

NEL JAN 12
PROJECT ID: 4984-01-57
WITH:

COUNTY: OUTAGAMIE

ORDER OF SHEETS

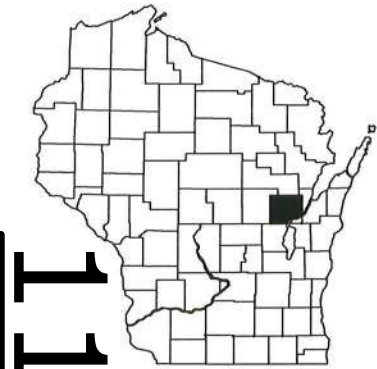
Section No. 1	Title
Section No. 2	Typical Sections and Details (Includes Erosion Control)
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
Section No. 4	Right of Way Plat
Section No. 5	Plan and Profile
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plates
Section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

TOTAL SHEETS = 164

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
LYNNDALE DR T GRAND CHUTE
STH 96 - CTH 00
CTH A
OUTAGAMIE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4984-01-57	WISC 2012016	1

STATE PROJECT NUMBER
4984-01-57



DESIGN DESIGNATION

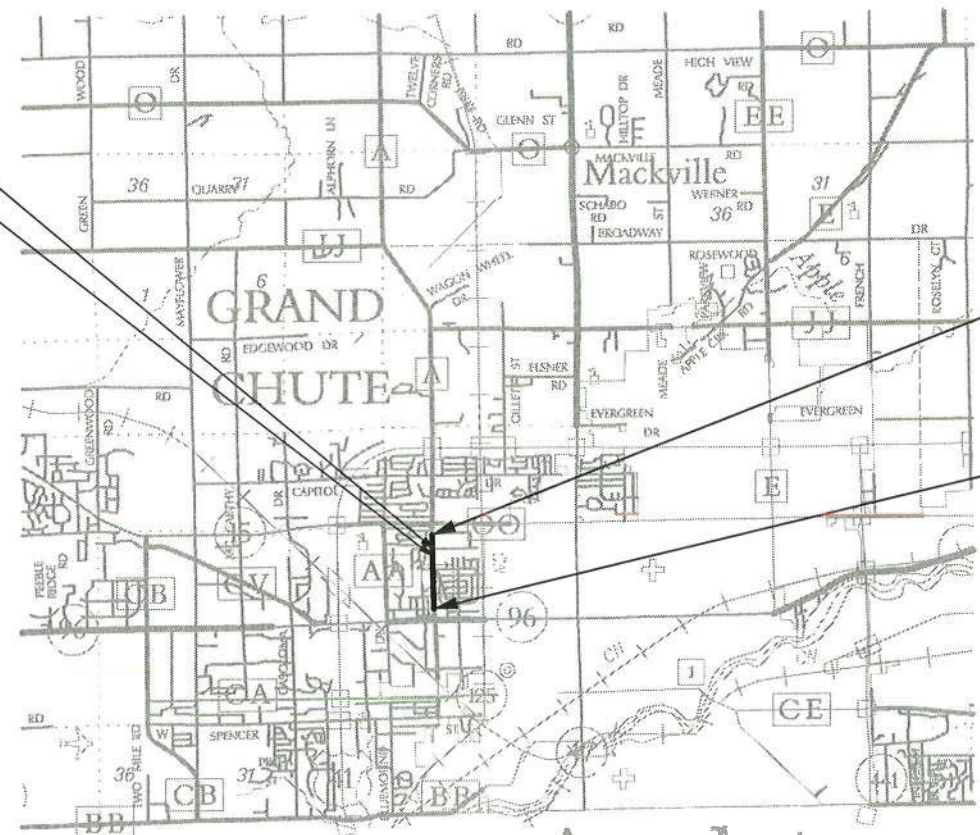
A.A.D.T. (2011)	=	16,300
A.A.D.T. (2031)	=	22,100
D.H.V.	=	2,298
D.D.	=	59/41
T.	=	3.2%
DESIGN SPEED	=	45 MPH
ESALS	=	6,606,500

CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	PL + 58.1
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)	
SPECIAL DITCH	
GRADE ELEVATION	95.36
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	

STRUCTURE C-44-120
STRUCTURE C-44-119



END PROJECT 4984-01-57
STA. 114+38
N = 571,149.904
E = 817,034.787

BEGIN PROJECT 4984-01-57
STA. 73+70
N = 567,082.967
E = 817,130.426

LAYOUT
SCALE 0 1 MI.
TOTAL NET LENGTH OF CENTERLINE = 0.770 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), OUTAGAMIE COUNTY.

ACCEPTED FOR
OUTAGAMIE COUNTY

DATE: 7-20-11 *Chim Smith*
(Signature)
Outagamie Highway
TITLE Commissioner

ORIGINAL PLANS PREPARED BY

OMNI ASSOCIATES

WISCONSIN
MICHAEL A. MALCOLM
E-30025
Appleton, WI
PROFESSIONAL ENGINEER
7-19-11

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor OMNI ASSOCIATES, INC
Designer OMNI ASSOCIATES, INC
Management Consultant SEH
C.O. Examiner *Chim Smith*

APPROVED FOR THE DEPARTMENT

DATE: 7/22/2011 *Chim Smith*
(Management Consultant Signature)

E

GENERAL NOTES

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

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

FILL AS SHOWN ON THE PLANS PERTAINS TO EMBANKMENTS CONSTRUCTED FROM COMMON EXCAVATION.

IF EXCAVATION BELOW SUBGRADE (EBS) IS REQUIRED, IT WILL BE MEASURED AND PAID FOR AS COMMON EXCAVATION. THE LIMITS OF EBS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

ALL DISTURBED AREAS NOT OTHERWISE SURFACED, ARE TO BE TOPSOILED, SEEDED, FERTILIZED AND COVERED WITH EMAT.

ALL MANHOLE AND INLET OFFSETS ARE GIVEN TO THE CENTER OF THE STRUCTURE.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ARE APPROXIMATE AND SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

THE COST OF CONNECTING NEW STORM SEWERS OR DRAINAGE STRUCTURES TO THE EXISTING STORM SEWER SHALL BE INCIDENTAL TO THE COST OF THE STORM SEWER.

IMMEDIATELY AFTER CONSTRUCTION OF ANY INLET, CONTRACTOR SHALL CONSTRUCT THE EROSION CONTROL PROTECTION IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS TO MINIMIZE SEDIMENTATION IN THE INLET AND STORM SEWER.

THE EXACT LOCATIONS OF ALL EROSION CONTROL ITEMS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

CURB AND GUTTER RADII AND ELEVATIONS ARE SHOWN TO THE FLANGELINE.

CURB RAMP OPENINGS AS SHOWN ON THE PLANS ARE APPROXIMATE. ALL RAMP OPENINGS ARE INCIDENTAL TO THE ITEM OF CURB AND GUTTER AND SHALL BE 6" DEPTH.

BEYOND THE BACK OF SIDEWALK, DRIVEWAYS SHALL BE REPLACED IN KIND. BASE AGGREGATE DENSE 1 1/4-INCH WILL BE USED UNDER ALL ASPHALTIC AND CONCRETE DRIVEWAYS AND SIDEWALKS. BASE AGGREGATE DENSE 3/4-INCH WILL BE USED FOR ALL AGGREGATE DRIVEWAYS.

GENERAL NOTES - CONTINUED

ALL 6-INCH CONCRETE SIDEWALK LOCATED IN THE RESIDENTIAL DRIVEWAYS SHALL BE PAID FOR AS 6-INCH CONCRETE DRIVEWAY.

BOXOUTS SHALL BE PROVIDED IN CONCRETE BY THE CONTRACTOR FOR SIGN PLACEMENT. THE COST FOR BOXOUTS WILL BE INCIDENTAL TO ASSOCIATED CONCRETE ITEM. LOCATIONS SHALL BE DETERMINED BY THE ENGINEER.

ADDITIONAL DOWEL BARS AND CONTRACTION JOINT DOWEL ASSEMBLIES REQUIRED TO MATCH MANHOLES, INLETS AND SIDE ROAD INTERSECTIONS SHALL BE INCIDENTAL TO THE CONCRETE PAVEMENT BID ITEM.

ALL TRANSVERSE CONTRACTION JOINTS, LONGITUDINAL JOINTS AND CONSTRUCTION JOINTS FOR CONCRETE PAVEMENT AND CONCRETE CURB AND GUTTER SHALL BE SAWED AND SEALED AS SHOWN IN CONSTRUCTION AND PAVING DETAILS.

WHEN THE QUANTITY OF ITEMS OF BASE AGGREGATE OR ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE. THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF MATERIAL AS DIRECTED BY THE ENGINEER.

WHERE SLOPE INTERCEPT LINES FALL OUTSIDE OF THE EXISTING RIGHT-OF-WAY, TEMPORARY INTERESTS TO ACCOMPLISH CONSTRUCTION WORK WITHIN THE SLOPE INTERCEPTS HAVE BEEN OBTAINED. THESE RIGHTS ARE EXTENDED TO THE CONTRACTOR.

ORDER OF "SECTION 2" SHEETS

GENERAL NOTES
TYPICAL SECTIONS
CONSTRUCTION DETAILS
CULVERT DETAILS
PAVING DETAILS
EROSION CONTROL PLAN
STORM SEWER PLAN
DETOUR AND TRAFFIC CONTROL PLANS
SIGNING AND PAVEMENT MARKING
ALIGNMENT PLAN

EROSION CONTROL NOTES

RUNOFF COEFFICIENTS FOR THIS PROJECT:
EXISTING/NEW PAVEMENT 0.95
EXISTING/NEW SLOPES 0.30

TOTAL PROJECT AREA = 9.71 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY
CONSTRUCTION ACTIVITIES = 9.20 ACRES

2

UTILITIES

CABLE TV

TIME WARNER CABLE
VINCE ALBIN
3520 DESTINATION DRIVE
APPLETON, WI 54915
TELEPHONE: 920-831-9249
MOBILE: 920-378-0444
EMAIL: vince.albin@twcable.com

COMMUNICATION

APPLETON AREA SCHOOL DISTRICT
JIM HAWBAKER
120 EAST HARRIS STREET
PO BOX 2019
APPLETON, WI 54912-2019
TELEPHONE: 920-993-7062
MOBILE:
EMAIL: hawbakerjim@aasd.k12.wi.us

ELECTRIC

WE ENERGIES
STEVE ARMSTRONG
P.O. BOX 1699
APPLETON, WI 54912-1699
TELEPHONE: 920-380-3563
MOBILE: 920-428-2650
EMAIL: steve-e.armstrong@we-energies.com

TELEPHONE

AT&T
VINCENT LabRUN
221 W. WASHINGTON STREET
APPLETON, WI 54911
TELEPHONE: 920-735-3206
MOBILE:
EMAIL: v11253@att.com

GAS

TRANS CANADA/ANR PIPELINE
ROBERT BIBELHAUSEN
N4956 OAKCREST DRIVE
BONDUEL, WI 54107
TELEPHONE: 715-758-5343
MOBILE: 715-460-4001
EMAIL: robert_bibelhausen@transcanada.com

GAS

WE ENERGIES
KEN VAN OSS
P.O. BOX 1699
APPLETON, WI 54912-1699
TELEPHONE: 920-380-3318
MOBILE:
EMAIL: kenneth.van-oss@we-energies.com

SEWER/WATER

GRAND CHUTE SANITARY DISTRICT 1 AND 2
TODD PRAHL
1900 WEST GRAND CHUTE BLVD.
GRAND CHUTE, WI 54913-9613
TELEPHONE: 920-832-1581
MOBILE: 920-419-2521
EMAIL: todd.prahl@grandchute.net

OTHER CONTACTS

OUTAGAMIE COUNTY
HIGHWAY DEPARTMENT

RAY PALONEN
1313 HOLLAND RD
APPLETON, WI 54911
TELEPHONE: 920-832-2032
MOBILE:
EMAIL: palenrg@co.outagamie.wi.us

TOWN OF GRAND
CHUTE

TOM MARQUARDT
1900 WEST GRAND CHUTE BLVD
GRAND CHUTE, WI 54913
TELEPHONE: 920-832-4771
MOBILE:
EMAIL: thomas.marquardt@grandchute.net

DNR LIAISON

WI DEPARTMENT OF NATURAL RESOURCES
JAMES DOPERALSKI
2984 SHAWANO AVE
GREEN BAY, WI 54313-6727
TELEPHONE: 920-662-5119
MOBILE:
EMAIL: james.doperalski@wisconsin.gov

DESIGN CONSULTANT

OMNNI ASSOCIATES INC.
MIKE MALCOLM, PE
ONE SYSTEMS DRIVE
APPLETON, WI 54914-1654
TELEPHONE: 920-830-6175
MOBILE:
EMAIL: mike.malcolm@omnni.com

ABBREVIATIONS

Δ

CENTRAL ANGLE

AC

ACRE

AEW

APRON ENDWALL

ASPH

ASPHALTIC

AVG

AVERAGE

BM

BENCHMARK

C/L

CENTERLINE

CABC

CRUSHED AGGREGATE BASE COURSE

CB

CATCHBASIN

CC

CENTER OF CURVATURE

CH

CHORD

CONC

CONCRETE

CWT

HUNDREDWEIGHT

CY

CUBIC YARD

D

DEGREE OF CURVE

DHV

DESIGN HOURLY VOLUME

DIA

DIAMETER

DWY

DRIVEWAY

EB

EASTBOUND

EBS

EXCAVATION BELOW SUBGRADE

EL

ELEVATION

ESALS

EQUIVILANT SINGLE AXLE LOADS

FO

FIBER OPTIC

FT

FOOT

GAL

GALLON

GRAV

GRAVEL

HES

HIGH EARLY STRENGTH

HMA

HOT MIX ASPHALT

HP

HIGH POINT

HT

HEIGHT

ID

INCH DIAMETER

INL

INLET

INV

INVERT

IP

IRON PIPE

L

LENGTH OF CURVE

LB

POUND

LC

LONG CHORD OF CURVE

LF

LINEAR FOOT

LP

LOW POINT

LS

LUMP SUM

LT

LEFT

MH

MANHOLE

MIN

MINIMUM

MP

MIDPOINT

OD

OUTSIDE DIAMETER

OS

OUTLET STRUCTURE

PC

POINT OF CURVATURE

PCC

POINT OF COMPOUND CURVE

PCC

PORTLAND CEMENT CONCRETE

PI

POINT OF INTERSECTION

PL

PROPERTY LINE

PT

POINT OF TANGENCY

PVC

POLYVINYL CHLORIDE

R,RAD

RADIUS

R/L

REFERERNC E LINE

R/W

RIGHT-OF-WAY

SSRCP

REINF. CONC. PIPE STORM SEWER

REB

REBAR

REQD

REQUIRED

RT

RIGHT

SAN

SANITARY SEWER

SDD

STANDARD DETAIL DRAWING

SF

SQUARE FEET

SS,STO

STORM SEWER

STA

STATION

SY

SQUARE YARD

TLE

TEMPORARY LIMITED EASEMENT

TYP

TYPICAL

VERT

VERTICAL

VOL

VOLUME

VPC

VERTICAL POINT OF CURVE

VPI

VERTICAL POINT OF INTERSECTION

VPT

VERTICAL POINT OF TANGENCY

WB

WESTBOUND

WM

WATERMAIN

WV

WATER VALVE

YD

YARD

2

2

PROJECT NO: 4984-01-57

HWY: CTH A

COUNTY: OUTAGAMIE

GENERAL NOTES

SHEET:

E

2.1

FILE NAME: F:\Transportation\E1672A04\Sheets\Plan\Gen Notes\49840157_020101_gn.ppt

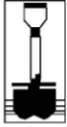
ORIGINATOR: OMNNI ASSOCIATES

ORIG. DATE:

REV. DATE:

PRINT DATE: November 8, 2011

DIGGERS



HOTLINE

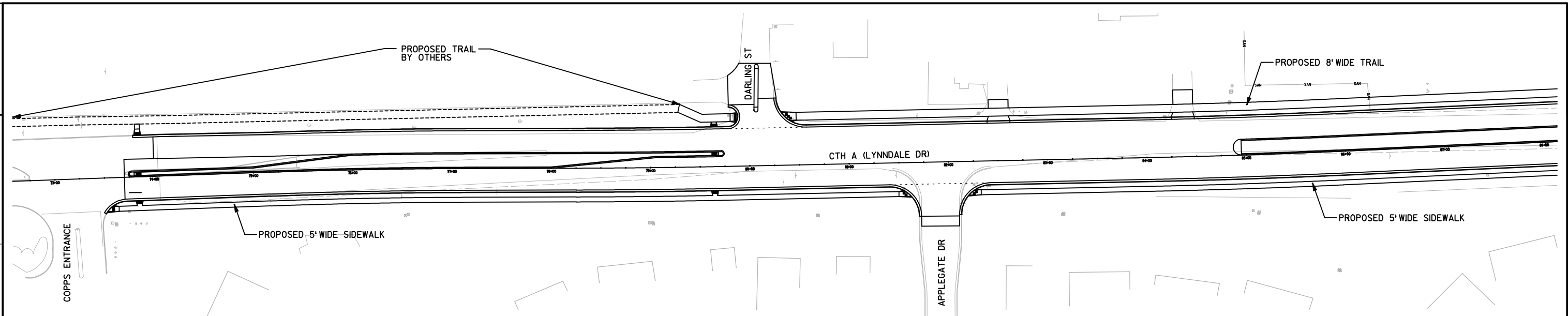
Call 811 3 Work Days Before You Dig

or Toll Free (800) 242-8511

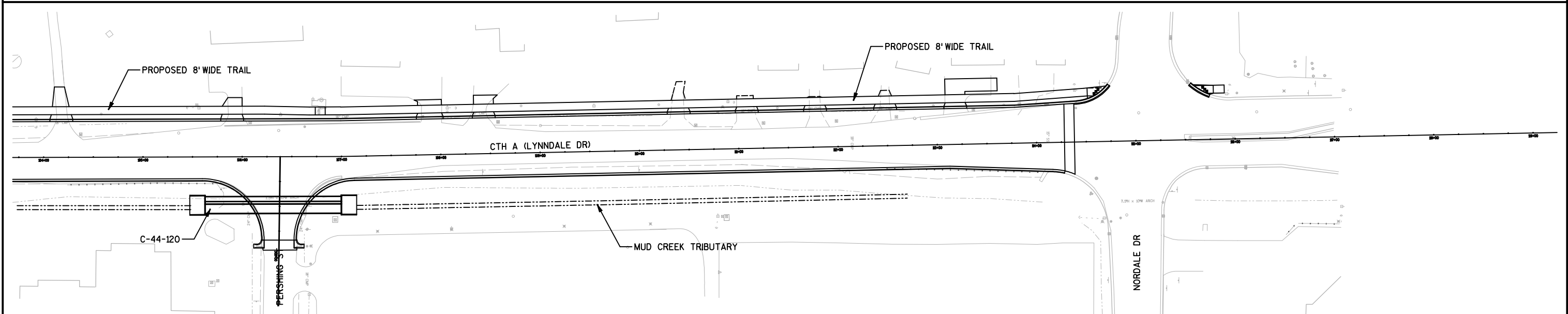
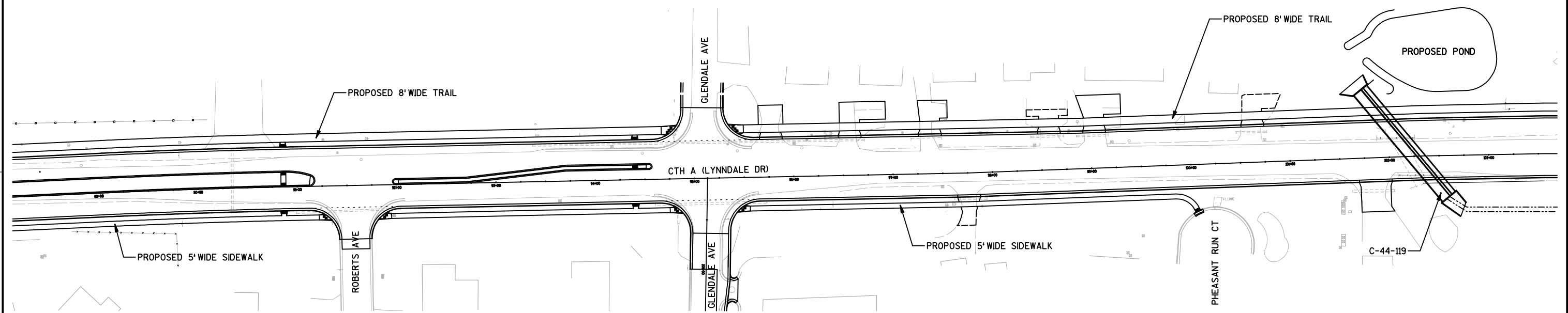
Hearing Impaired TDD (800) 542-2289

www.DiggersHotline.com

2



2



PROJECT NO: 4984-01-57

HWY: CTH A

COUNTY: OUTAGAMIE

OVERVIEW PLAN

SHEET

E

FILE NAME : F:\Transportation\E1672A04\Sheets\Plan\E16720V01.dgn

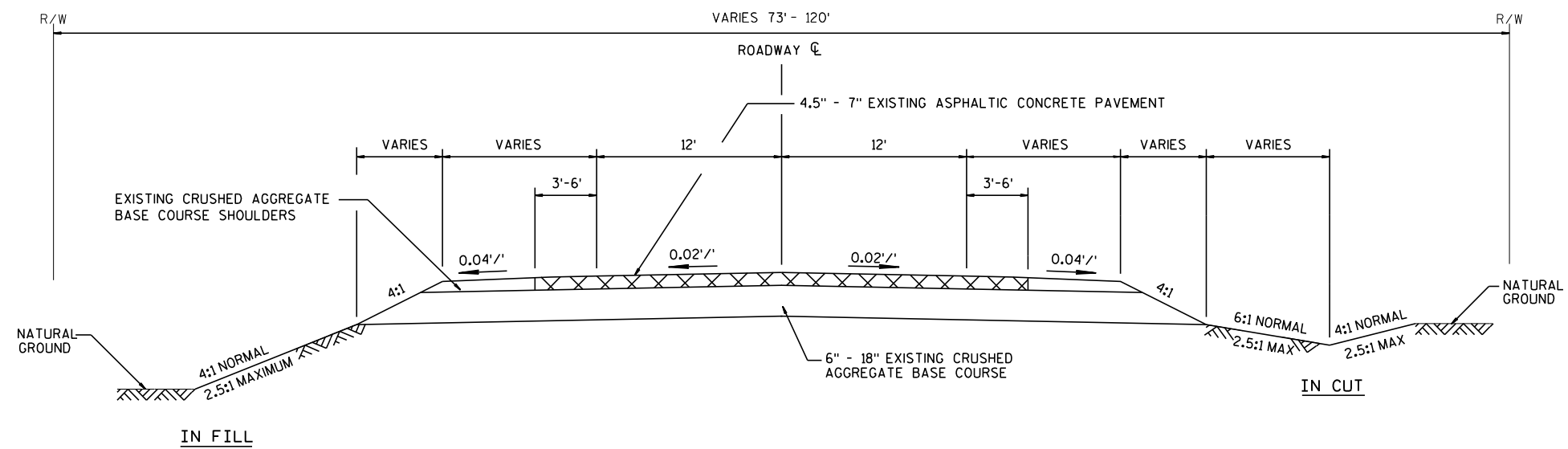
PLOT DATE : 10/26/2011 8:04:42 AM

PLOT BY : OMNI - perryd

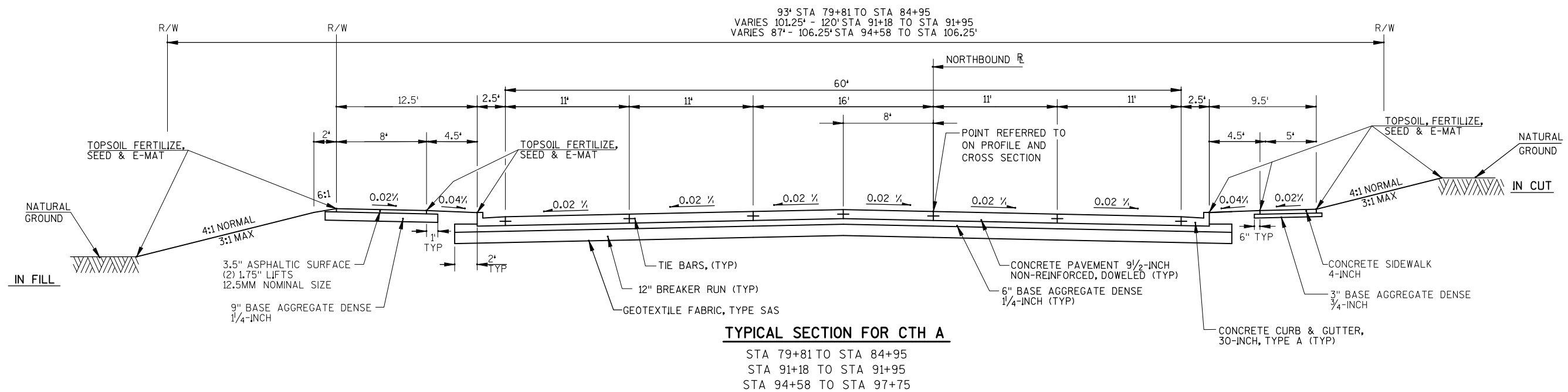
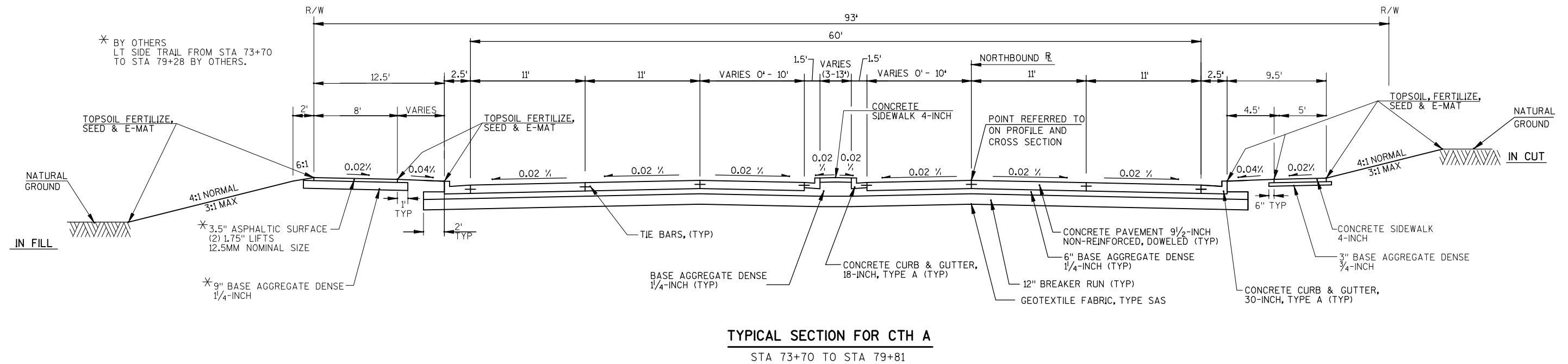
PLOT NAME :

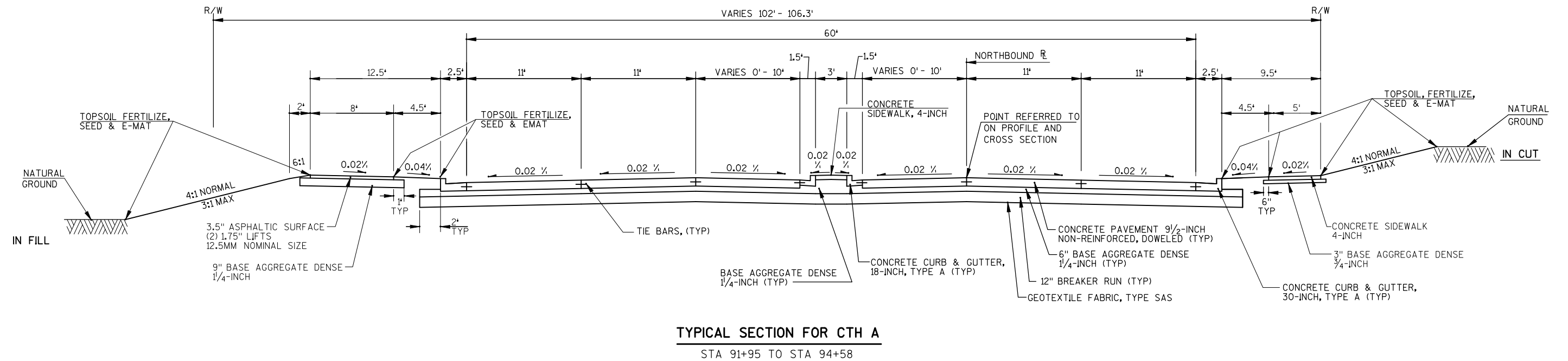
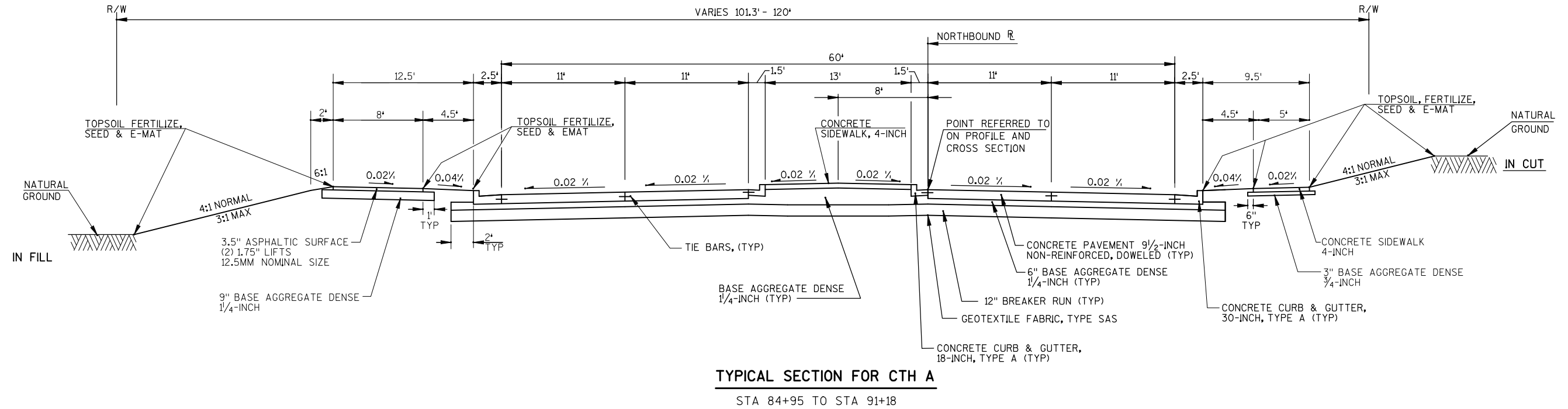
PLOT SCALE : _SCALE_

WISDOT/CADDs SHEET 42

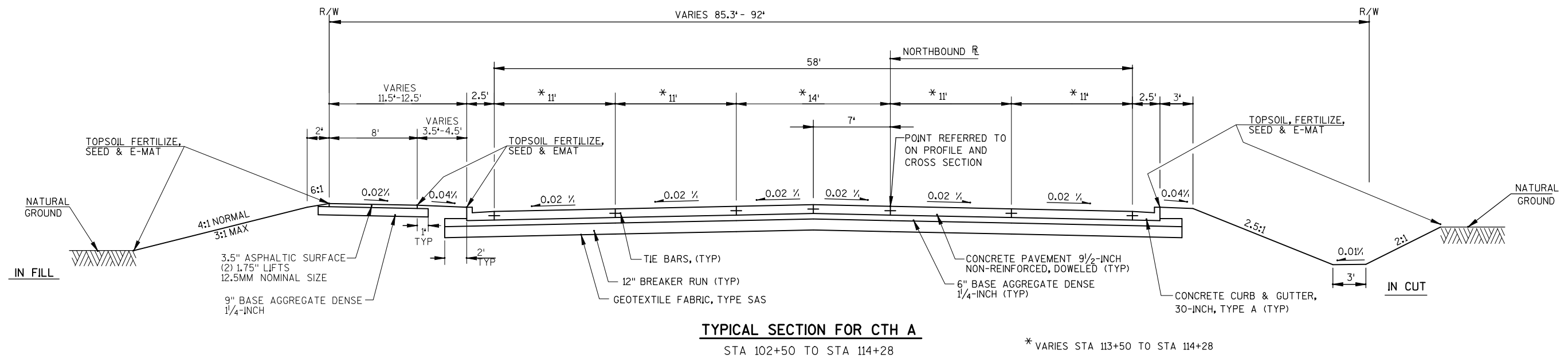
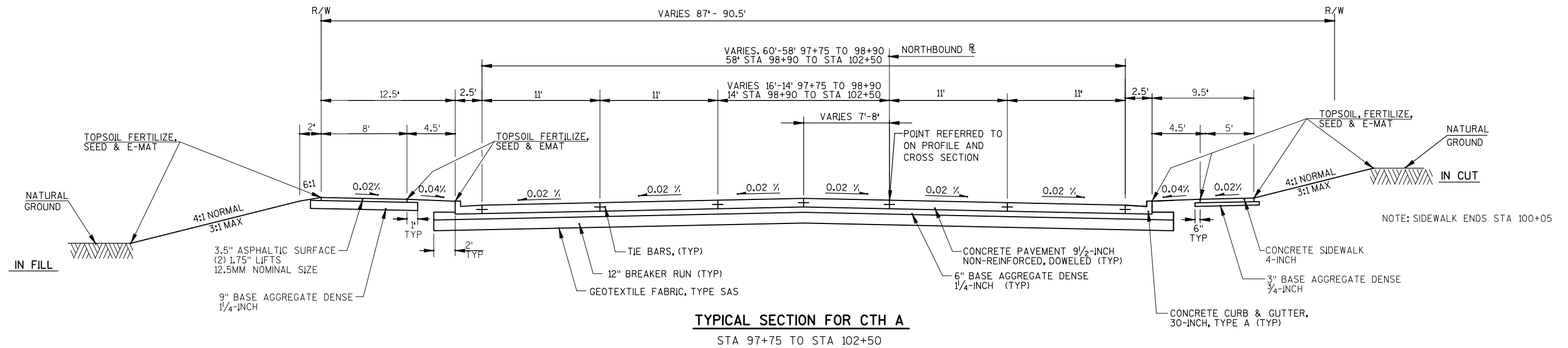


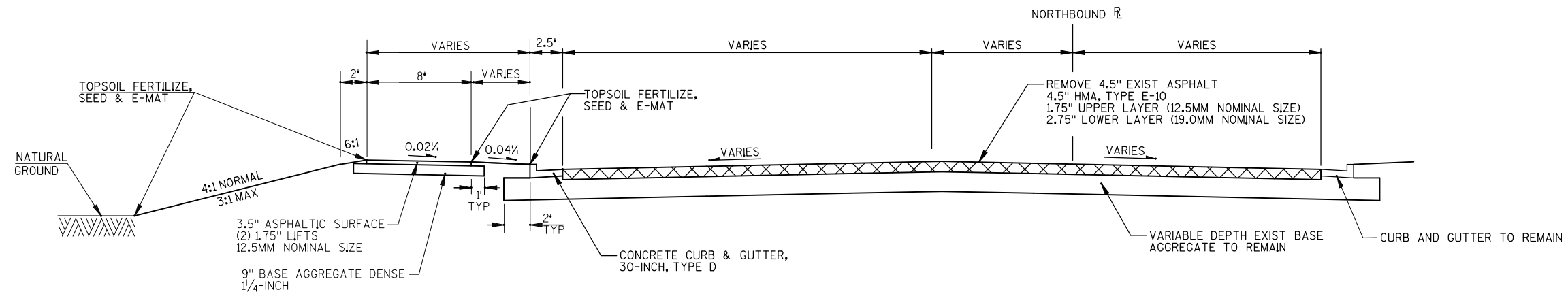
TYPICAL EXISTING CROSS SECTION FOR CTH A





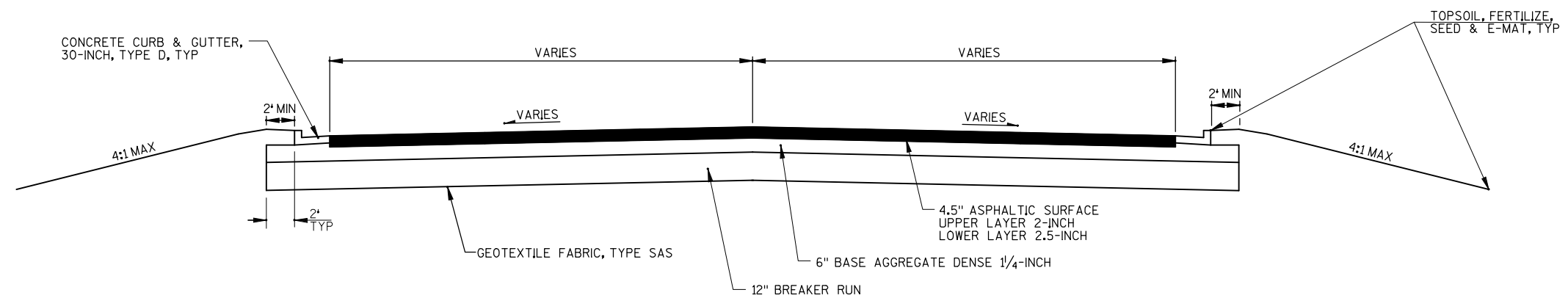
2



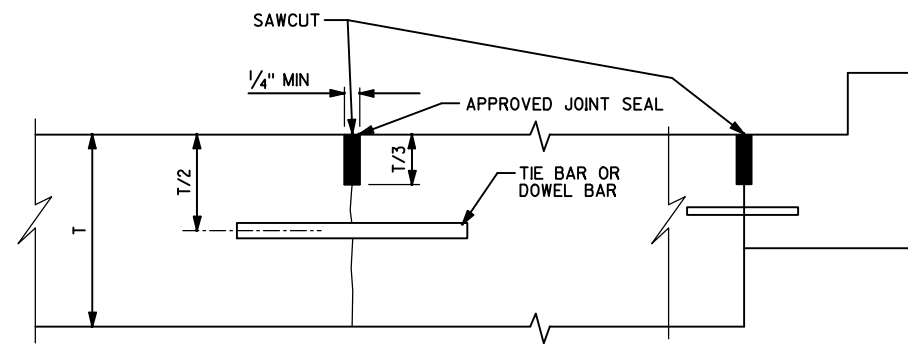
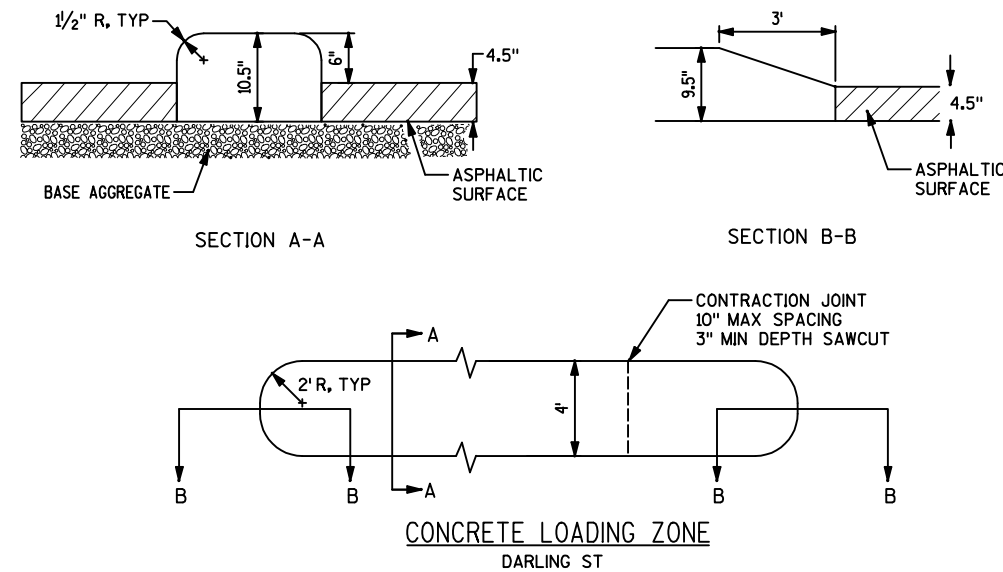
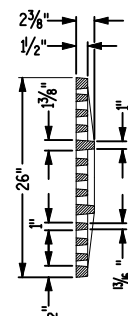
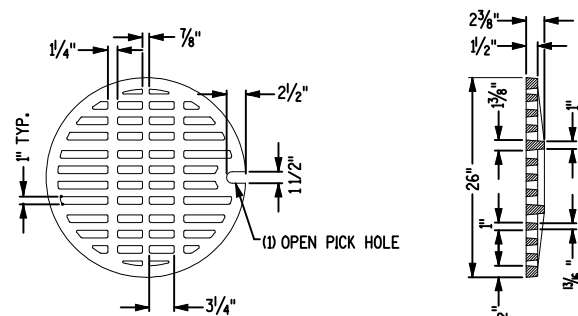
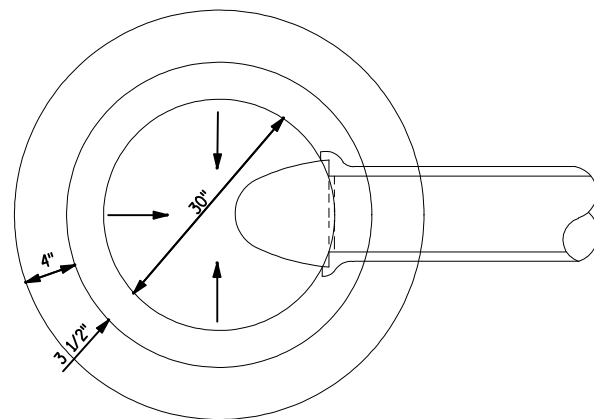
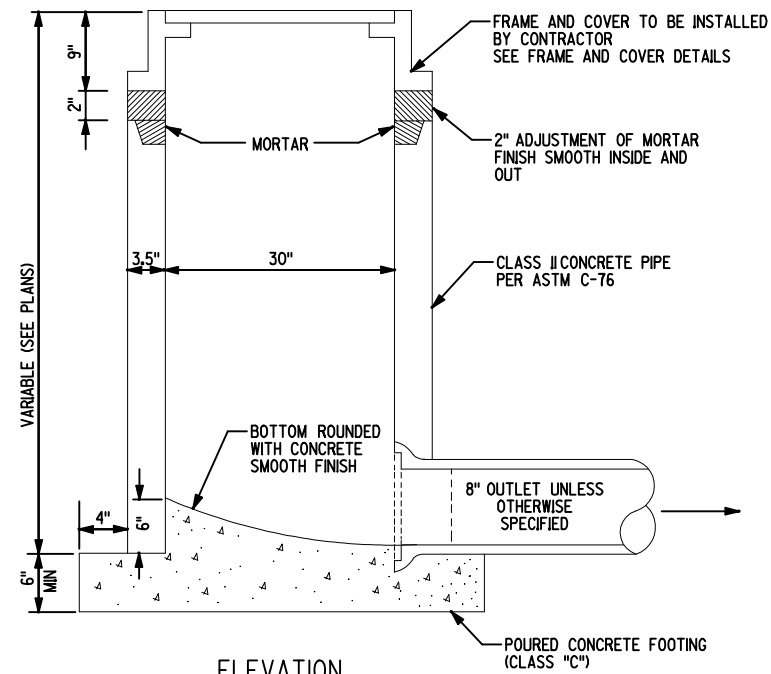


TYPICAL SECTION FOR CTH A

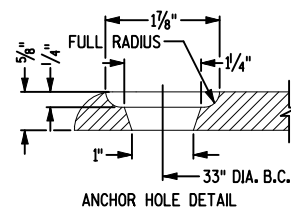
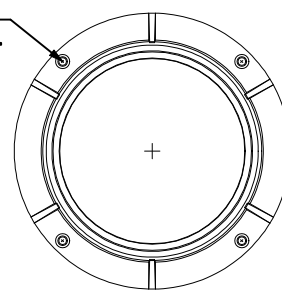
STA 114+28 TO STA 114+38
CONCRETE TO ASPHALT TRANSITION



TYPICAL SECTION FOR SIDEROAD RECONSTRUCTION

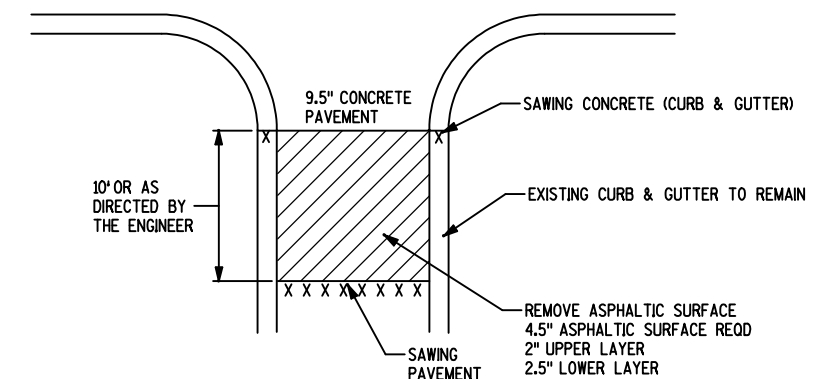
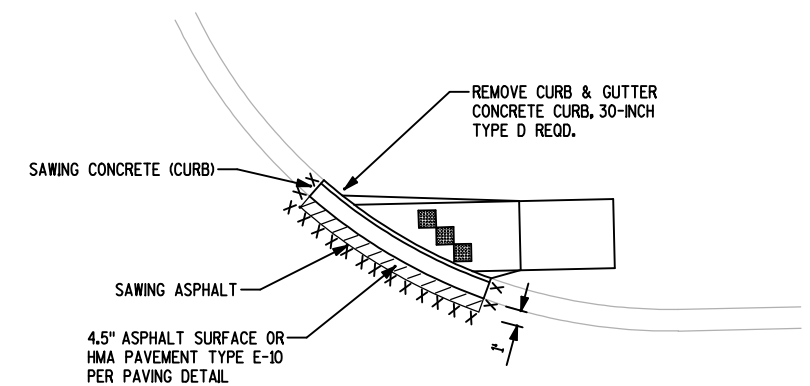
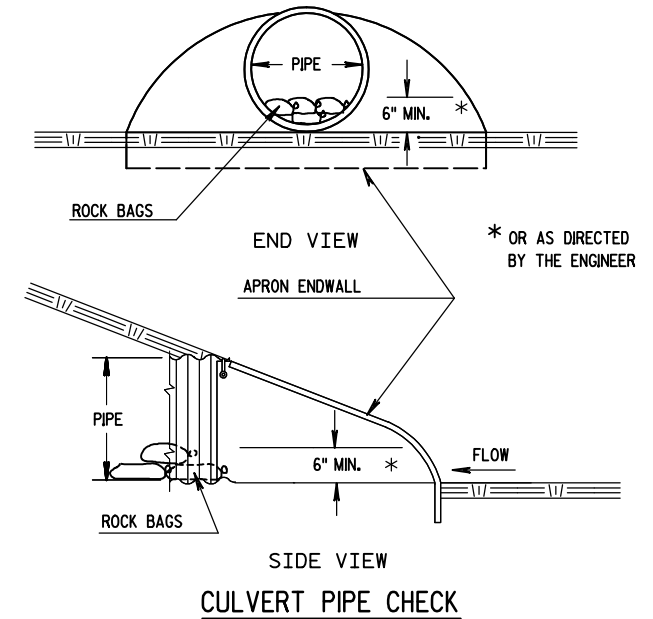


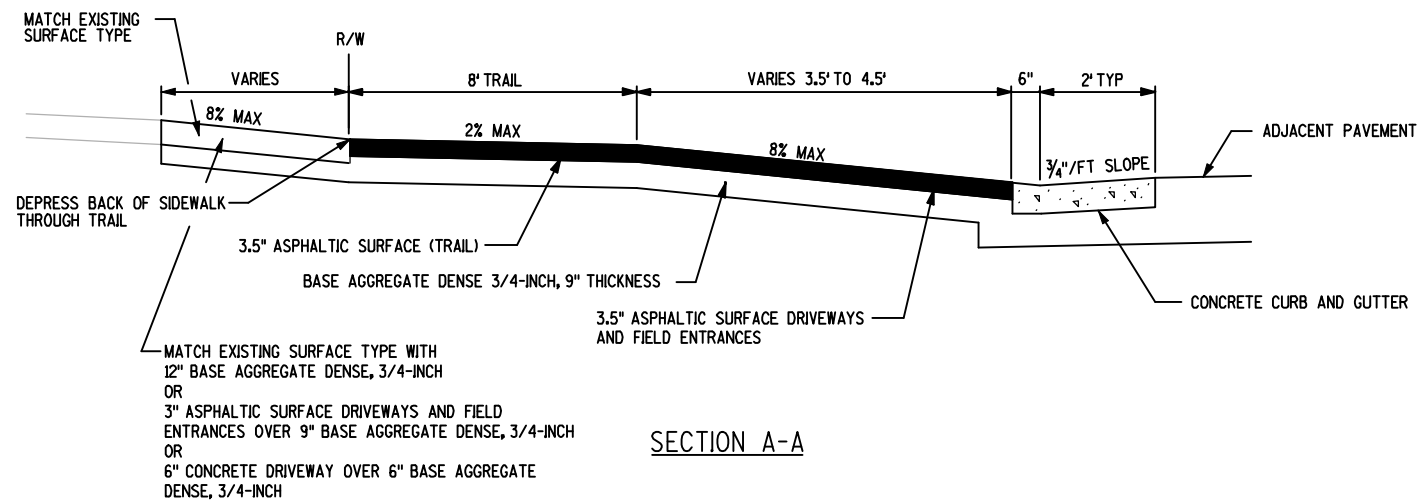
(4) 1" DIA. ANCHOR BOLT HOLES ON A 33" DIA. B.C.



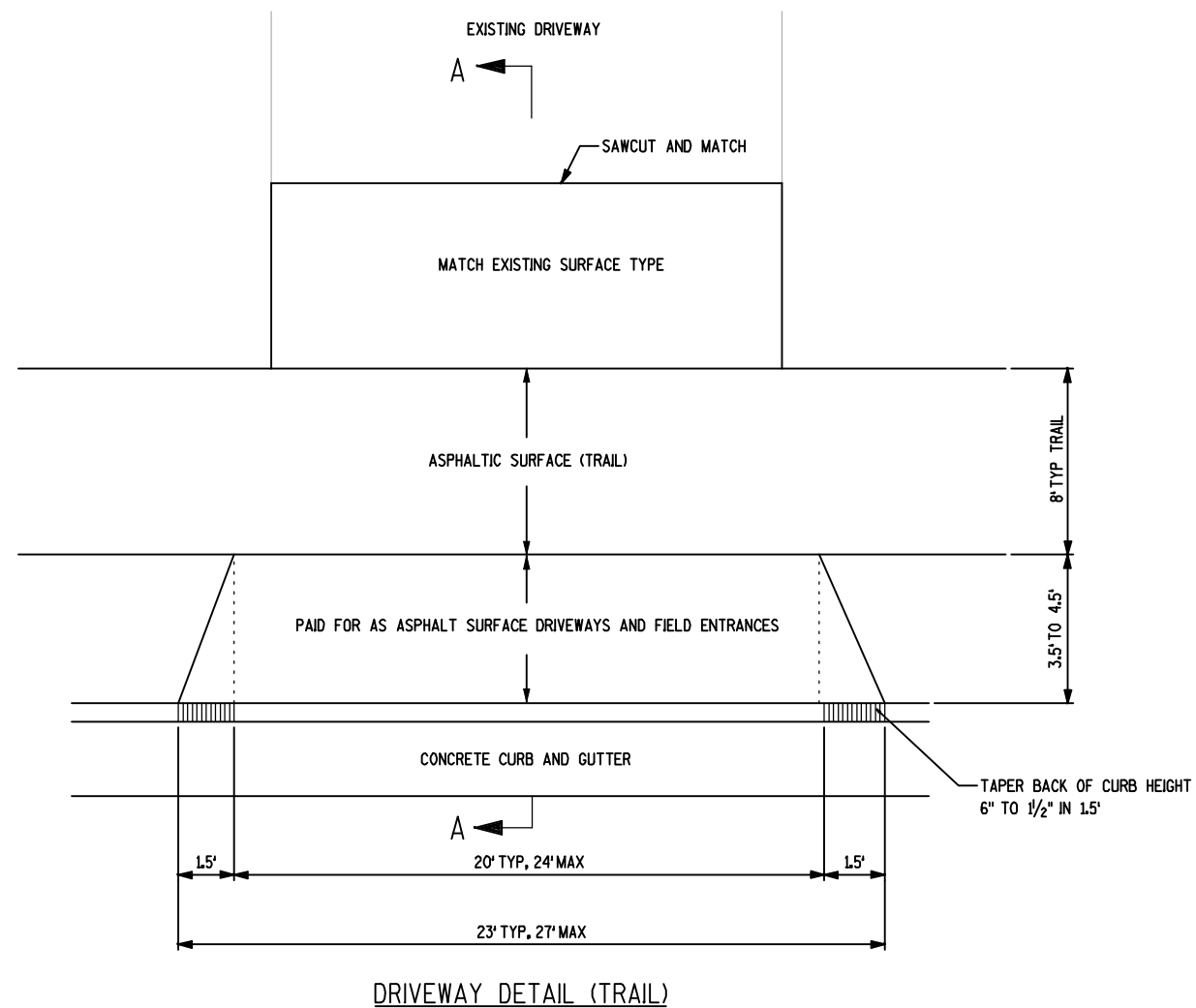
MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 35B
FINISH: NOT PAINTED
WEIGHT: 147*

FRAME DETAIL

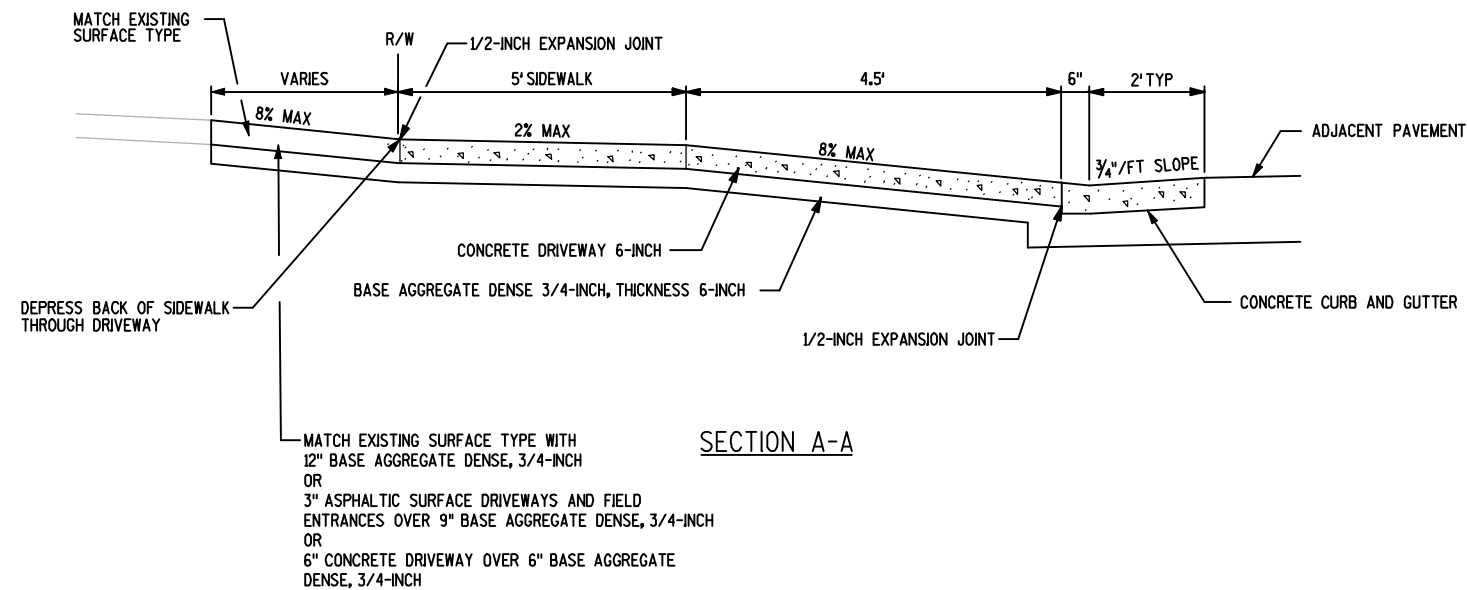




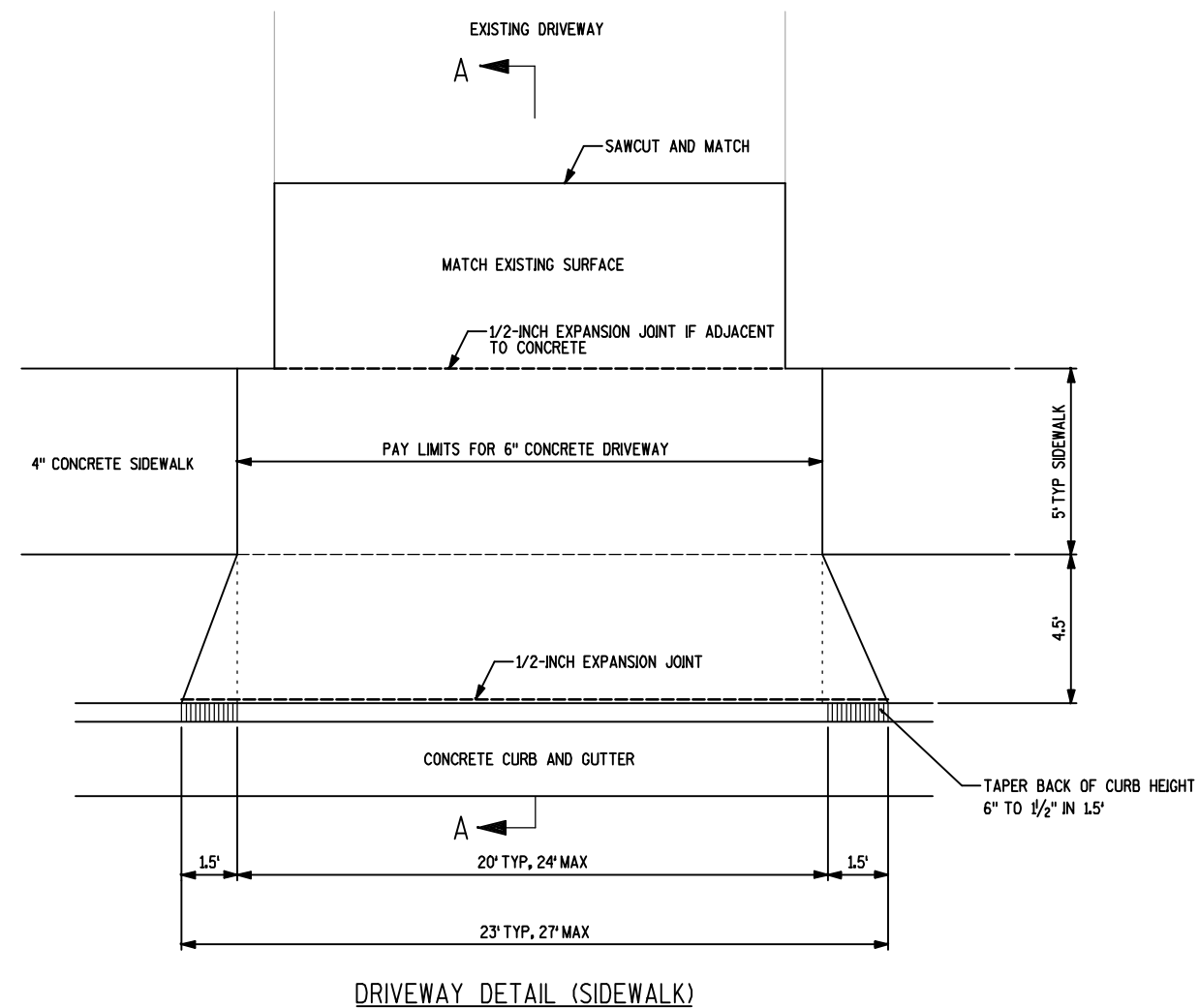
SECTION A-A



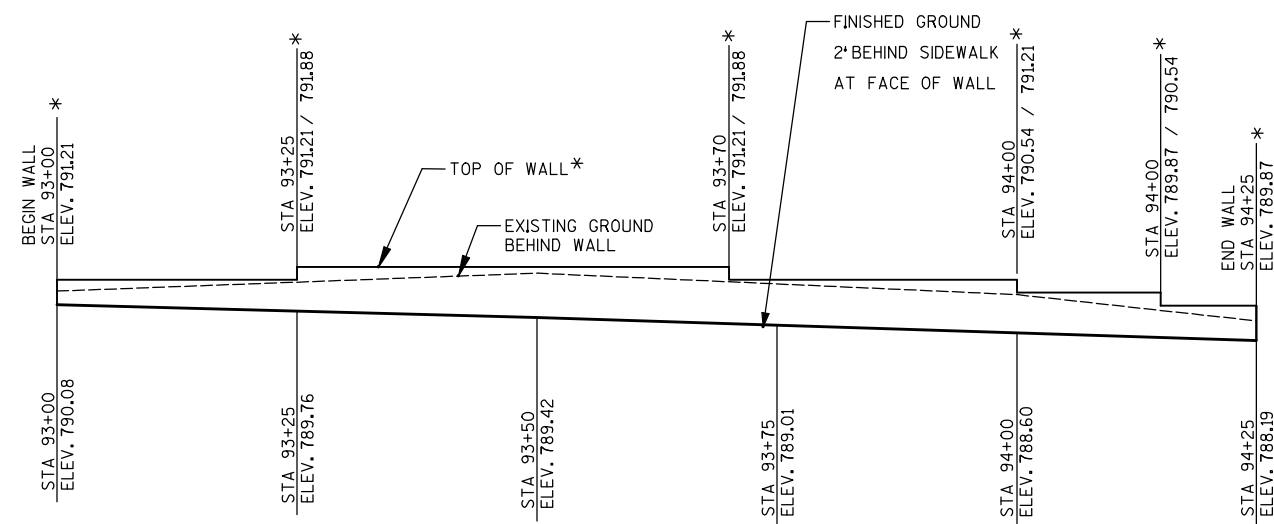
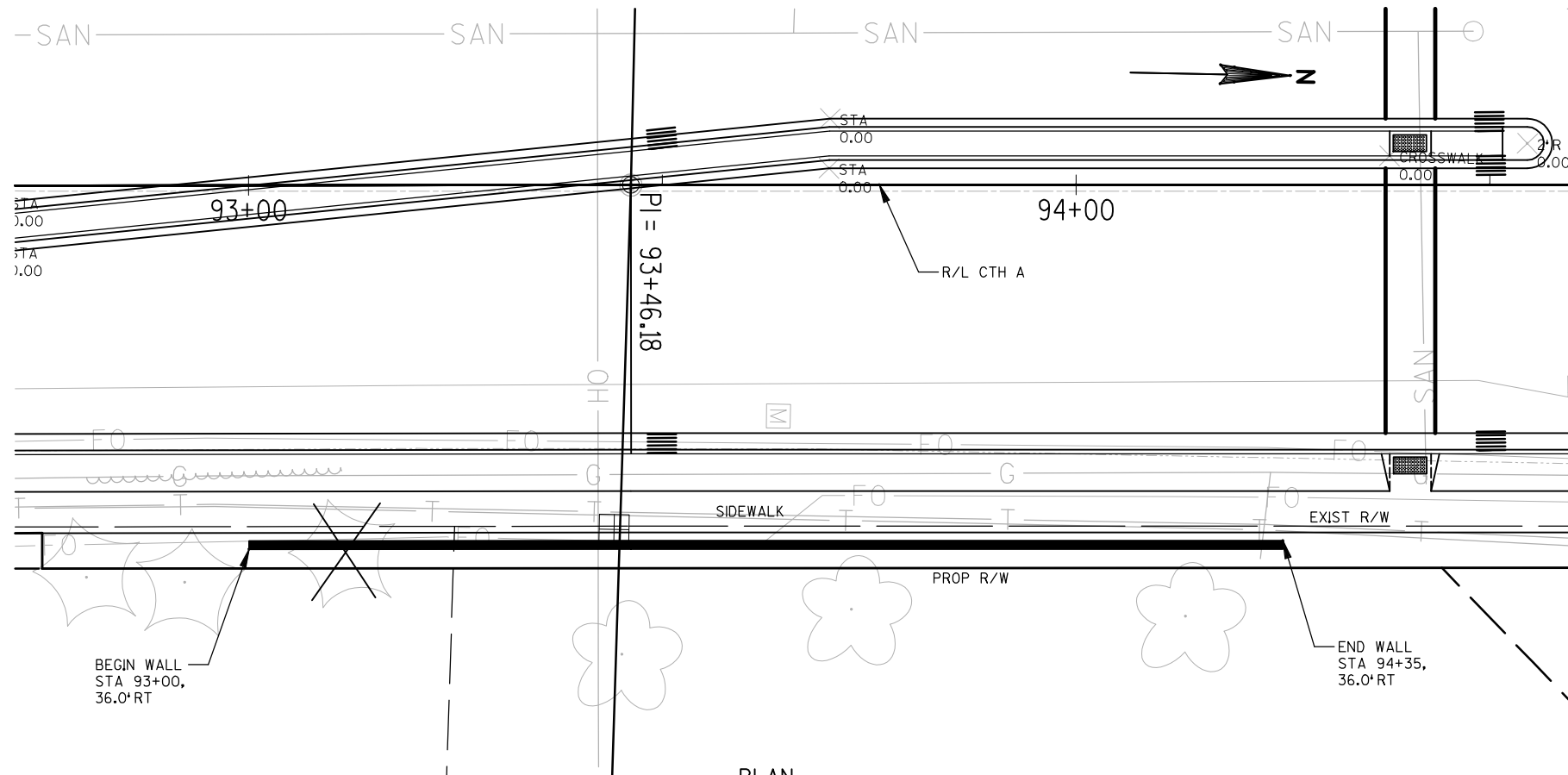
DRIVEWAY DETAIL (TRAIL)



SECTION A-A

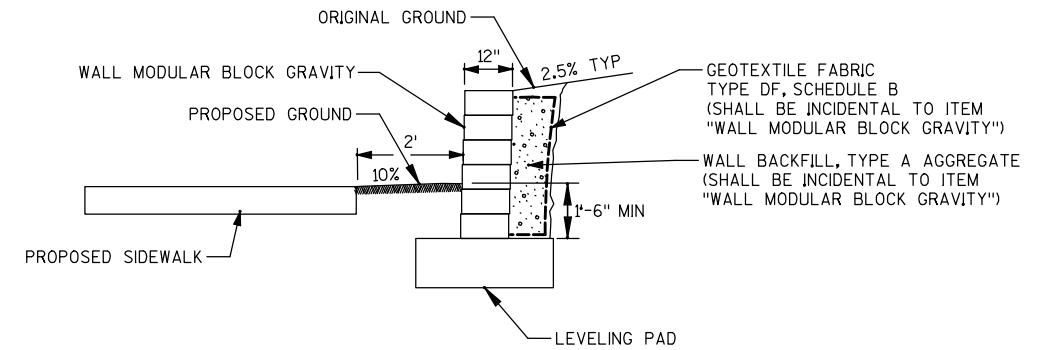


DRIVEWAY DETAIL (SIDEWALK)



*TOP OF WALL STEPPING SHOWN
BASED ON 8" HIGH X 12" WIDE
BLOCK

RETAINING WALL



TOTAL ESTIMATED QUANTITIES

WALL MODULAR BLOCK GRAVITY.....525 S.F.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DESIGN DATA

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALL IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL MODULAR BLOCK GRAVITY."

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THIS DRAWING ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

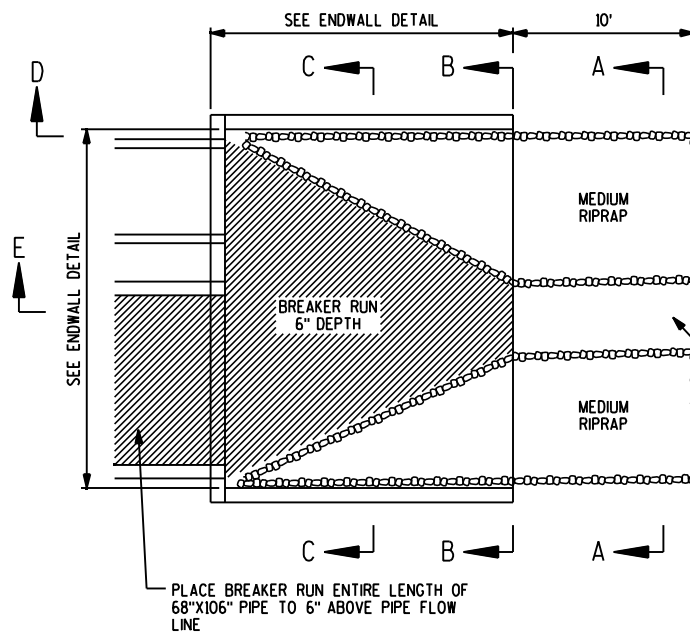
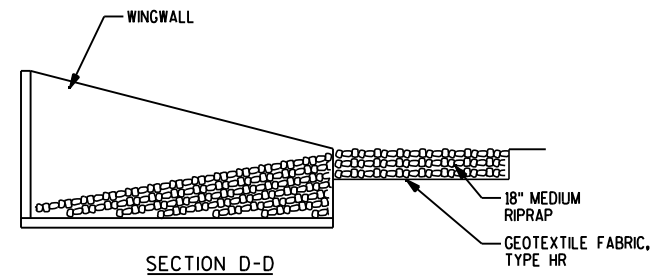
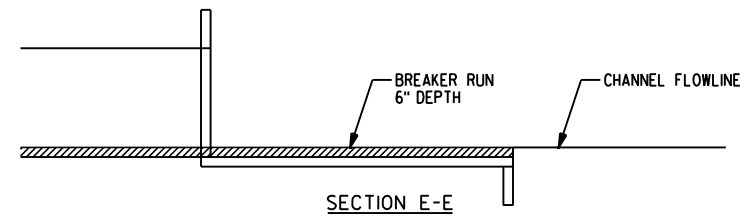
THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS SHEET.

DESIGN FOR THE RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND THE WALL AS SHOWN.

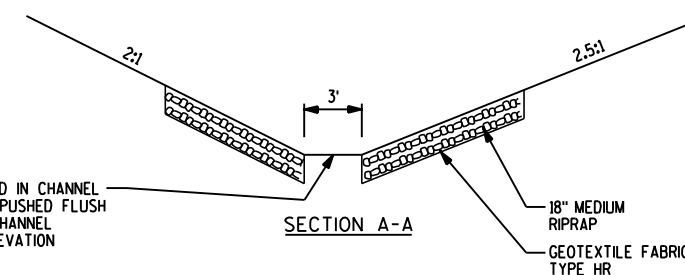
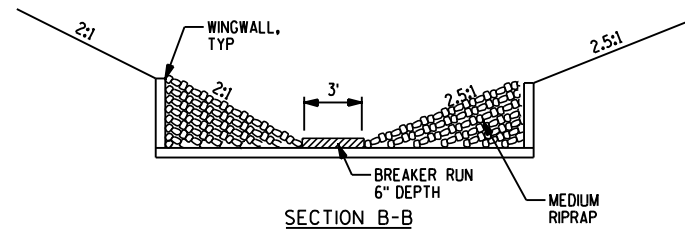
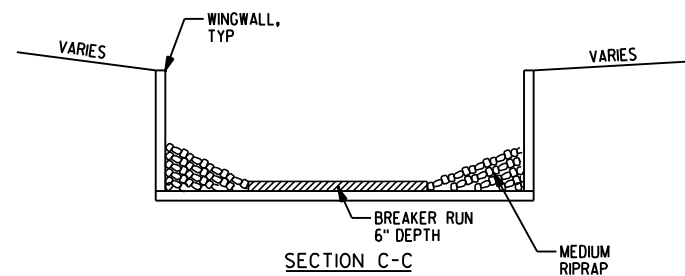
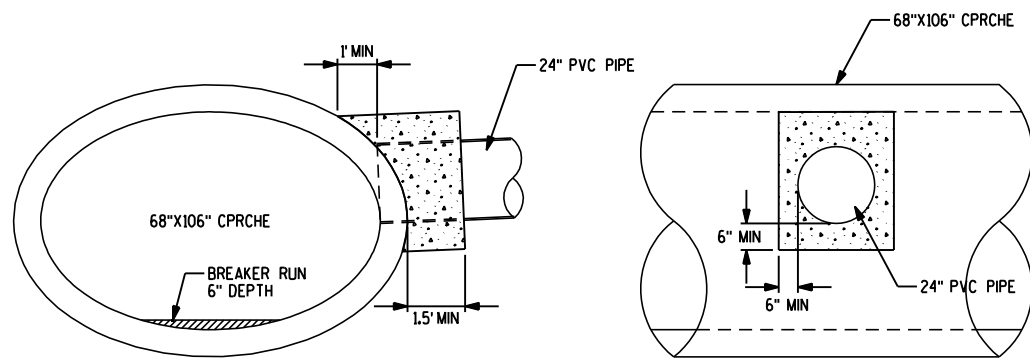
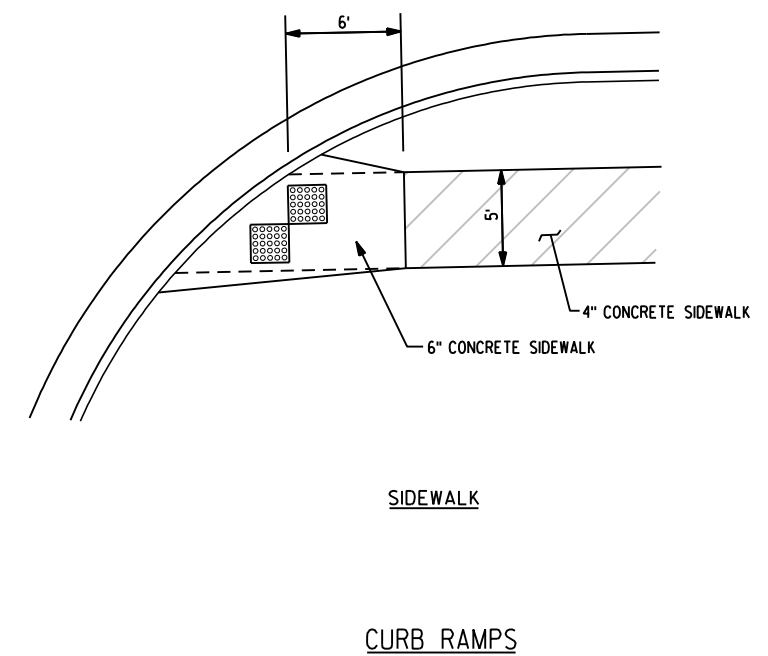
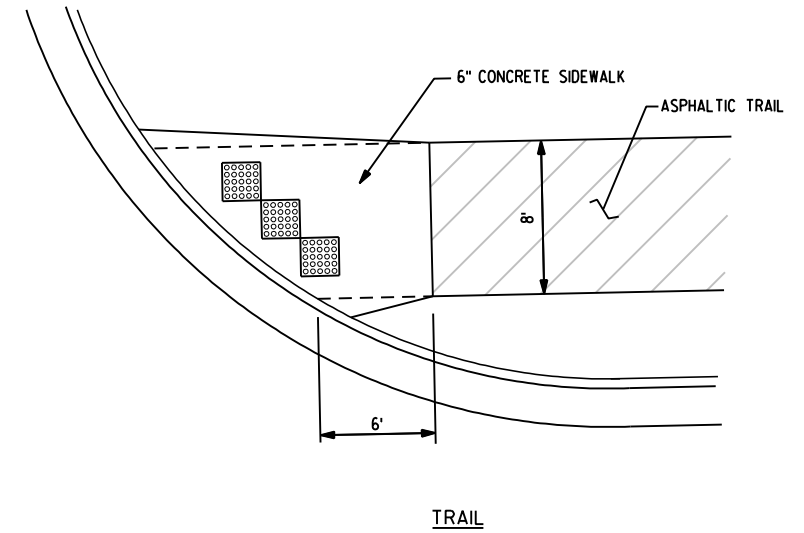
COLOR OF BLOCK SHALL BE GREY.

FOR THE PURPOSES OF COMPUTING LATERAL EARTH PRESSURES AGAINST UTILITIES AND STRUCTURES, ASSUMING TRIANGULAR LOAD DISTRIBUTION WITH GRANULAR BACKFILL, THE FOLLOWING SOIL PARAMETERS MAY BE USED:

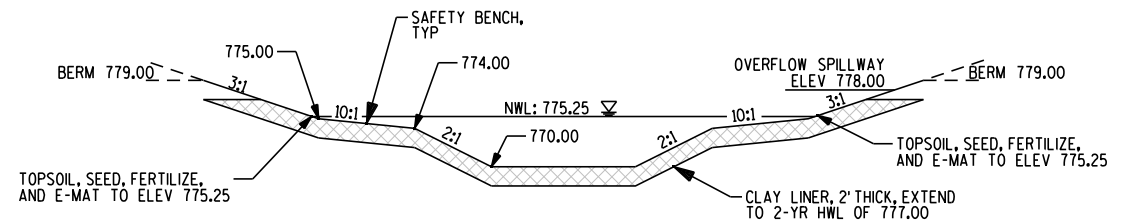
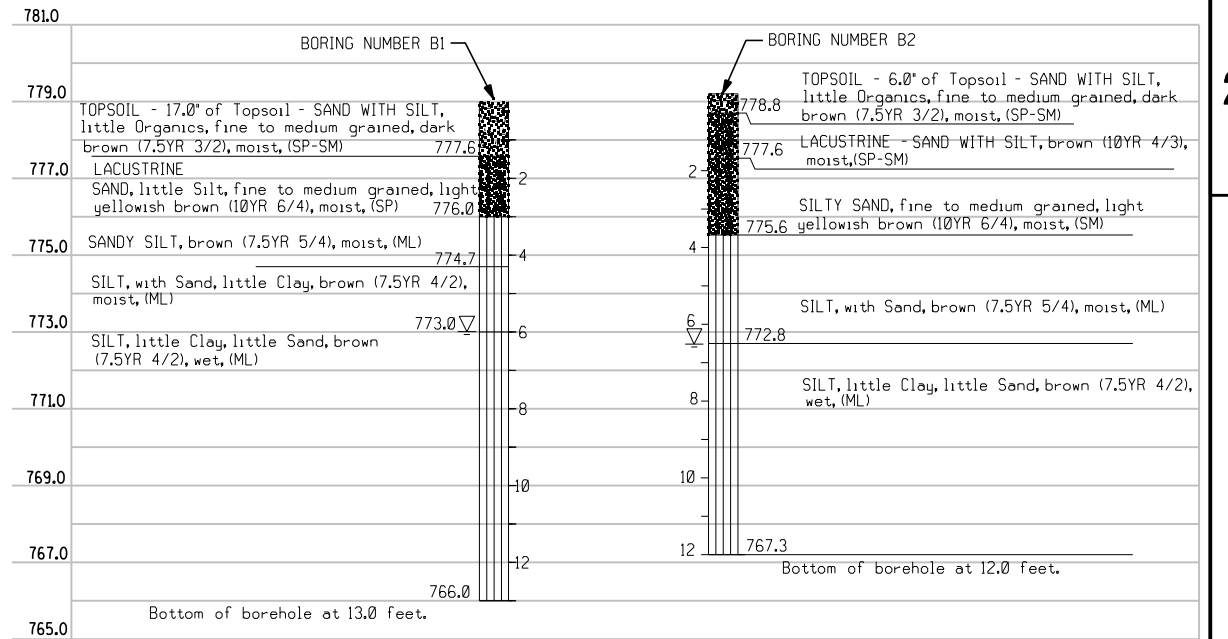
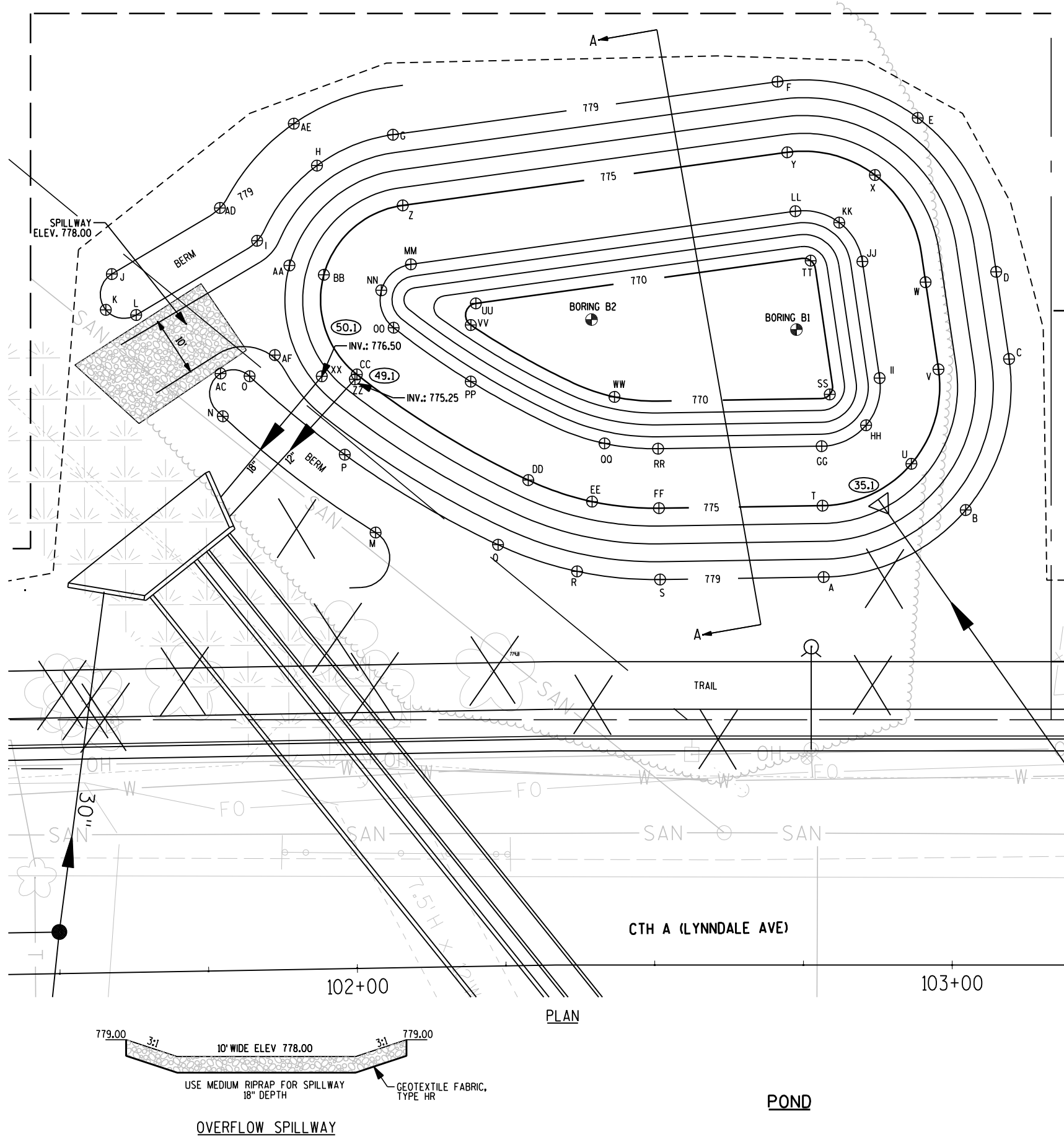
PHI = 30° γ = 115 pcf K_a = 0.33 K_p = 3.0 K_o = 0.5



CULVERT TRANSITION DETAIL

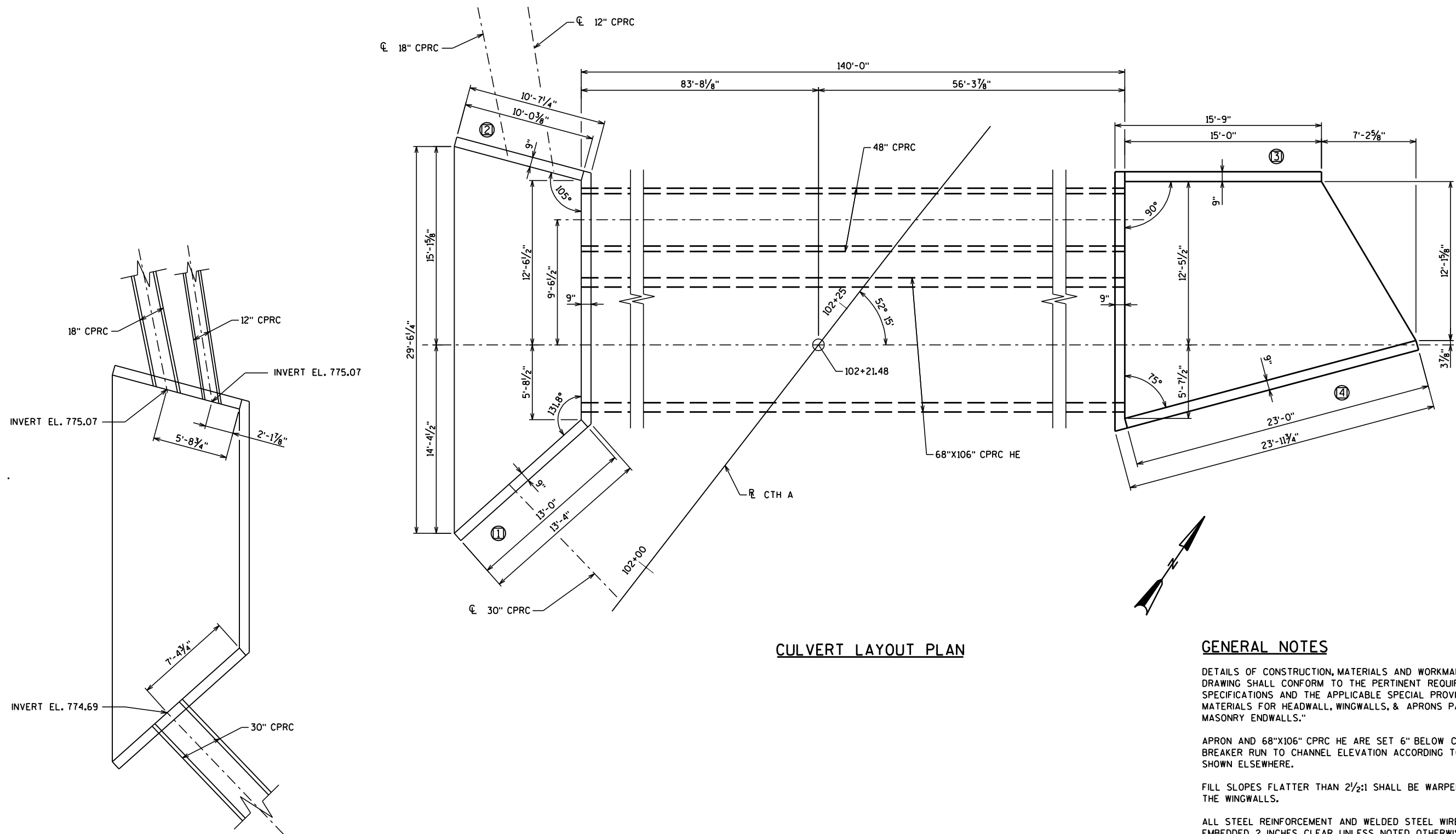
C-44-120 INLET AND OUTLET
C-44-119 INLETANY RIPRAP PLACED IN CHANNEL
BOTTOM SHALL BE PUSHED FLUSH
OR BELOW CHANNEL
FLOWLINE ELEVATION

LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,57,58,59,60,61,62,63



STAKING TABLE

	R/L	STATION	OFFSET	DIR	ELEV		R/L	STATION	OFFSET	DIR	ELEV
A	CTH A	102+78.38	65.23	L	779.00	DD	CTH A	102+30.15	81.59	L	775.00
B	CTH A	103+02.27	76.5	L	779.00	EE	CTH A	102+39.44	77.92	L	775.00
C	CTH A	103+09.55	101.89	L	779.00	FF	CTH A	102+50.69	76.81	L	775.00
D	CTH A	103+07.39	116.55	L	779.00	GG	CTH A	102+78.04	87.23	L	774.00
E	CTH A	102+94.20	142.43	L	779.00	HH	CTH A	102+85.51	90.75	L	774.00
F	CTH A	102+70.62	148.53	L	779.00	II	CTH A	102+87.78	98.69	L	774.00
G	CTH A	102+08.41	140.06	L	779.00	JJ	CTH A	102+84.90	118.29	L	774.00
H	CTH A	101+95.55	135.09	L	779.00	KK	CTH A	102+81.00	124.83	L	774.00
I	CTH A	101+85.27	122.63	L	779.00	LL	CTH A	102+73.63	126.74	L	774.00
J	CTH A	101+60.76	117.45	L	779.00	MM	CTH A	102+11.04	118.21	L	774.00
K	CTH A	101+59.63	111.46	L	779.00	NN	CTH A	102+06.00	113.93	L	774.00
L	CTH A	101+64.72	110.5	L	779.00	OO	CTH A	102+07.97	107.61	L	774.00
M	CTH A	102+04.34	73.23	L	779.00	PP	CTH A	102+20.77	98.33	L	774.00
N	CTH A	101+78.99	93.22	L	779.00	QQ	CTH A	102+41.54	87.7	L	774.00
O	CTH A	101+83.61	99.88	L	779.00	RR	CTH A	102+50.54	86.81	L	774.00
P	CTH A	101+99.38	86.41	L	779.00	SS	CTH A	102+79.41	95.93	L	770.00
Q	CTH A	102+24.87	70.82	L	779.00	TT	CTH A	102+76.20	118.43	L	770.00
R	CTH A	102+36.92	66.19	L	779.00	UU	CTH A	102+21.85	111.46	L	770.00
S	CTH A	102+50.87	64.81	L	779.00	VV	CTH A	102+20.95	107.83	L	770.00
T	CTH A	102+78.19	77.23	L	775.00	WW	CTH A	102+43.22	95.52	L	770.00
U	CTH A	102+93.13	84.27	L	775.00	XX	CTH A	101+95.75	99.66	L	776.50
V	CTH A	102+97.68	100.14	L	775.00	ZZ	CTH A	102+01.30	99.04	L	775.25
W	CTH A	102+95.52	114.8	L	775.00	AC	CTH A	101+78.74	100.42	L	779.00
X	CTH A	102+87.00	132.83	L	775.00	AD	CTH A	101+79.12	128.26	L	779.00
Y	CTH A	102+72.27	136.64	L	775.00	AE	CTH A	101+91.79	142.21	L	779.00
Z	CTH A	102+09.85	128.14	L	775.00	AF	CTH A	101+87.91	103.36	L	778.00
AA	CTH A	101+90.63	118.39	L	777.00						
BB	CTH A	101+96.39	116.72	L	775.00						
CC	CTH A	102+01.64	99.86	L	775.00						



CULVERT LAYOUT PLAN

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. ALL LABOR AND MATERIALS FOR HEADWALL, WINGWALLS, & APRONS PAID FOR UNDER "CONCRETE MASONRY ENDWALLS."

APRON AND 68"X106" CPRC HE ARE SET 6" BELOW CHANNEL FLOW LINE. PLACE BREAKER RUN TO CHANNEL ELEVATION ACCORDING TO CONSTRUCTION DETAILS SHOWN ELSEWHERE.

FILL SLOPES FLATTER THAN 2 1/2:1 SHALL BE WARPED TO MEET THE TOP OF THE WINGWALLS.

ALL STEEL REINFORCEMENT AND WELDED STEEL WIRE FABRIC SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS NOTED OTHERWISE.

DESIGN DATA

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY ————— f'c = 3,500 psi

HIGH STRENGTH BAR STEEL
REINFORCEMENT, GRADE 60 ————— fy = 60,000 psi

DOWNSTREAM APRON
CULVERT PENETRATIONS

PROJECT NUMBER: 4984-01-57

HWY: CTH A

COUNTY: OUTAGAMIE

C-44-119 CULVERT LAYOUT

SCALE, FEET

SHEET NO:

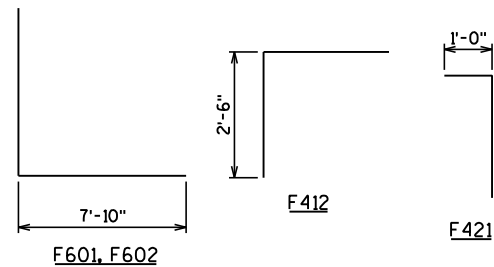
E

NOTES:
PLACE BARS AS SHOWN. SPACE AT 1'-0" ± UNLESS NOTED OTHERWISE. ELEVATION VIEWS SHOWN SEPARATE FOR CLAIRITY, PLACE BARS 2" CLEAR FROM BACKFACE OF HEADWALL.

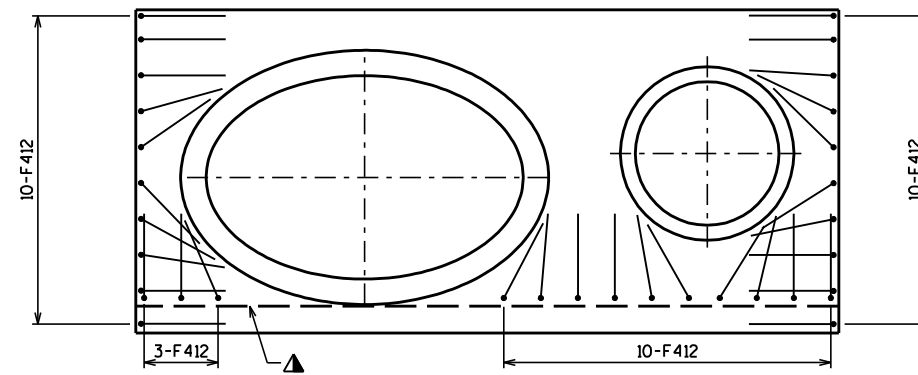
● PLACED ON BOTTOM MAT WITH F601 OR F602.

▲ BOTTOM OF APRON EL. 772.06

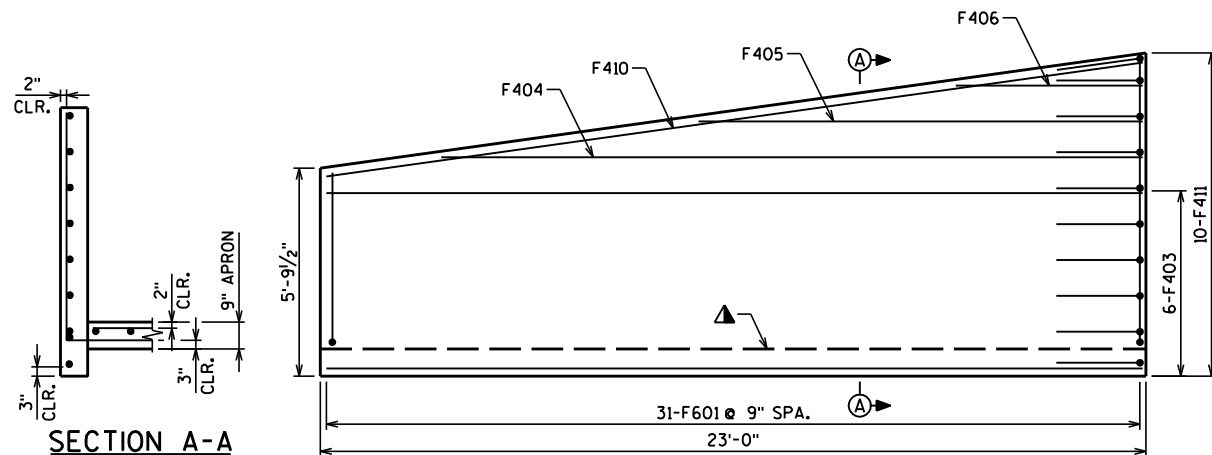
(X) DENOTES WING NUMBER



BAR BENDING DIAGRAMS



HEADWALL ELEVATION - CORNER TIE LAYOUT



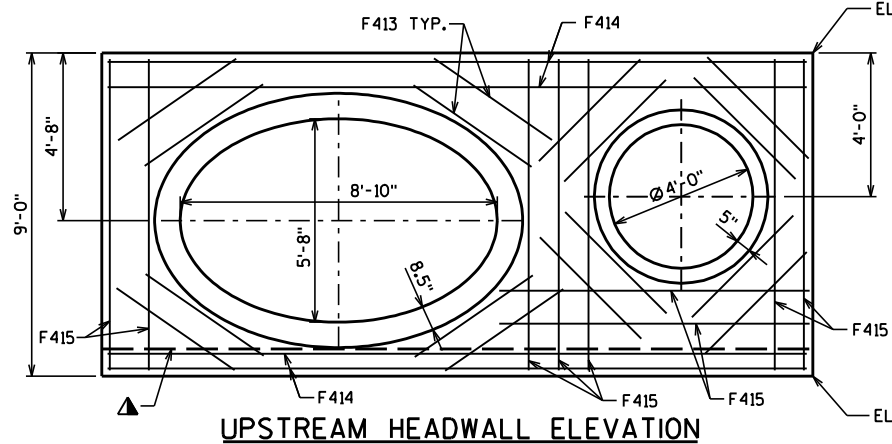
WINGWALL 4 ELEVATION

BILL OF BARS

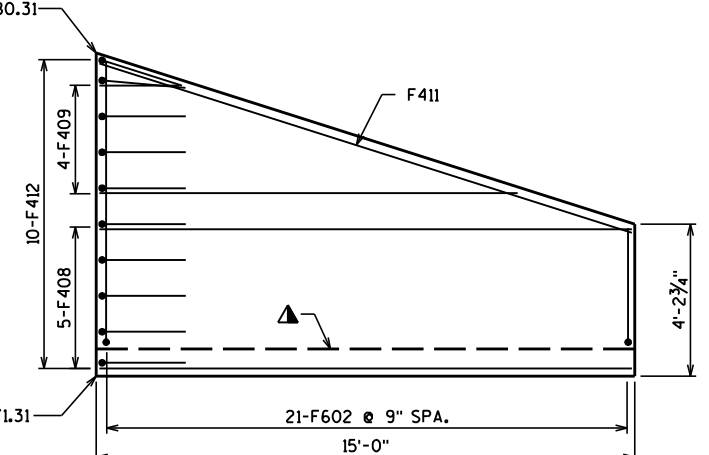
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
F601	X	31	13'-10"	X	▲	WINGWALL 4 VERTICAL
F602	X	21	13'-1"	X	▲	WINGWALL 3 VERTICAL
F403	X	6	23'-4"			WINGWALL 4 HORIZONTAL
F404	X	1	19'-0"			WINGWALL 4 HORIZONTAL
F405	X	1	11'-10"			WINGWALL 4 HORIZONTAL
F406	X	1	4'-8"			WINGWALL 4 HORIZONTAL
F408	X	5	15'-4"			WINGWALL 3 HORIZONTAL
F409	X	4	7'-2"		▲	WINGWALL 3 HORIZONTAL
F410	X	1	22'-11"			WINGWALL 4 DIAGONAL
F411	X	1	15'-5"			WINGWALL 3 DIAGONAL
F412	X	33	4'-11"	X		CORNER TIES
F413	X	16	4'-0"			HEADWALL OPENING
F414	X	4	19'-6"			HEADWALL HORIZONTAL
F415	X	9	8'-7"			HEADWALL HORIZONTAL & VERTICAL
F416	X	6	11'-11"		▲	APRON MAT - LONGITUDINAL
F417	X	12	18'-0"		▲	APRON MAT - LONGITUDINAL
F418	X	15	15'-10"		▲	APRON MAT - TRANSVERSE
F419	X	7	7'-5"		▲	APRON MAT - TRANSVERSE
F420	X	4	13'-9"			CUT OFF WALL HORIZONTAL
F421	X	15	3'-7"	X		CUT OFF WALL VERTICAL
F422	X	1	22'-8"			BOTTOM MAT - TIE FOR F601
F423	X	1	19'-0"			BOTTOM MAT - TIE FOR F601
F424	X	2	14'-10"			BOTTOM MAT - TIES FOR F602

BAR SERIES

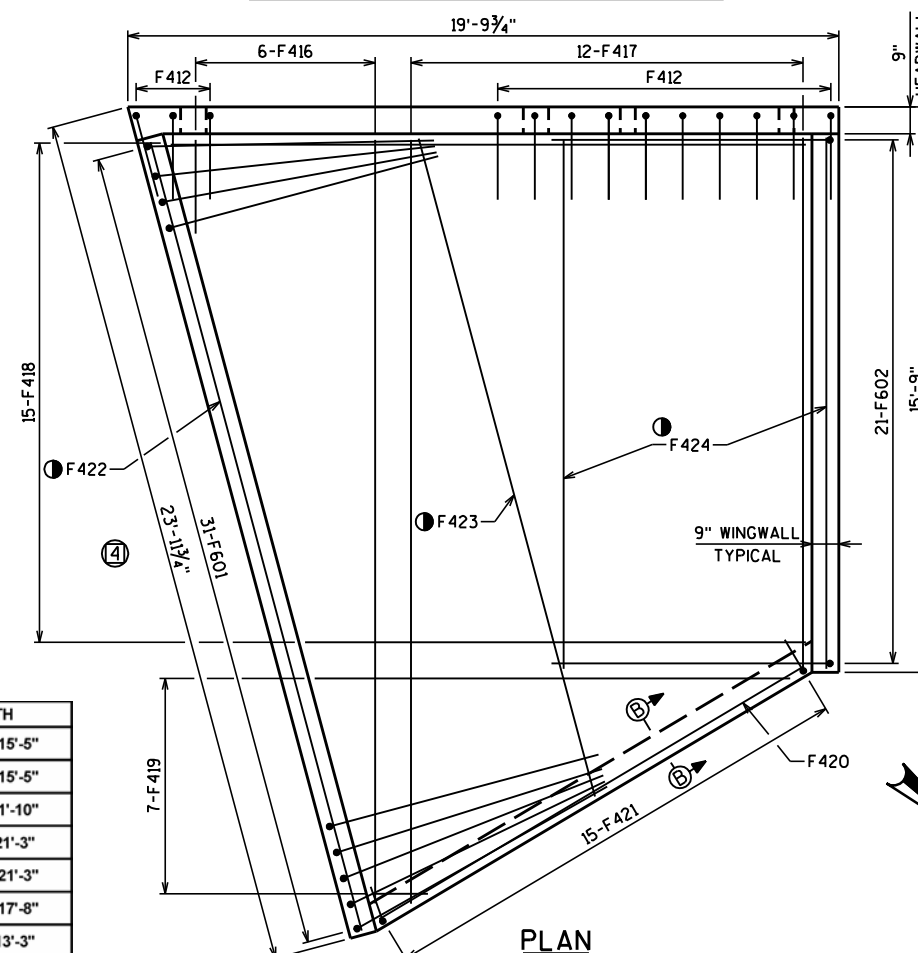
BAR NO.	NO. REQ'D.	LENGTH
F601	1 SERIES OF 31	12'-3" TO 15'-5"
F602	1 SERIES OF 21	10'-9" TO 15'-5"
F409	1 SERIES OF 4	2'-6" TO 11'-10"
F416	1 SERIES OF 6	2'-7" TO 21'-3"
F417	1 SERIES OF 12	14'-9" TO 21'-3"
F418	1 SERIES OF 15	14'-0" TO 17'-8"
F419	1 SERIES OF 7	1'-7" TO 13'-3"



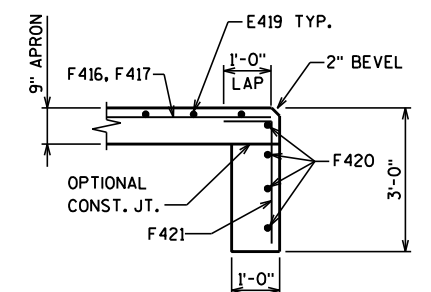
UPSTREAM HEADWALL ELEVATION



WINGWALL 3 ELEVATION



PLAN



SECTION B-B

PROJECT NUMBER: 4984-01-57

HWY: CTH A

COUNTY: OUTAGAMIE

C-44-119 APRON DETAILS

SCALE, FEET 0

SHEET NO:

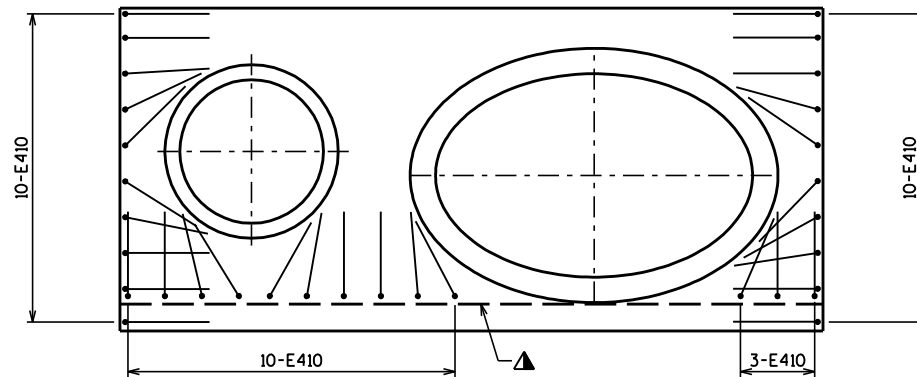
E

NOTES:
PLACE BARS AS SHOWN. SPACE AT 1'-0" ± UNLESS NOTED OTHERWISE. ELEVATION VIEWS SHOWN SEPARATE FOR CLAIRITY, PLACE BARS 2" CLEAR FROM BACKFACE OF HEADWALL.

