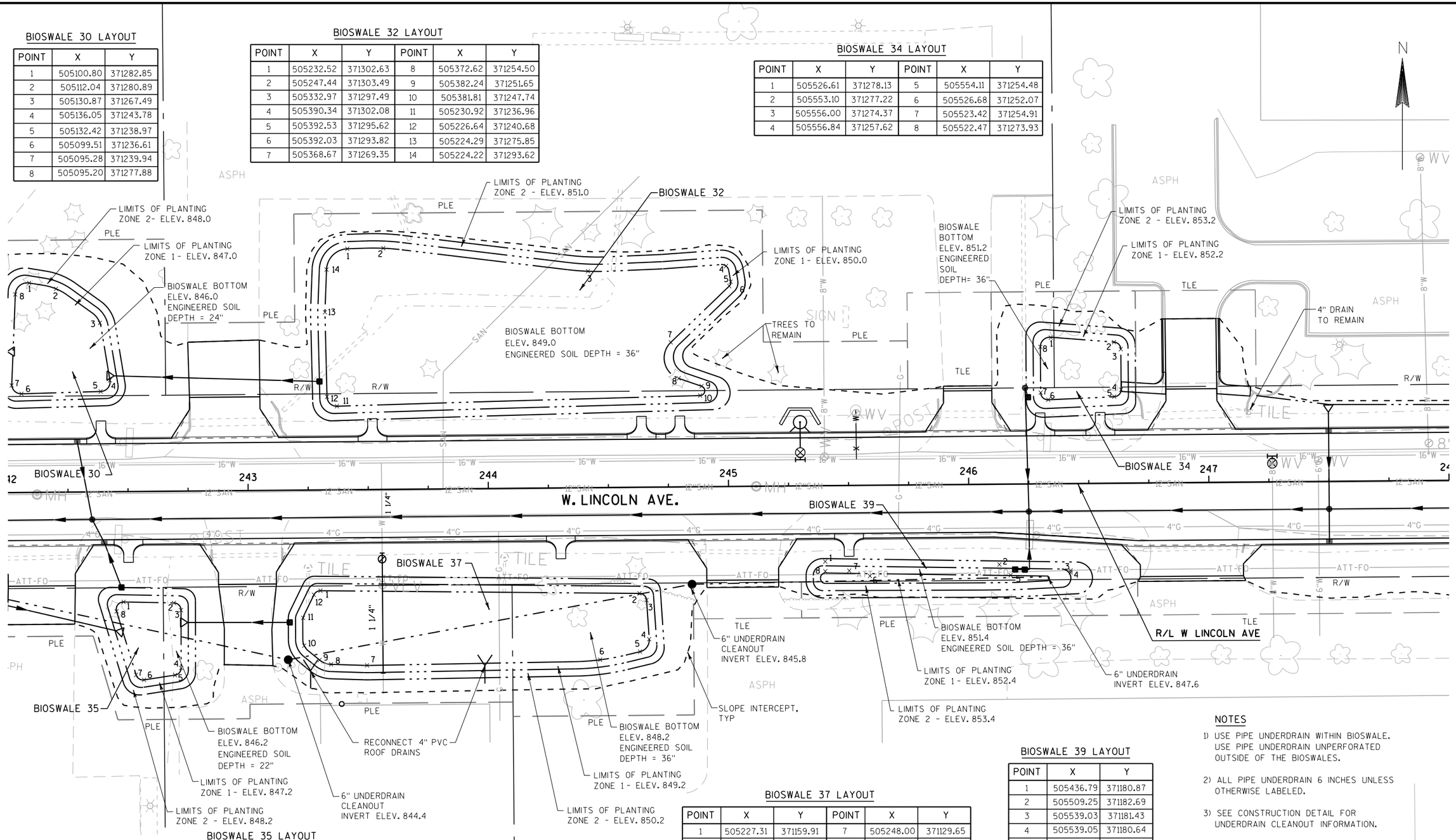
POINT	X	Y
1	505100.80	371282.85
2	505112.04	371280.89
3	505130.87	371267.49
4	505136.05	371243.78
5	505132.42	371238.97
6	505099.51	371236.61
7	505095.28	371239.94
8	505095.20	371277.88

BIOSWALE 32 LAYOUT

POINT	X	Y	POINT	X	Y
1	505232.52	371302.63	8	505372.62	371254.50
2	505247.44	371303.49	9	505382.24	371251.65
3	505332.97	371297.49	10	505381.81	371247.74
4	505390.34	371302.08	11	505230.92	371236.96
5	505392.53	371295.62	12	505226.64	371240.68
6	505392.03	371293.82	13	505224.29	371275.85
7	505368.67	371269.35	14	505224.22	371293.62

BIOSWALE 34 LAYOUT

POINT	X	Y	POINT	X	Y
1	505526.61	371278.13	5	505554.11	371254.48
2	505553.10	371277.22	6	505526.68	371252.07
3	505556.00	371274.37	7	505523.42	371254.91
4	505556.84	371257.62	8	505522.47	371273.93



BIOSWALE 35 LAYOUT

POINT	X	Y	POINT	X	Y
1	505145.61	371151.79	5	505168.28	371122.27
2	505166.57	371152.28	6	505155.48	371119.74
3	505169.64	371149.41	7	505152.07	371121.68
4	505170.69	371125.34	8	505142.85	371147.79

BIOSWALE 37 LAYOUT

POINT	X	Y	POINT	X	Y
1	505227.31	371159.91	7	505248.00	371129.65
2	505360.05	371164.36	8	505233.03	371129.46
3	505363.13	371161.69	9	505228.15	371131.06
4	505364.91	371145.48	10	505221.51	371136.74
5	505361.30	371140.13	11	505220.56	371148.29
6	505344.87	371136.07	12	505224.66	371158.11

BIOSWALE 39 LAYOUT

POINT	X	Y
1	505436.79	371180.87
2	505509.25	371182.69
3	505539.03	371181.43
4	505539.05	371180.64
5	505514.16	371178.40
6	505455.64	371175.63
7	505446.93	371177.47
8	505436.99	371176.80

NOTES

1) USE PIPE UNDERDRAIN WITHIN BIOSWALE. USE PIPE UNDERDRAIN UNPERFORATED OUTSIDE OF THE BIOSWALES.

2) ALL PIPE UNDERDRAIN 6 INCHES UNLESS OTHERWISE LABELED.

3) SEE CONSTRUCTION DETAIL FOR UNDERDRAIN CLEANOUT INFORMATION.

4) SEE STORM SEWER PLANS FOR BIOSWALE OUTLET INFORMATION.

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	BIOSWALE PLANS	SCALE, FEET 0 20 40	SHEET 54	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc023110_pl.dgn
PLOT DATE : 04-NOV-2013 13:01
PLOT BY : scook
PLOT NAME : PLOT NAME : lc023110_pl
PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

2

2

BIOSWALE 36 LAYOUT

POINT	X	Y	POINT	X	Y
1	505923.84	371310.63	7	505963.30	371279.05
2	505954.60	371311.73	8	505922.99	371274.01
3	505958.72	371307.37	9	505915.82	371282.10
4	505958.06	371297.84	10	505915.45	371289.25
5	505961.19	371288.09	11	505920.31	371297.90
6	505964.85	371284.30	12	505920.01	371306.11

NOTES

1) USE PIPE UNDERDRAIN WITHIN BIOSWALE. USE PIPE UNDERDRAIN UNPERFORATED OUTSIDE OF THE BIOSWALES.

2) ALL PIPE UNDERDRAIN 6 INCHES UNLESS OTHERWISE LABELED.

3) SEE CONSTRUCTION DETAIL FOR UNDERDRAIN CLEANOUT INFORMATION.

4) SEE STORM SEWER PLANS FOR BIOSWALE OUTLET INFORMATION.

N

LIMITS OF PLANTING ZONE 2 - ELEV. 859.3

LIMITS OF PLANTING ZONE 1 - ELEV. 858.3

BIOSWALE BOTTOM ELEV. 857.3 ENGINEERED SOIL DEPTH = 36"

DRAINS TO REMAIN

BIOSWALE 36

S. MOORLAND RD.

W. LINCOLN AVE.

R/L W LINCOLN AVE

SLOPE INTERCEPT, TYP

PLE

TLE

R/W

ASPH

CONC

GRT

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: BIOSWALE PLANS	SCALE, FEET 0 20 40	SHEET 55	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc023111_pl.dgn PLOT DATE : 30-OCT-2013 12:41 PLOT BY : scook PLOT NAME : PLOT NAME : lc023111_pl PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

NOTE

1) REMOVE EXISTING PAVEMENT MARKINGS IN CONFLICT WITH THE NEW MARKINGS.

END CONSTRUCTION
STA. 403+00.0

14 SPACES @ 9'EACH = 126'
13 SPACES @ 9'EACH = 117'
11 SPACES @ 9'EACH = 99'
24' WIDE AISLE

BEGIN CONSTRUCTION
STA. 400+23.1

BEGIN CONSTRUCTION
STA. 200+77.0

BEGIN PROJECT
STA. 201+80.00

END CONSTRUCTION
STA. 21+50.0

BEGIN CONSTRUCTION
STA. 18+48.9

FRONTAGE ROAD

S. CALHOUN ROAD

S. 170TH ST.

W. LINCOLN AVE.

MATCHLINE 211+25

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
4. PAVEMENT MARKING RAILROAD CROSSINGS EPOXY (SEE SDD FOR ADDITIONAL LAYOUT INFORMATION)
5. PAVEMENT MARKING EPOXY 8-INCH (WHITE)
6. PAVEMENT MARKING STOP LINE EPOXY 18-INCH (SEE DETAIL FOR LAYOUT)

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: PAVEMENT MARKING PLANS	SCALE, FEET 0 50 100	SHEET	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc024501_pm.DGN PLOT DATE : 01-OCT-2013 14:11 PLOT BY : scook PLOT NAME : PLOT NAME : lc024501_pm PLOT SCALE : 100:1
WISDOT/CADDS SHEET 42

2

N

PACIFIC UNION RR

W. LINCOLN AVE.

MATCHLINE 211+25

MATCHLINE 226+50

R/W

212 +94 +71 +04 214 +27 216 +16 218 +64 +38 220 +64 +72 +72 222 +56 224 226

45

BEGIN CONSTRUCTION
STA. 43+50.0

S. COMMERCE DRIVE

44

42

TILE

MH

MH

SIGN

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
2. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
3. PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
4. PAVEMENT MARKING RAILROAD CROSSINGS EPOXY (SEE SDD FOR ADDITIONAL LAYOUT INFORMATION)
6. PAVEMENT MARKING STOP LINE EPOXY 18-INCH (SEE DETAIL FOR LAYOUT)

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: PAVEMENT MARKING PLANS	SCALE, FEET 0 50 100	SHEET 57	E

2

N

W. LINCOLN AVE.

S. 162ND ST.

MATCHLINE 226+50

MATCHLINE 241+25

R/W

228 230 232 234 236 238 240

+40 +63 +27 +70 +03 +21 +61 +79 +87 +95

64 62 60 58 56

EXCEPTION TO
NET CENTERLINE
STA. 233+40.29 TO
STA. 233+62.56

END CONSTRUCTION
STA. 61+95.0

BEGIN CONSTRUCTION
STA. 57+73.0

P-67-0742

LEGEND

(1) PAVEMENT MARKING EPOXY 4-INCH (WHITE)

(3) PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)

(6) PAVEMENT MARKING STOP LINE EPOXY 18-INCH (SEE DETAIL FOR LAYOUT)

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: PAVEMENT MARKING PLANS	SCALE, FEET 0 50 100	SHEET 58	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc024503_pm.dgn PLOT DATE : 01-OCT-2013 14:11 PLOT BY : scook PLOT NAME : PLOT NAME : lc024503_pm PLOT SCALE : 100:1
WISDOT/CADDS SHEET 42

2

N

W. LINCOLN AVE.

S. MOORLAND RD.

CTH O

MATCHLINE 241+25

R/W

242 244 246 248 +56 250 +57 252

+87 +10 +14 +20 +22

CONC

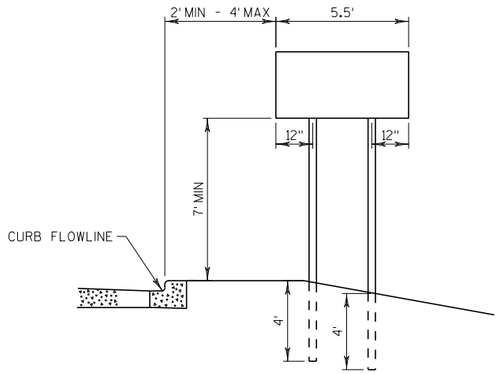
MH

END PROJECT
STA. 251+20.37

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING EPOXY 4-INCH (DOUBLE YELLOW)
5. PAVEMENT MARKING EPOXY 8-INCH (WHITE)
7. PAVEMENT MARKING ARROWS EPOXY TYPE 2 (WHITE)(SEE SDD FOR LAYOUT)
8. PAVEMENT MARKING WORDS EPOXY (SEE SDD FOR LAYOUT)
9. PAVEMENT MARKING EPOXY 24-INCH (WHITE)(SEE DETAIL FOR LAYOUT)

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TITLE: PAVEMENT MARKING PLANS	SCALE, FEET 0 50 100	SHEET 59	E



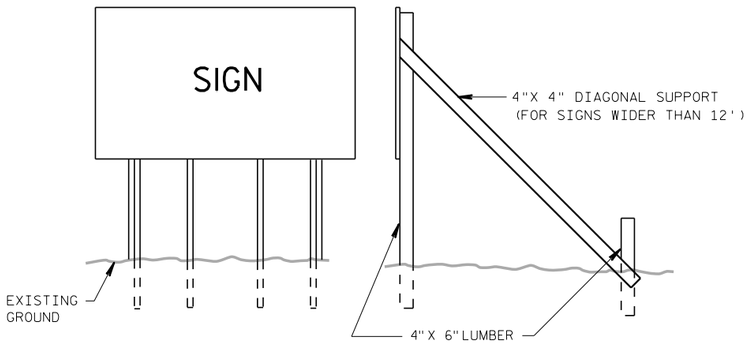
URBAN AREA

NOTES

1) SEE DETOUR ROUTE PLANS FOR SIGN LOCATIONS.

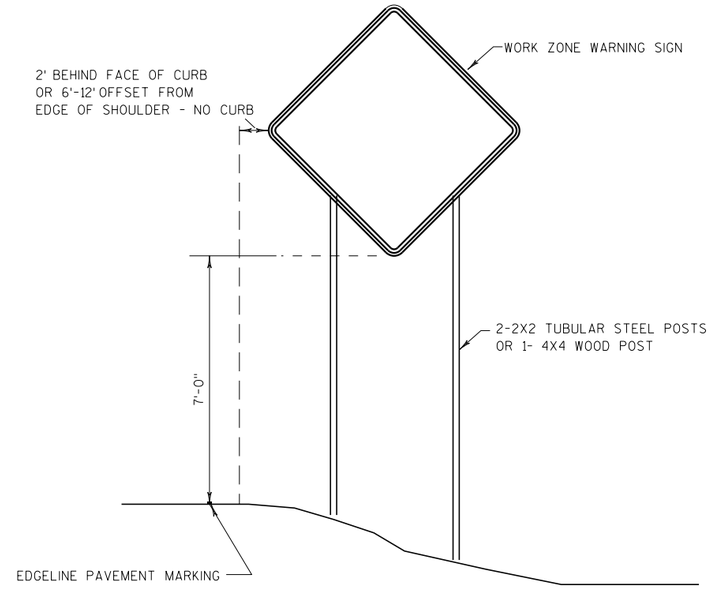
2) SEE "TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS" SIGN PLATE FOR ADDITIONAL REQUIREMENTS.

3) POST EMBEDMENT DEPTH SHALL BE 4 FEET.



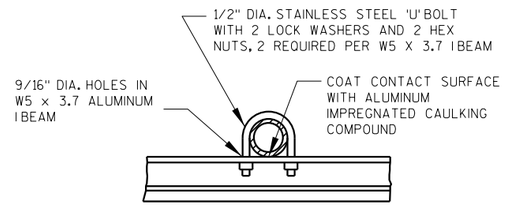
FRONT VIEW SIDE VIEW

MOUNTING DETAIL FOR FIXED MESSAGE SIGNS DETAIL

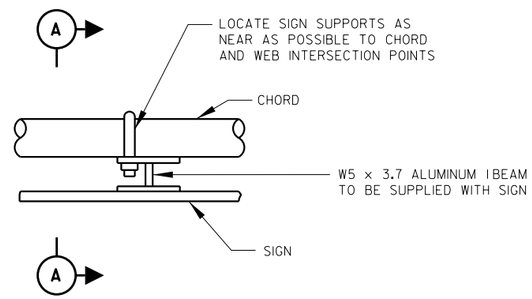


TYPICAL TEMPORARY TRAFFIC CONTROL DETAIL
MOUNTING ON FIXED SUPPORT DETAIL

LONG TERM
7 DAYS OR MORE



SECTION A-A



TYPICAL SIGN CONNECTION DETAIL

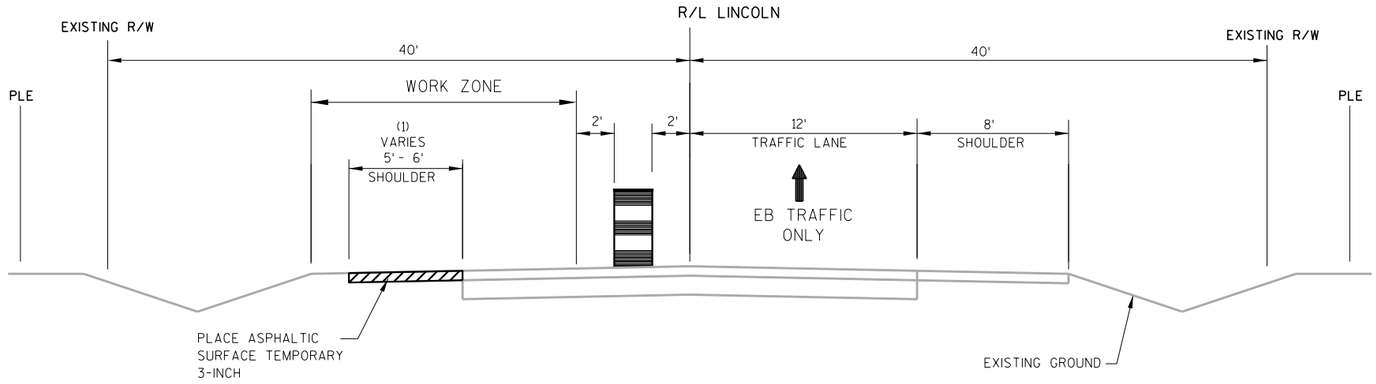
FOR USE WHEN MOUNTING SIGNS TO EXISTING SIGN BRIDGE TRUSS
INCIDENTAL TO OTHER SIGN ITEMS

LEGEND

- TYPE III BARRICADE WITH WARNING LIGHTS TYPE A
- TYPE III BARRICADE WTH WARNING LIGHTS TYPE A AND ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY PRECAST CONCRETE BARRIER
- CC — CRASH CUSION TEMPORARY
- WORK AREA
- DIRECTION OF TRAFFIC
- CMS — TRAFFIC CONTROL SIGNS PCMS
- TEMPORARY PAVEMENT WIDENING (ASPHALTIC SURFACE TEMPORARY)
- TEMPORARY WIDENING (BASE AGGREGATE DENSE 1 1/4-INCH)
- SL — STOP LINE, 18-INCH
- Y — CONTINUOUS YELLOW, 4-INCH
- W — CONTINUOUS WHITE, 4-INCH
- WI — CONTINUOUS WHITE, 8-INCH
- TPM — TEMPORARY PAVEMENT MARKING
- TPMRT — TEMPORARY PAVEMENT MARKING REMOVABLE TAPE

GENERAL NOTES FOR CONSTRUCTION STAGING AND TRAFFIC CONTROL

1. ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.
2. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.
3. TRAFFIC CONTROL DRUMS IN TAPERS, SHALL BE EQUIPPED WITH TRAFFIC CONTROL WARNING LIGHTS, TYPE "C", ONE WAY LIGHTS IN TAPERS ONLY, UNLESS OTHERWISE SHOWN, DRUMS SHALL BE SPACED AT 25-FT OC IN TAPERS AND 50-FT OC ON TANGENTS OR AS OTHERWISE SHOWN.
4. SIGN LOCATIONS ARE APPROXIMATE. THE ACTUAL LOCATION SPACING MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO MEET FIELD CONDITIONS.
5. ALL SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED AS NEEDED AND/OR AS DIRECTED BY THE ENGINEER. THE CITY OF NEW BERLIN WILL REMOVE THE SIGNS.
6. ALL EXISTING CONFLICTING PAVEMENT MARKING SHALL BE REMOVED.
7. CONTRACTOR SHALL INSTALL PERMANENT PAVEMENT MARKING WHEN APPROPRIATE DURING CONSTRUCTION STAGING AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER
8. BARRICADE STRIPES ARE TO BE SLOPED DOWNWARD IN THE DIRECTION OF TRAFFIC FLOW.
9. ALL SUBSEQUENT MOVING SIGNS AFTER INITIAL INSTALLATION, INCLUDING ALL ASSOCIATED LABOR AND MATERIALS, SHALL BE INCLUDED IN THE COST OF THE "TRAFFIC CONTROL (2722-11-70)" ITEM.
10. MAINTAIN ACCESS TO AT LEAST ONE DRIVEWAY PER PROPERTY, AND TO S. 170TH STREET, S. COMMERCE DRIVE, AND S. 162ND STREET DURING ALL STAGES.
11. ADEQUATE TURNING PROVISIONS SHALL BE MAINTAINED FOR ALL VEHICLES, INCLUDING TRUCKS AS DIRECTED BY THE ENGINEER.
12. TEMPORARY SIDE ROAD CLOSURES MAY BE NECESSARY FOR HMA PAVING OF SIDE ROADS.
13. TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS OR AS DIRECTED BY THE ENGINEER.
14. PLACE "ONE WAY" (R6-2L/R) SIGNS AT ALL DRIVEWAY LOCATIONS AND INTERSECTIONS (170TH, COMMERCE, AND 162ND) BEFORE CLOSING WESTBOUND LINCOLN AVENUE.
15. INSTALL "ROAD WORK AHEAD" (W20-1) SIGNS ON ALL CROSS STREETS. SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC."
16. SEE SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" FOR STAGE 1 PLACEMENT OF TEMPORARY ASPHALTIC SURFACE.

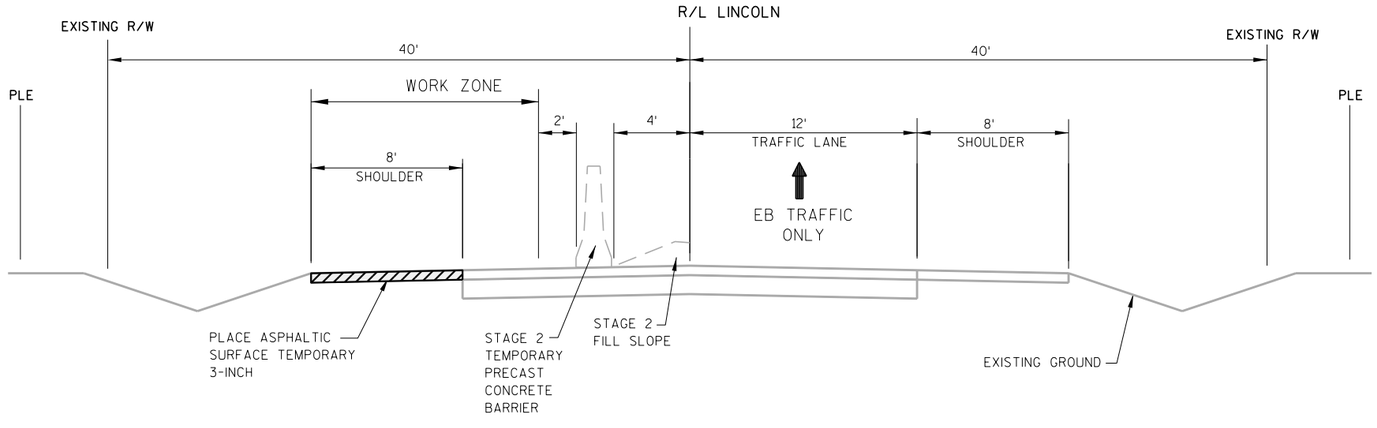


TRAFFIC CONTROL STAGE 1

202+60 TO 207+60
208+40 TO 212+94
213+04 TO 216+50
221+25 TO 223+00
230+00 TO 233+40
233+63 TO 237+15
237+70 TO 250+45

FOOTNOTE

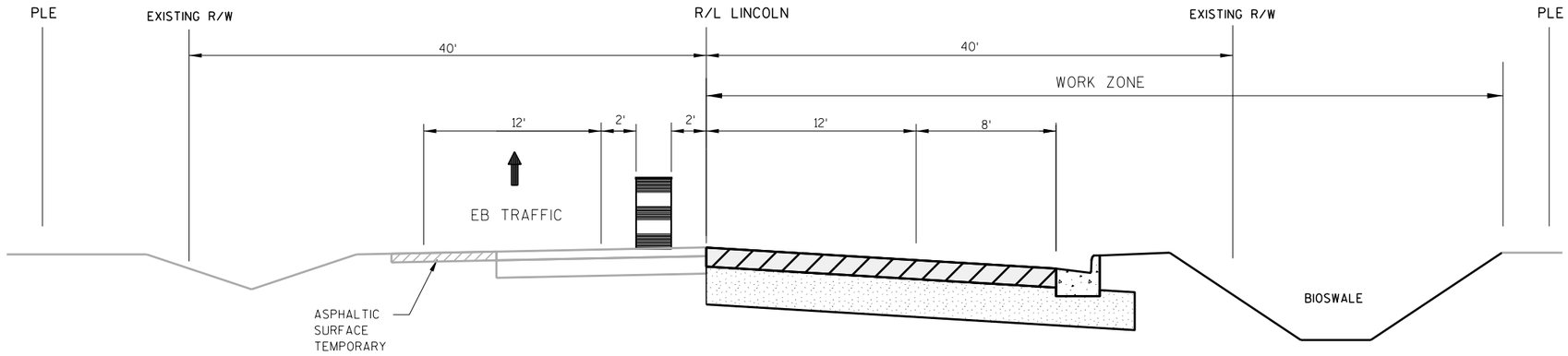
(1) SHOULDER WIDENING AT UP RR IS LESS THAN 2 FEET WIDE.



TRAFFIC CONTROL STAGE 1

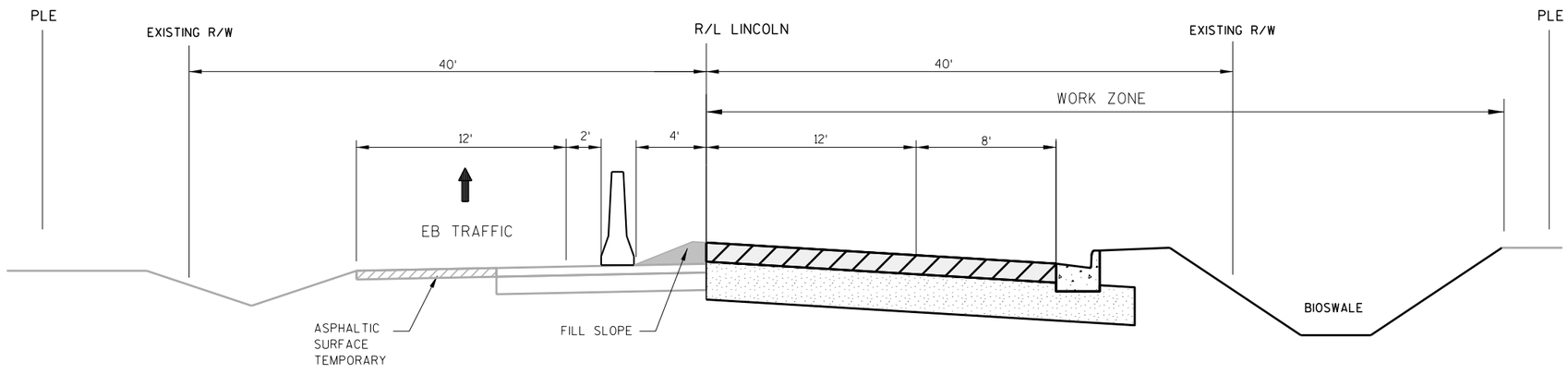
216+50 TO 221+25
223+00 TO 230+00

PROJECT NO: 2722-11-70	HWY: WEST LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL TYPICAL SECTION	SCALE: NTS	SHEET 62	E



TRAFFIC CONTROL STAGE 2

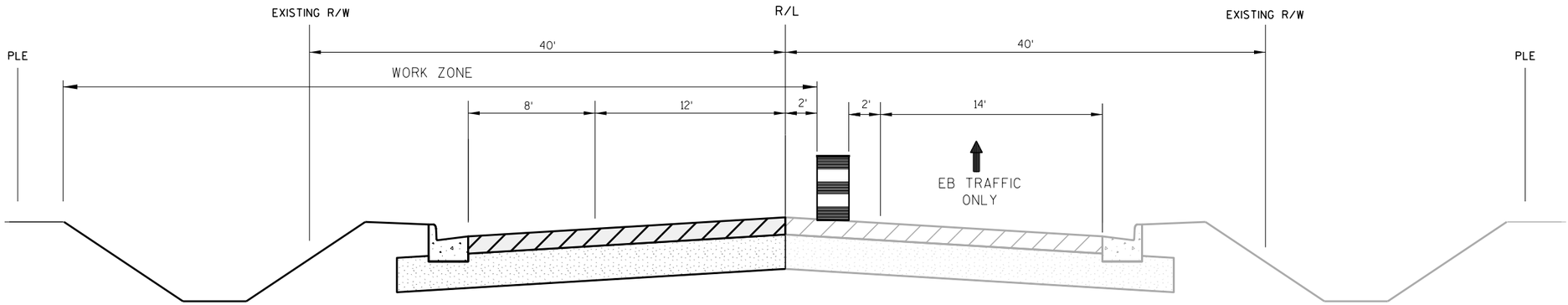
201+80 TO 212+96
213+04 TO 215+00
218+80 TO 220+84
221+47 TO 223+50
226+13 TO 227+75
227+75 TO 228+38
230+00 TO 233+40
233+63 TO 251+20



TRAFFIC CONTROL STAGE 2

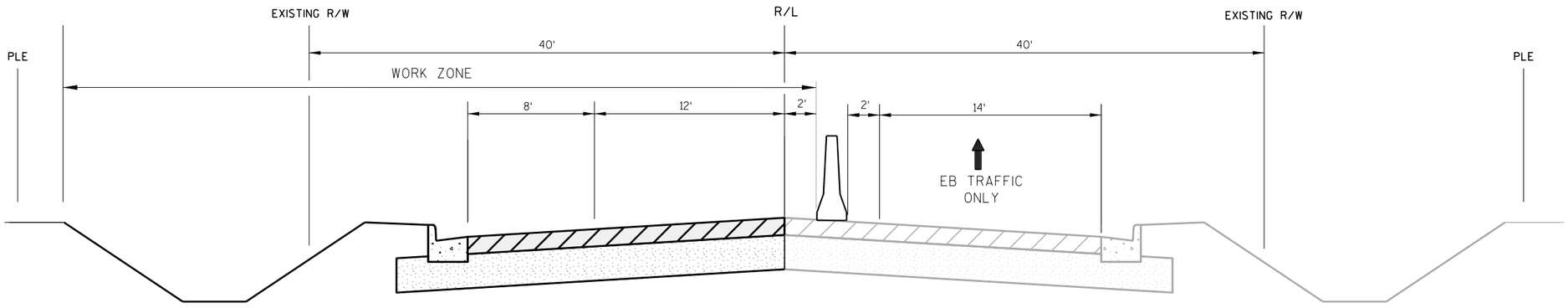
215+05 TO 218+80
220+84 TO 221+47
223+50 TO 225+50
226+13 TO 227+75
228+38 TO 230+00

PROJECT NO: 2722-11-70	HWY: WEST LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL TYPICAL SECTION	SCALE: NTS	SHEET 63	E



TRAFFIC CONTROL STAGE 3

201+50 TO 207+60
208+40 TO 215+00
223+25 TO 233+40
233+63 TO 237+15
237+70 TO 250+45



TRAFFIC CONTROL STAGE 3

215+00 TO 223+25

PROJECT NO: 2722-11-70	HWY: WEST LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL TYPICAL SECTION	SCALE: NTS	SHEET 64	E

2

2

STAGE 1 - CONSTRUCTION

UNION PACIFIC REPLACES RR CROSSING STA 12+99

REMOVE ENCROACHMENTS

ABANDON CROSS CULVERTS PRIOR TO TEMPORARY PAVEMENT WIDENING

REMOVE/RELOCATE ROAD SIGNS IN CONFLICT WITH TEMPORARY PAVEMENT WIDENING ALONG NORTH SIDE SHOULDER

INSTALL TEMPORARY PRECAST CONCRETE BARRIER
- STA 215+05 TO STA 218+80
- STA 219+84 TO STA 221+46.5
- STA 223+00 TO STA 230+00

PLACE TEMPORARY PAVEMENT WIDENING
- STA 202+60 TO STA 207+54
- STA 208+16 STA 212+94
- STA 213+04 STA 233+40
- STA 233+62 STA 237+06
- STA 237+75 STA 250+70
- STA 42+75 TO STA 44+80 RT

CONSTRUCT STORM SEWER CONVEYANCE OUTFALL
- STA 232+34 TO STA 233+15 LT

STAGE 1 - TRAFFIC

ALL ROADS OPEN TO THROUGH TRAFFIC
EXCEPT WESTBOUND LINCOLN AVE

N

S. CALHOUN RD.

FRONTAGE ROAD

S. 170TH ST.

S. 162ND ST.

S. MOORLAND RD.

W. LINCOLN AVE.

UNION PACIFIC RAILROAD

S. COMMERCE DR.

PLACE TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE FOR TWO WEEKS PRIOR TO THE START OF CONSTRUCTION (TYP) (SEE PCMS DETAIL)

PLACE TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE FOR TWO WEEKS PRIOR TO THE START OF CONSTRUCTION (TYP) (SEE PCMS DETAIL)

SM3

CMS

ROAD WORK AHEAD W020-1

ROAD WORK 500 FT W020-1

ROAD WORK 250 FT W020-1

1000'

250'

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	ADVANCED WARNING SIGNS/PCMS	SCALE, FEET 0 200 400	SHEET 65	E

2

2

N

ASPHALT

92

91

90

89

403

402

401

400

200

201

202

203

204

205

S. CALHOUN RD.

FRONTAGE RD.

W. LINCOLN AVE.

R/L S. CALHOUN RD

R/L FRONTAGE RD

R/L LINCOLN AVE

W01-6
48" X 24"

END
ROAD WORK
G20-2A
48" X 24"

REMOVE
PAVEMENT
MARKINGS

Y
TMPRT

+58

+55

+00

25'
TYP

50'
TYP

ONE
WAY
R6-2L
24" X 30"

LANE
CLOSED
R11-2(MOD)
48" X 30"

LANE
CLOSED
R11-2(MOD)
48" X 30"

TEMPORARY PAVEMENT
WIDENING, TYP.

6"

12"

3'

ONE
WAY
R6-2R
24" X 30"

ONE
WAY
R6-2R
24" X 30"

ONE
WAY
R6-2R
24" X 30"

MATCHLINE 205+10

LOADING
DOCK

SIGN

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 1	SCALE, FEET 0 20 40	SHEET 66	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc026102_S1_tc.dgn PLOT DATE : 08-JUL-2013 06:26 PLOT BY : scook PLOT NAME : PLOT NAME : lc026102_S1_tc PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

N

S. 170TH ST.

R/L S. 107TH ST.

W. LINCOLN AVE.

R/L LINCOLN AVE

MATCHLINE 205+10

MATCHLINE 211+25

ROAD WORK AHEAD W20-1

EXIST. STOP

R3-1 24" X 24"

ROAD CLOSED R11-2 48" X 30"

ONE WAY R6-2L 24" X 30"

WRONG WAY R5-1A 36" X 24"

DO NOT ENTER R5-1 30" X 30"

ONE WAY R6-2R 24" X 30"

TEMPORARY PAVEMENT WIDENING, TYP.

REMOVE POST

LANE CLOSED R11-2(MOD) 48" X 30"

EXIST. STOP R3-2 24" X 24"

ROAD WORK AHEAD W20-1

ASPH

CONC

SIGN

MP

POST

HBM1

CMP

6'

12'

3'

50' TYP

10' TYP

206

207

208

209

210

211

22

21

20

19

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 1	SCALE, FEET 0 20 40	SHEET 67	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc026103_S1_tc.dgn PLOT DATE : 05-JUL-2013 15:50 PLOT BY : scook PLOT NAME : PLOT NAME : lc026103_S1_tc PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

N

U.P. RR

CROSSING SURFACE TO BE REPLACED BY RAILROAD FORCES.

LANE CLOSED
R11-2(MOD)
48" X 30"

ONE WAY
R6-2L
24" X 30"

ONE WAY
R6-2L
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

TEMPORARY PAVEMENT WIDENING, TYP.

+94
16' LT

+04
16' LT

+94
18' LT

+04
18' LT

+50
18' LT

6"

12"

3"

212

213

214

215

216

217

50'
TYP

W. LINCOLN AVE.

R/L LINCOLN AVE

MATCHLINE 211+25

MATCHLINE 217+25

ONE WAY
R6-2R
24" X 30"

W10-1
36" X 36"

EXIST.
RAIL ROAD CROSSING
YIELD

CONCRETE LOADING DOCK

CONC

ASPHALT

ASPH

SIGN

FLAG

POST

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 1	SCALE, FEET 0 20 40	SHEET 68	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc026104_S1_tc.dgn PLOT DATE : 05-JUL-2013 15:50 PLOT BY : scook PLOT NAME : PLOT NAME : lc026104_S1_tc PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

N

ASPHALT

ASPH

ASPHALT

ONE WAY
R6-2L
24" X 30"

WRONG WAY
R5-1A
36" X 24"

SIGN

LANE CLOSED
R11-2(MOD)
48" X 30"

ONE WAY
R6-2R
24" X 30"

WETLAND BOUNDARY, TYP.

TEMPORARY PAVEMENT WIDENING, TYP.

LANE CLOSED
R11-2(MOD)
48" X 30"

+50
20' LT

REMOVE POST

+50
20' LT

+50
18' LT

+00
18' LT

MATCHLINE 217+25

MATCHLINE 223+40

218

219

220

221

222

223

8"

12'

6"

12'

3"

R/L LINCOLN AVE

W. LINCOLN AVE.

50'
TYP

POST

ASPHALT

ASPHALT

ONE WAY
R6-2R
24" X 30"

SIGN

ASPH

44+79.5
30' LT

FLAG

SIGN

ONE WAY
R6-2R
24" X 30"

EXIST.
STOP
R3-2
24" X 24"

13.5'

44

R/L S. COMMERCE DR.

S. COMMERCE DR.

ASPHALT

ASPH

ASPHALT

ASPH

ASPHALT

+46.7
26' RT

43

TEMPORARY BASE WIDENING

ASPH

+78

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 1	SCALE, FEET 0 20 40	SHEET 69	E

2

2

N

LANE CLOSED
R11-2(MOD)
48" X 30"

ONE WAY
R6-2L
24" X 30"

ONE WAY
R6-2L
24" X 30"

ONE WAY
R6-2R
24" X 30"

ONE WAY
R6-2R
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

+00
20'LT

+00
20'LT

REMOVE POST

REMOVE POST

TEMPORARY PAVEMENT WIDENING, TYP.

8"

12'

3"

224

225

226

227

228

229

50'
TYP

R/L LINCOLN AVE

W. LINCOLN AVE.

MATCHLINE 223+40

MATCHLINE 229+25

FLAG

FLAG

ASPH

ASPH

SIGN

ASPH

ASPH

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 1	SCALE, FEET 0 20 40	SHEET 70	E

2

2

N

MATCHLINE 229+25

MATCHLINE 235+40

LANE CLOSED
R11-2(MOD)
48" X 30"

TEMPORARY PAVEMENT WIDENING, TYP.

STORM WATER CONVEYANCE OUTFALL P-16.1

+00
18' LT

+40
18' LT

+40
17.3' LT

+63
17.1' LT

+63
18' LT

REMOVE POST

ASPH

6"

12"

3"

230

231

232

233

234

235

50'
TYP

W. LINCOLN AVE.

R/L LINCOLN AVE

ONE WAY
R6-2R
24" X 30"

SIGN

ASPH

SIGN

P-67-0742

DEER CREEK

POST

ONE WAY
R6-2R
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

ASPH

WETLAND BOUNDARY, TYP.

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 1	SCALE, FEET 0 20 40	SHEET 71	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc026107_S1_tc.dgn PLOT DATE : 05-JUL-2013 15:50 PLOT BY : scook PLOT NAME : PLOT NAME : lc026107_S1_tc PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

2

2

N

ROAD WORK AHEAD
W20-1

ASPH

EXIST. STOP
R3-1
24" X 24"

POST

S. 162ND ST.

61

ONE WAY
R6-2L
24" X 30"

WRONG WAY
R5-1A
36" X 24"

ROAD CLOSED
R11-2
48" X 30"

ONE WAY
R6-2L
24" X 30"

SIGN

REMOVE POST

REMOVE POST

MP

HBM07

SIGN

SIGN

SIG

TEMPORARY PAVEMENT WIDENING, TYP.

HBM06

REMOVE POST

6'

MATCHLINE 235+40

236

12'

237

238

12'

239

240

241

3'

MATCHLINE 241+50

R/L LINCOLN AVE

60

W. LINCOLN AVE.

50'
TYP

CR12

MP

LANE CLOSED
R11-2(MOD)
48" X 30"

ONE WAY
R6-2R
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

SIGN

DO NOT ENTER
R5-1
30" X 30"

FLAG

POST

EXIST. STOP
R3-2
24" X 24"

R/L 162ND ST.

59

S. 162ND ST.

ASPH

ROAD WORK AHEAD
W20-1

ASPH

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 1	SCALE, FEET 0 20 40	SHEET	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc026108_S1_tc.dgn PLOT DATE : 05-JUL-2013 15:50 PLOT BY : scook PLOT NAME : PLOT NAME : lc026108_S1_tc PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

N

ONE WAY
R6-2L
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

ONE WAY
R6-2L
24" X 30"

TEMPORARY PAVEMENT WIDENING, TYP.

ONE WAY
R6-2L
24" X 30"

ONE WAY
R6-2L
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

REMOVE POST

MATCHLINE 241+50

242

243

244

245

246

247

MATCHLINE 247+50

W. LINCOLN AVE.

50'
TYP

R/L LINCOLN AVE

6'

12'

3'

ONE WAY
R6-2R
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

ONE WAY
R6-2R
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

ONE WAY
R6-2R
24" X 30"

ASPH

POST

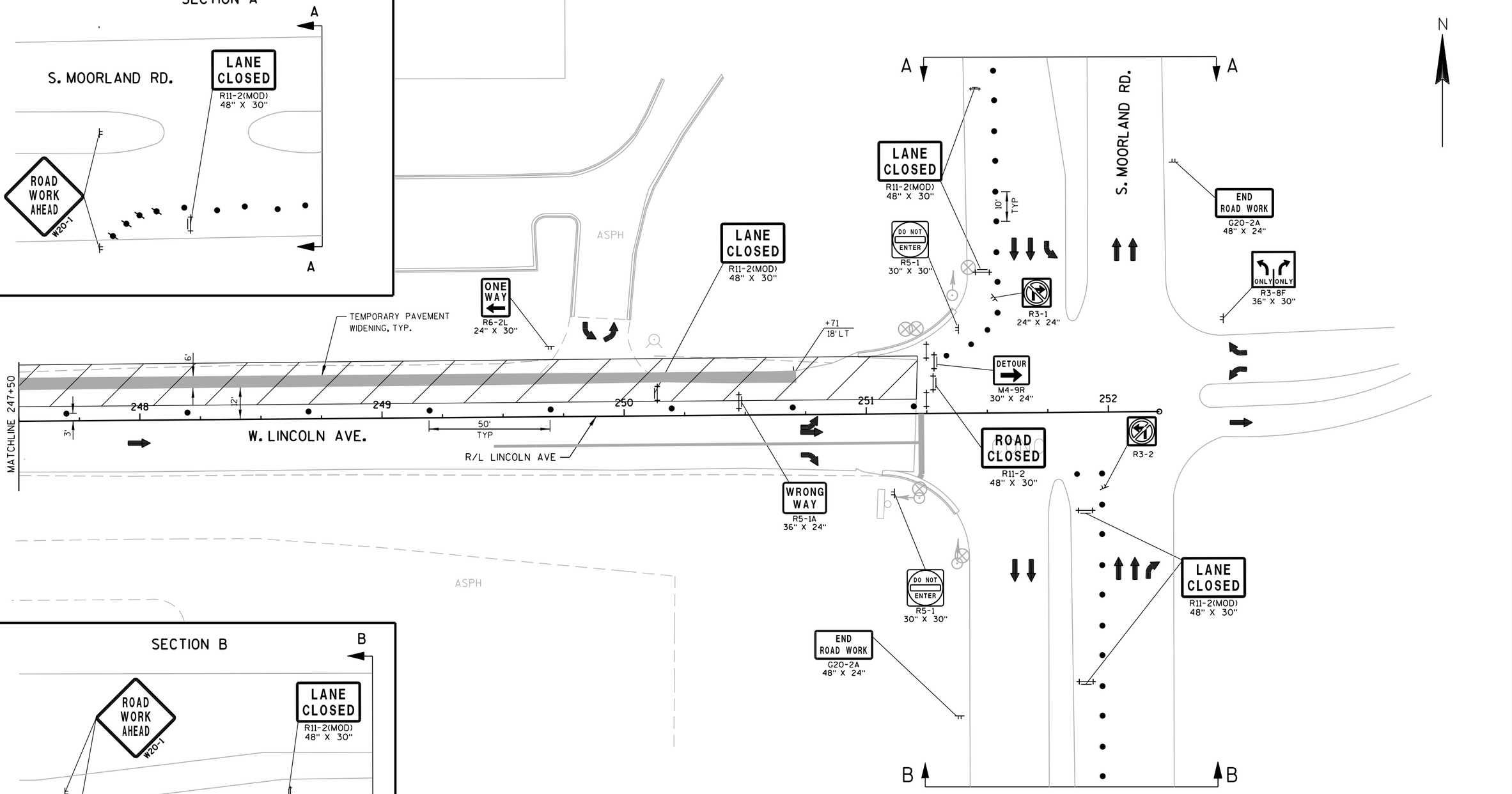
SIGN

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 1	SCALE, FEET 0 20 40	SHEET 73	E

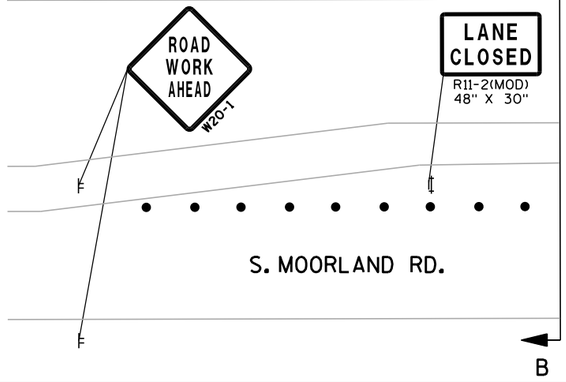
2

2

SECTION A



SECTION B



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 1	SCALE, FEET 0 20 40	SHEET 74	E

2

2

STAGE 2 - CONSTRUCTION

W. LINCOLN AVE EASTBOUND
STA 201+80 TO 251+20

S. 170TH ST.
STA 18+48 TO STA 19+38

S. COMMERCE DR. SOUTHBOUND
STA 43+50 TO STA 44+80

S. 162ND ST.
STA 57+73 TO STA 59+38

TEMPORARY PAVEMENT WIDENING S. COMMERCE DR.
STA 42+75 TO STA 44+80 LT

CONVEYANCE STORM SEWER
STA 201+22 TO STA 222+34
STA 233+86 TO STA 250+25

SOUTH STORAGE STORM SEWER
STA 213+50 TO STA 232+96

STAGE 2 - TRAFFIC

ALL ROADS OPEN TO THROUGH TRAFFIC EXCEPT WEST BOUND W. LINCOLN AVE

S. COMMERCE DRIVE OPEN TO THROUGH TRAFFIC. CONSTRUCTED IN HALVES TO MAINTAIN ONE 11-FOOT LANE OF TRAFFIC IN EACH DIRECTION.

N

S. CALHOUN RD.
FRONTAGE ROAD
S. 170TH ST.
W. LINCOLN AVE.
UNION PACIFIC RAILROAD
S. COMMERCE DR.
S. 162ND ST.
S. MOORLAND RD.

ROAD WORK AHEAD W020-1
ROAD WORK 500 FT W020-1
ROAD WORK 250 FT W020-1
1000'
250'

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	ADVANCED WARNING SIGNS - STAGE 2	SCALE, FEET 0 200 400	SHEET 75	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc026201_S2_tc.dgn PLOT DATE : 06-JUL-2013 14:18 PLOT BY : scook PLOT NAME : PLOT NAME : lc026201_S2_tc PLOT SCALE : 400:1
WISDOT/CADDS SHEET 42

2

2

S. CALHOUN RD.

R/L S. CALHOUN RD.

R/L FRONTAGE RD.

R/L W. LINCOLN AVE.

W. LINCOLN AVE.

ASPHALT

PROVIDE TEMPORARY BULKHEAD FOR 12-INCH SSPRC

PROVIDE TEMPORARY BULKHEAD FOR 15-INCH SSPRC

ONE WAY
R6-2L
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

35 M.P.H.
W13-1
18" X 18"

LANE CLOSED
R11-2(MOD)
48" X 30"

Y TPMRT

W TPMRT

25'

50'

203 TYP

3'

+95

+79

+44

200

201

202

204

205

400

401

402

91

90

89

88

MATCHLINE 205+10

W01-6
48" X 24"

LANE CLOSED
R11-2(MOD)
48" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

ONE WAY
R6-2R
24" X 30"

LOADING DOCK

ONE WAY
R6-2R
24" X 30"

ASPHALT

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 2	SCALE, FEET 0 20 40	SHEET 76	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc026202_S2_tc.dgn PLOT DATE : 08-JUL-2013 06:33 PLOT BY : scook PLOT NAME : PLOT NAME : lc026202_S2_tc PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

N

R/L S. 170TH ST.

S. 170TH ST.

22

21

20

19

STOP
R1-1
30" X 30"
R3-1
24" X 24"

ONE WAY
R6-2L
24" X 30"

CONCRETE LOADING DOCK

ASPHALT

WRONG WAY
R5-1A
36" X 24"

PROVIDE TEMPORARY BULKHEAD FOR 24-INCH SSPRC

MATCHLINE 205+10

206

R/L W. LINCOLN AVE.

207

208

W. LINCOLN AVE.

209

50'
TYP.

210

211

MATCHLINE 211+25

ONE WAY
R6-2L
24" X 30"

ONE WAY
R6-2L
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

DO NOT ENTER
R5-1
30" X 30"

STOP
R1-1
30" X 30"
R3-2
24" X 24"

ONE WAY
R6-2R
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

ONE WAY
R6-2R
24" X 30"

CONCRETE LOADING DOCK

NOTE

1) MAINTAIN ACCESS TO S. 107TH ST. AT ALL TIMES EXCEPT WHEN PLACING HMA PAVEMENT

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 2	SCALE, FEET 0 20 40	SHEET 77	E

2

2

N

U.P. RR

CONCRETE LOADING DOCK

ASPHALT

CONCRETE LOADING DOCK

ASPHALT

PROVIDE TEMPORARY BULKHEAD FOR 15-INCH SSPRC

RELOCATE EXISTING RR SIGNS TO RIGHT SIDE OF EB TRAFFIC

PROVIDE TEMPORARY BULKHEAD FOR 12-INCH SSPRC

CRASH CUSHION TEMPORARY

PROVIDE TEMPORARY BULKHEAD FOR 12-INCH SSPRC

5' TO CTR

MATCHLINE 211+25

212

3%

R/L W. LINCOLN AVE.

213

50' TYP

214

+05

215

216

W. LINCOLN AVE.

217

MATCHLINE 217+25

ASPHALT

ASPHALT

EXIST. RAIL ROAD CROSSING YIELD

W10-1
36" X 36"

ONE WAY
R6-2L
24" X 30"

ONE WAY
R6-2R
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

ONE WAY
R6-2L
24" X 30"

ASPHAI

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 2	SCALE, FEET 0 20 40	SHEET 78	E

NOTE

1) DRIVEWAY AT STA. 218+62 LT TO BE CLOSED TO TRAFFIC DURING STAGE 2. USE DRIVEWAY AT STA. 214+65.

LANE CLOSED
R11-2(MOD)
48" X 30"

W01-6
48" X 24"

ROAD CLOSED
R11-2
48" X 30"

PROVIDE TEMPORARY BULKHEAD FOR 12-INCH SSPRC

STOP
R1-1
30" X 30"
R3-2
24" X 24"

ONE WAY
R6-2R
24" X 30"

CRASH CUSHION TEMPORARY

WETLAND BOUNDARY, TYP.

PROVIDE TEMPORARY BULKHEAD FOR 12-INCH SSPRC

LANE CLOSED
R11-2(MOD)
48" X 30"

R/L W. LINCOLN AVE.

W. LINCOLN AVE.

MATCHLINE 217+25

MATCHLINE 223+40

218 +80 219 220 +03 221 +47 222 223

SIGN

ONE WAY
R6-2R
24" X 30"

CONSTRUCT TEMPORARY PAVEMENT BETWEEN OLD ROADWAY AND NEW HMA PAVEMENT 3" ASPHALTIC SURFACE TEMPORARY OVER 6" BASE.

+38
24' LT

TEMPORARY 18" DRAINAGE PIPE

CONSTRUCT TEMPORARY WIDENING 3" ASPHALTIC SURFACE TEMPORARY OVER 6" BASE

+41
26' LT

+99
14' LT

+70
12' LT

S. COMMERCE DR.

+40

25'

44

4' 11' 11' 2' GRAVEL

2'

50'

CULVERT EXTENSIONS

+62
26' RT

TEMPORARY DRAINAGE 18" PIPE

LANE CLOSED
R11-2(MOD)
48" X 30"

R/L S. COMMERCE DR

+47
26' RT

+49
4' RT

+78
12' RT

W1-4R
30" X 30"

SIGN

ONE WAY
R6-2R
24" X 30"

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 2A	SCALE, FEET 0 20 40	SHEET 79	E

NOTE

1) DRIVEWAY AT STA. 218+62, LT TO BE CLOSED TO TRAFFIC IN STAGE 2. USE DRIVEWAY AT STA. 214+65.

ONE WAY
R6-2R
24" X 30"

W01-6
48" X 24"

SIGN

ROAD CLOSED
R11-2
48" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

PROVIDE TEMPORARY BULKHEAD FOR 12-INCH SSPRC

ROAD CLOSED
R11-2
48" X 30"

CRASH CUSHION TEMPORARY

WETLAND BOUNDARY, TYP.

PROVIDE TEMPORARY BULKHEAD FOR 12-INCH SSPRC

LANE CLOSED
R11-2(MOD)
48" X 30"

R/L W. LINCOLN AVE.

MATCHLINE 217+25

218 +55

219

220 +03 CC

221 +47

222 W. LINCOLN AVE.

223

MATCHLINE 223+40

45

S. COMMERCE DR.

44

43

25' TYP

+60
1' LT

SL

R1-1
30" X 30"

STOP

R3-2
24" X 24"

ONE WAY
R6-2R
24" X 30"

ONE WAY
R6-2R
24" X 30"

AFTER CONSTRUCTION OF THE NB SIDE OF S. COMMERCE DRIVE, REMOVE THE ASPHALTIC SURFACE TEMPORARY, ASPHALTIC SURFACE TEMPORARY WIDENING, AND TEMPORARY DRAINAGE PIPE.

PLACE FINAL SW QUADRANT OF HMA PAVEMENT, CURB RETURN CURB & GUTTER AND THE CONCRETE SURFACE DRAIN.

2' GRAVEL

11'

11'

R/L S. COMMERCE DR

TEMPORARY 18" DRAINAGE PIPE

+51
1' LT

+87
12' RT

50'

W1-4L
30" X 30"

TILE

SIGN

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 2B	SCALE, FEET 0 20 40	SHEET 80	E

2

2

N

ONE WAY
R6-2L
24" X 30"

ONE WAY
R6-2L
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

PROVIDE TEMPORARY BULKHEAD FOR 12-INCH SSPRC

W. LINCOLN AVE.

R/L W. LINCOLN AVE.

MATCHLINE 223+40

MATCHLINE 229+25

CC +50 224 225 +50 226 CC +13 227 50' +75 228 CC +38 229 5' TO CTR

ONE WAY
R6-2R
24" X 30"

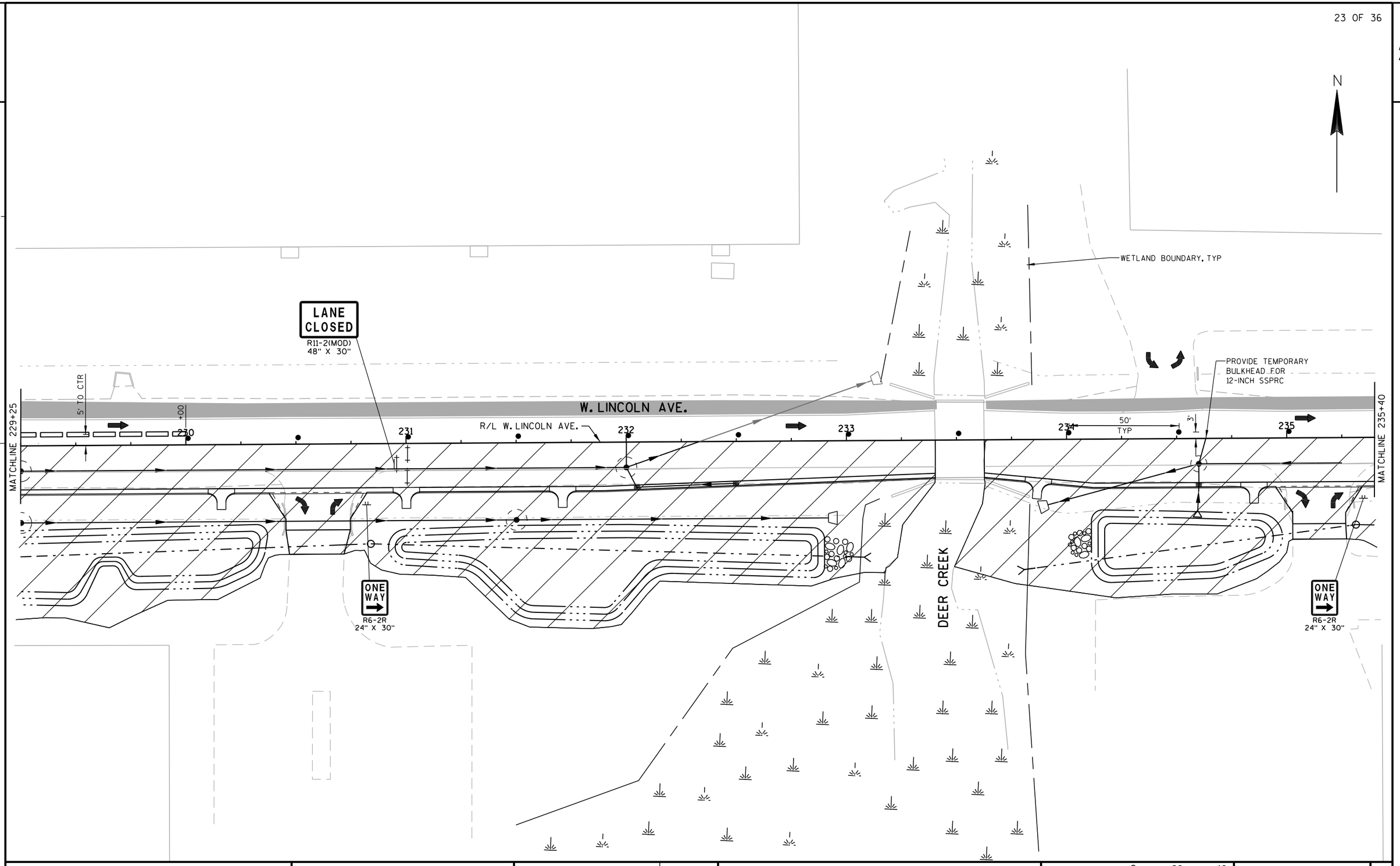
LANE CLOSED
R11-2(MOD)
48" X 30"

ONE WAY
R6-2R
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

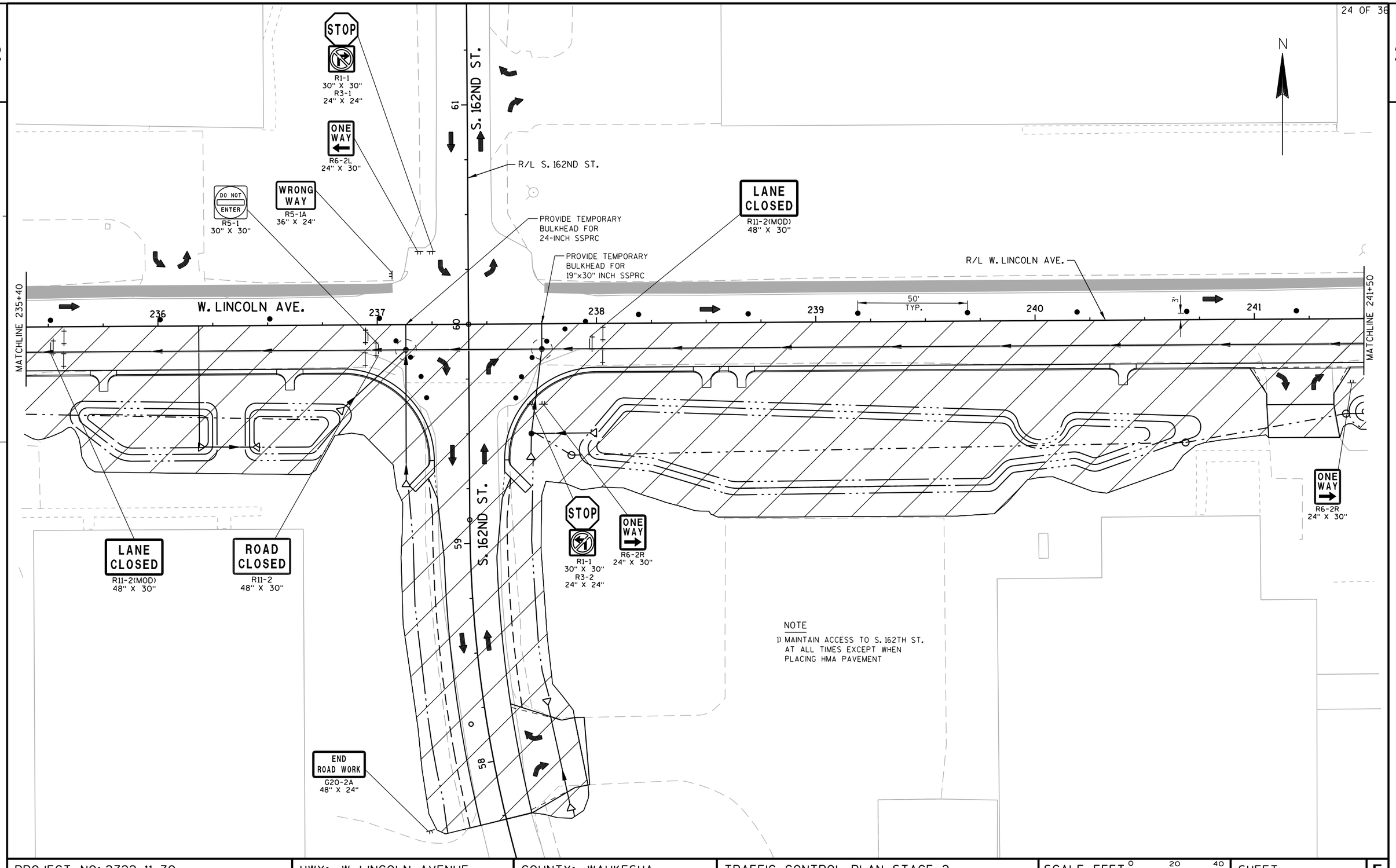
PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 2	SCALE, FEET 0 20 40	SHEET 81	E

2



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 2	SCALE, FEET 0 20 40	SHEET 82	E

2

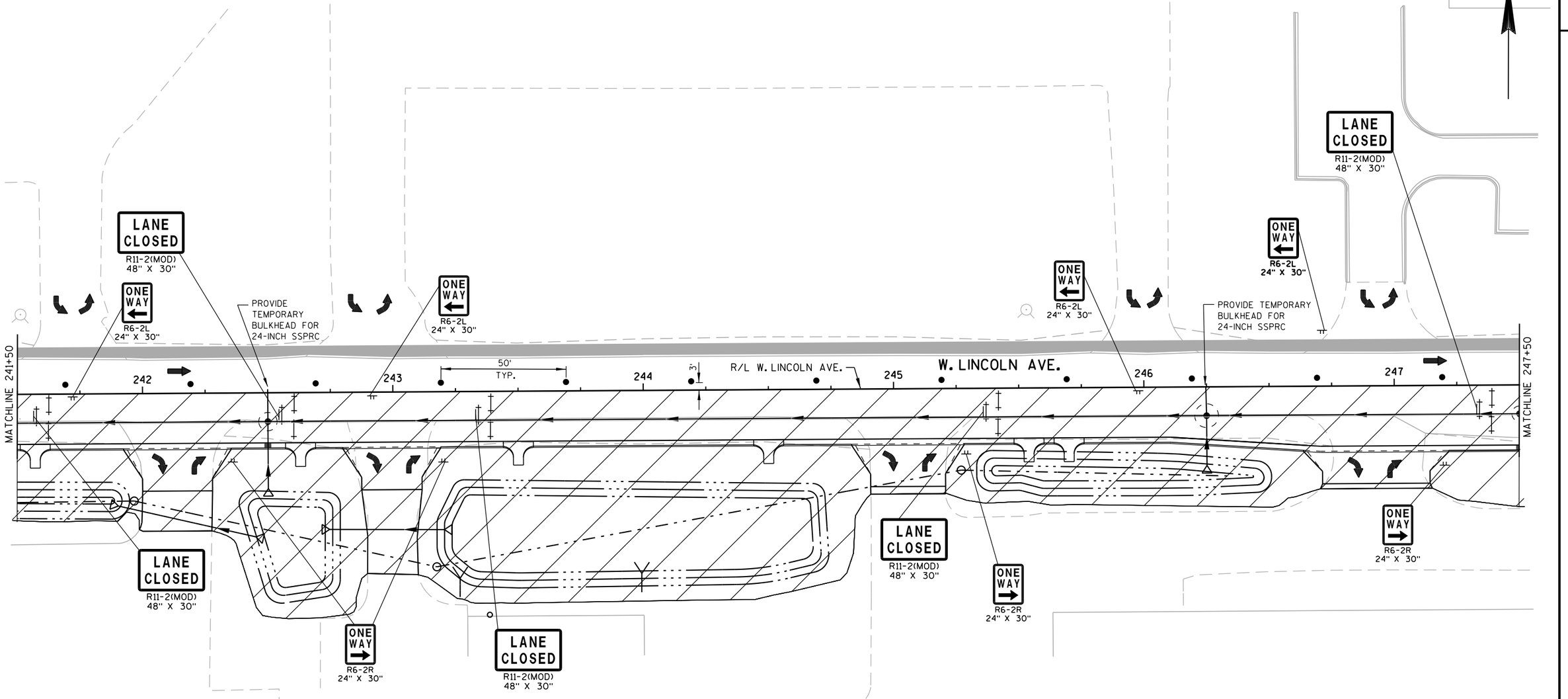


NOTE

1) MAINTAIN ACCESS TO S. 162TH ST. AT ALL TIMES EXCEPT WHEN PLACING HMA PAVEMENT

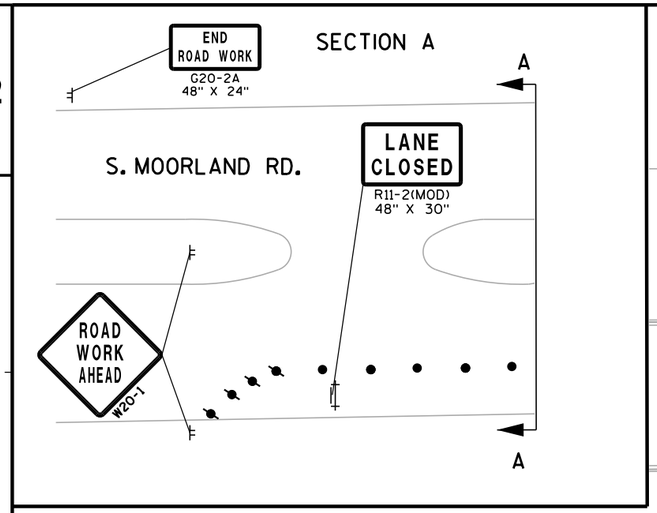
PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 2	SCALE, FEET 0 20 40	SHEET 83	E

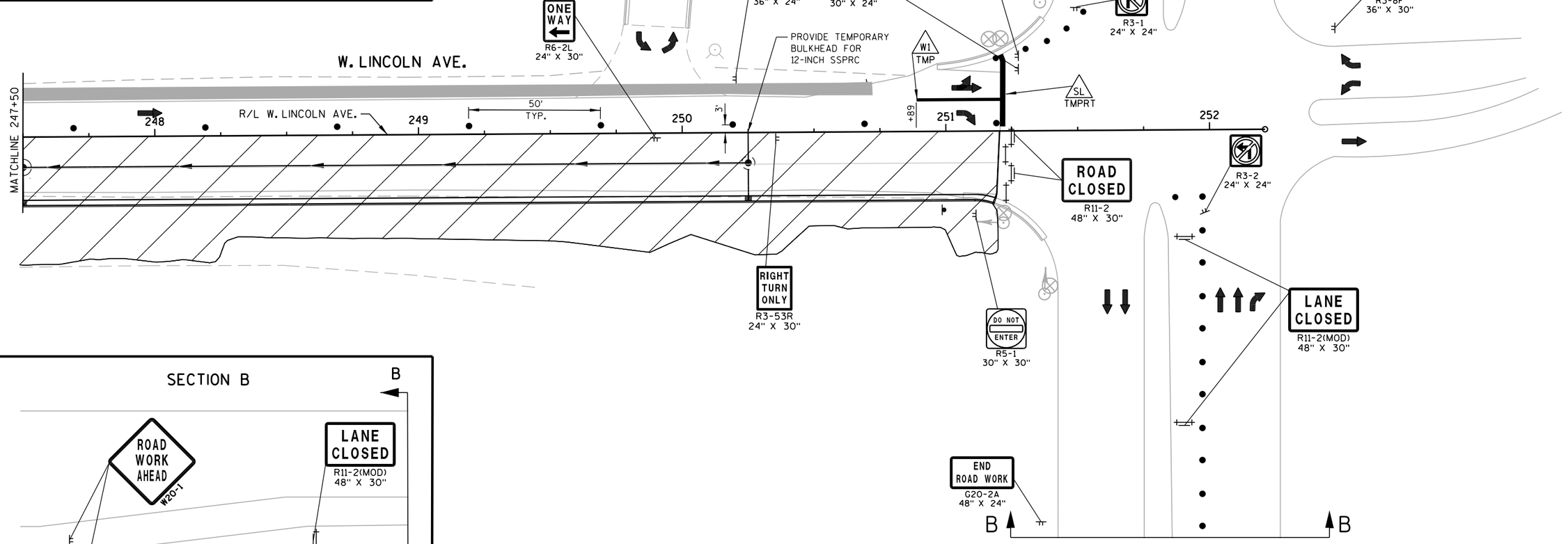
N

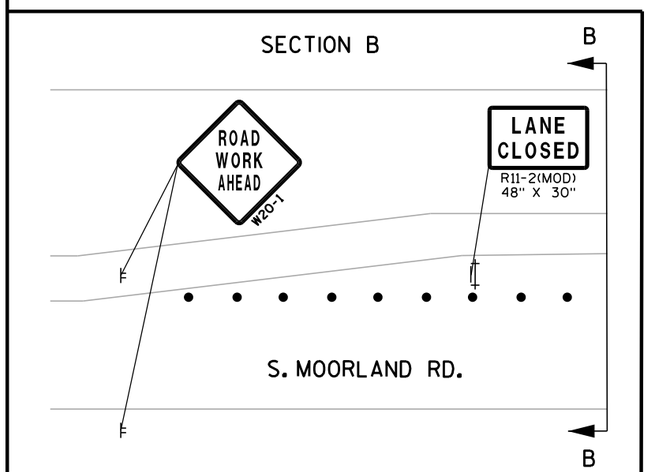


PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 2	SCALE, FEET 0 20 40	SHEET 84	E

2







PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 2	SCALE, FEET 0 20 40	SHEET 85	E

2

2

STAGE 3 - CONSTRUCTION

W. LINCOLN AVE WESTBOUND
STA 201+80 TO 251+20

FRONTAGE ROAD
STA 400+23 TO STA 403+00

S. 170TH ST.
STA 20+52 TO STA 21+50

S. 162ND ST
STA 60+00 TO STA 62+00

REMOVE TEMPORARY PAVEMENT WIDENING

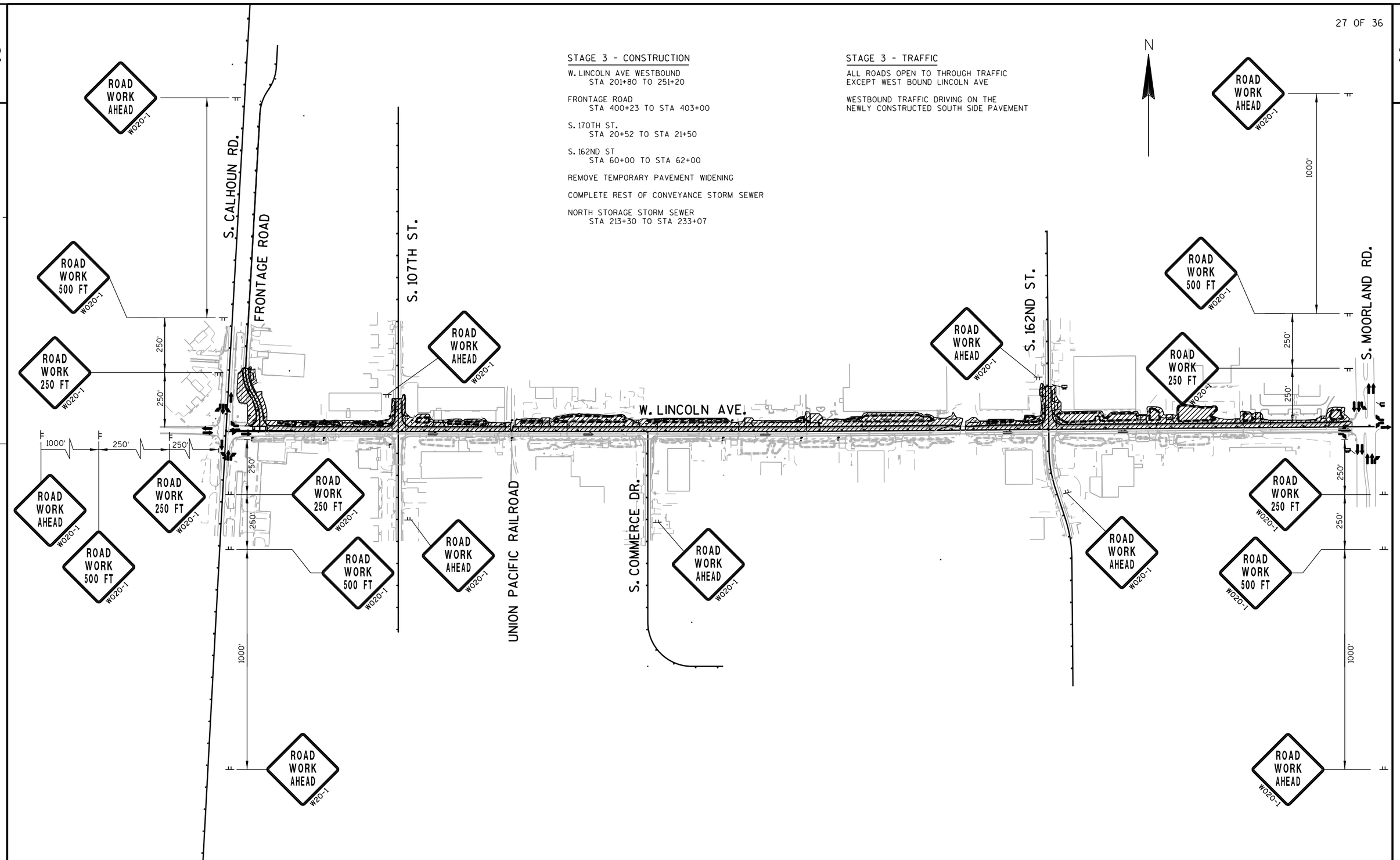
COMPLETE REST OF CONVEYANCE STORM SEWER

NORTH STORAGE STORM SEWER
STA 213+30 TO STA 233+07

STAGE 3 - TRAFFIC

ALL ROADS OPEN TO THROUGH TRAFFIC
EXCEPT WEST BOUND LINCOLN AVE

WESTBOUND TRAFFIC DRIVING ON THE
NEWLY CONSTRUCTED SOUTH SIDE PAVEMENT



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	ADVANCED WARNING SIGNS - STAGE 3	SCALE, FEET 0 200 400	SHEET 86	E

2

2

N

END ROAD WORK
G20-2A
48" X 24"

ROAD CLOSED
R11-2
48" X 30"

FRONTAGE RD.

S. CALHOUN RD.

ASPHALT

LANE CLOSED
R11-2(MOD)
48" X 30"

ONE WAY
R6-2L
24" X 30"

W01-6
48" X 24"

Y
TPMRT

+04

50'
TYP

+80

R/L LINCOLN AVE

W. LINCOLN AVE.

MATCHLINE 205+10

ONE WAY
R6-2R
24" X 30"

35
M.P.H.
W13-1
18" X 18"

LOADING DOCK

ONE WAY
R6-2R
24" X 30"

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 3	SCALE, FEET 0 20 40	SHEET 87	E

2

2

N

NOTE

1) MAINTAIN ACCESS TO S. 107TH ST. AT ALL TIMES EXCEPT WHEN PLACING HMA PAVEMENT

MATCHLINE 205+10

MATCHLINE 211+25

S. 170TH ST.

W. LINCOLN AVE.

R/L LINCOLN AVE

50' TYP

3"

8"W

206 207 208 209 210 211

22 21 20 19

ONE WAY
R6-2L
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

ROAD CLOSED
R11-2
48" X 30"

WRONG WAY
R5-1A
36" X 24"

DO NOT ENTER
R5-1
30" X 30"

STOP
R1-1
30" X 30"
R3-1
24" X 24"

ONE WAY
R6-2L
24" X 30"

END ROAD WORK
G20-2A
48" X 24"

ONE WAY
R6-2L
24" X 30"

ONE WAY
R6-2R
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

STOP
R1-1
30" X 30"
R3-2
24" X 24"

ONE WAY
R6-2R
24" X 30"

END ROAD WORK
G20-2A
48" X 24"

ASPHALT

CONCRETE LOADING DOCK

SIGN

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 3	SCALE, FEET 0 20 40	SHEET 88	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc026303_S3_tc.dgn PLOT DATE : 20-SEP-2013 10:36 PLOT BY : tlegear PLOT NAME : PLOT NAME : lc026303_S3_tc PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

2

2

N

CONCRETE LOADING DOCK

ASPHALT

U.P. RR

ONE WAY
R6-2L
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

CONCRETE LOADING DOCK

ONE WAY
R6-2L
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

ASPHALT

SIGN

MATCHLINE 211+25

212

213

214

215

216

217

MATCHLINE 217+25

R/L LINCOLN AVE

3"

W. LINCOLN AVE.

CC

RAMP

RELOCATE EXISTING RR SIGNS
TO RIGHT SIDE OF EB TRAFFIC

ONE WAY
R6-2R
24" X 30"

ASPHALT

EXIST.
RAIL ROAD CROSSING
YIELD

R R
W10-1
36" X 36"

SIGN

ASPHALT

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 3	SCALE, FEET 0 20 40	SHEET 89	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc026304_S3_tc.dgn PLOT DATE : 20-SEP-2013 10:36 PLOT BY : tlegear PLOT NAME : PLOT NAME : lc026304_S3_tc PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

2

2

NOTE

1) DRIVEWAY AT STA. 218+62 LT TO BE CLOSED TO TRAFFIC DURING STAGE 3. USE DRIVEWAY AT STA. 214+65.

N

WETLAND BOUNDARY, TYP

R/L LINCOLN AVE

W. LINCOLN AVE.

MATCHLINE 217+25

MATCHLINE 223+40

218 219 220 221 222 223

S. COMMERCE DR.

44

ASPHALT

WQ1-6
48" X 24"

LANE CLOSED
R11-2(MOD)
48" X 30"

WRONG WAY
R5-1A
36" X 24"

STOP
R1-1
30" X 30"

ONE WAY
R6-2R
24" X 30"

R3-2
24" X 24"

ONE WAY
R6-2R
24" X 30"

END ROAD WORK
G20-2A
48" X 24"

SIGN

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 3	SCALE, FEET 0 20 40	SHEET 90	E

2

2

N

ONE WAY
R6-2L
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

ONE WAY
R6-2L
24" X 30"

+25

MATCHLINE 223+40

224 225 226 227 228 229

50' TYP

R/L LINCOLN AVE

3%

W. LINCOLN AVE.

MATCHLINE 229+25

ONE WAY
R6-2R
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

ONE WAY
R6-2R
24" X 30"

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 3	SCALE, FEET 0 20 40	SHEET 91	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc026306_S3_tc.dgn PLOT DATE : 20-SEP-2013 10:36 PLOT BY : tlegear PLOT NAME : PLOT NAME : lc026306_S3_tc PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

2

2

N

MATCHLINE 229+25

MATCHLINE 235+40

230 231 232 233 234 235

3'

R/L LINCOLN AVE

W. LINCOLN AVE.

50' TYP

ONE WAY
R6-2L
24" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

ONE WAY
R6-2R
24" X 30"

SIGN

SIGN

DEER CREEK

ONE WAY
R6-2R
24" X 30"

WETLAND BOUNDARY, TYP

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 3	SCALE, FEET 0 20 40	SHEET 92	E

2

2

END ROAD WORK
G20-2A
48" X 24"

N

NOTE

1) MAINTAIN ACCESS TO S. 162TH ST. AT ALL TIMES EXCEPT WHEN PLACING HMA PAVEMENT

STOP
R1-1
30" X 30"
R3-1
24" X 24"

ROAD CLOSED
R11-2
48" X 30"

DO NOT ENTER
R5-1
30" X 30"

ONE WAY
R6-2L
24" X 30"

WRONG WAY
R5-1A
36" X 24"

LANE CLOSED
R11-2(MOD)
48" X 30"

S. 162ND ST.

61

60

59

236

237

238

239

240

241

50' TYP

W. LINCOLN AVE.

R/L LINCOLN AVE

MATCHLINE 235+40

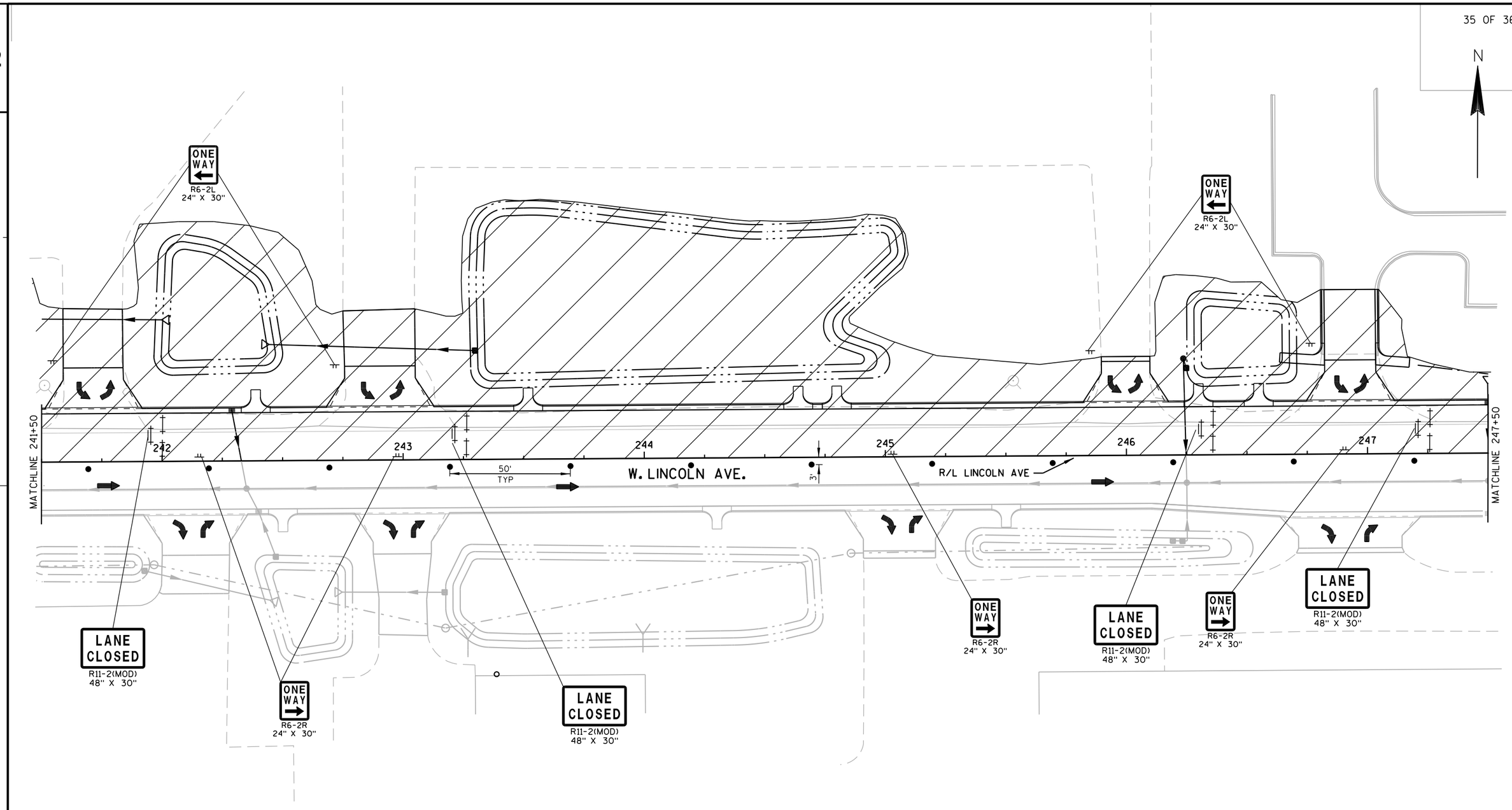
MATCHLINE 241+50

ONE WAY
R6-2R
24" X 30"

STOP
R1-1
30" X 30"
R3-2
24" X 24"

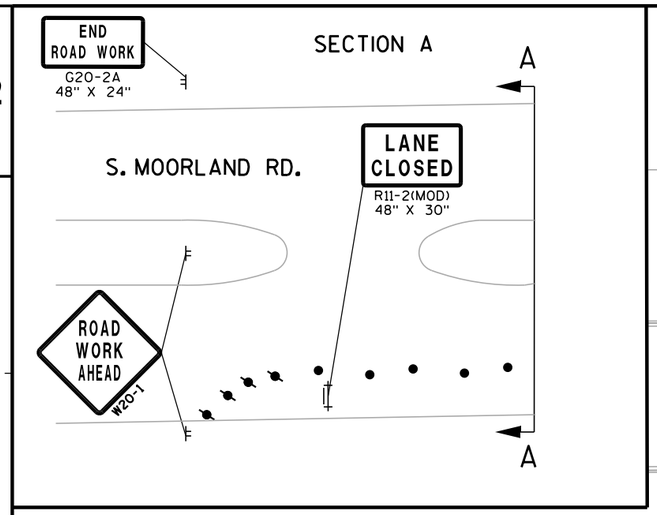
END ROAD WORK
G20-2A
48" X 24"

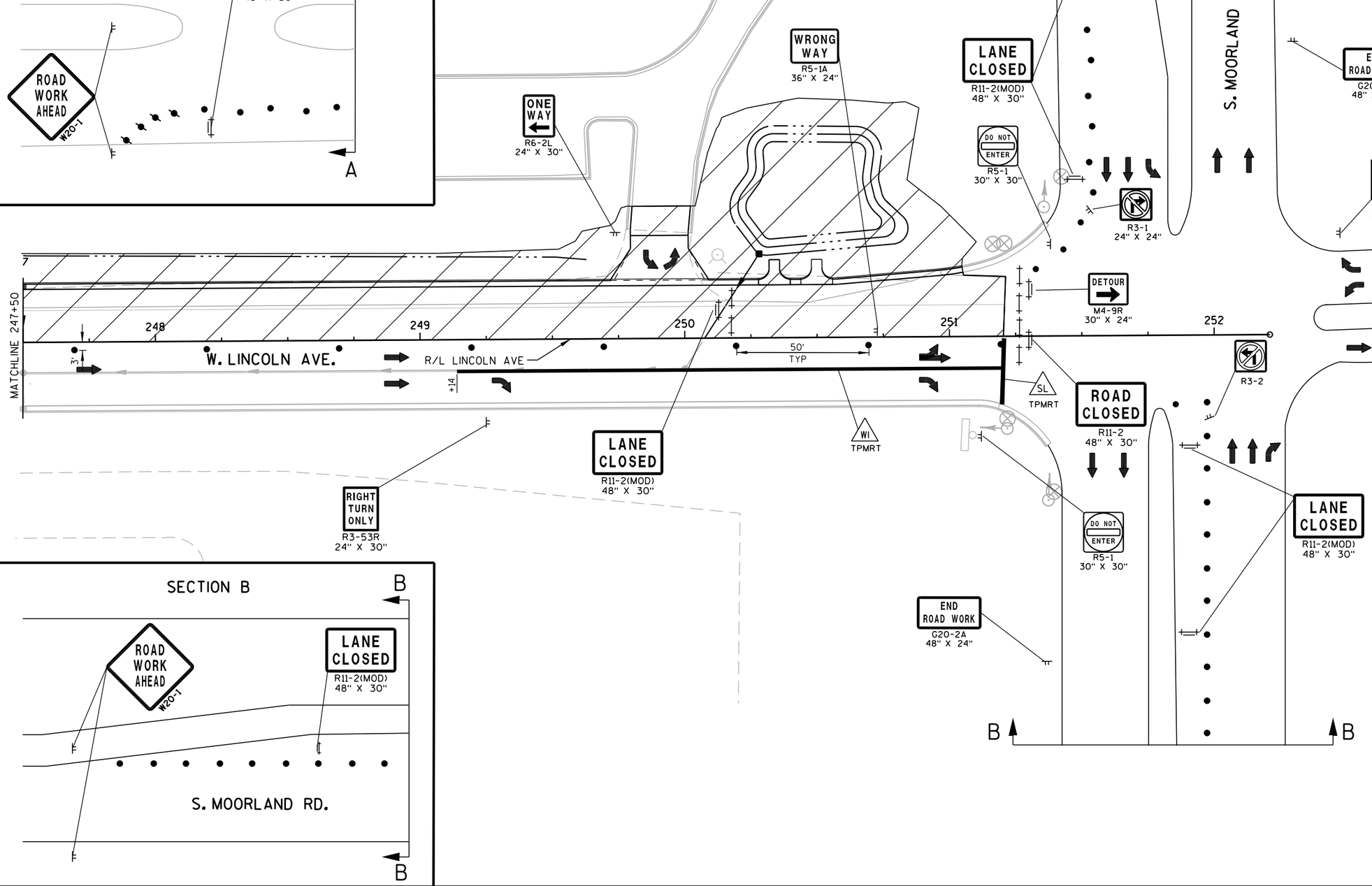
PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 3	SCALE, FEET 0 20 40	SHEET 93	E



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 3	SCALE, FEET 0 20 40	SHEET 94 E

2





PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	TRAFFIC CONTROL PLAN STAGE 3	SCALE, FEET 0 20 40	SHEET 95	E

SETUP "A"

FRAME 1:

FRAME 2:

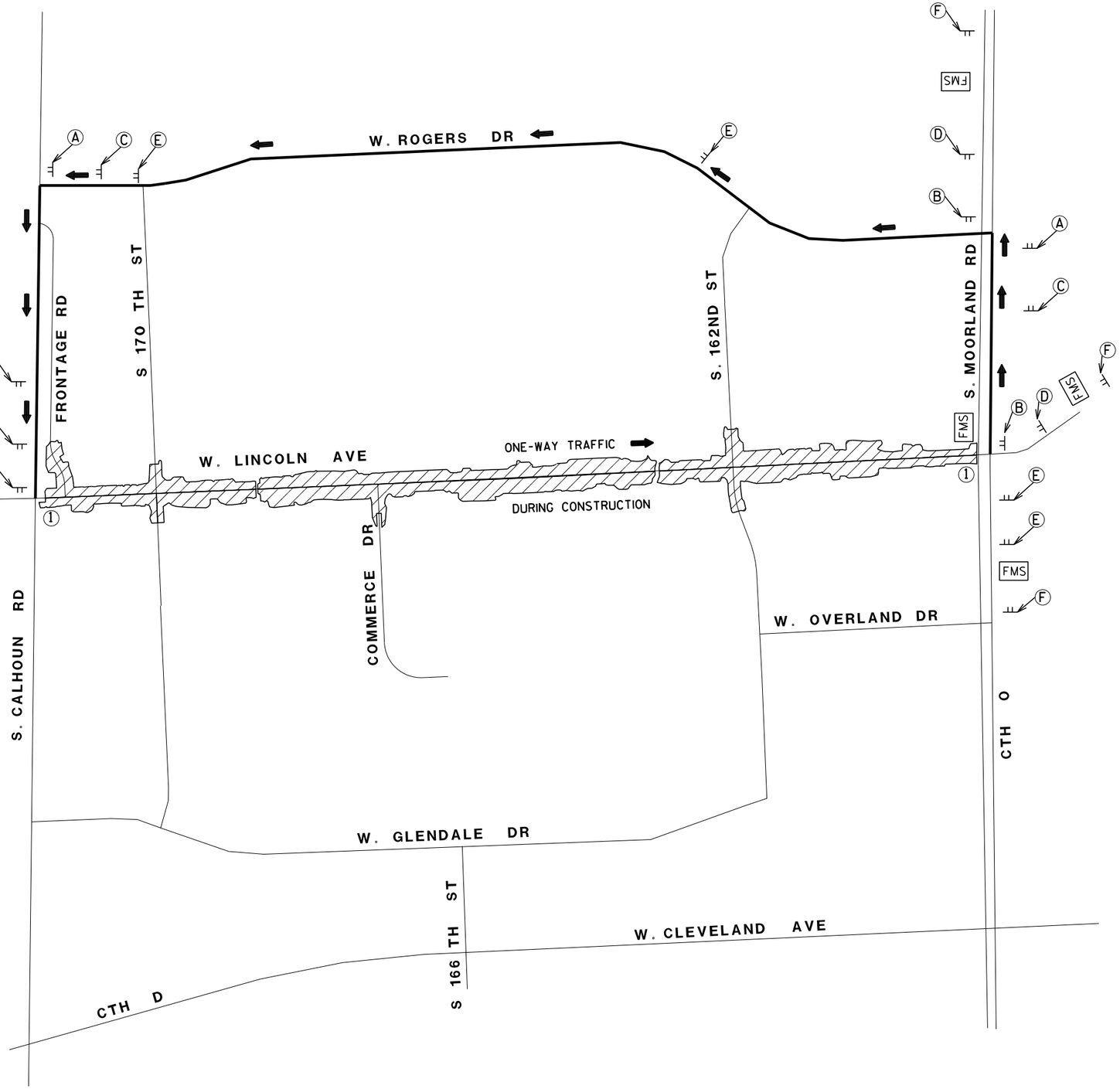
PRIOR TO
STAGE 1

GENERAL NOTES FOR TRAFFIC CONTROL SIGNS PORTABLE CHANGEABLE MESSAGE

1) SETUP "A" TO BE USED ON BOTH ENDS OF W. LINCOLN AVENUE FOR14 CALENDER DAYS, 2 WEEKS PRIOR TO START OF CONSTRUCTION.

2) SETUPS TO BE PLACED AT LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVE	COUNTY: WAUKESHA	PORTABLE CHANGEABLE MESSAGE SIGN DETAILS	SHEET 96	E



LEGEND

- WORK AREA
- SIGN MOUNTED ON TEMPORARY SUPPORT
- DETOUR ROUTE
- DIRECTION OF TRAVEL
- FMS — FIXED MESSAGE SIGN
- ① — SEE SDD "BARRICADES & SIGNS FOR MAINLINE CLOSURES" DETAIL B

Ⓐ DETOUR — M4-9L, 30" X 24"

Ⓑ DETOUR — M4-9R, 30" X 24"

Ⓒ DETOUR — M4-9L (MOD.), 30" X 24"

Ⓓ DETOUR — M4-9R (MOD.), 30" X 24"

Ⓔ DETOUR — M4-9 (MOD.), 30" X 24"

Ⓕ DETOUR AHEAD — W20-2

Ⓖ END DETOUR — M4-8A, 24" X 18"

FIXED MESSAGE SIGN TEXT:

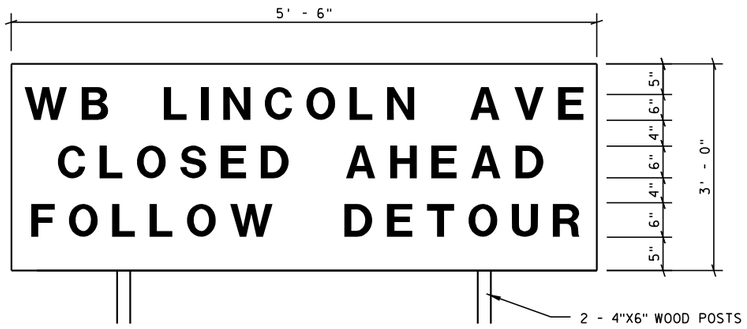
WB LINCOLN AVE
CLOSED AHEAD
FOLLOW DETOUR

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	DETOUR PLAN	SCALE, FEET 0 300 600	SHEET 97	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc027001_dt.dgn PLOT DATE : 17-JUL-2013 13:00 PLOT BY : scook PLOT NAME : PLOT NAME : lc027001_dt PLOT SCALE : 600:1

WISDOT/CADDS SHEET 42

FMS



NOTES

1) ALL SIGNS TO HAVE TYPE F PRISMATIC RETROREFLECTIVE SHEETING - REFERENCE: "WISDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," LATEST EDITION.

2) AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT BEFORE INSTALLATION, THE PROJECT ENGINEER SHALL VERIFY EACH SIGN LOCATION.

3) ALL SIGNS TO BE MOUNTED ON WOODEN POST SUPPORTS (4"x6"). THE NUMBER OF POSTS REQUIRED FOR EACH LAYOUT IS SHOWN.

4) SIGNS ON THIS SHEET TO BE PAID UNDER THE ITEM "TRAFFIC CONTROL SIGNS FIXED MESSAGE".

5) SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON FLUORESCENT ORANGE PRISMATIC RETROREFLECTIVE BACKGROUND.

6) ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS:
6" CAPS SHALL BE SERIES "C"

7) CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.

8) SIGN BASE MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 637 AND 643 OF THE STANDARD SPECIFICATIONS.

FMS SYMBOL SHOWN ON DETOUR PLANS

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	DETOUR PLAN - SIGN LAYOUT	SHEET 98	E

2

CONTROL POINTS

NO.	STATION	(Y) NORTHING	(X) EASTING	ELEV.
CP 1	200+81.23 27.83' RT	370981.1063	500982.2700	864.76
CP 2	207+67.03 26.09' LT	371063.7824	501665.1629	849.11
CP 3	11+37.16 15.65' RT	370676.5369	501713.5434	852.42
CP 4	212+68.91 15.47' RT	371043.3028	502168.3491	847.34
CP 5	23+49.48 12.14' LT	371387.0843	501655.7971	850.06
CP 6	218+41.47 15.34' LT	371098.1108	502739.1135	846.02
CP 7	41+89.22 21.88' RT	370776.3880	502851.3037	846.63
CP 8	223+37.95 14.40' RT	371089.2332	503236.4025	845.74
CP 9	226+40.79 12.68' RT	371129.1990	503537.7580	845.76

N

T 06 N R 20 E — 04 | 03 / 04 | 03

STA 408+00.00
Y= 372,511.19
X= 501,620.87

CURVE 2
PI =402+42.77
Y= 371,235.98
X= 500,976.20
△=33°38'29"
D=28°38'52"
R=200.00
T=60.46
L=117.43
E=8.94
PC =401+82.30
N= 371,185.18
E= 501,008.98
PT =402+99.74
Y= 371,296.44
X= 500,977.06

R/L S. CALHOUN RD.

405 FRONTAGE RD

200.27'

N 00°48'52" E

2659.15'

R/L FRONTAGE RD

PT 2

PI 2

CURVE 2

PC 2

117.94'

N 32°49'38" W

PT 1

PI 1

CURVE 1

PC 1

58.17'

N 2°24'18" W

STA 200+00.00=
STA 89+20.36
Y= 371,005.52
X= 500,899.91

CP 1

STA 207+53.13=
STA 400+00.00
Y= 371,011.95
X= 501,052.91

N 87°35'42" E

95 90 200 205 400

T 06 N R 20 E — 04 | 03 / 09 | 10

S. CALHOUN ROAD

2644.76'

N 00°39'45" E

85 80

CURVE 1
PI =401+12.55
Y= 371,124.40
X= 501,048.18
△=30°25'20"
D=28°38'52"
R=200.00
T=54.38
L=106.19
E=7.26
PC =400+58.17
N= 371,070.07
E= 501,050.46
PT =401+64.36
Y= 371,170.10
X= 501,018.70

STA 34+74.09
Y= 372,511.19
X= 501,620.87

SW 1/4

CP 5

N 02°24'18" W

R/L S. 170TH ST.

STA 207+83.51=
STA 20+00.00
Y= 371,038.40
X= 501,682.73

CP 2

UNION PACIFIC R.R.

25 20

S. 170TH STREET

CP 3

R/L S. 170TH ST.

15

STA 10+88.50
Y= 370,127.70
X= 501,720.98

DETAIL 1

NW 1/4

W. LINCOLN AVENUE

210 215 220 225

N 87°35'42" E

CP 4

R/L W. LINCOLN AVE.

CP 6

STA 219+18.18=
STA 45+00.00
Y= 371,086.01
X= 502,816.40

T 06 N R 20 E — 03 | 03 / 10 | 10

CP 9

MATCHLINE 226+50

CP 8

PI STA 226+14.69
Y= 371,115.24
X= 503,512.30

S. COMMERCE DRIVE

N 02°24'17" W

CP 7

40

CURVE 3
PI =35+18.01
Y= 370,019.00
X= 502,861.21
△=90°01'57"
D=28°38'42"
R=200.02
T=200.13
L=314.30
E=82.93
PC =33+17.88
N= 370,027.51
E= 503,061.17
PT =36+32.18
Y= 370,218.96
X= 502,852.82

R/L S. COMMERCE DR.

PT 3

CURVE 3

35

S 87°33'46" W

PI 3

PC 3

STA 31+78.05
Y= 370,033.46
X= 503,200.86

T 06 N R 20 E — 10

2

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	ALIGNMENT PLAN	SCALE, FEET 0 100 200	SHEET 99	E

2

STA 69+01.47
Y= 372072.45
X= 504592.31

S. 162ND STREET

SE 1/4

CP14

N02°53'37"W

MATCHLINE 226+50

230 235 240 245 250

W. LINCOLN AVENUE

CP11 CP15

CP10 CP12 CP16 CP17

N 87°06'23" E N 87°06'23" E

STA 237+41.64=
STA 60+00.00
Y= 371,172.13
X= 504,637.81

PT 5

N02°53'37"W

PI 5

CURVE 5
PI = 58+19.14
Y = 370,990.01
X = 504,647.02
△ = 17°45'11"
D = 9°36'15"
R = 596.57
T = 93.17
L = 184.85
E = 7.23
PC = 57+25.97
Y = 370,902.82
X = 504,679.87
PT = 59+10.82
Y = 371,083.06
X = 504,642.31

PC 5

N 20°38'47" W

CP13

PT 4

PI 4

PC 4

CURVE 4
PI = 54+92.67
Y = 370,683.11
X = 504,762.66
△ = 17°45'11"
D = 9°36'15"
R = 596.57
T = 93.17
L = 184.85
E = 7.23
PC = 53+99.50
Y = 370,590.06
E = 504,767.36
PT = 55+84.35
Y = 370,770.30
X = 504,729.81

S. 162ND STREET

N 02°53'37" W

PISTA 50+47.37

N 02°53'37" W

STA 48+21.17
Y= 370,012.46
X= 504,796.62

NE 1/4

S. MOORLAND ROAD

STA 252+21.05
Y= 371,246.81
X= 506,115.33

T 06 N
R 03 02 E
10 02
20

T 06 N
R 03 02 E
10 11
20

T 06 N
R 10 11 E
10 11
20

CONTROL POINTS

NO.	STATION	(Y) NORTHING	(X) EASTING	ELEV.
CP 10	230+79.19 15.70' RT	371122.9822	503977.0498	845.58
CP 11	233+91.01 16.59' LT	371170.9983	504286.7894	845.08
CP 12	237+68.90 20.36' RT	371153.1181	504666.1142	847.23
CP 13	56+38.89 17.16' LT	370815.2635	504694.5094	846.99
CP 14	63+31.42 14.97' LT	371502.3104	504606.1878	846.77
CP 15	241+91.28 15.44' LT	371210.1947	505086.1528	850.07
CP 16	245+23.72 17.23' RT	371194.3987	505419.7609	852.02
CP 17	250+04.02 19.01' LT	371254.8489	505897.6151	860.51

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	ALIGNMENT PLAN	SCALE, FEET 0 100 200	SHEET 100	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc027202_ad.dgn PLOT DATE : 02-JUL-2013 13:09 PLOT BY : scook PLOT NAME : PLOT NAME : lc027202_ad PLOT SCALE : 200:1

RECORD OF U. S. PUBLIC LAND SURVEY CONTROL STATION

U. S. PUBLIC LAND SURVEY CORNER 4|3 / 9|10 T 6 N, R 20 E, WAUKESHA COUNTY, WISCONSIN

HORIZONTAL CONTROL SURVEY BY: ALSTER & ASSOCIATES, INC. YEAR: 1966
VERTICAL CONTROL SURVEY BY: AERO-METRIC, INC./SEWRPC YEAR: 2001/2011

STATE PLANE COORDINATES OF: SECTION CORNER
NORTH 370,974.36
EAST 2,500,857.84
ELEVATION OF STATION: 866.380

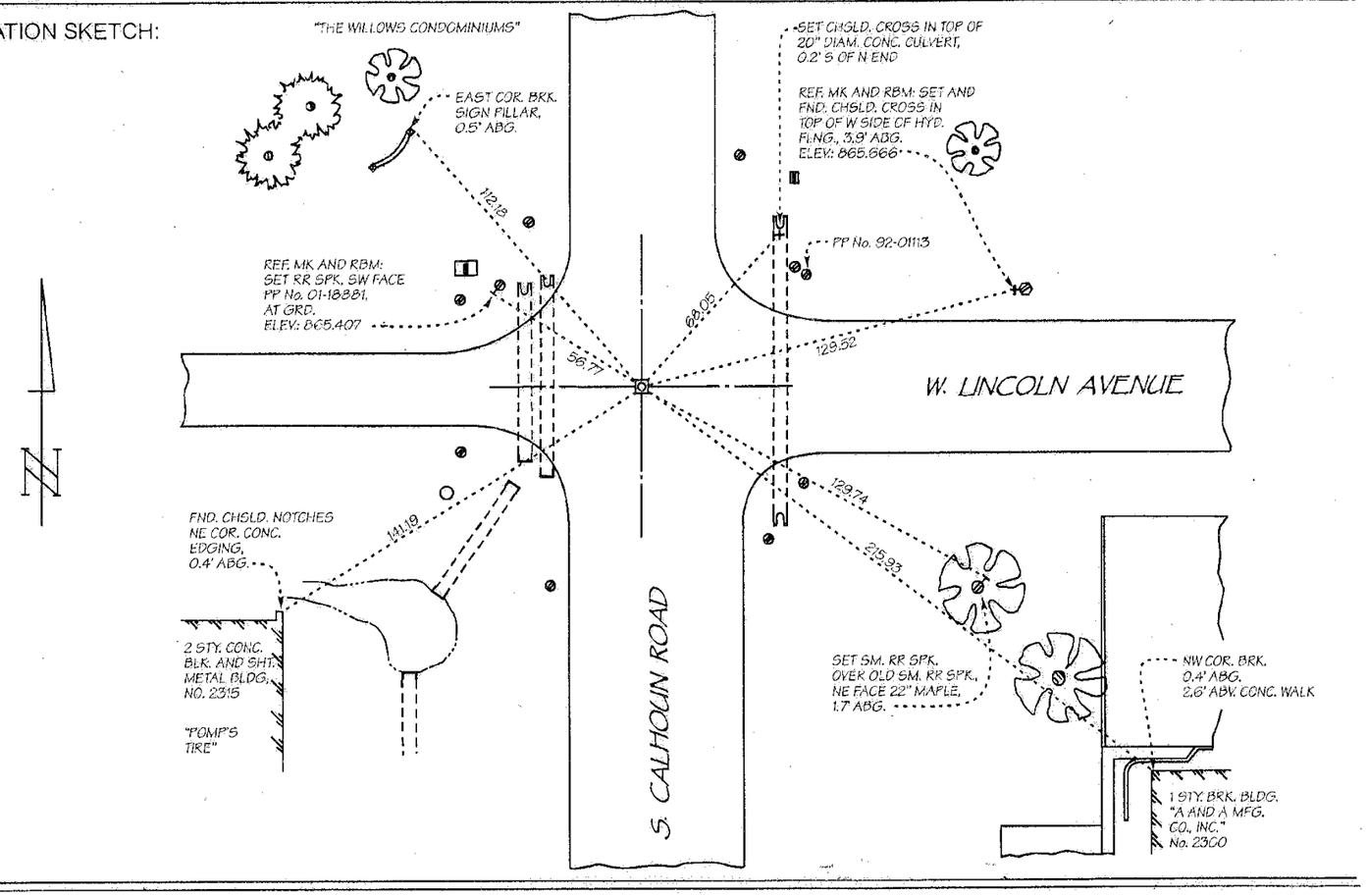
HORIZONTAL DATUM: WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE
NORTH AMERICAN DATUM OF 1927

VERTICAL DATUM: NATIONAL GEODETIC VERTICAL DATUM OF 1929

THETA ANGLE: +1-17-12

CONTROL ACCURACY:
HORIZONTAL: THIRD ORDER, CLASS I VERTICAL: SECOND ORDER, CLASS II

LOCATION SKETCH:



SURVEYOR'S AFFIDAVIT:

STATE OF WISCONSIN)
WAUKESHA COUNTY) SS

As Waukesha County Surveyor, I hereby certify that following street reconstruction, I set a concrete monument with SEWRPC brass cap to mark the location of this corner; replacing a broken concrete monument; said concrete monument with SEWRPC brass cap having been set to mark the location of this corner in October 1969 by Frank L. Grisa, S-380, following street reconstruction; replacing a broken concrete monument with City of New Berlin brass cap having been set to mark the location of this corner in the summer of 1965 by Donald R. Polzin, S-624, using recorded distances to witness marks and real property boundary line monumentation information maintained by the Office of the Waukesha County Surveyor to perpetuate the location of this corner; said recorded distances having been measured to an iron pipe set to mark the location of this corner in August 1931 by Edward H. Hoffmann, S-80, former Waukesha County Surveyor in the conduct of a survey of lands for S.W. Todd; that I have referenced the same as shown hereon; and that this record is correct and complete to the best of my knowledge and belief.

DATE OF SURVEY: 12 OCTOBER 2010

S - 157 33

REGISTERED LAND SURVEYOR

FORM PREPARED BY SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	ALIGNMENT PLANS – CONTROL POINTS	SHEET NO: 101	E

RECORD OF U. S. PUBLIC LAND SURVEY CONTROL STATION

U. S. PUBLIC LAND SURVEY CORNER 3/10 | 3/10 T 6 N, R 20 E, WAUKESHA COUNTY, WISCONSIN

HORIZONTAL CONTROL SURVEY BY: ALSTER & ASSOCIATES, INC. YEAR: 1966
VERTICAL CONTROL SURVEY BY: AERO-METRIC, INC. YEAR: 2001

STATE PLANE COORDINATES OF: QUARTER SECTION CORNER
NORTH 371,084.07
EAST 2,503,470.01
ELEVATION OF STATION: 845.739

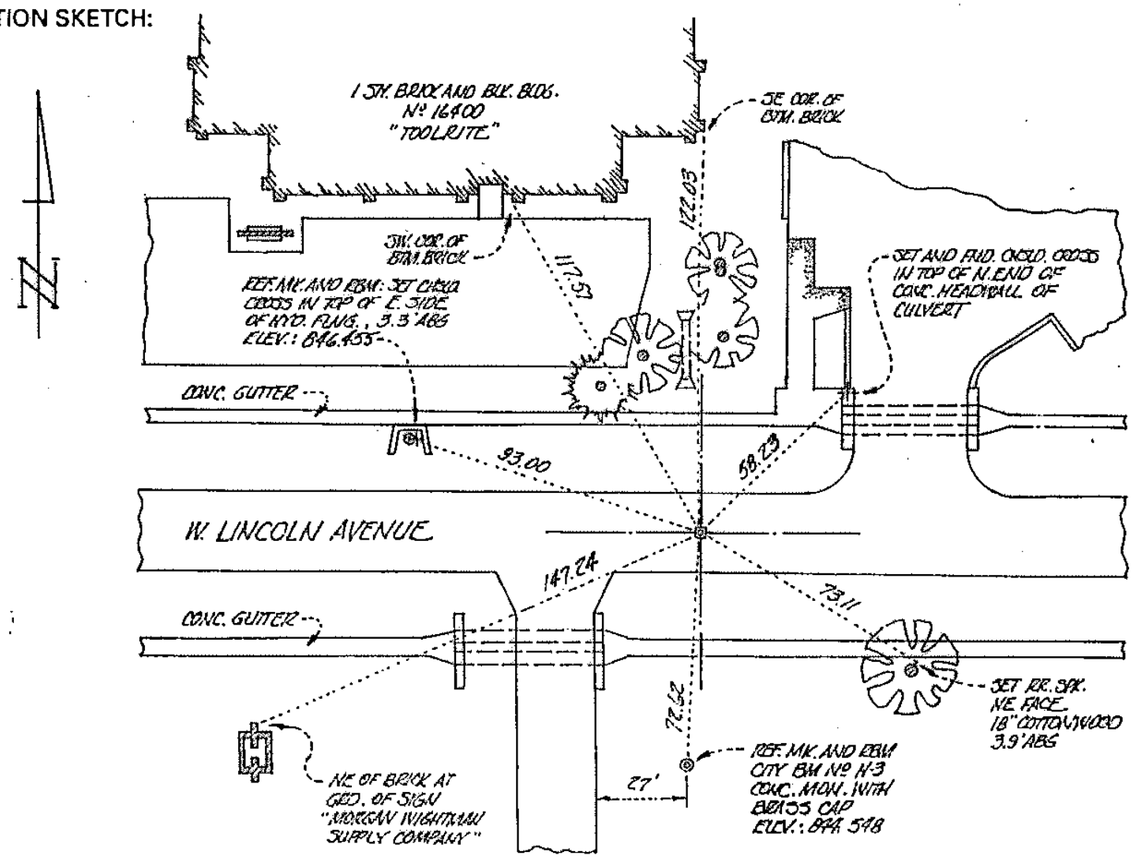
HORIZONTAL DATUM: WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE
NORTH AMERICAN DATUM OF 1927

VERTICAL DATUM: NATIONAL GEODETIC VERTICAL DATUM OF 1929

THETA ANGLE: +1-17-36

CONTROL ACCURACY:
HORIZONTAL: THIRD ORDER, CLASS I VERTICAL: SECOND ORDER, CLASS II

LOCATION SKETCH:



SURVEYOR'S AFFIDAVIT:

STATE OF WISCONSIN) SS
WAUKESHA COUNTY)

As Waukesha County Surveyor, I hereby certify that I set a concrete monument with SEWRPC brass cap to mark this corner; replacing a broken six inch diameter by five foot long concrete monument in a cast iron handhole, said concrete monument with City of New Berlin brass cap having been set to mark this corner in January 1969 by Frank L. Grisa, S-380, following street construction, said concrete monument having been found and referenced by me on October 19, 1987, and said concrete monument with City of New Berlin brass cap having been set to mark this corner in the summer of 1965 by Donald R. Polzin, S-624; replacing an old cut limestone monument set to mark this corner in 1876 by Jonathan C. Crounse, Surveyor, in the conduct of the remonumentation of the U.S. Public Land Survey System in the Town of New Berlin; replacing in turn a wood post set to mark this corner in May 1836 by Elisha Dwelle, Deputy United States Surveyor, in the conduct of the original United States Public Land Survey; that I referenced the same as shown hereon; and that this record is correct and complete to the best of my knowledge and belief.

DATE OF SURVEY: 17 October 2001

Kurt W. Bauer
REGISTERED LAND SURVEYOR
S - 157
32

FORM PREPARED BY SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

RECORD OF U. S. PUBLIC LAND SURVEY CONTROL STATION

U. S. PUBLIC LAND SURVEY CORNER 3/10 2/11 T 6 N, R 20 E, WAUKESHA COUNTY, WISCONSIN

HORIZONTAL CONTROL SURVEY BY: ALSTER & ASSOCIATES, INC. YEAR: 1967
VERTICAL CONTROL SURVEY BY: AERO-METRIC, INC. YEAR: 2001

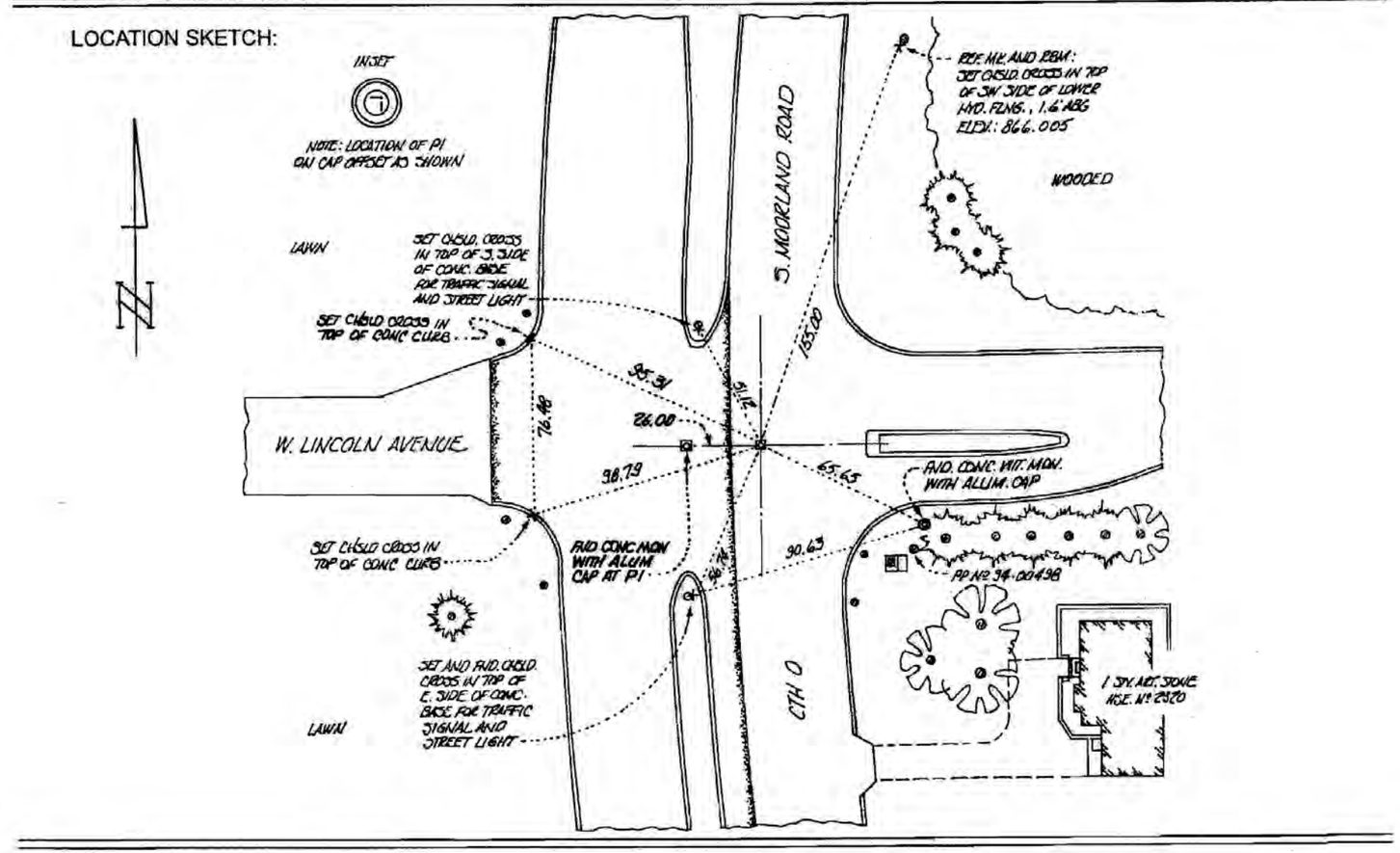
STATE PLANE COORDINATES OF: SECTION CORNER
NORTH 371,215.63
EAST 2,506,072.82
ELEVATION OF STATION: 864.223

HORIZONTAL DATUM: WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE
NORTH AMERICAN DATUM OF 1927

VERTICAL DATUM: NATIONAL GEODETIC VERTICAL DATUM OF 1929 THETA ANGLE: +01-18-00

CONTROL ACCURACY:
HORIZONTAL: THIRD ORDER, CLASS I VERTICAL: SECOND ORDER, CLASS II

LOCATION SKETCH:



WISCONSIN LAND SURVEYOR
K. W. BAUER
MILWAUKEE, WIS.

S - 157 31

SURVEYOR'S AFFIDAVIT:

STATE OF WISCONSIN) SS
WAUKESHA COUNTY)

As Waukesha County Surveyor, I hereby certify that following highway reconstruction I found a concrete monument with SEWRPC brass cap as set to mark the location of this corner by me as Waukesha County Surveyor on August 29, 2001; replacing a cast iron plug with cross set in the concrete pavement three inches below the then existing bituminous surface course; said cast iron plug having been found and referenced by me on October 19, 1987; said cast iron plug having been found and accepted as marking the location of this corner in the Fall of 1968 by Richard P. Jahnke, S-318; said cast iron plug having been set to mark the location of this corner in the Spring of 1967 by a Wisconsin Department of Transportation Project Engineer, following highway reconstruction; said location of this corner having been determined using recorded witness marks and ties maintained by the Waukesha County Surveyor to perpetuate the location of this corner; said witness marks and ties having been taken to an old cut limestone monument found and accepted as marking the location of this corner in August 1935 by Edward H. Hoffmann, S-80, former Waukesha County Surveyor; said limestone monument having been set to mark the location of this corner in 1876 by Jonathan C. Crounse, Surveyor, in the conduct of the remonumentation of the Town of New Berlin; replacing in turn a wood post set to mark this corner in May 1836 by Elisha Dwelle, Deputy United States Surveyor, in the conduct of the original United States Public Land Survey; that I have referenced the same as shown hereon; and that this record is correct and complete to the best of my knowledge and belief.

DATE OF SURVEY: 3 November 2006

REGISTERED LAND SURVEYOR

FORM PREPARED BY SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

DATE 05DEC13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2722-11-70 QUANTITY
0010	201.0105	CLEARING	STA	25.000	25.000
0020	201.0120	CLEARING	ID	53.000	53.000
0030	201.0205	GRUBBING	STA	25.000	25.000
0040	201.0220	GRUBBING	ID	53.000	53.000
0050	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	48.000	48.000
0060	204.0110	REMOVING ASPHALTIC SURFACE	SY	5,590.000	5,590.000
0070	204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	SY	460.000	460.000
0080	204.0150	REMOVING CURB & GUTTER	LF	86.000	86.000
0090	204.0180	REMOVING DELINEATORS AND MARKERS	EACH	30.000	30.000
0100	204.0185	REMOVING MASONRY	CY	361.000	361.000
0110	204.0215	REMOVING CATCH BASINS	EACH	1.000	1.000
0120	204.0245	REMOVING STORM SEWER (SIZE) 01. 18-INCH	LF	50.000	50.000
0130	204.0245	REMOVING STORM SEWER (SIZE) 02. 24-INCH	LF	25.000	25.000
0140	204.0245	REMOVING STORM SEWER (SIZE) 03. 36-INCH	LF	48.000	48.000
0150	204.0275	CLOSING CULVERT PIPES	EACH	17.000	17.000
0160	204.0291.S	ABANDONING SEWER	CY	136.000	136.000
0170	204.9165.S	REMOVING (ITEM DESCRIPTION) 01. WALL MODULAR BLOCK	SF	1,545.000	1,545.000
0180	205.0100	EXCAVATION COMMON	CY	40,500.000	40,500.000
0190	205.0501.S	EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL	TON	250.000	250.000
0200	213.0100	FINISHING ROADWAY (PROJECT) 01. 2722-11-70	EACH	1.000	1.000
0210	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	480.000	480.000
0220	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	31,000.000	31,000.000
0230	310.0115	BASE AGGREGATE OPEN GRADED	CY	95.000	95.000
0240	416.0170	CONCRETE DRIVEWAY 7-INCH	SY	1,980.000	1,980.000
0250	416.0270	CONCRETE DRIVEWAY HES 7-INCH	SY	520.000	520.000
0260	416.1010	CONCRETE SURFACE DRAINS	CY	38.000	38.000
0270	455.0105	ASPHALTIC MATERIAL PG58-28	TON	533.000	533.000
0280	455.0605	TACK COAT	GAL	1,670.000	1,670.000
0290	460.1103	HMA PAVEMENT TYPE E-3	TON	8,860.000	8,860.000
0300	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	5,670.000	5,670.000
0310	465.0105	ASPHALTIC SURFACE	TON	10.000	10.000
0320	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	390.000	390.000
0330	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	600.000	600.000
0340	520.1018	APRON ENDWALLS FOR CULVERT PIPE 18-INCH	EACH	2.000	2.000
0350	520.4018	CULVERT PIPE TEMPORARY 18-INCH	LF	245.000	245.000
0360	520.8000	CONCRETE COLLARS FOR PIPE	EACH	3.000	3.000
0370	522.0312	CULVERT PIPE REINFORCED CONCRETE CLASS IV 12-INCH	LF	162.000	162.000
0380	522.0315	CULVERT PIPE REINFORCED CONCRETE CLASS IV 15-INCH	LF	16.000	16.000
0390	522.0318	CULVERT PIPE REINFORCED CONCRETE CLASS IV 18-INCH	LF	40.000	40.000
0400	522.1012	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	EACH	12.000	12.000
0410	522.1015	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH	EACH	9.000	9.000
0420	522.1018	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	EACH	10.000	10.000
0430	522.1024	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	EACH	2.000	2.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2722-11-70 QUANTITY
0440	523.0543	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 43X68-INCH	EACH	1.000	1.000
0450	601.0407	CONCRETE CURB & GUTTER 18-INCH TYPE D	LF	104.000	104.000
0460	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE D	LF	10,100.000	10,100.000
0470	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	1,037.500	1,037.500
0480	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	1,862.500	1,862.500
0490	606.0200	RIPRAP MEDIUM	CY	80.000	80.000
0500	606.0300	RIPRAP HEAVY	CY	50.000	50.000
0510	608.0324	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	844.000	844.000
0520	608.0330	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH	LF	559.000	559.000
0530	608.0336	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH	LF	479.000	479.000
0540	608.0412	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH	LF	907.000	907.000
0550	608.0415	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH	LF	632.000	632.000
0560	608.0418	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH	LF	702.000	702.000
0570	608.0424	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH	LF	481.000	481.000
0580	608.0430	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH	LF	304.000	304.000
0590	610.0143	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 43X68-INCH	LF	595.000	595.000
0600	611.0530	MANHOLE COVERS TYPE J	EACH	4.000	4.000
0610	611.0555	MANHOLE COVERS TYPE Q	EACH	29.000	29.000
0620	611.0660	INLET COVERS TYPE WM	EACH	36.000	36.000
0630	611.2004	MANHOLES 4-FT DIAMETER	EACH	15.000	15.000
0640	611.2005	MANHOLES 5-FT DIAMETER	EACH	11.000	11.000
0650	611.2008	MANHOLES 8-FT DIAMETER	EACH	9.000	9.000
0660	611.2044	MANHOLES 4X4-FT	EACH	1.000	1.000
0670	611.3004	INLETS 4-FT DIAMETER	EACH	2.000	2.000
0680	611.3225	INLETS 2X2.5-FT	EACH	30.000	30.000
0690	611.9800.S	PIPE GRATES	EACH	3.000	3.000
0700	612.0106	PIPE UNDERDRAIN 6-INCH	LF	3,370.000	3,370.000
0710	612.0108	PIPE UNDERDRAIN 8-INCH	LF	373.000	373.000
0720	612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	2,420.000	2,420.000
0730	612.0208	PIPE UNDERDRAIN UNPERFORATED 8-INCH	LF	160.000	160.000
0740	612.0212	PIPE UNDERDRAIN UNPERFORATED 12-INCH	LF	520.000	520.000
0750	612.0806	APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH	EACH	11.000	11.000
0760	614.0905	CRASH CUSHIONS TEMPORARY	EACH	5.000	5.000
0770	619.1000	MOBILIZATION	EACH	1.000	1.000
0780	623.0200	DUST CONTROL SURFACE TREATMENT	SY	20,000.000	20,000.000
0790	624.0100	WATER	MGAL	100.000	100.000
0800	625.0100	TOPSOIL	SY	27,680.000	27,680.000
0810	627.0200	MULCHING	SY	21,000.000	21,000.000
0820	628.1104	EROSION BALES	EACH	500.000	500.000
0830	628.1504	SILT FENCE	LF	900.000	900.000
0840	628.1520	SILT FENCE MAINTENANCE	LF	900.000	900.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2722-11-70 QUANTITY
0850	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	10.000	10.000
0860	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	8.000	8.000
0870	628.2033	EROSION MAT CLASS III TYPE B	SY	2,100.000	2,100.000
0880	628.6510	SOIL STABILIZER TYPE B	ACRE	5.000	5.000
0890	628.7005	INLET PROTECTION TYPE A	EACH	50.000	50.000
0900	628.7020	INLET PROTECTION TYPE D	EACH	50.000	50.000
0910	628.7504	TEMPORARY DITCH CHECKS	LF	300.000	300.000
0920	628.7555	CULVERT PIPE CHECKS	EACH	80.000	80.000
0930	628.7560	TRACKING PADS	EACH	10.000	10.000
0940	628.7570	ROCK BAGS	EACH	100.000	100.000
0950	629.0210	FERTILIZER TYPE B	CWT	14.000	14.000
0960	630.0130	SEEDING MIXTURE NO. 30	LB	330.000	330.000
0970	630.0200	SEEDING TEMPORARY	LB	10.000	10.000
0980	631.0300	SOD WATER	MGAL	230.000	230.000
0990	631.1000	SOD LAWN	SY	2,800.000	2,800.000
1000	632.9101	LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES	EACH	12.000	12.000
1010	633.5200	MARKERS CULVERT END	EACH	46.000	46.000
1020	642.5201	FIELD OFFICE TYPE C	EACH	1.000	1.000
1030	643.0100	TRAFFIC CONTROL (PROJECT) 01. 2722-11-70	EACH	1.000	1.000
1040	643.0300	TRAFFIC CONTROL DRUMS	DAY	37,800.000	37,800.000
1050	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	18,300.000	18,300.000
1060	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	36,700.000	36,700.000
1070	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	3,900.000	3,900.000
1080	643.0900	TRAFFIC CONTROL SIGNS	DAY	23,800.000	23,800.000
1090	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	66.000	66.000
1100	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	28.000	28.000
1110	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 01. 2722-11-70	EACH	1.000	1.000
1120	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	3,850.000	3,850.000
1130	645.0112	GEOTEXTILE FABRIC TYPE DF SCHEDULE B	SY	3,520.000	3,520.000
1140	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	1,300.000	1,300.000
1150	645.0130	GEOTEXTILE FABRIC TYPE R	SY	960.000	960.000
1160	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	17,570.000	17,570.000
1170	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	370.000	370.000
1180	646.0600	REMOVING PAVEMENT MARKINGS	LF	1,220.000	1,220.000
1190	647.0110	PAVEMENT MARKING RAILROAD CROSSINGS EPOXY	EACH	2.000	2.000
1200	647.0166	PAVEMENT MARKING ARROWS EPOXY TYPE 2	EACH	3.000	3.000
1210	647.0356	PAVEMENT MARKING WORDS EPOXY	EACH	2.000	2.000
1220	647.0566	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	LF	162.000	162.000
1230	647.0576	PAVEMENT MARKING STOP LINE EPOXY 24-INCH	LF	27.000	27.000
1240	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	770.000	770.000
1250	649.0701	TEMPORARY PAVEMENT MARKING 8-INCH	LF	40.000	40.000
1260	649.0801	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH	LF	210.000	210.000
1270	649.1100	TEMPORARY PAVEMENT MARKING STOP LINE 18-INCH	LF	40.000	40.000
1280	649.1200	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH	LF	60.000	60.000
1290	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	85.000	85.000
1300	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	5,800.000	5,800.000
1310	650.5000	CONSTRUCTION STAKING BASE	LF	5,800.000	5,800.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2722-11-70 QUANTITY
1320	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	7,560.000	7,560.000
1330	650.6000	CONSTRUCTION STAKING PIPE CULVERTS	EACH	15.000	15.000
1340	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 2722-11-70	LS	1.000	1.000
1350	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	6,000.000	6,000.000
1360	690.0150	SAWING ASPHALT	LF	6,400.000	6,400.000
1370	690.0250	SAWING CONCRETE	LF	130.000	130.000
1380	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT $5.00/HR	HRS	2,400.000	2,400.000
1390	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	HRS	1,400.000	1,400.000
1400	SPV.0005	SPECIAL 01. SEEDBED PREPARATION	ACRE	3.810	3.810
1410	SPV.0005	SPECIAL 02. SEEDING SPECIAL	ACRE	3.810	3.810
1420	SPV.0035	SPECIAL 01. ENGINEERED SOIL	CY	7,020.000	7,020.000
1430	SPV.0035	SPECIAL 02. CONCRETE SURFACE DRAINS SPECIAL	CY	75.000	75.000
1440	SPV.0035	SPECIAL 03. BACKFILL SLURRY	CY	4,470.000	4,470.000
1450	SPV.0060	SPECIAL 01. ADJUSTING SANITARY MANHOLE COVERS	EACH	16.000	16.000
1460	SPV.0060	SPECIAL 02. RECONSTRUCTION SANITARY MANHOLES	EACH	6.000	6.000
1470	SPV.0060	SPECIAL 03. MANHOLE COVERS SANITARY	EACH	2.000	2.000
1480	SPV.0060	SPECIAL 04. SALVAGING FIRE HYDRANTS AND ABANDONING HYDRANT TEES	EACH	13.000	13.000
1490	SPV.0060	SPECIAL 05. SALVAGING WATER VALVES 8-INCH	EACH	8.000	8.000
1500	SPV.0060	SPECIAL 06.SALVAGING WATER VALVE VAULTS	EACH	6.000	6.000
1510	SPV.0060	SPECIAL 07. ADJUSTING WATER VALVE BOXES	EACH	13.000	13.000
1520	SPV.0060	SPECIAL 08. HYDRANT ASSEMBLIES	EACH	13.000	13.000
1530	SPV.0060	SPECIAL 09. GATE VALVES HYDRANT 6-INCH	EACH	13.000	13.000
1540	SPV.0060	SPECIAL 10. GATE VALVES 8-INCH	EACH	8.000	8.000
1550	SPV.0060	SPECIAL 11. BUTTERFLY VALVES 16-INCH	EACH	8.000	8.000
1560	SPV.0060	SPECIAL 12. PIPE SLEEVES DUCTILE IRON 8-INCH	EACH	5.000	5.000
1570	SPV.0060	SPECIAL 13. PIPE SLEEVES DUCTILE IRON 16-INCH	EACH	18.000	18.000
1580	SPV.0060	SPECIAL 14. UNDERDRAIN CLEANOUT	EACH	25.000	25.000
1590	SPV.0060	SPECIAL 15. APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 8-INCH	EACH	1.000	1.000
1600	SPV.0060	SPECIAL 16. APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 12-INCH	EACH	2.000	2.000
1610	SPV.0060	SPECIAL 17. CONSTRUCTION STAKING BIOSWALES	EACH	38.000	38.000
1620	SPV.0060	SPECIAL 18. EXPOSING EXISTING UTILITY	EACH	42.000	42.000
1630	SPV.0060	SPECIAL 19. ATRIUM ASSEMBLY 12-INCH	EACH	29.000	29.000
1640	SPV.0060	SPECIAL 20. ATTRIUM ASSEMBLY 24-INCH	EACH	20.000	20.000
1650	SPV.0060	SPECIAL 21. SALVAGING WATER VALVES 16-INCH	EACH	1.000	1.000
1660	SPV.0085	SPECIAL 01. SEEDING MIXTURE SPECIAL	LB	37.000	37.000
1670	SPV.0085	SPECIAL 02. SEEDING COVER CROP	LB	37.000	37.000
1680	SPV.0090	SPECIAL 01. STORM SEWER PIPE REINFORCED CONCRETE HORIZ ELLIPTICAL CLASS HE-IV 43X68-INCH	LF	1,340.000	1,340.000
1690	SPV.0090	SPECIAL 02. STEEL CASING WITH DUCTILE IRON 36-INCH CARRIER	LF	90.000	90.000
1700	SPV.0090	SPECIAL 03. HYDRANT LEADS DUCTILE IRON 6-INCH	LF	210.000	210.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	2722-11-70 QUANTITY
1710	SPV.0090	SPECIAL 04. WATER MAINS DUCTILE IRON 8-INCH	LF	280.000	280.000
1720	SPV.0090	SPECIAL 05. WATER MAINS DUCTILE IRON 16-INCH	LF	290.000	290.000
1730	SPV.0090	SPECIAL 06. WATER SERVICES 1 1/4-INCH OPEN CUT	LF	50.000	50.000
1740	SPV.0090	SPECIAL 07. WATER SERVICES 2-INCH OPEN CUT	LF	50.000	50.000
1750	SPV.0090	SPECIAL 08. WATER SERVICES 4-INCH OPEN CUT	LF	45.000	45.000
1760	SPV.0105	SPECIAL 01. CONSTRUCTION STAKING SANITARY SEWERS	LS	1.000	1.000
1770	SPV.0105	SPECIAL 02. CONSTRUCTION STAKING WATER MAINS	LS	1.000	1.000
1780	SPV.0165	SPECIAL 01. WALLS MODULAR BLOCK GRAVITY SPECIAL	SF	344.000	344.000
1790	SPV.0165	SPECIAL 02. PIPE INSULATION	SF	1,470.000	1,470.000
1800	SPV.0180	SPECIAL 01. GEOTEXTILE FABRIC TYPE FF	SY	800.000	800.000
1810	SPV.0180	SPECIAL 02. MULCHING SPECIAL	SY	18,430.000	18,430.000

CLEARING AND GRUBBING ITEMS

CATEGORY	LOCATION	201.0105 CLEARING STA	201.0120 CLEARING ID	201.0205 GRUBBING STA	201.0220 GRUBBING ID
0010	W. LINCOLN AVE				
	206+00 - 207+00	1	--	1	--
	209+00	--	6	--	6
	210+78	--	8	--	8
	211+00 - 212+00	1	--	1	--
	214+00 - 215+00	1	--	1	--
	215+38	--	4	--	4
	215+44	--	3	--	3
	217+00 - 219+00	2	--	2	--
	223+00 - 224+00	1	--	1	--
	224+57	--	8	--	8
	225+00 - 227+00	2	--	2	--
	228+00 - 230+00	2	--	2	--
	230+90	--	6	--	6
	231+00 - 232+00	1	--	1	--
	235+00 - 237+00	2	--	2	--
	238+00 - 245+00	7	--	7	--
	245+25	--	10	--	10
	246+00 - 249+00	3	--	3	--
	249+21	--	8	--	8
	250+00 - 251+00	1	--	1	--
	S. 162ND ST				
	61+00 - 62+00	1	--	1	--
	TOTALS	25	53	25	53

REMOVING ASPHALTIC SURFACE BUTT JOINTS

CATEGORY	LOCATION	OFFSET	204.0115 SY	REMARKS
0010	201+07	LT/RT	268	W. LINCOLN AVE
	403+00	LT/RT	32	FRONTAGE RD
	18+49	LT/RT	32	S. 170TH ST
	21+50	LT/RT	32	S. 170TH ST
	43+50	LT/RT	32	S. COMMERCE DR
	57+73	LT/RT	32	S. 162ND ST
	61+95	LT/RT	32	S. 162ND ST
	TOTAL		460	

REMOVING ASPHALTIC SURFACE

CATEGORY	LOCATION	OFFSET	204.0110 SY
0010	W. LINCOLN AVE		
	215+50 - 219+50	LT/RT	2,022
	223+20 - 229+60	LT/RT	3,047
	245+50 - 246+10	LT/RT	295
0010	FRONTAGE RD		
	401+50 - 402+80	LT	226
	TOTAL		5,590

REMOVING SMALL PIPE CULVERTS

CATEGORY	LOCATION	OFFSET	203.0100 EACH	PIPE SIZE
0010	W. LINCOLN AVE			
	202+42	RT	1	24" CPCS
	202+44	LT	1	18" CPCS
	203+35	RT	1	24" CPCS
	204+76	RT	1	24" CPCS
	205+49	LT	1	18" CPCS
	207+05	RT	1	24" CPCS
	209+58	LT	1	35" x 24" PACS
	210+76	RT	1	64" x 43" PACS
	212+55	RT	2	24" PACS
	214+54	LT	2	42" x 29" PACS
	218+51	RT	1	21" x 15" PACS
	218+51	RT	1	35" x 24" PACS
	218+62	LT	2	42" x 29" PACS
	222+24	RT	2	49" x 33" PACS
	223+12	RT	2	49" x 33" PACS
	223+73	LT	2	42" x 29" PACS
	225+62	RT	2	49" x 33" PACS
	226+73	LT	2	42" x 29" PACS
	228+08	RT	2	49" x 33" PACS
	230+61	RT	2	49" x 33" PACS
	234+43	LT	1	35" x 24" PACS
	235+15	RT	1	24" CPCS
	236+05	LT	1	35" x 24" PACS
	241+21	RT	1	18" CPCS
	241+70	LT	1	35" x 24" PACS
	242+15	RT	1	18" CPCS
	242+94	LT	1	35" x 24" PACS
	243+01	RT	1	18" CPCS
	245+07	RT	1	18" CPCS
	245+98	LT	1	28" x 20" PACS
	246+94	LT	1	28" x 20" PACS
	246+95	RT	1	15" CPCS
	249+83	LT	1	35" x 20" PACS
	250+09	RT	1	18" CPCS
	FRONTAGE ROAD			
	401+67	RT	1	18" CPCS
	402+57	RT	1	15" CPCS
	S, 162ND ST			
	61+06	RT	1	24" CPCS
	61+68	LT	1	24" CPCS
	TOTAL		48	

REMOVING WALL MODULAR BLOCK

CATEGORY	LOCATION		204.9165.S.01 SF
0010	W. LINCOLN AVE		
	246+68 - 246+73	LT	330
	247+15 - 247+28	LT	305
	249+58 - 249+63	LT	260
	250+06 - 250+20	LT	650
	TOTAL		1,545

REMOVING CURB & GUTTER

CATEGORY	LOCATION	OFFSET	204.0150 LF
0010	W. LINCOLN AVE		
	226+62	LT	15
	226+83	LT	13
	246+86	LT	12
	246+98	LT	12
	249+81	LT	9
	249+96	LT	10
	250+96 - 250+99	LT	3
	251+06 - 251+18	RT	12
	TOTAL		86

REMOVING DELINEATORS AND MARKERS

CATEGORY	STAGE	LOCATION	OFFSET		204.0180 EACH
0010		W. LINCOLN AVE			
	3	200+93.7	26.6	LT	1
	3	202+33.6	32.2	LT	2
	3	202+56.0	33.4	LT	2
	3	207+52.5	20.8	LT	1
	3	208+19.8	21.1	LT	1
	2	207+48.5	21.1	RT	1
	2	208+14.8	23.1	RT	1
	3	209+83.6	33.9	LT	1
	2	212+43.6	38.4	RT	1
	2	212+61.5	38.6	RT	1
	2	212+69.9	38.5	RT	1
	2	212+71.9	39.7	RT	1
	3	218+12.9	19.7	LT	1
	2	218+37.6	69.8	RT	1
	2	218+65.0	53.4	RT	1
	2	218+97.6	43.1	RT	1
	2	219+38.4	46.2	RT	1
	2	219+51.5	23.3	RT	1
	2	221+70.2	18.8	RT	1
	2	221+76.1	18.4	RT	1
	2	228+16.6	43.6	RT	1
	2	229+19.7	20.9	RT	1
	2	230+45.1	45.5	RT	1
	3	237+13.4	23.7	LT	1
	3	237+76.0	21.5	LT	1
	2	237+07.3	22.5	RT	1
	2	237+19.2	38.2	RT	1
	2	237+72.3	21.5	RT	1
	TOTAL				30

REMOVING MASONRY

CATEGORY	LOCATION	OFFSET	204.0185 CY	REMARKS
	W. LINCOLN AVE			
0010	202+33	30'LT	0.5	ENDWALL
	202+57	29'LT	0.5	ENDWALL
	204+60	26'RT	0.6	ENDWALL
	204+90	29'RT	1.9	ENDWALL
	205+30	30'LT	1.0	ENDWALL
	205+72	26'LT	0.5	ENDWALL
	206+91	25'RT	0.7	ENDWALL
	207+17	23'RT	1.6	ENDWALL
	207+54	28'RT	1.6	ENDWALL
	207+58	33'RT	1.9	ENDWALL
	208+10	33'RT	1.7	ENDWALL
	211+46 - 212+27	33'RT	6.7	DITCH LINING
	212+27	31'RT	4.5	ENDWALL
	212+67	25'LT	2.7	ENDWALL
	212+72	35'RT	1.1	ENDWALL
	213+27	33'LT	2.3	HYD WALL
	213+15 - 214+34	36'LT	8.3	DITCH LINING
	213+15 - 218+35	35'RT	38.5	DITCH LINING
	214+35	36'LT	1.2	ENDWALL
	214+75	36'LT	1.2	ENDWALL
	214+75 - 218+48	36'LT	27.3	DITCH LINING
	216+48	33'LT	2.0	HYD WALL
	218+48	35'LT	1.2	ENDWALL
	218+79 - 223+54	36'LT	32.8	DITCH LINING
	218+79	36'LT	1.1	ENDWALL
	218+66 - 218+93	34'RT	2.9	DITCH LINING
	218+94	35'RT	1.6	ENDWALL
	219+42	38'RT	2.0	ENDWALL
	219+43 - 222+02	35'RT	19.3	DITCH LINING
	221+48	33'LT	2.0	HYD WALL
	222+02	35'RT	1.7	ENDWALL
	222+44	34'RT	1.8	ENDWALL
	222+44 - 222+94	34'RT	4.8	DITCH LINING
	222+94	35'RT	2.1	ENDWALL
	223+27	35'RT	2.1	ENDWALL
	223+95 - 226+54	36'LT	17.5	DITCH LINING
	223+54	36'LT	1.1	ENDWALL
	223+95	36'LT	1.2	ENDWALL
	223+95 - 226+54	36'RT	17.5	DITCH LINING
	225+26	34'LT	2.0	HYD WALL
	225+38	38'RT	2.4	ENDWALL
	225+85	34'RT	2.2	ENDWALL
	223+95 - 226+54	36'RT	14.7	DITCH LINING
	226+54	36'LT	2.0	ENDWALL
	226+95	36'LT	2.0	ENDWALL
	226+95 - 233+47	36'LT	44.9	DITCH LINING

CATEGORY	LOCATION	OFFSET	204.0185 CY	REMARKS
	W. LINCOLN AVE			
	227+85	35'RT	2.4	ENDWALL
	228+17	34'RT	2.6	ENDWALL
	228+17 - 230+44	36'RT	16.9	DITCH LINING
	229+72	34'LT	2.4	HYD WALL
	230+44	34'RT	2.6	ENDWALL
	230+75	34'RT	2.5	ENDWALL
	230+75 - 233+11	34'RT	15.8	DITCH LINING
	233+69 - 233+89	29'LT	1.1	DITCH LINING
	233+62 - 233+92	32'LT	2.1	DITCH LINING
	234+60	29'LT	0.5	ENDWALL
0010	234+99	30'RT	0.5	ENDWALL
	235+30	30'RT	0.5	ENDWALL
	235+91	29'LT	0.6	ENDWALL
	236+22	29'LT	0.6	ENDWALL
	237+12	26'LT	1.3	ENDWALL
	237+12	29'RT	1.6	ENDWALL
	237+71	29'LT	0.7	ENDWALL
	237+71	30'RT	1.2	ENDWALL
	237+89	28'RT	0.5	ENDWALL
	238+28	28'RT	0.5	ENDWALL
	241+05	26'RT	0.9	ENDWALL
	241+36	27'RT	0.5	ENDWALL
	241+98	27'RT	0.8	ENDWALL
	242+29	26'RT	0.8	ENDWALL
	242+76	26'LT	1.6	ENDWALL
	242+84	27'RT	0.6	ENDWALL
	243+14	26'RT	0.6	ENDWALL
	243+15	25'LT	1.6	ENDWALL
	245+88	28'LT	1.6	ENDWALL
	246+11	28'RT	1.4	ENDWALL
	247+14	27'RT	0.5	ENDWALL
	249+86	30'RT	0.5	ENDWALL
0010	FRONTAGE RD			
	402+44	16'RT	0.5	ENDWALL
	402+78	22'RT	0.5	ENDWALL
0010	162ND ST			
	60+87	27'RT	0.5	ENDWALL
	61+25	27'RT	0.5	ENDWALL
	TOTAL		361	

ABANDONING CULVERT ITEMS

CATEGORY	LOCATION	OFFSET	PIPE SIZE / TYPE	204.0275 CLOSING CULVERT PIPES EACH	204.0291.S ABANDONING SEWER CY
	W. LINCOLN AVE				
0010	212+48	LT/RT	35" 24" PACS	1	12.1
	212+54	LT/RT	35" 24" PACS	1	11.8
	212+99	LT/RT	42"X30" PACS	2	8.3
	213+35	LT/RT	18" CPCM	1	3.3
	215+45	LT/RT	18" CPCM	1	3.2
	218+20	LT/RT	18" CPCM	1	2.9
	221+73	LT/RT	18" CPCM	1	3.2
	229+20	LT/RT	18" CPCM	1	3.5
	S. 170TH ST				
	19+65	LT/RT	35" X 24" PACS	1	8.7
	19+68	LT/RT	24" CPCS	1	6.2
	19+71	LT/RT	35" X 24" PACS	1	9.4
	20+27	LT/RT	35" X 24" PACS	1	10.1
	S. COMMERCE DR				
	44+63	LT/RT	49" X 33" PACS	1	15.9
	44+68	LT/RT	49" X 33" PACS	1	17.1
	S. 162ND ST				
	58+72	LT/RT	35" X 24" PACS	1	10.2
	60+29	LT/RT	35" X 24" PACS	1	10.1
	TOTALS			17	136

REMOVING STORM SEWER ITEMS

CATEGORY	LOCATION	OFFSET	204.0215 REMOVING CATCH BASINS EACH	204.0245.01 REMOVING STORM SEWER 18-INCH LF	204.0245.02 REMOVING STORM SEWER 24-INCH LF	204.0245.03 REMOVING STORM SEWER 36-INCH LF
0010	W. LINCOLN AV					
	212+08	LT	--	--	25	--
	212+21	LT/RT	--	50	--	--
	212+21	LT	1	--	--	--
	212+45	LT	--	--	--	48
	TOTALS		1	50	25	48

EXCAVATON HAULING AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL

CATEGORY	LOCATION	205.0501.S TON
0010	W. LINCOLN AVENUE	250
	TOTAL	250

EARTHWORK SUMMARY

CATEGORY	DIVISION	LOCATION	STATION TO STATION	(C) CUT EXCAVATION CY	(E) EBS EXCAVATION CY	(1) 205.0100 EXCAVATION COMMON CY	(P) EXCAVATED PETROLEUM CONTAMINATED MATERIAL CY	(S) SALVAGED PAVEMENT MATERIAL CY	(4) AVAILBLE MATERIAL CY	(5) 80% REDUCED EBS IN FILL CY	(6) 130% EXPANDED EBS BACKFILL CY	UNEXPANDED FILL CY	(7) 120% EXPANDED FILL CY	(8) MASS ORDINATE EXCESS (SHORTAGE) CY
0010	1	W. LINCOLN AVENUE	201+21 - 251+20	820	--	820	--	--	820	--	--	--	--	820
		S. COMMERCE DRIVE	43+50 - 45+00	5	--	5	--	--	5	--	--	--	--	5
	2	W. LINCOLN AVENUE	201+21 - 251+20	13,087	48	13,135	--	--	13,087	38	62	6,639	7,921	5,104
		S. 170TH STREET	18+50 - 21+50	318	27	345	--	--	318	22	35	--	(26)	309
		S. COMMERCE DRIVE	43+50 - 45+00	251	272	523	--	--	251	217	353	5	(254)	152
		S. 162ND STREET	57+73 - 61+95	749	30	779	--	--	749	24	39	--	(29)	739
	3	W. LINCOLN AVENUE	201+21 - 251+20	11,668	167	11,835	425	--	11,668	133	217	6,846	8,055	3,396
		FRONTAGE ROAD	401+23 - 403+00	2,320	25	2,345	--	--	2,320	20	32	18	(2)	2,289
		S. 170TH STREET	18+50 - 21+50	276	37	313	--	--	276	30	48	--	(36)	263
		S. 162ND STREET	57+73 - 61+95	759	26	785	425	--	759	21	34	--	(25)	750
		UNDISTRIBUTED STORM SEWER EXCAVATION		9,615	--	9,615	--	--	9,615	--	--	--	--	9,615
		TOTALS				40,500								23,442

NOTES

1) EXCAVATION COMMON IS THE SUM OF THE CUT (C) AND EBS EXCAVATION (E).
2) SALVAGED PAVEMENT MATERIAL IS INCLUDED IN CUT.
3) EBS EXCAVATION (E) TO BE BACKFILLED WITH CUT.
4) AVAILABLE MATERIAL = CUT (C) - (S).
5) REDUCED EBS IN FILL. THIS MATERIAL USEABLE IN FILLS OUTSIDE THE 1:1 SLOPE. REDUCTION FACTOR 0.80.
6) EXPANDED EBS BACKFILL. THIS IS TO BE FILLED WITH AVAILABLE MATERIAL. EBS EXPANSION FACTOR 1.30.
7) EXPANDED FILL = {UNEXPANDED FILL - (5) } * 120% FILL FACTOR.
8) MASS ORDINATE = AVAILABLE MATERIAL (4) - EXPANDED FILL (7) - EXPANDED EBS BACKFILL (6).

(P) EXCAVATED PETROLEUM CONTAMINATED MATERIAL TO BE PAID UNDER THE ITEM 205.0501.S EXCAVATION LOADING HAULING AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL, BY THE TON.

BASE AGGREGATE DENSE ITEMS

CATEGORY	LOCATION	OFFSET	* 305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
0010	W. LINCOLN AVE			
	201+45 - 207+84	LT/RT	--	3,194
	207+84 - 212+94	LT/RT	--	3,583
	213+04 - 219+17	LT/RT	--	3,005
	219+17 - 233+40	LT/RT	--	6,961
	233+63 - 237+42	LT/RT	--	1,975
	237+42 - 251+20	LT/RT	--	7,012

CATEGORY	LOCATION	OFFSET	* 305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
0010	FRONTAGE RD			
	400+23 - 403+00	LT/RT	53	1,070
	401+50 - 402+80	LT/RT	80	--
	S. 170TH STREET			
	18+49 - 19+38	LT/RT	40	369
	20+62 - 21+50	LT/RT	39	362
	S. COMMERCE DR			
	43+50 - 44+38	LT/RT	40	359
	TEMPORARY WIDENING	LT/RT	--	223

CATEGORY	LOCATION	OFFSET	* 305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
0010	S. 162ND ST			
	57+73 - 59+38	LT/RT	81	695
	60+62 - 61+95	LT/RT	64	630
	UNDISTRIBUTED		43	1,560
	TOTALS		440	31,000

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	MISCELLANEOUS QUANTITIES	SHEET NO: 111	E

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CONCRETE ITEMS

CATEGORY	LOCATION	OFFSET	416.0170 CONCRETE DRIVEWAY 7-INCH SY	416.0270 CONCRETE DRIVEWAY HES 7-INCH SY	416.1010 CONCRETE SURFACE DRAINS CY	SPV.0035.02 CONCRETE SURFACE DRAINS SPECIAL CY	601.0407 CONCRETE CURB & GUTTER 18-INCH TYPE D LF	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	645.0130 GEOTEXTILE FABRIC TYPE R SY
0010	W. LINCOLN AVE								
	201+45 - 207+84	LT/RT	179	182	--	13	--	1,191	38
	207+84 - 213+94	LT/RT	363	--	--	9	--	1,020	80
	213+04 - 219+17	LT/RT	123	58	--	8	--	1,219	23
	219+18 - 233+40	LT/RT	326	116	5	17	60	2,864	127
	233+63 - 237+42	LT/RT	130	54	--	5	--	766	19
	237+42 - 251+11	LT/RT	468	110	6	22	44	2,752	73
	FRONTAGE RD								
	400+23 - 403+00	LT/RT	72	--	2	--	--	288	--
	S. 170TH STREET								
	18+49 - 19+38	LT/RT	--	--	5	--	--	--	120
	20+62 - 21+50	LT/RT	--	--	5	--	--	--	120
	S. COMMERCE DR								
	43+50 - 44+38	LT/RT	--	--	5	--	--	--	120
	S. 162ND ST								
	57+70 - 59+38	LT/RT	120	--	5	--	--	--	120
	60+62 - 61+95	LT/RT	198	--	5	--	--	--	120
TOTALS			1,980	520	38	75	104	10,100	960

ASPHALT PAVEMENT ITEMS

CATEGORY	LOCATION	OFFSET	460.1103 HMA PAVEMENT TYPE E-3 TON	455.0605 TACK COAT GAL	455.0105 ASPHALTIC MATERIAL PG58-28 TON	460.2000 INCENTIVE DENSITY HMA PAVEMENT DOL	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON
0010	W. LINCOLN AVE							
	201+07 201+80	LT/RT	27	7	2	17	--	--
	201+45 - 207+84	LT/RT	1,027	183	62	657	34	58
	207+84 - 212+94	LT/RT	897	147	54	574	16	51
	213+04 - 219+14	LT/RT	998	196	60	639	52	78
	219+17 - 233+40	LT/RT	2,220	466	133	1,421	147	206
	233+63 - 237+42	LT/RT	670	104	40	429	7	36
	237+42 - 251+20	LT/RT	2,304	445	139	1,475	113	121
	FRONTAGE RD							
	400+23 - 403+00	LT/RT	294	43	18	188	1	--
	S. 170TH STREET							
	18+49 - 19+38	LT/RT	66	10	4	42	--	--
	20+62 - 21+50	LT/RT	60	9	4	39	--	--
	S. COMMERCE DR							
	43+50 - 44+38	LT/RT	59	9	4	38	--	51
	S. 162ND ST							
	57+70 - 59+38	LT/RT	131	21	8	84	2	--
	60+62 - 61+95	LT/RT	107	31	6	68	16	--
TOTALS			8,860	1,670	533	5,670	390	600

FINISHING ROADWAY

CATEGORY	LOCATION	213.0100 EACH
0010	W. LINCOLN AVE	1
	TOTAL	1

CONCRETE COLLARS FOR PIPE

CATEGORY			520.8000 EACH
0010	W. LINCOLN AVE		
	233+29	40.5 LT	1
	246+24	40.0 LT	1
	UNDISTRIBUTED		1
	TOTAL		3

PIPE GRATES

CATEGORY	PIPE NO.	STATION	OFFSET		611.9800 S EACH
0010	W. LINCOLN AVE				
	4.0	201+24	29'	RT	1
	16.1	233+16	29'	LT	1
	17.1	233+88	31'	RT	1
	TOTAL				3

CULVERT PIPE ITEMS

CATEGORY	ROADWAY	INLET STA	INLET OFFSET		DISCHARGE STA	DISCHARGE OFFSET	SLOPE	INVERT ELEVATIONS INLET	INVERT ELEVATIONS DISCHARGE	522.0312 CULVERT PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	522.0315 CULVERT PIPE REINFORCED CONCRETE CLASS IV 15-INCH LF	522.0318 CULVERT PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF	* 522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH EACH	* 522.1015 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH EACH	* 522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	* 612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH LF	* 612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH LF	* 612.0806 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH EACH	612.0816 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 12-INCH EACH	* (4) SPV.0060.19 ATRIUM ASSEMBLY 12-INCH EACH	* (4) SPV.0060.20 ATRIUM ASSEMBLY 24-INCH EACH	REMARKS
0010	W. LINCOLN AVE																					
		203+11.9	39.5 LT	-	203+52.5	39.5 LT	1.00%	857.52	857.11	--	--	--	--	--	--	37	--	1	--	1	--	ATRIUM RIM = 860.00 4-6" RISERS
		209+24.8	43.3 LT	-	210+13.8	39.6 LT	0.50%	845.68	845.20	--	--	--	--	--	--	94	--	1	--	1	--	ATRIUM RIM = 846.50, 0-12" RISERS
		210+37.5	43.0 RT	-	211+13.8	45.2 RT	1.00%	845.14	844.35	--	--	--	--	--	--	4	76	--	1	1	1	ATRIUM RIM = 847.00, 2-12" , 0-24" RISERS
		212+27.0	35.0 RT	-	212+69.3	35.0 RT	1.60%	844.14	843.50	--	--	--	--	--	--	4	36	--	1	1	1	ATRIUM RIM = 846.00, 2-12" , 0-24" RISERS
		214+35.7	46.9 LT	-	214+97.3	46.9 LT	1.00%	843.72	843.10	--		--	--		--	59	--	1	--	1	--	ATRIUM RIM = 844.54, 0-6" RISERS
		217+49.0	58.0 RT	-	217+02.0	55.0 RT	0.50%	844.34	844.10	36	--	--	2	--	--	--	--	--	--	--	--	
		225+39.6	57.0 RT	-	226+11.6	59.6 RT	2.00%	843.68	842.24	--		--	--		--	69	--	1	--	1	--	ATRIUM RIM = 844.50, 0-12" , RISERS
		236+18.0	55.2 RT	-	236+46.0	55.2 RT	1.00%	843.48	843.20	--	16	--	--	2	--	--	--	--	--	--	--	
		242+03.3	58.7 LT	-	241+37.3	59.6 LT	0.76%	847.00	846.50	54	--	--	2	--	--	--	--	--	--	--	--	
		241+92.4	45.4 RT	-	242+47.5	58.6 RT	1.00%	847.02	846.45	--	--	--	--	--	--	53	--	1	--	1	--	ATRIUM RIM = 849.50, 4-12" RISERS
		243+16.9	55.0 RT	-	242+71.4	54.7 RT	2.60%	848.02	846.84	--	--	--	--	--	--	42	--	1	--	1	--	ATRIUM RIM = 850.50, 4-12" RISERS
		243+30.0	45.3 LT	-	242+41.7	48.5 LT	1.70%	847.52	846.00	--	--	--	--	--	--	86	--	1	--	1	--	ATRIUM RIM = 850.00, 4-12" RISERS
0010	S 162ND ST																					
		57+73.0	29.5 RT	-	58+25.0	28.9 RT	0.50%	845.06	844.72	--	--	40	--	--	2	--	--	--	--	--	--	
		61+31.9	26.8 RT	-	60+79.7	26.8 RT	1.17%	844.66	844.17	40	--	--	2	--	--	--	--	--	--	--	--	
		61+91.3	27.7 LT	-	61+47.0	27.7 LT	0.96%	845.16	844.74	32	--	--	2	--	--	--	--	--	--	--	--	
	TOTALS									162	16	40	8	2	2	447	112	7	2	9	2	

NOTES

(1) STATION AND OFFSET IS TO CENTER OF CULVERT OR ATRIUM GRATE.

(2) LENGTHS OF PIPE SHOWN DO NOT INCLUDE APRON ENDWALLS.

(3) INVERT ELEVATIONS SHOWN ARE TO THE OUTSIDE EDGE OF THE APRON ENDWALLS.

(4) ATRIUM ASSEMBLIES ARE ON INVERT END OF CULVERTS.

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TEMPORARY CULVERT PIPE ITEMS

CATEGORY	ROADWAY	INLET STA	INLET OFFSET		DISCHARGE STA	DISCHARGE OFFSET	SLOPE	INVERT ELEVATIONS INLET	INVERT ELEVATIONS DISCHARGE	520.4018 CULVERT PIPE TEMPORARY 18-INCH LF	520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH EACH
0010	S. COMMERCE DR										
		44+65.0	37.5 RT	-	43+12.0	27.0 RT	0.48%	842.5	843.20	145	1
		44+38.0	30.7 LT	-	42+35.0	27.0 LT	0.60%	842.60	843.20	100	1
	TOTALS									245	2

NOTES

(1) STATION AND OFFSET IS TO CENTER OF CULVERT.

(2) LENGTHS OF PIPE SHOWN DO NOT INCLUDE APRON ENDWALLS.

(3) INVERT ELEVATIONS SHOWN ARE TO THE OUTSIDE EDGE OF THE APRON ENDWALLS.

CONCRETE BARRIER TEMPORARY PRECAST ITEMS

CATEGORY	STAGE	LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED EACH	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED EACH	614.0905 CRASH CUSHIONS TEMPORARY EACH
0010		W. LINCOLN AVE			
	2	215+05 - 218+80	375.0	375.0	1
		220+09 - 221+47	137.5	137.5	1
		223+50 - 225+50	200.0	200.0	1
		226+13 - 227+75	162.5	162.5	1
		228+38 - 230+00	162.5	162.5	1
	3	215+00 - 223+25	--	825.0	--
	TOTALS		1,037.5	1,862.5	5

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MOBILIZATION

CATEGORY	LOCATION	619.1000 EACH
0010	W. LINCOLN AVE	1
	TOTAL	1

WATER

CATEGORY	LOCATION	624.0100 WATER MGAL
0010	W. LINCOLN AVE	82
	FRONTAGE ROAD	5
	S. 170TH ST	4
	S. COMMERSE DR	2
	S. 162ND ST	7
	TOTAL	100

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STORM SEWER STRUCTURE AND ENDWALL ITEMS

CATEGORY	STRUCT NO.	LOCATION	STRUCT. OFFSET	RIM ELEV	INVERT ELEV	STRUCT DEPTH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	611.2044 MANHOLES 4X4-FT EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3225 INLETS 2x2.5-FT EACH	SPV.0060.19 ATRIUM ASSEMBLY 12-INCH EACH	SPV.0060.20 ATRIUM ASSEMBLY 24-INCH EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0555 MANHOLE COVERS TYPE Q EACH	611.0660 INLET COVERS TYPE WM EACH	* 522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH EACH	* 522.1015 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH EACH	* 522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	523.0543 APRON ENDWALLS FOR CPRCHE 43x68-INCH EACH	NOTES
0010	W. LINCOLN AVE																						
	1.0	211+80.0	21.3 LT	847.18	844.09	1.30	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	1.2	211+70.4	29.0 LT	846.75	844.22	2.53	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1-24" RISER
	1.2A	211+66.4	29.1 LT	846.75	844.27	2.48	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	4-12" RISERS
	2.0	212+25.0	21.3 LT	846.86	843.64	1.43	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	2.1	212+71.0	34.7 LT	--	843.15	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	JOINT TIES
	3.0	401+11.0	14.0 RT	861.50	858.90	0.81	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	4.0	201+23.8	28.7 RT	--	861.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	JOINT TIES
	5.0	201+95.0	13.0 RT	862.48	855.00	6.22	--	1	--	--	--	--	--	--	--	1	--	--	--	--	--	--	
	5.2	201+94.2	36.2 RT	861.50	858.97	2.53	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1-24" RISER
	5.2A	201+90.2	36.2 RT	861.50	859.02	2.48	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	4-12" RISERS
	6.0	204+00.0	11.5 RT	857.76	850.00	6.50	--	1	--	--	--	--	--	--	--	1	--	--	--	--	--	--	(1)
	6.2	204+00.0	21.3 LT	857.50	854.53	1.68	--	--	--	--	1	--	--	--	--	--	1	--	--	--	--	--	
	6.3	204+10.0	21.3 LT	857.26	854.60	1.37	--	--	--	--	1	--	--	--	--	--	1	--	--	--	--	--	
	6.4	204+24.5	33.0 LT	--	855.00	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	JOINT TIES
	6.5	204+00.0	26.5 LT	857.50	855.02	2.48	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	4-12" RISERS
	6.6	204+00.0	21.3 RT	857.50	853.77	1.94	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	6.7	204+10.0	21.3 RT	857.27	854.07	1.41	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	(1)
	6.8	203+97.7	39.1 RT	856.00	853.47	2.53	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1-24" RISER
	6.8A	203+93.7	39.0 RT	856.00	853.52	2.48	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	4-12" RISERS

NOTE

(1) USE FLAT TOP SLABS. ROTATE OPENING TO THE SOUTH.

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STORM SEWER STRUCTURE AND ENDWALL ITEMS CONTINUED

CATEGORY	STRUCT NO.	LOCATION	STRUCT. OFFSET	RIM ELEV	INVERT ELEV	STRUCT DEPTH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	611.2044 MANHOLES 4X4-FT EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3225 INLETS 2x2.5-FT EACH	* SPV.0060.19 ATRIUM ASSEMBLY 12-INCH EACH	* SPV.0060.20 ATRIUM ASSEMBLY 24-INCH EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0555 MANHOLE COVERS TYPE Q EACH	611.0660 INLET COVERS TYPE WM EACH	* 522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH EACH	* 522.1015 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH EACH	* 522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	523.0543 APRON ENDWALLS FOR CPRCHE 43x68-INCH EACH	NOTES
0010																							
	7.0	207+54.0	11.5 RT	850.64	843.66	5.72	--	1	--	--	--	--	--	--	--	1	--	--	--	--	--	--	(1)
	7.2	207+54.0	36.5 LT	850.70	846.64	3.32	1	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	
	7.3	20+59.2	28.5 LT	--	847.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	JOINT TIES
	7.4	207+12.9	33.4 LT	851.50	848.97	2.53	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1-24" RISER
	7.4A	207+12.7	32.9 LT	851.50	849.02	2.48	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	4-12" RISERS
	7.5	207+20.0	21.3 LT	850.77	847.01	1.97	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	7.6	207+10.0	21.3 LT	850.90	847.16	1.95	--	--	--	--	--	1	--	--	--	--	1	--	--	1	--	--	
	7.7	207+20.0	21.3 RT	850.77	846.65	2.33	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	7.8	207+10.0	21.3 RT	850.90	847.10	2.01	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	7.9	207+54.0	58.0 RT	849.75	846.80	2.21	1	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	
	7.10	19+26.0	29.5 LT	--	847.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	JOINT TIES
	7.11	207+23.4	42.9 RT	851.50	848.97	2.53	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1-24" RISER
	7.11A	207+23.4	38.9 RT	851.50	849.02	2.48	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	4-12" RISERS
	8.0	208+15.0	11.5 RT	850.07	843.35	5.46	--	1	--	--	--	--	--	--	--	1	--	--	--	--	--	--	(1)
	8.2	20+74.3	30.0 RT	--	846.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	JOINT TIES
	8.3	19+41.0	31.5 RT	--	846.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	JOINT TIES
	9.0	212+33.0	11.5 RT	847.09	841.26	4.57	--	--	1	--	--	--	--	--	--	1	--	--	--	--	--	--	(1)
	9.2	212+33.0	21.3 RT	846.87	841.31	4.27	--	1	--	--	--	--	--	--	--	--	1	--	--	--	--	--	ECCENT. FLAT TOP
	9.4	212+25.0	21.3 RT	846.86	843.50	1.57	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	10.0	213+75.0	11.5 RT	846.62	840.55	4.81	--	--	1	--	--	--	--	--	--	1	--	--	--	--	--	--	(1)
	10.2	213+75.0	21.3 LT	846.37	841.67	2.91	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	10.3	213+50.0	21.3 LT	846.54	842.12	2.63	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	10.4	213+36.0	34.7 RT	--	842.52	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	JOINT TIES
	10.5	213+75.0	21.3 RT	846.37	840.60	4.48	--	--	--	1	--	--	--	--	--	--	1	--	--	--	--	--	ECCENT. FLAT TOP
	10.6	213+55.0	21.3 RT	846.51	840.70	4.52	--	1	--	--	--	--	--	--	--	--	1	--	--	--	--	--	
	10.7	213+46.5	32.3 RT	--	842.30	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	JOINT TIES
	11.0	215+50.0	11.5 RT	847.65	840.66	5.73	--	--	1	--	--	--	--	--	--	1	--	--	--	--	--	--	(1)
	11.2	215+50.0	21.3 LT	847.39	842.80	2.80	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	11.3	215+48.0	43.0 LT	844.80	842.95	1.85	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	0-24" RISERS
	11.3A	215+44.0	43.0 LT	844.80	843.15	1.65	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	2-12" RISERS
	11.4	215+50.0	21.3 RT	847.39	842.80	2.80	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	11.5	215+48.0	37.8 RT	845.75	843.22	2.53	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1-24" RISER
	11.5A	215+44.0	37.8 RT	845.75	843.27	2.48	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	4-12" RISERS

NOTE

(1) USE FLAT TOP SLABS. ROTATE OPENING TO THE SOUTH.

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STORM SEWER STRUCTURE AND ENDWALL ITEMS CONTINUED

CATEGORY	STRUCT NO.	LOCATION	STRUCT. OFFSET	RIM ELEV	INVERT ELEV	STRUCT DEPTH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	611.2044 MANHOLES 4X4-FT EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3225 INLETS 2x2.5-FT EACH	* SPV.0060.19 ATRIUM ASSEMBLY 12-INCH EACH	* SPV.0060.20 ATRIUM ASSEMBLY 24-INCH EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0555 MANHOLE COVERS TYPE Q EACH	611.0660 INLET COVERS TYPE WM EACH	* 522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH EACH	* 522.1015 15-INCH EACH	* 522.1018 18-INCH EACH	522.1024 24-INCH EACH	523.0543 APRON ENDWALLS FOR CPRCHE 43x68-INCH EACH	NOTES
0010	12.0	219+60.0	11.5 RT	846.94	840.09	5.59	--	--	1	--	--	--	--	--	--	1	--	--	--	--	--	--	(1)
	12.2	219+60.0	34.6 LT	846.37	840.60	5.03	1	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	
	12.3	219+56.4	43.6 LT	843.00	841.14	1.86	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	0-24" RISERS
	12.3A	219+52.4	43.7 LT	843.00	841.35	1.65	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	2-12" RISERS
	12.4	219+60.0	35.0 RT	846.90	840.90	5.18	1	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	
	12.5	219+60.0	35.0 RT	847.53	842.05	4.66	1	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	
	12.6	44+38.0	31.1 LT	--	842.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	JOINT TIES
	12.7	219+54.2	37.6 LT	845.75	843.22	2.53	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1-24" RISER
	12.7A	219+50.2	37.7 LT	845.75	843.27	2.48	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	4-12" RISERS
	12.8	44+38.0	30.7 RT	--	842.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	JOINT TIES
	13.0	221+50.0	11.5 RT	846.01	840.19	4.56	--	--	1	--	--	--	--	--	--	1	--	--	--	--	--	--	(1)
	13.2	221+50.0	21.3 LT	845.75	842.36	1.60	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	13.3	221+60.0	21.3 LT	845.76	842.76	1.21	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	13.4	221+50.0	21.3 RT	845.75	842.36	1.60	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	13.5	221+60.0	21.3 RT	845.76	842.76	1.21	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	13.6	221+48.0	33.0 LT	845.50	842.97	2.53	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1-24" RISER
	13.6A	221+44.0	33.1 RT	845.50	843.02	2.48	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	4-12" RISERS
	14.0	223+30.0	11.5 RT	846.83	839.79	5.78	--	--	1	--	--	--	--	--	--	1	--	--	--	--	--	--	(1)
	14.2	223+29.3	35.5 LT	846.10	842.47	2.81	1	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	
	14.3	223+29.0	40.5 LT	--	843.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	CONC. COLLAR, (2), (3)
	14.4	223+30.5	35.0 RT	846.20	841.62	3.76	1	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	
	14.5	222+70.4	35.0 RT	846.30	841.92	3.56	1	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	
	14.6	222+70.4	49.0 RT	--	841.99	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	JOINT TIES
	15.0	226+40.0	11.5 RT	848.15	839.54	7.35	--	--	1	--	--	--	--	--	--	1	--	--	--	--	--	--	(1)
	15.2	226+38.6	56.8 LT	845.00	841.19	3.07	1	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	
	15.3	226+27.5	54.4 LT	844.00	841.47	2.53	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1-24" RISER
	15.3A	226+27.5	50.4 LT	844.00	841.52	2.48	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	4-12" RISERS
	15.4	226+38.1	46.7 RT	843.75	841.22	2.53	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1-24" RISER
	15.4A	226+34.1	46.7 RT	843.75	841.27	2.48	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	4-12" RISERS
	15.0A	229+25.0	11.5 RT	846.43	839.32	5.85	--	--	1	--	--	--	--	--	--	1	--	--	--	--	--	--	
	15.0B	229+25.0	42.2 RT	844.00	841.52	2.48	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	4-12" RISERS
	16.0	232+00.0	11.5 RT	844.57	839.32	3.99	--	--	1	--	--	--	--	--	--	1	--	--	--	--	--	--	(1)
	16.1	233+15.5	28.5 LT	--	839.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	JOINT TIES
	16.2	232+00.0	21.3 LT	844.31	841.15	1.37	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	16.3	232+50.0	21.3 LT	844.2	841.65	0.76	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	16.4	232+07.0	20.7 RT	844.31	841.10	1.42	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	16.5	232+50.0	19.1 RT	844.26	841.77	0.70	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	

NOTES

(1) USE FLAT TOP SLABS. ROTATE OPENING TO THE SOUTH.
(2) VERIFY IN FIELD
(3) CONSTRUCT OVER EXISTING 18" CPRC

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STORM SEWER STRUCTURE AND ENDWALL ITEMS CONTINUED

CATEGORY	STRUCT NO.	LOCATION	STRUCT. OFFSET	RIM ELEV	INVERT ELEV	STRUCT DEPTH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	611.2044 MANHOLES 4X4-FT EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3225 INLETS 2x2.5-FT EACH	* SPV.0060.19 ATRIUM ASSEMBLY 12-INCH EACH	* SPV.0060.20 ATRIUM ASSEMBLY 24-INCH EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0555 MANHOLE COVERS TYPE Q EACH	611.0660 INLET COVERS TYPE WM EACH	* 522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH EACH	* 522.1015 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH EACH	* 522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	523.0543 APRON ENDWALLS FOR CPRCHE 43x68-INCH EACH	NOTES
0010	17.0	234+60.0	11.5 RT	845.37	840.00	4.11	--	1	--	--	--	--	--	--	--	1	--	--	--	--	--	--	(1)
	17.1	233+87.5	30.8 RT	--	839.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	JOINT TIES
	17.2	234+69.0	19.9 LT	845.21	842.00	1.42	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	17.3	234+71.8	29.4 LT	844.75	842.22	2.53	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1-24" RISER
	17.3A	234+67.8	29.8 LT	844.75	842.27	2.48	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	4-12" RISERS
	17.4	234+60.0	21.3 RT	845.11	842.11	1.21	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	18.0	237+13.0	11.5 RT	847.04	842.00	3.78	--	1	--	--	--	--	--	--	--	1	--	--	--	--	--	--	(1)
	18.2	237+13.0	40.0 LT	847.32	843.40	3.10	1	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	
	18.3	60+58.5	31.7 LT	--	844.06	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	JOINT TIES
	18.4	237+04.7	40.1 LT	845.80	843.94	1.86	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	0-24" RISERS
	18.5	59+15.8	29.9 LT	--	843.85	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	JOINT TIES
	18.6	236+83.9	38.3 RT	845.25	842.72	2.53	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1-24' RISERS
	19.0	237+75.0	11.5 RT	847.68	842.94	3.48	--	1	--	--	--	--	--	--	--	1	--	--	--	--	--	--	(1)
	19.2	237+75.0	40.0 LT	847.25	843.55	2.88	1	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	
	19.3	60+78.4	33.1 RT	--	844.04	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	JOINT TIES
	19.4	237+92.5	44.6 LT	847.50	844.97	2.53	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1 -24" RISER
	19.4A	237+95.8	42.2 LT	847.50	845.02	2.48	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	4-12" RISERS
	19.5	238+03.0	21.3 LT	847.61	844.60	1.22	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	19.6	238+03.0	21.3 RT	847.61	844.60	1.22	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	19.7	237+71.0	50.0 RT	847.07	843.23	3.02	1	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	
	19.8	59+38.2	27.8 RT	--	843.98	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	JOINT TIES
	19.9	237+91.6	55.0 RT	847.50	845.02	2.48	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	4-12" RISERS
	20.0	242+35.0	11.5 RT	850.79	845.44	4.09	--	1	--	--	--	--	--	--	--	1	--	--	--	--	--	--	(1)
	20.2	242+29.0	21.3 LT	850.49	846.80	1.90	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	20.3	242+40.0	21.3 RT	850.57	846.44	2.34	--	--	--	--	--	1	--	--	--	--	1	--	--	1	--	--	
	20.4	242+46.9	39.9 RT	848.50	846.64	1.86	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	0-24" RISERS
	21.0	246+25.0	11.5 RT	853.62	849.00	3.36	--	1	--	--	--	--	--	--	--	1	--	--	--	--	--	--	(1)
	21.2	246+23.6	40.0 LT	853.80	850.00	2.98	1	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	(3)
	21.3	246+25.0	36.0 LT	853.00	850.52	2.48	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	4-12" RISERS
	21.4	246+23.0	35.7 RT	852.25	849.72	2.53	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	1 -24" RISER
	21.4A	246+19.0	35.6 RT	852.25	849.77	2.48	--	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	4-12" RISERS
	22.0	247+50.0	11.5 RT	855.50	851.15	3.53	1	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	(1)
	22.2	247+50.0	21.3 LT	855.24	852.17	1.28	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	22.3	247+50.0	31.8 LT	--	854.10	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	JOINT TIES
	22.4	247+50.0	25.3 RT	855.12	852.30	1.03	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	
	23.0	250+00.0	11.5 RT	859.96	856.54	2.60	1	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	(1)
	23.2	250+28.2	31.7 LT	859.00	857.35	0.80	--	--	--	--	--	--	1	--	--	--	1	--	--	--	--	--	2-12" RISERS
PROJECT TOTALS							15	11	9	1	2	30	20	18	4	29	36	4	7	8	2	1	

NOTES

(1) USE FLAT TOP SLABS. ROTATE OPENING TO THE SOUTH.
(2) USE FLAT TOP SLABS. ROTATE OPENING TO THE NORTH.
(3) VERIFY IN FIELD

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STORM SEWER PIPE ITEMS

CATEGORY	PIPE NO.	SLOPE	INVERT ELEVATION INLET	INVERT ELEVATION DISCHARGE	STRUCTURE FROM	STRUCTURE TO	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	608.0415 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH LF	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF	608.0424 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	608.0430 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF	610.0143 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 43x68-INCH LF	SPV.0090.01 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 43x68-INCH LF	* 612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH LF	* 612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH LF	SPV.0090.02 STEEL CASING W/ DUCTILE IRON 36-INCH CARRIER LF
0010	W. LINCOLN AVE																			
	1.1	1.00%	844.09	843.64	1.0	2.0	--	--	--	45	--	--	--	--	--	--	--	--	--	
	1.2	1.00%	844.22	844.09	1.2	1.0	--	--	--	--	--	--	--	--	--	--	--	13	--	
	1.2A	1.25%	844.27	844.22	1.2A	1.2	--	--	--	--	--	--	--	--	--	--	4	--	--	
	2.1	1.00%	843.64	843.15	2.0	2.1	--	--	--	--	43	--	--	--	--	--	--	--	--	
	3.1	0.53%	858.90	858.20	3.0	5.0	--	--	--	132	--	--	--	--	--	--	--	--	--	
	4.1	4.11%	861.20	858.20	4.0	5.0	--	--	--	--	--	--	67	--	--	--	--	--	--	
	5.1	2.44%	855.00	850.00	5.0	6.0	--	205	--	--	--	--	--	--	--	--	--	--	--	
	5.2	1.00%	858.97	858.71	5.2	5.0	--	--	--	--	--	--	--	--	--	--	--	26	--	
	5.2A	1.25%	859.02	858.97	5.2A	5.2	--	--	--	--	--	--	--	--	--	--	4	--	--	
	6.1	1.69%	850.00	844.00	6.0	7.0	--	354	--	--	--	--	--	--	--	--	--	--	--	
	6.2	2.30%	854.53	853.77	6.2	6.0	--	--	--	--	33	--	--	--	--	--	--	--	--	
	6.3	0.70%	854.60	854.53	6.3	6.2	--	--	--	--	10	--	--	--	--	--	--	--	--	
	6.4	2.11%	855.00	854.60	6.4	6.3	--	--	--	--	13	--	--	--	--	--	--	--	--	
	6.5	2.00%	855.02	854.92	6.5	6.2	--	--	--	--	--	--	--	--	--	--	5	--	--	
	6.6	2.00%	853.77	853.57	6.6	6.0	--	--	--	10	--	--	--	--	--	--	--	--	--	
	6.7	2.00%	854.07	853.87	6.7	6.6	--	--	--	10	--	--	--	--	--	--	--	--	--	
	6.8	2.00%	854.47	854.07	6.8	6.6	--	--	--	--	--	--	--	--	--	--	--	20	--	
	6.8A	1.25%	854.52	854.47	6.8A	6.8	--	--	--	--	--	--	--	--	--	--	4	--	--	
	7.1	0.50%	843.66	843.35	7.0	8.0	--	--	61	--	--	--	--	--	--	--	--	--	--	
	7.2	1.52%	846.64	845.91	7.2	7.0	--	--	--	--	--	48	--	--	--	--	--	--	--	
	7.3	1.57%	847.00	846.64	7.3	7.2	--	--	--	--	--	17	--	--	--	--	--	--	--	
	7.4	1.00%	848.97	848.56	7.4	7.2	--	--	--	--	--	--	--	--	--	--	--	41	--	
	7.4A	1.25%	849.02	848.97	7.4A	7.4	--	--	--	--	--	--	--	--	--	--	4	--	--	
	7.5	1.00%	847.01	846.64	7.5	7.2	--	--	--	37	--	--	--	--	--	--	--	--	--	
	7.6	1.50%	847.16	847.01	7.6	7.5	--	--	--	10	--	--	--	--	--	--	--	--	--	
	7.7	1.49%	846.65	846.13	7.7	7.0	--	--	--	35	--	--	--	--	--	--	--	--	--	
	7.8	2.00%	847.10	846.90	7.8	7.7	--	--	--	10	--	--	--	--	--	--	--	--	--	
	7.9	1.28%	846.80	846.20	7.9	7.0	--	--	--	--	--	47	--	--	--	--	--	--	--	
	7.10	1.88%	847.10	846.80	7.10	7.9	--	--	--	--	--	10	--	--	--	--	--	--	--	
	7.11	1.00%	848.97	848.61	7.11	7.9	--	--	--	--	--	--	--	--	--	--	--	36	--	
	7.11A	1.25%	849.02	848.97	7.11A	7.11	--	--	--	--	--	--	--	--	--	--	4	--	--	
	8.1	0.50%	843.35	841.26	8.0	9.0	--	--	418	--	--	--	--	--	--	--	--	--	--	
	8.2	1.91%	846.94	845.30	8.2	8.0	--	--	--	--	--	80	--	--	--	--	--	--	--	
	8.3	2.54%	846.58	845.36	8.3	8.2	--	--	--	--	--	42	--	--	--	--	--	--	--	
	9.1	0.50%	841.26	840.55	9.0	10.0	--	--	--	--	--	--	--	142	--	--	--	--	45	
	9.2	0.50%	841.36	841.31	9.0	9.2	--	--	--	--	--	--	--	10	--	--	--	--	--	
	9.3	0.50%	841.31	840.70	9.2	10.6	--	--	--	--	--	--	--	122	--	--	--	--	45	
	9.4	2.00%	843.50	843.34	9.4	9.2	--	--	--	8	--	--	--	--	--	--	--	--	--	
	10.1	0.08%	840.55	840.41	10.0	11.0	--	--	--	--	--	--	--	--	--	175	--	--	--	
	10.2	1.00%	841.67	841.34	10.2	10.0	--	--	--	--	--	33	--	--	--	--	--	--	--	
	10.3	1.00%	842.12	841.87	10.3	10.2	--	--	--	--	25	--	--	--	--	--	--	--	--	
	10.4	1.00%	842.52	842.32	10.4	10.3	--	--	--	--	14	--	--	--	--	--	--	--	--	
	10.5	0.50%	840.60	840.55	10.5	10.0	--	--	--	--	--	--	--	10	--	--	--	--	--	
	10.6	0.50%	840.70	840.60	10.6	10.5	--	--	--	--	--	--	--	20	--	--	--	--	--	
	10.7	1.00%	842.30	842.16	10.7	10.6	--	--	--	8	--	--	--	--	--	--	--	--	--	

NOTE

(1) LENGTHS OF PIPE SHOWN DO NOT INCLUDE APRON ENDWALLS

STORM SEWER PIPE ITEMS CONTINUED

CATEGORY	PIPE NO.	SLOPE	INVERT ELEVATION INLET	INVERT ELEVATION DISCHARGE	STRUCTURE FROM	STRUCTURE TO	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	608.0415 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH LF	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF	608.0424 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	608.0430 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF	610.0143 SPV.0090.01 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 43x68-INCH LF	610.0143 SPV.0090.01 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 43x68-INCH LF	* 612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH LF	* 612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH LF	SPV.0090.02 STEEL CASING W/ DUCTILE IRON 36-INCH CARRIER LF
0010	W. LINCOLN AVE																			
	11.1	0.08%	840.41	840.09	11.0	12.0	--	--	--	--	--	--	--	--	--	410	--	--	--
	11.2	1.00%	842.80	842.47	11.2	11.0	--	--	--	33	--	--	--	--	--	--	--	--	--
	11.3	0.60%	842.95	842.80	11.3	11.2	--	--	--	25	--	--	--	--	--	--	--	--	--
	11.3A	5.00%	843.15	842.95	11.3A	11.3	--	--	--	--	--	--	--	--	--	--	4	--	--
	11.4	2.00%	842.80	842.60	11.4	11.0	--	--	--	10	--	--	--	--	--	--	--	--	--
	11.5	1.00%	843.22	843.03	11.5	11.4	--	--	--	--	--	--	--	--	--	--	--	19	--
	11.5A	1.25%	843.27	843.22	11.5A	11.5	--	--	--	--	--	--	--	--	--	--	4	--	--
	12.1	0.08%	840.09	839.93	12.0	13.0	--	--	--	--	--	--	--	--	--	190	--	--	--
	12.2	1.00%	840.60	840.14	12.2	12.0	--	--	--	46	--	--	--	--	--	--	--	--	--
	12.3	2.00%	841.14	840.92	12.3	12.2	--	--	--	--	--	--	--	--	--	--	--	11	--
	12.3A	1.25%	841.35	841.30	12.3A	12.3	--	--	--	--	--	--	--	--	--	--	4	--	--
	12.4	0.83%	840.90	840.70	12.4	12.0	--	--	--	--	--	--	24	--	--	--	--	--	--
	12.5	1.00%	842.05	841.20	12.5	12.4	--	--	--	--	--	85	--	--	--	--	--	--	--
	12.6	1.00%	842.60	842.30	12.6	12.5	--	--	--	--	--	24	--	--	--	--	--	--	--
	12.7	2.00%	843.22	842.80	12.7	12.5	--	--	--	--	--	--	--	--	--	--	--	21	--
	12.7A	1.25%	843.27	843.22	12.7A	12.7	--	--	--	--	--	--	--	--	--	--	4	--	--
	12.8	0.49%	842.66	842.48	12.8	12.4	--	--	--	--	--	31	--	--	--	--	--	--	--
	13.1	0.08%	839.93	839.79	13.0	14.0	--	--	--	--	--	--	--	--	--	180	--	--	--
	13.2	1.00%	842.36	842.03	13.2	13.0	--	--	--	33	--	--	--	--	--	--	--	--	--
	13.3	2.00%	842.76	842.56	13.3	13.2	--	--	--	10	--	--	--	--	--	--	--	--	--
	13.4	2.00%	842.36	842.16	13.4	13.0	--	--	--	10	--	--	--	--	--	--	--	--	--
	13.5	2.00%	842.76	842.56	13.5	13.4	--	--	--	10	--	--	--	--	--	--	--	--	--
	13.6	1.00%	842.97	842.83	13.6	13.4	--	--	--	--	--	--	--	--	--	--	--	14	--
	13.6A	1.25%	843.02	842.97	13.6A	13.6	--	--	--	--	--	--	--	--	--	--	4	--	--
	14.1	0.08%	839.79	839.54	14.0	15.0	--	--	--	--	--	--	--	--	310	--	--	--	--
	14.2	1.00%	842.47	842.00	14.2	14.0	--	--	--	--	--	47	--	--	--	--	--	--	--
	14.3	4.00%	843.90	843.74	14.3	14.2	--	--	--	--	--	4	--	--	--	--	--	--	--
	14.4	0.50%	841.62	841.50	14.4	14.0	--	--	--	24	--	--	--	--	--	--	--	--	--
	14.5	0.50%	841.92	841.62	14.5	14.4	--	--	--	60	--	--	--	--	--	--	--	--	--
	14.6	0.50%	841.99	841.92	14.6	14.5	--	--	--	8	--	--	--	--	--	--	--	--	--
	15.1	0.08%	839.54	839.31	15.0	15.0A	--	--	--	--	--	--	--	--	285	--	--	--	--
	15.2	1.00%	841.19	840.62	15.2	15.0	--	--	--	--	--	57	--	--	--	--	--	--	--
	15.3	1.00%	841.47	841.34	15.3	15.2	--	--	--	--	--	--	--	--	--	--	--	13	--
	15.3A	1.25%	841.52	841.47	15.3A	15.3	--	--	--	--	--	--	--	--	--	--	4	--	--
	15.4	1.00%	841.22	840.75	15.4	15.0	--	--	--	--	--	--	--	--	--	--	--	47	--
	15.4A	1.25%	841.27	841.22	15.4A	15.4	--	--	--	--	--	--	--	--	--	--	4	--	--
	15.1A	0.08%	839.31	839.09	15.0A	16.0	--	--	--	--	--	--	--	--	--	275	--	--	--
	15.0B	1.00%	841.52	841.21	15.0B	15.0A	--	--	--	--	--	--	--	--	--	--	31	--	--
	16.1	0.08%	839.09	839.00	16.0	16.1	--	--	--	--	--	--	--	--	--	110	--	--	--
	16.2	1.00%	841.15	840.82	16.2	16.0	--	--	--	--	33	--	--	--	--	--	--	--	--
	16.3	1.00%	841.65	841.15	16.3	16.2	--	--	--	--	50	--	--	--	--	--	--	--	--
	16.4	0.90%	841.10	841.01	16.4	16.0	--	--	--	--	10	--	--	--	--	--	--	--	--
	16.5	1.50%	841.77	841.10	16.5	16.4	--	--	--	--	45	--	--	--	--	--	--	--	--
	--	--	OUTFALL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

