WIS

JANUARY 2018

PROJECT ID: 6995-11-71/6995-11-72

COUNTY: WOOD

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 = 274

22

DESIGN DESIGNATION

		WASHINGTON TO HUME	HUME TO VETERANS
A.A.D.T.	2018	= 2200	= 1600
A.A.D.T.	2038	= 2500	= 1800
D.H.V.		= 338	= 266
D.D.		= 59/41	= 59/41
T.		= 31.3%	= 31.3%
DESIGN SPEED		= 40 MPH	= 40 MPH
ESALS		= 3,900,000	= 3,900,000

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- 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

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

C MARSHFIELD, EAST 29TH STREET

HUME AVENUE TO VETERANS PARKWAY

LOCAL STREET

WOOD COUNTY

STATE PROJECT NUMBER
6995-11-71

WASHINGTON AVENUE TO HUME AVENUE

LOCAL STREET

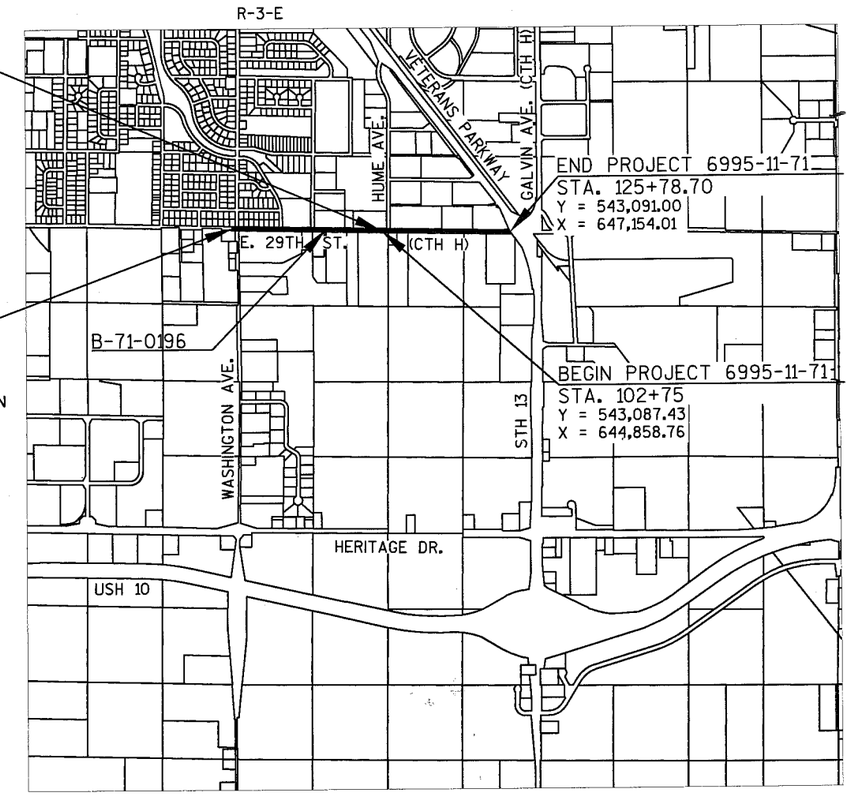
WOOD COUNTY

STATE PROJECT NUMBER
6995-11-72

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6995-11-71	WISC 2018058	1
6995-11-72	WISC 2018055	1

END PROJECT 6995-11-72
STA. 102+75.00
Y = 543,087.43
X = 644,858.76

BEGIN PROJECT 6995-11-72
STA. 76+45.00
Y = 543,139.52
X = 642,229.28



LAYOUT SCALE 0 1/2 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.934 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, WOOD COUNTY, NAD83 (YEAR), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ACCEPTED FOR CITY of MARSHFIELD

Daniel S. Knott
8-1-2017 Dir. Public Works
(Date) (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL
146 North Central Ave. Marshfield, WI 54449
715-384-2133 1-877-[illegible] 715-384-9787

WISCONSIN SEAN M. SPROMBERG E 37771-006 SCHOFIELD, WI PROFESSIONAL ENGINEER

8/1/17
(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	MSA Professional Services, Inc.
Designer	MSA Professional Services, Inc.
Management Consultant	CEDAR CORPORATION

APPROVED FOR THE DEPARTMENT

DATE: 8-1-2017
(Management Consultant Signature)

E

2

GENERAL NOTES

CROSS DRAIN PIPE AND STORM SEWER INVERT ELEVATIONS, LENGTHS AND LOCATIONS AS SHOWN ON THE PLANS AND CROSS SECTIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.

EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO CONSTRUCTION. EROSION CONTROL ITEMS ON THE PLAN ARE AT SUGGESTED LOCATIONS. THE EXACT LOCATIONS AND DIMENSIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD, ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER IN THE FIELD DEEMS THE DEVICES NO LONGER NECESSARY.

SILT FENCE SHALL BE PLACED AS SHOWN ON THE EROSION CONTROL PLAN OR AS DIRECTED BY THE ENGINEER IN THE FIELD. SILT FENCE SHALL BE PLACED PRIOR TO CONSTRUCTION OF THE CULVERT.

TEMPORARY DITCH CHECKS TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER IN THE FIELD.

LANDMARK REFERENCE MONUMENTS INCLUDE THE MONUMENT AND FOUR WITNESS MONUMENTS.

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

SECTION 2 ORDER

GENERAL NOTES
PROJECT OVERVIEW
EXISTING TYPICAL SECTIONS
FINISHED TYPICAL SECTIONS
CONSTRUCTION DETAILS
INTERSECTION DETAILS
CURB RAMP DETAILS
PAVING DETAILS
JOINT DETAILS
GRADING DETAILS
EROSION CONTROL
STORM SEWER
SANITARY SEWER
PERMANENT SIGNING
TRAFFIC CONTROL
DETOUR PLANS
CONTROL POINT TIES

AS-BUILT REFERENCE (YEAR)*

PROJECT: 6995-6-24 (1978)
PROJECT: 1623-09-76 (2002)

*APPROVAL YEAR (NOT CONSTRUCTION)

CONTACTS

DESIGN CONSULTANT:
MSA PROFESSIONAL SERVICES, INC.
146 NORTH CENTRAL AVE., SUITE 201
MARSHFIELD, WI 54449
ATT: SEAN SPROMBERG
EMAIL: sspromberg@msa-ps.com

CITY OF MARSHFIELD:
DIRECTOR OF PUBLIC WORKS
630 SOUTH CENTRAL AVE., SUITE 622
MARSHFIELD, WI 54449
ATT: DAN KNOECK
PHONE: (715) 487-8424
EMAIL: Dan.Knoeck@ci.marshfield.wi.us

CITY OF MARSHFIELD:
CITY ENGINEER
630 SOUTH CENTRAL AVE., SUITE 622
MARSHFIELD, WI 54449
ATT: TOM TURCHI
PHONE: (715) 486-2034
EMAIL: Tom.Turchi@ci.marshfield.wi.us

CITY OF MARSHFIELD:
ASSISTANT CITY ENGINEER
630 SOUTH CENTRAL AVE. SUITE 622
MARSHFIELD, WI 54449
ATT: TIM CASSIDY
PHONE: (715) 487-8424
EMAIL: Tim.Cassidy@ci.marshfield.wi.us

AGENCIES

DEPARTMENT OF NATURAL RESOURCES:
473 GRIFFITH AVENUE
WISCONSIN RAPIDS, WI 54494
ATT: MARC HERSHFIELD
PHONE: (715) 421-7867
EMAIL: marc.hershfield@wisconsin.gov

ARMY CORPS OF ENGINEERS:
1314 CONTRACTORS BOULEVARD
PLOVER, WI 54467
ATT: SAMUEL WOBORIL
PHONE: (651) 290-5878
EMAIL: samuel.j.woboril@usace.army

UTILITIES

WATER:
MARSHFIELD UTILITIES
2000 SOUTH CENTRAL AVE.
MARSHFIELD, WI 54449
ATTN: JOHN RICHMOND
PHONE: (715) 387-1195 EXT. 353
EMAIL: john.richmond@marshfieldutilities.org

WASTEWATER:
CITY OF MARSHFIELD
WASTEWATER UTILITY
2601 EAST 34TH STREET
MARSHFIELD, WI 54449
ATTN: SAM WARP
PHONE: (715) 591-2022
EMAIL: sam.warp@ci.marshfield.wi.us

ELECTRIC:
MARSHFIELD UTILITIES
2000 SOUTH CENTRAL AVE.
MARSHFIELD, WI 54449
ATTN: ERIC LORENZEN
PHONE: (715) 898-2142
CELL: (715) 305-4381
EMAIL:
eric.lorenzen@marshfieldutilities.org

ELECTRIC - HIGH VOLTAGE:
ATC
PO BOX 6113
DEPERE, WI 54115
ATTN: GERALD RHODE
PHONE: (920) 338-6523

GAS:
WE ENERGIES
1921 EIGHTH STREET SOUTH
WISCONSIN RAPIDS, WI 54494
ATTN: RYAN MIENTKE
PHONE: (715) 421-9293
CELL: 715-421-9293
EMAIL: ryan.mientke@we-energies.com

TELEPHONE:
FRONTIER COMMUNICATIONS
1851 N. 14TH AVE.
WAUSAU, WI 54401
ATTN: CAL KLADE
PHONE: (715) 847-1525
CELL: (715) 573-2110

TELEPHONE:
TDS TELECOM
10 COLLEGE AVE., SUITE 2184
APPLETON, WI 54911
ATTN: TIM SMITH
CELL: (920) 655-8747
EMAIL: tim.smith@tdstelecom.com

TELEPHONE:
SOLARUS
440 E. GRAND AVE.
WISCONSIN RAPIDS, WI 54495
ATTN: JARROD BROCK
PHONE: (715) 421-6099
CELL: (715) 570-1338
EMAIL: jbrock@solarus.net

CATV:
CHARTER COMMUNICATIONS
503 E. IVES STREET
MARSHFIELD, WI 54449
ATTN: JESSE GRUNY
PHONE: (715) 898-1616
CELL: (715) 651-5605
EMAIL: jesse.gruny@charter.com

CATV:
PACKERLAND BROADBAND
PO BOX 100
IRON MOUNTAIN, MI 49801
ATTN: RANDY SIMMS
PHONE: (906) 282-3802
PHONE: (800) 236-8434
EMAIL: randy.simms@ccisystems.com

EROSION CONTROL NOTES

RUNOFF COEFFICIENTS FOR THIS PROJECT: EXISTING SIDE SLOPES 0.30, PROPOSED SIDE SLOPES 0.30, EXISTING PAVEMENT 0.95, PROPOSED PAVEMENT 0.95.

TOTAL PROJECT AREA - 9.63 ACRES

TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 7.93 ACRES

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

2

E. 28TH ST.

WASHINGTON AVE.

BUTTERNUT PKWY.

HUME AVE.

PI: 77+38.98

PI: 103+77.7

80 85 90 95 100 105

10W'

E. 29TH ST. (CTH H)

TROPHY LN.

B-71-0196

BEGIN PROJECT 6995-11-72
STA. 76+45.00

END PROJECT 6995-11-72
STA. 102+75.00

UNNAMED TRIBUTARY
TO MILL CREEK

N

HUME AVE.

PI: 103+77.73

VETERANS PARKWAY (STH 13)
MULTI USE PATH

WIS CENTRAL LIMITED

GALVIN AVE. (CTH H)

100 105 110 115 120 125

E. 29TH ST. (CTH H)

BEGIN PROJECT 6995-11-71
STA. 102+75.00

END PROJECT 6995-11-71
STA. 125+78.70

MULTI USE PATH

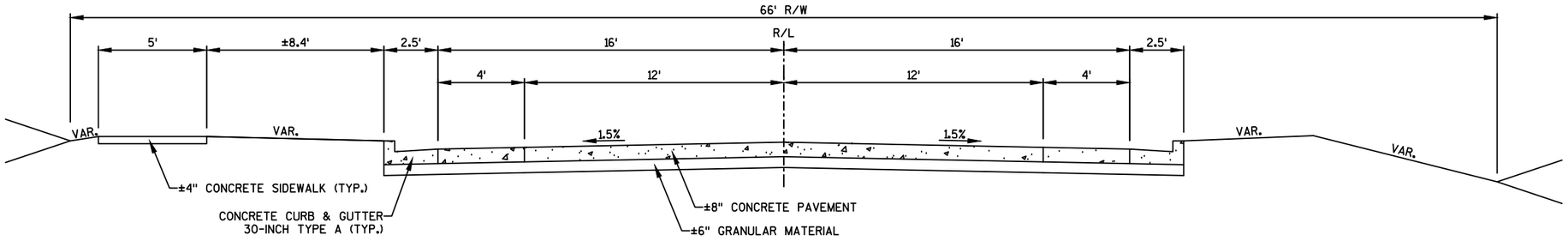
UNNAMED TRIBUTARY
TO MILL CREEK

N

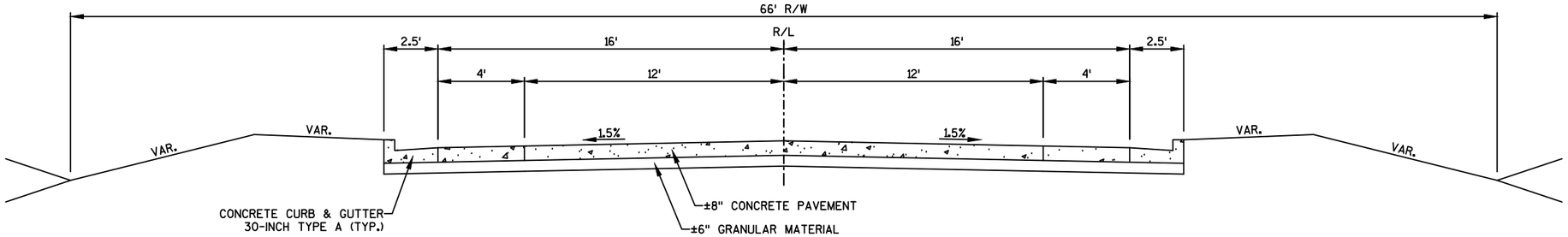
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\020201_PO.DWG
LAYOUT NAME - 020201_PO

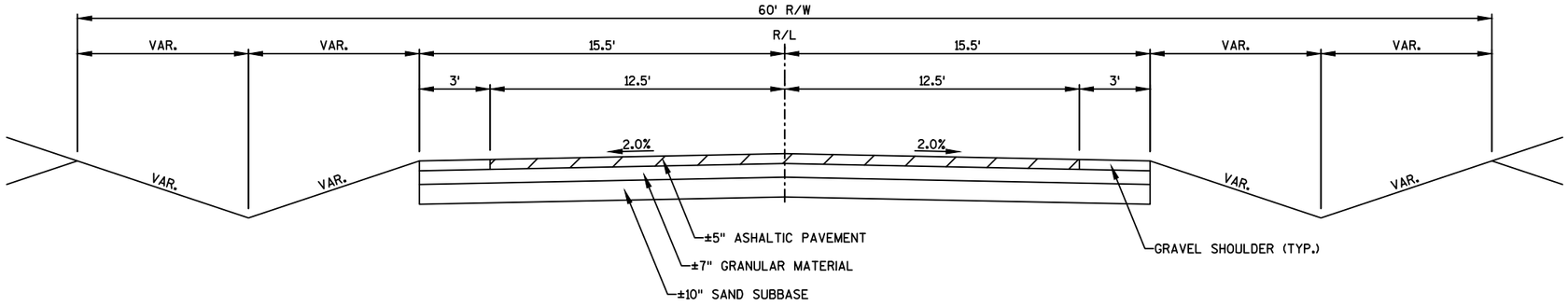
PLOT DATE : 7/3/2017 10:05 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:200 FT



EXISTING TYPICAL SECTION
E. 29TH STREET
STA. 76+45 - STA. 85+00

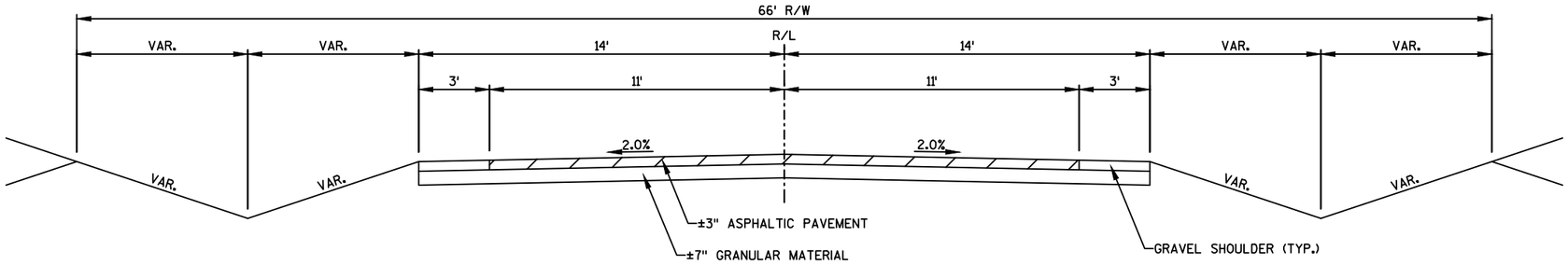


EXISTING TYPICAL SECTION
E. 29TH STREET
STA. 85+00 - STA. 125+42



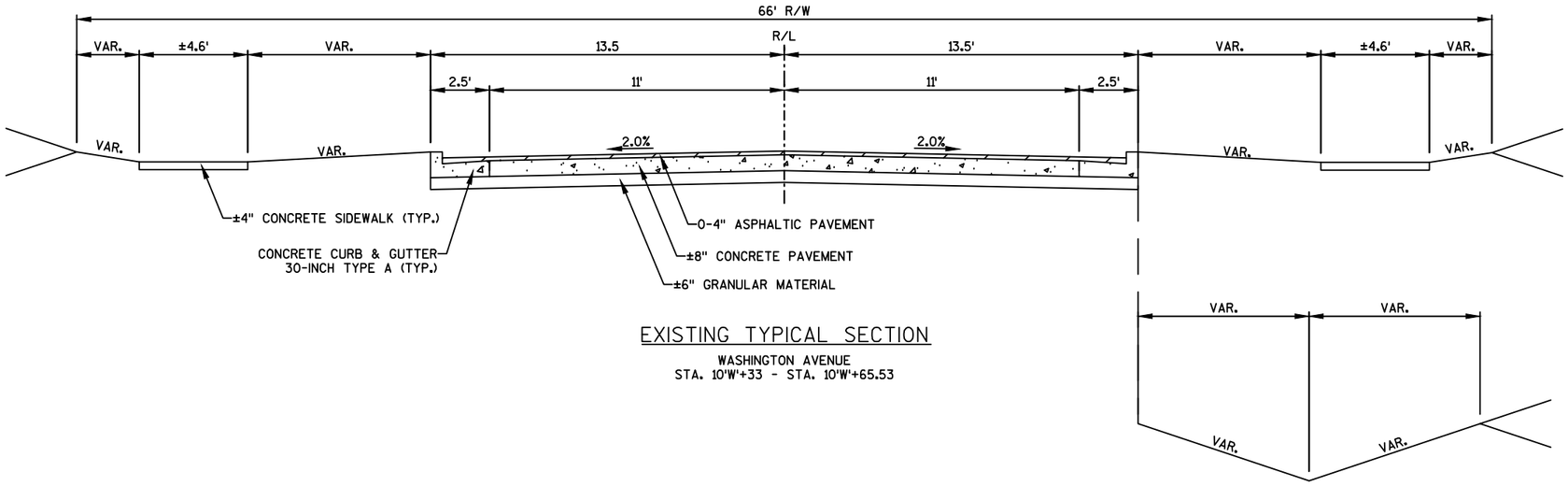
EXISTING TYPICAL SECTION
HUME AVENUE
STA. 10'H'+77 - STA. 12'H'+00

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	EXISTING TYPICAL SECTIONS	SHEET 4	E



EXISTING TYPICAL SECTION

WASHINGTON AVENUE
STA. 8'W'+69 - STA. 9'W'+67

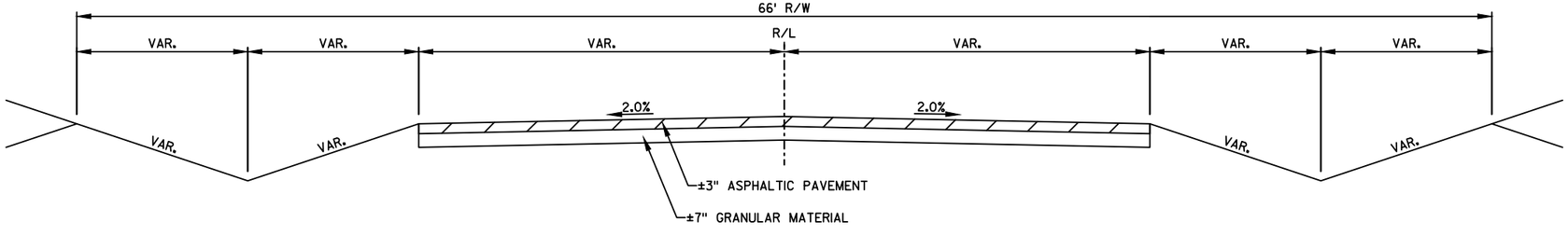


EXISTING TYPICAL SECTION

WASHINGTON AVENUE
STA. 10'W'+33 - STA. 10'W'+65.53

EXISTING TYPICAL SECTION

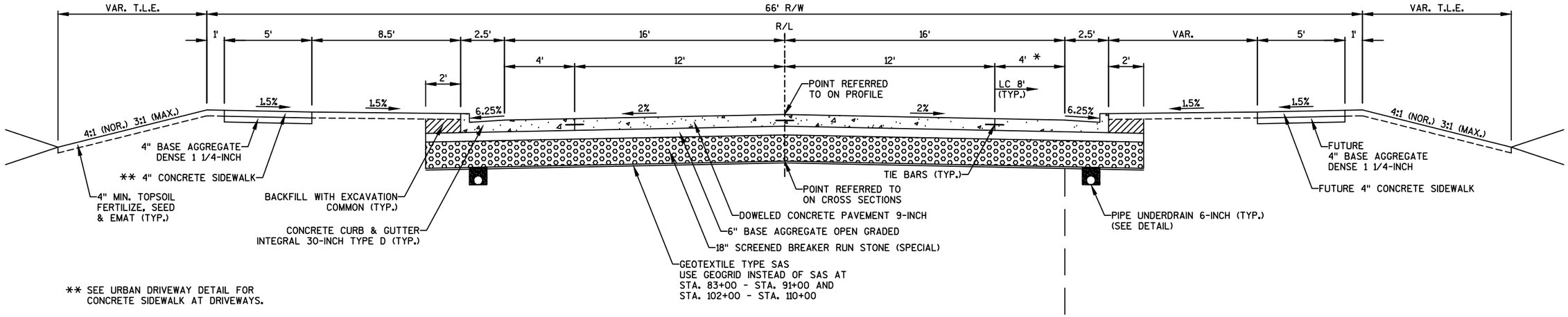
E. 29TH STREET
STA. 76+45 - STA. 76+75



EXISTING TYPICAL SECTION

BUTTERNUT PARKWAY

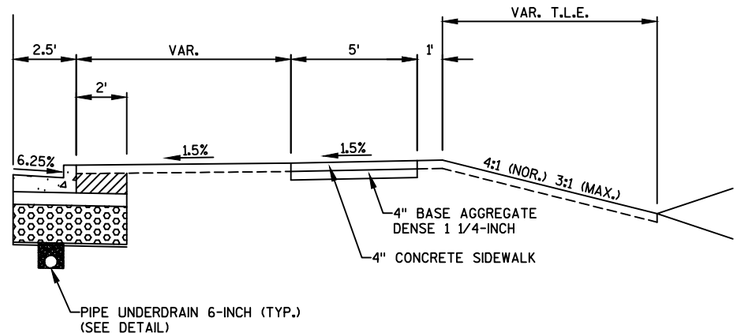
PROJECT NO:6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	EXISTING TYPICAL SECTIONS	SHEET 5	E



** SEE URBAN DRIVEWAY DETAIL FOR CONCRETE SIDEWALK AT DRIVEWAYS.

FINISHED TYPICAL SECTION

E. 29TH STREET
STA. 76+45 - STA. 123+50



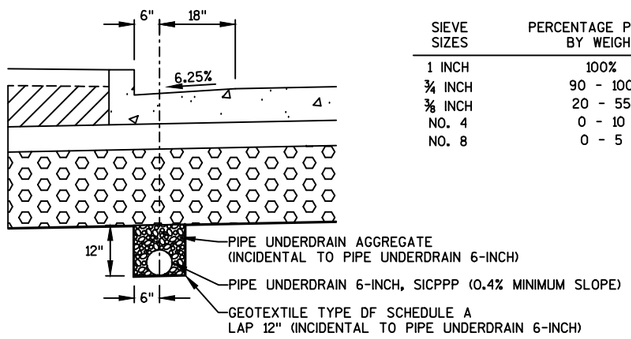
FINISHED TYPICAL SECTION

E. 29TH STREET
STA. 113+39 - STA. 123+50

* VARIES 4'-8' STA. 119+74.6 - 121+44.1, RT

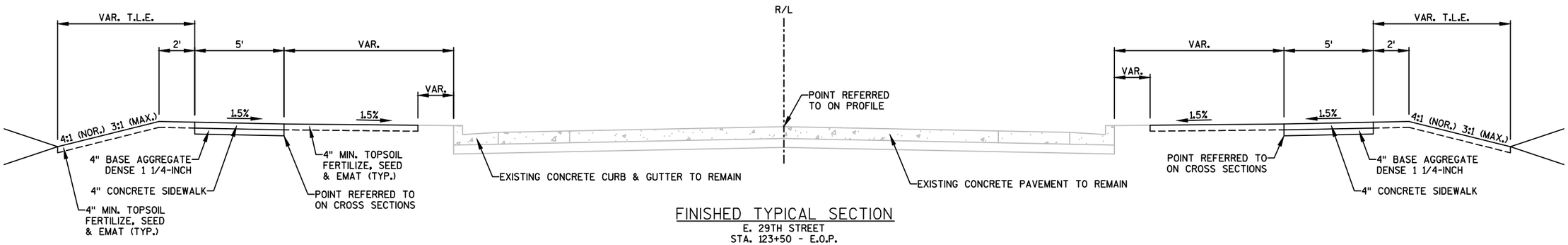
PIPE UNDERDRAIN AGGREGATE SHALL BE CLEAN STONE AGGREGATE MEETING THE FOLLOWING GRADATION:

SIEVE SIZES	PERCENTAGE PASSING BY WEIGHT
1 INCH	100%
¾ INCH	90 - 100
⅜ INCH	20 - 55
NO. 4	0 - 10
NO. 8	0 - 5



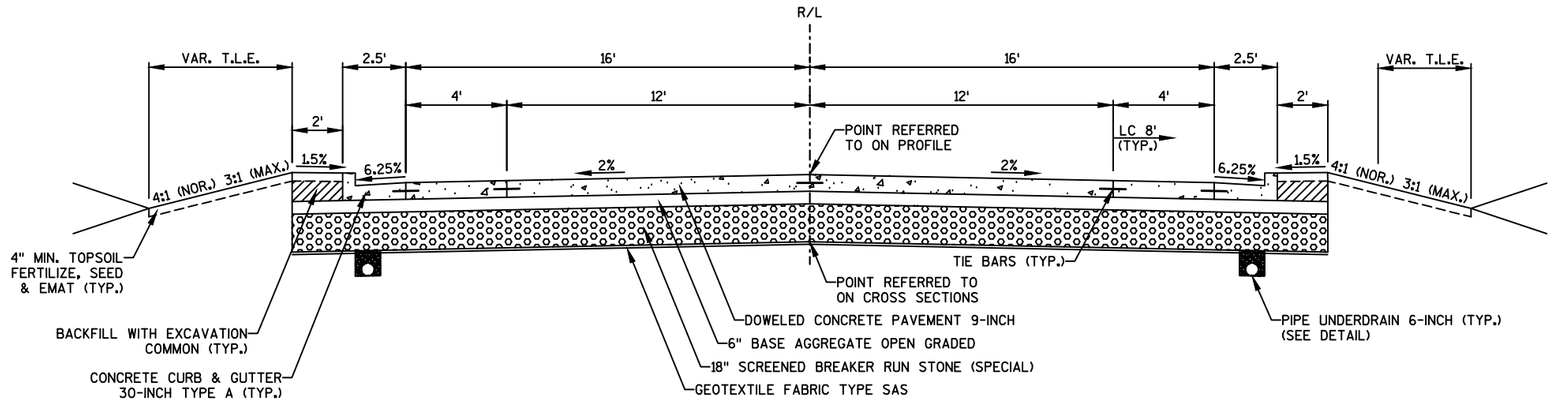
PIPE UNDERDRAIN 6-INCH DETAIL

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	FINISHED TYPICAL SECTIONS	SHEET 6	E



FINISHED TYPICAL SECTION

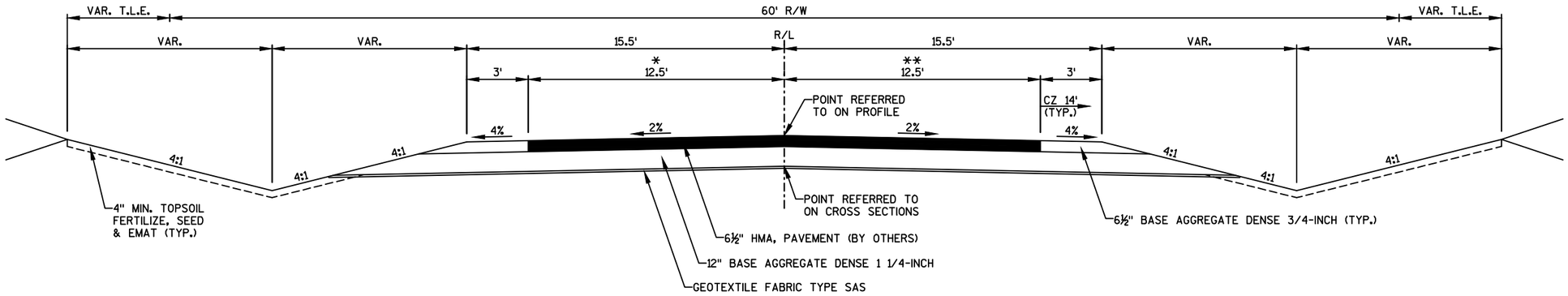
E. 29TH STREET
STA. 123+50 - E.O.P.



FINISHED TYPICAL SECTION

HUME AVENUE
STA. 10'H'+16 - STA. 10'H'+77

PROJECT NO: 6995-11-71	HWY: E. 29TH STREET	COUNTY: WOOD	FINISHED TYPICAL SECTIONS	SHEET 7	E

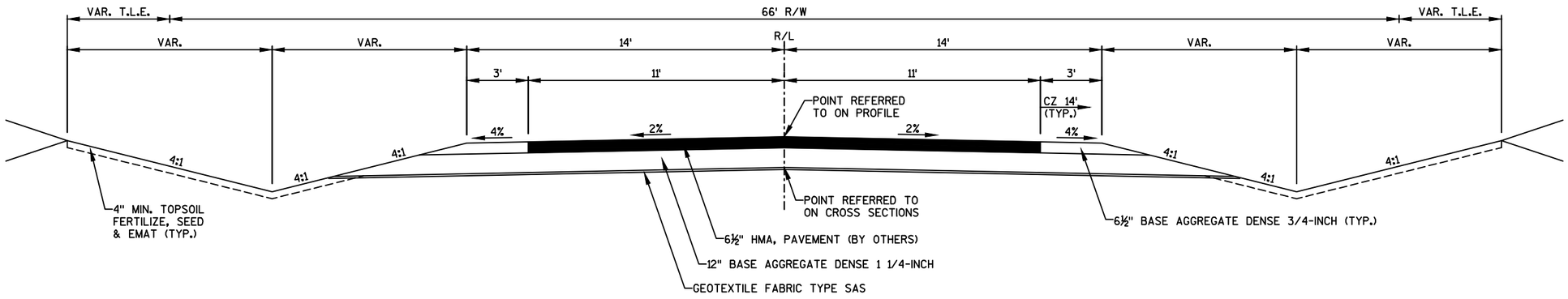


* VARIES 12.5'-18' STA. 10+77 - 11+32, LT

** VARIES 12.5'-18' STA. 10+77 - 11+57, RT

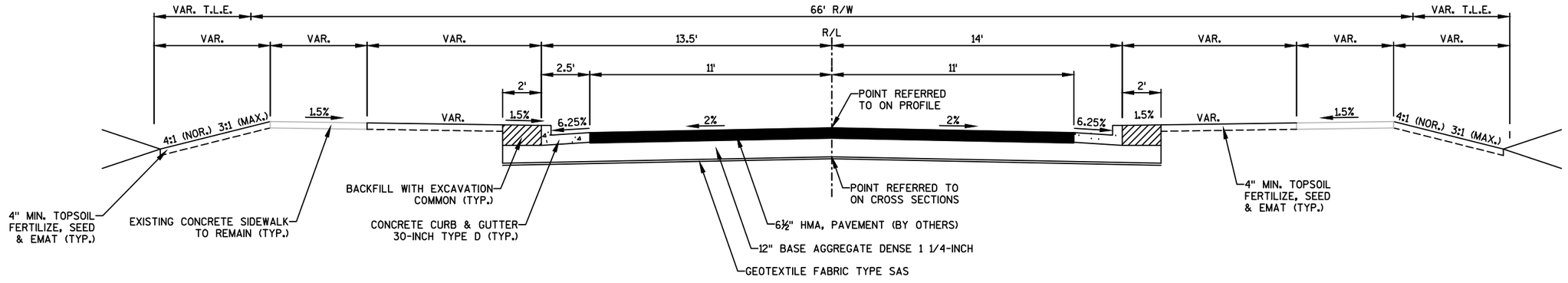
FINISHED TYPICAL SECTION

HUME AVENUE
STA. 10'H'+77 - STA. 12'H'+00



FINISHED TYPICAL SECTION

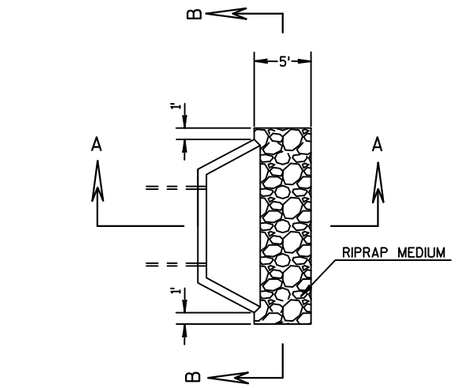
WASHINGTON AVENUE
STA. 8'W'+69 - STA. 9'W'+38

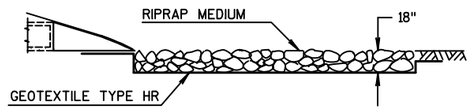


FINISHED TYPICAL SECTION

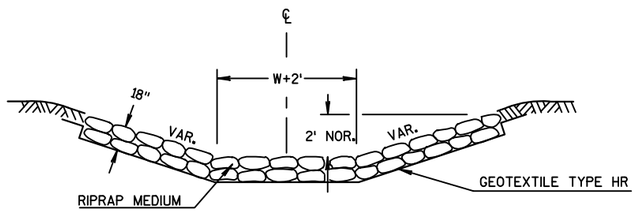
WASHINGTON AVENUE
STA. 10'W'+46 - STA. 10'W'65.53

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	FINISHED TYPICAL SECTIONS	SHEET 8	E



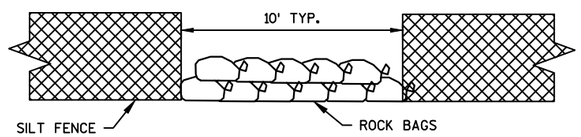


SECTION A-A



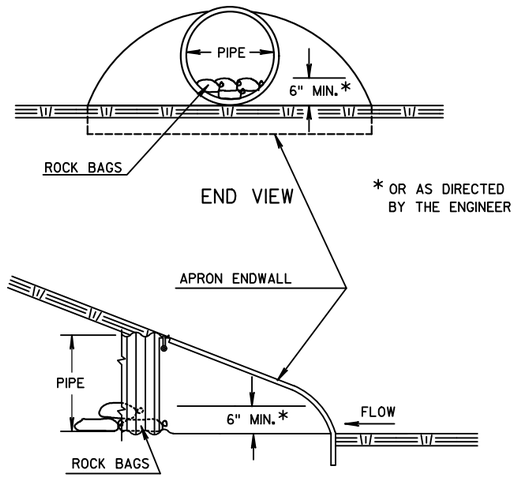
SECTION B-B

RIPRAP MEDIUM AT ENDWALL DETAIL



SILT FENCE RELIEF

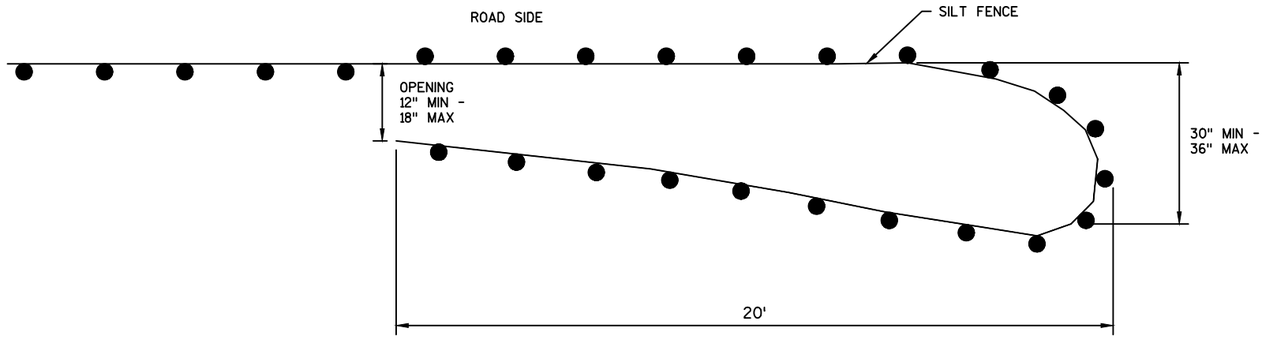
PAID AS ROCK BAGS EACH,
30 PER LOCATION TYP.



SIDE VIEW

CULVERT PIPE DITCH CHECK

PROJECT NO:6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CONSTRUCTION DETAIL	SHEET 9	E



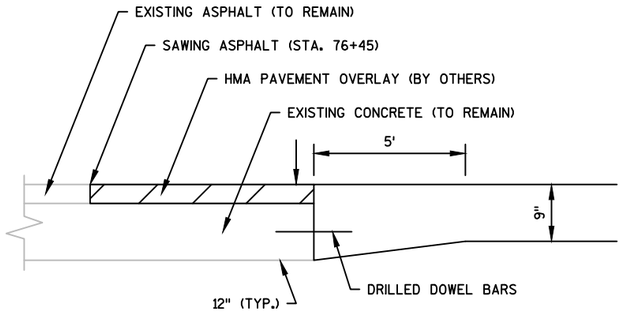
PLAN VIEW

GENERAL NOTES:

THE PURPOSE OF THE TURN-AROUNDS ARE TO REDIRECT SMALL ANIMALS AWAY FROM THE CONSTRUCTION ZONE. SILT FENCE POSTS FOR THE TURN-AROUND SHALL BE ON THE OUTSIDE OF THE TURN-AROUND AND TRENCHED IN ACCORDING TO SILT FENCE REQUIREMENTS.

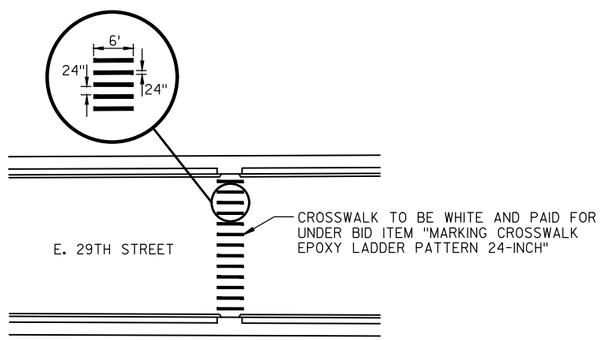
TEMPORARY SMALL ANIMAL TURN-AROUND

(INCLUDED IN SILT FENCE BID ITEM)



BUTT JOINT

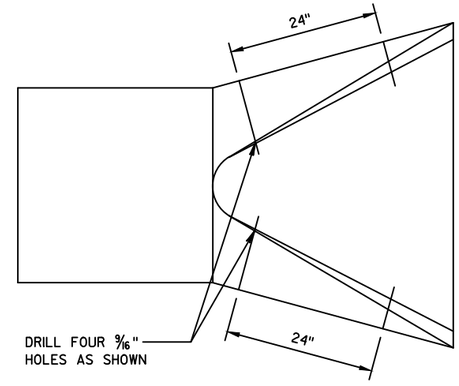
STA. 76+70

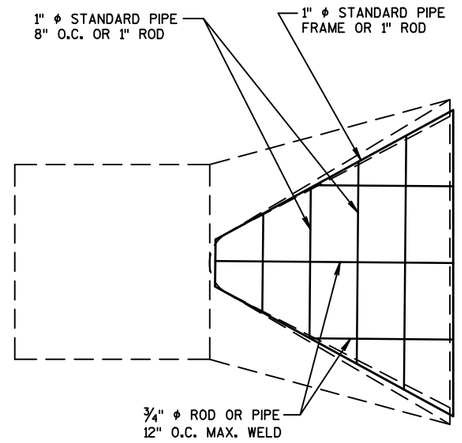


NOTES:

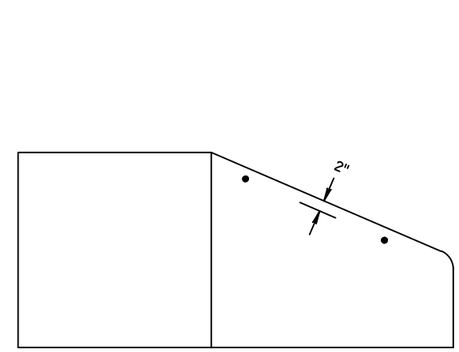
1. CROSSWALKS HAVE 24-INCH WIDE, 6-FOOT LONG CROSSWALKS PLACED IN LINE WITH THE TRAFFIC FLOW.
2. THE SPACING OR GAP BETWEEN THE CROSSBARS IS 24-INCHES.
3. THE CROSSBARS SHOULD BE PLACED IN A MANNER THAT MINIMIZES CONTACT WITH VEHICLES TIRES.

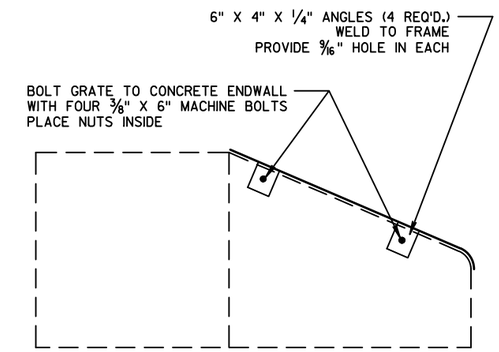
CROSSWALK PAVEMENT MARKING DETAIL

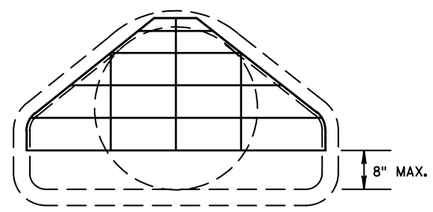




AT EACH PIPE

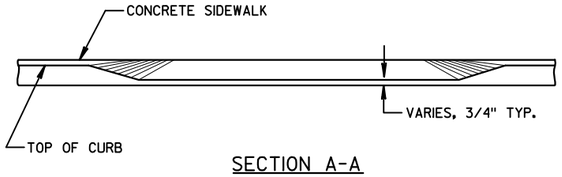




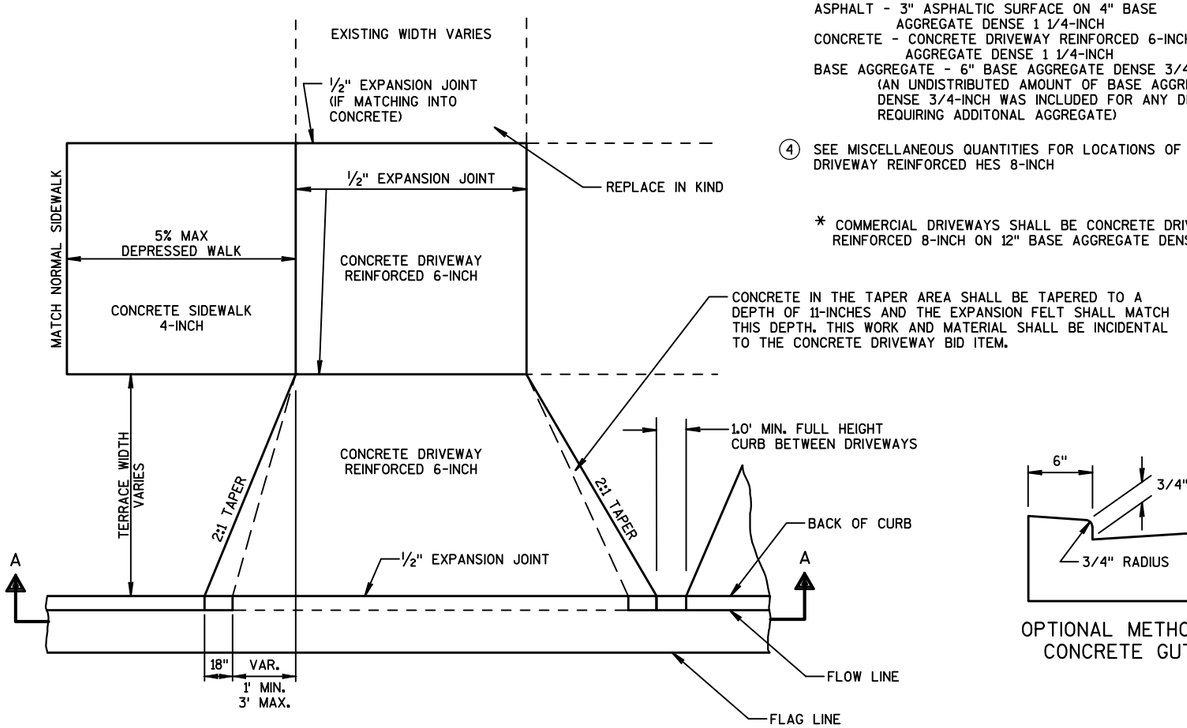


PIPE GRATE DETAIL

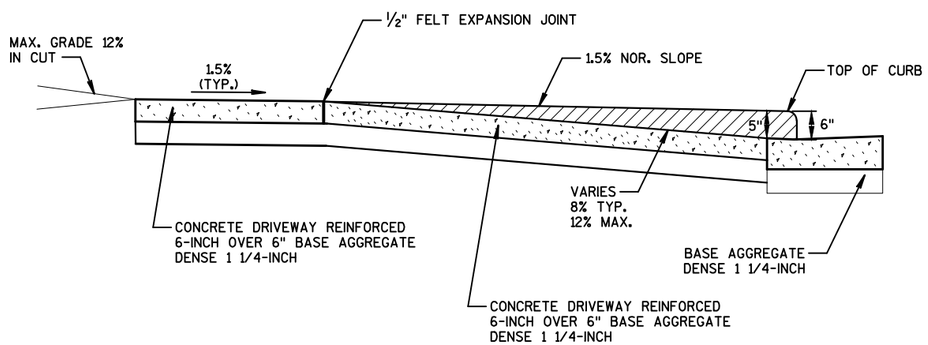
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CONSTRUCTION DETAIL	SHEET 10	E



SECTION A-A



PLAN



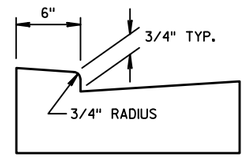
PROFILE

URBAN DRIVEWAY DETAIL

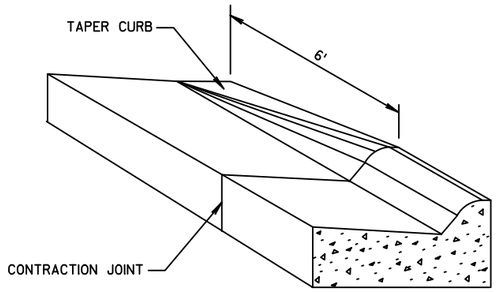
NOTES:

1. DRIVEWAY WIDTHS: SEE PLANS
2. ALL DRIVEWAY APPROACHES SHALL BE CONCRETE DRIVEWAY 6-INCH ON 6" BASE AGGREGATE DENSE 1 1/4-INCH.*
3. DRIVEWAY SURFACE BEHIND SIDEWALK SHALL BE REPLACED IN-KIND WITH MINIMUM SECTION OF:
   ASPHALT - 3" ASPHALTIC SURFACE ON 4" BASE AGGREGATE DENSE 1 1/4-INCH
   CONCRETE - CONCRETE DRIVEWAY REINFORCED 6-INCH ON 6" BASE AGGREGATE DENSE 1 1/4-INCH
   BASE AGGREGATE - 6" BASE AGGREGATE DENSE 3/4-INCH (AN UNDISTRIBUTED AMOUNT OF BASE AGGREGATE DENSE 3/4-INCH WAS INCLUDED FOR ANY DRIVEWAYS REQUIRING ADDITONAL AGGREGATE)
4. SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS OF CONCRETE DRIVEWAY REINFORCED HES 8-INCH

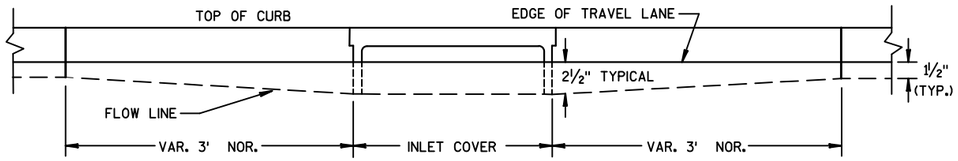
* COMMERCIAL DRIVEWAYS SHALL BE CONCRETE DRIVEWAY REINFORCED 8-INCH ON 12" BASE AGGREGATE DENSE 1 1/4-INCH



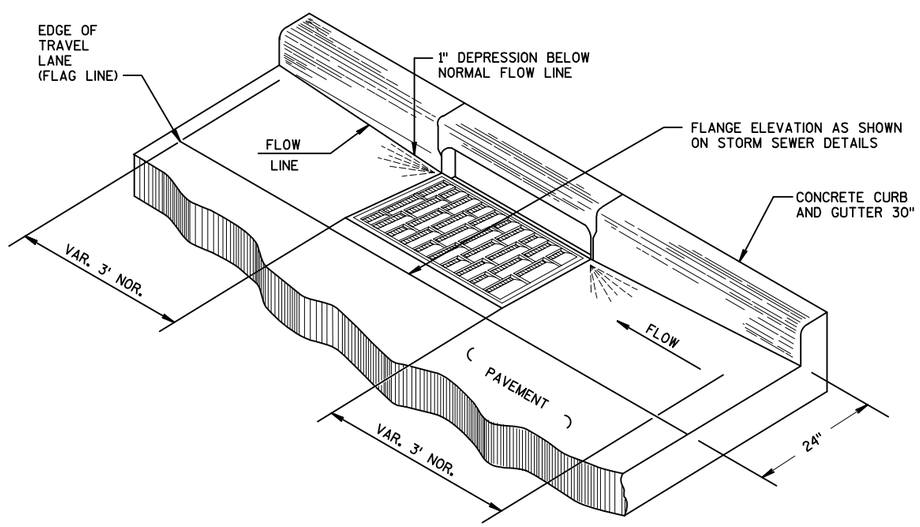
OPTIMAL METHOD FOR CONCRETE GUTTER



DETAIL OF CURB & GUTTER TERMINI



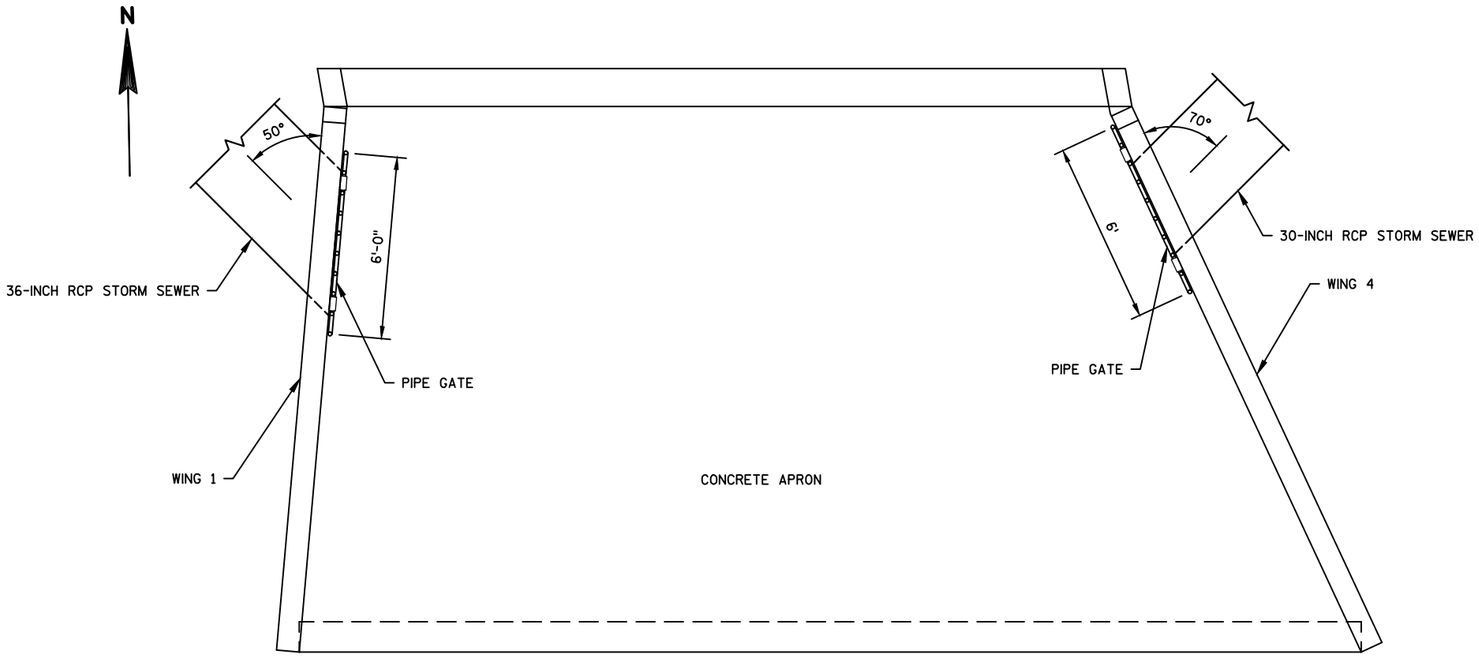
ELEVATION



(INLET 2x3-FT WITH INLET COVER TYPE H SHOWN)

DETAIL OF CURB & GUTTER AT INLETS

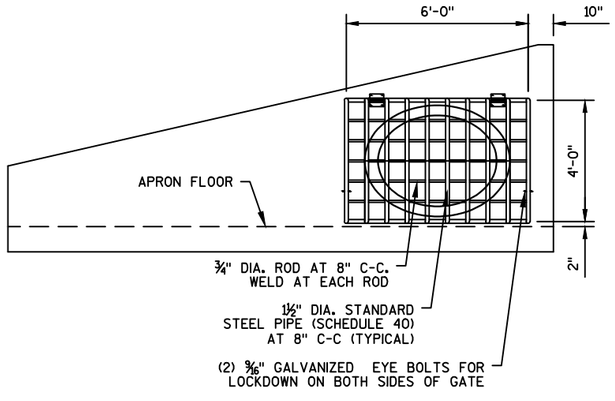
PROJECT NO:6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CONSTRUCTION DETAIL	SHEET 11	E



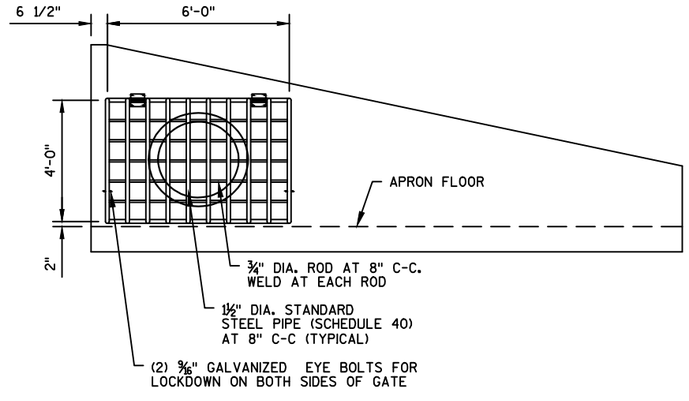
PLAN VIEW

PIPE GATE PAINTING SPECIFICATIONS

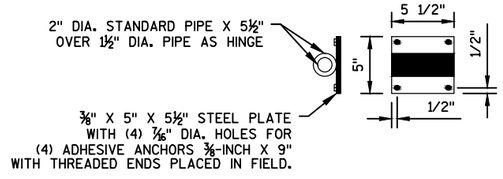
THE PIPE GATE SHALL RECEIVE THE FOLLOWING PREPARATION AND PAINTING:
BARE SURFACES (AFTER SCRAPING, WIRE BRUSHING AND CLEANING)
APPLY THE THREE COAT SYSTEM AS FOLLOWS:
FIRST COAT: RUST-OLEUM X-60 RED BARE METAL PRIMER OR EQUAL
SECOND COAT: RUST-OLEUM 960 ZINC CHROMATE PRIMER OR EQUAL
THIRD COAT: RUST-OLEUM 1282 HIGH GLOSS AND METALLIC FINISH OR EQUAL
EACH COAT SHALL BE AN OVERALL COAT
ALLOW 24-48 HOURS DRYING TIME BETWEEN COATS



WING 1



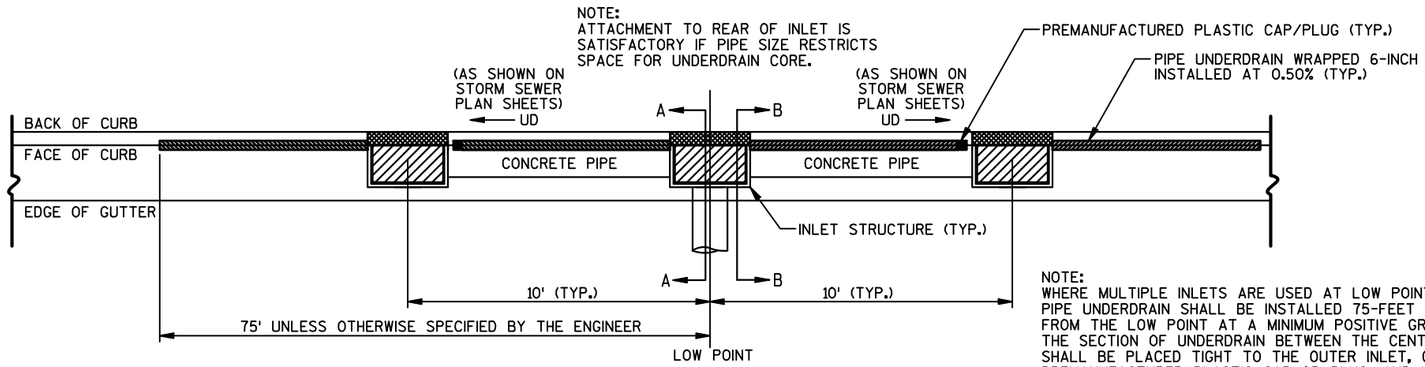
WING 4



PIPE GATE DETAIL

STRUCTURE B-71-0196

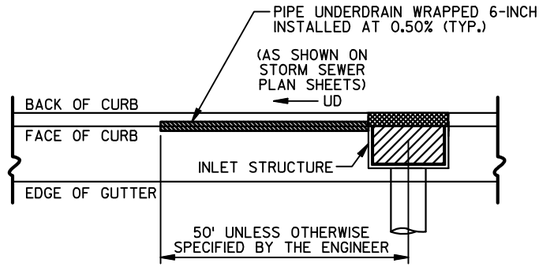
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CONSTRUCTION DETAIL	SHEET 12	E



PLAN VIEW

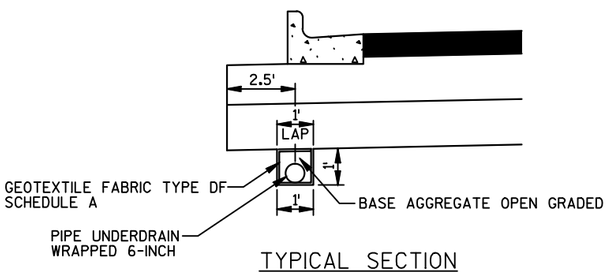
(TYPICAL TRIPLE INLET CONFIGURATION WITH UNDERDRAIN)

NOTE:
WHERE MULTIPLE INLETS ARE USED AT LOW POINTS, PERFORATED PIPE UNDERDRAIN SHALL BE INSTALLED 75-FEET TO EITHER DIRECTION FROM THE LOW POINT AT A MINIMUM POSITIVE GRADE OF 0.50%. THE SECTION OF UNDERDRAIN BETWEEN THE CENTER AND OUTER INLETS SHALL BE PLACED TIGHT TO THE OUTER INLET, CAPPED WITH A PREMANUFACTURED PLASTIC CAP OR PLUG, AND LAID AS SPECIFIED ABOVE TO THE CENTER INLET.

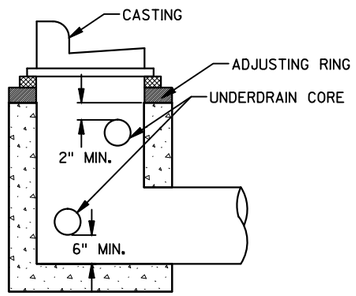


PLAN VIEW

(TYPICAL ON-GRADE INLET CONFIGURATION WITH UNDERDRAIN)



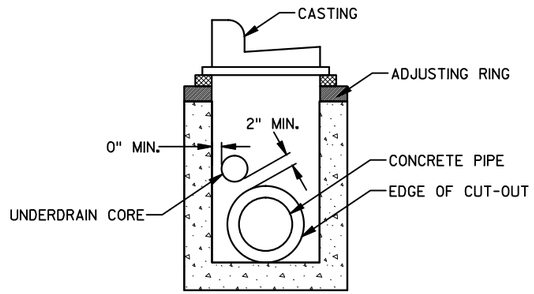
TYPICAL SECTION



NOTES:
(1) BOTTOM OF CORE SHALL BE PLACED A MINIMUM OF 6" ABOVE THE FLOOR OF THE INLET.
(2) TOP OF CORE HOLES SHALL BE A MINIMUM OF 2" BELOW THE TOP OF INLET STRUCTURES (BOTTOM OF ADJUSTMENT RINGS).
(3) DRAIN TILES SHALL NOT BE ALLOWED IN THE RING OF THE STRUCTURE OF INLETS OR SEWER ACCESS STRUCTURES.

SECTION A-A

(TYPICAL INLET CONFIGURATION WITH UNDERDRAIN CORED INTO WALL WITH CROSSPIPE ONLY)



NOTES:
(1) CORE HOLES SHALL PROVIDE FOR A MINIMUM OF 2" OF CONCRETE BETWEEN THE CUTOUT FOR A CONCRETE PIPE AND THE EDGE OF THE COREHOLE.
(2) CORE HOLES MAY HAVE 0" CLEARANCE FROM THE INSIDE WALLS OF A STRUCTURE.

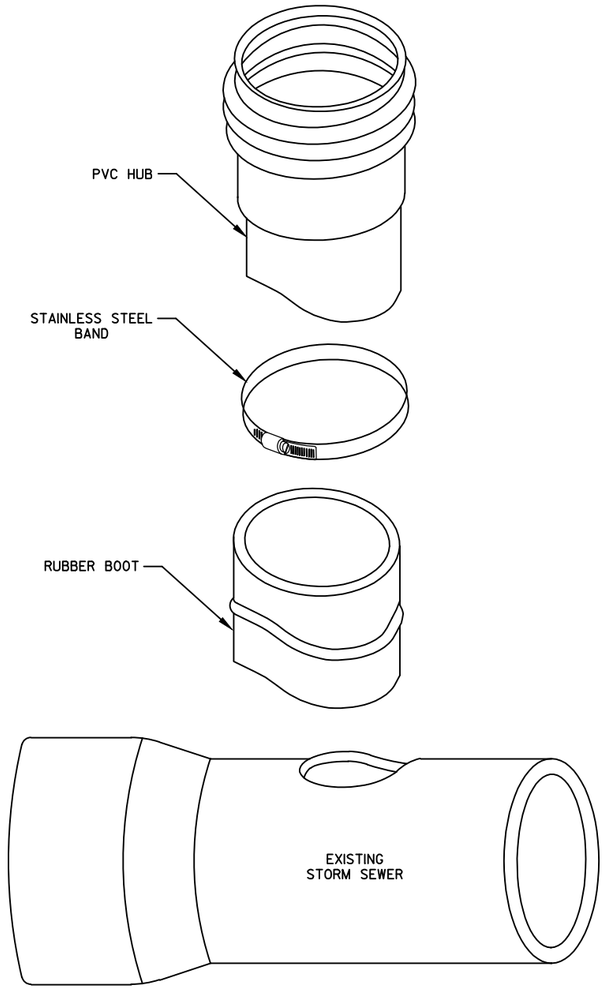
SECTION B-B

(TYPICAL INLET WITH UNDERDRAIN CORED INTO WALL WITH PIPE)

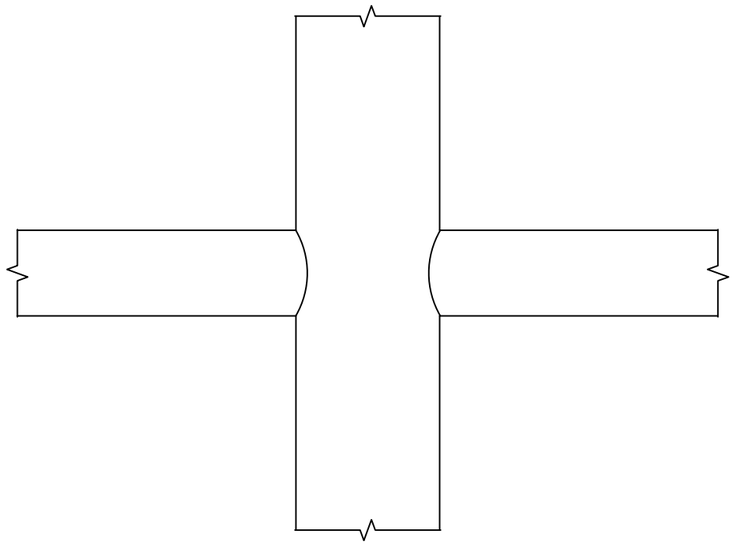
PIPE UNDERDRAIN CONNECTION DETAIL

SCALE: NONE

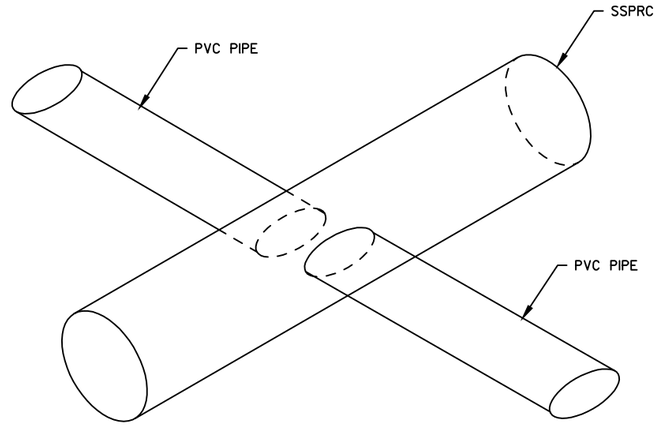
2



CORED TEE CONNECTION

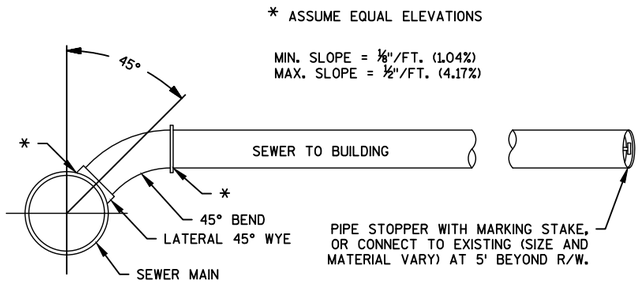


TOP VIEW

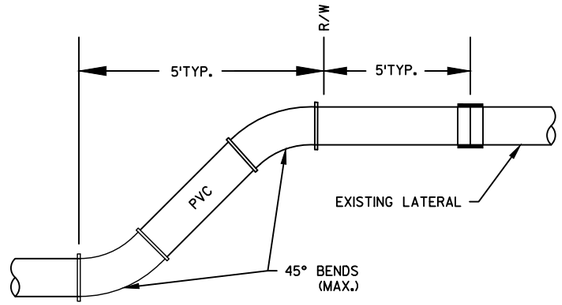


ISOMETRIC VIEW

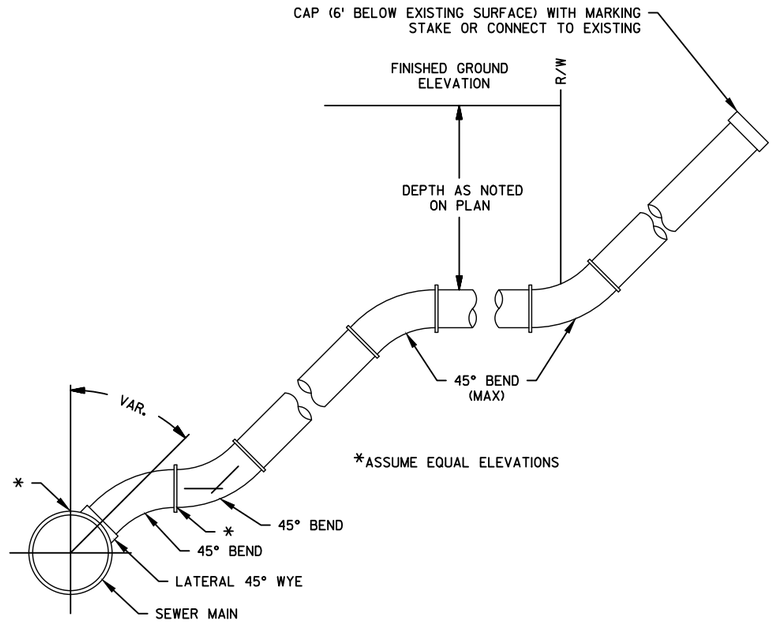
CORED TEE CONNECTION



LATERAL DETAIL - TYPE A



DROP CONNECTION TO EXISTING LATERAL

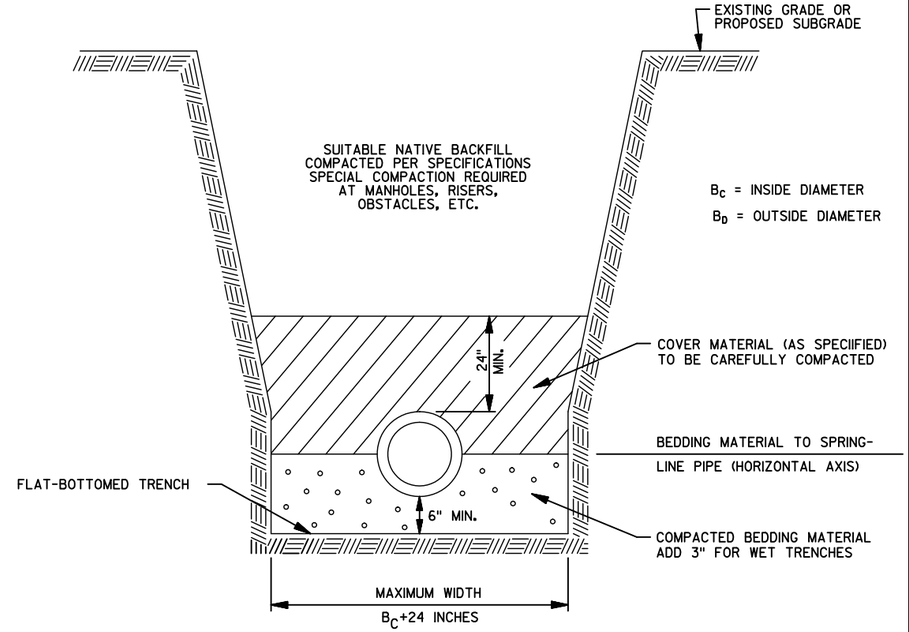


LATERAL DETAIL - TYPE C

NOTES: MAINTAIN 30" HORIZONTAL CLEARANCE WHERE SANITARY SEWER LATERALS PARALLEL WATER SERVICES.

USE COVER MATERIAL AS BACKFILL FOR VERTICAL RISER

FLEXIBLE RUBBER CONNECTION w/ STAINLESS STEEL BANDS IF EXISTING LATERAL IS NOT PVC.
GASKETED COUPLING IF EXISTING LATERAL IS PVC.



NOTES:

BEDDING AND COVER MATERIAL: CRUSHED STONE CHIPS MEETING THE FOLLOWING GRADING REQUIREMENTS.

SIEVE SIZE	PERCENTAGE PASSING BY WEIGHT
½"	100
⅜"	90 TO 100
NO. 8	0 TO 15
NO. 30	0 TO 3

TRENCH WIDTH: THE MAXIMUM TRENCH WIDTH AT THE TOP OF THE PIPE SHALL BE B_C+24 INCHES.

SPECIAL COMPACTION REQUIRED AT MANHOLES, RISERS, ETC.

TYPICAL TRENCH SECTION SANITARY SEWER CONSTRUCTION

GRAVITY MAINS, LATERALS AND FORCE MAINS

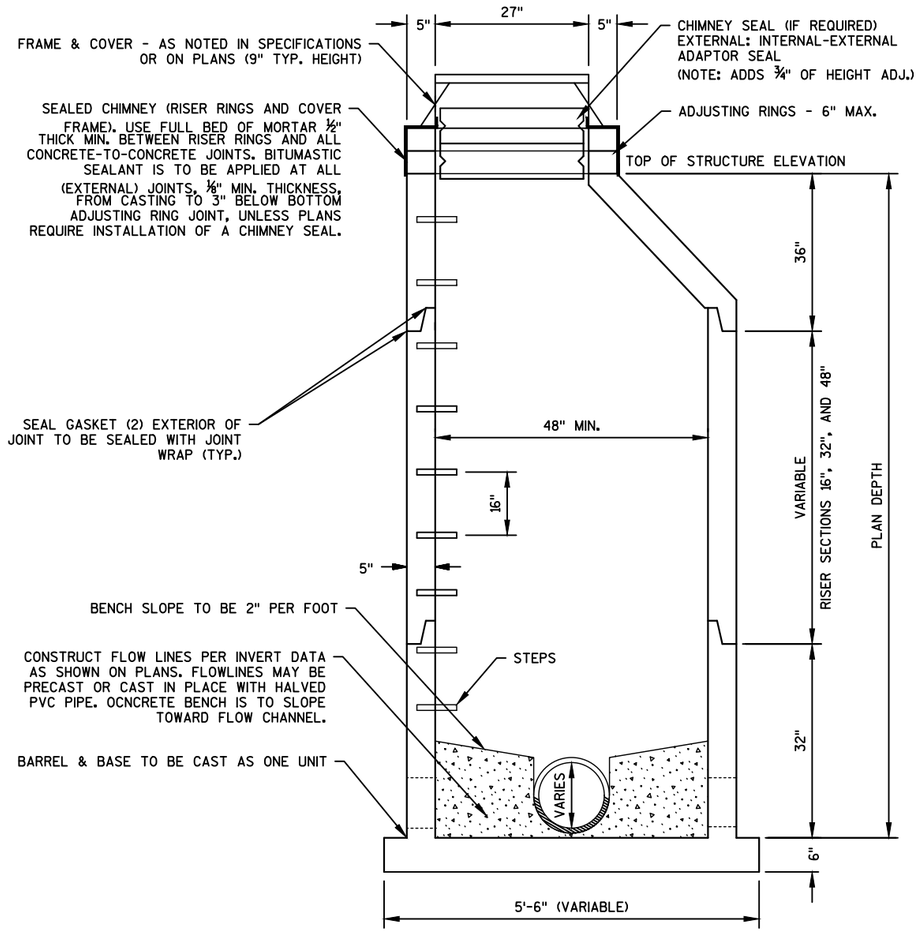
* AT APPROX. 20' UPSTREAM OF MANHOLES, INSTALL APPROVED NATIVE MATERIAL (CLAY TRENCH PLUG) TO FULL TRENCH DEPTH, 6' ALONG PIPE, ACROSS FULL TRENCH WIDTH,IN LEU OF BEDDING AND COVER MATERIAL.

2

SPECIFICATIONS:

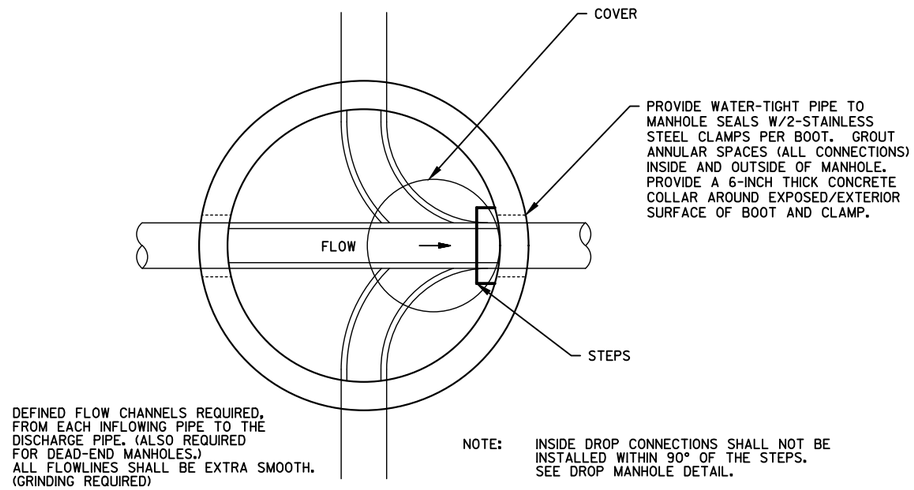
- MANUFACTURED TO ASTM C-478 SPECIFICATIONS
- CONCRETE STRENGTH - 4000 PSI
- STEEL DESIGN IN ACCORDANCE WITH ASTM C-478 0.12 SQ. IN./FT.
- ALL REINFORCING IS DESIGNED FOR MIN. 1" COVER
- STEP - STEEL, PLASTIC COATED 16" ON CENTER
- MONOLITHIC BASE WITH INLET AND OUTLET OPENING AS REQUIRED.
- 48" DIAMETER MANHOLE WILL ACCOMMODATE A 24" DIAMETER PIPE PASSING STRAIGHT THROUGH.
- 48" DIAMETER-5" WALL 890 LBS./FT.

NOTE: ALL STRUCTURES AND COMPONENTS SHALL BE LABELED BY THE MANUFACTURER IN ACCORDANCE WITH PLAN/SCHEDULE IDENTIFICATION.



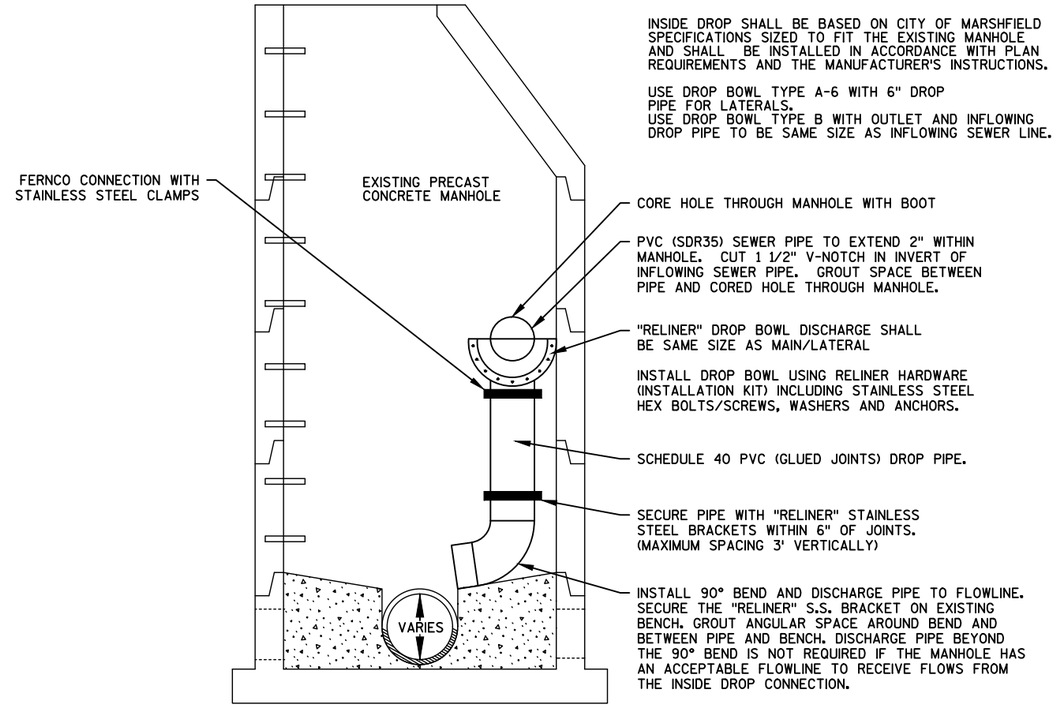
PRE-CAST CONCRETE SANITARY MANHOLE, TYPE 1 DETAIL

NOTE: LENGTH OF SANITARY SEWER MAINS = MANHOLE CENTER TO MANHOLE CENTER.
PIPE SLOPE CALCULATED FROM INSIDE MANHOLE WALL TO INSIDE MANHOLE WALL.
INVERT ELEVATION IS AT INSIDE MANHOLE WALL.
PAY DEPTH IS FROM BOTTOM OF CASTING TO LOWEST INVERT.



DEFINED FLOW CHANNELS REQUIRED, FROM EACH INFLOWING PIPE TO THE DISCHARGE PIPE. (ALSO REQUIRED FOR DEAD-END MANHOLES.) ALL FLOWLINES SHALL BE EXTRA SMOOTH. (GRINDING REQUIRED)

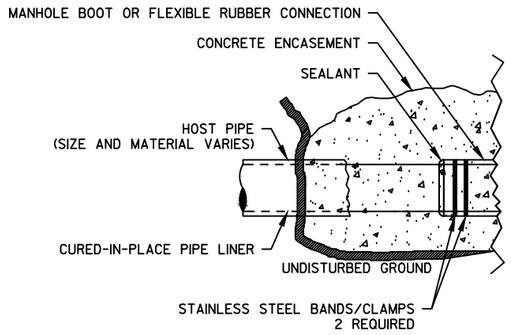
NOTE: INSIDE DROP CONNECTIONS SHALL NOT BE INSTALLED WITHIN 90° OF THE STEPS. SEE DROP MANHOLE DETAIL.



INSIDE DROP FOR EXISTING SANITARY MH DETAIL

NOTE: DO NOT CORE WITHIN 6" OF EITHER INSIDE JOINT OR OUTSIDE JOINT.
CORING TO ENTER MANHOLE RADIALLY. DRAWING OFFSET FOR ILLUSTRATION PURPOSES ONLY.

PROJECT NO:6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CONSTRUCTION DETAIL (SANITARY SEWER)	SHEET 16	E



ELEVATION/PROFILE VIEW

CONNECT TO EXISTING LINED SANITARY SEWER MAIN (FLEXIBLE RUBBER CONNECTION)

WORK REQUIRED

CAREFULLY REMOVE THE HOST PIPE FROM THE LINER PIPE. EXPOSE LINER PIPE TO AT LEAST 18-INCHES FROM THE MANHOLE BOOT OR FLEXIBLE RUBBER CONNECTION. REMOVE ENTIRE CIRCUMFERENCE OF HOST PIPE (ALL AROUND THE PIPE). DO NOT DAMAGE/MAR/CUT LINER PIPE.

REMOVE IRREGULARITIES IN/ON THE SURFACE OF THE LINER PIPE NEAR THE CONNECTION. THIS SURFACE SHALL BE SMOOTH SUCH THAT A LEAK- FREE SEAL CAN BE ACCOMPLISHED.

INSTALL THE FLEXIBLE RUBBER CONNECTION ONTO THE LINER PIPE. APPLY SEALANT TO THE EXTERIOR OF THE BOOT OR FLEXIBLE RUBBER CONNECTION JOINT CONNECTION. FASTEN FLEXIBLE RUBBER CONNECTION TO LINER USING 2 STAINLESS STEEL TYPE CLAMPS.

BLOCK/SUPPORT PIPE TO STABILIZE AND ACHIEVE PROPER SLOPE.

FOR FLEXIBLE RUBBER CONNECTION INSTALLATIONS, FLOWLINES SHALL BE ALIGNED, WITHOUT OFFSET BETWEEN THE LINER AND PVC PIPES. REMOVE SHARP EDGES ON THE INSIDE OF THE UPSTREAM PIPE AND BEVEL (1/4") THE INSIDE EDGES OF THE DOWNSTREAM PIPE.

ENCASE THE FLEXIBLE RUBBER CONNECTION, EXPOSED LINER PIPE AND AT LEAST 6-INCHES OF HOST PIPE IN CONCRETE. THICKNESS OF CONCRETE SHALL BE 6-INCHES MINIMUM, AND SHALL COMPLETELY ENCASE THE LENGTH AND CIRCUMFERENCE. EXTEND CONCRETE ENCASEMENT TO COVER DEFECTS IN THE HOST PIPE (CRACKS, ETC.). CONCRETE SHALL BE PLACED AGAINST UNDISTURBED GROUND UNDER ALL EXPOSED MAIN/HOST PIPE AND SHALL COMPLETELY FILL THE VOID UNDER SAID EXISTING MAIN.

VOIDS ALONGSIDE OF THE CONCRETE ENCASED MAINLINE PIPE SHALL BE FILLED USING CHIPPED STONE BEDDING/COVER MATERIAL (APPROVED FOR SANITARY SEWERS). COVER THE REMAINDER OF EXCAVATION WITH SAID STONE MATERIAL TO A POINT 2-FEET ABOVE THE CONCRETE ENCASEMENT.

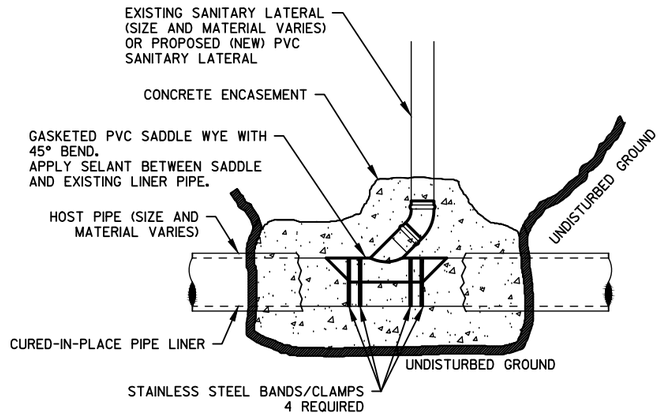
WATERTIGHT CONNECTIONS WILL BE VERIFIED BY INSPECTION AND/OR TELEVISING BY THE CITY. LEAKING OR OFFSET CONNECTIONS SHALL BE REMEDIED BY THE CONTRACTOR (INCIDENTAL). LEAKS SHALL BE ELIMINATED BY PRESSURE GROUTING FROM WITHIN THE MAIN. THE ENGINEER SHALL APPROVE THE MATERIALS/SUBCONTRACTOR FOR SAID REMEDY PRIOR TO USE.

MATERIALS

FLEXIBLE RUBBER CONNECTION'S SHALL BE AS SPECIFIED AND APPROVED BY THE CITY OF MARSHFIELD PART NO.S LISTED BELOW ARE PROVIDED FOR INFORMATION ONLY (CONTRACTOR SHALL VERIFY THE SIZE/OUTSIDE DIAMETER OF THE EXISTING CIPP LINER PIPE AS THIS DIMENSION MAY VARY). CONFIRM PART NO.S WITH CITY OF MARSHFIELD
- 8" LINER TO 8" PVC
- 10" LINER TO 10" PVC
- 12" LINER TO 12" PVC

SEALANT TO BE "ARCHITECTURAL SEALANT" AS SPECIFIED IN THE CITY OF MARSHFIELD SPECIFICATIONS.

CONCRETE TO BE A QUALITY MIX, FROM A READY MIX PLANT OR PROPERLY MIXED ON-SITE (3/8" MINUS AGGREGATE IS ACCEPTABLE). MIX MUST BE 6-BAG/GRADE A AS A MINIMUM AND CAPABLE OF ACHIEVING 4,000 PSI STRENGTH. SLUMP SHALL NOT EXCEED 3-INCH.



ELEVATION/PROFILE VIEW

SADDLE WYE INSTALLED ON EXISTING LINED SANITARY SEWER MAIN

WORK REQUIRED

CAREFULLY REMOVE THE HOST PIPE FROM THE LINER PIPE. EXPOSE LINER PIPE TO AT LEAST 6-INCHES FROM THE SADDLE AND CLAMPS. REMOVE ENTIRE CIRCUMFERENCE OF HOST PIPE (ALL AROUND THE PIPE). DO NOT DAMAGE/MAR LINER PIPE.

MARK PROPOSED HOLE FOR NEW SADDLE ON THE LINER PIPE, CENTERED ON EXISTING HOLE/DIMPLE (EXISTING LATERAL). PROPOSED HOLE SHALL BE THE SAME SIZE AND SHAPE AS THE HOLE IN THE SADDLE.

REMOVE IRREGULARITIES IN/ON THE SURFACE OF THE LINER NEAR THE SADDLE. THIS SURFACE SHALL BE SMOOTH SUCH THAT A LEAK-FREE SEAL TO THE SADDLE CAN BE ACCOMPLISHED.

SAW HOLE IN LINER PIPE USING HOLE/JIG SAW. HOLE MUST BE CLEANLY SAWED. FILE THE HOLE AND ALL EDGES AROUND THE HOLE.

INSTALL SADDLE WYE ONTO THE LINER PIPE. THE HOLE IN THE SADDLE SHALL BE ALIGNED WITH THE HOLE IN PIPE. APPLY ENTIRE TUBE OF SEALANT TO SADDLE/LINER CONNECTION. FASTEN SADDLE TO LINER USING 4 STAINLESS STEEL TYPE CLAMPS. WIPE AWAY ALL EXCESS SEALANT FROM THE INSIDE OF THE SADDLE WYE AND LINER PIPE.

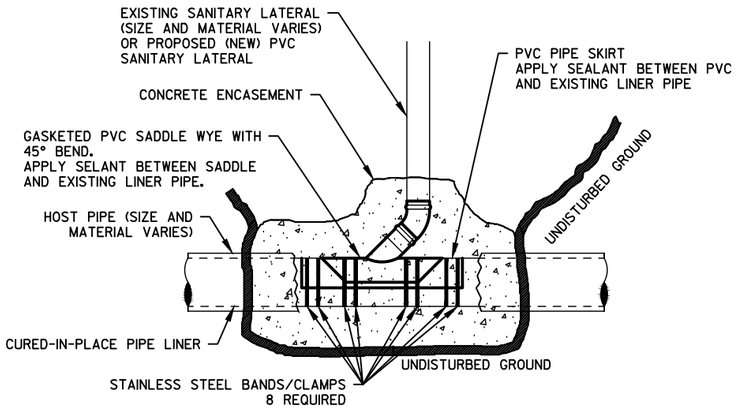
ENCASE THE SADDLE, EXPOSED LINER PIPE AND AT LEAST 6-INCHES OF HOST PIPE IN CONCRETE. THICKNESS OF CONCRETE SHALL BE 6-INCHES MINIMUM, AND SHALL COMPLETELY ENCASE THE BRANCH OF THE WYE AND THE 45° BEND, FOR EITHER HORIZONTAL RUNS OR VERTICAL RISERS. EXTEND CONCRETE ENCASEMENT TO COVER DEFECTS IN THE HOST PIPE (CRACKS, ETC.). CONCRETE SHALL BE PLACED AGAINST UNDISTURBED GROUND UNDER ALL EXPOSED MAIN/HOST PIPE AND SHALL COMPLETELY FILL THE VOID UNDER SAID EXISTING MAIN.

VOIDS ALONGSIDE OF THE CONCRETE ENCASED MAINLINE PIPE SHALL BE FILLED USING CHIPPED STONE BEDDING/COVER MATERIAL (APPROVED FOR SANITARY SEWERS). COVER THE REMAINDER OF EXCAVATION WITH SAID STONE MATERIAL TO A POINT 2-FEET ABOVE THE CONCRETE ENCASEMENT.

WATER-TIGHT CONNECTIONS WILL BE VERIFIED BY MAINLINE TELEVISING BY THE CITY. LEAKING CONNECTIONS SHALL BE REMEDIED BY THE CONTRACTOR (INCIDENTAL). LEAKS SHALL BE ELIMINATED BY PRESSURE GROUTING FROM WITHIN THE MAIN. THE ENGINEER SHALL APPROVE THE MATERIALS/SUBCONTRACTOR FOR SAID REMEDY PRIOR TO USE.

MATERIALS

PROVIDE MATERIALS MEETING THE CITY OF MARSHFIELD SPECIFICATIONS.



ELEVATION/PROFILE VIEW

PVC PIPE SKIRT FOR OVERSIZED LINER HOLE REPAIR OR ABANDON CUT OUT EXISTING LINED SANITARY SEWER MAIN

OVERSIZED HOLE REPAIR

IF THE EXISTING CUT-OUT HOLE IN THE LINER IS TOO LARGE (SADDLE WYE GASKET DOES NOT SURROUND HOLE / CONTACT LINER FOR FULL CIRCUMFERENCE) THEN DO THE FOLLOWING:

HOLE MUST BE CLEANLY SAWED. FILE THE HOLE AND ALL EDGES AROUND THE HOLE.

CUT / FABRICATE PVC PIPE SKIRT AS SHOWN. PVC PIPE SKIRT MUST BE 12 INCHES LONGER (TOTAL) THAN THE SADDLE WYE SKIRT, AND CIRCUMFERENCIALLY 1-INCH MORE THAN HALF PIPE.

PVC PIPE SKIRT SHALL BE FABRICATED FROM SDR 35 SEWER PIPE (PER ASTM D-3034)

SEAL PVC PIPE SKIRT USING FULL TUBE OF SEALANT.

SECURE PVC PIPE SKIRT USING (4) STAINLESS STEEL BANDS/CLAMPS ((2) AT EACH END, AS SHOWN)

INSTALL SADDLE WYE AS SHOWN / DISCUSSED HEREIN.

ABANDON CUT-OUT

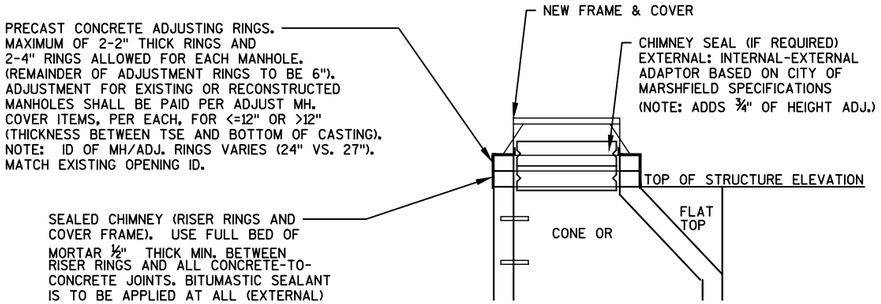
TO SEAL OR ABANDON A LATERAL CONNECTED TO A LINER, DO ALL WORK AS LISTED ABOVE (FOR SADDLE WYE, OVERSIZE HOLE REPAIR, ETC) EXCEPT:

LENGTH OF PVC PIPE SKIRT SHALL BE 12-INCHES LONGER THAN THE PREPARED HOLE.

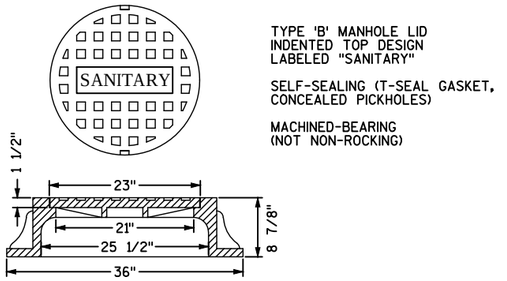
DO NOT CUT A HOLE IN THE PVC PIPE SKIRT.

USE (4) STAINLESS STEEL BANDS / CLAMPS EQUALLY SPACED.

ENCASE (CONCRETE), COVER, BACKFILL / COMPACT AS DESCRIBED.



ADJUST MANHOLE COVER

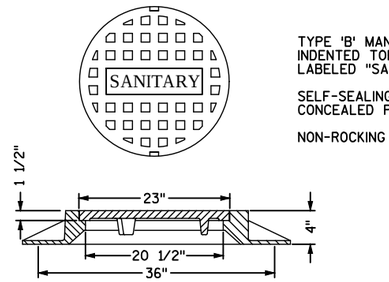


TYPE 'B' MANHOLE LID
INDENTED TOP DESIGN
LABELED "SANITARY"

SELF-SEALING (T-SEAL GASKET, CONCEALED PICKHOLES)

MACHINED-BEARING
(NOT NON-ROCKING)

MANHOLE COVER-TYPE "JM"
CITY OF MARSHFIELD

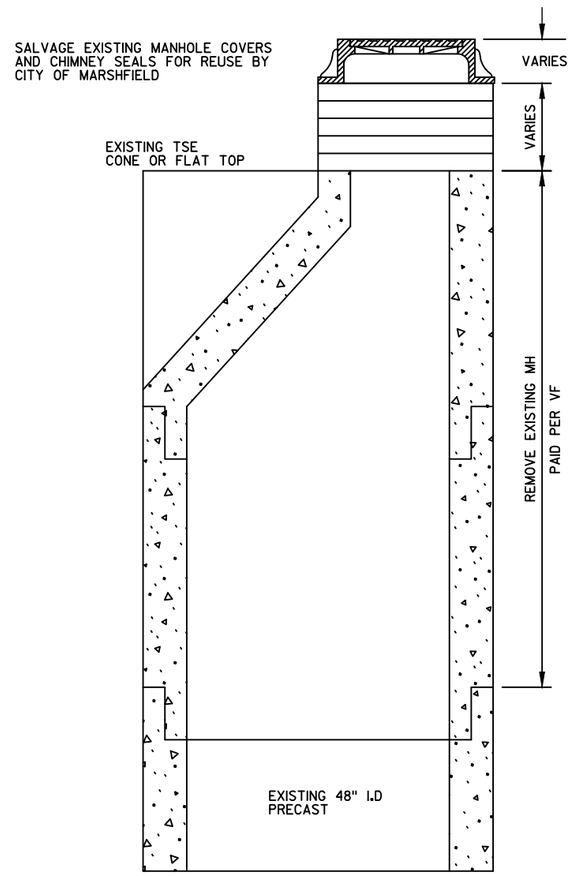


TYPE 'B' MANHOLE LID
INDENTED TOP DESIGN
LABELED "SANITARY"

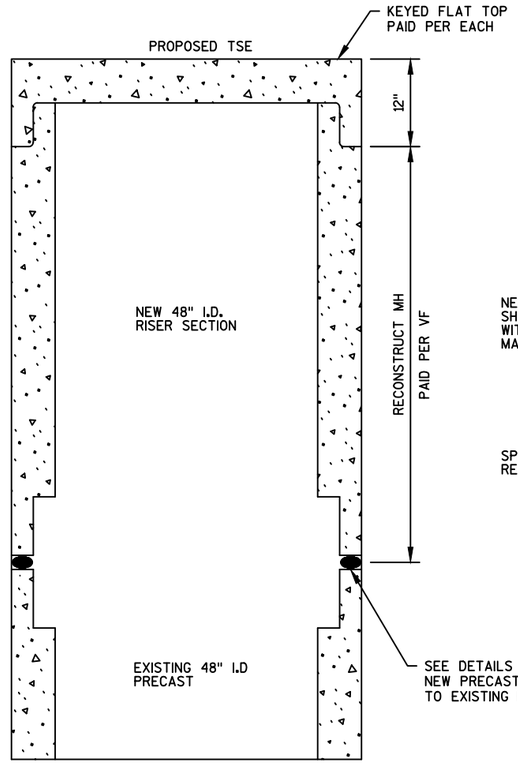
SELF-SEALING (T-SEAL GASKET, CONCEALED PICKHOLES)

NON-ROCKING

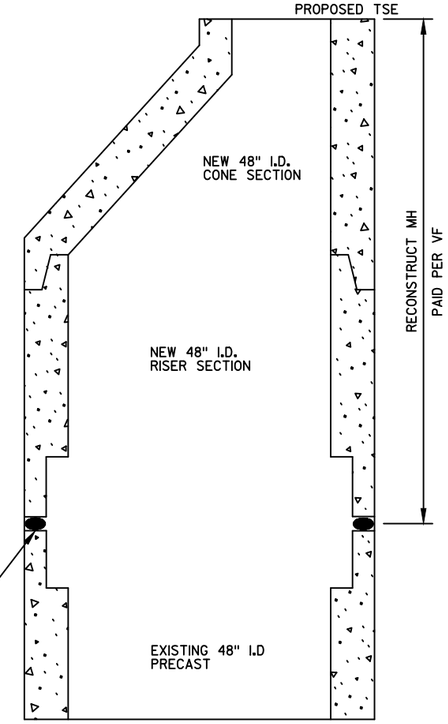
MANHOLE COVER FRAME-TYPE "JM-LP"
CITY OF MARSHFIELD



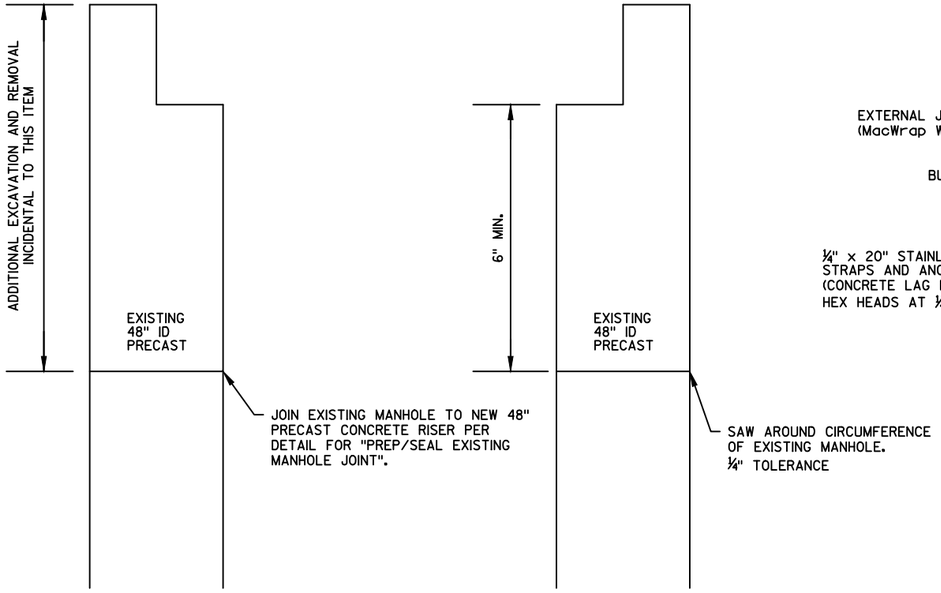
EXISTING MANHOLES TO BE RECONSTRUCTED



RECONSTRUCT EXISTING MANHOLE (W/FLAT TOP)

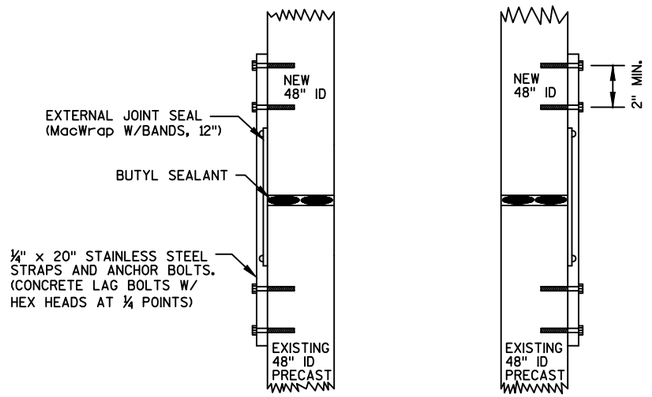


RECONSTRUCT EXISTING MANHOLE (W/CONE)



NOTE: THIS ITEM SHALL BE CONSTRUCTED ONLY IF THE EXISTING MANHOLE JOINT CANNOT BE UTILIZED (I.E.. EXISTING MANHOLE JOINT DAMAGED DURING REMOVAL.)

SAW/SEAL EXISTING MANHOLE
FOR NEW BUTT JOINT



PREP/SEAL EXISTING MANHOLE
FOR NEW BUTT JOINT

WORK REQUIRED

CAREFULLY REMOVE THE HOST PIPE FROM THE LINER PIPE. EXPOSE LINER PIPE TO AT LEAST 18-INCHES FROM THE MANHOLE BOOT OR FLEXIBLE RUBBER CONNECTION. REMOVE ENTIRE CIRCUMFERENCE OF HOST PIPE (ALL AROUND THE PIPE). DO NOT DAMAGE/MAR/CUT LINER PIPE.

REMOVE IRREGULARITIES IN/ON THE SURFACE OF THE LINER PIPE NEAR THE CONNECTION. THIS SURFACE SHALL BE SMOOTH SUCH THAT A LEAK- FREE SEAL CAN BE ACCOMPLISHED.

INSTALL THE MANHOLE BOOT ONTO THE LINER PIPE. APPLY SEALANT TO THE INTERIOR OF THE BOOT JOINT CONNECTION. FASTEN BOOT TO LINER USING 2 STAINLESS STEEL TYPE CLAMPS.

BLOCK/SUPPORT PIPE TO STABILIZE AND ACHIEVE PROPER SLOPE.

FLOWLINES SHALL BE ALIGNED, WITHOUT OFFSET BETWEEN THE LINER AND MANHOLE. REMOVE SHARP EDGES ON THE INSIDE OF THE UPSTREAM PIPE AND BEVEL (1/4") THE INSIDE EDGES OF THE DOWNSTREAM PIPE.

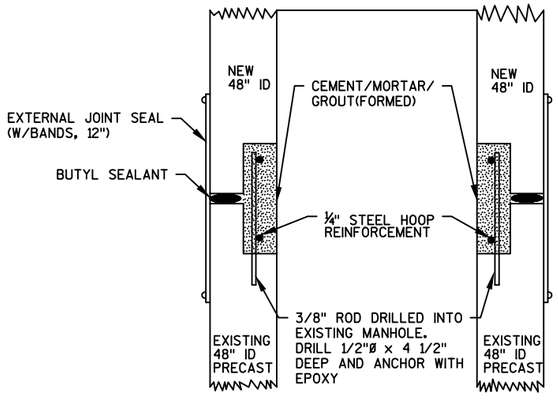
ENCASE THE MANHOLE BOOT, EXPOSED LINER PIPE AND AT LEAST 6-INCHES OF HOST PIPE IN CONCRETE. THICKNESS OF CONCRETE SHALL BE 6-INCHES MINIMUM, AND SHALL COMPLETELY ENCASE THE LENGTH AND CIRCUMFERENCE. EXTEND CONCRETE ENCASEMENT TO COVER DEFECTS IN THE HOST PIPE (CRACKS, ETC.). CONCRETE SHALL BE PLACED AGAINST UNDISTURBED GROUND UNDER ALL EXPOSED MAIN/HOST PIPE AND SHALL COMPLETELY FILL THE VOID UNDER SAID EXISTING MAIN.

VOIDS ALONGSIDE OF THE CONCRETE ENCASED MAINLINE PIPE SHALL BE FILLED USING CHIPPED STONE BEDDING/COVER MATERIAL (APPROVED FOR SANITARY SEWERS). COVER THE REMAINDER OF EXCAVATION WITH SAID STONE MATERIAL TO A POINT 2-FEET ABOVE THE CONCRETE ENCASEMENT.

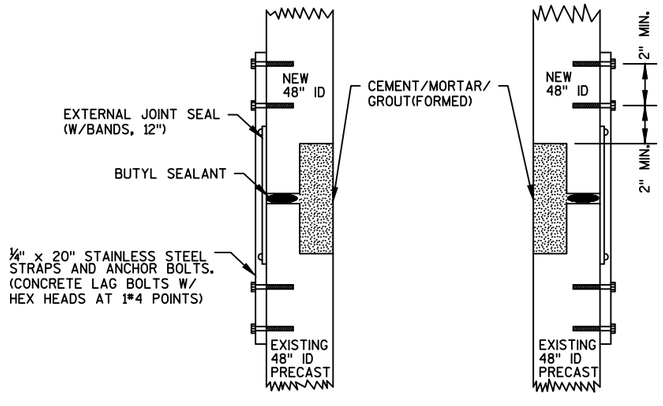
CONTRACTOR SHALL VERIFY THAT ALL SEWER MAIN CONNECTIONS ARE WATER-TIGHT BY TELEVISING SEWER MAINS ONCE WORK IS COMPLETE (INCIDENTAL). LEAKING OR OFFSET CONNECTIONS SHALL BE REMEDIED BY THE CONTRACTOR (INCIDENTAL). LEAKS SHALL BE ELIMINATED BY PRESSURE GROUTING FROM WITHIN THE MAIN. THE ENGINEER SHALL APPROVE THE MATERIALS/SUBCONTRACTOR FOR SAID REMEDY PRIOR TO USE.

MATERIALS

PROVIDE MATERIALS MEETING THE CITY OF MARSHFIELD SPECIFICATIONS.



ALTERNATE 'A'



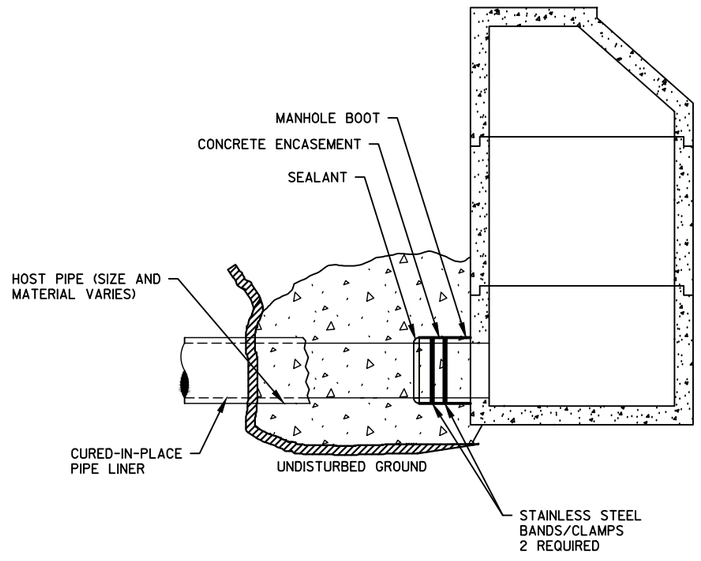
ALTERNATE 'B'

NOTE:

INSTALL A STEP IF THE EXISTING SPACE BETWEEN STEPS OF THE NEW MANHOLE SECTION AND THE EXISTING MANHOLE SECTION EXCEEDS 24-INCHES.

DO NOT BACKFILL (ALTERNATES A & B) UNTIL CONCRETE AND CEMENT/MORTAR/GROUT HAS SET/CURED.

PREP/SEAL EXISTING MANHOLE JOINT

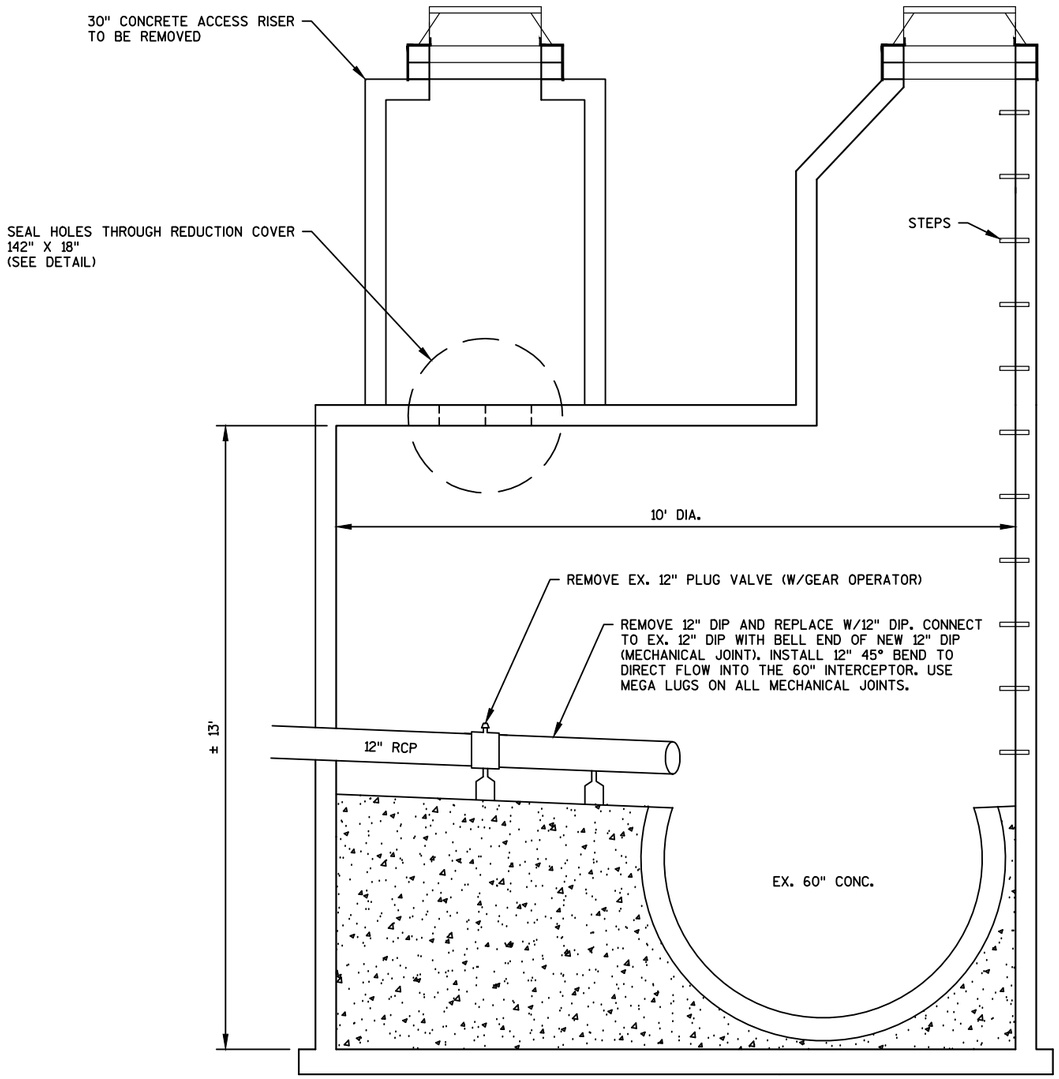


ELEVATION/PROFILE VIEW

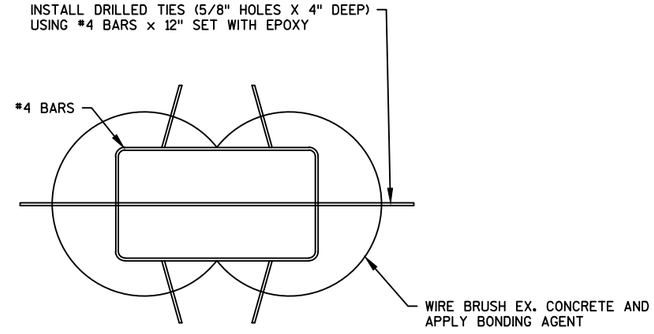
CONNECT TO LINED SANITARY SEWER MAIN
(MANHOLE BOOT)

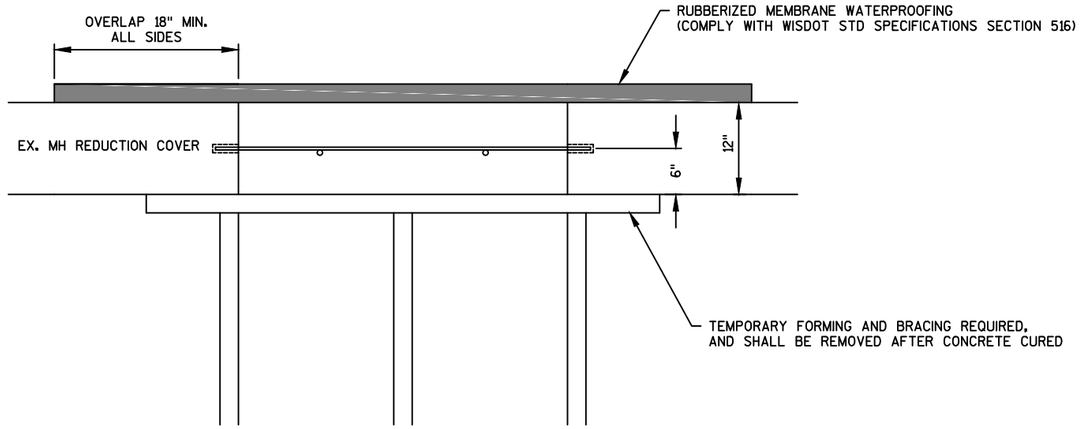
PROJECT NO:6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CONSTRUCTION DETAIL (SANITARY SEWER)	SHEET 19	E

2



MH Q122



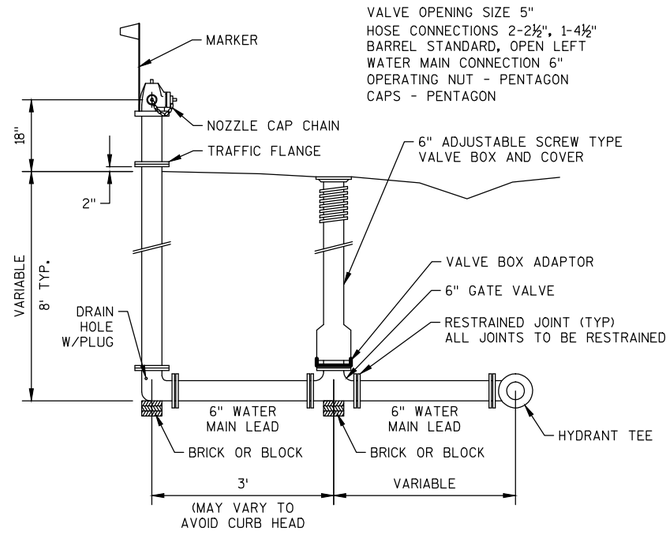


REMOVE & ABANDON VALVE ACCESS MH/RISER DETAIL

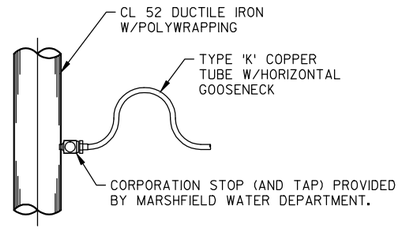
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CONSTRUCTION DETAIL (SANITARY SEWER)	SHEET 20	E

JOINT RESTRAINT SHALL BE REQUIRED. ACCEPTABLE MATERIALS INCLUDE
¾" THREADED RODS (2) W/RETAINER GLANDS,
RESTRAINING PIPE JOINT GASKETS, OR
RESTRAINING MECHANICAL JOINT GLANDS (MEGA LUGS, ETC.).
LENGTH OF PIPELINE TO BE RESTRAINED SHALL BE AS FOLLOWS:

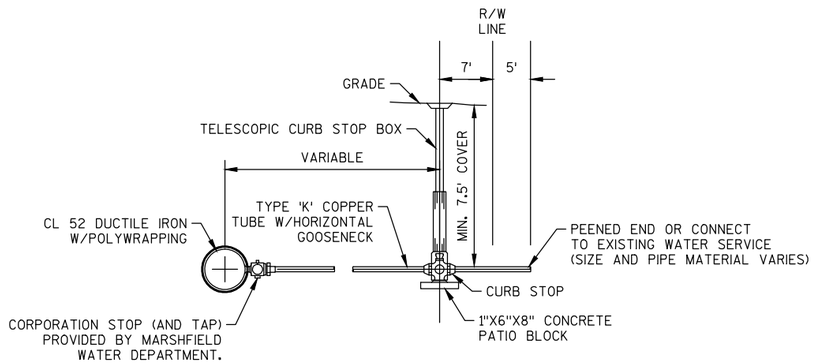
RUN OF TEE
ALL SIZES = 10 LF EACH SIDE OF BRANCH
BRANCH OF TEE:
6" & 8" PIPE = 35 LF
10" PIPE = 45 LF
12" PIPE = 55 LF
16" PIPE = 65 LF
BENDS:
6" & 8" PIPE = 25 LF EACH SIDE OF FITTING
10" PIPE = 35 LF EACH SIDE OF FITTING
12" PIPE = 45 LF EACH SIDE OF FITTING
16" PIPE = 55 LF EACH SIDE OF FITTING
DEAD ENDS:
6" & 8" PIPE = 35 LF
10" PIPE = 45 LF
12" PIPE = 55 LF
16" PIPE = 65 LF



TYPICAL HYDRANT, HYDRANT LEAD AND GATE VALVE INSTALLATION



TYPICAL WATER SERVICE CONNECTION
PLAN VIEW



TYPICAL WATER SERVICE CONNECTION
PROFILE VIEW

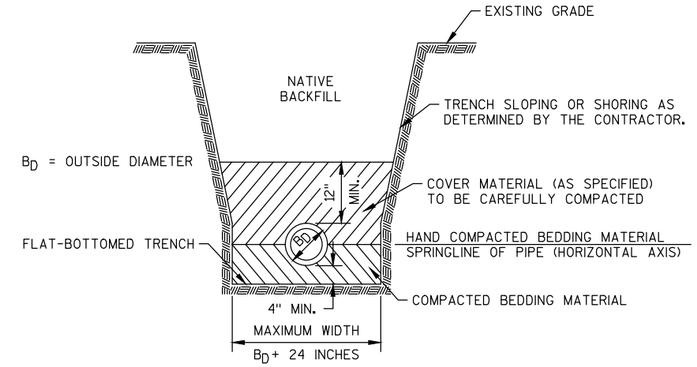
NOTES: EXISTING WATER SYSTEM AND PROPOSED ISOLATION GATE VALVES SHALL ONLY BE OPERATED BY THE MARSHFIELD ELECTRIC AND WATER DEPARTMENT.

ALL PIPE, VALVES, FITTINGS AND HYDRANTS TO BE POLYWRAPPED.

CONDUCTIVITY PROVISIONS SUCH AS STRAPS OR CABLES ARE REQUIRED FOR ALL JOINTS INCLUDING PIPE, VALVES, FITTINGS AND SLEEVES. CONDUCTIVITY TESTING WILL BE REQUIRED.

HYDROSTATIC TEST PRESSURE FOR WATER PIPE SHALL BE 150 PSI.

SPECIAL COMPACTION IS REQUIRED AT HYDRANTS, VALVE BOXES, CURB BOXES, AND OTHER RISERS.

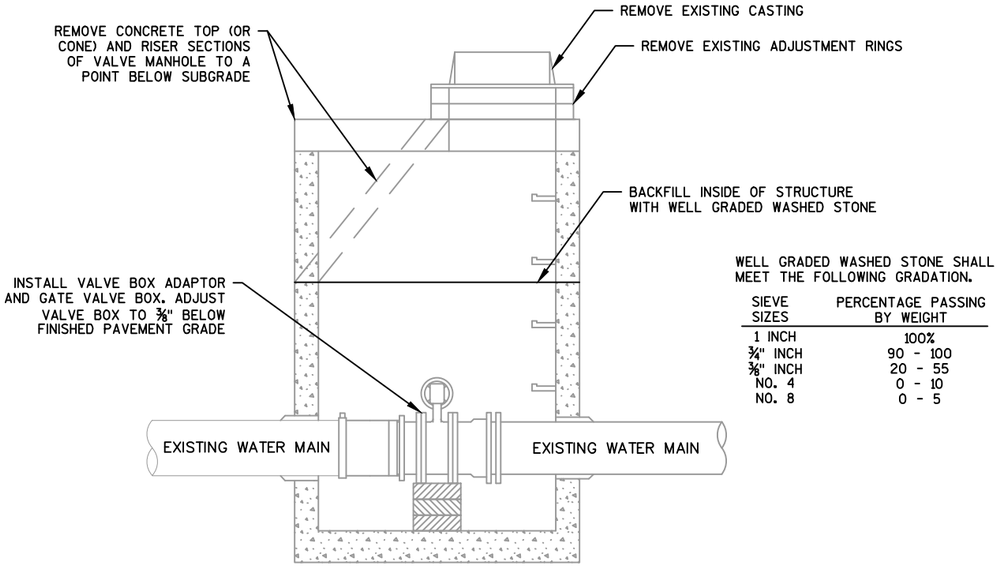


NOTES:

BEDDING AND COVER MATERIAL: MATERIAL SHALL BE BANK-RUN SAND, CRUSHED BANK-RUN GRAVEL, OR OTHER APPROVED MATERIAL CONFORMING SUBSTANTIALLY TO THE FOLLOWING GRADING REQUIREMENTS.

SIEVE SIZE	PERCENTAGE PASSING BY WEIGHT
1"	100
¾"	85 TO 100
NO. 40	15 TO 35
NO. 200	2 TO 10

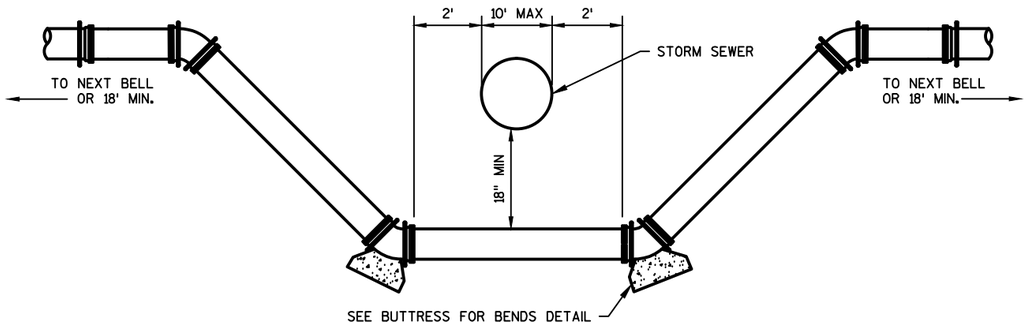
TYPICAL TRENCH SECTION
WATER MAIN AND WATER
SERVICE CONSTRUCTION



WELL GRADED WASHED STONE SHALL MEET THE FOLLOWING GRADATION.

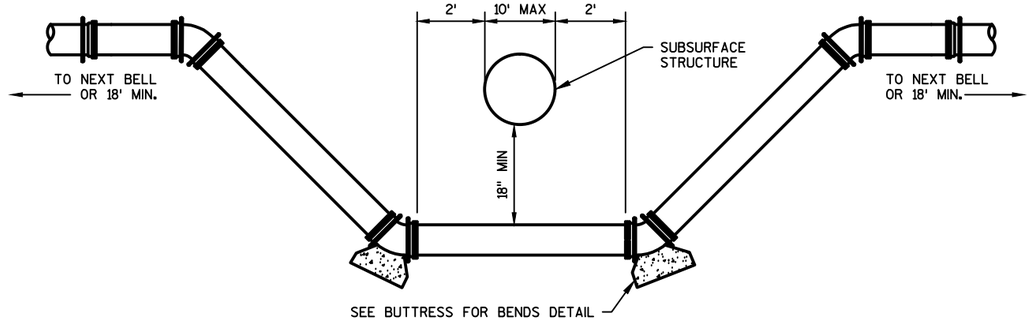
SIEVE SIZES	PERCENTAGE PASSING BY WEIGHT
1 INCH	100%
¾" INCH	90 - 100
⅜" INCH	20 - 55
NO. 4	0 - 10
NO. 8	0 - 5

ABANDON WATER VALVE MH DETAIL



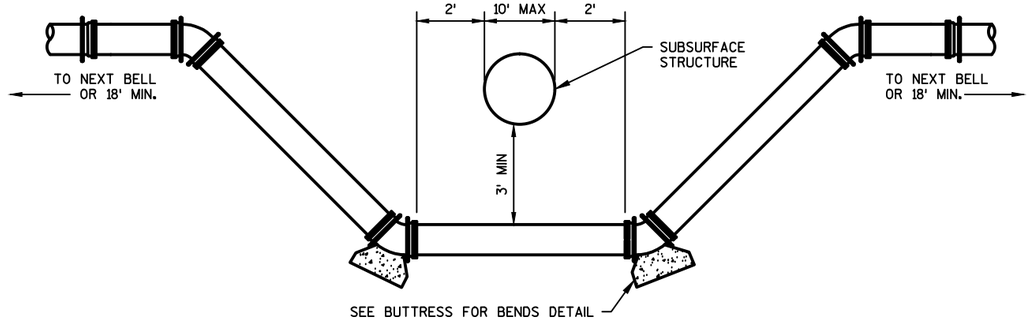
GENERAL NOTES:
1. FITTINGS TO BE WRAPPED WITH POLYETHYLENE BEFORE PLACEMENT BUTTRESSES.
2. ALL FITTINGS SHALL BE CONNECTED TO THE PIPE WITH AN APPROVED WEDGE ACTION THRUST RESTRAINING GLAND.
3. LOCATIONS OF EXISTING MAINS ARE APPROXIMATE. LENGTH REQUIRED TO BE LOWERED WILL BE DETERMINED IN THE FIELD.
4. MAINS SHALL BE INSULATED IF COVER IS LESS THAN 7 FEET.
5. OFFSET PIPE, FITTINGS, AND BENDS SHALL MATCH SIZE OF EXISTING WATER MAIN.

VERTICAL WATER MAIN OFFSET DETAIL



GENERAL NOTES:
1. FITTINGS TO BE WRAPPED WITH POLYETHYLENE BEFORE PLACEMENT OF RODDING AND BUTTRESSES.
2. ALL FITTINGS SHALL BE CONNECTED TO THE PIPE WITH AN APPROVED WEDGE ACTION THRUST RESTRAINING GLAND.
3. LOCATIONS OF EXISTING MAINS ARE APPROXIMATE. LENGTH REQUIRED TO BE LOWERED WILL BE DETERMINED IN THE FIELD.
4. MAINS SHALL BE INSULATED IF COVER IS LESS THAN 7 FEET.
5. OFFSET PIPE, FITTINGS, AND BENDS SHALL MATCH SIZE OF EXISTING WATER MAIN.

HORIZONTAL/VERTICAL WATER MAIN OFFSET DETAIL (SIDE VIEW)

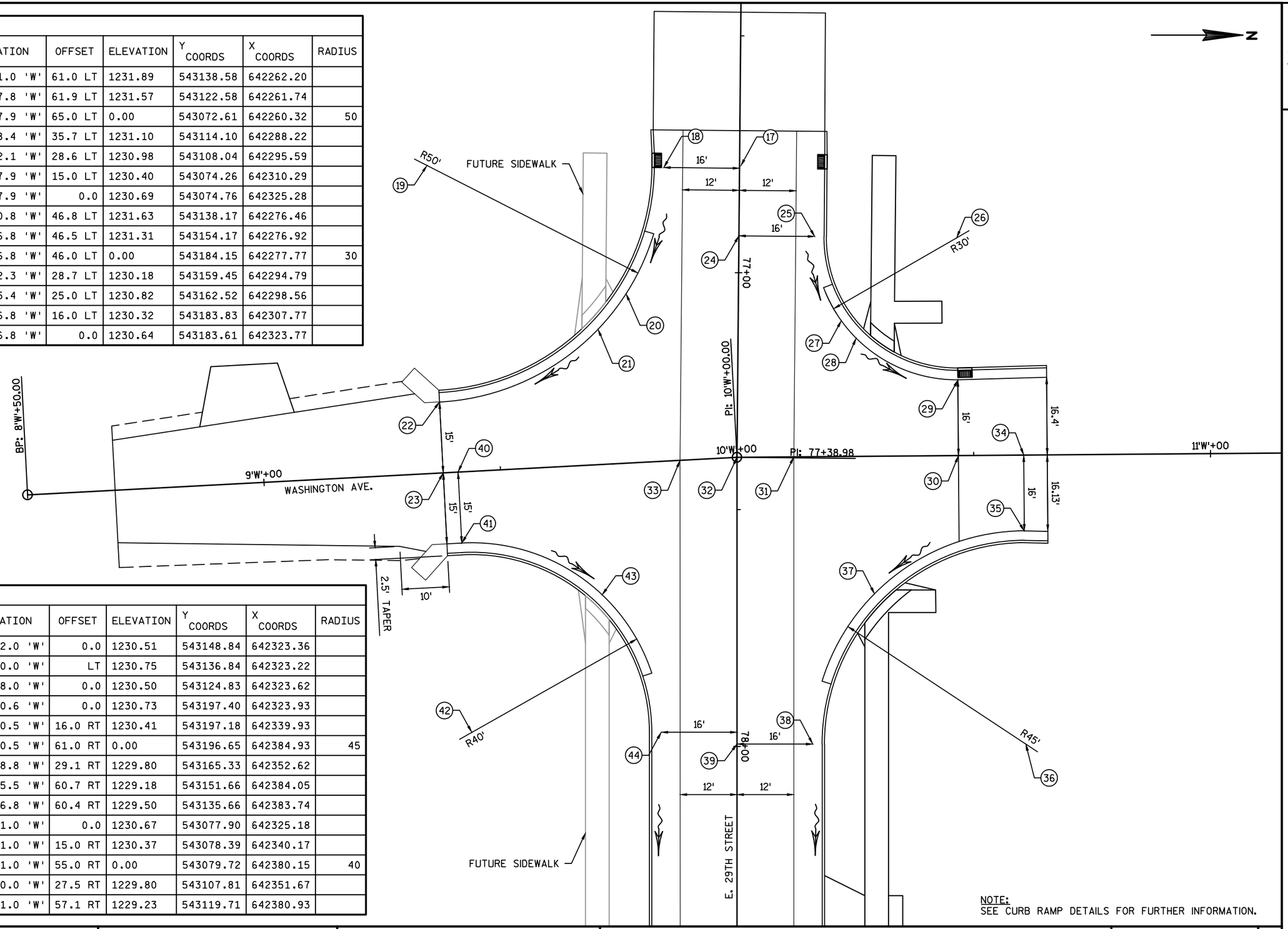


GENERAL NOTES:
1. FITTINGS TO BE WRAPPED WITH POLYETHYLENE BEFORE PLACEMENT OF RODDING AND BUTTRESSES.
2. ALL FITTINGS SHALL BE CONNECTED TO THE PIPE WITH AN APPROVED WEDGE ACTION THRUST RESTRAINING GLAND.
3. LOCATIONS OF EXISTING MAINS ARE APPROXIMATE. LENGTH REQUIRED TO BE LOWERED WILL BE DETERMINED IN THE FIELD.
4. MAINS SHALL BE INSULATED IF COVER IS LESS THAN 7 FEET.
5. OFFSET PIPE, FITTINGS, AND BENDS SHALL MATCH SIZE OF EXISTING WATER MAIN.

HORIZONTAL/VERTICAL WATER MAIN OFFSET DETAIL (TOP VIEW)

POINT	STATION	OFFSET	STATION	OFFSET	ELEVATION	Y COORDS	X COORDS	RADIUS
17	76+77.93	0.0	10+01.0 'W'	61.0 LT	1231.89	543138.58	642262.20	
18	76+77.93	16.0 RT	9+87.8 'W'	61.9 LT	1231.57	543122.58	642261.74	
19	76+77.93	66.0 RT	9+37.9 'W'	65.0 LT	0.00	543072.61	642260.32	50
20	77+04.64	23.7 RT	9+78.4 'W'	35.7 LT	1231.10	543114.10	642288.22	
21	77+12.18	29.6 RT	9+72.1 'W'	28.6 LT	1230.98	543108.04	642295.59	
22	77+27.84	62.9 RT	9+37.9 'W'	15.0 LT	1230.40	543074.26	642310.29	
23	77+42.25	62.0 RT	9+37.9 'W'	0.0	1230.69	543074.76	642325.28	
24	76+92.20	0.0	10+00.8 'W'	46.8 LT	1231.63	543138.17	642276.46	
25	76+92.20	16.0 LT	10+16.8 'W'	46.5 LT	1231.31	543154.17	642276.92	
26	76+92.20	46.0 LT	10+46.8 'W'	46.0 LT	0.00	543184.15	642277.77	30
27	77+09.92	21.8 LT	10+22.3 'W'	28.7 LT	1230.18	543159.45	642294.79	
28	77+13.59	25.0 LT	10+25.4 'W'	25.0 LT	1230.82	543162.52	642298.56	
29	77+22.20	46.5 LT	10+46.8 'W'	16.0 LT	1230.32	543183.83	642307.77	
30	77+38.20	46.8 LT	10+46.8 'W'	0.0	1230.64	543183.61	642323.77	

POINT	STATION	OFFSET	STATION	OFFSET	ELEVATION	Y COORDS	X COORDS	RADIUS
31	77+38.78	12.0 LT	10+12.0 'W'	0.0	1230.51	543148.84	642323.36	
32	77+38.98	0.0 RT	10+00.0 'W'	LT	1230.75	543136.84	642323.22	
33	77+39.61	12.0 RT	9+88.0 'W'	0.0	1230.50	543124.83	642323.62	
34	77+37.97	60.6 LT	10+60.6 'W'	0.0	1230.73	543197.40	642323.93	
35	77+54.51	60.7 LT	10+60.5 'W'	16.0 RT	1230.41	543197.18	642339.93	
36	77+99.51	61.0 LT	10+60.5 'W'	61.0 RT	0.00	543196.65	642384.93	45
37	77+67.81	29.1 LT	10+28.8 'W'	29.1 RT	1229.80	543165.33	642352.62	
38	77+99.51	16.0 LT	10+15.5 'W'	60.7 RT	1229.18	543151.66	642384.05	
39	77+99.51	0.0	9+96.8 'W'	60.4 RT	1229.50	543135.66	642383.74	
40	77+42.08	58.9 RT	9+41.0 'W'	0.0	1230.67	543077.90	642325.18	
41	77+57.06	58.1 RT	9+41.0 'W'	15.0 RT	1230.37	543078.39	642340.17	
42	77+97.01	56.0 RT	9+41.0 'W'	55.0 RT	0.00	543079.72	642380.15	40
43	77+67.99	28.5 RT	9+70.0 'W'	27.5 RT	1229.80	543107.81	642351.67	
44	77+97.01	16.0 RT	9+81.0 'W'	57.1 RT	1229.23	543119.71	642380.93	



NOTE:
SEE CURB RAMP DETAILS FOR FURTHER INFORMATION.

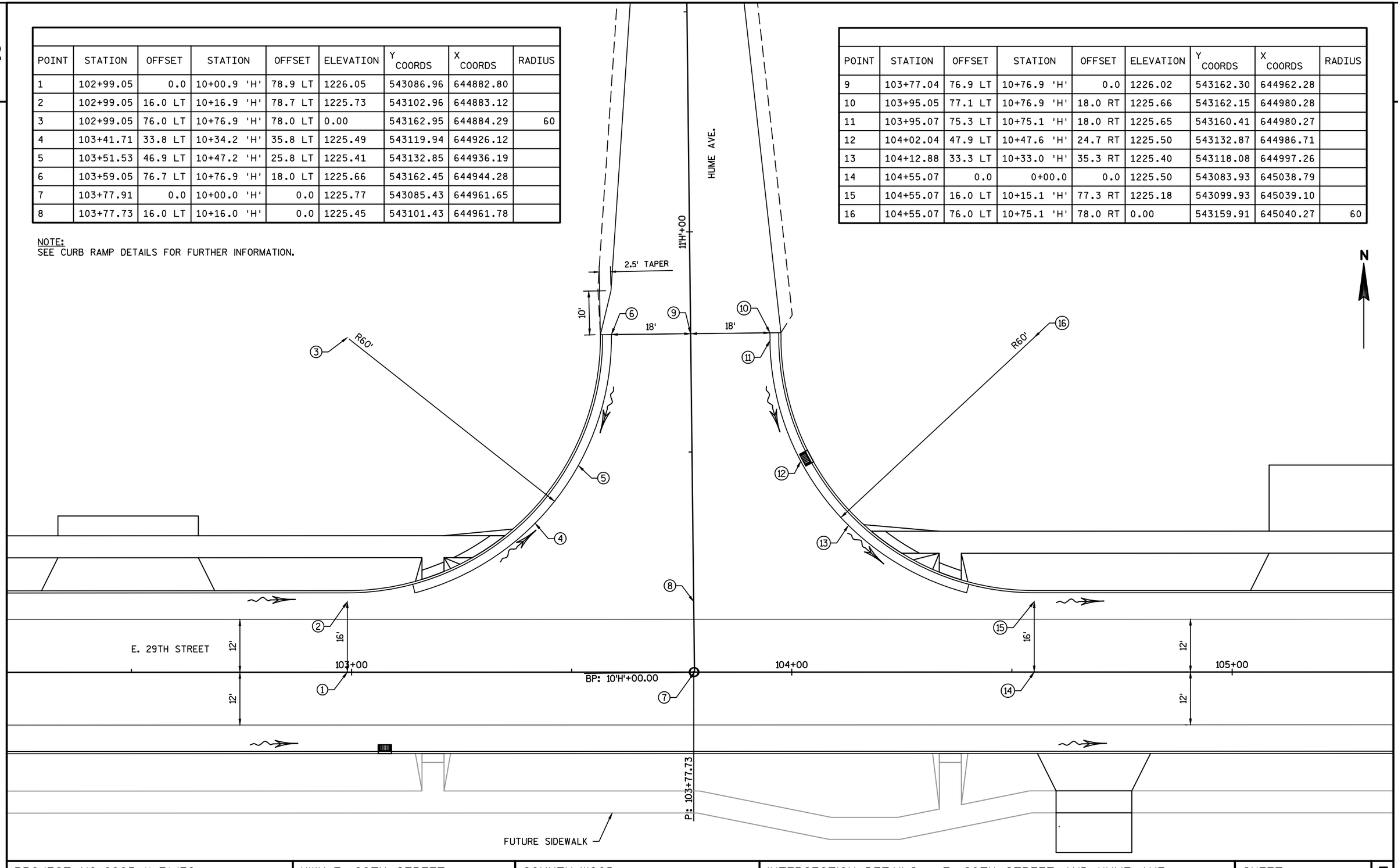
PROJECT NO:6995-11-71/72	HWY:E. 29TH STREET	COUNTY:WOOD	INTERSECTION DETAILS - E. 29TH STREET AND WASHINGTON AVE.	SHEET 23	E

POINT	STATION	OFFSET	STATION	OFFSET	ELEVATION	Y COORDS	X COORDS	RADIUS
1	102+99.05	0.0	10+00.9 'H'	78.9 LT	1226.05	543086.96	644882.80	
2	102+99.05	16.0 LT	10+16.9 'H'	78.7 LT	1225.73	543102.96	644883.12	
3	102+99.05	76.0 LT	10+76.9 'H'	78.0 LT	0.00	543162.95	644884.29	60
4	103+41.71	33.8 LT	10+34.2 'H'	35.8 LT	1225.49	543119.94	644926.12	
5	103+51.53	46.9 LT	10+47.2 'H'	25.8 LT	1225.41	543132.85	644936.19	
6	103+59.05	76.7 LT	10+76.9 'H'	18.0 LT	1225.66	543162.45	644944.28	
7	103+77.91	0.0	10+00.0 'H'	0.0	1225.77	543085.43	644961.65	
8	103+77.73	16.0 LT	10+16.0 'H'	0.0	1225.45	543101.43	644961.78	

POINT	STATION	OFFSET	STATION	OFFSET	ELEVATION	Y COORDS	X COORDS	RADIUS
9	103+77.04	76.9 LT	10+76.9 'H'	0.0	1226.02	543162.30	644962.28	
10	103+95.05	77.1 LT	10+76.9 'H'	18.0 RT	1225.66	543162.15	644980.28	
11	103+95.07	75.3 LT	10+75.1 'H'	18.0 RT	1225.65	543160.41	644980.27	
12	104+02.04	47.9 LT	10+47.6 'H'	24.7 RT	1225.50	543132.87	644986.71	
13	104+12.88	33.3 LT	10+33.0 'H'	35.3 RT	1225.40	543118.08	644997.26	
14	104+55.07	0.0	0+00.0	0.0	1225.50	543083.93	645038.79	
15	104+55.07	16.0 LT	10+15.1 'H'	77.3 RT	1225.18	543099.93	645039.10	
16	104+55.07	76.0 LT	10+75.1 'H'	78.0 RT	0.00	543159.91	645040.27	60

2

NOTE:
SEE CURB RAMP DETAILS FOR FURTHER INFORMATION.



PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	INTERSECTION DETAILS - E. 29TH STREET AND HUME AVE.	SHEET	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\021101-ID.DWG
LAYOUT NAME - 021102_ID
PLOT DATE : 11/15/2017 5:25 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

2

STA. 77+10.4, 33.0' LT
EL. = 1231.08

STA. 77+10.4, 33.0' LT
EL. = 1231.37

STA. 77+10.4, 33.0' LT
EL. = 1230.95

STA. 77+05.8, 28.0' LT
EL. = 1231.91

STA. 77+05.8, 33.0' LT
EL. = 1231.02

STA. 77+05.8, 28.0' LT
EL. = 1231.83

STA. 77+05.8, 28.0' LT
EL. = 1230.94

3.5%

1.3%

1.5%

4.3%
MAX.

1.5%

6.6%

5' CONCRETE
SIDEWALK

9'

CONCRETE CURB & GUTTER

STA. 77+16.4, 33.0' LT
EL. = 1230.69

STA. 77+13.0, 28.0' LT
EL. = 1230.82

STA. 77+10.4, 28.0' LT
EL. = 1230.87

CONCRETE CURB & GUTTER INTEGRAL

INLET COVER TYPE H (TYP.)

77+00

E. 29TH ST. (CTH H)

PI: 10'W'+00.00

10'W'+00

PI: 77+38.98

MANHOLE COVER

CONCRETE CURB & GUTTER INTEGRAL

FUTURE 5' CONCRETE SIDEWALK

CONCRETE CURB & GUTTER

NOTE:
CURB RAMPS CONSTRUCTED AS
CONCRETE SIDEWALK REINFORCED 6-INCH

WASHINGTON AVE.

STA. 77+71.8, 32.0' LT
EL. = 1230.33

STA. 77+71.8, 32.0' LT
EL. = 1230.36

STA. 77+71.8, 32.0' LT
EL. = 1230.00

5.1%

3.6%

CONCRETE CURB & GUTTER

STA. 77+67.0, 33.7' LT
EL. = 1229.91

DETECTABLE WARNING FIELD (TYP.)

STA. 77+74.0, 27.0' LT
EL. = 1229.73

STA. 77+90.0, 32.0' LT
EL. = 1230.05

STA. 77+99.5, 32.0' LT
EL. = 1229.88

STA. 77+99.5, 27.0' LT
EL. = 1229.81

1.5%

1.8%

1.5%

1.5%

5' CONCRETE SIDEWALK

STA. 77+90.0, 27.0' LT
EL. = 1229.97

8'

CONCRETE CURB & GUTTER INTEGRAL

78+00

N

2

CONCRETE CURB & GUTTER INTEGRAL

FUTURE 5' CONCRETE SIDEWALK

CONCRETE CURB & GUTTER

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CURB RAMP DETAILS	SHEET 25	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\CURB RAMP DETAILS.DWG
LAYOUT NAME - 01 CURB RAMP DETAILS

PLOT DATE : 11/16/2017 8:22 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

2

N

BUTTERNUT PARKWAY

STA. 84+63.7, 32.0' LT
EL. = 1218.64

STA. 84+63.7, 27.0' LT
EL. = 1218.56

1.5%

3.6%

5' CONCRETE SIDEWALK

8'

CONCRETE CURB & GUTTER

STA. 84+84.3, 32.0' LT
EL. = 1217.90

STA. 84+81.3, 27.0' LT
EL. = 1217.94

CONCRETE CURB & GUTTER INTEGRAL

DETECTABLE WARNING FIELD (TYP.)

CONCRETE CURB & GUTTER

STA. 85+23.0, 32.0' LT
EL. = 1217.81

STA. 85+26.0, 27.0' LT
EL. = 1217.76

1.7%

1.5%

STA. 85+43.7, 32.0' LT
EL. = 1218.14

STA. 85+43.7, 27.0' LT
EL. = 1218.07

5' CONCRETE SIDEWALK

8'

CONCRETE CURB & GUTTER INTEGRAL

85+00

E. 29TH ST. (CTH H)

MANHOLE COVER (TYP.)

INLET COVER TYPE H (TYP.)

CONCRETE CURB & GUTTER INTEGRAL

FUTURE 5' CONCRETE SIDEWALK

NOTE:
CURB RAMPS CONSTRUCTED AS
CONCRETE SIDEWALK REINFORCED 6-INCH

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CURB RAMP DETAILS	SHEET 26	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\CURB RAMP DETAILS.DWG
LAYOUT NAME - 02 CURB RAMP DETAILS
PLOT DATE : 11/16/2017 8:22 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 44

NOTE:
CURB RAMPS CONSTRUCTED AS
CONCRETE SIDEWALK REINFORCED 6-INCH

DETECTABLE WARNING FIELD (TYP.)

STA. 103+21.0, 31.0' LT
EL. = 1225.89

STA. 103+16.0, 31.0' LT
EL. = 1225.97

STA. 103+16.0, 26.0' LT
EL. = 1225.89

CONCRETE CURB & GUTTER

1.9%

5' CONCRETE SIDEWALK

1.5%

1.5%

2.63%

5.0% MAX.

7'

STA. 103+34.8, 31.0' LT
EL. = 1225.57

STA. 103+27.4, 26.0' LT
EL. = 1225.62

STA. 103+21.0, 26.0' LT
EL. = 1225.81

STA. 103+21.0, 22.9' LT
EL. = 1225.65

STA. 103+16.0, 21.1' LT
EL. = 1225.68

CONCRETE CURB & GUTTER INTEGRAL

HUME AVE.

PI: 103+77.73

BP: 10'H'+00.00

03+00

E. 29TH ST. (CTH H)

104+00

CONCRETE CURB & GUTTER

STA. 104+48.5, 32.0' LT
EL. = 1225.86

STA. 104+38.5, 32.0' LT
EL. = 1225.71

STA. 104+38.5, 27.0' LT
EL. = 1225.63

STA. 104+33.5, 32.0' LT
EL. = 1225.63

1.5%

1.5%

1.65%

1.5%

5' CONCRETE SIDEWALK
10'

1.5%

5.0% MAX.

5'

8'

STA. 104+18.1, 32.0' LT
EL. = 1225.43

STA. 104+25.0, 27.0' LT
EL. = 1225.38

STA. 104+33.5, 27.0' LT
EL. = 1225.55

STA. 104+33.5, 22.7' LT
EL. = 1225.33

STA. 104+38.5, 20.9' LT
EL. = 1225.31

STA. 104+48.5, 27.0' LT
EL. = 1225.78

CONCRETE CURB & GUTTER INTEGRAL

MANHOLE COVER (TYP.)

N

2

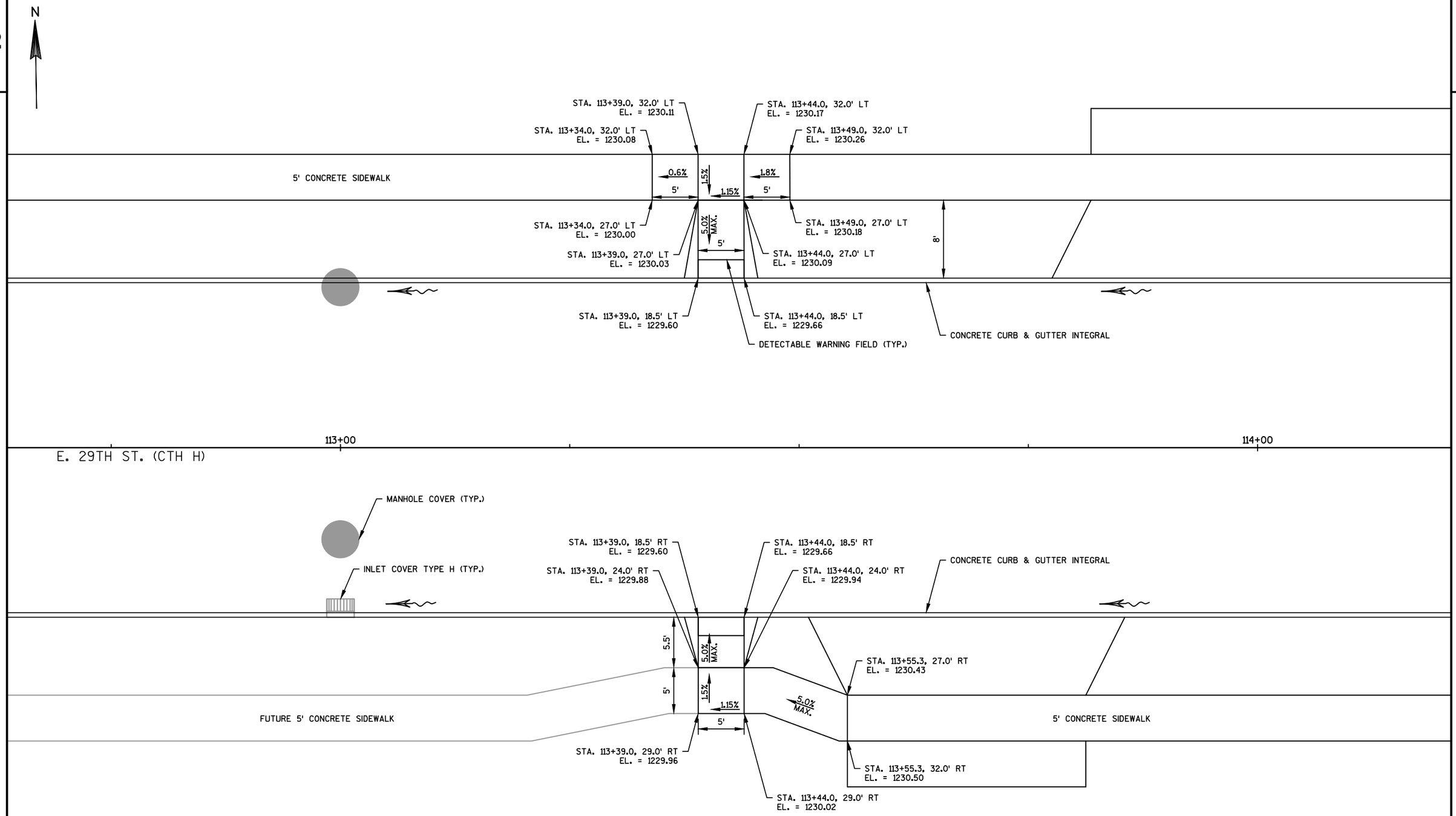
INLET COVER TYPE H (TYP.)