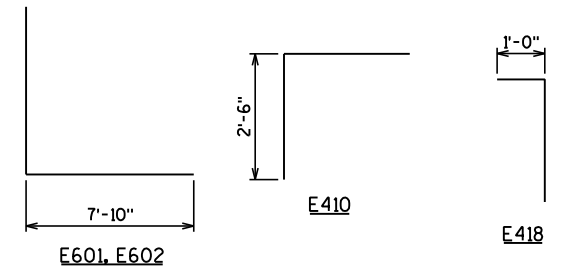
● PLACED ON BOTTOM MAT WITH E601 OR E602.

▲ BOTTOM OF APRON EL. 771.79

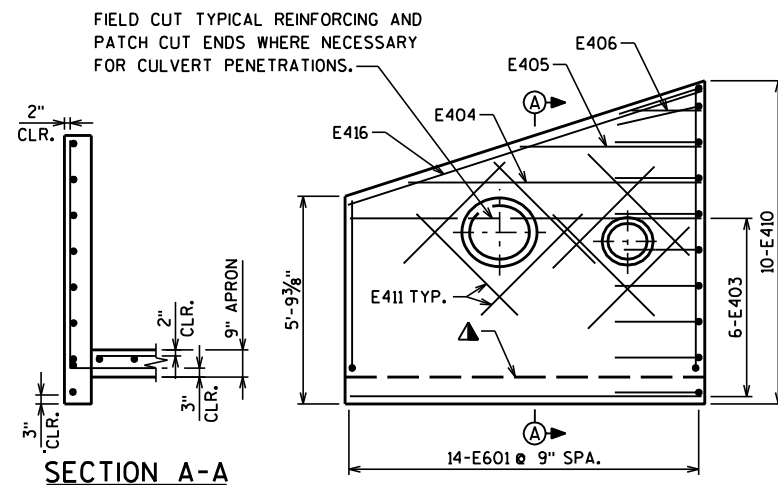
ⓧ DENOTES WING NUMBER



HEADWALL ELEVATION - CORNER TIE LAYOUT

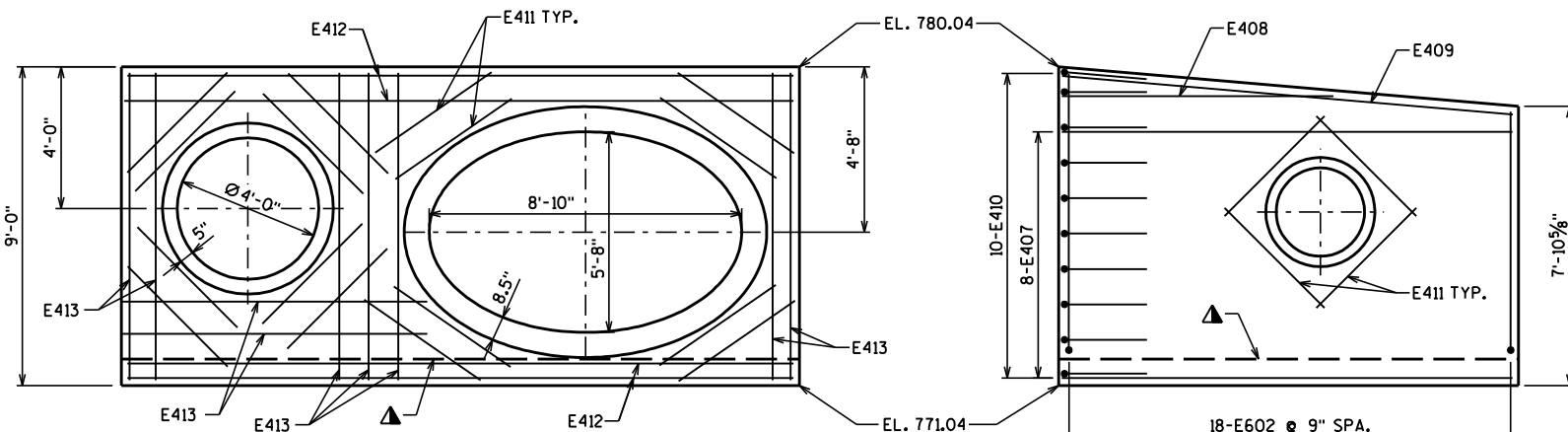


BAR BENDING DIAGRAMS



WINGWALL 2 ELEVATION

▲ BOTTOM OF APRON



DOWNSTREAM HEADWALL ELEVATION

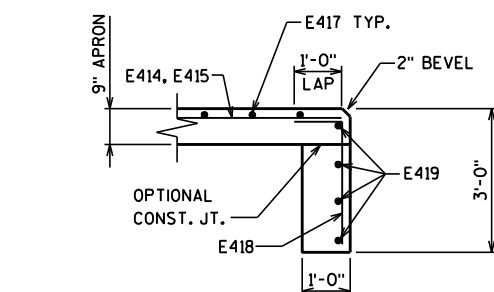
WINGWALL 1 ELEVATION

BAR SERIES

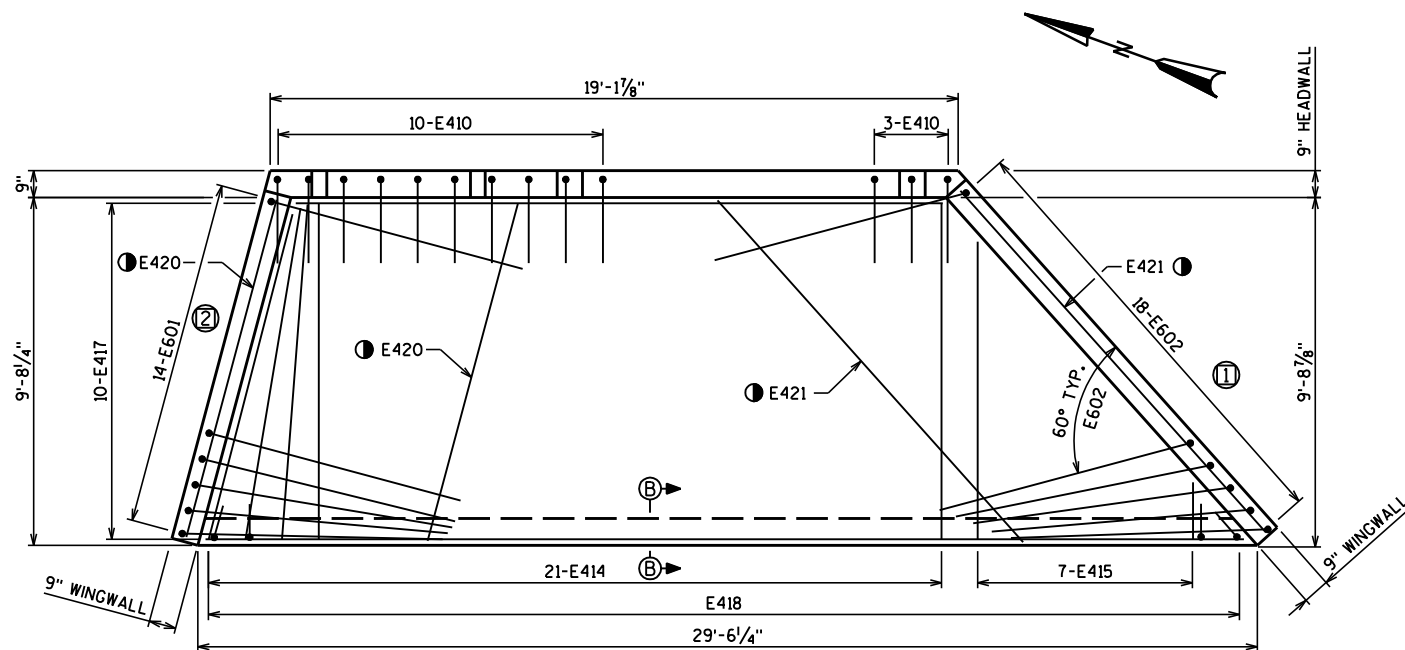
BAR NO.	NO. REQ'D.	LENGTH
E601	1 SERIES OF 14	12'-3" TO 15'-5"
E602	1 SERIES OF 18	14'-5" TO 15'-5"
E415	1 SERIES OF 7	1'-7" TO 8'-3"
E417	1 SERIES OF 10	18'-1" TO 28'-11"

BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
E601	X	14	13'-10"	X	▲	WINGWALL 2 VERTICAL
E602	X	18	14'-11"	X	▲	WINGWALL 1 VERTICAL
E403	X	6	10'-2"			WINGWALL 2 HORIZONTAL
E404	X	1	8'-6"			WINGWALL 2 HORIZONTAL
E405	X	1	5'-4"			WINGWALL 2 HORIZONTAL
E406	X	1	2'-3"			WINGWALL 2 HORIZONTAL
E407	X	8	13'-2"			WINGWALL 1 HORIZONTAL
E408	X	1	8'-0"			WINGWALL 1 HORIZONTAL
E409	X	1	12'-9"			WINGWALL 1 DIAGONAL
E410	X	33	4'-11"	X		CORNER TIES
E411	X	28	4'-0"			HEADWALL OPENING
E412	X	4	18'-10"			HEADWALL HORIZONTAL
E413	X	9	8'-7"			HEADWALL HORIZONTAL & VERTICAL
E414	X	21	9'-4"			APRON MAT - LONGITUDINAL
E415	X	7	4'-11"		▲	APRON MAT - LONGITUDINAL
E416	X	1	10'-2"			WINGWALL 2 DIAGONAL
E417	X	10	23'-6"		▲	APRON MAT - TRANSVERSE
E418	X	30	3'-7"	X		CUT OFF WALL VERTICAL
E419	X	4	28'-11"			CUT OFF WALL HORIZONTAL
E420	X	2	9'-8"			BOTTOM MAT - TIES FOR E601
E421	X	2	12'-8"			BOTTOM MAT - TIES FOR E602



SECTION B-B



PLAN

PROJECT NUMBER: 4984-01-57

HWY: CTH A

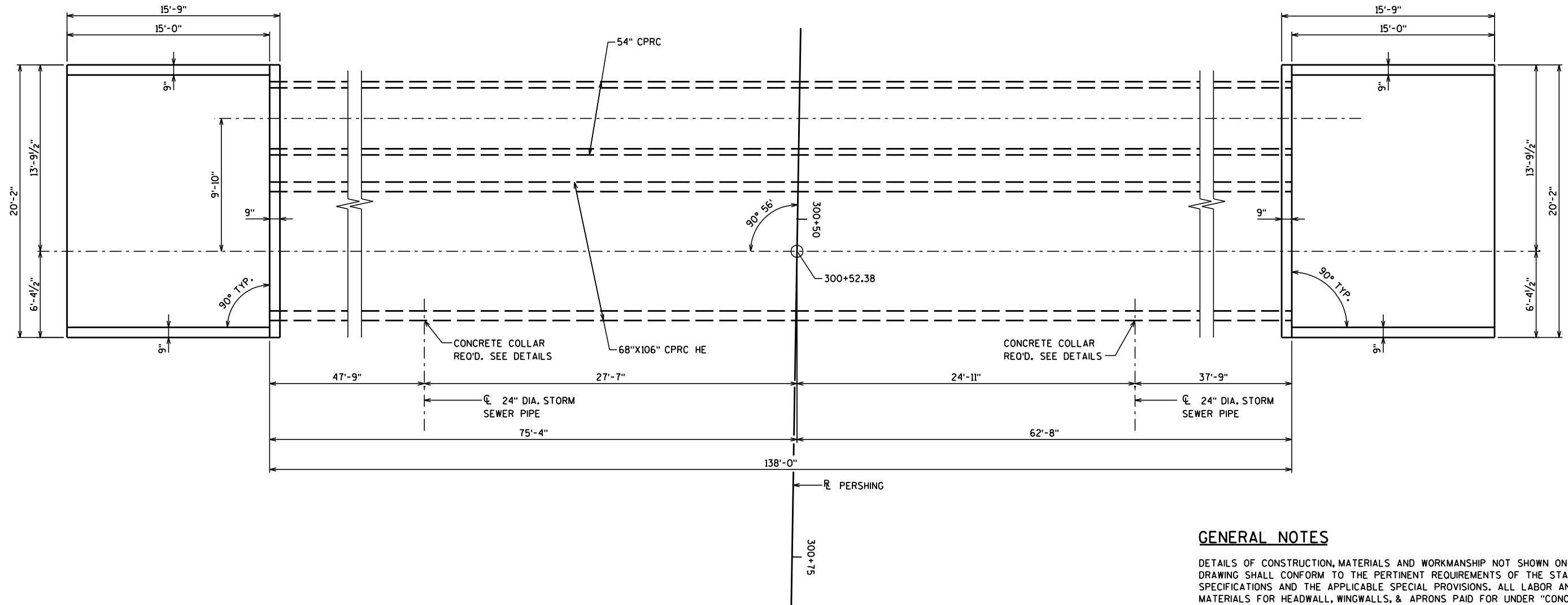
COUNTY: OUTAGAMIE

C-44-119 APRON DETAILS

SCALE, FEET 0

SHEET NO:

E



CULVERT LAYOUT PLAN

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. ALL LABOR AND MATERIALS FOR HEADWALL, WINGWALLS, & APRONS PAID FOR UNDER "CONCRETE MASONRY ENDWALLS."

APRON AND 68"x106" C-PRC HE ARE SET 6" BELOW CHANNEL FLOW LINE. PLACE BREAKER RUN TO CHANNEL ELEVATION ACCORDING TO CONSTRUCTION DETAILS SHOWN ELSEWHERE.

FILL SLOPES FLATTER THAN 2 1/2:1 SHALL BE WARPED TO MEET THE TOP OF THE WINGWALLS.

ALL STEEL REINFORCEMENT AND WELDED STEEL WIRE FABRIC SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS NOTED OTHERWISE.

DESIGN DATA

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY ————— f'c = 3,500 psi

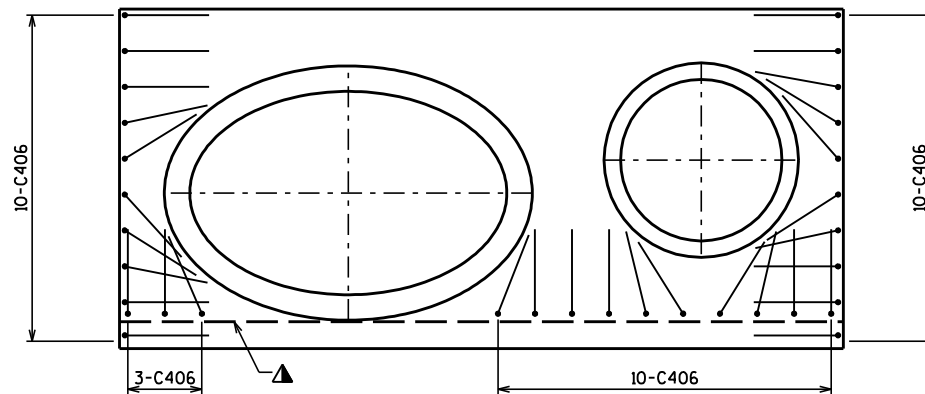
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ————— fy = 60,000 psi

NOTES:

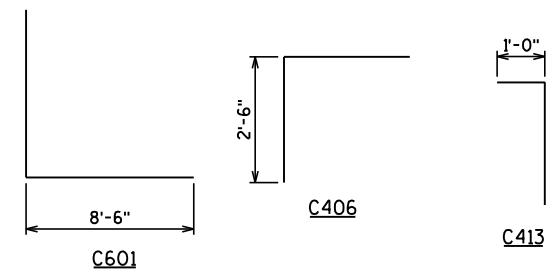
PLACE BARS AS SHOWN. SPACE AT 1'-0" ± UNLESS NOTED OTHERWISE. ELEVATION VIEWS SHOWN SEPARATE FOR CLAIRITY, PLACE BARS 2" CLEAR FROM BACKFACE OF HEADWALL.

● PLACED ON BOTTOM MAT WITH D601OR D615.

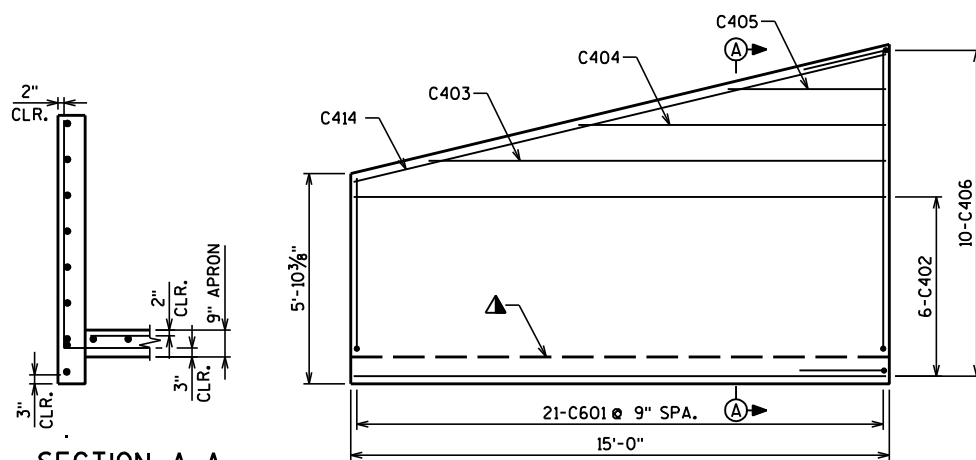
▲ BOTTOM OF APRON EL. 772.91



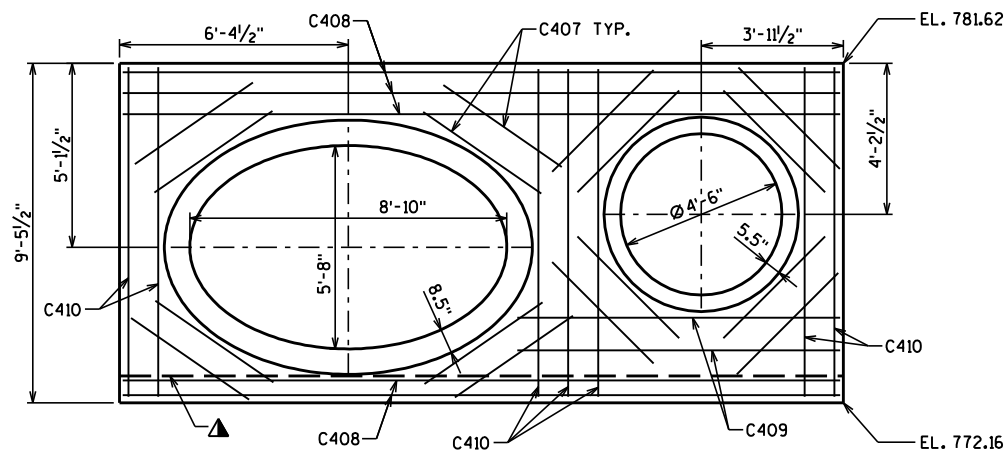
HEADWALL ELEVATION - CORNER TIE LAYOUT



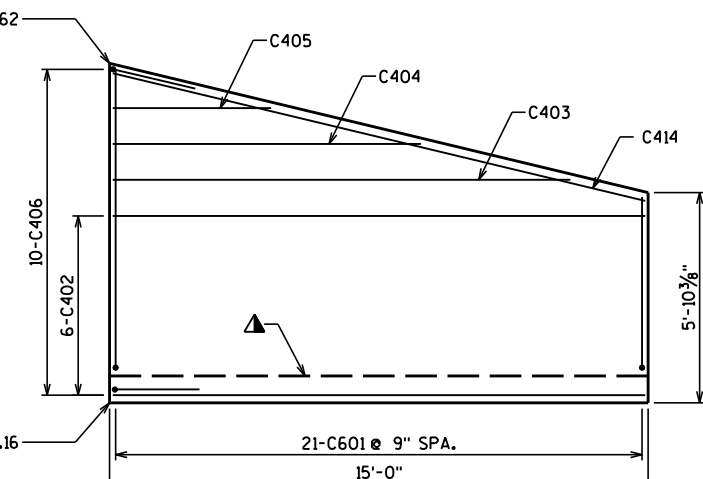
BAR BENDING DIAGRAMS



NE WINGWALL ELEVATION

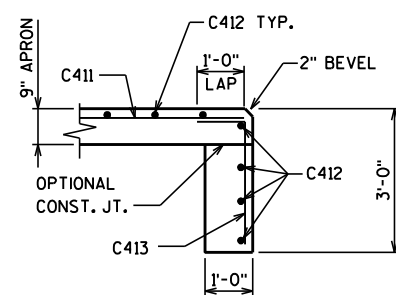
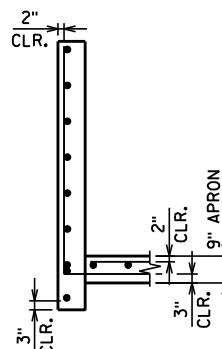


UPSTREAM HEADWALL ELEVATION

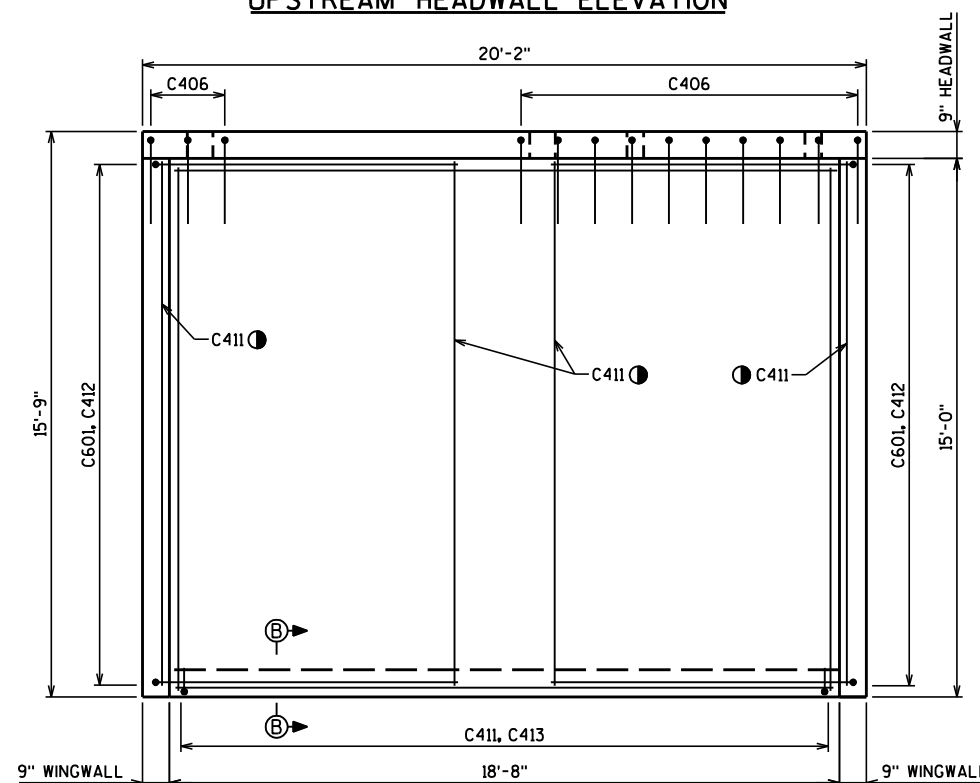


NW WINGWALL ELEVATION

SECTION A-A



SECTION B-B



PLAN

BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
C601	X	42	14'-10"	X	▲	WINGWALL VERTICAL
C402	X	12	15'-5"			WINGWALL HORIZONTAL
C403	X	2	13'-2"			WINGWALL HORIZONTAL
C404	X	2	9'-0"			WINGWALL HORIZONTAL
C405	X	2	4'-10"			WINGWALL HORIZONTAL
C406	X	33	4'-11"	X		CORNER TIES
C407	X	16	4'-0"			HEADWALL OPENING
C408	X	5	19'-10"			HEADWALL HORIZONTAL
C409	X	2	9'-2"			HEADWALL HORIZONTAL
C410	X	7	9'-0"			HEADWALL VERTICAL
C411	X	23	14'-8"			APRON MAT - LONGITUDINAL
C412	X	19	18'-4"			APRON MAT - TRANSVERSE & CUT OFF WALL
C413	X	19	3'-6"	X		CUT OFF WALL VERTICAL
C414	X	2	15'-0"			WINGWALL DIAGONAL

BAR SERIES

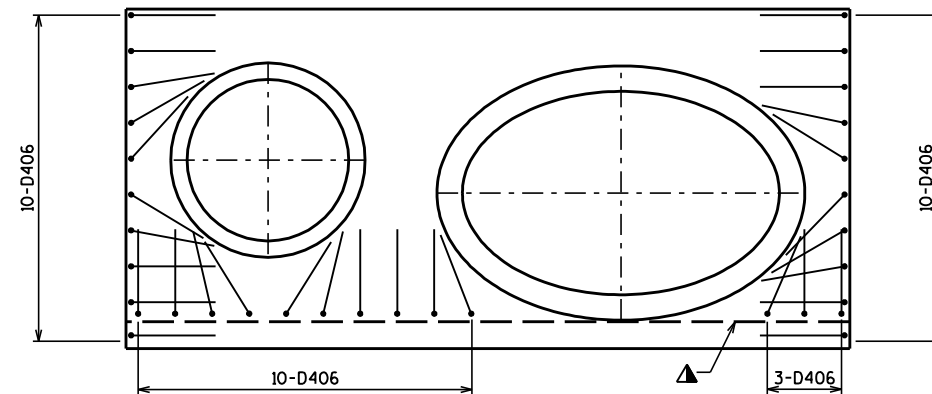
BAR NO.	NO. REQ'D.	LENGTH
C601	2 SERIES OF 21	13'-1" TO 16'-7"

NOTES:

PLACE BARS AS SHOWN. SPACE AT 1'-0" ± UNLESS NOTED OTHERWISE. ELEVATION VIEWS SHOWN SEPARATE FOR CLAIRITY, PLACE BARS 2" CLEAR FROM BACKFACE OF HEADWALL.

● PLACED ON BOTTOM MAT WITH D601 OR D615.

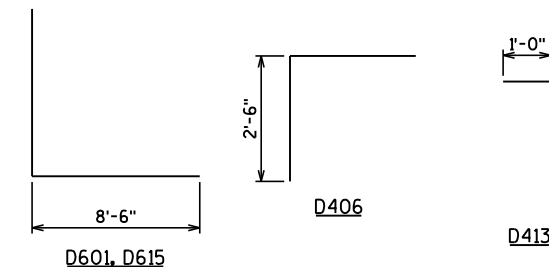
▲ BOTTOM OF APRON EL. 772.65



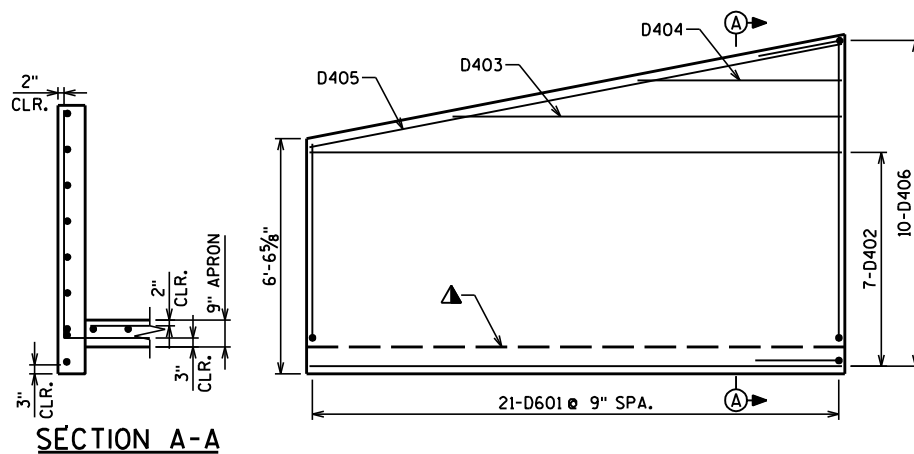
HEADWALL ELEVATION - CORNER TIE LAYOUT

BAR SERIES

BAR NO.	NO. REQ'D.	LENGTH
D601	1 SERIES OF 21	13'-9" TO 16'-7"
D615	1 SERIES OF 21	11'-7" TO 16'-7"
D416	1 SERIES OF 4	4'-4" TO 12'-10"

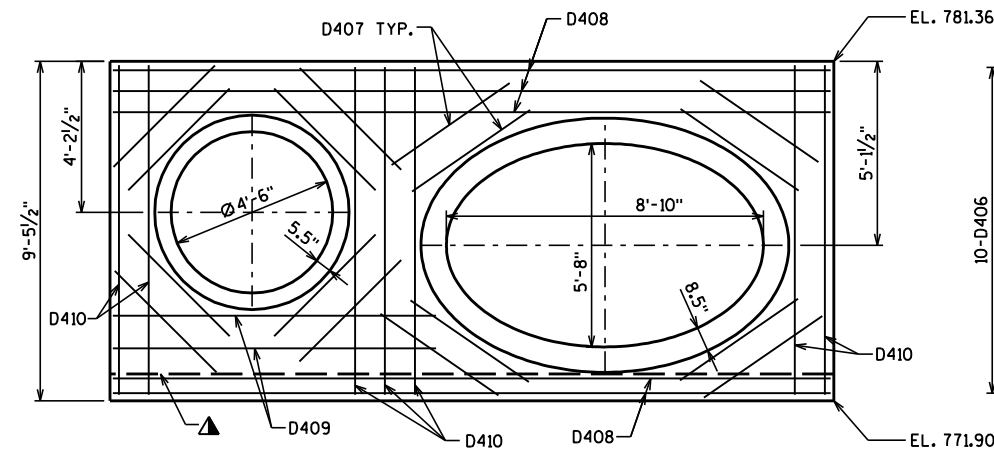


BAR BENDING DIAGRAM

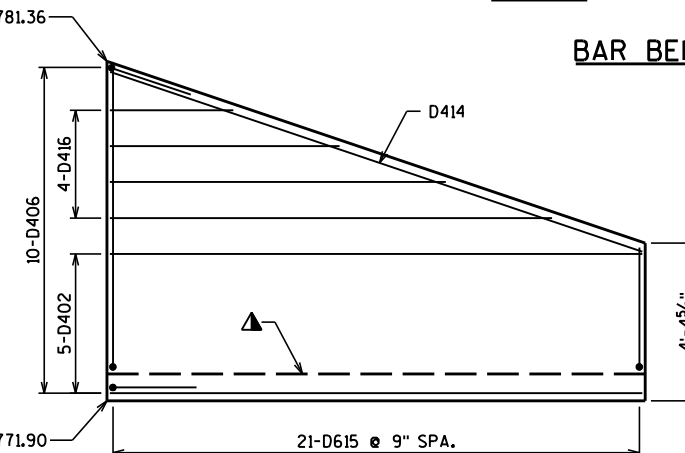


SECTION A-A

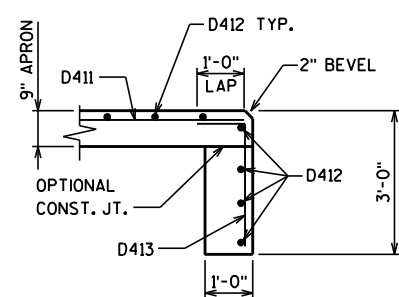
SW WINGWALL ELEVATION



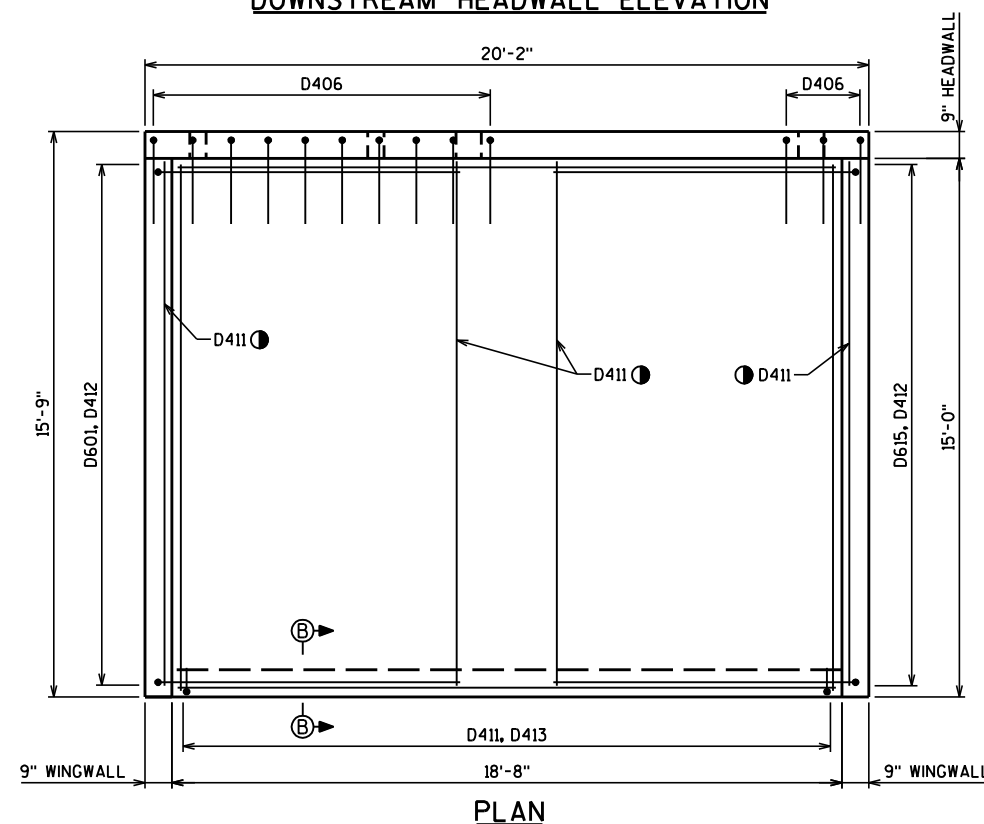
DOWNSTREAM HEADWALL ELEVATION



SE WINGWALL ELEVATION



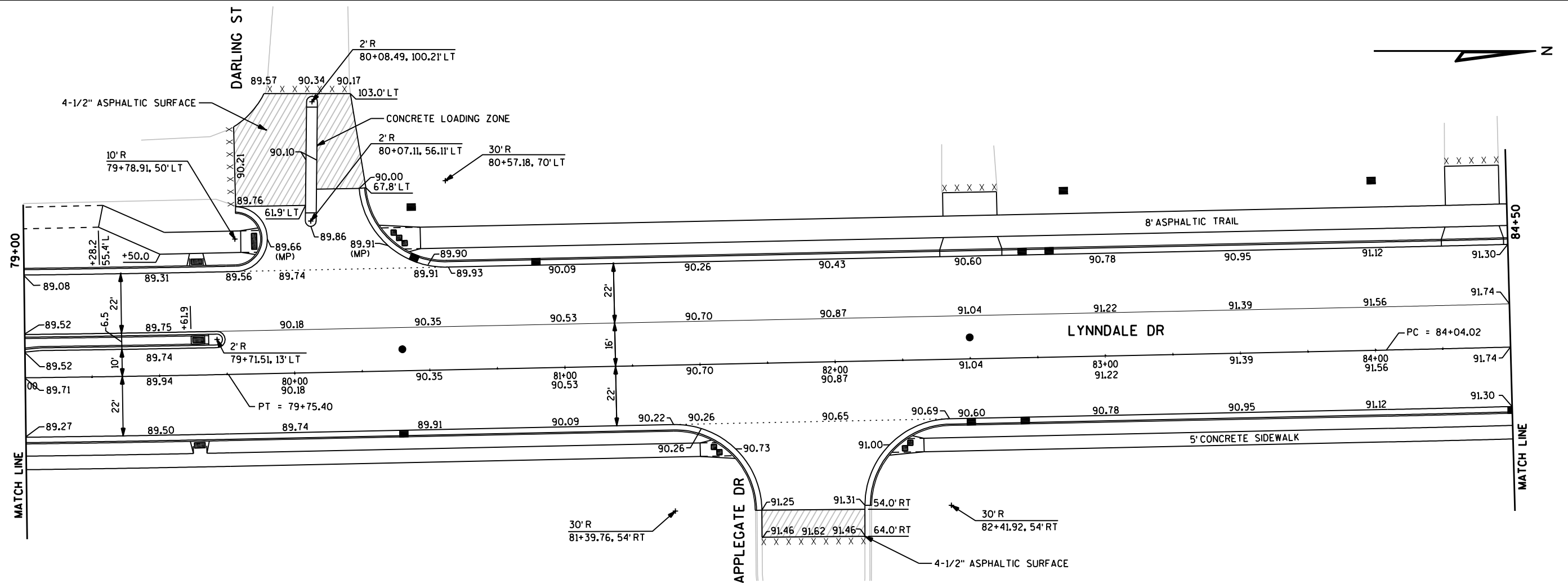
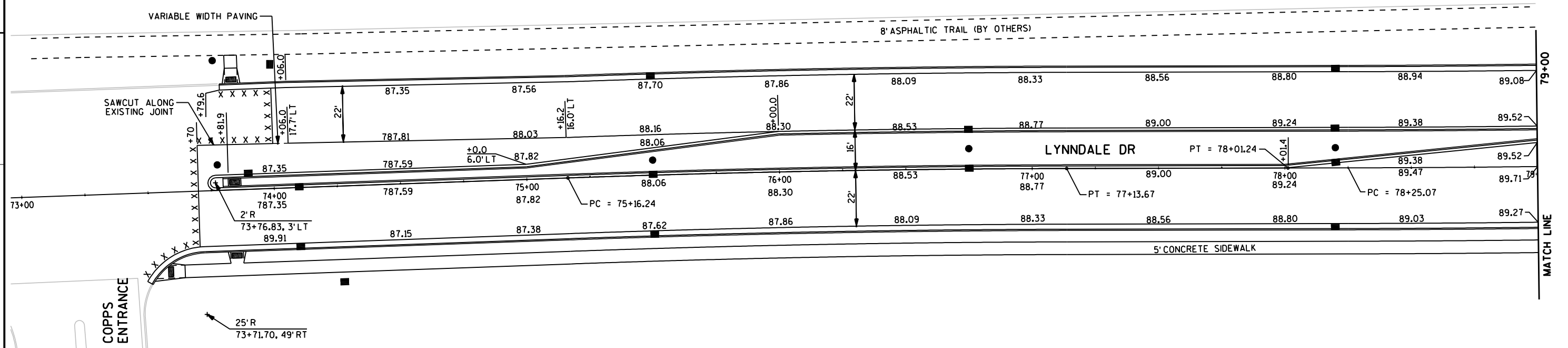
SECTION B-B



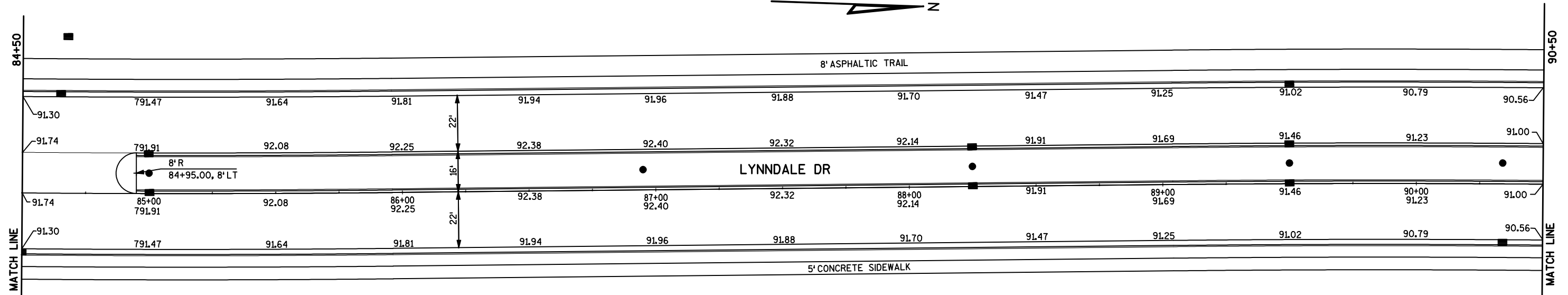
PLAN

BILL OF BARS

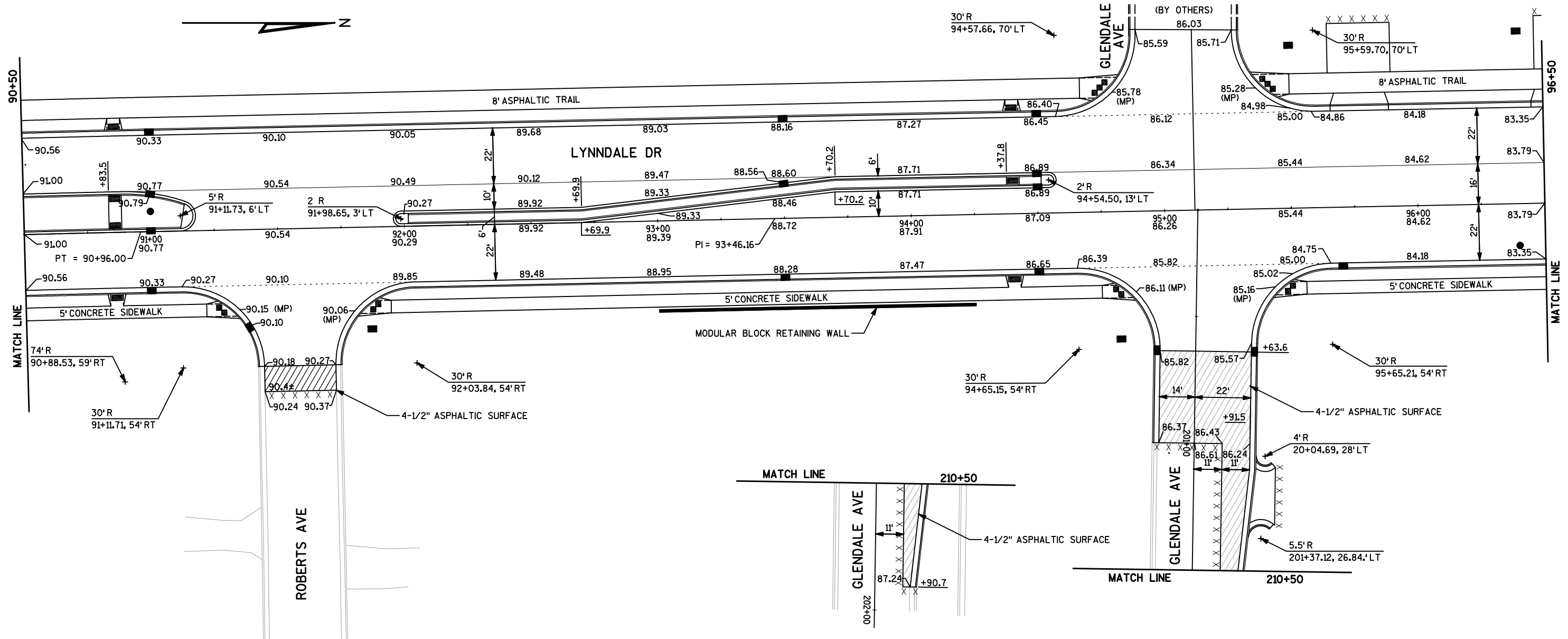
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
D601	X	21	15'-2"	X	Δ	SW WINGWALL VERTICAL
D402	X	12	15'-6"			WINGWALL HORIZONTAL
D403	X	1	10'-10"			SW WINGWALL HORIZONTAL
D404	X	1	5'-8"			SW WINGWALL HORIZONTAL
D405	X	1	14'-10"			SW WINGWALL DIAGONAL
D406	X	33	4'-11"	X		CORNER TIES
D407	X	16	4'-0"			HEADWALL OPENING
D408	X	5	19'-10"			HEADWALL HORIZONTAL
D409	X	2	9'-2"			HEADWALL HORIZONTAL
D410	X	7	9'-0"			HEADWALL VERTICAL
D411	X	23	14'-8"			APRON MAT - LONGITUDINAL
D412	X	19	18'-4"			APRON MAT - TRANSVERSE & CUT OFF WALL
D413	X	19	3'-6"	X		CUT OFF WALL VERTICAL
D414	X	1	15'-5"			SE WINGWALL DIAGONAL
D615	X	21	14'-3"	X	Δ	SE WINGWALL VERTICAL
D416	X	4	8'-7"		Δ	SE WINGWALL HORIZONTAL



2



2



PROJECT NO: 4984-01-57

HWY: CTH A

COUNTY: OUTAGAMIE

PAVING DETAILS

SHEET

E

FILE NAME : F:\Transportation\E1672A04\Sheets\Plan\E1672PD02.dgn

PLOT DATE : 7/18/2011 9:10:52 AM

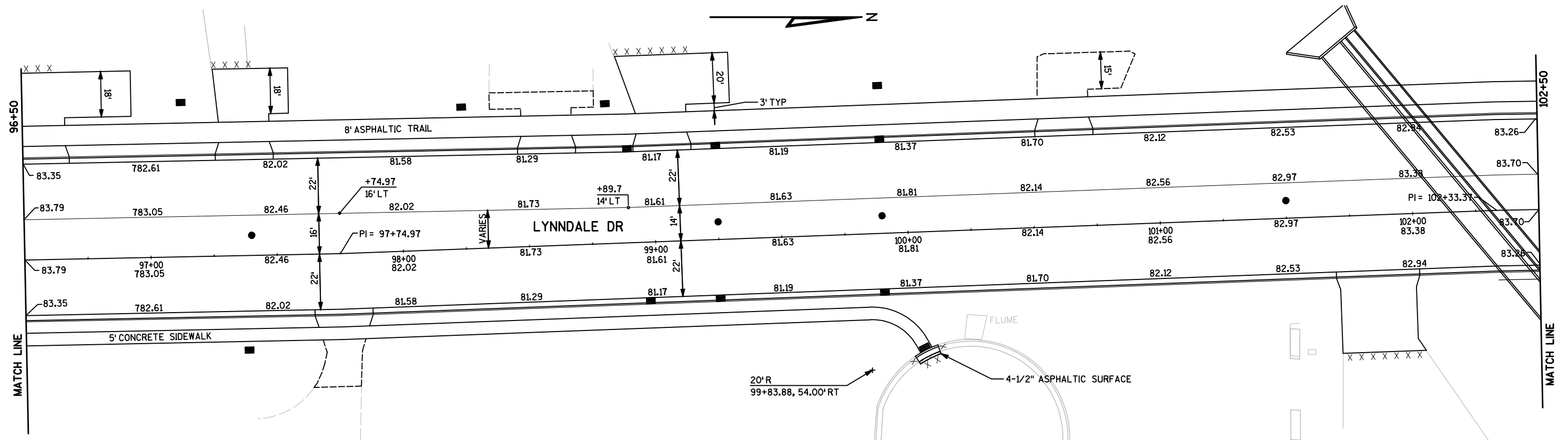
PLOT BY : OMNI - westbrod

PLOT NAME :

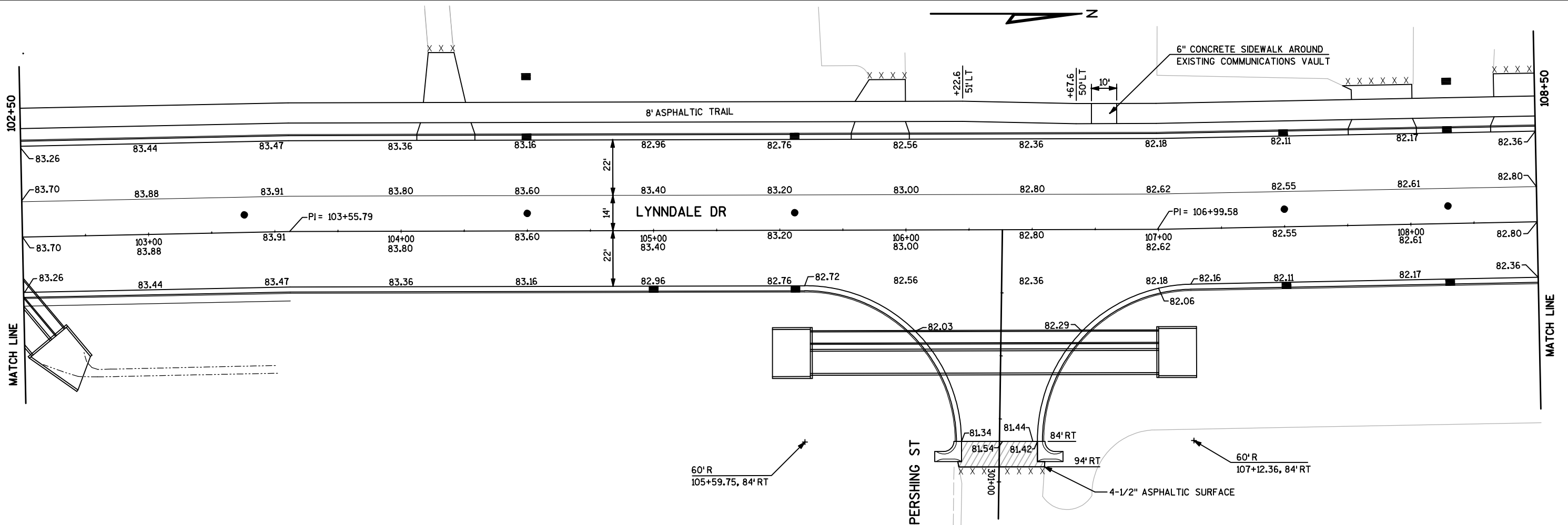
PLOT SCALE : _SCALE_

WISDOT/CADDs SHEET 42

2



2



PROJECT NO: 4984-01-57

HWY: CTH A

COUNTY: OUTAGAMIE

PAVING DETAILS

SHEET

E

FILE NAME : F:\Transportation\E1672A04\Sheets\Plan\E1672PD03.dgn

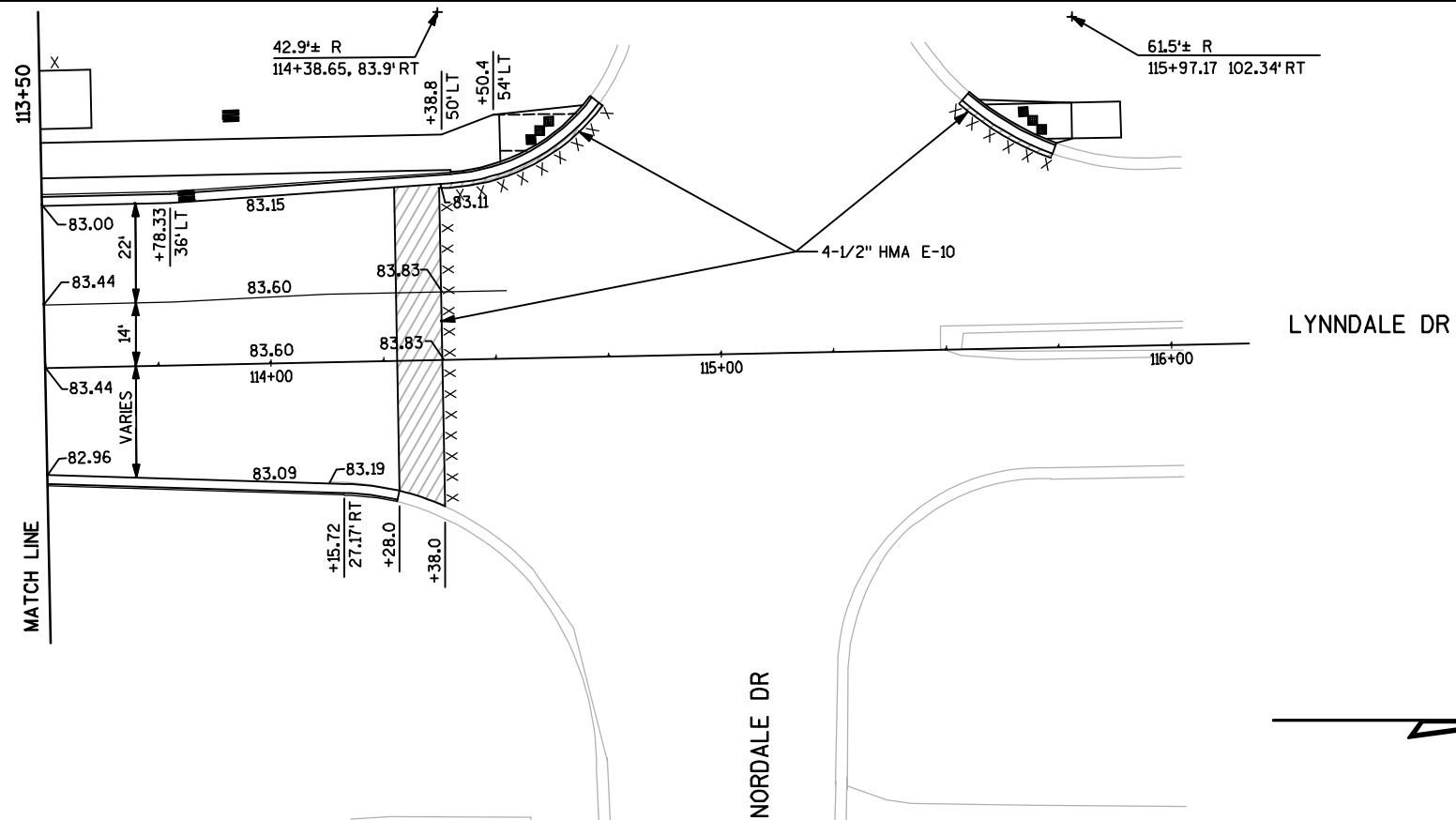
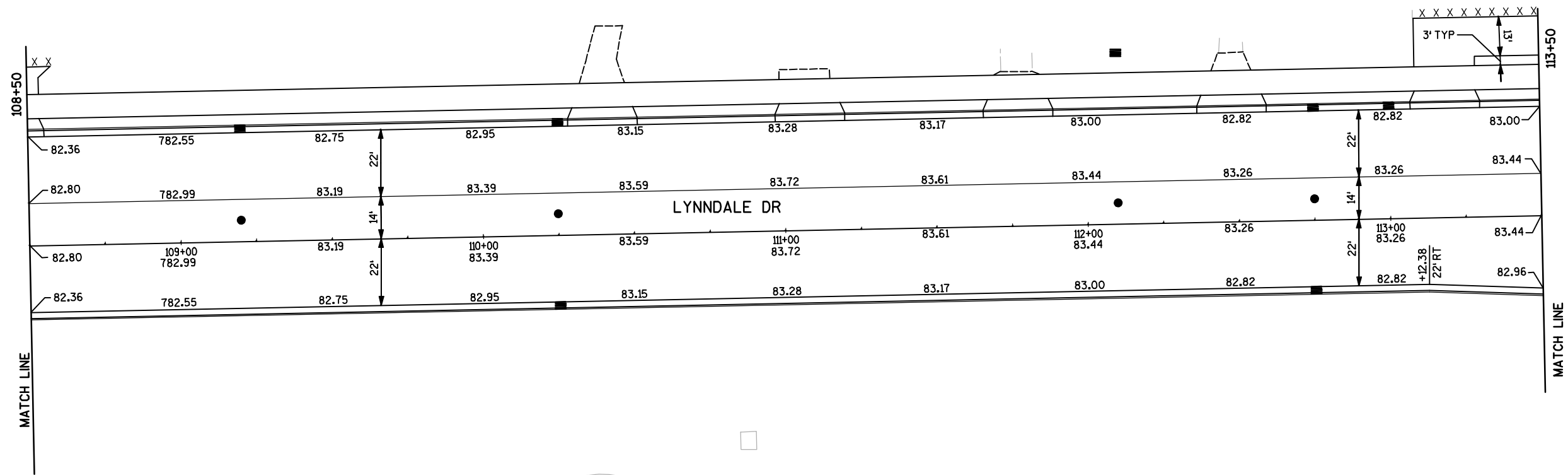
PLOT DATE : 10/25/2011 1:09:14 PM

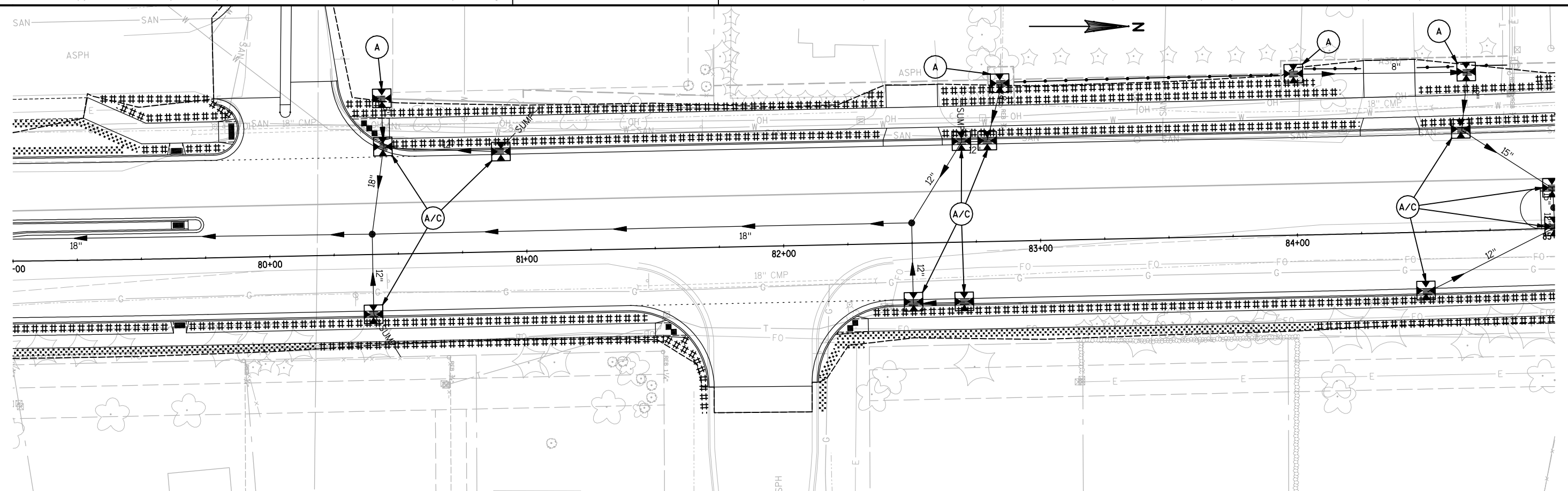
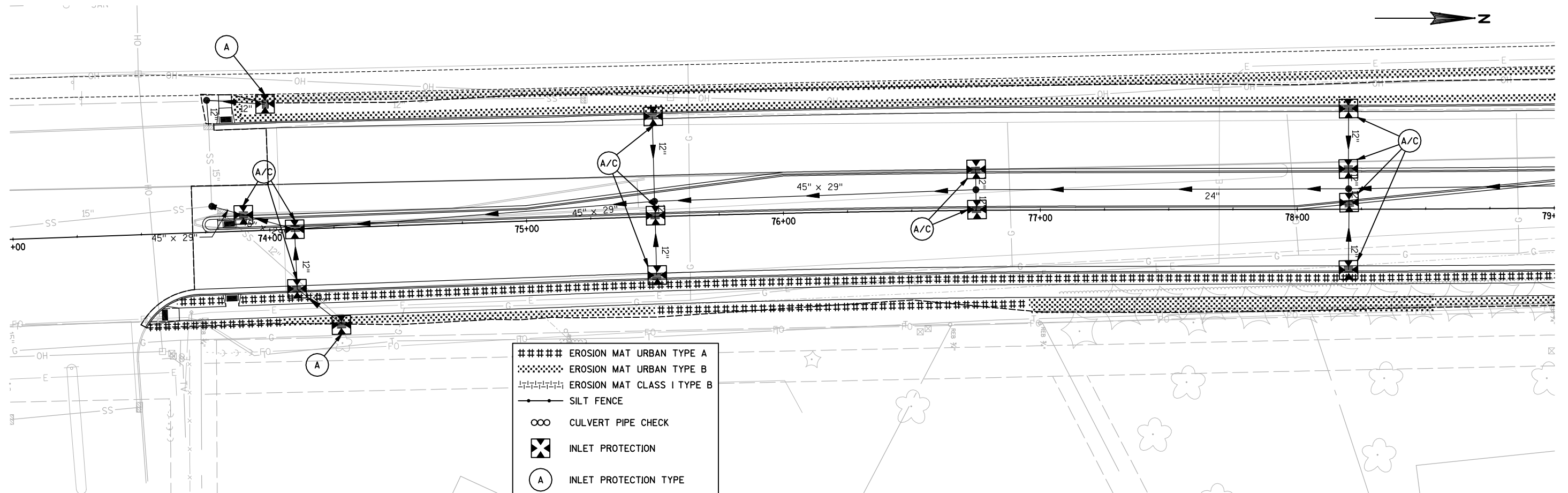
PLOT BY : OMNI - perryd

PLOT NAME :

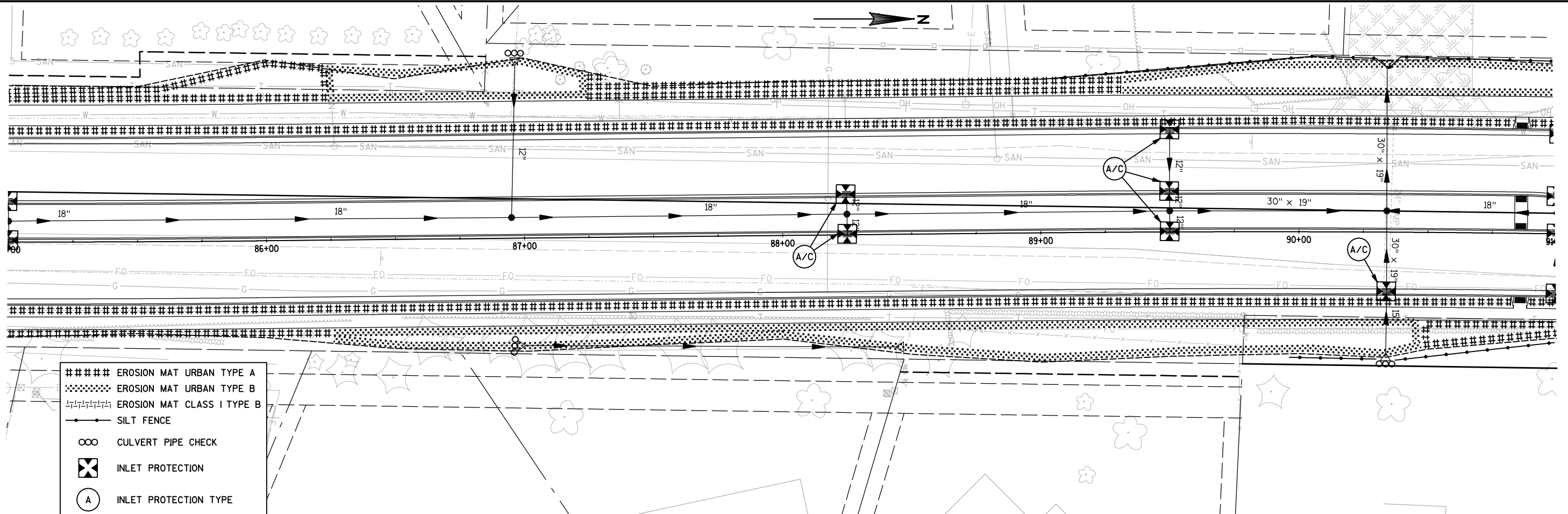
PLOT SCALE : _SCALE_

WISDOT/CADDs SHEET 42

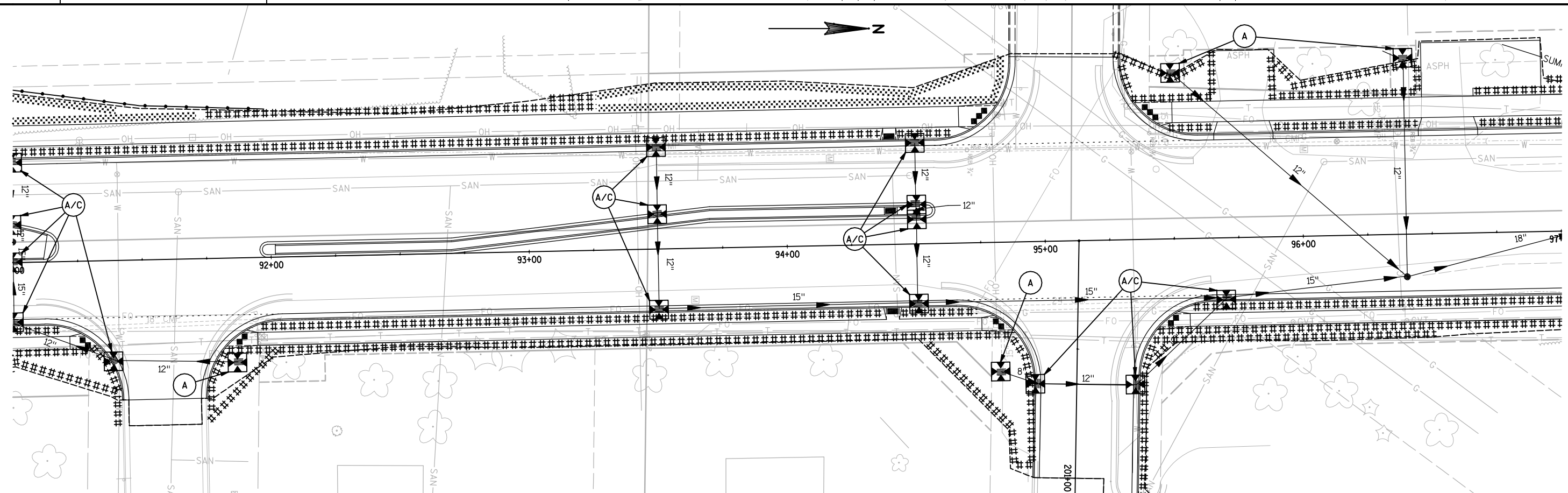




2



2



PROJECT NO: 4984-01-57

HWY: CTH A

COUNTY: OUTAGAMIE

EROSION CONTROL DETAIL

SHEET

E

FILE NAME : F:\Transportation\E1672A04\Sheets\Plan\E1672EC02.dgn

PLOT DATE : 10/26/2011 9:59:02 AM

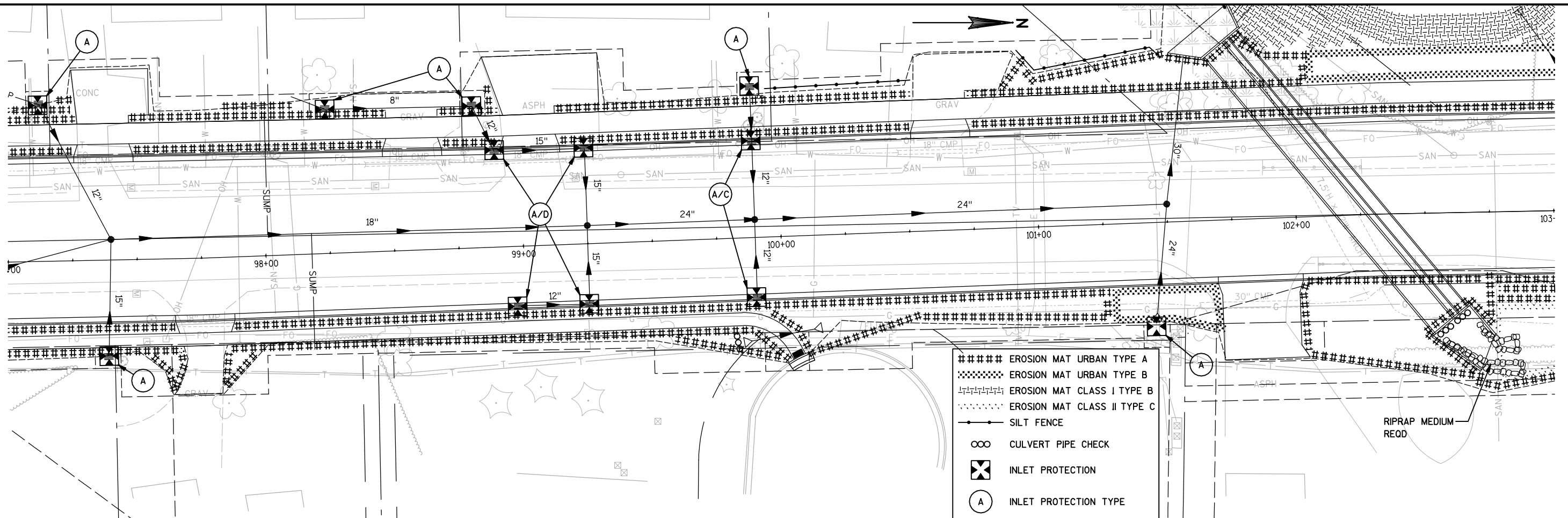
PLOT BY : OMNI - perryd

PLOT NAME :

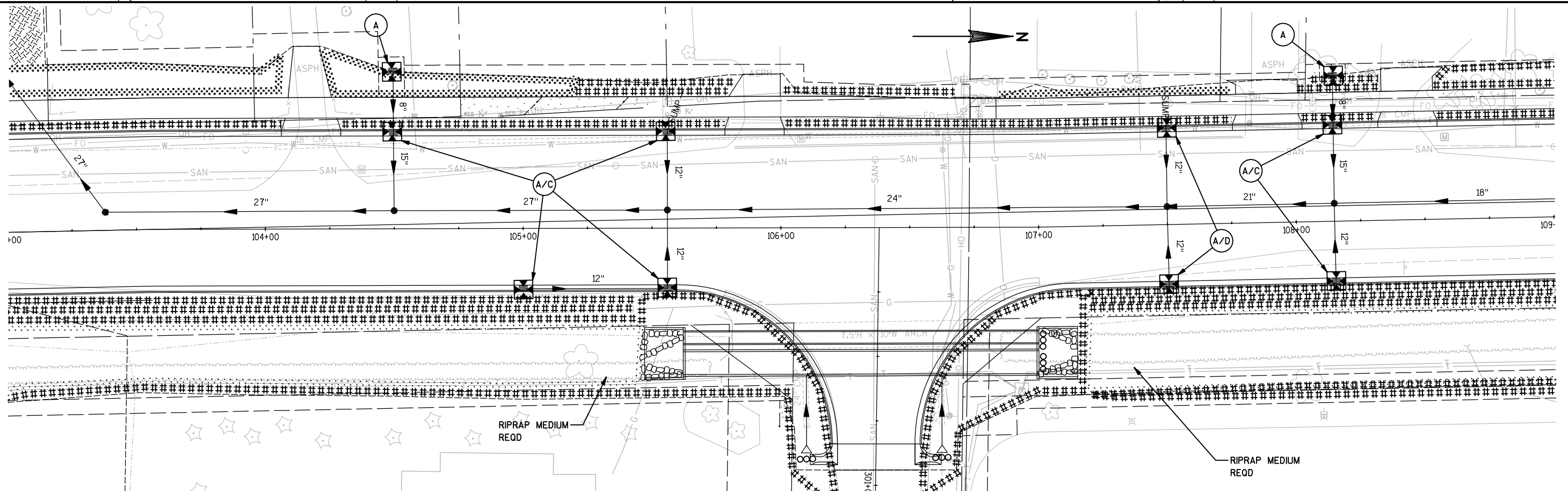
PLOT SCALE : _SCALE_

WISDOT/CADDs SHEET 42

2



2



PROJECT NO: 4984-01-57

HWY: CTH A

COUNTY: OUTAGAMIE

EROSION CONTROL DETAIL

SHEET

E

FILE NAME : F:\Transportation\E1672A04\Sheets\Plan\E1672EC03.dgn

PLOT DATE : 10/26/2011 10:00:09 AM

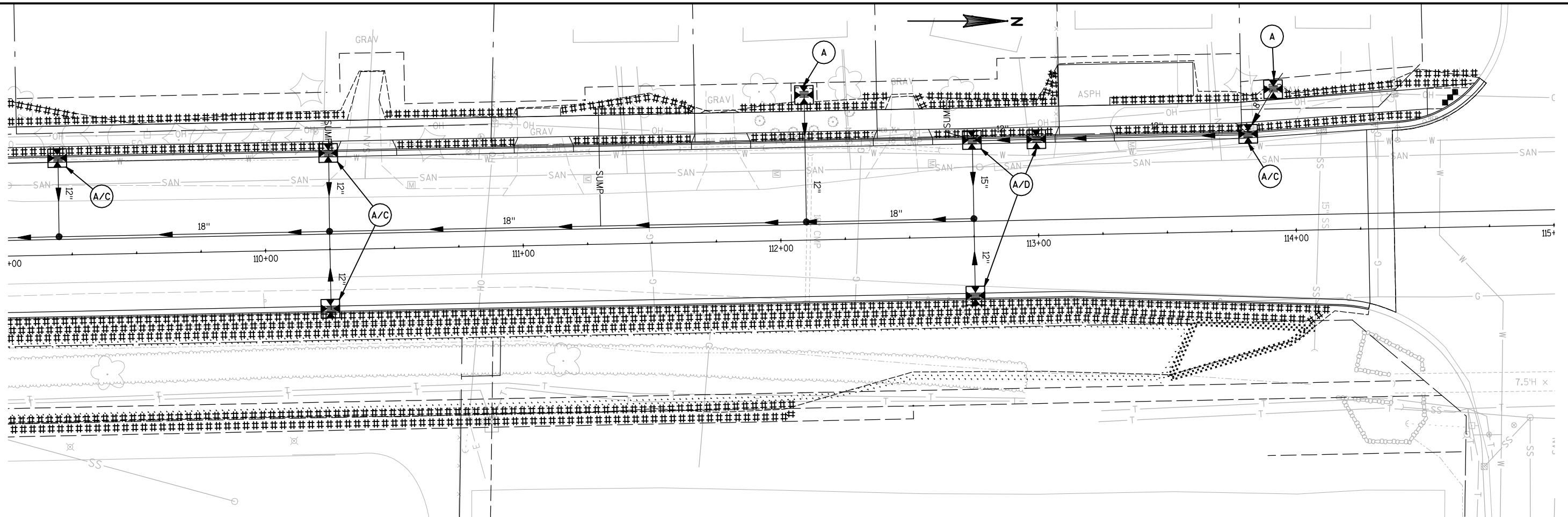
PLOT BY : OMNI - perryd

PLOT NAME :

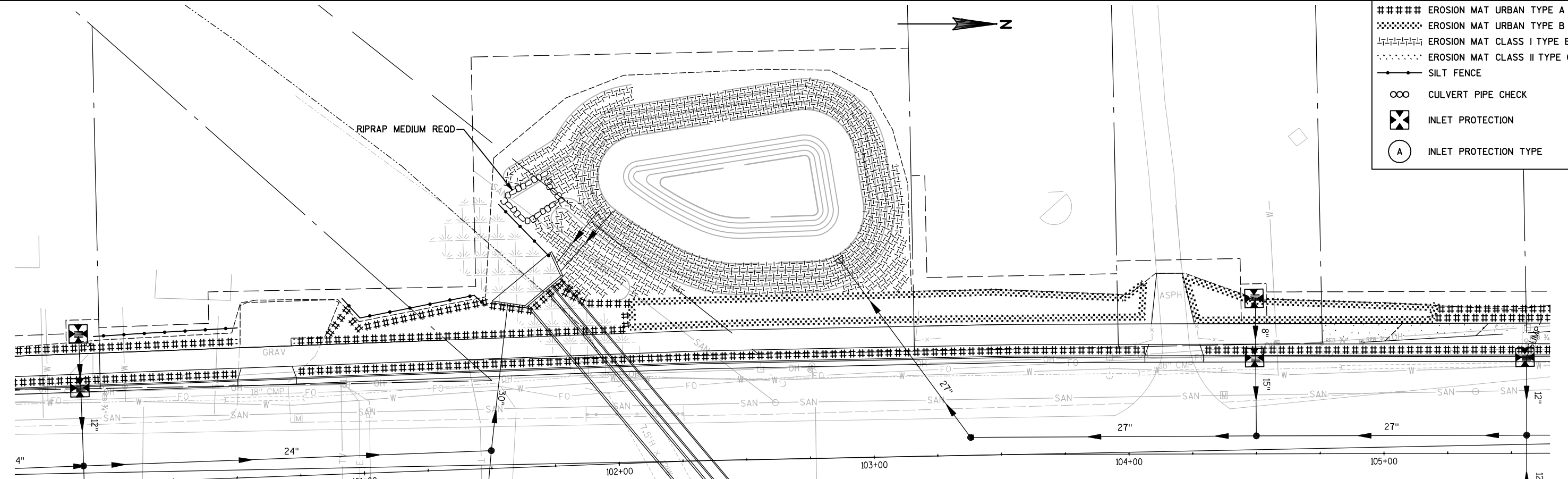
PLOT SCALE : _SCALE_

WISDOT/CADDs SHEET 42

2



2



- ##### EROSION MAT URBAN TYPE A
- ##### EROSION MAT URBAN TYPE B
- ##### EROSION MAT CLASS I TYPE B
- ##### EROSION MAT CLASS II TYPE C
- SILT FENCE
- ∞ CULVERT PIPE CHECK
- ⊗ INLET PROTECTION
- (A) INLET PROTECTION TYPE

PROJECT NO: 4984-01-57

HWY: CTH A

COUNTY: OUTAGAMIE

EROSION CONTROL DETAIL

SHEET

E

FILE NAME : F:\Transportation\E1672A04\Sheets\Plan\E1672EC04.dgn

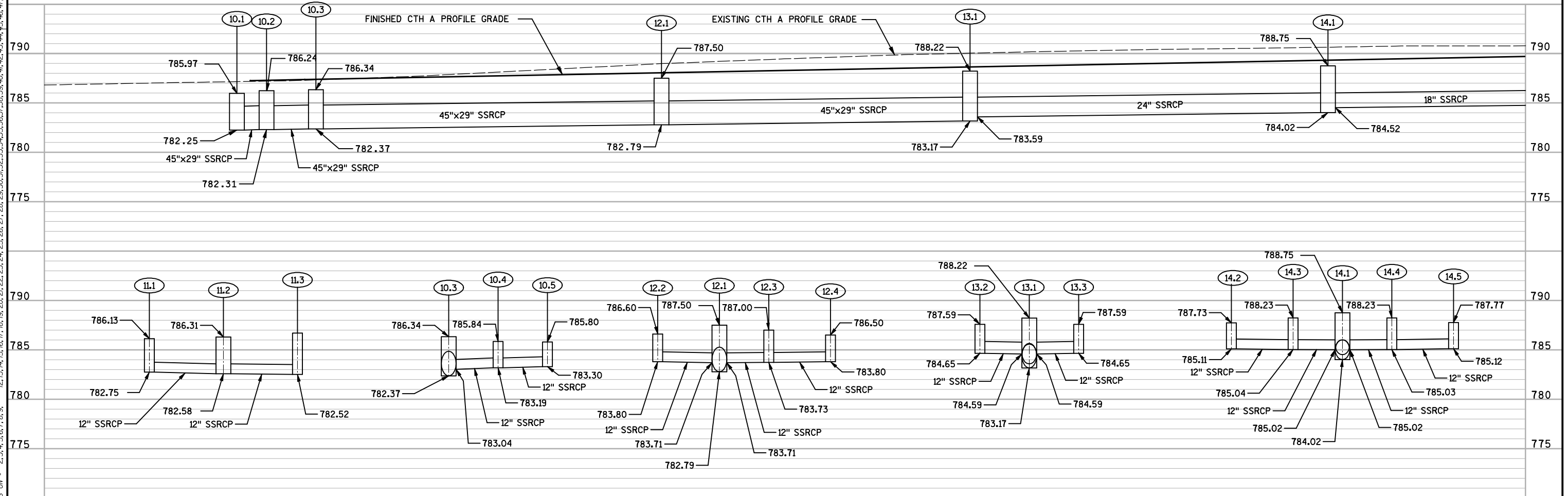
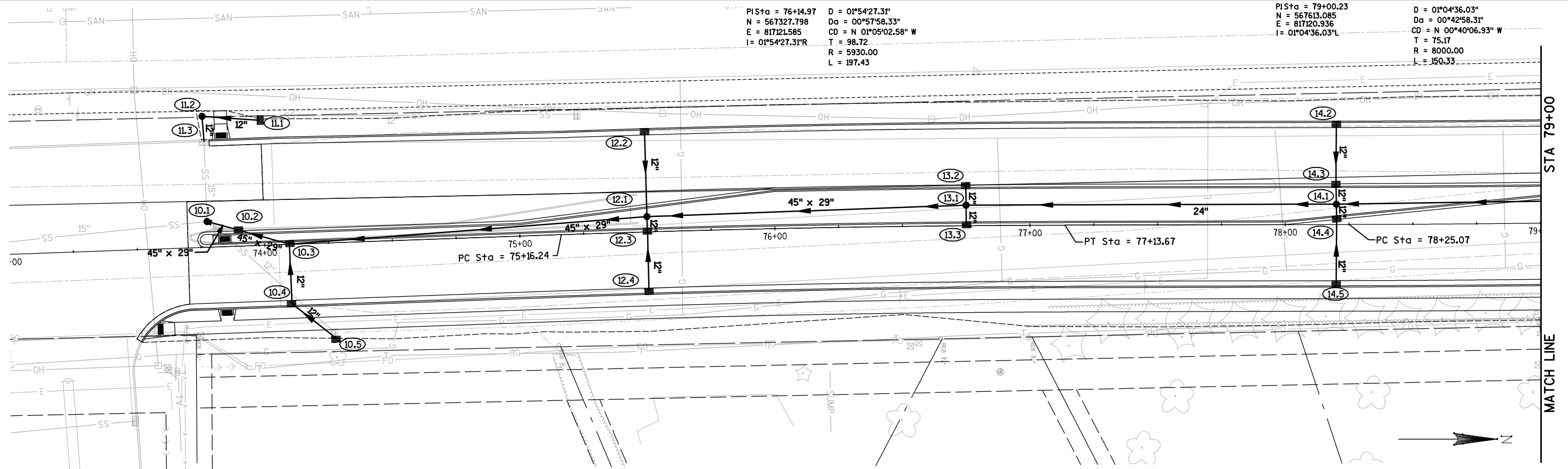
PLOT DATE : 10/26/2011 10:01:18 AM

PLOT BY : OMNI - perryd

PLOT NAME :

PLOT SCALE : _SCALE_

WISDOT/CADDs SHEET 42



PROJECT NUMBER: 4984-01-57

HWY: CTH A

COUNTY: OUTAGAMIE

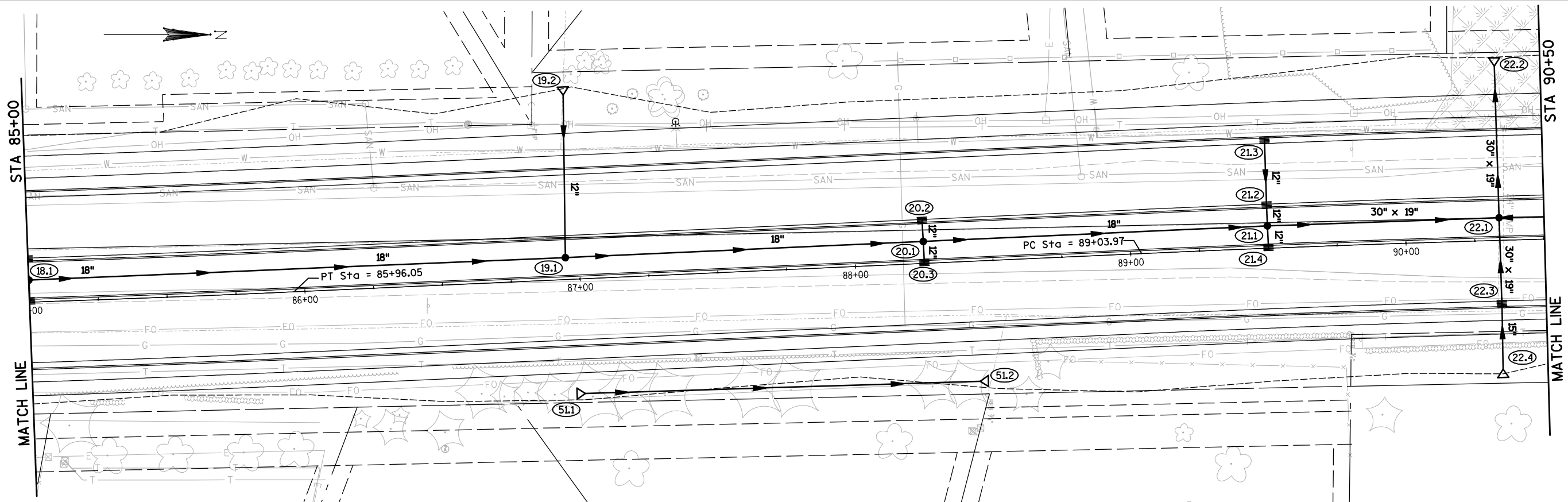
STORM SEWER:

SCALE, FEET

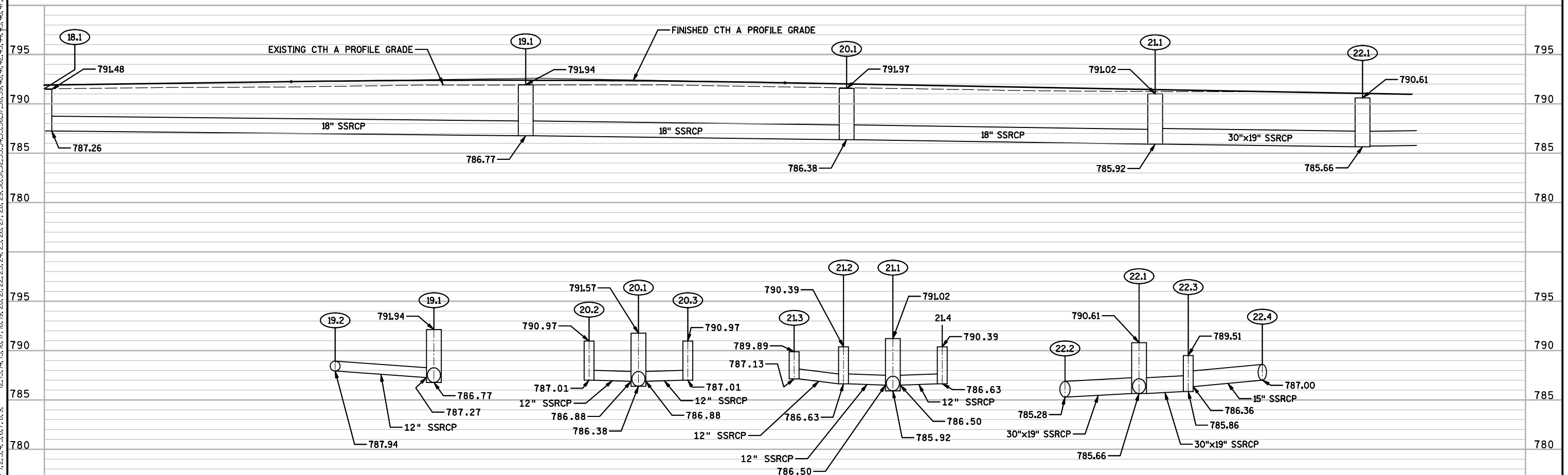
SHEET NO:

E





PIS α = 89+99.99
 N = 568712.211
 E = 817085.777
 I = 01°22'31.23" R
 D = 01°22'31.23"
 D α = 00°42'58.31"
 CD = N 01°53'40.56" W
 T = 96.02
 R = 8000.00
 L = 192.03



PROJECT NUMBER: 4984-01-57

HWY: CTH A

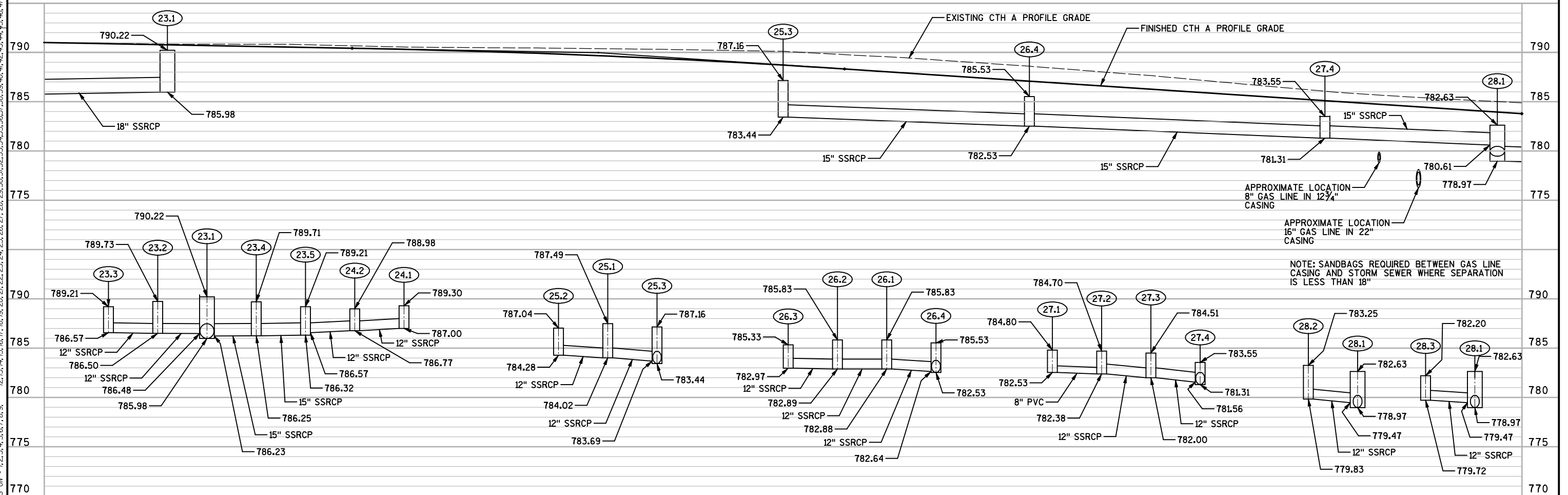
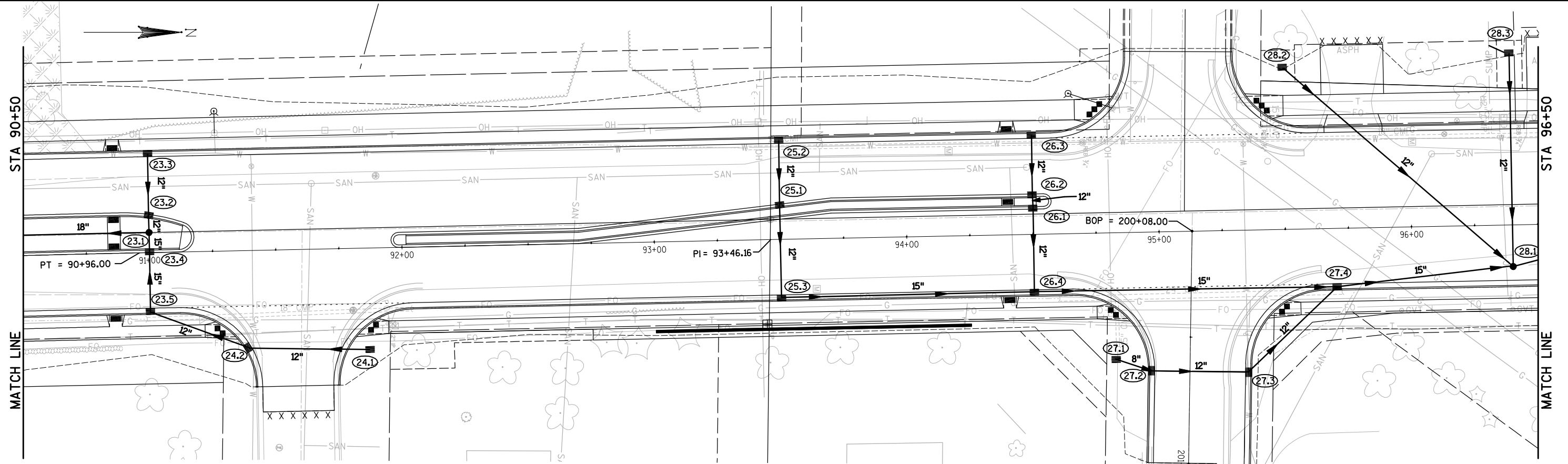
COUNTY: OUTAGAMIE

STORM SEWER:

SCALE, FEET

SHEET NO:

E



PROJECT NUMBER: 4984-01-57

HWY: CTH A

COUNTY: OUTAGAMIE

STORM SEWER:

SCALE, FEET

SHEET NO:

E

FILE NAME : F:\Transportation\E1672A04\Sheets\Plan\E1672SS04A.dgn

PLOT DATE : 10/26/2011 9:19:25 AM

PLOT BY : perryd

PLOT NAME :

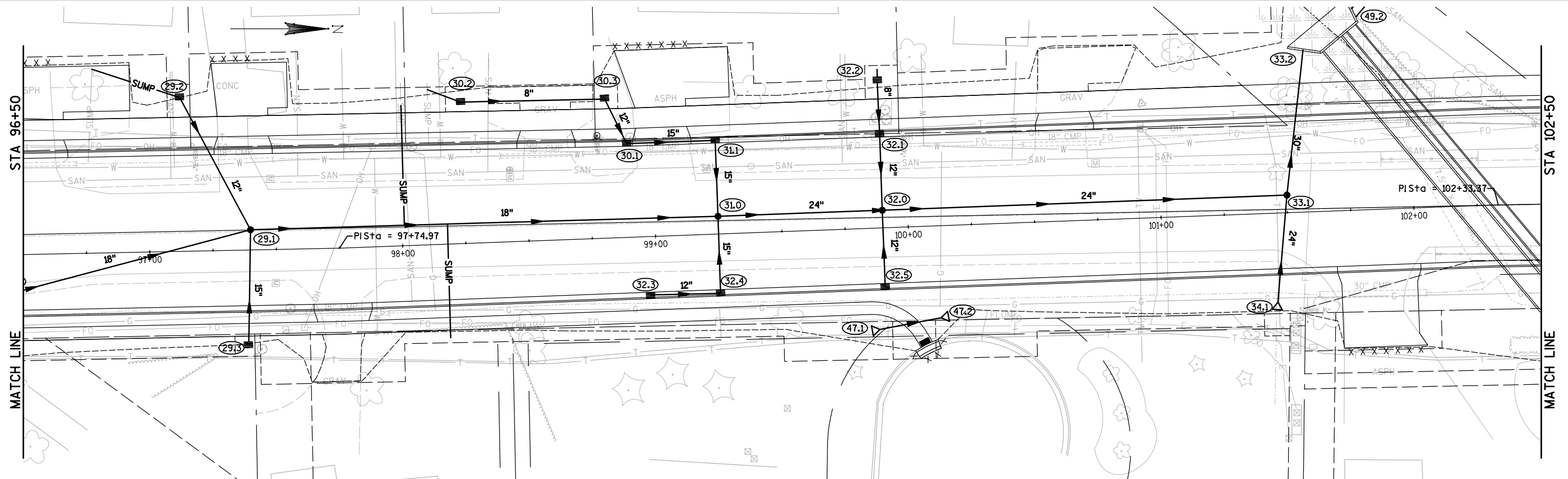
ORG DATE :

Originator : OMNNI ASSOCIATES, INC.

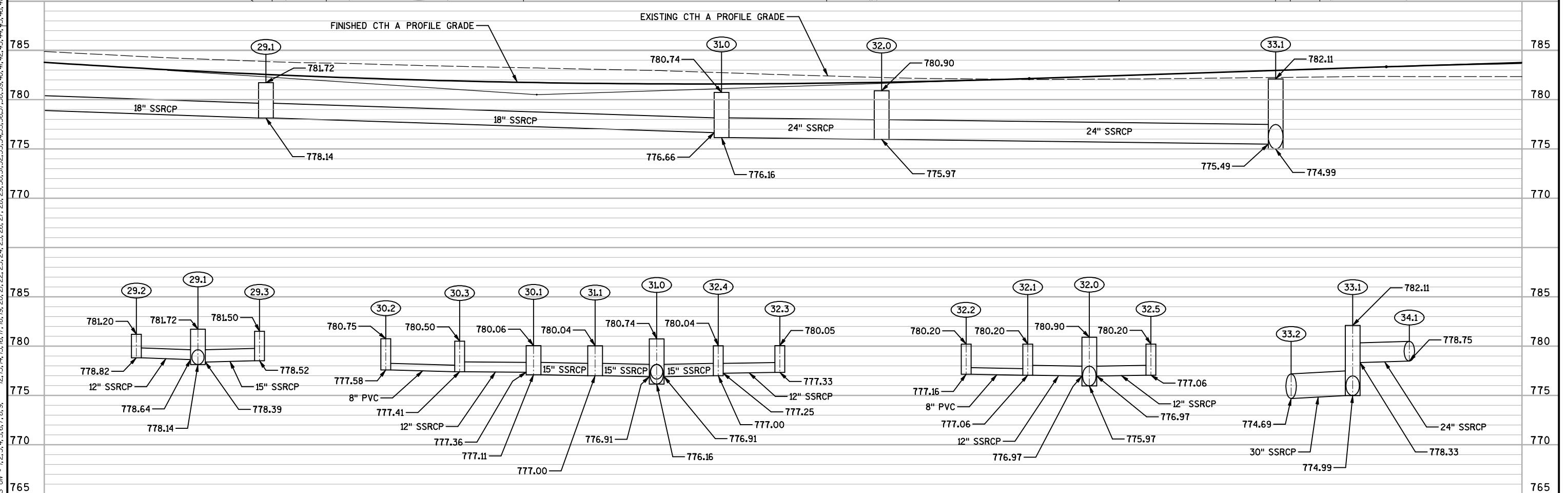
PLOT SCALE : _SCALE_

WISDOT/CADDs SHEET 41

2



2



PROJECT NUMBER: 4984-01-57

HWY: CTH A

COUNTY: OUTAGAMIE

STORM SEWER:

SCALE, FEET

SHEET NO:

E

FILE NAME : F:\Transportation\E1672A04\Sheets\Plan\E1672SS05A.dgn

PLOT DATE : 10/26/2011 9:27:52 AM

PLOT BY : perryd

PLOT NAME :

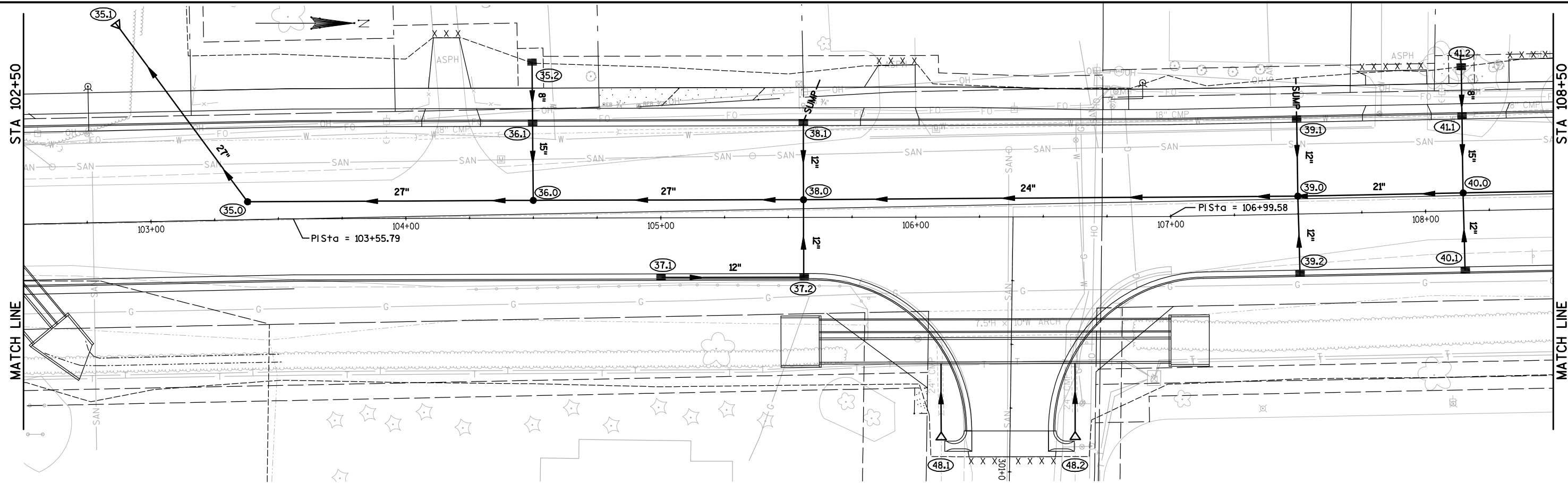
ORG DATE :

Originator : OMNI ASSOCIATES, INC.