NOTE

(1) LENGTHS OF PIPE SHOWN DO NOT INCLUDE APRON ENDWALLS

STORM SEWER PIPE ITEMS CONTINUED

CATEGORY	PIPE NO.	SLOPE	INVERT ELEVATION INLET	INVERT ELEVATION DISCHARGE	STRUCTURE FROM	STRUCTURE TO	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	608.0415 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH LF	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF	608.0424 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	608.0430 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF	610.0143 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 43x68-INCH LF	SPV.0090.01 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 43x68-INCH LF	* 612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH LF	* 612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH LF	SPV.0090.02 STEEL CASING W/ DUCTILE IRON 36-INCH CARRIER LF
0010	W. LINCOLN AVE																		
--	--		OUTFALL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17.1	1.00%		840.00	839.25	17.0	17.1	69	--	--	--	--	--	--	--	--	--	--	--	--
17.2	0.50%		842.00	841.84	17.2	17.0	--	--	--	--	33	--	--	--	--	--	--	--	--
17.3	1.00%		842.22	842.10	17.3	17.2	--	--	--	--	--	--	--	--	--	--	--	12	--
173.A	1.25%		842.27	842.22	17.3A	17.3	--	--	--	--	--	--	--	--	--	--	4	--	--
17.4	0.60%		842.11	842.05	17.4	17.0	--	--	--	--	10	--	--	--	--	--	--	--	--
18.1	0.79%		842.00	840.00	18.0	17.0	253	--	--	--	--	--	--	--	--	--	--	--	--
18.2	1.00%		843.40	842.89	18.2	18.0	--	--	--	--	51	--	--	--	--	--	--	--	--
18.3	1.50%		844.06	843.77	18.3	18.2	--	--	--	--	13	--	--	--	--	--	--	--	--
18.4	2.00%		843.94	843.80	18.4	18.2	--	--	--	--	--	--	--	--	--	--	--	7	--
18.5	1.50%		843.85	842.92	18.5	18.0	--	--	--	--	56	--	--	--	--	--	--	--	--
18.6	1.00%		842.72	842.33	18.6	18.0		--	--	--	--	--	--	--	--	--	--	39	--
19.1	1.52%		842.94	842.00	19.0	18.0	62	--	--	--	--	--	--	--	--	--	--	--	--
19.2	1.00%		843.55	843.03	19.2	19.0	--	--	--	--	52	--	--	--	--	--	--	--	--
19.3	1.00%		844.04	843.77	19.3	19.2	--	--	--	--	21	--	--	--	--	--	--	--	--
19.4	1.00%		844.97	844.80	19.4	19.2	--	--	--	--	--	--	--	--	--	--	--	17	--
19.4A	1.25%		845.02	844.97	19.4A	19.4	--	--	--	--	--	--	--	--	--	--	4	--	--
19.5	1.00%		844.60	844.26	19.5	19.2	--	--	--	34	--	--	--	--	--	--	--	--	--
19.6	1.00%		844.60	844.30	19.6	19.0	--	--	--	30	--	--	--	--	--	--	--	--	--
19.7	1.20%		843.84	843.37	19.7	19.0	--	--	--	--	39	--	--	--	--	--	--	--	--
19.8	1.17%		843.98	843.84	19.8	19.7	--	--	--	--	6	--	--	--	--	--	--	--	--
19.9	1.00%		845.02	844.81	19.9	19.7	--	--	--	--	--	--	--	--	--	--	21	--	--
20.1	0.54%		845.44	842.94	20.0	19.0	460	--	--	--	--	--	--	--	--	--	--	--	--
20.2	0.80%		846.80	846.55	20.2	20.0	--	--	--	--	32	--	--	--	--	--	--	--	--
20.3	1.50%		846.44	846.29	20.3	20.0	--	--	--	--	10	--	--	--	--	--	--	--	--
20.4	1.00%		846.64	846.44	20.4	20.3	--	--	--	--	--	--	--	--	--	--	--	20	--
21.1	0.91%		849.00	845.44	21.0	20.0	--	--	--	--	--	--	390	--	--	--	--	--	--
21.2	1.91%		850.00	849.00	21.2	21.0	--	--	--	--	--	52	--	--	--	--	--	--	--
21.3	1.25%		850.52	850.47	21.3	21.2	--	--	--	--	--	--	--	--	--	--	4	--	--
21.4	1.00%		849.72	849.20	21.4	21.0	--	--	--	--	--	--	--	--	--	--	--	52	--
21.4A	1.25%		849.77	849.72	21.4A	21.4	--	--	--	--	--	--	--	--	--	--	4	--	--
22.1	1.32%		851.15	849.50	22.0	21.0	--	--	--	--	--	125	--	--	--	--	--	--	--
22.2	0.50%		852.17	852.00	22.2	22.0	--	--	--	--	33	--	--	--	--	--	--	--	--
22.3	7.18%		854.10	853.31	22.3	22.2	--	--	--	5	--	--	--	--	--	--	--	--	--
22.4	0.80%		852.30	852.19	22.4	22.0	--	--	--	14	--	--	--	--	--	--	--	--	--
23.1	1.96%		856.54	851.65	23.0	22.0	--	--	--	250	--	--	--	--	--	--	--	--	--
23.2	1.00%		857.35	856.83	23.2	23.0	--	--	--	--	--	--	--	--	--	--	52	--	--
PROJECT TOTALS							844	559	479	907	632	702	481	304	595	1,340	173	408	90

NOTE

(1) LENGTHS OF PIPE SHOWN DO NOT INCLUDE APRON ENDWALLS

BIOSWALE UNDERDRAIN ITEMS

CATEGORY	(1) FROM STATION		TO STATION		REMARKS	310.0115 BASE AGGREGATE OPEN GRADED TON	612.0106 PIPE UNDERDRAIN 6-INCH LF	612.0108 PIPE UNDERDRAIN 8-INCH LF	* 612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH LF	612.0208 PIPE UNDERDRAIN UNPERFORATED 8-INCH LF	* 612.0806 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH EACH	645.0112 GEOTEXTILE FABRIC TYPE DF SCHEDULE B SY	SPV.0060.14 UNDERDRAIN CLEANOUTS EACH	SPV.0060.15 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 8-INCH EACH
0010	W. LINCOLN AVE													
	201+25	-	203+49	RT	(4)	2	80	--	148	--	--	77	--	--
	204+49	-	203+49	RT	(4)	2	77	--	24	--	--	74	--	--
	203+49	-	204+00	RT	(2)	--	--	--	58	--	--	--	1	--
	203+54	-	204+04	LT	(4)	1	50	--	11	--	--	48	--	--
	204+04	-	205+81	LT	--	2	85	--	81	--	--	82	1	--
	205+81	-	207+25	LT	--	2	120	--	24	--	--	89	1	--
	207+25	-	207+54	LT	(2)	--	--	--	30	--	--	--	1	--
	206+13	-	207+28	RT	(4)	3	100	--	16	--	--	96	--	--
	207+28	-	207+52	RT	(2)	--	--	--	24	--	--	--	1	--
	213+82	-	217+10	RT	(4)	8	321	--	7	--	--	311	--	--
	217+10	-	218+90	RT	(3)	3	117	--	64	--	1	113	1	--
	215+02	-	218+33	LT	(4)	8	311	--	20	--	--	299	--	--
	218+33	-	218+83	LT	--	--	--	--	54	--	--	--	1	--
	218+83	-	219+60	LT	(2)	--	--	--	77	--	--	--	1	--
	222+69	-	219+75	LT	(4)	8	294	--	--	--	--	283	1	--
	219+75	-	219+60	LT	(2)		4	--	18	--	--	4	--	--
	219+91	-	222+57	RT	(4)	5	185	--	83	--	--	178	--	--
	222+57	-	222+69	RT	--	--	--	--	14	--	--	--	1	--
	223+58	-	225+92	RT	--	5	191	--	57	--	--	184	--	--
	225+92	-	227+75	RT	--	4	153	--	29	--	--	147	1	--
	227+75	-	230+83	RT	--	5	--	185	--	123	--	178	1	--
	230+83	-	233+10	RT	(3)	5	--	188	--	37	--	181	1	1
	225+99	-	226+44	LT	(4)	1	27	--	19	--	--	20	--	--
	226+44	-	227+83	LT	--	--	--	--	139	--	--	--	1	--
	227+83	-	228+30	LT	--	--	--	--	47	--	--	--	1	--
	228+30	-	233+21	LT	(3)	9	365	--	126	--	1	351	1	--
	234+61	-	233+70	LT	(3)	--	--	--	92	--	1	--	1	--
	236+30	-	234+61	LT	--	2	106	--	62	--	--	79	1	--
	236+78	-	236+30	LT	(4)	1	43	--	6	--	--	41	--	--
	235+30	-	233+76	RT	(3)	2	76	--	77	--	1	73	1	--
	236+70	-	235+30	RT	(4)	2	86	--	56	--	--	83	--	--
	237+89	-	237+75	RT	(2)	--	--	--	38	--	--	--	1	--
	240+61	-	237+89	RT	--	7	272	--	33	--	--	262	1	--
	241+40	-	240+67	RT	--	--	--	--	80	--	--	--	1	--
	241+95	-	241+41	RT	--	1	42	--	14	--	--	31	1	--
	243+16	-	241+95	RT	--	1	28	--	96	--	--	27	1	--
	245+23	-	243+16	RT	--	4	143	--	20	--	--	138	1	--
	246+33	-	245+23	RT	(4)	2	94	--	56	--	--	70	--	--
TOTALS						95	3,370	373	1,800	160	4	3,520	25	1

FOOTNOTES

(1) LOCATION IS IN DIRECTION OF FLOW. IT IS NOT NECESSARILY IN DIRECTION OF STATIONING

(2) DISCHARGE PIPE UNDERDRAIN INTO INLET / MH

(3) DISCHARGE PIPE UNDERDRAIN TO CONCRETE APRON ENDWALL

(4) END CAP REQUIRED

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CULVERT/ BIOSWALE OUTLET MARKER ITEM

CATEGORY	ROADWAY	OFFSET		633.5200 MARKERS CULVERT END EACH
0010	W. LINCOLN AVE			
	201+24	29	RT	1
	201+92	37	RT	1
	203+11	27	LT	1
	204+00	27	LT	1
	207+13	34	LT	1
	207+21	41	RT	1
	209+25	48	LT	1
	210+38	45	RT	1
	211+68	29	LT	1
	212+27	35	RT	1
	215+46	43	LT	1
	215+46	38	RT	1
	218+52	38	RT	1
	219+54	44	LT	1
	221+46	33	RT	1
	222+70	50	RT	1
	226+28	52	LT	1
	226+36	47	RT	1
	229+25	42	RT	1
	233+16	29	LT	1
	233+09	54	RT	1
	233+70	35	LT	1
	233+77	60	RT	1
	233+88	28	RT	1
	234+70	29	LT	1
	236+83	38	RT	1
	237+91	55	RT	1
	237+94	43	LT	1
	241+92	45	LT	1
	242+48	41	RT	1
	243+17	55	RT	1
	243+30	45	LT	1
	246+21	35	RT	1
	246+25	36	LT	1
	247+50	32	LT	1
	250+28	32	LT	1
	S.1 70TH ST			
	19+26	31	LT	1
	19+41	31	RT	1
	20+59	31	LT	1
	20+74	30	RT	1
	S. COMMERCE DR			
	44+38	31	LT/RT	2
	S. 162ND ST			
	59+26	28	LT	1
	59+38	28	RT	1
	60+58	31	LT	1
	60+65	27	RT	1
TOTAL				46

FIELD OFFICE TYPE C

CATEGORY	LOCATION	642.5201 EACH
0010	W. LINCOLN AVE	1
	TOTAL	1

RESTORATION ITEMS

CATEGORY	LOCATION		OFFSET	623.0200 DUST CONTROL SURFACE TREATMENT SY	* 625.0100 TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	631.1000 SOD LAWN SY	631.0300 SOD WATER MGAL
0010	W. LINCOLN AVE									
	201+20 -	207+83	LT/RT	2,292	2,696	2,292	1.7	41	404	34
	207+83 -	212+94	LT/RT	2,152	2,392	2,152	1.5	39	239	20
	213+04 -	219+17	LT/RT	2,039	2,362	2,039	1.5	37	323	27
	219+17 -	233+40	LT/RT	5,694	6,488	5,694	4.1	102	794	67
	233+62 -	237+42	LT/RT	1,956	2,143	1,956	1.3	35	187	16
	237+42	251+20	LT/RT	3,694	4,429	3,694	2.8	66	735	62
	UNDISTRIBUTED			2,173	4,090	3,173	1.0	9	117	5
	TOTALS			20,000	24,600	21,000	14	330	2,800	230

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAVEMENT MARKING ITEMS

CATEGORY	LOCATION		646.0106 PAVEMENT MARKING EPOXY 4-INCH DOUBLE LINE YELLOW LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH CENTER LINE YELLOW LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH LINE WHITE LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH WHITE LF	646.0600 REMOVING PAVEMENT MARKINGS LF	647.0110 PAVEMENT MARKING RAILROAD CROSSINGS EPOXY WHITE EACH	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2 WHITE EACH	647.0356 PAVEMENT MARKING WORDS EPOXY WHITE EACH	647.0576 PAVEMENT MARKING STOP LINE EPOXY 18-INCH WHITE LF	647.0576 PAVEMENT MARKING STOP LINE EPOXY 24-INCH WHITE LF
0010	LINCOLN AVE											
	201+07 -	207+83	1,100	--	1,078	60	1,220	--	--	--	27	
	207+83 -	212+94	888	22	913	--	--	1	--	--	27	--
	213+04 -	219+18	1,097	22	1,176	--	--	1	--	--	--	--
	219+18 -	233+40	2,845	--	2,065	--	--	--	--	--	27	--
	233+62 -	237+42	648	--	650	--	--	--	--	--	27	--
	237+42 -	251+20	2,454	--	2,080	310	--	--	3	2	27	27
	FRONTAGE RD											
	400+23 -	403+00	532	--	--	--	--	--	--	--	27	--
	TOTALS			17,570		370	1,220	2	3	2	162	27

EROSION CONTROL ITEMS

CAT.	STAGE	LOCATION	OFFSET	606.0200 RIPRAP MEDIUM CY	606.0300 RIPRAP HEAVY CY	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2033 EROSION MAT CLASS III TYPE B SY	628.6510 SOIL STABILIZER TYPE B ACRE	628.7005 INLET PROTECTION TYPE A EACH	628.7020 INLET PROTECTION TYPE D EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7560 TRACKING PADS EACH	628.7570 ROCK BAGS EACH	630.0200 SEEDING TEMPORARY LB	645.0120 GEOTEXTILE FABRIC TYPE HR SY	SPV.0180.01 GEOTEXTILE FABRIC TYPE FF SY
0010	1	W. LINCOLN AVE																			
		201+20 - 207+84	LT/RT	--	--	3	--	--	1	1	--	--	--	--	32	4	2	--	--	--	--
		207+84 - 212+94	LT/RT	--	--	--	--	--	--	--	--	--	1	--	16	2	--	--	--	--	--
		213+04 - 219+17	LT/RT	--	--	3	33	33	--	--	--	--	--	--	8	6	--	--	--	--	--
		219+17 - 233+40	LT/RT	--	22	55	541	541	--	--	--	--	--	--	8	4	--	--	--	78	--
		233+63 - 237+42	LT/RT	--	--	7	91	91	--	--	--	--	--	--	--	2	--	--	--	--	--
		237+42 251+20	LT/RT	--	--	--	--	--	--	--	--	--	--	--	24	6	1	--	--	--	--
	1	S. COMMERCE DR																			
		43+50 - 44+38	LT/RT	--	--	--	--	--	1	1	--	--	--	--	8	1	--	--	--	--	--
	STAGE 1 SUBTOAL			0	22	68	665	665	2	2	0	0	1	0	96	25	3	0	0	78	0
0010	2	W. LINCOLN AVE																			
		201+20 - 207+84	LT/RT	--	--	18	--	--	1	1	84	--	3	3	16	2	--	--	--	24	26
		207+84 - 212+94	LT/RT	--	--	12	--	--	--	--	97	--	1	1	8	--	--	--	--	46	26
		213+04 - 219+18	LT/RT	--	--	24	--	--	--	--	118	--	3	3	8	2	--	--	--	47	53
		219+18 - 233+40	LT/RT	9	--	43	118	118	--	--	345	--	4	4	32	2	--	--	--	123	79
		233+63 - 237+42	LT/RT	--	18	19	112	112	--	--	73	--	1	1	8	2	--	--	--	89	26
		237+42 251+20	LT/RT	--	--	6	--	--	--	--	274	--	3	3	16	2	1	--	--	53	--
	2	S. 170ST ST																			
		18+49 - 19+38	LT/RT	8	--	--	--	--	1	1	--	--	--	--	--	2	--	--	--	44	--
	2	S. COMMERCE DR																			
		43+50 - 44+38	LT/RT	12	--	24	--	--	--	--	--	--	--	--	--	2	--	--	--	58	53
		S. 162ND ST																			
		57+73 - 59+38	LT/RT	8	--	24	--	--	1	1	--	--	--	--	--	2	--	--	--	44	53
	STAGE 2 SUBTOAL			37	18	170	230	230	3	3	991	--	15	15	88	16	1	0	0	527	316
0010	3	W. LINCOLN AVE						--													
		201+20 - 207+84	LT/RT	--	--	12	--	--	1	1	84	--	1	1	8	2	--	--	--	29	26
		207+84 - 212+94	LT/RT	--	--	12	--	--	--	--	44	--	2	2	8	--	--	--	--	34	26
		213+04 - 219+18	LT/RT	--	--	24	--	--	--	--	134	--	3	3	8	1	--	--	--	47	53
		219+18 - 233+40	LT/RT	4	--	24	--	--	--	--	209	--	4	4	16	1	--	--	--	138	53
		233+63 - 237+42	LT/RT	4	--	15	--	--	--	--	35	--	1	1	8	--	--	--	--	12	26
		237+42 251+20	LT/RT	--	--	33	--	--	--	--	424	--	3	3	32	2	--	--	--	85	53
	3	FRONTAGE ROAD																			
		400+23 - 403+00	LT/RT	3	--	--	--	--	1	1	--	--	--	--	--	--	--	--	--	12	
	3	S. 170ST ST																			
		20+62 - 21+50	LT/RT	8	--	24	--	--	--	--	--	--	--	--	--	2	--	--	--	44	53
	3	S. 162ND ST																			
		60+62 - 61+95	LT/RT	12	--	24	--	--	--	--	--	--	--	--	--	2	--	--	--	57	53
	STAGE 3 SUBTOAL			31	--	168	0	0	2	2	930	0	14	14	80	10	0	0	0	458	343
	UNDISTRIBUTED			12	10	94	5	5	3	1	179	5	20	21	36	29	6	100	10	237	140
	TOTALS			80	50	500	900	900	10	8	2,100	5	50	50	300	80	10	100	10	1,300	800

3

TRAFFIC CONTROL ID 2722-11-70

CATEGORY	STAGE	LOCATION	643.0100 EACH
0010	ALL	W. LINCOLN AVE	1
	TOTAL		1

TRAFFIC CONTROL SIGNS PCMS

CATEGORY	STAGE	DURATION/ DAYS	LOCATION	643.1050 EACH*	643.1050 DAYS
0010	1	14	LINCOLN AVE	2	28
	TOTAL				28

* FOR INFORMATION ONLY

TRAFFIC CONTROL ITEMS

CATEGORY	LOCATION	STAGE DURATION DAYS	643.0300 TRAFFIC CONTROL DRUMS EACH*	643.0300 DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH*	643.0420 DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH*	643.0705 DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH*	643.0715 DAYS	643.0900 TRAFFIC CONTROL SIGNS EACH*	643.0900 DAYS
0010	STAGE 1	10										
	W. LINCOLN AVENUE		162	1,620	39	390	78	780	13	130	84	840
	S. COMMERCE DRIVE		5	50	--	--	--	--	--	--	1	10
	ADVANCED WARNING SIGNS		--	--	--	--	--	--	--	--	22	220
	STAGE 1 SUBTOTAL			1,670		390		780		130		1,070
	STAGE 2 & 2A	100										
	W. LINCOLN AVENUE		165	16,500	84	8,400	168	16,800	17	1,700	92	9,200
	S. COMMERCE DRIVE		26	2,600	--	--	--	--	8	800	4	400
	ADVANCED WARNING SIGNS		--	--	--	--	--	--	--	--	22	2,200
	STAGE 2 & 2A SUBTOTAL			19,100		8400		16,800		2500		11,800
	STAGE 2B	10										
	S. COMMERCE DRIVE		22	220	--	--	--	--	4	40	4	40
	STAGE 2B SUBTOTAL			220		0		0		40		40
	STAGE 3	102										
	W. LINCOLN AVENUE		151	15,402	85	8,670	170	17,340	10	1,020	98	9,996
	ADVANCED WARNING SIGNS		--	--	--	--	--	--	--	--	22	2,244
	STAGE 3 SUBTOTAL			15,402		8,670		17,340		1,020		9,996
	UNDISTRIBUTED			1,408		840		1,780		210		894
	TOTALS			37,800		18,300		36,700		3,900		23,800

* FOR INFORMATION ONLY

TRAFFIC CONTROL DETOUR ITEMS

CATEGORY	STAGE	DURATION/ INSTANCE DAYS	LOCATION	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SIGN NO.	SIZE W X H FT X FT	# OF SIGNS	SF	643.2000 TRAFFIC CONTROL DETOUR 2722-11-70 EACH	643.3000 TRAFFIC CONTROL DETOUR SIGNS EACH	643.3000 DAYS
0010	1	10	W. LINCOLN AVE	FMS	5.5' x 3'	4	66.0	0.33	18	180
	STAGE 1 SUBTOTAL						66.0	0.33		180
	2 , 2A & 2B	100	W. LINCOLN AVE	--		--	--	0.33	18	1,800
	STAGE 2 SUBTOTAL						--	0.33		1,800
	3	102	W. LINCOLN AVE	--		--	--	0.33	18	1,836
	STAGE 3 SUBTOTAL						--	0.33		1,836
	UNDISTRIBUTED			--		--	--	--	--	34
	TOTALS						66.0	1		3,850

TEMPORARY PAVEMENT MARKING ITEMS

CATEGORY	STAGE	ROADWAY	649.0701 TEMPORARY PAVEMENT MARKING 8-INCH WHITE LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH WHITE LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH YELLOW LF	649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH WHITE LF	649.1100 TEMPORARY PAVEMENT MARKING STOP LINE 18-INCH WHITE LF	649.1200 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH LF
0010	1	W. LINCOLN AVE	--	245	--	--	--	--
		STAGE 1 SUBTOTAL	0	245		--	--	--
	2	W. LINCOLN AVE	32	140	225	--	34	30
		STAGE 2 SUBTOTAL	32	365		--	34	30
	3	W. LINCOLN AVE	--	--	145	210	--	25
		STAGE 3 SUBTOTAL	0	145		210	--	25
		UNDISTRIBUTED	8	15		--	6	5
		TOTALS	40	770		210	40	60

CONSTRUCTION STAKING BIOSWALES

CATEGORY	LOCATION	SPV.0060.17 EACH
0010	W. LINCOLN AVE	38
	TOTAL	38

BACKFILL SLURRY

CATEGORY	ROADWAY	* SPV.0035.03 CY
0010	W. LINCOLN AVE	
	STORM SEWER PIPES 1.1 TO 23.2	2,755
	TOTAL	2,755

*ADDITIONAL QUANTITY SHOWN ELSEWHERE

PIPE INSULATION

CATEGORY	STATION	OFFSET	APPROXIMATE TOP WM ELEV	INSULATION WIDTH FT	INSULATION LENGTH FT	INSULATION THICKNESS INCHES	SPV.0165.02 SF
0020	W. LINCOLN						
	201+88	13' LT	586.08	2	4	4	16
	204+00	11' LT	851.09	2	4	4	16
	206+17	27'-41' LT	-	2	14	4	56
	207+54	12' LT	843.15	2	4	4	16
	207+94	12' RT	841.75	2	4	4	16
	208+15	12' RT	842.37	2	4	4	16
	211+29	40'-60' LT	-	2	20	4	80
	213+50	12' LT	840.02	2	4	4	16
	213+75	12' LT	840.05	2	4	4	16
	213+57	21' LT	-	2	4	4	16
	213+57	36'-51' LT	-	2	15	4	60
	215+50	21' LT	839.51	2	4	4	16
	216+88	43'-70' LT	-	2	27	4	108
	216+91	12' RT	838.81	2	4	4	16
	219+28	12' RT	838.85	2	4	4	16
	219+60	10' LT	839.25	2	4	4	16
	221+50	10' LT	839.08	2	4	4	16
	223+30	10' LT	838.85	2	4	4	16
	225+36	12' RT	839.29	2	4	4	16
	226+40	10' LT	837.50	2	4	4	16
	228+93	40'-66' LT	-	2	26	4	104
	229+02	40'-70' LT	-	2	30	4	122
	229+45	12' RT	837.72	2	4	4	16
	229+45	40'-71' RT	-	2	31	4	124
	232+00	10' LT	837.71	2	4	4	16
	232+61	9' LT	835.89	2	4	4	16
	234+68	10' LT	835.54	2	4	4	16
	235+79	12' RT	837.05	2	4	4	16
	235+79	36'-60' RT	-	2	24	4	96
	237+13	10' LT	839.84	2	4	4	16
	237+53	12' RT	838.37	2	4	4	16
	237+75	10' LT	840.19	2	4	4	16
	239+61	58'-76' RT	-	2	18	4	72
	239+97	65'-75' RT	-	2	10	4	40
	239+96	12' RT	841.01	2	4	4	16
	242+31	11' LT	843.45	2	4	4	16
	243+56	12' RT	-	2	4	4	16
	243+56	36'-60' RT	-	2	24	4	96
	246+25	11' LT	845.72	2	4	4	16
	247+27	12' RT	847.74	2	4	4	16
	247+46	12' RT	848.01	2	4	4	16
	247+50	11' LT	848.50	2	4	4	16
	250+25	11' LT	854.49	2	4	4	16
	TOTAL						1,470

SAWING PAVEMENT ITEMS

CATEGORY	LOCATION	OFFSET	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	REMARKS
	W. LINCOLN AVE				
0010	201+20	LT/RT	167	-	BEGIN PROJECT
	202+41	RT	40	-	DRIVEWAY
	202+44	LT	22	-	DRIVEWAY
	203+30	RT	30	-	DRIVEWAY
	204+81	RT	29	-	DRIVEWAY
	205+74	LT	45	-	DRIVEWAY
	207+07	RT	20	-	DRIVEWAY
	209+68	LT	45	-	DRIVEWAY
	210+74	RT	--	38	DRIVEWAY
	212+31	LT	75	-	DRIVEWAY
	212+52	RT	16	-	DRIVEWAY
	212+94	LT/RT	24	-	UP RR
	213+04	LT/RT	24	-	UP RR
	214+54	LT	31	-	DRIVEWAY
	218+51	RT	26	-	DRIVEWAY
	218+63	LT	26	-	DRIVEWAY
	222+24	RT	26	-	DRIVEWAY
	223+11	RT	30	-	DRIVEWAY
	223+75	LT	31	-	DRIVEWAY
	225+70	RT	23	-	DRIVEWAY
	228+01	RT	28	-	DRIVEWAY
	230+60	RT	30	-	DRIVEWAY
	234+44	LT	28	-	DRIVEWAY
	235+15	RT	24	-	DRIVEWAY
	236+07	LT	29	-	DRIVEWAY
	241+21	RT	30	-	DRIVEWAY
	241+71	LT	24	-	DRIVEWAY
	242+14	RT	28	-	DRIVEWAY
	242+90	LT	30	-	DRIVEWAY
	243+00	RT	24	-	DRIVEWAY
	W. LINCOLN AVE				
0010	245+06	RT	30	-	DRIVEWAY
	246+00	LT	20	-	DRIVEWAY
	246+91	RT	43	-	DRIVEWAY
	246+93	LT	21	-	DRIVEWAY
	249+91	LT	22	-	DRIVEWAY
	251+20	LT/RT	22	72	END PROJECT
	201+80 - 250+20	NA	4,808	--	STAGING
	FRONTAGE ROAD				
	400+23	LT/RT	74	-	BEGIN CONSTRUCTION
	403+00	LT/RT	24		END CONSTRUCTION
	S. 170TH STREET				
0010	18+49	LT/RT	24	-	BEGIN CONSTRUCTION
	21+50	LT/RT	24	-	END CONSTRUCTION
	S. COMMERCE DR				
	43+50	LT/RT	24	-	BEGIN CONSTRUCTION
	43+50 - 45+00	NA	61		STAGING
	S. 162ND ST				
	57+73	LT/RT	24	-	BEGIN CONSTRUCTION
	57+97	RT	31	-	DRIVEWAY
	61+07	RT	44	-	DRIVEWAY
	61+70	LT	27	-	DRIVEWAY
	61+95	LT/RT	24	-	END CONSTRUCTION
UNDISTRIBUTED			48	20	
TOTALS			6,400	130	

CONSTRUCTION STAKING ITEMS

CATEGORY	LOCATION	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	W. LINCOLN AVE	85	5,800	5,800	7,560	15	1	6,000
	TOTALS	85	5,800	5,800	7,560	15	1	6,000

BIOSWALE LANDSCAPING ITEMS

CATEGORY	LOCATION	OFFSET	POND #	* 625.0100 TOPSOIL CY	632.9101 LANDSCAPING PLANTING SURVEILLANCE AND CARE CYCLES EACH	SPV.0005.01 SEEDBED PREPARATION ACRE	SPV.0005.02 SEEDING SPECIAL ACRE	SPV.0085.01 SEED MIX SPECIAL INFILTRATION MIX PLANTING ZONE 1 LB	SPV.0085.01 SEED MIX SPECIAL PRAIRIE MIX PLANTING ZONE 2 LB	SPV.0085.02 SEEDING COVER CROP LB	SPV.0035.01 ENGINEERED SOIL CY	SPV.0180.02 MULCHING SPECIAL SY
0010	W. LINCOLN AVE											
	201+12 - 202+08	RT	1	26	.32	0.03	0.03	0.11	0.11	0.3	46	155
	202+30 - 203+16	LT	2	28	.32	0.03	0.03	0.09	0.13	0.3	68	165
	203+53 - 204+57	RT	3	39	.32	0.05	0.05	0.28	0.13	0.5	119	231
	203+45 - 204+10	LT	4	22	.32	0.03	0.03	0.08	0.08	0.3	54	131
	204+21 - 205+19	LT	6	31	.32	0.04	0.04	0.10	0.11	0.4	76	185
	205+83 - 207+14	LT	8	40	.32	0.05	0.05	0.11	0.15	0.5	73	241
	206+03 - 207+24	RT	5	56	.32	0.07	0.07	0.45	0.15	0.7	191	336
	208+75 - 210+37	RT	7	91	.32	0.11	0.11	0.93	0.20	1.1	142	545
	208+60 - 209+24	LT	10	31	.32	0.04	0.04	0.23	0.09	0.4	44	184
	210+05 - 211+84	LT	12	59	.32	0.07	0.07	0.22	0.21	0.7	77	356
	211+05 - 212+35	RT	9	45	.32	0.06	0.06	0.19	0.15	0.5	59	269
	213+39 - 214+36	LT	14	26	.32	0.03	0.03	0.11	0.11	0.3	28	155
	213+70 - 217+08	RT	11	209	.32	0.26	0.26	2.33	0.41	2.5	335	1,251
	214+89 - 218+20	LT	16	182	.32	0.23	0.23	1.93	0.38	2.2	361	1,095
	217+42 - 218+68	RT	13	78	.32	0.10	0.10	0.85	0.16	0.9	124	471
	219+11 - 222+81	LT	18	135	.32	0.17	0.17	0.67	0.44	1.6	181	808
	219+70 - 221+80	RT	15	64	.32	0.08	0.08	0.14	0.24	0.8	78	382
	223+39 - 225+42	RT	17	205	.32	0.25	0.25	2.74	0.32	2.4	346	1,229
	223+91 - 226+30	LT	20	62	.32	0.08	0.08	0.20	0.36	0.7	69	371
	226+04 - 227+68	RT	19	94	.32	0.12	0.12	0.98	0.20	1.1	147	565
	228+33 - 230+35	RT	21	105	.32	0.13	0.13	1.00	0.24	1.2	218	628
	227+59 - 232+09	LT	22	220	.32	0.27	0.27	2.24	0.52	2.6	334	1,318
	230+90 - 232+88	RT	23	101	.32	0.13	0.13	0.93	0.24	1.2	154	607
	234+09 - 234+97	RT	25	45	.32	0.06	0.06	0.40	0.12	0.5	114	273
	234+64 - 235+80	LT	24	31	.32	0.04	0.04	0.13	0.13	0.4	45	185
	235+58 - 236+25	RT	27	29	.32	0.04	0.04	0.21	0.09	0.3	67	176
	236+38 - 236+86	RT	29	20	.32	0.02	0.02	0.12	0.07	0.2	42	121
	236+27 - 237+04	LT	26	34	.32	0.04	0.04	0.23	0.10	0.4	77	204
	237+71 - 241+47	LT	28	258	.32	0.32	0.32	3.15	0.45	3.1	758	1,539
	237+90 - 240+74	RT	31	164	.32	0.20	0.20	1.82	0.33	2.0	460	986
	241+41 - 241+93	RT	33	13	.32	0.02	0.02	0.05	0.06	0.2	22	79
	241+95 - 242+48	LT	30	48	.32	0.06	0.06	0.52	0.10	0.6	132	287
	242+36 - 242+77	RT	35	28	.32	0.03	0.03	0.22	0.08	0.3	62	167
	243+15 - 244+71	RT	37	116	.32	0.14	0.14	1.45	0.20	1.4	498	695
	243+26 - 245+07	LT	32	227	.32	0.27	0.27	3.28	0.28	2.6	1,049	1,323
	245+31 - 246+49	RT	39	33	.32	0.04	0.04	0.01	0.12	0.4	61	197
	246+12 - 246+63	LT	34	39	.32	0.05	0.05	0.27	0.12	0.5	124	237
	250+15 - 250+82	LT	36	47	.32	0.06	0.06	0.49	0.11	0.6	182	284
TOTALS				3,080	12	3.81	3.81	37		37	7,020	18,430

EXPOSING EXISTING UTILITY

CATEGORY	STATION	OFFSET	TOP WM ELEV	SPV.0060.18 EACH
0020	W. LINCOLN AVE			
	201+88	13' LT	856.08	1
	204+00	11' LT	851.09	1
	207+54	12' LT	843.15	1
	207+94	12' RT	841.75	1
	208+15	12' RT	842.37	1
	211+29	4'0-60' LT	840.51	1
	213+50	12' LT	840.02	1
	213+57	21' LT	-	1
	213+57	36'-51' LT	-	1
	213+75	12' LT	840.05	1
	215+50	11' LT	839.51	1
	216+88	43'-70' LT	-	1
	216+91	12' RT	838.81	1
	219+28	12' RT	838.78	1
	219+60	10' LT	839.25	1
	221+50	10' LT	839.08	1
	223+30	10' LT	838.85	1
	225+36	12' RT	839.29	1
	226+40	10' LT	837.50	1
	228+93	40'-66' LT	-	1
	229+02	40'-70' LT	-	1
	229+45	12' RT	837.72	1
	229+45	40'-71' RT	-	1
	232+00	10' LT	837.71	1
	232+61	9' LT	835.89	1
	234+68	10' LT	835.54	1
	235+79	12' RT	837.05	1
	235+79	36'-60' RT	-	1
	237+13	10' LT	839.84	1
	237+53	12' RT	838.37	1
	237+75	10' LT	840.19	1
	239+61	58'-76' RT	-	1
	239+97	65'-75' RT	-	1
	239+96	12' RT	841.01	1
	242+31	11' LT	843.45	1
	243+56	12' RT	-	1
	243+56	36'-60' RT	-	1
	246+25	11' LT	845.72	1
	247+27	12' RT	847.74	1
	247+46	12' RT	848.01	1
	247+50	11' LT	848.50	1
	250+25	11' LT	854.49	1
TOTAL				42

WATER MAIN ITEMS

CATEGORY	LOCATION	* SPV.0035.03 BACKFILL SLURRY CY	SPV.0060.04 SALVAGING FIRE HYDRANTS AND ABANDONING HYDRANT TEES EACH	SPV.0060.05 SALVAGING WATER VALVES 8-INCH EACH	SPV.0060.21 SALVAGING WATER VALVES 16-INCH EACH	SPV.0060.06 REMOVING WATER VALVE VAULTS EACH	SPV.0060.07 ADJUSTING WATER VALVE BOXES EACH	SPV.0060.08 HYDRANT ASSEMBLIES EACH	SPV.0060.09 GATE VALVES HYDRANT 6-INCH EACH	SPV.0060.10 GATE VALVES 8-INCH EACH	SPV.0060.11 BUTTERFLY VALVES 16-INCH EACH	SPV.0060.12 PIPE SLEEVES DUCTILE IRON 8-INCH EACH	SPV.0060.13 PIPE SLEEVES DUCTILE IRON 16-INCH EACH	SPV.0090.03 HYDRANT LEADS DUCTILE IRON 6-INCH LF	SPV.0090.04 WATER MAINS DUCTILE IRON 8-INCH LF	SPV.0090.05 WATER MAINS DUCTILE IRON 16-INCH LF	SPV.0090.06 WATER SERVICES 1 1/4-INCH OPEN CUT LF	SPV.0090.07 WATER SERVICES 2-INCH OPEN CUT LF	SPV.0090.08 WATER SERVICES 4-INCH OPEN CUT LF
0020	W. LINCOLN AVENUE																		
	200+00 - 206+00	171.3	2	--	--	--	--	2	2	--	--	--	1	34	--	77	--	--	--
	206+00 - 212+00	188.4	1	1	--	1	1	1	1	1	2	1	2	15	60	8	--	20	--
	212+00 - 218+00	299.0	2	1	--	1	3	2	2	1	1	--	3	31	40	53	--	--	--
	218+00 - 224+00	210.7	1	1	1	--	--	1	1	1	1	1	2	16	60	74	--	--	--
	224+00 - 230+00	339.7	2	2	--	1	3	1	1	2	1	--	1	17	80	32	--	--	--
	230+00 - 236+00	93.4	1	--	--	--	1	2	2	--	--	--	--	33	--	--	--	30	15
	236+00 - 242+00	272.3	2	2	--	2	2	2	2	2	2	3	6	32	40	24	--	--	30
	242+00 - 248+00	49.8	1	1	--	--	3	1	1	1	--	--	--	16	--	--	50	--	--
	248+00 - 252+00	90.5	1	--	--	1	--	1	1	--	1	--	3	16	--	22	--	--	--
	TOTALS	1,715	13	8	1	6	13	13	13	8	8	5	18	210	280	290	50	50	45

*ADDITIONAL QUANITIES SHOWN ELSEWHERE.

SANITARY SEWER ITEMS

CATEGORY	LOCATION	OFFSET	SPV.0060.01 ADJUSTING SANITARY MANHOLE COVERS EACH	SPV.0060.02 RECONSTRUCTING SANITARY MANHOLES EACH	SPV.0060.03 MANHOLE COVERS SANITARY EACH
0020	W. LINCOLN AVE.				
	202+51	1' LT	1	--	1
	205+01	1' LT	1	--	--
	207+85	1' LT	1	--	--
	211+12	1' LT	1	--	--
	214+12	1' LT	1	--	--
	217+10	1' LT	--	1	--
	219+18	2' LT	--	1	--
	220+19	2' LT	--	1	--
	223+10	R/L	1	--	--
	225+90	2' LT	--	1	--
	228+72	R/L	--	1	--
	231+74	2' LT	--	1	--
	233+73	R/L	1	--	--
	234+71	R/L	1	--	--
	237+41	R/L	1	--	--
	239+62	R/L	1	--	--
	242+12	R/L	1	--	--
	245+12	R/L	1	--	--
	248+11	1' LT	1	--	--
	251+11	1' RT	1	--	1
	S. 170TH ST				
	20+70	R/L	1	--	--
	S. 162ND ST				
	57+77	2' LT	1	--	--
	TOTALS		16	6	2

HYDRANT WALL ITEMS

CATEGORY	LOCATION	SPV.0165.01 WALLS MODULAR BLOCK GRAVITY SPECIAL SF	* 305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	465.0105 ASPHALTIC SURFACE TON
0020	W. LINCOLN AVE			
	204+75 LT	56.0	5.7	1.4
	217+60 LT	44.0	5.7	1.4
	221+25 LT	44.0	5.7	1.4
	226+00 LT	44.0	5.7	1.4
	235+00 LT	56.0	5.7	1.4
	245+30 LT	44.0	5.7	1.4
	249+60 LT	56.0	5.7	1.4
	TOTALS	344	40	10

* ADDITIONAL QUANTITIES LISTED ELSEWHERE

CONSTRUCTION STAKING ITEMS

CATEGORY	LOCATION	SPV.0105.01 CONSTRUCTION STAKING SANITARY SEWERS LS	SPV.0105.02 CONSTRUCTION STAKING WATER MAINS LS
0020	W. LINCOLN AVE	1	1
	TOTALS	1	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

TRANSPORTATION PROJECT PLAT TITLE SHEET

LINCOLN AVENUE RECONSTRUCTION

S. CALHOUN ROAD - S. MOORLAND ROAD

WAUKESHA COUNTY

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
2722-11-00	4.00	7
FEDERAL PROJECT NUMBER		

PLAT OF RIGHT-OF-WAY REQUIRED FOR
WEST LINCOLN AVENUE
FROM SOUTH CALHOUN ROAD
TO SOUTH MOORLAND ROAD
W. LINCOLN AVE. WAUKESHA COUNTY

CONSTRUCTION PROJECT NUMBER
2722-11-70

STATE PROJECT NUMBER
2722-11-00

CONVENTIONAL ABBREVIATIONS

ACCESS POINT	AP	REFERENCE LINE	℄
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	RIGHT-OF-WAY	R/W
AND OTHERS	ET.AL.	SECTION	SEC.
CENTERLINE	℄	STATION	STA.
CERTIFIED SURVEY MAP	CSM	TEMPORARY LIMITED EASEMENT	TLE
CORNER	COR.	VOLUME	V.
CONVEYANCE OF RIGHTS	CR		
DOCUMENT	DOC.		
EASEMENT	EASE.		
LAND CONTRACT	LC		
MONUMENT	MON.		
PAGE	P.		
PERMANENT LIMITED EASEMENT	PLE		
PROPERTY LINE	P.L.		
RECORDED AS	(100')		
RESIDENTIAL	RES.		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	DELTA
LENGTH OF CURVE	L
TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN — I.P. ● ("I" UNLESS NOTED)
R/W MONUMENT — ○ ●(SET)
R/W STANDARD — △ ▲(SET)
SIGN — | SIGN
SECTION CORNER MONUMENT
SECTION CORNER SYMBOL
FEE (HATCH VARIES)
TEMPORARY LIMITED EASEMENT
PERMANENT LIMITED EASEMENT
PARALLEL OFFSET
R/W BOUNDARY POINT — PRW100
PLE BOUNDRY POINT — PLE500
PARCEL NUMBER — 102
SIGN NUMBER (OFF PREMISE) — 21-1

PROPOSED R/W LINE
EXISTING H.E. LINE
PROPERTY LINE
LOT & TIE LINES
SLOPE INTERCEPTS
CORPORATE LIMITS
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
EXISTING CENTERLINE
PROPOSED REFERENCE LINE

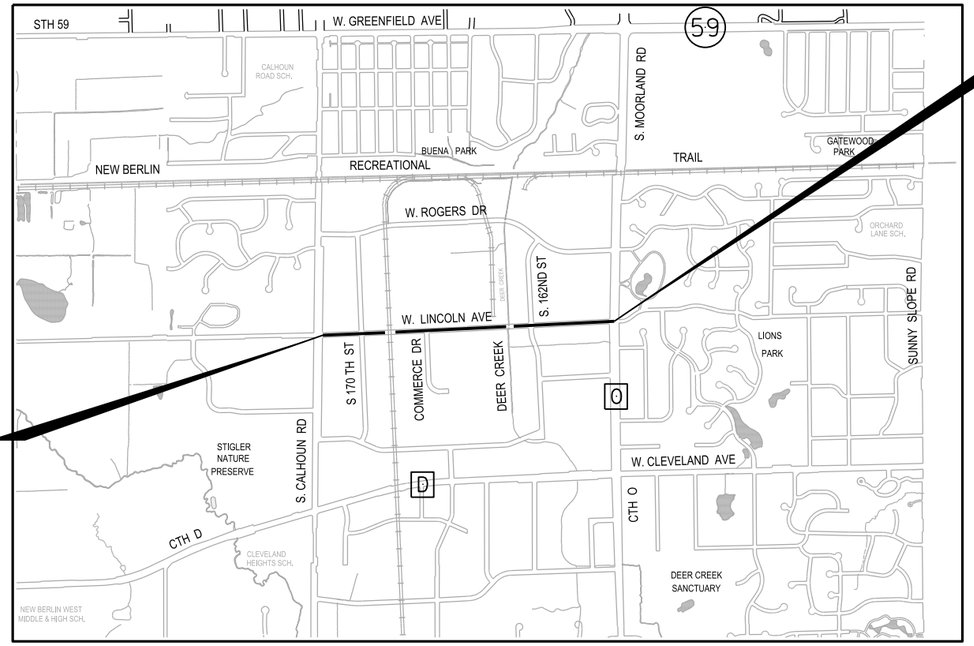
CONVENTIONAL SYMBOLS (CONT)

ACCESS RESTRICTED (BY PREVIOUS PROJECT/CONTROL)
NO ACCESS (BY ACQUISITION)
NO ACCESS (BY STATUTORY AUTHORITY)
BUILDING

CONVENTIONAL UTILITY SYMBOLS

WATER — W — W
GAS — G — G
TELEPHONE — T — T
OVERHEAD TRANSMISSION LINES — OH — OH
ELECTRIC — E — E
CABLE TELEVISION — TV — TV
FIBER OPTIC — FO — FO
SANITARY SEWER — SAN — SAN
STORM SEWER — SS — SS
NON COMPENSABLE — COMPENSABLE
POWER POLE
TELEPHONE POLE
TELEPHONE PEDESTAL
ELECTRIC TOWER

BEGIN PROJECT 2722-11-00
STA. 200+50.00 ℄ W. LINCOLN AVE.
Y= 371,007.62
X= 501,949.87
2.10' NORTH OF AND 49.96' EAST
OF THE SOUTHWEST COR. OF SEC. 03,
TOWNSHIP 06 NORTH, RANGE 20 EAST.



T-06-N

R-20-E

END PROJECT 2722-11-00
STA. 251+20.37 ℄ W. LINCOLN AVE.
Y= 371,241.73
X= 506,014.78
3.75' SOUTH OF AND 100.61' WEST
OF THE SOUTHEAST CORNER OF SEC. 03,
TOWNSHIP 06 NORTH, RANGE 20 EAST.

ORIGINAL PLAT SUBMITTED 3-12-2009
(NOT RECORDED)

I.D. 2722-11-00
ORIGINAL PLANS ACCEPTED BY
CITY OF NEW BERLIN

3/12/09 (Date) — (City Engineer)

ORIGINAL PLAT PREPARED BY:
BLOOM COMPANIES, LLC
Infrastructure Innovation and Ingenuity

WISCONSIN
TIMOTHY C. JOHNSON
S-2156
MILWAUKEE, WI
REGISTERED LAND SURVEYOR

3/12/09 (Date) — TIMOTHY C. JOHNSON, S-2156

BASIS OF RIGHT-OF-WAY

HWY	BASIS OF EXIST R/W	YEAR	WIDTH
W. LINCOLN AVE.	NEW BERLIN INDUSTRIAL PARK CALHOUN ROAD SUBDIVISION	1966	80'
W. LINCOLN AVE.	CSM #549. DOC #680863	1967	80'
W. LINCOLN AVE.	NEW BERLIN INDUSTRIAL PARK SUBDIVISION NO. 1	1965	80'
W. LINCOLN AVE.	NEW BERLIN INDUSTRIAL PARK SUBDIVISION NO. 2	1966	80'
W. LINCOLN AVE.	NEW BERLIN INDUSTRIAL PARK CALHOUN ROAD SUBDIVISION NO. 2	1967	80'
W. LINCOLN AVE.	NEW BERLIN INDUSTRIAL PARK CALHOUN ROAD SUBDIVISION NO. 1	1966	80'
--	--	----	--

LAYOUT
SCALE 0 0.25 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.944 URBAN MI.

REVISION DATE
02/22/13
07/31/13 NC

NOTES:

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, WAUKESHA COUNTY, ENGLISH, NAD 27 ADJUSTMENT. ALL DISTANCES ARE GROUND LENGTH.

PLE MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

A **TEMPORARY LIMITED EASEMENT** (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLEs ARE TO TERMINATE ON (Month, Year) OR THE DATE THE CONSTRUCTION OF THIS PROJECT IS COMPLETED, WHICHEVER OCCURS FIRST.

A **PERMANENT LIMITED EASEMENT** (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHT TO MAKE OR CONSTRUCT IMPROVEMENT ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSED ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	EXISTING ACRES	R/W ACRES REQUIRED			TOTAL REMAINING ACRES	T.L.E. ACRES	P.L.E. ACRES
					NEW R/W	EXISTING R/W	TOTAL R/W			
1	4.03	A & A MANUFACTURING	P.L.E., T.L.E.	1.071	--	--	--	1.071	0.982	0.089
2	4.03	EJO REAL ESTATE, LLC	P.L.E., T.L.E.	0.998	--	--	--	0.998	0.019	0.101
3	4.03	OLPH, LLC	P.L.E., T.L.E.	2.021	--	--	--	2.021	0.059	0.227
4	4.03, 4.04	LCM FUNDS 14 LINCOLN LLC	P.L.E., T.L.E.	8.959	--	--	--	8.959	0.022	0.605
5	4.04	PARKVIEW LINCOLN AVENUE, LLC	P.L.E.	3.787	--	--	--	3.787	0.000	0.126
6	4.04	PARKVIEW LINCOLN AVENUE, LLC	P.L.E., T.L.E.	3.793	--	--	--	3.793	0.026	0.120
7	4.04, 4.05	CHRIS HANSEN, INC.	P.L.E.	17.636	--	--	--	17.636	0.000	0.672
8	4.05	DS & HB, LLC	P.L.E., T.L.E.	1.005	--	--	--	1.005	0.016	0.146
9	4.05	16150 W LINCOLN AVENUE COMPANY	P.L.E., T.L.E.	3.567	--	--	--	3.567	0.028	0.564
10	4.05,4.06	NEW BERLIN INVESTORS, LLC	P.L.E., T.L.E.	5.946	--	--	--	5.946	0.032	0.424
11	4.06	HADER INDUSTRIES, INC.	P.L.E., T.L.E.	8.054	--	--	--	8.054	0.061	0.169
12	4.06	A. STEPHEN JORGENSEN AND JAMES B. JORGENSEN	P.L.E., T.L.E.	4.780	--	--	--	4.780	0.165	0.143
13	4.05	GERALDINE M. VACLAV BY-PASS TRUST	P.L.E.	1.000	--	--	--	1.000	0.000	0.168
14	4.05	J B KAIA CO.	P.L.E., T.L.E.	3.215	--	--	--	3.215	0.006	0.455
15	4.05	C & S REAL ESTATE HOLDINGS LLC	P.L.E.	2.160	--	--	--	2.160	0.000	0.223
16	4.04,4.05	GUARDIAN LIFE INSURANCE COMPANY OF AMERICA	P.L.E.	8.005	--	--	--	8.005	0.000	0.499
17	4.04	CENTERPOINT PROPERTIES TRUST	P.L.E.	8.000	--	--	--	8.000	0.000	0.655
18	4.04	ANDERSEAL, LLC	P.L.E.	2.000	--	--	--	2.000	0.000	0.190
19	4.03, 4.04	LINCOLN - NEW BERLIN PROPERTY, LLC	P.L.E., T.L.E.	5.845	--	--	--	5.845	0.017	0.602
20	4.03	2300 SOUTH 170TH STREET, LLC	P.L.E., T.L.E.	2.000	--	--	--	2.000	0.019	0.412
21	4.03	WILLIAM J SULZMANN, JR.	P.L.E., T.L.E.	1.000	--	--	--	1.000	0.031	0.103
22	4.03	A & A MANUFACTURING	P.L.E., T.L.E.	1.758	--	--	--	1.758	0.043	0.185
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
200	4.03, 4.05	AT&T WISCONSIN	RELEASE OF RIGHTS	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
202	4.03	WE ENERGIES ELECTRIC OPERATIONS	RELEASE OF RIGHTS	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
		TOTALS		96.600	0.00	0.00	0.00	96.600	1.527	6.878

4

4

REVISION DATE	DATE MAR 12, 2009	SCALE: FEET	HWY: W. LINCOLN AVENUE	STATE R/W PROJECT NUMBER 2722-11-00	PLAT SHEET 4.01	
02/22/13 07/31/13		0 N/A	COUNTY: WAUKESHA	CONSTRUCTION PROJECT NUMBER 2722-11-70	PS&E SHEET 130	E

CITY OF NEW BERLIN

BEGIN PROJECT 2722-11-00
STA. 200+50.00 ℄ W. LINCOLN AVE.

END PROJECT 2722-11-00
STA. 251+20.37 ℄ W. LINCOLN AVE.

℄ FRONTAGE ROAD
PROJECT NO. RD-10-02

℄ SOUTH CALHOUN ROAD

EXIST FRONTAGE ROAD

SOUTH 170TH STREET

UNION PACIFIC R.R.

℄ WEST LINCOLN AVENUE

℄ SOUTH 170TH STREET

EXCEPTION TO
NET CENTERLINE
STA 233+40.29 TO
STA 233+62.56

SOUTH 162ND STREET

S. MOORLAND RD.

WEST LINCOLN AVENUE

℄ SOUTH 162ND STREET

℄ SOUTH CALHOUN ROAD

S. CALHOUN ROAD

℄ SOUTH 170TH STREET

℄ SOUTH COMMERCE DRIVE

SOUTH COMMERCE DRIVE

SW-SW | SE-SW | SW-SE | SE-SE

NW-NW | NE-NW | NW-NE | NE-NE

GN

REVISION DATE 02/22/13 07/31/13	DATE MAR 12,2009	SCALE. FEET 0 200 400	HWY: W. LINCOLN AVENUE	STATE R/W PROJECT NUMBER 2722-11-00	PLAT SHEET 4.02
			COUNTY: WAUKESHA	CONSTRUCTION PROJECT NUMBER	PS&E SHEET 131 E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc040102_rw.dgn
FINAL SUBMITTAL PLAT: FEB 22, 2013

PLOT DATE : 31-JUL-2013 17:30 PLOT BY : kdew PLOT NAME : PLOT SCALE : 400:1

CONST. 2722-11-70 RW W. LINCOLN AVE 2722-11-00 4.02

CITY OF NEW BERLIN

NORTH LIMIT
STA. 20+50.0 ℄ S. 170TH ST.
Y= 371,118.27
X= 501,676.44

SOUTH LIMIT
STA. 20+50.0 ℄ S. 170TH ST.
Y= 370,887.42
X= 501,689.07

BEGIN PROJECT 2722-11-00
STA. 200+50.00 ℄ W. LINCOLN AVE.
Y= 371,007.62
X= 500,949.87

STA. 115+79.51
Y=373,664.41
X=500,937.71
CONC. MON.
WITH BRASS CAP

Y=373,780.30
X=503,551.47
CONC. MON.
WITH BRASS CAP

STA. 200+00.00 =
STA. 89+20.35
Y=371,005.52
X=500,899.91
CONC. MON.
WITH BRASS CAP

STA. 62+75.60
Y=368,360.94
X=500,869.33
CONC. MON.
WITH BRASS CAP

Y=368,474.06
X=503,520.45
CONC. MON.
WITH BRASS CAP

STA. 207+83.51, ℄ W. LINCOLN AVE.=
STA. 20+00.00, ℄ S. 170TH STREET
Y=371,038.40
X=501,682.73

STA. 226+14.69
Y=371,115.24
X=503,512.30
CONC. MON.
WITH BRASS CAP

℄ FRONTAGE ROAD
PROJECT NO. RD-10-02

℄ SOUTH CALHOUN ROAD

℄ SOUTH 170TH STREET

EXIST FRONTAGE ROAD

SOUTH 170TH STREET

SOUTH CALHOUN ROAD

WEST LINCOLN AVENUE

SW-SW

NW-NW

NEW BERLIN INDUSTRIAL PARK
CALHOUN ROAD SUBDIVSION
BLOCK 1

LOT 10
*17000
EJO REAL ESTATE, LLC

℄ WEST LINCOLN AVENUE
LOT 9
A & A MANUFACTURING

TLE SLOPES AND DRIVE

15' PLE DRAINAGE

15' TLE DRIVE

20' PLE DRAINAGE

15' PLE DRIVE & DRAINAGE

A & A MANUFACTURING
LOT 1 & 2
CSM *2448

15' TLE SLOPES AND DRIVE

50' PLE DRAINAGE

10' TLE SLOPES

25' PLE DRAINAGE

*2315
WILLIAM J. SULZMANN, JR.
LOT 19

NEW BERLIN INDUSTRIAL PARK
CALHOUN ROAD SUBDIVISION NO. 2
BLOCK 3

CSM * 503
OLPH, LLC
*16950

45" PLE DRAINAGE

25' TLE DRIVE

10' TLE SLOPES AND DRIVE

LCM FUNDS 14 LINCOLN
LOT 2
CSM * 2911
*16700

*2300
COLUMBIA PIPE & SUPPLY CO.
LOT 1 & 2

50' PLE DRAINAGE

10' TLE DRIVE

40' PLE DRAINAGE

NEW BERLIN INDUSTRIAL PARK
CALHOUN ROAD SUBDIVISION NO. 2
BLOCK 4

*16705

25' TLE SLOPES

NEW BERLIN

UNION PACIFIC R.R.
DOC * 992391

DOC * 673941

DOC * 700718

UNION PACIFIC R.R.
DOC * 1492497

1/4 SECTION LINE

SECTION LINE

N00°48'52"E 2659.15'

N00°39'45"E 2644.76'

N00°50'31"E 2750.34'

N00°49'23"E 2641.20'

N2°24'18"W

N87°35'42"E

2614.69' (TOTAL)

1214.69'

REVISION DATE	DATE MAR 12, 2009	SCALE. FEET	HWY: W. LINCOLN AVENUE	STATE R/W PROJECT NUMBER 2722-11-00	PLAT SHEET 4.03	
02/22/13 07/31/13	GRID FACTOR	0 50 100	COUNTY: WAUKESHA	CONSTRUCTION PROJECT NUMBER 2722-11-70	PS&E SHEET 132	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc040103_rw.dgn
REV SUBMITTAL PLAT: FEB 22, 2013
PLOT DATE : 31-JUL-2013 17:30 PLOT BY : kdew PLOT NAME : PLOT NAME : lc040103_rw PLOT SCALE : 100:1
CONST. 2722-11-70 RW W. LINCOLN AVE 2722-11-00 4.03

4

CITY OF

NEW BERLIN

STA. 115+79.51
Y=373,664.41
X=500,937.71
CONC. MON.
WITH BRASS CAP

STA. 200+00.00 =
STA. 89+20.35
Y=371,005.32
X=500,899.91
CONC. MON.
WITH BRASS CAP

N0°48'52"E
2659.15'

SECTION LINE

LCM FUNDS 14 LINCOLN, LLC
LOT 2
CSM # 2911

STA. 219+18.18, ℄ W. LINCOLN AVE.=
STA. 45+00.00, ℄ S. COMMERCE DR.
Y=371,086.01
X=502,816.40

℄ WEST LINCOLN AVENUE

N2°24'18"W

SE-SW

PART OF LOT F
CSM # 1213

#16400
PARKVIEW LINCOLN AVE, LLC

PART OF LOT F
CSM # 1213

#16700
PARKVIEW LINCOLN AVENUE, LLC

Y=373,780.30
X=503,551.47
CONC. MON.
WITH BRASS CAP

GN

Y=373,896.07
X=506,161.38
CONC. MON.
WITH BRASS CAP

STA. 252+21.05
Y=371,246.81
X=506,115.33
CONC. MON.
WITH BRASS CAP

N0°25'03"E
2750.34'

N0°59'46"E
2649.66'

LOTS G & J
CSM # 1806

#16300
CHRIS HANSEN, INC.

#16700
TEKRA

WETLANDS

214+36.00
40' & 65'
25' TLE
SLOPES AND DRIVE
214+75.00
40' & 65'
127.48'
39.0'
SIGN
FLAG
216+00.00
90'
50' PLE
DRAINAGE
250'
8"W
4
218+50.00
40' & 90'
218+50.00
40' & 65'
25' PLE
DRAINAGE
220+78.71
40' & 65'
222+98.68
40' & 65'
222+98.68
40' & 47'
219.97'
228.71'
N87°35'42"E
5
223+18.68
47' & 65'
25' PLE
DRAINAGE
223+55.00
40' & 65'
36.32'
45'
25' TLE SLOPES
AND DRIVE
224+00.00
40' & 65'
224+00.00
40' & 55'
6
FLAG
15' PLE
DRAINAGE
225+80.00
55'
180.0'
226+29.75
85'
57.54'
226+29.82
93'
226+54.82
85' & 93'
25.0'
570.25'
7
45' PLE
DRAINAGE
MH
N87°06'23"E
226+29.37
40'
2421.05'
2606.35' (TOTAL)
226+14.71
40'
168'
171.32'
227+82.03
40' & 85'
258.02'
45' PLE
DRAINAGE
16
#16255-16351
LINCOLN
SERVICE CTR
226+11.58
80'
45' PLE
DRAINAGE
226+11.39
85'
215+00
1500'
215+80.00
80'
40' PLE
DRAINAGE
298.19'
218+78.19
80'
19
#16705
68.01'
150.08'
215+15.00
100'
N87°35'42"E
550.01'
PARCEL 1
CSM # 5569
LINCOLN-NEW BERLIN PROPERTY, LLC
216
218
220
222
224
226
228
80'
N87°35'42"E
222+58.19
40' & 50'
2614.69' (TOTAL)
280'
221+00.00
60'
221+00.00
75'
100.0'
126.82'
35' PLE
DRAINAGE
18
#16555
ANDERSON GROUP
PARCEL A
CSM # 954
ANDERSEL, LLC
FLAG
58.19'
222+00.00
50' & 60'
222+58.19
40' & 65'
25' PLE
DRAINAGE
356.52'
66.81'
223+25.00
65' & 115'
219+73.18
75'
43+70.00
40' & 55'
70'
55'
17
#16465
MORGAN-WIGHTMAN
SUPPLY CO.
PARCEL 1
CSM # 3419
CENTERPOINT PROPERTIES TRUST
205'
75' PLE
DRAINAGE
225+30.00
115'
225+60.00
80'
46.40'
51.58'
50'
16
#16255-16351
LINCOLN
SERVICE CTR
PARCEL 1
CSM # 3569
GUARDIAN LIFE INSURANCE
COMPANY OF AMERICA
42
44
867.82'
N0°24'17"W
NE-NW
N0°39'45"E
2644.76'
1/4 SECTION LINE
N0°14'26"E
2651.29'
SECTION LINE

SOUTH LIMIT
STA. 43+50.0 ℄ S. COMMERCE ST.
Y= 502,822.70
X= 370,936.14

℄ SOUTH COMMERCE DRIVE

STA. 62+75.60
Y=368,360.94
X=500,869.33
CONC. MON.
WITH BRASS CAP

Y=368,474.06
X=503,520.45
CONC. MON.
WITH BRASS CAP

Y=368,587.76
X=506,150.58
CONC. MON.
WITH ALUMINUM CAP

REVISION DATE 02/22/13 07/31/13	DATE MAR 12, 2009	SCALE. FEET 0 50 100	HWY: W. LINCOLN AVENUE	STATE R/W PROJECT NUMBER 2722-11-00	PLAT SHEET 4.04
	GRID FACTOR		COUNTY: WAUKESHA	CONSTRUCTION PROJECT NUMBER 2722-11-70	PS&E SHEET 133 E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc040104_rw.dgn
REV SUBMITTAL PLAT: FEB 22, 2013

PLOT DATE : 31-JUL-2013 17:30 PLOT BY : kdew PLOT NAME : PLOT NAME : lc040104_rw PLOT SCALE : 100:1

CONST. 2722-11-70 RW W. LINCOLN AVE 2722-11-00 4.04

4

T 06 N R 20 E 03 — Y=373,780.30 X=503,551.47 CONC. MON. WITH BRASS CAP

T 06 N R 20 E 03 02 03 02 — Y=373,896.07 X=506,161.38 CONC. MON. WITH BRASS CAP

T 06 N R 20 E 03 02 10 11 — STA. 252+21.05 Y=371,246.81 X=506,115.33 CONC. MON. WITH BRASS CAP

T 06 N R 20 E 03 03 10 10 — STA. 226+14.69 Y=371,115.24 X=503,512.30 CONC. MON. WITH BRASS CAP

T 06 N R 20 E 10 — Y=368,474.06 X=503,520.45 CONC. MON. WITH BRASS CAP

T 06 N R 20 E 10 11 10 11 — Y=368,587.76 X=506,150.58 CONC. MON. WITH ALUMINUM CAP

N00°50'03"E 2750.34'

N00°39'45"E 2644.76'

N00°59'46"E 2649.66'

N00°14'26"E 2659.29'

CITY OF NEW BERLIN

SW-SE

NW-NE

NEW BERLIN

SECTION LINE

1/4 SECTION LINE

NORTH LIMIT
STA. 61+95.0 ℄ S. 162ND ST.
Y= 504,628.04
X= 371,366.88

SOUTH LIMIT
STA. 57+73.0 ℄ S. 162ND ST.
Y= 504,665.10
X= 370,947.46

℄ WEST LINCOLN AVENUE
LOT A
CSM # 374

WEST LINCOLN AVENUE

℄ SOUTH 162ND STREET

℄ SOUTH 162ND STREET

GN

PARCEL 1
CSM # 3815
#16150
W. LINCOLN AVENUE
COMPANY, LLC

PARCEL 2
CSM # 5714
#15700
NEW BERLIN
INVESTORS, LLC

#16300
CHRIS HANSEN, INC.

#16230
DS & HB, LLC

#16255-16351
PARCEL 1
CSM # 3569
GUARDIAN LIFE INSURANCE
COMPANY OF AMERICA

#16155
J B KAIA CO.
PARCEL A
CSM # 392

#15905
GERALDINE M. VACLAV
BY-PASS TRUST
PARCEL B
CSM # 392

C & S REAL ESTATE
HOLDINGS, LLC

LOT 1, BLOCK 5
NEW BERLIN
INDUSTRIAL PARK
CALHOUN ROAD
SUBDIVISION NO. 2

DRAINAGE CHANNEL CITY OF NEW BERLIN

DEER CREEK

WETLANDS

POND

EXCEPTION TO
NET CENTERLINE
STA 233+40.29 TO
STA 233+62.56

ABANDONED COAL AND FO

CURVE 05
PI = 58+19.14
Y = 370,990.01
X = 504,647.08
△ = 17°45'11"
D = 09°36'15"
R = 596.57'
T = 93.17'
L = 184.85'
EXT = 07.23'
PC = 57+25.97
PT = 59+10.82

CURVE 04
PI = 54+92.67
Y = 370,683.12
X = 504,762.72
△ = 17°45'11"
D = 09°36'15"
R = 596.57'
T = 93.17'
L = 184.85'
EXT = 07.23'
PC = 53+99.50
PT = 55+84.35

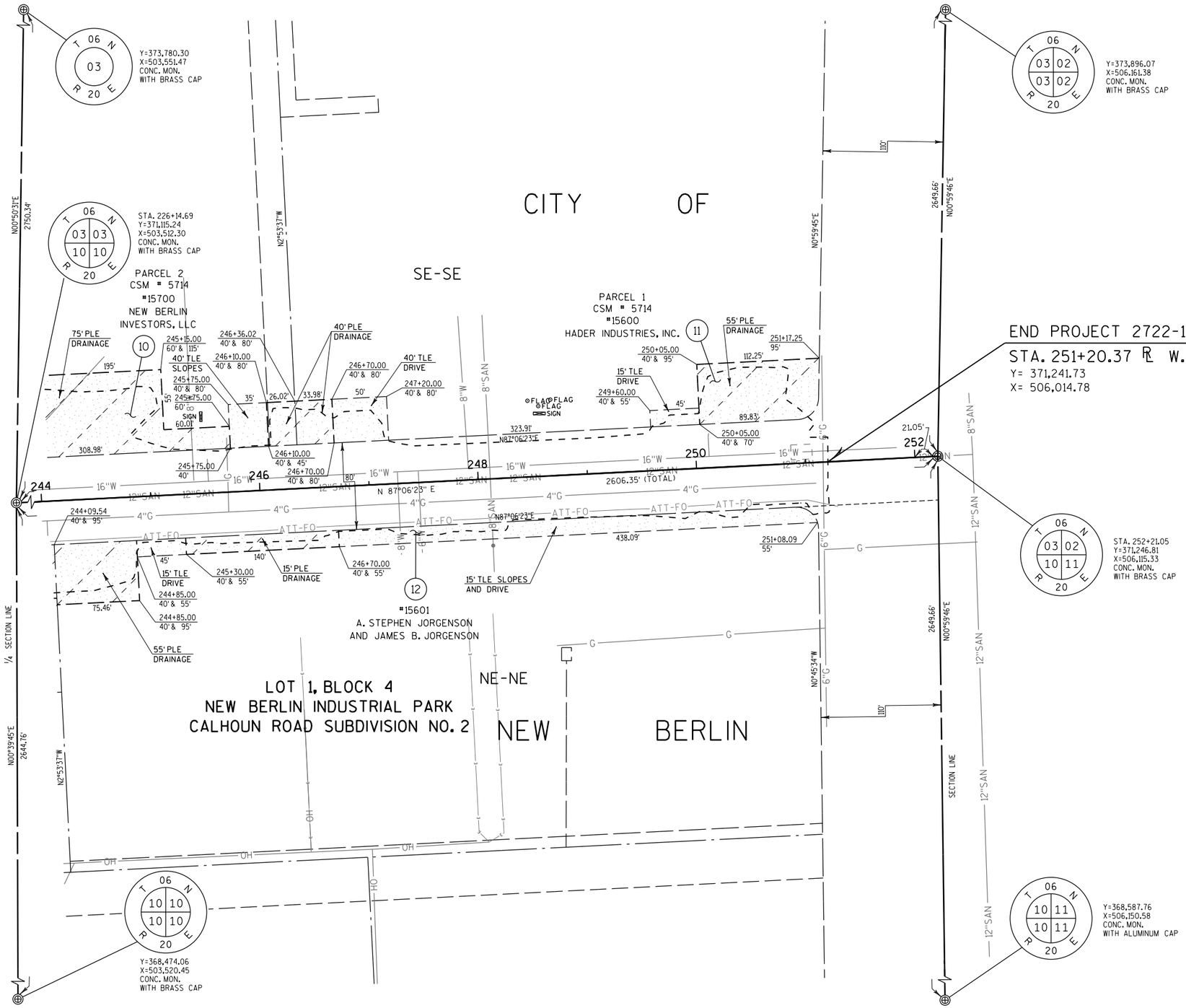
PC CURVE 05

PI CURVE 05

PT CURVE 05

PT CURVE 04

REVISION DATE 02/22/13 07/31/13	DATE MAR 12, 2009	SCALE. FEET 0 50 100	HWY: W. LINCOLN AVENUE	STATE R/W PROJECT NUMBER 2722-11-00	PLAT SHEET 4.05
	GRID FACTOR		COUNTY: WAUKESHA	CONSTRUCTION PROJECT NUMBER 2722-11-70	PS&E SHEET 134 E



REVISION DATE	DATE MAR 12, 2009	SCALE. FEET	HWY: W. LINCOLN AVENUE	STATE R/W PROJECT NUMBER 2722-11-00	PLAT SHEET 4.06	
02/22/13 07/31/13	GRID FACTOR	0 50 100	COUNTY: WAUKESHA	CONSTRUCTION PROJECT NUMBER 2722-11-70	PS&E SHEET 135	E

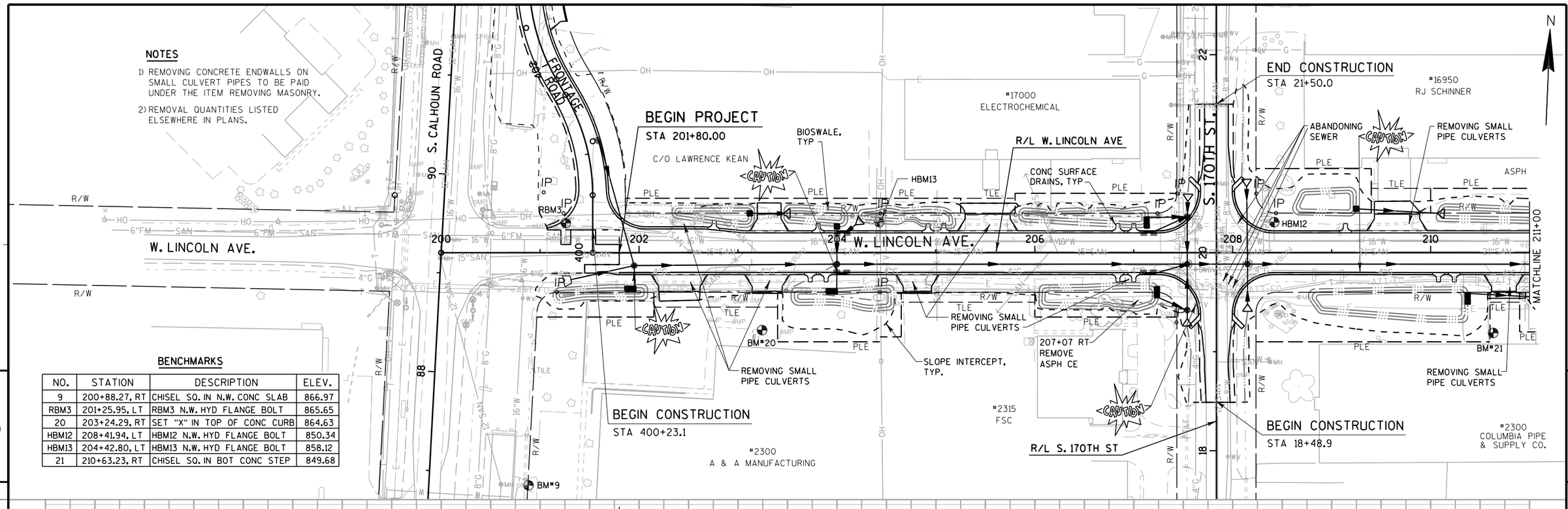
FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc040106_rw.dgn
REV SUBMITTAL PLAT: FEB 22, 2013
PLOT DATE : 31-JUL-2013 17:30 PLOT BY : kdew PLOT NAME : PLOT NAME : lc040106_rw PLOT SCALE : 100:1
CONST. 2722-11-70 RW W. LINCOLN AVE 2722-11-00 4.06

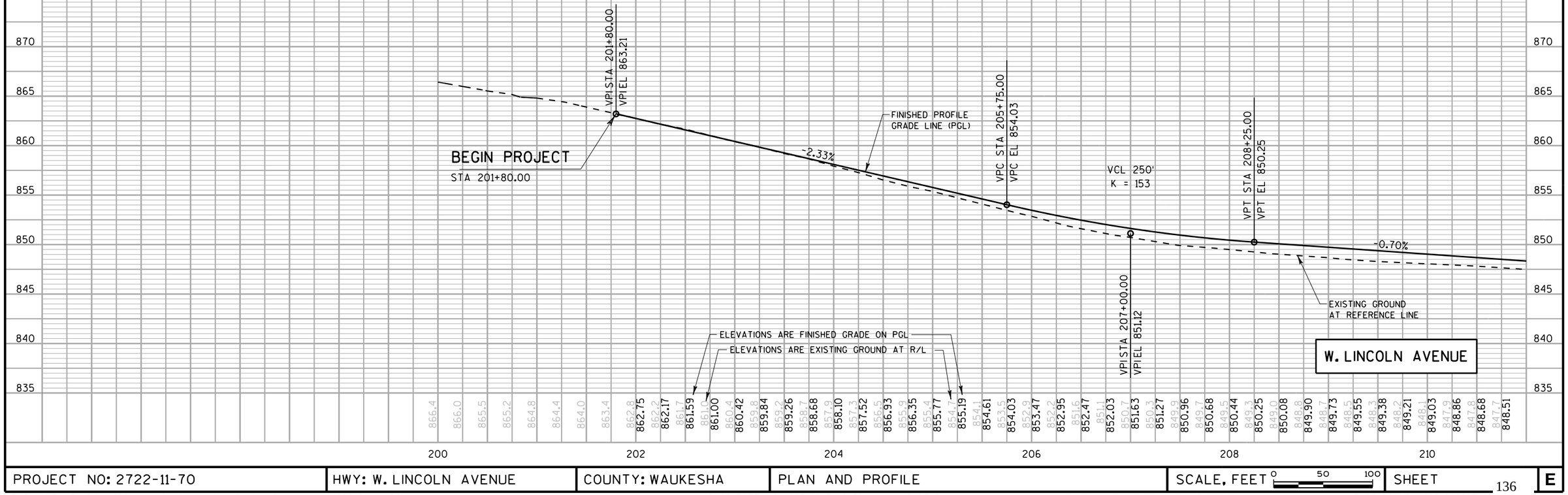
NOTES

1) REMOVING CONCRETE ENDWALLS ON SMALL CULVERT PIPES TO BE PAID UNDER THE ITEM REMOVING MASONRY.
2) REMOVAL QUANTITIES LISTED ELSEWHERE IN PLANS.

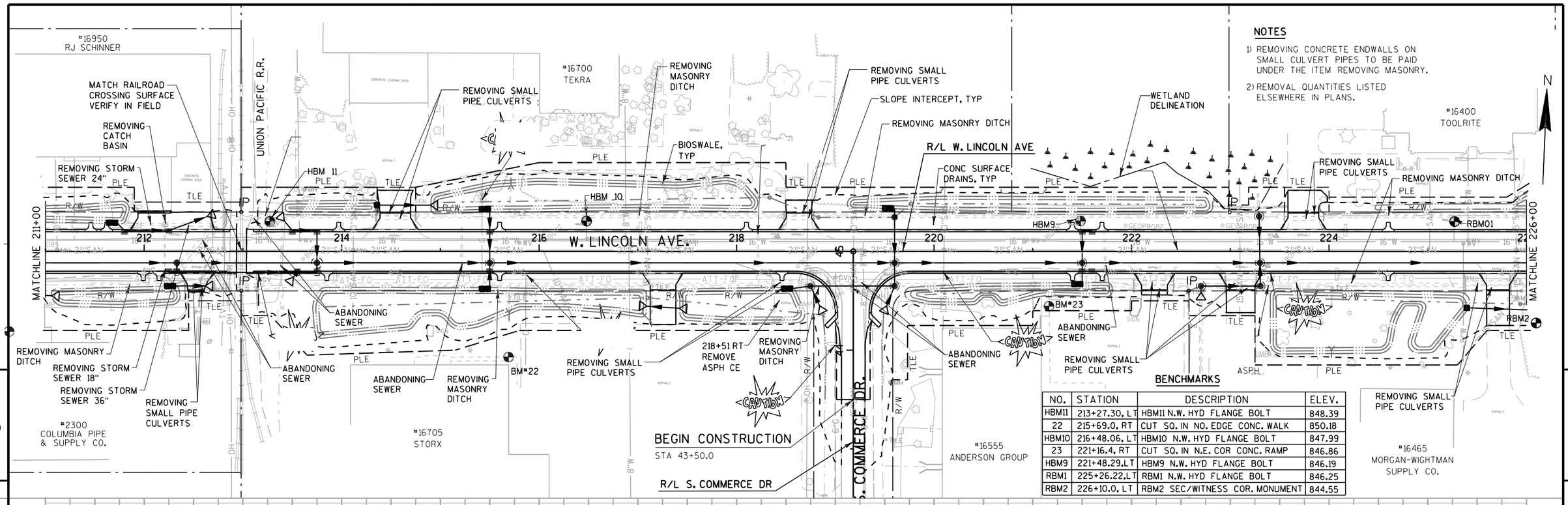
BENCHMARKS

NO.	STATION	DESCRIPTION	ELEV.
9	200+88.27, RT	CHISEL SQ. IN N.W. CONC SLAB	866.97
RBM3	201+25.95, LT	RBM3 N.W. HYD FLANGE BOLT	865.65
20	203+24.29, RT	SET "X" IN TOP OF CONC CURB	864.63
HBM12	208+41.94, LT	HBM12 N.W. HYD FLANGE BOLT	850.34
HBM13	204+42.80, LT	HBM13 N.W. HYD FLANGE BOLT	858.12
21	210+63.23, RT	CHISEL SQ. IN BOT CONC STEP	849.68



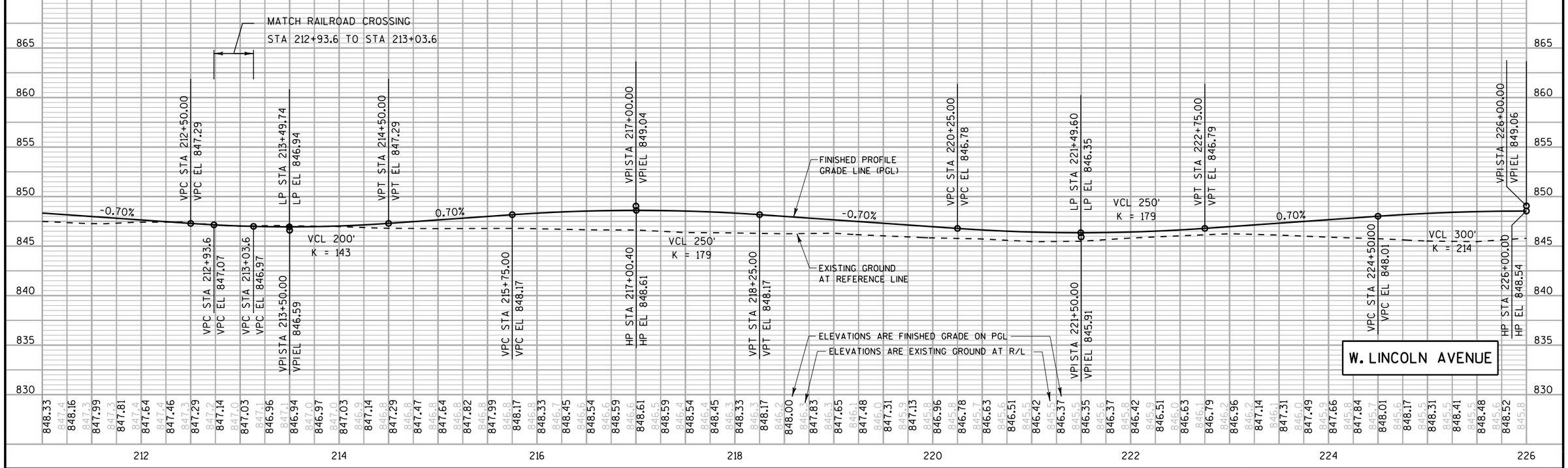


PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	PLAN AND PROFILE	SCALE, FEET 0 50 100	SHEET 136	E



BENCHMARKS

NO.	STATION	DESCRIPTION	ELEV.
HBM11	213+27.30, LT	HBM11 N.W. HYD FLANGE BOLT	848.39
22	215+69.0, RT	CUT SQ. IN NO. EDGE CONC. WALK	850.18
HBM10	216+48.06, LT	HBM10 N.W. HYD FLANGE BOLT	847.99
23	221+16.4, RT	CUT SQ. IN N.E. COR CONC. RAMP	846.86
HBM9	221+48.29,LT	HBM9 N.W. HYD FLANGE BOLT	846.19
RBM1	225+26.22,LT	RBM1 N.W. HYD FLANGE BOLT	846.25
RBM2	226+10.0, LT	RBM2 SEC/WITNESS COR. MONUMENT	844.55



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	PLAN AND PROFILE	SCALE, FEET 0 50 100	SHEET 137	E

NOTES

1) REMOVING CONCRETE ENDWALLS ON SMALL CULVERT PIPES TO BE PAID UNDER THE ITEM REMOVING MASONRY.
2) REMOVAL QUANTITIES LISTED ELSEWHERE IN PLANS.

*16300
CHR HANSON

*16230
GLASS DOCTOR

*16150
SCHROEDER SOLUTIONS

*16211
TAYLOR DYNAMETER

*16255-16351
LINCOLN SERVICE CTR

*16155
BSI SCALE

W. LINCOLN AVE.

R/L W. LINCOLN AVE

R/L S. 162ND ST

S. 162ND ST

DEER CREEK

ASPH

END CONSTRUCTION
STA 61+95.0

BEGIN CONSTRUCTION
STA 57+73.0

MATCHLINE 226+00

MATCHLINE 241+00

REMOVING MASONRY DITCH

REMOVING SMALL PIPE CULVERTS

SLOPE INTERCEPT, TYP

ABANDONING SEWER

BIOSWALE, TYP

EXCEPTION TO NET CENTERLINE STA 233+40.29 TO STA 233+62.56

CONC SURFACE DRAIN, TYP

WETLAND DELINEATION, TYP.