CONCRETE CURB & GUTTER INTEGRAL

FUTURE 5' CONCRETE SIDEWALK

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CURB RAMP DETAILS	SHEET 27	E

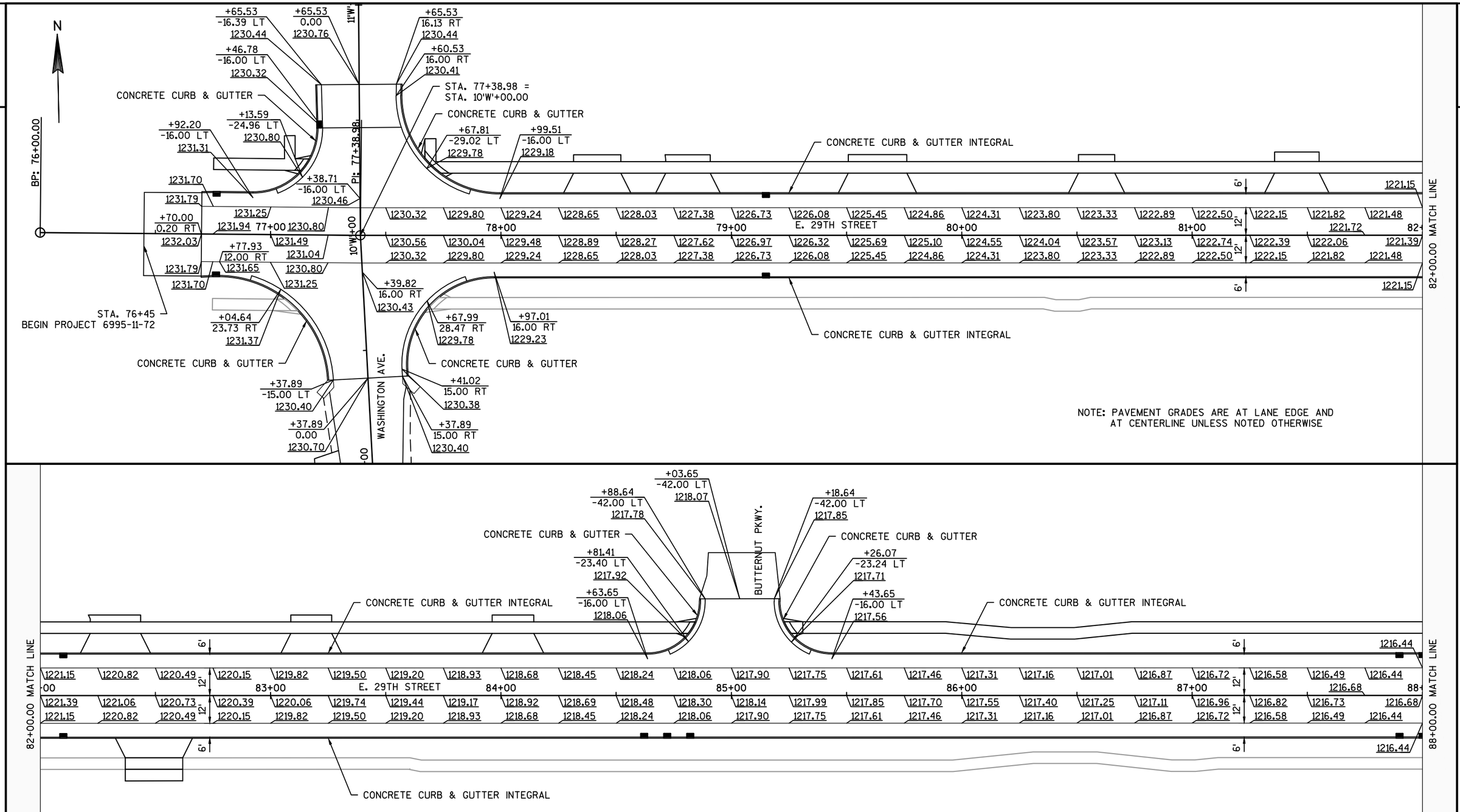
2



NOTE:
CURB RAMPS CONSTRUCTED AS
CONCRETE SIDEWALK REINFORCED 6-INCH

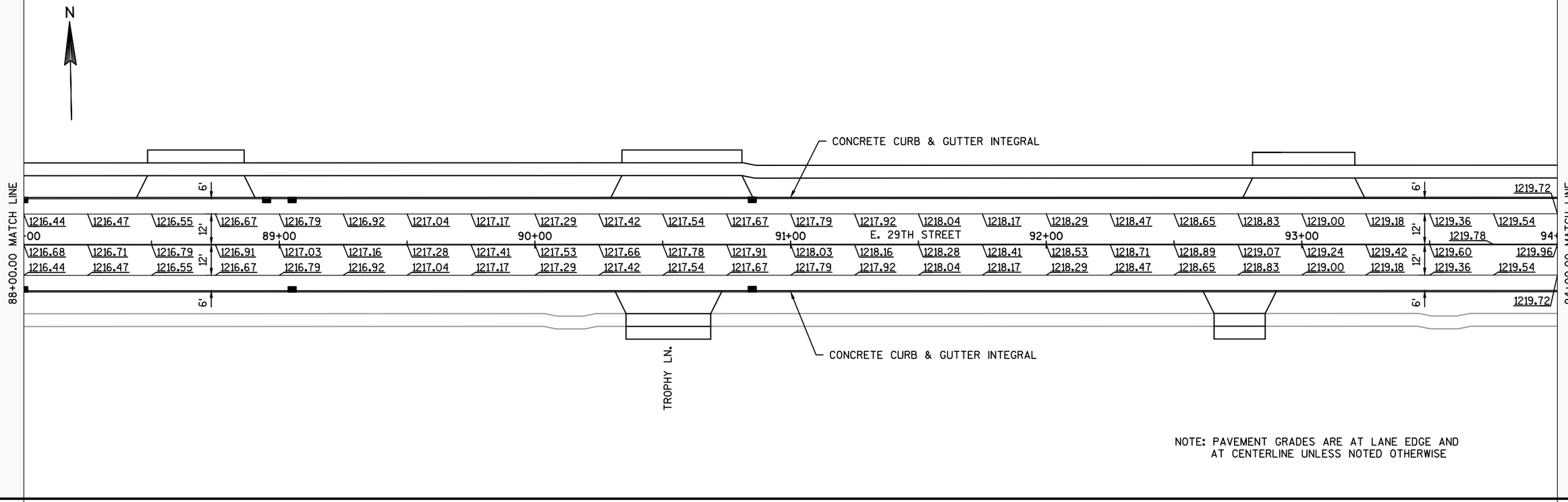
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CURB RAMP DETAILS	SHEET 28	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\CURB RAMP DETAILS.DWG
LAYOUT NAME - 04 CURB RAMP DETAILS
PLOT DATE : 11/16/2017 8:23 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 44

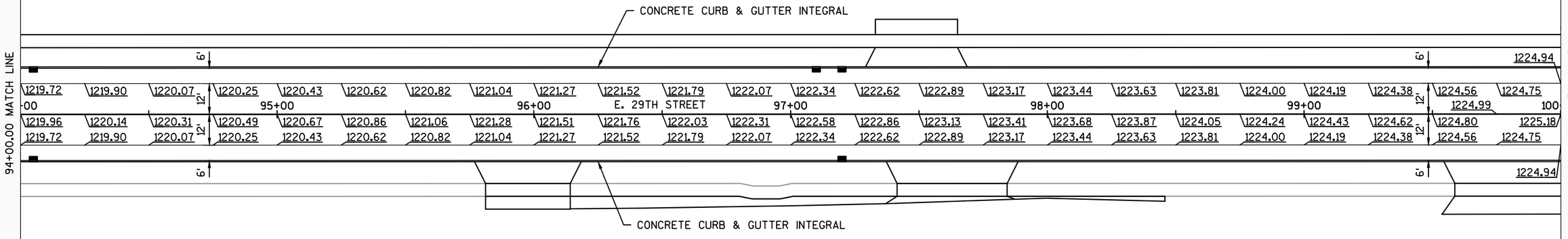


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PAVING DETAILS - E. 29TH STREET	SHEET 29 E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021201_PD
PLOT DATE : 11/16/2017 6:21 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

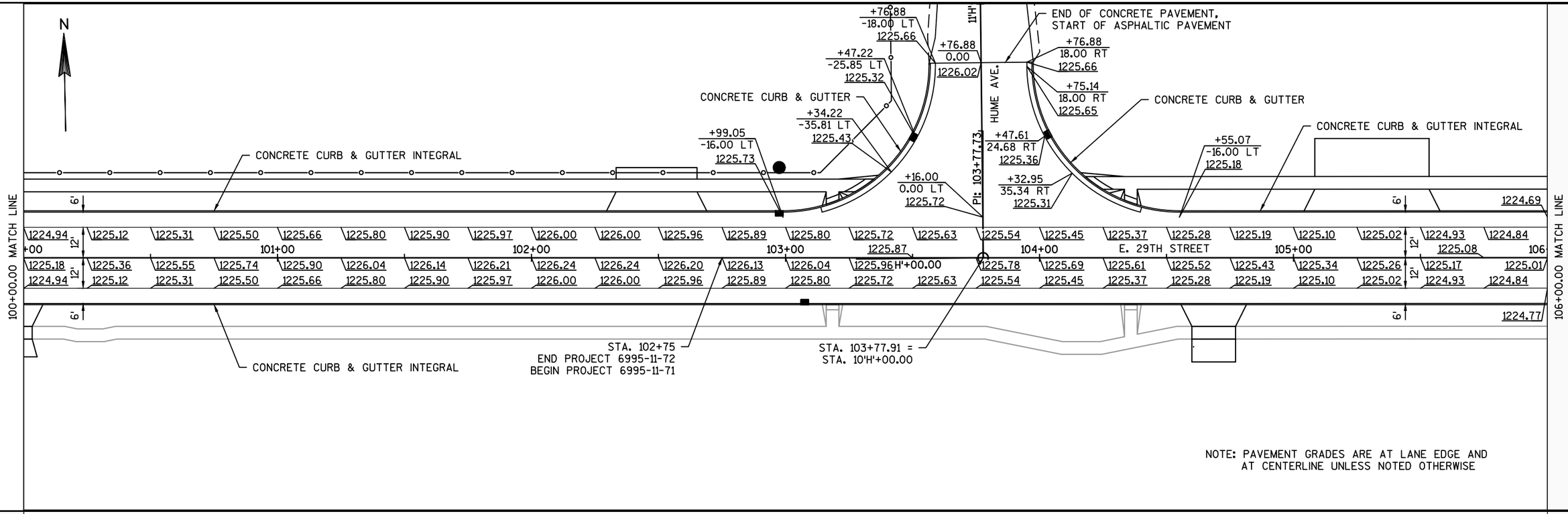


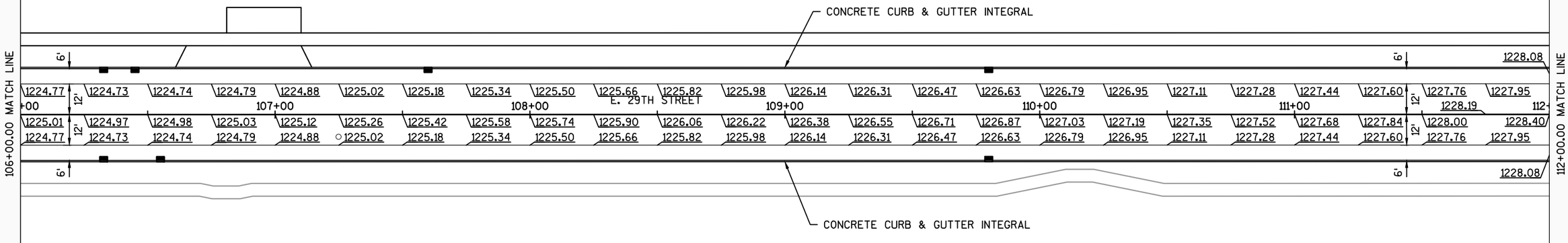
NOTE: PAVEMENT GRADES ARE AT LANE EDGE AND AT CENTERLINE UNLESS NOTED OTHERWISE



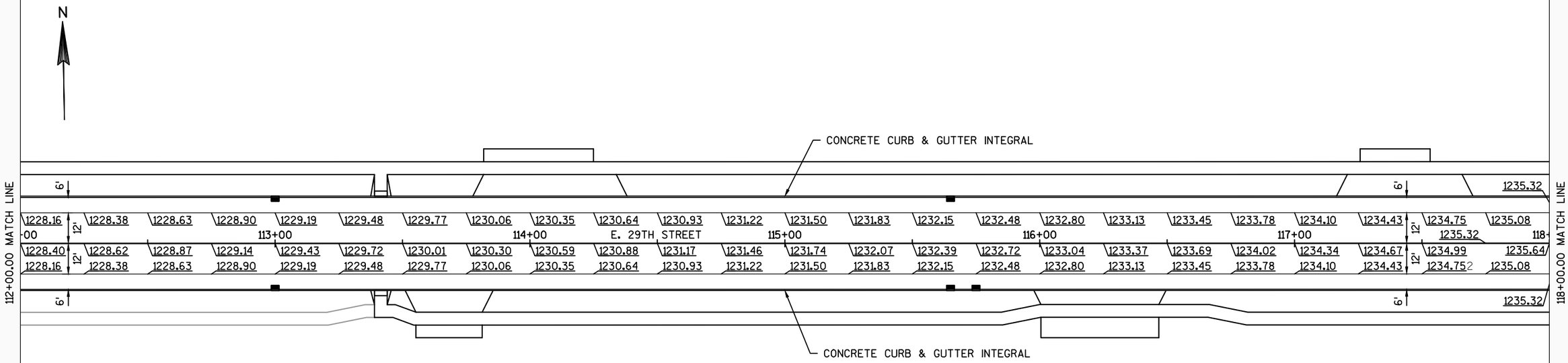
NOTE: PAVEMENT GRADES ARE AT LANE EDGE AND AT CENTERLINE UNLESS NOTED OTHERWISE

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PAVING DETAILS - E. 29TH STREET	SHEET 30	E

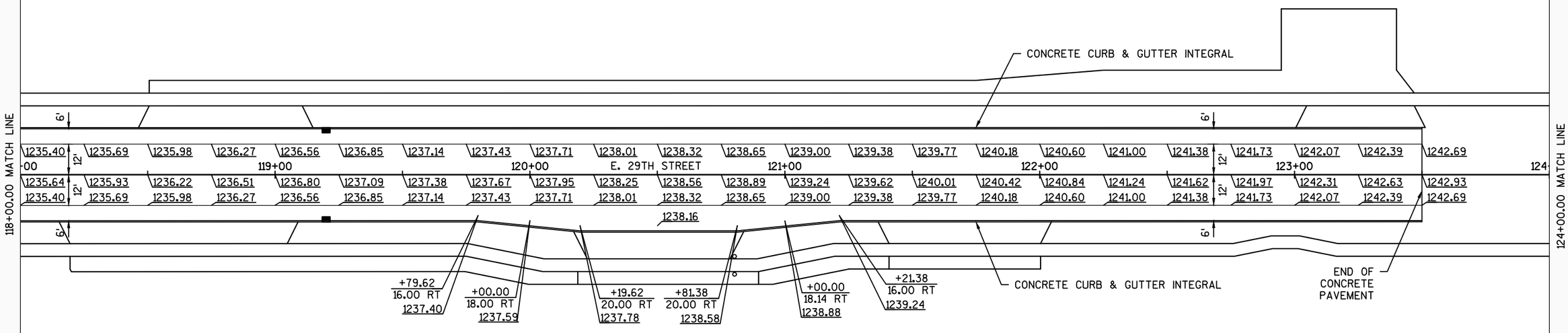




PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PAVING DETAILS - E. 29TH STREET	SHEET 31	E



NOTE: PAVEMENT GRADES ARE AT LANE EDGE AND AT CENTERLINE UNLESS NOTED OTHERWISE



NOTE: PAVEMENT GRADES ARE AT LANE EDGE AND AT CENTERLINE UNLESS NOTED OTHERWISE

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PAVING DETAILS - E. 29TH STREET	SHEET 32	E

2

N

11'W.

12' 12'

GUY

POST

GV

SAN

MH

77+00

78+00

79+00

80+00

81+00

82+

10'W.+00

15'

E. 29TH ST. (CTH H)

STA. 76+45
BEGINNING OF PROJECT 6995-11-72

82+00.00 MATCH LINE

WASHINGTON AVE.

SEPV

SEPC

BUTTERNUT PKWY.

12' 12'

12'

12'

83+00

84+00

85+00

86+00

87+00

88+

15'

E. 29TH ST. (CTH H)

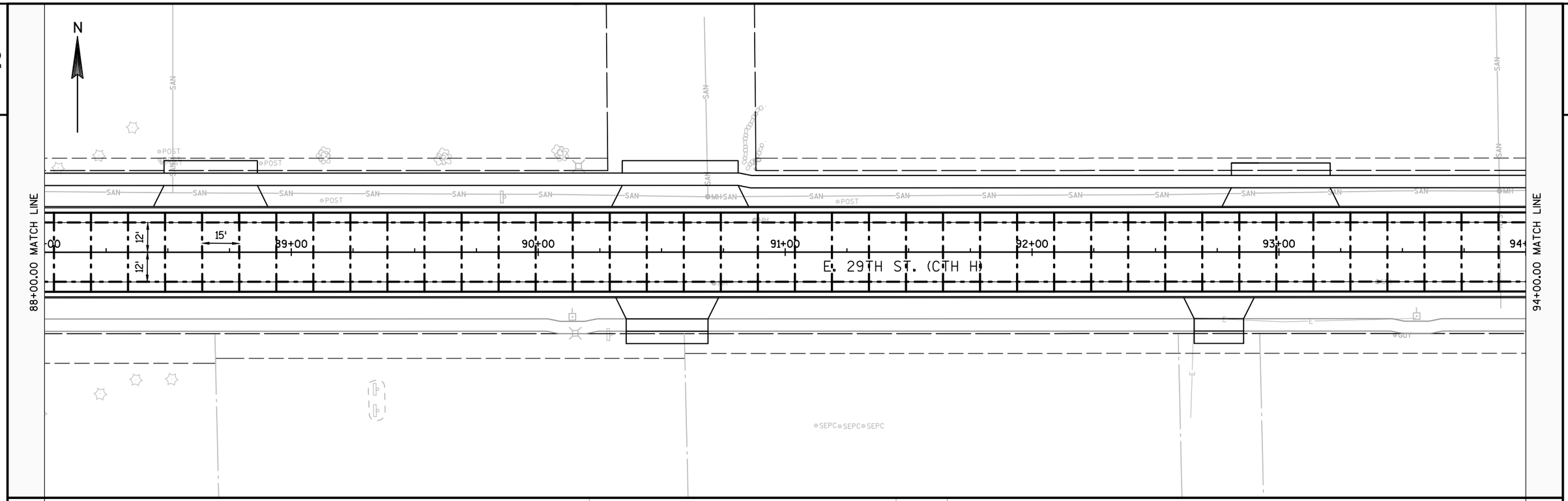
82+00.00 MATCH LINE

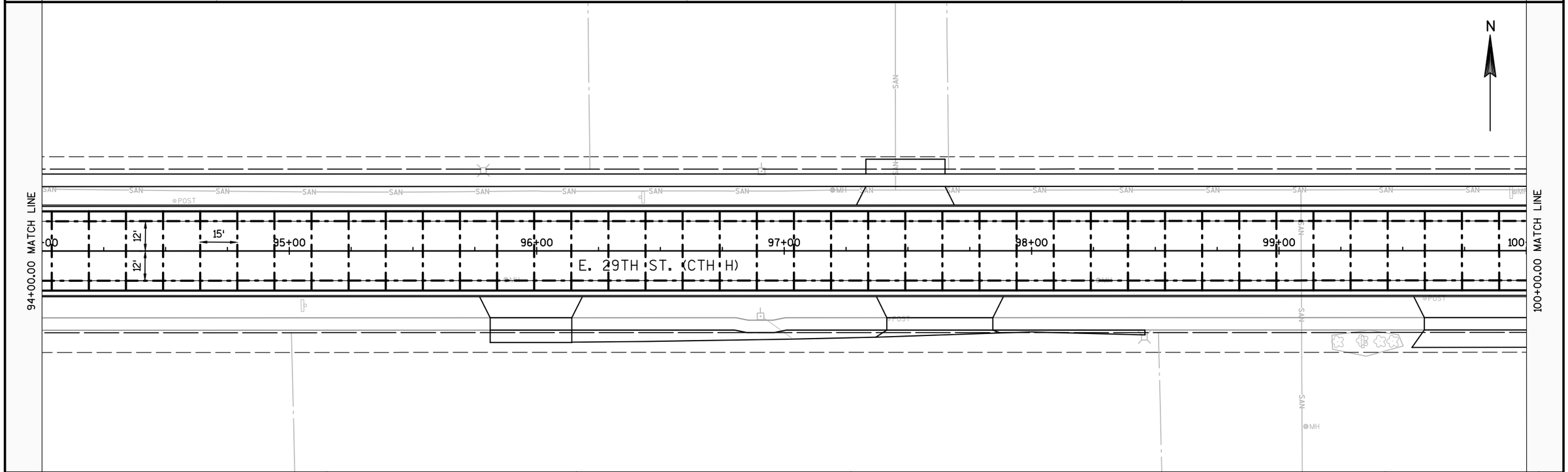
88+00.00 MATCH LINE

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	JOINT DETAILS	SHEET 33	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\021301_JD.DWG
LAYOUT NAME - 021301_JD

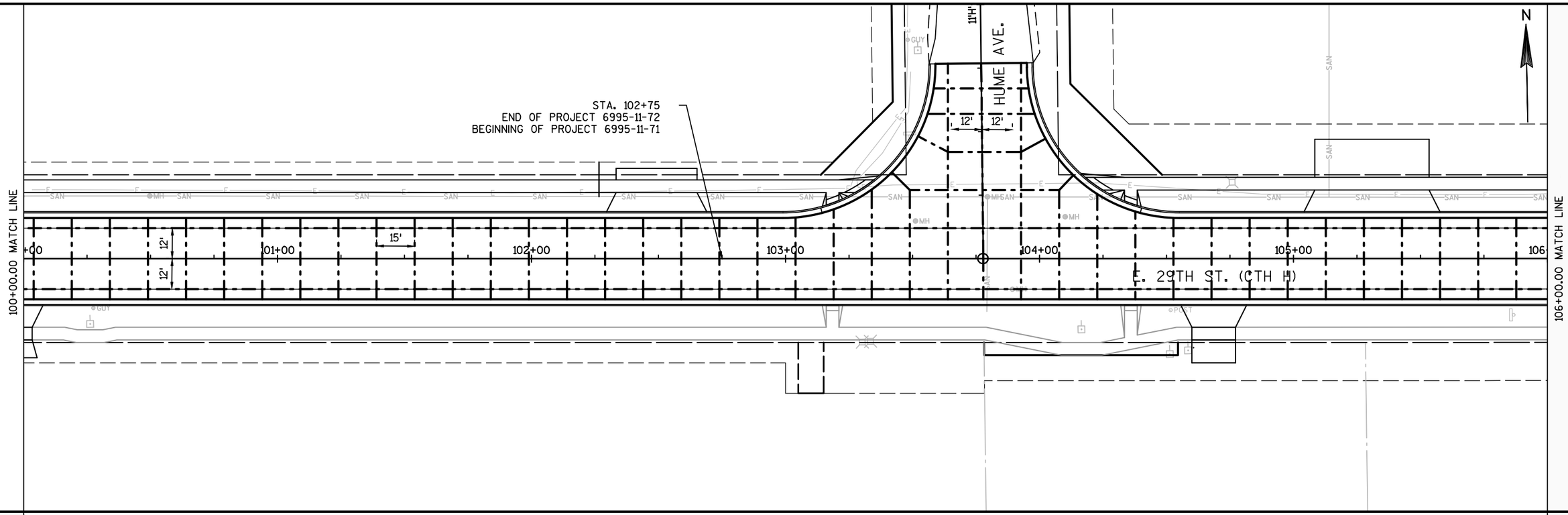
PLOT DATE : 11/16/2017 6:47 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT



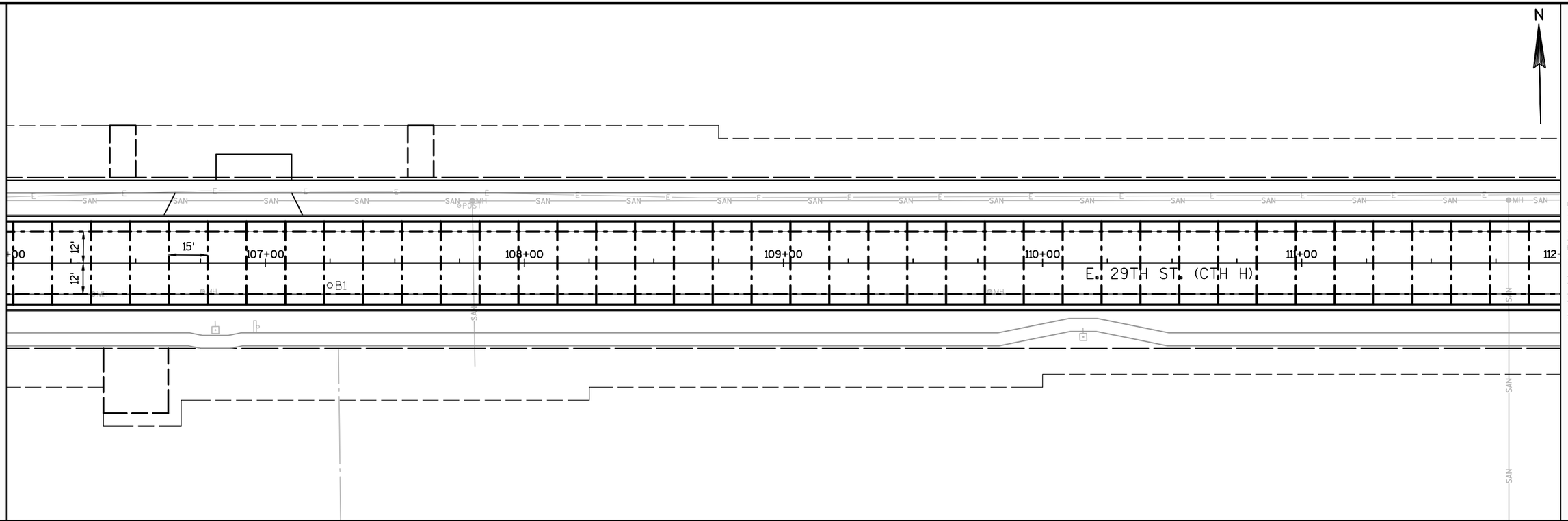


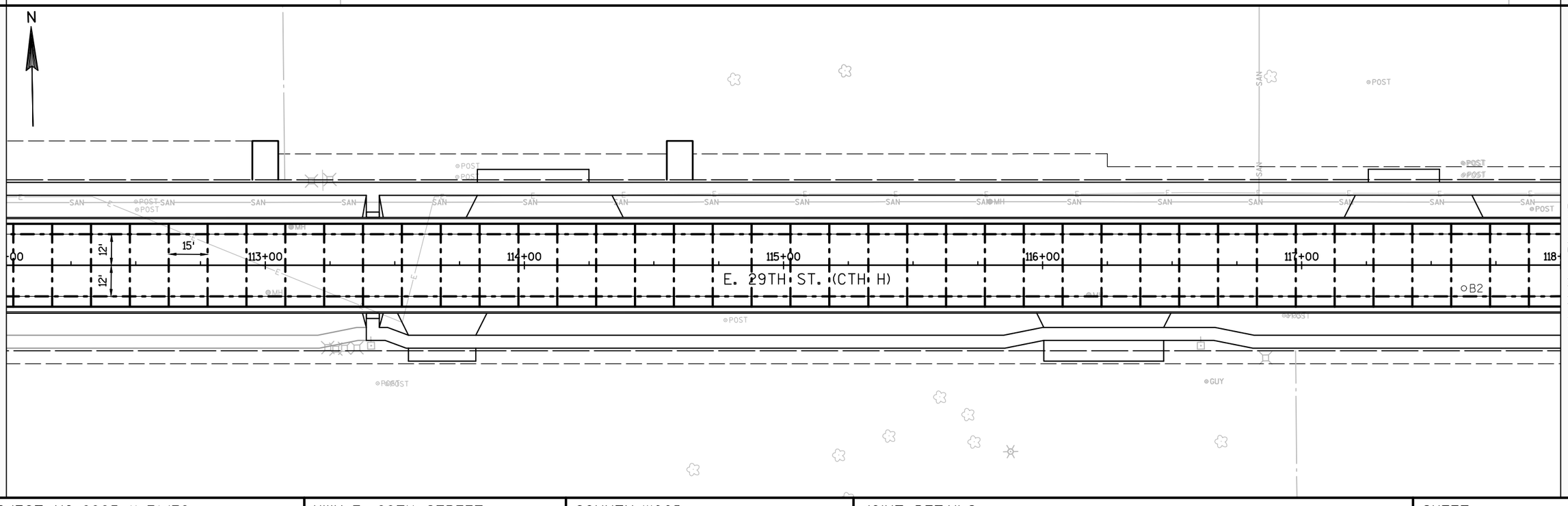
2

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	JOINT DETAILS	SHEET 34	E



PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	JOINT DETAILS	SHEET 35	E

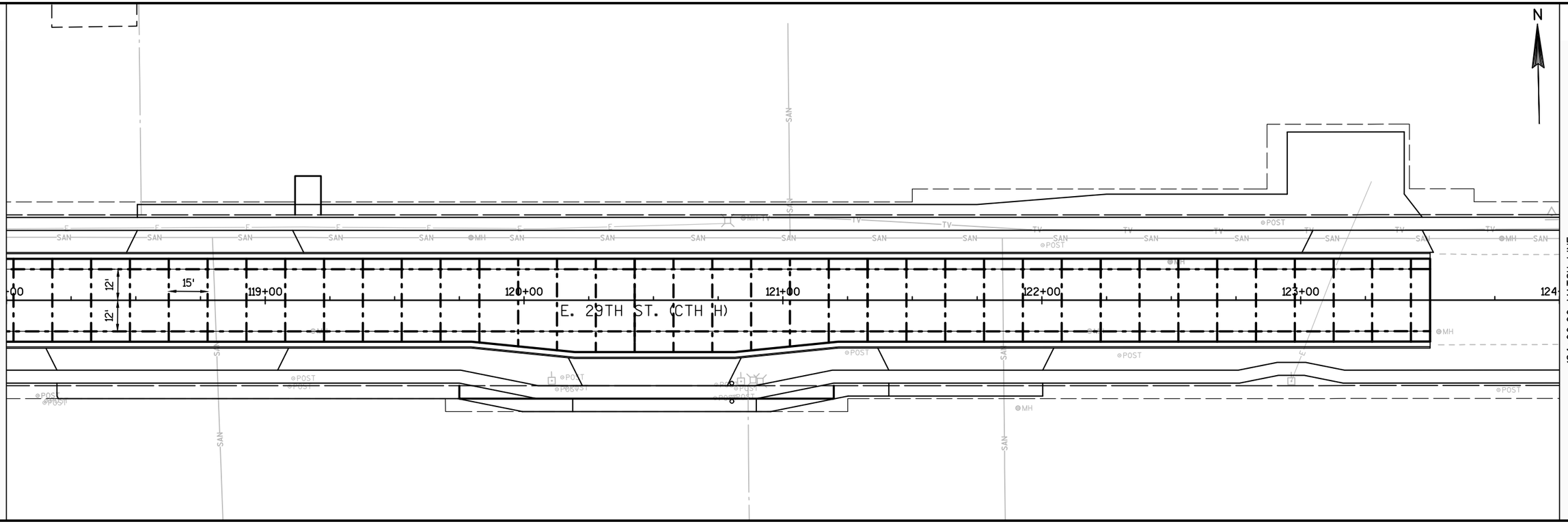




2

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	JOINT DETAILS	SHEET 36	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\021301_JD.DWG
LAYOUT NAME - 021304_JD
PLOT DATE : 11/16/2017 6:49 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	JOINT DETAILS	SHEET 37	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\021301_JD.DWG
LAYOUT NAME - 021305_JD
PLOT DATE : 11/16/2017 6:49 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2

N

TLE

R/W

87+00

E. 29TH STREET

86+00

FEE

FEE

TLE

R/W

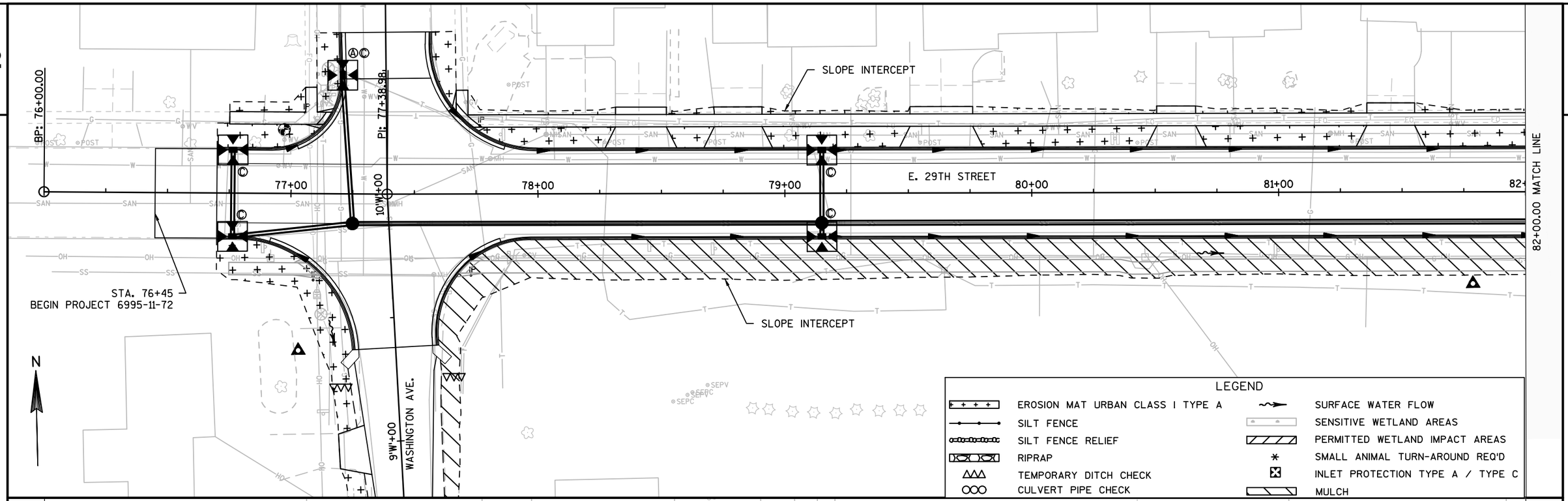
R/W

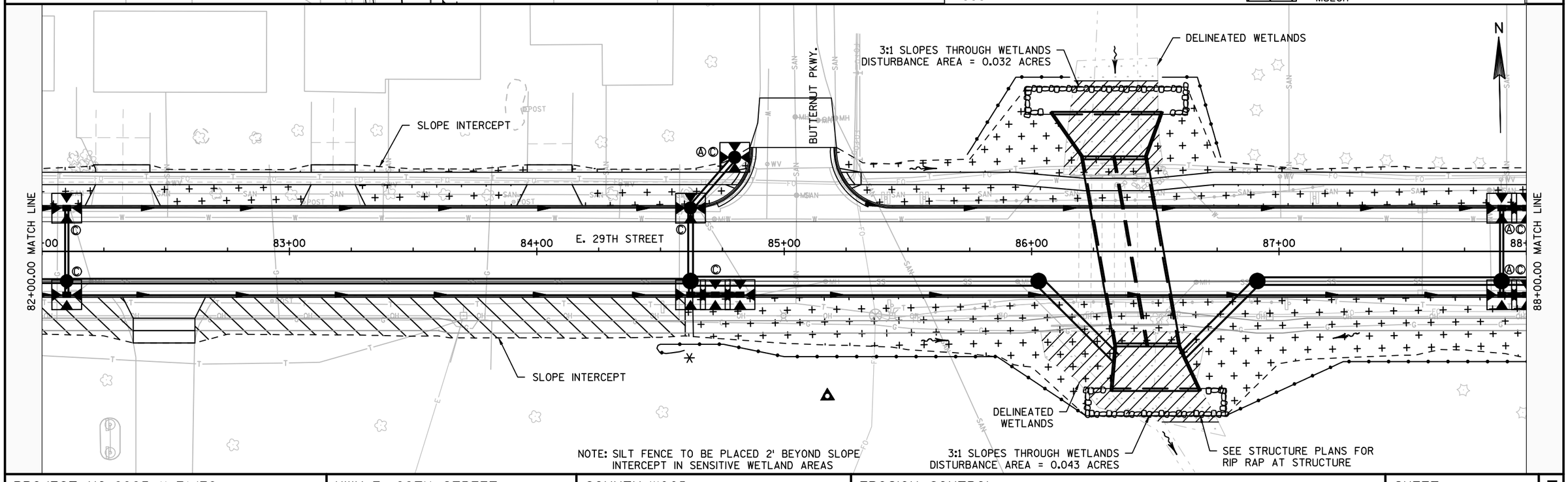
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	BOX CULVERT GRADING DETAILS	SHEET 38	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\BOX CULVERT GRADING DETAIL.DWG
LAYOUT NAME - BOX CULVERT GRADING

PLOT DATE : 7/31/2017 4:41 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:15 FT

WISDOT/CADDS SHEET 42





PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	EROSION CONTROL	SHEET 39	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001_EC

PLOT DATE : 11/16/2017 6:53 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

88+00.00 MATCH LINE

89+00 90+00 91+00 92+00 93+00 94+00.00 MATCH LINE

E. 29TH STREET

SLOPE INTERCEPT

SLOPE INTERCEPT

TROPHY LN.

LEGEND

EROSION MAT URBAN CLASS I TYPE A	SURFACE WATER FLOW
SILT FENCE	SENSITIVE WETLAND AREAS
SILT FENCE RELIEF	PERMITTED WETLAND IMPACT AREAS
RIPRAP	SMALL ANIMAL TURN-AROUND REQ'D
TEMPORARY DITCH CHECK	INLET PROTECTION TYPE A / TYPE C
CULVERT PIPE CHECK	MULCH

N

94+00.00 MATCH LINE

95+00 96+00 97+00 98+00 99+00 100+00.00 MATCH LINE

E. 29TH STREET

SLOPE INTERCEPT

SLOPE INTERCEPT

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	EROSION CONTROL	SHEET 40	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022002_EC

PLOT DATE : 11/16/2017 6:53 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT

LEGEND

- EROSION MAT URBAN CLASS I TYPE A
- SILT FENCE
- SILT FENCE RELIEF
- RIPRAP
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- SENSITIVE WETLAND AREAS
- PERMITTED WETLAND IMPACT AREAS
- SMALL ANIMAL TURN-AROUND REQ'D
- INLET PROTECTION TYPE A / TYPE C
- MULCH

100+00.00 MATCH LINE

106+00.00 MATCH LINE

HUME AVE.

PI: 103+77.78

BP: 10'H'+00.00

E. 29TH STREET

SLOPE INTERCEPT

STA. 102+75
END PROJECT 6995-11-72
BEGIN PROJECT 6995-11-71

NOTE: SILT FENCE TO BE PLACED 2' BEYOND SLOPE INTERCEPT IN SENSITIVE WETLAND AREAS

DELINEATED WETLANDS

106+00.00 MATCH LINE

112+00.00 MATCH LINE

3:1 SLOPES THROUGH WETLANDS
DISTURBANCE AREA = 0.087 ACRES

SEE RIPRAP MEDIUM AT ENDWALL DETAIL

3:1 SLOPES THROUGH WETLANDS
DISTURBANCE AREA = 0.148 ACRES

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	EROSION CONTROL	SHEET 41	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022003_EC

PLOT DATE : 11/16/2017 6:54 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

N

SLOPE INTERCEPT

112+00.00 MATCH LINE

-00 113+00 114+00 E. 29TH STREET 115+00 116+00 117+00 118+

B2

SLOPE INTERCEPT

LEGEND

EROSION MAT URBAN CLASS I TYPE A		SURFACE WATER FLOW	
SILT FENCE		SENSITIVE WETLAND AREAS	
SILT FENCE RELIEF		PERMITTED WETLAND IMPACT AREAS	
RIPRAP		SMALL ANIMAL TURN-AROUND REQ'D	
TEMPORARY DITCH CHECK		INLET PROTECTION TYPE A / TYPE C	
CULVERT PIPE CHECK		MULCH	

N

SLOPE INTERCEPT

118+00.00 MATCH LINE

-00 119+00 120+00 E. 29TH STREET 121+00 122+00 123+00 124+

SLOPE INTERCEPT

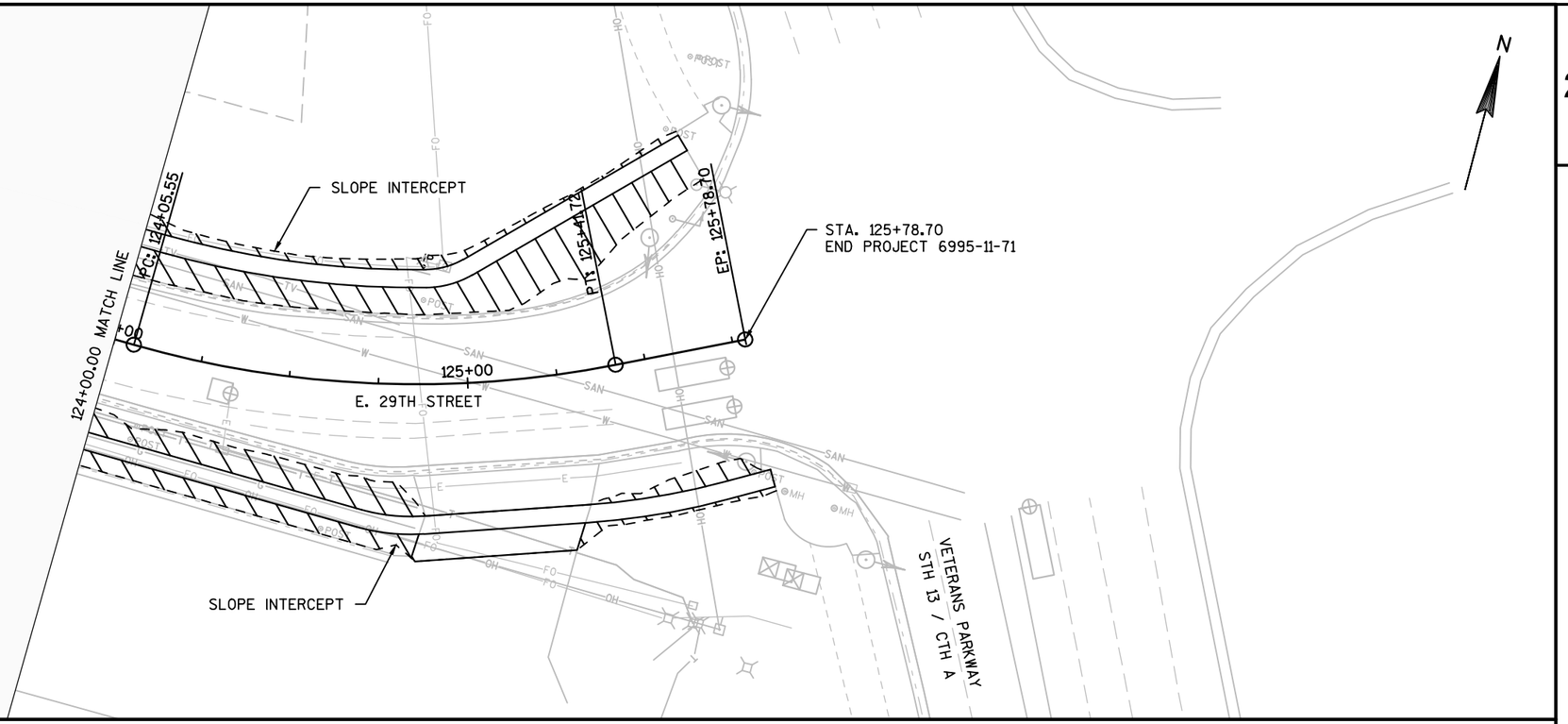
124+00.00 MATCH LINE

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	EROSION CONTROL	SHEET 42	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022004_EC

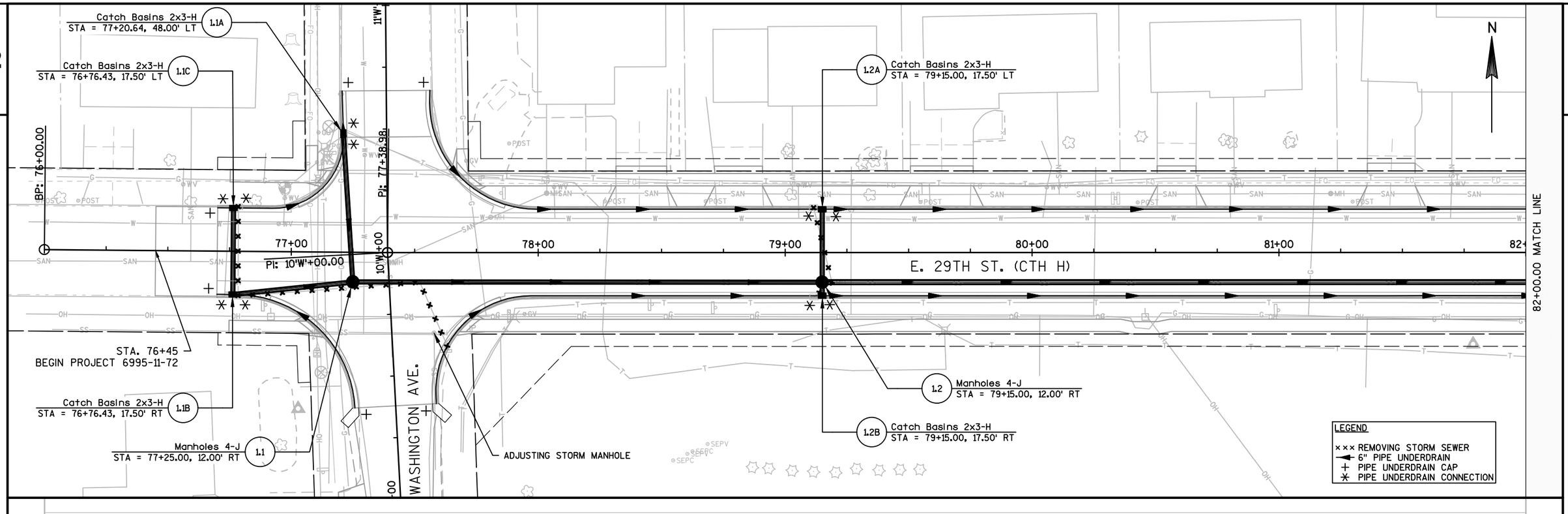
PLOT DATE : 11/16/2017 6:57 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT

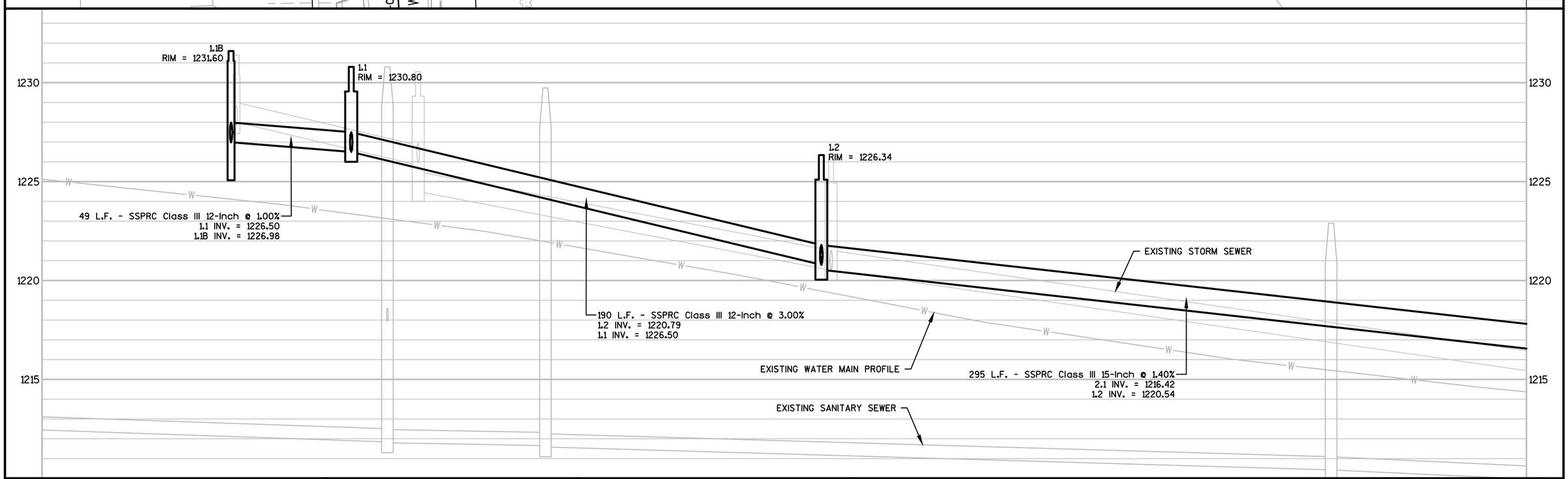
WISDOT/CADDS SHEET 44



LEGEND

	EROSION MAT URBAN CLASS I TYPE A		SURFACE WATER FLOW
	SILT FENCE		SENSITIVE WETLAND AREAS
	SILT FENCE RELIEF		PERMITTED WETLAND IMPACT AREAS
	RIPRAP	*	SMALL ANIMAL TURN-AROUND REQ'D
	TEMPORARY DITCH CHECK		INLET PROTECTION TYPE A / TYPE C
	CULVERT PIPE CHECK		MULCH

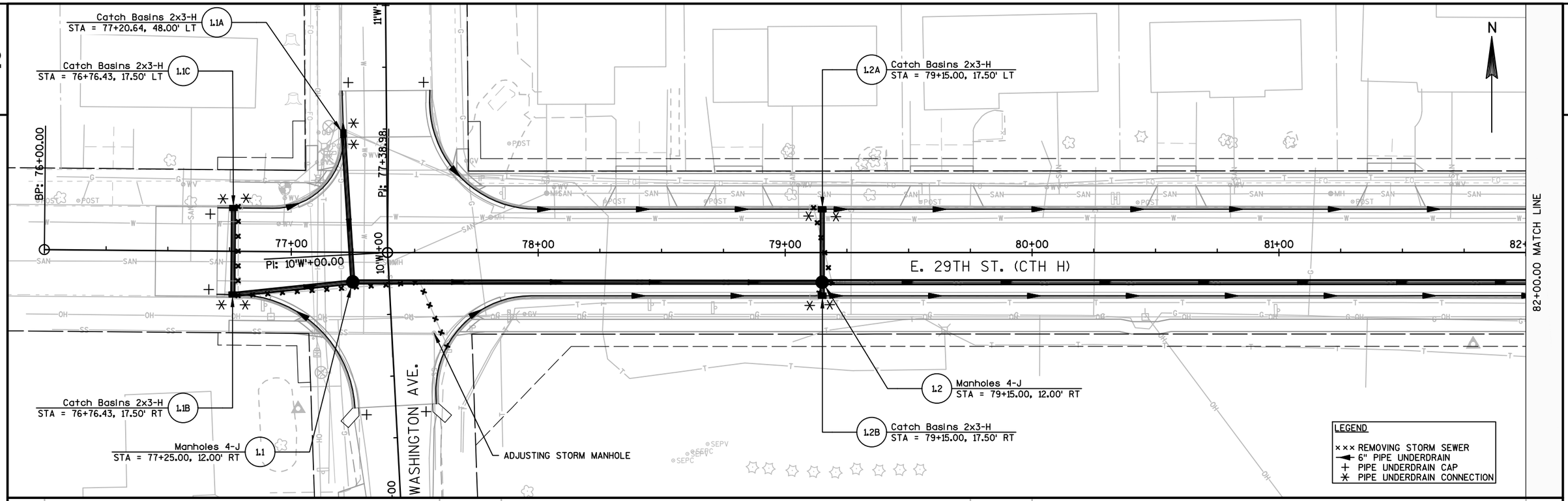


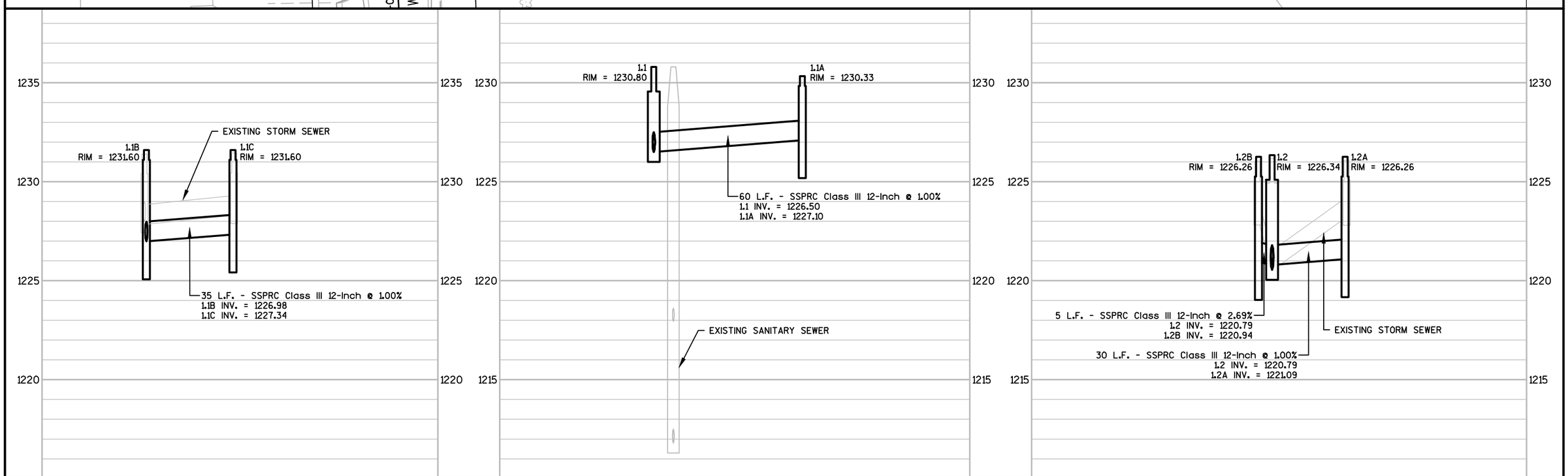


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	STORM SEWER	SHEET 44	E

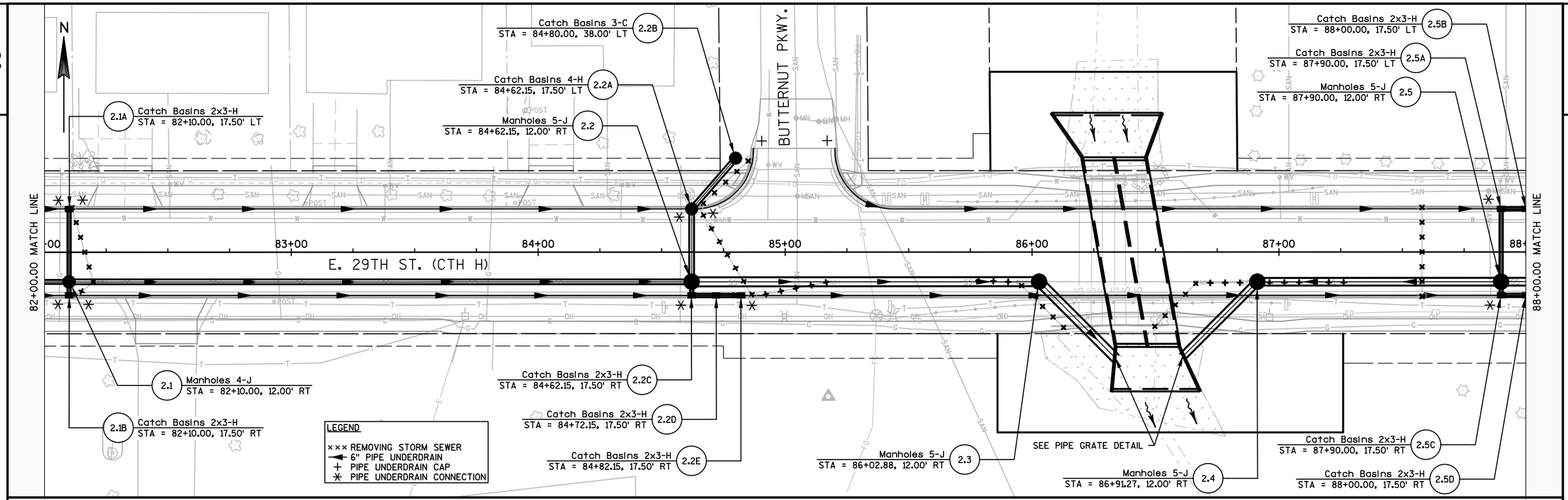
FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\022501-SS.DWG
LAYOUT NAME - 022501_SS

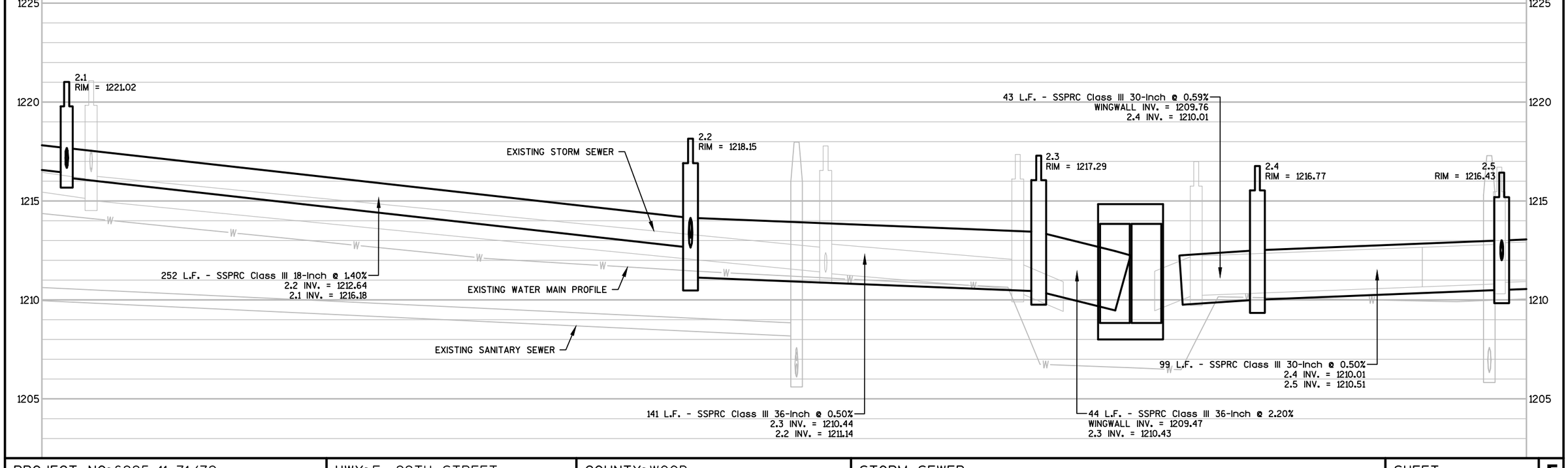
PLOT DATE : 11/16/2017 7:04 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT





PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	STORM SEWER	SHEET 45	E





PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	STORM SEWER	SHEET 46	E

2

N

82+00.00 MATCH LINE

88+00.00 MATCH LINE

BUTTERNUT PKWY.

E. 29TH ST. (CTH H)

83+00 84+00 85+00 86+00 87+00

2.1A Catch Basins 2x3-H
STA = 82+10.00, 17.50' LT

2.1 Manholes 4-J
STA = 82+10.00, 12.00' RT

2.1B Catch Basins 2x3-H
STA = 82+10.00, 17.50' RT

Catch Basins 3-C 2.2B
STA = 84+80.00, 38.00' LT

Catch Basins 4-H 2.2A
STA = 84+62.15, 17.50' LT

Manholes 5-J 2.2
STA = 84+62.15, 12.00' RT

Catch Basins 2x3-H 2.2C
STA = 84+62.15, 17.50' RT

Catch Basins 2x3-H 2.2D
STA = 84+72.15, 17.50' RT

Catch Basins 2x3-H 2.2E
STA = 84+82.15, 17.50' RT

Manholes 5-J 2.3
STA = 86+02.88, 12.00' RT

SEE PIPE GRATE DETAIL

Manholes 5-J 2.4
STA = 86+91.27, 12.00' RT

Catch Basins 2x3-H 2.5B
STA = 88+00.00, 17.50' LT

Catch Basins 2x3-H 2.5A
STA = 87+90.00, 17.50' LT

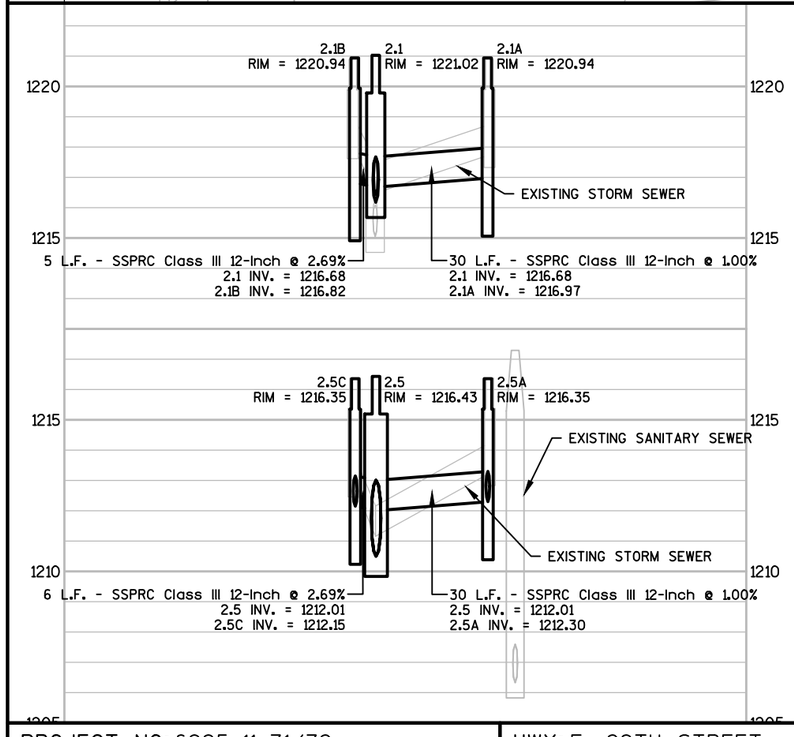
Manholes 5-J 2.5
STA = 87+90.00, 12.00' RT

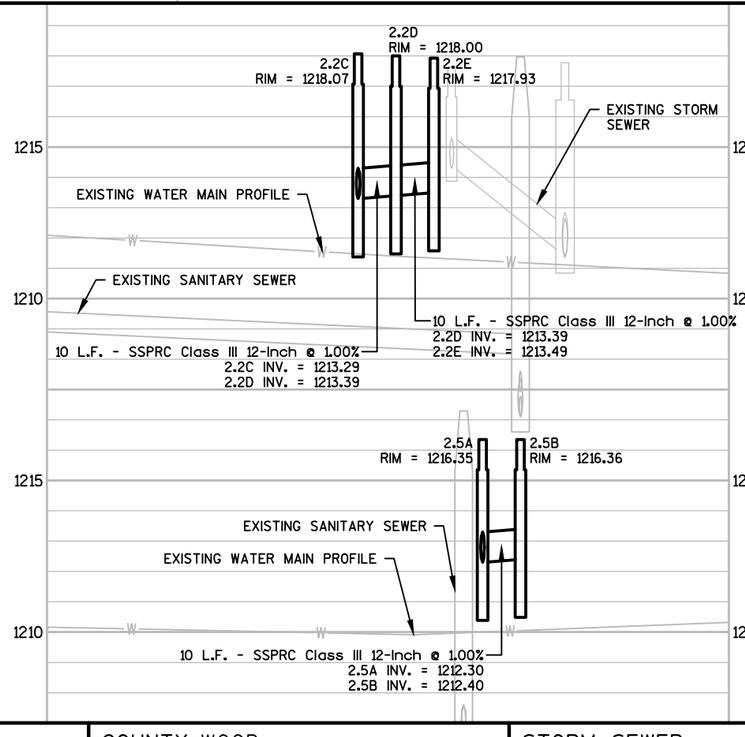
Catch Basins 2x3-H 2.5C
STA = 87+90.00, 17.50' RT

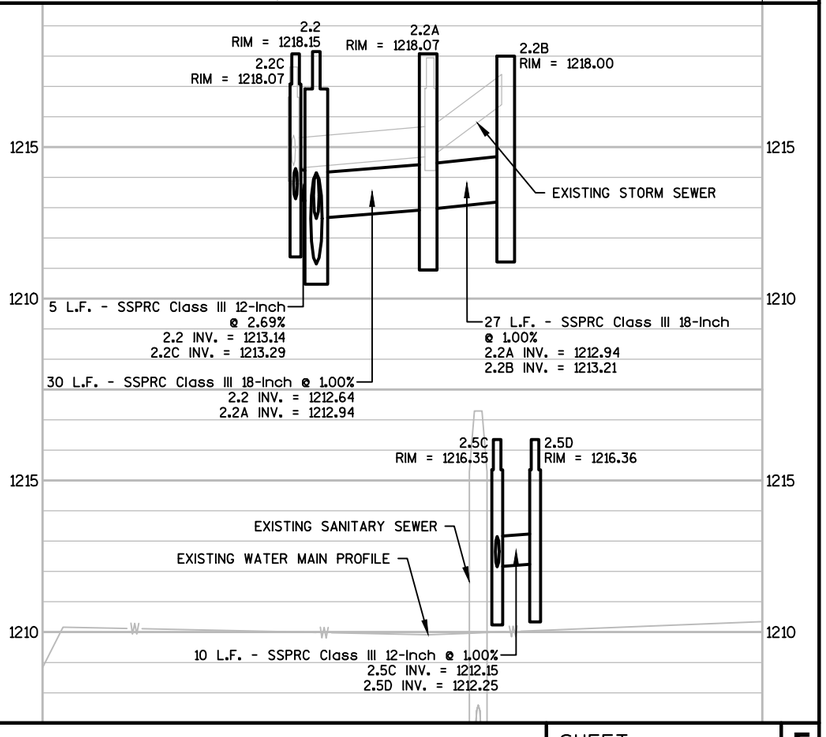
Catch Basins 2x3-H 2.5D
STA = 88+00.00, 17.50' RT

LEGEND

××× REMOVING STORM SEWER
6" PIPE UNDERDRAIN
PIPE UNDERDRAIN CAP
PIPE UNDERDRAIN CONNECTION







PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	STORM SEWER	SHEET 47	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\022501-SS.DWG
LAYOUT NAME - 022504_SS
PLOT DATE : 11/16/2017 7:06 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

88+00.00 MATCH LINE

94+00.00 MATCH LINE

89+00 90+00 91+00 92+00 93+00

E. 29TH ST. (CTH H)

3.1B Catch Basins 2x3-H
STA = 88+95.00, 17.50' LT

3.1A Catch Basins 2x3-H
STA = 89+05.00, 17.50' LT

3.1C Catch Basins 2x3-H
STA = 89+05.00, 17.50' RT

3.1 Manholes 5-J
STA = 89+05.00, 12.00' RT

3.2B Catch Basins 3-C
STA = 90+85.00, 40.00' LT

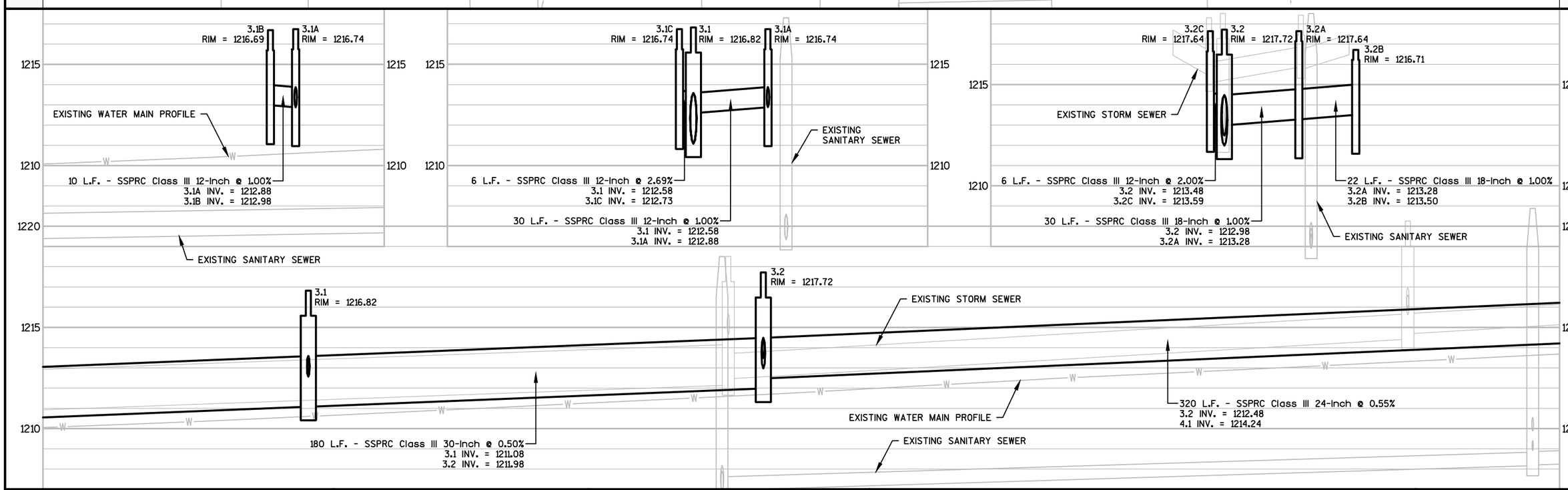
3.2A Catch Basins 2x3-H
STA = 90+85.00, 17.50' LT

3.2C Catch Basins 2x3-H
STA = 90+85.00, 17.50' RT

3.2 Manholes 5-J
STA = 90+85.00, 12.00' RT

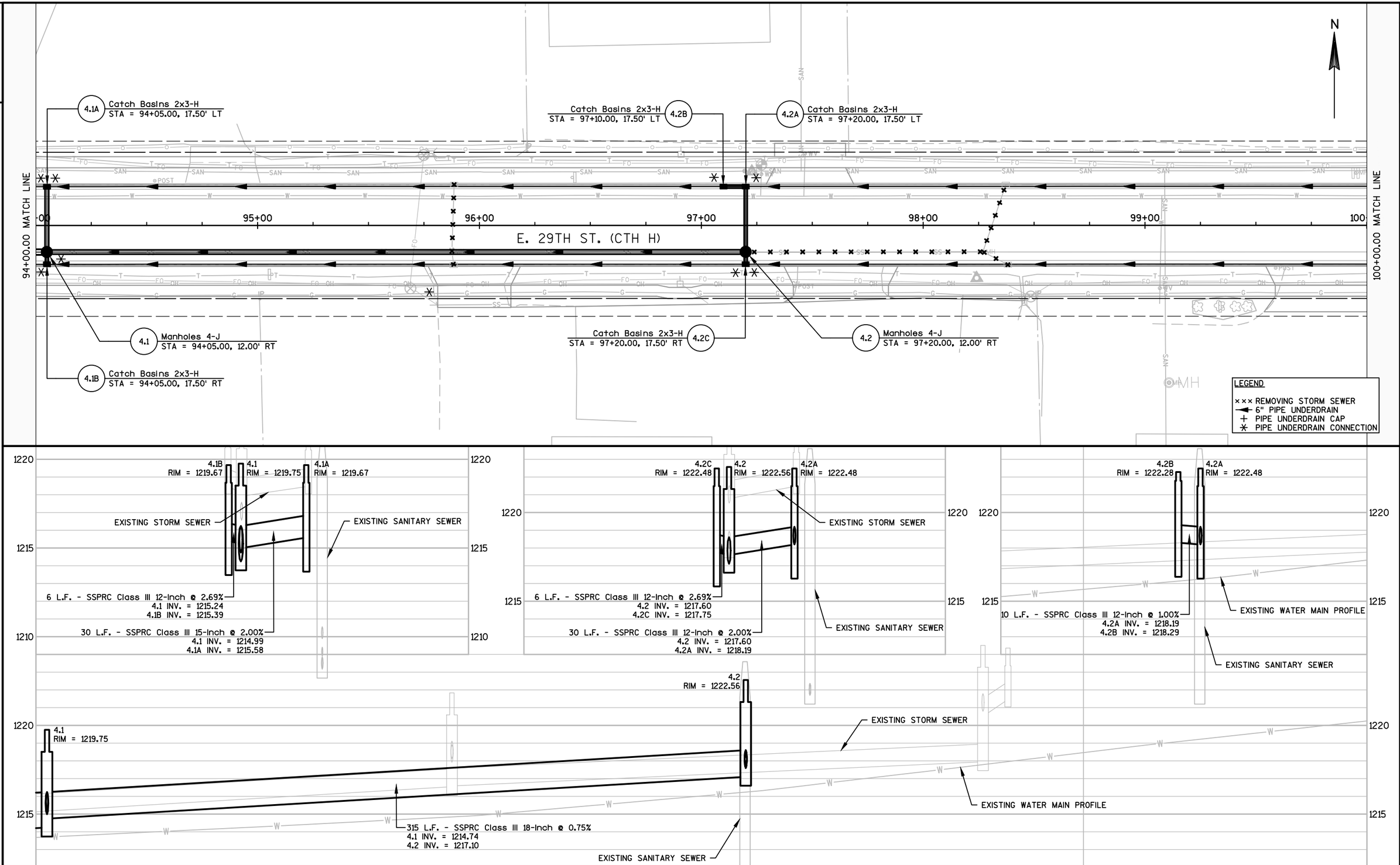
LEGEND

××× REMOVING STORM SEWER
6" PIPE UNDERDRAIN
PIPE UNDERDRAIN CAP
PIPE UNDERDRAIN CONNECTION



PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	STORM SEWER	SHEET 48	E

2

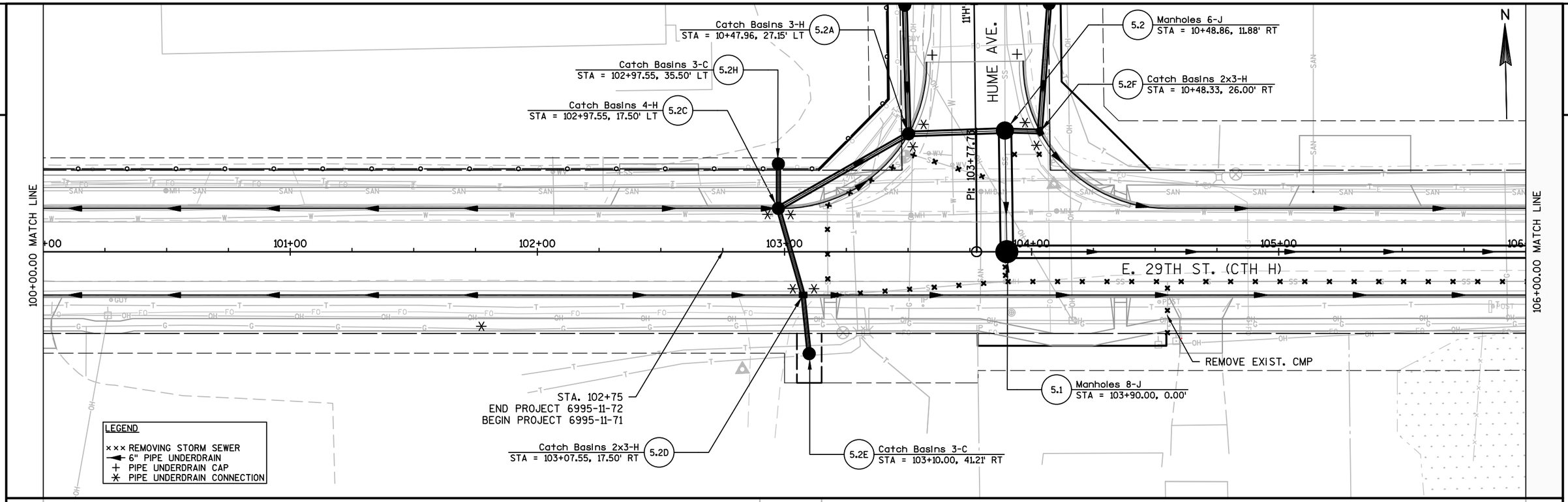


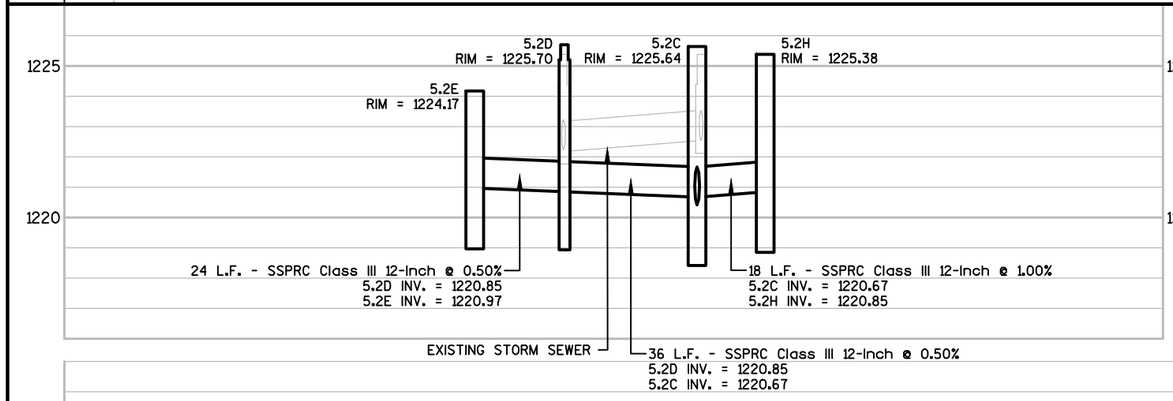
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	STORM SEWER	SHEET 49	E

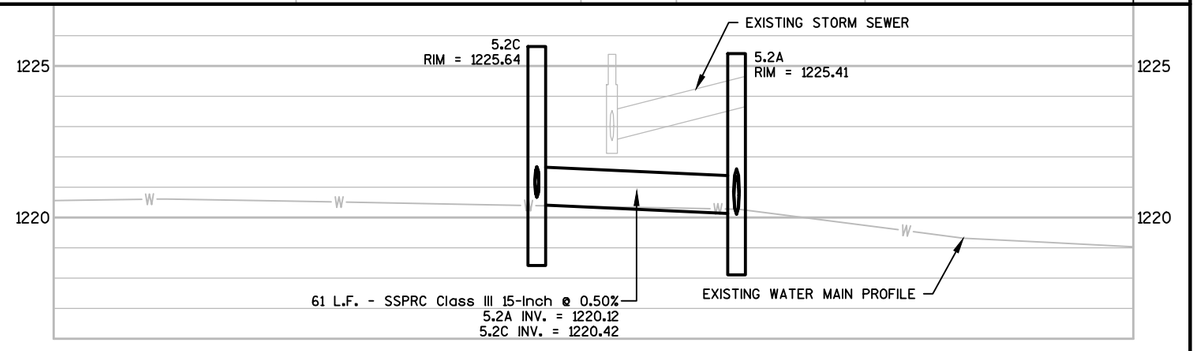
FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\022501-SS.DWG
LAYOUT NAME - 022506_SS

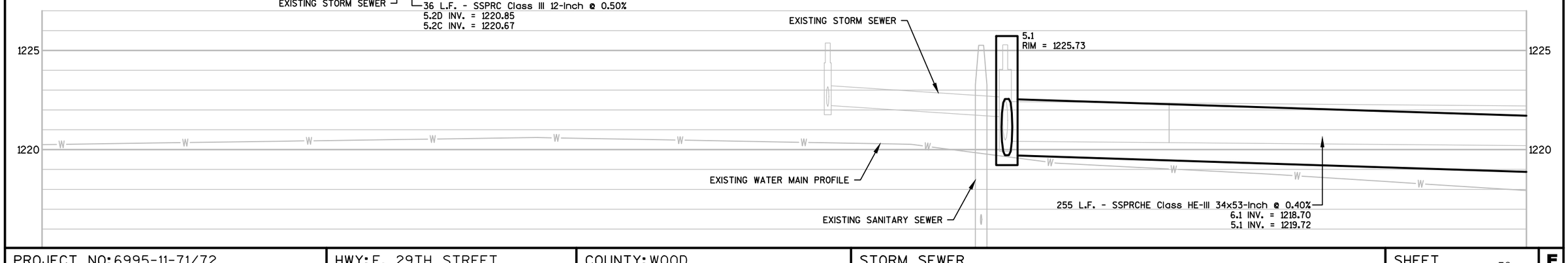
PLOT DATE : 11/16/2017 7:07 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT

2



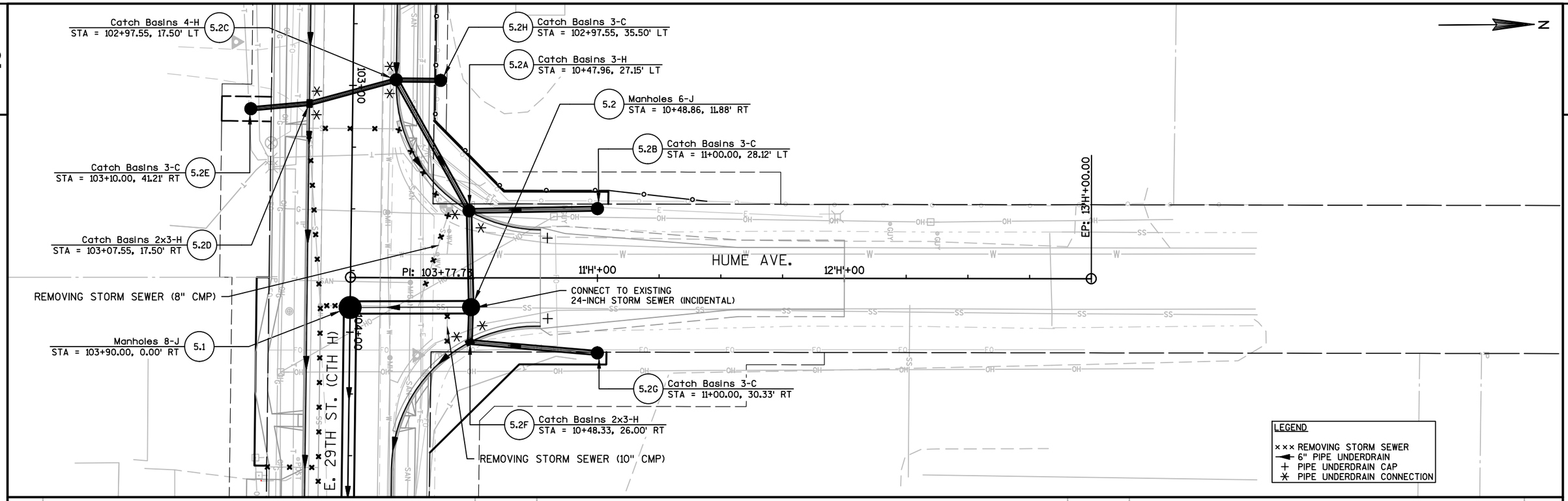


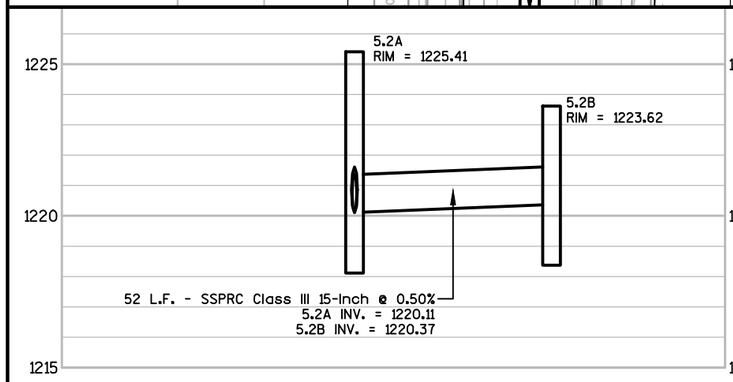


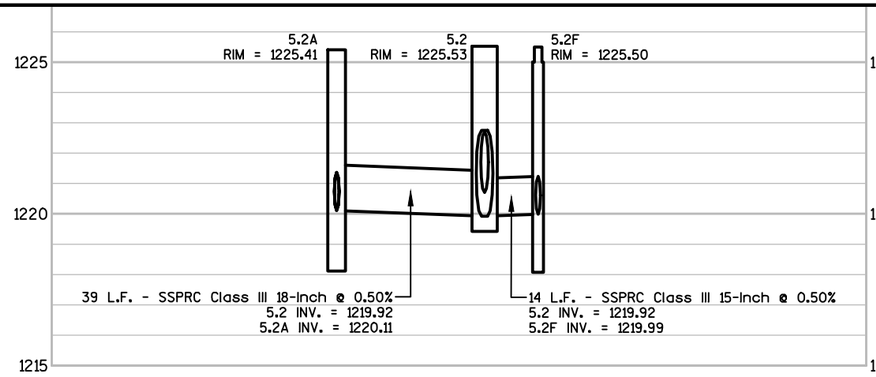


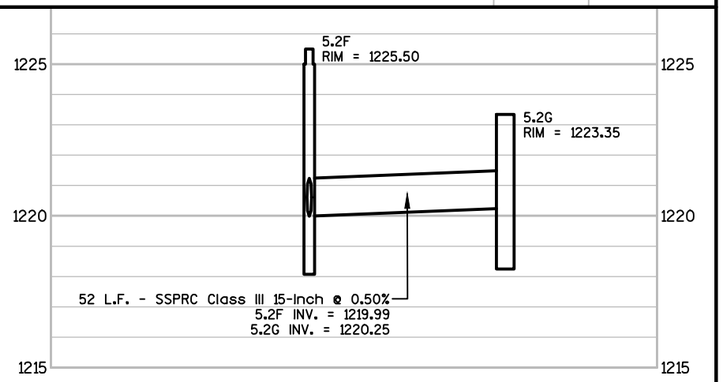
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	STORM SEWER	SHEET 50	E

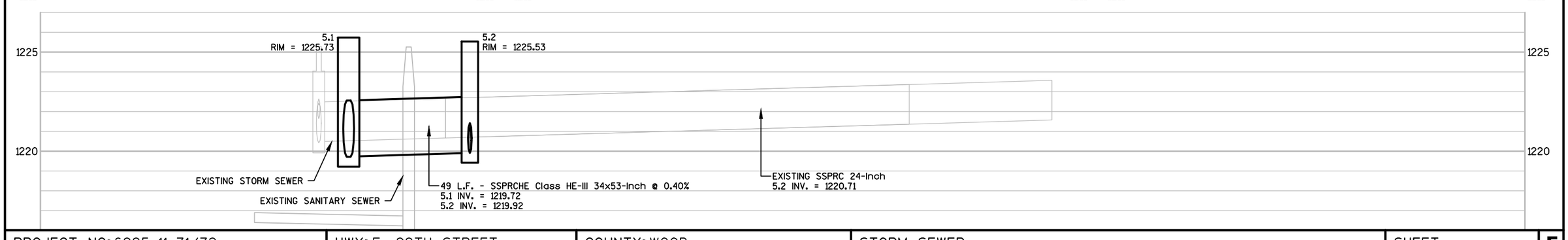
2











PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	STORM SEWER	SHEET 51	E

2

6.1C Catch Basins 2x3-H
STA = 106+32.70, 17.50' LT

6.1B Catch Basins 3-C
STA = 106+45.00, 45.00' LT

6.1A Catch Basins 2x3-H
STA = 106+45.00, 17.50' LT

EW.6B SEE PIPE GRATE DETAIL
Apron Endwalls for CPRC 24-Inch
STA = 107+60.00, 39.71' LT

6.2A Catch Basins 2x3-H
STA = 107+60.00, 17.50' LT

6.3A Catch Basins 2x3-H
STA = 109+80.00, 17.50' LT

106+00.00 MATCH LINE

112+00.00 MATCH LINE

+00 107+00 108+00 109+00 110+00 111+00 112+

E. 29TH ST. (CTH H)

6.1 Manholes 9-J
STA = 106+45.00 @ 0.00' RT

6.1E Catch Basins 2x3-H
STA = 106+55.00, 17.50' RT

6.2 Manholes 7-J
STA = 107+60.00, 12.00' RT

6.3 Manholes 5-J
STA = 109+80.00, 11.00' RT

6.3B Catch Basins 2x3-H
STA = 109+80.00, 17.50' RT

8-Inch TO 38x60-Inch
SEE CORED TEE CONNECTION DETAIL

SEE RIPRAP MEDIUM AT ENDWALL DETAIL

EW.6A SEE PIPE GRATE DETAIL
Apron Endwalls For CPRCHE 38x60-Inch
STA = 106+51.09, 44.01' RT

6.1D Catch Basins 2x3-H
STA = 106+32.70, 17.50' RT

LEGEND

××× REMOVING STORM SEWER
6" PIPE UNDERDRAIN
PIPE UNDERDRAIN CAP
PIPE UNDERDRAIN CONNECTION

N

6.1C
RIM = 1224.65

6.1A
RIM = 1224.66

EXISTING WATER MAIN PROFILE

EXISTING STORM SEWER

12 L.F. - SSPRC Class III 12-Inch @ 0.50%
6.1A INV. = 1220.12
6.1C INV. = 1220.18

EXISTING SANITARY SEWER

6.1D
RIM = 1224.65

6.1E
RIM = 1224.67

8-Inch TO 38x60-Inch
CORED TEE CONNECTIONS

EXISTING WATER MAIN PROFILE

EXISTING SANITARY SEWER

15 L.F. - PVC 8-Inch @ 0.50%
CORED TEE INV. = 1219.84
6.1D INV. = 1219.91

8 L.F. - PVC 8-Inch @ 1.00%
CORED TEE INV. = 1219.84
6.1E INV. = 1219.91

6.1
RIM = 1224.98

6.2
RIM = 1225.24

6.3
RIM = 1226.68

EXISTING STORM SEWER

EXISTING WATER MAIN PROFILE

EXISTING SANITARY SEWER

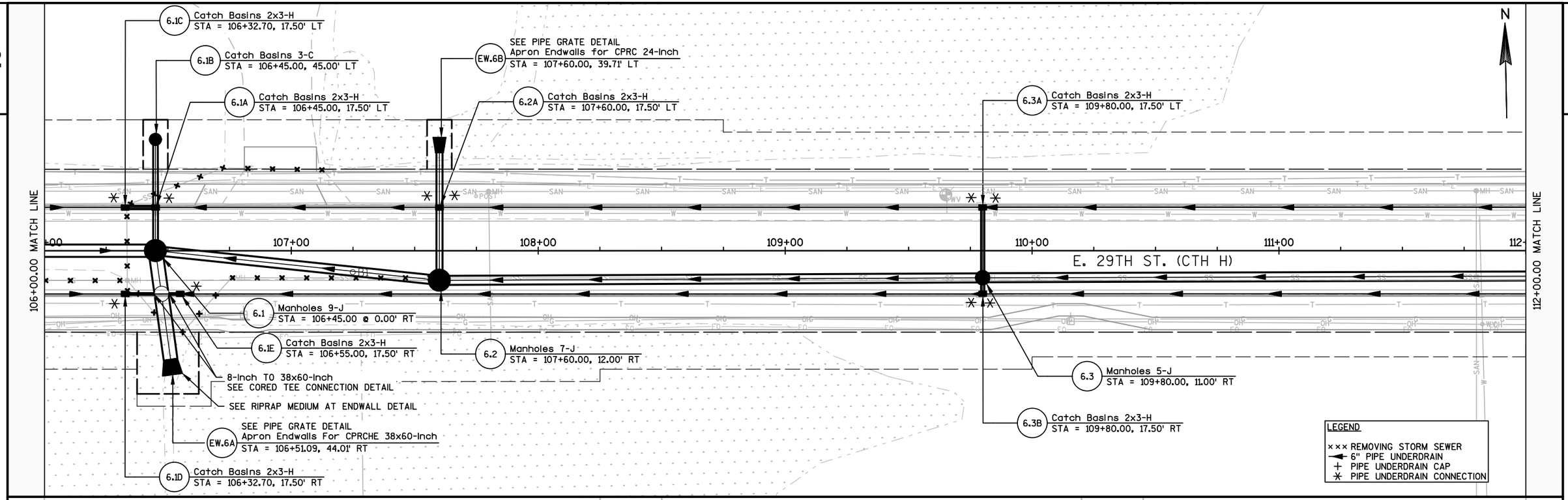
116 L.F. - SSPRC Class III 36-Inch @ 0.54%
6.1 INV. = 1218.62
6.2 INV. = 1219.25

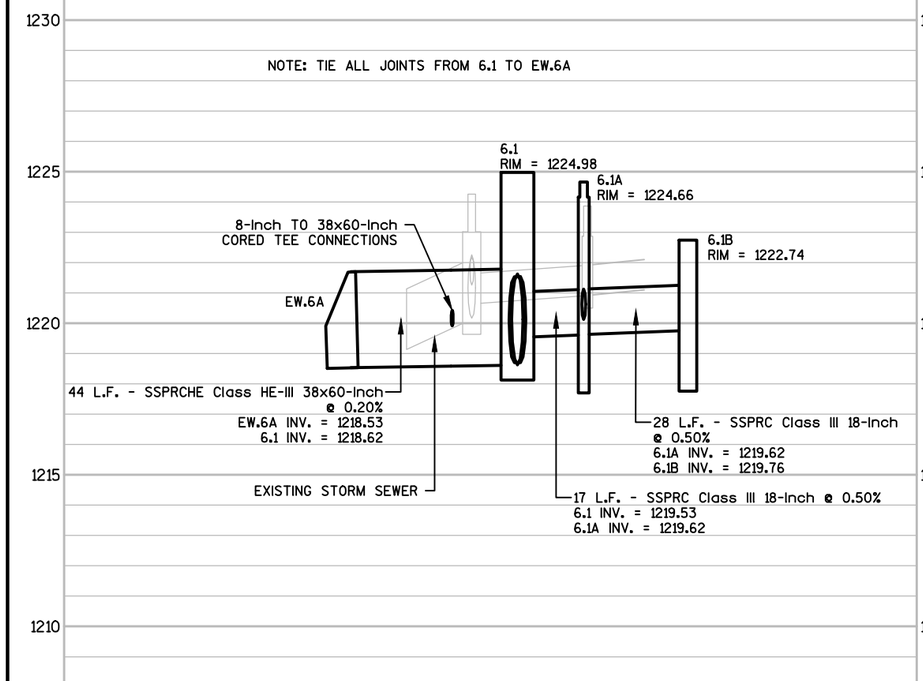
220 L.F. - SSPRC Class III 36-Inch @ 0.40%
6.2 INV. = 1219.25
6.3 INV. = 1220.13

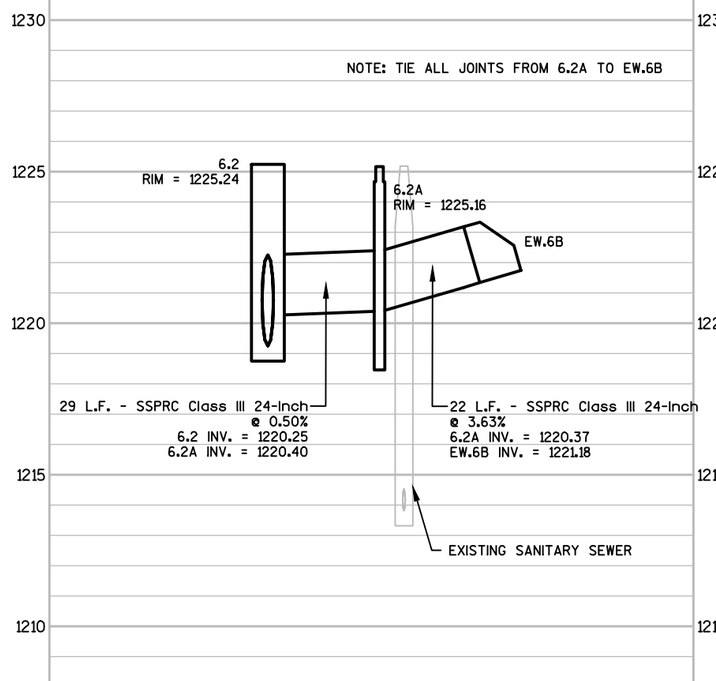
320 L.F. - SSPRC Class III 36-Inch @ 0.75%
6.3 INV. = 1220.13
7.1 INV. = 1222.53

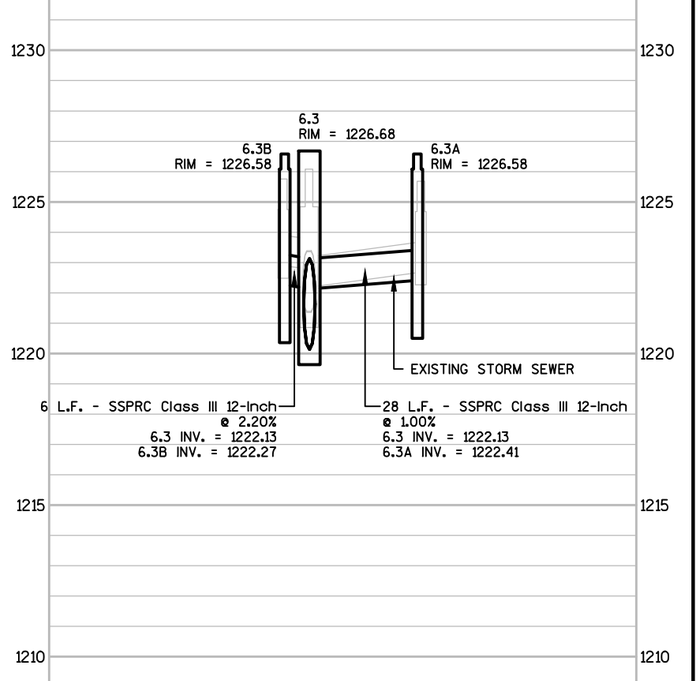
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	STORM SEWER	SHEET 52	E

2









PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	STORM SEWER	SHEET 53	E

2

N

CONNECT TO EXISTING
SSPCMPA 27x43-INCH (INCIDENTAL)

CONCRETE COLLAR FOR PIPE
STA. 113+00.40 @ 43.00' LT

7.1A Catch Basins 6-H
STA = 113+00.00, 17.50' LT

UTILITY LINE OPENING (ULO)
(VERIFY IF IN USE)
STORM SEWER PIPE 6-INCH COMPOSITE
CORED TEE CONNECTION
PROVIDE WATER PROOF CAP OVER
END OF PIPE (INCIDENTAL)
STA. 114+31, 35' RT

7.2A Catch Basins 3-C
STA = 114+60.00, 38.00' LT

7.3A Catch Basins 2x3-H
STA = 115+65.00, 17.50' LT

UTILITY LINE OPENING (ULO)
(VERIFY IF IN USE)
STORM SEWER PIPE 6-INCH COMPOSITE
CORED TEE CONNECTION

112+00.00 MATCH LINE

118+00.00 MATCH LINE

E. 29TH ST. (CTH H)

Manholes 6x6-J
STA = 113+00.00, 10.00' RT 7.1

Catch Basins 2x3-H
STA = 113+00.00, 17.50' RT 7.1B

STORM SEWER PIPE 6-INCH COMPOSITE
PROVIDE WATER PROOF CAP OVER
END OF PIPE (INCIDENTAL)
STA. 114+35, 35' RT

8-INCH TO 24-INCH
SEE CORED TEE CONNECTION DETAIL
STA. 114+60.00, 12.00' RT

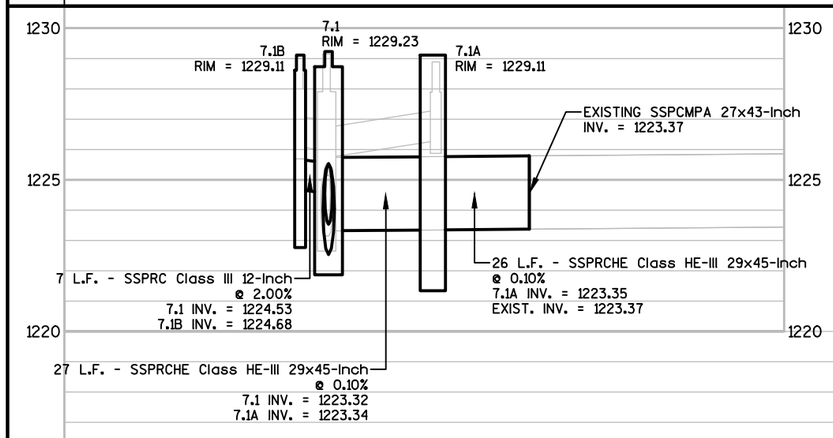
Manholes 4-J
STA = 115+65.00, 12.00' RT 7.3

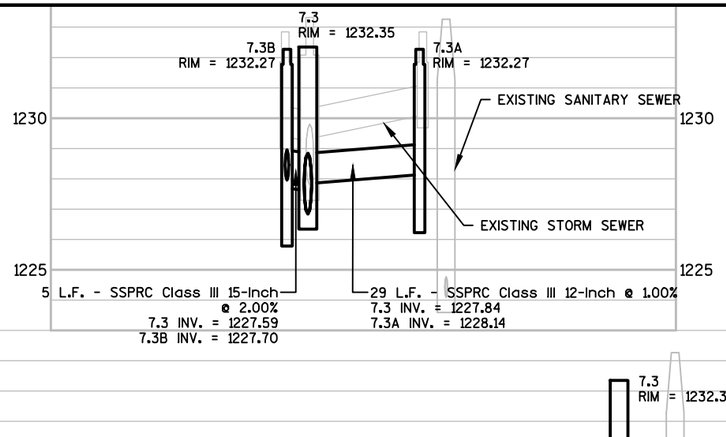
Catch Basins 2x3-H
STA = 115+65.00, 17.50' RT 7.3B

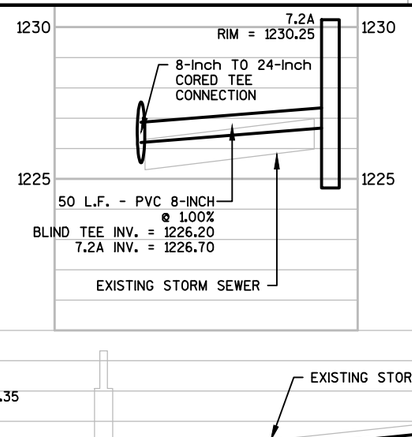
7.3C Catch Basins 2x3-H
STA = 115+75.00, 17.50' RT

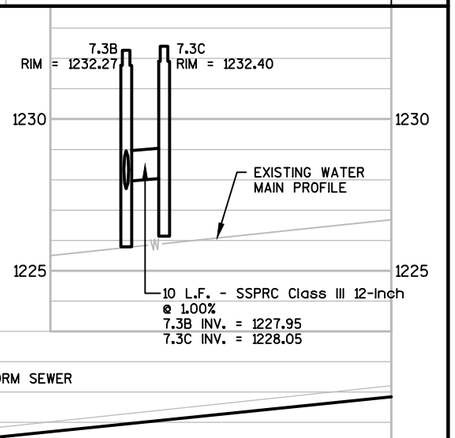
LEGEND

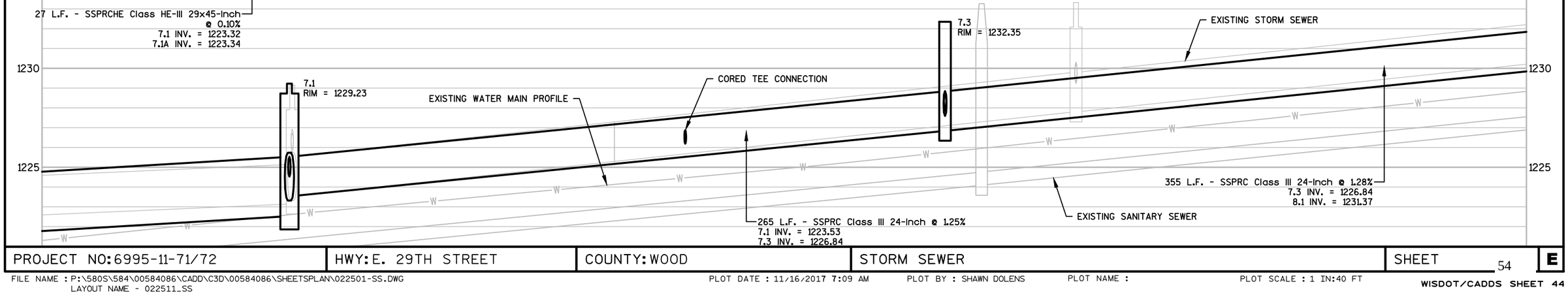
××× REMOVING STORM SEWER
6" PIPE UNDERDRAIN
PIPE UNDERDRAIN CAP
PIPE UNDERDRAIN CONNECTION





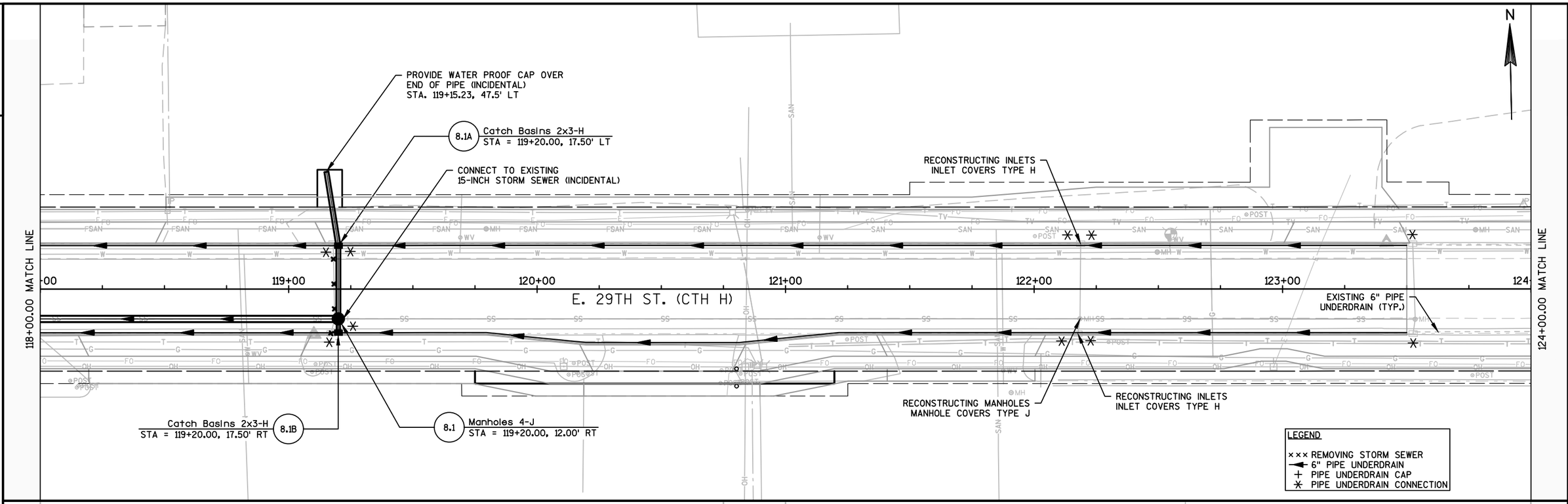


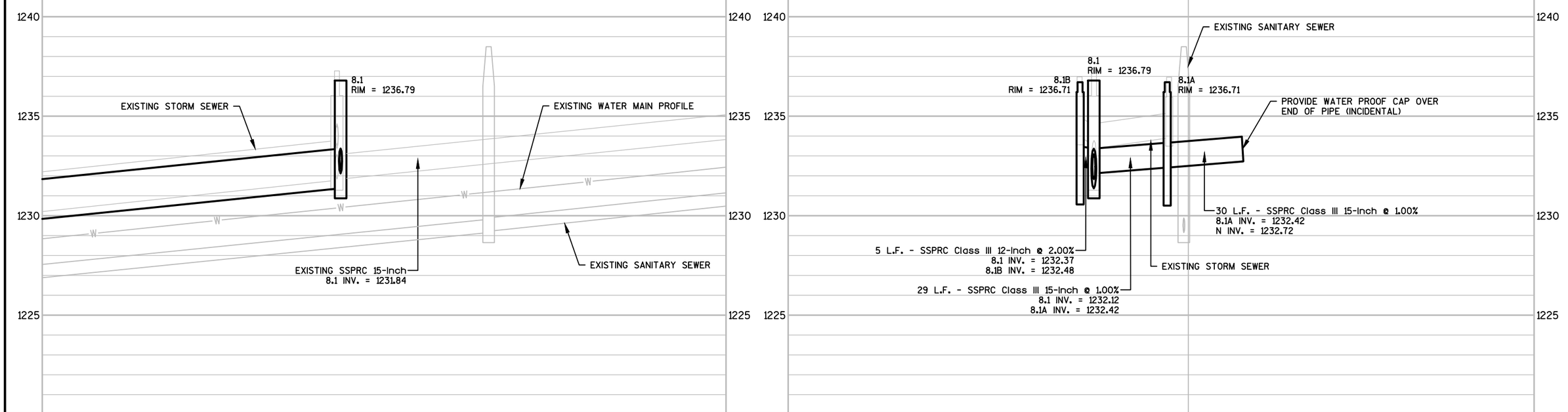




PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	STORM SEWER	SHEET 54	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\022501-SS.DWG
LAYOUT NAME - 022511_SS
PLOT DATE : 11/16/2017 7:09 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44





PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	STORM SEWER	SHEET 55	E

2

N

1323 E. 29TH ST.
TAYLOR HALEY

1401 E. 29TH ST.
DAVID & THERESA MEYER

1405 E. 29TH ST.
DELORIS GENTEMAN

1411 E. 29TH ST.
BENJAMIN & HOLLY LARSON

1415 E. 29TH ST.
DONALD SCHMUDE

1419 E. 29TH ST.
LAWRENCE & A LYNCH KELNHOFER

ADJUST WATER VALVE BOX

ADJUST WATER VALVE BOX

ADJUST CURB STOP

EX. 12" WM

8 LF - SAN. LATERAL, 6-INCH PVC
1 - CONNECT TO EX. SAN. LATERAL
1 - CONNECT TO EX. SAN. MANHOLE

Q6 ADJUST SANITARY MANHOLE (<12")
STA = 78+03.45 @ 23.99' LT
FRAME AND COVER TYPE JM
EXTERNAL CHIMNEY SEAL

ADJUST CURB STOP

10 LF - SAN. LATERAL, 6-INCH PVC
1 - CONNECT TO EX. SAN. LATERAL
1 - 8-INCH X 6-INCH SADDLE WYE
(INSTALLED ON EX. LINED MAIN)

10 LF - SAN. LATERAL, 6-INCH PVC
1 - CONNECT TO EX. SAN. LATERAL
1 - 8-INCH X 6-INCH SADDLE WYE
(INSTALLED ON EX. LINED MAIN)

ADJUST CURB STOP

ADJUST CURB STOP

10 LF - SAN. LATERAL, 6-INCH PVC
1 - CONNECT TO EX. SAN. LATERAL
1 - 8-INCH X 6-INCH SADDLE WYE
(INSTALLED ON EX. LINED MAIN)

10 LF - SAN. LATERAL, 6-INCH PVC
1 - CONNECT TO EX. SAN. LATERAL
1 - 8-INCH X 6-INCH SADDLE WYE
(INSTALLED ON EX. LINED MAIN)

ADJUST CURB STOP

TLE

R/W

CONC.

ASPH.

EX. 12" WM

BEGIN CONSTRUCTION
PROJECT 6995-11-72
STA 76+45

77+00 +59

78+00 +03

79+00 +11

80+00 +82

81+00 +70

82+

E. 29TH ST. (CTH H)

82+00.00 MATCH LINE

11W

10W+00

WASHINGTON AVE.

+29

ADJUST SANITARY MANHOLE (<12") Q7
STA = 77+39.63 @ 3.95' RT
FRAME AND COVER TYPE JM
EXTERNAL CHIMNEY SEAL

EXTEND 12" WATER MAIN TO 70' RT.
38 LF - WATER MAIN, 12-INCH DUCTILE IRON
1 - VALVE W/VALVE BOX (12-INCH)
1 - 12-INCH PLUG
1 - CONNECT TO EXISTING WATER MAIN

ABANDON WATER VALVE MH
SEE DETAIL

ADJUSTING STORM MANHOLE

EXTEND 8" PVC SANITARY TO 70' RT.
28 LF - SAN. SEWER, 8-INCH PVC @ 0.40%
1 - 8-INCH PVC CAP
1 - CONNECT TO EXISTING SAN. SEWER

ADJUST SANITARY MANHOLE (<12") Q5
STA = 81+21.03 @ 23.79' LT
FRAME AND COVER TYPE JM
EXTERNAL CHIMNEY SEAL

NOTES:
A) ALL EXISTING LATERALS ARE ASSUMED TO BE CAST IRON UNLESS NOTED OTHERWISE IN PLAN VIEW. REPLACE ALL NON PVC LATERALS WITH 6" PVC TO THE R/W LINE.
B) THIS WORK ALSO REQUIRES SADDLE WYES INSTALLED ON EXISTING LINED MAIN AND CONNECTIONS TO EXISTING LATERALS (OR CAPS FOR NEW LATERALS).

10897 WASHINGTON AVE.
RICHARD & KRISANN NIEHAUS

10896 WASHINGTON AVE.
DPRR LLC

Q7
EX. RIM =1230.80
EX. TSE = 1229.63
PROP. RIM = 1230.63

Q6
EX. RIM =1229.73
EX. TSE = 1226.81
PROP. RIM = 1229.58

Q5
EX. RIM =1222.90
EX. TSE = 1221.48
PROP. RIM = 1222.67

EXISTING GROUND

FINISHED PROFILE ON R/L

EXISTING STORM SEWER

EX. SANITARY LATERAL RISER

EXIST. PVC INSIDE DROP FOR SOUTH SEWER TO REMAIN

PROPOSED STORM SEWER
SEE STORM SEWER PLANS

EX. 60" CONC. STORM SEWER

1 - REMOVE EX. LATERAL IN SAN. MANHOLE
1 - 6-INCH PVC INSIDE DROP FOR EX. SAN. MANHOLE

EXISTING WATER MAIN PROFILE

EX. SANITARY LATERAL RISER

INV = 1209.65

EXISTING SANITARY SEWER

EX. 8" CONC. - LINED

EX. 8" CONC. - LINED

EX. 8" CONC. - LINED

+39.63
8" E INV = 1211.80
8" S UPPER INV = 1217.94
8" S LOWER INV = 1212.54
8" W INV = 1211.84

+03.45
8" N INV = 1213.08
8" E INV = 1211.59
8" W INV = 1211.66

+21.03
8" E INV = 1210.43
8" W INV = 1210.43

1230
1225
1220
1215
1210

76 77 78 79 80 81 82

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	SANITARY SEWER AND WATER	SHEET 56	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\023001-UP.DWG
LAYOUT NAME - 023001_UP

PLOT DATE : 11/16/2017 7:20 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1"= 40'

WISDOT/CADDS SHEET 44

1423 E. 29TH ST.
RANDY & MARILYN WEILER

1427 E. 29TH ST.
SAMANTHA SEIDL

1431 E. 29TH ST.
KAREN LAPPE

1523 E. 29TH ST.
TRD PROPERTIES LLC

10 LF - SAN. LATERAL, 6-INCH PVC
1 - CONNECT TO EX. SAN. LATERAL
1 - 8-INCH X 6-INCH SADDLE WYE
(INSTALLED ON EX. LINED MAIN)

10 LF - SAN. LATERAL, 6-INCH PVC
1 - CONNECT TO EX. SAN. LATERAL
1 - 8-INCH X 6-INCH SADDLE WYE
(INSTALLED ON EX. LINED MAIN)

ADJUST CURB STOP

ADJUST CURB STOP

ADJUST SANITARY MANHOLE (<12") Q3
STA = 85+04.49 @ 54.30' LT
FRAME AND COVER TYPE JM
EXTERNAL CHIMNEY SEAL

10 LF - SAN. LATERAL, 6-INCH PVC
1 - CONNECT TO EX. SAN. LATERAL
1 - 8-INCH X 6-INCH SADDLE WYE
(INSTALLED ON EX. LINED MAIN)

EX. 8" WM

ADJUST WATER VALVE BOX

ADJUST CURB STOP

BUTTERNUT PKWY.

REMOVE AND ABANDON SANITARY SEWER VALVE AND MANHOLE RISER (SEE DETAIL)

DO NOT DISTURB EXISTING MANHOLE COVER AND CHIMNEY SEAL (MH Q122)

FEE

9 LF - SAN. LATERAL, 6-INCH PVC
1 - CONNECT TO EX. SAN. LATERAL
1 - 15-INCH X 6-INCH SADDLE WYE
(INSTALLED ON EX. LINED MAIN)

DELINEATED WETLANDS

ADJUST CURB STOP

Q4 ADJUST SANITARY MANHOLE (<12")
STA = 85+04.98 @ 22.63' LT
FRAME AND COVER TYPE JM
EXTERNAL CHIMNEY SEAL

9 LF - SAN. LATERAL, 6-INCH PVC
1 - CONNECT TO EX. SAN. LATERAL
1 - 15-INCH X 6-INCH SADDLE WYE
(INSTALLED ON EX. LINED MAIN)

ADJUST CURB STOP

ADJUST SANITARY MANHOLE (<12") R1
STA = 87+84.99 @ 24.70' LT
FRAME AND COVER TYPE JM
EXTERNAL CHIMNEY SEAL

82+00.00 MATCH LINE

88+00.00 MATCH LINE

E. 29TH ST. (CTH H)

EX. 12" WM

HORIZONTAL/VERTICAL WATER MAIN OFFSET REQUIRED

ULO (STA 85+90 TO STA 86+75

INSTALL INSULATION OVER TOP OF WATER MAIN STA 85+90 TO 86+75

EX. 12" WM

ABANDON WATER VALVE MH SEE DETAIL

VERTICAL WATER MAIN OFFSET REQUIRED

EXTEND 8" WATER MAIN TO R/W
46 LF - WATER MAIN, 8-INCH DUCTILE IRON
1 - VALVE W/VALVE BOX (8-INCH)
1 - 8-INCH PLUG
1 - CONNECT TO EXISTING WATER MAIN

EXTEND 8" PVC SANITARY TO R/W
12 LF - SAN. SEWER, 8-INCH PVC
1 - 8-INCH PVC CAP
1 - CONNECT TO EX. SAN. SEWER

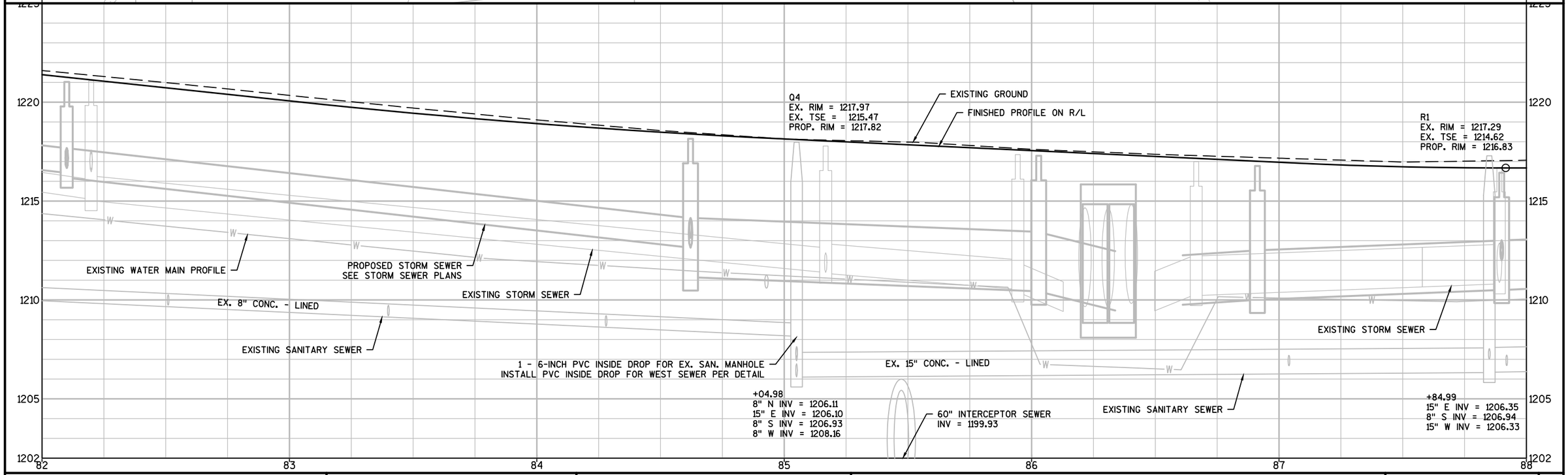
10896 WASHINGTON AVE.
DPRR LLC

DELINEATED WETLANDS

FEE

EXTEND 8" PVC SANITARY TO 5' BEYOND THE R/W,
20 LF - SAN. SEWER, 8-INCH PVC
1 - 8-INCH PVC CAP
1 - CONNECT TO EX. SAN. SEWER

NOTES:
A) ALL EXISTING LATERALS ARE ASSUMED TO BE CAST IRON UNLESS NOTED OTHERWISE IN PLAN VIEW. REPLACE ALL NON PVC LATERALS WITH 6" PVC TO THE R/W LINE.
B) THIS WORK ALSO REQUIRES SADDLE WYES INSTALLED ON EXISTING LINED MAIN AND CONNECTIONS TO EXISTING LATERALS (OR CAPS FOR NEW LATERALS).



PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	SANITARY SEWER AND WATER	SHEET 57	E

2

88+00.00 MATCH LINE

94+00.00 MATCH LINE

1523 E. 29TH ST.
TRD PROPERTIES LLC

1601 E. 29TH ST.
MTE PROPERTIES LLC

9 LF - SAN. LATERAL, 6-INCH PVC
1 - CONNECT TO EX. SAN. LATERAL
1 - 15-INCH X 6-INCH SADDLE WYE
(INSTALLED ON EX. LINED MAIN)

ADJUST CURB STOP

ADJUST CURB STOP

ADJUST WATER VALVE BOX

R2 ADJUST SANITARY MANHOLE (<12")
STA = 90+68.69 @ 22.37' LT
FRAME AND COVER TYPE JM
EXTERNAL CHIMNEY SEAL

ABANDON WATER VALVE MH
SEE DETAIL

8 LF - SAN. LATERAL, 6-INCH PVC
1 - CONNECT TO EXISTING SANITARY LATERAL
1 - CONNECT SANITARY LATERAL TO EXISTING MANHOLE

ADJUST CURB STOP

ADJUST SANITARY MANHOLE (<12") R3
STA = 93+89.34 @ 24.69' LT
FRAME AND COVER TYPE JM
EXTERNAL CHIMNEY SEAL

N

TLE
R/W

R/W

EX. 12" CONC.

EX. 12" WM

+52

+53

+77

VERTICAL WATER MAIN OFFSET REQUIRED

VERTICAL WATER MAIN OFFSET REQUIRED

E. 29TH ST. (CTH H)

TROPHY LN.

55 LF - SAN. SEWER, 8-INCH PVC @ 0.40%
1 - 8-INCH PVC CAP
1 - CONNECT 8-INCH PVC SANITARY SEWER TO EXISTING MANHOLE (CORE W/ BOOT)

46 LF - WATER MAIN, 8-INCH DUCTILE IRON
1 - 12-INCH X 8-INCH TEE
1 - VALVE W/VALVE BOX (8-INCH)
1 - 8-INCH PLUG
1 - CONNECT TO EXISTING WATER MAIN

46 LF - WATER MAIN, 8-INCH DUCTILE IRON
1 - 12-INCH X 8-INCH TEE
1 - VALVE W/VALVE BOX (8-INCH)
1 - 8-INCH PLUG
1 - CONNECT TO EXISTING WATER MAIN

EXTEND 8" PVC SANITARY TO R/W
10 LF - SAN. SEWER, 8-INCH PVC
1 - 8-INCH PVC CAP
1 - CONNECT TO EX. SAN. SEWER

NOTES:
A) ALL EXISTING LATERALS ARE ASSUMED TO BE CAST IRON UNLESS NOTED OTHERWISE IN PLAN VIEW. REPLACE ALL NON PVC LATERALS WITH 6" PVC TO THE R/W LINE.
B) THIS WORK ALSO REQUIRES SADDLE WYES INSTALLED ON EXISTING LINED MAIN AND CONNECTIONS TO EXISTING LATERALS (OR CAPS FOR NEW LATERALS).

10896 WASHINGTON AVE.
DPRR LLC

10885 TROPHY LN.
BTR RENTALS LLC

10888 TROPHY LN.
RUSSELL & DENISE BURR

DONALD & PENNY NIKOLAI

P/L

R2
EX. RIM = 1218.50
EX. TSE = 1215.25
PROP. RIM = 1217.68

R3
EX. RIM = 1220.89
EX. TSE = 1217.14
PROP. RIM = 1220.03

EXISTING GROUND

FINISHED PROFILE ON R/L

EXISTING STORM SEWER

EXISTING WATER MAIN PROFILE

PROPOSED STORM SEWER
SEE STORM SEWER PLANS

EX. 15" CONC. - LINED

EX. 8" CONC. - LINED

EXISTING SANITARY SEWER

1 - REMOVE EX. LATERAL IN SAN. MANHOLE
1 - 6" PVC INSIDE DROP FOR EX. SAN. MANHOLE

+68.69
12" N INV = 1206.90
8" E INV = 1206.95
8" S INV = 1206.96
15" W INV = 1206.94

+89.34
6" N UPPER INV = 1211.58
6" N LOWER INV = 1208.91
8" E INV = 1208.20
8" S INV = 1209.89
8" W INV = 1208.17

1225
1220
1215
1210
1205
1202

88 89 90 91 92 93 94

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	SANITARY SEWER AND WATER	SHEET 58	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\023001-UP.DWG
LAYOUT NAME - 023003_UP

PLOT DATE : 11/16/2017 7:21 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1"= 40'

WISDOT/CADDS SHEET 44

NOTES:
A) ALL EXISTING LATERALS ARE ASSUMED TO BE CAST IRON UNLESS NOTED OTHERWISE IN PLAN VIEW. REPLACE ALL NON PVC LATERALS WITH 6" PVC TO THE R/W LINE.
B) THIS WORK ALSO REQUIRES SADDLE WYES INSTALLED ON EXISTING LINED MAIN AND CONNECTIONS TO EXISTING LATERALS (OR CAPS FOR NEW LATERALS).

1601 E. 29TH ST.
MTE PROPERTIES LLC

1625 E. 29TH ST.
HEIKENEN SERVICES INC

1625 E. 29TH ST.
OFF CENTER HOLDING CO II

P/L

EX. 6" PVC SAN

ADJUST WATER VALVE BOX

ADJUST SANITARY MANHOLE (<12") R4
STA = 97+19.64 @ 24.49' LT
FRAME AND COVER TYPE JM
EXTERNAL CHIMNEY SEAL

ADJUST CURB STOP

ASPH. TLE R/W GRAV.

94+00.00 MATCH LINE

100+00.00 MATCH LINE

+30 +45 +35 +09

EX. 12" WM

95+00 96+00 97+00 98+00 99+00 100

E. 29TH ST. (CTH H)

CONC. R/W TLE GRAV. ASPH. GRAV.

47 LF - WATER MAIN, 6-INCH DUCTILE IRON
1 - 12-INCH X 6-INCH TEE
1 - VALVE W/VALVE BOX (6-INCH)
1 - 6-INCH PLUG
1 - CONNECT TO EXISTING WATER MAIN

58 LF - SAN. LATERAL, 6-INCH PVC
1 - 8-INCH PVC CAP
1 - 8-INCH X 6-INCH SADDLE WYE

ADJUST CURB STOP

58 LF - SAN. LATERAL, 6-INCH PVC
1 - CONNECT TO EX. SAN. LATERAL
1 - 8-INCH X 6-INCH SADDLE WYE

DONALD & PENNY NIKOLAI

8765 E. 29TH ST.
BACKAUS PROPERTIES

1701 E. 29TH ST.
MID-STATE CONTRACTING INC

R4
EX. RIM = 1223.60
EX. TSE = 1221.60
PROP. RIM = 1222.94

EXISTING GROUND

FINISHED PROFILE ON R/L

EXISTING WATER MAIN PROFILE

EXISTING STORM SEWER

PROPOSED STORM SEWER
SEE STORM SEWER PLANS

EX. SHORT RISER (TYP.)

EX. 8" CONC. - LINED

EX. 8" CONC. - LINED

EXISTING SANITARY SEWER

+19.64
8" E INV = 1209.70
8" W INV = 1209.70

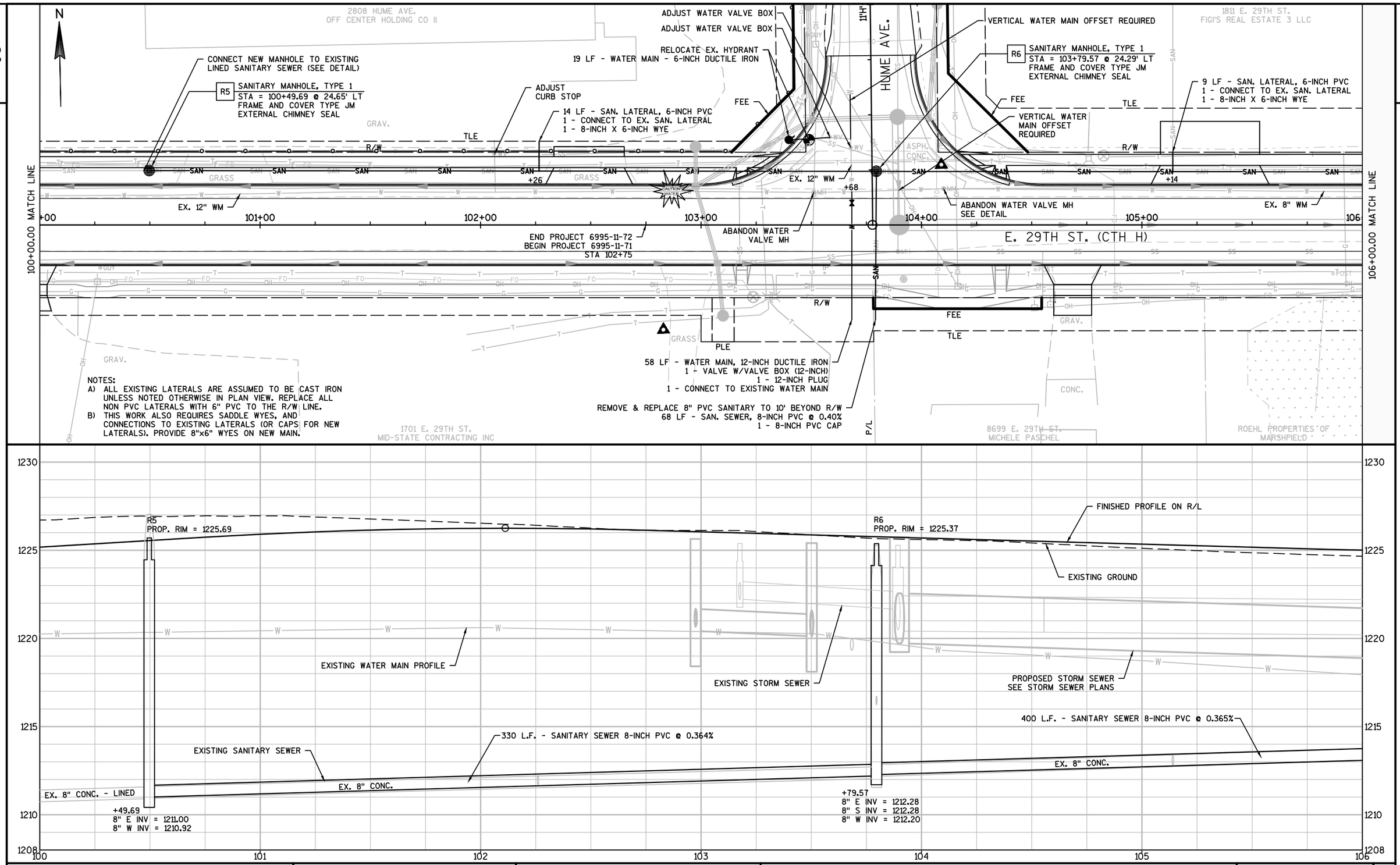
1230 1225 1220 1215 1210 1207

94 95 96 97 98 99 100

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	SANITARY SEWER AND WATER	SHEET 59	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\023001-UP.DWG
LAYOUT NAME - 023004_UP

PLOT DATE : 11/16/2017 7:21 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1"= 40'



PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	SANITARY SEWER AND WATER	SHEET 60	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\023001-UP.DWG
LAYOUT NAME - 023005_UP
PLOT DATE : 11/16/2017 7:22 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1"= 40'
WISDOT/CADDS SHEET 44

2

1811 E. 29TH ST.
FIGI'S REAL ESTATE 3 LLC

SANITARY MANHOLE, TYPE 1 R7
STA = 107+79.88 @ 23.93' LT
FRAME AND COVER TYPE JM
GRAV. EXTERNAL CHIMNEY SEAL

CONNECT NEW MANHOLE TO EXISTING LINED SANITARY SEWER (SEE DETAIL)

ADJUST WATER VALVE BOX

DELINEATED WETLANDS

ADJUST SANITARY MANHOLE (<12") R8
STA = 111+79.94 @ 24.18' LT
FRAME AND COVER TYPE JM
EXTERNAL CHIMNEY SEAL

N

106+00.00 MATCH LINE

112+00.00 MATCH LINE

PLE

TLE

R/W

SAN

CAUTION WATER

EX. 8" PVC

EX. 8" WM

+00 107+00 108+00 109+00 110+00 111+00 112+

E. 29TH ST. (CTH H)

B1

R/W

TLE

PLE

NOTES:
A) ALL EXISTING LATERALS ARE ASSUMED TO BE CAST IRON UNLESS NOTED OTHERWISE IN PLAN VIEW. REPLACE ALL NON PVC LATERALS WITH 6" PVC TO THE R/W LINE.
B) THIS WORK ALSO REQUIRES SADDLE WYES, AND CONNECTIONS TO EXISTING LATERALS (OR CAPS FOR NEW LATERALS). PROVIDE 8"x6" WYES ON NEW MAIN.

EXTEND 8" PVC SANITARY TO 10' BEYOND R/W
16 LF - SAN. SEWER, 8-INCH PVC
1 - 8-INCH PVC CAP
1 - CONNECT TO EX. SAN. SEWER

RELAY EX. 8-INCH PVC SAN. SEWER - 15 LF (ELIMINATE 4" SAG)
NEW CONNECTION TO MH & NEW FLOWLINE, CONNECT TO EX. 8" PVC
6 LF - SAN. SEWER, 8-INCH PVC
CONNECT TO EX. SAN. SEWER (8-INCH PVC TO 8-INCH PVC)

ADJUST CURB STOP

EX. 8" PVC SAN
EX. 2" WATER

DELINEATED WETLANDS

ROEHL PROPERTIES OF MARSHFIELD

P/L

1916 E. 29TH ST.
ROEHL PROPERTIES OF MARSHFIELD LLC

R8
EX. RIM = 1228.15
EX. TSE = 1227.40
PROP. RIM = 1228.37

FINISHED PROFILE ON R/L

EXISTING GROUND

R7
PROP. RIM = 1225.75

EXISTING STORM SEWER

EXISTING WATER MAIN PROFILE

PROPOSED STORM SEWER
SEE STORM SEWER PLANS

EX. 8" CONC. - LINED

+79.94
8" E INV = 1219.04
8" S INV = 1219.60
8" W INV = 1218.99

400 L.F. - SANITARY SEWER 8-INCH PVC @ 0.368%

EX. 8" CONC.

EXISTING SANITARY SEWER

CONNECT 8-INCH PVC SANITARY SEWER TO EXISTING MANHOLE (CORE W/ BOOT)
RELAYED/NEW 8" PVC. CUT EXISTING 8" PVC PIPE AT OUTSIDE WALL OF MH AND CORE-SAW FOR NEW CONNECTION. CONTINUE SAWING THROUGH THE BENCH TO CREATE FLOWLINE

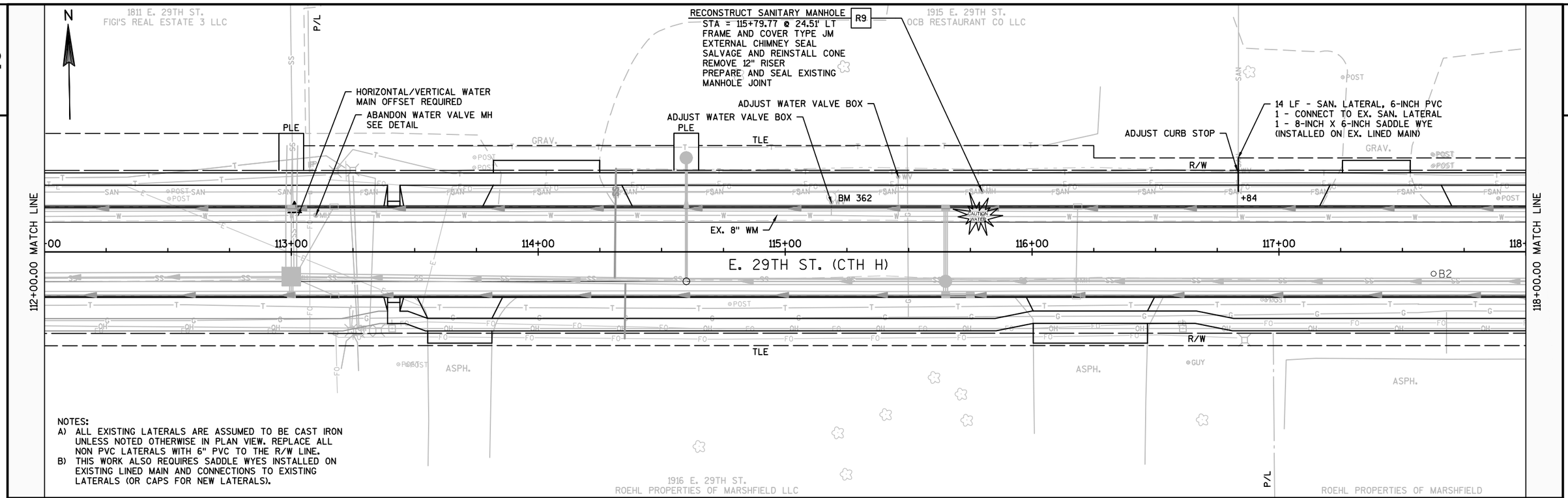
+79.88
8" E INV = 1213.82
8" S INV = 1213.82
8" W INV = 1213.74

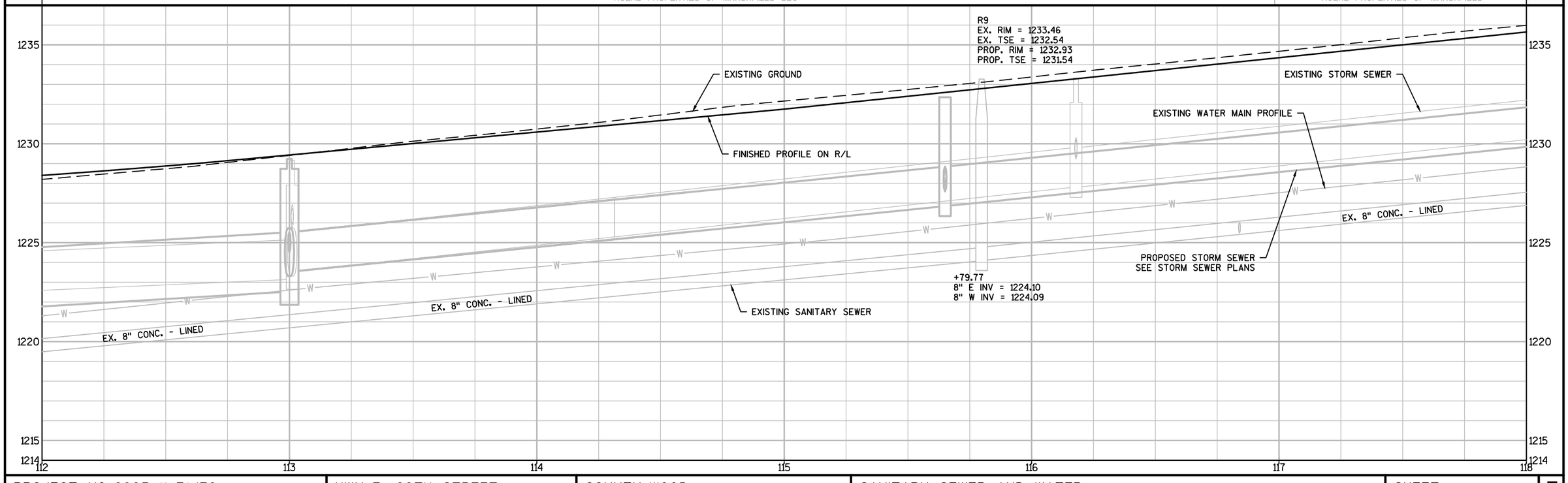
1230 1225 1220 1215 1210 1209

106 107 108 109 110 111 112

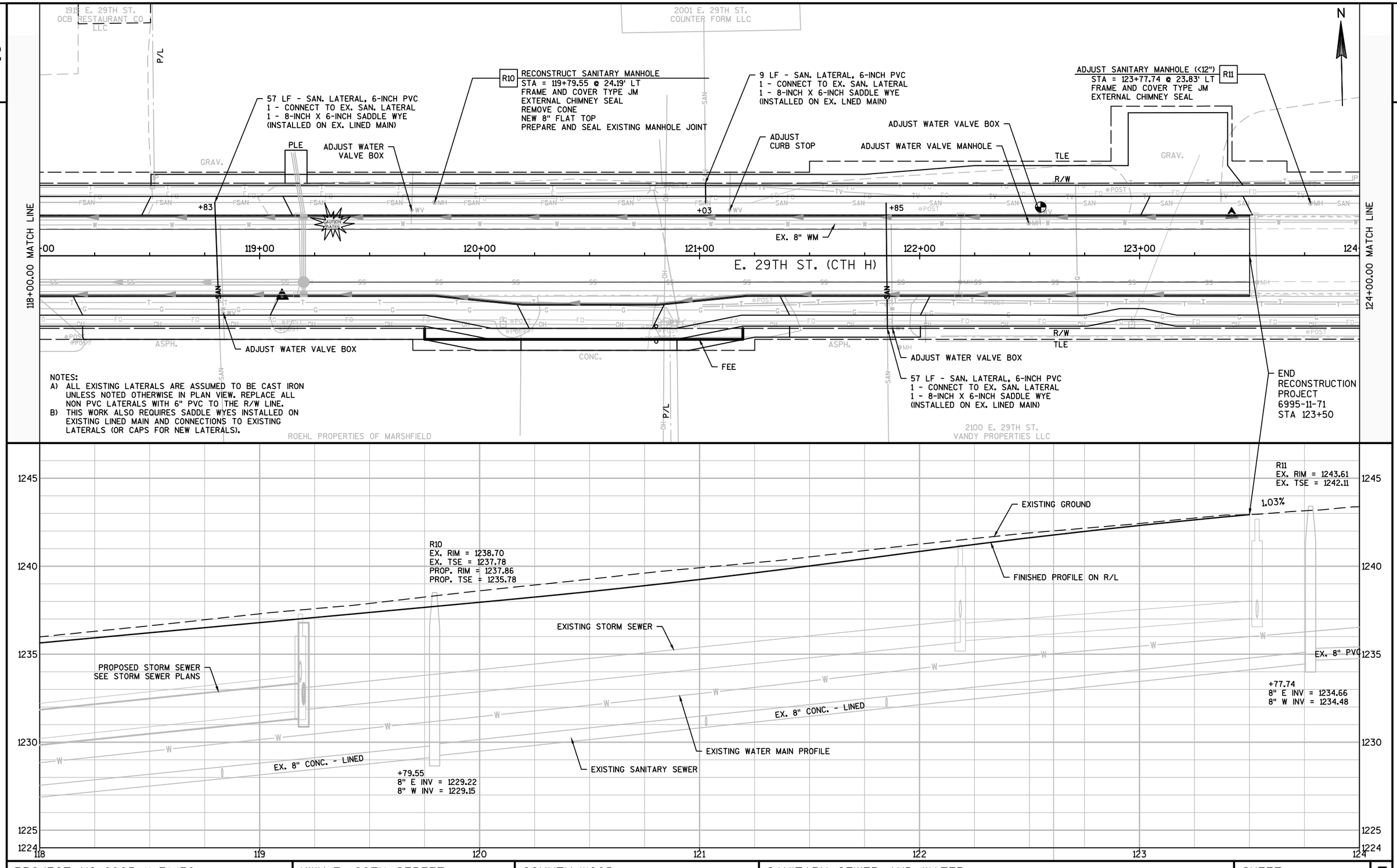
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	SANITARY SEWER AND WATER	SHEET 61	E

2



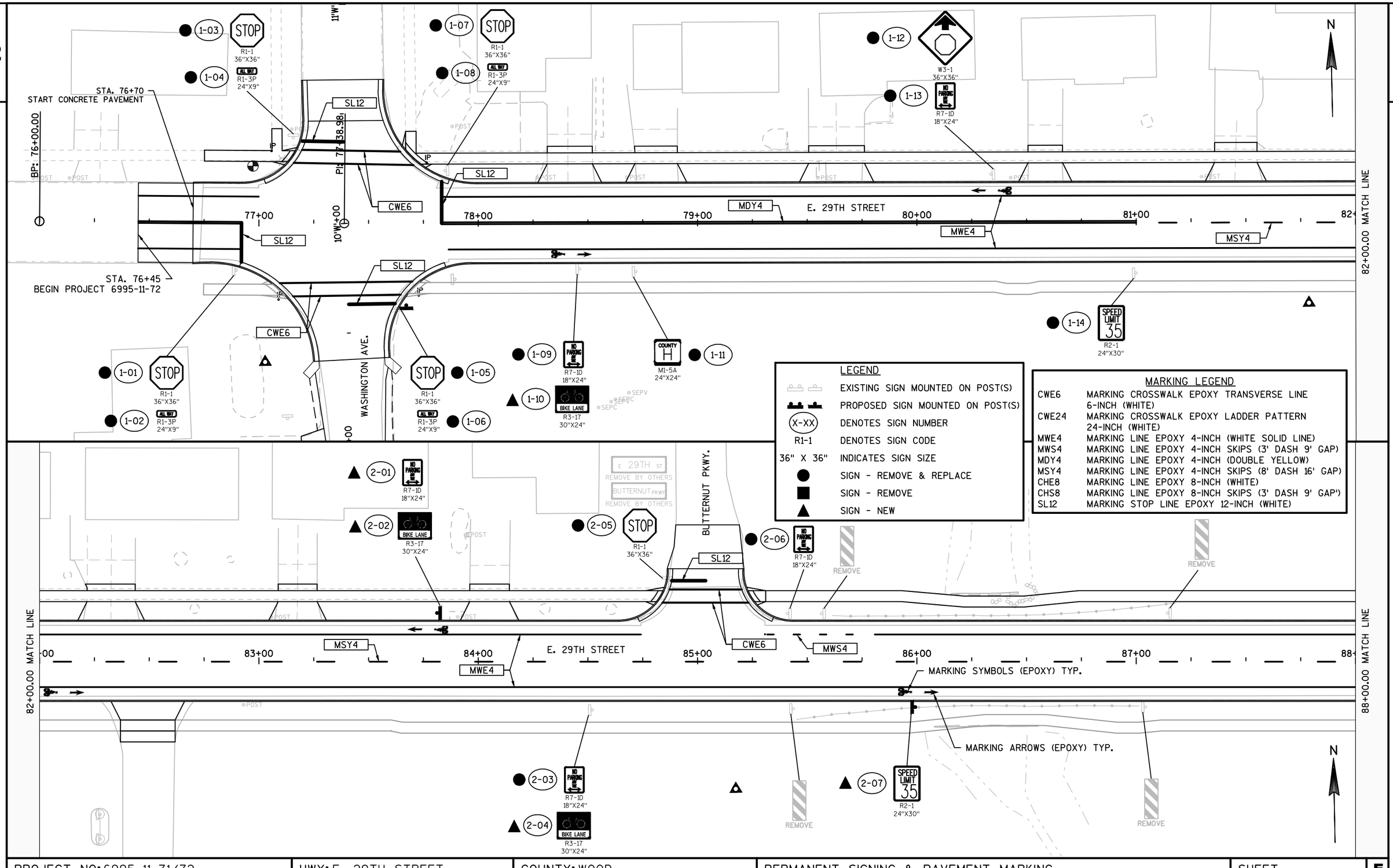


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	SANITARY SEWER AND WATER	SHEET 62	E



PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	SANITARY SEWER AND WATER	SHEET 63	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\023001-UP.DWG
LAYOUT NAME - 023008_UP
PLOT DATE : 11/16/2017 7:23 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1"= 40'
WISDOT/CADDS SHEET 44



LEGEND

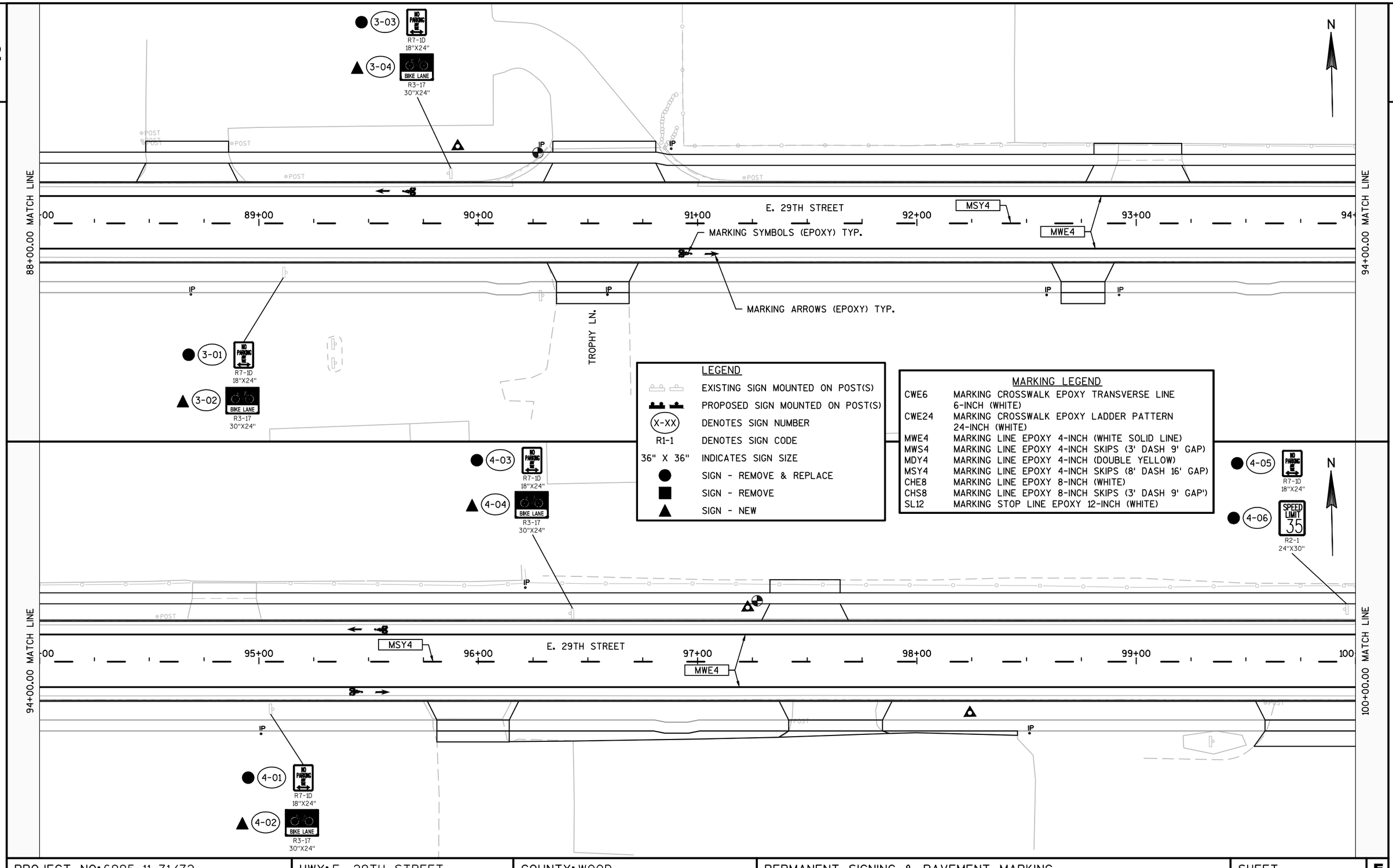
	EXISTING SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON POST(S)
X-XX	DENOTES SIGN NUMBER
R1-1	DENOTES SIGN CODE
36" X 36"	INDICATES SIGN SIZE
●	SIGN - REMOVE & REPLACE
■	SIGN - REMOVE
▲	SIGN - NEW

MARKING LEGEND

CWE6	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
CWE24	MARKING CROSSWALK EPOXY LADDER PATTERN 24-INCH (WHITE)
MWE4	MARKING LINE EPOXY 4-INCH (WHITE SOLID LINE)
MWS4	MARKING LINE EPOXY 4-INCH SKIPS (3' DASH 9' GAP)
MDY4	MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
MSY4	MARKING LINE EPOXY 4-INCH SKIPS (8' DASH 16' GAP)
CHE8	MARKING LINE EPOXY 8-INCH (WHITE)
CHS8	MARKING LINE EPOXY 8-INCH SKIPS (3' DASH 9' GAP')
SL12	MARKING STOP LINE EPOXY 12-INCH (WHITE)

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 64	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\023201_PS.DWG
LAYOUT NAME - 023201_PS
PLOT DATE : 11/16/2017 7:26 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44



LEGEND

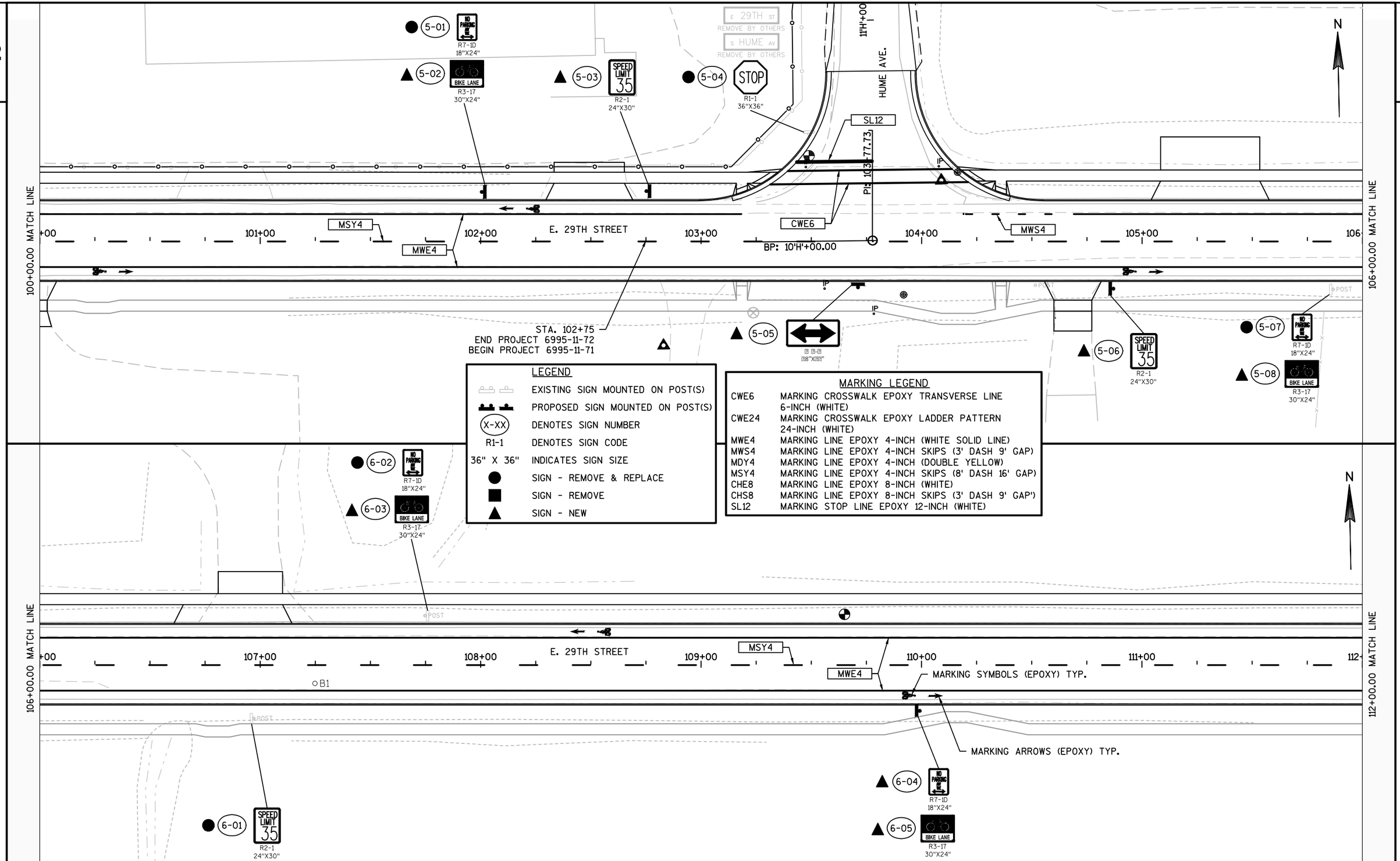
	EXISTING SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON POST(S)
X-XX	DENOTES SIGN NUMBER
R1-1	DENOTES SIGN CODE
36" X 36"	INDICATES SIGN SIZE
●	SIGN - REMOVE & REPLACE
■	SIGN - REMOVE
▲	SIGN - NEW

MARKING LEGEND

CWE6	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
CWE24	MARKING CROSSWALK EPOXY LADDER PATTERN 24-INCH (WHITE)
MWE4	MARKING LINE EPOXY 4-INCH (WHITE SOLID LINE)
MWS4	MARKING LINE EPOXY 4-INCH SKIPS (3' DASH 9' GAP)
MDY4	MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
MSY4	MARKING LINE EPOXY 4-INCH SKIPS (8' DASH 16' GAP)
CHE8	MARKING LINE EPOXY 8-INCH (WHITE)
CHS8	MARKING LINE EPOXY 8-INCH SKIPS (3' DASH 9' GAP')
SL12	MARKING STOP LINE EPOXY 12-INCH (WHITE)

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 65	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\023201_PS.DWG
LAYOUT NAME - 023202_PS
PLOT DATE : 11/16/2017 7:26 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44



LEGEND

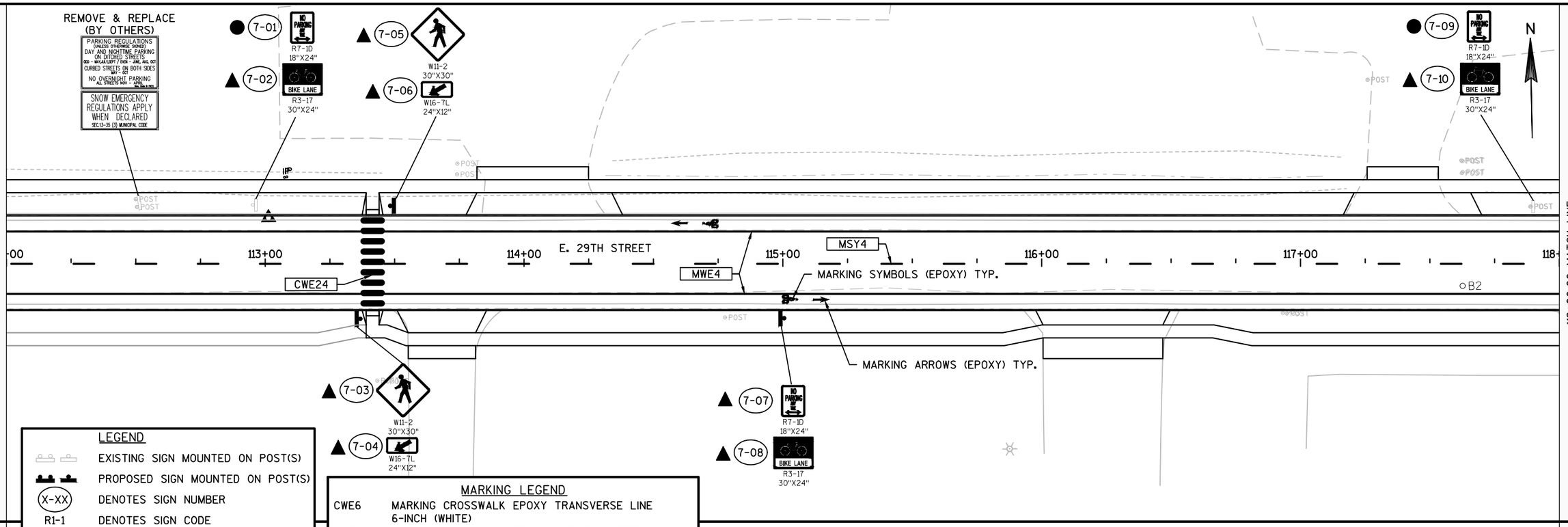
	EXISTING SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON POST(S)
(X-XX)	DENOTES SIGN NUMBER
R1-1	DENOTES SIGN CODE
36" X 36"	INDICATES SIGN SIZE
●	SIGN - REMOVE & REPLACE
■	SIGN - REMOVE
▲	SIGN - NEW

MARKING LEGEND

CWE6	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
CWE24	MARKING CROSSWALK EPOXY LADDER PATTERN 24-INCH (WHITE)
MWE4	MARKING LINE EPOXY 4-INCH (WHITE SOLID LINE)
MWS4	MARKING LINE EPOXY 4-INCH SKIPS (3' DASH 9' GAP)
MDY4	MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
MSY4	MARKING LINE EPOXY 4-INCH SKIPS (8' DASH 16' GAP)
CHE8	MARKING LINE EPOXY 8-INCH (WHITE)
CHS8	MARKING LINE EPOXY 8-INCH SKIPS (3' DASH 9' GAP')
SL12	MARKING STOP LINE EPOXY 12-INCH (WHITE)

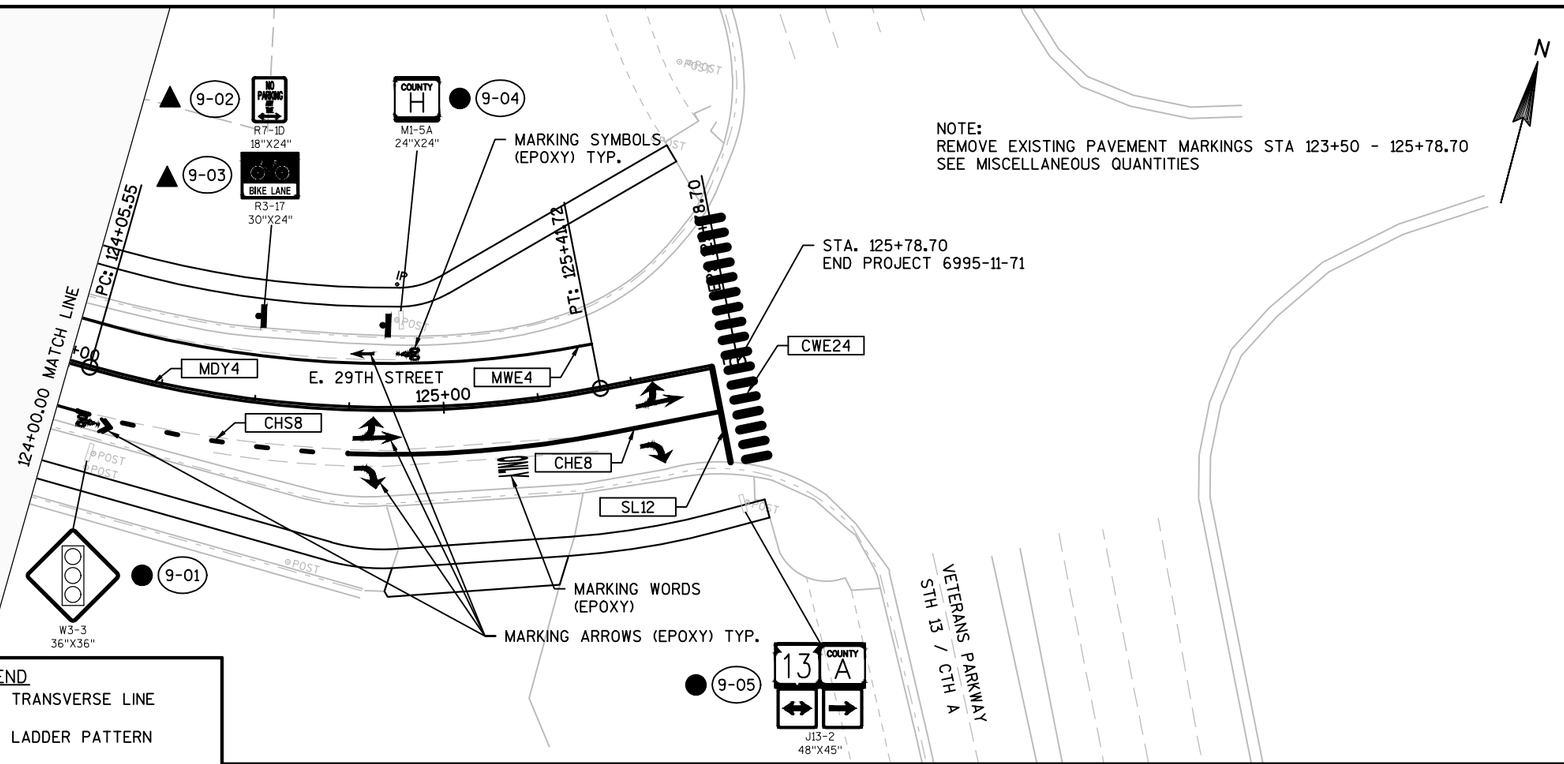
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 66 E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\023201_PS.DWG
LAYOUT NAME - 023203_PS
PLOT DATE : 11/16/2017 7:27 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PERMANENT SIGNING & PAVEMENT MARKING	SHEET 67	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\023201_PS.DWG
LAYOUT NAME - 023204_PS
PLOT DATE : 11/16/2017 8:45 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44



LEGEND	
	EXISTING SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON POST(S)
X-XX	DENOTES SIGN NUMBER
R1-1	DENOTES SIGN CODE
36" X 36"	INDICATES SIGN SIZE
●	SIGN - REMOVE & REPLACE
■	SIGN - REMOVE
▲	SIGN - NEW

MARKING LEGEND	
CWE6	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
CWE24	MARKING CROSSWALK EPOXY LADDER PATTERN 24-INCH (WHITE)
MWE4	MARKING LINE EPOXY 4-INCH (WHITE SOLID LINE)
MWS4	MARKING LINE EPOXY 4-INCH SKIPS (3' DASH 9' GAP)
MDY4	MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
MSY4	MARKING LINE EPOXY 4-INCH SKIPS (8' DASH 16' GAP)
CHE8	MARKING LINE EPOXY 8-INCH (WHITE)
CHS8	MARKING LINE EPOXY 8-INCH SKIPS (3' DASH 9' GAP')
SL12	MARKING STOP LINE EPOXY 12-INCH (WHITE)

STAGE 1 TRAFFIC
- CLOSE HUME AVENUE INTERSECTION.
- MAINTAIN LOCAL TRAFFIC ACCESS.
- PLACE 12" TEMPORARY BASE AGGREGATE DENSE IN AREAS UNOCCUPIED BY CONCRETE PAVEMENT.