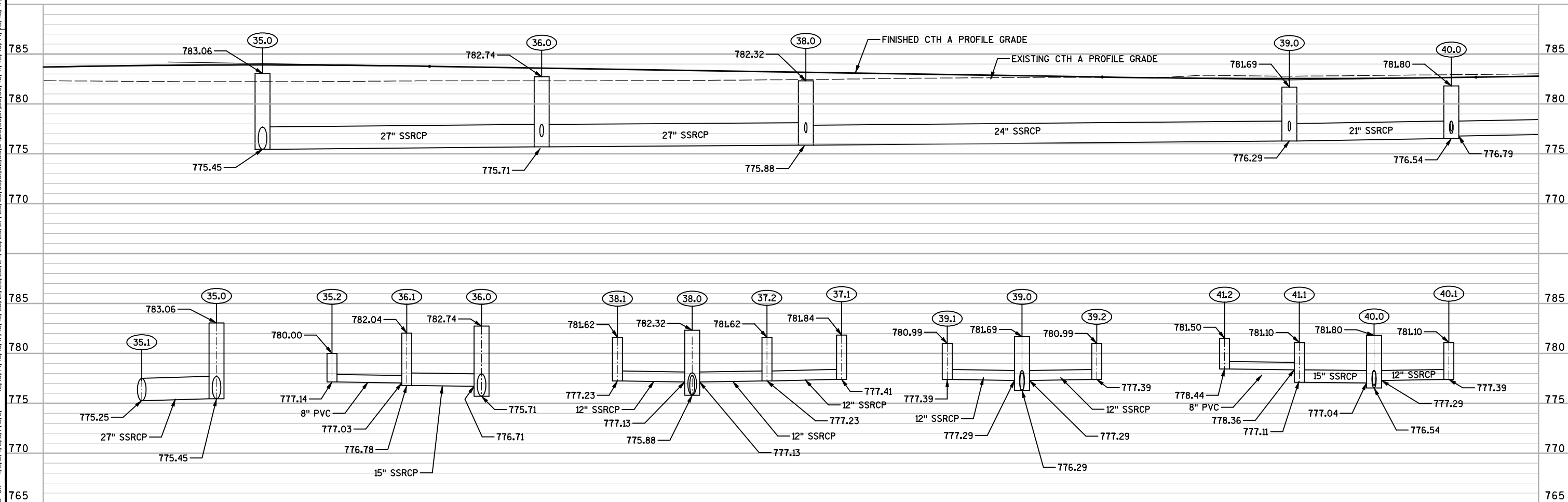
PLOT SCALE : _SCALE_

WISDOT/CADDs SHEET 41

2



2



PROJECT NUMBER: 4984-01-57

HWY: CTH A

COUNTY: OUTAGAMIE

STORM SEWER:

SCALE, FEET

SHEET NO:

E

FILE NAME : F:\Transportation\E1672A04\Sheets\Plan\E1672SS06A.dgn

PLOT DATE : 10/26/2011 9:49:05 AM

PLOT BY : perryd

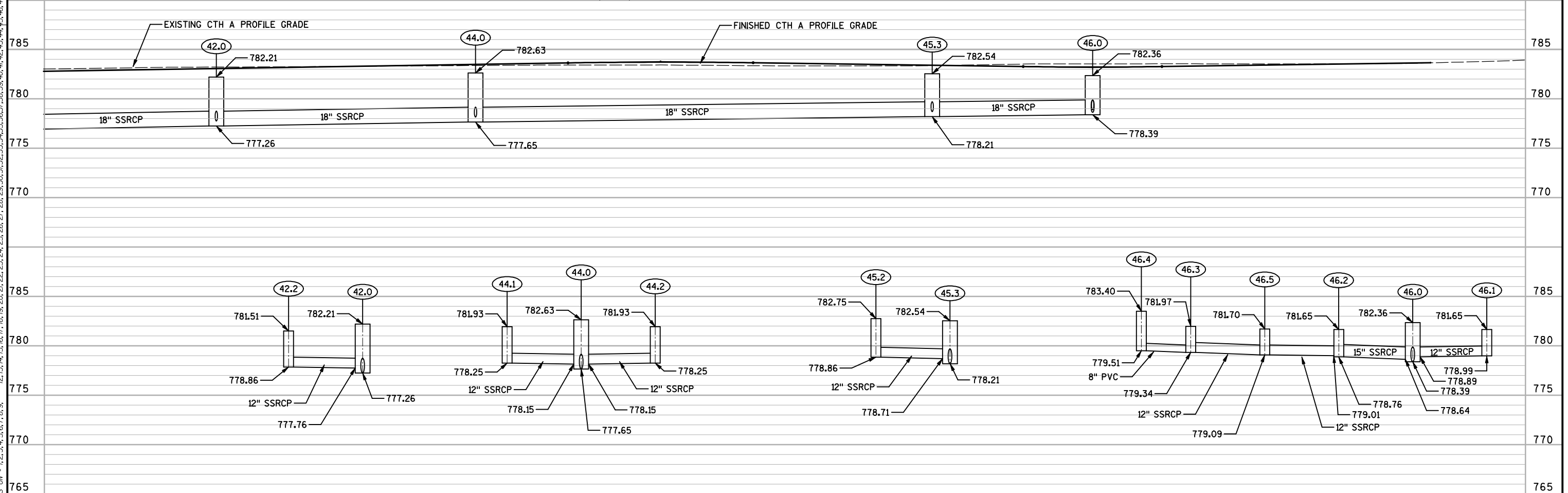
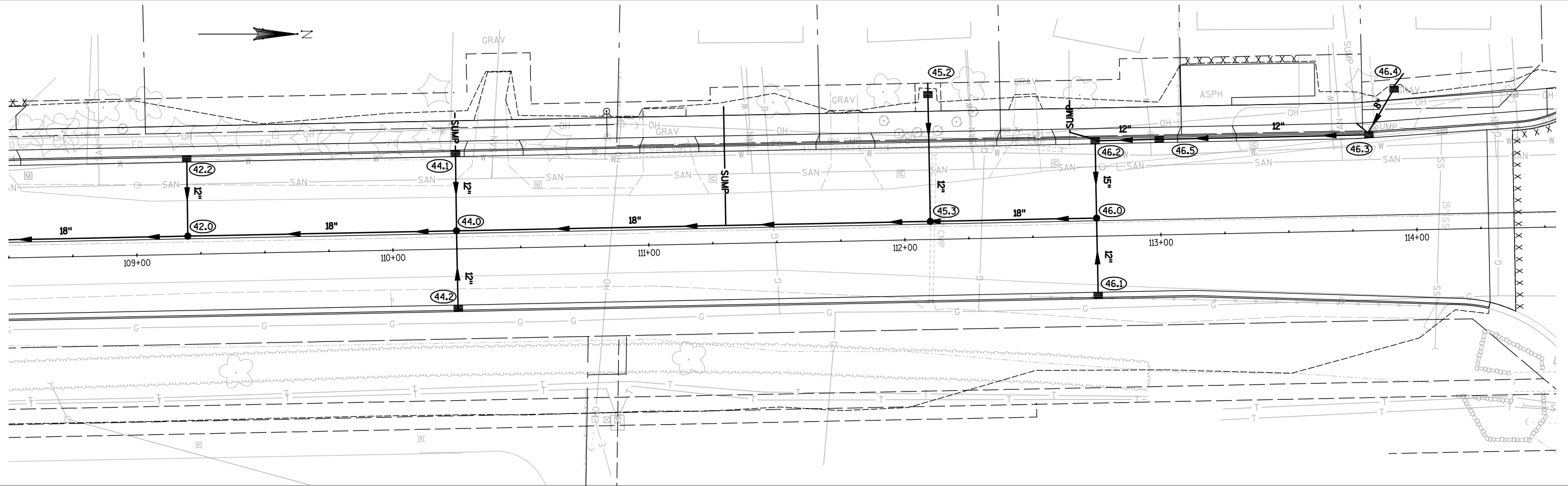
PLOT NAME :

ORG DATE :

Originator : OMNI ASSOCIATES, INC.

PLOT SCALE : _SCALE_

WISDOT/CADDs SHEET 41



PROJECT NUMBER:	4984-01-57	HWY: CTH A	COUNTY: OUTAGAMIE	STORM SEWER:	SCALE, FEET $\frac{1}{4"} = 1'$	SHEET NO:	E
-----------------	------------	------------	-------------------	--------------	---------------------------------	-----------	---

FILE NAME : F:\Transportation\E1672A04\Sheets\Plan\E1672SS07A.dgn PLOT DATE : 7/28/2011 10:02:31 AM PLOT BY : westbrod PLOT NAME : ORG DATE : Originator : OMNI ASSOCIATES, INC. PLOT SCALE : _SCALE_ WISDOT/CADDs SHEET 41

CTH A SOUTH APPROACH

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURES", DETAIL B AND E.

STH 96 - WISCONSIN AVE



COPPS ENTRANCE

ROAD CLOSED
TO
THRU TRAFFIC
R11-4
60" X 30"

DARLING ST

APPELEGATE DR

DURING GRADING AND PAVING, CLOSE APPROACH USING S.D.D. "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES", DETAIL 1. MAINTAIN ACCESS TO PROJECT AT ALL OTHER TIMES USING DETAIL 4. SEE SPECIAL PROVISIONS.

ROBERTS AVE

STA 94+00

MATCH LINE

GLENDALE AVE

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURES", DETAIL D. USE "BRIDGE OUT" SIGNS WHEN CULVERT IS UNDER CONSTRUCTION.

STA 94+00

MATCH LINE

GLENDALE AVE

MAINTAIN CROSS ACCESS AT GLENDALE AVE AT ALL TIMES, EXCEPT FOR CONCRETE PAVING WITHIN THE INTERSECTION. USE S.D.D. "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES", DETAIL 4.

CLOSE PERSHING DR APPROACH FOR STRUCTURE WORK AND PAVING USING S.D.D. "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES", DETAIL 1. ALLOW LOCAL ACCESS AT OTHER TIMES USING DETAIL 4. SEE SPECIAL PROVISIONS.

ROAD CLOSED
TO
THRU TRAFFIC
R11-4
60" X 30"

HEATHER AVE

NORDALE DR

MAINTAIN ACCESS TO NORDALE DR/HEATHER AVE AT ALL TIMES

CTH A NORTH APPROACH

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURES", DETAIL B AND E.

CLOSE INSIDE LEFT TURN LANE WHEN CTH A IS CLOSED TO THRU TRAFFIC

CTH 00 - NORTLAND AVE



TRAFFIC CONTROL OVERVIEW

SEE STANDARD DETAIL DRAWINGS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS

PROJECT NO: 4984-01-57

HWY: CTH A

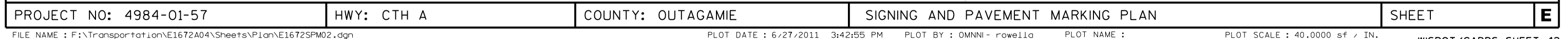
COUNTY: OUTAGAMIE

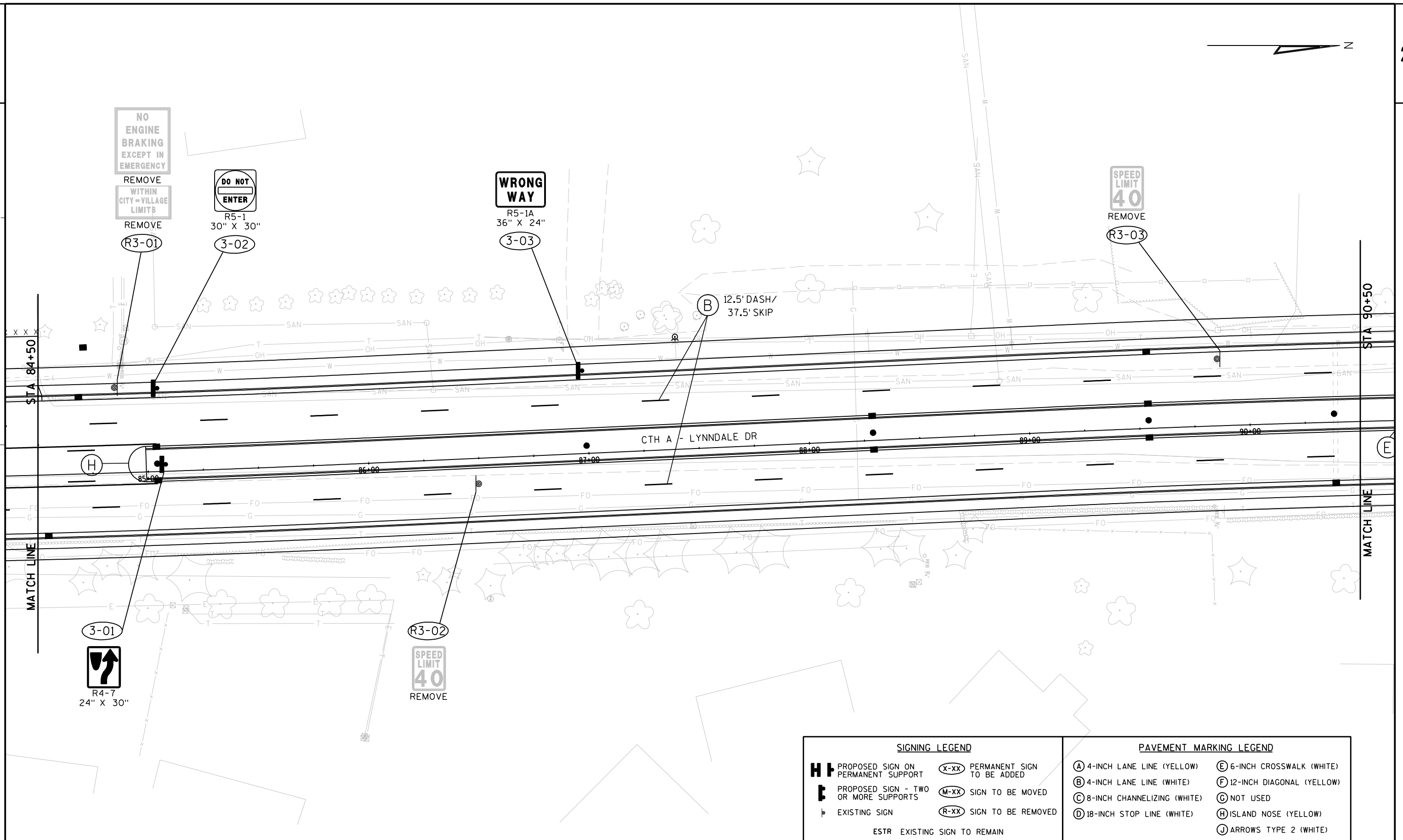
TRAFFIC CONTROL - OVERVIEW

SHEET

E







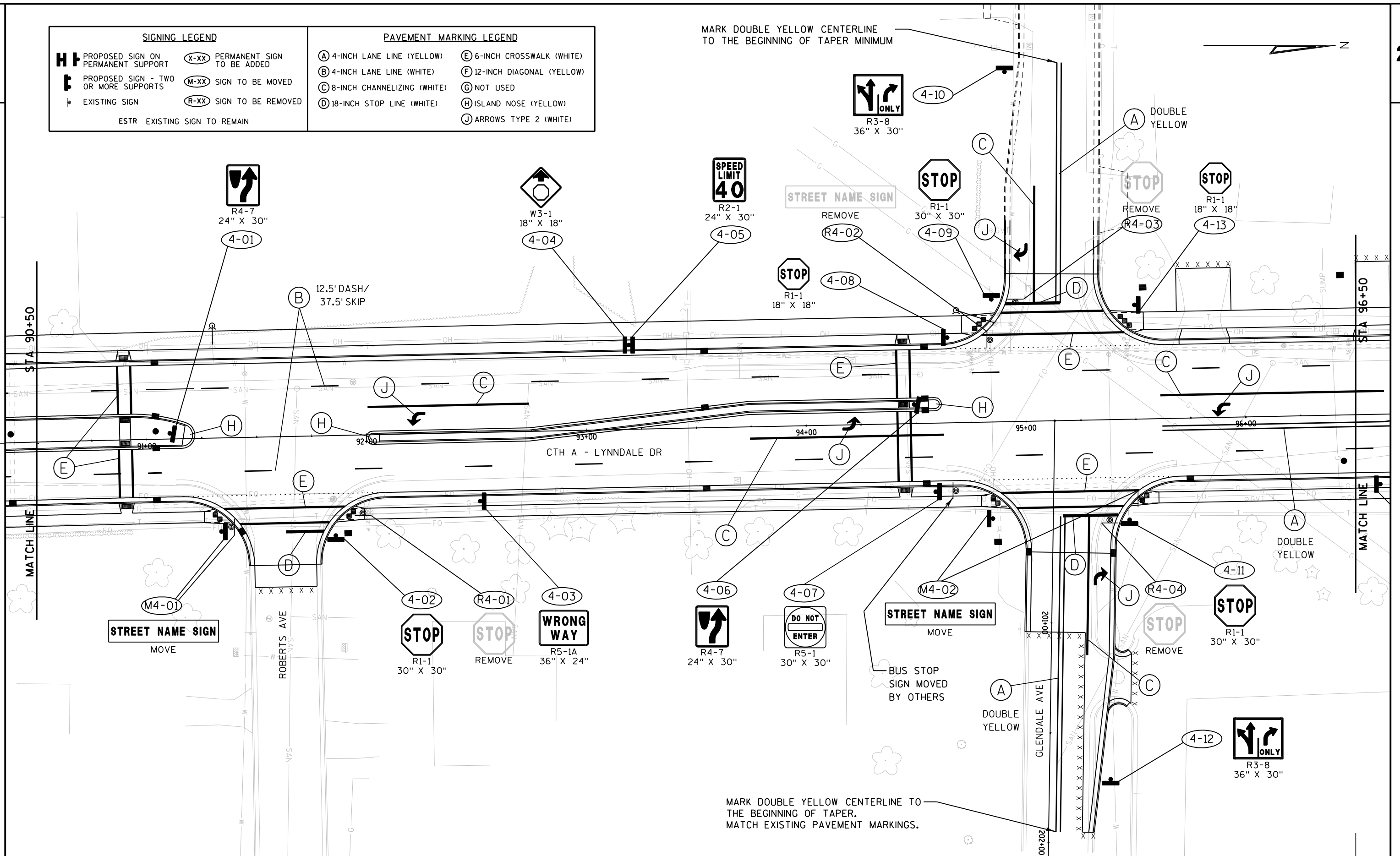
SIGNING LEGEND

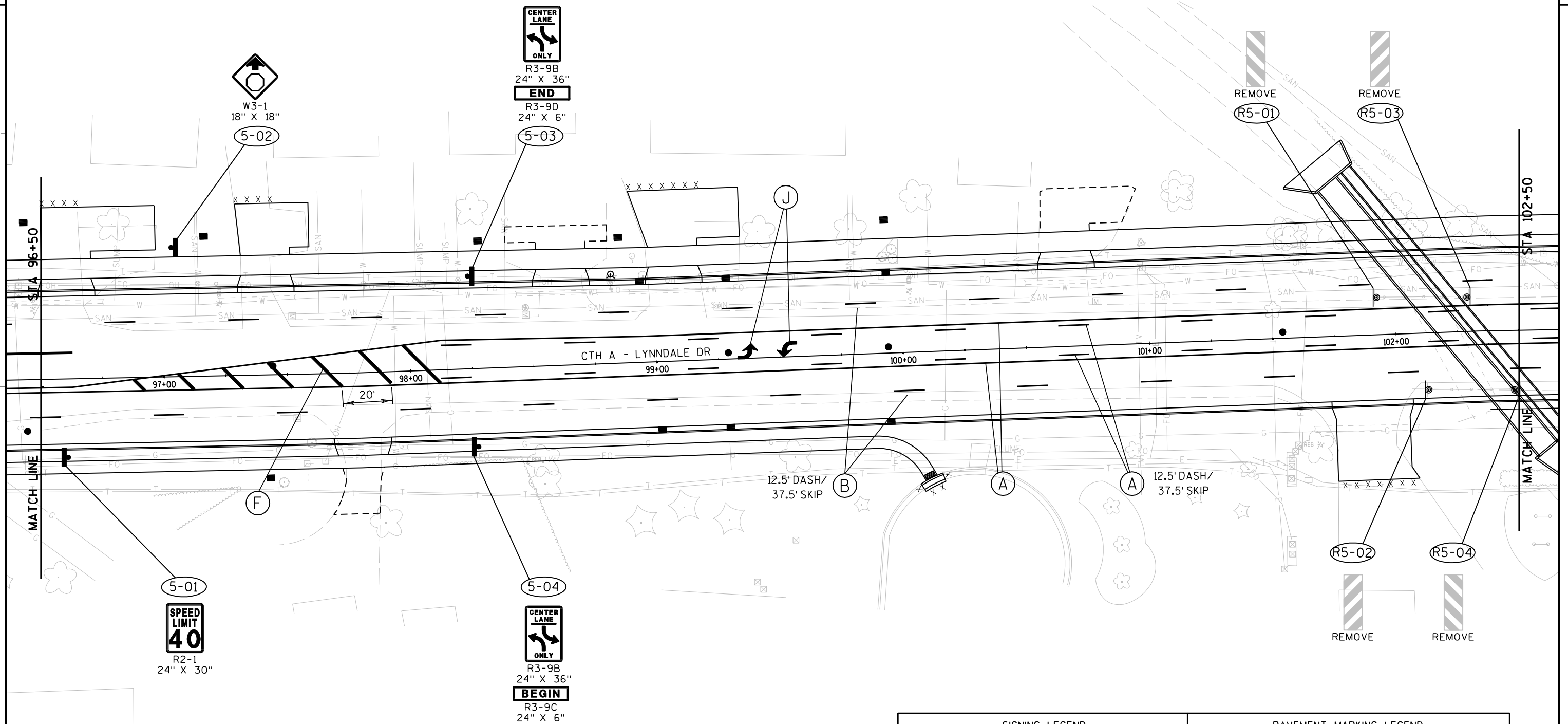
H PROPOSED SIGN ON PERMANENT SUPPORT	X-XX PERMANENT SIGN TO BE ADDED
I PROPOSED SIGN - TWO OR MORE SUPPORTS	M-XX SIGN TO BE MOVED
P EXISTING SIGN	R-XX SIGN TO BE REMOVED
ESTR EXISTING SIGN TO REMAIN	

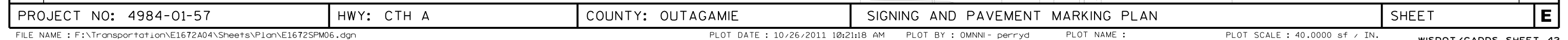
PAVEMENT MARKING LEGEND

A 4-INCH LANE LINE (YELLOW)	E 6-INCH CROSSWALK (WHITE)
B 4-INCH LANE LINE (WHITE)	F 12-INCH DIAGONAL (YELLOW)
C 8-INCH CHANNELIZING (WHITE)	G NOT USED
D 18-INCH STOP LINE (WHITE)	H ISLAND NOSE (YELLOW)
	J ARROWS TYPE 2 (WHITE)

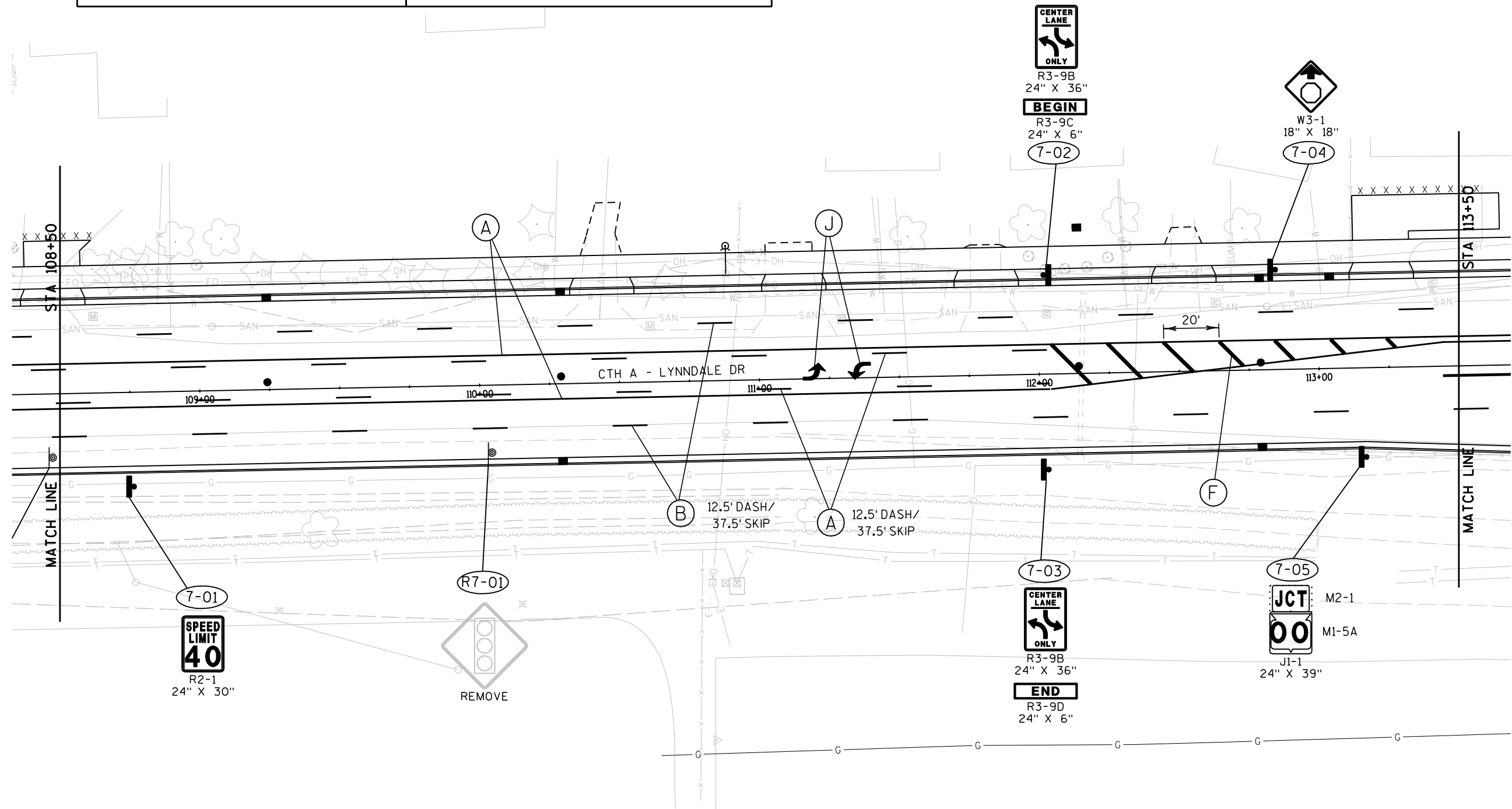
MARK DOUBLE YELLOW CENTERLINE TO THE BEGINNING OF TAPER MINIMUM

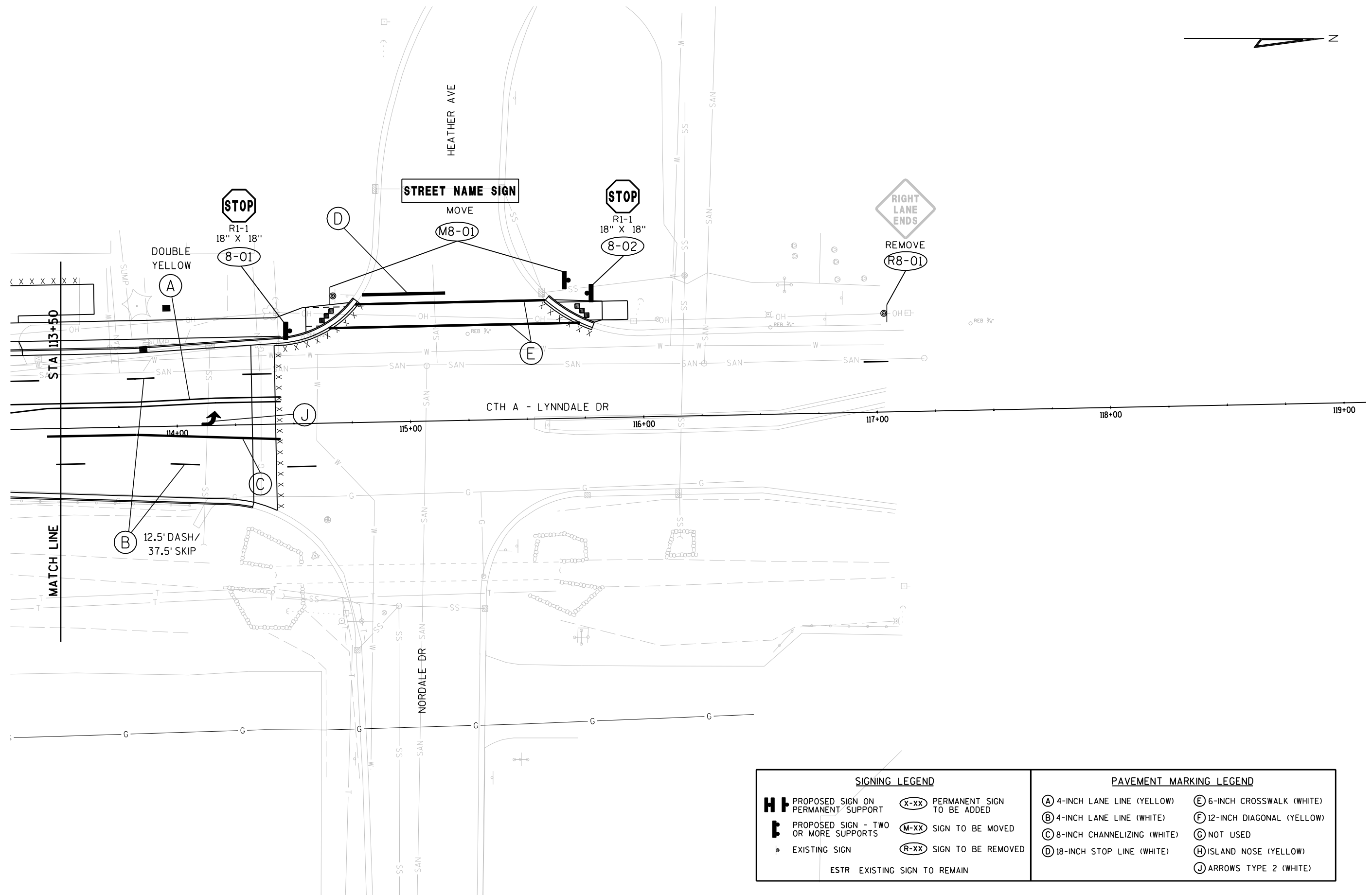




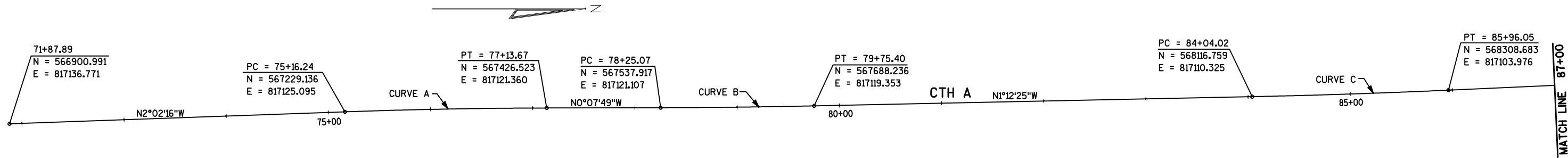


SIGNING LEGEND		PAVEMENT MARKING LEGEND	
H PROPOSED SIGN ON PERMANENT SUPPORT	(X-XX) PERMANENT SIGN TO BE ADDED	(A) 4-INCH LANE LINE (YELLOW)	(E) 6-INCH CROSSWALK (WHITE)
I PROPOSED SIGN - TWO OR MORE SUPPORTS	(M-XX) SIGN TO BE MOVED	(B) 4-INCH LANE LINE (WHITE)	(F) 12-INCH DIAGONAL (YELLOW)
P EXISTING SIGN	(R-XX) SIGN TO BE REMOVED	(C) 8-INCH CHANNELIZING (WHITE)	(G) NOT USED
ESTR EXISTING SIGN TO REMAIN		(D) 18-INCH STOP LINE (WHITE)	(H) ISLAND NOSE (YELLOW)
		(J) ARROWS TYPE 2 (WHITE)	

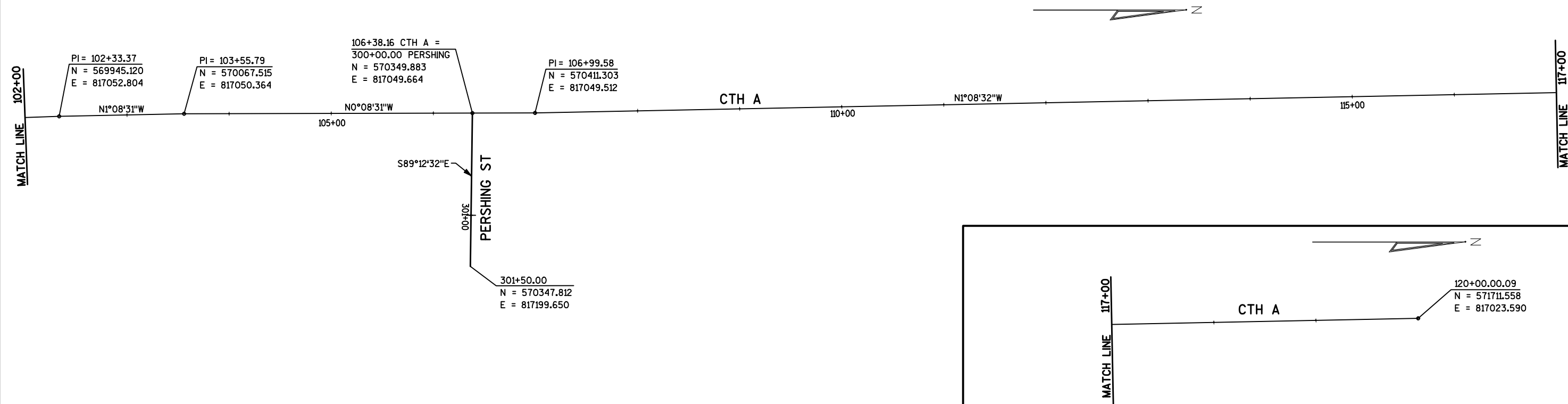
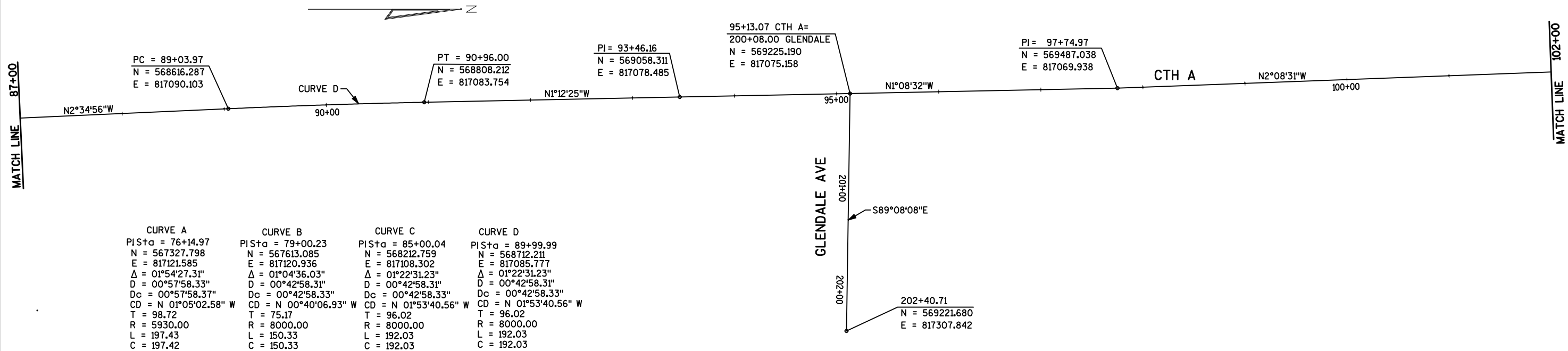




2



2



PROJECT NO: 4984-01-57

HWY: CTH A

COUNTY: OUTAGAMIE

ALIGNMENT PLAN

SHEET

E

DATE 09NOV11		E S T I M A T E O F Q U A N T I T I E S			
LINE		4984-01-57			
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	201.0105	CLEARING	STA	25.000	25.000
0020	201.0120	CLEARING	ID	22.000	22.000
0030	201.0205	GRUBBING	STA	25.000	25.000
0040	201.0220	GRUBBING	ID	22.000	22.000
0050	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	26.000	26.000
0060	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 01. STATION 102+20	LS	1.000	1.000
0070	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 02. STATION 106+35	LS	1.000	1.000
0080	204.0100	REMOVING PAVEMENT	SY	505.000	505.000
0090	204.0110	REMOVING ASPHALTIC SURFACE	SY	160.000	160.000
0100	204.0150	REMOVING CURB & GUTTER	LF	1,835.000	1,835.000
0110	204.0155	REMOVING CONCRETE SIDEWALK	SY	120.000	120.000
0120	204.0170	REMOVING FENCE	LF	220.000	220.000
0130	204.0190	REMOVING SURFACE DRAINS	EACH	1.000	1.000
0140	204.0210	REMOVING MANHOLES	EACH	2.000	2.000
0150	204.0220	REMOVING INLETS	EACH	4.000	4.000
0160	204.0245	REMOVING STORM SEWER (SIZE) 01. 12-INCH	LF	220.000	220.000
0170	204.0245	REMOVING STORM SEWER (SIZE) 02. 15-INCH	LF	84.000	84.000
0180	204.0245	REMOVING STORM SEWER (SIZE) 03. 24-INCH	LF	5.000	5.000
0190	205.0100	EXCAVATION COMMON	CY	30,551.000	30,551.000
0200	209.0100	BACKFILL GRANULAR	CY	1,100.000	1,100.000
0210	213.0100	FINISHING ROADWAY (PROJECT) 01. 4984-01-57	EACH	1.000	1.000
0220	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	639.000	639.000
0230	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	14,128.000	14,128.000
0240	311.0110	BREAKER RUN	TON	25,605.000	25,605.000
0250	415.0095	CONCRETE PAVEMENT 9 1/2-INCH **P**	SY	24,270.000	24,270.000
0260	415.0210	CONCRETE PAVEMENT GAPS	EACH	3.000	3.000
0270	415.1095	CONCRETE PAVEMENT HES 9 1/2-INCH **P**	SY	1,665.000	1,665.000
0280	416.0260	CONCRETE DRIVEWAY HES 6-INCH	SY	86.000	86.000
0290	416.0610	DRILLED TIE BARS	EACH	13.000	13.000
0300	416.0620	DRILLED DOWEL BARS	EACH	36.000	36.000
0310	416.1010	CONCRETE SURFACE DRAINS	CY	2.000	2.000
0320	440.4410.S	INCENTIVE IRI RIDE	DOL	6,165.000	6,165.000
0330	455.0120	ASPHALTIC MATERIAL PG64-28	TON	1.000	1.000
0340	455.0605	TACK COAT	GAL	91.000	91.000
0350	460.1110	HMA PAVEMENT TYPE E-10	TON	23.000	23.000
0360	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	10.000	10.000
0370	465.0105	ASPHALTIC SURFACE	TON	789.000	789.000
0380	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	102.000	102.000
0390	504.0900	CONCRETE MASONRY ENDWALLS	CY	71.900	71.900
0400	520.8000.S	CULVERT PIPE CONCRETE COLLAR	EACH	2.000	2.000
0410	521.0112	CULVERT PIPE CORRUGATED STEEL 12-INCH	LF	157.000	157.000
0420	521.1012	APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH	EACH	4.000	4.000
0430	521.1024	APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH	EACH	2.000	2.000
0440	522.0148	CULVERT PIPE REINFORCED CONCRETE CLASS III 48-INCH	LF	140.000	140.000
0450	522.0154	CULVERT PIPE REINFORCED CONCRETE CLASS III 54-INCH	LF	138.000	138.000

DATE 09NOV11		E S T I M A T E O F Q U A N T I T I E S			
LINE				4984-01-57	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0460	522.1012	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	EACH	2.000	2.000
0470	522.1018	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	EACH	1.000	1.000
0480	522.1024	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	EACH	1.000	1.000
0490	522.1027	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 27-INCH	EACH	1.000	1.000
0500	523.0168	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 68X106-INCH	LF	278.000	278.000
0510	523.0519	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 19X30-INCH	EACH	2.000	2.000
0520	532.0200.S	WALL MODULAR BLOCK GRAVITY	SF	525.000	525.000
0530	601.0405	CONCRETE CURB & GUTTER 18-INCH TYPE A **P**	LF	2,970.000	2,970.000
0540	601.0409	CONCRETE CURB & GUTTER 30-INCH TYPE A **P**	LF	8,200.000	8,200.000
0550	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE D	LF	240.000	240.000
0560	602.0405	CONCRETE SIDEWALK 4-INCH **P**	SF	25,510.000	25,510.000
0570	602.0415	CONCRETE SIDEWALK 6-INCH **P**	SF	1,220.000	1,220.000
0580	602.0505	CURB RAMP DETECTABLE WARNING FIELD YELLOW	SF	232.000	232.000
0590	602.1000	CONCRETE LOADING ZONE	SF	190.000	190.000
0600	606.0200	RIPRAP MEDIUM	CY	160.000	160.000
0610	608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	1,791.000	1,791.000
0620	608.0315	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	LF	624.000	624.000
0630	608.0318	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	LF	1,754.000	1,754.000
0640	608.0321	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 21-INCH	LF	65.000	65.000
0650	608.0324	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	606.000	606.000
0660	608.0327	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 27-INCH	LF	304.000	304.000
0670	608.0330	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH	LF	58.000	58.000
0680	610.0119	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 19X30-INCH	LF	168.000	168.000
0690	610.0129	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 29X45-INCH	LF	299.000	299.000
0700	611.0201	MANHOLES TYPE 1	EACH	25.000	25.000
0710	611.0210	MANHOLES TYPE 3	EACH	9.000	9.000
0720	611.0303	INLETS TYPE 3	EACH	58.000	58.000
0730	611.0420	RECONSTRUCTING MANHOLES	EACH	5.000	5.000
0740	611.0530	MANHOLE COVERS TYPE J	EACH	27.000	27.000
0750	611.0624	INLET COVERS TYPE H	EACH	60.000	60.000
0760	611.0639	INLET COVERS TYPE H-S	EACH	5.000	5.000
0770	611.8110	ADJUSTING MANHOLE COVERS	EACH	10.000	10.000
0780	614.0920	SALVAGED RAIL	LF	355.000	355.000
0790	614.0925	SALVAGED GUARDRAIL END TREATMENTS	EACH	1.000	1.000
0800	619.1000	MOBILIZATION	EACH	1.000	1.000

DATE 09NOV11		E S T I M A T E O F Q U A N T I T I E S			
LINE		4984-01-57			
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0810	620.0300	CONCRETE MEDIAN SLOPED NOSE	SF	165.000	165.000
0820	624.0100	WATER	MGAL	485.000	485.000
0830	625.0100	TOPSOIL **P**	SY	21,970.000	21,970.000
0840	628.1504	SILT FENCE	LF	1,000.000	1,000.000
0850	628.1520	SILT FENCE MAINTENANCE	LF	1,000.000	1,000.000
0860	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	6.000	6.000
0870	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	4.000	4.000
0880	628.2004	EROSION MAT CLASS I TYPE B	SY	1,000.000	1,000.000
0890	628.2006	EROSION MAT URBAN CLASS I TYPE A	SY	12,645.000	12,645.000
0900	628.2008	EROSION MAT URBAN CLASS I TYPE B	SY	5,005.000	5,005.000
0910	628.2027	EROSION MAT CLASS II TYPE C	SY	3,315.000	3,315.000
0920	628.7005	INLET PROTECTION TYPE A	EACH	85.000	85.000
0930	628.7015	INLET PROTECTION TYPE C	EACH	56.000	56.000
0940	628.7020	INLET PROTECTION TYPE D	EACH	9.000	9.000
0950	628.7570	ROCK BAGS	EACH	145.000	145.000
0960	629.0210	FERTILIZER TYPE B **P**	CWT	14.000	14.000
0970	630.0140	SEEDING MIXTURE NO. 40 **P**	LB	395.000	395.000
0980	630.0200	SEEDING TEMPORARY **P**	LB	593.000	593.000
0990	634.0412	POSTS WOOD 4X4-INCH X 12-FT	EACH	11.000	11.000
1000	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	31.000	31.000
1010	637.0202	SIGNS REFLECTIVE TYPE II	SF	204.870	204.870
1020	638.2102	MOVING SIGNS TYPE II	EACH	12.000	12.000
1030	638.2602	REMOVING SIGNS TYPE II	EACH	26.000	26.000
1040	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	24.000	24.000
1050	638.4000	MOVING SMALL SIGN SUPPORTS	EACH	7.000	7.000
1060	642.5401	FIELD OFFICE TYPE D	EACH	1.000	1.000
1070	643.0100	TRAFFIC CONTROL (PROJECT) 01. 4984-01-57	EACH	1.000	1.000
1080	643.0300	TRAFFIC CONTROL DRUMS	DAY	3,800.000	3,800.000
1090	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	7,200.000	7,200.000
1100	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	10,600.000	10,600.000
1110	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	1,300.000	1,300.000
1120	643.0900	TRAFFIC CONTROL SIGNS	DAY	5,000.000	5,000.000
1130	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	28.000	28.000
1140	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	120.000	120.000
1150	645.0140	GEOTEXTILE FABRIC TYPE SAS	SY	32,671.000	32,671.000
1160	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	8,200.000	8,200.000
1170	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	715.000	715.000
1180	647.0166	PAVEMENT MARKING ARROWS EPOXY TYPE 2	EACH	20.000	20.000
1190	647.0566	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	LF	185.000	185.000
1200	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	6.000	6.000
1210	647.0726	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	LF	195.000	195.000
1220	647.0766	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	LF	1,125.000	1,125.000
1230	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	127.000	127.000
1240	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	4,068.000	4,068.000
1250	650.5000	CONSTRUCTION STAKING BASE	LF	3,436.000	3,436.000
1260	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	165.000	165.000
1270	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. STA 102+20	LS	1.000	1.000
1280	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 02. STA 106+36	LS	1.000	1.000
1290	650.7000	CONSTRUCTION STAKING CONCRETE PAVEMENT	LF	4,068.000	4,068.000
1300	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 4984-01-57	LS	1.000	1.000

DATE 09NOV11			E S T I M A T E O F Q U A N T I T I E S		
LINE			4984-01-57		
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
1310	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	4,068.000	4,068.000
1320	690.0150	SAWING ASPHALT	LF	663.000	663.000
1330	690.0250	SAWING CONCRETE	LF	166.000	166.000
1340	715.0415	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	6,484.000	6,484.000
1350	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT \$5.00/HR	HRS	2,000.000	2,000.000
1360	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT \$5.00/HR	HRS	1,320.000	1,320.000
1370	SPV.0035	SPECIAL 01. POND LINER CLAY	CY	500.000	500.000
1380	SPV.0060	SPECIAL 01. INLET YARD DRAIN	EACH	19.000	19.000
1390	SPV.0060	SPECIAL 02. SALVAGE AND REINSTALL INTERNAL CHIMNEY SEAL	EACH	15.000	15.000
1400	SPV.0060	SPECIAL 03. REPLACE 8-INCH VALVE	EACH	3.000	3.000
1410	SPV.0060	SPECIAL 04. REPLACE 12-INCH VALVE	EACH	3.000	3.000
1420	SPV.0060	SPECIAL 05. BOLT REPLACEMENT HYDRANTS	EACH	9.000	9.000
1430	SPV.0060	SPECIAL 06. BOLT REPLACEMENT FITTINGS	EACH	20.000	20.000
1440	SPV.0060	SPECIAL 07. RELOCATE EXISTING HYDRANTS	EACH	7.000	7.000
1450	SPV.0060	SPECIAL 08. REPLACE CURB BOXES	EACH	10.000	10.000
1460	SPV.0060	SPECIAL 09. REPLACE CURB STOPS	EACH	5.000	5.000
1470	SPV.0060	SPECIAL 10. RELOCATE CURB STOP AND CURB BOX	EACH	11.000	11.000
1480	SPV.0060	SPECIAL 11. INSTALL HYDRANT EXTENSION	EACH	6.000	6.000
1490	SPV.0060	SPECIAL 12. SAND BAG	EACH	10.000	10.000
1500	SPV.0060	SPECIAL 14. CONSTRUCTION STAKING POND	EACH	1.000	1.000
1510	SPV.0060	SPECIAL 15. SEDIMENTATION BASIN	EACH	1.000	1.000
1520	SPV.0090	SPECIAL 01. STORM SEWER LATERAL	LF	342.000	342.000
1530	SPV.0090	SPECIAL 02. STORM SEWER 8-INCH	LF	272.000	272.000
1540	SPV.0090	SPECIAL 03. INSTALL HYDRANT LEAD	LF	77.000	77.000
1550	SPV.0090	SPECIAL 04. STORM SEWER 24-INCH	LF	60.000	60.000
1560	SPV.0105	SPECIAL 01. CONCRETE PAVEMENT JOINT LAYOUT	LS	1.000	1.000
1570	SPV.0180	SPECIAL 01. CONCRETE JOINT SEALING	SY	25,935.000	25,935.000

3

CLEARING AND GRUBBING

STATION TO STATION			LOCATION	201.0105 CLEARING* STA	201.0120 CLEARING ID	201.0205 GRUBBING* STA	201.0220 GRUBBING ID
CATEGORY 0010							
77+00	-	85+00	CTH A	8	---	8	---
86+00	-	92+00	CTH A	6	---	6	---
93+00	-	94+00	CTH A	1	---	1	---
96+00	-	97+00	CTH A	1	---	1	---
97+55, 22' RT			CTH A	---	3	---	3
98+00	-	100+00	CTH A	2	---	2	---
100+87, 38' RT			CTH A	---	8	---	8
101+00	-	103+00	CTH A	2	---	2	---
104+73, 55' RT			CTH A	---	3	---	3
107+04, 72' RT			CTH A	---	5	---	5
108+00	-	113+00	CTH A	5	---	5	---
114+38, 52' LT			CTH A	---	3	---	3

PROJECT TOTAL 25 22 25 22

*INCLUDES CLEARING AND GRUBBING FOR STORMWATER POND

REMOVING SMALL PIPE CULVERTS

STATION	DIR	LOCATION	203.0100 EA	REMARKS
CATEGORY 0010				
80+00	LT	CTH A	1	80 LF 18" CMP
82+00	RT	CTH A	1	92 LF 18" CMP
84+35	LT	CTH A	1	34 LF 18" CMP
90+35	--	CTH A	1	66 LF 24" CMP
91+50	RT	CTH A	1	105 LF 18" CMP
94+83	RT	CTH A	1	20 LF 15" CMP
95+00	LT	CTH A	1	335 LF 18" CMP
95+16	RT	CTH A	1	114 LF 24" CMP
95+44	LT	CTH A	1	10 LF 15" CMP
96+31	LT	CTH A	1	10 LF 12" CMP
97+35	LT	CTH A	1	32 LF 18" CMP
97+78	RT	CTH A	1	32 LF 18" CMP
98+56	LT	CTH A	1	32 LF 18" CMP
99+00	LT	CTH A	1	32 LF 18" CMP
101+62	LT	CTH A	1	32 LF 18" CMP
101+84	RT	CTH A	1	43 LF 30" CMP
104+20	LT	CTH A	1	32 LF 18" CMP
106+09	RT	CTH A	1	30 LF 24" CMP
106+45	LT	CTH A	1	320 LF 18" CMP
106+60	RT	CTH A	1	30 LF 24" CMP
108+36	LT	CTH A	1	32 LF 18" CMP
108+65	RT	CTH A	1	TRIM 5 LF 24" PVC
111+10	LT	CTH A	1	32 LF 18" CMP
111+77	LT	CTH A	1	32 LF 18" CMP
112+10	---	CTH A	1	58 LF 18" CMP
112+48	LT	CTH A	1	28 LF 18" CMP

PROJECT TOTAL 26

REMOVING STORM SEWER

STATION	DIR	LOCATION	204.0210 REMOVING MANHOLES EA	204.0220 REMOVING INLETS EA	204.0245.01 REMOVING STORM SEWER 12" LF	204.0245.02 REMOVING STORM SEWER 15" LF	204.0245.03 REMOVING STORM SEWER 24" LF	REMARKS
CATEGORY 0010								
73+77	LT	CTH A	2	---	10	---	---	
73+82	LT	CTH A	---	1	---	---	---	2' X 3' INLET
74+26	RT	CTH A	---	1	64	---	---	3' X 3' INLET
75+24	LT	CTH A	---	1	146	---	---	3' X 3' INLET
108+66	RT	CTH A	---	---	---	---	5	TRIM PVC PIPE TO MATCH PRO. SLOPE
114+10	LT	CTH A	---	1	---	84	---	2' X 3' INLET

PROJECT TOTAL 2 4 220 84 5

REMOVING ASPHALTIC SURFACE

LOCATION	REMARK	204.0110 SY
CATEGORY 0010		
APPLEGATE DR	ASPHALT TRANSITION	45
ROBERTS AVE	ASPHALT TRANSITION	30
CTH A	ASPHALT TRANSITION	85

PROJECT TOTAL 160

REMOVING CONCRETE SIDEWALK

STATION	TO	STATION	DIR	LOCATION	204.0155 SY
CATEGORY 0010					
73+72	-	75+47	LT	CTH A	120

PROJECT TOTAL 120

REMOVING CURB AND GUTTER

STATION	TO	STATION	DIR	LOCATION	204.0150 LF	REMARKS
CATEGORY 0010						
73+51	-	74+06	RT	CTH A	60	COPPS RADII
73+77	-	74+04	LT	CTH A	30	
73+72	-	75+44	LT	CTH A	350	MEDIAN
79+83	-	80+54	LT	CTH A	70	DARLING RADII
81+43	-	82+43	RT	CTH A	145	APPLEGATE RADII
91+09	-	92+08	RT	CTH A	135	ROBERTS RADII
93+51	-	95+58	LT	CTH A	220	GLENDALE RADII
94+60	-	95+63	RT	CTH A	120	GLENDALE RADII
95+27			---	CTH A	125	GLENDALE N SIDE
100+03	-	100+11	RT	CTH A	10	CUL-DE-SAC
105+76	-	107+00	RT	CTH A	135	PERSHING RADII
105+82	-	107+80	LT	CTH A	200	
112+83	-	114+72	LT	CTH A	195	
114+13	-	114+28	RT	CTH A	15	
115+55	-	115+76	LT	CTH A	25	

PROJECT TOTAL 1,835

REMOVING PAVEMENT

STATION	TO	STATION	DIR	LOCATION	204.0100 SY
CATEGORY 0010					
73+70	-	77+97	LT	CTH A PAVEMENT AND CORRUGATED MEDIAN	400
97+34			LT	DRIVEWAY	105

PROJECT TOTAL 505

REMOVING FENCE

STATION TO STATION	DIR	LOCATION	204.0170 LF
CATEGORY 0010			
88+72 - 89+77	RT	CTH A	115
103+20	LT	CTH A	22
104+05	LT	CTH A	25
104+32	LT	CTH A	20
110+87	LT	CTH A	10
113+05	LT	CTH A	28

PROJECT TOTAL 220

REMOVING SURFACE DRAINS

STATION	DIR	LOCATION	204.0190 EA
CATEGORY 0010			
114+05	RT	CTH A	1

PROJECT TOTAL 1

3

EARTHWORK SUMMARY

Division	From/To Station	Location	Excavation Common CY 205.0100		Salvaged/ Unusable Pavement Material CY	Available Material CY (5)	Unexpand. Fill CY	Expanded Fill CY (13)	Mass Ordinate +/- CY	Waste CY	Comment:
		(16)	Cut (2)	EBS Excavation (3)				Factor 1.25			
Category	73+00 to 114+50	CTH A Mainline	26,651	0	2,507	24,144	7,622	9,527	14,617	14,617	
0010	102+00 - 103+00	Pond	1,900	0	0	1,900	40	50	1,850	1,850	
Div 1	Undistributed	CTH A		2,000	0	0	0	0	0	0	
Category 0010 Subtotal			28,551	2,000	2,507	26,044	7,662	9,577	16,467	16,467	
Grand Total			28,551	2,000	2,507	26,044	7,662	9,577	16,467	16,467	
Total Project Common Excavation				30,551							

- 2) Salvaged/Unsuable Pavement Material is included in Cut.
- 3) EBS Excavation to be backfilled with Breaker Run material.
- 5) Available Material = Cut - Salvaged/Unusuable Pavement Material.
- 13) Expanded Fill. Factor = 1.25

Expanded Fill = (Unexpanded Fill * Fill Factor)
- 15) Borrow will be paid only if there is insufficient waste material within the Division.
- 16) CTH A mainline volumes do not include excavation for pond or excavation and fill paid for as Excavation for Structures (Culverts) and Backfill Structure.

BACKFILL GRANULAR

	209.0100
LOCATION	CY
CATEGORY 0010	
C-44-119	550
C-44-120	550

PROJECT TOTAL 1,100

BASE AGGREGATE DENSE

				305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON
STATION	TO	STATION	LOCATION		
CATEGORY 0010					
73+70	-	79+00	CTH A	64	1,615
79+00	-	85+00	CTH A	63	2,119
85+00	-	91+00	CTH A	71	2,370
91+00	-	97+00	CTH A	57	2,159
97+00	-	103+00	CTH A	37	1,927
103+00	-	109+00	CTH A	0	2,087
109+00	-	114+38	CTH A	0	1,711
200+64	-	201+90	GLENDALE	0	140
DRIVEWAYS			CTH A	347	0

PROJECT TOTAL 639 14,128

BREAKER RUN

				311.0110
STATION	TO	STATION	LOCATION	TON
CATEGORY 0010				
73+70	-	79+00	CTH A	2,632
79+00	-	85+00	CTH A	3,439
85+00	-	91+00	CTH A	3,067
91+00	-	97+00	CTH A	3,446
97+00	-	103+00	CTH A	3,002
103+00	-	109+00	CTH A	3,305
109+00	-	114+38	CTH A	2,645
UNDISTRUBUTED			EBS	4,000
C-44-119			68"x108"	20
C-44-119			INLET APR	8
C-44-119			OUTLET APR	10
C-44-120			68"x108"	20
C-44-120			INLET APR	6
C-44-120			OUTLET APR	6

PROJECT TOTAL 25,605

CONCRETE PAVEMENT GAPS

	415.0210 EACH
LOCATION	
CATEGORY 0010	
CTH A - GLENDALE AVE INTERSECTION	2
CTH A - DWY STA 98+70 - 99+05 SB	1

PROJECT TOTAL 3

DRIVEWAYS

			416.0260 CONCRETE DRIVEWAY 6-INCH HES SY	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	*** BASE AGGREGATE DENSE 3/4-INCH TON
STATION	DIR	LOCATION			
CATEGORY 0010					
82+50	LT	CTH A	0	4	10
84+36	LT	CTH A	0	1	4
95+77	LT	CTH A	0	7	18
96+55	LT	CTH A	0	15	38
97+34	LT	CTH A	75	0	26
97+76	RT	CTH A	11	0	15
98+58	LT	CTH A	0	1	10
99+05	LT	CTH A	0	15	38
100+61	LT	CTH A	0	1	26
101+89	RT	CTH A	0	14	35
104+19	LT	CTH A	0	5	14
105+93	LT	CTH A	0	4	10
107+91	LT	CTH A	0	3	9
108+39	LT	CTH A	0	4	10
110+40	LT	CTH A	0	1	11
111+08	LT	CTH A	0	1	5
111+78	LT	CTH A	0	1	3
112+48	LT	CTH A	0	1	5
113+19	LT	CTH A	0	22	58

PROJECT TOTALS 86 102 347

CONCRETE PAVEMENT

		415.0095 9 1/2-INCH SY	415.1095 HES 9 1/2-INCH SY	715.0415 INCENTIVE STRENGTH CONCRETE PAVEMENT DOL	SPV.0180.02 CONCRETE JOINT SEALING SY	
STATION TO STATION		LOCATION				REMARKS
CATEGORY 0010						CATEGORY 0020
73+70	-	79+00	CTH A	2,760	---	690 2,760
79+00	-	85+00	CTH A	4,135	150	1,071 4,285 HES AT INTERSECTIONS
85+00	-	91+00	CTH A	2,935	---	734 2,935
91+00	-	97+00	CTH A	3,030	1,325	1,089 4,355 HES AT GLENDALE AVE
97+00	-	103+00	CTH A	3,785	115	975 3,900 HES AT PAVEMENT GAP
103+00	-	109+00	CTH A	4,185	75	1,065 4,260 HES AT INTERSECTIONS
109+00	-	114+38	CTH A	3,440	---	860 3,440

PROJECT TOTAL 24,270 1,665 6,484 25,935

CONCRETE SURFACE DRAINS

	416.1010 CY
LOCATION	
CATEGORY 0010	
PERSHING ST, STA 300+90 LT	1
PERSHING ST, STA 300+90 RT	1

PROJECT TOTAL 2

DRILLED TIE AND DOWEL BARS

	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	
LOCATION			REMARKS
CATEGORY 0010			
BEGIN PROJECT	13	36	TIE BARS FOR CURB TO SIDEWALK CURB RAMP

PROJECT TOTALS 13 36

*** FOR INFORMATION ONLY, QUANTITY LISTED ELSEWHERE

ASPHALTIC ITEMS

STATION	TO	STATION	LOCATION	455.0120 ASPHALTIC MATERIAL PG64-28 TON	455.0605 TACK COAT GAL	460.1110 HMA PAVEMENT TYPE E-10 TON	465.0105 ASPHALTIC SURFACE TON	460.2000 INCENTIVE DENSITY HMA PAVEMENT DOL
CATEGORY 0010								
73+70	-	79+00	CTH A	---	---	---	---	---
79+00	-	85+00	CTH A	---	11	---	98	---
85+00	-	91+00	CTH A	---	13	---	116	---
91+00	-	97+00	CTH A	---	11	---	100	---
97+00	-	103+00	CTH A	---	13	---	116	---
103+00	-	109+00	CTH A	---	13	---	116	---
109+00	-	116+00	CTH A	---	12	---	106	---
DARLING ST				---	4	---	46	---
APPLEGATE DR				---	1	---	12	---
ROBERTS AVE				---	1	---	9	---
GLENDALE AVE				---	5	---	60	---
CUL-DE-SAC				---	1	---	1	---
PERSHING ST				---	1	---	10	---
LYNNDALE				1	2	23	---	10
CATEGORY 0010 TOTALS				1	91	23	789	10
PROJECT TOTALS				1	91	23	789	10

CULVERT PIPE CONCRETE COLLAR

STATION	LOCATION	520.8000.S EA	REMARKS
CATEGORY 0010			
106+10, RT	CTH A	1	CONNECT PVC STORM PIPE TO C-44-120
106+62, RT	CTH A	1	CONNECT PVC STORM PIPE TO C-44-120
PROJECT TOTAL		2	

CONCRETE CURB AND GUTTER

STATION	TO	STATION	LOCATION	601.0405 18-INCH TYPE A LF	601.0409 30-INCH TYPE A LF	601.0411 30-INCH TYPE D LF
CATEGORY 0010						
73+70	-	79+00	CTH A	1,050	1,075	---
79+00	-	85+00	CTH A	170	1,210	---
85+00	-	91+00	CTH A	1,200	1,200	---
91+00	-	97+00	CTH A	550	1,215	---
97+00	-	103+00	CTH A	---	1,200	---
103+00	-	109+00	CTH A	---	1,235	---
109+00	-	116+00	CTH A	---	1,065	65
200+64	-	201+90	GLENDALE	---	---	165
CUL-DE-SAC				---	---	10
PROJECT TOTALS				2,970	8,200	240

CONCRETE MASONRY ENDWALLS

	504.0900
LOCATION	CY
CATEGORY 0010	
C-44-119	35.3
C-44-120	36.6
PROJECT TOTAL	
	71.9

CULVERT PIPE CORRUGATED STEEL

LOCATION		521.0112	INLET ELEV	DISCH ELEV
FROM	TO	12 IN. L.F.		
CATEGORY 0010				
47.1	47.2	24	780.41	780.16
51.1	51.2	133	789.53	788.24

MINIMUM WALL THICKNESS 0.064"

APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE

STRUCTURE NUMBER	LOCATION				STRUCT	522.1012	522.1018	522.1024	522.1027	523.0519	INVERT ELEV
	STATION	OFFSET				12-INCH	18-INCH	24-INCH	27-INCH	19x30-INCH	
		RL	DIST.	DIR.		EACH	EACH	EACH	EACH	EACH	
CATEGORY 0010											
19.2	86 + 97.	NB	67	LT	EW	1	---	---	---	---	787.94
22.2	90 + 34.	NB	70	LT	EW	---	---	---	---	1	785.28
22.4	90 + 34.	NB	45	RT	EW	---	---	---	---	1	787.00
34.1	101 + 45.	NB	40	RT	EW	---	---	1	---	---	778.75
35.1	102 + 90.	NB	76	LT	EW	---	---	---	1	---	775.25
49.1	102+01	NB	99.04	LT	EV	1	---	---	---	---	775.25
50.1	101+96	NB	99.66	LT	EW	---	1	---	---	---	776.50
PROJECT TOTALS						2	1	1	1	2	

NOTE: JOINT TIES REQUIRED FOR EACH END WALL AND ADJACENT SECTION OF PIPE (4 TIES TOTAL FOR EACH ENDWALL)

CULVERT PIPE REINFORCED CONCRETE CLASS III

LOCATION	522.0148 48-INCH LF	522.0154 54-INCH LF	523.0168 68X106-INCH LF	REMARKS
CATEGORY 0010				
C-44-119	140	---	140	
C-44-120	---	138	138	2 - 24" PVC TAPS REQD
PROJECT TOTALS	140	138	278	

APRON ENDWALLS FOR CULVERT PIPE STEEL

STRUCTURE NUMBER	LOCATION				STRUCT	521.1012	521.1024	INVERT ELEV
	STATION	OFFSET				12-INCH	24-INCH	
		RL	DIST.	DIR.		EACH	EACH	
CATEGORY 0010								
47.1	99 + 87.	NB	40	RT	EW	1	---	780.41
47.2	100 + 11.	NB	36	RT	EW	1	---	780.16
51.2	87 + 00.	NB	41.57	RT	EW	1	---	789.53
51.2	88 + 45.	NB	44.1	RT	EW	1	---	788.24
48.1	106 + 10.	NB	85	RT	EW	---	1	777.85
48.2	106 + 62.	NB	85	RT	EW	---	1	779.69
PROJECT TOTALS						4	2	

WALL MODULAR BLOCK GRAVITY

STATION	LOCATION	532.0200.s SF
CATEGORY 0010		
93+00 - 94+25, RT	CTH A	525
PROJECT TOTAL		525

3

CONCRETE SIDEWALK

				602.0405 4-INCH SF	602.0415 6-INCH SF	REMARKS
STATION	TO	STATION	LOCATION			
CATEGORY 0010						
73+75	-	79+80	CTH A	4,745	0	MEDIAN
84+95	-	91+12	CTH A	8,010	0	MEDIAN
91+98	-	94+70	CTH A	760	0	MEDIAN
73+70	-	79+00	CTH A	2,725	95	6-INCH AT CURBRAMPS
79+00	-	85+00	CTH A	2,585	280	6-INCH AT CURBRAMPS
85+00	-	91+00	CTH A	3,000	45	6-INCH AT CURBRAMPS
91+00	-	97+00	CTH A	2,230	400	6-INCH AT CURBRAMPS
97+00	-	103+00	CTH A	1,455	30	6-INCH AT CURBRAMPS
103+00	-	109+00	CTH A	0	80	TRAIL AROUND UTILITY VAULT
109+00	-	116+00	CTH A	0	290	6-INCH AT CURBRAMPS

PROJECT TOTALS 25,510 1,220

SALVAGED GUARDRAIL

					614.0920 SALVAGED RAIL LF	614.0925 SALVAGED GUARDRAIL END TREATMENTS EA	REMARKS
STATION	TO	STATION	DIR	LOCATION			
CATEGORY 0010							
101+85	-	102+30	LT	CTH A	45	---	
102+05	-	102+50	RT	CTH A	45	---	
104+23	-	105+80	RT	CTH A	162	---	
112+48	-	114+01	RT	CTH A	103	1	EAT (50 LF)

PROJECT TOTALS 355 1

RECONSTRUCTING AND ADJUSTING MANHOLES

				611.0420 RECONSTRUCTING MANHOLES EA	611.8110 ADJUSTING MANHOLE COVERS EA	SPV.0060.02 SALVAGE AND REINSTALL INTERNAL CHIMNEY SEAL EA	EXISTING RIM ELEVATION	PROPOSED RIM ELEVATION	REMARKS
STATION	OFFSET	DIR	LOCATION						
CATEGORY 0020									
79+84	52'	LT	CTH A	1	---	1	791.10	790.03	IN CURB RAMP
79+94	93'	LT	CTH A	---	1	1	789.94	789.69	
83+38	38'	LT	CTH A	1	---	1	792.04	790.91	IN CURB LINE
86+25	67'	LT	CTH A	---	1	1	789.58	789.98	NEAR PROPOSED DITCH BOTTOM
86+27	36'	LT	CTH A	---	1	1	791.42	791.91	
88+83	29'	LT	CTH A	---	1	1	790.92	791.50	
91+65	26'	LT	CTH A	---	1	1	790.41	790.32	
94+48	27'	LT	CTH A	1	---	1	788.42	786.68	
96+09	29'	LT	CTH A	---	1	1	784.89	784.21	
99+39	26'	LT	CTH A	---	1	1	781.41	781.38	
102+62	22'	LT	CTH A	1	---	1	780.52	783.57	
105+36	24'	LT	CTH A	1	---	1	781.90	783.05	
106+37	26'	LT	CTH A	---	1	1	782.23	782.60	
109+01	27'	LT	CTH A	---	1	1	782.50	782.72	
112+78	27'	LT	CTH A	---	1	1	782.90	782.96	

PROJECT TOTAL 5 10 15

CURB RAMP DETECTABLE WARNING
FIELD YELLOW

		602.0505
STATION	LOCATION	SF
CATEGORY 0010		
73+85	CTH A	24
79+65	CTH A	24
79+87	CTH A	12
80+40	CTH A	12
81+58	CTH A	8
82+24	CTH A	8
90+86	CTH A	32
91+30	CTH A	8
91+86	CTH A	8
94+40	CTH A	24
94+72	CTH A	12
94+83	CTH A	8
95+40	CTH A	12
95+46	CTH A	8
100+05	CTH A	8
114+60	CTH A	12
115+66	CTH A	12

PROJECT TOTAL 232

CONCRETE MEDIAN SLOPE NOSE

		620.0300 TYPE 1 SF
STATION	LOCATION	
CATEGORY 0010		
73+75	CTH A	5
79+80	CTH A	5
84+95	CTH A	100
91+15	CTH A	45
91+98	CTH A	5
94+60	CTH A	5

PROJECT TOTAL 165

GEOTEXTILE FABRIC TYPE SAS

				645.0140
STATION	TO	STATION	LOCATION	SY
CATEGORY 0010				
73+70	-	79+00	CTH A	3,964
79+00	-	85+00	CTH A	4,962
85+00	-	91+00	CTH A	4,600
91+00	-	97+00	CTH A	5,469
97+00	-	103+00	CTH A	4,600
103+00	-	109+00	CTH A	5,012
109+00	-	114+38	CTH A	4,064

PROJECT TOTAL 32,671

CONCRETE LOADING ZONE

	602.1000
LOCATION	SF
CATEGORY 0010	
DARLING ST	190

PROJECT TOTAL 190

RIPRAP MEDIUM AND FABRIC

	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE FABRIC TYPE HR SY
LOCATION		
CATEGORY 0010		
C-44-119 INLET APRON	40	20
C-44-120 INLET APRON	50	30
C-44-120 OUTLET APRON	50	30
POND SPILLWAY	20	40

PROJECT TOTALS 160 120

3

STORM SEWER PIPE

LOCATION		RCP CLASS III									INLET ELEV	DISCH ELEV
FROM	TO	608.0312	608.0315	608.0318	608.0321	608.0324	608.0327	610.0119	608.0330	610.0129		
		12 IN. L.F.	15 IN. L.F.	18 IN. L.F.	21 IN. L.F.	24 IN. L.F.	27 IN. L.F.	30 IN x 19 IN. L.F.	30 IN. L.F.	45 IN x 29 IN L.F.		
CATEGORY 0010												
10.2	10.1	---	---	---	---	---	---	---	---	13	782.31	782.25
10.3	10.2	---	---	---	---	---	---	---	---	21	782.37	782.31
10.4	10.3	23	---	---	---	---	---	---	---	---	783.19	783.04
10.5	10.4	22	---	---	---	---	---	---	---	---	783.30	783.19
11.1	11.2	22	---	---	---	---	---	---	---	---	782.75	782.58
11.2	11.3	10	---	---	---	---	---	---	---	---	782.58	782.52
12.1	10.3	---	---	---	---	---	---	---	---	140	782.79	782.37
12.2	12.1	32	---	---	---	---	---	---	---	---	783.80	783.71
12.3	12.1	6	---	---	---	---	---	---	---	---	783.73	783.71
12.4	12.3	23	---	---	---	---	---	---	---	---	783.80	783.73
13.1	12.1	---	---	---	---	---	---	---	---	125	783.17	782.79
13.2	13.1	6	---	---	---	---	---	---	---	---	784.65	784.59
13.3	13.1	6	---	---	---	---	---	---	---	---	784.65	784.59
14.1	13.1	---	---	---	---	145	---	---	---	---	784.02	783.59
14.2	14.3	24	---	---	---	---	---	---	---	---	785.11	785.04
14.3	14.1	8	---	---	---	---	---	---	---	---	785.04	785.02
14.4	14.1	6	---	---	---	---	---	---	---	---	785.03	785.02
14.5	14.4	26	---	---	---	---	---	---	---	---	785.12	785.03
15.1	14.1	---	---	220	---	---	---	---	---	---	785.18	784.52
15.2	15.1	---	---	34	---	---	---	---	---	---	785.29	785.18
15.3	15.2	45	---	---	---	---	---	---	---	---	785.92	785.79
15.4	15.1	32	---	---	---	---	---	---	---	---	785.77	785.68
15.5	15.2	---	---	---	---	---	---	---	---	---	785.94	785.79
16.1	15.1	---	---	210	---	---	---	---	---	---	785.81	785.18
16.2	16.1	38	---	---	---	---	---	---	---	---	786.50	786.31
16.3	16.2	10	---	---	---	---	---	---	---	---	786.55	786.50
16.4	16.1	32	---	---	---	---	---	---	---	---	786.47	786.31
16.5	16.4	20	---	---	---	---	---	---	---	---	786.57	786.47
16.6	16.3	---	---	---	---	---	---	---	---	---	786.67	786.55
17.2	18.2	---	42	---	---	---	---	---	---	---	787.43	787.29
17.3	17.2	22	---	---	---	---	---	---	---	---	787.49	787.43
17.4	17.3	---	---	---	---	---	---	---	---	---	787.65	787.49
17.5	18.3	55	---	---	---	---	---	---	---	---	787.45	787.29
18.1	19.1	---	---	194	---	---	---	---	---	---	787.26	786.77
18.2	18.1	---	6	---	---	---	---	---	---	---	787.29	787.26
18.3	18.1	6	---	---	---	---	---	---	---	---	787.29	787.26
19.1	20.1	---	---	130	---	---	---	---	---	---	786.77	786.38
19.2	19.1	58	---	---	---	---	---	---	---	---	787.94	787.27
20.1	21.1	---	---	125	---	---	---	---	---	---	786.38	785.92
20.2	20.1	6	---	---	---	---	---	---	---	---	787.01	786.88
20.3	20.1	6	---	---	---	---	---	---	---	---	787.01	786.88
21.1	22.1	---	---	---	---	---	---	84	---	---	785.92	785.66
21.2	21.1	6	---	---	---	---	---	---	---	---	786.63	786.50
21.3	21.2	24	---	---	---	---	---	---	---	---	787.13	786.63
21.4	21.1	6	---	---	---	---	---	---	---	---	786.63	786.50
22.1	22.2	---	---	---	---	---	---	52	---	---	785.66	785.28
22.3	22.1	---	---	---	---	---	---	32	---	---	785.86	785.66
22.4	22.3	---	26	---	---	---	---		---	---	787.00	786.36

PROJECT NO: 4984-01-57

HWY: CTH A

COUNTY: OUTAGAMIE

MISCELLANEOUS QUANTITIES

SHEET

E

STORM SEWER PIPE - CONTINUED

LOCATION		RCP CLASS III									INLET ELEV	DISCH ELEV
FROM	TO	608.0312	608.0315	608.0318	608.0321	608.0324	608.0327	610.0119	608.0330	610.0129		
		12 IN. L.F.	15 IN. L.F.	18 IN. L.F.	21 IN. L.F.	24 IN. L.F.	27 IN. L.F.	30 IN x 19 IN. L.F.	30 IN. L.F.	45 IN x 29 IN L.F.		
CATEGORY 0010												
23.1	22.1	---	---	66	---	---	---	---	---	---	785.98	785.73
23.2	23.1	6	---	---	---	---	---	---	---	---	786.50	786.48
23.3	23.2	25	---	---	---	---	---	---	---	---	786.57	786.50
23.4	23.1	---	6	---	---	---	---	---	---	---	786.25	786.23
23.5	23.4	---	25	---	---	---	---	---	---	---	786.32	786.25
24.1	24.2	48	---	---	---	---	---	---	---	---	787.00	786.77
24.2	23.5	41	---	---	---	---	---	---	---	---	786.77	786.57
25.1	25.3	36	---	---	---	---	---	---	---	---	784.02	783.69
25.2	25.1	26	---	---	---	---	---	---	---	---	784.28	784.02
25.3	26.4	---	100	---	---	---	---	---	---	---	783.44	782.53
26.1	26.4	32	---	---	---	---	---	---	---	---	782.88	782.64
26.2	26.1	4	---	---	---	---	---	---	---	---	782.89	782.88
26.3	26.2	24	---	---	---	---	---	---	---	---	782.97	782.89
26.4	27.4	---	120	---	---	---	---	---	---	---	782.53	781.31
27.1	27.2	---	---	---	---	---	---	---	---	---	782.53	782.38
27.2	27.3	38	---	---	---	---	---	---	---	---	782.38	782.00
27.3	27.4	48	---	---	---	---	---	---	---	---	782.00	781.56
27.4	28.1	---	70	---	---	---	---	---	---	---	781.31	780.61
28.2	28.1	120	---	---	---	---	---	---	---	---	779.83	779.47
28.3	28.1	84	---	---	---	---	---	---	---	---	779.72	779.47
28.1	29.1	---	---	104	---	---	---	---	---	---	778.97	778.14
29.2	29.1	60	---	---	---	---	---	---	---	---	778.82	778.64
29.3	29.1	---	44	---	---	---	---	---	---	---	778.52	778.39
29.1	31.0	---	---	185	---	---	---	---	---	---	778.14	776.66
30.2	30.3	---	---	---	---	---	---	---	---	---	777.58	777.41
30.3	30.1	20	---	---	---	---	---	---	---	---	777.41	777.36
30.1	31.1	---	35	---	---	---	---	---	---	---	777.11	777.00
31.1	31.0	---	30	---	---	---	---	---	---	---	777.00	776.91
32.3	32.4	27	---	---	---	---	---	---	---	---	777.33	777.25
32.4	31.0	---	30	---	---	---	---	---	---	---	777.00	776.91
31.0	32.0	---	---	---	---	65	---	---	---	---	776.16	775.97
32.2	32.1	---	---	---	---	---	---	---	---	---	777.16	777.06
32.1	32.0	30	---	---	---	---	---	---	---	---	777.06	776.97
32.5	32.0	30	---	---	---	---	---	---	---	---	777.06	776.97
32.0	33.1	---	---	---	---	160	---	---	---	---	775.97	775.49
34.1	33.1	---	---	---	---	42	---	---	---	---	778.75	778.33
33.1	33.2	---	---	---	---	---	---	---	58	---	774.99	774.69
35.0	35.1	---	---	---	---	---	87	---	---	---	775.45	775.25
36.0	35.0	---	---	---	---	---	112	---	---	---	775.71	775.45
35.2	36.1	---	---	---	---	---	---	---	---	---	777.14	777.03
36.1	36.0	---	30	---	---	---	---	---	---	---	776.78	776.71
38.0	36.0	---	---	---	---	---	105	---	---	---	775.88	775.71
38.1	38.0	30	---	---	---	---	---	---	---	---	777.23	777.13
37.1	37.2	56	---	---	---	---	---	---	---	---	777.41	777.23
37.2	38.0	30	---	---	---	---	---	---	---	---	777.23	777.13
39.0	38.0	---	---	---	---	194	---	---	---	---	776.29	775.88
PAGE												
SUBTOTALS		1,395	564	1,268	0	606	304	168	58	299		

STORM SEWER PIPE - CONTINUED

LOCATION		RCP CLASS III									INLET ELEV	DISCH ELEV
FROM	TO	608.0312 12 IN. L.F.	608.0315 15 IN. L.F.	608.0318 18 IN. L.F.	608.0321 21 IN. L.F.	608.0324 24 IN. L.F.	608.0327 27 IN. L.F.	610.0119 30 IN x 19 IN. L.F.	608.0330 30 IN. L.F.	610.0129 45 IN x 29 IN L.F.		
CATEGORY 0010												
39.1	39.0	30	---	---	---	---	---	---	---	---	777.39	777.29
39.2	39.0	30	---	---	---	---	---	---	---	---	777.39	777.29
40.0	39.0	---	---	---	65	---	---	---	---	---	776.54	776.29
40.1	40.0	30	---	---	---	---	---	---	---	---	777.39	777.29
41.2	41.1	---	---	---	---	---	---	---	---	---	778.44	778.36
41.1	40.0	---	30	---	---	---	---	---	---	---	777.11	777.04
42.0	40.0	---	---	105	---	---	---	---	---	---	777.26	776.79
42.2	42.0	30	---	---	---	---	---	---	---	---	777.86	777.76
44.0	42.0	---	---	105	---	---	---	---	---	---	777.65	777.26
44.1	44.0	30	---	---	---	---	---	---	---	---	778.25	778.15
44.2	44.0	30	---	---	---	---	---	---	---	---	778.25	778.15
45.3	44.0	---	---	185	---	---	---	---	---	---	778.21	777.65
45.2	45.3	49	---	---	---	---	---	---	---	---	778.86	778.71
46.0	45.3	---	---	65	---	---	---	---	---	---	778.39	778.21
46.1	46.0	30	---	---	---	---	---	---	---	---	778.99	778.89
46.2	46.0	---	30	---	---	---	---	---	---	---	778.76	778.64
46.3	46.5	82	---	---	---	---	---	---	---	---	779.34	779.09
46.5	46.2	25	---	---	---	---	---	---	---	---	779.09	779.01
46.4	46.3	---	---	---	---	---	---	---	---	---	779.51	779.34
49.1	49.2	30	---	---	---	---	---	---	---	---	775.25	775.07
50.1	50.2	---	---	26	---	---	---	---	---	---	776.50	775.07

PAGE SUBTOTALS	396	60	486	65	0	0	0	0	0
PROJECT TOTALS	1,791	624	1,754	65	606	304	168	58	299

STORM SEWER PVC

LOCATION		SPV.0090.02 8-INCH LF	SPV.0090.04 24-INCH LF	INLET ELEV	DISCH ELEV
FROM	TO				
CATEGORY 0010					
15.5	15.2	18	---	785.94	785.79
16.6	16.3	22	---	786.67	786.55
17.4	17.3	67	---	787.65	787.49
27.1	27.2	24	---	782.53	782.38
30.2	30.3	57	---	777.58	777.41
32.2	32.1	20	---	777.16	777.06
35.2	36.1	24	---	777.14	777.03
41.2	41.1	20	---	778.44	778.36
46.4	46.3	20	---	779.51	779.34
48.1	C-44-120	---	30	777.85	776.32
48.2	C-44-120	---	30	777.69	776.42

PROJECT TOTALS	272	60
----------------	-----	----

STORM SEWER LATERAL

STATION	DIR	LOCATION	STRUCTURE / PIPE	SPV.0090.01 LF
CATEGORY 0020				
80+40	RT	CTH A	15.4	20
80+90	LT	CTH A	15.3	20
82+70	LT	CTH A	16.2	17
84+00	LT	CTH A	17.4	3
96+40	LT	CTH A	28.3	8
91+13	LT	CTH A	29.2	36
98+01	LT	CTH A	31.0-29.1	47
98+18	RT	CTH A	31.0-29.1	45
98+25	LT	CTH A	30.2	14
99+90	LT	CTH A	32.2	3
105+56	LT	CTH A	38.1	18
107+50	LT	CTH A	39.1	16
108+15	LT	CTH A	41.2	3
110+25	LT	CTH A	44.1	15
111+30	LT	CTH A	45.3-44.0	46
112+10	LT	CTH A	45.2	3
112+75	LT	CTH A	46.2	20
113+82	LT	CTH A	46.3	5
113+82	LT	CTH A	46.4	3

PROJECT TOTALS	342
----------------	-----

MANHOLES, INLETS, AND COVERS

STRUCTURE NUMBER	LOCATION				STRUCT	611.0201 MANHOLE TYPE 1 ROUND EACH	611.0210 MANHOLE TYPE 3 ROUND EACH	611.0303 INLET TYPE 3 EACH	SPV.0060.01 INLET YARD DRAIN EACH	611.0624 INLET COVERS TYPE H EACH	611.0639 INLET COVERS TYPE HS EACH	611.0530 MANHOLE COVERS TYPE J EACH	TOP OF COVER ELEV	TOP OF STRUCT ELEV	LOW INVERT ELEV	STRUCT DEPTH (FT)	REMARKS
	STATION	OFFSET															
		RL	DIST.	DIR.													
CATEGORY 0010																	
10.1	73 + 78.	NB	10.00	LT	MH	---	1	---	---	---	---	1	786.97	785.97	782.25	3.72	
10.2	73 + 90.	NB	5.50	LT	MH	---	1	---	---	1	---	---	787.24	786.24	782.31	3.93	
10.3	74 + 10.	NB	0.5	LT	MH	---	1	---	---	1	---	---	787.34	786.34	782.37	3.97	
10.4	74 + 10.	NB	23.5	RT	INL	---	---	1	---	1	---	---	786.84	785.84	783.19	2.65	
10.5	74 + 25.	NB	37.5	RT	INL	---	---	---	1	---	---	---	785.80	785.80	783.30	2.50	
11.1	74 + 00.	NB	46.5	LT	INL	---	---	---	1	---	---	---	786.13	786.13	782.75	3.38	
11.2	73 + 77.	NB	51	LT	MH	---	1	---	---	---	---	1	787.31	786.31	782.58	3.73	
11.3	73 + 77.	NB	39.5	LT	EX INL	---	---	---	---	---	---	---	786.70				
12.1	75 + 50.	NB	6	LT	MH	---	1	---	---	---	---	1	788.50	787.50	782.79	4.71	
12.2	75 + 50.	NB	39.5	LT	INL	---	---	1	---	1	---	---	787.60	786.60	783.80	2.80	
12.3	75 + 50.	NB	0.5	LT	INL	---	---	1	---	1	---	---	788.00	787.00	783.73	3.27	
12.4	75 + 50.	NB	23.5	RT	INL	---	---	1	---	1	---	---	787.50	786.50	783.80	2.70	
13.1	76 + 75.	NB	8	LT	MH	---	1	---	---	---	---	1	789.22	788.22	783.17	5.05	
13.2	76 + 75.	NB	15.5	LT	INL	---	---	1	---	1	---	---	788.59	787.59	784.65	2.94	
13.3	76 + 75.	NB	0.5	LT	INL	---	---	1	---	1	---	---	788.59	787.59	784.65	2.94	
14.1	78 + 20.	NB	8	LT	MH	1	---	---	---	---	---	1	789.75	788.75	784.02	4.73	
14.2	78 + 20.	NB	39.5	LT	INL	---	---	1	---	1	---	---	788.73	787.73	785.11	2.62	
14.3	78 + 20.	NB	15.5	LT	INL	---	---	1	---	1	---	---	789.23	788.23	785.04	3.19	
14.4	78 + 20.	NB	2.5	LT	INL	---	---	1	---	1	---	---	789.23	788.23	785.03	3.20	
14.5	78 + 20.	NB	23.5	RT	INL	---	---	1	---	1	---	---	788.77	787.77	785.12	2.65	
15.1	80 + 40.	NB	8	LT	MH	1	---	---	---	---	---	1	790.48	789.48	785.18	4.30	
15.2	80 + 45.	NB	42	LT	INL	---	---	1	---	1	---	---	789.76	788.76	785.79	2.97	
15.3	80 + 90.	NB	39.5	LT	INL	---	---	1	---	1	---	---	789.93	788.93	785.92	3.01	
15.4	80 + 40.	NB	23.5	RT	INL	---	---	1	---	1	---	---	789.76	788.76	785.77	2.99	
15.5	80 + 45.	NB	60	LT	INL	---	---	---	1	---	---	---	789.20	789.20	785.94	3.26	
16.1	82 + 50.	NB	8	LT	MH	1	---	---	---	---	---	1	791.20	790.20	785.81	4.39	
16.2	82 + 70.	NB	39.5	LT	INL	---	---	1	---	1	---	---	790.55	789.55	786.50	3.05	
16.3	82 + 80.	NB	39.5	LT	INL	---	---	1	---	1	---	---	790.59	789.59	786.55	3.04	
16.4	82 + 50.	NB	23.5	RT	INL	---	---	1	---	1	---	---	790.48	789.48	786.47	3.01	
16.5	82 + 70.	NB	23.5	RT	INL	---	---	1	---	1	---	---	790.55	789.55	786.57	2.98	
16.6	82 + 85.	NB	61.5	LT	INL	---	---	---	1	---	---	---	789.50	789.50	786.67	2.83	
17.2	84 + 65.	NB	39.5	LT	INL	---	---	1	---	1	---	---	791.23	790.23	787.43	2.80	
17.3	84 + 67.	NB	62	LT	INL	---	---	---	1	---	---	---	788.82	788.82	787.49	1.33	
17.4	84 + 00.	NB	63	LT	INL	---	---	---	1	---	---	---	789.65	789.65	787.65	2.00	
17.5	84 + 50.	NB	23.5	RT	INL	---	---	1	---	1	---	---	791.17	790.17	787.45	2.72	
18.1	85 + 00.	NB	8	LT	MH	1	---	---	---	---	---	1	792.48	791.48	787.26	4.22	
18.2	85 + 00.	NB	15.5	LT	INL	---	---	1	---	1	---	---	791.79	790.79	787.29	3.50	
18.3	85 + 00.	NB	0.5	LT	INL	---	---	1	---	1	---	---	791.79	790.79	787.29	3.50	
19.1	86 + 95.	NB	8	LT	MH	1	---	---	---	---	---	1	792.94	791.94	786.77	5.17	
20.1	88 + 25.	NB	8	LT	MH	1	---	---	---	---	---	1	792.57	791.57	786.38	5.19	
20.2	88 + 25.	NB	15.5	LT	INL	---	---	1	---	1	---	---	791.97	790.97	787.01	3.96	
20.3	88 + 25.	NB	0.5	LT	INL	---	---	1	---	1	---	---	791.97	790.97	787.01	3.96	
21.1	89 + 50.	NB	8	LT	MH	1	---	---	---	---	---	1	792.02	791.02	785.92	5.10	
21.2	89 + 50.	NB	15.5	LT	INL	---	---	1	---	1	---	---	791.39	790.39	786.63	3.76	
21.3	89 + 50.	NB	39.5	LT	INL	---	---	1	---	1	---	---	790.89	789.89	787.13	2.76	
21.4	89 + 50.	NB	0.5	LT	INL	---	---	1	---	1	---	---	791.39	790.39	786.63	3.76	

PAGE SUBTOTALS 7 6 26 6 28 0 11

MANHOLES, INLETS, AND COVERS - CONTINUED

STRUCTURE NUMBER	LOCATION				STRUCT	611.0201 MANHOLE TYPE 1 ROUND EACH	611.0210 MANHOLE TYPE 3 ROUND EACH	611.0303 INLET TYPE 3 EACH	SPV.0060.01 INLET YARD DRAIN EACH	611.0624 INLET COVERS TYPE H EACH	611.0639 INLET COVERS TYPE HS EACH	611.0530 MANHOLE COVERS TYPE J EACH	TOP OF COVER ELEV	TOP OF STRUCT ELEV	LOW INVERT ELEV	STRUCT DEPTH (FT)	REMARKS
	STATION	OFFSET				611.0201 MANHOLE TYPE 1 ROUND EACH	611.0210 MANHOLE TYPE 3 ROUND EACH	611.0303 INLET TYPE 3 EACH	SPV.0060.01 INLET YARD DRAIN EACH	611.0624 INLET COVERS TYPE H EACH	611.0639 INLET COVERS TYPE HS EACH	611.0530 MANHOLE COVERS TYPE J EACH	TOP OF COVER ELEV	TOP OF STRUCT ELEV	LOW INVERT ELEV	STRUCT DEPTH (FT)	REMARKS
		RL	DIST.	DIR.													
CATEGORY 0010																	
22.1	90 + 34.	NB	8	LT	MH	1	---	---	---	---	---	1	791.61	790.61	785.66	4.95	
22.3	90 + 34.	NB	23.5	RT	MH	1	---	---	---	---	1	---	790.51	789.51	785.86	3.65	
23.1	91 + 00.	NB	8	LT	MH	1	---	---	---	---	---	1	791.22	790.22	785.98	4.24	
23.2	91 + 00.	NB	15.5	LT	INL	---	---	1	---	1	---	---	790.73	789.73	786.50	3.23	
23.3	91 + 00.	NB	39.5	LT	INL	---	---	1	---	1	---	---	790.21	789.21	786.57	2.64	
23.4	91 + 00.	NB	0.5	LT	INL	---	---	1	---	1	---	---	790.71	789.71	786.25	3.46	
23.5	91 + 00.	NB	23.5	RT	INL	---	---	1	---	1	---	---	790.21	789.21	786.32	2.89	
24.1	91 + 86.	NB	41	RT	INL	---	---	---	1	---	---	---	789.30	789.30	787.00	2.30	
24.2	91 + 38.	NB	38.6	RT	INL	---	---	1	---	1	---	---	789.98	788.98	786.77	2.21	
25.1	93 + 50.	NB	13.5	LT	INL	---	---	1	---	1	---	---	788.49	787.49	784.02	3.47	
25.2	93 + 50.	NB	39.5	LT	INL	---	---	1	---	1	---	---	788.04	787.04	784.28	2.76	
25.3	93 + 50.	NB	23.5	RT	INL	---	---	1	---	1	---	---	788.16	787.16	783.44	3.72	
26.1	94 + 50.	NB	10.6	LT	INL	---	---	1	---	1	---	---	786.83	785.83	782.88	2.95	
26.2	94 + 50.	NB	13.6	LT	INL	---	---	1	---	1	---	---	786.83	785.83	782.89	2.94	
26.3	94 + 50.	NB	39.5	LT	INL	---	---	1	---	1	---	---	786.33	785.33	782.97	2.36	
26.4	94 + 50.	NB	23.5	RT	MH	---	1	---	---	1	---	---	786.53	785.53	782.53	3.00	
27.1	94 + 82.	NB	50	RT	INL	---	---	---	1	---	---	---	784.80	784.80	782.53	2.27	
27.2	200 + 64.	GLEN	15.5	RT	INL	---	---	1	---	1	---	---	785.70	784.70	782.38	2.32	
27.3	200 + 64.	GLEN	23.5	LT	INL	---	---	1	---	1	---	---	785.51	784.51	782.00	2.51	
27.4	95 + 70.	NB	23.5	RT	MH	---	1	---	---	1	---	---	784.55	783.55	781.31	2.24	
28.1	96 + 40.	NB	16.5	RT	MH	---	1	---	---	---	---	1	783.63	782.63	778.97	3.66	
28.2	95 + 50.	NB	64	LT	INL	---	---	---	1	---	---	---	783.25	783.25	779.83	3.42	
28.3	96 + 40.	NB	68	LT	INL	---	---	---	1	---	---	---	782.20	782.20	779.72	2.48	
29.1	97 + 40.	NB	8	LT	MH	1	---	---	---	---	---	1	782.72	781.72	778.14	3.58	
29.2	97 + 15.	NB	62	LT	INL	---	---	---	1	---	---	---	781.20	781.20	778.82	2.38	
29.3	97 + 38.	NB	38	RT	INL	---	---	---	1	---	---	---	781.50	781.50	778.52	2.98	
30.1	98 + 90.	NB	37.5	LT	MH	1	---	---	---	---	1	---	781.06	780.06	777.11	2.95	
30.2	98 + 25.	NB	57	LT	INL	---	---	---	1	---	---	---	780.75	780.75	777.58	3.17	
30.3	98 + 82.	NB	56	LT	INL	---	---	---	1	---	---	---	780.50	780.50	777.41	3.09	
31.1	99 + 25.	NB	37.5	LT	MH	1	---	---	---	1	---	---	781.04	780.04	777.00	3.04	
31.0	99 + 25.	NB	7	LT	MH	1	---	---	---	---	---	1	781.74	780.74	776.16	4.58	
32.0	99 + 90.	NB	7	LT	MH	1	---	---	---	---	---	1	781.90	780.90	775.97	4.93	
32.1	99 + 90.	NB	37.5	LT	INL	---	---	1	---	1	---	---	781.20	780.20	777.06	3.14	
32.2	99 + 90.	NB	59	LT	INL	---	---	---	1	---	---	---	780.20	780.20	777.16	3.04	
32.3	98 + 96.	NB	23.5	RT	INL	---	---	1	---	1	---	---	781.05	780.05	777.33	2.72	
32.4	99 + 25.	NB	23.5	RT	INL	---	---	1	---	1	---	---	781.04	780.04	777.00	3.04	
32.5	99 + 90.	NB	23.5	RT	INL	---	---	1	---	---	1	---	781.20	780.20	777.06	3.14	
33.1	101 + 50.	NB	7	LT	MH	1	---	---	---	---	---	1	783.11	782.11	774.99	7.12	
35.0	103 + 38.	NB	7	LT	MH	1	---	---	---	---	---	1	784.06	783.06	775.45	7.61	
35.2	104 + 50.	NB	62	LT	INL	---	---	---	1	---	---	---	780.00	780.00	777.14	2.86	
36.0	104 + 50.	NB	7	LT	MH	1	---	---	---	---	---	1	783.74	782.74	775.71	7.03	
36.1	104 + 50.	NB	37.5	LT	INL	---	---	1	---	1	---	---	783.04	782.04	776.78	5.26	