CAUTION

RBM2

HBM7

BM*24

BM*25

BM*26

BM*27

BENCHMARKS

NO.	STATION	DESCRIPTION	ELEV.
24	227+60.36, LT	CUT SQ. IN COR. OF BACK OF CURB	845.84
25	232+49.46, LT	CUT SQ. N.E. COR CONC. PAD OF MH	846.58
26	236+46.79, RT	CUT SQ. IN N.E. COR. CONC. WALK	848.36
HBM7	237+71.60, LT	HBM7 N.W. HYD FLANGE BOLT	847.88
27	239+94.76, LT	CUT SQ. IN S.W. COR. CONC. WALK	849.91

VPI STA 226+00.00
VPI EL 849.06

HP STA 226+00.00
HP EL 848.54

VCL 300'
K = 214

VPT STA 227+50.00
VPT EL 848.01

FINISHED PROFILE GRADE LINE (PGL)

EXISTING GROUND AT REFERENCE LINE

-0.70%

VPC STA 231+68.00
VPC EL 845.09

VCL 164'
K = 117

LP STA 232+50.00
LP EL 844.80

VPT STA 232+50.00
VPT EL 844.51

VPI STA 233+32.00
VPI EL 845.09

VPI STA 233+32.30
VPI EL 845.09

VPI STA 233+70.59
VPI EL 845.08

NET EXCEPTION OF CENTERLINE
STA 233+32.30 TO STA 233+70.59

0.70%

-0.03%

0.70%

TWIN CELL 62"x120" BOX CULVERT
P-67-0742
INV. EL. 839.0

ELEVATIONS ARE FINISHED GRADE ON PGL

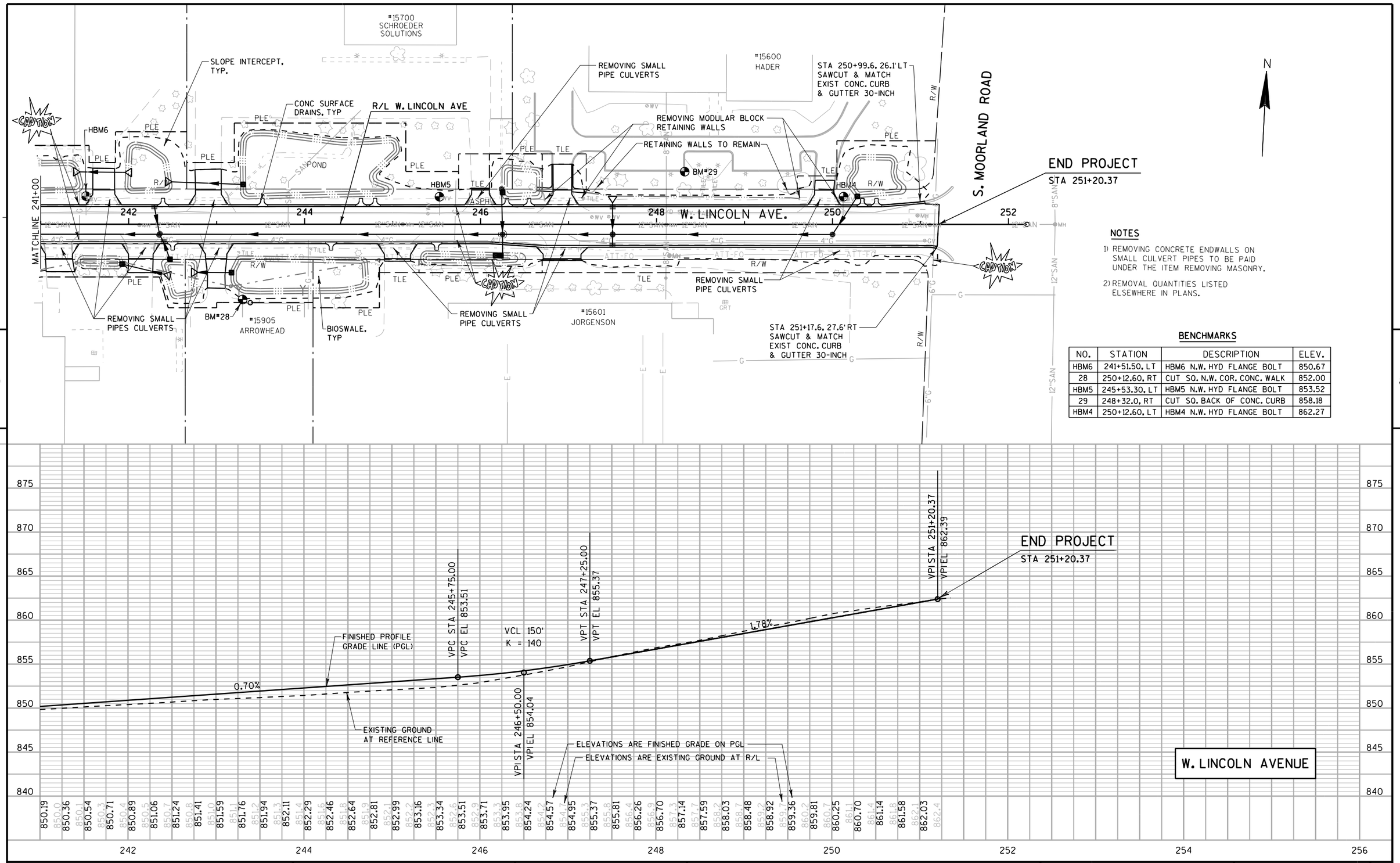
ELEVATIONS ARE EXISTING GROUND AT R/L

226	228	230	232	234	236	238	240
848.54	848.01	847.84	847.66	847.49	847.31	847.14	846.96
845.9	846.2	846.0	845.9	845.8	845.7	845.6	846.2
848.52	846.79	846.61	846.44	846.26	846.09	845.91	845.74
846.0	845.5	845.4	845.6	845.8	846.0	846.1	846.2
848.48	844.83	844.80	844.83	844.91	845.04	845.09	845.11
846.2	845.6	845.6	845.4	845.3	845.2	845.1	845.3
848.41	844.91	845.04	845.21	845.39	845.46	845.64	845.81
846.3	845.7	845.9	846.0	846.2	845.7	846.0	846.3
848.31	845.04	845.29	845.46	845.56	845.74	845.91	846.09
846.3	845.9	845.5	845.7	846.2	846.2	846.1	846.0
848.17	846.61	846.51	846.34	846.16	845.99	845.81	846.09
846.3	846.6	846.8	846.5	846.4	846.3	846.0	845.9
848.01	846.44	846.69	846.86	847.04	847.21	847.39	847.56	847.74	847.91	848.09	848.26	848.44	848.61	848.79	848.96	849.14	849.31	849.49	849.66	849.84	850.01
846.2	845.8	846.9	847.0	847.2	847.4	847.6	847.7	847.8	847.9	848.0	848.2	848.3	848.5	848.6	848.8	848.9	849.1	849.3	849.5	849.7	849.8

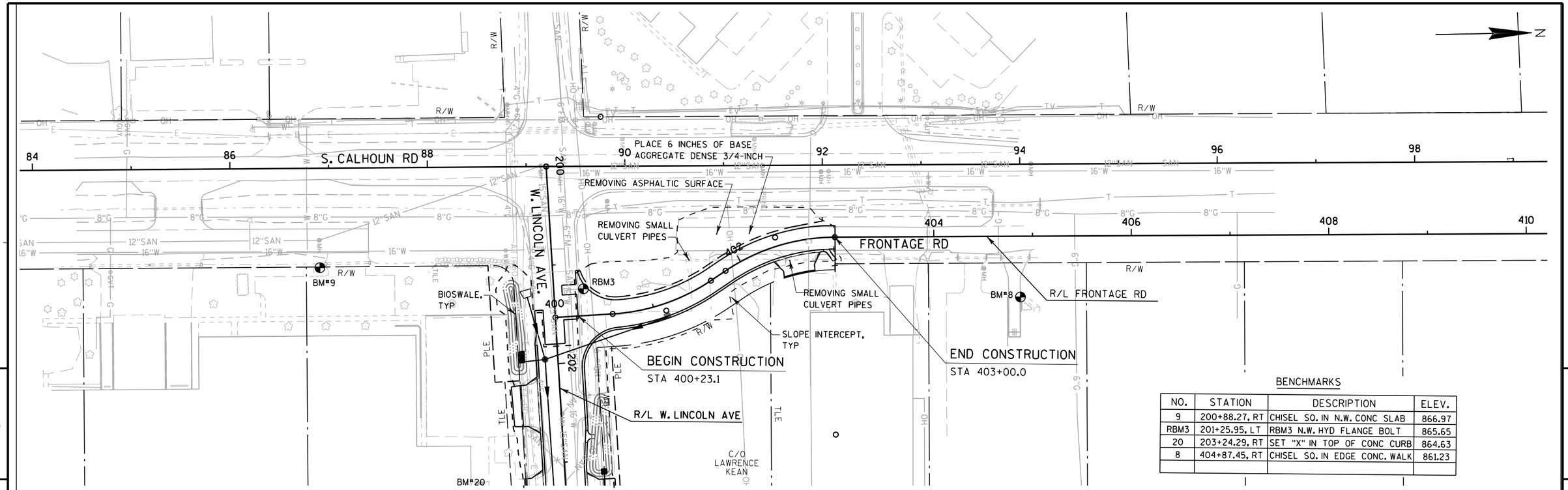
W. LINCOLN AVENUE

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	PLAN AND PROFILE	SCALE, FEET 0 50 100	SHEET	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc050103_pp.dgn
PLOT DATE : 01-OCT-2013 18:00
PLOT BY : scook
PLOT NAME : PLOT NAME : lc050103_pp
PLOT SCALE : 100.000003:1
WISDOT/CADDS SHEET 44

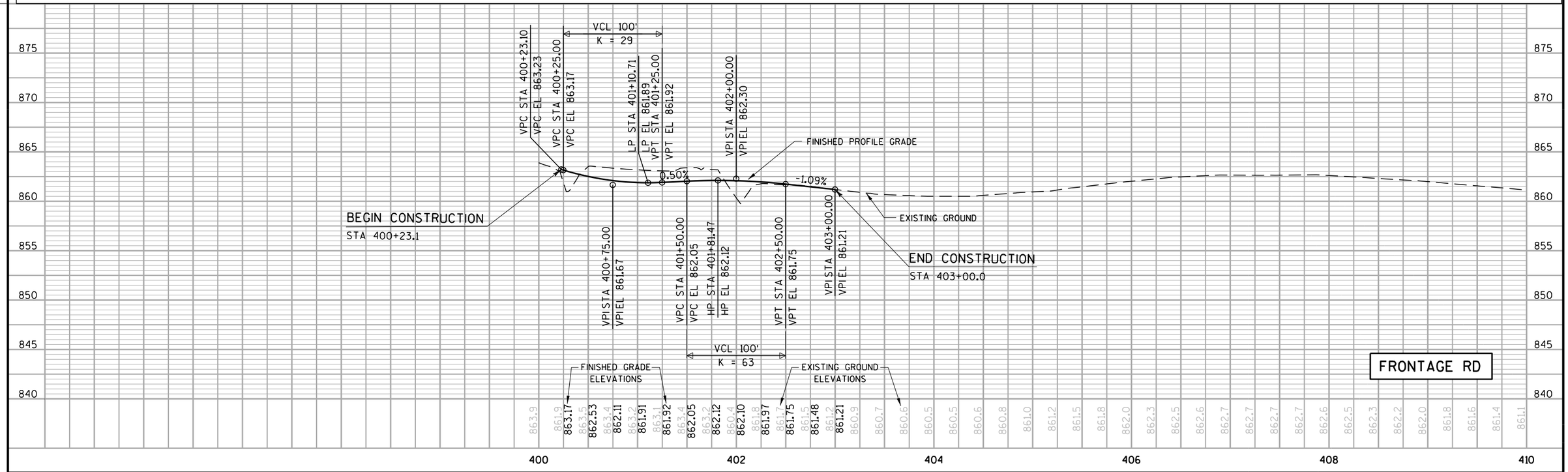


PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	PLAN AND PROFILE	SCALE, FEET 0 50 100	SHEET 139	E



BENCHMARKS

NO.	STATION	DESCRIPTION	ELEV.
9	200+88.27, RT	CHISEL SQ. IN N.W. CONC SLAB	866.97
RBM3	201+25.95, LT	RBM3 N.W. HYD FLANGE BOLT	865.65
20	203+24.29, RT	SET "X" IN TOP OF CONC CURB	864.63
8	404+87.45, RT	CHISEL SQ. IN EDGE CONC. WALK	861.23



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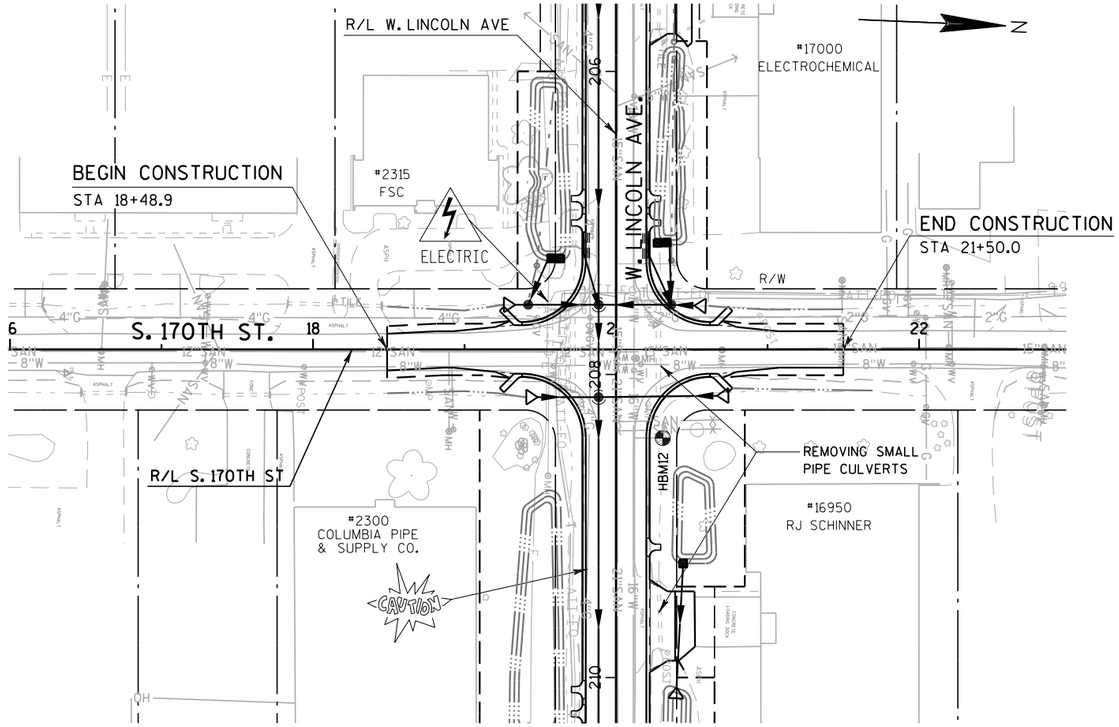
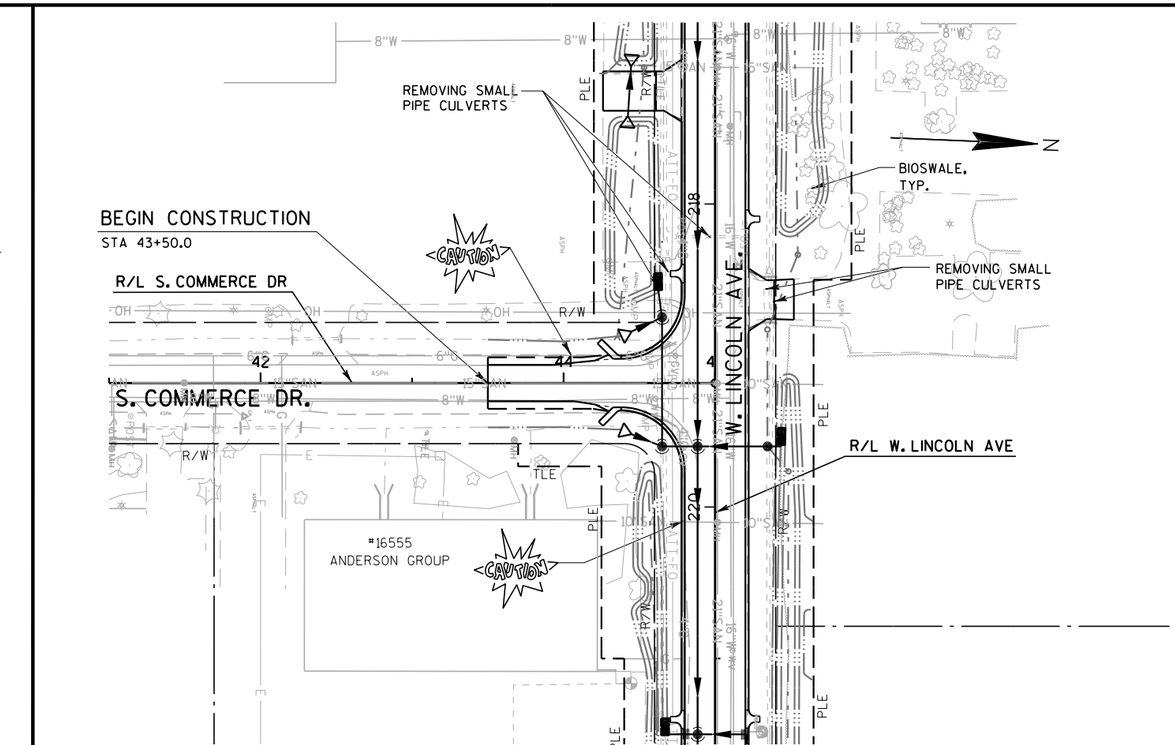
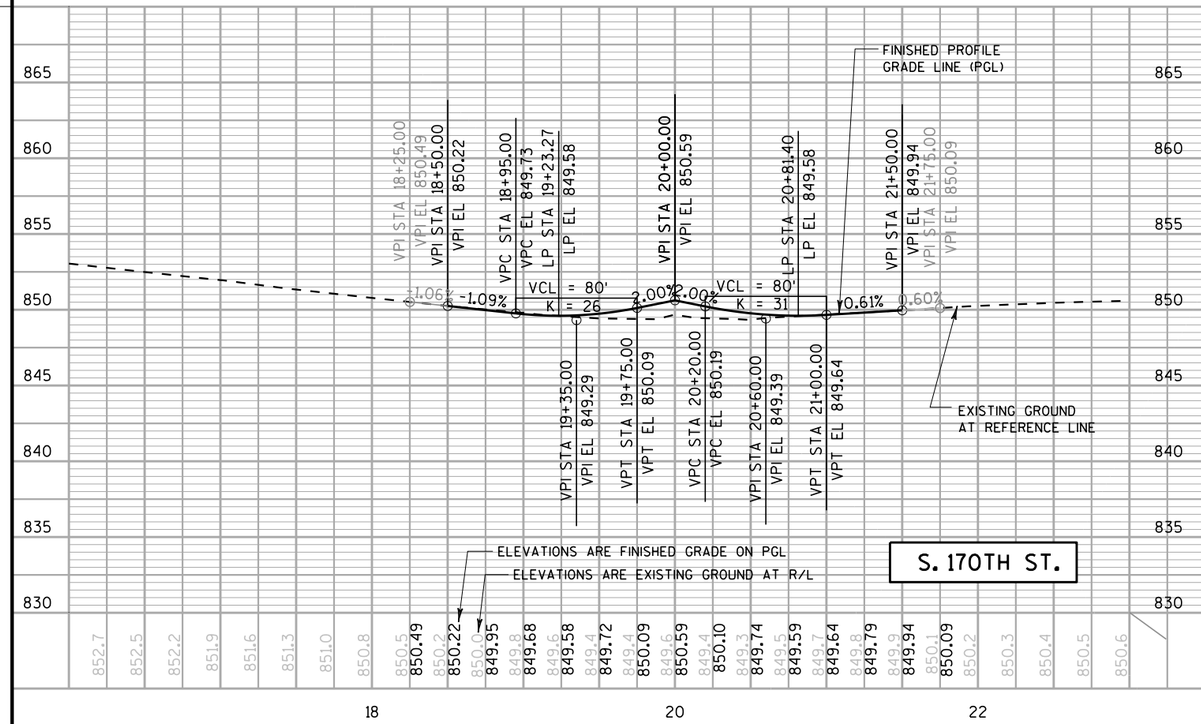
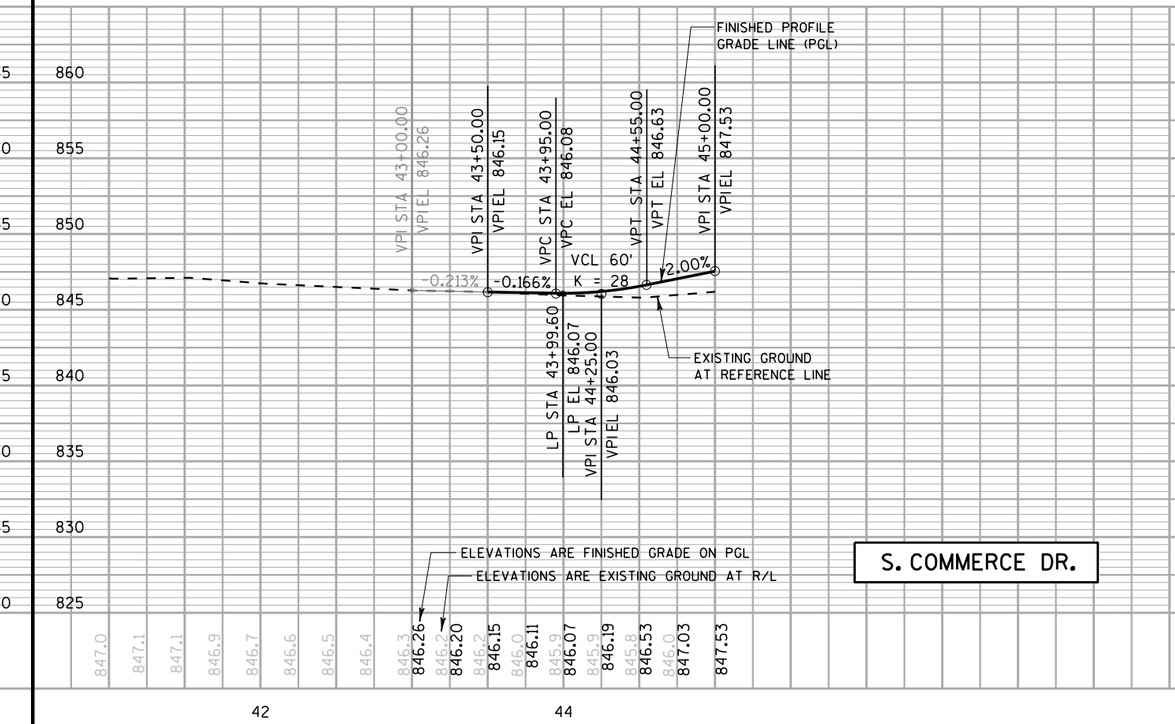
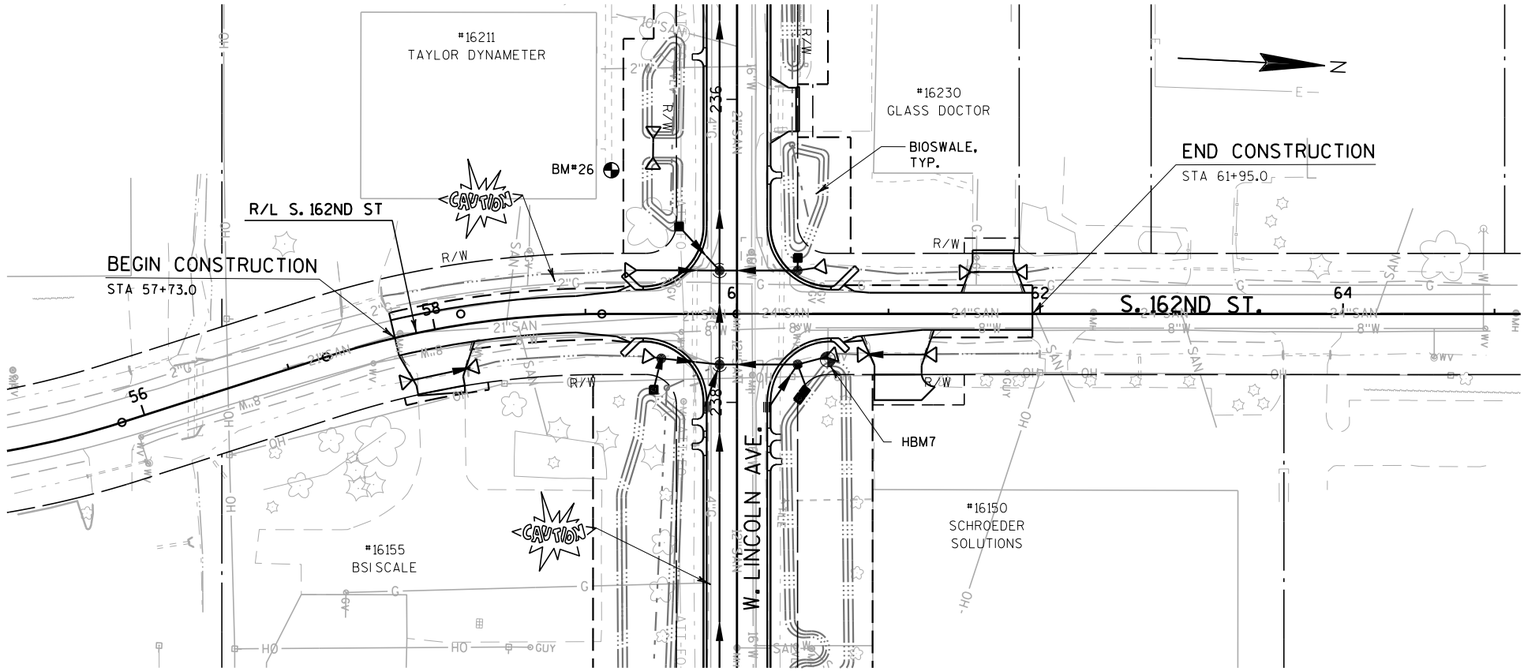


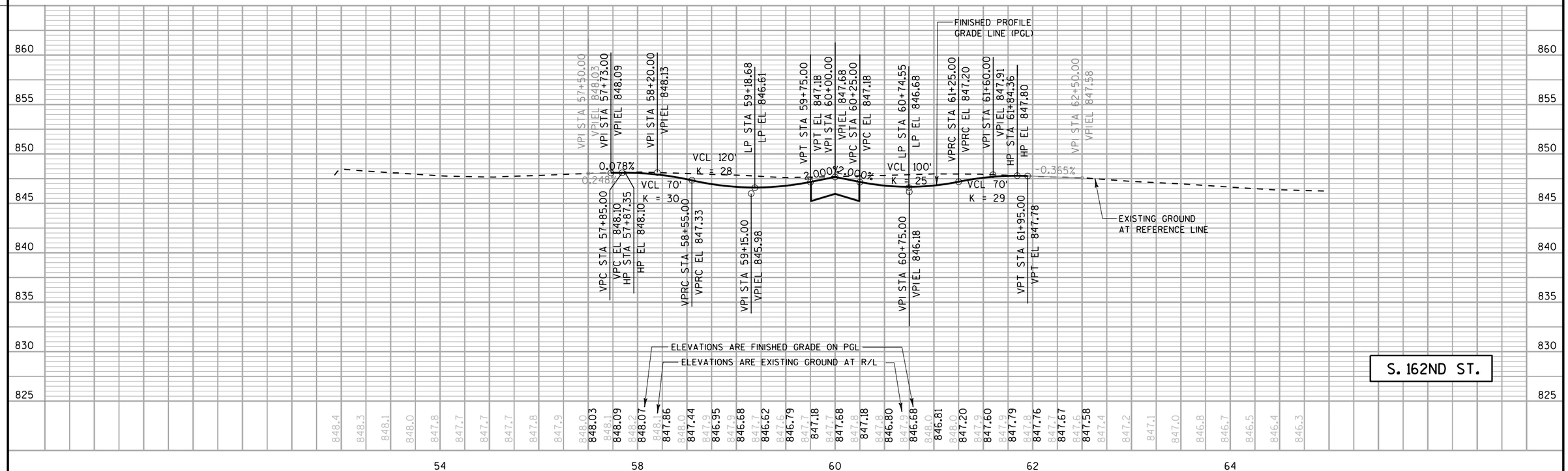






PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	PLAN AND PROFILE	SCALE, FEET 0 50 100	SHEET 141	E





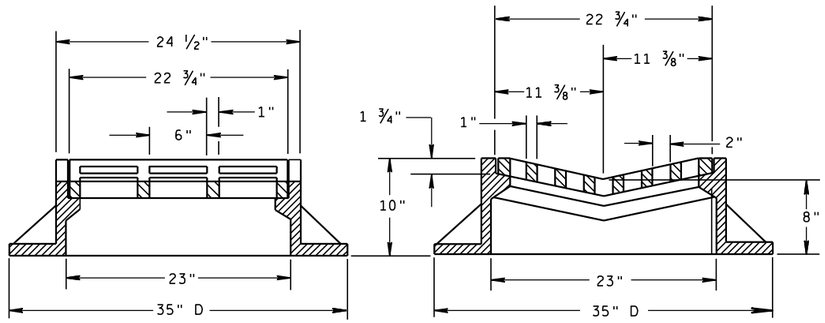
PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	PLAN AND PROFILE	SCALE, FEET 0 50 100	SHEET 142	E

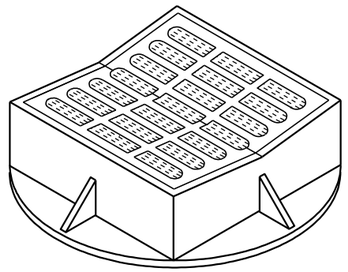
FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc050106_pp.dgn PLOT DATE : 01-OCT-2013 18:01 PLOT BY : scook PLOT NAME : PLOT NAME : lc050106_pp PLOT SCALE : 100.000003:1
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

08A05-18B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-18D	INLET COVER, TYPE BW, Z MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08B10-01	MANHOLES 3X3-FT, 4X4-FT, 5X5-FT AND 6X6-FT
08C06-01	INLETS 3-FT AND 4-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
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
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F05-01	CLASS "B" BEDDING FOR CULVERT PIPE OR STORM SEWER
08F06-04	REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN
13B01-10	PAVEMENT DETAILS FOR RAILROAD APPROACH
14B07-13A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-01A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B29-01	SAFETY EDGE
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-02	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C09-09A	SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS
15C12-03	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D20-02	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-02	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

6

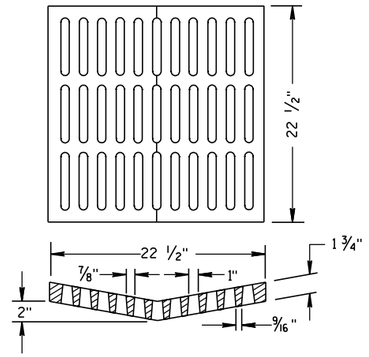




TYPE "B"

(APPROXIMATE WEIGHT 405 LBS.)

FRAME..... 294 LBS.
GRATE..... 111 LBS.

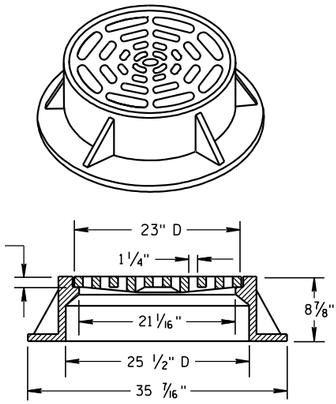


ALTERNATIVE GRATE FOR TYPE "B" COVER

(APPROXIMATE GRATE WEIGHT 134 LBS.)

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.

NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

(APPROXIMATE WEIGHT 259 LBS.)

FRAME..... 152 LBS.
GRATE..... 107 LBS.

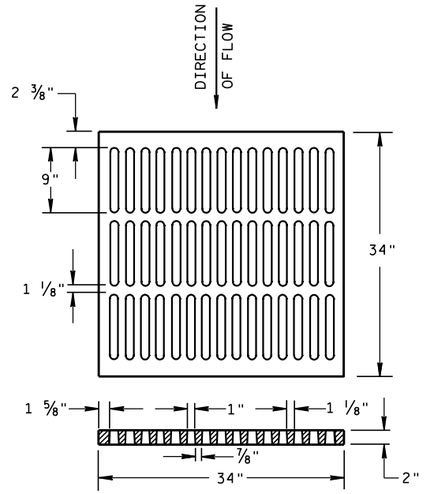
GENERAL NOTES

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.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

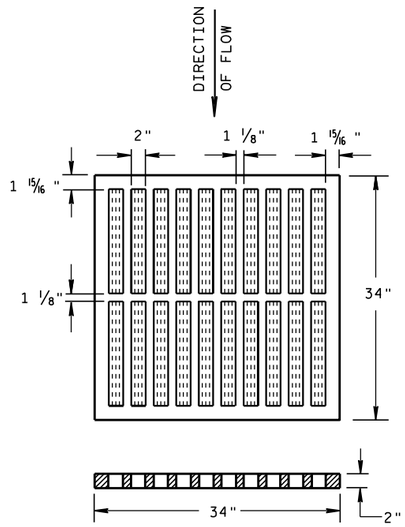


ALTERNATIVE TYPE "MS"

(APPROXIMATE GRATE WEIGHT 329 LBS.)

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED

NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

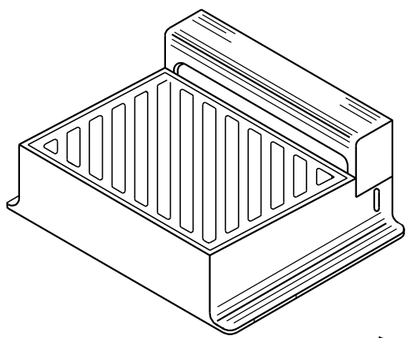


TYPE "MS"

(APPROXIMATE GRATE WEIGHT 268 LBS.)

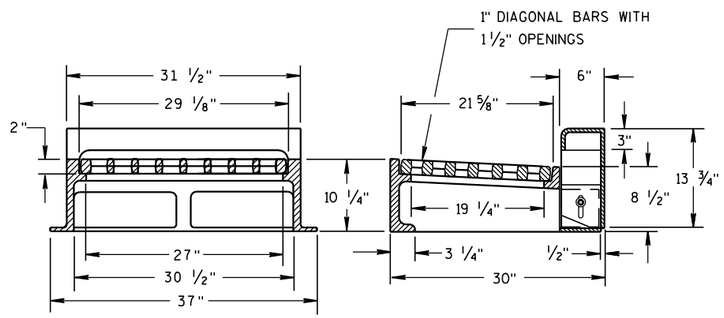
USE ON FREEWAYS AND EXPRESSWAYS

NOTED AS TYPE MS ON DRAINAGE TABLE



DIRECTION OF FLOW

DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

(APPROXIMATE WEIGHT 648 LBS.)

FRAME..... 355 LBS.
GRATE..... 156 LBS.
CURB BOX..... 137 LBS.

INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012 DATE

/S/ Jerry H. Zaas
ROADWAY STANDARDS ENGINEER

144

ENT

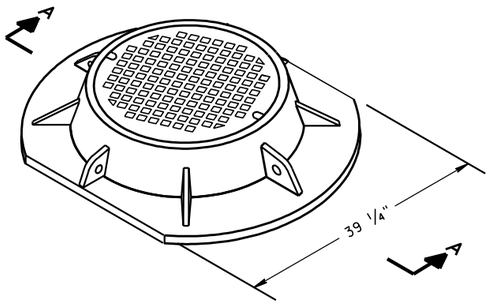
FHWA

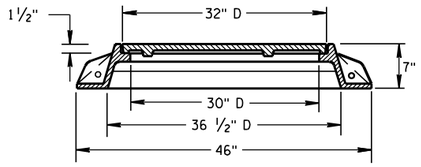
6

S.D.D. 8 A 5-18b

6

S.D.D. 8 A 5-18b



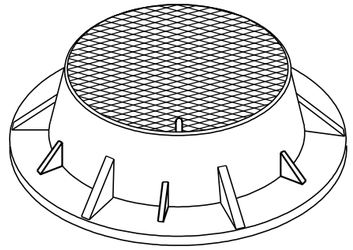


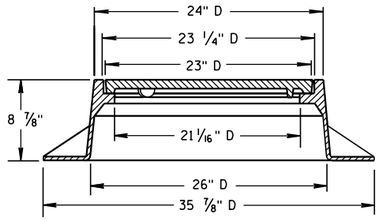
SECTION A-A

TYPE "K"

(APPROXIMATE WEIGHT 439 LBS.)

FRAME.....216 LBS.
LID.....223 LBS.

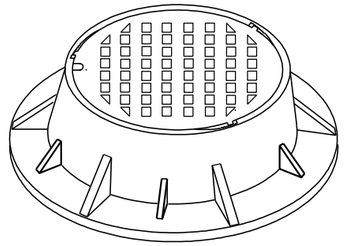


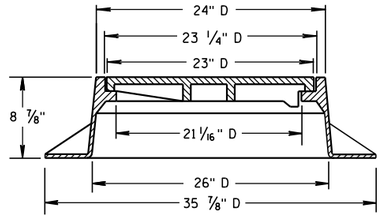


TYPE "J"

(APPROXIMATE WEIGHT 267 LBS.)

FRAME.....152 LBS.
LID.....115 LBS.





TYPE "J" SPECIAL

TYPE "B" NON-ROCKING SELF-SEAL LID

(APPROXIMATE WEIGHT 267 LBS.)

FRAME.....158 LBS.
LID.....109 LBS.

(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

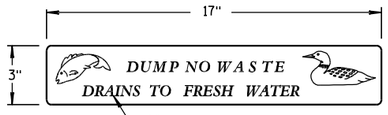
GENERAL NOTES

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.

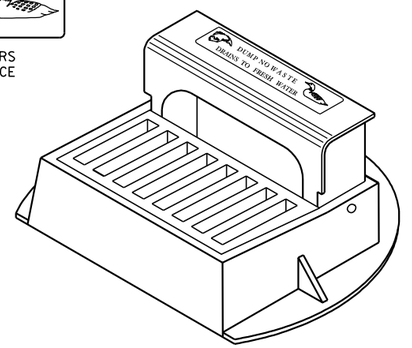
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

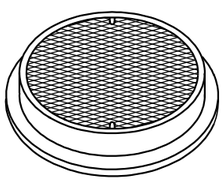
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

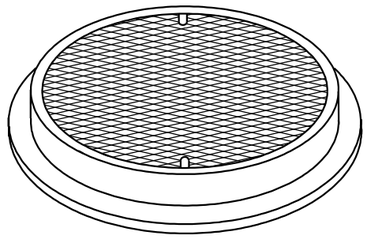
THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

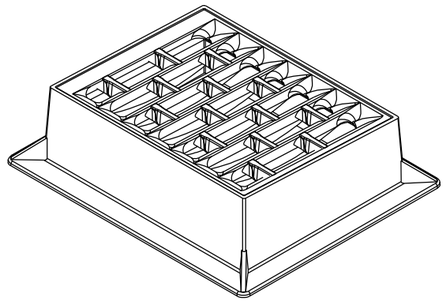


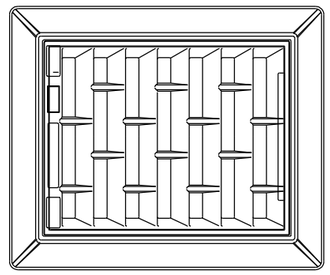
LOGO DETAIL

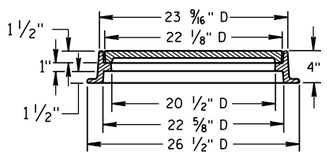








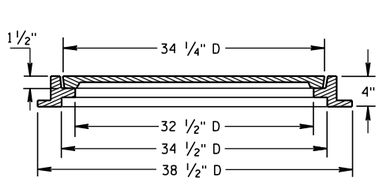




TYPE "L"

(APPROXIMATE WEIGHT 158 LBS.)

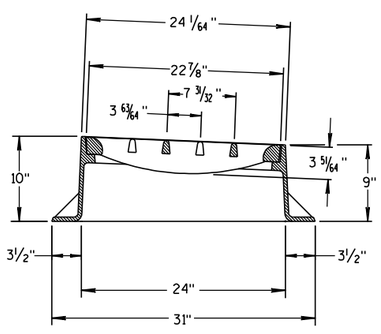
FRAME.....81 LBS.
LID.....77 LBS.

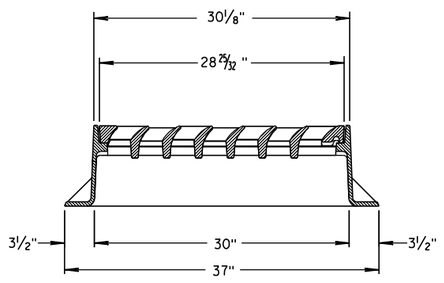


TYPE "M"

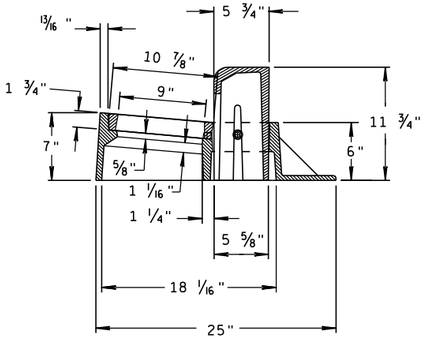
(APPROXIMATE WEIGHT 377 LBS.)

FRAME..... 125 LBS.
LID..... 252 LBS.





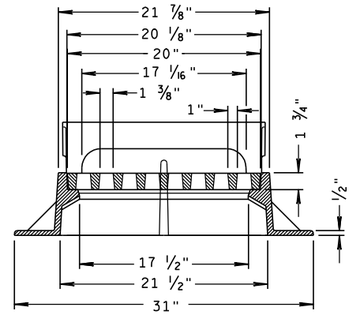
INLET COVER TYPE "BW"



INLET COVER TYPE "Z"

(APPROXIMATE WEIGHT 344 LBS.)

FRAME.....206 LBS.
GRATE..... 46 LBS.
CURB BOX..... 92 LBS.



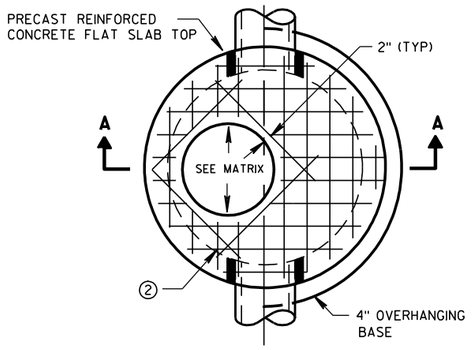
INLET COVERS, TYPE BW, Z
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

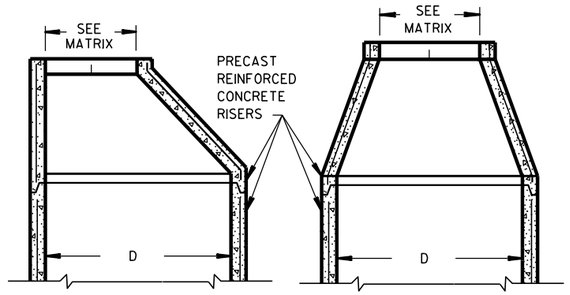
APPROVED
6/5/2012
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

6
S.D.D. 8 A 5-18d

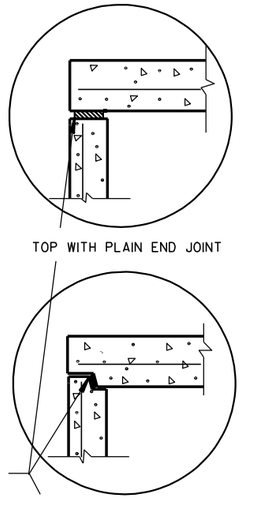


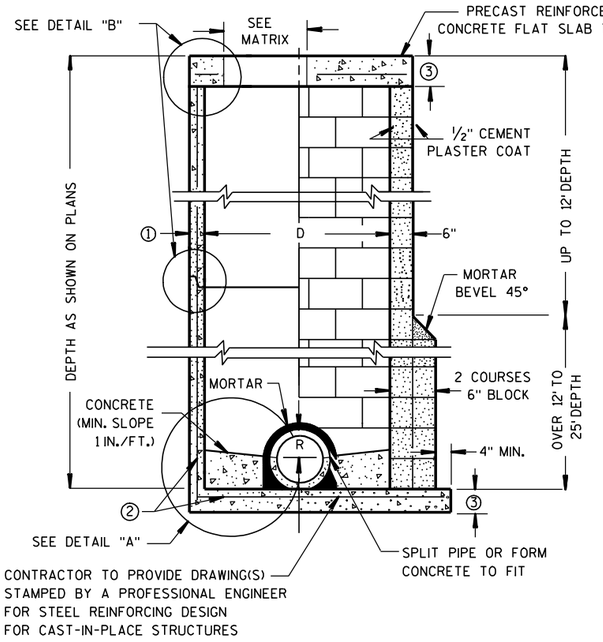
PLAN VIEW CIRCULAR OPENING



OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

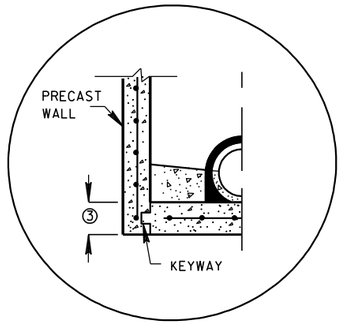
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



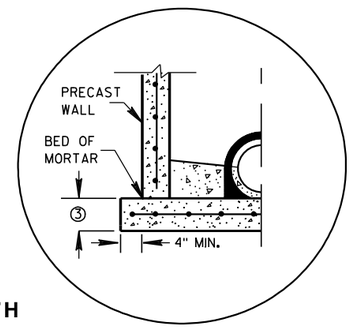


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

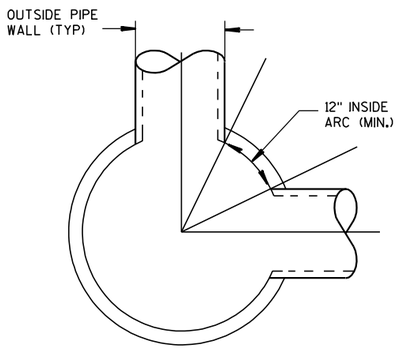


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

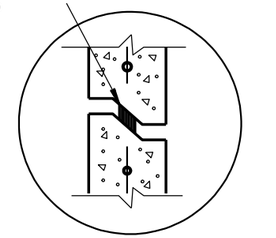


SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"



DETAIL "B"

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 ½" 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 PERMITED 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

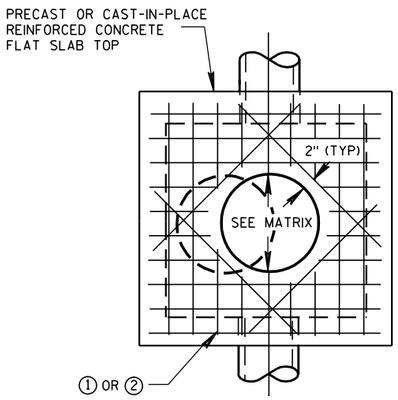
APPROVED

6/5/2012
DATE

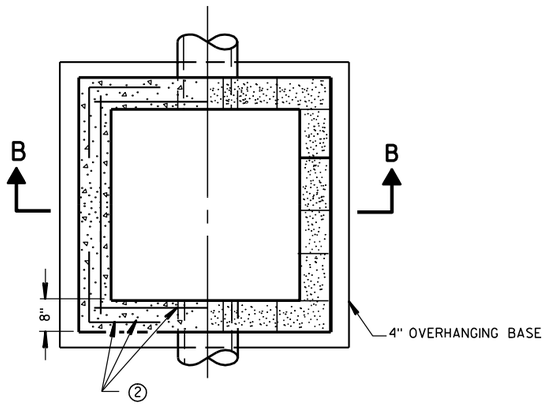
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

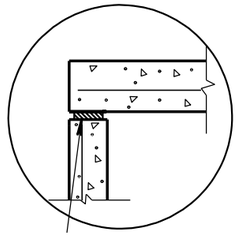
6
S.D.D. 8 B 9-1



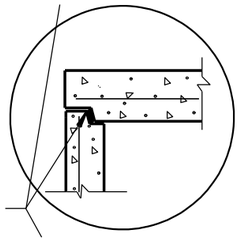
PLAN VIEW
CIRCULAR OPENING



SECTION A-A
PLAN VIEW

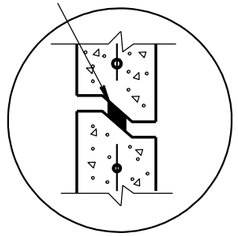


TOP WITH PLAIN END JOINT



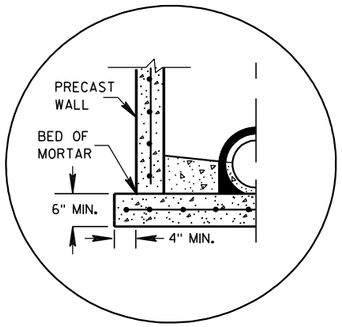
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



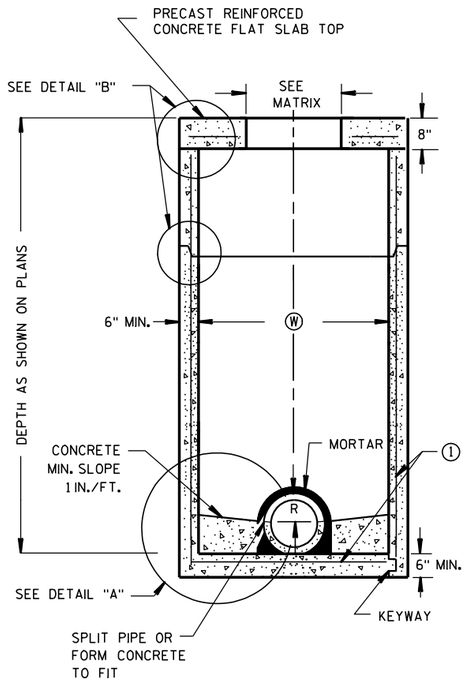
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

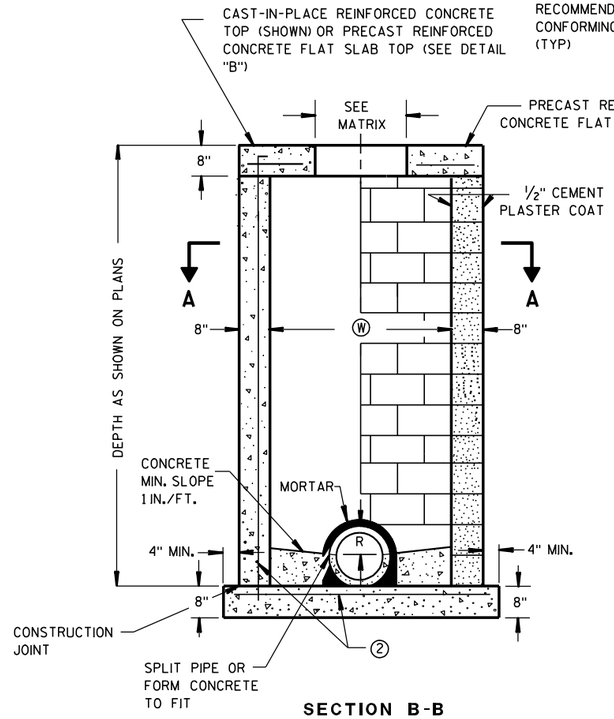


SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE



SECTION B-B

PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

CAST-IN-PLACE REINFORCED CONCRETE

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

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 FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

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 ½ INCH 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 PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN WIDTH.

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 ASTM C 913.

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.

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

① FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

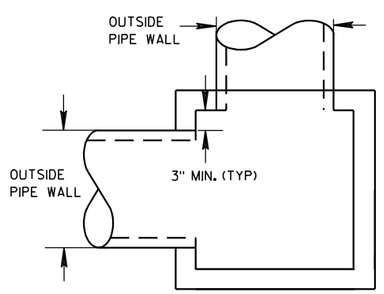
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

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	
	WIDTH Ⓦ (IN)	LENGTH Ⓛ (IN)
3X3-FT	24	24
4X4-FT	30	30
5X5-FT	42	42
6X6-FT	54	54



DETAIL "C"

SQUARE MANHOLES W/ FLAT TOP

MANHOLES 3X3-FT, 4X4-FT, 5X5-FT AND 6X6-FT

MANHOLES 3X3-FT, 4X4-FT 5X5-FT AND 6X6-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

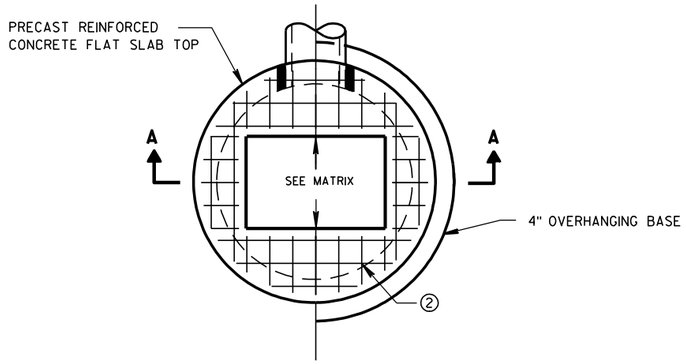
APPROVED
6/5/2012
DATE
/S/ Jerry H. Zaas
ROADWAY STANDARDS ENGINEER
'MENT
FHWA

6

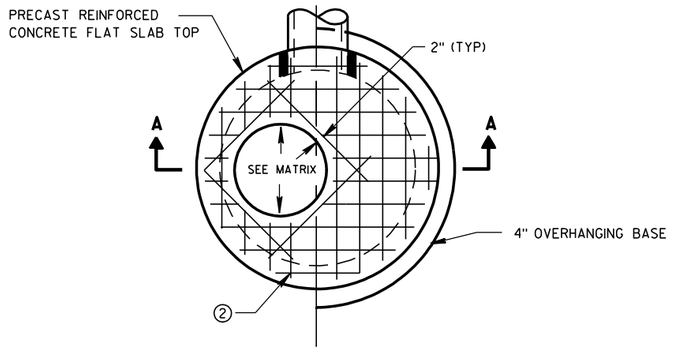
S.D.D. 8 B 10-1

6

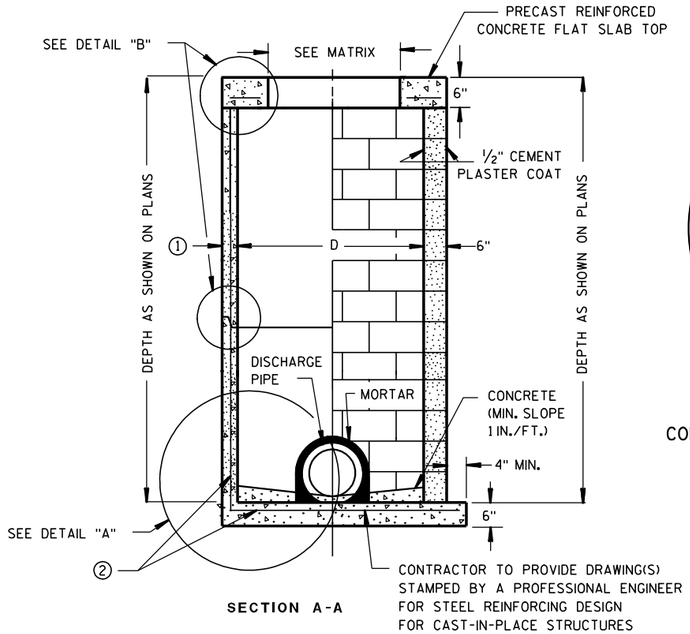
S.D.D. 8 B 10-1



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

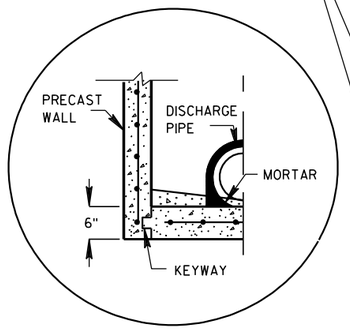


SECTION A-A

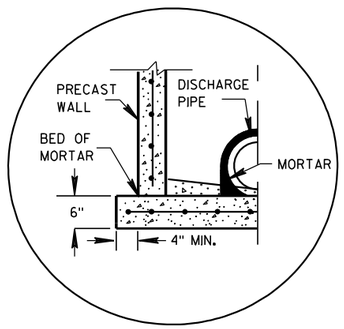
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

CIRCULAR INLETS W/ FLAT TOP

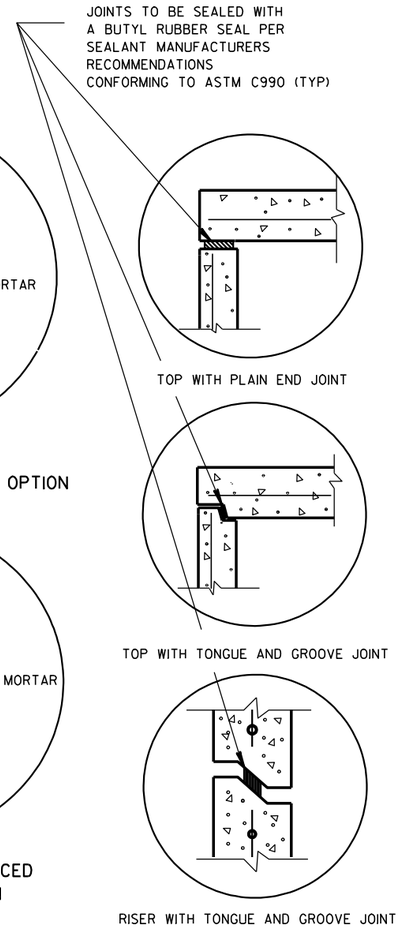


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

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 INLET 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.

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

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

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.

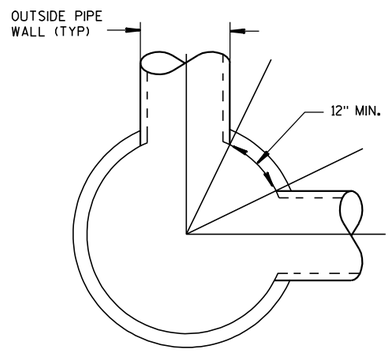
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

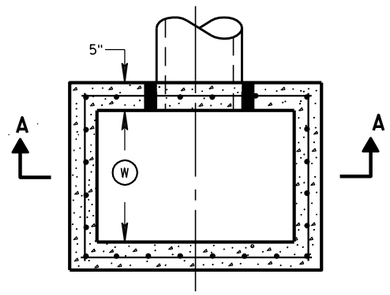
INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

INLETS 3-FT AND 4-FT DIAMETER

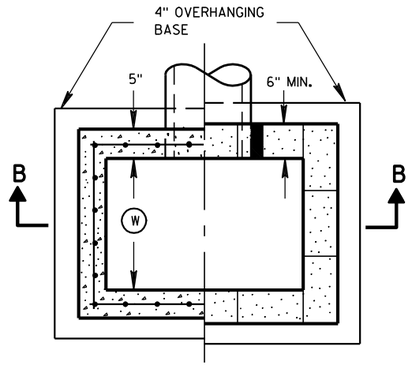
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

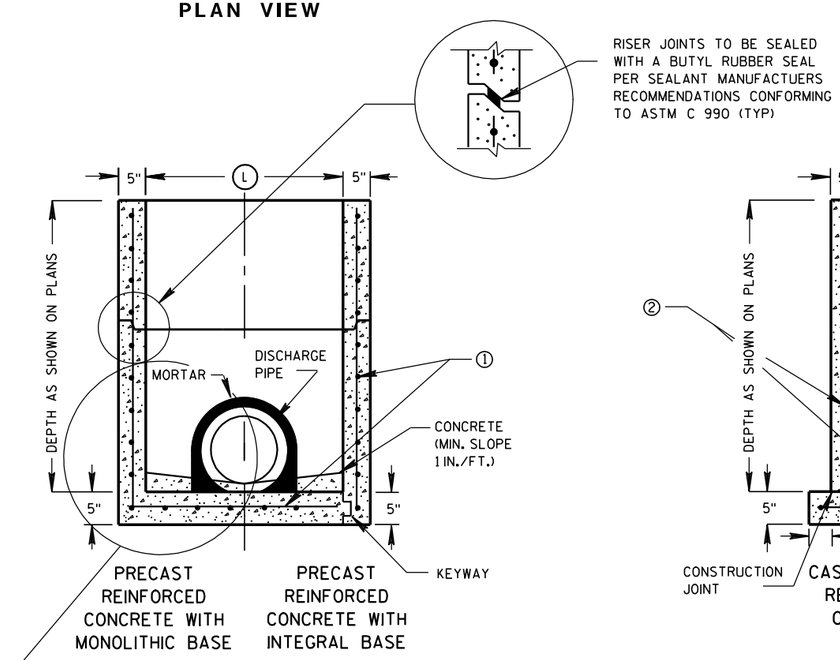
INLETS 3-FT AND 4-FT DIAMETER



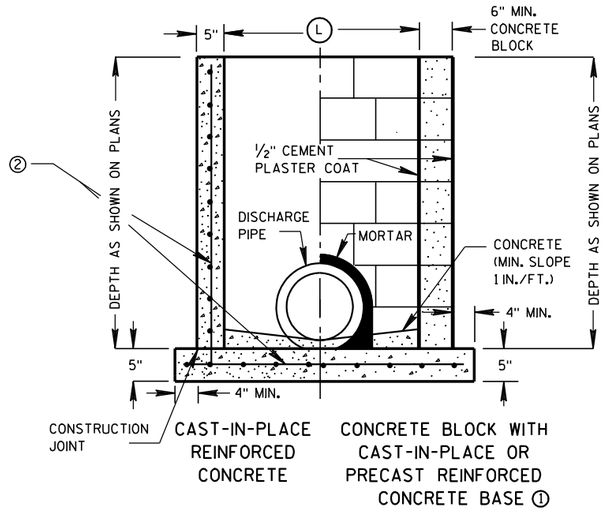
PLAN VIEW



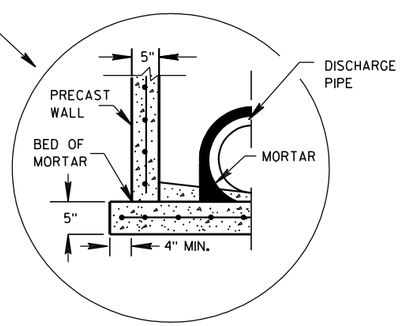
PLAN VIEW



SECTION A-A



SECTION B-B



SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION

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 INLET 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 INLET 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 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

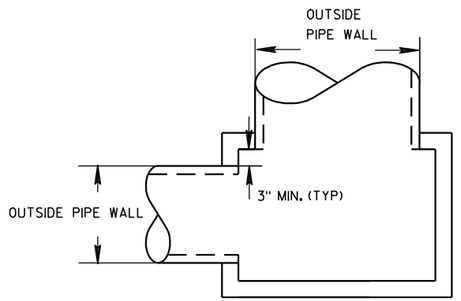
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS D ENGINEER
FHWA

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S.D.D. 8 C 7-1

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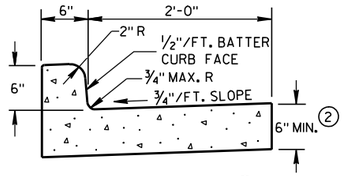
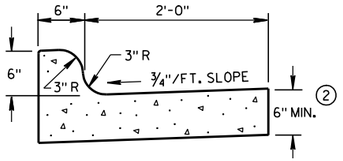
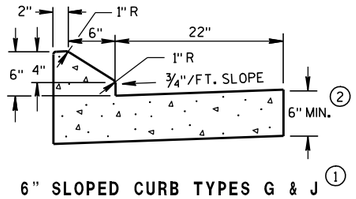
S.D.D. 8 C 7-1



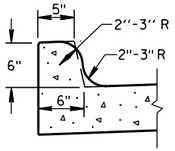
TYPES A & D (1)



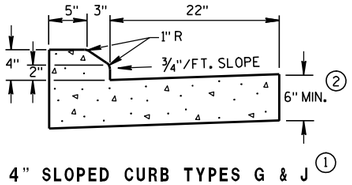
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

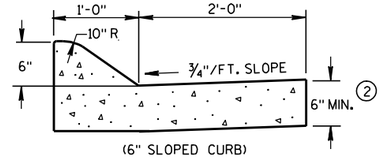


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

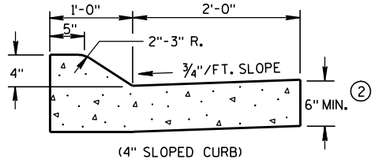


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

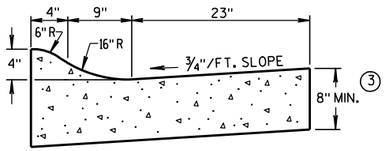


(6" SLOPED CURB)



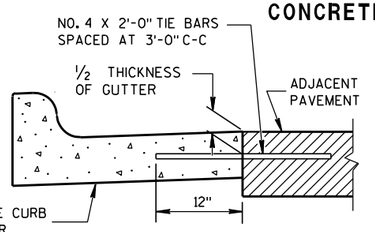
(4" SLOPED CURB)

TYPES A & D (1)

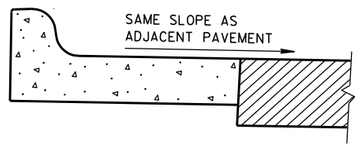


4" SLOPED CURB TYPES R & T (1) (4)

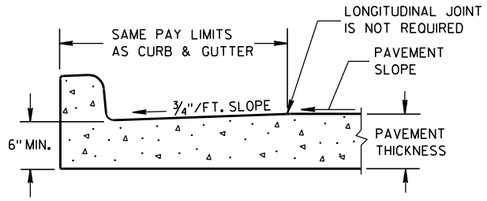
CONCRETE CURB & GUTTER 36"



TYPICAL TIE BAR LOCATION (1)



REVERSE SLOPE GUTTER (5)
(TYPICAL FOR ALL CURB & GUTTER TYPES)



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

GENERAL NOTES

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

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

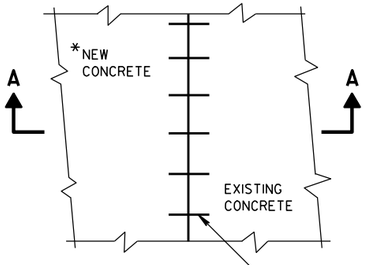
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) 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.

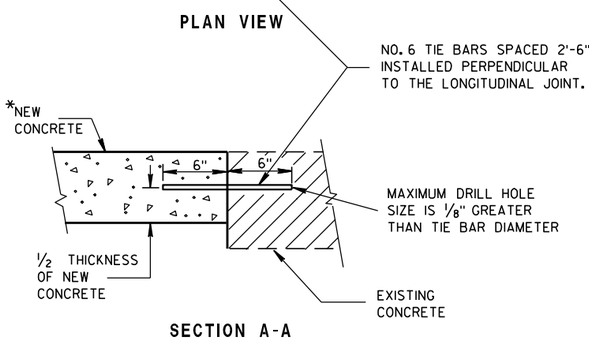
(4) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(5) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



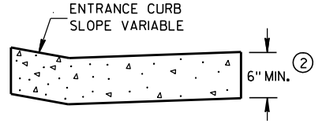
PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

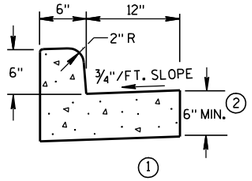


SECTION A-A

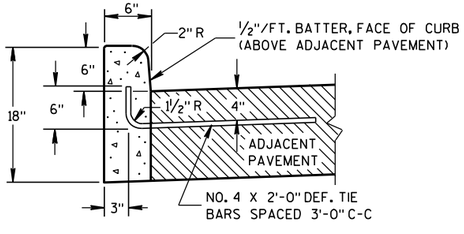
TIE BARS DRILLED INTO EXISTING PAVEMENT



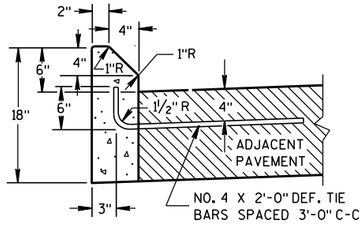
DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)



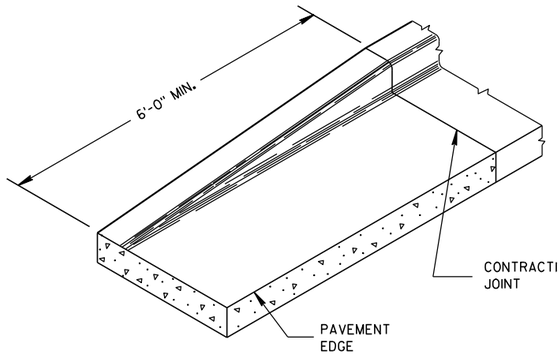
(1)
TYPES A & D
CONCRETE CURB & GUTTER 18"



(1)
TYPES A & D



(1)
TYPES G & J



END SECTION CURB & GUTTER

CONCRETE CURB

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

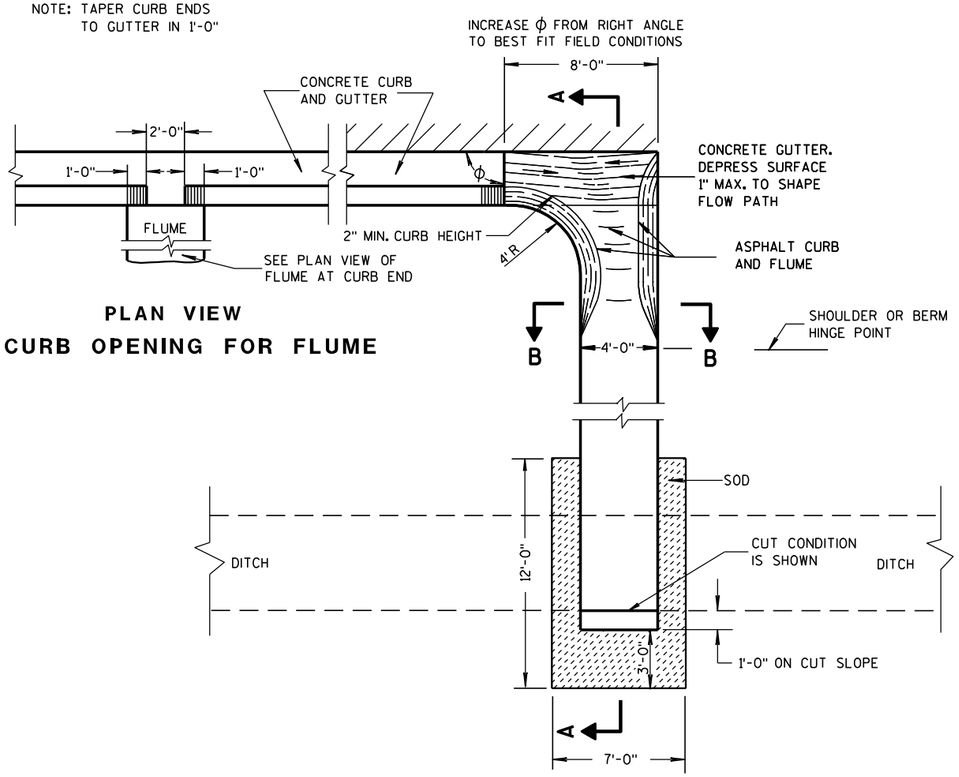
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
FHWA

6

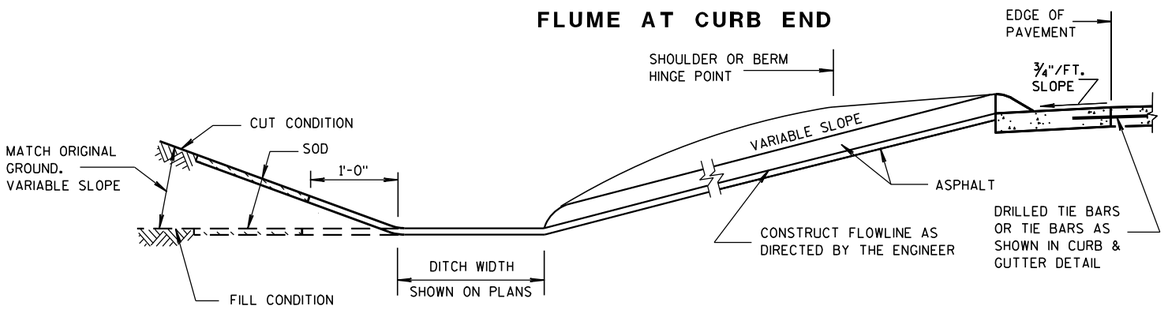
S.D.D. 8 D 1-17

ASPHALTIC FLUME

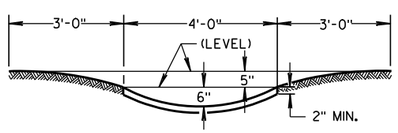


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

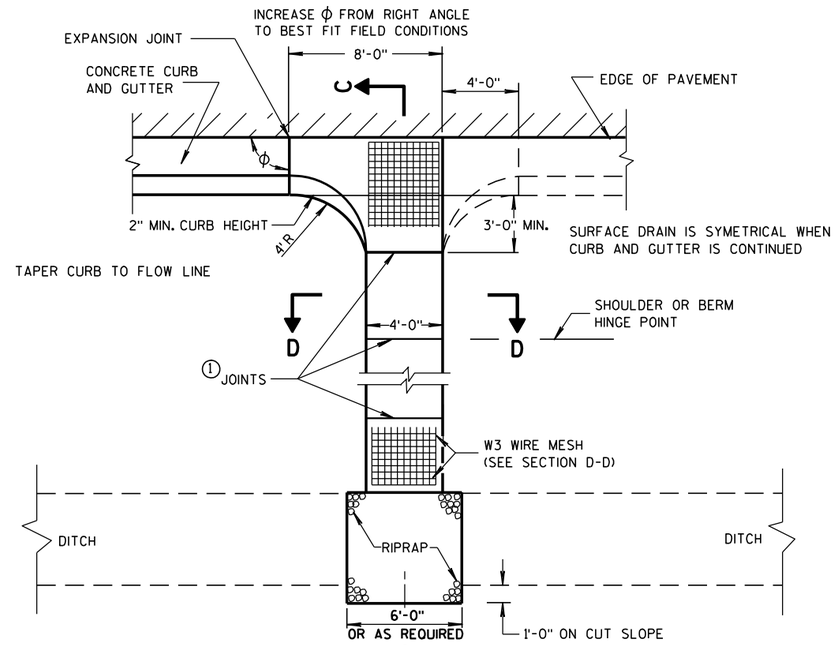
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

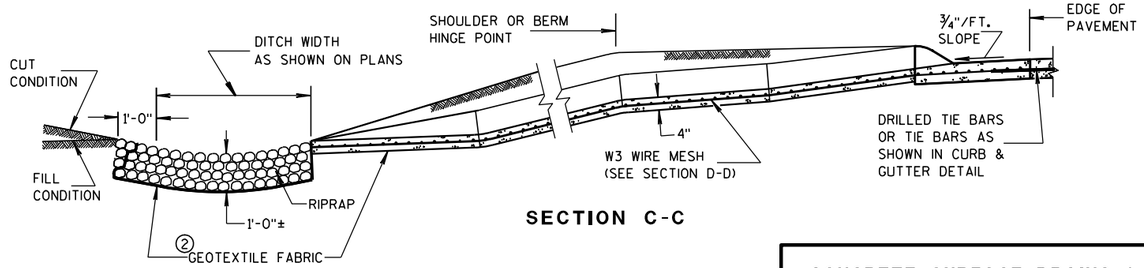
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

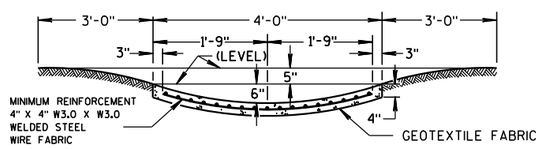
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
151
MENT
FHWA

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S.D.D. 8 D 4-5

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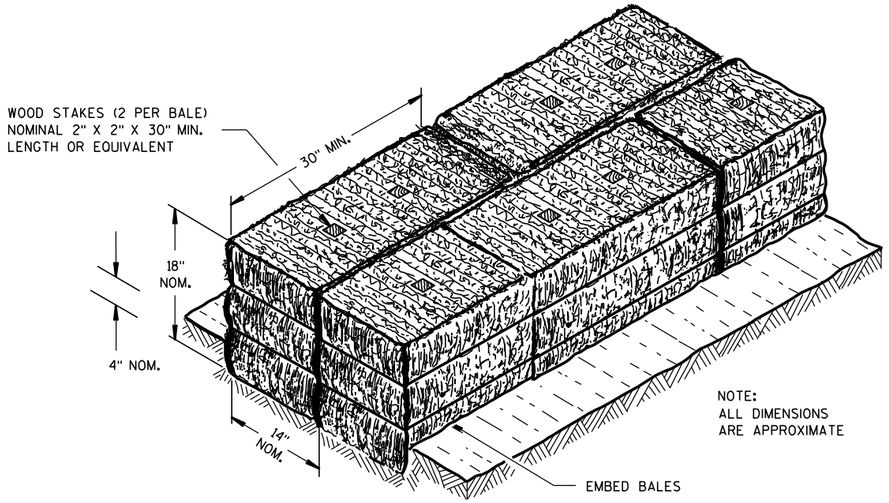
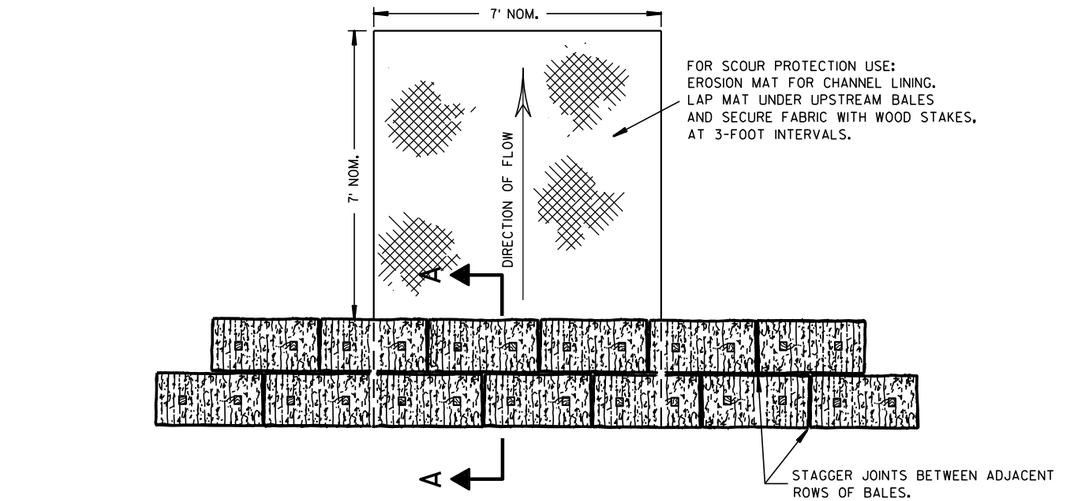
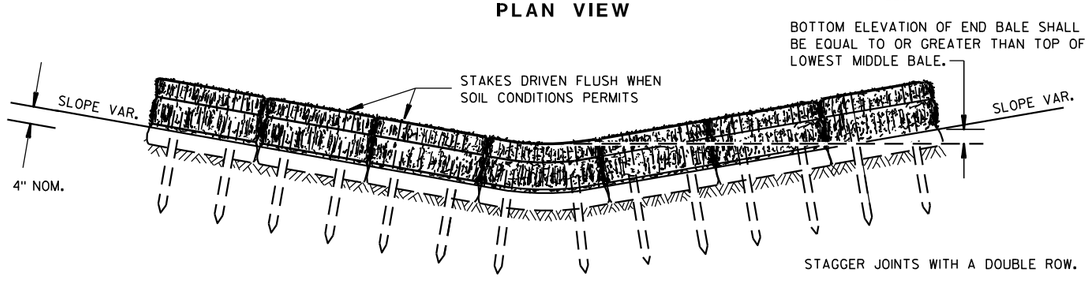
S.D.D. 8 D 4-5



SECTION A-A



PLAN VIEW



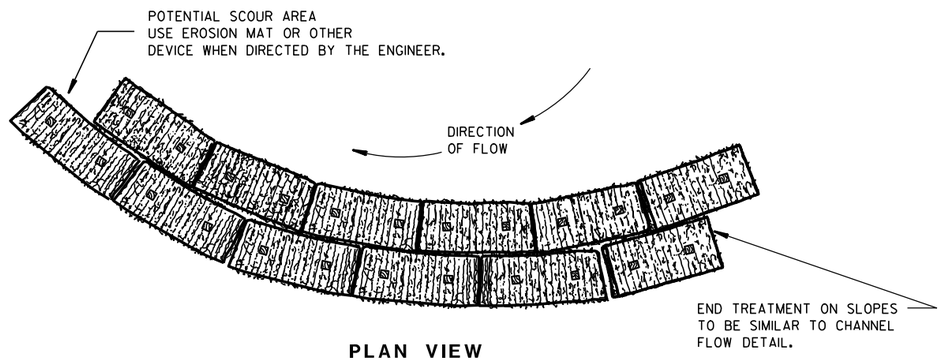
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

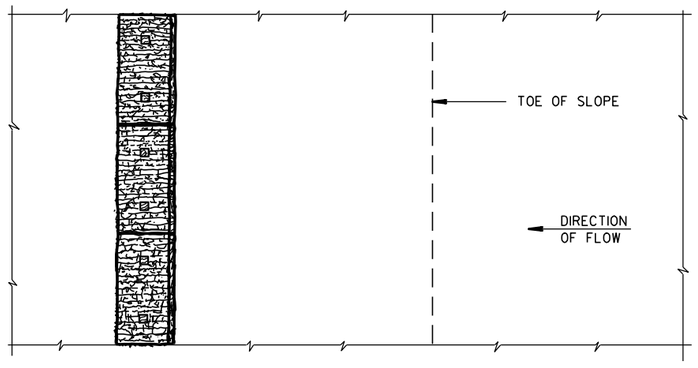
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

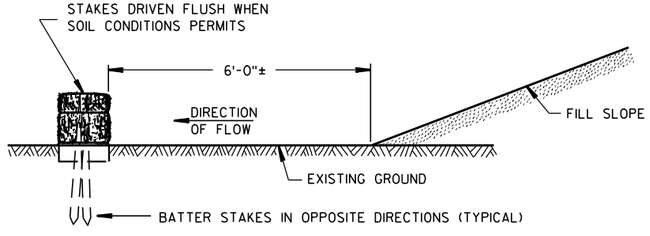


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

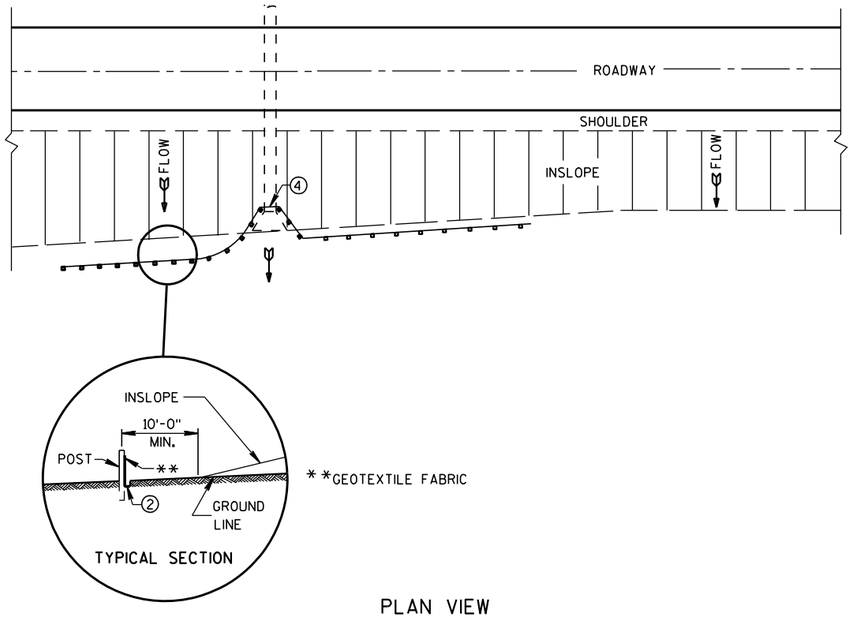
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

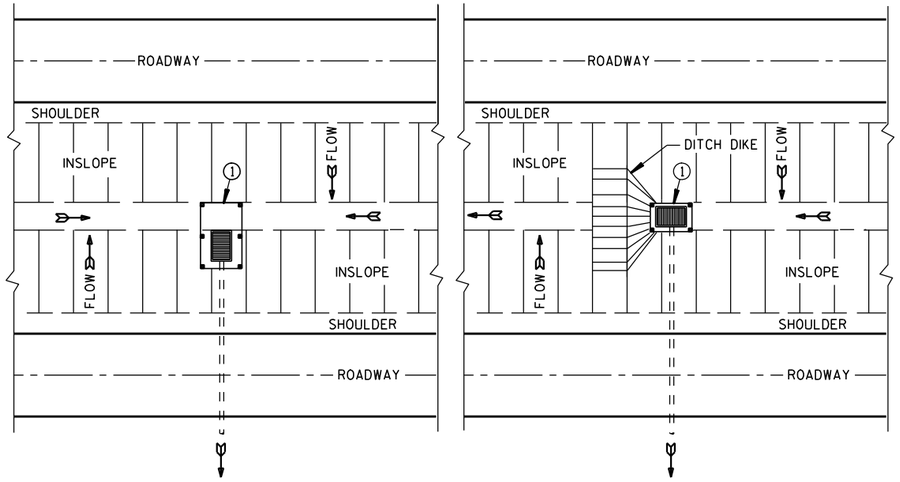
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

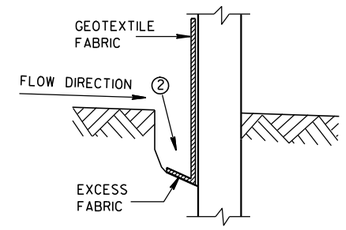
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

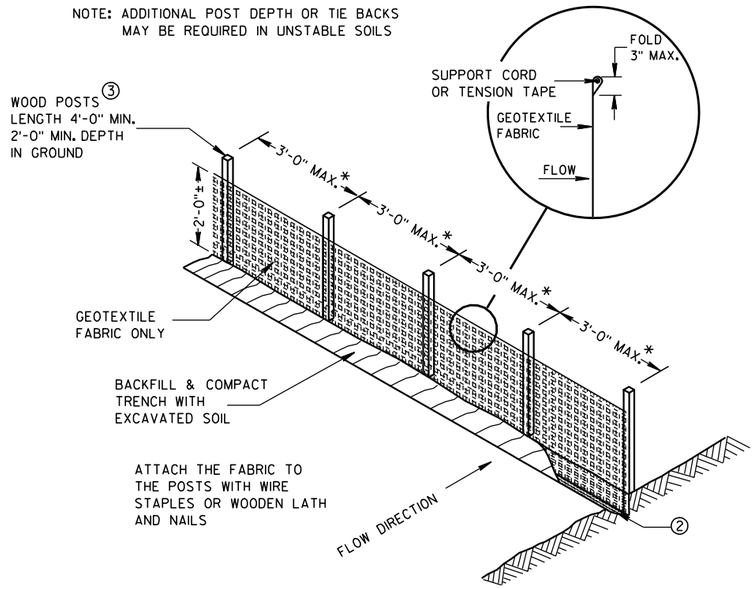
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

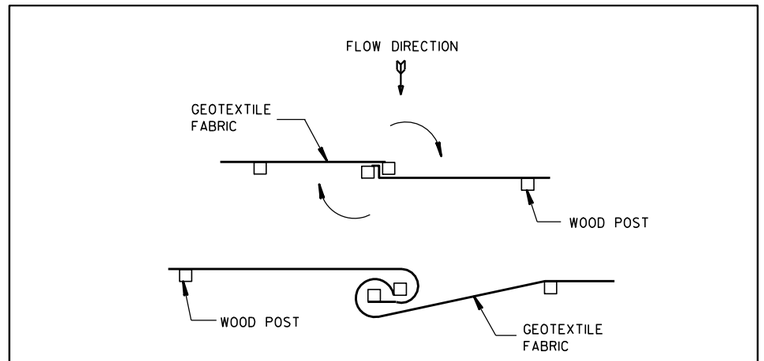
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



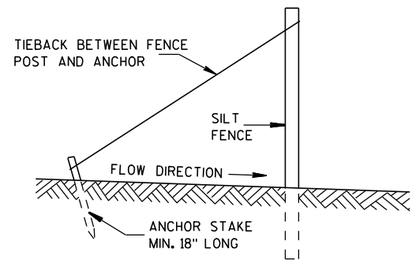
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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S.D.D. 8 E 9-6

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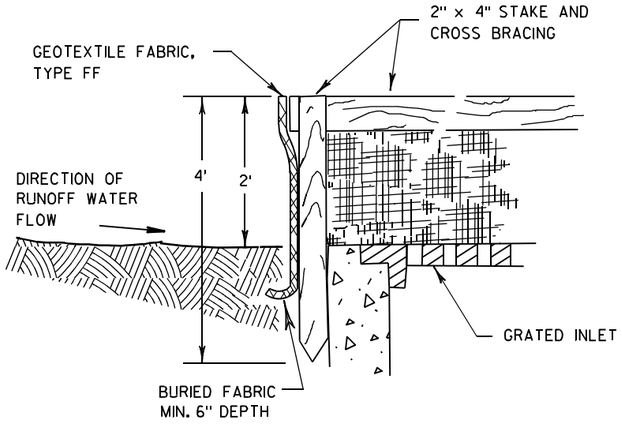
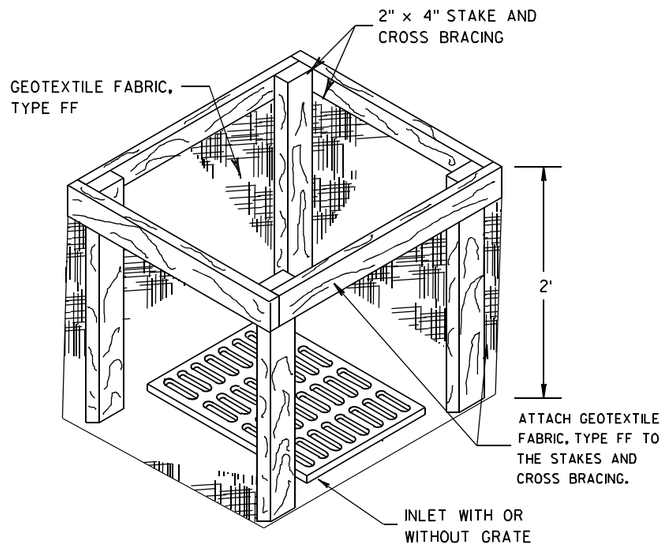
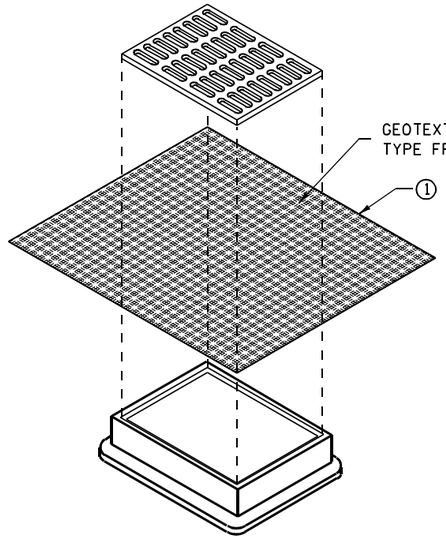
S.D.D. 8 E 9-6



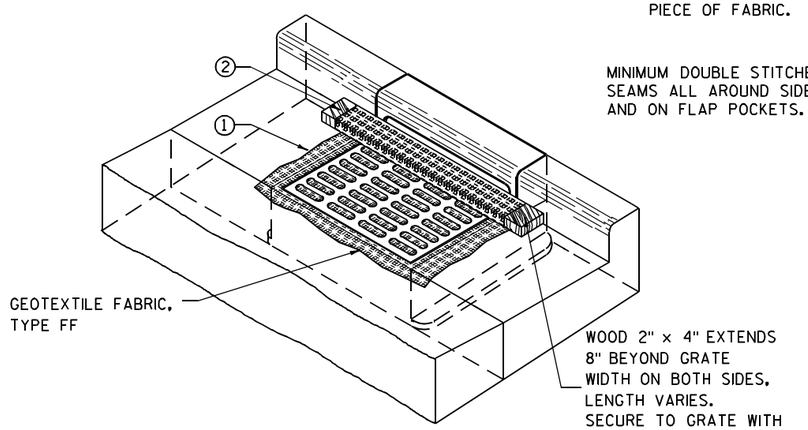


INLET PROTECTION, TYPE A

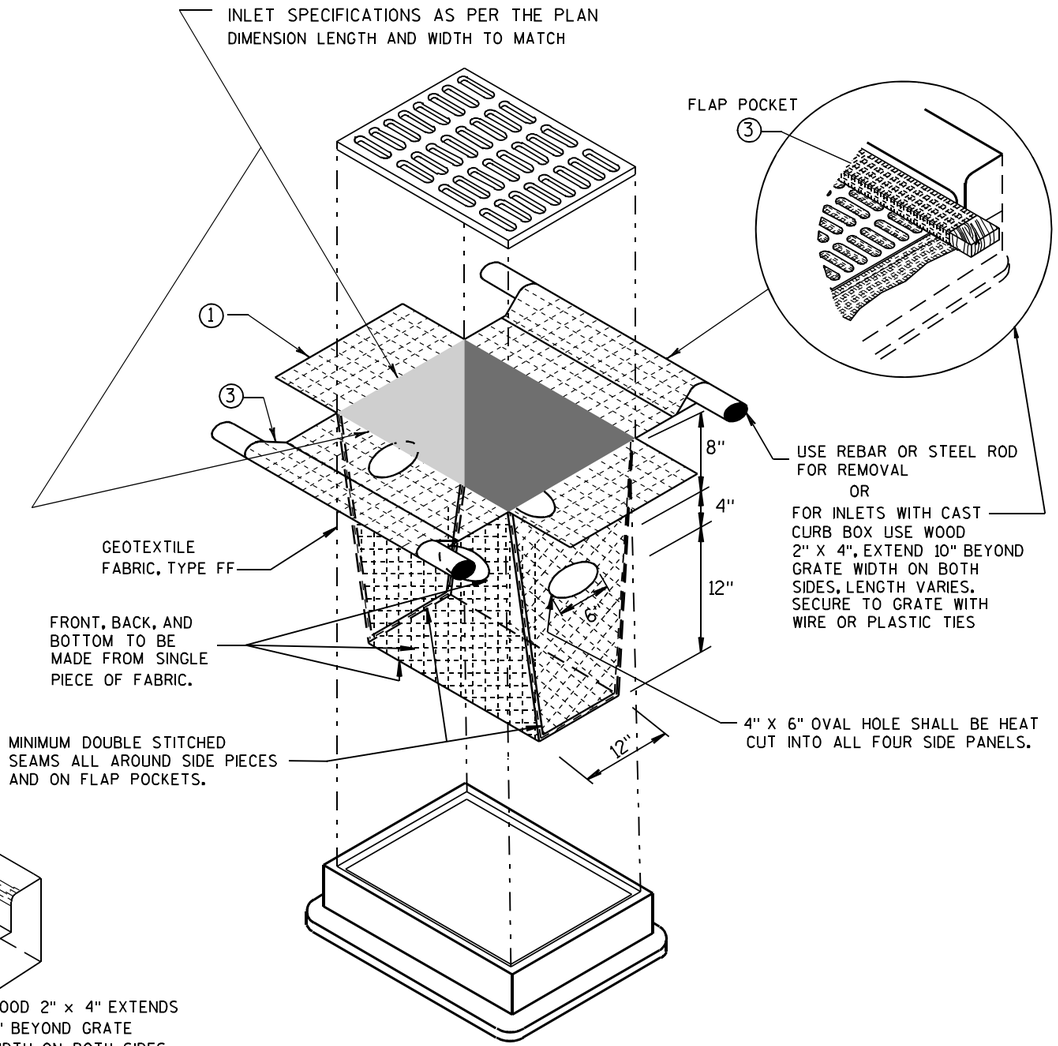


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

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.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

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

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

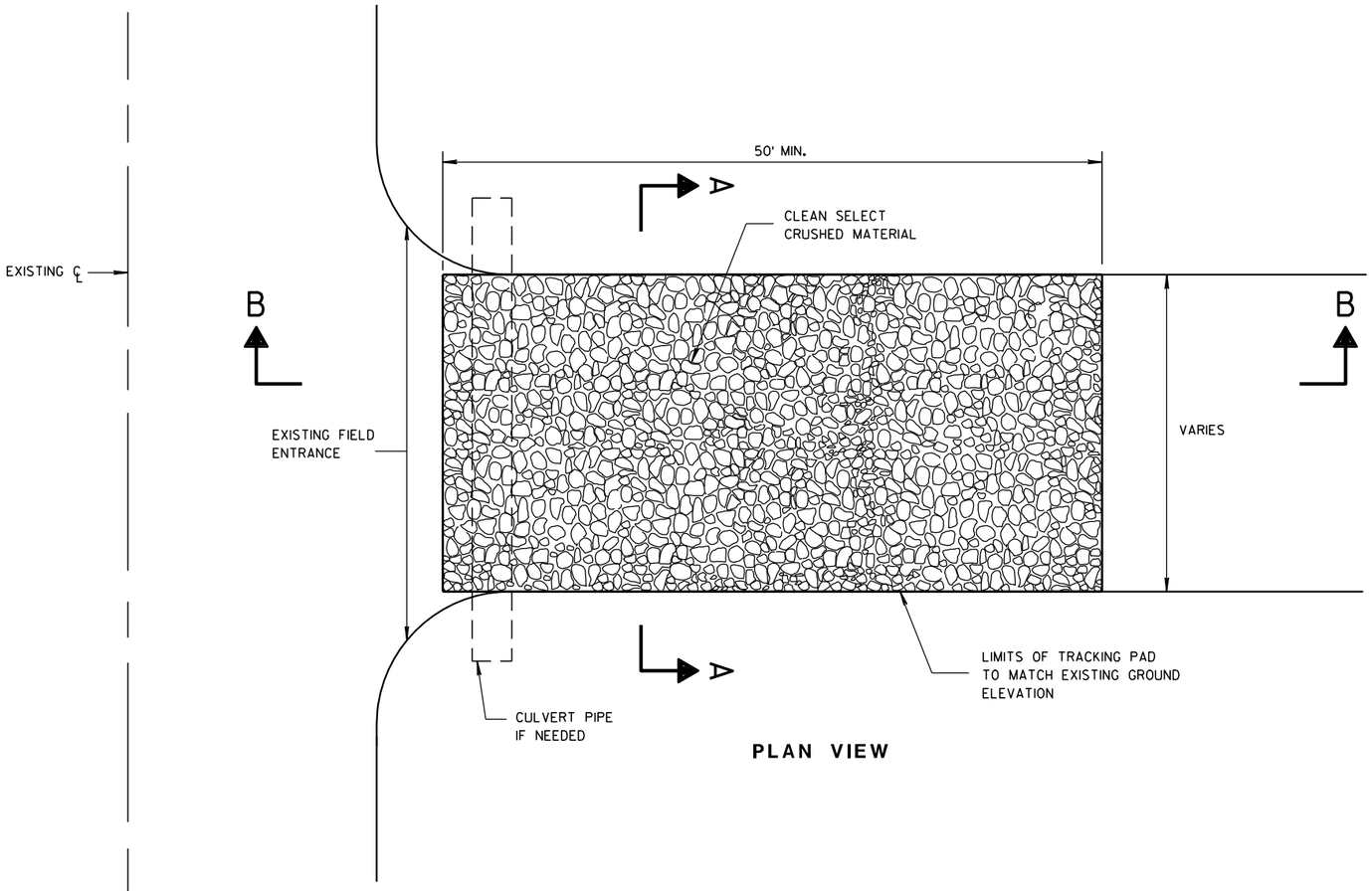
APPROVED

10/16/02
DATE

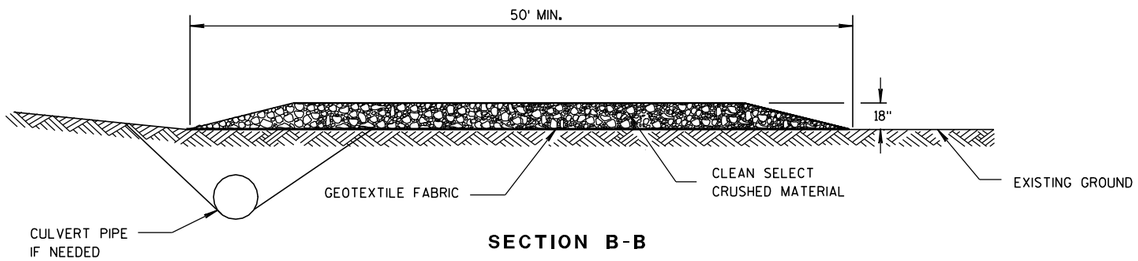
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6
S.D.D. 8 E 10-2



PLAN VIEW



SECTION B-B

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.

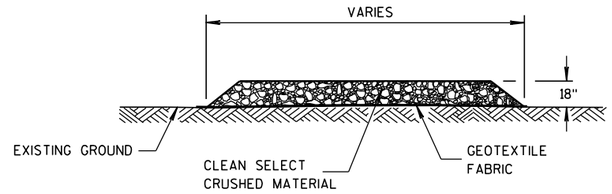
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

TRACKING PAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/24/2011 DATE FHWA	/S/ Jerry H. Zoda ROADWAY STANDARDS ENGINEER
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S.D.D. 8 E 14-1

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S.D.D. 8 E 14-1

METAL APRON ENDWALLS

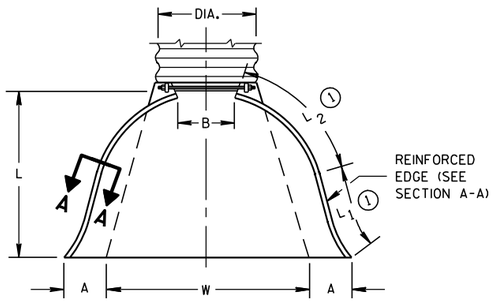
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

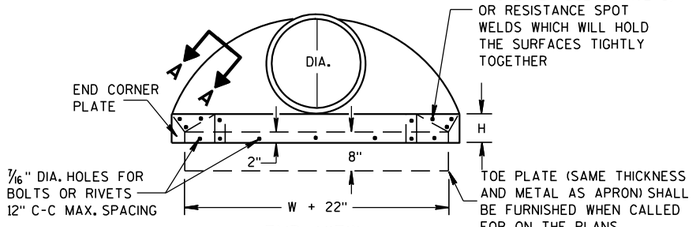
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

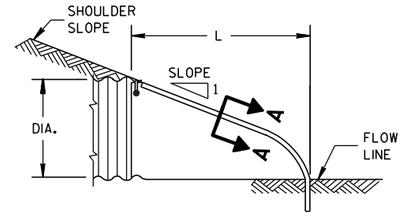
*MINIMUM
**MAXIMUM



PLAN VIEW

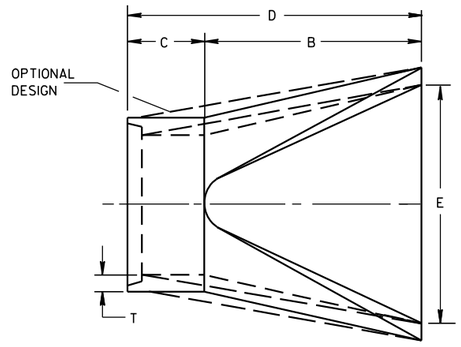


END VIEW

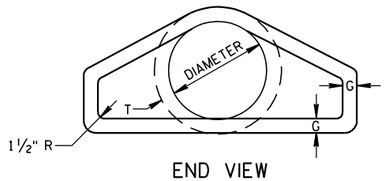


SIDE ELEVATION

METAL ENDWALLS



PLAN



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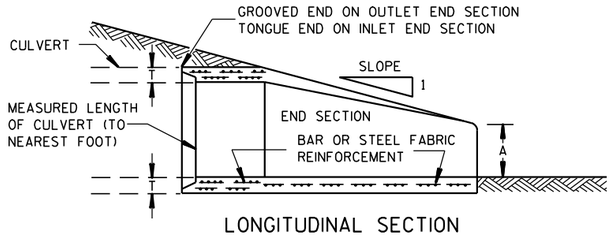
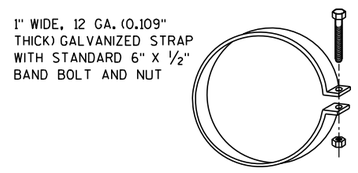


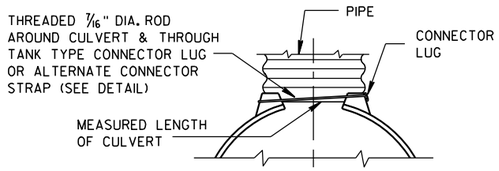
LONGITUDINAL SECTION

CONCRETE ENDWALLS

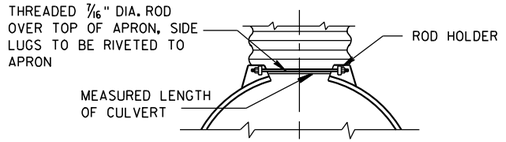


ALTERNATE FOR TYPE 1 CONNECTION

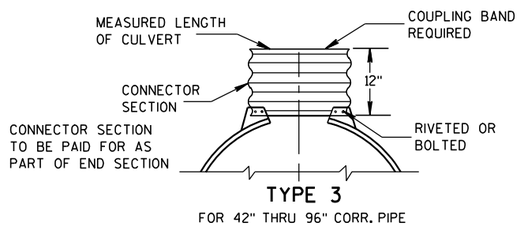
END SECTION CONNECTOR STRAP



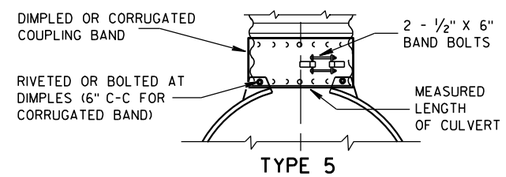
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

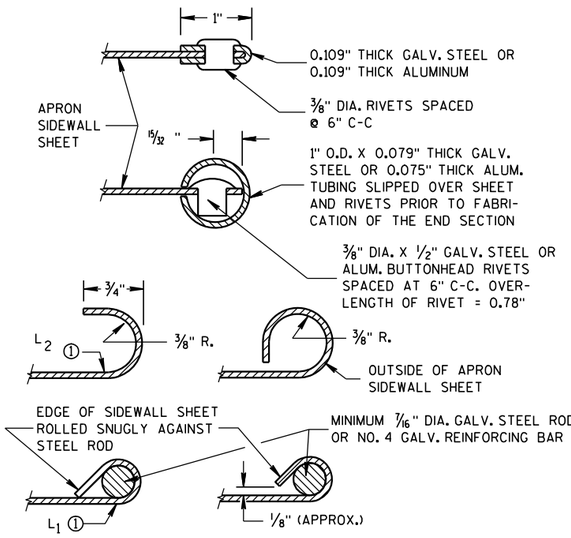
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

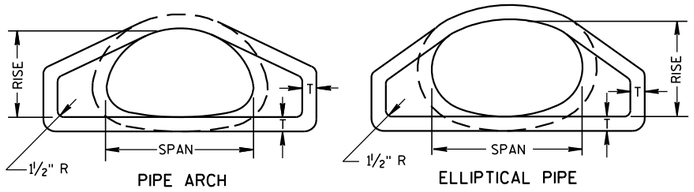
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

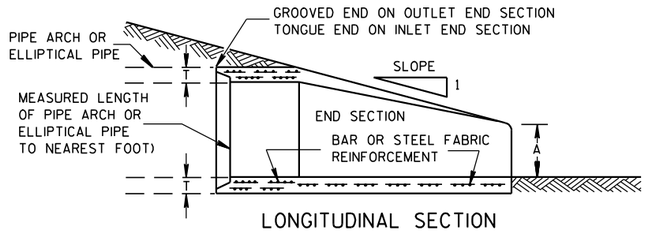
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

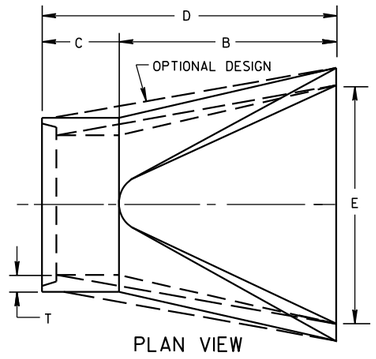
6
S.D.D. 8 F 1-11



END VIEW

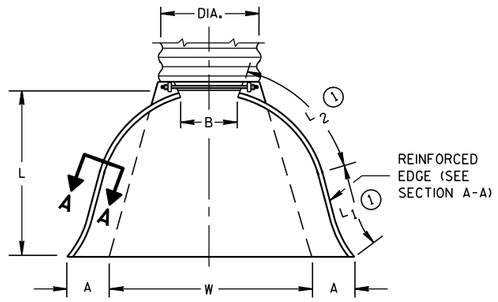


LONGITUDINAL SECTION

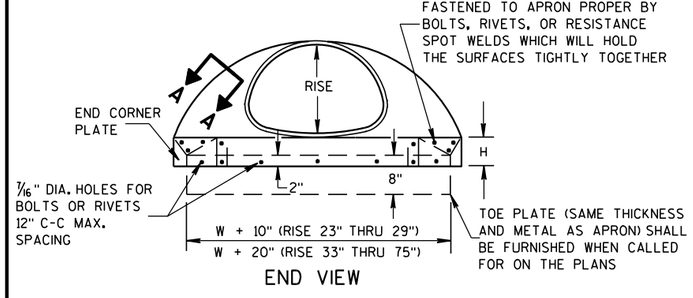


PLAN VIEW

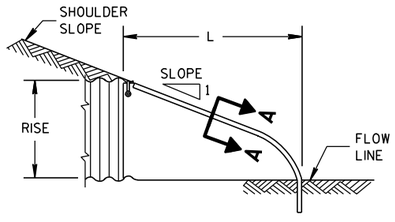
CONCRETE ENDWALLS



PLAN VIEW

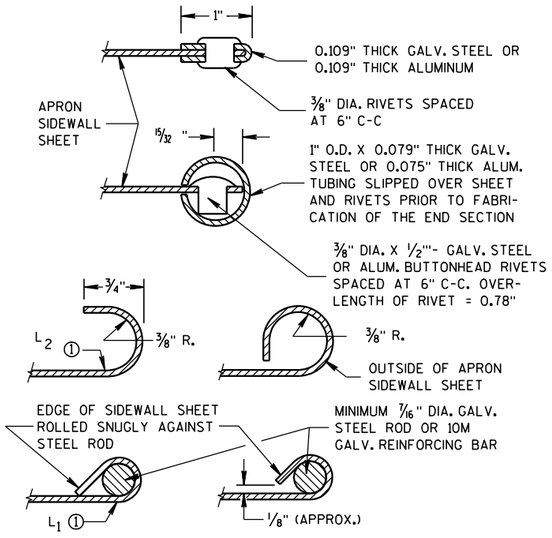


END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

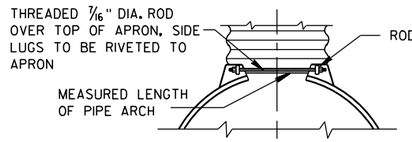
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

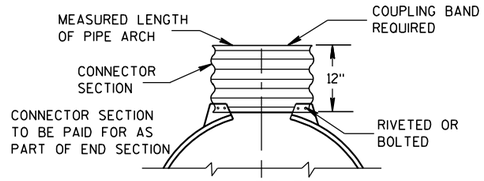
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



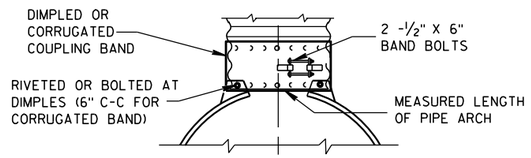
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

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.