STAGE 1 CONSTRUCTION
- CONSTRUCT UNDERGROUND UTILITIES AND HUME AVENUE INTERSECTION INCLUDING FINAL CONCRETE AND ASPHALT PAVEMENT TO THE CENTER NORTH HALF OF EAST 29TH STREET.

2808 S. HUME AVE.
OFF CENTER HOLDING CO II

1811 E. 29TH ST.
FIGI'S REAL ESTATE 3 LLC

1625 E. 29TH ST.
HEIKENEN SERVICES INC

12"H+00
HUME AVE.
11"H+00

SEE STANDARD DETAIL DRAWING BARRICADES AND SIGNS FOR MAINLINE CLOSURES, DETAIL C.

97+00 98+00 99+00 100+00 101+00 102+00 103+00 104+00 105+00 106+00 107+00 108+00 109+00 110+00 111+00 112

E. 29TH STREET

8765 E. 29TH ST.
BACKAUS PROPERTIES

1701 E. 29TH ST.
MID-STATE CONTRACTING INC

8699 E. 29TH ST.
MICHELE PASCHEL

STAGE 1

ROEHL PROPERTIES OF MARSHFIELD

1916 E. 29TH ST.
ROEHL PROPERTIES OF MARSHFIELD LLC

LEGEND
WORK AREA
DIRECTION OF TRAFFIC (LOCAL ACCESS ONLY)

STAGE 2 TRAFFIC
- OPEN HUME AVENUE INTERSECTION.
- CLOSE WASHINGTON AVENUE INTERSECTION AND B-71-196.
- MAINTAIN LOCAL TRAFFIC TWO WAY ACCESS.
- ROAD CLOSED TO ALL TRAFFIC AT B-71-0196 LOCATION.
- BRING ROADWAY AT CULVERT UP TO EXISTING ROADWAY FINISHED SURFACE ELEVATION WITH TEMPORARY BASE AGGREGATE.

STAGE 2 CONSTRUCTION
- CONSTRUCT CULVERT, B-71-0196.
- CONSTRUCT WASHINGTON AVENUE INTERSECTION TO FINAL CONCRETE AND ASPHALT PAVEMENT INCLUDING FLAT WORK AND RESTORATION IN THE LIMITS SHOWN.

E. 28TH STREET

LOCAL TRAFFIC ONLY
NO TRUCKS
60"X30"

1523 E. 29TH ST.
TRD PROPERTIES LLC

1323 E. 29TH ST.
TAYLOR HALEY

1401 E. 29TH ST. DAVID & THERESA MEYER
1405 E. 29TH ST. DELORIS GENTEMAN
1411 E. 29TH ST. BENJAMIN & HOLLY LARSON
1415 E. 29TH ST. DONALD SCHMUDE
1419 E. 29TH ST. LAWRENCE & A LYNCH KELNHOFER
1423 E. 29TH ST. RANDY & MARILYN WEILER
1427 E. 29TH ST. SAMANTHA SEIDL
1431 E. 29TH ST. KAREN LAPPE

11"W+00
WASHINGTON AVE.
10"W+00
00+MH6

BUTTERNUT PKWY.

77+00 78+00 79+00 80+00 81+00 82+00 83+00 84+00 85+00 86+00 87+00 88+00 89

E. 29TH STREET

SEE STANDARD DETAIL DRAWING BARRICADES AND SIGNS FOR MAINLINE CLOSURES, DETAIL C.

10897 WASHINGTON AVE.
RICHARD & KRISANN NIEHAUS

10896 WASHINGTON AVE.
DPRR LLC

STAGE 2

LEGEND
WORK AREA
DIRECTION OF TRAFFIC (LOCAL ACCESS ONLY)

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	TRAFFIC CONTROL - STAGE 1 & 2	SHEET 69	E

2

2

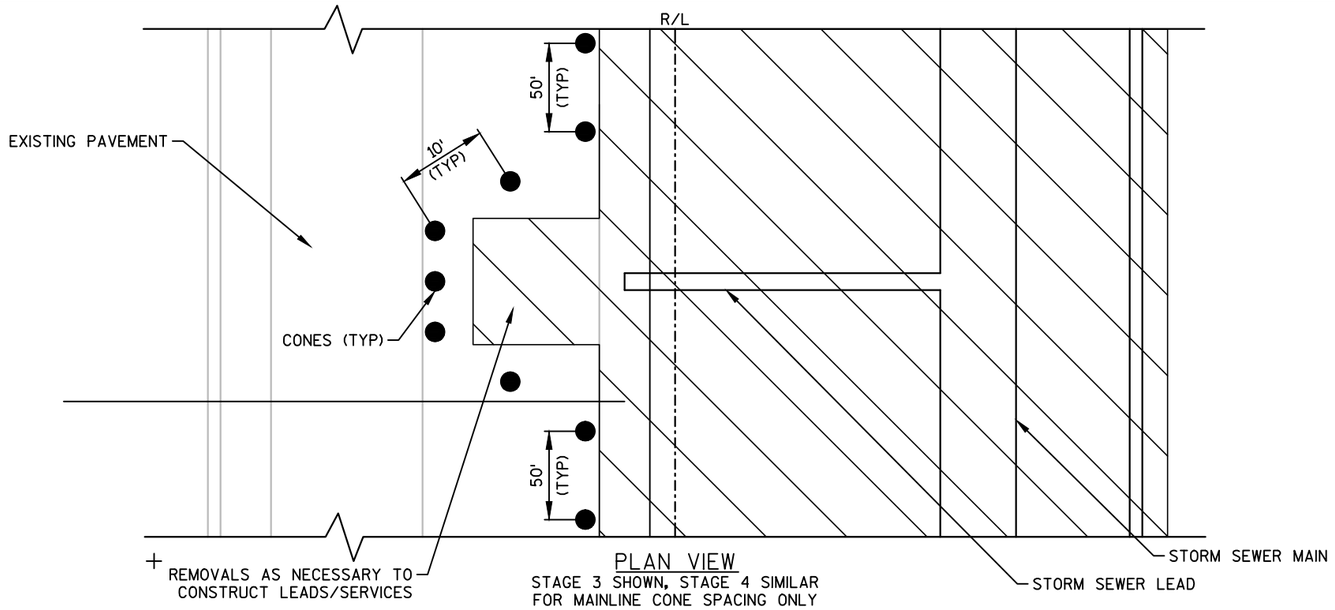
LEGEND

WORK AREA

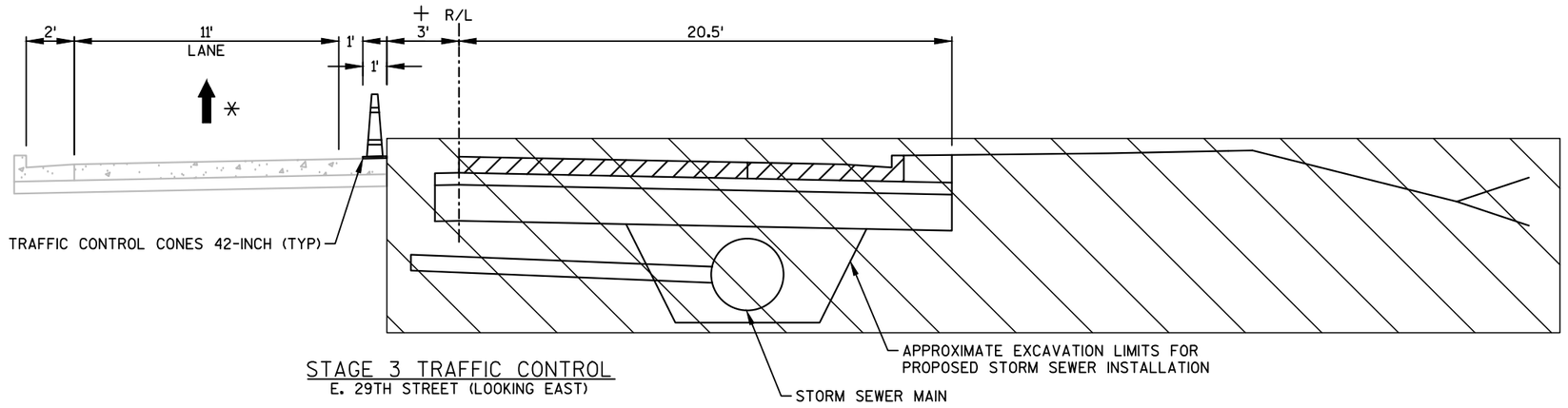
NOTES:

✳ SEE TRAFFIC CONTROL PLAN SHEETS FOR ADDITIONAL TRAFFIC CIRCULATION INFORMATION.

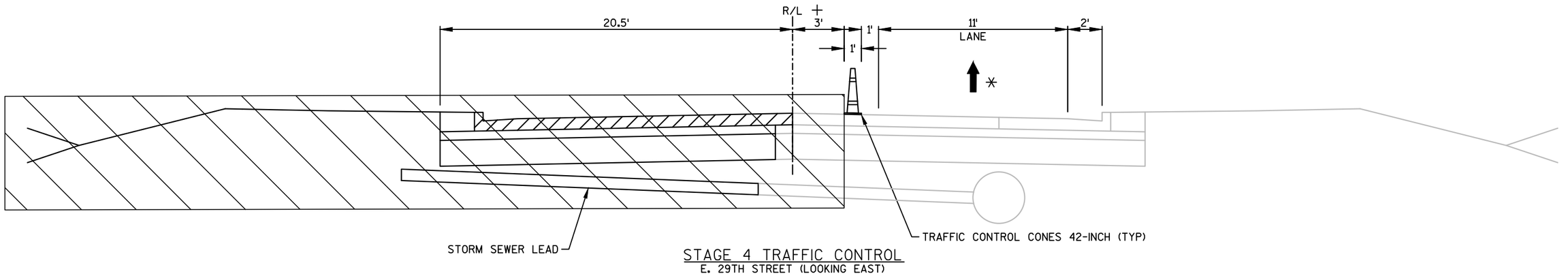
+ PROVIDE FLAGGERS AND NO MORE THAN 15 MINUTE DELAYS FOR LEAD AND SERVICE EXTENSIONS. PROVIDE 8' MIN. BETWEEN C&G AND CONES FOR IN BETWEEN DELAYS. BRING AREAS REMOVED BACK TO FINISHED GRADE WITH 12" TEMPORARY BASE AGGREGATE DENSE.



PLAN VIEW
STAGE 3 SHOWN, STAGE 4 SIMILAR FOR MAINLINE CONE SPACING ONLY



STAGE 3 TRAFFIC CONTROL
E. 29TH STREET (LOOKING EAST)



STAGE 4 TRAFFIC CONTROL
E. 29TH STREET (LOOKING EAST)

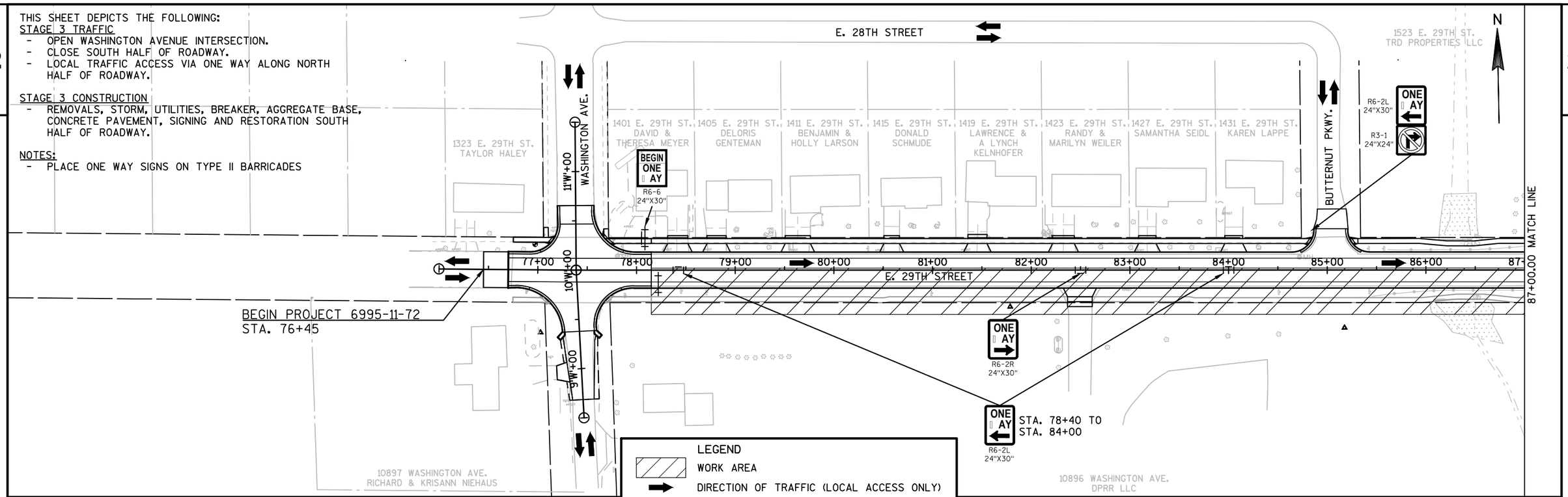
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	TRAFFIC CONTROL TYPICAL SECTIONS - STAGE 3 & 4	SHEET 70	E

THIS SHEET DEPICTS THE FOLLOWING:

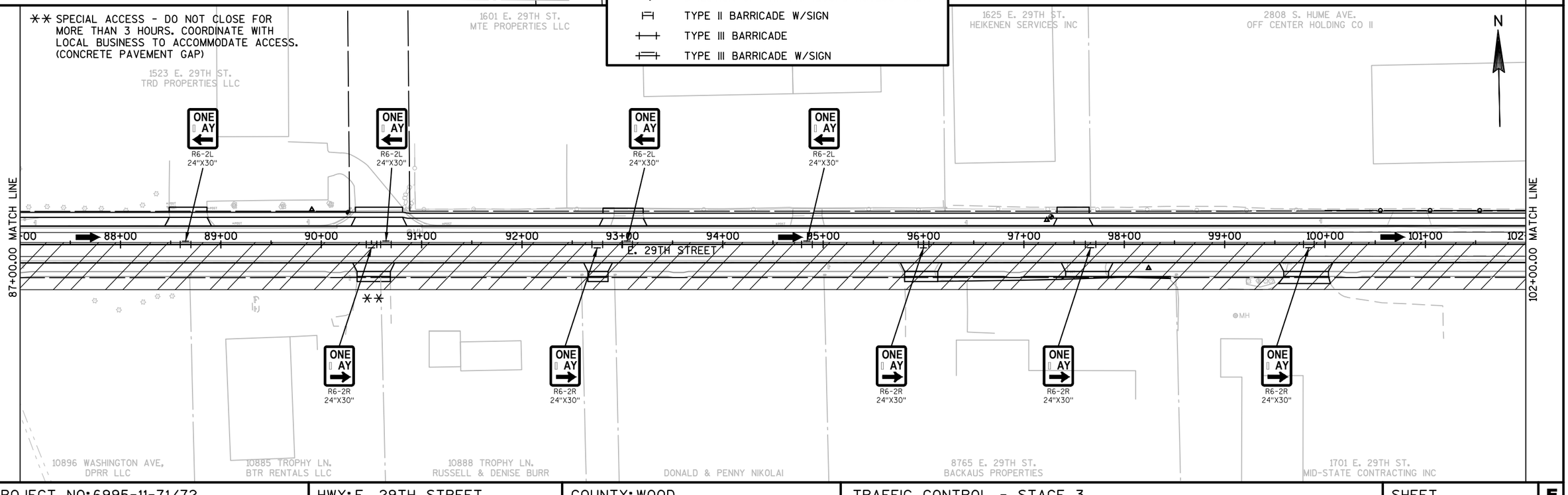
STAGE 3 TRAFFIC
- OPEN WASHINGTON AVENUE INTERSECTION.
- CLOSE SOUTH HALF OF ROADWAY.
- LOCAL TRAFFIC ACCESS VIA ONE WAY ALONG NORTH HALF OF ROADWAY.

STAGE 3 CONSTRUCTION
- REMOVALS, STORM, UTILITIES, BREAKER, AGGREGATE BASE, CONCRETE PAVEMENT, SIGNING AND RESTORATION SOUTH HALF OF ROADWAY.

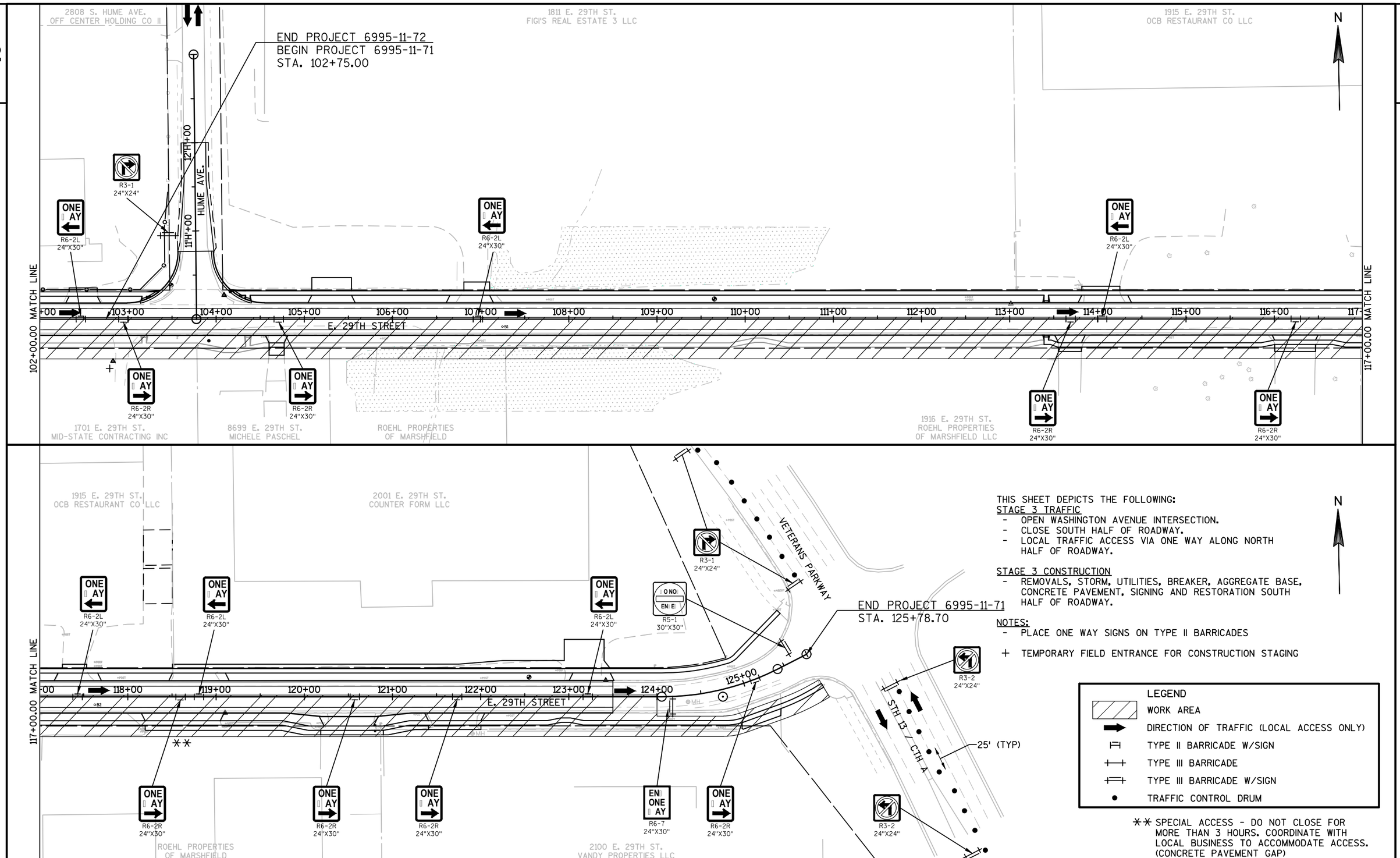
NOTES:
- PLACE ONE WAY SIGNS ON TYPE II BARRICADES



LEGEND
- WORK AREA
- DIRECTION OF TRAFFIC (LOCAL ACCESS ONLY)
- TYPE II BARRICADE W/SIGN
- TYPE III BARRICADE
- TYPE III BARRICADE W/SIGN



PROJECT NO:6995-11-71/72	HWY:E. 29TH STREET	COUNTY:WOOD	TRAFFIC CONTROL - STAGE 3	SHEET 71	E



THIS SHEET DEPICTS THE FOLLOWING:

STAGE 3 TRAFFIC
- OPEN WASHINGTON AVENUE INTERSECTION.
- CLOSE SOUTH HALF OF ROADWAY.
- LOCAL TRAFFIC ACCESS VIA ONE WAY ALONG NORTH HALF OF ROADWAY.

STAGE 3 CONSTRUCTION
- REMOVALS, STORM, UTILITIES, BREAKER, AGGREGATE BASE, CONCRETE PAVEMENT, SIGNING AND RESTORATION SOUTH HALF OF ROADWAY.

NOTES:
- PLACE ONE WAY SIGNS ON TYPE II BARRICADES

\+ TEMPORARY FIELD ENTRANCE FOR CONSTRUCTION STAGING

LEGEND
- WORK AREA
- DIRECTION OF TRAFFIC (LOCAL ACCESS ONLY)
- TYPE II BARRICADE W/SIGN
- TYPE III BARRICADE
- TYPE III BARRICADE W/SIGN
- TRAFFIC CONTROL DRUM

** SPECIAL ACCESS - DO NOT CLOSE FOR MORE THAN 3 HOURS. COORDINATE WITH LOCAL BUSINESS TO ACCOMMODATE ACCESS. (CONCRETE PAVEMENT GAP)

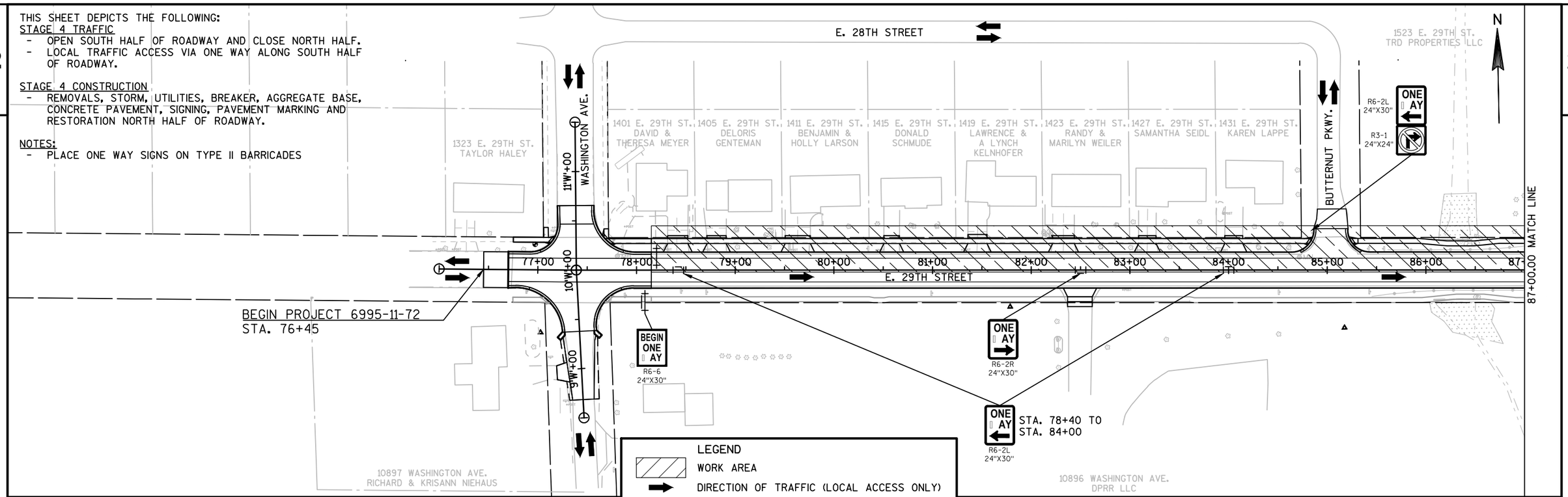
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	TRAFFIC CONTROL - STAGE 3	SHEET 72 E

THIS SHEET DEPICTS THE FOLLOWING:

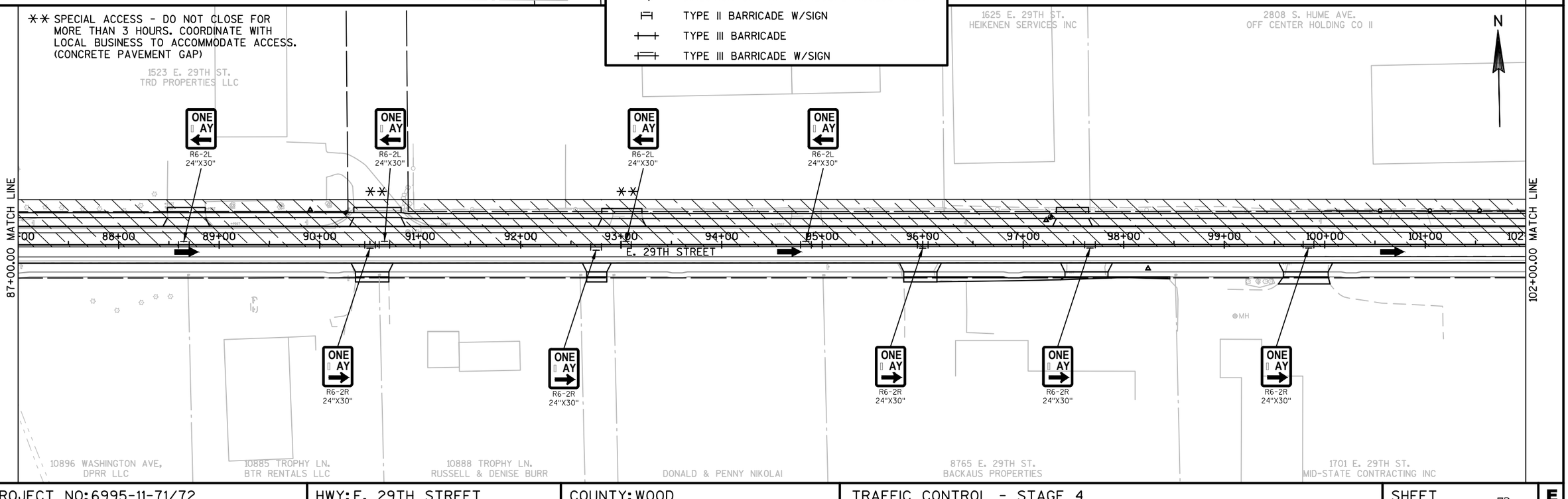
STAGE 4 TRAFFIC
- OPEN SOUTH HALF OF ROADWAY AND CLOSE NORTH HALF.
- LOCAL TRAFFIC ACCESS VIA ONE WAY ALONG SOUTH HALF OF ROADWAY.

STAGE 4 CONSTRUCTION
- REMOVALS, STORM, UTILITIES, BREAKER, AGGREGATE BASE, CONCRETE PAVEMENT, SIGNING, PAVEMENT MARKING AND RESTORATION NORTH HALF OF ROADWAY.

NOTES:
- PLACE ONE WAY SIGNS ON TYPE II BARRICADES



LEGEND
- WORK AREA
- DIRECTION OF TRAFFIC (LOCAL ACCESS ONLY)
- TYPE II BARRICADE W/SIGN
- TYPE III BARRICADE
- TYPE III BARRICADE W/SIGN



PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	TRAFFIC CONTROL - STAGE 4	SHEET 73 E

2808 S. HUME AVE.
OFF CENTER HOLDING CO II

1811 E. 29TH ST.
FIGI'S REAL ESTATE 3 LLC

1915 E. 29TH ST.
OCB RESTAURANT CO LLC

END PROJECT 6995-11-72
BEGIN PROJECT 6995-11-71
STA. 102+75.00

12TH+00

11H+00

HUME AVE.

R3-1
24"X24"

ONE WAY
R6-2L
24"X30"

ONE WAY
R6-2L
24"X30"

ONE WAY
R6-2L
24"X30"

102+00.00 MATCH LINE

+00 103+00 104+00 105+00 106+00 107+00 108+00 109+00 110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+

117+00.00 MATCH LINE

E. 29TH STREET

ONE WAY
R6-2R
24"X30"

ONE WAY
R6-2R
24"X30"

ONE WAY
R6-2R
24"X30"

ONE WAY
R6-2R
24"X30"

1701 E. 29TH ST.
MID-STATE CONTRACTING INC

8699 E. 29TH ST.
MICHELE PASCHEL

ROEHL PROPERTIES
OF MARSHFIELD

1916 E. 29TH ST.
ROEHL PROPERTIES
OF MARSHFIELD LLC

1915 E. 29TH ST.
OCB RESTAURANT CO LLC

2001 E. 29TH ST.
COUNTER FORM LLC

VETERANS PARKWAY

R3-1
24"X24"

ONE WAY
R6-2L
24"X30"

ONE WAY
R6-2L
24"X30"

ONE WAY
R6-2L
24"X30"

117+00.00 MATCH LINE

00 118+00 119+00 120+00 121+00 122+00 123+00 124+00 125+00

E. 29TH STREET

END PROJECT 6995-11-71
STA. 125+78.70

R3-2
24"X24"

STH 13 / CTH A

25' (TYP)

R3-2
24"X24"

ONE WAY
R6-2R
24"X30"

ONE WAY
R6-2R
24"X30"

ONE WAY
R6-2R
24"X30"

ONE WAY
R6-2R
24"X30"

ROEHL PROPERTIES
OF MARSHFIELD

2100 E. 29TH ST.
VANDY PROPERTIES LLC

THIS SHEET DEPICTS THE FOLLOWING:

STAGE 4 TRAFFIC
- OPEN SOUTH HALF OF ROADWAY AND CLOSE NORTH HALF.
- LOCAL TRAFFIC ACCESS VIA ONE WAY ALONG SOUTH HALF OF ROADWAY.

STAGE 4 CONSTRUCTION
- REMOVALS, STORM, UTILITIES, BREAKER, AGGREGATE BASE, CONCRETE PAVEMENT, SIGNING, PAVEMENT MARKING AND RESTORATION NORTH HALF OF ROADWAY.

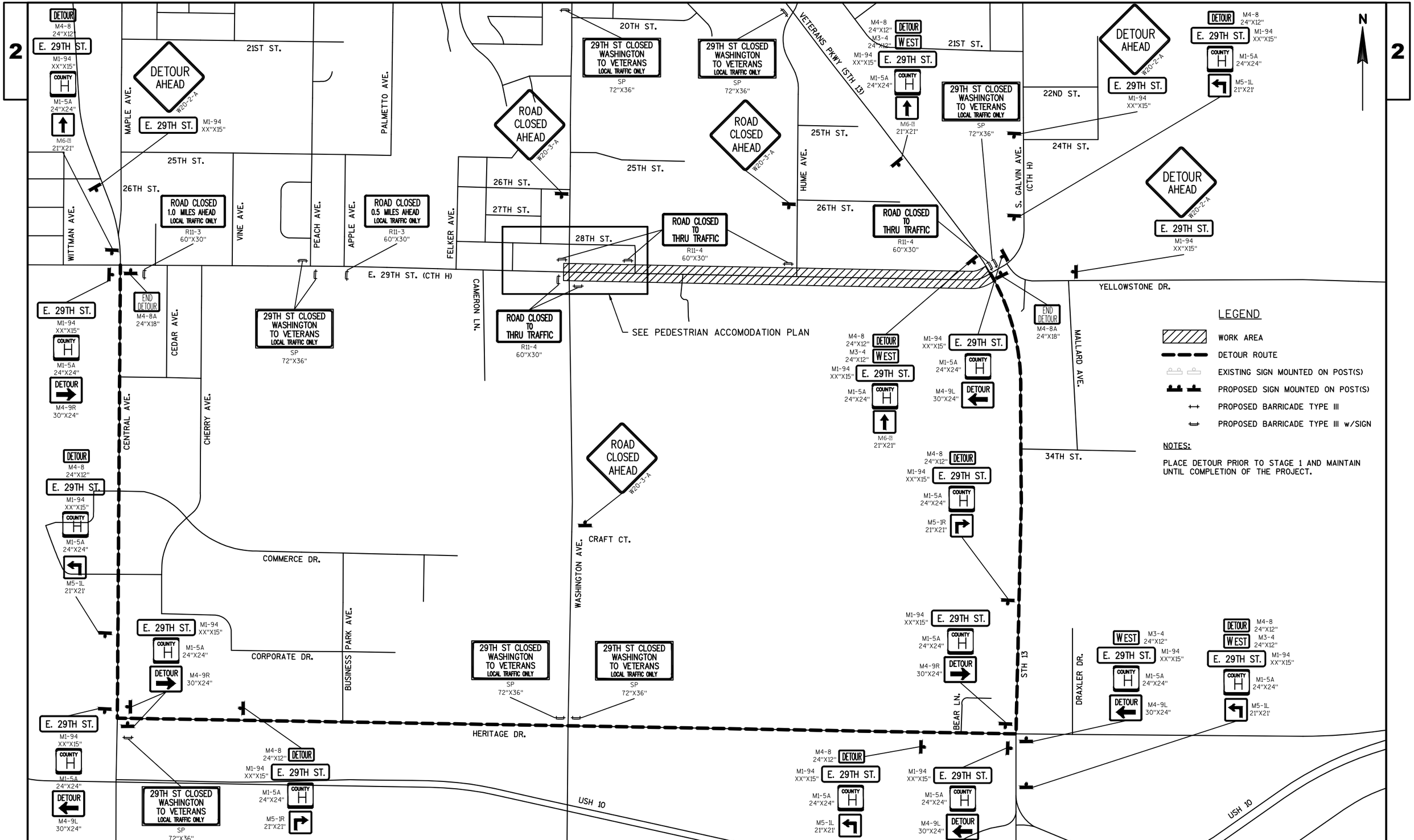
NOTES:
- PLACE ONE WAY SIGNS ON TYPE II BARRICADES

LEGEND
- WORK AREA
- DIRECTION OF TRAFFIC (LOCAL ACCESS ONLY)
- TYPE II BARRICADE W/SIGN
- TYPE III BARRICADE
- TYPE III BARRICADE W/SIGN
- TRAFFIC CONTROL DRUM

** SPECIAL ACCESS - DO NOT CLOSE FOR MORE THAN 3 HOURS. COORDINATE WITH LOCAL BUSINESS TO ACCOMMODATE ACCESS. (CONCRETE PAVEMENT GAP)

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	TRAFFIC CONTROL - STAGE 4	SHEET 74	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\025002_TC.DWG
LAYOUT NAME - 025006_TC STAGE 4
PLOT DATE : 11/16/2017 7:37 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 44



PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	E. 29TH ST. DETOUR PLAN	SHEET 75 E

2

2

LEGEND

WORK AREA

ALTERNATE PEDESTRIAN ROUTE

EXISTING PEDESTRIAN ROUTE

PROPOSED BARRICADE TYPE II

PROPOSED BARRICADE TYPE II w/SIGN

N

NOTES:

SEE STANDARD DETAIL DRAWING TRAFFIC CONTROL, PEDESTRIAN ACCOMODATION FOR ADDITIONAL DETAILS.

PROVIDE PEDESTRIAN ACCOMODATION SIGNS PER THIS PLAN DURING SIDEWALK REMOVALS.

PROVIDE TEMPORARY PEDESTRIAN CROSSINGS THROUGH THE CONSTRUCTION ZONE FOR RESIDENT ACCESS.

TAMARACK AVE.

28TH ST.

28TH ST.

MADISON AVE.

WASHINGTON AVE.

BUTTERNUT PKWY.

R9-B
30"X48"
SIDEWALK CLOSED

M6-B
24"X24"

SIDEWALK CLOSED AHEAD
CROSS HERE

R9-B2
48"X30"

SIDEWALK CLOSED
R9-B
30"X48"

R9-B
30"X48"
SIDEWALK CLOSED

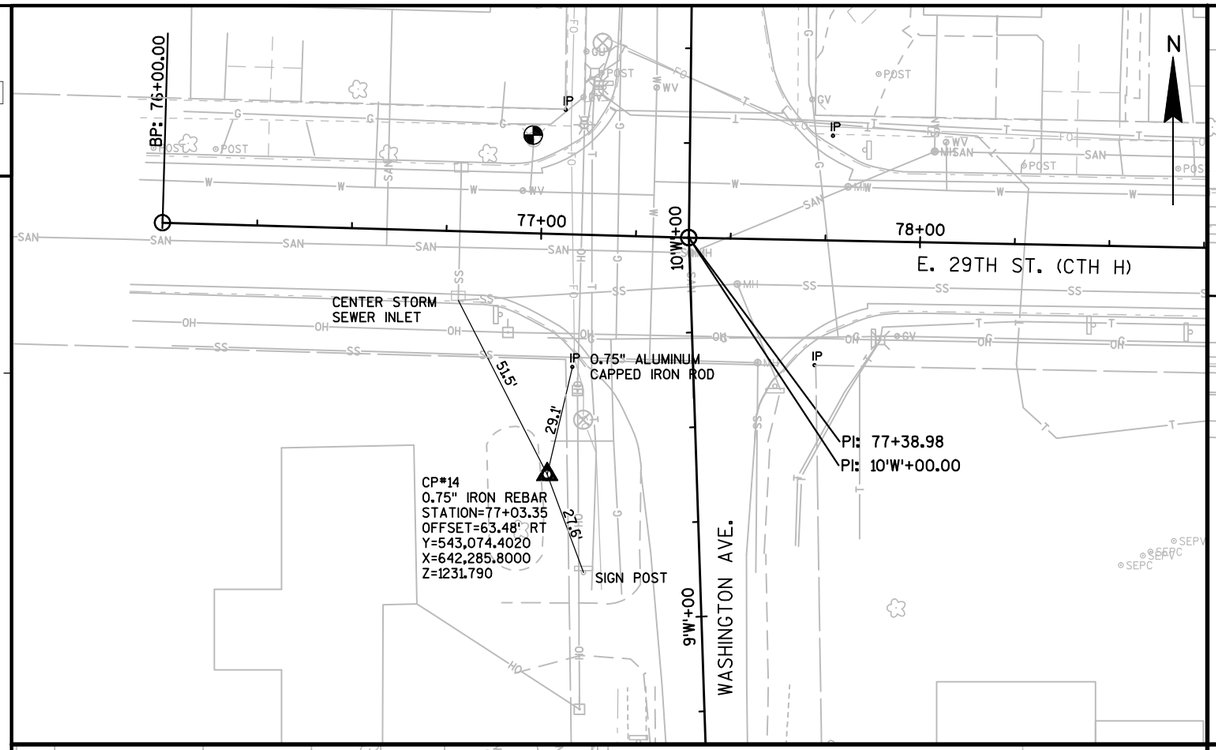
M6-B
24"X24"

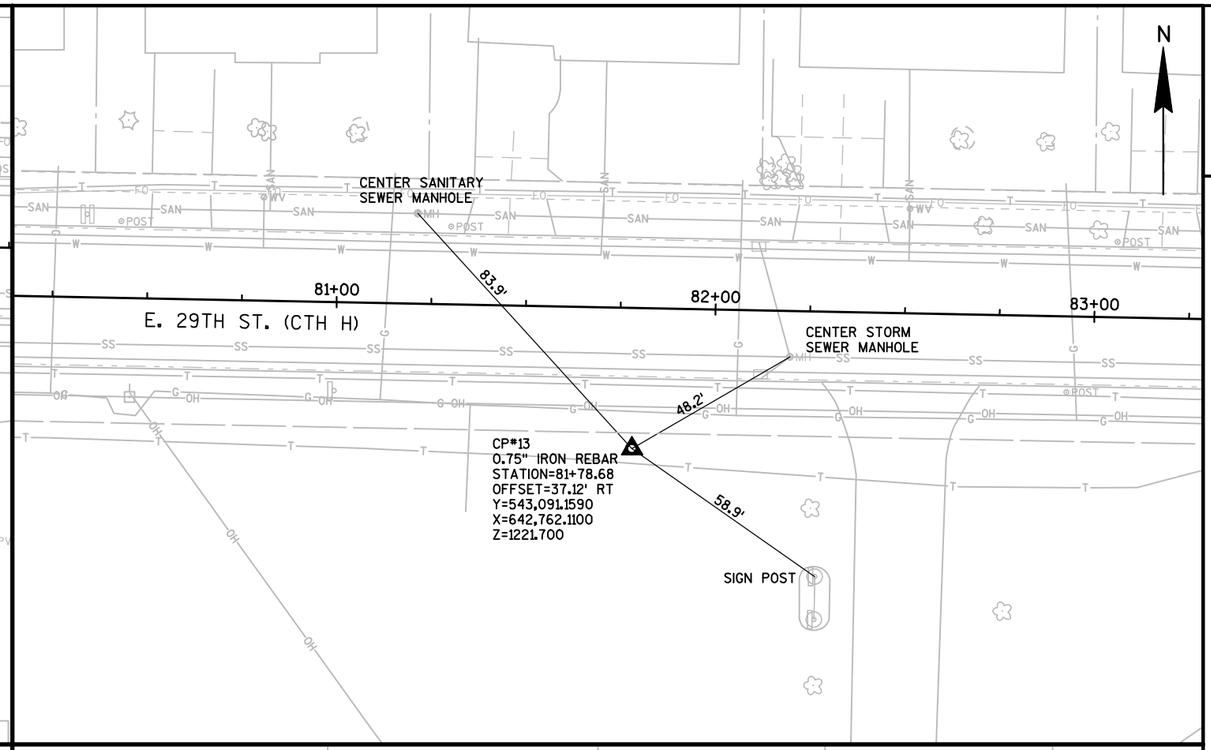
E. 29TH ST. (CTH H)

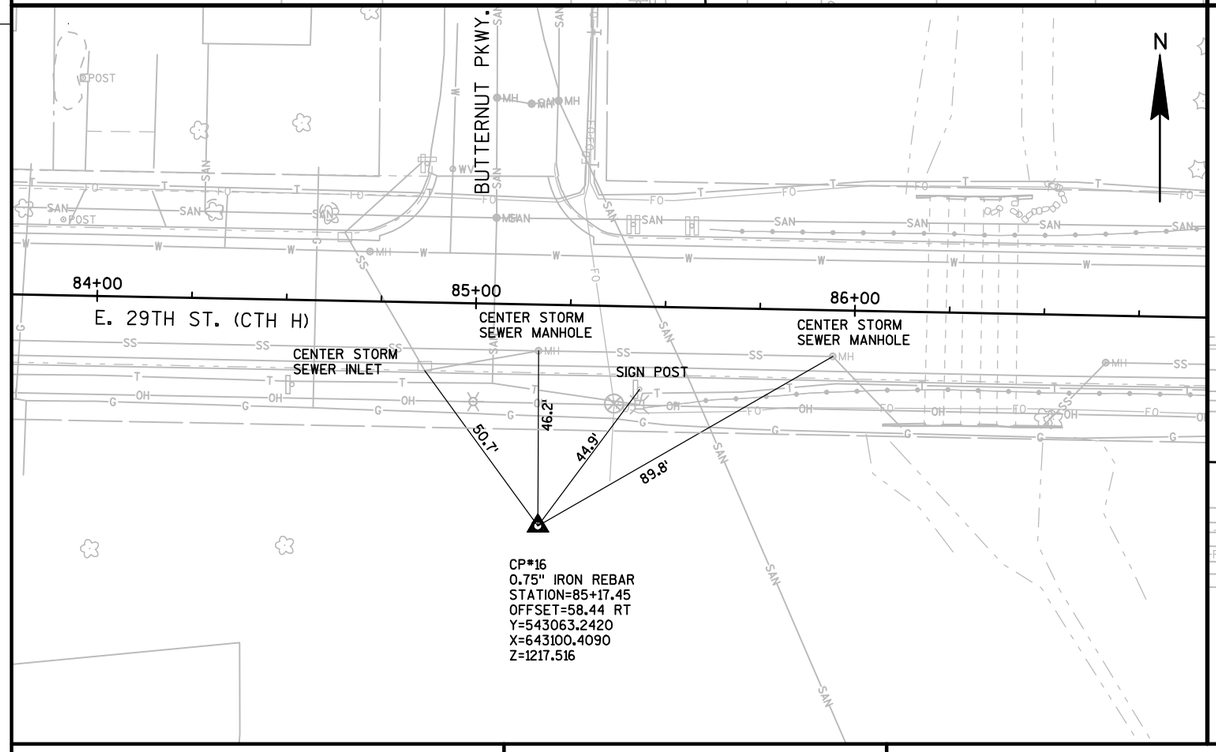
PROJECT NO:6995-11-71/72	HWY:E. 29TH STREET	COUNTY:WOOD	PEDESTRIAN ACCOMODATION PLAN	SHEET 76	E

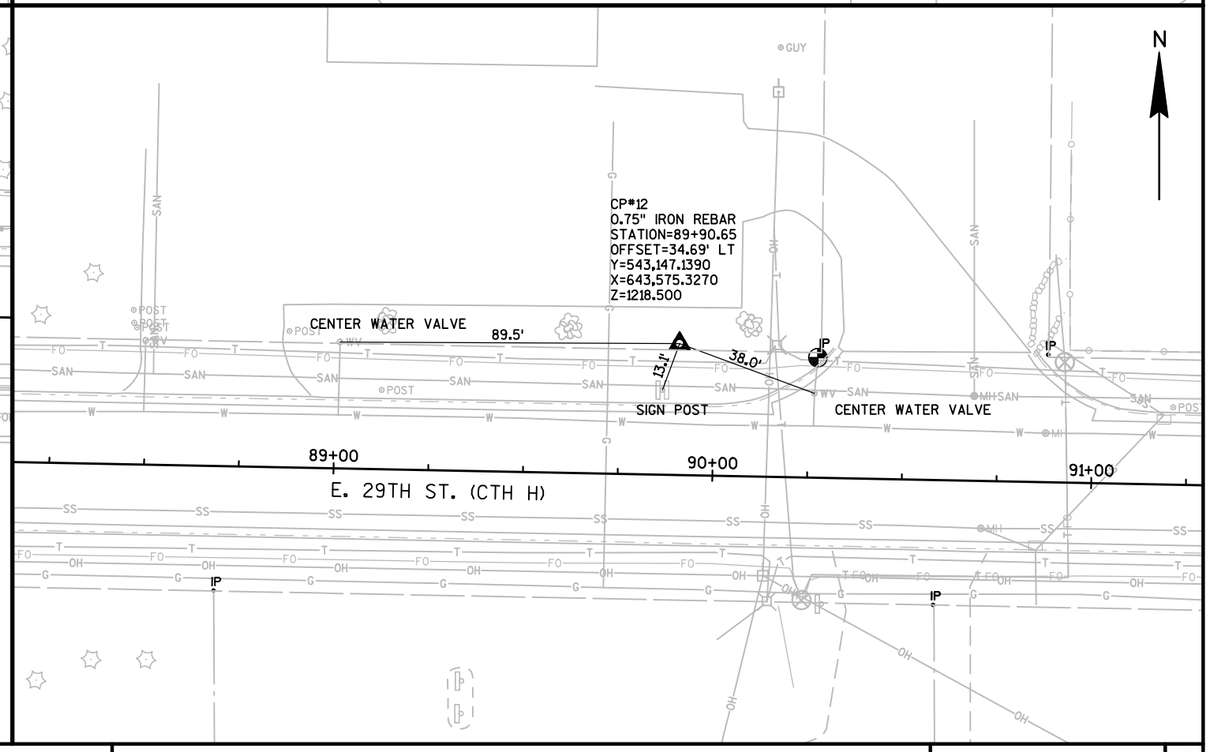
FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - 027002_DT

PLOT DATE : 7/19/2017 6:00 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:100 FT



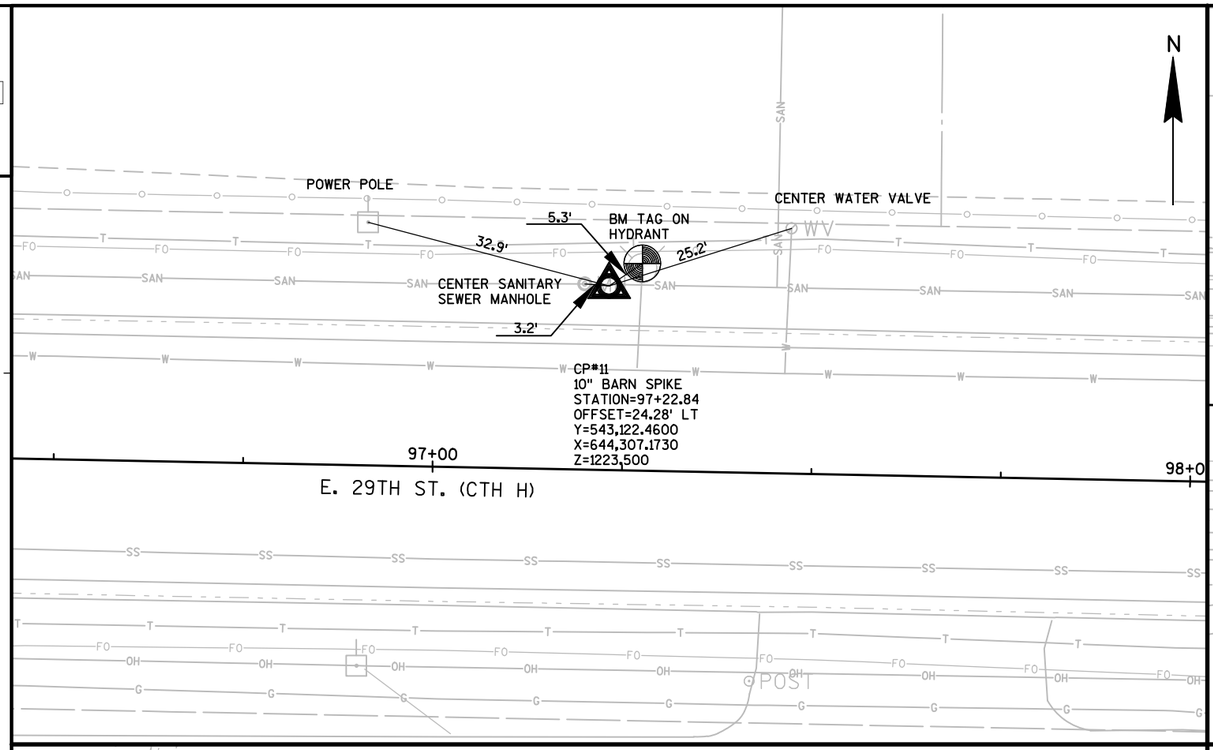


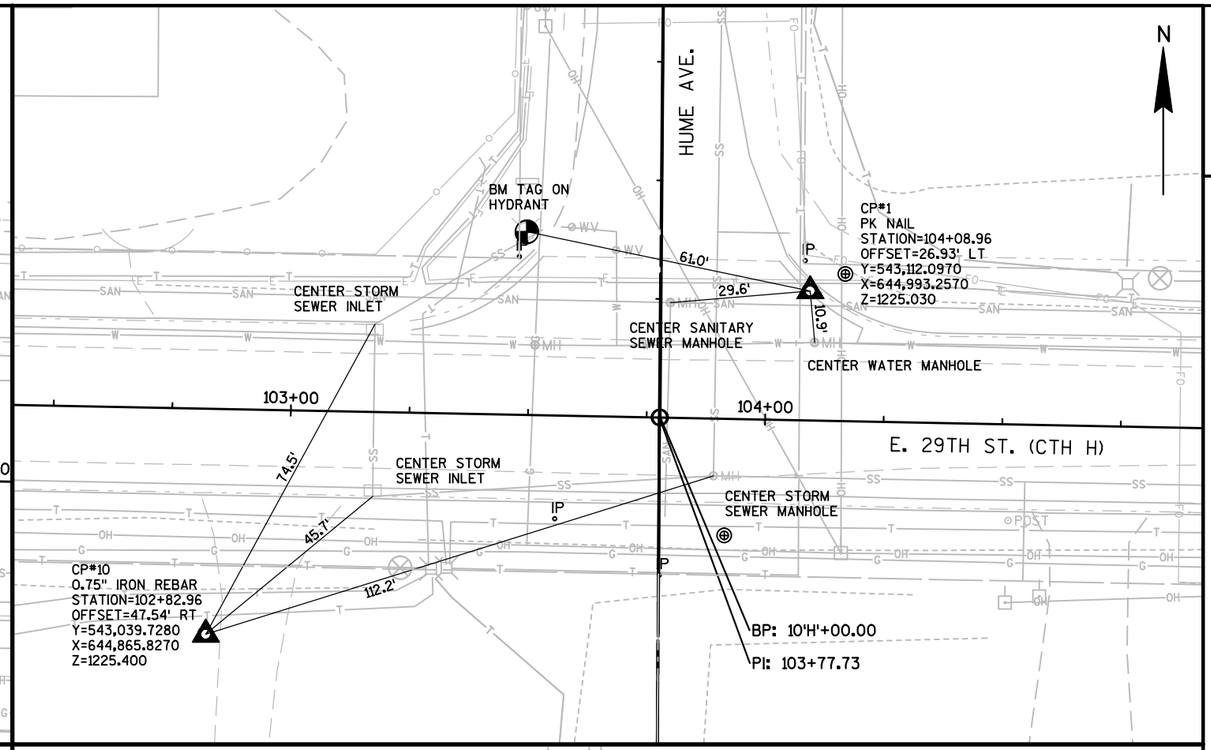


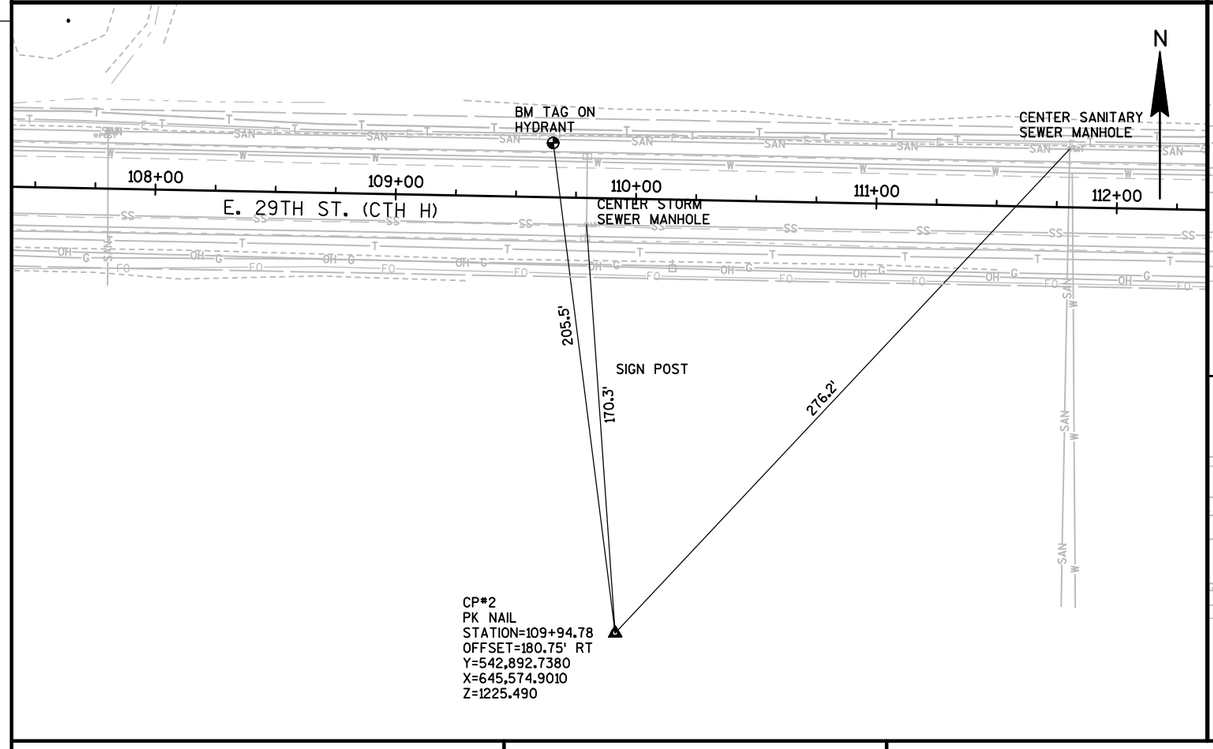


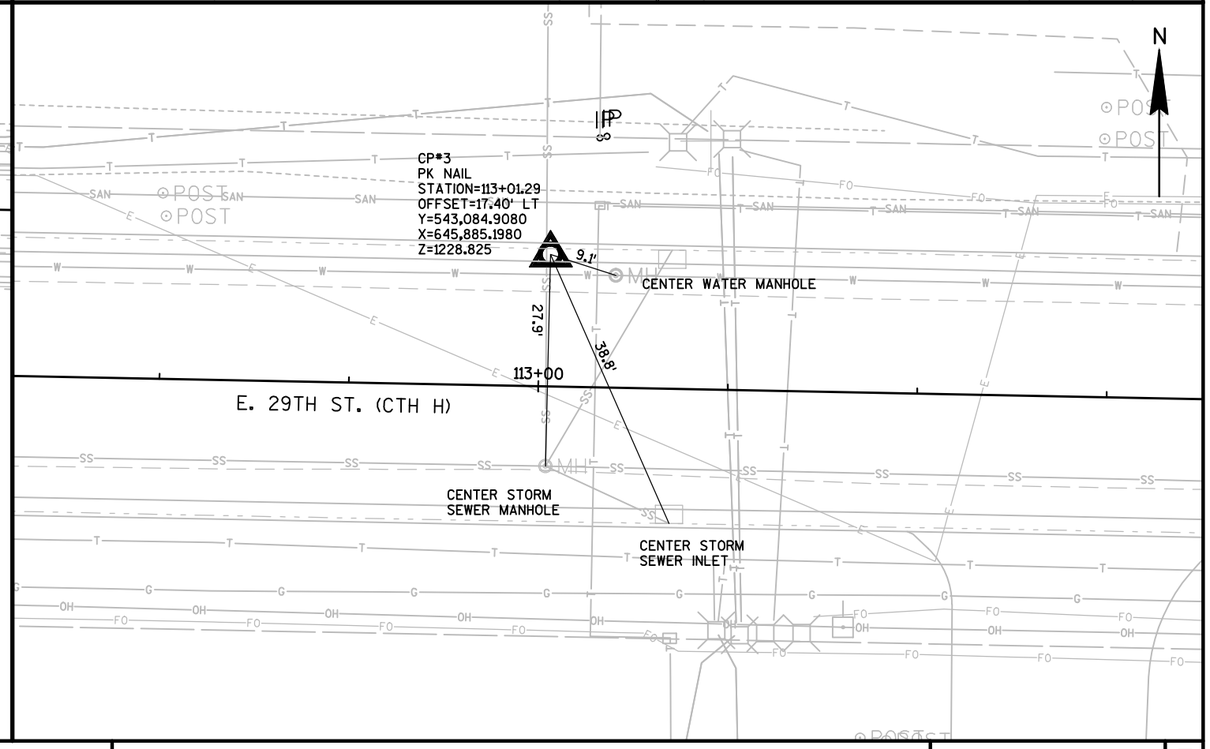
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CONTROL POINT TIES	SHEET 77	E

FILE NAME : P:\580S\584\00584086\CADD PHASE 2\BASEDATA\SURVEY\ORIG\584086 PHASE 2 SURVEY\584086 CP'S.DWG
584086 PLANS - 027301_XX
PLOT DATE : 3/28/2017 9:48 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : *********
WISDOT/CADDS SHEET 42

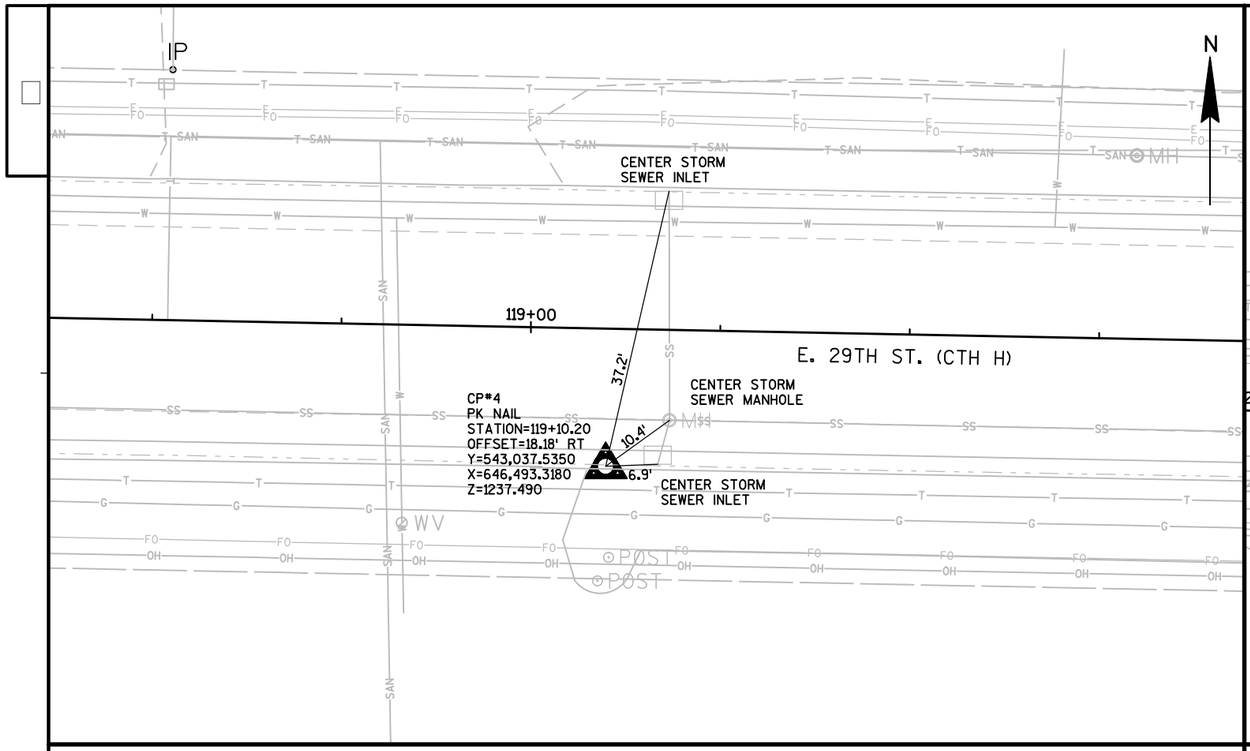


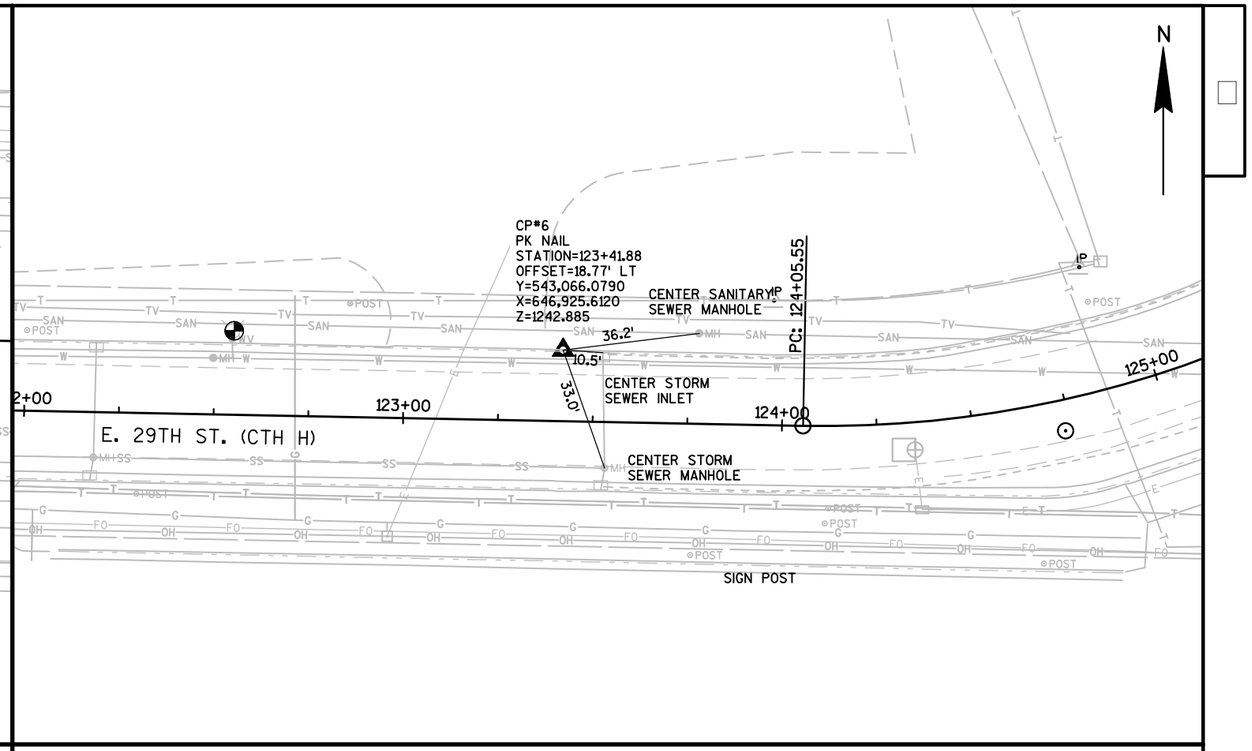






PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CONTROL POINT TIES	SHEET 78	E





PROJECT NO:6995-11-71/72	HWY:E. 29TH STREET	COUNTY:WOOD	CONTROL POINT TIES	SHEET 79	E

Estimate Of Quantities

Line	Item	Item Description	Unit	Total	6995-11-71 Qty	6995-11-72 Qty
0002	201.0110	Clearing	SY	33.000		33.000
0004	201.0210	Grubbing	SY	33.000		33.000
0006	203.0100	Removing Small Pipe Culverts	EACH	3.000	1.000	2.000
0008	203.0500.S	Removing Old Structure Over Waterway (station) 01. 86+31	LS	1.000		1.000
0010	204.0100	Removing Pavement	SY	20,200.000	8,740.000	11,460.000
0012	204.0150	Removing Curb & Gutter	LF	80.000		80.000
0014	204.0155	Removing Concrete Sidewalk	SY	440.000		440.000
0016	204.0165	Removing Guardrail	LF	350.000		350.000
0018	204.0170	Removing Fence	LF	535.000	260.000	275.000
0020	204.0210	Removing Manholes	EACH	19.000	7.000	12.000
0022	204.0215	Removing Catch Basins	EACH	12.000	12.000	
0024	204.0220	Removing Inlets	EACH	18.000		18.000
0026	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	2,010.000	450.000	1,560.000
0028	204.0245	Removing Storm Sewer (size) 02. 15-Inch	LF	570.000		570.000
0030	204.0245	Removing Storm Sewer (size) 03. 18-Inch	LF	105.000		105.000
0032	204.0245	Removing Storm Sewer (size) 04. 24-Inch	LF	1,460.000	1,030.000	430.000
0034	204.0245	Removing Storm Sewer (size) 05. 27x43-Inch	LF	715.000	715.000	
0036	205.0100	Excavation Common	CY	23,587.000	9,646.000	13,941.000
0038	206.2000	Excavation for Structures Culverts (structure) 01. B-71-0196	LS	1.000		1.000
0040	210.2500	Backfill Structure Type B	TON	665.000		665.000
0042	213.0100	Finishing Roadway (project) 01. 6995-11-71	EACH	1.000	1.000	
0044	213.0100	Finishing Roadway (project) 02. 6995-11-72	EACH	1.000		1.000
0046	305.0110	Base Aggregate Dense 3/4-Inch	TON	3,520.000	2,640.000	880.000
0048	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	3,820.000	2,180.000	1,640.000
0050	310.0110	Base Aggregate Open-Graded	TON	9,300.000	4,100.000	5,200.000
0052	311.0115	Breaker Run	CY	290.000		290.000
0054	371.1000.S	QMP Base Aggregate Dense 1 1/4-Inch Compaction	TON	1,541.000	1,541.000	
0056	415.0090	Concrete Pavement 9-Inch	SY	17,120.000	7,640.000	9,480.000
0058	415.0210	Concrete Pavement Gaps	EACH	5.000	2.000	3.000
0060	415.1090	Concrete Pavement HES 9-Inch	SY	480.000	160.000	320.000
0062	415.5110.S	Concrete Pavement Joint Layout 01. 6995-11-71	LS	1.000	1.000	
0064	415.5110.S	Concrete Pavement Joint Layout 02. 6995-11-72	LS	1.000		1.000
0066	416.0620	Drilled Dowel Bars	EACH	42.000	26.000	16.000
0068	440.4410	Incentive IRI Ride	DOL	3,546.000	1,572.000	1,974.000
0070	504.0100	Concrete Masonry Culverts	CY	230.000		230.000
0072	505.0400	Bar Steel Reinforcement HS Structures	LB	25,150.000		25,150.000
0074	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	1,510.000		1,510.000
0076	516.0500	Rubberized Membrane Waterproofing	SY	24.000		24.000

					6995-11-71	6995-11-72
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0078	520.8000	Concrete Collars for Pipe	EACH	1.000	1.000	
0080	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	1.000	1.000	
0082	522.2638	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 38x60-Inch	EACH	1.000	1.000	
0084	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	410.000	155.000	255.000
0086	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	30.000		30.000
0088	601.0452	Concrete Curb & Gutter Integral 30-Inch Type D	LF	8,995.000	4,025.000	4,970.000
0090	602.0405	Concrete Sidewalk 4-Inch	SF	24,695.000	14,018.000	10,677.000
0092	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	20.000	20.000	
0094	602.0615	Curb Ramp Detectable Warning Field Radial Natural Patina	SF	120.000	59.000	61.000
0096	606.0200	Riprap Medium	CY	35.000	35.000	
0098	606.0300	Riprap Heavy	CY	95.000		95.000
0100	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	764.000	175.000	589.000
0102	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	625.000	243.000	382.000
0104	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	703.000	84.000	619.000
0106	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	991.000	671.000	320.000
0108	608.0330	Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	LF	437.000		437.000
0110	608.0336	Storm Sewer Pipe Reinforced Concrete Class III 36-Inch	LF	841.000	656.000	185.000
0112	608.2329	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 29x45-Inch	LF	53.000	53.000	
0114	608.2334	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 34x53-Inch	LF	304.000	304.000	
0116	608.2338	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 38x60-Inch	LF	44.000	44.000	
0118	608.6006	Storm Sewer Pipe Composite 6-Inch	LF	70.000	70.000	
0120	608.6008	Storm Sewer Pipe Composite 8-Inch	LF	73.000	73.000	
0122	611.0420	Reconstructing Manholes	EACH	1.000	1.000	
0124	611.0430	Reconstructing Inlets	EACH	2.000	2.000	
0126	611.0530	Manhole Covers Type J	EACH	20.000	9.000	11.000
0128	611.0612	Inlet Covers Type C	EACH	8.000	6.000	2.000
0130	611.0624	Inlet Covers Type H	EACH	44.000	20.000	24.000
0132	611.1003	Catch Basins 3-FT Diameter	EACH	11.000	7.000	4.000
0134	611.1004	Catch Basins 4-FT Diameter	EACH	1.000	1.000	
0136	611.1006	Catch Basins 6-FT Diameter	EACH	1.000	1.000	

					6995-11-71	6995-11-72
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0138	611.1230	Catch Basins 2x3-FT	EACH	36.000	15.000	21.000
0140	611.2004	Manholes 4-FT Diameter	EACH	8.000	2.000	6.000
0142	611.2005	Manholes 5-FT Diameter	EACH	7.000	1.000	6.000
0144	611.2006	Manholes 6-FT Diameter	EACH	1.000	1.000	
0146	611.2007	Manholes 7-FT Diameter	EACH	1.000	1.000	
0148	611.2008	Manholes 8-FT Diameter	EACH	1.000	1.000	
0150	611.2066	Manholes 6x6-FT	EACH	1.000	1.000	
0152	611.8110	Adjusting Manhole Covers	EACH	2.000		2.000
0154	611.8120.S	Cover Plates Temporary	EACH	70.000	35.000	35.000
0156	611.9800.S	Pipe Grates 01. 24-Inch	EACH	1.000	1.000	
0158	611.9800.S	Pipe Grates 02. 38 x 60-Inch	EACH	1.000	1.000	
0160	612.0902.S	Insulation Board Polystyrene (inch) 01. 2-Inch	SY	272.000	88.000	184.000
0162	616.0205	Fence Chain Link 5-FT	LF	130.000		130.000
0164	616.0206	Fence Chain Link 6-FT	LF	515.000	240.000	275.000
0166	616.0329	Gates Chain Link (width) 01. 40 feet	EACH	1.000		1.000
0168	618.0100	Maintenance And Repair of Haul Roads (project) 01. 6995-11-71	EACH	1.000	1.000	
0170	618.0100	Maintenance And Repair of Haul Roads (project) 02. 6995-11-72	EACH	1.000		1.000
0172	619.1000	Mobilization	EACH	1.000	0.500	0.500
0174	621.0100	Landmark Reference Monuments	EACH	2.000	1.000	1.000
0176	624.0100	Water	MGAL	519.000	249.000	270.000
0178	625.0100	Topsoil	SY	16,390.000	8,460.000	7,930.000
0180	627.0200	Mulching	SY	9,600.000	4,280.000	5,320.000
0182	628.1504	Silt Fence	LF	3,960.000	1,600.000	2,360.000
0184	628.1520	Silt Fence Maintenance	LF	3,960.000	1,600.000	2,360.000
0186	628.1905	Mobilizations Erosion Control	EACH	20.000	10.000	10.000
0188	628.1910	Mobilizations Emergency Erosion Control	EACH	20.000	10.000	10.000
0190	628.2006	Erosion Mat Urban Class I Type A	SY	6,880.000	4,280.000	2,600.000
0192	628.7005	Inlet Protection Type A	EACH	49.000	22.000	27.000
0194	628.7010	Inlet Protection Type B	EACH	7.000	7.000	
0196	628.7015	Inlet Protection Type C	EACH	56.000	30.000	26.000
0198	628.7504	Temporary Ditch Checks	LF	120.000	60.000	60.000
0200	628.7555	Culvert Pipe Checks	EACH	10.000	10.000	
0202	628.7560	Tracking Pads	EACH	6.000	2.000	4.000
0204	628.7570	Rock Bags	EACH	170.000	145.000	25.000
0206	630.0140	Seeding Mixture No. 40	LB	306.000	155.000	151.000
0208	630.0200	Seeding Temporary	LB	235.000	122.000	113.000
0210	631.0300	Sod Water	MGAL	917.000	475.000	442.000
0212	633.5200	Markers Culvert End	EACH	2.000	2.000	

					6995-11-71	6995-11-72
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0214	637.2210	Signs Type II Reflective H	SF	278.500	135.500	143.000
0216	637.2230	Signs Type II Reflective F	SF	58.500	49.500	9.000
0218	638.2602	Removing Signs Type II	EACH	29.000	11.000	18.000
0220	638.3000	Removing Small Sign Supports	EACH	29.000	11.000	18.000
0222	642.5001	Field Office Type B	EACH	1.000	0.500	0.500
0224	643.0410	Traffic Control Barricades Type II	DAY	5,074.000	2,279.000	2,795.000
0226	643.0420	Traffic Control Barricades Type III	DAY	7,572.000	3,551.000	4,021.000
0228	643.0705	Traffic Control Warning Lights Type A	DAY	8,098.000	3,746.000	4,352.000
0230	643.0900	Traffic Control Signs	DAY	36,092.000	17,647.000	18,445.000
0232	643.1070	Traffic Control Cones 42-Inch	DAY	20,710.000	9,260.000	11,450.000
0234	643.5000	Traffic Control	EACH	1.000	0.500	0.500
0236	645.0105	Geotextile Type C	SY	505.000		505.000
0238	645.0120	Geotextile Type HR	SY	300.000	95.000	205.000
0240	645.0140	Geotextile Type SAS	SY	23,910.000	10,600.000	13,310.000
0242	645.0220	Geogrid Type SR	SY	7,350.000	3,305.000	4,045.000
0244	646.1020	Marking Line Epoxy 4-Inch	LF	12,290.000	5,750.000	6,540.000
0246	646.3020	Marking Line Epoxy 8-Inch	LF	120.000	120.000	
0248	646.5020	Marking Arrow Epoxy	EACH	21.000	12.000	9.000
0250	646.5120	Marking Word Epoxy	EACH	1.000	1.000	
0252	646.5220	Marking Symbol Epoxy	EACH	18.000	9.000	9.000
0254	646.6020	Marking Stop Line Epoxy 12-Inch	LF	170.000	65.000	105.000
0256	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	485.000	200.000	285.000
0258	646.7520	Marking Crosswalk Epoxy Ladder Pattern 24-Inch	LF	156.000	156.000	
0260	646.9000	Marking Removal Line 4-Inch	LF	480.000	480.000	
0262	646.9100	Marking Removal Line 8-Inch	LF	100.000	100.000	
0264	646.9200	Marking Removal Line Wide	LF	380.000	380.000	
0266	646.9300	Marking Removal Special Marking	EACH	5.000	5.000	
0268	650.4000	Construction Staking Storm Sewer	EACH	70.000	34.000	36.000
0270	650.4500	Construction Staking Subgrade	LF	5,066.000	2,258.000	2,808.000
0272	650.5000	Construction Staking Base	LF	326.000	123.000	203.000
0274	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	285.000		285.000
0276	650.6500	Construction Staking Structure Layout (structure) 01. B-71-0196	LS	1.000		1.000
0278	650.7000	Construction Staking Concrete Pavement	LF	4,855.000	2,135.000	2,720.000
0280	650.9000	Construction Staking Curb Ramps	EACH	10.000	6.000	4.000
0282	650.9910	Construction Staking Supplemental Control (project) 01. 6995-11-71	LS	1.000	1.000	
0284	650.9910	Construction Staking Supplemental Control (project) 02. 6995-11-72	LS	1.000		1.000
0286	650.9920	Construction Staking Slope Stakes	LF	5,066.000	2,258.000	2,808.000

					6995-11-71	6995-11-72
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0288	690.0150	Sawing Asphalt	LF	830.000	540.000	290.000
0290	690.0250	Sawing Concrete	LF	5,800.000	2,300.000	3,500.000
0292	715.0415	Incentive Strength Concrete Pavement	DOL	4,788.000	1,944.000	2,844.000
0294	715.0502	Incentive Strength Concrete Structures	DOL	1,380.000		1,380.000
0296	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	4,000.000	2,000.000	2,000.000
0298	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,520.000	1,260.000	1,260.000
0300	SPV.0030	Special 01. Fertilizer For Lawn Type Turf	CWT	10.200	5.280	4.920
0302	SPV.0060	Special 01. Temporary Connection to Existing Storm Sewer Pipe	EACH	16.000	8.000	8.000
0304	SPV.0060	Special 02. Connect to Existing Water Main	EACH	6.000	1.000	5.000
0306	SPV.0060	Special 03. Relocate Existing Hydrant and Valve	EACH	1.000	1.000	
0308	SPV.0060	Special 04. 12-Inch x 6-Inch Tee	EACH	1.000		1.000
0310	SPV.0060	Special 05. 12-Inch x 8-Inch Tee	EACH	2.000		2.000
0312	SPV.0060	Special 06. 12-Inch x 12-Inch Tee	EACH	1.000	1.000	
0314	SPV.0060	Special 10. Valve w/Valve Box (12-Inch)	EACH	2.000	1.000	1.000
0316	SPV.0060	Special 11. Valve w/Valve Box (8-Inch)	EACH	3.000		3.000
0318	SPV.0060	Special 12. Valve w/Valve Box (6-Inch)	EACH	1.000		1.000
0320	SPV.0060	Special 13. 12-Inch Plug	EACH	2.000	1.000	1.000
0322	SPV.0060	Special 14. 8-Inch Plug	EACH	3.000		3.000
0324	SPV.0060	Special 15. 6-Inch Plug	EACH	1.000		1.000
0326	SPV.0060	Special 16. Adjust Curb Stop	EACH	19.000	3.000	16.000
0328	SPV.0060	Special 17. Adjust Water Valve Box	EACH	14.000	9.000	5.000
0330	SPV.0060	Special 19. 12-Inch Hydrant Extension Undistributed	EACH	2.000		2.000
0332	SPV.0060	Special 20. Adjust Sanitary Manhole Cover (<12")	EACH	11.000	2.000	9.000
0334	SPV.0060	Special 21. Adjust Sanitary Manhole Cover (>12")	EACH	4.000	2.000	2.000
0336	SPV.0060	Special 22. Reconstruct Sanitary Manhole-Salvage & Reinstall Cone	EACH	1.000	1.000	
0338	SPV.0060	Special 23. Sanitary Manhole Frame & Cover, Type JM	EACH	16.000	6.000	10.000
0340	SPV.0060	Special 24. Connect New Manhole to Existing Lined Sanitary Sewer	EACH	3.000	2.000	1.000
0342	SPV.0060	Special 25. Prepare and Seal Existing Manhole Joint	EACH	2.000	2.000	
0344	SPV.0060	Special 26. 8-Inch PVC CAP	EACH	8.000	2.000	6.000
0346	SPV.0060	Special 27. 6-Inch PVC Inside Drop for Existing Sanitary Manhole	EACH	3.000		3.000
0348	SPV.0060	Special 28. External Chimney Seal	EACH	16.000	6.000	10.000
0350	SPV.0060	Special 29. Remove Existing Lateral in Sanitary Manhole	EACH	2.000		2.000
0352	SPV.0060	Special 30. Connect 8-Inch PVC to Existing Manhole (Core w/Boot)	EACH	2.000	1.000	1.000
0354	SPV.0060	Special 31. Connect to Existing Sanitary Sewer (8-Inch PVC to 8-Inch PVC)	EACH	5.000	2.000	3.000

					6995-11-71	6995-11-72
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0356	SPV.0060	Special 32. 8-Inch PVC Inside Drop for Existing Sanitary Manhole	EACH	2.000	1.000	1.000
0358	SPV.0060	Special 33. 15-Inch x 6-Inch Saddle Wye on Lined Main	EACH	3.000		3.000
0360	SPV.0060	Special 34. 8-Inch x 4-Inch Saddle Wye on Lined Main	EACH	2.000	1.000	1.000
0362	SPV.0060	Special 35. 8-Inch x 6-Inch Saddle Wye on Lined Main	EACH	13.000	4.000	9.000
0364	SPV.0060	Special 36. Connect to Existing Sanitary Lateral	EACH	19.000	5.000	14.000
0366	SPV.0060	Special 37. Saw and Seal Existing Manhole Joint	EACH	2.000	2.000	
0368	SPV.0060	Special 38. Reconstructing Sanitary Manhole - New 48" Flat Top	EACH	1.000	1.000	
0370	SPV.0060	Special 39. Connect Sanitary Lateral to Existing Manhole	EACH	3.000		3.000
0372	SPV.0060	Special 40. 8-Inch x 6-Inch PVC Wye	EACH	2.000	1.000	1.000
0374	SPV.0060	Special 41. Research and Locate Existing Land Parcel Monuments	EACH	19.000	8.000	11.000
0376	SPV.0060	Special 42. Verify and Replace Existing Land Parcel Monuments	EACH	17.000	6.000	11.000
0378	SPV.0060	Special 43. Manholes 9-FT Diameter	EACH	1.000	1.000	
0380	SPV.0060	Special 44. Temporary Connection to Storm Sewer Structure	EACH	8.000	4.000	4.000
0382	SPV.0060	Special 45. Pipe Gates	EACH	2.000		2.000
0384	SPV.0060	Special 47. U-Channel Post, 14-FT, Yellow	EACH	10.000	6.000	4.000
0386	SPV.0060	Special 49. U-Channel Post, 16-FT, Yellow	EACH	31.000	16.000	15.000
0388	SPV.0060	Special 51. Cored Tee Connection	EACH	5.000	5.000	
0390	SPV.0060	Special 52. Utility Line Opening (ULO)	EACH	3.000	2.000	1.000
0392	SPV.0060	Special 54. Water Main Offset 12-Inch	EACH	2.000	1.000	1.000
0394	SPV.0060	Special 55. Water Main Offset 8-Inch	EACH	5.000	2.000	3.000
0396	SPV.0060	Special 56. Abandon Water Valve Manhole	EACH	7.000	4.000	3.000
0398	SPV.0090	Special 02. Water Main 12-Inch Ductile Iron	LF	96.000	58.000	38.000
0400	SPV.0090	Special 03. Water Main 8-Inch Ductile Iron	LF	138.000		138.000
0402	SPV.0090	Special 04. Water Main 6-Inch Ductile Iron	LF	66.000	19.000	47.000
0404	SPV.0090	Special 05. Sanitary Sewer 8-Inch PVC	LF	945.000	595.000	350.000
0406	SPV.0090	Special 06. Sanitary Lateral 6-Inch PVC	LF	389.000	146.000	243.000
0408	SPV.0090	Special 07. Sanitary Lateral 4-Inch PVC	LF	20.000	10.000	10.000
0410	SPV.0090	Special 08. Relay Existing 8-Inch PVC Sanitary Sewer	LF	15.000	15.000	
0412	SPV.0090	Special 09. Pipe Underdrain SICPP (Wrapped Trench) 6-Inch	LF	9,455.000	4,200.000	5,255.000
0414	SPV.0105	Special 01. Temporary Water Diversion Culvert B-71-0196	LS	1.000		1.000
0416	SPV.0105	Special 02. Treat and Seal New Concrete Pavement Joints 6995-11-71	LS	1.000	1.000	
0418	SPV.0105	Special 03. Remove & Abandon Sanitary Sewer Valve Access Manhole/Riser 6995-11-72	LS	1.000		1.000

					6995-11-71	6995-11-72
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0420	SPV.0105	Special 04. Treat and Seal New Concrete Pavement Joints 6995-11-72	LS	1.000		1.000
0422	SPV.0105	Special 05. Fine Grading (For Asphalt) 6995-11-71	LS	1.000	1.000	
0424	SPV.0105	Special 06. Construction Staking Sanitary Sewer 6995-11-71	LS	1.000	1.000	
0426	SPV.0105	Special 07. Construction Staking Water Main 6995-11-71	LS	1.000	1.000	
0428	SPV.0105	Special 08. Construction Staking Sanitary Sewer 6995-11-72	LS	1.000		1.000
0430	SPV.0105	Special 09. Construction Staking Water Main 6995-11-72	LS	1.000		1.000
0432	SPV.0105	Special 10. Fine Grading (For Asphalt) 6995-11-72	LS	1.000		1.000
0434	SPV.0165	Special 02. Remove, Salvage, and Replace Brick Pavers	SF	340.000		340.000
0436	SPV.0165	Special 05. Concrete Sidewalk Reinforced 6-Inch	SF	506.000	308.000	198.000
0438	SPV.0180	Special 01. Preparing Topsoil For Lawn Type Turf	SY	16,390.000	8,460.000	7,930.000
0440	SPV.0180	Special 03. Concrete Driveway Reinforced 8-Inch	SY	1,200.000	820.000	380.000
0442	SPV.0180	Special 04. Concrete Driveway Reinforced HES 8-Inch	SY	420.000	220.000	200.000
0444	SPV.0180	Special 05. Concrete Driveway Reinforced 6-Inch	SY	480.000	30.000	450.000
0446	SPV.0195	Special 01. Screened Breaker Run Stone (Special)	TON	21,500.000	9,500.000	12,000.000
0448	SPV.0200	Special 01. Sanitary Manhole, Type 1	VF	40.000	25.200	14.800

3

REMOVING

STATION	LOCATION	203.0100 SMALL PIPE CULVERTS EACH	204.0100 PAVEMENT SY	204.0170 FENCE LF	204.0210 MANHOLES EACH	204.0215 CATCH BASINS EACH	204.0245.01 STORM SEWER 12-INCH LF	204.0245.04 STORM SEWER 24-INCH LF	204.0245.05 STORM SEWER 27x43-INCH LF
STAGE 1 102+75 - 106+75	E. 29TH ST. & HUME AVE.	--	1,730	--	--	--	--	--	--
STAGE 3&4 106+75 - 123+50	E. 29TH ST.	--	7,010	--	--	--	--	--	--
103+17	LT & RT	--	--	--	--	2	35	--	--
103+17 - 103+53	LT	--	--	--	--	--	45	--	--
103+17 - 103+89	RT	--	--	--	--	--	--	75	--
103+53 - 103+89	LT	--	--	--	--	--	45	--	--
103+89	LT & RT	--	--	--	1	--	--	65	--
103+89 - 104+04	LT	--	--	--	--	--	15	--	--
103+89 - 106+34	RT	--	--	--	--	--	--	245	--
104+55	RT	--	--	--	--	--	20	--	--
105+82	RT	--	--	20	--	--	--	--	--
106+34	LT & RT	--	--	--	1	2	--	--	--
106+34 - 107+20	LT & RT (12" CMCP EXISTING LT)	1	--	--	--	--	80	--	--
106+34 - 106+48	RT	--	--	--	--	--	--	25	--
106+56 - 106+76	RT	--	--	--	--	--	--	--	30
106+76	RT	--	--	--	1	--	--	--	--
106+76 - 109+79	RT	--	--	--	--	--	--	--	305
109+79	LT & RT	--	--	--	1	2	35	--	--
109+79 - 113+01	RT	--	--	--	--	--	--	--	325
113+01	LT & RT	--	--	--	1	--	5	--	55
113+01 - 113+17	LT & RT	--	--	--	--	2	55	--	--
113+01 - 116+18	RT	--	--	--	--	--	45	320	--
116+18	LT & RT	--	--	--	1	2	35	--	--
116+18 - 119+19	RT	--	--	--	--	--	--	300	--
119+18	LT & RT	--	--	--	1	2	35	--	--
102+75 - 11'H'+00	LT	--	--	240	--	--	--	--	--
TOTAL		1	8,740	260	7	12	450	1,030	715

NOTE: REMOVING PAVEMENT QUANTITY INCLUDES REMOVING CONCRETE PAVEMENT AND CONCRETE CURB & GUTTER WHERE IT IS ADJACENT TO CONCRETE PAVEMENT.

FINISHING ROADWAY (PROJECT)

PROJECT	213.0100 EACH
6995-11-71	1
TOTAL	1

DRILLED DOWEL BARS

STATION	LOCATION	416.0620 EACH
123+50	E. 29TH ST.	26
TOTALS		26

3

EARTHWORK SUMMARY

STATION	205.0100 EXCAVATION COMMON CUT (2) CY	205.0100 EXCAVATION COMMON EBS CY	SALVAGED/ UNUSABLE PAVEMENT MATERIAL (3) CY	EXPANDED MARSH BACKFILL (4) CY	AVAILABLE MATERIAL (5) CY	UNEXPANDED FILL CY	EXPANDED FILL (6) CY	MASS ORDINATE +/- (7) CY	208.0100 BORROW CY	COMMENTS
PROJECT	9,446	200	--	--	--	1,881	--	--	--	ROAD
TOTAL	9,446	200	0	0	0	1,881	0	0	0	

(1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM 205.0100
(2) SALVAGED/UNUSEABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(3) SALVAGED/UNUSEABLE PAVEMENT MATERIAL
(4) EXPANDED MARSH BACKFILL IS TO BE FILLED WITH AVAILABLE MATERIAL OR GRANULAR BACKFILL??. MARSH BACKFILL FACTOR = 1.875
(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSEABLE PAVEMENT MATERIAL
(6) EXPANDED FILL FACTOR = 1.25
(7) THE MASS ORDINATE + OR - QUANTITY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0010 UNLESS OTHERWISE NOTED

3

3

SUBBASE ITEMS

STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	310.0110 BASE AGGREGATE OPEN-GRADED TON	SPV.0195.01 SCREENED BREAKER RUN STONE (SPECIAL) TON	606.0200 RIPRAP MEDIUM CY	** 624.0100 WATER MGAL	645.0120 GEOTEXTILE TYPE HR SY	645.0140 GEOTEXTILE TYPE SAS SY	645.0220 GEOGRID TYPE SR SY	COMMENTS
102+75 - 110+00	E. 29TH ST.	--	--	--	--	--	--	--	--	3,305	
102+75 - 123+50	E. 29TH ST.	--	--	3,900	9,000	--	129	--	9,460	--	
102+75 - 125+72	SIDEWALK, LT	--	300	--	--	--	3	--	--	--	
113+38 - 125+79	SIDEWALK, RT	--	200	--	--	--	2	--	--	--	
102+93	TEMPORARY DRIVEWAY, RT	10	--	--	--	--	--	--	--	--	
104+68	DRIVEWAY, RT	10	10	--	--	--	--	--	--	--	
105+30	DRIVEWAY, LT	--	80	--	--	--	--	--	--	--	
106+50	ENDWALL, RT	--	--	--	--	35	--	95	--	--	
106+87	DRIVEWAY, LT	--	70	--	--	--	--	--	--	--	
113+68	DRIVEWAY, RT	--	50	--	--	--	--	--	--	--	
114+05	DRIVEWAY, LT	10	70	--	--	--	--	--	--	--	
116+25	DRIVEWAY, RT	--	70	--	--	--	--	--	--	--	
117+42	DRIVEWAY, LT	10	60	--	--	--	--	--	--	--	
118+60	DRIVEWAY, RT	--	150	--	--	--	--	--	--	--	
118+81	DRIVEWAY & PARKING LOT, LT	80	80	--	--	--	2	--	--	--	
120+50	DRIVEWAY, RT	--	130	--	--	--	--	--	--	--	
121+70	DRIVEWAY, RT	--	100	--	--	--	--	--	--	--	
123+15	DRIVEWAY & PARKING LOT, LT	120	60	--	--	--	2	--	--	--	
125+08	DRIVEWAY, RT	--	50	--	--	--	--	--	--	--	
10'H'+215 - 10'H'+77	HUME AVE.	--	--	200	500	--	7	--	430	--	
10'H'+77 - 12'H'+00	HUME AVE.	100	500	--	--	--	6	--	710	--	
STAGE 1	HUME INTERSECTION	1,500	--	--	--	--	15	--	--	--	INTERSECTION STAGING
STAGE 3	E. 29TH ST.	500	--	--	--	--	5	--	--	--	UTILITY AND DRIVEWAY STAGING
STAGE 4	E. 29TH ST.	250	--	--	--	--	3	--	--	--	UTILITY AND DRIVEWAY STAGING
UNDISTRIBUTED		50	--	--	--	--	1	--	--	--	ADDITIONAL AGGREGATE FOR DRIVEWAYS
UNDISTRIBUTED		--	200	--	--	--	2	--	--	--	TEMPORARY DRIVEWAY ACCESS AND RAMPS
TOTALS		2,640	2,180	4,100	9,500	35	175	95	10,600	3,305	

NOTE: BASE AGGREGATE ITEMS (3/4-INCH & 1 1/4-INCH) WERE CALCULATED USING 2.0 TONS/CY. BASE AGGREGATE OPEN-GRADED & SELECT CRUSHED SPECIAL WERE CALCULATED USING 1.9 TONS/CY.
AGGREGATE LOSS FACTOR OF 30% FOR OPEN GRADED AND 20% FOR BASE AGGREGATE DENSE WERE INCLUDED IN THE QUANTITIES
**ADDITIONAL QUANTITIES LISTED ELSEWHERE

CONCRETE PAVEMENT

STAGE	STATION	LOCATION	415.0210 CONCRETE PAVEMENT GAPS EACH	415.5110.S CONCRETE PAVEMENT JOINT LAYOUT LS	SPV.0105.02 TREAT AND SEAL NEW CONCRETE PAVEMENT JOINTS LS	415.0090 CONCRETE PAVEMENT 9-INCH SY	415.1090 CONCRETE PAVEMENT HES 9-INCH SY
STAGE 1	10'H'+16 - 10'H'+77	HUME AVE.	--	--	--	400	--
STAGE 1	102+75 - 106+75	E. 29TH ST., LT	--	--	--	720	--
STAGE 3	102+75 - 118+55	E. 29TH ST., RT	--	--	--	2,810	--
STAGE 3	118+55 - 119+00	E. 29TH ST., RT	1	--	--	--	80
STAGE 3	119+00 - 123+50	E. 29TH ST., RT	--	--	--	800	--
STAGE 4	106+75 - 117+30	E. 29TH ST., LT	--	--	--	1,880	--
STAGE 4	117+30 - 117+75	E. 29TH ST., LT	1	--	--	--	80
STAGE 4	117+75 - 123+50	E. 29TH ST., LT	--	--	--	1,030	--
	PROJECT 6995-11-71		--	1	1	--	--
	TOTALS		2	1	1	7,640	160

**ADDITIONAL QUANTITIES LISTED ELSEWHERE

CONCRETE DRIVEWAY

STATION	LOCATION	SPV.0180.03 CONCRETE DRIVEWAY REINFORCED 8-INCH SY	SPV.0180.04 CONCRETE DRIVEWAY REINFORCED HES 8-INCH SY	SPV.0180.05 CONCRETE DRIVEWAY REINFORCED 6-INCH SY
104+68	RT	--	--	30
105+30	LT	80	--	--
106+87	LT	80	--	--
113+68	RT	50	--	--
114+05	LT	90	--	--
116+25	RT	60	--	--
117+42	LT	--	70	--
118+55	RT	--	150	--
118+81	LT	100	--	--
120+50	RT	160	--	--
121+70	RT	100	--	--
123+15	LT	70	--	--
125+00	RT	30	--	--
TOTALS		820	220	30

**ADDITIONAL QUANTITIES LISTED ELSEWHERE

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0010 UNLESS OTHERWISE NOTED

3

CONCRETE CURB & GUTTER

STATION	LOCATION	LOCATION	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	601.0452 CONCRETE CURB & GUTTER INTEGRAL 30-INCH TYPE D LF
102+75 - 102+99	E. 29TH ST.	LT	--	40
102+75 - 123+50	E. 29TH ST.	RT	--	2,075
104+55 - 123+50	E. 29TH ST.	LT	--	1,910
10'H'+19 - 10'H'+77	HUME AVE.	LT & RT	155	--
	TOTAL		155	4,025

CONCRETE SIDEWALK

STATION	LOCATION	602.0405 CONCRETE SIDEWALK 4-INCH SF	SPV.0165.05 CONCRETE SIDEWALK REINFORCED 6-INCH SF	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF	602.0615 CURB RAMP DETECTABLE WARNING FIELD RADIAL NATURAL PATINA SF	COMMENTS
102+75 - 103+16	LT	205	--	--	--	
103+16 - 103+35	LT	--	97	--	30	CURB RAMP
104+18 - 104+38	LT	--	112	--	29	CURB RAMP
104+38 - 105+08	LT	350	--	--	--	
105+53 - 106+65	LT	560	--	--	--	
107+10 - 113+82	LT	3359	--	--	--	
113+39 - 113+46	LT	--	60	10	--	CURB RAMP
113+39 - 113+46	RT	--	39	10	--	CURB RAMP
113+39 - 113+55	RT	84	--	--	--	
113+81 - 116+00	RT	1100	--	--	--	
114+34 - 117+21	LT	1435	--	--	--	
116+74 - 118+19	RT	865	--	--	--	
117+66 - 118+50	LT	425	--	--	--	
119+05 - 120+19	RT	575	--	--	--	
119+11 - 123+05	LT	1975	--	--	--	
120+89 - 121+41	RT	265	--	--	--	
122+00 - 124+86	RT	1485	--	--	--	
123+47 - 125+72	LT	1075	--	--	--	
125+29 - 125+79	RT	260	--	--	--	
TOTALS		14,018	308	20	59	

EXISTING LAND PARCEL MONUMENTS

STATION	LOCATION	SPV.0060.41 RESEARCH AND LOCATE EXISTING LAND PARCEL MONUMENTS EACH	SPV.0060.42 VERIFY AND REPLACE EXISTING LAND PARCEL MONUMENTS EACH	REMARKS
103+49	34' LT	1	--	2.5" DIA
103+77	34' RT	1	1	1" DIA
104+08	34' LT	1	--	0.875" DIA
113+09	34' LT	1	1	0.75" DIA
118+51	34' LT	1	1	0.75" DIA
120+86	34' RT	1	1	0.75" DIA
123+98	34' LT	1	1	0.75" DIA
124+97	34' LT	1	1	0.75" DIA
TOTAL		8	6	

3

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0010 UNLESS OTHERWISE NOTED

STORM SEWER

				STORM SEWER PIPE																
	520.8000 CONCRETE COLLAR FOR PIPE	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	522.2638 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE ELLIPTICAL 38X60-INCH	608.6006 COMPOSITE 6-INCH	608.6008 COMPOSITE 8-INCH	608.0312 REINFORCED CONCRETE CLASS III 12-INCH	608.0315 REINFORCED CONCRETE CLASS III 15-INCH	608.0318 REINFORCED CONCRETE CLASS III 18-INCH	608.0324 REINFORCED CONCRETE CLASS III 24-INCH	608.0336 REINFORCED CONCRETE CLASS III 36-INCH	608.2329 REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE III 29X45-INCH	608.2334 REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE III 34X53-INCH	608.2338 REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE III 38X60-INCH	JOINT TIES	611.9800.S PIPE GRATES 01. 24-INCH	611.9800.S PIPE GRATES 02. 38X60-INCH	612.0902.S INSULATION BOARD POLYSTYRENE 2-INCH	633.5200 MARKERS END	SPV.0060.51 CORED TEE CONNECTIONS	SPV.0060.52 UTILITY LINE OPENING (ULO)
STRUCTURE - STRUCTURE	EACH	EACH	EACH	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EACH (1)	EACH	EACH	SY	EACH	EACH	EACH
5.2 - 5.1	--	--	--	--	--	--	--	--	--	--	--	49	--	--	--	--	8	--	--	--
5.2A - 5.2	--	--	--	--	--	--	--	39	--	--	--	--	--	--	--	--	8	--	--	--
5.2B - 5.2A	--	--	--	--	--	--	52	--	--	--	--	--	--	--	--	--	--	--	--	--
5.2C - 5.2A	--	--	--	--	--	--	61	--	--	--	--	--	--	--	--	--	--	--	--	--
5.2D - 5.2C	--	--	--	--	--	36	--	--	--	--	--	--	--	--	--	--	8	--	--	--
5.2E - 5.2D	--	--	--	--	--	24	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5.2F - 5.2	--	--	--	--	--	--	14	--	--	--	--	--	--	--	--	--	--	--	--	--
5.2G - 5.2F	--	--	--	--	--	--	52	--	--	--	--	--	--	--	--	--	--	--	--	--
5.2C- 5.2H	--	--	--	--	--	18	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5.1 - 6.1	--	--	--	--	--	--	--	--	--	--	--	255	--	--	--	--	--	--	--	--
6.1 - EW.6A	--	--	1	--	--	--	--	--	--	--	--	--	44	12	--	1	--	1	--	--
6.1A - 6.1	--	--	--	--	--	--	--	17	--	--	--	--	--	--	--	--	8	--	--	--
6.1B - 6.1A	--	--	--	--	--	--	--	28	--	--	--	--	--	--	--	--	--	--	--	--
6.1C - 6.1A	--	--	--	--	--	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6.1D - BLIND	--	--	--	--	15	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
6.1E - BLIND	--	--	--	--	8	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
6.2 - 6.1	--	--	--	--	--	--	--	--	--	116	--	--	--	--	--	--	--	--	--	--
6.2A - 6.2	--	--	--	--	--	--	--	--	29	--	--	--	--	--	--	--	8	--	--	--
EW.6B- 6.2A	--	1	--	--	--	--	--	--	22	--	--	--	--	6	1	--	--	1	--	--
6.3 - 6.2	--	--	--	--	--	--	--	--	--	220	--	--	--	--	--	--	--	--	--	--
6.3A - 6.3	--	--	--	--	--	28	--	--	--	--	--	--	--	--	--	--	8	--	--	--
6.3B - 6.3	--	--	--	--	--	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7.1 - 6.3	--	--	--	--	--	--	--	--	--	320	--	--	--	--	--	--	8	--	--	--
7.1A - 7.1	--	--	--	--	--	--	--	--	--	--	27	--	--	--	--	--	8	--	--	--
7.1B - 7.1	--	--	--	--	--	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CONNECT - 7.1A	1	--	--	--	--	--	--	--	--	--	26	--	--	--	--	--	--	--	--	--
7.2A - BLIND	--	--	--	--	50	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
7.3 - 7.1	--	--	--	--	--	--	--	--	265	--	--	--	--	--	--	--	--	--	--	--
7.3A - 7.3	--	--	--	--	--	29	--	--	--	--	--	--	--	--	--	--	8	--	--	--
7.3B - 7.3	--	--	--	--	--	--	5	--	--	--	--	--	--	--	--	--	--	--	--	--
7.3C - 7.3B	--	--	--	--	--	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8.1 - 7.3	--	--	--	--	--	--	--	--	355	--	--	--	--	--	--	--	8	--	--	--
8.1A - 8.1	--	--	--	--	--	--	30	--	--	--	--	--	--	--	--	--	--	--	--	--
CAP - 8.1A	--	--	--	--	--	--	29	--	--	--	--	--	--	--	--	--	--	--	--	--
8.1B- 8.1	--	--	--	--	--	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
114+31 LT &RT	--	--	--	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1
114+35 RT	--	--	--	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1
121+87 RT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	--	--	--
UNDISTRIBUTED	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTALS	1	1	1	70	73	175	243	84	671	656	53	304	44	18	1	1	88	2	5	2

NOTE: JOINT TIES ARE REQUIRED AT EVERY JOINT.
(1) FOR INFORMATION PURPOSES ONLY, INCIDENTAL TO STORM SEWER PIPE.

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0010 UNLESS OTHERWISE NOTED

3

STORM SEWER STRUCTURES

STRUCTURE	STATION	LOCATION	611.0420 RECONSTRUCT MANHOLES EACH	611.0430 RECONSTRUCT INLETS EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0612 INLET COVERS TYPE C EACH	611.0624 INLET COVERS TYPE H EACH	611.1003 CATCH BASINS 3-FT DIAMETER EACH	611.1004 CATCH BASINS 4-FT DIAMETER EACH	611.1006 CATCH BASINS 6-FT DIAMETER EACH	611.1230 CATCH BASINS 2x3-FT EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2007 MANHOLES 7-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	SPV.0060.43 MANHOLES 9-FT DIAMETER EACH	611.2066 MANHOLES 6-FT X 6-FT EACH	611.8120.S COVERS PLATES TEMPORARY EACH	SPV.0060.01 TEMPORARY CONNECTION TO EXISTING STORM SEWER PIPE EACH	SPV.0060.44 TEMPORARY CONNECTION TO STORM SEWER STRUCTURE EACH
5.1	103+90	0.00'	--	--	1	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--
5.2	10'H'+48	11.88' RT	--	--	1	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--
5.2A	10'H'+48	27.15' LT	--	--	--	--	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--
5.2B	11'H'+00	28.12' LT	--	--	--	1	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
5.2C	102+98	17.50' LT	--	--	--	--	1	--	1	--	--	--	--	--	--	--	--	--	--	--	--
5.2D	103+08	17.50' RT	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--
5.2E	103+10	41.21' RT	--	--	--	1	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
5.2F	10'H'+48	26.00' RT	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--
5.2G	11'H'+00	30.33' RT	--	--	--	1	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
5.2H	102+98	35.50' RT	--	--	--	1	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
6.1	106+45	0.00'	--	--	1	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--
6.1A	106+45	17.5' LT	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--
6.1B	106+45	45.00' LT	--	--	--	1	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
6.1C	106+33	17.50' LT	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--
6.1D	106+33	17.50' RT	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--
6.1E	106+55	17.50' RT	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--
6.2	107+60	12.00' RT	--	--	1	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--
6.2A	107+60	17.50' LT	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--
6.3	109+80	11.00' RT	--	--	1	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
6.3A	109+80	17.50' LT	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--
6.3B	109+80	17.50' RT	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--
7.1	113+00	10.00' RT	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--
7.1A	113+00	17.50' LT	--	--	--	--	1	--	--	1	--	--	--	--	--	--	--	--	--	--	--
7.1B	113+00	17.50' RT	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--
7.2A	114+60	38.00' LT	--	--	--	1	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
7.3	115+65	12.00' RT	--	--	1	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--
7.3A	115+65	17.50' LT	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--
7.3B	115+65	17.50' RT	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--
7.3C	115+75	17.50' RT	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--
8.1	119+20	12.00' RT	--	--	1	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--
8.1A	119+20	17.50' LT	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--
8.1B	119+20	17.50' RT	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--
	122+18	12' RT	1	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	122+18	17.5' LT	--	1	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	122+18	17.5' LT	--	1	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UNDISTRIBUTED			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	35	8	4
TOTALS			1	2	9	6	20	7	1	1	15	2	1	1	1	1	1	1	35	8	4

PIPE UNDERDRAIN

STATION	LOCATION	SPV.0090.09 SICPP (WRAPPED TRENCH) 6-INCH LF
102+75 - 123+50	E. 29TH ST., LT & RT	4,040
10'H'+20 - 10'H'+77	HUME AVE., LT & RT	160
TOTAL		4,200

621.0100 LANDMARK REFERENCE MONUMENT

STATION	LOCATION	EACH
103+77.73	0.00'	1
	TOTAL	1

FENCE

STATION	LOCATION	616.0206 FENCE CHAIN LINK 6-FT LF
102+75 - 11'H'+00	LT	240
TOTAL		240

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0010 UNLESS OTHERWISE NOTED

3

RESTORATION

STATION	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	630.0140 SEEDING MIXTURE #40 LB	630.0200 SEEDING TEMPORARY LB	631.0300 SOD WATER MGAL	SPV.0030.01 FERTILIZER FOR LAWN TYPE TURF CWT	SPV.0180.01 PREPARING TOPSOIL FOR LAWN TYPE TURF SY
102+75 - 103+75	LT	100	100	0	2	2	5	0.06	100
102+75 - 103+75	RT	280	280	0	5	4	16	0.17	280
103+75 - 107+00	LT	500	240	260	9	7	28	0.31	500
103+75 - 107+00	RT	990	330	660	18	14	56	0.62	990
107+00 - 114+00	LT	1,570	0	1,570	29	22	88	0.98	1,570
107+00 - 114+00	RT	1,720	30	1,690	31	24	97	1.08	1,720
114+00 - 119+00	LT	630	630	0	12	9	35	0.39	630
114+00 - 119+00	RT	550	550	0	10	8	31	0.34	550
119+00 - 125+72	LT	690	690	0	13	10	39	0.43	690
119+00 - 125+79	RT	620	620	0	11	9	35	0.38	620
10'H'+38 - 12'H'+00	LT	320	320	0	6	5	18	0.20	320
10'H'+38 - 12'H'+00	RT	390	390	0	7	6	22	0.24	390
UNDISTRIBUTED		100	100	100	2	2	6	0.06	100
TOTALS		8,460	4,280	4,280	155	122	475	5.28	8,460

EROSION CONTROL

STATION	LOCATION	** 624.0100 WATER MGAL	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATION EACH	628.1910 MOBILIZATION EMERGENCY EACH	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7560 TRACKING PADS EACH	628.7570 ROCK BAGS EACH	COMMENTS
102+75 -125+78	E. 29TH ST.	74	1,400	1,400	--	--	--	--	--	--	--	--	120	WATER FOR DUST CONTROL
123+00 - 123+50	E. 29TH ST.	--	--	--	--	--	--	--	--	--	--	1	--	
11'H'+50 - 12'H'+00	HUME AVE.	--	--	--	--	--	--	--	--	--	--	1	--	
102+97	LT	--	--	--	--	--	1	--	1	--	--	--	--	PROPOSED
103+08	RT	--	--	--	--	--	1	--	1	--	--	--	--	PROPOSED
103+10	RT	--	--	--	--	--	--	1	--	--	--	--	--	PROPOSED
103+17	LT	--	--	--	--	--	--	--	1	--	--	--	--	EXISTING
106+33	LT	--	--	--	--	--	--	--	1	--	--	--	--	EXISTING
106+33	LT	--	--	--	--	--	1	--	1	--	--	--	--	PROPOSED
106+33	RT	--	--	--	--	--	1	--	1	--	--	--	--	PROPOSED
106+45	LT	--	--	--	--	--	1	1	1	--	--	--	--	PROPOSED
106+54	RT	--	--	--	--	--	1	--	1	--	--	--	--	PROPOSED
107+60	LT	--	--	--	--	--	1	--	1	--	10	--	--	PROPOSED
109+79	LT	--	--	--	--	--	--	--	1	--	--	--	--	EXISTING
109+80	LT	--	--	--	--	--	1	--	1	--	--	--	--	PROPOSED
109+80	RT	--	--	--	--	--	1	--	1	--	--	--	--	PROPOSED
113+00	LT	--	--	--	--	--	1	--	1	--	--	--	--	PROPOSED
113+00	RT	--	--	--	--	--	1	--	1	--	--	--	--	PROPOSED
113+17	LT	--	--	--	--	--	--	--	1	--	--	--	--	EXISTING
114+60	LT	--	--	--	--	--	--	1	--	--	--	--	--	PROPOSED
115+65	LT	--	--	--	--	--	1	--	1	--	--	--	--	PROPOSED
115+65	RT	--	--	--	--	--	1	--	1	--	--	--	--	PROPOSED
115+75	LT	--	--	--	--	--	1	--	1	--	--	--	--	PROPOSED
116+19	LT	--	--	--	--	--	--	--	1	--	--	--	--	EXISTING
119+19	LT	--	--	--	--	--	--	--	1	--	--	--	--	EXISTING
119+20	LT	--	--	--	--	--	1	--	1	--	--	--	--	PROPOSED
119+20	RT	--	--	--	--	--	1	--	1	--	--	--	--	PROPOSED
122+18	LT	--	--	--	--	--	--	--	1	--	--	--	--	EXISTING
122+18	LT	--	--	--	--	--	--	--	1	--	--	--	--	EXISTING
123+52	LT	--	--	--	--	--	1	--	1	--	--	--	--	EXISTING
123+52	RT	--	--	--	--	--	1	--	1	--	--	--	--	EXISTING
10'H'+48	LT	--	--	--	--	--	1	--	1	--	--	--	--	PROPOSED
10'H'+48	RT	--	--	--	--	--	1	--	1	--	--	--	--	PROPOSED
11'H'+00	LT	--	--	--	--	--	--	1	--	--	--	--	--	PROPOSED
11'H'+00	RT	--	--	--	--	--	--	1	--	--	--	--	--	PROPOSED
PROJECT 6995-11-71		--	--	--	10	10	--	--	--	--	--	--	--	
UNDISTRIBUTED		--	200	200	--	--	2	2	2	60	--	--	25	
TOTALS		74	1,600	1,600	10	10	22	7	30	60	10	2	145	

**ADDITIONAL QUANTITIES LISTED ELSEWHERE

NOTE: LOCATIONS FOR TEMPORARY DITCH CHECKS AND ROCK BAGS FOR SILT FENCE RELIEFS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0010 UNLESS OTHERWISE NOTED

PERMANENT SIGNS

SIGN NO.	STATION	LOCATION	SIGN CODE	SIGN SIZE IN X IN	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	SPV.0060.47 U-CHANNEL POST 14-FT YELLOW EACH	SPV.0060.49 U-CHANNEL POST 16-FT YELLOW EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	MESSAGE
5-03	102+75	LT	R2-1	24 X 30	5.00	--	1	--	--	--	SPEED LIMIT
5-04	10'H'+50	LT	R1-1	36 X 36	9.00	--	--	1	1	1	STOP
5-05	103+78	RT	W1-7	48 X 24	--	8.00	1	--	--	--	TWO-DIRECTION LARGE ARROW
5-06	104+87	RT	R2-1	24 X 30	5.00	--	1	--	--	--	SPEED LIMIT
5-07	105+87	RT	R7-1D	18 X 24	3.00	--	--	1	1	1	NO PARKING ANY TIME
5-08	105+87	RT	R3-17	30 X 24	5.00	--	--	--	--	--	BIKE LANE
6-01	106+97	RT	R2-1	24 X 30	5.00	--	1	--	1	1	SPEED LIMIT
6-02	107+75	LT	R7-1D	18 X 24	3.00	--	--	1	1	1	NO PARKING ANY TIME
6-03	107+75	LT	R3-17	30 X 24	5.00	--	--	--	--	--	BIKE LANE
6-04	110+00	RT	R7-1D	18 X 24	3.00	--	--	1	--	--	NO PARKING ANY TIME
6-05	110+00	RT	R3-17	30 X 24	5.00	--	--	--	--	--	BIKE LANE
7-01	112+96	LT	R7-1D	18 X 24	3.00	--	--	1	1	1	NO PARKING ANY TIME
7-02	112+96	LT	R3-17	30 X 24	5.00	--	--	--	--	--	BIKE LANE
7-03	113+36	RT	W11-2	30 X 30	--	6.25	--	1	--	--	PEDESTRIAN CROSSING
7-04	113+36	RT	W16-7L	24 X 12	--	2.00	--	--	--	--	CONVENTIONAL YELLOW DIRECTIONAL ARROWS
7-05	113+50	LT	W11-2	30 X 30	--	6.25	--	1	--	--	PEDESTRIAN CROSSING
7-06	113+50	LT	W16-7L	24 X 12	--	2.00	--	--	--	--	CONVENTIONAL YELLOW DIRECTIONAL ARROWS
7-07	115+00	RT	R7-1D	18 X 24	3.00	--	--	1	--	--	NO PARKING ANYTIME
7-08	115+00	RT	R3-17	30 X 24	5.00	--	--	--	--	--	BIKE LANE
7-09	117+88	LT	R7-1D	18 X 24	3.00	--	--	1	1	1	NO PARKING ANYTIME
7-10	117+88	LT	R3-17	30 X 24	5.00	--	--	--	--	--	BIKE LANE
8-01	119+52	RT	R7-1D	18 X 24	3.00	--	--	1	--	--	NO PARKING ANYTIME
8-02	119+52	RT	R3-17	30 X 24	5.00	--	--	--	--	--	BIKE LANE
	122+00	LT			--	--	--	--	--	--	REMOVE ONLY
8-03	122+00	LT	R7-1D	18 X 24	3.00	--	--	1	1	1	NO PARKING ANYTIME
8-04	122+00	LT	R3-17	30 X 24	5.00	--	--	--	--	--	BIKE LANE
8-05	122+30	RT	W10-1	36 X 36	--	9.00	--	1	1	1	RAILROAD CROSSING
8-06	122+30	RT	W10-1A	24 X 12	--	2.00	--	--	--	--	EXEMPT
8-07	122+30	RT	W10-9P	24 X 30	--	5.00	--	--	--	--	NO TRAIN HORN
8-08	123+00	RT	J1-2	48 X 39	13.00	--	--	1	--	--	DIRECTIONAL J-ASSEMBLY
			M2-1	21 X 15	--	--	--	--	--	--	JUNCTION
			M1-6	24 X 24	--	--	--	--	--	--	STH 13
			M1-5A	24 X 24	--	--	--	--	--	--	JUNCTION
			M6-1	21 X 21	--	--	--	--	--	--	CTH A
8-09	123+50	RT	R3-8	36 X 30	7.50	--	1	--	--	--	VARIOUS ONLYS
9-01	124+07	RT	W3-3	36 X 36	--	9.00	--	1	1	1	TRAFFIC SIGNALS AHEAD SYMBOL
9-02	124+50	LT	R7-1D	18 X 24	3.00	--	--	1	--	--	NO PARKING ANYTIME
9-03	124+50	LT	R3-17	30 X 24	5.00	--	--	--	--	--	BIKE LANE
9-04	124+85	LT	M1-5A	24 X 24	4.00	--	1	--	1	1	CTH ROUTE MARKER 2 OR 3 LETTERS
9-05	125+95	RT	J13-2	48 X 45	15.00	--	--	1	1	1	DIRECTIONAL J-ASSEMBLY
			M1-6	24 X 24	--	--	--	--	--	--	STH 13
			M6-4	21 X 21	--	--	--	--	--	--	DOUBLE ARROW
			M6-1	21 X 21	--	--	--	--	--	--	CTH A
			M2-1	21 X 15	--	--	--	--	--	--	ARROW BOARD
			TOTALS		135.50	49.50	6	16	11	11	

TRAFFIC CONTROL

STAGE	DURATION (DAYS)	643.5000 TRAFFIC CONTROL EACH	643.0410 BARRICADES TYPE II EACH	643.0410 BARRICADES TYPE II DAY	643.0420 BARRICADES TYPE III EACH	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A EACH	643.0705 WARNING LIGHTS TYPE A DAY	643.0900 SIGNS EACH	643.0900 SIGNS DAY	643.1870 CONES 42-INCH EACH	643.1870 CONES 42-INCH DAY
DETOUR	91	--	--	--	16	1,456	--	--	91	14,162	--	--
PEDESTRIAN ACCOMODATIONS	91	--	7	637	--	--	--	--	10	910	--	--
STAGE 1	37	--	--	--	21	777	30	1,110	15	555	--	--
STAGE 3	31	--	13	403	7	217	14	434	20	620	110	3,410
STAGE 4	23	--	13	299	7	161	14	322	20	460	50	1,150
PROJECT 6995-11-71		0.5	--	--	--	--	--	--	--	--	--	--
UNDISTRIBUTED (ACCESS)	94	--	10	940	10	940	20	1,880	10	940	50	4,700
TOTALS		0.5		2,279		3,551		3,746		17,647		9,260

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0010 UNLESS OTHERWISE NOTED

3

MARKING

STATION	LOCATION	646.0106 LINE EPOXY 4-INCH (YELLOW) LF	646.0106 LINE EPOXY 4-INCH (WHITE) LF	646.3020 LINE EPOXY 8-INCH (WHITE) LF	646.5020 ARROW EPOXY EACH	646.5120 WORD EPOXY EACH	646.5220 SYMBOL EPOXY EACH	646.6020 STOP LINE EPOXY 12-INCH LF	646.7420 CROSSWALK EPOXY TRANSVERSE LINE 6-INCH LF	646.7520 CROSSWALK EPOXY LADDER PATTERN 24-INCH LF	646.9000 REMOVAL LINE 4-INCH LF	646.9100 REMOVAL LINE 8-INCH LF	646.9200 REMOVAL LINE WIDE LF	646.9300 REMOVAL SPECIAL MARKING EACH
102+75 - 123+50	E. 29TH ST.	1,000	4,050	--	7	--	7	--	--	--	--	--	--	--
10'H'+16 - 12'H'+00	HUME AVE.	--	--	--	--	--	--	35	200	--	--	--	--	--
113+42	E. 29TH ST.	--	--	--	--	--	--	--	--	54	--	--	--	--
123+50 - 125+79	E. 29TH ST.	460	240	120	5	--	2	30	--	102	480	100	380	5
125+15	E. 29TH ST.	--	--	--	--	1	--	--	--	--	--	--	--	--
TOTALS		1,460	4,290	120	12	1	9	65	200	156	480	100	380	5
		5,750												

SAWING

STAGE	STATION	LOCATION	690.0150 ASPHALT LF	690.0250 CONCRETE LF
STAGE 1	102+75 - 106+75	E. 29TH ST., LT	--	440
STAGE 3	106+75 - 123+50	E. 29TH ST., LT	--	1720
	113+68	DRIVEWAY, RT	30	--
	116+25	DRIVEWAY, RT	50	--
	118+60	DRIVEWAY/PARKING LOT, RT	160	--
	120+50	DRIVEWAY/PARKING LOT, RT	145	--
	121+70	DRIVEWAY/PARKING LOT, RT	80	--
	125+08	DRIVEWAY/PARKING LOT, RT	50	--
	12'H'+00	HUME AVE.	25	--
	UNDISTRIBUTED (LEADS AND SERVICES)		--	140
	TOTALS		540	2,300

3

CONSTRUCTION STAKING

CATEGORY	STATION	LOCATION	650.4000 STORM SEWER EACH	650.4500 SUBGRADE LF	650.5000 BASE LF	650.7000 CONCRETE PAVEMENT LF	650.9000 CURB RAMPS EACH	650.9920 SLOPE STAKES LF	650.9910 SUPPLEMENTAL CONTROL LS	SPV.0105.07 WATER MAIN LS	SPV.0105.06 SANITARY SEWER LS
0010	102+75 - 123+50	E. 29TH ST.	--	2,075	--	2,075	2	2,075	1	--	--
	10'H'+16 - 10'H'+77	HUME AVE.	--	60	--	60	4	60	--	--	--
	10'H'77 - 12'H'+00	HUME AVE.	--	123	123	--	--	123	--	--	--
	102+75 - 123+50	6995-11-71	--	--	--	--	--	--	--	--	--
	103+90	0.00'	1	--	--	--	--	--	--	--	--
	10'H'+48	11.88' RT	1	--	--	--	--	--	--	--	--
	10'H'+48	27.15' LT	1	--	--	--	--	--	--	--	--
	11'H'+00	28.12' LT	1	--	--	--	--	--	--	--	--
	102+98	17.50' LT	1	--	--	--	--	--	--	--	--
	103+08	17.50' RT	1	--	--	--	--	--	--	--	--
	103+10	41.21' RT	1	--	--	--	--	--	--	--	--
	10'H'+48	26.00' RT	1	--	--	--	--	--	--	--	--
	11'H'+00	30.33' RT	1	--	--	--	--	--	--	--	--
	102+98	35.50' RT	1	--	--	--	--	--	--	--	--
	106+45	0.00'	1	--	--	--	--	--	--	--	--
	106+45	17.5' LT	1	--	--	--	--	--	--	--	--
	106+45	45.00' LT	1	--	--	--	--	--	--	--	--
	106+50	50.00' RT	1	--	--	--	--	--	--	--	--
	106+33	17.50' LT	1	--	--	--	--	--	--	--	--
	106+33	17.50' RT	1	--	--	--	--	--	--	--	--
	106+55	17.50' RT	1	--	--	--	--	--	--	--	--
	107+60	12.00' RT	1	--	--	--	--	--	--	--	--
	107+60	17.50' LT	1	--	--	--	--	--	--	--	--
	107+60	45.00' LT	1	--	--	--	--	--	--	--	--
	109+80	11.00' RT	1	--	--	--	--	--	--	--	--
	109+80	17.50' LT	1	--	--	--	--	--	--	--	--
	109+80	17.50' RT	1	--	--	--	--	--	--	--	--
	113+00	10.00' RT	1	--	--	--	--	--	--	--	--
	113+00	17.50' LT	1	--	--	--	--	--	--	--	--
	113+00	17.50' RT	1	--	--	--	--	--	--	--	--
	114+60	38.00' LT	1	--	--	--	--	--	--	--	--
	115+65	12.00' RT	1	--	--	--	--	--	--	--	--
	115+65	17.50' LT	1	--	--	--	--	--	--	--	--
	115+65	17.50' RT	1	--	--	--	--	--	--	--	--
	115+75	17.50' RT	1	--	--	--	--	--	--	--	--
	119+20	12.00' RT	1	--	--	--	--	--	--	--	--
	119+20	17.50' LT	1	--	--	--	--	--	--	--	--
	119+20	17.50' RT	1	--	--	--	--	--	--	--	--
0020	102+75 - 107+80	LT	--	--	--	--	--	--	--	--	1
0030	102+75 - 123+50	LT & RT	--	--	--	--	--	--	--	1	--
	TOTALS		34	2,258	123	2,135	6	2,258	1	1	1

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0010 UNLESS OTHERWISE NOTED

SANITARY ITEMS

STATION	LOCATION	SPV.0060.20 ADJUSTING SANITARY MANHOLE COVER (<12") EACH	SPV.0060.21 ADJUSTING SANITARY MANHOLE COVER (>12") EACH	SPV.0060.22 RECONSTRUCT SANITARY MANHOLE -SALVAGE & REINSTALL CONE EACH	SPV.0060.23 SANITARY MANHOLE FRAME COVER TYPE JM EACH	SPV.0060.24 CONNECT NEW MANHOLE TO EXISTING LINED SANITARY SEWER EACH	SPV.0060.25 PREPARE AND SEAL EXISTING MANHOLE JOINT EACH	SPV.0060.26 PVC CAP 8-INCH EACH	SPV.0060.28 EXTERNAL CHIMNEY SEAL EACH	SPV.0060.30 CONNECT 8-INCH PVC TO EXISTING MANHOLE (CORE W/BOOT) EACH	SPV.0060.31 CONNECT TO EXISTING SANITARY SEWER (8-INCH PVC TO 8-INCH PVC EACH	SPV.0060.32 8-INCH PVC INSIDE DROP FOR EXISTING SANITARY MANHOLE EACH	SPV.0060.34 8-INCH X 4-INCH SADDLE WYE ON LINED MAIN EACH	SPV.0060.35 8-INCH X 6-INCH SADDLE WYE ON LINED MAIN EACH	SPV.0060.36 CONNECT TO EXISTING SANITARY LATERAL EACH	SPV.0060.37 SAW AND SEAL EXISTING MANHOLE JOINT EACH	SPV.0060.38 RECONSTRUCTING SANITARY MANHOLE- NEW 48" FLAT TOP EACH	SPV.0060.40 8-INCH X 6-INCH PVC WYE EACH	SPV.0090.05 SANITARY SEWER 8-INCH PVC LF	SPV.0090.06 SANITARY LATERAL 6-INCH PVC LF	SPV.0090.07 SANITARY LATERAL 4-INCH PVC LF	SPV.0090.08 RELAY EXISTING 8-INCH PVC SANITARY SEWER LF	SPV.0200.01 SANITARY MANHOLE TYPE 1 VF
102+75 - 103+80	LT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	105	--	--	--	--
103+80	24' LT	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	13.2
103+80	24' LT - 33' RT	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	68	--	--	--	--
103+80 - 107+80	LT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	400	--	--	--	--
105+14	LT	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	9	--	--	--
107+80	24' LT	--	--	--	1	2	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	12.0
107+80	RT	--	--	--	--	--	--	1	--	--	1	--	--	--	--	--	--	16	--	--	--	--
111+80	24' LT	1	--	--	1	--	--	--	1	1	1	--	--	--	--	--	--	6	--	--	15	--
115+80	24' LT	--	--	1	1	--	1	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
116+84	LT	--	--	--	--	--	--	--	--	--	--	--	--	1	1	--	--	--	14	--	--	--
118+83	LT & RT	--	--	--	--	--	--	--	--	--	--	--	--	1	1	--	--	--	57	--	--	--
119+80	24' LT	--	--	--	1	--	1	--	1	--	--	--	--	--	--	1	1	--	--	--	--	--
121+03	LT	--	--	--	--	--	--	--	--	--	--	--	--	1	1	--	--	--	9	--	--	--
121+85	LT & RT	--	--	--	--	--	--	--	--	--	--	--	--	1	1	--	--	--	57	--	--	--
123+78	24' LT	1	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
UNDISTRIBUTED		--	2	--	--	--	--	--	--	--	--	1	1	--	--	--	--	--	--	10	--	--
TOTALS		2	2	1	6	2	2	2	6	1	2	1	1	4	5	2	1	1	595	146	10	15	25.20

ALL ITEMS AND QUANTITIES ON THE TOP HALF OF THIS SHEET ARE CATEGORY 0020 UNLESS OTHERWISE NOTED

WATER ITEMS

STATION	LOCATION	SPV.0060.02 CONNECT TO EXISTING WATERMAIN EACH	SPV.0060.03 RELOCATE EXISTING HYDRANT AND VALVE EACH	SPV.0060.06 TEE 12-INCH X 12-INCH EACH	SPV.0060.10 VALVE W/ VALVE BOX 12-INCH EACH	SPV.0060.13 PLUG 12-INCH EACH	SPV.0060.16 ADJUST CURB STOP EACH	SPV.0060.17 ADJUST WATER VALVE BOX EACH	SPV.0060.54 WATER MAIN OFFSET 12-INCH EACH	SPV.0060.55 WATER MAIN OFFSET 8-INCH EACH	SPV.0060.56 ABANDON WATER VALVE MANHOLE EACH	SPV.0090.02 WATER MAIN 12-INCH DUCTILE IRON LF	SPV.0090.04 WATER MAIN 6-INCH DUCTILE IRON LF
103+49	39' LT	--	1	--	--	--	--	--	--	--	--	--	19
103+51	14' LT	--	--	--	--	--	--	--	--	--	1	--	--
103+59	39' LT	--	--	--	--	--	--	1	--	--	--	--	--
103+68	35' LT -60' LT	--	--	--	--	--	--	1	1	--	--	--	--
103+68	15' LT - 43' RT	1	--	1	1	1	--	--	--	--	--	58	--
103+90	16' LT	--	--	--	--	--	--	--	--	1	--	--	--
104+10	16' LT	--	--	--	--	--	--	--	--	--	1	--	--
109+65	21' LT	--	--	--	--	--	--	1	--	--	--	--	--
111+82	30' RT	--	--	--	--	--	1	--	--	--	--	--	--
113+00	15' LT	--	--	--	--	--	--	--	--	1	--	--	--
113+10	16' LT	--	--	--	--	--	--	--	--	--	1	--	--
115+19	20' LT	--	--	--	--	--	--	1	--	--	--	--	--
115+46	30' LT	--	--	--	--	--	--	1	--	--	--	--	--
116+80	LT	--	--	--	--	--	1	--	--	--	--	--	--
118+84	26' RT	--	--	--	--	--	--	1	--	--	--	--	--
119+69	21' LT	--	--	--	--	--	--	1	--	--	--	--	--
121+14	21' LT	--	--	--	--	--	1	--	--	--	--	--	--
121+88	33' RT	--	--	--	--	--	--	1	--	--	--	--	--
122+50	15' LT	--	--	--	--	--	--	--	--	--	1	--	--
122+55	19' LT	--	--	--	--	--	--	1	--	--	--	--	--
TOTALS		1	1	1	1	1	3	9	1	2	4	58	19

ALL ITEMS AND QUANTITIES ON THE BOTTOM HALF OF THIS SHEET ARE CATEGORY 0030 UNLESS OTHERWISE NOTED

3

CLEARING & GRUBBING

STATION	LOCATION	201.0110 SY	201.0210 SY
76+75 - 77+00	LT	3	3
79+00 - 79+50	LT	6	6
82+50 - 84+75	LT	25	25
86+50 - 86+75	RT	3	3
TOTAL		33	33

REMOVING

STATION	LOCATION	203.0100 SMALL PIPE CULVERTS EACH	204.0100 PAVEMENT SY	204.0150 CURB & GUTTER LF	204.0155 CONCRETE SIDEWALK SY	204.0165 GUARDRAIL LF	204.0170 FENCE LF	204.0210 MANHOLES EACH	204.0220 INLETS EACH	204.0245.01 STORM SEWER 12-INCH LF	204.0245.02 STORM SEWER 15-INCH LF	204.0245.03 STORM SEWER 18-INCH LF	204.0245.04 STORM SEWER 24-INCH LF
STAGE 2 76+70 - 78+25	E. 29TH ST. & S. WASHINGTON AVE.	--	975	--	--	--	--	--	--	--	--	--	--
76+75 - 77+17	LT	--	--	--	30	--	--	--	--	--	--	--	--
76+78	LT & RT	--	--	--	--	--	--	--	2	37	--	--	--
76+78 - 77+52	RT	--	--	--	--	--	--	--	--	75	--	--	--
77+52	RT	--	--	--	--	--	--	1	--	30	--	--	--
77+52 - 79+19	RT	--	--	--	--	--	--	--	--	167	--	--	--
77+67 - 84+87	LT	--	--	--	400	--	--	--	--	--	--	--	--
STAGE 3&4 78+25 - 85+50	E. 29TH ST. & S. BUTTERNUT PKWY.	--	3,100	--	--	--	--	--	--	--	--	--	--
78+41	DRIVEWAY, LT	--	30	--	--	--	--	--	--	--	--	--	--
78+81	DRIVEWAY, LT	--	10	--	--	--	--	--	--	--	--	--	--
79+11	LT	--	--	--	--	--	--	--	1	--	--	--	--
79+11 - 79+19	LT	--	--	--	--	--	--	--	--	32	--	--	--
79+12	RT	--	--	--	--	--	--	--	1	--	--	--	--
79+12 - 79+19	RT	--	--	--	--	--	--	--	--	10	--	--	--
79+19	RT	--	--	--	--	--	--	1	--	--	--	--	--
79+19 - 82+20	RT	--	--	--	--	--	--	--	--	301	--	--	--
79+64	DRIVEWAY, LT	--	15	--	--	--	--	--	--	--	--	--	--
80+59	DRIVEWAY, LT	--	10	--	--	--	--	--	--	--	--	--	--
81+45	DRIVEWAY, LT	--	35	--	--	--	--	--	--	--	--	--	--
82+11	LT	--	--	--	--	--	--	--	1	--	--	--	--
82+11 - 82+20	LT	--	--	--	--	--	--	--	--	32	--	--	--
82+12	RT	--	--	--	--	--	--	--	1	--	--	--	--
82+12 - 82+20	RT	--	--	--	--	--	--	--	--	10	--	--	--
82+20	RT	--	--	--	--	--	--	1	--	--	--	--	--
82+20 - 85+17	RT	--	--	--	--	--	--	--	--	--	300	--	--
82+33	DRIVEWAY, LT	--	40	--	--	--	--	--	--	--	--	--	--
83+17	DRIVEWAY, LT	--	30	--	--	--	--	--	--	--	--	--	--
84+05	DRIVEWAY, LT	--	35	--	--	--	--	--	--	--	--	--	--
84+65	LT	--	--	--	--	--	--	--	1	--	--	--	--
84+65 - 85+17	LT & RT	--	--	--	--	--	--	--	--	101	--	--	--
84+87	RT	--	--	--	--	--	--	--	1	--	--	--	--
85+17	RT	--	--	--	--	--	--	1	--	--	--	--	--
85+17 - 86+14	RT	--	--	--	--	--	--	--	--	--	--	105	--
85+42 - 87+05	RT	--	--	--	--	175	--	--	--	--	--	--	--
STAGE 2 85+50 - 87+50	RT	--	830	--	--	--	--	--	--	--	--	--	--
85+58 - 87+21	LT	--	--	--	--	175	--	--	--	--	--	--	--
85+95	RT	--	--	--	--	--	--	1	--	--	--	--	--
86+50 - 87+89	RT	--	--	--	--	--	--	--	--	--	--	--	148
86+66	RT	--	--	--	--	--	--	1	--	--	--	--	--
STAGE 3&4 87+50 - 102+75	E. 29TH ST. & S. BUTTERNUT PKWY.	--	6,275	--	--	--	--	--	--	--	--	--	--
87+58	LT & RT	--	--	--	--	--	--	1	2	36	--	--	--
87+89	RT	--	--	--	--	--	--	1	--	--	--	--	--
87+89 - 90+71	RT	--	--	--	--	--	--	--	--	--	--	--	282
90+71	RT	--	--	--	--	--	--	1	--	--	--	--	--
90+71 - 91+19	LT & RT	--	--	--	--	--	--	--	--	118	--	--	--
90+71 - 93+40	RT	--	--	--	--	--	--	--	--	--	270	--	--
90+86	RT	--	--	--	--	--	--	--	1	--	--	--	--
91+19	RT	--	--	--	--	--	--	--	1	--	--	--	--
93+05	DRIVEWAY, LT	--	60	--	--	--	--	--	--	--	--	--	--
93+37	LT	--	--	--	--	--	--	--	1	--	--	--	--
93+38	LT & RT	--	--	--	--	--	--	--	1	37	--	--	--
93+40	RT	--	--	--	--	--	--	1	--	--	--	--	--
93+40 - 95+88	RT	--	--	--	--	--	--	--	--	250	--	--	--
94+85	DRIVEWAY, LT	--	15	--	--	--	--	--	--	--	--	--	--
95+88	LT & RT	--	--	--	--	--	--	1	2	37	--	--	--
95+88 - 98+27	RT	--	--	--	--	--	--	--	--	240	--	--	--
96+00	RT (12" CPCP EXISTING)	1	--	--	--	--	--	--	--	--	--	--	--
98+27	RT	--	--	--	--	--	--	1	--	--	--	--	--
98+27 - 98+38	RT	--	--	--	--	--	--	--	--	12	--	--	--
98+27 - 98+37	LT & RT	--	--	--	--	--	--	--	--	35	--	--	--
98+37	LT	--	--	--	--	--	--	--	1	--	--	--	--
98+38	RT	--	--	--	--	--	--	--	1	--	--	--	--
102+50	LT (12" CONCRETE EXISTING)	1	--	--	--	--	--	--	--	--	--	--	--
100+00 - 102+75	LT	--	--	--	--	--	275	--	--	--	--	--	--
10'W'+35 - 10'W'+43	LT	--	--	--	5	--	--	--	--	--	--	--	--
10'W'+35 - 10'W'+42	RT	--	--	--	5	--	--	--	--	--	--	--	--
10'W'+34 - 10'W'+65	S. WASHINGTON AVE.	--	--	80	--	--	--	--	--	--	--	--	--
	TOTALS	2	11,460	80	440	350	275	12	18	1,560	570	105	430

NOTE: REMOVING PAVEMENT QUANTITY INCLUDES REMOVING CONCRETE PAVEMENT AND CONCRETE CURB & GUTTER WHERE IT IS ADJACENT TO CONCRETE PAVEMENT.