PAGE SUBTOTALS 11 3 18 10 20 3 9

MANHOLES, INLETS, AND COVERS - CONTINUED

STRUCTURE NUMBER	LOCATION				STRUCT	611.0201 MANHOLE TYPE 1 ROUND EACH	611.0210 MANHOLE TYPE 3 ROUND EACH	611.0303 INLET TYPE 3 EACH	SPV.0060.01 INLET YARD DRAIN EACH	611.0624 INLET COVERS TYPE H EACH	611.0639 INLET COVERS TYPE HS EACH	611.0530 MANHOLE COVERS TYPE J EACH	TOP OF COVER ELEV	TOP OF STRUCT ELEV	LOW INVERT ELEV	STRUCT DEPTH (FT)	REMARKS
	STATION	OFFSET															
		RL	DIST.	DIR.													
CATEGORY 0010																	
37.1	105 + 00.	NB	23.5	RT	INL	---	---	1	---	1	---	---	782.84	781.84	777.41	4.43	
37.2	105 + 56.	NB	23.5	RT	INL	---	---	1	---	1	---	---	782.62	781.62	777.23	4.39	
38.0	105 + 56.	NB	7	LT	MH	1	---	---	---	---	---	1	783.32	782.32	775.88	6.44	
38.1	105 + 56.	NB	37.5	LT	INL	---	---	1	---	1	---	---	782.62	781.62	777.23	4.39	
39.0	107 + 50.	NB	7	LT	MH	1	---	---	---	---	---	1	782.69	781.69	776.29	5.40	
39.1	107 + 50.	NB	37.5	LT	INL	---	---	1	---	1	---	---	781.99	780.99	777.39	3.60	
39.2	107 + 50.	NB	23.5	RT	INL	---	---	1	---	1	---	---	781.99	780.99	777.39	3.60	
40.0	108 + 15.	NB	7	LT	MH	1	---	---	---	---	---	1	782.80	781.80	776.54	5.26	
40.1	108 + 15.	NB	23.5	RT	INL	---	---	1	---	---	1	---	782.10	781.10	777.39	3.71	
41.1	108 + 15.	NB	37.5	LT	INL	---	---	1	---	---	1	---	782.10	781.10	777.11	3.99	
41.2	108 + 15.	NB	57	LT	INL	---	---	---	1	---	---	---	781.50	781.50	778.44	3.06	
42.0	109 + 20.	NB	7	LT	MH	1	---	---	---	---	---	1	783.21	782.21	777.26	4.95	
42.2	109 + 20.	NB	37.5	LT	INL	---	---	1	---	1	---	---	782.51	781.51	777.86	3.65	
44.0	110 + 25.	NB	7	LT	MH	1	---	---	---	---	---	1	783.63	782.63	777.65	4.98	
44.1	110 + 25.	NB	37.5	LT	INL	---	---	1	---	1	---	---	782.93	781.93	778.25	3.68	
44.2	110 + 25.	NB	23.5	RT	INL	---	---	1	---	1	---	---	782.93	781.93	778.25	3.68	
45.2	112 + 10.	NB	57	LT	INL	---	---	---	1	---	---	---	782.75	782.75	778.86	3.89	
45.3	112 + 10.	NB	7	LT	MH	1	---	---	---	---	---	1	783.54	782.54	778.21	4.33	
46.0	112 + 75.	NB	7	LT	MH	1	---	---	---	---	---	1	783.36	782.36	778.39	3.97	
46.1	112 + 75.	NB	23.5	RT	INL	---	---	1	---	1	---	---	782.65	781.65	778.99	2.66	
46.2	112 + 75.	NB	37.5	LT	INL	---	---	1	---	1	---	---	782.65	781.65	778.76	2.89	
46.3	113 + 82.	NB	37.7	LT	INL	---	---	1	---	1	---	---	782.97	781.97	779.34	2.63	
46.4	113 + 92.	NB	55	LT	INL	---	---	---	1	---	---	---	783.40	783.40	779.51	3.89	
46.5	113 + 00.	NB	37.5	LT	INL	---	---	1	---	1	---	---	782.70	781.70	779.08	2.62	

PAGE SUBTOTALS	7	0	14	3	12	2	7
PROJECT TOTALS	25	9	58	19	60	5	27

TOP OF COVER ELEVATION IS GUTTERLINE FOR INLET TOPS IN CURB AND CENTER OF STRUCTURE FOR MANHOLE AND YARD DRAIN TOPS
LOCATION REFERS TO CENTER OF STRUCTURE
TOP OF STRUCTURE ELEVATION IS 1.0 FT BELOW TOP OF COVER ELEVATION FOR STRUCTURE IN PAVEMENT, 0.0 FT FOR YARD DRAINS

WATER

STATION	TO	STATION	LOCATION	624.0100 MGAL	REMARKS
CATEGORY 0010					
73+70	-	79+00	CTH A	9	COMPACTION
79+00	-	85+00	CTH A	13	COMPACTION
85+00	-	91+00	CTH A	12	COMPACTION
91+00	-	97+00	CTH A	13	COMPACTION
97+00	-	103+00	CTH A	12	COMPACTION
103+00	-	109+00	CTH A	13	COMPACTION
109+00	-	114+38	CTH A	10	COMPACTION
200+64	-	201+90	GLENDALE	1	COMPACTION
DRIVEWAYS			CTH A	2	COMPACTION
UNDISTRUBUTED				400	DUST CONTROL

PROJECT TOTAL 485

SAWCUTS

STATION TO STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	REMARKS
CATEGORY 0010				
BOP - 79+00	CTH A	---	120	
79+00 - 85+00	CTH A	40	---	DRIVEWAYS
91+00 - 97+00	CTH A	74	---	DRIVEWAYS
97+00 - 103+00	CTH A	77	21	DRIVEWAYS & CURB
103+00 - 109+00	CTH A	79	---	DRIVEWAYS
109+00 - EOP	CTH A	52	5	DRIVEWAYS & CURB
-	DARLING ST	80	---	
-	APPLEGATE DR	38	5	
-	ROBERTS AVE	28	5	
-	GLENDALE AVE EAST	125	10	
-	GLENDALE AVE WEST	38	---	
-	PERSHING DR	32	---	

PROJECT TOTALS 663 166

EROSION CONTROL ITEMS

STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EA	628.1910 MOBILZATIONS EMERGENCY EROSION CONTROL EA	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING MIXTURE #40 LB	630.0200 SEEDING TEMPORARY LB
CATEGORY 0010											
73+70	-	79+00	CTH A	1,515	0	0	---	---	1	27	41
79+00	-	85+00	CTH A	1,685	200	200	---	---	1	30	45
85+00	-	91+00	CTH A	2,610	300	300	---	---	2	47	70
91+00	-	97+00	CTH A	2,050	100	100	---	---	1	37	55
97+00	-	103+00	CTH A	2,900	200	200	---	---	2	52	78
103+00	-	109+00	CTH A	3,870	0	0	---	---	2	70	104
109+00	-	114+38	CTH A	2,940	0	0	---	---	2	53	79
UNDISTRIBUTED				4,400	200	200	6	4	3	79	119

PROJECT TOTALS 21,970 1,000 1,000 6 4 14 395 593

EROSION CONTROL ITEMS

STATION	TO	STATION	LOCATION	628.7005 INLET PROTECTION TYPE A EA	628.7015 INLET PROTECTION TYPE C EA	628.7020 INLET PROTECTION TYPE D EA	628.7570 ROCK BAGS EA	628.2004 EROSION MAT CLASS I TYPE B SY	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.2027 EROSION MAT CLASS II TYPE C SY
CATEGORY 0010											
73+70	-	79+00	CTH A	14	12	0	0	0	435	1,080	0
79+00	-	85+00	CTH A	15	11	0	0	0	1,290	395	0
85+00	-	91+00	CTH A	6	6	0	30*	0	1,280	1,330	0
91+00	-	97+00	CTH A	19	15	0	0	0	1,670	380	0
97+00	-	103+00	CTH A	12	2	4	35*	700	1,820	260	120
103+00	-	109+00	CTH A	10	6	2	50*	100	2,090	460	1,220
109+00	-	114+38	CTH A	9	4	3	0	0	1,530	100	1,310
UNDISTRIBUTED				0	0	0	30	200	2,530	1,000	665

PROJECT TOTALS 85 56 9 145 1,000 12,645 5,005 3,315
* QTY FOR DITCH PIPE CHECKS

CONSTRUCTION STAKING

STATION - STATION	LOCATION	650.4000 STORM SEWER EACH	650.4500 SUBGRADE LF	650.5000 BASE LF	650.5500 CURB GUTTER AND CURB & GUTTER LF	650.6500 STRUCTURE LAYOUT LS	650.7000 CONCRETE PAVEMENT LF	650.9910 SUPPLEMENTAL CONTROL LS	650.9920 SLOPE STAKES LF	REMARKS
CATEGORY 0010										
PROJECT 4984-01-57										
73+70 - 114+38	CTH A	127	4,068*	---	165	---	4,068	1	4,068	
79+28 - 115+90	TRAIL	---	---	3,436	---	---	---	---	---	
STRUCTURE C-44-0119	CTH A	---	---	---	---	1	---	---	---	
STRUCTURE C-44-0120	PERSHING ST	---	---	---	---	1	---	---	---	

PROJECT TOTALS 127 4,068 3,436 165 4,068 4,068

*SUBGRADE STAKING FOR TRAIL INCLUDED WITH SUBGRADE STAKING FOR ROADWAY

REMOVING SIGNS TYPE II AND REMOVING SMALL SIGN SUPPORTS

SIGN NO.	STATION	LOCATION	DESCRIPTION	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
CATEGORY 0010						
R1-01	73+75 , MEDIAN	LYNNDALE DR	KEEP RIGHT	1	1	
R1-02	76+50 , RT	LYNNDALE DR	RIGHT LANE ENDS	1	1	
R1-03	76+60 , LT	LYNNDALE DR	JCT 96	1	1	
R2-01	79+50 , LT	LYNNDALE DR	SPEED LIMIT 40	1	1	
R2-02	79+75 , LT	DARLING ST	STOP SIGN	1	1	
R2-03	79+75 , LT	E. FRONTAGE RD	YIELD	1	1	
R2-04	80+35 , LT	DARLING ST	<--->	1	1	
R2-05	80+45 , RT	LYNNDALE DR	TWO WAY TRAFFIC	1	1	
R2-06	82+20 , RT	APPLEGATE DR	STOP SIGN	1	1	
R3-01	84+75 , LT	LYNNDALE DR	NO ENGINE BRAKING, WITHIN GRAND CHUTE LIMITS	2	1	
R3-02	86+45 , RT	LYNNDALE DR	SPEED LIMIT 40	1	1	
R3-03	89+75 , LT	LYNNDALE DR	SPEED LIMIT 40	1	1	
R4-01	91+85 , RT	ROBERTS AV	STOP SIGN	1	1	
R4-02	94+80 , LT	GLENDALE AV	LYNNDALE DR & GLENDALE DR STREET MARKERS	2	1	
R4-03	94+85 , LT	GLENDALE AV	STOP SIGN	1	1	
R4-04	95+40 , RT	GLENDALE AV	STOP SIGN	1	1	
R5-01	101+90 , LT	LYNNDALE DR	OBJECT MARKER	1	1	
R5-02	102+05 , RT	LYNNDALE DR	OBJECT MARKER	1	1	
R5-03	102+25 , LT	LYNNDALE DR	OBJECT MARKER	1	1	
R5-04	102+45 , RT	LYNNDALE DR	OBJECT MARKER	1	1	
R6-01	106+65 , RT	PERSHING ST	STOP SIGN	1	1	
R6-02	108+40 , RT	LYNNDALE DR	JCT 00	1	1	
R7-01	110+00 , RT	LYNNDALE DR	TRAFFIC SIGNAL AHEAD	1	1	
R8-01	117+00 , LT	LYNNDALE DR	RIGHT LANE ENDS	1	1	BETWEEN HEATHER AV & CTH 00
PROJECT TOTALS				26	24	

MOVING SIGNS TYPE II AND MOVING SMALL SIGN SUPPORTS

SIGN NO.	FROM STATION	TO STATION	LOCATION	DESCRIPTION	638.2102 MOVING SIGNS TYPE II EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS
CATEGORY 0010							
M1-01	77+50 , RT	77+50 , MED	LYNNDALE DR	PATRIOT PARK <---	1	1	
M2-01	79+75 , LT	80+45 , LT	LYNNDALE DR / DARLING ST INT.	STREET MARKER SIGNS	2	1	
M2-02	81+75 , LT	83+00 , LT	LYNNDALE DR	PATRIOT PARK --->	1	1	
M2-03	82+20 , RT	81+60 , RT	LYNNDALE DR / APPLEGATE DR INT.	STREET MARKER SIGNS	2	1	
M4-01	91+35 , RT	91+35 , RT	LYNNDALE DR / ROBERTS AV INT.	STREET MARKER SIGNS	2	1	
M4-02	95+50 , RT	94+85 , RT	LYNNDALE DR / GLENDALE AV INT.	STREET MARKER SIGNS	2	1	
M6-01	106+75 , RT	106+00 , RT	LYNNDALE DR / PERSHING ST INT.	STREET MARKER SIGNS	2	1	
PROJECT TOTALS					12	7	

PERMANENT SIGNS TYPE II AND SIGN SUPPORTS

SIGN NO.	STATION	LOCATION	FACE DIR.	SIGN CODE	SIGN SIZE	DESCRIPTION	SIGN DIMENSIONS				SIGN MOUNTED ON SAME POST AS	634.0412 POSTS WOOD 4 X 4-INCH 12 FT EACH	634.0616 POSTS WOOD 4 X 6-INCH 16 FT EACH	637.0202 SIGNS REFLECTIVE TYPE II SF	REMARKS	
							W IN	X X	H IN	AREA SF						
CATEGORY 0010																
1-01	76+00	, LT	LYNNDALE DR.	SB	J1-1	2	ROUTE ASSEMBLIES	24	X	39	6.50			1	6.50	
					M2-1	2	JCT	15	X	21	---					
					M1-6	2	STATE ROUTE MARKER	24	X	24	---					HIGHWAY 96
1-02	78+25	, LT	TRAIL	NB	W3-1	6	STOP AHEAD SYMBOL MESSAGE	18	X	18	2.25		1		2.25	
2-01	78+95	, LT	LYNNDALE DR.	SB	R2-1	2	SPEED LIMIT XX MPH	24	X	30	5.00			1	5.00	40 MPH
2-02	79+80	, LT	TRAIL	NB	R1-1	6	STOP	18	X	18	1.86		1		1.86	
2-03	79+80	, LT	E FRONTAGE RD	NB	R1-2	2	YIELD	36	X	31	3.88			1	3.88	
2-04	79+90	, LT	DARLING ST	EB	R1-1	2	STOP	30	X	30	5.18			1	5.18	
2-05	80+10	, LT	DARLING ST	NB	R6-2R	2	ONE WAY --->	24	X	30	5.00			1	5.00	
2-06	80+10	, LT	DARLING ST	WB	R4-7	2	KEEP RIGHT	24	X	30	5.00			1	5.00	
2-07	80+50	, LT	TRAIL	SB	R1-1	6	STOP	18	X	18	1.86		1		1.86	
2-08	82+00	, LT	TRAIL	SB	W3-1	6	STOP AHEAD SYMBOL MESSAGE	18	X	18	2.25		1		2.25	
2-09	82+20	, RT	APPLEGATE DR	WB	R1-1	2	STOP	30	X	30	5.18			1	5.18	
2-10	83+00	, RT	LYNNDALE DR	NB	R2-1	2	SPEED LIMIT XX MPH	24	X	30	5.00			1	5.00	40 MPH
3-01	85+05	, MED	LYNNDALE DR	NB	R4-7	2	KEEP RIGHT	24	X	30	5.00			1	5.00	
3-02	85+05	, LT	LYNNDALE DR	NB	R5-1	2	DO NOT ENTER	30	X	30	6.25			1	6.25	
3-03	87+00	, LT	LYNNDALE DR	NB	R5-1A	2	WRONG WAY	36	X	24	6.00			1	6.00	
4-01	91+10	, MED	LYNNDALE DR	SB	R4-7	2	KEEP RIGHT	24	X	30	5.00			1	5.00	
4-02	91+80	, RT	ROBERTS AV	WB	R1-1	2	STOP	30	X	30	5.18			1	5.18	
4-03	92+50	, RT	LYNNDALE DR	SB	R5-1A	2	WRONG WAY	36	X	24	6.00			1	6.00	
4-04	93+20	, LT	TRAIL	NB	W3-1	6	STOP AHEAD SYMBOL MESSAGE	18	X	18	2.25		1		2.25	
4-05	93+20	, LT	LYNNDALE DR	SB	R2-1	2	SPEED LIMIT XX MPH	24	X	30	5.00	4-04			5.00	40 MPH
4-06	94+50	, MED	LYNNDALE DR	SB	R4-7	2	KEEP RIGHT	24	X	30	5.00			1	5.00	
4-07	94+60	, RT	LYNNDALE DR	SB	R5-1	2	DO NOT ENTER	30	X	30	6.25			1	6.25	
4-08	94+70	, LT	TRAIL	NB	R1-1	6	STOP	18	X	18	1.86		1		1.86	
4-09	199+50	, RT	GLENDALE AV	EB	R1-1	2	STOP	30	X	30	5.18			1	5.18	
4-10	198+50	, RT	GLENDALE AV	EB	R3-8	2	LANE CONTROL - LEFT-THR, RT ONLY	36	X	30	7.50			1	7.50	
4-11	200+55	, LT	GLENDALE AV	WB	R1-1	2	STOP	30	X	30	5.18			1	5.18	
4-12	210+75	, LT	GLENDALE AV	WB	R3-8	2	LANE CONTROL - LEFT-THR, RT ONLY	36	X	30	7.50			1	7.50	
4-13	95+50	, LT	TRAIL	SB	R1-1	6	STOP	18	X	18	1.86		1		1.86	
5-01	96+60	, RT	LYNNDALE DR	NB	R2-1	2	SPEED LIMIT XX MPH	24	X	30	5.00			1	5.00	40 MPH
5-02	97+00	, LT	TRAIL	SB	W3-1	6	STOP AHEAD SYMBOL MESSAGE	18	X	18	2.25		1		2.25	
5-03	98+25	, LT	LYNNDALE DR	SB	R3-9B	2	CENTER LANE - TWLTL	24	X	36	6.00			1	6.00	
				SB	R3-9D	2	END	24	X	6	1.00				1.00	
5-04	98+25	, RT	LYNNDALE DR	NB	R3-9B	2	CENTER LANE - TWLTL	24	X	36	6.00			1	6.00	
				NB	R3-9C	2	BEGIN	24	X	6	1.00				1.00	
6-01	104+50	, LT	LYNNDALE DR	SB	R2-1	2	SPEED LIMIT XX MPH	24	X	30	5.00			1	5.00	40 MPH
6-02	106+25	, LT	LYNNDALE DR	SB	R3-9B	2	CENTER LANE - TWLTL	24	X	36	6.00			1	6.00	
6-03	106+75	, RT	PERSHING ST	WB	R1-1	2	STOP	30	X	30	5.18			1	5.18	
6-04	107+50	, RT	LYNNDALE DR	NB	R3-9B	2	CENTER LANE - TWLTL	24	X	36	6.00			1	6.00	
7-01	108+75	, RT	LYNNDALE DR	NB	R2-1	2	SPEED LIMIT XX MPH	24	X	30	5.00			1	5.00	40 MPH
7-02	112+00	, LT	LYNNDALE DR	SB	R3-9B	2	CENTER LANE - TWLTL	24	X	36	6.00			1	6.00	
				SB	R3-9C	2	BEGIN	24	X	6	1.00				1.00	
7-03	112+00	, RT	LYNNDALE DR	NB	R3-9B	2	CENTER LANE - TWLTL	24	X	36	6.00			1	6.00	
				NB	R3-9D	2	END	24	X	6	1.00				1.00	
7-04	112+85	, LT	TRAIL	NB	W3-1	6	STOP AHEAD SYMBOL MESSAGE	18	X	18	2.25		1		2.25	
PAGE SUBTOTALS												9		30		194.65

PERMANENT SIGNS TYPE II AND SIGN SUPPORTS CONTINUED

SIGN NO.	STATION	LOCATION	FACE DIR.	SIGN CODE	SIGN SIZE	DESCRIPTION	SIGN DIMENSIONS				SIGN MOUNTED ON SAME POST AS	634.0412 POSTS WOOD 4 X 4-INCH 12 FT EACH	634.0616 POSTS WOOD 4 X 6-INCH 16 FT EACH	637.0202 SIGNS REFLECTIVE TYPE II SF	REMARKS
							W IN	X X	H IN	AREA SF					
CATEGORY 0010															
7-05	113+15 , RT	LYNNDALE DR	NB	J1-1	2	ROUTE ASSEMBLIES	24	X	39	6.50			1	6.50	
				M2-1	2	JCT	15	X	21	---					
				M1-6	2	COUNTY ROUTE MARKER	24	X	24	---					COUNTY 00
8-01	114+50 , LT	TRAIL	NB	R1-1	6	STOP	18	X	18	1.86		1		1.86	
8-02	115+85 , LT	TRAIL	SB	R1-1	6	STOP	18	X	18	1.86		1		1.86	

PAGE SUBTOTALS 2 1 10.22
PROJECT TOTALS 11 31 204.87

TRAFFIC CONTROL

LOCATION	SERVICE PERIOD DAYS	643.0300		643.0420		643.0705		643.0715		643.0900		643.1050		REMARKS
		DRUMS		BARRICADES TYPE III		WARNING LIGHTS TYPE A		WARNING LIGHTS TYPE C		SIGNS		PORTABLE CHANGEABLE MESSAGE SIGNS		
		NO	DAYS	NO	DAYS	NO	DAYS	NO	DAYS	NO	DAYS	NO	DAYS	
CATEGORY 0010														
CTH A - ADVANCED SIGNAGE	120	20	2,400	24	2,880	36	4,320	10	1,200	16	1,920	2	14	NOTE A; NOTE C
SIDE ROADS	120	10	1,200	28	3,360	40	4,800	--	--	20	2,400	--	--	
CTH A - CULVERT CLOSURE	50	--	--	12	600	18	900	--	--	8	400	2	14	NOTE B
UNDISTRIBUTED	--		200		360		580		100		280			

PROJECT TOTALS 3,800 7,200 10,600 1,300 5,000 28

NOTE A: INSTALL PORTABLE CHANGEABLE MESSAGE SIGN ON CTH A AT EACH END OF PROJECT ONE WEEK BEFORE CLOSURE.
NOTE B: INSTALL PORTABLE CHANGEABLE MESSAGE SIGN ONE WEEK BEFORE FULL ROAD CLOSURE FOR CULVERT WORK ACROSS CTH A.
NOTE C: DRUMS FOR CTH 00 WESTBOUND LEFT TURN LANE CLOSURE AT CTH A.

PAVEMENT MARKING

STATION - STATION	LOCATION	****	****	646.0106	646.0126	647.0726	647.0166	647.0566	647.0606	647.0766	REMARKS
		EPOXY 4-INCH (WHITE) LF	EPOXY 4-INCH (YELLOW) LF	EPOXY 4-INCH LF	EPOXY 8-INCH LF	DIAGONAL EPOXY 12-INCH (YELLOW) LF	ARROWS EPOXY TYPE 2 (WHITE) EACH	STOP LINE EPOXY 18-INCH (WHITE) LF	ISLAND NOSE EPOXY (YELLOW) EACH	CROSSWALK EPOXY 6-INCH (WHITE) LF	
CATEGORY 0010											
72+50 - 78+50	LYNNDALE DR	250	---	250	125	---	1	---	1	110	
78+50 - 84+50	LYNNDALE DR	300	1,000	1,300	80	---	5	---	1	105	
84+50 - 90+50	LYNNDALE DR	300	75	375	---	---	---	---	1	---	
90+50 - 96+50	LYNNDALE DR	300	190	490	265	---	3	---	3	195	
96+50 - 102+50	LYNNDALE DR	300	1,425	1,725	---	105	2	---	---	---	
102+50 - 108+50	LYNNDALE DR	300	1,500	1,800	---	---	4	---	---	---	
108+50 - 113+50	LYNNDALE DR	250	1,200	1,450	---	90	2	---	---	---	
113+50 - 117+00	LYNNDALE DR	50	190	240	100	---	1	---	---	---	
	DARLING ST	---	---	---	---	---	---	18	---	90	
	APPLEGATE DR	---	50	50	25	---	---	27	---	115	
	ROBERTS AV	---	---	---	---	---	---	18	---	95	
	GLENDALE AV	---	520	520	120	---	2	50	---	225	
	PERSHING ST	---	---	---	---	---	---	36	---	---	
	HEATHER AV	---	---	---	---	---	---	36	---	190	

PROJECT TOTALS 2,050 6,150 8,200 715 195 20 185 6 1,125

**** FOR INFORMATION ONLY.

HYDRANT ADJUSTMENTS

EXISTING LOCATION			LOCATION	SPV.0060.05 BOLT REPLACEMENT HYDRANTS	SPV.0060.07 RELOCATE EXISTING HYDRANTS	SPV.0060.11 INSTALL HYDRANT EXTENSION	SPV.0090.03 INSTALL HYDRANT LEAD	EXISTING ELEVATION	PROPOSED ELEVATION	PROPOSED LOCATION		
STATION	OFFSET	DIR		EA	EA	EA	LF			STATION	OFFSET	DIR
CATEGORY 0020												
83+38.50	55.95	LT	CTH A	1	---	1	---	789.91	791.41	---	---	---
87+37.17	53.55	LT	CTH A	1	1	1	2	789.58	791.61	87+37	55.5'	LT
91+26.61	46.89	LT	CTH A	1	1	1	9	786.74	789.91	91+22	55.5'	LT
94+81.67	49.41	LT	CTH A	1	1	---	18	787.06	787.25	94+65	55.5'	LT
98+78.32	39.29	LT	CTH A	1	1	1	2	780.77	781.68	98+78	40.7'	LT
102+76.31	36.23	LT	CTH A	1	1	1	17	777.56	783.37	102+76	53.5'	LT
106+76.98	46.27	LT	CTH A	1	1	---	19	783.25	783.21	106+89	52.5'	LT
110+84.49	42.59	LT	CTH A	1	1	1	10	782.15	784.27	106+77	52.5'	LT
300+89.48	32.06	LT	PERSHING	1	---	---	---	---	---	---	---	---

PROJECT TOTAL 9 7 6 77

POND LINER CLAY

LOCATION	SPV.0035.01 CY
CATEGORY 0010	
POND	500

PROJECT TOTAL 500

WATER VALVE REPLACEMENT

LOCATION	SPV.0060.03 REPLACE 8-INCH VALVE EA	SPV.0060.04 REPLACE 12-INCH VALVE EA
	EA	EA
CATEGORY 0020		
UNDISTRIBUTED	CTH A	3 3

PROJECT TOTAL 3 3

WATER SERVICE ADJUSTMENTS

EXISTING LOCATION			LOCATION	SPV.0060.08	SPV.0060.09	SPV.0060.10
STATION	OFFSET	DIR		REPLACE CURB BOXES	REPLACE CURB STOPS	RELOCATE CURB STOP AND CURB BOX
CATEGORY 0020						
80+77	52.3	LT	CTH A	1	---	---
83+05 +/-	50 +/-	LT	CTH A	1	---	---
84+02	60.3	LT	CTH A	1	---	---
96+19	41.7	LT	CTH A	1	---	---
97+10	42.1	LT	CTH A	1	---	---
97+78	40.6	LT	CTH A	---	---	1
97+88	33.8	RT	CTH A	1	---	---
98+16	40.6	LT	CTH A	---	---	1
99+77	38 +/-	LT	CTH A	---	---	1
100+07	37.6	LT	CTH A	---	---	1
104+58	43.4	LT	CTH A	1	---	---
106+28 +/-	38 +/-	LT	CTH A	---	---	1
107+29 +/-	38 +/-	LT	CTH A	---	---	1
107+83	38.8	LT	CTH A	---	---	1
108+82	47.4	LT	CTH A	1	---	---
110+20	45.9	LT	CTH A	1	---	---
111+39	40.2	LT	CTH A	1	---	---
112+26	39.0	LT	CTH A	---	---	1
112+97	39.5	LT	CTH A	---	---	1
113+67	38.7	LT	CTH A	---	---	1
114+40	39.0	LT	CTH A	---	---	1
UNDISTRIBUTED				---	5	---

PROJECT TOTAL 10 5 11

HYDRANT ADJUSTMENTS

EXISTING LOCATION				FITTING TYPE	SPV.0060.06 BOLT REPLACEMENT FITTINGS EA
STATION	OFFSET	DIR	R/L		
CATEGORY 0020					
83+39	54.3	LT	CTH A	VALVE	1
87+37	50.8	LT	CTH A	VALVE	1
88+89	45.7	LT	CTH A	VALVE	1
88+89	42.9	LT	CTH A	TEE	1
91+27	42.8	LT	CTH A	VALVE	1
91+41	38.0	LT	CTH A	TEE	1
91+41	33.4	LT	CTH A	VALVE	1
94+83	49.4	LT	CTH A	VALVE	1
94+89	36.0	LT	CTH A	TEE	1
95+34	35.9	LT	CTH A	TEE	1
95+34	34.1	LT	CTH A	VALVE	1
98+78	37.0	LT	CTH A	VALVE	1
102+76	34.5	LT	CTH A	VALVE	1
106+63	36.8	LT	CTH A	TEE	1
106+63	30.2	LT	CTH A	VALVE	1
106+77	43.2	LT	CTH A	VALVE	1
107+83	37.3	LT	CTH A	VALVE	1
107+83	36.0	LT	CTH A	TEE	1
110+83	40.4	LT	CTH A	VALVE	1
300+90	28.2	LT	PERSHING	VALVE	1

PROJECT TOTAL 20

SAND BAG

LOCATION	SPV.0060.12 EA
CATEGORY 0010	
ANR GAS PIPELINE CROSSING	10

PROJECT TOTAL 10

LEVELS ON = 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

Conventional Signs and Abbreviations

SECTION LINE	AC	ACRES	R	RADIUS
QUARTER LINE	Δ	CENTRAL ANGLE	R.	RANGE
TOWNSHIP AND RANGE LINE	C/L	CENTERLINE	R/L	REFERENCE LINE
PROPOSED OR NEW CENTERLINE	COR.	CORNER	R/W	RIGHT OF WAY
PROPOSED OR NEW R/W LINE	CTH	COUNTY TRUNK HIGHWAY	1/4 LINE	QUARTER LINE
EXISTING R/W LINE	D	DEGREE OF CURVE	1/2 LINE	SIXTEENTH LINE
LOT LINE	E	EAST	S.	SOUTH
PROPERTY LINE	L	LENGTH OF CURVE	SEC	SECTION
COUNTY LINE LIMITS	LC	LONG CHORD	SEC LINE	SECTION LINE
SLOPE INTERCEPTS	LCB	LONG CHORD BEARING	STH	STATE TRUNK HIGHWAY
EXISTING PROPERTY MONUMENT	MR	MILE	SF	SQUARE FEET
FENCE	N.	NORTH	STA	STATION
SECTION OR QUARTER CORNER	PC	POINT OF CURVATURE	T.	TOWN
POWER POLE	PI	POINT OF INTERSECTION	T	TANGENT LENGTH OF CURVE
TELEPHONE PEDESTAL	PT	POINT OF TANGENCY	TI	TEMPORARY INTEREST
UNDERGROUND TELEPHONE CABLE	PLE	PERMANENT LIMITED EASEMENT	USH	UNITED STATES HIGHWAY
NO ACCESS (BY ACQUISITION)	PVL	PROPERTY LINE	W.	WEST
NO ACCESS (BY STATUTORY AUTHORITY)				
NO ACCESS (BY PREVIOUS PROJECT)				
TEMPORARY INTEREST				
PERMANENT LIMITED EASEMENT				
RIGHT-OF-WAY TYPE 2 MONUMENTS SET AT NEWLY ACQUIRED R/W ANGLE POINTS				

BEGIN RELOCATION ORDER

STATION 79+00.00

1207.64' NORTH OF AND 25.44 FEET
WEST OF THE SOUTH QUARTER CORNER
SEC 21, T21N, R17E, OUTAGAMIE COUNTY
N = 567612.283
E = 817100.948

Notes

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, (OUTAGAMIE COUNTY) COUNTY ZONE, NAD 83 (1990) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLOT.

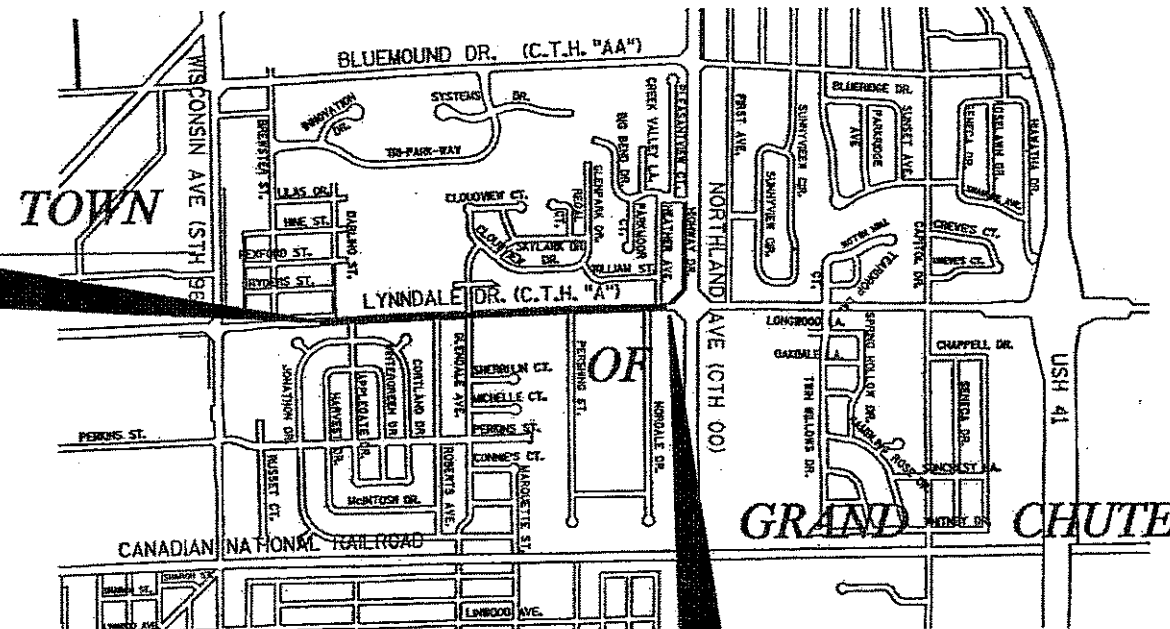
RIGHT OF WAY MONUMENTS ARE TYPE 2 (TYPICALLY 3/4" X 24" REBAR) AND ARE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

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

EXISTING RIGHT-OF-WAY IS BASED UPON RIGHT-OF-WAY PLAT PROJECT S 1254(3) DATED FEB. 16, 1960, AND AND RIGHT-OF-WAY PLAT PROJECT 4657-13-00 BY McMAHON AND ASSOCIATES

EXISTING ACCESS CONTROL ON CTH A (LYNNDALE DRIVE) IS BASED UPON SUBDIVISION PLATS TIMBER CREST ESTATES, LIBERTY COMMONS, APPLAGATE WEST, AND NORDALE COMMERCE-INDUSTRIAL PLAT



END RELOCATION ORDER

STATION 116+00.00

399.92' SOUTH OF AND 7.97 FEET
EAST OF THE NORTH QUARTER CORNER
SEC 21, T21N, R17E, OUTAGAMIE COUNTY
N = 571311.514
E = 817025.564

LAYOUT

SCALE 0 1/2 1 MI.
TOTAL NET LENGTH OF CENTERLINE = 0.701 MI.

REVISION DATE	R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
4-25-11	FEDERAL PROJECT NUMBER	4.1	10
5-6-11	PLAT OF RIGHT-OF-WAY REQUIRED FOR CTH A (LYNNDALE DRIVE) STH - 96 TO CTH - 00 OUTAGAMIE COUNTY WISCONSIN		
7-26-11			
	CONSTRUCTION PROJECT NUMBER 4984-01-57		



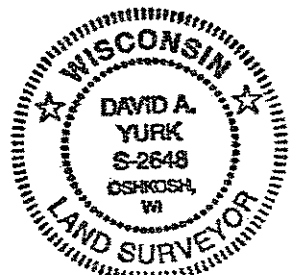
ACCEPTED FOR
OUTAGAMIE COUNTY

5-31-11

Ann Swick
Highway Commissioner
Signature & Title of Official

ORIGINAL PLANS PREPARED BY

OMNI
ASSOCIATES
APPLETON, WISCONSIN



6-29-10

David A. Yurk
Signature

SCHEDULE OF LANDS & INTERESTS REQUIRED

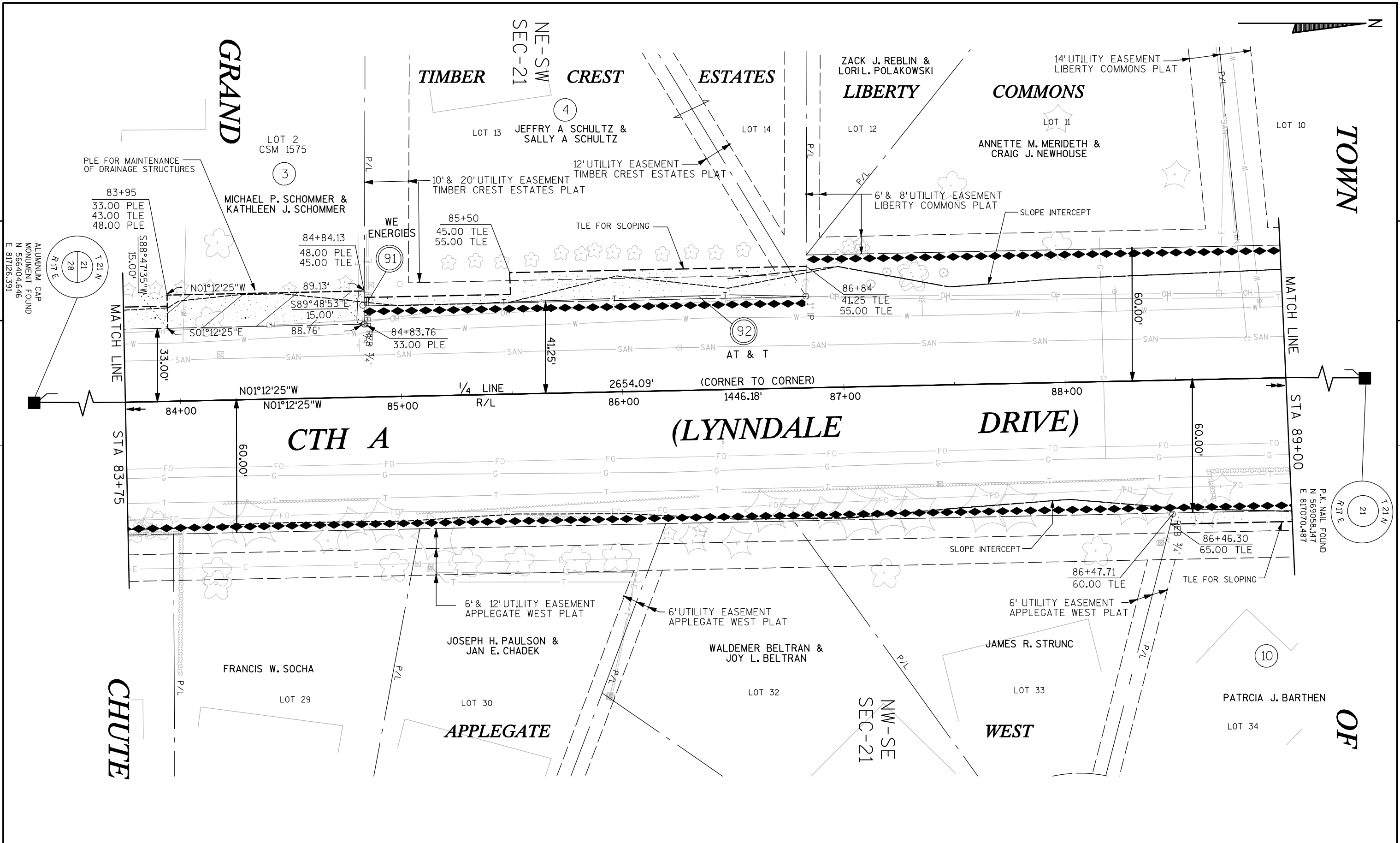
OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY
AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LANDS
OF INTEREST TO THE DEPARTMENT.

PARCEL	SHEET			TOTAL	AREA	REQUIRED	TOTAL AREA		
NUMBER	NUMBER	OWNER	INT. REQD.	AREA	NEW	EXISTING	TOTAL	REMAINING	TLE AREA PLE AREA
1	4.4	RONALD S. BECKLUND & KATHRYN A. BECKLUND	FEE TLE	0.60 AC	0.01 AC	----	0.01 AC	0.59 AC	0.01 AC ----
2	4.4	SARA R. BRANDON & KATHLEEN J. SCHOMMER	FEE TLE PLE	0.46 AC	12 SQ FT	----	12 SQ FT	0.46 AC	1057 SQ FT 73 SQ FT
3	4.4 4.5	MICHAEL P. SCHOMMER & KATHLEEN J. SCHOMMER	TLE PLE	0.82 AC	----	----	----	0.82 AC	0.02 AC 0.03 AC
4	4.5	JEFFRY A. SCHULTZ & SALLY A. SCHULTZ	TLE	0.98 AC	----	----	----	0.98 AC	0.05 AC ----
6	4.6	PAMELA J. CASE	FEE	0.53 AC	0.06 AC	----	0.06 AC	0.47 AC	---- ----
7	4.7	RICHARD E. SCHULTZ & ELSA R. SCHULTZ	FEE TLE	0.42 AC	0.01 AC	----	0.01 AC	0.41 AC	0.01 AC ----
8	4.6 4.7	DALE LAURIN & SHARON LAURIN	FEE TLE	1.13 AC	0.02 AC	----	0.02 AC	1.11 AC	0.01 AC ----
9	4.6 4.7 4.8 4.9	OUTAGAMIE COUNTY	PLE TLE	2.74 AC	----	----	----	2.64 AC	0.49 AC 0.10 AC
10	4.5 4.6	PATRICIA J. BARTHEN	TLE	0.46 AC	----	----	----	0.46 AC	0.02 AC ----
11	4.7	JOANN M. SCHROEDER	FEE TLE PLE	0.31 AC	0.04 AC	----	----	0.27 AC	0.03 AC 0.01 AC
12	4.7	WESTWOOD PARK CONDOMINIUM	FEE TLE PLE	1.18 AC	355 SQ FT	----	----	1.17 AC	1566 SQ FT 62 SQ FT
13	4.7	LAURA K. GWIAZDON	FEE TLE PLE	0.47 AC	43 SQ FT	----	----	0.47 AC	1312 SQ FT 18 SQ FT
14	4.7	DANIEL G. SCHROEDER & PATRICIA M. SCHROEDER	FEE TLE PLE	0.24 AC	913 SQ FT	----	----	0.22 AC	1565 SQ FT 173 SQ FT
16	4.7	KEVIN J. SCHUELLER & KIARRA K. SHUELLER	FEE TLE	0.26 AC	0.02 AC	----	----	0.24 AC	0.03 AC ----
17	4.7	PHILLIP L. KALWITZ & KAREN M. KALWITZ	FEE TLE PLE	0.21 AC	900 SQ FT	----	----	0.19 AC	160 SQ FT 589 SQ FT
18	4.7 4.8	NANCY J. PACKETT	FEE TLE PLE	0.60 AC	0.04 AC	----	----	0.56 AC	0.04 AC 0.01 AC
19	4.8 4.9	VERSATILE DEVELOPMENTS COMPANY, LLC	FEE TLE PLE	6.85 AC	0.01 AC	----	----	6.84 AC	0.07 AC 0.01 AC
21	4.7	LOIS CHADEK	FEE TLE	0.30 AC	0.05 AC	----	----	0.25 AC	0.05 AC ----
22	4.8	BERNICE SWEETALLA	FEE TLE PLE	0.96 AC	1434 SQ FT	----	----	0.93 AC	3254 SQ FT 156 SQ FT
24	4.9	NANCY K. WEBER, JANE M. STEVENSON & THOMAS R. REINKE	FEE TLE	0.71 AC	174 SQ FT	----	----	0.71 AC	986 SQ FT ----
25	4.9	HARRY E. ROZELLE & MILDRED E. ROZELLE	FEE TLE	0.33 AC	0.01 AC	----	----	0.32 AC	0.02 AC ----
26	4.9	PAUL DRAXLER	FEE TLE	0.51 AC	90 SQ FT	----	----	0.51 AC	264 SQ FT ----
27	4.9	LESTER KRUEGER	FEE TLE PLE	0.43 AC	275 SQ FT	----	----	0.42 AC	985 SQ FT 110 SQ FT
28	4.9 4.10	TANNAN PROPERTIES LLC	FEE TLE	1.33 AC	0.01 AC	----	----	1.32 AC	0.05 AC ----
29	4.9 4.10	METAPHOR, A LIMITED PARTNERSHIP	FEE TLE	3.44 AC	0.01 AC	----	----	3.43 AC	0.05 AC ----
31	4.10	MARK ERDMAN & CARLA ERDMAN	FEE TLE	0.23 AC	0.02 AC	----	----	0.21 AC	0.02 AC ----
32	4.10	DAVID R. HERRMANN & MARIA B. HERRMANN	FEE TLE PLE	0.22 AC	777 SQ FT	----	----	0.20 AC	668 SQ FT 110 SQ FT
33	4.10	MILLER INVESTMENTS INC	TLE	3.43 AC	----	----	----	3.43 AC	0.02 AC ----
34	4.10	JAMES T. LAVIOLETTE & JANELLE G. LAVIOLETTE	FEE TLE	0.22 AC	0.02 AC	----	----	0.20 AC	0.02 AC ----
36	4.10	BRADLEY J. GREGORIUS	FEE TLE	0.22 AC	0.02 AC	----	----	0.20 AC	0.03 AC ----
37	4.10	PETER D. LARDINOIS	FEE TLE	0.21 AC	0.01 AC	----	----	0.20 AC	0.01 AC ----
90	4.7	TRANSCANADA	RELEASE OF RIGHTS		----	----	----		----
91	4.5 4.7 4.8 4.9 4.10	WE ENERGIES	RELEASE OF RIGHTS		----	----	----		----
92	4.5 4.6 4.7 4.8 4.9 4.10	AT & T WISCONSIN	RELEASE OF RIGHTS		----	----	----		----
93	4.8	TOWN OF GRAND CHUTE UTILITIES	RELEASE OF RIGHTS		----	----	----		----
94	4.9	TIME WARNER CABLE	RELEASE OF RIGHTS		----	----	----		----



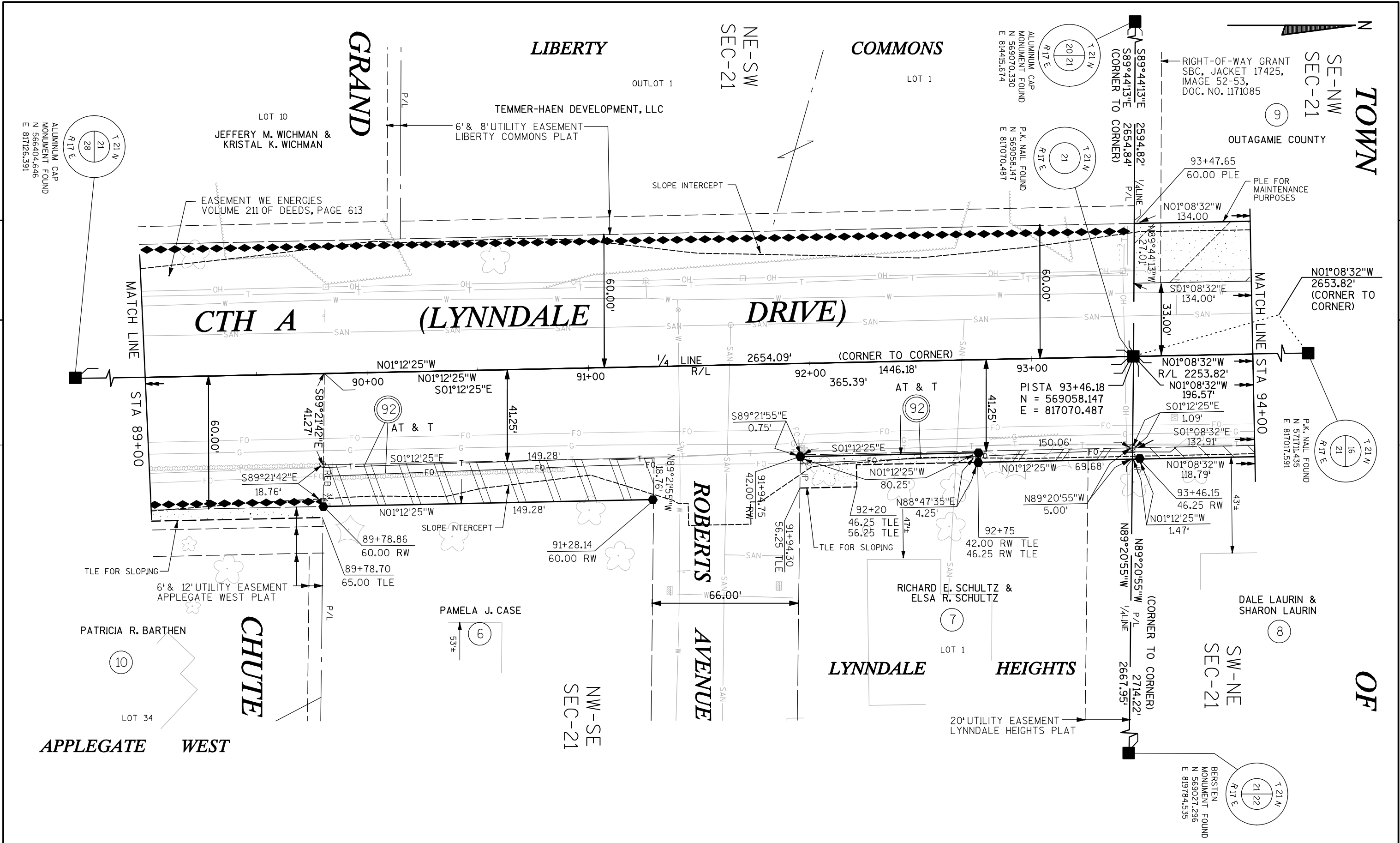
FILE NAME : F:\Transportation\E1672A04\Sheets\Plot\1o1.dgn PLOT DATE : 7/26/2011 11:44:00 AM PLOT BY : yurkd PLOT NAME : ORG DATE : Originator : OMNNI ASSOCIATES, INC. PLOT SCALE : _SCALE_ WISDOT/CADD SHEET 70

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63



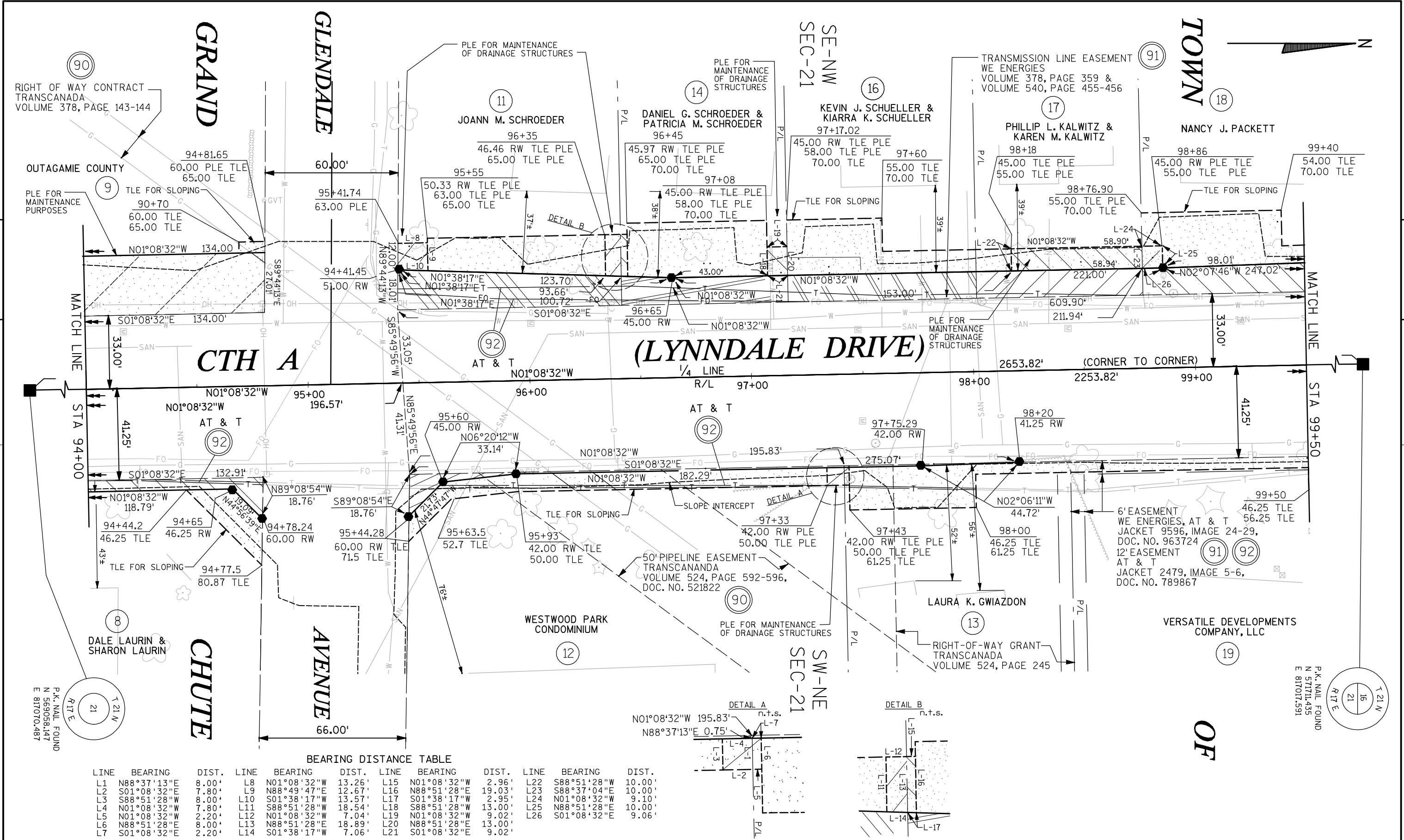
REVISION DATE	4-25-11	5-6-11	7-26-11 NC	DATE	SCALE, FEET 0 40	HWY: CTH A (LYNNDALE DR)	STATE R/W PROJECT NUMBER	PLAT SHEET NO: 4.5	E
				GRID FACTOR		COUNTY: OUTAGAMIE	CONSTRUCTION PROJECT NUMBER 4984-01-57	PS&E SHEET NO:	

LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63



REVISION DATE	4-25-11	5-6-11	7-26-11	DATE	SCALE, FEET 	HWY: CTH A (LYNNDALE DR)	STATE R/W PROJECT NUMBER	PLAT SHEET NO: 4.6	
				GRID FACTOR		COUNTY: OUTAGAMIE	CONSTRUCTION PROJECT NUMBER 4984-01-57	PS&E SHEET NO:	

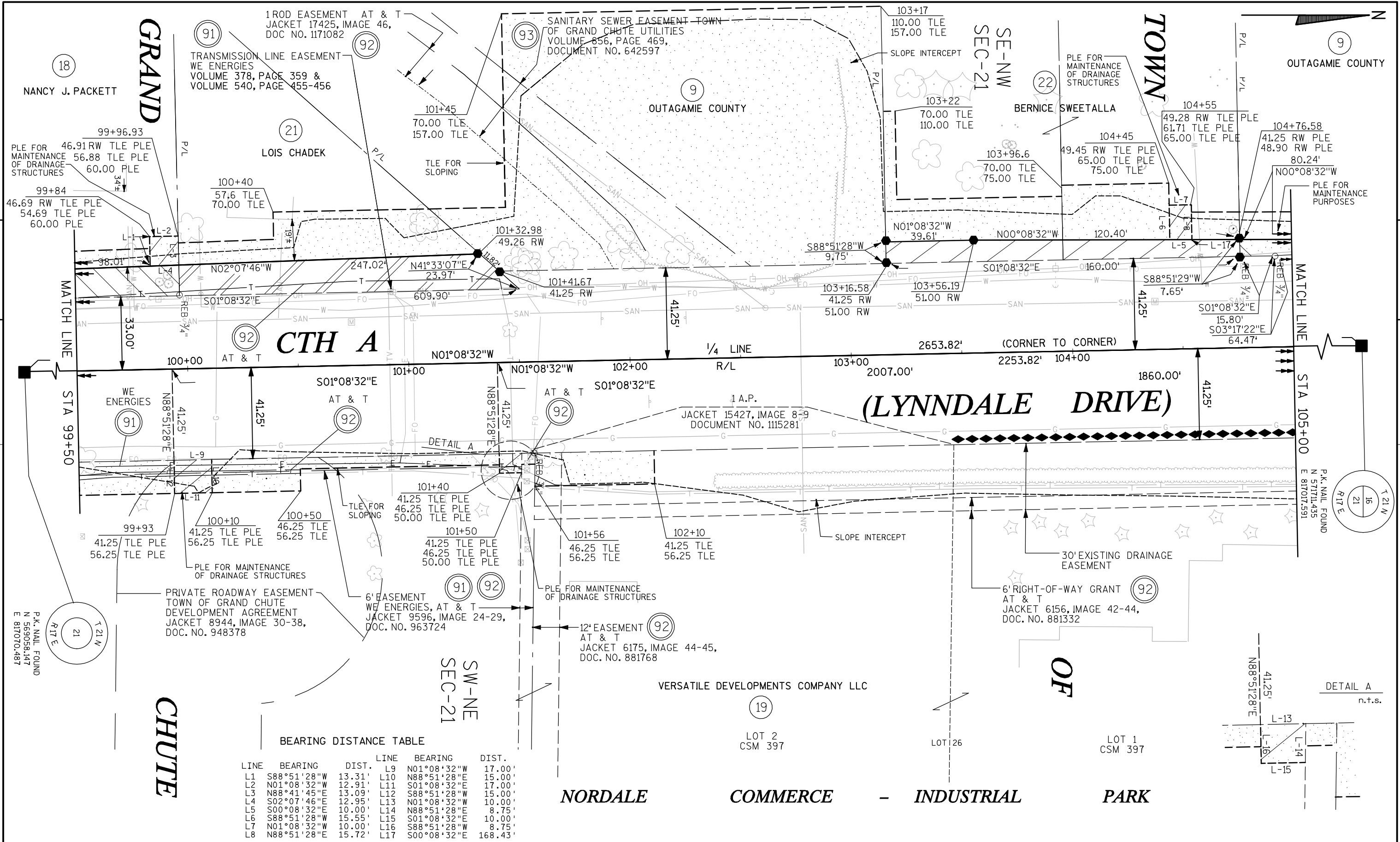
LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63



BEARING DISTANCE TABLE											
LINE	BEARING	DIST.	LINE	BEARING	DIST.	LINE	BEARING	DIST.	LINE	BEARING	DIST.
L1	N88°37'13"E	8.00'	L8	N01°08'32"W	13.26'	L15	N01°08'32"W	2.96'	L22	S88°51'28"W	10.00'
L2	S01°08'32"E	7.80'	L9	N88°49'47"E	12.67'	L16	N88°51'28"E	19.03'	L23	S88°37'04"E	10.00'
L3	S88°51'28"W	8.00'	L10	S01°38'17"W	13.57'	L17	S01°38'17"W	2.95'	L24	N01°08'32"W	9.10'
L4	N01°08'32"W	7.80'	L11	S88°51'28"W	18.54'	L18	S88°51'28"W	13.00'	L25	N88°51'28"E	10.00'
L5	N01°08'32"W	2.20'	L12	N01°08'32"W	7.04'	L19	N01°08'32"W	9.02'	L26	S01°08'32"E	9.06'
L6	N88°51'28"E	8.00'	L13	N88°51'28"E	18.89'	L20	N88°51'28"E	13.00'			
L7	S01°08'32"E	2.20'	L14	S01°38'17"W	7.06'	L21	S01°08'32"E	9.02'			

REVISION DATE	4-25-11	5-6-11 NC	7-26-11	DATE	SCALE, FEET 	HWY: CTH A (LYNNDALE DR)	STATE R/W PROJECT NUMBER	PLAT SHEET NO: 4.7	
				GRID FACTOR		N/A	COUNTY: OUTAGAMIE	CONSTRUCTION PROJECT NUMBER 4984-01-57	

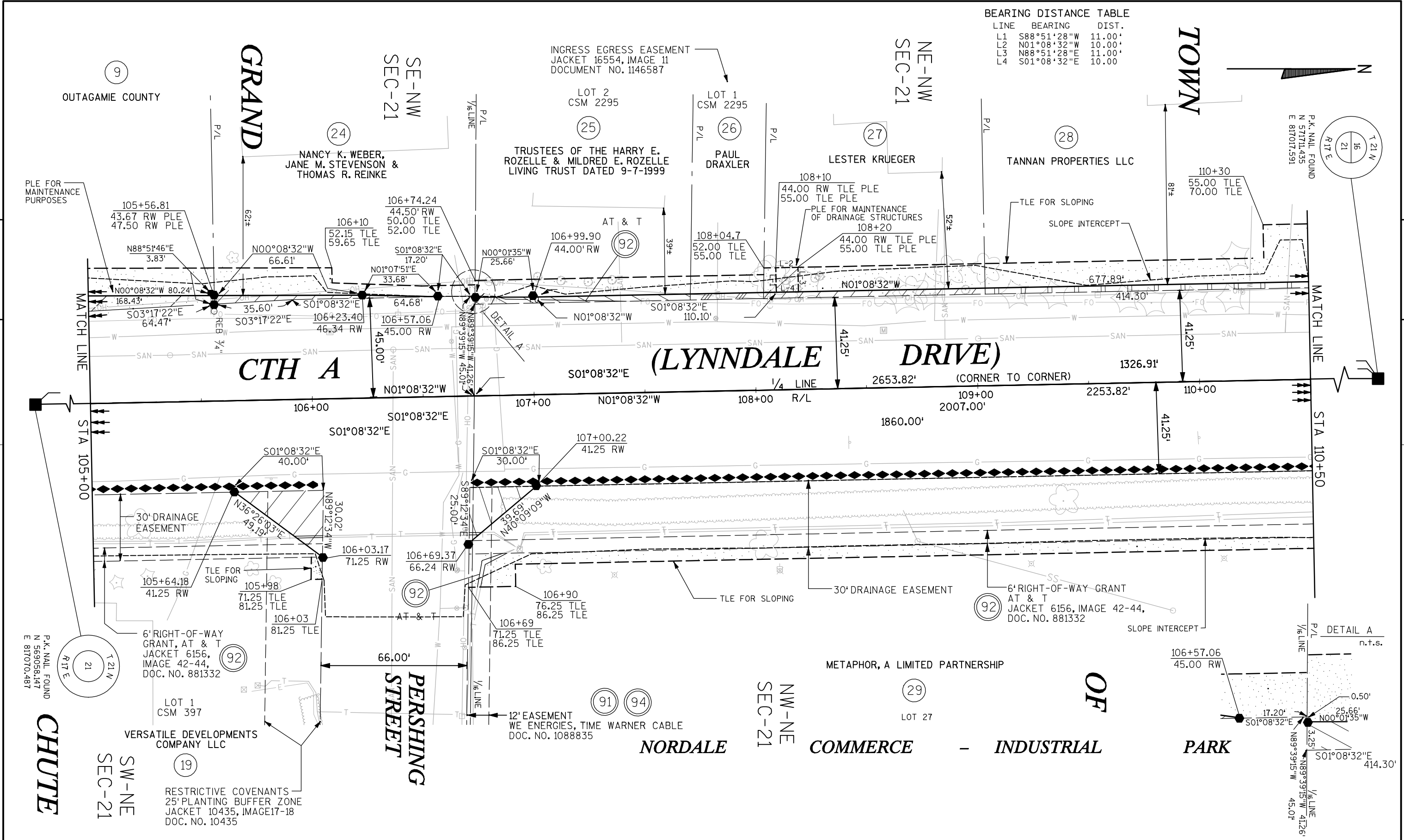
LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63



BEARING DISTANCE TABLE					
LINE	BEARING	DIST.	LINE	BEARING	DIST.
L1	S88°51'28"W	13.31'	L9	N01°08'32"W	17.00'
L2	N01°08'32"W	12.91'	L10	N88°51'28"E	15.00'
L3	N88°41'45"E	13.09'	L11	S01°08'32"E	17.00'
L4	S02°07'46"E	12.95'	L12	S88°51'28"W	15.00'
L5	S00°08'32"E	10.00'	L13	N01°08'32"W	10.00'
L6	S88°51'28"W	15.55'	L14	N88°51'28"E	8.75'
L7	N01°08'32"W	10.00'	L15	S01°08'32"E	10.00'
L8	N88°51'28"E	15.72'	L16	S88°51'28"W	8.75'
			L17	S00°08'32"E	168.43'

REVISION DATE	4-25-11	5-6-11	7-26-11	DATE		SCALE, FEET	HWY: CTH A (LYNNDALE DR)	STATE R/W PROJECT NUMBER	PLAT SHEET NO: 4.8
				GRID FACTOR	N/A		COUNTY: OUTAGAMIE	CONSTRUCTION PROJECT NUMBER 4984-01-57	PS&E SHEET NO:

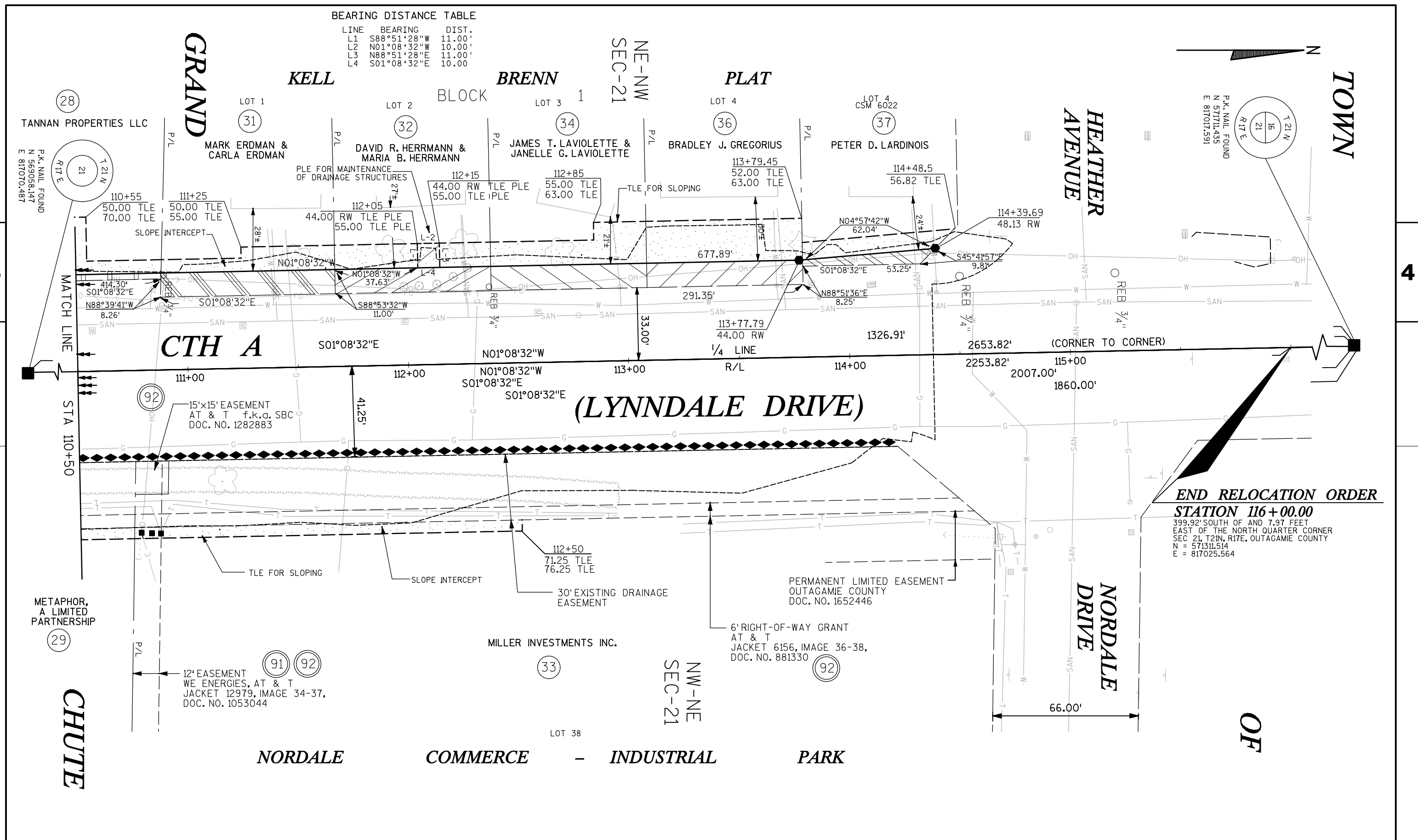
LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63



BEARING DISTANCE TABLE

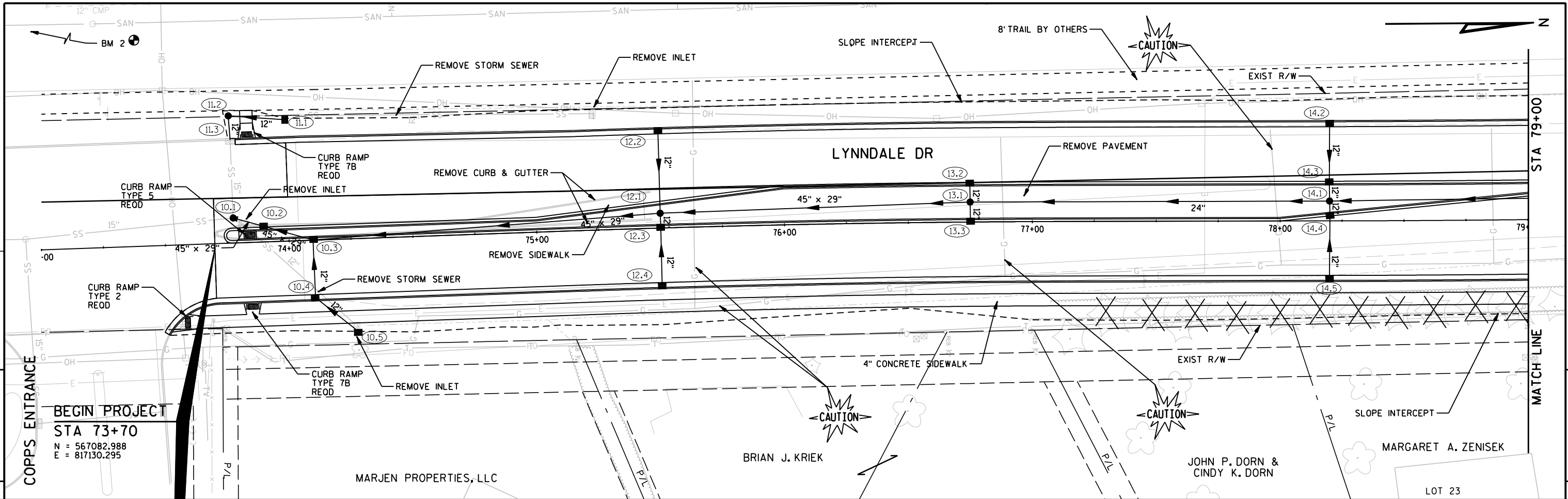
LINE	BEARING	DIST.
L1	S88°51'28"W	11.00'
L2	N01°08'32"W	10.00'
L3	N88°51'28"E	11.00'
L4	S01°08'32"E	10.00'

REVISION DATE	4-25-11 NC	5-6-11 NC	7-26-11	DATE		SCALE, FEET	0 40	HWY: CTH A (LYNNDALE DR)	STATE R/W PROJECT NUMBER	PLAT SHEET NO: 4.9
GRID FACTOR	N/A							COUNTY: OUTAGAMIE	CONSTRUCTION PROJECT NUMBER 4984-01-57	PS&E SHEET NO:

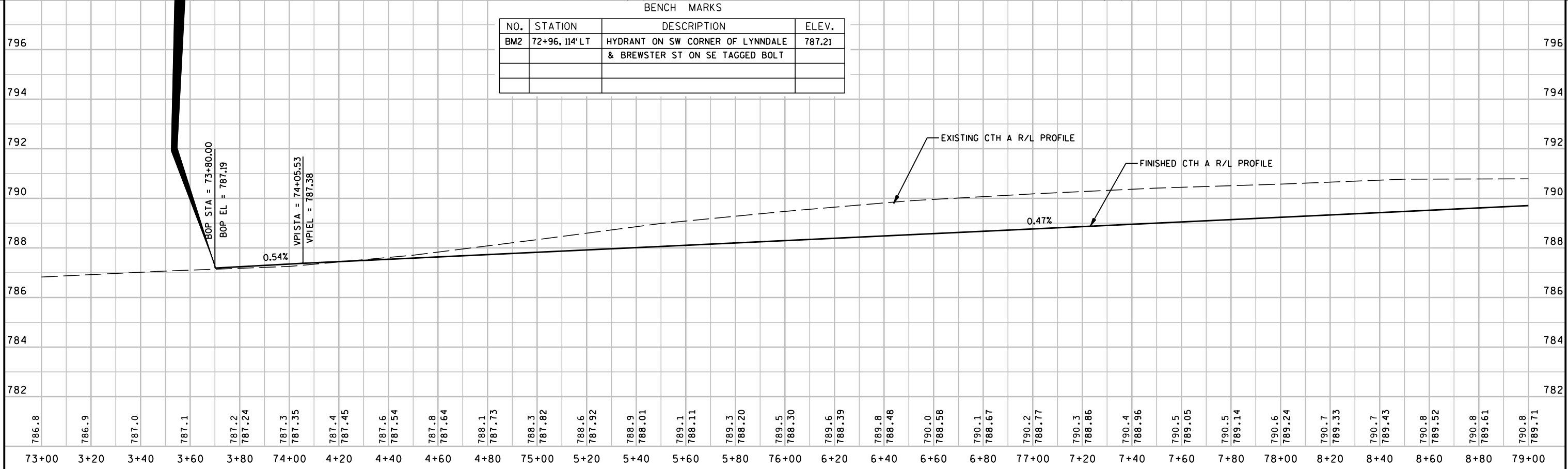


REVISION DATE	4-25-11	5-6-11 NC	7-26-11 NC	DATE	SCALE, FEET 	HWY: CTH A (LYNNDALE DR)	STATE R/W PROJECT NUMBER	PLAT SHEET NO: 4.10	E
				GRID FACTOR N/A		COUNTY: OUTAGAMIE	CONSTRUCTION PROJECT NUMBER 4984-01-57	PS&E SHEET NO:	

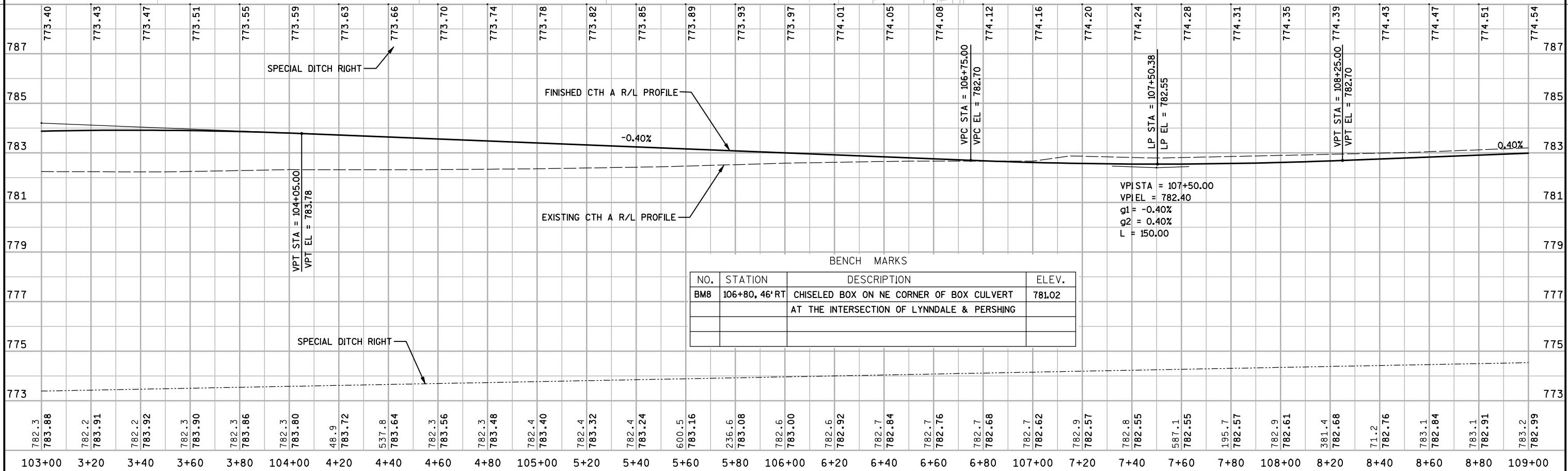
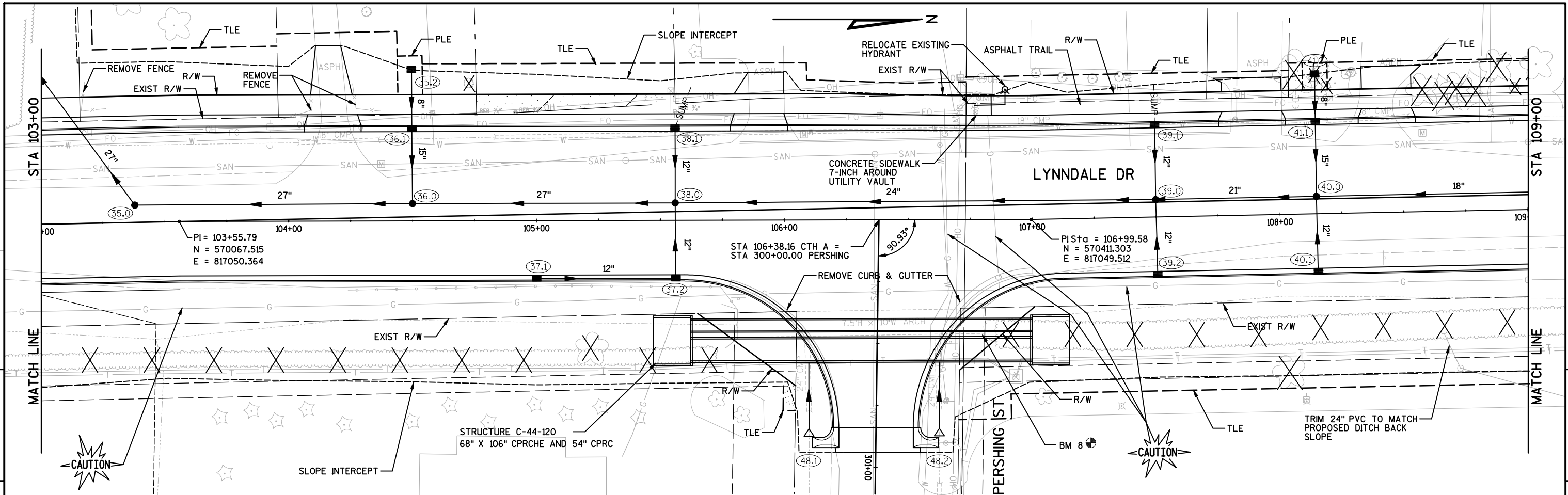
LEVELS ON = 1.2, 5, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 57, 58, 59, 60,



BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
BM2	72+96, 114' LT	HYDRANT ON SW CORNER OF LYNNDALE & BREWSTER ST ON SE TAGGED BOLT	787.21



LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,



NO.	STATION	DESCRIPTION	ELEV.
BM8	106+80.46' RT	CHISELED BOX ON NE CORNER OF BOX CULVERT AT THE INTERSECTION OF LYNNDALE & PERSHING	781.02

57.58,59,60,

51,

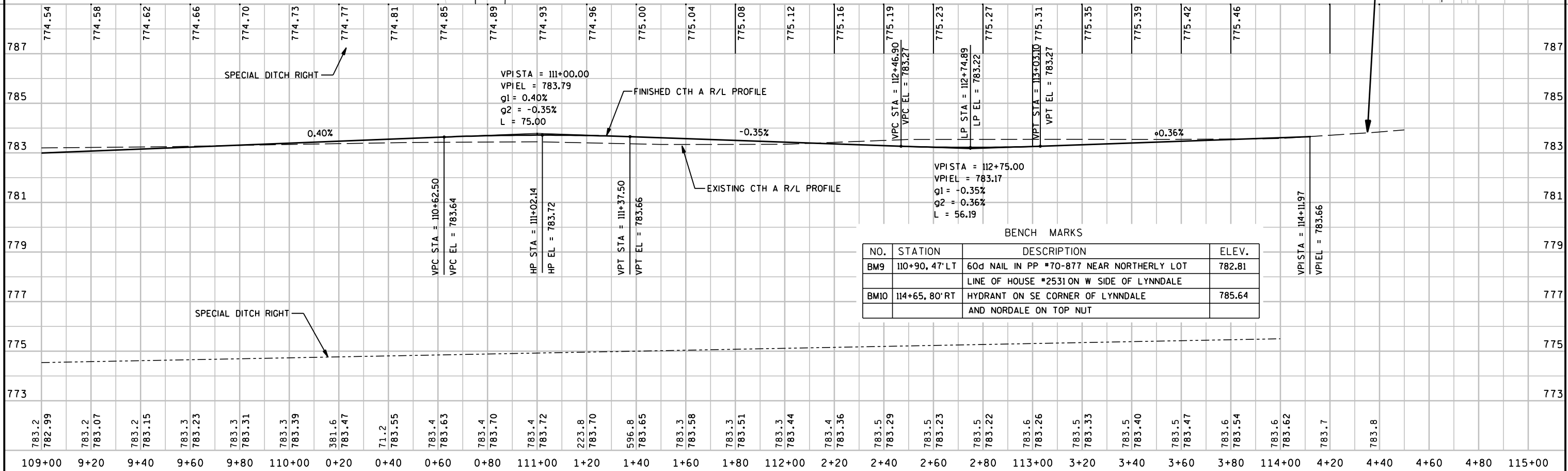
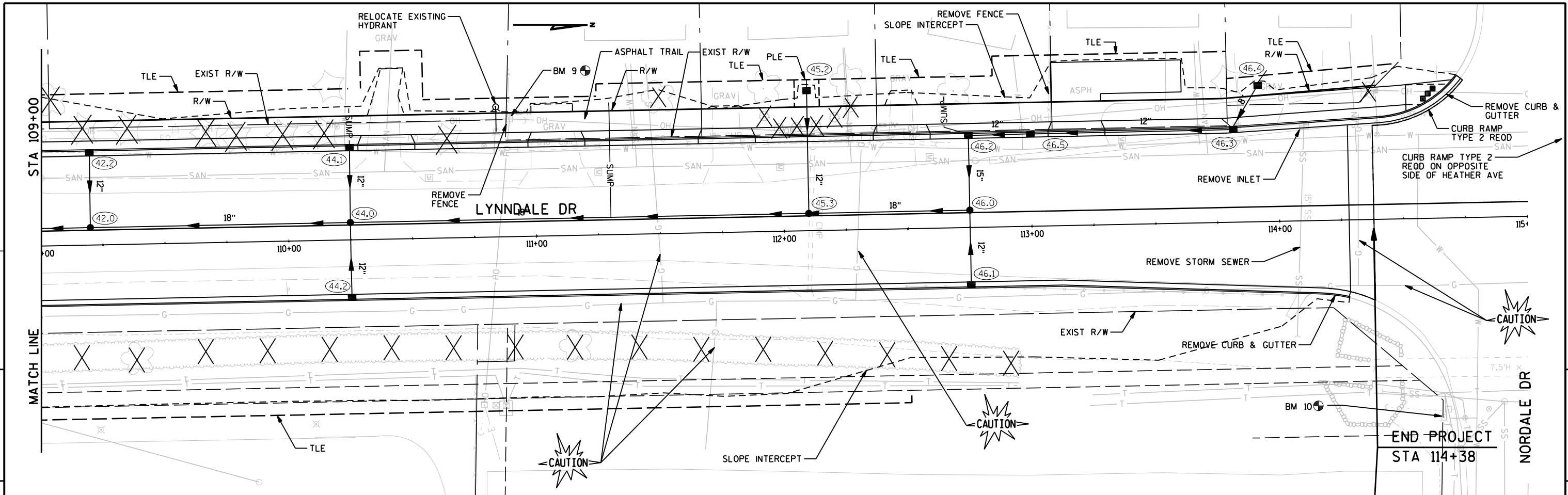
5

31,

10, 11, 12, 13, 14, 15,

4, 5,

LEVELS ON -



BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
BM9	110+90, 47' LT	60d NAIL IN PP #70-877 NEAR NORTHERLY LOT	782.81
BM10	114+65, 80' RT	LINE OF HOUSE #2531 ON W SIDE OF LYNNDAL	
		HYDRANT ON SE CORNER OF LYNNDAL	785.64
		AND NORDALE ON TOP NUT	

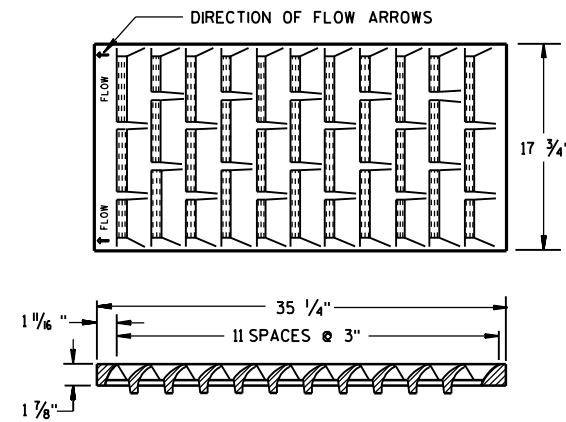
PROJECT NO: 4984-01-57 HWY: CTH A COUNTY: OUTAGAMIE PLAN AND PROFILE: SHEET: 5

FILE NAME : F:\Transportation\E1672A04\Sheets\Plan\E1672PP07.dgn PLOT DATE : 10/26/2011 1:53:24 PM PLOT BY : perryd PLOT NAME : ORG DATE : Originator : OMNNI ASSOCIATES, INC. PLOT SCALE : 2.0000 ft / IN. WISDOT/CADDs SHEET 400

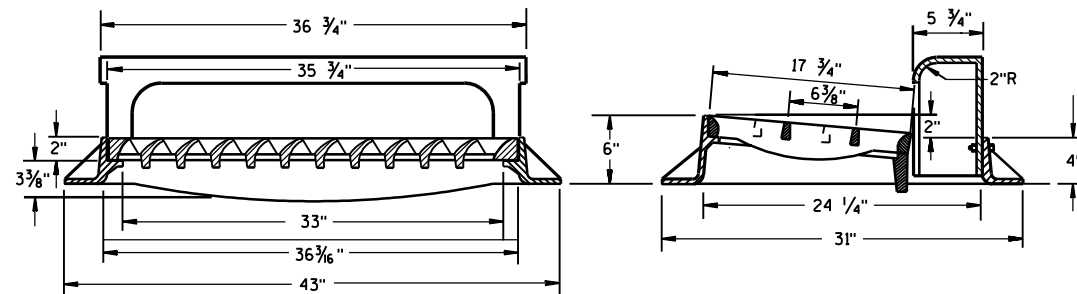
Standard Detail Drawing List

08A5-16A	INLET COVERS TYPE A, H, A-S, & H-S
08A5-17D	INLET COVER, TYPE Z MANHOLE COVERS, TYPE K, J, J-S, J-H, J-H-S, L & M
08B6-4	MANHOLES TYPE 1
08B7-4	MANHOLES TYPE 2 & 3
08C1-5	INLETS TYPE 1, 2, 3 & 4
08D1-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D4-5	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D5-14A	CURB RAMPS TYPES 1 AND 1-A
08D5-14B	CURB RAMPS TYPES 2 AND 3
08D5-14C	CURB RAMPS TYPE 4A
08D5-14D	CURB RAMPS TYPE 4B
08D5-14E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E9-6	SILT FENCE
08E10-2	INLET PROTECTION TYPE A, B, C AND D
08F1-11	APRON ENDWALLS FOR CULVERT PIPE
08F2-1	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F4-6	JOINT TIES FOR CONCRETE PIPE
11B2-2	CONCRETE MEDIAN NOSE
12A3-10	NAME PLATE (STRUCTURES)
13C1-15	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-7	URBAN DOWELED CONCRETE PAVEMENT
13C18-1A	CONCRETE PAVEMENT JOINTING
13C18-1B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-1C	CONCRETE PAVEMENT JOINT TIES
13C18-1D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
15C2-4A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C2-4B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C3-1	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C7-12C	PAVEMENT MARKING ARROWS
15C8-14A	PAVEMENT MARKING (MAINLINE)
15C8-14E	PAVEMENT MARKING (LEFT TURN LANE)
15C8-14F	PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)
15C18-3	MEDIAN ISLAND MARKING

NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

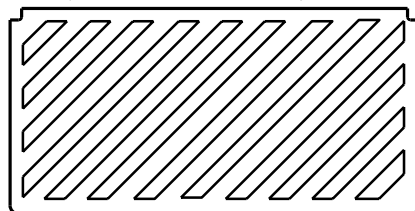


TYPE "H"

(APPROXIMATE WEIGHT 422 LBS.)

FRAME..... 175 LBS.
GRATE..... 138 LBS.
CURB BOX..... 109 LBS.

1 1/8" DIAGONAL BARS WITH 1 5/8" OPENINGS



SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(APPROXIMATE WEIGHT 172 LBS.)

GRATE..... 172 LBS.

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

S.D.D. 8 A 5-160

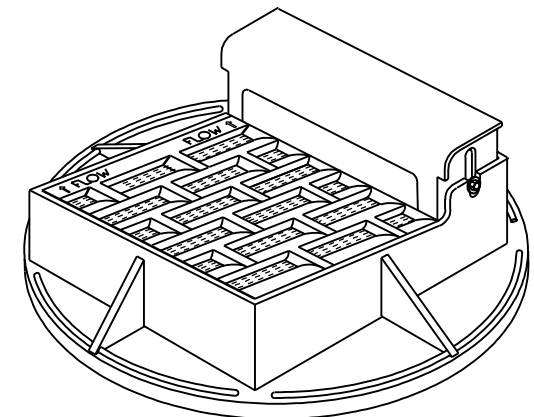
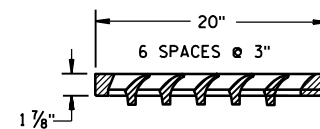
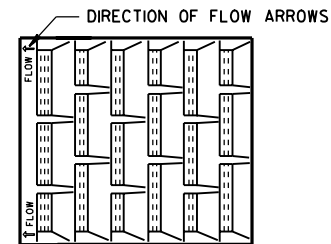
GENERAL NOTES

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.

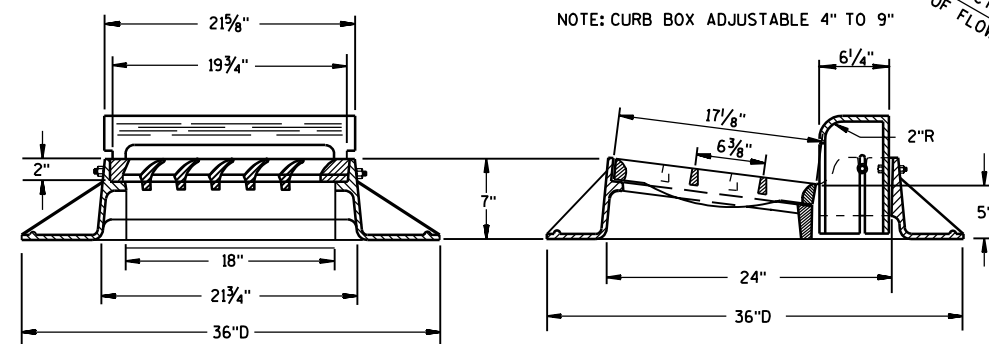
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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.



NOTE: CURB BOX ADJUSTABLE 4" TO 9"



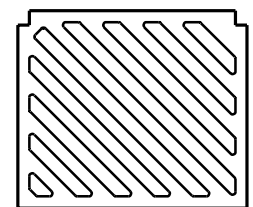
TYPE "A"

(APPROXIMATE WEIGHT 325 LBS.)

FRAME..... 157 LBS.
GRATE..... 84 LBS.
CURB BOX..... 84 LBS.

NOTE:
GRATE IS REVERSIBLE.

1" DIAGONAL BARS
WITH 1 1/2" OPENINGS



SPECIAL GRATE FOR TYPE "A" COVER

(MEASURES 19 3/4" X 17" X 1 7/8")

GRATE..... 84 LBS.

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

INLET COVERS
TYPE A, H, A-S, & H-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

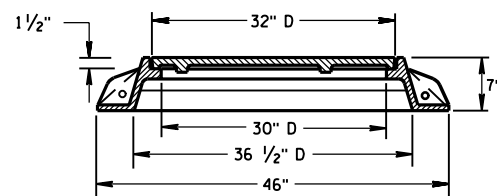
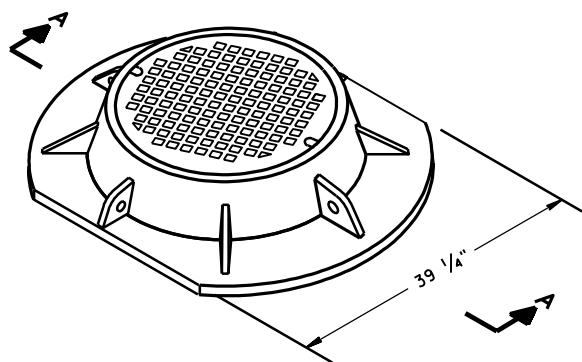
APPROVED

10/4/99
DATE

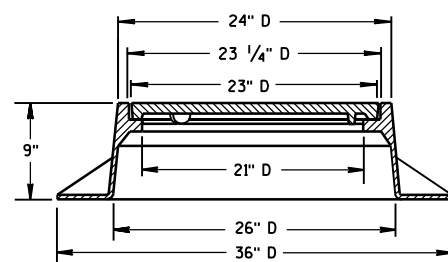
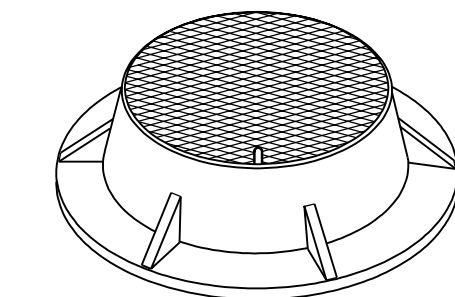
FHWA

Paul J. Rasmussen
CHIEF ROADWAY DEVELOPMENT ENGINEER

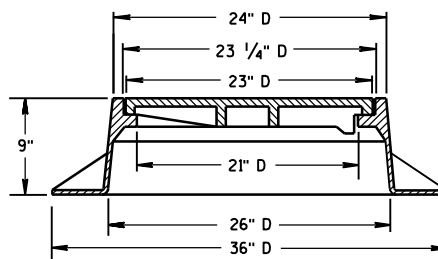
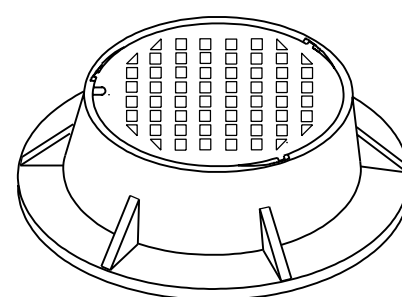
S.D.D. 8 A 5-160



SECTION A-A
TYPE "K"
(APPROXIMATE WEIGHT 415 LBS.)
FRAME.....210 LBS.
LID.....205 LBS.



TYPE "J"
(APPROXIMATE WEIGHT 250 LBS.)
FRAME.....135 LBS.
LID.....115 LBS.



TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(APPROXIMATE WEIGHT 245 LBS.)
FRAME.....145 LBS.
LID.....100 LBS.
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

GENERAL NOTES

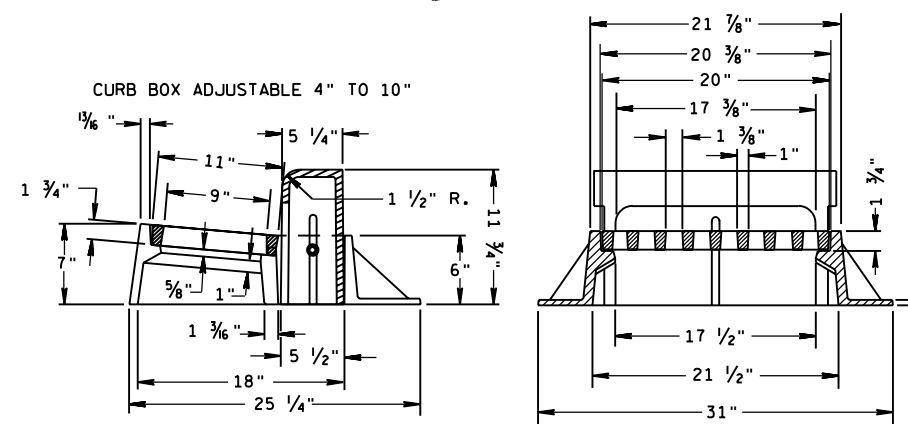
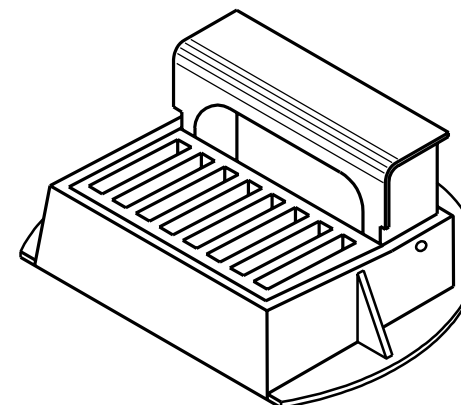
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

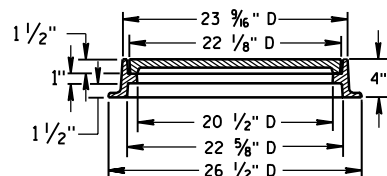
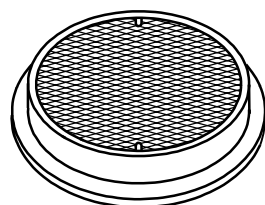
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

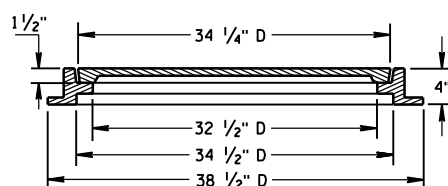
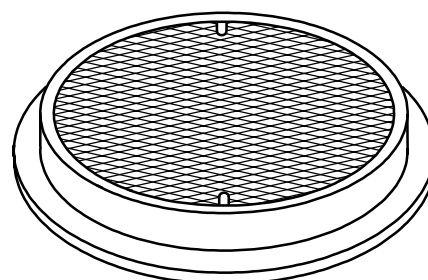
- ① MANUFACTURER MAY PROVIDE ADDITIONAL SEALS OR GASKETS.



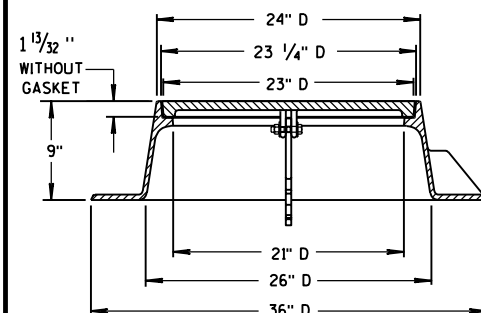
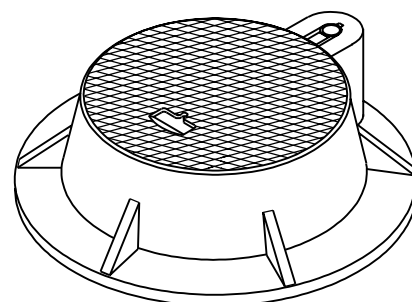
INLET COVER TYPE "Z"
(APPROXIMATE WEIGHT 340 LBS.)
FRAME.....198 LBS.
GRATE.....50 LBS.
CURB BOX.....92 LBS.