CONCRETE APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94 — DATE

/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 8 F 2-1

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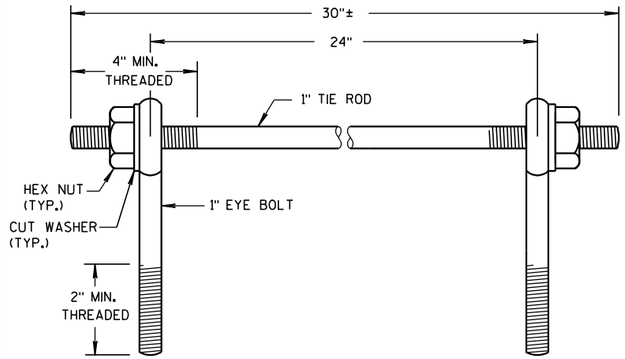
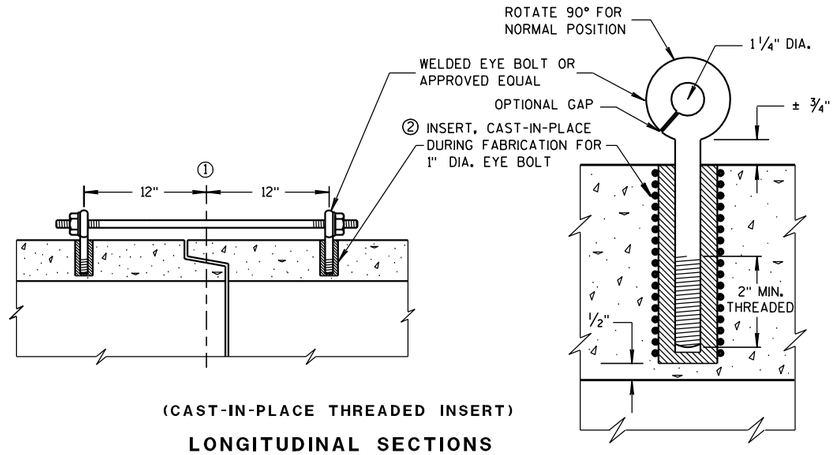
S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 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 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 ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

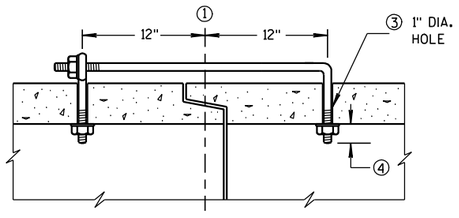
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

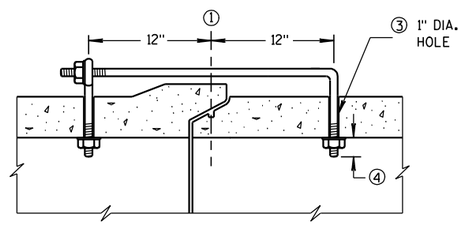
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

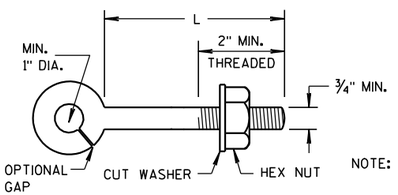


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

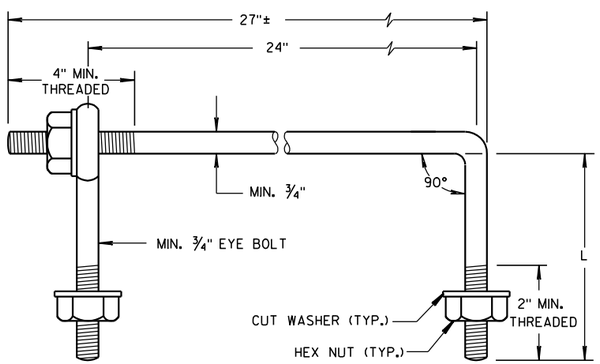
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

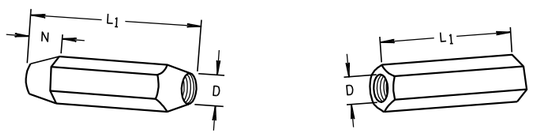
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

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

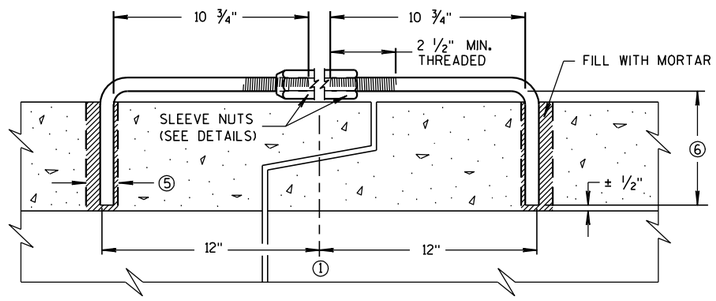
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

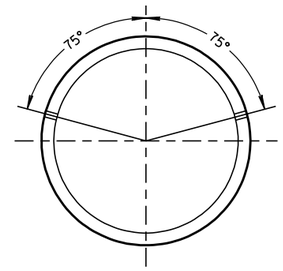
SLEEVE NUTS



LONGITUDINAL SECTION

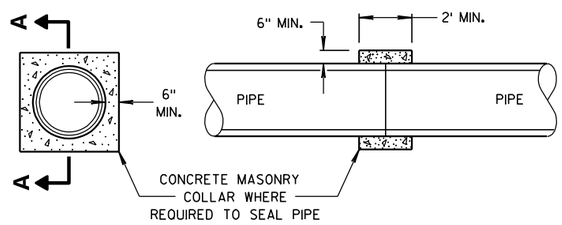
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
158
FHWA

6

S.D.D. 8 F 4-7

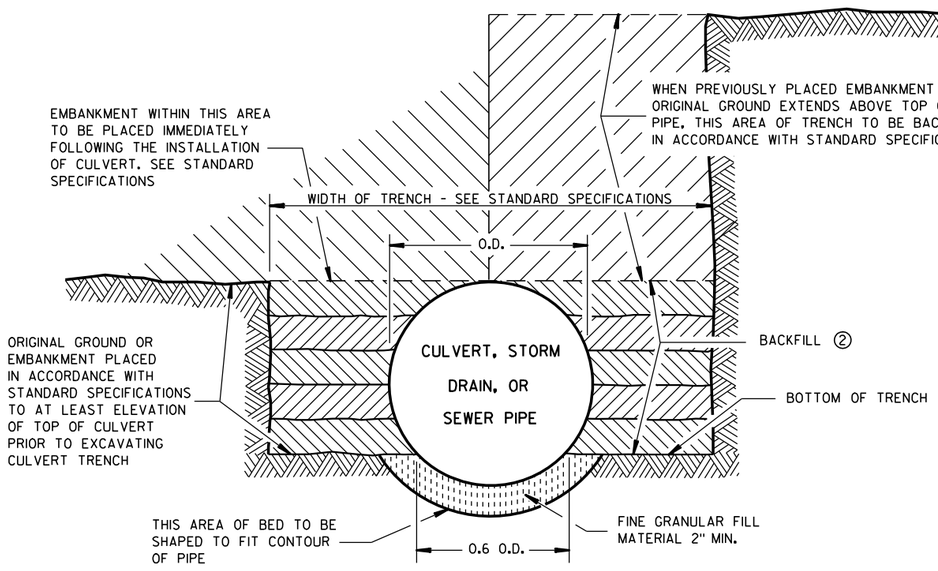
GENERAL NOTES

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

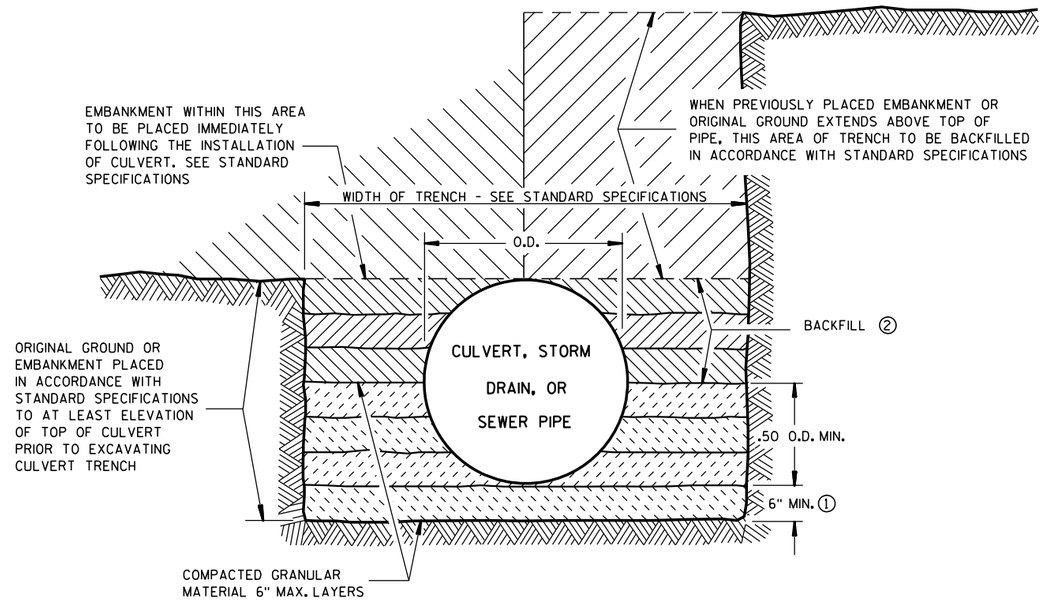
THE SHAPED SUBGRADE WITH GRANULAR FOUNDATION IS AN EQUAL ALTERNATE TO THE GRANULAR FOUNDATION EXCEPT WHERE ROCK IS ENCOUNTERED.

① WHERE ROCK, HARD PAN OR FRAGMENTED MATERIAL IS ENCOUNTERED, THE TRENCH SHALL BE EXCAVATED BELOW THE BOTTOM OF THE PIPE AN AMOUNT EQUAL TO ½ INCH PER FOOT OF PROPOSED EMBANKMENT ABOVE THE TOP OF THE PIPE, BUT NOT LESS THAN 6 INCHES.

② TRENCH SHALL BE BACKFILLED AS REQUIRED BY STANDARD SPECIFICATIONS; SECTION 520 FOR PIPE CULVERTS AND SECTION 607 FOR STORM SEWERS.



SHAPED SUBGRADE WITH GRANULAR FOUNDATION



GRANULAR FOUNDATION

CLASS "B" BEDDING

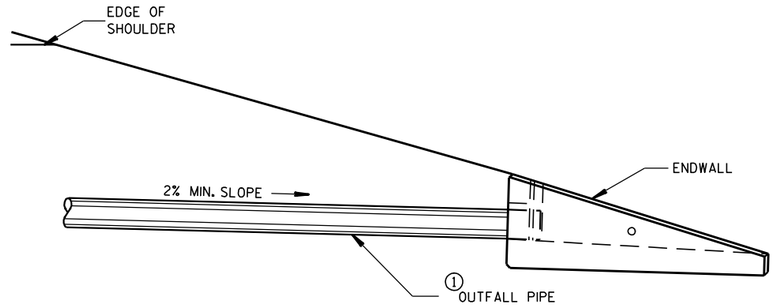
CLASS "B" BEDDING FOR CULVERT PIPE OR STORM SEWER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
4/7/83 DATE	/S/ D. L. Strand STATE DESIGN ENGINEER
FHWA	HWYS

6

S.D.D. 8 F 5-1

DIMENSIONS IN INCHES											
PIPE DIA.	A	B	C	D	E	F	G	H	J	L	Z
**4	6	12	5 1/4	9	8	32	36	11	2 3/8	6 1/2	4
6	8	14	7 1/4	11	10	42	44	13	3 5/8	8 1/2	6

**APRON ENDWALL FOR 6 INCH DIAMETER PIPE MAY BE SUBSTITUTED FOR THIS SIZE PROVIDED THE HOLE IN THE HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE 4 INCH DIAMETER PIPE DIMENSIONS (C & J)



INSTALLATION DETAIL

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.

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

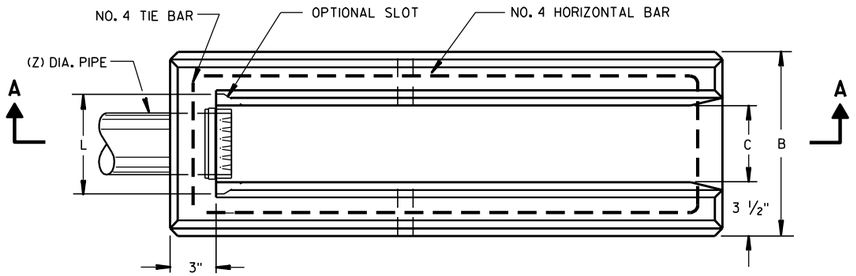
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

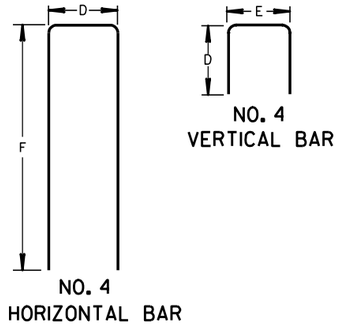
① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

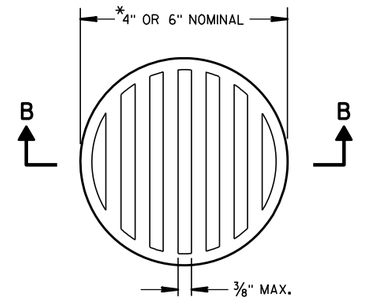
② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



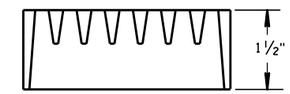
PLAN VIEW



BAR STEEL REINFORCEMENT DETAILS



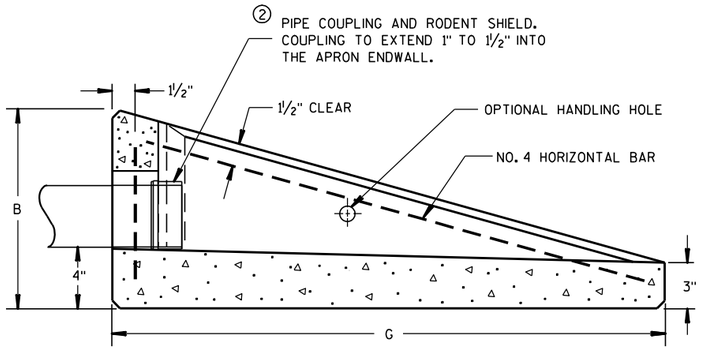
NOTE: ORIENT SHIELD SO SLOTS ARE VERTICAL.



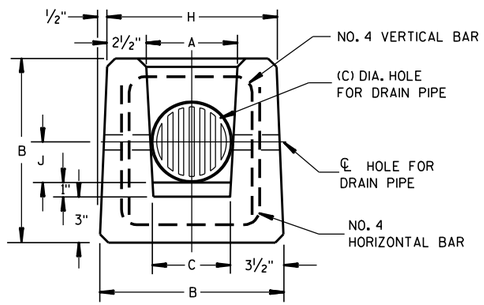
SECTION B-B

② RODENT SHIELD

*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.



SECTION A-A



END VIEW

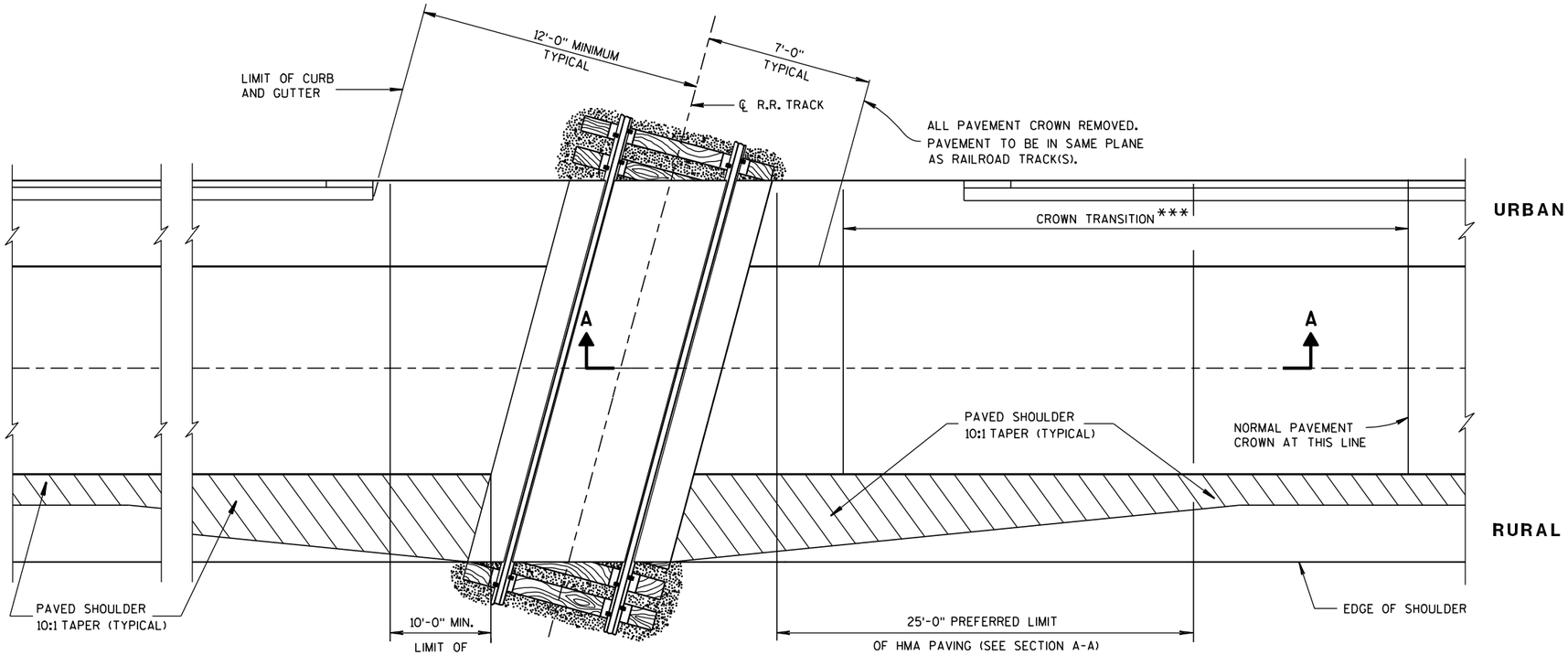
CONCRETE APRON ENDWALL FOR UNDERDRAIN

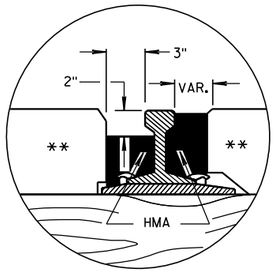
REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/10/98 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 6-4





DETAIL B

HMA FLANGEWAY AND FIELD FILLERS

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.

TIMBER, CONCRETE OR RUBBER CROSSING SURFACE MATERIAL, RAILS, TIES, BALLAST, GEOTEXTILE FABRIC AND CROSSING DRAINAGE SYSTEM BY OTHERS UNLESS OTHERWISE PROVIDED.

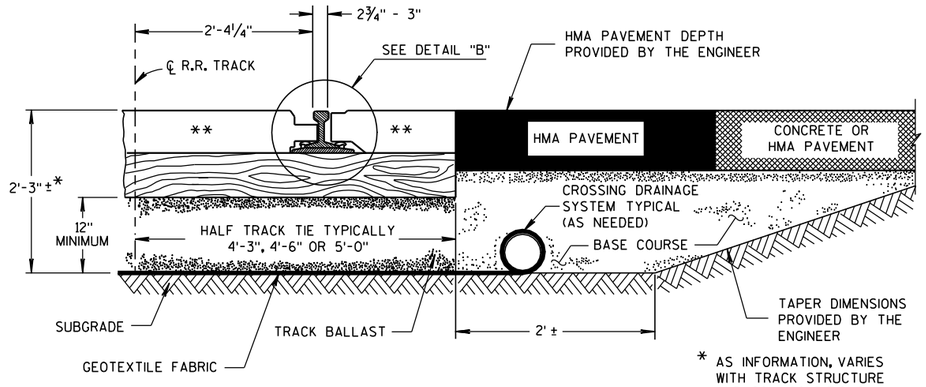
HMA PAVEMENT APPROACHES AND HMA PAVEMET CROSSING SURFACES TO BE PLACED BY CONTRACTOR UNLESS OTHERWISE PROVIDED.

HMA FLANGEWAY AND FIELD FILLERS TO BE PLACED AND THOROUGHLY HAND COMPACTED BY THE CONTRACTOR WHEN NOT PROVIDED BY OTHERS. SEE DETAIL B. HMA FILLERS NOT REQUIRED WHEN RUBBER FILLERS ARE PROVIDED.

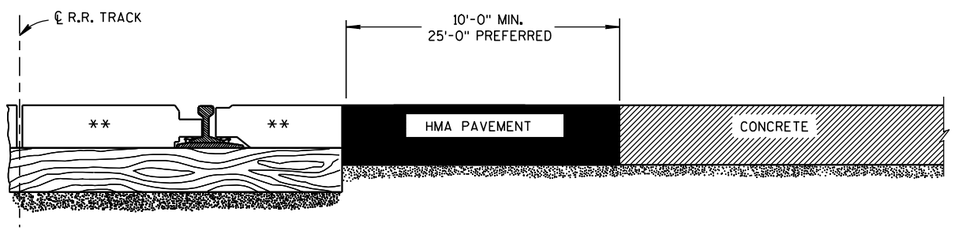
HMA PAVEMENT SHALL BE ROLLED PARALLEL TO THE TRACK.

** CROSSING SURFACE MAY BE TIMBER, RUBBER, CONCRETE, HMA PAVEMENT OR A COMBINATION OF SUCH MATERIALS.

*** CROWN TRANSITION LENGTH SHOWN ELSEWHERE IN THE PLAN.



TYPICAL HALF SECTION



SECTION A-A

CONCRETE PAVEMENT APPROACH

SECTION A-A

HMA PAVEMENT APPROACH

EXAMPLES OF PAVEMENT APPROACHES

PAVEMENT DETAILS FOR RAILROAD APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-28-09 DATE
/S/ Ronald E. Adams
CHIEF, RAILROADS & HAI CTION
FHWA

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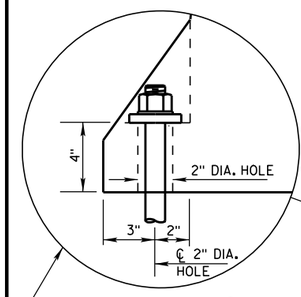
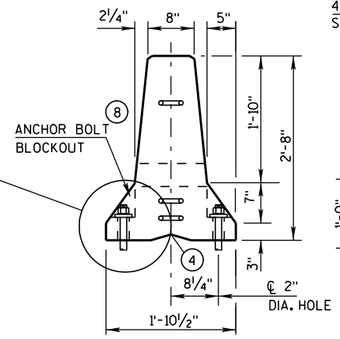
S.D.D. 13 B 1-10

6

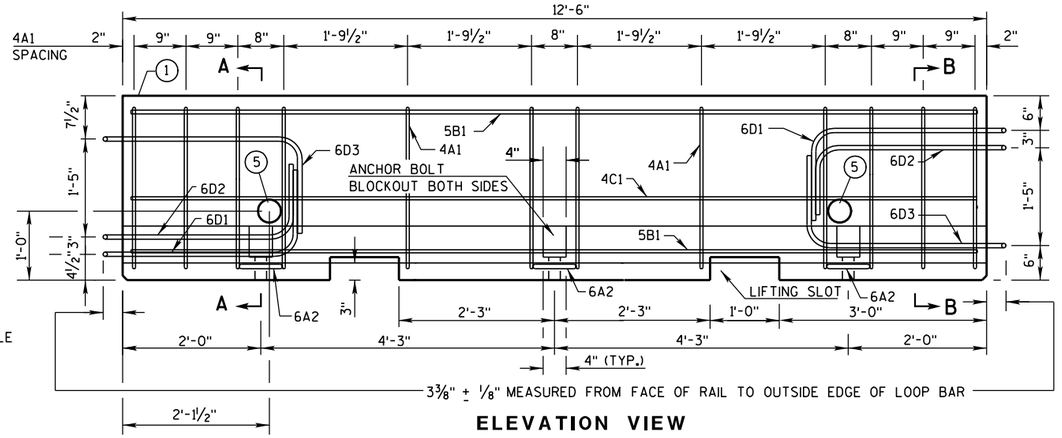
S.D.D. 13 B 1-10



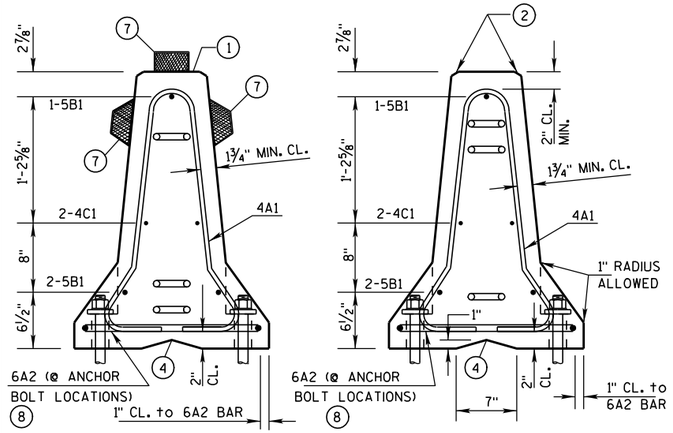
ANCHOR ON TRAFFIC SIDE (8) ONLY WHEN REQUIRED (SEE SHEET D FOR ADDITIONAL ANCHOR DETAIL)



END VIEW

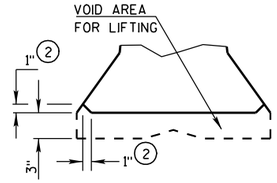


ELEVATION VIEW

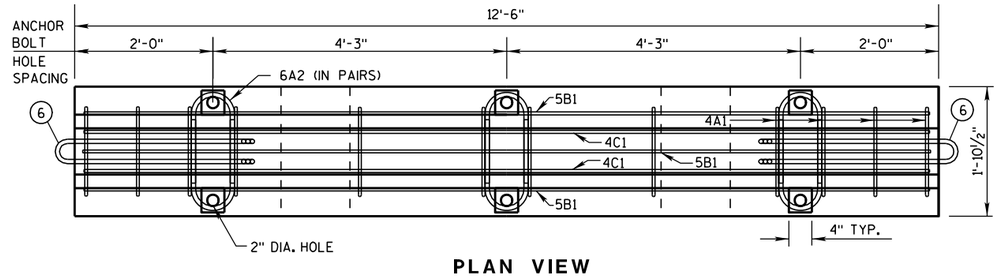


SECTION A-A
(STIRRUP PLACEMENT)

SECTION B-B
(STIRRUP PLACEMENT)

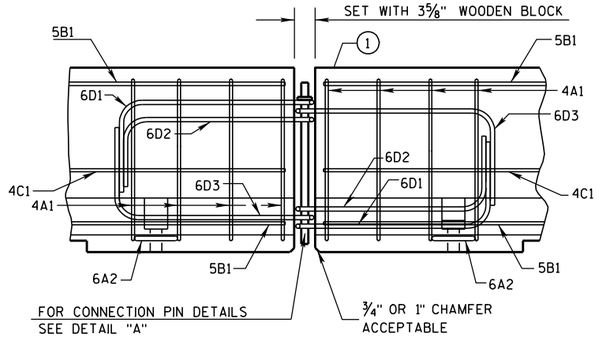


DETAIL "B"
LIFTING SLOT DETAIL

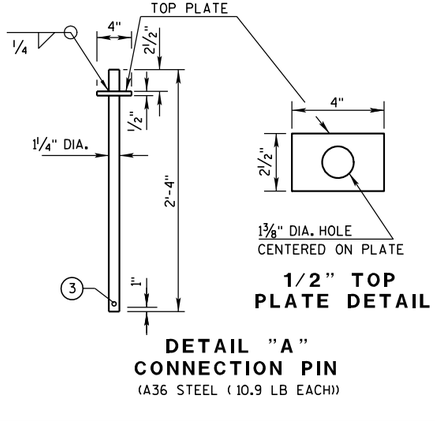


PLAN VIEW

DETAILS OF BARRIER SECTION

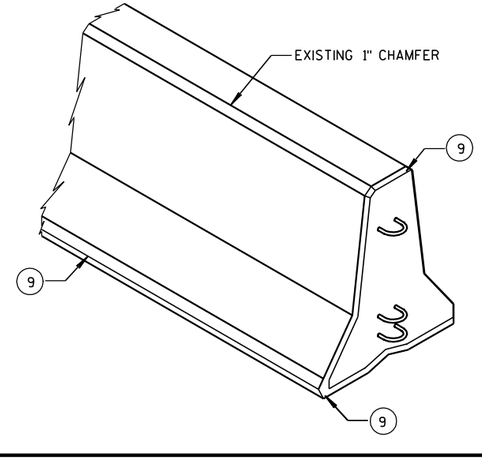


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-13(a) THRU 14B7-13(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR EPOXY ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WICBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

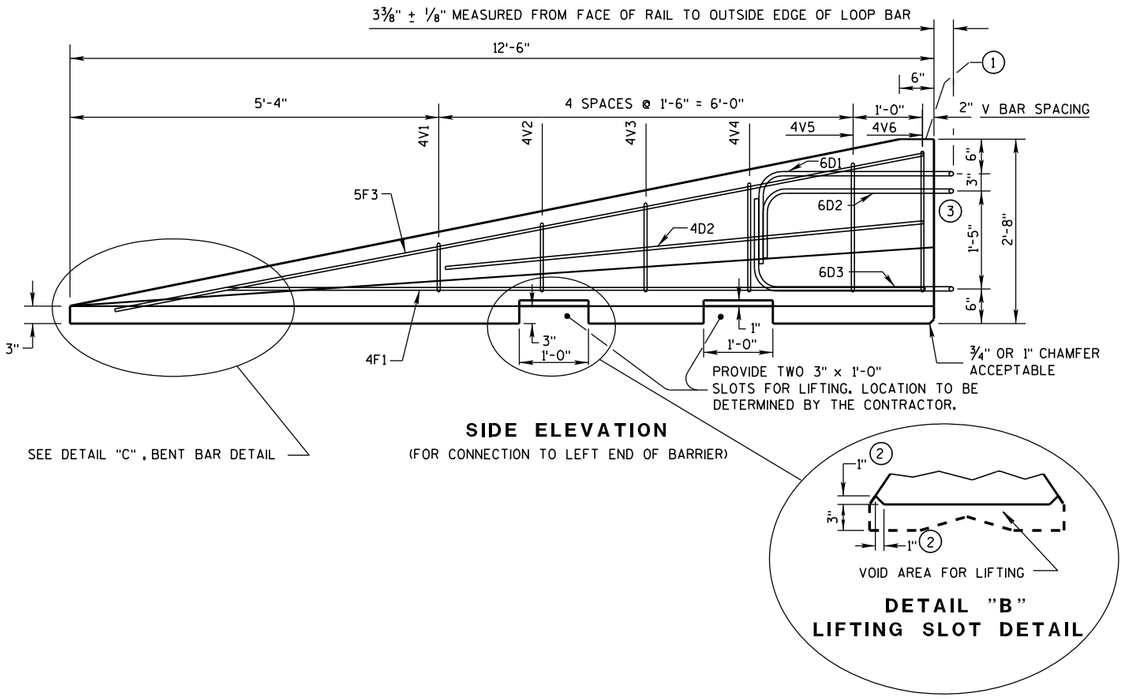
(8) SEE SHEET D FOR ANCHORING CRITERIA.

(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO.....

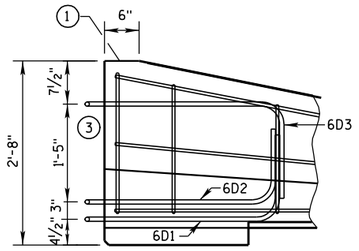
6
S.D.D. 14 B 7-13a



SIDE ELEVATION

(FOR CONNECTION TO LEFT END OF BARRIER)

DETAIL "B"
LIFTING SLOT DETAIL

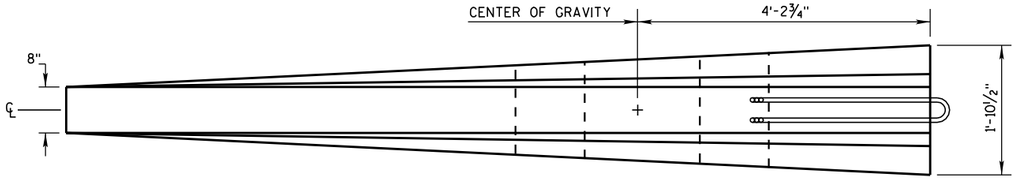


SIDE ELEVATION

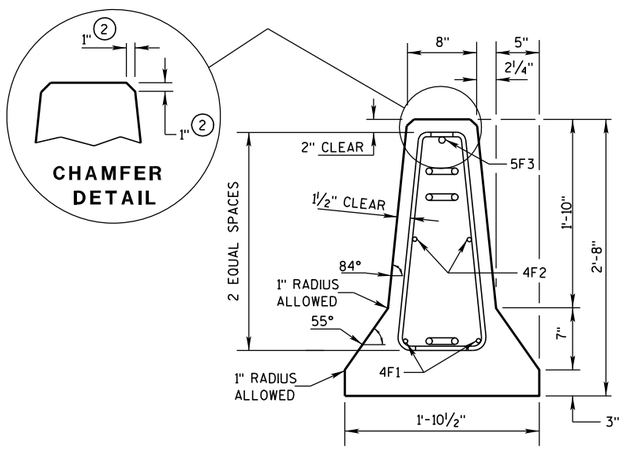
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

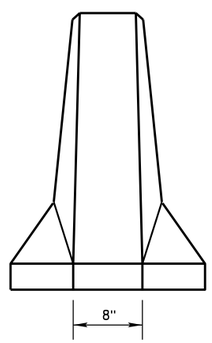
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



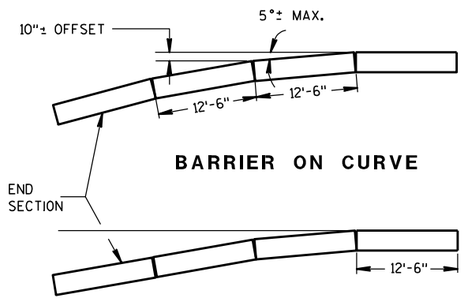
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

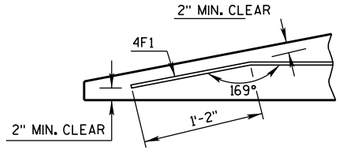
6

S.D.D. 14 B 7-13b

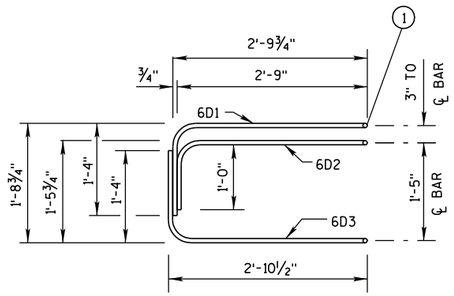
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

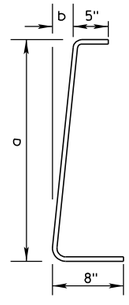
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



DETAIL "C"
BENT BAR DETAIL



ELEVATION
LOOP BAR ASSEMBLY



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

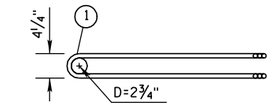
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

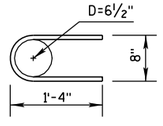
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

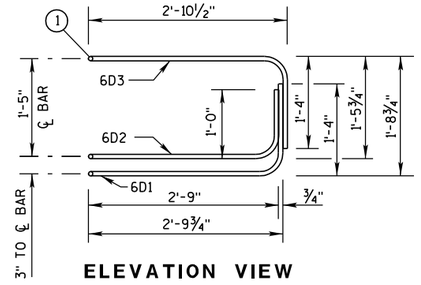
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



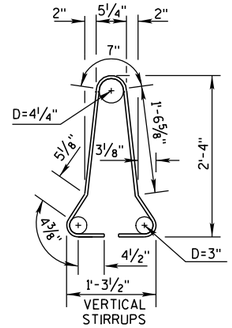
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



ELEVATION VIEW



4A1

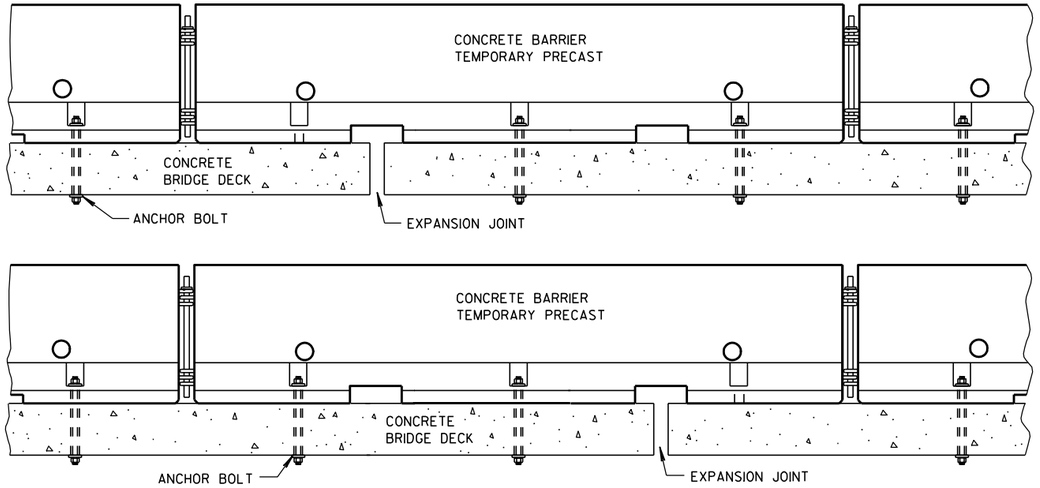
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

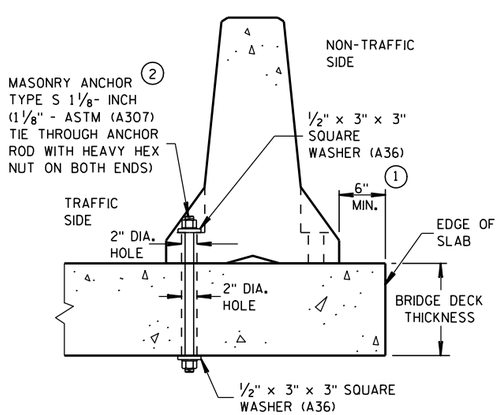
6

S.D.D. 14 B 7-13c



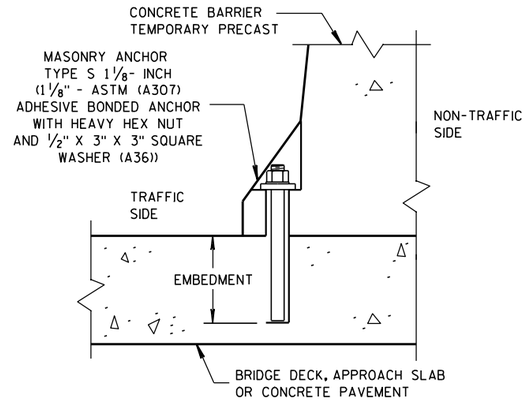
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



REMOVABLE ADHESIVE BONDED ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

2

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

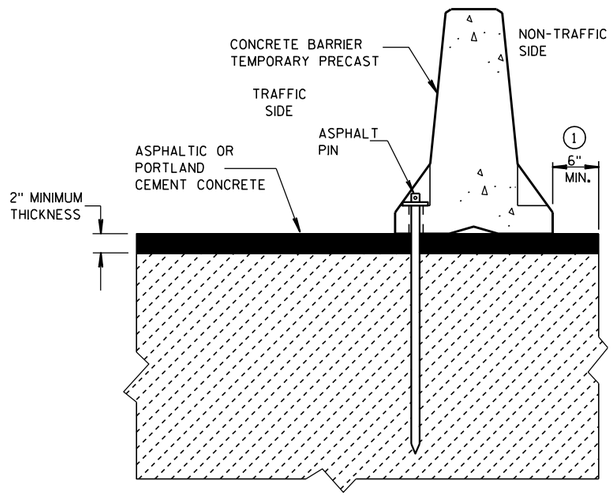
1. CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT. IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

2. ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

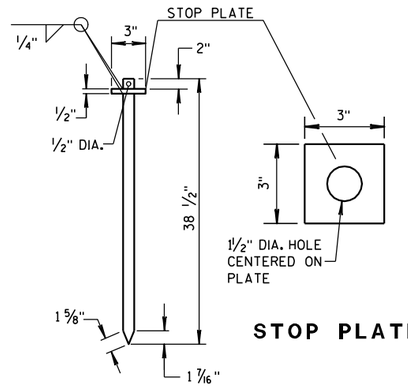
   WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

   UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALLANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERICAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

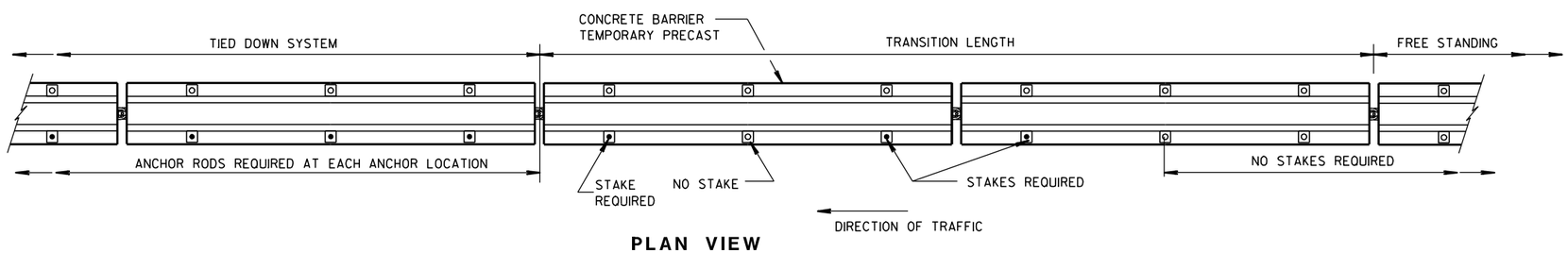
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



ASPHALT PIN

(ASTM A36 STEEL)

STOP PLATE



PLAN VIEW

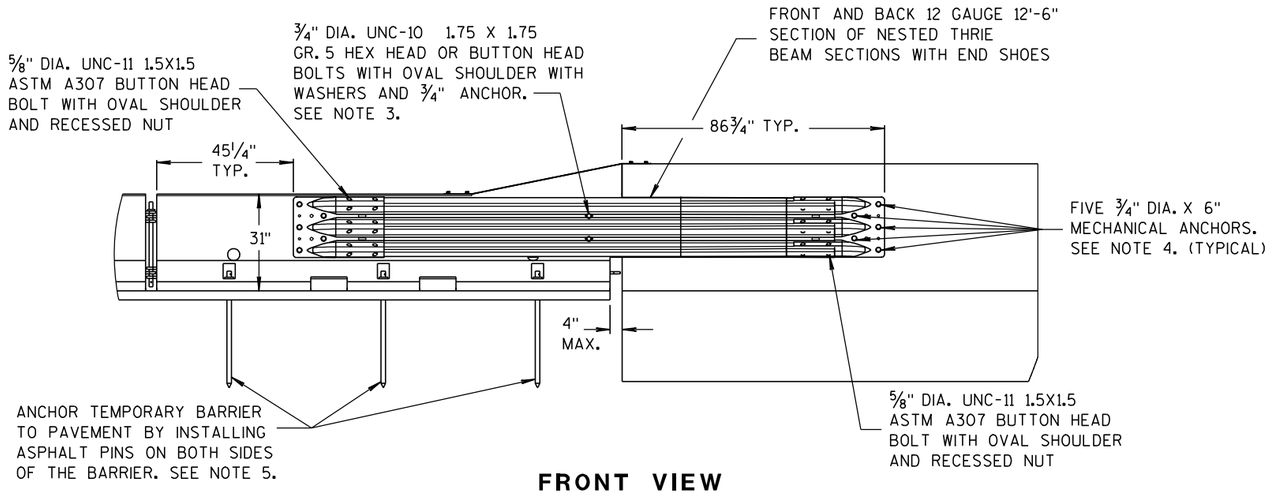
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

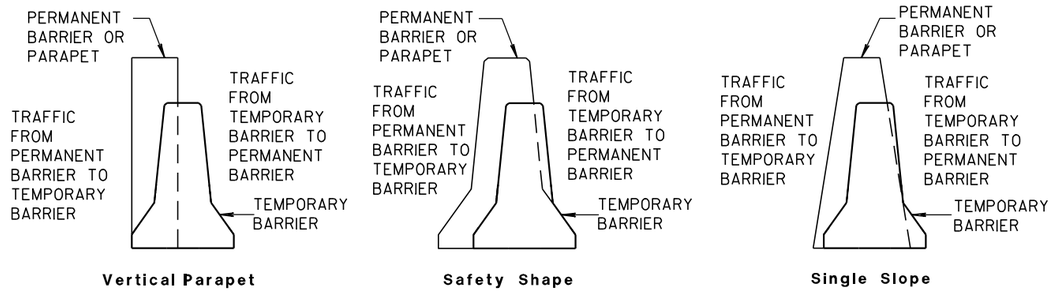
6
S.D.D. 14 B 7-13d

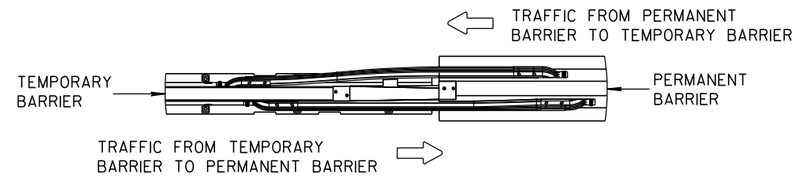


FRONT VIEW

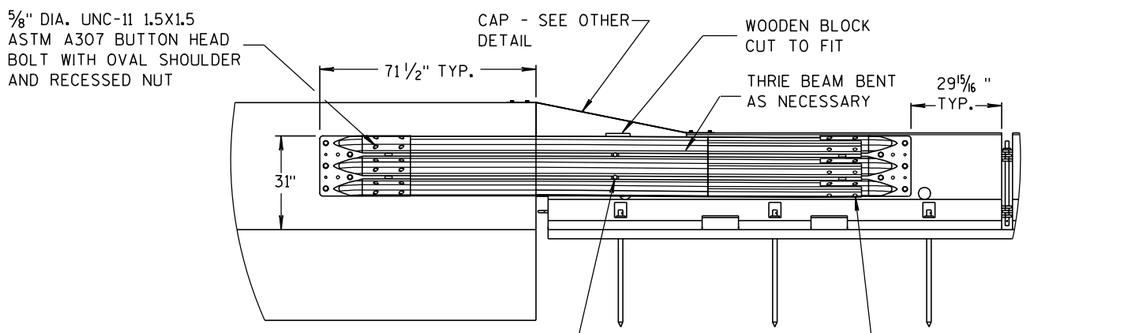
NOTES

1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.

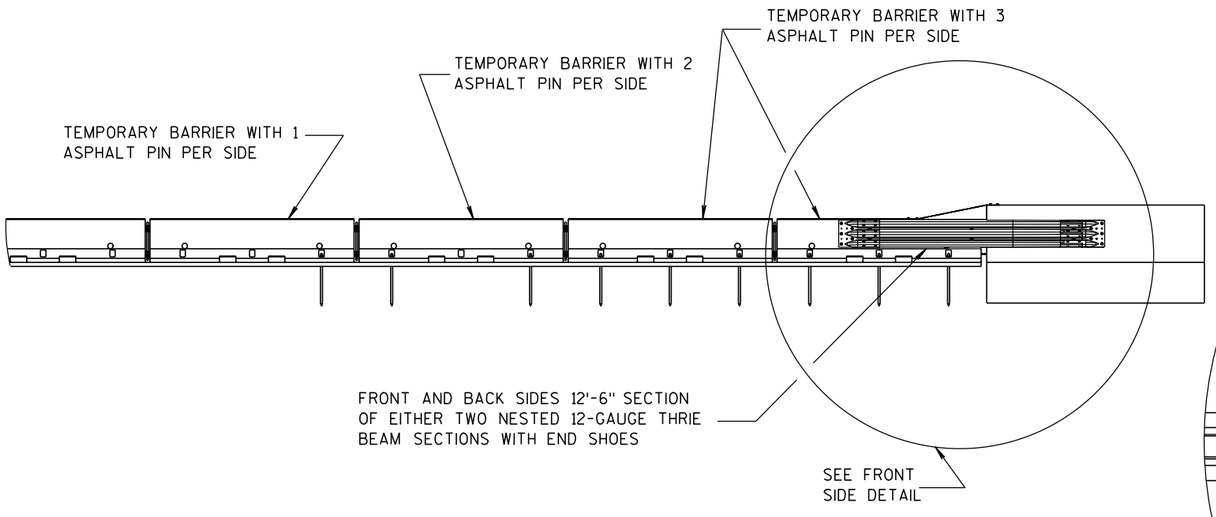




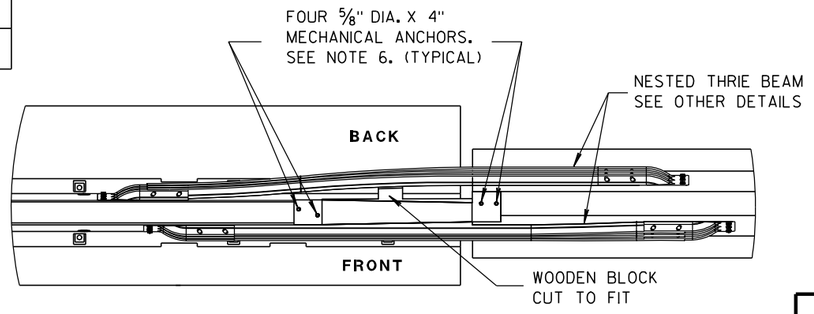
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



BACK VIEW



FRONT VIEW



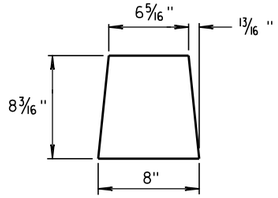
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

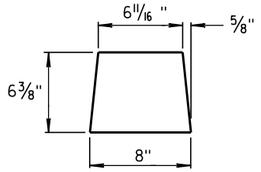
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

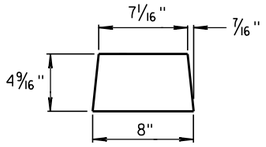
6
S.D.D. 14 B 7-13e



GUSSET 1



GUSSET 2



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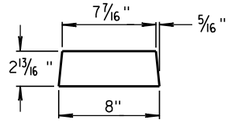
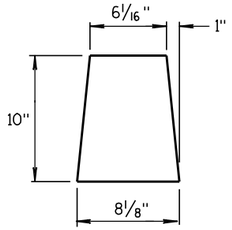
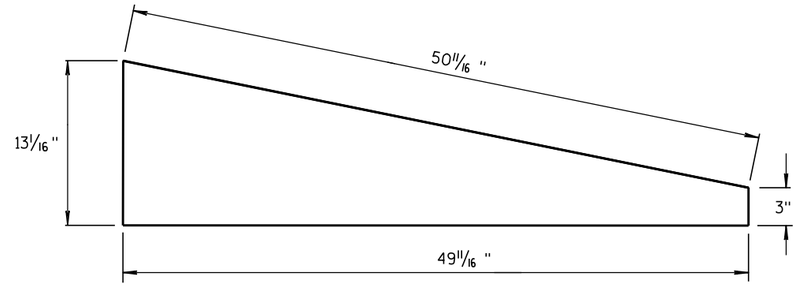


GUSSET 4

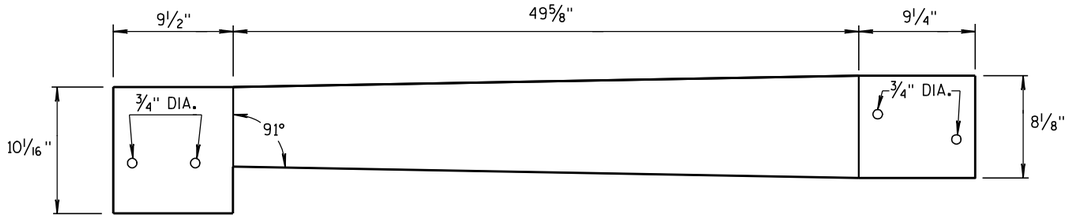
GUSSETS

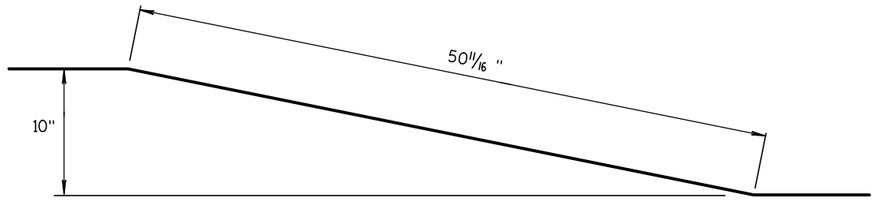


END PLATE

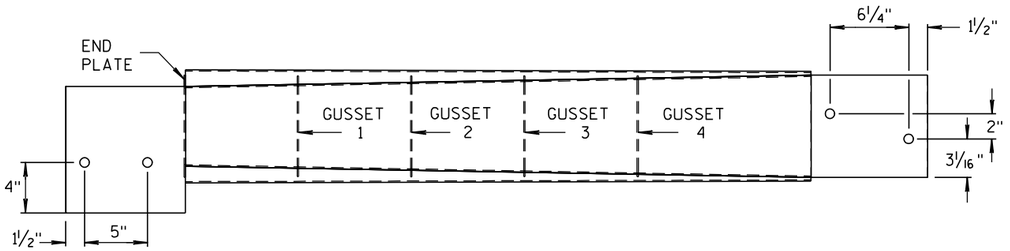


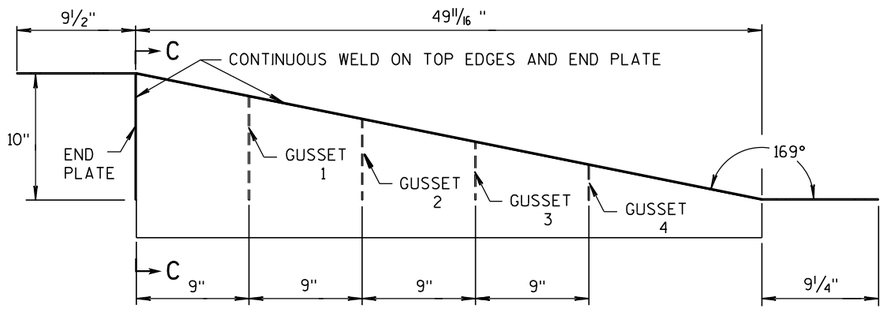
SIDE PLATE

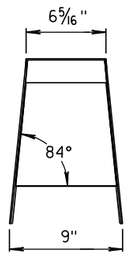




TOP PLATE







SECTION C-C

NOTES

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

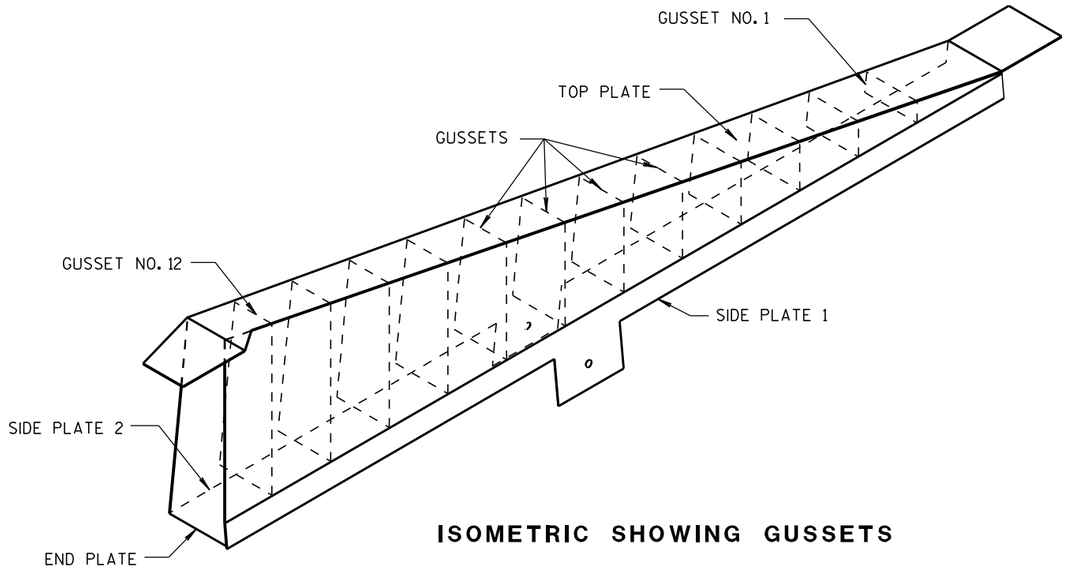
SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

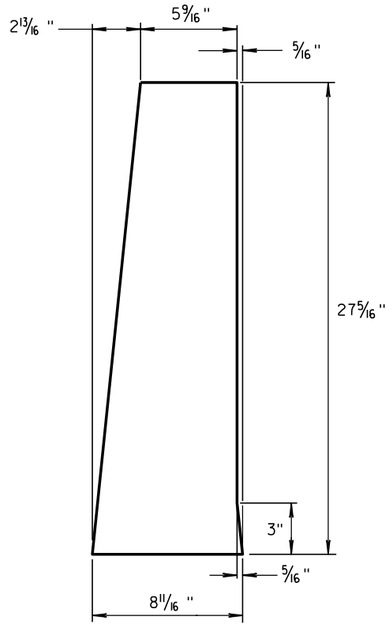
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6

S.D.D. 14 B 7-13f

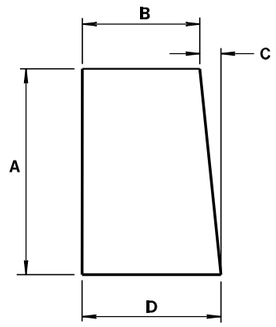


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



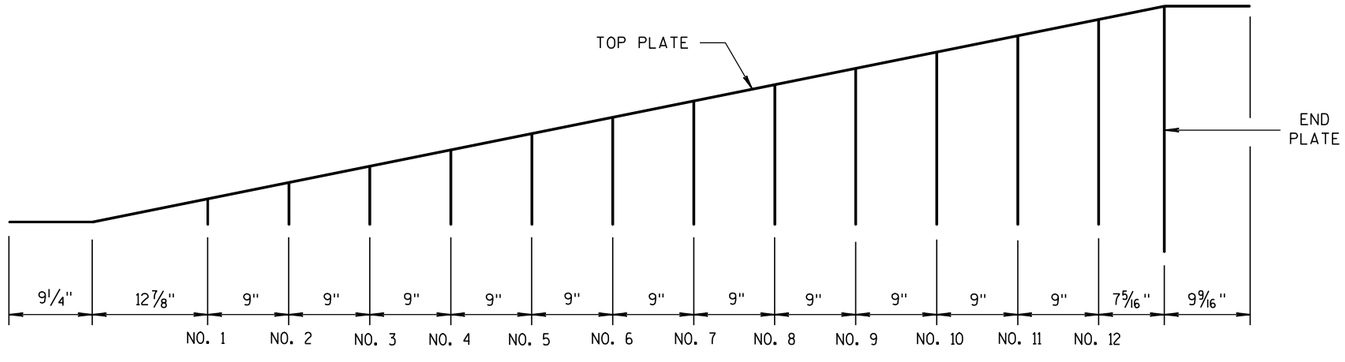
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

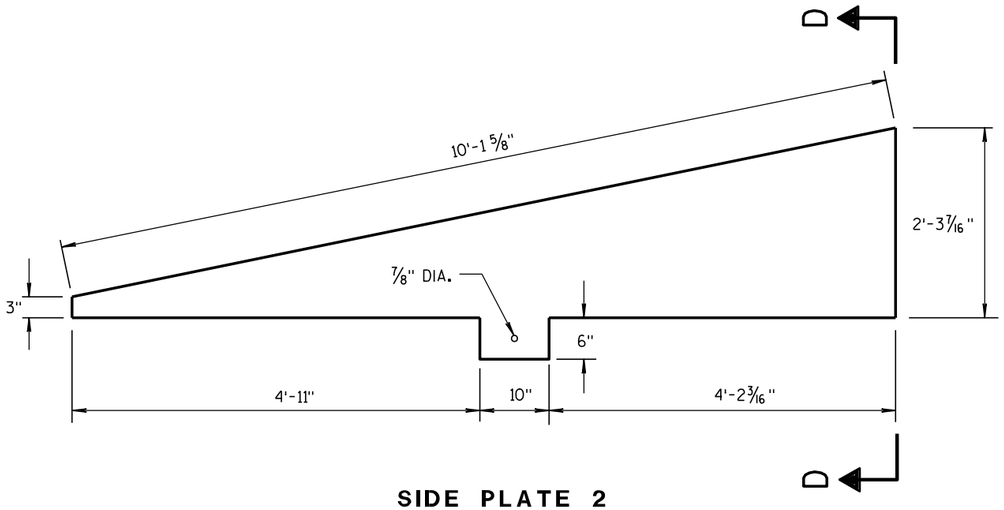
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6

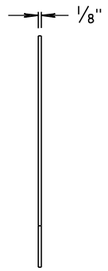
S.D.D. 14 B 7-13g

6

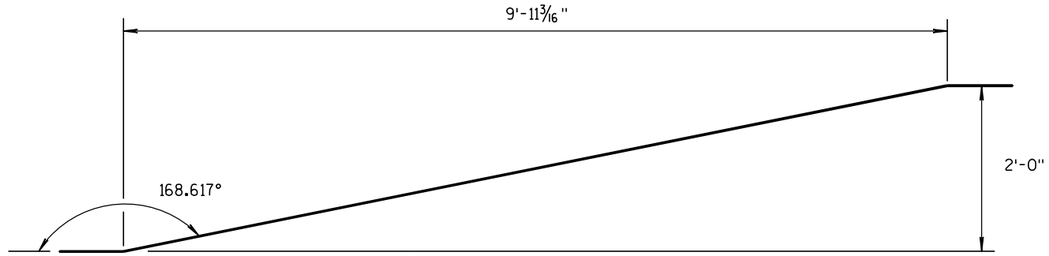
S.D.D. 14 B 7-13g



SIDE PLATE 2

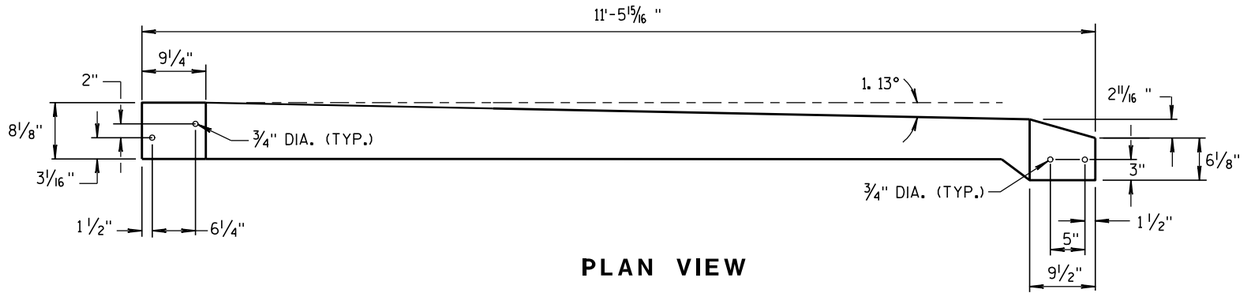


END VIEW



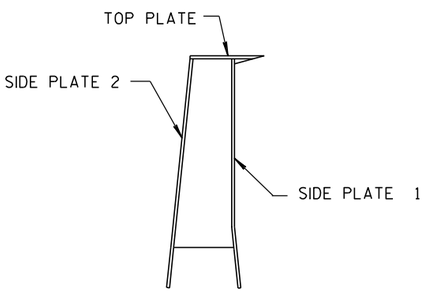
SIDE VIEW

TOP PLATE

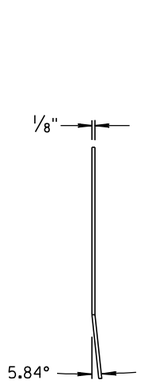


PLAN VIEW

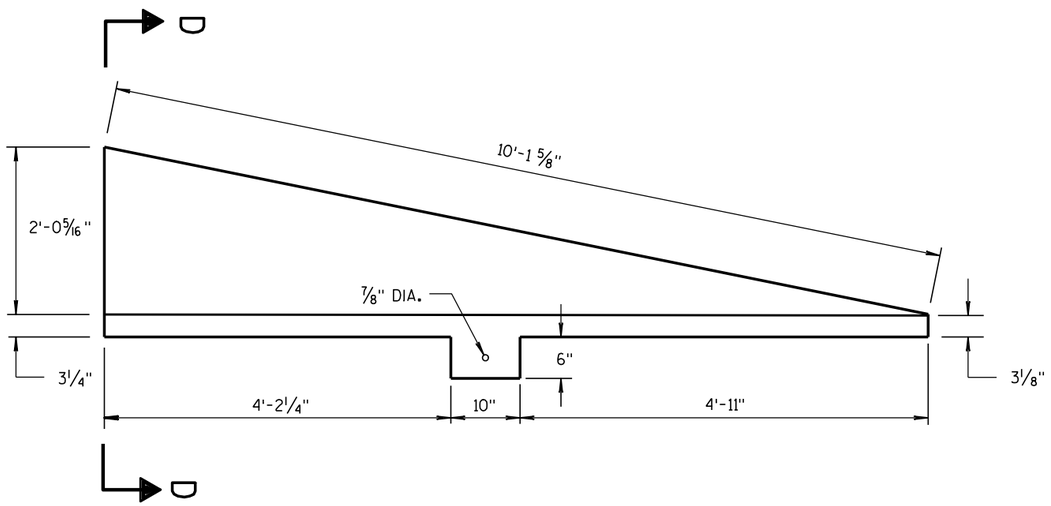
TOP PLATE



SECTION D-D



END VIEW



SIDE PLATE 1

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

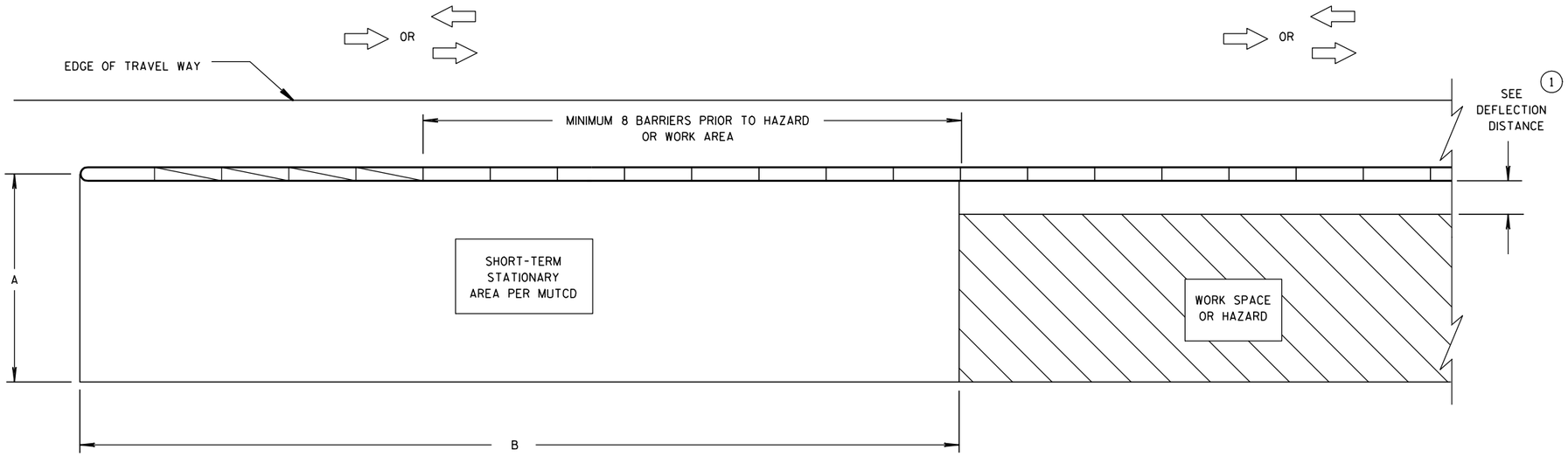
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
8/31/2012 DATE	/S/ Jerry H. ROADWAY STANDARDS ENGINEER
FHWA	169 ENT

6

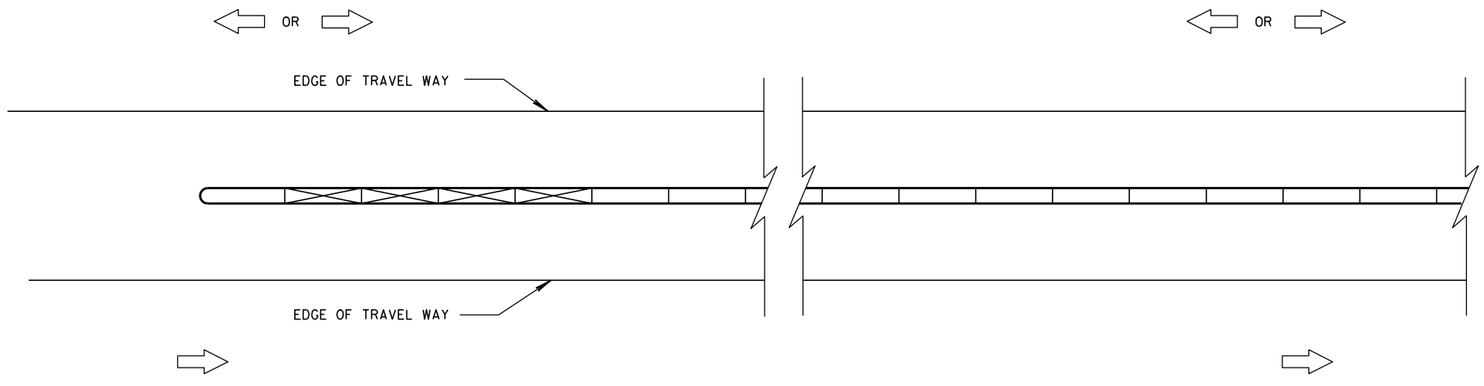
S.D.D. 14 B 7-13h

6

S.D.D. 14 B 7-13h



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

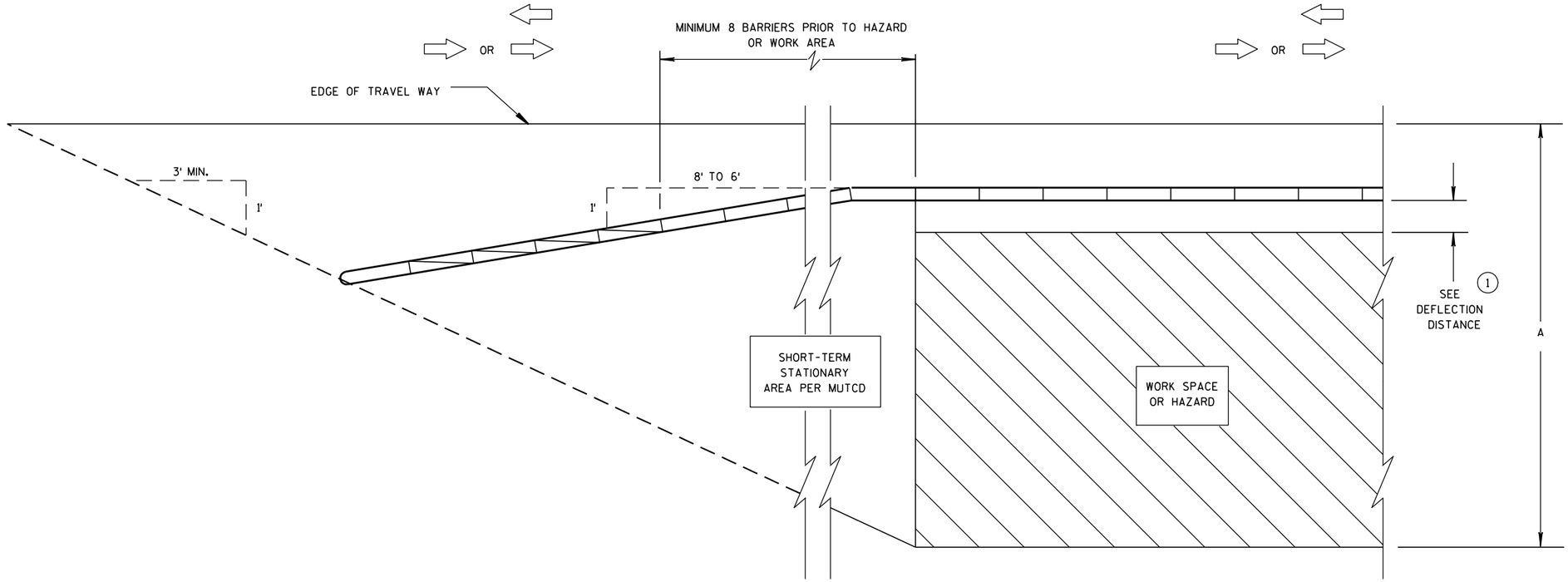
(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

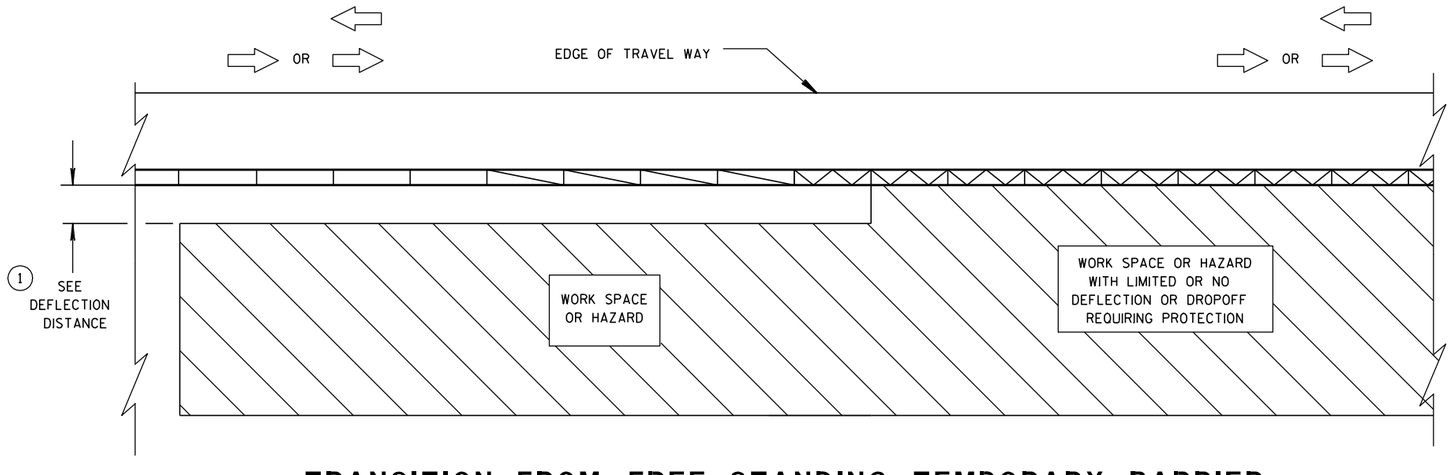
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 8-1a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

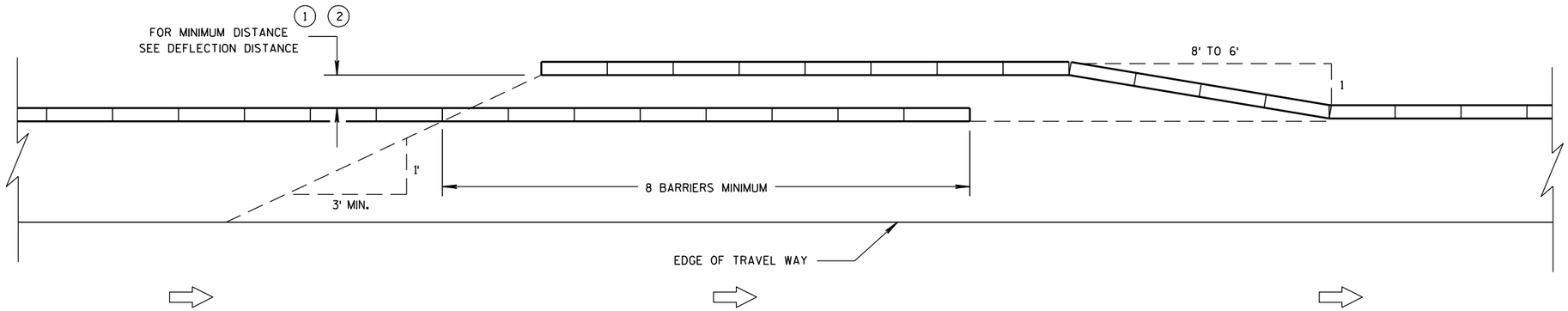
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

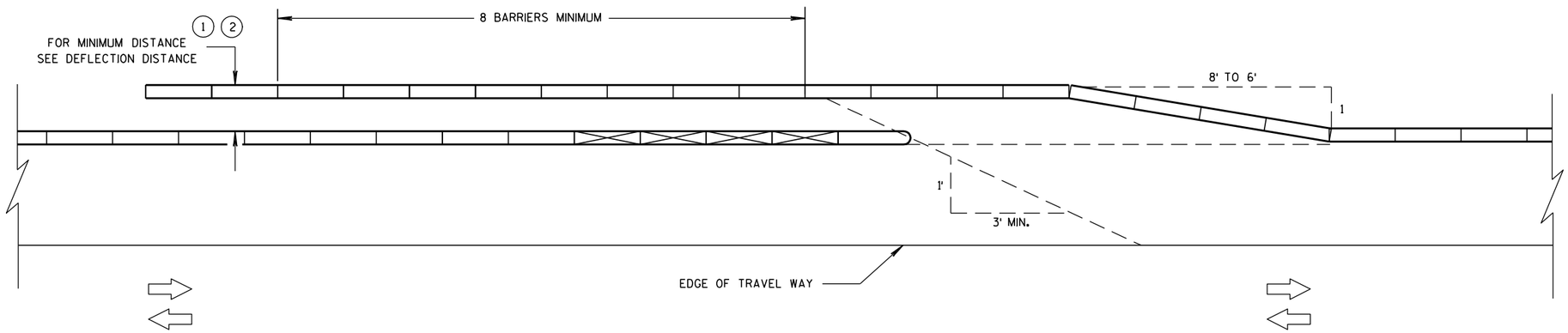
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

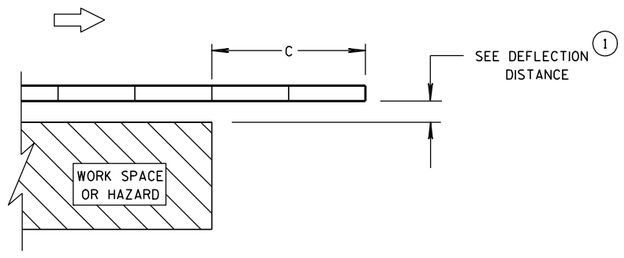
S.D.D. 14 B 8-1b



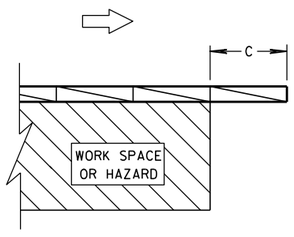
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

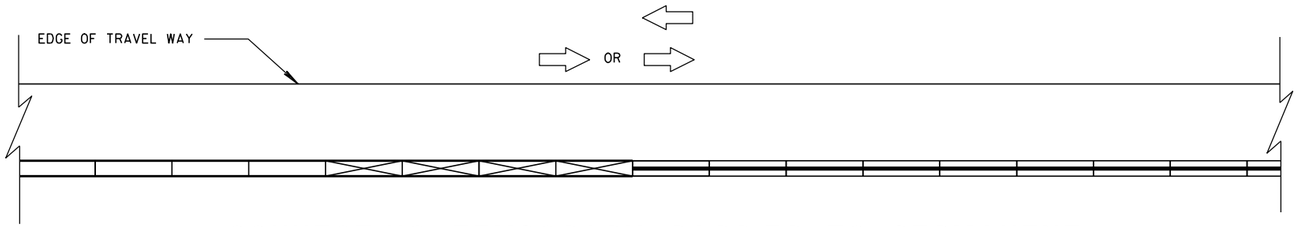
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

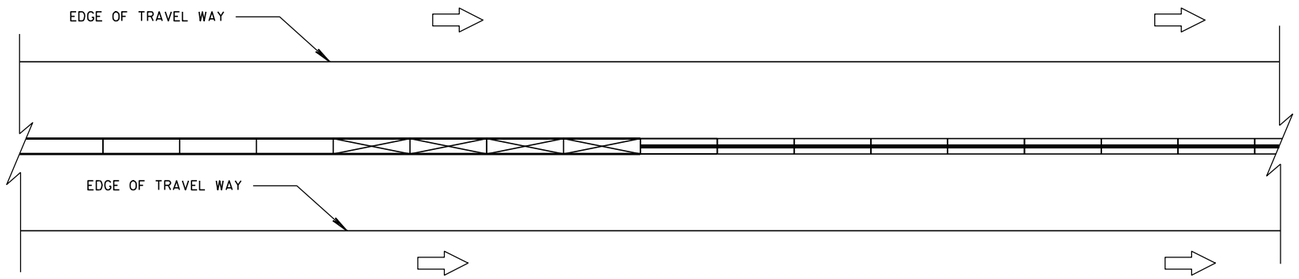
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 8-1c



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

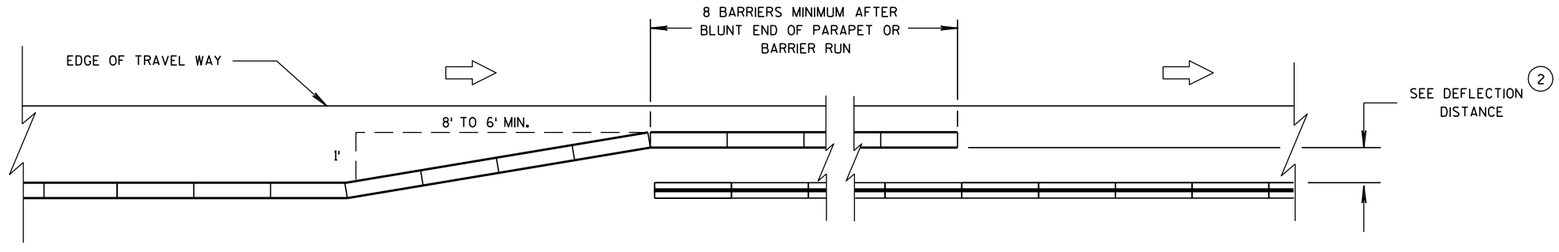
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

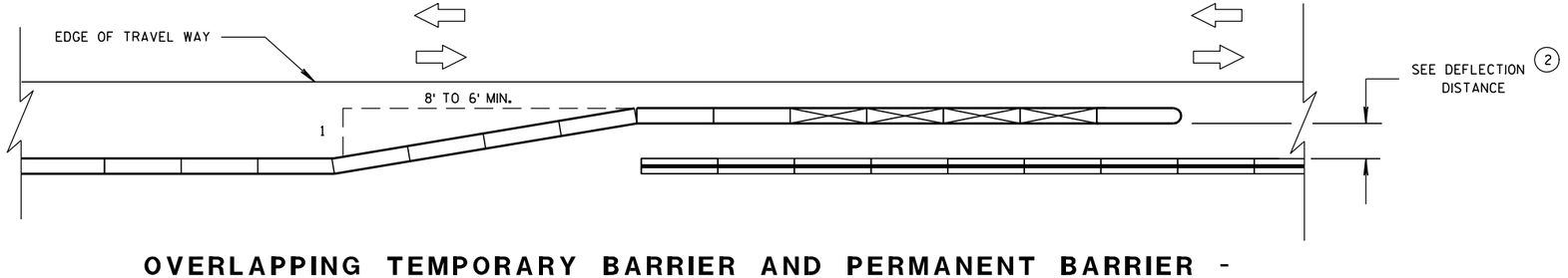
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER
OR CONCRETE PARAPET

FREE STANDING TEMPORARY
BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 8-1d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

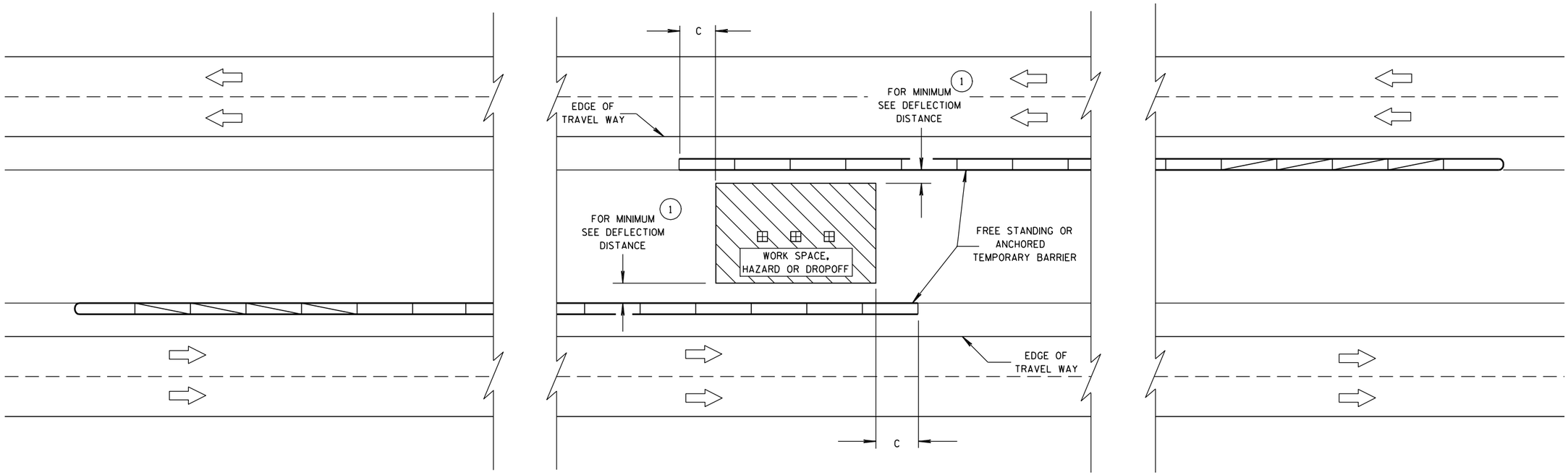
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

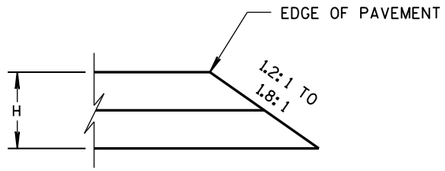
APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER

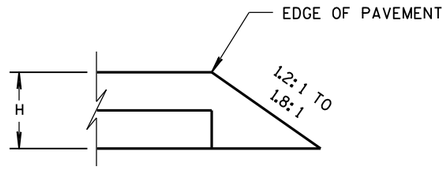
FHWA

6
S.D.D. 14 B 8-1e



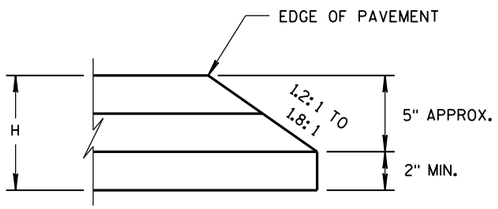
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



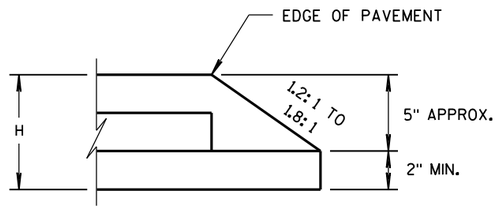
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

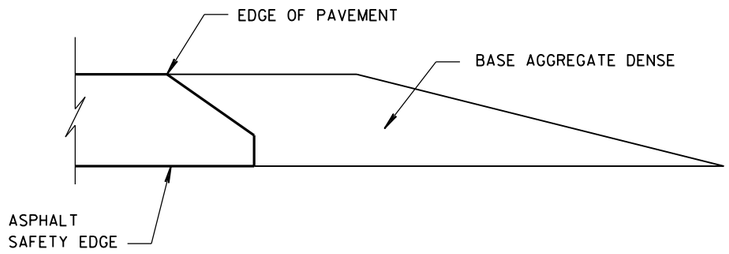
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

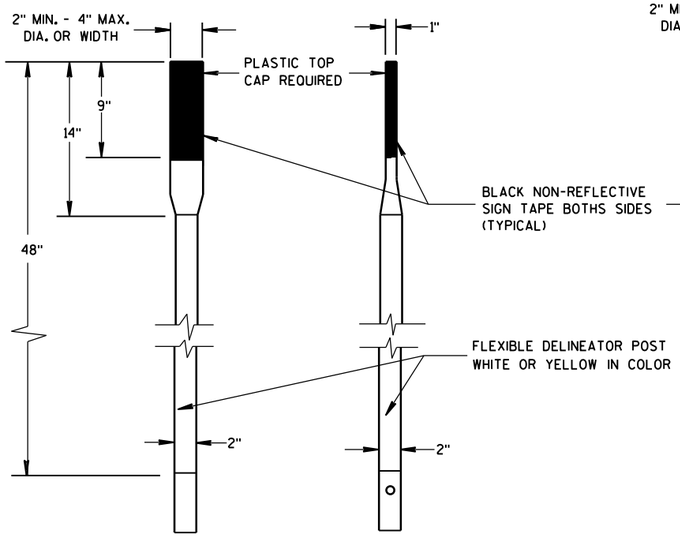
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

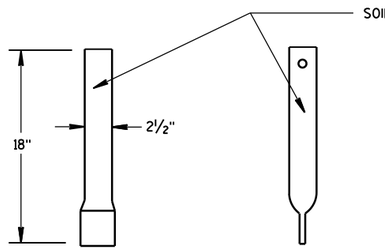
APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

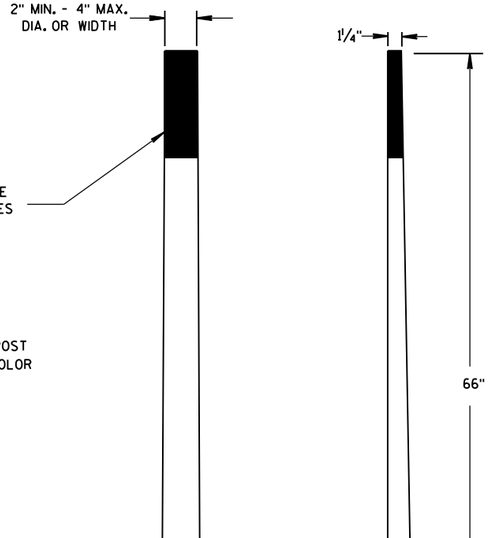
FHWA





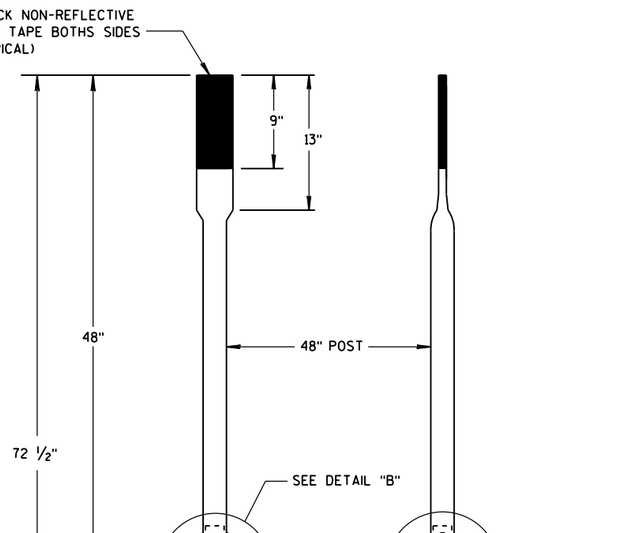
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

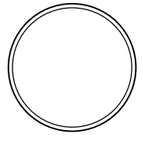
ALTERNATE 2



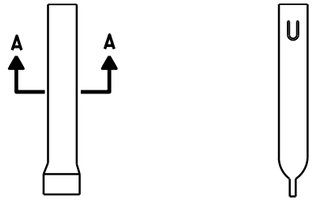
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

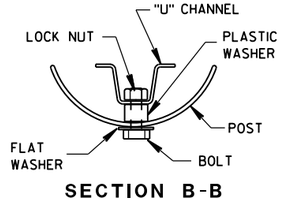


SECTION A-A

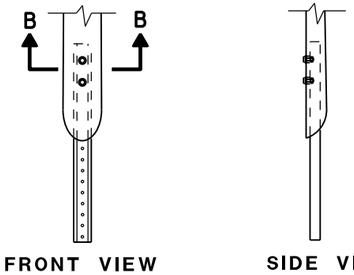


FRONT VIEW SIDE VIEW

ALTERNATE 1

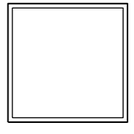


SECTION B-B

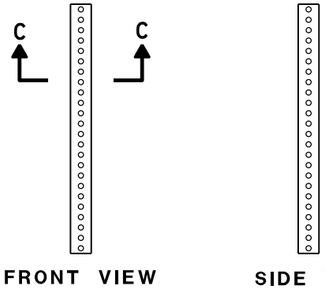


FRONT VIEW SIDE VIEW

ALTERNATE 2



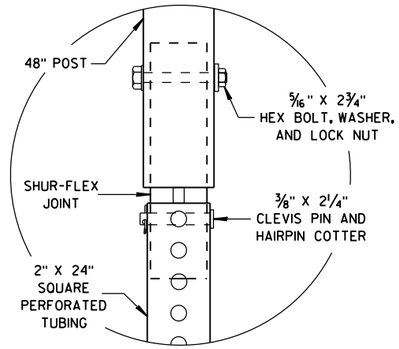
SECTION C-C



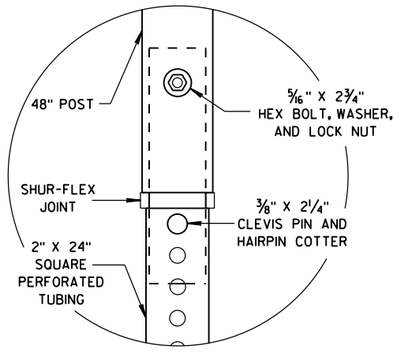
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

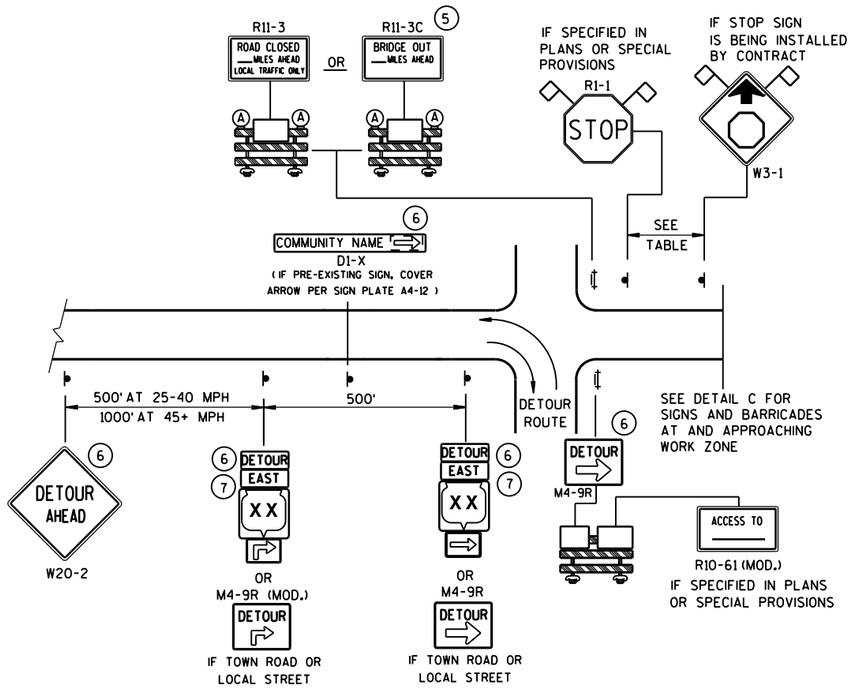
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 A 3-2b

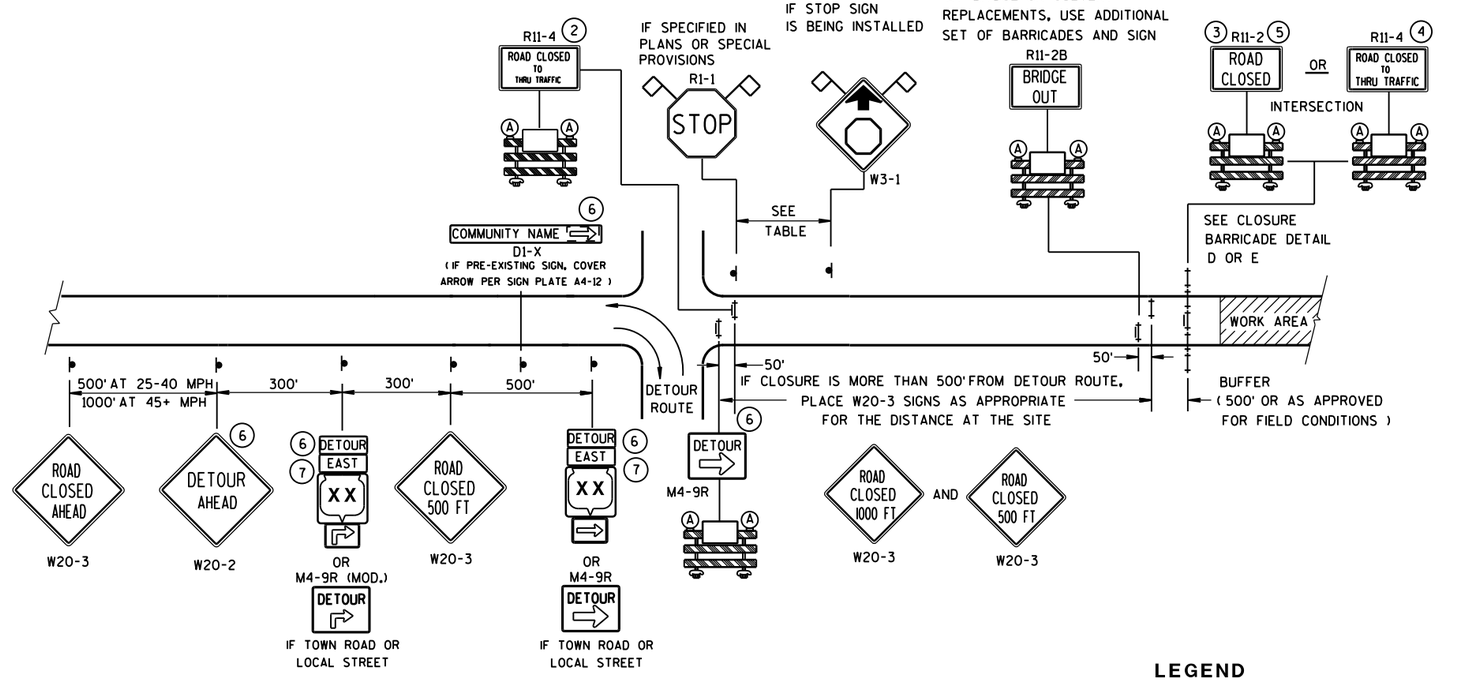
6

S.D.D. 15 A 3-2b



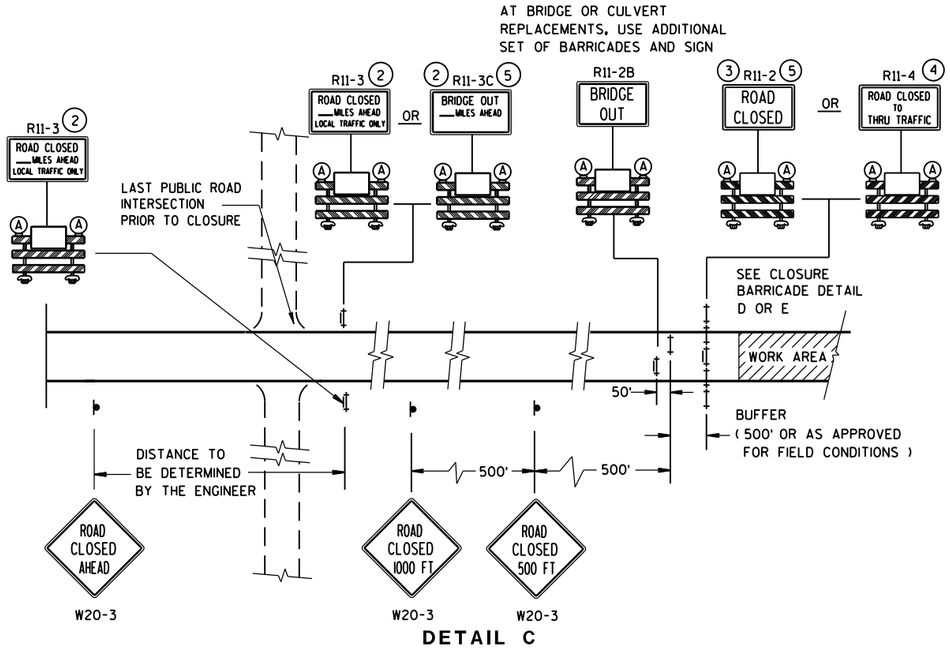
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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-SHEET "**b**" FOR GENERAL NOTES AND FOOTNOTES ① THROUGH ⑦

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

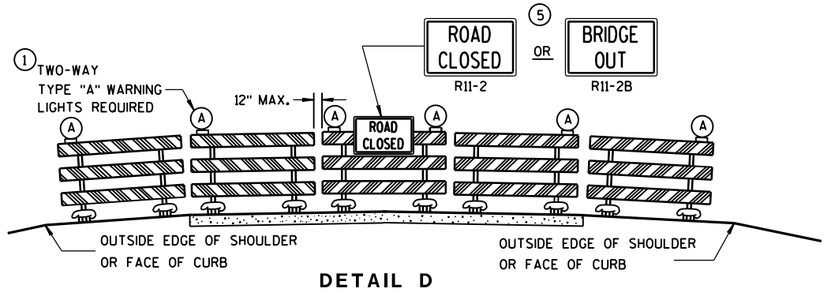
FHWA

6

S.D.D. 15 C 2-5a

6

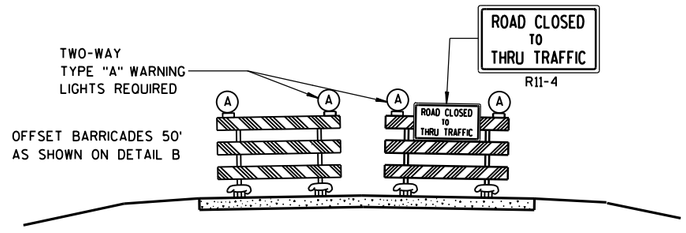
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" 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.