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0010 UNLESS OTHERWISE NOTED

3

EARTHWORK SUMMARY

STATION	205.0100 EXCAVATION COMMON CUT (2) CY	205.0100 EXCAVATION COMMON EBS CY	SALVAGED/ UNUSABLE PAVEMENT MATERIAL (3) CY	EXPANDED MARSH BACKFILL (4) CY	AVAILABLE MATERIAL (5) CY	UNEXPANDED FILL CY	EXPANDED FILL (6) CY	MASS ORDINATE +/- (7) CY	208.0100 BORROW CY	COMMENTS
PROJECT	13,741	200	--	--	--	661	--	--	--	ROAD
TOTAL	13,741	200	0	0	0	661	0	0	0	

(1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM 205.0100
(2) SALVAGED/UNUSEABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(3) SALVAGED/UNUSEABLE PAVEMENT MATERIAL
(4) EXPANDED MARSH BACKFILL IS TO BE FILLED WITH AVAILABLE MATERIAL OR GRANULAR BACKFILL??. MARSH BACKFILL FACTOR = 1.875
(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSEABLE PAVEMENT MATERIAL
(6) EXPANDED FILL FACTOR = 1.25
(7) THE MASS ORDINATE + OR - QUANTITY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION.
MINUS QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

FINISHING ROADWAY

PROJECT	213.0100 EACH
6995-11-72	1
TOTAL	1

3

SUBBASE ITEMS

STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	310.0110 BASE AGGREGATE OPEN-GRADED TON	SPV.0195.01 SCREENED BREAKER RUN STONE (SPECIAL) TON	** 624.0100 WATER MGAL	645.0140 GEOTEXTILE TYPE SAS SY	645.0220 GEOGRID TYPE SR SY	COMMENTS
76+70 - 78+25	STAGE 2 - E. 29TH ST.	--	--	520	1,200	17	1250	--	
78+25 - 85+50	E. 29TH ST.	--	--	1,440	3,300	47	3480	--	
85+50 -87+50	STAGE 2 - E. 29TH ST.	--	--	380	900	13	920	--	
87+50 - 102+75	E. 29TH ST.	--	--	2,860	6,600	95	6950	--	
76+75 - 102+75	SIDEWALK, LT	--	330	--	--	3	--	--	
78+41	DRIVEWAY, LT	--	20	--	--	--	--	--	
78+81	DRIVEWAY, LT	--	20	--	--	--	--	--	
79+64	DRIVEWAY, LT	--	30	--	--	--	--	--	
80+59	DRIVEWAY, LT	--	20	--	--	--	--	--	
81+45	DRIVEWAY, LT	--	20	--	--	--	--	--	
82+33	DRIVEWAY, LT	--	20	--	--	--	--	--	
82+50	DRIVEWAY, RT	--	30	--	--	--	--	--	
83+00 - 91+00	E. 29TH ST.	--	--	--	--	--	--	3,700	
83+17	DRIVEWAY, LT	--	20	--	--	--	--	--	
84+05	DRIVEWAY, LT	--	20	--	--	--	--	--	
88+67	DRIVEWAY, LT	--	60	--	--	--	--	--	
90+52	DRIVEWAY, RT	10	50	--	--	--	--	--	
90+56	DRIVEWAY & PARKING LOT, LT	--	70	--	--	--	--	--	
92+75	DRIVEWAY, RT	10	20	--	--	--	--	--	
93+05	DRIVEWAY, LT	--	60	--	--	--	--	--	
95+98	DRIVEWAY & PARKING LOT, RT	10	50	--	--	--	--	--	
97+50	DRIVEWAY, LT	10	40	--	--	--	--	--	
97+63	DRIVEWAY & PARKING LOT, RT	--	80	--	--	--	--	--	
99+80	DRIVEWAY & PARKING LOT, RT	20	60	--	--	--	--	--	
102+00 - 102+75	E. 29TH ST.	--	--	--	--	--	--	345	
102+50	DRIVEWAY, LT	10	40	--	--	--	--	--	
8'W'+97	DRIVEWAY, LT	10	--	--	--	--	--	--	
8'W'+69 - 9'W'+38	WASHINGTON AVE.	--	250	--	--	3	430	--	
10'W'+46 - 10'W'+65	WASHINGTON AVE.	--	80	--	--	1	100	--	
STAGE 3	E. 29TH ST.	500	--	--	--	5	--	--	UTILITY AND DRIVEWAY STAGING
STAGE 4	E. 29TH ST.	250	--	--	--	3	--	--	UTILITY AND DRIVEWAY STAGING
	UNDISTRIBUTED	50	--	--	--	1	--	--	ADDITIONAL AGGREGATE FOR DRIVEWAYS
	UNDISTRIBUTED	--	250	--	--	3	--	--	TEMPORARY DRIVEWAY ACCESS AND RAMPS
TOTALS		880	1,640	5,200	12,000	189	13,130	4,045	

NOTE: BASE AGGREGATE ITEMS (3/4-INCH & 1 1/4-INCH) WERE CALCULATED USING 2.0 TONS/CY. BASE AGGREGATE OPEN-GRADED & SELECT CRUSHED SPECIAL WERE CALCULATED USING 1.9 TONS/CY.
AGGREGATE LOSS FACTOR OF 30% FOR OPEN GRADED AND 20% FOR BASE AGGREGATE DENSE WERE INCLUDED IN THE QUANTITIES
**ADDITIONAL QUANTITIES LISTED ELSEWHERE

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0010 UNLESS OTHERWISE NOTED

3

CONCRETE PAVEMENT

STAGE	STATION	LOCATION	416.0620 DRILLED DOWEL BARS EACH	415.0210 CONCRETE PAVEMENT GAPS EACH	415.5110.S CONCRETE PAVEMENT JOINT LAYOUT LS	SPV.0105.04 TREAT AND SEAL NEW CONCRETE PAVEMENT JOINTS LS	415.0090 CONCRETE PAVEMENT 9-INCH SY	415.1090 CONCRETE PAVEMENT HES 9-INCH SY
STAGE 2	76+70 - 78+25	WASHINGTON AVE.	16	--	--	--	950	--
STAGE 3	78+25 - 90+25	E. 29TH ST., RT	--	--	--	--	2,140	--
STAGE 3	90+25 -90+75	E. 29TH ST., RT	--	1	--	--	--	90
STAGE 3	90+75 - 102+75	E. 29TH ST., RT	--	--	--	--	2,140	--
STAGE 4	78+25 - 90+25	E. 29TH ST., LT	--	--	--	--	2,240	--
STAGE 4	90+25 - 91+00	E. 29TH ST., LT	--	1	--	--	--	140
STAGE 4	91+00 - 92+75	E. 29TH ST., LT	--	--	--	--	320	--
STAGE 4	92+75 - 93+25	E. 29TH ST., LT	--	1	--	--	--	90
STAGE 4	93+25 - 102+75	E. 29TH ST., LT	--	--	--	--	1,690	--
	PROJECT 6995-11-72		--	--	1	1	--	--
	TOTALS		16	3	1	1	9,480	320

CONCRETE CURB & GUTTER

STATION	LOCATION	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	601.0452 CONCRETE CURB & GUTTER INTEGRAL 30-INCH TYPE D LF
9'W'+38 - 10'W'+47	WASHINGTON AVENUE	195	--	--
10'W'+47 - 10'W'+65	WASHINGTON AVENUE	--	30	--
84+75 - 85+35	BUTTERNUT PARKWAY	60	--	--
76+70 - 76+90	RT	--	--	20
76+70 - 77+05	LT	--	--	35
77+85 - 102+75	RT	--	--	2,490
77+87 - 84+72	LT	--	--	685
85+35 - 102+75	LT	--	--	1,740
	TOTAL	255	30	4,970

CONCRETE DRIVEWAY

STATION	LOCATION	SPV.0180.03 CONCRETE DRIVEWAY REINFORCED 8-INCH SY	SPV.0180.04 CONCRETE DRIVEWAY REINFORCED HES 8-INCH SY	SPV.0180.05 CONCRETE DRIVEWAY REINFORCED 6-INCH SY
78+42	LT	--	--	40
78+81	LT	--	--	40
79+65	LT	--	--	60
80+59	LT	--	--	40
81+46	LT	--	--	50
82+33	LT	--	--	50
82+50	RT	--	--	50
83+18	LT	--	--	40
84+06	LT	--	--	40
88+69	LT	70	--	--
90+52	RT	--	60	--
90+58	LT	--	80	--
92+75	RT	--	--	40
93+00	LT	--	60	--
96+00	RT	60	--	--
97+50	LT	50	--	--
97+64	RT	70	--	--
99+82	RT	80	--	--
102+50	LT	50	--	--
TOTALS		380	200	450

CONCRETE SIDEWALK

STATION	LOCATION	SPV.0165.05 CONCRETE SIDEWALK REINFORCED 6-INCH SF	602.0405 CONCRETE SIDEWALK 4-INCH SF	602.0615 CURB RAMP DETECTABLE WARNING FIELD RADIAL NATURAL PATINA SF	COMMENTS
76+75 - 77+10	LT	--	200	--	
77+06 - 77+16	LT	46	--	13	CURB RAMP
77+67 - 77+79	LT	86	--	24	CURB RAMP
77+79 - 78+32	LT	--	263	--	
78+52 - 78+71	LT	--	97	--	
78+91 - 79+51	LT	--	300	--	
79+76 - 80+51	LT	--	373	--	
80+66 - 81+36	LT	--	347	--	
81+55 - 82+22	LT	--	333	--	
82+44 - 83+09	LT	--	326	--	
83+27 - 83+96	LT	--	348	--	
84+14 - 84+76	LT	--	310	--	
84+76 - 84+84	LT	33	--	12	CURB RAMP
85+23 - 85+31	LT	33	--	12	CURB RAMP
85+31 - 88+48	LT	--	1,588	--	
88+86 - 90+34	LT	--	739	--	
90+81 - 92+81	LT	--	1,000	--	
93+21 - 97+33	LT	--	2,061	--	
97+65 - 102+33	LT	--	2,342	--	
102+65 - 102+75	LT	--	50	--	
TOTALS		198	10,677	61	

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0010 UNLESS OTHERWISE NOTED

STORM SEWER

STRUCTURE - STRUCTURE	STORM SEWER PIPE 608.0312 REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 REINFORCED CONCRETE CLASS III 30-INCH LF	608.0336 REINFORCED CONCRETE CLASS III 36-INCH LF	SPV.0060.45 PIPE GATES EACH	611.8110 ADJUSTING MANHOLE COVER EACH	612.0902.S INSULATION BOARD POLYSTYRENE 2-INCH SY	SPV.0060.52 UTILITY LINE OPENING (ULO) EACH
1.1A - 1.1	60	--	--	--	--	--	--	--	--	--
1.1B - 1.1	49	--	--	--	--	--	--	--	--	--
1.1B - 1.1C	35	--	--	--	--	--	--	--	--	--
1.1 - 1.2	190	--	--	--	--	--	--	--	--	--
1.2 - 1.2A	30	--	--	--	--	--	--	--	8	--
1.2 - 1.2B	5	--	--	--	--	--	--	--	--	--
1.2 - 2.1	--	295	--	--	--	--	--	--	--	--
2.1 - 2.1A	30	--	--	--	--	--	--	--	--	--
2.1 - 2.1B	5	--	--	--	--	--	--	--	--	--
2.1 - 2.2	--	--	252	--	--	--	--	--	--	--
2.2 - 2.2A	--	30	--	--	--	--	--	--	8	--
2.2A - 2.2B	--	27	--	--	--	--	--	--	--	--
2.2 - 2.2C	5	--	--	--	--	--	--	--	--	--
2.2C - 2.2D	10	--	--	--	--	--	--	--	--	--
2.2D - 2.2E	10	--	--	--	--	--	--	--	--	--
2.2 - 2.3	--	--	--	--	--	141	--	--	--	--
2.3 - OUTFALL	--	--	--	--	--	44	1	1	--	--
2.4 - OUTFALL	--	--	--	--	43	--	1	1	--	--
2.4 - 2.5	--	--	--	--	99	--	--	--	--	--
2.5 - 2.5A	30	--	--	--	--	--	--	--	8	--
2.5A - 2.5B	10	--	--	--	--	--	--	--	--	--
2.5 - 2.5C	6	--	--	--	--	--	--	--	--	--
2.5C - 2.5D	10	--	--	--	--	--	--	--	--	--
2.5 - 3.1	--	--	--	--	115	--	--	--	--	--
3.1 - 3.1A	30	--	--	--	--	--	--	--	8	--
3.1A - 3.1B	10	--	--	--	--	--	--	--	--	--
3.1 - 3.1C	6	--	--	--	--	--	--	--	--	--
3.1 - 3.2	--	--	--	--	180	--	--	--	--	--
3.2 - 3.2A	--	--	30	--	--	--	--	--	8	--
3.2A - 3.2B	--	--	22	--	--	--	--	--	--	--
3.2 - 3.2C	6	--	--	--	--	--	--	--	--	--
3.2 - 4.1	--	--	--	320	--	--	--	--	--	--
4.1 - 4.1A	--	30	--	--	--	--	--	--	8	--
4.1 - 4.1B	6	--	--	--	--	--	--	--	--	--
4.1 - 4.2	--	--	315	--	--	--	--	--	--	--
4.2 - 4.2A	30	--	--	--	--	--	--	--	8	--
4.2A - 4.2B	10	--	--	--	--	--	--	--	--	--
4.2 - 4.2C	6	--	--	--	--	--	--	--	--	--
77+58, 32' LT	--	--	--	--	--	--	--	--	--	--
86+22 - 86+40 LT	--	--	--	--	--	--	--	--	128	1
TOTALS	589	382	619	320	437	185	2	2	184	1

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0010 UNLESS OTHERWISE NOTED

3

3

STORM SEWER STRUCTURES

STRUCTURE	STATION	LOCATION	611.0530 MANHOLE COVERS TYPE J EACH	611.0612 INLET COVERS TYPE C EACH	611.0624 INLET COVERS TYPE H EACH	611.1003 CATCH BASINS 3-FT DIAMETER EACH	611.1230 CATCH BASINS 2x3-FT EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.8120.S COVERS PLATES TEMPORARY EACH	SPV.0060.01 TEMPORARY CONNECTION TO EXISTING STORM SEWER PIPE EACH	SPV.0060.44 TEMPORARY CONNECTION TO STORM SEWER STRUCTURE EACH
1.1	77+25.00	12.00' RT	1	--	--	--	--	1	--	--	--	--
1.1A	77+09.03	23.00' LT	--	--	1	1	--	--	--	--	--	--
1.1B	77+03.84	25.00' RT	--	--	1	1	--	--	--	--	--	--
1.2	79+40.00	12.00' RT	1	--	--	--	--	1	--	--	--	--
1.2A	79+40.00	17.50' LT	--	--	1	--	1	--	--	--	--	--
1.2B	79+40.00	17.50' RT	--	--	1	--	1	--	--	--	--	--
2.1	82+20.00	12.00' RT	1	--	--	--	--	1	--	--	--	--
2.1A	82+20.00	17.50' LT	--	--	1	--	1	--	--	--	--	--
2.1B	82+20.00	17.50' RT	--	--	1	--	1	--	--	--	--	--
2.2	84+80.00	12.00' RT	1	--	--	--	--	--	1	--	--	--
2.2A	84+80.00	24.46' LT	--	--	1	--	--	1	--	--	--	--
2.2B	84+80.00	40.00' LT	--	1	--	1	--	--	--	--	--	--
2.2C	84+80.00	17.50' RT	--	--	1	--	1	--	--	--	--	--
2.2D	84+70.00	17.50' RT	--	--	1	--	1	--	--	--	--	--
2.2E	84+60.00	17.50' RT	--	--	1	--	1	--	--	--	--	--
2.3	85+97.29	12.00' RT	1	--	--	--	--	--	1	--	--	--
2.4	86+99.47	12.00' RT	1	--	--	--	--	--	1	--	--	--
2.5	87+90.00	12.00' RT	1	--	--	--	--	--	1	--	--	--
2.5A	87+90.00	17.50' LT	--	--	1	--	1	--	--	--	--	--
2.5B	88+00.00	17.50' LT	--	--	1	--	1	--	--	--	--	--
2.5C	87+90.00	17.50' RT	--	--	1	--	1	--	--	--	--	--
2.5D	88+00.00	17.50' RT	--	--	1	--	1	--	--	--	--	--
3.1	89+05.00	12.00' RT	1	--	--	--	--	--	1	--	--	--
3.1A	89+05.00	17.50' LT	--	--	1	--	1	--	--	--	--	--
3.1B	88+95.00	17.50' LT	--	--	1	--	1	--	--	--	--	--
3.1C	89+05.00	17.50' RT	--	--	1	--	1	--	--	--	--	--
3.2	90+85.00	12.00' RT	1	--	--	--	--	--	1	--	--	--
3.2A	90+85.00	17.50' LT	--	--	1	--	1	--	--	--	--	--
3.2B	90+85.00	17.50' RT	--	1	--	1	--	--	--	--	--	--
4.1	94+05.00	12.00' RT	1	--	--	--	--	1	--	--	--	--
4.1A	94+05.00	17.50' LT	--	--	1	--	1	--	--	--	--	--
4.1B	94+05.00	17.50' RT	--	--	1	--	1	--	--	--	--	--
4.2	97+20.00	12.00' RT	1	--	--	--	--	1	--	--	--	--
4.2A	97+20.00	17.50' LT	--	--	1	--	1	--	--	--	--	--
4.2B	97+10.00	17.50' LT	--	--	1	--	1	--	--	--	--	--
4.2C	97+20.00	17.50' RT	--	--	1	--	1	--	--	--	--	--
	UNDISTIBUTED		--	--	1	--	1	--	--	35	8	4
	TOTALS		11	2	24	4	21	6	6	35	8	4

FENCE

STATION	LOCATION	616.0206 FENCE CHAIN LINK 6-FT LF	616.0329 GATES CHAIN LINK (40 FT) EACH
100+00 - 102+75	LT	275	1
TOTAL		275	1

PIPE UNDERDRAIN

STATION	LOCATION	SPV.0090.09 SICPP (WRAPPED TRENCH) 6-INCH LF
9'W'+38 - 10'W'+65	LT & RT	225
84+75 - 85+35	BUTTERNUT PARKWAY	60
76+70 - 76+90	RT	20
76+70 - 77+05	LT	35
77+85 - 102+75	RT	2,490
77+87 - 84+72	LT	685
85+35 - 102+75	LT	1,740
TOTAL		5,255

621.0100 LANDMARK REFERENCE MONUMENT

STATION	LOCATION	EACH
77+38.98	0.00'	1
	TOTAL	1

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0010 UNLESS OTHERWISE NOTED

3

3

RESTORATION

STATION	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	630.0140 SEEDING MIXTURE #40 LB	630.0200 SEEDING TEMPORARY LB	631.0300 SOD WATER MGAL	SPV.0030.01 FERTILIZER FOR LAWN TYPE TURF CWT	SPV.0180.01 PREPARING TOPSOIL FOR LAWN TYPE TURF SY
76+45 - 80+00	LT	260	0	260	5	4	14	0.16	260
76+45 - 80+00	RT	540	450	90	10	8	30	0.34	540
80+00 - 85+00	LT	440	0	440	8	6	24	0.27	440
80+00 - 85+00	RT	840	760	80	16	12	47	0.53	840
85+00 - 90+00	LT	700	160	540	13	10	39	0.44	700
85+00 - 90+00	RT	1,350	290	1,060	25	19	76	0.85	1,350
90+00 - 95+00	LT	520	520	0	10	7	29	0.32	520
90+00 - 95+00	RT	930	930	0	17	13	52	0.58	930
95+00 - 100+00	LT	580	580	0	11	8	32	0.36	580
95+00 - 100+00	RT	690	690	0	13	10	39	0.43	690
100+00 - 102+75	LT	290	290	0	6	4	16	0.18	290
100+00 - 102+75	RT	570	570	0	11	8	32	0.35	570
8'W'+50 - 9'W'+50	LT	80	0	80	2	1	4	0.04	80
8'W'+50 - 9'W'+50	RT	80	80	0	2	1	4	0.04	80
10'W'+50 - 11'W'+50	LT	30	0	30	1	1	1	0.01	30
10'W'+50 - 11'W'+50	RT	30	0	20	1	1	1	0.01	30
TOTALS		7,930	5,320	2,600	151	113	442	4.92	7,930

EROSION CONTROL

STATION	LOCATION	** 624.0100 WATER MGAL	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATION EACH	628.1910 MOBILIZATION EMERGENCY EACH	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7560 TRACKING PADS EACH	628.7570 ROCK BAGS EACH	COMMENTS
77+60 - 82+40	RT	--	480	480	--	--	--	--	--	--	--	
82+60 - 84+50	RT	--	190	190	--	--	--	--	--	--	--	
84+50 - 86+30	RT	--	190	190	--	--	--	--	--	--	--	
85+75 - 86+20	LT	--	60	60	--	--	--	--	--	--	--	
86+50 - 86+75	LT	--	50	50	--	--	--	--	--	--	--	
86+60 - 88+75	RT	--	200	200	--	--	--	--	--	--	--	
90+70 - 95+80	RT	--	510	510	--	--	--	--	--	--	--	
99+95 - 102+75	RT	--	280	280	--	--	--	--	--	--	--	
77+03 - 77+09	LT & RT	--	--	--	--	--	2	2	--	--	--	
79+40	LT & RT	--	--	--	--	--	2	2	--	--	--	
82+20	LT & RT	--	--	--	--	--	2	2	--	--	--	
84+60 - 84+80	LT & RT	--	--	--	--	--	5	4	--	--	--	
87+90 - 88+00	LT & RT	--	--	--	--	--	4	4	--	--	--	
88+95 - 89+05	LT & RT	--	--	--	--	--	3	3	--	--	--	
90+85	LT & RT	--	--	--	--	--	2	2	--	--	--	
94+05	LT & RT	--	--	--	--	--	2	2	--	--	--	
97+10 - 97+20	LT & RT	--	--	--	--	--	3	3	--	--	--	
9'W'+00 -9'W'+50	WASHINGTON	--	--	--	--	--	--	--	--	1	--	
78+25 - 78+75	E. 29TH ST.	--	--	--	--	--	--	--	--	1	--	
PROJECT 6995-11-72		79	--	--	10	10	--	--	--	--	--	WATER FOR DUST CONTROL
UNDISTRIBUTED		--	400	400	--	--	2	2	60	2	25	
TOTALS		79	2,360	2,360	10	10	27	26	60	4	25	

**ADDITIONAL QUANTITIES LISTED ELSEWHERE

NOTE: LOCATIONS FOR TEMPORARY DITCH CHECKS AND ROCK BAGS FOR SILT FENCE RELIEFS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0010 UNLESS OTHERWISE NOTED

3

3

PERMANENT SIGNS

SIGN NO.	STATION	LOCATION	SIGN CODE	SIGN SIZE IN X IN	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	SPV.0060.47 U-CHANNEL POST 14-FT YELLOW EACH	SPV.0060.49 U-CHANNEL POST 16-FT YELLOW EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	MESSAGE
1-01	76+90	RT	R1-1	36 X 36	9.00	--	--	1	1	1	STOP
1-02	76+90	RT	R1-3P	24 X 9	1.50	--	--	--	--	--	ALL WAY
1-03	10+40	LT	R1-1	36 X 36	9.00	--	--	1	1	1	STOP
1-04	10+40	LT	R1-3P	24 X 9	1.50	--	--	--	--	--	ALL WAY
1-05	9'W'+60	RT	R1-1	36 X 36	9.00	--	--	1	1	1	STOP
1-06	9'W'+60	RT	R1-3P	24 X 9	1.50	--	--	--	--	--	ALL WAY
1-07	77+86	LT	R1-1	36 X 36	9.00	--	--	1	1	1	STOP
1-08	77+86	LT	R1-3P	24 X 9	1.50	--	--	--	--	--	ALL WAY
1-09	78+45	RT	R7-1D	18 X 24	3.00	--	--	1	1	1	NO PARKING ANY TIME
1-10	78+45	RT	R3-17	30 X 24	5.00	--	--	--	--	--	BIKE LANE
1-11	78+72	RT	M1-5A	24 X 24	4.00	--	1	--	1	1	CTH H
1-12	80+34	LT	W3-1	36 X 36	--	9.00	--	1	1	1	STOP AHEAD
1-13	80+34	LT	R7-1D	18 X 24	3.00	--	--	--	--	--	NO PARKING ANY TIME
1-14	81+00	RT	R2-1	24 X 30	5.00	--	1	--	1	1	SPEED LIMIT
2-01	83+80	LT	R7-1D	18 X 24	3.00	--	--	1	1	1	NO PARKING ANY TIME
2-02	83+80	LT	R3-17	30 X 24	5.00	--	--	--	--	--	BIKE LANE
2-03	84+51	RT	R7-1D	18 X 24	3.00	--	--	1	1	1	NO PARKING ANY TIME
2-04	84+51	RT	R3-17	30 X 24	5.00	--	--	--	--	--	BIKE LANE
2-05	84+85	LT	R1-1	36 X 36	9.00	--	--	1	1	1	STOP
2-06	85+41	RT	R7-1D	18 X 24	3.00	--	1	--	--	--	NO PARKING ANY TIME
	85+41	RT				--	--	--	--	--	REMOVE ONLY
	85+57	LT				--	--	--	--	--	REMOVE ONLY
2-07	85+99	RT	R2-1	24 X 30	5.00	--	1	--	1	1	SPEED LIMIT
3-01	89+12	RT	R7-1D	18 X 24	3.00	--	--	1	1	1	NO PARKING ANY TIME
3-02	89+12	RT	R3-17	30 X 24	5.00	--	--	--	--	--	BIKE LANE
3-03	89+85	LT	R7-1D	18 X 24	3.00	--	--	1	1	1	NO PARKING ANY TIME
3-04	89+85	LT	R3-17	30 X 24	5.00	--	--	--	--	--	BIKE LANE
4-01	95+06	RT	R7-1D	18 X 24	3.00	--	--	1	1	1	NO PARKING ANY TIME
4-02	95+06	RT	R3-17	30 X 24	5.00	--	--	--	--	--	BIKE LANE
4-03	96+41	LT	R7-1D	18 X 24	3.00	--	--	1	1	1	NO PARKING ANY TIME
4-04	96+41	LT	R3-17	30 X 24	5.00	--	--	--	--	--	BIKE LANE
4-05	99+95	LT	R7-1D	18 X 24	3.00	--	--	1	1	1	NO PARKING ANY TIME
4-06	99+95	LT	R2-1	24 X 30	5.00	--	--	--	--	--	SPEED LIMIT
5-01	102+00	LT	R7-1D	18 X 24	3.00	--	--	1	1	1	NO PARKING ANY TIME
5-02	102+00	LT	R3-17	30 X 24	5.00	--	--	--	--	--	BIKE LANE
			TOTALS		143.00	9.00	4	15	18	18	

TRAFFIC CONTROL

STAGE	DURATION (DAYS)	643.5000 TRAFFIC CONTROL EACH	643.0410 BARRICADES TYPE II EACH	643.0410 BARRICADES TYPE II DAY	643.0420 BARRICADES TYPE III EACH	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A EACH	643.0705 WARNING LIGHTS TYPE A DAY	643.0900 SIGNS EACH	643.0900 SIGNS DAY	643.1070 CONES 42-INCH EACH	643.1070 CONES 42-INCH DAY
DETOUR	94	--	--	--	16	1,504	--	--	91	14,162	--	--
PEDESTRIAN ACCOMODATIONS	94	--	7	658	--	--	--	--	10	940	--	--
STAGE 2	31	--	--	--	41	1,271	60	1,860	27	837	--	--
STAGE 3	36	--	19	684	4	144	8	288	24	864	150	5,400
STAGE 4	27	--	19	513	6	162	12	324	26	702	50	1,350
PROJECT 6995-11-72		0.5	--	--	--	--	--	--	--	--	--	--
UNDISTRIBUTED (ACCESS)	94	--	10	940	10	940	20	1,880	10	940	50	4,700
TOTALS		0.5		2,795		4,021		4,352		18,445		11,450

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0010 UNLESS OTHERWISE NOTED

MARKING

STATION	LOCATION	646.0106 LINE EPOXY 4-INCH (YELLOW) LF	646.0106 LINE EPOXY 4-INCH (WHITE) LF	646.5020 ARROW EPOXY EACH	646.5220 SYMBOL EPOXY EACH	646.6020 STOP LINE EPOXY 12-INCH LF	646.7420 CROSSWALK EPOXY TRANSVERSE LINE 6-INCH LF
76+75 - 102+75	E. 29TH ST.	1,500	5,040	9	9	0	0
	S. WASHINGTON AVE.	0	0	0	0	85	210
	S. BUTTERNUT PKWY.	0	0	0	0	20	75
	TOTALS	1,500	5,040	9	9	105	285
		6,540					

CONSTRUCTION STAKING

CATEGORY	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 B-71-0196 EACH	650.7000 CONCRETE PAVEMENT LF	650.9000 CURB RAMPS EACH	650.9910 SUPPLEMENTAL CONTROL EACH	650.9920 SLOPE STAKES LF	SPV.0105.07 WATER MAIN LS	SPV.0105.06 SANITARY SEWER LS
0010	76+70 - 102+75	E. 29TH ST.	--	2,605	--	--	--	2,605	--	1	2,605	--	--
	85+05	BUTTERNUT PKWY	--	45	45	60	--	25	2	--	45	--	--
	8'W'+68 - 9'W'+80	WASHINGTON AVE	--	112	112	110	--	45	--	--	112	--	--
	10'W'+20 - 10'W'+66	WASHINGTON AVE	--	46	46	115	--	45	2	--	46	--	--
	77+25.00	12.00' RT	1	--	--	--	--	--	--	--	--	--	--
	77+09.03	23.00' LT	1	--	--	--	--	--	--	--	--	--	--
	77+03.84	25.00' RT	1	--	--	--	--	--	--	--	--	--	--
	79+40.00	12.00' RT	1	--	--	--	--	--	--	--	--	--	--
	79+40.00	17.50' LT	1	--	--	--	--	--	--	--	--	--	--
	79+40.00	17.50' RT	1	--	--	--	--	--	--	--	--	--	--
	82+20.00	12.00' RT	1	--	--	--	--	--	--	--	--	--	--
	82+20.00	17.50' LT	1	--	--	--	--	--	--	--	--	--	--
	82+20.00	17.50' RT	1	--	--	--	--	--	--	--	--	--	--
	84+80.00	12.00' RT	1	--	--	--	--	--	--	--	--	--	--
	84+80.00	24.46' LT	1	--	--	--	--	--	--	--	--	--	--
	84+80.00	40.00' LT	1	--	--	--	--	--	--	--	--	--	--
	84+80.00	17.50' RT	1	--	--	--	--	--	--	--	--	--	--
	84+70.00	17.50' RT	1	--	--	--	--	--	--	--	--	--	--
	84+60.00	17.50' RT	1	--	--	--	--	--	--	--	--	--	--
	85+97.29	12.00' RT	1	--	--	--	--	--	--	--	--	--	--
	86+99.47	12.00' RT	1	--	--	--	--	--	--	--	--	--	--
	87+90.00	12.00' RT	1	--	--	--	--	--	--	--	--	--	--
	87+90.00	17.50' LT	1	--	--	--	--	--	--	--	--	--	--
	88+00.00	17.50' LT	1	--	--	--	--	--	--	--	--	--	--
	87+90.00	17.50' RT	1	--	--	--	--	--	--	--	--	--	--
	88+00.00	17.50' RT	1	--	--	--	--	--	--	--	--	--	--
	89+05.00	12.00' RT	1	--	--	--	--	--	--	--	--	--	--
	89+05.00	17.50' LT	1	--	--	--	--	--	--	--	--	--	--
	88+95.00	17.50' LT	1	--	--	--	--	--	--	--	--	--	--
	89+05.00	17.50' RT	1	--	--	--	--	--	--	--	--	--	--
	90+85.00	12.00' RT	1	--	--	--	--	--	--	--	--	--	--
	90+85.00	17.50' LT	1	--	--	--	--	--	--	--	--	--	--
	90+85.00	17.50' RT	1	--	--	--	--	--	--	--	--	--	--
	94+05.00	12.00' RT	1	--	--	--	--	--	--	--	--	--	--
	94+05.00	17.50' LT	1	--	--	--	--	--	--	--	--	--	--
	94+05.00	17.50' RT	1	--	--	--	--	--	--	--	--	--	--
	97+20.00	12.00' RT	1	--	--	--	--	--	--	--	--	--	--
	97+20.00	17.50' LT	1	--	--	--	--	--	--	--	--	--	--
	97+10.00	17.50' LT	1	--	--	--	--	--	--	--	--	--	--
	97+20.00	17.50' RT	1	--	--	--	--	--	--	--	--	--	--
0020	86+40	E. 29TH ST.	--	--	--	--	1	--	--	--	--	--	--
0030	76+70 - 102+75	LT	--	--	--	--	--	--	--	--	--	--	1
0040	76+70 - 102+75	LT & RT	--	--	--	--	--	--	--	--	--	1	--
	TOTALS		36	2,808	203	285	1	2,720	4	1	2,808	1	1

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0010 UNLESS OTHERWISE NOTED

3

3

SAWING

STAGE	STATION	LOCATION	690.0150 ASPHALT LF	690.0250 CONCRETE LF
STAGE 2	76+70 - 78+25	E. 29TH ST.	--	75
STAGE 2	85+50 - 87+50	E. 29TH ST.	--	75
STAGE 2	8'W'+68 - 9'W'+80	WASHINGTON AVE	25	440
STAGE 2	10'W'+20 - 10'W'+66	WASHINGTON AVE	40	20
STAGE 3	78+25 - 85+50	E. 29TH ST., LT	--	725
STAGE 3	85+50 - 102+75	E. 29TH ST., LT	--	1,725
	BUTTERNUT PKWY	E. 29TH ST., LT	30	--
	78+42	LT	--	21
	78+81	LT	--	20
	79+65	LT	--	25
	80+59	LT	--	16
	81+46	LT	--	20
	82+33	LT	--	22
	82+50	RT	25	--
	83+18	LT	--	18
	84+06	LT	--	18
	88+69	LT	38	--
	90+52	LT	47	--
	93+00	LT	40	--
	97+64	RT	45	--
	UNDISTRIBUTED (LEADS AND SERVICES)		--	280
	TOTALS		290	3,500

EXISTING LAND PARCEL MONUMENTS

STATION	LOCATION	SPV.0060.41 RESEARCH AND LOCATE EXISTING LAND PARCEL MONUMENTS EACH	SPV.0060.42 VERIFY AND REPLACE EXISTING LAND PARCEL MONUMENTS EACH	REMARKS
77+06	34' LT	1	1	1.25" DIA
77+73	34' RT	1	1	1.25" DIA
88+69	34' RT	1	1	0.75" DIA
90+17	34' LT	1	1	0.75" DIA
90+59	34' RT	1	1	0.75" DIA
90+90	34' LT	1	1	2.5' DIA
92+59	34' RT	1	1	0.75" DIA
92+92	34' RT	1	1	1" DIA
95+00	34' RT	1	1	1.25" DIA
96+22	34' LT	1	1	1.25" DIA
98+50	34' RT	1	1	1.25" DIA
TOTAL		11	11	

SPV.0165.02 REMOVE, SALVAGE, AND REPLACE BRICK PAVERS

STATION	LOCATION	SF
78+31	35' LT	340
	TOTAL	340

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0010 UNLESS OTHERWISE NOTED

SANITARY ITEMS

STATION	LOCATION	SPV.0060.20 ADJUSTING SANITARY MANHOLE COVER (<12") EACH	SPV.0060.21 ADJUSTING SANITARY MANHOLE COVER (>12") EACH	SPV.0060.23 SANITARY MANHOLE FRAME COVER TYPE JM EACH	SPV.0060.24 CONNECT NEW MANHOLE TO EXISTING LINED SANITARY SEWER EACH	SPV.0060.26 PVC CAP 8-INCH EACH	SPV.0060.27 6-INCH PVC INSIDE DROP FOR EXISTING SANITARY MANHOLE EACH	SPV.0060.28 EXTERNAL CHIMNEY SEAL EACH	SPV.0060.29 REMOVE EXISTING LATERAL IN SANITARY MANHOLE EACH	SPV.0060.30 CONNECT 8-INCH PVC TO EXISTING MANHOLE (CORE W/BOOT) EACH	SPV.0060.31 CONNECT TO EXISTING SANITARY SEWER (8-INCH PVC TO 8-INCH PVC) EACH	SPV.0060.32 8-INCH PVC INSIDE DROP FOR EXISTING SANITARY MANHOLE EACH	SPV.0060.33 SADDLE WYE ON LINED MAIN 15-INCH X 6-INCH EACH	SPV.0060.34 8-INCH X 4-INCH SADDLE WYE ON LINED MAIN EACH	SPV.0060.35 SADDLE WYE ON LINED MAIN 8-INCH X 6-INCH EACH	SPV.0060.36 CONNECT TO EXISTING SANITARY LATERAL EACH	SPV.0060.39 CONNECT SANITARY LATERAL TO EXISTING MANHOLE EACH	SPV.0060.40 8-INCH X 6-INCH PVC WYE EACH	SPV.0090.05 SANITARY SEWER PVC 8-INCH LF	SPV.0090.06 SANITARY LATERAL PVC 6-INCH LF	SPV.0090.07 SANITARY LATERAL 4-INCH PVC LF	SPV.0105.03 REMOVE & ABANDON SANITARY SEWER VALVE ACCESS LS	SPV.0200.01 SANITARY MANHOLE TYPE 1 VF
77+40	4' RT	1	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
77+41	42' RT - 70' RT	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--	28	--	--	--	--
78+03	24' LT	1	--	1	--	--	1	1	1	--	--	--	--	--	--	1	1	--	--	8	--	--	--
79+03	LT	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1	--	--	--	10	--	--	--
80+11	LT	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1	--	--	--	10	--	--	--
80+82	LT	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1	--	--	--	10	--	--	--
81+21	24' LT	1	--	1			--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
81+70	LT	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1	--	--	--	10	--	--	--
82+51	LT	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1	--	--	--	10	--	--	--
83+40	LT	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1		--	--	10	--	--	--
84+28	LT	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1	--	--	--	10	--	--	--
85+05	23' LT	1	--	1	--	--	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
85+05	54' LT	1	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
85+05	21' RT - 33' RT	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--	12	--	--	--	--
85+14	53' LT		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
87+04	LT	--	--	--	--	--	--	--	--	--	--	--	1	--	--	1	--	--	--	9	--	--	--
87+85	25' LT	1	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
87+85	18' RT - 38' RT	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--	--	20	--	--	--	--
87+92	LT		--	--	--	--	--	--	--	--	--	--	1	--	--	1	--	--	--	9	--	--	--
88+52	LT	--	--	--	--	--	--	--	--	--	--	--	1	--	--	1	--	--	--	9	--	--	--
90+69	22' LT	1	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
90+69	22' LT - 33' RT	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	1	--	55	--	--	--
93+89	25' LT	1	--	1	--	--	1	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
93+89	23' RT - 33' RT	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	10	--	--	--	--
93+92	24' LT - 33' LT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1	--	8	--	--	--
97+20	25' LT	1	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
98+35	RT	--	--	--	--	1	--	--	--	--	--	--	--	--	1	--	--	--	--	58	--	--	--
99+09	RT	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1	--	--	--	58	--	--	--
100+50 - 102+75	25' LT	--	--	1	1	--	--	1	--	--	--	--	--	--	--	--	--	--	225	--	--	--	14.8
102+26	25' LT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	1	--	14	--	--	--
UNDISTRIBUTED		--	2	--	--	--	--	--	--	--	--	1	--	1	--	--	--	--	--	--	10	--	--
TOTALS		9	2	10	1	6	3	10	2	1	3	1	3	1	9	14	3	1	350	243	10	1	14.8

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0030 UNLESS OTHERWISE NOTED

WATER ITEMS

STATION	LOCATION	SPV.0060.03 CONNECT TO EXISTING WATERMAIN EACH	SPV.0060.04 TEE 12-INCH X 6-INCH EACH	SPV.0060.05 TEE 12-INCH X 8-INCH EACH	SPV.0060.10 VALVE W/ VALVE BOX 12-INCH EACH	SPV.0060.11 VALVE W/ VALVE BOX 8-INCH EACH	SPV.0060.12 VALVE W/ VALVE BOX 6-INCH EACH	SPV.0060.13 PLUG 12-INCH EACH	SPV.0060.14 PLUG 8-INCH EACH	SPV.0060.15 PLUG 6-INCH EACH	SPV.0060.16 ADJUST CURB STOP EACH	SPV.0060.17 ADJUST WATER VALVE BOX EACH	SPV.0060.19 12-INCH HYDRANT EXTENSION UNDISTRIBUTED EACH	SPV.0060.54 WATER MAIN OFFSET 12-INCH EACH	SPV.0060.55 WATER MAIN OFFSET 8-INCH EACH	SPV.0060.56 ABANDON EXISTING WATER VALVE MANHOLE EACH	SPV.0090.02 WATERMAIN 12-INCH DUCTILE IRON LF	SPV.0090.03 WATERMAIN 8-INCH DUCTILE IRON LF	SPV.0090.04 WATERMAIN 6-INCH DUCTILE IRON LF
76+56	27' LT	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
76+94	10' LT	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--
77+30	39' LT	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--
77+30	32' RT - 70' RT	1	--	--	1	--	--	1	--	--	--	--	--	--	--	--	38	--	--
77+81	14' LT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--
78+10	LT	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
79+10	LT	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
80+10	LT	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
80+80	LT	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
81+70	LT	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
82+50	LT	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
83+40	LT	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
84+30	LT	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
84+60	13' LT	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--
84+72	13' LT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--
84+93	35' LT	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--
84+93	13' LT - 33' RT	1	--	--	--	1	--	--	1	--	--	--	--	--	1	--	--	46	--
87+00	LT	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
87+90	29' LT	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
88+50	LT	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
89+00	LT	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
90+26	22' LT	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--
90+53	13' LT - 33' RT	1	--	1	--	1	--	--	1	--	--	--	--	--	1	--	--	46	--
90+88	12' LT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--
93+77	13' LT - 33' RT	1	--	1	--	1	--	--	1	--	--	--	--	--	1	--	--	46	--
93+90	LT	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
96+30	13' LT - 33' RT	1	1	--	--	--	1	--	--	1	--	--	--	--	--	--	--	--	47
97+27	23' LT	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--
97+47	32' LT	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
99+07	28' RT	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
102+06	32' LT	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
UNDISTRIBUTED		--	--	--	--	--	--	--	--	--	--	--	2	--	--	--	--	--	--
TOTALS		5	1	2	1	3	1	1	3	1	16	5	2	1	3	3	38	138	47

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CAEGORY 0040 UNLESS OTHERWISE NOTED

TRANSPORTATION PROJECT PLAT NO: 6995-11-02-4.01

THAT PART OF LOTS 1, 2, 3, 4, 5, 6, 7, 8 OF THE PLAT OF DONALD NIKOLAI EAST 29TH STREET SUBDIVISION RECORDED IN VOLUME 11 OF PLATS ON PAGE 96 AS DOCUMENT NO. 514724, LOT 12 OF THE PLAT OF MAYWOOD SUBDIVISION RECORDED IN VOLUME 9 OF PLATS ON PAGE 24 AS DOCUMENT NO. 443749, LOT 1 CSM NO. 8758 RECORDED IN VOL.30 PG.58 AS DOCUMENT NO. 2007R1348, DEED VOLUME 468 PAGE 697 LOCATED IN THE SW 1/4 - SW 1/4, SECTION 16, THE SE 1/4 - SE 1/4, SECTION 17, T25N, R3E, CITY OF MARSHFIELD, AND THE NE 1/4 - NE 1/4, SECTION 20, THE NW 1/4 - NW 1/4, SECTION 21, T25N, R3E, CITY OF MARSHFIELD, AND TOWN OF CAMERON, WOOD COUNTY, WISCONSIN.

RELOCATION ORDER LOCAL STREET - EAST 29TH STREET, CITY OF MARSHFIELD, WOOD COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF MARSHFIELD DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22, AND 32.05, WISCONSIN STATUTES, THE CITY OF MARSHFIELD ORDERS THAT:

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE CITY OF MARSHFIELD FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF MARSHFIELD, PURSUANT TO THE PROVISIONS OF SECTION 62.22(1) OR 32.05(2a), WISCONSIN STATUTES.

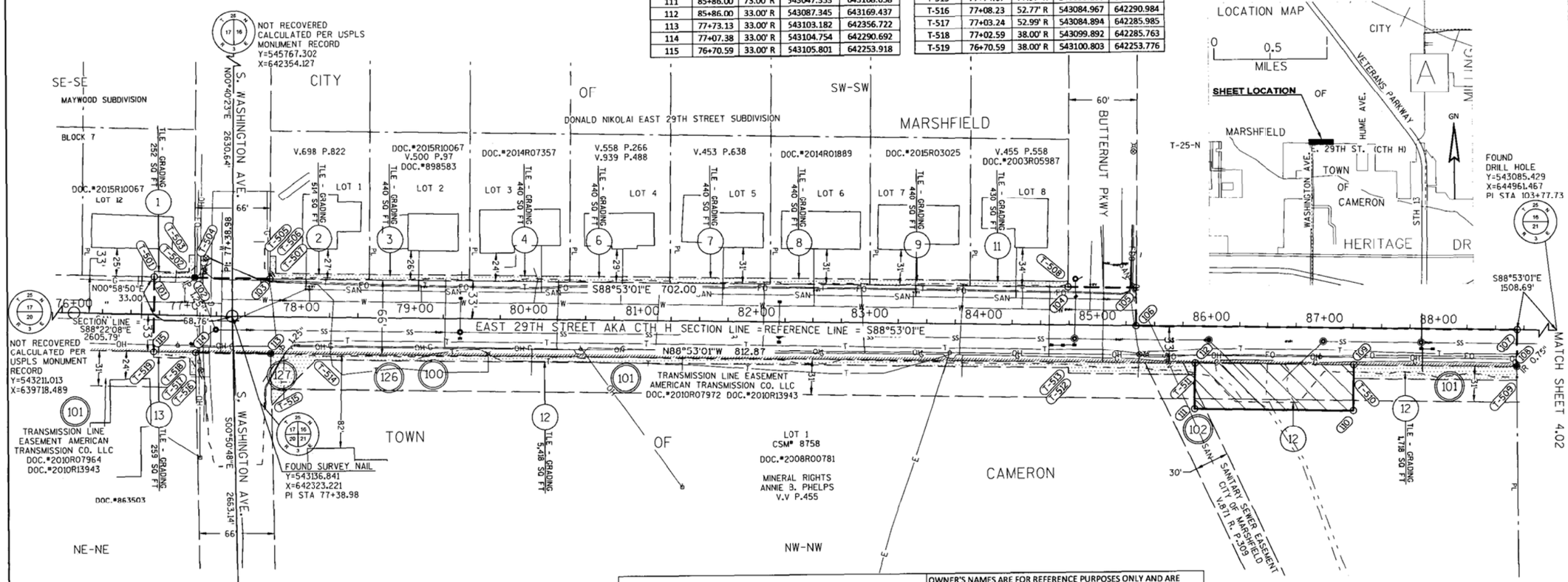
WISCONSIN ADMINISTRATIVE CODE CHAPTER TRANS 233 RESTRICTIONS APPLY.

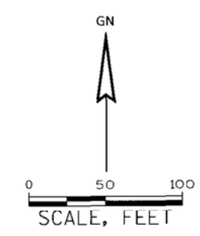
FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2.

*Block 7

R/W	STATION	OFFSET	Y	X
101	76+69.84	33.00' L	543171.795	642255.048
102	77+05.42	33.00' L	543170.782	642290.618
103	77+71.73	33.00' L	543169.196	642356.604
104	84+73.72	33.00' L	543155.519	643058.468
105	85+33.73	33.00' L	543154.350	643118.459
106	85+33.73	0.00'	543121.356	643117.816
107	88+69.04	0.00'	543114.823	643453.065
108	88+69.04	33.00' R	543081.831	643452.422
109	87+26.00	33.00' R	543084.617	643309.411
110	87+26.00	73.00' R	543044.625	643308.631
111	85+86.00	73.00' R	543047.353	643168.658
112	85+86.00	33.00' R	543087.345	643169.437
113	77+73.13	33.00' R	543103.182	642356.722
114	77+07.38	33.00' R	543104.754	642290.692
115	76+70.59	33.00' R	543105.801	642253.918

TLE POINT	STATION	OFFSET	Y	X
T-501	76+69.84	38.00' L	543176.793	642255.190
T-502	77+00.34	38.00' L	543175.925	642285.678
T-503	77+00.09	52.91' L	543190.840	642285.853
T-504	77+05.09	53.00' L	543190.781	642290.853
T-505	77+71.57	53.00' L	543189.195	642356.838
T-506	77+76.57	53.04' L	543189.136	642361.838
T-507	77+76.69	38.00' L	543174.099	642361.661
T-508	84+73.68	38.00' L	543160.519	643058.520
T-509	88+69.27	45.00' R	543069.828	643452.421
T-510	87+26.00	45.00' R	543072.620	643309.177
T-511	85+86.00	43.00' R	543077.347	643169.243
T-512	84+75.00	43.00' R	543079.509	643058.264
T-513	84+75.00	38.00' R	543084.508	643058.361
T-514	78+13.30	38.00' R	543097.400	642396.785
T-515	77+74.67	77.97' R	543058.186	642357.387
T-516	77+08.23	52.77' R	543084.967	642290.984
T-517	77+03.24	52.99' R	543084.894	642285.985
T-518	77+02.59	38.00' R	543099.892	642285.763
T-519	76+70.59	38.00' R	543100.803	642253.776





2017R01802

SUSAN E. GINTER
WOOD COUNTY
REGISTER OF DEEDS
RECORDED ON
03/07/2017 08:29AM
REC FEE: 50.00
EXEMPT #:
PAGES: 2 EMSA

Vol. 13 of Plats, Page 153

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 6995-11-02-4.01
AMENDMENT NO:___

ALIGNMENT INFORMATION

EAST 29TH STREET

PI = STA 76+00
Y = 543140.7966
X = 642184.2973

DA = S88°22'08"E

PI = STA 77+38.98
Y = 543136.8406
X = 642323.2210

DA = S88°53'01"E

PI = STA 103+77.73
Y = 543,085.4290
X = 642,323.2210

FOUND SURVEY NAIL Y=540473.991 X=642362.571

EXISTING FOUND MONUMENTS			
POINT	DESC.	Y	X
102	IP 1.25"	543170.782	642290.618
108	IR 0.75"	543081.831	643452.422
113	IP 1.25"	543103.182	642356.722
345	IR 0.75"	543081.918	643452.390
347	IP 1.25"	543103.229	642356.441
349	IP 1.25"	543170.570	642290.761

COURSE TABLE		
COURSE	BEARING	DISTANCE
115-101	N00°58'50"E	66.00'
101-102	S88°22'08"E	35.58'
102-103	S88°37'23"E	66.00'
104-105	S88°53'01"E	60.00'
105-106	S01°06'59"W	33.00'
106-107	S88°53'01"E	335.31'
107-108	S01°06'59"W	33.00'
108-109	N88°53'00"W	143.04'
109-110	S01°06'59"W	40.00'
110-111	N88°53'01"W	140.00'
111-112	N01°06'59"E	40.00'
113-114	N88°38'10"W	66.05'
114-115	N88°22'08"W	36.79'

UILITY INTERESTS REQUIRED

UTILITY NUMBER	OWNERS	INTEREST REQUIRED	DOCUMENT INFO.
100	GENERAL TELEPHONE COMPANY	RELEASE OF RIGHTS	V.407 P.168
101	AMERICAN TRANSMISSION CO.LLC	RELEASE OF RIGHTS	DOC.# 2010R07972, DOC.#2010R13943
102	CITY OF MARSHFIELD	MERGED INTEREST	V.871 P.309
126	FRONTIER COMMUNICATIONS	RELEASE OF RIGHTS	
127	TDS TELECOM	RELEASE OF RIGHTS	

SCHEDULE OF LANDS & INTEREST REQUIRED

OWNER'S NAMES ARE FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE CITY.

PARCEL NUMBER	OWNERS	INTEREST REQUIRED	R/W SQ FT REQUIRED NEW	R/W SQ FT REQUIRED EXISTING	R/W SQ FT REQUIRED TOTAL	PLE SQ FT	TLE SQ FT
1	TAYLOR HALEY, A SINGLE PERSON	TLE	--	--	--	--	252
2	DAVID J. MEYER AND THERESA A. MEYER, AS SURVIVORSHIP MARITAL PROPERTY	TLE	--	--	--	--	514
3	JOHN H. GENTEMAN AND DELORIS M. GENTEMAN, HUSBAND AND WIFE, AS JOINT TENANTS	TLE	--	--	--	--	440
4	BENJAMIN A. LARSON AND HOLLY A. LARSON, HUSBAND AND WIFE AS SURVIVORSHIP MARITAL PROPERTY	TLE	--	--	--	--	440
6	DONALD H. SCHMUDE AND BARBARA M. SCHMUDE HUSBAND AND WIFE AS SURIVORSHIP MARITAL PROPERTY	TLE	--	--	--	--	440
7	LAWRENCE T. KELNHOFER AND ANN M. LYNCH, AS JOINT TENANTS, AND NOT AS TENANTS IN COMMON	TLE	--	--	--	--	440
8	RANDY WEILER AND MARILYN K. WEILER, HUSBAND AND WIFE AS JOINT TENANTS	TLE	--	--	--	--	440
9	SAMANTHA R. SEIDL, AS INDIVIDUAL PROPERTY	TLE	--	--	--	--	440
11	KAREN A. LAPPE	TLE	--	--	--	--	430
12	DPRR. LLC, A WISONSIN LIMITED LIABILITY COMPANY, ETAL	FEE/TLE	5,600	--	5,600	--	7,136
13	RICHARD J. NIEHAUS AND KRISANN M. NIEHAUS, AS SURVIVORSHIP MARITAL PROPERTY	TLE	--	--	--	--	259

MSA PROFESSIONAL SERVICES

ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
146 North Central Ave Marshfield, WI 54449
(715) 384-2133 (877) 204-0572
www.msa-ps.com

© MSA Professional Services, Inc.

I, CHAD A. BESAW PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF MARSHFIELD, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: _____ DATE: 3/6/2017
PRINT NAME: CHAD A. BESAW
REGISTRATION NUMBER: S-3029

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF MARSHFIELD

SIGNATURE: Daniel G. Knoeck DATE: 3/6/17
PRINT NAME: Daniel G. Knoeck
Director of Public Works

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\RW\CITY ONLY 2014_CAD TPP 6995-11-01_6995-11-02.DWG
PLOT DATE : 2/28/2017 11:45 AM
PLOT BY : CHAD BESAW
PLOT NAME :
PLOT SCALE : ##########
APPRAISAL PLAT DATE : 2/24/2017

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

TRANSPORTATION PROJECT PLAT TITLE SHEET

C. MARSHFIELD, EAST 29TH STREET

WASHINGTON AVENUE TO HUME AVENUE
LOCAL STREET
WOOD COUNTY
6995-11-02

HUME AVENUE TO VETERANS PARKWAY
LOCAL STREET
WOOD COUNTY
6995-11-01

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING — TO BE REMOVED
BRIDGE

SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED) IP
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
OFF-PREMISE SIGN

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE	■	□
TELEPHONE POLE	●	○
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)	✱	✱

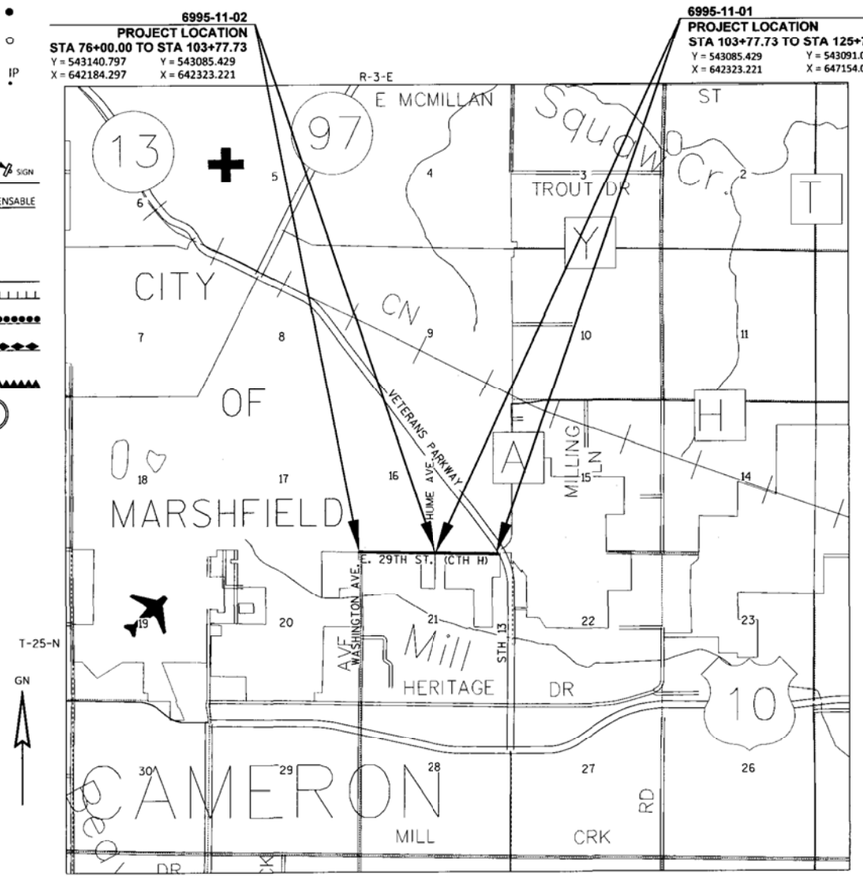
ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER (25) UTILITY NUMBER (40)
PARALLEL OFFSETS

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	POINT OF INTERSECTION	PI
ACRES	AC	PROPERTY LINE	PL
AHEAD	AH	RECORDED AS	(100')
ALUMINUM	ALUM	REEL / IMAGE	R/I
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BLOCK	BLK	RESTICTIVE DEVELOPMENT EASEMENT	RDE
CENTERLINE	C/L	RIGHT	RT
CERTIFIED SURVEY MAP	CSM	RIGHT OF WAY	R/W
CONCRETE	CONC	SECTION	SEC
COUNTY	CO	SEPTIC VENT	SEPV
COUNTY TRUNK HIGHWAY	CTH	SQUARE FEET	SF
DISTANCE	DIST	STATE TRUNK HIGHWAY	STH
CORNER	COR	STATION	STA
DOCUMENT NUMBER	DOC	TELEPHONE PEDESTAL	TP
EASEMENT	EASE	TEMPORARY LIMITED EASEMENT	TLE
EXISTING	EX	TRANSPORTATION PROJECT PLAT	TPP
GAS VALVE	GV	UNITED STATES HIGHWAY	USH
GRID NORTH	GN	UNITED STATES PUBLIC LAND SURVEY	USPLS
HIGHWAY EASEMENT	HE	VOLUME	V
IDENTIFICATION	ID		
LAND CONTRACT	LC		
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		
POINT OF COMPOUND CURVE	PCC		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB



CONVENTIONAL UTILITY SYMBOLS

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

THE NOTES,CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECTS 6995-11-01 6995-11-02

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), WOOD COUNTY, NAD83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4"X24" IRON REBARS) UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLEs) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHTS TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING ACCESS CONTROL ALONG EAST 29TH STREET ESTABLISHED FROM PREVIOUS PROJECT 1623-09-22.

EXISTING RIGHT-OF-WAY FOR EAST 29TH STREET ESTABLISHED FROM: PREVIOUS PROJECT 1623-09-22, PLAT OF DONALD NIKOLAI EAST 29TH STREET SUBDIVISION RECORDED IN VOLUME 11 OF PLATS ON PAGE 96 AS DOCUMENT NO. 514724,
PLAT OF INDUSTRIAL PARK SUBDIVISION RECORDED IN VOLUME 11 OF PLATS ON PAGE 11 AS DOCUMENT NO. 480780,
PLAT OF MAYWOOD SUBDIVISION RECORDED IN VOLUME 9 OF PLATS ON PAGE 24 AS DOCUMENT NO. 443749,
CSM NO. 2758 RECORDED IN VOL.10 PG.3 AS DOCUMENT NO. 613957,
CSM NO. 5003 RECORDED IN VOL.17 PG.203 AS DOCUMENT NO. 732620,
CSM NO. 6896 RECORDED IN VOL.23 PG. 296 AS DOCUMENT NO. 852759,
CSM NO. 7444 RECORDED IN VOL.25 PG.244 AS DOCUMENT NO. 891453,
CSM NO. 8030 RECORDED IN VOL.27 PG.230 AS DOCUMENT NO. 2004R11340,
CSM NO. 8758 RECORDED IN VOL.30 PG.58 AS DOCUMENT NO. 2007R13481,
CSM NO. 9103 RECORDED IN VOL.32 PG.3 AS DOCUMENT NO. 2010R01034,
CSM NO. 9566 RECORDED IN VOL.34 PG.66 AS DOCUMENT NO. 2013R00603,
CSM NO. 9963 RECORDED IN VOL.36 PG.63 AS DOCUMENT NO. 2015R08954,
DEED VOLUME 468 PAGE 697

TRANSPORTATION PROJECT PLAT ID 6995-11-01 IS COINCIDENT WITH CONSTRUCTION ID 6995-11-71
TRANSPORTATION PROJECT PLAT ID 6995-11-02 IS COINCIDENT WITH CONSTRUCTION ID 6995-11-72

MSA PROFESSIONAL SERVICES
ARCHITECTURE | ENGINEERING | ENVIRONMENTAL PLANNING | PLANNING | SURVEYING
145 North Central Ave Marshfield, WI 54449
(715) 384-2133 (877) 204-0572
www.msa-ps.com

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 6995-11-01-4.01 Sheet 2 of 2
PROJECT NUMBER 6995-11-02-4.01 Sheet 2 of 2
AMENDMENT NO:

FILE NAME : P:\5805\584\00584086\CADD\C3D\00584086\RW\CITY ONLY 2014_CAD TPP 6995-11-01_6995-11-02.DWG
LAYOUT NAME: TITLE 6995-11-01_02-4.01
PLOT DATE : 2/24/2017 8:55 AM PLOT BY : CHAD BESAW PLOT NAME : _____
APPRAISAL PLAT DATE : 2/24/2017
6995-11-02-4.01

TRANSPORTATION PROJECT PLAT NO: 6995-11-02-4.02

THAT PART OF LOT 1, BLOCK 4 OF THE PLAT OF INDUSTRIAL PARK SUBDIVISION RECORDED IN VOLUME 11 OF PLATS ON PAGE 11 AS DOCUMENT NO. 480780, CSM NO. 5003 RECORDED IN VOL.17 PG.203 AS DOCUMENT NO. 732620, LOT 1 CSM NO. 6896 RECORDED IN VOL.23 PG. 296 AS DOCUMENT NO. 852759, LOT 1 CSM NO. 7444 RECORDED IN VOL.25 PG.244 AS DOCUMENT NO. 891453, LOT 1 CSM NO. 9566 RECORDED IN VOL.34 PG.66 AS DOCUMENT NO. 2013R00603, LOT 1 CSM NO. 9963 RECORDED IN VOL.36 PG.63 AS DOCUMENT NO. 2015R08954, DEED VOLUME 468 PAGE 697 LOCATED IN THE SW 1/4 - SW 1/4, SE 1/4 - SW 1/4, SECTION 16, T25N, R3E, CITY OF MARSHFIELD, AND THE NW 1/4 - NW 1/4, NE 1/4 - NW 1/4, SECTION 21, T25N, R3E, CITY OF MARSHFIELD, AND TOWN OF CAMERON, WOOD COUNTY, WISCONSIN.

RELOCATION ORDER LOCAL STREET - EAST 29TH STREET, CITY OF MARSHFIELD, WOOD COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF MARSHFIELD DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22, AND 32.05, WISCONSIN STATUTES, THE CITY OF MARSHFIELD ORDERS THAT:

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE CITY OF MARSHFIELD FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF MARSHFIELD, PURSUANT TO THE PROVISIONS OF SECTION 62.22(1) OR 32.05(2a), WISCONSIN STATUTES.

WISCONSIN ADMINISTRATIVE CODE CHAPTER TRANS 233 RESTRICTIONS.

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED IN THE WOOD COUNTY REGISTER OF DEEDS OFFICE AS SHEET 2 OF 2 OF DOCUMENT NUMBER 2017R01802

GN

0 50 100

SCALE, FEET

EXISTING FOUND MONUMENTS			
POINT	DESC.	Y	X
108	IR 0.75"	543081.831	643452.422
120	IR 0.75"	543144.717	643612.816
125	IP 1.25"	543062.692	644434.500
338	IP 1.25"	543133.545	644206.089
339	IP 1.25"	543069.206	644084.259
340	IP 1.0"	543073.496	643875.514
341	IR 0.75"	543074.190	643842.489
342	IP 1.0"	543078.143	643642.294
343	IP 2.5"	543144.173	643672.672

TLE POINT	STATION	OFFSET	Y	X
T-520	85+33.68	38.00' L	543159.349	643118.512
T-521	85+76.13	38.00' L	543158.522	643160.954
T-522	85+76.09	48.00' L	543168.521	643161.102
T-523	85+83.04	48.00' L	543168.386	643168.055
T-524	86+83.13	38.00' L	543156.438	643267.933
T-525	90+28.13	38.00' L	543149.716	643612.867
T-526	90+88.13	38.00' L	543148.547	643672.858
T-527	97+66.44	38.00' L	543135.332	644351.033
T-528	98+51.49	41.00' R	543054.690	644434.530
T-529	90+59.32	41.00' R	543070.124	643642.512
T-530	90+59.37	43.00' R	543068.125	643642.520
T-531	88+69.27	43.00' R	543071.828	643452.460

R/W	STATION	OFFSET	Y	X
105	85+33.73	33.00' L	543154.350	643118.459
106	85+33.73	0.00'	543121.356	643117.816
107	88+69.04	0.00'	543114.823	643453.065
108	88+69.04	33.00' R	543081.831	643452.422
116	85+83.18	33.00' L	543153.386	643167.901
117	85+82.81	73.00' L	543193.386	643168.312
118	86+82.81	73.00' L	543191.438	643268.292
119	86+83.18	33.00' L	543151.438	643267.881
120	90+28.18	33.00' L	543144.717	643612.816
121	90+88.18	33.00' L	543143.547	643672.807
122	97+66.50	33.00' L	543130.332	644350.994
123	97+66.50	0.00'	543097.338	644350.351
124	98+51.30	0.00'	543095.686	644435.142
125	98+51.30	33.00' R	543062.692	644434.500

2017R01803

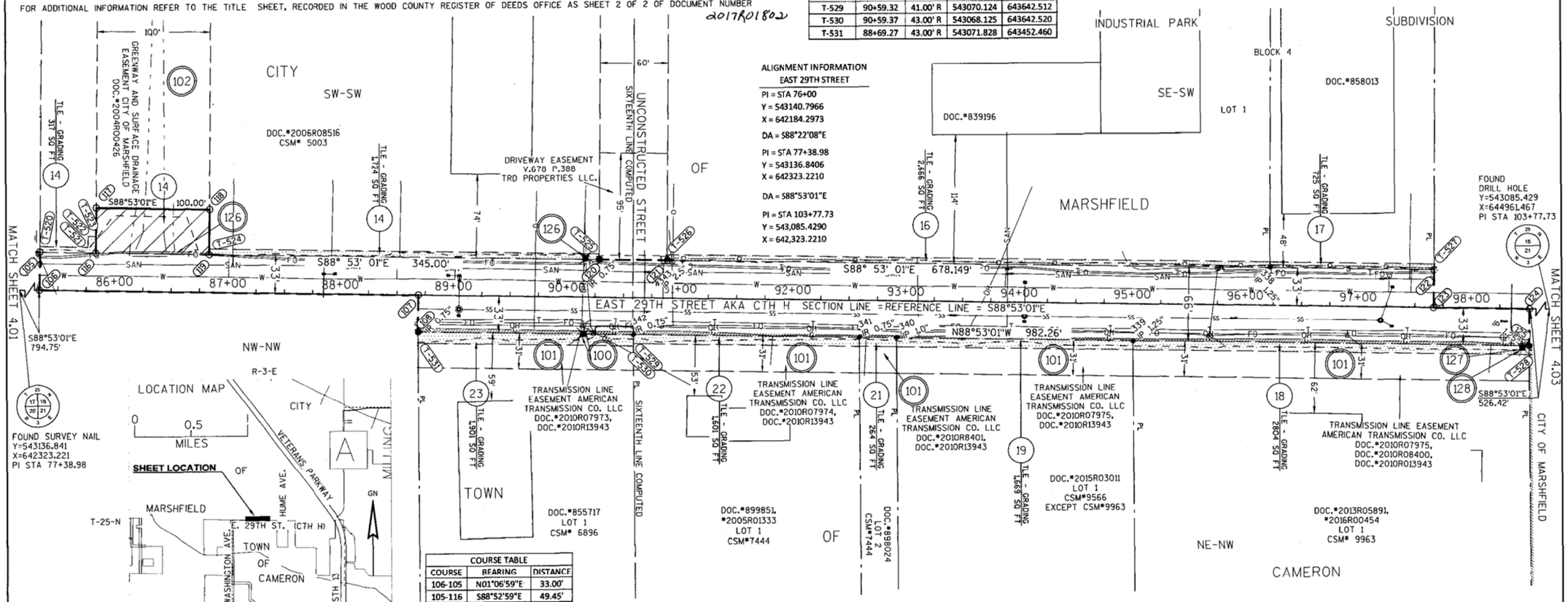
2017R01803

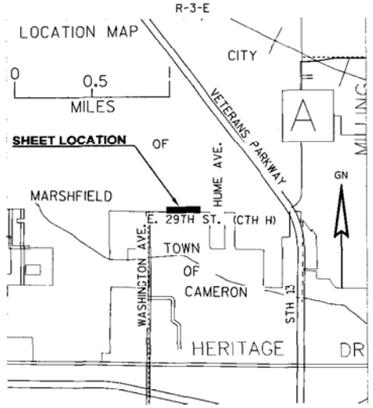
SUSAN E. GINTER
WOOD COUNTY
REGISTER OF DEEDS
RECORDED ON
03/07/2017 08:33AM
REC FEE: 25.00
EXEMPT #:
PAGES: 1

E MSA

Vol. 13 of Plats, Page 154

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 6995-11-02-4.02
AMENDMENT NO:





ALIGNMENT INFORMATION EAST 29TH STREET
PI = STA 76+00
Y = 543140.7966
X = 642184.2973
DA = S88°22'08"E
PI = STA 77+38.98
Y = 543136.8406
X = 642323.2210
DA = S88°53'01"E
PI = STA 103+77.73
Y = 543,085.4290
X = 642,323.2210

COURSE TABLE		
COURSE	BEARING	DISTANCE
106-105	N01°06'59"E	33.00'
105-116	S88°52'59"E	49.45'
116-117	N00°35'19"E	40.00'
118-119	S00°35'19"W	40.00'
120-121	S88°53'01"E	60.00'
122-123	S01°06'59"W	33.00'
123-124	S88°53'01"E	84.81'
124-125	S01°06'59"W	33.00'
108-107	N01°06'59"E	33.00'
107-106	N88°53'01"W	335.31'

UILITY INTERESTS REQUIRED			
UTILITY NUMBER	OWNERS	INTEREST REQUIRED	DOCUMENT INFO.
100	GENERAL TELEPHONE COMPANY	RELEASE OF RIGHTS	V.407 P.574, V.407 P.162, V.407 P.168, V.407 P.171, V.471 P.704
101	AMERICAN TRANSMISSION CO.LLC	RELEASE OF RIGHTS	DOC.# 2010R13943, 2010R7975, 2010R08400, 2010R07975, 2010R08401, 2010R07973
102	CITY OF MARSHFIELD	MERGED INTEREST	2004R00426
126	FRONTIER COMMUNICATIONS	RELEASE OF RIGHTS	
127	TDS TELECOM	RELEASE OF RIGHTS	
128	SOLARUS	RELEASE OF RIGHTS	

SCHEDULE OF LANDS & INTEREST REQUIRED		OWNER'S NAMES ARE FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE CITY.					
PARCEL NUMBER	OWNERS	INTEREST REQUIRED	R/W SQ FT REQUIRED NEW	EXISTING	TOTAL	PLE SQ FT	TLE SQ FT
14	TRD PROPERTIES, LLC, A WISCONSIN LIMITED LIABILITY COMPANY	FEE/TLE	4,000	--	4,000	--	2,041
16	MTE PROPERTIES, LLC, A WISCONSIN LIMITED LIABILITY COMPANY	TLE	--	--	--	--	2,666
17	HEIKENEN SERVICES, INC., A WISCONSIN CORPORATION	TLE	--	--	--	--	725
18	BACKAUS PROPERTIES, A WISCONSIN GENERAL PARTNERSHIP	TLE	--	--	--	--	2,804
19	DONALD P. NIKOLAI AND PENNY L. NIKOLAI, OR THEIR SUCCESSOR, AS TRUSTEES OF THE DONALD P. NIKOLAI AND PENNY L. NIKOLAI JOINT REVOCABLE TRUST DATED JULY 12, 2013	TLE	--	--	--	--	1,669
21	MCCC REAL ESTATE, L.L.C.	TLE	--	--	--	--	264
22	RUSSELL L. BURR AND DENISE M. BURR, HUSBAND AND WIFE AS SURVIVORSHIP MARITAL PROPERTY	TLE	--	--	--	--	1,601
23	B.T.R. RENTALS, LLC , A WISCONSIN LIMITED LIABILITY COMPANY	TLE	--	--	--	--	1,901

MSA PROFESSIONAL SERVICES

ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
146 North Central Ave Marshfield, WI 54449
(715) 384-2133 (877) 204-0572
www.msa-ps.com

© MSA Professional Services, Inc.

I, CHAD A. BESAW PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF MARSHFIELD, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: DATE: 3/3/2017
PRINT NAME: CHAD A. BESAW
REGISTRATION NUMBER: S-3029

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF MARSHFIELD
SIGNATURE: Daniel G. Knoeck DATE: 3/6/17
PRINT NAME: Daniel G. Knoeck
Director of Public Works

FILE NAME : P:\S805\S84\00584086\CADD\C3D\00584086\RW\CITY ONLY 2014_CAD TPP 6995-11-01_6995-11-02.DWG
PLOT DATE : 2/28/2017 11:51 AM
PLOT BY : CHAD BESAW
PLOT NAME :
PLOT SCALE : ##########
APPRAISAL PLAT DATE : 2/24/2017

6995-11-02-4.02

TRANSPORTATION PROJECT PLAT NO: 6995-11-02-4.03

THAT PART OF LOT 1, BLOCK 4 OF THE PLAT OF INDUSTRIAL PARK SUBDIVISION RECORDED IN VOLUME 11 OF PLATS ON PAGE 11 AS DOCUMENT NO. 480780, CSM NO. 2758 RECORDED IN VOL.10 PG.3 AS DOCUMENT NO. 613957, DEED VOLUME 468 PAGE 697 LOCATED IN THE SE 1/4 - SW 1/4, SECTION 16, T25N, R3E, CITY OF MARSHFIELD, AND THE NE 1/4 - NW 1/4, SECTION 21, T25N, R3E, CITY OF MARSHFIELD, AND TOWN OF CAMERON, WOOD COUNTY, WISCONSIN.

RELOCATION ORDER LOCAL STREET - EAST 29TH STREET, CITY OF MARSHFIELD, WOOD COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF MARSHFIELD DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22, AND 32.05, WISCONSIN STATUTES, THE CITY OF MARSHFIELD ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE CITY OF MARSHFIELD FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF MARSHFIELD, PURSUANT TO THE PROVISIONS OF SECTION 62.22(1) OR 32.05(2a), WISCONSIN STATUTES.

WISCONSIN ADMINISTRATIVE CODE CHAPTER TRANS 233 RESTRICTIONS.

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED IN THE WOOD COUNTY REGISTER OF DEEDS OFFICE AS SHEET 2 OF 2 OF DOCUMENT NUMBER 2017R01802

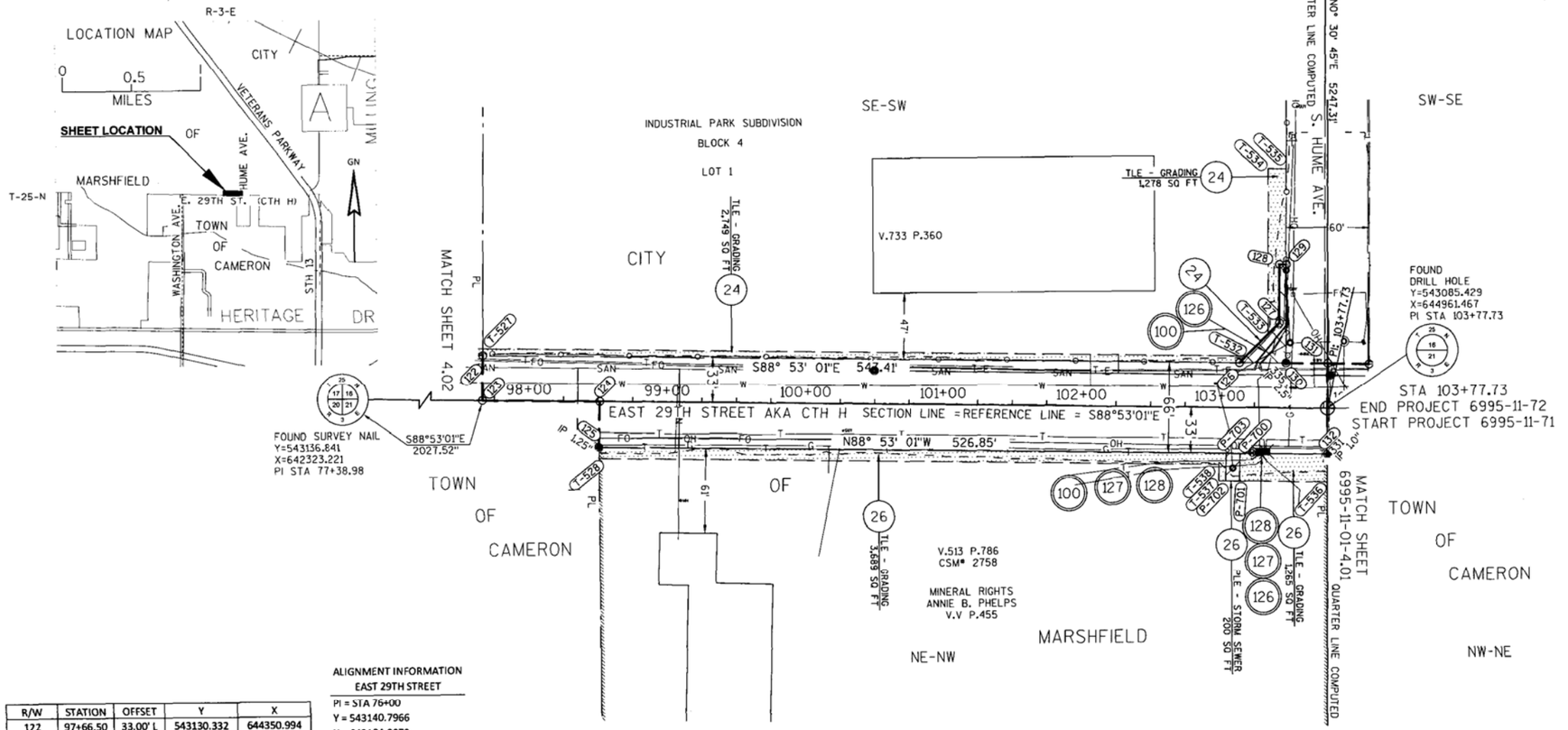
2017R01804

SUSAN E. GINTER
WOOD COUNTY
REGISTER OF DEEDS
RECORDED ON
03/07/2017 08:37AM
REC FEE: 25.00
EXEMPT #:
PAGES: 1

E msa

Vol. 13 of Plats, Page 155

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 6995-11-02-4.03
AMENDMENT NO:



COURSE TABLE		
COURSE	BEARING	DISTANCE
123-122	N01°06'59"E	33.00'
126-127	N45°47'19"E	40.26'
127-128	N00°28'23"E	42.37'
128-129	S88°53'03"E	5.00'
129-130	S00°28'23"W	71.00'
130-131	S88°53'03"E	30.19'
131-132	S00°45'00"W	66.00'
125-124	N01°06'59"E	33.00'
124-123	N88°53'01"W	84.81'

ALIGNMENT INFORMATION
EAST 29TH STREET

PI = STA 76+00
Y = 543140.7966
X = 642184.2973

DA = S88°22'08"E

PI = STA 77+38.98
Y = 543136.8406
X = 642323.2210

DA = S88°53'01"E

PI = STA 103+77.73
Y = 543,085.4290
X = 642,323.2210

R/W	STATION	OFFSET	Y	X
122	97+66.50	33.00' L	543130.332	644350.994
123	97+66.50	0.00'	543097.338	644350.351
124	98+51.30	0.00'	543095.686	644435.142
125	98+51.30	33.00' R	543062.692	644434.500
126	103+13.91	33.00' L	543119.666	644898.301
127	103+42.21	61.63' L	543147.743	644927.161
128	103+41.74	104.00' L	543190.110	644927.511
129	103+46.74	104.00' L	543190.013	644932.511
130	103+47.54	33.00' L	543119.011	644931.924
131	103+77.73	33.00' L	543118.423	644962.110
132	103+78.15	33.00' R	543052.430	644961.246

PLE POINT	STATION	OFFSET	Y	X
P-700	103+15.00	33.00' R	543053.660	644898.109
P-701	103+15.00	53.00' R	543033.664	644897.720
P-702	103+05.00	53.00' R	543033.859	644887.721
P-703	103+05.00	33.00' R	543053.855	644888.111

TLE POINT	STATION	OFFSET	Y	X
T-527	97+66.44	38.00' L	543135.332	644351.033
T-528	98+51.49	41.00' R	543054.690	644434.530
T-532	103+18.85	38.00' L	543124.569	644903.340
T-533	103+34.30	53.63' L	543139.897	644919.096
T-534	103+32.96	173.68' L	543259.946	644920.088
T-535	103+45.95	173.82' L	543259.838	644933.087
T-536	103+78.40	53.00' R	543032.430	644961.112
T-537	103+00.00	53.00' R	543033.956	644882.722
T-538	103+00.00	41.00' R	543045.951	644882.956

EXISTING FOUND MONUMENTS			
POINT	DESC.	Y	X
125	IP 1.25"	543062.692	644434.500
331	IP 1.0"	543052.268	644961.498
335	IP 2.5"	543119.454	644931.928

SCHEDULE OF LANDS & INTEREST REQUIRED		OWNER'S NAMES ARE FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE CITY.					
PARCEL NUMBER	OWNERS	INTEREST REQUIRED	R/W SQ FT REQUIRED			PLE SQ FT	TLE SQ FT
			NEW	EXISTING	TOTAL		
24	OFF CENTER HOLDING COMPANY II, LLC.	FEE/TLE	765	--	765	--	4,027
26	MID-STATE CONTRACTING, INC.	PLE/TLE	--	--	--	200	4,954

UILITY INTERESTS REQUIRED			
UTILITY NUMBER	OWNERS	INTEREST REQUIRED	DOCUMENT INFO.
100	GENERAL TELEPHONE COMPANY	RELEASE OF RIGHTS	V.407 P.574, V.407 P.162
126	FRONTIER COMMUNICATIONS	RELEASE OF RIGHTS	
127	TDS TELECOM	RELEASE OF RIGHTS	
128	SOLARUS	RELEASE OF RIGHTS	

MSA PROFESSIONAL SERVICES
ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
146 North Central Ave Marshfield, WI 54449
(715) 384-2133 (877) 204-0572
www.msa-ps.com

© MSA Professional Services, Inc.

I, CHAD A. BESAW PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF MARSHFIELD, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: _____ DATE: 3/3/2017
PRINT NAME: CHAD A. BESAW
REGISTRATION NUMBER: S-3029

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF MARSHFIELD
SIGNATURE: Daniel D. Knoeck DATE: 3/6/17
PRINT NAME: Daniel D. Knoeck
Director of Public Works

TRANSPORTATION PROJECT PLAT NO: 6995-11-01-4.01

THAT PART OF LOT 1, BLOCK 1 OF THE PLAT OF INDUSTRIAL PARK SUBDIVISION RECORDED IN VOLUME 11 OF PLATS ON PAGE 11 AS DOCUMENT NO. 480780, DEED VOLUME 468 PAGE 697, LOCATED IN THE SW 1/4 - SE 1/4 , SECTION 16, T25N, R3E, CITY OF MARSHFIELD, AND THE NW 1/4 - NE 1/4, SECTION 21, T25N, R3E, CITY OF MARSHFIELD, AND TOWN OF CAMERON, WOOD COUNTY, WISCONSIN.

RELOCATION ORDER LOCAL STREET - EAST 29TH STREET, CITY OF MARSHFIELD, WOOD COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF MARSHFIELD DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22, AND 32.05, WISCONSIN STATUTES, THE CITY OF MARSHFIELD ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE CITY OF MARSHFIELD FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF MARSHFIELD, PURSUANT TO THE PROVISIONS OF SECTION 62.22(1) OR 32.05(2a), WISCONSIN STATUTES.

WISCONSIN ADMINISTRATIVE CODE CHAPTER TRANS 233 RESTRICTIONS.

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED IN THE WOOD COUNTY REGISTER OF DEEDS OFFICE AS SHEET 2 OF 2 OF DOCUMENT NUMBER 2017R01802

2017R01805
SUSAN E. GINTER
WOOD COUNTY
REGISTER OF DEEDS
RECORDED ON
03/07/2017 08:39AM
REC FEE: 25.00
EXEMPT #:
PAGES: 1
MSA
Vol. 13 of Plats, Page 156
RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 6995-11-01-4.01
AMENDMENT NO:

ALIGNMENT INFORMATION
EAST 29TH STREET

PI = STA 103+77.73
Y = 543,085.4290
X = 642,323.2210

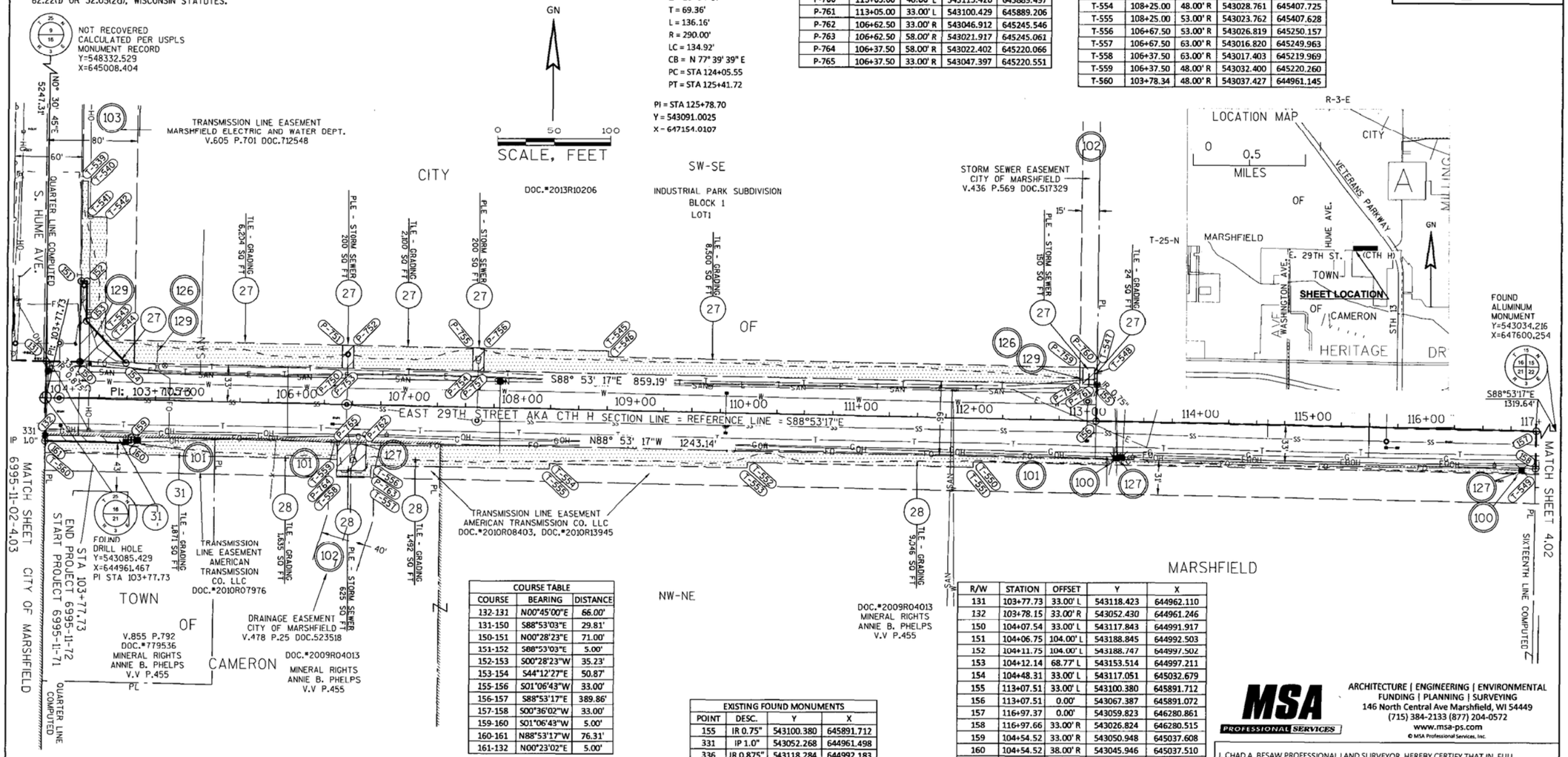
DA = 588°53'17"E

PI = STA 124+73.64
Y = 543044.7349
X = 647058.2593
Δ = 26° 54' 07"
T = 69.36'
L = 136.16'
R = 290.00'
LC = 134.92'
CB = N 77° 39' 39" E
PC = STA 124+05.55
PT = STA 125+41.72

PI = STA 125+78.70
Y = 543091.0025
X = 647154.0107

PLE POINT	STATION	OFFSET	Y	X
P-750	106+40.00	33.00' L	543113.332	645224.331
P-751	106+40.00	53.00' L	543133.328	645224.719
P-752	106+50.00	53.00' L	543133.134	645234.717
P-753	106+50.00	33.00' L	543113.138	645234.329
P-754	107+55.00	33.00' L	543111.101	645339.309
P-755	107+55.00	53.00' L	543131.097	645339.697
P-756	107+65.00	53.00' L	543130.903	645349.696
P-757	107+65.00	33.00' L	543110.907	645349.308
P-758	112+95.00	33.00' L	543100.623	645879.208
P-759	112+95.00	48.00' L	543115.620	645879.499
P-760	113+05.00	48.00' L	543115.426	645889.497
P-761	113+05.00	33.00' L	543100.429	645889.206
P-762	106+62.50	33.00' R	543046.912	645245.546
P-763	106+62.50	58.00' R	543021.917	645245.061
P-764	106+37.50	58.00' R	543022.402	645220.066
P-765	106+37.50	33.00' R	543047.397	645220.551

TLE POINT	STATION	OFFSET	Y	X
T-539	104+05.77	192.26' L	543277.110	644993.232
T-540	104+10.77	192.32' L	543277.069	644998.232
T-541	104+11.12	160.73' L	543245.482	644997.971
T-542	104+28.12	160.92' L	543245.342	645014.970
T-543	104+29.25	58.88' L	543143.294	645014.128
T-544	104+35.20	53.00' L	543137.302	645019.956
T-545	108+75.00	53.00' L	543128.768	645459.675
T-546	108+75.00	48.00' L	543123.769	645459.578
T-547	113+05.00	43.00' L	543110.427	645889.400
T-548	113+07.39	43.00' L	543110.380	645891.791
T-549	116+97.71	38.00' R	543021.824	646280.462
T-550	112+00.00	38.00' R	543031.483	645782.848
T-551	112+00.00	43.00' R	543026.483	645782.751
T-552	110+00.00	43.00' R	543030.365	645582.789
T-553	110+00.00	48.00' R	543025.365	645582.692
T-554	108+25.00	48.00' R	543028.761	645407.725
T-555	108+25.00	53.00' R	543023.762	645407.628
T-556	106+67.50	53.00' R	543026.819	645250.157
T-557	106+67.50	63.00' R	543016.820	645249.963
T-558	106+37.50	63.00' R	543017.403	645219.969
T-559	106+37.50	48.00' R	543032.400	645220.260
T-560	103+78.34	48.00' R	543037.427	644961.145



COURSE TABLE		
COURSE	BEARING	DISTANCE
132-131	N00°45'00"E	66.00'
131-150	S88°53'03"E	29.81'
150-151	N00°28'23"E	71.00'
151-152	S88°53'03"E	5.00'
152-153	S00°28'23"W	35.23'
153-154	S44°12'27"E	50.87'
155-156	S01°06'43"W	33.00'
156-157	S88°53'17"E	389.86'
157-158	S00°36'02"W	33.00'
159-160	S01°06'43"W	5.00'
160-161	N88°53'17"W	76.31'
161-132	N00°23'02"E	5.00'

NW-NE

EXISTING FOUND MONUMENTS			
POINT	DESC.	Y	X
155	IR 0.75"	543100.380	645891.712
331	IP 1.0"	543052.268	644961.498
336	IR 0.875"	543118.284	644992.183

R/W	STATION	OFFSET	Y	X
131	103+77.73	33.00' L	543118.423	644962.110
132	103+78.15	33.00' R	543052.430	644961.246
150	104+07.54	33.00' L	543117.843	644991.917
151	104+06.75	104.00' L	543188.845	644992.503
152	104+11.75	104.00' L	543188.747	644997.502
153	104+12.14	68.77' L	543153.514	644997.211
154	104+48.31	33.00' L	543117.051	645032.679
155	113+07.51	33.00' L	543100.380	645891.712
156	113+07.51	0.00'	543067.387	645891.072
157	116+97.37	0.00'	543059.823	646280.861
158	116+97.66	33.00' R	543026.824	646280.515
159	104+54.52	33.00' R	543050.948	645037.608
160	104+54.52	38.00' R	543045.946	645037.510
161	103+78.21	38.00' R	543047.427	644961.212

SCHEDULE OF LANDS & INTEREST REQUIRED		OWNER'S NAMES ARE FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE CITY.					
PARCEL NUMBER	OWNERS	INTEREST REQUIRED	R/W SQ FT REQUIRED NEW	EXISTING	TOTAL	PLE SQ FT	TLE SQ FT
27	FIGI'S REAL ESTATE 3, LLC, A WISCONSIN LIMITED LIABILITY COMPANY	FEE/PLE/TLE	995	--	995	550	16,828
28	ROEHL PROPERTIES OF MARSHFIELD, LLC, A WISCONSIN LIMITED LIABILITY COMPANY, ETAL	PLE/TLE	--	--	--	625	12,173
31	MICHELE PASCHEL	FEE/PLE/TLE	382	--	382	--	1,871

UILITY INTERESTS REQUIRED			
UTILITY NUMBER	OWNERS	INTEREST REQUIRED	DOCUMENT INFO.
100	GENERAL TELEPHONE COMPANY	RELEASE OF RIGHTS	V.407 P.162, V.407 P.574, DOC.# 496159
101	AMERICAN TRANSMISSION CO.LLC	RELEASE OF RIGHTS	DOC.# 2010R07976, 2010R08403, 2010R13945
102	CITY OF MARSHFIELD	MERGED INTEREST	V.436 P.569
103	MARSHFIELD ELECTRIC AND WATER DEPARTMENT	MERGED INTEREST	V.605, P.701, DOC.# 712548 V.478P.25, DOC.# 523518
126	FRONTIER COMMUNICATIONS	RELEASE OF RIGHTS	
127	TDS TELECOM	RELEASE OF RIGHTS	
129	CHARTER COMMUNICATIONS	RELEASE OF RIGHTS	

MSA PROFESSIONAL SERVICES
ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
146 North Central Ave Marshfield, WI 54449
(715) 384-2133 (877) 204-0572
www.msa-ps.com

© MSA Professional Services, Inc.

I, CHAD A. BESAW PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF MARSHFIELD, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: _____ DATE: 3/6/17
PRINT NAME: CHAD A. BESAW
REGISTRATION NUMBER: S-3029

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF MARSHFIELD
SIGNATURE: Daniel G. Knoeck DATE: 3/6/17
PRINT NAME: Daniel G. Knoeck
Director of Public Works

TRANSPORTATION PROJECT PLAT NO: 6995-11-01-4.02

THAT PART OF LOT 1 CSM NO. 8030 RECORDED IN VOL.27 PG.230 AS DOCUMENT NO. 2004R11340, LOT 1 CSM NO. 9103 RECORDED IN VOL.32 PG.3 AS DOCUMENT NO. 2010R01034, DEED VOLUME 468 PAGE 697 LOCATED IN THE SW 1/4 - SE 1/4, SE 1/4 - SE 1/4, SECTION 16, T25N, R3E, CITY OF MARSHFIELD, AND THE NE 1/4 - NE 1/4, SECTION 21, T25N, R3E, CITY OF MARSHFIELD, AND TOWN OF CAMERON, WOOD COUNTY, WISCONSIN.

RELOCATION ORDER LOCAL STREET - EAST 29TH STREET, CITY OF MARSHFIELD, WOOD COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF MARSHFIELD DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22, AND 32.05, WISCONSIN STATUTES, THE CITY OF MARSHFIELD ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE CITY OF MARSHFIELD FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF MARSHFIELD, PURSUANT TO THE PROVISIONS OF SECTION 62.22(1) OR 32.05(2a), WISCONSIN STATUTES.

WISCONSIN ADMINISTRATIVE CODE CHAPTER TRANS 233 RESTRICTIONS.

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED IN THE WOOD COUNTY REGISTER OF DEEDS OFFICE AS SHEET 2 OF 2 OF DOCUMENT NUMBER 2017R01802

GN

0 50 100

SCALE, FEET

TLE POINT	STATION	OFFSET	Y	X
T-548	113+07.39	43.00' L	543110.380	645891.791
T-549	116+97.71	38.00' R	543021.824	646280.462
T-561	114+55.00	43.00' L	543107.516	646039.372
T-562	114+65.00	43.00' L	543107.322	646049.370
T-563	116+25.00	43.00' L	543104.218	646209.340
T-564	116+25.00	38.00' L	543099.219	646209.243
T-565	119+11.50	38.00' L	543093.660	646495.689
T-566	119+21.50	38.00' L	543093.466	646505.687
T-567	121+50.00	38.00' L	543089.032	646734.144
T-568	121+50.00	43.00' L	543094.031	646734.241
T-569	122+87.00	43.00' L	543091.373	646871.215
T-570	122+87.00	68.00' L	543116.368	646871.700
T-571	123+42.00	68.00' L	543115.301	646926.690
T-572	123+42.00	43.00' L	543090.305	646926.205
T-573	123+67.00	43.00' L	543089.820	646951.200
T-574	123+67.00	38.00' L	543084.821	646951.103
T-575	123+97.74	38.00' L	543084.225	646981.839
T-576	124+88.15	38.70' L	543093.528	647060.456
T-577	125+12.77	61.77' R	543005.622	647115.256
T-578	121+25.00	38.00' R	543013.533	646707.674
T-579	121+25.00	43.00' R	543008.534	646707.577
T-580	119+69.66	43.00' R	543011.547	646552.263
T-581	119+69.61	38.00' R	543016.546	646552.316

EXISTING FOUND MONUMENTS			
POINT	DESC.	Y	X
155	IR 0.75"	543100.380	645891.712
162	IR 0.75"	543079.226	646981.743
163	IR 0.75"	543088.879	647062.440
356	IR 0.75"	543019.210	646669.260
357	IR 0.75"	543089.847	646436.214

PLE POINT	STATION	OFFSET	Y	X
P-766	114+55.00	33.00' L	543097.518	646039.178
P-767	114+55.00	48.00' L	543112.515	646039.469
P-768	114+65.00	48.00' L	543112.321	646049.467
P-769	114+65.00	33.00' L	543097.324	646049.176
P-770	119+11.50	33.00' L	543088.661	646495.592
P-771	119+11.50	48.00' L	543103.658	646495.883
P-772	119+21.50	48.00' L	543103.464	646505.881
P-773	119+21.50	33.00' L	543088.467	646505.590

R/W	STATION	OFFSET	Y	X
155	113+07.51	33.00' L	543100.380	645891.712
156	113+07.51	0.00'	543067.387	645891.072
157	116+97.37	0.00'	543059.823	646280.861
158	116+97.66	33.00' R	543026.824	646280.515
162	123+97.74	33.00' L	543079.226	646981.743
163	124+88.94	33.69' L	543088.879	647062.440
164	125+11.21	55.69' R	543010.697	647111.422
165	121+19.61	33.00' R	543018.636	646702.385
166	121+19.61	38.00' R	543013.636	646702.288
167	119+75.00	38.00' R	543016.443	646557.702
168	119+75.00	33.00' R	543021.443	646557.799

2017R01806

SUSAN E. GINTER
WOOD COUNTY
REGISTER OF DEEDS
RECORDED ON
03/07/2017 08:47AM
REC FEE: 25.00
EXEMPT #:
PAGES: 1

Vol. 13 of Plats, Page 157

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 6995-11-01-4.02
AMENDMENT NO:

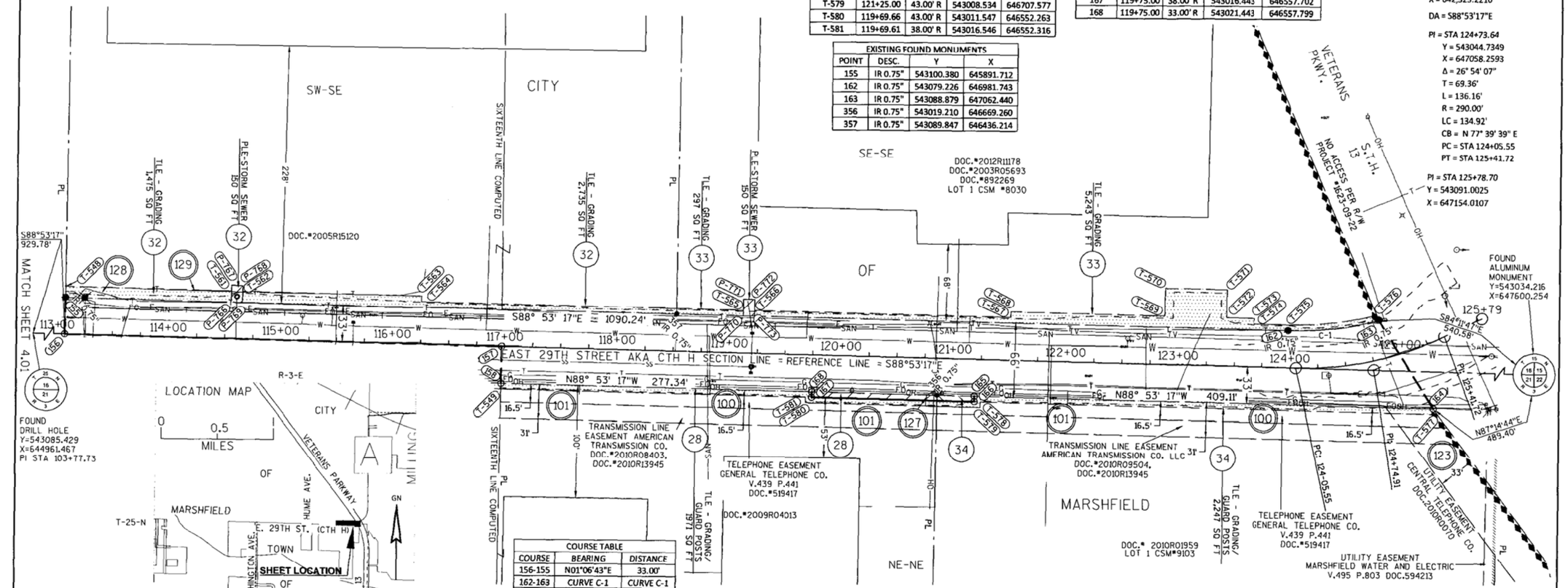
ALIGNMENT INFORMATION
EAST 29TH STREET

PI = STA 103+77.73
Y = 543,085.4290
X = 642,323.2210

DA = S88°53'17"E

PI = STA 124+73.64
Y = 543044.7349
X = 647058.2593
Δ = 26° 54' 07"
T = 69.36'
L = 136.16'
R = 290.00'
LC = 134.92'
CB = N 77° 39' 39" E
PC = STA 124+05.55
PT = STA 125+41.72

PI = STA 125+78.70
Y = 543091.0025
X = 647154.0107



COURSE TABLE		
COURSE	BEARING	DISTANCE
156-155	N01°06'43"E	33.00'
162-163	CURVE C-1	CURVE C-1
163-164	S32°04'05"E	92.26'
165-166	S01°06'43"W	5.00'
166-167	N88°53'17"W	144.61'
167-168	N01°06'43"E	5.00'
158-157	N00°36'02"E	33.00'
157-156	N88°53'17"W	389.86'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH	DELTA	TANGENT IN	TANGENT OUT
C1	81.53'	294.43'	N83°10'43"E	81.27'	15°51'59"	N01°06'43"E	S14°45'16"E

UILITY INTERESTS REQUIRED

UTILITY NUMBER	OWNERS	INTEREST REQUIRED	DOCUMENT INFO.
100	GENREAL TELEPHONE COMPANY	RELEASE OF RIGHTS	V.439 P.437, DOC.# 519416 V.439 P.441, DOC.# 519417, V.407 P.162
101	AMERICAN TRANSMISSION CO.LLC	RELEASE OF RIGHTS	DOC.# 2010R07976, 2010R08403, 2010R13945,
123	CENTRAL STATE TELEPHONE COMPANY / TDS TELECOM	RELEASE OF RIGHTS	DOC.# 2010R0070
127	TDS TELECOM	RELEASE OF RIGHTS	
128	SOLARUS	RELEASE OF RIGHTS	
129	CHARTER COMMUNICATIONS	RELEASE OF RIGHTS	

SCHEDULE OF LANDS & INTEREST REQUIRED

OWNER'S NAMES ARE FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE CITY.

PARCEL NUMBER	OWNERS	INTEREST REQUIRED	R/W SQ FT REQUIRED NEW	EXISTING	TOTAL	PLE SQ FT	TLE SQ FT
32	OCB RESTAURANT COMPANY, LLC, A MINNESOTA LIMITED LIABILITY COMPANY	PLE/TLE	--	--	--	150	4,210
33	VALLEY ACQUISITION LLC, A WISCONSIN LIMITED LIABILITY COMPANY	PLE/TLE	--	--	--	150	5,540
34	VANDY PROPERTIES MARSHFIELD LLC, A WISCONSIN LIMITED LIABILITY COMPANY	FEE/TLE	165	--	165	--	2,247
28	ROEHL PROPERTIES OF MARSHFIELD, LLC, A WISCONSIN LIMITED LIABILITY COMPANY	FEE/TLE	557	--	557	--	1,971

MSA PROFESSIONAL SERVICES
ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
146 North Central Ave Marshfield, WI 54449
(715) 384-2133 (877) 204-0572
www.msa-ps.com

© MSA Professional Services, Inc.

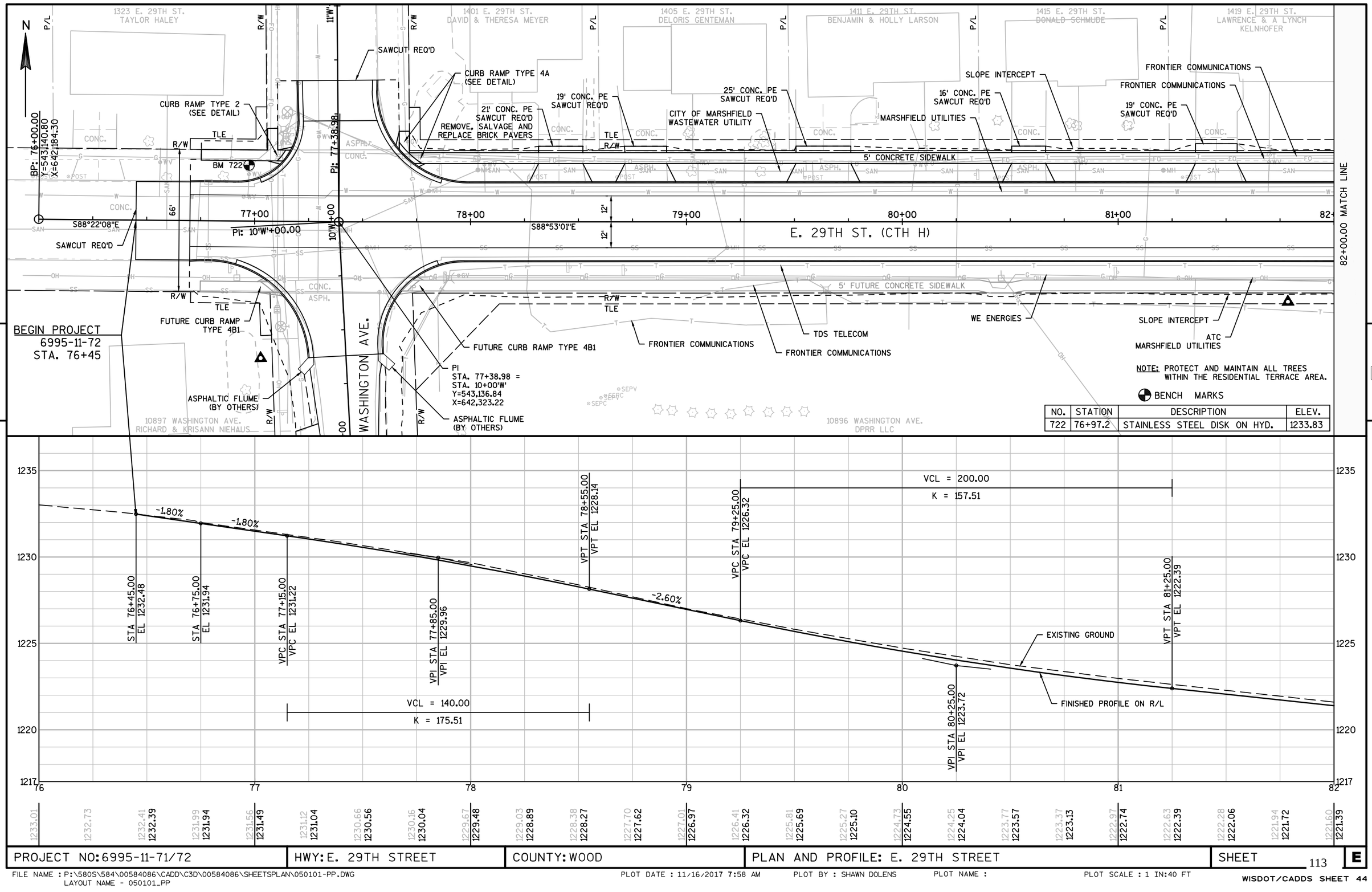
I, CHAD A. BESAW PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF MARSHFIELD, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: _____ DATE: 3/6/2017
PRINT NAME: CHAD A. BESAW
REGISTRATION NUMBER: S-3029

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF MARSHFIELD

SIGNATURE: Daniel G. Knoek DATE: 3/6/17
PRINT NAME: Daniel G. Knoek
Director of Public Works

FILE NAME : P:\5805\584\00584086\CADD\C3D\00584086\RW\CITY ONLY 2014_CAD TPP 6995-11-01_6995-11-02.DWG
APPRAISAL PLAT DATE : 2/24/2017
PLOT DATE : 2/28/2017 11:52 AM
PLOT BY : CHAD BESAW
PLOT NAME :
PLOT SCALE : ##########



PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PLAN AND PROFILE: E. 29TH STREET	SHEET 113 E

1423 E. 29TH ST.
RANDY & MARILYN WEILER

1427 E. 29TH ST.
SAMANTHA SEIDL

1431 E. 29TH ST.
KAREN LAPPE

1523 E. 29TH ST.
TRD PROPERTIES LLC

10896 WASHINGTON AVE.
DPRR LLC

BUTTERNUT PKWY.

STA 86+40, STRUCTURE B-71-196, REQUIRED
TWIN CELL 12' WIDE X 5' HIGH BOX CULVERT
10° SKEW RHF

MARSHFIELD UTILITIES
CITY OF MARSHFIELD WASTEWATER UTILITY
22' CONC. PE SAWCUT REQ'D
18' CONC. PE SAWCUT REQ'D
18' CONC. PE SAWCUT REQ'D
CURB RAMP TYPE 2 (SEE DETAIL)
SLOPE INTERCEPT
35' ASPH. CE SAWCUT REQ'D
CURB RAMP TYPE 2 (SEE DETAIL)
DELINEATED WETLANDS
FEE
FRONTIER COMMUNICATIONS
FRONTIER COMMUNICATIONS
REMOVING GUARDRAIL
TLE
R/W
5' CONCRETE SIDEWALK
STRUCTURE B-71-196 REQUIRED
12'
12'
82+00.00 MATCH LINE
88+00.00 MATCH LINE
83+00
84+00
85+00
86+00
87+00
66'
E. 29TH ST. (CTH H)
S88°53'01"E
5' FUTURE CONCRETE SIDEWALK
ASPH.
25' ASPH. PE SAWCUT REQ'D
SLOPE INTERCEPT
ATC MARSHFIELD UTILITIES
WE ENERGIES
MARSHFIELD UTILITIES
REMOVING GUARDRAIL
TLE
TDS TELECOM
SOLARUS
DELINEATED WETLANDS
FEE
SEE GRADING PLAN DETAIL
REMOVE OLD STRUCTURE (STA 86+31)
(3) 83" X 57" X 60" CMP CULVERTS
0° SKEW

NOTE: PROTECT AND MAINTAIN ALL TREES WITHIN THE RESIDENTIAL TERRACE AREA.

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
722	76+97.2	STAINLESS STEEL DISK ON HYD.	1233.83
369	90+27.3	STAINLESS STEEL DISK ON HYD.	1220.39

VCL = 200.00
K = 270.50

VCL = 160.00
K = 146.67

-1.33%
-0.59%

EXISTING GROUND
FINISHED PROFILE ON R/L

VPC STA 83+00.00
VPC EL 1220.06

VPI STA 84+00.00
VPI EL 1218.73

VPT STA 85+00.00
VPT EL 1218.14

VPC STA 87+05.00
VPC EL 1216.93

VPI STA 87+85.00
VPI EL 1216.46

HIGH WATER 100 ELEVATION: 1216.97
OBSERVED WATER ELEVATION: 1210.85± (5-24-16)
STREAMBED ELEVATION: 1208.84±

1225
1220
1215
1210
1205

82 83 84 85 86 87 88

1221.60	1221.39	1221.30	1221.06	1220.99	1220.73	1220.67	1220.39	1220.34	1220.06	1220.02	1219.74	1219.70	1219.44	1219.40	1219.17	1219.10	1218.92	1218.83	1218.69	1218.56	1218.48	1218.35	1218.30	1218.14	1218.14	1218.06	1217.99	1217.98	1217.85	1217.81	1217.70	1217.62	1217.55	1217.49	1217.40	1217.36	1217.25	1217.27	1217.11	1217.17	1216.96	1217.07	1216.82	1216.97	1216.73	1217.02	1216.68	1217.06	1216.68

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PLAN AND PROFILE: E. 29TH STREET	SHEET 114	E

1523 E. 29TH ST.
TRD PROPERTIES LLC

1601 E. 29TH ST.
MTE PROPERTIES LLC

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
369	90+27.3	STAINLESS STEEL DISK ON HYD.	1220.39

N

88+00.00 MATCH LINE

94+00.00 MATCH LINE

60'

R/W

R/W

47' ASPH. CE
SAWCUT REQ'D

38' ASPH. CE
SAWCUT REQ'D

FRONTIER COMMUNICATIONS

FRONTIER COMMUNICATIONS

PROVIDE 5:1 TAPER
STA. 90+81.4, 32.0' LT TO
STA. 90+86.4, 31.0' LT BOW

CITY OF MARSHFIELD
WASTEWATER UTILITY

EXISTING FENCE
(TO REMAIN)

MARSHFIELD UTILITIES

40' ASPH. CE
SAWCUT REQ'D

EXISTING SLIDE GATE
(TO REMAIN)

SLOPE INTERCEPT

TLE
R/W

BM 369

5' CONCRETE SIDEWALK

12'

12'

66'

S88°53'01"E

E. 29TH ST. (CTH H)

5' FUTURE CONCRETE SIDEWALK

R/W

TLE

WE ENERGIES

SLOPE INTERCEPT

33' GRAV. CE

ATC
MARSHFIELD UTILITIES

SOLARUS

SOLARUS

20' GRAV. PE

MARSHFIELD UTILITIES

TDS TELECOM

TROPHY LN.

10896 WASHINGTON AVE.
DPRR LLC

10885 TROPHY LN.
BTR RENTALS LLC

10888 TROPHY LN.
RUSSELL & DENISE BURR

DONALD & PENNY NIKOLAI

VCL = 160.00
K = 146.67

VPT STA 88+65.00
VPT EL 1216.86

STA 92+00.00
EL 1218.53

EXISTING GROUND

FINISHED PROFILE ON R/L

0.50%

0.71%

1225
1220
1215
1210

88 89 90 91 92 93 94

1217.06 1216.68
1217.22 1216.71
1217.38 1216.79
1217.53 1216.91
1217.67 1217.03
1217.81 1217.16
1217.96 1217.28
1218.12 1217.41
1218.28 1217.53
1218.47 1217.66
1218.66 1217.78
1218.84 1217.91
1219.02 1218.03
1219.18 1218.16
1219.34 1218.28
1219.51 1218.41
1219.68 1218.53
1219.85 1218.71
1220.02 1218.89
1220.14 1219.07
1220.27 1219.24
1220.44 1219.42
1220.61 1219.60
1220.75 1219.78
1220.89 1219.96

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PLAN AND PROFILE: E. 29TH STREET	SHEET 115	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 050103_PP

PLOT DATE : 11/16/2017 7:45 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT

1601 E. 29TH ST.
MTE PROPERTIES LLC

1625 E. 29TH ST.
HEIKENEN SERVICES INC

2808 S. HUME AVE.
OFF CENTER HOLDING CO II

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
369	90+27.3	STAINLESS STEEL DISK ON HYD.	1220.39
364	103+49.0	STAINLESS STEEL DISK ON HYD.	1227.73

N

REMOVE EXISTING DRIVEWAY
CITY OF MARSHFIELD WASTEWATER UTILITY
EXISTING SLIDE GATE (TO REMAIN)
FRONTIER COMMUNICATIONS
FRONTIER COMMUNICATIONS
FRONTIER COMMUNICATIONS
SLOPE INTERCEPT
32' GRAV. CE
REMOVING FENCE GATES CHAIN LINK (40 FEET) STA. 97+49
EXISTING FENCE (TO REMAIN)
MARSHFIELD UTILITIES
5' CONCRETE SIDEWALK

94+00.00 MATCH LINE
100+00.00 MATCH LINE

95+00 96+00 97+00 98+00 99+00 100

12' 66' 12'

S88°53'01"E

E. 29TH ST. (CTH H)

5' FUTURE CONCRETE SIDEWALK

SLOPE INTERCEPT
33' GRAV. CE
WE ENERGIES
TDS TELECOM
ATC
MARSHFIELD UTILITIES
EDGE OF EXISTING ASPHALT PARKING (TO REMAIN)
43' ASPH. CE SAWCUT REQ'D
SOLARUS
45' GRAV. CE

DONALD & PENNY NIKOLAI

8765 E. 29TH ST.
BACKAUS PROPERTIES

1701 E. 29TH ST.
MID-STATE CONTRACTING INC

5

5

VCL = 150.00
K = 387.93

VPC STA 95+00.00
VPC EL 1220.67

VPI STA 95+75.00
VPI EL 1221.21

VPT STA 96+50.00
VPT EL 1222.03

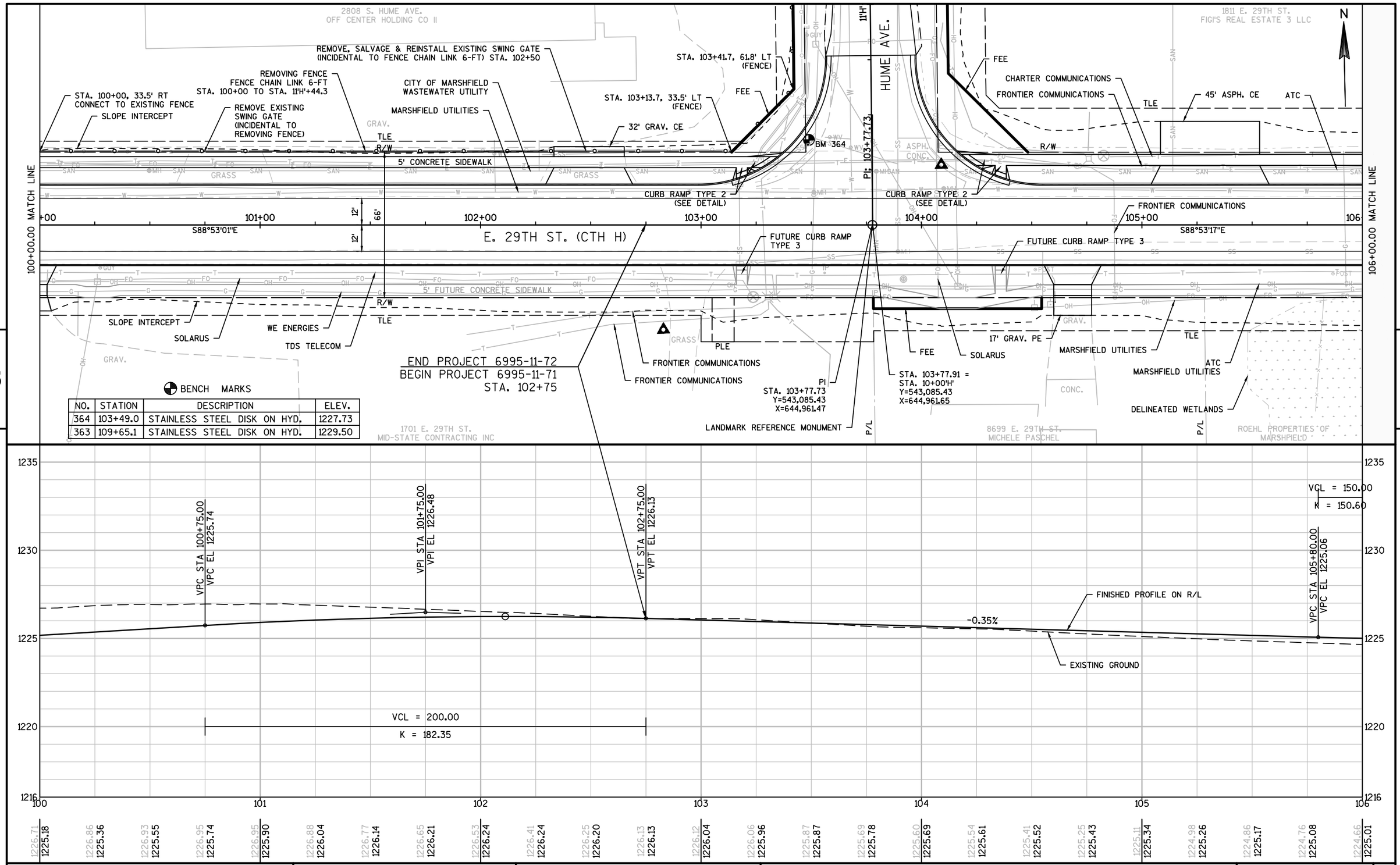
STA 98+00.00
EL 1223.68

EXISTING GROUND
FINISHED PROFILE ON R/L
1.10%
0.75%

1230 1225 1220 1215 1213

94 95 96 97 98 99 100

| | | |



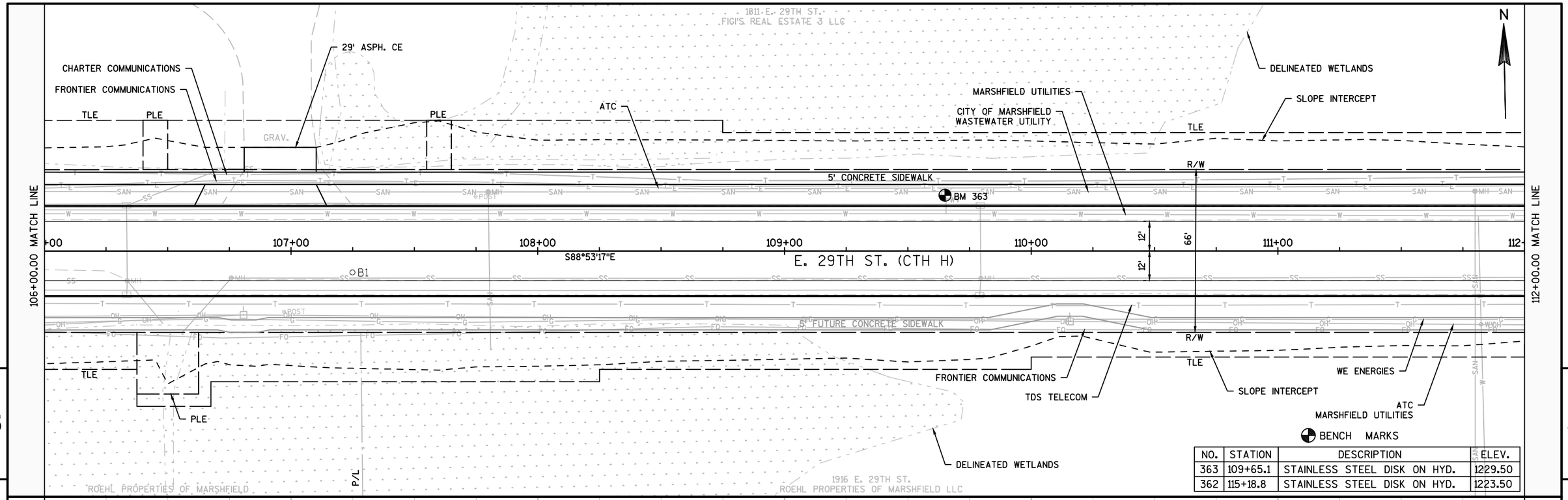
5

5

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PLAN AND PROFILE: E. 29TH STREET	SHEET 117	E

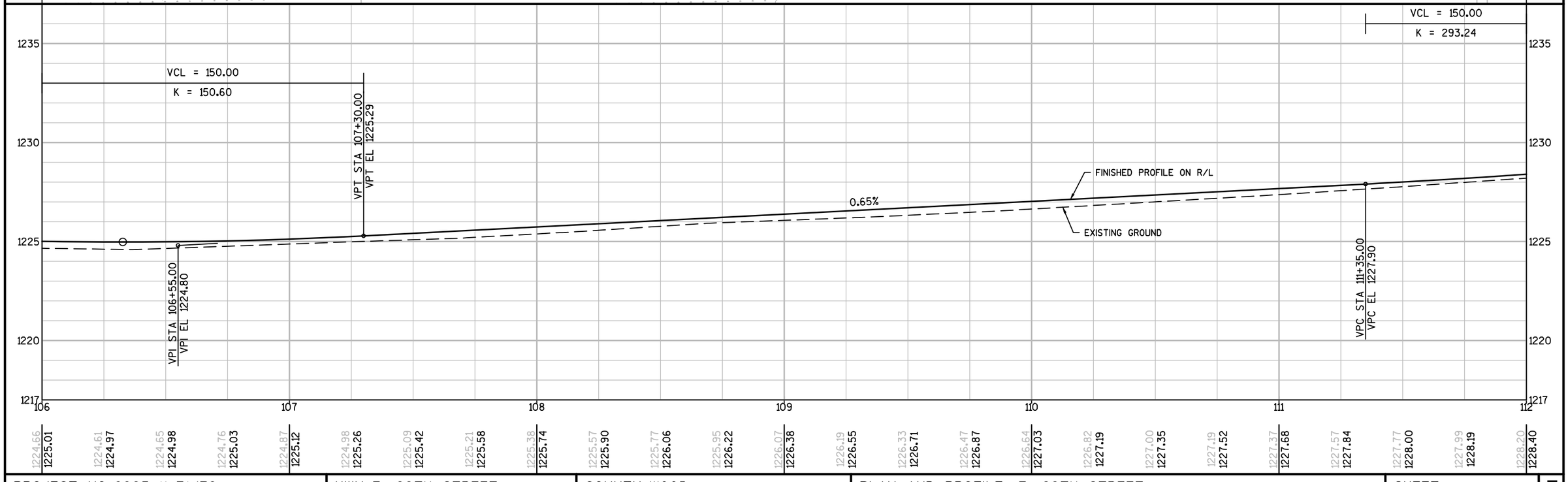
FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 050105_PP

PLOT DATE : 11/16/2017 7:46 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT

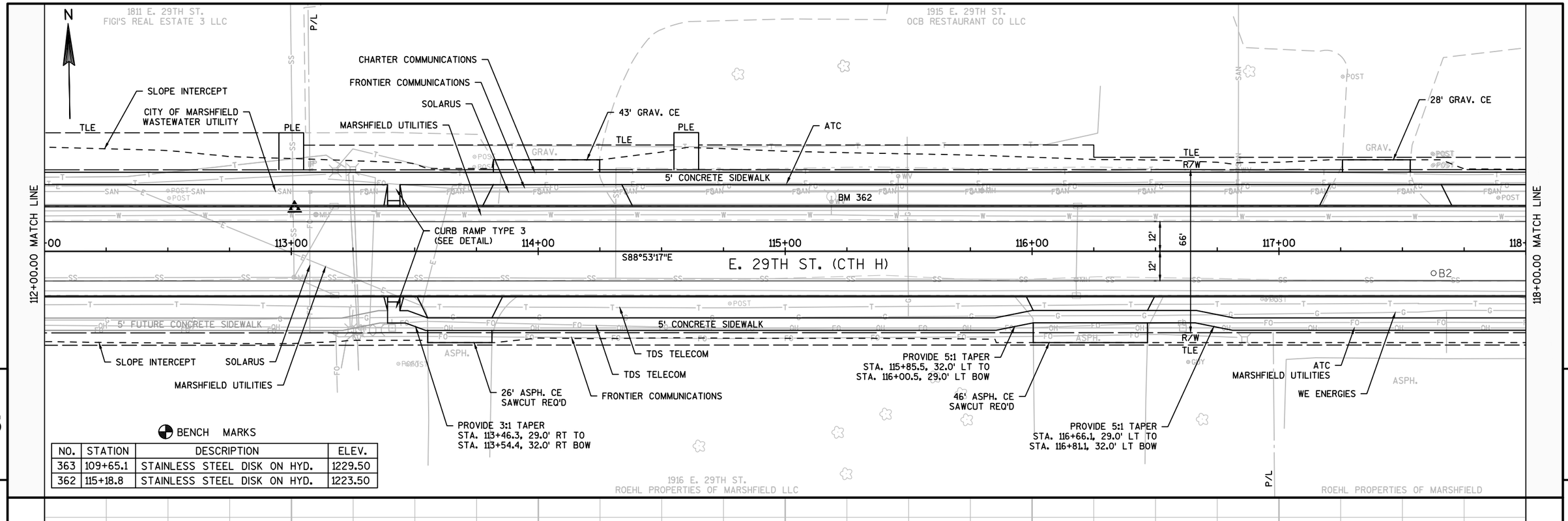


BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
363	109+65.1	STAINLESS STEEL DISK ON HYD.	1229.50
362	115+18.8	STAINLESS STEEL DISK ON HYD.	1223.50

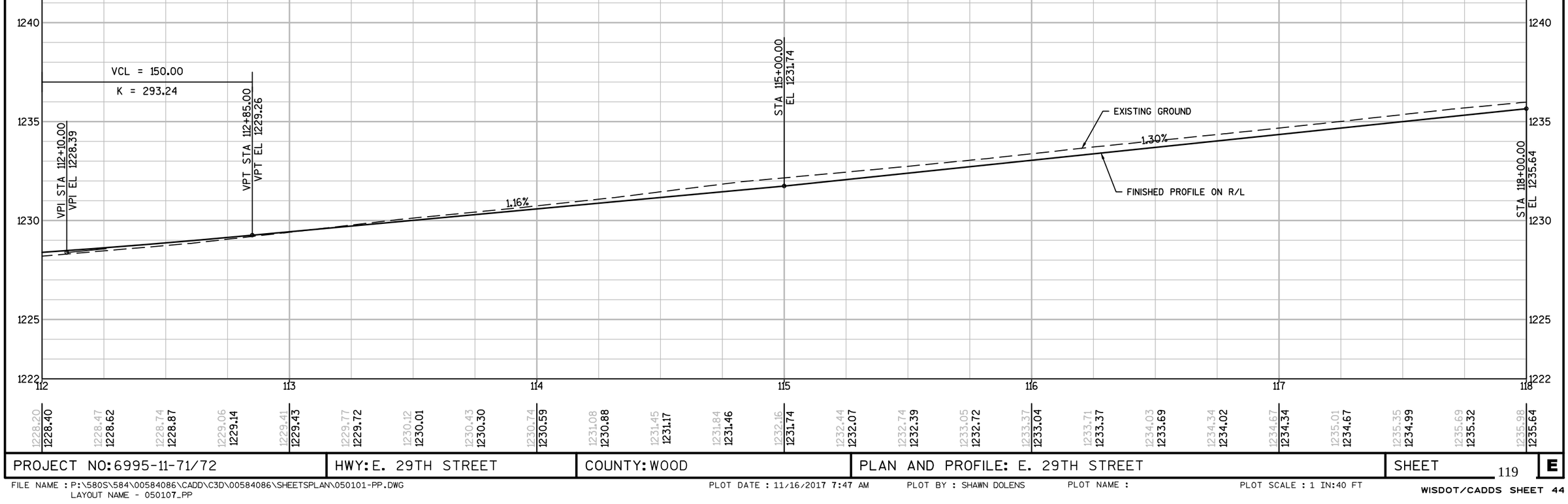


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PLAN AND PROFILE: E. 29TH STREET	SHEET 118 E



BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
363	109+65.1	STAINLESS STEEL DISK ON HYD.	1229.50
362	115+18.8	STAINLESS STEEL DISK ON HYD.	1223.50



PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PLAN AND PROFILE: E. 29TH STREET	SHEET 119 E

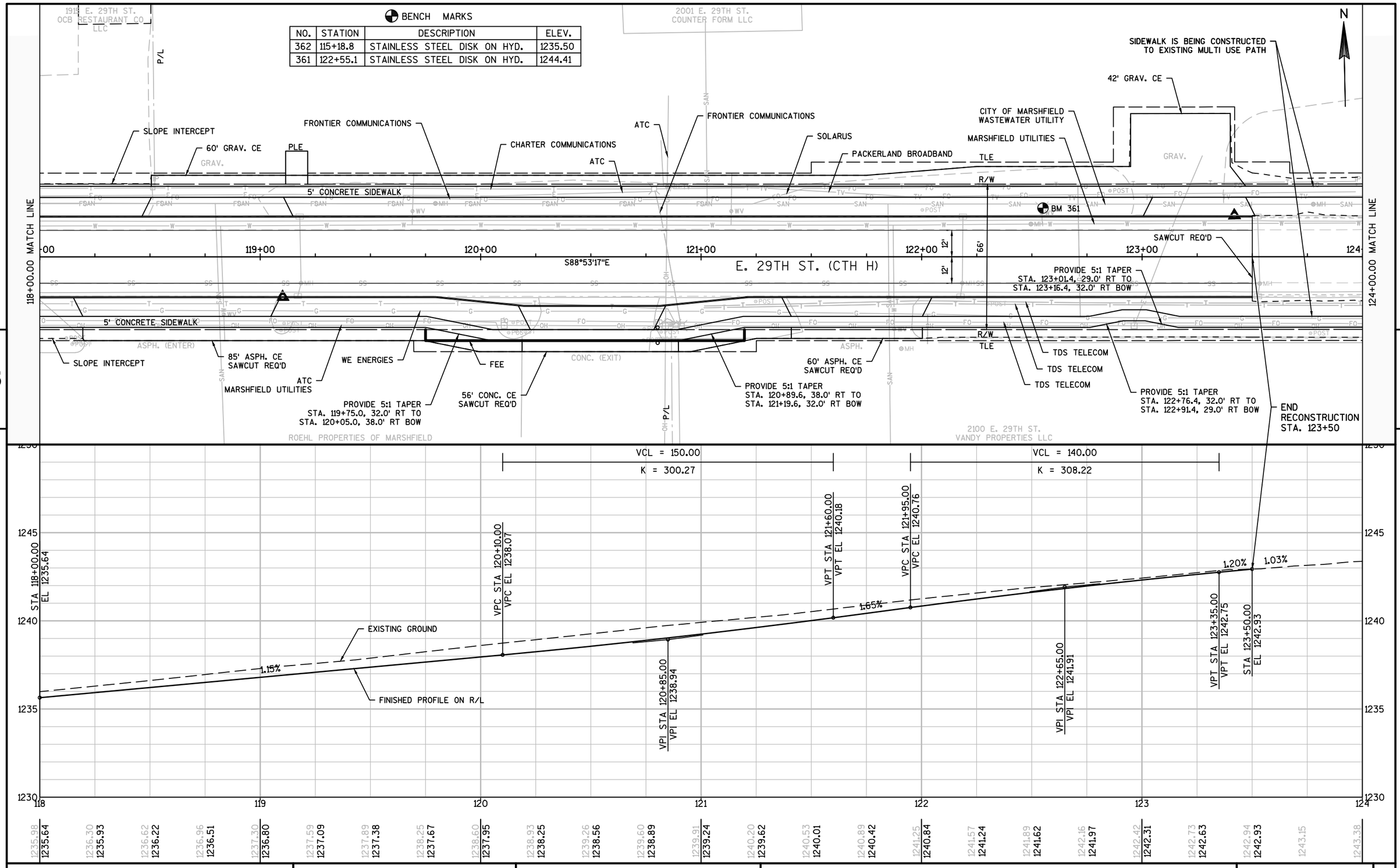
FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 050107_PP

PLOT DATE : 11/16/2017 7:47 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

BENCH MARKS

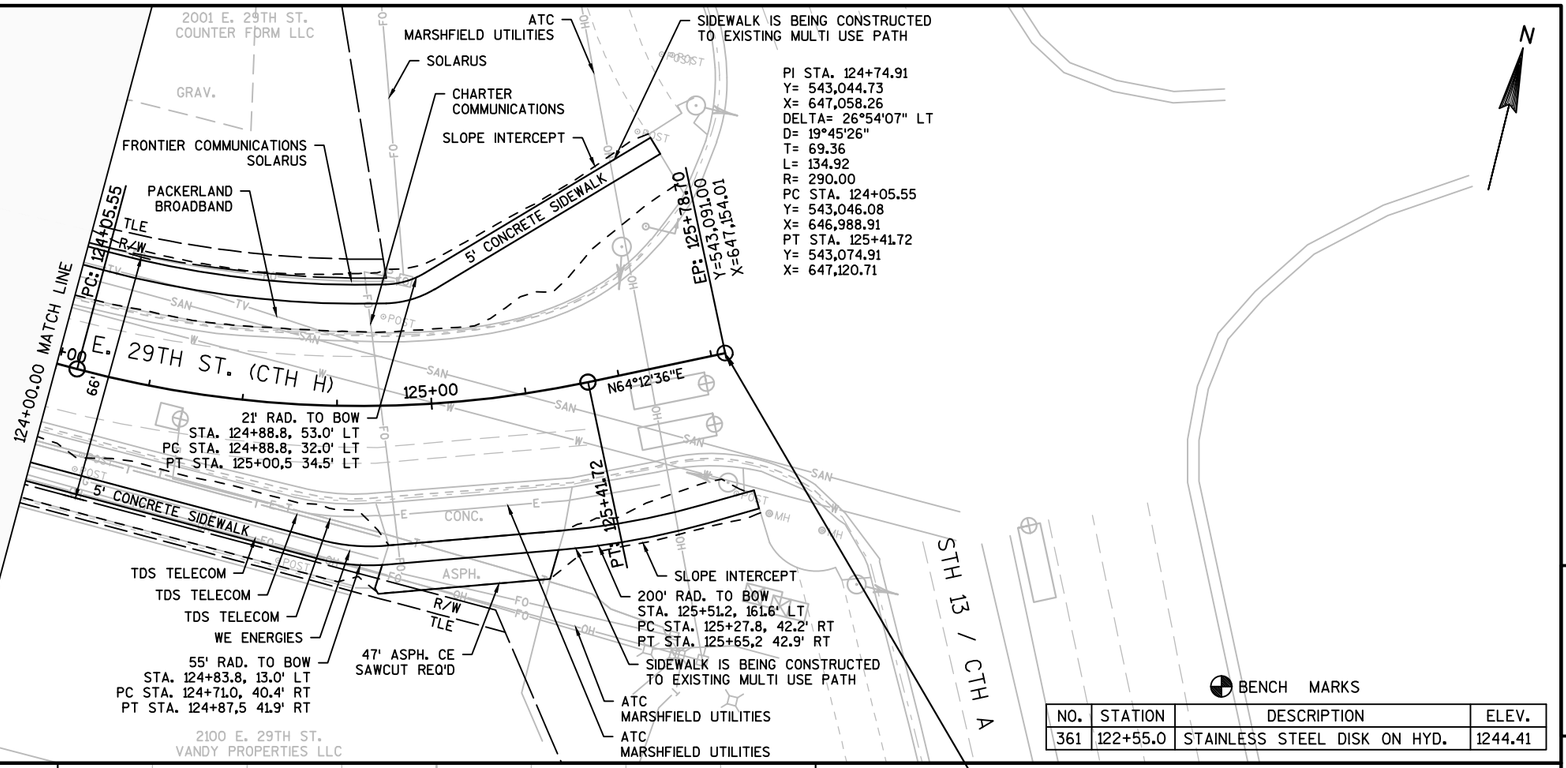
NO.	STATION	DESCRIPTION	ELEV.
362	115+18.8	STAINLESS STEEL DISK ON HYD.	1235.50
361	122+55.1	STAINLESS STEEL DISK ON HYD.	1244.41



PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PLAN AND PROFILE: E. 29TH STREET	SHEET 120	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 050108_PP

PLOT DATE : 11/16/2017 8:01 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT



PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PLAN AND PROFILE: E. 29TH STREET	SHEET 121	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 050109_PP

PLOT DATE : 11/16/2017 7:51 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

10883 WASHINGTON AVE.
JODI LIEGL

10897 WASHINGTON AVE.
RICHARD & KRISANN NIEHAUS

1323 E 29TH ST.
TAYLOR HALEY

2800 WASHINGTON AVE.
JACOB & KRISTINA HOWEY

10896 WASHINGTON AVE.
DPRR LLC

1401 E 29TH ST.
DAVID & THERESA MEYER

2801 WASHINGTON AVE.
DEBORAH ZWICKE

N

P/L

R/W

TLE

CITY OF MARSHFIELD WASTEWATER UTILITY

MARSHFIELD UTILITIES

EX. 15" CMCP (TO REMAIN)

ATC MARSHFIELD UTILITIES

14' GRAV. PE

SLOPE INTERCEPT

FUTURE CURB RAMP TYPE 4B1

BM 722

CURB RAMP TYPE 2

FRONTIER COMMUNICATIONS

MARSHFIELD UTILITIES

SAWCUT REQ'D

BP: 8'W'+50.00
Y=542,986.92
X=642,328.20

9'W'+00

N1°54'05"E

10'W'+00

PI: 77+38.98
N0°40'23"E

11'W'+00

EP: 11'W'+50.00
Y=543,286.83
X=642,324.98

99'

WASHINGTON AVE.

PI: 10'W'+00.00

77+00

78+00

E. 29TH ST. (CTH H)

SLOPE INTERCEPT

TDS TELECOM

TDS TELECOM

FUTURE CURB RAMP TYPE 4B1

CURB RAMP TYPE 4A

WE ENERGIES

STA. 10'W'+00 =
STA. 77+38.98
Y=543,136.80
X=642,323.22

END CONSTRUCTION
STA. 10'W'+65.53

5

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
722	76+97.2	STAINLESS STEEL DISK ON HYD.	1233.83

STA 8'W'+68.50
EL 1231.08

STA 9'W'+84.00
EL 1230.45

STA 10'W'+00.00
EL 1230.77

STA 10'W'+16.00
EL 1230.45

STA 10'W'+65.53
EL 1230.76

FINISHED PROFILE ON R/L

EXISTING GROUND

-0.54%

2.00%

-2.00%

0.63%

1240
1235
1230
1225
1220

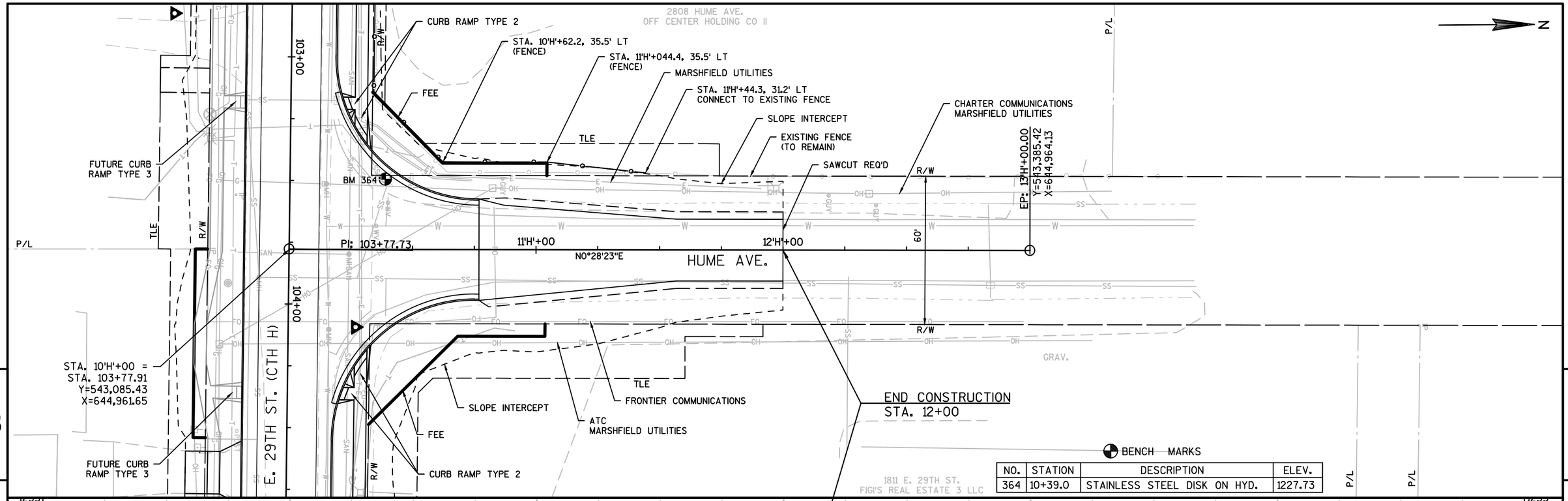
7'W' 8'W' 9'W' 10'W' 11'W' 12'W' 13'W'

1231.05 1231.04
1230.93 1230.90
1230.86 1230.77
1230.89 1230.63
1230.88 1230.50
1230.88 1230.77
1230.83 1230.51
1230.79 1230.66
1230.75
1230.64
1230.49

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PLAN AND PROFILE: WASHINGTON AVENUE	SHEET 122	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 050110_PP

PLOT DATE : 11/16/2017 7:49 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT



NO.	STATION	DESCRIPTION	ELEV.
364	10+39.0	STAINLESS STEEL DISK ON HYD.	1227.73

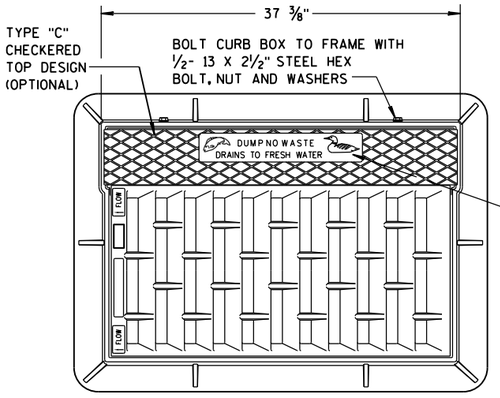
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	PLAN AND PROFILE: HUME AVENUE	SHEET 123 E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 050111_PP
PLOT DATE : 11/16/2017 7:49 AM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

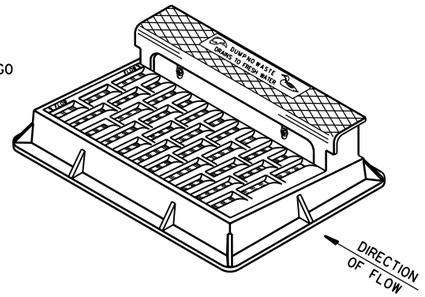
Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08A08-02	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08A09-02	CATCH BASINS 2X3-FT AND 2.5X3-FT
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08B10-02	MANHOLES 3X3-FT, 4X4-FT, 5X5-FT AND 6X6-FT
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-18A	CURB RAMPS TYPES 1 AND 1-A
08D05-18B	CURB RAMPS TYPES 2 AND 3
08D05-18C	CURB RAMPS TYPES 4A AND 4A1
08D05-18D	CURB RAMPS TYPE 4B AND 4B1
08D05-18E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D19-01	DRIVEWAY AND SIDEWALK RAMPS TYPE Z
08D20-01	DRIVEWAYS WITH CURB & GUTTER RETURNS
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
12A03-10	NAME PLATE (STRUCTURES)
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-08	URBAN DOWELED CONCRETE PAVEMENT
13C18-05A	CONCRETE PAVEMENT JOINTING
13C18-05B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-05C	CONCRETE PAVEMENT JOINT TYPES
13C18-05D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-03	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-13B	PAVEMENT MARKING WORDS
15C07-13C	PAVEMENT MARKING ARROWS
15C07-13E	PAVEMENT MARKING FOR BIKE LANES
15C08-17A	LONGITUDINAL MARKING (MAINLINE)
15C29-05A	BICYCLE LANE MARKING
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-01A	PAVEMENT MARKING (INTERSECTIONS)
15D20-04	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D30-03A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D38-01A	TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS
15D38-01B	ATTACHMENT OF SIGNS TO POSTS
16A01-06	LANDMARK REFERENCE MONUMENTS AND COVERS

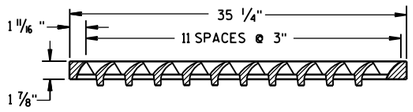
6

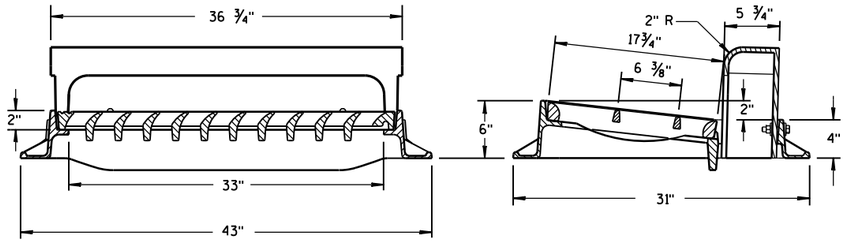


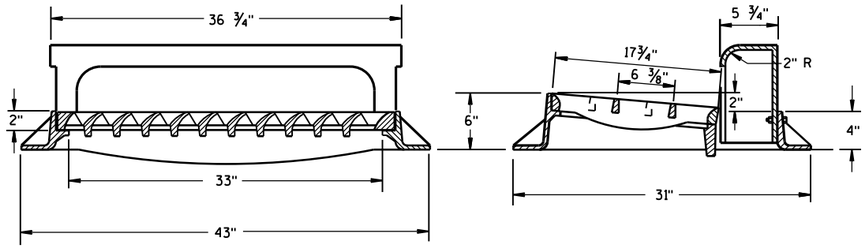
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

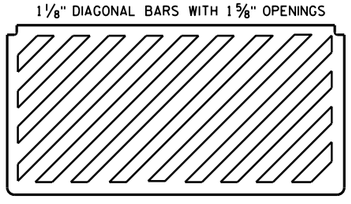






TYPE "H"

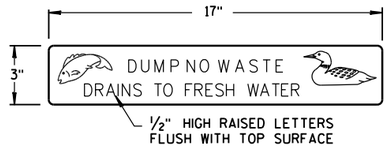
NOTE: EITHER CASTING IS ACCEPTABLE



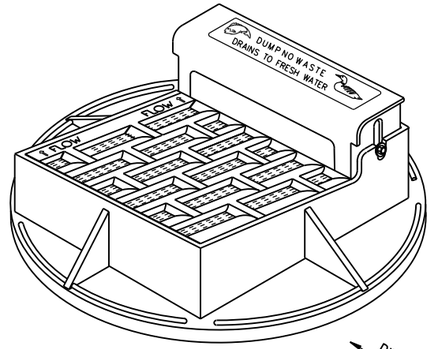
SPECIAL GRATE FOR TYPE "H" COVER

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

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

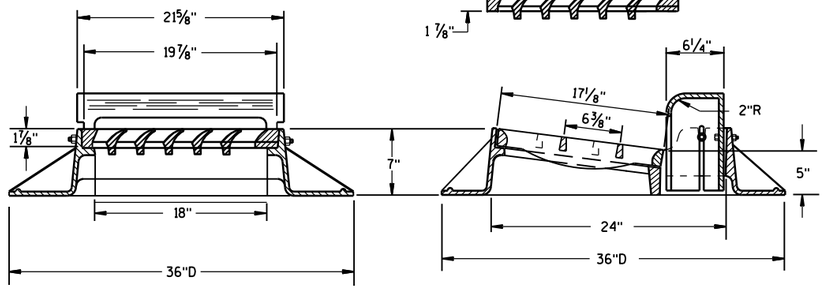


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



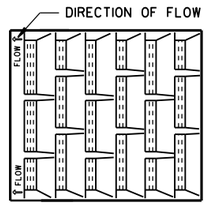
TYPE "A"

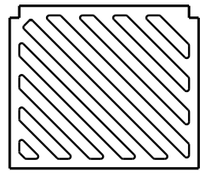
GENERAL NOTES

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.

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.

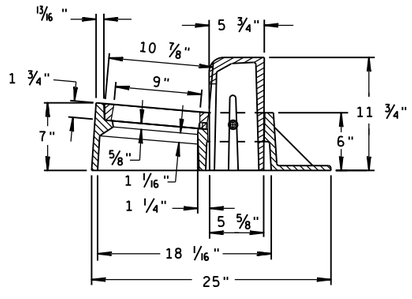


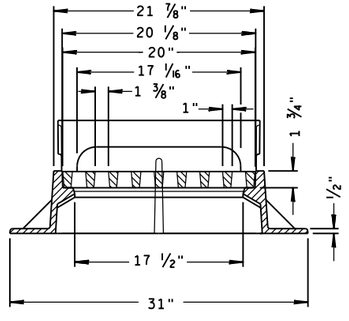


SPECIAL GRATE FOR TYPE "A" COVER

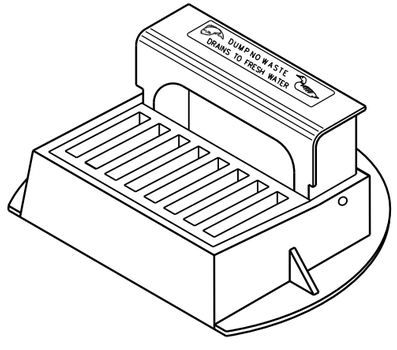
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)





TYPE "Z"

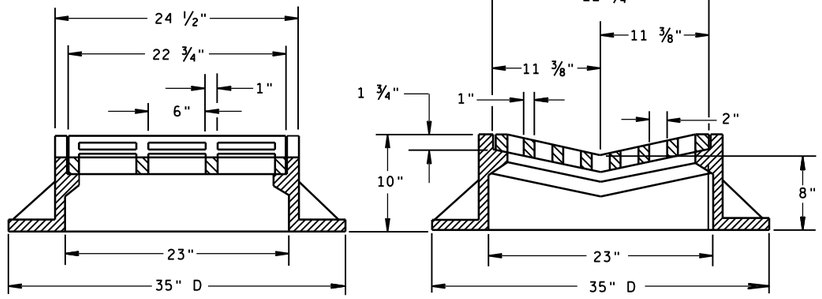


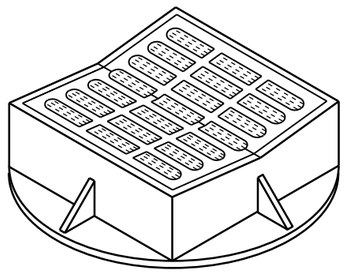
INLET COVERS TYPE A, H, A-S, H-S & Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

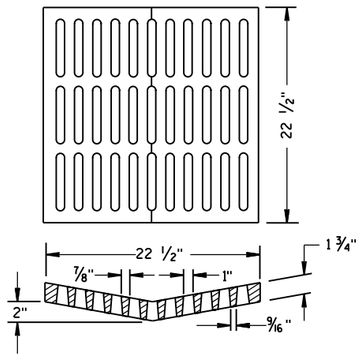
APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

S.D.D. 8 A 5-19a



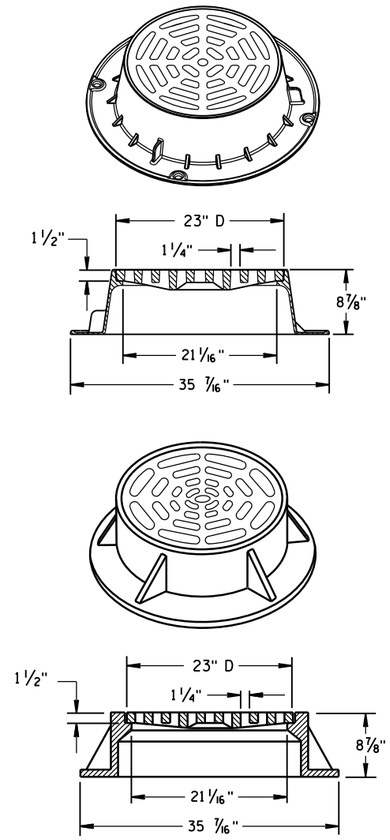


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

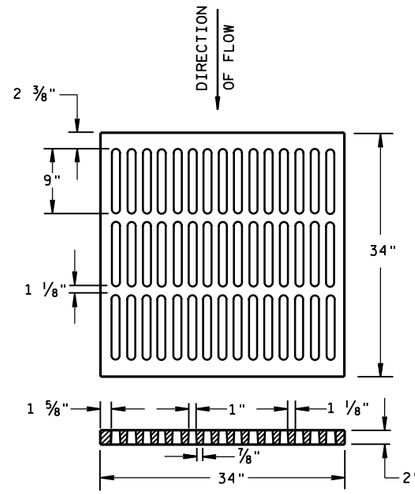
NOTE: EITHER CASTING IS ACCEPTABLE

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.

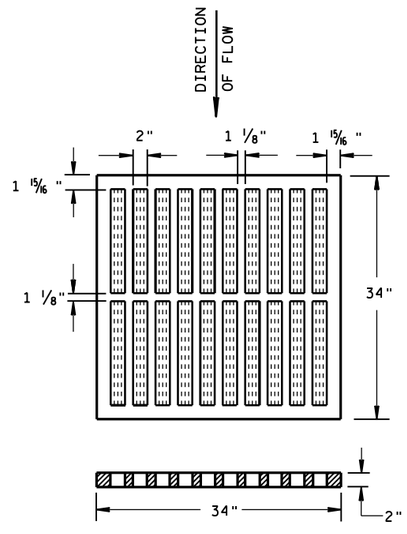
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



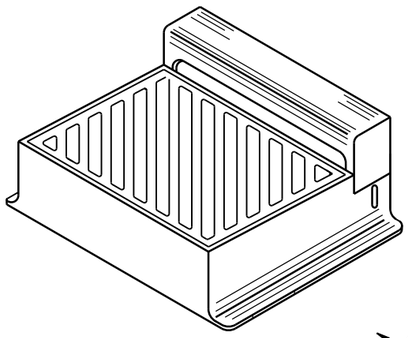
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

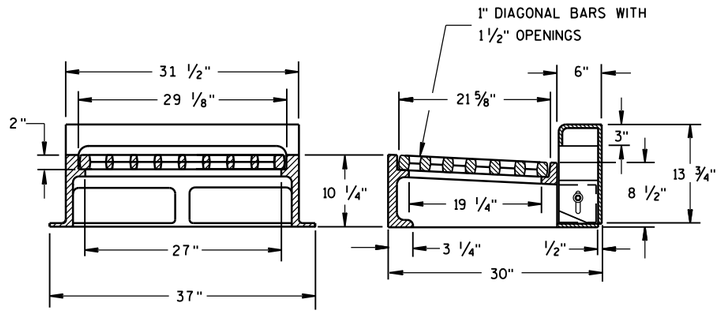


TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED
TO THE DIRECTION OF FLOW AS ILLUSTRATED.
GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

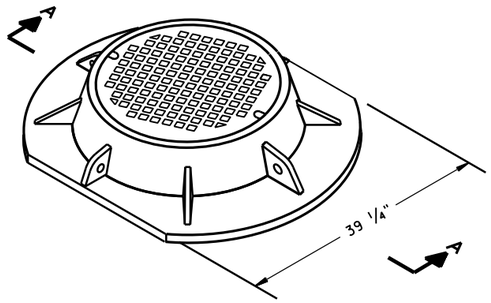
INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM

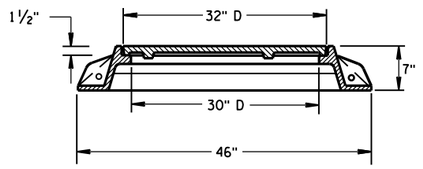
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

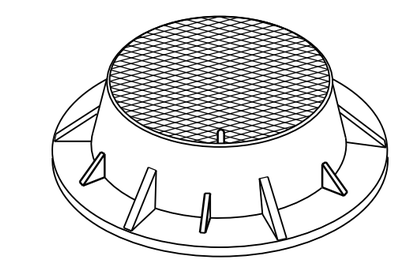
6

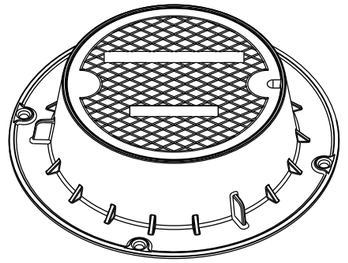
S.D.D. 8 A 5-19b

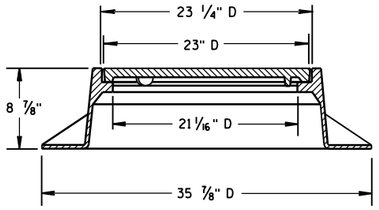


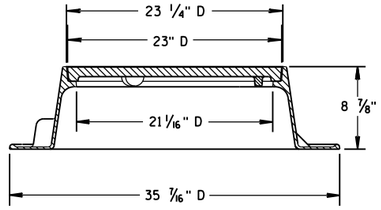


SECTION A-A
TYPE "K"









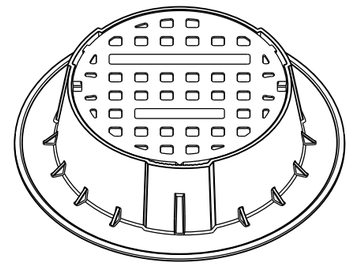
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

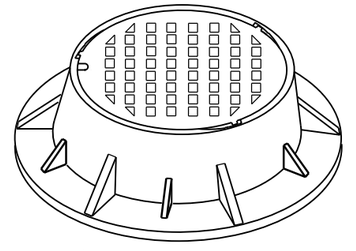
GENERAL NOTES

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.

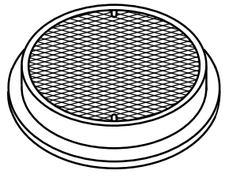
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

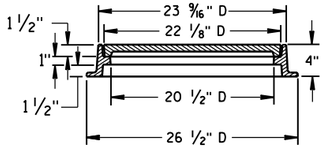
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



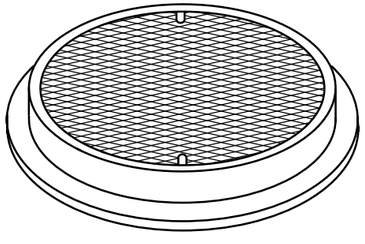


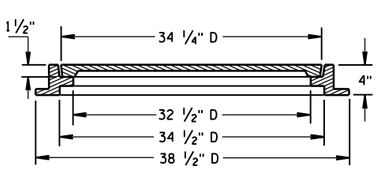
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



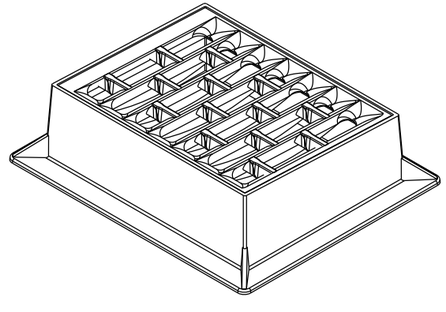


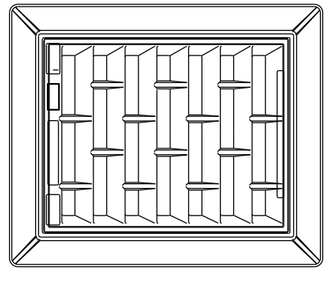
TYPE "L"

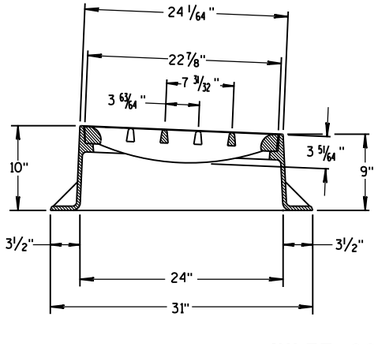


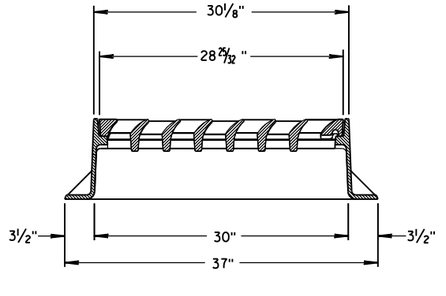


TYPE "M"









INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

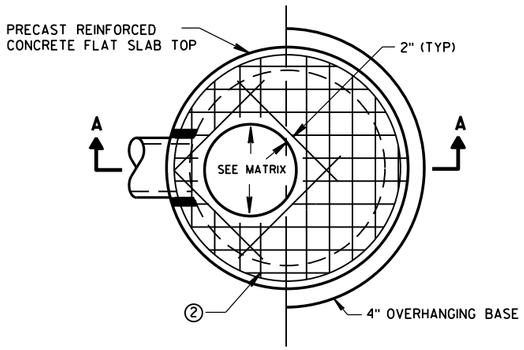
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

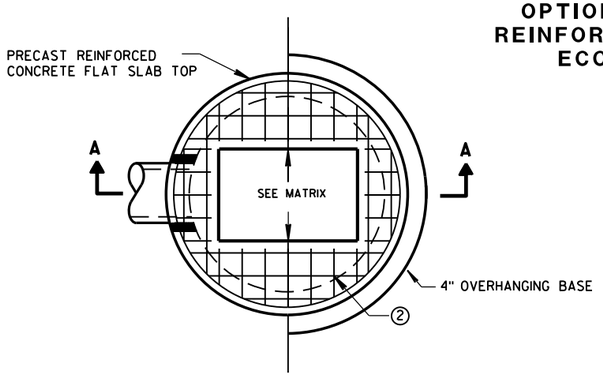
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

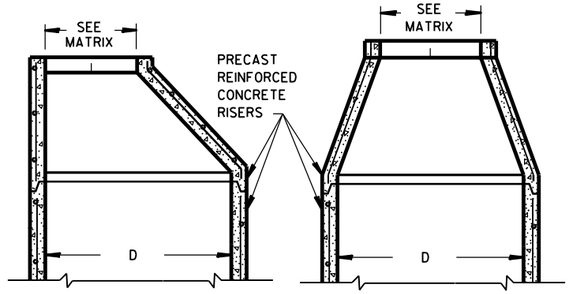
S.D.D. 8 A 5-19d



PLAN VIEW CIRCULAR OPENING

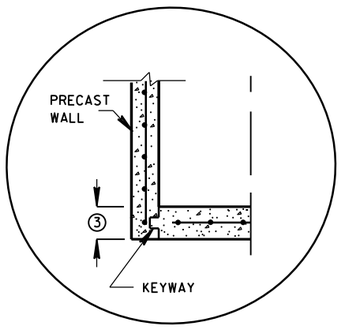


PLAN VIEW RECTANGULAR OPENING



OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

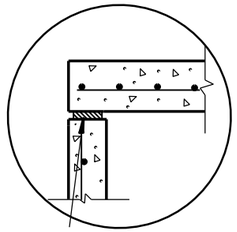
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



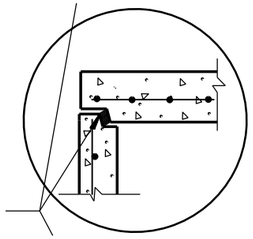
PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

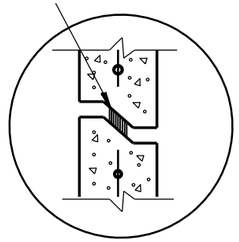


TOP WITH PLAIN END JOINT



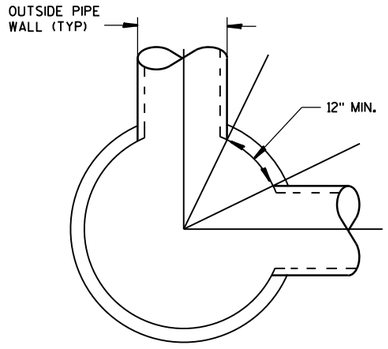
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT

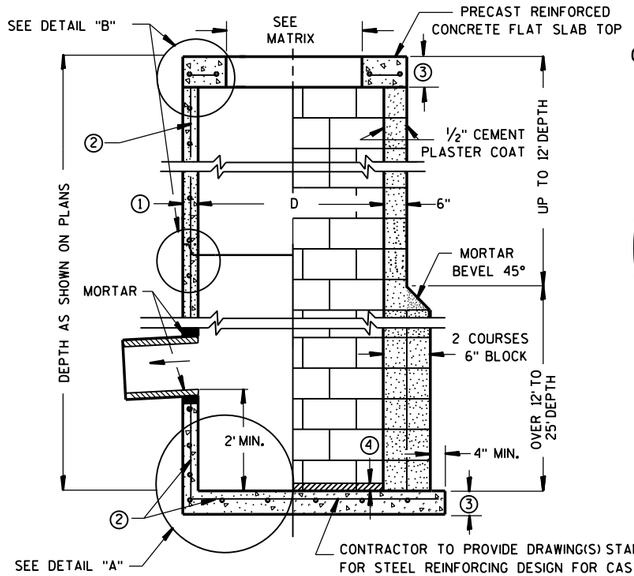


RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



DETAIL "C"



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

SECTION A-A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

GENERAL NOTES

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

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

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

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

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

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

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

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

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½ INCH AND MEET THE REQUIREMENTS OF ASTM A615.