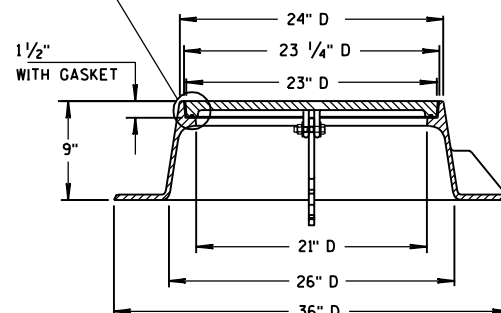
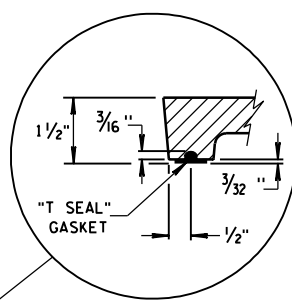
TYPE "L"
(APPROXIMATE WEIGHT 145 LBS.)
FRAME.....75 #
LID.....70 #



TYPE "M"
(APPROXIMATE WEIGHT 385 LBS.)
FRAME.....125 #
LID.....260 #



TYPE "J" HINGED
LID WITHOUT "T SEAL" GASKET
(APPROXIMATE WEIGHT 310 LBS.)
FRAME.....190 LBS.
LID.....120 LBS.
(NOTED AS TYPE J-H ON THE DRAINAGE TABLE)



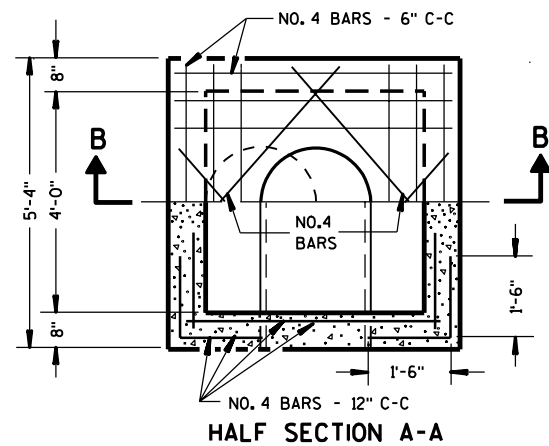
TYPE "J" HINGED-SPECIAL ①
LID WITH "T SEAL" GASKET
(APPROXIMATE WEIGHT 310 LBS.)
FRAME.....190 LBS.
LID.....120 LBS.
(NOTED AS TYPE J-S-H ON THE DRAINAGE TABLE)

**INLET COVER, TYPE Z
MANHOLE COVERS, TYPE
K, J, J-S, J-H, J-H-S, L & M**

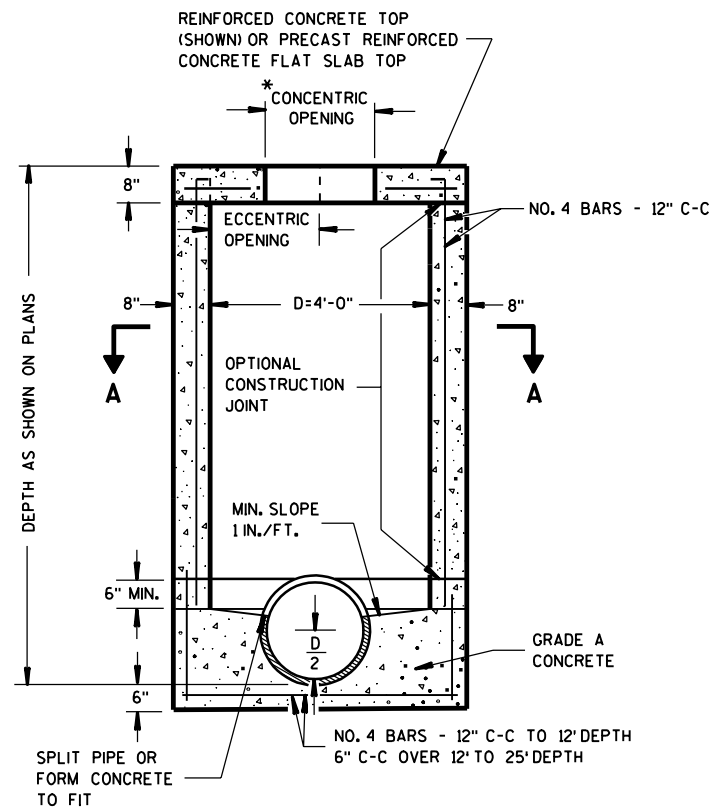
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05
DATE
FHWA

CHIEF ROADWAY DEVELOPMENT ENGINEER

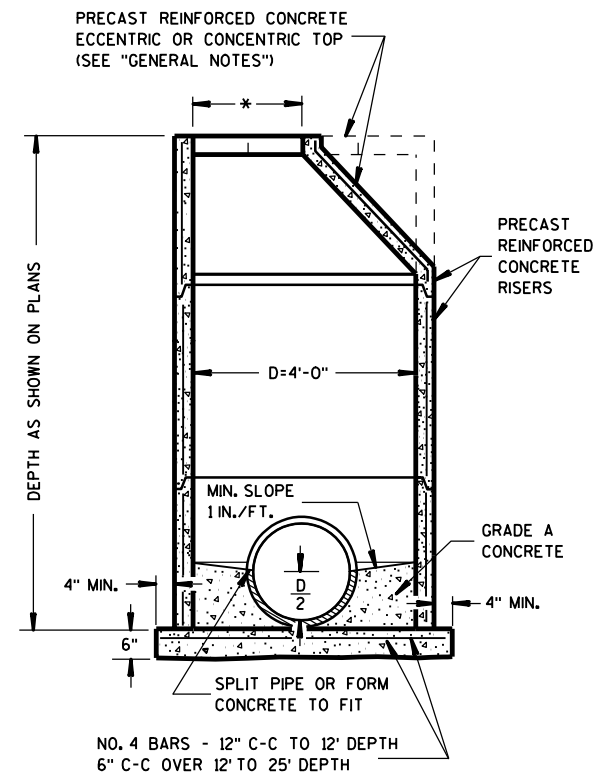


HALF SECTION A-A

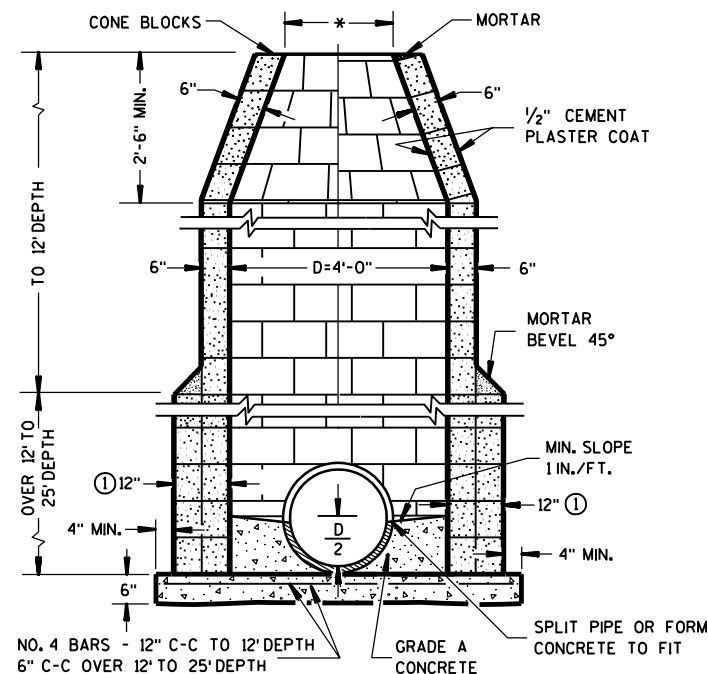


SECTION B-B
REINFORCED CONCRETE

MANHOLES TYPE 1



PRECAST REINFORCED CONCRETE



CONCRETE BLOCK

GENERAL NOTES

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

DETAILED DRAWINGS 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 1-C", "CATCH BASINS 1-B", "INLETS 3-H", ETC. THE FIRST DIGIT DESIGNATES THE MASONRY PORTION OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

PRECAST REINFORCED 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) 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 CONFORMING TO AASHTO M 199 SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH.

SOLID ALUMINUM STEPS SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 0.75 INCH. ALUMINUM SURFACES TO BE EMBEDDED IN CONCRETE SHALL BE GIVEN ONE COAT OF SUITABLE QUALITY PAINT, SUCH AS ZINC CHROMATE PRIMER CONFORMING TO FEDERAL SPECIFICATION TT-P-645 OR EQUIVALENT.

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

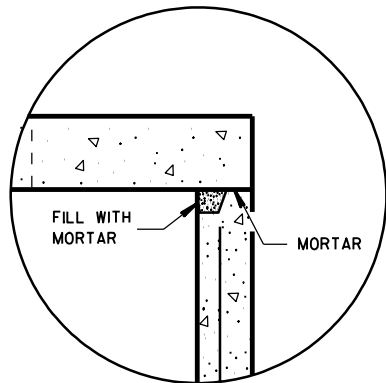
PRECAST REINFORCED CONCRETE RISERS MAY BE PLACED WITH TONGUE UP OR DOWN.

ALL PRECAST INLET UNITS AND MANHOLES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

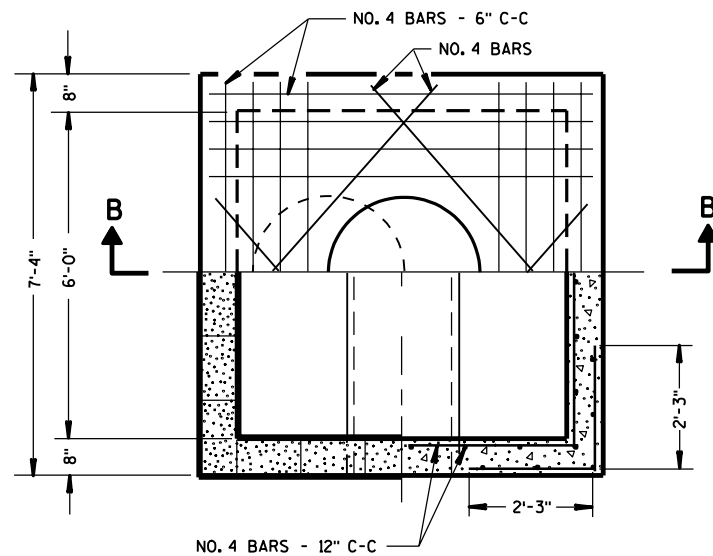
* USE 2'-0" DIAMETER OPENING WITH TYPE "C", "L" AND "J" COVERS, OR 3'-0" DIAMETER WITH TYPE "K" AND "M" COVERS.

① 2 COURSES 6" BLOCK.

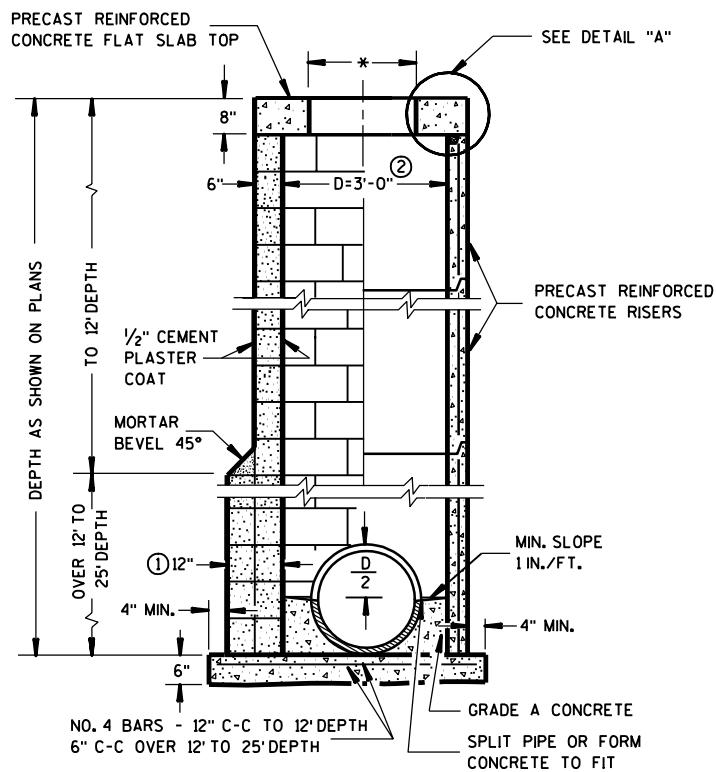
MANHOLES TYPE 1	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 9/9/05 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



DETAIL "A"



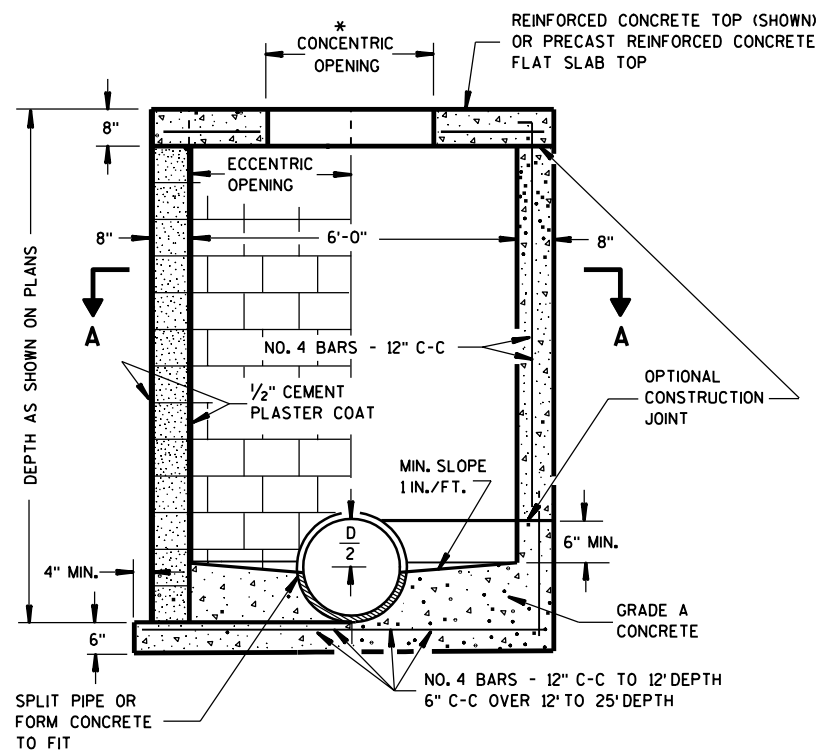
HALF SECTION A-A



CONCRETE
BLOCK

② PRECAST
REINFORCED
CONCRETE

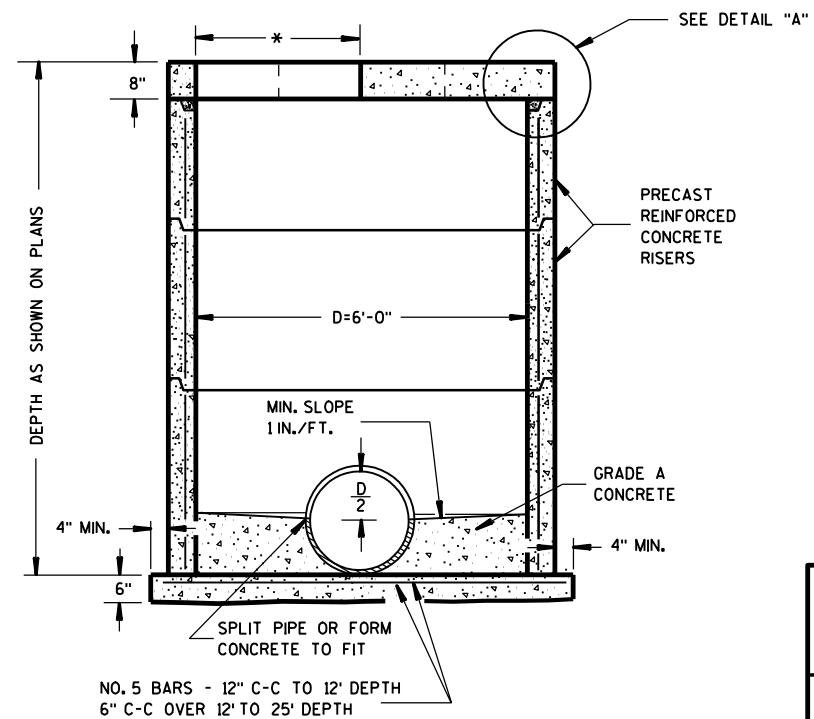
MANHOLES TYPE 2



CONCRETE
BLOCK

REINFORCED
CONCRETE

MANHOLES TYPE 3



PRECAST REINFORCED CONCRETE

GENERAL NOTES

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

DETAILED DRAWINGS 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 1-C", "CATCH BASINS 1-B", "INLETS 3-H", ETC. THE FIRST DIGIT DESIGNATES THE MASONRY PORTION OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

PRECAST REINFORCED 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.

STEPS CONFORMING TO AASHTO M 199 SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH.

SOLID ALUMINUM STEPS SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 0.75 INCH. ALUMINUM SURFACES TO BE EMBEDDED IN CONCRETE SHALL BE GIVEN ONE COAT OF SUITABLE QUALITY PAINT, SUCH AS ZINC CHROMATE PRIMER CONFORMING TO FEDERAL SPECIFICATION TT-P-645 OR EQUIVALENT.

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

PRECAST REINFORCED CONCRETE RISERS MAY BE PLACED WITH TONGUE UP OR DOWN.

ALL PRECAST INLET UNITS AND MANHOLES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

* USE 2'-0" DIAMETER OPENING WITH TYPE "C", "L" AND "J" COVERS, OR 3'-0" DIAMETER WITH TYPE "K" AND "M" COVERS.

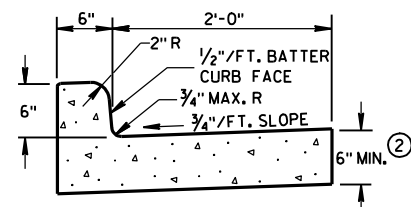
① 2 COURSES 6" BLOCK.

② WHEN CONNECTING PIPES ARE 24" OR LARGER THE PRECAST MANHOLES MAY BE INCREASED TO 42" DIAMETER.

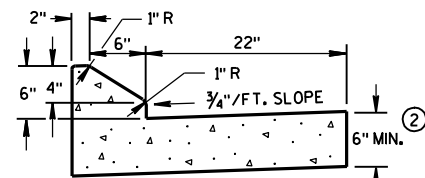
MANHOLES TYPE 2 & 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

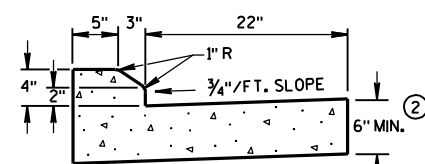
APPROVED
9/9/05 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



TYPES A & D ①

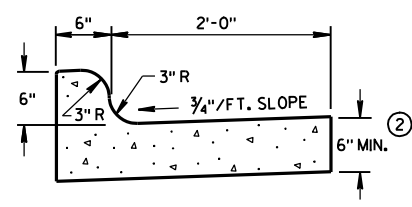


6" SLOPED CURB TYPES G & J ①

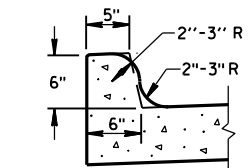
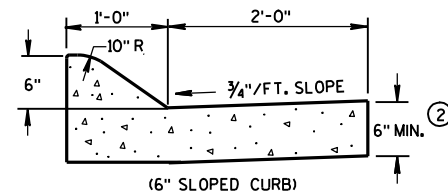


4" SLOPED CURB TYPES G & J ①

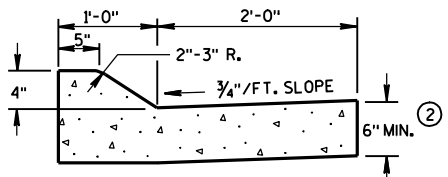
CONCRETE CURB & GUTTER 30"



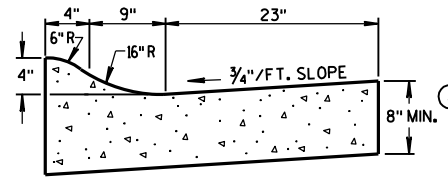
TYPES K & L ①

OPTIONAL CURB SHAPE
FOR TYPES K & L ①

(6" SLOPED CURB)

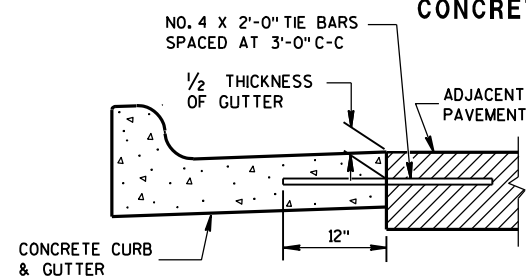


TYPES A & D ①

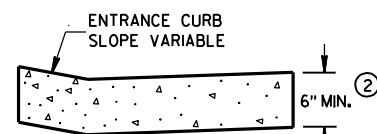
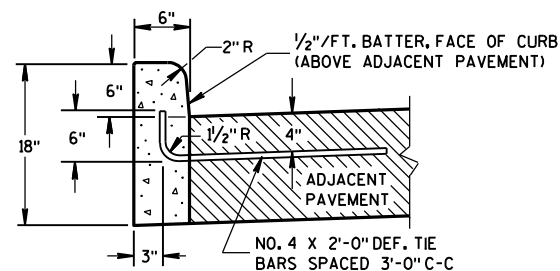


4" SLOPED CURB TYPES R & T ① ④

CONCRETE CURB & GUTTER 36"

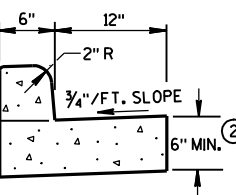
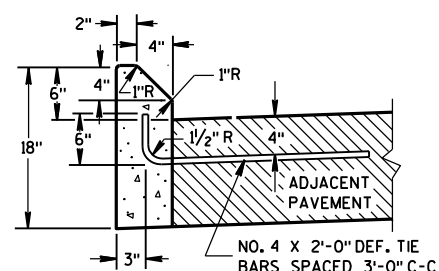


TYPICAL TIE BAR LOCATION ①

DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

TYPES A & D ①

CONCRETE CURB

TYPES A & D
CONCRETE CURB & GUTTER 18"

TYPES G & J ①

GENERAL NOTES

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

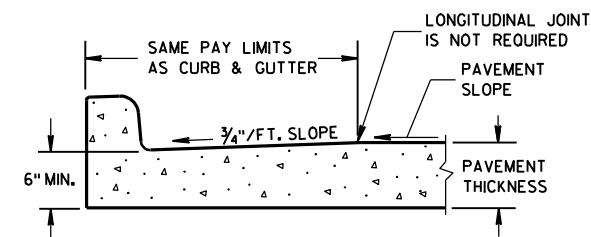
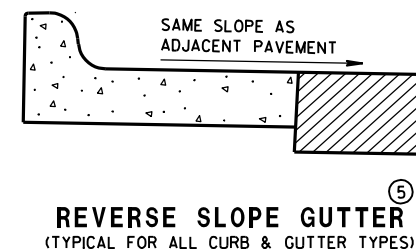
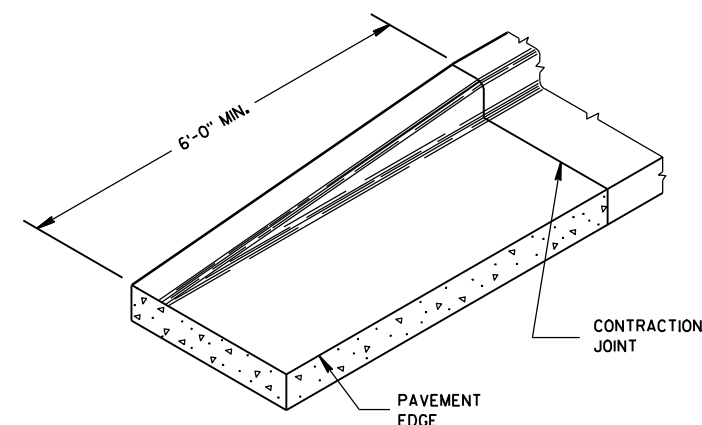
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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.

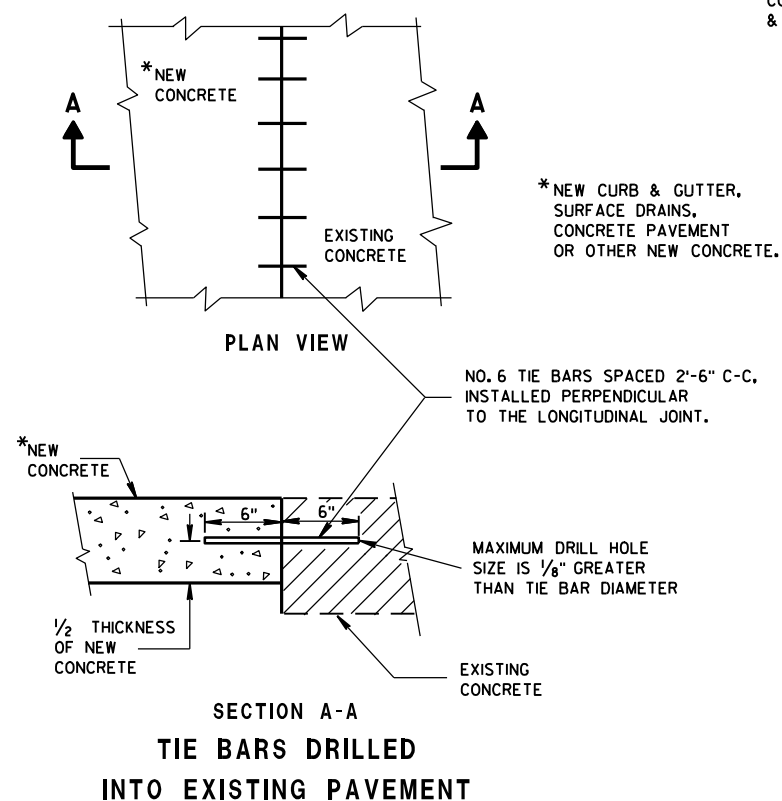
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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.

PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER

END SECTION CURB & GUTTER



SECTION A-A

TIE BARS DRILLED
INTO EXISTING PAVEMENT

*NEW CURB & GUTTER,
SURFACE DRAINS,
CONCRETE PAVEMENT
OR OTHER NEW CONCRETE.

NO. 6 TIE BARS SPACED 2'-6" C-C,
INSTALLED PERPENDICULAR
TO THE LONGITUDINAL JOINT.

MAXIMUM DRILL HOLE
SIZE IS 1/8" GREATER
THAN TIE BAR DIAMETER

EXISTING
CONCRETE

1/2" THICKNESS
OF NEW
CONCRETE

CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

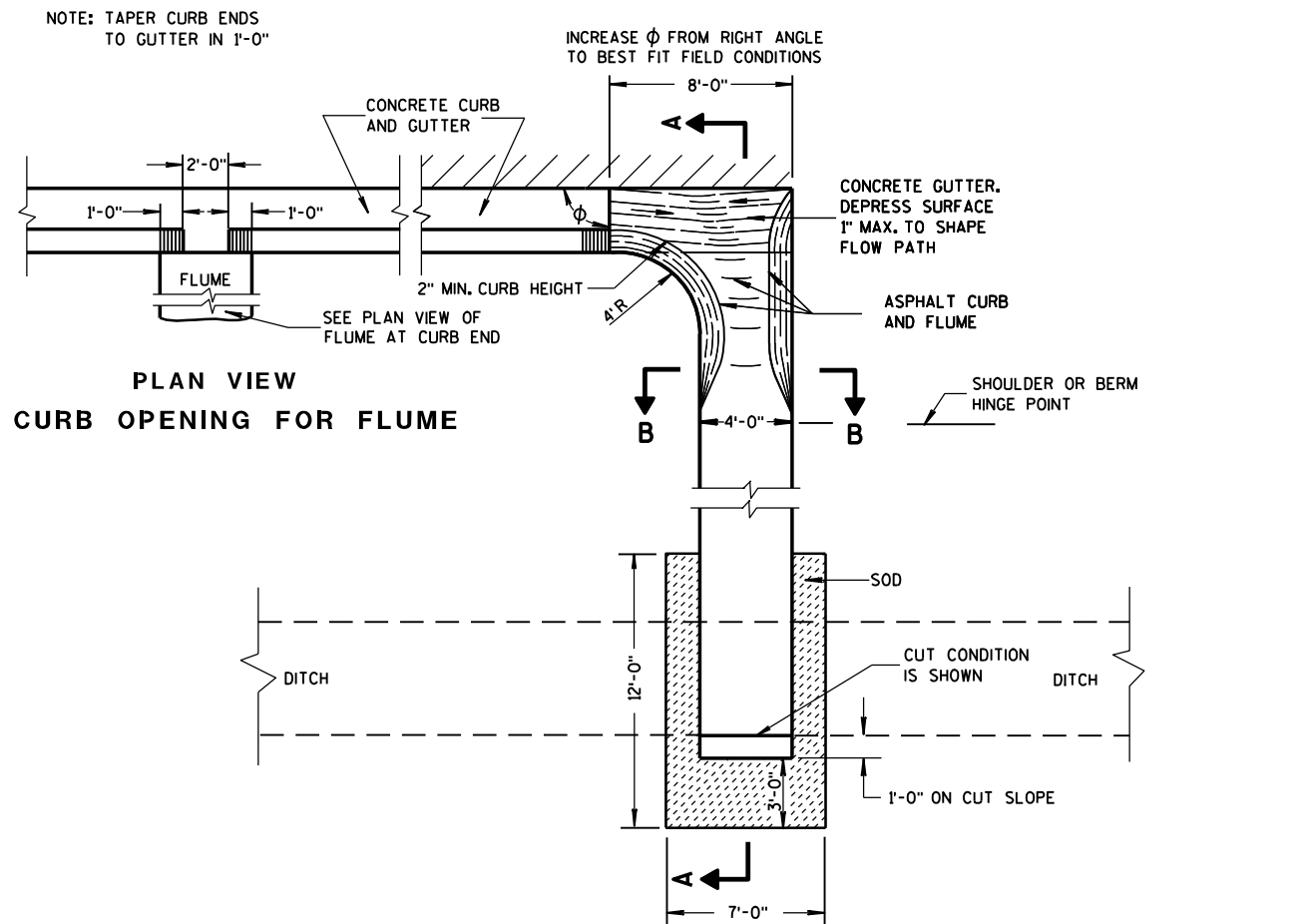
9/4/08

DATE

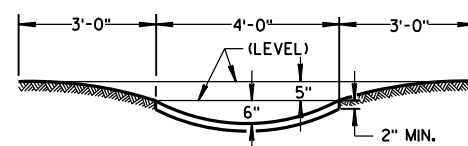
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

ASPHALTIC FLUME



SECTION A-A



SECTION B-B

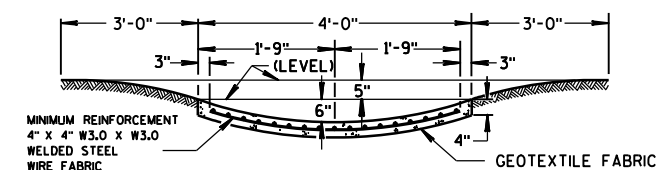
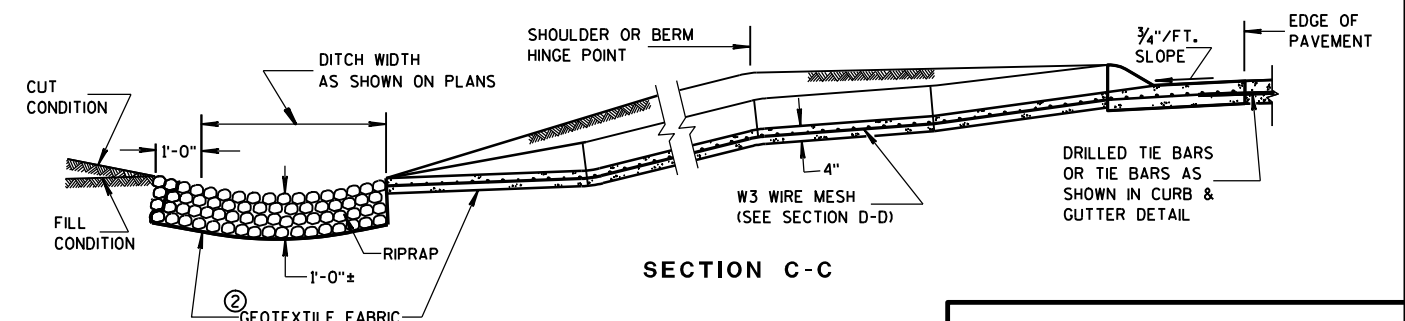
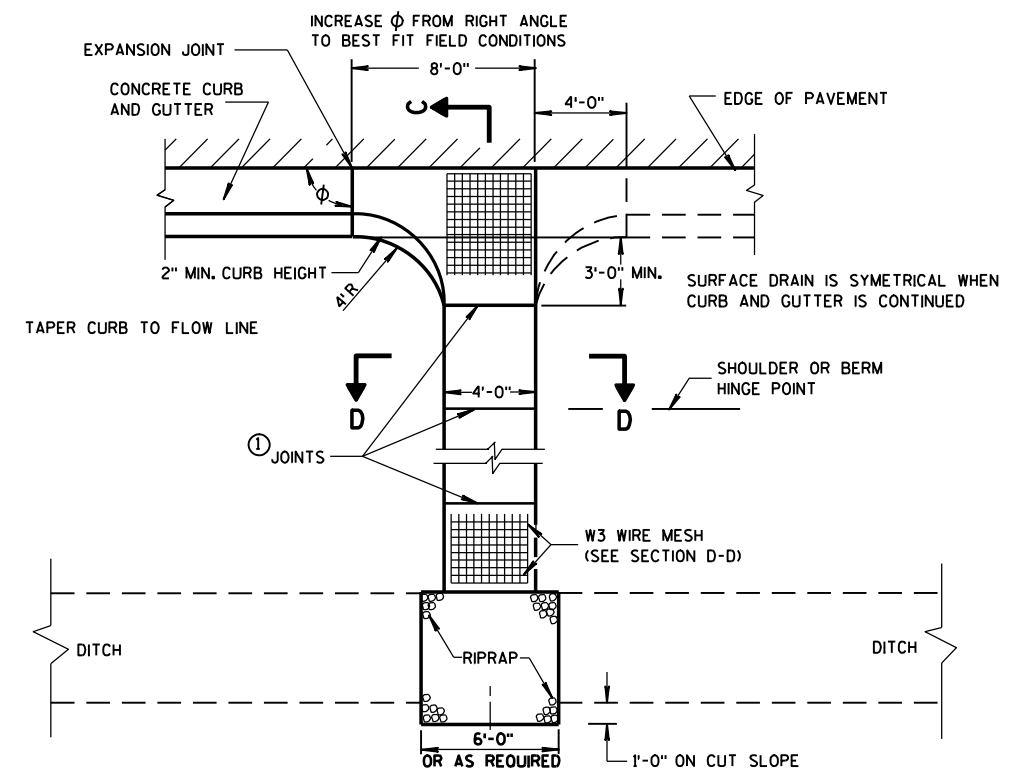
GENERAL NOTES

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.

- JOINTS SHALL BE 1/8 TO 1/4 INCH WIDE BY 1 1/2 INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

③ CONCRETE SURFACE DRAIN

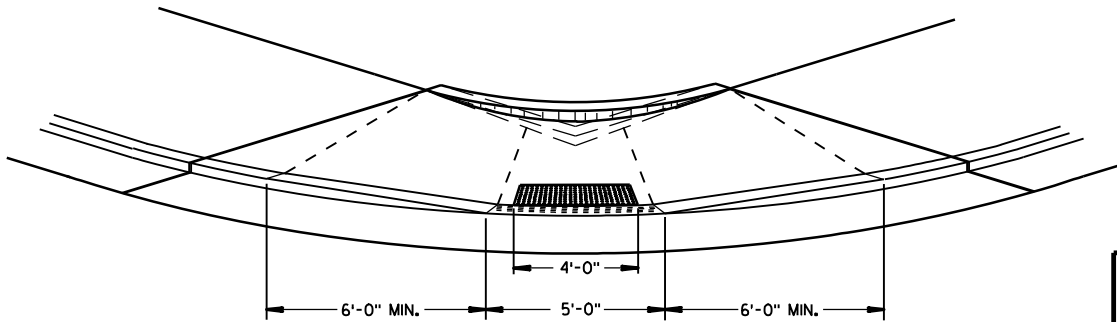
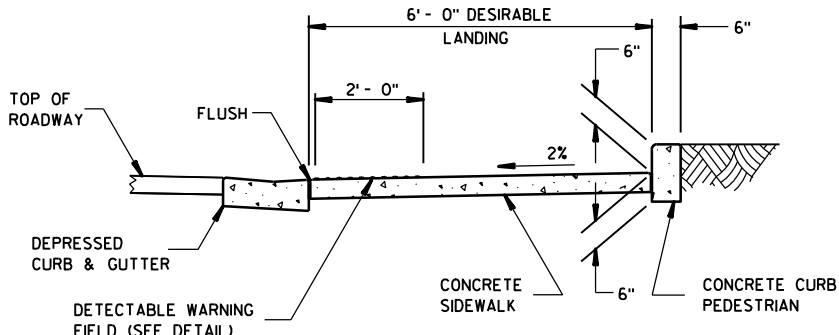
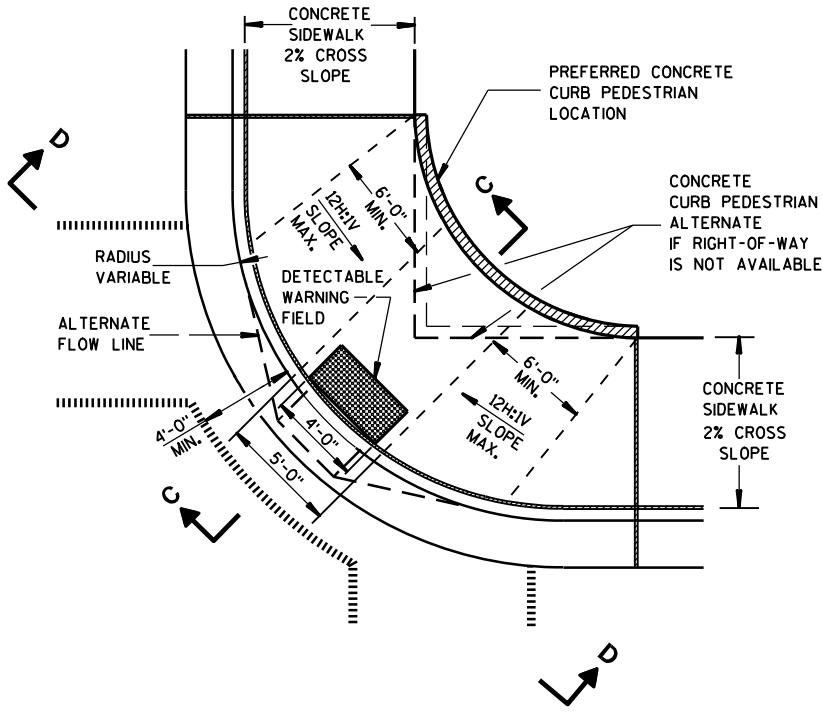
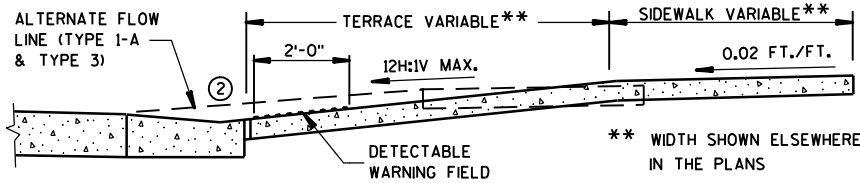
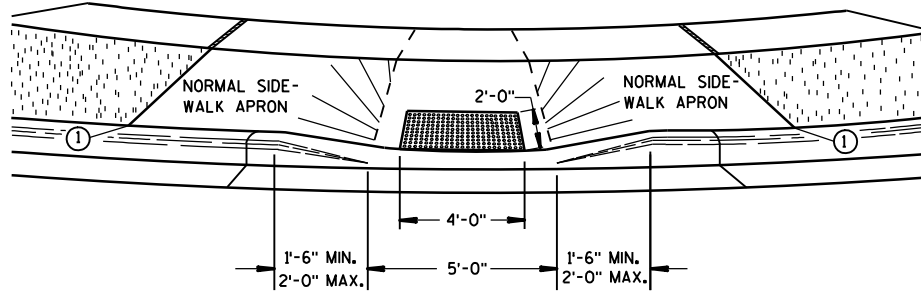
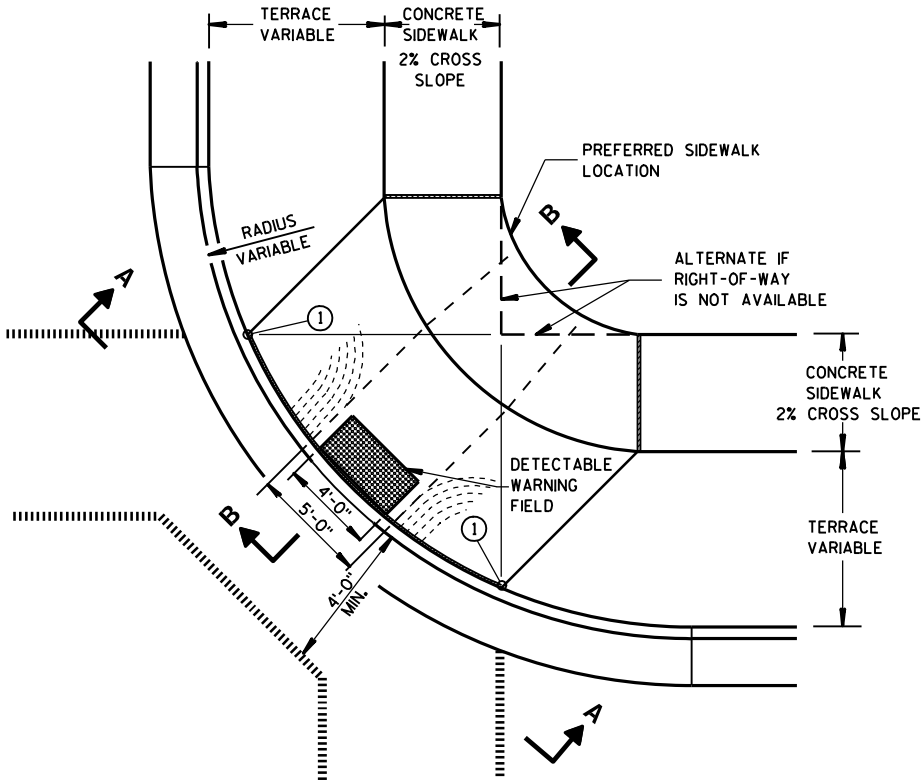


SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-4-08 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



GENERAL NOTES

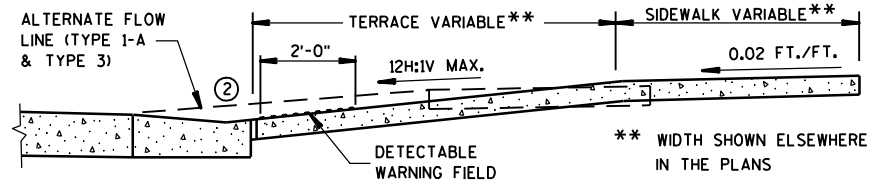
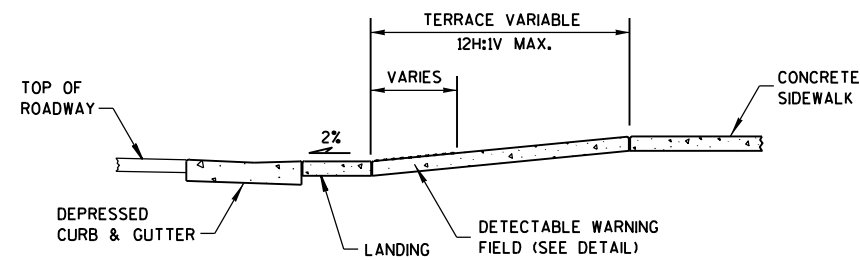
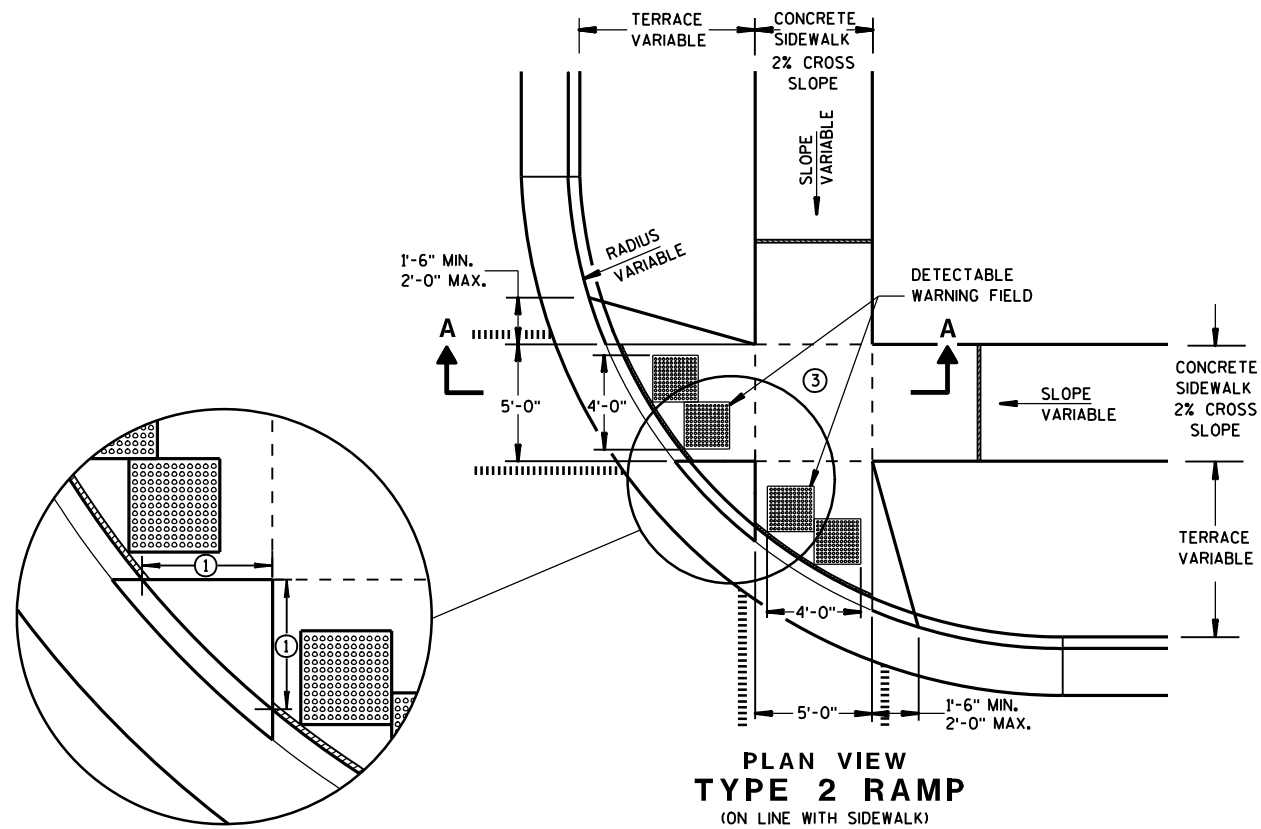
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.
- TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.
- DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.
- SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".
- SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.
 - ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

LEGEND

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

CURB RAMPS
TYPES I AND I-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



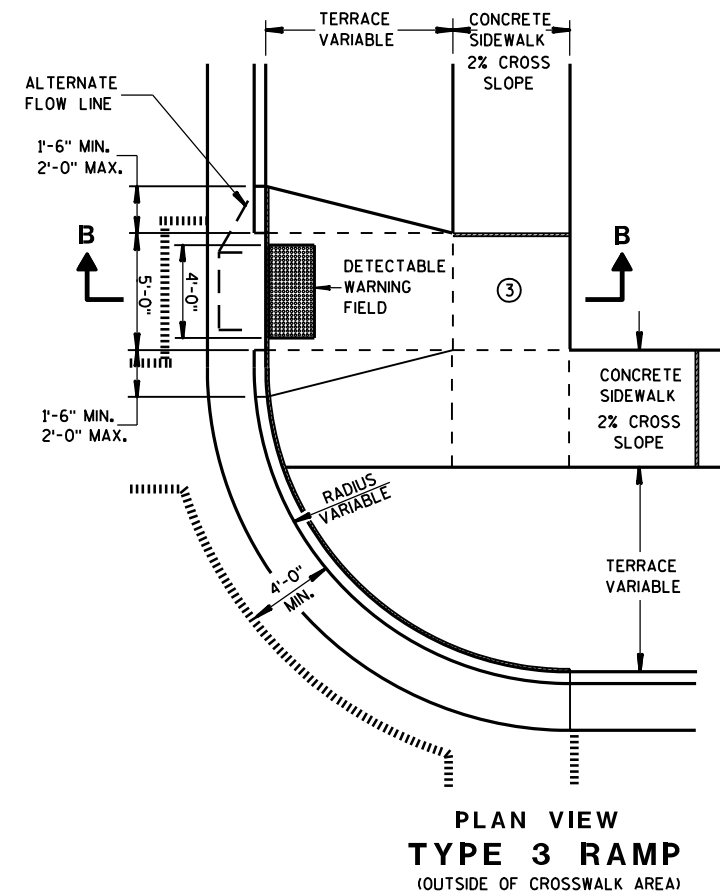
GENERAL NOTES

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

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

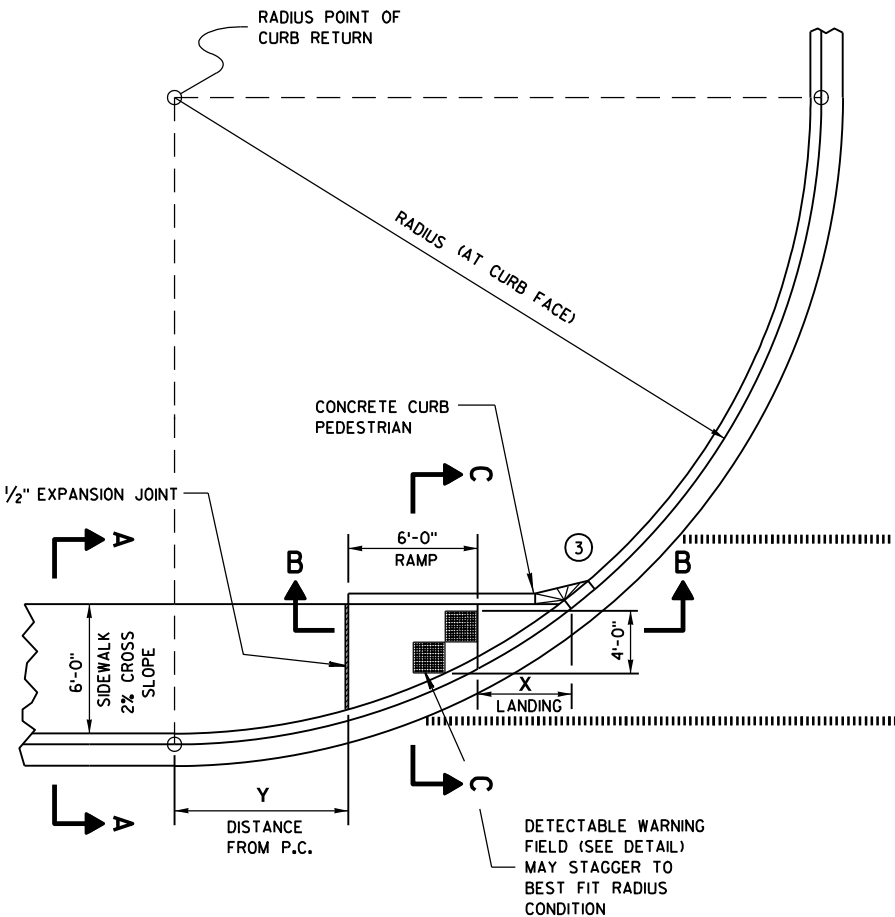
LEGEND

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

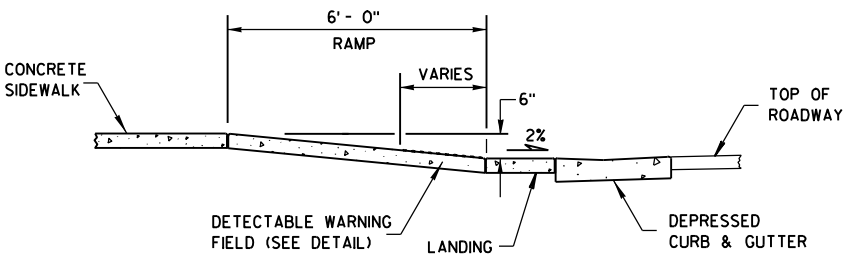


**CURB RAMPS
TYPES 2 AND 3**

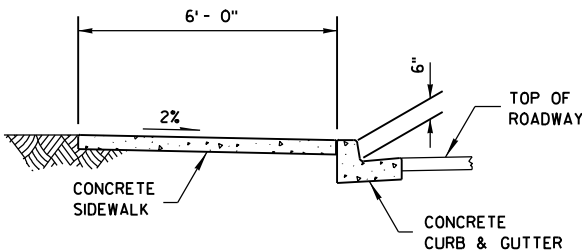
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



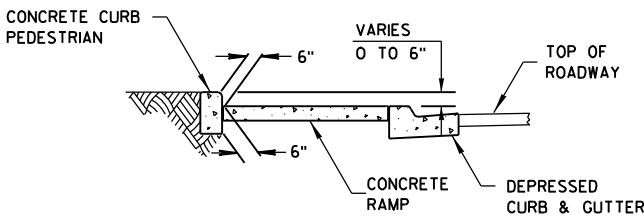
CURB RAMP TYPE 4A
PLAN VIEW



SECTION B-B



SECTION A-A



SECTION C-C

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

INTERMEDIATE RADII CAN BE INTERPOLATED

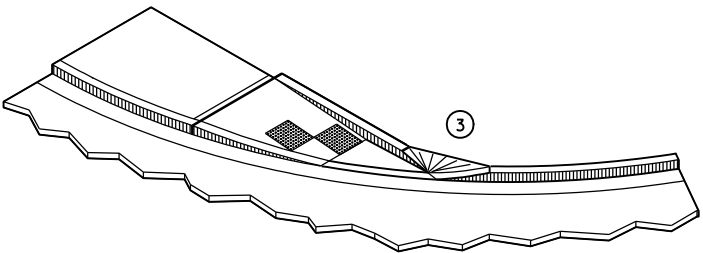
GENERAL NOTES

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

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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



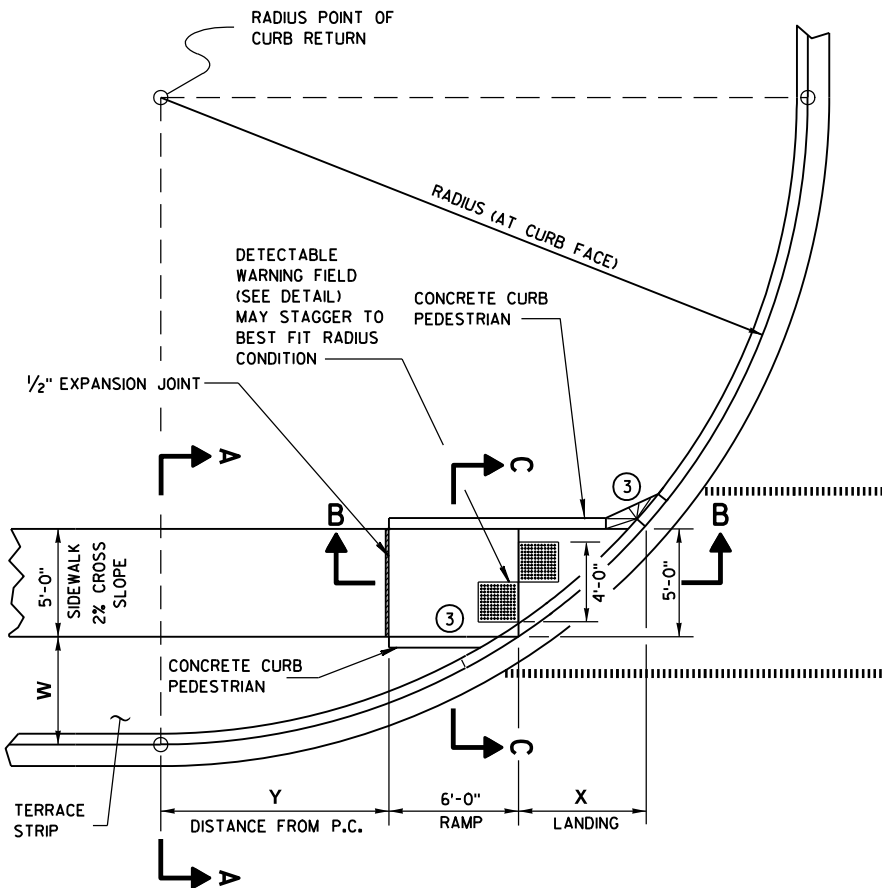
ISOMETRIC VIEW

LEGEND

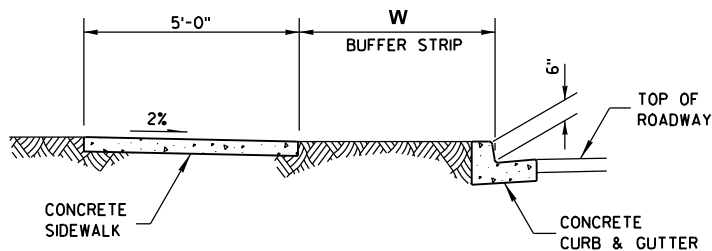
- 1/2" EXPANSION JOINT-SIDEWALK
- - - - CONTRACTION JOINT FIELD LOCATED
||||| PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 4A

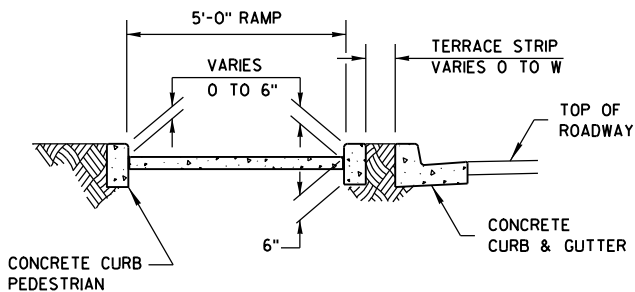
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



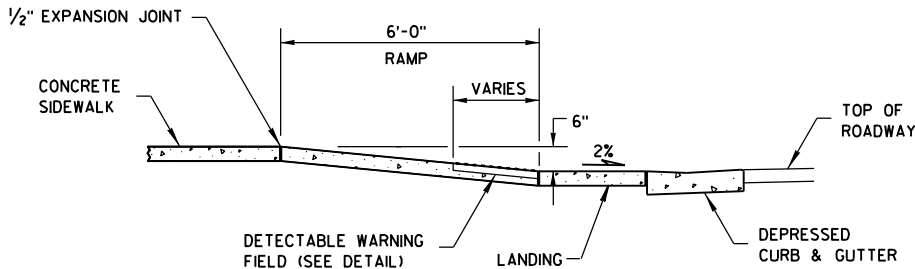
CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A



SECTION C-C



SECTION B-B

GENERAL NOTES

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

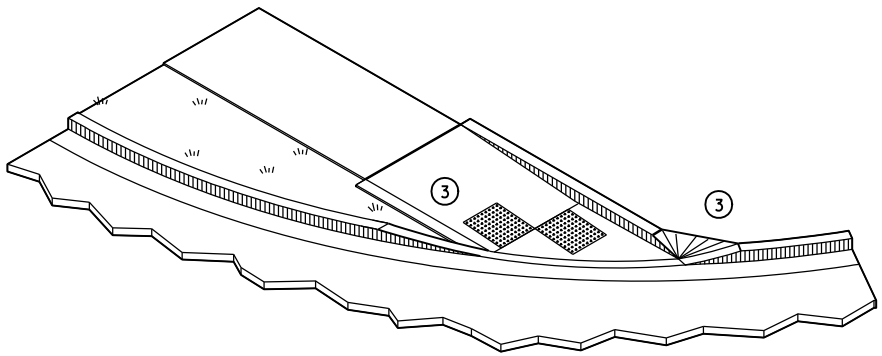
RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

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

INTERMEDIATE RADII CAN BE INTERPOLATED



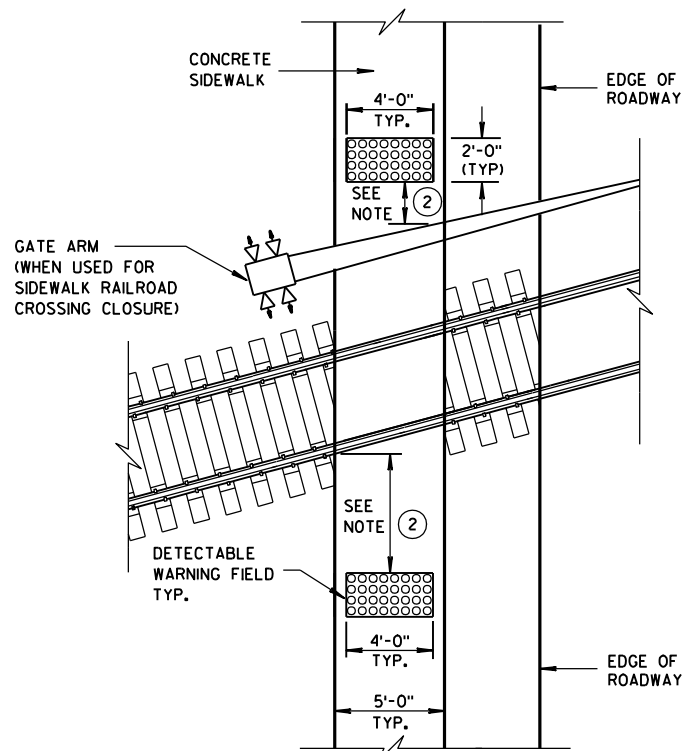
ISOMETRIC VIEW

LEGEND

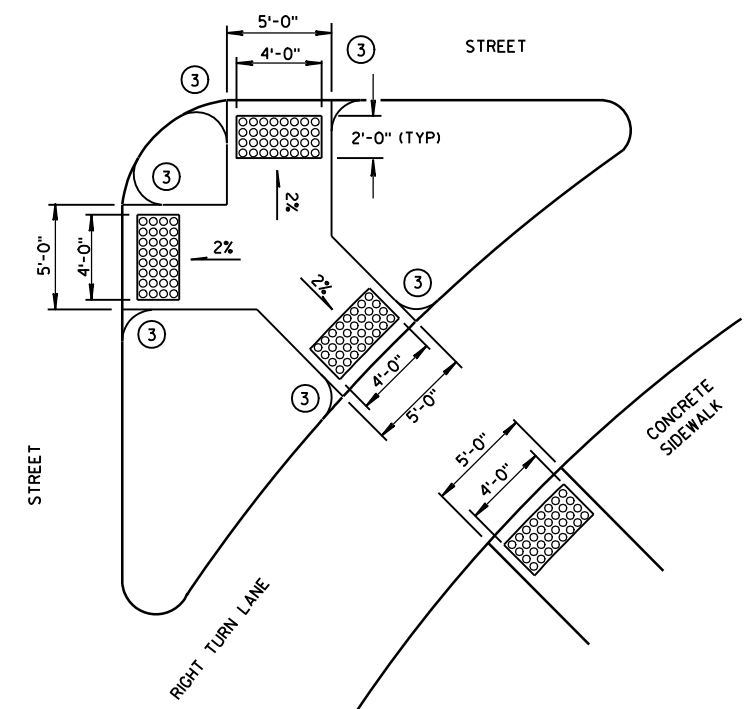
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMP
TYPE 4B

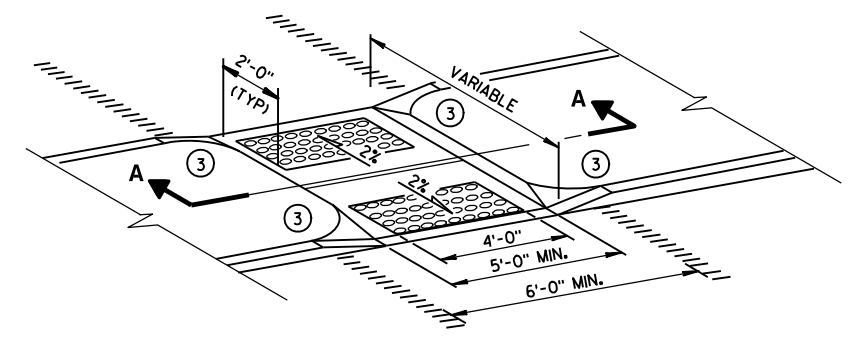
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



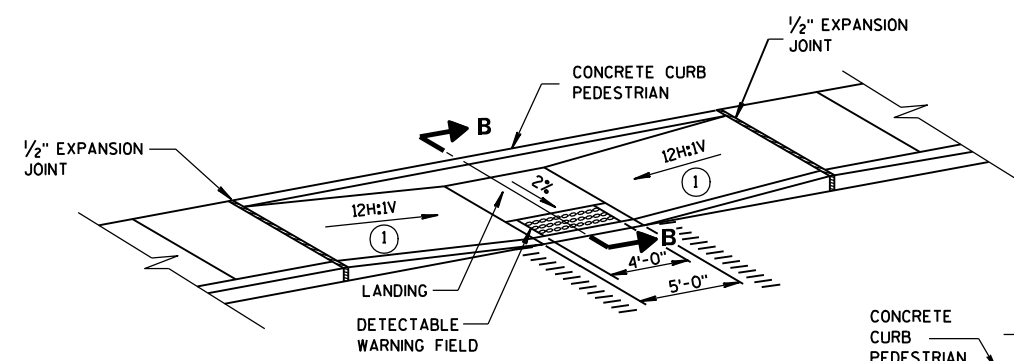
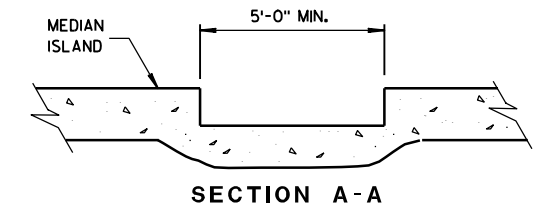
TYPE 8
DETECTABLE WARNINGS
AT RAILROAD CROSSING



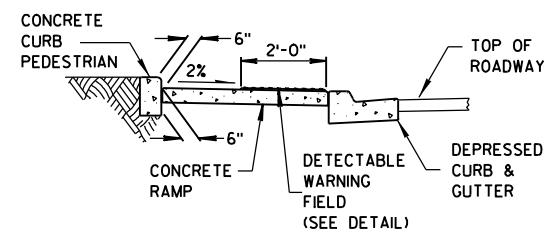
TYPE 6
DETECTABLE WARNING AT ISLANDS



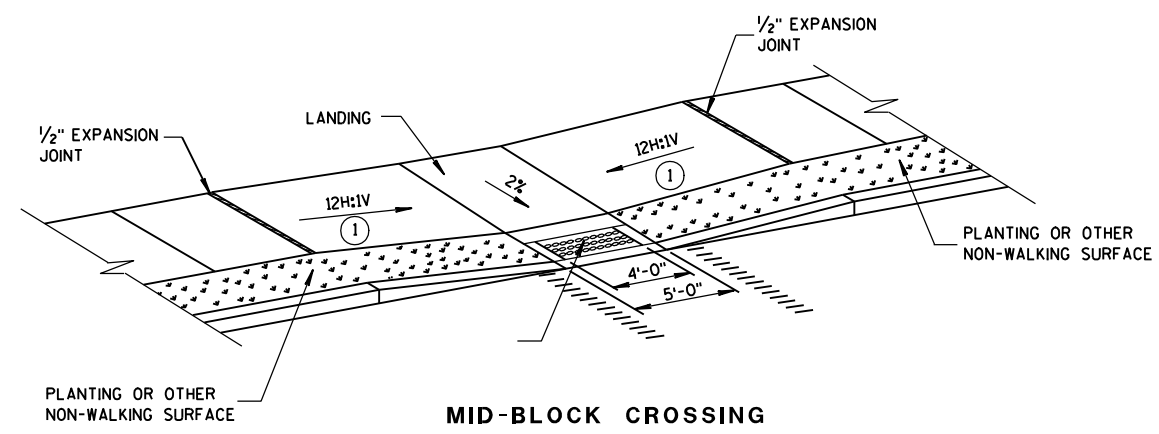
MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5



MID-BLOCK CROSSING
TYPE 7A



SECTION B-B



MID-BLOCK CROSSING
TYPE 7B

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

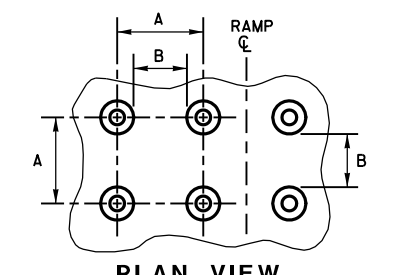
GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

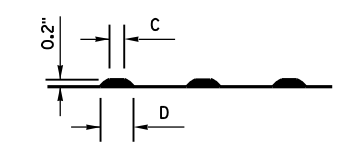
- ① SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ② THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE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

LEGEND

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



PLAN VIEW

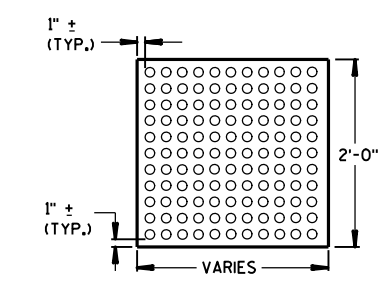


ELEVATION VIEW

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

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

TRUNCATED DOMES
DETECTABLE WARNING
PATTERN DETAIL



PLAN VIEW

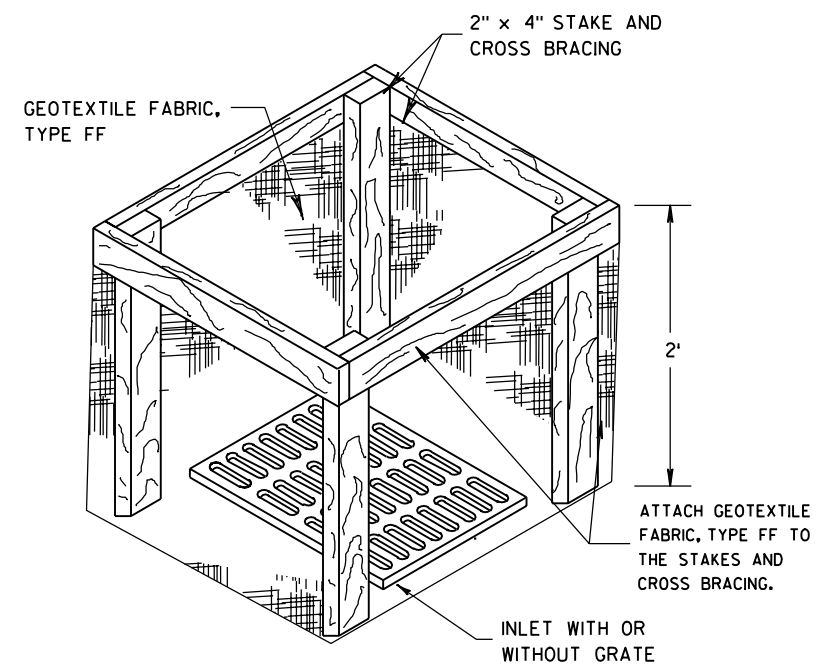
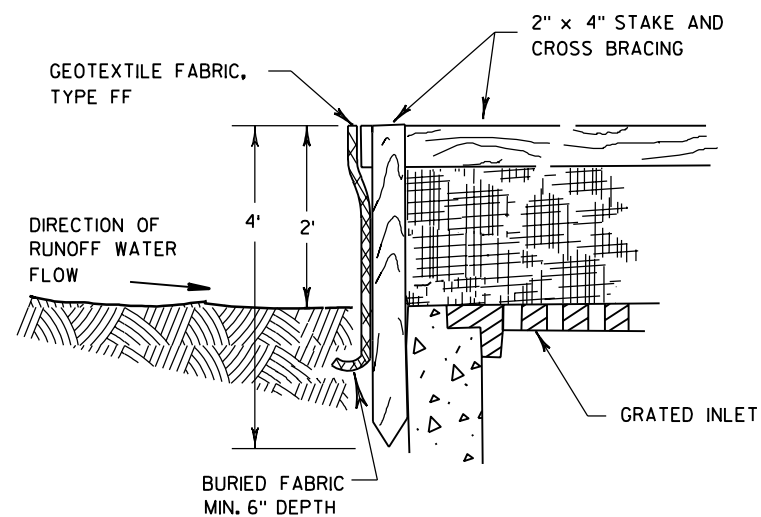
DETECTABLE WARNING
FIELD (TYPICAL)

CURB RAMPS TYPES 5, 6, 7A, 7B & 8	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
2-9-10 DATE FHWA	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER



TRENCH DETAIL





INLET PROTECTION, TYPE A

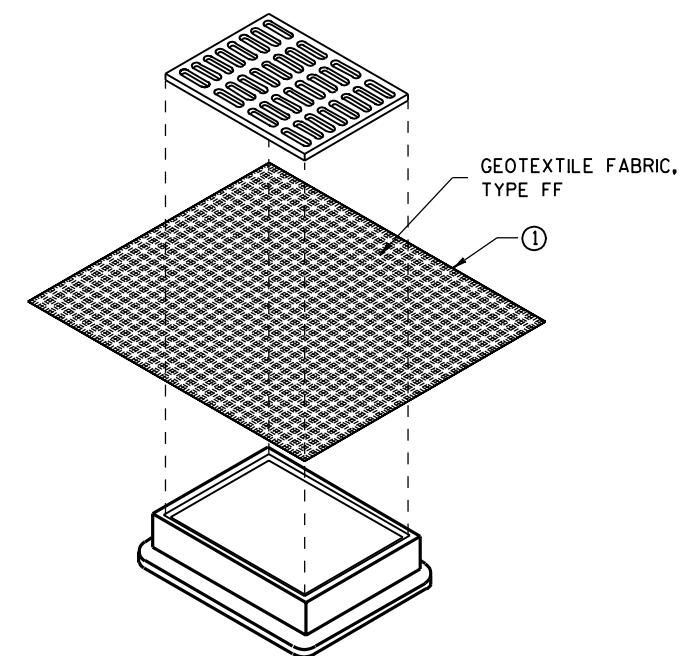
GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

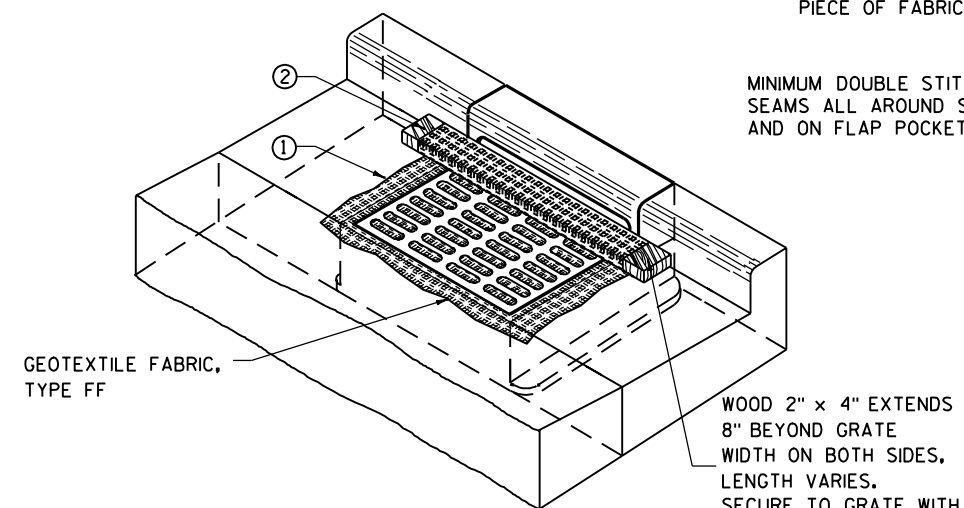
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



INLET PROTECTION, TYPE B (WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

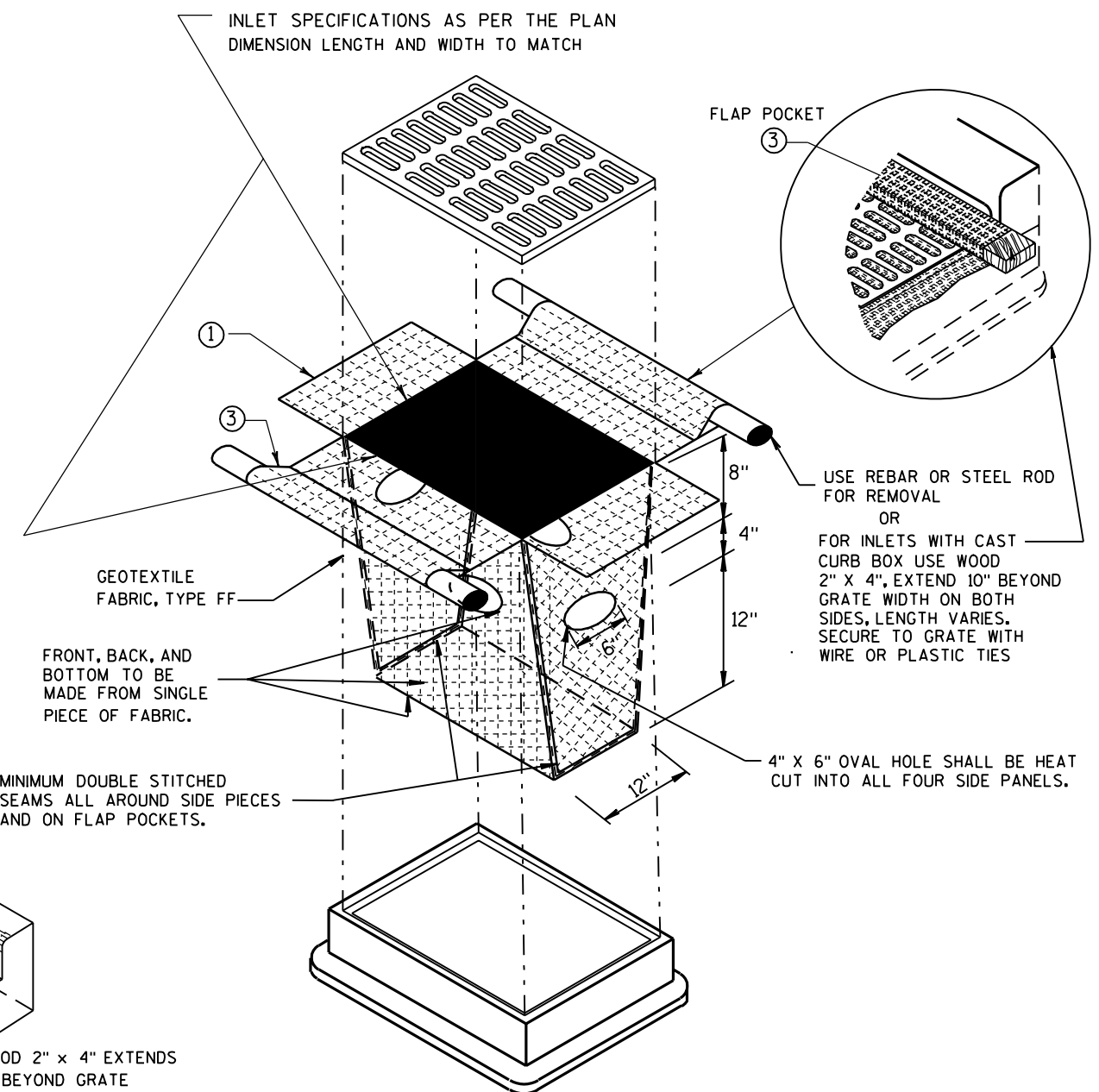
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

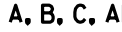
TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



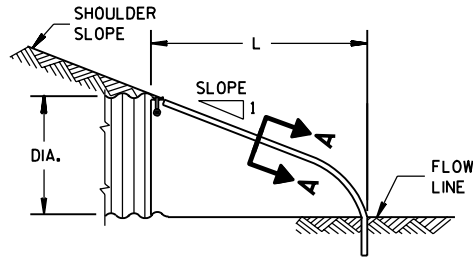
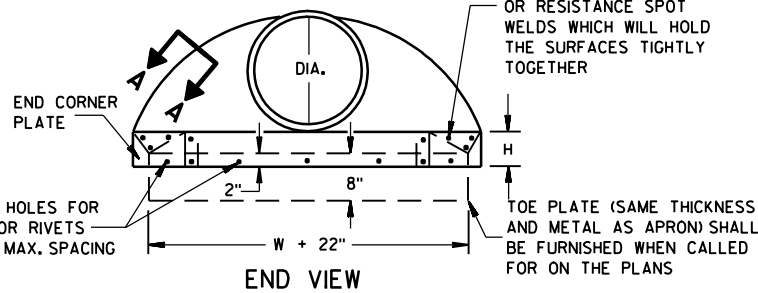
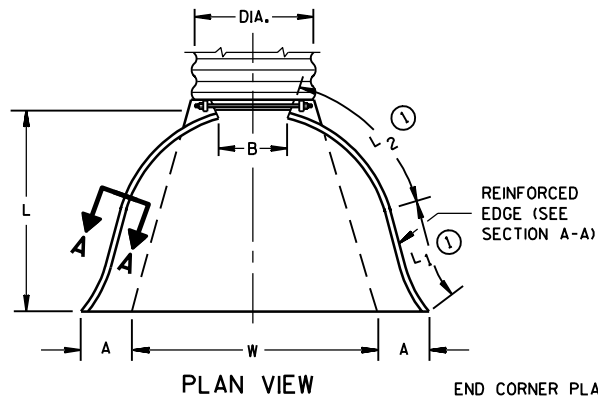
INLET PROTECTION, TYPE D

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

INLET PROTECTION TYPE A, B, C, AND D
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED <u>10/16/02</u> DATE  CHIEF ROADWAY DEVELOPMENT ENGINEER

METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
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 3/8	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	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

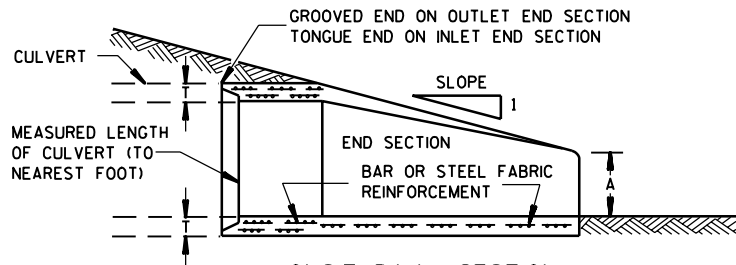
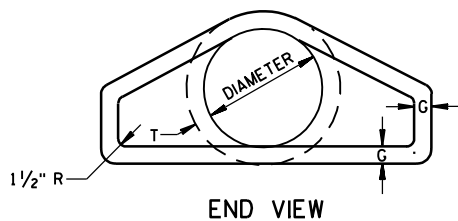
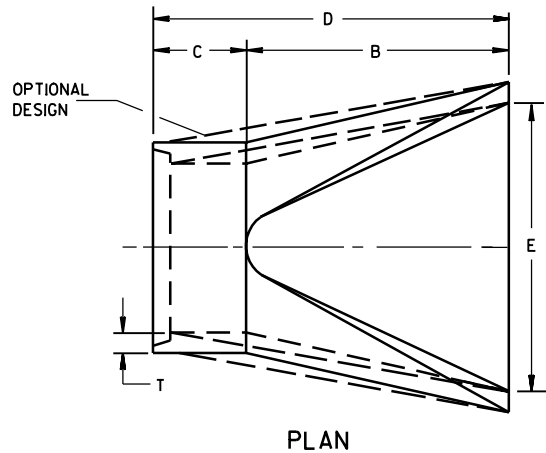
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



SIDE ELEVATION
METAL ENDWALLS

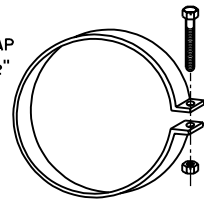
REINFORCED CONCRETE APRON ENDWALLS									
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE	
	T	A	B	C	D	E	G		
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1	
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1	
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1	
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1	
24	3	9 1/2	43 1/2	30	73 1/2	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 1/4	73 1/2	60	3 1/2	3 to 1	
36	4	15	63	34 1/4	97 1/4	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	98 1/4	90	5 1/2	2 5/8 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

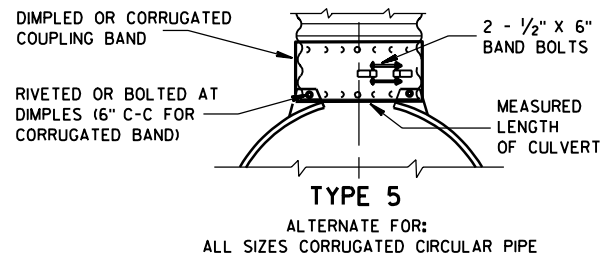
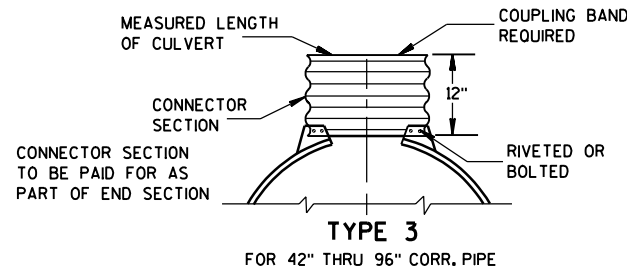
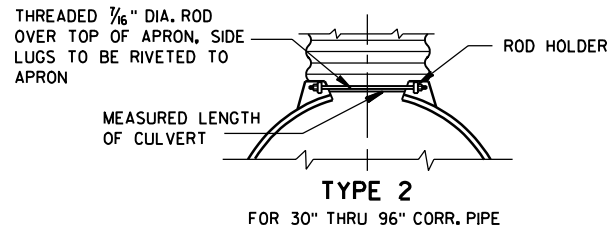
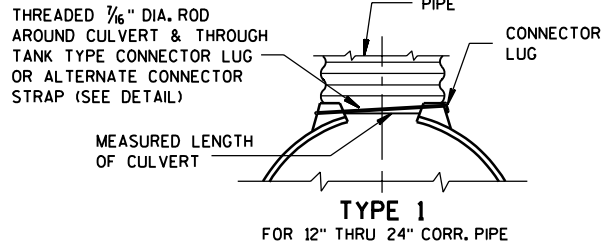


LONGITUDINAL SECTION
CONCRETE ENDWALLS

1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



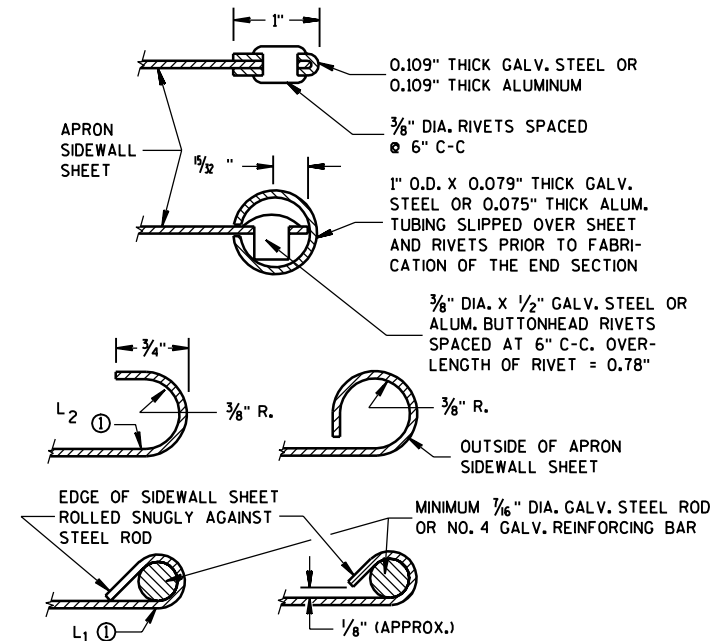
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

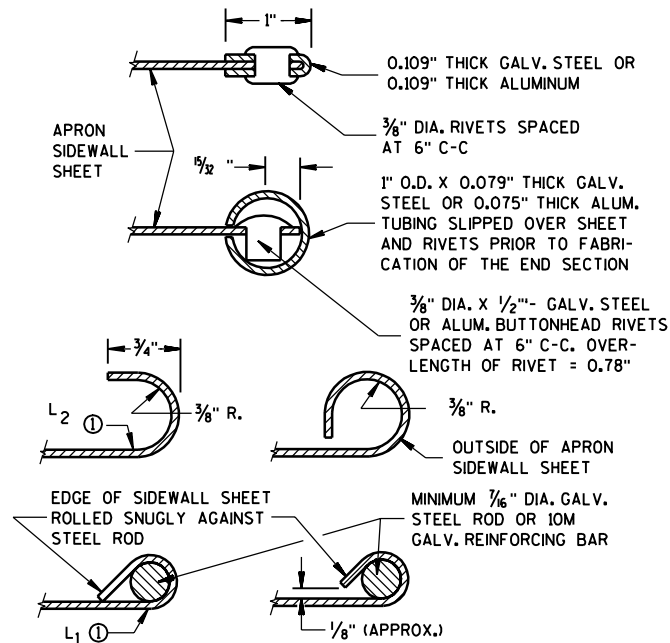
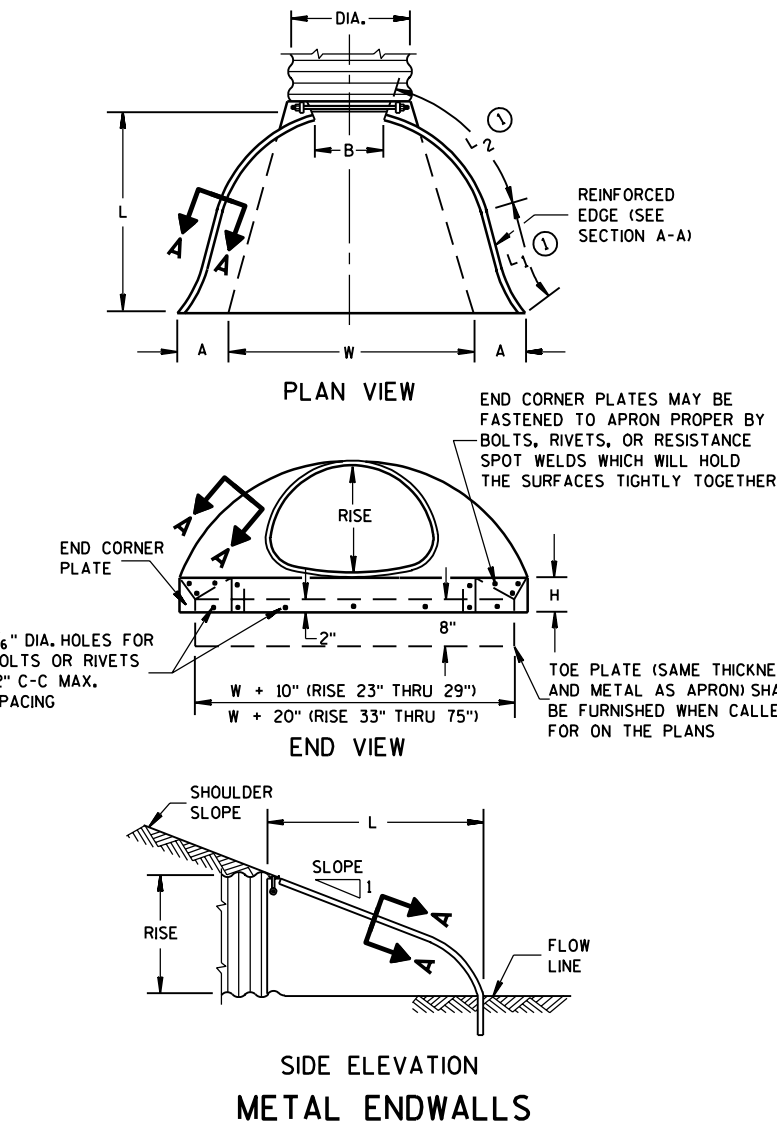
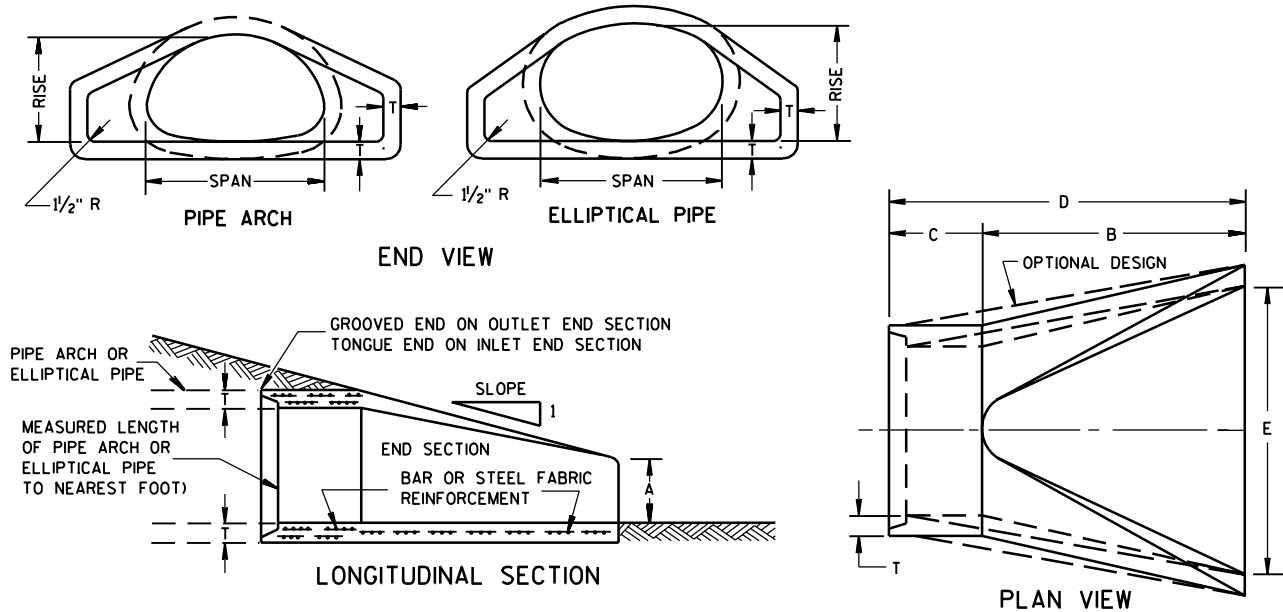
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



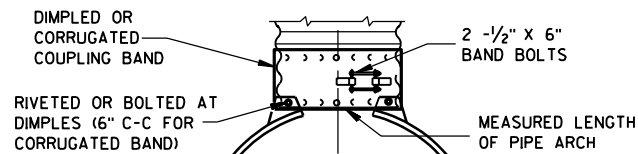
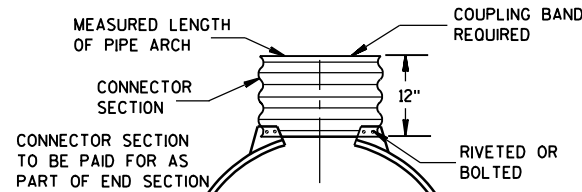
SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS													
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE			A	B	H	L	L1	L2	W		
			(±1")	(MAX.)	(±1")	(±1 1/2")	①	①	(±2")				
15	17	13	.064	.060	7	9	6	19	14	16	30	2 1/2 to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19 3/8	36	2 1/2 to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21 1/4	42	2 1/2 to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27 1/2	48	2 1/2 to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37 3/8	60	2 1/2 to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45 3/8	75	2 1/2 to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54 3/4	85	2 1/2 to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2 1/2 to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72 3/4	102	2 1/4 to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82 1/4	114	2 1/4 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)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A	B	H	L	L1	L2	W		
					(±1")	(MAX.)	(±1")	(±1½")	①	①	(±2")		
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



CONNECTION DETAILS

REINFORCED CONCRETE PIPE ARCH										
EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE	
	** SPAN	** RISE	T	A	B	C	D	E		
	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)		
24	29	18	3	8 1/2	39	33	72	48	3 to 1	
30	36	22	3 1/2	9 1/2	50	46	96	60	3 to 1	
36	44	27	4	11 1/8	60	36	96	72	3 to 1	
42	51	31	4 1/2	15 1/8	60	36	96	78	3 to 1	
48	58	36	5	21	60	36	96	84	3 to 1	
54	65	40	5 1/2	25 1/2	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	28 1/2	83	19	102	144	2 to 1	

REINFORCED CONCRETE ELLIPTICAL PIPE										
EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE	
	** SPAN	** RISE	T	A	B	C	D	E		
	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)	(Inches)		
24	30	19	3 1/4	8 1/2	39	33	72	48	3 to 1	
30	38	24	3 3/4	9 1/2	54	18	72	60	3 to 1	
36	45	29	4 1/2	11 1/8	60	24	84	72	2 1/2 to 1	
42	53	34	5	15 1/4	60	36	96	78	2 1/2 to 1	
48	60	38	5 1/2	21	60	36	96	84	2 1/2 to 1	
54	68	43	6	25 1/2	60	36	96	90	2 1/2 to 1	
60	76	48	6 1/2	30	60	36	96	96	2 1/2 to 1	

**NOMINAL SIZE

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

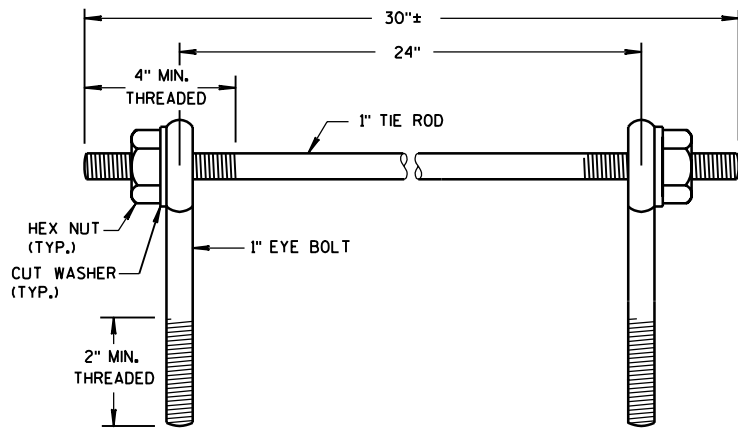
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

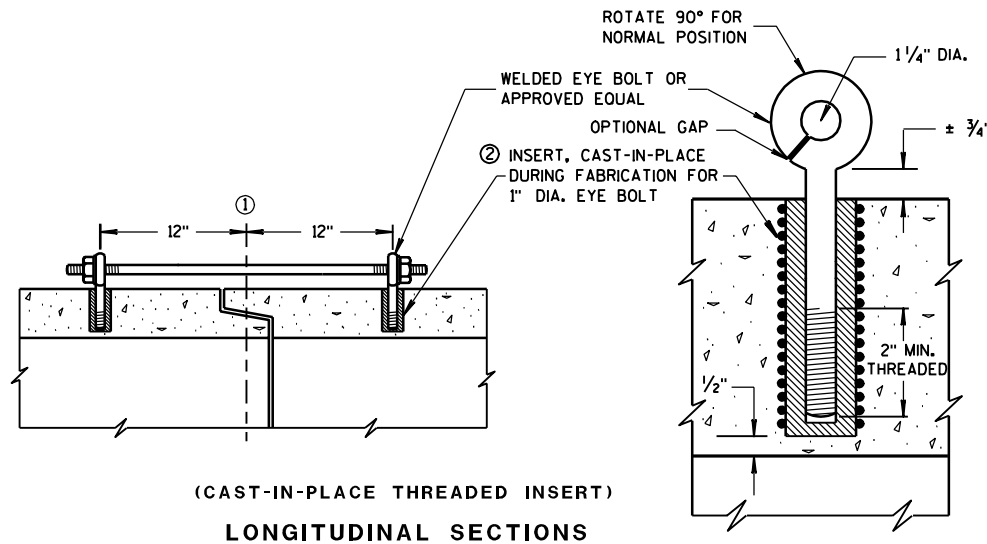
11/30/94
DATE

FHWA

Chief Roadway Development Engineer



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)
LONGITUDINAL SECTIONS

GENERAL NOTES

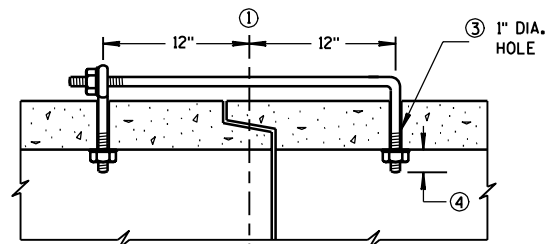
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED ON 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 CULVERT PIPE AS INDICED ON THE PLANS AND BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO CULVERT PIPE, REINFORCED CONCRETE CULVERT PIPE, OR REINFORCED CONCRETE PIPE CATTLE PASS.

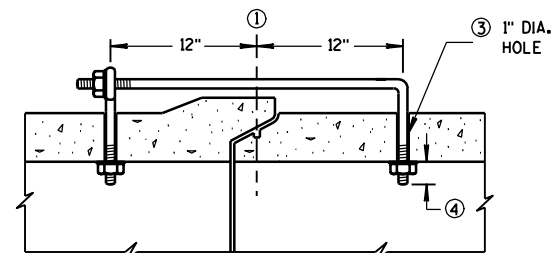
DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

- ① C. 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 C. 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.