"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 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- 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

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 2-5b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

GENERAL NOTES

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

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. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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.

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

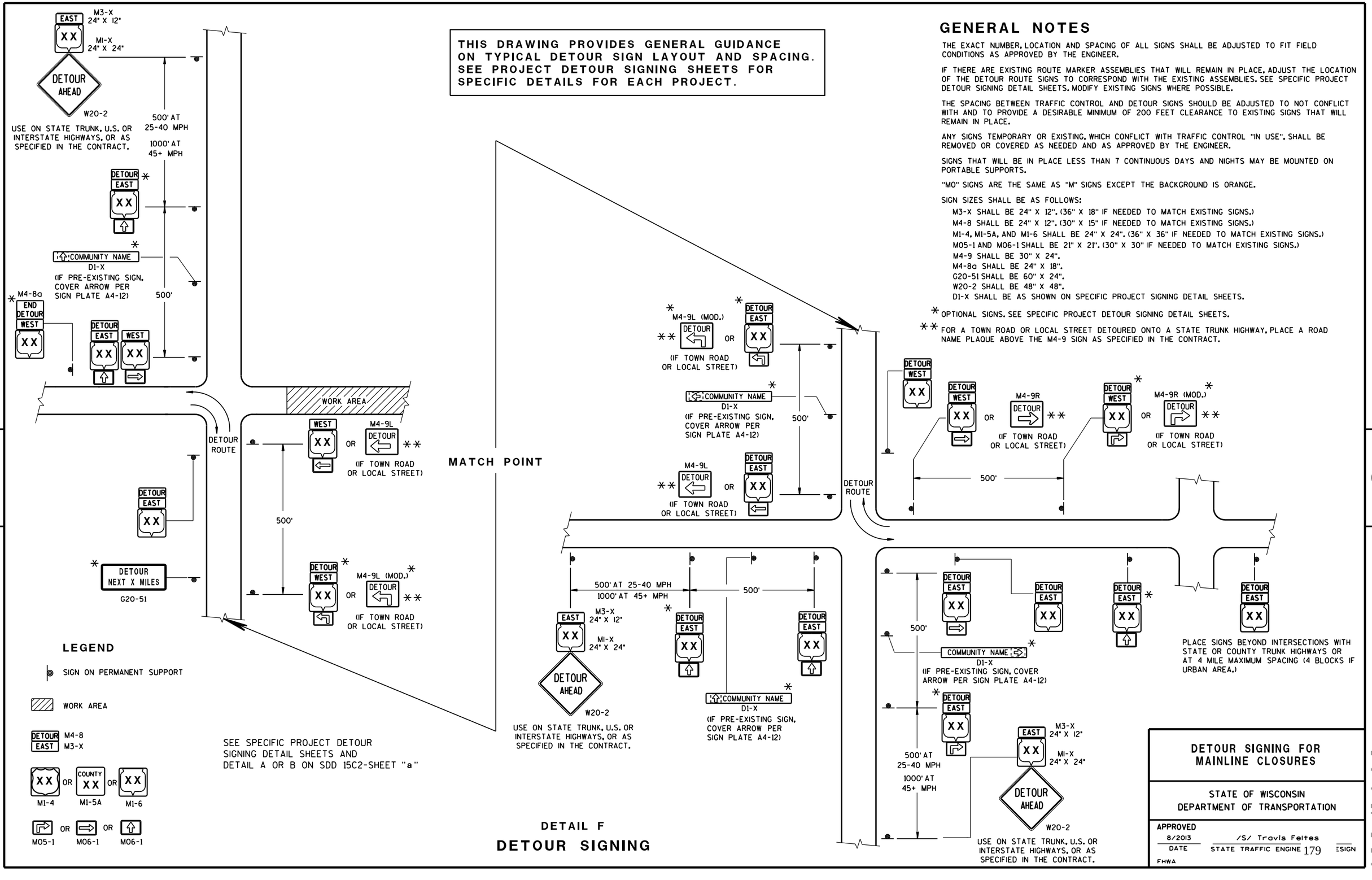
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- 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.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



DETAIL F

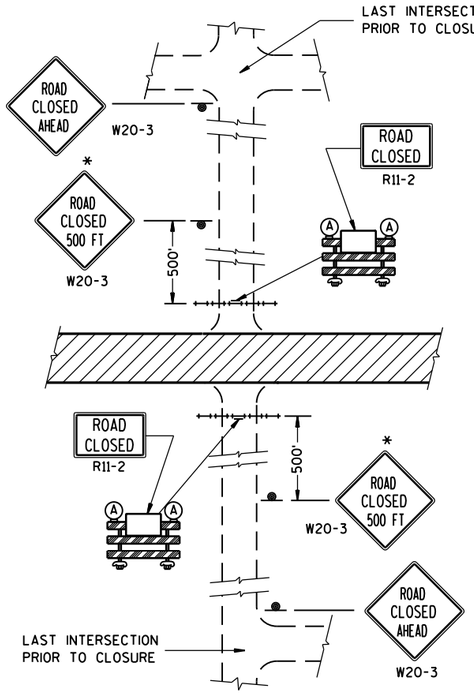
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

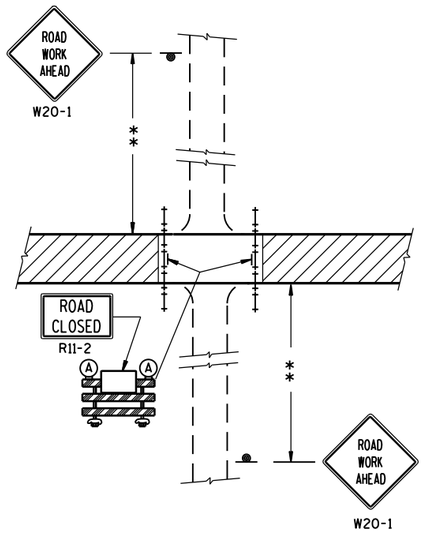
APPROVED
8/2013 DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINE
FHWA

S.D.D. 15 C 2-5c



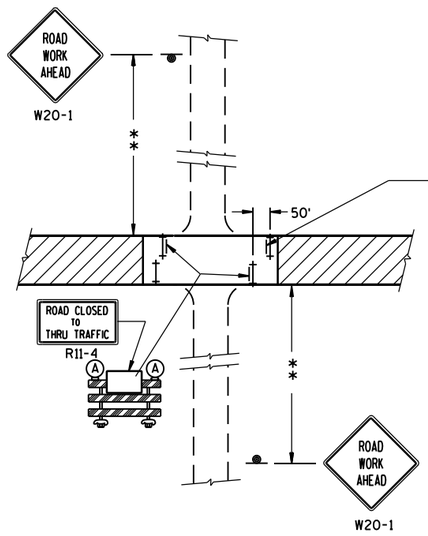
DETAIL 1

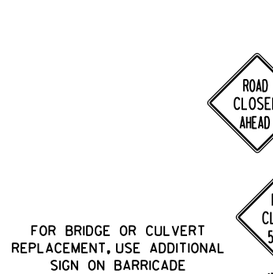
(NO ACCESS TO PROJECT)



DETAIL 2

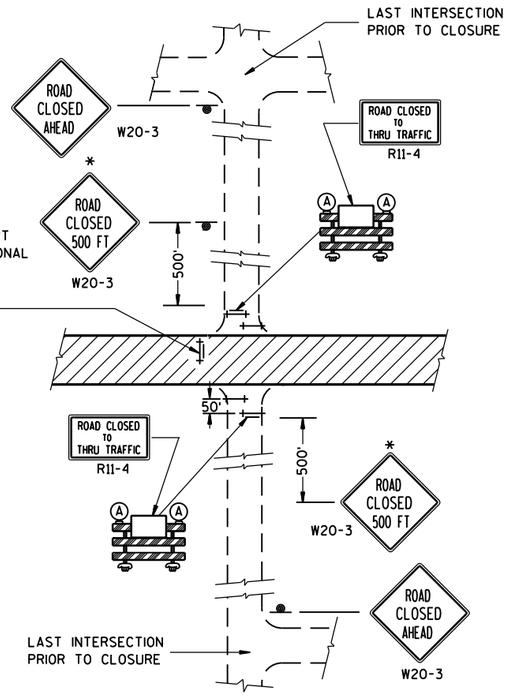
(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).





DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

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.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

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 AND R11-4 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.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

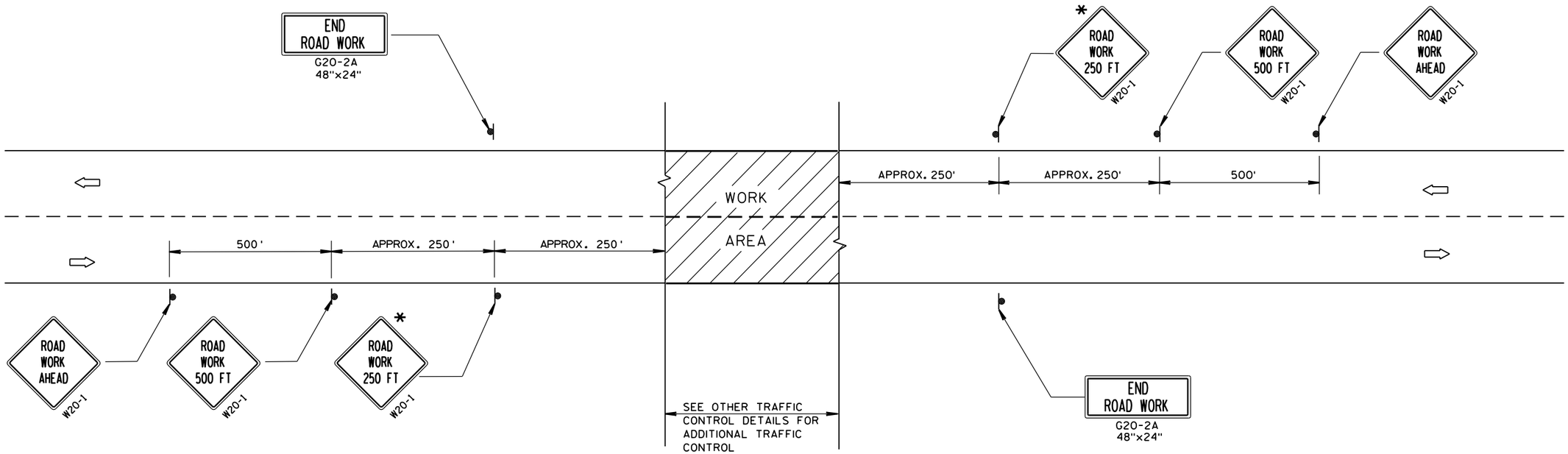
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

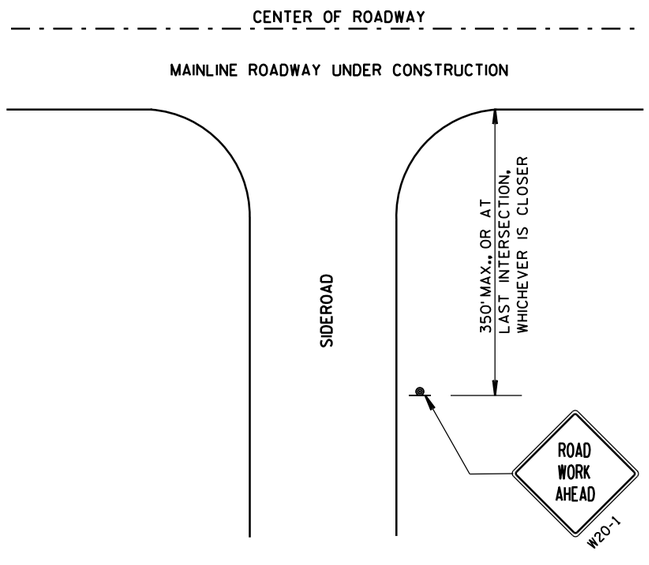
S.D.D. 15 C 3-2

6

S.D.D. 15 C 3-2



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

SIGN

FHWA

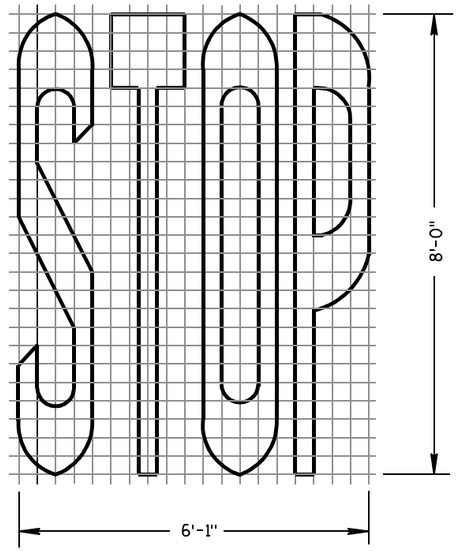
6

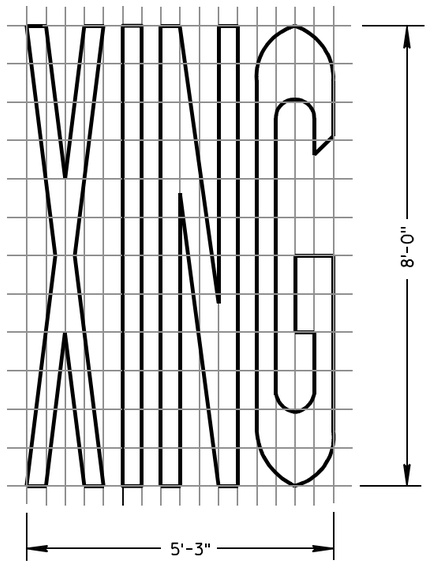
S.D.D. 15 C 5-2

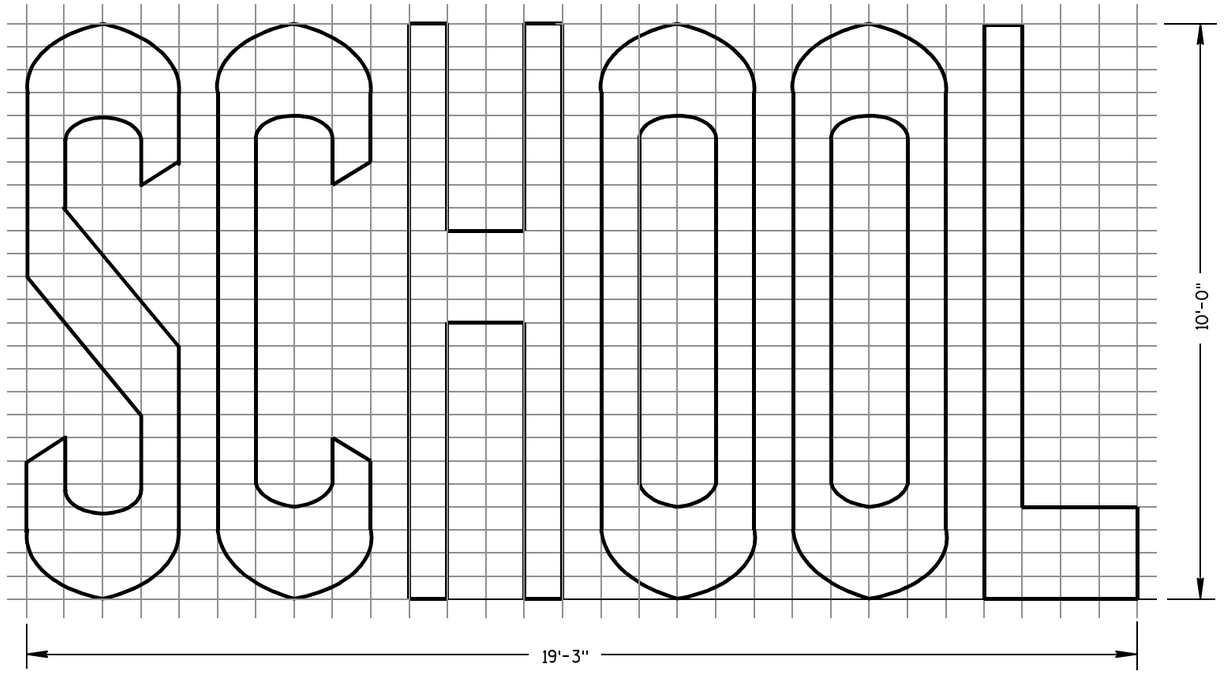
GENERAL NOTES

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.

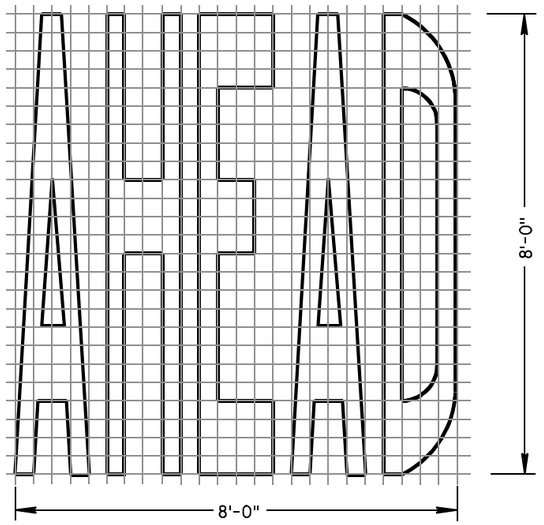
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES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

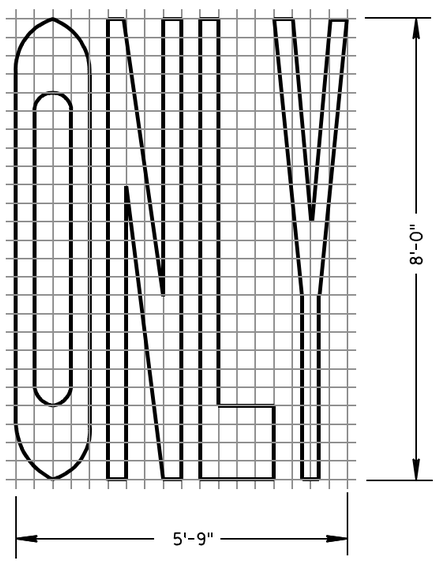


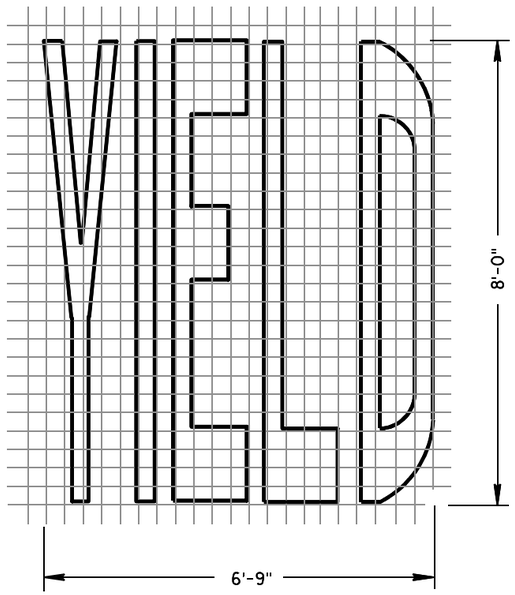


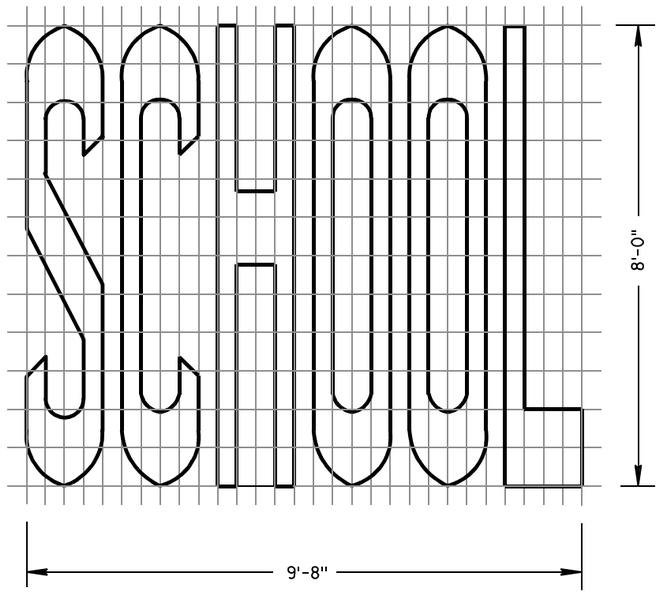


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-1-11 DATE — /S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER — IGN

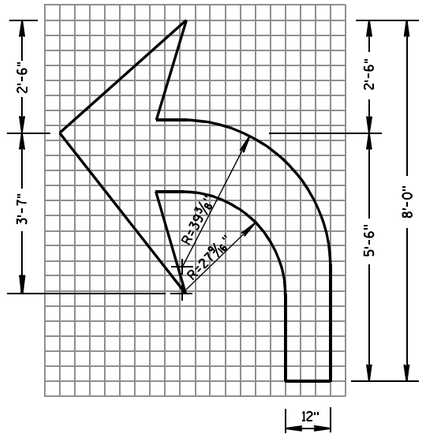
FHWA

6

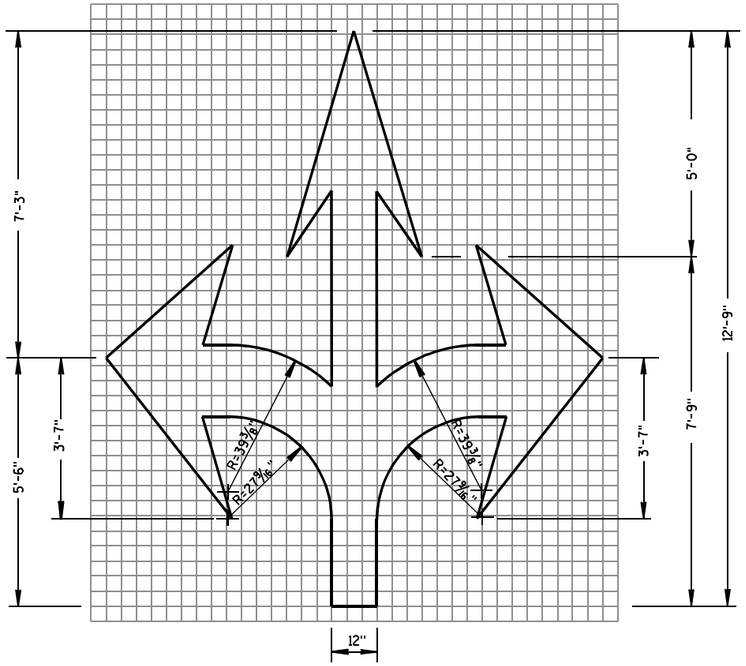
S.D.D. 15 C 7-12b

6

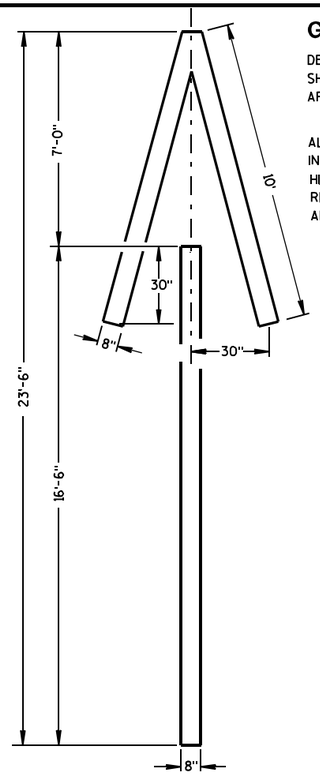
S.D.D. 15 C 7-12b



TYPE 2



TYPE 6

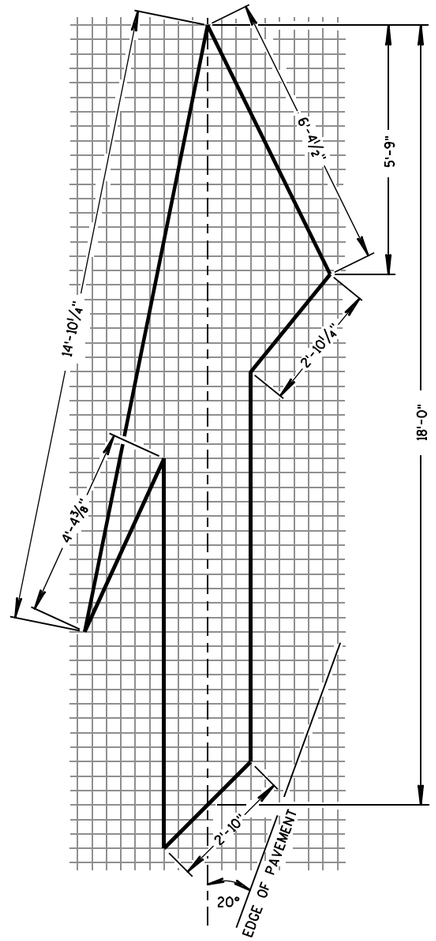


TYPE 4

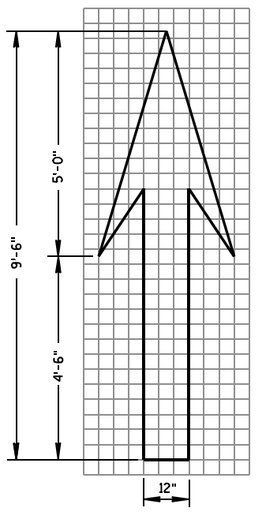
GENERAL NOTES

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.

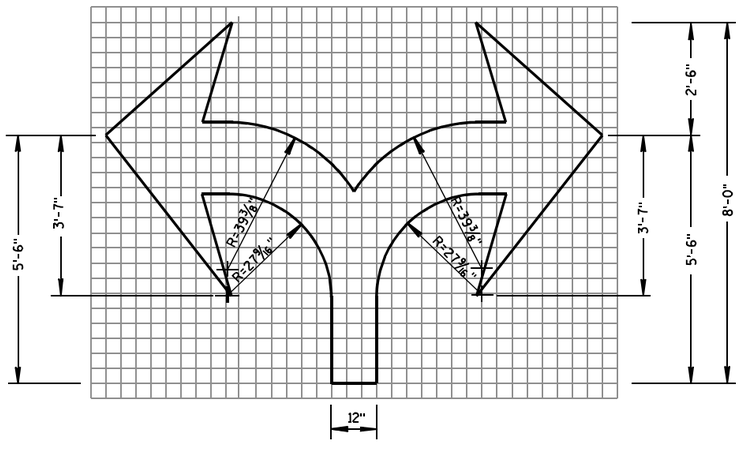
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES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



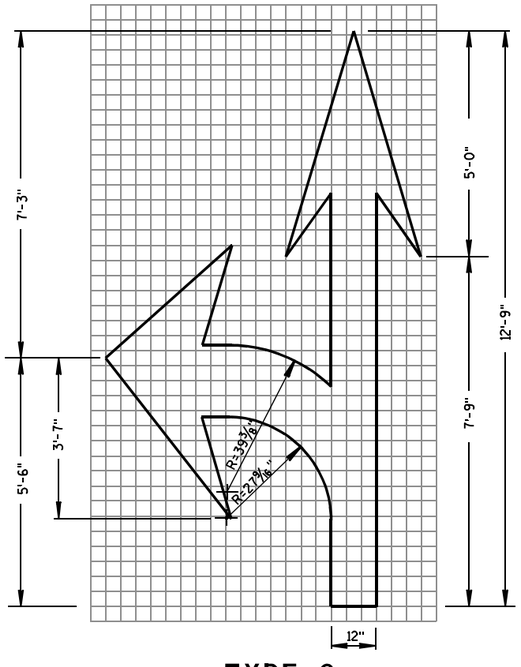
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nathaham — STATE TRAFFIC ENGINEER

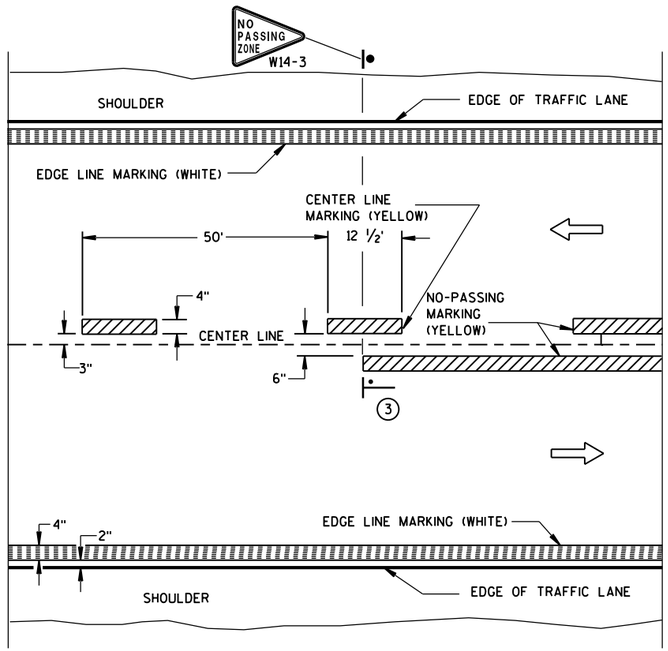
FHWA

6

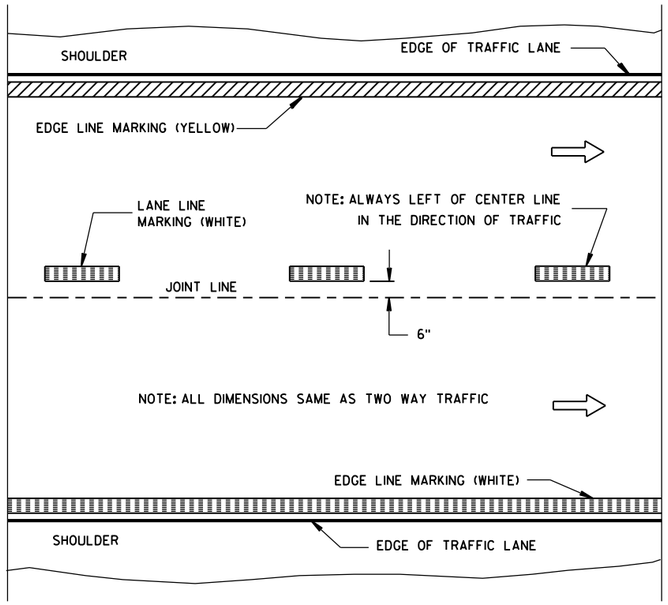
S.D.D. 15 C 7-12c

6

S.D.D. 15 C 7-12c

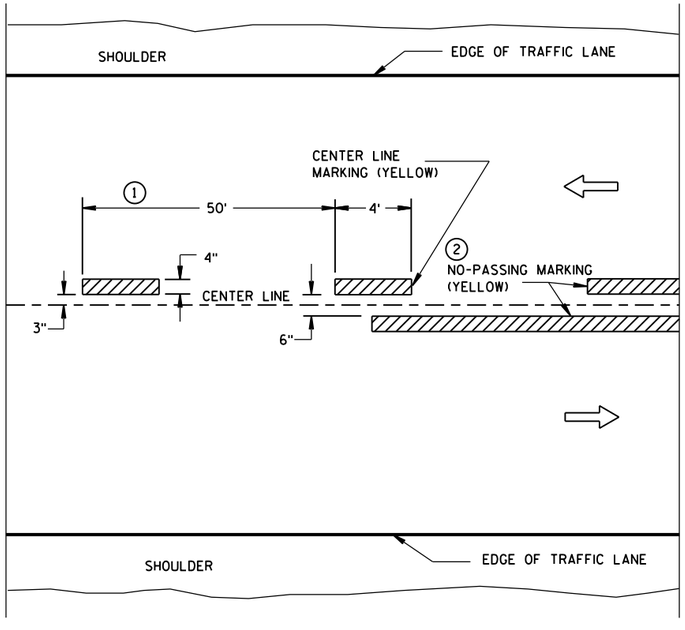


TWO WAY TRAFFIC

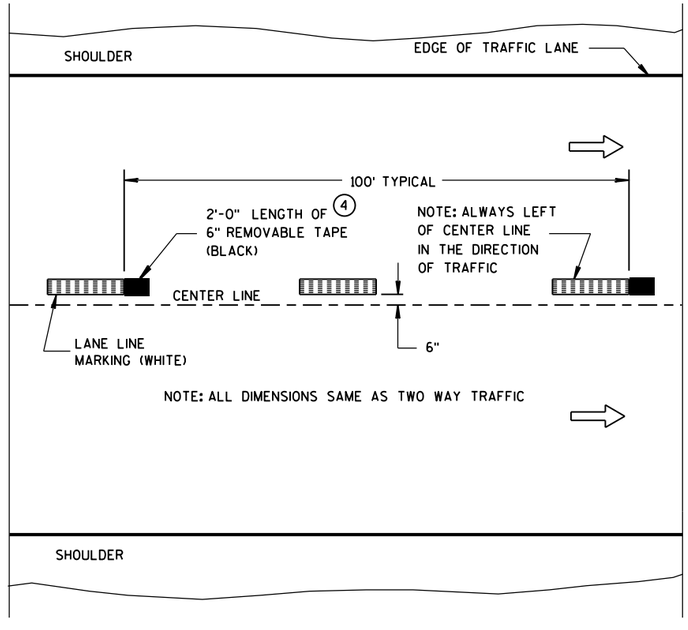


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

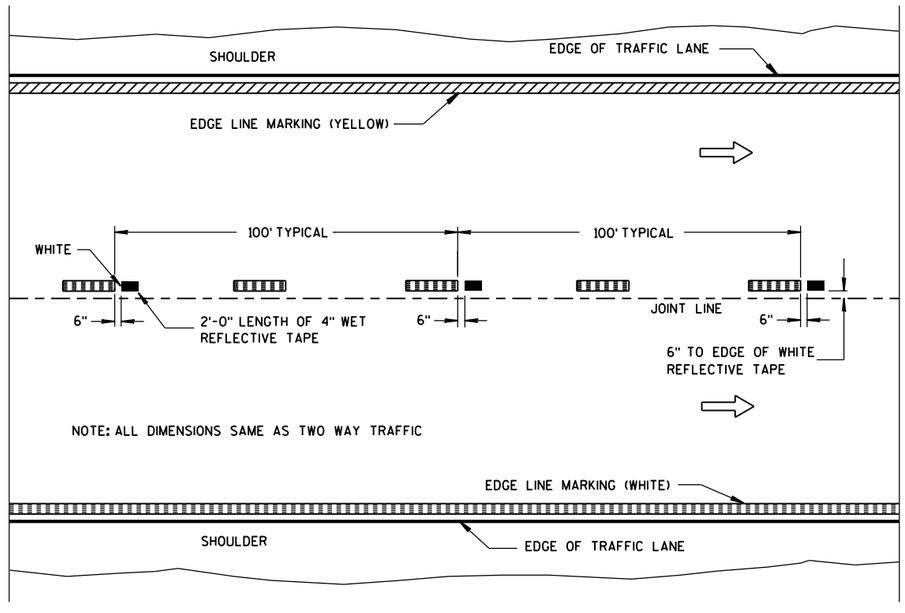
GENERAL NOTES

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.
4. CONCRETE ONLY.

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

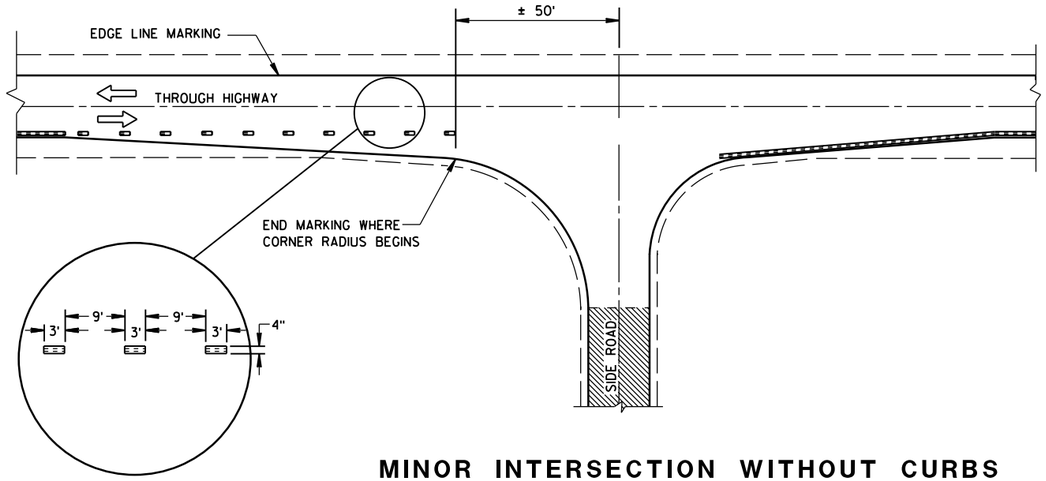
PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

6

S.D.D. 15 C 8-16a



MINOR INTERSECTION WITHOUT CURBS

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.

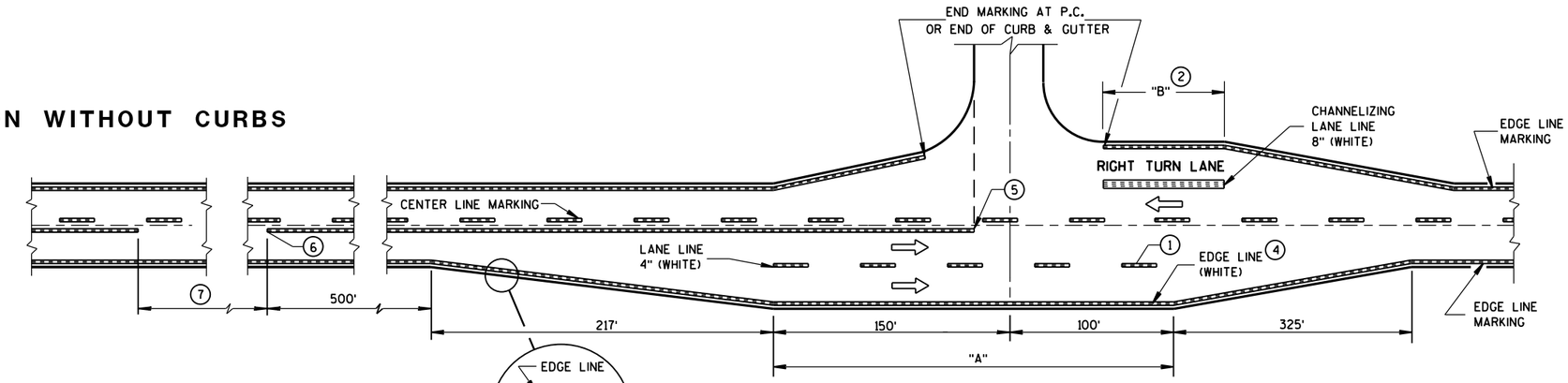
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

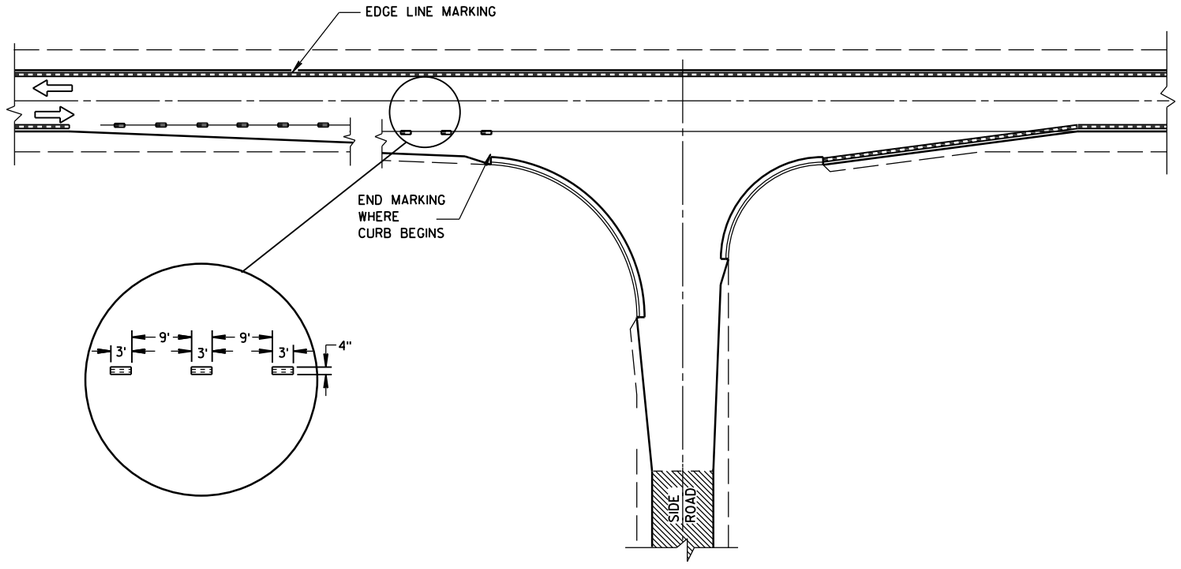
(7)

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



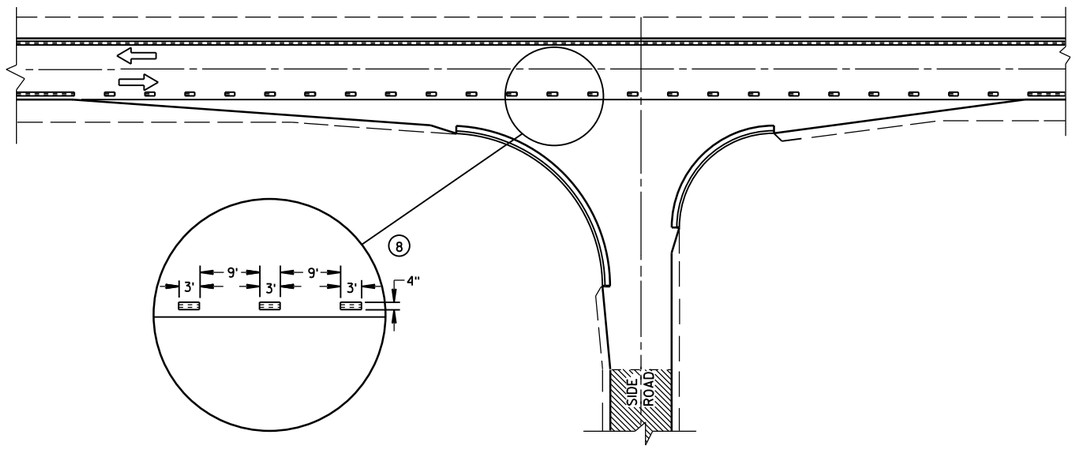
MAJOR INTERSECTIONS

(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)

PAVEMENT MARKING
(INTERSECTIONS)

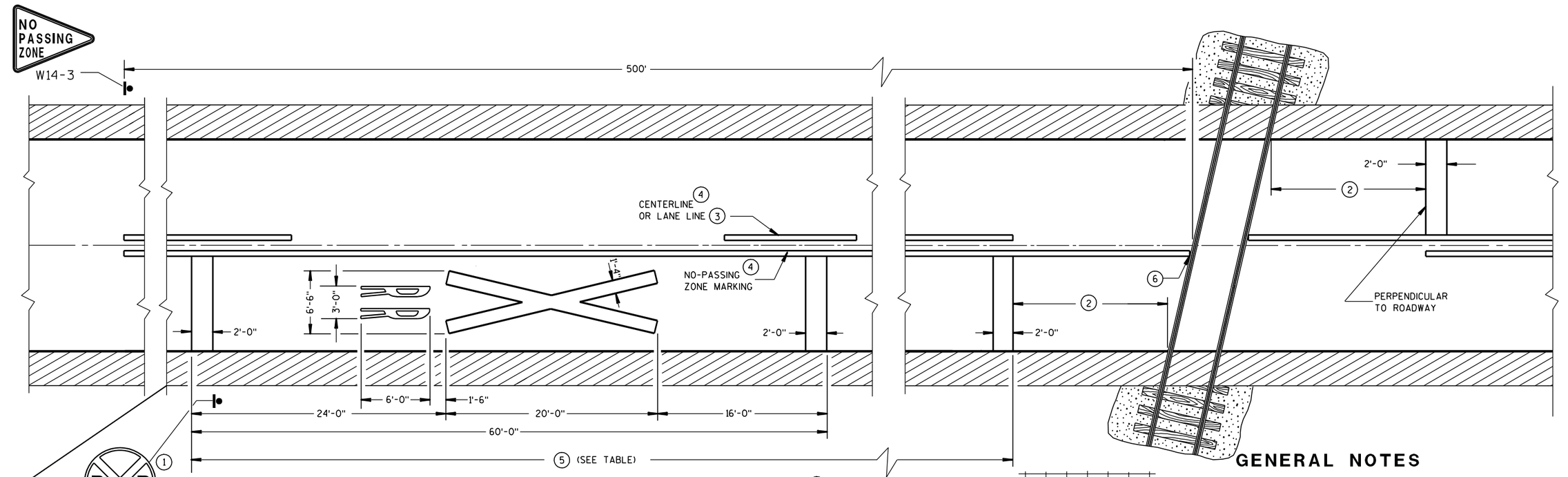
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

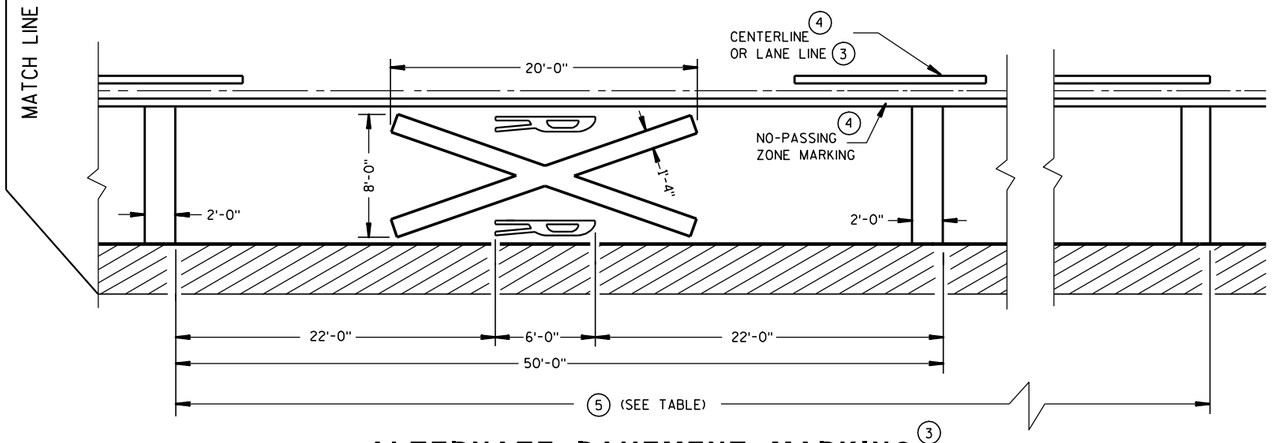
S.D.D. 15 C 8-16b

6

S.D.D. 15 C 8-16b



PREFERRED PAVEMENT MARKING (3)

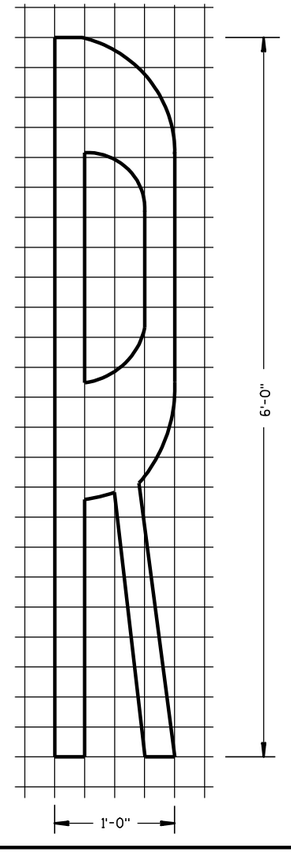


ALTERNATE PAVEMENT MARKING (3)

(5)

Posted Speed (M.P.H.)	Dimension Range (Feet)
25	150*- 250
30	200*- 300
35	250*- 450
40	300*- 500
45	400*- 650
50	550*- 800
55	750*- 1000
60	1000*- 1250
65	1000*- 1250

* THE MINIMUM DISTANCES IN THE TABLE ARE DESIRABLE AND SHOULD BE USED. THE DISTANCES MAY BE INCREASED UP TO THE MAXIMUM TO ALLOW FOR FIELD CONDITIONS SUCH AS THE CLOSE PROXIMITY OF DRIVEWAYS, BRIDGES, SIDEROADS OR OTHER FEATURES THAT WOULD PROHIBIT THE MINIMUM DISTANCES FROM BEING USED.



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.

A THREE-LANE ROADWAY SHOULD BE MARKED WITH A CENTERLINE FOR TWO-LANE APPROACH OPERATION ON THE APPROACH TO A CROSSING.

ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE. ALL LETTERS AND SYMBOLS SHALL BE IN CONFORMANCE WITH THE "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" (ADOPTED BY THE FEDERAL HIGHWAY ADMINISTRATION).

CENTER OR LANE LINES AND NO-PASSING ZONE MARKINGS SHOWN ON THIS DRAWING ARE REQUIRED AND PAID FOR UNDER OTHER ITEMS IN THE CONTRACT.

(1) A PORTION OF THE PAVEMENT MARKING SYMBOL SHOULD BE DIRECTLY OPPOSITE THE ADVANCE WARNING SIGN (W10-1).

(2) MINIMUM 8' FROM ANY RAILROAD WARNING DEVICES (SIGNALS, GATES, ETC.) OR 25' FROM THE NEAREST RAIL, WHICHEVER DISTANCE IS GREATER.

(3) REFLECTIVE WHITE.

(4) REFLECTIVE YELLOW 500' MINIMUM. MARKING LIMITS MAY BE EXTENDED AS DIRECTED BY THE ENGINEER TO MEET ADJACENT NO-PASSING ZONE MARKINGS.

(5) TABLE BASED UPON 2C-4 WISCONSIN SUPPLEMENT OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

(6) FOR MULTIPLE TRACK CROSSINGS, THE BARRIER LINE SHALL EXTEND TO THE NEAR RAIL OF THE FURTHEST TRACK IN THE DIRECTION OF HIGHWAY TRAVEL.

SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

1-9-2012
DATE

/S/ Thomas N. [illegible]
STATE TRAFFIC ENGINEER

FHWA

6
S.D.D. 15 C 9-9a

TWO-LANE ROADWAY

SYMBOLS

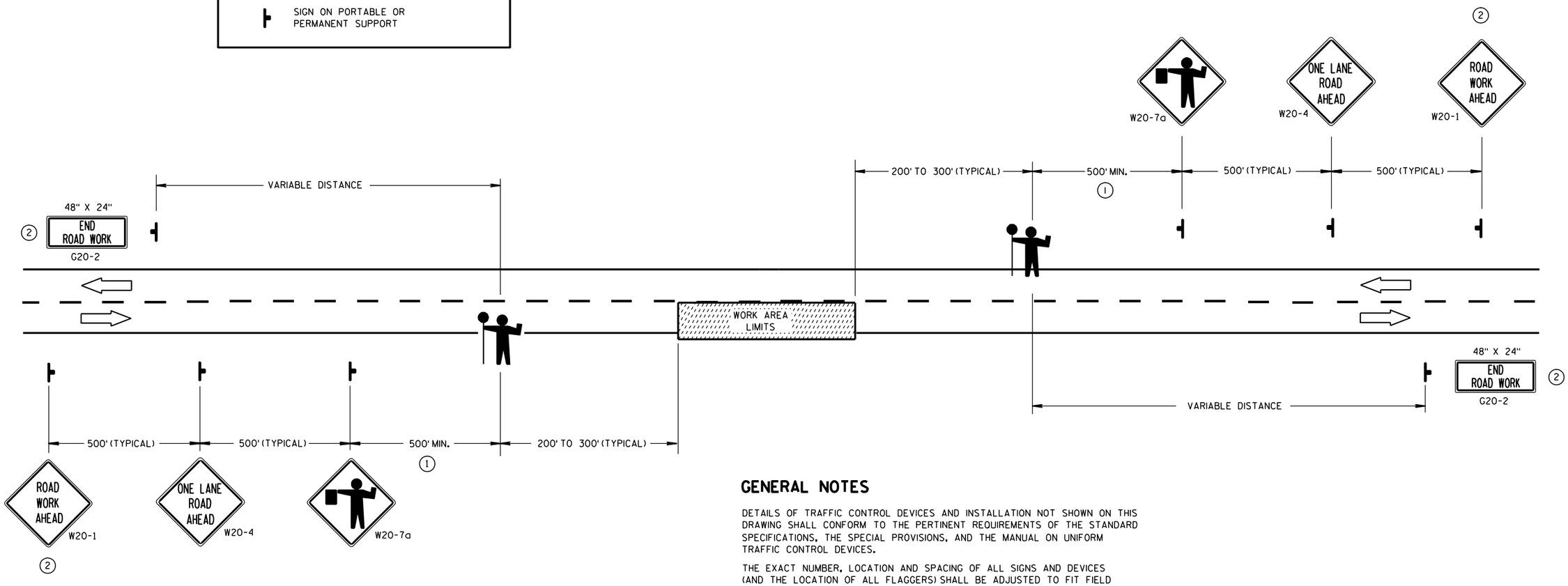
WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN ON PORTABLE OR PERMANENT SUPPORT

W3-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



(1) FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, THE "FLAGGER AHEAD", THE "ROAD WORK AHEAD" AND THE ONE LANE ROAD AHEAD" SIGNS SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

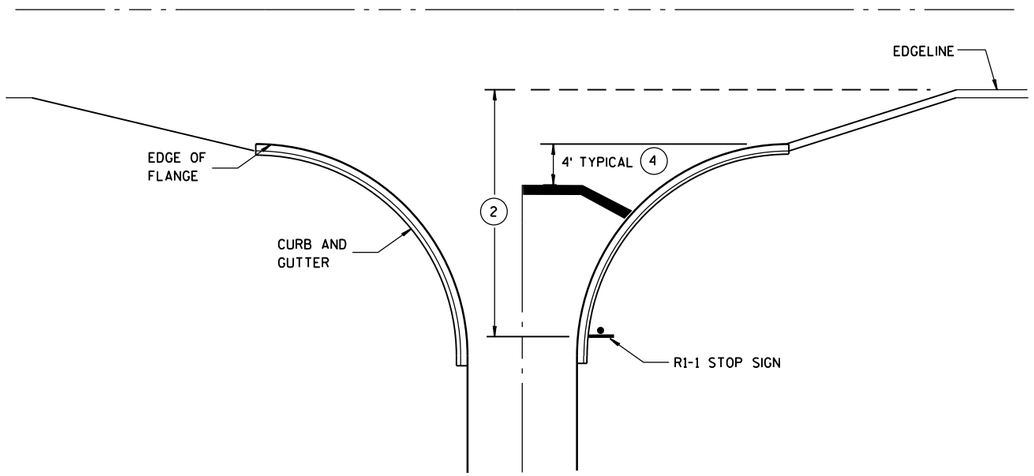
9/5/06 — DATE

/S/ Thomas N. Nathaam — STATE TRAFFIC ENGINEER

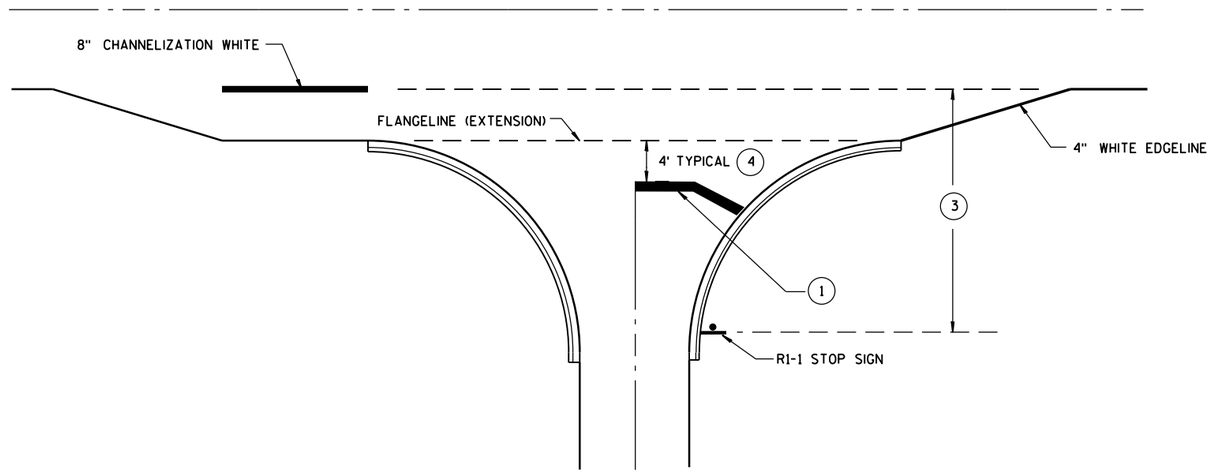
FHWA

6

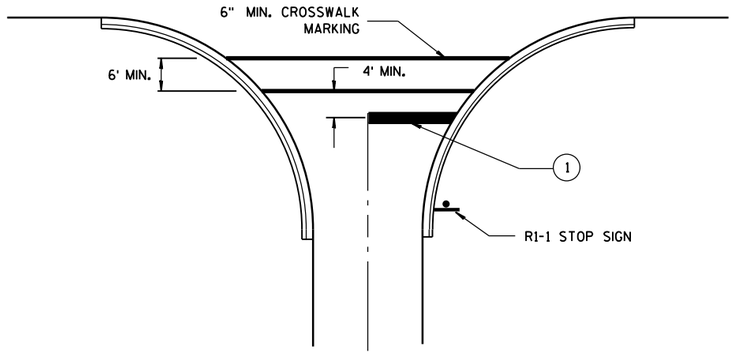
S.D.D. 15 C 12-3



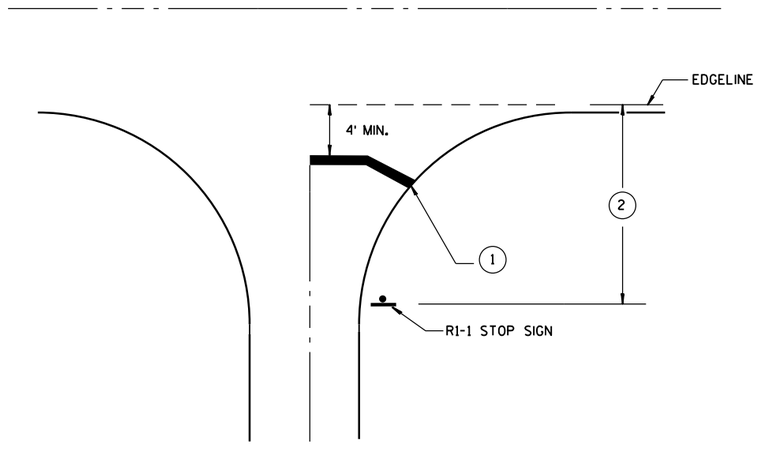
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
3. IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
4. MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

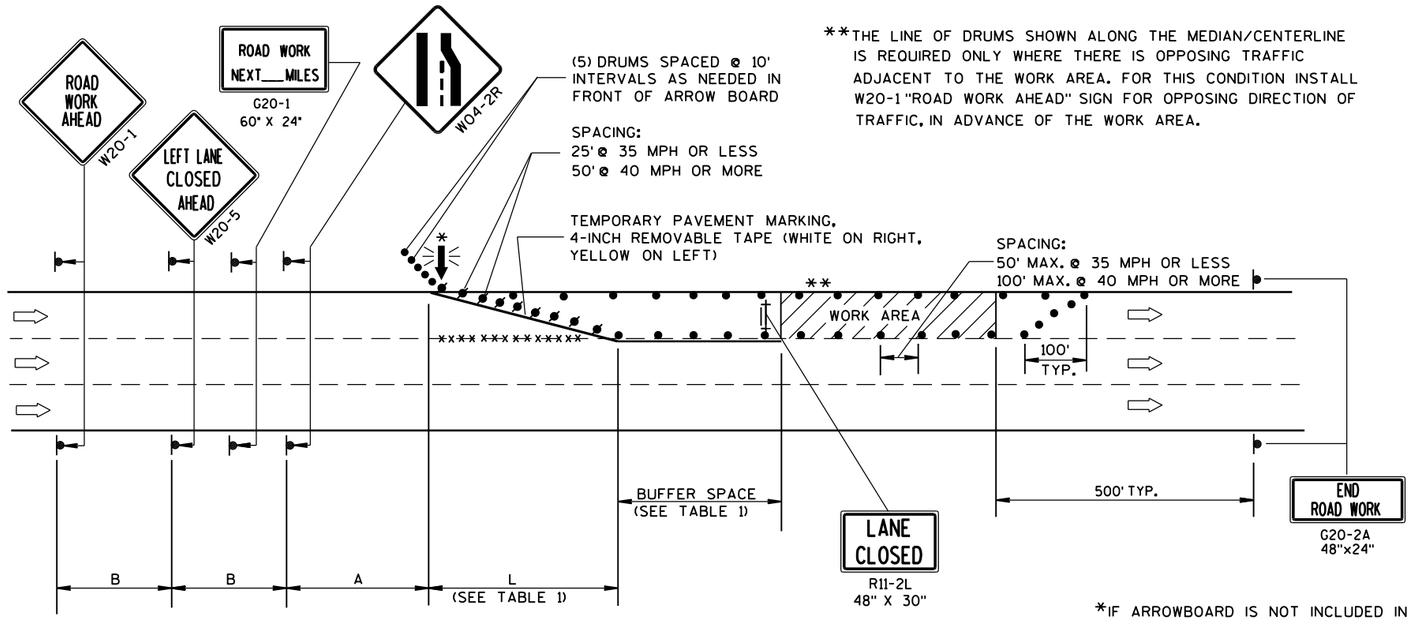
STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/30/2013 DATE
/S/ Travis Feltes
STATE TRAFFIC E
FHWA

6

S.D.D. 15 C 33-1



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

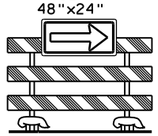


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

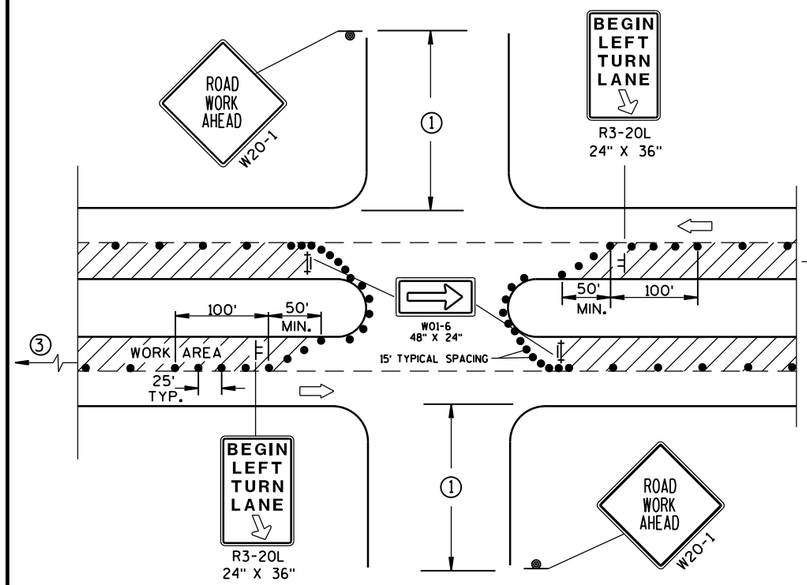
TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

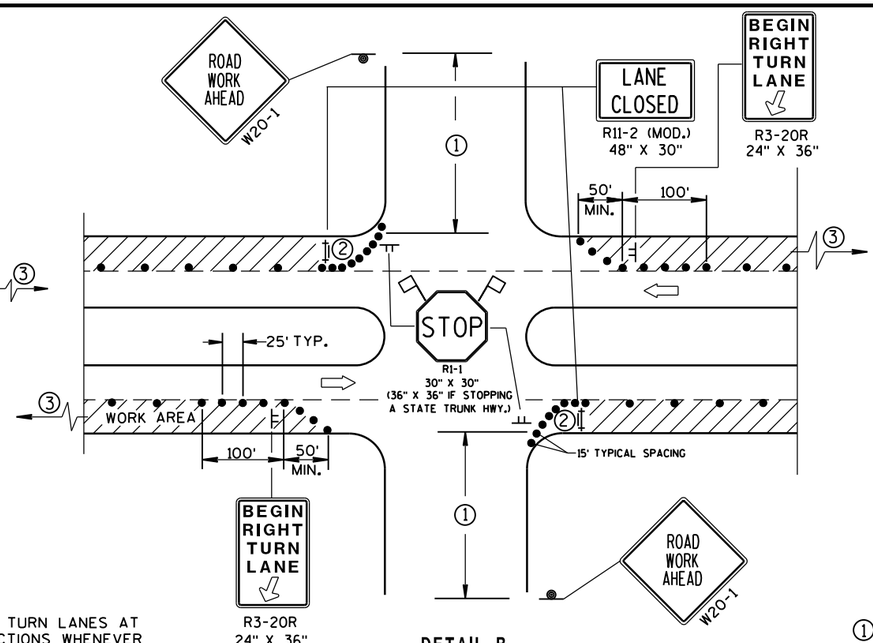
S.D.D. 15 D 20-2



DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

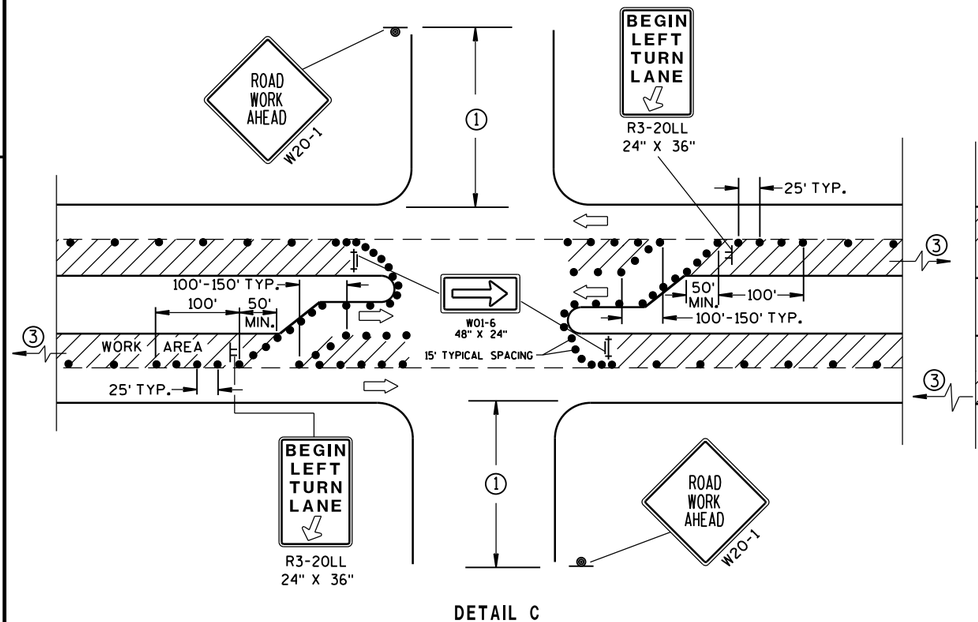
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

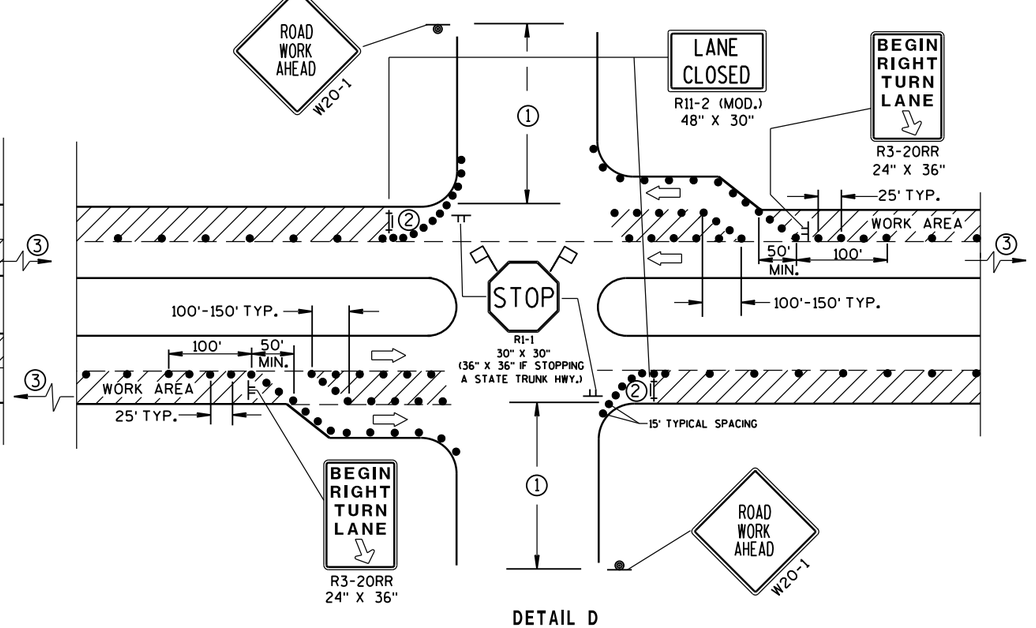
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D

FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

DESIGN

FHWA

6

S.D.D. 15 D 21-2

W. LINCOLN AVENUE

STAGE 2

CATEGORY	REFERENCE LINE STATION	ENTIRE EXCAVATION DISTANCE (FT)	ENTIRE EXCAVATION END AREA CUT (SF)	ENTIRE EXCAVATION VOLUME CUT (CY)	ENTIRE EXCAVATION CUMM VOLUME CUT (CY)	EMBANKMENT END AREA FILL (SF)	EMBANKMENT VOLUME FILL (CY)	EMBANKMENT FILL FACTOR	EMBANKMENT EXPANDED VOLUME FILL (CY)	EMBANKMENT CUMM VOLUME FILL (CY)	(EXCESS)/ SHORTAGE CUMM VOLUME (CY)
0010	201+07 BA		17			17					
		13		12	12		10	1.2	12	12	(0)
	201+20		33			24					
		30		27	39		24	1.2	29	41	1
	201+50		17			19					
		30		37	76		25	1.2	30	71	(5)
	201+80		50			27					
		50		60	136		45	1.2	54	125	(11)
	202+00		48			30					
		41		94	230		22	1.2	27	152	(78)
	202+41		77			0					
		4		12	242		0	1.2	0	152	(90)
	202+45		79			0					
		5		16	257		0	1.2	0	152	(106)
	202+50		81			0					
		50		113	370		33	1.2	39	191	(180)
	203+00		42			35					
		29		57	427		19	1.2	23	214	(214)
	203+29		63			0					
		21		41	469		1	1.2	2	215	(253)
	203+50		45			4					
		50		157	626		30	1.2	36	251	(375)
	204+00		125			29					
		50		168	794		57	1.2	68	319	(475)
	204+50		56			33					
		31		61	855		19	1.2	23	342	(513)
	204+81		49			0					
		19		27	882		10	1.2	12	354	(528)
	205+00		28			29					
		50		53	934		54	1.2	65	418	(516)
	205+50		29			29					
		3		3	937		3	1.2	3	422	(515)
	205+53		28			29					
		47		47	984		48	1.2	57	479	(505)
	206+00		25			25					
		50		73	1,057		42	1.2	50	529	(528)
	206+50		54			20					
		50		97	1,154		26	1.2	31	560	(594)
	207+00		50			8					
		50		62	1,216		39	1.2	47	607	(609)
	207+50		17			34					
		34		61	1,277		21	1.2	26	632	(644)
	207+84		81			0					
		16		44	1,321		0	1.2	0	632	(689)
	208+00		64			0					
		50		73	1,394		43	1.2	52	684	(710)
	208+50		15			47					
		50		133	1,527		80	1.2	96	780	(747)
	209+00		129			40					
		50		246	1,773		75	1.2	90	870	(903)
0010	209+50		137			42					

CATEGORY	REFERENCE LINE STATION	ENTIRE EXCAVATION DISTANCE (FT)	ENTIRE EXCAVATION END AREA CUT (SF)	ENTIRE EXCAVATION VOLUME CUT (CY)	ENTIRE EXCAVATION CUMM VOLUME CUT (CY)	EMBANKMENT END AREA FILL (SF)	EMBANKMENT VOLUME FILL (CY)	EMBANKMENT FILL FACTOR	EMBANKMENT EXPANDED VOLUME FILL (CY)	EMBANKMENT CUMM VOLUME FILL (CY)	(EXCESS)/ SHORTAGE CUMM VOLUME (CY)
0010	209+50		137			42					
		16		83	1,856		25	1.2	30	900	(957)
	209+66		143			41					
		34		191	2,047		53	1.2	63	963	(1,084)
	210+00		160			43					
		50		165	2,212		104	1.2	124	1,087	(1,125)
	210+50		18			69					
		24		23	2,235		31	1.2	38	1,125	(1,110)
	210+74		32			0					
		26		25	2,260		25	1.2	30	1,155	(1,105)
	211+00		21			54					
		50		114	2,374		92	1.2	111	1,266	(1,108)
	211+50		103			46					
		50		190	2,564		79	1.2	95	1,361	(1,203)
	212+00		102			40					
		30		106	2,670		33	1.2	39	1,400	(1,270)
	212+30		88			19					
		20		56	2,726		7	1.2	8	1,408	(1,318)
	212+50		64			0					
		3		6	2,732		0	1.2	0	1,408	(1,324)
	212+53		64			0					
		40		80	2,812		1	1.2	1	1,409	(1,403)
	212+93 EA		43			1					
	213+04 BA		41			4					
		46		64	2,877		30	1.2	36	1,446	(1,431)
	213+50		34			32					
		50		154	3,031		66	1.2	79	1,525	(1,506)
	214+00		132			39					
		50		248	3,279		78	1.2	94	1,619	(1,660)
	214+50		136			45					
		4		21	3,301		7	1.2	9	1,627	(1,673)
	214+54		137			46					
		46		148	3,448		84	1.2	101	1,729	(1,720)
	215+00		38			54					
		50		125	3,573		102	1.2	122	1,851	(1,723)
	215+50		98			56					
		50		118	3,691		107	1.2	128	1,979	(1,712)
	216+00		30			59					
		50		61	3,752		119	1.2	143	2,122	(1,630)
	216+50		36			69					
		50		82	3,834		135	1.2	162	2,284	(1,550)
	217+00		53			77					
		33		38	3,872		101	1.2	121	2,405	(1,466)
	217+33		9			88					
		17		16	3,888		53	2.2	117	2,522	(1,366)
	217+50		43			80					
		50		75	3,947		142	1.2	170	2,576	(1,371)
	218+00		38			73					
		50		78	4,024		96	1.2	115	2,691	(1,334)
0010	218+50		46			30					

W. LINCOLN AVENUE

STAGE 2

CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	ENTIRE EXCAVATION END AREA CUT (SF)	ENTIRE EXCAVATION VOLUME CUT (CY)	ENTIRE EXCAVATION CUMM VOLUME CUT (CY)	EMBANKMENT END AREA FILL (SF)	EMBANKMENT VOLUME FILL (CY)	EMBANKMENT FILL FACTOR	EMBANKMENT EXPANDED VOLUME FILL (CY)	EMBANKMENT CUMM VOLUME FILL (CY)	(EXCESS)/ SHORTAGE CUMM VOLUME (CY)
0010	218+50		46			30					
		13		15	4,039		18	1.2	22	2,712	(1,327)
	218+63		15			44					
		37		20	4,059		30	1.2	36	2,749	(1,310)
	219+00		14			0					
		18		20	4,079		0	1.2	0	2,749	(1,330)
	219+18		45			0					
		32		33	4,113		59	2.2	130	2,878	(1,234)
	219+50		11			99					
		50		57	4,169		137	1.2	164	2,913	(1,256)
	220+00		50			49					
		50		70	4,239		82	1.2	99	2,977	(1,262)
	220+50		25			40					
		50		49	4,288		72	1.2	86	3,000	(1,289)
	221+00		28			38					
		50		45	4,333		74	1.2	89	3,089	(1,244)
	221+50		20			42					
		50		44	4,377		91	1.2	109	3,198	(1,180)
	222+00		28			56					
		23		31	4,408		24	1.2	29	3,227	(1,182)
	222+23		44			0					
		27		35	4,444		38	1.2	46	3,272	(1,171)
	222+50		27			77					
		50		65	4,508		71	1.2	85	3,358	(1,150)
	223+00		43			0					
		11		15	4,523		0	1.2	0	3,358	(1,165)
	223+11		34			0					
		39		149	4,672		45	1.2	54	3,412	(1,260)
	223+50		171			62					
		24		153	4,826		57	1.2	69	3,481	(1,345)
	223+74		174			67					
		26		178	5,003		68	1.2	81	3,562	(1,441)
	224+00		196			74					
		50		293	5,297		150	1.2	180	3,742	(1,554)
	224+50		121			89					
		15		67	5,364		70	1.2	85	3,827	(1,537)
	224+65		121			165					
		5		13	5,377		31	1.2	37	3,864	(1,513)
	224+70		14			165					
		20		10	5,387		122	1.2	147	4,010	(1,377)
	224+90		14			165					
		5		14	5,401		31	1.2	37	4,047	(1,354)
	224+95		141			165					
		5		26	5,427		26	1.2	31	4,078	(1,349)
	225+00		137			112					
		50		127	5,554		241	1.2	289	4,367	(1,187)
	225+50		0			148					
		21		2	5,555		83	1.2	99	4,466	(1,089)
	225+71		4			64					
		29		2	5,558		94	1.2	113	4,579	(979)
0010	226+00		0			112					

CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	ENTIRE EXCAVATION END AREA CUT (SF)	ENTIRE EXCAVATION VOLUME CUT (CY)	ENTIRE EXCAVATION CUMM VOLUME CUT (CY)	EMBANKMENT END AREA FILL (SF)	EMBANKMENT VOLUME FILL (CY)	EMBANKMENT FILL FACTOR	EMBANKMENT EXPANDED VOLUME FILL (CY)	EMBANKMENT CUMM VOLUME FILL (CY)	(EXCESS)/ SHORTAGE CUMM VOLUME (CY)
0010	226+00		0			112					
		50		50	5,607		196	1.2	236	4,814	(793)
	226+50		54			100					
		25		46	5,654		90	1.2	109	4,923	(731)
	226+75		48			97					
		25		42	5,696		89	1.2	106	5,029	(666)
	227+00		42			93					
		50		68	5,763		168	1.2	201	5,231	(532)
	227+50		31			88					
		50		41	5,804		88	1.2	105	5,336	(468)
	228+00		13			7					
		2		1	5,805		0	1.2	0	5,337	(468)
	228+02		13			7					
		48		52	5,857		73	1.2	87	5,424	(433)
	228+50		45			75					
		50		122	5,979		135	1.2	163	5,587	(393)
	229+00		87			72					
		50		147	6,126		125	1.2	151	5,737	(389)
	229+50		72			64					
		10		17	6,143		24	1.2	28	5,765	(378)
	229+60		17			64					
		8		7	6,150		19	1.2	23	5,788	(361)
	229+68		27			64					
		9		17	6,166		21	1.2	25	5,814	(353)
	229+77		72			64					
		23		66	6,232		50	1.2	60	5,874	(358)
	230+00		82			55					
		50		137	6,369		51	1.2	61	5,935	(434)
	230+50		66			0					
		10		25	6,393		0	1.2	0	5,935	(458)
	230+60		69			0					
		40		110	6,503		37	1.2	45	5,980	(524)
	231+00		79			50					
		50		203	6,707		88	1.2	105	6,085	(622)
	231+50		140			44					
		50		225	6,932		85	1.2	103	6,187	(745)
	232+00		103			48					
		50		174	7,106		90	1.2	108	6,295	(811)
	232+50		85			49					
		50		118	7,224		97	1.2	117	6,412	(812)
	233+00		43			56					
		40		57	7,281		43	1.2	51	6,463	(818)
	233+40 EA		33			1					
	233+63 BA		34			92					
		37		53	7,334		96	1.2	115	6,579	(755)
	234+00		43			47					
		44		122	7,456		56	1.2	67	6,646	(810)
	234+44		107			22					
		6		24	7,480		5	1.2	6	6,651	(829)
0010	234+50		110			20					

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W. LINCOLN AVENUE

STAGE 2

CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	ENTIRE EXCAVATION END AREA CUT (SF)	ENTIRE EXCAVATION VOLUME CUT (CY)	ENTIRE EXCAVATION CUMM VOLUME CUT (CY)	EMBANKMENT END AREA FILL (SF)	EMBANKMENT VOLUME FILL (CY)	EMBANKMENT FILL FACTOR	EMBANKMENT EXPANDED VOLUME FILL (CY)	EMBANKMENT CUMM VOLUME FILL (CY)	(EXCESS)/ SHORTAGE CUMM VOLUME (CY)
0010	234+50		110			20					
		50		147	7,627		32	1.2	39	6,690	(937)
	235+00		49			15					
		14		30	7,657		4	1.2	5	6,695	(962)
	235+14		65			0					
		36		79	7,735		14	1.2	16	6,711	(1,025)
	235+50		54			20					
		50		182	7,917		34	1.2	41	6,752	(1,165)
	236+00		143			17					
		7		36	7,953		4	1.2	5	6,757	(1,196)
	236+07		140			17					
		43		223	8,176		27	1.2	32	6,789	(1,387)
	236+50		139			17					
		50		167	8,343		37	1.2	45	6,834	(1,509)
	237+00		42			24					
		42		142	8,485		18	1.2	22	6,856	(1,629)
	237+42		143			0					
		8		42	8,527		0	1.2	0	6,856	(1,671)
	237+50		130			0					
		50		214	8,741		17	1.2	20	6,875	(1,865)
	238+00		101			18					
		50		266	9,007		37	1.2	44	6,920	(2,087)
	238+50		187			22					
		50		362	9,369		41	1.2	49	6,969	(2,400)
	239+00		204			23					
		50		381	9,750		43	1.2	51	7,020	(2,730)
	239+50		207			24					
		50		300	10,049		57	1.2	68	7,088	(2,961)
	240+00		117			38					
		50		236	10,286		58	1.2	69	7,158	(3,128)
	240+50		138			24					
		50		157	10,443		52	1.2	62	7,220	(3,223)
	241+00		32			32					
		21		36	10,479		13	1.2	15	7,235	(3,244)
	241+21		61			0					
		29		61	10,540		12	1.2	15	7,250	(3,290)
	241+50		54			23					
		22		46	10,586		18	1.2	22	7,272	(3,314)
	241+72		61			22					
		28		64	10,650		11	1.2	14	7,285	(3,365)
	242+00		62			0					
		14		31	10,681		0	1.2	0	7,285	(3,396)
	242+14		58			0					
		36		139	10,820		15	1.2	17	7,303	(3,517)
	242+50		151			22					
		42		171	10,991		17	1.2	20	7,323	(3,668)
	242+92		70			0					
		8		20	11,011		0	1.2	0	7,323	(3,688)
	242+99		73			0					
		1		2	11,013		0	1.2	0	7,323	(3,689)
0010	243+00		73			0					
		50		200	11,213		20	1.2	24	7,347	(3,865)
	243+50		143			22					
		50		275	11,487		39	1.2	47	7,394	(4,093)
	244+00		154			21					
		50		314	11,802		40	1.2	48	7,442	(4,359)
	244+50		186			23					
		50		212	12,013		21	1.2	25	7,468	(4,546)
	245+00		43			0					
		6		9	12,022		0	1.2	0	7,468	(4,554)
	245+06		41			0					
		44		47	12,069		25	1.2	30	7,497	(4,572)
	245+50		17			30					
		50		36	12,105		45	1.2	53	7,551	(4,554)
	246+00		22			18					
		50		46	12,152		35	1.2	42	7,593	(4,559)
	246+50		28			20					
		42		67	12,218		15	1.2	18	7,611	(4,608)
	246+92		59			0					
		1		3	12,221		0	1.2	0	7,611	(4,611)
	246+93		59			0					
		7		15	12,237		0	1.2	0	7,611	(4,626)
	247+00		61			0					
		50		101	12,337		15	1.2	18	7,629	(4,708)
	247+50		48			17					
		50		92	12,429		28	1.2	34	7,663	(4,766)
	248+00		51			14					
		50		93	12,522		25	1.2	30	7,693	(4,830)
	248+50		50			13					
		50		97	12,619		25	1.2	30	7,722	(4,897)
	249+00		54			13					
		50		106	12,725		24	2.2	53	7,775	(4,950)
	249+50		60			13					
		40		92	12,817		10	3.2	33	7,808	(5,009)
	249+90		63			1					
		10		23	12,840		0	4.2	1	7,809	(5,031)
	250+00		67			0					
		50		114	12,954		8	5.2	40	7,850	(5,105)
	250+50		57			8					
		50		99	13,053		15	6.2	91	7,941	(5,112)
	251+00		50			8					
		20		34	13,087		4	7.2	26	7,967	(5,120)
0010	251+20 EA		42			2					
TOTALS				13,087						7,967	

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PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	EARTHWORK DATA	SHEET NO: 193	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090101_ew.ppt PLOT DATE : 7/17/2013 5:13 PM PLOT BY : cmcmahon PLOT NAME : lc090103_ew PLOT SCALE : 1.000000:1.000000

WISDOT / CADDS SHEET 42

S. 170TH STREET

STAGE 2

CATEGORY	REFERENCE LINE STATION	ENTIRE EXCAVATION DISTANCE (FT)	END AREA CUT (SF)	VOLUME CUT (CY)	CUMM VOLUME CUT (CY)	EMBANKMENT END AREA FILL (SF)	VOLUME FILL (CY)	FILL FACTOR	EXPANDED VOLUME FILL (CY)	CUMM VOLUME FILL (CY)	(EXCESS)/ SHORTAGE CUMM VOLUME (CY)
0010	18+49 BA		100			0					
		51		186	186		0	1.2	0	0	(186)
	19+00		98			0					
		38		132	318		0	1.2	0	0	(318)
	19+38 EA		90			0					
TOTAL					318					0	

W. LINCOLN AVENUE

STAGE 2

SW CURB RETURN AT S. 170TH ST

CATEGORY	REFERENCE LINE STATION	EXCAVATION BELOW SUBGRADE DISTANCE (FT)	END AREA CUT (SF)	VOLUME CUT (CY)	CUMM VOLUME CUT (CY)
0010	207+29 BA		11		
		21		9	9
	207+50		11		
		25		10	19
	207+75		11		
		20		8	27
	19+50 EA		11		
TOTAL					27

W. LINCOLN AVENUE

STAGE 2

SE CURB RETURN AT S. 170TH ST

CATEGORY	REFERENCE LINE STATION	EXCAVATION BELOW SUBGRADE DISTANCE (FT)	END AREA CUT (SF)	VOLUME CUT (CY)	CUMM VOLUME CUT (CY)
0010	19+50 BA		11		
		25		10	10
	208+09		11		
		16		7	17
	208+25		11		
		25		10	26
	208+50 EA		10		
TOTAL					26

9

9

PROJECT NO: 2722-11-70 | HWY: W. LINCOLN AVENUE | COUNTY: WAUKESHA | EARTHWORK DATA | SHEET NO: 194 | E

S. COMMERCE DRIVE

STAGE 2

CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	ENTIRE EXCAVATION END AREA CUT (SF)	ENTIRE EXCAVATION VOLUME CUT (CY)	ENTIRE EXCAVATION CUMM VOLUME CUT (CY)	EMBANKMENT END AREA FILL (SF)	EMBANKMENT VOLUME FILL (CY)	EMBANKMENT FILL FACTOR	EMBANKMENT EXPANDED VOLUME FILL (CY)	EMBANKMENT CUMM VOLUME FILL (CY)	(EXCESS)/ SHORTAGE CUMM VOLUME (CY)
0010	43+50 BA		43			0					
		50		78	78		0	1.2	0	0	(77)
	44+00		41			0					
		38		50	128		2	1.2	2	2	(125)
	44+38 EA		30			3					
TOTAL					128					2	

W. LINCOLN AVENUE

STAGE 2

SW CURB RETURN AT S. COMMERCE DR

CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	EXCAVATION BELOW SUBGRADE END AREA CUT (SF)	EXCAVATION BELOW SUBGRADE VOLUME CUT (CY)	EXCAVATION BELOW SUBGRADE CUMM VOLUME CUT (CY)
0010	218+60 BA		18		
		15		8	8
	218+75		12		
		33		15	24
	219+08		13		
		45		20	44
	44+06		11		
		32		22	65
	44+38		25		
		38		34	100
	44+00		23		
		50		43	142
	43+50		23		
		10		4	146
	43+40 EA		0		
TOTAL					146

S. COMMERCE DRIVE

STAGE 2B

CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	ENTIRE EXCAVATION END AREA CUT (SF)	ENTIRE EXCAVATION VOLUME CUT (CY)	ENTIRE EXCAVATION CUMM VOLUME CUT (CY)	EMBANKMENT END AREA FILL (SF)	EMBANKMENT VOLUME FILL (CY)	EMBANKMENT FILL FACTOR	EMBANKMENT EXPANDED VOLUME FILL (CY)	EMBANKMENT CUMM VOLUME FILL (CY)	(EXCESS)/ SHORTAGE CUMM VOLUME (CY)
0010	43+50 BA		42			0					
		50		75	75		0	1.2	0	0	(75)
	44+00		39			0					
		38		48	123		3	1.2	4	4	(119)
	44+38 EA		29			5					
TOTAL					123					4	

W. LINCOLN AVENUE

STAGE 2B

SE CURB RETURN AT S. COMMERCE DR

CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	EXCAVATION BELOW SUBGRADE END AREA CUT (SF)	EXCAVATION BELOW SUBGRADE VOLUME CUT (CY)	EXCAVATION BELOW SUBGRADE CUMM VOLUME CUT (CY)
0010	43+40 BA		0		
		10		4	4
	43+50		22		
		50		41	45
	44+00		23		
		38		30	76
	44+38		20		
		12		7	83
	44+16		11		
		25		11	93
	44+50		12		
		32		18	111
	219+50		18		
		27		15	126
	219+77 EA		11		
TOTAL					126

S. 162ND STREET
STAGE 2

CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	ENTIRE EXCAVATION END AREA CUT (SF)	ENTIRE EXCAVATION VOLUME CUT (CY)	ENTIRE EXCAVATION CUMM VOLUME CUT (CY)	EMBANKMENT END AREA FILL (SF)	EMBANKMENT VOLUME FILL (CY)	EMBANKMENT FILL FACTOR	EMBANKMENT EXPANDED VOLUME FILL (CY)	EMBANKMENT CUMM VOLUME FILL (CY)	(EXCESS)/ SHORTAGE CUMM VOLUME (CY)
0010	57+73 BA		86			0					
		24		89	89		0	1.2	0	0	(89)
	57+97		115			0					
		3		13	102		0	1.2	0	0	(102)
	58+00		116			0					
		50		214	316		0	1.2	0	0	(316)
	58+50		115			0					
		50		237	553		0	1.2	0	0	(553)
	59+00		141			0					
		38		196	749		0	1.2	0	0	(749)
	59+38 EA		138			0					
TOTAL					749					0	

W. LINCOLN AVENUE
STAGE 2
SW CURB RETURN AT S. 162ND ST

CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	EXCAVATION BELOW SUBGRADE END AREA CUT (SF)	EXCAVATION BELOW SUBGRADE VOLUME CUT (CY)	EXCAVATION BELOW SUBGRADE CUMM VOLUME CUT (CY)
0010	236+84 BA		11		
		16		6	6
	237+00		10		
		15		6	12
	237+24		11		
		22		9	21
	59+39 EA		11		
TOTAL					21

W. LINCOLN AVENUE
STAGE 2
SE CURB RETURN AT S. 162ND ST

CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	EXCAVATION BELOW SUBGRADE END AREA CUT (SF)	EXCAVATION BELOW SUBGRADE VOLUME CUT (CY)	EXCAVATION BELOW SUBGRADE CUMM VOLUME CUT (CY)
0010	59+32 BA		11		
		32		13	13
	237+52		11		
		16		7	20
	237+68		12		
		24		10	30
	237+92 EA		11		
TOTAL					30

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PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	EARTHWORK DATA	SHEET NO: 196	E

W. LINCOLN AVENUE

STAGE 3

CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	ENTIRE EXCAVATION END AREA CUT (SF)	ENTIRE EXCAVATION VOLUME CUT (CY)	ENTIRE EXCAVATION CUMM VOLUME CUT (CY)	EMBANKMENT END AREA FILL (SF)	EMBANKMENT VOLUME FILL (CY)	EMBANKMENT FILL FACTOR	EMBANKMENT EXPANDED VOLUME FILL (CY)	EMBANKMENT CUMM VOLUME FILL (CY)	(EXCESS)/ SHORTAGE CUMM VOLUME (CY)
0010	201+07 BA		10			0					
		13		11	11		0	1.2	0	0	(11)
	201+20		37			0					
		30		55	66		1	1.2	1	1	(65)
	201+50		62			1					
		40		81	147		4	1.2	4	5	(142)
	201+90		48			4					
		50		95	242		24	1.2	29	34	(208)
	202+00		41			25					
		41		95	336		20	1.2	24	58	(278)
	202+41		85			1					
		4		11	347		0	1.2	0	58	(289)
	202+45		64			0					
		5		14	361		0	1.2	0	58	(303)
	202+50		78			2					
		50		116	477		15	1.2	18	77	(400)
	203+00		47			15					
		29		49	527		14	1.2	16	93	(433)
	203+29		44			11					
		21		37	563		11	1.2	13	107	(456)
	203+50		52			19					
		50		88	651		31	1.2	38	144	(506)
	204+00		43			15					
		50		92	743		28	1.2	34	178	(565)
	204+50		57			15					
		31		59	802		21	1.2	26	204	(598)
	204+81		44			22					
		19		29	831		13	1.2	16	220	(611)
	205+00		39			17					
		50		76	907		16	1.2	19	239	(668)
	205+50		43			0					
		3		4	911		0	1.2	0	239	(672)
	205+53		39			0					
		47		68	978		19	1.2	22	261	(718)
	206+00		38			21					
		50		68	1,047		36	1.2	44	305	(742)
	206+50		36			18					
		50		61	1,108		38	1.2	45	350	(758)
	207+00		31			22					
		50		41	1,149		60	1.2	72	422	(727)
	207+50		14			43					
		34		59	1,207		26	1.2	32	454	(754)
	207+84		81			0					
		16		39	1,246		0	1.2	0	454	(792)
	208+00		46			0					
		50		55	1,301		48	1.2	58	512	(789)
	208+50		13			52					
		50		193	1,493		74	1.2	89	600	(893)
	209+00		195			28					
		50		197	1,690		30	1.2	36	636	(1,054)
0010	209+50		17			5					
		16		12	1,702		2	1.2	2	638	(1,064)
	209+66		22			1					
		34		25	1,726		29	1.2	34	672	(1,054)
	210+00		17			45					
		50		66	1,793		63	1.2	76	749	(1,044)
	210+50		55			24					
		24		49	1,841		20	1.2	24	772	(1,069)
	210+74		54			20					
		26		52	1,893		18	1.2	22	794	(1,099)
	211+00		55			19					
		50		108	2,002		33	1.2	40	834	(1,167)
	211+50		62			17					
		50		99	2,101		16	1.2	19	853	(1,248)
	212+00		46			0					
		30		46	2,147		2	1.2	3	856	(1,291)
	212+30		37			4					
		20		34	2,181		1	1.2	2	858	(1,324)
	212+50		55			0					
		3		5	2,186		0	1.2	0	858	(1,329)
	212+53		54			0					
		40		69	2,255		3	1.2	4	862	(1,394)
	212+93 EA		38			4					
	213+04 BA		40			3					
		46		90	2,345		40	1.2	47	909	(1,436)
	213+50		66			44					
		50		117	2,462		79	1.2	94	1,003	(1,459)
	214+00		60			41					
		50		106	2,568		38	1.2	46	1,049	(1,519)
	214+50		54			0					
		4		8	2,576		0	1.2	0	1,049	(1,527)
	214+54		52			0					
		46		76	2,652		44	1.2	53	1,102	(1,550)
	215+00		38			52					
		50		69	2,721		108	1.2	130	1,232	(1,489)
	215+50		36			65					
		50		79	2,799		124	1.2	149	1,381	(1,419)
	216+00		49			69					
		50		101	2,900		121	1.2	145	1,526	(1,374)
	216+50		60			62					
		50		118	3,018		130	1.2	156	1,682	(1,336)
	217+00		67			79					
		33		79	3,098		101	1.2	122	1,804	(1,294)
	217+33		62			87					
		17		40	3,138		55	2.2	121	1,925	(1,213)
	217+50		66			88					
		50		115	3,213		160	1.2	192	1,996	(1,217)
	218+00		59			85					
		50		61	3,274		83	1.2	100	2,096	(1,178)
0010	218+50		8			5					

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PROJECT NO: 2722-11-70 | HWY: W. LINCOLN AVENUE | COUNTY: WAUKESHA | EARTHWORK DATA | SHEET NO: 197 | E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090101_ew.ppt PLOT DATE : 7/17/2013 5:13 PM PLOT BY : cmcmahon PLOT NAME : lc090107_ew PLOT SCALE : 1.000000:1.000000

W. LINCOLN AVENUE

STAGE 3

CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	ENTIRE EXCAVATION END AREA CUT (SF)	ENTIRE EXCAVATION VOLUME CUT (CY)	ENTIRE EXCAVATION CUMM VOLUME CUT (CY)	EMBANKMENT END AREA FILL (SF)	EMBANKMENT VOLUME FILL (CY)	EMBANKMENT FILL FACTOR	EMBANKMENT EXPANDED VOLUME FILL (CY)	EMBANKMENT CUMM VOLUME FILL (CY)	(EXCESS)/ SHORTAGE CUMM VOLUME (CY)
0010	218+50		8			5					
		13		4	3,278		2	1.2	2	2,098	(1,180)
	218+63		8			3					
		37		10	3,288		66	1.2	79	2,177	(1,111)
	219+00		7			94					
		18		12	3,300		55	1.2	66	2,243	(1,057)
	219+18		28			70					
		32		35	3,335		78	2.2	171	2,414	(921)
	219+50		32			61					
		50		48	3,383		110	1.2	132	2,375	(1,008)
	220+00		20			58					
		50		53	3,436		103	1.2	123	2,537	(899)
	220+50		38			53					
		50		71	3,507		95	1.2	114	2,489	(1,019)
	221+00		39			50					
		50		69	3,577		82	1.2	98	2,587	(990)
	221+50		36			38					
		50		71	3,648		84	1.2	100	2,687	(960)
	222+00		41			52					
		23		34	3,682		46	1.2	55	2,743	(939)
	222+23		39			55					
		27		37	3,719		57	1.2	68	2,811	(907)
	222+50		35			60					
		50		51	3,770		109	1.2	131	2,942	(828)
	223+00		20			58					
		11		7	3,777		23	1.2	28	2,970	(807)
	223+11		18			61					
		39		22	3,799		107	1.2	129	3,099	(701)
	223+50		12			86					
		24		10	3,809		43	1.2	52	3,151	(658)
	223+74		10			11					
		26		5	3,814		44	1.2	53	3,204	(610)
	224+00		0			81					
		50		0	3,815		169	1.2	203	3,407	(408)
	224+50		0			101					
		50		2	3,817		205	1.2	247	3,653	(163)
	225+00		2			121					
		50		5	3,822		228	1.2	273	3,927	105
	225+50		4			125					
		21		3	3,824		97	1.2	116	4,043	218
	225+71		4			123					
		29		8	3,832		131	1.2	158	4,200	368
	226+00		11			123					
		50		10	3,842		314	1.2	377	4,577	735
	226+50		0			216					
		25		3	3,845		121	1.2	146	4,723	877
	226+75		6			48					
		25		3	3,848		67	1.2	80	4,803	955
	227+00		0			95					
		50		0	3,848		190	1.2	227	5,030	1,182
0010	227+50		0			109					
0010	227+50		0			109					
		50		1	3,850		174	1.2	209	5,239	1,390
	228+00		1			79					
		2		0	3,850		5	1.2	6	5,245	1,396
	228+02		1			88					
		48		34	3,883		156	1.2	187	5,433	1,550
	228+50		36			86					
		50		164	4,048		153	1.2	184	5,617	1,569
	229+00		141			79					
		50		222	4,270		142	1.2	170	5,787	1,517
	229+50		99			74					
		50		192	4,462		136	1.2	163	5,950	1,488
	230+00		109			72					
		50		208	4,670		131	1.2	158	6,108	1,437
	230+50		116			70					
		10		43	4,713		25	1.2	30	6,138	1,425
	230+60		119			69					
		40		181	4,895		100	1.2	120	6,258	1,364
	231+00		125			66					
		50		176	5,071		122	1.2	146	6,404	1,334
	231+50		66			65					
		50		157	5,228		125	1.2	149	6,554	1,326
	232+00		104			69					
		50		155	5,382		149	1.2	178	6,732	1,350
	232+50		63			91					
		50		103	5,486		162	1.2	195	6,927	1,442
	233+00		49			84					
		40		63	5,549		63	1.2	75	7,002	1,453
	233+40 EA		37			0					
	233+63 BA		40			69					
		37		54	5,603		72	1.2	86	7,089	1,486
	234+00		38			35					
		44		83	5,686		29	1.2	34	7,123	1,437
	234+44		64			0					
		6		14	5,700		0	1.2	0	7,123	1,423
	234+50		65			0					
		50		113	5,813		16	1.2	19	7,142	1,329
	235+00		57			17					
		14		29	5,842		9	1.2	11	7,153	1,311
	235+14		55			18					
		36		74	5,916		23	1.2	28	7,181	1,265
	235+50		56			18					
		50		109	6,026		16	1.2	19	7,200	1,175
	236+00		62			0					
		7		16	6,041		0	1.2	0	7,200	1,159
	236+07		62			0					
		43		143	6,184		14	1.2	17	7,217	1,033
	236+50		117			18					
		50		149	6,333		54	1.2	64	7,281	949
0010	237+00		43			40					

PROJECT NO: 2722-11-70 | HWY: W. LINCOLN AVENUE | COUNTY: WAUKESHA | EARTHWORK DATA | SHEET NO: 198 | E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090101_ew.ppt PLOT DATE : 7/17/2013 5:13 PM PLOT BY : cmcmahon PLOT NAME : lc090108_ew PLOT SCALE : 1.000000:1.000000

WISDOT / CADDS SHEET 42

W. LINCOLN AVENUE

STAGE 3

CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	ENTIRE EXCAVATION END AREA CUT (SF)	ENTIRE EXCAVATION VOLUME CUT (CY)	ENTIRE EXCAVATION CUMM VOLUME CUT (CY)	EMBANKMENT END AREA FILL (SF)	EMBANKMENT VOLUME FILL (CY)	EMBANKMENT FILL FACTOR	EMBANKMENT EXPANDED VOLUME FILL (CY)	EMBANKMENT CUMM VOLUME FILL (CY)	(EXCESS)/ SHORTAGE CUMM VOLUME (CY)
0010	237+00		43			40					
		42		150	6,483		31	1.2	37	7,319	836
	237+42		152			0					
		8		45	6,528		0	1.2	0	7,319	791
	237+50		138			0					
		50		244	6,772		36	1.2	43	7,362	589
	238+00		126			39					
		50		257	7,029		46	1.2	55	7,417	388
	238+50		151			11					
		50		309	7,338		21	1.2	25	7,442	104
	239+00		182			12					
		50		338	7,676		30	1.2	36	7,478	(198)
	239+50		183			21					
		50		241	7,917		31	1.2	37	7,515	(402)
	240+00		78			13					
		50		228	8,145		24	1.2	28	7,544	(601)
	240+50		169			13					
		50		311	8,456		26	1.2	32	7,575	(881)
	241+00		168			15					
		21		135	8,592		12	1.2	14	7,590	(1,002)
	241+21		177			15					
		29		111	8,702		25	1.2	30	7,620	(1,083)
	241+50		31			31					
		22		37	8,739		13	1.2	15	7,635	(1,104)
	241+72		60			0					
		28		108	8,847		9	1.2	10	7,645	(1,202)
	242+00		147			17					
		14		96	8,943		9	1.2	10	7,655	(1,288)
	242+14		219			16					
		36		164	9,107		29	1.2	35	7,691	(1,417)
	242+50		28			28					
		42		75	9,183		22	1.2	26	7,717	(1,466)
	242+92		69			0					
		8		19	9,202		0	1.2	0	7,717	(1,485)
	242+99		71			0					
		1		2	9,204		0	1.2	0	7,717	(1,487)
	243+00		71			0					
		50		185	9,389		17	1.2	20	7,737	(1,652)
	243+50		129			18					
		50		211	9,600		34	1.2	41	7,778	(1,822)
	244+00		99			19					
		50		191	9,791		37	1.2	44	7,822	(1,969)
	244+50		108			21					
		50		127	9,918		42	1.2	50	7,872	(2,045)
	245+00		29			25					
		6		5	9,923		6	1.2	7	7,880	(2,043)
	245+06		21			34					
		44		32	9,955		58	1.2	70	7,950	(2,005)
	245+50		18			38					
		50		58	10,013		35	1.2	42	7,991	(2,022)
0010	246+00		45			0					
		50		167	10,180		13	1.2	16	8,007	(2,173)
	246+50		136			14					
		42		180	10,360		11	1.2	13	8,020	(2,340)
	246+92		98			0					
		1		5	10,366		0	1.2	0	8,020	(2,346)
	246+93		98			0					
		7		25	10,391		0	1.2	0	8,020	(2,371)
	247+00		97			0					
		50		127	10,518		11	1.2	13	8,033	(2,485)
	247+50		40			12					
		50		77	10,595		21	1.2	25	8,058	(2,537)
	248+00		43			11					
		50		82	10,677		20	1.2	23	8,082	(2,595)
	248+50		46			10					
		50		88	10,764		15	1.2	18	8,100	(2,664)
	249+00		49			6					
		50		93	10,857		16	2.2	35	8,136	(2,722)
	249+50		52			11					
		40		112	10,969		8	3.2	27	8,162	(2,807)
	249+90		98			0					
		10		35	11,004		0	4.2	0	8,162	(2,842)
	250+00		98			0					
		50		325	11,329		3	5.2	18	8,180	(3,149)
	250+50		253			4					
		50		292	11,621		5	6.2	31	8,211	(3,410)
	251+00		63			2					
		20		47	11,668		1	7.2	5	8,216	(3,452)
0010	251+20 EA		62			0					
TOTAL					11,668						8,216

PROJECT NO: 2722-11-70 | HWY: W. LINCOLN AVENUE | COUNTY: WAUKESHA | EARTHWORK DATA | SHEET NO: 199 | E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090101_ew.ppt PLOT DATE : 7/17/2013 5:13 PM PLOT BY : cmcmahon PLOT NAME : lc090109_ew PLOT SCALE : 1.000000:1.000000

WISDOT / CADDS SHEET 42

W. LINCOLN AVENUE

STAGE 3

CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	EXCAVATION BELOW SUBGRADE: END AREA CUT (SF)	VOLUME CUT (CY)	CUMM VOLUME CUT (CY)
0010	201+07 BA		0		
		13		3	3
	201+20		12		
		30		10	13
	201+50		7		
		40		13	27
	201+90		11		
		50		17	43
	202+00		11		
		41		18	61
	202+41		13		
		9		4	66
	202+50		13		
		50		22	88
	203+00		11		
		29		12	100
	203+29		11		
		21		4	104
	203+50		0		
	TOTAL				104

FRONTAGE ROAD

STAGE 3

CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	ENTIRE EXCAVATION: END AREA CUT (SF)	VOLUME CUT (CY)	CUMM VOLUME CUT (CY)	EMBANKMENT: END AREA FILL (SF)	VOLUME FILL (CY)	FILL FACTOR	EXPANDED VOLUME FILL (CY)	CUMM VOLUME FILL (CY)	(EXCESS)/ SHORTAGE CUMM VOLUME (CY)
0010	400+23 BA		328			0					
		27		328	328		0	1.2	0	0	(328)
	400+50		328			0					
		50		607	935		0	1.2	0	0	(935)
	401+00		327			0					
		50		478	1413		0	1.2	0	0	(1,413)
	401+50		189			0					
		50		461	1,874		0	1.2	0	0	(1,874)
	402+00		170			0					
		50		236	2,111		2	1.2	2	2	(2,108)
	402+50		86			2					
		50		209	2,320		16	1.2	20	22	(2,298)
	403+00 EA		56			18					
	TOTAL				2,320					22	

FRONTAGE ROAD

STAGE 3

CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	EXCAVATION BELOW SUBGRADE: END AREA CUT (SF)	VOLUME CUT (CY)	CUMM VOLUME CUT (CY)
0010	401+79 BA		12		
		21		9	9
	402+00		12		
		35		16	25
	402+36 EA		12		
	TOTAL				25

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PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	EARTHWORK DATA	SHEET NO: 200	E

S. 170TH STREET

STAGE 3

CATEGORY	REFERENCE LINE STATION	ENTIRE EXCAVATION DISTANCE (FT)	END AREA CUT (SF)	VOLUME CUT (CY)	CUMM VOLUME CUT (CY)	EMBANKMENT END AREA FILL (SF)	VOLUME FILL (CY)	FILL FACTOR	EXPANDED VOLUME FILL (CY)	CUMM VOLUME FILL (CY)	(EXCESS)/ SHORTAGE CUMM VOLUME (CY)
0010	20+62 BA		72			0					
		38		114	114		0	1.2	0	0	(114)
	21+00		89			0					
		50		162	276		0	1.2	0	0	(276)
	21+50 EA		86			0					
TOTAL					276					0	

W. LINCOLN AVENUE

STAGE 3

NW CURB RETURN AT S. 170TH ST

CATEGORY	REFERENCE LINE STATION	EXCAVATION BELOW SUBGRADE DISTANCE (FT)	END AREA CUT (SF)	VOLUME CUT (CY)	CUMM VOLUME CUT (CY)
0010	207+29 BA		11		
		21		9	9
	207+50		11		
		25		10	19
	207+75		11		
		45		18	37
	20+90 EA		11		
TOTAL					37

W. LINCOLN AVENUE

STAGE 3

NE CURB RETURN AT S. 170TH ST

CATEGORY	REFERENCE LINE STATION	EXCAVATION BELOW SUBGRADE DISTANCE (FT)	END AREA CUT (SF)	VOLUME CUT (CY)	CUMM VOLUME CUT (CY)
0010	20+90 BA		11		
		31		13	13
	207+95		11		
		55		22	35
	208+50		11		
		10		4	39
	208+60 EA		11		
TOTAL					39

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PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	EARTHWORK DATA	SHEET NO: 201	E

S. 162ND STREET

STAGE 3

CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	ENTIRE EXCAVATION END AREA CUT (SF)	ENTIRE EXCAVATION VOLUME CUT (CY)	ENTIRE EXCAVATION CUMM VOLUME CUT (CY)	EMBANKMENT END AREA FILL (SF)	EMBANKMENT VOLUME FILL (CY)	EMBANKMENT FILL FACTOR	EMBANKMENT EXPANDED VOLUME FILL (CY)	EMBANKMENT CUMM VOLUME FILL (CY)	(EXCESS)/ SHORTAGE CUMM VOLUME (CY)
0010	60+62 BA		157			0					
		38		260	260		0	1.2	0	0	(260)
	61+00		212			0					
		6		46	306		0	1.2	0	0	(306)
	61+06		205			0					
		44		266	573		0	1.2	0	0	(573)
	61+50		121			0					
		19		85	657		0	1.2	0	0	(657)
	61+69		119			0					
		26		101	759		0	1.2	0	0	(759)
	61+95 EA		91			0					
TOTAL					759					0	

W. LINCOLN AVENUE

STAGE 3

NW CURB RETURN AT S. S. 162ND ST

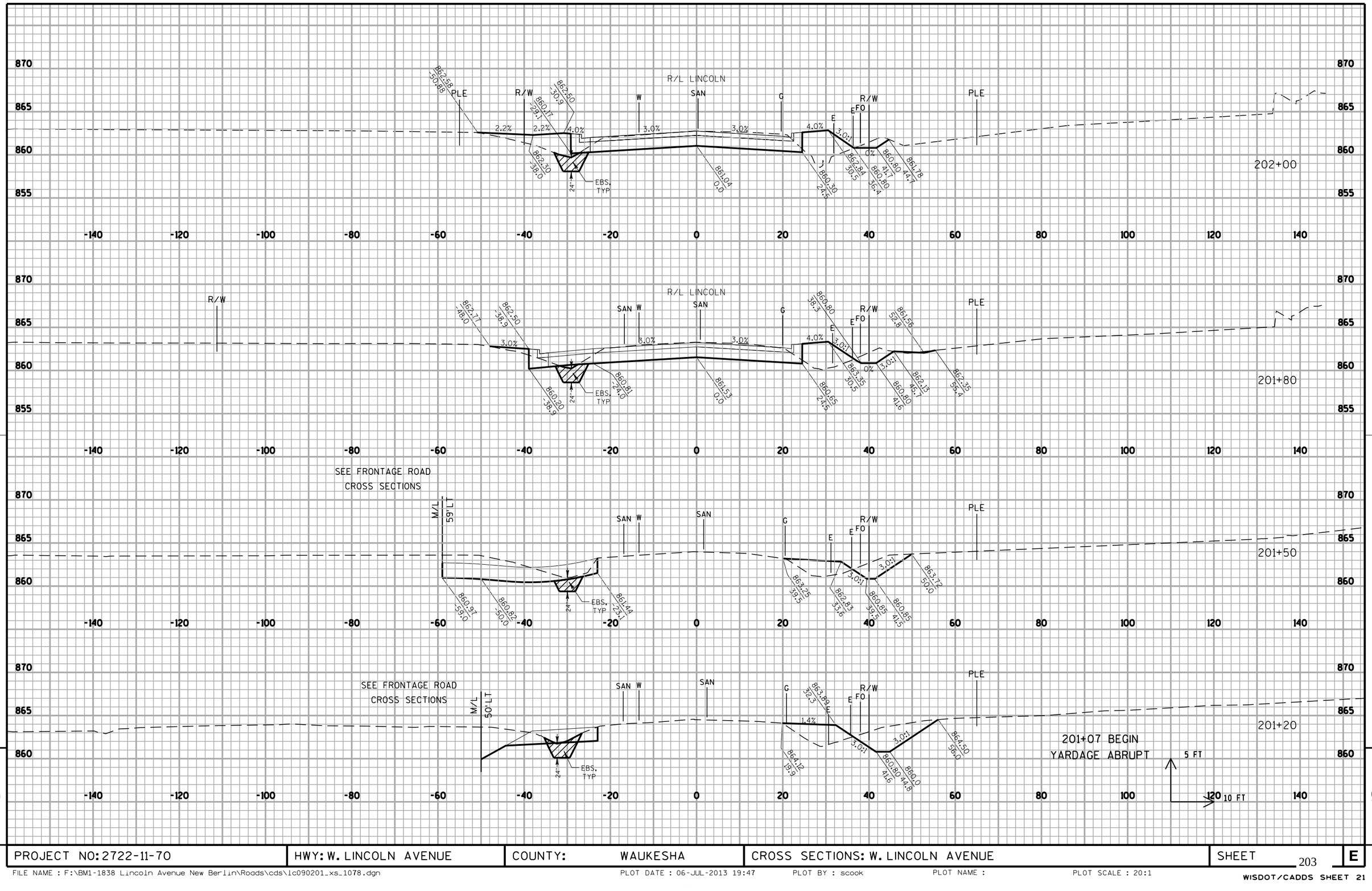
CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	EXCAVATION BELOW SUBGRADE END AREA CUT (SF)	EXCAVATION BELOW SUBGRADE VOLUME CUT (CY)	EXCAVATION BELOW SUBGRADE CUMM VOLUME CUT (CY)
0010	236+84 BA		11		
		16		6	6
	237+00		10		
		15		6	13
	237+24		13		
		30		13	26
	60+66 EA		11		
TOTAL					26

W. LINCOLN AVENUE

STAGE 3

NE CURB RETURN AT S. S. 162ND ST

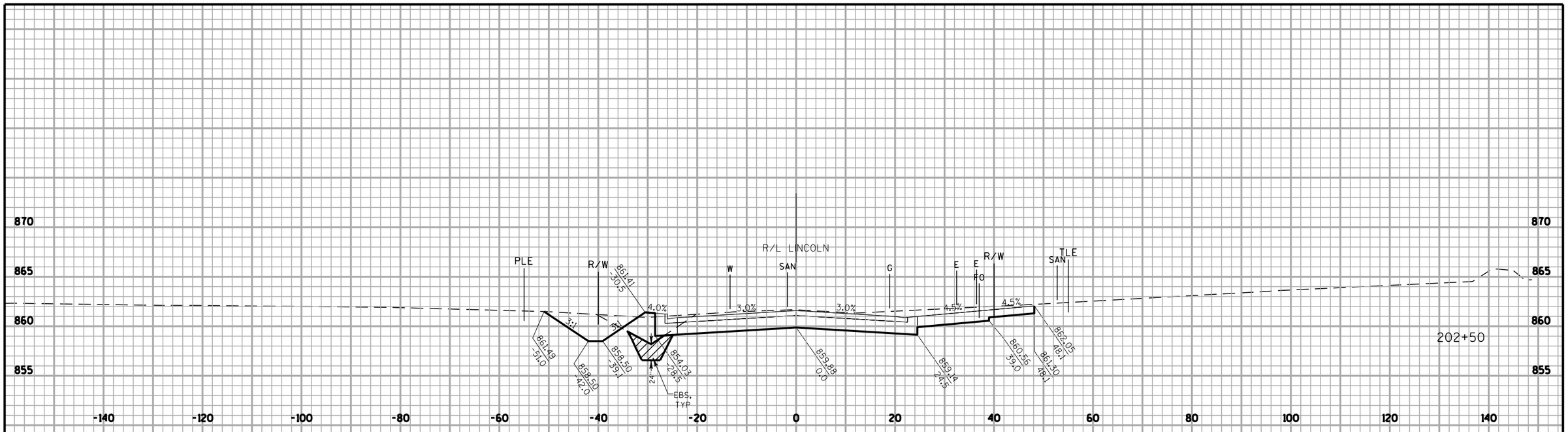
CATEGORY	REFERENCE LINE STATION	DISTANCE (FT)	EXCAVATION BELOW SUBGRADE END AREA CUT (SF)	EXCAVATION BELOW SUBGRADE VOLUME CUT (CY)	EXCAVATION BELOW SUBGRADE CUMM VOLUME CUT (CY)
0010	59+30 BA		11		
		35		15	15
	237+51		12		
		19		8	23
	237+70		12		
		25		11	34
	237+95 EA		11		
TOTAL					34

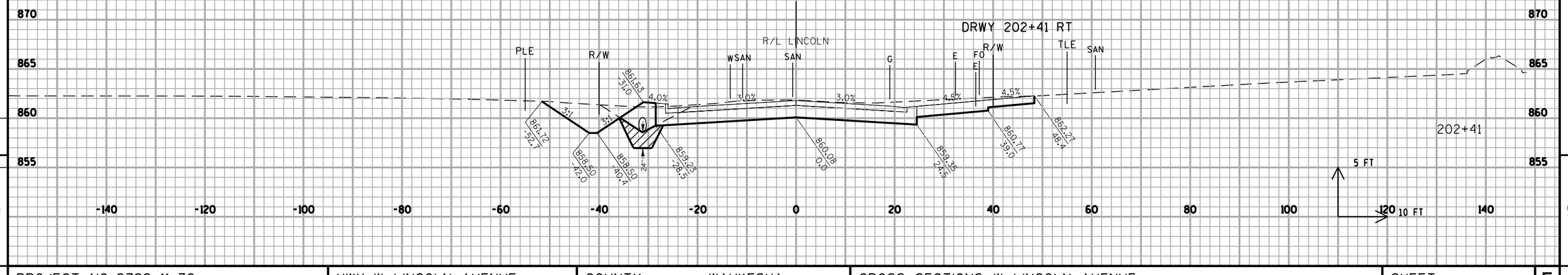


PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 203	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090201_xs_1078.dgn PLOT DATE : 06-JUL-2013 19:47 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21





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PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 204	E

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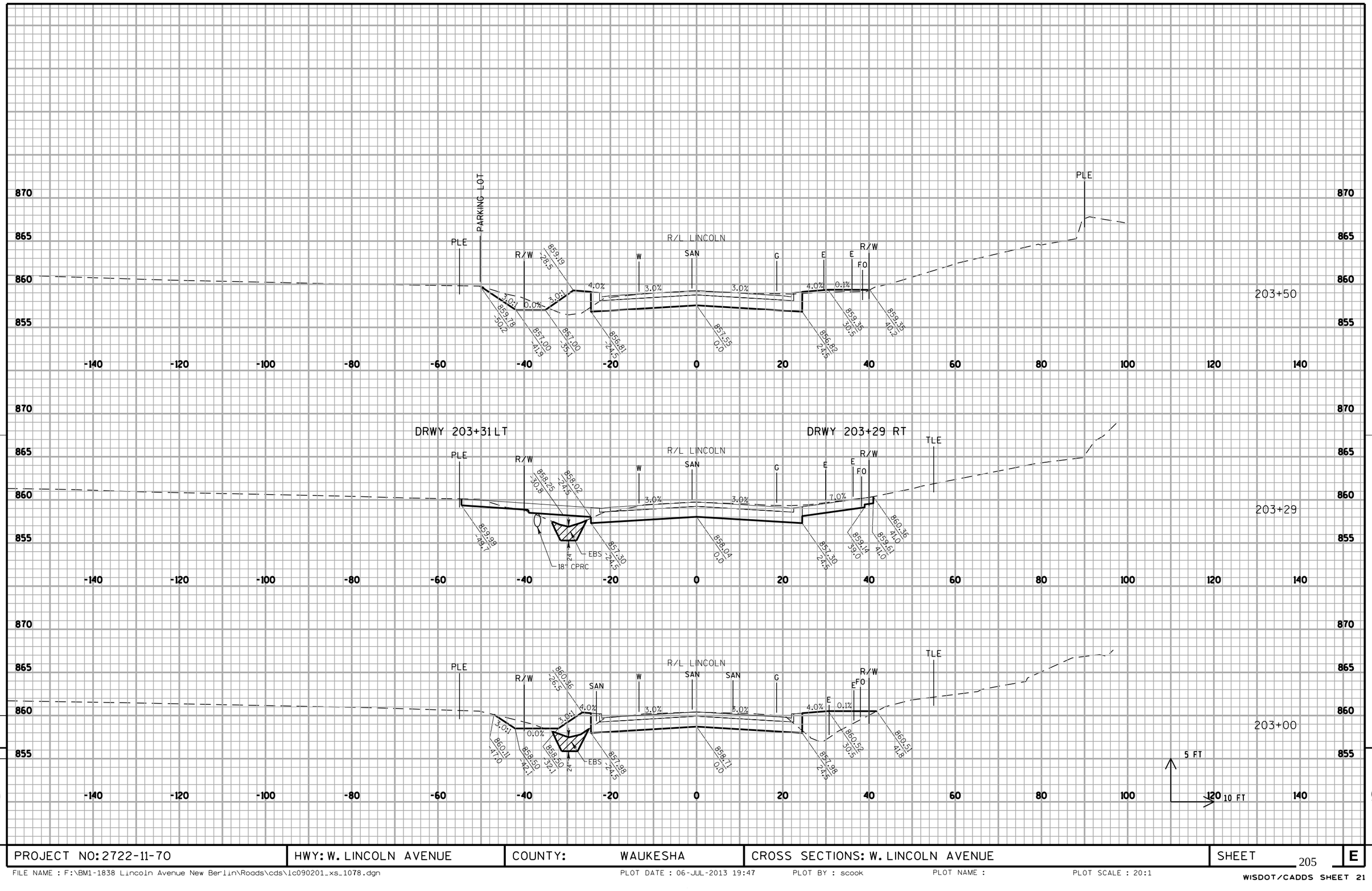

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090201_xs_1078.dgn PLOT DATE : 06-JUL-2013 19:47 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

205+00

204+81

DRWY 204+81 RT

204+50

204+00

5 FT

10 FT

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090201_xs_1078.dgn PLOT DATE : 06-JUL-2013 19:47 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1

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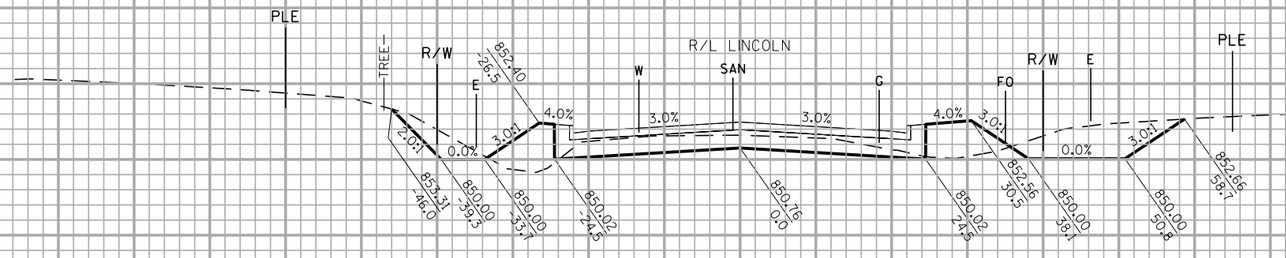

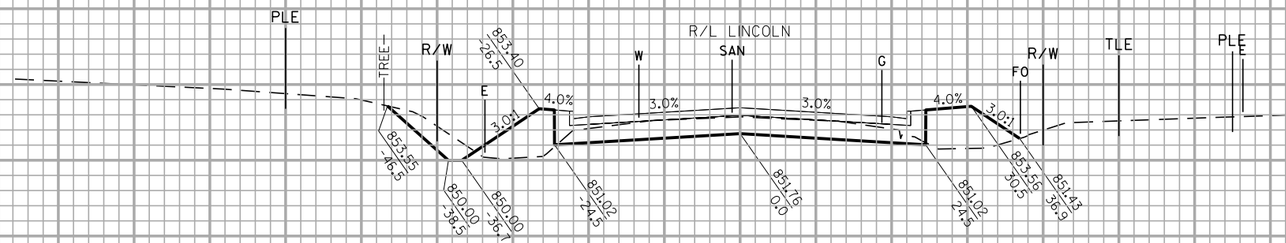

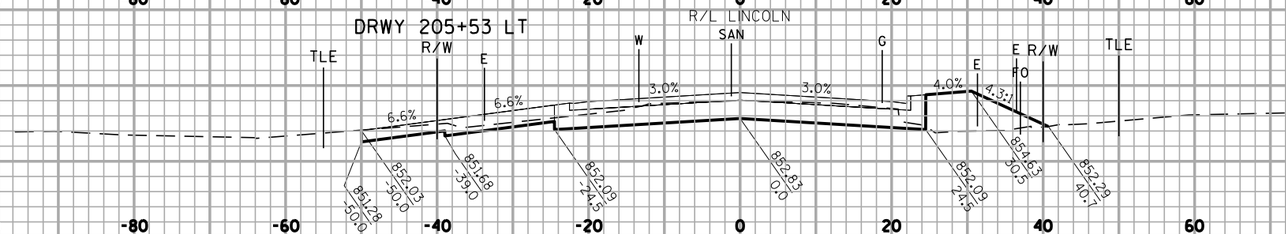

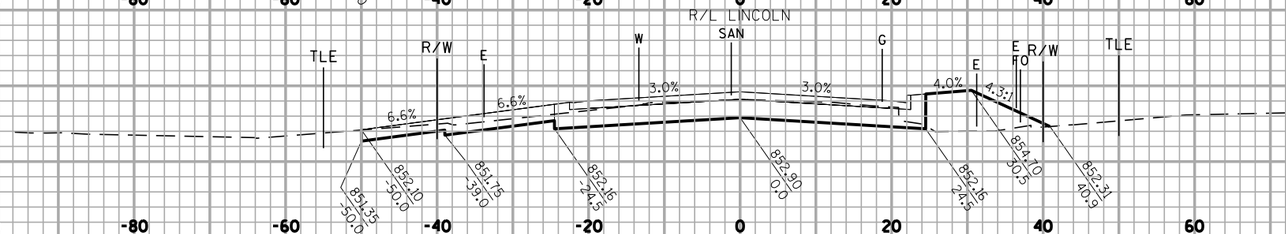

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET E

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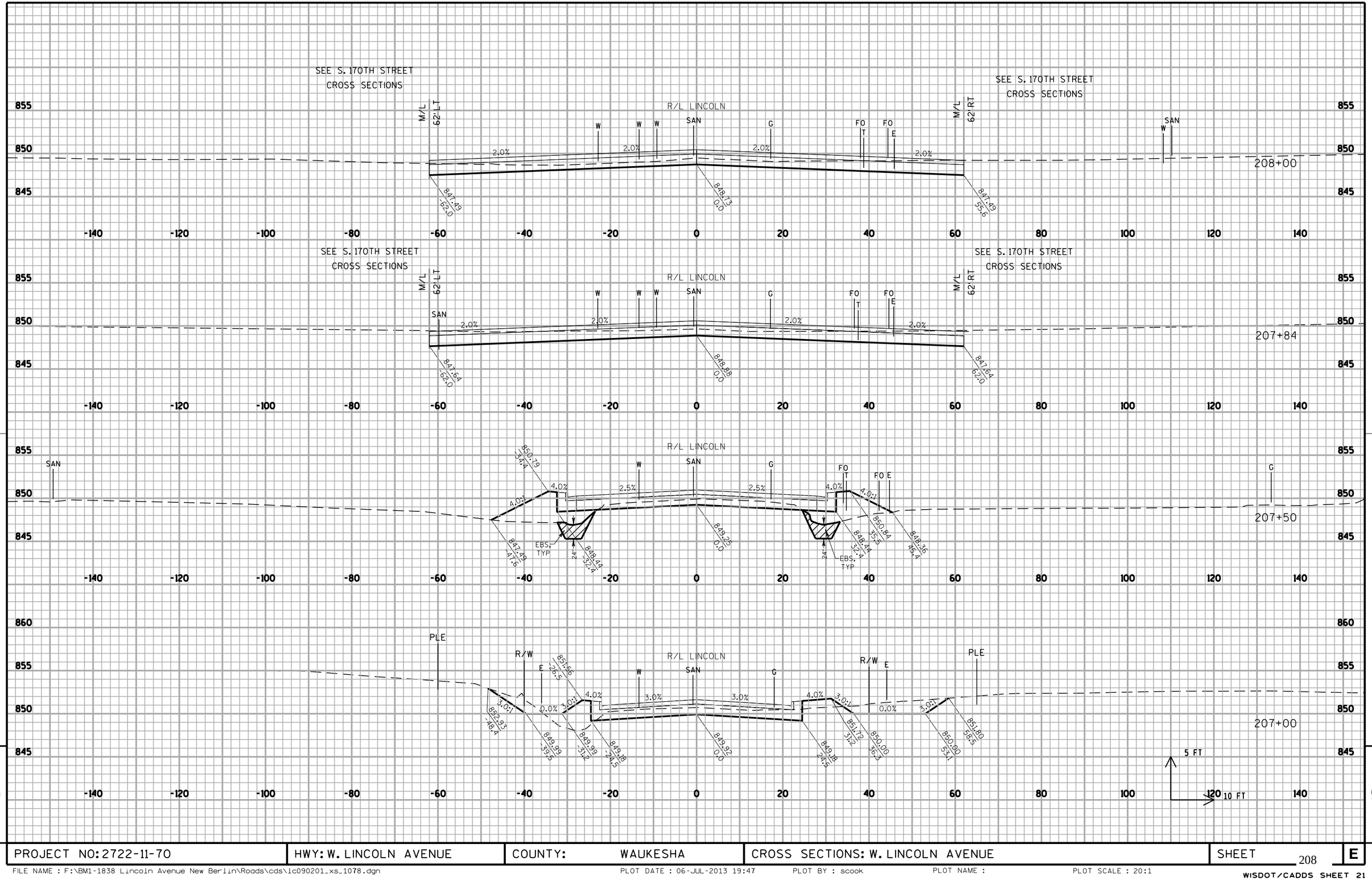

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 208 E

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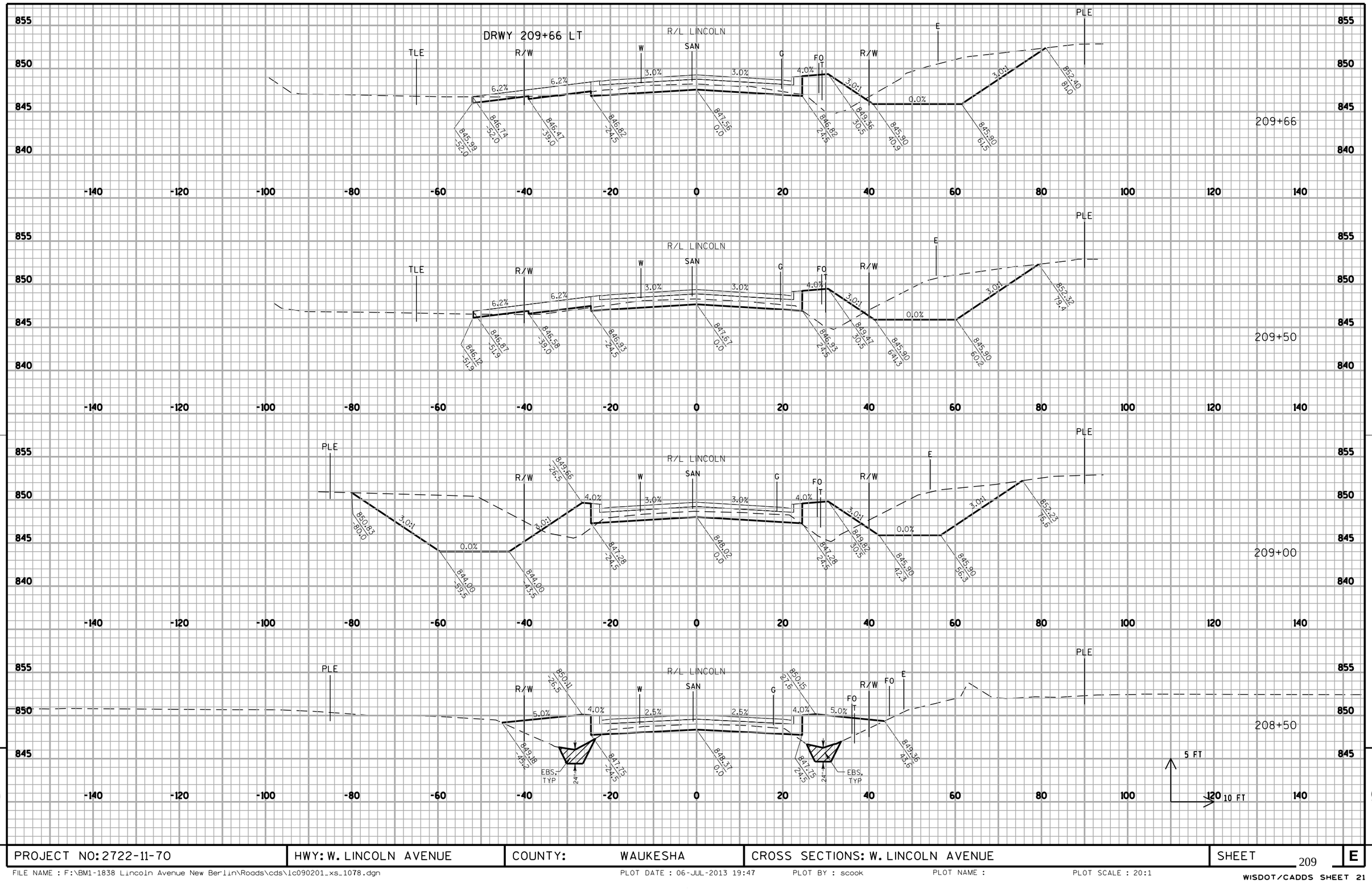

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 209	E

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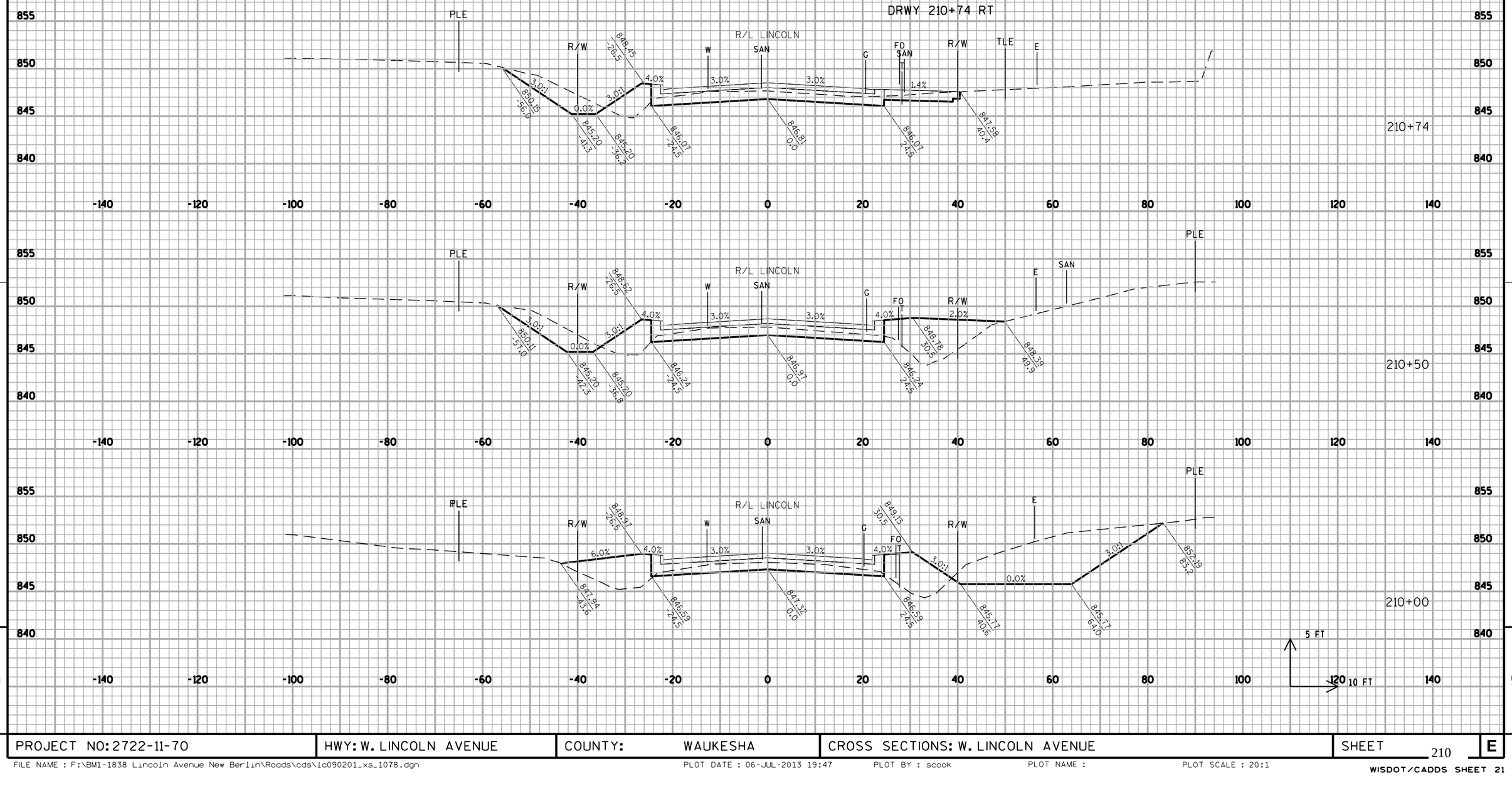

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 210 E

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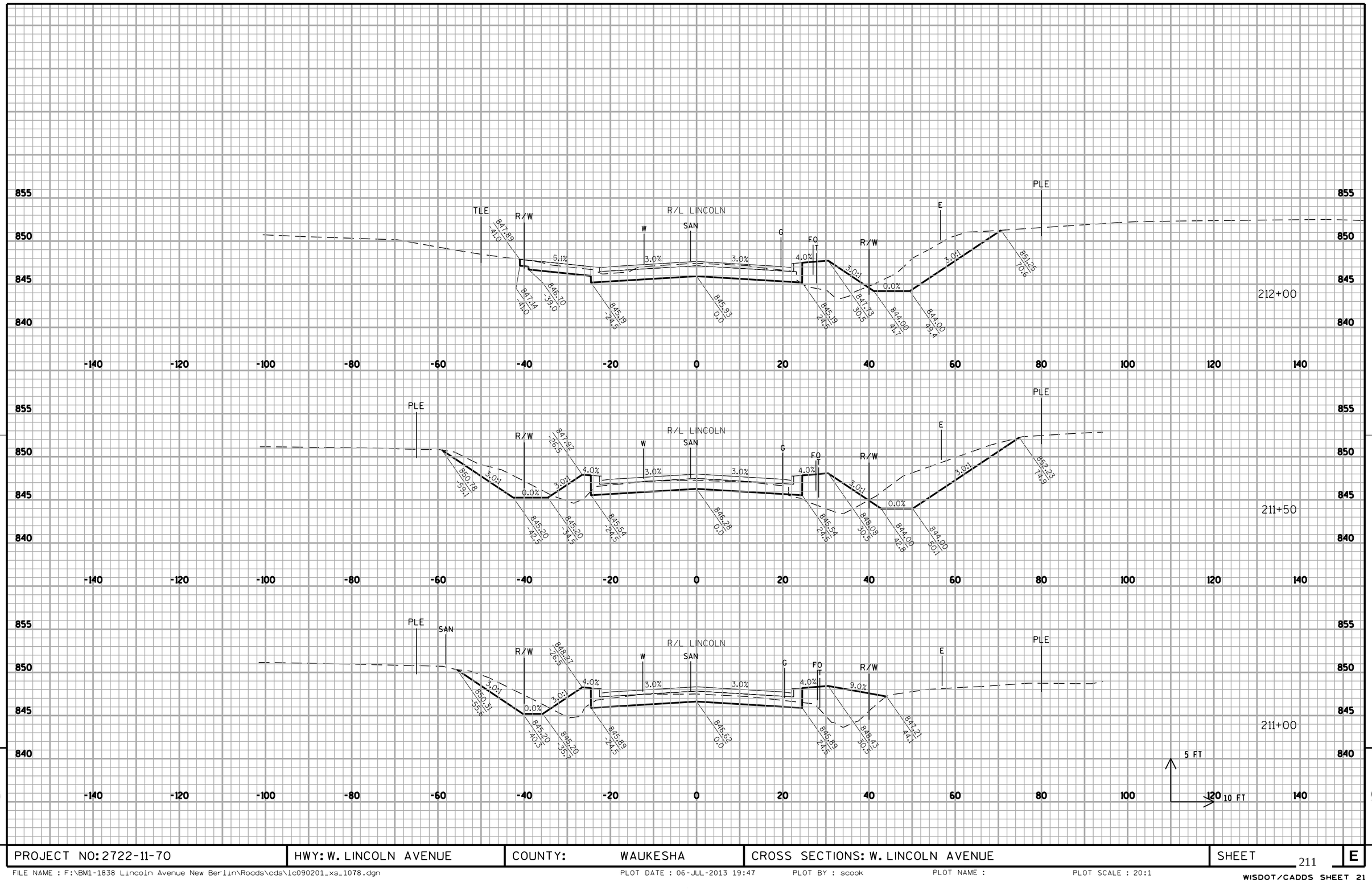

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PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 211	E

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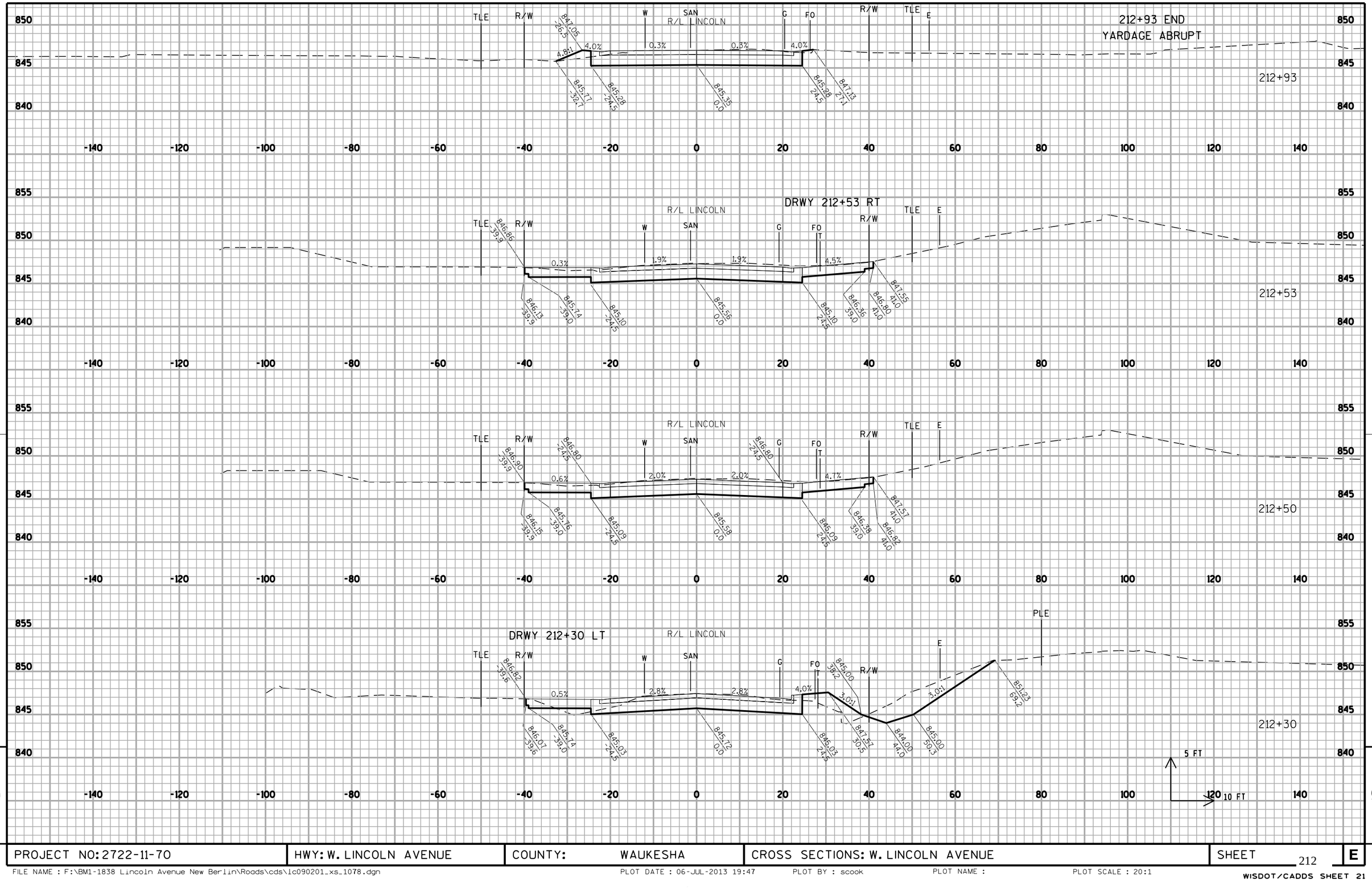

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PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 212	E

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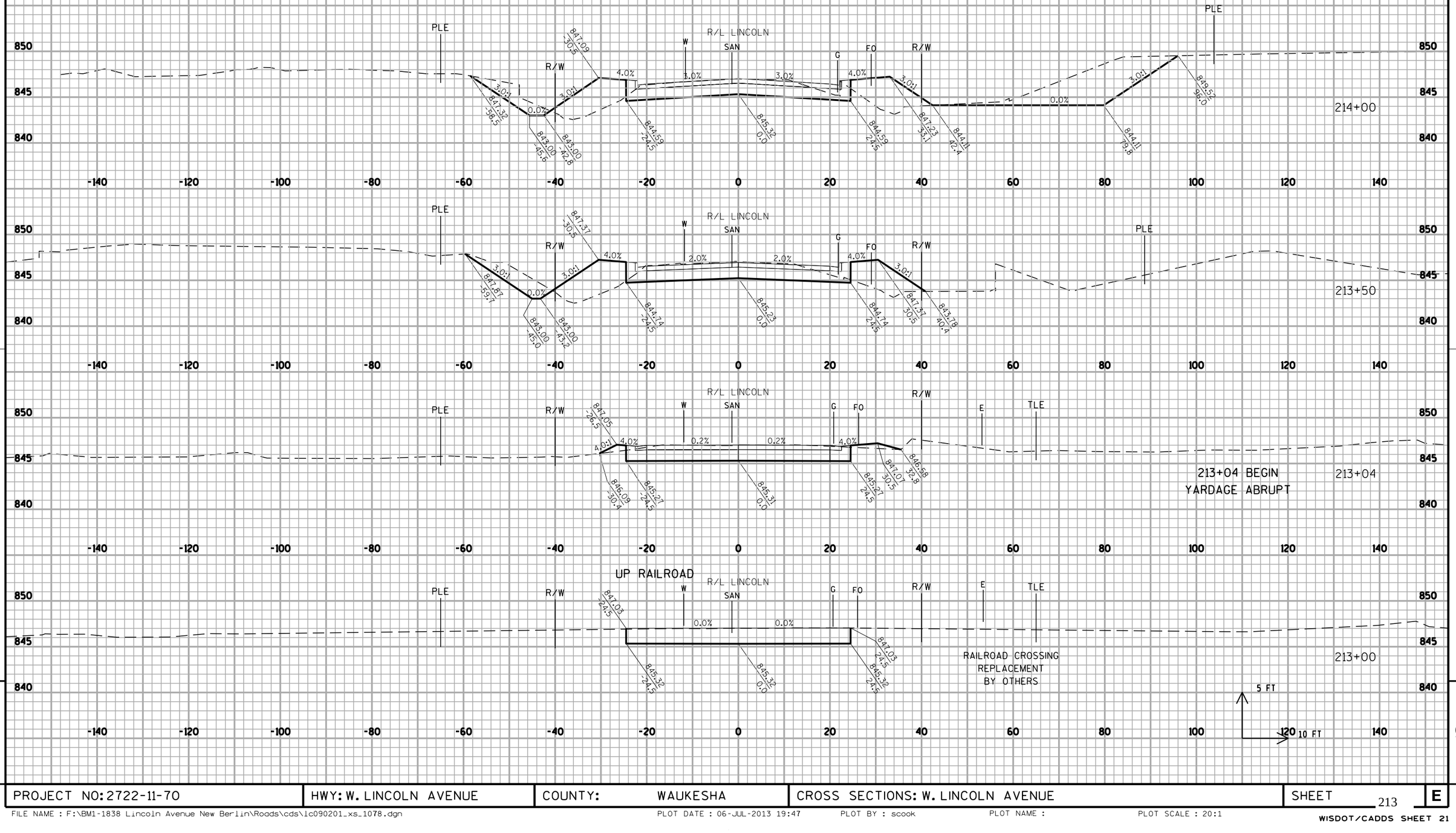

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PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 213	E

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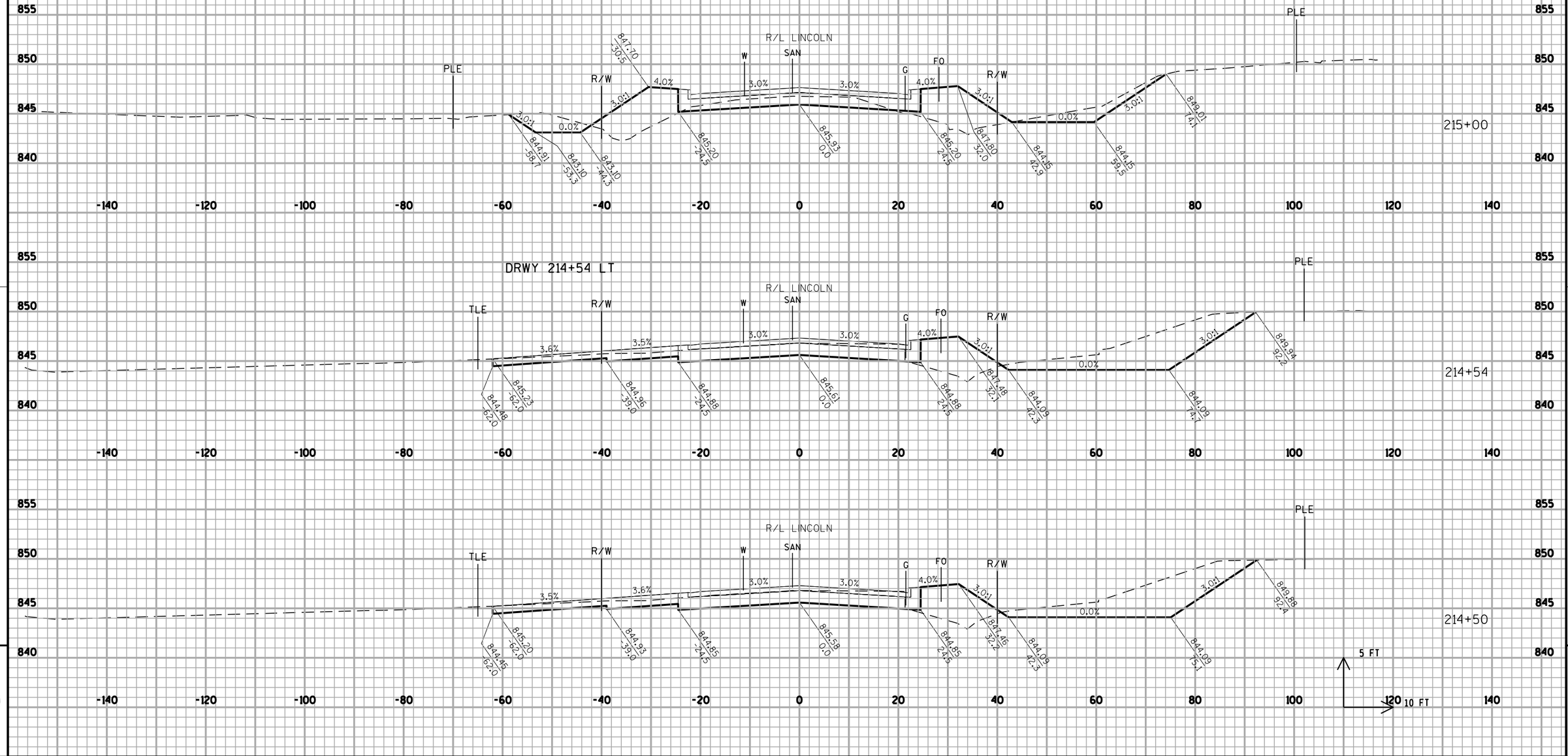

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 214	E

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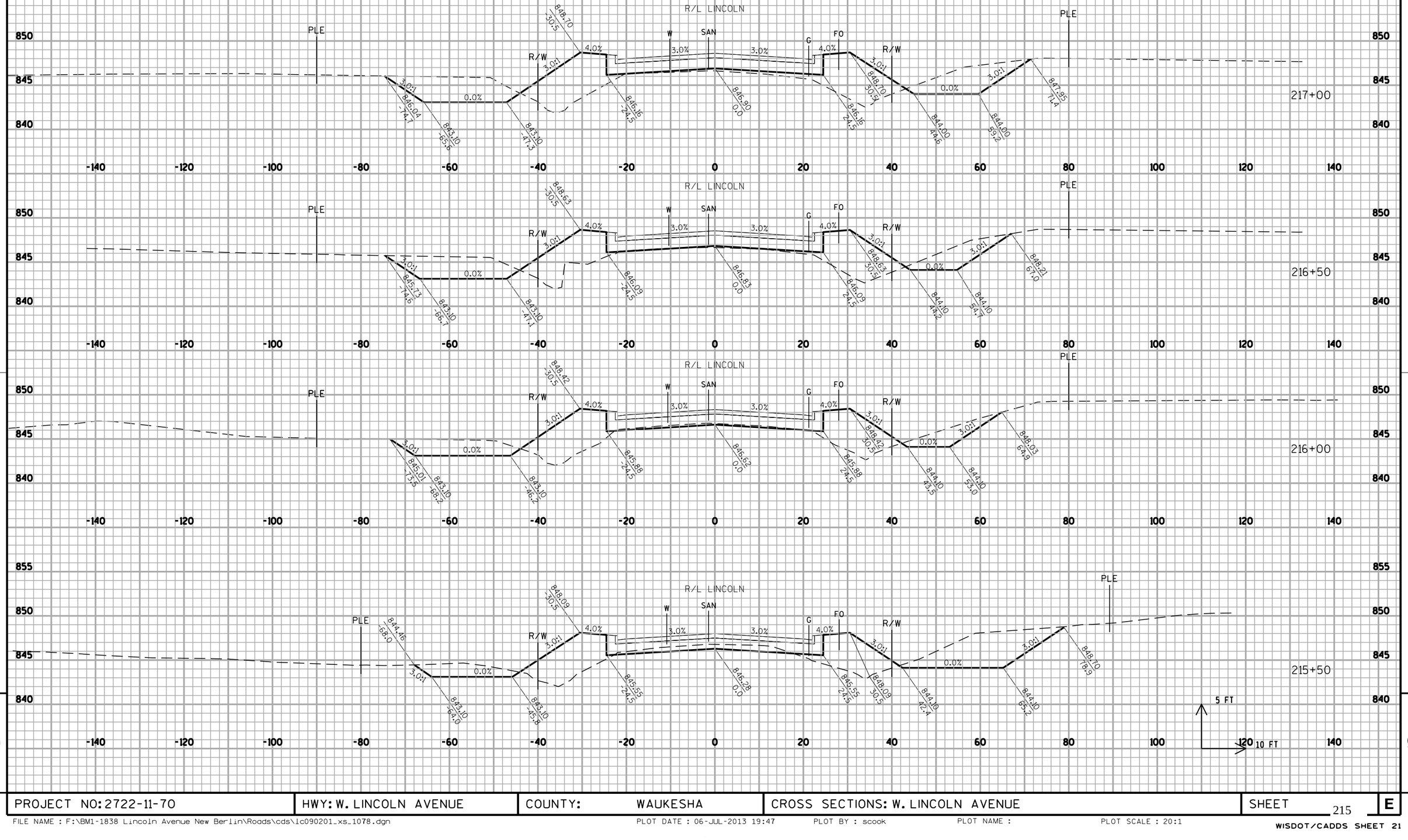

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PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 215	E

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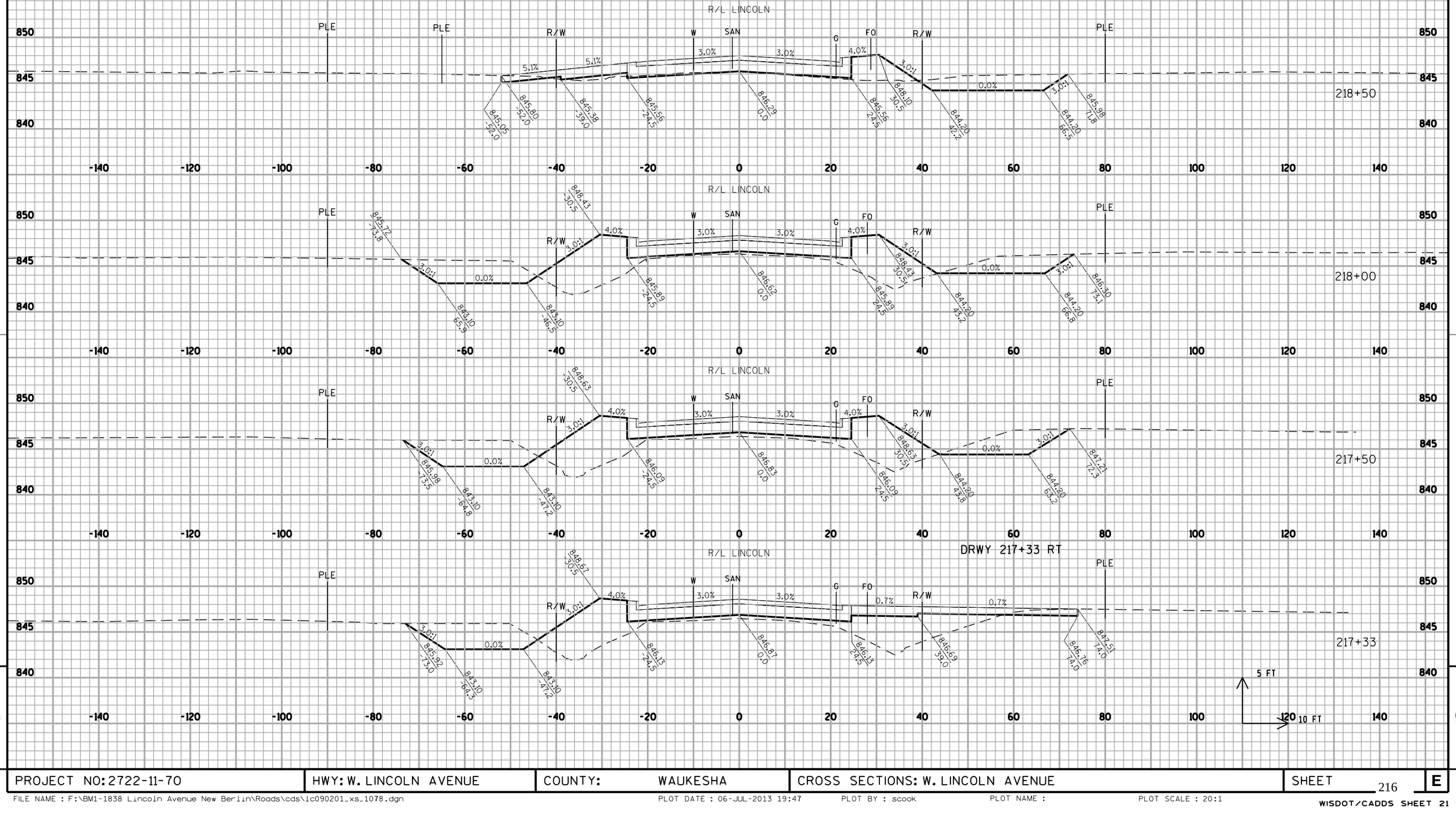
WISDOT/CADDS SHEET 21



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 216	E

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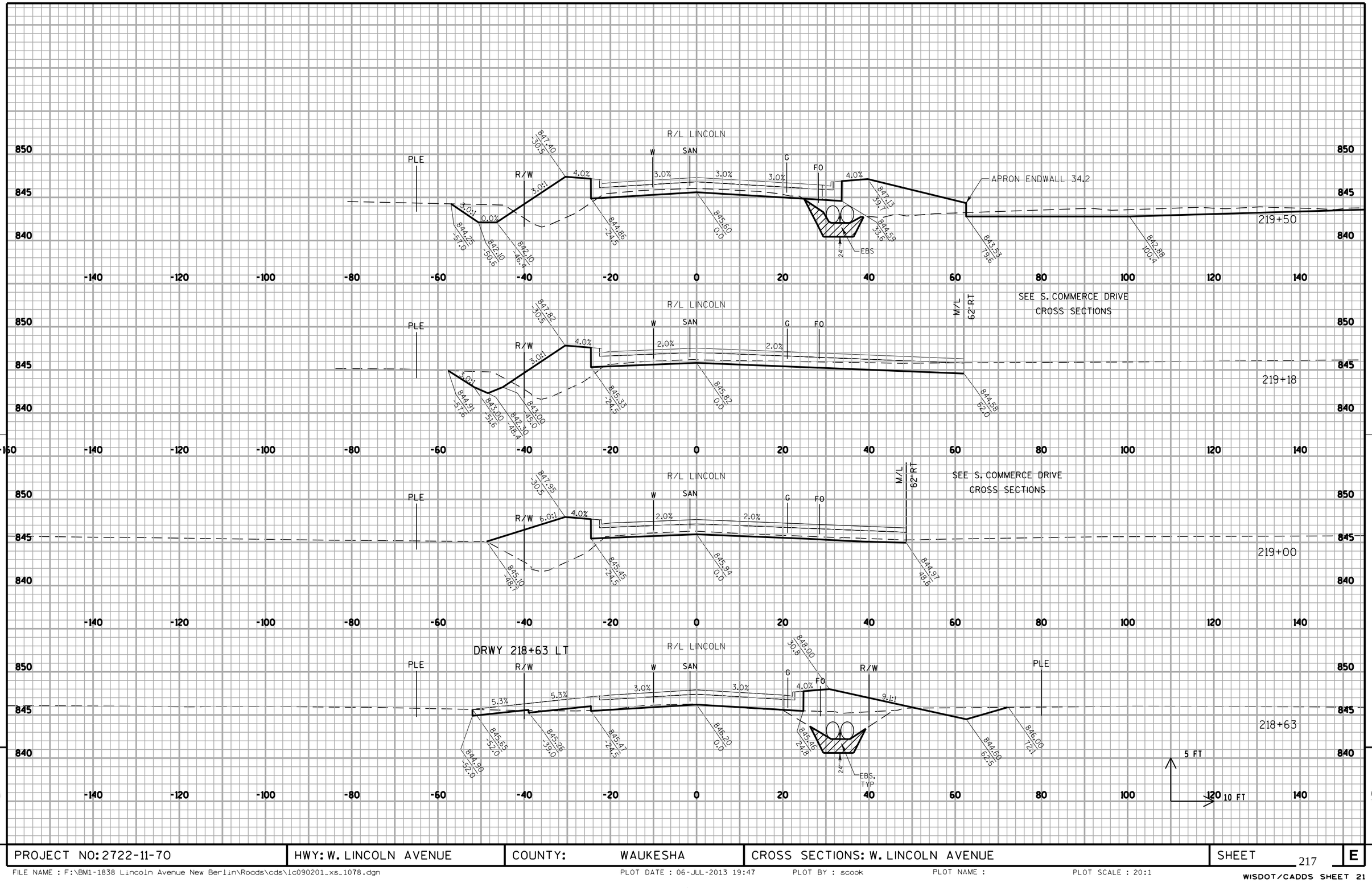
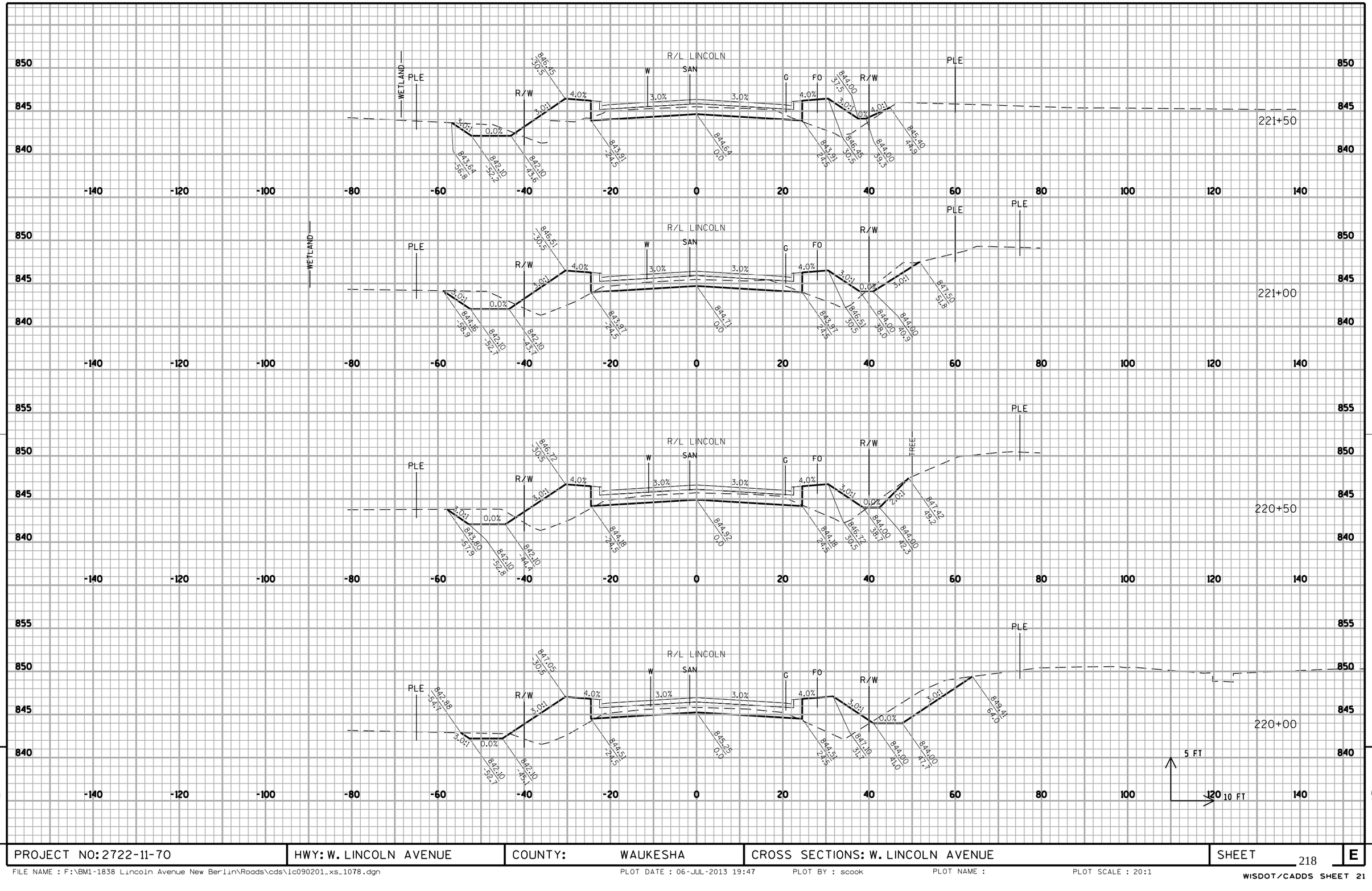


PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090201_xs_1078.dgn PLOT DATE : 06-JUL-2013 19:47 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 218 E

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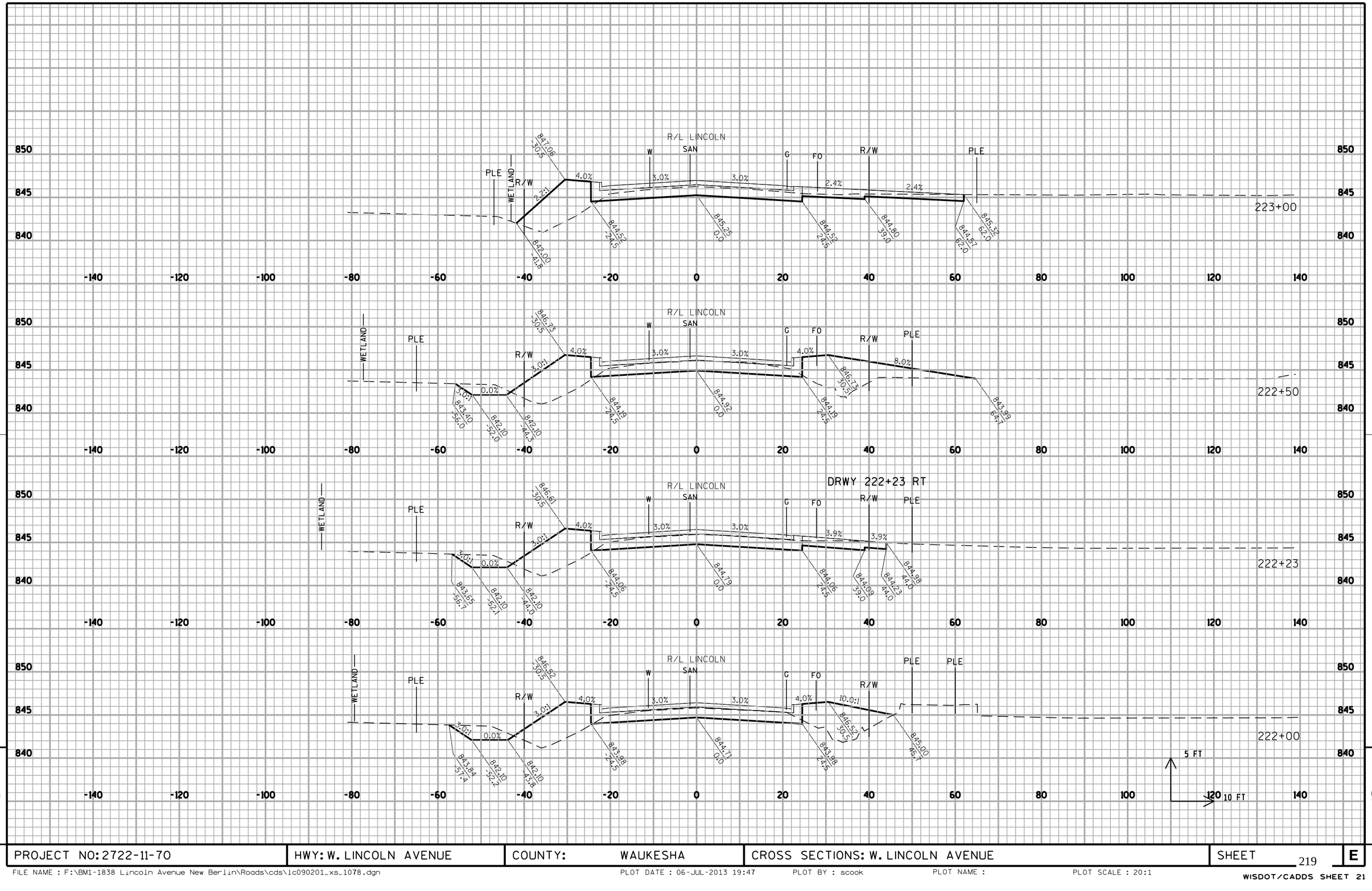
WISDOT/CADDS SHEET 21



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 219 E

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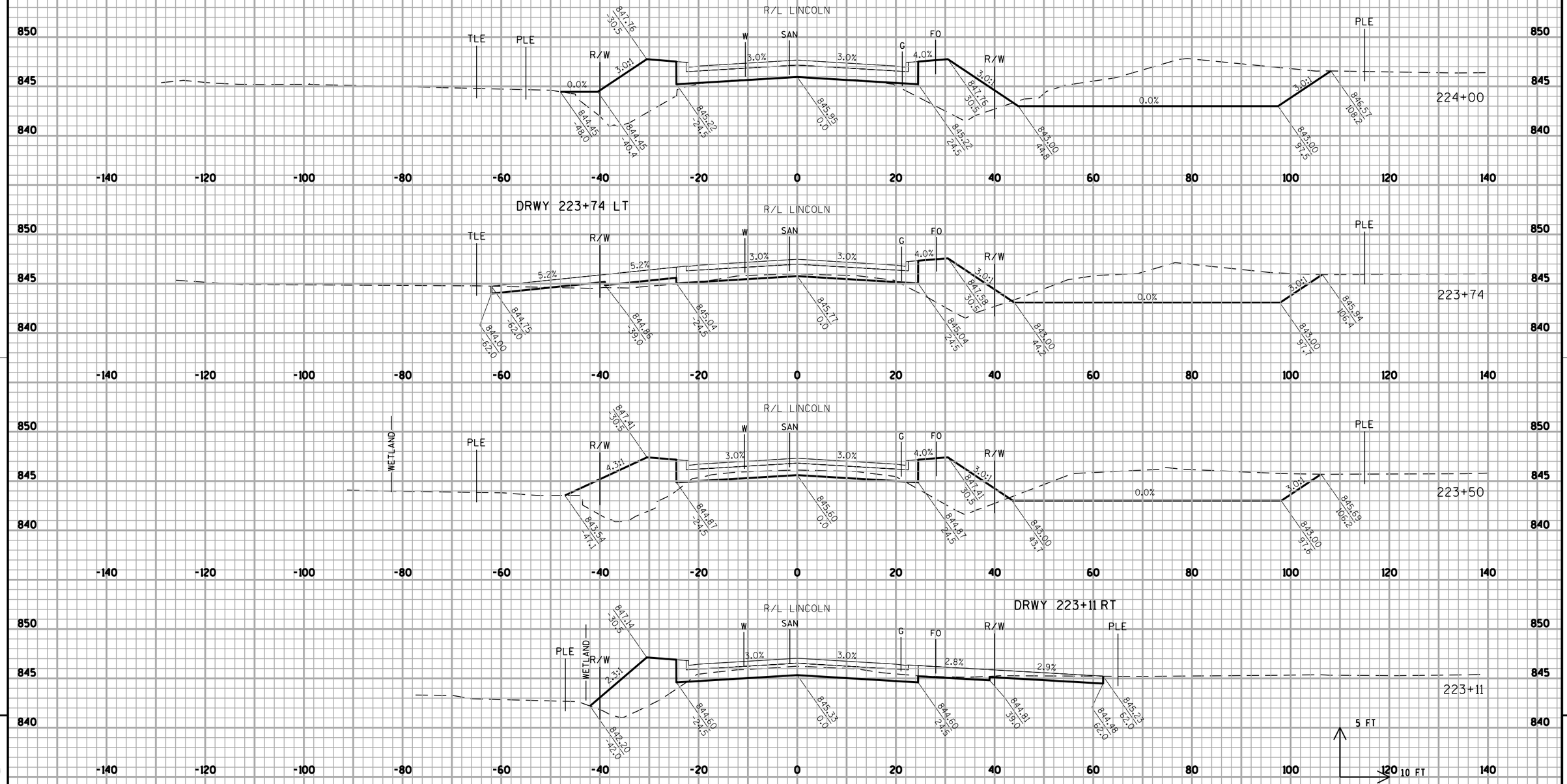
WISDOT/CADDS SHEET 21



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 220	E

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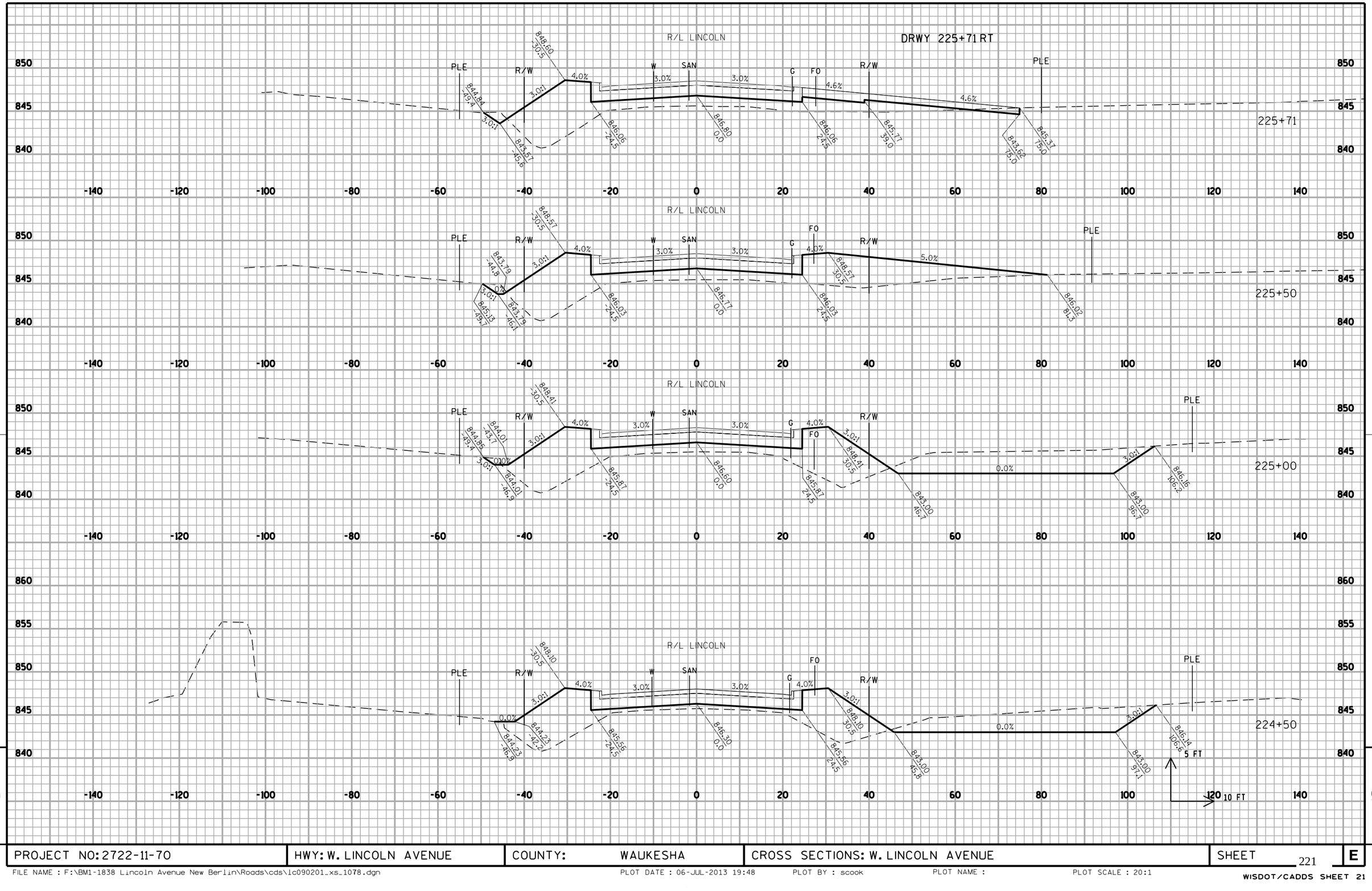

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET E

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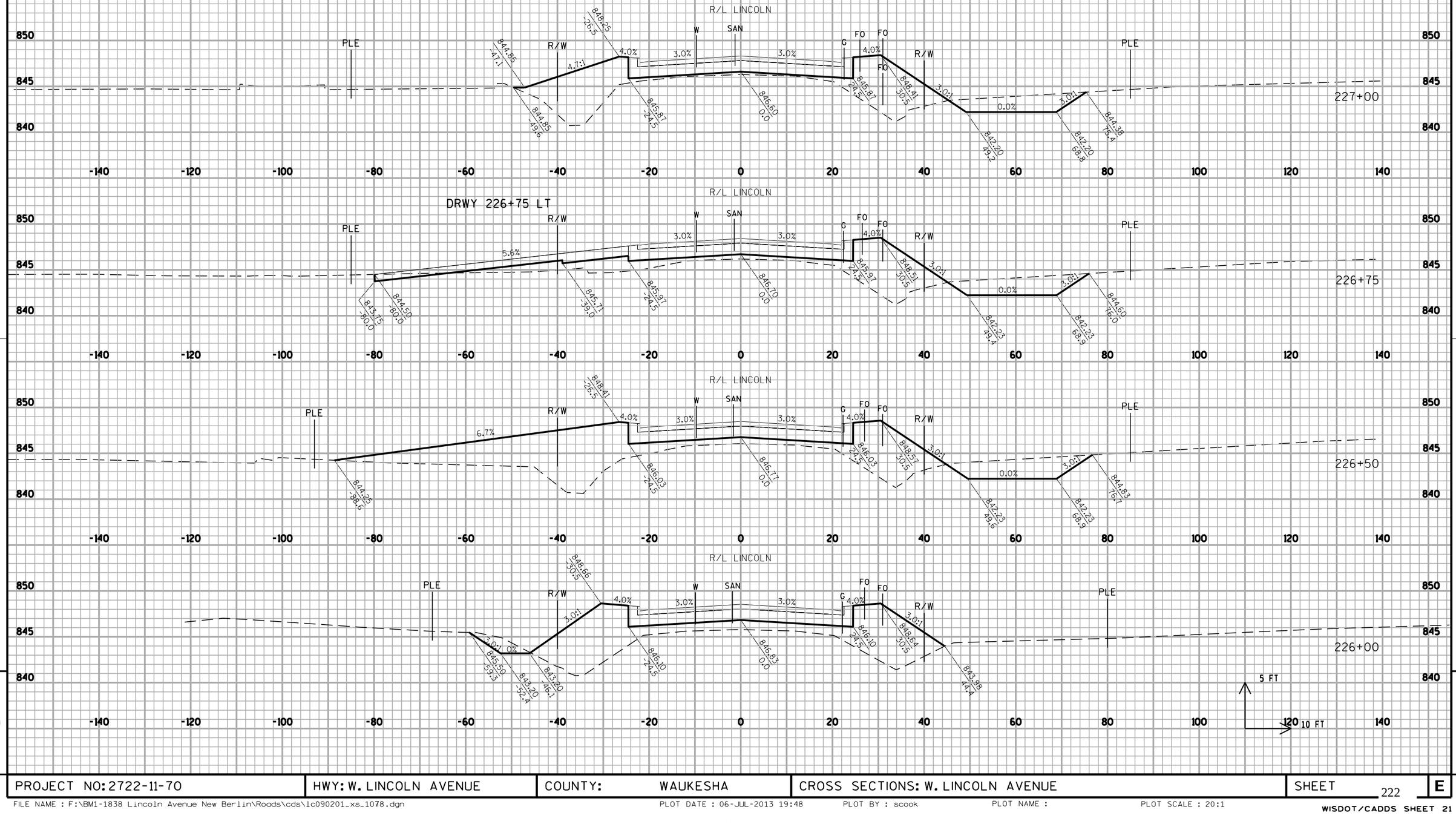

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090201_xs_1078.dgn PLOT DATE : 06-JUL-2013 19:48 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1

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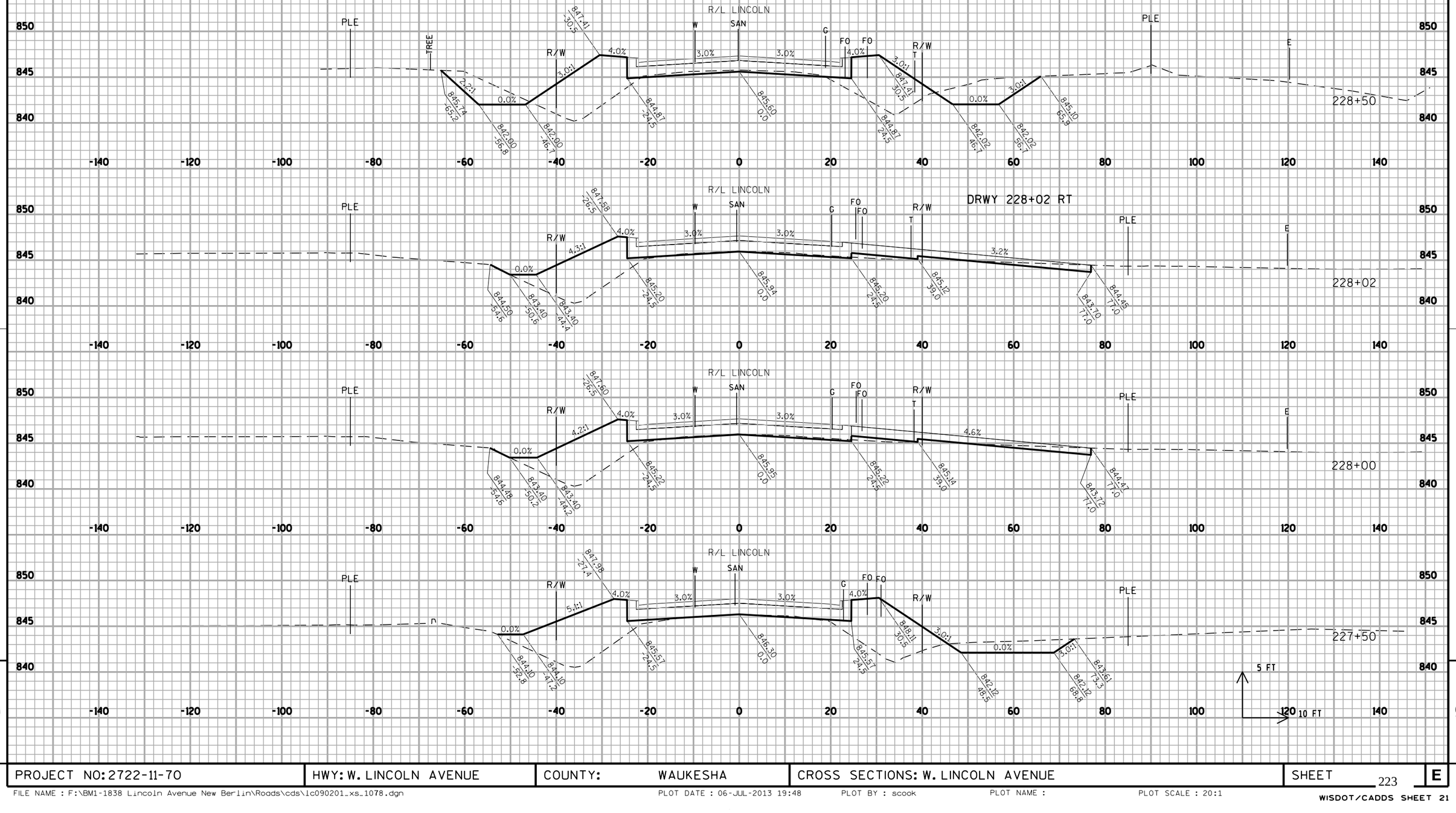