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

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

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

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

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

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT AND 7 INCHES FOR 6-FT DIAMETER PRECAST CATCH BASINS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

④ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER OPENING MATRIX

CATCH BASIN SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
	OPENING SIZE (FT)											
3-FT	2X2	X	X					X		X		
	2 DIA.				X							X
4-FT-6-FT	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2 DIA.				X							X
	2X3						X					
	2.5X3					X						

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	30

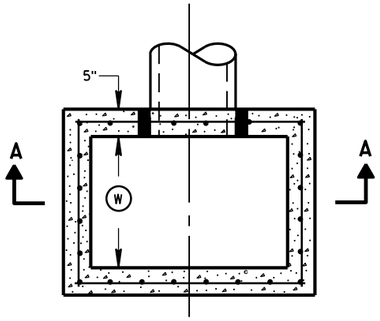
CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

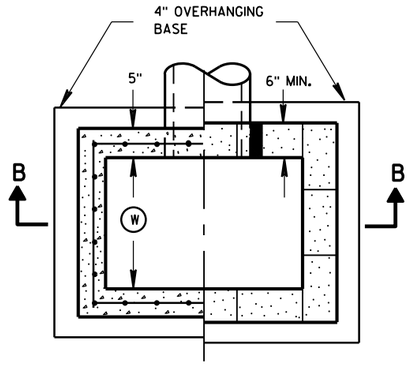
APPROVED
Sept., 2016
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

S.D.D. 8 A 8-2

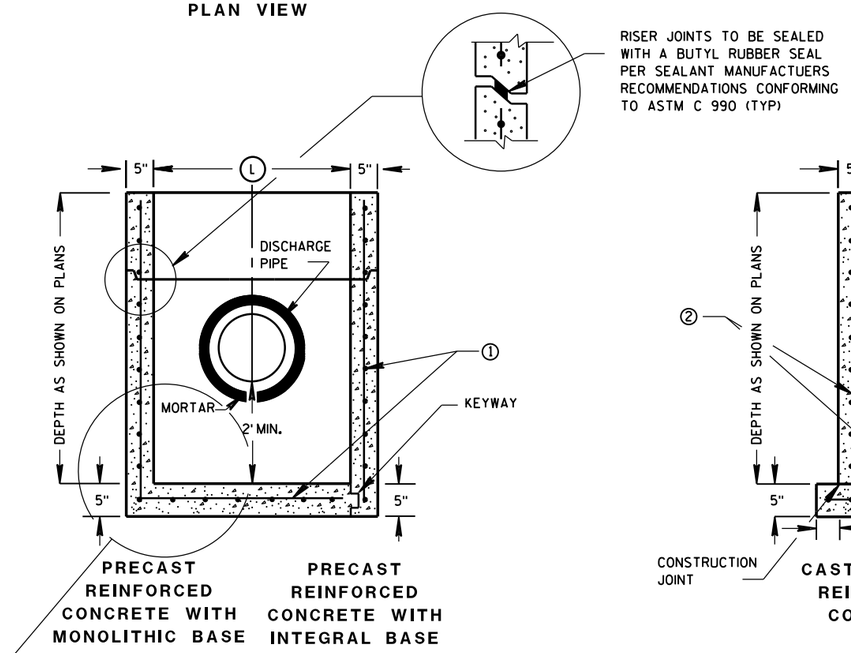
6



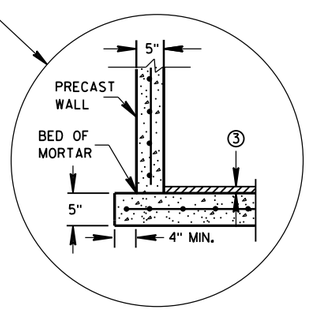
PLAN VIEW



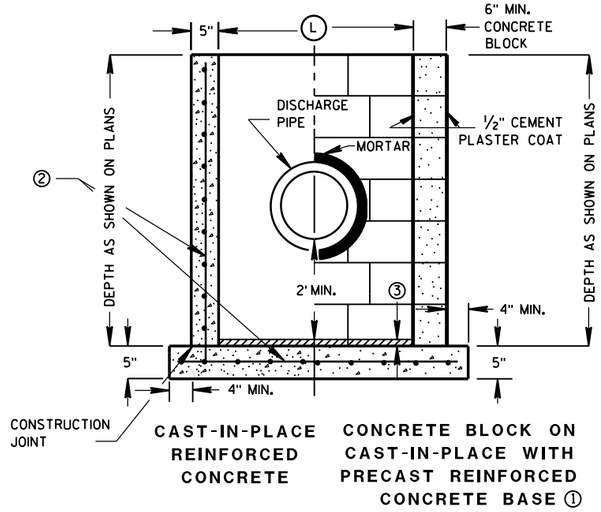
PLAN VIEW



SECTION A-A



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION



SECTION B-B

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

① FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

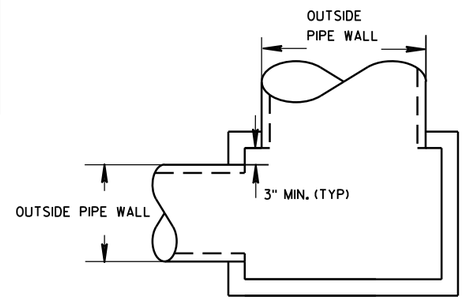
③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER MATRIX

CATCH BASIN SIZE		INLET COVER TYPE	F	ALL H'S
	WIDTH (W) (FT)	LENGTH (L) (FT)		
2X3-FT	2	3		X
2.5X3-FT	2.5	3	X	

PIPE MATRIX

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



DETAIL "A"

CATCH BASINS 2X3-FT AND 2.5X3-FT

CATCH BASINS 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016
DATE
FHWA

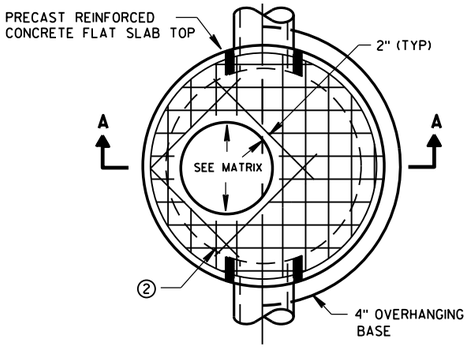
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

6

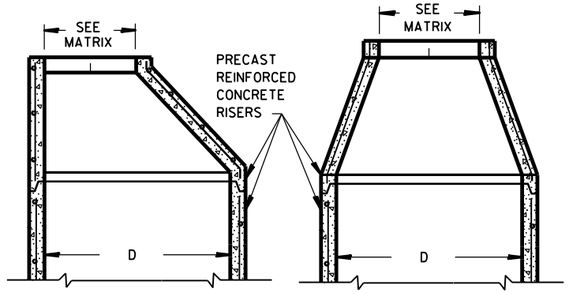
S.D.D. 8 A 9-2

6

S.D.D. 8 A 9-2

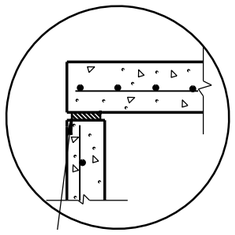


PLAN VIEW CIRCULAR OPENING

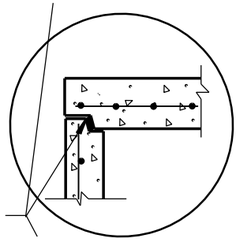


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

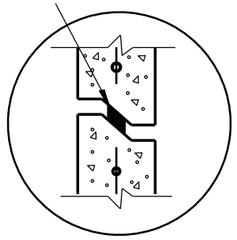


TOP WITH PLAIN END JOINT



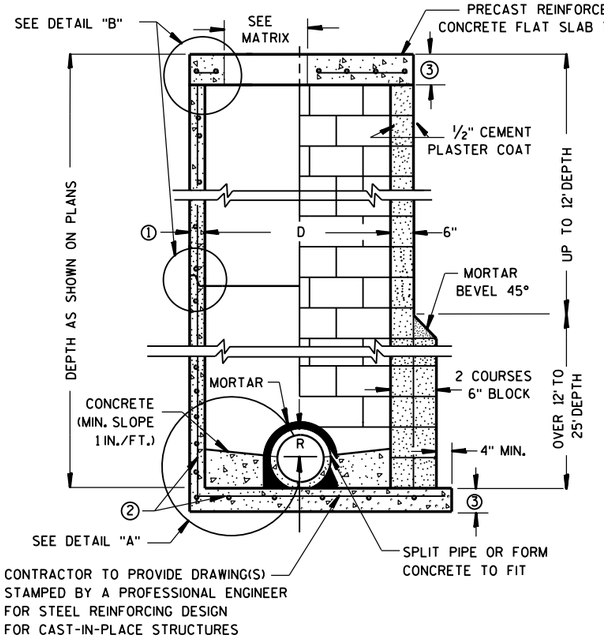
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



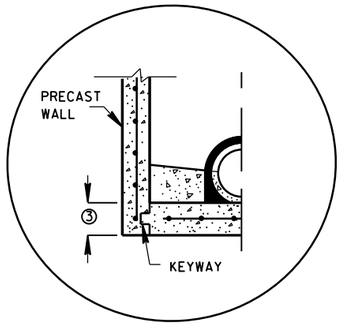
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

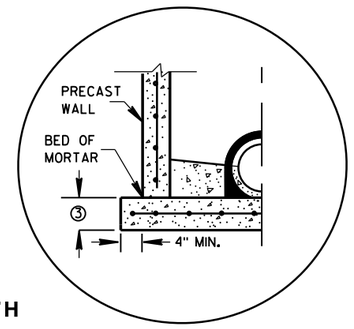


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

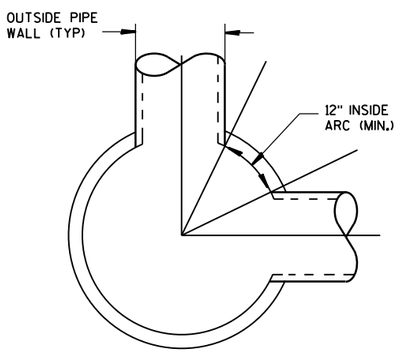


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

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

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

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

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

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

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

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

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

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

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

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

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

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

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

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

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

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

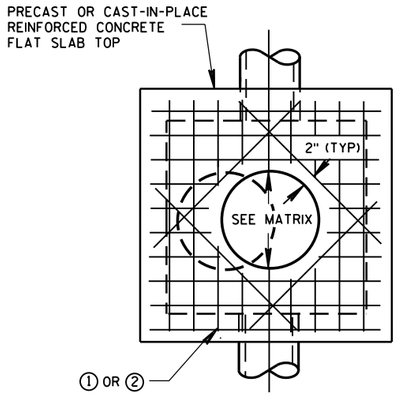
APPROVED

Sept., 2016
DATE

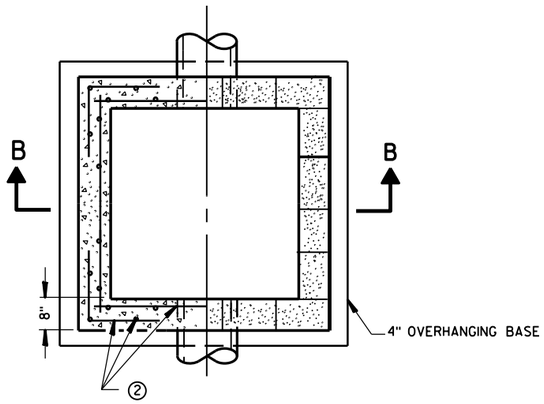
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERV

FHWA

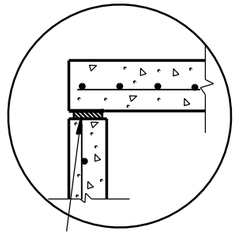
6
S.D.D. 8 B 9-2



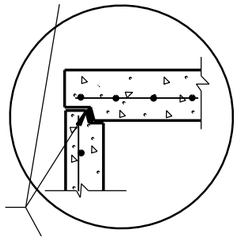
PLAN VIEW
CIRCULAR OPENING



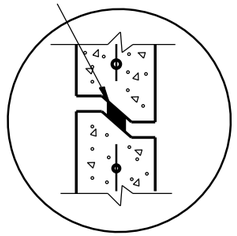
SECTION A-A
PLAN VIEW



TOP WITH PLAIN END JOINT

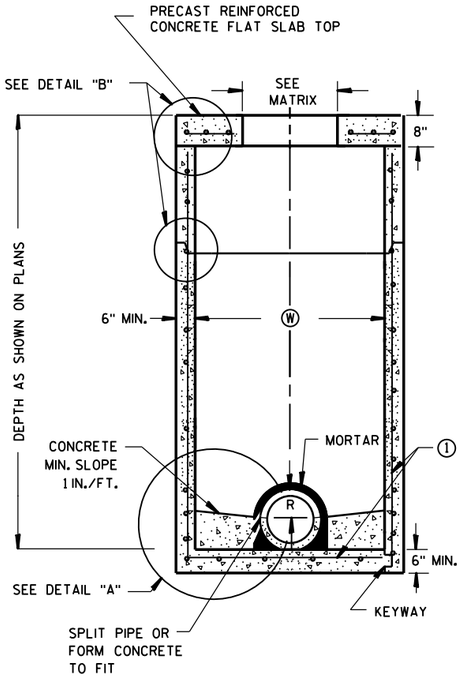


TOP WITH TONGUE AND GROOVE JOINT

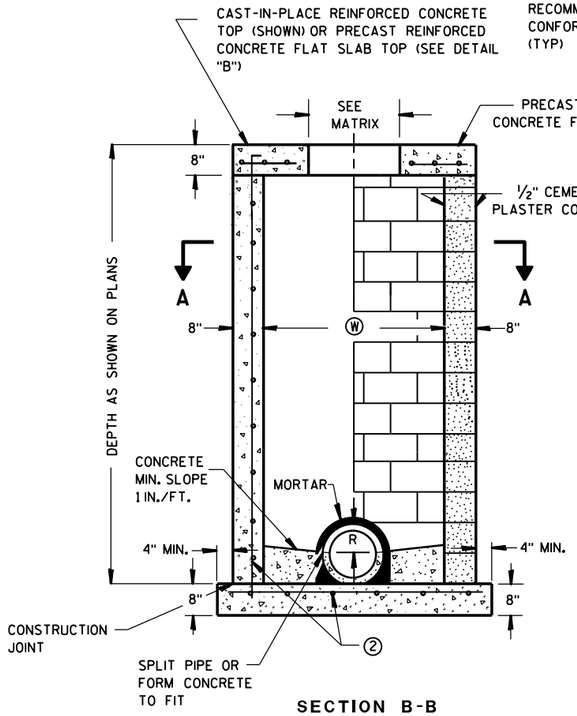


RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

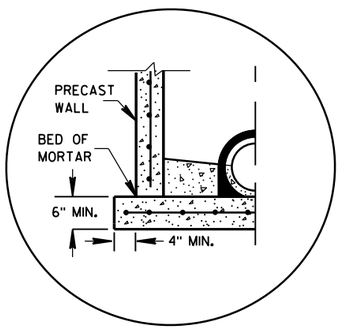


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

CAST-IN-PLACE REINFORCED CONCRETE

SECTION B-B

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



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "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.

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

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

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

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

PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

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

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½ INCH AND MEET THE REQUIREMENTS OF ASTM A615.

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

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

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN WIDTH.

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

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

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

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

① FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

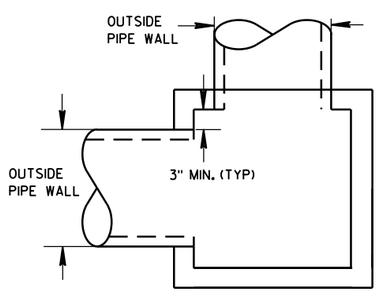
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (W) (IN)	LENGTH (L) (IN)
3X3-FT	24	24
4X4-FT	30	30
5X5-FT	42	42
6X6-FT	54	54



DETAIL "C"

SQUARE MANHOLES W/ FLAT TOP

MANHOLES 3X3-FT, 4X4-FT, 5X5-FT AND 6X6-FT

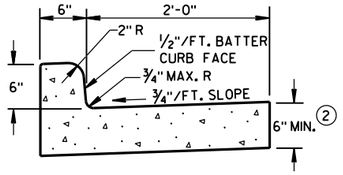
MANHOLES 3X3-FT, 4X4-FT 5X5-FT AND 6X6-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

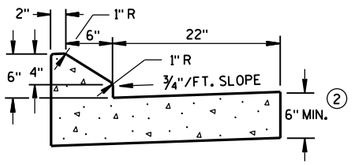
APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

6

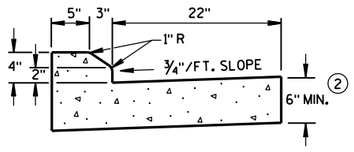
S.D.D. 8 B 10-2



TYPES A & D ①

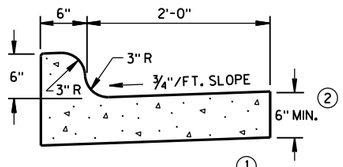


6" SLOPED CURB TYPES G & J ①

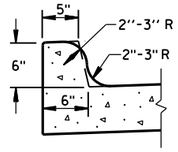


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

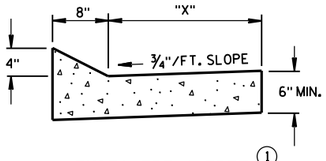


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

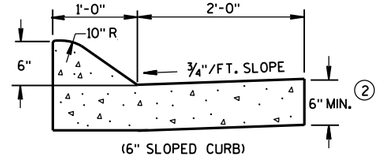
CONCRETE CURB & GUTTER 30"



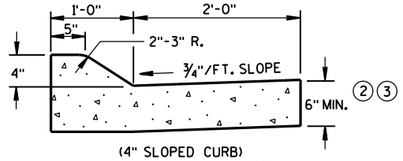
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

TBT & TBTT	"X"
30"	22"
36"	28"

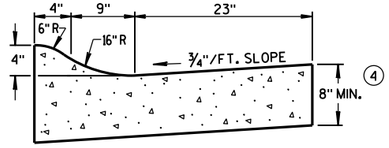


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ①⑤

CONCRETE CURB & GUTTER 36"

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, R AND TBTT.

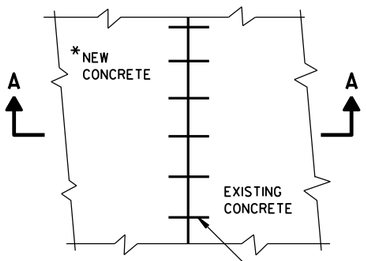
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

④ 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.

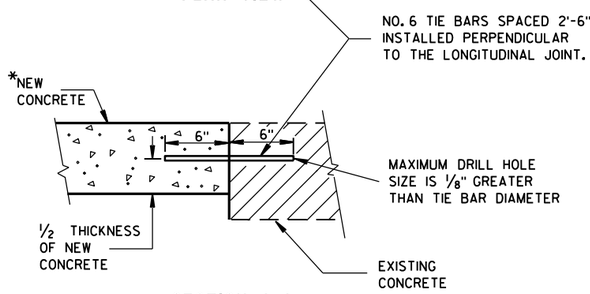
⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



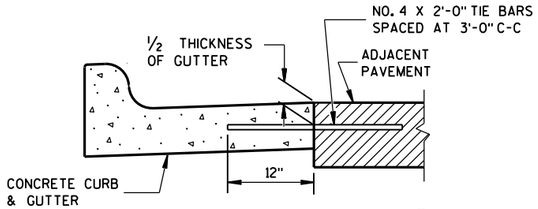
PLAN VIEW

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

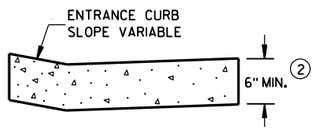


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

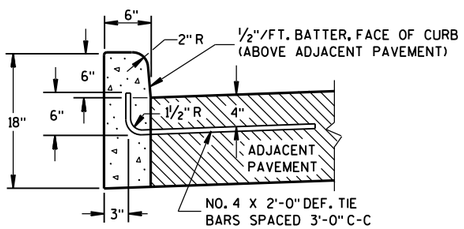


TYPICAL TIE BAR LOCATION ①

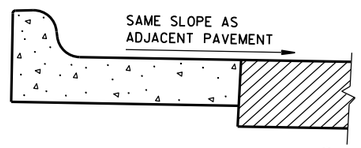


DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

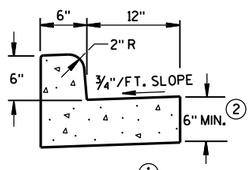


① TYPES A & D



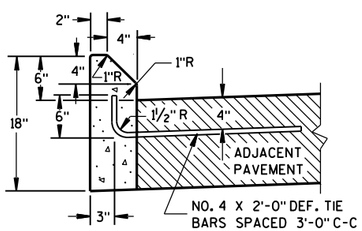
⑥ REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



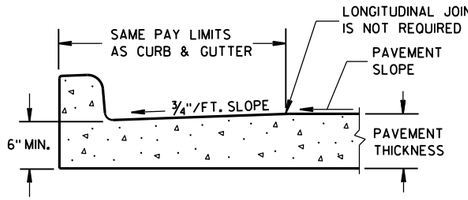
① TYPES A & D

CONCRETE CURB & GUTTER 18"

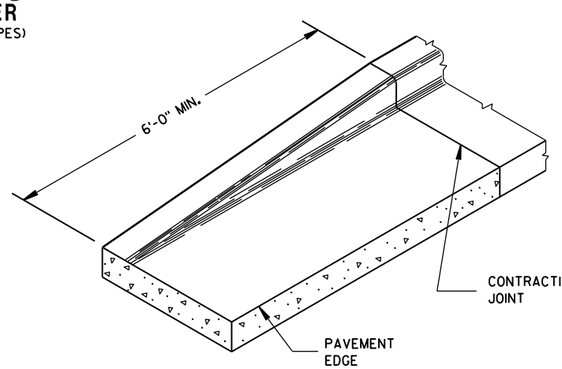


① TYPES G & J

CONCRETE CURB



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

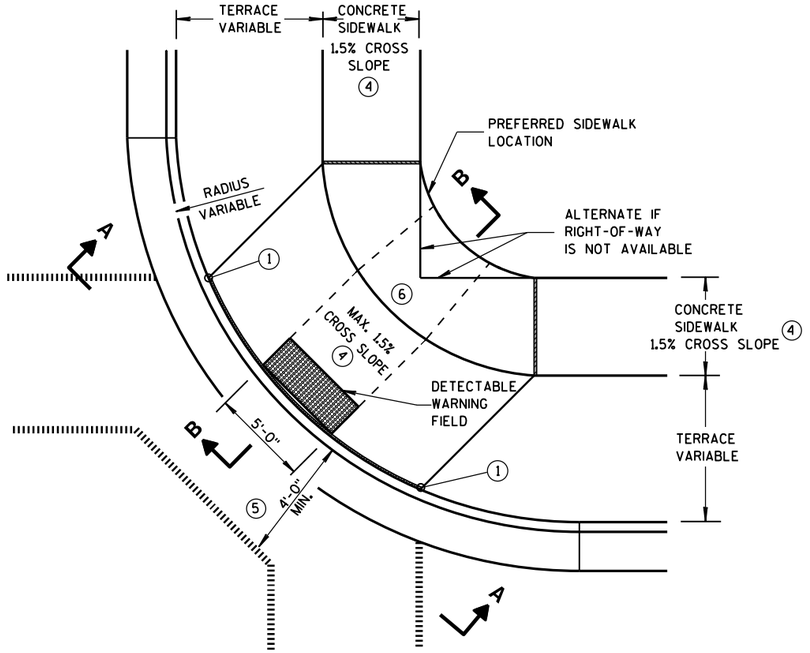
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

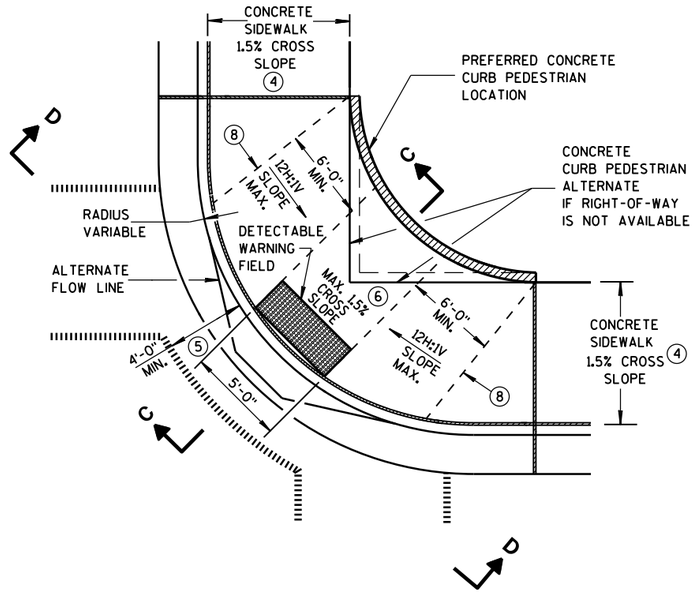
S.D.D. 8 D 1-19



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

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.

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".

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

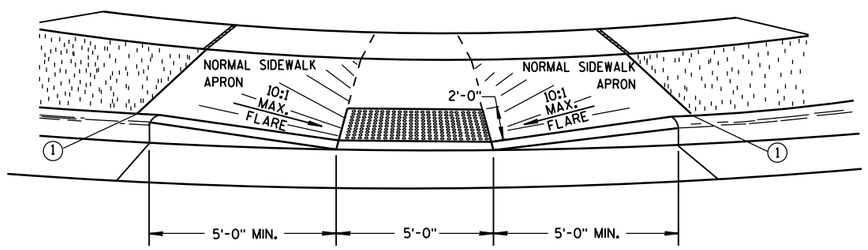
(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

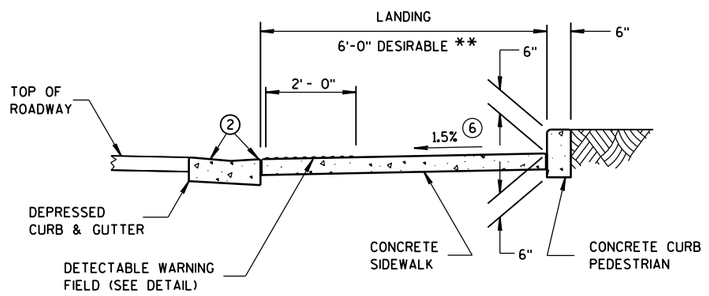
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.



VIEW A-A

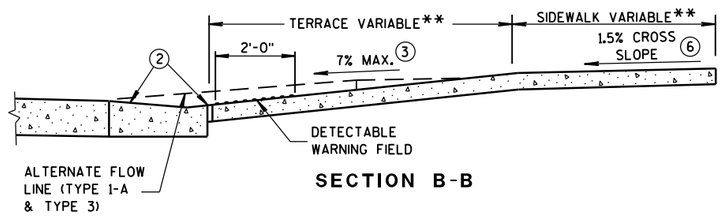
** WIDTH SHOWN ELSEWHERE IN THE PLANS



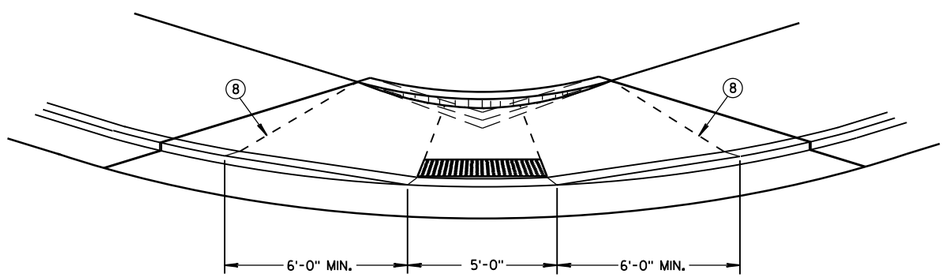
SECTION C-C

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



SECTION B-B



VIEW D-D

CURB RAMPS
TYPES 1 AND 1-A

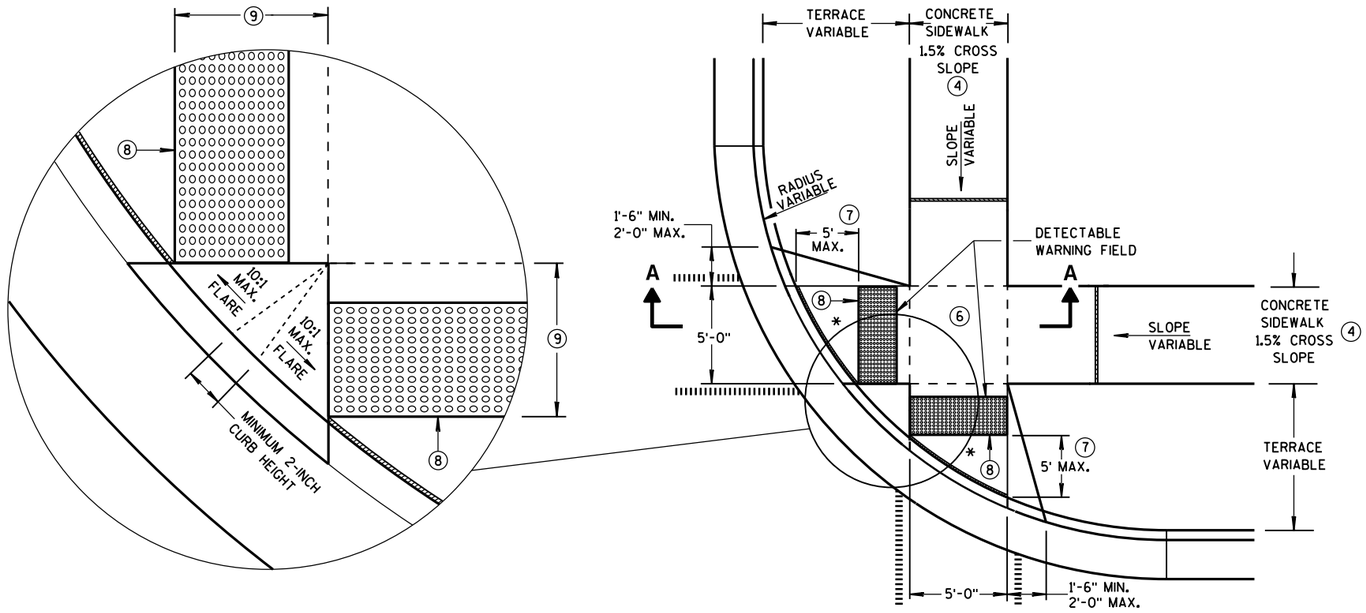
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 8 D 5-18a

6

S.D.D. 8 D 5-18a

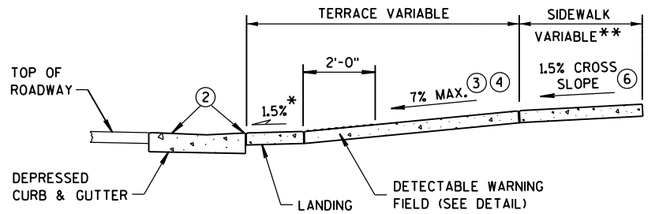


PLAN VIEW

TYPE 2 RAMP

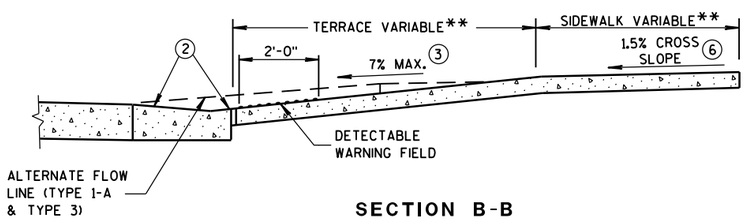
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

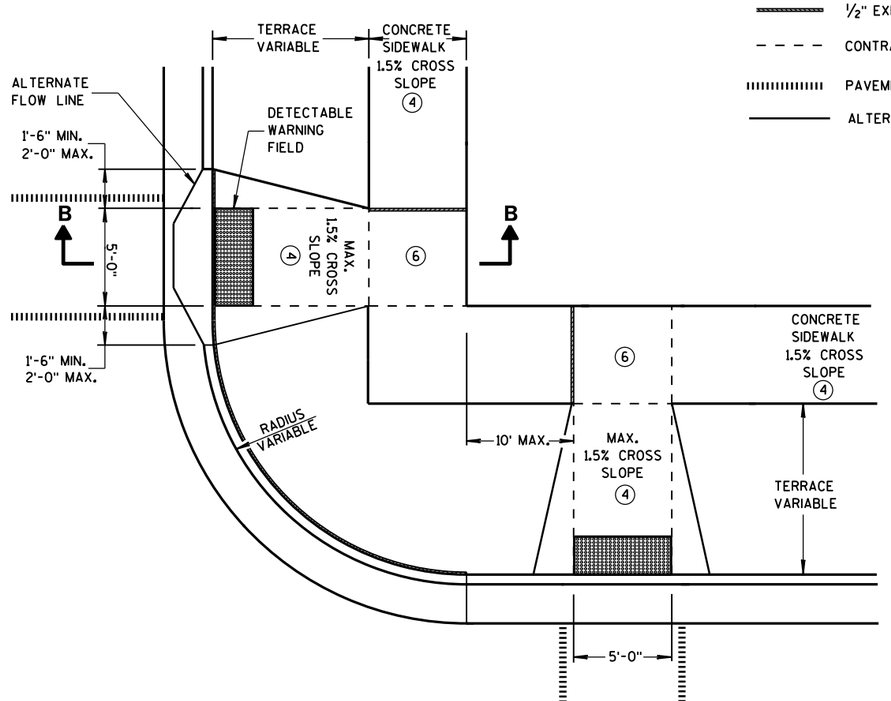


SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



PLAN VIEW

TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

LEGEND

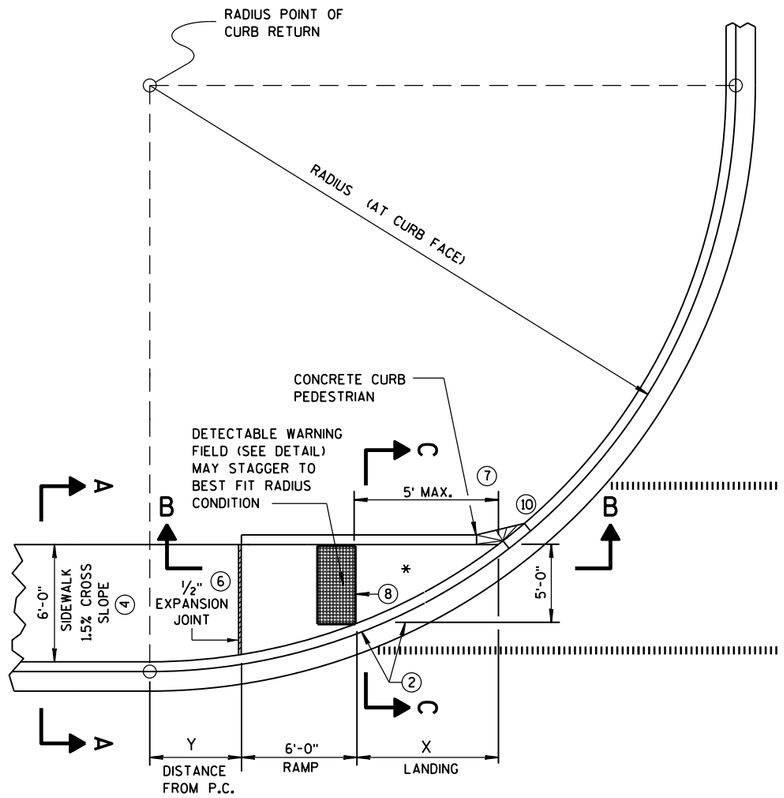
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

S.D.D. 8 D 5-18b

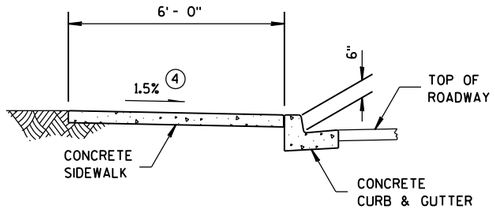


CURB RAMP TYPE 4A

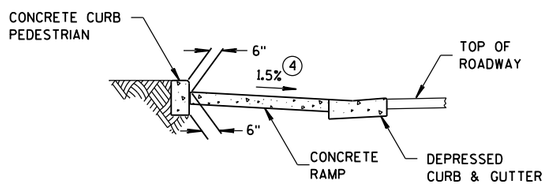
PLAN VIEW

RADIUS (AT CURB FACE)	X	Y
20 FEET	7'-11"	0'-2"
30 FEET	10'-2¾"	1'-7½"
40 FEET	12'-1¼"	2'-10"
50 FEET	13'-8¾"	3'-10¾"
60 FEET	15'-2"	4'-10¼"

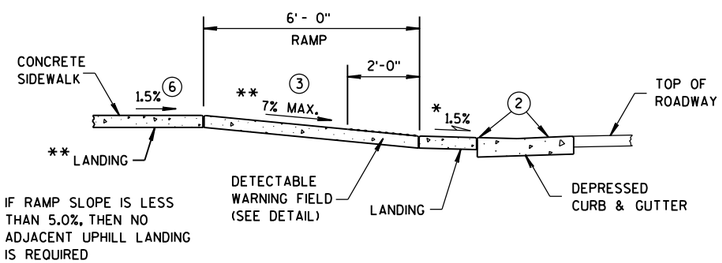
INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

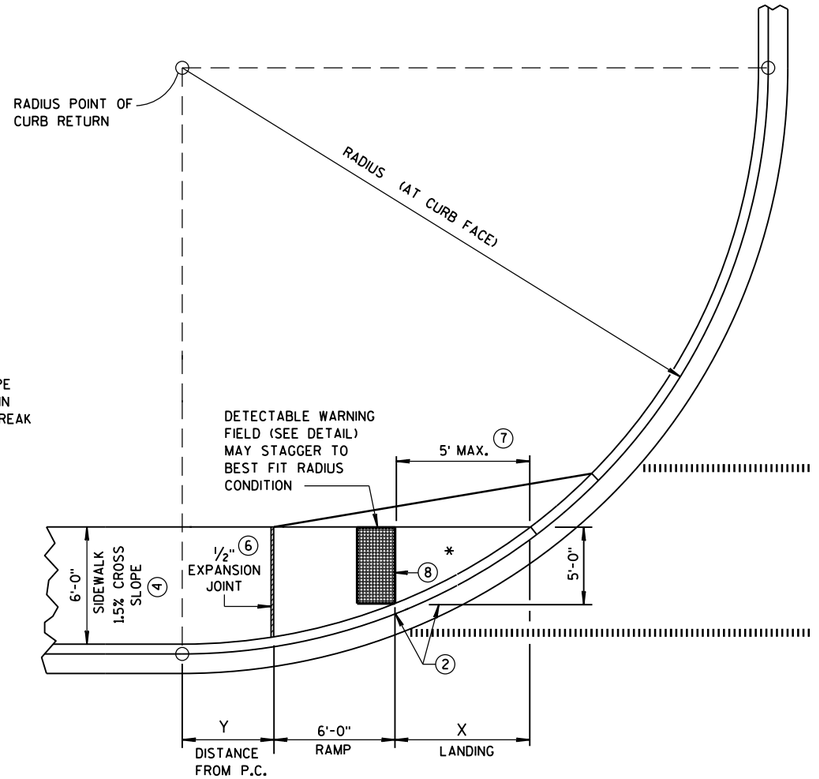


SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



CURB RAMP TYPE 4A1

PLAN VIEW

GENERAL NOTES

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

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

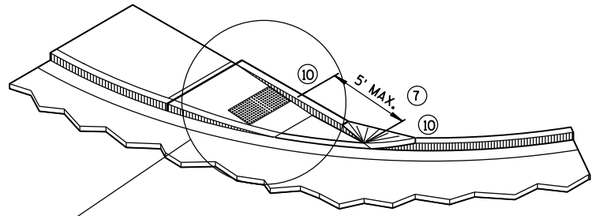
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

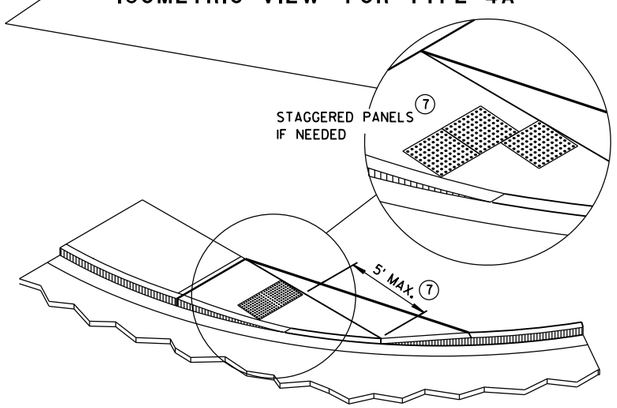
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

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



ISOMETRIC VIEW FOR TYPE 4A



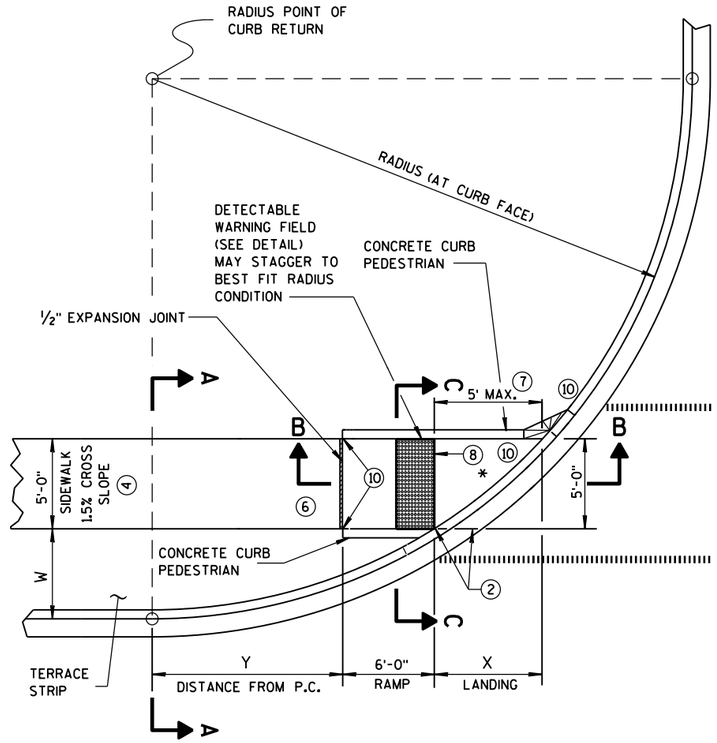
ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

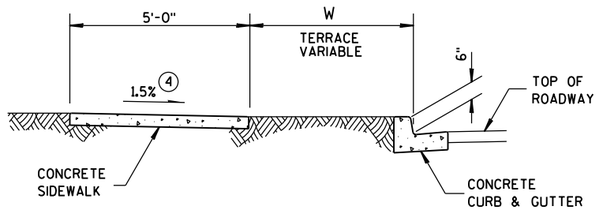
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

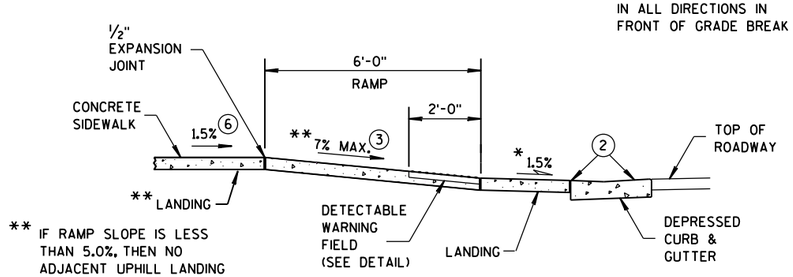
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



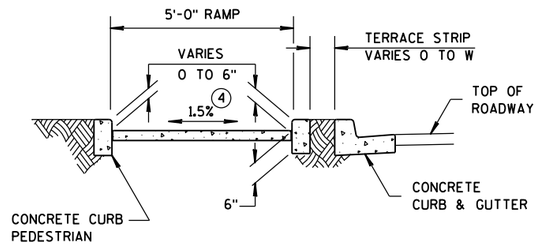
SECTION B-B FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)



SECTION C-C FOR TYPE 4B

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'-9¾"	3'-6½"	4'-11½"	5'-1¾"	4'-3¼"	6'-5½"	3'-8¾"	7'-6¾"	3'-3"	8'-6¼"
30 FEET	7'-9¼"	5'-10½"	6'-9½"	7'-11¼"	6'-0¼"	9'-8"	5'-5"	11'-1¾"	4'-10¾"	12'-5¾"
40 FEET	9'-4"	7'-10"	8'-2¾"	10'-3"	7'-4¾"	12'-3¾"	6'-8½"	14'-1¼"	6'-1¾"	15'-8½"
50 FEET	10'-8"	9'-6½"	9'-5½"	12'-3¼"	8'-6½"	14'-7½"	7'-9¾"	16'-8¼"	7'-2½"	18'-6¼"
60 FEET	11'-10¼"	11'-0¾"	10'-6½"	14'-1¼"	9'-6½"	16'-8½"	8'-9¼"	18'-11¾"	8'-1½"	21'-0½"

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

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

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

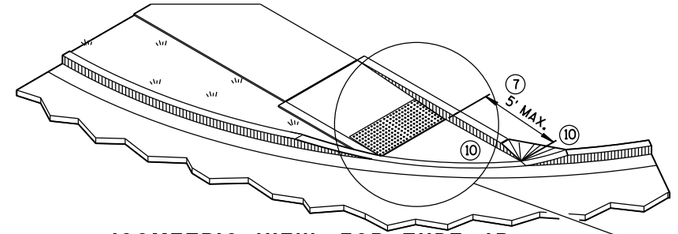
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

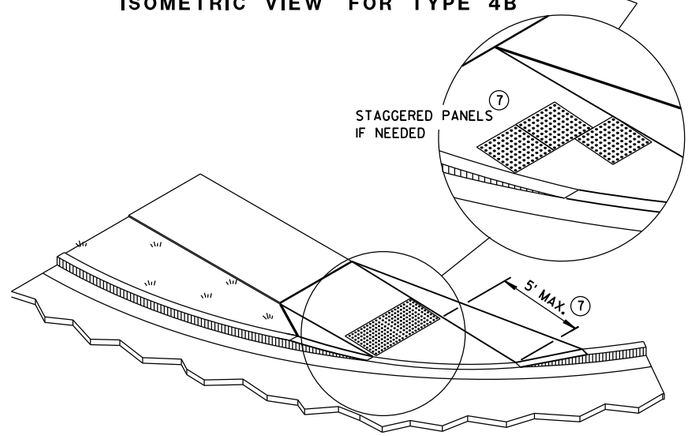
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

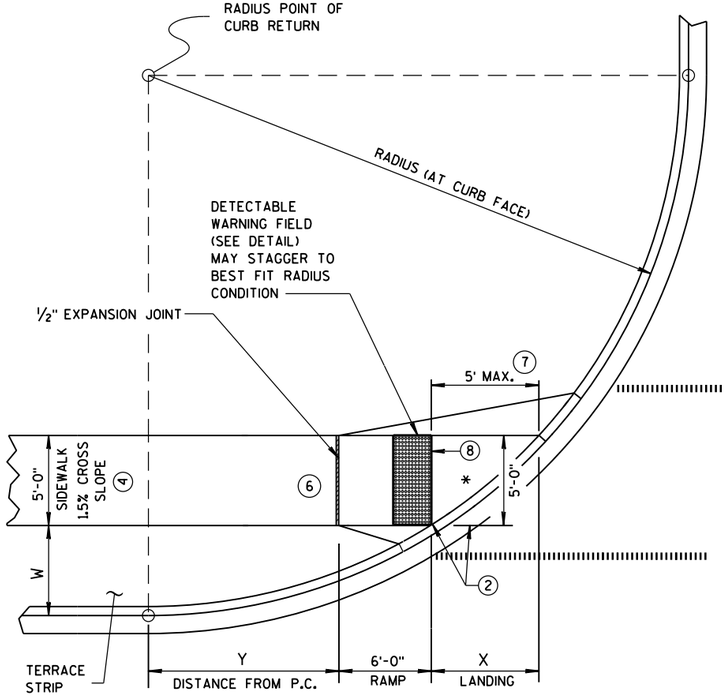
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1



CURB RAMP TYPE 4B1
PLAN VIEW

CURB RAMPS
TYPE 4B AND 4B1

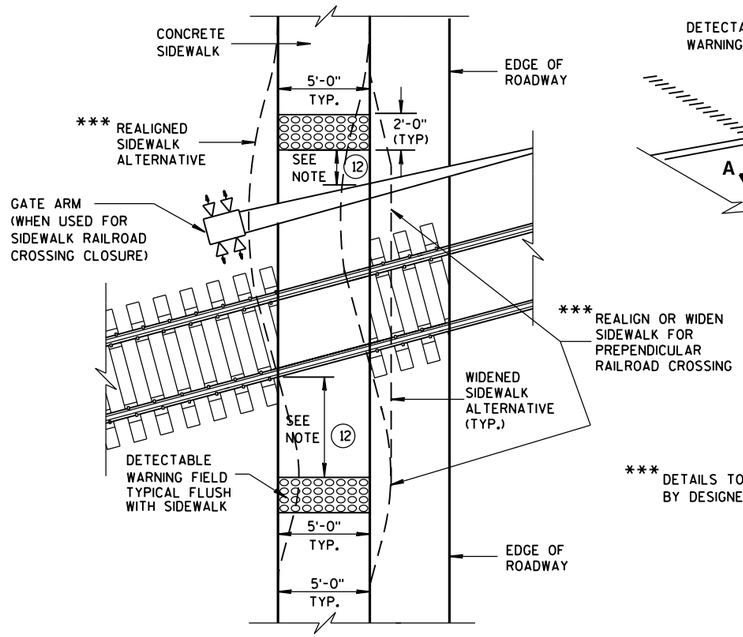
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 8 D 5-18d

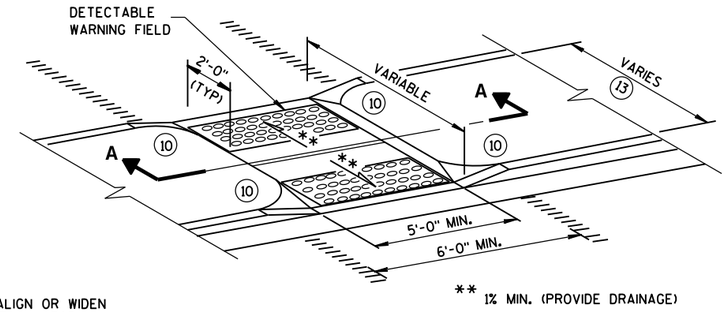
6

S.D.D. 8 D 5-18d



*** DETAILS TO BE DETERMINED BY DESIGNER

TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

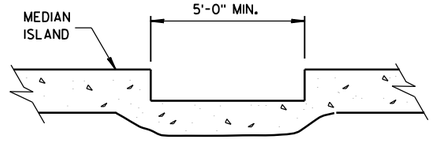
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

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

(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) 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.

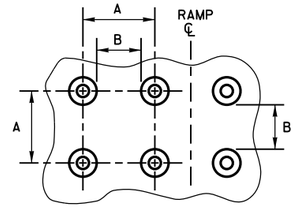
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



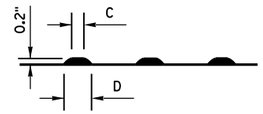
SECTION A-A

	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.

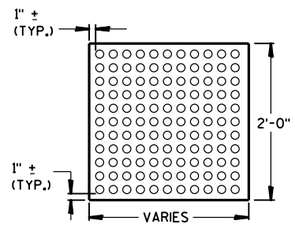


PLAN VIEW



ELEVATION VIEW

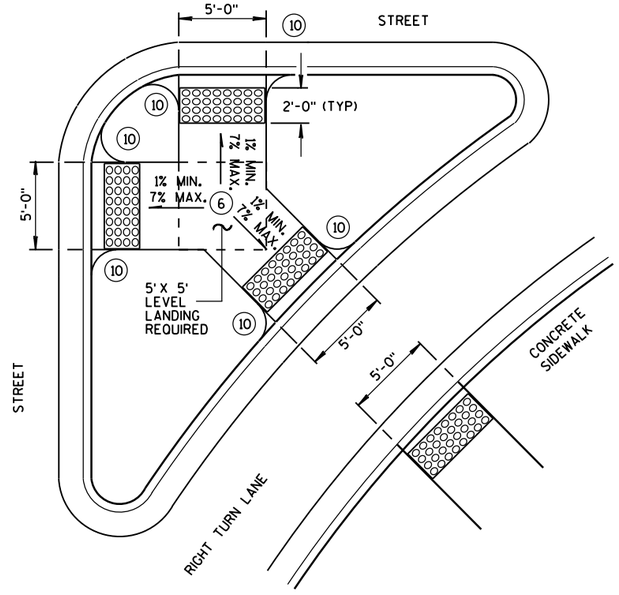
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



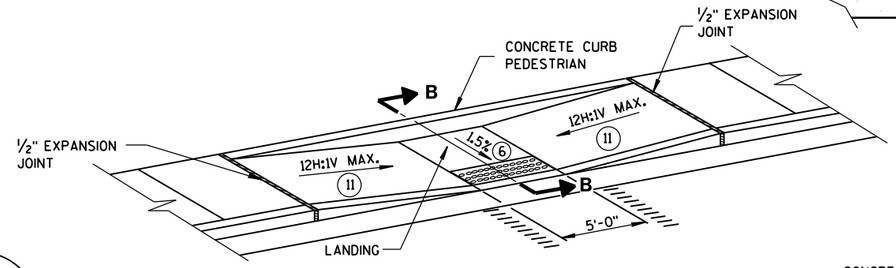
PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)

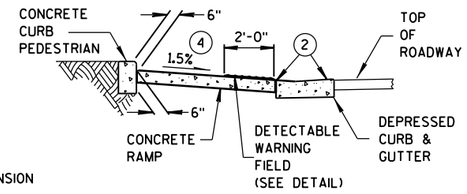
REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



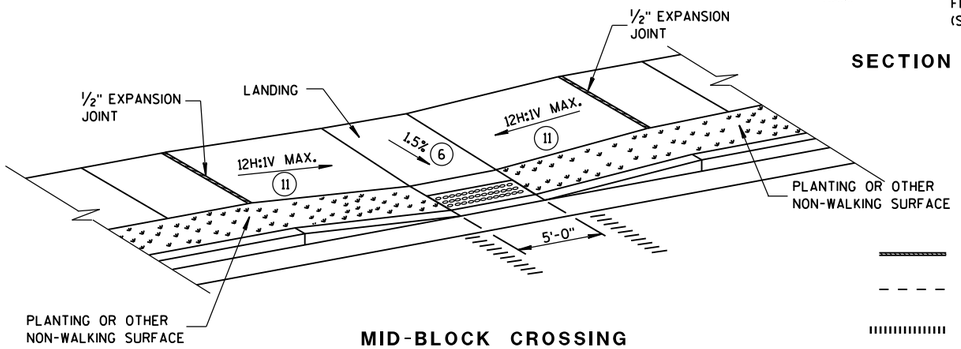
TYPE 6
DETECTABLE WARNING AT ISLANDS



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.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

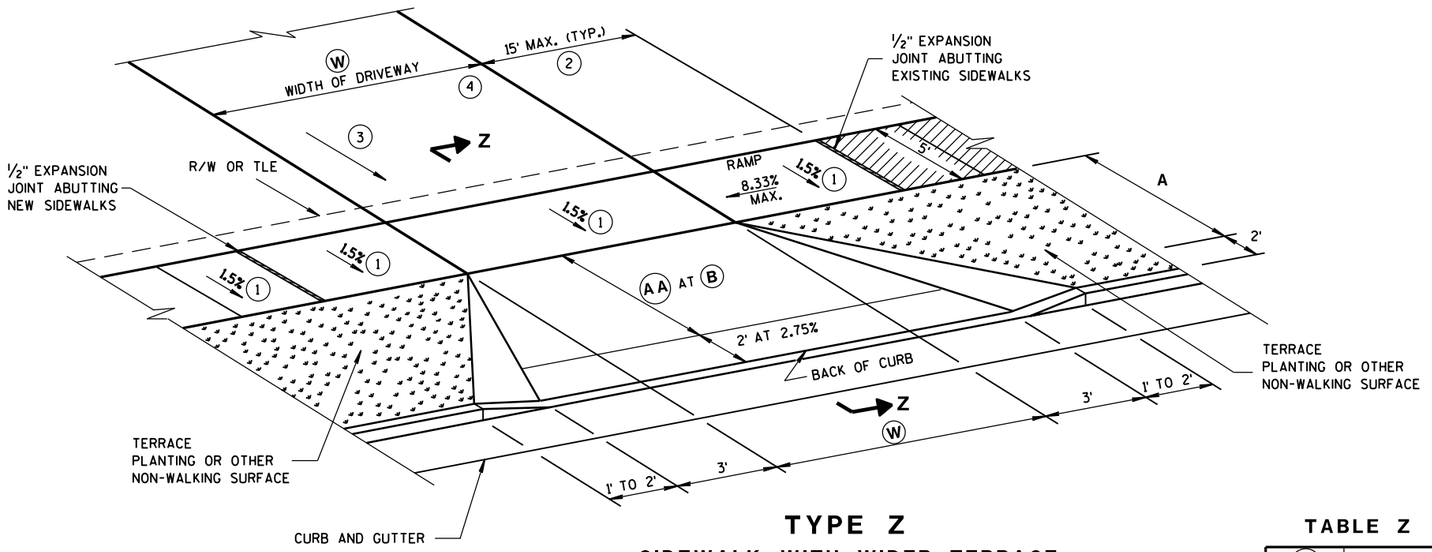
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV
FHWA

6

S.D.D. 8 D 5-18e



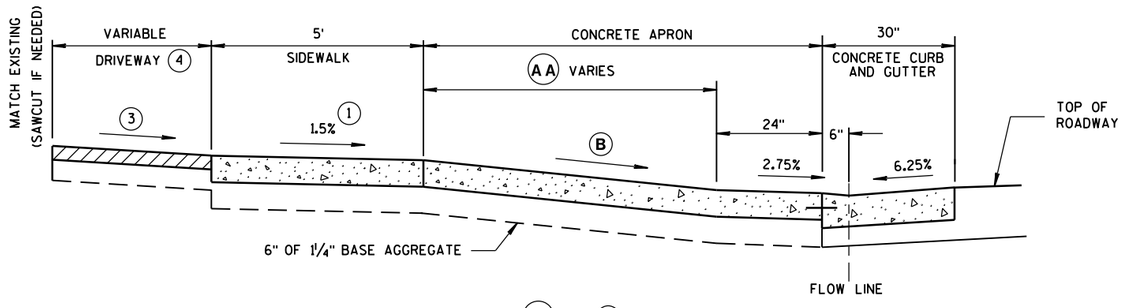
TYPE Z

SIDEWALK WITH WIDER TERRACE

TERRACE VARIES 7 TO 12 FEET

TABLE Z

(AA) FEET	(B) %
4.5'	11.5%
5.5'	9-11.5%
6.5'	8-11.5%
7.5'	7-11.5%
8.5'	6-11.5%
9.5'	5-11.5%



PROVIDE (AA) AND (B) AS SHOWN ON CROSS SECTIONS.

NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS FOR **B** VALUES NOT SHOWN IN TABLE Z.

SIDEWALK WITHIN THE LIMITS OF THE DRIVEWAY PAID FOR AS CONCRETE DRIVEWAY, 6-INCH.

SEPARATE PAYMENT FOR BASE AGGREGATE WILL BE MADE.

CONCRETE APRON MEASURED AND PAID FOR AS CONCRETE DRIVEWAY, 6-INCH

SECTION Z-Z

DRIVEWAY DETAIL WITH CONCRETE CURB & GUTTER

(URBAN AND SUBURBAN)

(W): 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)

16' MIN. - 35' MAX. COMMERCIAL (CE)

GENERAL NOTES

1. CONSTRUCTION TOLERANCE OF 0.5% ± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

2. THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY.

3. DRIVEWAY SLOPES: DESIRABLE MAXIMUM
   - 10.5% UP AWAY FROM SIDEWALK (SAG)
   - 8.5% DOWN AWAY FROM SIDEWALK (CREST)
   - ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

4. DRIVEWAY TYPES
   - 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
   - 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
   - 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES)

5. PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

6. (W) IS SHOWN ON PLAN AND PROFILE SHEETS.

7. OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

NOT TO SCALE

DRIVEWAY AND SIDEWALK RAMPS TYPE Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

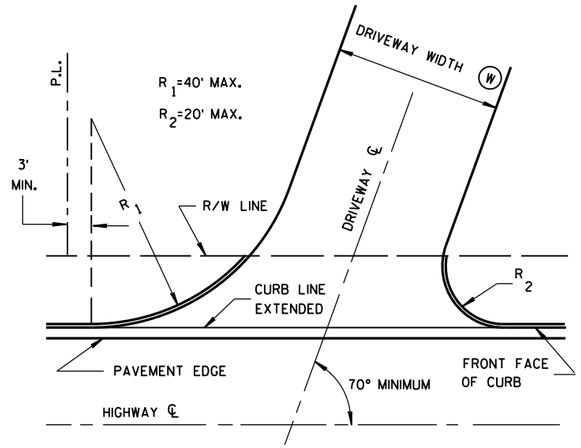
APPROVED
December, 2016 — /S/ Rodney Taylor
DATE — ROADWAY STANDARDS UNIT SUPERV — ENT
FHWA

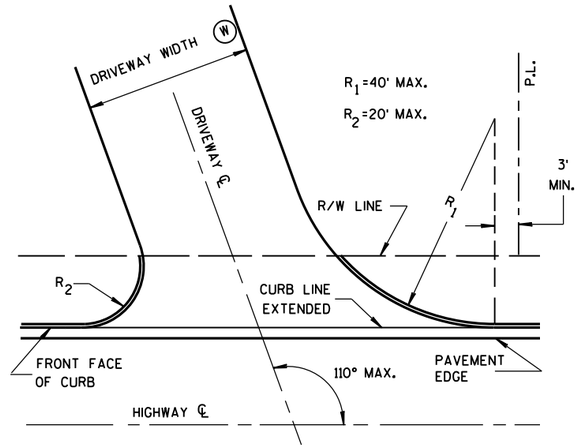
6

S.D.D. 8 D 19-1

6

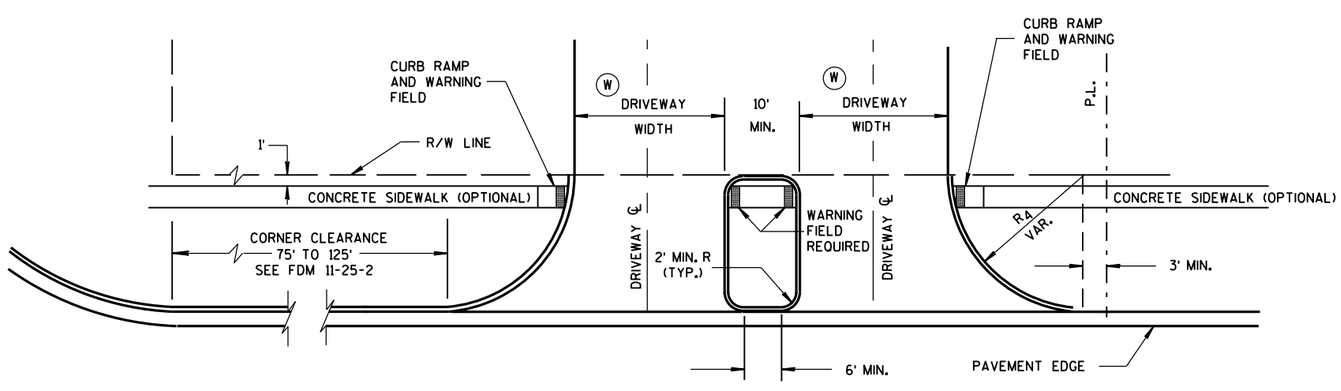
S.D.D. 8 D 19-1





SKEWED DRIVEWAY DETAILS
(COMMERCIAL AND NON-COMMERCIAL)

SIDEWALK NOT SHOWN



DRIVEWAY LOCATION AND SPACING DETAILS

SIDEWALK SHOWN

NOTES

A MAXIMUM RADIUS OF 10 FEET SHALL BE USED FOR NON-COMMERCIAL PRIVATE ENTRANCES. RADII FOR COMMERCIAL DRIVEWAYS SHALL BE DETERMINED BY THE ENGINEER BASED ON TRAFFIC AND DRIVEWAY PERMIT RESTRICTIONS.

THE MINIMUM ANGLE OF INTERSECTION BETWEEN THE DRIVEWAY AND HIGHWAY CENTERLINES SHALL BE 70°.

ALL CURVILINEAR PRIVATE ENTRANCE OUTLINES SHALL BE CONTAINED WITHIN THE HIGHWAY R/W.

NO DRIVEWAY SHALL BE BUILT WITHIN 3 FEET OF THE PROPERTY LINE EXCEPT FOR EXISTING JOINT DRIVEWAY SHARED BY TWO OWNERS.

Ⓦ DRIVEWAY WIDTHS:

COMMERCIAL - 35' MAX., 16' MIN.

RESIDENTIAL AND NON-COMMERCIAL - 24' MAX., 12' MIN.

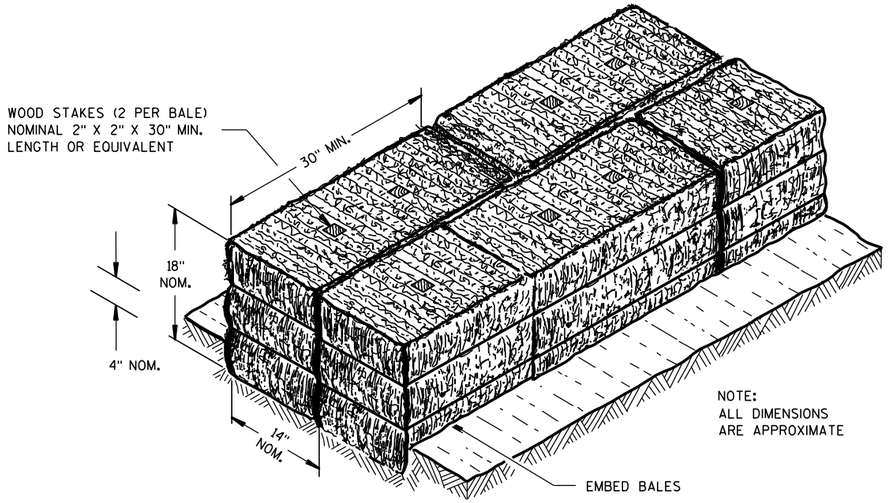
DRIVEWAYS WITH CURB & GUTTER RETURNS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

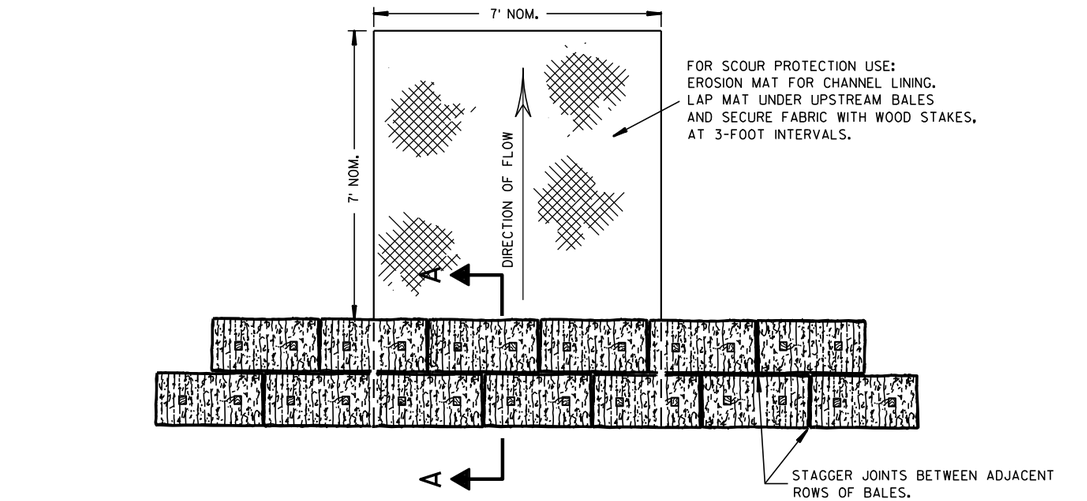
APPROVED
December, 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS UNIT SUPERV
FHWA

6

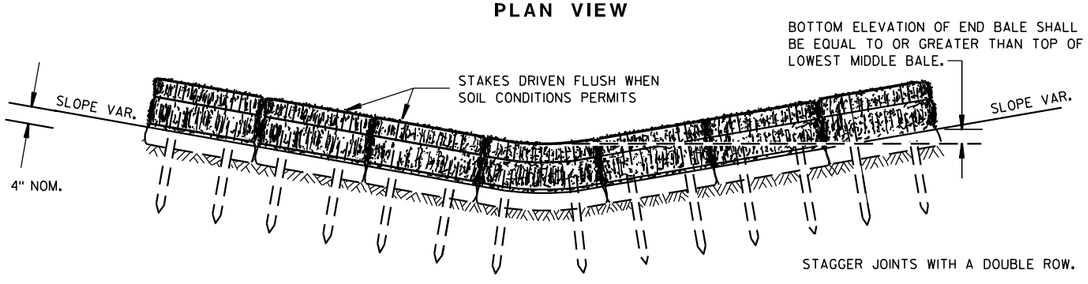
S.D.D. 8 D 20-1



SECTION A-A



PLAN VIEW



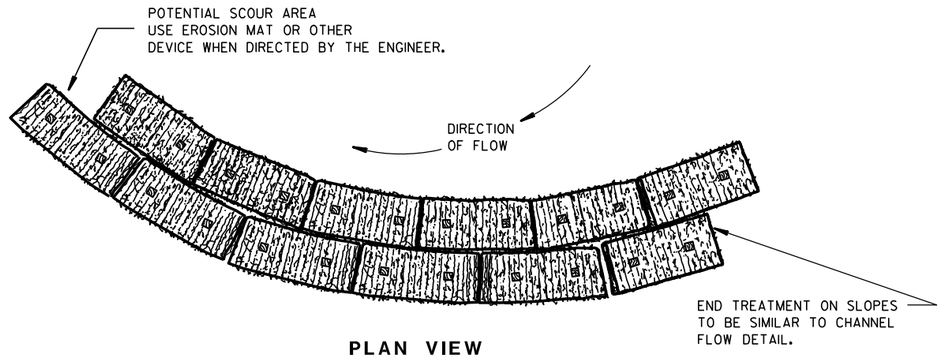
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

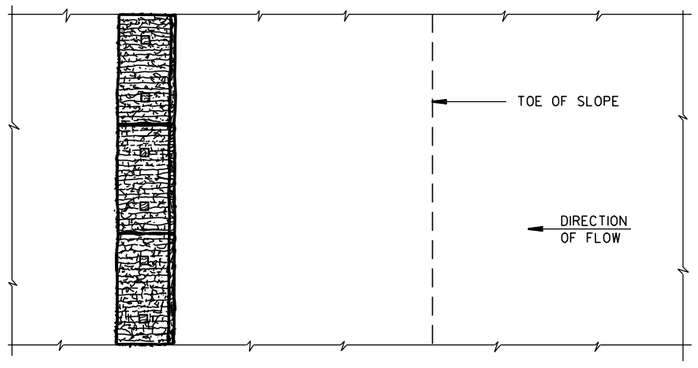
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

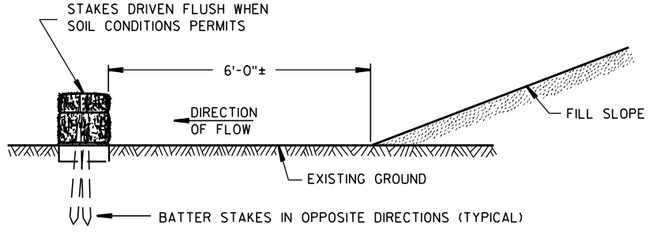


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

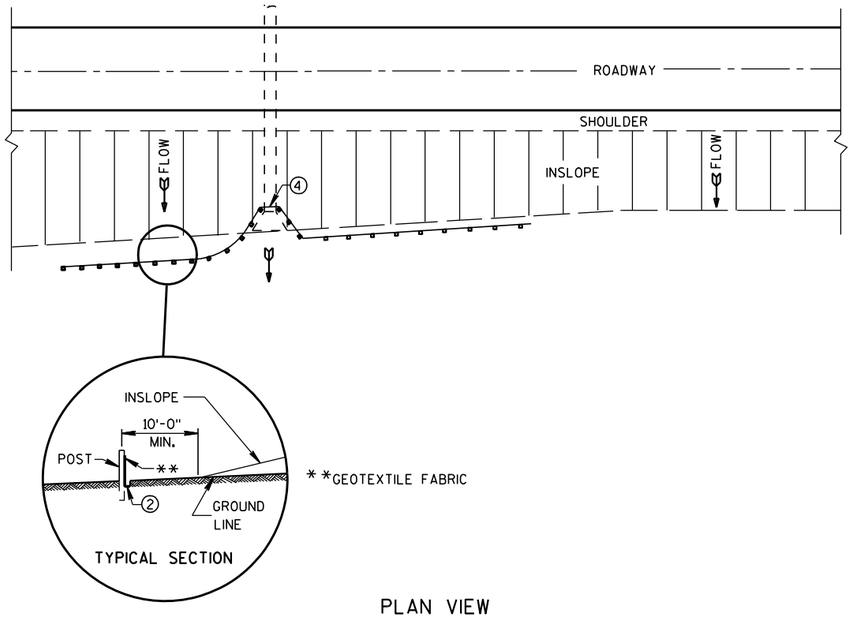
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

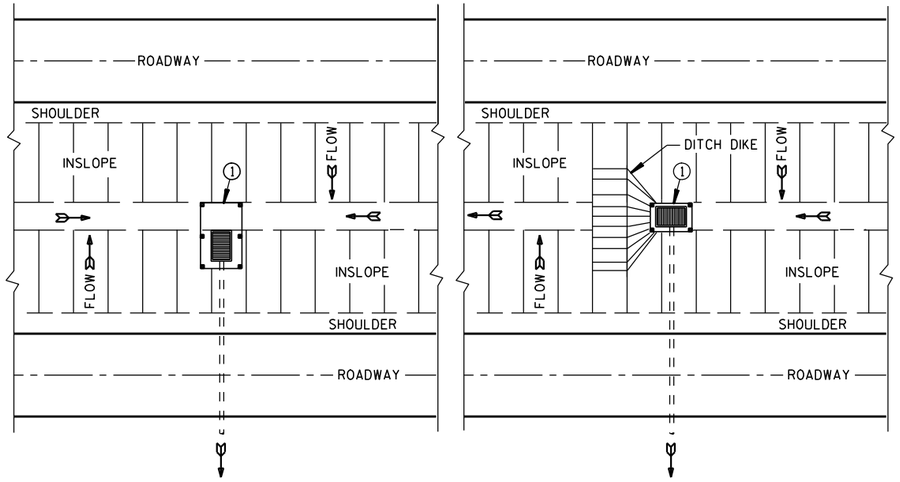
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



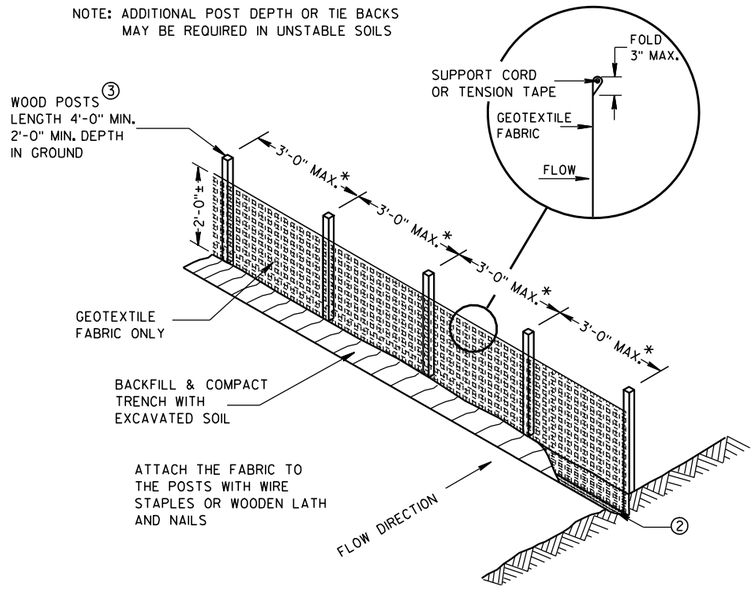
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



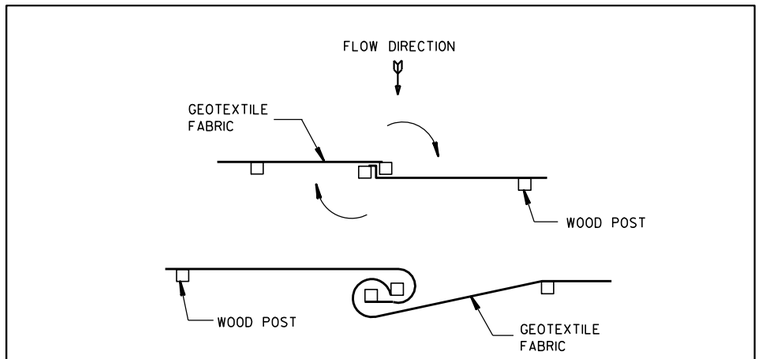
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS



*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

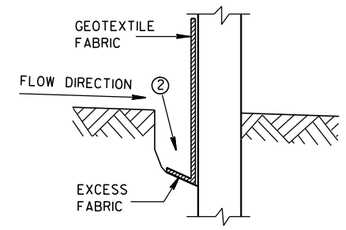


JOINING TWO LENGTHS OF SILT FENCE 5

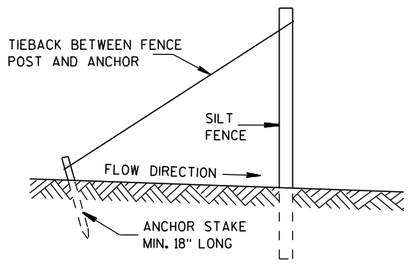
GENERAL NOTES

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

1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

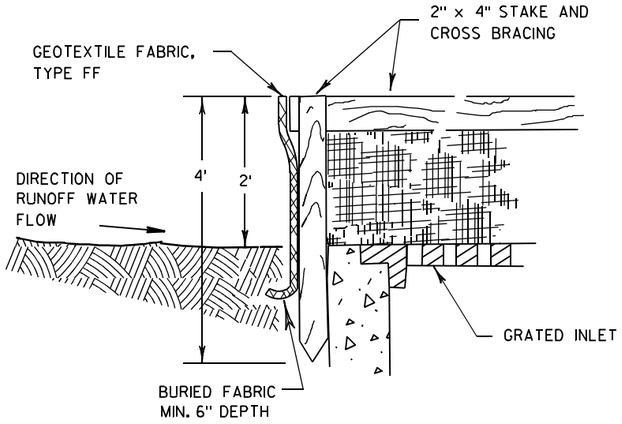
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

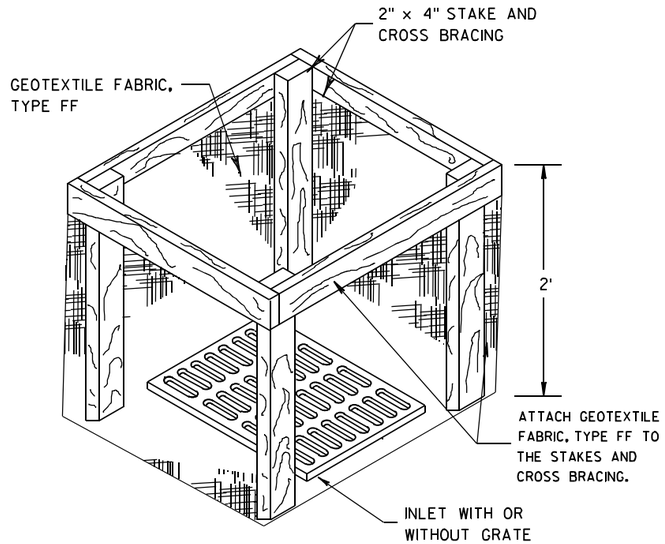
6

S.D.D. 8 E 9-6

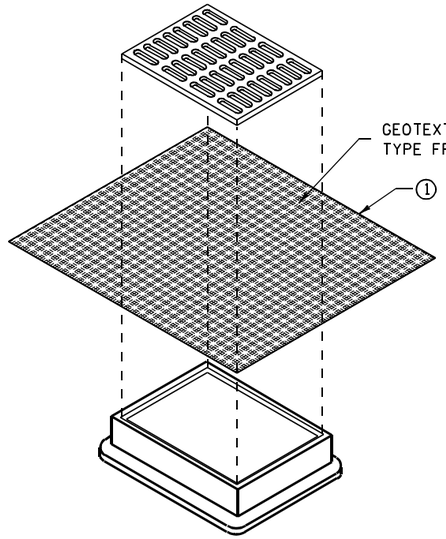
6

S.D.D. 8 E 9-6



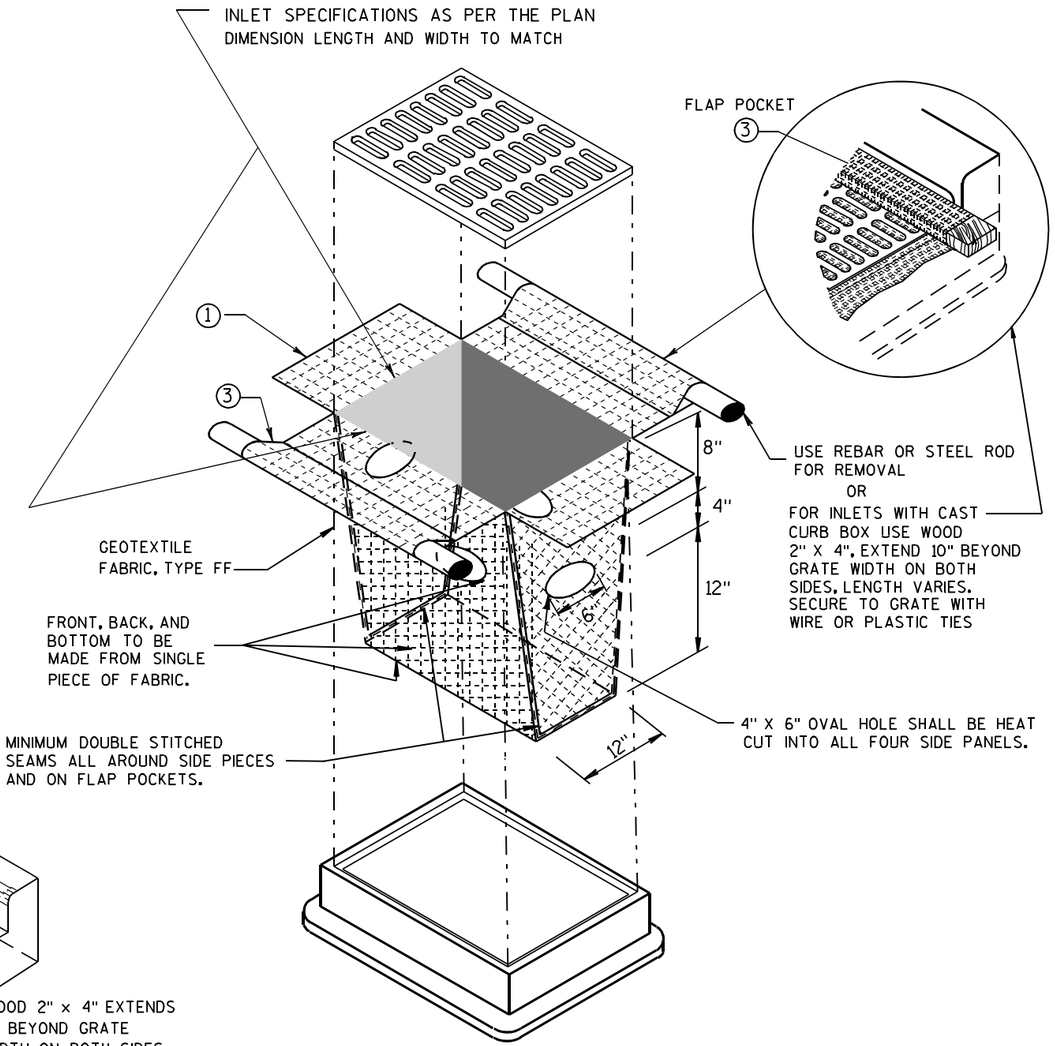


INLET PROTECTION, TYPE A



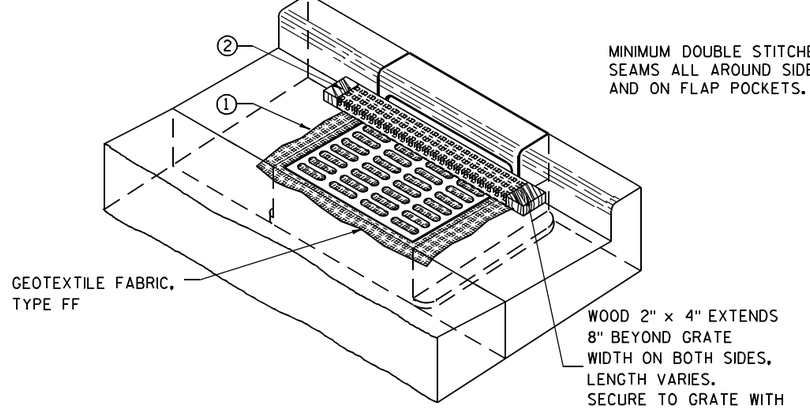
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

GENERAL NOTES

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

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

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

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

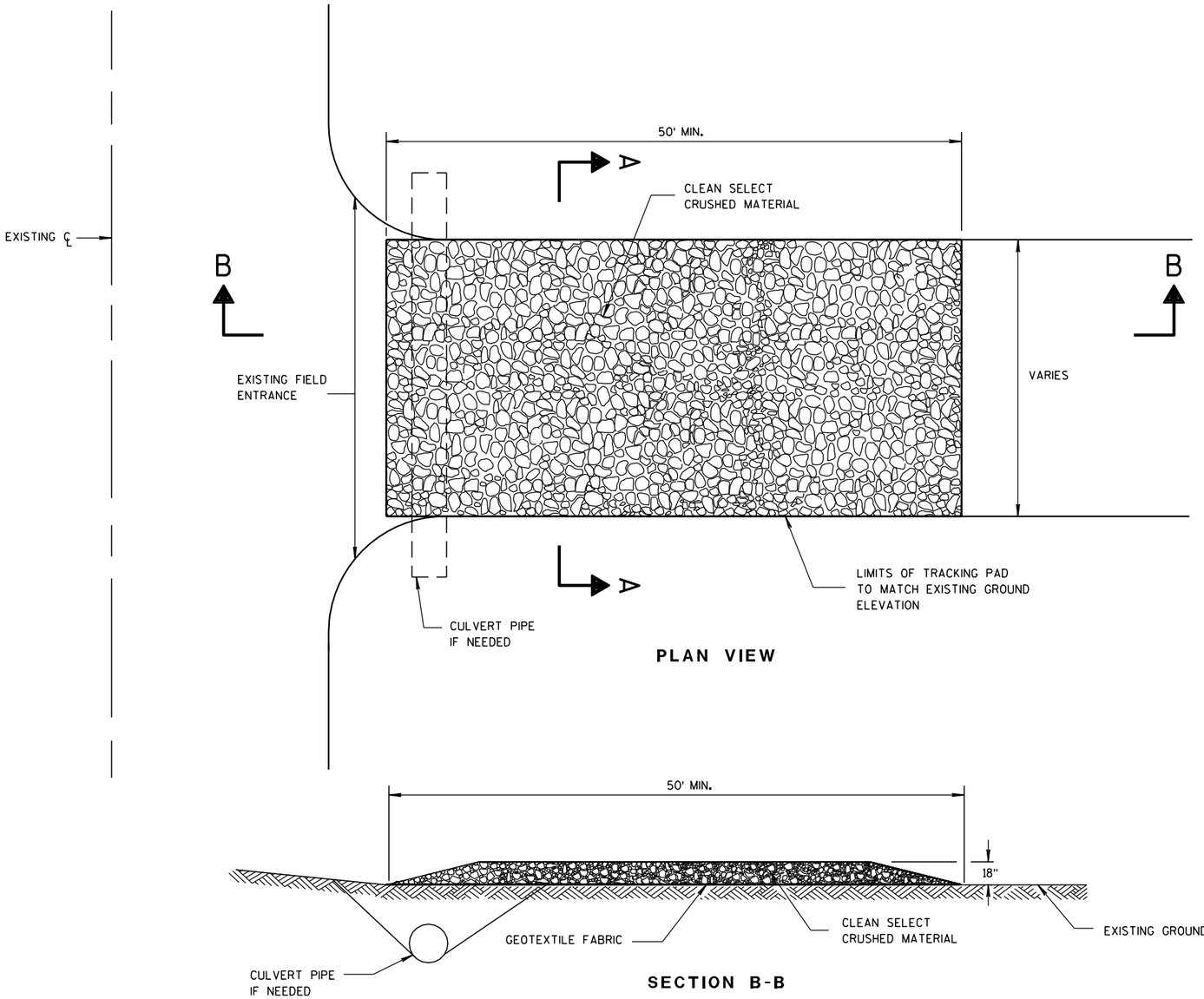
APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6
S.D.D. 8 E 10-2



PLAN VIEW

SECTION B-B

GENERAL NOTES

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

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

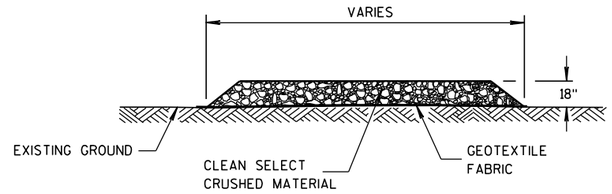
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

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

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

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



SECTION A-A

TRACKING PAD

TRACKING PAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/24/2011 DATE FHWA	/S/ Jerry H. Zoda ROADWAY STANDARDS ENGINEER

6

S.D.D. 8 E 14-1

6

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

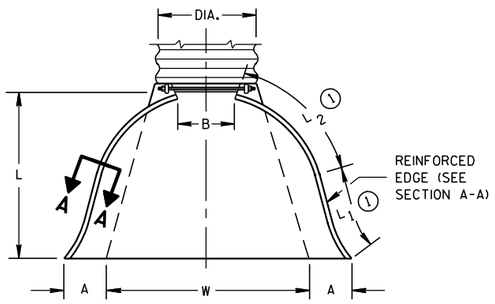
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

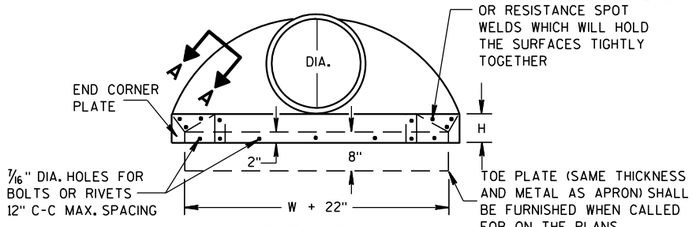
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

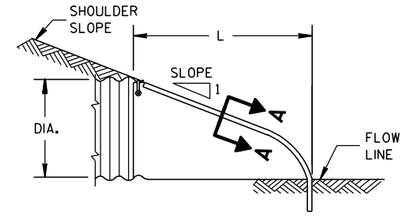
*MINIMUM
**MAXIMUM



PLAN VIEW

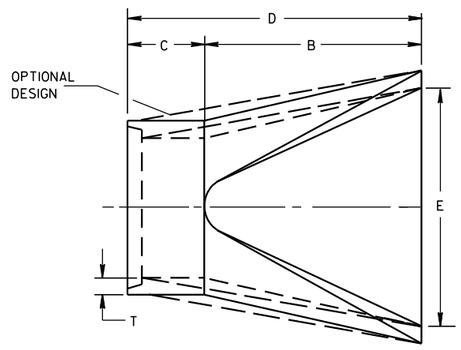


END VIEW

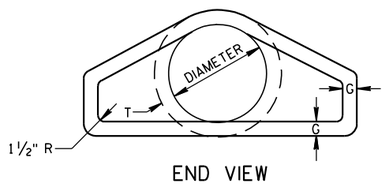


SIDE ELEVATION

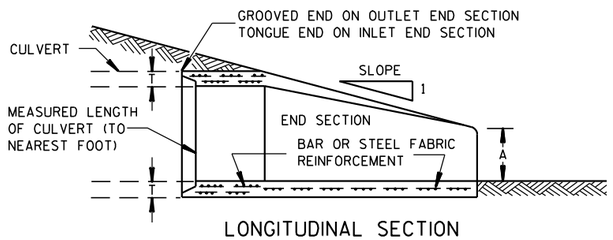
METAL ENDWALLS



PLAN

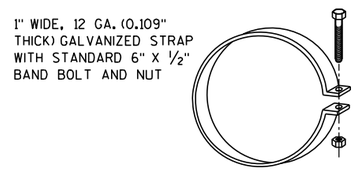


END VIEW



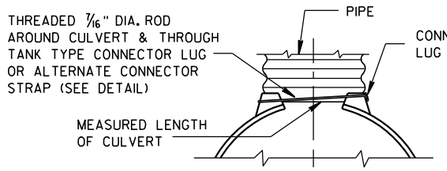
LONGITUDINAL SECTION

CONCRETE ENDWALLS

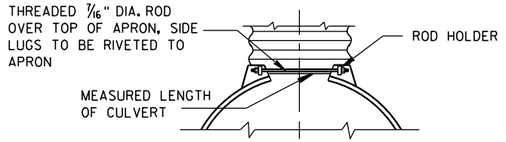


ALTERNATE FOR TYPE 1 CONNECTION

END SECTION CONNECTOR STRAP

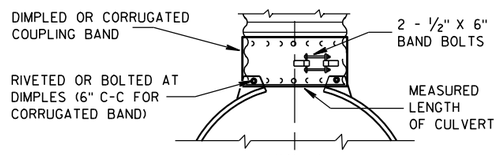


TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE

TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

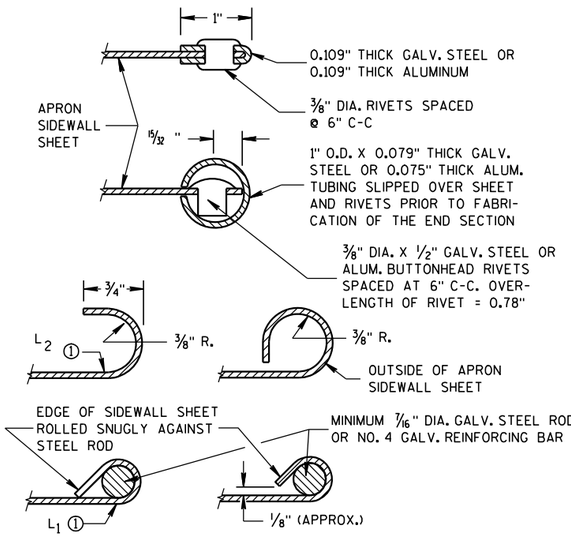
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

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

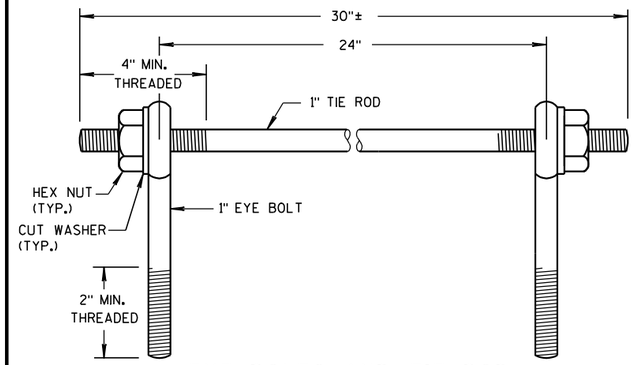
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

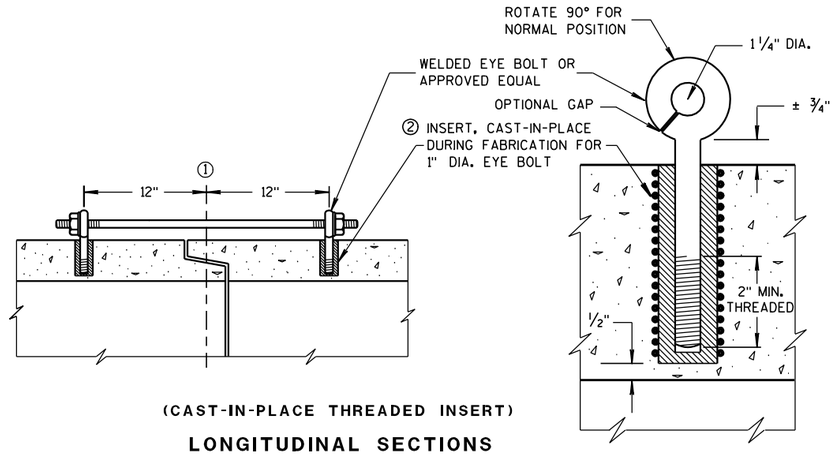
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

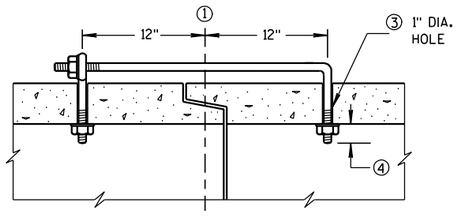
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

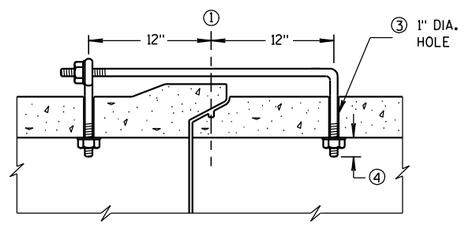
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

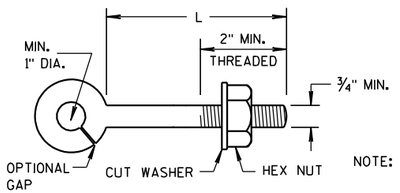


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

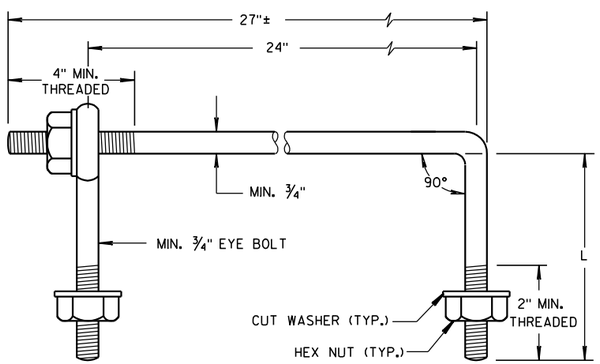
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

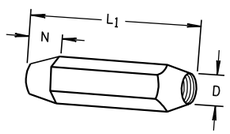
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

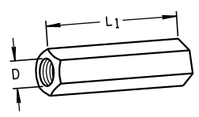
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



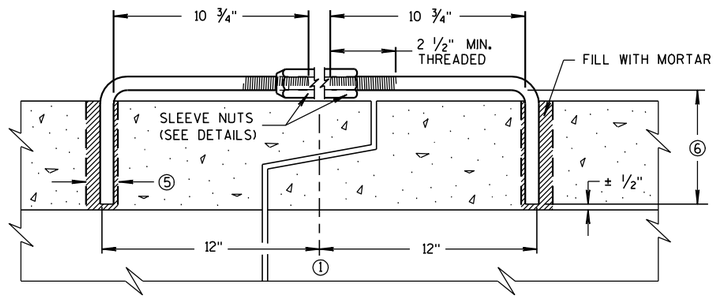
TAPERED



PLAIN

RIGHT AND LEFT THREADS

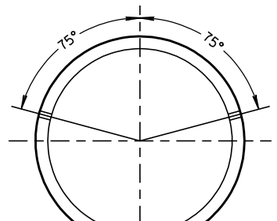
SLEEVE NUTS



LONGITUDINAL SECTION

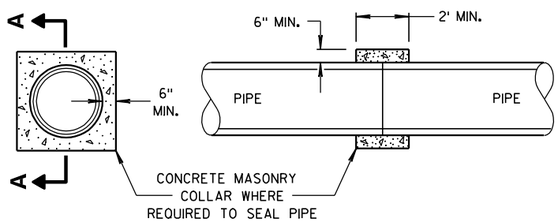
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

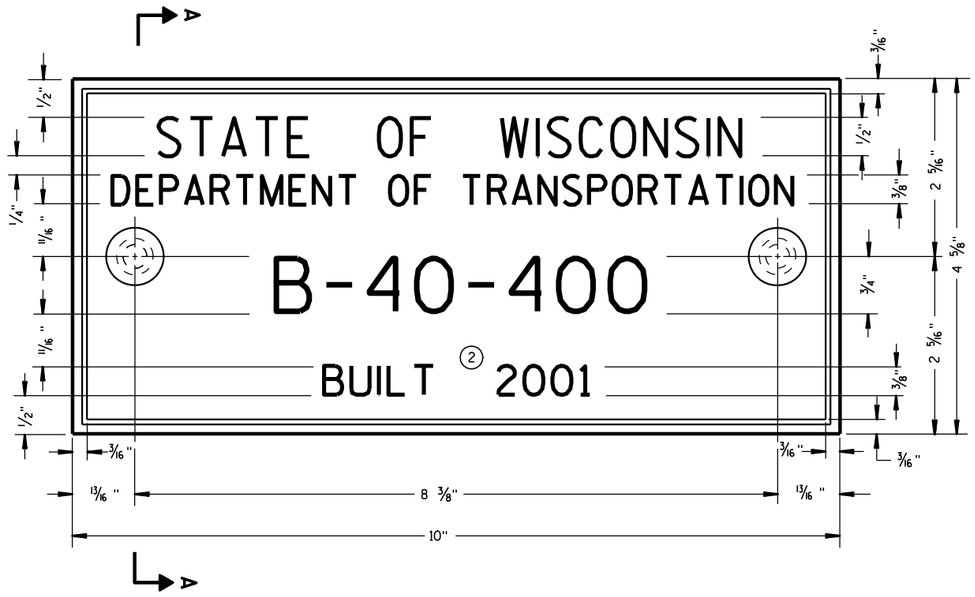
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
145
FHWA

6

S.D.D. 8 F 4-7

6

S.D.D. 8 F 4-7



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

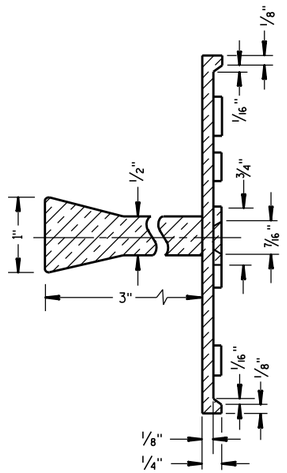
GENERAL NOTES

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.

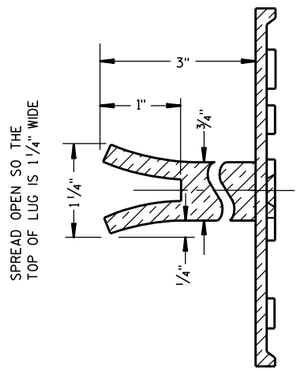
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

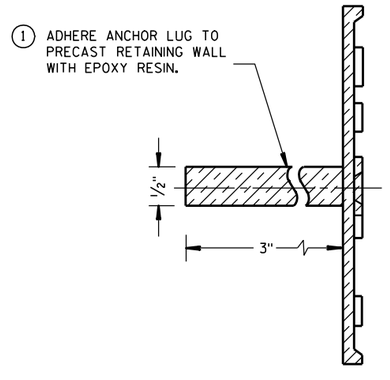
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

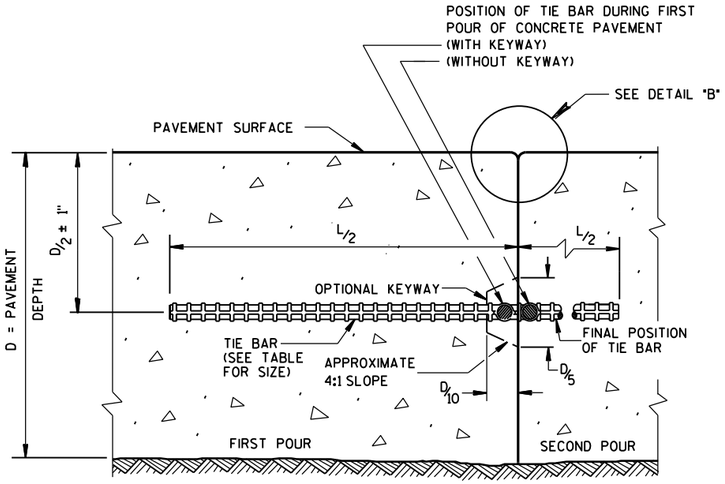
3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

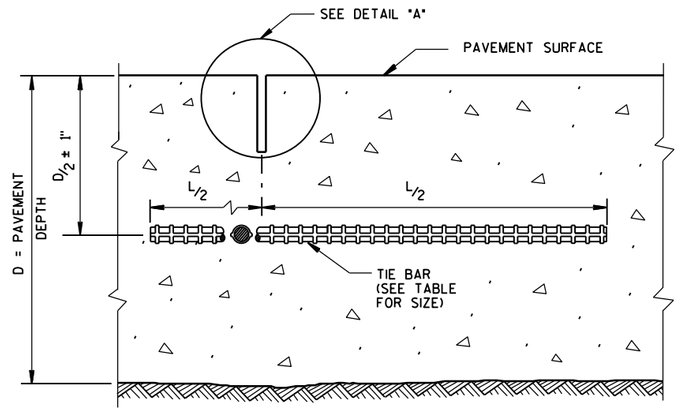
FHWA

6

S.D.D. 12 A 3-10



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.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

PLAN VIEW

SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

DETAIL "A"

DETAIL "B"

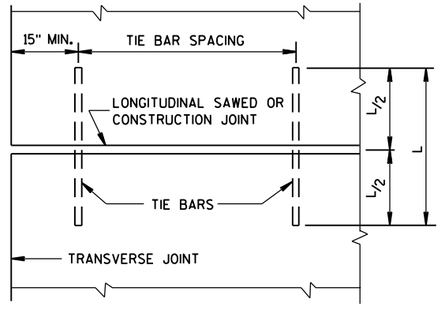
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW
SHOWING LOCATION OF TIE BARS

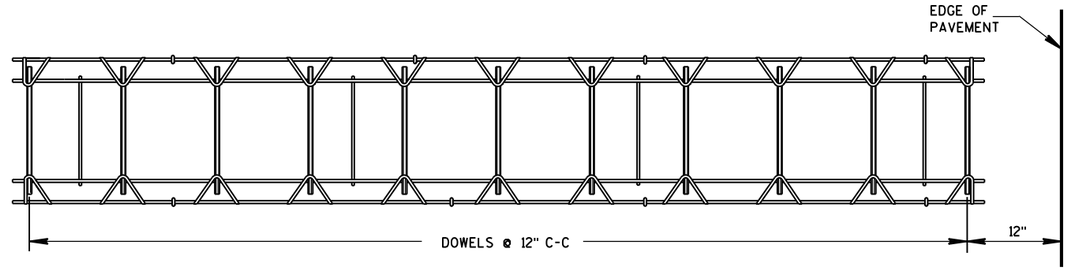
CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

6

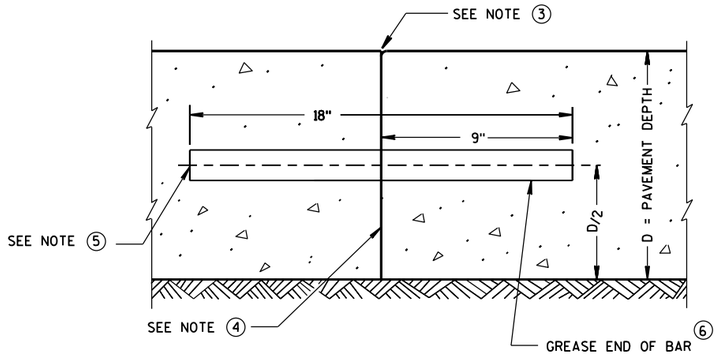
S.D.D. 13 C 1-18



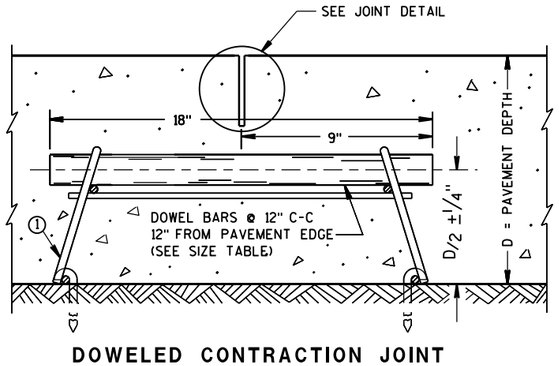
PLAN VIEW

SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①



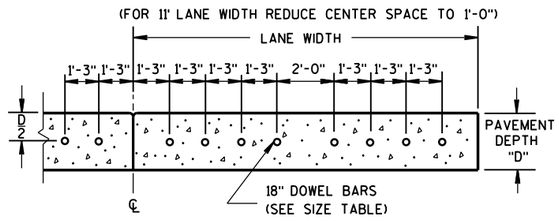
TRANSVERSE CONSTRUCTION JOINT



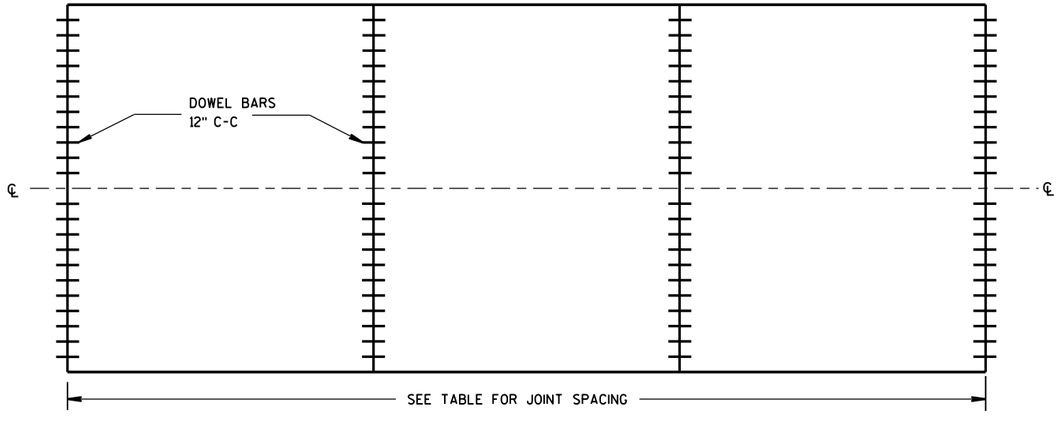
DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE 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, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE LONGITUDINAL JOINT AND THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① **OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.**

② 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.

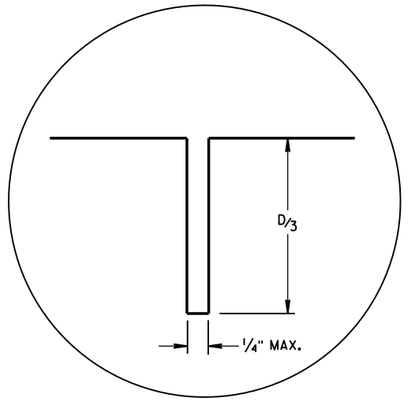
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



JOINT DETAIL

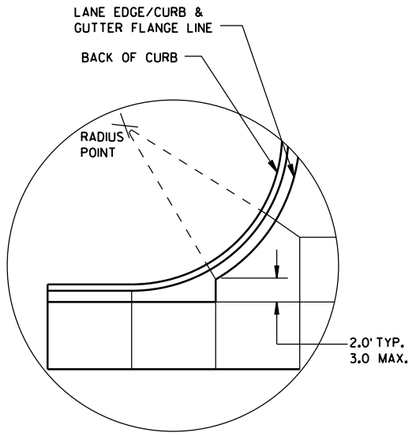
URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

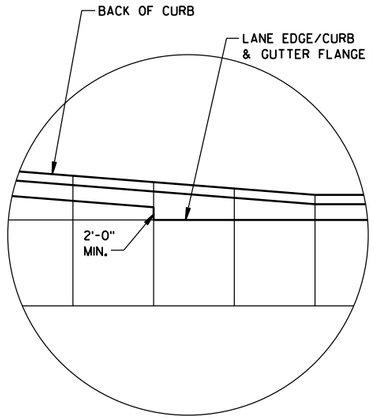
APPROVED
5/3/2013 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE ENGINEER
FHWA

6

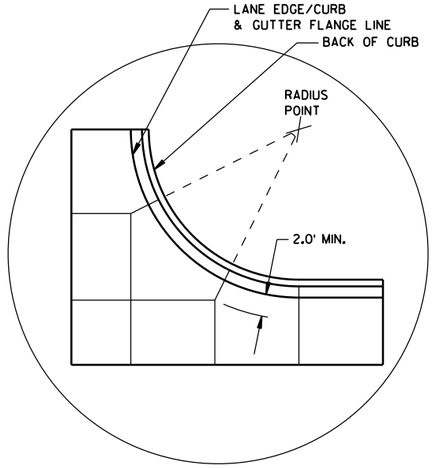
S.D.D. 13 C 13-8



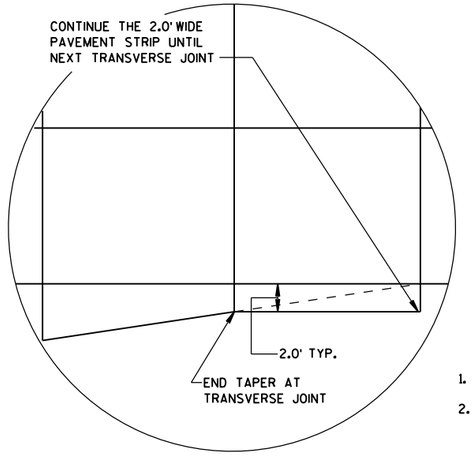
DETAIL "A"



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.

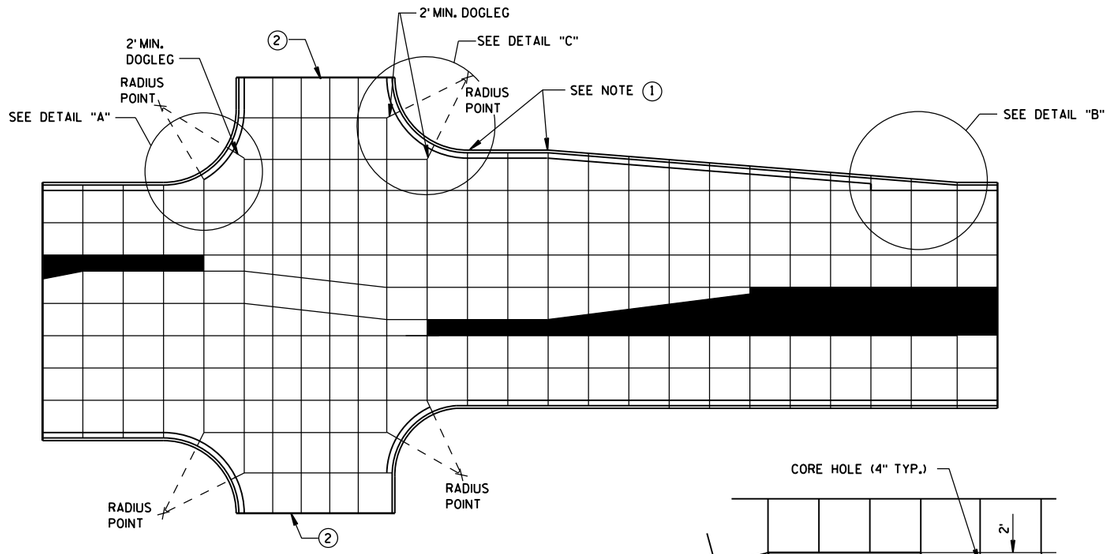
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

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.

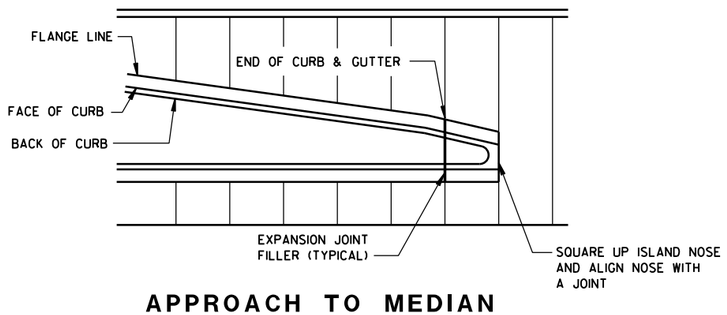
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



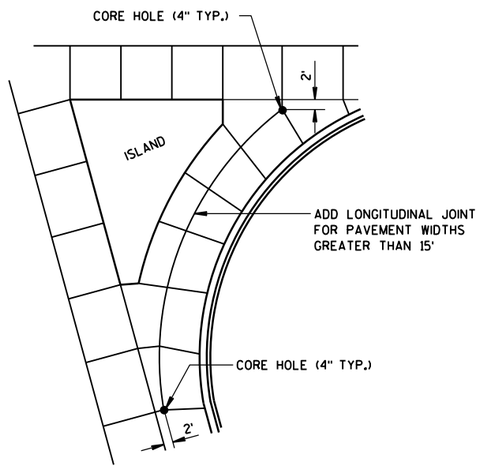
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

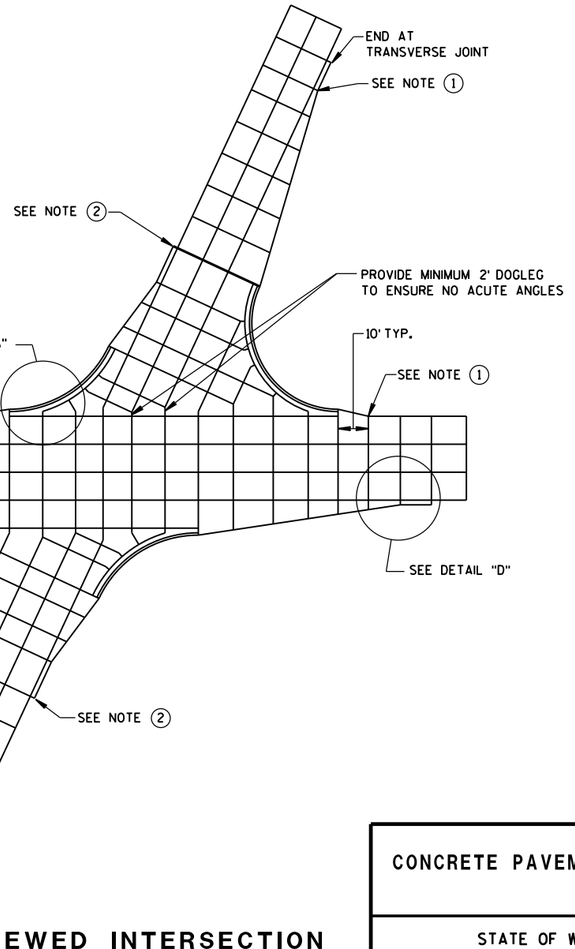
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



APPROACH TO MEDIAN



LARGE RIGHT TURN



SKEWED INTERSECTION

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

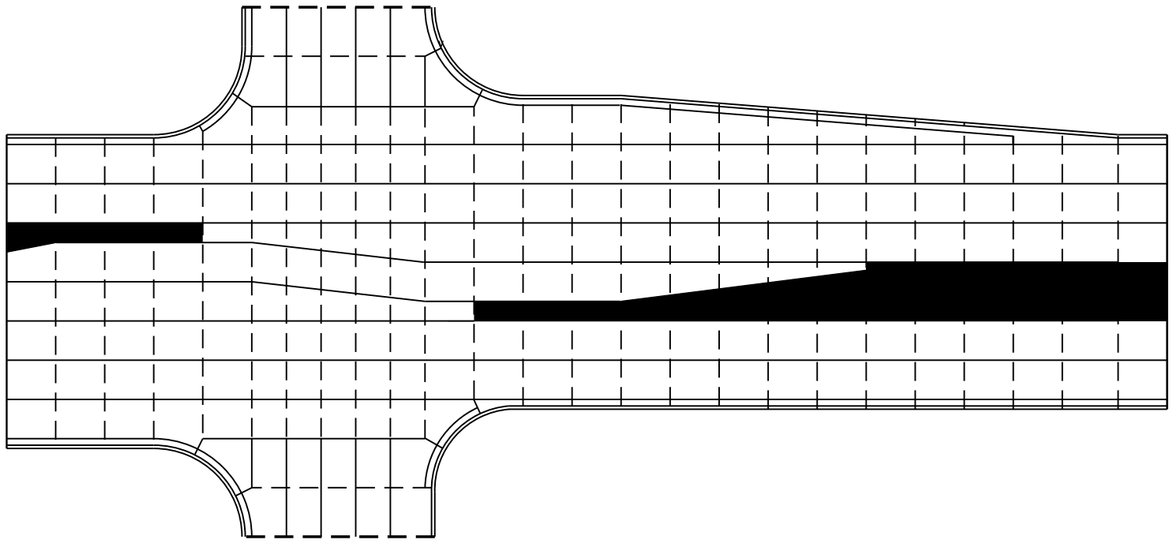
6
S.D.D. 13 C 18-5a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

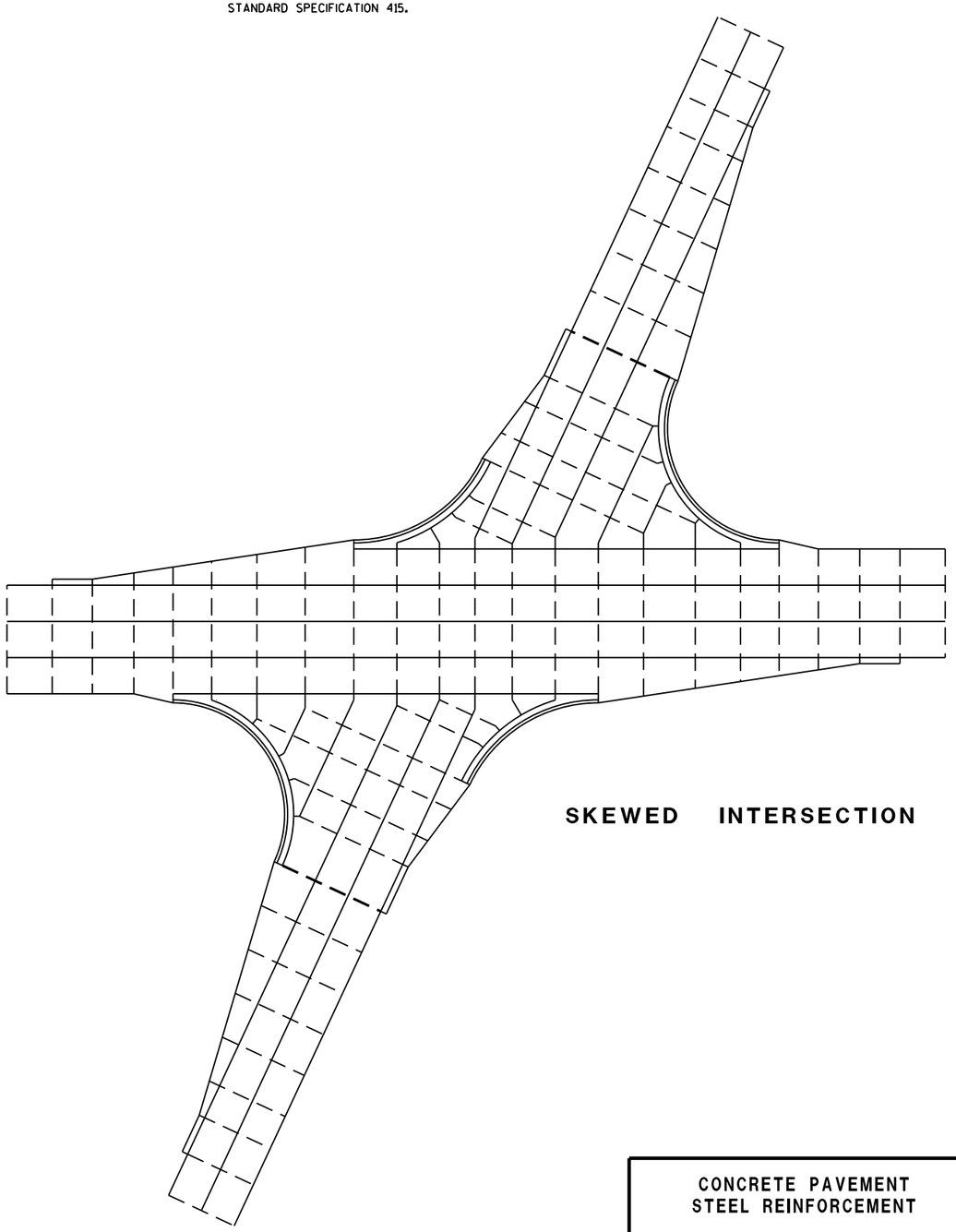
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

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



SKEWED INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

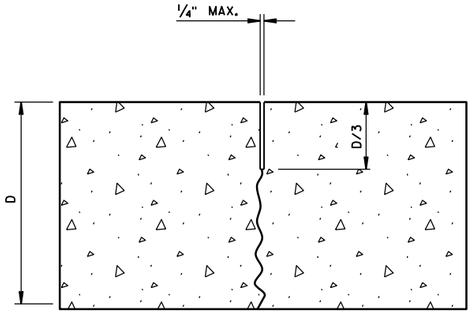
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

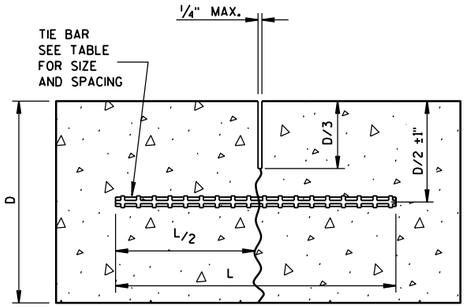
S.D.D. 13 C 18-5b

6

S.D.D. 13 C 18-5b



UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

TIE BAR TABLE

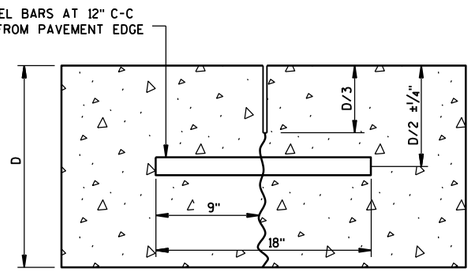
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

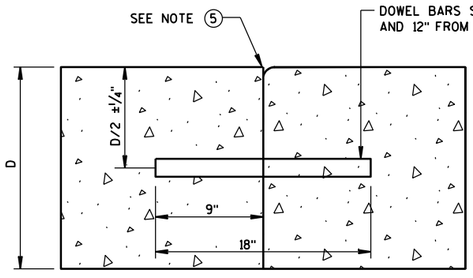
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF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



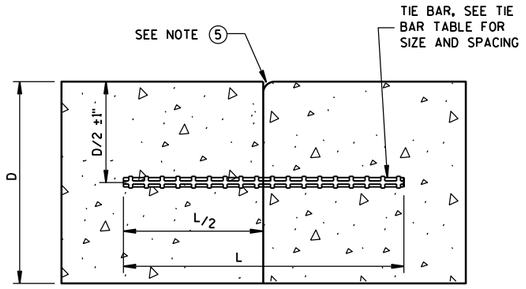
DOWELED-TRANSVERSE

CONTRACTION JOINTS

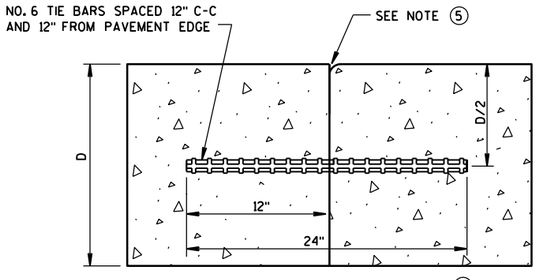
SEE NOTE (2)



DOWELED TRANSVERSE (3)

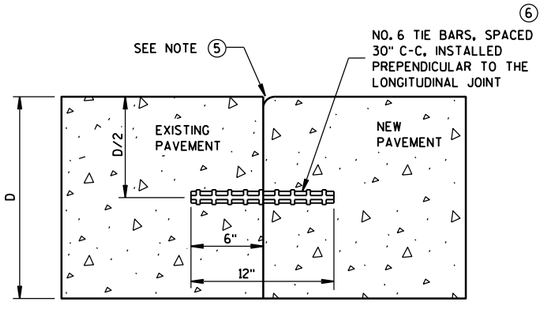


TIED LONGITUDINAL



TIED TRANSVERSE (3)

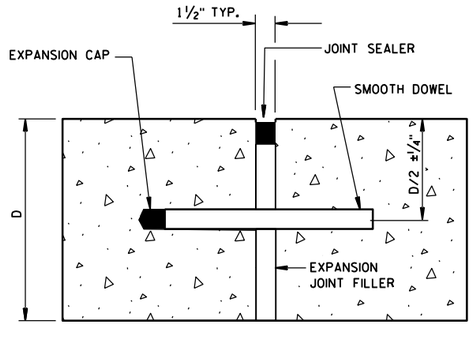
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

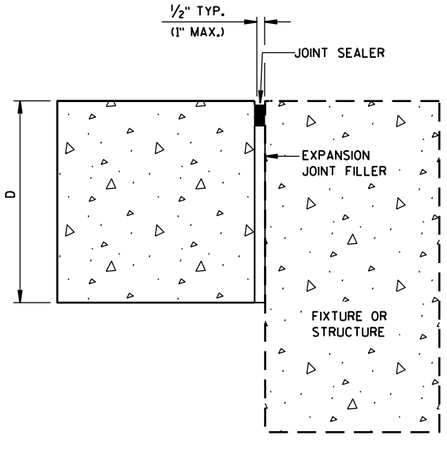
CONSTRUCTION JOINTS

SEE NOTE (4)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

6

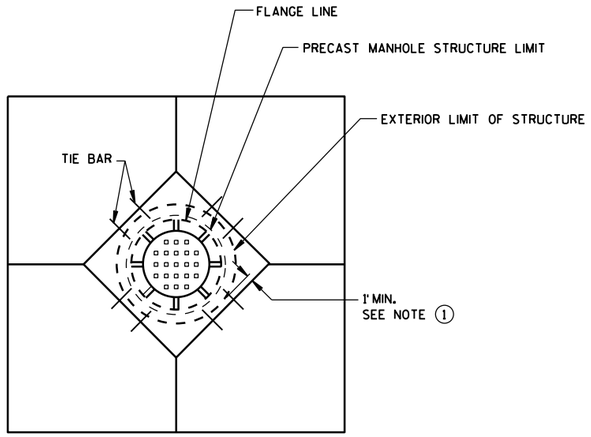
6

S.D.D. 13 C 18-5c

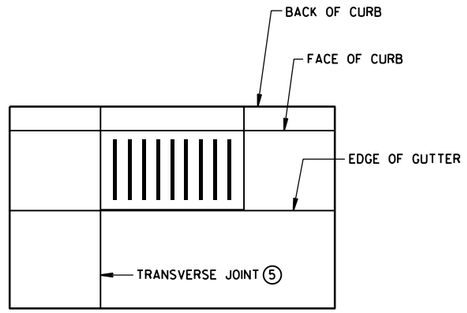
S.D.D. 13 C 18-5c

CONCRETE PAVEMENT
JOINT TYPES

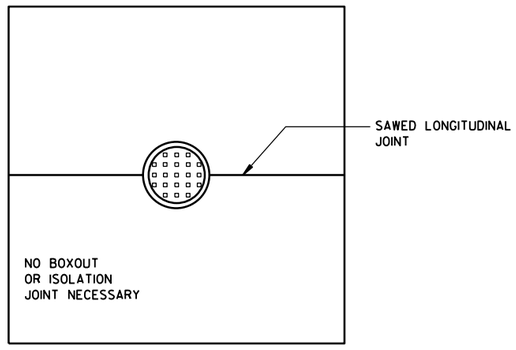
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



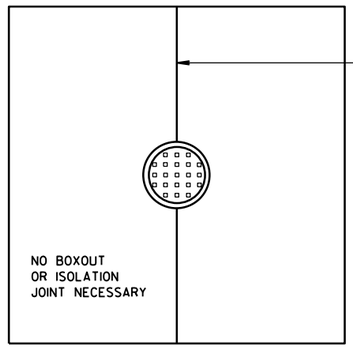
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



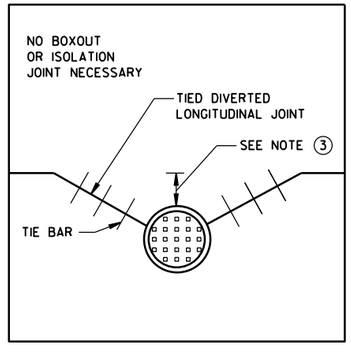
INLET WITH TRANSVERSE JOINT



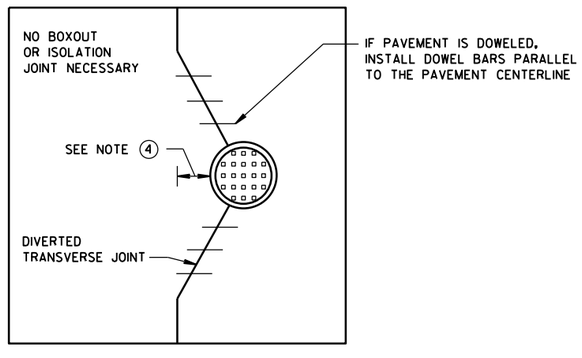
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION 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 2 FEET OR LESS, DIVERT THE LONGITUDIAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(4) IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(5) ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

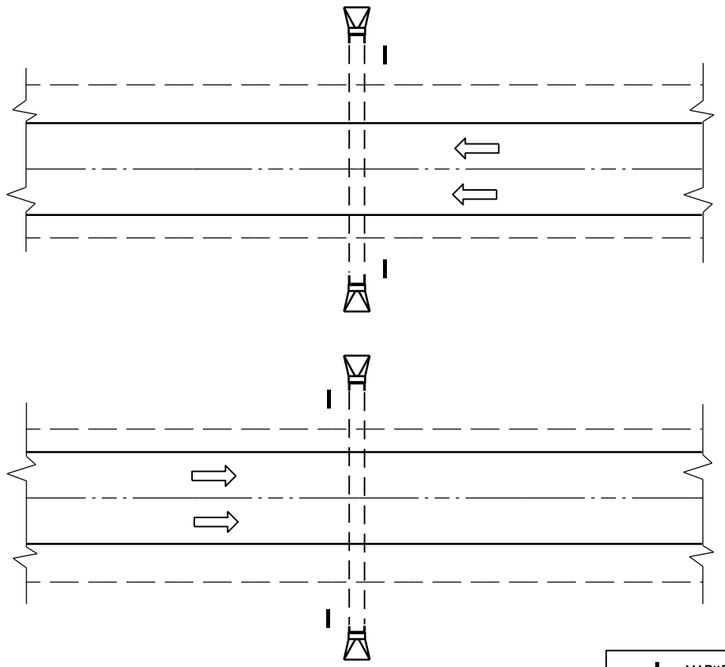
CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December, 2016 — /S/ Peter Kemp, P.E.
DATE — PAVEMENT SUPEF
FHWA

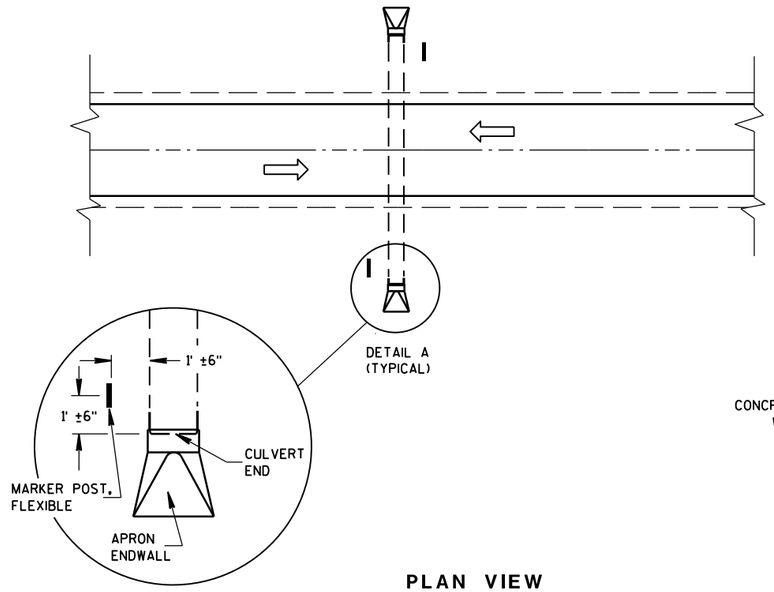
6

S.D.D. 13 C 18-5d



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

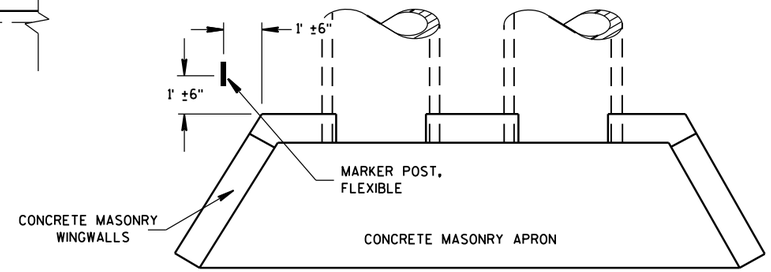
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

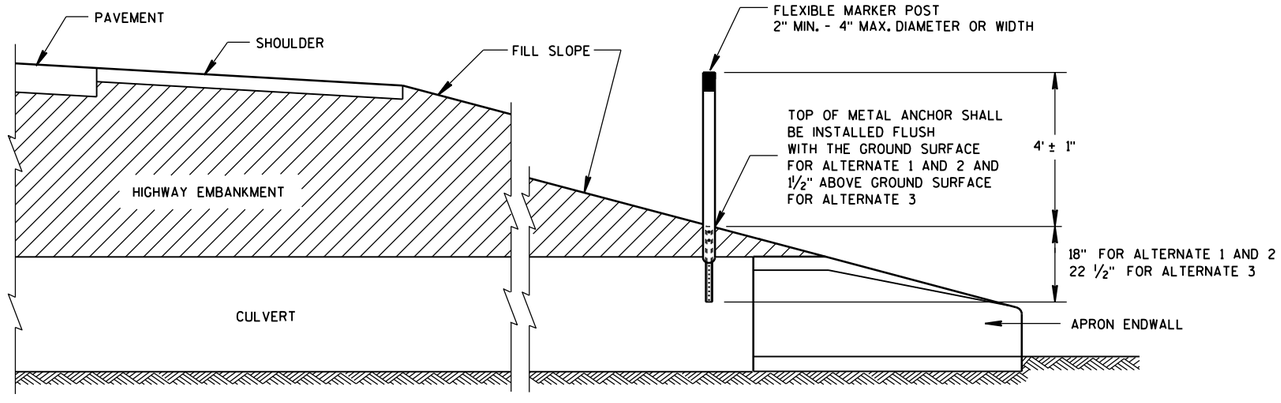
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

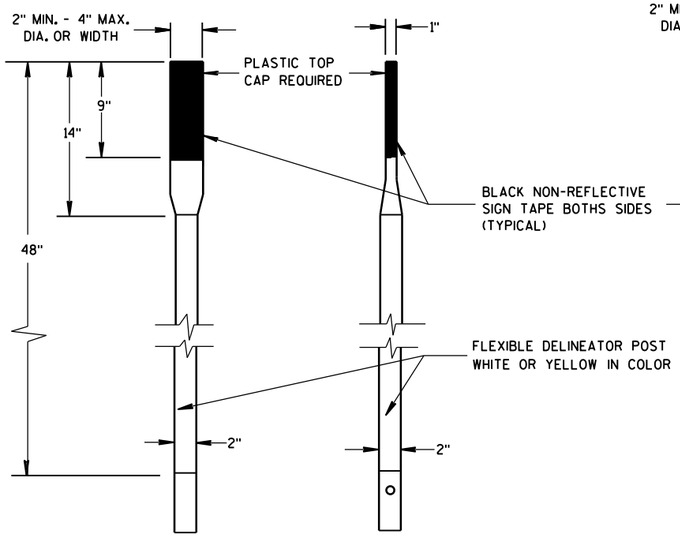
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

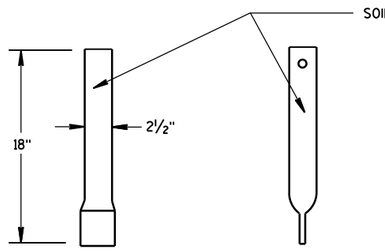
6

S.D.D. 15 A 3-2a

6

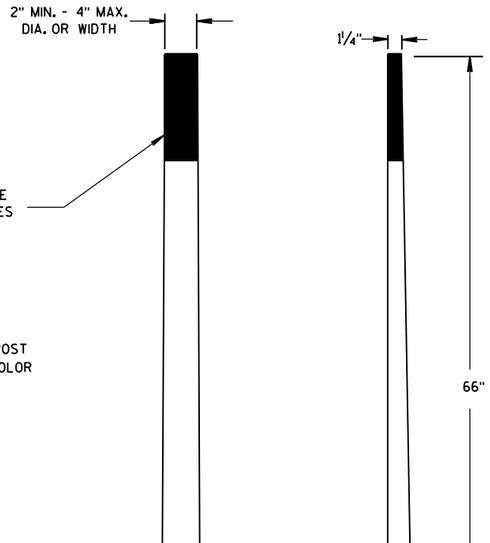
S.D.D. 15 A 3-2a





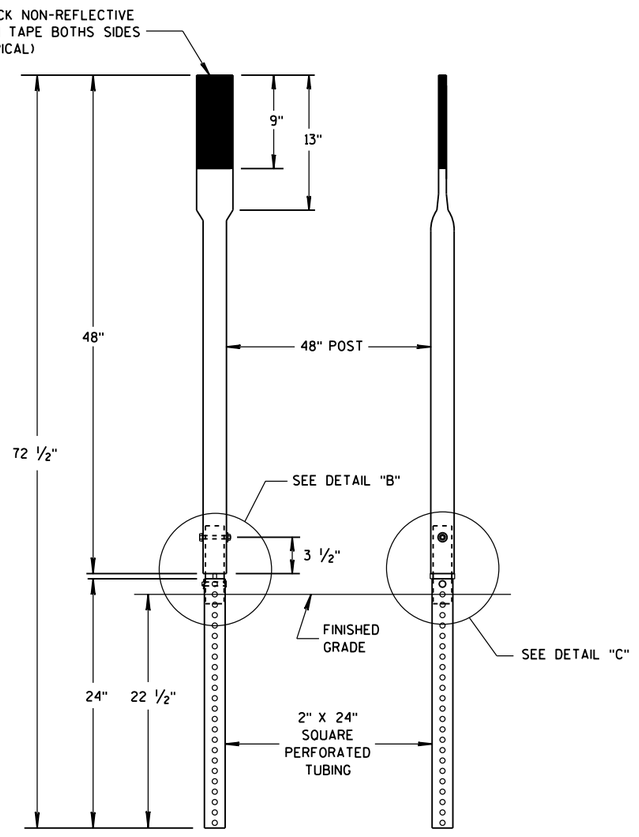
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

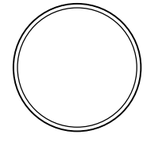
ALTERNATE 2



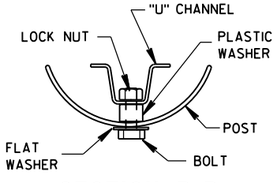
FRONT VIEW SIDE VIEW

ALTERNATE 3

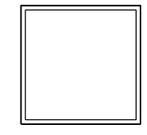
FLEXIBLE MARKER POSTS



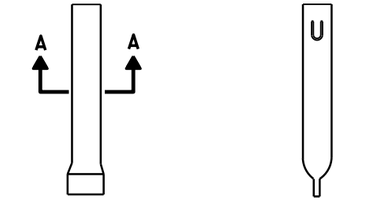
SECTION A-A



SECTION B-B

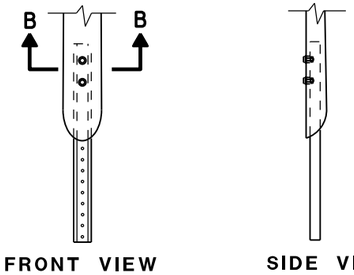


SECTION C-C



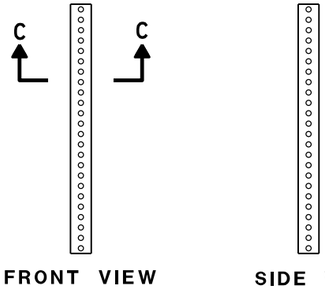
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

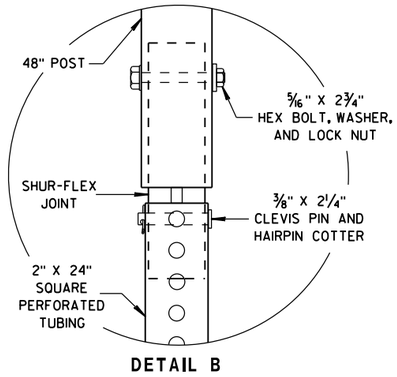
ALTERNATE 2



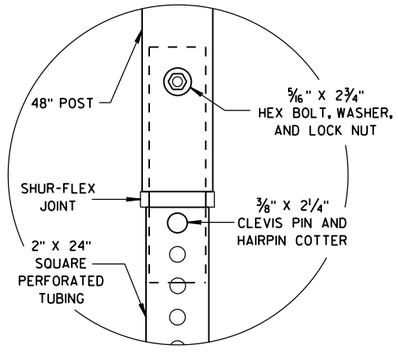
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

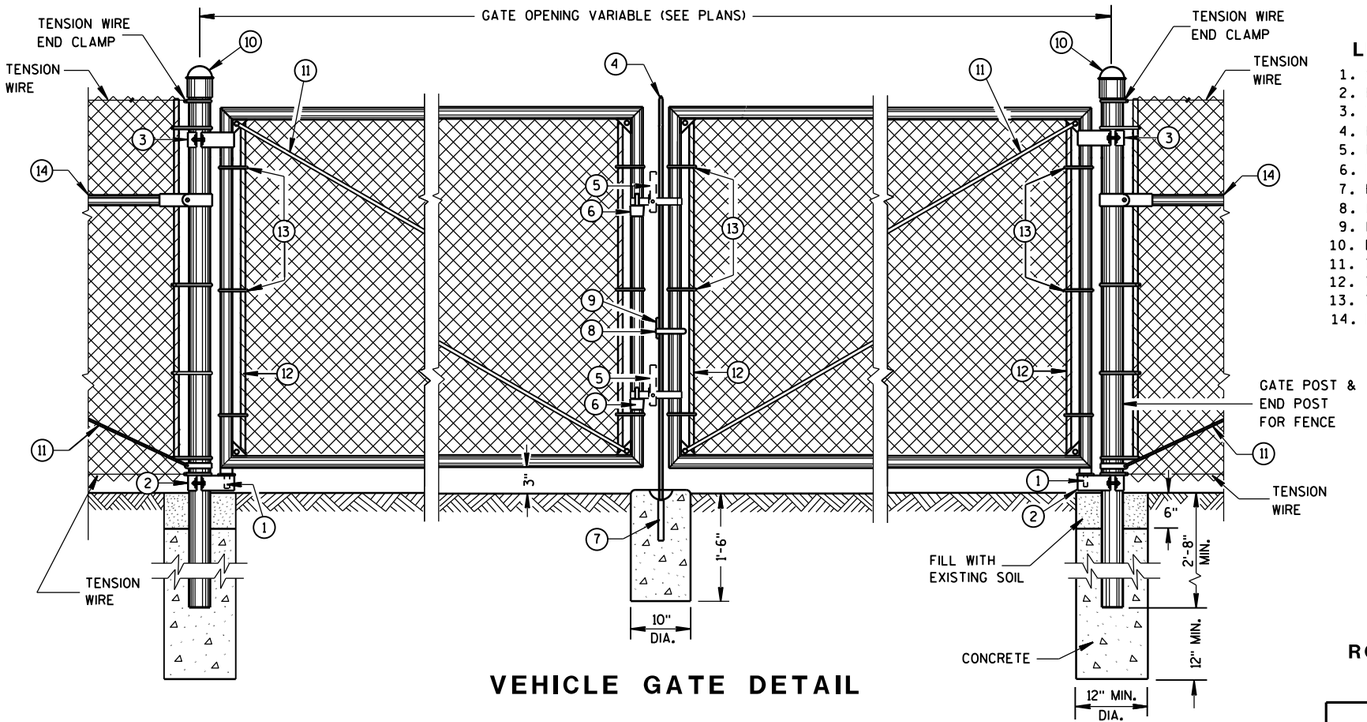
IGN

6

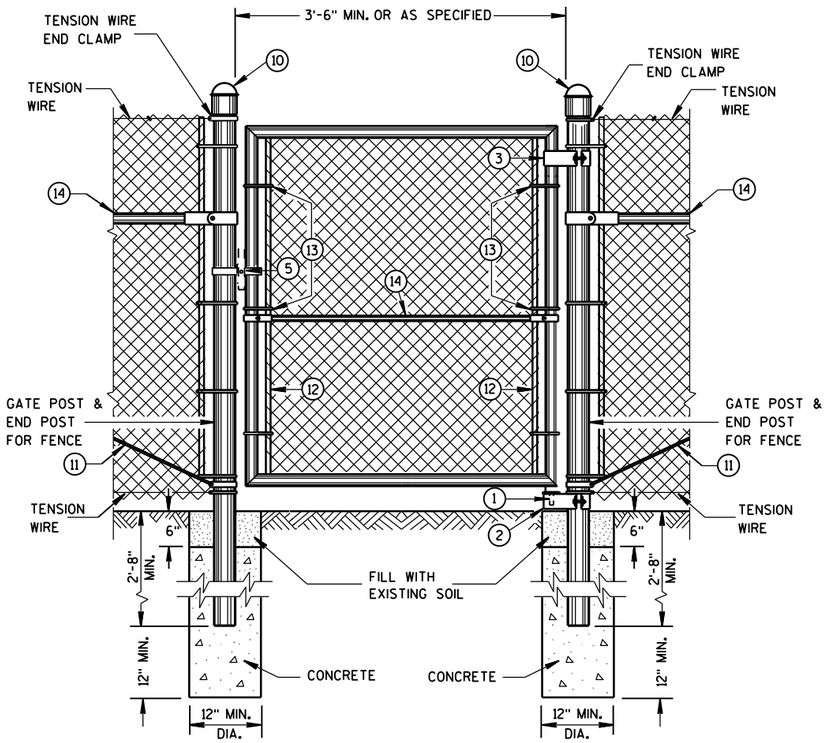
S.D.D. 15 A 3-2b

6

S.D.D. 15 A 3-2b



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

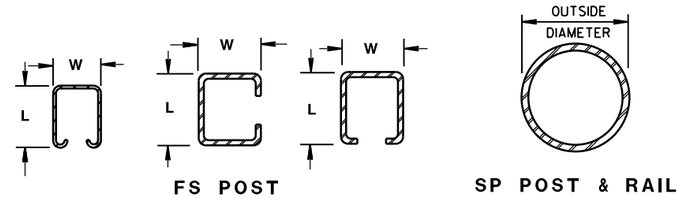
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

USE TYPE 2, CLASS 3, MARCELLED/CRIMPED, TENSION WIRE PER ASTM A 817.