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



(TONGUE & GROOVE PIPE)



(MODIFIED BELL PIPE)
LONGITUDINAL SECTION

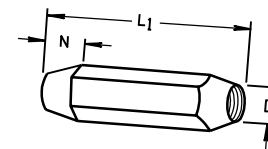
EYE BOLT DIMENSION TABLE

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"	

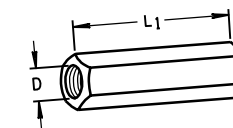
ADJUSTABLE TIE ROD TABLE

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 1/8

DIMENSIONS SHOWN ARE IN INCHES



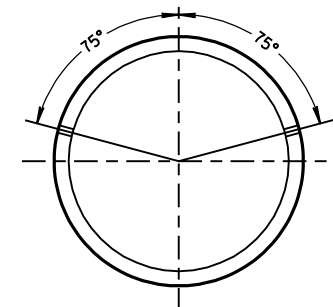
TAPERED



PLAIN

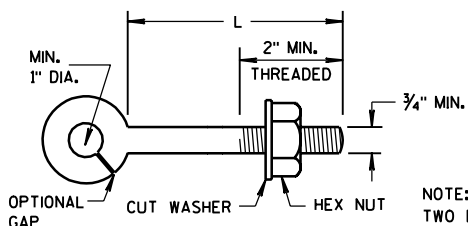
RIGHT AND LEFT THREADS

SLEEVE NUTS



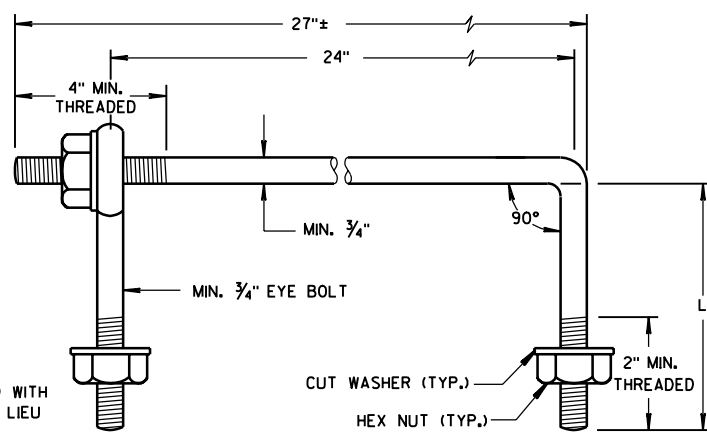
PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



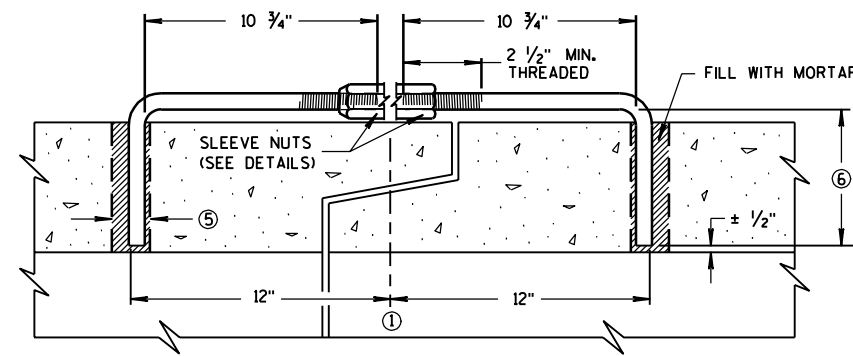
EYE BOLT

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)



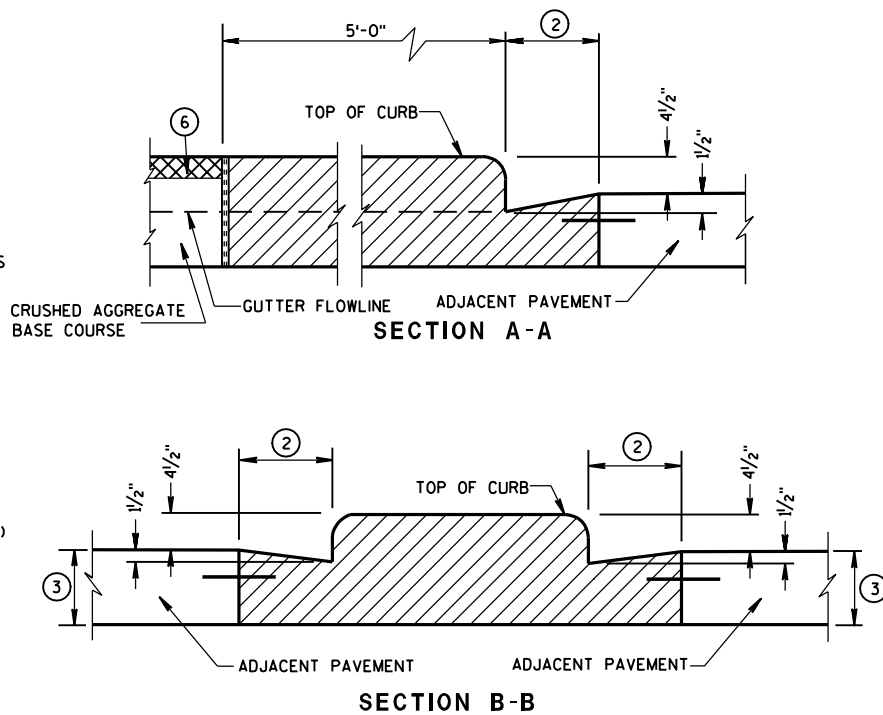
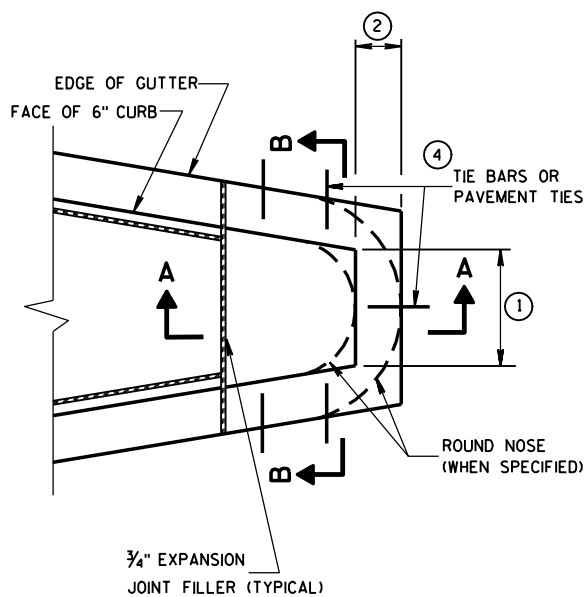
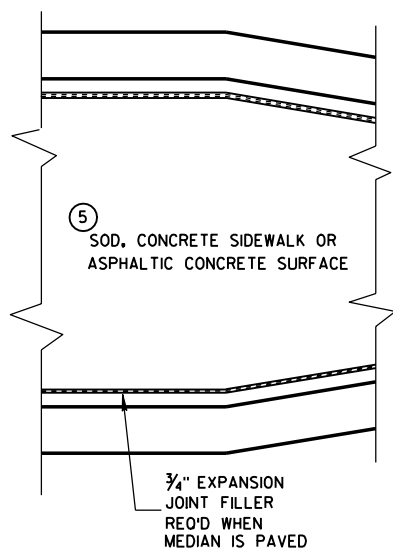
LONGITUDINAL SECTION

(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)
ADJUSTABLE TIE ROD (ALTERNATE NO. 3)

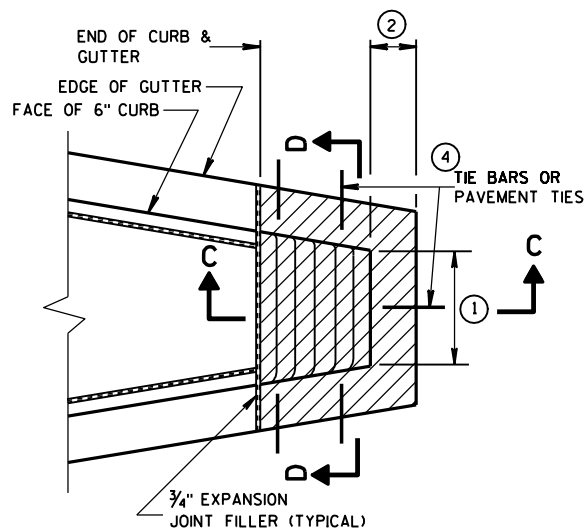
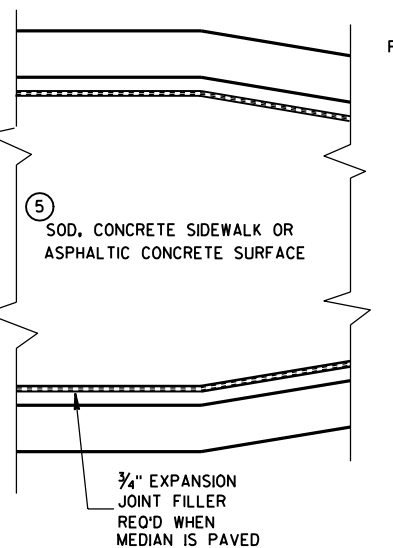
JOINT TIES FOR CONCRETE PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

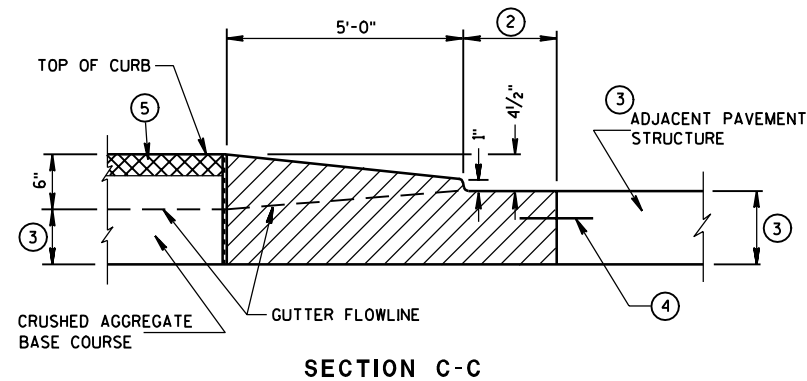
APPROVED
12/17/07 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



CONCRETE MEDIAN BLUNT NOSE DETAIL



CONCRETE MEDIAN SLOPED NOSE TYPE 1

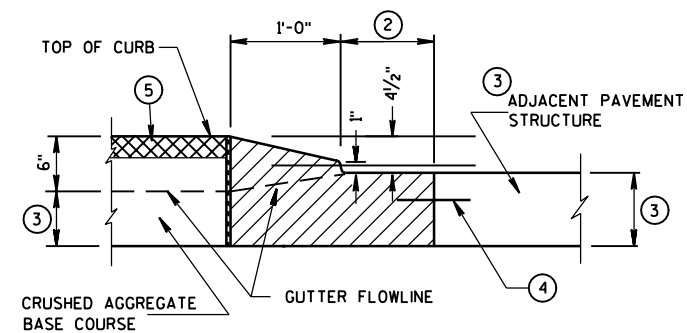
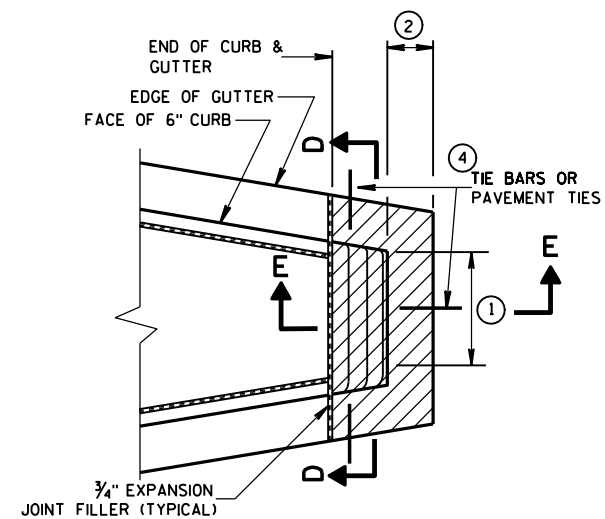


GENERAL NOTES

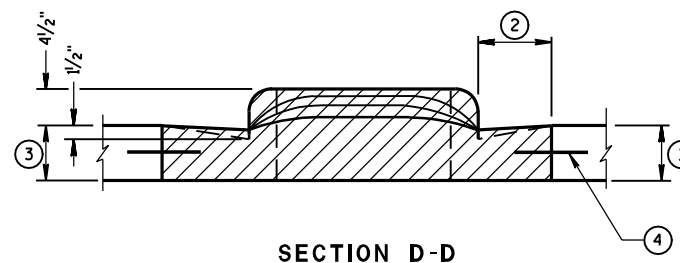
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).
- ② WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.
- ③ DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:
 - (1) NEW OR EXISTING CONCRETE PAVEMENT.
 - (2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.
 - (3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

- ④ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.
- PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.
- ⑤ SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



CONCRETE MEDIAN SLOPED NOSE TYPE 2

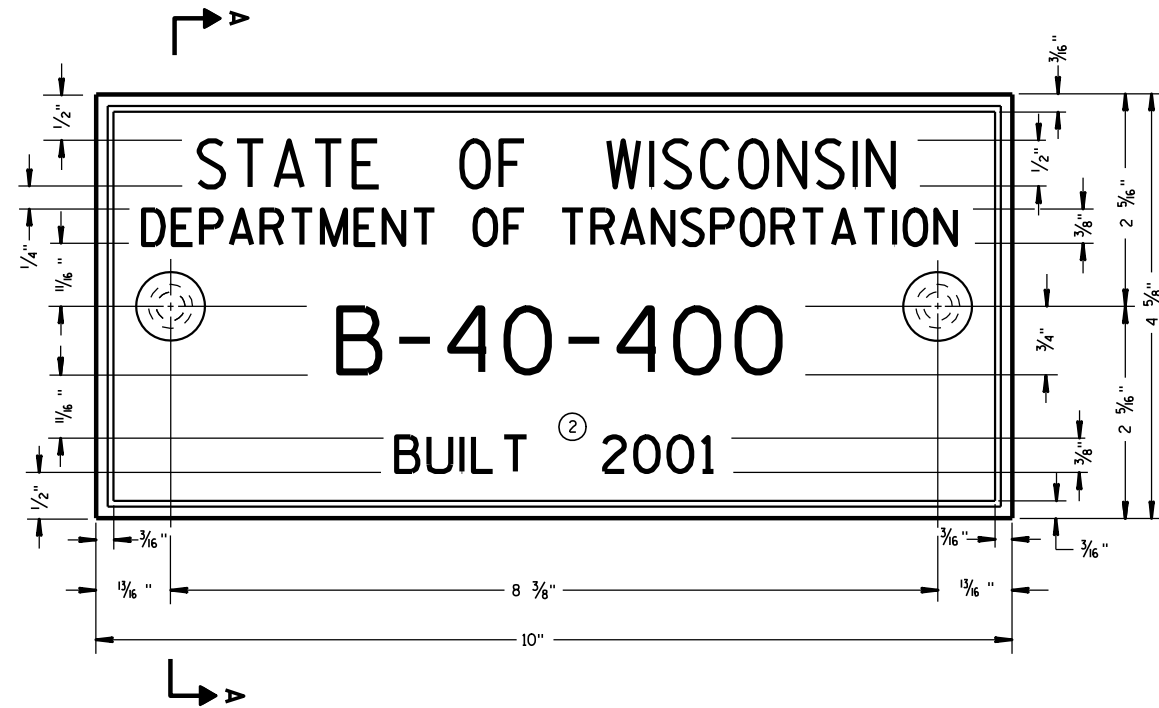


CONCRETE MEDIAN NOSE

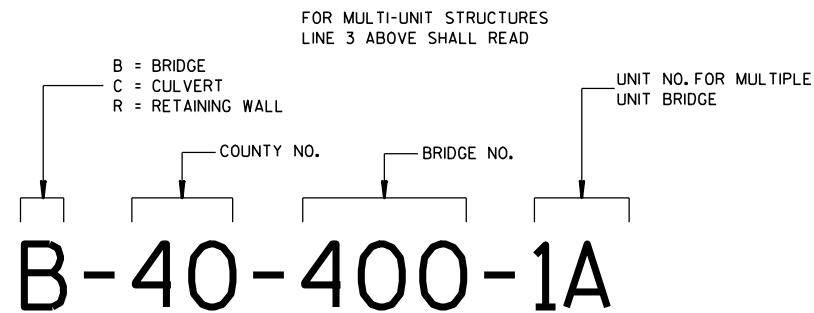
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/8/06
DATE
FWHA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)



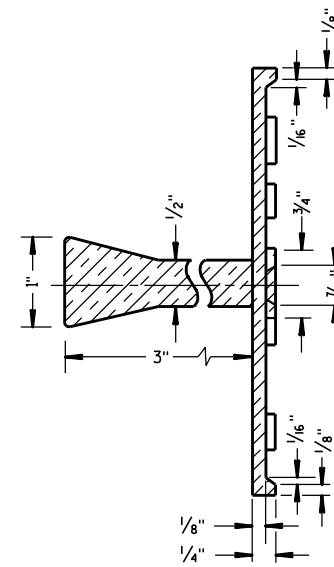
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

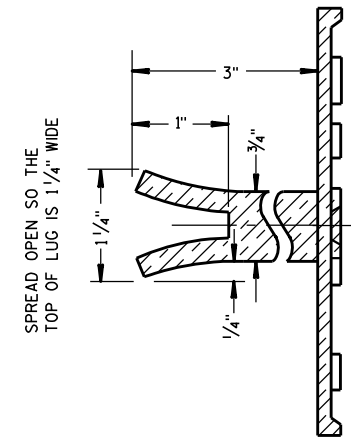
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

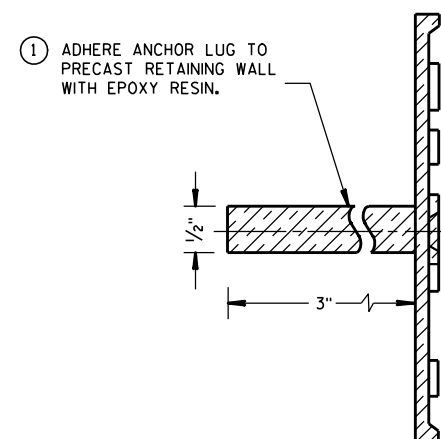
- 1 EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 2 REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG

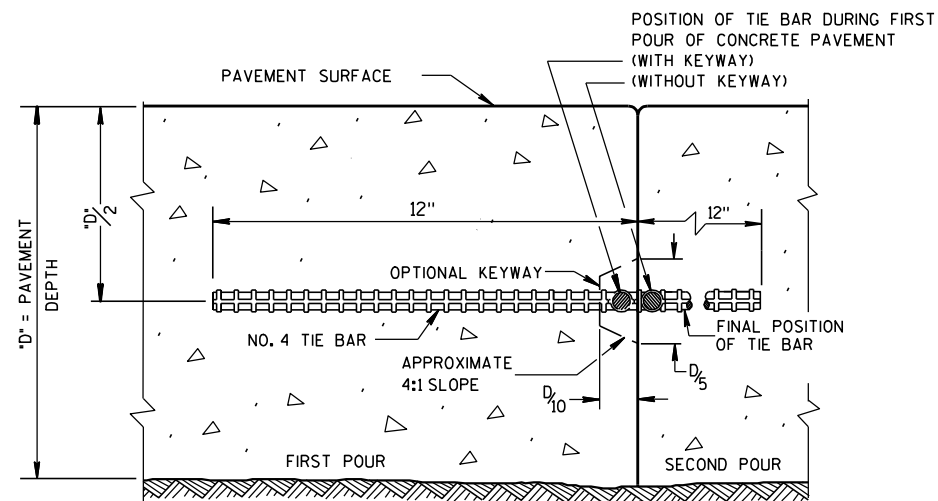


ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

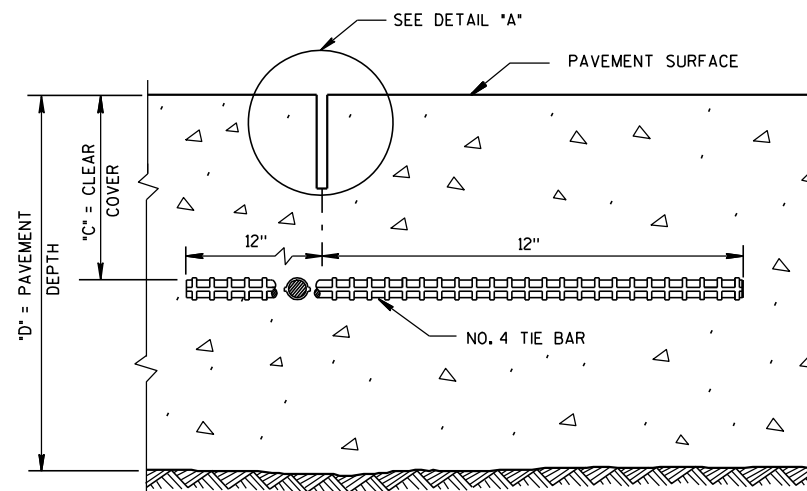
**NAME PLATE
(STRUCTURES)**

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

APPROVED
3/26/10 /S/ Scot Becker
DATE CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA



CONSTRUCTION JOINT



SAWED JOINT

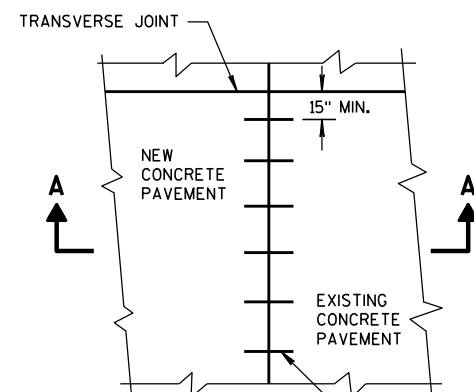
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

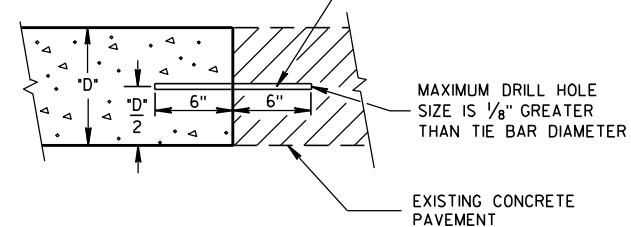
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

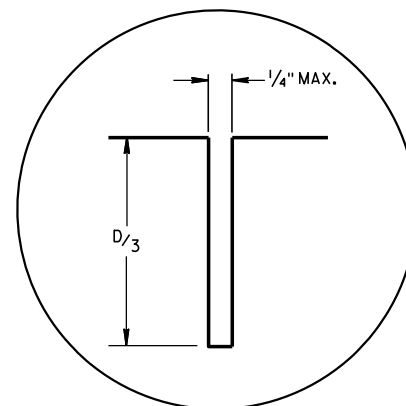


PLAN VIEW

NO. 6 TIE BARS SPACED 2'-6" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①

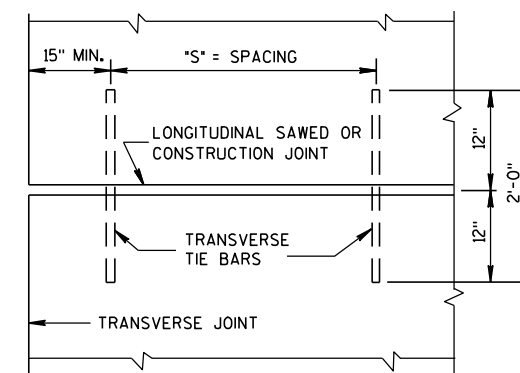


SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH 24' OR 26'	≥ 30'
6, 6 1/2"	3" ± 1/2"	48"	42"
7, 7 1/2"	3 1/4" ± 1"	45"	36"
8, 8 1/2"	3 3/4" ± 1"	39"	30"
9, 9 1/2"	4 1/4" ± 1"	33"	27"
10, 10 1/2"	4 3/4" ± 1"	30"	24"
11, 11 1/2"	5 1/4" ± 1"	27"	21"
12"	5 3/4" ± 1"	24"	21"



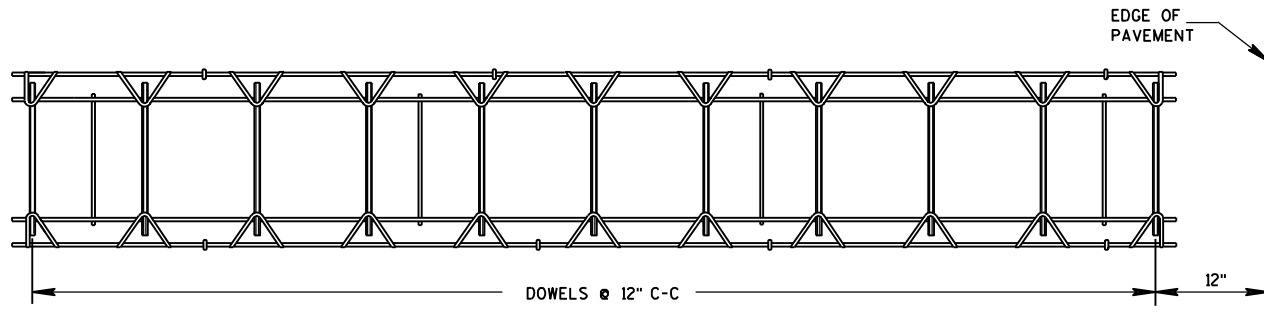
PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10-5-2010 /S/ Deb Bischoff
DATE PAVEMENT POLICY & DESIGN ENGINEER
FHWA



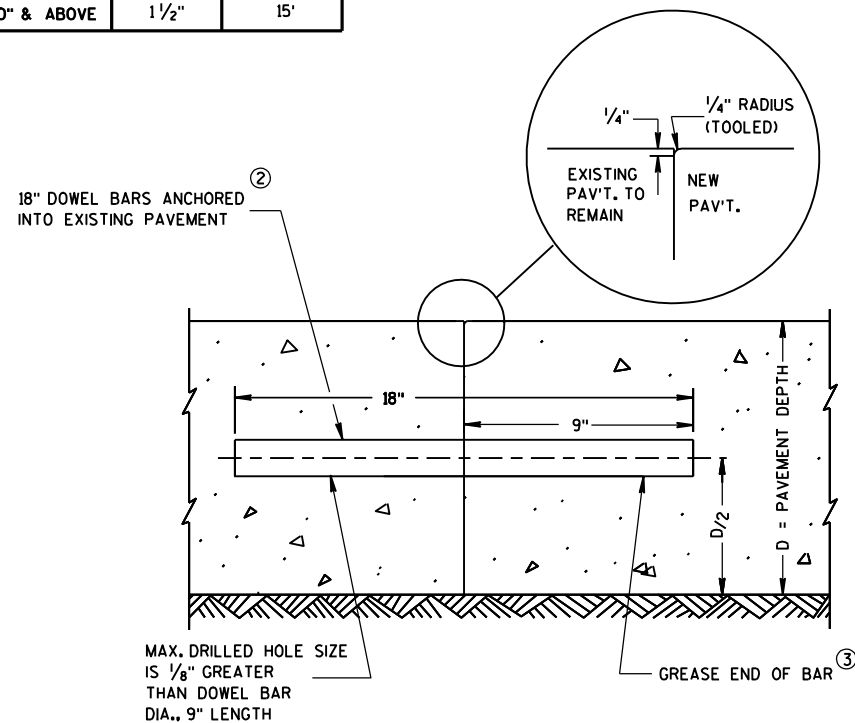
PLAN VIEW



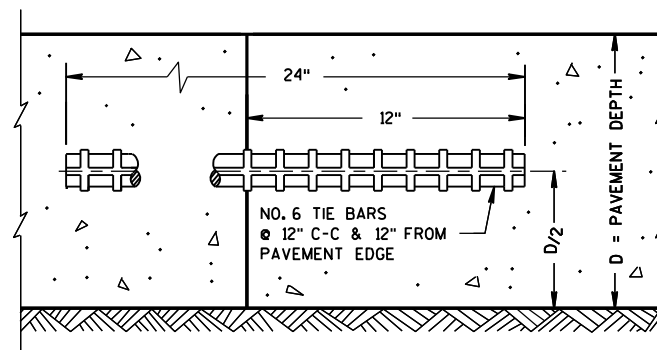
SIDE VIEW
CONTRACTION JOINT DOWEL ASSEMBLY

PAVEMENT DEPTH, DOWEL BAR SIZE
AND JOINT SPACING TABLE

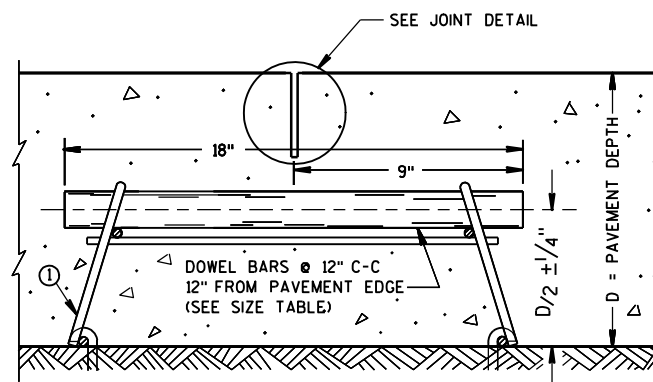
PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9", 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'



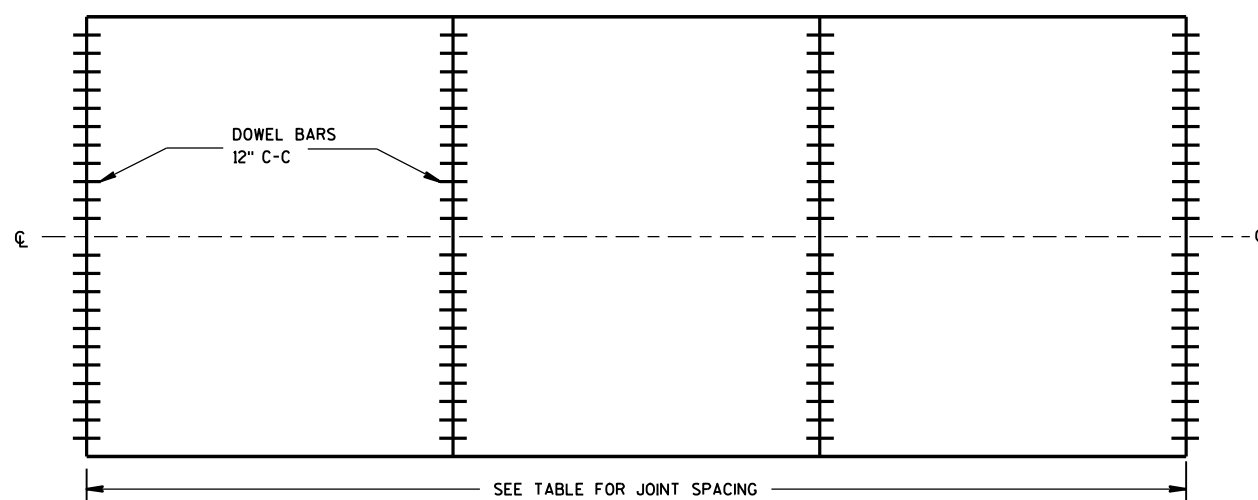
TRANSVERSE CONTRACTION JOINTS ABUTTING
EXISTING PAVEMENT
DOWEL BAR DETAIL



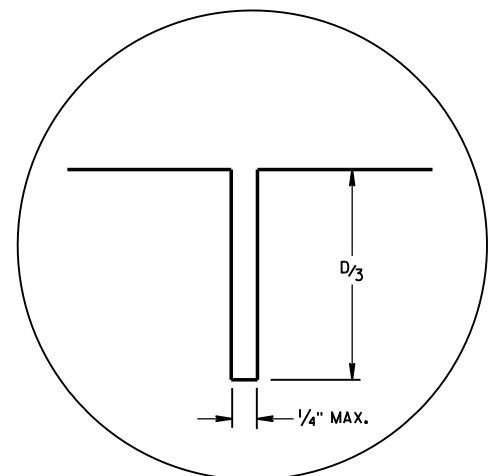
TRANSVERSE CONSTRUCTION JOINT



DOWELED CONTRACTION JOINT



CONTRACTION JOINT LOCATIONS



JOINT DETAIL

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, CENTER THE DOWEL ASSEMBLY ACROSS THE LANES. LOCATE THE INNER AND OUTER MOST DOWEL BARS SO THAT THE CENTER OF THE BARS ARE A MINIMUM OF 6 INCHES AND A MAXIMUM OF 12 INCHES FROM THE LONGITUDINAL JOINT AND THE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

THE CONTRACTOR MAY INSERT TIE BARS THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN PLACED.

- THE ENGINEER MAY APPROVE THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. THE CONTRACTOR MAY USE MECHANICAL DOWEL BAR INSERTERS INSTEAD OF DOWEL ASSEMBLIES.
- ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY.
- APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
- SPACE DOWEL BARS INSTALLED BY DRILLING 1'-3" ON CENTER. CENTER THE GROUPING OF DOWEL BARS INSIDE THE SLAB BASED ON ALL THE FOLLOWING SITUATIONS:

BETWEEN THE EDGES OF PAVEMENTS WITHOUT LONGITUDINAL JOINTS OR
BETWEEN THE EDGE OF PAVEMENT AND NEAREST LONGITUDINAL JOINT OR
BETWEEN TWO ADJACENT LONGITUDINAL JOINTS.
- SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

URBAN DOWELED
CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

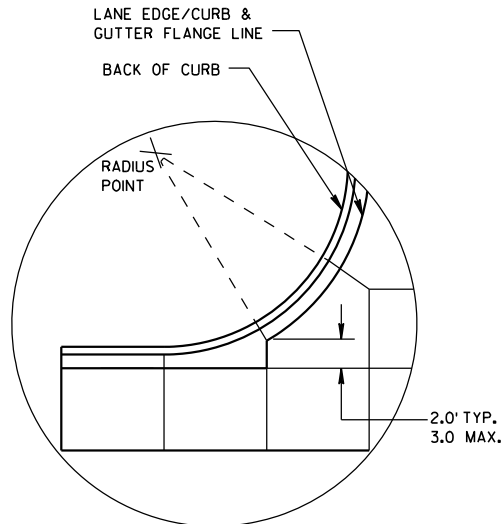
12/11/2009

DATE

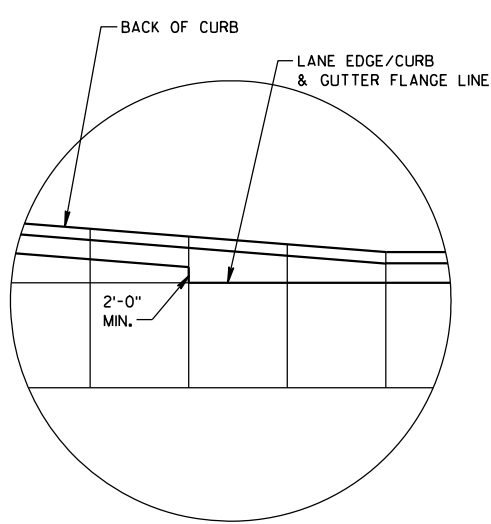
FHWA

/S/ Deb Bischoff

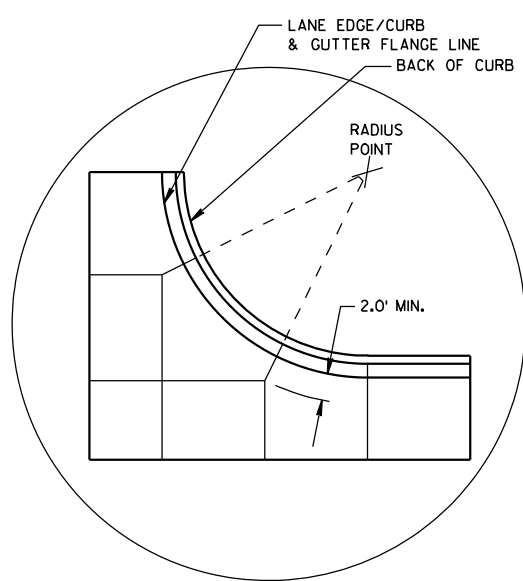
PAVEMENT POLICY & DESIGN ENGINEER



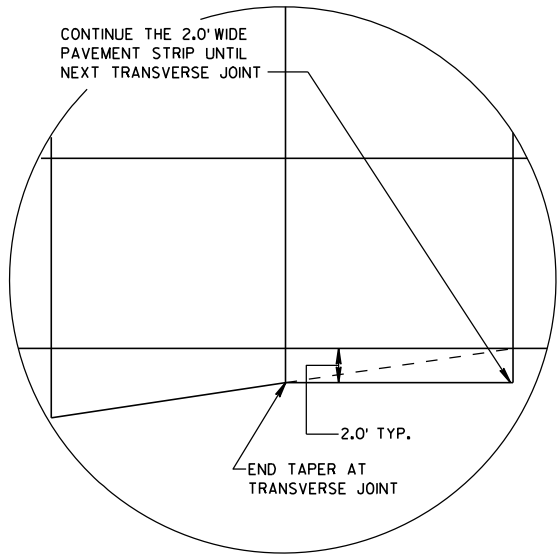
DETAIL "A"



DETAIL "B"



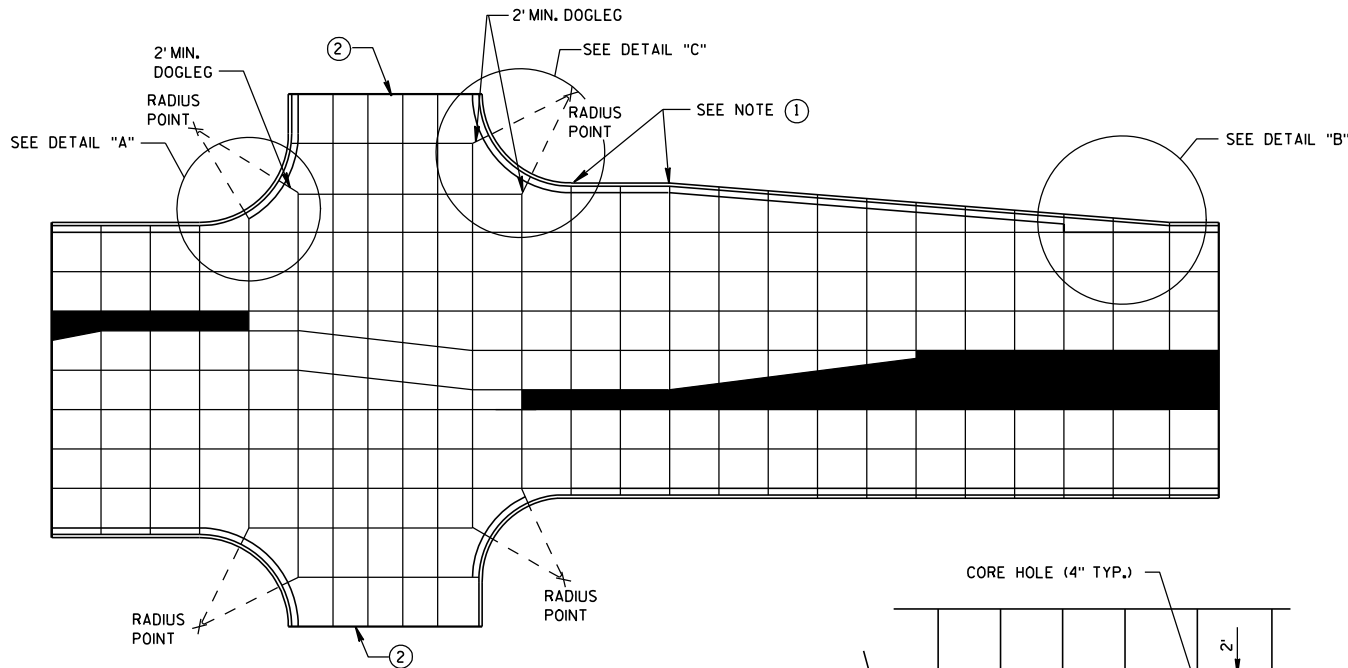
DETAIL "C"



DETAIL "D"

GENERAL NOTES

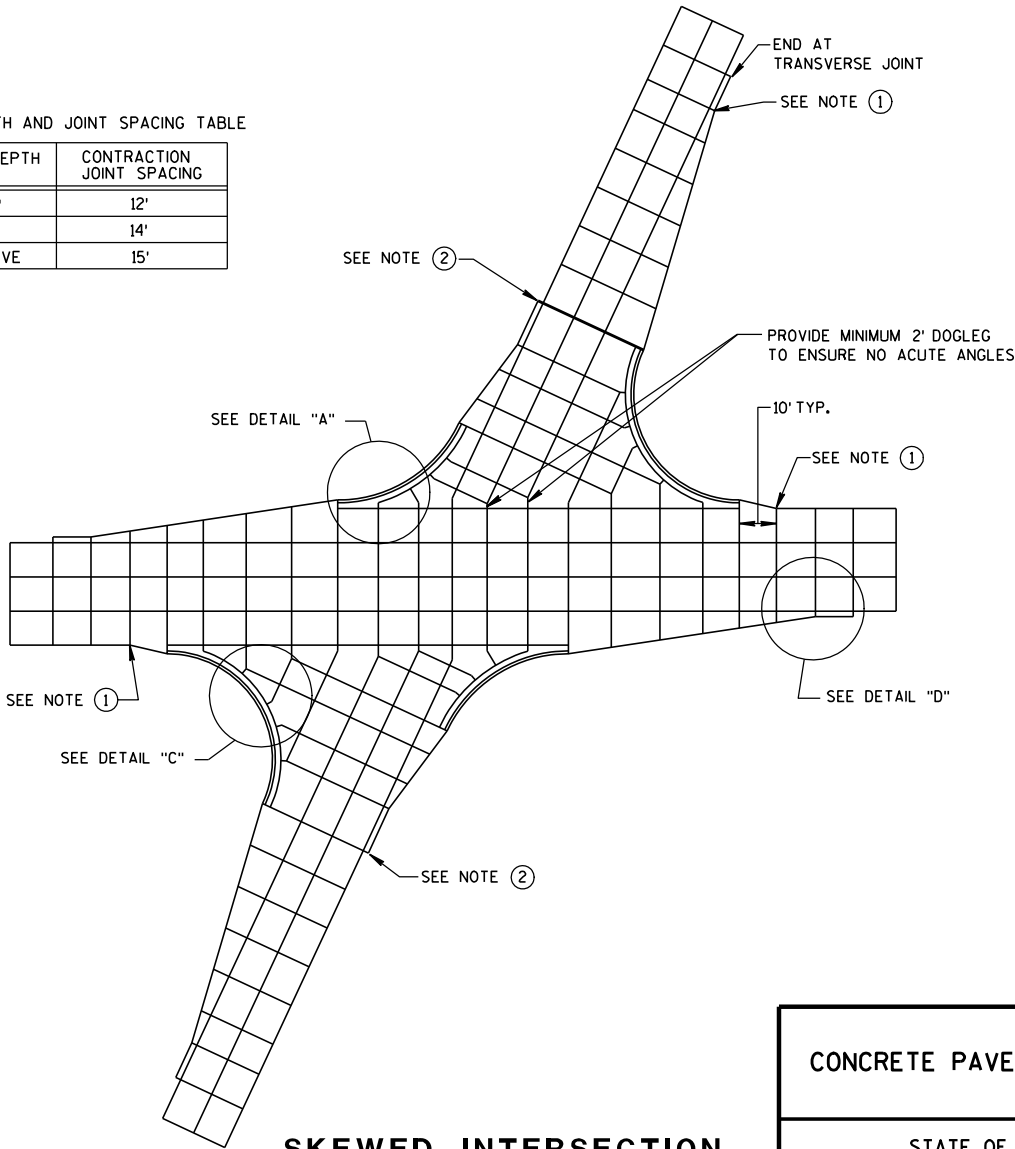
- THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.
- ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.
- CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.
- ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.
- AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.
- SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.
- AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.
- CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
 2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
 3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



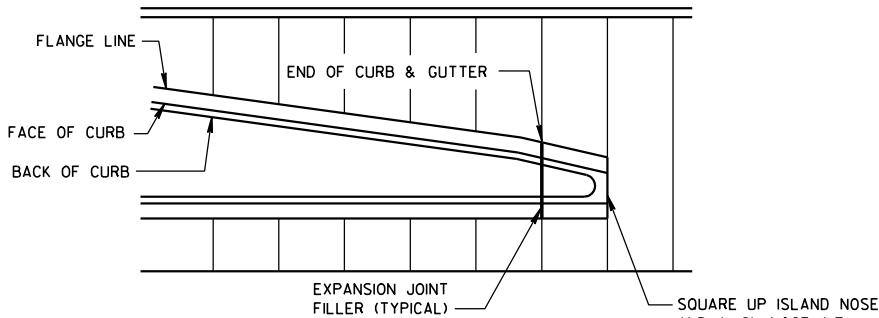
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

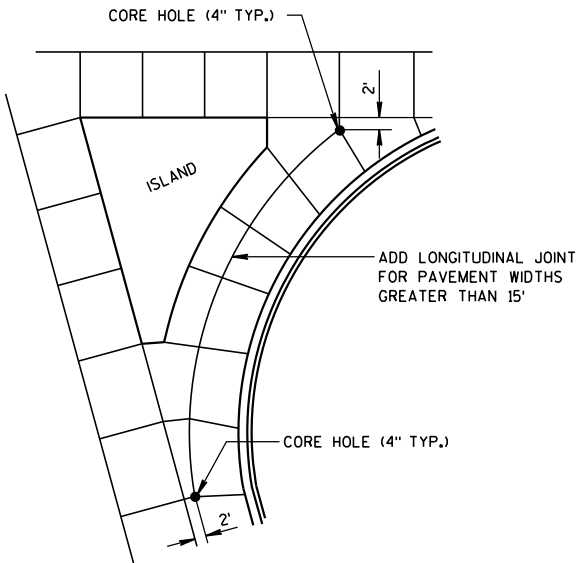
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



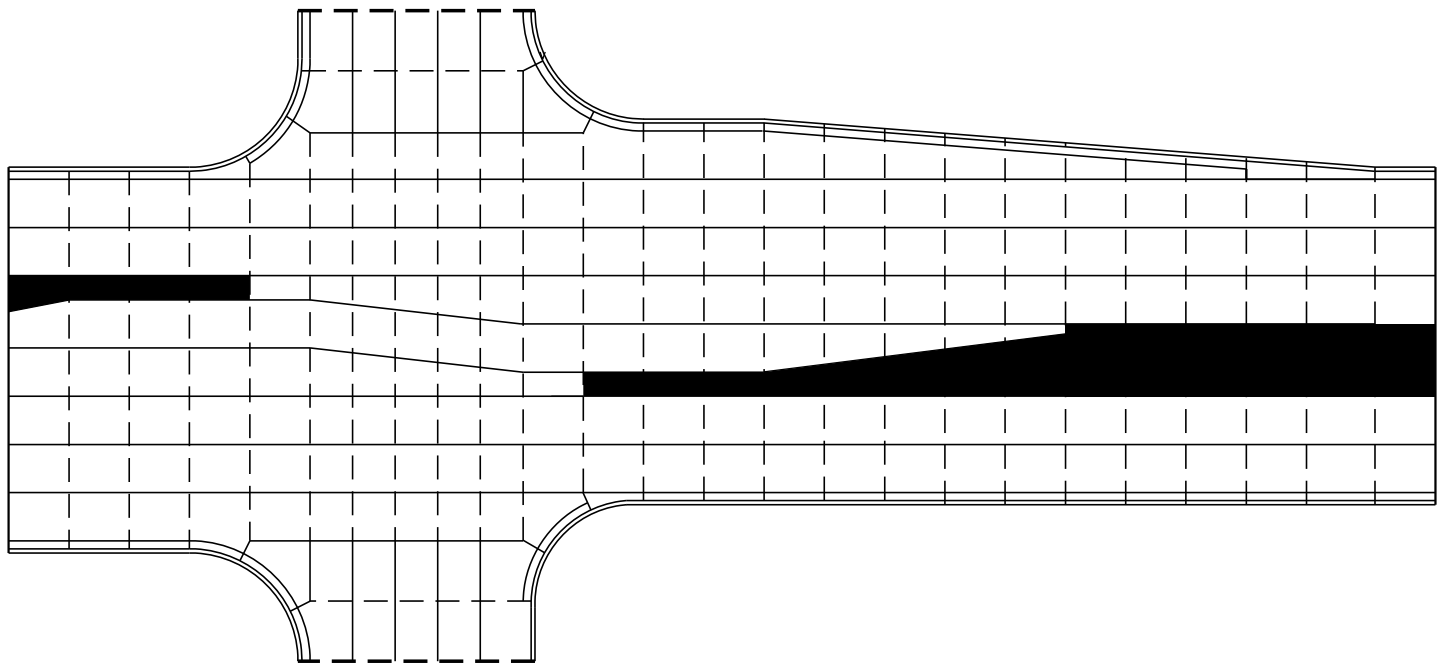
LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

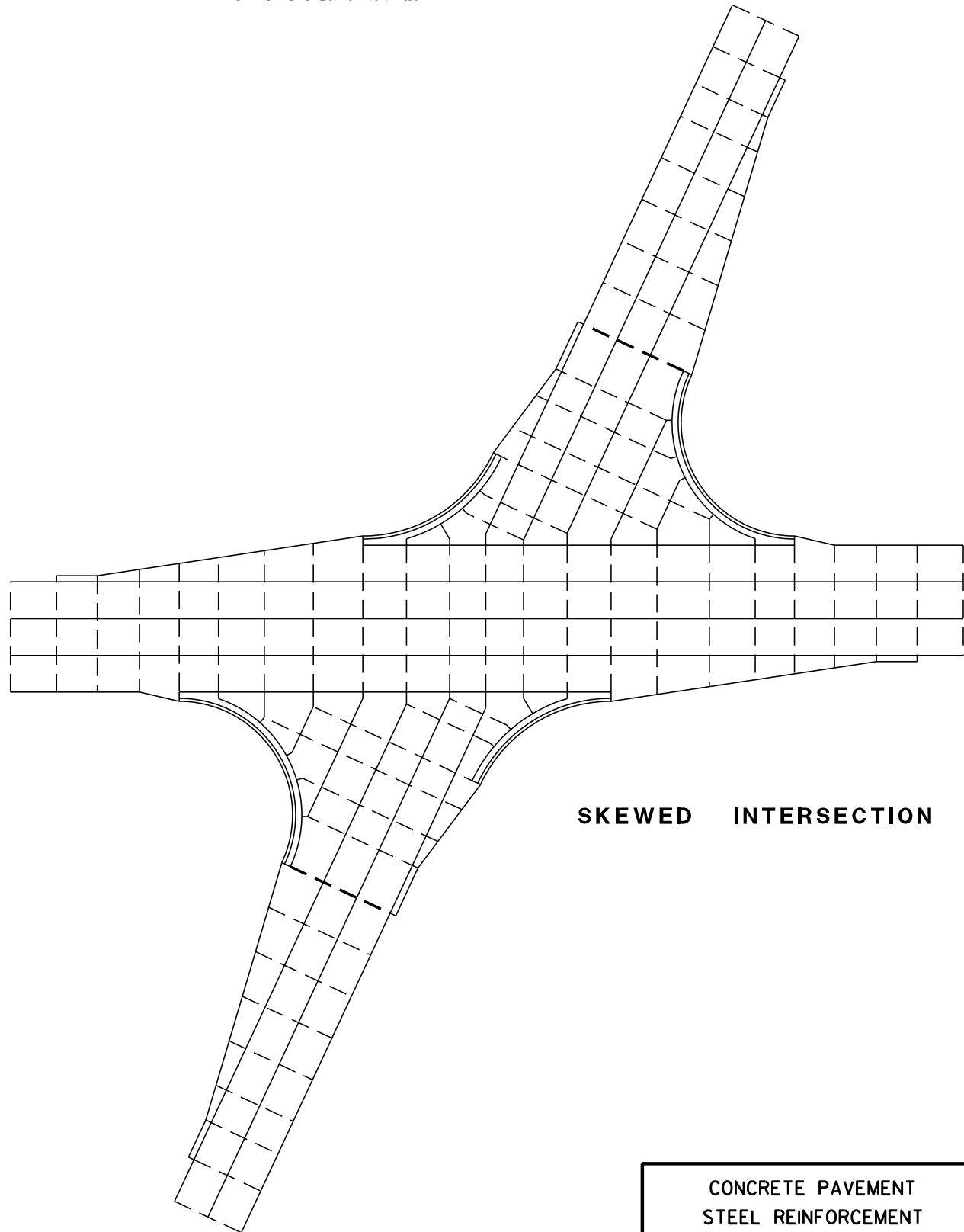
- POTENTIAL DOWELED EXPANSION JOINT
- DOWELED JOINT
- TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

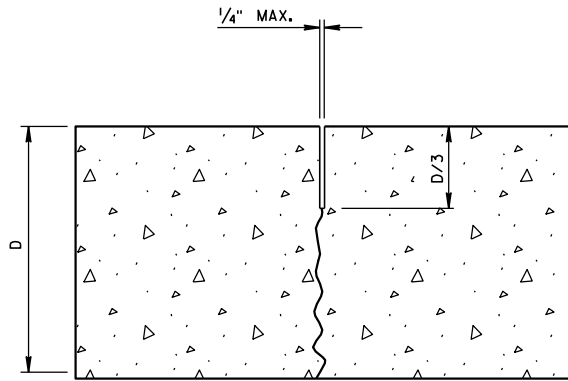
USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



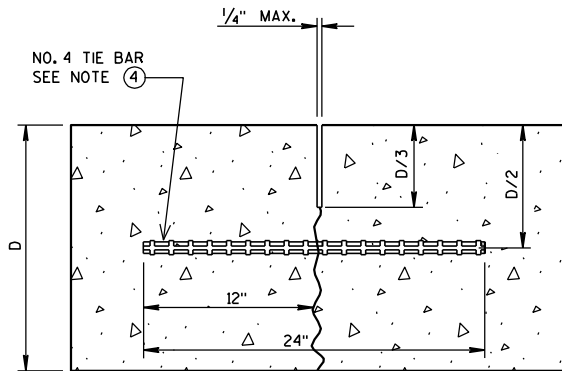
SKEWED INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

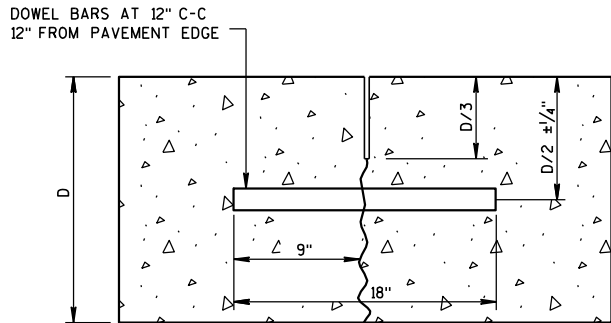
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



UNDOWELED-TRANSVERSE



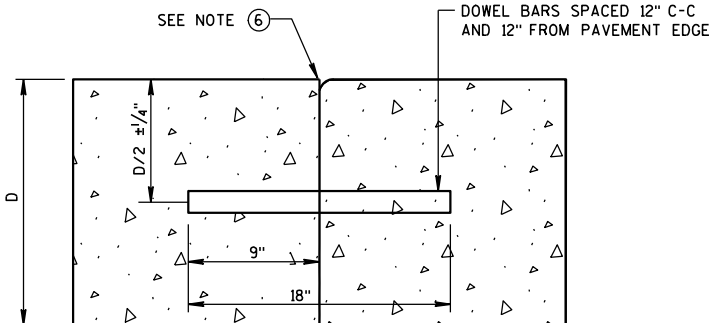
TIED LONGITUDINAL



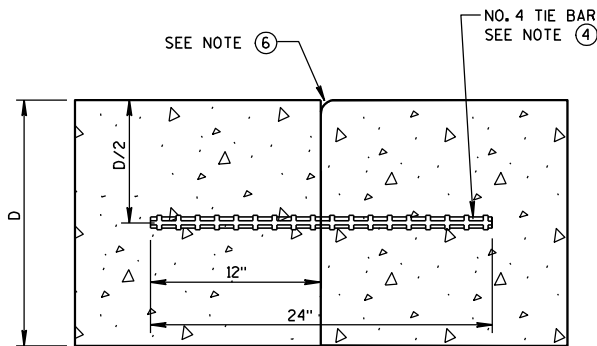
DOWELED-TRANSVERSE

CONTRACTION JOINTS

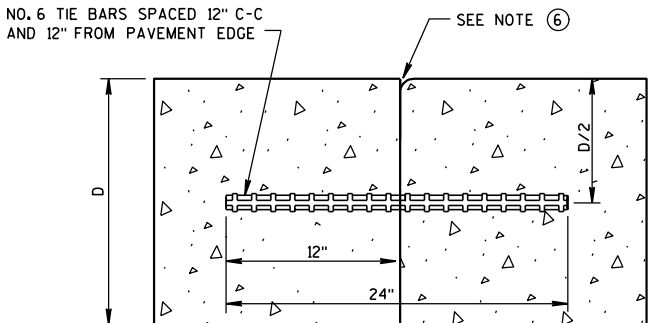
SEE NOTE 2



DOWELED TRANSVERSE

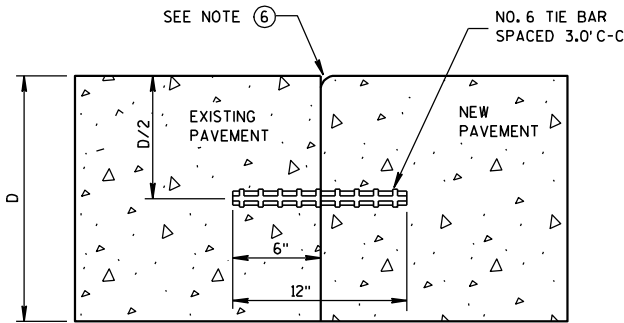


TIED LONGITUDINAL



TIED TRANSVERSE

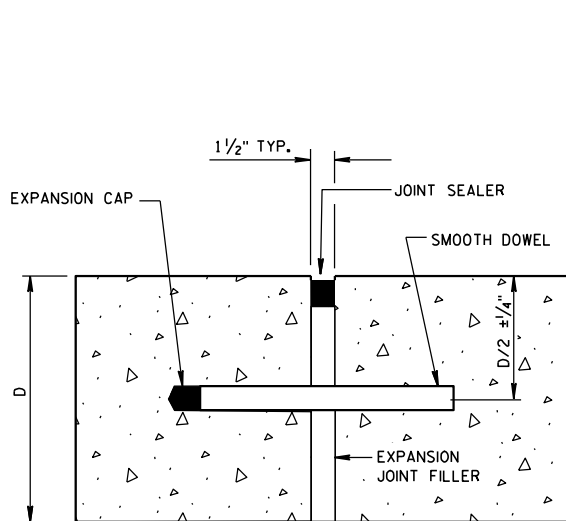
SEE NOTE 3



TIED LONGITUDINAL TO EXISTING

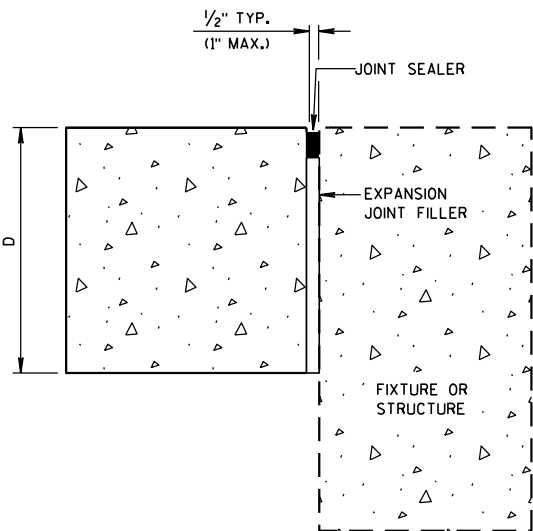
CONSTRUCTION JOINTS

SEE NOTE 5



DOWELED-TRANSVERSE

SEE NOTE 1



UNTIED-LONGITUDINAL

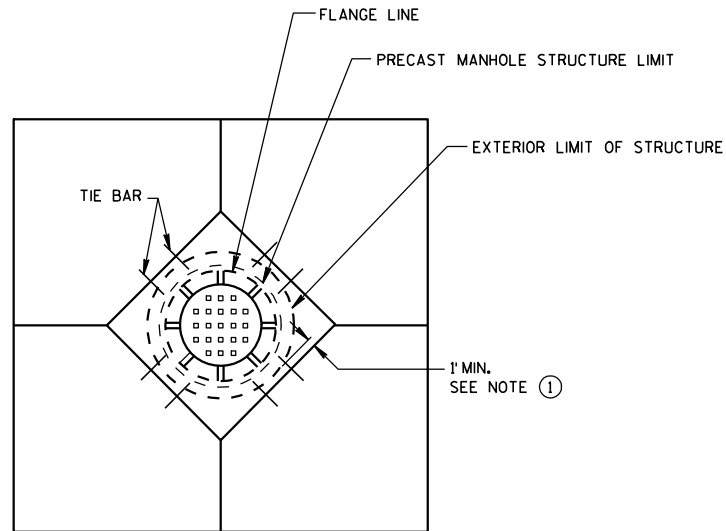
EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

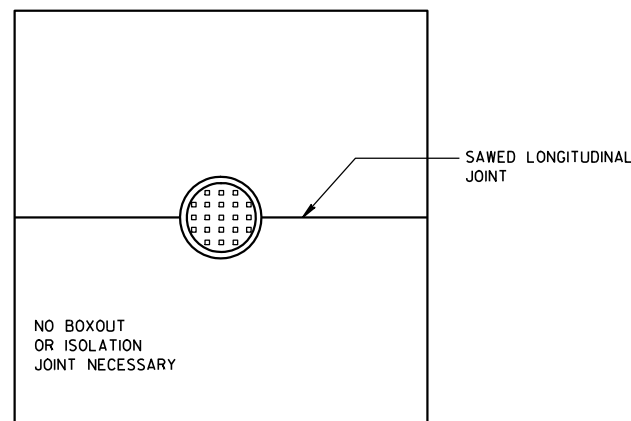
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

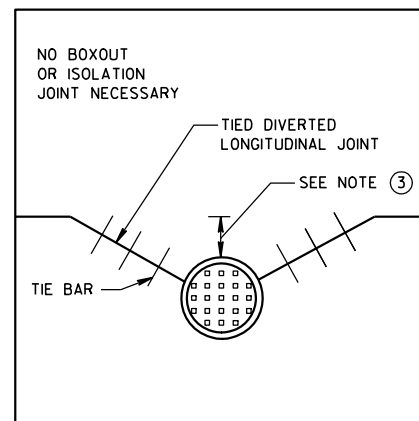
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.
4. SPACE TIE BARS AT LONGITUDINAL CONSTRUCTION OR CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C1.
5. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
6. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.



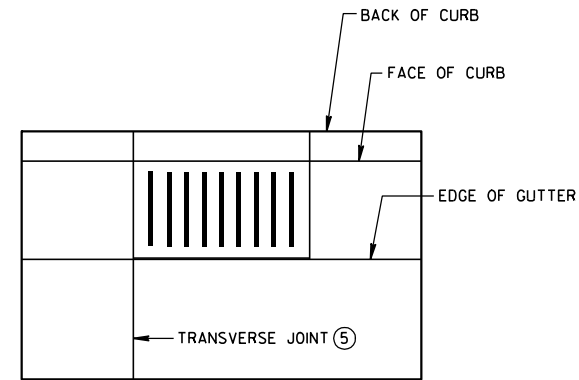
**DIAGONAL MANHOLE BOXOUT
FOR CONSTRUCTION JOINTS**



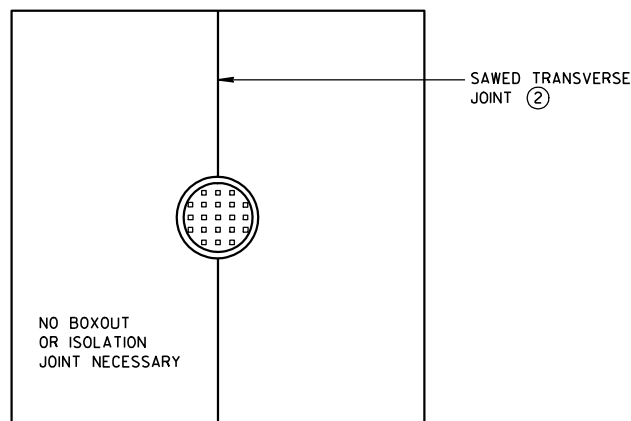
**MANHOLE WITH
LONGITUDINAL JOINT**



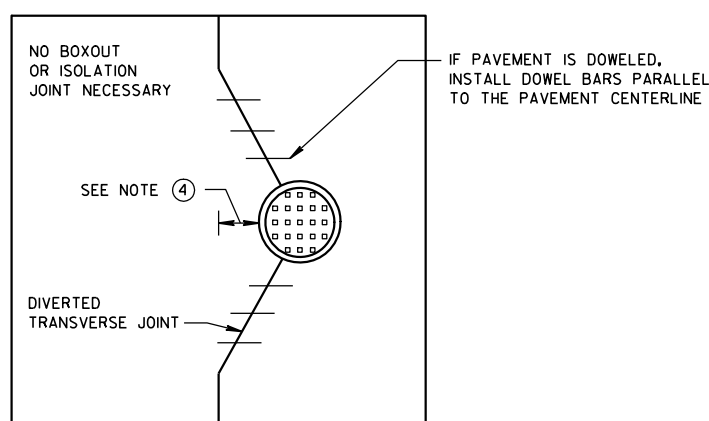
**MANHOLE WITH DIVERTED
LONGITUDINAL CONTRACTION JOINT**



**INLET WITH
TRANSVERSE JOINT**



**MANHOLE WITH
TRANSVERSE JOINT**

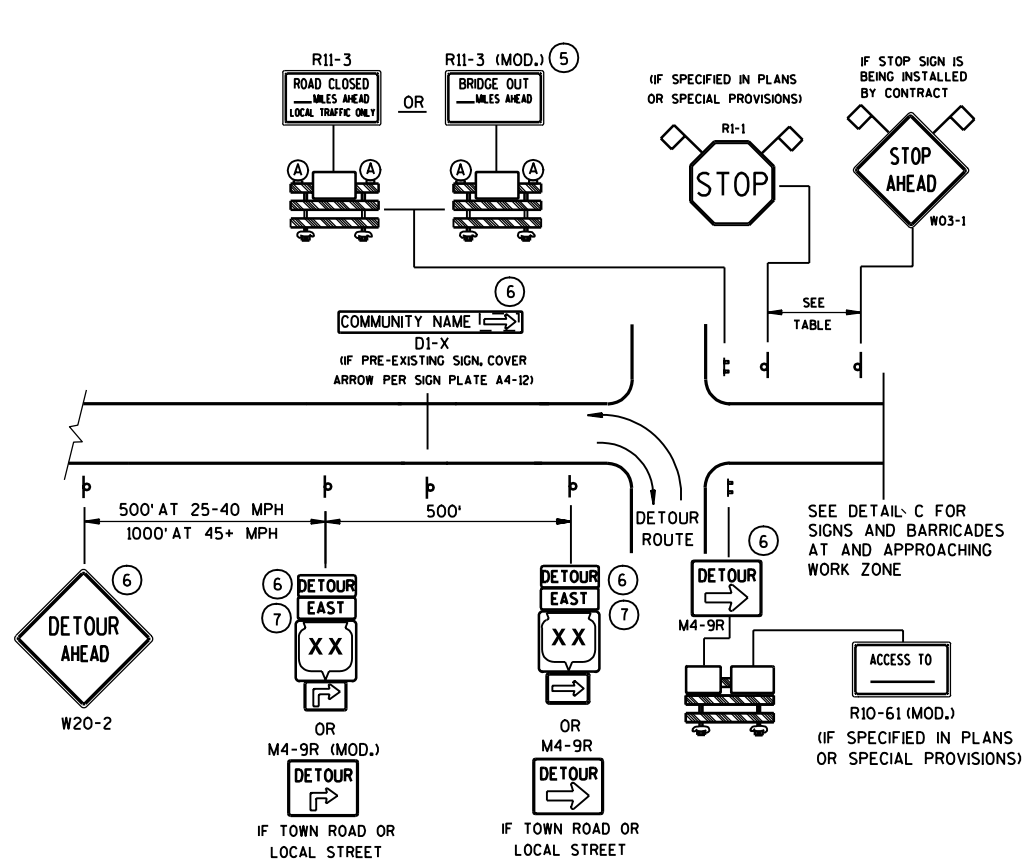


**MANHOLE WITH DIVERTED
TRANSVERSE CONTRACTION JOINT**

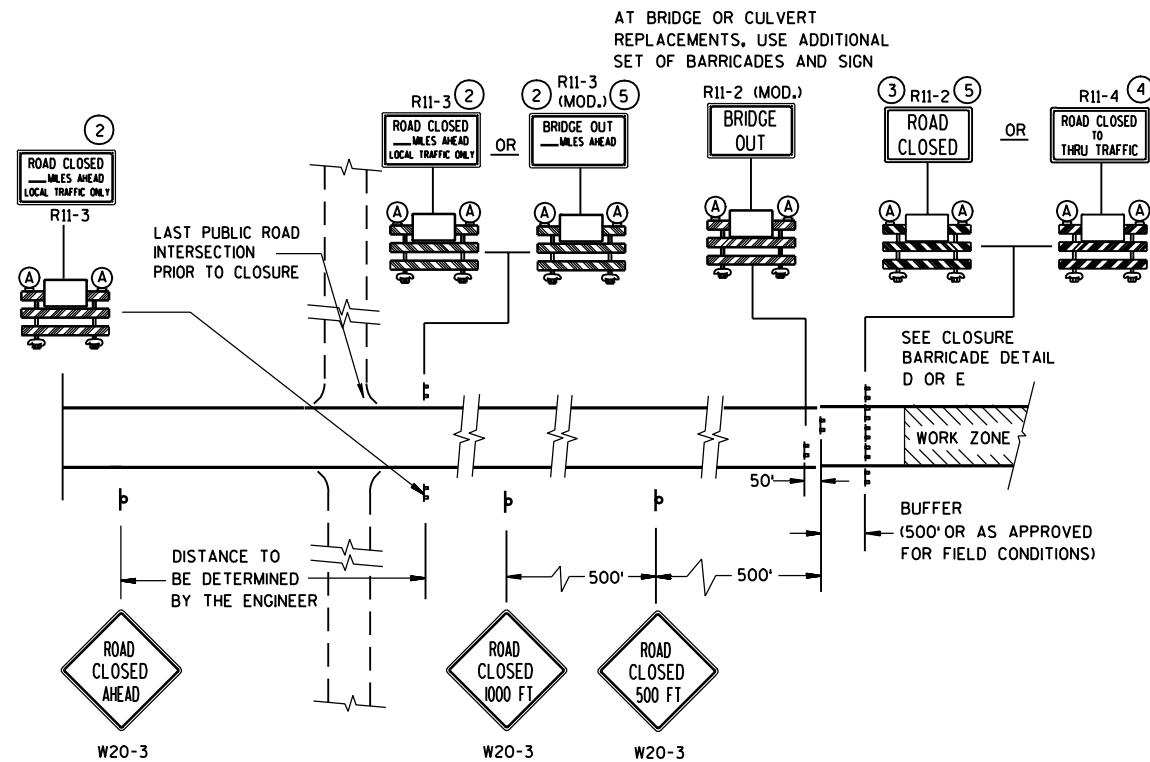
GENERAL NOTES

1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS GREATER THAN 2 FEET, DO NOT DIVERT JOINT AND SAW LONGITUDINAL JOINT AS NORMAL. IF DISTANCE IS 2 FEET OR LESS, DIVERT LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE.
4. IF DISTANCE FROM THE EDGE OF MANHOLE TO THE NEAREST TRANSVERSE JOINT IS GREATER THAN 4 FEET, REDIRECT JOINT TO INTERSECT MANHOLE. IF DISTANCE IS 4 FEET OR LESS, PLACE REBAR REINFORCEMENT AROUND MANHOLE.
5. ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

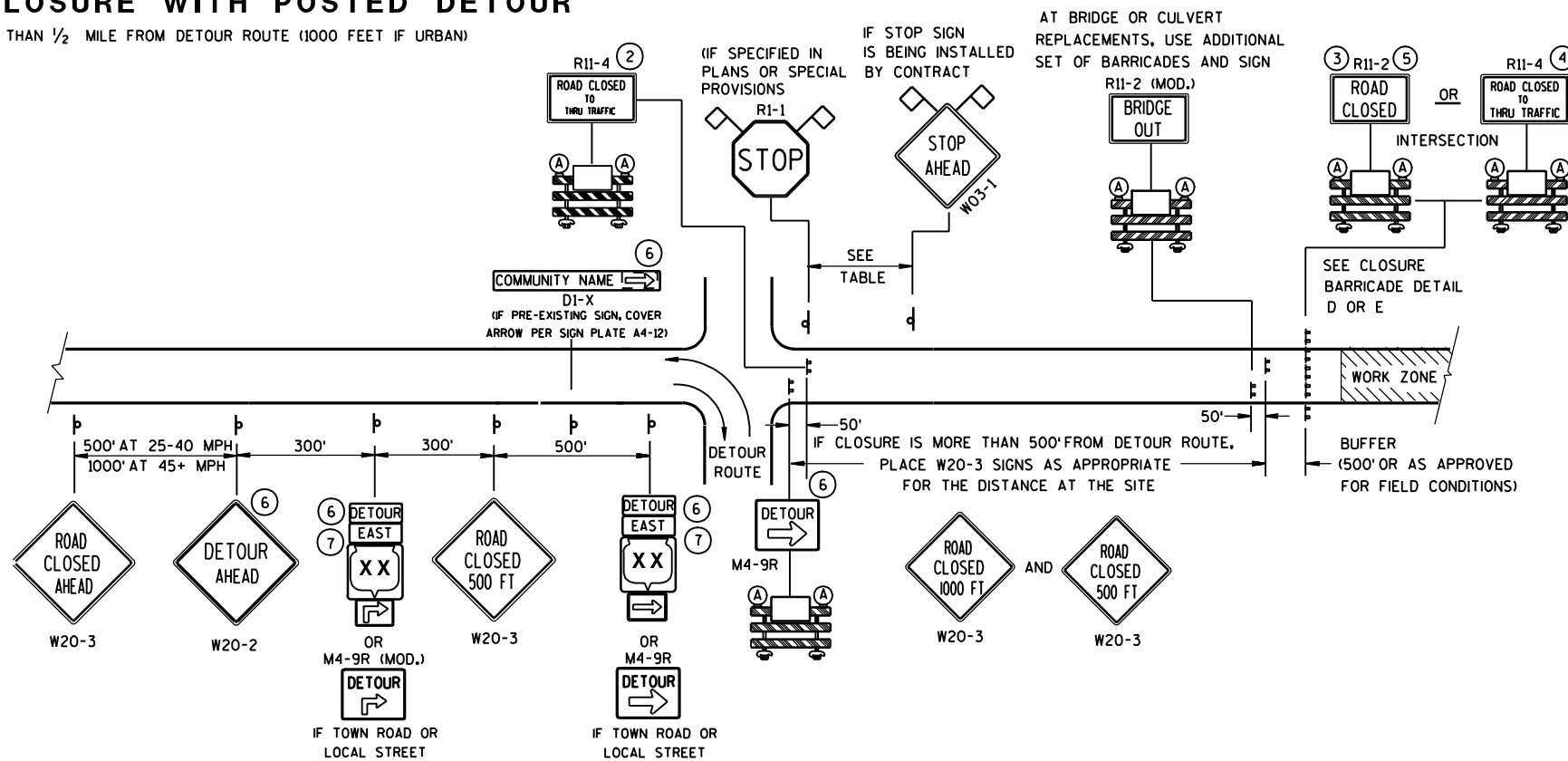
CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10-5-2010 DATE	/S/ Deb Bischoff PAVEMENT POLICY & DESIGN ENGINEER
FHWA	



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

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

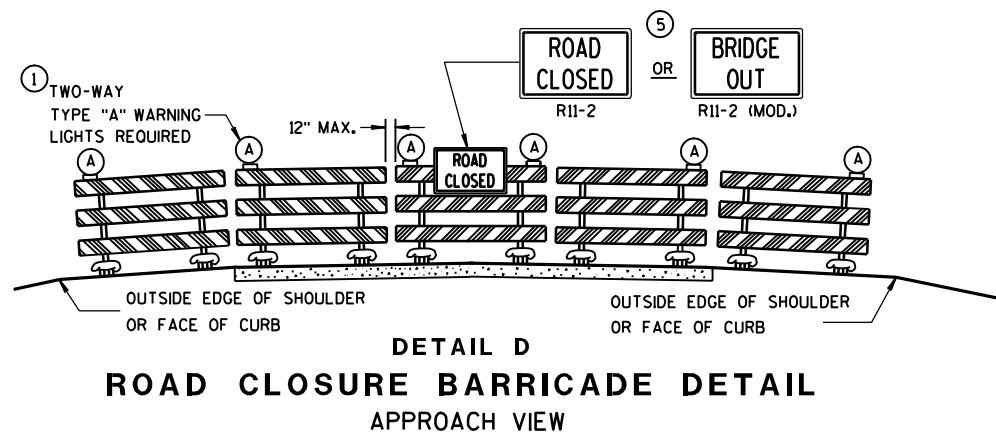
SEE SDD 15C2-4b
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

LEGEND

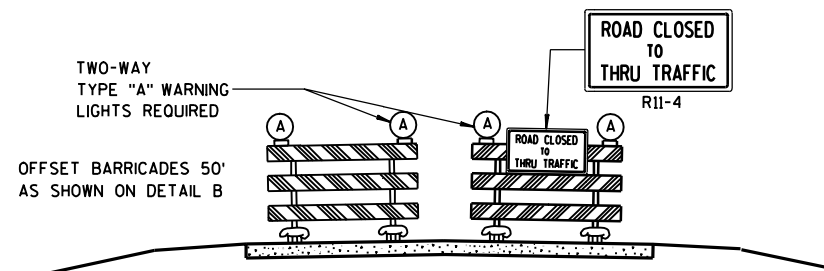
- POST MOUNTED SIGN
- TYPE III BARRICADES
- TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK ZONE
- DETOUR EAST M4-8 M3-X
- MI-4 OR COUNTY MI-5A OR MI-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

**BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-4a FOR LEGEND

GENERAL NOTES

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

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

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

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

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

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

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

R11-2 SHALL BE 48" X 30".

R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".

M4-9 SHALL BE 30" X 24".

M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)

M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)

M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)

D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

R1-1 SHALL BE 36" X 36".

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

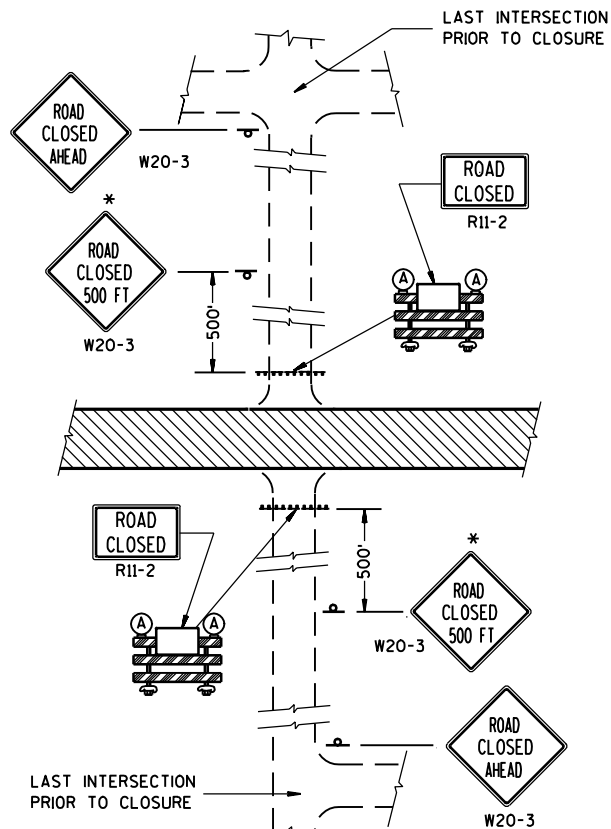
APPROVED

9/16/03

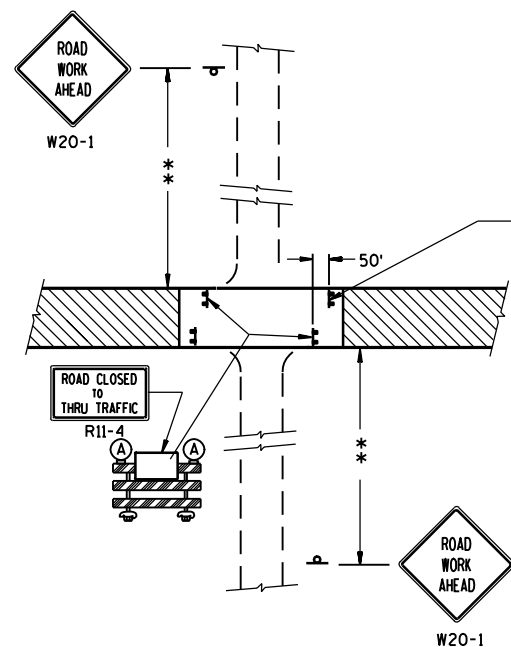
DATE

Thomas N. Nottm for
CHIEF SIGNS AND MARKING ENGINEER

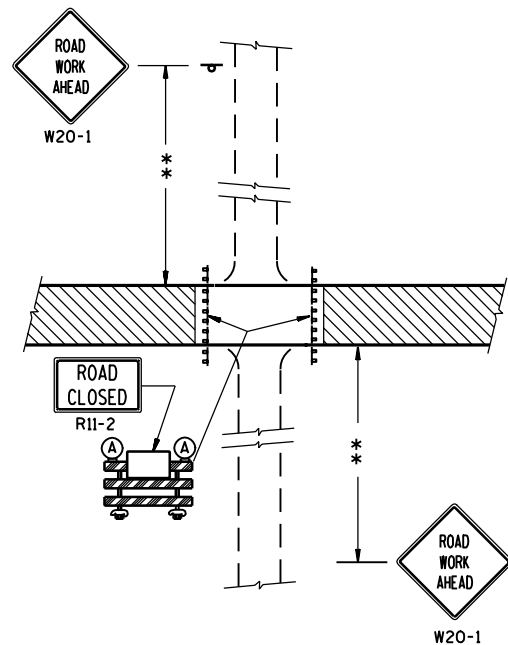
FHWA



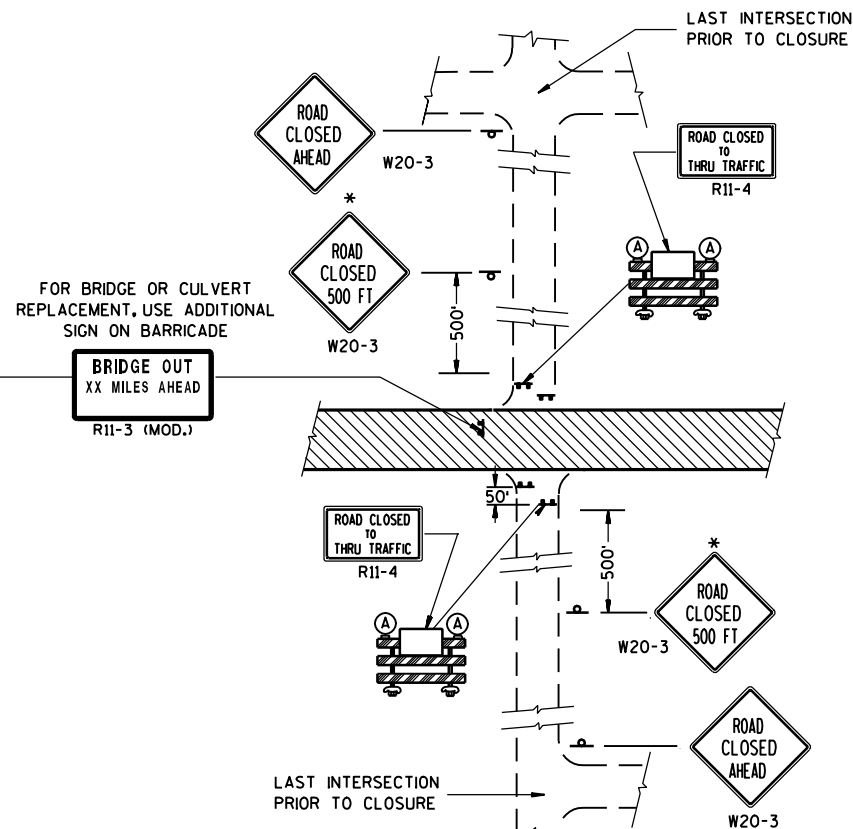
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT).



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.

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

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

POST MOUNTED WARNING SIGN

TYPE III BARRICADES

TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)

WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

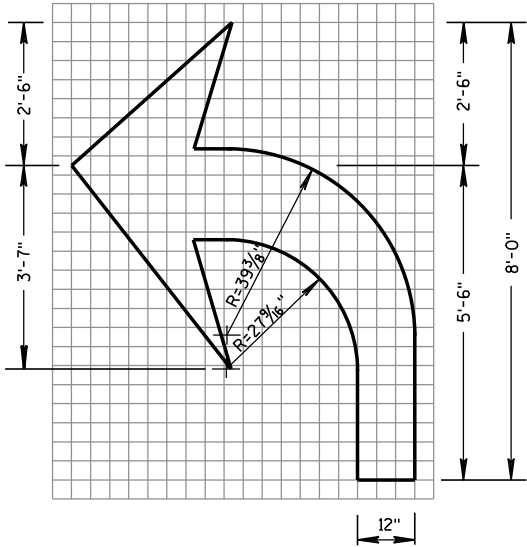
APPROVED

9-16-03

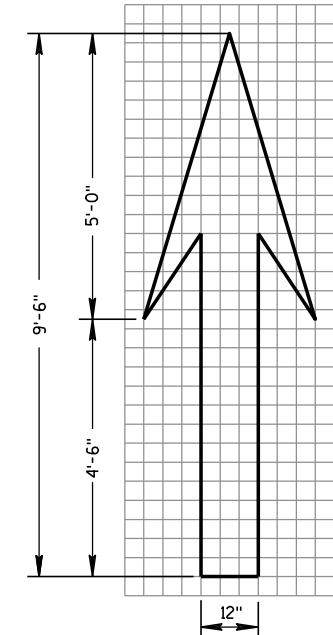
DATE

FHWA

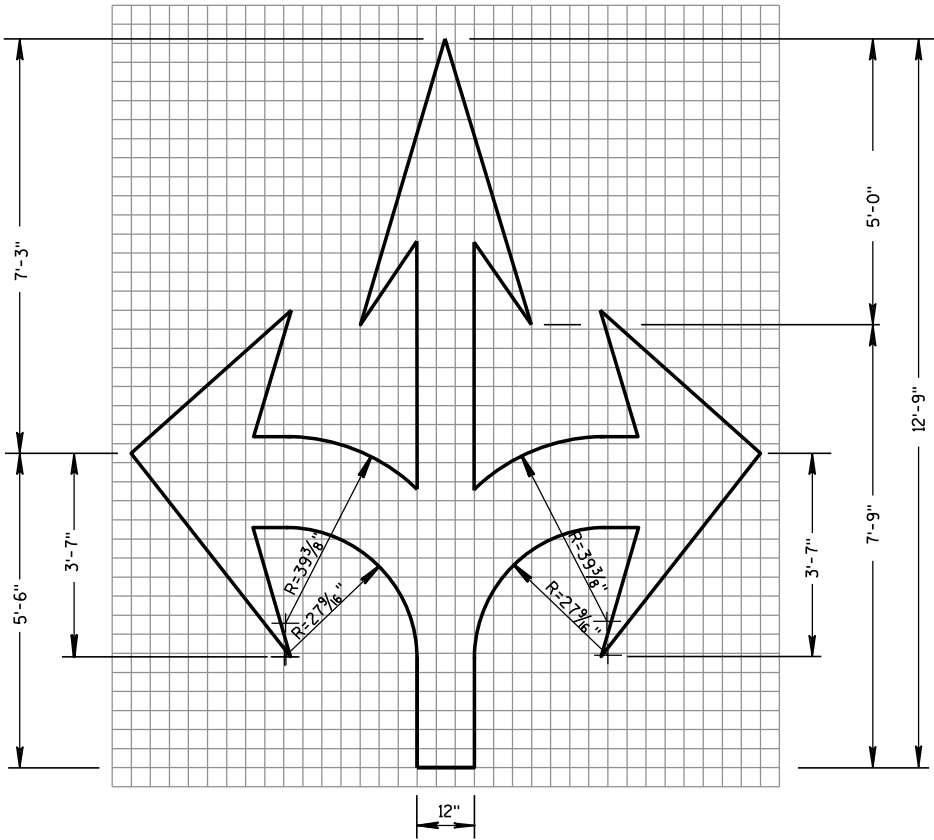
Thomas N. Nottm for
CHIEF SIGNS AND MARKING ENGINEER



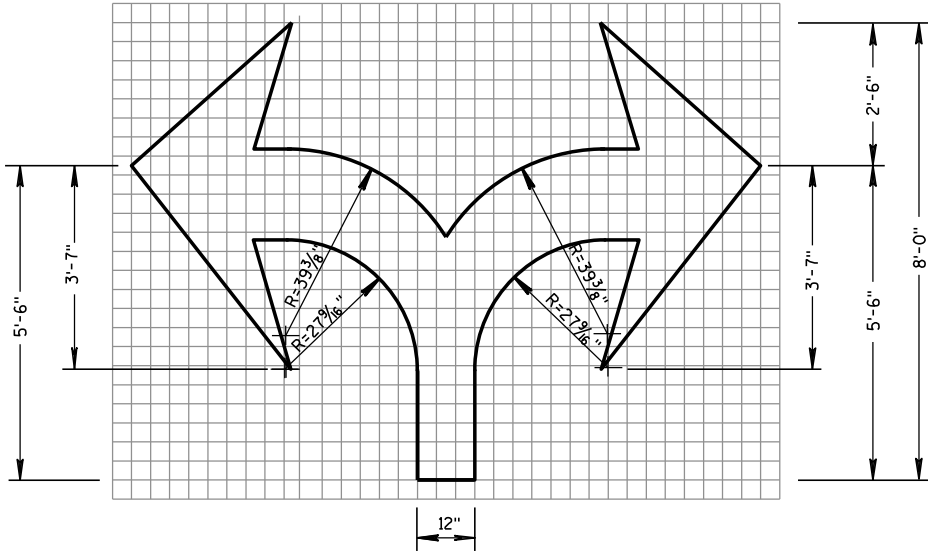
TYPE 2



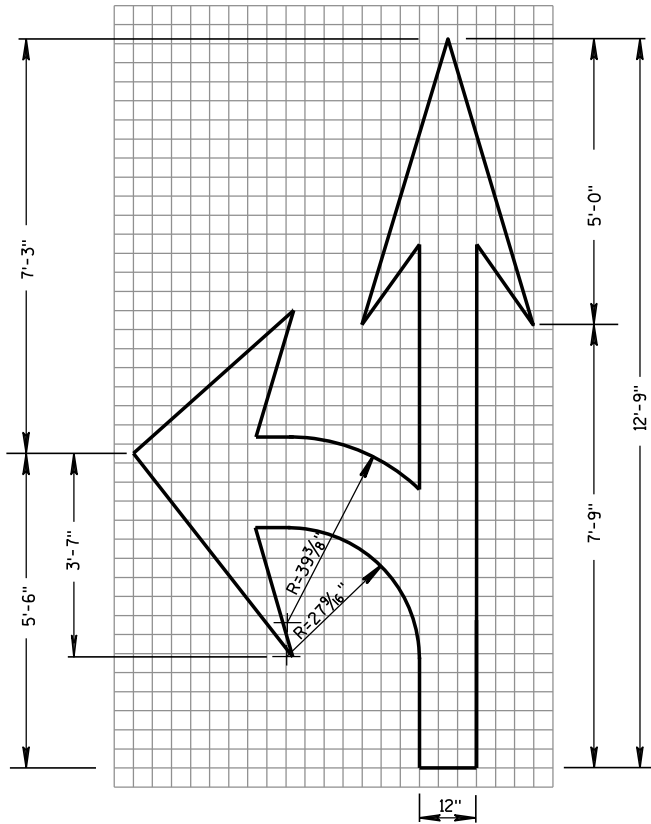
TYPE 1



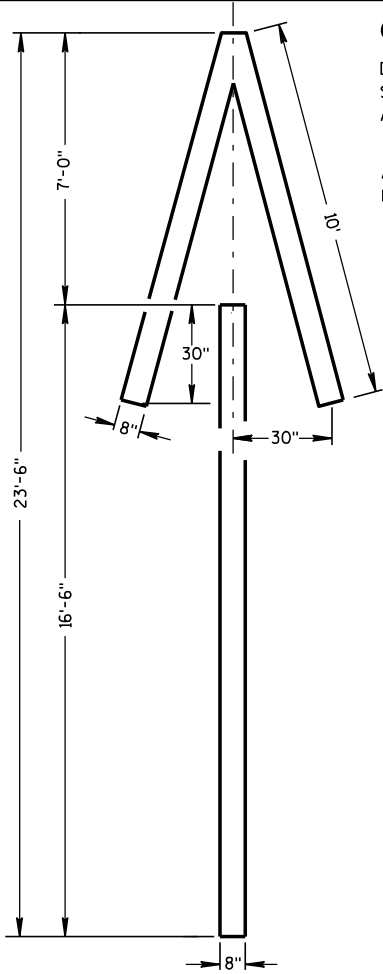
TYPE 6



TYPE 7



TYPE 3

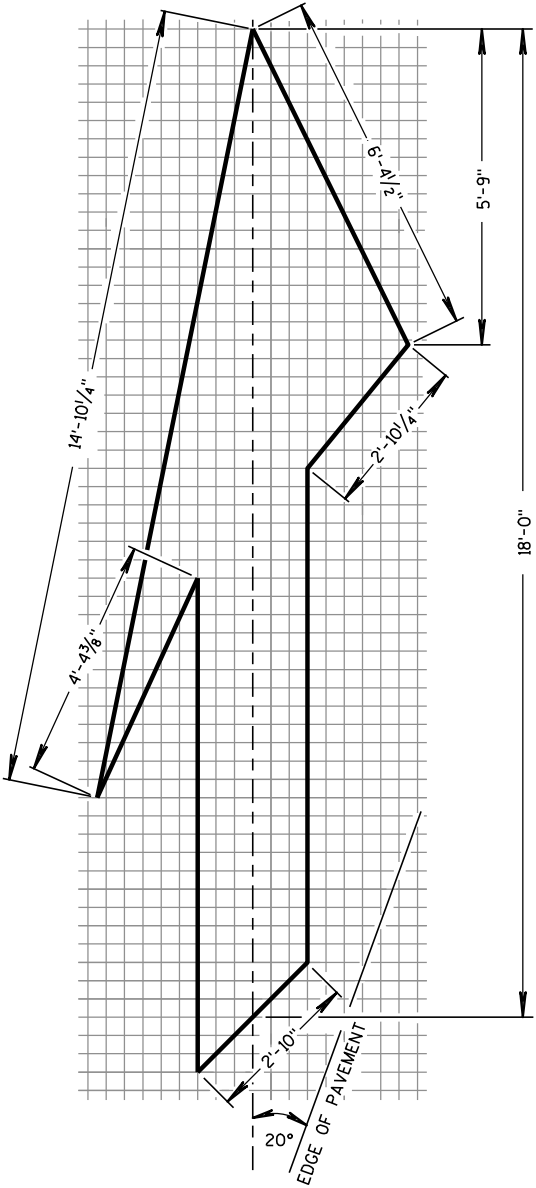


TYPE 4

GENERAL NOTES

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

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

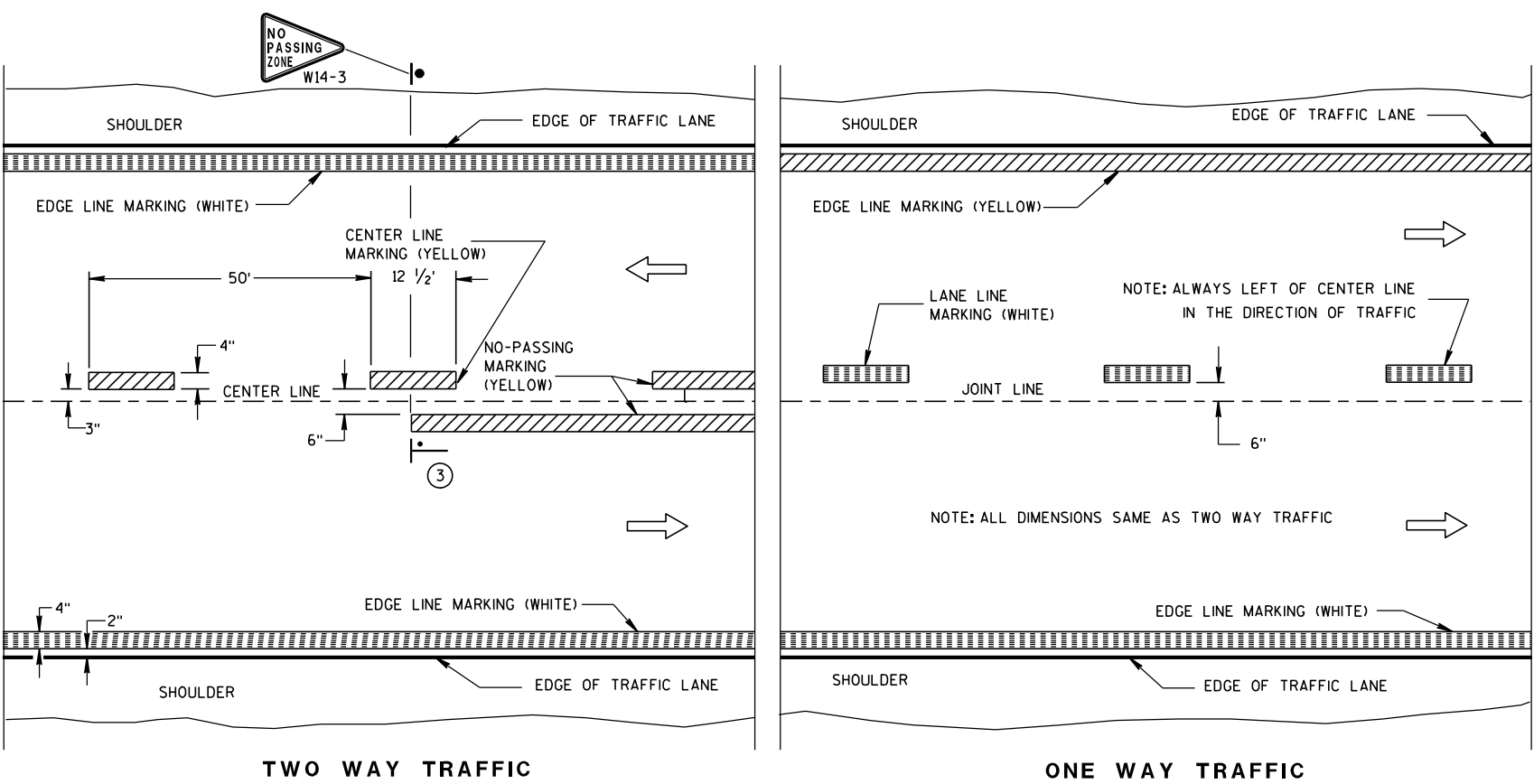


TYPE 5 LANE DROP ARROW

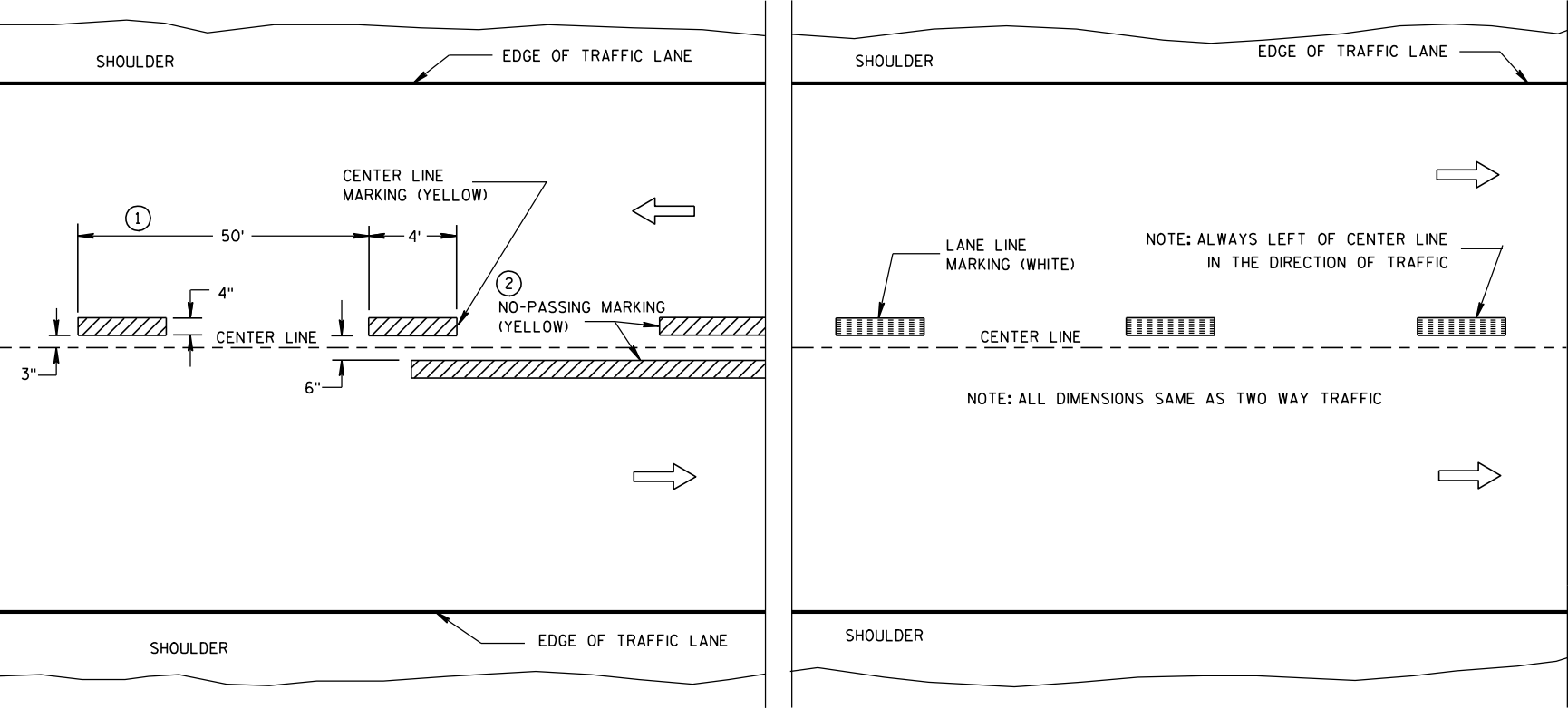
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/1/11
DATE
/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN
FHWA



PERMANENT PAVEMENT MARKING



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

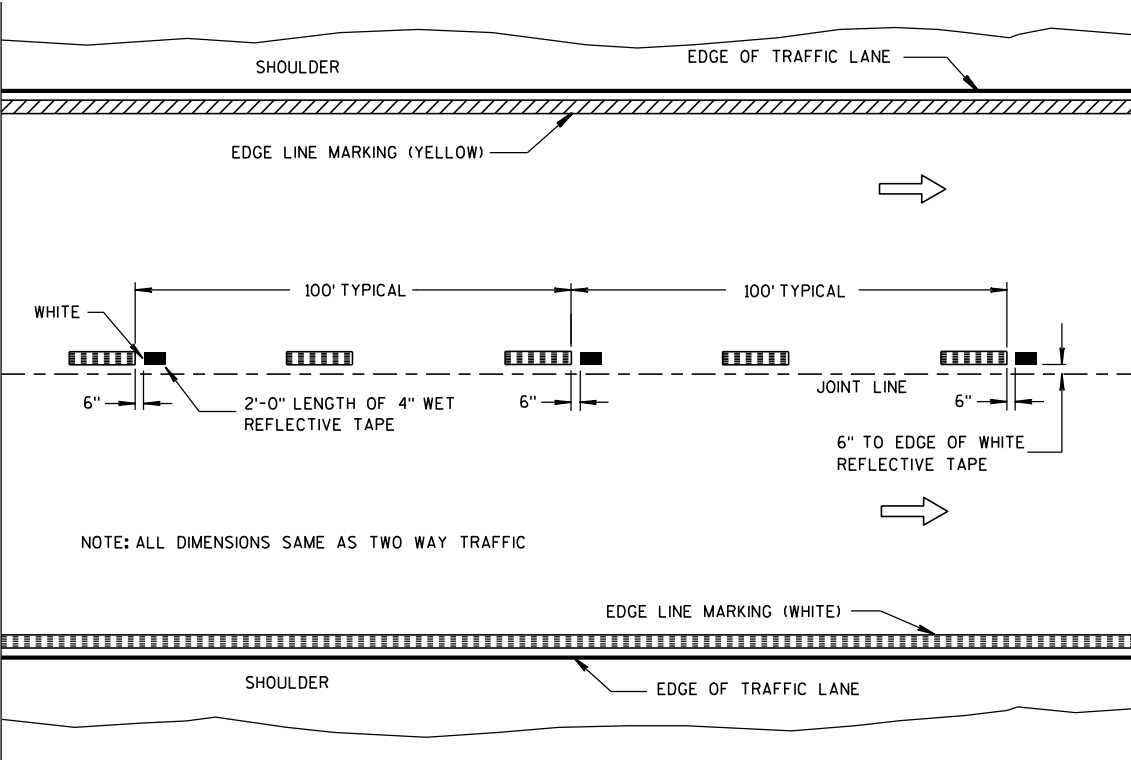
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