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET E

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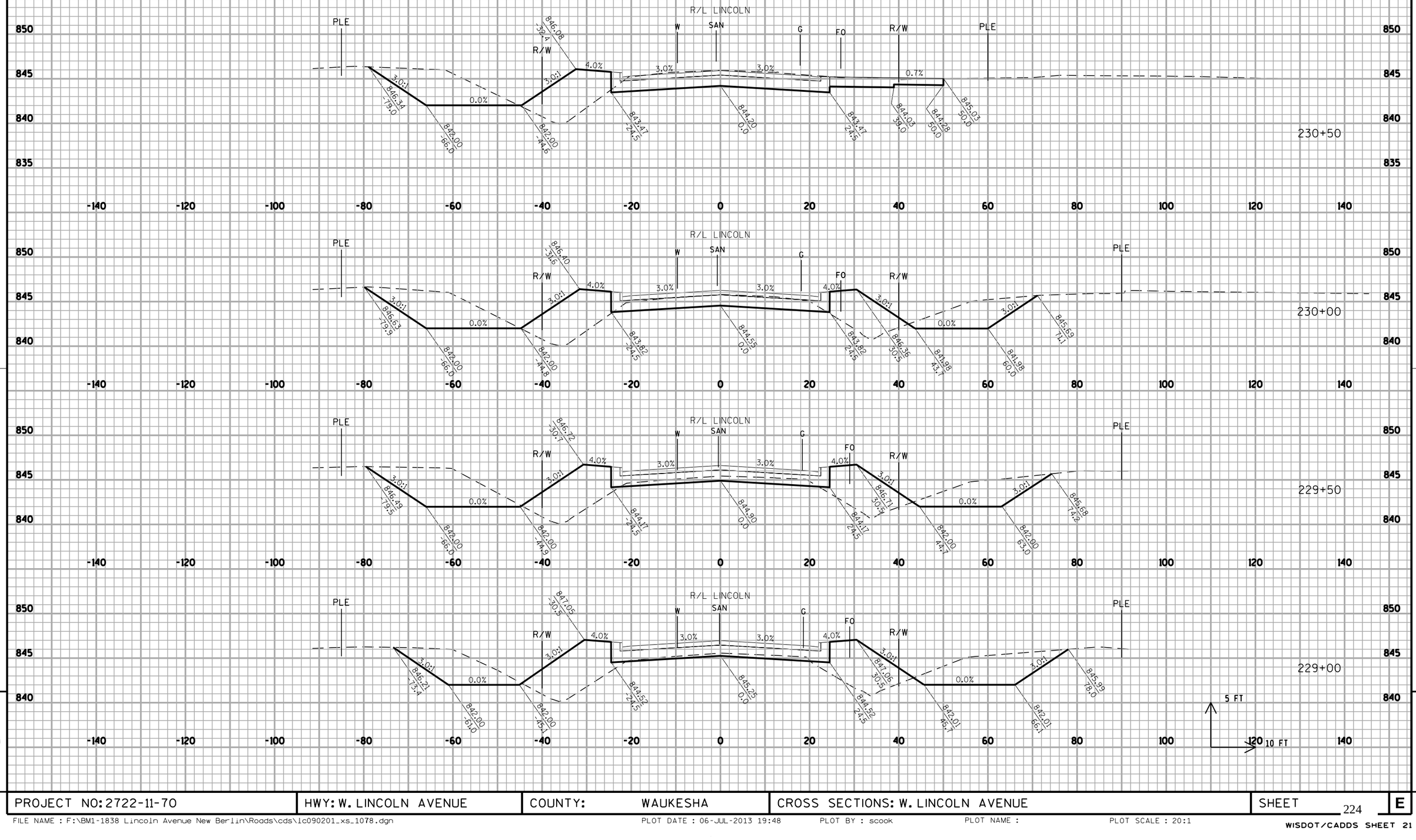
WISDOT/CADDS SHEET 21



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET	E

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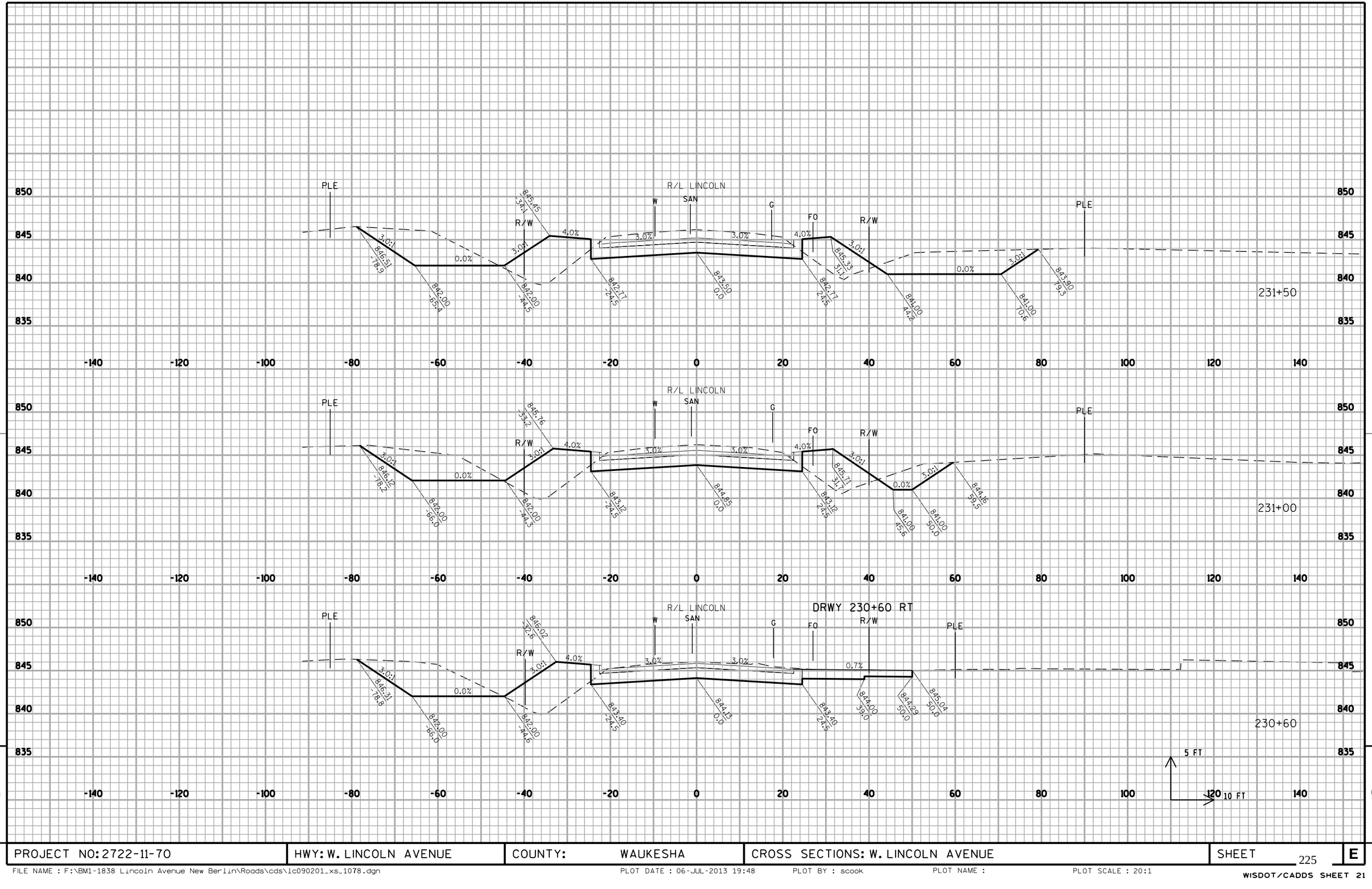

PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 225	E

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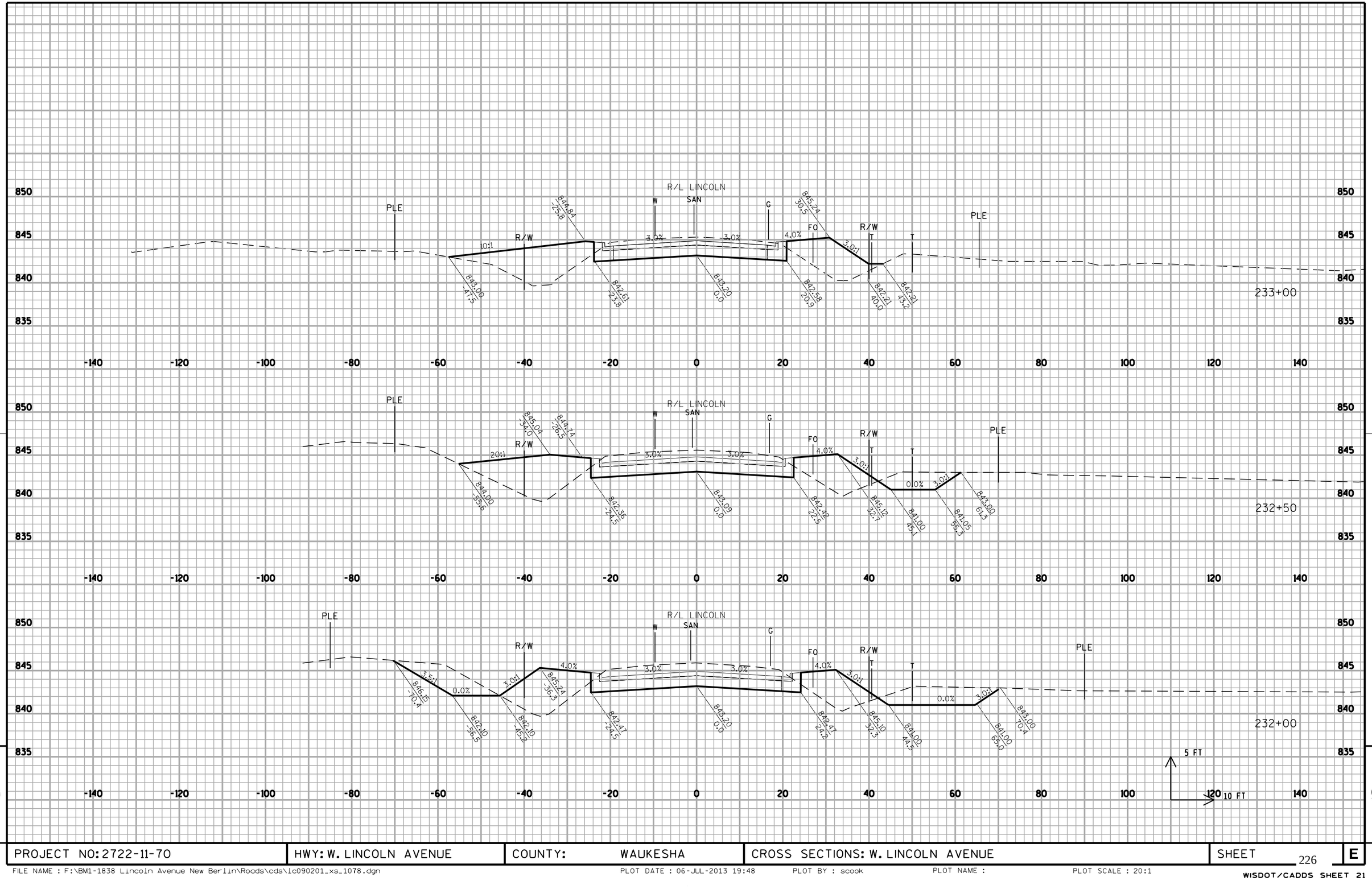

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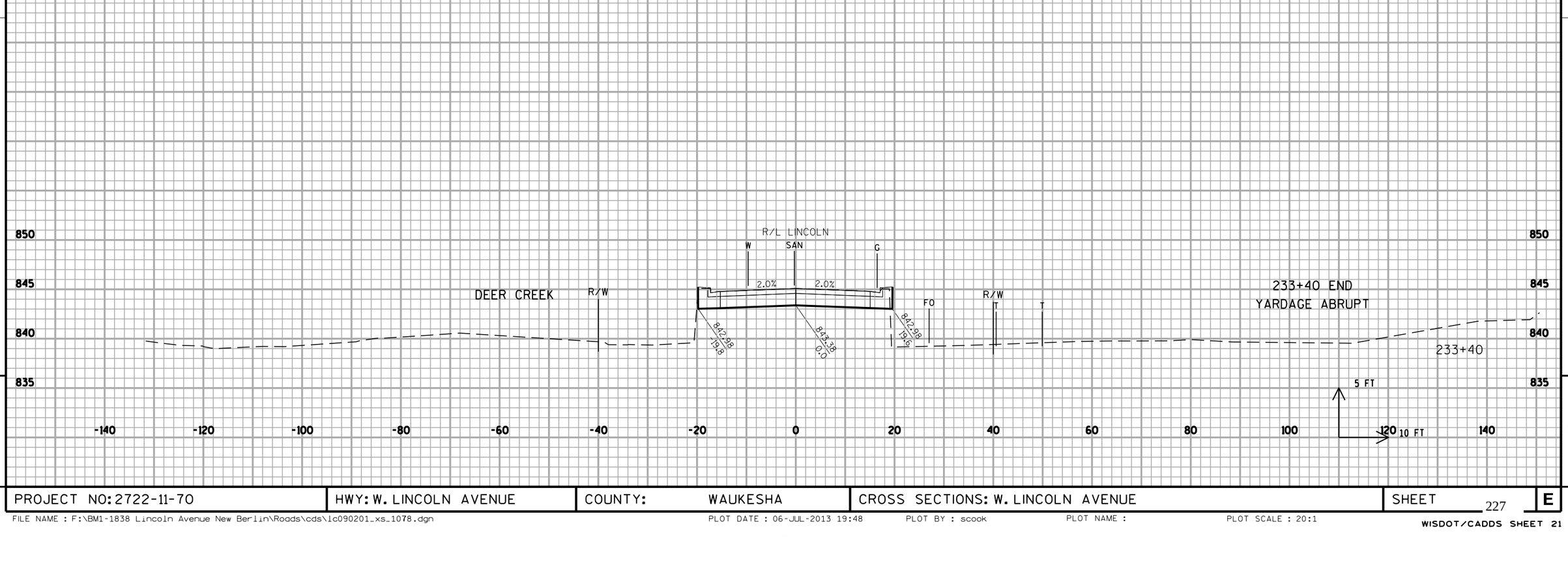
PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET	E

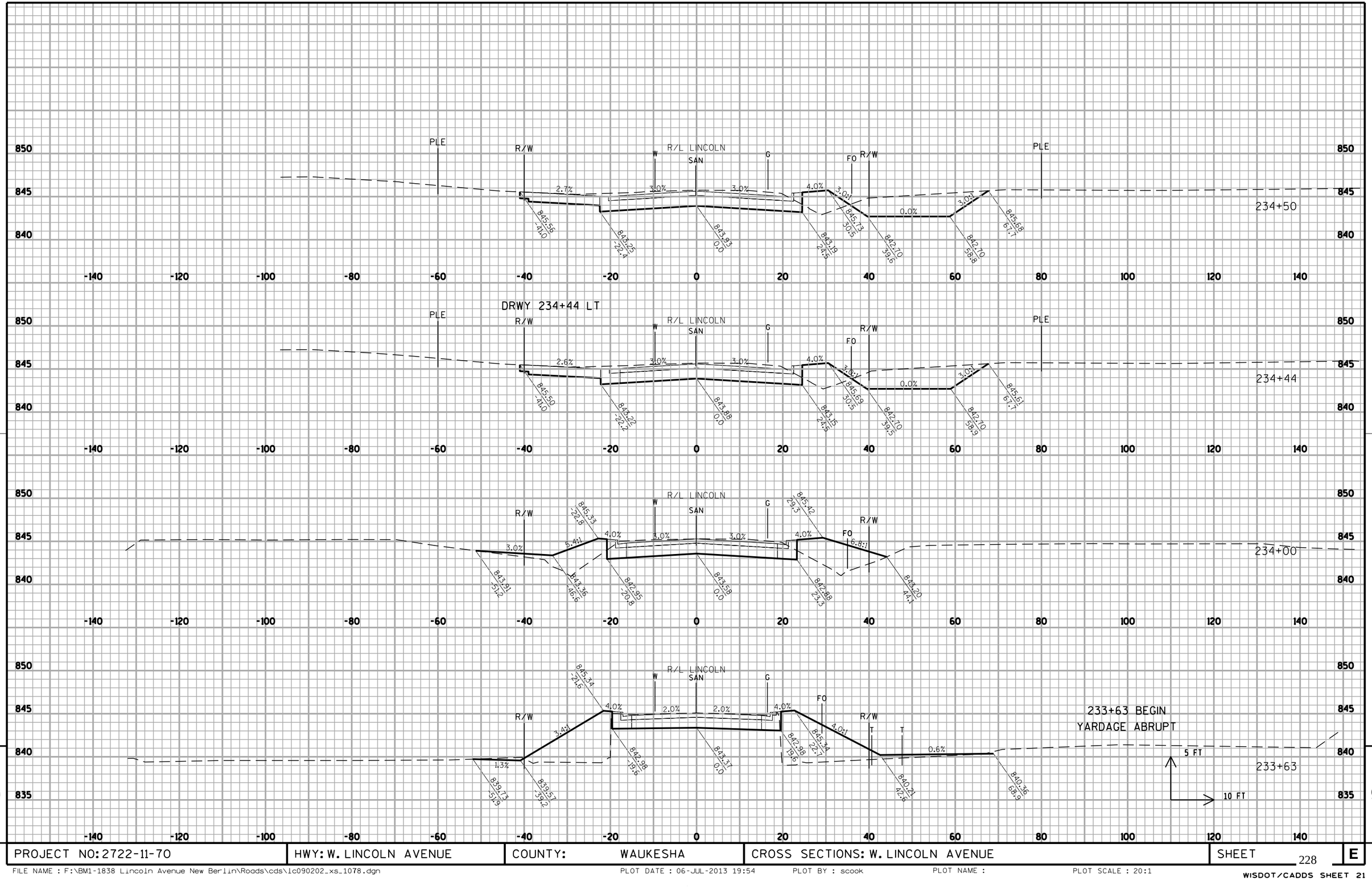
FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090201_xs_1078.dgn PLOT DATE : 06-JUL-2013 19:48 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 227	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090201_xs_1078.dgn PLOT DATE : 06-JUL-2013 19:48 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1

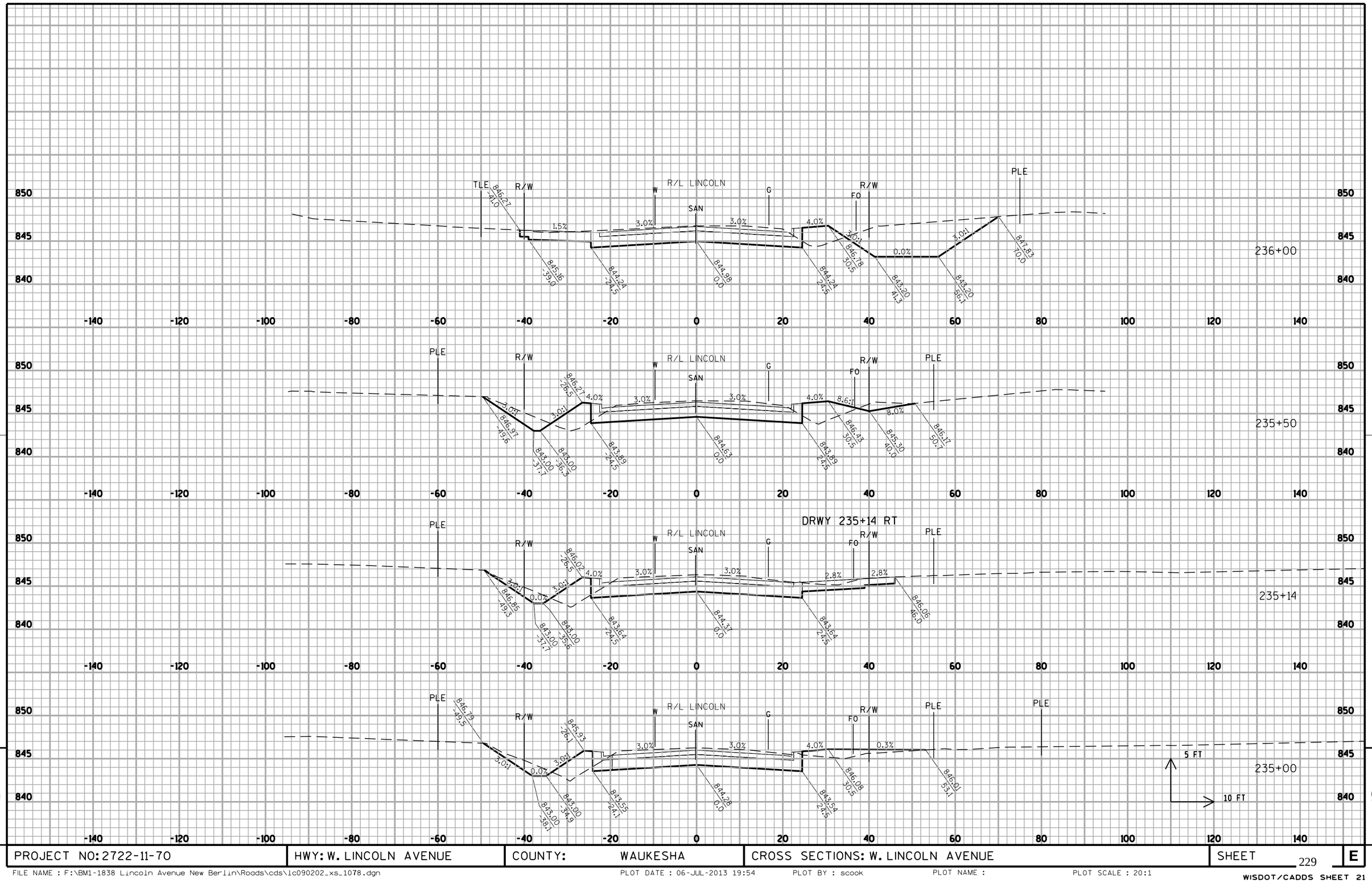
WISDOT/CADDS SHEET 21



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 228 E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090202_xs_1078.dgn | PLOT DATE : 06-JUL-2013 19:54 | PLOT BY : scook | PLOT NAME : | PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



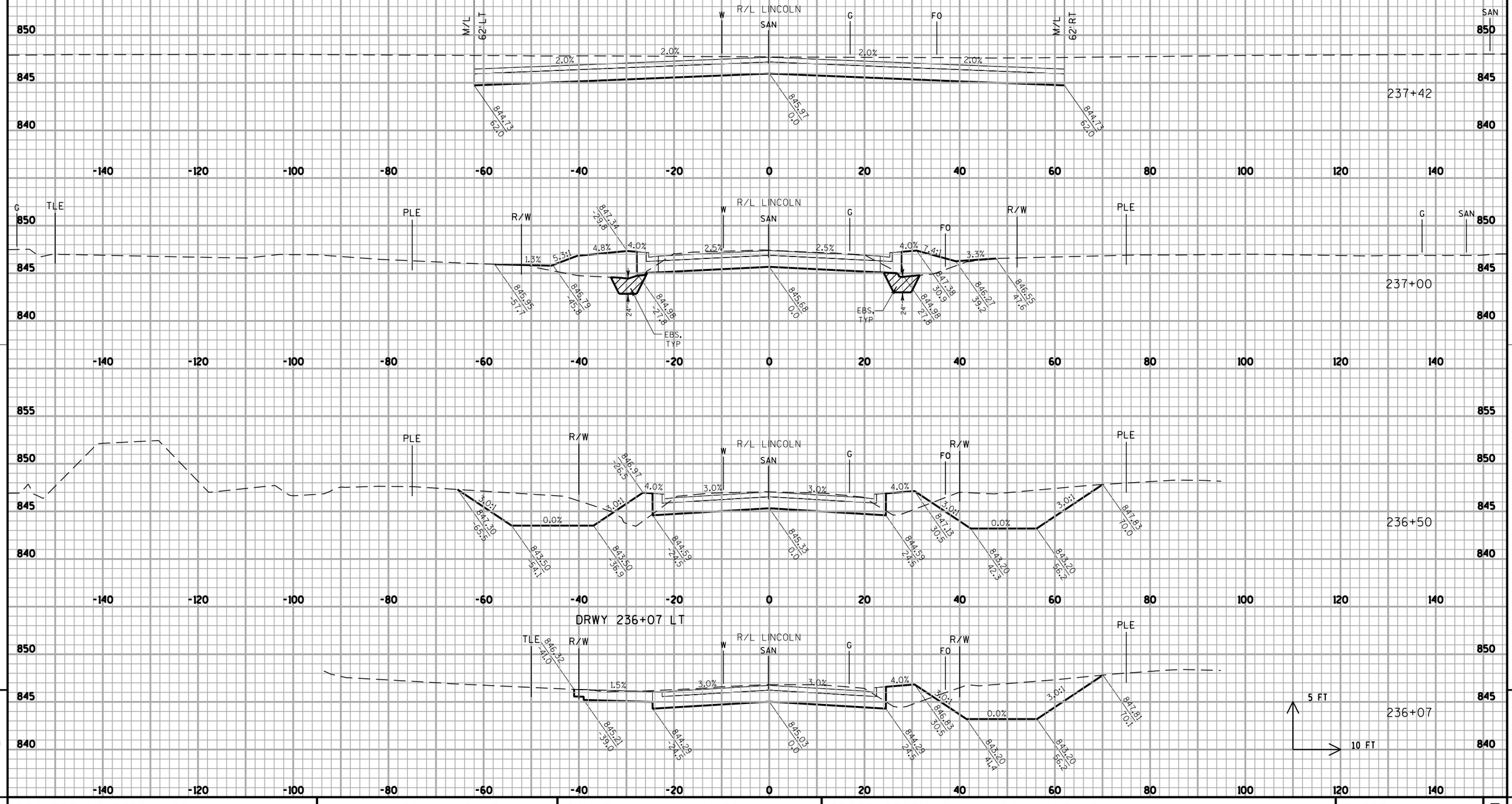
PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 229	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090202_xs_1078.dgn PLOT DATE : 06-JUL-2013 19:54 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

SEE S. 170TH STREET CROSS SECTIONS

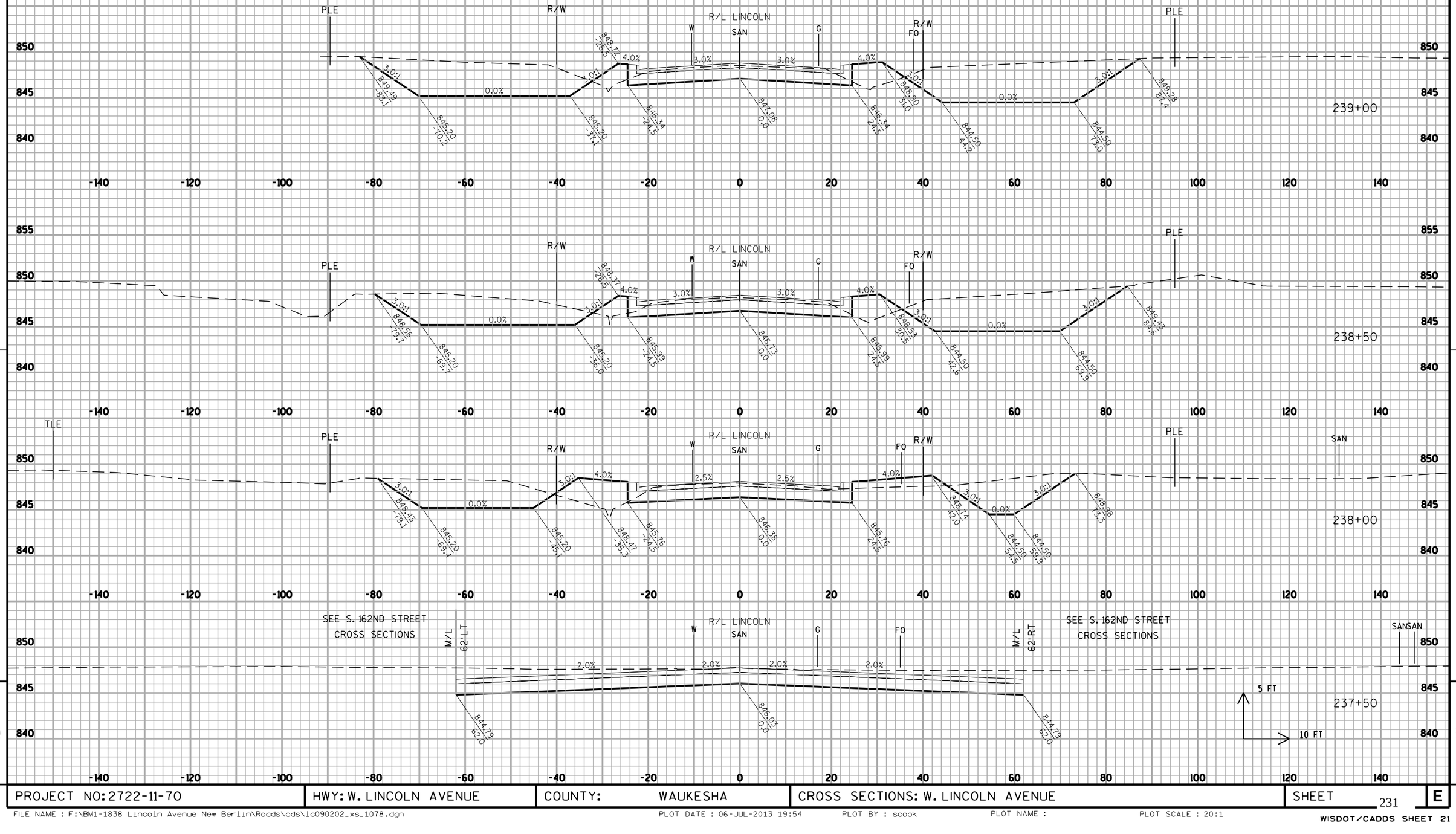
SEE S. 162ND STREET CROSS SECTIONS



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 230	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090202_xs_1078.dgn PLOT DATE : 06-JUL-2013 19:54 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1

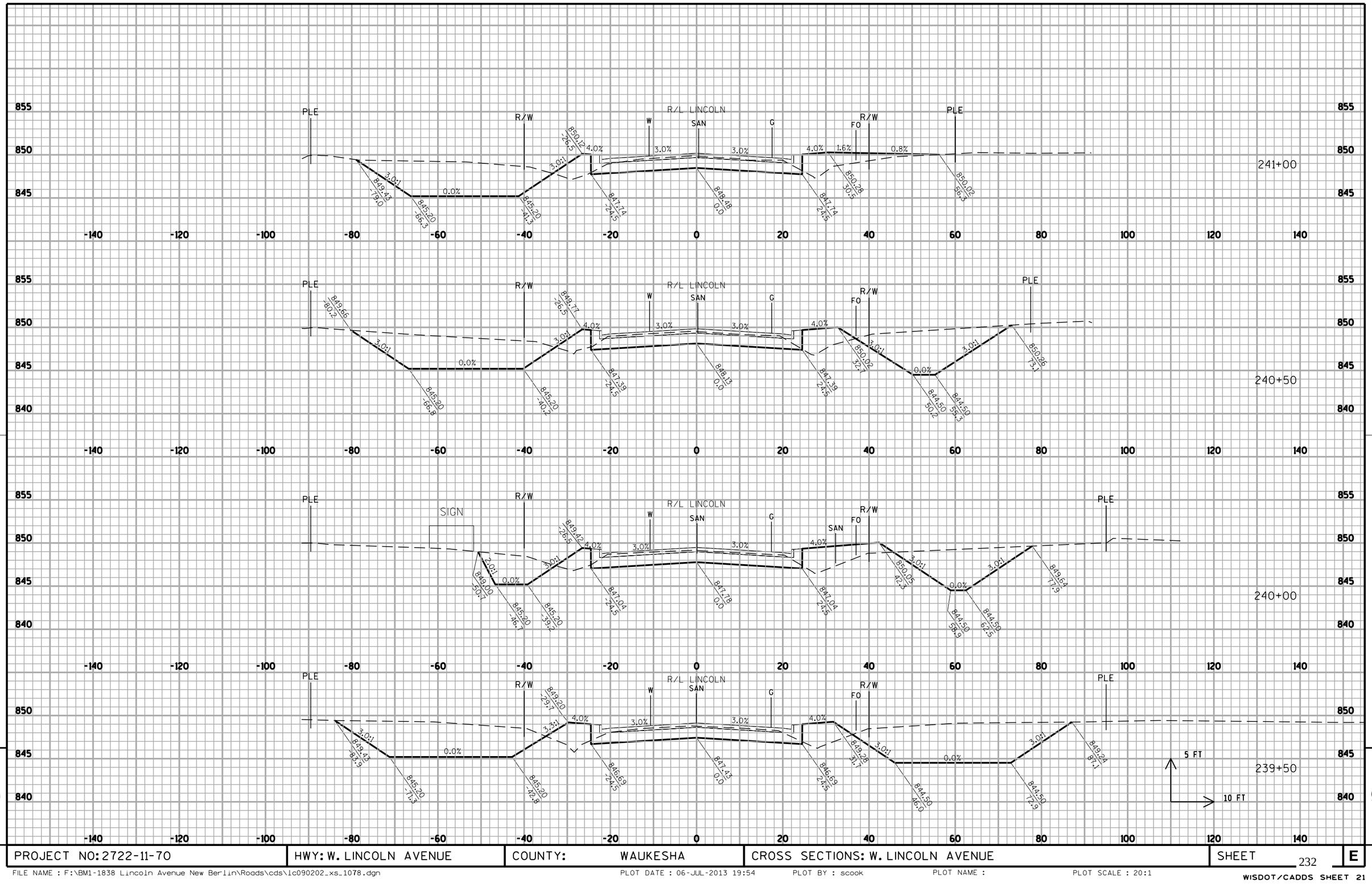
WISDOT/CADDS SHEET 21



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 231 E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090202_xs_1078.dgn PLOT DATE : 06-JUL-2013 19:54 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1

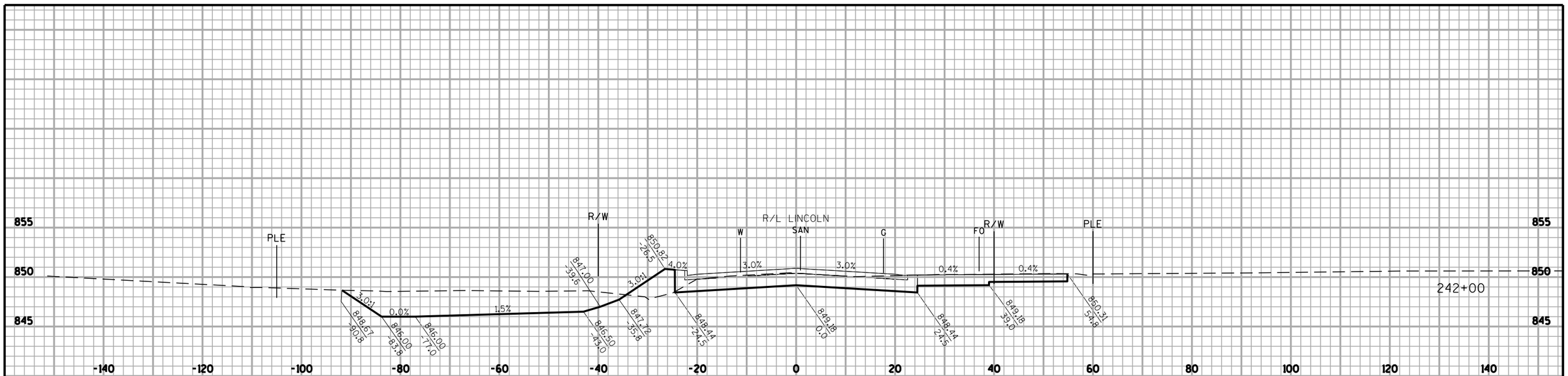
WISDOT/CADDS SHEET 21

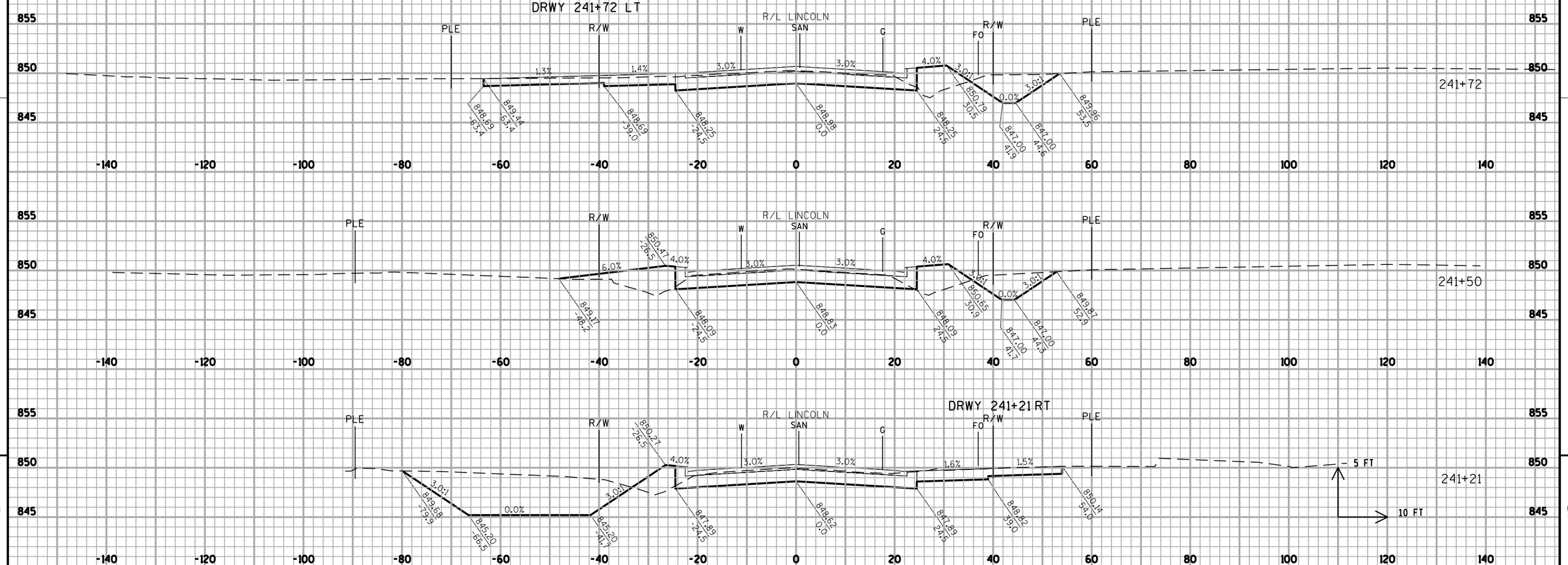


PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 232	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090202_xs_1078.dgn PLOT DATE : 06-JUL-2013 19:54 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21





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PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 233 E

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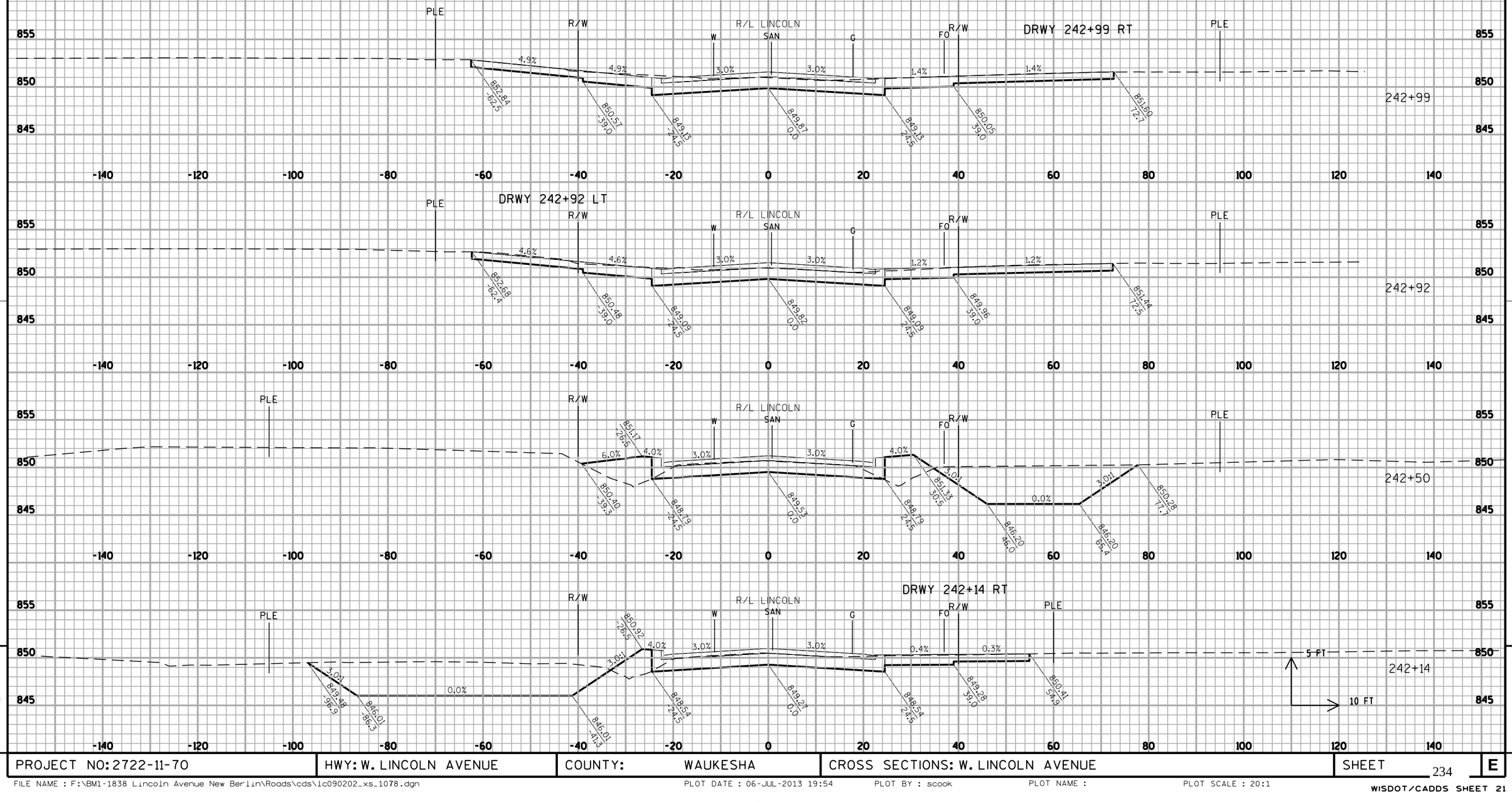
WISDOT/CADDS SHEET 21



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PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 234	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090202_xs_1078.dgn PLOT DATE : 06-JUL-2013 19:54 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1

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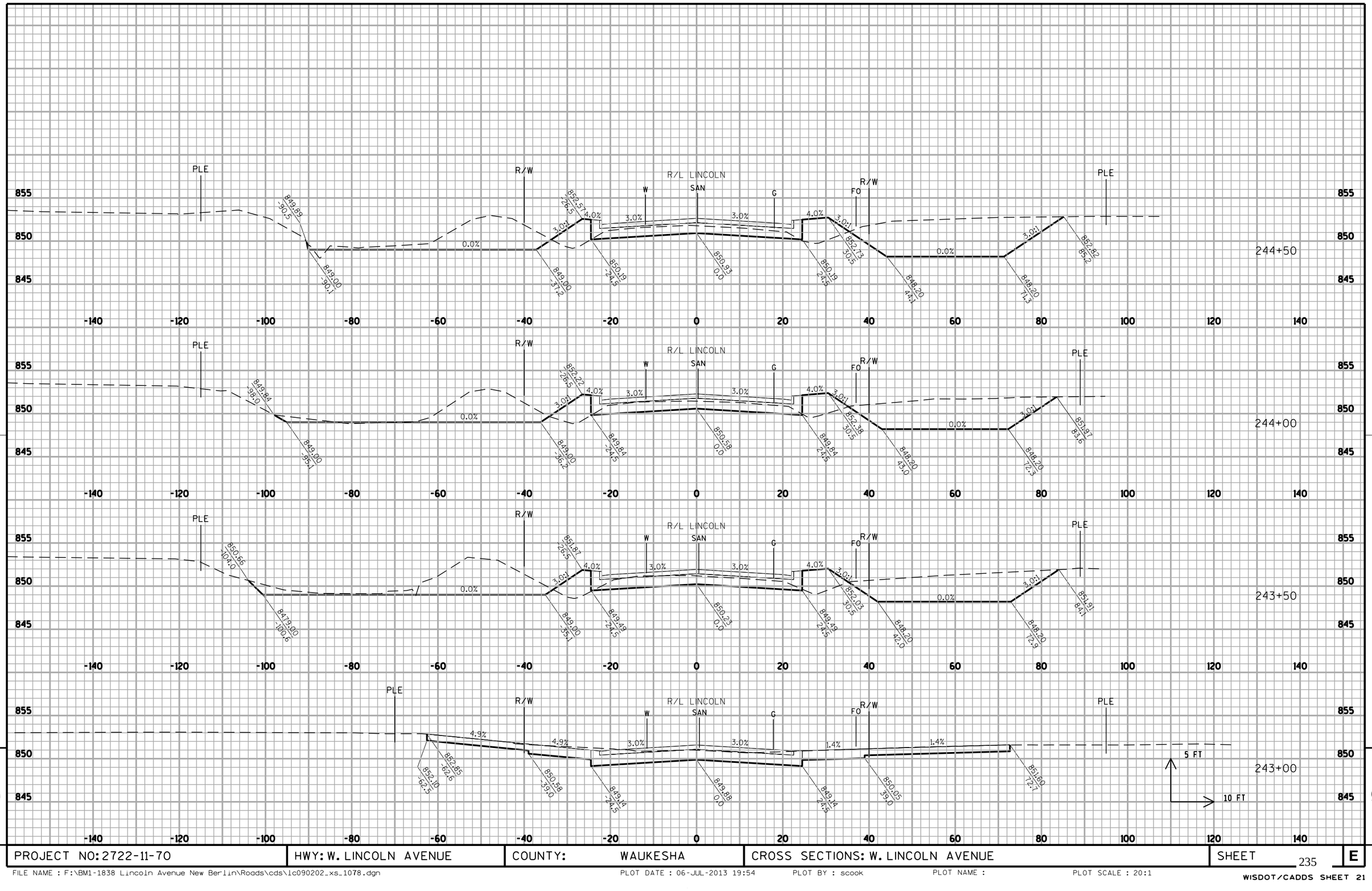

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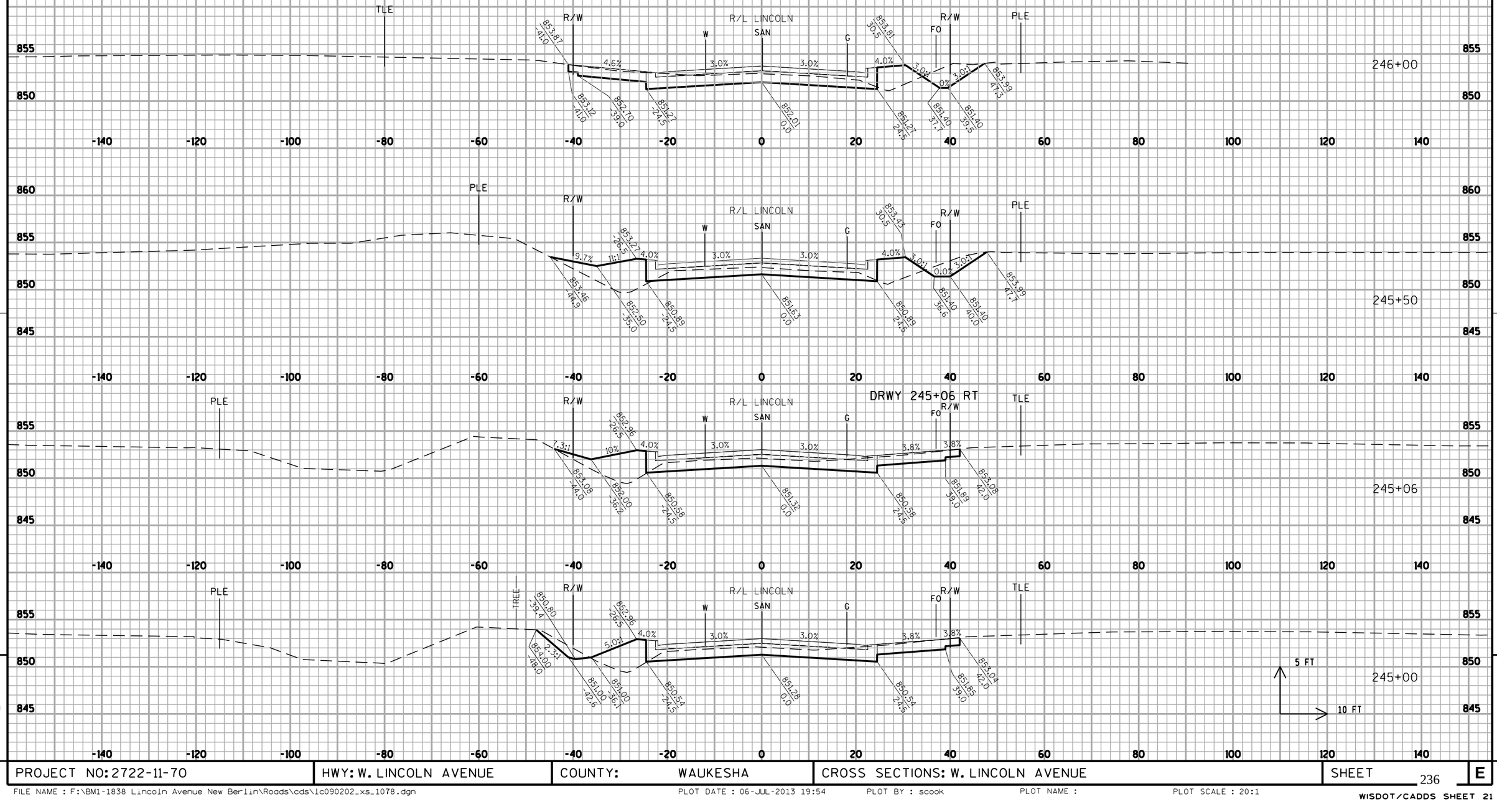
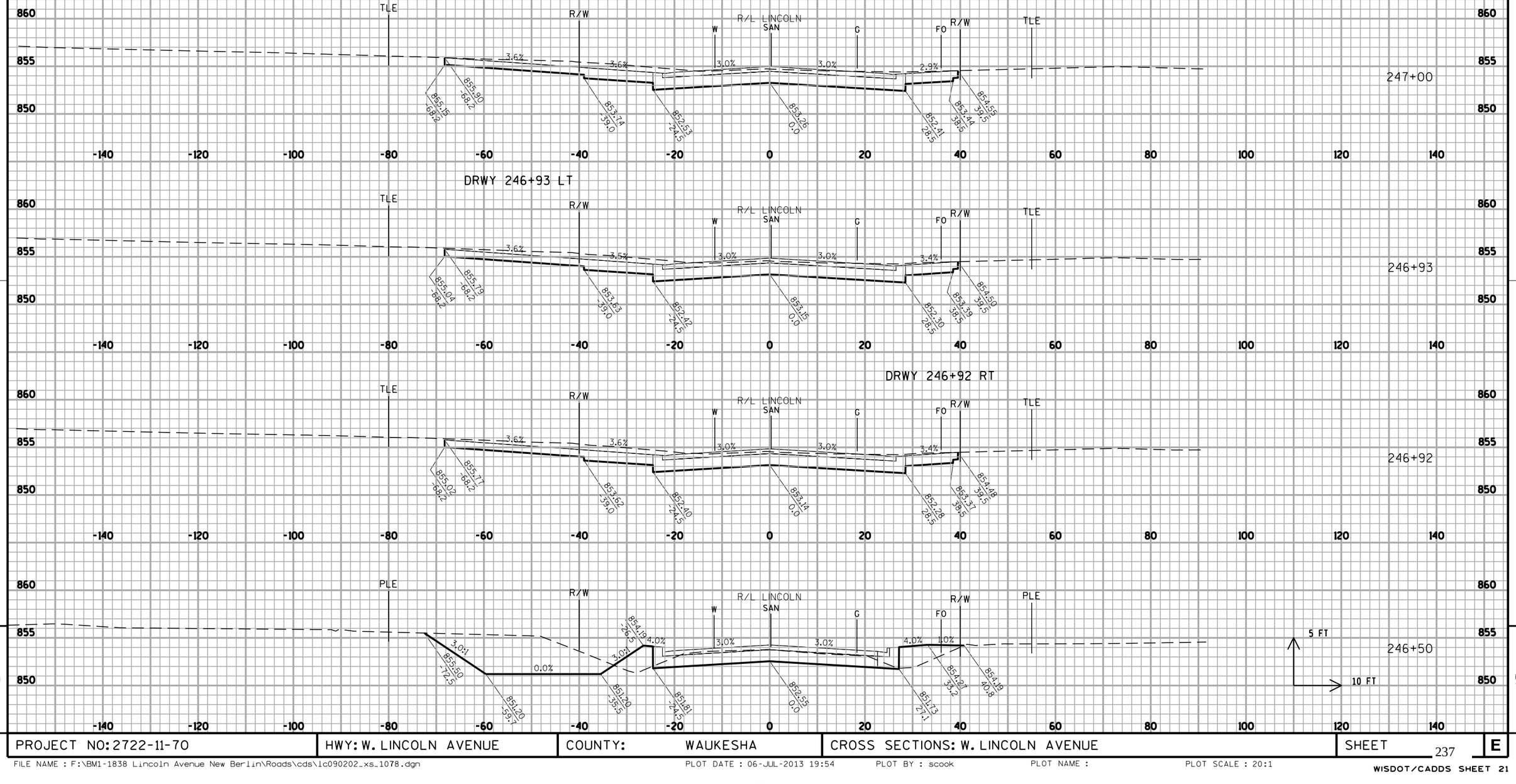
PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 235	E



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090202_xs_1078.dgn PLOT DATE : 06-JUL-2013 19:54 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1

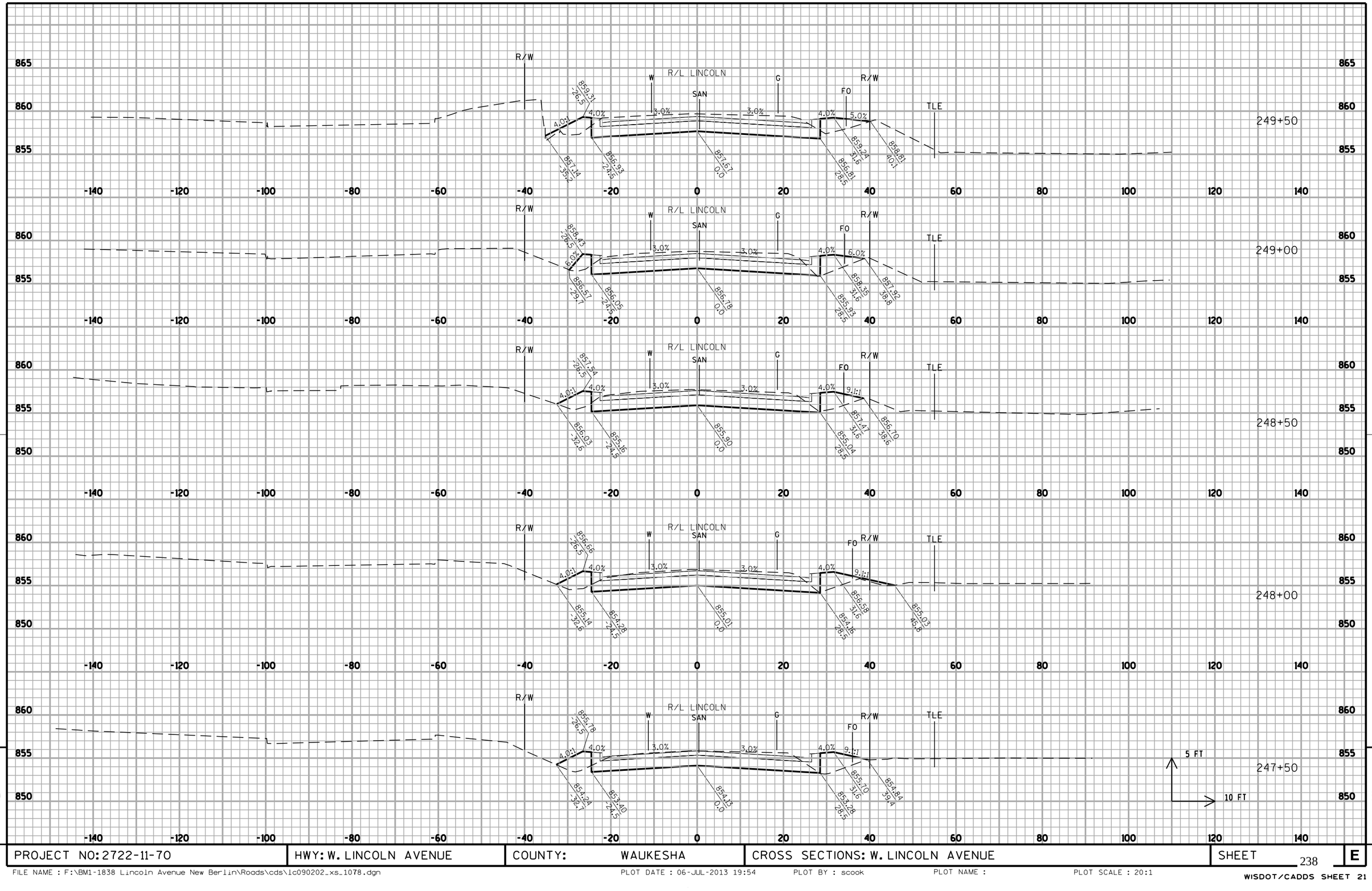
WISDOT/CADDS SHEET 21



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 237	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090202_xs_1078.dgn PLOT DATE : 06-JUL-2013 19:54 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



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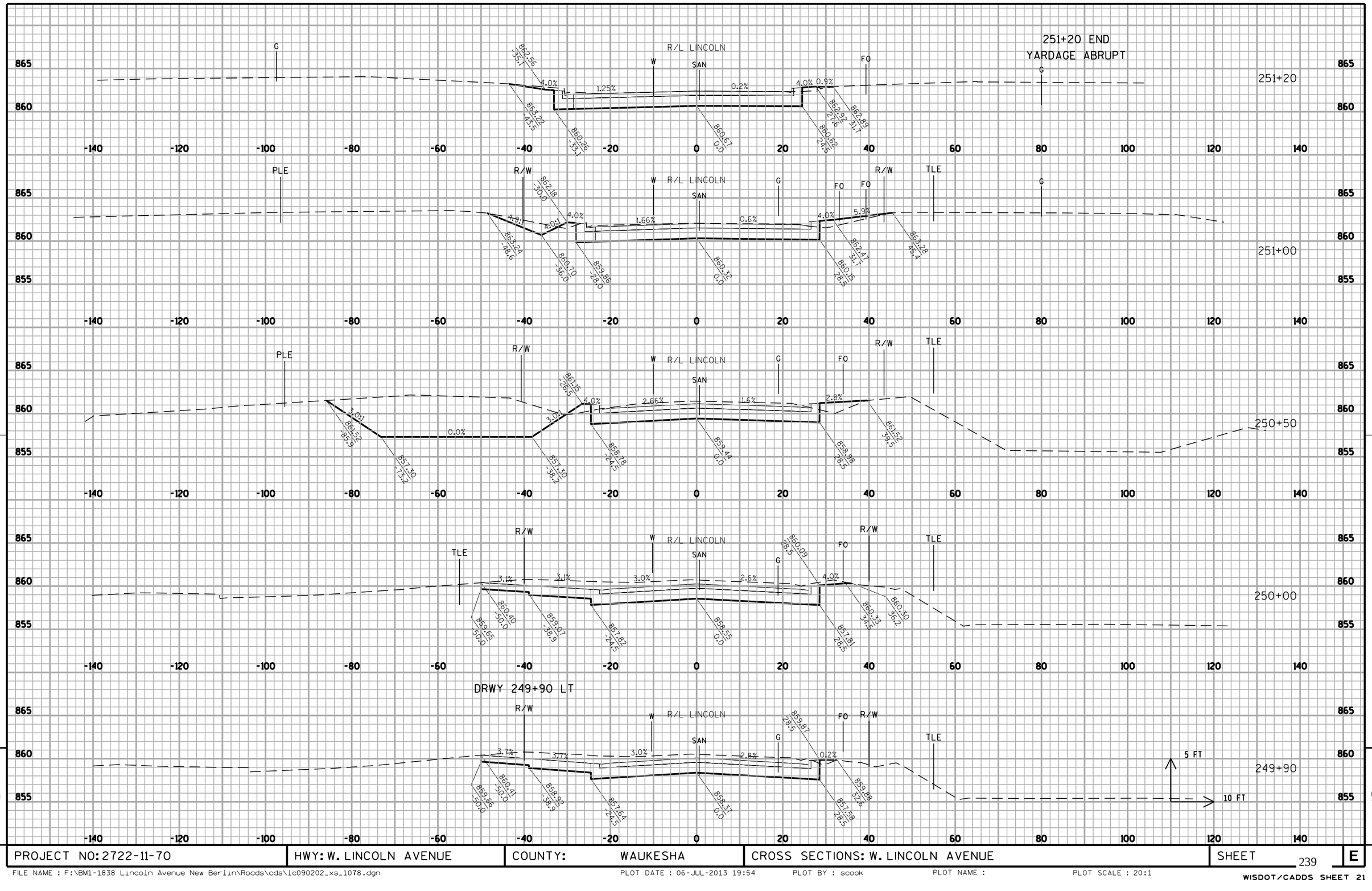
PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET	E

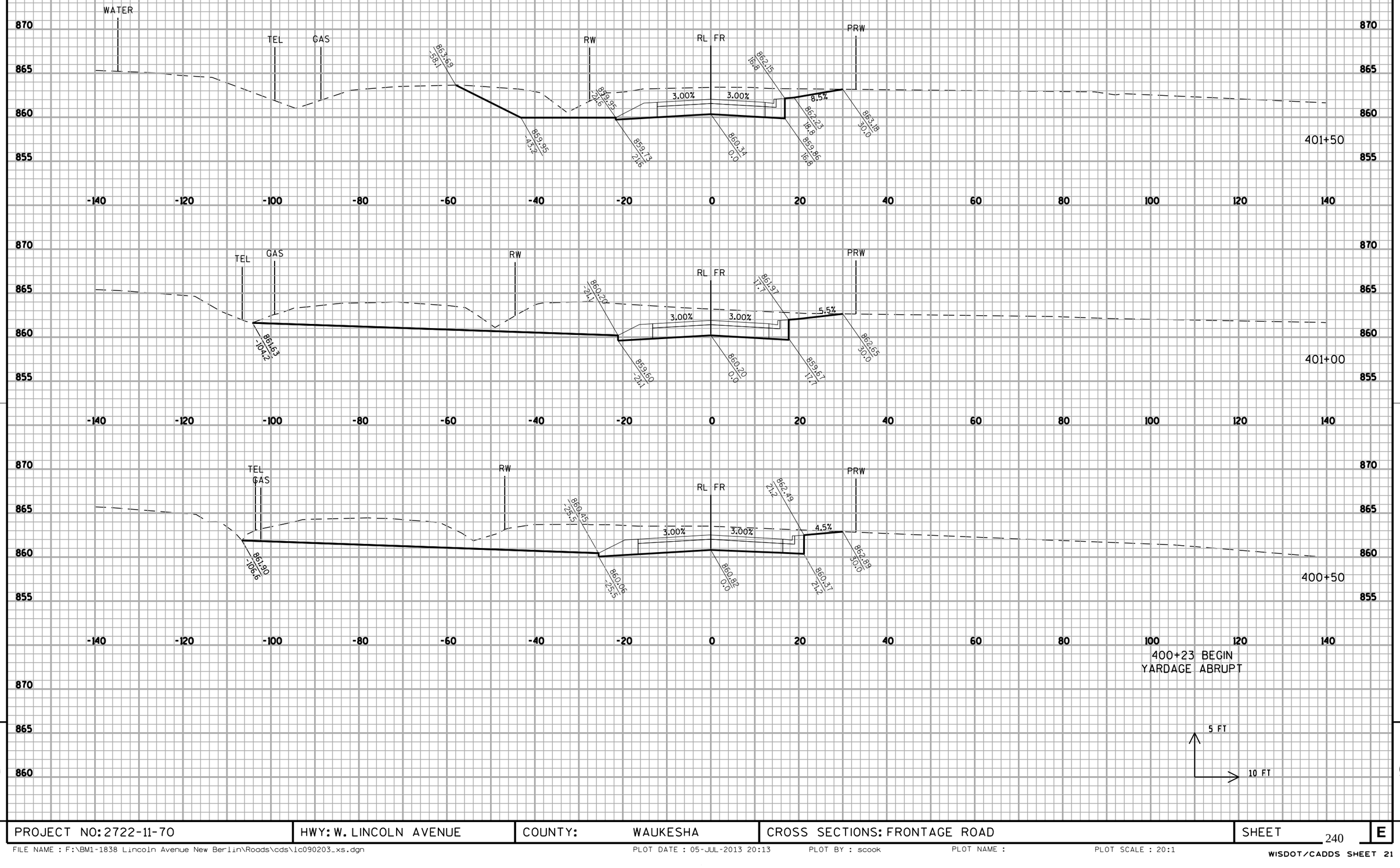
FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090202_xs_1078.dgn PLOT DATE : 06-JUL-2013 19:54 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21



PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: W. LINCOLN AVENUE	SHEET 239	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090202_xs_1078.dgn PLOT DATE : 06-JUL-2013 19:54 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



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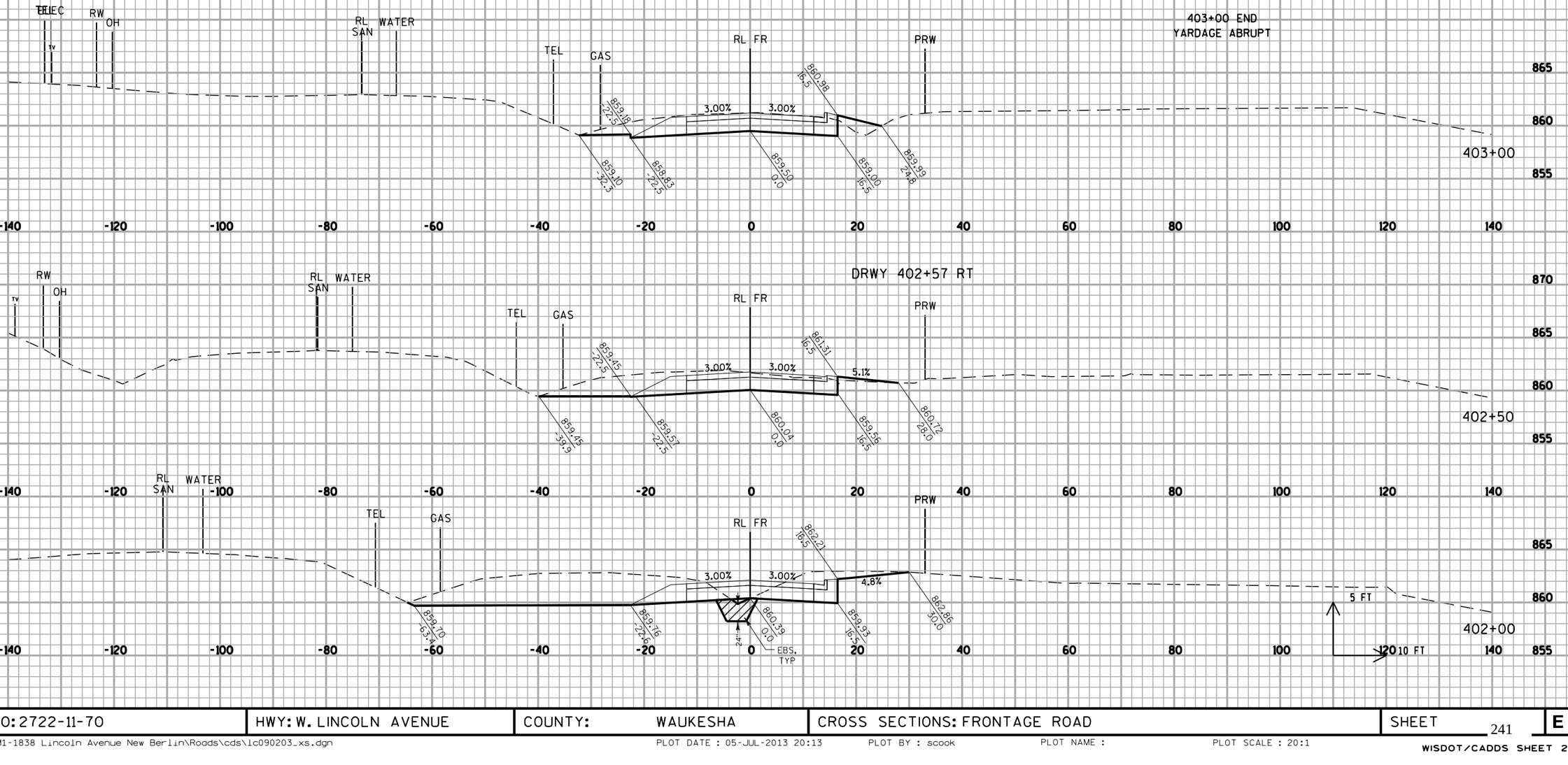
PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: FRONTAGE ROAD	SHEET 240	E



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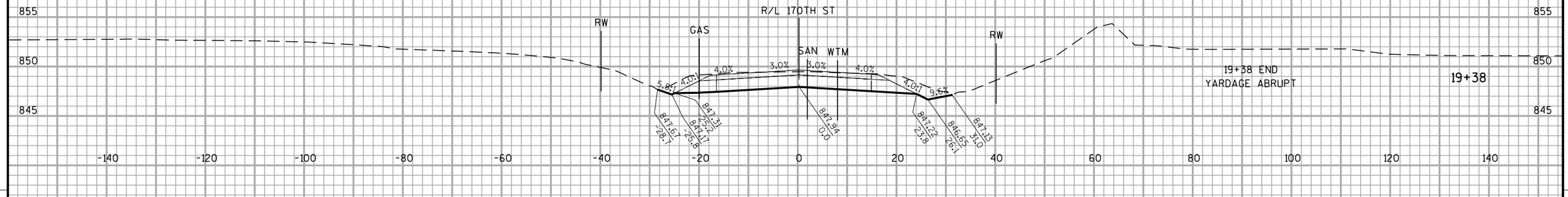
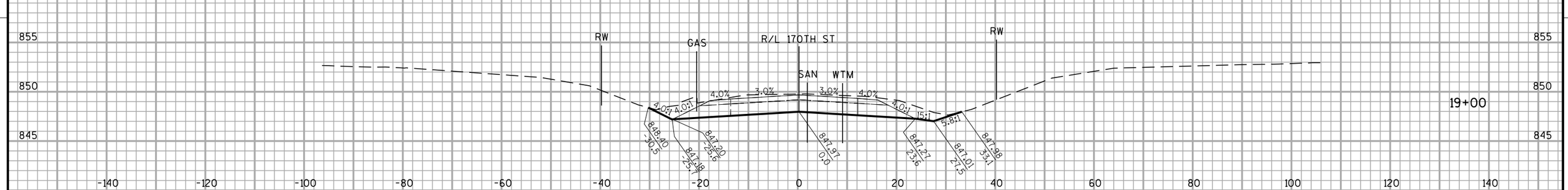
PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: FRONTAGE ROAD	SHEET 241	E

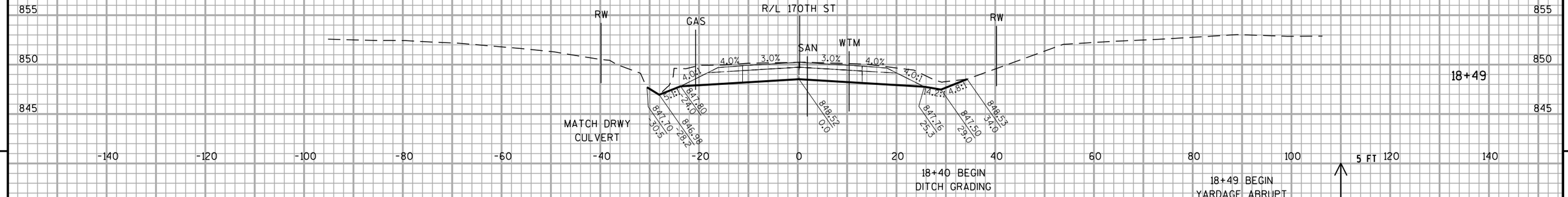
FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090203_xs.dgn PLOT DATE : 05-JUL-2013 20:13 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

SEE W. LINCOLN AVE
FOR INTERSECTION
CROSS SECTION DETAILS







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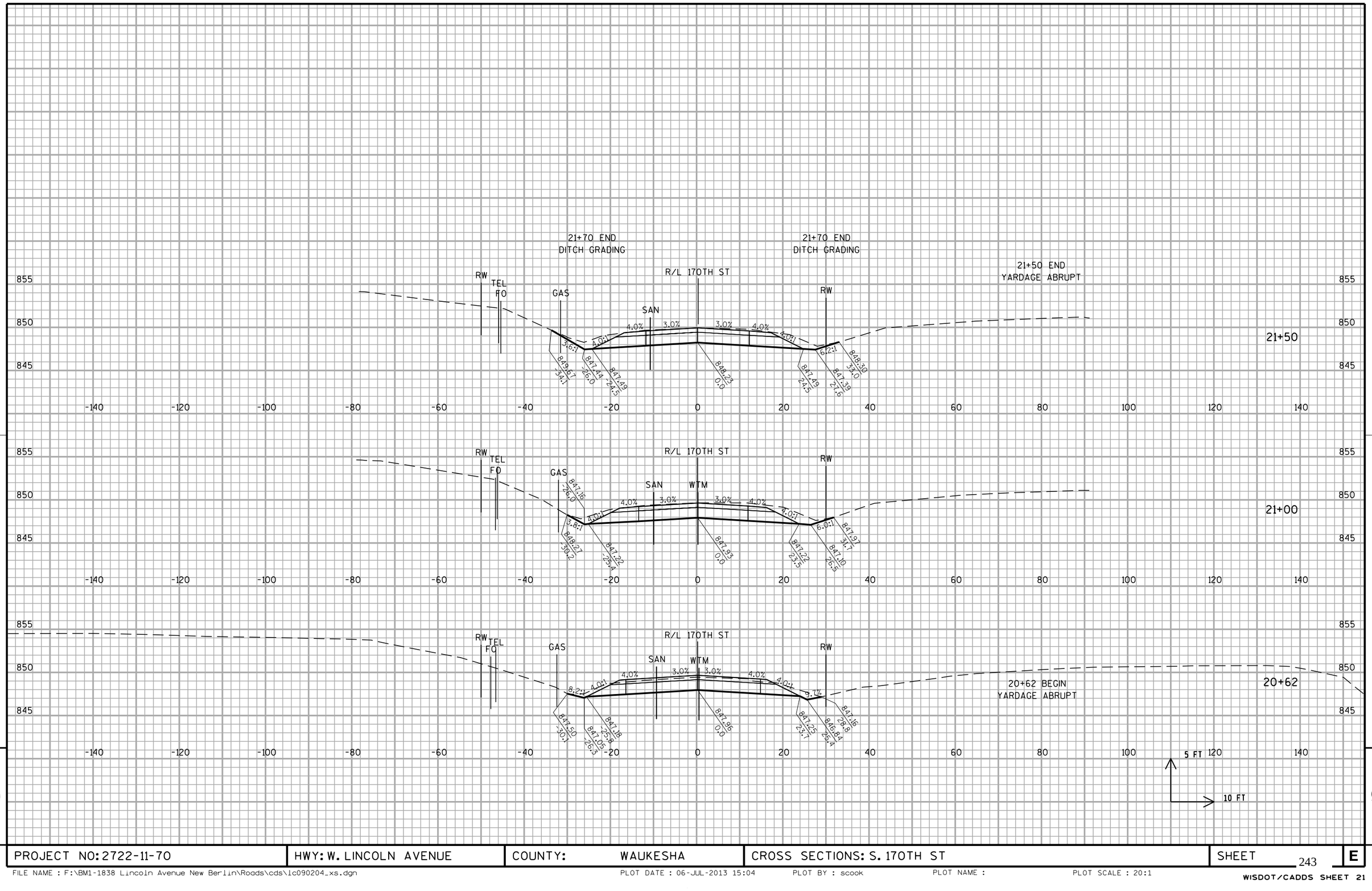
PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: S. 170TH ST	SHEET 242	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090204_xs.dgn PLOT DATE : 06-JUL-2013 15:04 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



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PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: S. 170TH ST	SHEET 243	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090204_xs.dgn PLOT DATE : 06-JUL-2013 15:04 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

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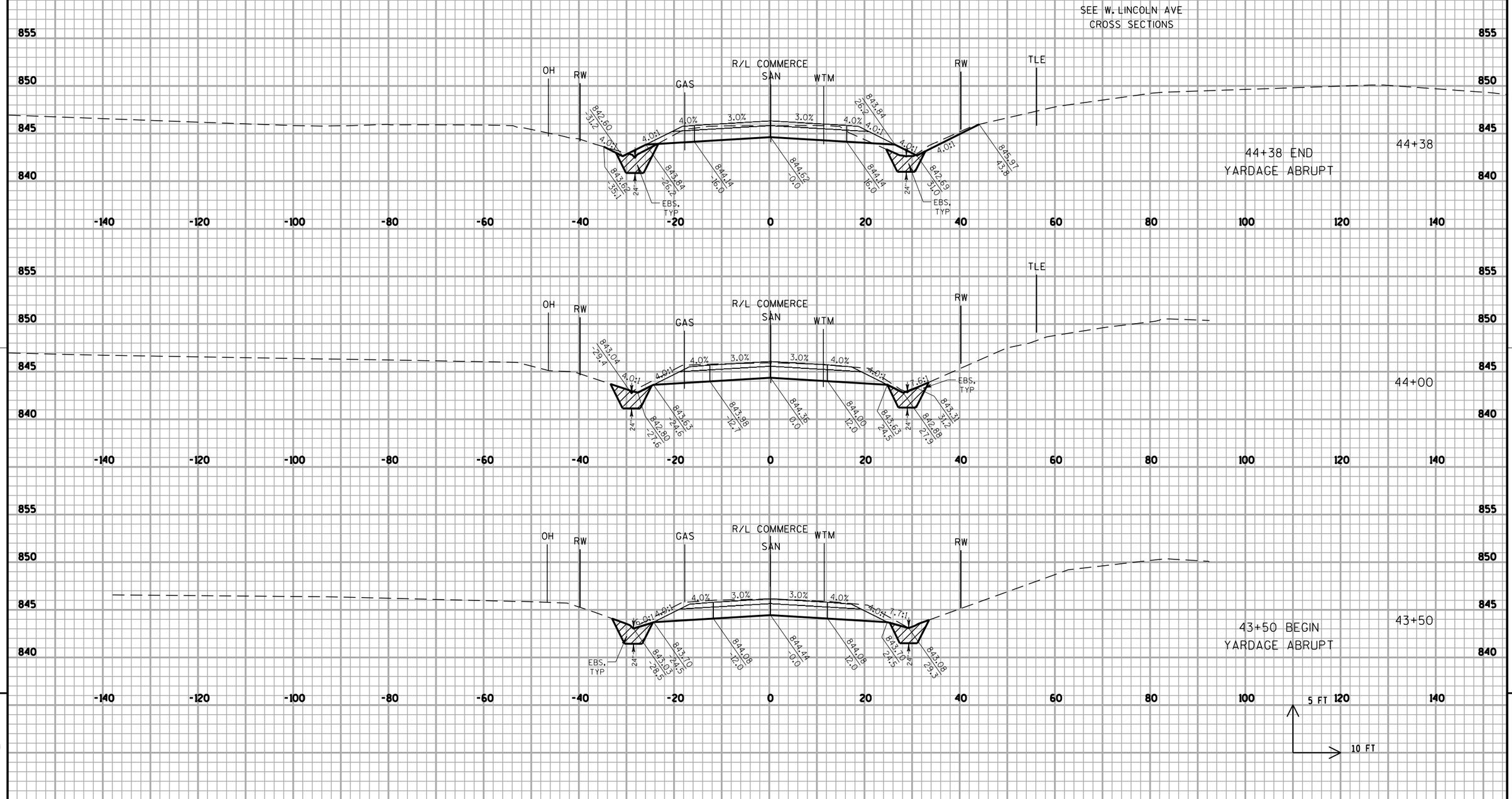
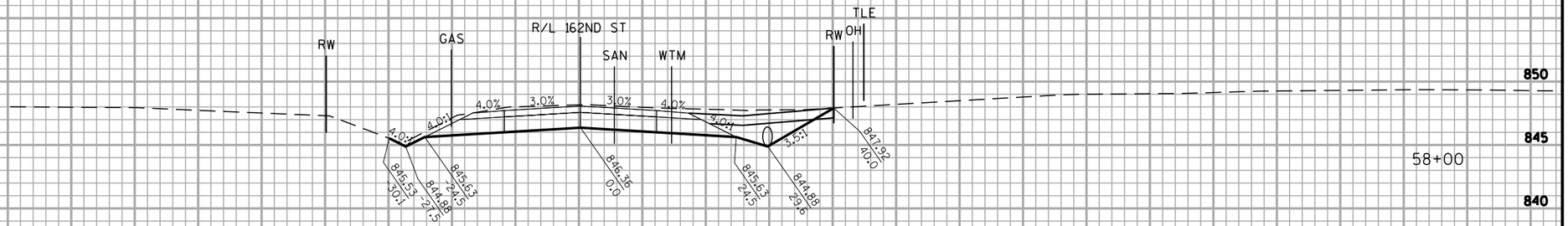
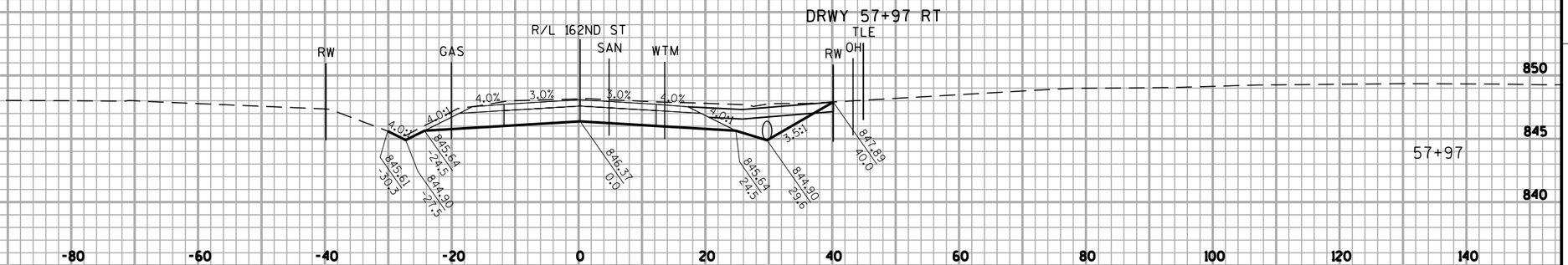
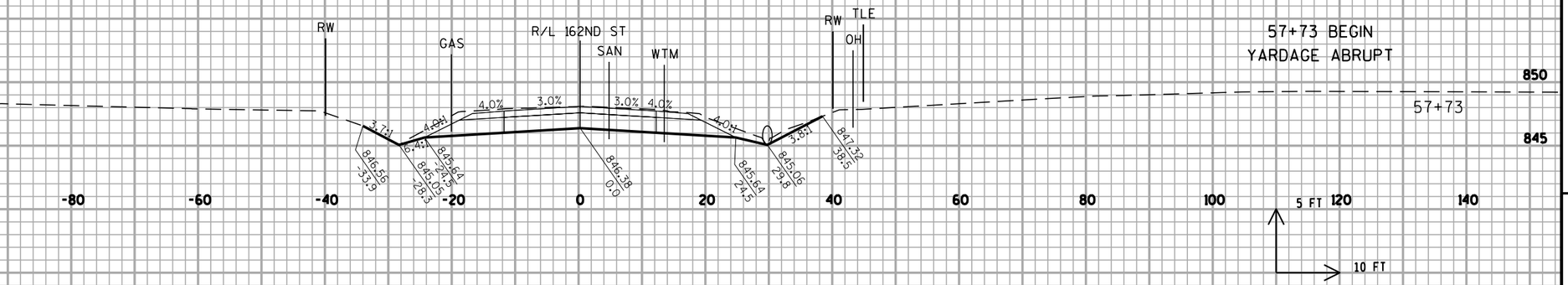


PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: S. COMMERCE DRIVE	SHEET 244 E







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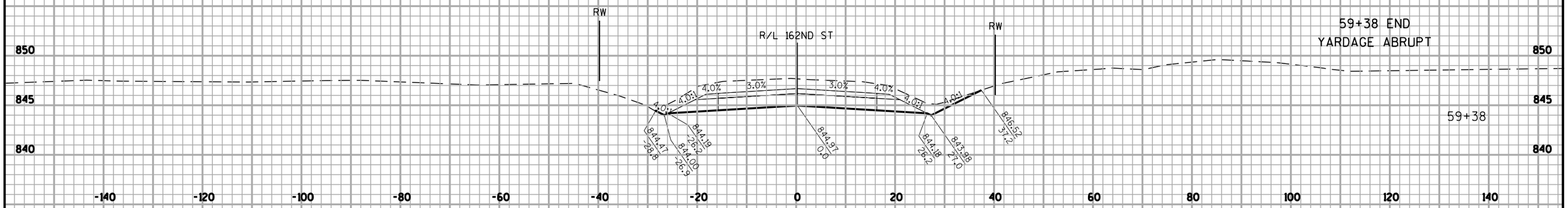
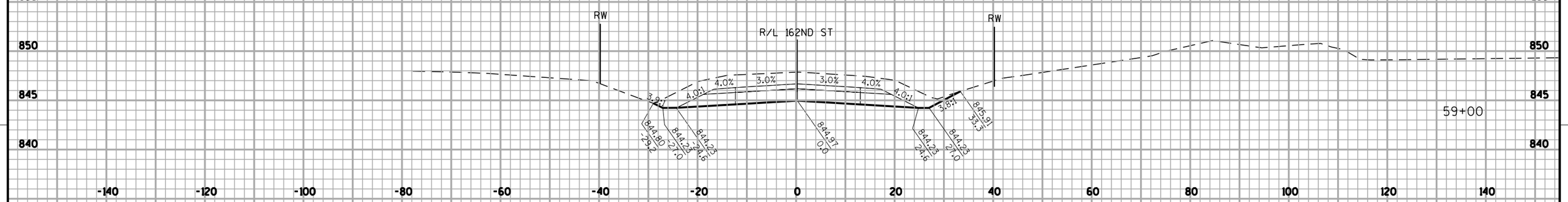
PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: S. 162ND STREET	SHEET 245	E

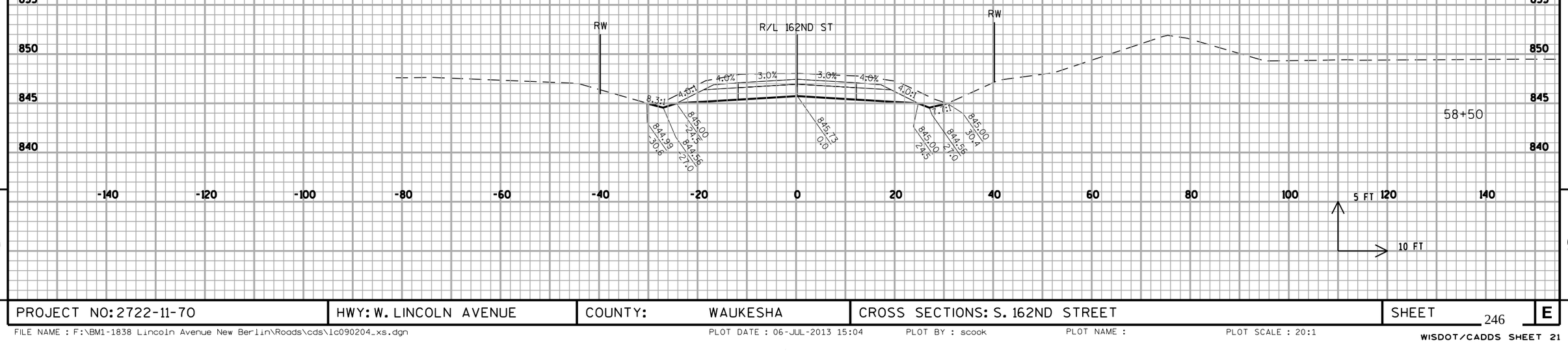
FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090204_xs.dgn PLOT DATE : 06-JUL-2013 15:04 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

SEE W. LINCOLN AVE
FOR CROSS SECTIONS







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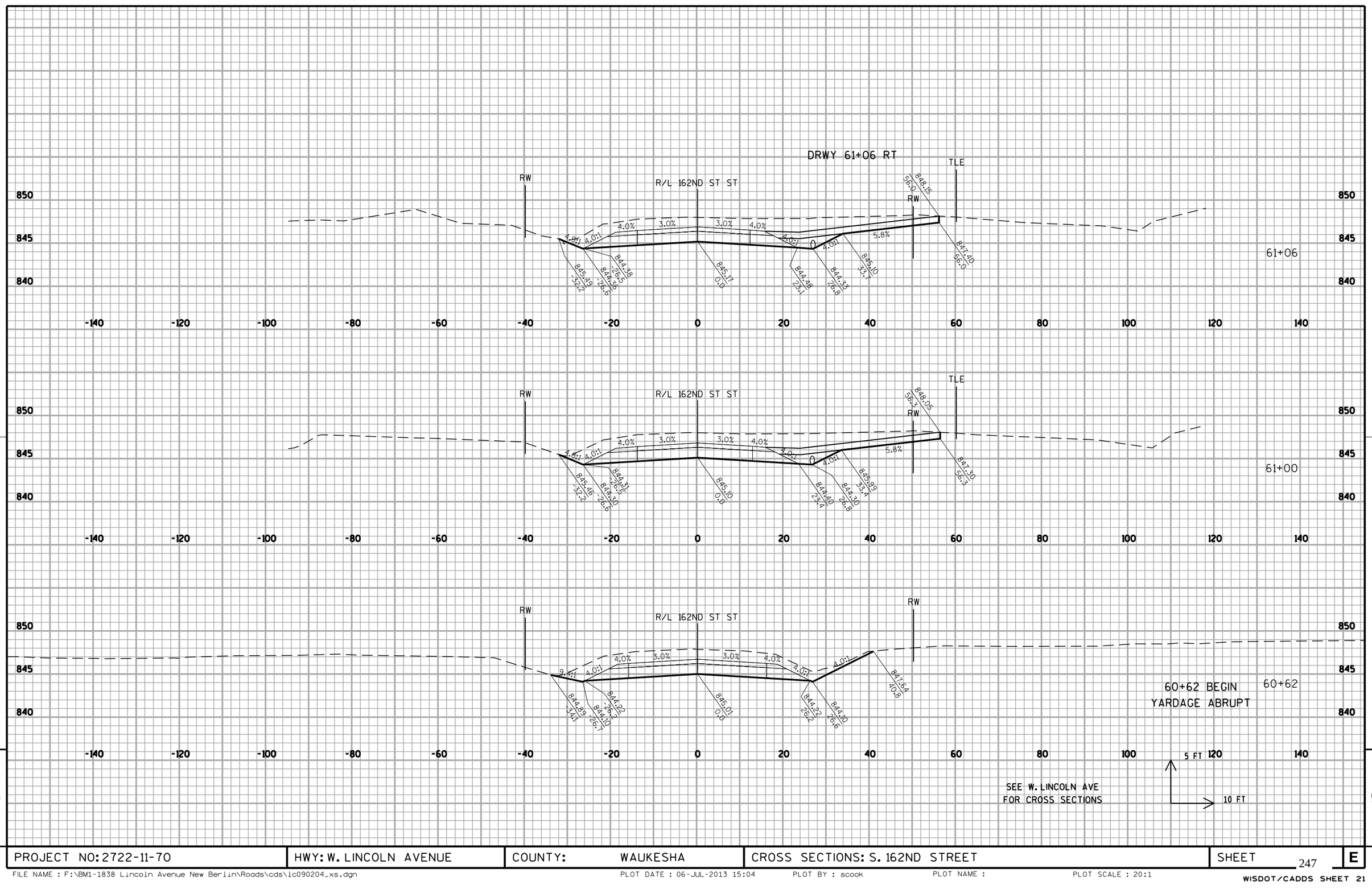
PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: S. 162ND STREET	SHEET 246	E



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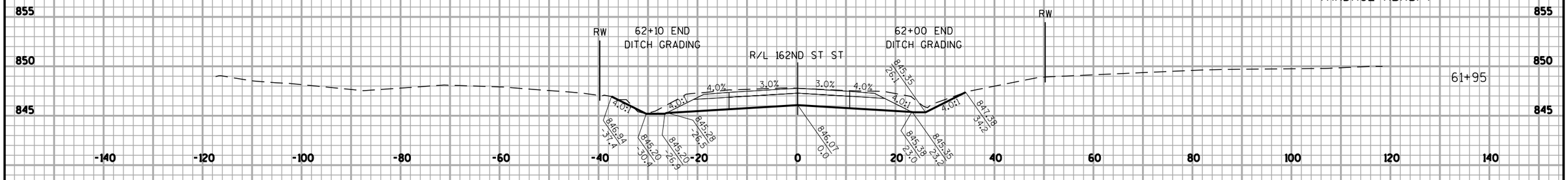
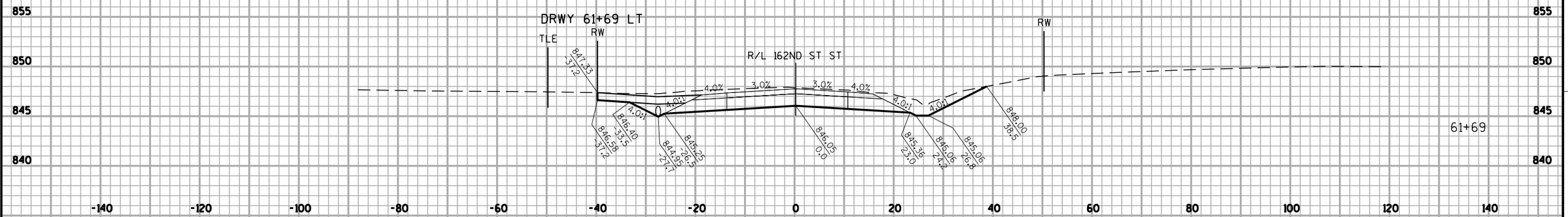
PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: S. 162ND STREET	SHEET 247 E

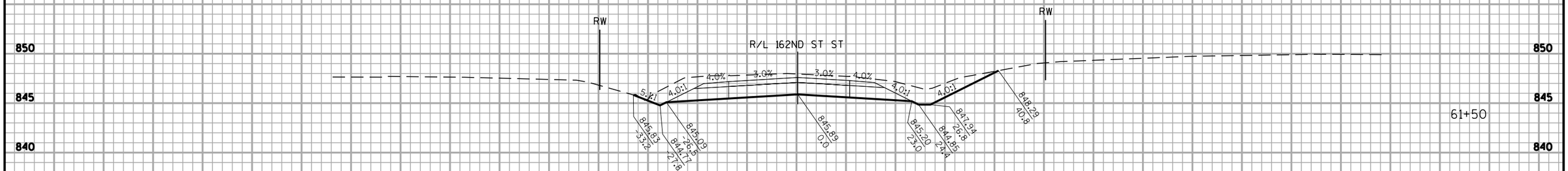
FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090204_xs.dgn PLOT DATE : 06-JUL-2013 15:04 PLOT BY : scook PLOT NAME : PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

61+95 END
YARDAGE ABRUPT







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PROJECT NO: 2722-11-70	HWY: W. LINCOLN AVENUE	COUNTY: WAUKESHA	CROSS SECTIONS: S. 162ND STREET	SHEET	E

FILE NAME : F:\BM1-1838 Lincoln Avenue New Berlin\Roads\cds\lc090204_xs.dgn
PLOT DATE : 06-JUL-2013 15:04
PLOT BY : scook
PLOT NAME :
PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

WISCONSIN DEPARTMENT OF TRANSPORTATION

EPlans Final Sheet Numbering Tool

Notes

- Acrobat 5 or higher is required to Insert Final Sheet Numbers.
- The Bureau of Highway Construction Plan Examiner places sheet numbers in the final plan.
- This sheet is for placing Final sheet numbers
- If a plan contains multiple projects, number each plan individually.
- Leave this sheet in the plan.

TO ADD Final SHEET NUMBERS

1. Insert this sheet at the end of the plan

a. With the plan open in Acrobat, select Document > Insert Pages.
b. In the Select File to Insert dialog box, select this file (Final_Sheet_Numbers.pdf)
c. In the Insert dialog box, choose After for Location and Last page for Page.
d. Click OK.

2. Click the Place Preliminary Sheet Numbers button

a. Go to the last sheet of the plan.
b. Click the Place Final Sheet Numbers button once.
(The Final sheet number appears in the bottom right corner of the sheets.
The number should match the page number in the Acrobat Status bar).

3. Re-Save the PDF

a. Select File > Save As and save the PDF.

Place Preliminary Sheet Numbers

TO REMOVE Final SHEET NUMBERS

Remove

Wisconsin Department of Transportation

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through innovation and exceptional service.

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