FS POST

SP POST & RAIL

CROSS SECTIONS OF POSTS AND RAILS

ROLLED-FORMED STEEL FENCE POST (2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

ROUND STEEL FENCE POST (1.8 OZ./SQ. FT. COATING)

POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

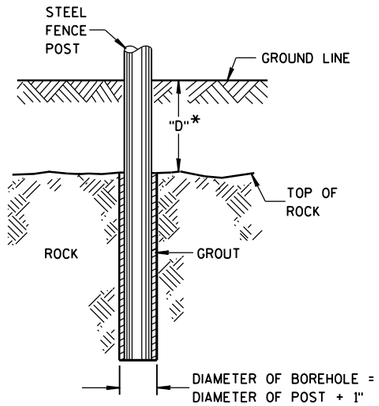
** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

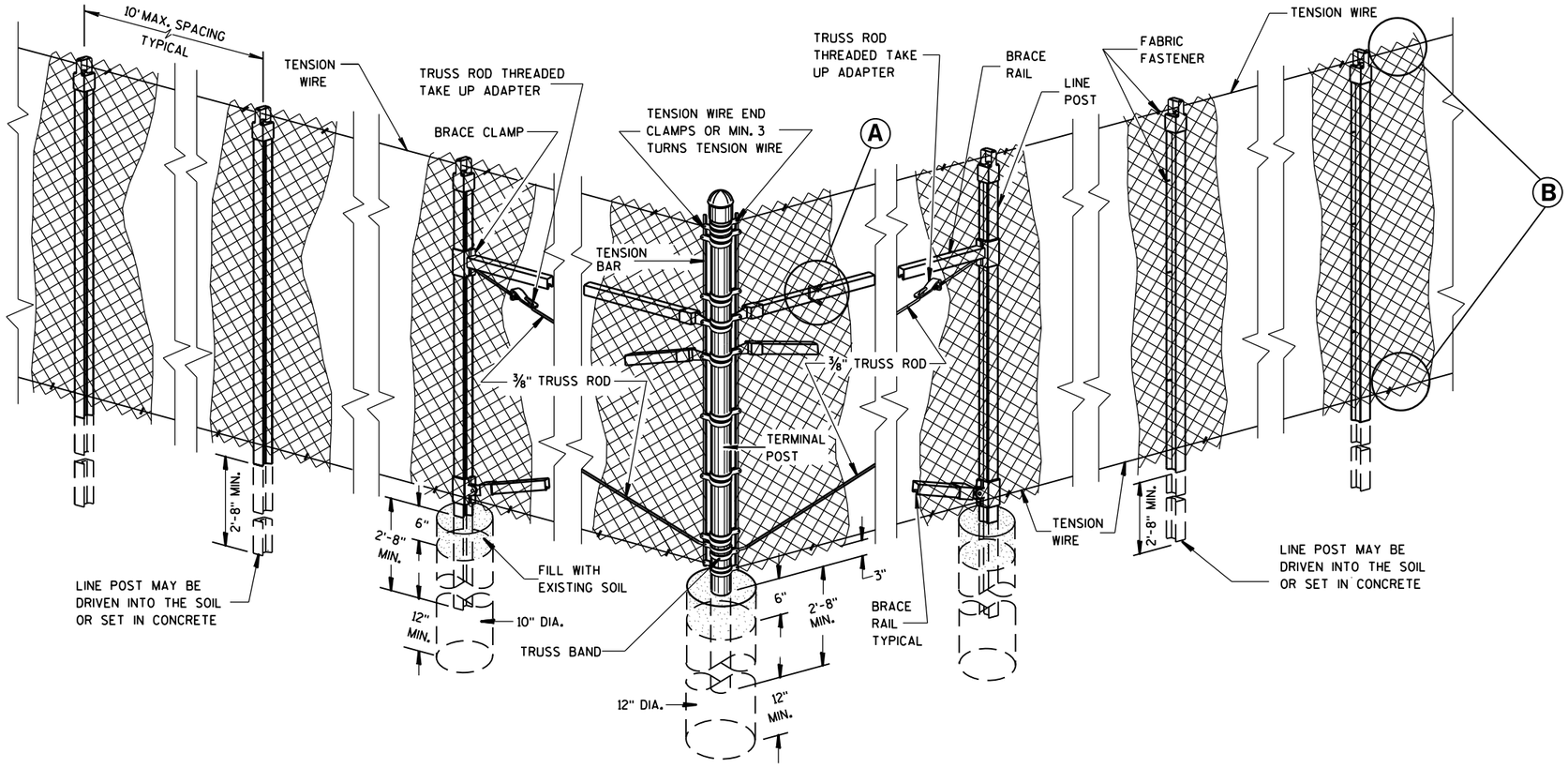
6

S.D.D. 15 B 3-15a

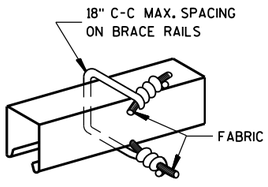


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



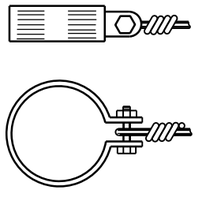
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



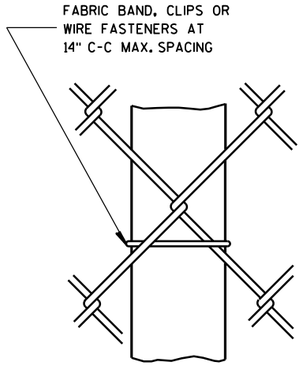
BRACE RAIL

FABRIC FASTENER

Ⓐ



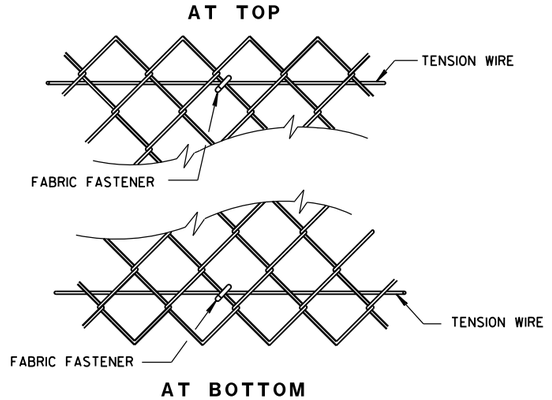
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

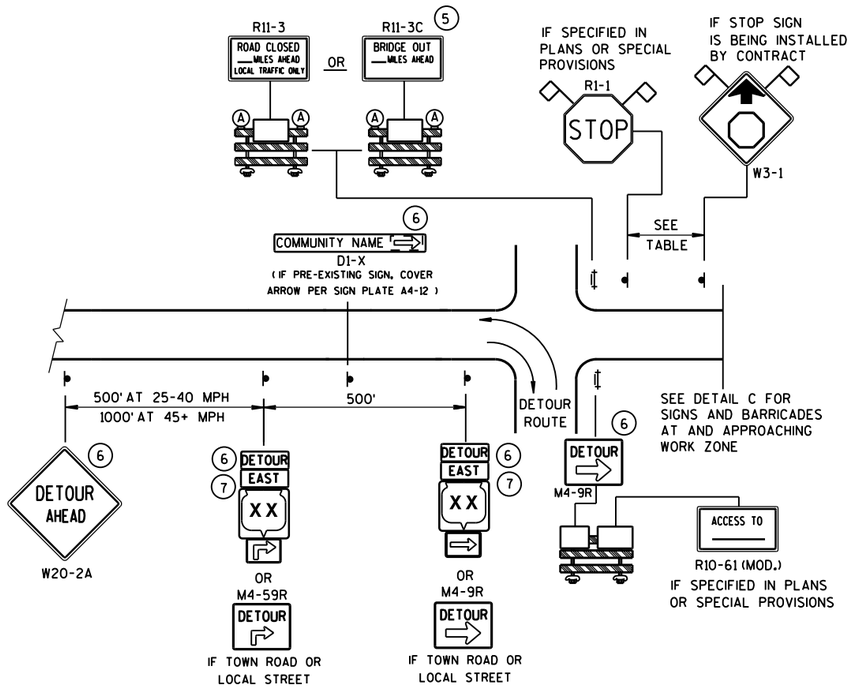
APPROVED
FEB. 2015 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 15 B 3-15b

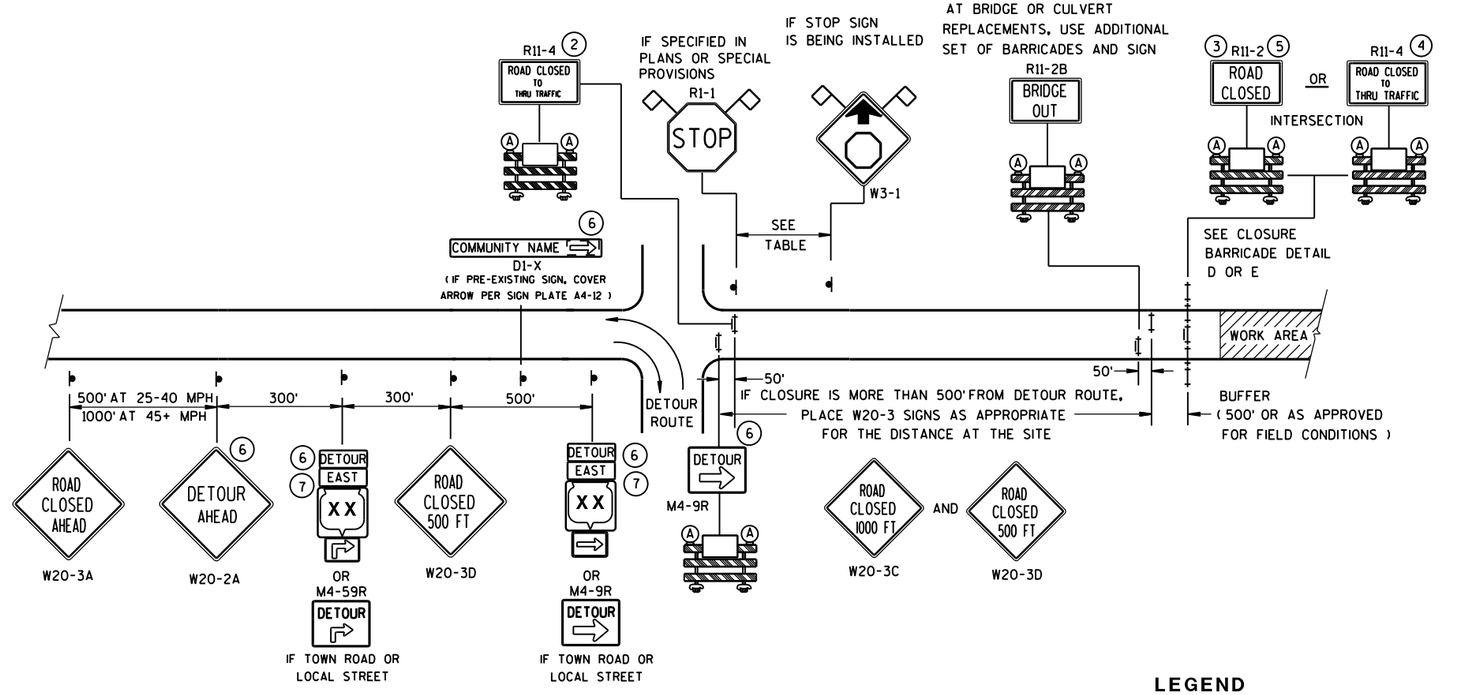
6

S.D.D. 15 B 3-15b



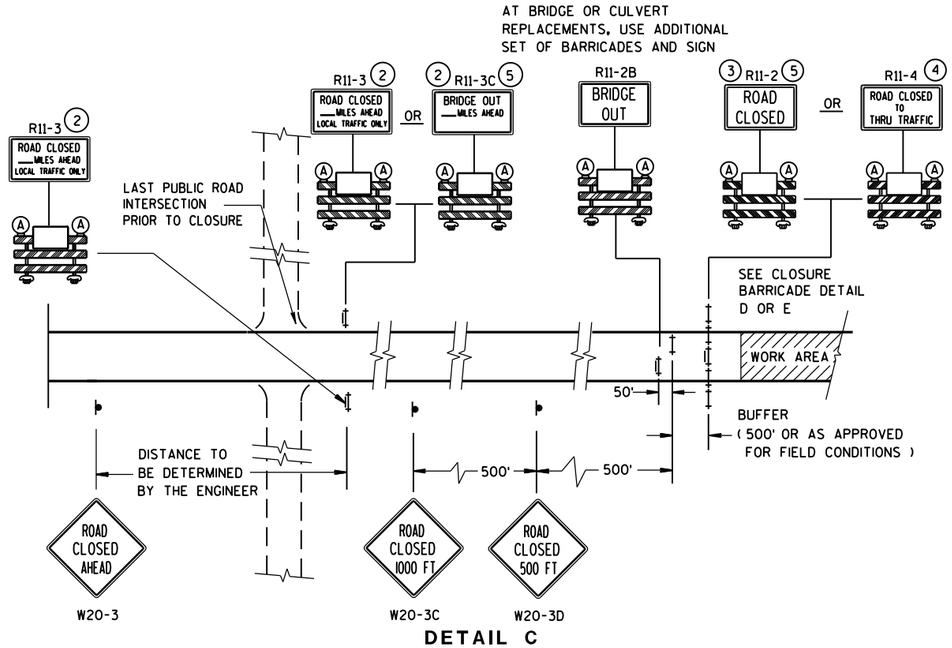
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

SEE SDD 15C2-SHEET "**b**" FOR GENERAL NOTES AND FOOTNOTES (1) THROUGH (7)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

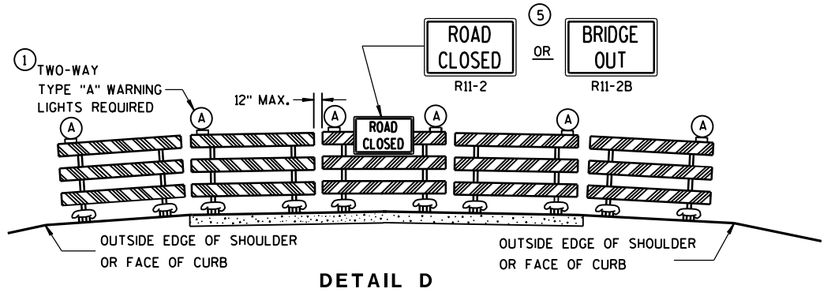
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 C 2-6a

6

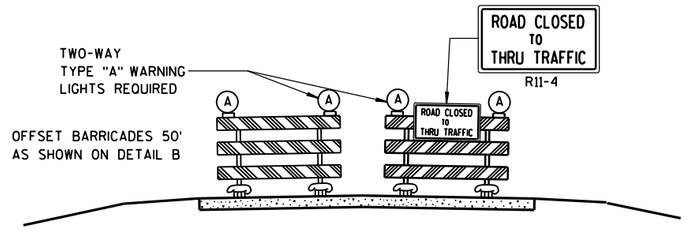
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI — FIC

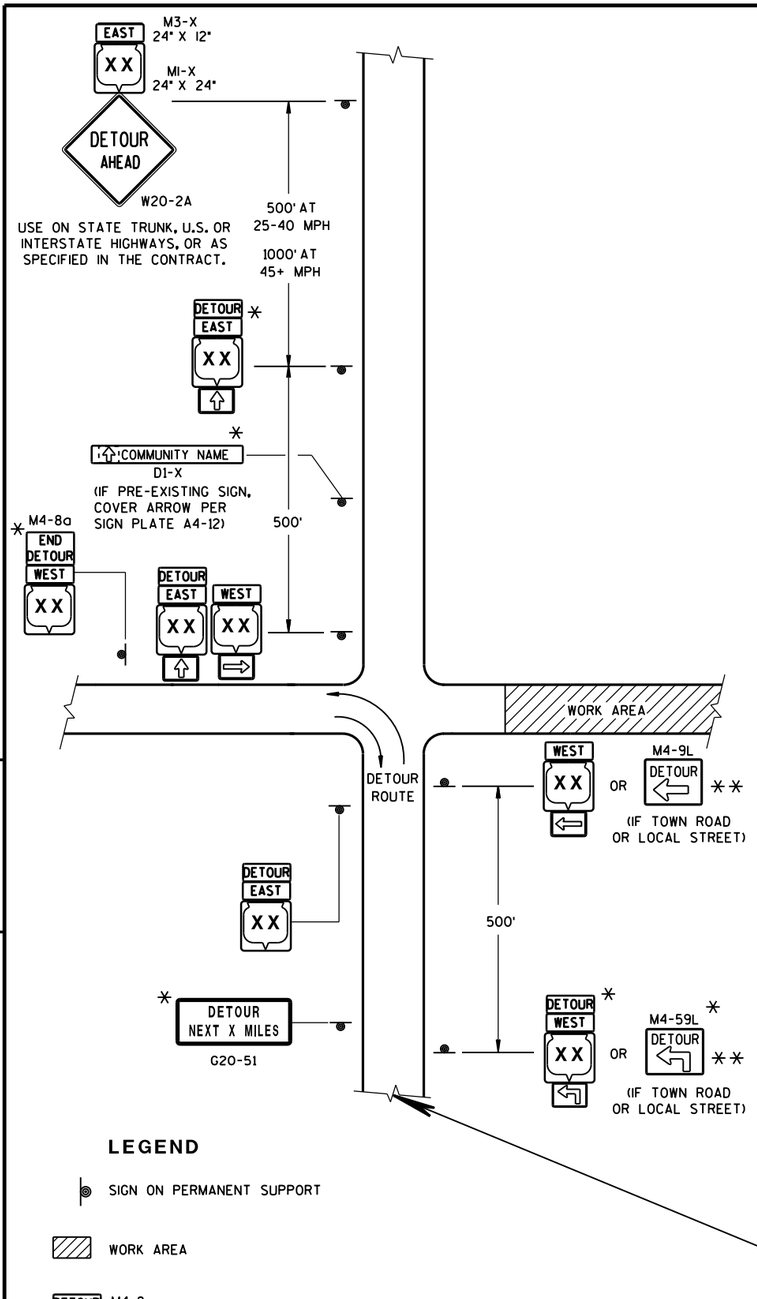
FHWA

6

S.D.D. 15 C 2-6b

6

S.D.D. 15 C 2-6b



THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

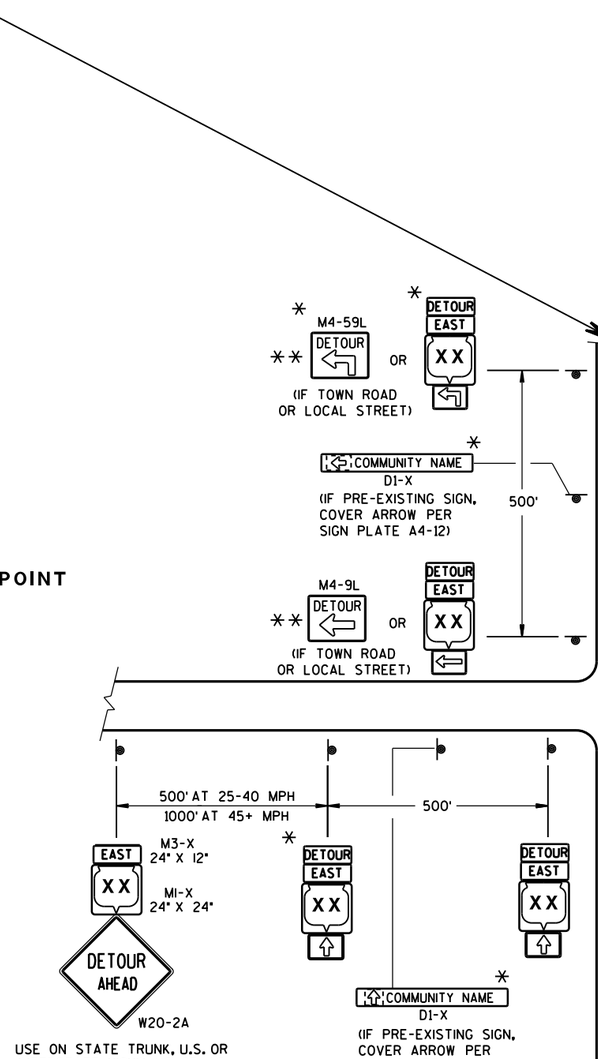
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

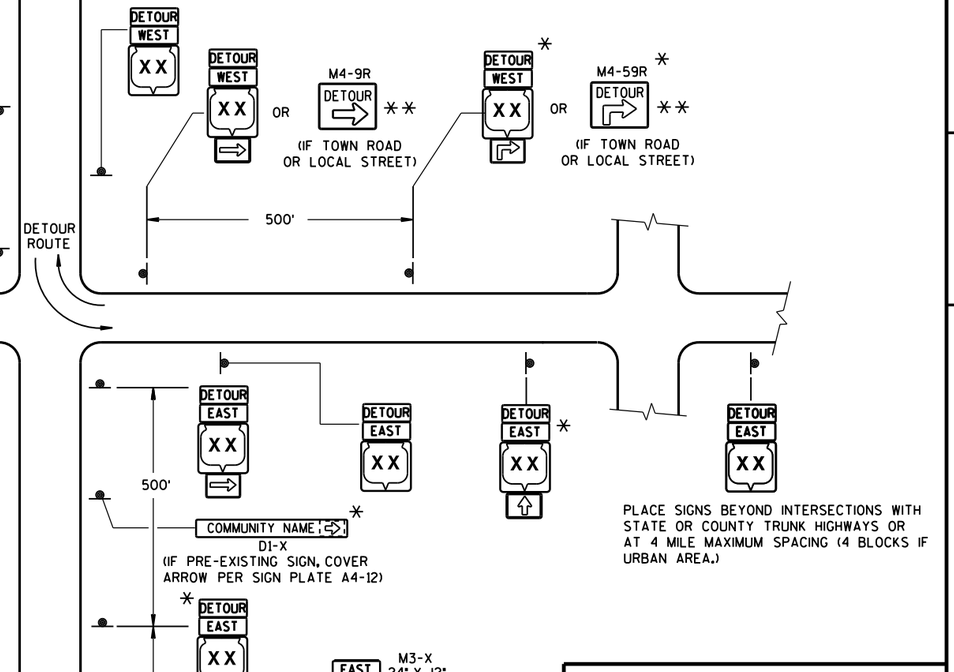
SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- MO5-1 AND MO6-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.





LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR EAST — M4-8 / M3-X
- XX OR COUNTY XX OR XX — M1-4 / M1-5A / M1-6
- MO5-1 OR MO6-1 OR MO6-1

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD 15C2-SHEET "a"

DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

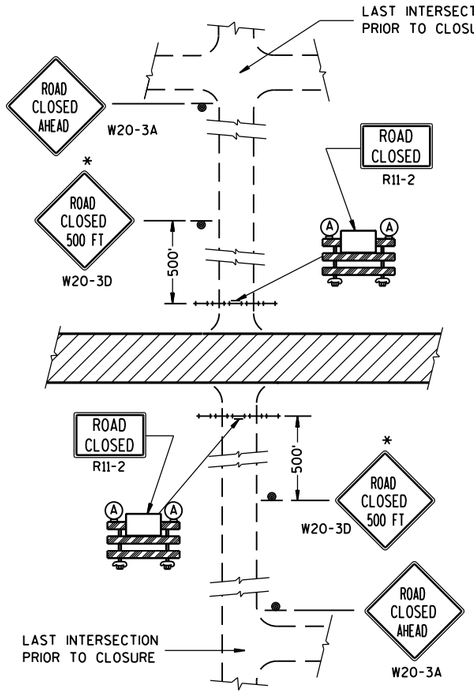
Sept. 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO... SAFETY ENGI... FIC

FHWA

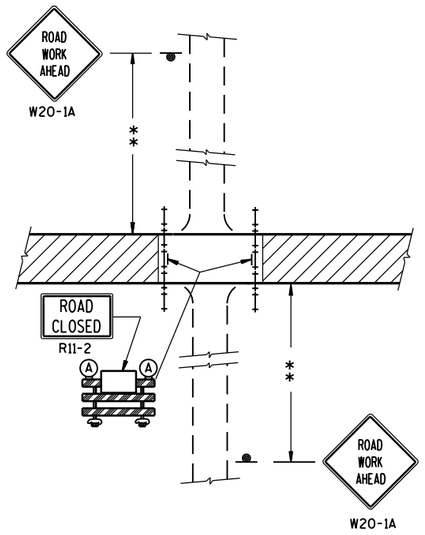
S.D.D. 15 C 2-6c

S.D.D. 15 C 2-6c



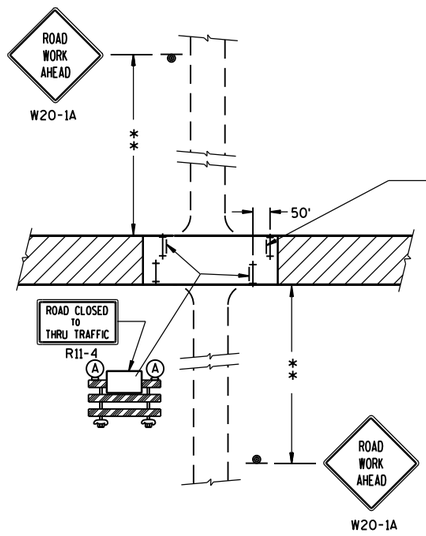
DETAIL 1

(NO ACCESS TO PROJECT)



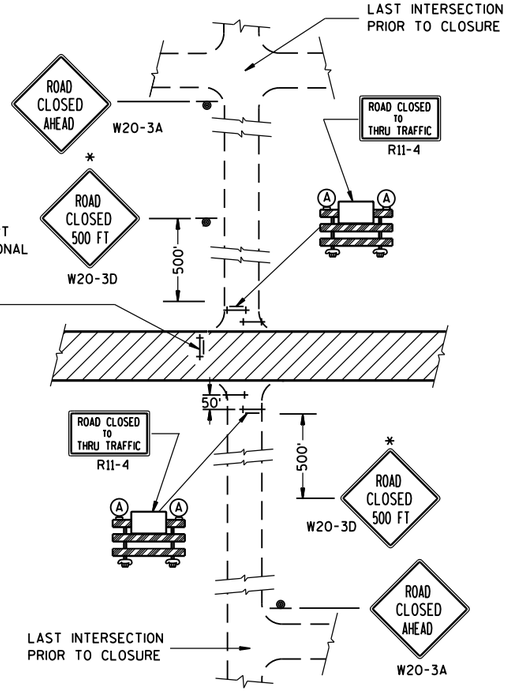
DETAIL 2

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



DETAIL 3

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



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

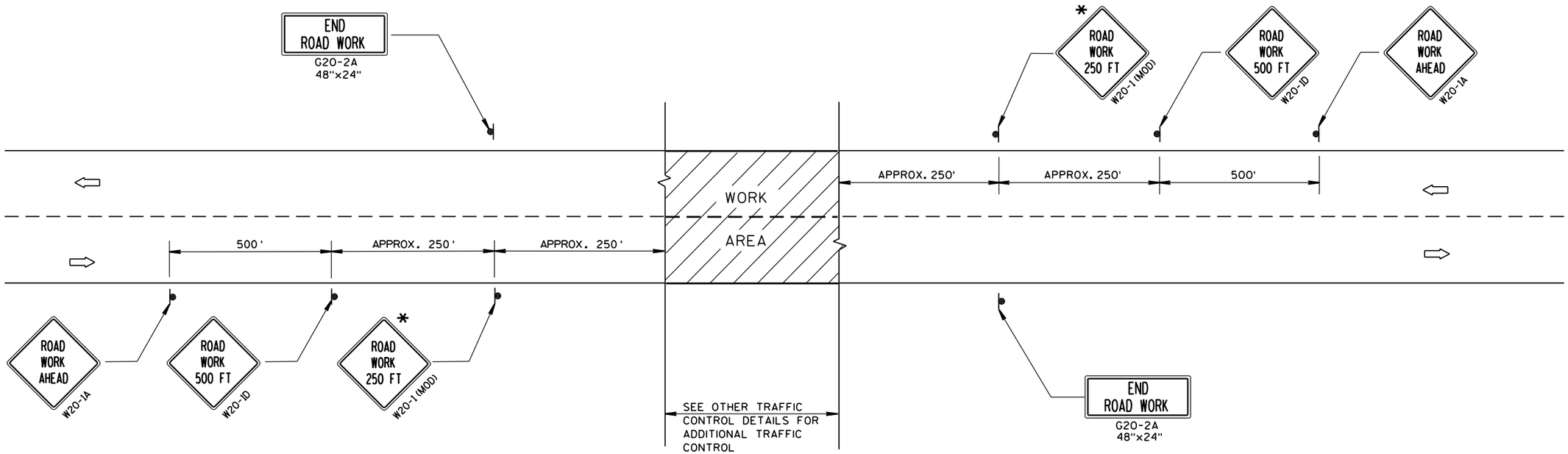
APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible]FIC SAFETY ENGI[illegible]
FHWA

6

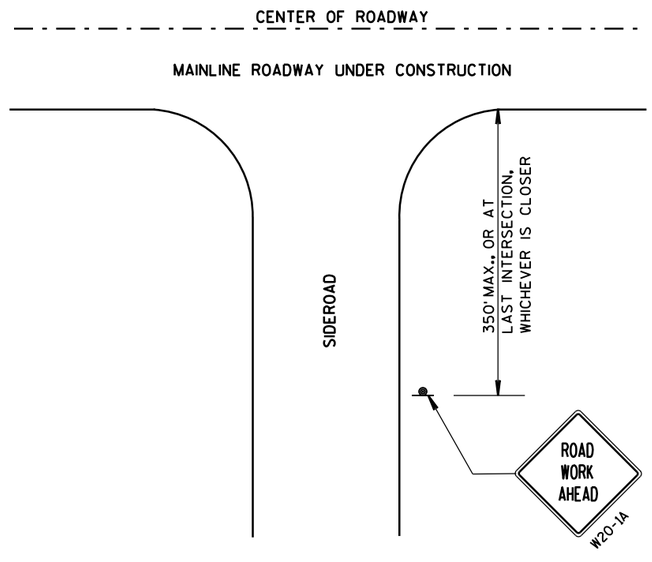
S.D.D. 15 C 3-3

6

S.D.D. 15 C 3-3



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

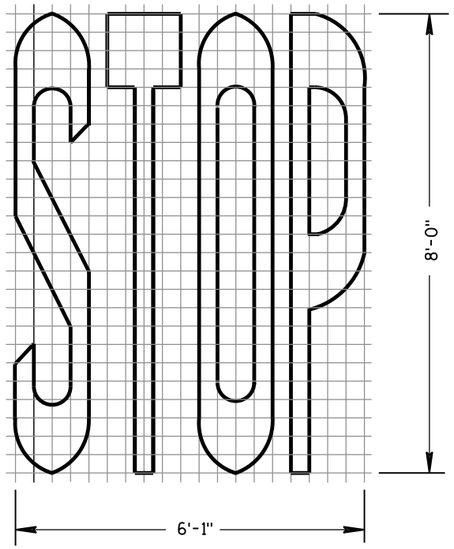
APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZOI SAFETY ENGIN IC
FHWA

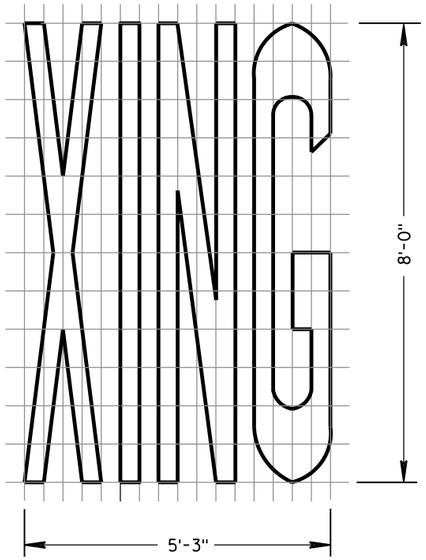
6

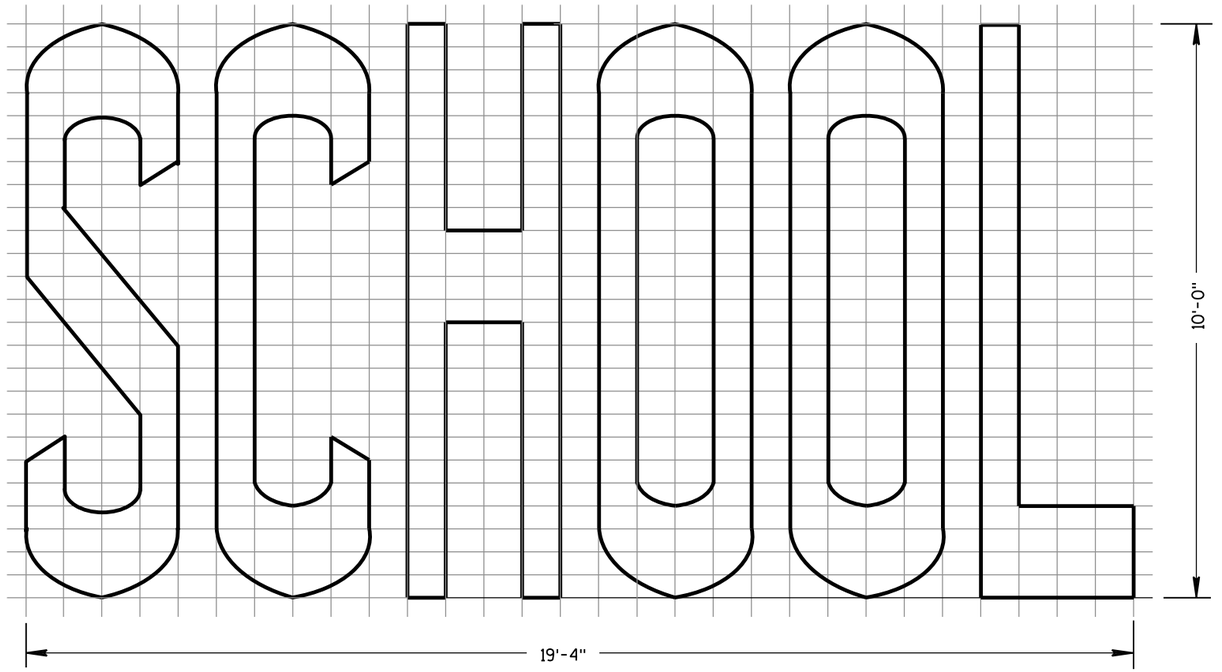
S.D.D. 15 C 5-3

GENERAL NOTES

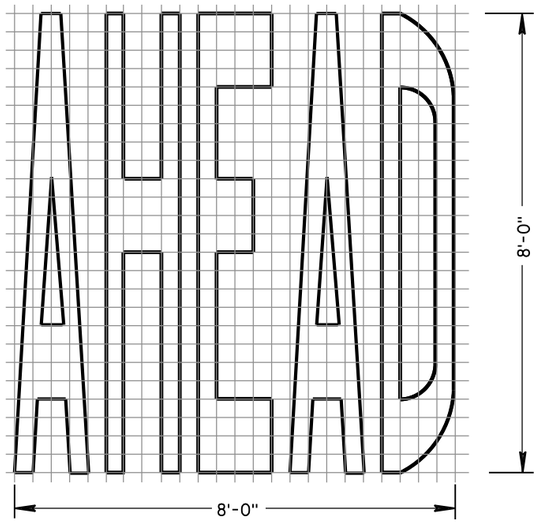
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

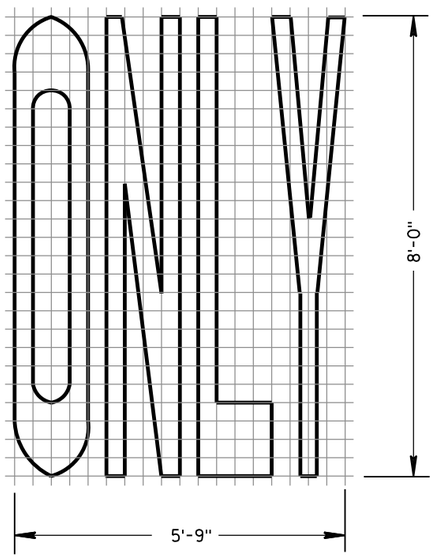


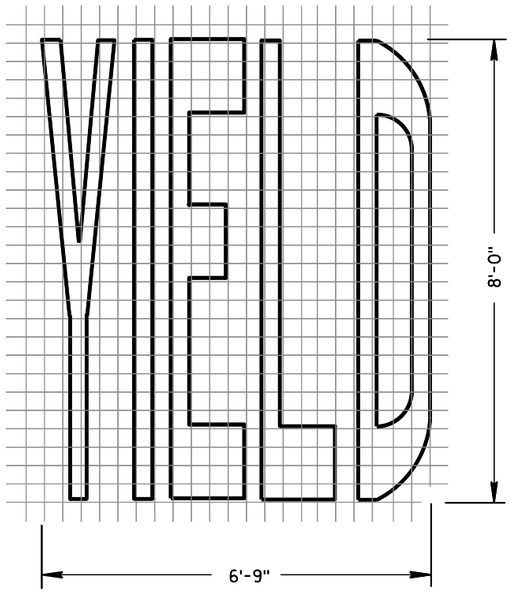


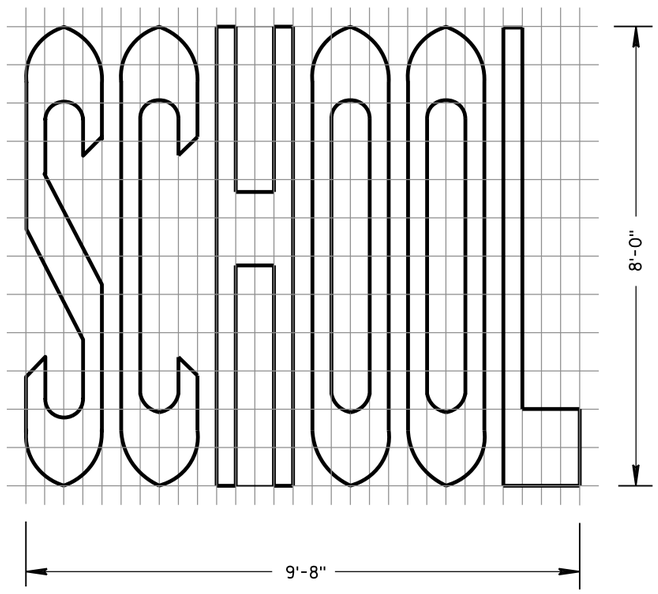


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-16	/S/ Matthew R. Rauch	
DATE	STATE SIGNING AND MARK	EER

FHWA

6

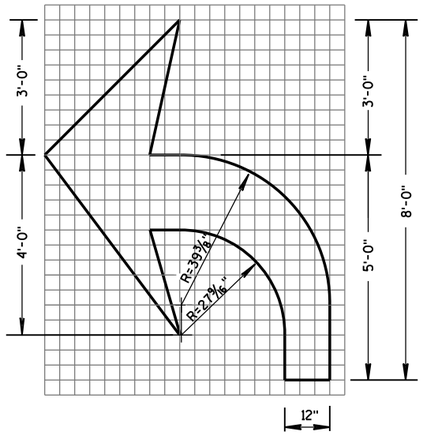
S.D.D. 15 C 7-13b

6

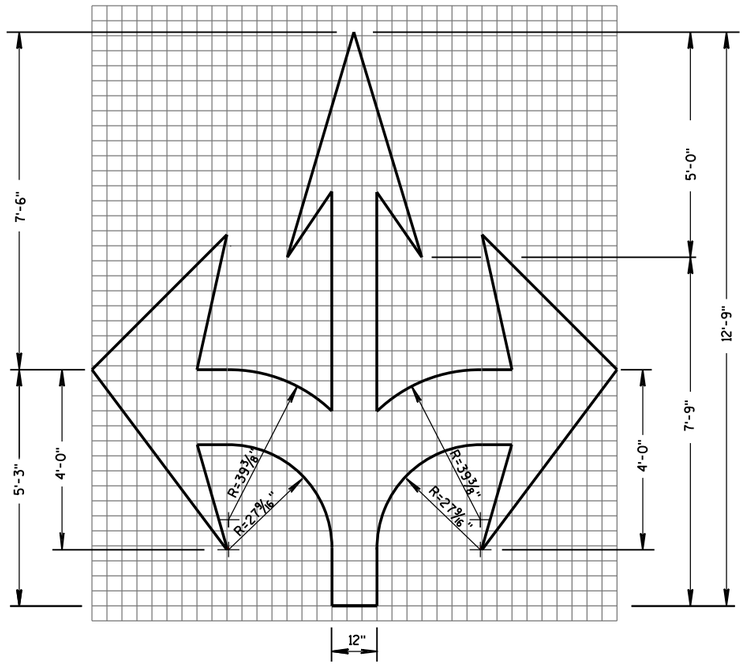
S.D.D. 15 C 7-13b

GENERAL NOTES

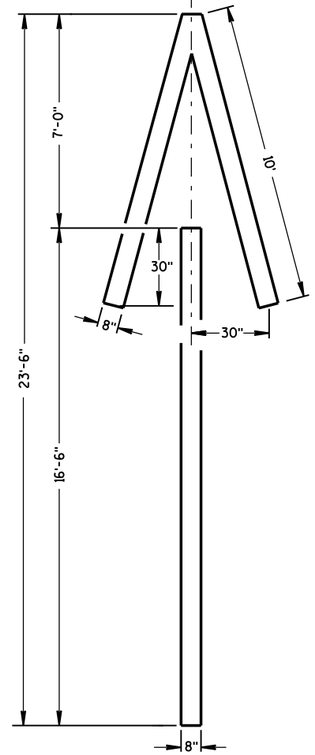
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



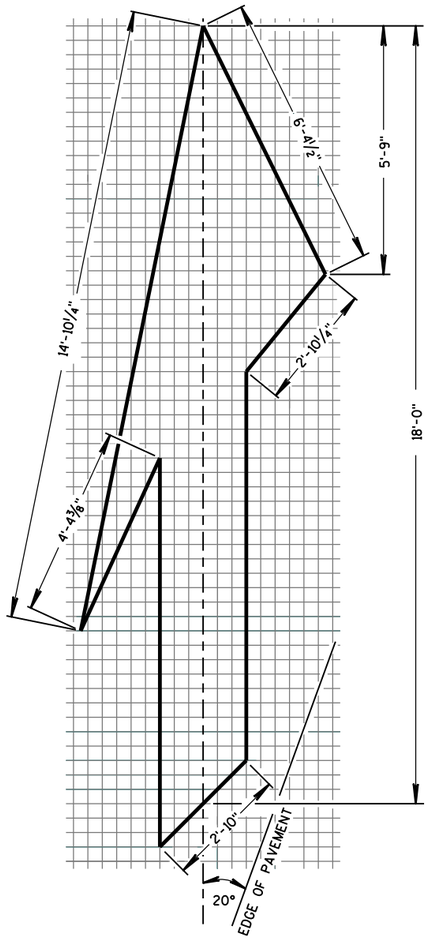
TYPE 2



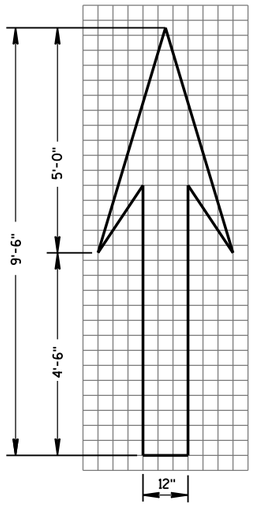
TYPE 6



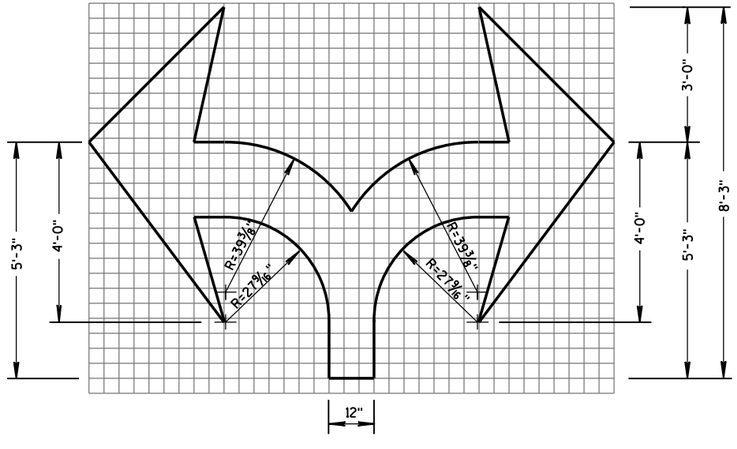
TYPE 4



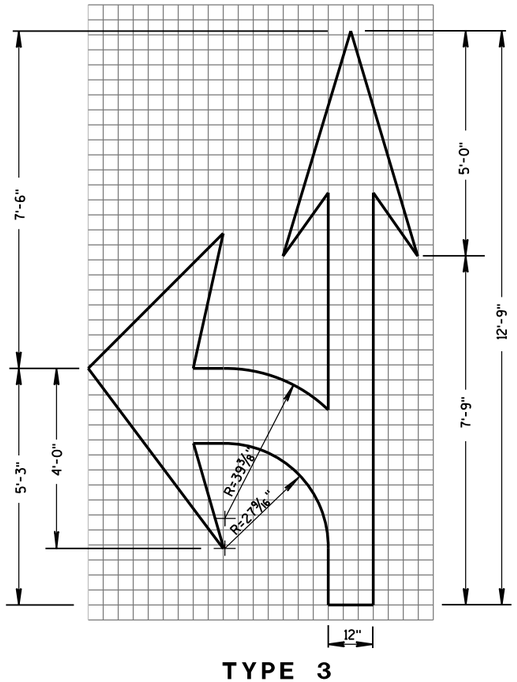
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

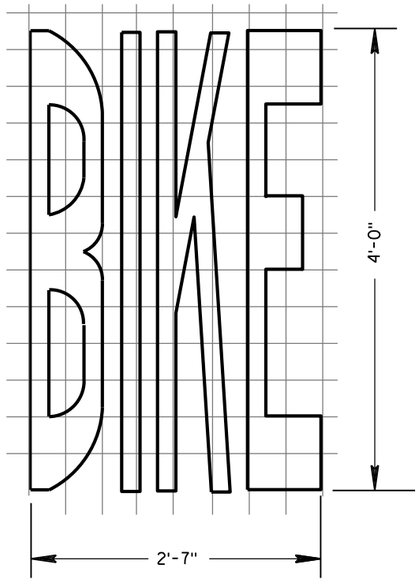
APPROVED
4-18-16
DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR
NEER
FHWA

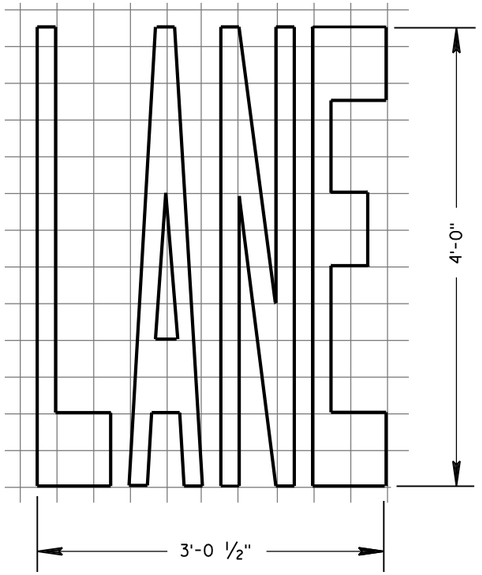
6

S.D.D. 15 C 7-13c

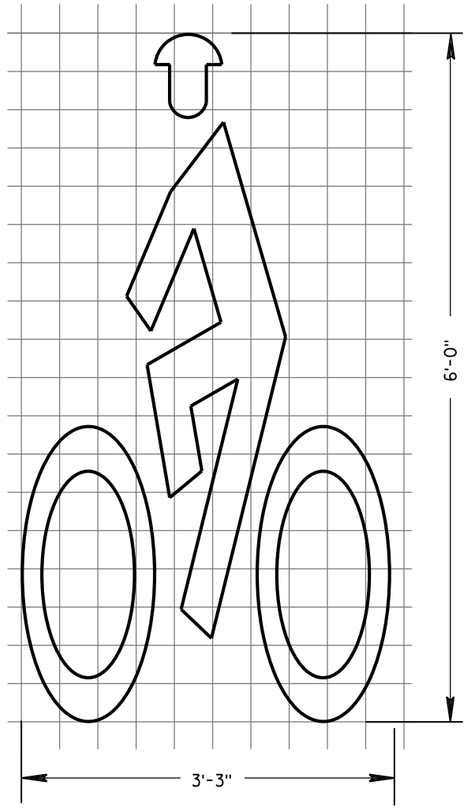
6

S.D.D. 15 C 7-13c

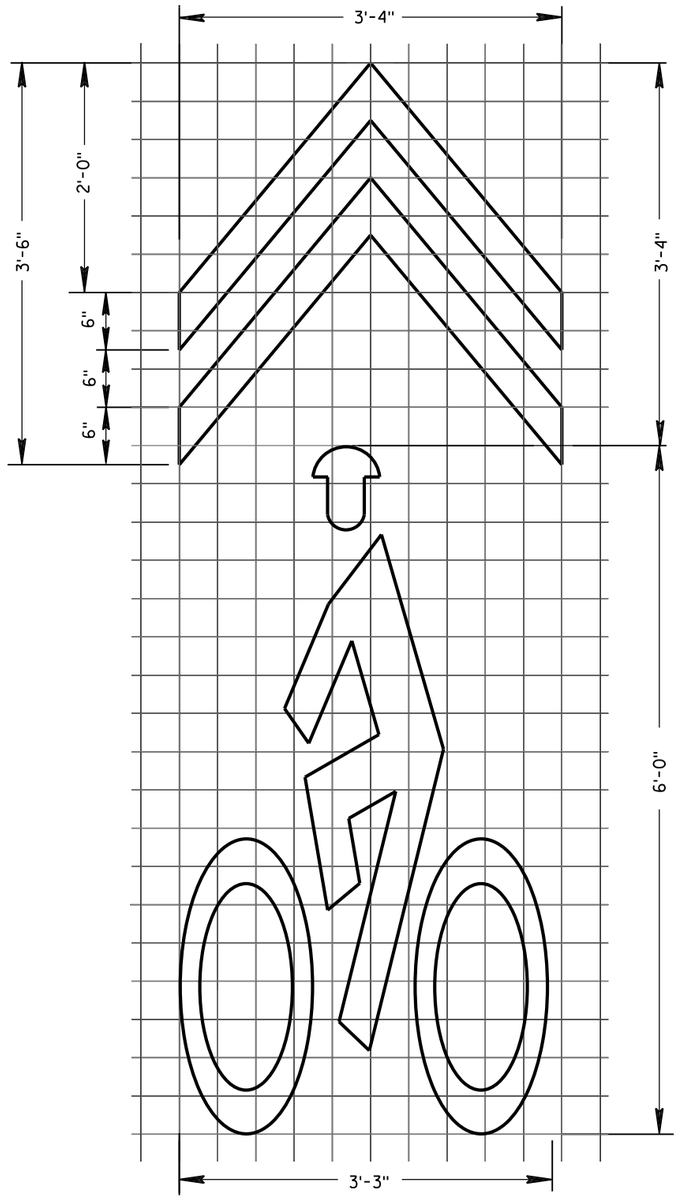




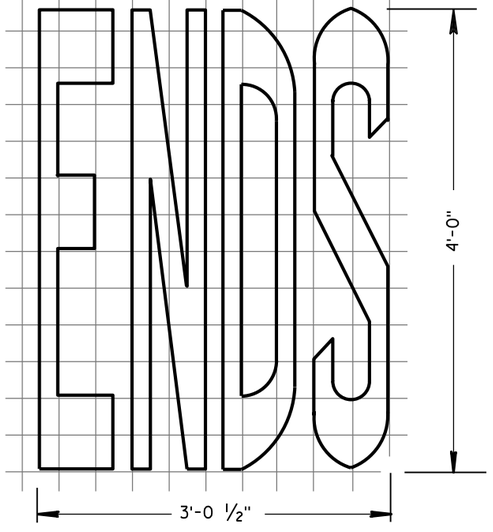
BIKE LANE WORDS



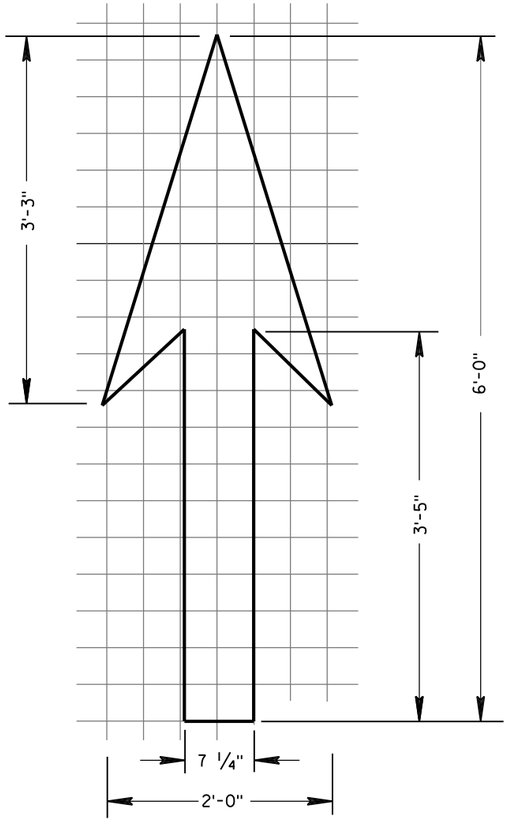
BIKE LANE SYMBOL



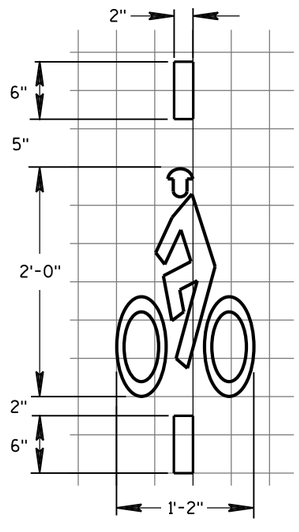
BIKE SYMBOL FOR SHARED LANE



BIKE LANE WORDS



BIKE LANE ARROW



BICYCLE DETECTOR PAVEMENT MARKING

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.

PAVEMENT MARKING FOR BIKE LANES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-2016 DATE

/S/ Matthew R. Rauch STATE SIGNING AND MARK ENGINEER

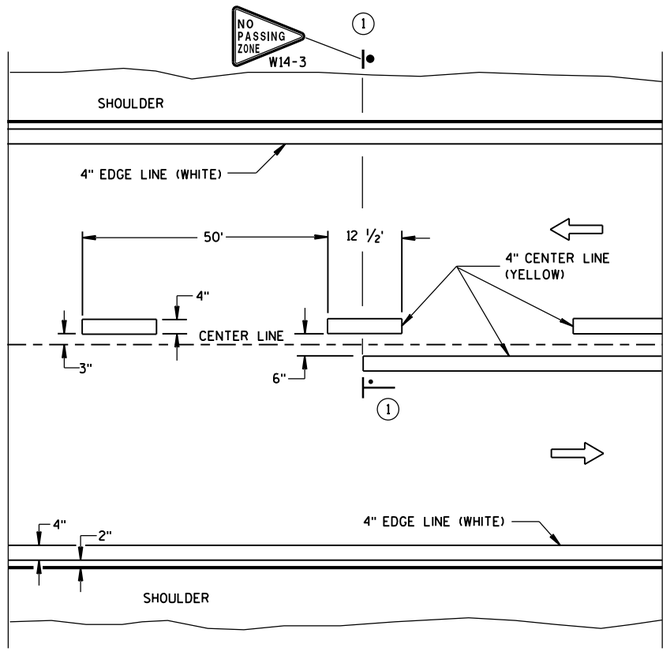
FHWA

6

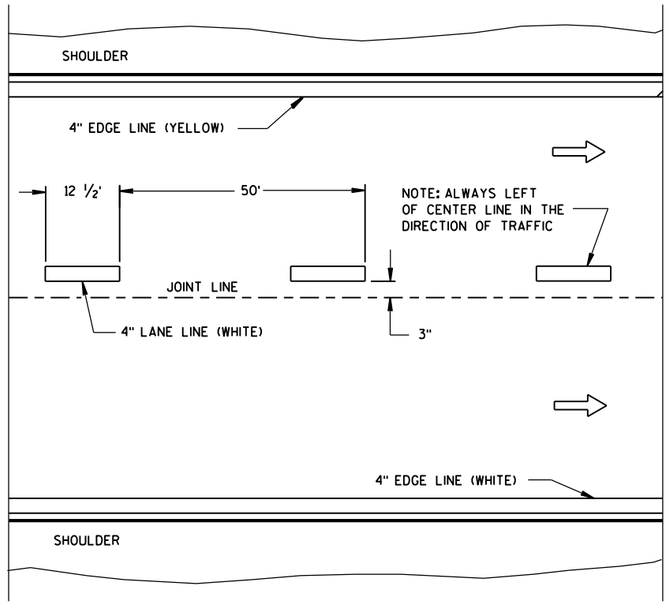
S.D.D. 15 C 7-13e

6

S.D.D. 15 C 7-13e



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

(1) NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

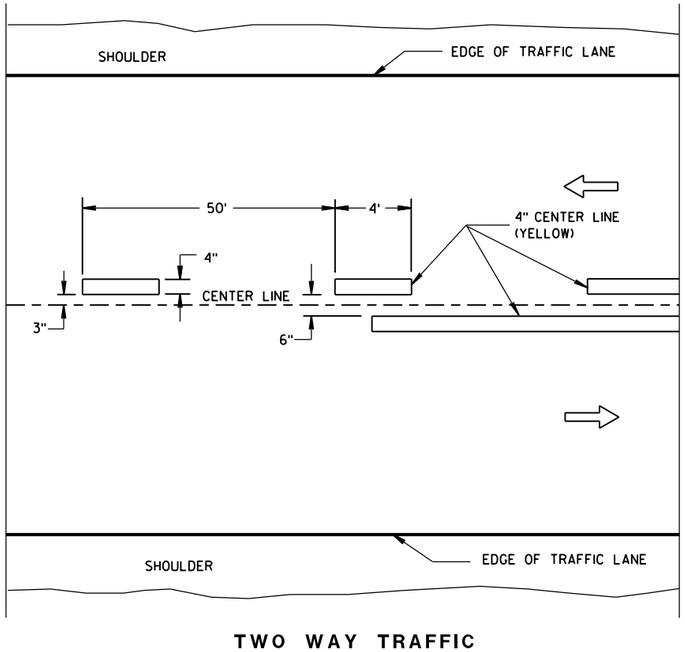
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

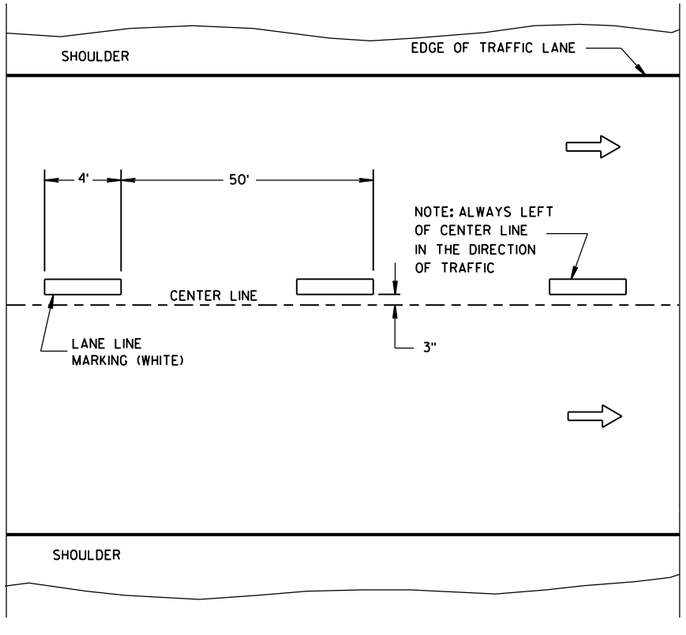
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

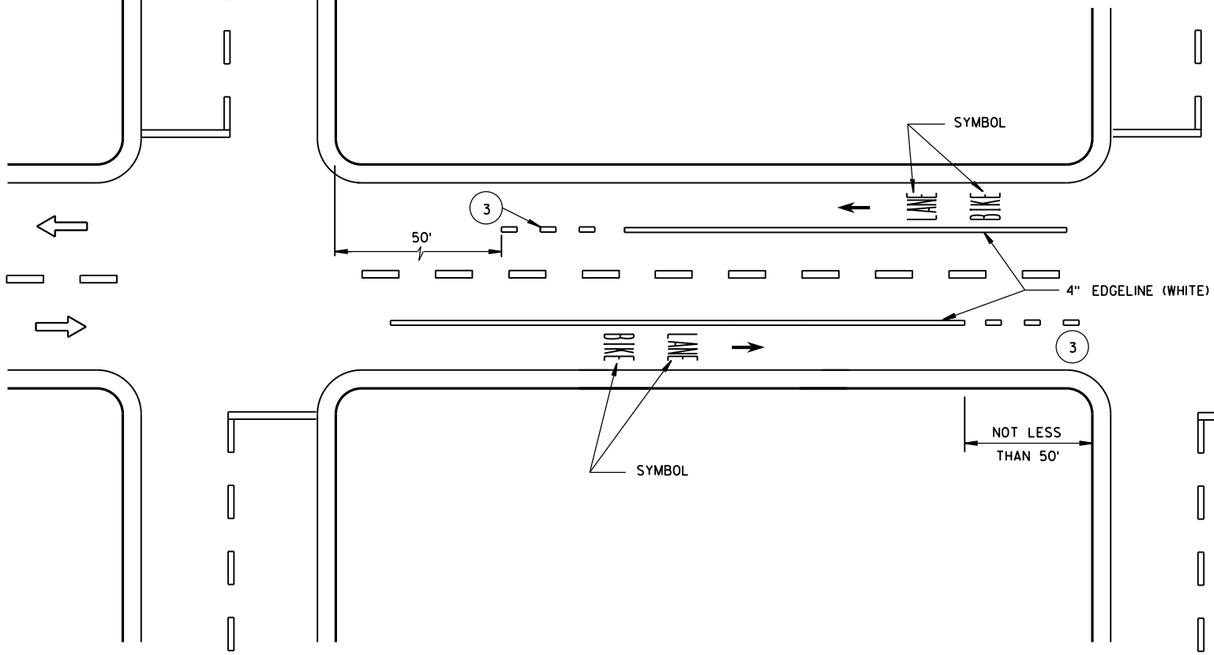
APPROVED
Sept., 2016 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]INEER
FHWA

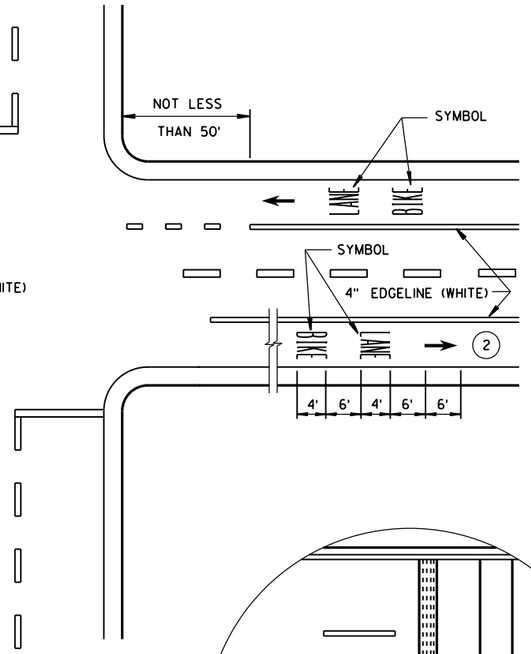
6

S.D.D. 15 C 8-17a

6

S.D.D. 15 C 8-17a



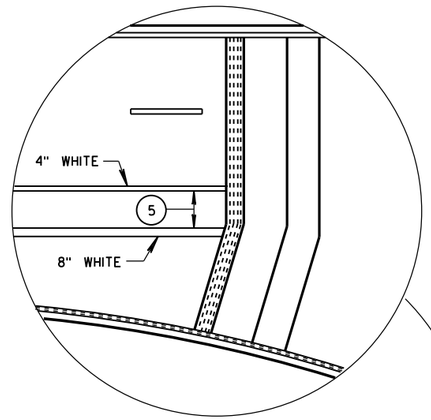


DESIGNATED BICYCLE LANE
NO PARKING

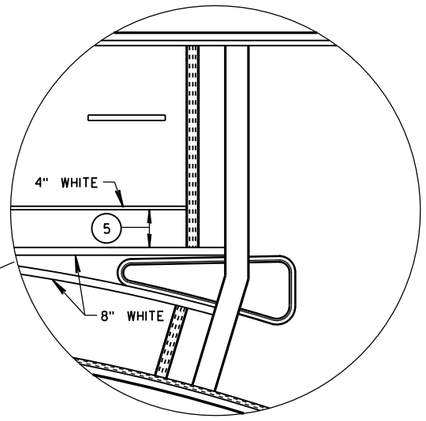
GENERAL NOTES

1. DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
2. MINIMUM OF ONE PER BLOCK. MAXIMUM OF 250 FEET.
3. DOTTED LINES (3'LINE, 9'GAP) SHOULD BE USED 50 FEET TO 200 FEET IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
4. IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.
5. BIKE ACCOMODATION FOR CONCRETE PAVEMENT IS 5 FEET WIDE. BIKE ACCOMODATION FOR ASPHALT PAVEMENT IS A MINIMUM OF 4 FEET. USE 5 FEET AT ≥45 MPH.
6. OMIT THESE MARKINGS FOR WIDER TURN LANE APPLICATIONS (MINIMUM OF 15 FEET WIDE TURN LANE).
7. REFER TO CONTRACT PLANS FOR LANE WIDTH.

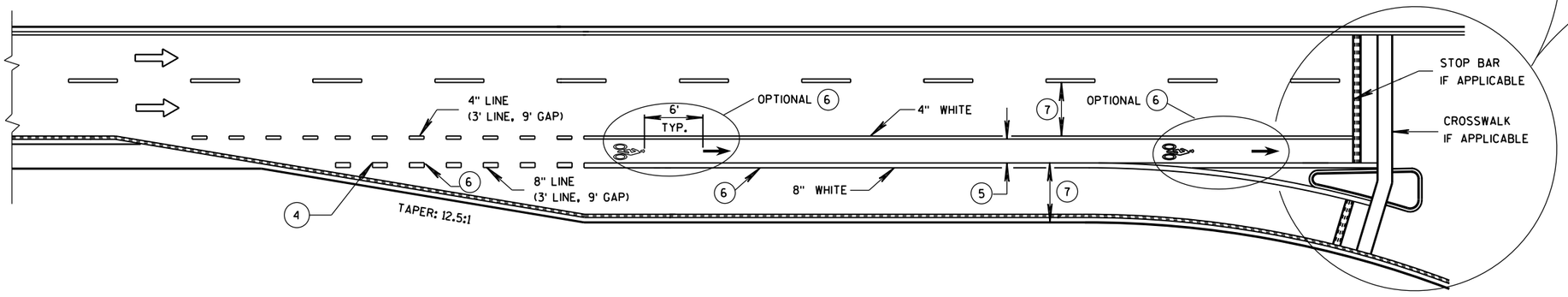
DIRECTION OF TRAVEL



4 LANE DIVIDED WITHOUT ISLAND



4 LANE DIVIDED WITH ISLAND



BIKE LANE - FOR 2-LANE ROADWAYS AND 4-LANE DIVIDED ROADWAYS
(4-LANE DIVIDED WITH RIGHT TURN LANE SHOWN)

BICYCLE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

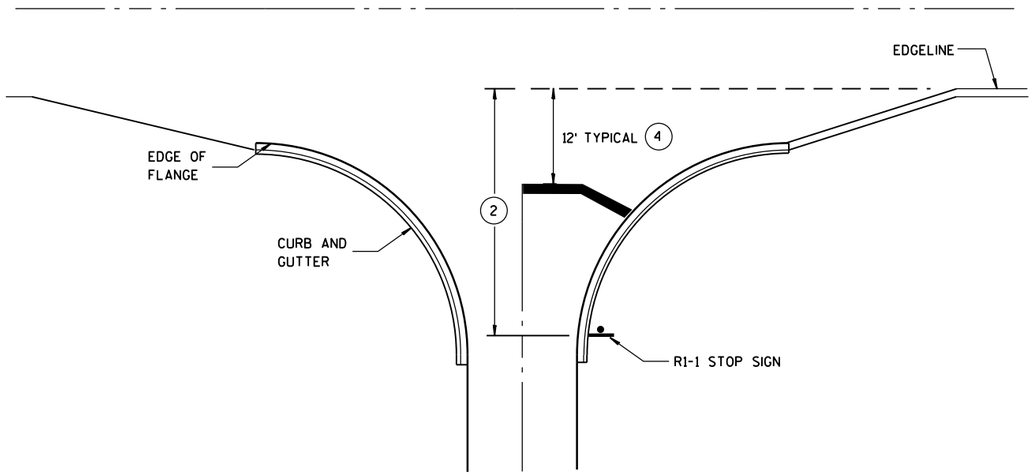
APPROVED
12-2016 DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER
FHWA

6

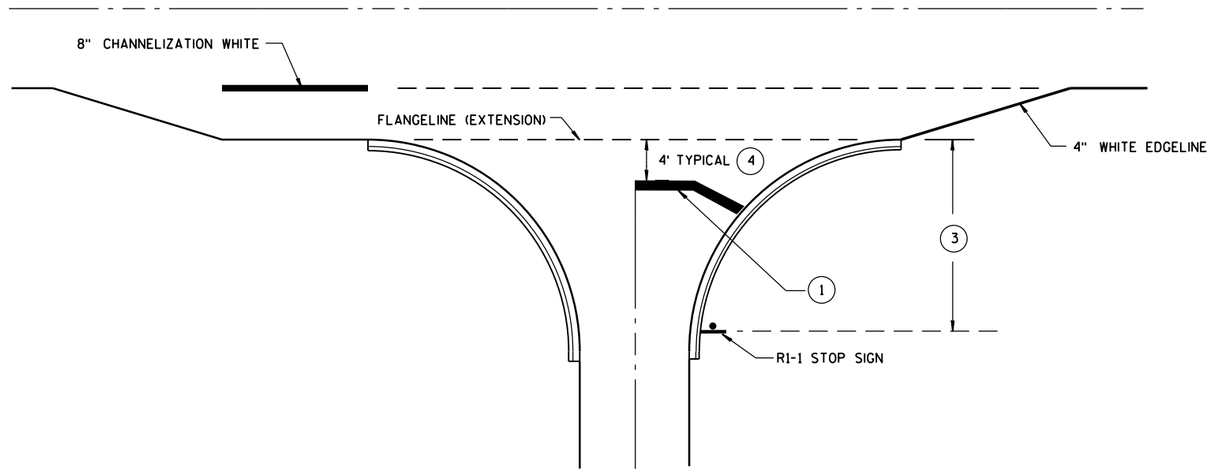
S.D.D. 15 C 29-5a

6

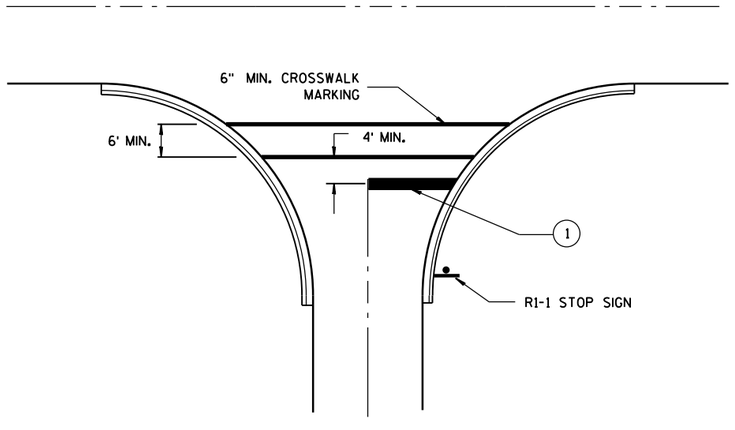
S.D.D. 15 C 29-5a



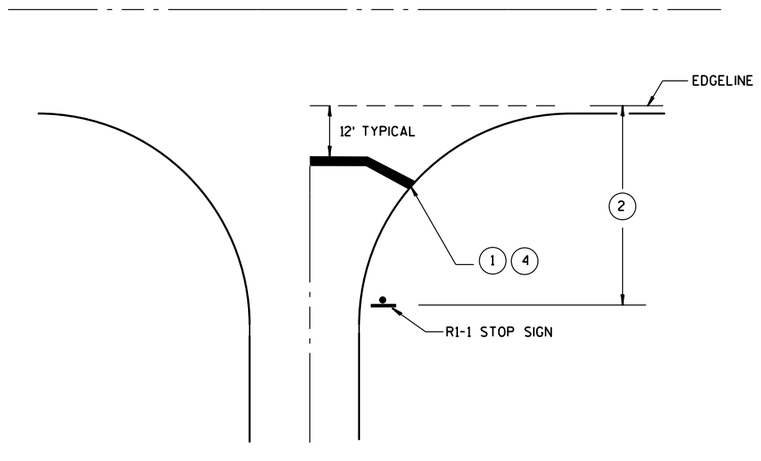
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
3. IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
4. MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

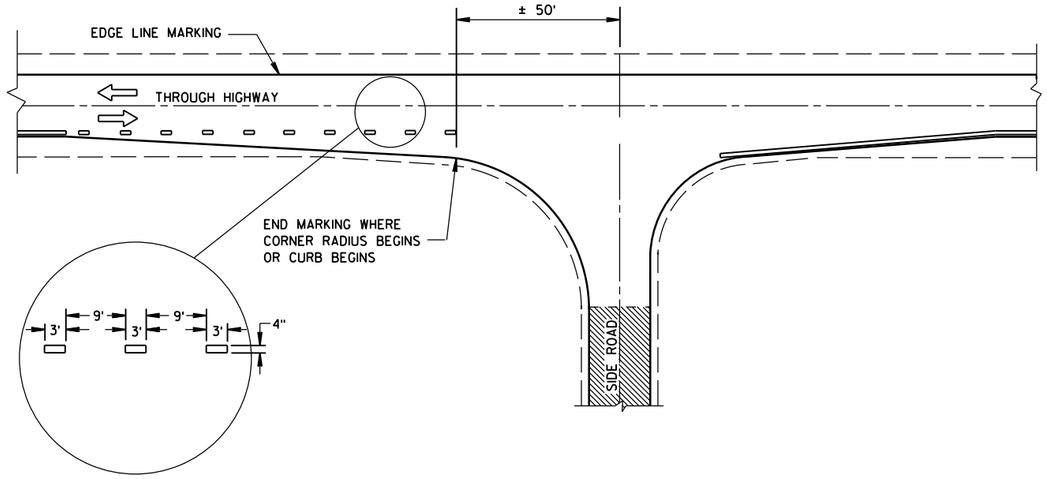
4-18-2016
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAR[illegible]NEER

FHWA

6

S.D.D. 15 C 33-2



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

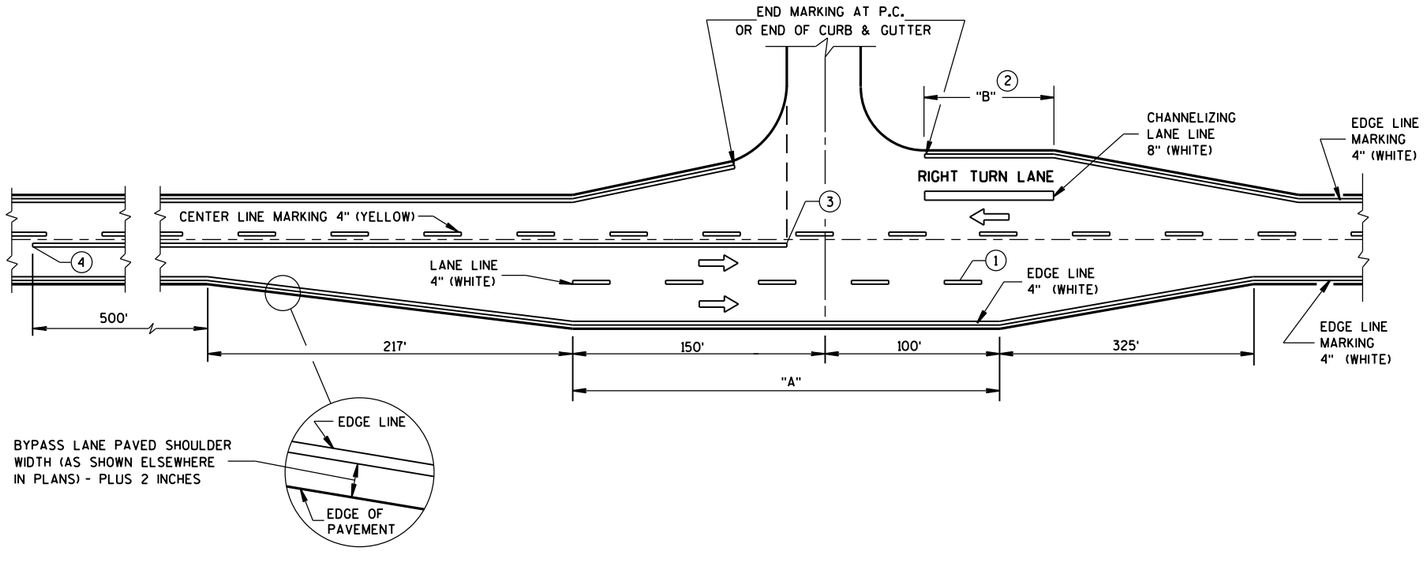
(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(4) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



MAJOR INTERSECTIONS

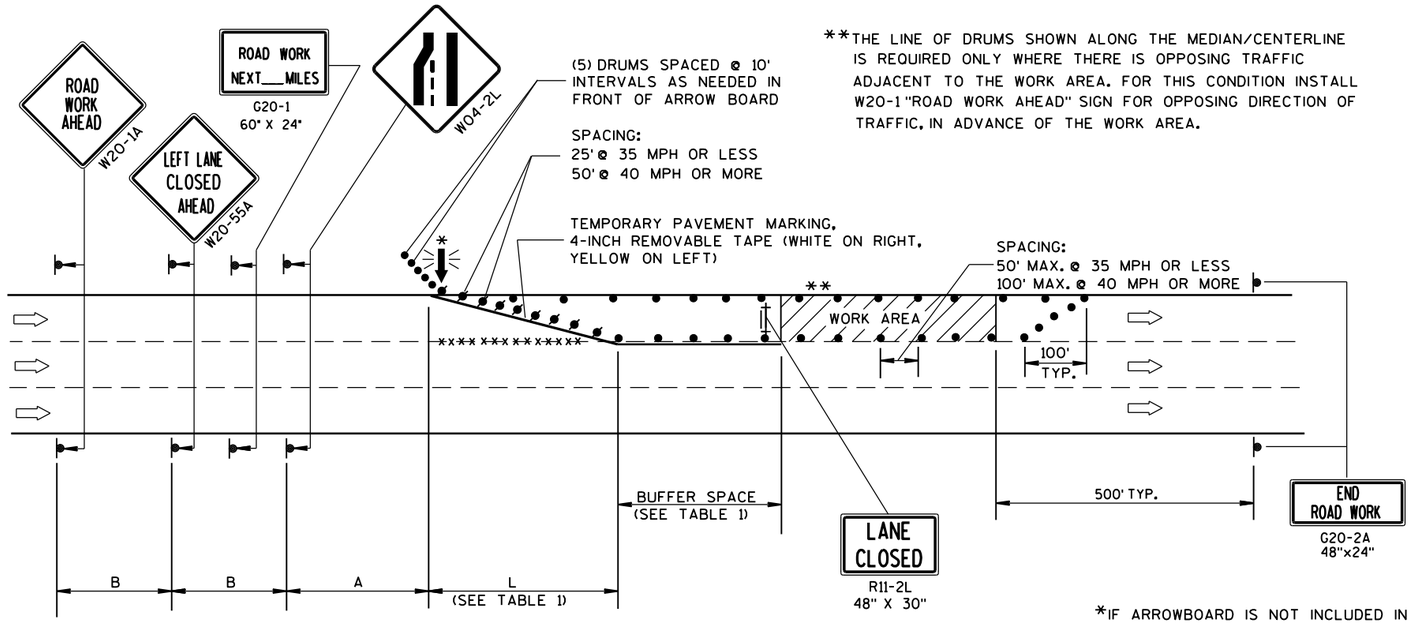
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 C 35-1a



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

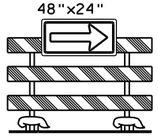


TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

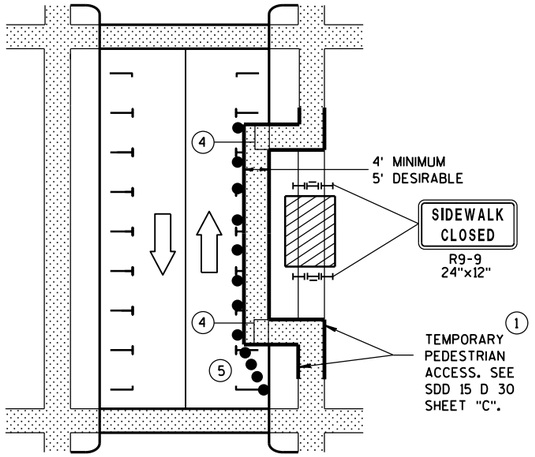
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

6

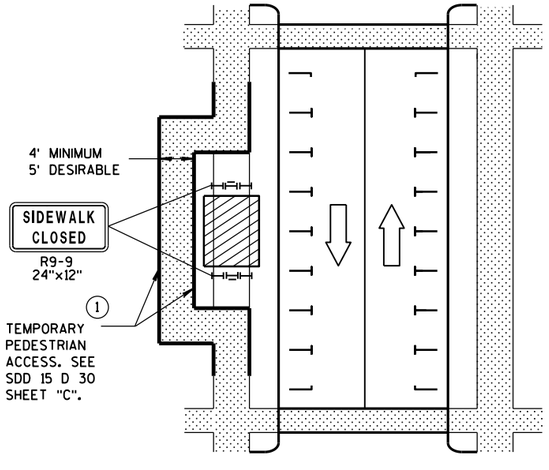
S.D.D. 15 D 20-4

NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.

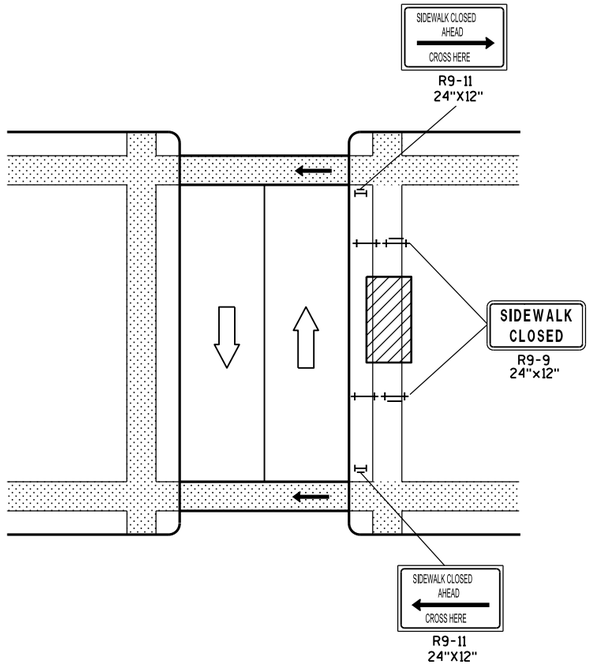


MID-BLOCK SIDEWALK CLOSURE IN PARKING LANE

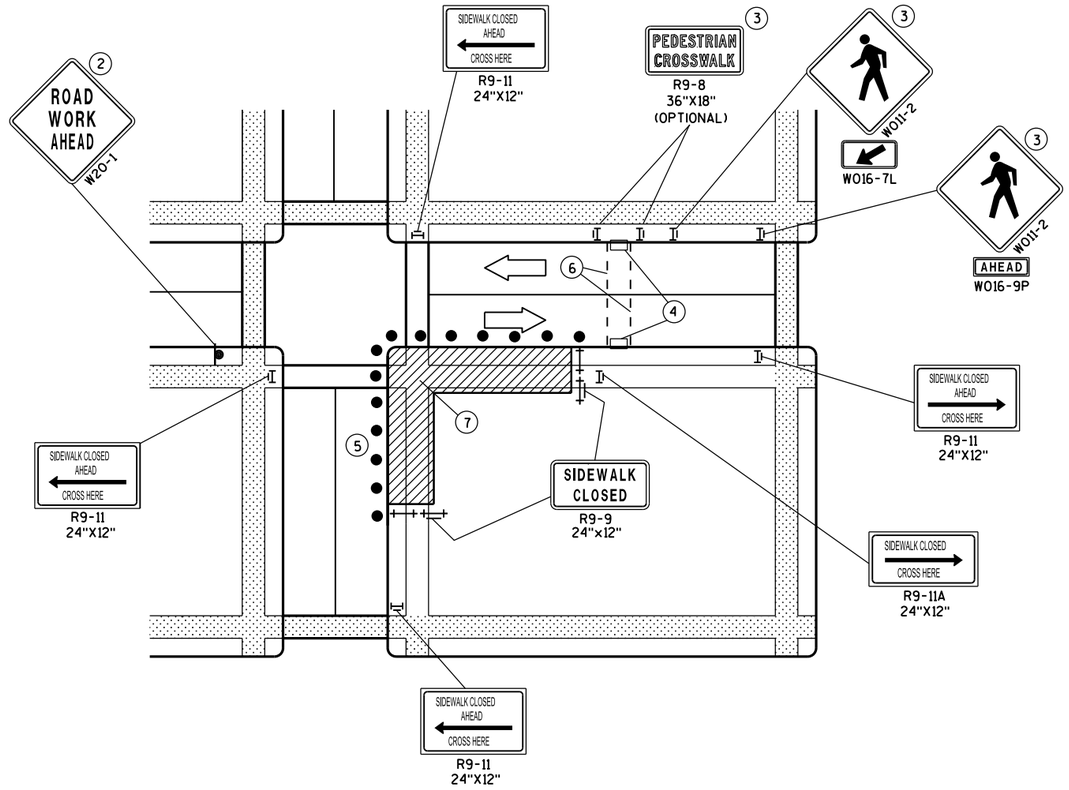
NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION



MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

FOR NIGHTTIME CLOSURE USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

(1) IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE.

(2) "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.

(3) IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND W011-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.

(4) TEMPORARY CURB RAMPS. SEE SDD 15 D 30 SHEET "B".

(5) DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.

(6) TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.

(7) LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

LEGEND

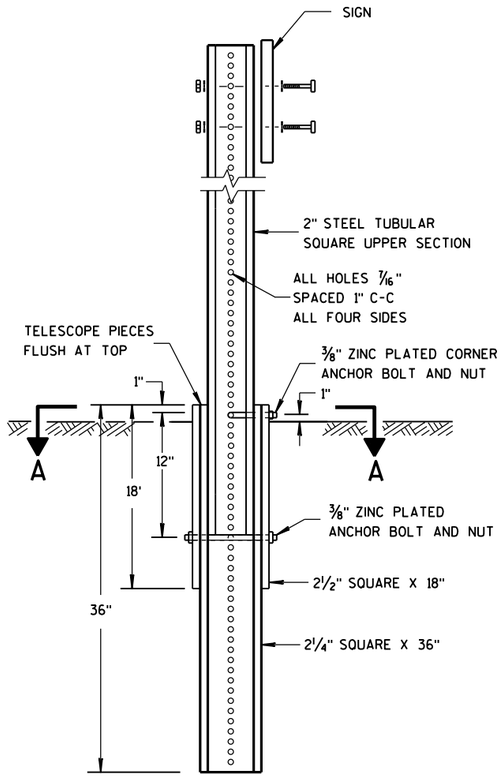
- SIGN ON PERMANENT SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- DIRECTION OF TRAFFIC
- TRAFFIC CONTOL DRUM

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

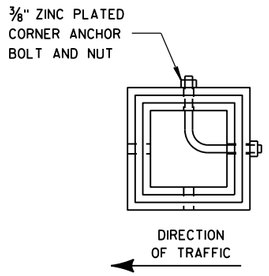
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

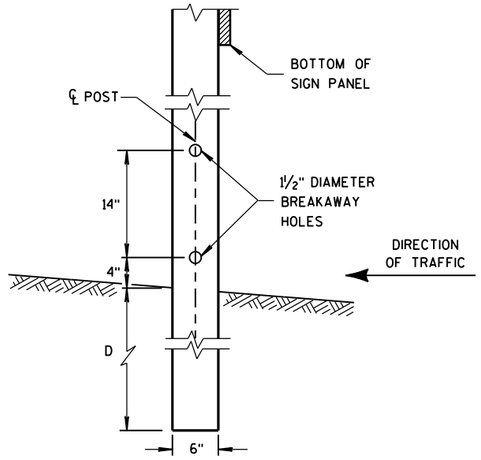
S.D.D. 15 D 30-3a



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



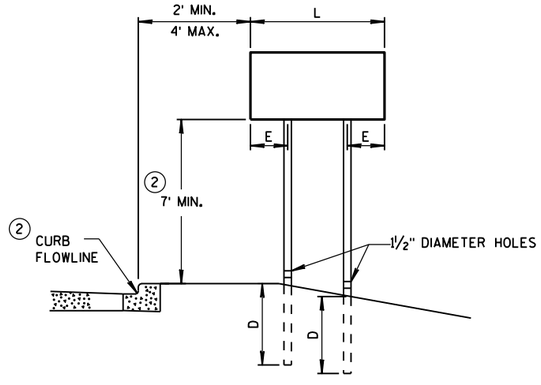
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

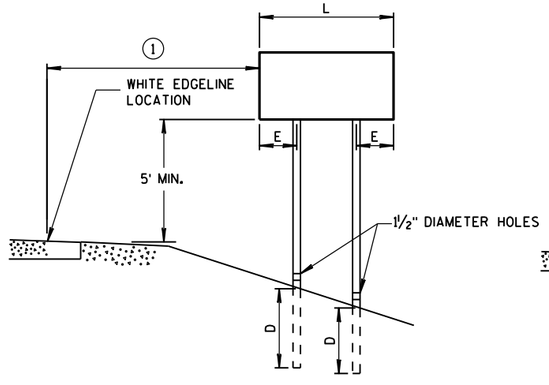
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

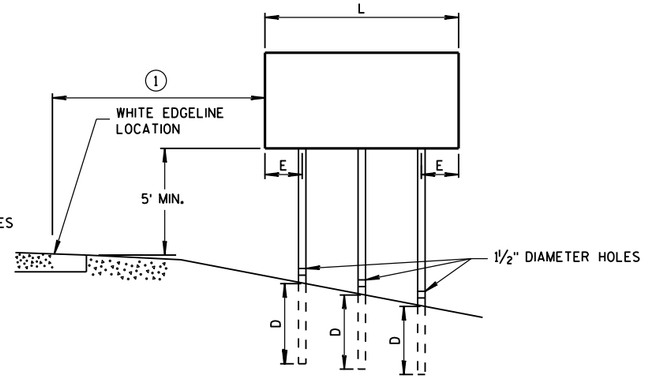
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

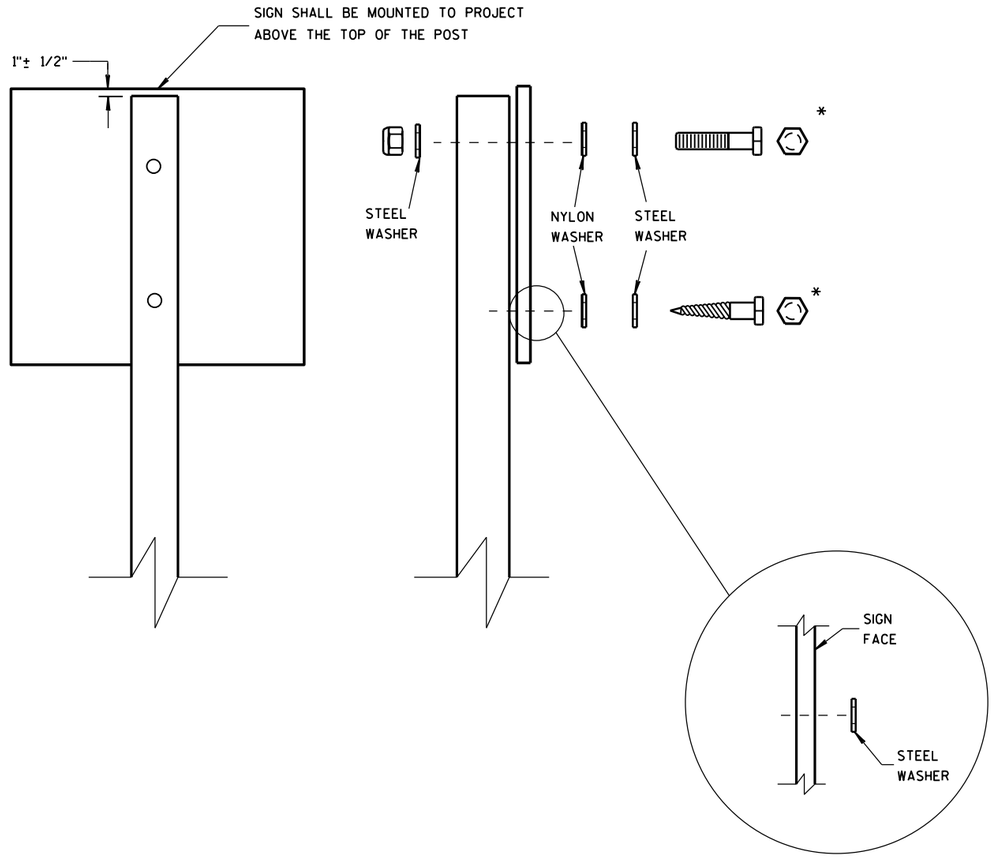
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

STATE OF WISCONSIN DEPARTMENT OF TRANSPOR

6

S.D.D. 15 D 38-1a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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

* 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

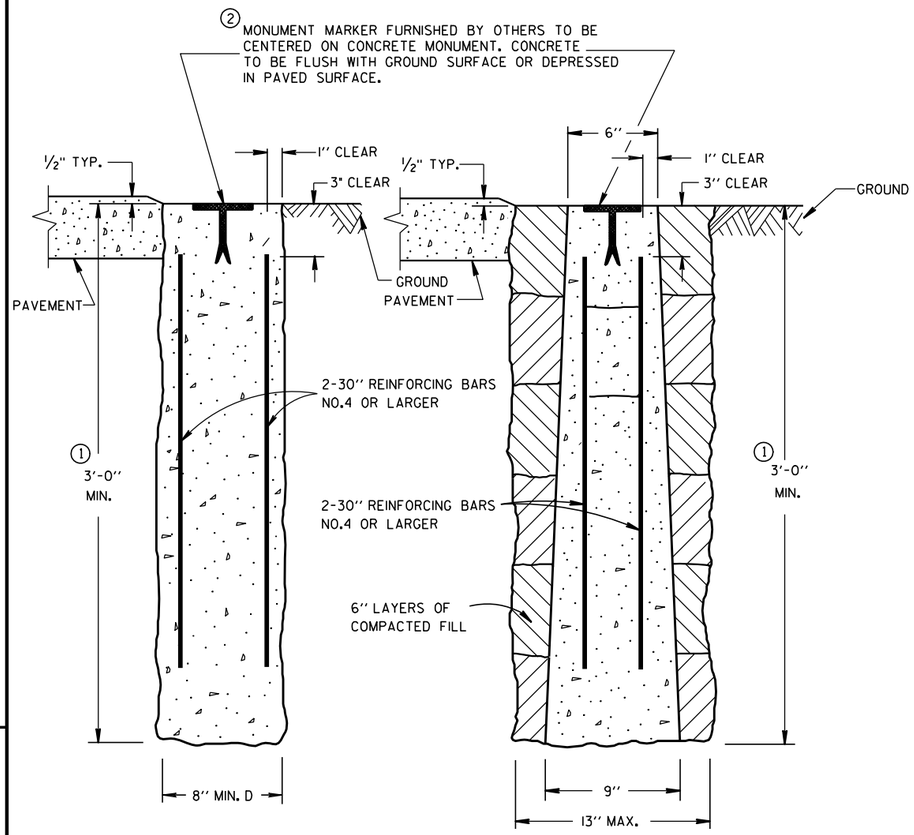
S.D.D. 15 D 38-1b

S.D.D. 15 D 38-1b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

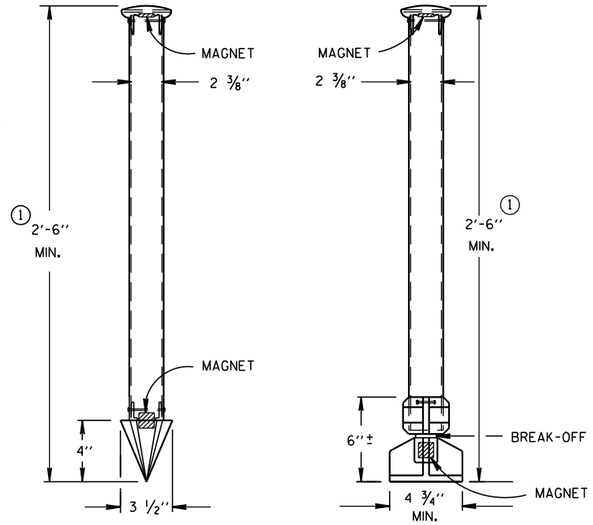
APPROVED
Feb. 2015 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA



CAST-IN-PLACE PRECAST

CONCRETE MONUMENTS

TYPE A



TYPE C TYPE D

DRIVE-IN MONUMENT BREAK-OFF MONUMENT

ALUMINUM MONUMENTS

(INCLUDES MARKER)

GENERAL NOTES

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

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

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

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

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

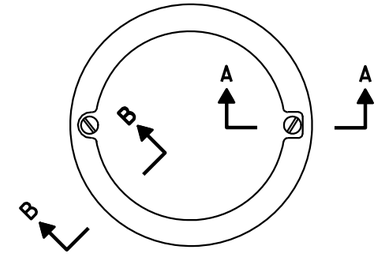
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

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

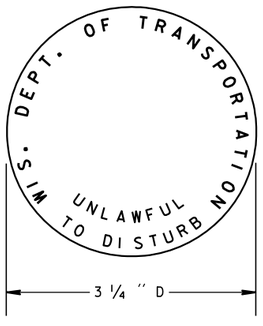
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

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

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

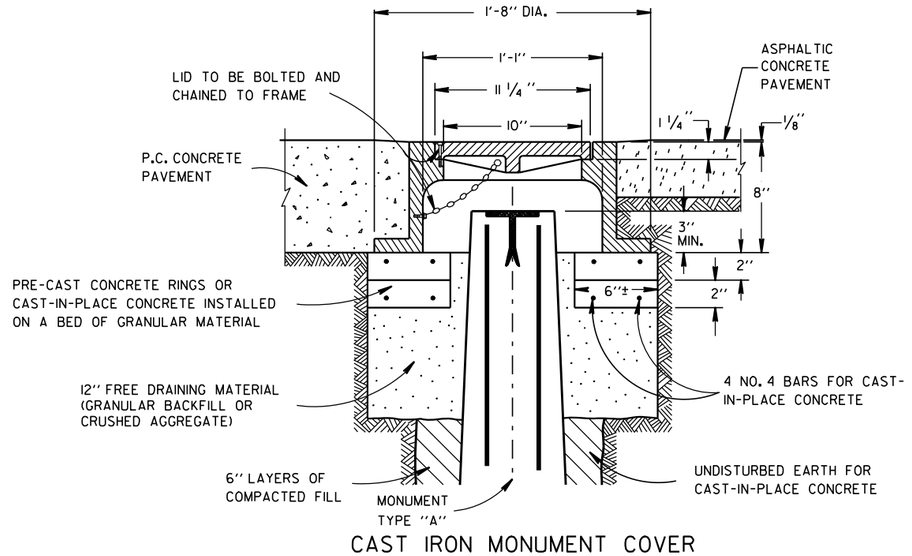


TOP VIEW



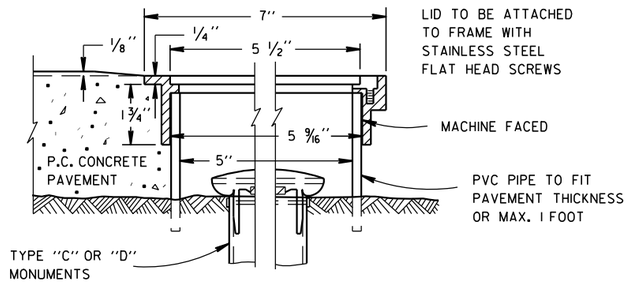
② WIS DOT MONUMENT MARKER LOGO

FOR TYPES "A", "C" & "D"



CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT - 95 LBS.)



SECTION B-B SECTION A-A

ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)

(FOR CONCRETE PAVEMENT ONLY)

LANDMARK REFERENCE MOUNMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/22/1999 DATE

/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6

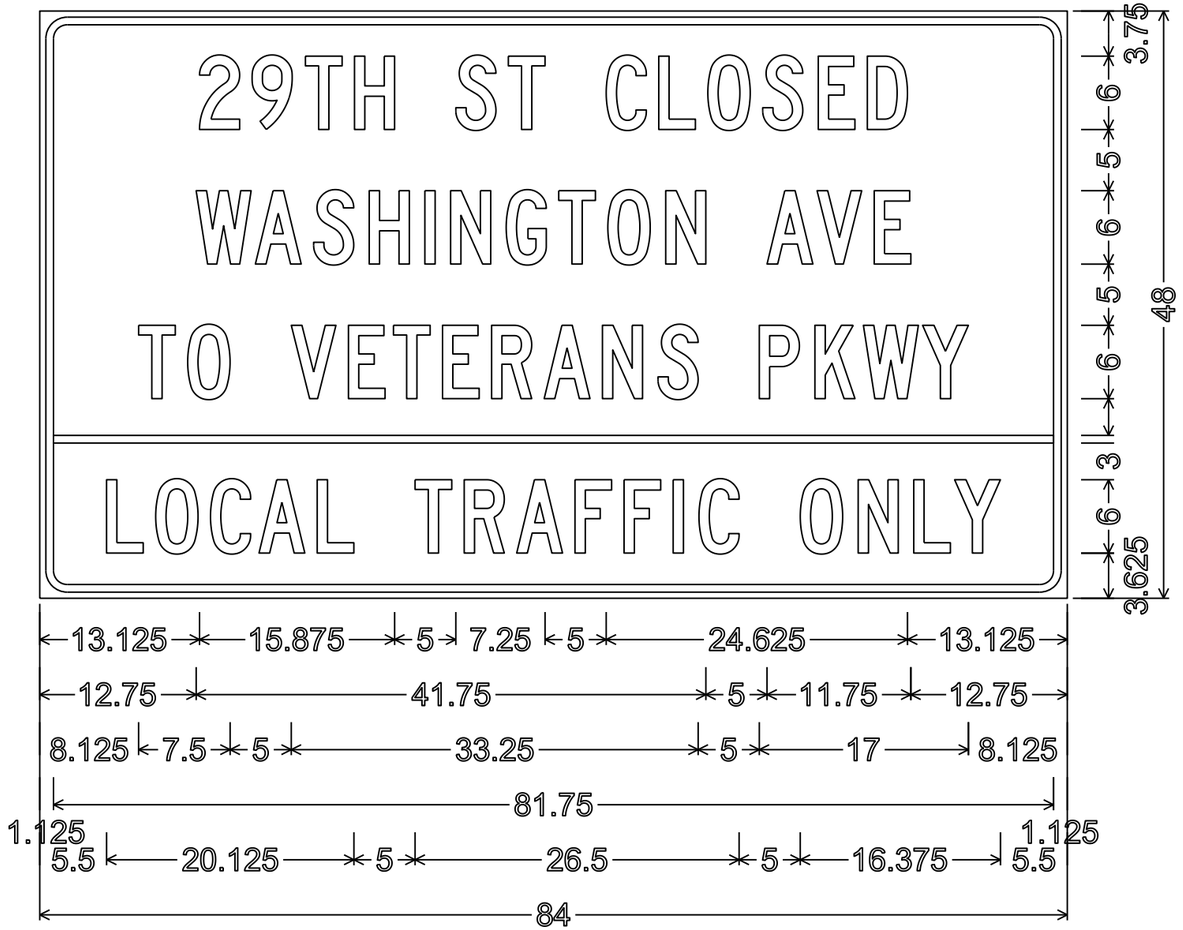
S.D.D. 16 A 1-6

6

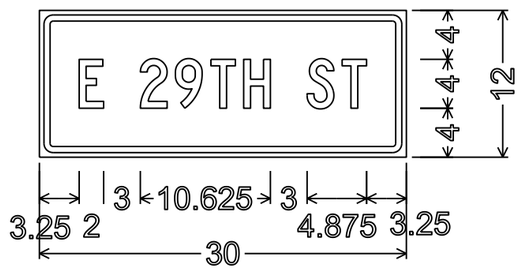
S.D.D. 16 A 1-6

NOTES

1. Fixed Message Type II Signs - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C



2.250" Radius, 0.625" Border, 0.500" Indent



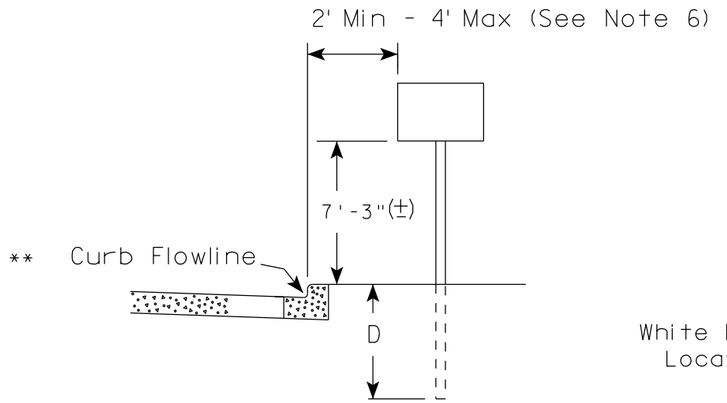
1.125" Radius, 0.500" Border, 0.375" Indent

7

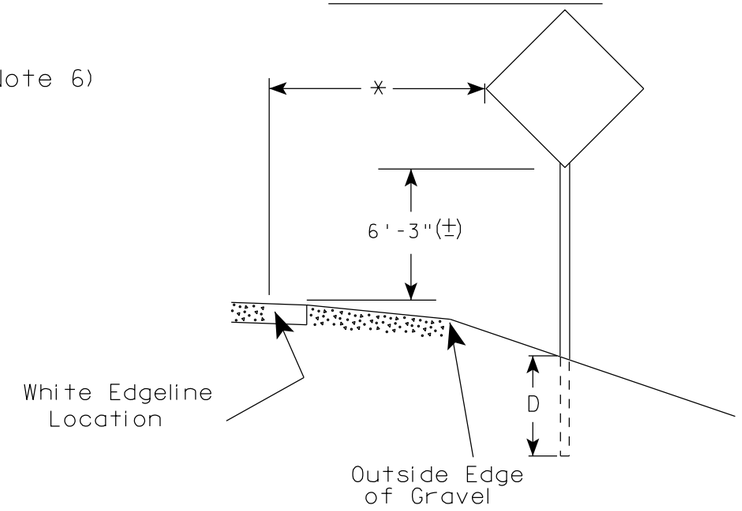
7

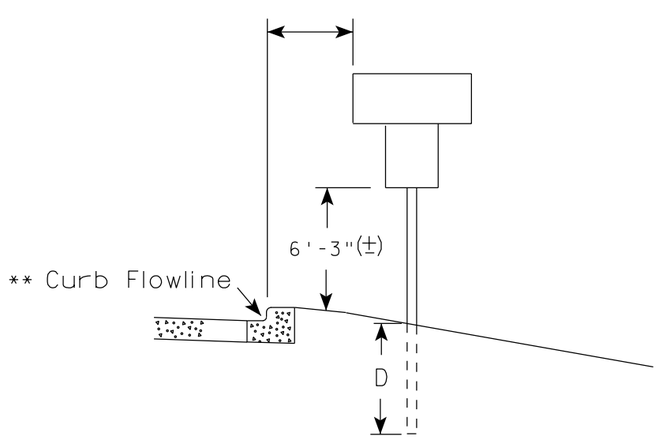
PROJECT NO: 6995-11-71/72	HWY: E 29TH STREET	COUNTY: WOOD	TEMPORARY SIGNING	SHEET NO: 174	E

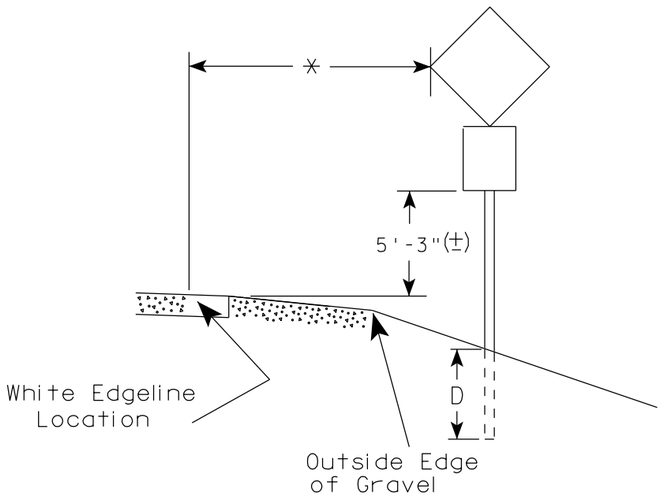
URBAN AREA



RURAL AREA (See Note 2)







** 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.

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) 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 signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

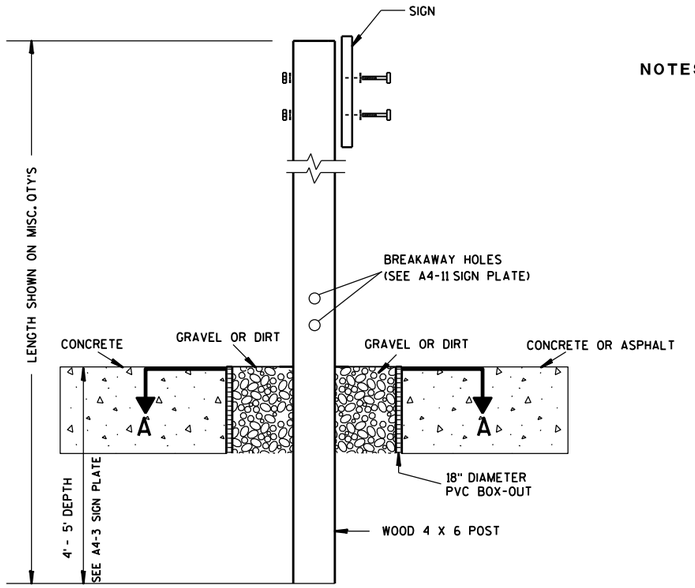
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

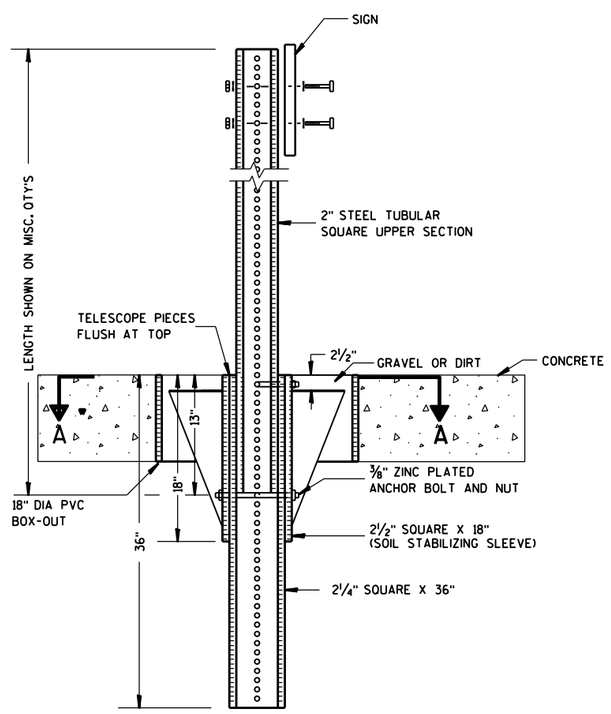
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

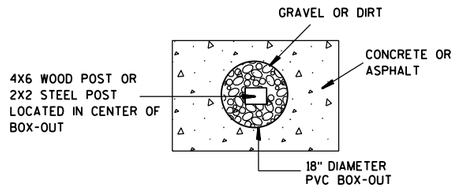
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

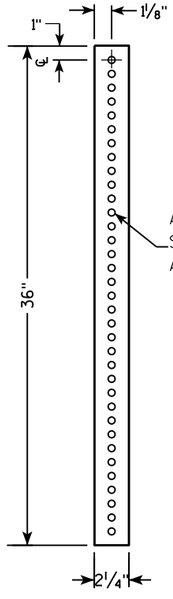
DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

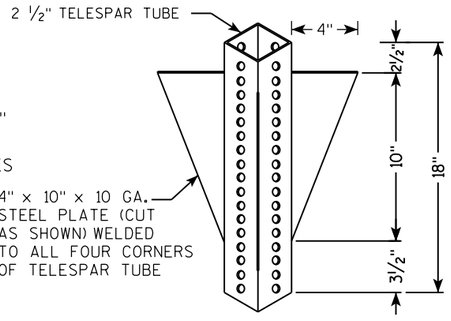
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

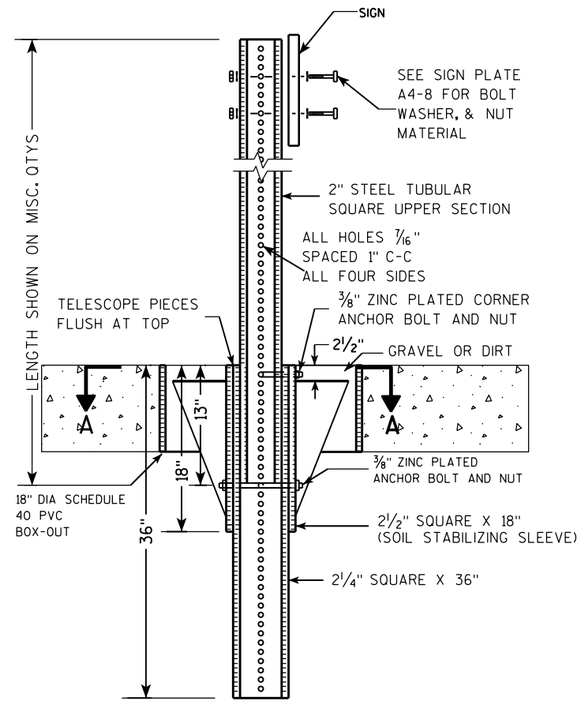
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



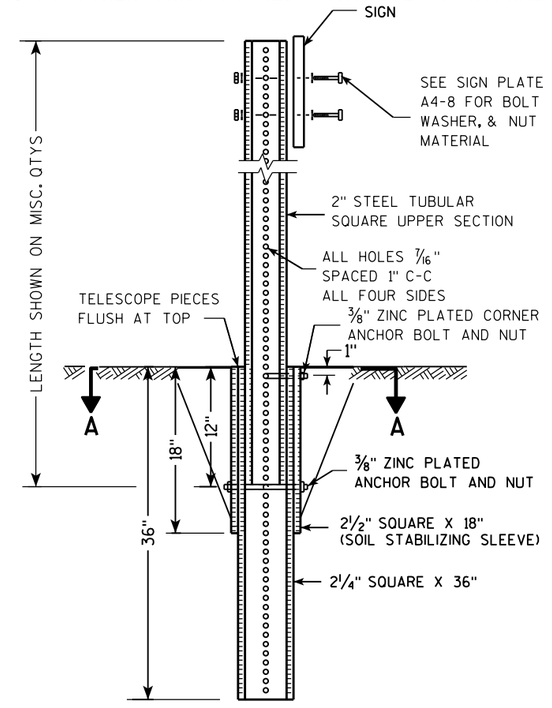
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

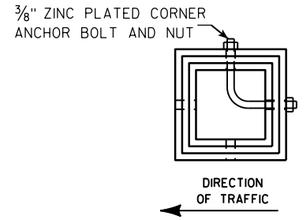


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

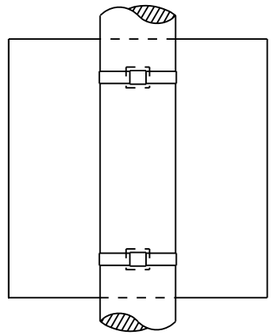
APPROVED Matthew R Rauch
for State Traffic Engineer

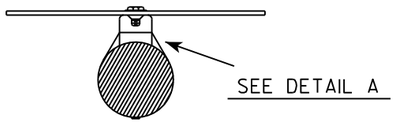
DATE 2/05/15 PLATE 177 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

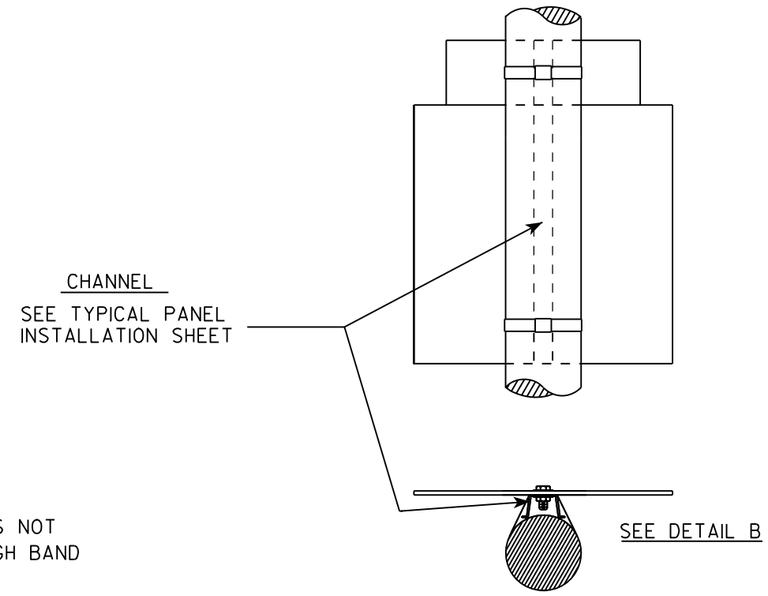
BANDING

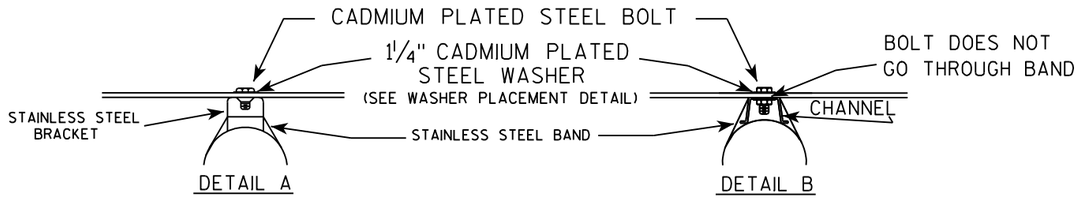
SINGLE SIGN



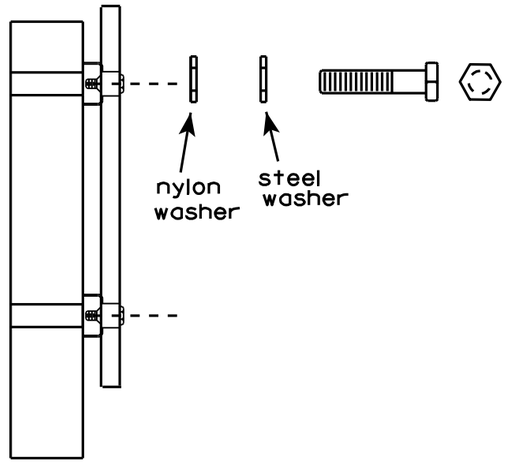


"J" ASSEMBLY





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

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

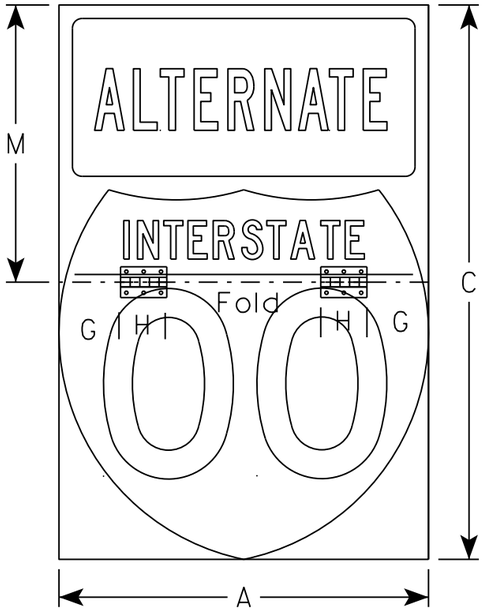
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

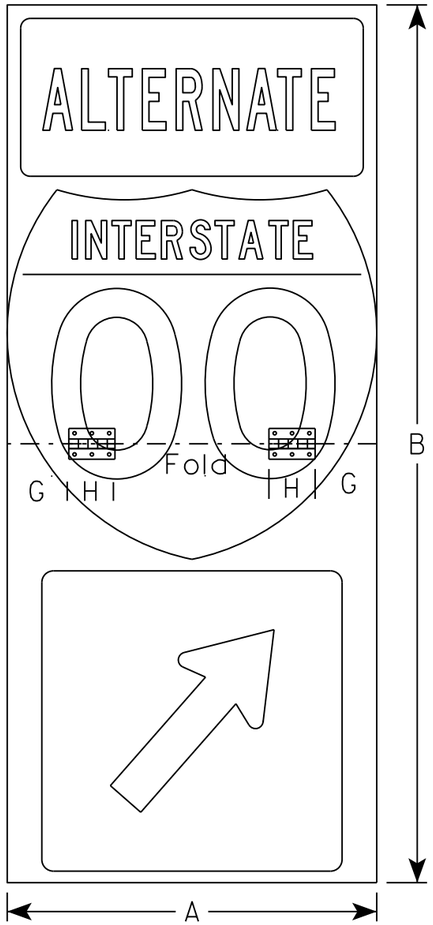
APPROVED Matthew R Rauch
for State Traffic Engineer

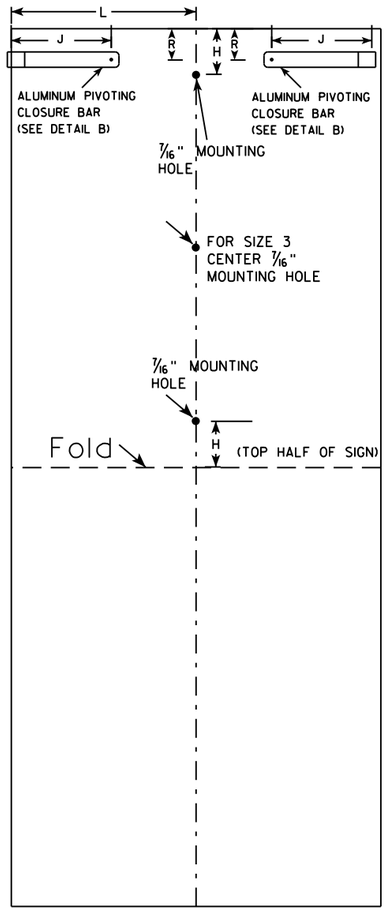
DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 178	E



SIZE	Area sq. ft.
1	
2	6.0
3	13.5



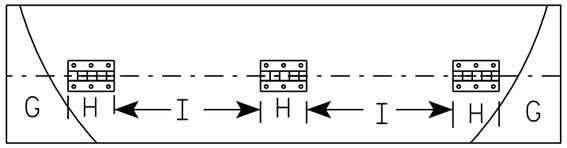


(BACK VIEW)

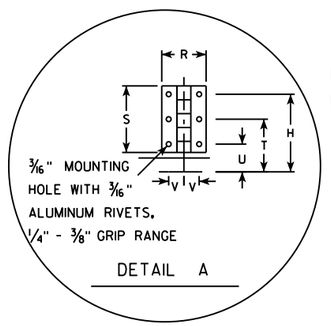
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - *
   Message - *
3. Message Series - C
4. Sign Base Material shall be aluminum and borders shall be rounded.
5. All hardware used on the folding sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.
6. Size 3 shall have 3 hinges see detail below

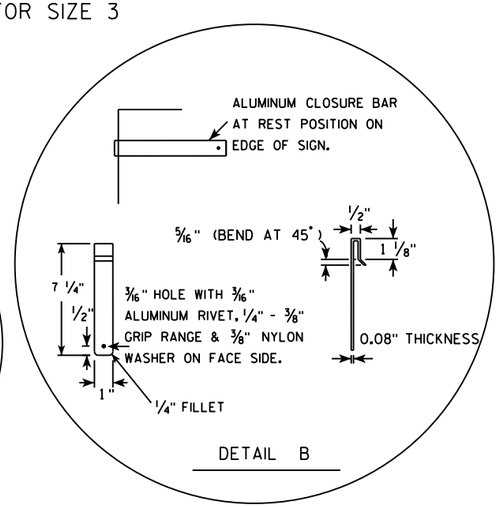
* See Appropriate Route Shield, Cardinals, Arrow, and A2-1S Sign Plates.



HINGE PLACEMENT FOR SIZE 3



DETAIL A



DETAIL B

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	57	36				4	3		6 1/2	28 1/2	12	18					2	3	2 5/8	1 1/4	11/16					9.5
3	36	84	54				4	3	9 1/2	6 1/2	40 1/2	18	27					2	3	2 5/8	1 1/4	11/16					21.0
4																											
5																											

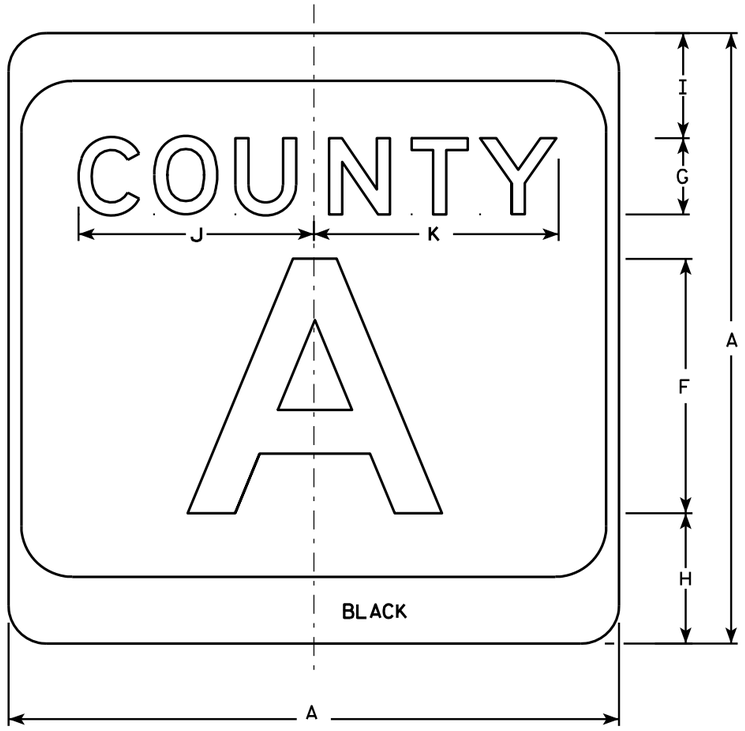
STANDARD SIGN
JV-F

WISCONSIN DEPT OF TRANSPORTATION

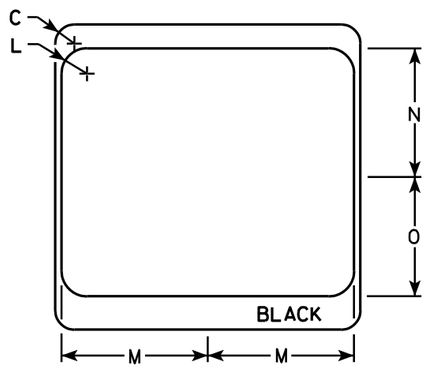
APPROVED Matthew R Rauch
for State Traffic Engineer

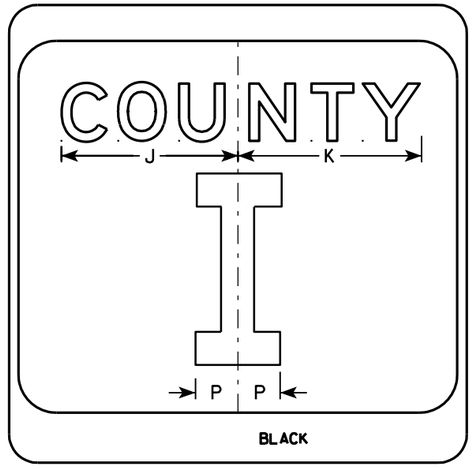
DATE 2/23/17 PLATE NO. JV-F.3

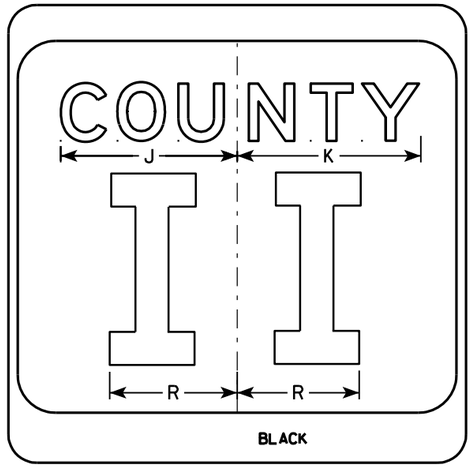
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 179 | E



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

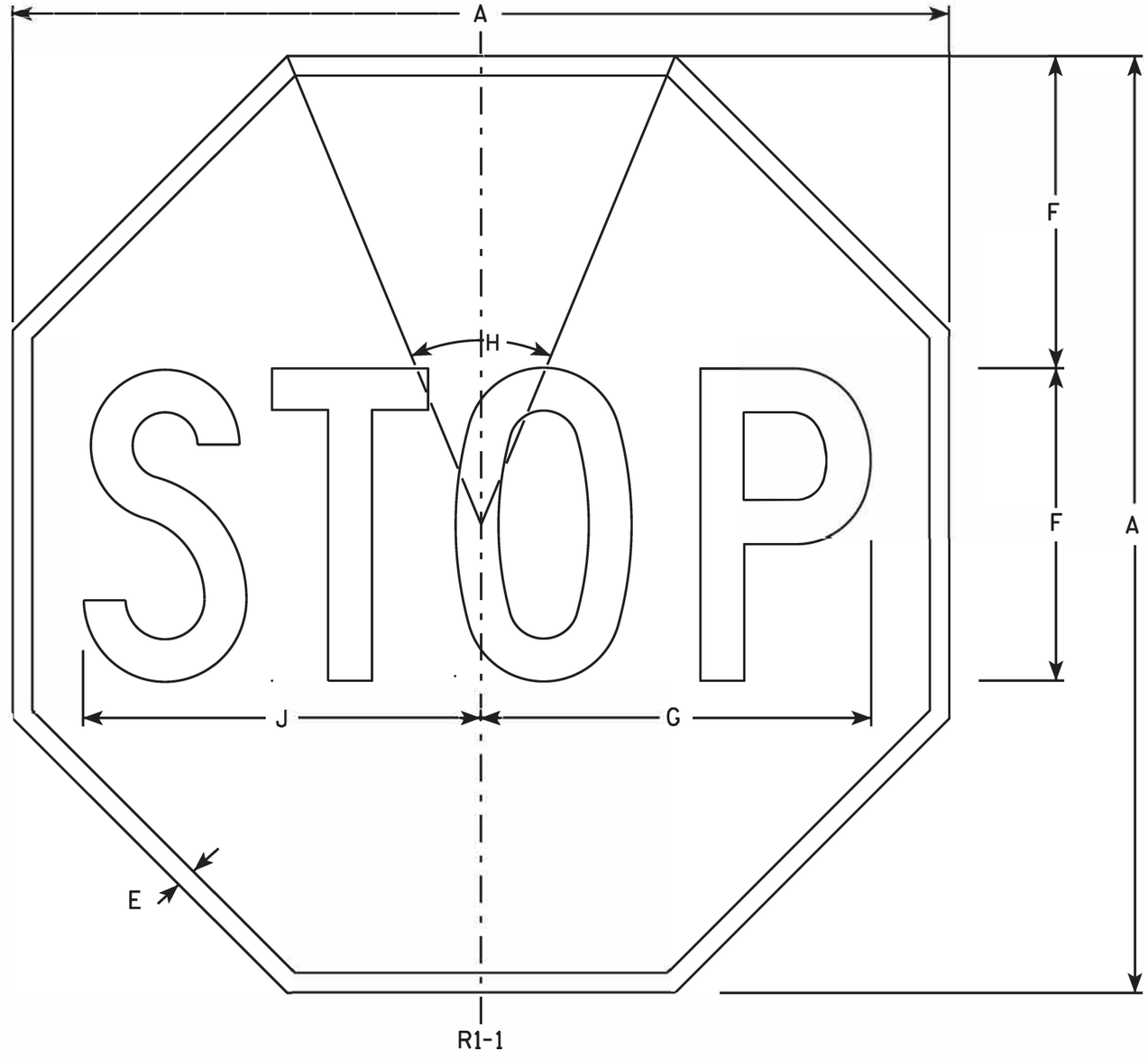
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 180	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 - Red
   Message - White
3. Message Series - C

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				5/8	10	12 1/2	45°		12 3/4																	5.18
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

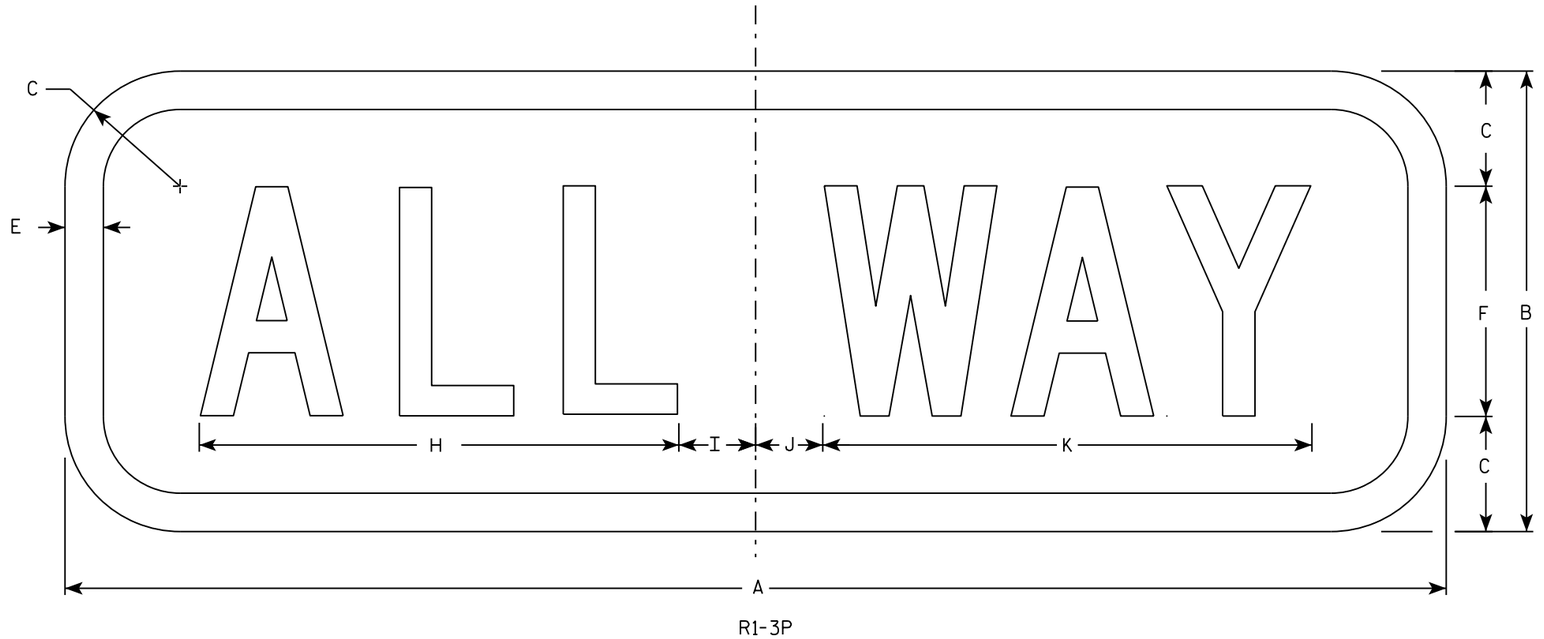
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO. 181	E



R1-3P

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. For 30"x30" R1-1 use 18"x6" R1-3P sign
   For 36"x36" R1-1 use 24"x9" R1-3P sign
   For 48"x48" R1-1 use 30"x12" R1-3P sign

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	6	1 ½		½	3		6 ¼	1 ¼	⅞	6 ⅜																0.75
2S	18	6	1 ½		½	3		6 ¼	1 ¼	⅞	6 ⅜																1.5
2M	24	9	1 ½		½	5		9 ¼	1 ¼	¾	9 ¾																1.5
3	24	9	1 ½		½	5		9 ¼	1 ¼	¾	9 ¾																1.5
4	30	12	2 ¼		⅝	6		11	2 ¼	1 ½	11 ¾																2.5
5	30	12	2 ¼		⅝	6		11	2 ¼	1 ½	11 ¾																2.5

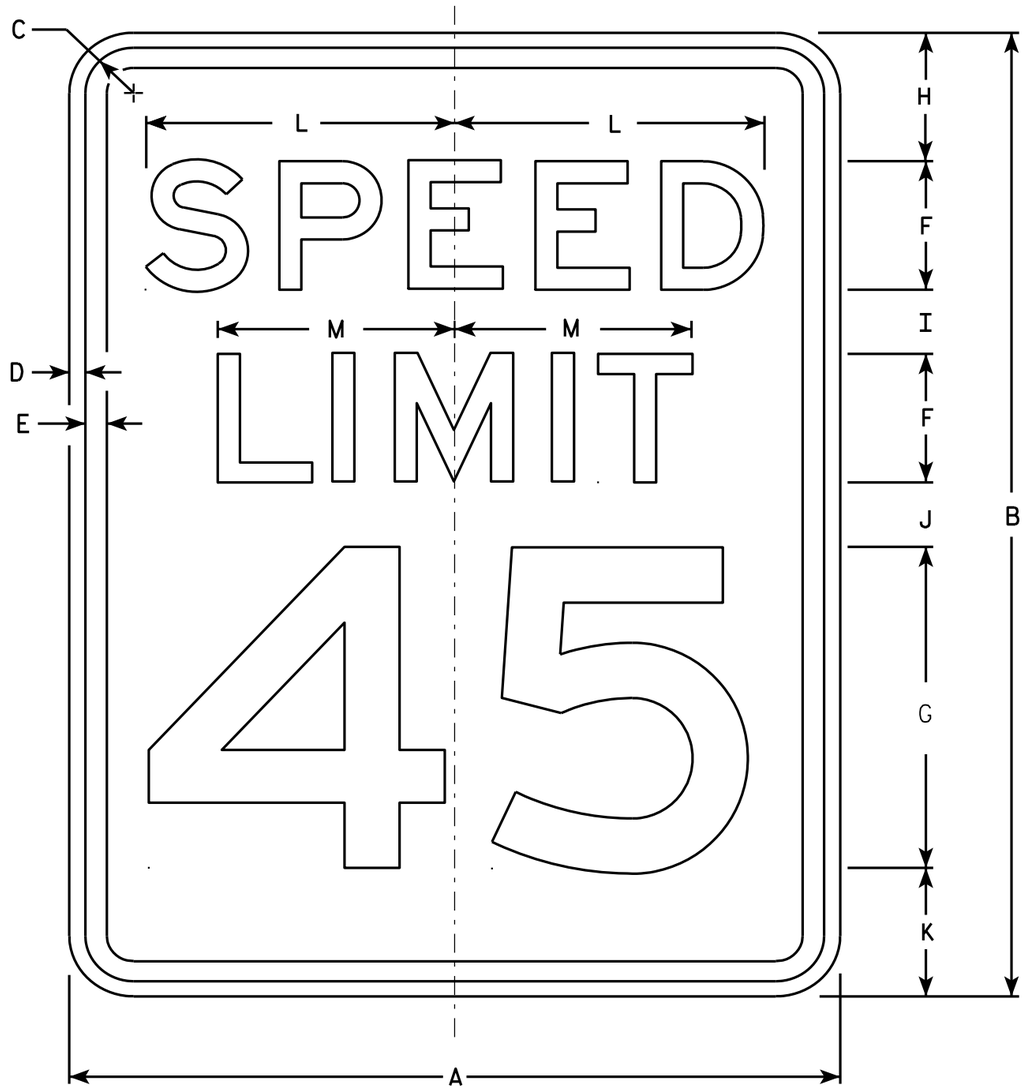
STANDARD SIGN
R1-3P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/29/16 PLATE NO. R1-3P.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 182 | 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

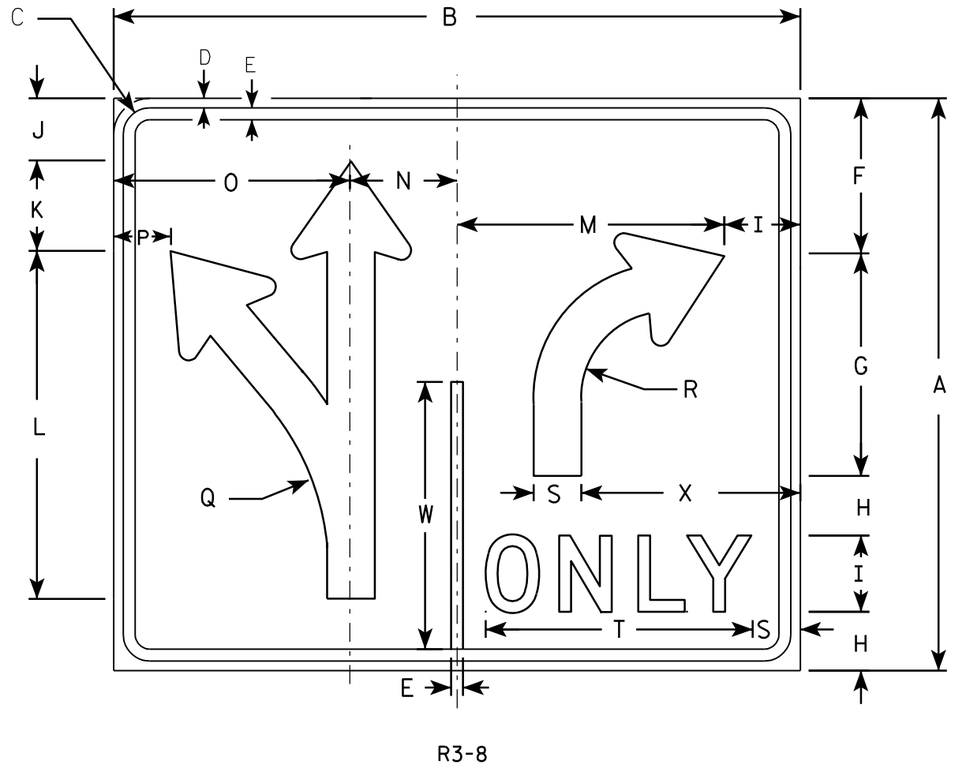
APPROVED Matthew R Rauch
for State Traffic Engineer

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

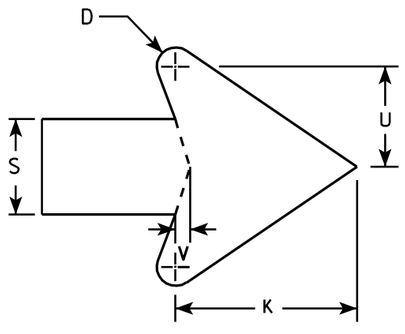
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 183 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R21.DGN PLOT DATE : 28-MAY-2010 08:32 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 4.717577:1.000000

WISDOT/CADDS SHEET 42



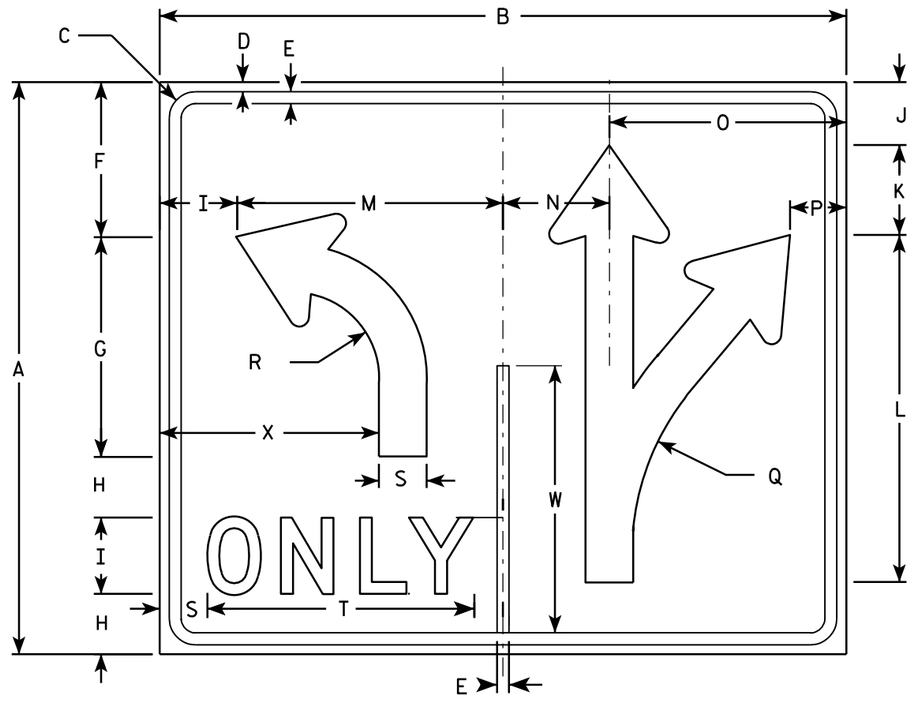
R3-8



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: 184	E

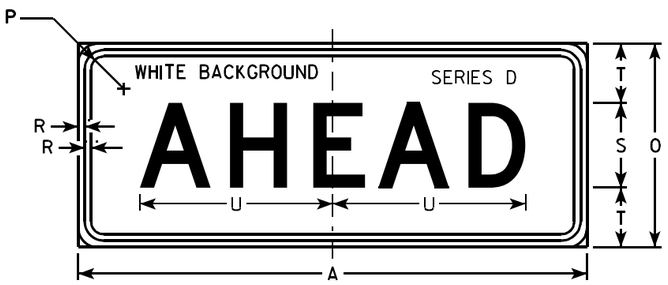
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R38.DGN PLOT DATE : 18-MAR-2011 10:28 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 7.945391:1.000000

WISDOT/CADDS SHEET 42

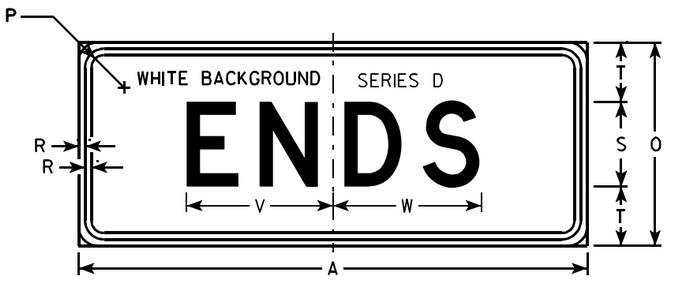
R3-17

NOTES

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



R3-17ap



R3-17bp

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

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

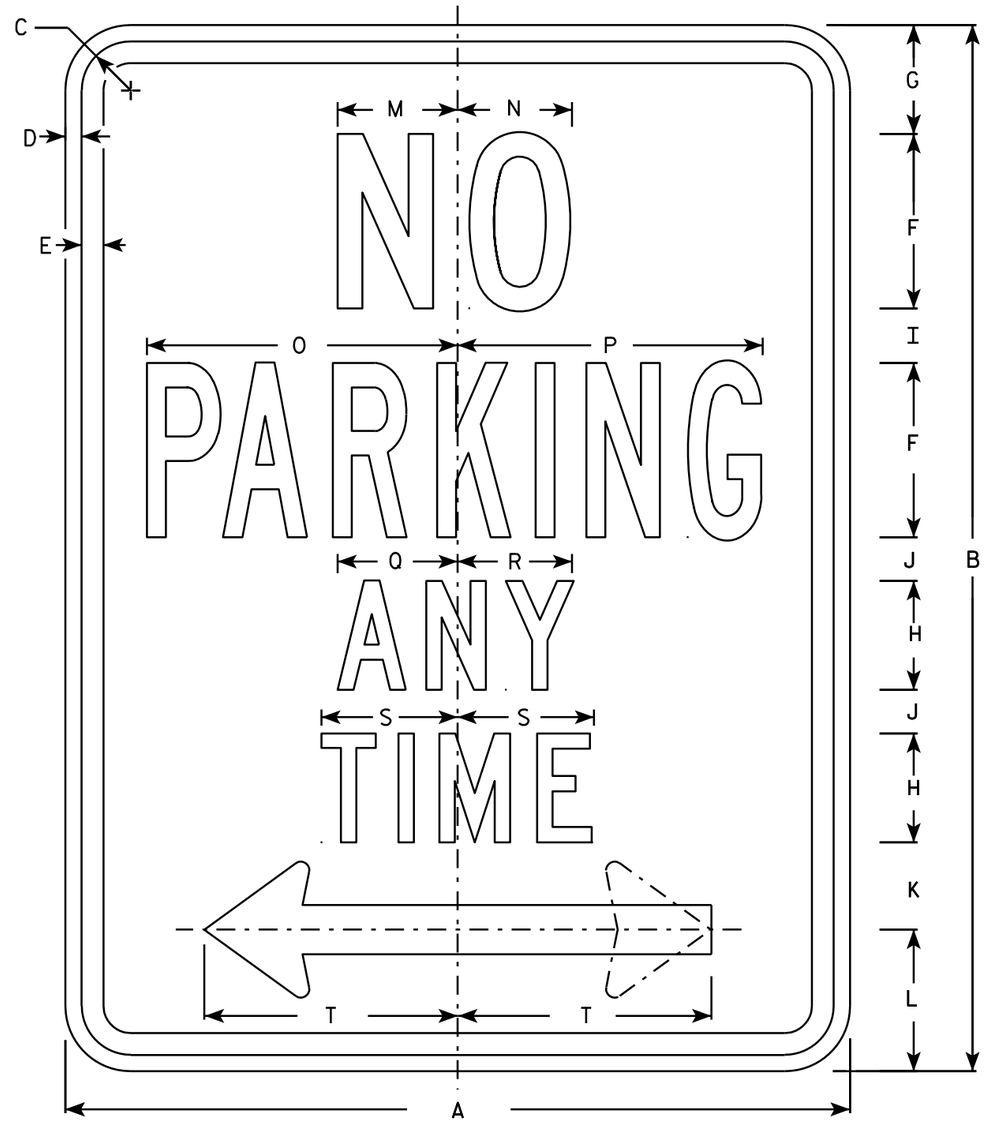
SHEET NO: 185 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R317.DGN PLOT DATE : 02-APR-2013 14:09 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42

7

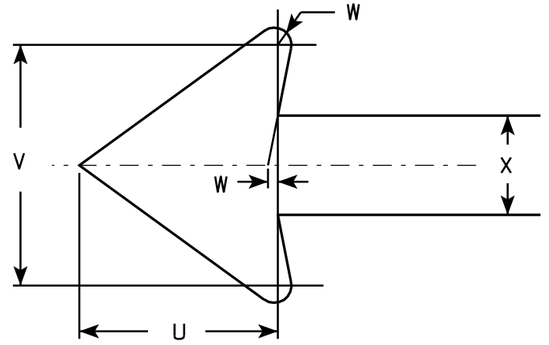
7



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



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

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

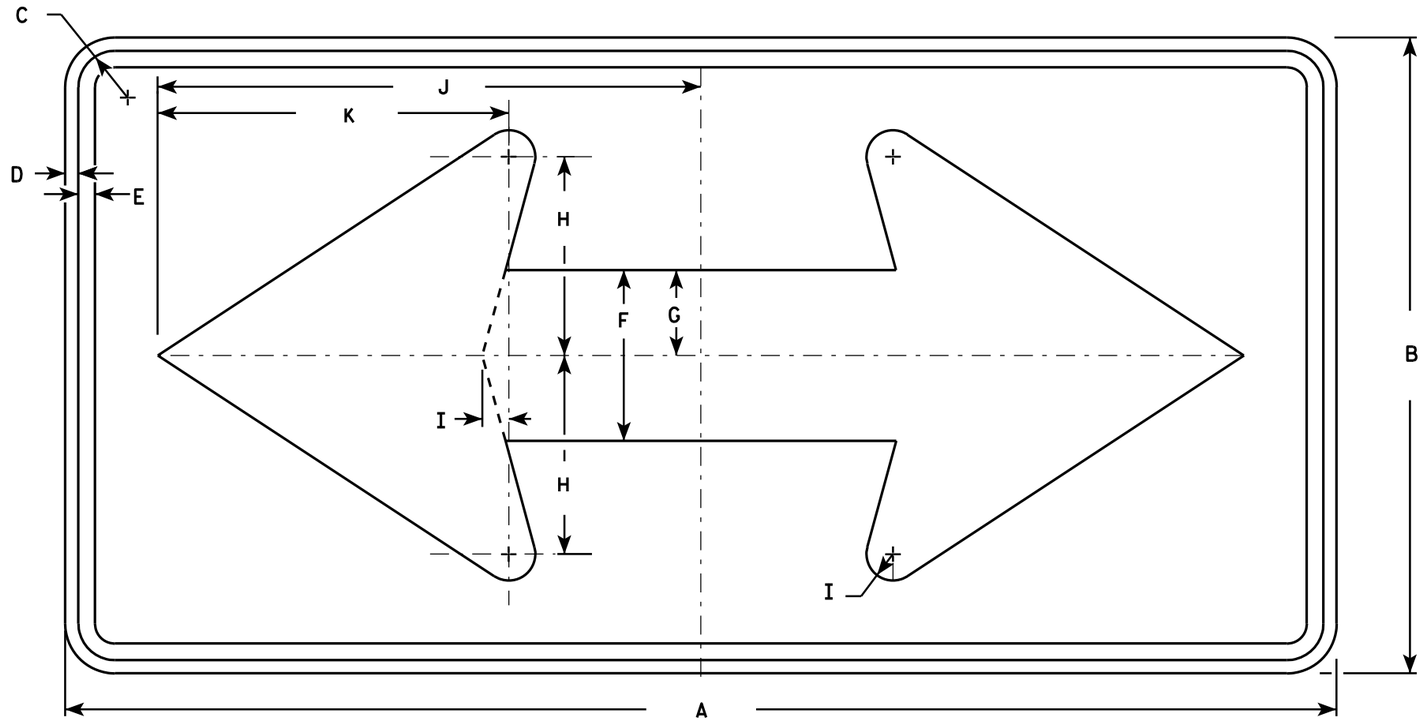
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 186	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R71.DGN PLOT DATE : 31-MAR-2011 09:20 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.476110:1.000000

WISDOT/CADDS SHEET 42



W1-7

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. 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	36	18	1 1/8	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	96	48	2 1/4	3/4	1	13	6 1/2	15	2	41	26 1/2																32.0

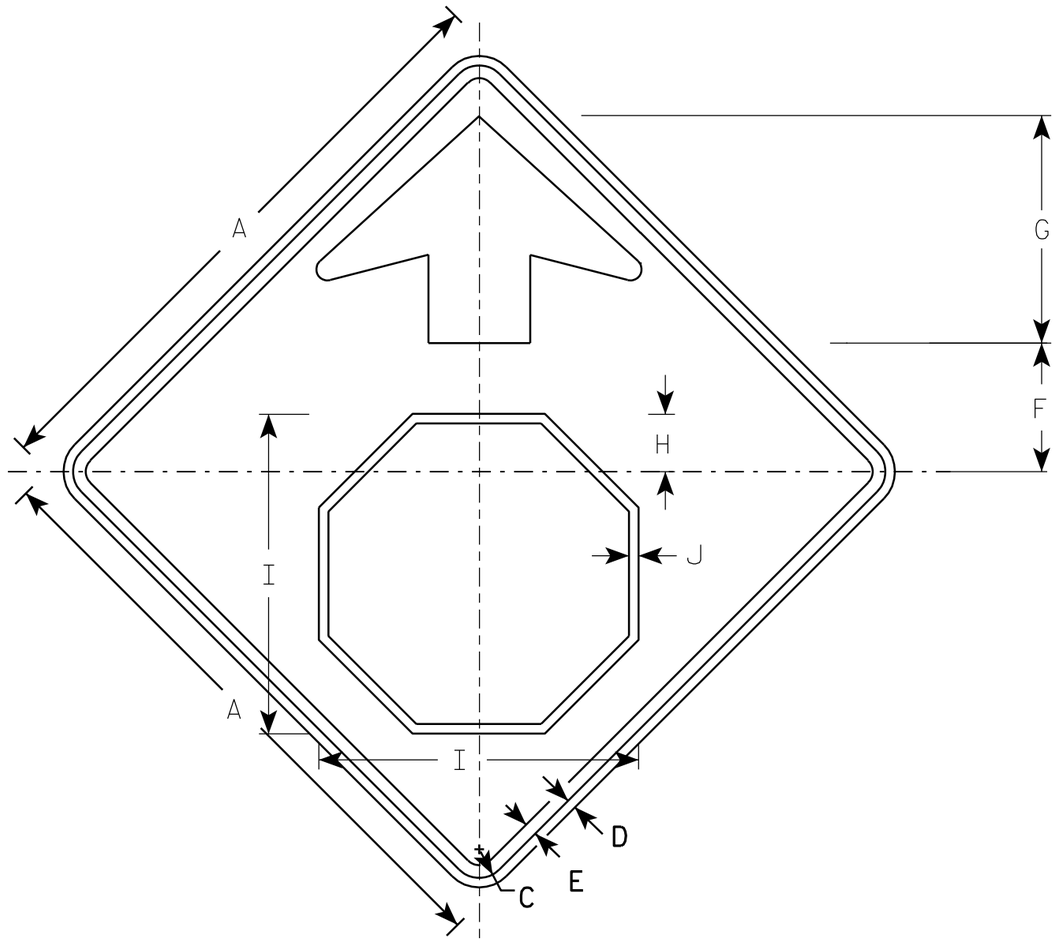
STANDARD SIGN
W1-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-7.7

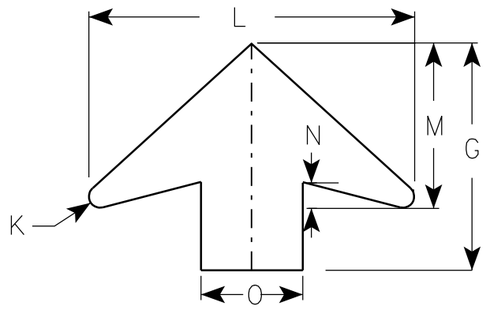
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 187 | E



W3-1

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

STANDARD SIGN
W3-1

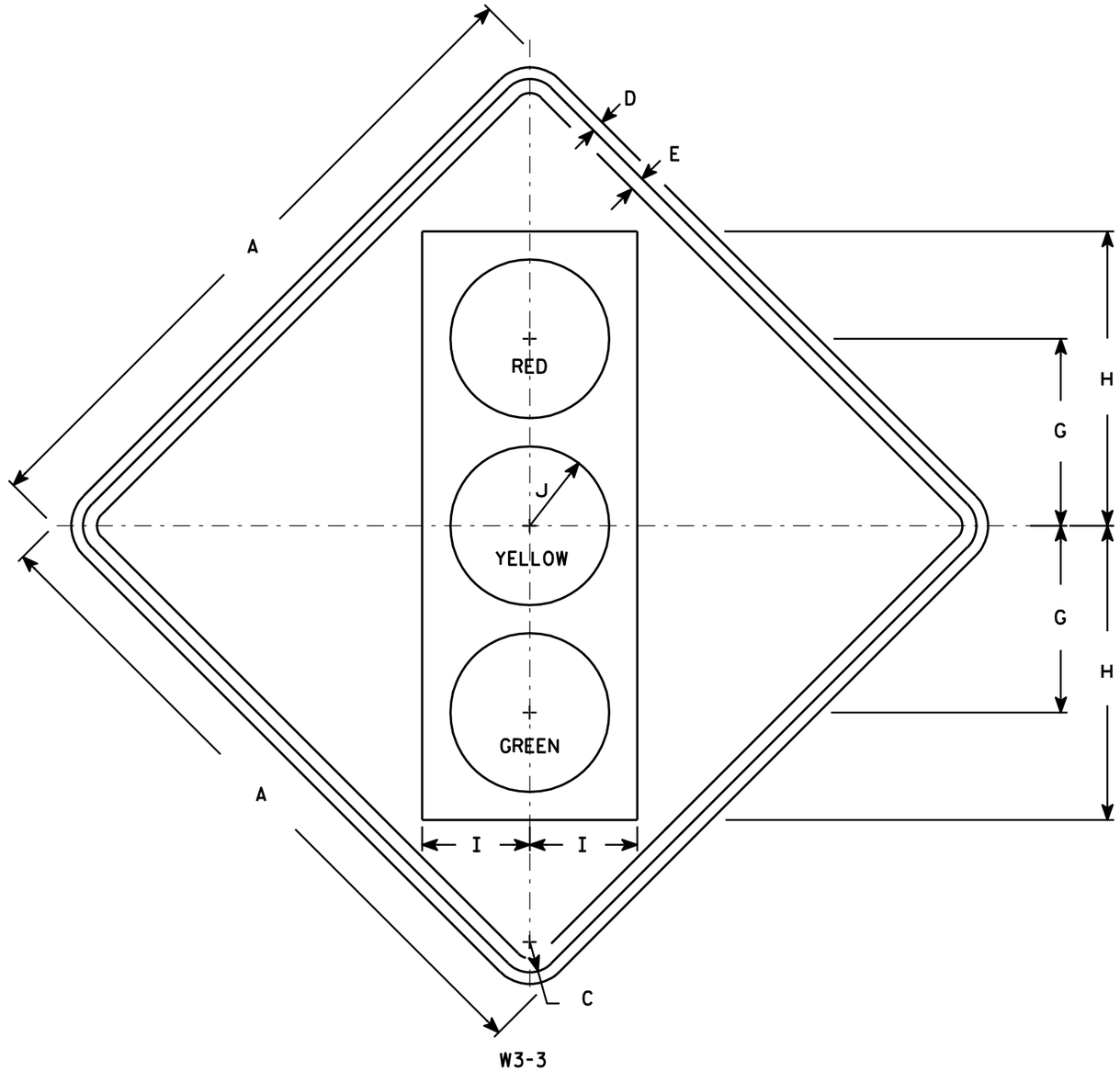
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

SHEET NO: 188 E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

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		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN
W3-3

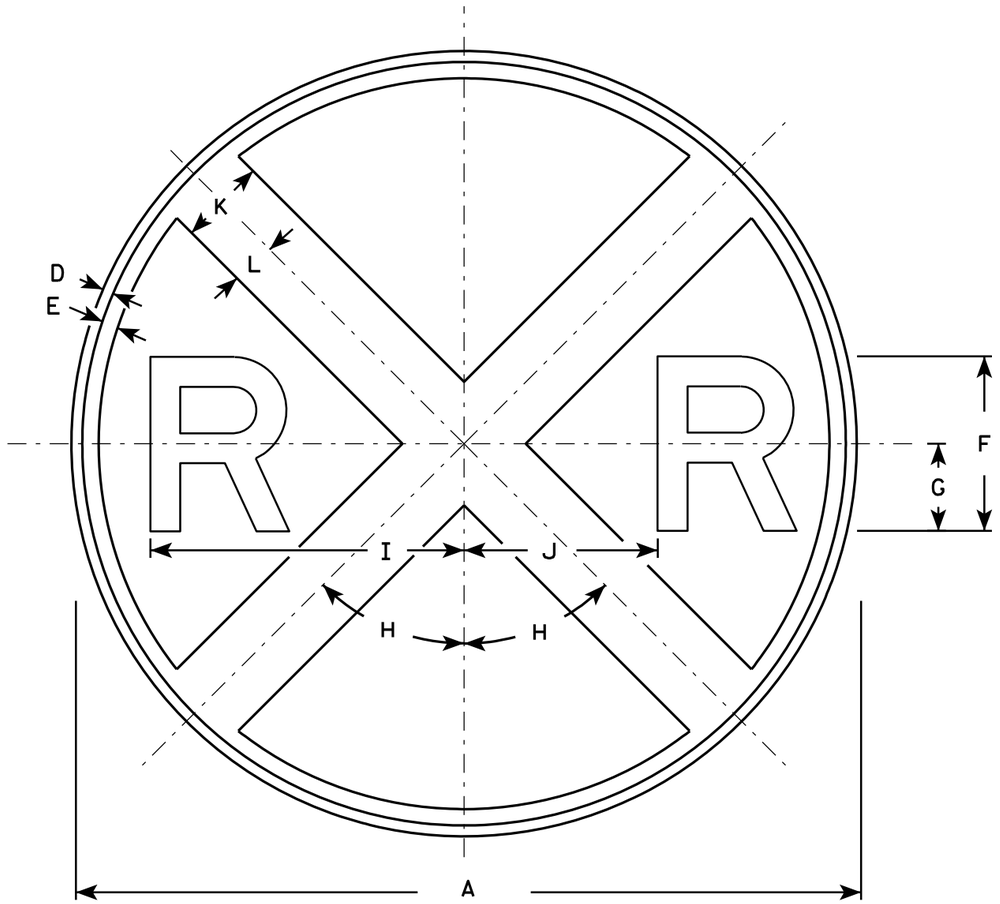
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 189 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W33.DGN PLOT DATE : 07-JUN-2010 13:07 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 7.448805:1.000000
WISDOT/CADDS SHEET 42



W10-1

NOTES

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

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			3/8	5/8	7	3 1/2	45°	12 3/8	7 1/8	3	1 1/2															4.91
2S	36			5/8	3/4	8	4	45°	14 3/8	8 5/8	4	2															7.07
2M	36			5/8	3/4	8	4	45°	14 3/8	8 5/8	4	2															7.07
3																											
4	48			3/4	1 1/4	10	5	45°	18 3/8	11 5/8	5	2 1/2															12.57
5																											

STANDARD SIGN
W10-1

WISCONSIN DEPT OF TRANSPORTATION

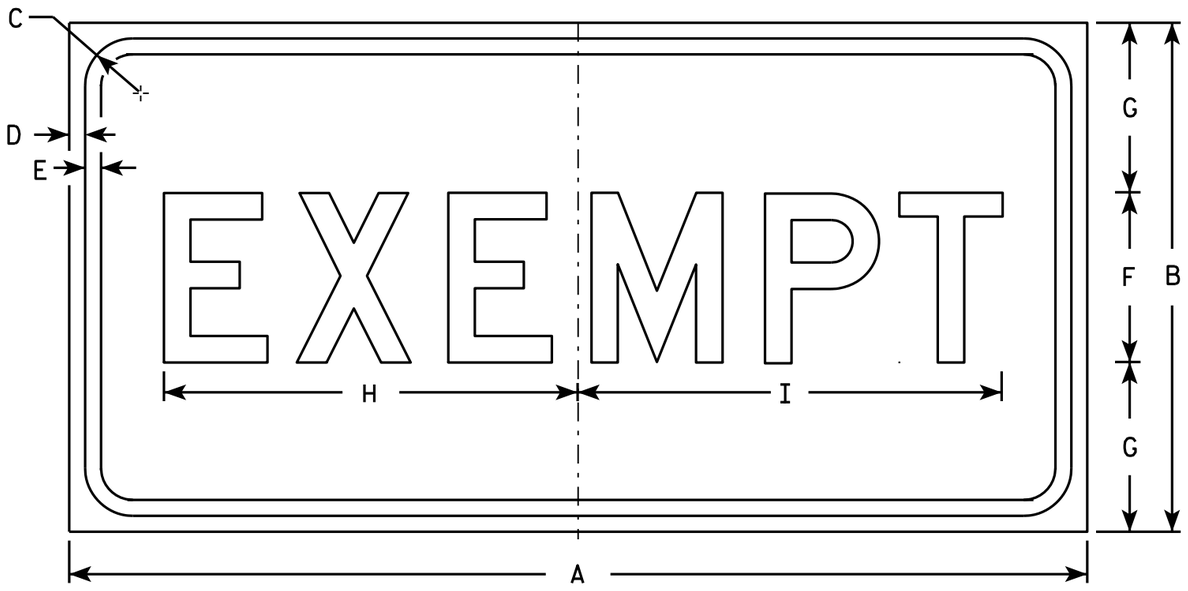
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/13/13 PLATE NO. W10-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 190	E

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See Note 5
   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. Background - R15-3 is White Type H Reflective
   W10-1A is Yellow.