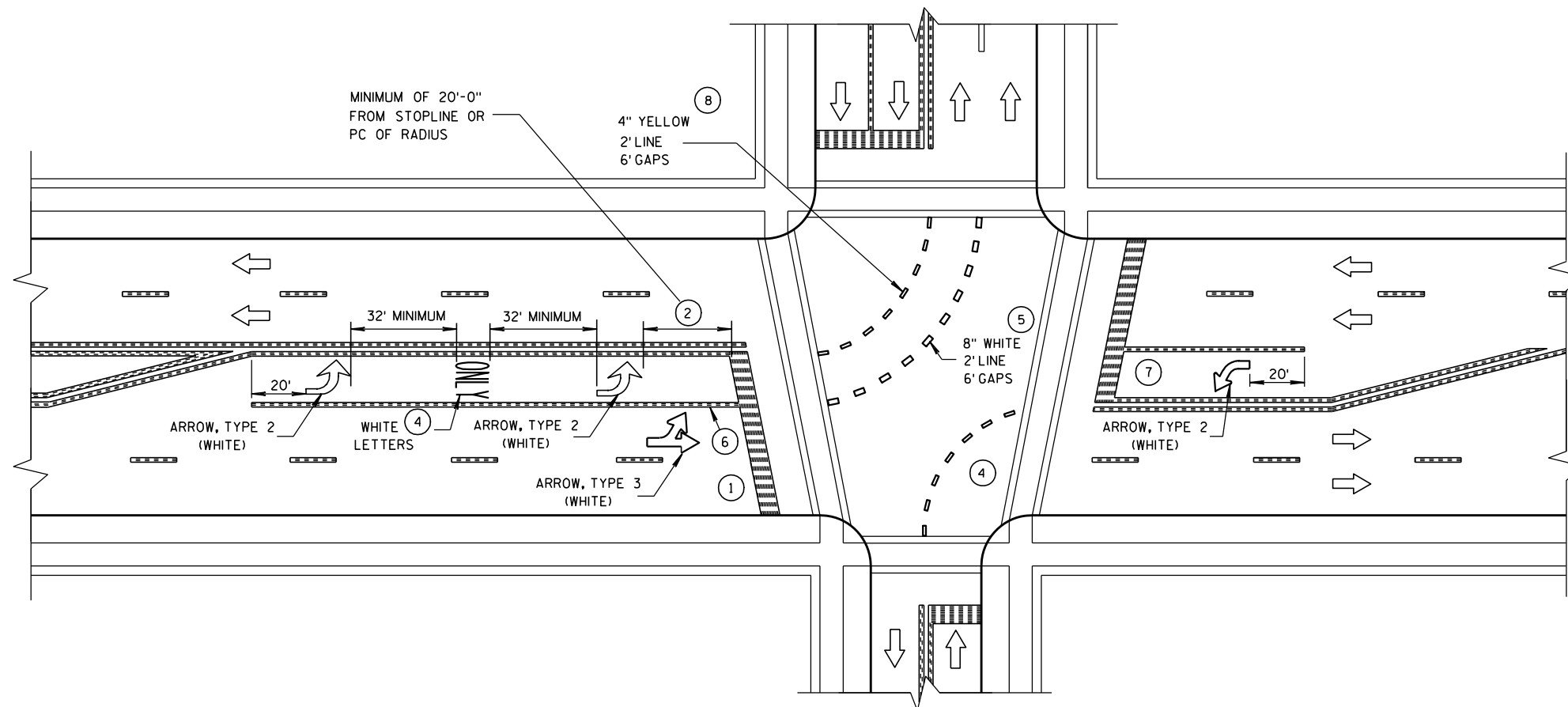


WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

- "T" MARKING
- POST MOUNTED SIGN

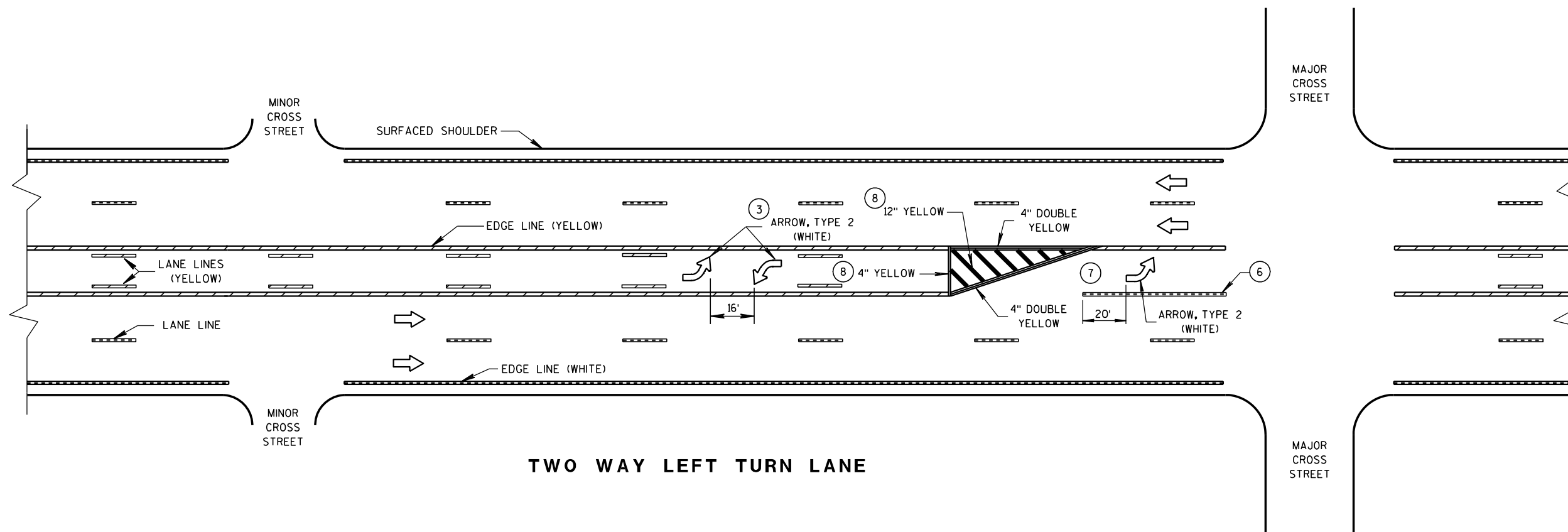
PAVEMENT MARKING (MAINLINE)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6-23-11 DATE	/S/ Thomas N. Notbohm STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



GENERAL NOTES

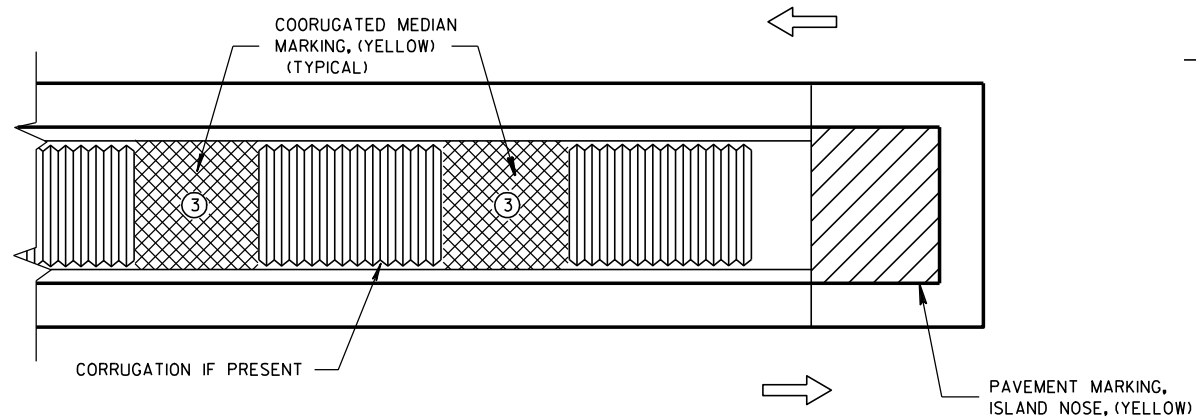
- ① STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
- ② DISTANCE MAY BE ADJUSTED TO ACCOMMODATE SHORT LEFT TURN LANES, AS APPROVED BY THE ENGINEER.
- ③ A SET OF ARROWS IS REQUIRED EVERY 400' OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ④ ADD EXTRA ARROW AND ONLY PER 160' OR WHEN ON A CURVE.
- ⑤ 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
- ⑥ 8" WHITE
- ⑦ ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108'.
- ⑧ REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL ()
SHOWS DIRECTION OF TRAVEL

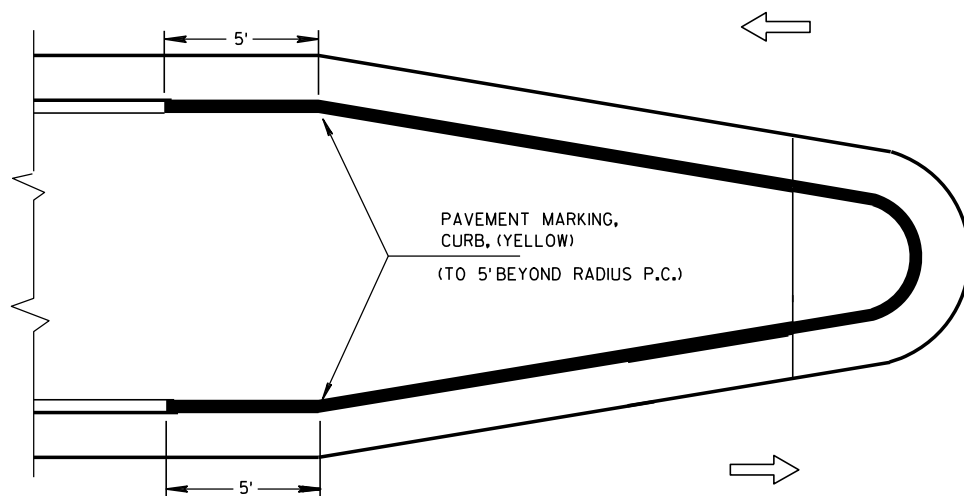


PAVEMENT MARKING
(LEFT TURN LANE)

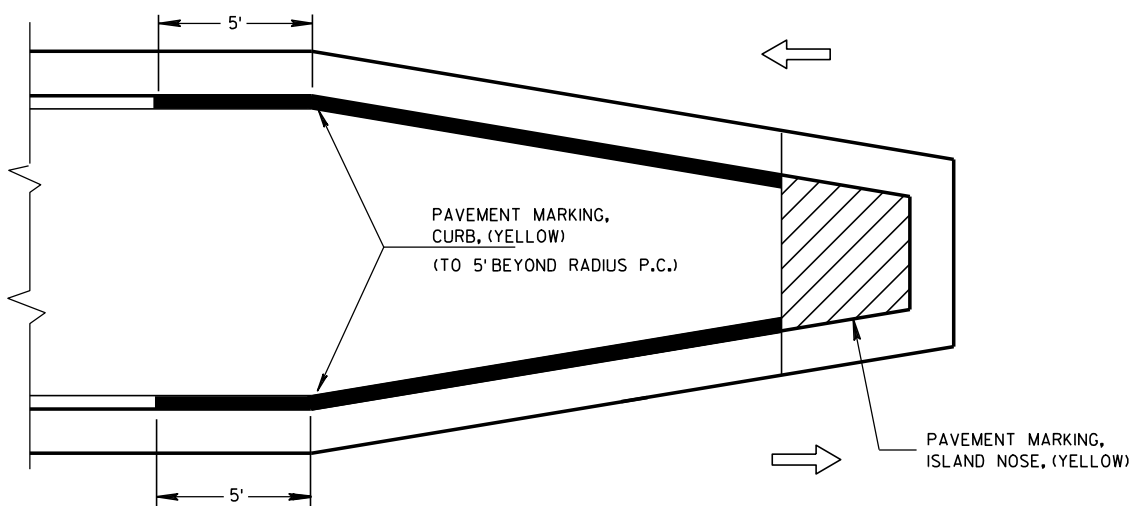
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

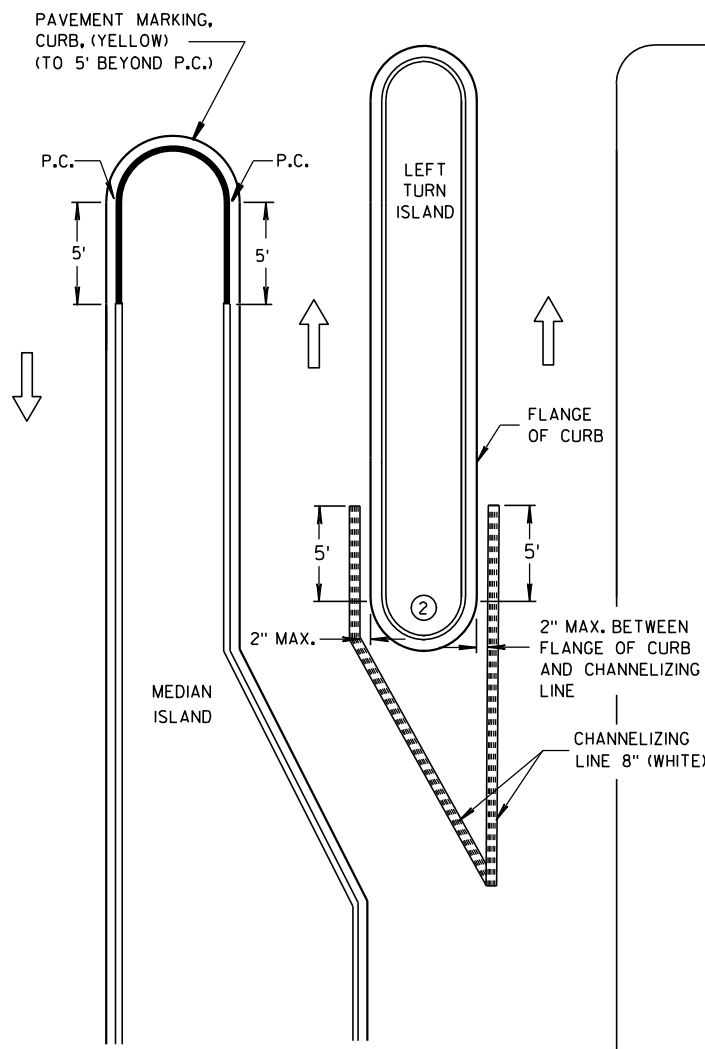


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

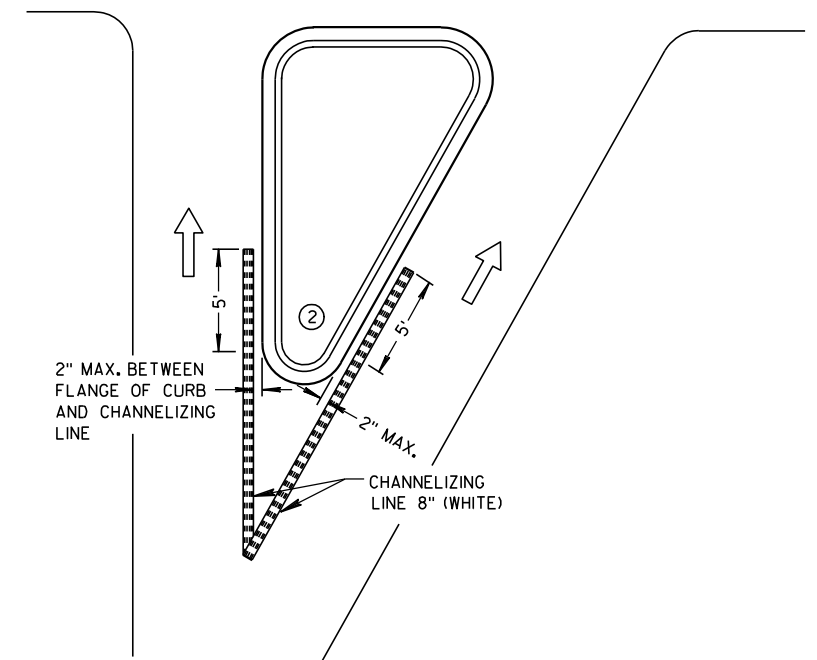
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

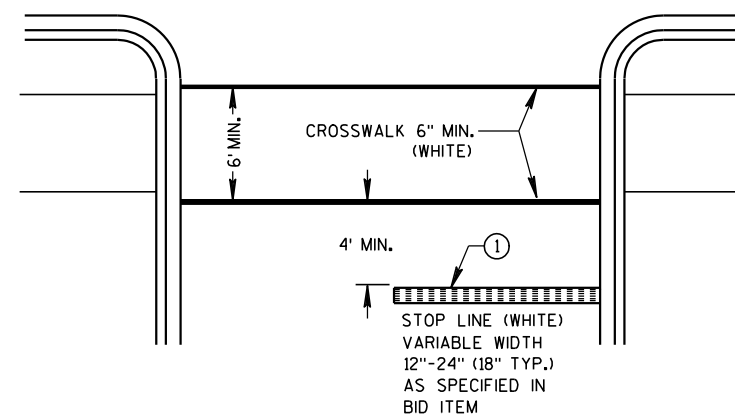
- ① STOP LINE IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
- ② DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
- ③ WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED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



RIGHT TURN ISLAND

LEGEND

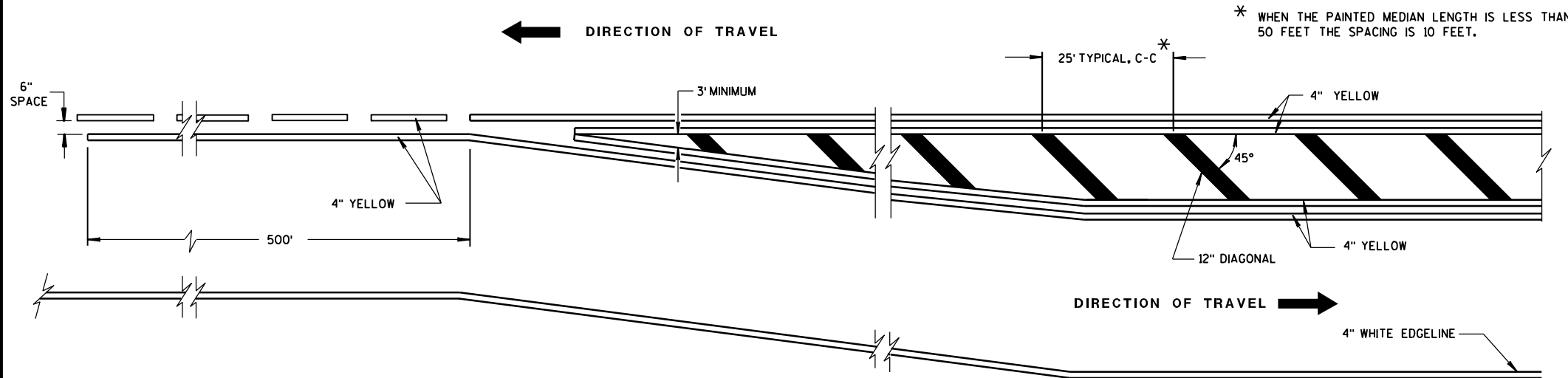
- ISLAND NOSE MARKING
- CURB MAKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL



STOP LINE AND CROSSWALK

**PAVEMENT MARKING
(ISLANDS, STOP LINE &
CROSS WALK)**

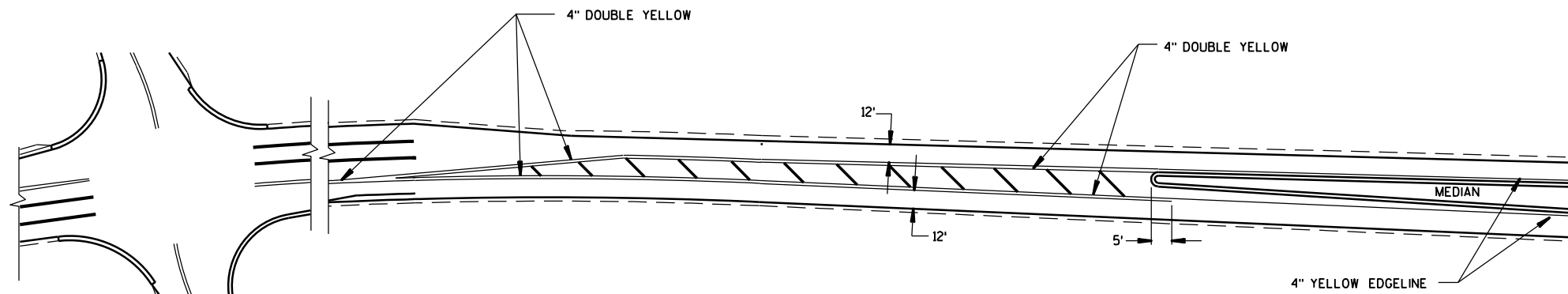
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



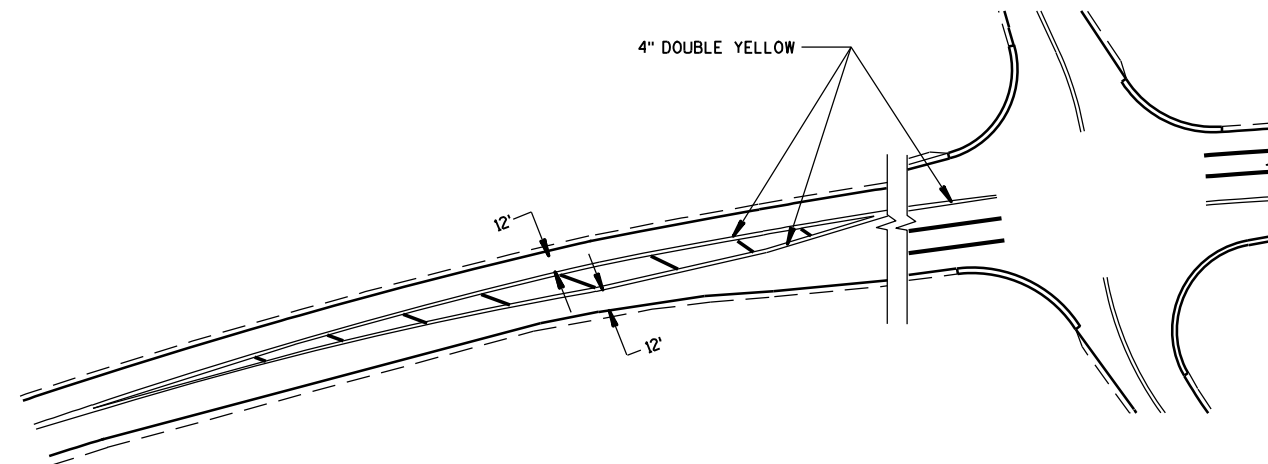
MEDIAN ISLAND DETAIL

GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



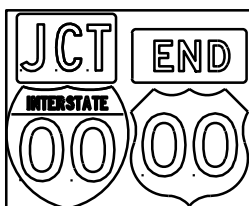
NON APPROACH MARKINGS

MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-5-09 DATE	/S/ Thomas N. Notbohm STATE TRAFFIC ENGINEER OF DESIGN
FHWA	

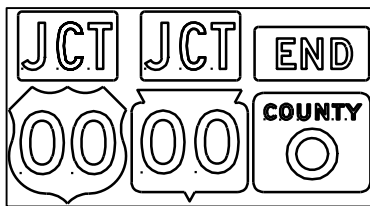
TYPICAL ASSEMBLIES



J1-1



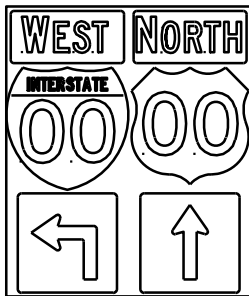
J1-2



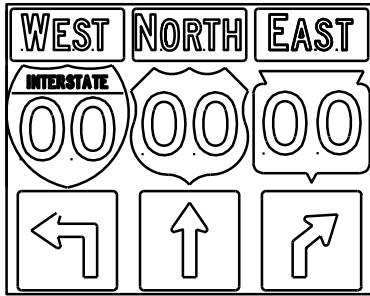
J1-3



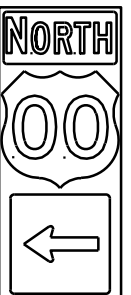
J2-1



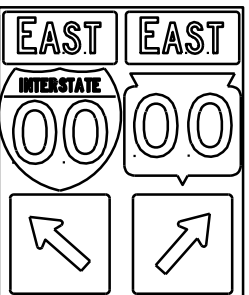
J2-2



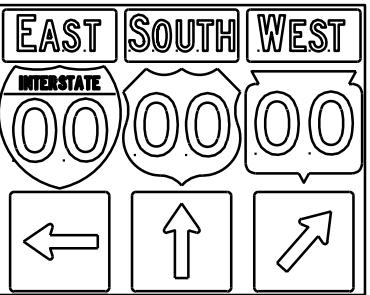
J2-3



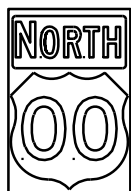
J3-1



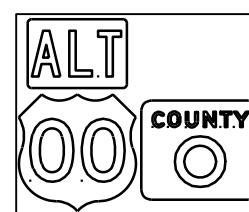
J3-2



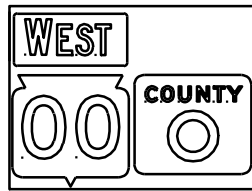
J3-3



J4-1



J4-2

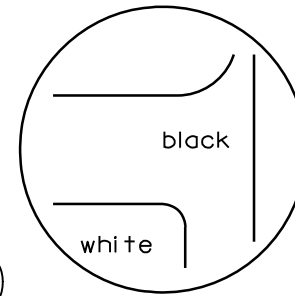
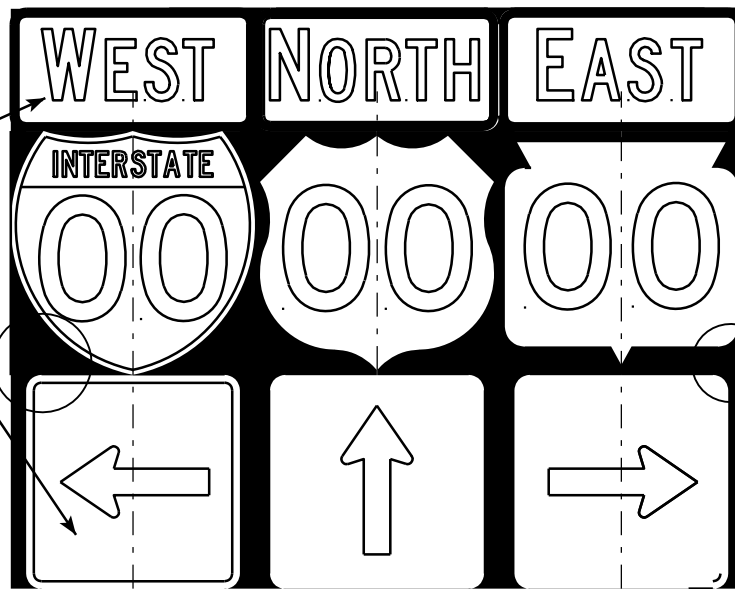
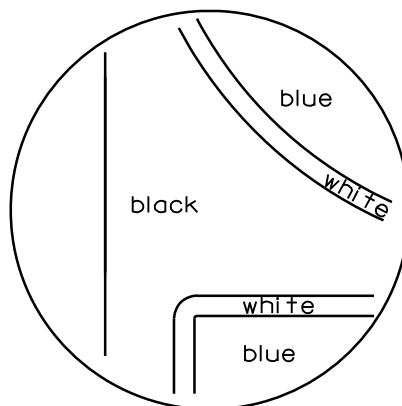


J4-2

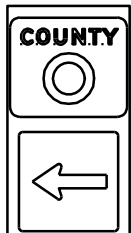


JV

[blue background with interstate]



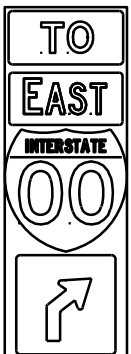
[black background]



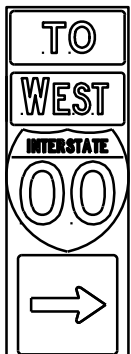
J13-1



J12-1



J32-1



J33-1



J23-1



J22-1

NOTES

- Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Black Non-reflective
Message - see Note 5
- Message Series - See Note 5
- Corners shall be square since base material is plywood.
- The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
- Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
- Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
- Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.

ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
For State Traffic Engineer

DATE 10/21/09

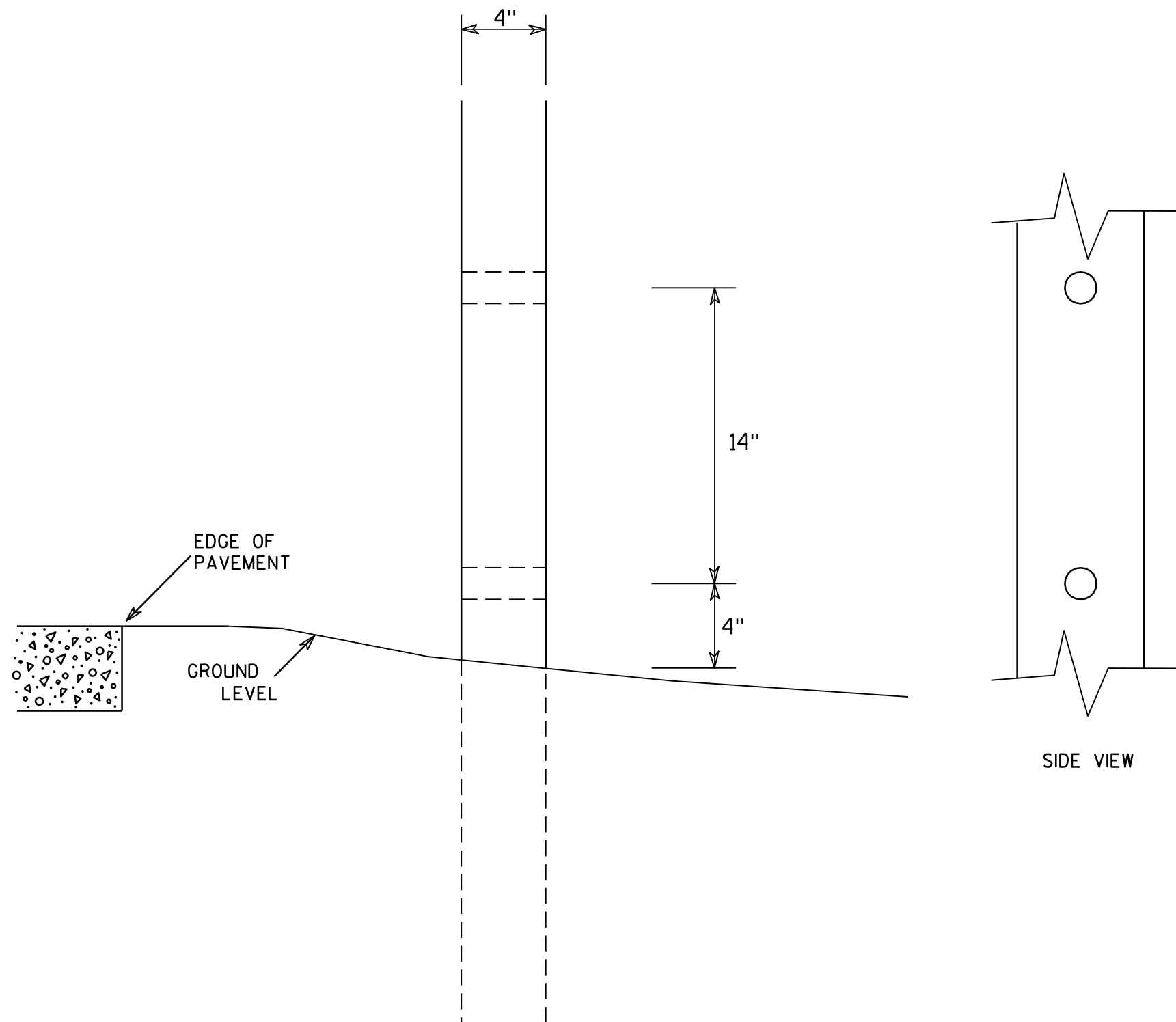
PLATE NO. A2-1S.6

PROJECT NO:

SHEET NO:

E

7

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

**4 X 6 WOOD POST
MODIFICATIONS**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

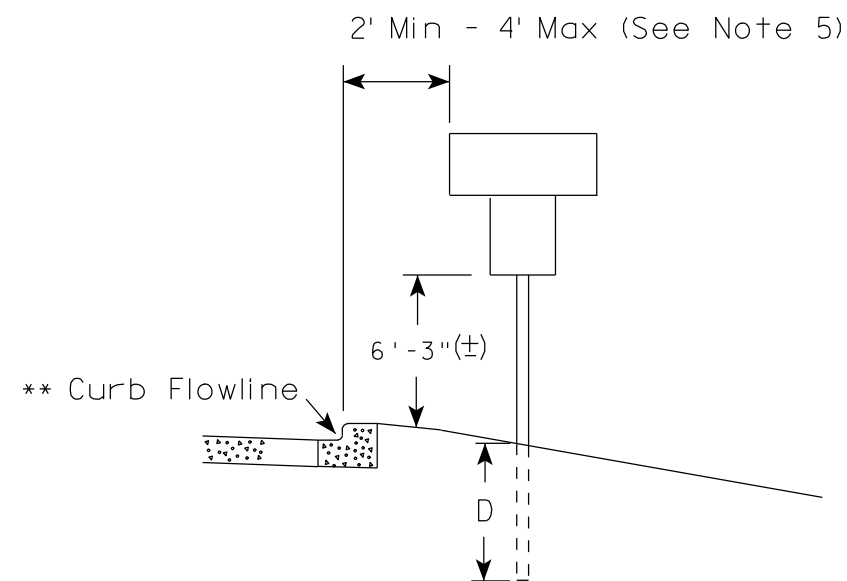
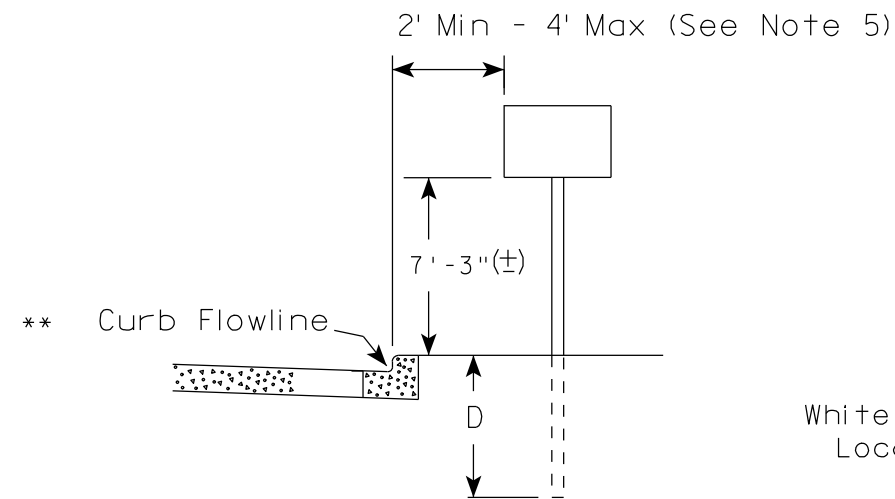
HWY:

COUNTY:

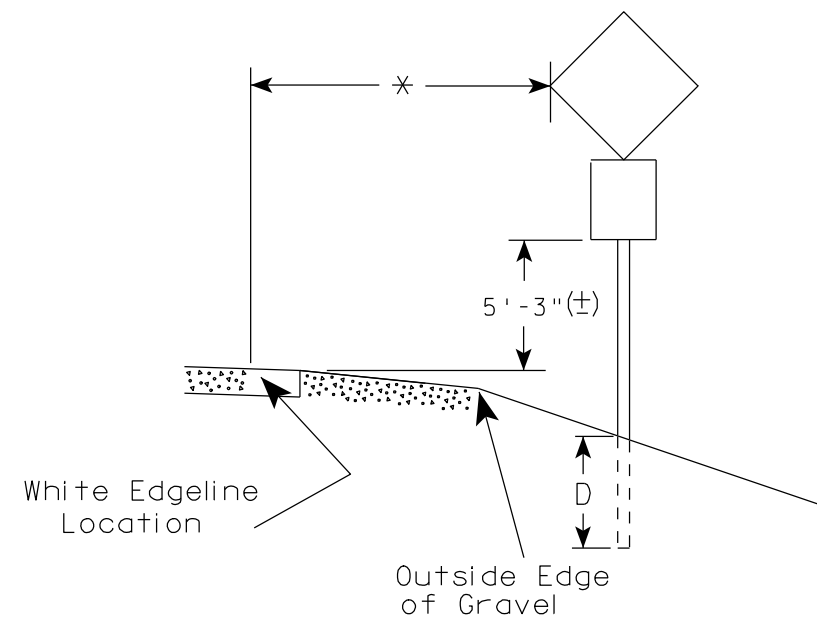
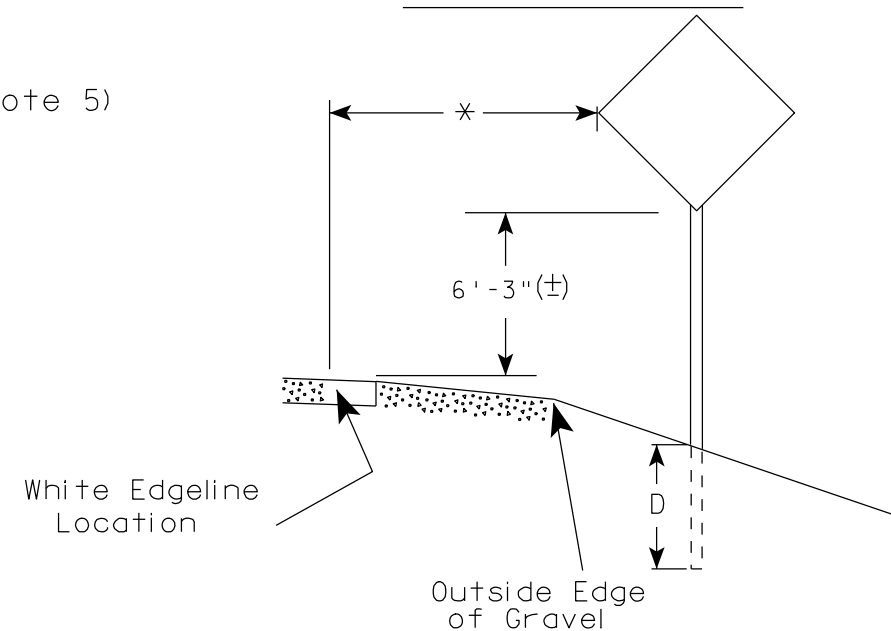
SHEET NO:

E

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'-3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

✱✱ The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 9/21/2011 PLATE NO. A4-3.16

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

GENERAL NOTES

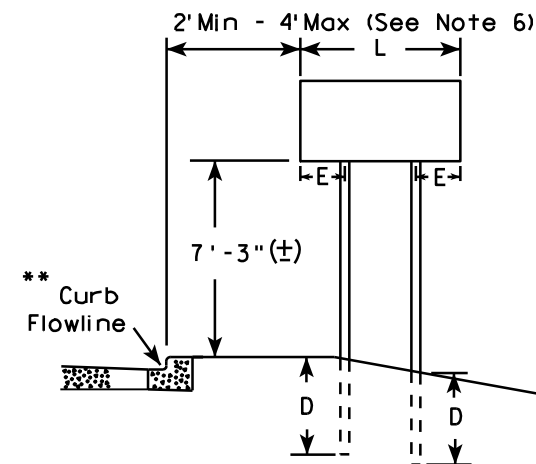
- For multiple post installations, individual post spacing shall be greater than 3'-6".
- See tables below for required number of posts.
- For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
- The (±) tolerance for mounting height is 3 inches.
- Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
- The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

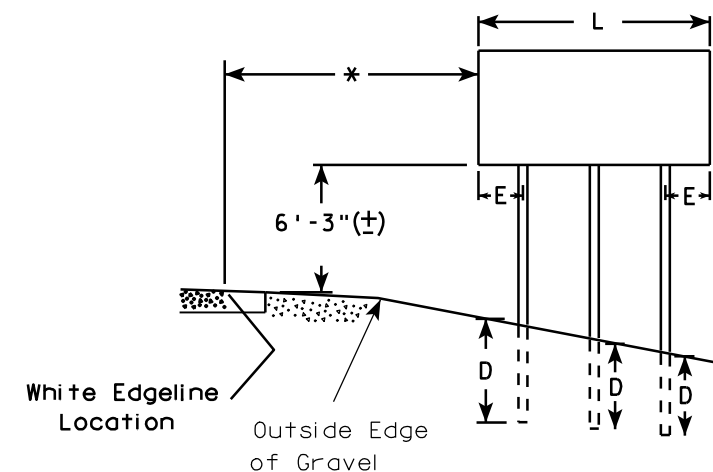
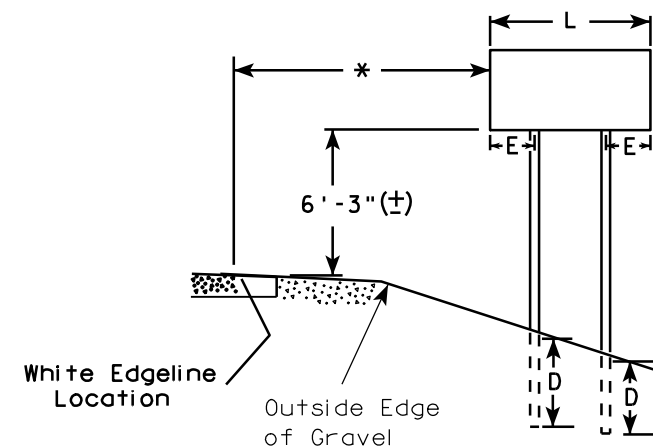
** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width or 20 S.F. or less in area.

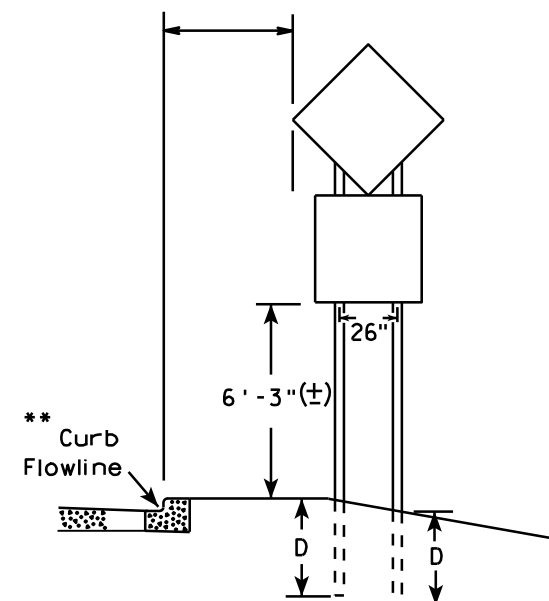
URBAN AREA



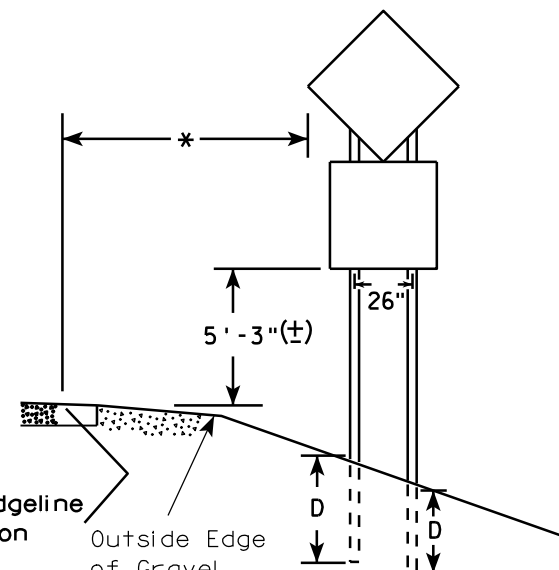
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 9/21/2011 PLATE NO. A4-4.11

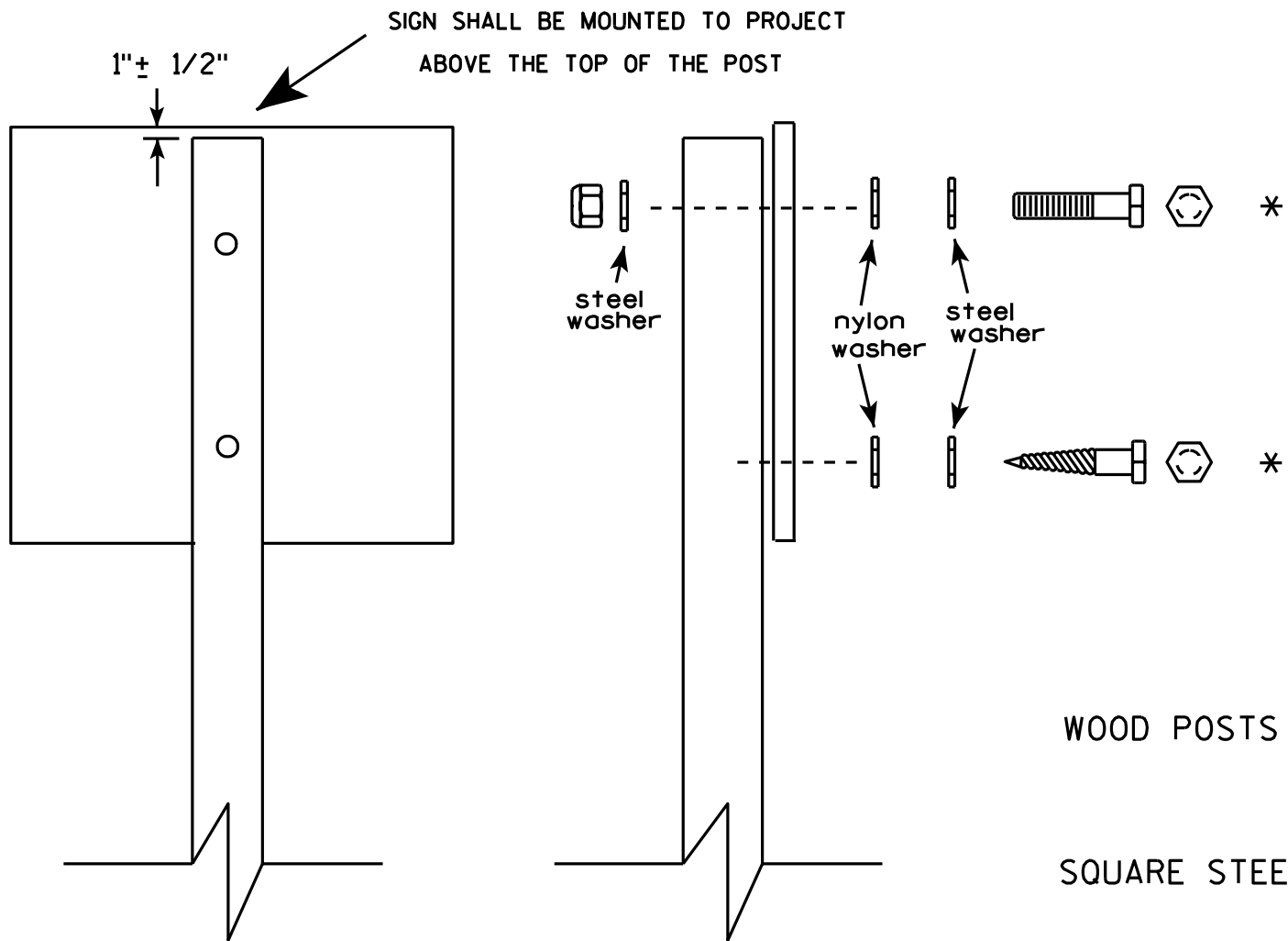
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")

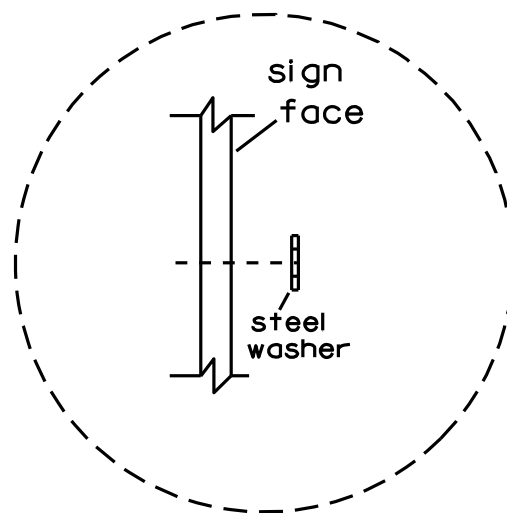
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

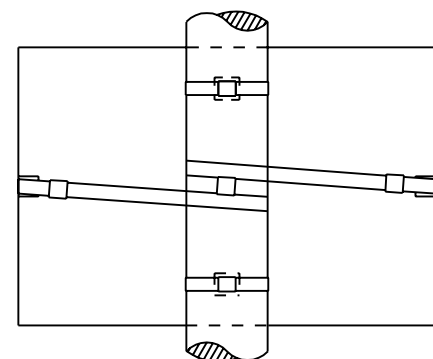
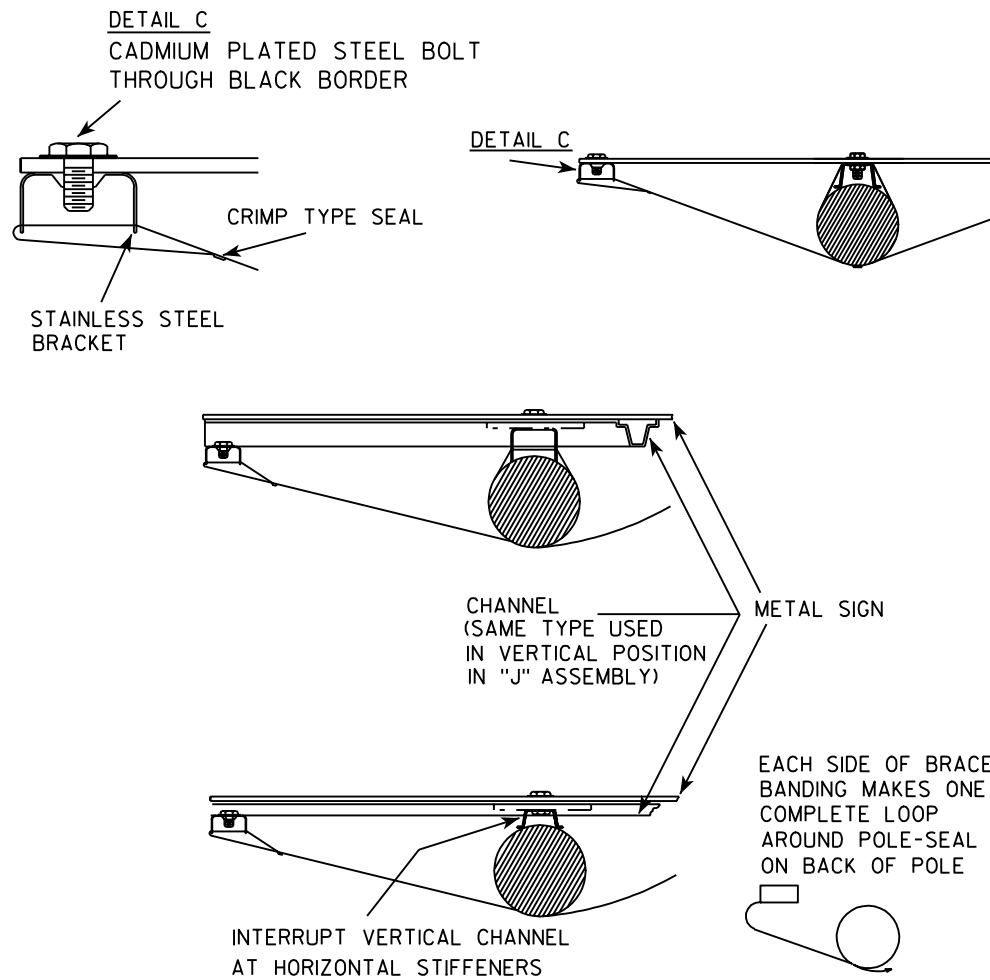
ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

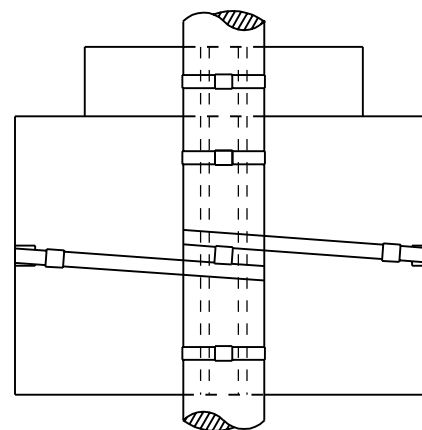
DATE 3/23/10 PLATE NO. A4-8.7

BRACE BANDING



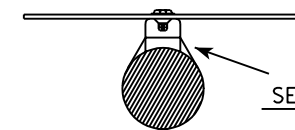
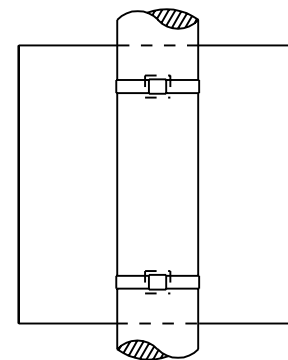
BRACE BANDING

BRACE BANDING SHALL BE TIGHTENED FIRMLY
BUT NOT SO TIGHT AS TO APPRECIABLY
CURVE FACE OF SIGN.

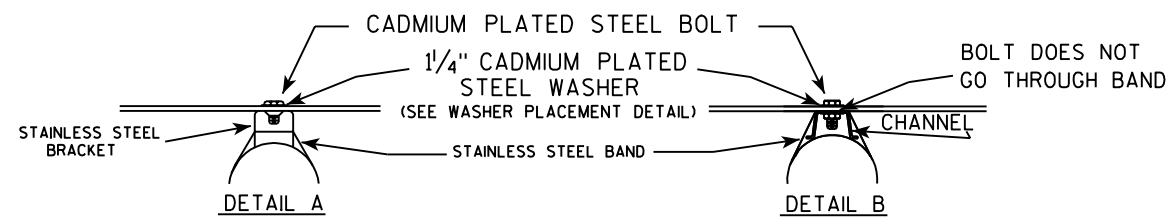


BRACKET BANDING

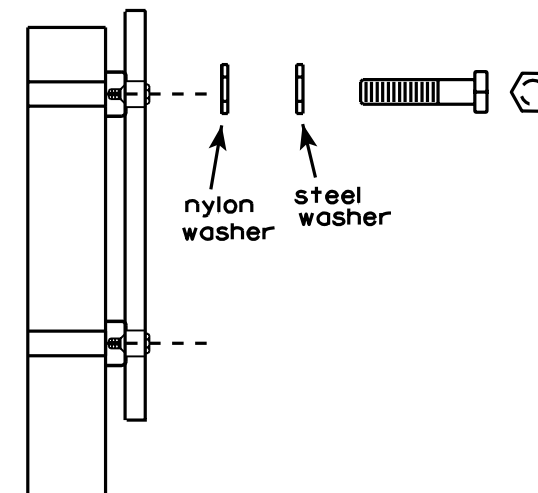
SINGLE SIGN



SEE DETAIL A



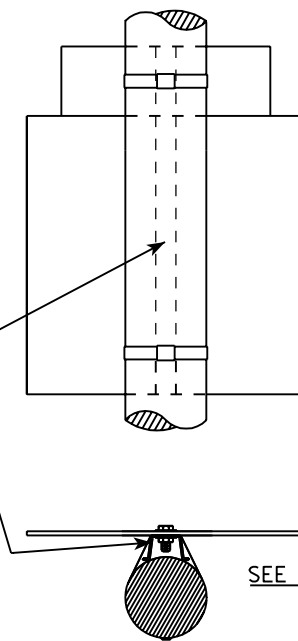
WASHER PLACEMENT



WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

"J" ASSEMBLY



SEE DETAIL B

GENERAL NOTES

1. Signs 4' or greater in width shall have one brace band installed at the center of the sign.
2. Signs 3' or greater in height shall have three bracket bands installed. Signs less than 3' in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

STANDARD SIGN SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 11/08/05 PLATE NO. A5-9.2

PROJECT NO:

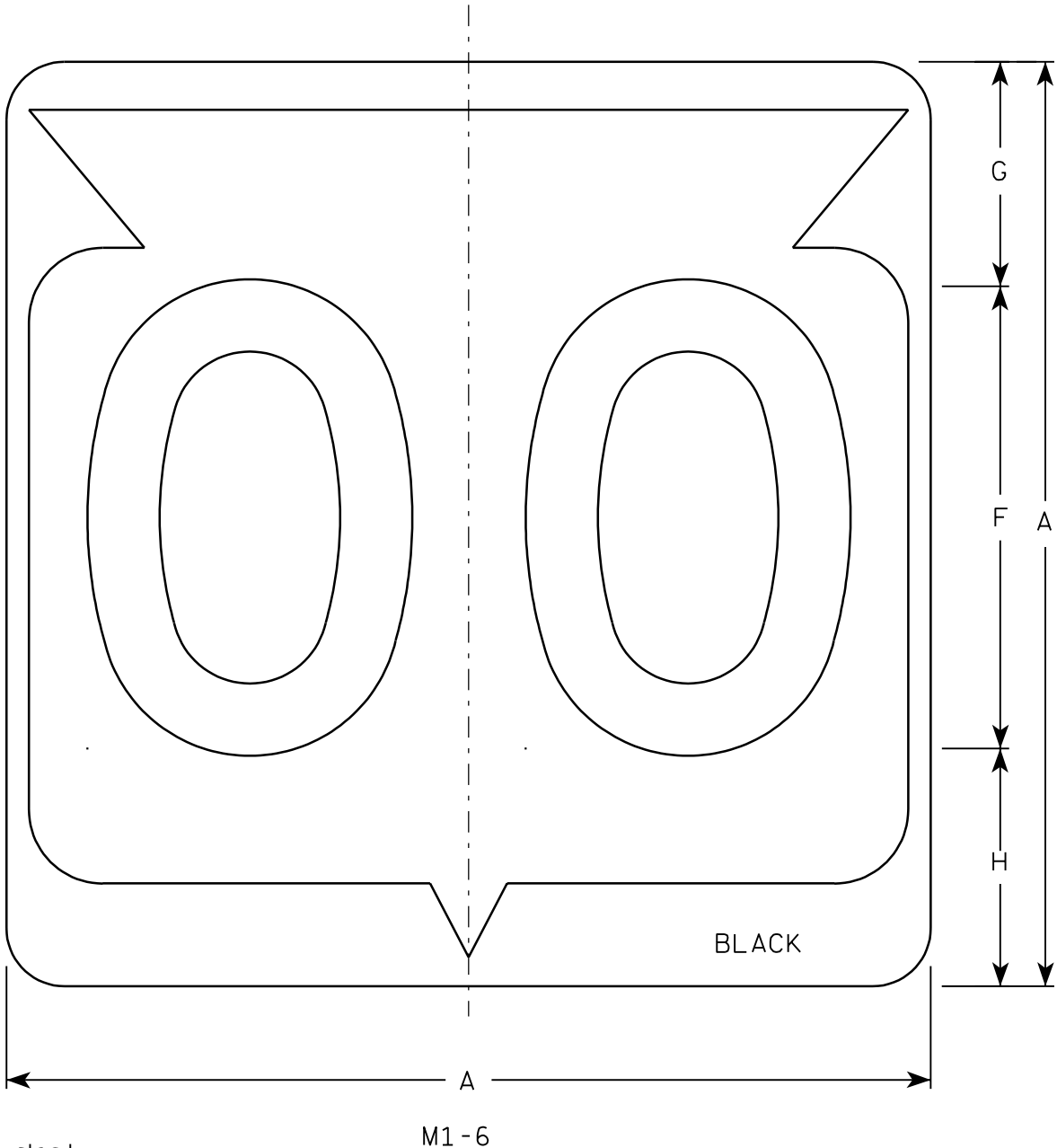
HWY:

COUNTY:

SHEET NO:

E

7



Metric equivalent
for this sign is:

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

FILE NAME : C:\Users\Projects\tr_stdp\late\M16.DGN

PLOT DATE : 13-OCT-2005 14:55

PLOT BY : DITJPH

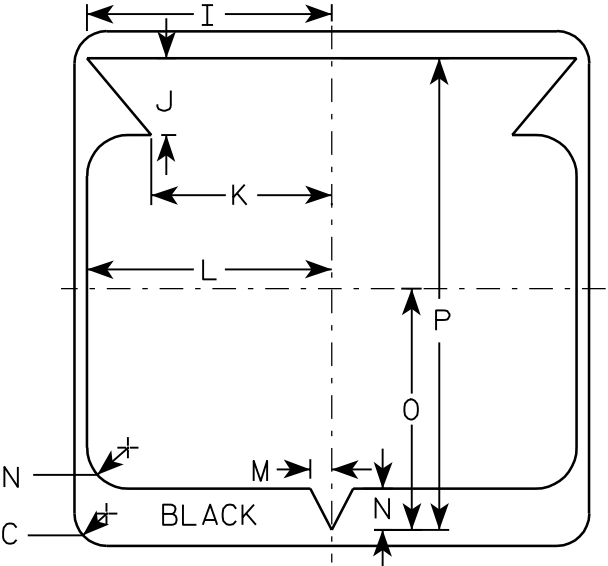
PLOT NAME :

PLOT SCALE : 6.715871:1.000000

WISDOT/CADDs SHEET 42

NOTES

1. Sign is Type II - See Note 6 - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 6
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base
material is plywood but borders shall be rounded
as shown. When base material is metal, the
corners and borders shall be rounded.
5. Substitute appropriate Series numerals and
adjust spacing as per plate A10-1.
6. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective



STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

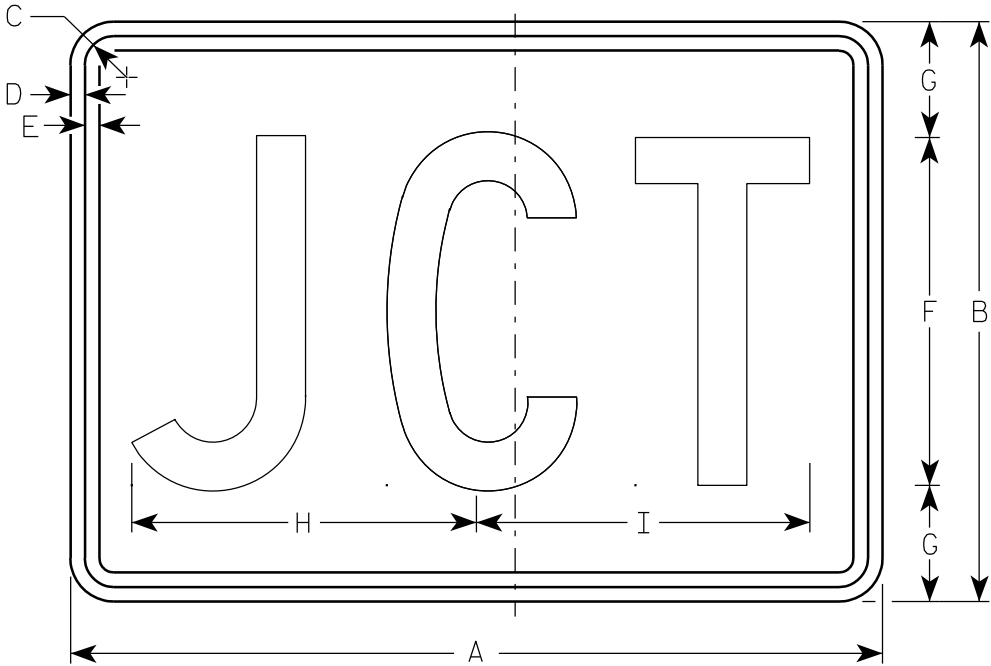
Chester J. Spang
for State Traffic Engineer

DATE 3/20/02

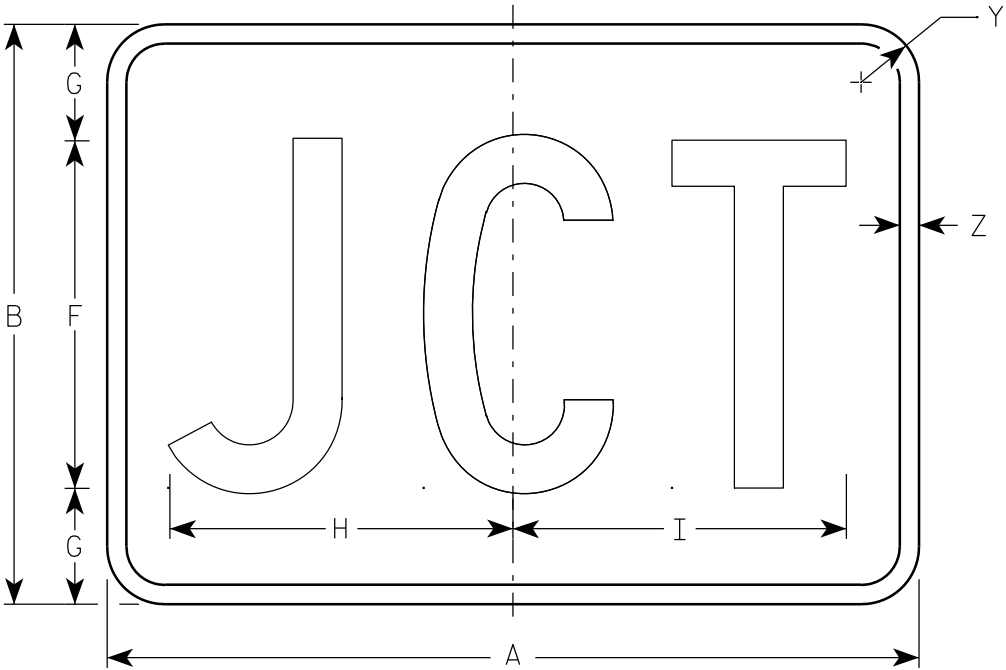
PLATE NO. M1-6.9

NOTES

1. Sign is Type II - See Note 5 - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base
material is plywood but borders shall be rounded
as shown. When base material is metal, the
corners and borders shall be rounded.
5. M2-1 Background - White - Type H Reflective
(Detour or temporary Signs - Reflective)
Message - Black
MB2-1 Background - Blue
Message - White - Type H Reflective
(Detour or temporary Signs - Reflective)
MG2-1 Background - Green
Message - White - Type H Reflective
MK2-1 Background - Green
Message - White - Type H Reflective
MM2-1 Background - White - Type H Reflective
Message - Green
MN2-1 Background - Brown
Message - White - Type H Reflective
MR2-1 Background - Brown
Message - Yellow - Type H Reflective



M2-1
MK2-1
MM2-1
MR2-1



MB2-1
MG2-1
MN2-1

Metric equivalent
for this sign is:

SIZE	
1	
2	525 mm X 375 mm
3	750 mm X 525 mm
4	750 mm X 525 mm
5	750 mm X 525 mm

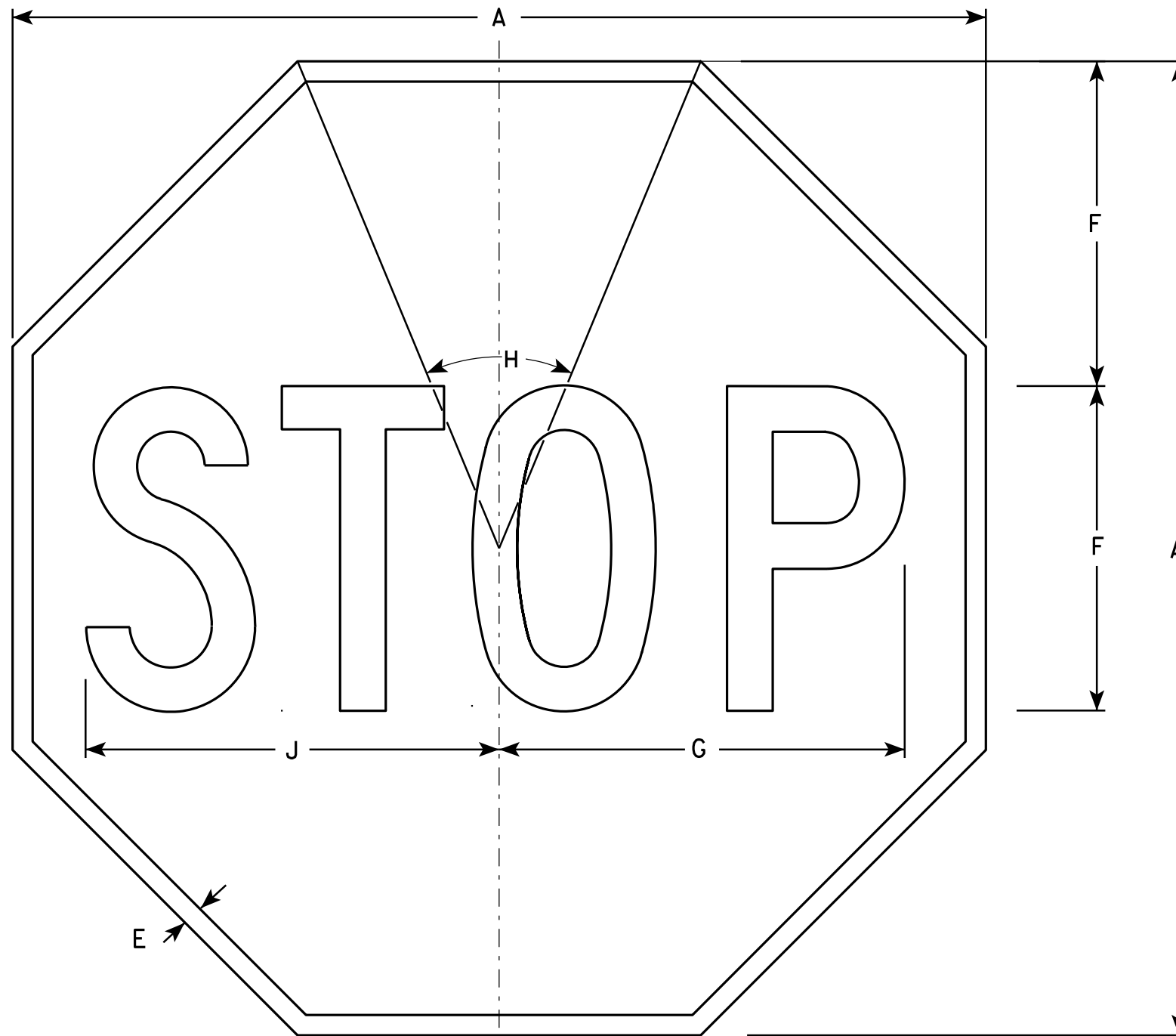
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20	0.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20

STANDARD SIGN
M2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M2-1.10



NOTES

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

R1-1

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

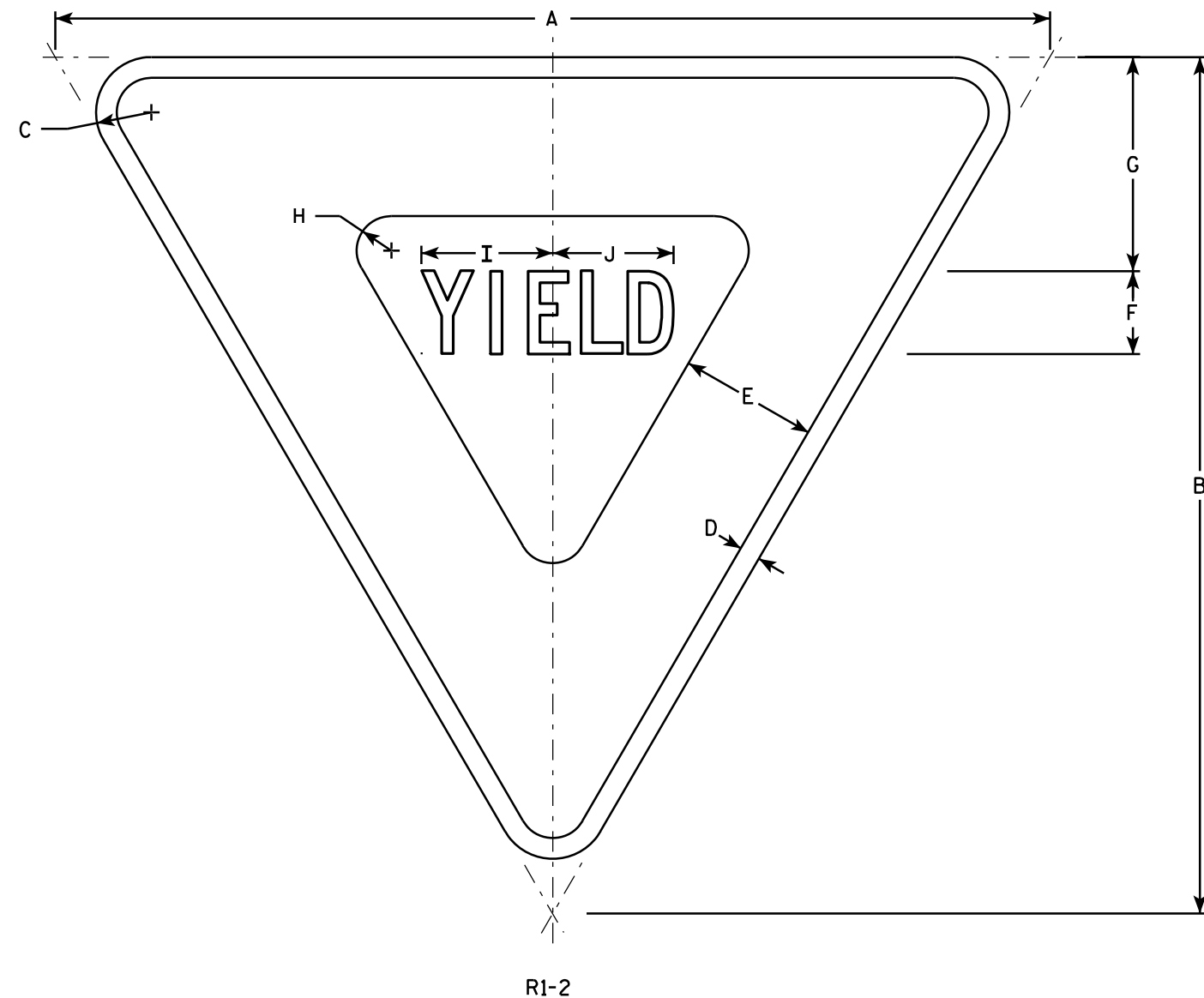
STANDARD SIGN
R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
-------------	------	---------	-----------	---



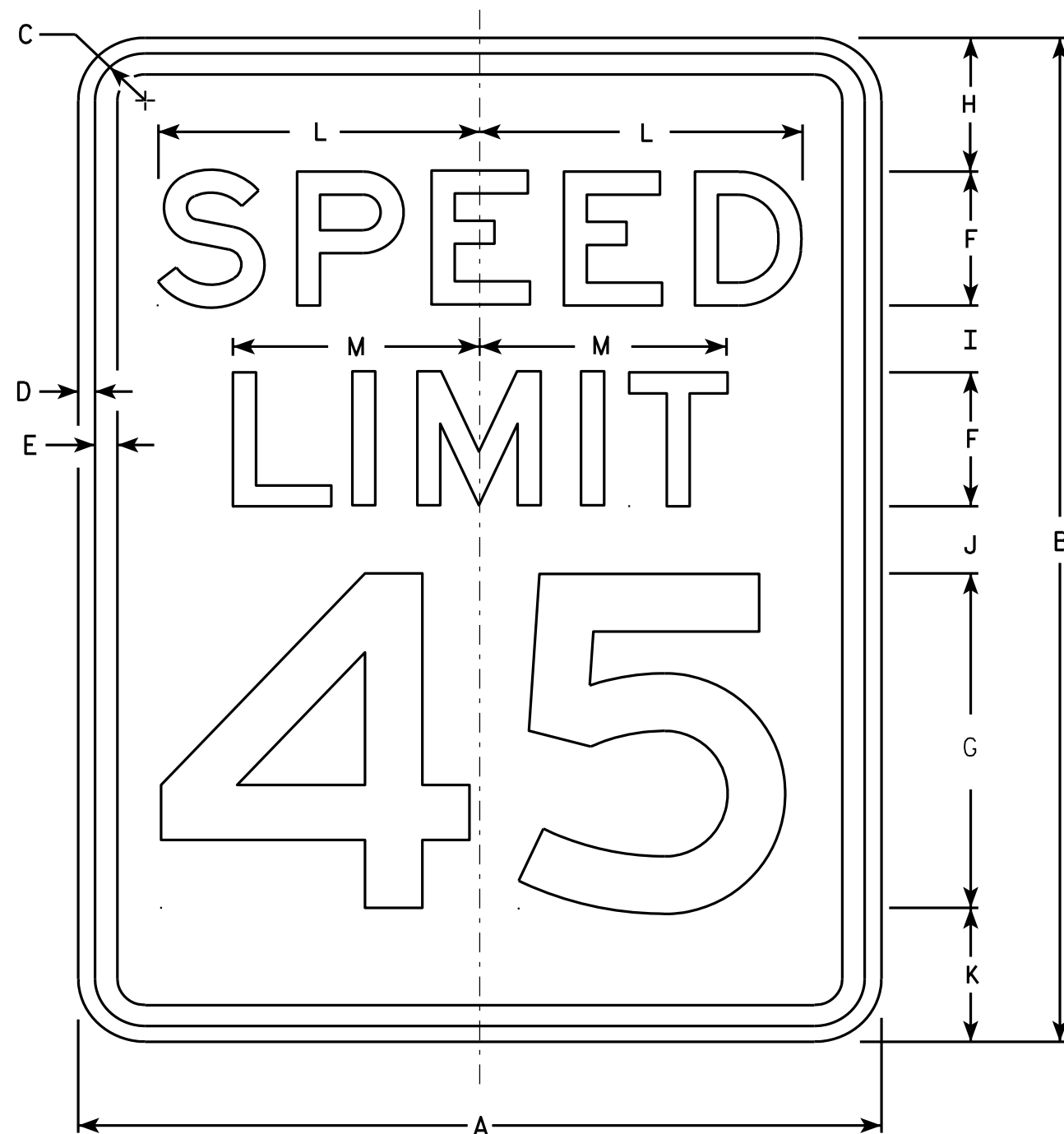
NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6	24	21	1 1/2	3/8	3	2	4 3/4	7/8	3 1/4	3																	1.75
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN	
R1-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 11/02/10	PLATE NO. R1-2.11

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
-------------	------	---------	-----------	---



R2-1

NOTES

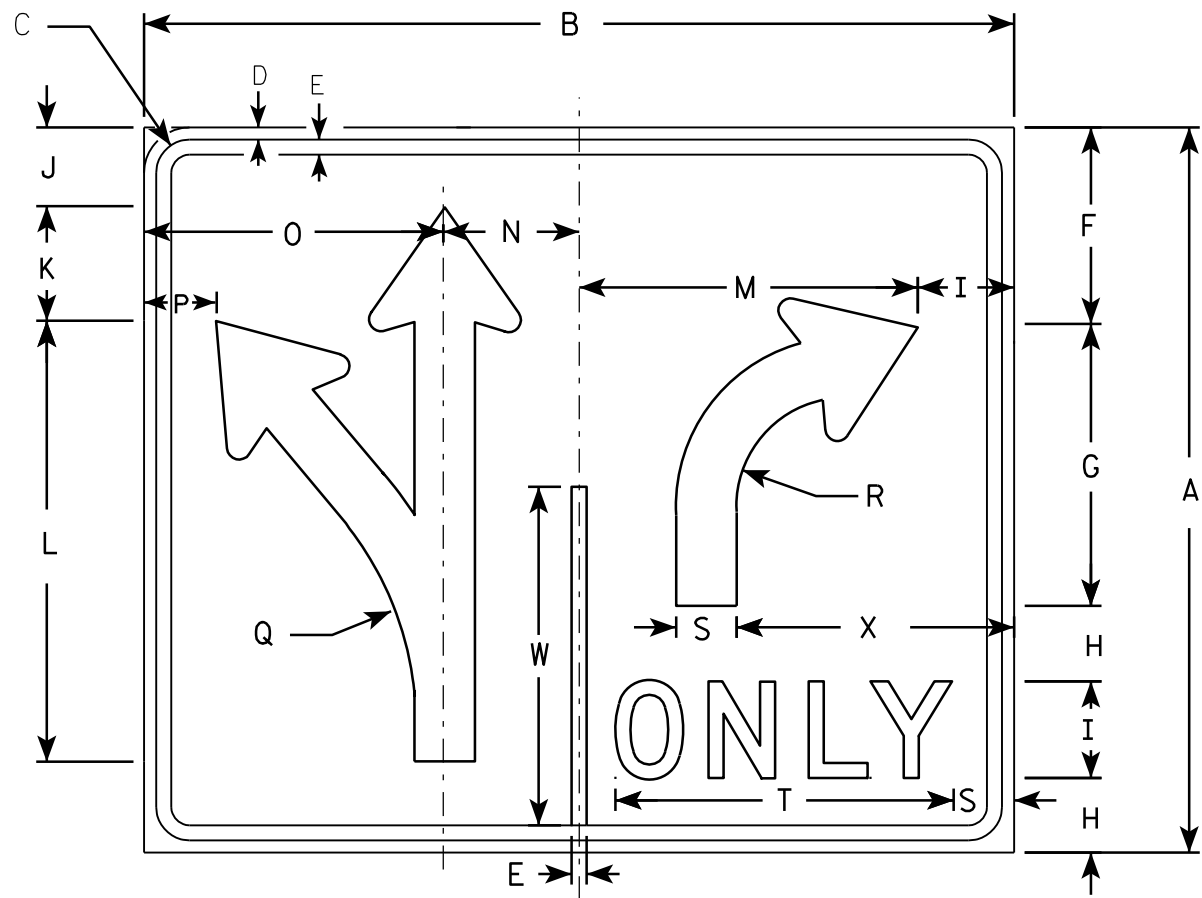
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

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

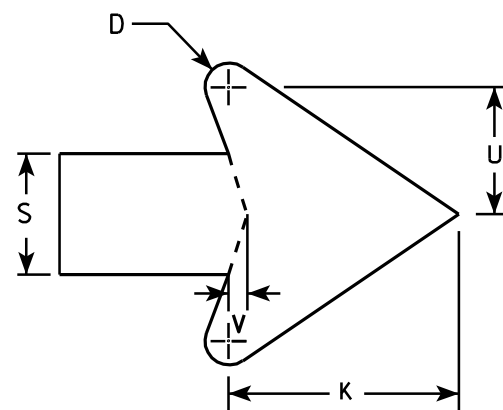
STANDARD SIGN R2-1

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: E



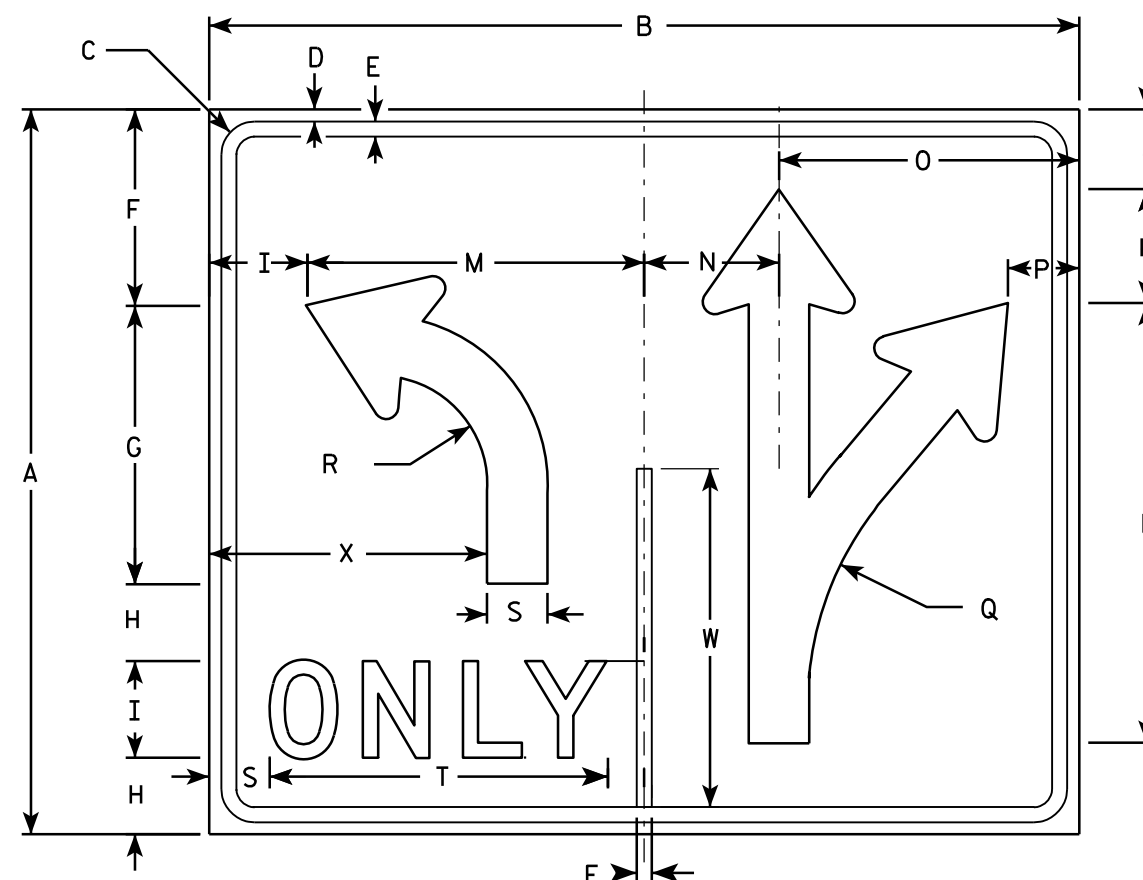
R3-8



ARROW DETAIL

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - WHITE
Message - BLACK
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R3-8A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 ³ / ₈	¹ / ₂	⁵ / ₈	8 ¹ / ₈	11 ⁵ / ₈	3 ¹ / ₈	4	3 ¹ / ₄	4 ³ / ₄	18 ¹ / ₄	14	5 ⁵ / ₈	12 ³ / ₈	3	13 ¹ / ₄	4 ¹ / ₂	2 ¹ / ₂	14	2 ⁵ / ₈	³ / ₈	14	11 ¹ / ₂			7.5
2M	30	36	1 ³ / ₈	¹ / ₂	⁵ / ₈	8 ¹ / ₈	11 ⁵ / ₈	3 ¹ / ₈	4	3 ¹ / ₄	4 ³ / ₄	18 ¹ / ₄	14	5 ⁵ / ₈	12 ³ / ₈	3	13 ¹ / ₄	4 ¹ / ₂	2 ¹ / ₂	14	2 ⁵ / ₈	³ / ₈	14	11 ¹ / ₂			7.5
3																											
4	48	54	2 ¹ / ₄	³ / ₄	1	13 ¹ / ₄	18 ¹ / ₂	5 ¹ / ₈	6	5 ¹ / ₄	7 ¹ / ₈	29 ¹ / ₈	21	8 ³ / ₈	18 ⁵ / ₈	4 ³ / ₈	21 ⁷ / ₈	7 ¹ / ₄	3 ³ / ₄	20 ⁵ / ₈	4	⁵ / ₈	22 ³ / ₈	17 ¹ / ₄			18.0
5	48	54	2 ¹ / ₄	³ / ₄	1	13 ¹ / ₄	18 ¹ / ₂	5 ¹ / ₈	6	5 ¹ / ₄	7 ¹ / ₈	29 ¹ / ₈	21	8 ³ / ₈	18 ⁵ / ₈	4 ³ / ₈	21 ⁷ / ₈	7 ¹ / ₄	3 ³ / ₄	20 ⁵ / ₈	4	⁵ / ₈	22 ³ / ₈	17 ¹ / ₄			18.0

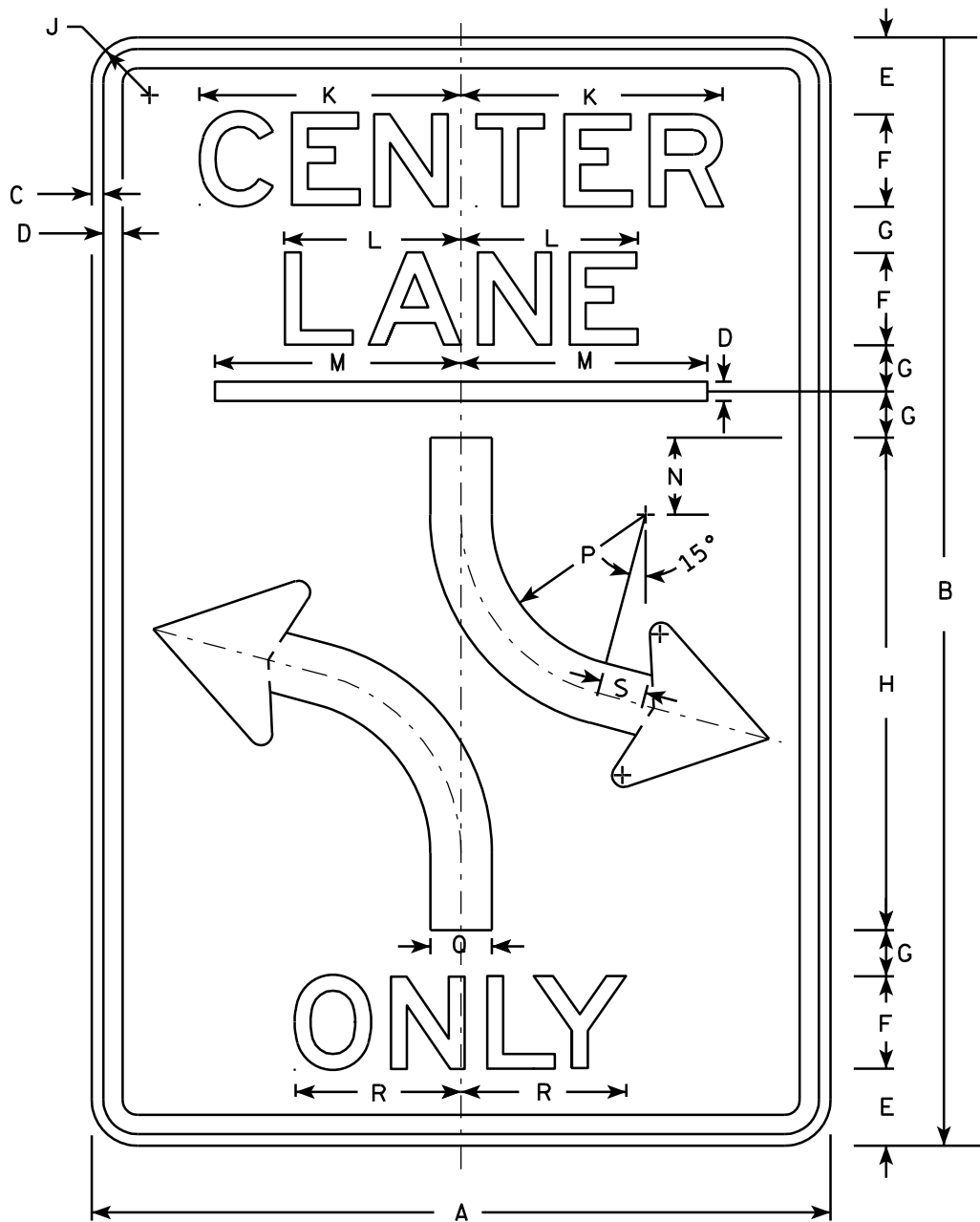
STANDARD SIGN R3-8 & R3-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-8.5

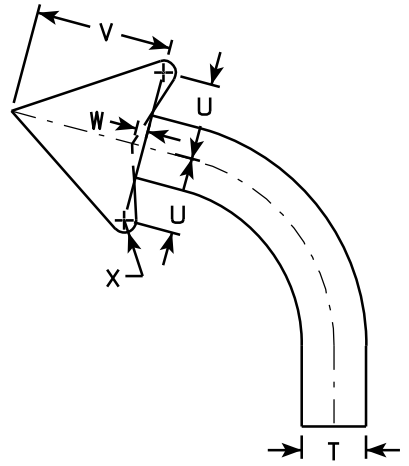
PROJECT NO: HWY: COUNTY: SHEET NO: E



R3-9B

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - White
Message - Black
- 3. Message Series - E
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	$\frac{3}{8}$	$\frac{1}{2}$	2 $\frac{1}{2}$	3	1 $\frac{1}{2}$	16		1 $\frac{1}{2}$	8 $\frac{1}{2}$	5 $\frac{3}{4}$	8	2 $\frac{1}{2}$		6	2	5 $\frac{1}{8}$	1 $\frac{1}{2}$		2 $\frac{3}{8}$	4 $\frac{3}{8}$	$\frac{3}{8}$				6.0
2M	24	36	$\frac{3}{8}$	$\frac{1}{2}$	2 $\frac{1}{2}$	3	1 $\frac{1}{2}$	16		1 $\frac{1}{2}$	8 $\frac{1}{2}$	5 $\frac{3}{4}$	8	2 $\frac{1}{2}$		6	2	5 $\frac{1}{8}$	1 $\frac{1}{2}$		2 $\frac{3}{8}$	4 $\frac{3}{8}$	$\frac{3}{8}$				6.0
3	36	48	$\frac{5}{8}$	$\frac{7}{8}$	3 $\frac{1}{2}$	5	1 $\frac{1}{2}$	20		2 $\frac{1}{4}$	14 $\frac{1}{8}$	9 $\frac{1}{2}$	12	3		4	3	9 $\frac{7}{8}$	2		3 $\frac{1}{2}$	6 $\frac{1}{8}$	$\frac{1}{2}$				12.0
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN
R3-9B

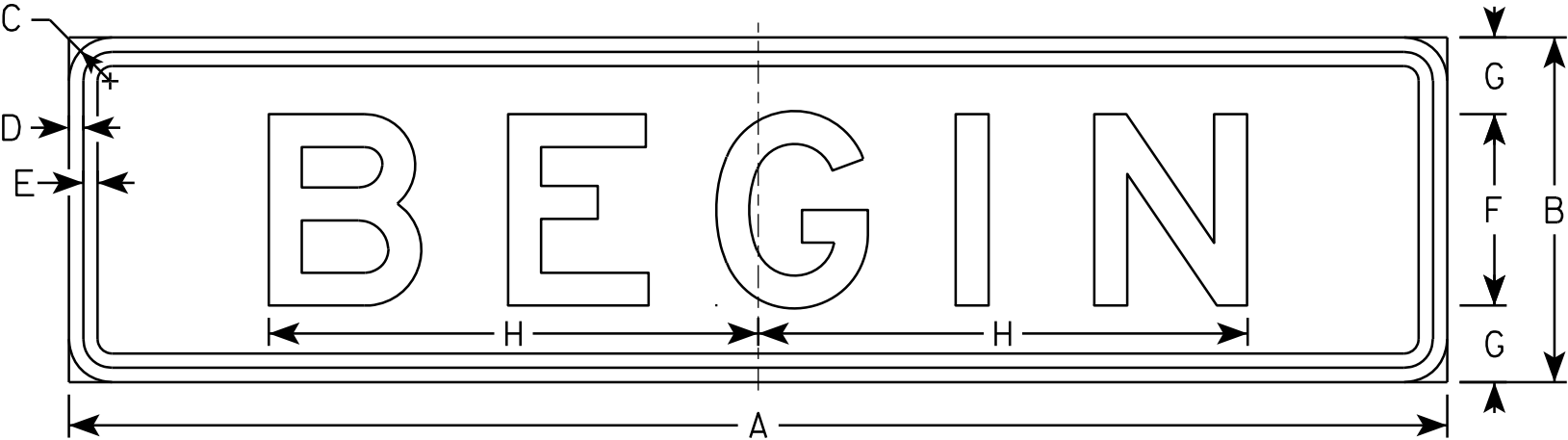
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

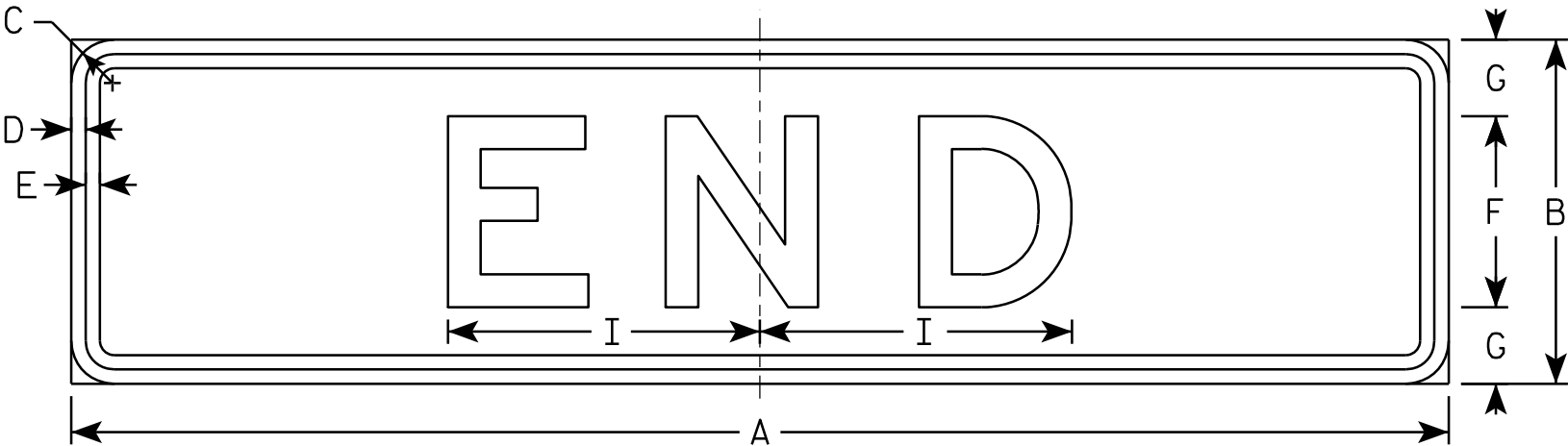
DATE 3/24/2011 PLATE NO. R3-9B.5

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - White
Message - Black
- 3. Message Series - E
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R3-9C



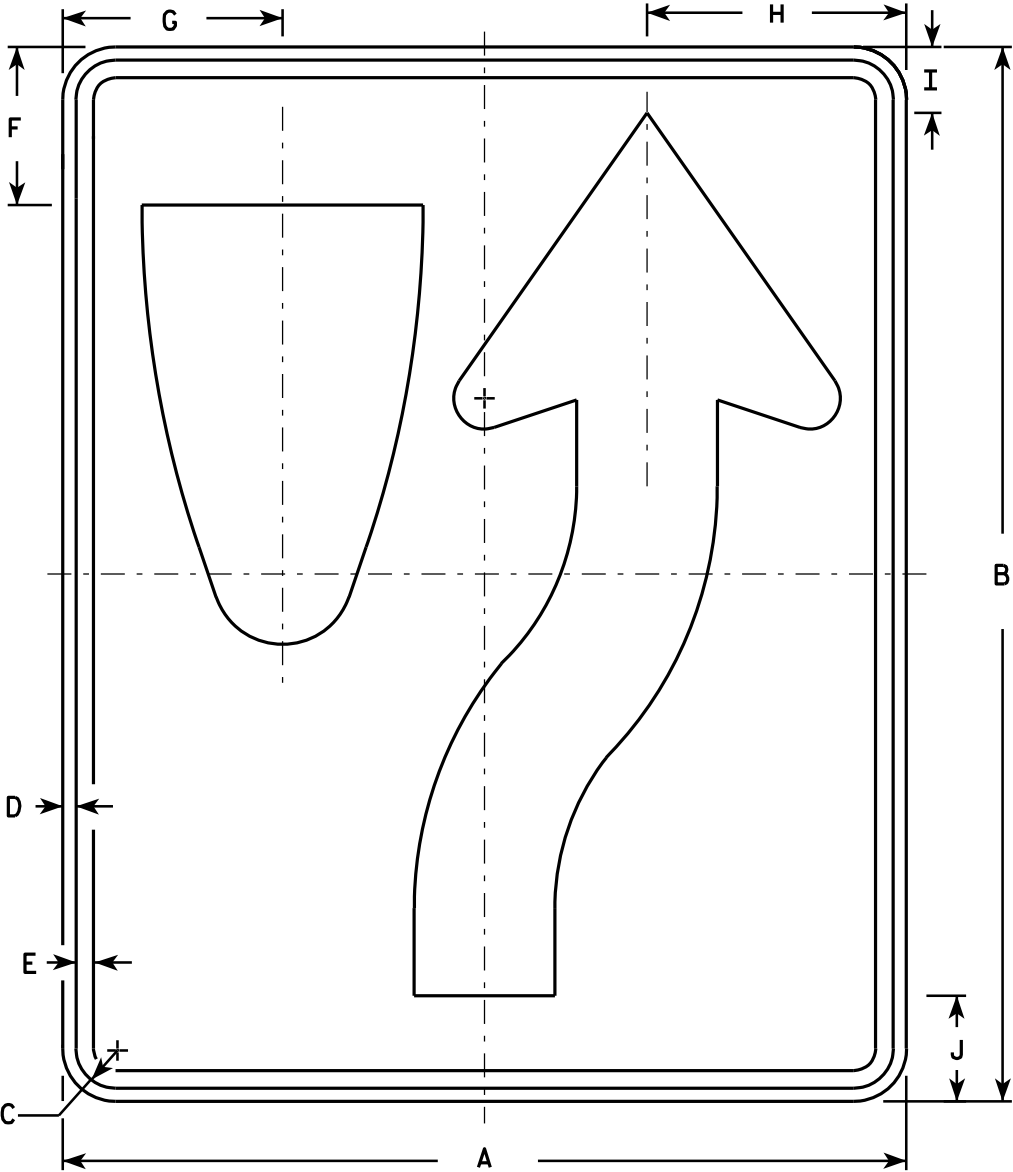
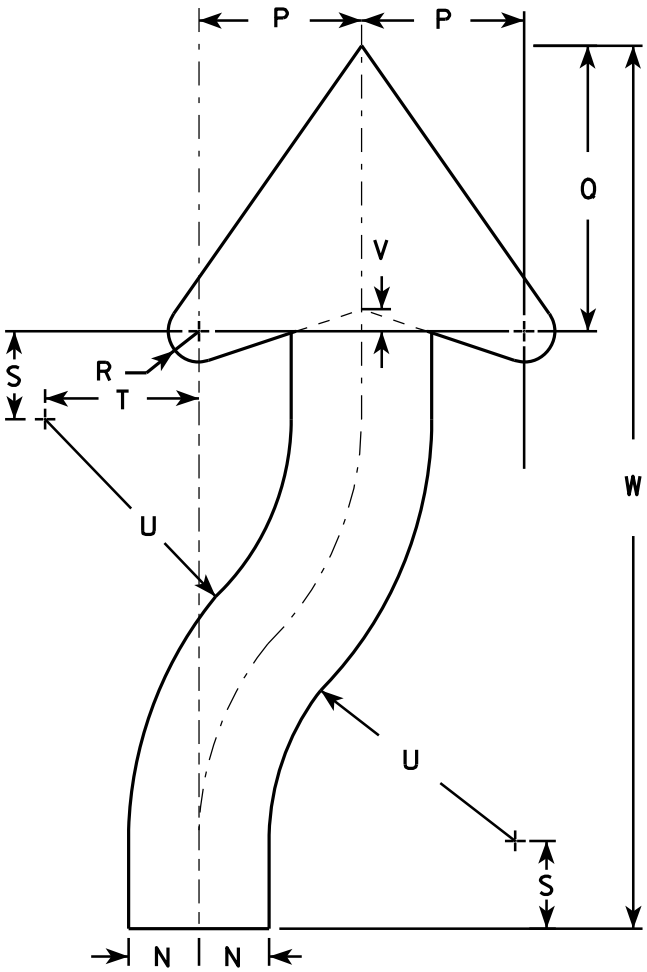
R3-9D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	6	1 1/8	3/8	3/8	3	1 1/2	7 3/4	4 7/8																		1.0
2M	24	6	1 1/8	3/8	3/8	3	1 1/2	7 3/4	4 7/8																		1.0
3	36	9	1 1/8	3/8	3/8	5	2	12 3/4	8 1/8																		1.86
4																											
5																											

STANDARD SIGN R3-9C & R3-9D	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 3/24/2011	PLATE NO. R3-9C.2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
Background - White
Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

STANDARD SIGN
R4-7 & R4-8

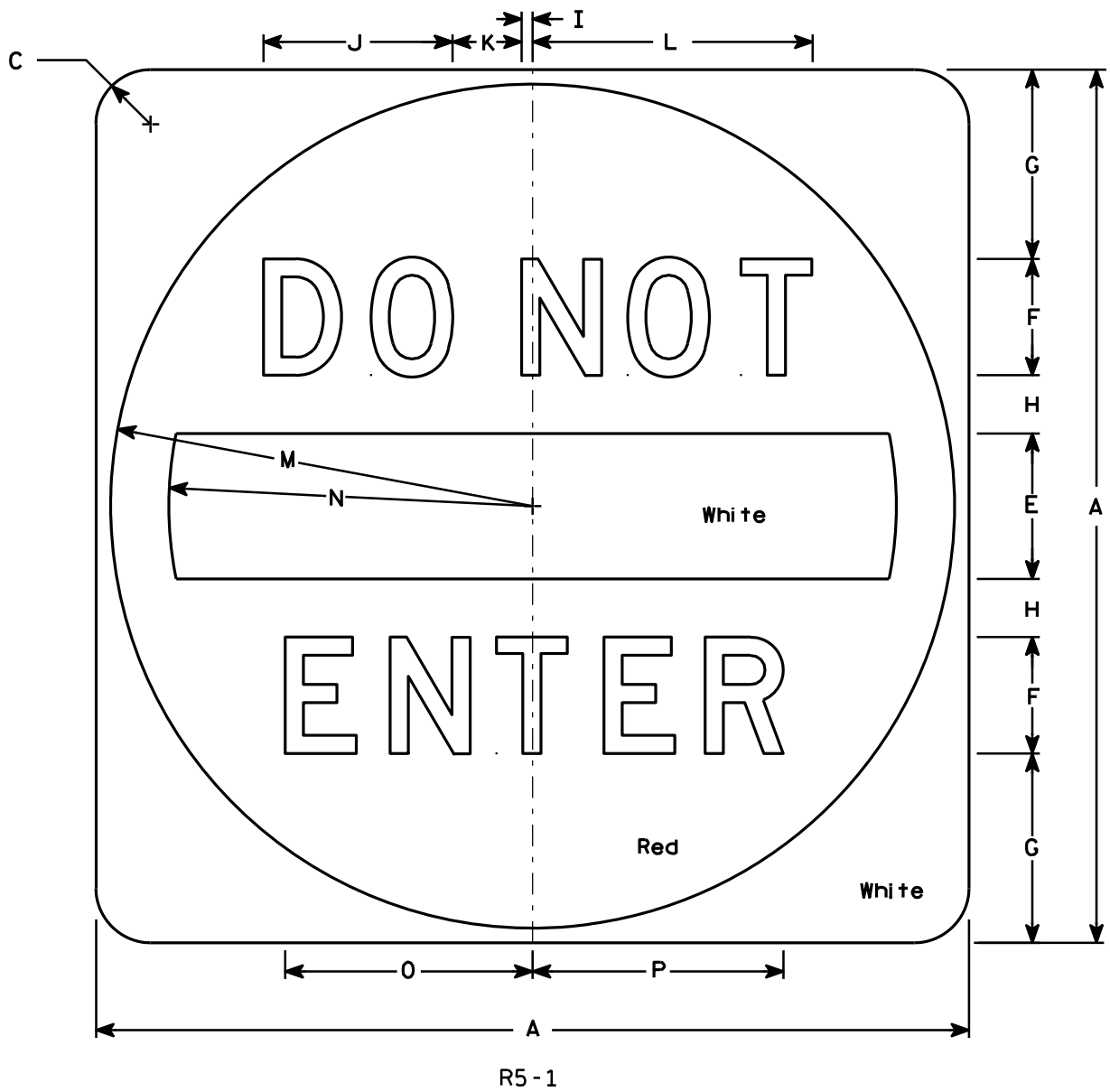
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - See detail
 - Message - White - Type H Reflective
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but when base material is metal, the corners shall be rounded.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7⁄8		5	4	6 1⁄2	2	3⁄8	6 1⁄2	2 3⁄8	9 5⁄8	14 1⁄2	12 1⁄2	8 1⁄2	8 5⁄8											6.26
2M	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
3	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
4	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
5	48		3		8	6	11	3	5⁄8	9 3⁄4	3 5⁄8	14 1⁄2	23 1⁄2	20	12 3⁄4	12 7⁄8											16.0

STANDARD SIGN
R5 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

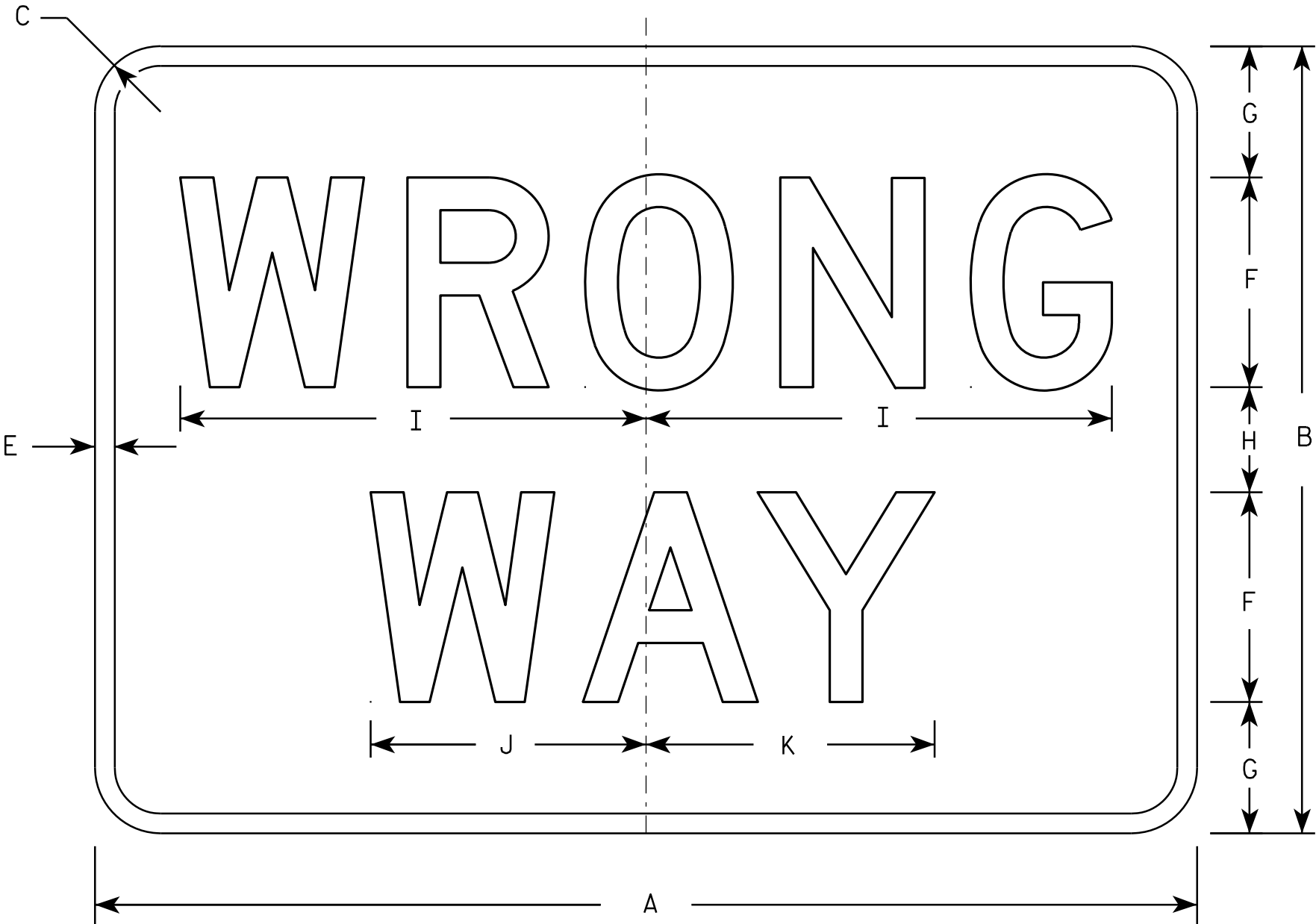
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



R5-1A

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - Red
 - Message - White
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

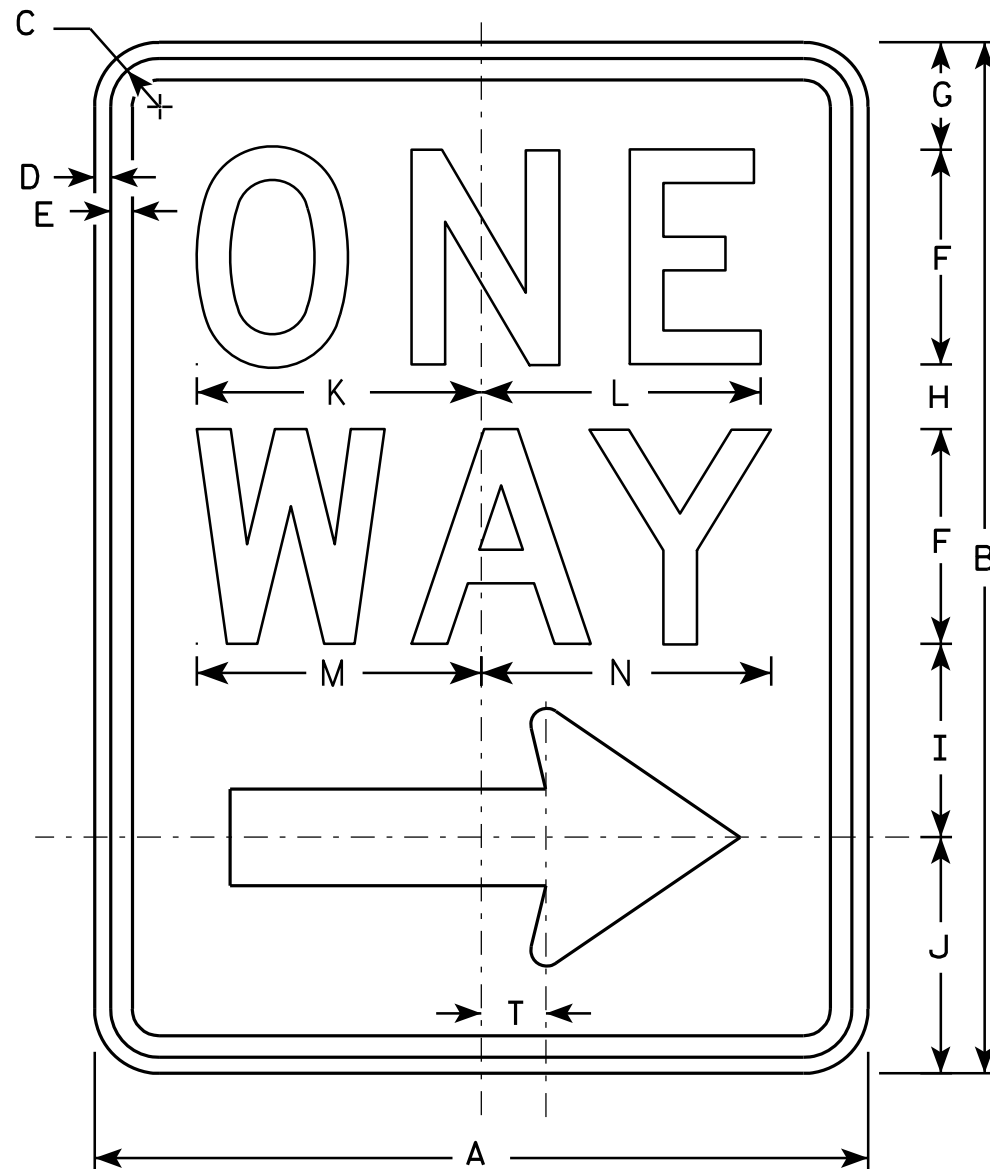
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

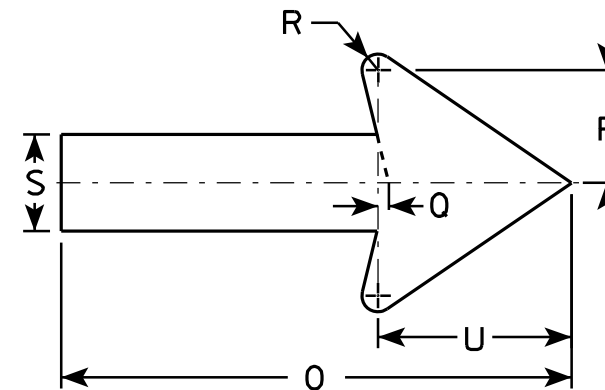
DATE 12/17/10 PLATE NO. R5-1A.2



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

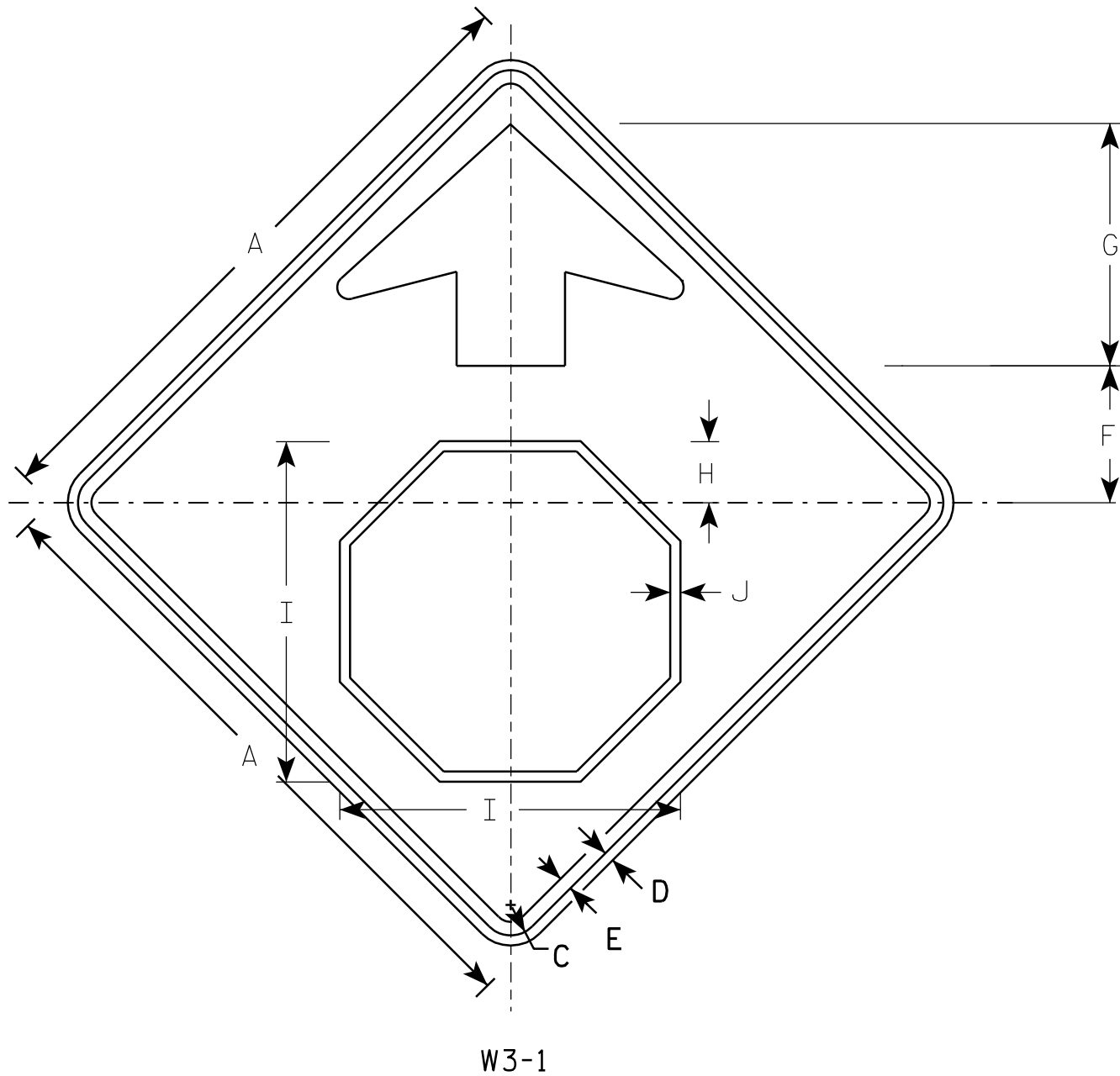
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

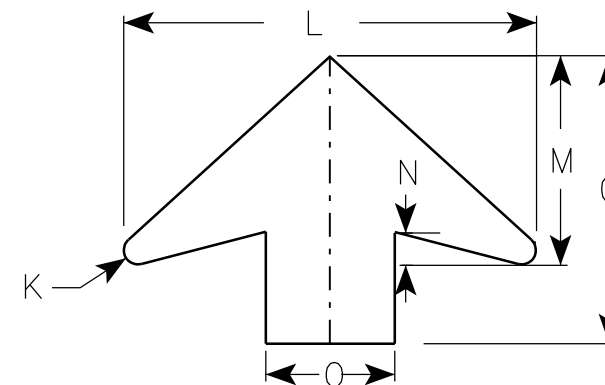
DATE 11/2/10 PLATE NO. R6-2.8

PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - YELLOW
Arrow & Border - BLACK
Stop Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

PROJECT NO:

STANDARD SIGN
W3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/7/10 PLATE NO. W3-1.12

SHEET NO:

E

CTH A MAINLINE - CATEGORY 0010

STATION	Distance	AREA (SF)					Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/ Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	Cut	Salvaged/ Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
73+70	70.00	0	16.5	0	0.00	0.00	0	21	0	0	0	-21
74+00	30.00	172	16.5	3	0.00	0.00	96	18	2	96	2	54
74+50	50.00	175	16.5	22	0.00	0.00	321	31	23	417	31	316
75+00	50.00	188	16.5	30	0.00	0.00	336	31	48	753	91	561
75+50	50.00	211	16.5	29	0.00	0.00	369	31	55	1,122	159	832
76+00	50.00	230	16.5	22	0.00	0.00	408	31	47	1,531	219	1,150
76+50	50.00	243	16.5	16	0.00	0.00	438	31	35	1,969	263	1,514
77+00	50.00	248	16.5	14	0.00	0.00	455	31	28	2,423	297	1,903
77+50	50.00	251	16.5	11	0.00	0.00	462	31	23	2,885	326	2,306
78+00	50.00	247	16.5	8	0.00	0.00	461	31	18	3,346	348	2,714
78+50	50.00	255	16.5	6	0.00	0.00	465	31	13	3,811	364	3,132
79+00	50.00	244	16.5	4	0.00	0.00	462	31	9	4,273	376	3,552
79+50	50.00	254	16.5	13	0.00	0.00	461	31	16	4,734	396	3,963
80+00	50.00	419	16.5	0	0.00	0.00	623	31	12	5,358	411	4,541
80+50	50.00	223	16.5	5	0.00	0.00	594	31	5	5,952	416	5,099
81+00	50.00	222	16.5	3	0.00	0.00	412	31	7	6,364	426	5,471
81+50	50.00	255	16.5	2	0.00	0.00	442	31	5	6,806	431	5,876
82+00	50.00	365	16.5	0	0.00	0.00	574	31	2	7,380	434	6,417
82+50	50.00	235	16.5	0	0.00	0.00	556	31	0	7,935	434	6,942
83+00	50.00	193	16.5	9	0.00	0.00	396	31	8	8,332	444	7,298
83+50	50.00	175	16.5	16	0.00	0.00	341	31	23	8,672	473	7,579
84+00	50.00	154	16.5	28	0.00	0.00	305	31	41	8,977	524	7,802
84+50	50.00	143	16.5	9	0.00	0.00	275	31	34	9,252	567	8,004
85+00	50.00	118	16.5	34	0.00	0.00	242	31	40	9,494	617	8,165
85+50	50.00	107	16.5	38	0.00	0.00	208	31	67	9,702	700	8,260
86+00	50.00	95	16.5	57	0.00	0.00	187	31	88	9,889	810	8,306
86+50	50.00	97	16.5	65	0.00	0.00	178	31	113	10,067	951	8,312
87+00	50.00	98	16.5	73	0.00	0.00	181	31	128	10,247	1,111	8,302
87+50	50.00	89	16.5	59	0.00	0.00	173	31	122	10,421	1,264	8,292
88+00	50.00	88	16.5	58	0.00	0.00	164	31	108	10,584	1,399	8,290
88+50	50.00	92	16.5	72	0.00	0.00	167	31	120	10,751	1,550	8,276
89+00	50.00	100	16.5	66	0.00	0.00	178	31	128	10,929	1,709	8,263
89+50	50.00	104	16.5	84	0.00	0.00	189	31	139	11,118	1,883	8,248
90+00	50.00	111	16.5	127	0.00	0.00	199	31	195	11,317	2,127	8,172
90+34	34.00	114	16.5	152	0.00	0.00	142	21	176	11,459	2,347	8,074
90+50	16.00	115	16.5	130	0.00	0.00	68	10	84	11,526	2,451	8,027
91+00	50.00	136	16.5	74	0.00	0.00	232	31	189	11,759	2,687	7,993
91+50	50.00	257	16.5	27	0.00	0.00	364	31	94	12,123	2,804	8,209
92+00	50.00	158	16.5	17	0.00	0.00	384	31	41	12,507	2,855	8,512
92+50	50.00	184	16.5	4	0.00	0.00	317	31	19	12,824	2,879	8,774
93+00	50.00	237	16.5	0	0.00	0.00	390	31	4	13,213	2,884	9,129
93+50	50.00	343	16.5	0	0.00	0.00	537	31	0	13,750	2,884	9,635
94+00	50.00	342	16.5	0	0.00	0.00	634	31	0	14,385	2,884	10,239
94+50	50.00	304	16.5	3	0.00	0.00	598	31	3	14,983	2,887	10,803
95+00	50.00	474	16.5	0	0.00	0.00	720	31	3	15,703	2,891	11,489
95+50	50.00	242	16.5	23	0.00	0.00	663	31	21	16,366	2,918	12,095
96+00	50.00	194	16.5	31	0.00	0.00	404	31	50	16,770	2,980	12,406
96+50	50.00	204	16.5	14	0.00	0.00	369	31	42	17,138	3,032	12,692

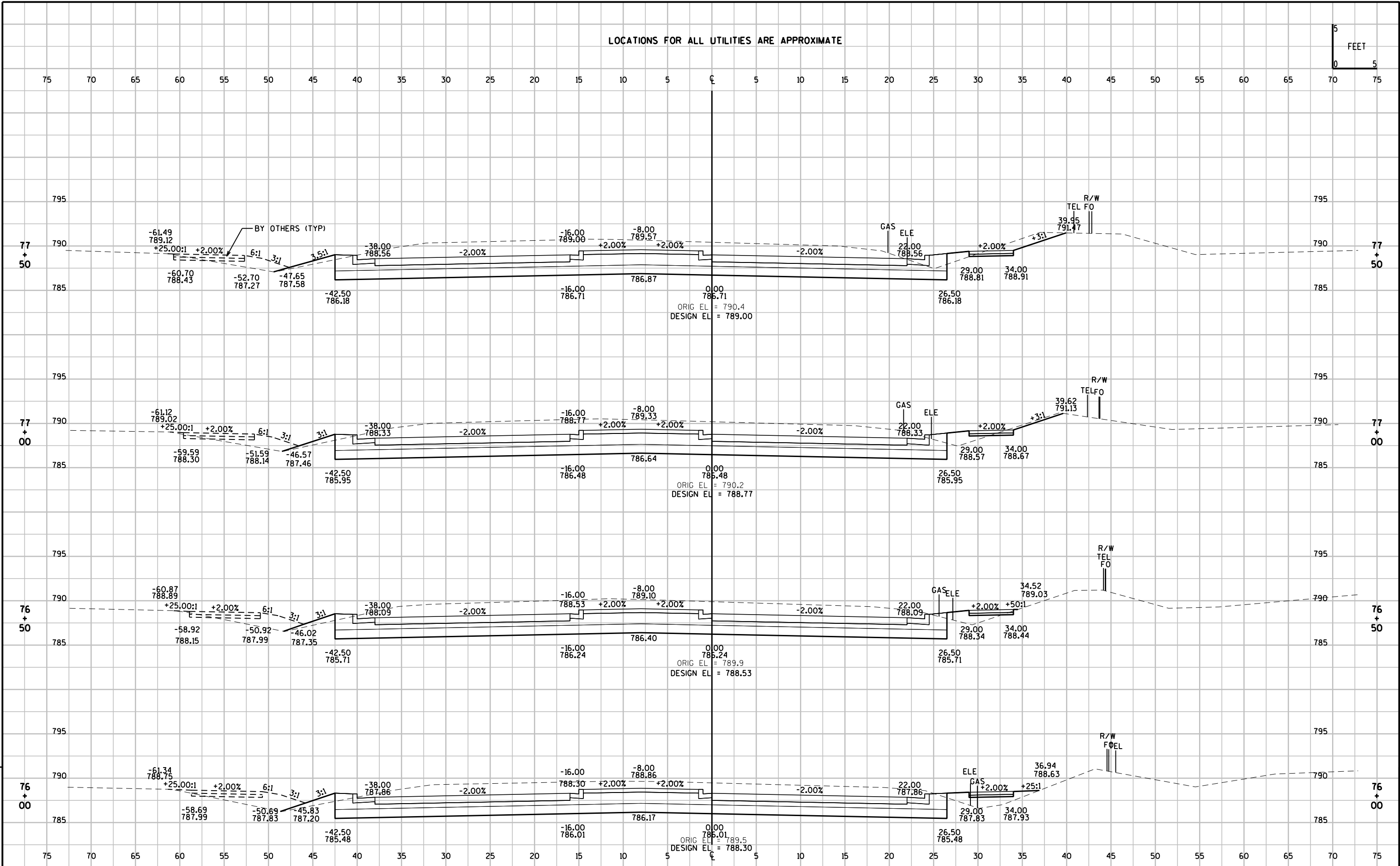
CTH A MAINLINE - CATEGORY 0010 - CONTINUED

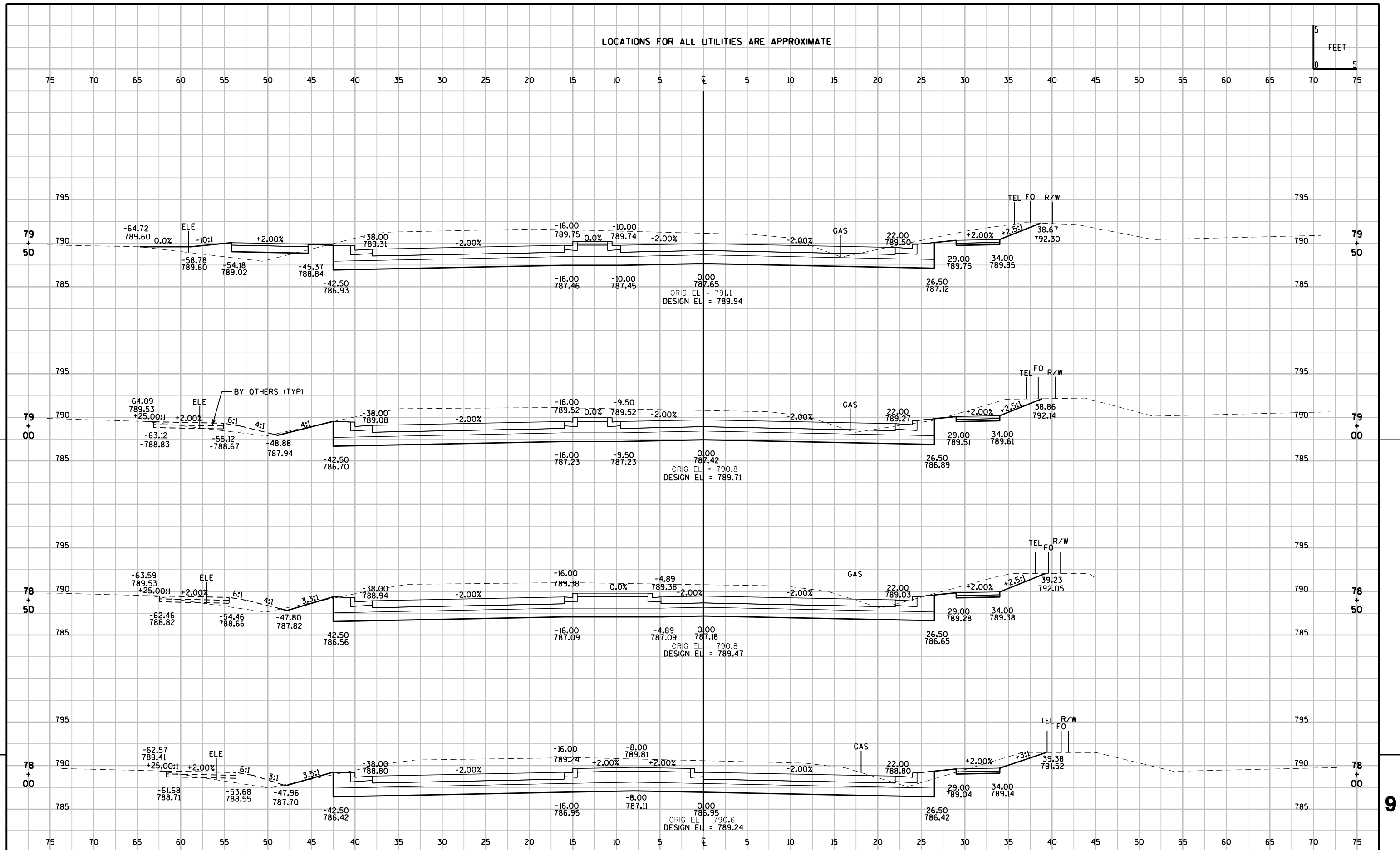
STATION	Distance	AREA (SF)					Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/ Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	Cut	Salvaged/ Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
97+00	50.00	180	16.5	17	0.00	0.00	356	31	29	17,494	3,068	12,981
97+50	50.00	197	16.5	9	0.00	0.00	349	31	24	17,843	3,098	13,269
98+00	50.00	200	16.5	12	0.00	0.00	368	31	19	18,211	3,122	13,582
98+50	50.00	231	16.5	3	0.00	0.00	399	31	14	18,610	3,140	13,933
99+00	50.00	213	16.5	12	0.00	0.00	411	31	14	19,021	3,157	14,296
99+50	50.00	149	16.5	23	0.00	0.00	335	31	32	19,356	3,198	14,560
100+00	50.00	119	16.5	53	0.00	0.00	248	31	70	19,604	3,286	14,690
100+50	50.00	109	16.5	27	0.00	0.00	211	31	74	19,815	3,378	14,778
101+00	50.00	67	16.5	80	0.00	0.00	163	31	99	19,978	3,502	14,786
101+50	50.00	57	16.5	142	0.00	0.00	115	31	206	20,093	3,759	14,614
* 102+00	50.00	55	16.5	223	0.00	0.00	104	31	338	20,197	4,181	14,264
* 102+50	50.00	26	16.5	371	0.00	0.00	75	31	550	20,272	4,869	13,621
* 103+00	50.00	30	16.5	224	0.00	0.00	52	31	551	20,324	5,558	12,954
103+50	50.00	38	16.5	211	0.00	0.00	63	31	403	20,387	6,061	12,483
104+00	50.00	44	16.5	162	0.00	0.00	76	31	345	20,462	6,493	12,097
104+50	50.00	59	16.5	133	0.00	0.00	95	31	273	20,558	6,834	11,820
105+00	50.00	81	16.5	90	0.00	0.00	130	31	206	20,687	7,092	11,661
105+50	50.00	85	16.5	102	0.00	0.00	154	31	178	20,841	7,315	11,562
106+00	50.00	172	16.5	2	0.00	0.00	238	31	96	21,079	7,435	11,649
106+50	50.00	277	16.5	0	0.00	0.00	416	31	2	21,495	7,437	12,032
107+00	50.00	173	16.5	103	0.00	0.00	417	31	95	21,912	7,556	12,299
107+50	50.00	213	16.5	60	0.00	0.00	357	31	151	22,269	7,745	12,437
108+00	50.00	210	16.5	66	0.00	0.00	392	31	117	22,661	7,891	12,652
108+50	50.00	177	16.5	68	0.00	0.00	358	31	124	23,019	8,046	12,825
109+00	50.00	174	16.5	69	0.00	0.00	325	31	127	23,344	8,205	12,961
109+50	50.00	165	16.5	65	0.00	0.00	314	31	124	23,658	8,360	13,089
110+00	50.00	175	16.5	68	0.00	0.00	315	31	123	23,973	8,514	13,219
110+50	50.00	185	16.5	63	0.00	0.00	333	31	121	24,306	8,665	13,370
111+00	50.00	170	16.5	77	0.00	0.00	329	31	130	24,635	8,827	13,507
111+50	50.00	136	16.5	98	0.00	0.00	283	31	162	24,918	9,030	13,557
112+00	50.00	142	16.5	79	0.00	0.00	257	31	164	25,175	9,235	13,579
112+50	50.00	184	16.5	49	0.00	0.00	302	31	119	25,477	9,383	13,702
113+00	50.00	185	16.5	21	0.00	0.00	342	31	65	25,819	9,464	13,932
113+50	50.00	174	16.5	9	0.00	0.00	332	31	28	26,151	9,499	14,199
114+00	50.00	163	16.5	8	0.00	0.00	312	31	16	26,463	9,518	14,461
114+38	38.00	104	16.5	2	0.00	0.00	188	23	7	26,651	9,527	14,617
	0.00		0.0		0.00	0.00	0	0	0	26,651	9,527	14,617

* DOES NOT INCLUDE POND EXCAVATION VOLUME

TOTALS 26,651 2,507 7,622

LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60, 62.63





PROJECT NO: 4984-01-57

HWY: CTH A

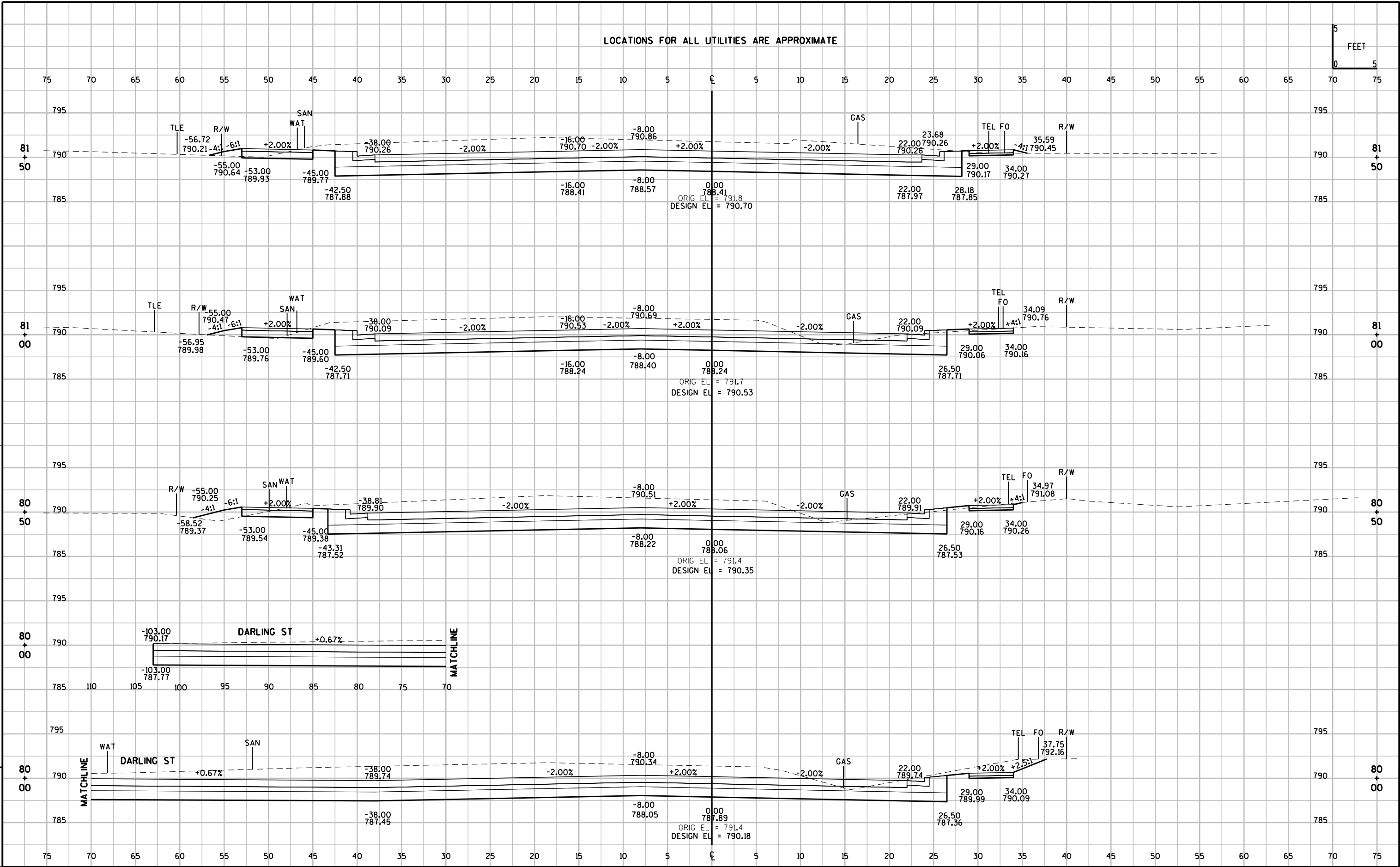
COUNTY: OUTAGAMIE

CROSS SECTIONS:

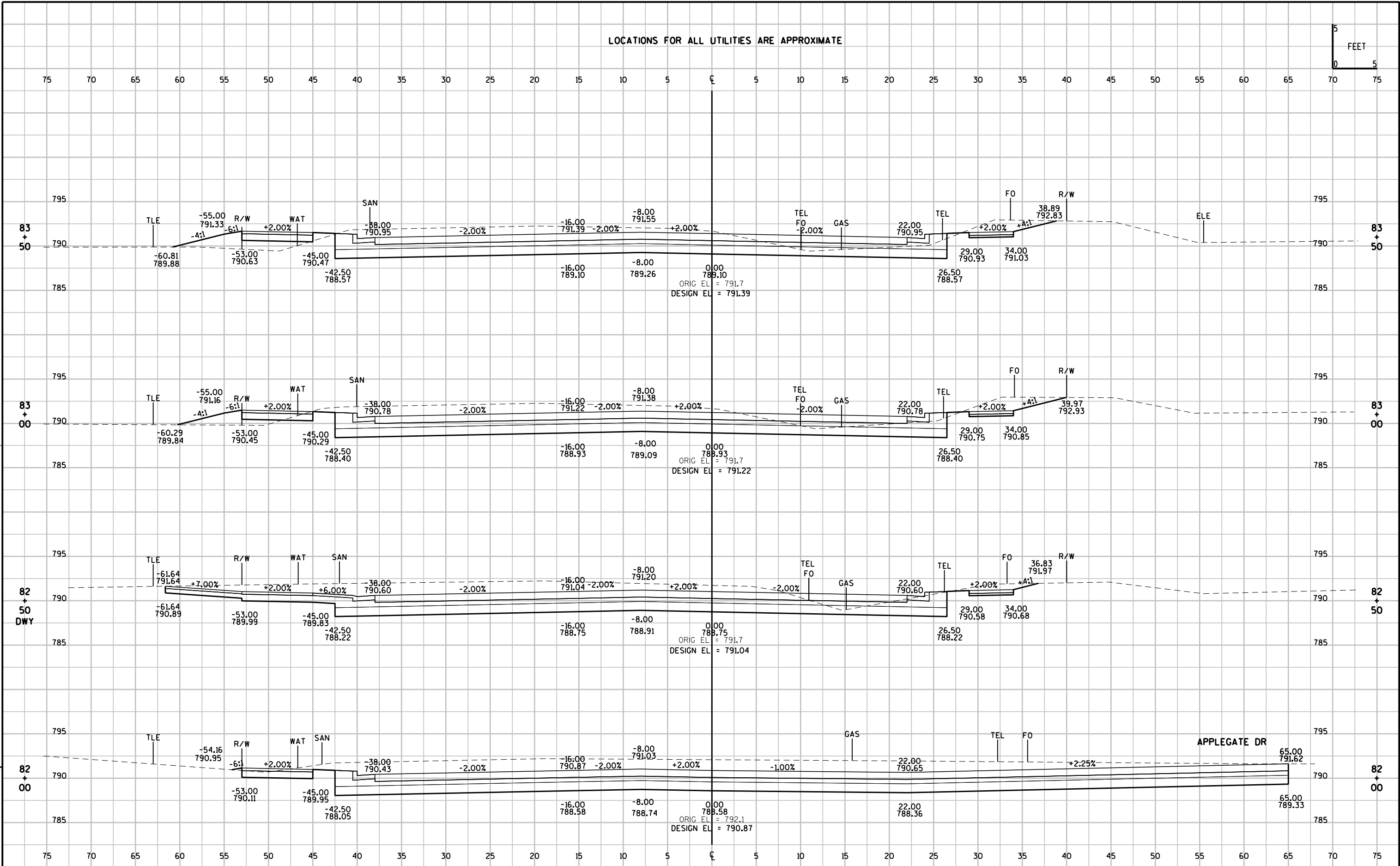
SHEET:

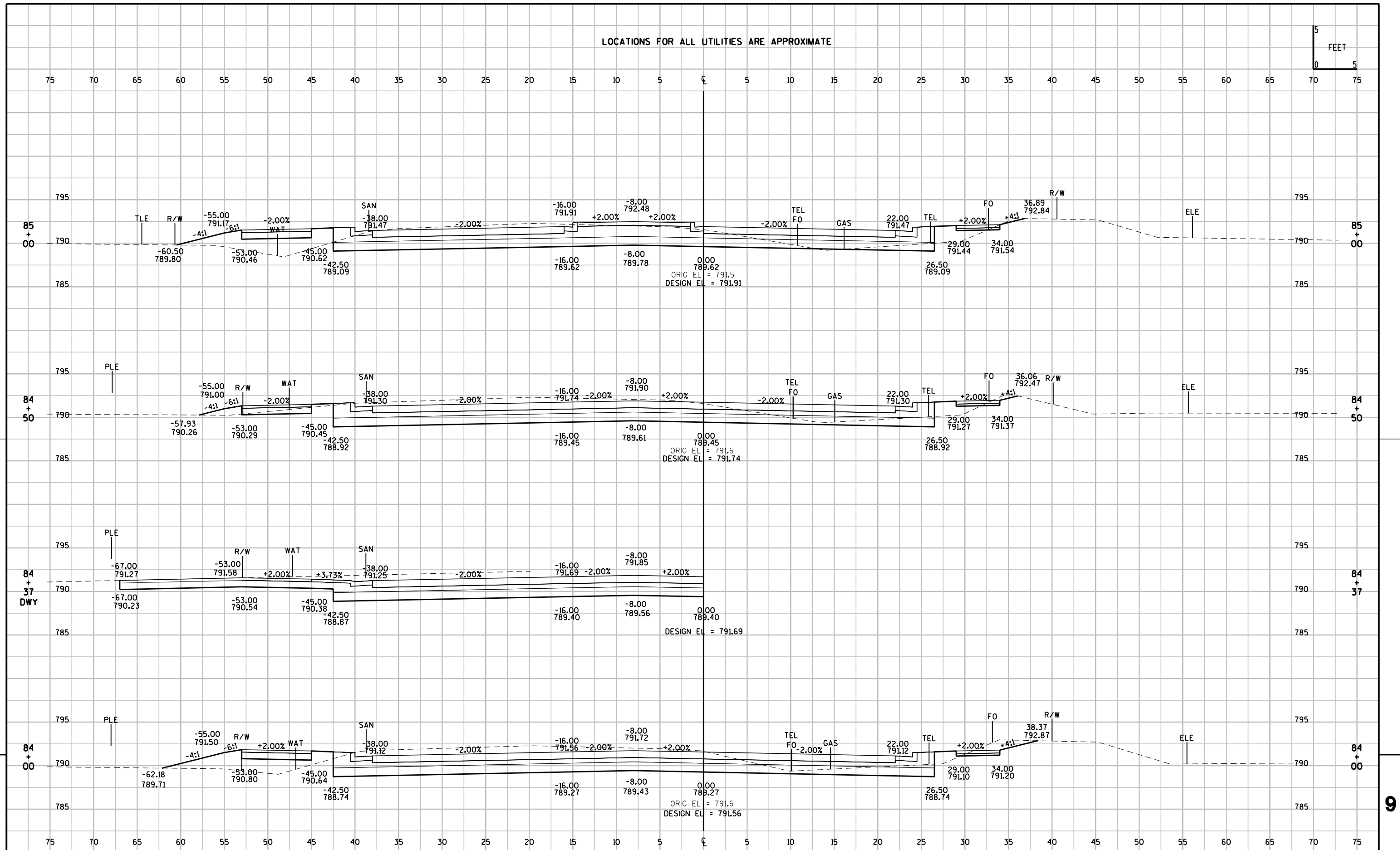
1

LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60, 62,63



LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60, 62.63





PROJECT NO: 4984-01-57

HWY: CTH A

COUNTY: OUTAGAMIE

CROSS SECTIONS:

SHEET:

9

FILE NAME : F:\Transportation\E1672A04\Sheets\XSECT\E1672XS06.dgn PLOT DATE : 10/26/2011 2:29:29 PM PLOT BY : perryd

PLOT DATE : 10/26/2011 2:29:29 PM PLOT BY : perryd

PLOT BY : perryd

PLOT NAME :

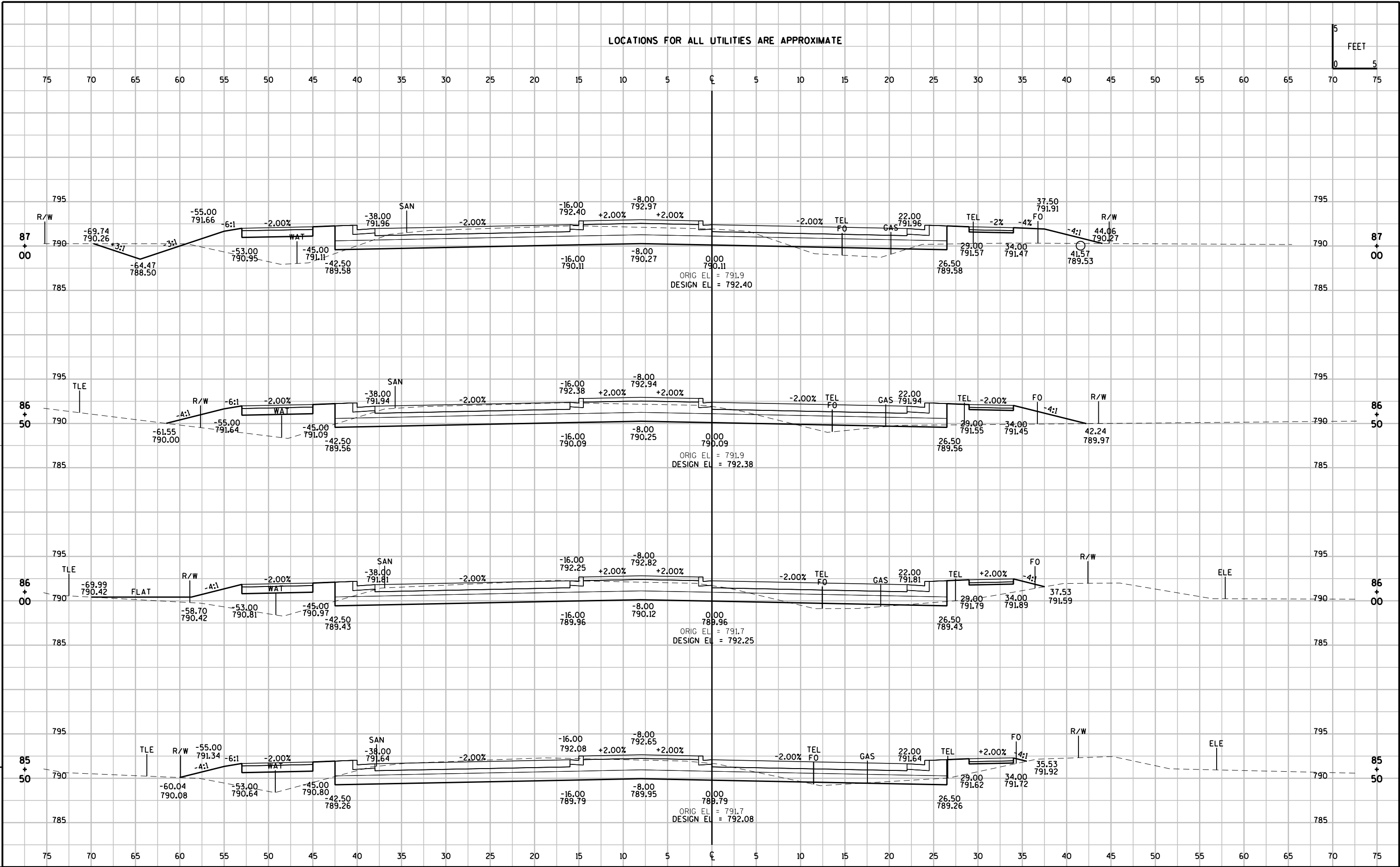
ORG DATE :

Originator : OMNNI ASSOCIATES, INC.

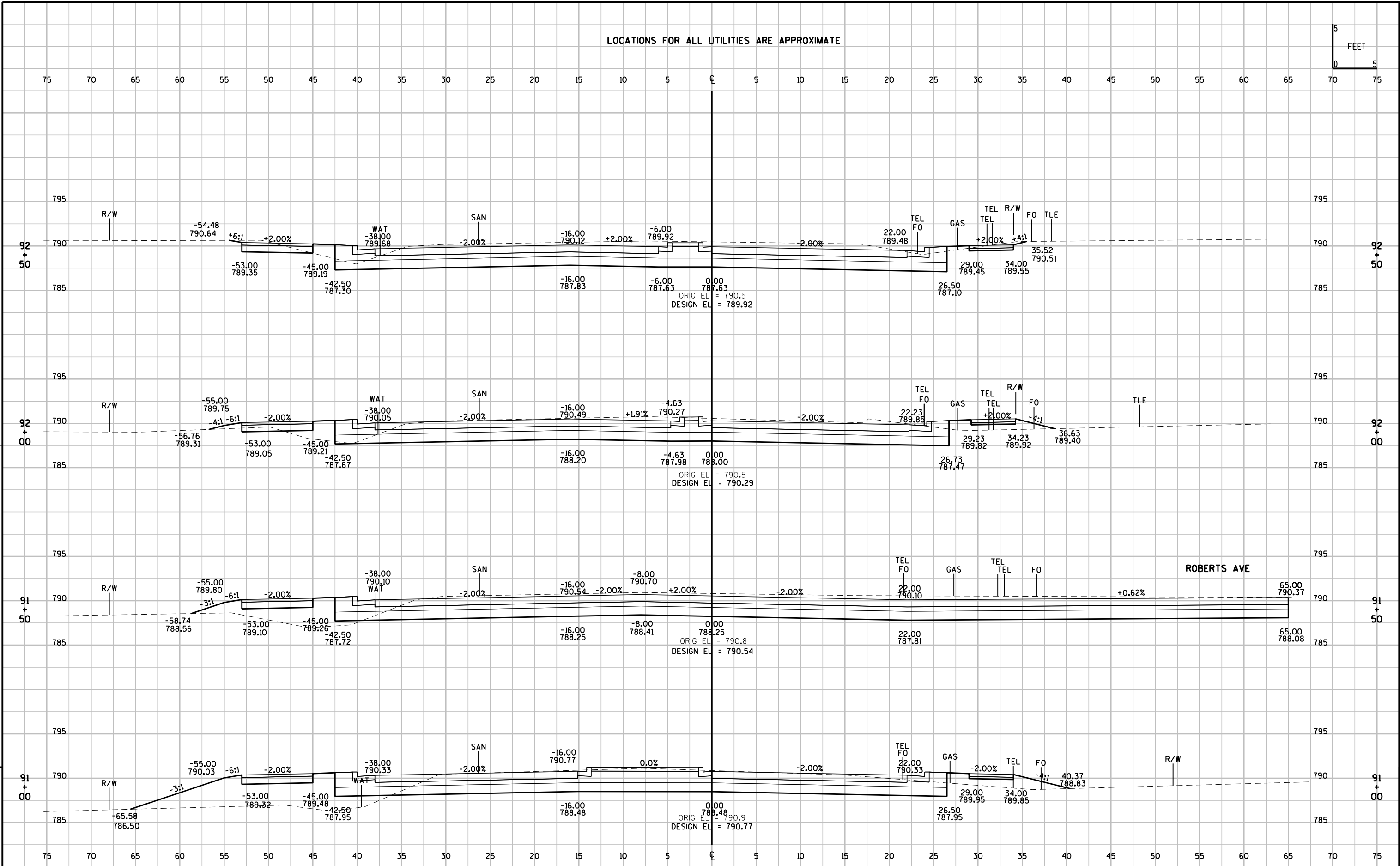
PLOT SCALE : 2.00 " / IN.

WISDOT/CADDS SHEET 21

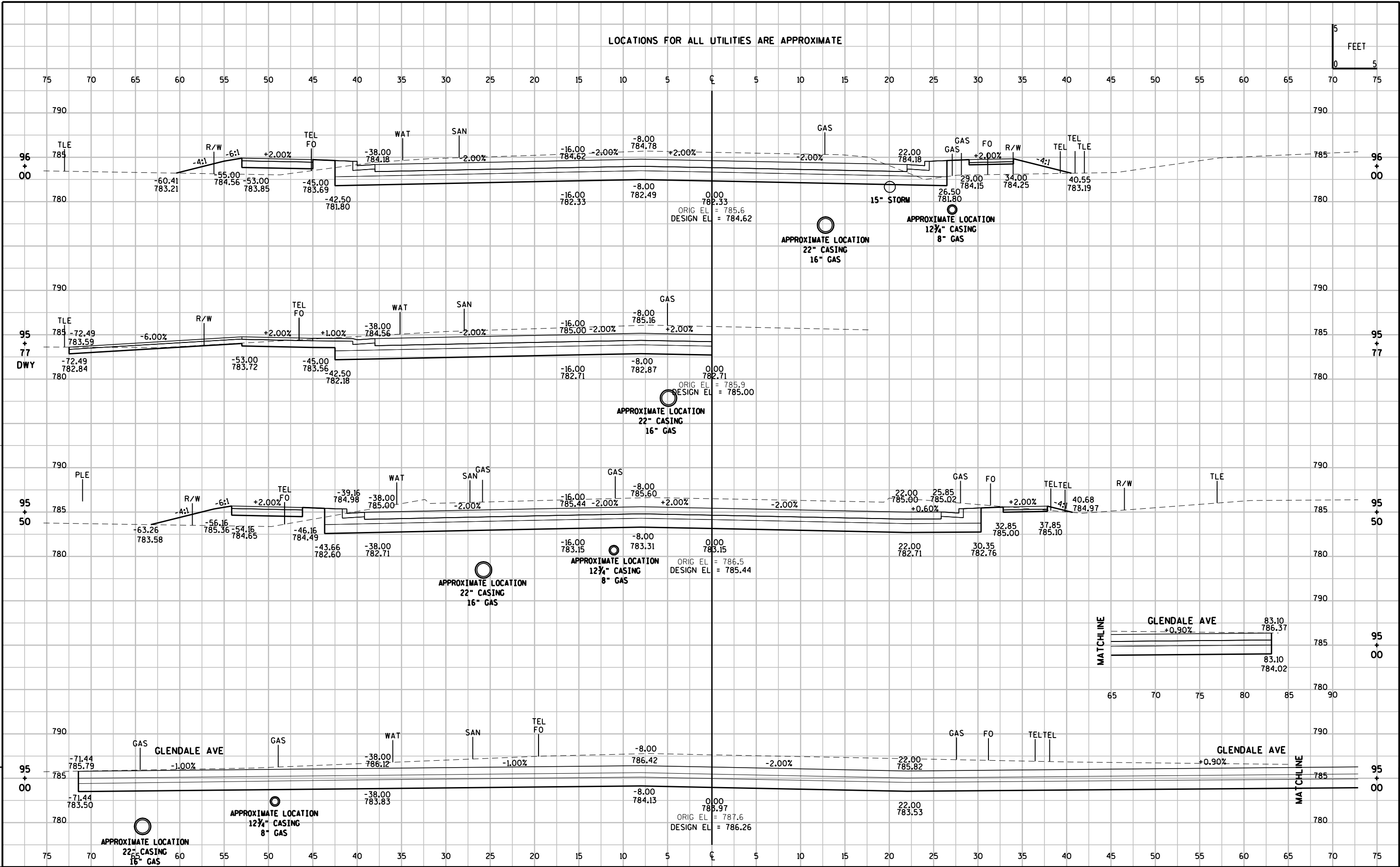
LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60, 62,63



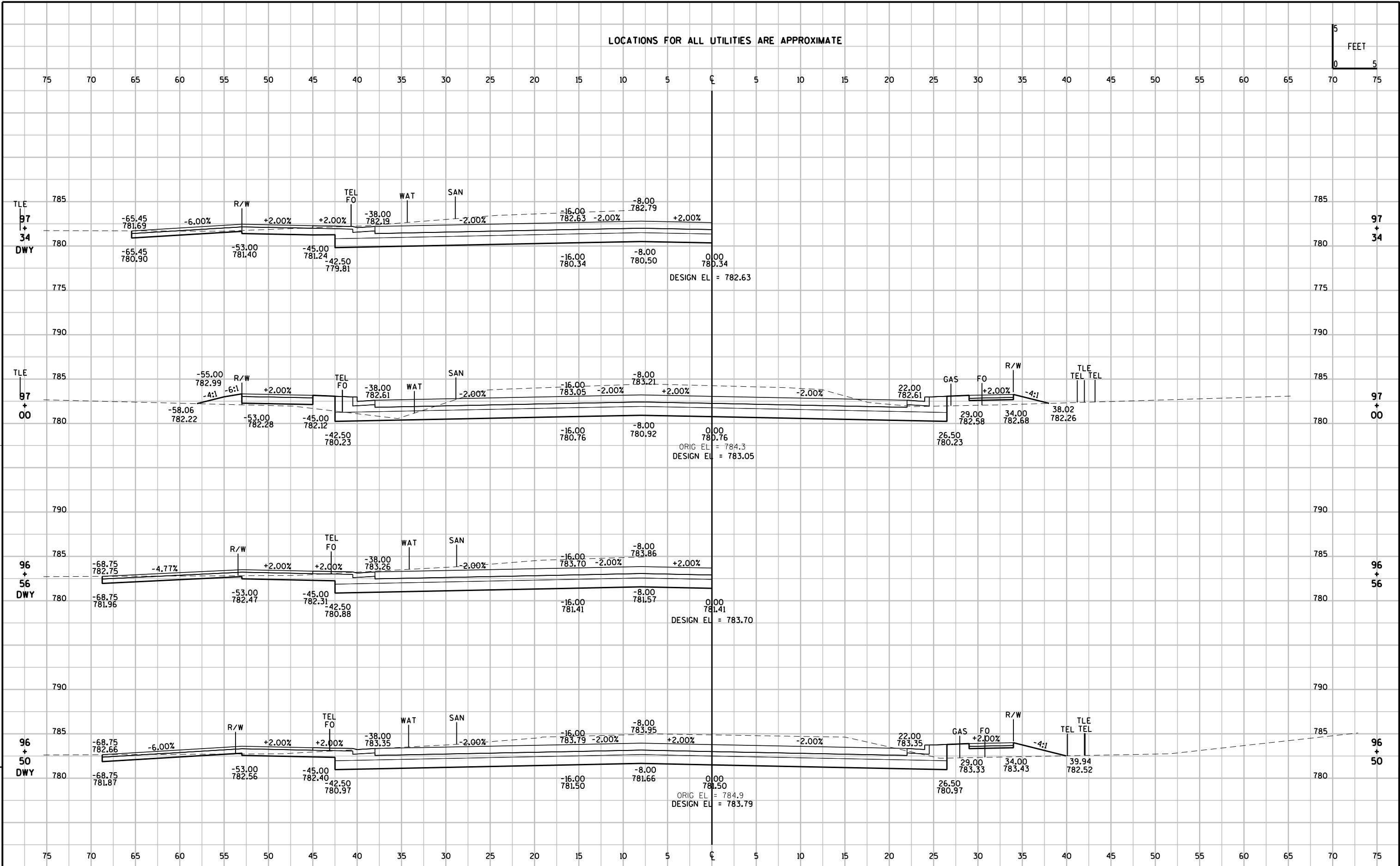
LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60, 62,63



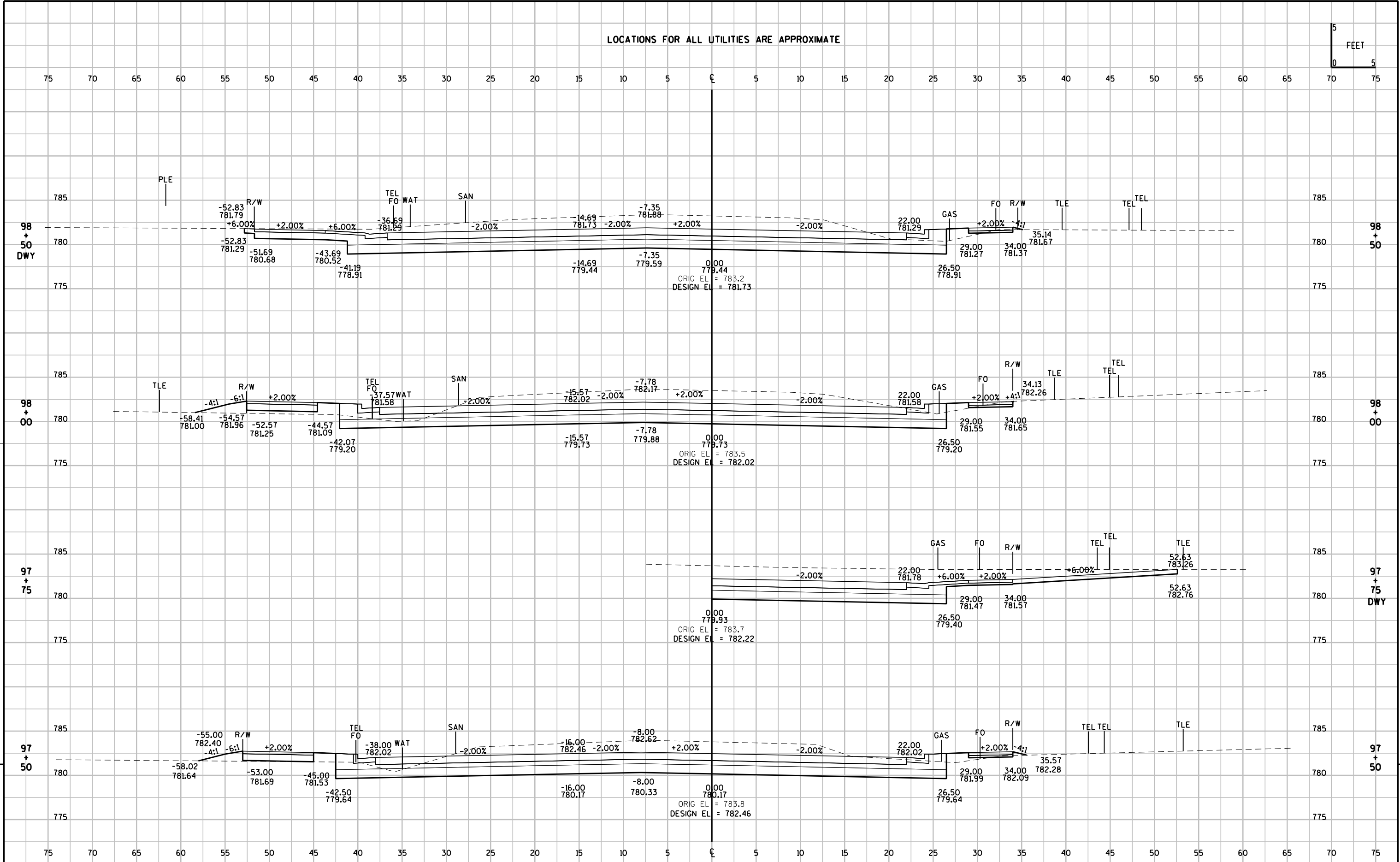
LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60, 62,63



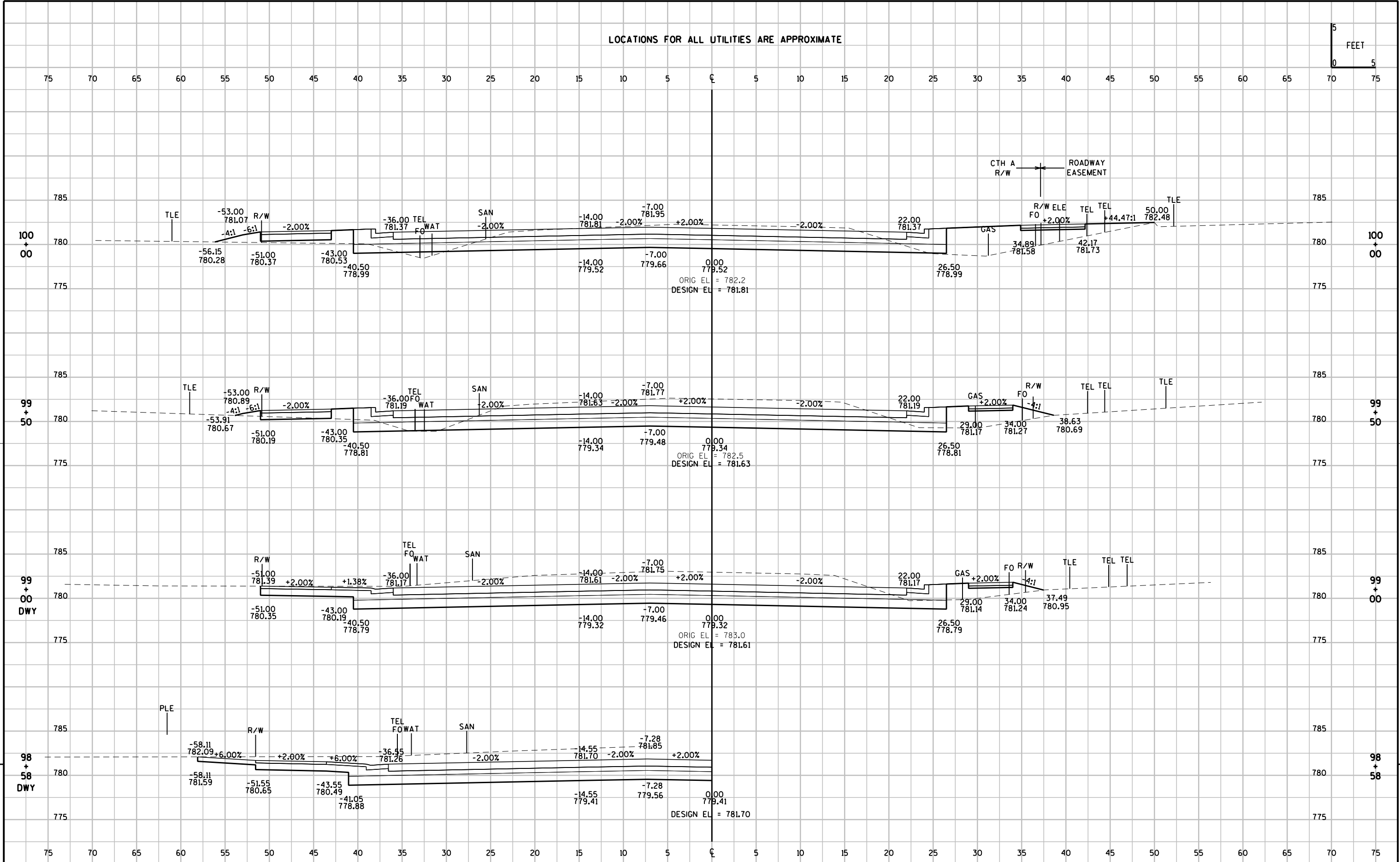
LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60, 62.63



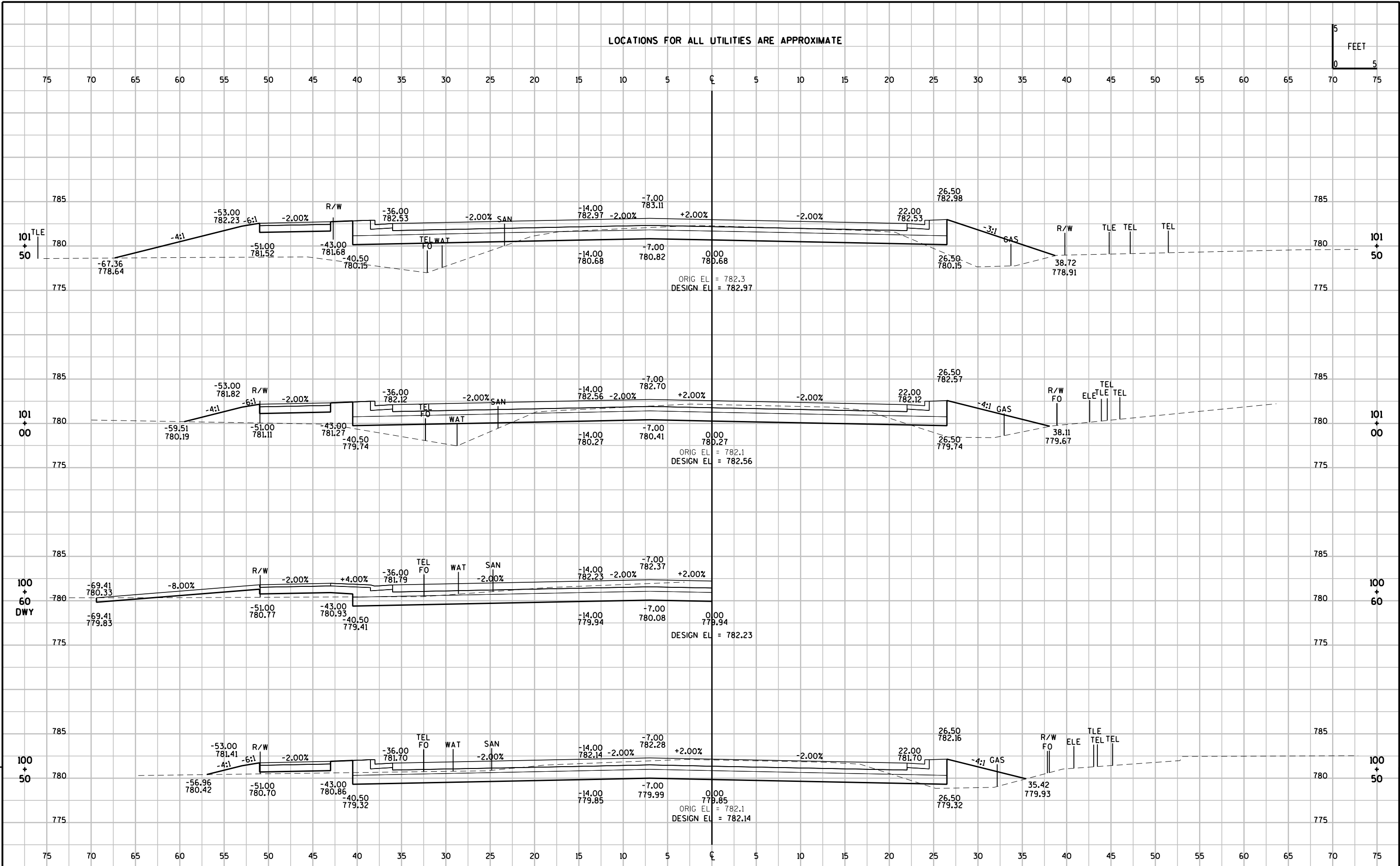
LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60, 62.63



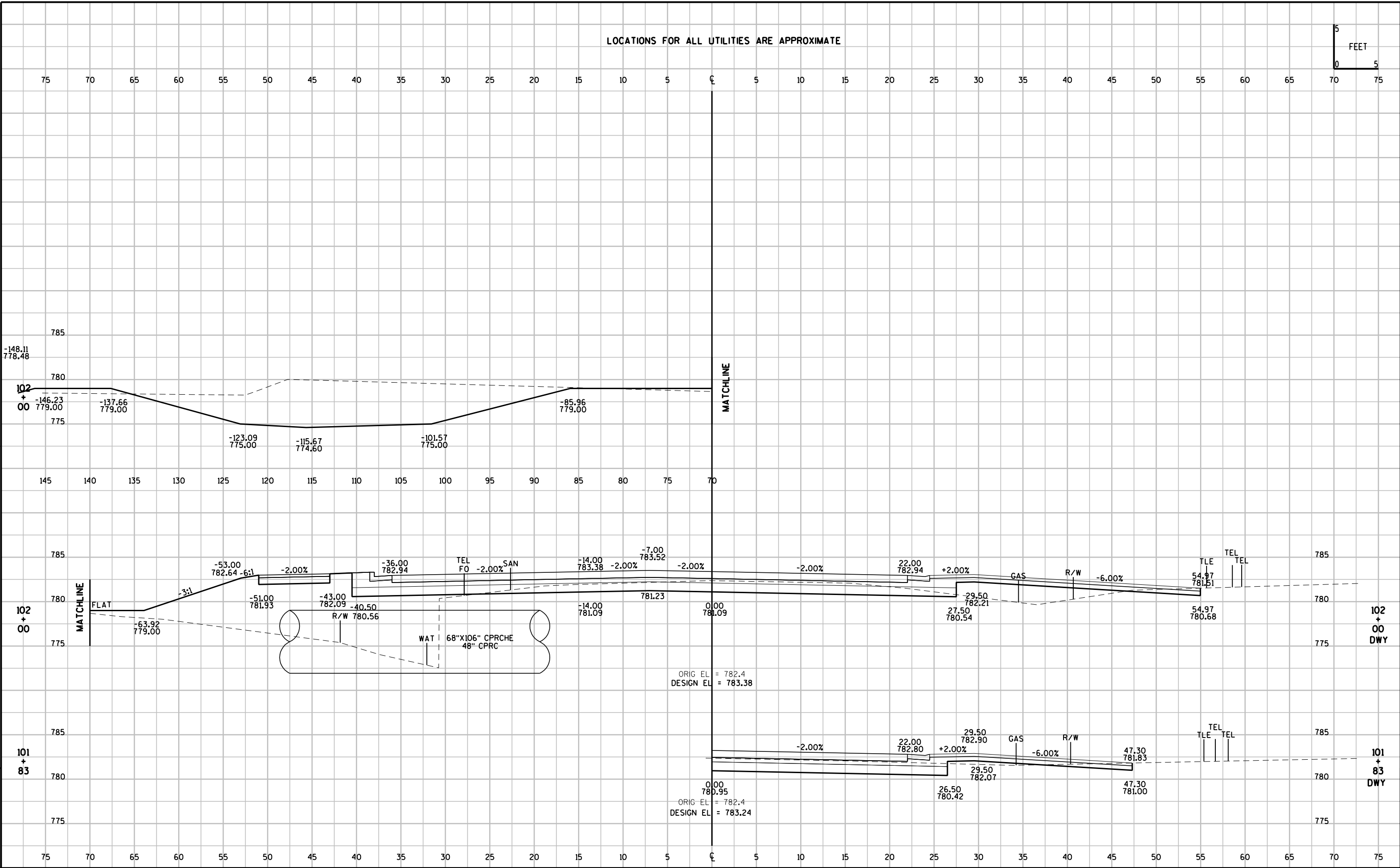
LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60, 62.63



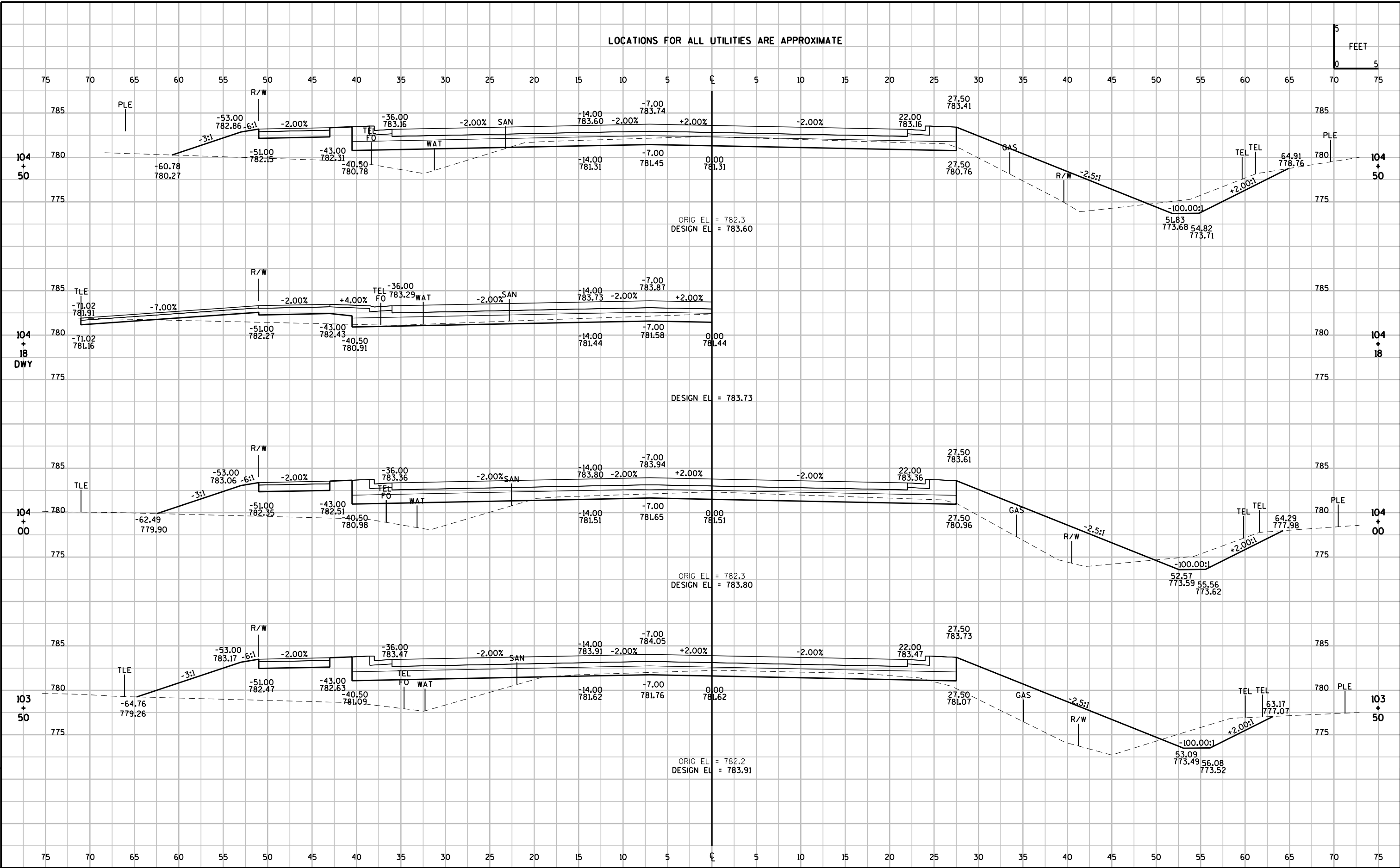
LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60, 62.63



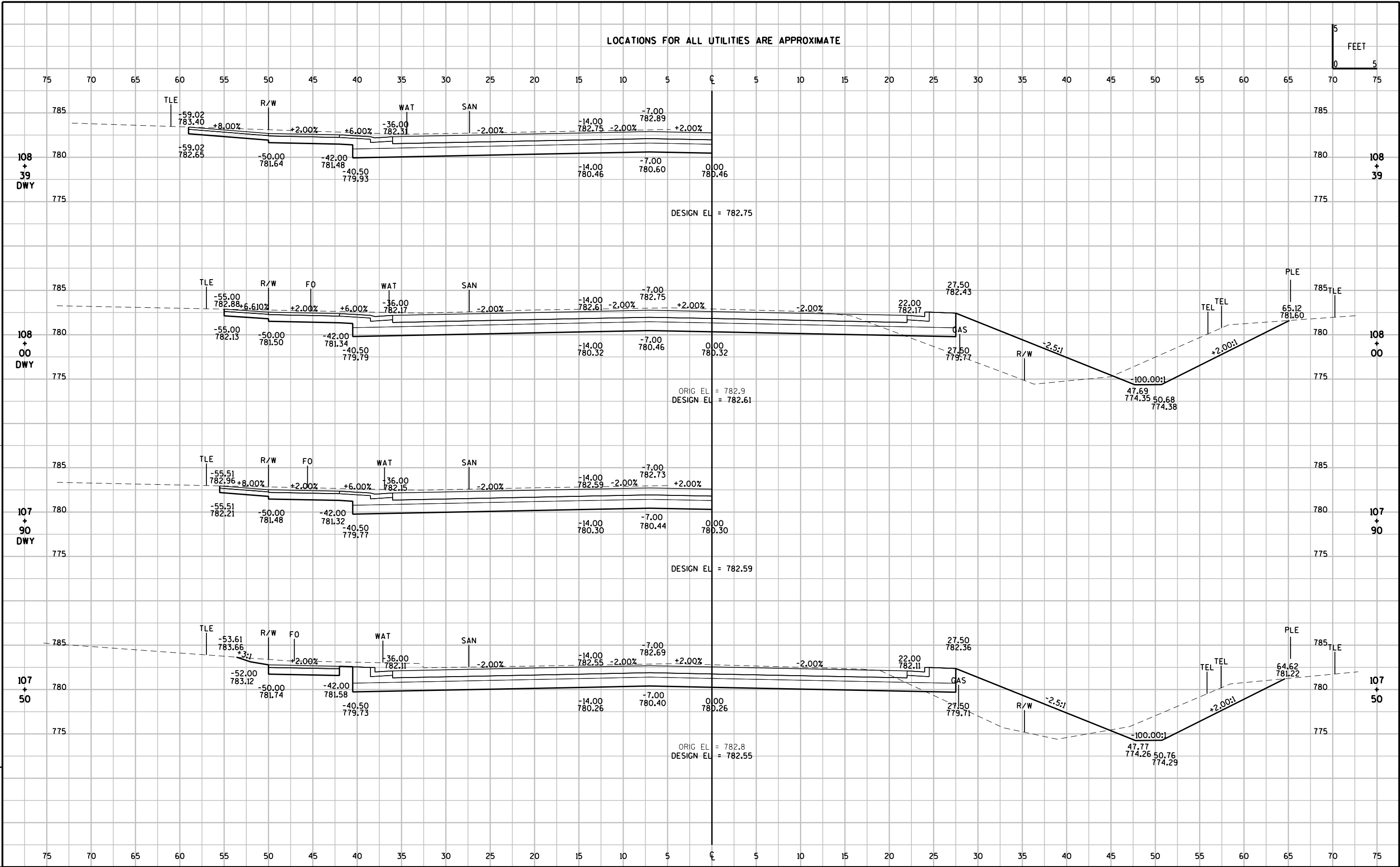
LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60, 62,63



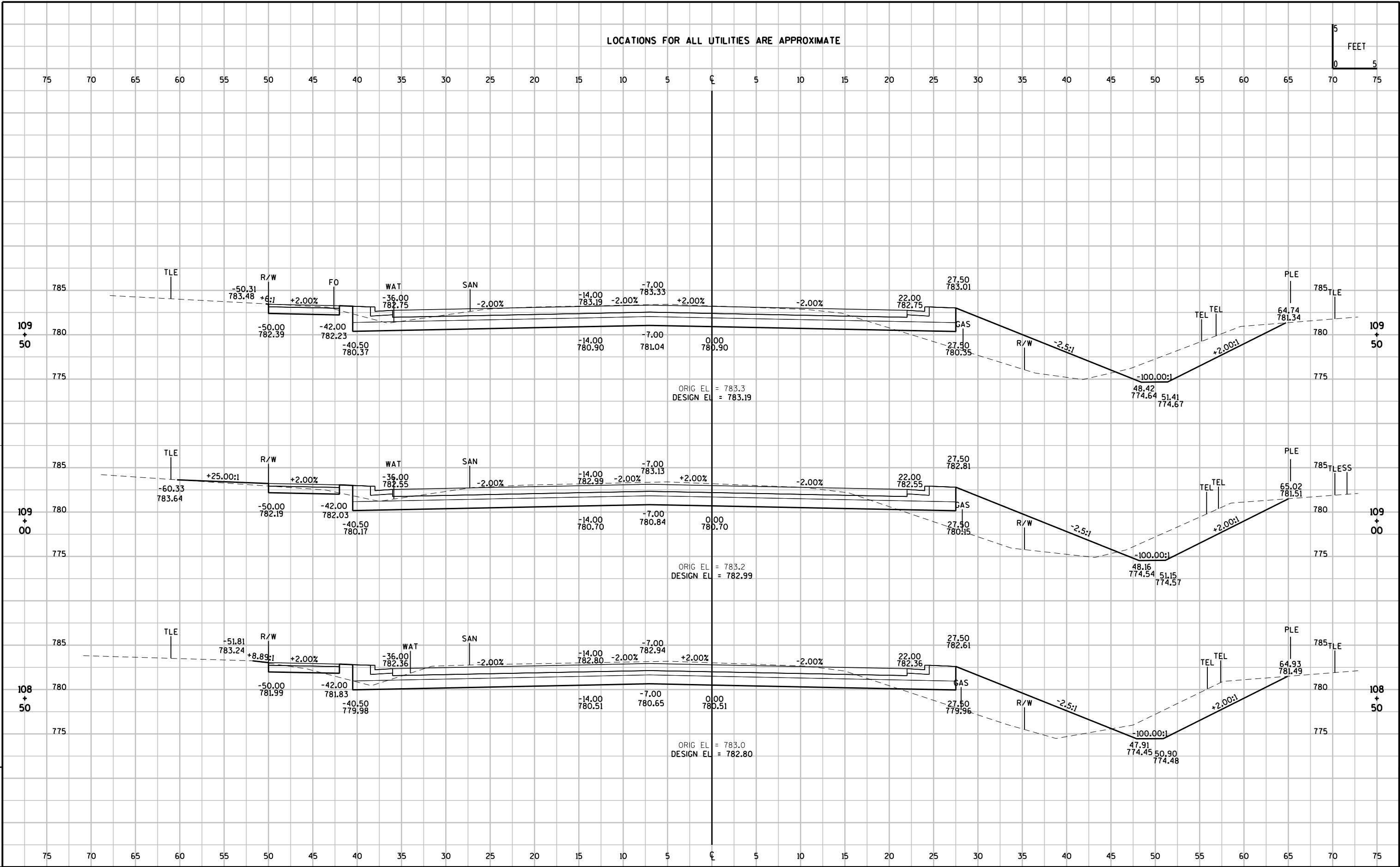
LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60, 62,63



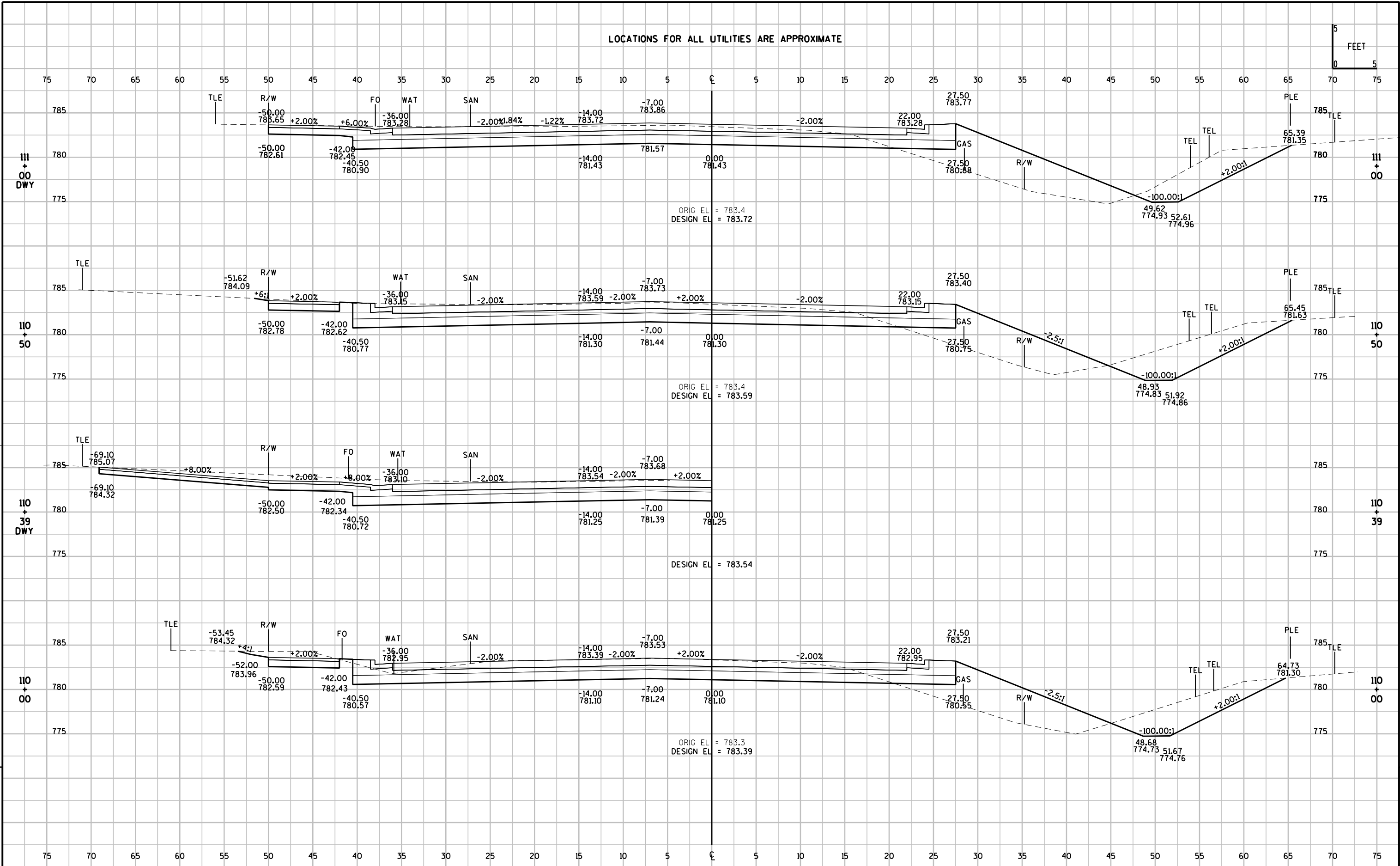
LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60, 62,63



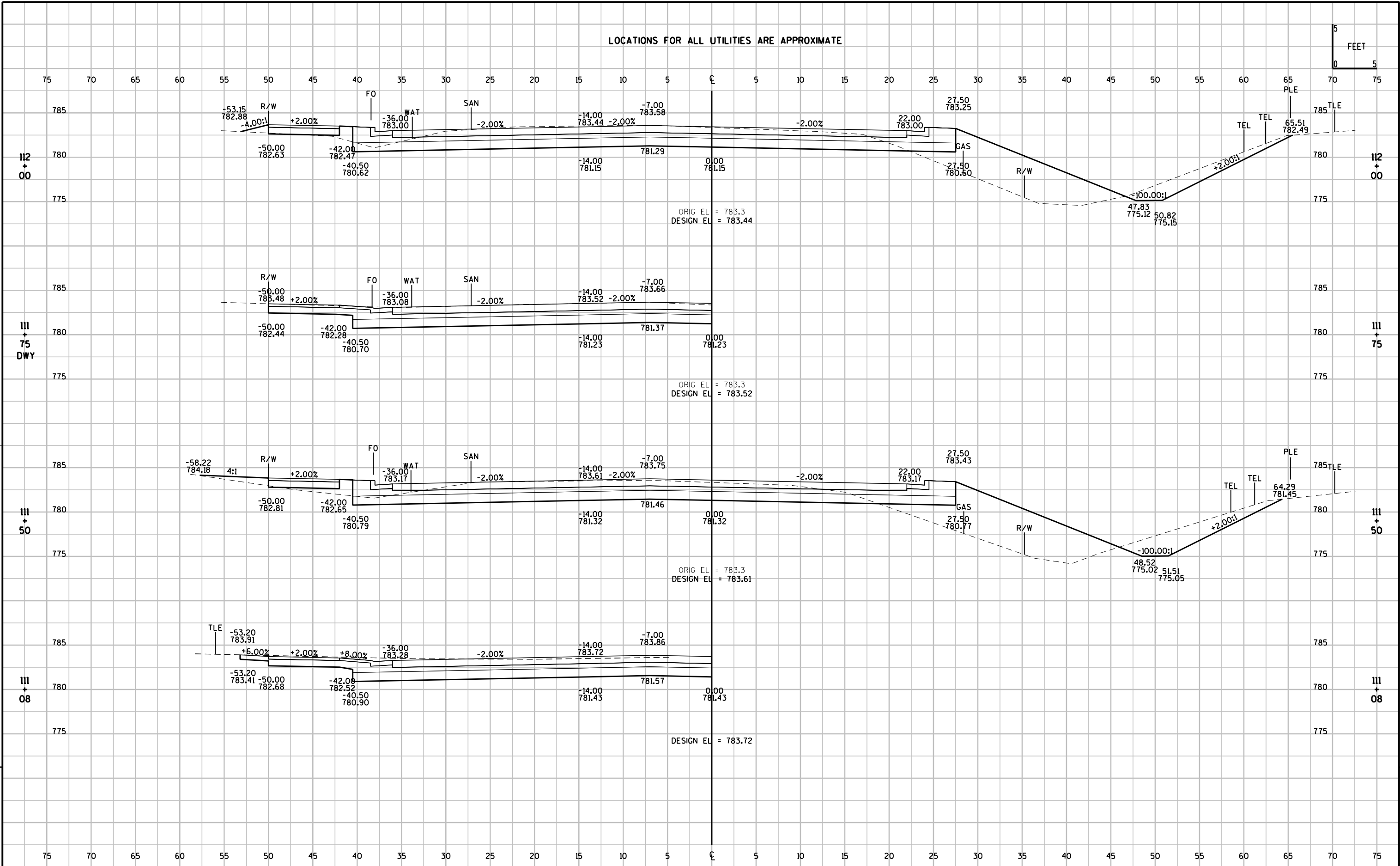
LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60, 62,63



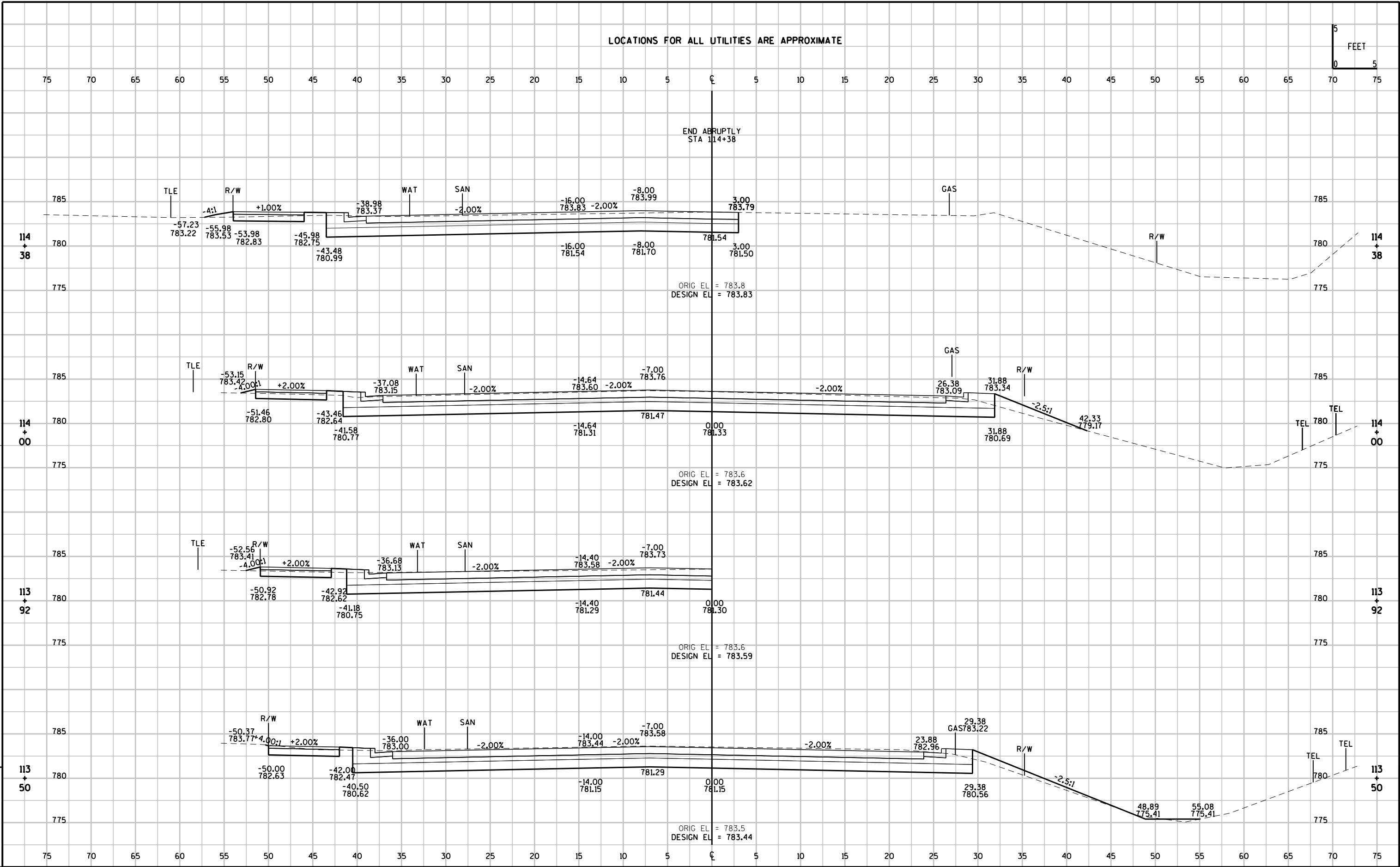
LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60, 62,63

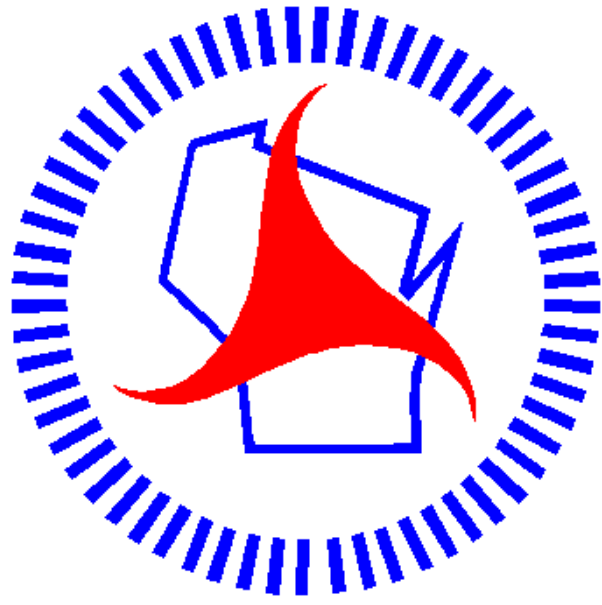


LEVELS ON = 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60, 62,63



LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60, 62,63





Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

<http://www.dot.wisconsin.gov>