R15-3
and
W10-1A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	4	4	9 3/4	10																		2
2M	24	12	1 1/8	3/8	3/8	4	4	9 3/4	10																		2
3																											
4																											
5																											

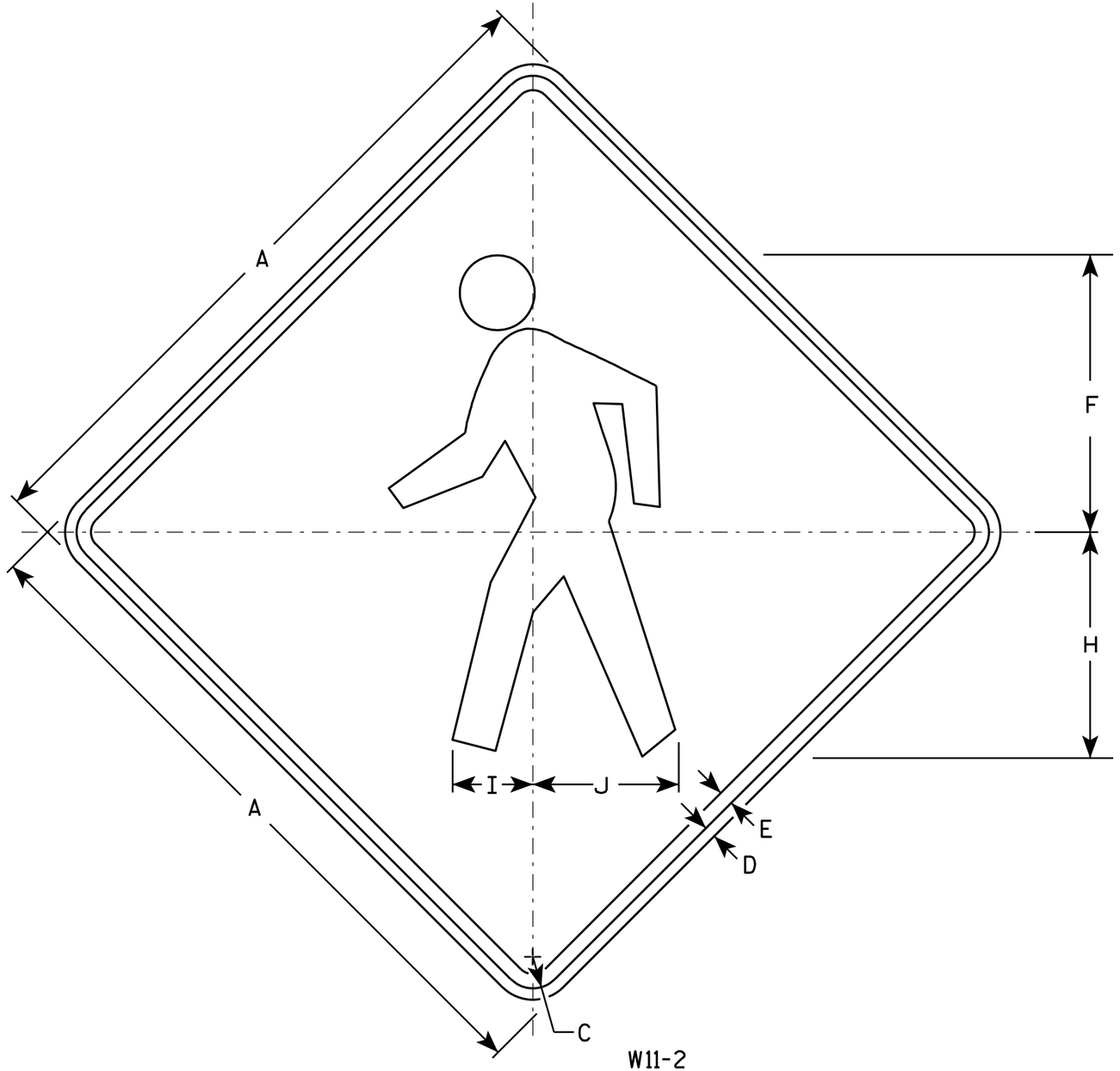
STANDARD SIGN
R15-3 & W10-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. R15-3.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 191	E



W11-2

NOTES

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

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

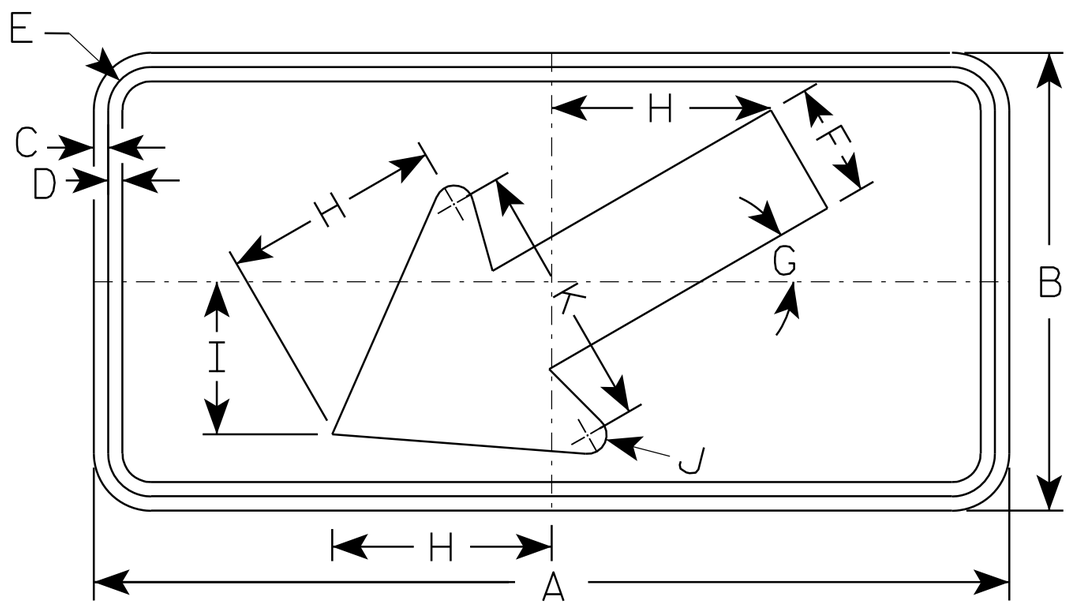
STANDARD SIGN
W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 192	E



W16-7L

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W16-7R is the same as W16-L except the arrow is reversed along the vertical centerline.

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

STANDARD SIGN
W16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

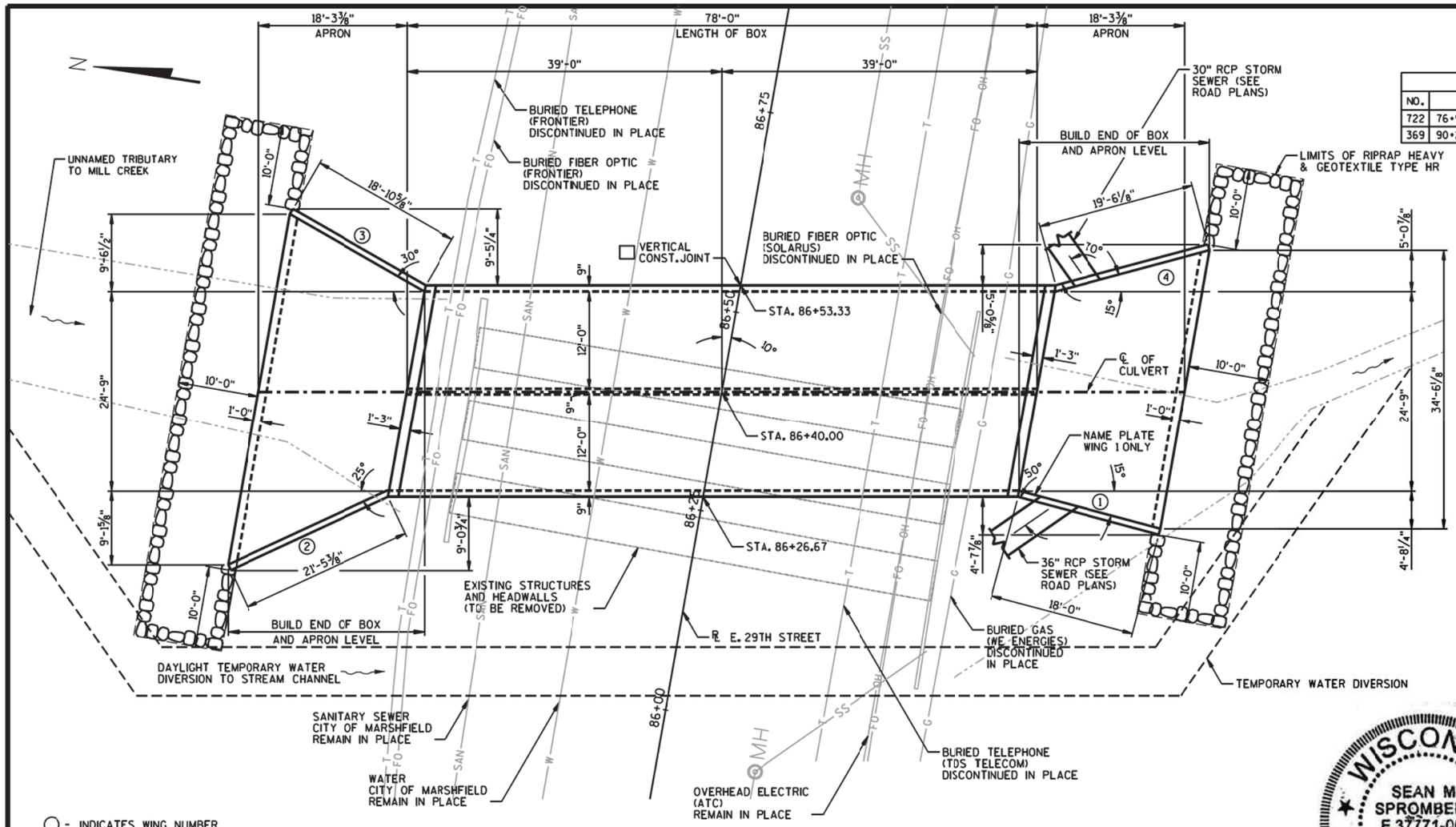
DATE 11/02/10 PLATE NO. W16-7.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 193	E

STATE PROJECT NUMBER
6995-11-72

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
722	76+97.2, 25.5' LT.	STAINLESS STEEL DISK ON HYDRANT	1233.83
369	90+27.3, 31.1' LT.	STAINLESS STEEL DISK ON HYDRANT	1220.39

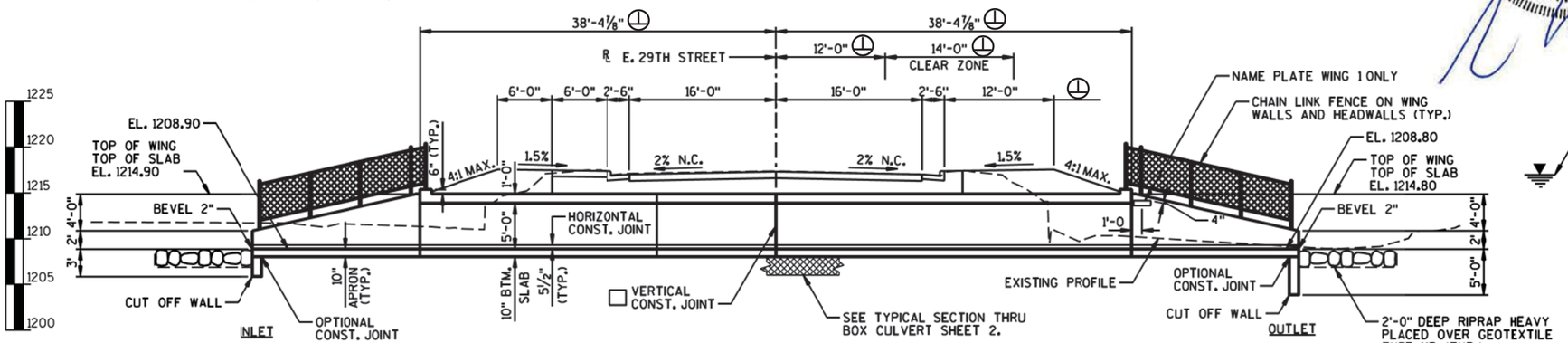


PLAN
(TWO-CELL REINFORCED CONCRETE BOX CULVERT)

○ - INDICATES WING NUMBER

□ - 18" MIN. WIDTH RUBBERIZED MEMBRANE WATERPROOFING UP WALLS & ACROSS TOP SLAB.

⏚ - BOX AND ROAD DIMENSIONS NORMAL TO THE ℄ OF E. 29TH STREET.
FENCE POSTS & CHAIN LINK - SEE DETAILS, SHEETS 4, 7.



ELEVATION
(NORMAL TO ℄ BOX CULVERT)
(LOOKING EAST)

DESIGN DATA

LIVE LOAD:
- DESIGN LOADING : HL-93
- INVENTORY RATING FACTOR: 1.05
- OPERATIONAL RATING FACTOR: 1.35
- WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 255 KIPS

TRAFFIC DATA:
- A.A.D.T. (2018) = 2,200
- A.A.D.T. (2038) = 2,500
- RDS = 40 MPH

EARTH LOAD : DESIGNED FOR FILL HEIGHT RANGE OF 2.0 TO 2.5 FEET

MATERIAL PROPERTIES:
- CONCRETE MASONRY — f'c = 3,500 P.S.I.
- BAR STEEL REINFORCEMENT HS STRUCTURES — fy = 60,000 P.S.I.

FOUNDATION DATA:
- ALLOWABLE SOIL BEARING CAPACITY — 3,000 P.S.F.

HYDRAULIC DATA:
100 YEAR FREQUENCY
- DRAINAGE AREA — 2.3 SQ. MI.
- Q_{100} — 840 C.F.S.
- VELOCITY — 8.24 F.P.S.
- WATERWAY AREA — 102 SQ. FT.
- HIGH WATER $_{100}$ ELEVATION — 1216.97
- ROADWAY OVERFLOW DESIGN FREQUENCY — > 100 YEARS
- Q_2 HIGH WATER ELEVATION (220 C.F.S.) — 1213.52
- SCOUR CRITICAL CODE — 8
- VEL_2 — 2.4 F.P.S.

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION, QUANTITIES, NOTES & DETAILS
3. BOX CULVERT
4. BOX CULVERT DETAILS
5. INLET APRON & WING DETAILS
6. OUTLET APRON & WING DETAILS
7. FENCING DETAILS
8. SUBSURFACE EXPLORATION

WISCONSIN
SEAN M. SPROMBERG
E-37771-008
SCHOFIELD, WI
PROFESSIONAL ENGINEER

5/31/17

HW100 EL. 1216.97

OBSERVED WATER EL. 1212.56 6-14-16

DESIGN CONTACT:
SEAN SPROMBERG
(715) 302-8718

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608) 266-8489

NO.	DATE	REVISION	BY

MSA PROFESSIONAL SERVICES
ARCHITECTURE | ENGINEERING | ENVIRONMENTAL
FUNDING | PLANNING | SURVEYING
146 North Central Ave Marshfield, WI 54449
(715) 384-2133 (877) 204-0572 Fax: (715) 384-9787
Web Address: www.msa-ps.com

© MSA Professional Services, Inc.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher SDR 08/28/17
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-71-196

E. 29TH STREET OVER UNNAMED TRIBUTARY

COUNTY	TOWN/~~CITY~~/~~VILLAGE~~
WOOD	MARSHFIELD

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	JAS	DESIGN CK'D.	DHW	DRAWN BY	SSD	PLANS CK'D.	SWS

GENERAL PLAN

SHEET 1 OF 8

194

FILE= 584086_01.DGN
DATE= 5/31/2017

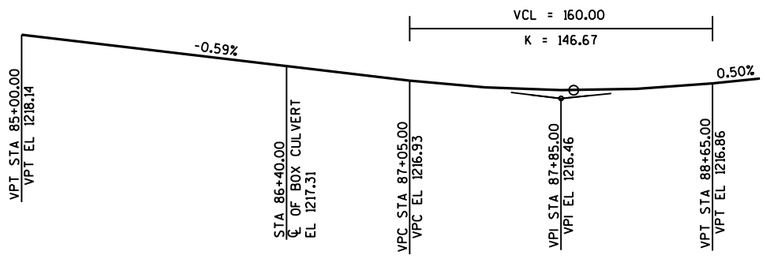
584086_01.dgn 5/31/2017 7:20:44 PM SDOLENS

STATE PROJECT NUMBER

6995-11-72

STRUCTURE ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
203.0500.S.01	REMOVING OLD STRUCTURE OVER WATERWAY STATION 86+31	LS	1
206.2000.01	EXCAVATION FOR STRUCTURES CULVERTS B-71-196	LS	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	665
311.0115	BREAKER RUN	CY	290
504.0100	CONCRETE MASONRY CULVERTS	CY	230
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	25,150
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,510
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	24
606.0300	RIPRAP HEAVY	CY	95
616.0205	FENCE CHAIN LINK 5-FT	LF	130
645.0105	GEOTEXTILE TYPE C	SY	505
645.0120	GEOTEXTILE TYPE HR	SY	205
SPV.0105.01	TEMPORARY WATER DIVERSION, CULVERT B-71-196	LS	1
	NON-BID ITEMS		
	PREFORMED FILLER	SIZE	¾"



PROFILE GRADE LINE - E. 29TH STREET

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

THIS STRUCTURE WILL REPLACE THREE EXISTING 83" X 57" X 60' CORRUGATED METAL PIPE CULVERTS.

THE CONCRETE IN THE CUT OFF WALL MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.

THE ALTERNATE CUT OFF WALL MAY BE USED IN LIEU OF THE CAST IN PLACE CUT OFF WALLS. PAYMENT SHALL BE BASED ON CONCRETE CUT OFF WALLS.

ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE AND BREAKER RUN SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE B TO THE ELEVATION OF THE ROADWAY SUBGRADE. BACKFILL STRUCTURE TYPE B IS REQUIRED BEHIND ALL WINGWALLS.

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS B-71-196" SHALL BE THE EXISTING GROUND LINE.

THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE BOX CULVERT WITH THE ACCEPTANCE OF THE SHOP DRAWINGS BY THE STRUCTURES DESIGN SECTION. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO PRECAST DETAILS IN CHAPTER 36 STANDARDS OF THE CURRENT WISCONSIN DOT BRIDGE MANUAL. PAYMENT FOR THE PRECAST CULVERT SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE ITEMS LISTED IN THE "STRUCTURE ESTIMATED QUANTITIES".

UNDERCUT 2'-0", EXCAVATION FOR UNDER CUT TO BE INCLUDED IN EXCAVATION FOR STRUCTURES. PLACE "GEOTEXTILE TYPE C" AND BACKFILL WITH "BREAKER RUN" BETWEEN THE CUT OFF WALLS. EXTEND THE UNDERCUT 3'-0" BEYOND THE FOOTPRINT OF THE CULVERT AND APRON ENDWALLS ON EACH SIDE.

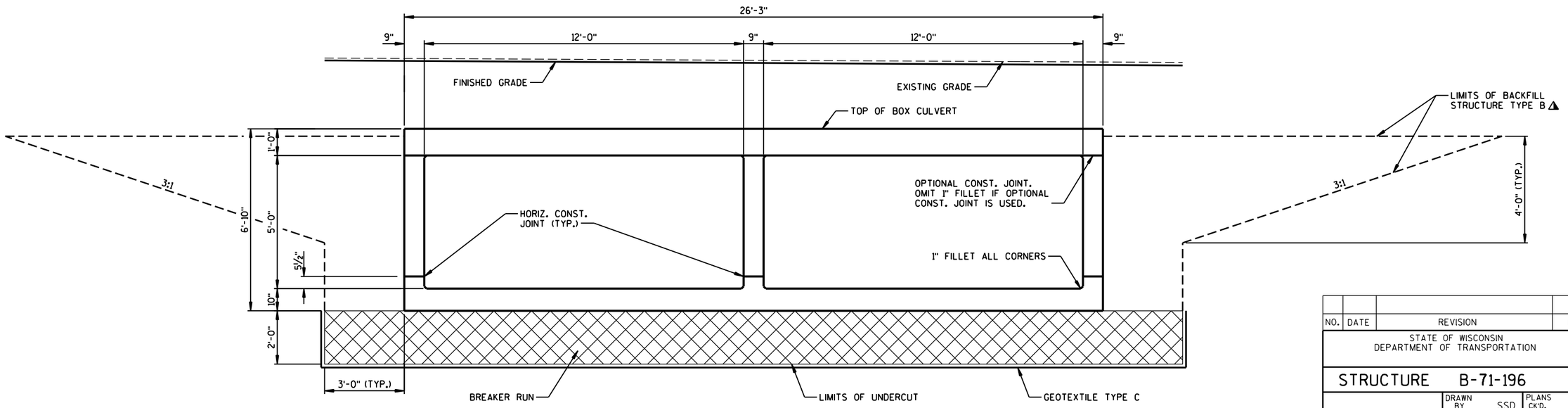
IN LIEU OF USING BREAKER RUN FOR THE BOX CONSTRUCTION PLATFORM, THE CONTRACTOR MAY ELECT TO SUBSTITUTE #1 OR #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR BASE STABILITY WITH ANY SUBSTITUTED MATERIAL.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NAVD 88, AND WERE ESTABLISHED AT THE SITE USING GPS TECHNOLOGY.

APRONS MAY BE POURED CONTINUOUSLY WITH BOTTOM SLAB IN LIEU OF THE BOTTOM SLAB CONSTRUCTION JOINT. THE CONTRACTOR MAY USE 2" DEEP SAWCUTS WITHIN 12 HOURS AFTER POURING.

PLACE FENCE SAFETY AROUND PERIMETER OF ENDWALLS WHEN PERMANENT RAILING IS NOT IN PLACE. QUANTITIES INCLUDED IN ROAD PLANS.

USE CAUTION WHEN EXCAVATING NEAR THE EXISTING SANITARY SEWER. DO NOT PLACE BREAKER RUN DIRECTLY OVER THE PIPE. PLACE 1'-0" MINIMUM OF STRUCTURE BACKFILL OVER THE PIPE BEFORE PLACEMENT OF BREAKER RUN.



TYPICAL SECTION THRU BOX CULVERT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-71-196

DRAWN BY SSD | PLANS CK'D. SMS

CROSS SECTION, QUANTITIES, NOTES & DETAILS

SHEET 2 OF 8

195

8

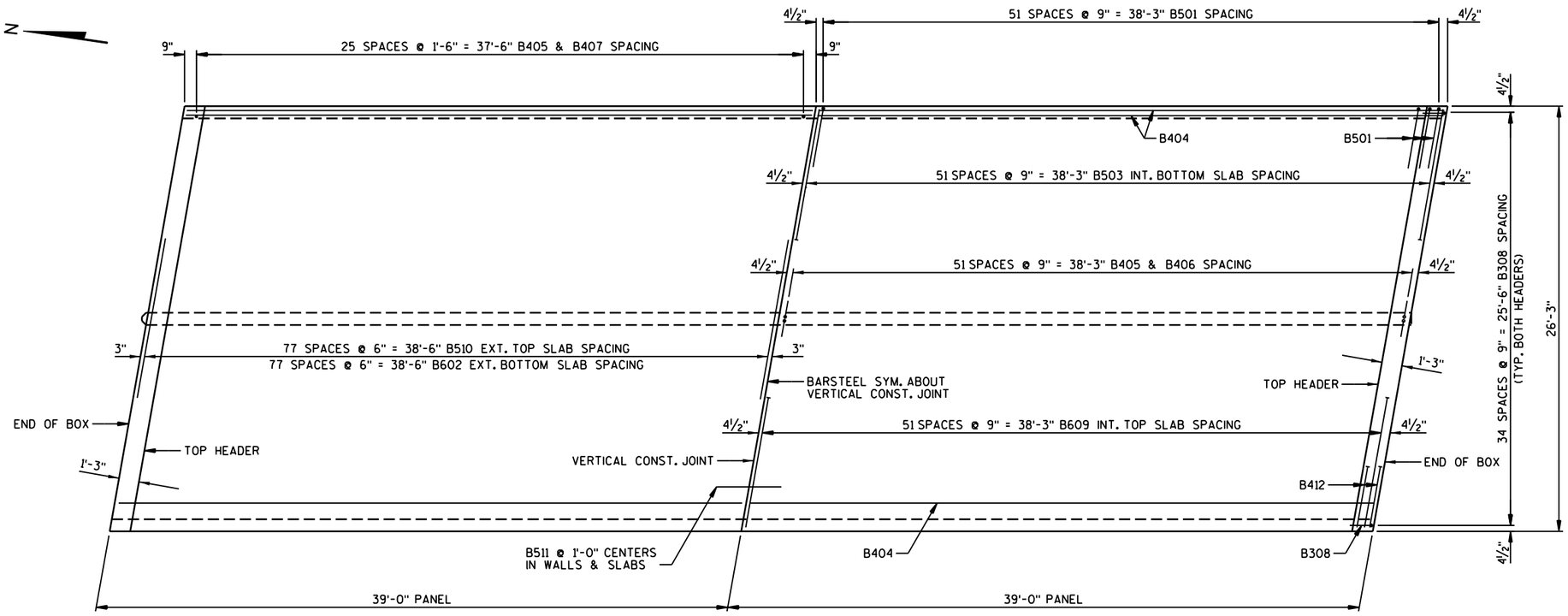
8

584086_02.dgn 6/1/2017 11:28:06 AM lmodes

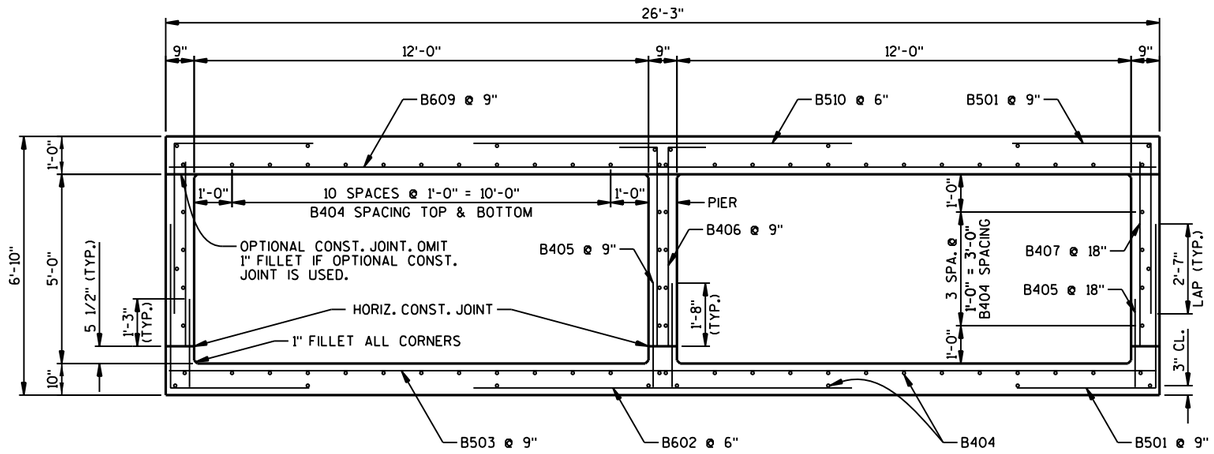
FILE= 584086_02.dgn
DATE= 6/1/2017

STATE PROJECT NUMBER

6995-11-72



PLAN VIEW OF PANELS



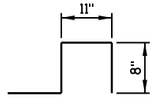
ALL LONGITUDINAL BARS NOT IDENTIFIED ARE B404 AS SHOWN

TYPICAL SECTION THRU BOX

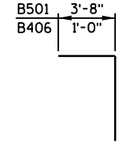
BILL OF BARS UNCOATED 23,040 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
B501	416	8'-2"	X	CORNERS - TOP & BOTTOM - VERT.
B602	156	14'-9"		BOTTOM SLAB - EXTERIOR - TRANS.
B503	104	26'-3"		BOTTOM SLAB - INTERIOR - TRANS.
B404	172	38'-9"		SLAB & WALLS - LONGIT.
B405	312	2'-9"		DOWELS - WALL & PIER - VERT.
B406	208	6'-4"	X	PIER - VERT.
B407	104	4'-11"		WALLS - VERT.
B308	70	2'-9"	X	HEADER - STIRRUP - LONGIT.
B609	104	26'-4"		TOP SLAB - INTERIOR - TRANS.
B510	156	14'-9"		TOP SLAB - EXTERIOR - TRANS.
B511	69	4'-0"		CONSTRUCTION JOINT DOWEL - LONGIT.
B412	4	26'-3"		HEADERS - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



B308



B501, B406

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-71-196

DRAWN BY SSD | PLANS CK'D. SMS

BOX CULVERT

SHEET 7 OF 8

196

8

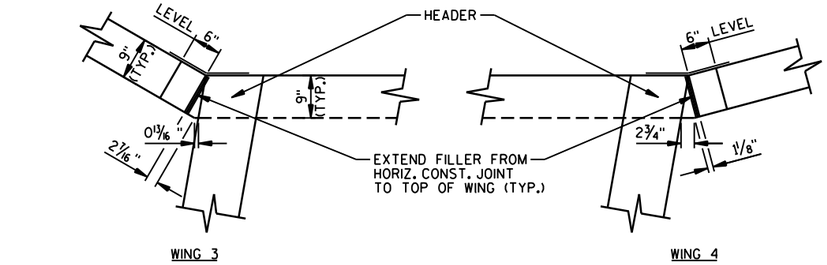
8

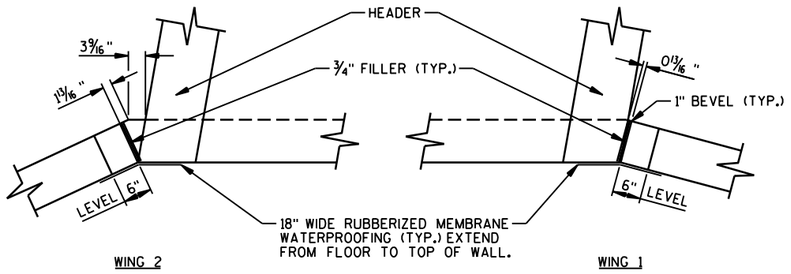
FILE= 584086_03.dgn
DATE=5/31/2017

584086_03.dgn 5/31/2017 6:35:43 PM SDOLENS

STATE PROJECT NUMBER

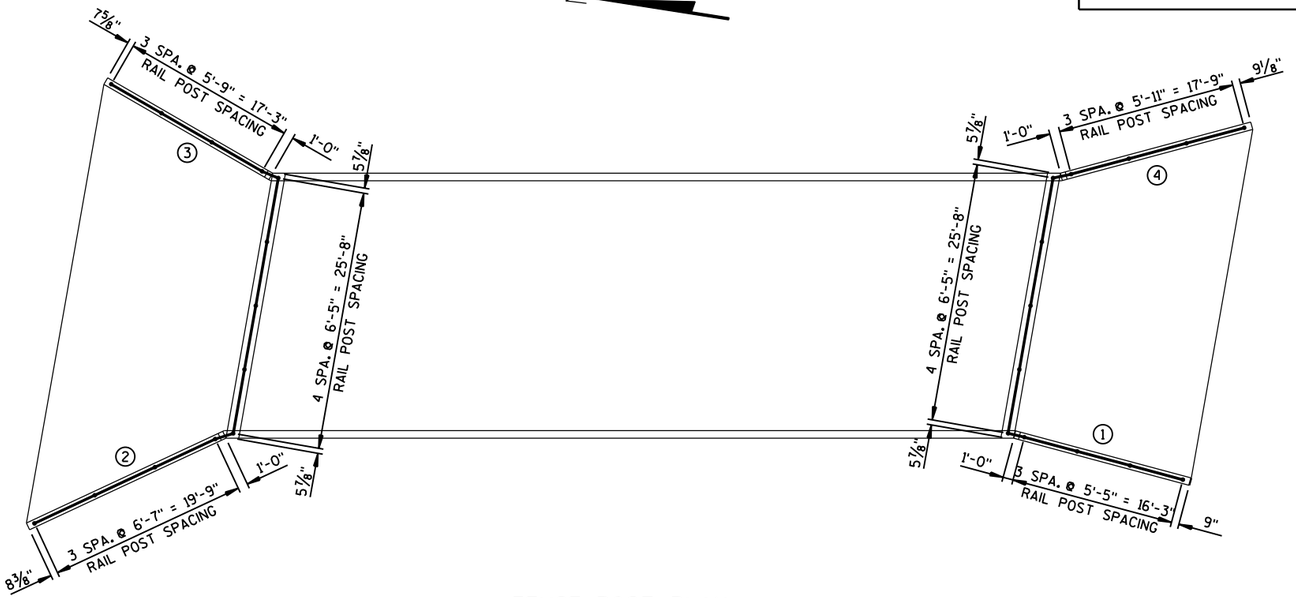
6995-11-72





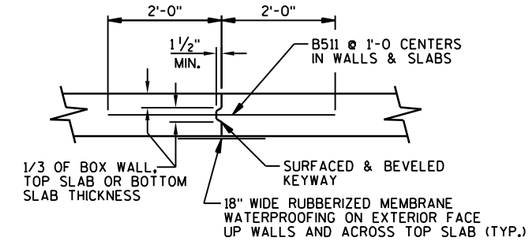
CORNER DETAILS

SEE SHEETS 5 & 6 FOR WING DETAILS

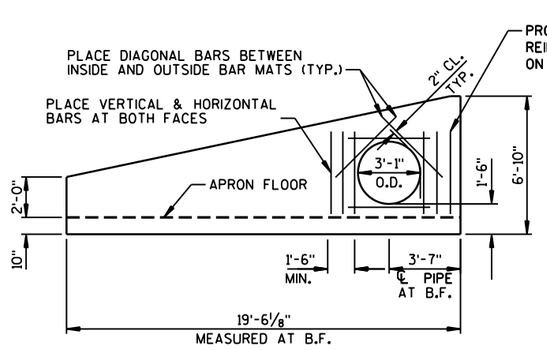


FENCE POST PLAN

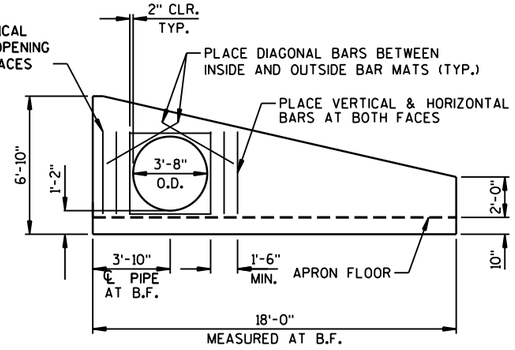
FOR CHAIN LINK DETAILS, SEE SHEET 7



VERTICAL CONSTRUCTION JOINT



WING 4

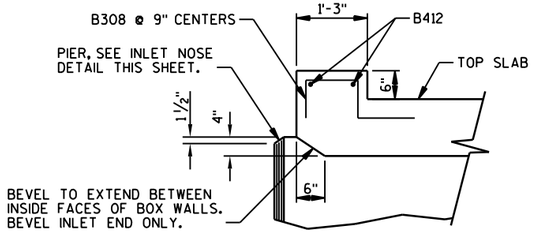


WING 1

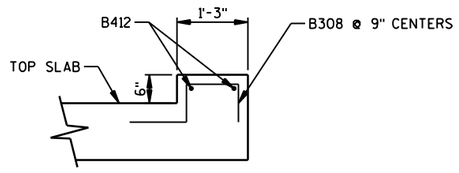
PIPE OPENING IN WINGWALLS

NOTES: ALL BAR STEEL REINFORCEMENT SHALL BE FIELD CUT 2" CLEAR AROUND PIPE OPENING. PLACE PIPES BEFORE POURING WINGS.

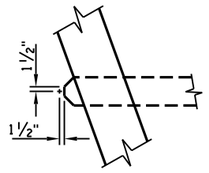
ALL BARS PLACED AROUND PIPE OPENINGS ARE D425.



SECTION THRU INLET HEADER



SECTION THRU OUTLET HEADER



INLET NOSE DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-71-196

DRAWN BY	PLANS CK'D.
SSD	SMS

BOX CULVERT DETAILS

SHEET 4 OF 8
197

8

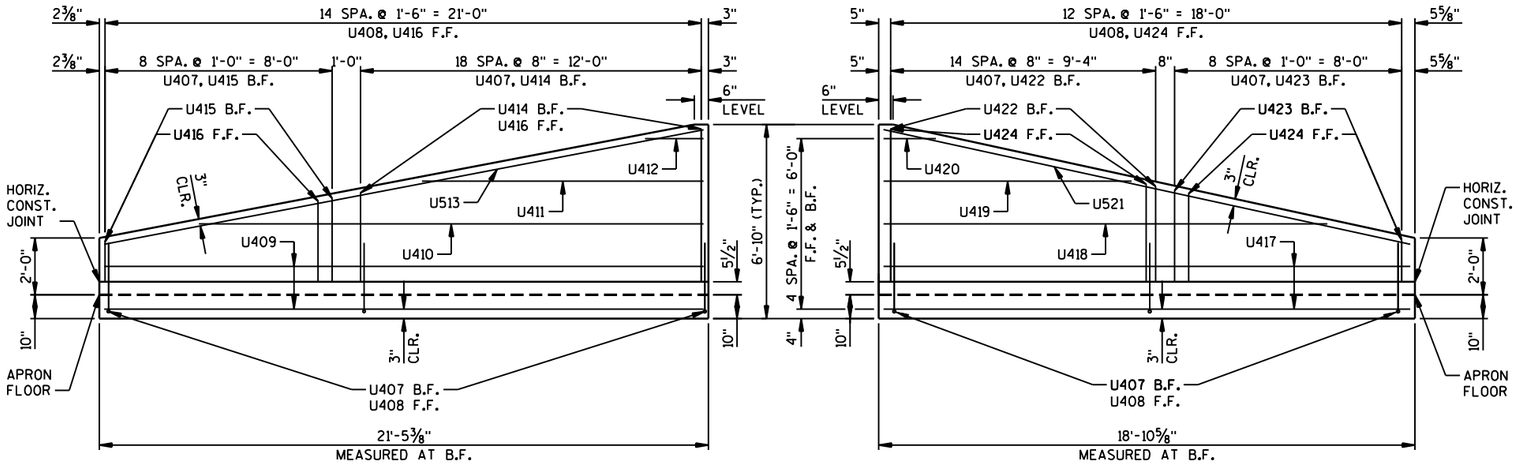
8

FILE= 584086_04.dgn
DATE=5/31/2017

584086_04.dgn 5/31/2017 6:35:43 PM SDOLENS

STATE PROJECT NUMBER

6995-11-72



WING 2 WING 3

INLET WING ELEVATIONS

BILL OF BARS

COATED 730 LBS.
UNCOATED 1,080 LBS.

MARK	NO. REQ'D COATED	NO. REQ'D UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION
U401	-	44	3'-6"	X		INLET APRON CUT-OFF WALL - VERT.
U402	-	3	44'-8"			INLET APRON CUT-OFF WALL - TRANS.
U403	-	26	20'-4"			INLET APRON - LONGIT.
U404	-	8	10'-1"		*	INLET APRON @ WING 2 - LONGIT.
U405	-	8	10'-5"		*	INLET APRON @ WING 3 - LONGIT.
U406	-	18	35'-7"		*	INLET APRON - TRANS.
U407	52	-	6'-6"	X		WINGS 2 & 3 - B.F. DOWELS - VERT.
U408	28	-	2'-6"			WINGS 2 & 3 - F.F. DOWELS - VERT.
U409	4	-	21'-1"			WING 2 - F.F. & B.F. & APRON - LONGIT.
U410	2	-	17'-9"			WING 2 - F.F. & B.F. - LONGIT.
U411	2	-	9'-11"			WING 2 - F.F. & B.F. - LONGIT.
U412	2	-	2'-1"			WING 2 - F.F. & B.F. - LONGIT.
U513	2	-	21'-6"			WING 2 - F.F. & B.F. - TOP - LONGIT.
U414	19	-	4'-3"		*	WING 2 - B.F. - VERT.
U415	9	-	2'-2"		*	WING 2 - B.F. - VERT.
U416	15	-	3'-5"		*	WING 2 - F.F. - VERT.
U417	4	-	18'-6"			WING 3 - F.F. & B.F. & APRON - LONGIT.
U418	2	-	15'-7"			WING 3 - F.F. & B.F. - LONGIT.
U419	2	-	8'-9"			WING 3 - F.F. & B.F. - LONGIT.
U420	2	-	1'-10"			WING 3 - F.F. & B.F. - LONGIT.
U521	2	-	18'-11"			WING 3 - F.F. & B.F. - TOP - LONGIT.
U422	15	-	4'-5"		*	WING 3 - B.F. - VERT.
U423	9	-	2'-3"		*	WING 3 - B.F. - VERT.
U424	13	-	3'-5"		*	WING 3 - F.F. - VERT.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

* - LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS. BENT BARS IF USED IN BAR SERIES TABLE SHALL BE BENT AFTER CUTTING.

BAR SERIES TABLE

MARK	NO. REQUIRED	LENGTH
U404	1 SERIES OF 8	3'-2" TO 17'-0"
U405	1 SERIES OF 8	3'-8" TO 17'-2"
U406	1 SERIES OF 18	26'-6" TO 44'-8"
U414	1 SERIES OF 19	3'-1" TO 5'-5"
U415	1 SERIES OF 9	1'-5" TO 2'-11"
U416	1 SERIES OF 15	1'-5" TO 5'-5"
U422	1 SERIES OF 15	3'-5" TO 5'-5"
U423	1 SERIES OF 9	1'-4" TO 3'-2"
U424	1 SERIES OF 13	1'-6" TO 5'-4"

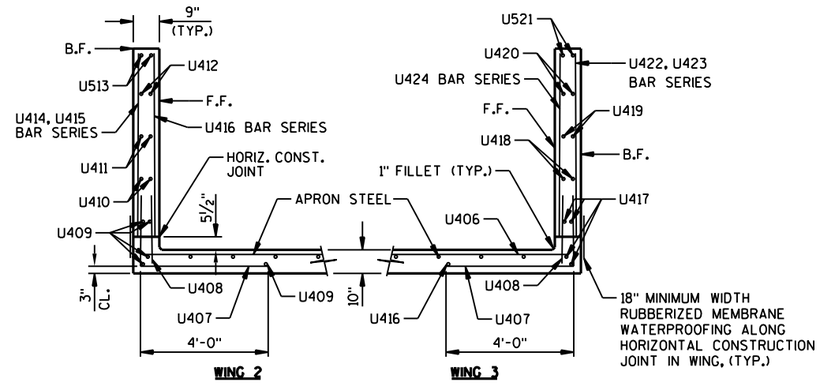
BUNDLE AND TAG EACH SERIES SEPARATELY

MARK	A
U401	1'-0"
U407	4'-0"

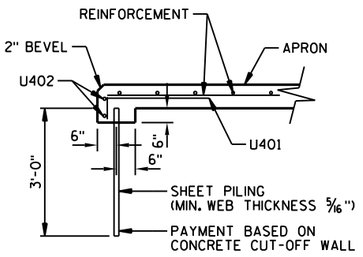
THIS LEG HORIZ. A

LEGEND

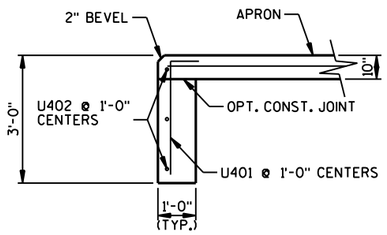
◯ - INDICATES WING NUMBER
F.F. - FRONT FACE
B.F. - BACK FACE
CL. - CLEAR



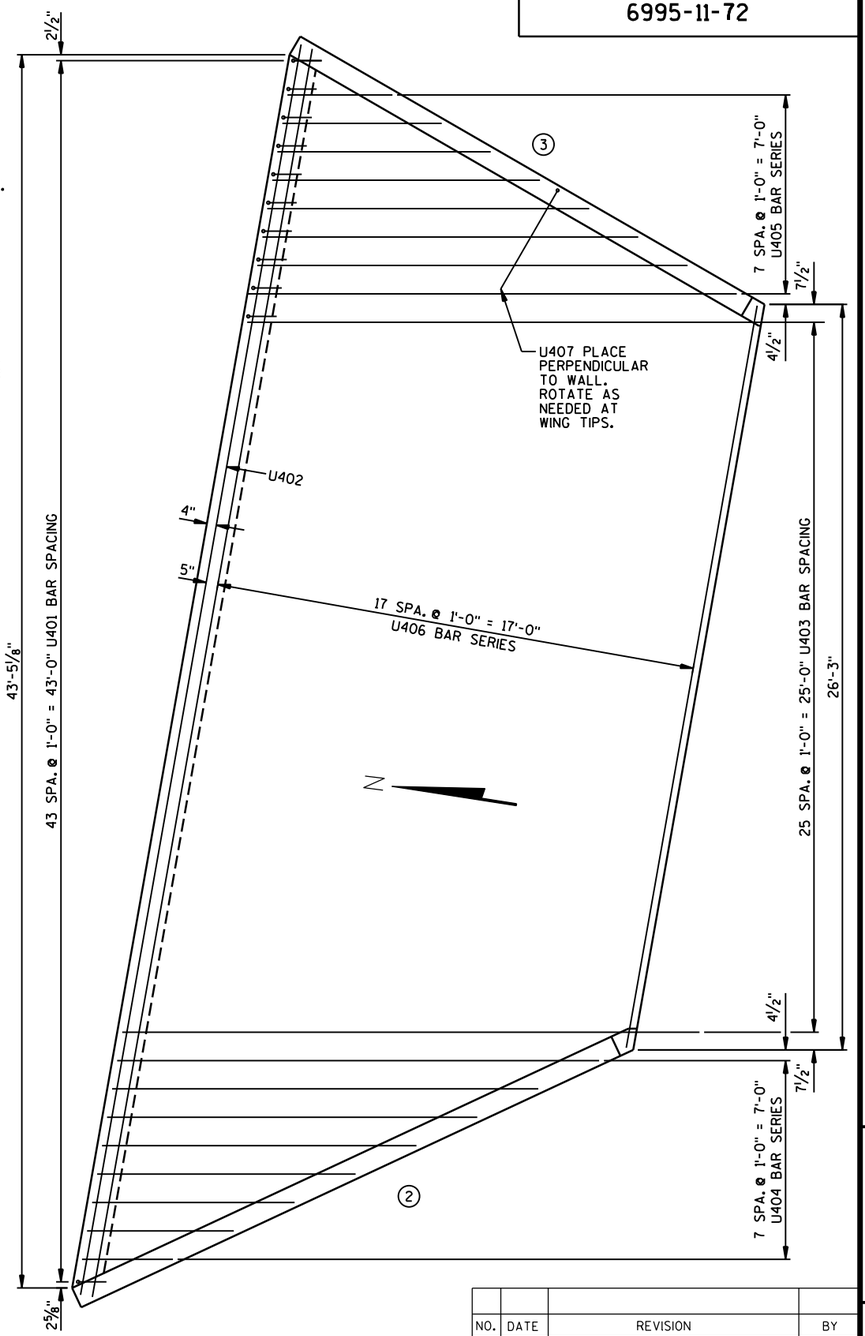
SECTION THRU WINGS
(NORMAL TO WING WALLS)



ALTERNATE CUT-OFF WALL



SECTION THRU INLET CUT-OFF WALL



INLET APRON PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-71-196

DRAWN BY SSD | PLANS CK'D. SMS

INLET APRON & WING DETAILS

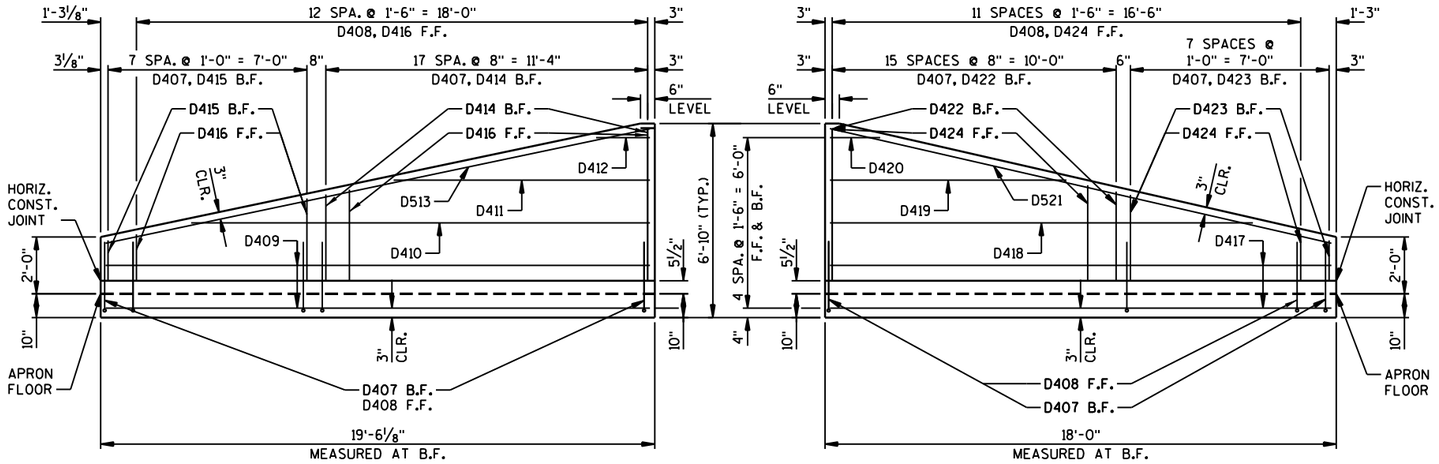
SHEET 5 OF 8
198

FILE= 584086_05.dgn
DATE=6/1/2017

584086_05.dgn 6/1/2017 11:16:29 AM lmodes

STATE PROJECT NUMBER

6995-11-72



WING 4

WING 1

OUTLET WING ELEVATIONS

NOTE: SEE SHEET 4 FOR PIPE OPENING IN WINGWALLS DETAIL

BILL OF BARS

COATED 780 LBS.
UNCOATED 1,030 LBS.

MARK	NO. REQ'D COATED	NO. REQ'D UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION
D401	-	35	5'-6"	X		OUTLET APRON CUT-OFF WALL - VERT.
D402	-	5	35'-11"			OUTLET APRON CUT-OFF WALL - TRANS.
D403	-	26	20'-4"			OUTLET APRON - LONGIT.
D404	-	4	10'-9"		*	OUTLET APRON @ WING 4 - LONGIT.
D405	-	4	10'-1"		*	OUTLET APRON @ WING 1 - LONGIT.
D406	-	18	31'-1"		*	OUTLET APRON - TRANS.
D407	50	-	6'-6"	X		WINGS 1 & 4 - B.F. DOWELS - VERT.
D408	25	-	2'-6"			WINGS 1 & 4 - F.F. DOWELS - VERT.
D409	4	-	19'-2"			WING 4 - F.F. & B.F. & APRON - LONGIT.
D410	2	-	16'-2"			WING 4 - F.F. & B.F. - LONGIT.
D411	2	-	9'-0"			WING 4 - F.F. & B.F. - LONGIT.
D412	2	-	1'-10"			WING 4 - F.F. & B.F. - LONGIT.
D513	2	-	19'-7"			WING 4 - F.F. & B.F. - TOP - LONGIT.
D414	18	-	4'-2"		*	WING 4 - B.F. - VERT.
D415	8	-	2'-2"		*	WING 4 - B.F. - VERT.
D416	13	-	3'-5"		*	WING 4 - F.F. - VERT.
D417	4	-	17'-8"			WING 1 - F.F. & B.F. & APRON - LONGIT.
D418	2	-	14'-11"			WING 1 - F.F. & B.F. - LONGIT.
D419	2	-	8'-4"			WING 1 - F.F. & B.F. - LONGIT.
D420	2	-	1'-9"			WING 1 - F.F. & B.F. - LONGIT.
D521	2	-	18'-1"			WING 1 - F.F. & B.F. - TOP - LONGIT.
D422	16	-	4'-3"		*	WING 1 - B.F. - VERT.
D423	8	-	2'-3"		*	WING 1 - B.F. - VERT.
D424	12	-	3'-5"		*	WING 1 - F.F. - VERT.
D425	36	-	4'-1"			PIPE OPENINGS

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

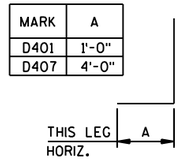
* - LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS. BENT BARS IF USED IN BAR SERIES TABLE SHALL BE BENT AFTER CUTTING.

BAR SERIES TABLE

MARK	NO. REQUIRED	LENGTH
D404	1 SERIES OF 4	5'-5" TO 16'-1"
D405	1 SERIES OF 4	4'-2" TO 16'-0"
D406	1 SERIES OF 18	26'-5" TO 35'-9"
D414	1 SERIES OF 18	3'-0" TO 5'-4"
D415	1 SERIES OF 8	1'-5" TO 2'-11"
D416	1 SERIES OF 13	1'-6" TO 5'-4"
D422	1 SERIES OF 16	3'-2" TO 5'-4"
D423	1 SERIES OF 8	1'-5" TO 3'-1"
D424	1 SERIES OF 12	1'-6" TO 5'-4"

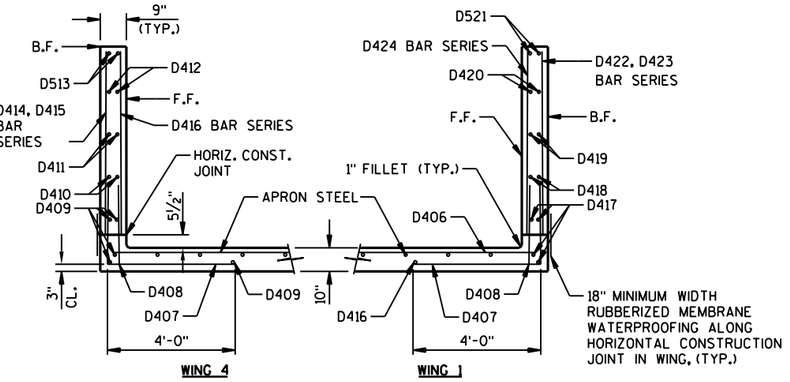
BUNDLE AND TAG EACH SERIES SEPARATELY

MARK	A
D401	1'-0"
D407	4'-0"



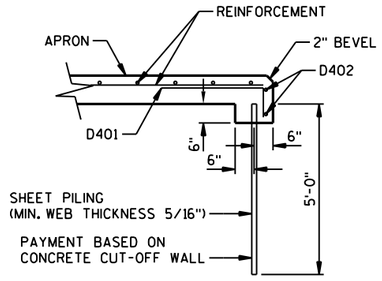
LEGEND

◯ - INDICATES WING NUMBER
F.F. - FRONT FACE
B.F. - BACK FACE
CL. - CLEAR

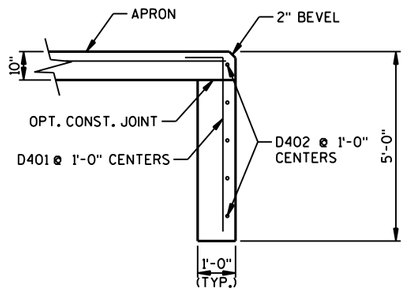


SECTION THRU WINGS

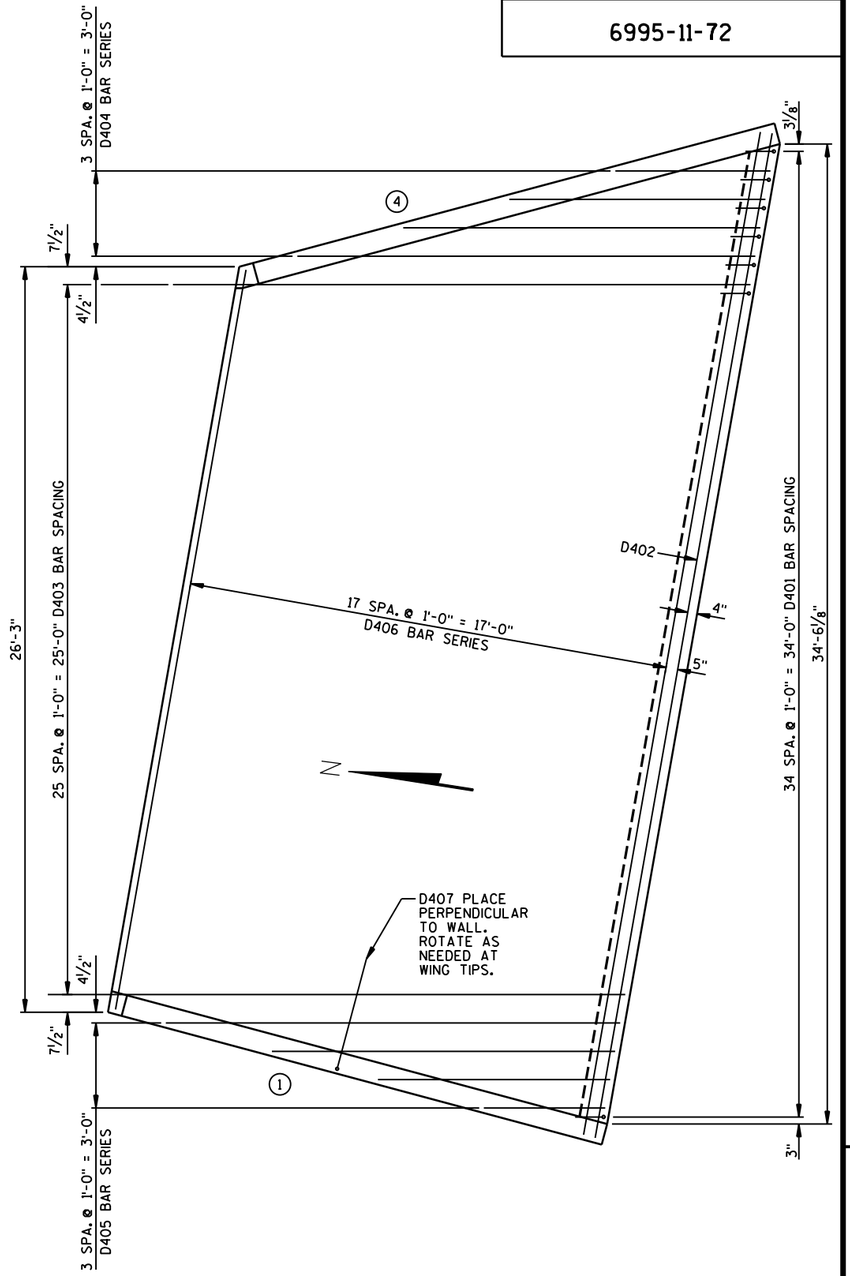
(NORMAL TO WING WALLS)



ALTERNATE CUT-OFF WALL



SECTION THRU OUTLET CUT-OFF WALL



OUTLET APRON PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-71-196

DRAWN BY SSD | PLANS CK'D. SMS

OUTLET APRON & WING DETAILS

SHEET 6 OF 8
199

FILE= 584086_06.dgn
DATE= 6/1/2017

584086_06.dgn 6/1/2017 11:43:27 AM lmodes

8

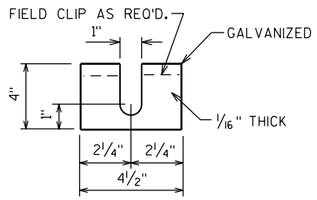
8

STATE PROJECT NUMBER

6995-11-72

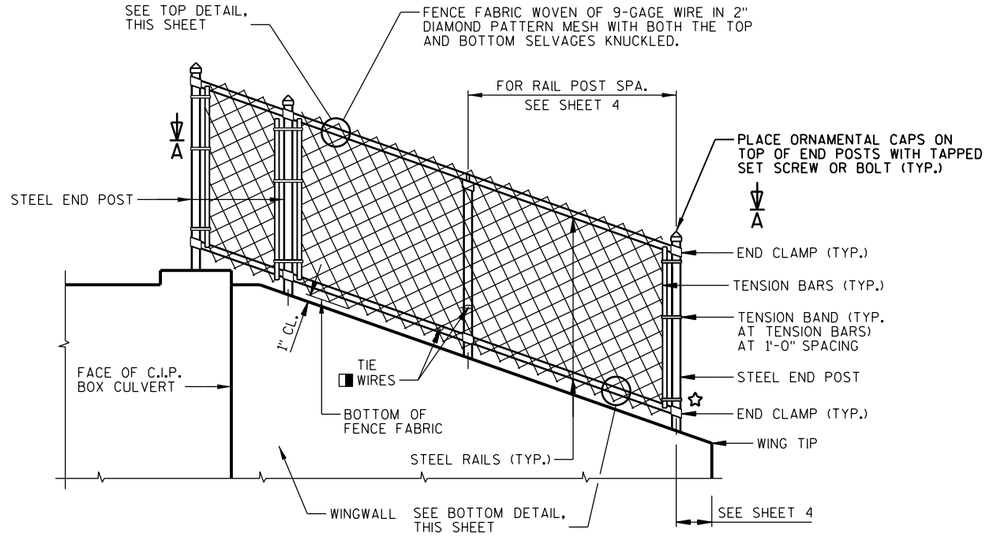
FENCE MEMBER SIZE & WEIGHT

STEEL FENCE MEMBER	OUTSIDE DIAMETER (INCHES)	WEIGHT (LB/FT)
RAILS	1.660	2.27
END POST	2.875	5.80
OVERHANG POST	2.875	5.80
LINE POST	2.375	3.65
POST SLEEVE	4.000	9.12



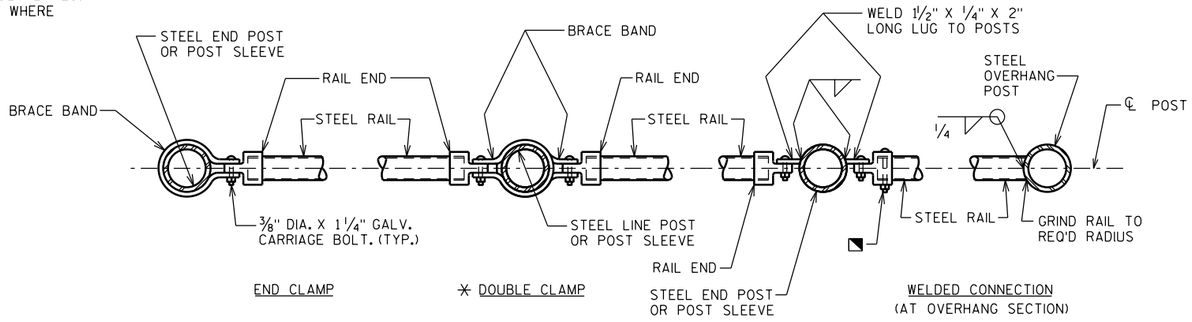
POST SHIM DETAILS

SHIMS REQUIRED ONLY WHEN END POSTS AND LINE POSTS ARE WELDED TO BASE PLATES. PROVIDE 4 SHIMS PER POST. USE WHERE REQUIRED FOR ALIGNMENT.



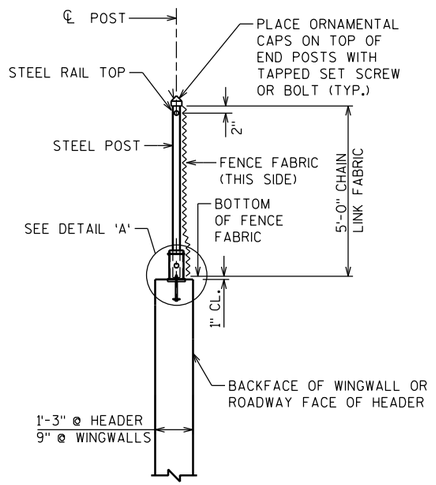
FENCE ELEVATION

VIEWING FABRIC SIDE

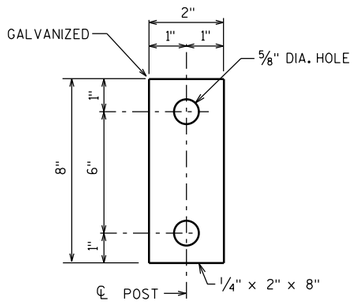


SECTION A-A

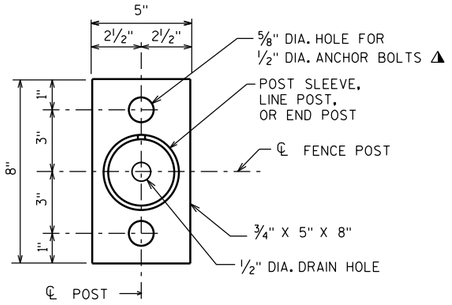
NOTE: PLACE ALL BOLT HEADS ON SIDE OF FENCE ADJACENT TO PEDESTRIANS



SECTION THRU FENCE



ANCHOR PLATE



BASE PLATE

GENERAL NOTES

POSTS ARE TO BE SET VERTICAL.

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL, EXCEPT THE FENCE FABRIC WHICH MAY BE ALUMINUM-COATED STEEL OR GALVANIZED STEEL.

FABRIC SHALL CONFORM TO ASTM A491 OR A392, CLASS 2. STEEL RAILS, POSTS AND POST SLEEVES SHALL CONFORM TO ASTM F1083, STANDARD WEIGHT PIPE (SCHEDULE 40). FITTINGS SHALL CONFORM TO ASTM F626.

THE BID ITEM SHALL BE "FENCE CHAIN LINK 5-FT", LF.

COMPLETE ANY REQUIRED WELDING OF COMPONENTS BEFORE GALVANIZING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

BASE PLATES, ANCHOR PLATES AND SHIMS SHALL BE ASTM A709, GRADE 36.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY ALONG THE C/L OF THE POST.

◪ CAULK AROUND PERIMETER OF BASE PLATE AND FILL PORTION OF SLOTTED HOLE AROUND ANCHOR BOLT IN SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

⚹ ALTERNATE TO DOUBLE CLAMP: USE LINE RAIL CLAMP (BOULEVARD) OR 180° BRACE BAND, WHICH MAY BE USED WHEN THE POSTS ARE EITHER BOLTED TO THE POST SLEEVES OR DIRECTLY WELDED TO THE BASE PLATE.

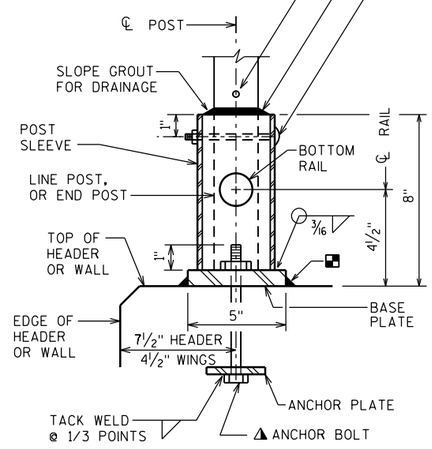
◭ 1/2" DIA. X 6 7/8" LONG GALVANIZED HEX BOLT WITH NUT & WASHER. 1/2" DIA. CONCRETE ADHESIVE ANCHORS MAY BE SUBSTITUTED FOR 1/2" DIA. BOLTS. ANCHOR PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED. SEE ☆

☆ ADHESIVE ANCHOR 1/2-INCH. EMBED 6" IN CONCRETE. ANCHOR, WASHER, AND NUT SHALL BE GALVANIZED.

◨ ATTACH FABRIC TO RAILS, AND TO POSTS WITHOUT TENSION BANDS, WITH TIE WIRES (ROUND, 9-GAGE) SPACED AT 1'-0".

◥ BOLT RAIL TO RAIL END TO SECURE OVERHANG SECTION. ALTERNATE IS TO WELD RAIL DIRECTLY TO END POST.

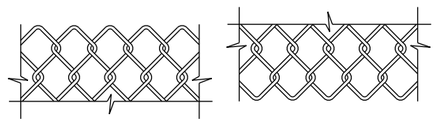
MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". LOCATE SPLICES NEAR 1/4 POINT OF POST SPACING.



DETAIL 'A'

UNIT SHALL BE GALVANIZED AFTER FABRICATION

NOTE: IN LIEU OF USING THE POST SLEEVE, THE FENCE POST MAY BE WELDED TO THE BASE PLATE.



TOP DETAIL BOTTOM DETAIL

FENCE FABRIC

FENCE FABRIC WOVEN OF 9-GAGE WIRE IN 2" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-71-196

DRAWN BY SSD | PLANS CK'D. SMS

FENCING DETAILS

SHEET 7 OF 8
200

8

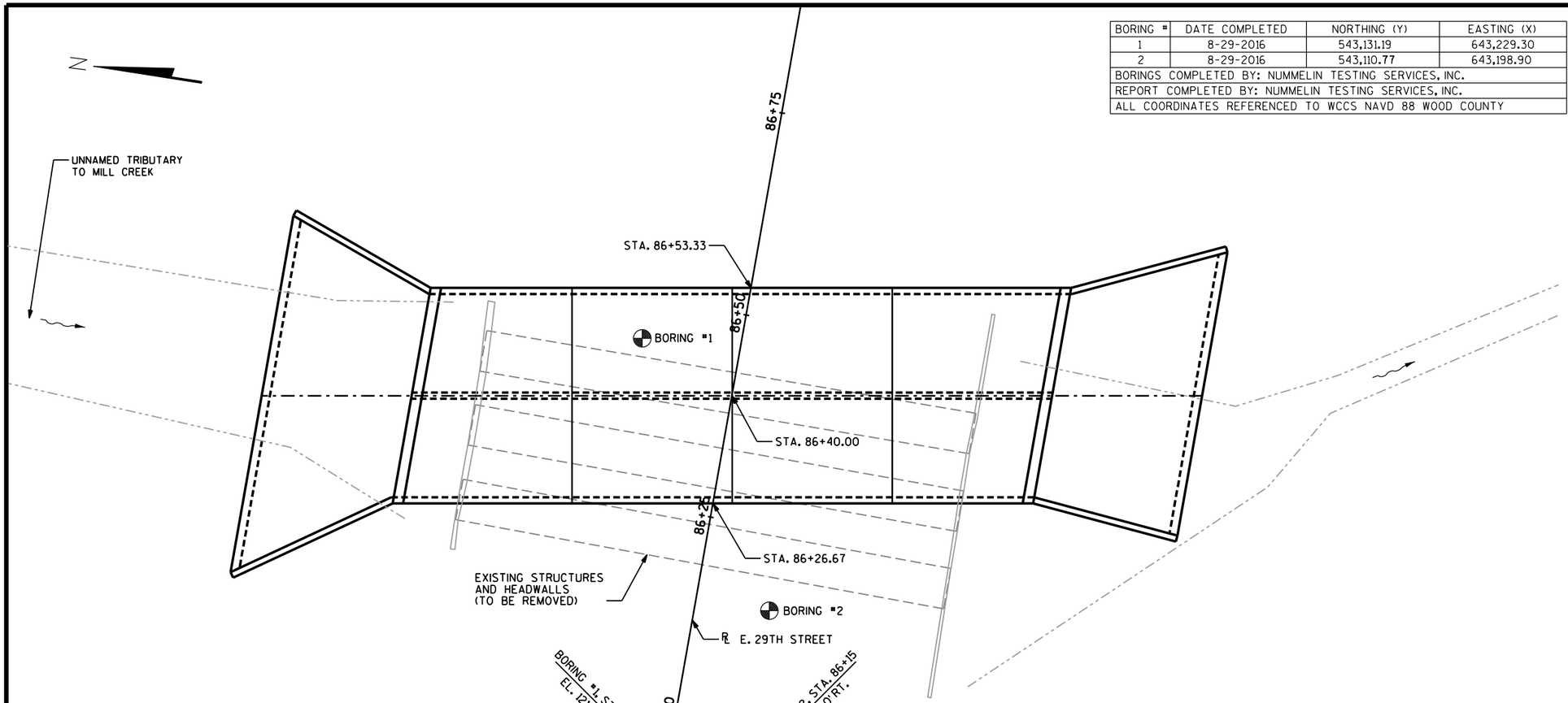
8

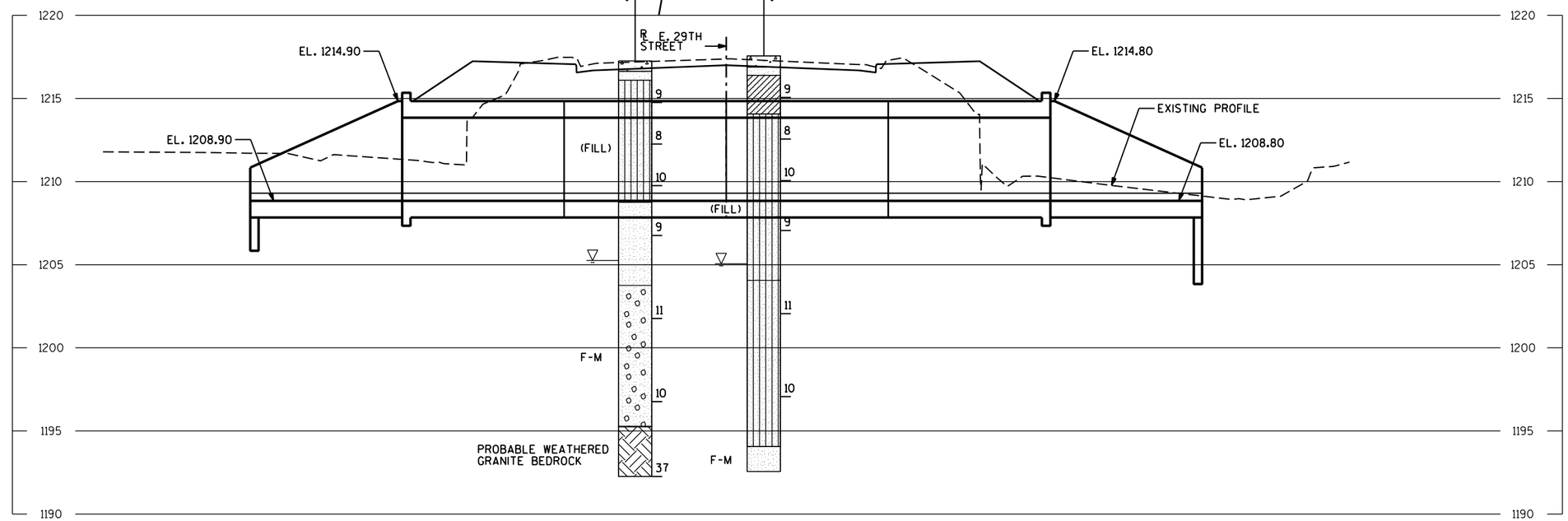
12 6 11 14

584086_07.dgn 6/1/2017 9:16:43 AM jsnyder

FILE= 584086_07.dgn
DATE= 6/1/2017

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	8-29-2016	543,131.19	643,229.30
2	8-29-2016	543,110.77	643,198.90
BORINGS COMPLETED BY: NUMMELIN TESTING SERVICES, INC.			
REPORT COMPLETED BY: NUMMELIN TESTING SERVICES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAVD 88 WOOD COUNTY			





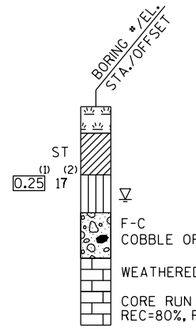
STATE PROJECT NUMBER

6995-11-72

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY occur.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-71-196

DRAWN BY SSD | PLANS CK'D. SMS

SUBSURFACE EXPLORATION

SHEET 8 OF 8

201

8

8

FILE= 584086_08.DGN
DATE= 5/31/2017

584086_08.tgn 5/31/2017 6:35:48 PM SDOLENS

EARTHWORK PROJECT I.D. 6995-11-71 - C. MARSHFIELD, EAST 29TH STREET HUME AVENUE TO VETERANS PARKWAY

STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
102+75		106	0	13	0	0	0	0	0	0
102+93.48	18.48	107	0	10	73	0	8	73	10	63
102+99.05	5.57	107	0	9	22	0	2	95	13	82
103+00	0.95	109	0	7	4	0	0	99	13	86
103+50	50.00	121	0	9	213	0	15	312	32	280
103+75	25.00	125	0	9	114	0	11	426	46	380
104+00	25.00	125	0	14	116	0	19	542	69	473
104+50	50.00	104	0	26	211	0	52	753	134	619
104+55.07	5.07	98	0	30	19	0	4	772	139	633
104+68.62	13.56	101	0	17	50	0	9	822	150	672
104+75	6.38	98	0	18	23	0	7	845	159	686
105+00	25.00	95	0	45	89	0	46	935	217	717
105+25	25.00	94	0	55	87	0	55	1022	285	737
105+50	25.00	93	0	62	87	0	62	1109	364	745
106+00	50.00	87	0	73	167	0	139	1276	538	738
106+45	45.00	85	0	78	143	0	105	1419	670	749
107+00	55.00	95	0	48	184	0	130	1603	831	771
107+50	50.00	96	0	79	177	0	150	1779	1019	760
108+00	50.00	87	0	84	169	0	155	1948	1213	735
108+50	50.00	87	0	84	161	0	146	2110	1395	714
109+00	50.00	87	0	74	162	0	127	2271	1554	717
109+50	50.00	84	0	63	159	0	102	2430	1682	748
110+00	50.00	82	0	48	154	0	85	2583	1788	795
110+50	50.00	84	0	44	153	0	79	2736	1887	850
111+00	50.00	87	0	42	158	0	73	2894	1978	916
111+50	50.00	90	0	37	164	0	56	3058	2048	1010
112+00	50.00	95	0	23	172	0	40	3230	2098	1132
112+50	50.00	100	0	20	181	0	32	3411	2137	1273
113+00	50.00	103	0	14	188	0	14	3598	2155	1443
113+50	50.00	116	0	1	203	0	2	3801	2157	1644
113+68.26	18.26	115	0	1	78	0	0	3879	2158	1722
113+75	6.74	116	0	1	29	0	0	3908	2158	1751
114+00	25.00	130	0	0	114	0	2	4022	2160	1862
114+50	50.00	129	0	4	239	0	5	4261	2167	2095
115+00	50.00	136	0	2	245	0	4	4507	2171	2335
115+50	50.00	134	0	2	250	0	3	4757	2175	2582
116+00	50.00	125	0	2	240	0	3	4996	2178	2818
116+25	25.00	127	0	1	117	0	1	5113	2180	2933
116+50	25.00	126	0	1	117	0	1	5230	2181	3049
117+00	50.00	131	0	1	238	0	1	5468	2183	3286
117+25	25.00	135	0	0	123	0	0	5591	2183	3409
117+39.48	14.48	133	0	0	72	0	0	5663	2183	3481
117+50	10.52	137	0	0	52	0	0	5716	2183	3533
118+00	50.00	131	0	0	248	0	0	5963	2183	3781
118+25	25.00	132	0	0	122	0	0	6085	2183	3902
118+50	25.00	132	0	0	122	0	0	6207	2183	4024
118+75	25.00	140	0	0	126	0	0	6333	2183	4150
119+00	25.00	147	0	0	133	0	0	6466	2183	4283
119+50	50.00	144	0	1	269	0	2	6735	2185	4550
120+00	50.00	155	0	1	277	0	2	7012	2188	4823

CONTINUED ON NEXT PAGE

EARTHWORK PROJECT I.D. 6995-11-71 - C. MARSHFIELD, EAST 29TH STREET HUME AVENUE TO VETERANS PARKWAY

STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
120+25	25.00	166	0	1	148	0	1	0	2190	4971
120+50	25.00	167	0	1	154	0	1	154	2191	5123
120+75	25.00	165	0	1	153	0	1	308	2192	5276
121+00	25.00	160	0	2	150	0	1	458	2193	5425
121+50	50.00	140	0	2	278	0	4	736	2198	5698
121+75	25.00	134	0	2	127	0	3	863	2202	5822
122+00	25.00	137	0	3	125	0	4	988	2206	5942
122+50	50.00	127	0	5	244	0	36	1233	2251	6142
123+00	50.00	117	0	33	226	0	52	1459	2317	6302
123+16.93	16.93	117	0	23	74	0	15	1532	2335	6357
123+25	8.07	117	0	24	35	0	5	1567	2341	6386
123+50	25.00	109	0	9	104	0	8	1671	2351	6481
					8832	0	1881			

EARTHWORK PROJECT I.D. 6995-11-71 - C. MARSHFIELD, EAST 29TH STREET HUME AVENUE TO VETERANS PARKWAY

STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
E 29th st 12' lt										
10+12		80	0	0	0	0	0	0	0	0
10+75.14	63.14	80	0	0	187	0	0	187	0	187
10+76.88	1.75	154	0	0	8	0	0	195	0	195
11+00	23.12	100	0	0	109	0	0	303	0	303
11+50	50.00	66	0	0	153	0	0	457	0	456
11+56.88	6.88	62	0	0	16	0	0	473	0	473
11+75	18.12	58	0	0	40	0	0	513	0	513
12+00	25.00	53	0	0	51	0	0	564	0	564
					564	0	0			

EARTHWORK PROJECT I.D. 6995-11-71 - C. MARSHFIELD, EAST 29TH STREET HUME AVENUE TO VETERANS PARKWAY

STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
TEMPORARY WIDENING REMOVAL		1350	0	0	50	0	0	50	0	50
UNDISTRIBUTED EBS		5400	0	0	200	0	0	250	0	250
					250	0	0			

EARTHWORK PROJECT I.D. 6995-11-72 - C. MARSHFIELD, EAST 29TH STREET WASHINGTON AVENUE TO HUME AVENUE

STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
76+75		117	0	0	0	0	0	0	0	0
76+77.93	2.93	117	0	0	13	0	0	13	0	13
76+92.2	14.27	126	0	0	64	0	0	77	0	77
77+00.	7.80	134	0	0	38	0	0	114	0	114
77+25.	25.00	132	0	2	123	0	1	238	1	237
77+50.	25.00	142	0	0	127	0	0	364	1	363
77+75.	25.00	140	0	0	130	0	1	495	2	492
77+97.01	22.01	125	0	2	108	0	1	603	4	599
77+99.51	2.50	121	0	2	11	0	0	614	4	610
78+00.	0.49	118	0	2	2	0	0	616	4	612
78+50.	50.00	114	0	3	215	0	5	831	11	820
78+75.	25.00	113	0	2	105	0	3	936	15	922
79+00.	25.00	108	0	5	102	0	3	1039	18	1020
79+50.	50.00	114	0	2	205	0	3	1244	22	1221
79+75.	25.00	120	0	2	108	0	1	1352	24	1328
80+00.	25.00	117	0	0	110	0	1	1462	25	1437
80+50.	50.00	119	0	2	219	0	2	1680	27	1653
80+60.	10.00	120	0	1	44	0	0	1724	27	1697
81+00.	40.00	121	0	0	178	0	1	1902	29	1874
81+50.	50.00	119	0	1	222	0	2	2125	30	2094
82+00.	50.00	119	0	0	220	0	2	2345	33	2312
82+25.	25.00	123	0	2	112	0	1	2457	34	2423
82+50.	25.00	123	0	0	114	0	0	2571	34	2536
83+00.	50.00	126	0	0	231	0	0	2802	34	2767
83+25.	25.00	128	0	0	118	0	0	2919	34	2885
83+50.	25.00	125	0	0	117	0	0	3036	34	3002
84+00.	50.00	126	0	0	232	0	0	3269	34	3234
84+50.	50.00	113	0	0	222	0	2	3490	37	3454
84+63.65	13.65	112	0	2	57	0	2	3547	39	3508
85+00.	36.35	97	0	6	140	0	12	3688	54	3634
85+43.65	43.65	116	0	11	172	0	20	3859	79	3781
85+50.	6.35	119	0	14	28	0	8	3887	89	3798
86+00.	50.00	116	0	56	218	0	103	4105	218	3887
86+26.67	26.67	116	0	56	115	0	55	4219	286	3933
B-33-0132										
					4219	0	229			

EARTHWORK PROJECT I.D. 6995-11-72 - C. MARSHFIELD, EAST 29TH STREET WASHINGTON AVENUE TO HUME AVENUE

STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
B-33-0132										
86+53.32		119	0	28	0	0	0	0	0	0
87+00	46.68	119	0	28	205	0	48	205	60	145
87+50	50.00	119	0	20	220	0	45	425	116	309
88+00	50.00	129	0	20	229	0	37	655	163	492
88+50	50.00	138	0	20	247	0	36	902	208	693
88+75	25.00	139	0	23	128	0	20	1030	233	797
89+00	25.00	138	0	17	128	0	19	1158	257	901
89+50	50.00	149	0	10	265	0	26	1423	289	1135
90+00	50.00	152	0	10	279	0	19	1702	313	1389
90+50	50.00	160	0	0	290	0	10	1991	325	1666
90+75	25.00	157	0	7	147	0	3	2138	329	1810
91+00	25.00	154	0	8	144	0	7	2283	337	1945
91+50	50.00	165	0	4	295	0	11	2578	352	2226
92+00	50.00	173	0	2	313	0	6	2891	359	2532
92+50	50.00	175	0	1	322	0	3	3213	363	2850
92+75	25.00	171	0	0	160	0	1	3373	363	3009
93+00	25.00	174	0	4	160	0	2	3532	366	3167
93+50	50.00	161	0	8	310	0	11	3842	379	3463
94+00	50.00	160	0	2	297	0	9	4139	390	3748
94+50	50.00	158	0	8	294	0	9	4433	401	4032
95+00	50.00	147	0	9	283	0	15	4716	420	4296
95+50	50.00	151	0	7	276	0	14	4992	438	4554
96+00	50.00	146	0	0	275	0	6	5267	445	4821
96+50	50.00	139	0	2	264	0	1	5530	447	5083
97+00	50.00	143	0	0	261	0	1	5791	449	5342
97+50	50.00	146	0	2	268	0	1	6059	451	5608
97+75	25.00	148	0	0	136	0	1	6195	452	5743
98+00	25.00	150	0	0	138	0	0	6333	452	5881
98+50	50.00	160	0	1	287	0	1	6620	453	6166
99+00	50.00	170	0	2	306	0	3	6926	457	6469
99+50	50.00	199	0	1	342	0	3	7268	460	6807
99+75	25.00	199	0	0	184	0	0	7452	461	6991
100+00	25.00	198	0	0	184	0	0	7636	461	7175
100+50	50.00	187	0	1	356	0	1	7992	462	7530
100+75	25.00	175	0	2	168	0	1	8159	464	7696
101+00	25.00	162	0	4	156	0	3	8315	467	7848
101+50	50.00	143	0	6	282	0	8	8598	477	8120
102+00	50.00	121	0	10	245	0	15	8842	496	8347
102+50	50.00	118	0	10	221	0	19	9064	520	8544
102+75	25.00	106	0	13	104	0	12	9167	535	8632
					9167	0	428			

9

9

PROJECT NO:6995-11-71/72 | HWY:E. 29TH STREET | COUNTY:WOOD | EARTHWORK | SHEET 205 | E

EARTHWORK PROJECT I.D. 6995-11-72 - C. MARSHFIELD, EAST 29TH STREET WASHINGTON AVENUE TO HUME AVENUE

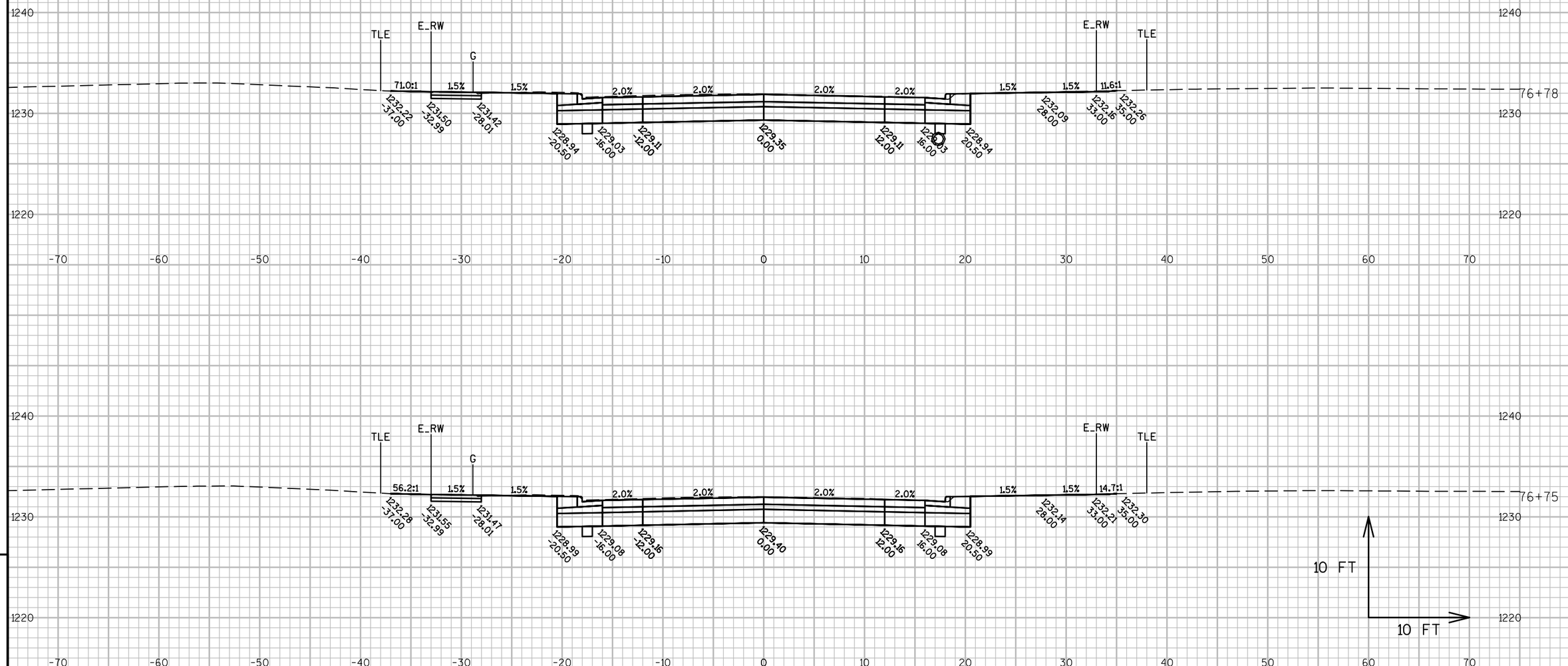
STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
8+69		58	0	0	0	0	0	0	0	0
9+00.	31.49	54	0	0	65	0	0	65	0	65
9+37.89	37.89	71	0	5	88	0	3	153	4	149
9+41.02	3.14	36	0	0	6	0	0	159	5	155
9+87.98	46.96	36	0	0	63	0	0	223	5	218
E 29th st 12' rt										
					223	0	4			

EARTHWORK PROJECT I.D. 6995-11-72 - C. MARSHFIELD, EAST 29TH STREET WASHINGTON AVENUE TO HUME AVENUE

STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
E 29th St 12' lt										
10+12		35	0	0	0	0	0	0	0	0
10+46.78	34.78	35	0	0	45	0	0	45	0	45
10+50.	3.22	35	0	0	4	0	0	49	0	49
10+60.53	10.53	67	0	0	20	0	0	69	0	69
10+65.53	5.00	65	0	0	12	0	0	82	0	82
					82	0	0			

EARTHWORK PROJECT I.D. 6995-11-72 - C. MARSHFIELD, EAST 29TH STREET WASHINGTON AVENUE TO HUME AVENUE

STATION	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/Unusable Pavement Material	Fill	Cut	Salvaged/Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.25	
TEMPORARY WIDENING REMOVAL		1350	0	0	50	0	0	50	0	50
UNDISTRIBUTED EBS		5400	0	0	200	0	0	250	0	250
					250	0	0			

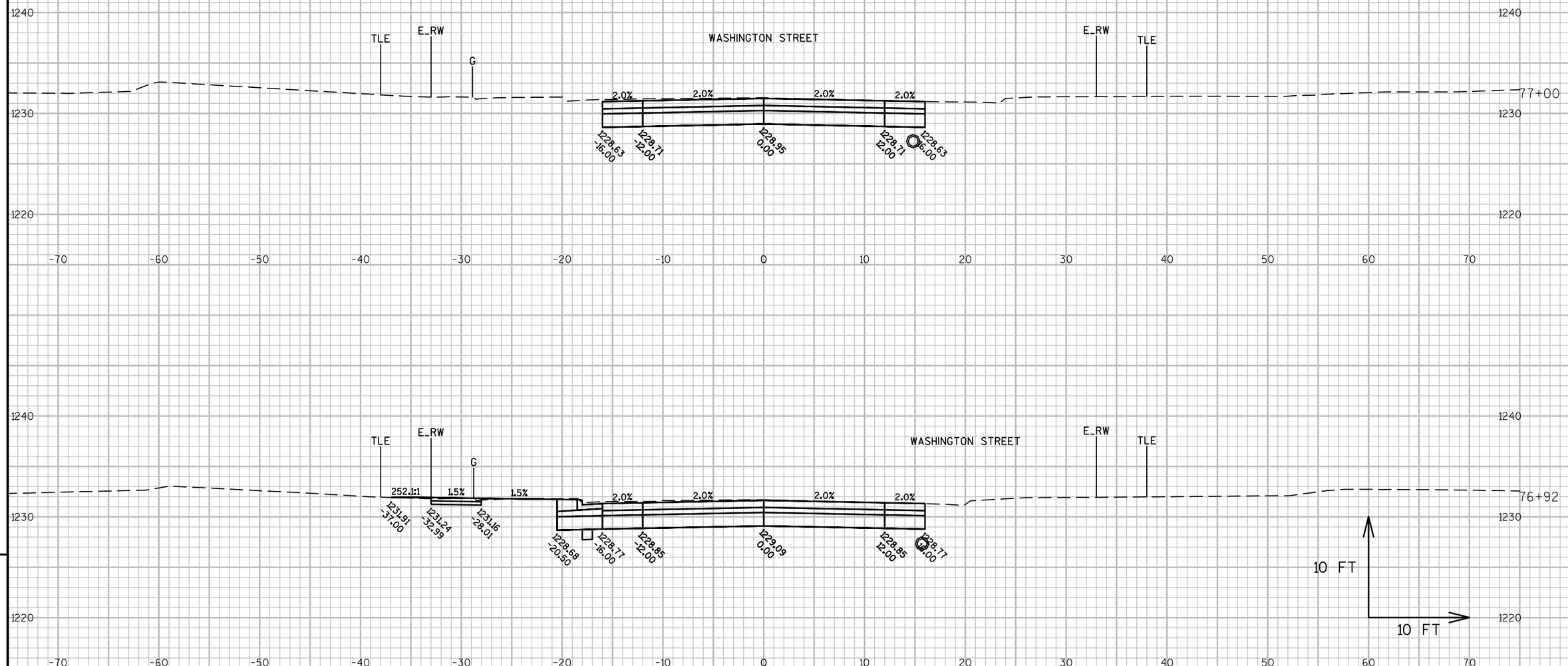


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 207	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090201_XS

PLOT DATE : 7/27/2017 1:56 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

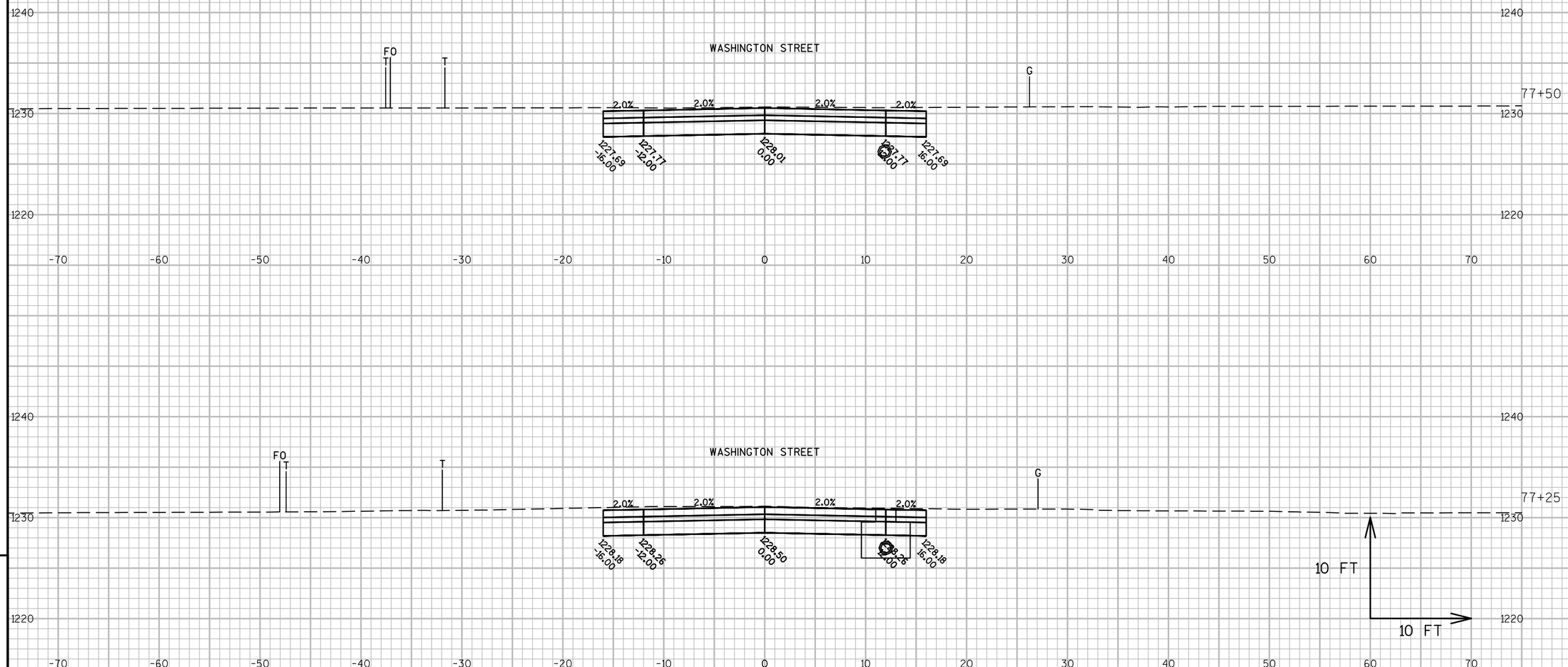
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 208 E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090202_XS

PLOT DATE : 7/27/2017 1:56 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

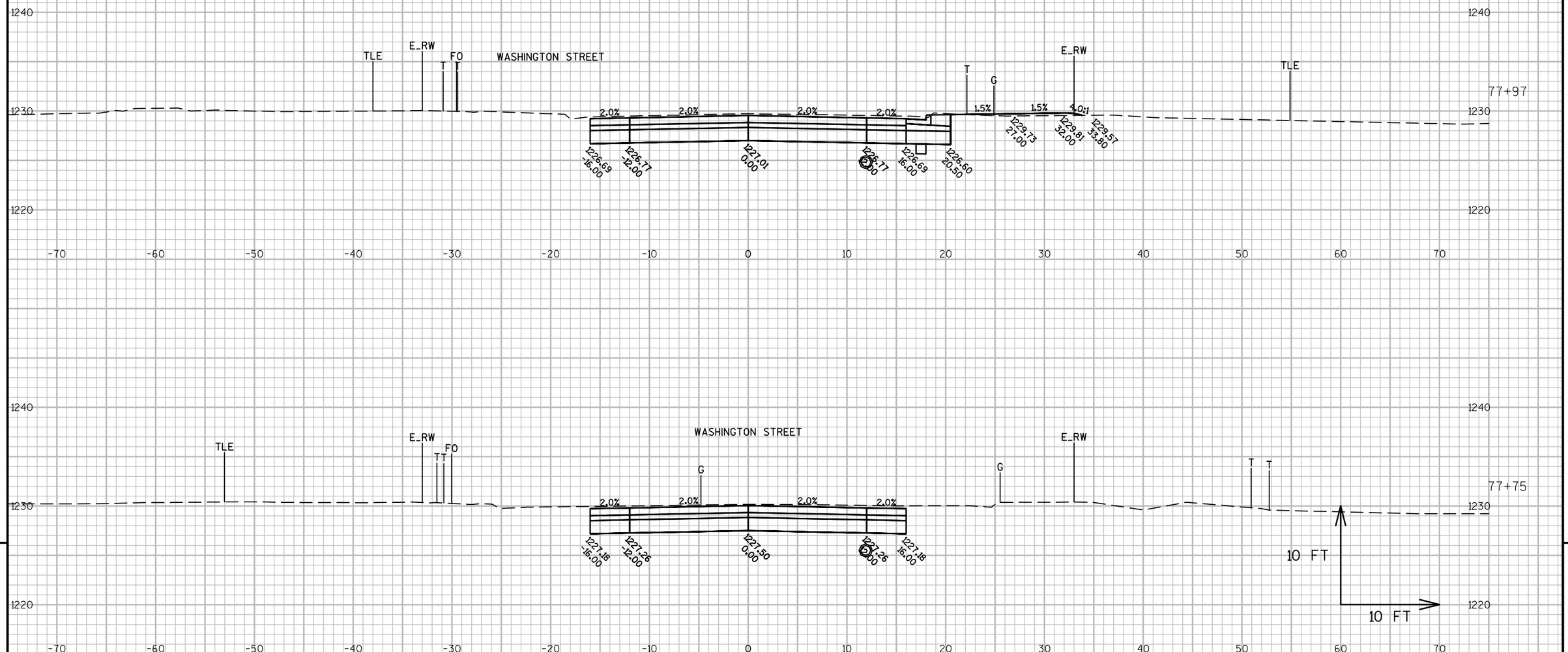
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 209	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090203_XS

PLOT DATE : 7/27/2017 1:56 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

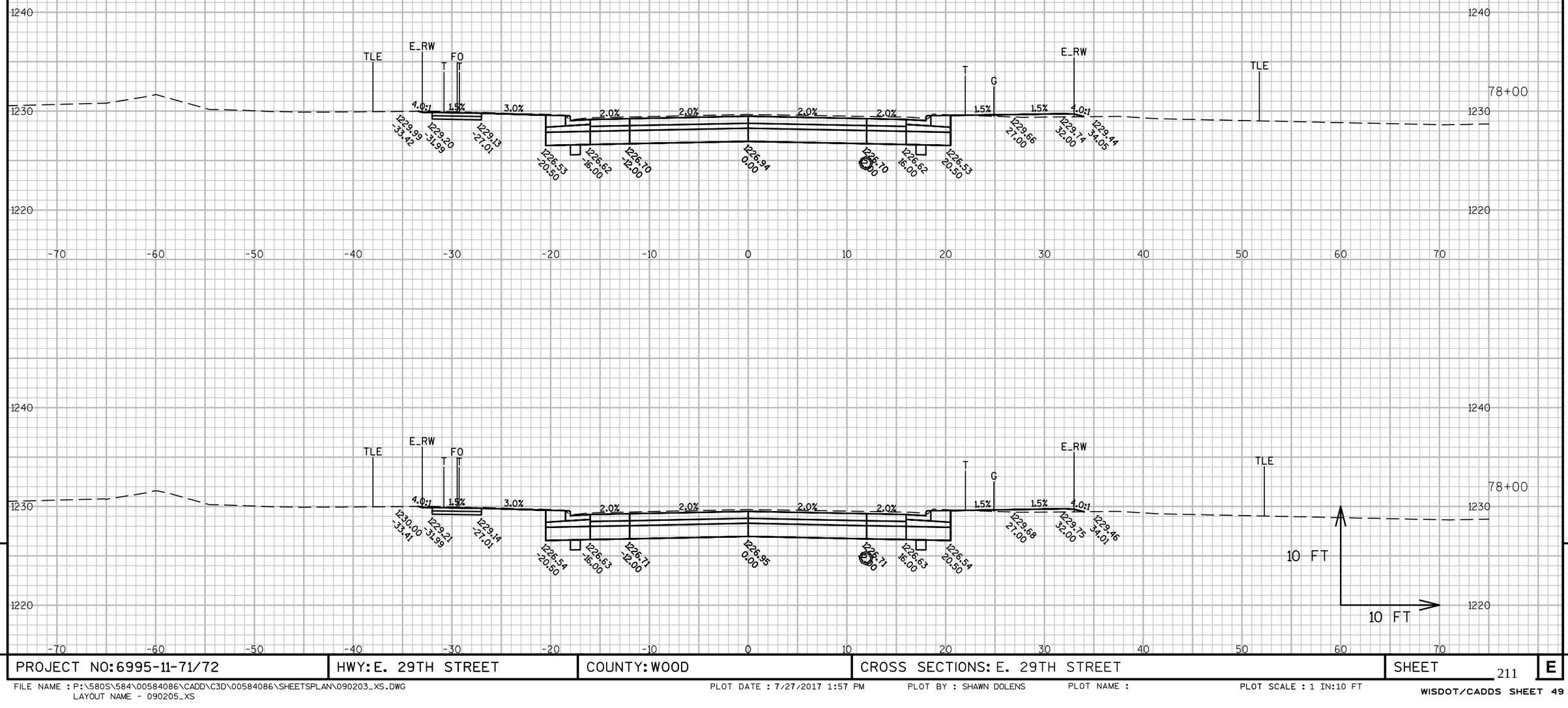
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 210	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090204_XS

PLOT DATE : 7/27/2017 1:57 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

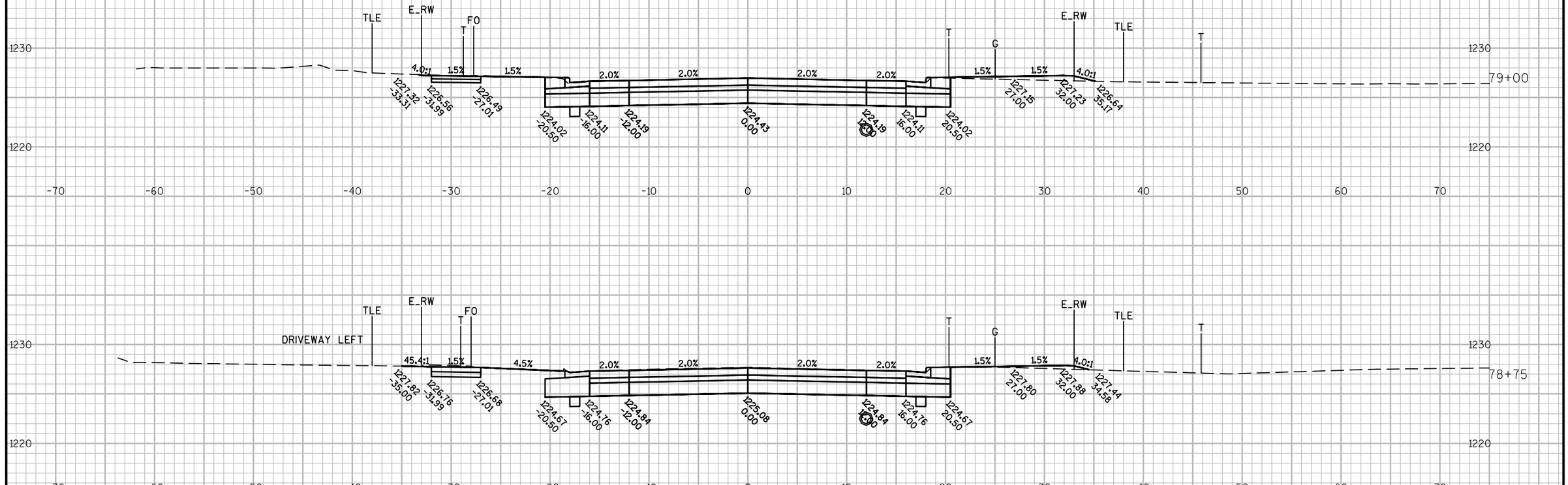


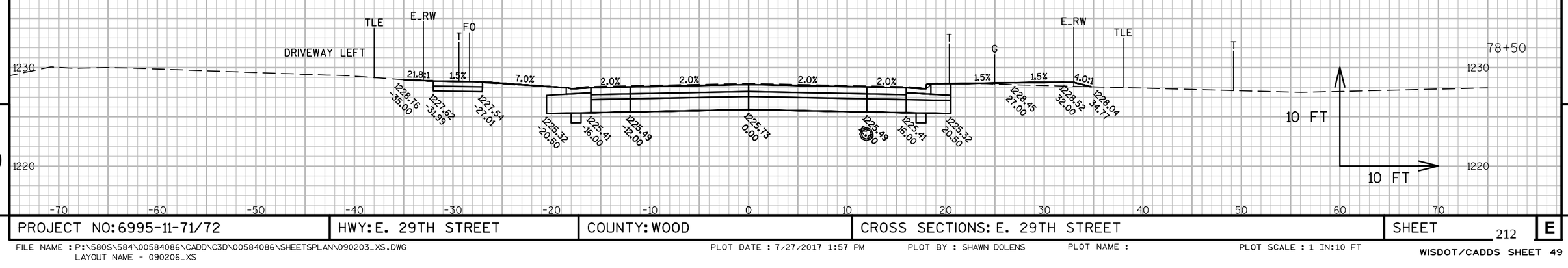
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 211 E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090205_XS

PLOT DATE : 7/27/2017 1:57 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49





9

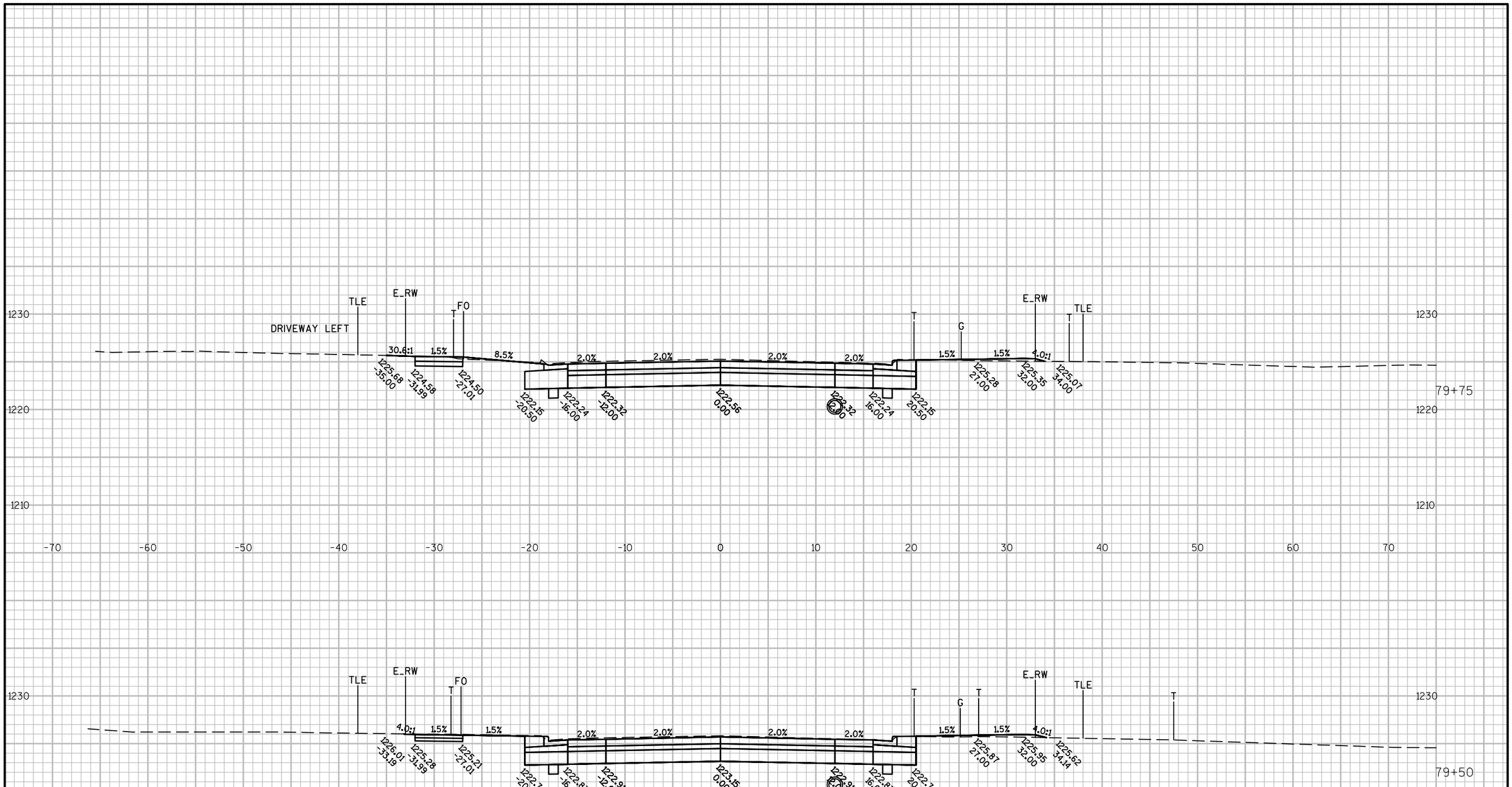
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 212	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090206_XS

PLOT DATE : 7/27/2017 1:57 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

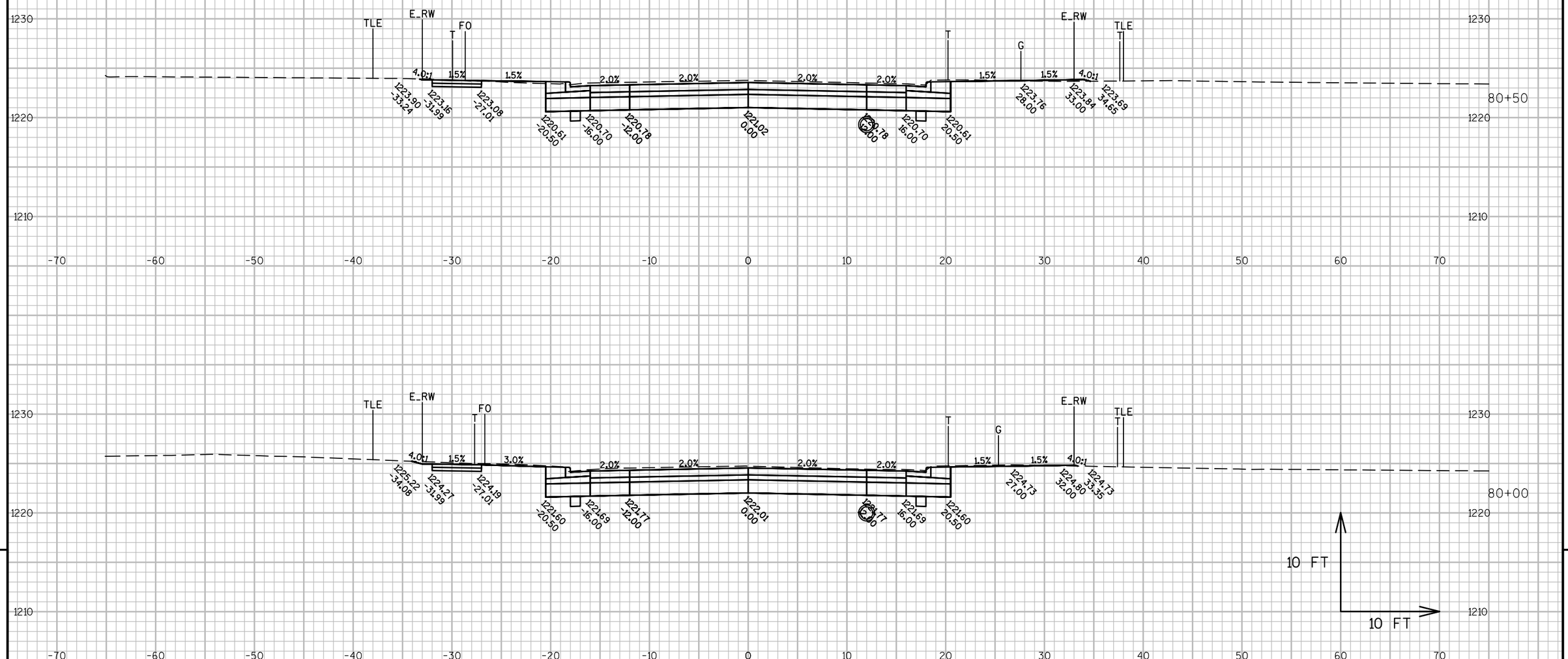
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 213	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090207_XS

PLOT DATE : 7/27/2017 1:57 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

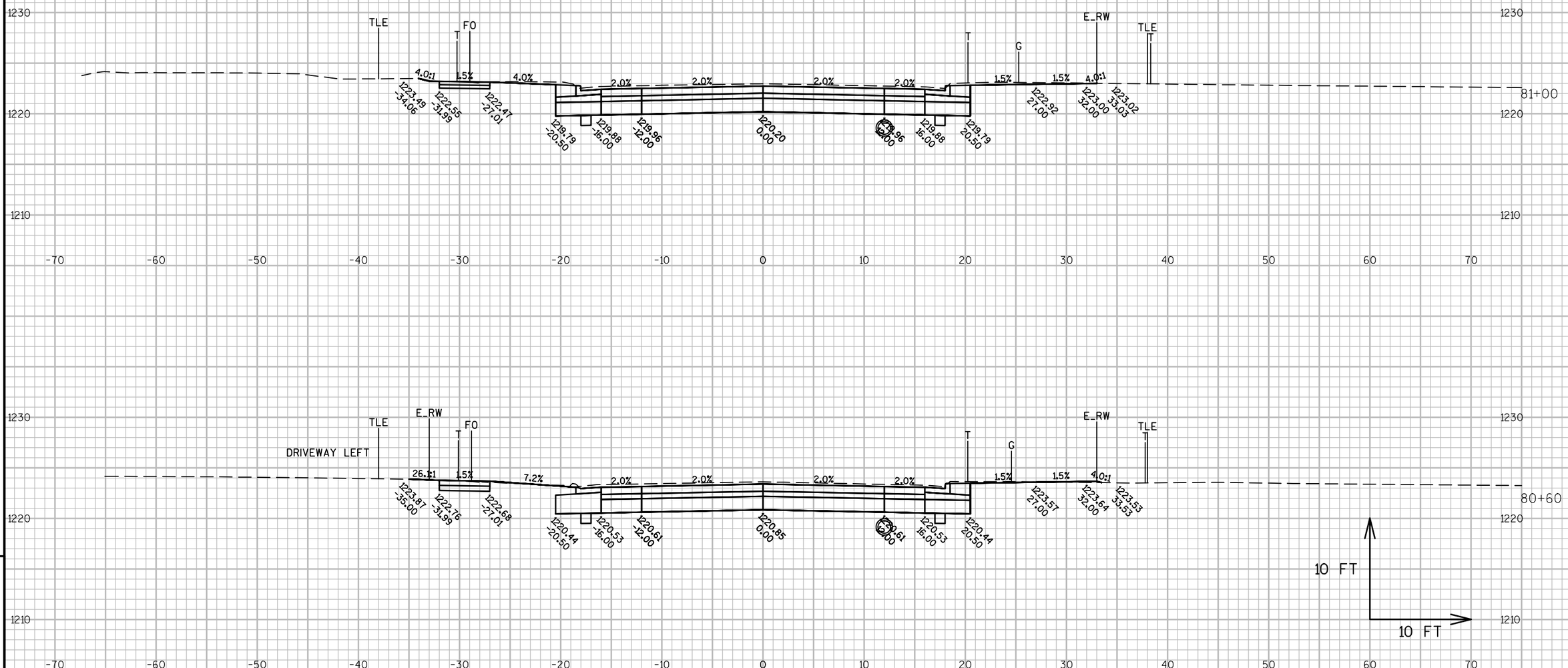


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 214 E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090208_XS

PLOT DATE : 7/27/2017 1:58 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

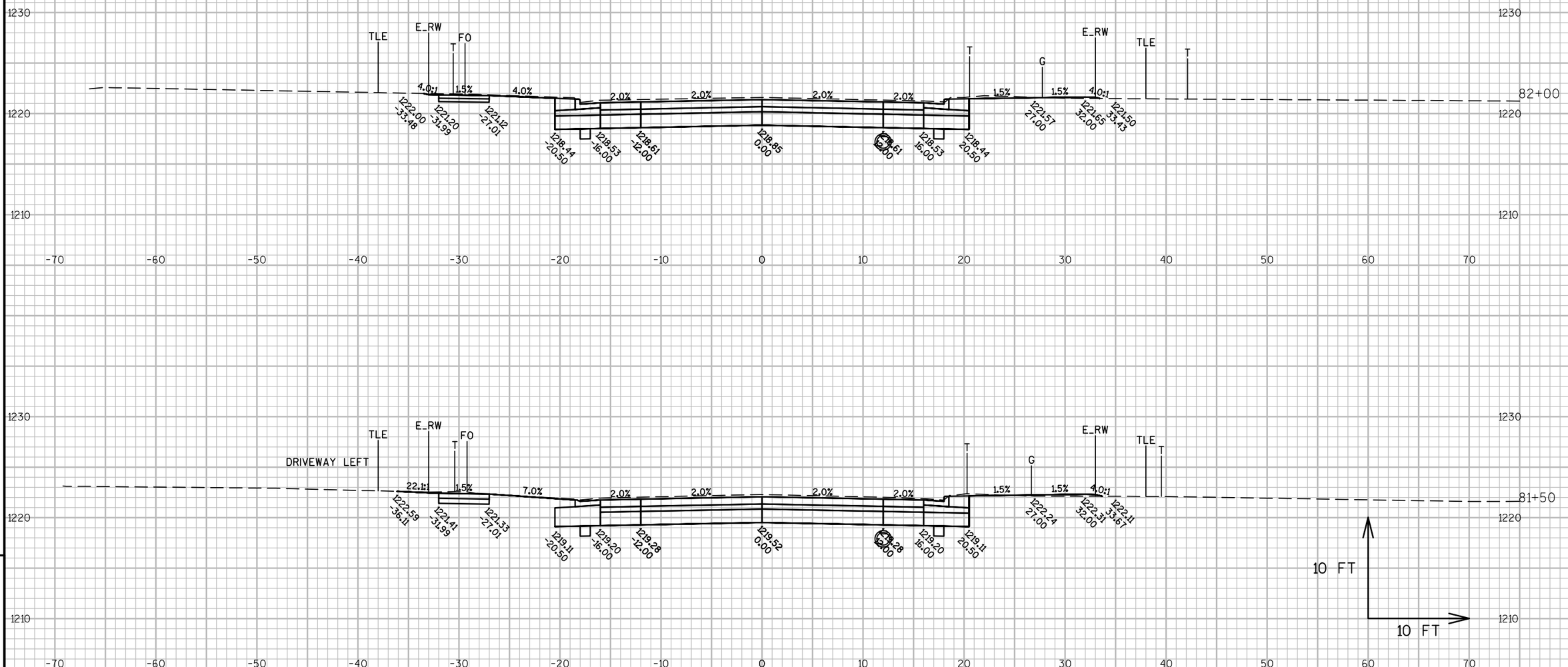
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 215	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090209_XS

PLOT DATE : 7/27/2017 1:58 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

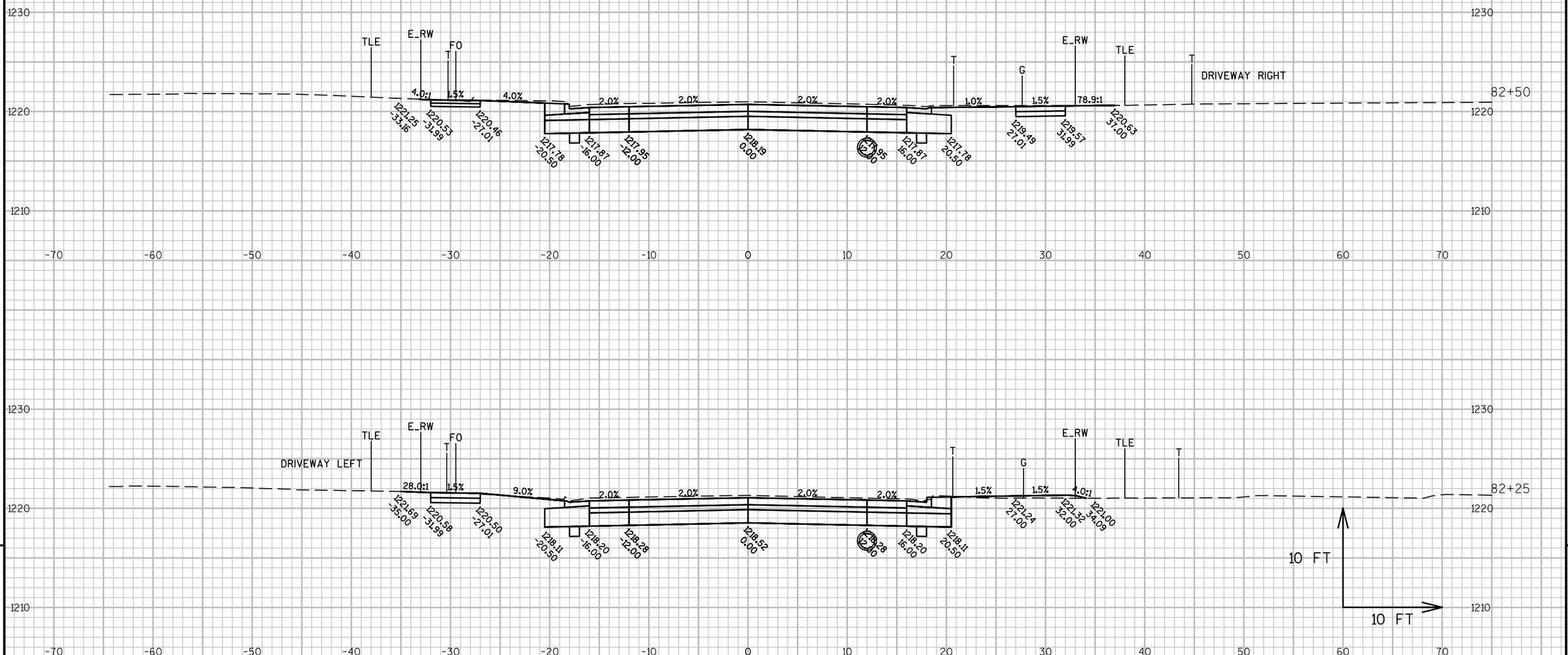
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 216 E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090210_XS

PLOT DATE : 7/27/2017 1:58 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

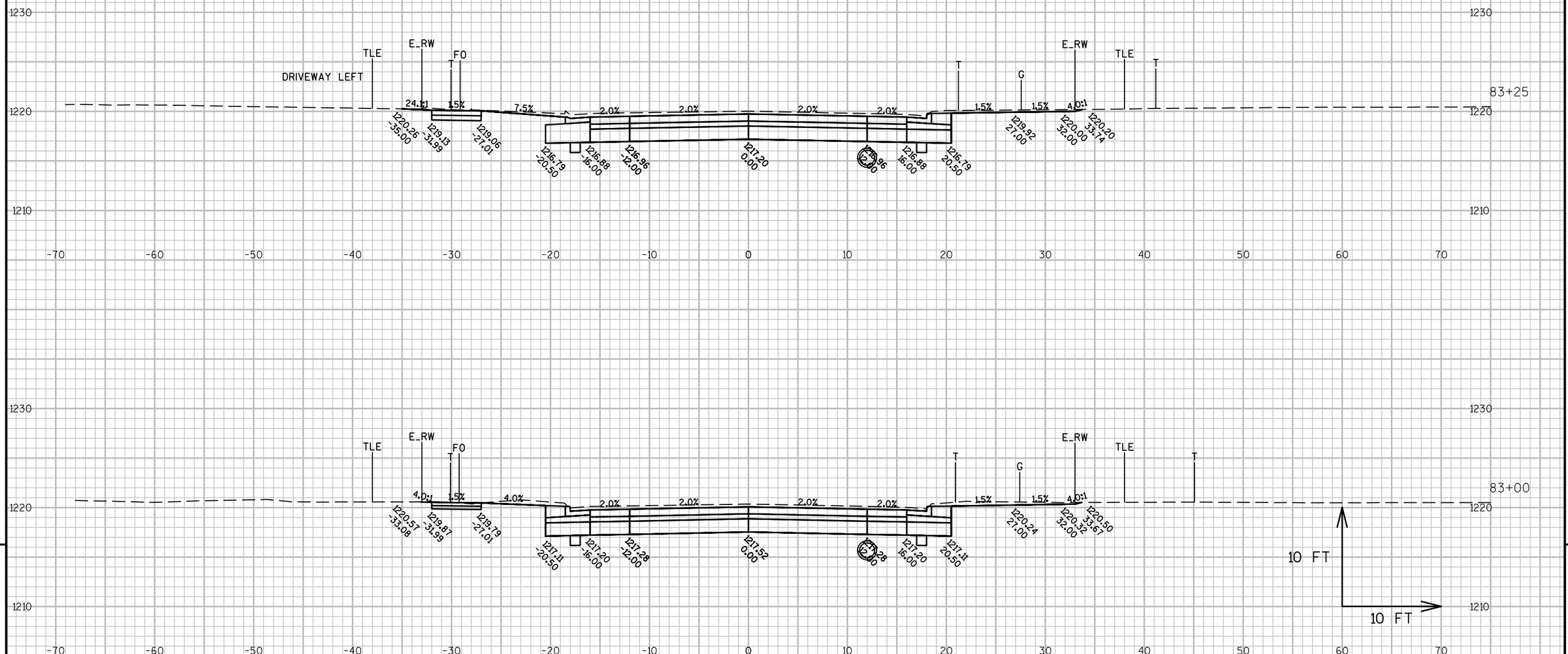
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 217	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090211_XS

PLOT DATE : 7/27/2017 1:58 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

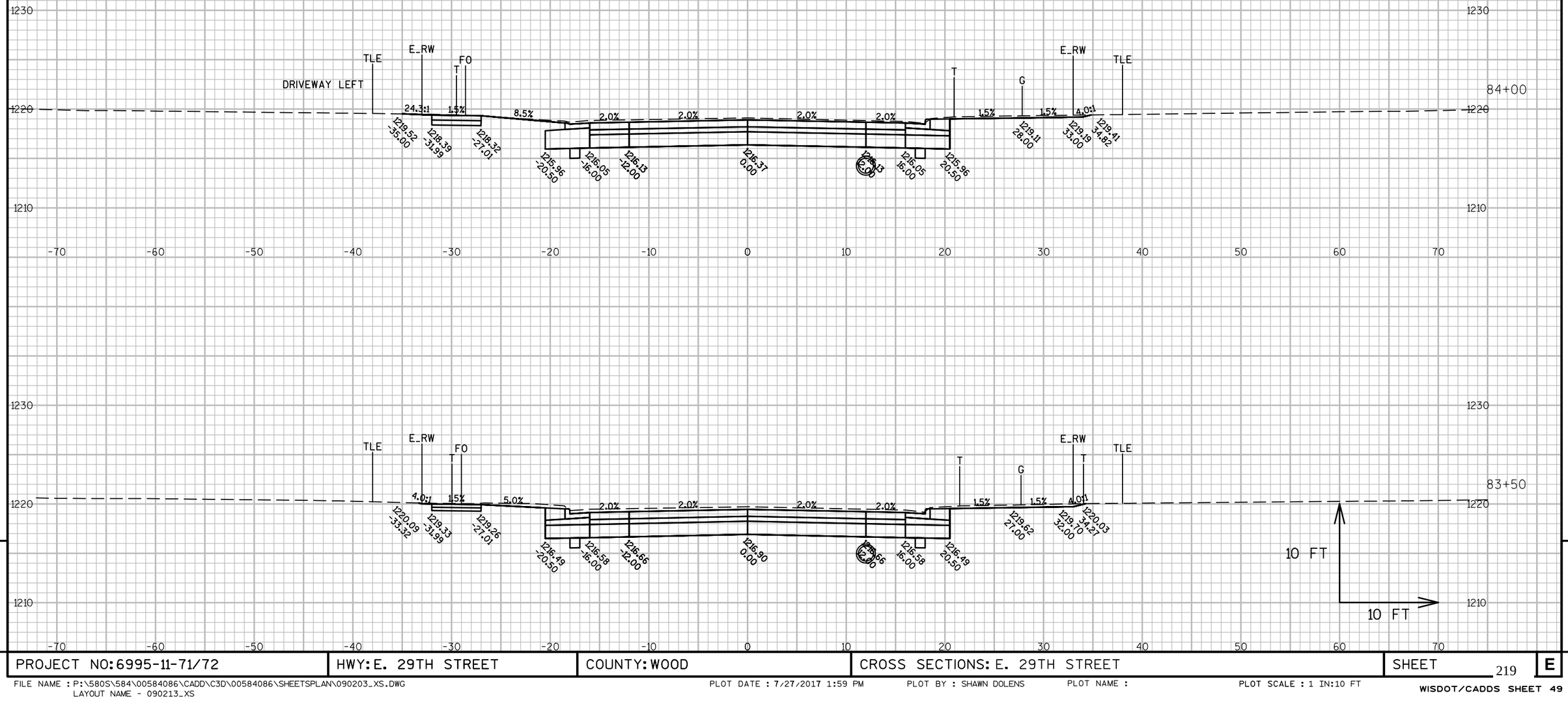


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 218 E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090212_XS

PLOT DATE : 7/27/2017 1:59 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

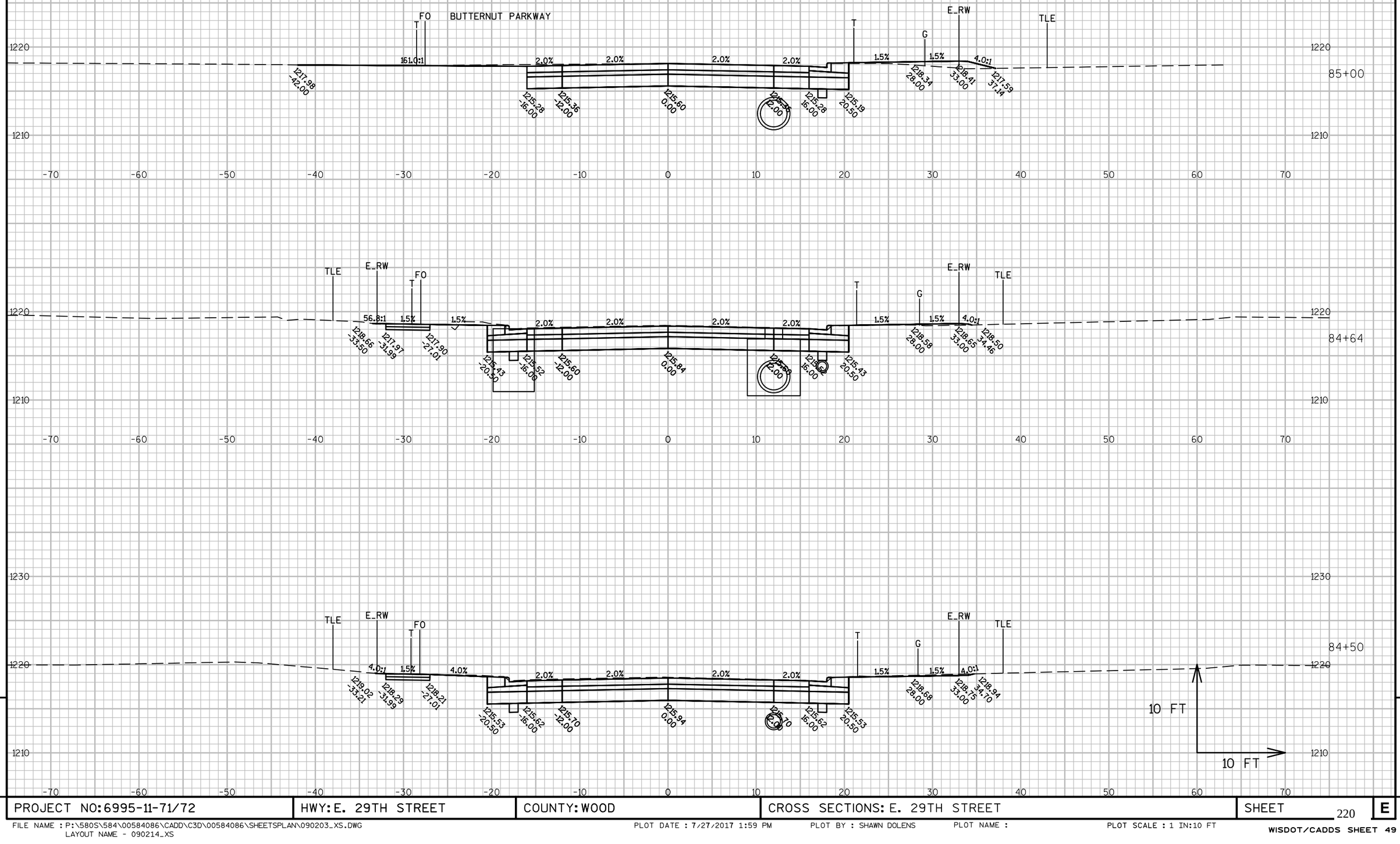


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 219	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090213_XS

PLOT DATE : 7/27/2017 1:59 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



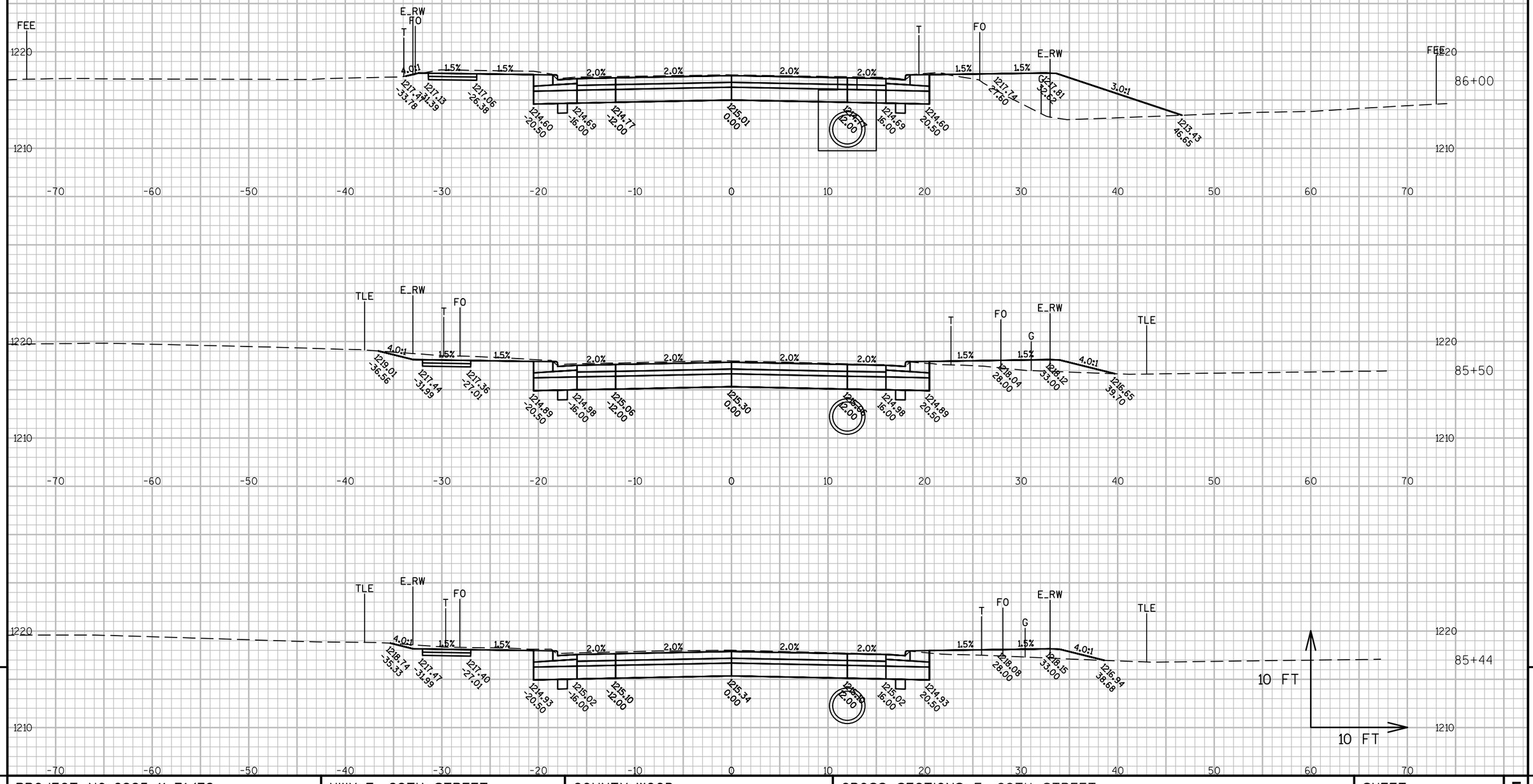
9

9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 220	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090214_XS

PLOT DATE : 7/27/2017 1:59 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

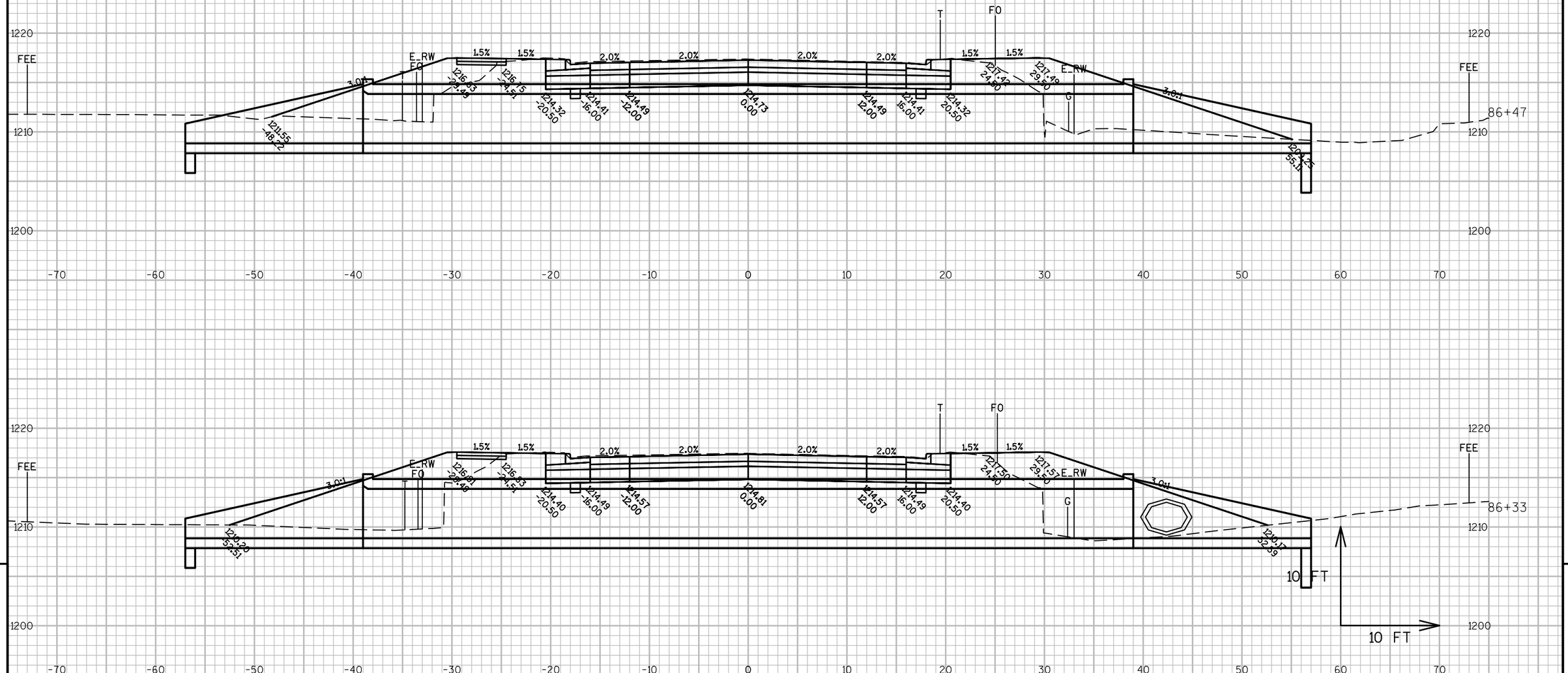


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 221	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090215_XS

PLOT DATE : 7/27/2017 2:00 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

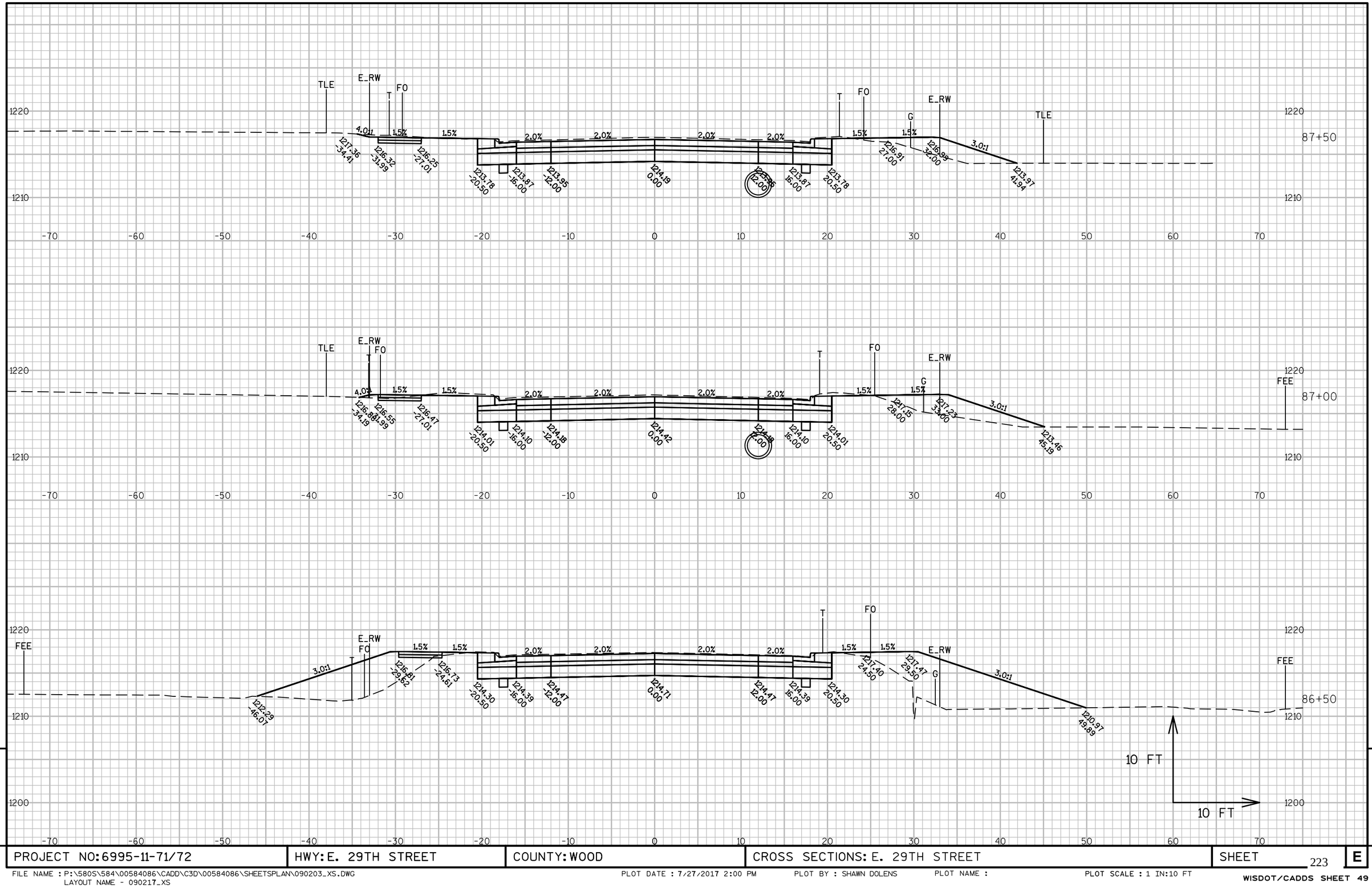
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 222	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090216_XS

PLOT DATE : 7/27/2017 2:00 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

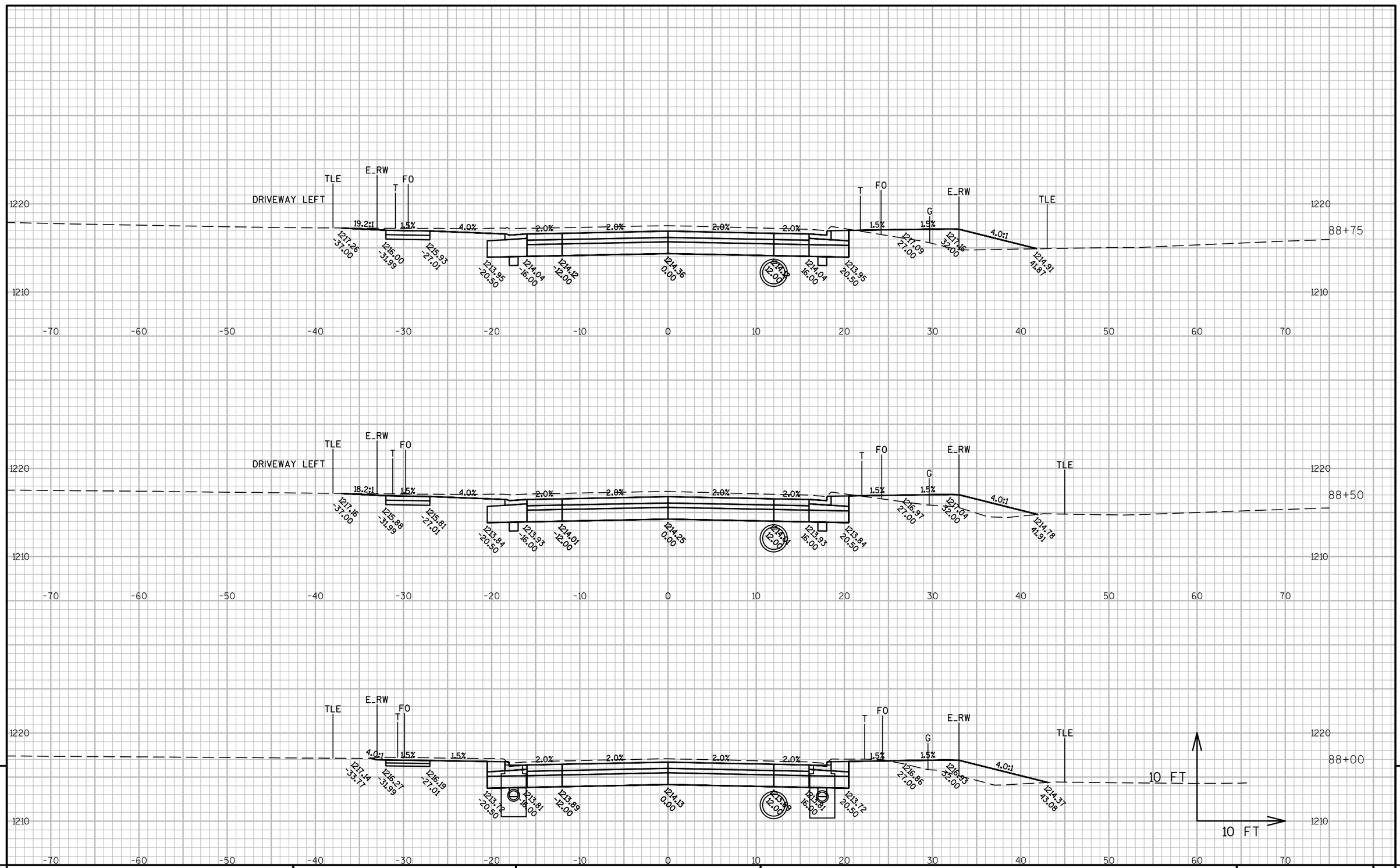
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 223	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090217_XS

PLOT DATE : 7/27/2017 2:00 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



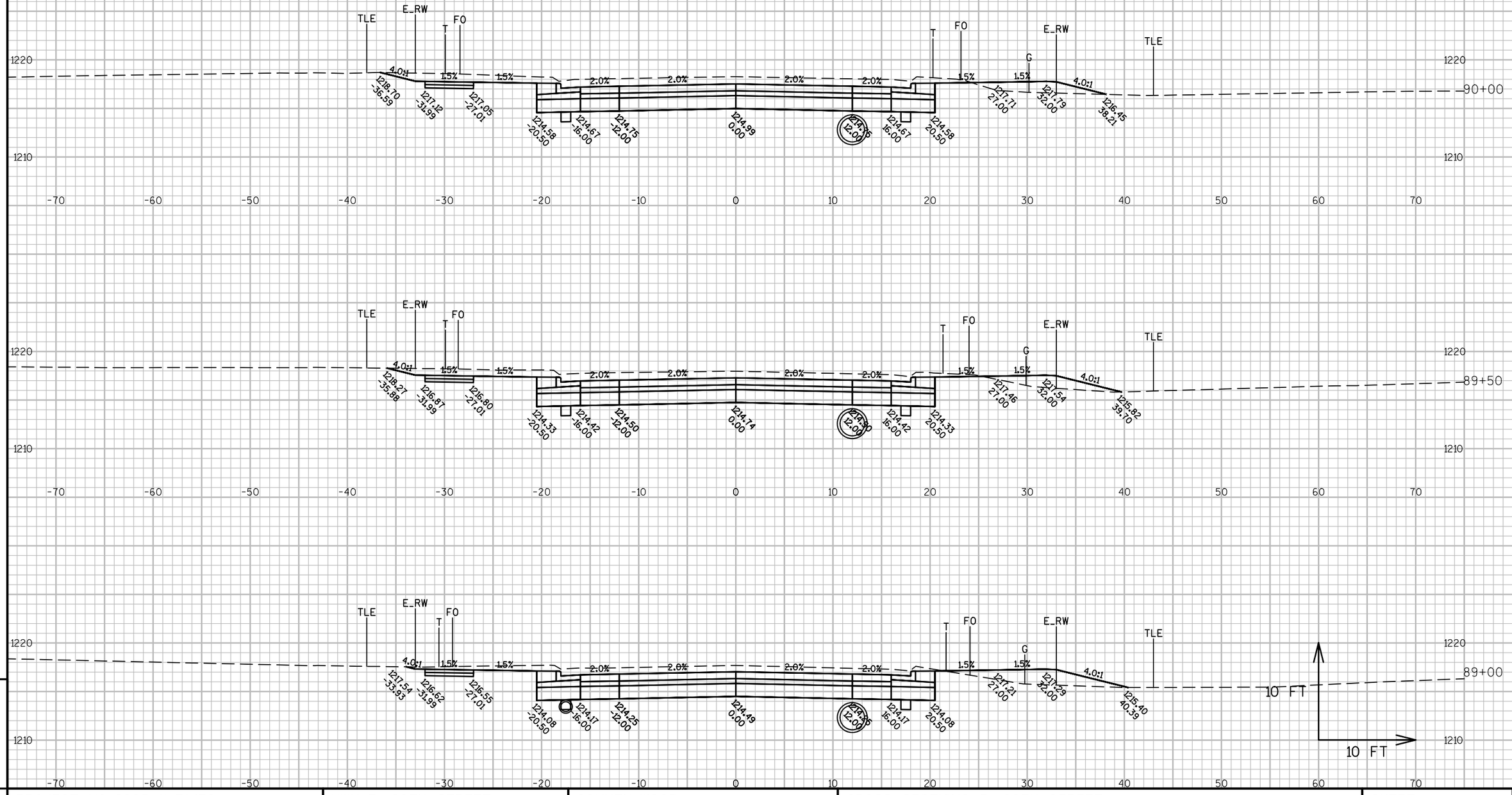
9

9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 224	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090218_XS

PLOT DATE : 7/27/2017 2:00 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

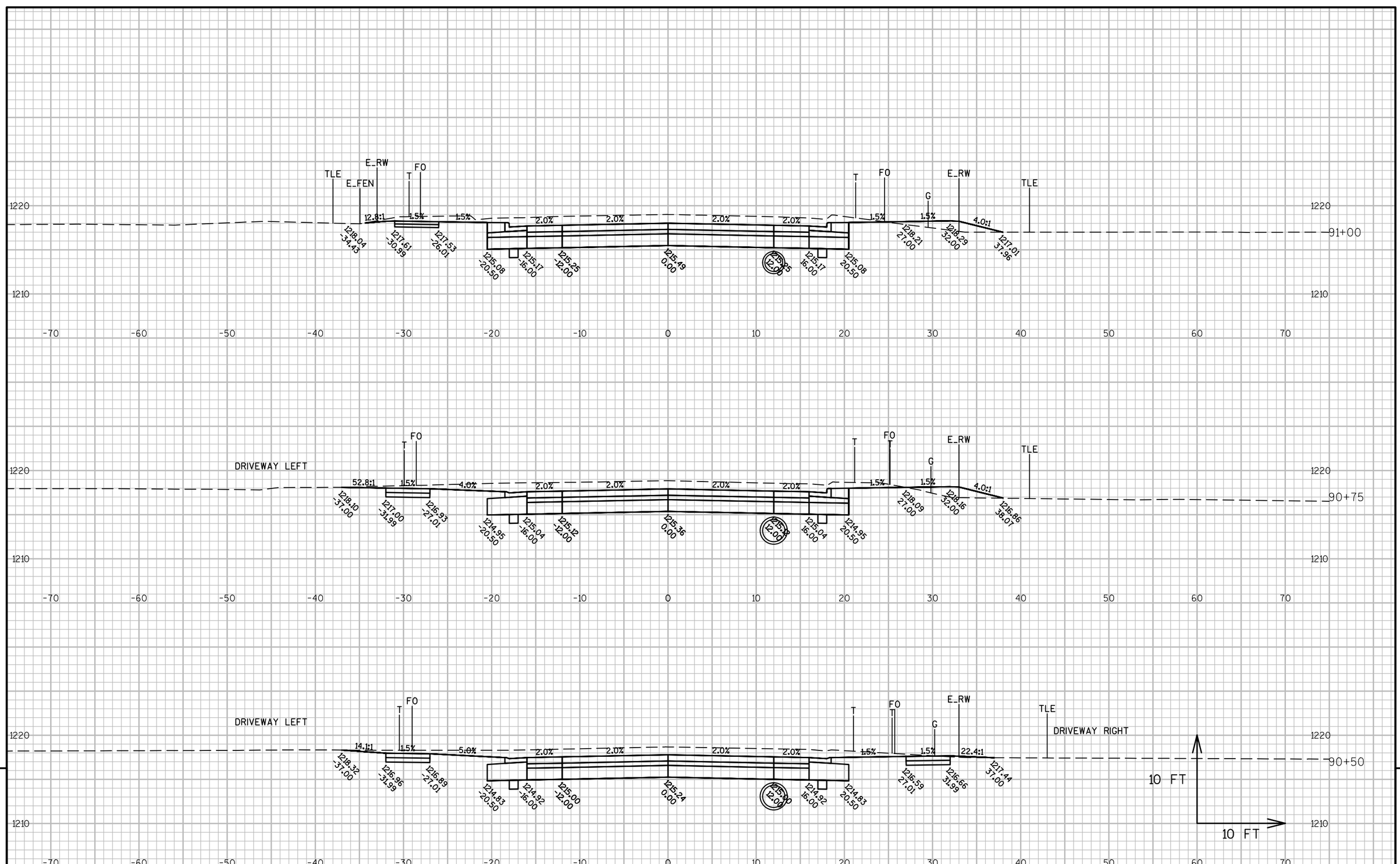


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 225 E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090219_XS

PLOT DATE : 7/27/2017 2:01 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

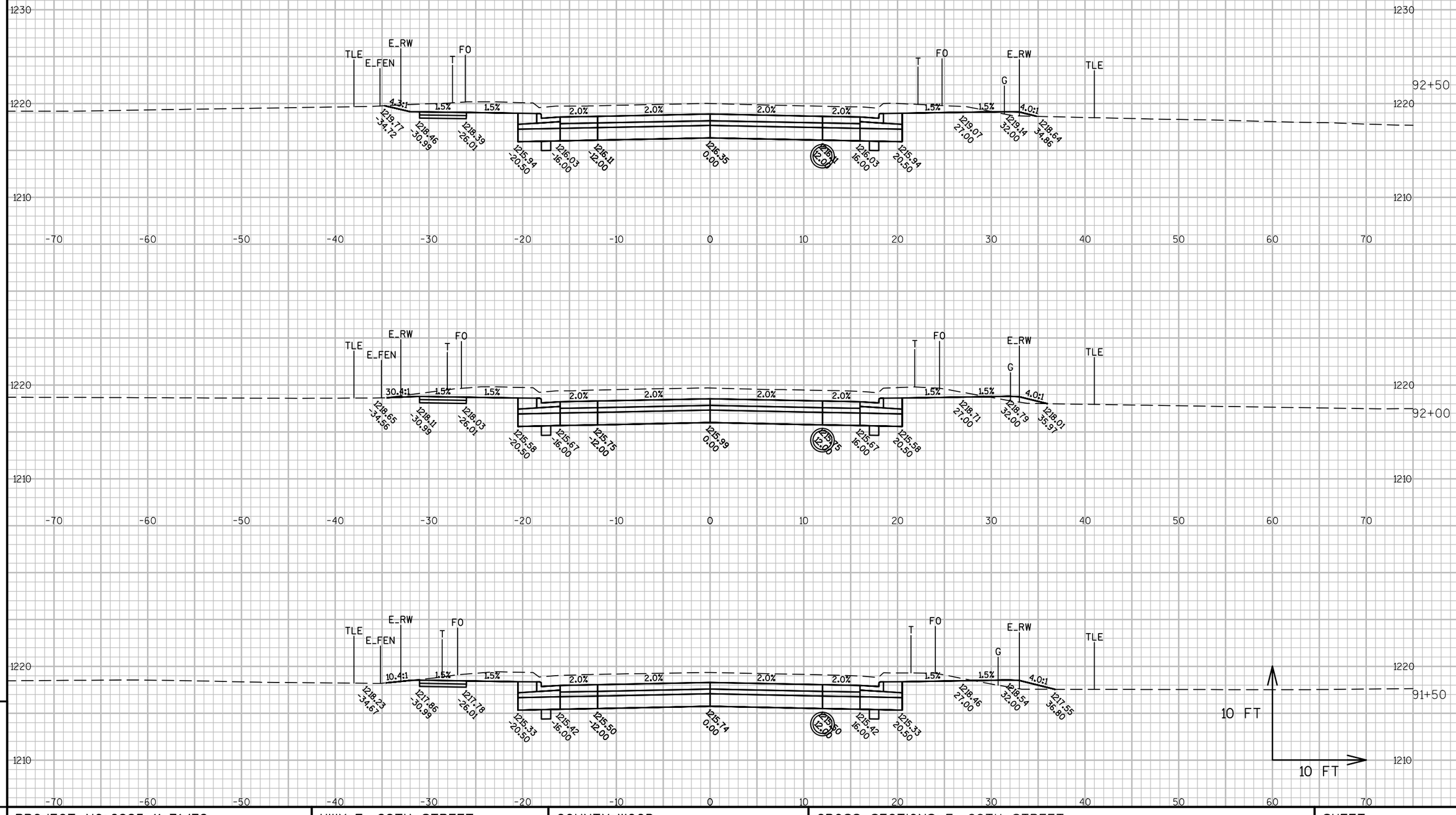
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 226	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090220_XS

PLOT DATE : 7/27/2017 2:01 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



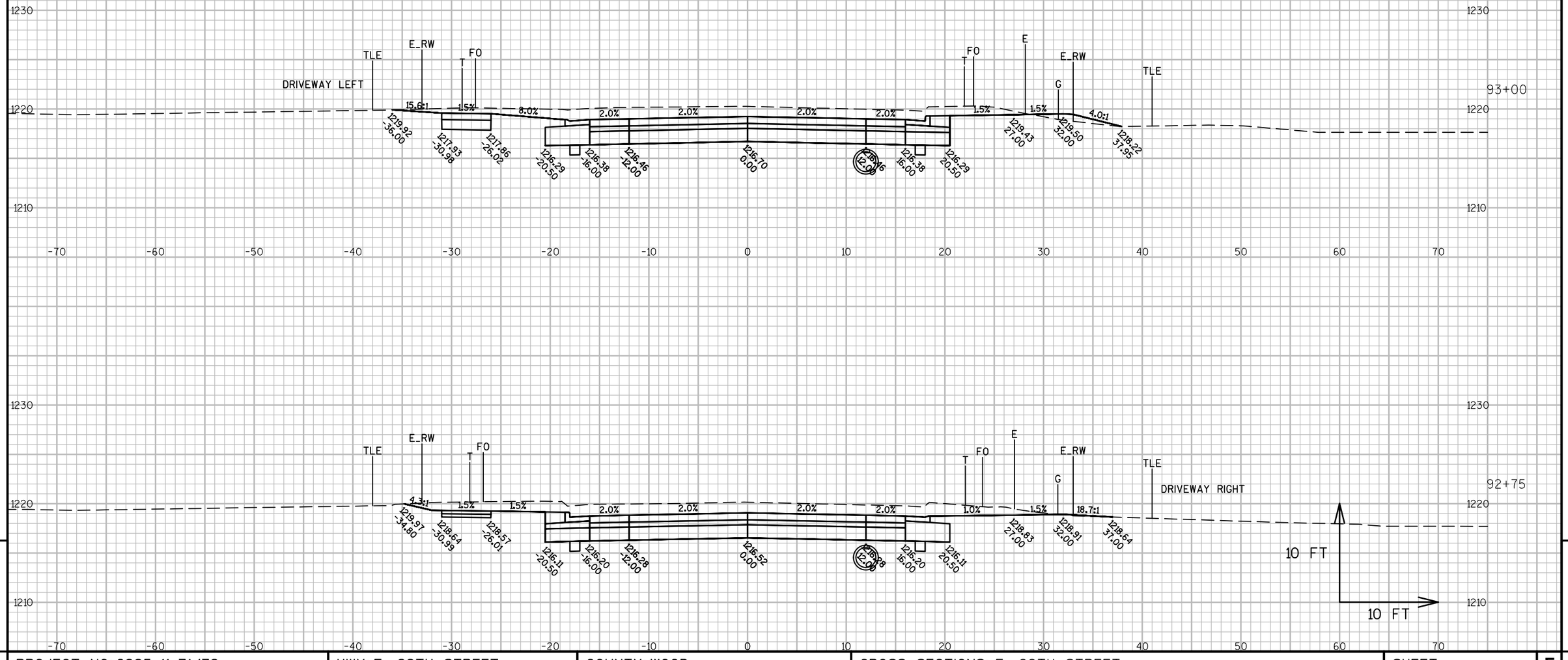
9

9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 227	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090221_XS

PLOT DATE : 7/27/2017 2:01 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT



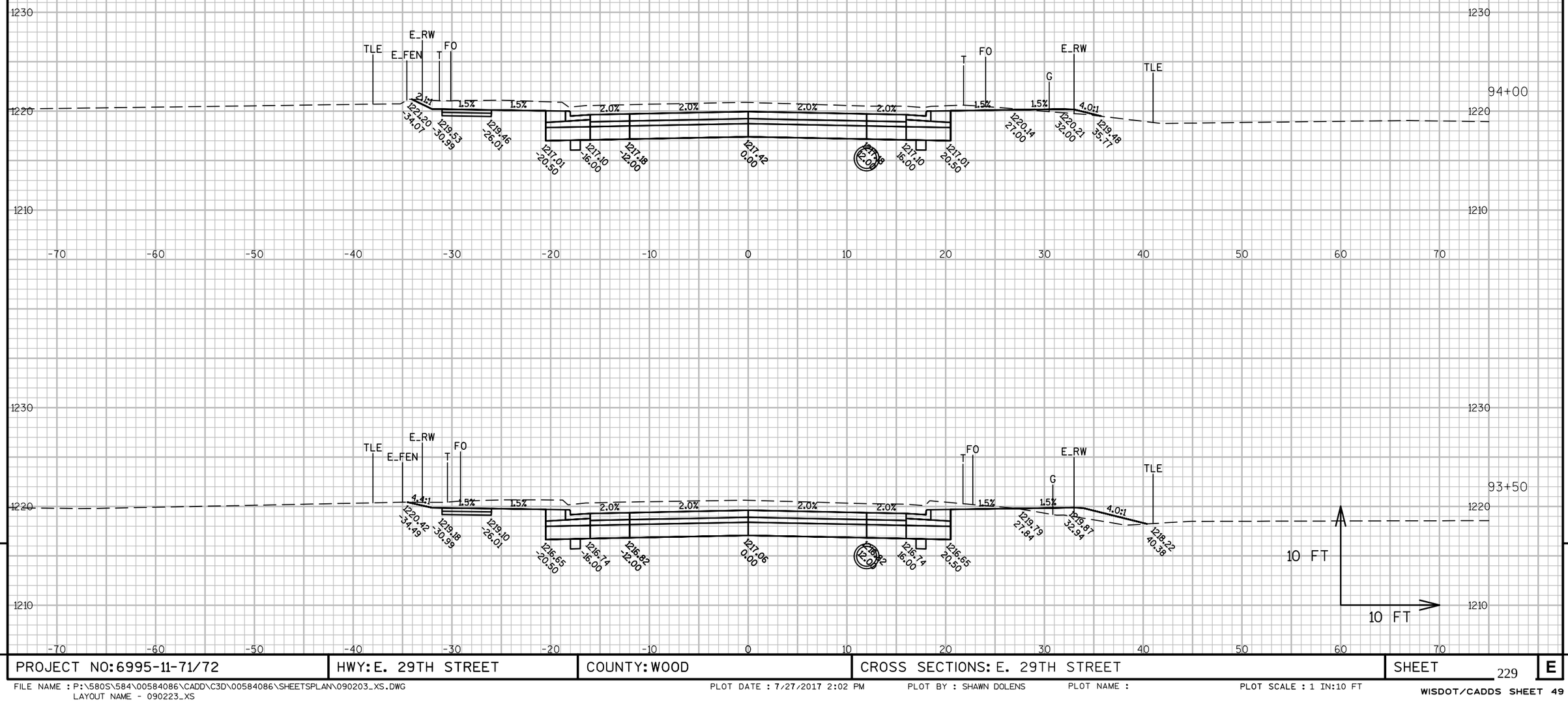
9

9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 228	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090222_XS

PLOT DATE : 7/27/2017 2:01 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

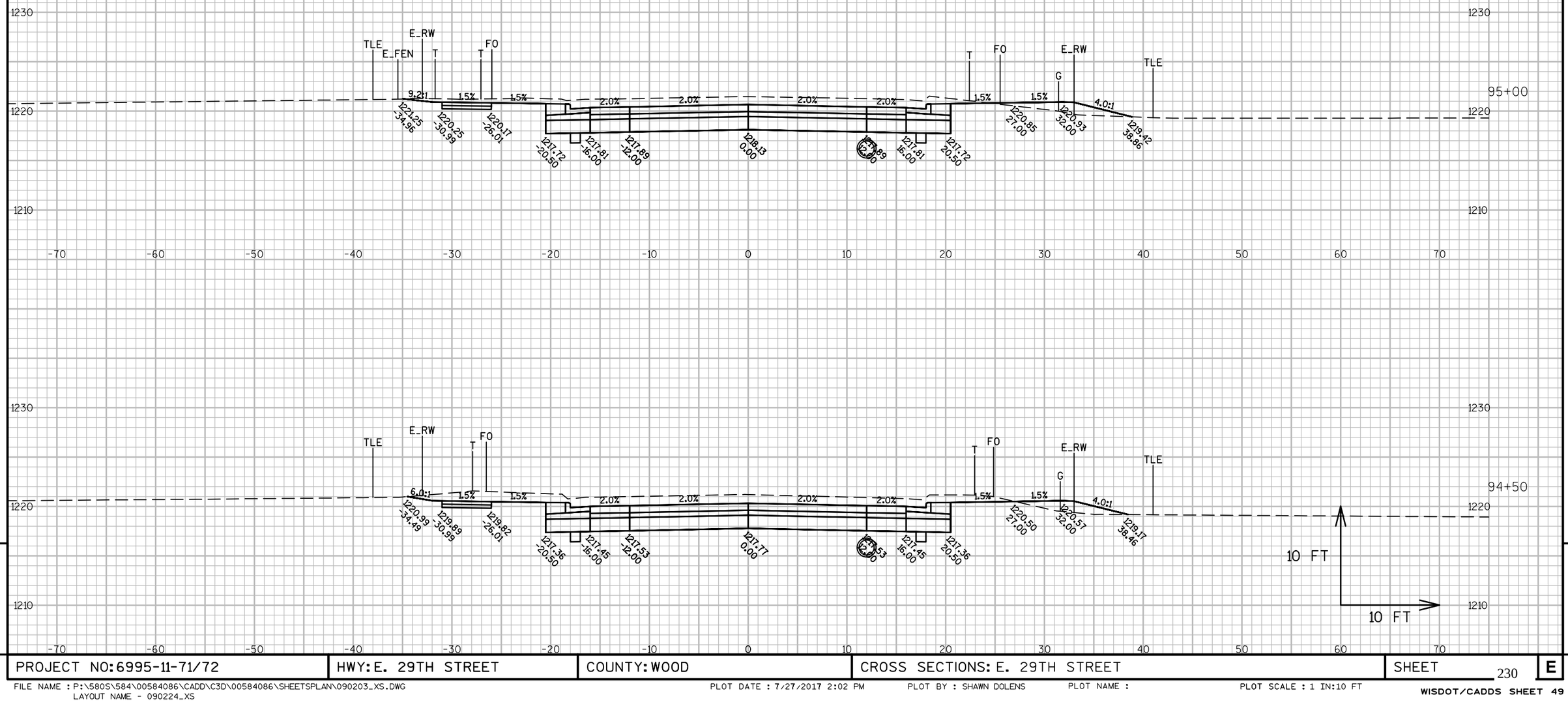


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 229 E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090223_XS

PLOT DATE : 7/27/2017 2:02 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

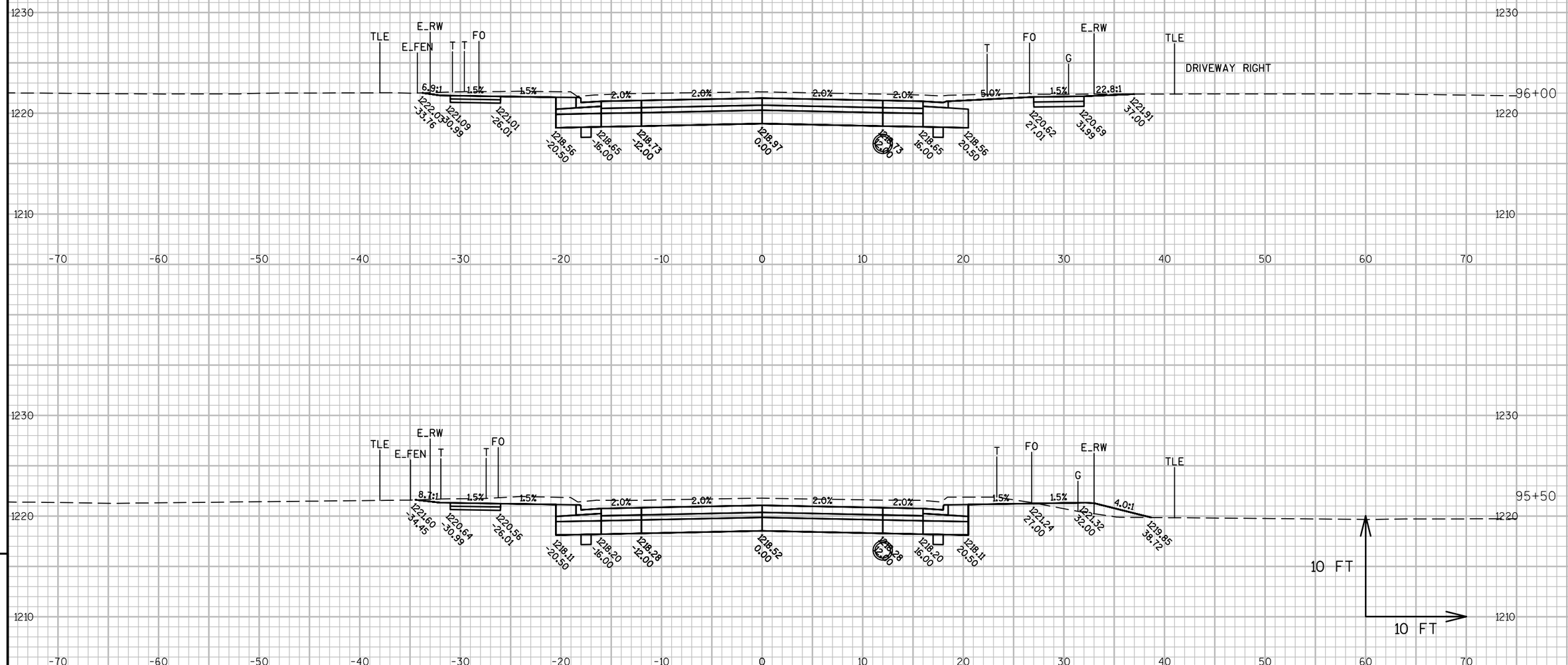
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 230	E

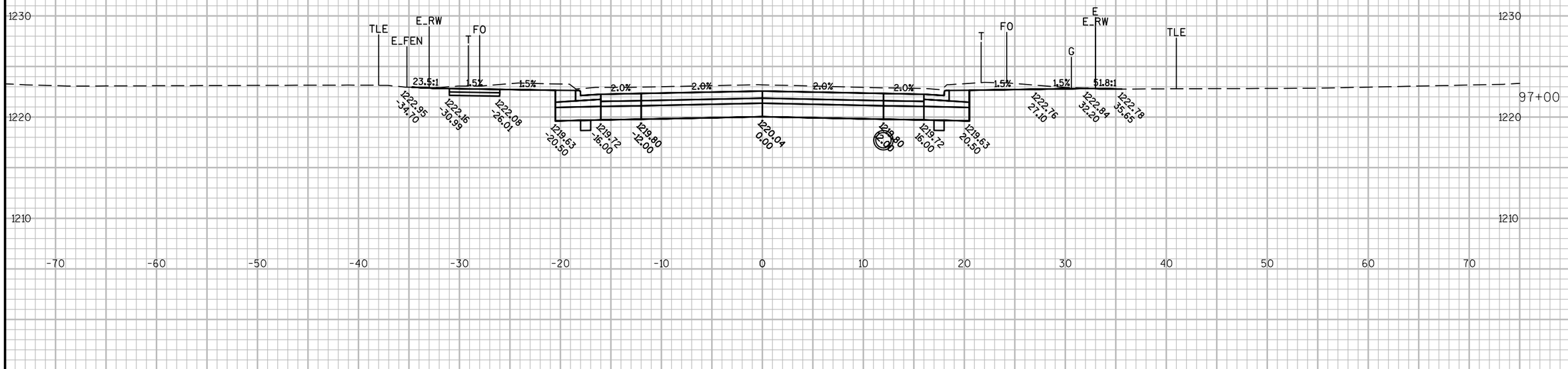
FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090224_XS

PLOT DATE : 7/27/2017 2:02 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 231 E

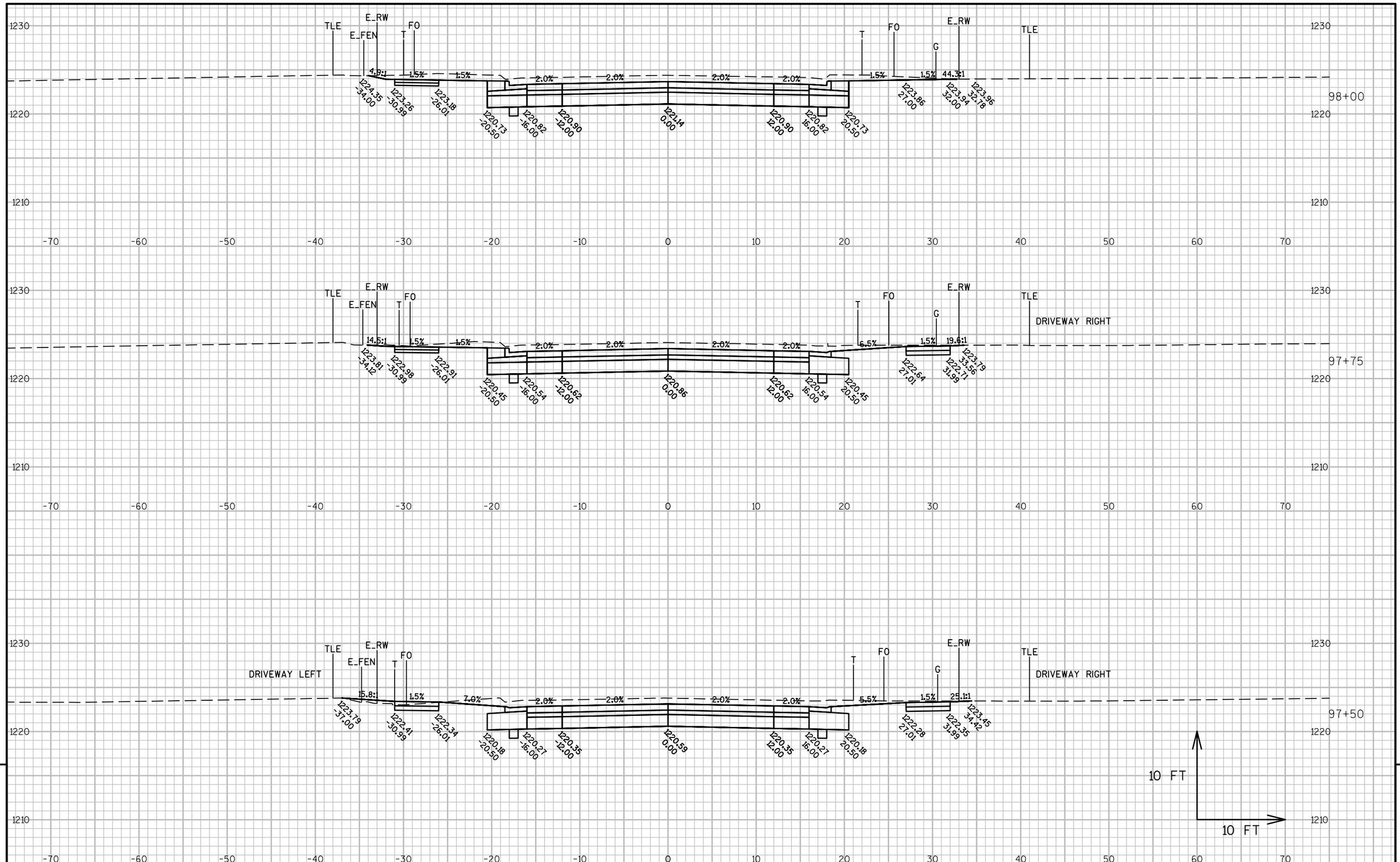


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 232 E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090226_XS

PLOT DATE : 7/27/2017 2:03 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



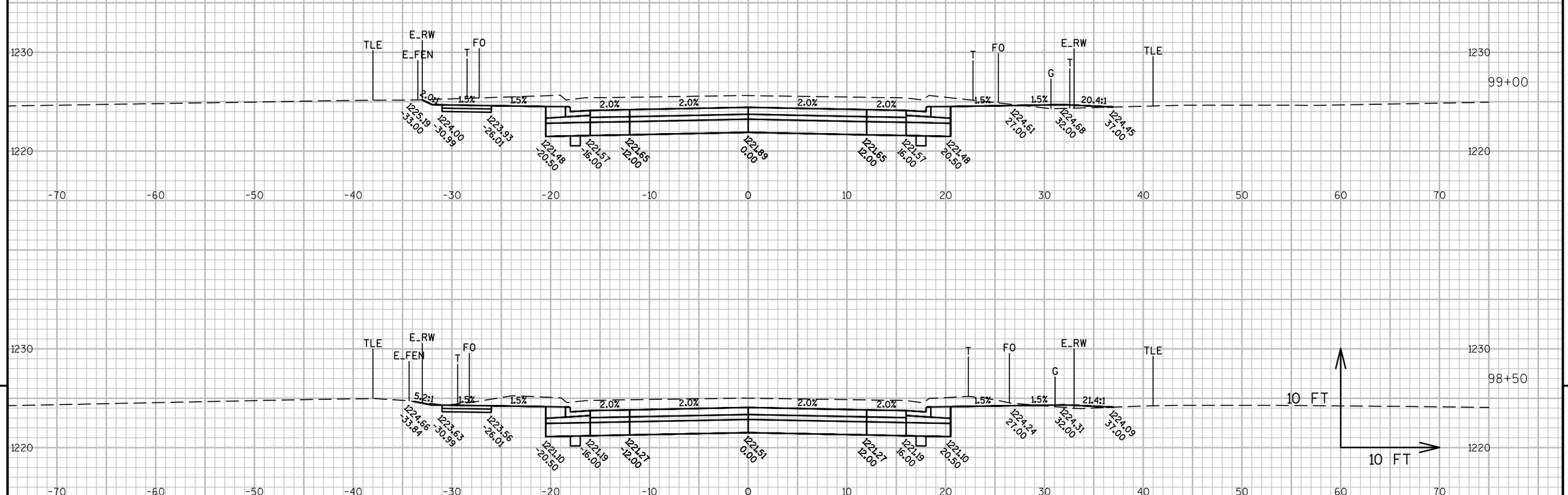
9

9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 233	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090227_XS

PLOT DATE : 7/27/2017 2:03 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

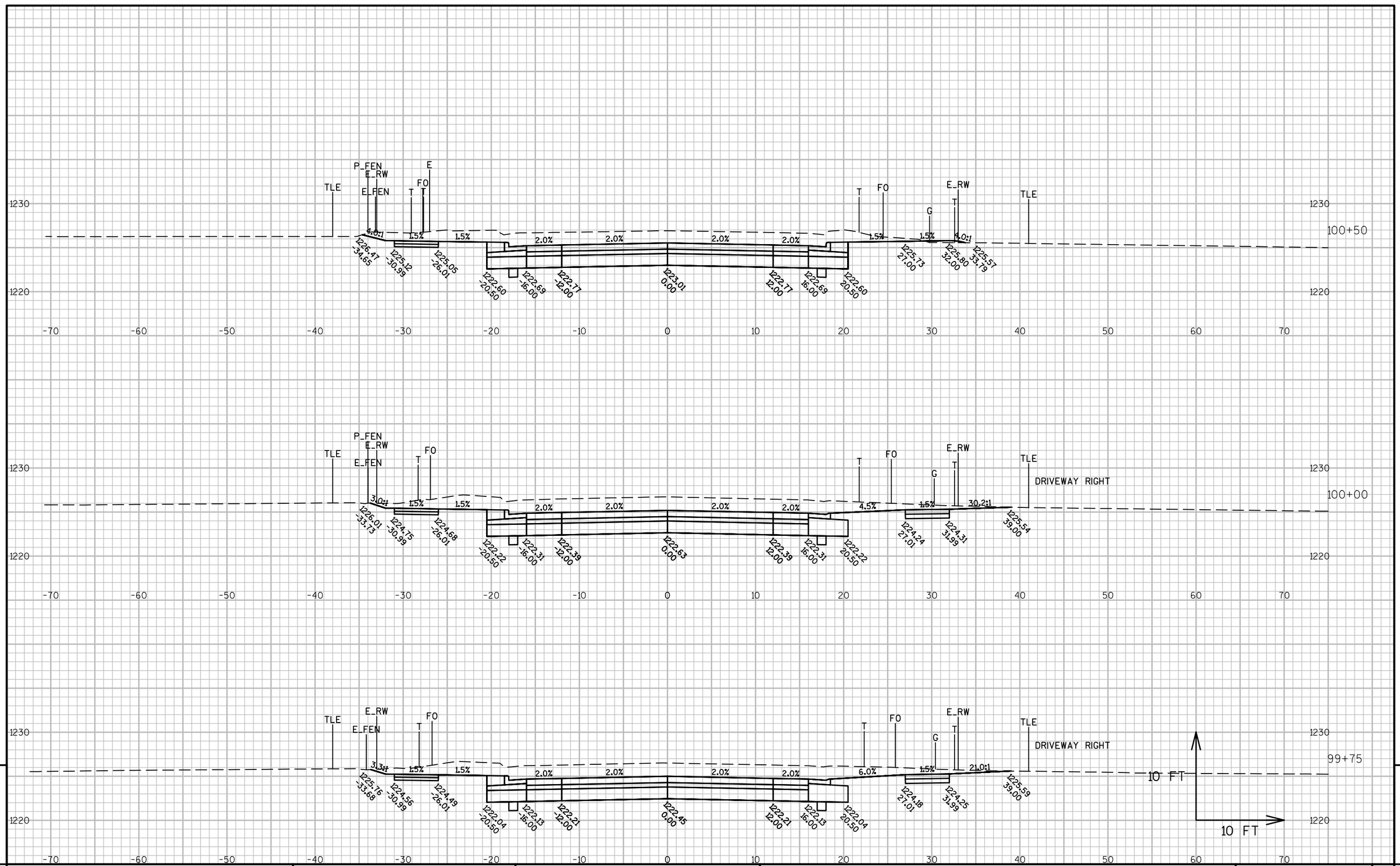
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 234	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090228_XS

PLOT DATE : 7/27/2017 2:03 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

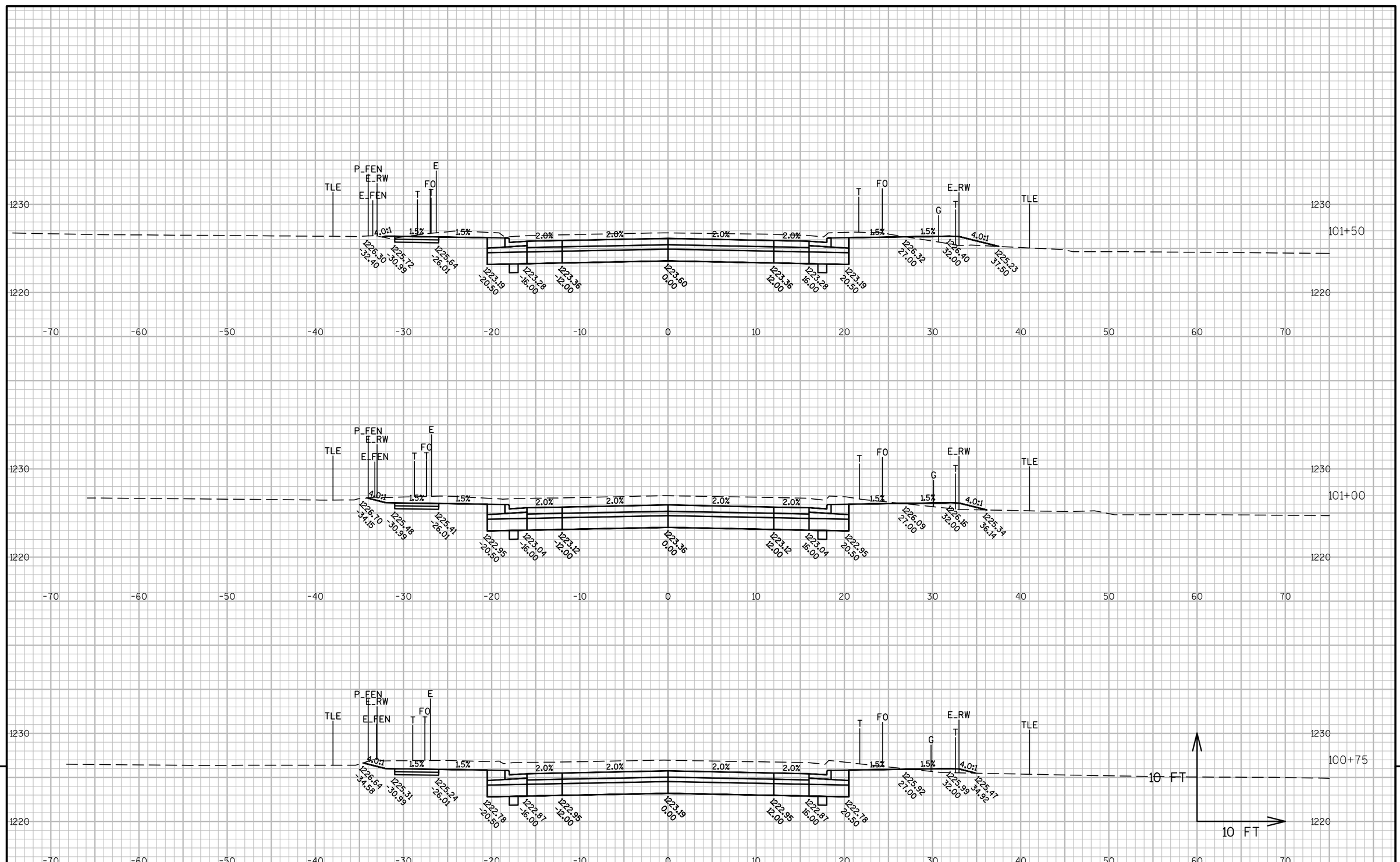
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 235	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090229_XS

PLOT DATE : 7/27/2017 2:03 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



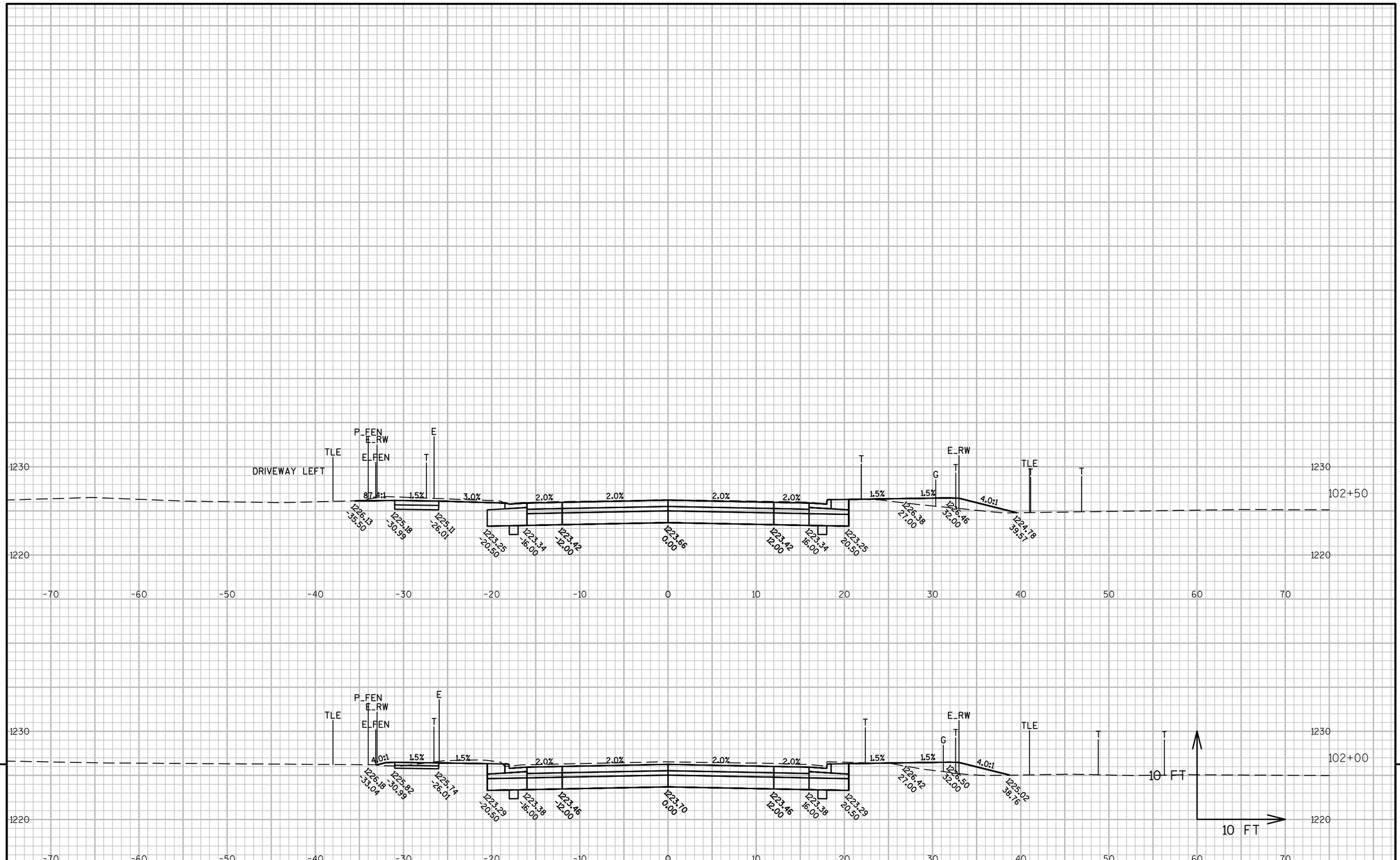
9

9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 236	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090230_XS

PLOT DATE : 7/27/2017 2:04 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT



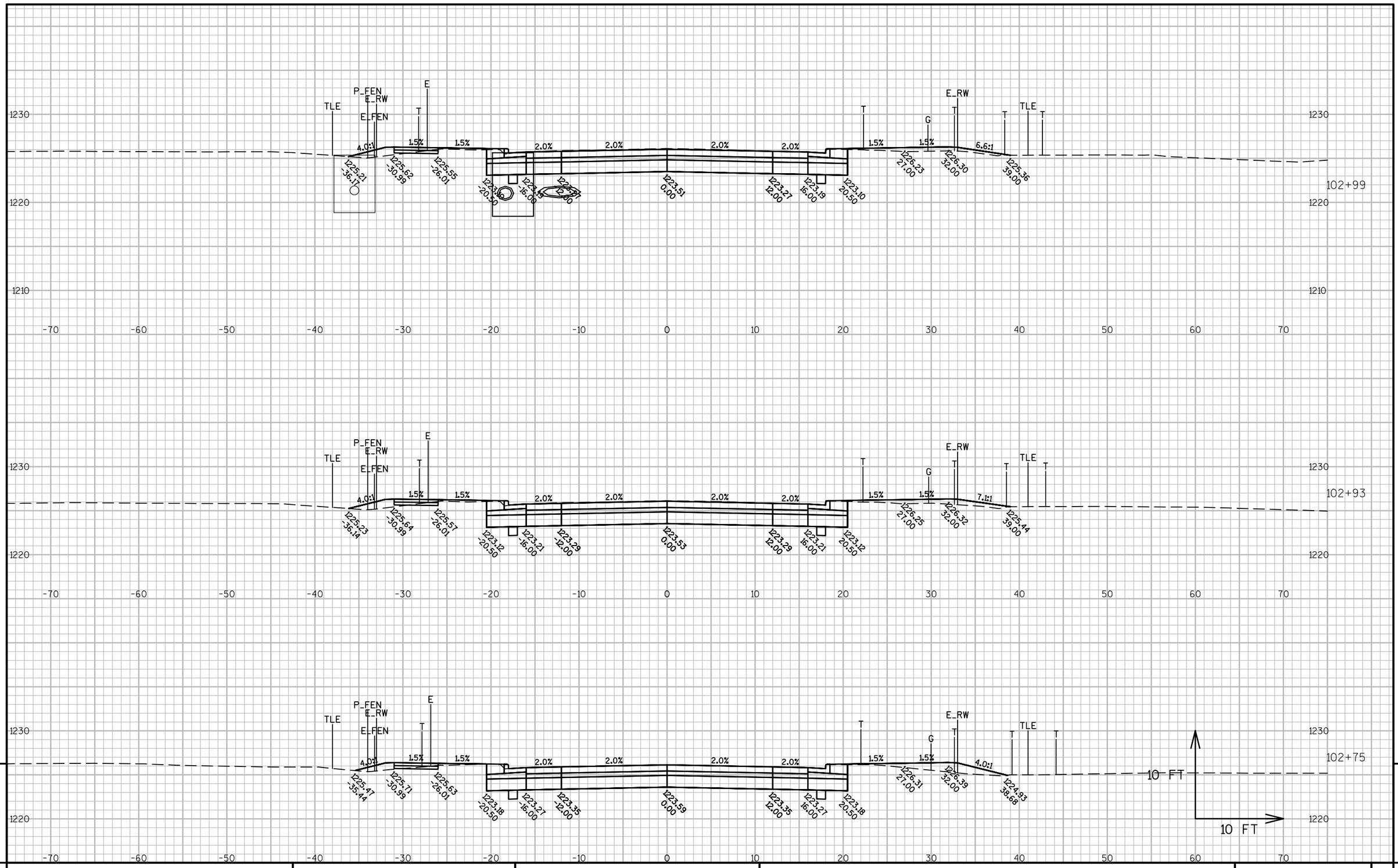
9

9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 237	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090231_XS

PLOT DATE : 7/27/2017 2:04 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

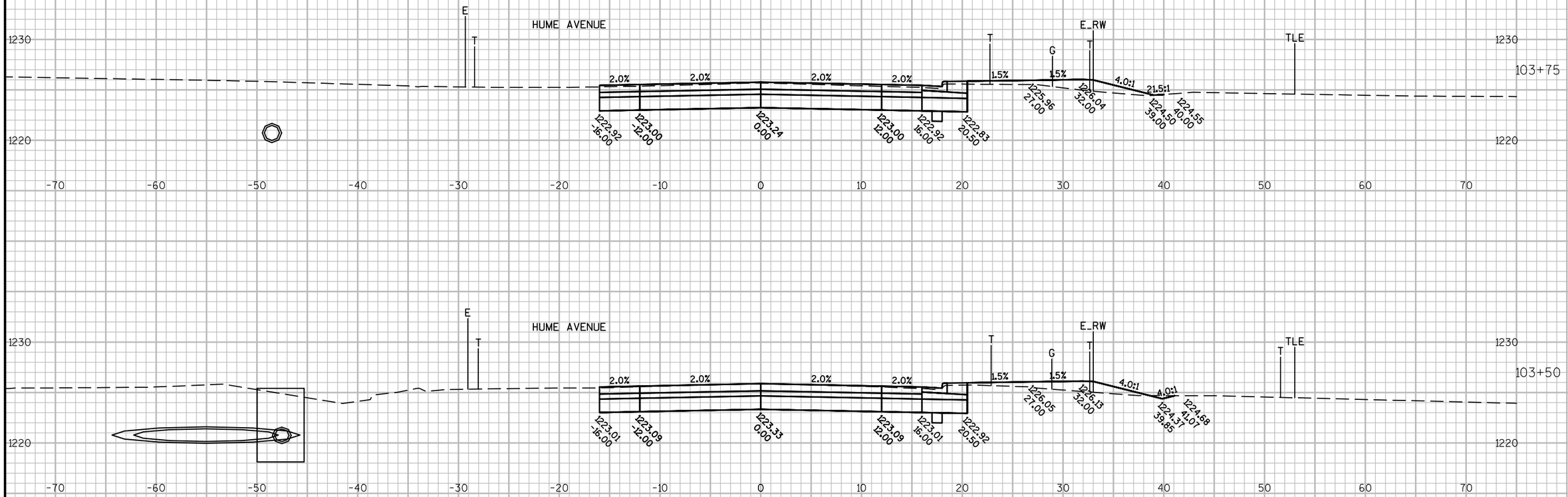


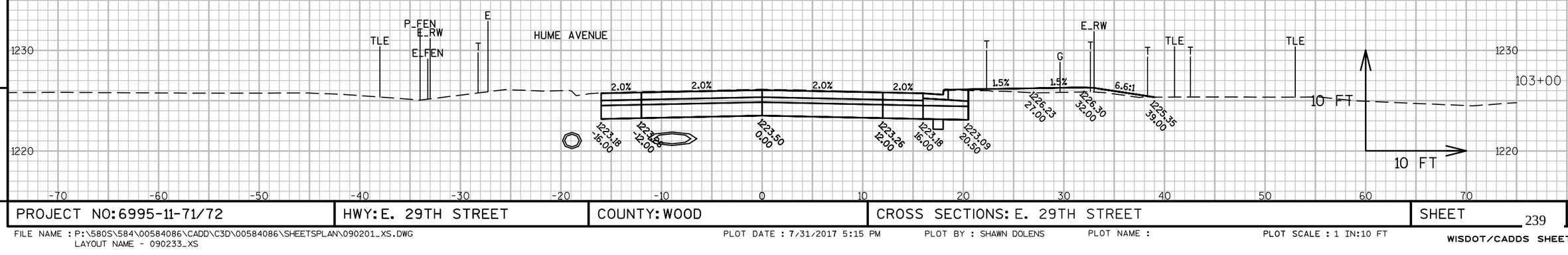
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 238	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090232_XS

PLOT DATE : 7/31/2017 5:14 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



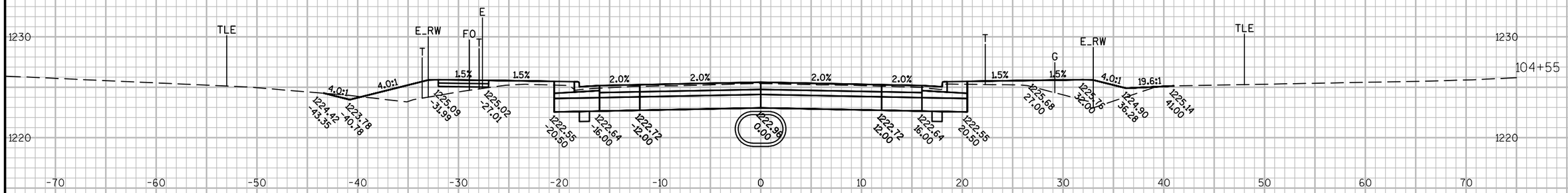


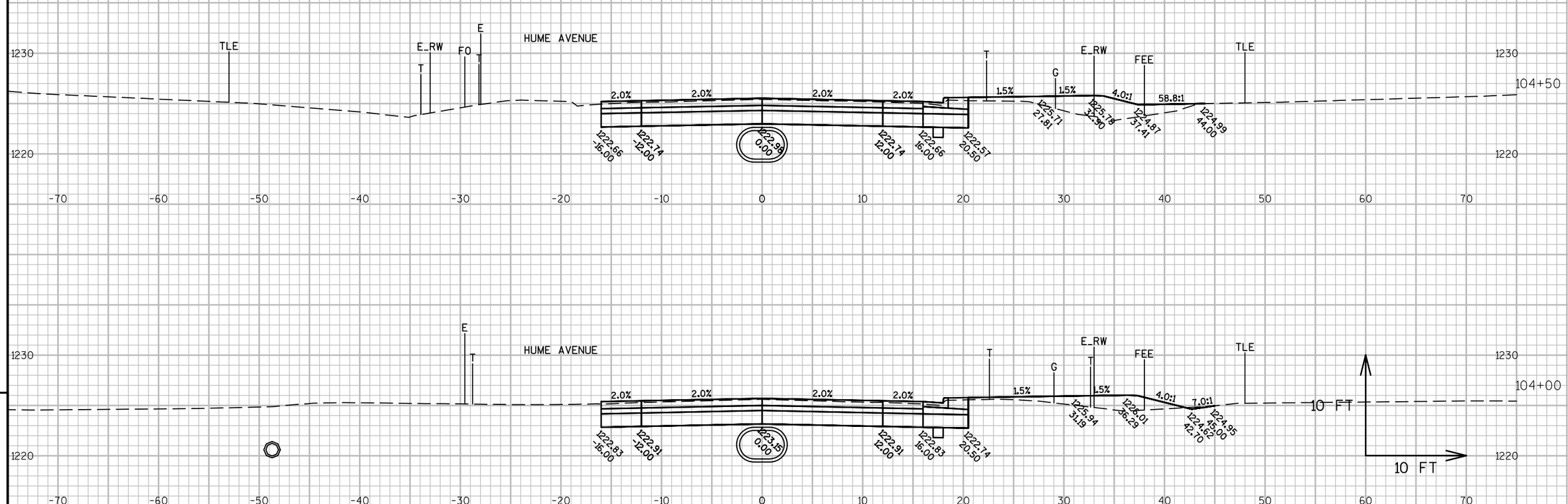
9

9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 239	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090233_XS
PLOT DATE : 7/31/2017 5:15 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49





9

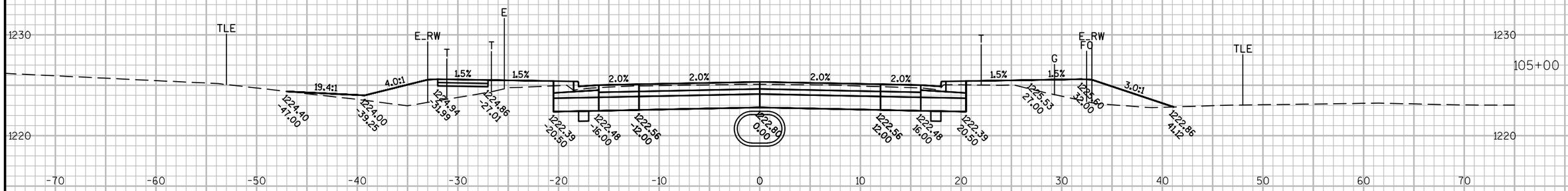
9

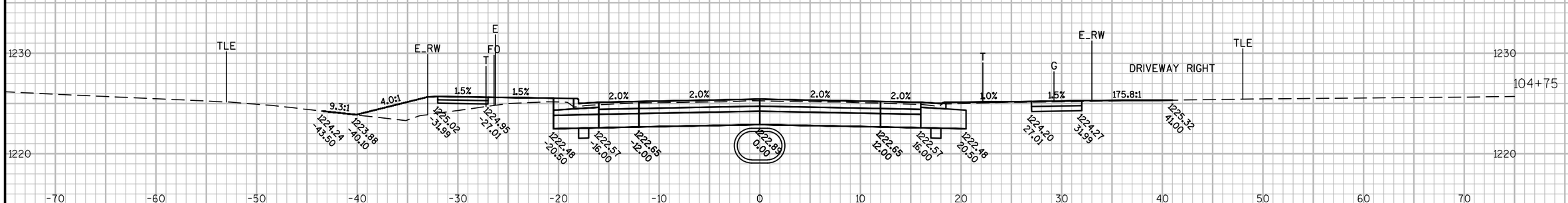
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 240	E

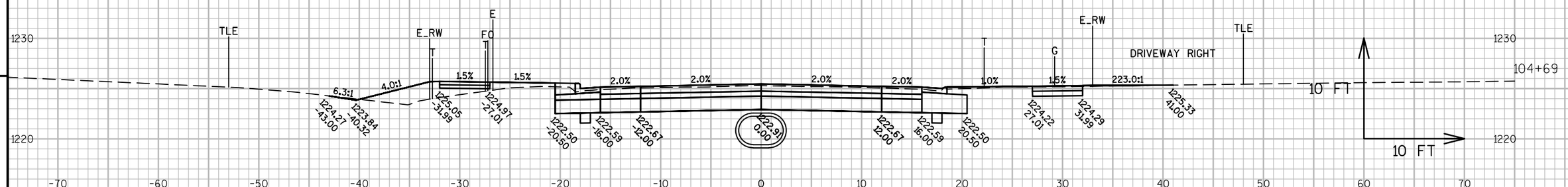
FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090234_XS

PLOT DATE : 7/31/2017 5:15 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49







9

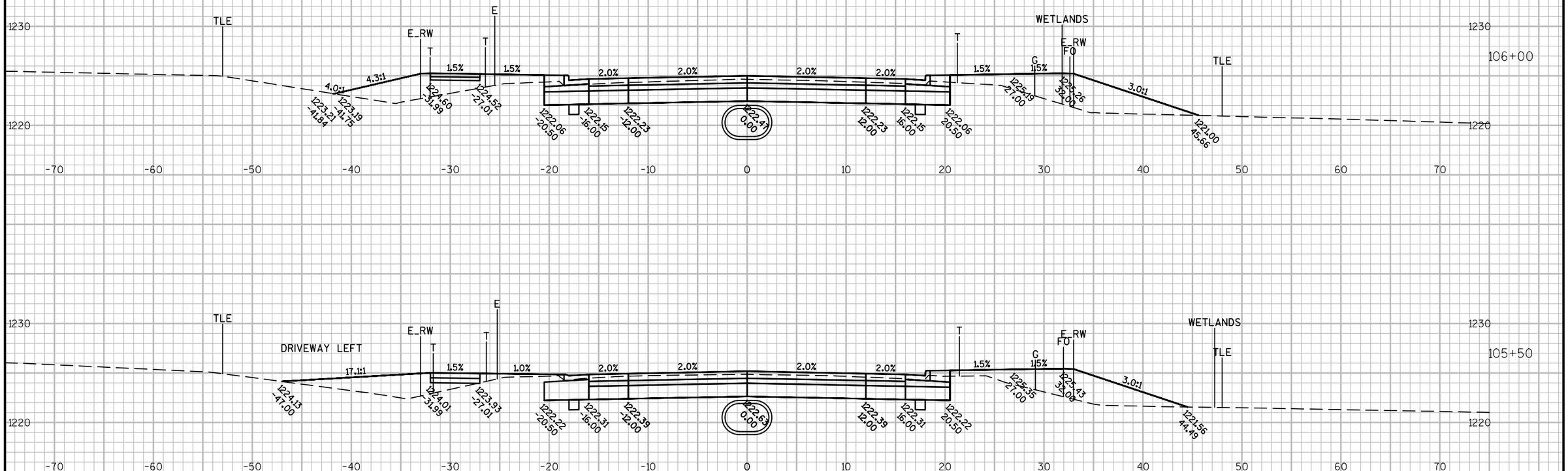
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 241	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090235_XS

PLOT DATE : 7/31/2017 5:15 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

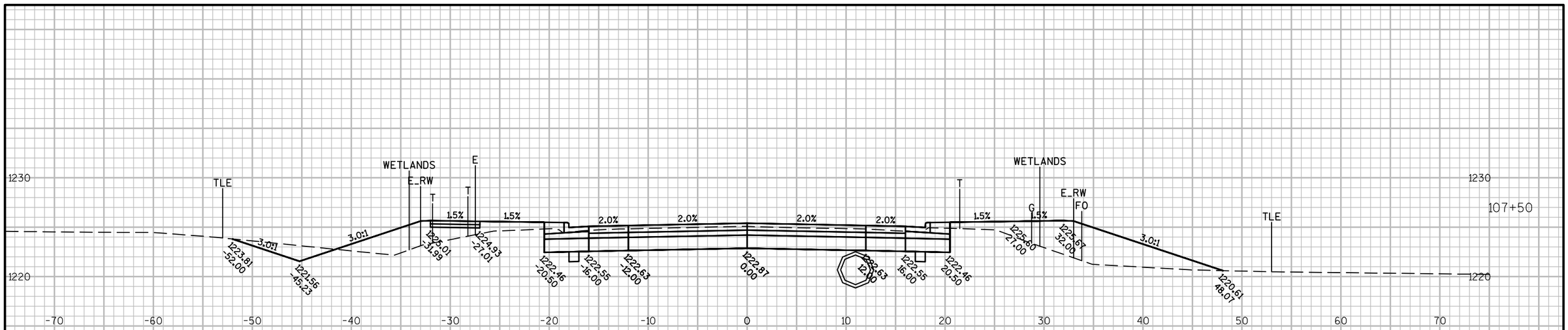
WISDOT/CADDS SHEET 49

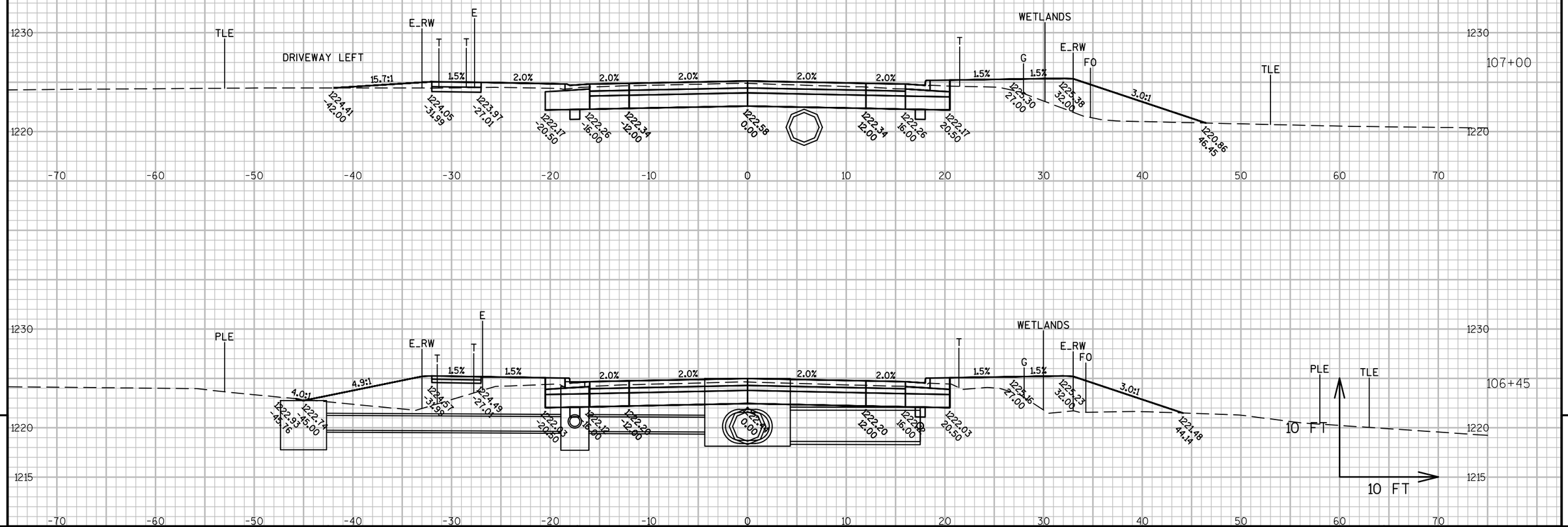


9

9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 242	E





9

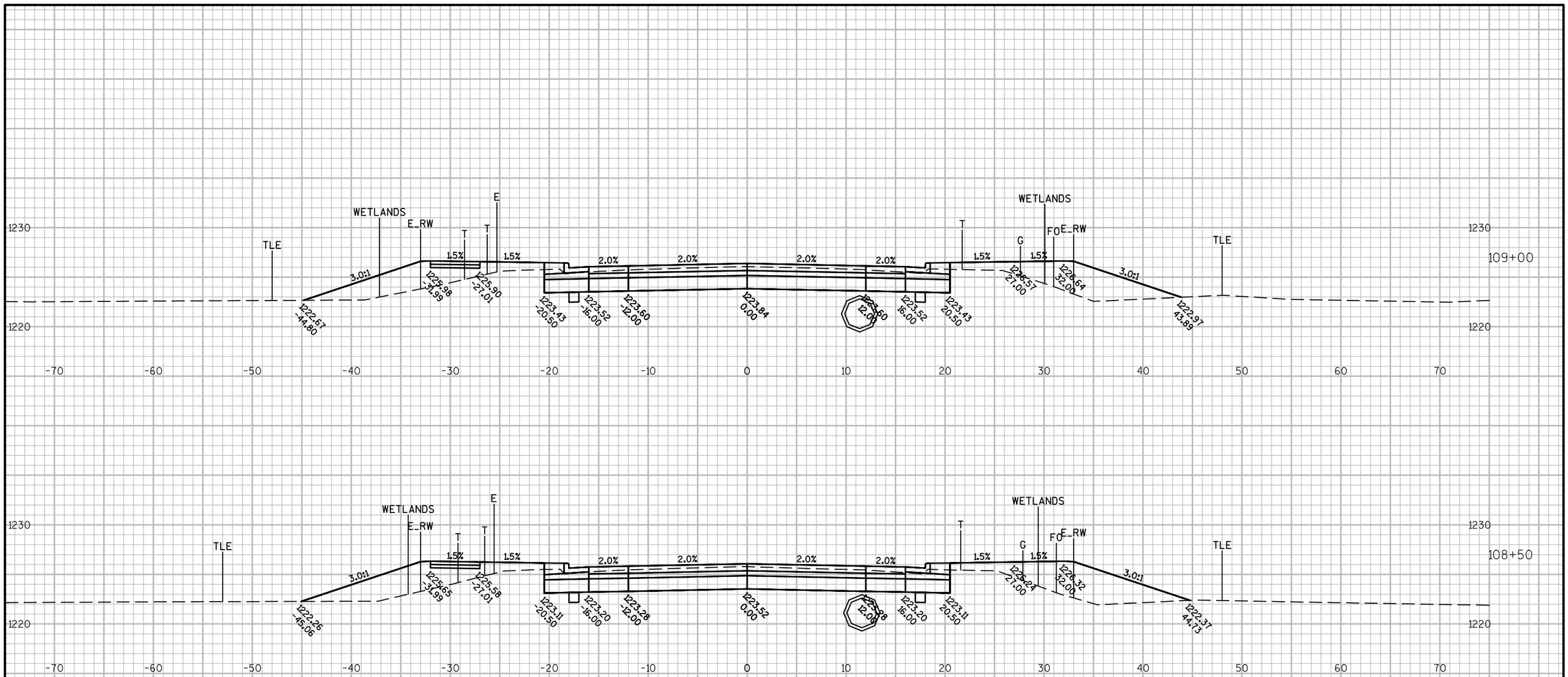
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 243	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090237_XS

PLOT DATE : 7/31/2017 5:16 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



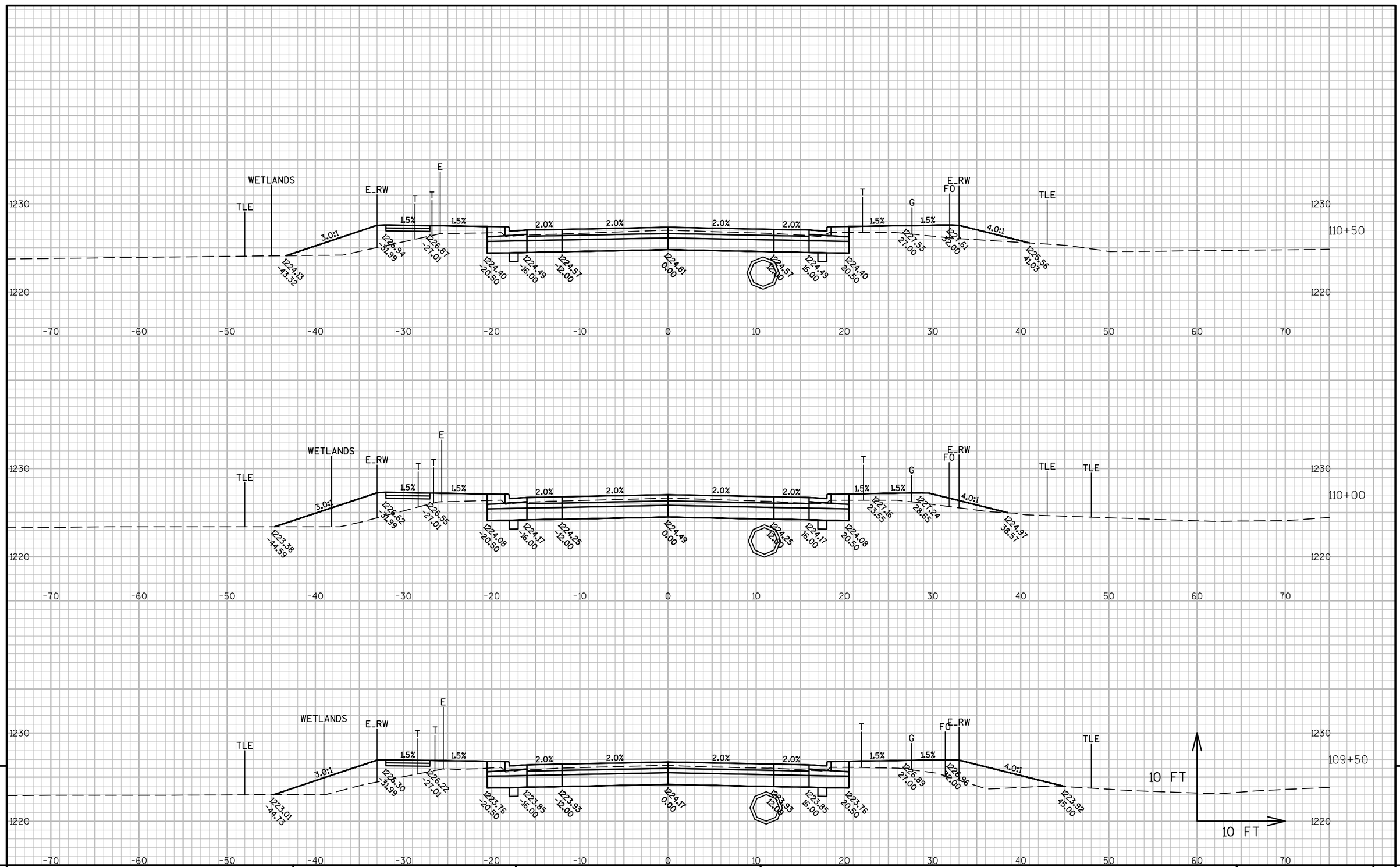
9

9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 244	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090238_XS

PLOT DATE : 7/31/2017 5:16 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT



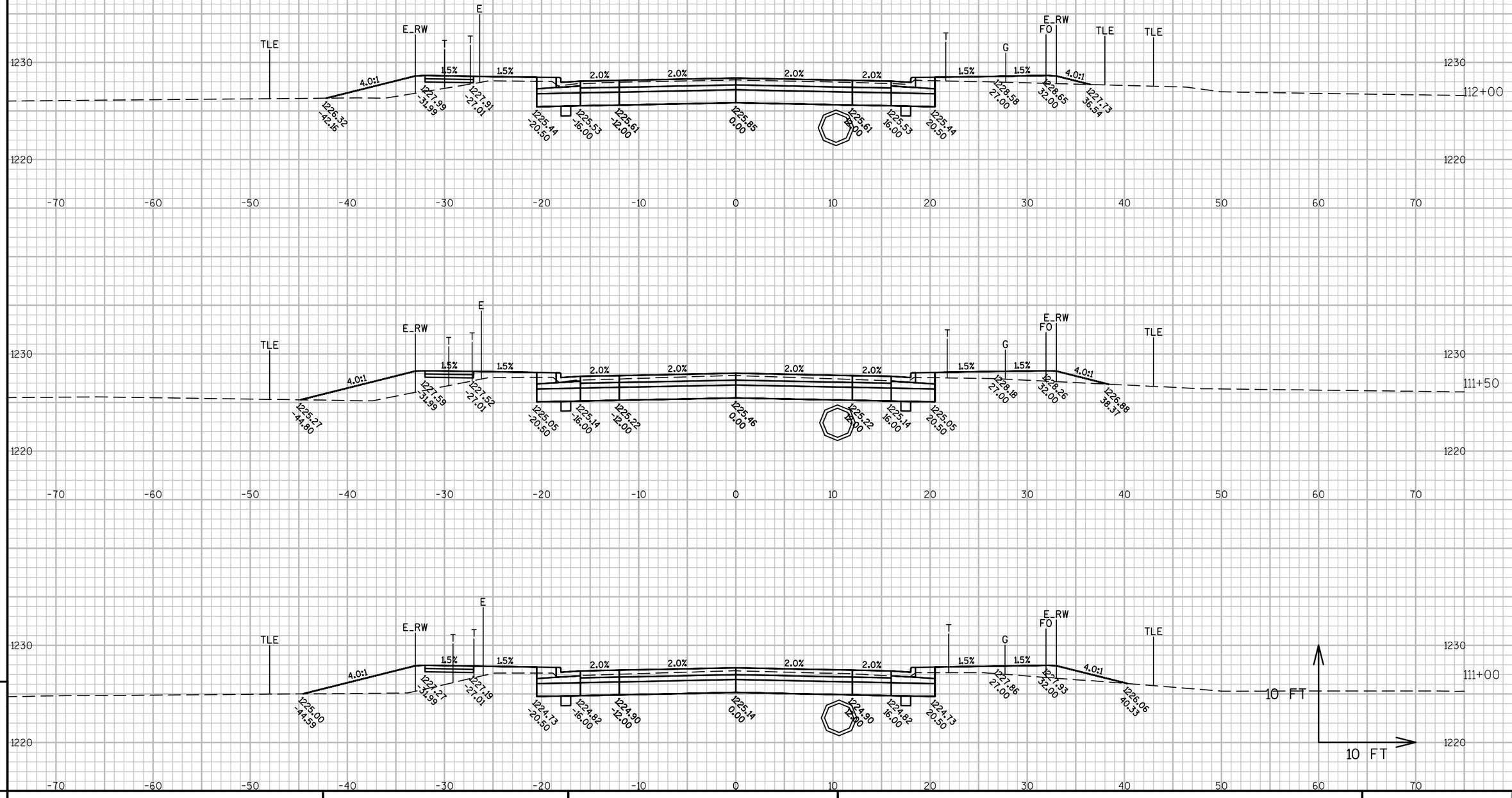
9

9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 245	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090239_XS

PLOT DATE : 7/31/2017 5:16 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT



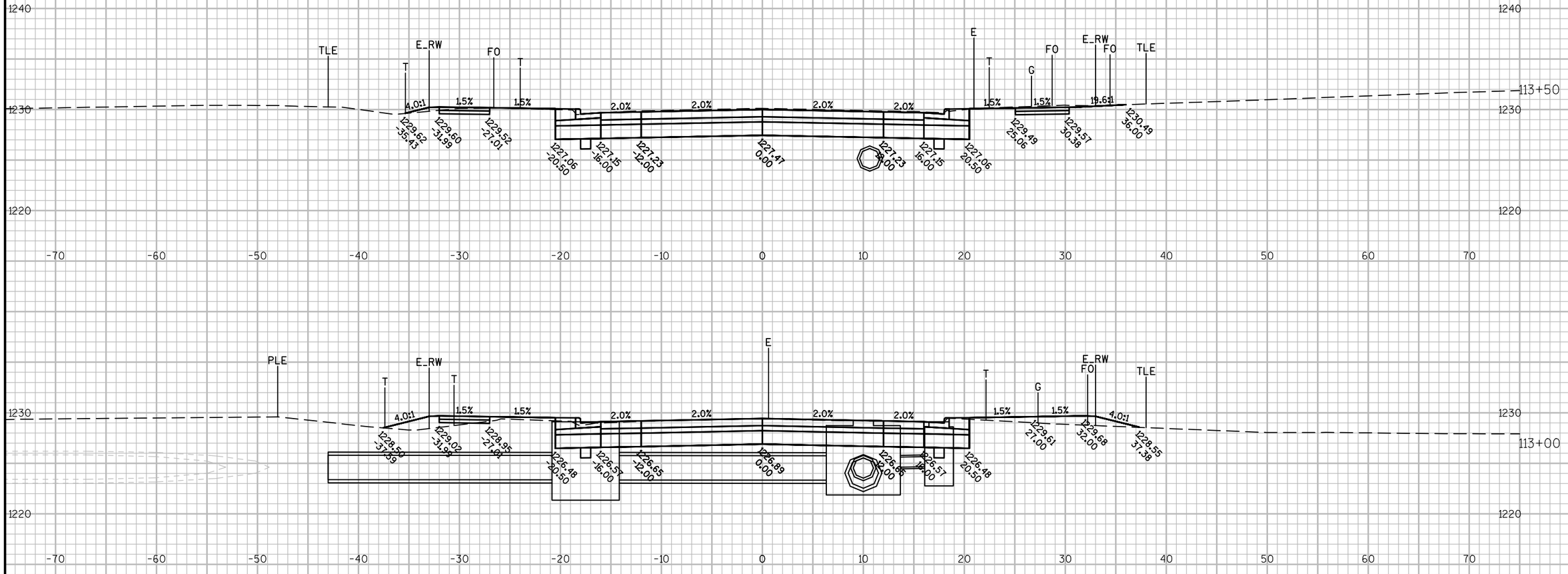
9

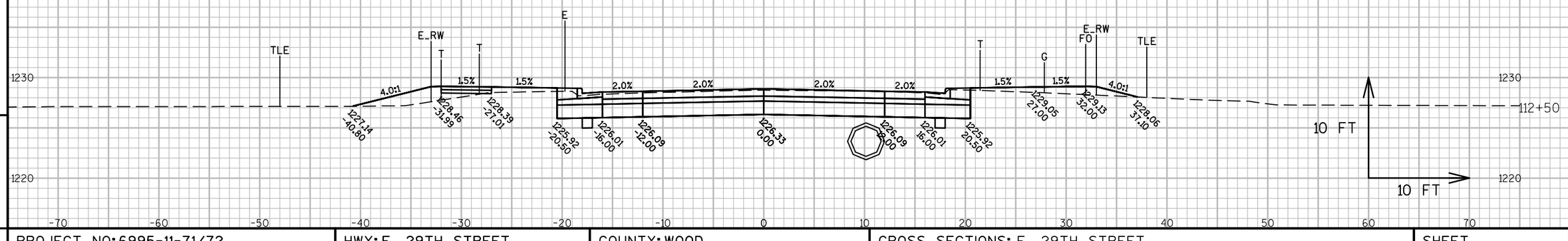
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 246	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090240_XS

PLOT DATE : 7/31/2017 5:17 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT





9

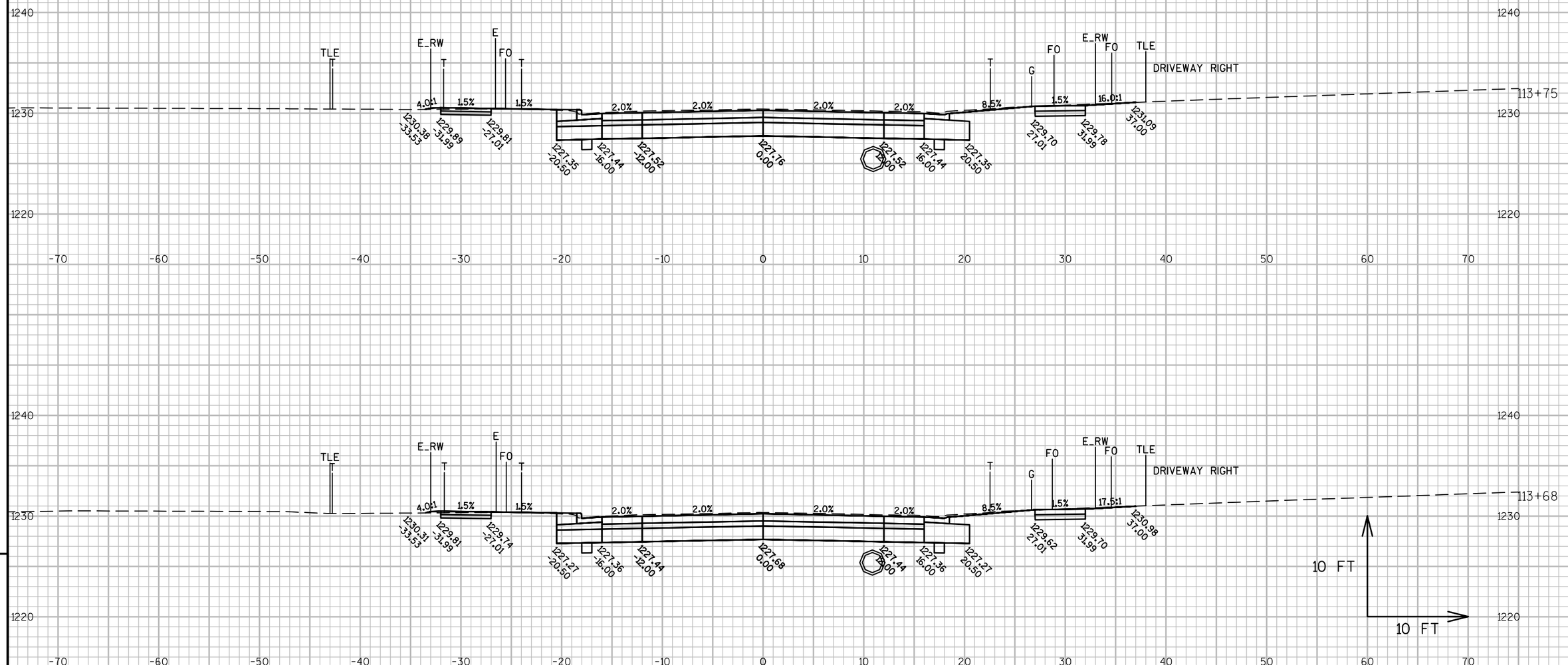
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 247	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090241_XS

PLOT DATE : 7/31/2017 5:17 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

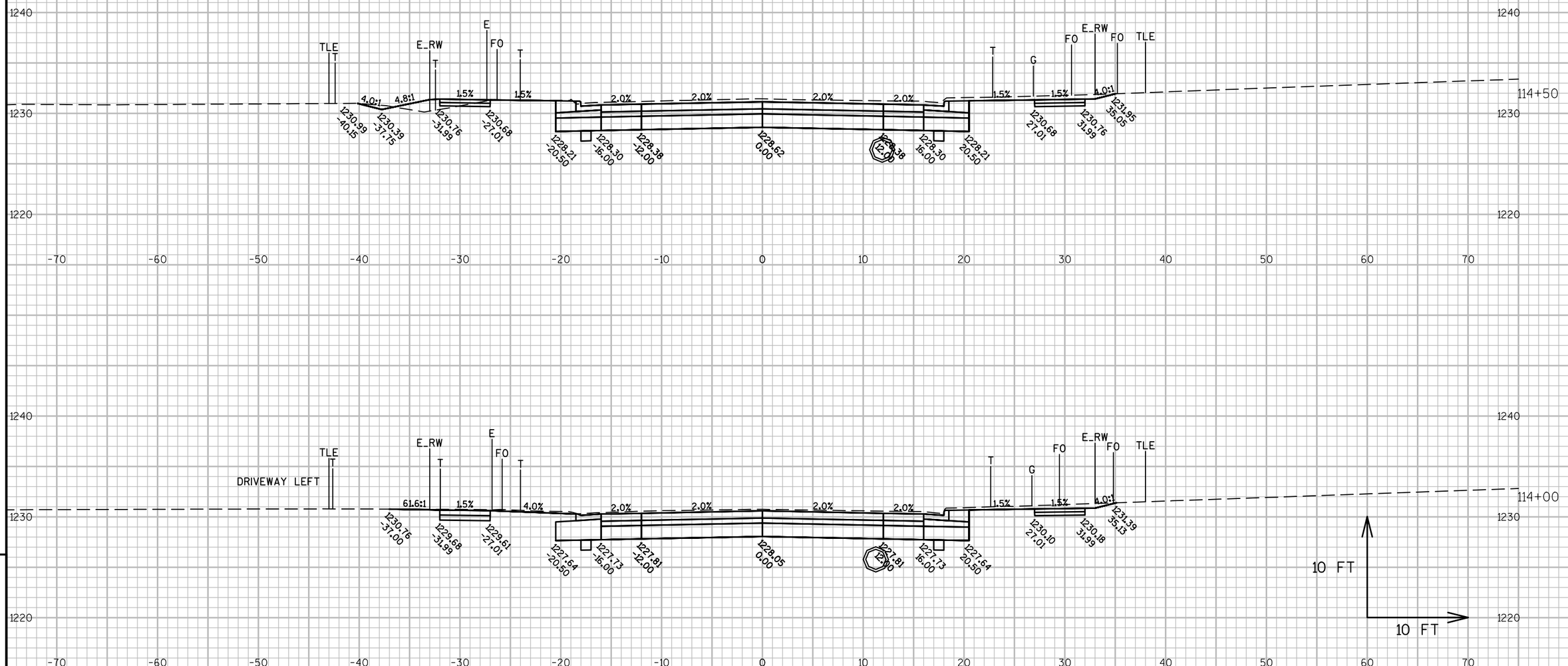
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 248	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090242_XS

PLOT DATE : 7/31/2017 5:17 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

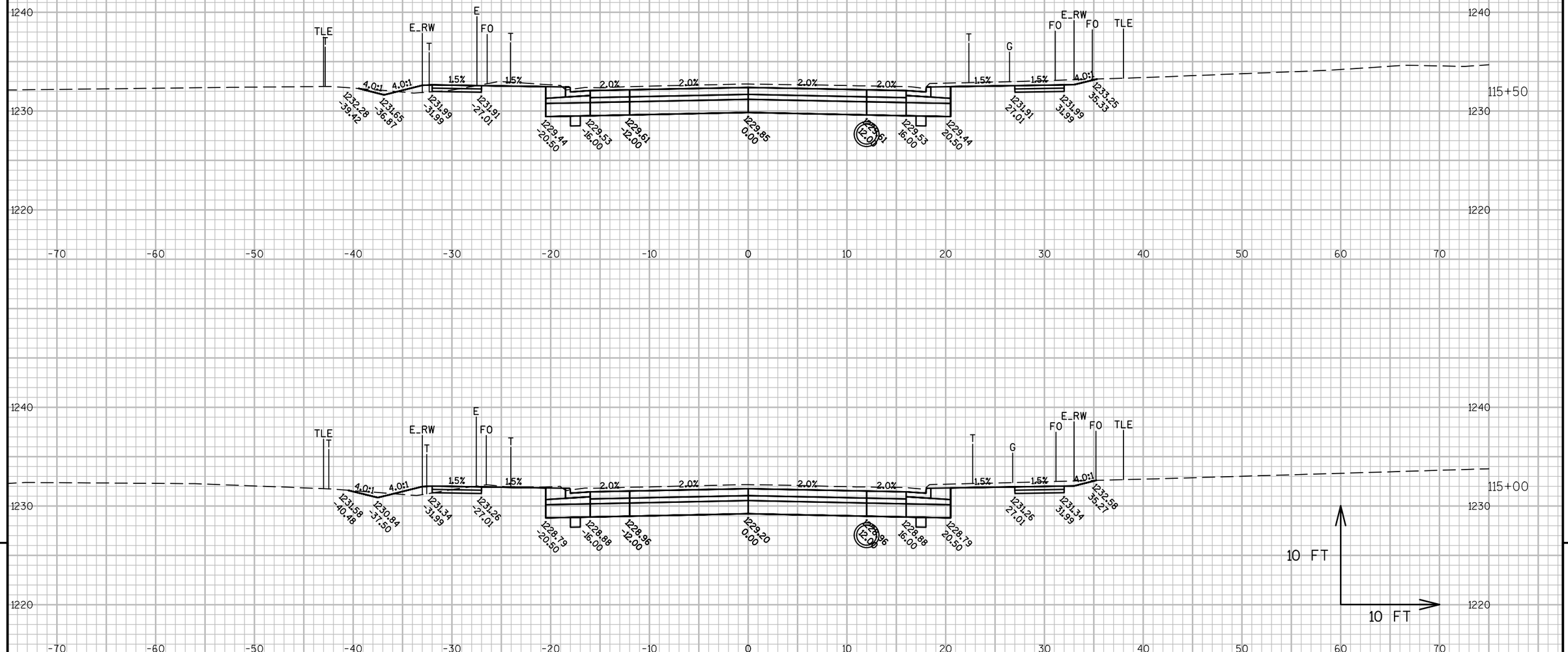


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 249	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090243_XS

PLOT DATE : 7/31/2017 5:18 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

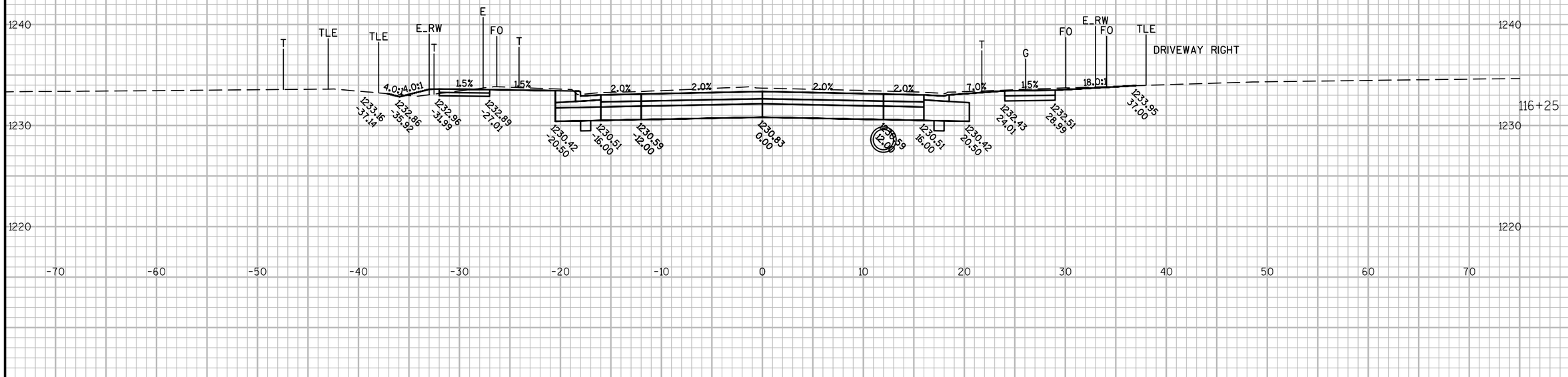


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 250	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090244_XS

PLOT DATE : 7/31/2017 5:18 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

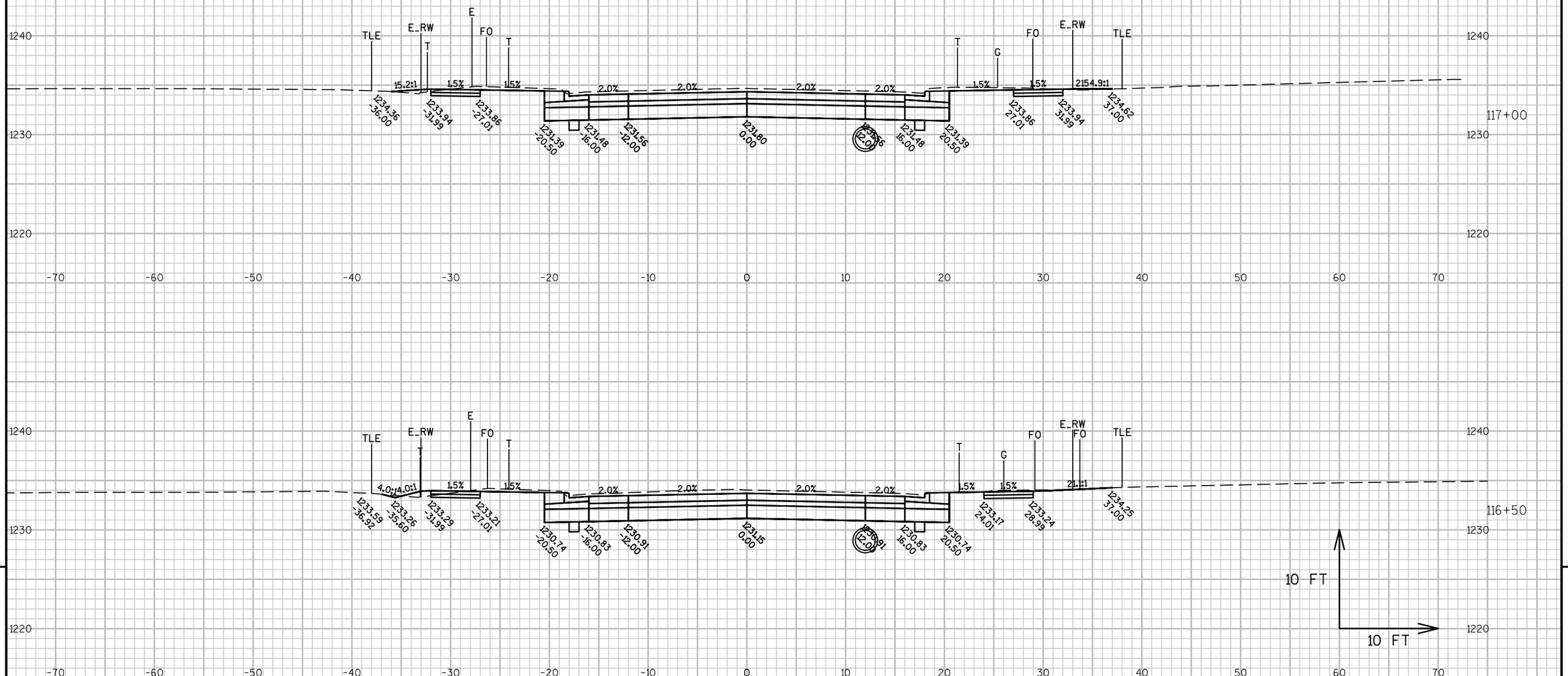
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 251	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090245_XS

PLOT DATE : 7/31/2017 5:18 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

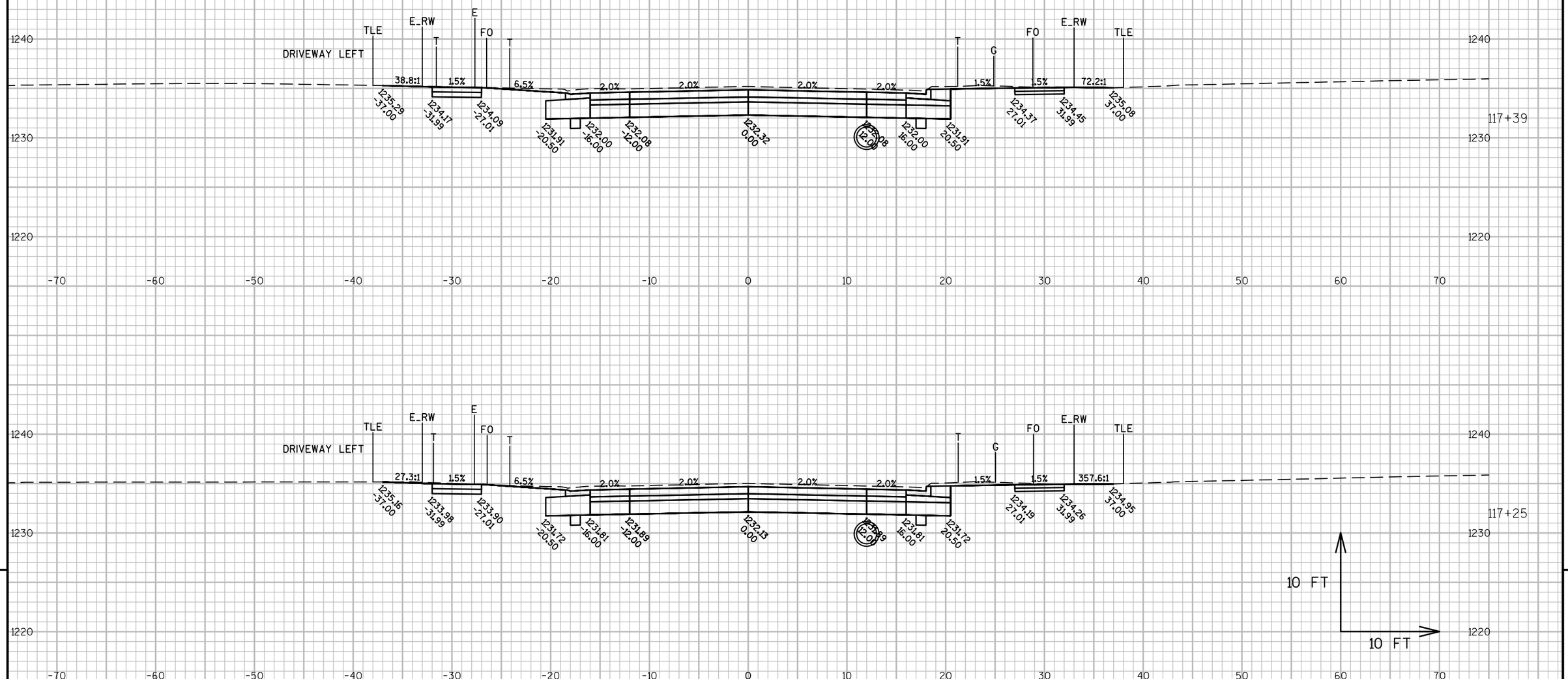
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 252	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090246_XS

PLOT DATE : 7/31/2017 5:18 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

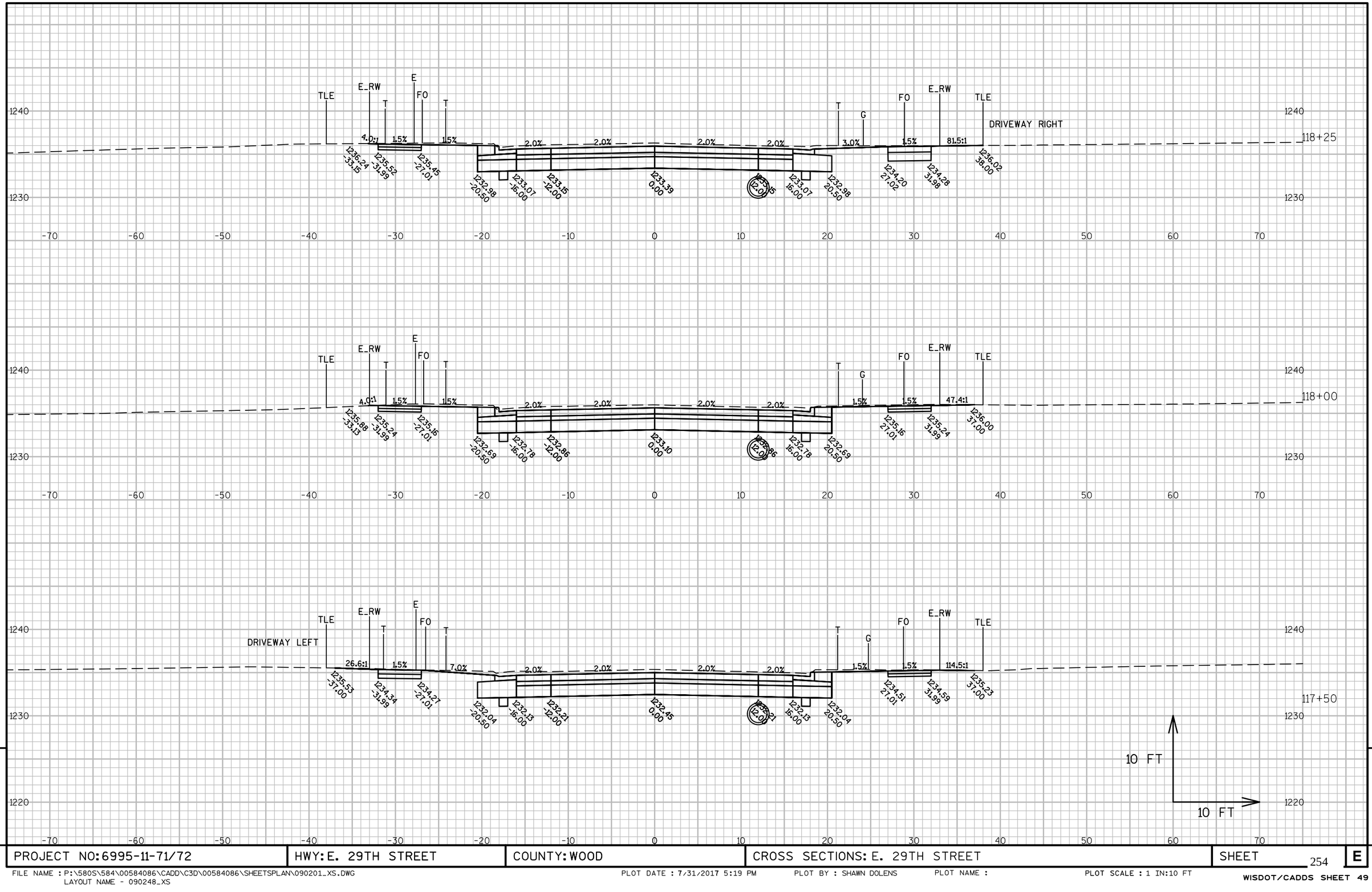


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 253 E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090247_XS

PLOT DATE : 7/31/2017 5:19 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



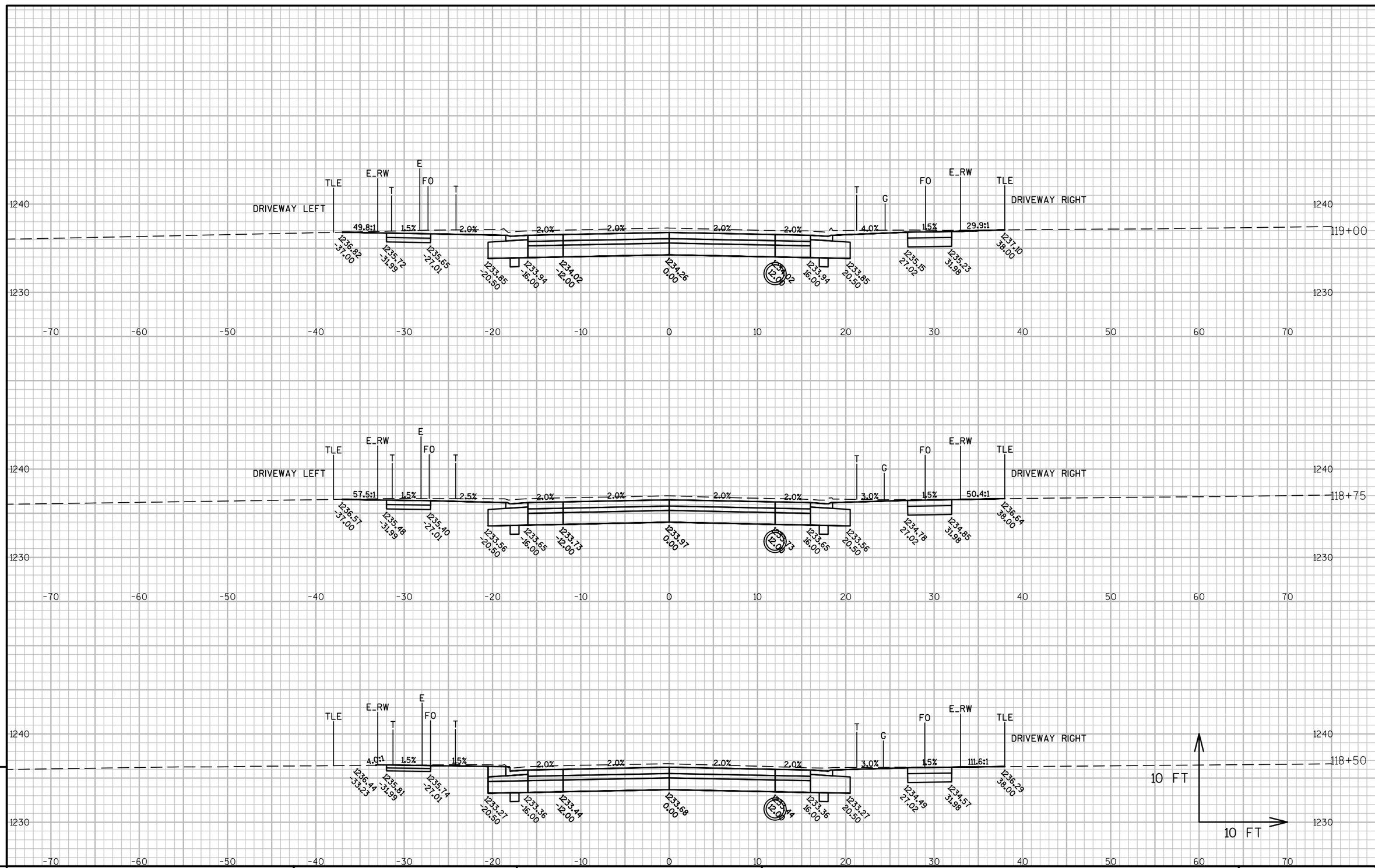
9

9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 254	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090248_XS

PLOT DATE : 7/31/2017 5:19 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

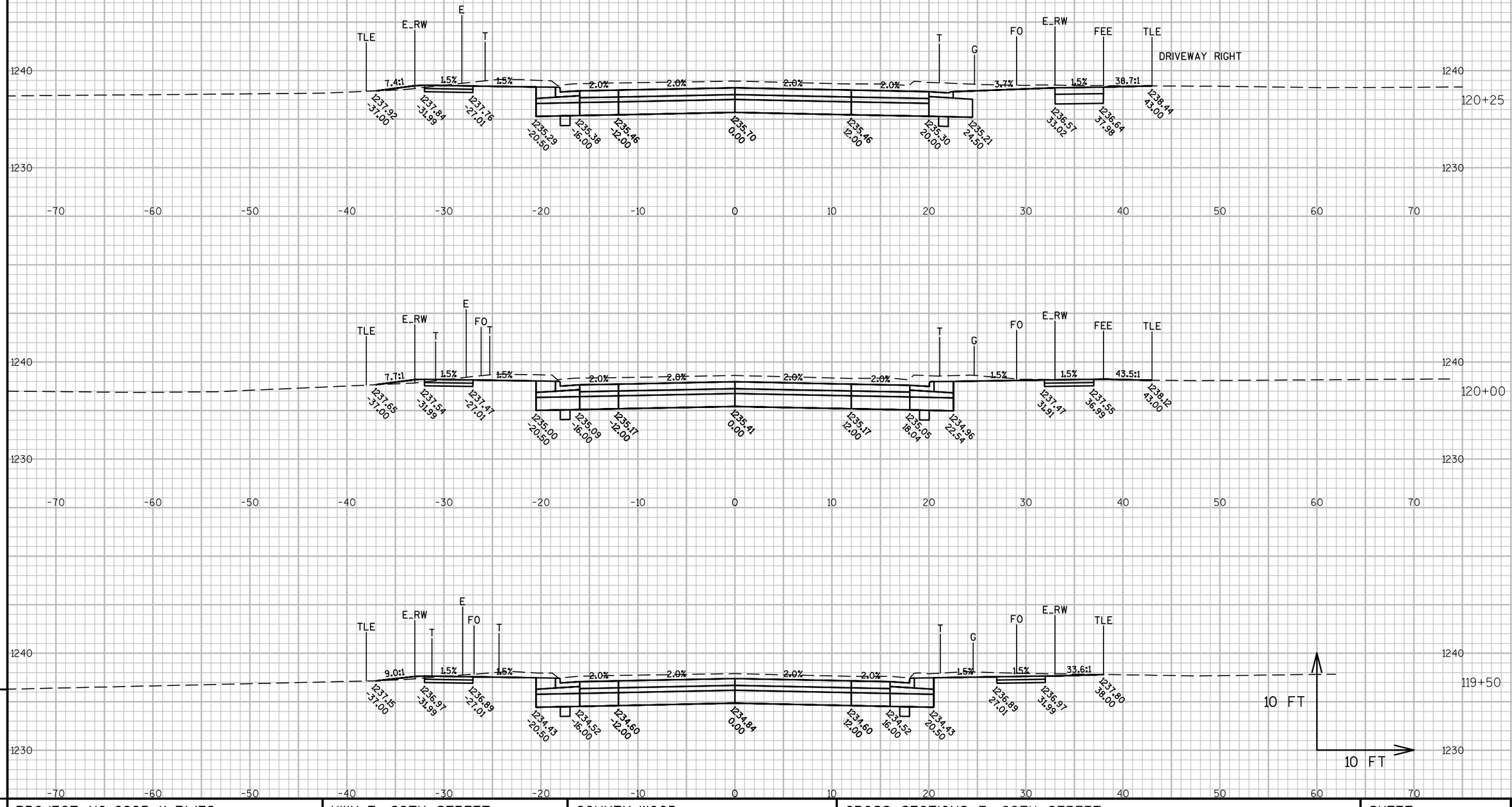


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 255	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090249_XS

PLOT DATE : 7/31/2017 5:19 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



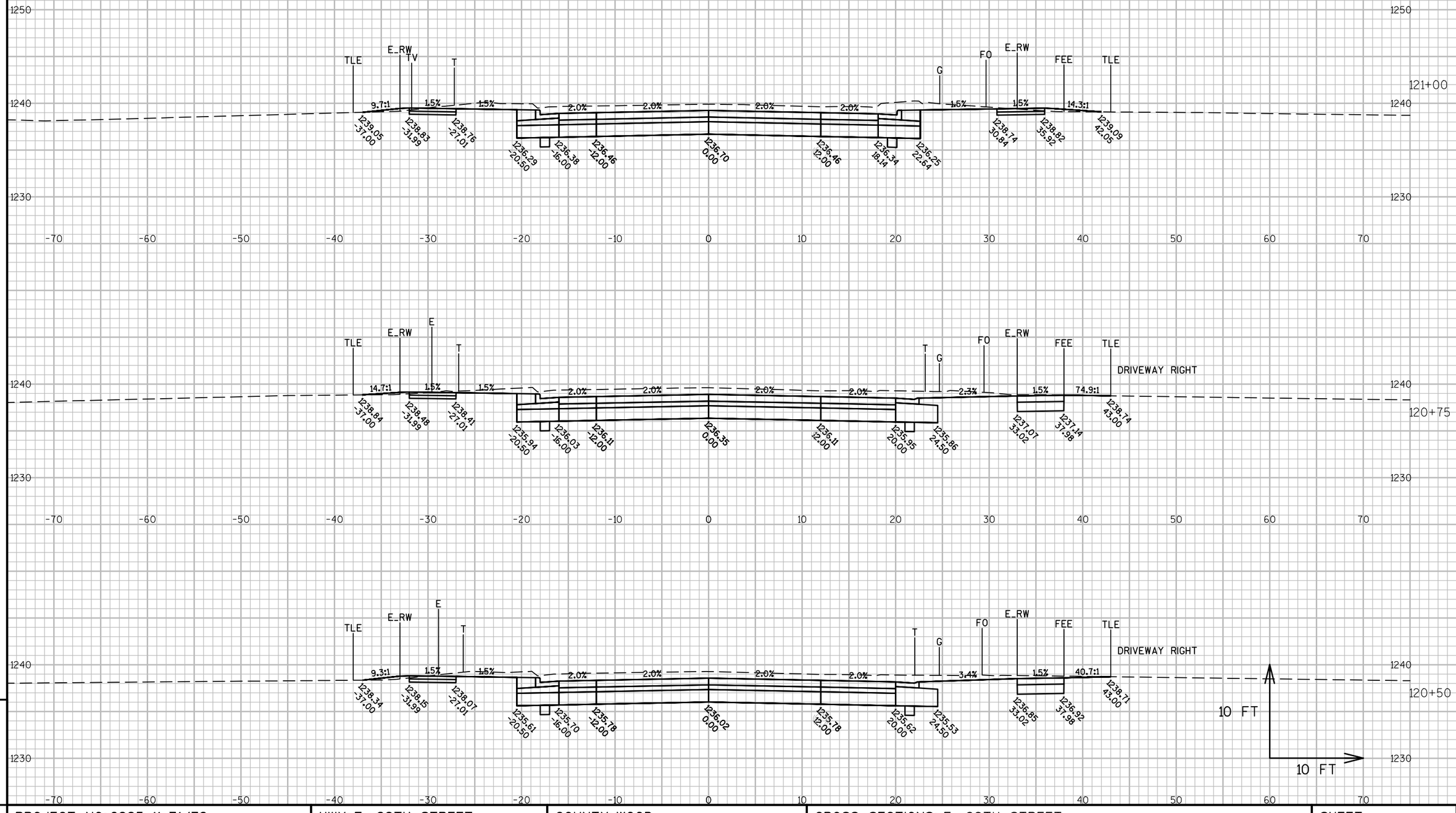
9

9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 256	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090250_XS

PLOT DATE : 7/31/2017 5:20 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

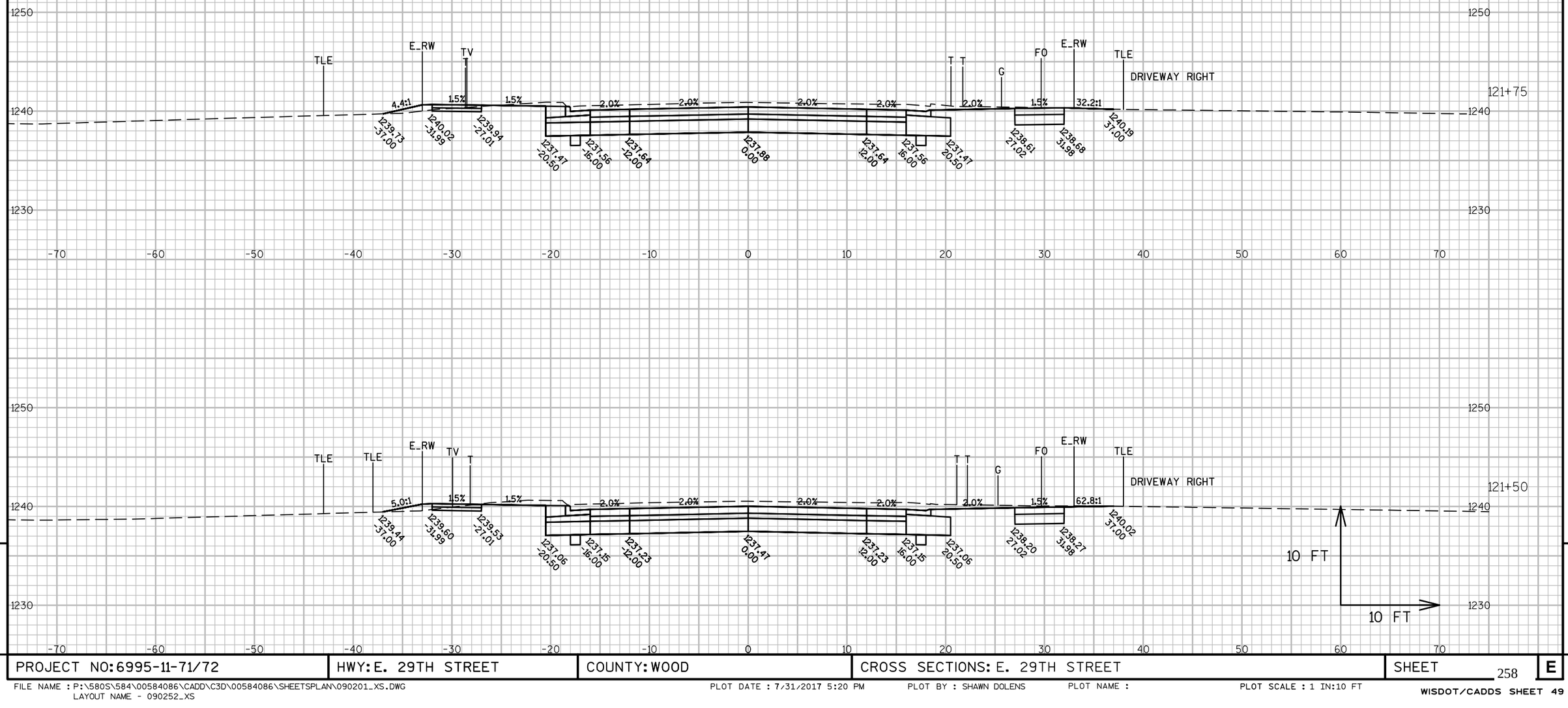


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 257	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090251_XS

PLOT DATE : 7/31/2017 5:20 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

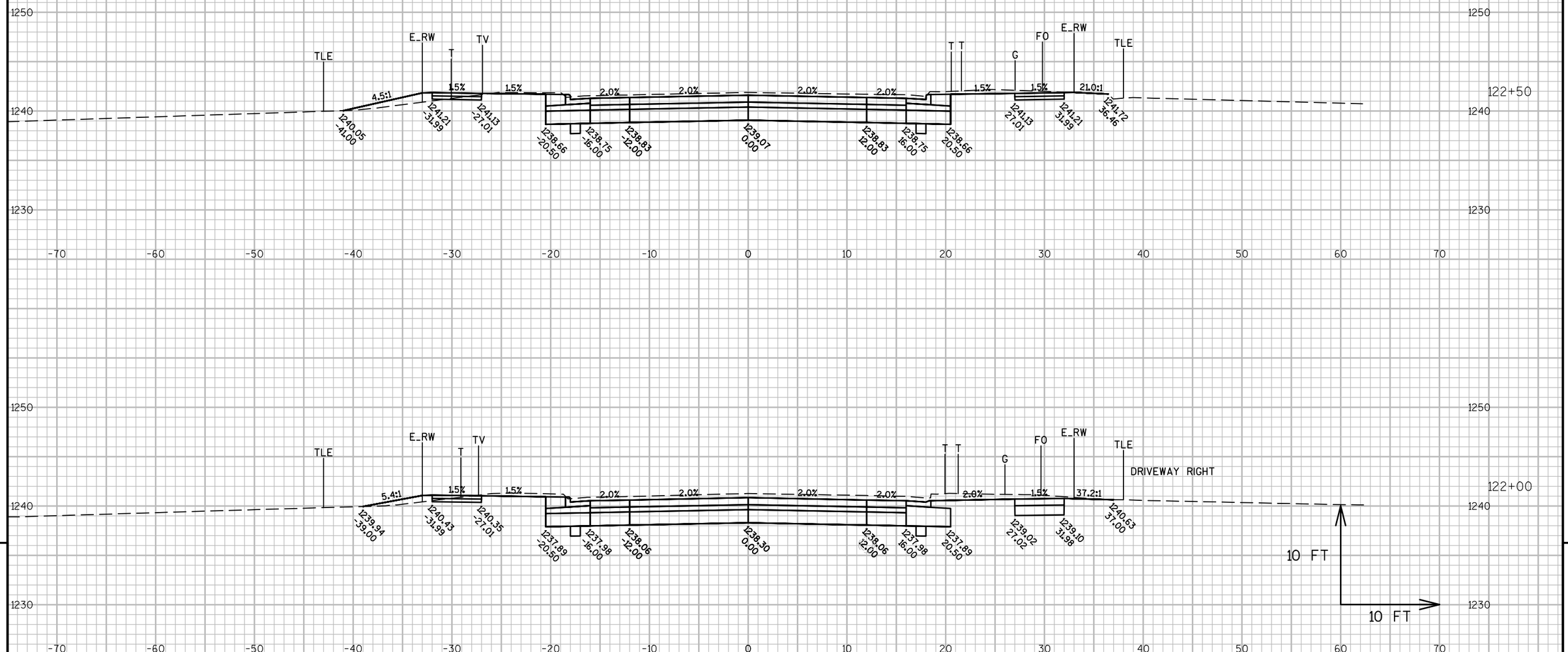
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 258	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090252_XS

PLOT DATE : 7/31/2017 5:20 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

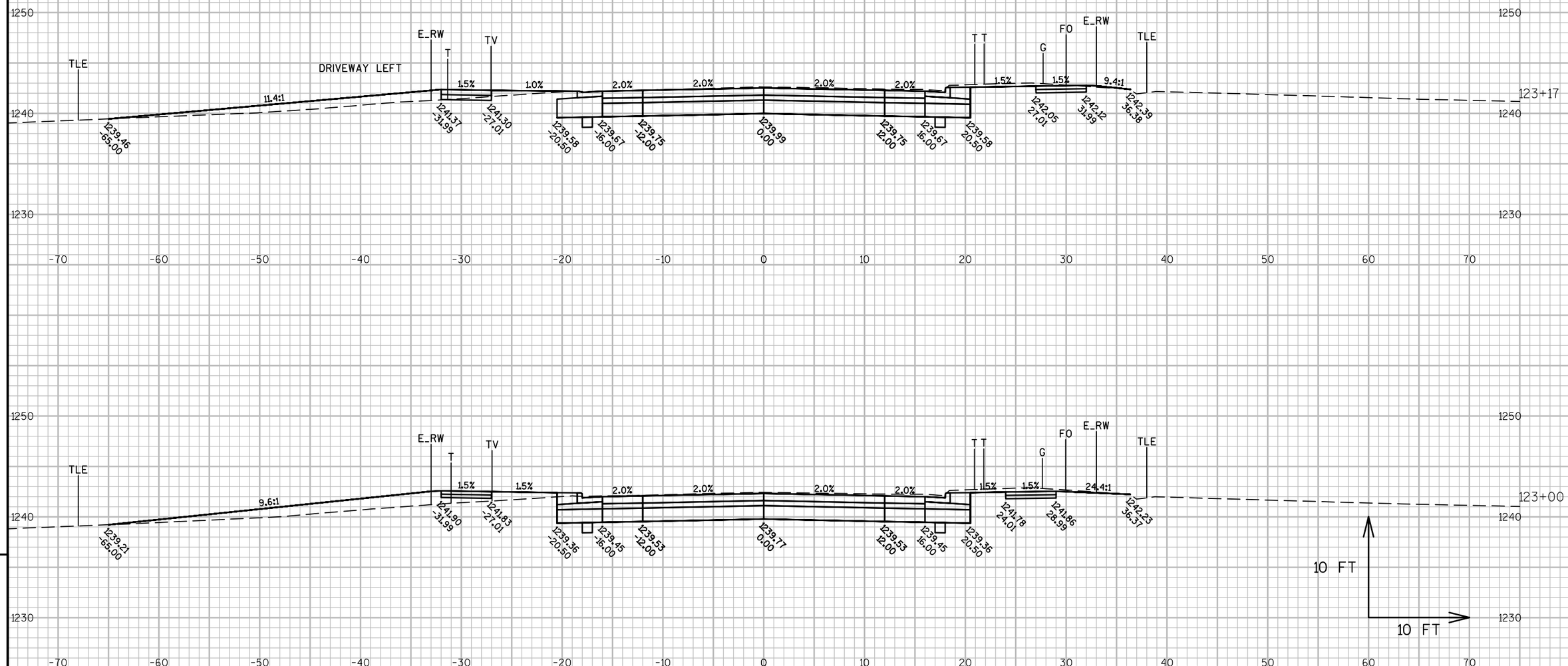


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 259 E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090253_XS

PLOT DATE : 7/31/2017 5:20 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

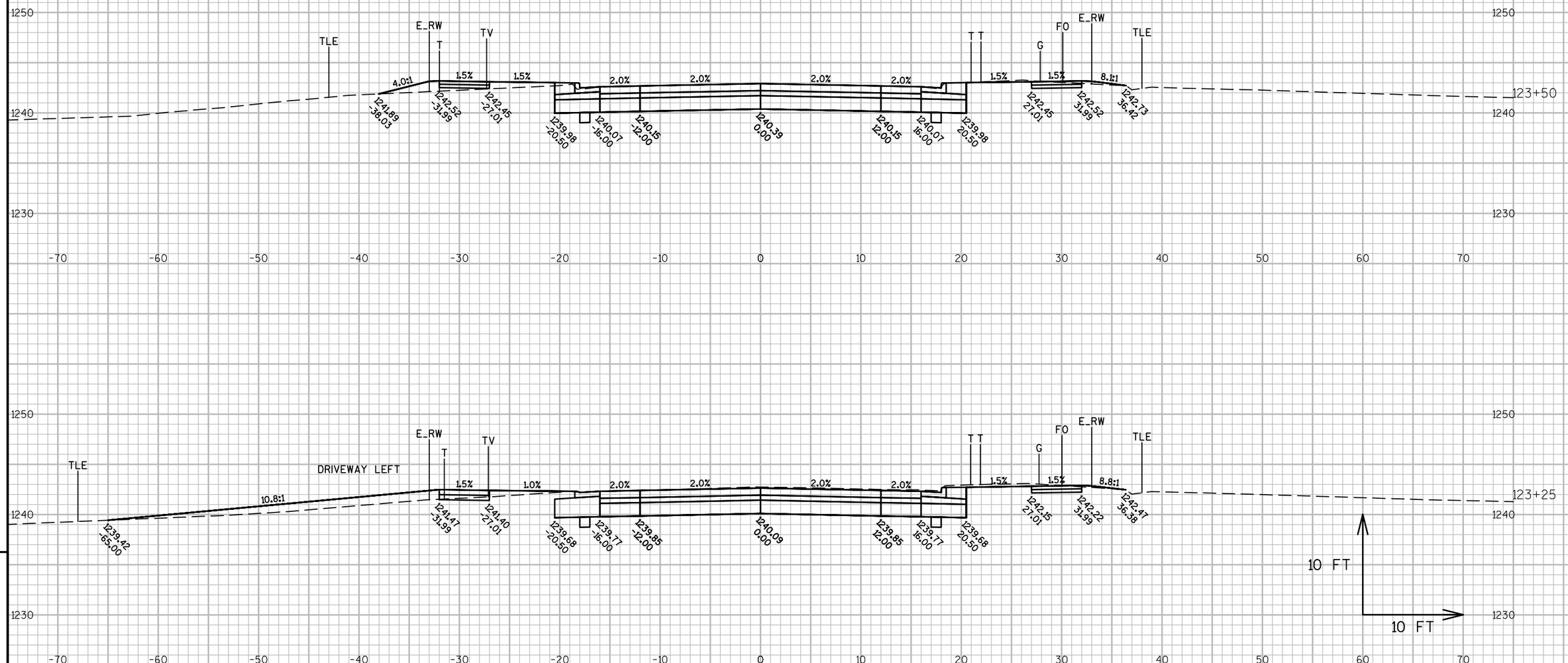


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 260 E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090254_XS

PLOT DATE : 7/31/2017 5:21 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

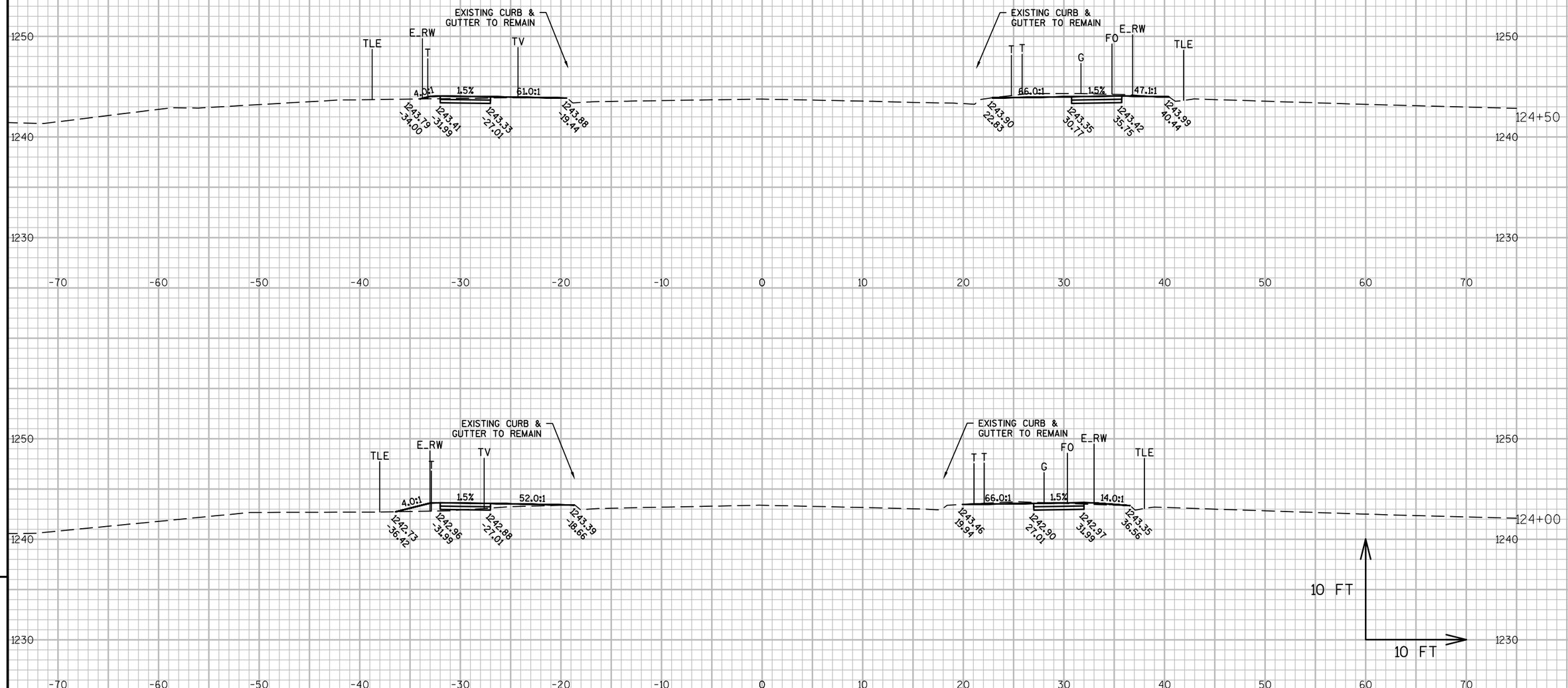
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 261 E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090255_XS

PLOT DATE : 7/31/2017 5:21 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

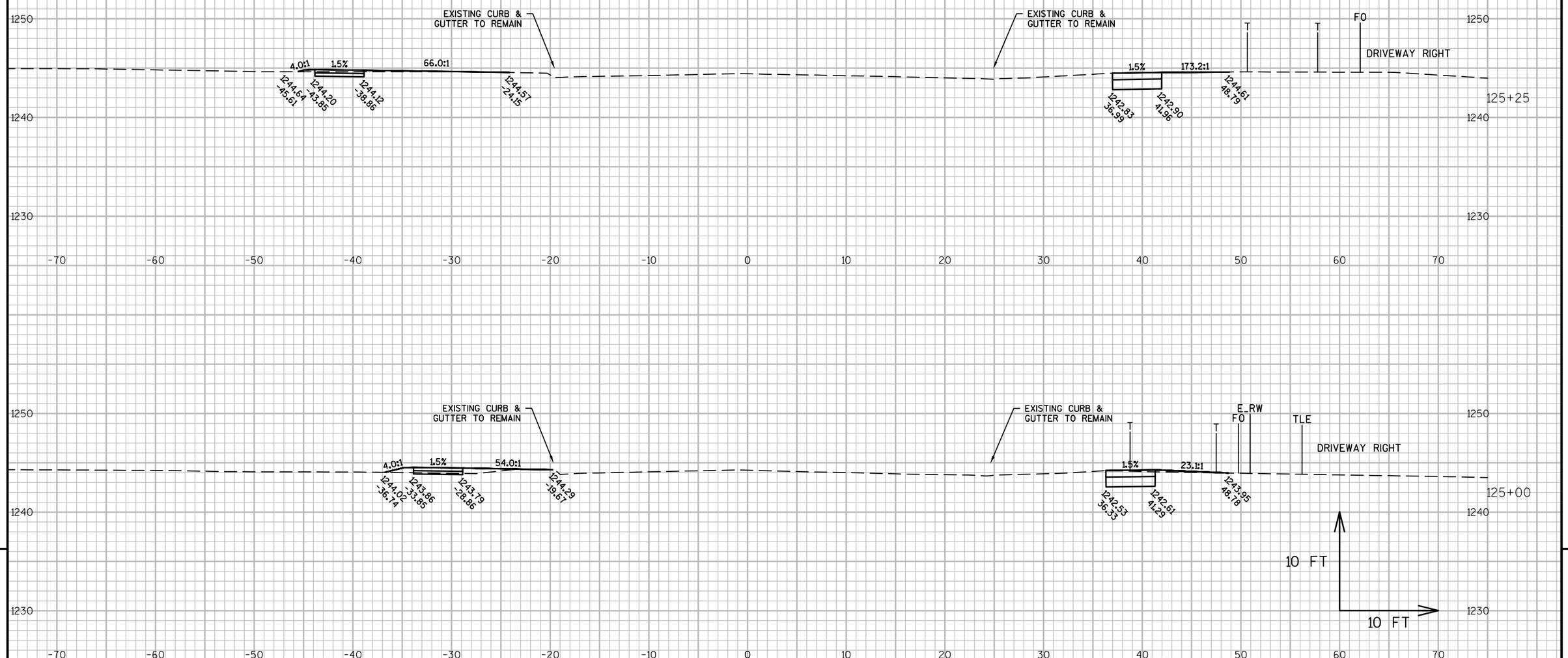
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 262 E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090256_XS

PLOT DATE : 7/31/2017 5:21 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

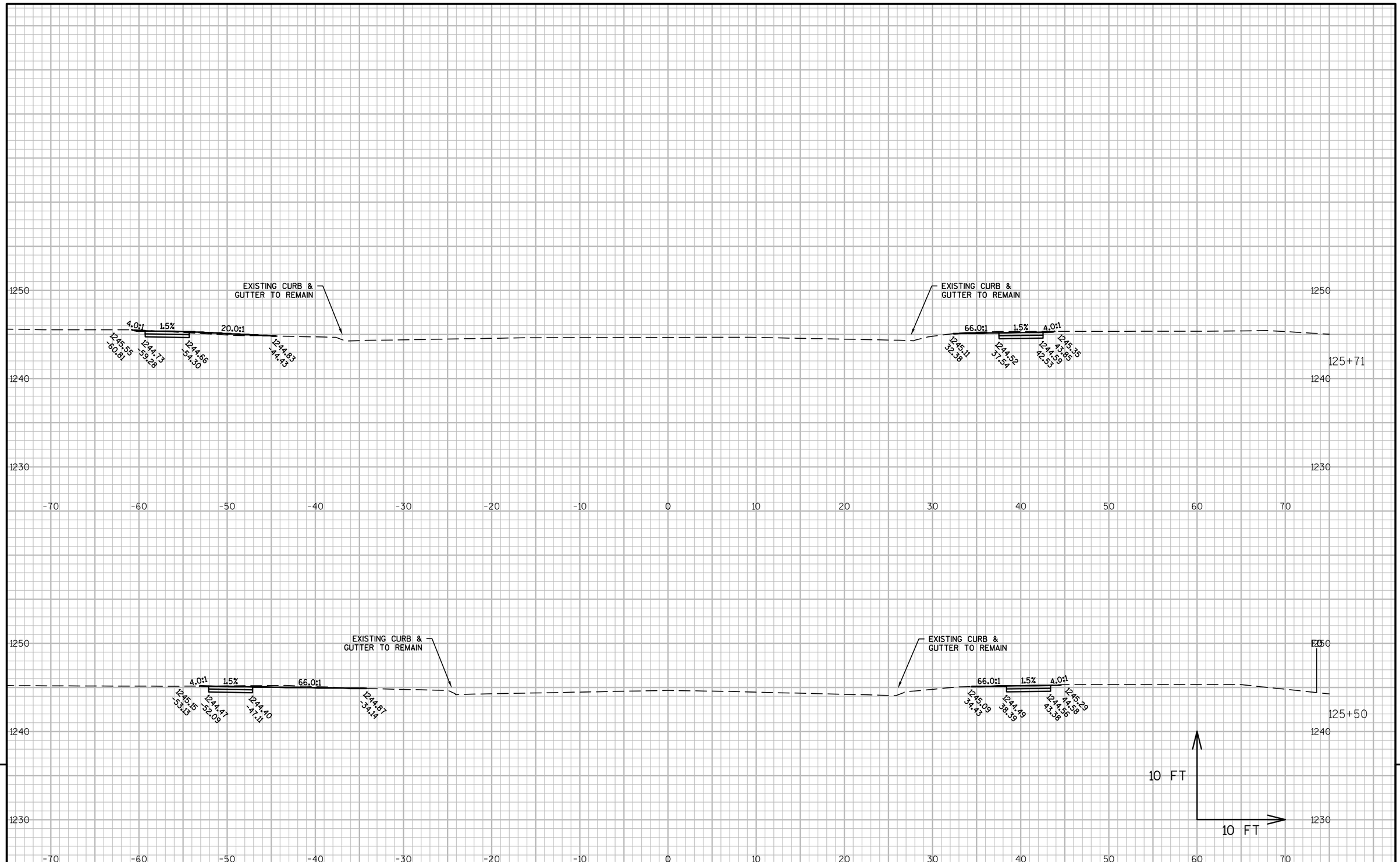
9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 263 E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090257_XS

PLOT DATE : 7/31/2017 5:21 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 264	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090258_XS

PLOT DATE : 7/31/2017 5:22 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

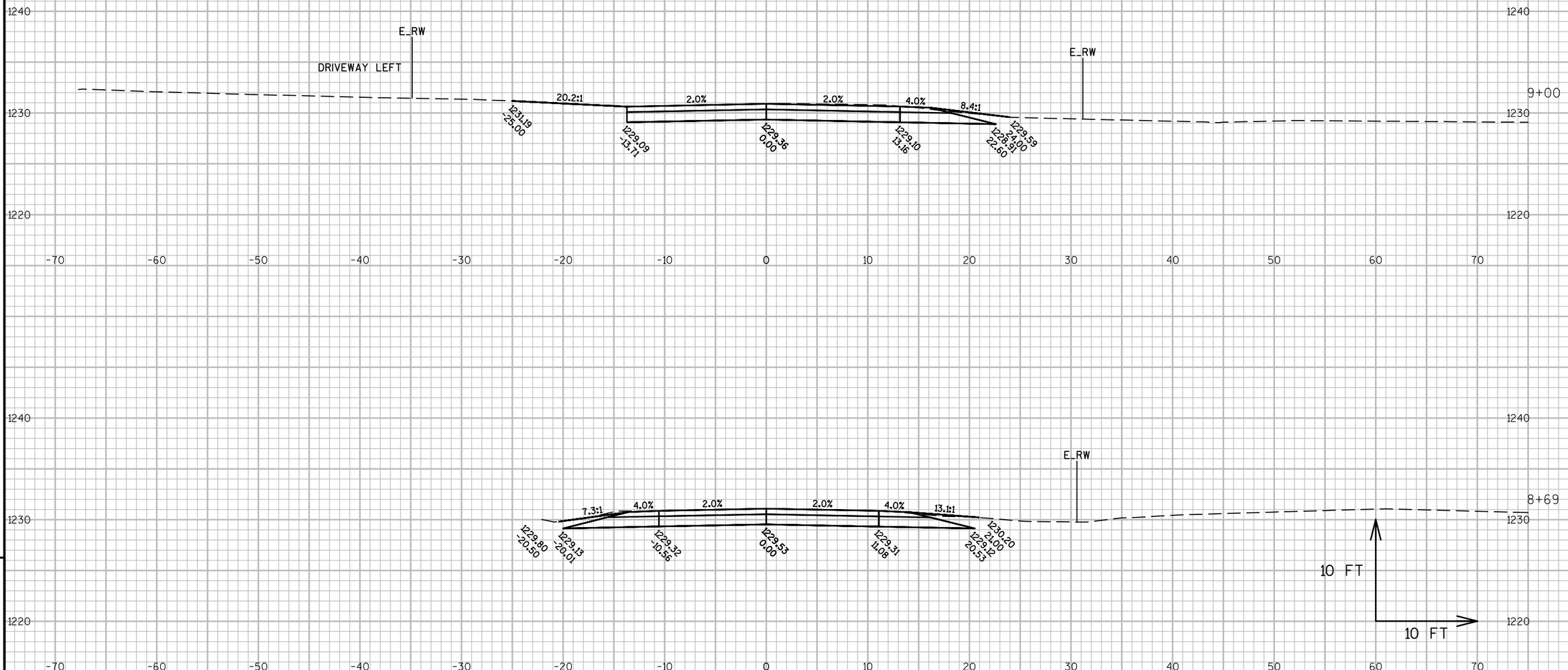
9

9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: E. 29TH STREET	SHEET 265	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090259_XS

PLOT DATE : 7/31/2017 5:22 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

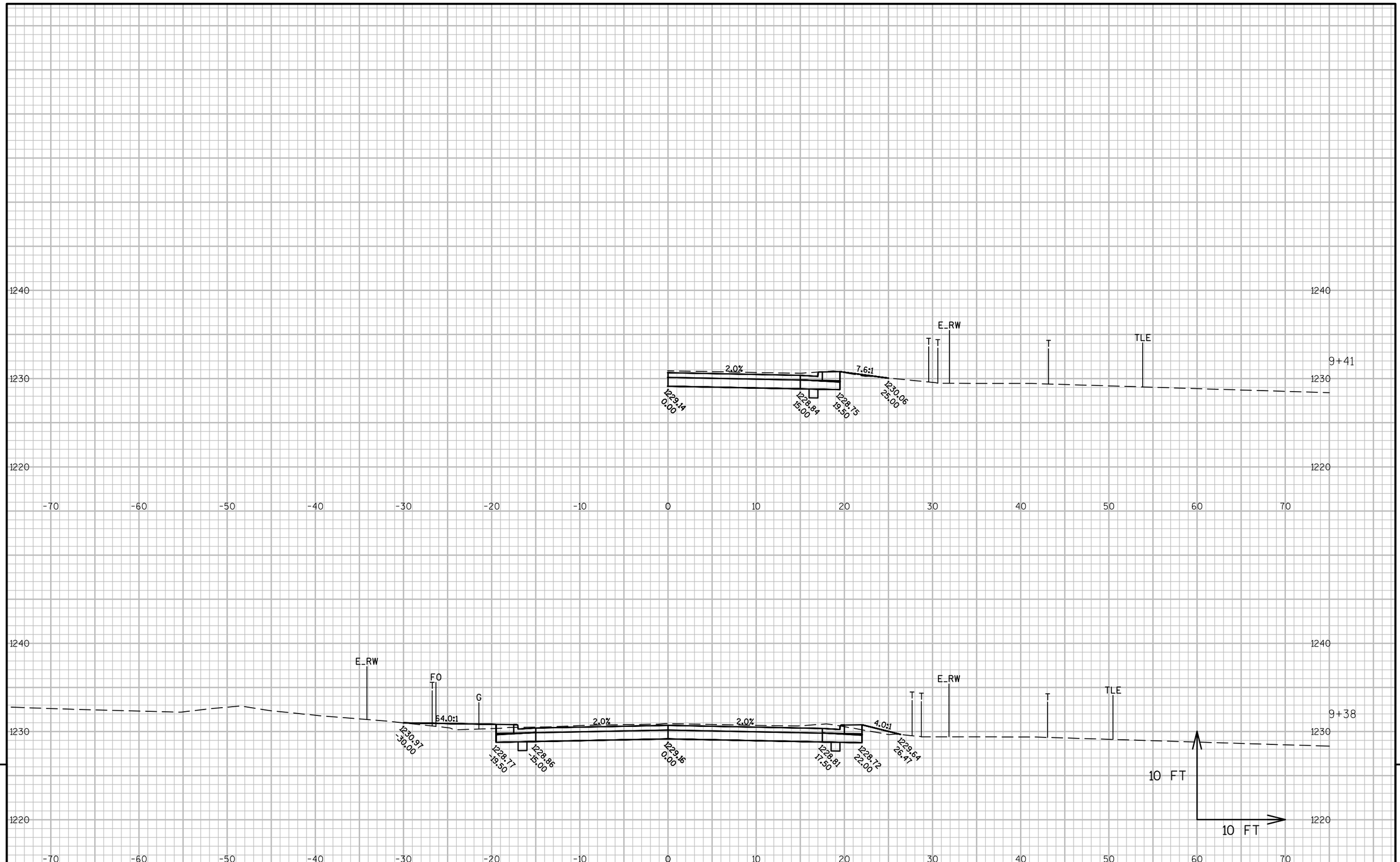


PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: WASHINGTON AVENUE	SHEET 266 E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090204_XS.DWG
LAYOUT NAME - 090260_XS

PLOT DATE : 7/31/2017 5:53 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



9

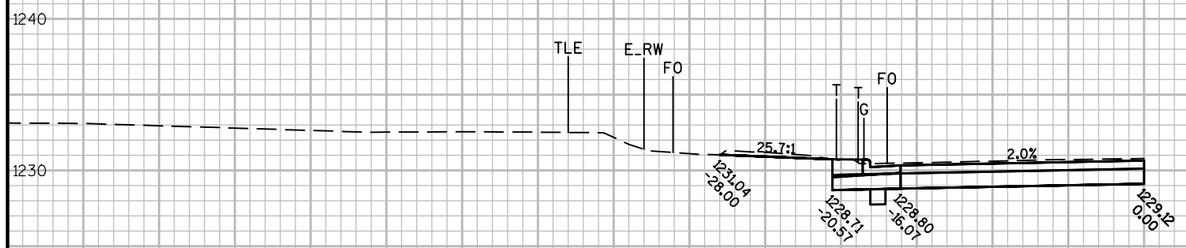
9

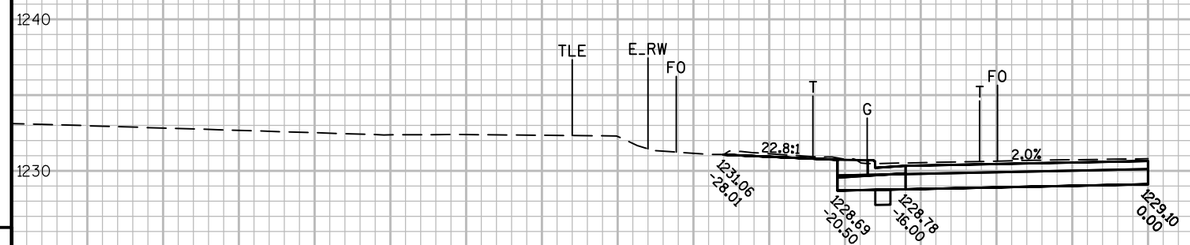
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: WASHINGTON AVENUE	SHEET 267	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090204_XS.DWG
LAYOUT NAME - 090261_XS

PLOT DATE : 7/31/2017 5:53 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

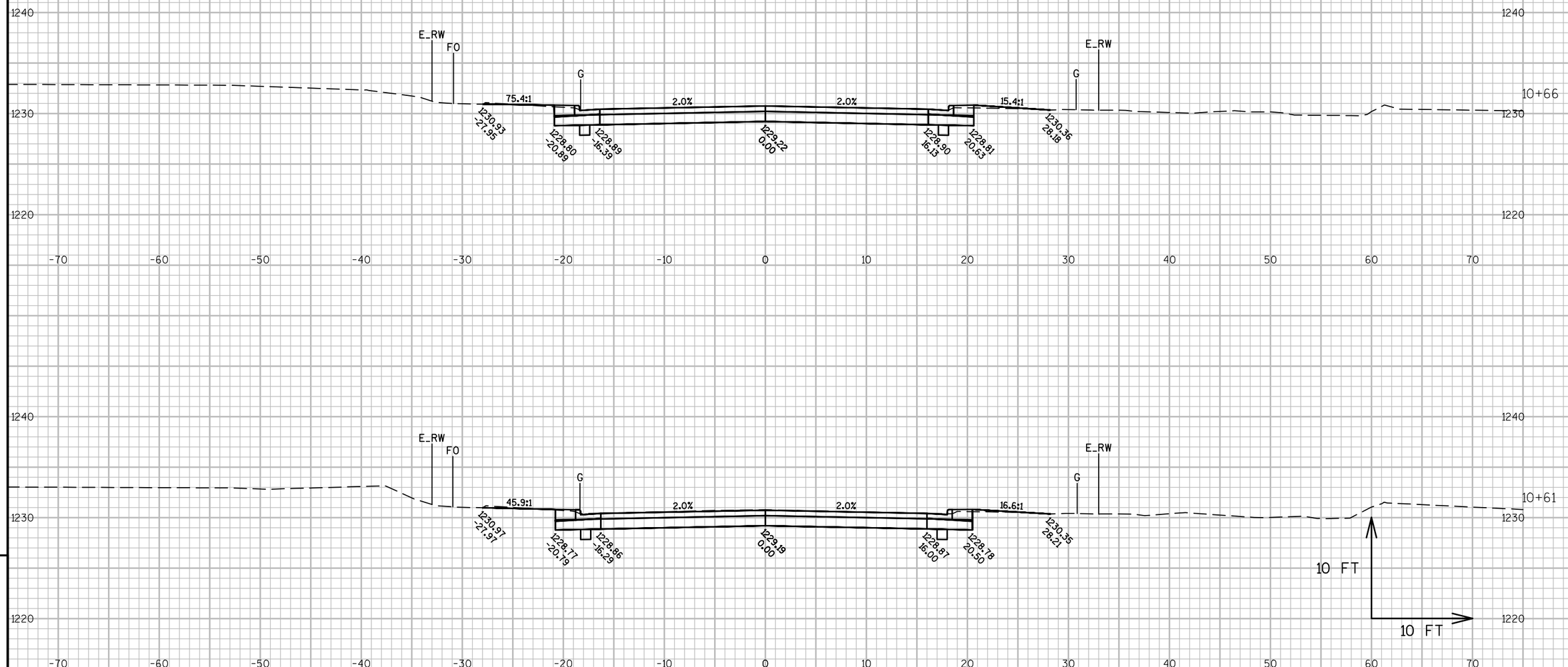




9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: WASHINGTON AVENUE	SHEET 268	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090204_XS.DWG
LAYOUT NAME - 090262_XS
PLOT DATE : 7/31/2017 5:53 PM
PLOT BY : SHAWN DOLENS
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49



9

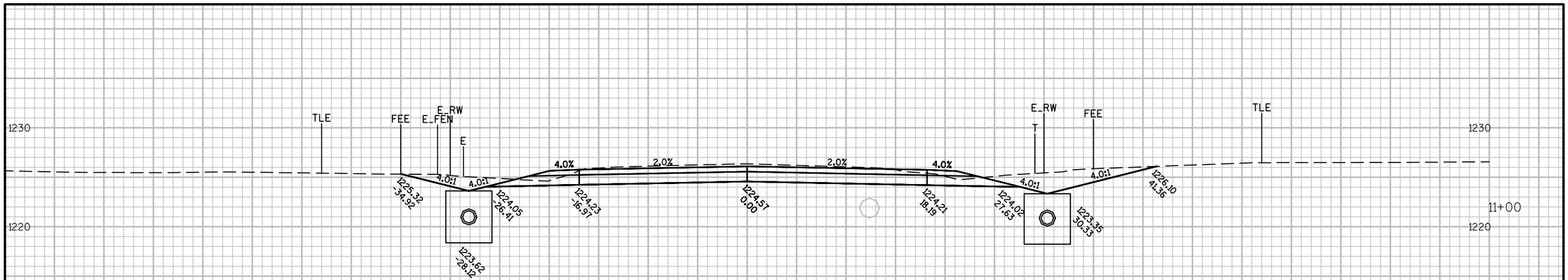
9

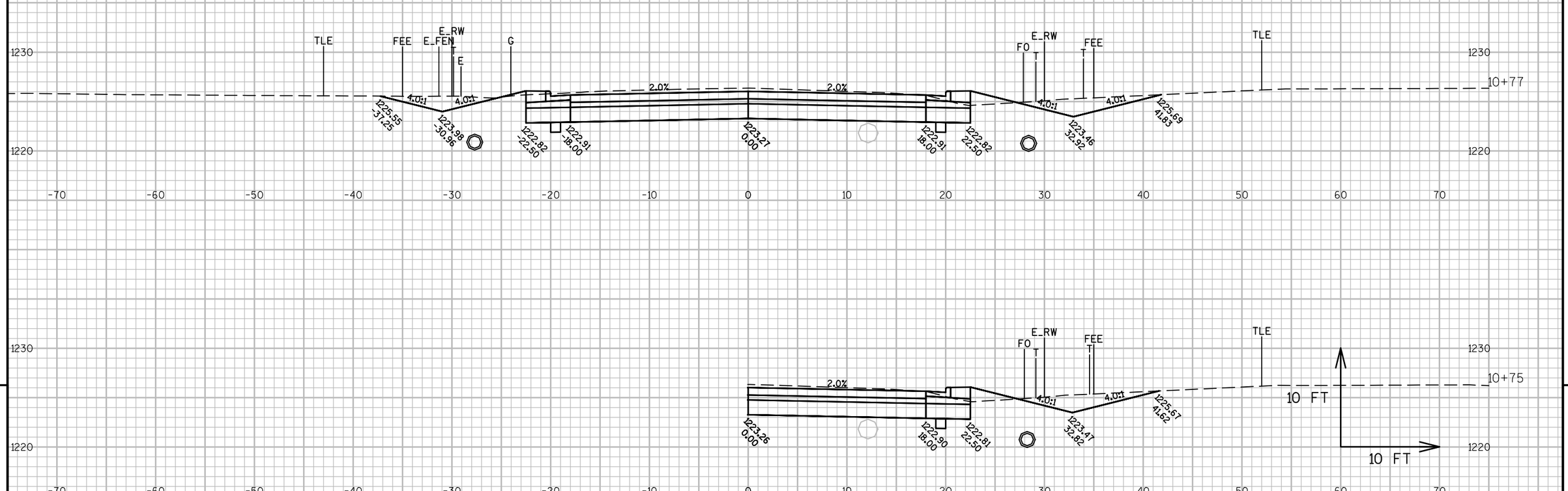
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: WASHINGTON AVENUE	SHEET 269	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090204_XS.DWG
LAYOUT NAME - 090263_XS

PLOT DATE : 7/31/2017 5:53 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49





9

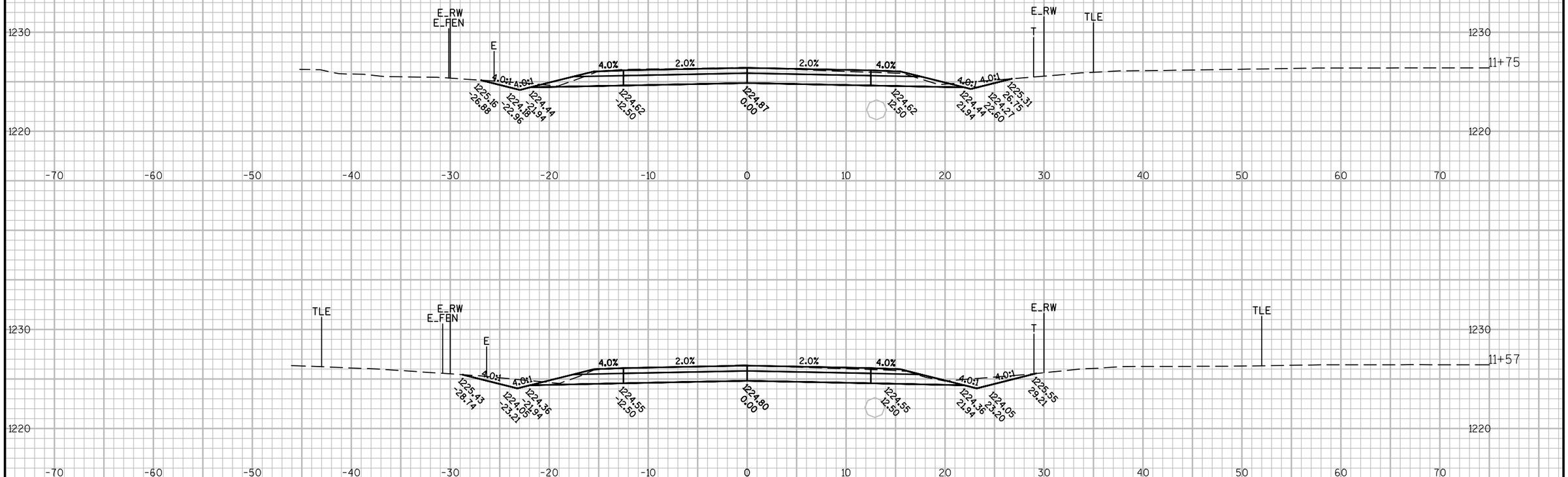
9

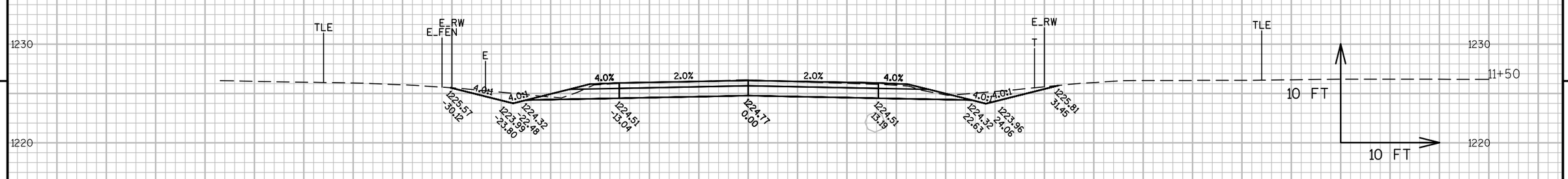
PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: HUME AVENUE	SHEET 270	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090264_XS

PLOT DATE : 7/31/2017 5:54 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



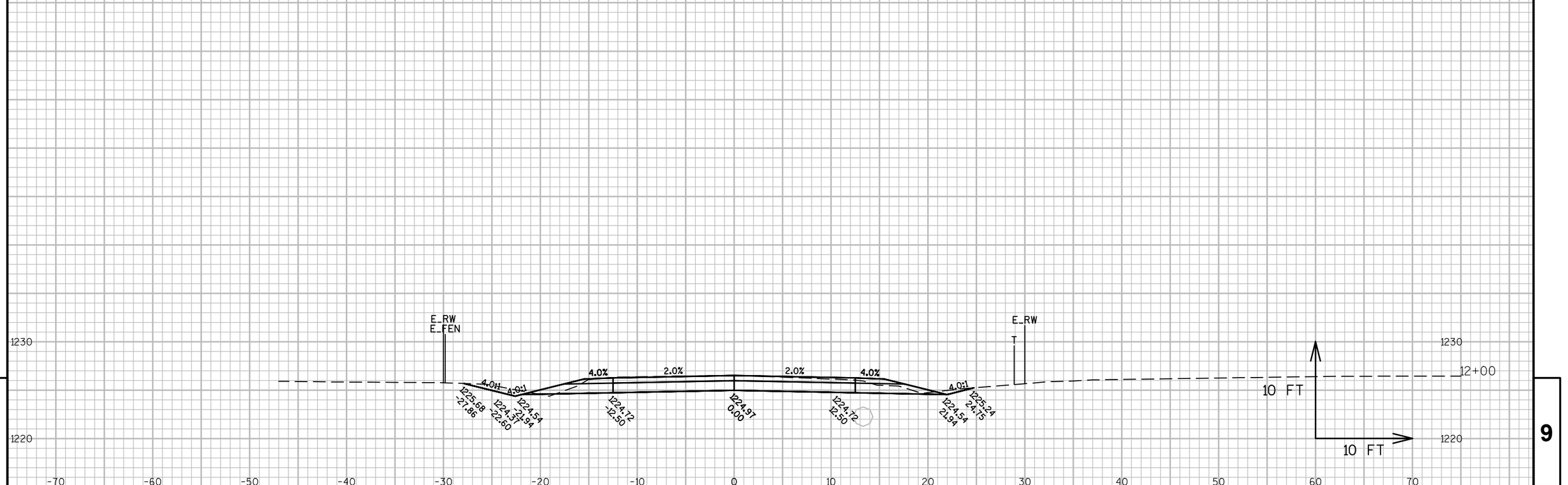


9

9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: HUME AVENUE	SHEET 271	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090265_XS
PLOT DATE : 7/31/2017 5:54 PM
PLOT BY : SHAWN DOLENS
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 6995-11-71/72	HWY: E. 29TH STREET	COUNTY: WOOD	CROSS SECTIONS: HUME AVENUE	SHEET 272	E

FILE NAME : P:\580S\584\00584086\CADD\C3D\00584086\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090266_XS

PLOT DATE : 7/31/2017 5:54 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:10 FT

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov