SEL JANUARY 2015

PROJECT ID: 3944-00-71

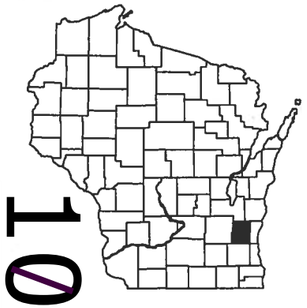
WITH:

COUNTY: WASHINGTON COUNTY

ORDER OF SHEETS

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

TOTAL SHEETS = 232



10

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CTH N (WEST STATE STREET)

CTH NP TO AIRPORT DRIVE

CTH N

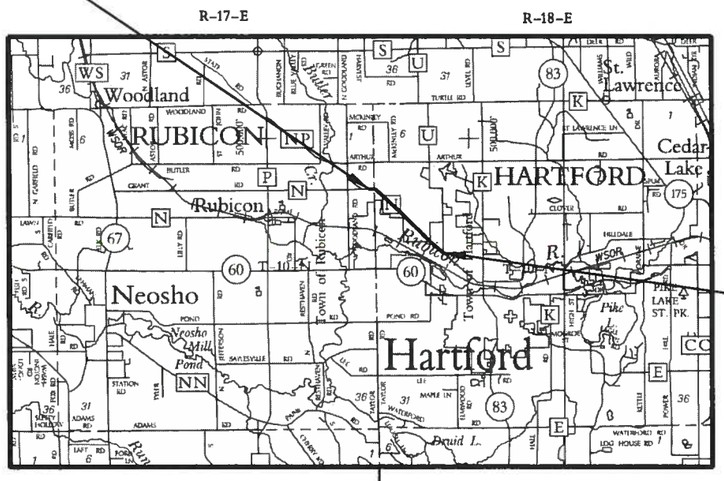
WASHINGTON COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
3944-00-71	WISC 2015007	1

STATE PROJECT NUMBER

3944-00-71

BEGIN PROJECT
STA 95+50.00
Y=494,952.92
X=2,419,628.59



END PROJECT
STA 201+65.00

LAYOUT
SCALE 0 1.42 MI.

TOTAL NET LENGTH OF CENTERLINE = 2.010 MI.

Horizontal datum is based on the Wisconsin State Plane Coordinate System Grid, south zone (NAD-27).

Elevations are based on NGVD 1929.

DESIGN DESIGNATION

		COUNTY LINE TO INDEPENDENCE AVE	INDEPENDENCE AVE TO AIRPORT DR
A.A.D.T. 2013	=	2400	3000
A.A.D.T. 2033	=	3700	4200
D.H.V.	=	585	664
D.D.	=	58%	58%
T.	=	3.3%	3.3%
DESIGN SPEED	=	60 MPH	60 MPH / 45 MPH
ESALS	=	231,550	270,100

CONVENTIONAL SYMBOLS

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

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

ACCEPTED FOR WASHINGTON COUNTY

7-31-14
DATE

COUNTY HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED BY

KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.351.6668

WISCONSIN
NICHOLAS A. BOBINSKI
E-42700-6
MENOMONEE FALLS
WISCONSIN
PROFESSIONAL ENGINEER

7/31/2014
(Date)

(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	Kapur & Associates, Inc.
Designer	Kapur & Associates, Inc.
Management Consultant	DAAR Engineering
C.O. Examiner	

APPROVED FOR DEPARTMENT OFFICE

DATE: 8/1/14

Management Consultant Signature

E

GENERAL NOTES

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

ALL PRIVATE EXISTING UTILITIES NOT INCLUDED IN THE PLAN ARE TO BE ADJUSTED BY THE UTILITIES CONCERNED. WATER MANHOLES WILL BE ADJUSTED AND PAID FOR AS A CONTRACT BID ITEM.

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

THE EARTHWORK YARDAGE IS ESTIMATED BY EXPANDING THE FILL VOLUME. AN EXPANSION FACTOR OF 1.15 IS USED.

THE LOCATION AND LIMITS OF EBS (EXCAVATION BELOW SUBGRADE), IF REQUIRED, WILL BE DETERMINED BY THE ENGINEER. SUCH EBS SHALL NOT BE USED TO BALANCE YARDAGE.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLAND AREAS.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF SALVAGED TOPSOIL WHERE REQUIRED. SALVAGED TOPSOIL SHALL BE PLACED A MINIMUM OF 4 INCHES IN DEPTH.

SALVAGED TOPSOIL SHALL NOT BE PLACED ON SUBGRADE UNTIL APPROVED BY ENGINEER.

DISTURBED AREAS WITHIN RIGHT-OF-WAY OR TLE SHALL BE RESTORED BY DIRECTION OF THE ENGINEER WITH THE FOLLOWING FINISHING ITEMS: SALVAGED TOPSOIL, SEED, FERTILIZER, AND MULCH. QUANTITIES FOR FINISHING ITEMS INCLUDE RESTORATION EXTENDING 3 FEET BEYOND THE SLOPE INTERCEPT SHOWN ON THE PLANS. SALVAGED TOPSOIL SHALL BE APPLIED WITHIN 7 DAYS AFTER GRADING WORK IS COMPLETED. SEED, FERTILIZER, AND MULCH SHALL BE APPLIED WITHIN 7 DAYS AFTER PLACEMENT OF SALVAGED TOPSOIL.

EROSION CONTROL DEVICES WILL BE PLACED IN SEQUENCE WITH CONSTRUCTION ACTIVITIES AS DETERMINED BY THE ENGINEER.

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

REMOVAL OF EROSION CONTROL DEVICES IS INCIDENTAL TO THE COST OF THEIR RESPECTIVE BID ITEMS.

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

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES WILL BE FILLED WITH GRANULAR BACKFILL.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR MUST VERIFY INVERT AND RIM ELEVATIONS IN THE PLAN WITH THE ENGINEER.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

LOCATION AND ELEVATION OF STORM SEWER STRUCTURES IN CURB AND GUTTER SECTION REFER TO FLOW LINE OF CURB.

LOCATION AND ELEVATION OF STORM SEWER STRUCTURES NOT IN CURB AND GUTTER REFER TO CENTERLINE OF COVER.

ADJUSTING MANHOLES TO GRADE SHALL BE COMPLETED AFTER PAVING LOWER LAYER.

EXISTING INLET AND MANHOLE COVERS THAT ARE NOT REQUIRED TO BE REUSED ON THE PROJECT SHALL BECOME THE PROPERTY OF THE RESPECTIVE MUNICIPALITY.

REINFORCED CONCRETE APRON ENDWALLS AND ADJOINING TWO SECTIONS OF CONCRETE PIPE WILL BE TIED TOGETHER AS SHOWN ON THE STANDARD DETAIL DRAWINGS. JOINT TIES WILL BE INCIDENTAL ITEMS INCLUDED IN THE COST OF THE CONCRETE PIPE.

CURB HEIGHTS AT THE END OF CURB AND GUTTER WILL BE TAPERED FROM 0 TO 6 INCHES OVER 10 FEET. CHANGES IN CURB TYPE SHALL TRANSITION OVER 10 FEET.

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE LINE. CURB AND GUTTER RADII ARE MEASURED TO THE FACE.

CURB AND GUTTER JOINT SPACING SHALL BE 20 FEET ALONG TANGENT SECTIONS.

1/2-INCH FELT EXPANSION JOINT MATERIAL IS REQUIRED BETWEEN BACK OF CURB AND FRONT OF WALK OR DRIVEWAY APRON.

EXISTING DRIVEWAYS AND FIELD ENTRANCES WILL BE RESTORED IN KIND AS DIRECTED BY THE ENGINEER IN THE FIELD AND AT THE LOCATION DETERMINED BY THE ENGINEER.

BROKEN CONCRETE CONTAINING RE-BAR WILL NOT BE USED AS RIPRAP OR HEAVY RIPRAP.

A SAWED JOINT IS REQUIRED WHERE NEW ASPHALTIC CONCRETE SURFACE MEETS EXISTING ASPHALTIC CONCRETE SURFACE.

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

MUNICIPAL-OWNED STREET SIGNS WILL BE REMOVED, STORED AND RE-INSTALLED BY THE MUNICIPALITY.

SIGNS TO BE MOVED WILL BE STORED AND PROTECTED BY THE CONTRACTOR, FREE FROM DAMAGE, UNTIL SUCH TIME AS THEY ARE RE-INSTALLED.

HMA PAVEMENT WILL BE CONSTRUCTED WITH THE THE FOLLOWING LAYERS AND GRADATIONS:

4-INCH HMA PAVEMENT TYPE E-0.3
2.25-INCH LOWER LAYER (19.0 mm GRADATION, PG64-28)
1.75-INCH UPPER LAYER (12.5 mm GRADATION, PG64-28)

2

DESIGN INDEX

TITLE
GENERAL NOTES AND UTILITY CONTACTS
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
EROSION CONTROL
STORM SEWER
SIGNING
PAVEMENT MARKING
TRAFFIC CONTROL
ALIGNMENT PLAN

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tnhartford@netwurx.net

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TOWN CHAIRMAN
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WEST BEND, WI 53095
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DODGE COUNTY
SHERIFFS DEPARTMENT
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2

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

STANDARD ABBREVIATIONS

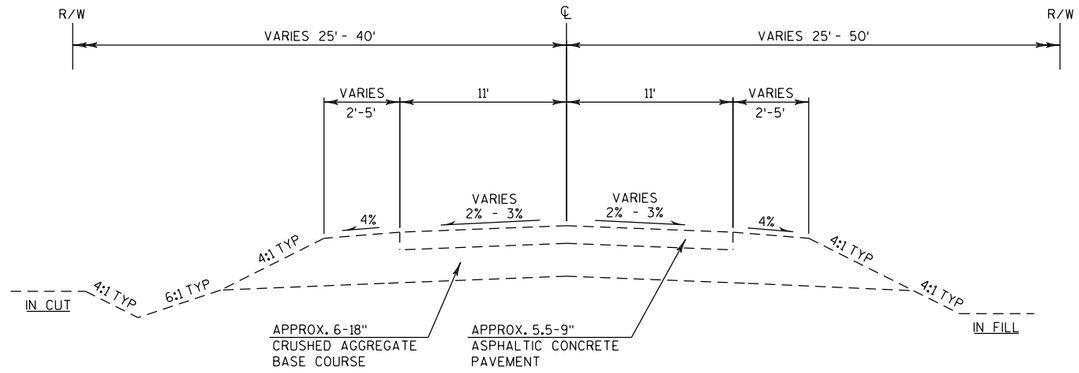
<	ANGLE
ADT	AVERAGE DAILY TRAFFIC
AC	ACRE
AE, AEW	APRON ENDWALL
AGG	AGGREGATE
AH	AHEAD
ASPH	ASPHALTIC
BC	BACK OF CURB
BF	BACK FACE
BIT	EXISTING BITUMINOUS
BM	BENCH MARK
BEG	BEGIN
BK	BACK
C & G	CURB AND GUTTER
CABC	CRUSHED AGGREGATE BASE COURSE
CB	CATCH BASIN
CMCP	CORRUGATED METAL CULVERT PIPE
CMP	CORRUGATED METAL PIPE
CP	CULVERT PIPE
CY	CUBIC YARD
CL OR C/L	CENTER LINE
CO	COUNTY
CONC	CONCRETE
CONST	CONSTRUCTION
CR	CREEK
CTH	COUNTY TRUNK HIGHWAY
CWT	HUNDRED WEIGHT
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
DISCH	DISCHARGE
E	EAST
EA	EACH
EB	EASTBOUND
EBS	EXCAVATION BELOW SUBGRADE
EL, ELEV	ELEVATION
ELEC	ELECTRIC(AL), ELEC CABLE
EMB	EMBANKMENT
ESALS	EQUIVALENT SINGLE AXEL LOADS
ESMT	EASEMENT
EW	ENDWALL
EXC	EXCAVATION
EXIST	EXISTING BITUMINOUS
EXP	EXPANSION
FC	FACE OF CURB
FE	FIELD ENTRANCE
FF	FACE TO FACE
F/L, FL	FLOW LINE
FERT	FERTILIZER
FHWA	FEDERAL HIGHWAY
FT	FOOT (FEET)
G	GAS
GN	GRID NORTH
H	HOUSE
HP	HIGH POINT
HR	HANDICAP RAMP
HYD	HYDRANT
I	INTERSECTION ANGLE
ID	INSIDE DIAMETER
INL	INLET
INTER	INTERSECTION
INV	INVERT
IP	IRON PIPE
JT	JOINT
K	RATE OF VERTICAL CURVATURE
L	LENGTH OF CURVE
LB	POUND
LC	LONG CHORD OF CURVE
LP	LOW POINT
LF	LINEAR FOOT(FEET)
LHF	LEFT HAND FORWARD
LC	LONG CHORD
LS	LUMP SUM
LT	LEFT
M	MARSH
MATL	MATERIAL
MP	MARKER POST
MAX	MAXIMUM
MGAL	1000 GALLONS
MH	MANHOLE
MIN	MINIMUM
ML OR M/L	MATCH LINE
N	NORTH
NB	NORTHBOUND
NC	NORMAL CROWN OR NO CHANGE
NO	NUMBER
NW OR N/W	NORMAL WATER
OBLIT	OBLITERATE
OD	OUTSIDE DIAMETER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PGL	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PLE	PERMANENT LIMITED EASEMENT
PRC	POINT OF REVERSE CURVE
PROJ	PROJECT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PT	POINT OF TANGENCY
PAV'T	PAVEMENT
PCC	PORTLAND CEMENT CONCRETE
R	RADIUS OR RANGE
RCCP	REINFORCED CONCRETE CULVERT PIPE
RCHECP	REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CULVERT PIPE
RCPSS	REINFORCED CONCRETE PIPE STORM SEWER
RHF	RIGHT HAND FORWARD
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RD	ROAD
RDWY	ROADWAY
REL	RELOCATE
REM	REMAINING
REQD	REQUIRED
RT	RIGHT
RW	RETAINING WALL
S	SOUTH
SALV	SALVAGED
SAN	SANITARY
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWINGS
SE	SUPERELEVATION
SEC	SECTION
SF	SQUARE FOOT (FEET)
S/L	SURVEY LINE
SHLDR	SHOULDER(S)
SHR	SHRINKAGE
SPECS	SPECIFICATIONS
SS	STORM SEWER
STA	STATION
STH	STATE TRUNK HIGHWAY
STR	STRUCTURE
SW	SIDEWALK
SY	SQUARE YARD
TAN	TANGENT
TEL	TELEPHONE
T	(TRUCKS) PERCENT OF
TC	TOP OF CURB
TAN	TANGENT
TEMP	TEMPORARY
TL OR T/L	TRANSIT LINE
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
UG	UNDERGROUND (CABLE)
UNCL	UNCLASSIFIED
VAR	VARIABLE
VCL	VERTICAL CURVE LENGTH
VPC	VERTICAL POINT OF CURVATURE
VPCC	VERTICAL POINT OF COMPOUND CURVE
VPI	VERTICAL POINT OF INTERSECTION
VPRC	VERTICAL POINT OF REVERSE CURVE
VPT	VERTICAL POINT OF TANGENCY
VLV	VALVE
VOL	VOLUME
W	WEST
WB	WESTBOUND
WV	WATER VALVE
X	EASTING OR EAST GRID COORDINATE
Y	NORTHING OR NORTH GRID COORDINATE
YD	YARD

2

2

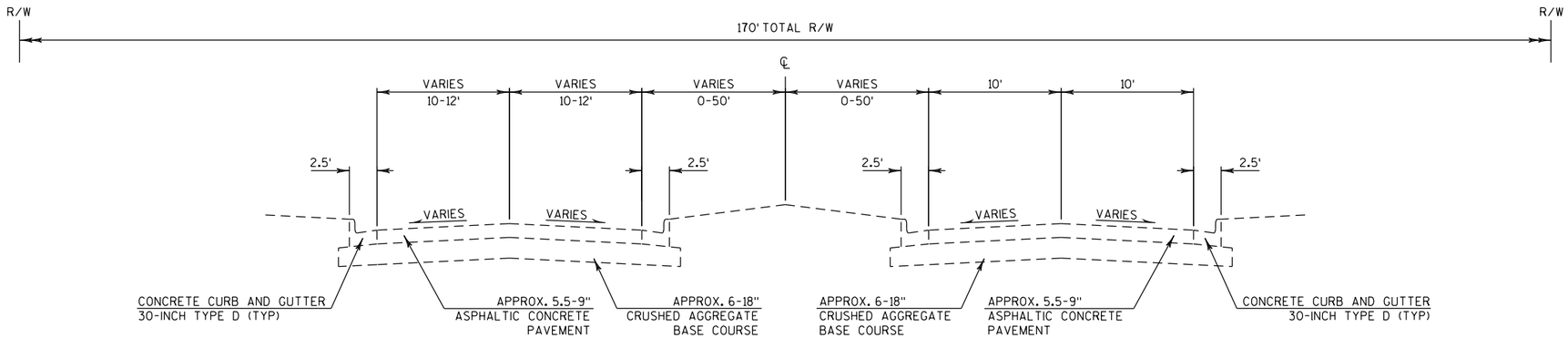


PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PROJECT OVERVIEW	SHEET 5	E



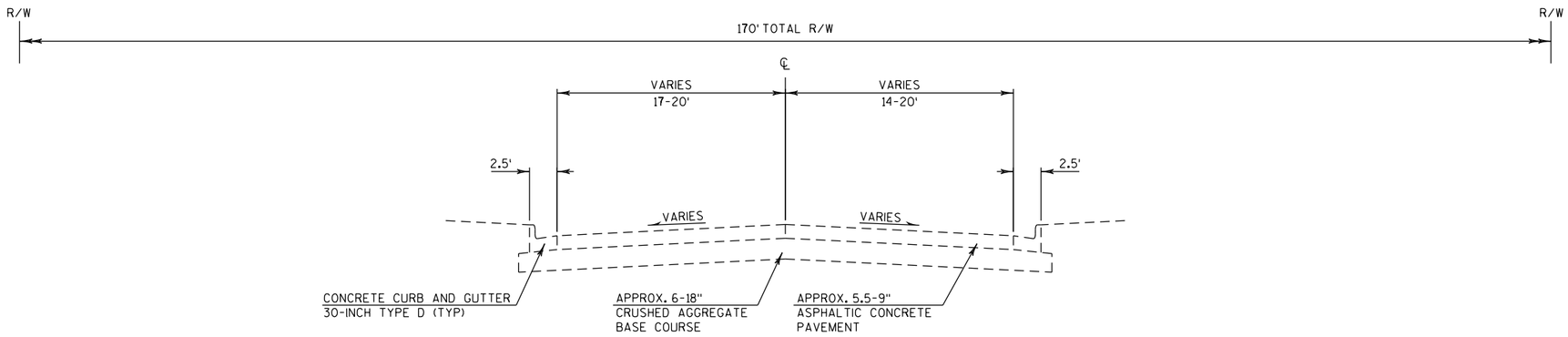
EXISTING CTH N TYPICAL SECTION

STA 95+50 TO STA 198+77.60



EXISTING INDEPENDENCE AVE TYPICAL SECTION

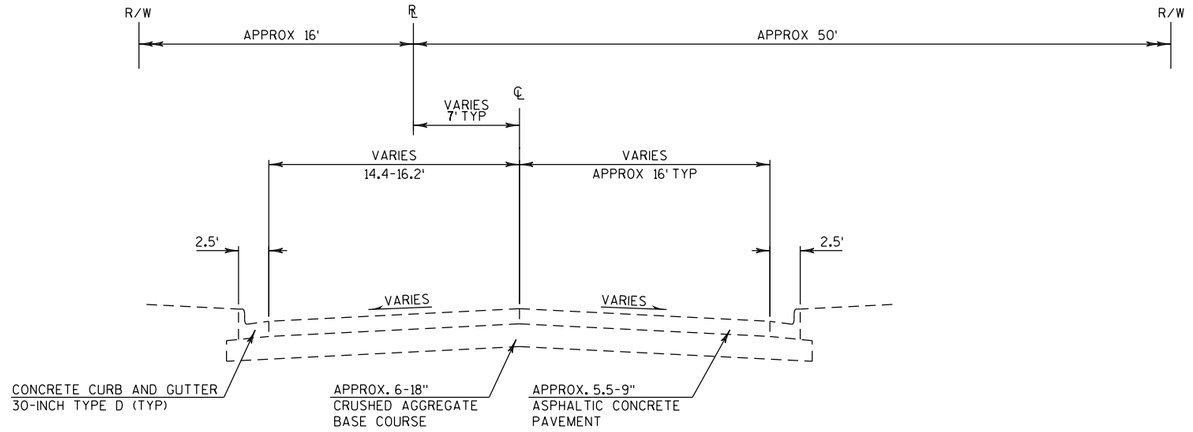
STA 7+16.78 TO STA 8+35



EXISTING INDEPENDENCE AVE TYPICAL SECTION

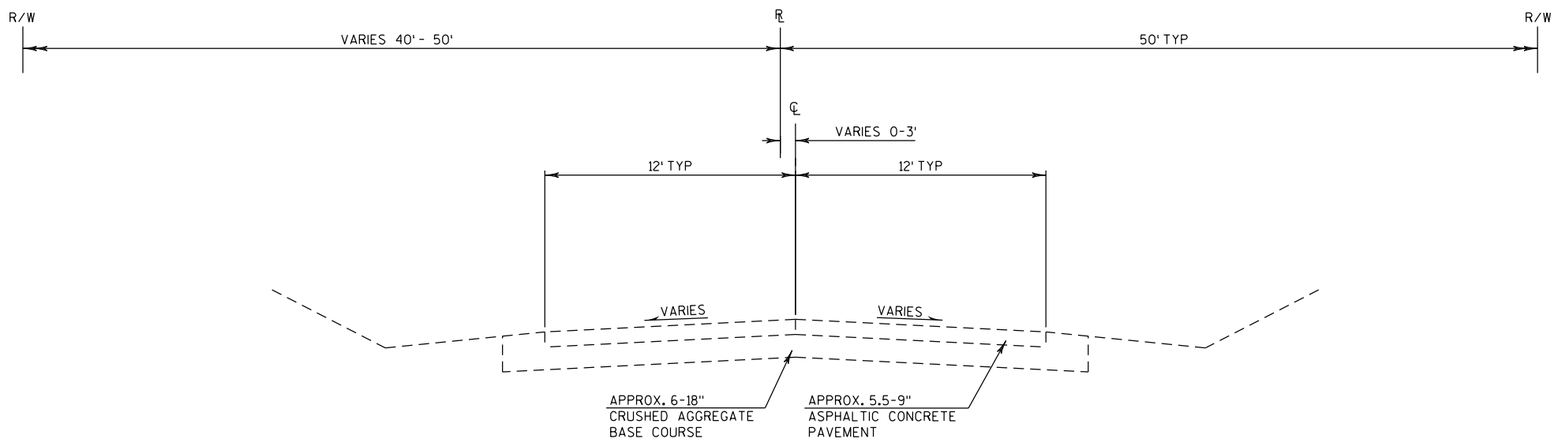
STA 8+35 TO STA 9+71

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	EXISTING TYPICAL SECTIONS	SHEET 6	E



EXISTING AIRPORT DR TYPICAL SECTION

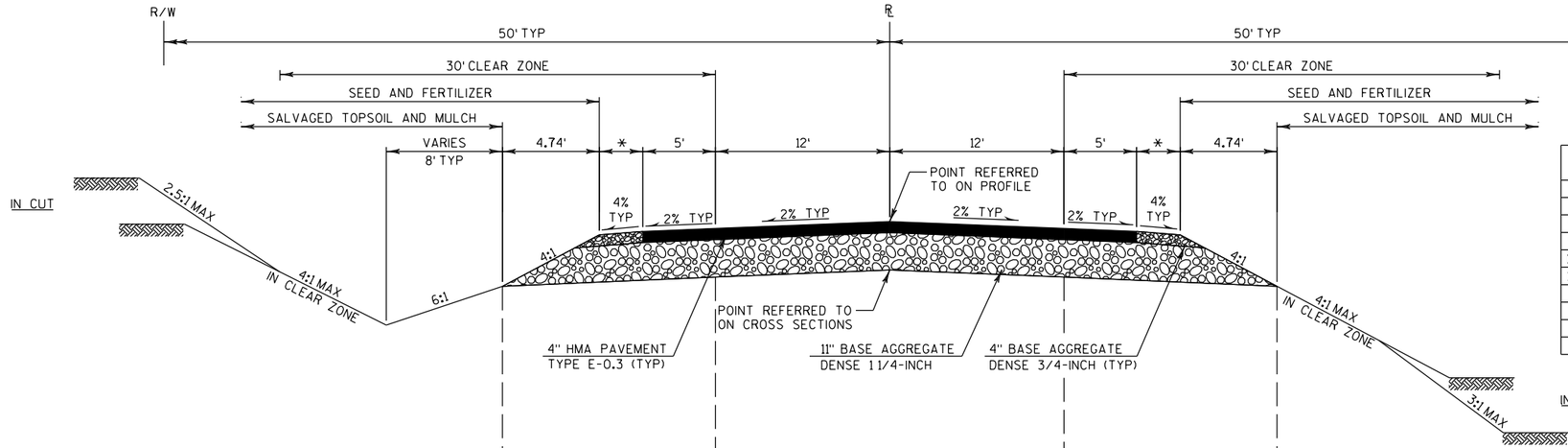
STA 28+60 TO STA 29+78.63



EXISTING AIRPORT DR TYPICAL SECTION

STA 30+18.60 TO STA 32+55

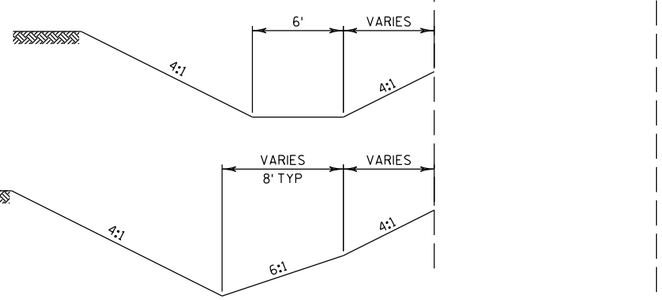
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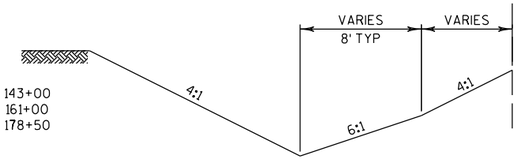
*3' STA 97+50 TO STA 147+50
5' STA 147+50 TO STA 179+00

SLOPE CHART

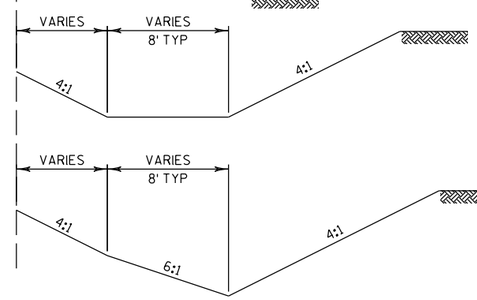
STA	LT AGG SHLD	LT LANE/ PAVED SHLD	RT LANE/ PAVED SHLD	RT AGG SHLD
97+62.48	↙4%			
98+15.73	↙2%	↙2%		
99+22.07			2%↘	
99+75.40				4%↘
100+28.73	6%↘	6%↘	6%↘	6%↘
109+65.88	6%↘	6%↘	6%↘	6%↘
110+19.21				4%↘
110+72.55			2%↘	
111+78.88	↙2%			
112+32.13	↙4%	↙2%		



STA 100+50 TO STA 129+25

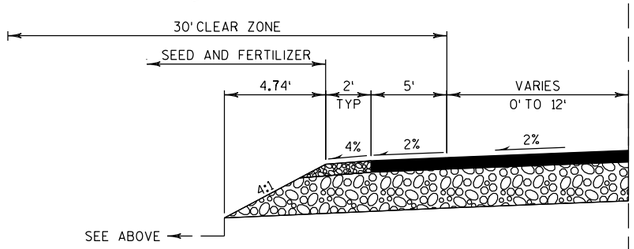


STA 133+00 TO STA 143+00
STA 155+50 TO STA 161+00
STA 177+00 TO STA 178+50

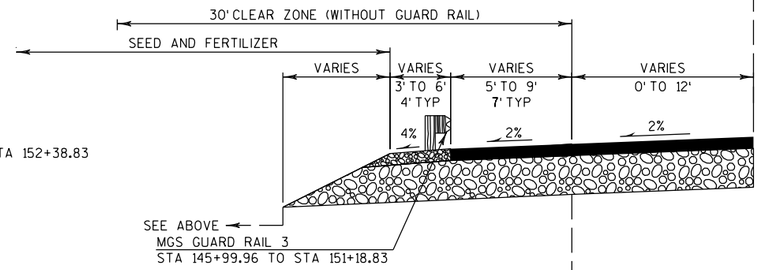


STA 136+15 TO STA 139+50

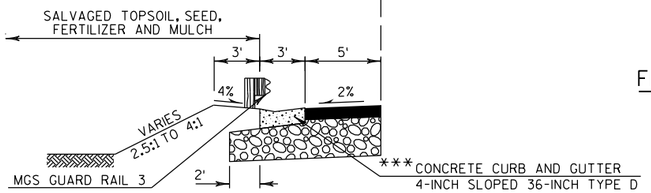
STA 120+50 TO STA 125+50
STA 134+00 TO STA 136+15
STA 148+25 TO STA 153+00



STA 95+71.27 TO STA 103+82.88
STA 108+88.63 TO STA 116+79.66

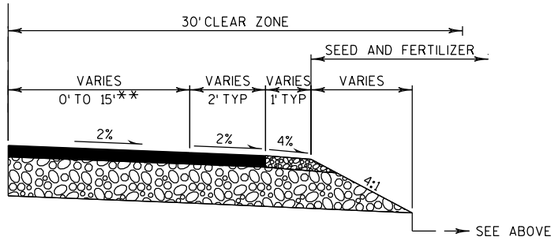


STA 143+28.46 TO STA 152+38.83



STA 147+00 TO STA 149+03.40

***SEE CONSTRUCTION DETAIL
"MGS GUARD RAIL WITH CURB & GUTTER"



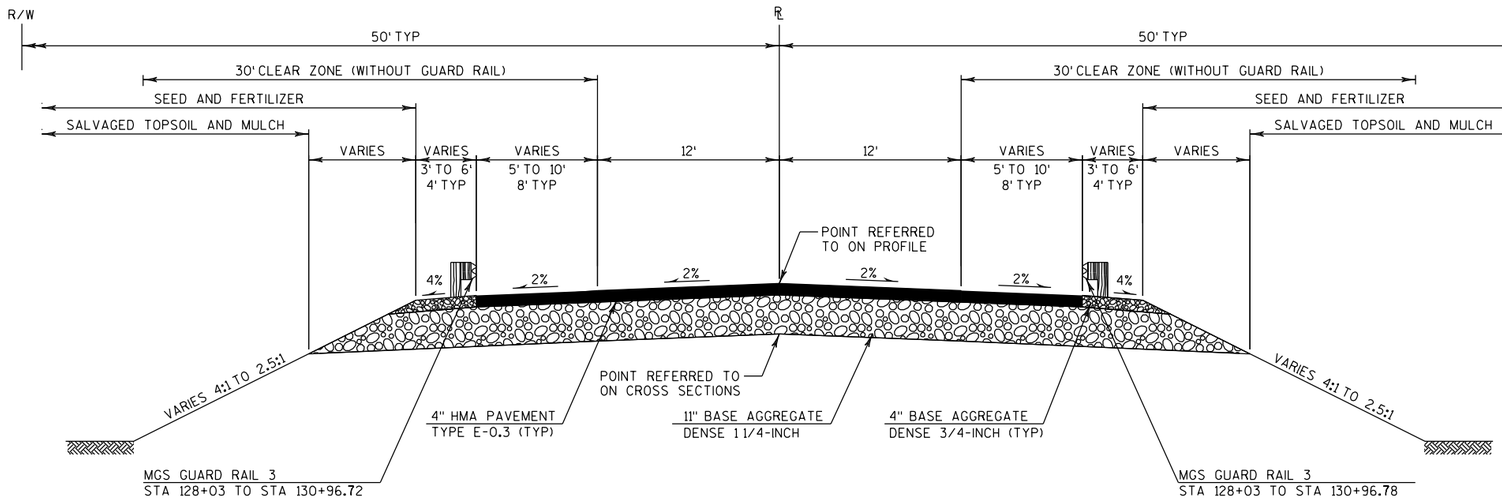
STA 96+56.72 TO STA 101+81.01
STA 109+87.44 TO STA 114+67.71
STA 142+66.98 TO STA 149+17.26

** 17' STA 142+66.98 TO STA 149+17.26

FINISHED CTH N TYPICAL SECTION

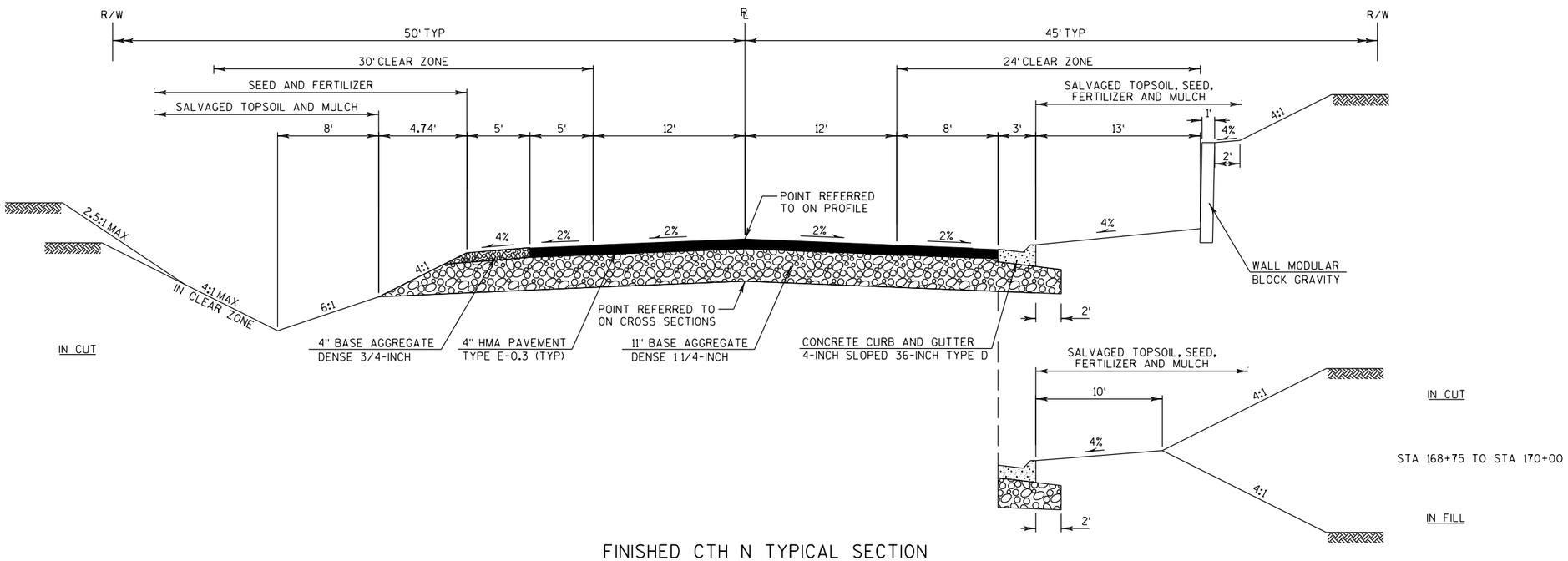
STA 95+50 TO STA 126+68
STA 132+15.12 LT/132+15.63 RT TO STA 167+00
STA 170+00 TO STA 179+00

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	FINISHED TYPICAL SECTIONS	SHEET 8	E



FINISHED CTH N TYPICAL SECTION

STA 126+68 TO STA 132+15.12 LT/132+15.63 RT



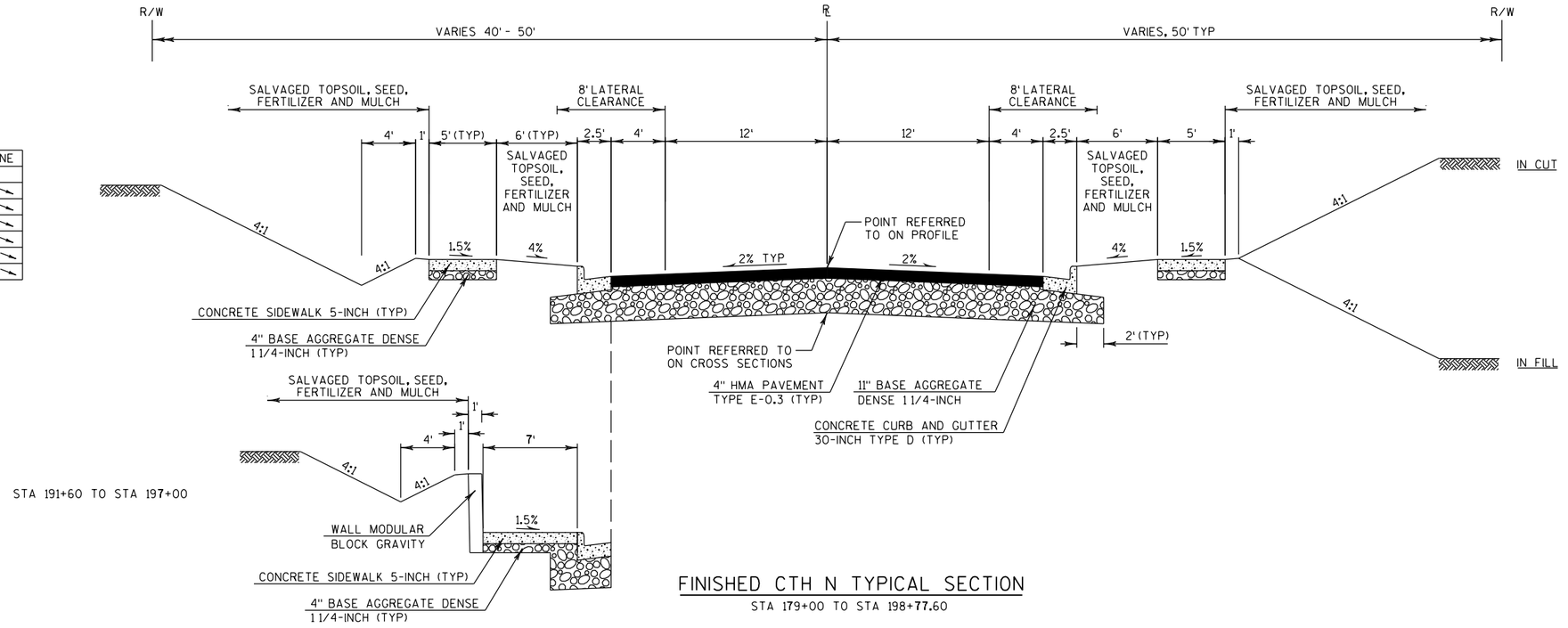
FINISHED CTH N TYPICAL SECTION

STA 167+00 TO STA 170+00

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	FINISHED TYPICAL SECTIONS	SHEET 9	E

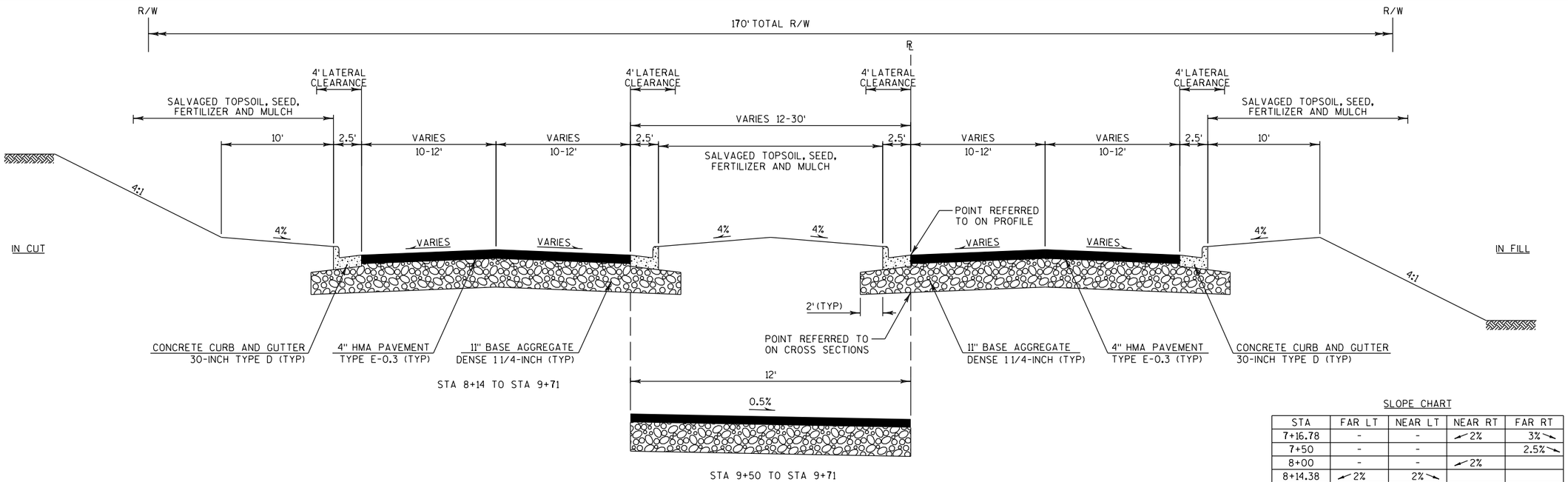
SLOPE CHART

STA	LT LANE
191+00	2%
193+00	2%
196+50	2%
197+50	3%
198+30	3%
198+63.62	1.4%
198+77.60	1.4%



FINISHED CTH N TYPICAL SECTION

STA 179+00 TO STA 198+77.60



FINISHED INDEPENDENCE AVE TYPICAL SECTION

STA 7+16.78 TO STA 9+71

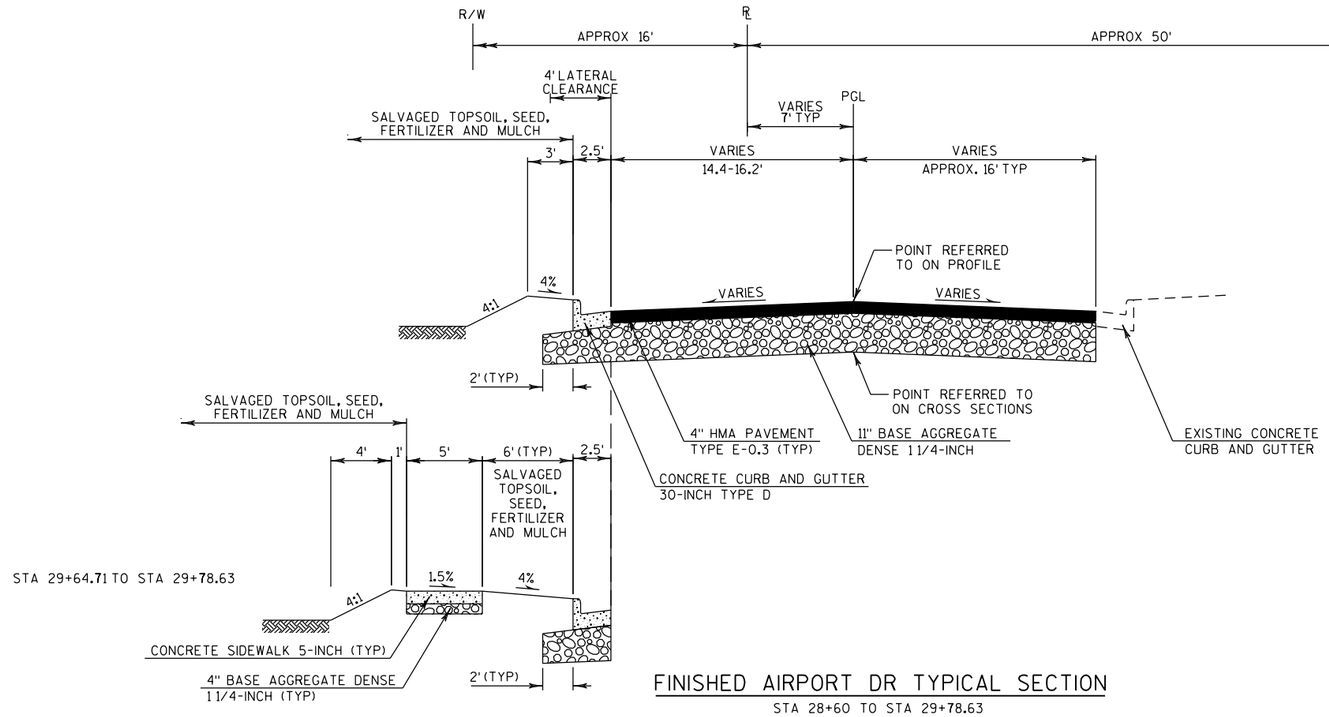
SLOPE CHART

STA	FAR LT	NEAR LT	NEAR RT	FAR RT
7+16.78	-	-	2%	3%
7+50	-	-		2.5%
8+00	-	-	2%	
8+14.38	2%	2%		
8+50	1%	1.5%		
9+00	0%	1%	0%	1%
9+46.42	0.5%	0.5%	0.5%	0.5%
9+71	0.5%	0.5%	0.5%	0.5%

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	FINISHED TYPICAL SECTIONS	SHEET 10	E

SLOPE CHART

STA	LT LANE
28+60	4.3%
29+30	0%
29+73.85	1%
29+78.63	1%

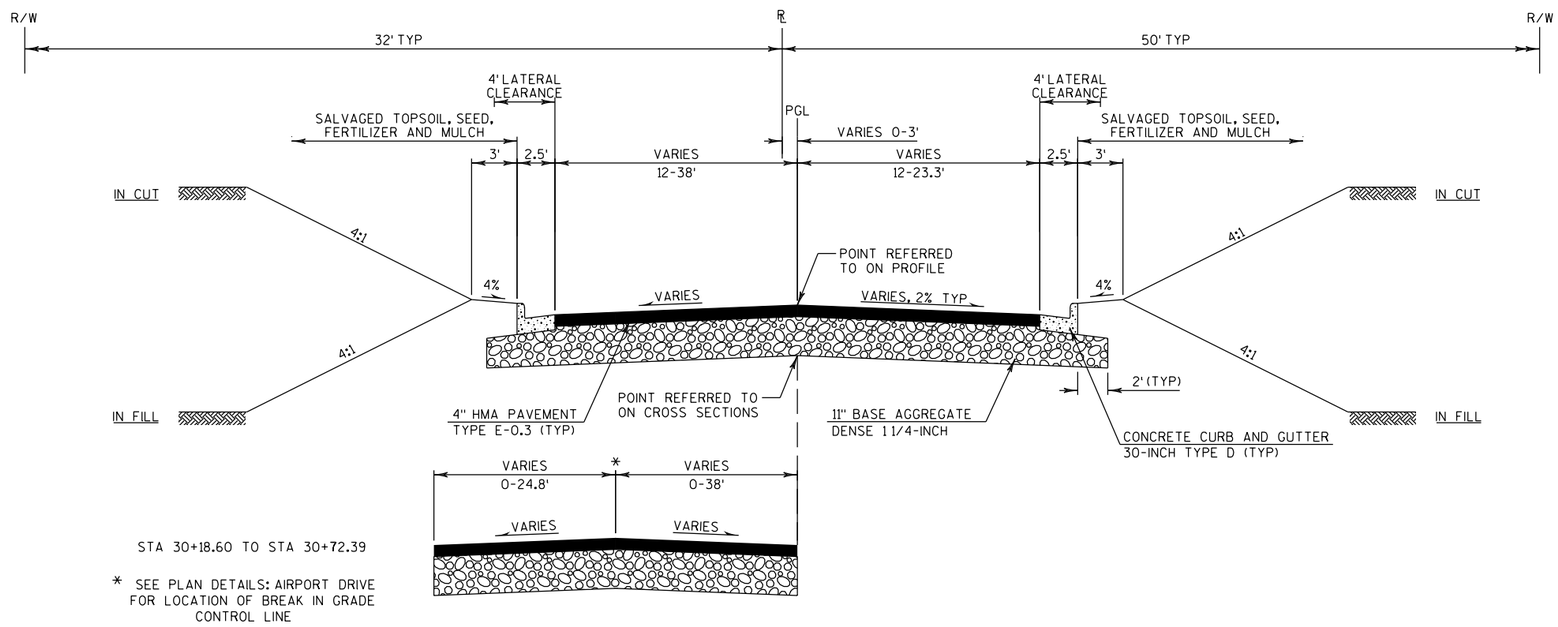


FINISHED AIRPORT DR TYPICAL SECTION

STA 28+60 TO STA 29+78.63

SLOPE CHART

STA	FAR LT	NEAR LT
30+18.60	-	MATCH CTH N
30+31.34	MATCH CTH N	1.35%
30+50	MATCH CTH N	1%
30+70.28	0.75%	
30+72.39	1%	
30+75	-	1%
31+50	-	2%
32+55	-	2%



STA 30+18.60 TO STA 30+72.39

* SEE PLAN DETAILS: AIRPORT DRIVE FOR LOCATION OF BREAK IN GRADE CONTROL LINE

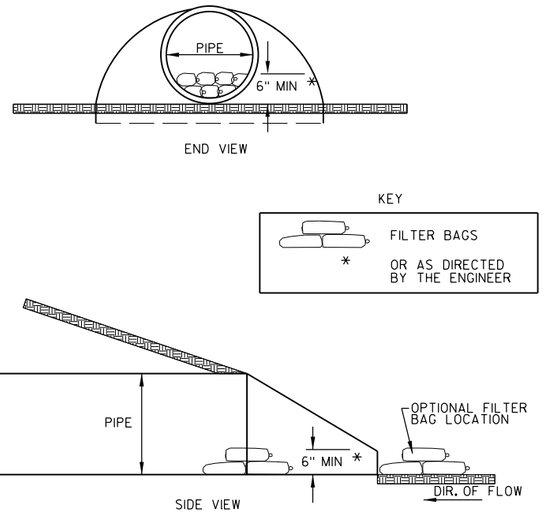
SLOPE CHART

STA	RT LANE
30+18.60	3.44%
30+34.64	2.5%
30+41.88	3.3%
30+60	2%

FINISHED AIRPORT DR TYPICAL SECTION

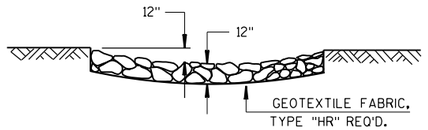
STA 30+18.60 TO STA 32+55

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	FINISHED TYPICAL SECTIONS	SHEET 11	E

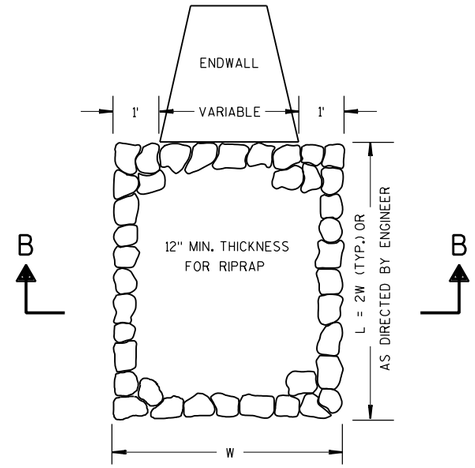


CULVERT PIPE CHECK

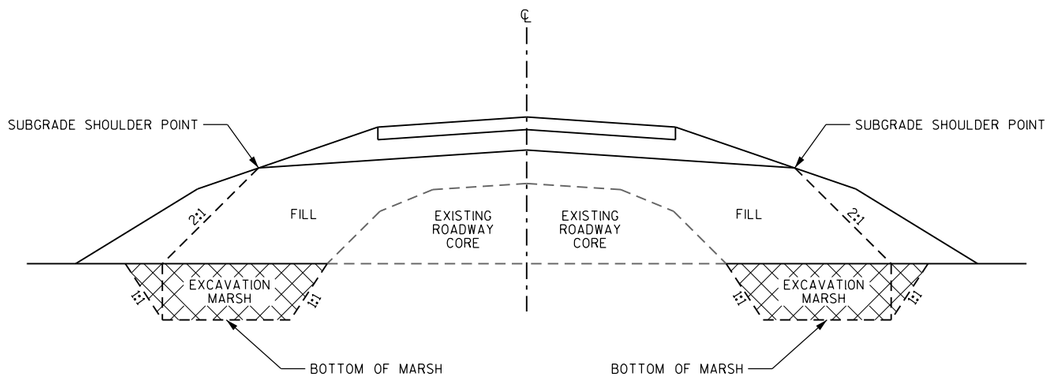
(INSTALL ON INLET END ONLY)



SECTION B-B



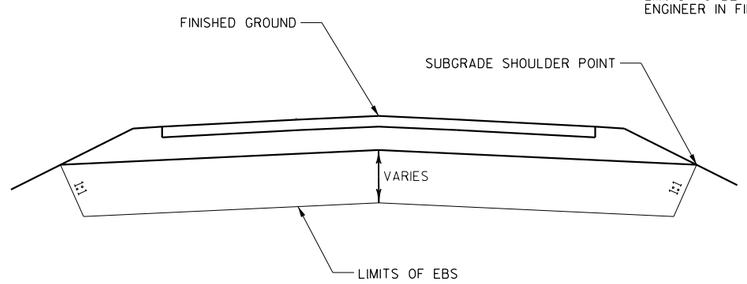
RIPRAP TREATMENT AT CULVERTS



MARSH EXCAVATION

STA 128+75 TO STA 129+50 LT
STA 129+10 TO STA 129+40 RT

NOTE:
LIMITS TO BE DETERMINED BY ENGINEER IN FIELD.

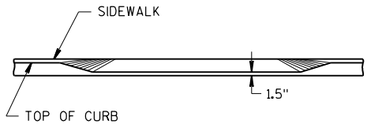


CROSS SECTION

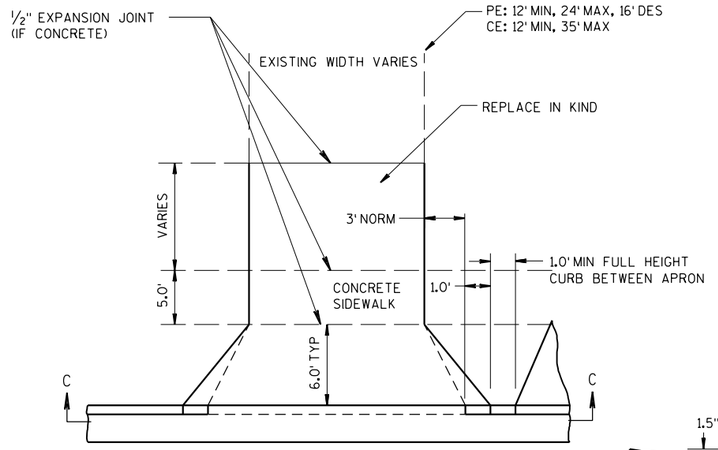
EXCAVATION BELOW SUBGRADE (EBS)

NOTES:
DRIVEWAY APRONS BEHIND CURB SHALL BE CONCRETE.
MINIMUM 10' PAVED BEHIND SIDEWALK.
ALL OTHER DRIVEWAY SURFACES TO BE SAME AS EXISTING.

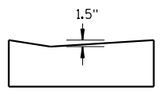
ASPHALT - 3" (PE) OR 4" (CE) ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH
CONCRETE - 7" CONCRETE DRIVEWAY HES OVER 4" BASE AGGREGATE DENSE 1 1/4-INCH
GRAVEL - 6" BASE AGGREGATE DENSE 3/4-INCH



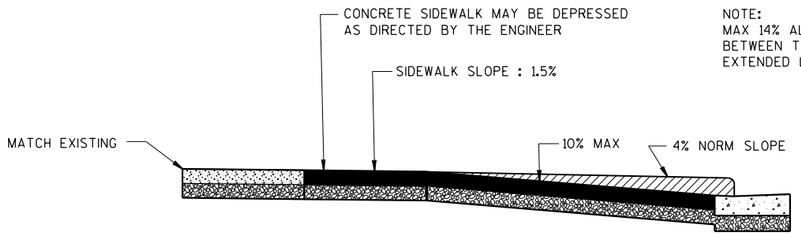
SECTION C-C



PLAN VIEW



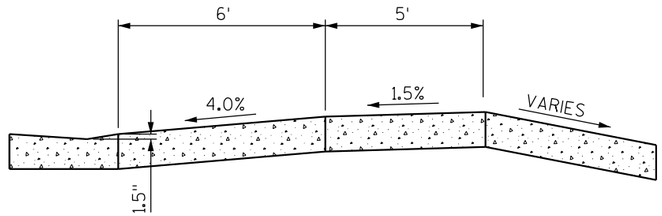
CONCRETE GUTTER DETAIL AT DRIVEWAYS



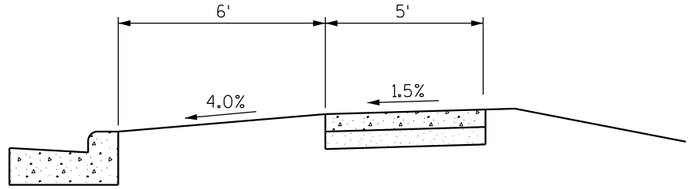
NOTE:
MAX 14% ALGEBRAIC DIFFERENCE BETWEEN TANGENT GRADES EXTENDED IN FILLS

PROFILE VIEW

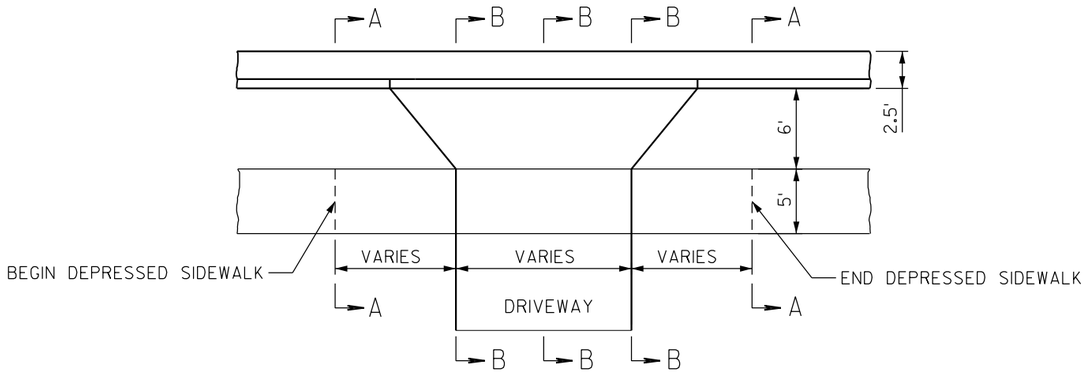
URBAN DRIVEWAY DETAIL



SECTION B-B



SECTION A-A

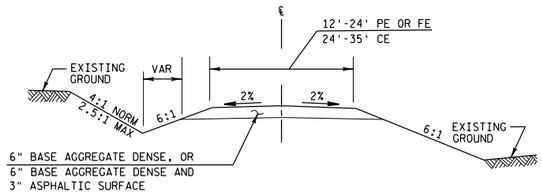


PLAN VIEW

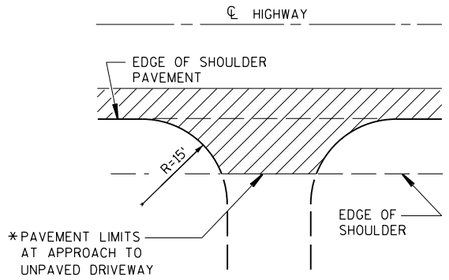
NOTE: LONGITUDINAL SIDEWALK SLOPE NOT TO EXCEED 5%

SEE PLAN DETAILS FOR LOCATIONS

DEPRESSED SIDEWALK DETAIL

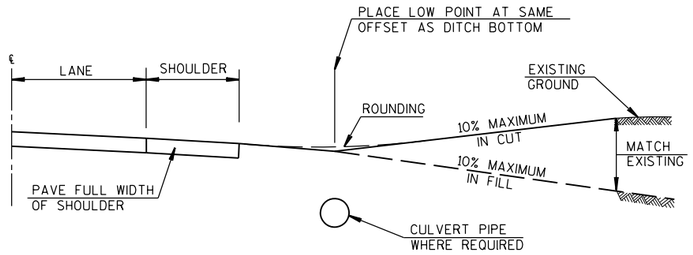


TYPICAL CROSS SECTION



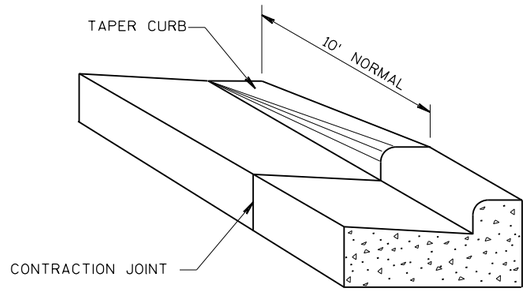
*WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHALL BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

PLAN VIEW

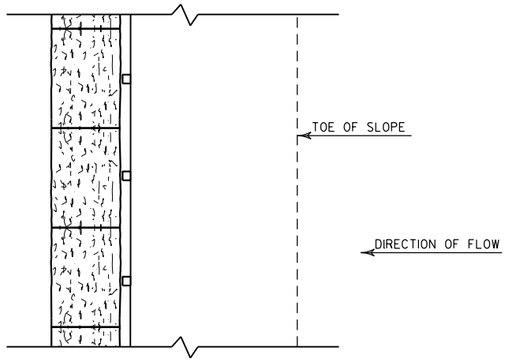


PROFILE VIEW

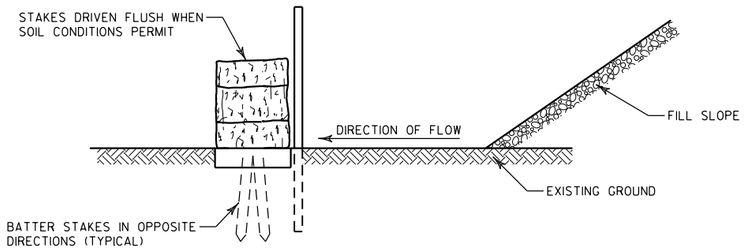
RURAL DRIVEWAY DETAIL



DETAIL OF CURB & GUTTER TERMINI

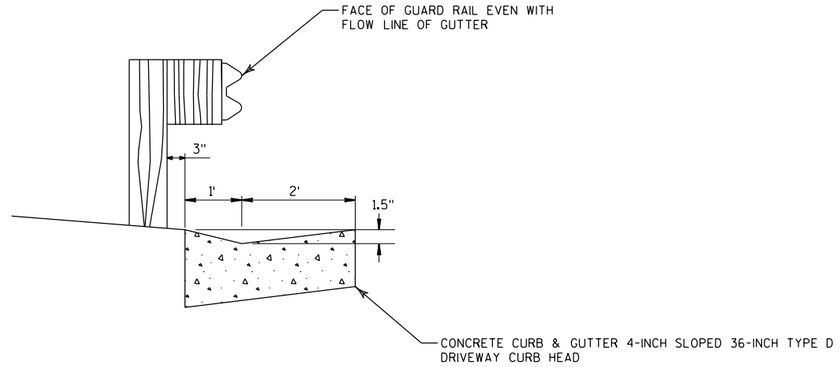


PLAN VIEW



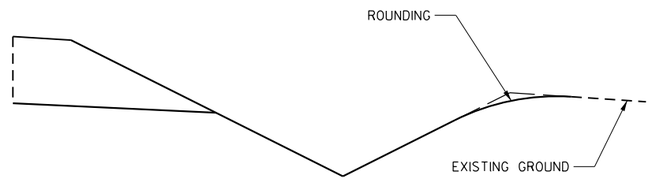
ELEVATION

SILT FENCE IN FRONT OF EROSION BALES DETAIL

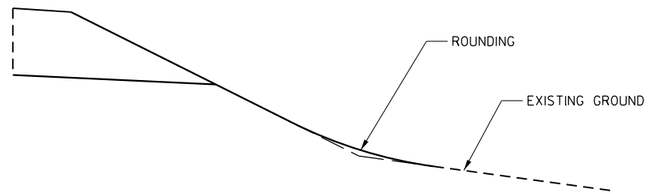


MGS GUARD RAIL WITH CURB & GUTTER

STA 147+00 TO STA 149+03.40



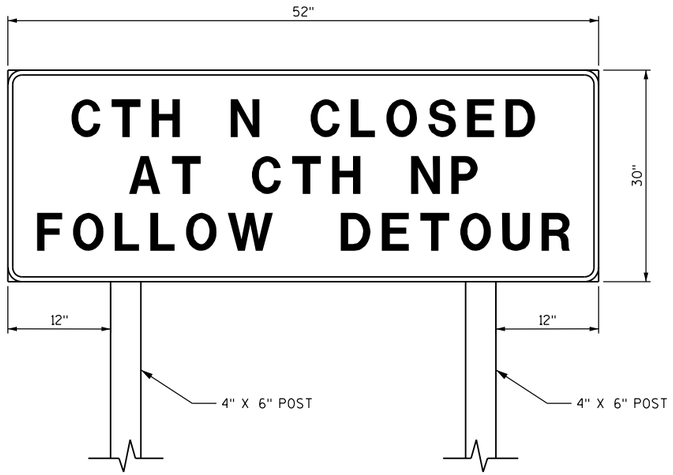
IN CUT

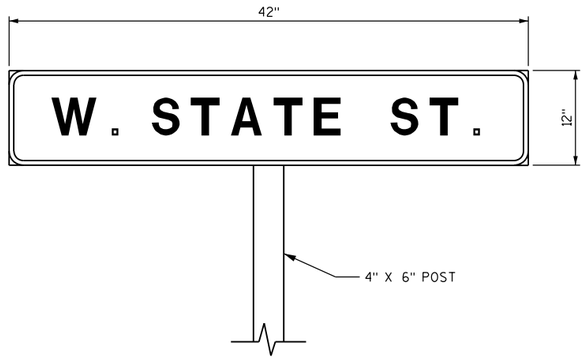


IN FILL

SLOPE ROUNDING DETAIL

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CONSTRUCTION DETAILS	SHEET 15	E





TRAFFIC CONTROL SIGNS FIXED MESSAGE

NOTES

1) SEE DETOUR PLAN FOR FIXED MESSAGE SIGN LOCATIONS.

2) SIGNS SHALL HAVE BLACK NON-REFLECTIVE MESSAGE ON ORANGE FLUORESCENT REFLECTIVE BACKGROUND. SHEETING AND BASE MATERIAL PER SPEC 637 & 643. REFERENCE: "WISDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," LATEST EDITION.

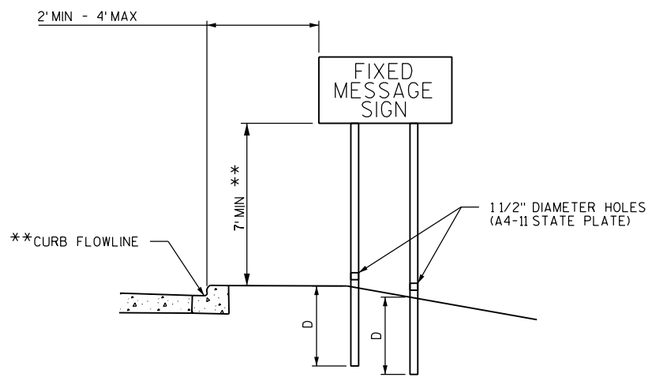
3) SIGNS SHALL HAVE 6" CAPITAL LETTERS, SERIES "C".

4) SIGNS SHALL HAVE A 1" BLACK BORDER WITH 3" CORNER RADIUS.

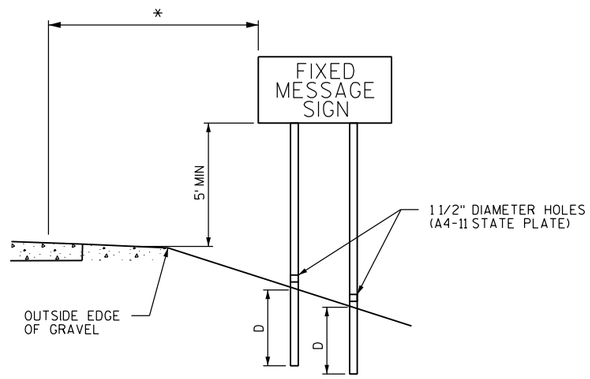
5) CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.

6) SIGNS SHALL BE MOUNTED ON 4"X6" WOODEN POST SUPPORTS, WITH 2 HOLES PER STATE PLATE A4-11. THE NUMBER OF POSTS REQUIRED IS SHOWN.

2



URBAN AREA



RURAL AREA

NOTES

* 6' FROM EDGE OF PAVED SHOULDER OR 12' FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) OR 2' FROM THE OUTSIDE EDGE OF GRAVEL. WHICHEVER IS GREATER UNLESS DIRECTED BY PROJECT ENGINEER.

** THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARaNCE MAY BE REDUCED TO 5' MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20' OR LESS	4'
GREATER THAN 20'	5'

POST MOUNTING FOR TRAFFIC CONTROL SIGNS FIXED MESSAGE

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CONSTRUCTION DETAILS	SHEET 16	E

WATER MAIN NOTES

1) ALL PROPOSED WATER UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THIS CONSTRUCTION PLAN, THE PROJECT SPECIFICATIONS, THE CITY OF HARTFORD STANDARDIZED DEVELOPMENT SPECIFICATIONS MANUAL, THE LATEST EDITION OF THE WISCONSIN STANDARD SPECIFICATIONS FOR SEWER & WATER CONSTRUCTION, AND ANY CONDITIONS OF APPROVAL.

2) THE CONTRACTOR SHALL MAINTAIN ELECTRICAL CONTINUITY ALONG ALL PROPOSED WATERMAIN AND WATER SERVICE PIPING AS PER SPECIFICATIONS (INCIDENTAL TO THE SPECIFIC PIPING). IF THE CURB STOP BOX FALLS WITHIN A PROPOSED DRIVEWAY, THE CONTRACTOR SHALL INSTALL A PVC "SLIDER" PIPE AROUND SAID BOX PRIOR TO DRIVEWAY RESTORATION SO THAT CONCRETE DOES NOT ADHERE TO THE BOX (INCIDENTAL TO CONSTRUCTION).

3) ALL PROPOSED WATER MAINLINE SHALL BE DUCTILE IRON PIPE WITH A PIPE SIZE AS NOTED ON THE PLANS OR AS DIRECTED BY THE CITY STAFF OR FIELD ENGINEER. THE CONTRACTOR SHALL COORDINATE ANY REQUIRED TEMPORARY WATERMAIN CLOSURES OR WATER SERVICE FLUSHES WITH THE CITY. ALL EXISTING WATER VALVES, HYDRANTS, ETC. SHALL BE OPERATED BY CITY PERSONNEL ONLY.

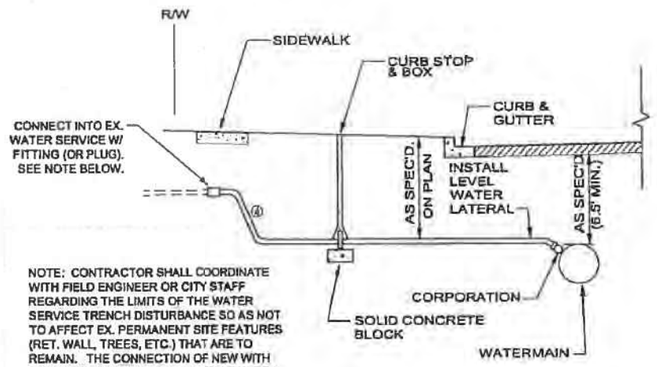
4) 6.5 FEET OF COVER OVER ALL NEWLY INSTALLED WATERMAINS AND SERVICES IS DESIRED FOR THIS PROJECT. THE CONTRACTOR SHALL MAINTAIN A MINIMUM DEPTH OF COVER OF 5.0 FEET UNLESS DIRECTED OTHERWISE BY THE CITY OF HARTFORD. IF THE NEWLY INSTALLED WATER SERVICE OR MAIN IS INSTALLED WITH COVER LESS THAN 6.5 FEET, THE CONTRACTOR SHALL INSULATE THE WATER PIPING ACCORDING TO THE INSULATION DETAIL AND PROJECT SPECIFICATIONS. THE DEPTH OF COVER SHALL BE BASED ON FINISHED GROUND ELEVATIONS. INSULATION SHALL ALSO BE INSTALLED AT ALL LOCATIONS WHERE STORM SEWER CROSSES THE WATERMAIN. MINIMUM VERTICAL SEPARATION DISTANCE WHERE WATERMAIN CROSSES OVER SEWER IS 6 INCHES. MINIMUM VERTICAL SEPARATION DISTANCE WHERE WATERMAIN CROSSES UNDER SEWER IS 18 INCHES. FINAL ELEVATIONS OF THE WATERMAIN WILL BE DETERMINED DURING CONSTRUCTION BY THE FIELD ENGINEER AND/OR CITY STAFF.

5) LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES AND MAY VARY SLIGHTLY FROM PLAN. LENGTHS SHALL BE VERIFIED IN THE FIELD DURING CONSTRUCTION.

6) ALL BENDS, CONNECTORS, FITTINGS AND OTHER MATERIALS NOT SPECIFICALLY ITEMIZED ON THE BID BUT NECESSARY TO MAKE A WATERTIGHT CONNECTION TO THE WATER PIPING AS WELL AS TO PROVIDE A COMPLETE WORKING SYSTEM SHALL BE INCIDENTAL TO CONSTRUCTION. ALL PROPOSED WATER PIPING CONNECTIONS INTO EXISTING PIPING OR STRUCTURES SHALL BE INCIDENTAL TO CONSTRUCTION. ALL EXISTING WATER PIPE REMOVAL AS WELL AS THE REMOVAL OF EXISTING VALVE BOXES THAT ARE NO LONGER IN USE SHALL BE INCIDENTAL TO CONSTRUCTION.

7) THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS (SHORING, BRACING, ETC.) AND SHALL CAREFULLY INSTALL THE NEW WATER IMPROVEMENTS SO AS NOT TO DISTURB ANY EXISTING PRIVATE UTILITY STRUCTURES OR PIPING. ANY DISTURBANCE OR DAMAGE (AS DETERMINED BY THE CITY) SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE TO THE SATISFACTION OF THE CITY.

8) ALL TRENCHES SHALL BE FILLED WITH GRANULAR BACKFILL (INCIDENTAL TO CONSTRUCTION)

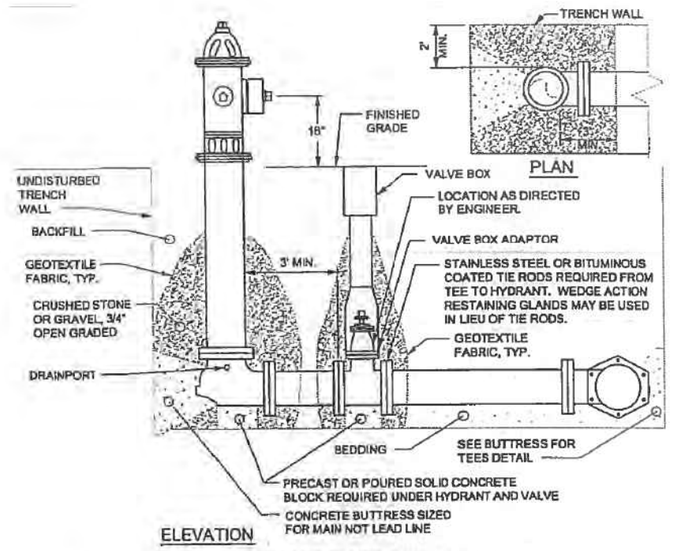


ELEVATION VIEW

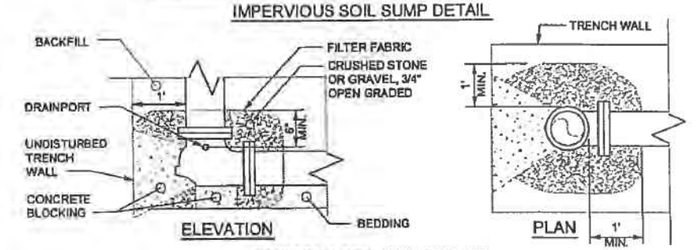
GENERAL NOTES:

1. SEE PLANS AND SPECIFICATIONS FOR LOCATION, SIZE, & TYPE OF CURB STOP, CORPORATION, AND SERVICE LINE.
2. COMMUNITY STANDARDS SHALL SUPERSEDE THIS DETAIL.
3. CONTRACTOR SHALL MAINTAIN ELECTRICAL CONTINUITY ALONG ALL PROPOSED WATER SERVICE PIPING AS PER SPECIFICATIONS (INCIDENTAL TO WATER SERVICE PIPING).
4. MAINTAIN MIN. DEPTH OF COVER ALONG THE NEW WATER SERVICE PIPING. IF THE CONNECTION POINT TO THE EX. WATER SERVICE PIPING (AT THE STREET R/W) IS AT LESS THAN THE MINIMUM DEPTH OF COVER, THEN DEFLECT THE NEW PIPING UP TO MATCH AT THE LAST POSSIBLE POINT AND INSULATE AS SPECIFIED.

WATER SERVICE DETAIL

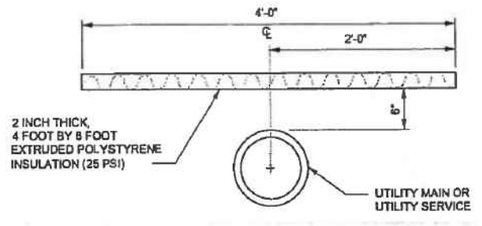


IMPERVIOUS SOIL SUMP DETAIL

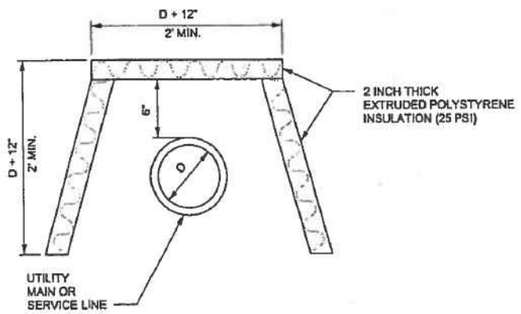


PERVIOUS SOIL SUMP DETAIL

HYDRANT AND LEAD CONNECTION DETAIL



STANDARD INSTALLATION

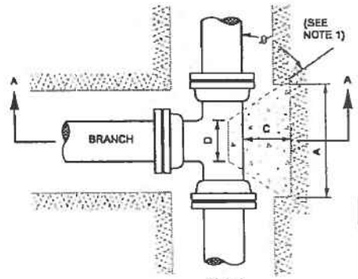


SIDE PROTECTION INSTALLATION

GENERAL NOTES:

1. THE SIDE PROTECTION INSTALLATION SHALL BE USED WHERE FROST WILL PENETRATE BELOW THE PIPE INVERT.

PIPE INSULATION DETAIL



SECTION A-A

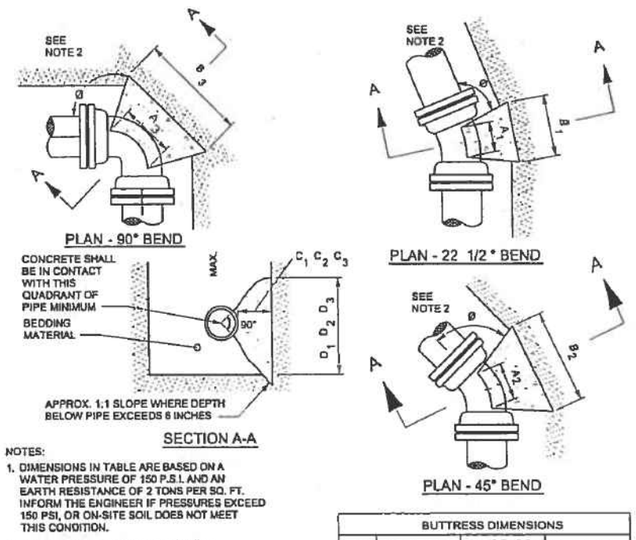
BUTTRESS DIMENSIONS				
B.D	A	B	C	D
8"	1'-3"	1'-0"	SEE NOTE NO. 1	SEE NOTE NO. 3
8"	1'-6"	1'-4"		
10"	1'-10"	1'-8"		
12"	2'-3"	2'-0"		
16"	3'-2"	2'-6"		
20"	4'-0"	3'-0"		
24"	5'-3"	3'-4"		

B.D. = BRANCH DIAMETER

NOTES:

1. DIMENSION 'C' SHOULD BE LARGE ENOUGH TO MAKE ANGLE Ø GREATER THAN OR EQUAL TO 45°.
2. CONCRETE SHOULD BEAR ON THIS QUADRANT OF PIPE AT A MINIMUM.
3. DIMENSION 'D' SHOULD BE AS LARGE AS POSSIBLE BUT CONCRETE SHOULD NOT INTERFERE WITH MECHANICAL JOINTS.
4. BUTTRESS DIMENSIONS ARE BASED ON A SOIL RESISTANCE OF TWO TONS PER SQ. FT. AND A WATER PRESSURE OF 150 PSI. INFORM THE ENGINEER IF ON-SITE SOIL DOES NOT MEET THIS CONDITION OR PRESSURES EXCEED 150 PSI.
5. BUTTRESS TO BE PLACED AGAINST FIRM UNDISTURBED SOIL, OR DISTURBED SOIL COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY, ASTM D1557.
6. CONCRETE SHALL HAVE A MINIMUM 7-DAY COMPRESSIVE STRENGTH OF 2000 PSI.
7. ALL POURED BUTTRESSED FITTINGS SHALL BE WRAPPED IN POLYETHYLENE.
8. IN ADDITION TO BUTTRESSES, ALL JOINTS SURROUNDING TEES SHALL BE RESTRAINED WITH WEDGE ACTION RESTRAINING GLANDS.

BUTTRESS FOR TEES DETAIL



NOTES:

1. DIMENSIONS IN TABLE ARE BASED ON A WATER PRESSURE OF 150 P.S.I. AND AN EARTH RESISTANCE OF 2 TONS PER SQ. FT. INFORM THE ENGINEER IF PRESSURES EXCEED 150 PSI, OR ON-SITE SOIL DOES NOT MEET THIS CONDITION.
2. DIMENSION C. C. C. SHOULD BE LARGE ENOUGH TO MAKE ANGLE Ø EQUAL TO OR LARGER THAN 45°.
3. DIMENSION C. C. C. SHOULD BE LARGE AS POSSIBLE WITHOUT INTERFERRING WITH THE MECHANICAL JOINT.
4. BUTTRESS TO BE PLACED AGAINST FIRM UNDISTURBED SOIL, OR DISTURBED SOIL COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY, ASTM D1557.
5. ALL POURED BUTTRESSED FITTINGS SHALL BE WRAPPED IN POLYETHYLENE.
6. CONCRETE SHALL HAVE A MINIMUM 7-DAY COMPRESSIVE STRENGTH OF 2000 PSI.
7. IN ADDITION TO BUTTRESS, ALL JOINTS SURROUNDING BENDS SHALL BE RESTRAINED WITH WEDGE ACTION RESTRAINING GLANDS.

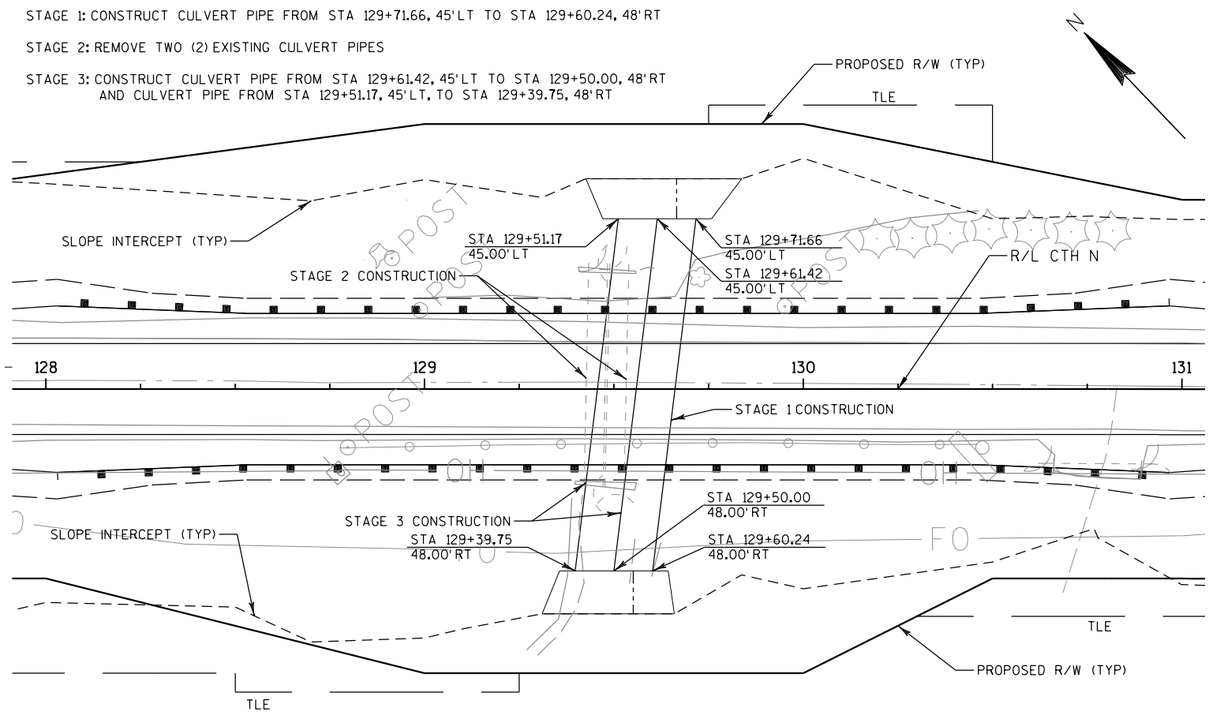
BUTTRESS DIMENSIONS						
PIPE SIZE	22 1/2 ° BENDS		45° BENDS		90° BENDS	
	B_1	D_1	B_2	D_2	B_3	D_3
6"	1'-0"	1'-0"	1'-0"	1'-0"	1'-4"	1'-2"
8"	1'-0"	1'-0"	1'-4"	1'-2"	1'-10"	1'-5"
10"	1'-2"	1'-2"	1'-7"	1'-7"	2'-3"	1'-10"
12"	1'-4"	1'-4"	1'-10"	1'-10"	2'-8"	2'-3"
16"	1'-10"	1'-8"	2'-6"	2'-4"	3'-10"	2'-10"
20"	2'-4"	2'-0"	3'-3"	2'-10"	5'-0"	3'-4"
24"	2'-10"	2'-4"	4'-0"	3'-3"	6'-4"	3'-10"

BUTTRESS FOR BENDS DETAIL

STAGE 1: CONSTRUCT CULVERT PIPE FROM STA 129+71.66, 45'LT TO STA 129+60.24, 48'RT

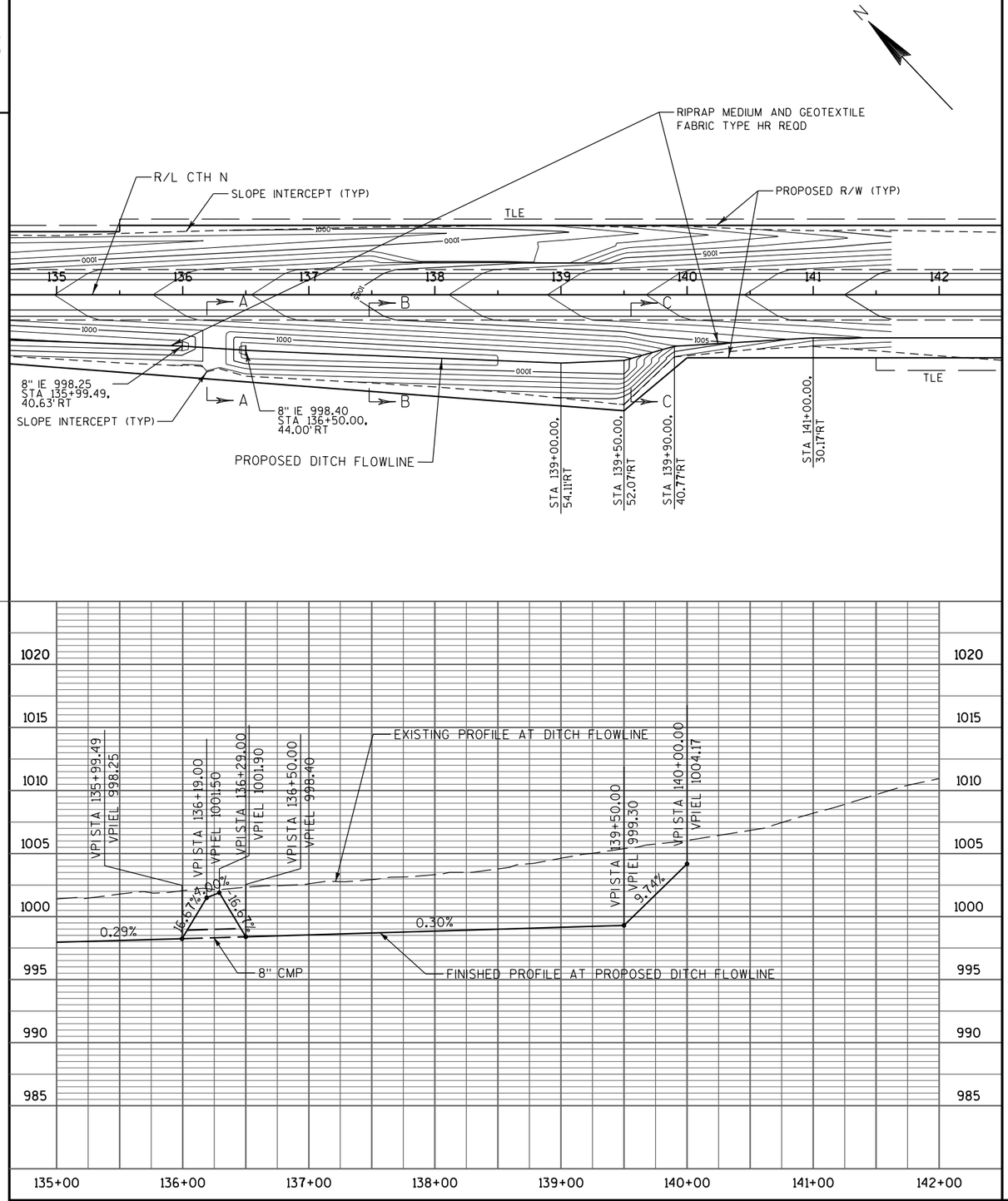
STAGE 2: REMOVE TWO (2) EXISTING CULVERT PIPES

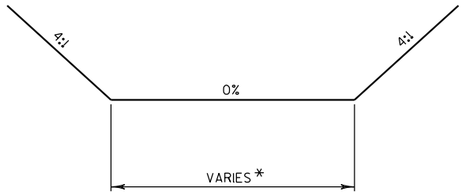
STAGE 3: CONSTRUCT CULVERT PIPE FROM STA 129+61.42, 45'LT TO STA 129+50.00, 48'RT
AND CULVERT PIPE FROM STA 129+51.17, 45'LT, TO STA 129+39.75, 48'RT



CULVERT CONSTRUCTION STAGING

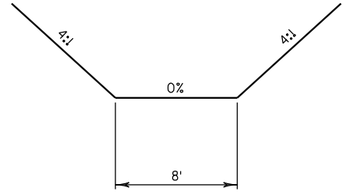
PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CONSTRUCTION DETAILS	SHEET 19	E



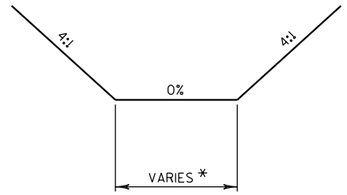


SECTION A-A

*TAPER FROM 0' AT STA 135+99.48 TO 32' AT STA 136+19.00
32' FROM STA 169+19.00 TO STA 136+29.00
TAPER FROM 32' AT STA 136+29.00 TO 8' STA 136+50.00



SECTION B-B



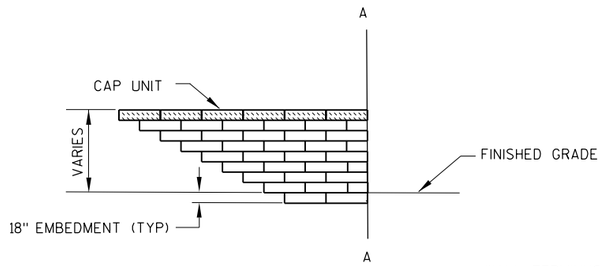
SECTION C-C

*TAPER FROM 8' AT STA 139+50.00 TO 0' AT STA 139+90.00

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CONSTRUCTION DETAIL: FINISHED DITCH	SHEET 20	E

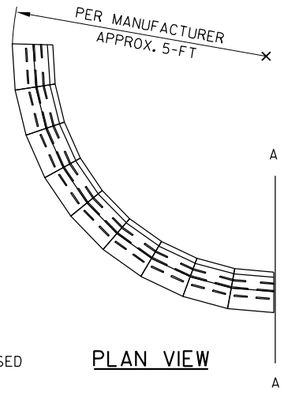
WALL TERMINUS

STA 167+00
STA 168+75

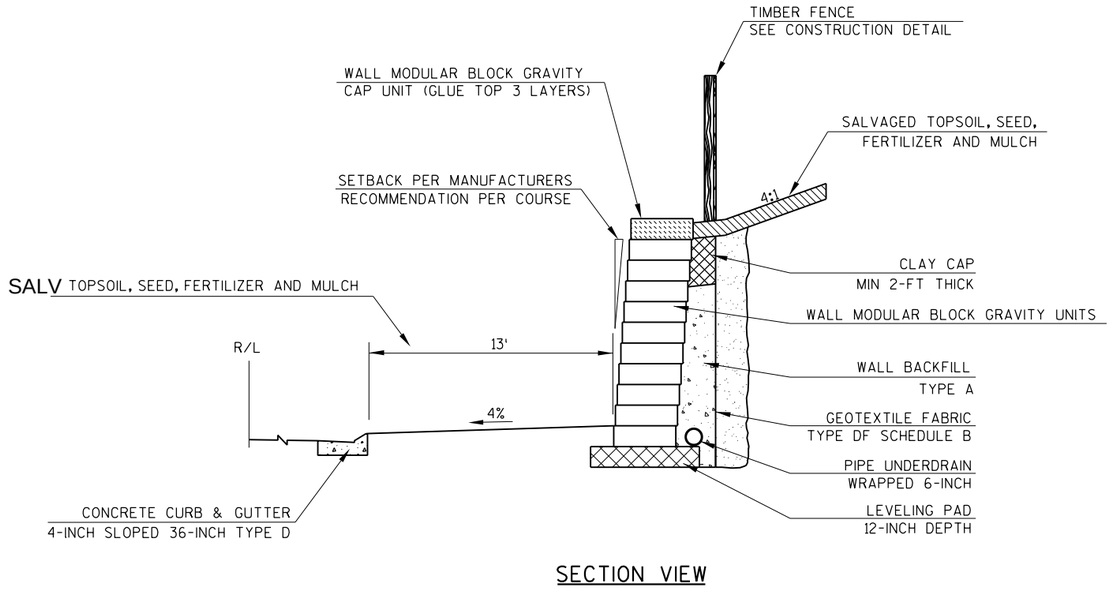


ELEVATION VIEW

WALL TERMINUS TO TURN
BACK INTO SLOPE,
NO BLUNT TERMINUS EXPOSED

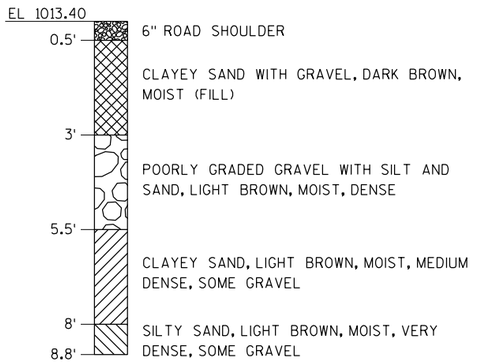


PLAN VIEW



SECTION VIEW

NOTE:
CONNECT PIPE UNDERDRAIN TO MH 36.0

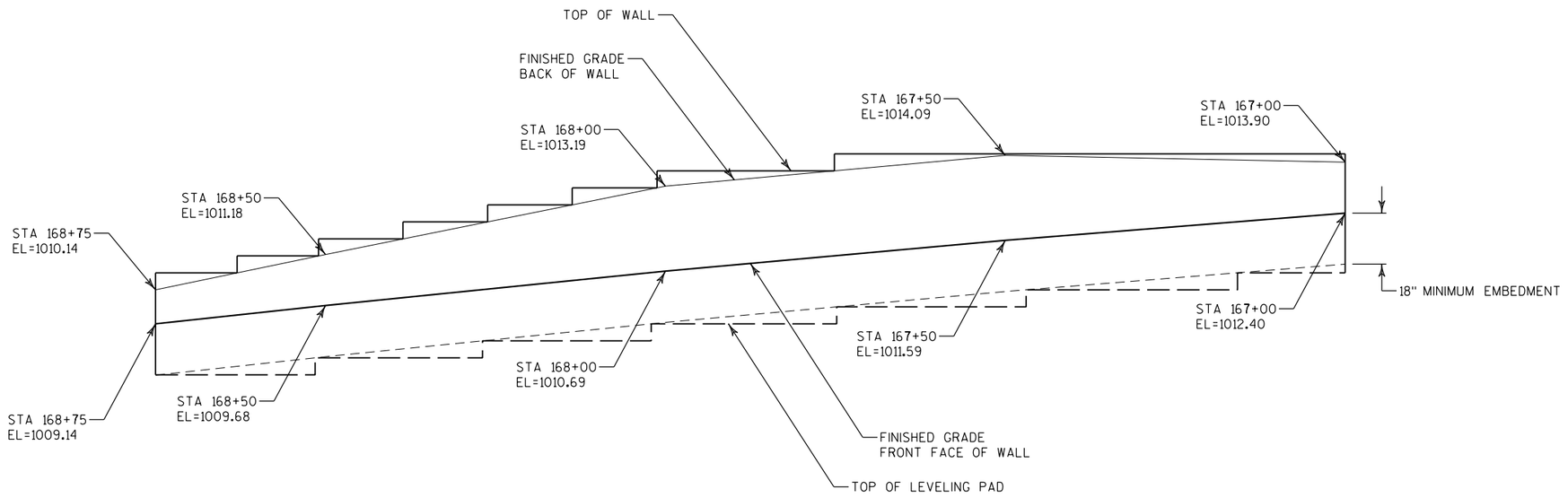


BORING B-9

STA 168+00, 20' RT

SOIL DESIGN PARAMETERS

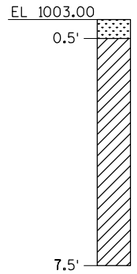
UNIT WEIGHT OF BACKFILL: 130 PCF
ANGLE OF INTERNAL FRICTION OF BACKFILL: 32°
COHESIVE STRENGTH OF BACKFILL: 0 PSF
ALLOWABLE BEARING CAPACITY: 2,000 PSF



WALL MODULAR BLOCK GRAVITY

STA 167+00 TO STA 168+75, 36' RT

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CONSTRUCTION DETAILS	SHEET 21	E



BORING B-12

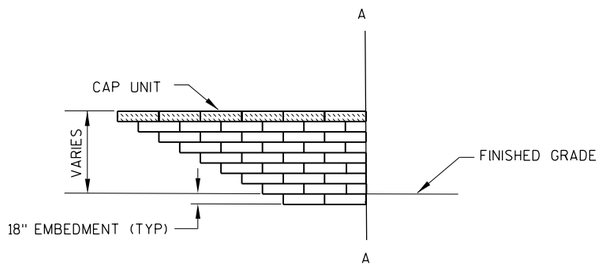
STA 195+25, 25'LT

SOIL DESIGN PARAMETERS

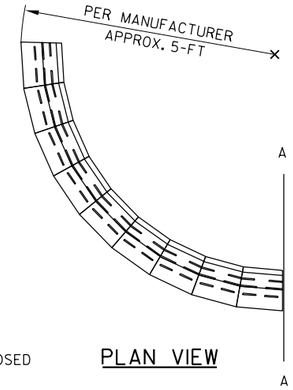
UNIT WEIGHT OF BACKFILL: 130 PCF
ANGLE OF INTERNAL FRICTION OF BACKFILL: 32°
COHESIVE STRENGTH OF BACKFILL: 0 PSF
ALLOWABLE BEARING CAPACITY: 2,000 PSF

WALL TERMINUS

STA 191+60

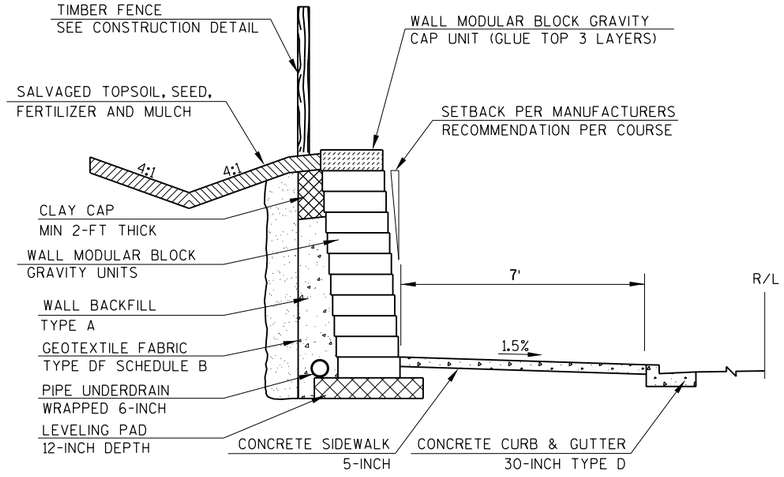


ELEVATION VIEW



PLAN VIEW

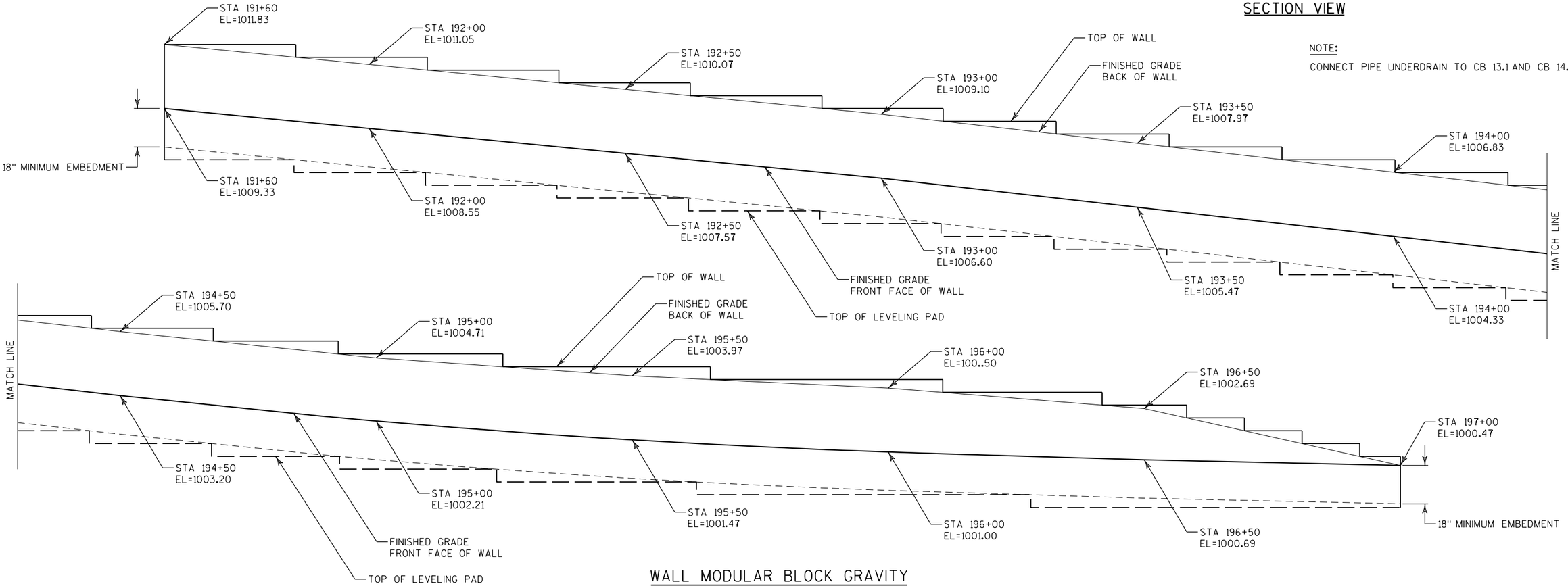
WALL TERMINUS TO TURN BACK INTO SLOPE, NO BLUNT TERMINUS EXPOSED



SECTION VIEW

NOTE:

CONNECT PIPE UNDERDRAIN TO CB 13.1 AND CB 14.2



WALL MODULAR BLOCK GRAVITY

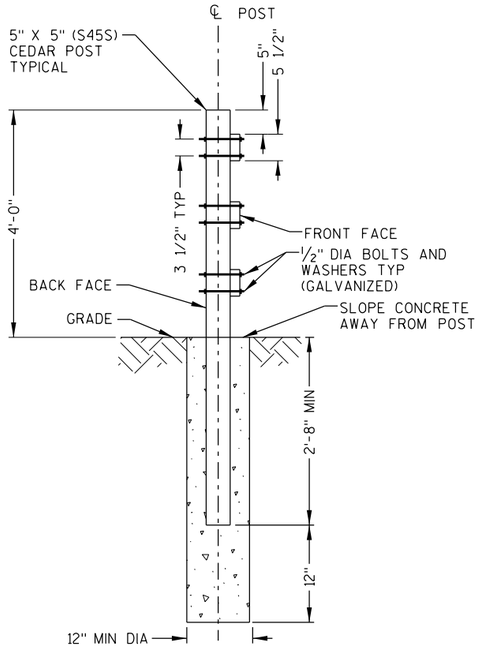
STA 191+60 TO STA 197+00, 25.5'LT

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CONSTRUCTION DETAILS	SHEET 22	E

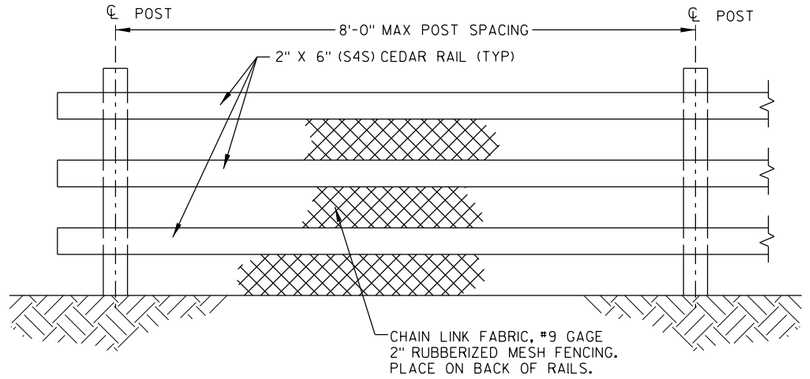
NOTES

1) FENCING LAYOUT BY ENGINEER IN THE FIELD.

2) HARDWARE, POST CONCRETE AND MESH FENCING INCIDENTAL TO THE BID ITEM "TIMBER FENCE".

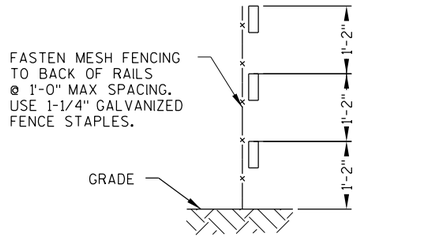


POST DETAIL



TIMBER FENCE DETAIL

FOR WALL MODULAR BLOCK GRAVITY
STA 167+00 TO STA 168+75, RT
STA 191+60 TO STA 197+00, LT



MESH FENCING CONNECTION

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CONSTRUCTION DETAILS	SHEET 23	E

2

LEGEND:

- AG1 AGGREGATE SHOULDER, BASE AGGREGATE DENSE 3/4-INCH
- AP1 HMA PAVEMENT TYPE E-0.3, 4-INCH
- BG1 MGS GUARDRAIL 3
- BG2 MGS GUARDRAIL TERMINAL EAT
- CG1 CONCRETE CURB AND GUTTER 30-INCH TYPE D
- CG2 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D
- CG3 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
- CM1 CONCRETE MEDIAN SLOPED NOSE TYPE 1
- CS1 CONCRETE SIDEWALK 5-INCH
- DR1 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
- DR2 AGGREGATE DRIVEWAY, BASE AGGREGATE DENSE 3/4-INCH, 6-INCH
- DR3 CONCRETE DRIVEWAY HES 7-INCH
- AF1 ASPHALTIC FLUME
- SW1 SAWING ASPHALT
- SW2 SAWING CONCRETE

N

BEGIN PROJECT
STA 95+50.00

CONSTRUCT PE
MATCH EXISTING
39.02' LT

STA 95+55.79
17.51' LT

STA 95+50.00
18.55' LT

STA 95+50.00
16.37' RT

STA 95+75.00
17.00' RT

STA 96+56.72
12.00' RT

STA 96+94.14
17.00' RT

STA 95+96.27
12.00' LT

CONSTRUCT PE
MATCH EXISTING
35.49' RT

STA 98+44.22
27.00' RT

STA 99+21.27
24.00' LT

STA 99+44.22
27.00' RT

STA 99+75.40
27.00' RT

STA 99+94.14
52.50' RT

CONSTRUCT CE
MATCH
52.50' RT

STA 100+40.97
52.50' RT

STA 100+80.00
27.00' RT

STA 100+89.30
28.97' RT

R=60'

R=60'

R/L CTH N

CTH N

TLE

R/W

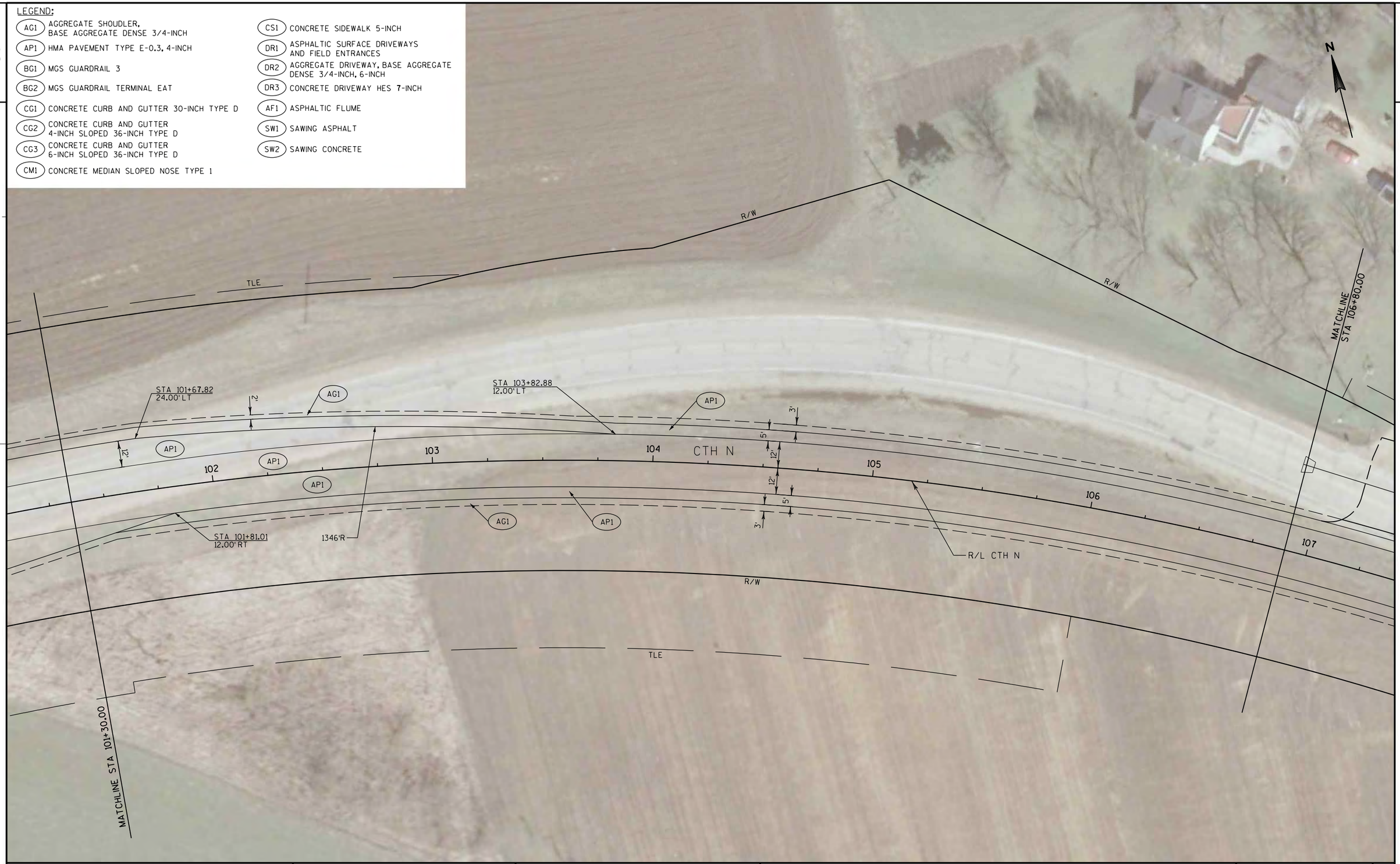
MATCHLINE STA 101+30.00

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN DETAILS: CTH N	SHEET 24	E

2

LEGEND:

- (AG1) AGGREGATE SHOULDER, BASE AGGREGATE DENSE 3/4-INCH
- (AP1) HMA PAVEMENT TYPE E-0.3, 4-INCH
- (BG1) MGS GUARDRAIL 3
- (BG2) MGS GUARDRAIL TERMINAL EAT
- (CG1) CONCRETE CURB AND GUTTER 30-INCH TYPE D
- (CG2) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D
- (CG3) CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
- (CM1) CONCRETE MEDIAN SLOPED NOSE TYPE 1
- (CS1) CONCRETE SIDEWALK 5-INCH
- (DR1) ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
- (DR2) AGGREGATE DRIVEWAY, BASE AGGREGATE DENSE 3/4-INCH, 6-INCH
- (DR3) CONCRETE DRIVEWAY HES 7-INCH
- (AF1) ASPHALTIC FLUME
- (SW1) SAWING ASPHALT
- (SW2) SAWING CONCRETE

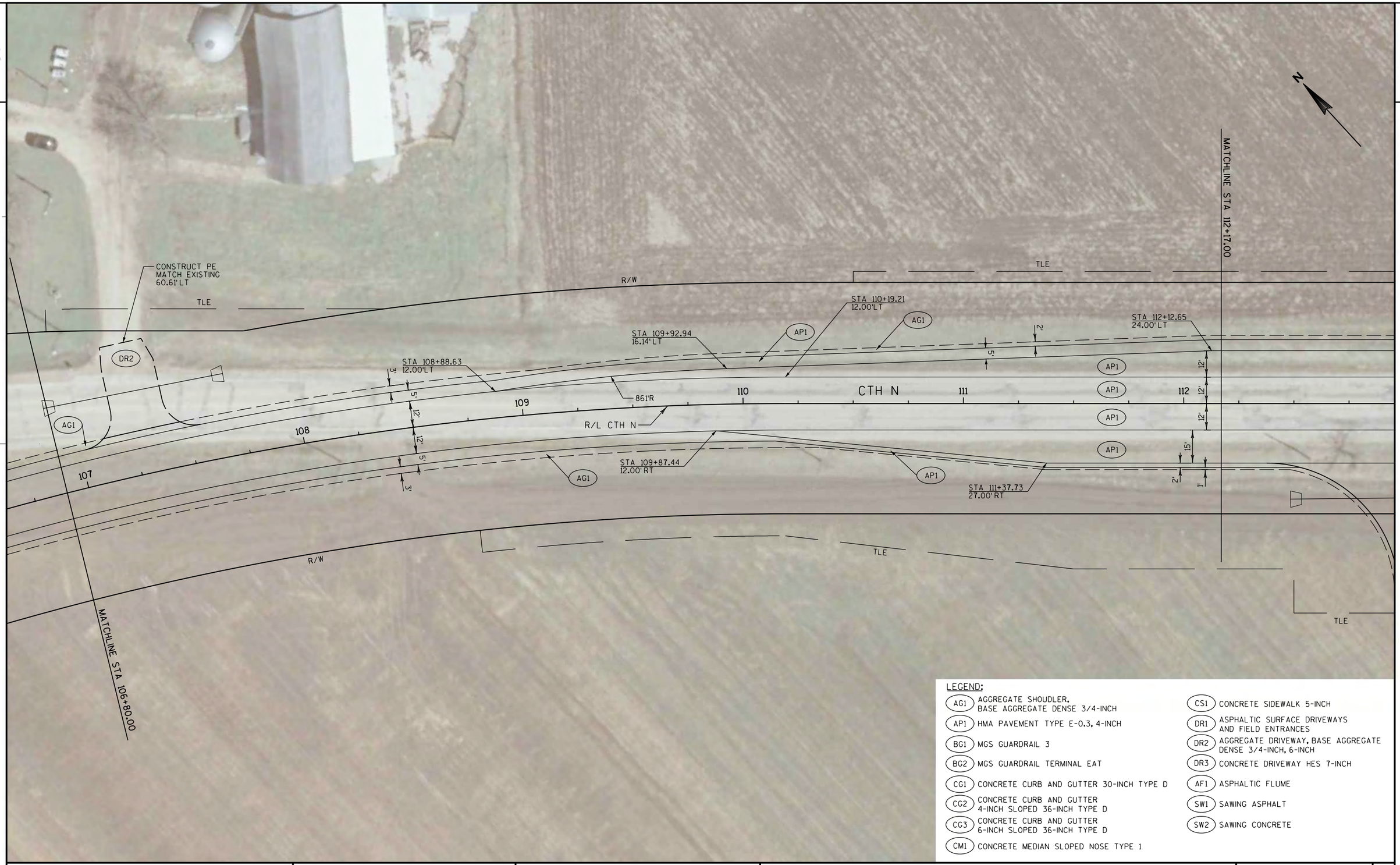


PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN DETAILS: CTH N	SHEET 25	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\021202_pd.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

2

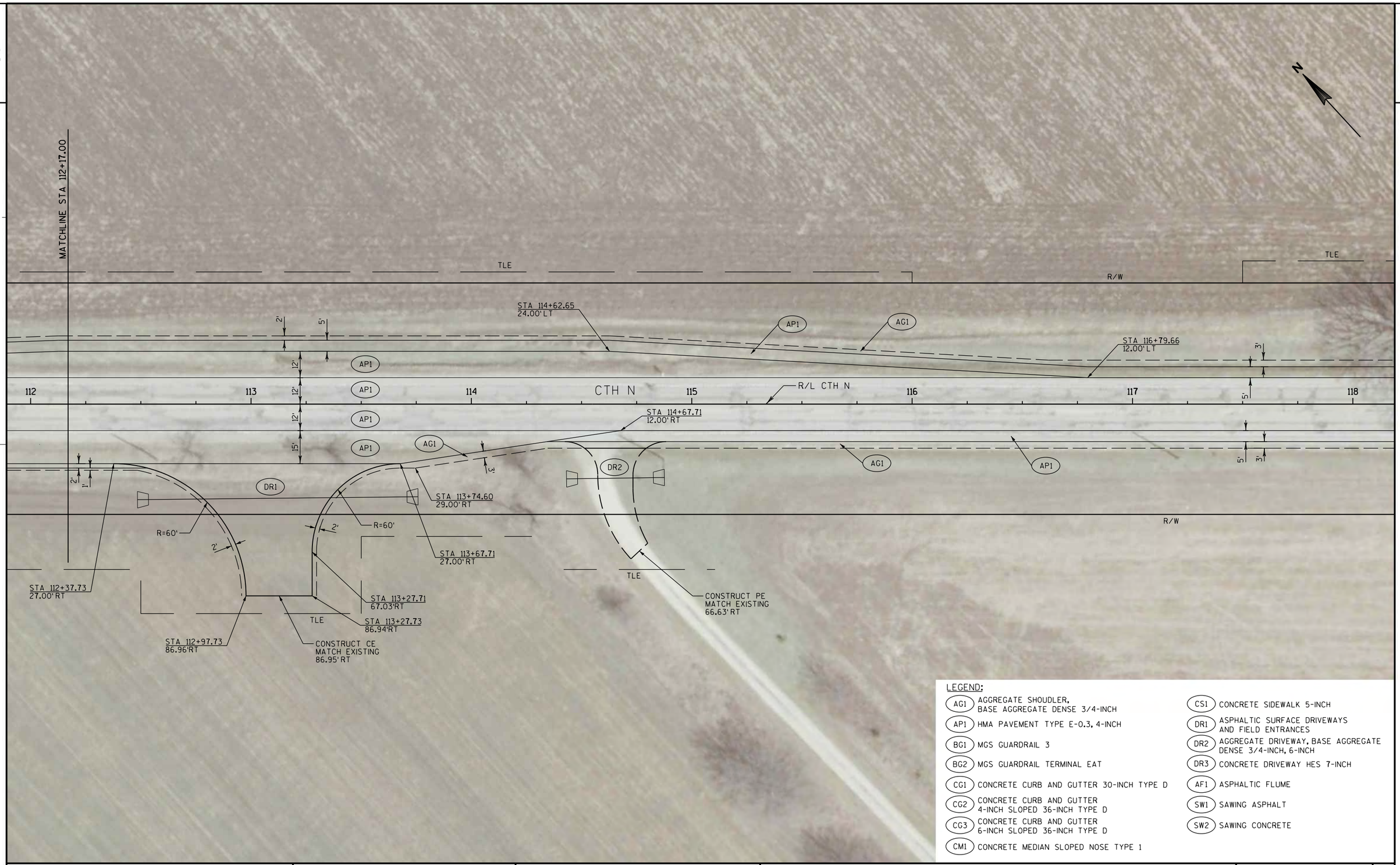


LEGEND:

AG1	AGGREGATE SHOULDER, BASE AGGREGATE DENSE 3/4-INCH	CS1	CONCRETE SIDEWALK 5-INCH
AP1	HMA PAVEMENT TYPE E-0.3, 4-INCH	DR1	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
BG1	MGS GUARDRAIL 3	DR2	AGGREGATE DRIVEWAY, BASE AGGREGATE DENSE 3/4-INCH, 6-INCH
BG2	MGS GUARDRAIL TERMINAL EAT	DR3	CONCRETE DRIVEWAY HES 7-INCH
CG1	CONCRETE CURB AND GUTTER 30-INCH TYPE D	AF1	ASPHALTIC FLUME
CG2	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D	SW1	SAWING ASPHALT
CG3	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	SW2	SAWING CONCRETE
CM1	CONCRETE MEDIAN SLOPED NOSE TYPE 1		

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN DETAILS: CTH N	SHEET 26	E

2



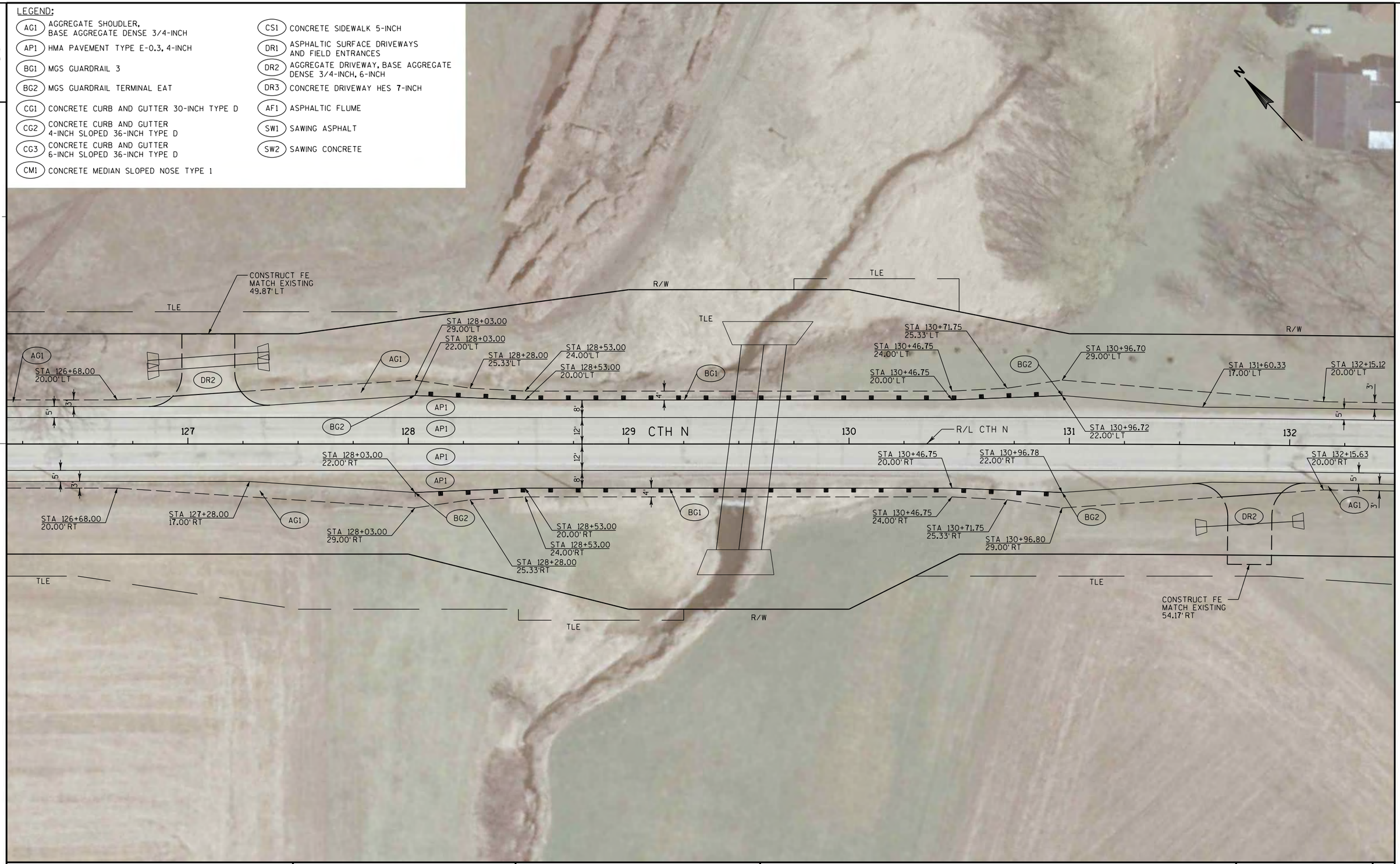
LEGEND:

AG1	AGGREGATE SHOULDER, BASE AGGREGATE DENSE 3/4-INCH	CS1	CONCRETE SIDEWALK 5-INCH
AP1	HMA PAVEMENT TYPE E-0.3, 4-INCH	DR1	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
BG1	MGS GUARDRAIL 3	DR2	AGGREGATE DRIVEWAY, BASE AGGREGATE DENSE 3/4-INCH, 6-INCH
BG2	MGS GUARDRAIL TERMINAL EAT	DR3	CONCRETE DRIVEWAY HES 7-INCH
CG1	CONCRETE CURB AND GUTTER 30-INCH TYPE D	AF1	ASPHALTIC FLUME
CG2	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D	SW1	SAWING ASPHALT
CG3	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	SW2	SAWING CONCRETE
CM1	CONCRETE MEDIAN SLOPED NOSE TYPE 1		

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN DETAILS: CTH N	SHEET 27	E

LEGEND:

- AG1 AGGREGATE SHOULDER, BASE AGGREGATE DENSE 3/4-INCH
- AP1 HMA PAVEMENT TYPE E-0.3, 4-INCH
- BG1 MGS GUARDRAIL 3
- BG2 MGS GUARDRAIL TERMINAL EAT
- CG1 CONCRETE CURB AND GUTTER 30-INCH TYPE D
- CG2 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D
- CG3 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
- CM1 CONCRETE MEDIAN SLOPED NOSE TYPE 1
- CS1 CONCRETE SIDEWALK 5-INCH
- DR1 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
- DR2 AGGREGATE DRIVEWAY, BASE AGGREGATE DENSE 3/4-INCH, 6-INCH
- DR3 CONCRETE DRIVEWAY HES 7-INCH
- AF1 ASPHALTIC FLUME
- SW1 SAWING ASPHALT
- SW2 SAWING CONCRETE



PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN DETAILS: CTH N	SHEET 28	E

NOTE:

1) SEE "PLAN DETAILS: INDEPENDENCE AVE" FOR INDEPENDENCE AVE INFORMATION.

*- DRIVEWAY CURB HEAD, SEE CONSTRUCTION DETAIL, MGS GUARD RAIL WITH CURB & GUTTER

N

MATCHLINE STA 112+17.00

CONSTRUCT CE
MATCH EXISTING
56.25'LT

TLE

R/W

DR2

STA 143+28.46
12.00'LT

STA 143+74.06
20.30'LT

AG1

STA 144+80.36
24.38'LT

AP1

STA 145+40.16
24.67'LT

STA 145+99.96
36.97'LT

STA 145+99.96
30.96'LT

BG1

STA 146+24.96
35.26'LT

STA 146+49.96
35.00'LT

STA 146+90.00
35.00'LT

STA 147+00.00
31.00'LT

CG2*

1010.39

BG2

STA 146+53.26
24.00'LT

142 143 144 145 146 CTH N 147

R/L CTH N

STA 142+66.98
12.00'RT

STA 144+61.26
29.00'RT

STA 146+61.26
31.00'RT

STA 146+51.26
29.00'RT

STA 146+61.26
32.00'RT

CG3

STA 146+61.26
89.00'RT
R=58'

STA 147+19.26
89.00'RT

LEGEND:

AG1	AGGREGATE SHOULDER, BASE AGGREGATE DENSE 3/4-INCH
AP1	HMA PAVEMENT TYPE E-0.3, 4-INCH
BG1	MGS GUARDRAIL 3
BG2	MGS GUARDRAIL TERMINAL EAT
CG1	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG2	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG3	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
CM1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CS1	CONCRETE SIDEWALK 5-INCH
DR1	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
DR2	AGGREGATE DRIVEWAY, BASE AGGREGATE DENSE 3/4-INCH, 6-INCH
DR3	CONCRETE DRIVEWAY HES 7-INCH
AF1	ASPHALTIC FLUME
SW1	SAWING ASPHALT
SW2	SAWING CONCRETE

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN DETAILS: CTH N	SHEET 29	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\021206_pd.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

NOTE:

1) SEE "PLAN DETAILS: INDEPENDENCE AVE" FOR INDEPENDENCE AVE INFORMATION.

*- DRIVEWAY CURB HEAD, SEE CONSTRUCTION DETAIL, MGS GUARD RAIL WITH CURB & GUTTER

MATCHLINE STA 112+17.00

CG2* BG1 R/W

STA 149+03.45
31.00'LT

STA 149+13.40
34.46'LT

AG1 BG1

STA 150+68.83
25.86'LT

STA 150+68.83
21.85'LT

BG2

STA 151+18.83
30.00'LT

STA 151+18.83
24.00'LT

STA 152+23.83
17.00'LT

STA 152+38.83
22.00'LT

1010.39 1010.14 1009.89 1009.64 1009.39

12' 5' 4' 7' 6' 5' 5' 12'

STA 149+03.26
24.00'LT

AP1

STA 151+20.26
12.00'LT

147 148 149 150 CTH N 151 152 153

AP1 AP1 12' 5' 5'

R/L CTH N

AP1 STA 148+32.56
32.00'RT

STA 149+17.26
12.00'RT

3' AG1 AP1

CG3

STA 148+17.26
31.00'RT

STA 148+17.26
32.00'RT

TLE R/W

STA 148+17.26
69.00'RT
R=38'

STA 147+79.26
69.00'RT

R/L INDEPENDENCE AVE

INDEPENDENCE AVE

9 8

LEGEND:

AG1	AGGREGATE SHOULDER, BASE AGGREGATE DENSE 3/4-INCH	CS1	CONCRETE SIDEWALK 5-INCH
AP1	HMA PAVEMENT TYPE E-0.3, 4-INCH	DR1	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
BG1	MGS GUARDRAIL 3	DR2	AGGREGATE DRIVEWAY, BASE AGGREGATE DENSE 3/4-INCH, 6-INCH
BG2	MGS GUARDRAIL TERMINAL EAT	DR3	CONCRETE DRIVEWAY HES 7-INCH
CG1	CONCRETE CURB AND GUTTER 30-INCH TYPE D	AF1	ASPHALTIC FLUME
CG2	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D	SW1	SAWING ASPHALT
CG3	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	SW2	SAWING CONCRETE
CM1	CONCRETE MEDIAN SLOPED NOSE TYPE 1		

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN DETAILS: CTH N	SHEET 30	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\021207_pd.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:40

2

NOTE:

1) LOCATIONS GIVEN TO FRONT FACE OF RETAINING WALL.

N

CONSTRUCT FE
MATCH EXISTING
69.35' LT

TLE

DR2

AG1

AP1

5'

12'

166

167

168

169

170

171

CTH N

R/L CTH N

STA 166+50.00
17.00' RT

STA 166+66.49
22.00' RT

STA 166+74.82
23.00' RT

STA 166+95.00
41.00' RT

STA 167+00.00
22.00' RT

STA 167+00.00
23.00' RT

STA 167+00.00
36.00' RT

1011.67

1010.86

1009.96

8"

1008.95

STA 168+96.62
23.00' RT

STA 168+75.00
36.00' RT

STA 168+80.00
41.00' RT

1007.84

1006.63

1005.32

STA 169+25.30
23.00' RT

STA 170+00.00
22.00' RT

STA 170+50.00
17.00' RT

STA 170+33.51
22.00' RT

STA 170+25.18
23.00' RT

CG2

DR3

CONSTRUCT PE
MATCH EXISTING
29.00' RT

WALL MODULAR BLOCK GRAVITY #1

AF1

R/W

TLE

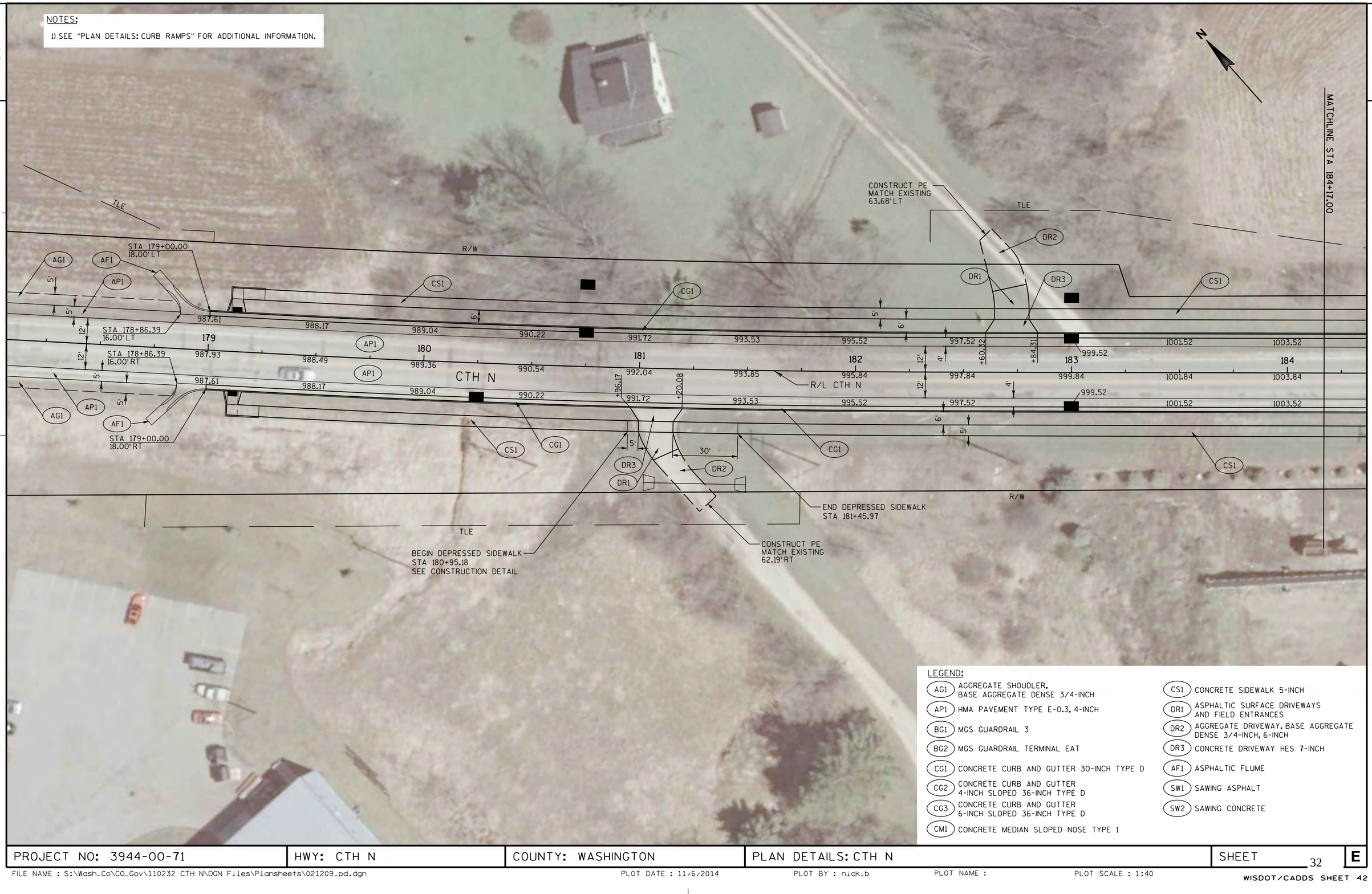
LEGEND:

AG1	AGGREGATE SHOULDER, BASE AGGREGATE DENSE 3/4-INCH	CS1	CONCRETE SIDEWALK 5-INCH
AP1	HMA PAVEMENT TYPE E-0.3, 4-INCH	DR1	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
BG1	MGS GUARDRAIL 3	DR2	AGGREGATE DRIVEWAY, BASE AGGREGATE DENSE 3/4-INCH, 6-INCH
BG2	MGS GUARDRAIL TERMINAL EAT	DR3	CONCRETE DRIVEWAY HES 7-INCH
CG1	CONCRETE CURB AND GUTTER 30-INCH TYPE D	AF1	ASPHALTIC FLUME
CG2	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D	SW1	SAWING ASPHALT
CG3	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	SW2	SAWING CONCRETE
CM1	CONCRETE MEDIAN SLOPED NOSE TYPE 1		

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN DETAILS: CTH N	SHEET 31	E

NOTES:

1) SEE "PLAN DETAILS: CURB RAMPS" FOR ADDITIONAL INFORMATION.



LEGEND:

AG1	AGGREGATE SHOULDER, BASE AGGREGATE DENSE 3/4-INCH	CS1	CONCRETE SIDEWALK 5-INCH
AP1	HMA PAVEMENT TYPE E-0.3, 4-INCH	DR1	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
BG1	MGS GUARDRAIL 3	DR2	AGGREGATE DRIVEWAY, BASE AGGREGATE DENSE 3/4-INCH, 6-INCH
BG2	MGS GUARDRAIL TERMINAL EAT	DR3	CONCRETE DRIVEWAY HES 7-INCH
CG1	CONCRETE CURB AND GUTTER 30-INCH TYPE D	AF1	ASPHALTIC FLUME
CG2	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D	SW1	SAWING ASPHALT
CG3	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	SW2	SAWING CONCRETE
CM1	CONCRETE MEDIAN SLOPED NOSE TYPE 1		

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN DETAILS: CTH N	SHEET 32	E

2

MATCHLINE STA 184+17.00

MATCHLINE STA 190+17.00

N

TLE

R/W

CS1 AP1 CG1

5' 6' 12' 12' 6' 5' 4' 4'

.52	1005.52	1007.39	1009.01	1010.37	1011.47	1012.32	1012.92	1013.26	1013.34	1013.17	1012.75	1012.07
4		185		186		187		188		189		190
.84	1005.84	1007.71	1009.33	1010.69	1011.79	1012.64	1013.24	1013.58	1013.66	1013.49	1013.07	1012.39
.52	1005.52	1007.39	1009.01	1010.37	1011.47	1012.32	1012.92	1013.26	1013.34	1013.17	1012.75	1012.07

AP1

CTH N

R/L CTH N

+70.03 +13.03

DR3 DR2 DR1 CS1 AP1 CG1

R/W

CONSTRUCT CE
MATCH EXISTING
47.61' RT

LEGEND:

AG1	AGGREGATE SHOULDER, BASE AGGREGATE DENSE 3/4-INCH
AP1	HMA PAVEMENT TYPE E-0.3, 4-INCH
BG1	MGS GUARDRAIL 3
BG2	MGS GUARDRAIL TERMINAL EAT
CG1	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG2	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG3	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
CM1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CS1	CONCRETE SIDEWALK 5-INCH
DR1	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
DR2	AGGREGATE DRIVEWAY, BASE AGGREGATE DENSE 3/4-INCH, 6-INCH
DR3	CONCRETE DRIVEWAY HES 7-INCH
AF1	ASPHALTIC FLUME
SW1	SAWING ASPHALT
SW2	SAWING CONCRETE

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN DETAILS: CTH N	SHEET 33	E

NOTE:
1) LOCATIONS GIVEN TO FRONT FACE OF RETAINING WALL.

MATCHLINE STA 190+17.00

MATCHLINE STA 196+17.00

TLE

STA 191+00.00
29.50'LT

STA 191+00.00
24.50'LT

STA 191+25.00
21.50'LT

STA 191+55.00
30.50'LT

STA 191+60.00
25.50'LT

STA 191+50.00
19.50'LT

CG1

CS1

AP1

R/W

WALL MODULAR BLOCK GRAVITY #2

CTH N

R/L CTH N

1011.14 1010.01 1008.07 1007.09 1006.12 1004.99 1003.85 1002.72 1001.73 1000.99 1000.52

191 192 193 194 195 196

1011.46 1010.33 1009.20 1008.07 1006.93 1005.80 1004.67 1003.53 1002.40 1001.41 1000.67 1000.20

1009.04 1008.88 1007.75 1006.61 1005.48 1004.35 1003.21 1002.08 1001.09 1000.35 999.88

+34.22 +68.96 +76.45 +19.45 +41.43 +74.19 +39.21 +33.52 +69.72 +04.76

5' 6' 7' 4' 12' 12' 4' 6' 5'

15' 10' 15' 10' 10' 10'

DR3 DR1 DR1 CS1 DR1 DR3 CS1 AP1 CG1 DR3 DR1 DR3 DR1

SW1 SW1 SW1

TLE TLE

END DEPRESSED SIDEWALK
STA 191+25.45

CONSTRUCT CE
MATCH EXISTING
46.81'RT

CONSTRUCT CE
MATCH EXISTING
39.87'RT

BEGIN DEPRESSED SIDEWALK
STA 190+23.22
SEE CONSTRUCTION DETAIL

CONSTRUCT CE
MATCH EXISTING
38.59'RT

BEGIN DEPRESSED SIDEWALK
STA 194+88.21
SEE CONSTRUCTION DETAIL

CONSTRUCT CE
MATCH EXISTING
45.61'RT

END DEPRESSED SIDEWALK
STA 195+39.52

BEGIN DEPRESSED SIDEWALK
STA 195+63.72
SEE CONSTRUCTION DETAIL

CONSTRUCT CE
MATCH EXISTING
72.45'RT

END DEPRESSED SIDEWALK
STA 196+10.76

LEGEND:

AG1	AGGREGATE SHOULDER, BASE AGGREGATE DENSE 3/4-INCH	CS1	CONCRETE SIDEWALK 5-INCH
AP1	HMA PAVEMENT TYPE E-0.3, 4-INCH	DR1	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
BG1	MGS GUARDRAIL 3	DR2	AGGREGATE DRIVEWAY, BASE AGGREGATE DENSE 3/4-INCH, 6-INCH
BG2	MGS GUARDRAIL TERMINAL EAT	DR3	CONCRETE DRIVEWAY HES 7-INCH
CG1	CONCRETE CURB AND GUTTER 30-INCH TYPE D	AF1	ASPHALTIC FLUME
CG2	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D	SW1	SAWING ASPHALT
CG3	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	SW2	SAWING CONCRETE
CM1	CONCRETE MEDIAN SLOPED NOSE TYPE 1		

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN DETAILS: CTH N	SHEET 34	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\021211_pd.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:40

NOTES:

1) SEE "PLAN DETAILS: AIRPORT DRIVE" FOR AIRPORT DRIVE INFORMATION.

2) SEE "PLAN DETAILS: CURB RAMPS" FOR ADDITIONAL INFORMATION.

3) DIMENSIONS GIVEN TO WALL MODULAR BLOCK GRAVITY ARE TO FRONT FACE OF WALL.

MATCHLINE STA 196+17.00

R/L AIRPORT DR

R/L CTH N

CTH N

AIRPORT DR

END PROJECT
STA 201+65.00

WALL MODULAR BLOCK GRAVITY #2

STA 197+68.87
62.49'LT

STA 197+46.24
46.00'LT
R=28'

STA 197+23.71
21.50'LT

STA 197+46.24
18.00'LT

STA 196+99.98
25.50'LT

STA 197+00.00
19.48'LT

STA 197+00.00
18.50'LT

STA 197+48.06
24.57'LT

STA 198+53.95
35.44'LT

STA 198+34.76
43.08'LT

STA 198+53.98
63.44'LT
R=28'

STA 198+55.56
46.18'LT
EL=998.25

STA 198+55.59
41.18'LT
EL=998.18

STA 198+63.07
35.43'LT

STA 198+77.76
15.00'LT

STA 198+77.76
0.00'RT

STA 198+63.06
33.43'LT

STA 199+07.74
46.70'LT
EL=996.51

STA 199+22.57
33.13'LT

STA 199+07.78
41.70'LT
EL=41.70

STA 199+79.21
29.55'LT

STA 199+79.00
27.56'LT

STA 200+09.34
40.91'LT
EL=993.06

STA 199+54.30
46.91'LT
EL=995.29

STA 199+54.26
41.91'LT
EL=995.22

STA 200+09.43
EL=993.06

STA 200+11.11
24.25'LT

STA 200+30.19
24.30'LT

STA 200+10.90
22.26'LT

STA 200+10.90
15.00'LT

CONSTRUCT CE
MATCH EXISTING
40.23'RT

CONSTRUCT CE
MATCH EXISTING
40.08'RT

STA 201+15.40
24.45'LT

49.38'LT

STA 199+46.18
33.21

STA 199+65.55
53.42
R=28'

STA 199+38.45
46.37

STA 198+26.45
66.00'RT
R=48'

STA 198+62.38
34.18'RT

STA 198+26.45
18.00'RT

+64.72
+96.42
+15.47
+49.98
+54.40
+39.44

1000.21
999.89
999.57
999.27
999.99
999.59
999.18
998.86
998.43
998.11

LEGEND:

AG1	AGGREGATE SHOULDER, BASE AGGREGATE DENSE 3/4-INCH
AP1	HMA PAVEMENT TYPE E-0.3, 4-INCH
BG1	MGS GUARDRAIL 3
BG2	MGS GUARDRAIL TERMINAL EAT
CG1	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG2	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG3	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
CM1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CS1	CONCRETE SIDEWALK 5-INCH
DR1	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
DR2	AGGREGATE DRIVEWAY, BASE AGGREGATE DENSE 3/4-INCH, 6-INCH
DR3	CONCRETE DRIVEWAY HES 7-INCH
AF1	ASPHALTIC FLUME
SW1	SAWING ASPHALT
SW2	SAWING CONCRETE

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN DETAILS: CTH N	SHEET 35	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\021212_pd.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

NOTE:
1) SEE "PLAN DETAILS: CTH N" FOR CTH N INFORMATION.
2) TRANSITION PAID FOR AS CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D.

N

R/L CTH N

CTH N

146

147

148

149

TLE

R/W

INDEPENDENCE AVE

R/L INDEPENDENCE AVE

BEGIN CONSTRUCTION
STA 7+16.78

END CONSTRUCTION
STA 9+71.00

STA 7+16.78
10.00' RT

STA 7+48.22
2.00' LT

STA 7+95.62
12.08' RT

STA 7+95.75
26.08' RT

STA 8+02.50
300.00' LT
R=298'

STA 8+13.39
27.23' LT

STA 8+20.38
39.17' LT

STA 8+27.25
51.18' LT

STA 8+27.81
50.90' LT

STA 8+78.60
142.00' LT
R=132'

STA 8+98.91
192.00' LT
R=158'

STA 9+11.00
92.00' LT
R=58'

STA 9+69.00
92.00' LT

STA 8+02.50
2.00' LT

STA 8+78.60
10.00' LT

STA 8+98.91
34.00' LT

STA 9+11.00
34.00' LT

STA 9+25.00
10.00' LT

STA 9+25.00
63.00' RT
R=73'

STA 9+25.00
2.00' LT

STA 9+31.00
26.00' RT

STA 9+25.00
75.00' LT
R=73'

STA 9+31.00
64.00' RT
R=38'

STA 9+69.00
64.00' RT

STA 9+46.42
8.88' LT

STA 9+45.57
6.00' LT
R=1'

STA 9+46.42
3.13' LT

10' TRANSITION
CG1 TO CG3
SEE NOTE 2

10' TRANSITION
CG1 TO CG3
SEE NOTE 2

R=145'

1018.63
1018.83
1018.58
1016.40
1016.64
1016.40
1014.28
1014.23
1013.92
1013.92
1013.86
1014.04
1011.79
1011.79
1011.69
1011.69
1011.69
1011.57
1010.58
1011.43
1010.49
1010.38
1010.65
1010.32
1010.07
1009.82

20'
24'
12'
12'
20'
10'

SW1
SW2
AP1
CG1
CG3
CM1
BG1
BG2

LEGEND:

AG1	AGGREGATE SHOULDER, BASE AGGREGATE DENSE 3/4-INCH
AP1	HMA PAVEMENT TYPE E-0.3, 4-INCH
BG1	MGS GUARDRAIL 3
BG2	MGS GUARDRAIL TERMINAL EAT
CG1	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG2	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D
CG3	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
CM1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CS1	CONCRETE SIDEWALK 5-INCH
DR1	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
DR2	AGGREGATE DRIVEWAY, BASE AGGREGATE DENSE 3/4-INCH, 6-INCH
DR3	CONCRETE DRIVEWAY HES 7-INCH
AF1	ASPHALTIC FLUME
SW1	SAWING ASPHALT
SW2	SAWING CONCRETE

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN DETAILS: INDEPENDENCE AVE	SHEET 36	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\021213_pd.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

NOTE:
1) SEE "PLAN DETAILS: CTH N" FOR CTH N INFORMATION.

N

BEGIN CONSTRUCTION
STA 28+60.00

END CONSTRUCTION
STA 32+55.00

AIRPORT DR

CTH N

R/L CTH N

R/L AIRPORT DR

PGL AIRPORT DR

STA 30+00.20
27.38'LT

STA 29+64.27
59.20'LT
R=48'

STA 29+64.27
11.20'LT

STA 30+72.39
36.96'LT

STA 30+54.79
11.93'LT

STA 30+31.34
11.26'LT

STA 30+80.33
63.56'LT

STA 31+01.29
45.00'LT
R=28'

CONSTRUCT CE
MATCH EXISTING
71.55'LT

STA 31+82.11
30.09'LT
R=40'

STA 31+86.11
40.09'LT
R=30'

STA 31+56.11
40.09'LT

STA 31+32.11
30.09'LT

BREAK IN GRADE
CONTROL LINE

STA 30+98.63
17.13'LT

STA 31+00.00
0.00'RT

STA 31+00.09
14.00'RT

STA 31+31.39
14.00'LT

STA 28+94.84
22.91'RT

STA 28+89.08
22.96'RT

STA 28+92.55
23.66'RT

STA 28+93.52
24.48'RT

STA 29+18.02
7.00'RT

STA 29+79.66
22.97'RT

STA 29+90.89
32.91'RT

STA 30+40.42
19.34'RT

STA 30+42.92
47.23'RT
R=28'

STA 30+21.98
28.64'RT

22.23'RT

24'

22.9'

22.3'

LEGEND:

AG1	AGGREGATE SHOULDER, BASE AGGREGATE DENSE 3/4-INCH	CS1	CONCRETE SIDEWALK 5-INCH
AP1	HMA PAVEMENT TYPE E-0.3, 4-INCH	DR1	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
BG1	MGS GUARDRAIL 3	DR2	AGGREGATE DRIVEWAY, BASE AGGREGATE DENSE 3/4-INCH, 6-INCH
BG2	MGS GUARDRAIL TERMINAL EAT	DR3	CONCRETE DRIVEWAY HES 7-INCH
CG1	CONCRETE CURB AND GUTTER 30-INCH TYPE D	AF1	ASPHALTIC FLUME
CG2	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D	SW1	SAWING ASPHALT
CG3	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	SW2	SAWING CONCRETE
CM1	CONCRETE MEDIAN SLOPED NOSE TYPE 1		

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN DETAILS: AIRPORT DRIVE	SHEET 37	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\021214_pd.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

2

N

NOTE:
SEE STANDARD DETAIL DRAWINGS FOR CURB RAMPS FOR ADDITIONAL INFORMATION

LEGEND

- 5% GUTTER SLOPE
- GUTTER SLOPE VARIES
- DETECTABLE WARNING FIELD

R/L CTH N

CTH N

179

5'

6'

6'

5'

SLOPE INTERCEPT (TYP)

1.5%

STA 179+25.00
24.50' LT
EL=988.46

STA 179+15.00
18.00' LT
EL=987.64

STA 179+15.00
24.50' LT
EL=987.74

1.5' FLARE (TYP)

CURB RAMP TYPE 7B-MODIFIED

1.5%

CONCRETE CURB PEDESTRIAN

STA 179+15.00
16.00' LT
EL=987.74

STA 179+10.00
16.00' LT
EL=987.70

STA 179+10.00
24.50' LT
EL=987.70

STA 179+10.00
18.00' LT
EL=987.60

PROPOSED R/W (TYP)

PROPOSED TLE (TYP)

EXISTING R/W (TYP)

1.5%

STA 179+25.00
24.50' RT
EL=988.46

STA 179+15.00
18.00' RT
EL=987.64

STA 179+15.00
24.50' RT
EL=987.74

CURB RAMP TYPE 7B-MODIFIED

1.5%

CONCRETE CURB PEDESTRIAN

STA 179+15.00
16.00' RT
EL=987.74

STA 179+10.00
16.00' RT
EL=987.70

STA 179+10.00
24.50' RT
EL=987.70

STA 179+10.00
18.00' RT
EL=987.60

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN DETAILS: CURB RAMPS	SHEET 38	E

NOTE:
SEE STANDARD DETAIL DRAWINGS FOR CURB RAMPS FOR ADDITIONAL INFORMATION

LEGEND
- 5% GUTTER SLOPE
- GUTTER SLOPE VARIES
- DETECTABLE WARNING FIELD

N

AIRPORT DR

R/L AIRPORT DR

EXISTING R/W (TYP)

SLOPE INTERCEPT (TYP)

CURB RAMP TYPE 2-MODIFIED

CURB RAMP TYPE 2-MODIFIED

STA 30+82.73
38.61' LT
EL=999.88

STA 30+77.19
30.75' LT
EL=999.69

STA 30+75.47
29.73' LT
EL=999.79

STA 30+72.88
35.36' LT
EL=999.77

STA 30+74.78
36.00' LT
EL=999.67

STA 30+78.23
40.91' LT
EL=999.79

STA 197+48.06
24.58' LT
EL=1000.06

STA 30+42.06
19.19' RT
EL=998.03

STA 30+35.80
28.08' RT
EL=998.13

STA 30+31.94
33.57' RT
EL=998.20

STA 30+41.88
17.20' RT
EL=998.13

STA 30+28.20
30.25' RT
EL=998.13

STA 30+31.74
25.22' RT
EL=998.06

STA 30+34.64
18.39' RT
EL=998.05

STA 30+35.19
20.32' RT
EL=998.00

1.5' FLARE (TYP)

PGL AIRPORT DR

1.80%

1.60%

0.80%

1.5%

5'

CTH N

198

30

R/L CTH N

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN DETAILS: CURB RAMPS	SHEET 39	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\021221_pd.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:10

WISDOT/CADDS SHEET 42

NOTE:
SEE STANDARD DETAIL DRAWINGS FOR CURB RAMPS FOR ADDITIONAL INFORMATION

N

199

30

R/L CTH N

CTH N

STA 198+20.00
24.50' RT
EL=998.33

1.5%

6'

5'

6'R

STA 29+65.91
17.73' LT
EL=996.46

STA 29+61.61
15.69' LT
EL=996.36

STA 29+57.64
11.20' LT
EL=996.05

STA 29+57.64
9.20' LT
EL=996.15

PGL AIRPORT DR

STA 29+065.71
22.73' LT
EL=996.53

STA 29+50.96
9.20' LT
EL=995.95

2.00%

0.67%

0.17%

STA 29+50.96
11.20' LT
EL=995.90

STA 29+57.87
19.01' LT
EL=996.44

CURB RAMP TYPE 2-MODIFIED

EXISTING R/W (TYP)

PROPOSED TLE (TYP)

SLOPE INTERCEPT (TYP)

R/L AIRPORT DR

62

AIRPORT DR

CURB RAMP TYPE 2-MODIFIED

STA 29+07.96
44.24' RT
EL=993.55

STA 29+09.86
43.60' RT
EL=993.59

STA 29+07.67
38.69' RT
EL=993.66

STA 29+05.93
39.66' RT
EL=993.57

STA 29+03.99
48.74' RT
EL=993.80

STA 29+00.67
52.48' RT
EL=993.90

STA 28+97.23
49.45' RT
EL=993.91

STA 29+00.57
45.71' RT
EL=993.90

1.5' FLARE (TYP)

LEGEND

5% GUTTER SLOPE

GUTTER SLOPE VARIES

DETECTABLE WARNING FIELD

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN DETAILS: CURB RAMPS	SHEET 40	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\021222_pd.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:10

WISDOT/CADDS SHEET 42

2

SILT FENCE
STA 100+38.64, 75.88'LT

SILT FENCE
STA 100+27.43, 62.81'LT

SILT FENCE
STA 99+67.76, 60.44'LT

WETLAND BOUNDARY
STA 99+68.99, 57.47'LT

SILT FENCE
STA 101+15.16, 77.24'LT

WETLAND BOUNDARY
STA 101+14.98, 74.23'LT

R/L CTH N

HAND PLACE SILT FENCE

CTH N

BEGIN PROJECT
STA 95+50.00

LEGEND

- SILT FENCE
- EROSION BALES
- CULVERT PIPE CHECK
- DIRECTION OF FLOW
- INLET PROTECTION, TYPE A/B/C
- RIP RAP MEDIUM
- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS III, TYPE C

NOTE: ALL AREAS OF EROSION MAT CLASS III, TYPE C ALSO REQUIRE EROSION MAT CLASS I, TYPE A

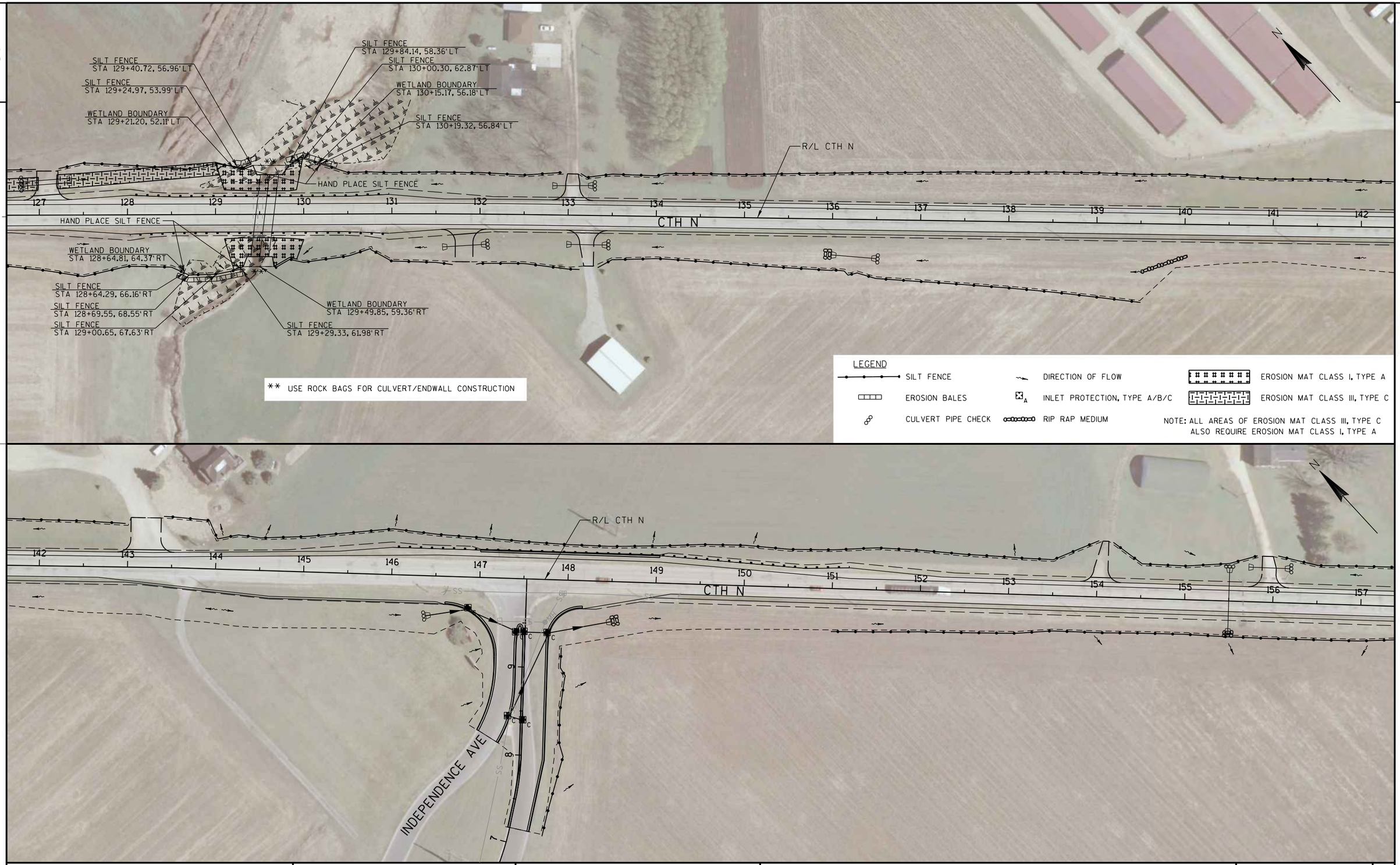
R/L CTH N

CTH N

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	EROSION CONTROL PLAN	SHEET 41	E

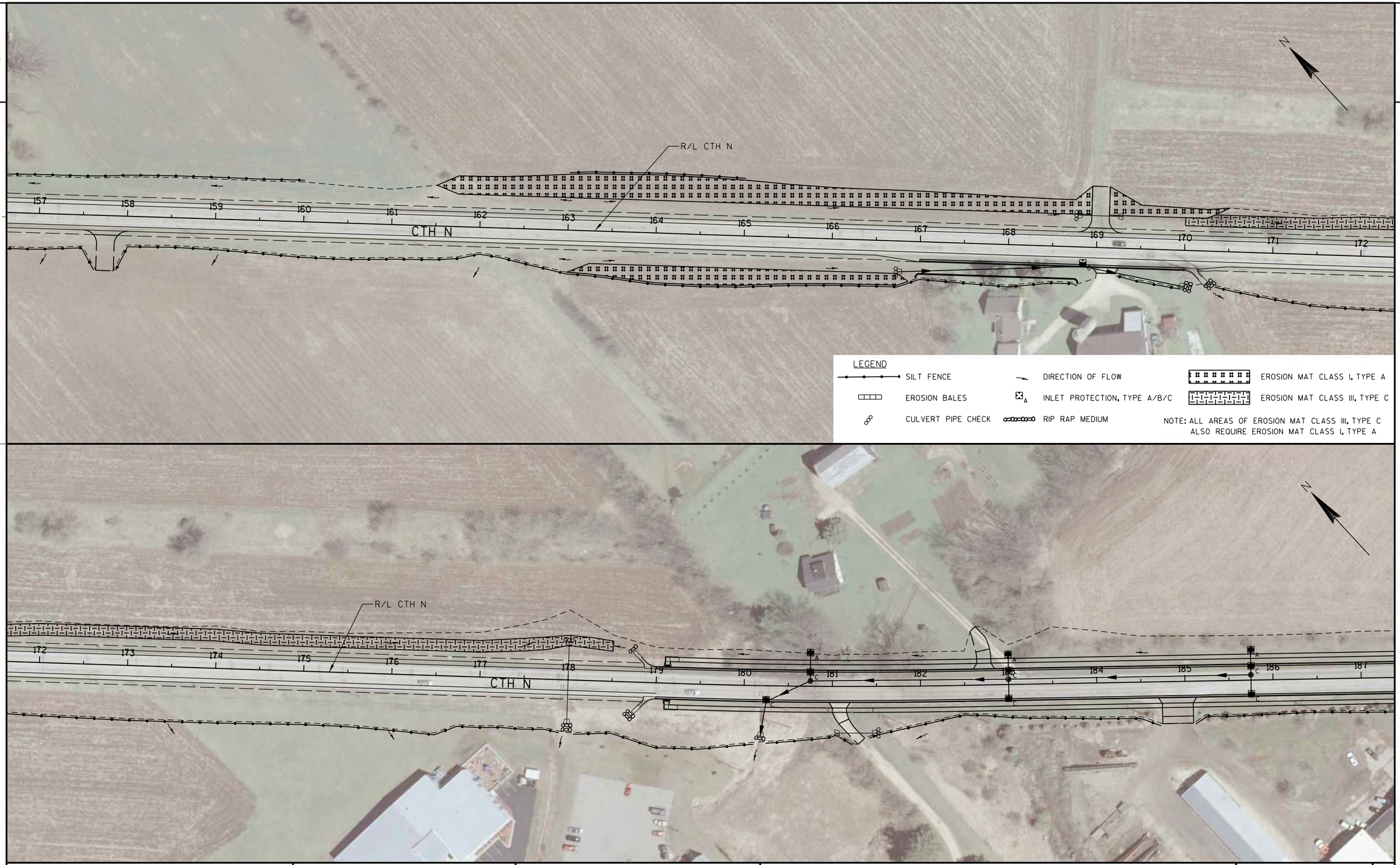
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2



PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	EROSION CONTROL PLAN	SHEET 42	E

2



PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	EROSION CONTROL PLAN	SHEET 43	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\022003_ec.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:100



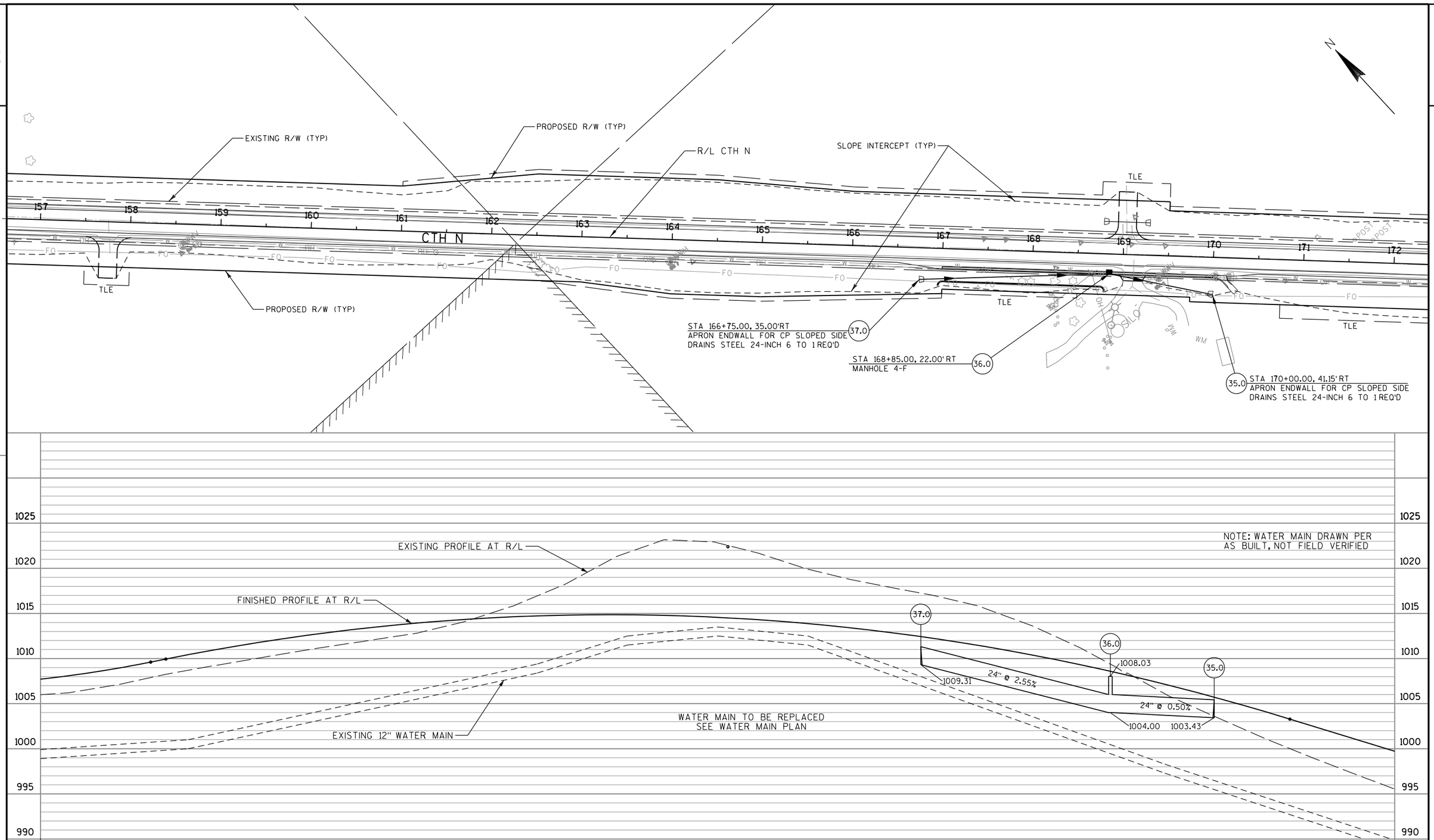
LEGEND

- SILT FENCE
- EROSION BALES
- CULVERT PIPE CHECK
- DIRECTION OF FLOW
- INLET PROTECTION, TYPE A/B/C
- RIP RAP MEDIUM
- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS III, TYPE C

NOTE: ALL AREAS OF EROSION MAT CLASS III, TYPE C ALSO REQUIRE EROSION MAT CLASS I, TYPE A

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	EROSION CONTROL PLAN	SHEET 44	E

2



PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	STORM SEWER PLAN AND PROFILE: STA 166+75 TO STA 170+00	SHEET 45	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\022505_ss.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:100

2

CITY OF HARTFORD
TOWN OF HARTFORD

PROPOSED R/W (TYP)
EXISTING R/W (TYP)
SLOPE INTERCEPT (TYP)
R/L CTH N
TLE
CTH N
172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187

STA 180+75.00, 6.00'LT
MANHOLE 5-J
32.0

STA 180+25.00, 18.00'RT
MANHOLE 6-H
31.0

STA 180+19.01, 57.25'RT
APRON ENDWALL FOR CPRC 30" REQ'D
30.0

STA 180+75.00, 38.00'LT
INLET 2G-MS
32.2

STA 180+75.00, 18.00'LT
CATCH BASIN 2X3-H
32.1

STA 183+00.00, 6.00'LT
MANHOLE 4-H
33.0

STA 183+00.00, 18.00'RT
CATCH BASIN 2X3-H
33.1

STA 183+00.00, 34.50'LT
CATCH BASIN 3-B
33.3

STA 183+00.00, 18.00'LT
CATCH BASIN 2X3-H
33.2

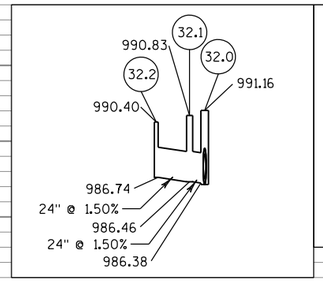
STA 185+75.00, 34.53'LT
CATCH BASIN 3-B
34.3

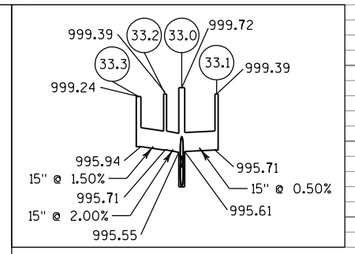
STA 185+75.00, 18.00'LT
CATCH BASIN 2X3-H
34.2

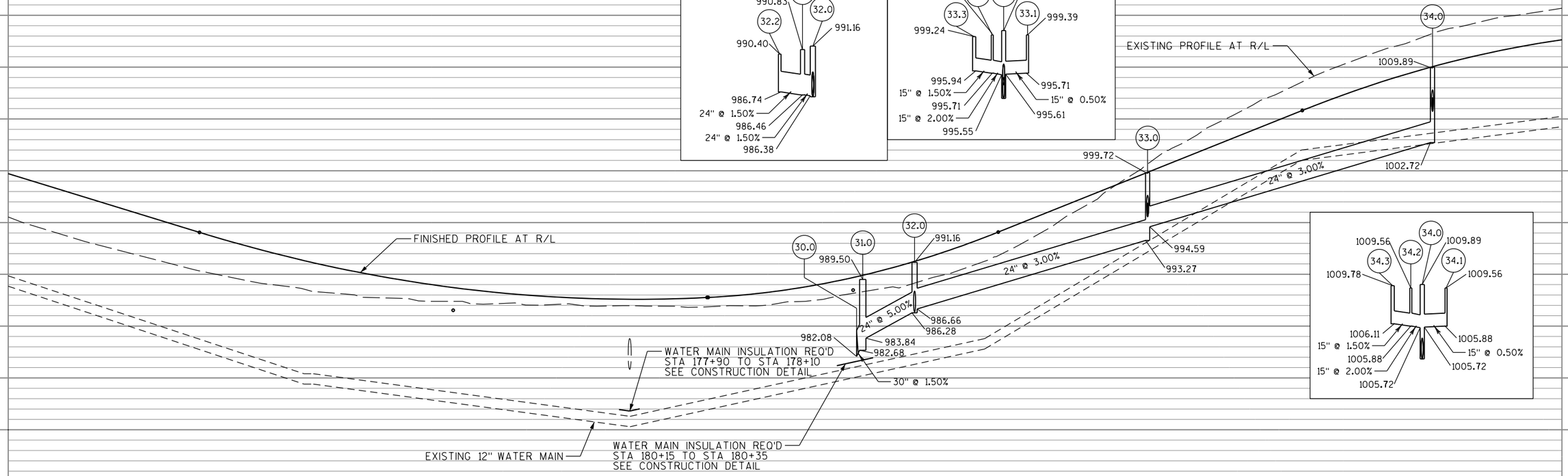
STA 185+75.00, 6.00'LT
MANHOLE 4-H
34.0

STA 185+75.00, 18.00'RT
CATCH BASIN 2X3-H
34.1

NOTE: WATER MAIN DRAWN PER
AS BUILT, NOT FIELD VERIFIED

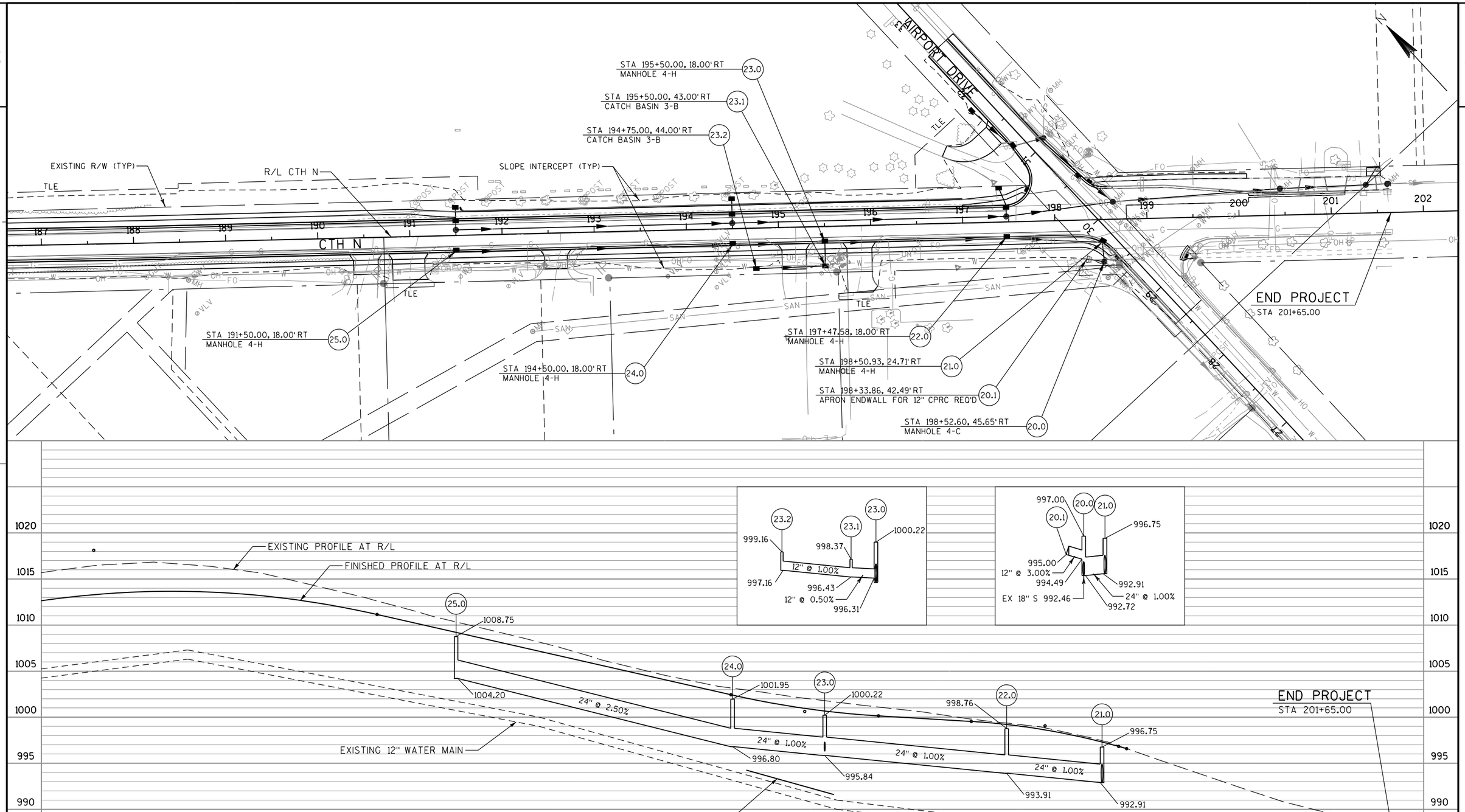






PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	STORM SEWER PLAN AND PROFILE: STA 180+19 TO STA 185+75	SHEET 46	E

2



PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	STORM SEWER PLAN AND PROFILE: STA 191+50 TO STA 198+52	SHEET 47	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\022507_ss.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 41

2

STA 191+50.00, 30.52'LT
CATCH BASIN 3-B (15.2)

STA 191+50.00, 18.00'LT
CATCH BASIN 2X3-H (15.1)

STA 191+50.00, 6.00'LT
MANHOLE 4-J (15.0)

EXISTING R/W (TYP)

R/L CTH N

TLE

CTH N

STA 194+50.00, 32.50'LT
CATCH BASIN 3-B (14.2)

STA 194+50.00, 18.00'LT
CATCH BASIN 2X3-H (14.1)

STA 194+50.00, 6.00'LT
MANHOLE 5-J (14.0)

SLOPE INTERCEPT (TYP)

STA 197+40.00, 36.90'LT
INLET 1G-MS (13.2)

STA 197+47.42, 18.00'LT
CATCH BASIN 2X3-H (13.1)

STA 197+47.42, 6.00'LT
MANHOLE 5-J (13.0)

AIRPORT DRIVE

STA 31+80.00, 20.00'LT
INLET 1G-MS (12.4)

STA 31+22.22, 14.87'LT
CATCH BASIN 4-H (12.3)

STA 31+05.46, 16.80'RT
CATCH BASIN 4-H (12.2)

STA 30+50.00, 18.48'RT
CATCH BASIN 4-H (12.1)

STA 198+63.42, 18.96'LT
MANHOLE 7-J (12.0)

WATER MAIN INSULATION REQ'D
STA 30+00 TO STA 31+20
SEE CONSTRUCTION DETAIL

STA 201+61.47, 31.17'LT
MANHOLE 6-J (9.0)

STA 201+50.29, 49.38'LT
EXISTING INLET TO REMAIN (10.1)

STA 201+38.29, 30.70'LT
MANHOLE 6-J (10.0)

STA 200+44.94, 28.82'LT
MANHOLE 6-J (11.0)

END PROJECT
STA 201+65.00

187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202

1020 1015 1010 1005 1000 995 990 985 980

EXISTING PROFILE AT R/L

FINISHED PROFILE AT R/L

EXISTING 12" WATER MAIN

15.0 — 1009.14 — 1004.37 — 24" @ 2.30%

14.0 — 1002.52 — 997.57 — 997.14 — 24" @ 1.25%

13.0 — 999.39 — 993.48 — 24" @ 1.50%

12.0 — 997.18 — 991.82 — 991.10 — 24" @ 2.83%

END PROJECT
STA 201+65.00

11.0 — 991.02 — 986.15 — 24" @ 2.74%

9.0 — 989.00 — 986.15 — EX 8" N 987.23

10.0 — 988.68 — 983.75 — EX 12" SW 984.25

983.75 — 24" @ 2.56%

983.31 — EX 12" SW 983.61

EX 24" SE 983.31

13.2 — 999.00
13.1 — 999.55
13.0 — 999.39
996.15 — 15" @ 1.60%
995.85 — 15" @ 2.00%
995.70

12.4 — 1005.00
12.3 — 1001.28
12.2 — 1000.93
12.1 — 998.30
12.0 — 997.18
999.06 — 15" @ 5.00%
996.30
996.20 — 15" @ 2.00%
995.60
995.50 — 15" @ 3.00%
EX 12" N 999.90
EX 10" NE 1000.10
993.86
993.96 — 15" @ 3.00%
992.60

10.1 — 988.68
10.0 — 12" @ 3.00%
985.73
985.20

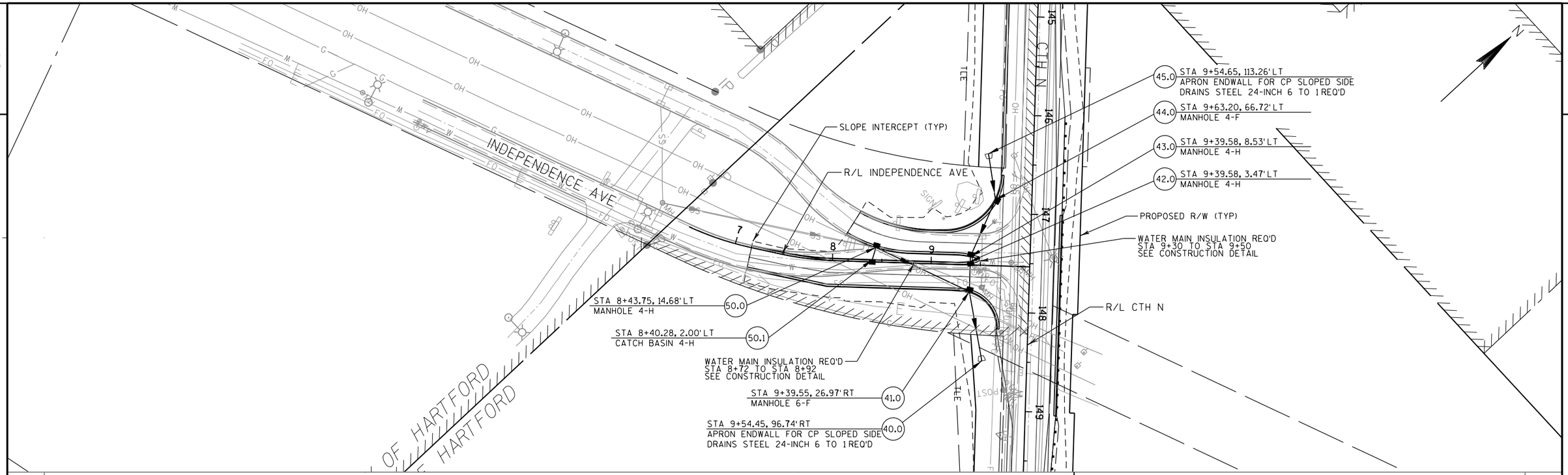
15.2 — 1008.91
15.1
15.0 — 1009.14
1008.56
1005.74 — 15" @ 2.50%
1005.46 — 15" @ 3.00%
1005.22

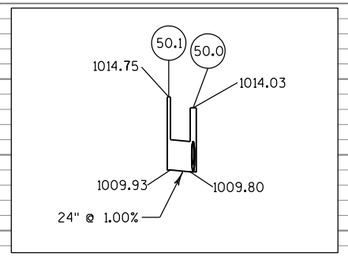
14.2 — 1002.59
14.1
14.0 — 1002.52
1004.66
998.38 — 18" @ 2.00%
998.12 — 18" @ 2.00%
997.97

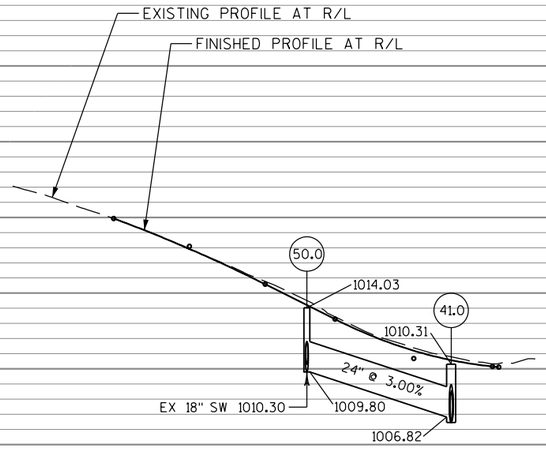
NOTE: WATER MAIN DRAWN PER AS BUILT, NOT FIELD VERIFIED

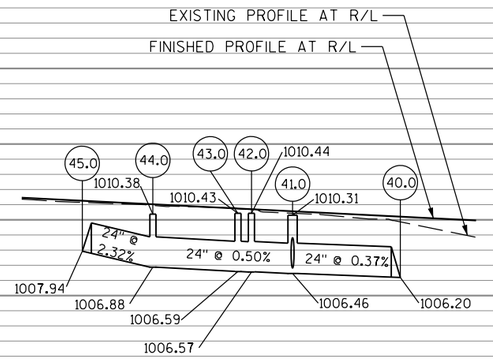
PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	STORM SEWER PLAN AND PROFILE: STA 191+50 TO STA 206+61	SHEET 48	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\022508_ss.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:100









PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	STORM SEWER PLAN AND PROFILE: INDEPENDENCE AVE	SHEET 49	E

NOTES:

SEE CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION

EXISTING R/W (TYP)

PROPOSED R/W (TYP)

R/L CTH N

SLOPE INTERCEPT (TYP)

CTH N

TLE

PROPOSED R/W (TYP)

SALVAGE AND RELOCATE HYDRANT
STA 163+99
45'RT

PROPOSED 12" WATER MAIN

SALVAGE AND RELOCATE HYDRANT
STA 169+40
38'RT

EXISTING PROFILE AT R/L

FINISHED PROFILE AT R/L

12" DUCTILE IRON WATER MAIN

0.07%

12" DUCTILE IRON WATER MAIN

1.64%

PROPOSED STORM SEWER

EXISTING 12" WATER MAIN

161+50, 19'RT
CONNECT TO EXISTING
12" WATER MAIN
ELEV=1006.20
(VERIFY IN FIELD)

163+99, 19'RT
HYDRANT ASSEMBLY

164+06, 19'RT
12" GATE VALVE AND
VALVE BOX

164+86, 19'RT
VERTICAL BEND
ELEV=1006.42

169+00, 19'RT
CONNECT TO EXISTING
12" WATER MAIN
ELEV=1001.93
(VERIFY IN FIELD)

WATER MAIN INSULATION REQ'D
STA 168+00 TO STA 169+10
SEE CONSTRUCTION DETAIL

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	WATER MAIN PLAN	SHEET 50 E

2

CITY OF HARTFORD
TOWN OF HARTFORD

EXISTING R/W (TYP)

R/L CTH N

TLE

PROPOSED R/W (TYP)

SLOPE INTERCEPT (TYP)

SALVAGE AND RELOCATE HYDRANT
STA 174+81
45' RT

STA 181+16
50' LT

PROPOSED
WATER SERVICE

STA 181+16
32' RT

STA 181+26
32' RT

PROPOSED
WATER SERVICE

STA 181+26
57' RT

ADJUSTING HYDRANT
STA 181+40
38' RT

CTH N

NOTES:

SEE CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION

EXISTING PROFILE AT R/L

FINISHED PROFILE AT R/L

EXISTING 12" WATER MAIN

WATER MAIN INSULATION REQ'D
STA 177+90 TO STA 178+10
SEE CONSTRUCTION DETAIL

WATER MAIN INSULATION REQ'D
STA 180+15 TO STA 180+35
SEE CONSTRUCTION DETAIL

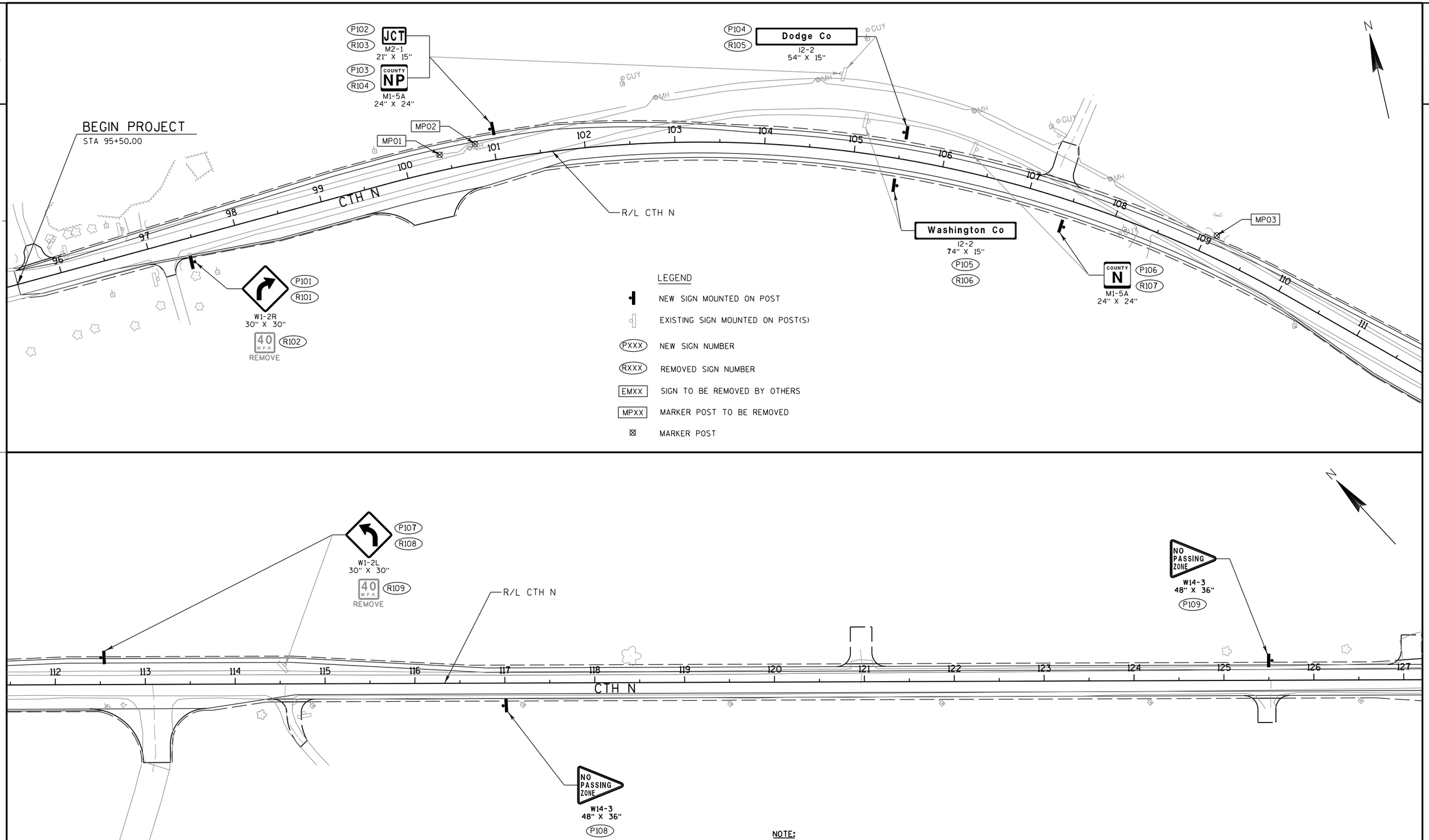
PROPOSED WATER SERVICE STA 181+16

PROPOSED WATER SERVICE STA 181+26

PROPOSED STORM SEWER

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	WATER MAIN PLAN	SHEET 51 E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\023002_up.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:100



NOTE:
LOCATIONS OF NO PASSING ZONE SIGNS ARE APPROXIMATE
USE ITEM "LOCATING NO PASSING ZONES" TO DETERMINE EXACT LOCATION

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	SIGN REMOVAL/PERMANENT SIGNING PLAN	SHEET 52	E

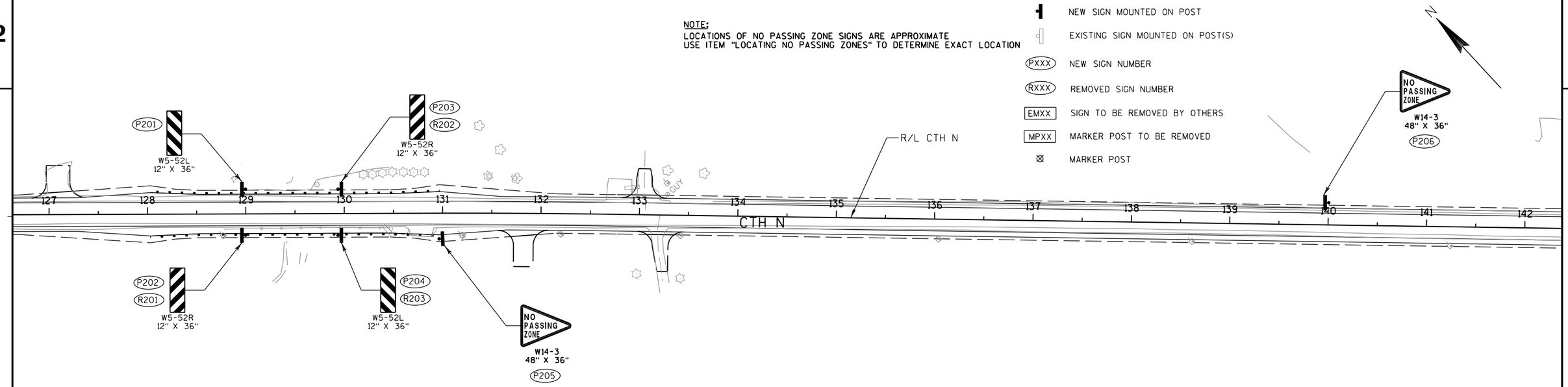
FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\023251_ps.dgn PLOT DATE : 11/17/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:100

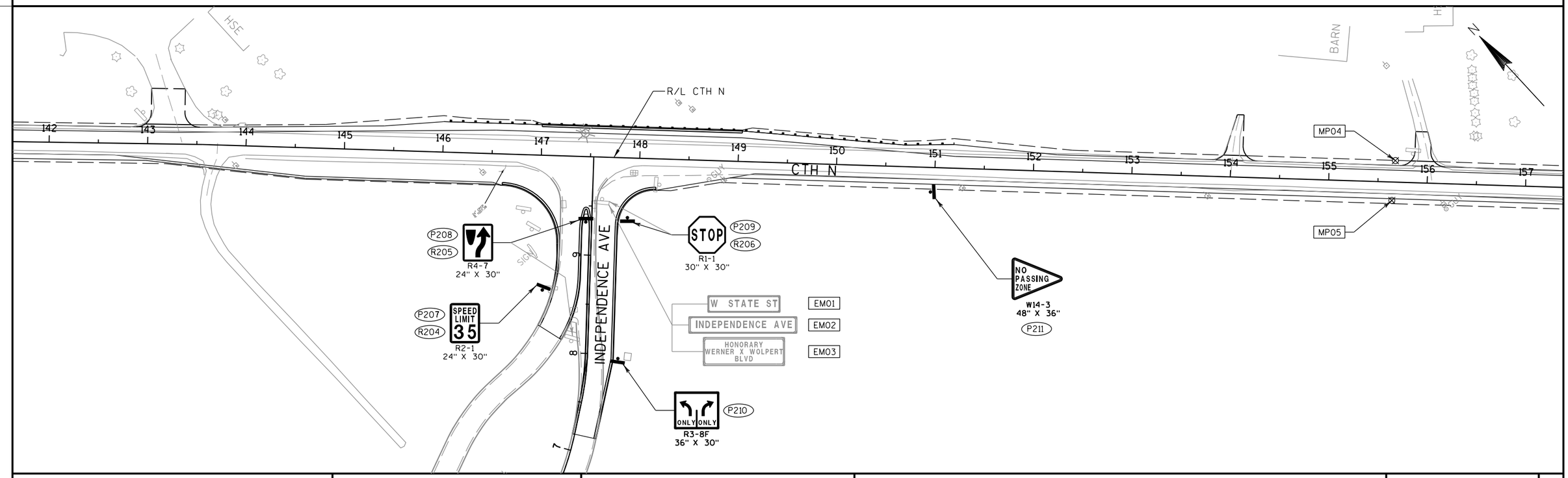
2

NOTE:
LOCATIONS OF NO PASSING ZONE SIGNS ARE APPROXIMATE
USE ITEM "LOCATING NO PASSING ZONES" TO DETERMINE EXACT LOCATION

LEGEND

- NEW SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON POST(S)
- (PXXX) NEW SIGN NUMBER
- (RXXX) REMOVED SIGN NUMBER
- [EMXX] SIGN TO BE REMOVED BY OTHERS
- [MPXX] MARKER POST TO BE REMOVED
- ⊠ MARKER POST



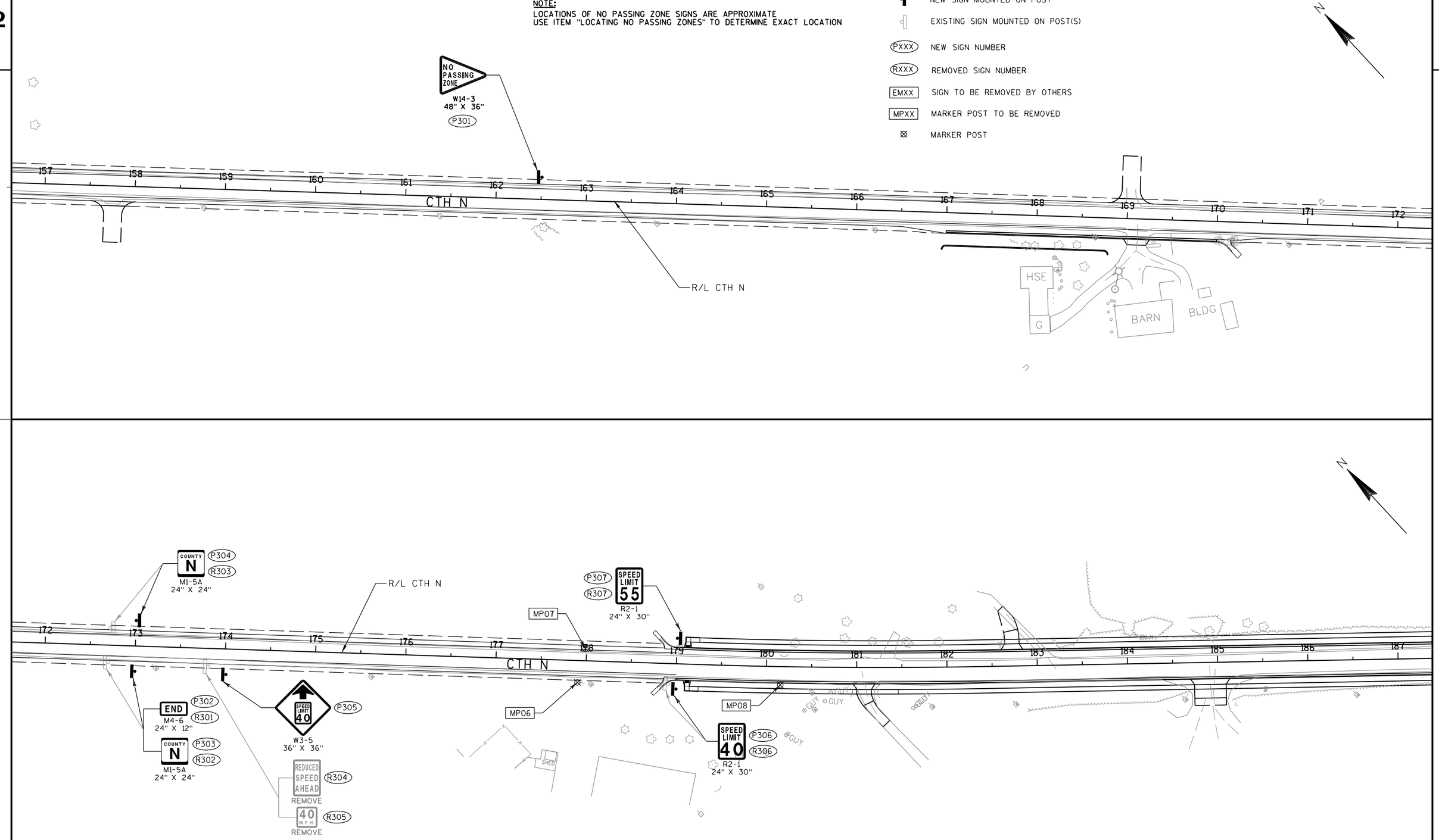


PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	SIGN REMOVAL/PERMANENT SIGNING PLAN	SHEET 53	E

NOTE:
LOCATIONS OF NO PASSING ZONE SIGNS ARE APPROXIMATE
USE ITEM "LOCATING NO PASSING ZONES" TO DETERMINE EXACT LOCATION

LEGEND

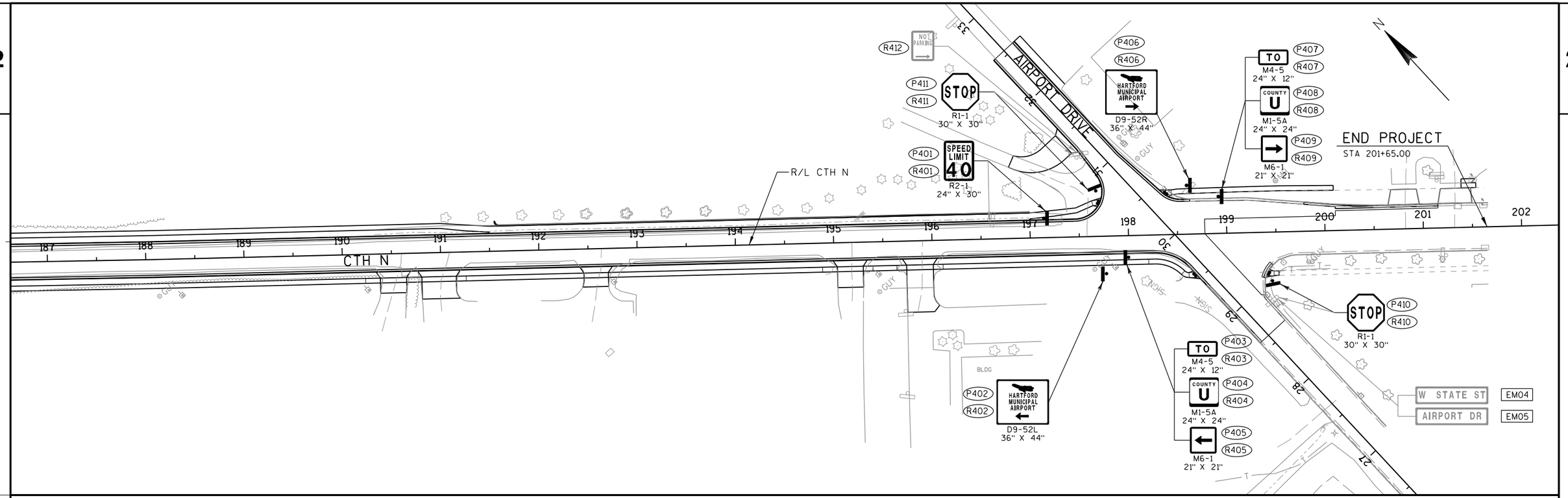
- NEW SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON POST(S)
- (PXXX) NEW SIGN NUMBER
- (RXXX) REMOVED SIGN NUMBER
- [EMXX] SIGN TO BE REMOVED BY OTHERS
- [MPXX] MARKER POST TO BE REMOVED
- ⊠ MARKER POST



PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	SIGN REMOVAL/PERMANENT SIGNING PLAN	SHEET 54	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\023253_ps.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42



LEGEND

- NEW SIGN MOUNTED ON POST
- EXISTING SIGN MOUNTED ON POST(S)
- (PXXX) NEW SIGN NUMBER
- (RXXX) REMOVED SIGN NUMBER
- [EMXX] SIGN TO BE REMOVED BY OTHERS
- [MPXX] MARKER POST TO BE REMOVED
- ⊠ MARKER POST

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	SIGN REMOVAL/PERMANENT SIGNING PLAN	SHEET 55	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\023254_ps.dgn PLOT DATE : 11/17/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42

2

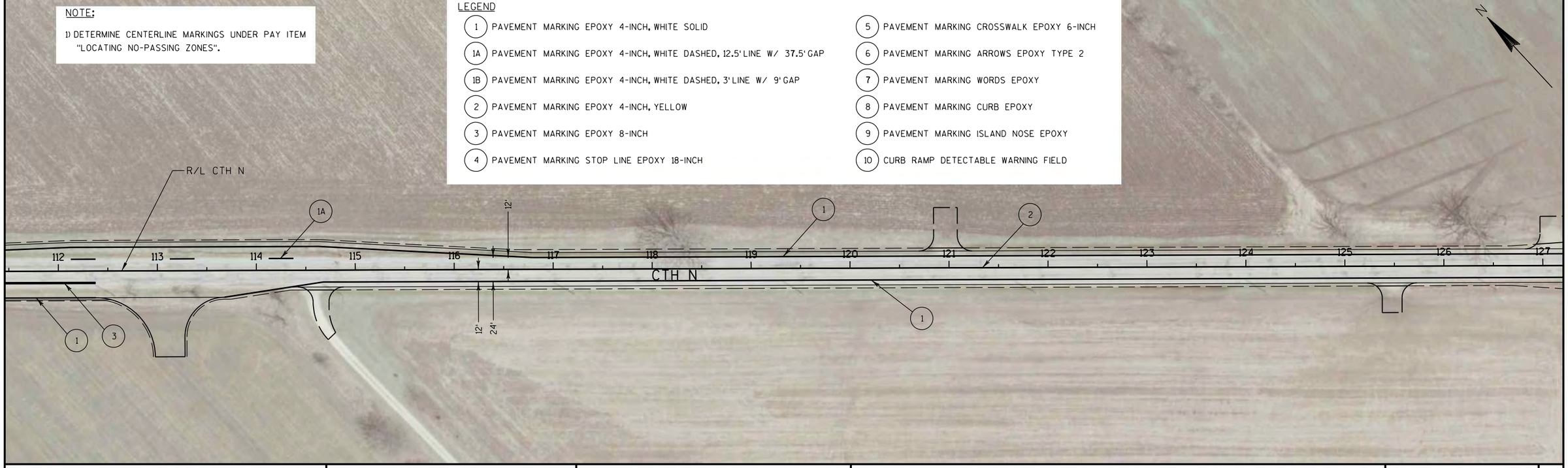


NOTE:

1) DETERMINE CENTERLINE MARKINGS UNDER PAY ITEM "LOCATING NO-PASSING ZONES".

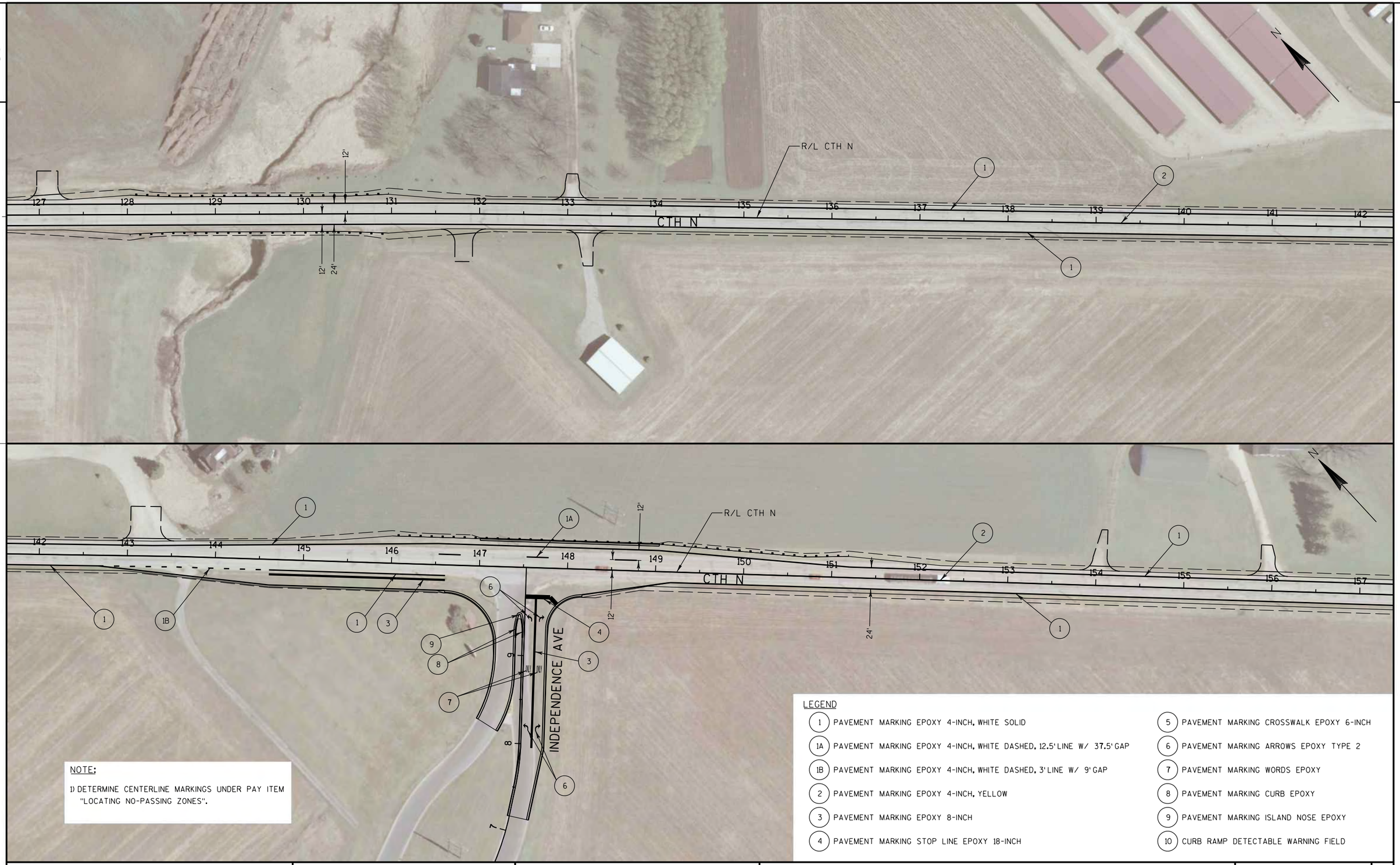
LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH, WHITE SOLID	5	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH
1A	PAVEMENT MARKING EPOXY 4-INCH, WHITE DASHED, 12.5'LINE W/ 37.5'GAP	6	PAVEMENT MARKING ARROWS EPOXY TYPE 2
1B	PAVEMENT MARKING EPOXY 4-INCH, WHITE DASHED, 3'LINE W/ 9'GAP	7	PAVEMENT MARKING WORDS EPOXY
2	PAVEMENT MARKING EPOXY 4-INCH, YELLOW	8	PAVEMENT MARKING CURB EPOXY
3	PAVEMENT MARKING EPOXY 8-INCH	9	PAVEMENT MARKING ISLAND NOSE EPOXY
4	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	10	CURB RAMP DETECTABLE WARNING FIELD



PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PAVEMENT MARKING PLAN	SHEET 56	E

2



NOTE:

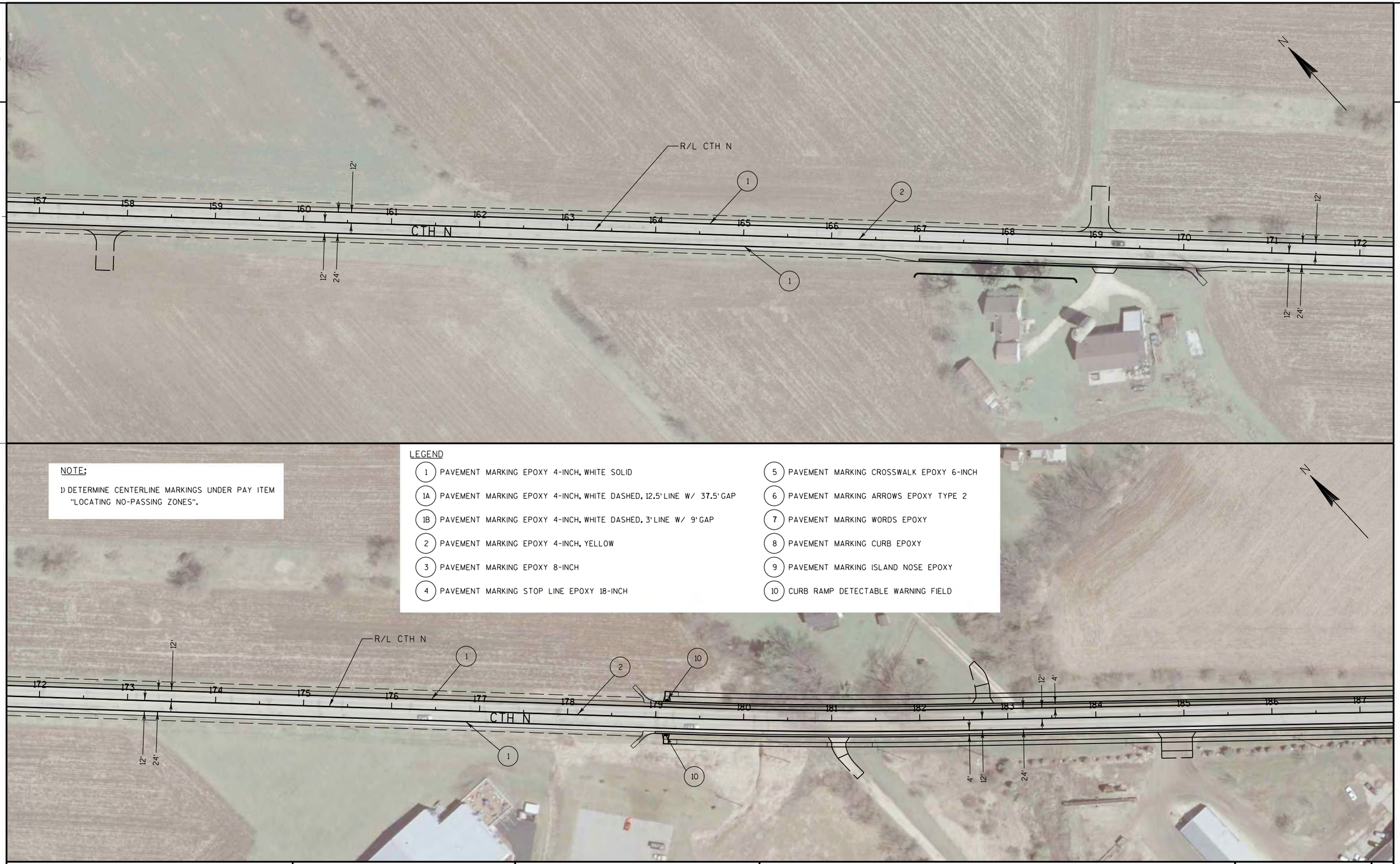
1) DETERMINE CENTERLINE MARKINGS UNDER PAY ITEM "LOCATING NO-PASSING ZONES".

LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH, WHITE SOLID	5	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH
1A	PAVEMENT MARKING EPOXY 4-INCH, WHITE DASHED, 12.5'LINE W/ 37.5'GAP	6	PAVEMENT MARKING ARROWS EPOXY TYPE 2
1B	PAVEMENT MARKING EPOXY 4-INCH, WHITE DASHED, 3'LINE W/ 9'GAP	7	PAVEMENT MARKING WORDS EPOXY
2	PAVEMENT MARKING EPOXY 4-INCH, YELLOW	8	PAVEMENT MARKING CURB EPOXY
3	PAVEMENT MARKING EPOXY 8-INCH	9	PAVEMENT MARKING ISLAND NOSE EPOXY
4	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	10	CURB RAMP DETECTABLE WARNING FIELD

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PAVEMENT MARKING PLAN	SHEET 57	E

2



NOTE:

1) DETERMINE CENTERLINE MARKINGS UNDER PAY ITEM "LOCATING NO-PASSING ZONES".

LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH, WHITE SOLID	5	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH
1A	PAVEMENT MARKING EPOXY 4-INCH, WHITE DASHED, 12.5'LINE W/ 37.5'GAP	6	PAVEMENT MARKING ARROWS EPOXY TYPE 2
1B	PAVEMENT MARKING EPOXY 4-INCH, WHITE DASHED, 3'LINE W/ 9'GAP	7	PAVEMENT MARKING WORDS EPOXY
2	PAVEMENT MARKING EPOXY 4-INCH, YELLOW	8	PAVEMENT MARKING CURB EPOXY
3	PAVEMENT MARKING EPOXY 8-INCH	9	PAVEMENT MARKING ISLAND NOSE EPOXY
4	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	10	CURB RAMP DETECTABLE WARNING FIELD

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PAVEMENT MARKING PLAN	SHEET 58	E



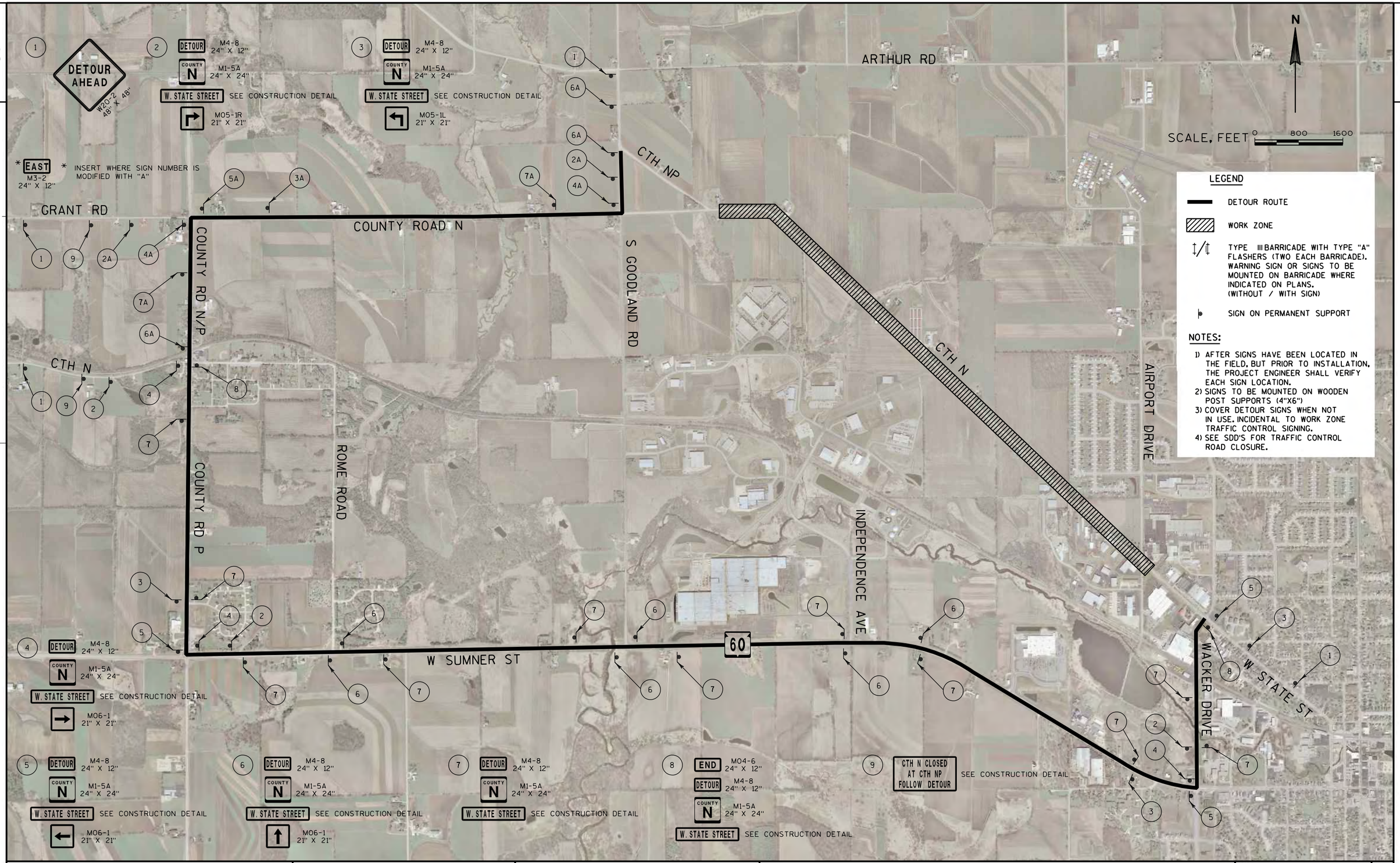
LEGEND

(1) PAVEMENT MARKING EPOXY 4-INCH, WHITE SOLID	(5) PAVEMENT MARKING CROSSWALK EPOXY 6-INCH
(1A) PAVEMENT MARKING EPOXY 4-INCH, WHITE DASHED, 12.5'LINE W/ 37.5'GAP	(6) PAVEMENT MARKING ARROWS EPOXY TYPE 2
(1B) PAVEMENT MARKING EPOXY 4-INCH, WHITE DASHED, 3'LINE W/ 9'GAP	(7) PAVEMENT MARKING WORDS EPOXY
(2) PAVEMENT MARKING EPOXY 4-INCH, YELLOW	(8) PAVEMENT MARKING CURB EPOXY
(3) PAVEMENT MARKING EPOXY 8-INCH	(9) PAVEMENT MARKING ISLAND NOSE EPOXY
(4) PAVEMENT MARKING STOP LINE EPOXY 18-INCH	(10) CURB RAMP DETECTABLE WARNING FIELD

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PAVEMENT MARKING PLAN	SHEET 59	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\024504_pm.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:100

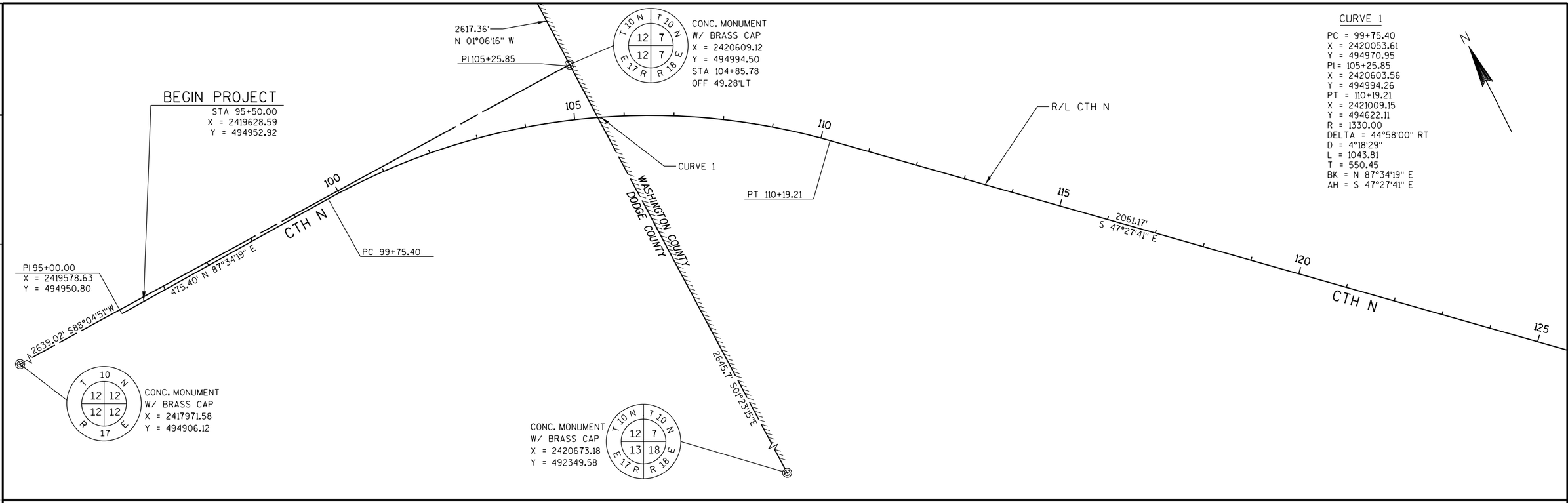
WISDOT/CADDS SHEET 42

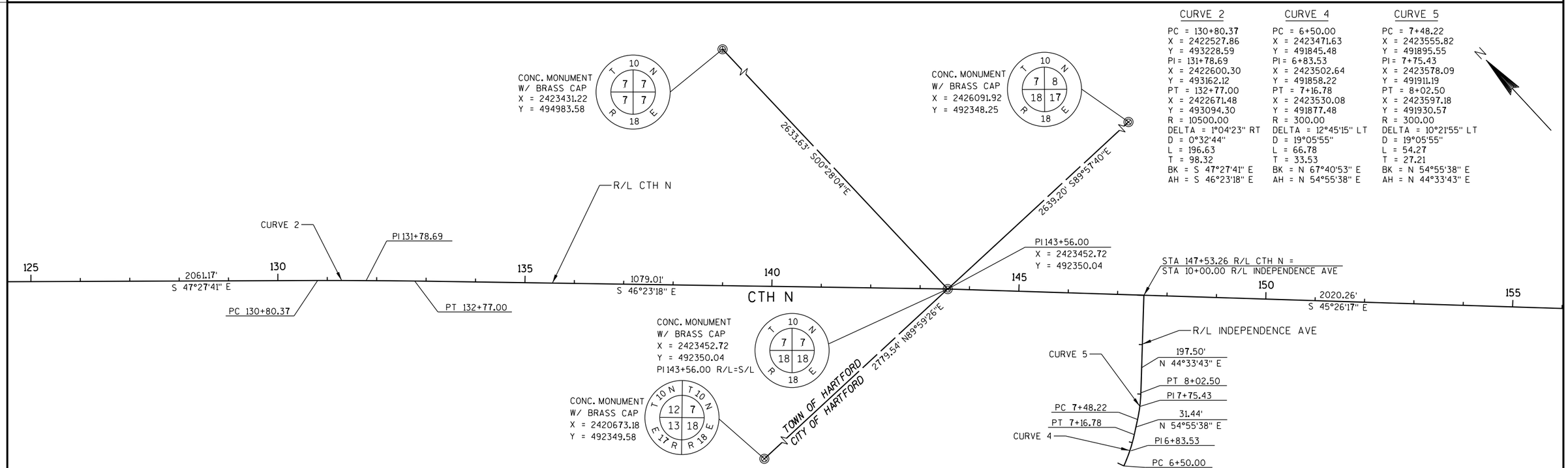


PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	DETOUR ROUTE	SHEET 60	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\027001_dt.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:1600

WISDOT/CADDS SHEET 42





PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	ALIGNMENT	SHEET 61	E

CURVE 3

PC = 179+28.48
X = 2425996.70
Y = 489841.91
PI = 180+81.47
X = 2426105.57
Y = 489734.42
PT = 182+34.39
X = 2426219.78
Y = 489632.62
R = 6000.00
DELTA = 2°55'17" LT
D = 0°57'18"
L = 305.92
T = 152.99
BK = S 45°21'56" E
AH = S 48°17'12" E

CONC. MONUMENT
W/ BRASS CAP
X = 2426091.92
Y = 492348.25

CITY OF HARTFORD
TOWN OF HARTFORD

2638.29' S00°11'15"E

CITY OF HARTFORD
CITY OF HARTFORD

2637.52' N89°54'58"E

N

155 — 2020.26' S 45°26'17" E — 160 — CTH N — 165 — 170 — 1552.22' S 45°21'56" E — 175 — 180 — 573.03' S 48°17'12" E — 185

R/L CTH N

PI 163+76.26
X = 2424892.14
Y = 490932.47

PC 179+28.48

PI 180+81.47

PT 182+34.39

CURVE 3

CITY OF HARTFORD
TOWN OF HARTFORD

2636.56' S89°55'18"E

CONC. MONUMENT
W/ BRASS CAP
X = 2423469.15
Y = 489713.60

CONC. MONUMENT
W/ BRASS CAP
X = 2426105.70
Y = 489710.00
STA 180+98.18
OFF 19.70'

CITY OF HARTFORD
CITY OF HARTFORD

CONC. MONUMENT
W/ BRASS CAP
X = 2428743.22
Y = 489713.86

2447.44' N 0°10'38" W

35

R/L AIRPORT DRIVE

END PROJECT
STA 201+65.00
X = 2427666.68
Y = 488354.46

R/L CTH N

PI 188+07.43
X = 2426647.54
Y = 489251.32

PI 216+04.55
X = 2428747.36
Y = 487403.44

185 — 573.03' S 48°17'12" E — 190 — CTH N — 195 — 2797.12' S 48°39'06" E — 30 — 200 — 205 — 210 — 215

STA 198+47.07 R/L CTH N =
STA 30+00.00 R/L AIRPORT DRIVE

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	ALIGNMENT	SHEET 62	E

DATE 18NOV14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	3944-00-71 QUANTITY
0010	201.0105	CLEARING	STA	12.000	12.000
0020	201.0120	CLEARING	ID	202.000	202.000
0030	201.0205	GRUBBING	STA	12.000	12.000
0040	201.0220	GRUBBING	ID	376.000	376.000
0050	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	23.000	23.000
0060	203.0200	REMOVING OLD STRUCTURE (STATION) 01. STA 129+50	LS	1.000	1.000
0070	204.0150	REMOVING CURB & GUTTER	LF	822.000	822.000
0080	204.0155	REMOVING CONCRETE SIDEWALK	SY	117.000	117.000
0090	204.0165	REMOVING GUARDRAIL	LF	263.000	263.000
0100	204.0180	REMOVING DELINEATORS AND MARKERS	EACH	8.000	8.000
0110	204.0210	REMOVING MANHOLES	EACH	12.000	12.000
0120	204.0220	REMOVING INLETS	EACH	3.000	3.000
0130	204.0245	REMOVING STORM SEWER (SIZE) 01. 12-INCH	LF	107.000	107.000
0140	204.0245	REMOVING STORM SEWER (SIZE) 02. 15-INCH	LF	103.000	103.000
0150	204.0245	REMOVING STORM SEWER (SIZE) 03. 18-INCH	LF	583.000	583.000
0160	204.0245	REMOVING STORM SEWER (SIZE) 04. 24-INCH	LF	263.000	263.000
0170	204.0245	REMOVING STORM SEWER (SIZE) 05. 30-INCH	LF	903.000	903.000
0180	205.0100	EXCAVATION COMMON	CY	70,933.000	70,933.000
0190	205.0400	EXCAVATION MARSH	CY	300.000	300.000
0200	209.0100	BACKFILL GRANULAR	CY	11,845.000	11,845.000
0210	213.0100	FINISHING ROADWAY (PROJECT) 01. 3944-00-71	EACH	1.000	1.000
0220	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	2,324.000	2,324.000
0230	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	43,140.000	43,140.000
0240	416.0270	CONCRETE DRIVEWAY HES 7-INCH	SY	412.000	412.000
0250	440.4410.S	INCENTIVE IRI RIDE	DOL	8,000.000	8,000.000
0260	455.0120	ASPHALTIC MATERIAL PG64-28	TON	607.000	607.000
0270	455.0605	TACK COAT	GAL	5,760.000	5,760.000
0280	460.1100	HMA PAVEMENT TYPE E-0.3	TON	11,027.000	11,027.000
0290	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	7,070.000	7,070.000
0300	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	255.000	255.000
0310	465.0315	ASPHALTIC FLUMES	SY	42.000	42.000
0320	465.0425	ASPHALTIC SHOULDER RUMBLE STRIPS 2-LANE RURAL	LF	11,404.000	11,404.000
0330	465.0475	ASPHALT CENTER LINE RUMBLE STRIPS 2-LANE RURAL	LF	7,349.000	7,349.000
0340	504.0900	CONCRETE MASONRY ENDWALLS	CY	29.000	29.000
0350	520.8000	CONCRETE COLLARS FOR PIPE	EACH	7.000	7.000
0360	521.0336	APRON ENDWALLS FOR CULVERT PIPE SLOPED CROSS DRAINS STEEL 36-INCH 4 TO 1	EACH	2.000	2.000
0370	521.0728	PIPE ARCH CORRUGATED STEEL 28X20-INCH	LF	170.000	170.000
0380	521.0735	PIPE ARCH CORRUGATED STEEL 35X24-INCH	LF	94.000	94.000
0390	521.1518	APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 18-INCH 6 TO 1	EACH	18.000	18.000
0400	521.1524	APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 24-INCH 6 TO 1	EACH	6.000	6.000
0410	521.1536	APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 36-INCH 6 TO 1	EACH	2.000	2.000
0420	521.1728	APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS STEEL 28X20-INCH 6 TO 1	EACH	8.000	8.000
0430	521.1735	APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS STEEL 35X24-INCH 6 TO 1	EACH	4.000	4.000
0440	522.0118	CULVERT PIPE REINFORCED CONCRETE CLASS III 18-INCH	LF	508.000	508.000

3

DATE 18NOV14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	3944-00-71 QUANTITY
0450	522.0124	CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	104.000	104.000
0460	522.0136	CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH	LF	133.000	133.000
0470	522.0172	CULVERT PIPE REINFORCED CONCRETE CLASS III 72-INCH	LF	282.000	282.000
0480	522.1012	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	EACH	1.000	1.000
0490	522.1024	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	EACH	2.000	2.000
0500	522.1030	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH	EACH	1.000	1.000
0510	532.0200.S	WALL MODULAR BLOCK GRAVITY	SF	2,620.000	2,620.000
0520	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE D	LF	5,193.000	5,193.000
0530	601.0553	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D	LF	503.000	503.000
0540	601.0557	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	LF	151.000	151.000
0550	601.0600	CONCRETE CURB PEDESTRIAN	LF	54.000	54.000
0560	602.0410	CONCRETE SIDEWALK 5-INCH	SF	20,353.000	20,353.000
0570	602.0505	CURB RAMP DETECTABLE WARNING FIELD YELLOW	SF	48.000	48.000
0580	606.0200	RIPRAP MEDIUM	CY	57.000	57.000
0590	608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	135.100	135.100
0600	608.0315	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	LF	358.200	358.200
0610	608.0318	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	LF	26.500	26.500
0620	608.0324	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	2,955.700	2,955.700
0630	608.0330	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH	LF	33.600	33.600
0640	611.0530	MANHOLE COVERS TYPE J	EACH	7.000	7.000
0650	611.0606	INLET COVERS TYPE B	EACH	6.000	6.000
0660	611.0612	INLET COVERS TYPE C	EACH	1.000	1.000
0670	611.0615	INLET COVERS TYPE F	EACH	3.000	3.000
0680	611.0624	INLET COVERS TYPE H	EACH	23.000	23.000
0690	611.0642	INLET COVERS TYPE MS	EACH	4.000	4.000
0700	611.1003	CATCH BASINS 3-FT DIAMETER	EACH	6.000	6.000
0710	611.1004	CATCH BASINS 4-FT DIAMETER	EACH	4.000	4.000
0720	611.1230	CATCH BASINS 2X3-FT	EACH	8.000	8.000
0730	611.2004	MANHOLES 4-FT DIAMETER	EACH	14.000	14.000
0740	611.2005	MANHOLES 5-FT DIAMETER	EACH	3.000	3.000
0750	611.2006	MANHOLES 6-FT DIAMETER	EACH	5.000	5.000
0760	611.2007	MANHOLES 7-FT DIAMETER	EACH	1.000	1.000
0770	611.3901	INLETS MEDIAN 1 GRATE	EACH	2.000	2.000
0780	611.3902	INLETS MEDIAN 2 GRATE	EACH	1.000	1.000
0790	611.8120.S	COVER PLATES TEMPORARY	EACH	11.000	11.000
0800	612.0204	PIPE UNDERDRAIN UNPERFORATED 4-INCH	LF	200.000	200.000
0810	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	820.000	820.000
0820	612.0700	DRAIN TILE EXPLORATION	LF	1,000.000	1,000.000
0830	612.0902.S	INSULATION BOARD POLYSTYRENE (INCH) 01. 2-INCH	SY	198.000	198.000
0840	614.2300	MGS GUARDRAIL 3	LF	787.500	787.500
0850	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	6.000	6.000

3

DATE 18NOV14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	3944-00-71 QUANTITY
0860	619.1000	MOBILIZATION	EACH	1.000	1.000
0870	620.0300	CONCRETE MEDIAN SLOPED NOSE	SF	43.000	43.000
0880	624.0100	WATER	MGAL	734.000	734.000
0890	625.0500	SALVAGED TOPSOIL	SY	86,114.000	86,114.000
0900	627.0200	MULCHING	SY	86,114.000	86,114.000
0910	628.1104	EROSION BALES	EACH	466.000	466.000
0920	628.1504	SILT FENCE	LF	18,389.000	18,389.000
0930	628.1520	SILT FENCE MAINTENANCE	LF	18,389.000	18,389.000
0940	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	1.000	1.000
0950	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0960	628.2002	EROSION MAT CLASS I TYPE A	SY	8,066.000	8,066.000
0970	628.2037	EROSION MAT CLASS III TYPE C	SY	3,563.000	3,563.000
0980	628.7005	INLET PROTECTION TYPE A	EACH	9.000	9.000
0990	628.7010	INLET PROTECTION TYPE B	EACH	1.000	1.000
1000	628.7015	INLET PROTECTION TYPE C	EACH	28.000	28.000
1010	628.7555	CULVERT PIPE CHECKS	EACH	127.000	127.000
1020	628.7570	ROCK BAGS	EACH	75.000	75.000
1030	629.0210	FERTILIZER TYPE B	CWT	64.000	64.000
1040	630.0130	SEEDING MIXTURE NO. 30	LB	1,799.000	1,799.000
1050	630.0200	SEEDING TEMPORARY	LB	903.000	903.000
1060	633.5200	MARKERS CULVERT END	EACH	10.000	10.000
1070	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	10.000	10.000
1080	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	21.000	21.000
1090	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	3.000	3.000
1100	637.2210	SIGNS TYPE II REFLECTIVE H	SF	121.700	121.700
1110	637.2230	SIGNS TYPE II REFLECTIVE F	SF	69.500	69.500
1120	638.2602	REMOVING SIGNS TYPE II	EACH	34.000	34.000
1130	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	23.000	23.000
1140	642.5201	FIELD OFFICE TYPE C	EACH	1.000	1.000
1150	643.0100	TRAFFIC CONTROL (PROJECT) 01. 3944-00-71	EACH	1.000	1.000
1160	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	1,188.000	1,188.000
1170	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	2,376.000	2,376.000
1180	643.0900	TRAFFIC CONTROL SIGNS	DAY	1,848.000	1,848.000
1190	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	169.000	169.000
1200	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	14.000	14.000
1210	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 01. 3944-01-71	EACH	1.000	1.000
1220	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	16,896.000	16,896.000
1230	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	214.000	214.000
1240	645.0135	GEOTEXTILE FABRIC TYPE SR	SY	1,000.000	1,000.000
1250	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	38,610.000	38,610.000
1260	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	872.000	872.000
1270	647.0166	PAVEMENT MARKING ARROWS EPOXY TYPE 2	EACH	6.000	6.000
1280	647.0356	PAVEMENT MARKING WORDS EPOXY	EACH	3.000	3.000
1290	647.0456	PAVEMENT MARKING CURB EPOXY	LF	43.000	43.000
1300	647.0566	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	LF	101.000	101.000
1310	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	1.000	1.000
1320	647.0766	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	LF	253.000	253.000
1330	648.0100	LOCATING NO-PASSING ZONES	MI	2.000	2.000
1340	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	46.000	46.000
1350	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	10,937.000	10,937.000
1360	650.5000	CONSTRUCTION STAKING BASE	LF	10,937.000	10,937.000

3

DATE 18NOV14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	3944-00-71 QUANTITY
1370	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	5,901.000	5,901.000
1380	650.6000	CONSTRUCTION STAKING PIPE CULVERTS	EACH	23.000	23.000
1390	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. WALL #1	LS	1.000	1.000
1400	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 02. WALL #2	LS	1.000	1.000
1410	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 3944-00-71	LS	1.000	1.000
1420	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	10,937.000	10,937.000
1430	690.0150	SAWING ASPHALT	LF	636.000	636.000
1440	690.0250	SAWING CONCRETE	LF	49.000	49.000
1450	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT $5. 00/HR	HRS	900.000	900.000
1460	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	HRS	1,000.000	1,000.000
1470	SPV.0060	SPECIAL 01. APRON ENDWALLS FOR CULVERT PIPE CORRUGATED STEEL 8-INCH	EACH	2.000	2.000
1480	SPV.0060	SPECIAL 02. CONSTRUCTION STAKING CURB RAMP	EACH	6.000	6.000
1490	SPV.0060	SPECIAL 03. ADJUSTING WATER VALVE BOXES	EACH	23.000	23.000
1500	SPV.0060	SPECIAL 04. ADJUSTING WATER MANHOLES	EACH	2.000	2.000
1510	SPV.0060	SPECIAL 05. GATE VALVE & VALVE BOX 12-INCH	EACH	1.000	1.000
1520	SPV.0060	SPECIAL 06. SALVAGE AND RELOCATE HYDRANT	EACH	6.000	6.000
1530	SPV.0060	SPECIAL 07. ADJUSTING HYDRANT	EACH	2.000	2.000
1540	SPV.0060	SPECIAL 08. GATE VALVE & VALVE BOX 6-INCH	EACH	1.000	1.000
1550	SPV.0060	SPECIAL 09. WATER SERVICE CORPORATION	EACH	2.000	2.000
1560	SPV.0060	SPECIAL 10. CURB STOP VALVE & BOX	EACH	2.000	2.000
1570	SPV.0060	SPECIAL 11. TEMPORARY MAILBOX STATION	EACH	1.000	1.000
1580	SPV.0090	SPECIAL 01. CULVERT PIPE CORRUGATED STEEL 8-INCH	LF	49.000	49.000
1590	SPV.0090	SPECIAL 02. TIMBER FENCE	LF	730.000	730.000
1600	SPV.0090	SPECIAL 03. CONSTRUCTION STAKING CONCRETE SIDEWALK	LF	4,070.000	4,070.000
1610	SPV.0090	SPECIAL 04. WATER MAIN DUCTILE IRON 12-INCH	LF	750.000	750.000
1620	SPV.0090	SPECIAL 05. HYDRANT LEAD 6-INCH	LF	159.500	159.500
1630	SPV.0090	SPECIAL 06. WATER SERVICE 1-INCH	LF	107.000	107.000
1640	SPV.0170	SPECIAL 01. TEST ROLLING	STA	112.000	112.000
1650	SPV.0195	SPECIAL 01. QMP BASE AGGREGATE DENSE 1 1/4-INCH COMPACTION	TON	43,140.000	43,140.000

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CLEARING AND GRUBBING

STATION	-	STATION	OFFSET		LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA	201.0120 CLEARING ID	201.0220 GRUBBING ID	NOTES
		96+46	38'	LT	CTH N	--	--	4	4	
TOTALS CATEGORY 0020						**--**	**--**	**4**	**4**	
		112+77	24'	RT	CTH N	--	--	--	24	STUMP
		114+29	34'	RT	CTH N	--	--	8	8	
		118+40	30'	LT	CTH N	--	--	52	52	
		125+03	33'	LT	CTH N	--	--	36	36	
		126+36	35'	LT	CTH N	--	--	48	48	
		128+89	34'	LT	CTH N	--	--	--	24	STUMP
		132+98	60'	RT	CTH N	--	--	8	8	
		143+65	32'	LT	CTH N	--	--	6	6	
		143+71	30'	LT	CTH N	--	--	3	3	
		162+54	30'	RT	CTH N	--	--	24	24	
167+00	-	169+00		RT	CTH N	2	2	--	--	
		170+05	21'	RT	CTH N	--	--	--	42	STUMP
		170+19	22'	RT	CTH N	--	--	--	48	STUMP
		171+16	25'	LT	CTH N	--	--	--	36	STUMP
180+00	-	182+00		LT	CTH N	2	2	--	--	
183+00	-	191+00		LT/RT	CTH N	8	8	--	--	
		191+44	35'	LT	CTH N	--	--	3	3	
		194+09	36'	LT	CTH N	--	--	10	10	
TOTALS CATEGORY 0010						**12**	**12**	**198**	**372**	

REMOVING OLD STRUCTURE

LOCATION	DESCRIPTION	203.0200 REMOVING OLD STRUCTURE (STA 129+50) LS
STA 129+50	TWO 60" CULVERTS WITH MASONRY ENDWALLS	1
TOTAL CATEGORY 0010		**1**

REMOVING SMALL PIPE CULVERTS

FROM STATION	OFFSET	TO STATION	OFFSET	LOCATION	DESCRIPTION	203.0100 REMOVING SMALL PIPE CULVERTS EACH
95+57	28' LT	95+93	27' LT	CTH N	DRIVEWAY CULVERT	1
96+79	27' LT	97+04	27' LT	CTH N	DRIVEWAY CULVERT	1
97+05	28' RT	97+29	28' RT	CTH N	DRIVEWAY CULVERT	1
TOTAL CATEGORY 0020						**3**
107+14	59' LT	107+41	53' LT	CTH N	DRIVEWAY CULVERT	1
109+02	44' LT	109+02	28' LT	CTH N	DRIVEWAY CULVERT	1
114+42	20' RT	114+69	22' RT	CTH N	DRIVEWAY CULVERT	1
120+83	22' LT	121+11	22' LT	CTH N	DRIVEWAY CULVERT	1
125+34	21' RT	125+63	21' RT	CTH N	DRIVEWAY CULVERT	1
126+95	28' LT	127+24	28' LT	CTH N	DRIVEWAY CULVERT	1
130+92	20' RT	130+63	20' RT	CTH N	DRIVEWAY CULVERT	1
133+23	20' LT	132+92	20' LT	CTH N	DRIVEWAY CULVERT	1
133+29	20' RT	133+09	20' RT	CTH N	DRIVEWAY CULVERT	1
155+65	23' LT	155+67	20' RT	CTH N	CROSS CULVERT	1
156+15	27' LT	155+86	27' LT	CTH N	DRIVEWAY CULVERT	1
168+94	19' LT	169+14	19' LT	CTH N	DRIVEWAY CULVERT	1
177+95	16' LT	177+94	24' RT	CTH N	CROSS CULVERT	1
180+19	11' LT	180+18	23' RT	CTH N	CROSS CULVERT	1
181+23	29' RT	180+95	28' RT	CTH N	DRIVEWAY CULVERT	1
181+50	13' LT	181+24	13' LT	CTH N	DRIVEWAY CULVERT	1
183+19	11' LT	183+00	11' LT	CTH N	DRIVEWAY CULVERT	1
192+35	24' RT	192+86	23' RT	CTH N	DRIVEWAY CULVERT	1
194+96	30' RT	195+37	30' RT	CTH N	DRIVEWAY CULVERT	1
195+66	29' RT	196+08	29' RT	CTH N	DRIVEWAY CULVERT	1
TOTAL CATEGORY 0010						**20**

REMOVING CURB & GUTTER

STATION	-	STATION	OFFSET	LOCATION	204.0150 REMOVING CURB & GUTTER LF
199+79	-	201+15	LT	CTH N	136
7+16	-	9+78	LT/RT	INDEPENDENCE AVE	558
28+60	-	29+41	LT	AIRPORT DR	81
29+04	-	29+09	RT	AIRPORT DR	16
30+16	-	30+44	RT	AIRPORT DR	31
TOTAL CATEGORY 0010					**822**

REMOVING CONCRETE SIDEWALK

STATION	TO	STATION	OFFSET	LOCATION	204.0155 REMOVING CONCRETE SIDEWALK SY
198+40	-	200+09	LT	CTH N	92
		199+45	RT	CTH N	9
201+39	-	201+54	LT	CTH N	8
		8+25	LT	INDEPENDENCE AVE	8
TOTAL CATEGORY 0010					**117**

REMOVING GUARDRAIL

STATION	-	STATION	OFFSET	LOCATION	204.0165 REMOVING GUARDRAIL LF
128+77	-	130+46	RT	CTH N	169
128+99	-	129+93	LT	CTH N	94
TOTAL CATEGORY 0010					**263**

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REMOVING DELINEATORS AND MARKERS

MARKER #	LOCATION	204.0180 REMOVING DELINEATORS AND MARKERS EACH	REMARKS
MP01	CTH N	1	CULVERT MARKER
MP02	CTH N	1	CULVERT MARKER
TOTAL CATEGORY 0020		**2**	
MP03	CTH N	1	CULVERT MARKER
MP04	CTH N	1	CULVERT MARKER
MP05	CTH N	1	CULVERT MARKER
MP06	CTH N	1	CULVERT MARKER
MP07	CTH N	1	CULVERT MARKER
MP08	CTH N	1	CULVERT MARKER
TOTAL CATEGORY 0010		**6**	

SEE PERMANENT SIGNING SHEETS FOR MARKER POST LOCATIONS

REMOVING MANHOLES

STATION	OFFSET	LOCATION	204.0210 REMOVING MANHOLES EACH
100+73	18' LT	CTH N	1
102+80	51' LT	CTH N	1
104+52	75' LT	CTH N	1
TOTALS CATEGORY 0020			**3**
106+21	68' LT	CTH N	1
107+81	37' LT	CTH N	1
198+64	19' LT	CTH N	1
200+45	26' LT	CTH N	1
201+62	29' LT	CTH N	1
9+52	22' RT	INDEPENDENCE AVE	1
9+85	42' RT	INDEPENDENCE AVE	1
31+05	17' RT	AIRPORT DR	1
TOTAL CATEGORY 0010			**8**

REMOVING INLETS

STATION	OFFSET	LOCATION	204.0220 REMOVING INLETS EACH
8+44	15' LT	INDEPENDENCE AVE	1
9+51	30' LT	INDEPENDENCE AVE	1
9+52	3' RT	INDEPENDENCE AVE	1
TOTAL CATEGORY 0010			**3**

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FINISHING ROADWAY

PROJECT I.D.	DESCRIPTION	213.0100 FINISHING ROADWAY (3944-00-71) EACH
3944-00-71	CTH N	1
TOTAL CATEGORY 0010		**1**

REMOVING STORM SEWER

FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	LOCATION	204.0245.01 REMOVING STORM SEWER 12-INCH LF	204.0245.02 REMOVING STORM SEWER 15-INCH LF	204.0245.03 REMOVING STORM SEWER 18-INCH LF	204.0245.04 REMOVING STORM SEWER 24-INCH LF	204.0245.05 REMOVING STORM SEWER 30-INCH LF
100+60	28' LT	100+74	18' LT	CTH N	--	--	--	--	17
100+74	18' LT	102+80	51' LT	CTH N	--	--	--	--	214
102+80	51' LT	104+52	75' LT	CTH N	--	--	--	--	182
TOTALS CATEGORY 0020					**--**	**--**	**--**	**--**	**413**
104+52	75' LT	106+21	68' LT	CTH N	--	--	--	--	177
106+21	68' LT	107+81	37' LT	CTH N	--	--	--	--	169
107+81	37' LT	109+21	25' LT	CTH N	--	--	--	--	144
197+33	16' LT	198+64	19' LT	CTH N	--	--	131	--	--
198+64	19' LT	200+45	26' LT	CTH N	--	--	182	--	--
200+45	26' LT	201+62	29' LT	CTH N	--	--	117	--	--
201+50	49' LT	201+55	31' LT	CTH N	20	--	--	--	--
8+44	15' LT	9+52	22' RT	INDEPENDENCE AVE	--	--	114	--	--
9+51	30' LT	9+52	3' RT	INDEPENDENCE AVE	33	--	--	--	--
9+52	3' RT	9+51	22' RT	INDEPENDENCE AVE	19	--	--	--	--
9+51	22' RT	9+85	42' RT	INDEPENDENCE AVE	--	--	39	--	--
9+84	92' LT	9+85	42' RT	INDEPENDENCE AVE	--	--	--	133	--
9+85	42' RT	9+84	172' RT	INDEPENDENCE AVE	--	--	--	130	--
31+22	14' LT	31+05	17' RT	AIRPORT DR	35	--	--	--	--
31+05	17' RT	198+64	19' LT	AIRPORT DR/CTH N	--	103	--	--	--
TOTALS CATEGORY 0010					**107**	**103**	**583**	**263**	**490**

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3944-00-01 CTH N
EARTHWORK SUMMARY

LOCATION	CUT CY	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	(1) AVAILABLE MATERIAL CY	UNEXPANDED FILL CY	(5) EXPANDED FILL CY	UNADJUSTED EXCAVATION BELOW SUBGRADE CY	205.0400 EXCAVATION MARSH CY	(2) 205.0100 EXCAVATION COMMON CY	624.0100* WATER MGAL	UNADJUSTED BACKFILL GRANULAR CY	(5) 209.0100 BACKFILL GRANULAR CY	(3) COMPUTED BORROW (-) CY	(3) COMPUTED WASTE (+) CY	(4) UNSUITABLE WASTE CY	MASS HAUL CY
CTH N	58,859	0	58,859	24,262	27,899	10,000	300	68,859	276	10,300	11,845		41,260	10,300	41,260
INDEPENDENCE AVE	1,181	0	1,181	18	21	0	0	1,181	5	0	0		1,160	0	1,160
AIRPORT DR S	177	0	177	26	31	0	0	177	1	0	0		146	0	146
AIRPORT DR N	716	0	716	5	6	0	0	716	3	0	0		710	0	710
TOTALS CATEGORY 0010	**60,933**	**0**	**60,933**		**27,957**	**10,000**	**300**	**70,933**	**285**	**10,300**	**11,845**		**43,276**	**10,300**	

(1) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
(2) EXCAVATION COMMON INCLUDES CUT AND EBS
(3) COMPUTED (+)WASTE (-)BORROW = USEABLE MATERIAL - EXPANDED FILL
(4) UNSUITABLE WASTE = EXCAVATION MARSH AND EXCAVATION BELOW SUBGRADE
(5) EXPANSION FACTORS: FILL = 1.15, BACKFILL GRANULAR = 1.15

*ADDITIONAL QUANTITIES LISTED ELSEWHERE. SEE "**AGGREGATE ITEMS**"

AGGREGATE ITEMS

STATION	-	STATION	LOCATION	305.0110* BASE AGGREGATE DENSE 3/4-INCH TON	305.0120* BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100** WATER MGAL
95+50	-	105+50	CTH N	138	4190	42
TOTALS CATEGORY 0020				**138**	**4,190**	**42**
105+50	-	110+00	CTH N	78	1,599	17
110+00	-	120+00	CTH N	150	4216	44
120+00	-	130+00	CTH N	209	3,765	40
130+00	-	140+00	CTH N	202	3,694	39
140+00	-	150+00	CTH N	140	4,444	46
150+00	-	160+00	CTH N	285	3,940	42
160+00	-	170+00	CTH N	244	3,869	41
170+00	-	179+00	CTH N	260	3,455	37
179+00	-	185+00	CTH N	--	2,082	21
185+00	-	190+00	CTH N	--	1,741	17
190+00	-	195+00	CTH N	--	1,750	18
195+00	-	198+77	CTH N	--	1,247	12
198+77	-	201+65	CTH N	--	278	3
7+16	-	9+76	INDEPENDENCE AVE	--	1,122	11
28+60	-	29+78	AIRPORT DR	--	347	3
30+18	-	32+55	AIRPORT DR	--	743	7
TOTALS CATEGORY 0010				**1,568**	**38,292**	**398**

* ADDITIONAL QUANTITIES LISTED ELSEWHERE. SEE "**DRIVEWAYS**"
** ADDITIONAL QUANTITIES LISTED ELSEWHERE. SEE "**EARTHWORK SUMMARY**"

PAVEMENT ITEMS

STATION	-	STATION	LOCATION	455.0120 ASPHALTIC MATERIAL PG64-28 TON	455.0605 TACK COAT GAL	460.1100 HMA PAVEMENT TYPE E-0.3 TON
95+50	-	105+50	CTH N	65	617	1,182
TOTALS CATEGORY 0020				**65**	**617**	**1,182**
105+50	-	110+00	CTH N	23	218	417
110+00	-	120+00	CTH N	64	611	1,173
120+00	-	130+00	CTH N	53	506	969
130+00	-	140+00	CTH N	52	496	950
140+00	-	150+00	CTH N	69	657	1,259
150+00	-	160+00	CTH N	53	498	956
160+00	-	170+00	CTH N	52	494	945
170+00	-	179+00	CTH N	45	431	823
179+00	-	185+00	CTH N	28	269	516
185+00	-	190+00	CTH N	24	225	429
190+00	-	195+00	CTH N	24	225	429
195+00	-	198+77	CTH N	18	170	324
198+77	-	201+65	CTH N	4	36	70
7+16	-	9+76	INDEPENDENCE AVE	16	149	285
28+60	-	29+78	AIRPORT DR	6	53	100
30+18	-	32+55	AIRPORT DR	11	105	200
TOTALS CATEGORY 0010				**542**	**5,143**	**9,845**

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DRIVEWAYS

STATION	LOCATION	TYPE	OFFSET	305.0110* BASE AGGREGATE DENSE 3/4-INCH TON	305.0120* BASE AGGREGATE DENSE 1 1/4-INCH TON	416.0270 CONCRETE DRIVEWAY HES 7-INCH SY	465.0120 ASPHALTIC SURFACE DRIVEWAYS & FIELD ENTRANCES TON	624.0100* WATER MGAL
95+75	CTH N	PE	LT	18	--	--	--	--
97+17	CTH N	PE	RT	--	9	--	5	--
100+22	CTH N	CE	RT	--	76	--	48	1
TOTALS CATEGORY 0020				**18**	**85**	**--**	**53**	**1**
107+29	CTH N	PE	LT	41	--	--	--	--
113+13	CTH N	CE	RT	--	124	--	79	1
114+63	CTH N	PE	RT	32	--	--	--	--
120+97	CTH N	FE	LT	44	--	--	--	--
125+48	CTH N	FE	RT	25	--	--	--	--
127+09	CTH N	FE	LT	28	--	--	--	--
131+82	CTH N	FE	RT	28	--	--	--	--
133+05	CTH N	PE	LT	18	--	--	--	--
133+23	CTH N	PE	RT	25	--	--	--	--
143+21	CTH N	CE	LT	55	--	--	--	1
154+06	CTH N	PE	LT	23	--	--	--	--
155+94	CTH N	PE	LT	21	--	--	--	--
157+76	CTH N	FE	RT	35	--	--	--	--
169+03	CTH N	FE	LT	41	--	--	--	--
169+12	CTH N	PE	RT	--	5	16	--	--
181+10	CTH N	PE	RT	14	12	22	3	--
182+74	CTH N	PE	LT	16	12	22	3	--
184+92	CTH N	CE	RT	30	25	45	9	1
190+47	CTH N	CE	RT	--	21	35	7	--
190+97	CTH N	CE	RT	--	37	45	17	--
192+59	CTH N	CE	RT	--	18	33	6	--
195+16	CTH N	CE	RT	--	28	35	12	--
195+87	CTH N	CE	RT	--	60	36	33	1
200+80	CTH N	CE	LT	--	12	49	--	--
201+35	CTH N	CE	LT	--	16	55	1	--
31+40	AIRPORT DR	CE	LT	--	55	19	32	1
UNDISTRIBUTED				124	148	--	--	3
TOTALS CATEGORY 0010				**600**	**573**	**412**	**202**	**8**

* ADDITIONAL QUANTITIES LISTED ELSEWHERE. SEE **"AGGREGATE ITEMS"**

ASPHALTIC FLUMES

STATION	LOCATION	OFFSET	465.0315 ASPHALTIC FLUMES SY
170+00	CTH N	RT	14
179+00	CTH N	LT	14
179+00	CTH N	RT	14
TOTAL CATEGORY 0010			**42**

ASPHALTIC RUMBLE STRIPS

STATION	TO	STATION	LOCATION	465.0425 ASPHALTIC SHOULDER RUMBLE STRIP 2-LANE RURAL (TYPE 1) LF	465.0475 ASPHALTIC CENTER LINE RUMBLE STRIP 2-LANE RURAL LF
95+50	-	105+50	CTH N	1,095	796
TOTALS CATEGORY 0020				**1,095**	**796**
105+50	-	125+00	CTH N	2,650	1,753
125+00	-	150+00	CTH N	3,187	1,900
150+00	-	179+00	CTH N	4,472	2,900
TOTALS CATEGORY 0010				**10,309**	**6,553**

CONCRETE MASONRY ENDWALLS

STATION	LOCATION	OFFSET	504.0900 CONCRETE MASONRY ENDWALLS CY
129+50	CTH N	LT	15
129+50	CTH N	RT	14
TOTAL CATEGORY 0010			**29**

CULVERT PIPE

FROM STATION	FROM OFFSET	FROM ELEV	TO STATION	TO OFFSET	TO ELEV	SLOPE	LOCATION	522.0118 CULVERT PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	522.0136 CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	522.0172 CULVERT PIPE REINFORCED CONCRETE CLASS III 72-INCH LF	521.0336 APRON ENDWALLS FOR CULVERT PIPE SLOPED CROSS DRAINS STEEL 4 TO 1 36-INCH EACH	521.1518 APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 6 TO 1 18-INCH EACH	521.1524* APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 6 TO 1 24-INCH EACH	521.1536 APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 6 TO 1 36-INCH EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	521.0728 PIPE ARCH CORRUGATED STEEL 28X20-INCH LF	521.0735 PIPE ARCH CORRUGATED STEEL 35X24-INCH LF	521.1728 APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS STEEL 6 TO 1 28X20-INCH EACH	521.1735 APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS STEEL 6 TO 1 35X24-INCH EACH	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	SPV.0060.01 APRON ENDWALLS FOR CULVERT PIPE CORRUGATED STEEL 8-INCH EACH	SPV.0090.01 CULVERT PIPE CORRUGATED STEEL 8-INCH LF	SEE NOTE
95+51.35	27.45' LT	1035.48	96+00.35	29.27' LT	1034.77	1.45%	DRIVEWAY	42	-	-	-	-	2	-	-	-	-	-	-	-	1	-	-	1, 3
96+95.99	30.18' RT	1033.81	97+39.05	31.85' RT	1033.40	0.95%	DRIVEWAY	36	-	-	-	-	2	-	-	-	-	-	-	-	1	-	-	1, 3
99+54.78	45.00' RT	1029.62	100+80.77	43.37' RT	1028.42	0.98%	DRIVEWAY	115	-	-	-	-	2	-	-	-	-	-	-	-	1	-	-	1, 3
TOTALS CATEGORY 0020								**193**	**--**	**--**	**--**	**--**	**6**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**3**	**--**	**--**	
106+88.86	39.84' LT	1024.33	107+69.35	37.73' LT	1024.09	0.29%	DRIVEWAY	-	-	57	-	-	-	-	2	-	-	-	-	-	1	-	-	1, 3
112+48.45	43.35' RT	1017.50	113+75.78	41.99' RT	1015.10	1.88%	DRIVEWAY	120	-	-	-	-	2	-	-	-	-	-	-	-	1	-	-	1, 3
114+43.18	33.88' RT	1013.99	114+87.56	33.25' RT	1013.15	1.89%	DRIVEWAY	37	-	-	-	-	2	-	-	-	-	-	-	-	1	-	-	1, 3
120+66.01	42.44' LT	1005.59	121+27.01	42.92' LT	1005.13	0.75%	DRIVEWAY	-	-	-	-	-	-	-	-	-	-	47	-	2	1	-	-	1
120+66.01	48.44' LT	1005.59	121+27.01	48.92' LT	1005.13	0.75%	DRIVEWAY	-	-	-	-	-	-	-	-	-	-	47	-	2	1	-	-	1
125+20.09	37.49' RT	1001.62	125+75.09	34.86' RT	1001.41	0.38%	DRIVEWAY	-	42	-	-	-	-	2	-	-	-	-	-	-	1	-	-	1, 3
126+81.76	32.91' LT	998.46	127+36.76	36.85' LT	996.95	2.74%	DRIVEWAY	-	-	-	-	-	-	-	-	-	46	-	2	-	1	-	-	1
126+81.76	37.91' LT	998.46	127+36.76	36.76' LT	996.95	2.74%	DRIVEWAY	-	-	-	-	-	-	-	-	-	46	-	2	-	1	-	-	1
129+51.18	45.00' LT	982.75	129+39.76	48.00' RT	981.50	1.33%	CTH N	-	-	-	94	-	-	-	-	-	-	-	-	-	1	-	-	2
129+61.42	45.00' LT	982.75	129+50.00	48.00' RT	981.50	1.33%	CTH N	-	-	-	94	-	-	-	-	-	-	-	-	-	1	-	-	2
129+71.66	45.00' LT	982.75	129+60.24	48' RT	981.50	1.33%	CTH N	-	-	-	94	-	-	-	-	-	-	-	-	-	1	-	-	2
132+06.79	34.18' RT	995.17	131+57.62	37.54' RT	994.57	1.22%	DRIVEWAY	42	-	-	-	-	2	-	-	-	-	-	-	-	1	-	-	1, 3
133+27.46	33.97' LT	996.53	132+81.96	33.16' LT	996.15	0.83%	DRIVEWAY	38	-	-	-	-	2	-	-	-	-	-	-	-	1	-	-	1, 3
133+44.09	33.23' RT	996.94	132+98.84	33.17' RT	996.36	1.28%	DRIVEWAY	38	-	-	-	-	2	-	-	-	-	-	-	-	1	-	-	1, 3
136+50.00	44.00' RT	998.4	135+99.49	40.63' RT	998.25	0.30%	CTH N	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	49	1, 4
155+50.00	37.34' LT	1002.66	155+50.00	36.28' RT	1002.26	0.54%	CTH N	-	62	-	-	-	-	-	-	2	-	-	-	-	1	-	-	1
156+17.86	38.83' LT	1003	155+71.66	39.13' LT	1002.76	0.52%	DRIVEWAY	-	-	-	-	-	-	-	-	-	37	-	2	-	1	-	-	1
168+78.03	36.00' LT	1005.45	169+28.83	36.00' LT	1004.26	2.34%	DRIVEWAY	-	-	-	-	-	-	-	-	-	41	-	2	-	1	-	-	1
178+00.00	43.13' LT	982.00	178+00.00	49.54' RT	979.65	2.54%	CTH N	-	-	76	-	2	-	-	-	-	-	-	-	-	1	-	-	1, 3
181+50.00	53.00' RT	988.56	181+03.00	53.00' RT	986.60	4.13%	DRIVEWAY	40	-	-	-	-	2	-	-	-	-	-	-	-	1	-	-	1, 3
TOTALS CATEGORY 0010								**315**	**104**	**133**	**282**	**2**	**12**	**2**	**2**	**2**	**170**	**94**	**8**	**4**	**20**	**2**	**49**	

NOTES:
1. LOCATIONS AND ELEVATIONS GIVEN AT END OF ENDWALL, NOT END OF PIPE
2. LOCATIONS AND ELEVATIONS GIVEN AT END OF PIPE
3. STEEL ADAPTER SLEEVE FOR CONCRETE PIPE REQUIRED
4. MINIMUM PIPE THICKNESS 0.064 INCHES

* ADDITIONAL QUANTITIES LISTED ELSEWHERE. SEE "STORM SEWER STRUCTURES"

WALL MODULAR BLOCK GRAVITY

STATION	-	STATION	LOCATION	532.0200.S WALL MODULAR BLOCK GRAVITY SF	650.6500.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (WALL #1) LS	650.6500.02 CONSTRUCTION STAKING STRUCTURE LAYOUT (WALL #2) LS	SPV.0090.02 TIMBER FENCE LF
166+95	-	168+80	CTH N	620	1	--	185
191+55	-	197+00	CTH N	2,000	--	1	545
TOTALS CATEGORY 0010				**2,620**	**1**	**1**	**730**

CONCRETE CURB AND GUTTER

STATION	-	STATION	LOCATION	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	601.0553 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D LF	601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF	601.0600 CONCRETE CURB PEDESTRIAN LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF
147+00	-	149+03	CTH N	--	203	--	--	203
167+00	-	170+00	CTH N	--	300	--	--	300
179+00	-	185+00	CTH N	1,200	--	--	54	1,254
185+00	-	190+00	CTH N	1,000	--	--	--	1,000
190+00	-	195+00	CTH N	1,000	--	--	--	1,000
195+00	-	198+77	CTH N	573	--	--	--	573
198+77	-	201+65	CTH N	136	--	--	--	136
7+16	-	9+76	INDEPENDENCE AVE	661	--	151	--	812
28+60	-	29+78	AIRPORT DR	160	--	--	--	160
30+18	-	32+55	AIRPORT DR	463	--	--	--	463
TOTALS CATEGORY 0010				**5,193**	**503**	**151**	**54**	**5,901**

3

CONCRETE SIDEWALK

STATION	-	STATION	LOCATION	602.0410 CONCRETE SIDEWALK 5-INCH SF	SPV.0090.03 CONSTRUCTION STAKING CONCRETE SIDEWALK LF
179+00	-	185+00	CTH N	5,680	1,136
185+00	-	190+00	CTH N	4,955	991
190+00	-	195+00	CTH N	5,305	1,061
195+00	-	198+77	CTH N	3,551	710
198+77	-	201+65	CTH N	862	172
TOTAL CATEGORY 0010				**20,353**	**4,070**

RIPRAP

STATION	OFFSET	LT/RT	LOCATION	WIDTH (FT)		LENGTH (FT)		DEPTH (IN)	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE FABRIC TYPE HR SY
135+99	41'	RT	ENDWALL	3.5	x	7	x	12	1	6
139+75	45'	RT	SLOPE	15	x	55	x	12	31	108
148+50	46'	RT	ENDWALL	6	x	12	x	12	3	12
155+50	36'	RT	CROSS CULVERT	6	x	12	x	12	3	12
170+00	41'	RT	ENDWALL	6	x	12	x	12	3	12
170+26	36'	RT	FLUME	12	x	6	x	12	3	12
178+00	50'	RT	CROSS CULVERT	6	x	12	x	12	3	12
178+74	34'	LT	FLUME	12	x	6	x	12	3	12
178+74	34'	RT	FLUME	12	x	6	x	12	3	12
180+19	57'	RT	ENDWALL	7	x	14	x	12	4	16
TOTALS CATEGORY 0010									**57**	**214**

COVER PLATES TEMPORARY

LOCATION	611.8120.S COVER PLATES TEMPORARY EA
UNDISTRIBUTED	11
TOTAL CATEGORY 0010	**11**

PIPE UNDERDRAIN ITEMS

STATION	TO	STATION	OFFSET	LOCATION	612.0204 PIPE UNDERDRAIN UNPERFORATED 4-INCH LF	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH LF
166+95	-	168+80	RT	CTH N RET WALL	--	220
191+55	-	197+00	LT	CTH N RET WALL	--	600
UNDISTRIBUTED					200	--
TOTALS CATEGORY 0010					**200**	**820**

DRAIN TILE EXPLORATION

LOCATION	612.0700 DRAIN TILE EXPLORATION LF
UNDISTRIBUTED	1,000
TOTAL CATEGORY 0010	**1,000**

STORM SEWER STRUCTURES

STR NO	STA	LOCATION	OFFSET	LT/ RT	RIM ELEV	DEPTH	CATCH BASINS 3-FT DIAMETER 611.1003 EACH	CATCH BASINS 4-FT DIAMETER 611.1004 EACH	CATCH BASINS 2X3-FT 611.1230 EACH	INLETS MEDIAN 1 GRATE 611.3901 EACH	INLETS MEDIAN 2 GRATE 611.3902 EACH	INLET COVERS TYPE B 611.0606 EACH	INLET COVERS TYPE C 611.0612 EACH	INLET COVERS TYPE F 611.0615 EACH	INLET COVERS TYPE H 611.0624 EACH	INLET COVERS TYPE MS 611.0642 EACH	MANHOLES 4-FT DIAMETER 611.2004 EACH	MANHOLES 5-FT DIAMETER 611.2005 EACH	MANHOLES 6-FT DIAMETER 611.2006 EACH	MANHOLES 7-FT DIAMETER 611.2007 EACH	MANHOLE COVERS TYPE J 611.0530 EACH	APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 24-INCH 6 TO 1 521.1524* EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12 IN 522.1012 EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30 IN 522.1030 EACH	CONCRETE COLLARS FOR PIPE 520.8000 EACH	STR NOTES
			FT			FT																				
9.0	201+61.47	CTH N	31.17	LT	989.00	5.69													1		1				2	1, 3
10.0	201+38.29	CTH N	30.70	LT	988.68	4.93													1						1	1
10.1	201+50.29	CTH N	49.38	LT	EXIST	EXIST																			1	1, 10
11.0	200+44.94	CTH N	28.82	LT	991.02	4.87													1		1				1	4
12.0	198+63.42	CTH N	18.96	LT	997.18	6.08														1	1					5
12.1	30+50.00	AIRPORT	18.48	RT	998.30	6.44		1							1											
12.2	31+05.46	AIRPORT	16.80	RT	1000.93	7.43		1							1										1	1, 6
12.3	31+22.22	AIRPORT	14.87	LT	1001.28	7.08		1							1											
12.4	31+80.00	AIRPORT	20.00	LT	1005.00	5.94				1						1										
13.0	197+47.42	CTH N	6.00	LT	999.39	5.91												1			1					
13.1	197+47.42	CTH N	18.00	LT	999.55	5.70			1						1											11
13.2	197+40.00	CTH N	36.90	LT	999.00	2.85				1						1										
14.0	194+50.00	CTH N	6.00	LT	1002.52	5.38												1			1					
14.1	194+50.00	CTH N	18.00	LT	1002.59	6.47			1						1											
14.2	194+50.00	CTH N	32.50	LT	1004.66	8.28	1					1														11
15.0	191+50.00	CTH N	6.00	LT	1009.14	4.77											1				1					
15.1	191+50.00	CTH N	18.00	LT	1008.91	5.45			1						1											
15.2	191+50.00	CTH N	30.52	LT	1008.56	4.82	1					1														
20.0	198+52.60	CTH N	45.65	RT	997.00	4.28							1				1								1	1, 7
20.1	198+33.86	CTH N	42.49	RT	--	--																		1		
21.0	198+50.93	CTH N	24.71	RT	996.75	3.84									1		1									
22.0	197+47.58	CTH N	18.00	RT	998.76	4.85									1		1									
23.0	195+50.00	CTH N	18.00	RT	1000.22	4.38									1		1									
23.1	195+50.00	CTH N	43.00	RT	998.37	3.94	1					1														
23.2	194+75.00	CTH N	44.00	RT	999.16	4.00	1					1														
24.0	194+50.00	CTH N	18.00	RT	1001.95	5.15									1		1									
25.0	191+50.00	CTH N	18.00	RT	1008.75	4.55									1		1									
30.0	180+19.01	CTH N	57.25	RT	--	--																			1	2
31.0	180+25.00	CTH N	18.00	RT	989.50	6.82									1				1							
32.0	180+75.00	CTH N	6.00	LT	991.16	4.88												1			1					
32.1	180+75.00	CTH N	18.00	LT	990.83	6.37			1						1											
32.2	180+75.00	CTH N	38.00	LT	990.40	3.66					1					2										
33.0	183+00.00	CTH N	6.00	LT	999.72	6.45									1		1									
33.1	183+00.00	CTH N	18.00	RT	999.39	5.68			1						1											
33.2	183+00.00	CTH N	18.00	LT	999.39	5.68			1						1											
33.3	183+00.00	CTH N	34.50	LT	999.24	5.30	1					1														
SUBTOTALS							**5**	**3**	**6**	**2**	**1**	**5**	**1**	**--**	**16**	**4**	**8**	**3**	**4**	**1**	**7**	**--**	**1**	**1**	**7**	

GENERAL NOTES:

A. LOCATION/ELEVATION OF STRUCTURES IN CURB AND GUTTER SECTION REFER TO FLOW LINE OF CURB.
B. LOCATION/ELEVATION OF STRUCTURES NOT IN CURB AND GUTTER SECTION REFER TO CENTER OF COVER.
C. CATCH BASINS SHALL HAVE A 2-FOOT SUMP.
D. DEPTH OF STRUCTURE IS MEASURED FROM RIM ELEVATION TO LOWEST PIPE INVERT OR SUMP.
E. END WALL LOCATIONS ARE GIVEN AT END OF ENDWALL, NOT END OF PIPE

* ADDITIONAL QUANTITIES LISTED ELSEWHERE. SEE "**CULVERT PIPE**"

STRUCTURE NOTES:

1. CONCRETE COLLAR REQ'D. VERIFY INVERT IN FIELD.
2. APRON ENDWALL WITH RIP RAP.
3. REPLACE EXISTING MANHOLE. CONNECT PIPES TO SOUTH AND SOUTHEAST.
4. REPLACE EXISTING MANHOLE. CONNECT PIPE TO NORTH.
5. REPLACE EXISTING MANHOLE.
6. REPLACE EXISTING MANHOLE. CONNECT PIPES TO NORTH AND NORTHEAST.
7. REMOVE EXISTING ENDWALL. CONNECT PIPE TO SOUTH.
8. STEEL ADAPTER SLEEVE FOR CONCRETE PIPE REQUIRED.
9. REPLACE EXISTING MANHOLE. CONNECT PIPE TO SOUTHWEST.
10. EXISTING STRUCTURE TO REMAIN. REMOVE EXISTING PIPE AND CONNECT NEW PIPE TO SOUTHWEST.
11. CONNECT 6-INCH PIPE UNDERDRAIN FROM RETAINING WALL.

STORM SEWER STRUCTURES (CONTINUED)

STR NO	STA	LOCATION	OFFSET	LT/ RT	RIM ELEV	DEPTH	CATCH BASINS 3-FT DIAMETER	CATCH BASINS 4-FT DIAMETER	CATCH BASINS 2X3-FT	INLETS MEDIAN 1 GRATE	INLETS MEDIAN 2 GRATE	INLET COVERS TYPE B	INLET COVERS TYPE C	INLET COVERS TYPE F	INLET COVERS TYPE H	INLET COVERS TYPE MS	MANHOLES 4-FT DIAMETER	MANHOLES 5-FT DIAMETER	MANHOLES 6-FT DIAMETER	MANHOLES 7-FT DIAMETER	MANHOLE COVERS TYPE J	APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 24-INCH 6 TO 1	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12 IN	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30 IN	CONCRETE COLLARS FOR PIPE	STR NOTES
							611.1003	611.1004	611.1230	611.3901	611.3902	611.0606	611.0612	611.0615	611.0624	611.0642	611.2004	611.2005	611.2006	611.2007	611.0530	521.1524	522.1012	522.1030	520.8000	
			FT			FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
34.0	185+75.00	CTH N	6.00	LT	1009.89	7.17									1		1									
34.1	185+75.00	CTH N	18.00	RT	1009.56	5.68			1						1											
34.2	185+75.00	CTH N	18.00	LT	1009.56	5.68			1						1											
34.3	185+75.00	CTH N	34.53	LT	1009.78	5.67	1					1														
35.0	170+00.00	CTH N	41.15	RT	--	--																1				2, 8
36.0	168+85.00	CTH N	22.00	RT	1008.03	4.03								1			1									11
37.0	166+75.00	CTH N	35.00	RT	--	--																1				8
40.0	9+54.45	INDEPENDENCE	96.74	RT	--	--																1				2, 8
41.0	9+39.55	INDEPENDENCE	26.97	RT	1010.31	3.85								1					1							
42.0	9+39.58	INDEPENDENCE	3.47	LT	1010.44	3.87									1		1									
43.0	9+39.58	INDEPENDENCE	8.53	LT	1010.43	3.84									1		1									
44.0	9+63.20	INDEPENDENCE	66.72	LT	1010.38	3.50								1			1									
45.0	9+54.65	INDEPENDENCE	113.26	LT	--	--																1				8
50.0	8+43.75	INDEPENDENCE	14.68	LT	1014.03	4.23									1		1									1, 9
50.1	8+40.28	INDEPENDENCE	2.00	LT	1010.31	2.38		1							1											
SUBTOTALS							**1**	**1**	**2**	**--**	**--**	**1**	**--**	**3**	**7**	**--**	**6**	**--**	**1**	**--**	**--**	**4**	**--**	**--**	**--**	
TOTALS CATEGORY 0010							**6**	**4**	**8**	**2**	**1**	**6**	**1**	**3**	**23**	**4**	**14**	**3**	**5**	**1**	**7**	**4**	**1**	**1**	**7**	

GENERAL NOTES:

A. LOCATION/ELEVATION OF STRUCTURES IN CURB AND GUTTER SECTION REFER TO FLOW LINE OF CURB.
B. LOCATION/ELEVATION OF STRUCTURES NOT IN CURB AND GUTTER SECTION REFER TO CENTER OF COVER.
C. CATCH BASINS SHALL HAVE A 2-FOOT SUMP.
D. DEPTH OF STRUCTURE IS MEASURED FROM RIM ELEVATION TO LOWEST PIPE INVERT OR SUMP.
E. END WALL LOCATIONS ARE GIVEN AT END OF ENDWALL, NOT END OF PIPE

* ADDITIONAL QUANTITIES LISTED ELSEWHERE. SEE "**CULVERT PIPE**"

STRUCTURE NOTES:

1. CONCRETE COLLAR REQ'D. VERIFY INVERT IN FIELD.
2. APRON ENDWALL WITH RIP RAP.
3. REPLACE EXISTING MANHOLE. CONNECT PIPES TO SOUTH AND SOUTHEAST.
4. REPLACE EXISTING MANHOLE. CONNECT PIPE TO NORTH.
5. REPLACE EXISTING MANHOLE.
6. REPLACE EXISTING MANHOLE. CONNECT PIPES TO NORTH AND NORTHEAST.
7. REMOVE EXISTING ENDWALL. CONNECT PIPE TO SOUTH.
8. STEEL ADAPTER SLEEVE FOR CONCRETE PIPE REQUIRED.
9. REPLACE EXISTING MANHOLE. CONNECT PIPE TO SOUTHWEST.
10. EXISTING STRUCTURE TO REMAIN. REMOVE EXISTING PIPE AND CONNECT NEW PIPE TO SOUTHWEST.
11. CONNECT 6-INCH PIPE UNDERDRAIN FROM RETAINING WALL.

STORM SEWER PIPE REINFORCED CONCRETE

PIPE NUMBER	UPSTREAM STRUCTURE	DOWNSTREAM STRUCTURE	INV IN	INV OUT	PIPE SLOPE	STORM SEWER PIPE REINFORCED CONCRETE CLASS III				
						12 IN	15 IN	18 IN	24 IN	30 IN
						608.0312	608.0315	608.0318	608.0324	608.0330
						LF	LF	LF	LF	LF
P 10.0	10.0	9.0	983.75	983.31	2.56%				23.2	
P 10.1	10.1	10.0	985.73	985.20	3.00%	22.2				
P 11.0	11.0	10.0	986.15	983.75	2.74%				93.4	
P 12.0	12.0	11.0	991.10	986.15	2.8%				181.8	
P 12.1	12.1	12.0	993.86	992.60	3.00%		47.1			
P 12.2	12.2	12.1	995.50	993.96	3.00%		55.5			
P 12.3	12.3	12.2	996.20	995.60	2.00%		35.8			
P 12.4	12.4	12.3	999.06	996.30	5.00%		58.0			
P 13.0	13.0	12.0	993.48	991.82	1.50%				116.7	
P 13.1	13.1	13.0	995.85	995.70	2.00%		12.0			
P 13.2	13.2	13.1	996.15	995.85	1.60%		20.3			
P 14.0	14.0	13.0	997.14	993.48	1.25%				297.4	
P 14.1	14.1	14.0	998.12	997.97	2.00%			12.0		
P 14.2	14.2	14.1	998.38	998.12	2.00%			14.5		
P 15.0	15.0	14.0	1004.37	997.57	2.30%				300.0	
P 15.1	15.1	15.0	1005.46	1005.22	3.00%		12.0			
P 15.2	15.2	15.1	1005.74	1005.46	2.50%		12.5			
P 20.1	20.1	20.0	995.00	994.49	3.00%	12.9				
P 21.0	21.0	20.0	992.91	992.72	1.00%				21.0	
P 22.0	22.0	21.0	993.91	992.91	1.00%				103.7	
P 23.0	23.0	22.0	995.84	993.91	1.00%				197.4	
P 23.1	23.1	23.0	996.43	996.31	0.50%	25.0				
P 23.2	23.2	23.1	997.16	996.43	1.00%	75.0				
P 24.0	24.0	23.0	996.80	995.84	1.00%				100.0	
P 25.0	25.0	24.0	1004.20	996.80	2.50%				300.0	
P 31.0	31.0	30.0	982.68	982.08	1.50%					33.6

STORM SEWER PIPE REINFORCED CONCRETE (CONTINUED)

PIPE NUMBER	UPSTREAM STRUCTURE	DOWNSTREAM STRUCTURE	INV IN	INV OUT	PIPE SLOPE	STORM SEWER PIPE REINFORCED CONCRETE CLASS III				
						12 IN	15 IN	18 IN	24 IN	30 IN
						608.0312	608.0315	608.0318	608.0324	608.0330
						LF	LF	LF	LF	LF
P 32.0	32.0	31.0	986.28	983.84	5.00%				55.6	
P 32.1	32.1	32.0	986.46	986.38	1.50%				12.0	
P 32.2	32.2	32.1	986.74	986.46	1.50%				20.0	
P 33.0	33.0	32.0	993.27	986.66	3.00%				224.8	
P 33.1	33.1	33.0	995.71	995.61	0.50%		24.0			
P 33.2	33.2	33.0	995.71	995.55	2.00%		12.0			
P 33.3	33.3	33.2	995.94	995.71	1.50%		16.5			
P 34.0	34.0	33.0	1002.72	994.59	3.00%				275.0	
P 34.1	34.1	34.0	1005.88	1005.72	0.50%		24.0			
P 34.2	34.2	34.0	1005.88	1005.72	2.00%		12.0			
P 34.3	34.3	34.2	1006.11	1005.88	1.50%		16.5			
P 36.0	36.0	35.0	1004.00	1003.43	0.50%				109.6	
P 37.0	37.0	36.0	1009.31	1004.00	2.55%				203.4	
P 41.0	41.0	40.0	1006.46	1006.20	0.37%				64.3	
P 42.0	42.0	41.0	1006.57	1006.46	0.50%				30.5	
P 43.0	43.0	42.0	1006.59	1006.57	0.50%				5.1	
P 44.0	44.0	43.0	1006.88	1006.59	0.50%				62.8	
P 45.0	45.0	44.0	1007.94	1006.88	2.32%				40.3	
P 50.0	50.0	41.0	1009.80	1006.82	3.00%				104.5	
P 50.1	50.1	50.0	1009.93	1009.80	1.00%				13.2	
TOTALS CATEGORY 0010						**135.1**	**358.2**	**26.5**	**2955.7**	**33.6**

GENERAL NOTES:

1. PIPE LENGTHS GIVEN ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
2. PIPE SLOPES GIVEN ARE TRUE SLOPES FROM INSIDE WALL OF STRUCTURE TO INSIDE WALL OF STRUCTURE.

MGS GUARDRAIL

STATION		STATION	OFFSET	614.2300 MGS GUARDRAIL 3 LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
128+03	-	130+97	LT	187.5	2
128+03	-	130+97	RT	187.5	2
146+00	-	151+19	LT	412.5	2
TOTALS CATEGORY 0010				**787.5**	**6**

MOBILIZATION

PROJECT ID	DESCRIPTION	619.1000 MOBILIZATION EACH
3944-00-71	CTH N	1
TOTAL CATEGORY 0010		**1**

CONCRETE MEDIAN SLOPED NOSE

STATION	LOCATION	OFFSET	TYPE	620.0300 CONCRETE MEDIAN SLOPED NOSE SF
9+45	INDEPENDENCE AVE	LT	1	43
TOTAL CATEGORY 0010				**43**

MOBILIZATIONS EROSION CONTROL

PROJECT ID	DESCRIPTION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
3944-00-71	CTH N	1	2
TOTALS CATEGORY 0010		**1**	**2**

EROSION CONTROL

STATION		STATION	LOCATION	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2002 EROSION MAT CLASS I TYPE A SY	628.2037 EROSION MAT CLASS III TYPE C SY	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH
95+50	-	105+50	CTH N	211	1,595	1,595	505	--	--	--	--	12	--
TOTALS CATEGORY 0020				**211**	**1,595**	**1,595**	**505**	**--**	**--**	**--**	**--**	**12**	**--**
105+50	-	110+00	CTH N	--	903	903	--	--	--	--	--	4	--
110+00	-	120+00	CTH N	--	1,991	1,991	908	908	--	--	--	8	--
120+00	-	130+00	CTH N	154	1,863	1,863	1,178	700	--	--	--	20	60
130+00	-	140+00	CTH N	50	1,903	1,903	--	--	--	--	--	16	--
140+00	-	150+00	CTH N	--	973	973	--	--	--	--	--	4	--
150+00	-	160+00	CTH N	--	1,883	1,883	--	--	--	--	--	8	--
160+00	-	170+00	CTH N	--	1,159	1,159	2,677	--	--	--	1	8	--
170+00	-	179+00	CTH N	--	855	855	1,286	1,242	--	--	--	4	--
179+00	-	185+00	CTH N	--	553	553	--	--	2	--	4	4	--
185+00	-	190+00	CTH N	--	497	497	--	--	1	--	2	--	--
190+00	-	195+00	CTH N	--	403	403	--	--	3	--	4	--	--
195+00	-	198+77	CTH N	--	130	130	--	--	2	--	3	12	--
198+77	-	201+65	CTH N	--	--	--	--	--	--	1	3	--	--
7+16	-	9+76	INDEPENDENCE AVE	--	220	220	--	--	--	--	6	--	--
28+60	-	29+78	AIRPORT DR	--	102	102	--	--	--	--	3	--	--
30+18	-	32+55	AIRPORT DR	--	--	--	--	--	1	--	2	4	--
UNDISTRIBUTED				51	3,359	3,359	1,512	713	--	--	--	23	15
TOTALS CATEGORY 0010				**255**	**16,794**	**16,794**	**7,561**	**3,563**	**9**	**1**	**28**	**115**	**75**

RESTORATION ITEMS

STATION		STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB
95+50	-	105+50	CTH N	9,406	9,406	7	195	97
TOTALS CATEGORY 0020				**9,406**	**9,406**	**7**	**195**	**97**
105+50	-	110+00	CTH N	3,232	3,232	2.4	70	35
110+00	-	120+00	CTH N	6,155	6,155	4.8	137	69
120+00	-	130+00	CTH N	7,669	7,669	5.7	163	82
130+00	-	140+00	CTH N	7,738	7,738	5.8	165	83
140+00	-	150+00	CTH N	5,053	5,053	3.9	112	56
150+00	-	160+00	CTH N	4,365	4,365	3.6	104	52
160+00	-	170+00	CTH N	6,726	6,726	5.0	143	72
170+00	-	179+00	CTH N	6,657	6,657	5.0	143	72
179+00	-	185+00	CTH N	4,101	4,101	2.6	74	37
185+00	-	190+00	CTH N	3,190	3,190	2.0	57	29
190+00	-	195+00	CTH N	2,240	2,240	1.4	40	20
195+00	-	198+77	CTH N	1,238	1,238	0.8	22	11
198+77	-	201+65	CTH N	406	406	0.3	7	4
7+16	-	9+76	INDEPENDENCE AVE	1,472	1,472	0.9	26	13
28+60	-	29+78	AIRPORT DR	238	238	0.2	4	2
30+18	-	32+55	AIRPORT DR	886	886	0.6	16	8
UNDISTRIBUTED				15,342	15,342	12	321	161
TOTALS CATEGORY 0010				**76,708**	**76,708**	**57**	**1,604**	**806**

NOTE: OVERSOW PERMANENT SEED WITH TEMPORARY SEED TO HELP ENSURE RAPID REVEGETATION

MARKERS CULVERT END

LOCATION	OFFSET	633.5200 MARKERS CULVERT END EACH
ENDWALL 45.0		1
ENDWALL 40.0		1
155+50	LT	1
155+50	RT	1
ENDWALL 37.0		1
ENDWALL 35.0		1
178+00	LT	1
178+00	RT	1
ENDWALL 30.0		1
ENDWALL 20.1		1
TOTAL CATEGORY 0010		**10**

TRAFFIC CONTROL

PROJECT ID	DESCRIPTION	643.0100 TRAFFIC CONTROL (3944-00-71) EACH	643.2000 TRAFFIC CONTROL DETOUR (3944-00-71) EACH
3944-00-71	CTH N	1	1
TOTALS CATEGORY 0010		**1**	**1**

TRAFFIC CONTROL ITEMS

LOCATION	643.0420 TRAFFIC CONTROL BARRICADES TYPE III NUMBER	DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NUMBER	DAYS	643.0900 TRAFFIC CONTROL SIGNS NUMBER	DAYS
BEGIN PROJECT	2	264	4	528	3	396
END PROJECT	2	264	4	528	3	396
SIDEWALK CLOSURE	1	132	2	264	2	264
INDEPENDENCE AVE	2	264	4	528	3	396
AIRPORT DR	2	264	4	528	3	396
TOTALS CATEGORY 0010		**1,188**		**2,376**		**1,848**

FIELD OFFICE TYPE C

PROJECT ID	DESCRIPTION	642.5201 FIELD OFFICE TYPE C EACH
3944-00-71	CTH N	1
TOTAL CATEGORY 0010		**1**

PERMANENT SIGNING

SIGN #	SIGN CODE	SIGN SIZE IN	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0614 POSTS WOOD 4X6-IN X 14 FT EACH	634.0616 POSTS WOOD 4X6-IN X 16 FT EACH	634.0618 POSTS WOOD 4X6-IN X 18 FT EACH	SIGN MOUNTED ON SAME POST AS	REMARKS
P101	W1-2R	30 X 30		6.25	--	1	--		CURVE RIGHT
P102	M2-1	21 X 15	2.20		--	1	--		JCT
P103	M1-5A	24 X 24	4.00		--	--	--	P102	COUNTY NP
P104	I2-2	54 X 15	5.63		2	--	--		DODGE CO
TOTALS CATEGORY 0020			**11.83**	**6.25**	**2**	**2**	**--**		
P105	I2-2	74 X 15	7.71		2	--	--		WASHINGTON CO
P106	M1-5A	24 X 24	4.00		1	--	--		COUNTY N
P107	W1-2L	30 X 30		6.25	--	1	--		CURVE LEFT
P108	W14-3	48 X 36		6.00	--	1	--		NO PASSING ZONE
P109	W14-3	48 X 36		6.00	--	1	--		NO PASSING ZONE
P201	W5-52L	12 X 36		3.00	1	--	--		OBJECT MARKER
P202	W5-52R	12 X 36		3.00	1	--	--		OBJECT MARKER
P203	W5-52R	12 X 36		3.00	1	--	--		OBJECT MARKER
P204	W5-52L	12 X 36		3.00	1	--	--		OBJECT MARKER
P205	W14-3	48 X 36		6.00	--	1	--		NO PASSING ZONE
P206	W14-3	48 X 36		6.00	--	1	--		NO PASSING ZONE
P207	R2-1	24 X 30	5.00		--	1	--		SPEED LIMIT 35
P208	R4-7	24 X 30	5.00		--	1	--		KEEP RIGHT ARROW
P209	R1-1	30 X 30	5.18		--	1	--		STOP
P210	R3-8F	30 X 36	7.50		--	1	--		LEFT ONLY/RIGHT ONLY
P211	W14-3	48 X 36		6.00	--	1	--		NO PASSING ZONE
P301	W14-3	48 X 36		6.00	--	1	--		NO PASSING ZONE
P302	M4-6	24 X 12	2.00		--	1	--		END
P303	M1-5A	24 X 24	4.00		--	--	--	P301	COUNTY N
P304	M1-5A	24 X 24	4.00		1	--	--		COUNTY N
P305	W3-5	36 X 36		9.00	--	--	1		SPEED LIMIT 40 AHEAD
P306	R2-1	24 X 30	5.00		--	1	--		SPEED LIMIT 40
P307	R2-1	24 X 30	5.00		--	1	--		SPEED LIMIT 55
P401	R2-1	24 X 30	5.00		--	1	--		SPEED LIMIT 40
P402	D9-52L	36 X 44	11.00		--	1	--		HARTFORD MUNICIPAL AIRPORT
P403	M4-5	24 X 12	2.00		--	--	1		TO
P404	M1-5A	24 X 24	4.00		--	--	--	P404	COUNTY U
P405	M6-1	21 X 21	3.06		--	--	--	P404	ARROW LEFT
P406	D9-52R	36 X 44	11.00		--	1	--		HARTFORD MUNICIPAL AIRPORT
P407	M4-5	24 X 12	2.00		--	--	1		TO
P408	M1-5A	24 X 24	4.00		--	--	--	P408	COUNTY U
P409	M6-1	21 X 21	3.06		--	--	--	P408	ARROW RIGHT
P410	R1-1	30 X 30	5.18		--	1	--		STOP
P411	R1-1	30 X 30	5.18		--	1	--		STOP
TOTALS CATEGORY 0010			**109.87**	**63.25**	**8**	**19**	**3**		

REMOVING SIGNS

SIGN #	SIGN CODE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	SIGN MOUNTED ON SAME POST AS	REMARKS
R101	W1-2R	1	1		CURVE RIGHT
R102	W13-1	1	-	R101	40 MPH
R103	M2-1	1	1		JCT
R104	M1-5A	1	-	R103	COUNTY NP
R105	I2-2	1	-	R103	DODGE CO
TOTALS CATEGORY 0020		**5**	**2**		
R106	I2-2	1	1		WASHINGTON CO
R107	M1-5A	1	1		CTH N
R108	W1-2L	1	1		CURVE LEFT
R109	W13-1	1	-	R108	40 MPH
R201	W5-52R	1	1		OBJECT MARKER
R202	W5-52R	1	1		OBJECT MARKER
R203	W5-52L	1	1		OBJECT MARKER
R204	R2-1	1	1		SPEED LIMIT 35
R205	R4-7	1	1		KEEP RIGHT ARROW
R206	R1-1	1	1		STOP
R301	M4-6	1	1		END
R302	M1-5A	1	-	R301	COUNTY N
R303	M1-5A	1	1		COUNTY N
R304	R2-5A	1	1		REDUCED SPEED AHEAD
R305	W13-1W	1	-	R304	40 MPH
R306	R2-1	1	1		SPEED LIMIT 40
R307	R2-1	1	1		SPEED LIMIT 55
R401	R2-1	1	1		SPEED LIMIT 40
R402	D9-52	1	1		HARTFORD MUNICIPAL AIRPORT
R403	M4-5	1	-	POWER POLE	TO
R404	M1-5A	1	-	R403	COUNTY U
R405	M6-1	1	-	R403	ARROW LEFT
R406	D9-52	1	1		HARTFORD MUNICIPAL AIRPORT
R407	M4-5	1	1		TO
R408	M1-5A	1	-	R407	COUNTY U
R409	M6-1	1	-	R407	ARROW RIGHT
R410	R1-1	1	1		STOP
R411	R1-1	1	1		STOP
R412	R7-1R	1	1		NO PARKING
TOTALS CATEGORY 0010		**29**	**21**		

GEOTEXTILE FABRIC TYPE SR

LOCATION	645.0135 GEOTEXTILE FABRIC TYPE SR SY	NOTES
UNDISTRIBUTED	1,000	AT MARSH EXCAVATION LOCATIONS
TOTAL CATEGORY 0010	**1,000**	

TRAFFIC CONTROL DETOUR SIGNS

LOCATION	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE NUMBER	SIZE (IN)	X	SIZE (IN)	SF	643.3000 TRAFFIC CONTROL DETOUR SIGNS NUMBER	DAYS	643.1050 TRAFFIC CONTROL SIGNS PCMS DAYS
DETOUR ROUTE	2	52	X	30	22	128	16896	14
	42	42	X	12	147			
TOTALS CATEGORY 0010					**169**		**16896**	**14**

SAWCUTS

STATION	LOCATION	OFFSET	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	COMMENTS
95+50	CTH N	R/L	28	--	
97+17	CTH N	35' RT	12	--	DRIVEWAY
190+97	CTH N	47' RT	39	--	DRIVEWAY
192+59	CTH N	39' RT	26	--	DRIVEWAY
195+16	CTH N	46' RT	26	--	DRIVEWAY
195+87	CTH N	72' RT	36	--	DRIVEWAY
198+77 - 201+65	CTH N	LT/RT	175	10	
201+39 - 201+54	CTH N	LT	19	10	SIDEWALK/DRIVEWAY
7+16	INDEPENDENCE AVE	RT	20	5	
8+14	INDEPENDENCE AVE	LT	24	5	
28+60	AIRPORT DR	R/L	32	3	
28+93 - 29+80	AIRPORT DR	23' RT	85	3	
29+00	AIRPORT DR	51' RT	--	10	SIDEWALK/CURB
30+30	AIRPORT DR	34' RT	--	3	CURB
31+40	AIRPORT DR	72' LT	13	--	DRIVEWAY
31+88 - 32+55	AIRPORT DR	22' RT	67	--	PARKING LOT
32+55	AIRPORT DR	R/L	34	--	
TOTALS CATEGORY 0010			**636**	**49**	

PAVEMENT MARKING

STATION	-	STATION	LOCATION	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	646.0106 PAVEMENT MARKING EPOXY 4-INCH WHITE LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH YELLOW LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH LF	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2 EACH	647.0356 PAVEMENT MARKING WORDS EPOXY EACH	647.0456 PAVEMENT MARKING CURB EPOXY LF	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH LF	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY EACH	647.0766 PAVEMENT MARKING CROSSWALK EPOXY 6-INCH LF
95+50	-	105+50	CTH N	--	1,925	1,994	100	--	--	--	--	--	--
SUBTOTALS					1,863	1,994							
TOTALS CATEGORY 0020				**--**	**3,857**		**100**	**--**	**--**	**--**	**--**	**--**	**--**
105+50	-	110+00	CTH N	--	907	906	--	--	--	--	--	--	--
110+00	-	120+00	CTH N	--	1,935	1,136	100	--	--	--	--	--	--
120+00	-	130+00	CTH N	--	2,000	1,583	--	--	--	--	--	--	--
130+00	-	140+00	CTH N	--	2,000	1,250	--	--	--	--	--	--	--
140+00	-	150+00	CTH N	--	2,157	2,000	200	--	--	--	--	--	--
150+00	-	160+00	CTH N	--	2,000	1,340	--	--	--	--	--	--	--
160+00	-	170+00	CTH N	--	2,000	1,819	--	--	--	--	--	--	--
170+00	-	179+00	CTH N	--	1,800	1,800	--	--	--	--	--	--	--
179+00	-	185+00	CTH N	16	1,200	1,200	--	--	--	--	--	--	--
185+00	-	190+00	CTH N	--	1,000	1,000	--	--	--	--	--	--	--
190+00	-	195+00	CTH N	--	1,000	1,000	--	--	--	--	--	--	--
195+00	-	198+77	CTH N	--	576	654	--	--	--	--	--	--	--
198+77	-	201+65	CTH N	--	--	--	300	2	1	--	--	--	--
7+16	-	9+76	INDEPENDENCE AVE	--	--	--	172	4	2	43	39	1	--
28+60	-	29+78	AIRPORT DR	16	--	116	--	--	--	--	32	--	133
30+18	-	32+55	AIRPORT DR	16	--	374	--	--	--	--	30	--	120
SUBTOTALS					18,575	16,178							
TOTALS CATEGORY 0010				**48**	**34,753**		**772**	**6**	**3**	**43**	**101**	**1**	**253**

LOCATING NO-PASSING ZONES

STATION	TO	STATION	648.0100 LOCATING NO-PASSING ZONES MI
95+50	-	198+77	2
TOTAL CATEGORY 0010			**2**

CONSTRUCTION STAKING

STATION	-	STATION	LOCATION	LENGTH LF	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
95+50	-	198+77	CTH N	10,327	46	10,327	10,327	10,327
7+16	-	9+71	INDEPENDENCE AVE	255	--	255	255	255
28+60	-	29+78	AIRPORT DR	118	--	118	118	118
30+18	-	32+55	AIRPORT DR	237	--	237	237	237
TOTALS CATEGORY 0010				**10,937**	**46**	**10,937**	**10,937**	**10,937**

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

PROJECT ID	DESCRIPTION	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (3944-00-71) LS
3944-00-71	CTH N	1
TOTALS		**1**

3

CONSTRUCTION STAKING CURB RAMP

LOCATION	SPV.0060.02 CONSTRUCTION STAKING CURB RAMP EACH
179+10	2
CTH N & AIRPORT DR	4
TOTAL CATEGORY 0010	**6**

TEST ROLLING

STATION	-	STATION	DESCRIPTION	SPV.0170.01 TEST ROLLING STA
95+50	-	198+77	CTH N	104
7+17	-	9+71	INDEPENDENCE AVE	3
28+60	-	29+79	AIRPORT DR	2
30+19	-	32+55	AIRPORT DR	3
TOTAL CATEGORY 0010				**112**

WATER MAIN ITEMS

STATION	OFFSET		LOCATION	204.0210 REMOVING MANHOLES EACH	SPV.0060.03 ADJUSTING WATER VALVE BOXES EACH	SPV.0060.04 ADJUSTING WATER MANHOLES EACH	SPV.0060.05 GATE VALVE & VALVE BOX 12-INCH EACH	SPV.0060.06 SALVAGE AND RELOCATE HYDRANT EACH	SPV.0060.07 ADJUSTING HYDRANT EACH	SPV.0060.08 GATE VALVE & VALVE BOX 6-INCH EACH	SPV.0090.04 WATER MAIN DUCTILE IRON 12-INCH LF	SPV.0090.05 HYDRANT LEAD 6-INCH LF	PROPOSED HYDRANT LOCATION STATION	OFFSET		FINISHED GROUND ELEVATION
9+44	2'	RT	INDEPENDENCE	--	1	--	--	--	--	--	--	--				
9+44	7'	RT	INDEPENDENCE	--	1	--	--	1	--	--	--	38.0	9+35	35'	RT	1011.22
147+49	19'	RT	CTH N	--	--	1	--	--	--	--	--	--				1010.34
147+54	7'	RT	CTH N	--	--	1	--	--	--	--	--	--				1010.56
153+21	22'	RT	CTH N	--	1	--	--	1	--	--	--	28.5	153+21	45'	RT	1003.53
153+26	17'	RT	CTH N	--	1	--	--	--	--	--	--	--				
158+59	23'	RT	CTH N	--	1	--	--	1	--	--	--	26.0	158+59	45'	RT	1006.78
158+64	19'	RT	CTH N	--	1	--	--	--	--	--	--	--				
163+99	24'	RT	CTH N	--	1	--	--	1	--	1	--	25.5	163+99	45'	RT	1014.58
164+06	19'	RT	CTH N	1	--	--	1	--	--	--	750.0	--				
169+40	24'	RT	CTH N	--	1	--	--	1	--	--	--	19.0	169+40	38'	RT	1006.65
169+45	19'	RT	CTH N	--	1	--	--	--	--	--	--	--				
174+81	27'	RT	CTH N	--	1	--	--	1	--	--	--	22.5	174+81	45'	RT	985.17
174+85	23'	RT	CTH N	--	1	--	--	--	--	--	--	--				
181+40	38'	RT	CTH N	--	1	--	--	--	1	--	--	--				991.86
181+43	33'	RT	CTH N	--	1	--	--	--	--	--	--	--				
184+43	39'	RT	CTH N	--	1	--	--	--	--	--	--	--				
184+48	34'	RT	CTH N	--	1	--	--	--	--	--	--	--				
188+65	35'	RT	CTH N	--	1	--	--	--	--	--	--	--				
195+64	35'	RT	CTH N	--	--	--	--	--	1	--	--	--				999.86
198+61	9'	LT	CTH N	--	1	--	--	--	--	--	--	--				
198+62	50'	RT	CTH N	--	1	--	--	--	--	--	--	--				
198+77	7'	RT	CTH N	--	1	--	--	--	--	--	--	--				
198+82	11'	RT	CTH N	--	1	--	--	--	--	--	--	--				
29+36	7'	RT	AIRPORT	--	1	--	--	--	--	--	--	--				
29+47	17'	RT	AIRPORT	--	1	--	--	--	--	--	--	--				
31+37	19'	RT	AIRPORT	--	1	--	--	--	--	--	--	--				
TOTALS CATEGORY 0030				**1**	**23**	**2**	**1**	**6**	**2**	**1**	**750.0**	**159.5**				

WATER MAIN INSULATION

STATION	OFFSET	STATION	OFFSET	LOCATION	612.0902.S INSULATION BOARD POLYSTYRENE 2-INCH SY
168+00	21' RT	169+10	19' RT	CTH N	49
177+90	30' RT	178+10	30' RT	CTH N	9
180+15	30' RT	180+35	30' RT	CTH N	9
194+65	41' RT	195+60	42' RT	CTH N	42
198+20	43' RT	198+60	43' RT	CTH N	18
8+72	3' RT	8+92	1' RT	INDEPENDENCE AVE	9
9+30	3' LT	9+50	4' LT	INDEPENDENCE AVE	9
30+00	16' RT	31+20	13' RT	AIRPORT DR	53
TOTAL CATEGORY 0030					**198**

WATER SERVICE ITEMS

STATION	OFFSET	LOCATION	SPV.0060.09 WATER SERVICE CORPORATION EACH	SPV.0060.10 CURB STOP VALVE & BOX EACH	SPV.0090.06 WATER SERVICE 1-INCH LF
181+	LT	CTH N	1	1	82
181+	RT	CTH N	1	1	25
TOTALS CATEGORY 0030			**2**	**2**	**107**

TEMPORARY MAILBOX STATION

LOCATION	SPV.0060.11 TEMPORARY MAILBOX STATION EACH
CTH N	1
TOTAL CATEGORY 0030	**1**

TRANSPORTATION PROJECT PLAT NO: 3944-00-01 - 4.01

PART OF THE SE1/4 OF THE NE1/4 AND THE NE1/4 OF THE SE1/4 OF SECTION 12, T10N, R17E, TOWN OF RUBICON AND CITY OF HARTFORD, DODGE COUNTY, WISCONSIN.

RELOCATION ORDER CTH N (W. STATE ST.) DODGE COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, DODGE COUNTY 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 83.07 AND 83.08, WISCONSIN STATUTES, DODGE COUNTY HEREBY 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 COUNTY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF DODGE COUNTY, PURSUANT TO THE PROVISIONS OF SECTION 83.07 AND 83.08, WISCONSIN STATUTES.

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES OR S.F. REQUIRED			TLE ACRES OR S.F.
			NEW	EXISTING	TOTAL	
1	EUGENE F AND VIRGINIA M RETTLER REVOCABLE TRUST	FEE, TLE	0.340	1678	2.018	0.067
2	SIGNICAST, LLC	FEE, TLE	0.600		0.600	0.666

ALL FEE TITLE AREAS REQUIRED FOR NEW R/W INDICATED BY HATCHING

0 100 200
SCALE, FEET

GN

TOWN OF RUBICON

SE-NE

NE-SE

CITY OF HARTFORD

DODGE COUNTY

WASHINGTON COUNTY

1/16TH

S/L

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y	X	DESC.
108	95+50.00	-40.00	494992.89	2419626.89	PRW
109	96+00.00	-50.00	495005.00	2419676.43	PRW
645	96+00.00	-55.00	495009.99	2419676.21	TLE
140	97+43.41	40.00	494921.16	2419823.52	PRW
141	97+43.93	50.00	494911.18	2419824.47	PRW
504	97+45.76	85.00	494876.29	2419827.77	TLE
110	98+50.00	-50.00	495015.59	2419926.20	PRW
646	98+70.90	-55.00	495021.47	2419946.87	TLE
505	99+50.00	85.00	494884.95	2420031.83	TLE
533	99+50.00	90.00	494879.95	2420032.04	TLE
148	99+75.40	-80.00	495050.87	2420050.22	PRW
142	99+75.40	50.00	494920.39	2420055.73	PRW
559	99+75.40	90.00	494881.03	2420057.42	TLE
500	100+00.00	-85.00	495056.74	2420076.16	TLE
532	100+00.00	-80.00	495051.74	2420076.28	TLE
558	101+50.00	85.00	494882.22	2420220.49	TLE
540	101+50.00	90.00	494877.24	2420220.04	TLE
139	102+94.49	-80.00	495024.72	2420386.67	PRW
501	103+18.68	-85.00	495024.34	2420412.84	TLE
143	105+69.37	50.00	494818.99	2420613.37	PRW
506	105+86.49	85.00	494780.41	2420614.31	TLE

SCHEDULE OF UTILITIES & INTERESTS REQUIRED

UTILITY NUMBER	OWNER	INTEREST REQUIRED
80	AT&T	RELEASE OF RIGHTS

R/W COURSE TABLE		
COURSE	DISTANCE	BEARING
108-109	50.39	N76°15'58"E
109-110	250.00	N87°34'19"E
110-148	128.94	N74°07'03"E
148-139*	337.47	S85°33'18"E
143-142*	566.90	N79°38'03"W
142-141	231.47	S87°34'19"W
141-140	10.02	N05°24'37"W

*INDICATES LCH AND LCB

FOUND EXISTING MONUMENTATION COORDINATE TABLE				
STATION	OFFSET	Y	X	DESCRIPTION
105+37.56	-21.09	494896.70	2420611.48	IP 1IN

CONC. MONUMENT W/ BRASS CAP
Y 494906.12
X 2417971.58

CONC. MONUMENT W/ BRASS CAP
Y 497611.37
X 2420558.67

CONC. MONUMENT W/ BRASS CAP
Y 492349.58
X 2420673.18

CONC. MONUMENT W/ BRASS CAP
Y 494994.50
X 2420609.12
STA. 105+02.04
OFF. 111.54'L

C.T.H. NP

C.T.H. N

N56°31'41"W

95+50.00 WEST PROJECT LIMITS

PI 95+00.00

TLE GRADING

SLOPE INTERCEPT

C/L PC 102+83.11 OFFSET 36.41'

105+21.02 61.96'

105+46.62 R/L=S/L

PI 105+25.85 C/L PI=104+07.30 OFFSET 109.41'L

24.71' MON. TO EXIST. R/W ALONG SEC. LINE

120.61' MON. TO R/L ALONG SEC. LINE

175.56' MON. TO PROP. R/W ALONG SEC. LINE

54.75' R/L TO PROP. R/W

PC 99+75.40 R/L=C/L (WEST)

2639.02 S88°04'51"W

2617.36 N01°06'18"W

S01°23'15"E 2645.70'

1147.28'

SEE TPP 3944-00-01 - 4.02 FILED IN THE WASHINGTON COUNTY REGISTER OF DEEDS OFFICE

CURVE DATA R/L
PI = 105+25.85
Y = 494994.26
X = 2420603.56
DELTA= 44°58'00"R
D = 4°18'29"
T = 550.45'
L = 1043.81'
R = 1330.00'
PC = 99+75.40
PT = 110+19.21

CURVE C/C/L
DELTA= 44°58'00"R
D = 10°00'00"
T = 237.13'
L = 449.67'
R = 572.96'

500-501
DELTA= 13°43'43"R
R = 1415.00'
T = 170.34'
L = 339.05'

148-139
DELTA= 02°26'48"L
R = 612.96'
T = 13.09'
L = 26.18'

CURVE 142-143
DELTA= 25°35'16"L
R = 1280.00'
T = 290.67'
L = 571.64'

558-506
DELTA= 18°48'14"L
R = 1245.00'
T = 206.15'
L = 408.60'

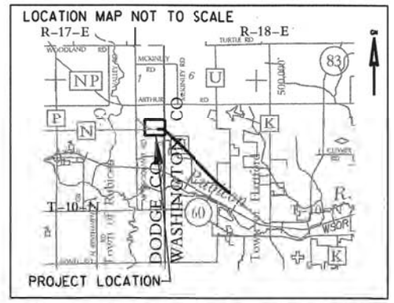
C4 EXIST. R/W
DELTA= 7°55'31"R
R = 612.96'
T = 42.46'
L = 84.78'

CURVE C2 EXIST. R/W
DELTA= 25°35'16"L
R = 1280.00'
T = 290.67'
L = 571.64'

559-558
DELTA= 07°31'18"L
R = 1240.00'
T = 81.51'
L = 162.79'

C3 EXIST. R/W
DELTA= 02°01'52"L
R = 612.96'
T = 10.87'
L = 21.73'

LOCATION MAP NOT TO SCALE



CONVENTIONAL SYMBOLS AND ABBREVIATIONS

STATE, COUNTY, OR TOWN LINE		ACCESS POINT	AP
		ACCESS RIGHTS	AR
SECTION LINE		ACRES	AC.
QUARTER LINE		AND OTHERS	ET.AL.
SIXTEENTH LINE		CENTERLINE EXISTING R/W	C/L
PROPOSED REFERENCE LINE		CERTIFIED SURVEY MAP	CSM
PROPOSED R/W LINE		DOCUMENT	DOC.
EXISTING H.E. LINE		HIGHWAY EASEMENT	H.E.
PROPERTY LINE		LAND CONTRACT	LC
EASEMENT LINE		MONUMENT	MON.
CORPORATE LIMITS		PAGE	P.
EXISTING CENTERLINE		PERMANENT LIMITED EASEMENT	PLE
LOT & TIE LINES		PROPERTY LINE	PL
UTILITIES	(TYPE) (TELEPHONE, GAS, ELECTRIC, CABLE TV, FIBER OPTIC)	RECORDED AS	(100')
NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)		REFERENCE LINE	R/L
NO ACCESS (BY ACQUISITION)		REMAINING	REM.
NO ACCESS (BY STATUTORY AUTHORITY)		RIGHT-OF-WAY	R/W
FEE (HATCH VARIES)		SECTION	SEC.
TEMPORARY LIMITED EASEMENT		SQUARE FEET	S.F.
PERMANENT LIMITED EASEMENT		STATION	STA.
PARCEL NUMBER	21	TEMPORARY LIMITED EASEMENT	TLE
UTILITY PARCEL NUMBER	80	VOLUME	V.
SIGN NUMBER (OFF PREMISE)	21		
BUILDING			
FOUND IRON PIPE/PIN	IP (1" UNLESS NOTED)		
R/W MONUMENT TYPE 2	○ ● (SET)		
R/W STANDARD	△ ▲ (SET)		
SIGN	ISIGN		
SECTION CORNER SYMBOL (N.T.S.)			

CURVE DATA

		NON COMPENSABLE	COMPENSABLE
LONG CHORD	LCH	POWER POLE	
LONG CHORD BEARING	LCB	TELEPHONE POLE	
RADIUS	R	TELEPHONE PEDESTAL	
DEGREE OF CURVE	D		
CENTRAL ANGLE OR DELTA	DELTA		
LENGTH OF CURVE	L		
TANGENT	TAN		

HIGHWAY	BASIS OF EXISTING RIGHT-OF-WAY	WIDTH	DATE
CTH N	DODGE CO. PROJECT 537-A	40'-45'	1949
CTH N	TOWN OF RUBICON ROAD RECORD No. 6	3 RODS	1846

NOTES:

COORDINATES AND BEARINGS ON THE PLAT ARE ORIENTED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD 1927. ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR OF 0.99988411 UNLESS OTHERWISE NOTED.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

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

PROPERTY OWNERSHIP INFORMATION OBTAINED FROM "OWNERSHIP REPORTS" PERFORMED BY A LOCAL TITLE COMPANY.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO 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 AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLES EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

AFFIDAVIT OF CORRECTION
DOC #1209189
APRIL 11,2014

I, GARY D. SCHNEIDER, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF DODGE COUNTY, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 3944-00-01- 4.01 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN GARY D. SCHNEIDER S-1297 West Bend Wisconsin LAND SURVEYOR

(SIGNATURE) Gary D. Schneider DATE Jan. 28,2014
(PRINTED NAME) GARY D. SCHNEIDER
(REGISTRATION NUMBER) S-1297
THIS PLAT AND RELOCATION ORDER ARE APPROVED BY DODGE COUNTY
(SIGNATURE) DATE 2-17-2014
(PRINTED NAME) BRIAN FIELD

KAPUR & ASSOCIATES, INC. CONSULTING ENGINEERS MILWAUKEE, WISCONSIN 414.351.6668

ACCEPTED FOR RECORDING AND FILING IN THE OFFICE OF THE REGISTER OF DEEDS IN Dodge COUNTY, WISCONSIN AT 2:53 PM ON February 19, 2014 AS DOCUMENT # 1207528 AND FILED IN Cabinet C, Page 110 of Plats
Chris Blanchard
SIGNATURE OF REGISTER OF DEEDS

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 3944-00-01-4.01
AMENDMENT NO:

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\Survey\DGN\040101_tpp-01.dgn
PLOT DATE : 2/13/2014
PLOT BY : raisa_k
PLOT NAME :
PLOT SCALE : 1:100
APPRAISAL PLAT DATE :

4.01

TRANSPORTATION PROJECT PLAT NO: 3944-00-01 - 4.02

PART OF OUTLOT 1, CSM NO. 3802, AS RECORDED IN VOLUME 24 ON PAGE 67 OF CERTIFIED SURVEY MAPS OF WASHINGTON COUNTY, LOCATED IN AND INCLUDING THE FRACTIONAL NW 1/4 OF THE FRACTIONAL SW 1/4, AND THE FRACTIONAL SW1/4 OF THE FRACTIONAL SW1/4, ALL IN SECTION 7, TOWN 10 NORTH, RANGE 18 EAST, TOWN OF HARTFORD, WASHINGTON COUNTY, WISCONSIN, AND ALSO PART OF THE FRACTIONAL NW 1/4 OF THE FRACTIONAL SW 1/4 OF SECTION 7, TOWN 10 NORTH, RANGE 18 EAST, CITY OF HARTFORD, WASHINGTON COUNTY, WISCONSIN.

RELOCATION ORDER CTH N (W. STATE ST.) WASHINGTON COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, WASHINGTON COUNTY 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 83.07 AND 83.08, WISCONSIN STATUTES, WASHINGTON COUNTY HEREBY 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 COUNTY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF WASHINGTON COUNTY, PURSUANT TO THE PROVISIONS OF SECTION 83.07 AND 83.08, WISCONSIN STATUTES.

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES OR S.F. REQUIRED			TLE ACRES OR S.F.
			NEW	EXISTING	TOTAL	
2	SIGNICAST, LLC	FEE, TLE	0.705		0.705	0.279
3	WALLACE A. RETTLER AND ANNA MARIA RETTLER, TRUSTEES	FEE, TLE	1.143	0.999	2.142	0.237
4	RONALD & SHIRLEY SPAETH	FEE, TLE	0.025		0.025	0.039
5	JEROME SCHAEFER, TRUSTEE OF JEROME SCHAEFER REVOCABLE TRUST U.A.	FEE, TLE	0.711	0.619	1.330	0.081

ALL FEE TITLE AREAS REQUIRED FOR NEW R/W INDICATED BY HATCHING

RECORDED
February 25, 2014 11:20 AM
SHARON D MARTIN, REGISTER OF DEEDS
WASHINGTON COUNTY, WISCONSIN
Fee Amounts: $25.00

0 100 200
SCALE, FEET

GN

CONC. MONUMENT
W/ BRASS CAP
Y 494994.50
X 2420609.12
STA. 105+02.04
OFF. 111.54'L

CONC. MONUMENT
W/ BRASS CAP
Y 494983.56
X 2423431.22

FRACT.SW-FRACT.NW

TOWN OF HARTFORD

HIGHWAY	BASIS OF EXISTING RIGHT-OF-WAY	WIDTH	DATE
C.T.H. N	TOWN OF HARTFORD, TOWN ROAD RECORD, HORICON RD., ENTRY 11	3 RODS	1860's

SCHEDULE OF UTILITIES & INTERESTS REQUIRED

UTILITY NUMBER	OWNER	INTEREST REQUIRED
80	AT&T	RELEASE OF RIGHTS
81	WE ENERGIES	RELEASE OF RIGHTS

FRACT.NW-FRACT.SW

FOUND EXISTING MONUMENTATION COORDINATE TABLE

STATION	OFFSET	Y	X	DESCRIPTION
105+37.56	-21.09	494896.70	2420611.48	IP 1IN
113+93.36	24.84	494350.84	2421268.04	IP 1IN
114+01.37	32.99	494339.42	2421268.43	IP 1IN
114+70.33	33.30	494292.58	2421319.03	IP 1IN

R/W COURSE TABLE

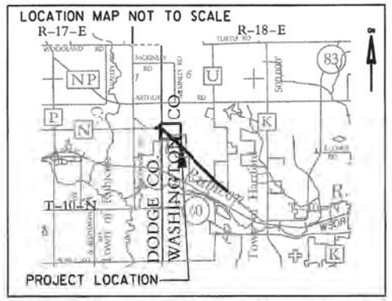
COURSE	DISTANCE	BEARING
103-106*	246.86	S 52°34'28" E
106-177	1457.35	S 47°27'41" E
105-152	174.66	N 47°27'41" W
152-151	100.50	N 53°10'19" W
151-150	200.00	N 47°27'41" W
150-149	200.25	N 44°35'56" W
149-144	413.51	N 47°27'41" W
144-143*	430.87	N 57°09'03" W

*INDICATES LCH AND LCB

STATION & OFFSET TABLE

POINT	STATION	OFFSET	Y	X	DESC.
143	105+69.37	50.00	494818.99	2420613.37	PRW
506	105+86.49	85.00	494780.41	2420614.31	TLE
508	106+00.00	50.00	494807.08	2420640.34	TLE
507	106+00.00	85.00	494775.23	2420625.84	TLE
509	106+98.09	-73.30	494872.98	2420783.95	TLE
510	107+00.00	-83.09	494880.59	2420790.44	TLE
639	107+20.81	-78.30	494865.63	2420807.36	TLE
103	107+81.83	-55.00	494812.66	2420850.29	PRW
511	108+44.00	-55.00	494776.79	2420904.17	TLE
513	108+75.00	50.00	494673.38	2420868.2	TLE
514	108+75.00	60.00	494665.32	2420862.28	TLE
106	110+19.21	-55.00	494662.64	2421046.33	PRW
144	110+19.21	50.00	494585.27	2420975.34	PRW
515	110+19.21	60.00	494577.9	2420968.58	TLE
575	110+50.00	-60.00	494645.5	2421072.4	TLE
574	110+50.00	-55.00	494641.82	2421069.02	TLE
516	111+50.00	75.00	494478.42	2421054.81	TLE
517	112+50.00	75.00	494410.81	2421128.5	TLE
518	112+50.00	95.00	494396.08	2421114.97	TLE
615	113+50.00	60.00	494354.26	2421212.32	TLE
519	113+50.00	95.00	494328.47	2421188.66	TLE
401	114+17.82	50.00	494315.78	2421269.05	TLE
520	114+27.45	60.00	494301.9	2421269.38	TLE
521	114+41.90	75.00	494281.08	2421269.89	TLE
400	114+86.49	50.00	494269.34	2421319.65	TLE
522	115+10.57	75.00	494234.64	2421320.49	TLE
583	116+00.00	-60.00	494273.65	2421477.65	TLE
584	116+00.00	-55.00	494269.97	2421474.28	TLE
613	117+50.00	-65.00	494175.92	2421591.56	TLE
612	117+50.00	-55.00	494168.56	2421584.8	TLE
149	119+00.00	50.00	493989.78	2421624.33	PRW
150	121+00.00	60.00	493847.19	2421764.94	PRW
618	121+00.00	65.00	493843.51	2421761.56	TLE
614	123+00.00	-65.00	493804.08	2421996.81	TLE
640	123+00.00	-60.00	493800.39	2421993.43	TLE
151	123+00.00	60.00	493711.97	2421912.3	PRW
616	123+50.00	60.00	493678.17	2421949.14	TLE
617	123+50.00	65.00	493674.49	2421945.76	TLE
152	124+00.00	50.00	493651.73	2421992.74	PRW
525	124+71.88	-60.00	493684.19	2422120.08	TLE
177	124+76.55	-55.00	493677.34	2422120.14	PRW
105	125+74.66	50.00	493533.65	2422121.43	PRW
590	125+84.00	60.00	493519.97	2422121.56	TLE

LOCATION MAP NOT TO SCALE



CONVENTIONAL SYMBOLS AND ABBREVIATIONS

STATE, COUNTY, or TOWN LINE		ACCESS POINT	AP
		ACCESS RIGHTS	AR
SECTION LINE		ACRES	AC.
QUARTER LINE		AND OTHERS	ET.AL.,
SIXTEENTH LINE		CENTERLINE EXISTING R/W	C/L
PROPOSED REFERENCE LINE		CERTIFIED SURVEY MAP	CSM
PROPOSED R/W LINE		DOCUMENT	DOC.
EXISTING H.E. LINE		HIGHWAY EASEMENT	H.E.
PROPERTY LINE		LAND CONTRACT	LC
EASEMENT LINE		MONUMENT	MON.
CORPORATE LIMITS		PAGE	P.
EXISTING CENTERLINE		PERMANENT LIMITED EASEMENT	PLE
LOT & TIE LINES		PROPERTY LINE	PL
UTILITIES (TELEPHONE, GAS, ELECTRIC, CABLE TV, FIBER OPTIC)	(TYPE)	RECORDED AS	(100')
NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)		REFERENCE LINE	R/L
NO ACCESS (BY ACQUISITION)		REMAINING	REM.
NO ACCESS (BY STATUTORY AUTHORITY)		RIGHT-OF-WAY	R/W
FEE (HATCH VARIES)		SECTION	SEC.
TEMPORARY LIMITED EASEMENT		SQUARE FEET	S.F.
PERMANENT LIMITED EASEMENT		STATION	STA.
PARCEL NUMBER	21	TEMPORARY LIMITED EASEMENT	TLE
UTILITY PARCEL NUMBER	80	VOLUME	V.
SIGN NUMBER (OFF PREMISE)	21		
BUILDING			
FOUND IRON PIPE/PIN	IP (1" UNLESS NOTED)		
R/W MONUMENT TYPE 2	○ ● (SET)		
R/W STANDARD	△ ▲ (SET)		
SIGN			
SECTION CORNER SYMBOL (N.T.S.)			

CURVE DATA

	NON COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	DELTA
LENGTH OF CURVE	L
TANGENT	TAN

CURVE C1 C/L
DELTA = 44°58'00"R
D = 10°00'00"
T = 237.13'
L = 449.67'
R = 572.96'

CURVE DATA R/L
PI = 105+25.85
Y = 494994.26
X = 2420603.56
DELTA= 44°58'00"R
D = 4°18'29"
T = 550.45'
L = 1043.81'
R = 1330.00'
PC = 99+75.40
PT = 110+19.21

CURVE 143-144
DELTA= 18°27'03"R
R = 539.96'
T = 87.70'
L = 173.88'

CURVE 3
DELTA= 18°27'03"R
R = 539.96'
T = 87.70'
L = 173.88'

CURVE 103-106
DELTA= 10°13'33"R
R = 1385.00'
T = 123.92'
L = 247.19'

CURVE 4
DELTA= 07°01'36"R
R = 605.96
T = 37.20'
L = 74.31'

CONC. MONUMENT
W/ BRASS CAP
Y 492349.58
X 2420673.18

DETAIL N.T.S.

AFFIDAVIT OF CORRECTION DOC #1357593 APRIL 11, 2014

I, GARY D. SCHNEIDER, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF WASHINGTON COUNTY, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 3944-00-01 - 4.02 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN GARY D. SCHNEIDER S-1297 West Bend Wisconsin LAND SURVEYOR

(SIGNATURE) _____ DATE Jan. 28, 2014
(PRINTED NAME) GARY D. SCHNEIDER
(REGISTRATION NUMBER) S-1297

THIS PLAT AND RELOCATION ORDER ARE APPROVED BY WASHINGTON COUNTY

(SIGNATURE) _____ DATE 2-26-2014
(PRINTED NAME) Thomas A. Vrakas

KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.351.6468

ACCEPTED FOR RECORDING AND FILING IN THE OFFICE OF THE REGISTER OF DEEDS IN Washington COUNTY, WISCONSIN AT 11:20 O'CLOCK A.M. ON Feb. 26, 2014 AS DOCUMENT # 1355299 AND FILED IN Map Book 52 Page 17

Sharon D Martin
SIGNATURE OF REGISTER OF DEEDS

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 3944-00-01-4.02
AMENDMENT NO:

NOTES:

COORDINATES AND BEARINGS ON THE PLAT ARE ORIENTED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD 1927. ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR OF 0.99988411 UNLESS OTHERWISE NOTED.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

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

PROPERTY OWNERSHIP INFORMATION OBTAINED FROM "OWNERSHIP REPORTS" PERFORMED BY A LOCAL TITLE COMPANY.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO 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 AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLES EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

SEE TPP 3944-00-01 - 4.01 FILED IN THE DODGE COUNTY REGISTER OF DEEDS OFFICE

SEE TPP 3944-00-01 - 4.03 FILED IN THE WASHINGTON COUNTY REGISTER OF DEEDS OFFICE

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\Survey\DGN\040101_tpp-02.dgn
PLOT DATE : 1/28/2014
PLOT BY : raisa_k
PLOT NAME :
PLOT SCALE : 1:100
APPRAISAL PLAT DATE :

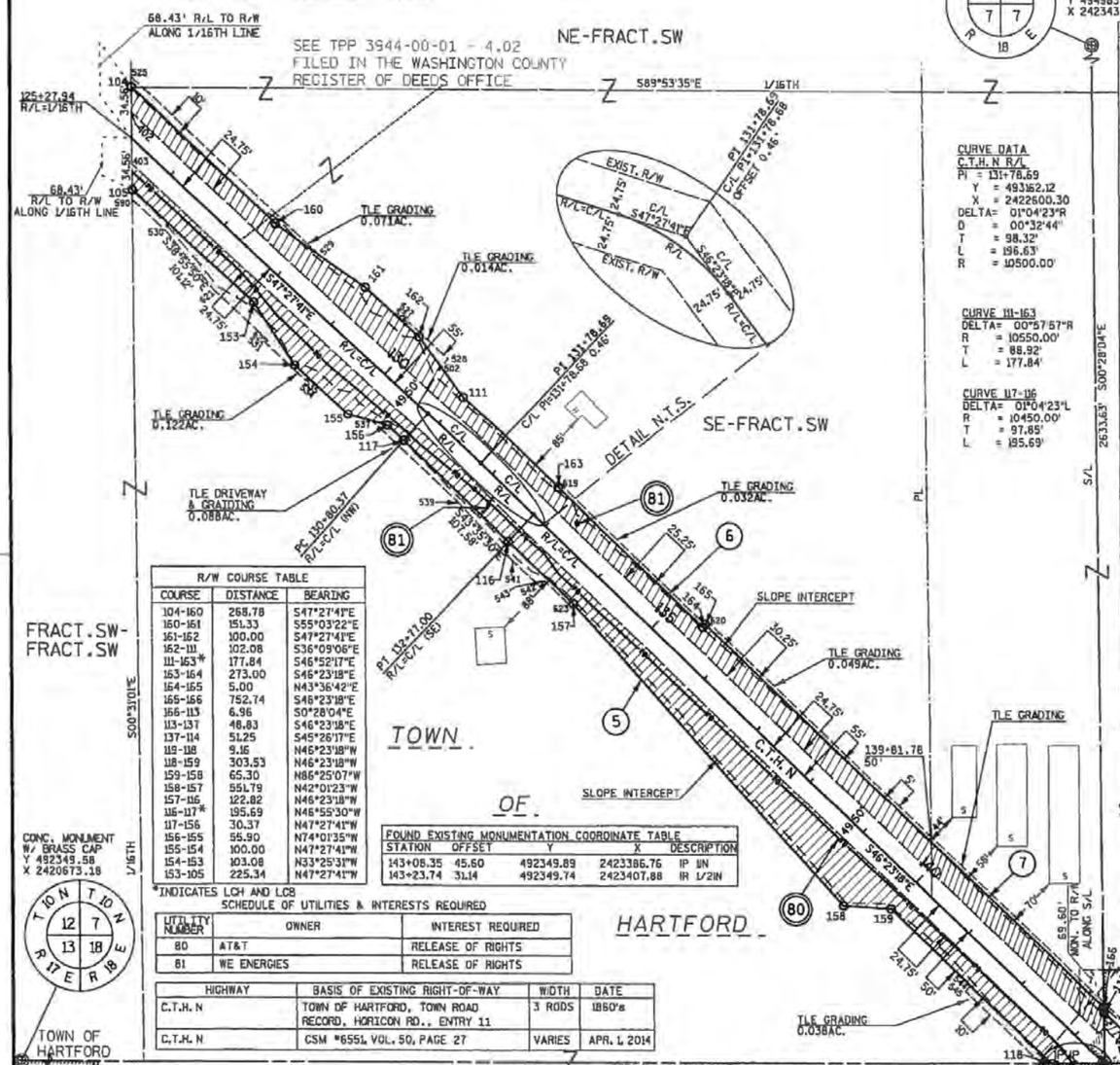
4.02

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES OR S.F. REQUIRED			TLE ACRES OR S.F.
			NEW	EXISTING	TOTAL	
5	JEROME SCHAEFER, TRUSTEE OF JEROME SCHAEFER REVOCABLE TRUST U A	FEE, TLE	1407	1025	2432	0248
6	DONALD A THOMAS AND SHERRY L LAUERSDORF	FEE, TLE	1022	0853	1875	0188
7	CHARLES LANGENECKER AND DARLENE LANGENECKER	FEE, TLE	0225	0173	0398	0037
21	CHARLES LANGENECKER	FEE, TLE	0029	0042	0071	0025

ALL FEE TITLE AREAS REQUIRED FOR NEW R/W INDICATED BY HATCHING



R/W COURSE TABLE

COURSE	DISTANCE	BEARING
104-160	268.78	S47°27'41"E
160-161	151.33	S55°03'22"E
161-162	100.00	S47°27'41"E
162-111	102.08	S36°09'06"E
111-163*	177.84	S46°52'17"E
163-164	273.00	S46°23'18"E
164-165	5.00	N43°36'42"E
165-166	752.74	S46°23'18"E
166-113	6.96	S0°28'04"E
113-137	46.83	S46°23'18"E
137-114	51.25	S45°26'17"E
115-118	9.16	N46°23'18"W
118-159	303.53	N46°23'18"W
159-158	65.30	N86°25'07"W
158-157	551.79	N42°01'23"W
157-116	122.82	N46°23'18"W
116-117*	195.69	N46°55'30"W
117-156	30.37	N47°27'41"W
156-155	55.90	N74°01'35"W
155-154	100.00	N47°27'41"W
154-153	103.08	N33°25'31"W
153-105	225.34	N47°27'41"W

*INDICATES LCH AND LCB

FOUND EXISTING MONUMENTATION COORDINATE TABLE

STATION	OFFSET	Y	X	DESCRIPTION
143+08.35	45.60	492349.89	2423386.76	IP W
143+23.74	31.14	492349.74	2423407.88	IR 1/2IN

SCHEDULE OF UTILITIES & INTERESTS REQUIRED

UTILITY NUMBER	OWNER	INTEREST REQUIRED
80	AT&T	RELEASE OF RIGHTS
81	WE ENERGIES	RELEASE OF RIGHTS

HIGHWAY	BASIS OF EXISTING RIGHT-OF-WAY	WIDTH	DATE
C.T.H. N	TOWN OF HARTFORD, TOWN ROAD RECORD, HORICON RD., ENTRY 11	3 RODS	1860's
C.T.H. N	CSM #6551, VOL. 50, PAGE 27	VARIES	APR. 1, 2014

CURVE DATA
C.T.H. N R/L
PI = 131+78.69
Y = 493162.12
X = 2422600.30
DELTA= 01°04'23"R
D = 00°32'44"
T = 98.32'
L = 196.63'
R = 10500.00'

CURVE 111-163
DELTA= 00°57'57"R
R = 10550.00'
T = 88.92'
L = 177.84'

CURVE 117-116
DELTA= 01°04'23"L
R = 10450.00'
T = 97.85'
L = 195.69'

STATION & OFFSET TABLE

POINT	STATION	OFFSET	Y	X	
525	124+71.68	-60.00	493684.19	2422120.08	TLE
104	124+81.22	-50.00	493670.50	2422120.20	PRW
402	125+04.82	-24.75	493635.95	2422120.51	ERW
403	125+51.07	24.75	493568.21	2422121.12	ERW
105	125+74.66	50.00	493533.65	2422121.43	PRW
590	125+84.00	60.00	493519.97	2422121.56	TLE
530	126+50.00	60.00	493475.34	2422170.19	TLE
160	127+50.00	-50.00	493488.78	2422318.24	PRW
621	127+50.00	75.00	493396.68	2422233.73	TLE
153	128+00.00	50.00	493381.30	2422287.47	PRW
529	128+25.00	-60.00	493445.45	2422380.26	TLE
622	128+50.00	75.00	493329.07	2422307.41	TLE
531	128+50.00	80.00	493325.39	2422304.03	TLE
161	129+00.00	-70.00	493402.11	2422442.28	PRW
154	129+00.00	75.00	493295.27	2422344.25	PRW
535	129+25.00	75.00	493278.37	2422362.67	TLE
534	129+25.00	80.00	493274.68	2422359.29	TLE
527	129+75.00	-75.00	493355.09	2422500.93	TLE
526	129+75.00	-70.00	493351.40	2422497.55	TLE
162	130+00.00	-70.00	493334.50	2422515.97	PRW
155	130+00.00	75.00	493227.66	2422417.93	PRW
537	130+30.00	60.00	493218.43	2422450.18	TLE
528	130+50.00	-75.00	493304.38	2422556.19	TLE
502	130+50.00	-60.00	493293.33	2422546.05	TLE
156	130+50.00	50.00	493212.28	2422471.68	PRW
117	130+80.37	50.00	493191.74	2422494.06	PRW
111	131+00.00	-50.00	493252.08	2422576.18	PRW
539	131+92.06	59.41	493109.29	2422569.13	TLE
619	132+77.00	-55.00	493134.12	2422709.42	TLE
163	132+77.00	-50.00	493130.50	2422705.97	PRW
116	132+77.00	50.00	493058.10	2422637.00	PRW
541	133+00.00	65.00	493031.37	2422643.31	TLE
543	133+50.00	55.00	493004.12	2422686.40	TLE
542	133+50.00	65.00	492996.88	2422679.51	TLE
157	133+99.81	50.00	492973.38	2422725.92	PRW
623	133+99.81	55.00	492969.76	2422722.47	TLE
620	135+50.00	-60.00	492949.43	2422910.53	TLE
165	135+50.00	-55.00	492945.81	2422907.09	PRW
164	135+50.00	-50.00	492942.19	2422903.64	PRW
158	139+50.00	92.00	492563.47	2423095.30	PRW
159	140+00.00	50.00	492559.40	2423160.47	PRW
544	141+50.00	50.00	492455.93	2423269.08	TLE
545	141+50.00	60.00	492448.69	2423262.18	TLE
166	143+02.74	-55.00	492426.60	2423452.09	PRW
118	143+03.53	50.00	492350.03	2423380.24	PRW
113	143+07.58	-50.00	492419.64	2423452.15	PRW
119	143+12.70	50.00	492343.71	2423386.88	PRW
546	143+22.34	60.00	492329.81	2423386.96	TLE
312	143+30.03	24.75	492350.03	2423416.84	ERW
137	143+56.00	-50.00	492385.96	2423487.51	PRW
624	143+56.00	60.00	492393.14	2423494.47	TLE
333	143+91.76	-35.17	492350.01	2423502.88	ERW
114	144+06.84	-50.00	492349.99	2423524.03	PRW
525	144+17.01	-60.00	492349.98	2423538.29	TLE

TRANSPORTATION PROJECT PLAT NO: 3944-00-01 - 4.03 AMENDMENT NO: 1

AMENDS PARCEL 7 AND ADDS PARCEL 21 OF TRANSPORTATION PROJECT PLAT NO.3944-00-01-4.03, AS RECORDED IN MAP BOOK 52 ON PAGE 18 AS DOCUMENT NO.1355245

PART OF THE SE1/4 OF THE FRACTIONAL SW1/4, THE NE1/4 OF THE FRACTIONAL SW1/4 AND THE SW1/4 OF THE SE1/4 ALL IN SECTION 7, AND PART OF THE NE1/4 OF THE FRACTIONAL NW1/4 OF SECTION 18, ALL IN T10N, R18E, TOWN OF HARTFORD, WASHINGTON COUNTY, WISCONSIN.

RELOCATION ORDER CTH N (W. STATE ST.) WASHINGTON COUNTY

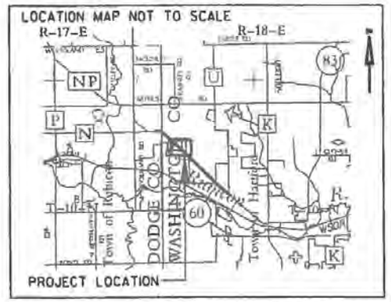
TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, WASHINGTON COUNTY DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 83.07 AND 83.08, WISCONSIN STATUTES, WASHINGTON COUNTY HEREBY 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 COUNTY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF WASHINGTON COUNTY, PURSUANT TO THE PROVISIONS OF SECTION 83.07 AND 83.08, WISCONSIN STATUTES.

SCALE, FEET 0 100 200

LOCATION MAP NOT TO SCALE



CONVENTIONAL SYMBOLS AND ABBREVIATIONS

STATE, COUNTY, OR TOWN LINE		ACCESS POINT	AP
		ACCESS RIGHTS	AR
SECTION LINE		ACRES	AC.
QUARTER LINE		AND OTHERS	ET, AL.,
SIXTEENTH LINE		CENTERLINE EXISTING R/W	C/L
PROPOSED REFERENCE LINE		CERTIFIED SURVEY MAP	CSM
PROPOSED R/W LINE		DOCUMENT	DOC.
EXISTING H.E. LINE		HIGHWAY EASEMENT	H.E.
PROPERTY LINE		LAND CONTRACT	LC
EASEMENT LINE		MONUMENT	MON.
CORPORATE LIMITS		PAGE	P.
EXISTING CENTERLINE		PERMANENT LIMITED EASEMENT	PLE
LOT & TIE LINES		PROPERTY LINE	PL
UTILITIES (TYPE) (TYPE) (TELEPHONE, GAS, ELECTRIC, CABLE TV, FIBER OPTIC)		RECORDED AS	(100')
NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)		REFERENCE LINE	R/L
NO ACCESS (BY ACQUISITION)		REMAINING	REM.
NO ACCESS (BY STATUTORY AUTHORITY)		RIGHT-OF-WAY	R/W
FEE (HATCH VARIES)		SECTION	SEC.
TEMPORARY LIMITED EASEMENT		SQUARE FEET	S.F.
PERMANENT LIMITED EASEMENT		STATION	STA.
PARCEL NUMBER	(21)	TEMPORARY LIMITED EASEMENT	TLE
UTILITY PARCEL NUMBER	(80)	VOLUME	V.
SIGN NUMBER (OFF PREMISE)	(21)	CURVE DATA	
BUILDING		LONG CHORD	LCH
FOUND IRON PIPE/PIN (1" UNLESS NOTED)	IP	LONG CHORD BEARING	LCB
R/W MONUMENT TYPE 2	○ ●(SET)	RADIUS	R
R/W STANDARD	△ ▲(SET)	DEGREE OF CURVE	D
SIGN	(SIGN)	CENTRAL ANGLE OR DELTA	DELTA
SECTION CORNER SYMBOL (N.T.S.)		LENGTH OF CURVE	L
		TANGENT	TAN
			NON COMPENSABLE / COMPENSABLE
		POWER POLE	
		TELEPHONE POLE	
		TELEPHONE PEDESTAL	

NOTES:

COORDINATES AND BEARINGS ON THE PLAT ARE ORIENTED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD 1927. ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR OF 0.99986411 UNLESS OTHERWISE NOTED.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

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

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DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO 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 AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLES EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

I, GARY D. SCHNEIDER, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF WASHINGTON COUNTY, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 3944-00-01- 4.03 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

(SIGNATURE) _____ DATE Apr. 21, 2014
(PRINTED NAME) GARY D. SCHNEIDER
(REGISTRATION NUMBER) S-1297

WISCONSIN GARY D. SCHNEIDER S-1297 West Bend Wisconsin LAND SURVEYOR

THIS PLAT AND RELOCATION ORDER ARE APPROVED BY WASHINGTON COUNTY

(SIGNATURE) _____ DATE 4/21/2014
(PRINTED NAME) Thomas L. Wenske

KAPUR & ASSOCIATES, INC. CONSULTING ENGINEERS MILWAUKEE, WISCONSIN 414.351.4668

ACCEPTED FOR RECORDING AND FILING IN THE OFFICE OF THE REGISTER OF DEEDS IN Wash. COUNTY, WISCONSIN AT 2:00 PM ON April 22, 2014 AS DOCUMENT # 1355243 AND FILED IN Map Book 52 Page 24

Sharon A Martin
SIGNATURE OF REGISTER OF DEEDS

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 3944-00-01-4.03
AMENDMENT NO:

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\Survey\DGN\040101_tpp-03_amended.dgn
PLOT DATE : 4/21/2014 PLOT BY : roiso_k PLOT NAME : PLOT SCALE : 1:100
APPRAISAL PLAT DATE :

4.03

TRANSPORTATION PROJECT PLAT NO: 3944-00-01 - 4.04
AMENDMENT NO: 1

AMENDS PARCELS 8 AND 10 OF TRANSPORTATION PROJECT PLAT NO.3944-00-01-4.04, AS RECORDED IN MAP BOOK 52 ON PAGE 19 AS DOCUMENT NO.1355246

PART OF OUTLOT 1 OF CSM NO.4768, AS RECORDED IN V. 32 ON P. 199 OF CERTIFIED SURVEY MAPS OF WASHINGTON COUNTY, LOCATED IN AND INCLUDING PART OF THE NE1/4 OF THE FRACTIONAL NW1/4 AND THE NW1/4 OF THE NE1/4, AND THE SW1/4 OF THE NE1/4, ALL IN SECTION 18, T10N, R18E, CITY OF HARTFORD, WASHINGTON COUNTY, WISCONSIN. AND ALSO PART OF THE NW1/4 OF THE NE1/4, AND THE NE1/4 OF THE NE1/4, ALL IN SECTION 18, T10N, R18E, TOWN OF HARTFORD, WASHINGTON COUNTY, WISCONSIN.

RELOCATION ORDER CTH N (W. STATE ST.) WASHINGTON COUNTY

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

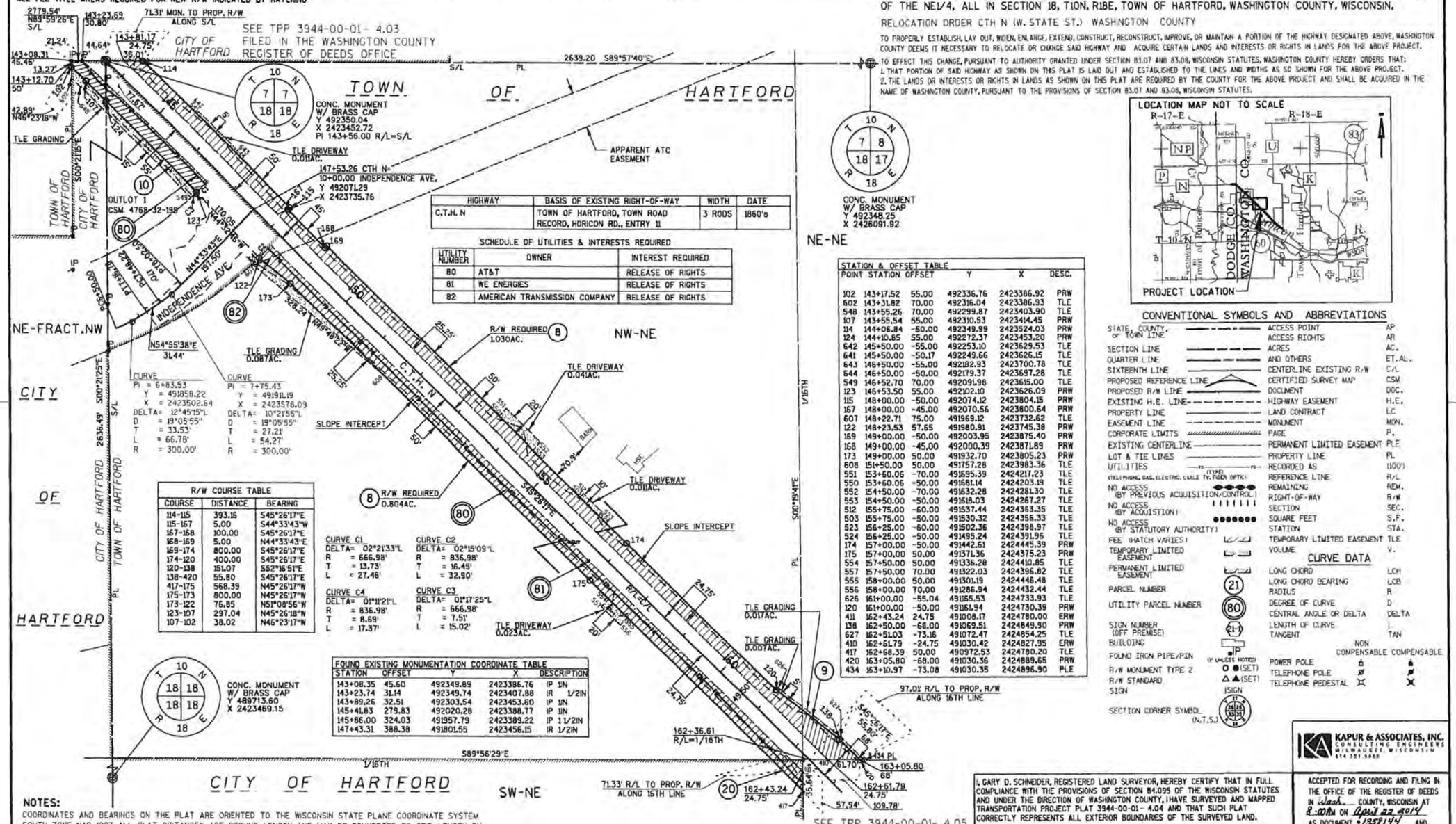
TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 83.07 AND 83.08, WISCONSIN STATUTES, WASHINGTON COUNTY HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE COUNTY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF WASHINGTON COUNTY, PURSUANT TO THE PROVISIONS OF SECTION 83.07 AND 83.08, WISCONSIN STATUTES.

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES OR S.F. REQUIRED			TLE ACRES OR S.F.
			NEW	EXISTING	TOTAL	
9	JAMES AND JANICE RETTLER REVOCABLE TRUST	FEE, TLE	1834	1838	3672	0.180
9	ALLAN RETTLER AND DELORES M. RETTLER	FEE TLE	0.099	0.024	0.123	0.017
10	CITY OF HARTFORD	FEE, TLE	0.199		0.199	0.113
20	CITY OF HARTFORD	FEE	0.033	0.006	0.039	

ALL FEE TITLE AREAS REQUIRED FOR NEW R/W INDICATED BY HATCHING



HIGHWAY	BASIS OF EXISTING RIGHT-OF-WAY	WIDTH	DATE
C.T.H. N	TOWN OF HARTFORD, TOWN ROAD RECORD, HORICON RD., ENTRY 11	3 RODS	1860's

SCHEDULE OF UTILITIES & INTERESTS REQUIRED

UTILITY NUMBER	OWNER	INTEREST REQUIRED
80	AT&T	RELEASE OF RIGHTS
81	WE ENERGIES	RELEASE OF RIGHTS
82	AMERICAN TRANSMISSION COMPANY	RELEASE OF RIGHTS

R/W COURSE TABLE		
COURSE	DISTANCE	BEARING
114-115	393.16	S45°26'17"E
115-167	5.00	S44°33'43"W
167-168	100.00	S45°26'17"E
168-169	5.00	N44°33'43"E
169-174	800.00	S45°26'17"E
174-120	400.00	S45°26'17"E
120-138	151.07	S52°16'51"E
138-420	55.80	S45°26'17"E
417-175	568.39	N45°26'17"W
175-173	800.00	N45°26'17"W
173-122	76.85	N51°08'56"W
123-107	297.04	N45°26'18"W
107-102	38.02	N46°23'17"W

CURVE C1: DELTA= 02°21'33"L, R = 666.98', T = 13.73', L = 27.46'
CURVE C2: DELTA= 02°15'09"L, R = 836.98', T = 16.49', L = 32.90'
CURVE C4: DELTA= 01°11'21"L, R = 836.98', T = 8.69', L = 17.37'
CURVE C3: DELTA= 01°17'25"L, R = 666.98', T = 7.51', L = 15.02'

FOUND EXISTING MONUMENTATION COORDINATE TABLE				
STATION	OFFSET	Y	X	DESCRIPTION
143+08.35	45.60	492349.89	2423386.76	IP 1/2IN
143+23.74	31.14	492349.74	2423407.88	IR 1/2IN
143+89.26	32.51	492303.54	2423453.60	IP 1/2IN
145+41.83	279.83	492020.28	2423388.77	IR 1/2IN
145+86.00	324.03	491957.79	2423389.22	IP 1 1/2IN
147+43.31	388.38	491801.55	2423456.15	IR 1/2IN

CONC. MONUMENT W/ BRASS CAP Y 489713.60 X 2423469.15

CONC. MONUMENT W/ BRASS CAP Y 492348.25 X 2426091.92

NE-NE

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y	X	DESC.
102	143+17.52	55.00	492336.76	2423386.92	PRW
602	143+31.82	70.00	492316.04	2423386.93	TLE
548	143+55.26	70.00	492299.87	2423403.90	TLE
107	143+55.54	55.00	492310.53	2423414.45	PRW
114	144+06.84	-50.00	492349.99	2423524.03	PRW
124	144+10.85	55.00	492272.37	2423453.20	PRW
642	145+50.00	-55.00	492253.10	2423629.53	TLE
641	145+50.00	-50.17	492249.66	2423626.15	TLE
643	146+50.00	-55.00	492182.93	2423700.78	TLE
644	146+50.00	-50.00	492179.37	2423697.28	TLE
549	146+52.70	70.00	492091.98	2423615.00	TLE
123	146+53.50	55.00	492102.10	2423626.09	PRW
115	148+00.00	-50.00	492074.12	2423804.15	PRW
167	148+00.00	-45.00	492070.56	2423800.64	PRW
607	148+22.71	75.00	491969.12	2423732.62	TLE
122	148+23.53	57.65	491980.91	2423745.38	PRW
169	149+00.00	-50.00	492003.95	2423875.40	PRW
168	149+00.00	-45.00	492000.39	2423871.89	PRW
173	149+00.00	50.00	491932.70	2423805.23	PRW
608	151+50.00	50.00	491757.28	2423983.36	TLE
551	153+60.06	-70.00	491695.39	2424217.23	TLE
550	153+60.06	-50.00	491681.14	2424203.19	TLE
552	154+50.00	-70.00	491632.28	2424281.30	TLE
553	154+50.00	-50.00	491618.03	2424267.27	TLE
602	155+75.00	-60.00	491537.44	2424363.35	TLE
603	155+75.00	-50.00	491530.32	2424356.33	TLE
523	156+25.00	-60.00	491502.36	2424398.97	TLE
524	156+25.00	-50.00	491495.24	2424391.96	TLE
174	157+00.00	-50.00	491442.61	2424445.39	PRW
175	157+00.00	50.00	491371.36	2424375.23	PRW
554	157+50.00	50.00	491336.28	2424410.85	TLE
557	157+50.00	70.00	491322.03	2424396.82	TLE
555	158+00.00	50.00	491301.19	2424446.48	TLE
556	158+00.00	70.00	491286.94	2424432.44	TLE
626	161+00.00	-55.04	491155.53	2424733.93	TLE
120	161+00.00	-50.00	491161.94	2424730.39	PRW
411	162+43.24	24.75	491008.17	2424780.00	ERW
138	162+50.00	-68.00	491059.51	2424849.50	PRW
627	162+51.03	-73.16	491072.47	2424854.25	TLE
410	162+61.79	-24.75	491030.42	2424827.95	ERW
417	162+68.39	50.00	490972.53	2424780.20	TLE
420	163+05.80	-68.00	491030.36	2424889.65	PRW
434	163+10.97	-73.08	491030.35	2424896.90	PLE

LOCATION MAP NOT TO SCALE

CONVENTIONAL SYMBOLS AND ABBREVIATIONS

STATE, COUNTY, OR TOWN LINE		ACCESS POINT	AP
		ACCESS RIGHTS	AR
SECTION LINE		ACRES	AC.
QUARTER LINE		AND OTHERS	ET. AL.
SIXTEENTH LINE		CENTERLINE EXISTING R/W	C/L
PROPOSED REFERENCE LINE		CERTIFIED SURVEY MAP	CSM
PROPOSED R/W LINE		DOCUMENT	DOC.
EXISTING H.E. LINE		HIGHWAY EASEMENT	H.E.
PROPERTY LINE		LAND CONTRACT	LC
EASEMENT LINE		MONUMENT	MON.
CORPORATE LIMITS		PAGE	P.
EXISTING CENTERLINE		PERMANENT LIMITED EASEMENT	PLE
LOT & TIE LINES		PROPERTY LINE	PL
UTILITIES (TYPE) (TELEPHONE, GAS, ELECTRIC, CABLE TV, FIBER OPTIC)		RECORDED AS	(100')
NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)		REFERENCE LINE	R/L
NO ACCESS (BY ACQUISITION)		REMAINING	REM.
NO ACCESS (BY STATUTORY AUTHORITY)		RIGHT-OF-WAY	R/W
FEE (HATCH VARIES)		SECTION	SEC.
TEMPORARY LIMITED EASEMENT		SQUARE FEET	S.F.
PERMANENT LIMITED EASEMENT		STATION	STA.
PARCEL NUMBER	21	TEMPORARY LIMITED EASEMENT	TLE
UTILITY PARCEL NUMBER	80	VOLUME	V.
SIGN NUMBER (OFF PREMISE)	21	CURVE DATA	
BUILDING		LONG CHORD	LCH
FOUND IRON PIPE/PIN (IF UNLESS NOTED)	IP	LONG CHORD BEARING	LCB
R/W MONUMENT TYPE 2	● (SET)	RADIUS	R
R/W STANDARD	▲ (SET)	DEGREE OF CURVE	D
SIGN	SIGN	CENTRAL ANGLE OR DELTA	DELTA
SECTION CORNER SYMBOL (N.T.S.)		LENGTH OF CURVE	L
		TANGENT	TAN
			NON COMPENSABLE / COMPENSABLE
		POWER POLE	
		TELEPHONE POLE	
		TELEPHONE PEDESTAL	

NOTES:

COORDINATES AND BEARINGS ON THE PLAT ARE ORIENTED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD 1927, ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR OF 0.9998841 UNLESS OTHERWISE NOTED.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD". PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES. EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY. PROPERTY OWNERSHIP INFORMATION OBTAINED FROM "OWNERSHIP REPORTS" PERFORMED BY A LOCAL TITLE COMPANY.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO 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 AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLES EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

I, GARY D. SCHNEIDER, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF WASHINGTON COUNTY, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 3944-00-01- 4.04 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN GARY D. SCHNEIDER S-1297 West Bend Wisconsin LAND SURVEYOR

(SIGNATURE) Gary D. Schneider DATE Apr. 21, 2014
(PRINTED NAME) GARY D. SCHNEIDER
(REGISTRATION NUMBER) S-1297

THIS PLAT AND RELOCATION ORDER ARE APPROVED BY WASHINGTON COUNTY

(SIGNATURE) _____ DATE _____
(PRINTED NAME) _____

KAPUR & ASSOCIATES, INC. CONSULTING ENGINEERS MILWAUKEE, WISCONSIN 414 351-6868

ACCEPTED FOR RECORDING AND FILING IN THE OFFICE OF THE REGISTER OF DEEDS IN Wash. COUNTY, WISCONSIN AT 8:00 AM ON April 22 2014 AS DOCUMENT # 1357144 AND FILED IN Map Book 52 Page 25

Sharon A Martin
SIGNATURE OF REGISTER OF DEEDS

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 3944-00-01-4.04
AMENDMENT NO:

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\Survey\DGN\040101_tpp-04_amended.dgn
APPRAISAL PLAT DATE :
PLOT DATE : 4/21/2014
PLOT BY : folsa_k
PLOT NAME :
PLOT SCALE : 1:100

4.04

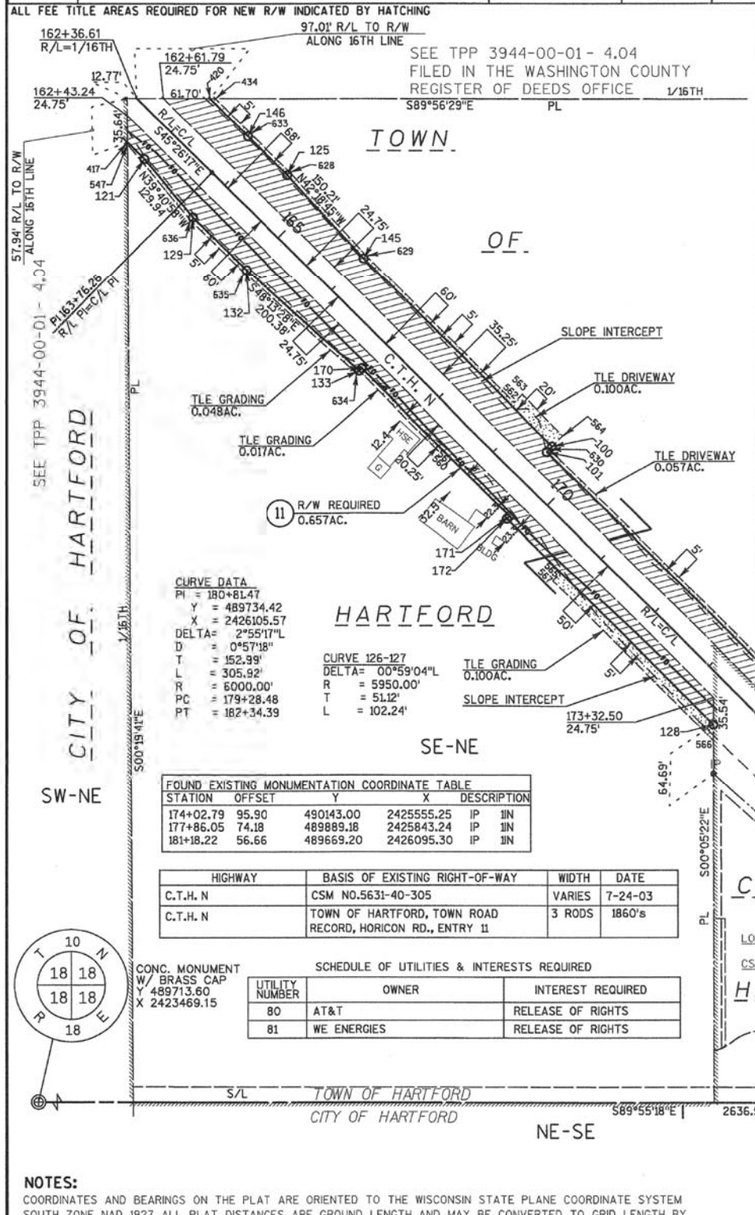
SCHEDULE OF LANDS & INTERESTS REQUIRED

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

RECORDED
February 26, 2014 11:20 AM
SHARON A MARTIN, REGISTER OF DEEDS
WASHINGTON COUNTY, WISCONSIN
Fee Amount: 425.00

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES OR S.F. REQUIRED			TLE ACRES OR S.F.
			NEW	EXISTING	TOTAL	
11	ALLAN RETTLER AND DELORES M. RETTLER	FEE, TLE	1875	1869	3,744	0.422
12	TUMPTA, LLC	TLE				0.087
13	JEFFERY J. SCHMIDT & KATHLEEN M. HERMANN	FEE, TLE	0.010	0.001	0.011	0.005

ALL FEE TITLE AREAS REQUIRED FOR NEW R/W INDICATED BY HATCHING



STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y	X	DESC.
417	162+68.39	50.00	490972.53	2424780.20	TLE
547	162+70.39	52.00	490969.71	2424780.22	TLE
121	163+00.00	50.00	490950.35	2424802.72	PRW
420	163+05.80	-68.00	491030.36	2424889.65	PRW
434	163+10.97	-73.08	491030.35	2424896.90	TLE
633	163+76.26	-73.00	490984.45	2424943.40	TLE
146	163+76.26	-68.00	490980.88	2424939.90	PRW
636	163+99.75	65.00	490869.71	2424863.19	TLE
125	164+00.00	60.00	490873.09	2424866.88	PRW
125	164+50.00	-68.00	490929.05	2424992.39	PRW
628	164+50.13	-73.00	490932.51	2424996.00	TLE
132	165+00.00	60.00	490802.83	2424938.04	PRW
635	165+00.12	65.00	490799.19	2424934.62	TLE
145	166+00.00	-60.00	490817.97	2425093.51	PRW
629	166+00.13	-65.00	490821.43	2425097.12	TLE
132	167+00.00	50.00	490669.43	2425087.39	PRW
170	167+00.25	45.00	490672.82	2425091.08	PRW
634	167+00.25	55.01	490665.70	2425084.05	TLE
56	168+50.00	45.00	490567.61	2425197.64	TLE
560	168+50.00	50.00	490564.05	2425194.13	TLE
563	168+75.00	-80.00	490638.59	2425303.25	TLE
562	168+75.00	-65.00	490628.32	2425292.71	TLE
564	169+50.00	-80.00	490586.30	2425356.62	TLE
100	169+50.00	-60.00	490572.07	2425342.57	PRW
630	169+50.00	-55.00	490568.51	2425339.06	TLE
101	169+50.00	-50.00	490564.95	2425335.55	PRW
171	169+75.00	45.00	490479.78	2425286.59	PRW
172	169+75.00	50.00	490476.22	2425283.08	PRW
565	170+75.00	50.00	490405.37	2425354.24	TLE
561	170+75.00	65.00	490395.29	2425343.70	TLE
128	173+57.51	50.00	490207.48	2425555.27	PRW
566	173+72.37	65.00	490186.37	2425555.31	TLE
631	174+50.00	-55.00	490217.22	2425694.86	TLE
632	174+50.00	-50.00	490213.66	2425691.35	TLE
569	175+50.00	-55.00	490146.96	2425766.02	TLE
568	175+50.00	-50.00	490143.40	2425762.51	TLE
536	177+00.00	-55.00	490041.57	2425872.76	TLE
538	178+00.00	-85.00	489992.86	2425965.00	TLE
610	178+75.00	-55.00	489918.62	2425997.29	TLE
572	178+75.00	68.38	489830.82	2425910.61	TLE
573	178+75.00	83.40	489820.13	2425900.05	TLE
570	179+00.00	-55.00	489901.05	2426015.08	TLE
57.	179+00.00	-50.00	489897.50	2426011.57	TLE
126	179+28.48	-50.00	489877.49	2426031.83	PRW
127	180+31.57	-50.00	489806.29	2426105.20	PRW
134	181+19.37	57.06	489668.11	2426095.88	PRW
135	181+32.61	56.72	489659.30	2426105.92	PRW
577	181+46.10	71.41	489639.25	2426106.01	TLE

FOUND EXISTING MONUMENTATION COORDINATE TABLE					
STATION	OFFSET	Y	X	DESCRIPTION	
174+02.79	95.90	490143.00	2425555.25	IP	1IN
177+86.05	74.18	489889.18	2425843.24	IP	1IN
181+18.22	56.66	489669.20	2426095.30	IP	1IN

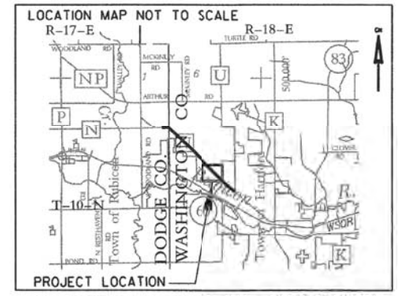
HIGHWAY	BASIS OF EXISTING RIGHT-OF-WAY	WIDTH	DATE
C.T.H. N	CSM NO.5631-40-305	VARIES	7-24-03
C.T.H. N	TOWN OF HARTFORD, TOWN ROAD RECORD, HORICON RD., ENTRY 11	3 RODS	1860's

SCHEDULE OF UTILITIES & INTERESTS REQUIRED

UTILITY NUMBER	OWNER	INTEREST REQUIRED
80	AT&T	RELEASE OF RIGHTS
81	WE ENERGIES	RELEASE OF RIGHTS

R/W COURSE TABLE		
COURSE	DISTANCE	BEARING
420-146	70.52	S45°26'17"E
146-125	73.77	S45°21'56"E
125-145	150.21	S42°18'45"E
145-100	350.00	S45°21'56"E
100-101	10.00	S44°38'04"W
101-126	978.48	S45°21'56"E
126-127*	102.23	S45°51'28"E
128-172	382.51	N45°21'56"W
172-171	5.00	N44°38'04"E
171-170	274.75	N45°21'56"W
170-133	5.01	S47°29'48"W
133-132	200.25	N48°13'40"W
132-129	100.00	N45°21'56"W
129-121	100.43	N39°42'22"W
121-417	31.61	N45°26'17"W
135-134	13.37	N48°43'18"W

*INDICATES LCH AND LCB



TRANSPORTATION PROJECT PLAT NO: 3944-00-01 - 4.05

PART OF LOT 2 OF CSM No. 5631 AS RECORDED IN V.40 ON P.305 OF CERTIFIED SURVEY MAPS OF WASHINGTON COUNTY, LOCATED IN AND INCLUDING PART OF THE SE1/4 OF THE NE1/4 AND THE NE1/4 OF THE SE1/4, ALL IN SECTION 18, T10N, R18E, CITY OF HARTFORD. AND ALSO PART OF THE SE1/4 OF THE NE1/4 IN SECTION 18, T10N, R18E, TOWN OF HARTFORD, WASHINGTON COUNTY, WISCONSIN.

RELOCATION ORDER CTH N (W. STATE ST.) WASHINGTON COUNTY - CITY OF HARTFORD

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, WASHINGTON COUNTY AND THE CITY OF HARTFORD DEEM 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 83.07, 83.08 AND 62.22, WISCONSIN STATUTES, WASHINGTON COUNT AND THE CITY OF HARTFORD HEREBY 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 COUNTY OR THE CITY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF WASHINGTON COUNTY OR THE CITY OF HARTFORD, PURSUANT TO THE PROVISIONS OF SECTION 83.07, 83.08 OR 62.22, WISCONSIN STATUTES.

CONVENTIONAL SYMBOLS AND ABBREVIATIONS

STATE, COUNTY, OR TOWN LINE		ACCESS POINT	AP
SECTION LINE		ACCESS RIGHTS	AR
QUARTER LINE		ACRES	AC.
SIXTEENTH LINE		AND OTHERS	ET.AL.
PROPOSED REFERENCE LINE		CENTERLINE EXISTING R/W	C/L
PROPOSED R/W LINE		CERTIFIED SURVEY MAP	CSM
EXISTING H.E. LINE		DOCUMENT	DOC.
PROPERTY LINE		HIGHWAY EASEMENT	H.E.
EASEMENT LINE		LAND CONTRACT	LC
CORPORATE LIMITS		MONUMENT	MON.
EXISTING CENTERLINE		PAGE	P.
LOT & TIE LINES		PERMANENT LIMITED EASEMENT	PLE
UTILITIES	FO (TYPE) FO (TELEPHONE, GAS, ELECTRIC, CABLE TV, FIBER OPTIC)	PROPERTY LINE	PL
NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)		RECORDED AS	(100')
NO ACCESS (BY ACQUISITION)		REFERENCE LINE	R/L
NO ACCESS (BY STATUTORY AUTHORITY)		REMAINING	REM.
FEE (HATCH VARIES)		RIGHT-OF-WAY	R/W
TEMPORARY LIMITED EASEMENT		SECTION	SEC.
PERMANENT LIMITED EASEMENT		SQUARE FEET	S.F.
PARCEL NUMBER	21	STATION	STA.
UTILITY PARCEL NUMBER	80	TEMPORARY LIMITED EASEMENT	TLE
SIGN NUMBER (OFF PREMISE)	21-1	VOLUME	V.
BUILDING		**CURVE DATA**	
FOUND IRON PIPE/PIN	IP (1" UNLESS NOTED)	LONG CHORD	LCH
R/W MONUMENT TYPE 2	○ ● (SET)	LONG CHORD BEARING	LCB
R/W STANDARD	△ ▲ (SET)	RADIUS	R
SIGN	ISIGN	DEGREE OF CURVE	D
SECTION CORNER SYMBOL (N.T.S.)	17 21 24 25 36 37 20 29 28 33 32 19	CENTRAL ANGLE OR DELTA	DELTA
		LENGTH OF CURVE	L
		TANGENT	TAN
		NON COMPENSABLE	COMPENSABLE
		POWER POLE	
		TELEPHONE POLE	
		TELEPHONE PEDESTAL	

NOTES:

COORDINATES AND BEARINGS ON THE PLAT ARE ORIENTED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD 1927. ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR OF 0.99988411 UNLESS OTHERWISE NOTED.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT. RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD". PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY. PROPERTY OWNERSHIP INFORMATION OBTAINED FROM "OWNERSHIP REPORTS" PERFORMED BY A LOCAL TITLE COMPANY. DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO NEW REFERENCE LINES.

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I, GARY D. SCHNEIDER, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF WASHINGTON COUNTY, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 3944-00-01- 4.05 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN GARY D. SCHNEIDER S-1297 West Bend Wisconsin LAND SURVEYOR

(SIGNATURE) Gary D. Schneider DATE Jan. 28,2014
(PRINTED NAME) GARY D. SCHNEIDER
(REGISTRATION NUMBER) S-1297

THIS PLAT AND RELOCATION ORDER ARE APPROVED BY WASHINGTON COUNTY

(SIGNATURE) Thomas A. Weeden DATE 2-26-2014
(PRINTED NAME) Thomas A. Weeden

THIS PLAT AND RELOCATION ORDER ARE APPROVED BY THE CITY OF HARTFORD RESOLUTION NUMBER 3383

(SIGNATURE) Sandra L. Dedert DATE 2/26/14
CITY CLERK Lori Hetzel

KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.351.9660

ACCEPTED FOR RECORDING AND FILING IN THE OFFICE OF THE REGISTER OF DEEDS IN Washington COUNTY, WISCONSIN AT 11:20AM ON Feb 26, 2014 AS DOCUMENT #1355247 AND FILED IN Map Book 5 Page 20

Sharon A Martin
SIGNATURE OF REGISTER OF DEEDS

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 3944-00-01-4.05
AMENDMENT NO:

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\Survey\DGN\040101_tpp-05.dgn
PLOT DATE : 2/13/2014
PLOT BY : roisa_k
PLOT NAME :
PLOT SCALE : 1:100
APPRAISAL PLAT DATE :

4.05

TRANSPORTATION PROJECT PLAT NO: 3944-00-01 - 4.06

PART OF PARCEL 1 OF CSM NO.5199, AS RECORDED IN V.36 ON P.219 OF CERTIFIED SURVEY MAPS OF WASHINGTON COUNTY LOCATED IN AND INCLUDING PART OF THE SW1/4 OF THE NW1/4, AND THE NW1/4 OF THE SW1/4 OF SECTION 17, T10N, R18E, CITY OF HARTFORD, WASHINGTON COUNTY, WISCONSIN, AND LOT 1 OF CSM No.4360, AS RECORDED IN V.29 ON P.20, AND LOT 1 OF CSM No.3115, AS RECORDED IN V.18 ON P.85,, AND LOT 2 OF CSM No.3417, AS RECORDED IN V.20 ON P.260 ALL BEING CERTIFIED SURVEY MAPS OF WASHINGTON COUNTY LOCATED IN AND INCLUDING PART OF THE NW1/4 OF THE SW1/4 OF SECTION 17, T10N, R18E, CITY OF HARTFORD, WASHINGTON COUNTY, WISCONSIN.

RELOCATION ORDER CTH N (W. STATE ST.) WASHINGTON COUNTY - CITY OF HARTFORD

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SCHEDULE OF LANDS & INTERESTS REQUIRED

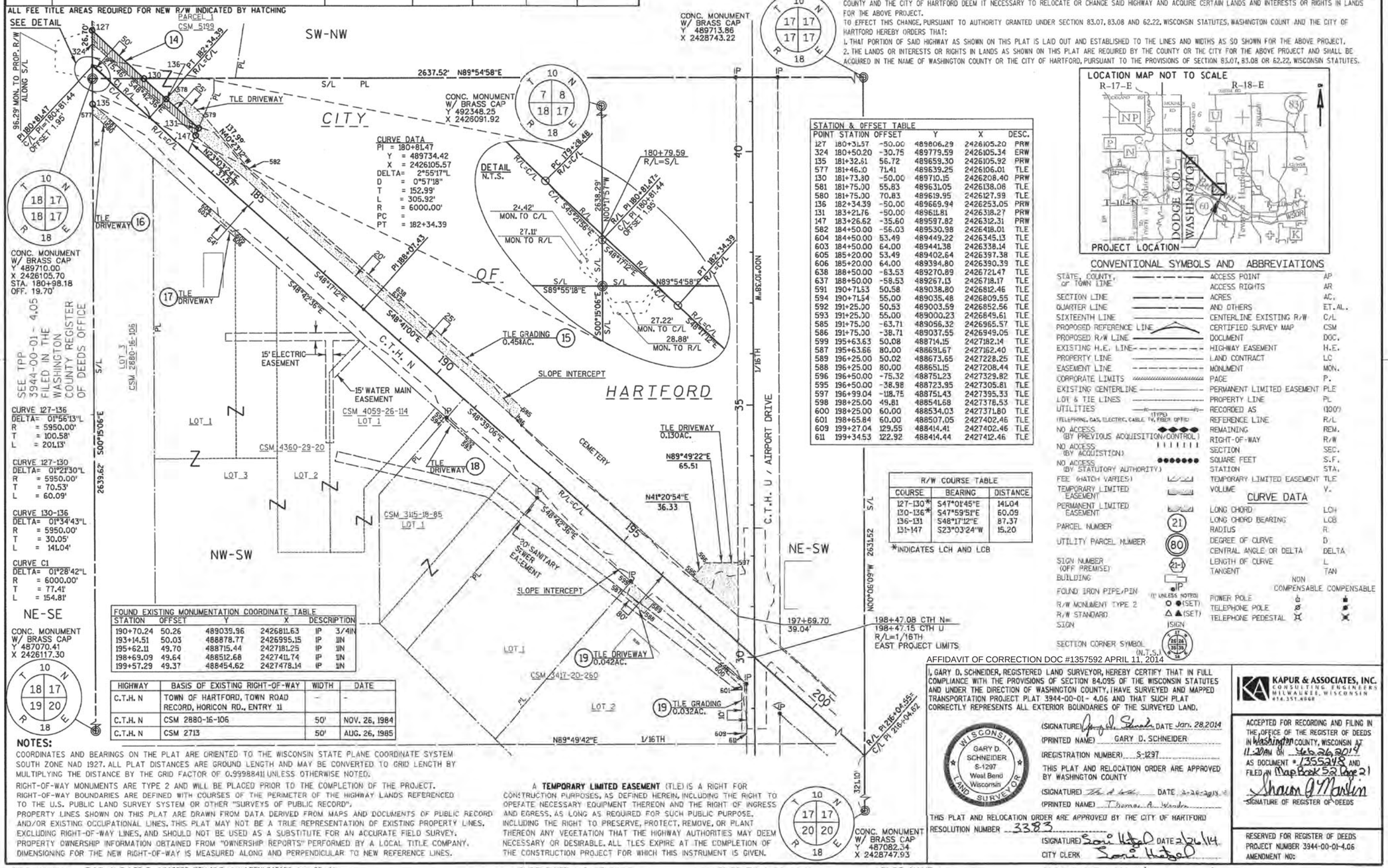
OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE COUNTY.

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES OR S.F. REQUIRED			TLE ACRES OR S.F.
			NEW	EXISTING	TOTAL	
14	MICHAEL M. & REBECCA S. HADLEY	FEE, TLE	0.105		0.105	0.048
15	ST KILLIANS CONG	TLE				0.588
16	CITY OF HARTFORD	TLE				0.012
17	DANIEL C. & VIRGINIA A. ALLAR	TLE				0.017
18	HARTFORD INVESTMENT COMPANY, LLC	TLE				0.005
19	BHN RENTALS, LLC	TLE				0.074

RECORDED February 26, 2014 11:20 AM
KAREN A MARTIN REGISTER OF DEEDS
WASHINGTON COUNTY, WISCONSIN

SCALE, FEET 0 100 200

ALL FEE TITLE AREAS REQUIRED FOR NEW R/W INDICATED BY HATCHING



STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y	X	DESC.
127	180+31.57	-50.00	489806.29	2426105.20	PRW
324	180+50.20	-30.75	489779.59	2426105.34	ERW
135	181+32.61	56.72	489659.30	2426105.92	PRW
577	181+46.10	71.41	489639.25	2426106.01	TLE
130	181+73.30	-50.00	489710.15	2426208.40	PRW
581	181+75.00	55.83	489631.05	2426138.08	TLE
580	181+75.00	70.83	489619.95	2426127.99	TLE
136	182+34.39	-50.00	489669.94	2426253.05	PRW
131	183+21.76	-50.00	489611.81	2426318.27	PRW
147	183+26.62	-35.60	489597.82	2426312.31	PRW
582	184+50.00	-56.03	489530.98	2426418.01	TLE
604	184+50.00	53.49	489449.22	2426345.13	TLE
603	184+50.00	64.00	489441.38	2426338.14	TLE
605	185+20.00	53.49	489402.64	2426397.38	TLE
606	185+20.00	64.00	489394.80	2426390.39	TLE
638	188+50.00	-63.53	489270.89	2426721.47	TLE
637	188+50.00	-58.53	489267.13	2426718.17	TLE
591	190+71.53	50.58	489038.80	2426812.46	TLE
594	190+71.54	55.00	489035.48	2426809.55	TLE
592	191+25.00	50.53	489003.59	2426852.56	TLE
593	191+25.00	55.00	489000.23	2426849.61	TLE
585	191+75.00	-63.71	489056.32	2426965.57	TLE
586	191+75.00	-38.71	489037.55	2426949.05	TLE
599	195+63.63	50.08	488714.15	2427182.14	TLE
587	195+63.66	80.00	488691.67	2427162.40	TLE
589	196+25.00	50.02	488673.65	2427228.25	TLE
588	196+25.00	80.00	488651.15	2427208.44	TLE
596	196+50.00	-75.32	488751.23	2427329.82	TLE
595	196+50.00	-38.98	488723.95	2427305.81	TLE
597	196+99.04	-118.75	488751.43	2427395.33	TLE
598	198+25.00	49.81	488541.68	2427378.53	TLE
600	198+25.00	60.00	488534.03	2427371.80	TLE
601	198+65.84	60.00	488507.05	2427402.46	TLE
609	199+27.04	129.55	488414.41	2427402.46	TLE
611	199+34.53	122.92	488414.44	2427412.46	TLE

R/W COURSE TABLE		
COURSE	BEARING	DISTANCE
127-130*	S47°01'45"E	141.04
130-136*	S47°59'51"E	60.09
136-131	S48°17'12"E	87.37
131-147	S23°03'24"W	15.20

*INDICATES LCH AND LCB

FOUND EXISTING MONUMENTATION COORDINATE TABLE					
STATION	OFFSET	Y	X	DESCRIPTION	
190+70.24	50.26	489039.96	2426811.63	IP	3/4IN
193+14.51	50.03	488878.77	2426995.15	IP	1IN
195+62.11	49.70	488715.44	2427181.25	IP	1IN
198+69.09	49.64	488512.68	2427411.74	IP	1IN
199+57.29	49.37	488454.62	2427478.14	IP	1IN

HIGHWAY	BASIS OF EXISTING RIGHT-OF-WAY	WIDTH	DATE
C.T.H. N	TOWN OF HARTFORD, TOWN ROAD RECORD, HORICON RD., ENTRY 11	-	-
C.T.H. N	CSM 2880-16-106	50'	NOV. 26, 1984
C.T.H. N	CSM 2713	50'	AUG. 26, 1985

LOCATION MAP NOT TO SCALE

CONVENTIONAL SYMBOLS AND ABBREVIATIONS

STATE, COUNTY, OR TOWN LINE		ACCESS POINT	AP
		ACCESS RIGHTS	AR
SECTION LINE		ACRES	AC.
QUARTER LINE		AND OTHERS	ET. AL.
SIXTEENTH LINE		CENTERLINE EXISTING R/W	C/L
PROPOSED REFERENCE LINE		CERTIFIED SURVEY MAP	CSM
PROPOSED R/W LINE		DOCUMENT	DOC.
EXISTING H.E. LINE		HIGHWAY EASEMENT	H.E.
PROPERTY LINE		LAND CONTRACT	LC
EASEMENT LINE		MONUMENT	MON.
CORPORATE LIMITS		PAGE	P.
EXISTING CENTERLINE		PERMANENT LIMITED EASEMENT	PLE
LOT & TIE LINES		PROPERTY LINE	PL
UTILITIES (TELEPHONE, GAS, ELECTRIC, CABLE TV, FIBER OPTIC)	(TYPE)	RECORDED AS	(100')
		REFERENCE LINE	R/L
NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)		REMAINING	REM.
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NO ACCESS (BY STATUTORY AUTHORITY)		SECTION	SEC.
FEE (HATCH VARIES)		SQUARE FEET	S.F.
TEMPORARY LIMITED EASEMENT		STATION	STA.
PERMANENT LIMITED EASEMENT		TEMPORARY LIMITED EASEMENT	TLE
PARCEL NUMBER	21	VOLUME	V.
UTILITY PARCEL NUMBER	80	CURVE DATA	
SIGN NUMBER (OFF PREMISE)	21	LONG CHORD	LCH
BUILDING		LONG CHORD BEARING	LCB
FOUND IRON PIPE/PIN	IP (1" UNLESS NOTED)	RADIUS	R.
R/W MONUMENT TYPE 2	○ ●(SET)	DEGREE OF CURVE	D
R/W STANDARD	△ ▲(SET)	CENTRAL ANGLE OR DELTA	DELTA
SIGN	ISIGN	LENGTH OF CURVE	L
SECTION CORNER SYMBOL (N.T.S.)		TANGENT	TAN
			NON COMPENSABLE / COMPENSABLE
		POWER POLE	○ / ●
		TELEPHONE POLE	⌀ / ⌀
		TELEPHONE PEDESTAL	⊠ / ⊠

NOTES:

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AFFIDAVIT OF CORRECTION DOC #1357592 APRIL 11, 2014

I, GARY D. SCHNEIDER, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF WASHINGTON COUNTY, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 3944-00-01- 4.06 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN GARY D. SCHNEIDER S-1297 West Bend Wisconsin LAND SURVEYOR

(SIGNATURE) Gary D. Schneider DATE Jan. 28,2014
(PRINTED NAME) GARY D. SCHNEIDER
(REGISTRATION NUMBER) S-1297

THIS PLAT AND RELOCATION ORDER ARE APPROVED BY WASHINGTON COUNTY
(SIGNATURE) [illegible] DATE 3-26-2014
(PRINTED NAME) Thomas A. Vondra

THIS PLAT AND RELOCATION ORDER ARE APPROVED BY THE CITY OF HARTFORD
RESOLUTION NUMBER 3383
(SIGNATURE) Lori Hetzel DATE 2/26/14
CITY CLERK Lori Hetzel

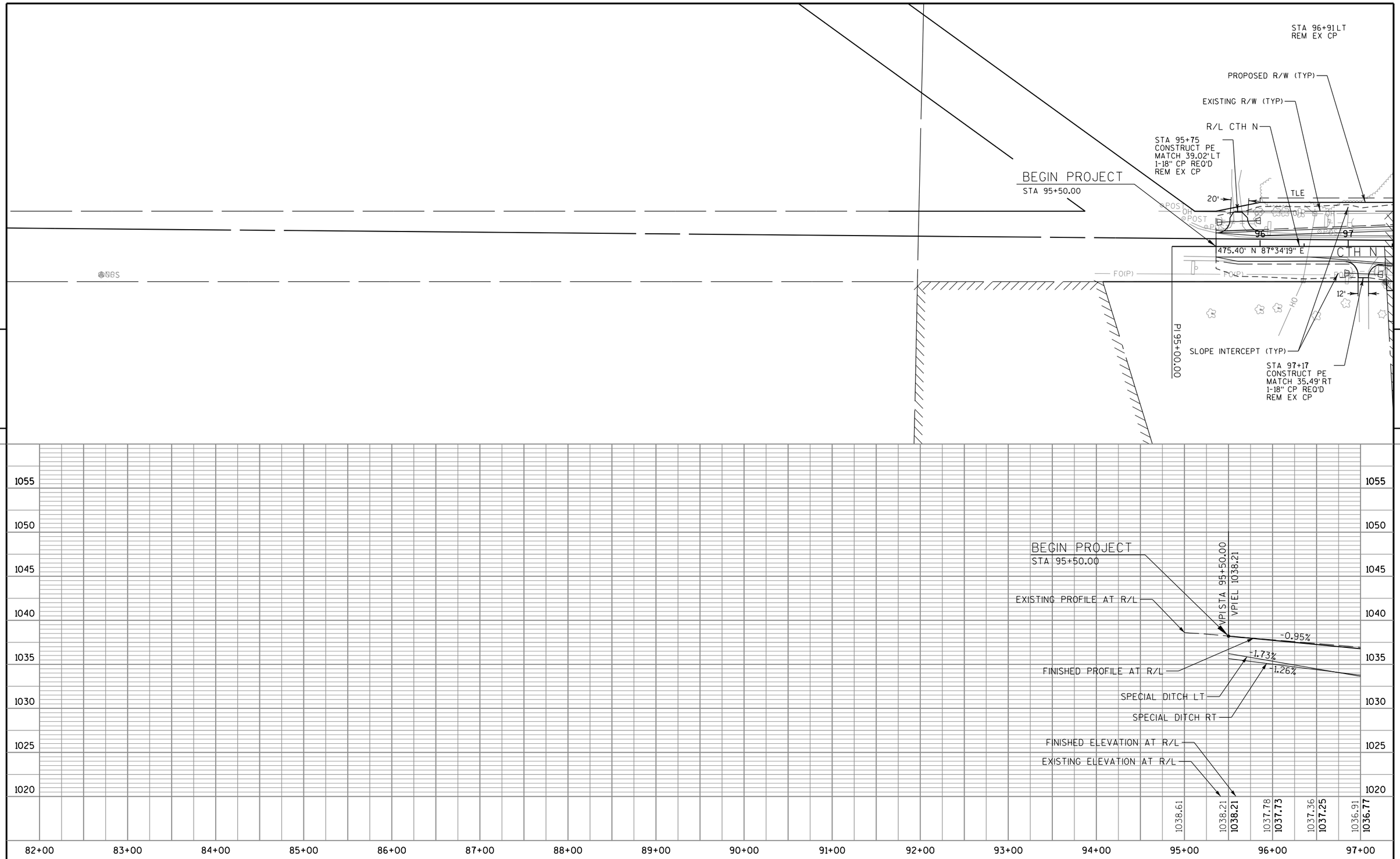
KAPUR & ASSOCIATES, INC. CONSULTING ENGINEERS MILWAUKEE, WISCONSIN 414.351.6068

ACCEPTED FOR RECORDING AND FILING IN THE OFFICE OF THE REGISTER OF DEEDS IN Washington COUNTY, WISCONSIN AT 11:20AM ON Feb 26 2014 AS DOCUMENT # 1355348 AND FILED IN Map Book 52 Page 21
Sharon A Martin
SIGNATURE OF REGISTER OF DEEDS

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 3944-00-01-4.06
AMENDMENT NO:

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\Survey\DGN\040101_tpp-06.dgn
PLOT DATE : 2/13/2014
PLOT BY : raisa_k
PLOT NAME :
PLOT SCALE : 1:100
APPRAISAL PLAT DATE :

4.06



PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN AND PROFILE: STA 95+50 TO STA 97+00	SHEET 89	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\050100_pp.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

CURVE 1

PC = 99+75.40
X = 2420053.61
Y = 494970.95
PI = 105+25.85
X = 2420603.56
Y = 494994.26
PT = 110+19.21
X = 2421009.15
Y = 494622.11
R = 1330.00
DELTA = 44°58'00" RT
D = 4°18'29"
L = 1043.81
T = 550.45
BK = N 87°34'19" E
AH = S 47°27'41" E

EUGENE AND VIRGINIA RETTLER TRUST

WETLAND BOUNDARY

PROPOSED R/W (TYP)

R/L CTH N

PI 105+25.85

STA 100+73.18' LT
REM EX MH
REM EX SS

STA 102+80.51' LT
REM EX MH
REM EX SS

BM RBM 40

STA 104+52.75' LT
REM EX MH
REM EX SS

STA 106+21.68' LT
REM EX MH
REM EX SS

STA 107+29
CONSTRUCT PE
MATCH 60.61' LT
1-36" CP REQ'D
REM EX CP

STA 107+81.37' LT
REM EX MH
REM EX SS

STA 109+02.36' LT
REM EX CP

WALLACE AND ANNA MARIE RETTLER TRUST

N

CTH N

475.40' N 87°34'19" E

PC 99+75.40

45'

TLE

PROPOSED R/W (TYP)

EXISTING R/W (TYP)

SLOPE INTERCEPT (TYP)

STA 100+22
CONSTRUCT CE
MATCH 52.50' RT
1-18" CP REQ'D

3' 5' 12' 24'

12' 5' 3'

24'

WASHINGTON COUNTY
DODGE COUNTY

SIGNICAST, LLC

BM A

PT 110+19.21

BENCHMARKS			
LABEL	LOCATION	DESCRIPTION	ELEVATION
RBM 40	STA 104+97.22, 127.10' LT	RR SPK W FACE POWER POLE 77-04629 RBM FOR SECTION CORNER WEST OF 7 T10N R18E ON COUNTY LINE	1033.70
BM A	STA 110+35.46, 24.61' RT	SET RR SPIKE NORTH FACE POWER POLE 77-11246	1024.21

-0.95%
-1.44%
-1.79%
-0.95%
-0.95%
-0.30%
-1.00%
-2.21%
-2.00%

EXISTING PROFILE AT R/L
FINISHED PROFILE AT R/L
SPECIAL DITCH LT
SPECIAL DITCH RT
SPECIAL DITCH LT
EXISTING ELEVATION AT R/L
FINISHED ELEVATION AT R/L

VPI STA 111+20.94
VPI EL 1023.22
VPC STA 109+95.94
VPC EL 1024.41
VCL 250.00
K 262.60

1045 1040 1035 1030 1025 1020 1015 1010

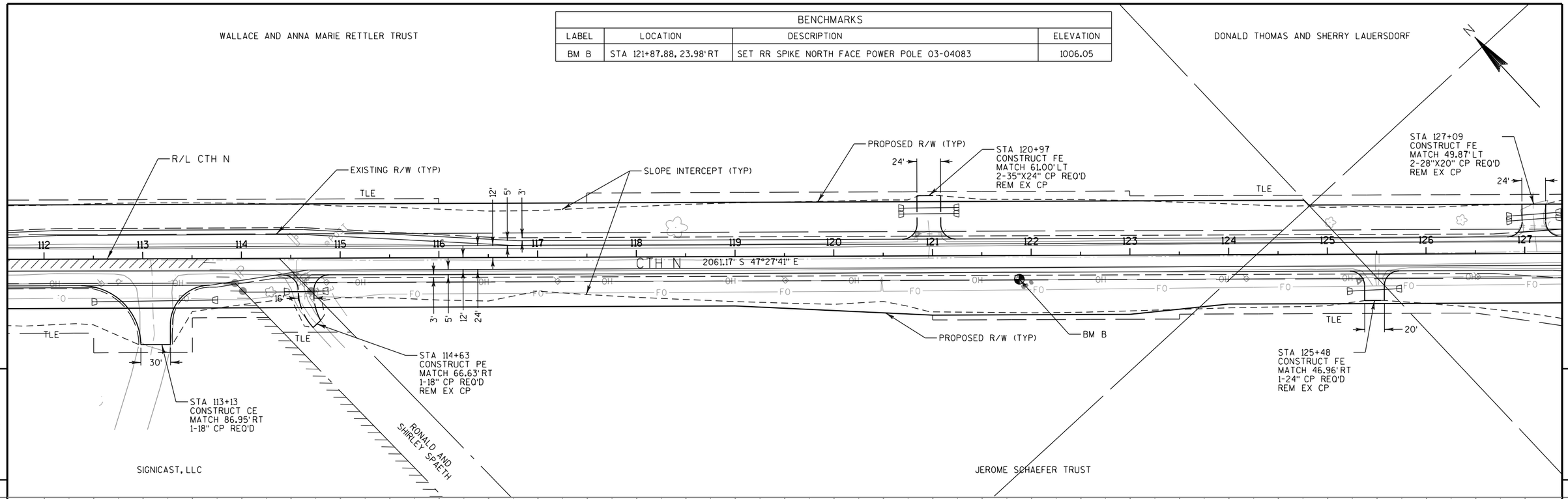
97+00	98+00	99+00	100+00	101+00	102+00	103+00	104+00	105+00	106+00	107+00	108+00	109+00	110+00	111+00	112+00
1036.91	1036.34 **1036.34**	1035.95 **1035.86**	1035.71 **1035.38**	1035.50 **1034.90**	1035.38 **1034.42**	1035.24 **1033.95**	1034.91 **1033.47**	1034.45 **1032.99**	1033.79 **1032.51**	1031.93 **1032.03**	1030.64 **1031.55**	1031.75 **1031.08**	1032.61 **1030.60**	1032.88 **1030.12**	1030.28 **1029.64**	1028.02 **1029.16**	1028.07 **1028.68**	1028.32 **1028.21**	1028.38 **1027.73**	1028.48 **1027.25**	1027.79 **1026.77**	1027.13 **1026.29**	1027.72 **1025.81**	1026.93 **1025.33**	1026.09 **1024.86**	1025.39 **1024.38**	1024.61 **1023.84**	1023.71 **1023.22**	1022.81 **1022.49**	1021.94 **1021.67**

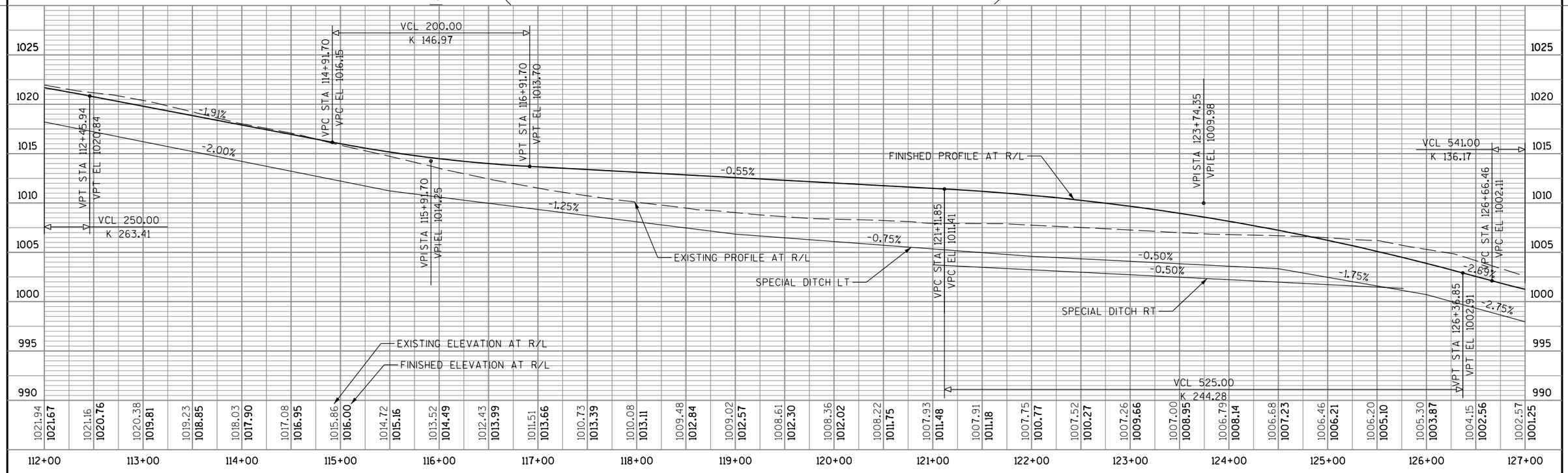
PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN AND PROFILE: STA 97+00 TO STA 112+00	SHEET 90	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\050101_pp.dgn
PLOT DATE : 11/6/2014
PLOT BY : nick_b
PLOT NAME :
PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40

BENCHMARKS			
LABEL	LOCATION	DESCRIPTION	ELEVATION
BM B	STA 121+87.88, 23.98' RT	SET RR SPIKE NORTH FACE POWER POLE 03-04083	1006.05





PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN AND PROFILE: STA 112+00 TO STA 127+00	SHEET 91 E

BENCHMARKS			
LABEL	LOCATION	DESCRIPTION	ELEVATION
BM C	STA 131+20.64, 21.64' RT	RR SPIKE NORTH FACE POWER POLE 77-1255	994.09

CURVE 2
PC = 130+80.37
X = 2422527.86
Y = 493228.59
PI = 131+78.69
X = 2422600.30
Y = 493162.12
PT = 132+77.00
X = 2422671.48
Y = 493094.30
R = 10500.00
DELTA = 1°04'23" RT
D = 0°32'44"
L = 196.63
T = 98.32
BK = S 47°27'41" E
AH = S 46°23'18" E

DONALD THOMAS AND SHERRY LAUERSDORF

CHARLES AND DARLENE LANGENECKER

N

STA 127+09
CONSTRUCT FE
MATCH 49.87' LT
2-28"X20" CP REQ'D
REM EX CP

WETLAND BOUNDARY

PROPOSED R/W (TYP)

24'

TLE

PI 131+78.69

STA 133+05
CONSTRUCT PE
MATCH 46.81' LT
1-18" CP REQ'D
REM EX CP

12' 5' 3'

16'

R/L CTH N

EXISTING R/W (TYP)

SLOPE INTERCEPT (TYP)

127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142

2061.17' S 47°27'41" E

1079.01' S 46°23'18" E

CTH N

FO OH BH

BM C

20'

PC 130+80.37

PT 132+77.00

STA 131+82
CONSTRUCT FE
MATCH 54.17' RT
1-18" CP REQ'D

STA 133+23
CONSTRUCT PE
MATCH 57.46' RT
1-18" CP REQ'D
REM EX CP

3' 5' 12' 24'

PROPOSED R/W (TYP)

STA 136+25 RT
1-8" CP REQ'D

SEE CONSTRUCTION DETAIL: PROPOSED DITCH

STA 129+56
3-72" X 94' CP REQ'D
SKEW 7° LHF
REM OLD STRUCTURE

STA 130+78 RT
REM EX CP

JEROME SCHAEFER TRUST

VCL 541.00
K 136.17

130+33.35
997.17

VPT STA 132+07.46
VPT EL 998.28

VPI STA 129+36.96
VPI EL 994.82

-2.75%

-5.67%

SPECIAL DITCH LT

EXISTING PROFILE AT R/L

0.53%

0.29%

16.67%

4.00%

16.67%

0.50%

1.28%

FINISHED PROFILE AT R/L

SPECIAL DITCH LT

0.30%

0.96%

9.74%

1.79%

SPECIAL DITCH RT

VPC STA 141+15.08
VPC EL 1009.89

VCL 450.00
K 253.00

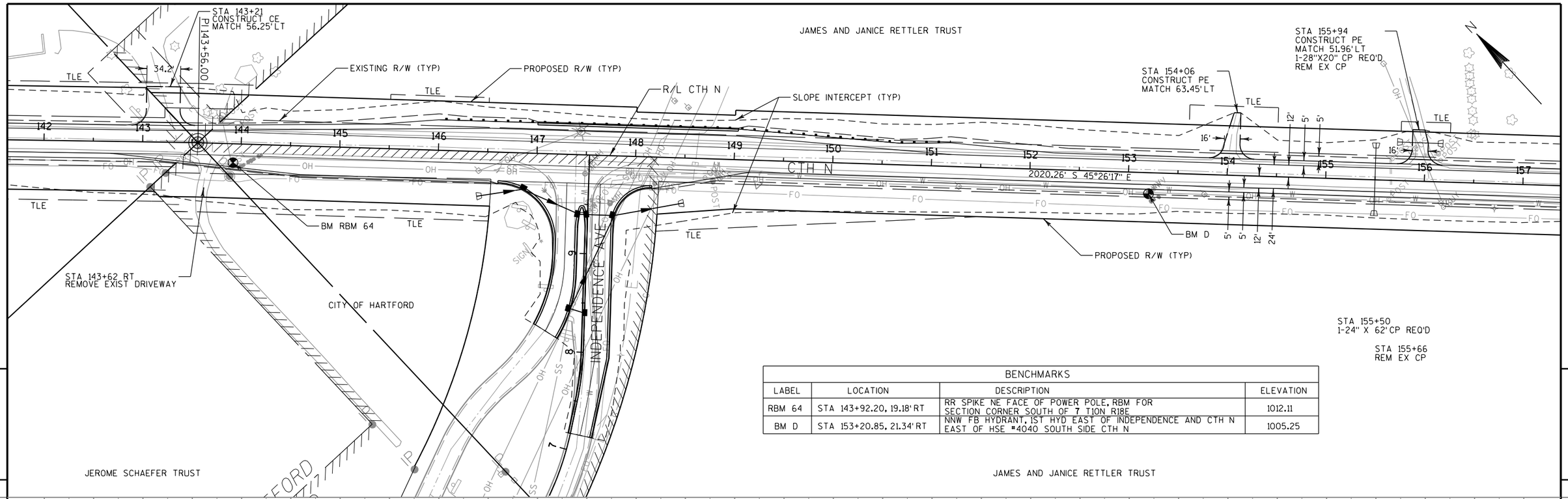
EXISTING ELEVATION AT R/L

FINISHED ELEVATION AT R/L

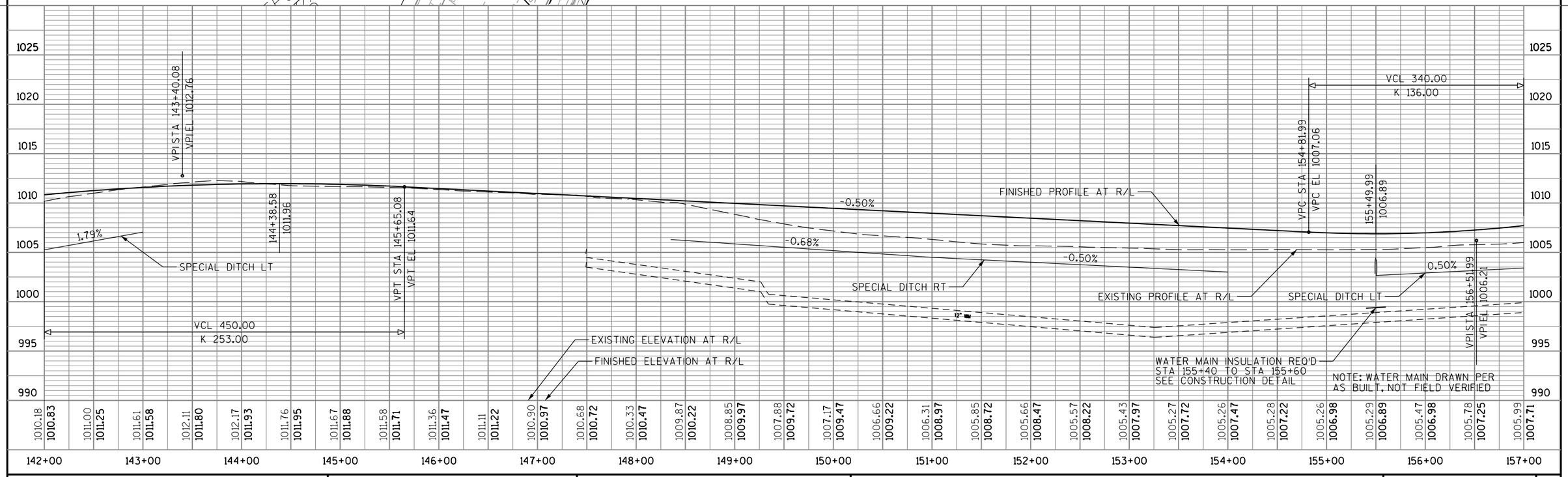
1002.57	1000.61	998.33	996.16	994.95	994.28	994.16	994.50	995.59	997.36	998.51	999.40	1000.00	1000.37	1000.60	1000.87	1001.16	1001.43	1001.66	1002.02	1002.40	1002.73	1003.10	1003.84	1004.47	1005.26	1006.46	1007.82	1009.11	1010.18
1001.25	**1000.12**	**999.17**	**998.40**	**997.82**	**997.42**	**997.21**	**997.18**	**997.33**	**997.67**	**998.19**	**998.83**	**999.47**	**1000.11**	**1000.74**	**1001.38**	**1002.02**	**1002.66**	**1003.30**	**1003.94**	**1004.58**	**1005.22**	**1005.86**	**1006.50**	**1007.14**	**1007.78**	**1008.42**	**1009.06**	**1009.70**	**1010.31**	**1010.83**

127+00 128+00 129+00 130+00 131+00 132+00 133+00 134+00 135+00 136+00 137+00 138+00 139+00 140+00 141+00 142+00

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN AND PROFILE: STA 127+00 TO STA 142+00	SHEET 92	E

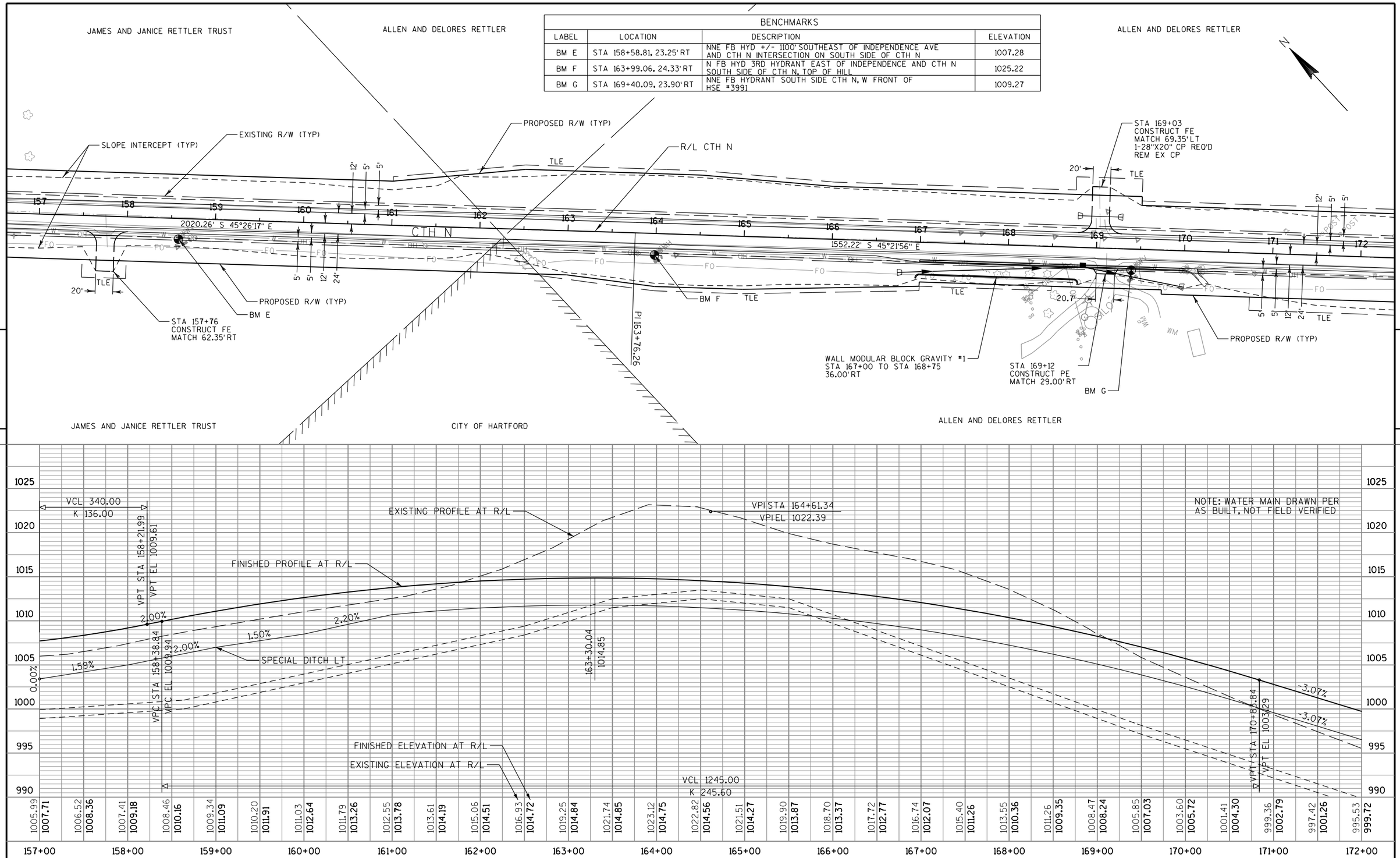


BENCHMARKS			
LABEL	LOCATION	DESCRIPTION	ELEVATION
RBM 64	STA 143+92.20, 19.18'RT	RR SPIKE NE FACE OF POWER POLE, RBM FOR SECTION CORNER SOUTH OF 7 T10N R18E	1012.11
BM D	STA 153+20.85, 21.34'RT	NNW FB HYDRANT, 1ST HYD EAST OF INDEPENDENCE AND CTH N EAST OF HSE #4040 SOUTH SIDE CTH N	1005.25



PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN AND PROFILE: STA 142+00 TO STA 157+00	SHEET 93 E

BENCHMARKS			
LABEL	LOCATION	DESCRIPTION	ELEVATION
BM E	STA 158+58.81, 23.25' RT	NNE FB HYD +/- 1100' SOUTHEAST OF INDEPENDENCE AVE AND CTH N INTERSECTION ON SOUTH SIDE OF CTH N	1007.28
BM F	STA 163+99.06, 24.33' RT	N FB HYD 3RD HYDRANT EAST OF INDEPENDENCE AND CTH N SOUTH SIDE OF CTH N, TOP OF HILL	1025.22
BM G	STA 169+40.09, 23.90' RT	NNE FB HYDRANT SOUTH SIDE CTH N, W FRONT OF HSE #3991	1009.27



PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN AND PROFILE: STA 157+00 TO STA 172+00	SHEET 94 E

BENCHMARKS			
LABEL	LOCATION	DESCRIPTION	ELEVATION
BM H	STA 174+80.41, 26.77' RT	NNE FB HYDRANT SOUTH SIDE CTH N IN FRONT OF PRESCHOOL	986.91
RBM 68	STA 181+39.30, 37.71' RT	CHISLED X IN TOP NW FLANGE HYDRANT 2.1' ABOVE GROUND, RBM FOR SECTION CORNER EAST OF 18 TION R18E	991.58
BM I	STA 184+42.91, 38.53' RT	NNW FB HYD 50' W OF ENTRANCE TO ALLAR BUILDING SOUTH SIDE CTH N	1010.06

ALLEN AND DELORES RETTLER

CITY OF HARTFORD
TOWN OF HARTFORD

MICHAEL AND REBECCA HADLEY

ST KILLIANS CONGREGATION

CURVE 3
PC = 179+28.48
X = 2425996.70
Y = 489841.91
PI = 180+81.47
X = 2426105.57
Y = 489734.42
PT = 182+34.39
X = 2426219.78
Y = 489632.62
R = 6000.00
DELTA = 2°55'17" LT
D = 0°57'18"
L = 305.92
T = 152.99
BK = S 45°21'56" E
AH = S 48°17'12" E

SLOPE INTERCEPT (TYP)
R/L CTH N
PROPOSED R/W (TYP)
EXISTING R/W (TYP)
TLE
PC 179+28.48
STA 181+36
REM EX DWY
REM EX CP
STA 182+74
CONSTRUCT PE
MATCH 63.68' LT
REM EX CP
1552.22' S 45°21'56" E
BM H
CTH N
573.03' S 48°17'12" E
BM RBM 68
PT 182+34.39
SAVE TREES
BM I
STA 184+92
CONSTRUCT CE
MATCH 47.61' RT
STA 177+94
REM EX CP
STA 178+00
1-36" X 76' CP REQ'D
STA 180+19
REM EX CP
PI 180+81.47
STA 181+10
CONSTRUCT PE
MATCH 62.19' RT
1-18" CP REQ'D
REM EX CP

ALLEN AND DELORES RETTLER | DREAM CENTER, LLC | TUMPTA, LLC | JEFFREY SCHMIDT AND KATHLEEN HERMANN | CITY OF HARTFORD | DANIEL AND VIRGINIA ALLAR

60 MPH DESIGN SPEED | 45 MPH DESIGN SPEED

EXISTING PROFILE AT R/L
VCL 490.00
K 137.23
VCL 280.00
K 80.04
VPC STA 173+84.60
VPC EL 994.06
VPT STA 178+74.60
VPIT EL 987.77
VPC STA 178+75.74
VPC EL 987.77
VPT STA 181+55.74
VPT EL 994.07
VPC STA 184+49.30
VPC EL 1005.82
VCL 615.00
K 98.13
-3.07%
-3.07%
4.00%
0.50%
-2.76%
5.18%
FINISHED PROFILE AT R/L
178+05.77
987.59
SPECIAL DITCH LT
VPI STA 176+29.60
VPI EL 986.54
WATER MAIN INSULATION REQ'D
STA 177+90 TO STA 178+10
SEE CONSTRUCTION DETAIL
VPI STA 180+15.74
VPI EL 988.47
EXISTING ELEVATION AT R/L
FINISHED ELEVATION AT R/L

| | | |

BENCHMARKS			
LABEL	LOCATION	DESCRIPTION	ELEVATION
BM J	STA 195+65.36, 33.32' RT	NNE FB HYDRANT SOUTH SIDE OF CTH N WEST OF FIRST DRIVEWAY WEST OF AIRPORT DR	1010.30

ST KILLIANS CONGREGATION

DOROJACK REALTY CO

DANIEL AND VIRGINIA ALLAR

HARTFORD INVESTMENT COMPANY

ALFRED AND BONNIE NAGORNY

BHN RENTALS, LLC

TRITON PROPERTIES, LLC

PI 188+07.43

EXISTING R/W (TYP)

SLOPE INTERCEPT (TYP)

WALL MODULAR BLOCK GRAVITY #2
STA 191+60 TO STA 197+00
25.50' LT

SAVE TREES

R/L CTH N

573.03' S 48°17'12" E

2797.12' S 48°39'06" E

STA 31+40
CONSTRUCT CE
MATCH 71.55' LT

AIRPORT DRIVE

STA 201+62, 29' LT
REM EX MH
REM EX SS

STA 198+64, 19' LT
REM EX MH
REM EX SS

STA 201+50, 49' LT
REM EX SS

STA 201+34
CONSTRUCT CE
MATCH 40.08' LT

STA 200+81
CONSTRUCT CE
MATCH 40.23' LT

STA 200+45, 26' LT
REM EX MH
REM EX SS

END PROJECT
STA 201+65.00

STA 190+47
CONSTRUCT CE
MATCH 39.87' RT

STA 190+97
CONSTRUCT CE
MATCH 46.81' RT

STA 192+59
CONSTRUCT CE
MATCH 38.59' RT
REM EX CP

STA 195+16
CONSTRUCT CE
MATCH 45.61' RT
REM EX CP

BM J

STA 195+87
CONSTRUCT CE
MATCH 72.45' RT
REM EX CP

TLE

CTH N

5

5

VPI STA 187+56.80
VPI EL 1018.12

EXISTING PROFILE AT R/L

FINISHED PROFILE AT R/L

188+41.83
1013.67

VPT STA 190+64.30
VPT EL 1011.14

VCL 615.00
K 98.13

2.27%

VPC STA 194+48.31
VPC EL 1002.44

VCL 160.00
K 95.97

VPT STA 196+08.31
VPT EL 1000.14

0.60%

VPI STA 195+28.31
VPI EL 1000.62

VPC STA 197+09.04
VPC EL 999.54

VPI STA 197+89.04
VPI EL 999.06

VPI STA 198+69.04
VPI EL 996.83

VPT STA 198+77.60
VPT EL 996.59

1.79%

VCL 160.00
K 73.06

EXISTING ELEVATION AT R/L

FINISHED ELEVATION AT R/L

NOTE: WATER MAIN DRAWN PER AS BUILT, NOT FIELD VERIFIED

WATER MAIN INSULATION REQ'D
STA 194+65 TO STA 195+60
SEE CONSTRUCTION DETAIL

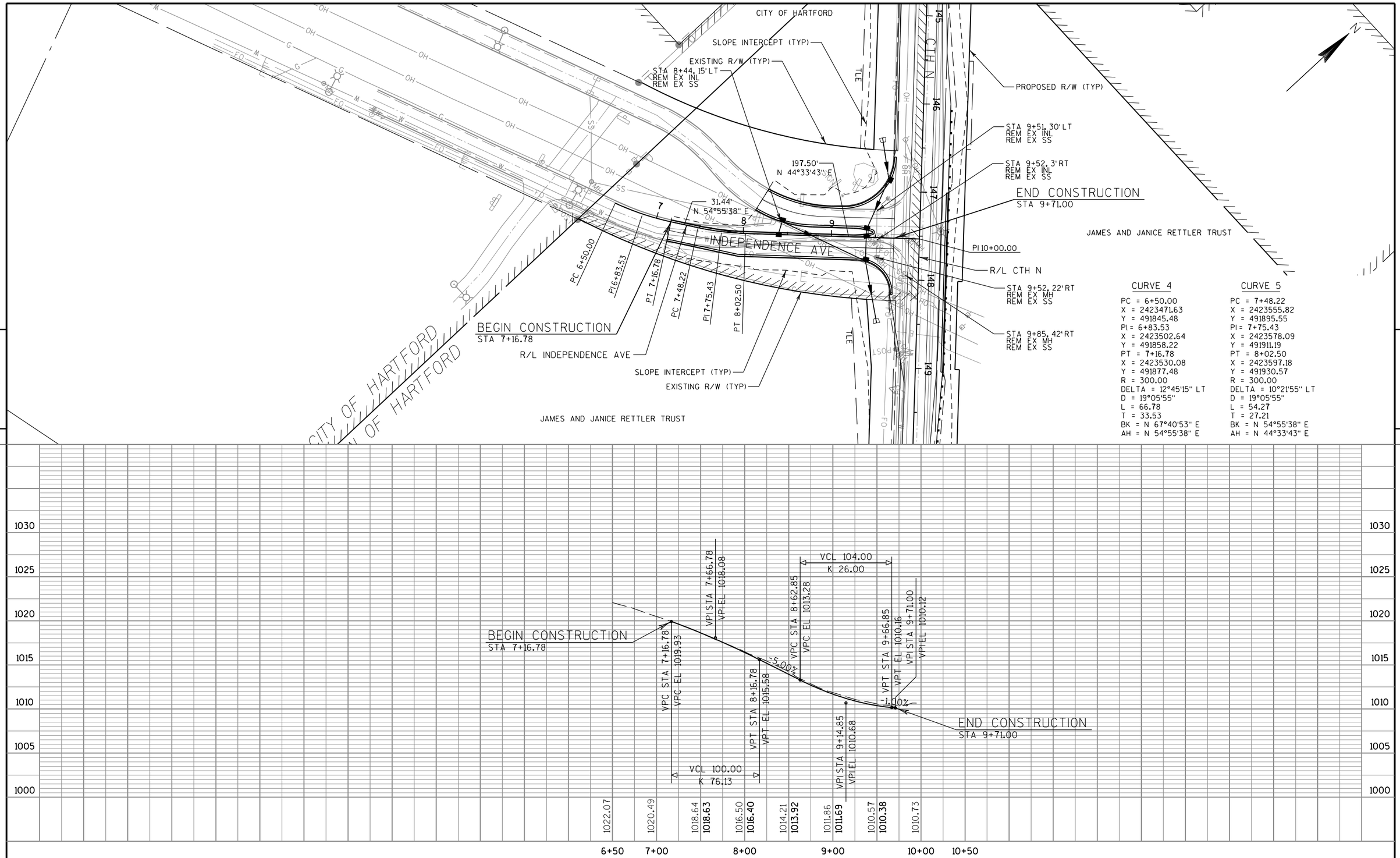
WATER MAIN INSULATION REQ'D
STA 198+20 TO STA 198+60
SEE CONSTRUCTION DETAIL

1015.68 **1012.64** | 1016.35 **1013.24** | 1016.71 **1013.58** | 1016.62 **1013.66** | 1016.15 **1013.49** | 1015.37 **1013.07** | 1014.19 **1012.39** | 1013.02 **1011.46** | 1011.66 **1010.33** | 1010.34 **1009.20** | 1009.14 **1008.07** | 1007.90 **1006.93** | 1006.47 **1005.80** | 1005.19 **1004.67** | 1004.06 **1003.53** | 1003.15 **1002.40** | 1002.45 **1001.41** | 1001.79 **1000.67** | 1001.19 **1000.20** | 1000.65 **999.89** | 999.92 **999.59** | 999.33 **999.18** | 998.61 **998.43** | 997.47 **997.33** | 995.81 | 994.10 | 992.40 | 990.77 | 989.57 | 988.41

187+00 | 188+00 | 189+00 | 190+00 | 191+00 | 192+00 | 193+00 | 194+00 | 195+00 | 196+00 | 197+00 | 198+00 | 199+00 | 200+00 | 201+00 | 202+00

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN AND PROFILE: STA 187+00 TO STA 202+00	SHEET 96 E

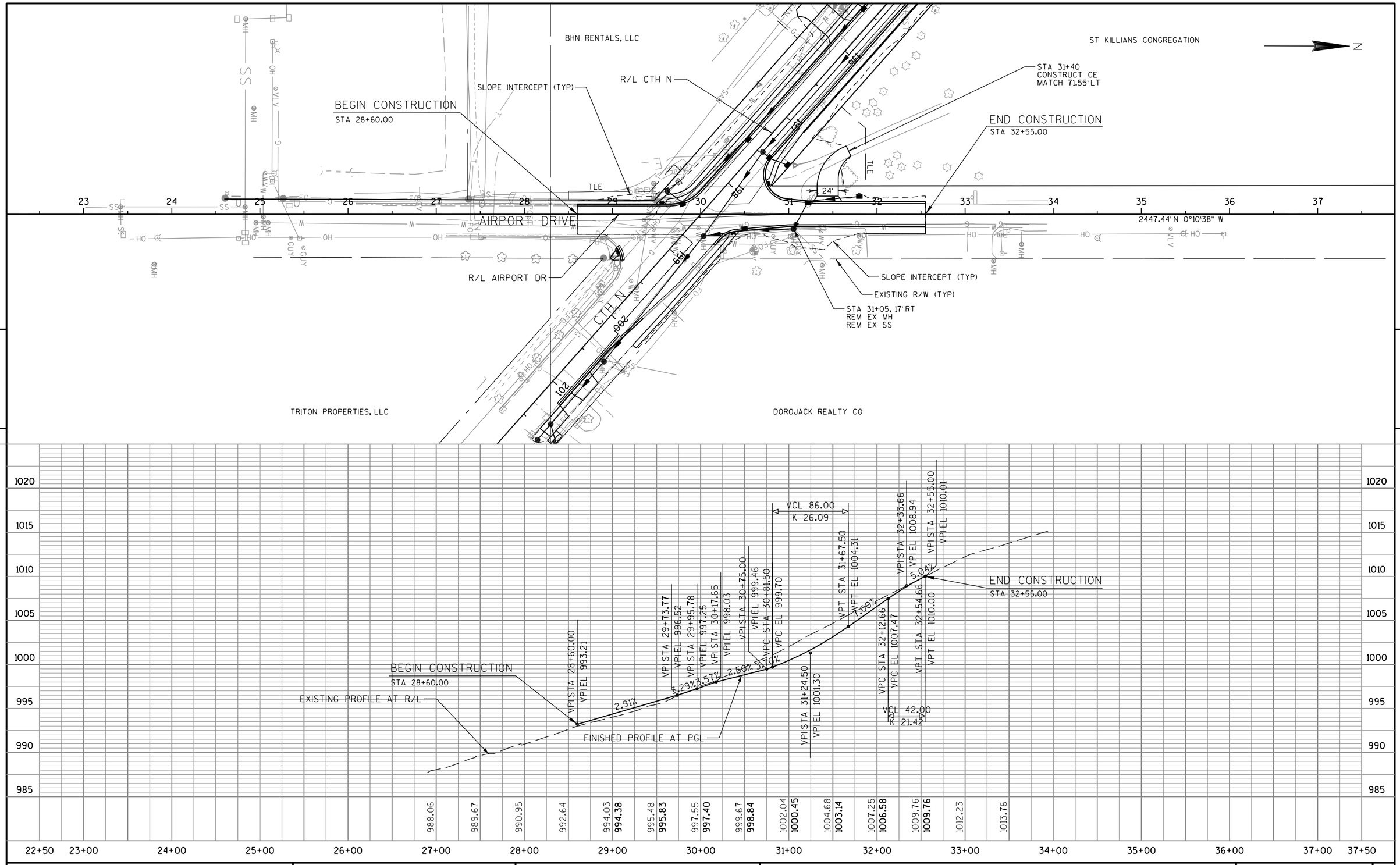
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PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN AND PROFILE: INDEPENDENCE AVE	SHEET 97	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\050108_pp.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 40



PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	PLAN AND PROFILE: AIRPORT DR	SHEET 98 E

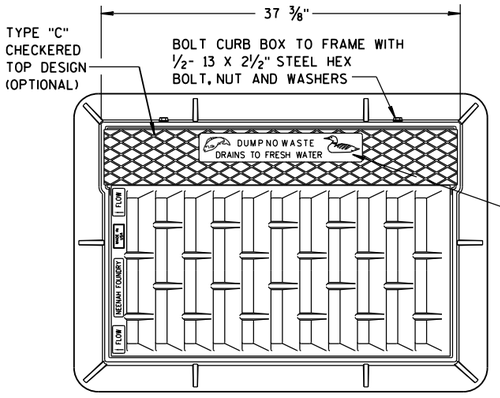
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WISDOT/CADDS SHEET 40

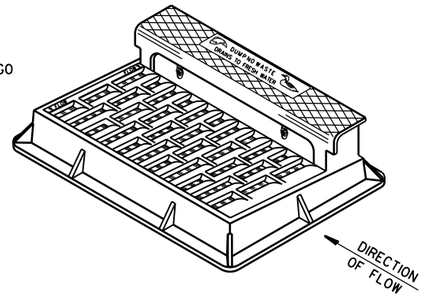
Standard Detail Drawing List

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
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08A08-01	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08A09-01	CATCH BASINS 2X3-FT AND 2.5X3-FT
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C08-01	INLETS MEDIAN 1 AND 2 GRATE
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F07-05	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE FRAINS
08F08-02	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS
08F10-01	CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH
11B02-02	CONCRETE MEDIAN NOSE
13A10-01A	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01B	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01C	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01D	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A11-02A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-02B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-02	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING

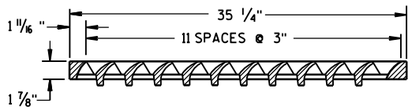
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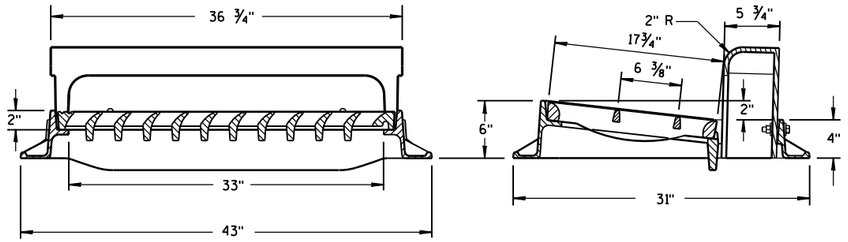


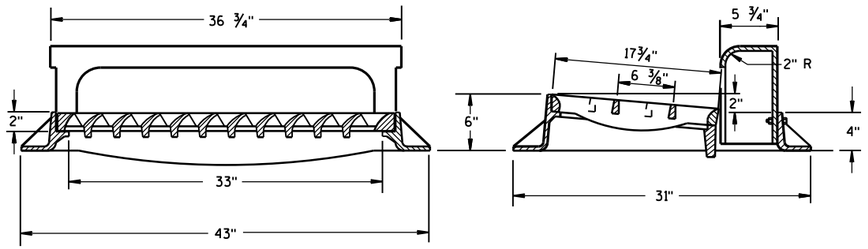
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

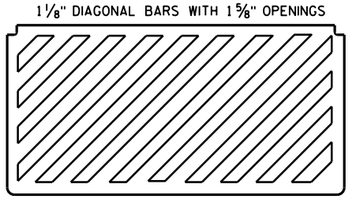






TYPE "H"

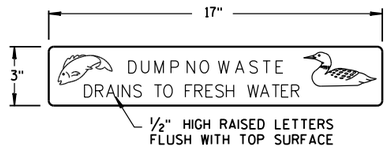
NOTE: EITHER CASTING IS ACCEPTABLE



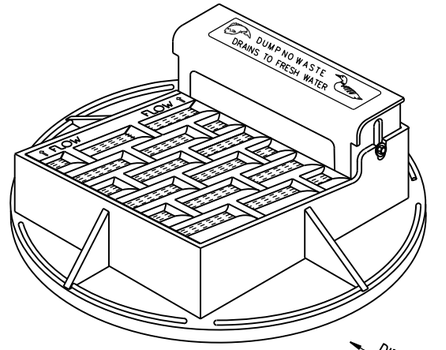
SPECIAL GRATE FOR TYPE "H" COVER

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

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

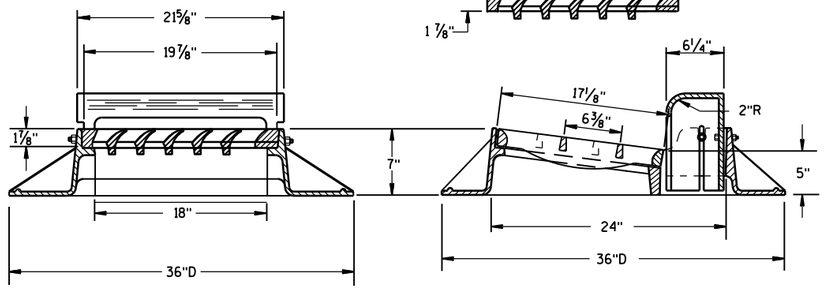


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



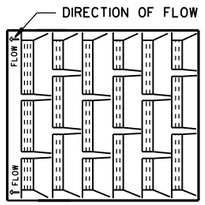
TYPE "A"

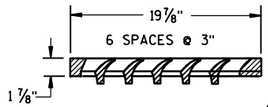
GENERAL NOTES

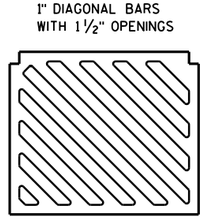
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.



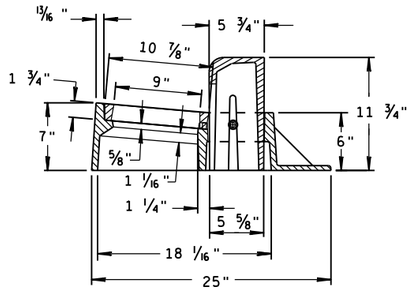


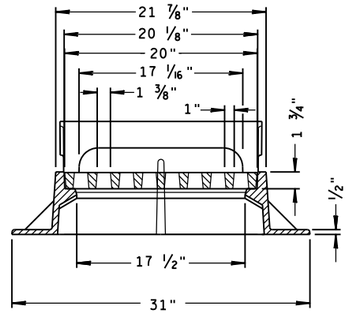


SPECIAL GRATE FOR TYPE "A" COVER

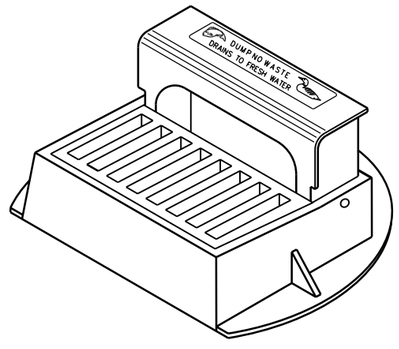
(MEASURES 19 3/4" X 17" X 1 7/8")

(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

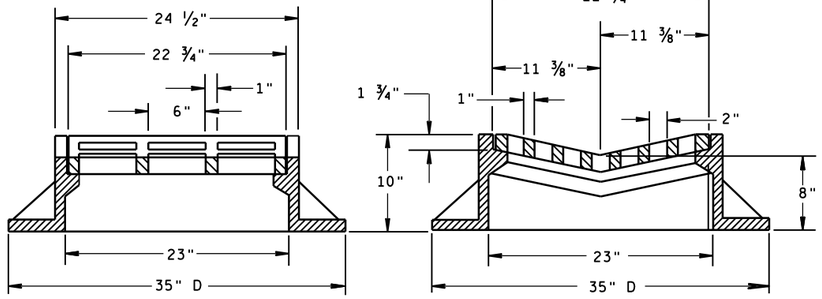
11-27-13 — DATE

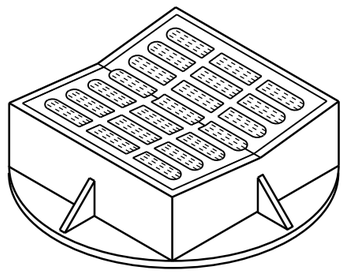
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER

FHWA

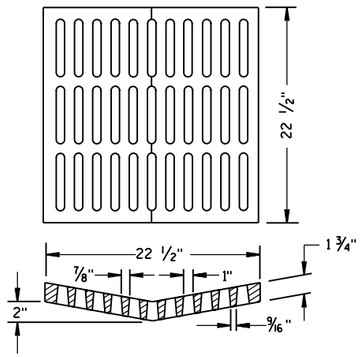
6

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



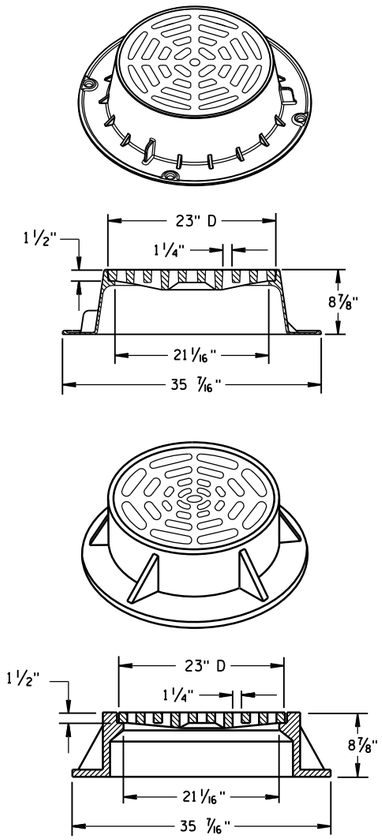


TYPE "B"



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"

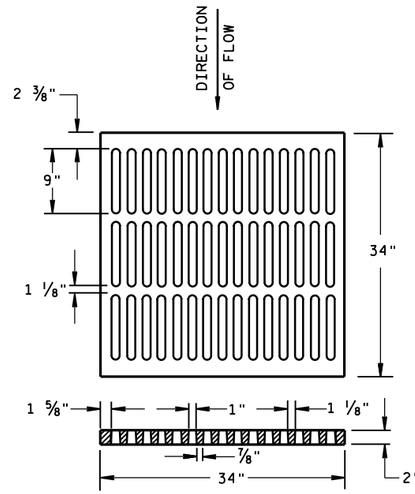
NOTE: EITHER CASTING IS ACCEPTABLE

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.

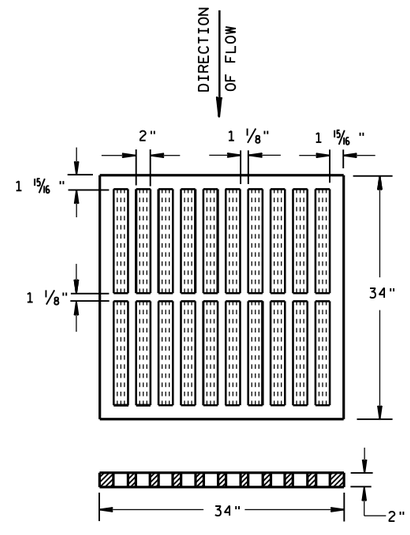
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



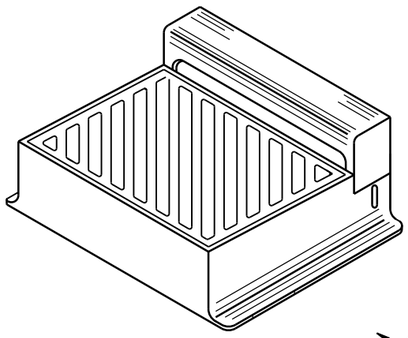
ALTERNATIVE TYPE "MS"

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

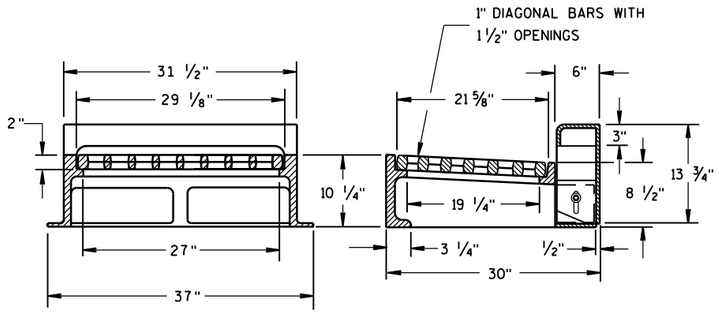


TYPE "MS"

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"

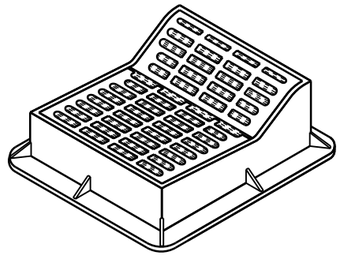
INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM

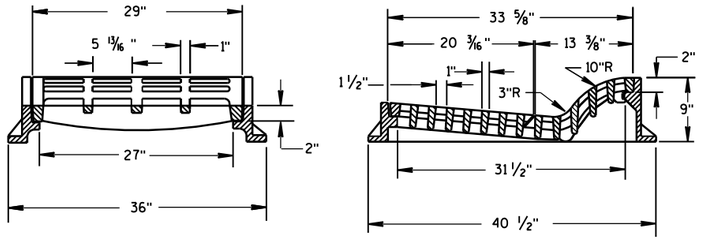
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

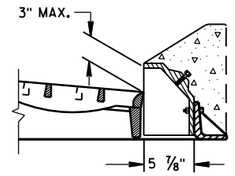
S.D.D. 8 A 5-19b





TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

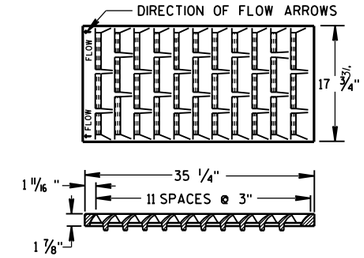
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

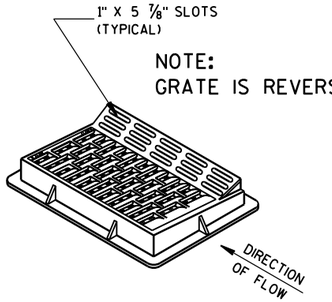
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

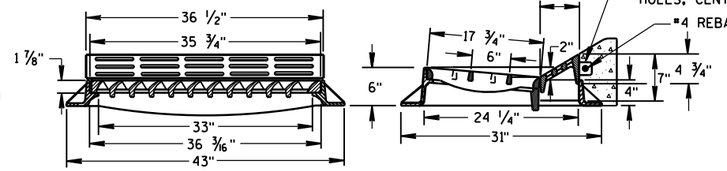
GENERAL NOTES

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

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



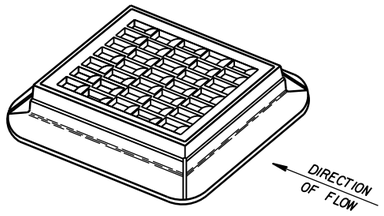


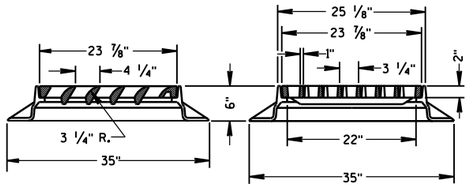


TYPE "HM"

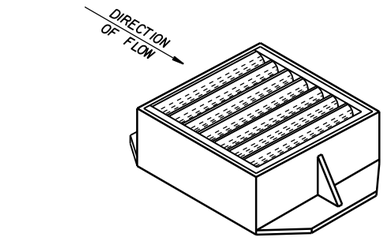
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

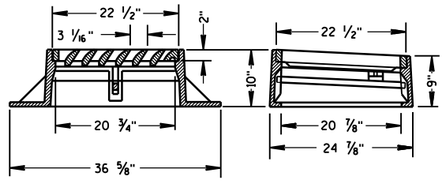
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



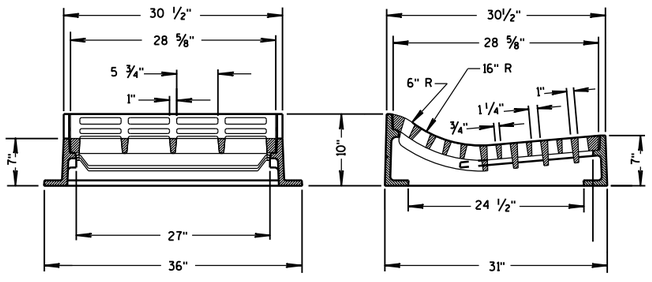


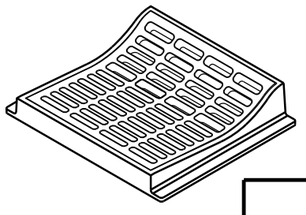
TYPE "S"





TYPE "V"





TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.

INLET COVERS
TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

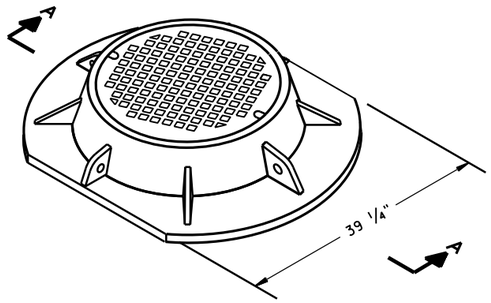
APPROVED
11/27/2013
DATE

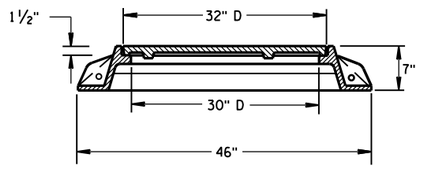
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

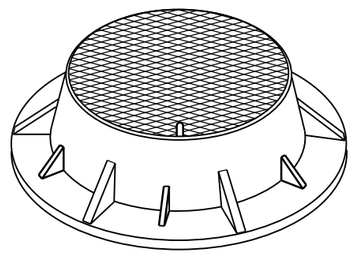
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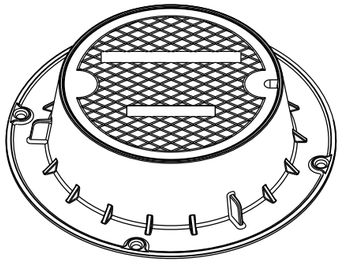
S.D.D. 8 A 5-19c

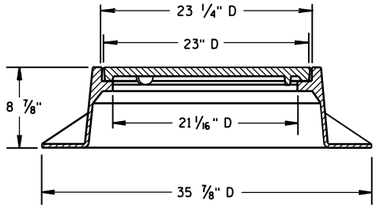


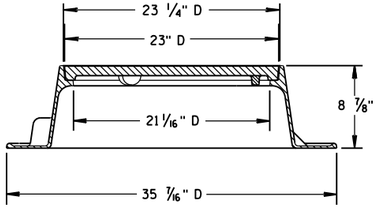


SECTION A-A
TYPE "K"









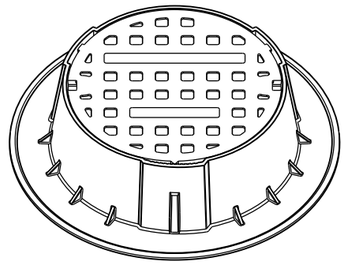
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

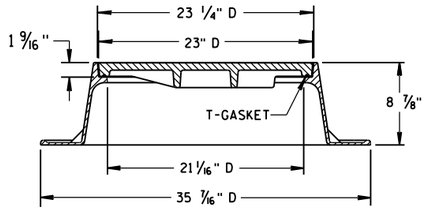
GENERAL NOTES

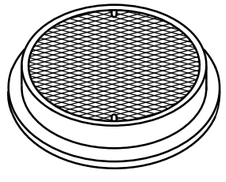
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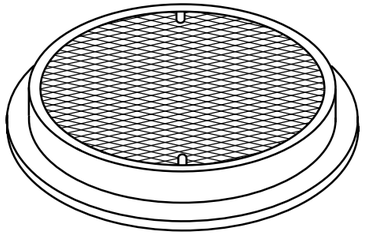
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

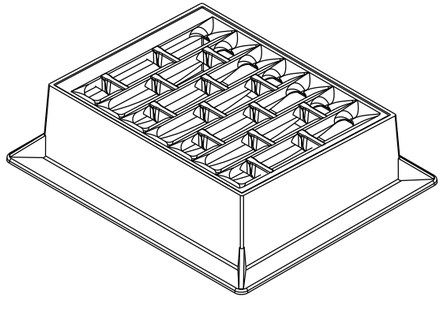
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

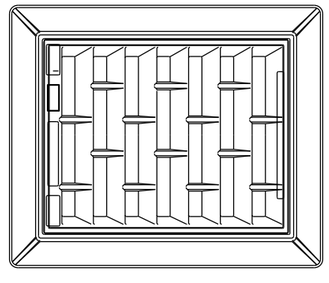


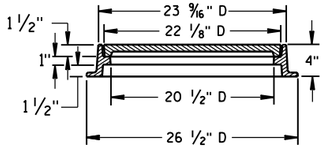




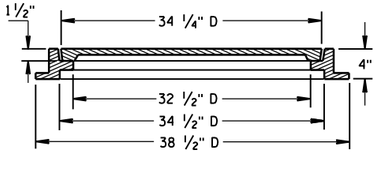




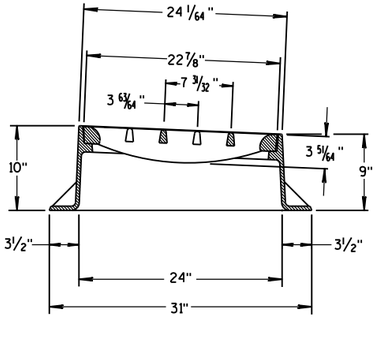


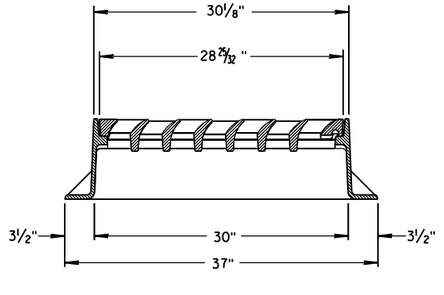


TYPE "L"

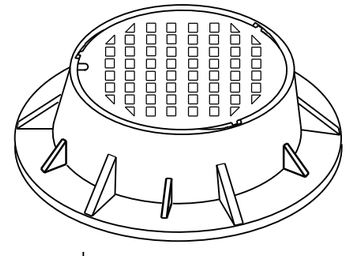


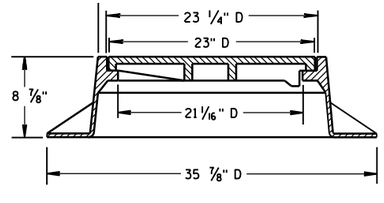
TYPE "M"





INLET COVER TYPE "BW"





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

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

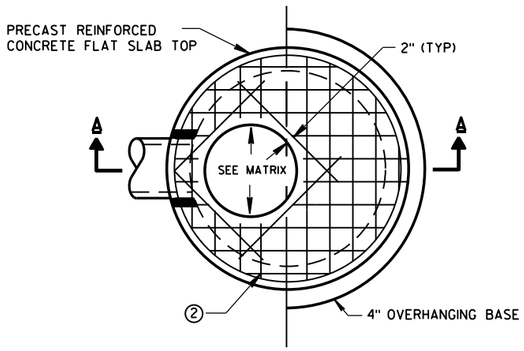
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

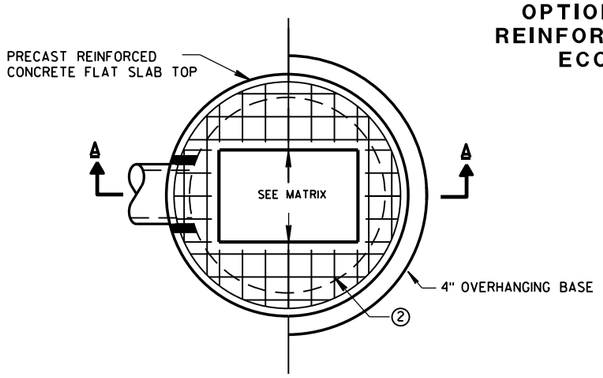
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

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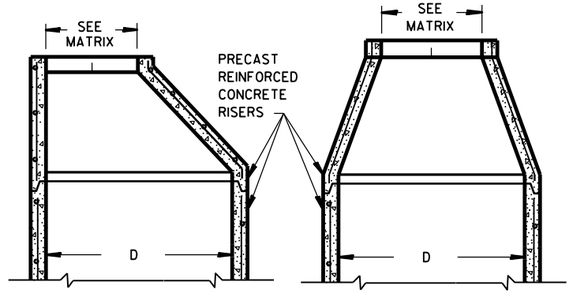
S.D.D. 8 A 5-19d



PLAN VIEW CIRCULAR OPENING

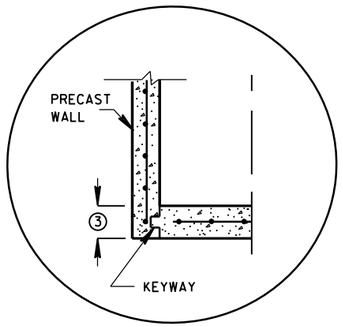


PLAN VIEW RECTANGULAR OPENING

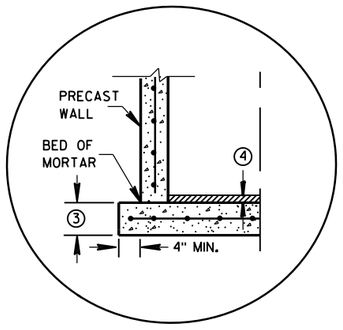


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

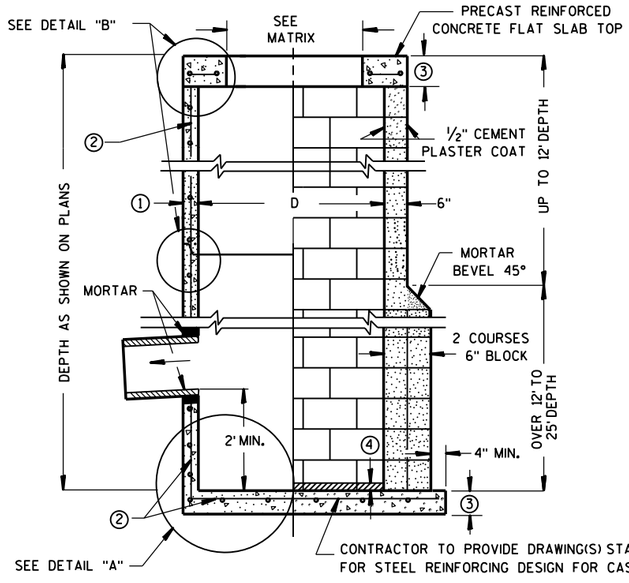


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

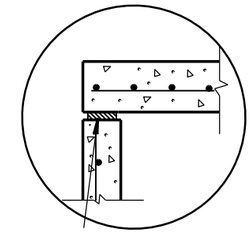


CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

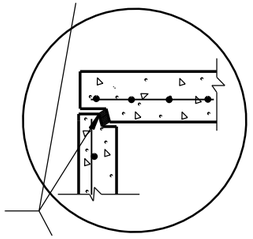
SECTION A-A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

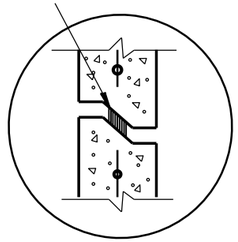


TOP WITH PLAIN END JOINT



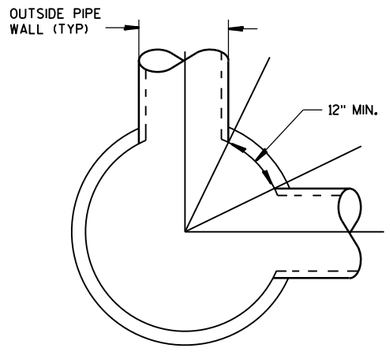
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



DETAIL "C"

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 GRANULAR 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. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

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

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

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 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

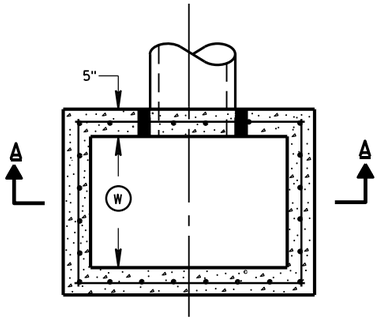
CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

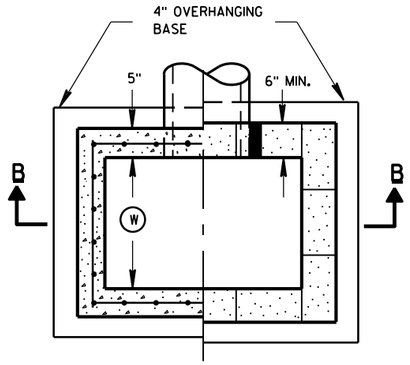
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

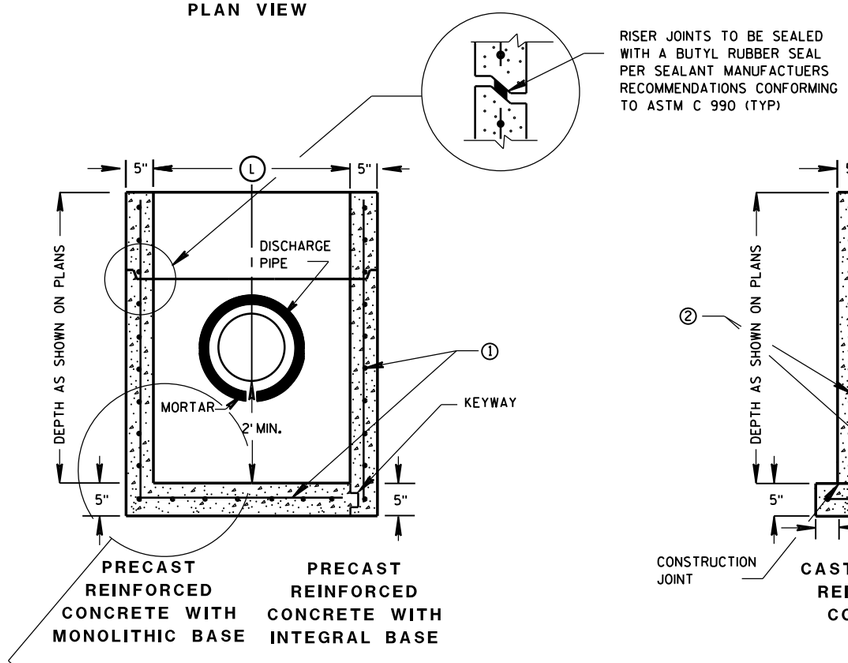
S.D.D. 8 A 8-1



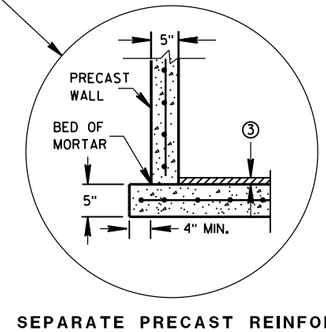
PLAN VIEW



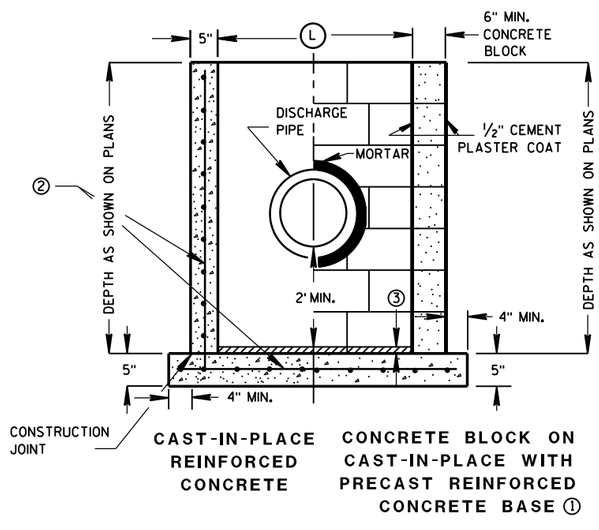
PLAN VIEW



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 GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

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

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN 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.

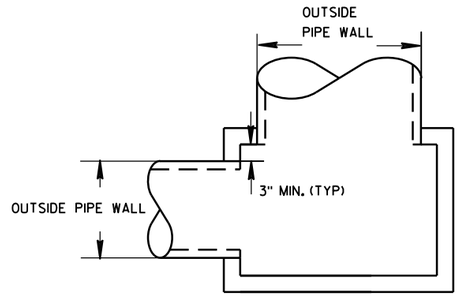
③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

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"

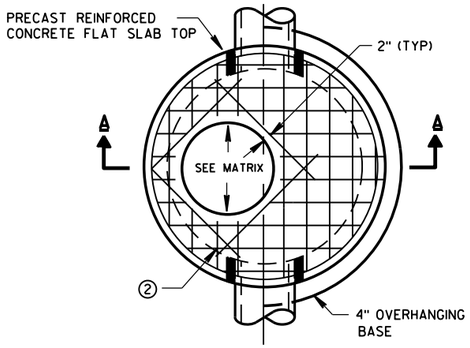
CATCH BASINS 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

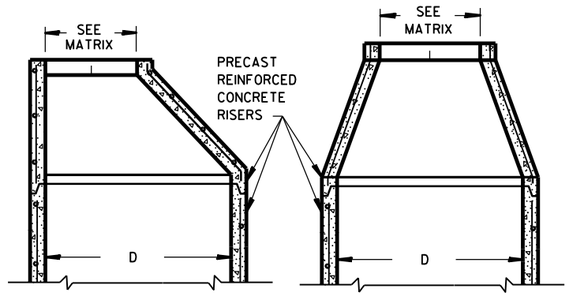
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 8 A 9-1

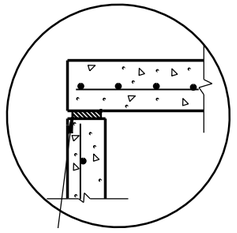


PLAN VIEW CIRCULAR OPENING

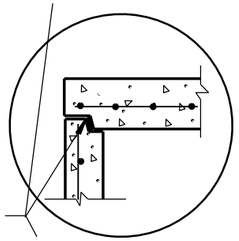


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

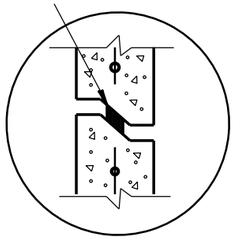


TOP WITH PLAIN END JOINT



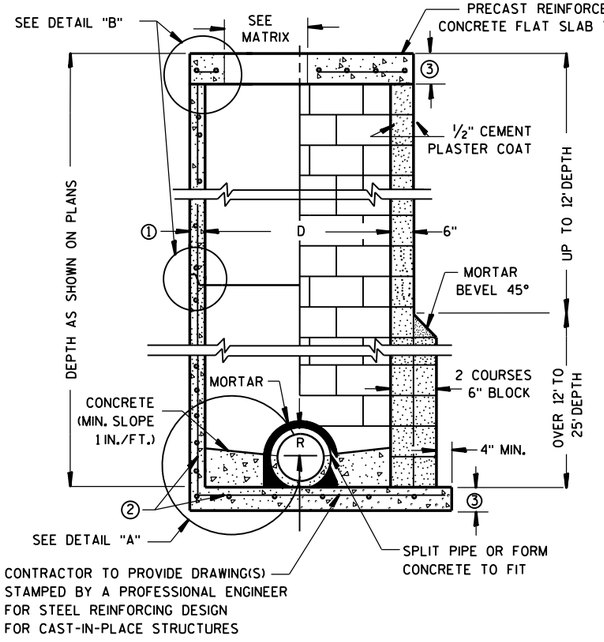
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



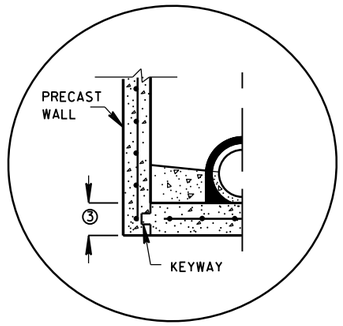
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

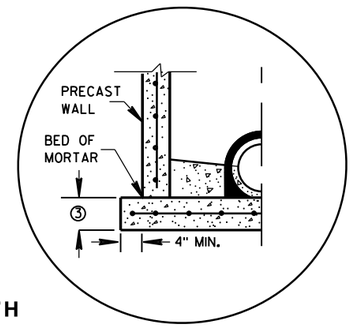


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

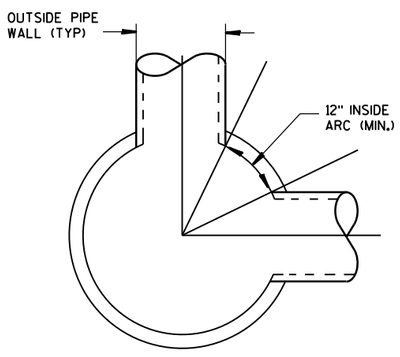


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



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 GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

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

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

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

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

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

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

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

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

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN 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
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

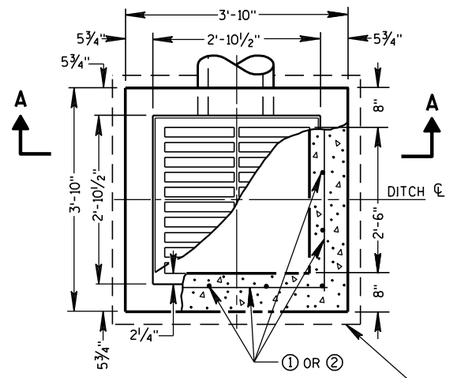
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

6

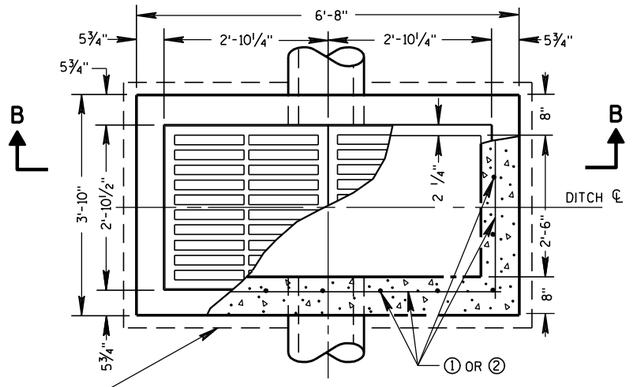
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S.D.D. 8 B 9-1

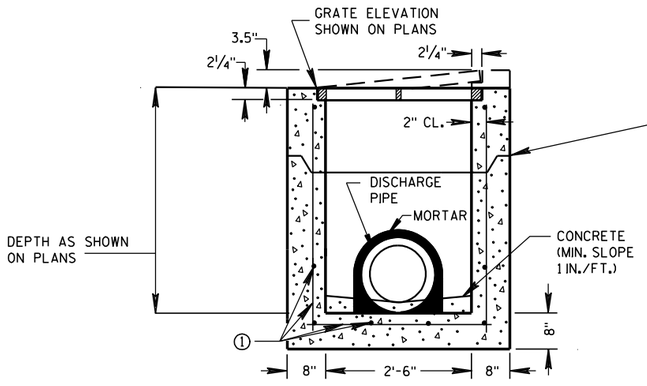


PLAN VIEW

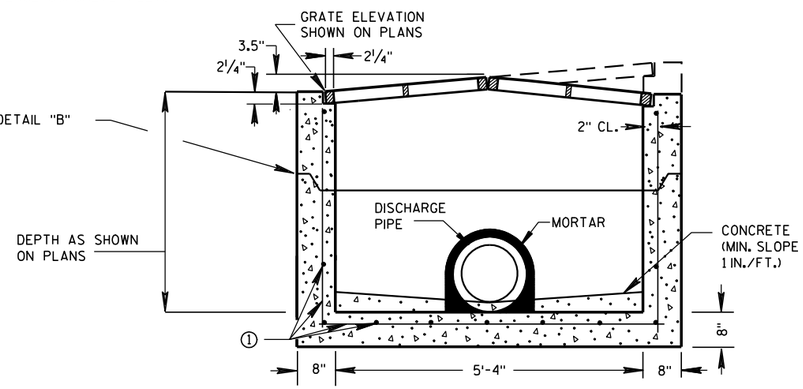


PLAN VIEW

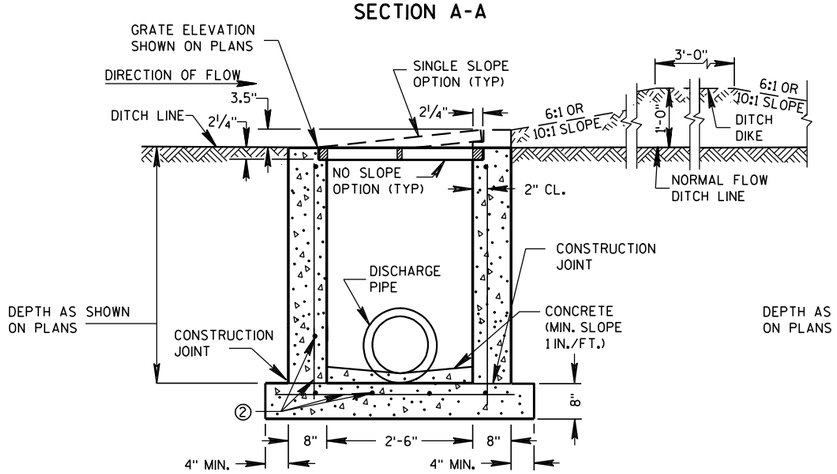
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



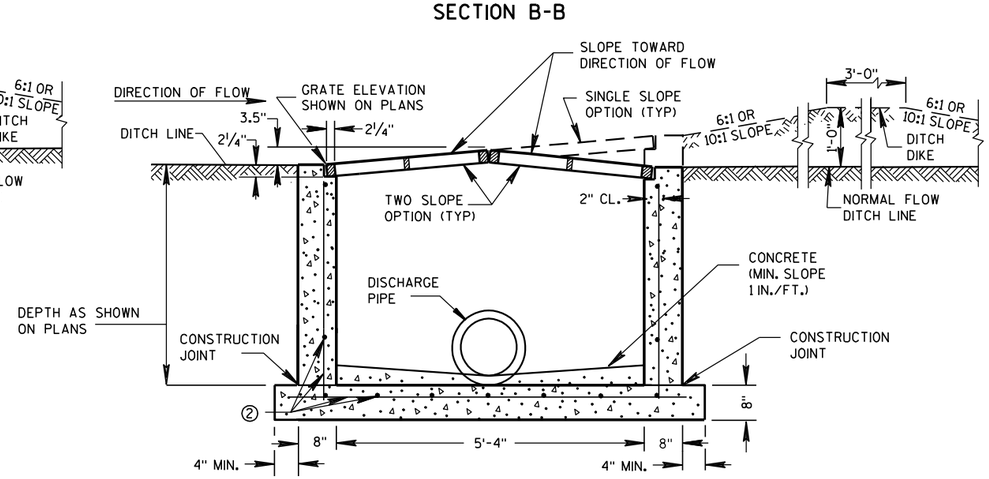
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

GENERAL NOTES

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

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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.

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

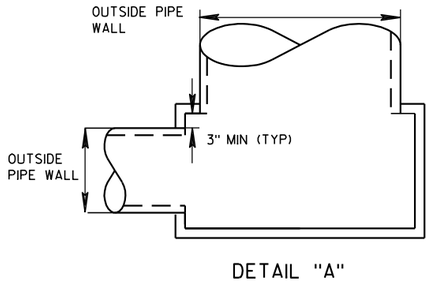
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

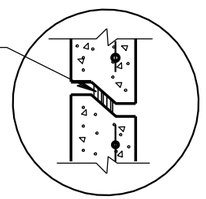
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

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



DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

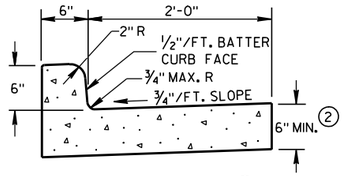
APPROVED

6/5/2012
DATE

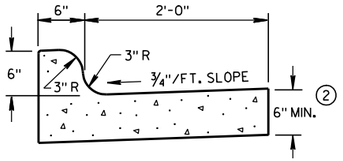
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

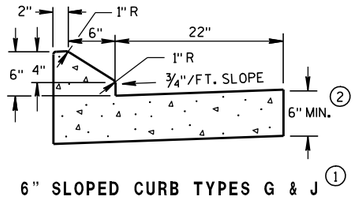
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S.D.D. 8 C 8-1



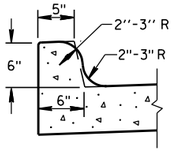
TYPES A & D (1)



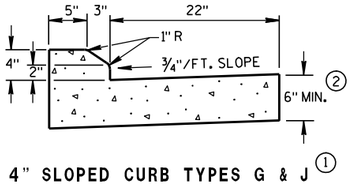
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

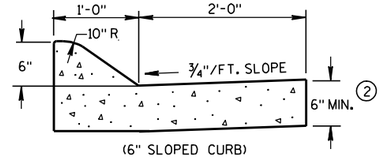


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

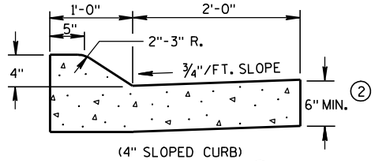


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

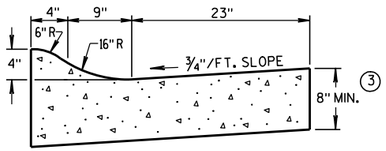


(6" SLOPED CURB)



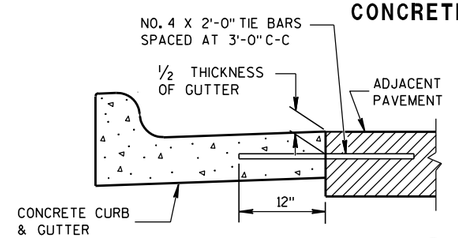
(4" SLOPED CURB)

TYPES A & D (1)

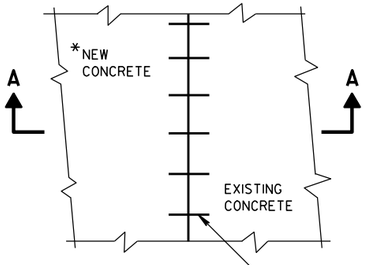


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"

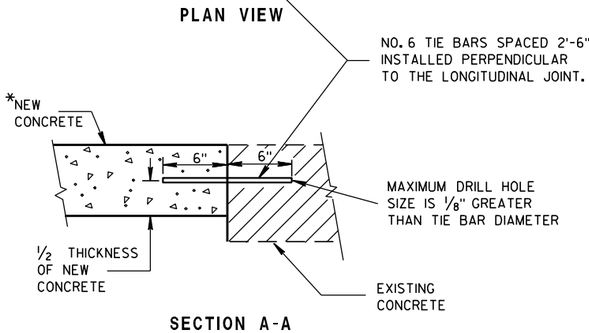


TYPICAL TIE BAR LOCATION (1)



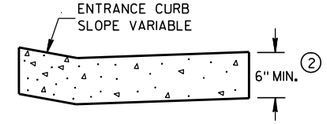
PLAN VIEW

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



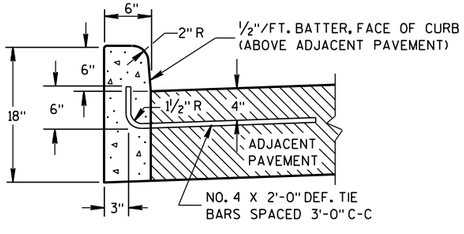
SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



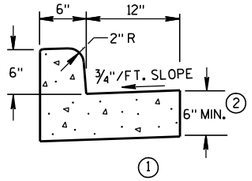
DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)



(1)

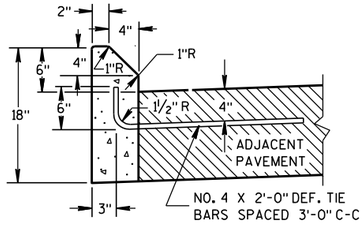
TYPES A & D



(1)

TYPES A & D

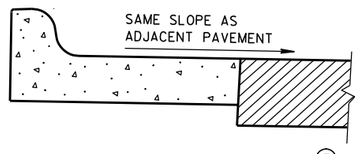
CONCRETE CURB & GUTTER 18"



(1)

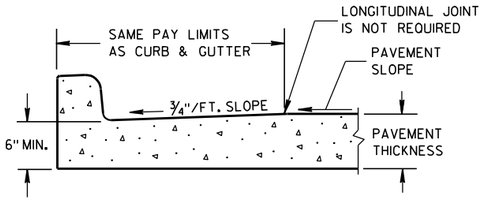
TYPES G & J

CONCRETE CURB

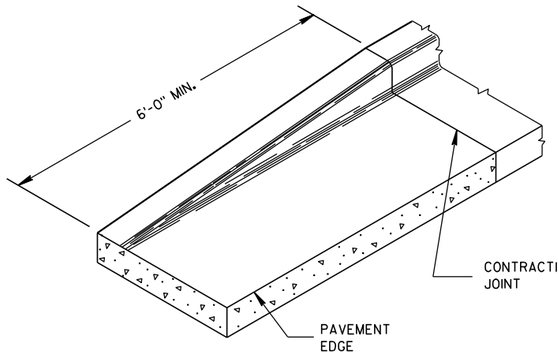


REVERSE SLOPE GUTTER (5)

(TYPICAL FOR ALL CURB & GUTTER TYPES)



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

GENERAL NOTES

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

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

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

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

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

(4) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(5) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

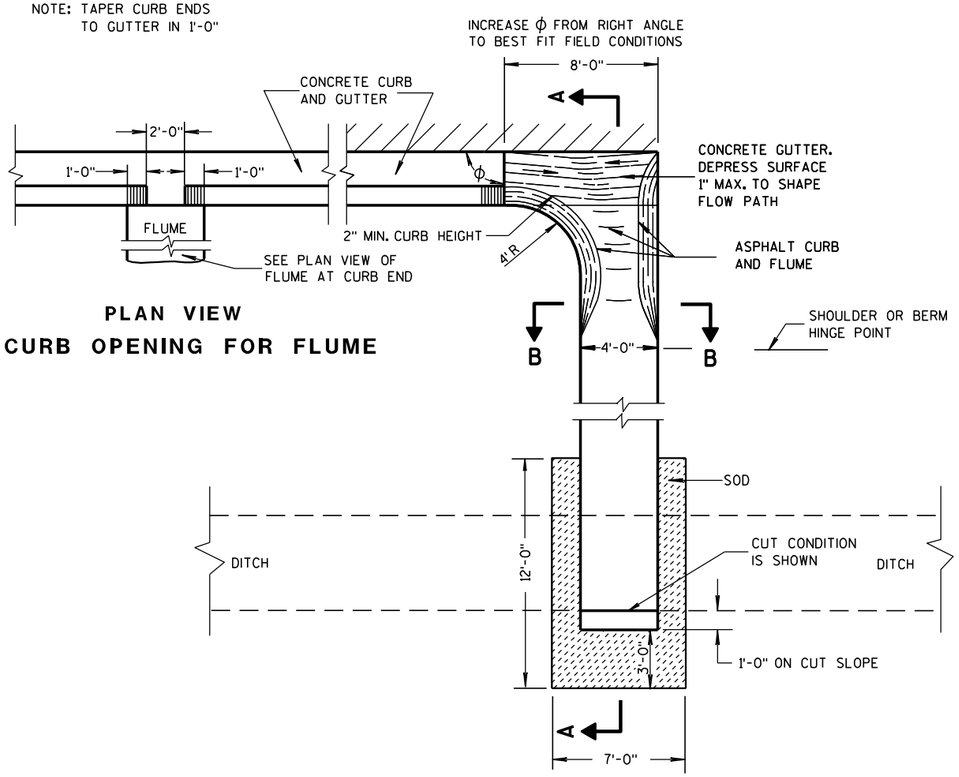
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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9/4/08 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS ENGINEER
FHWA

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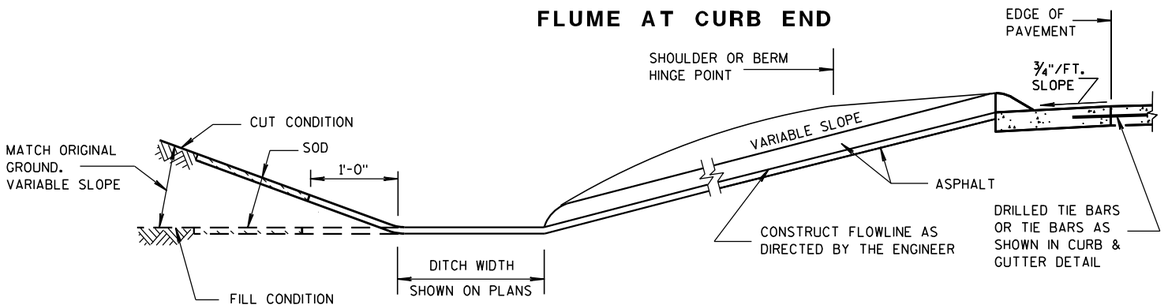
S.D.D. 8 D 1-17

ASPHALTIC FLUME

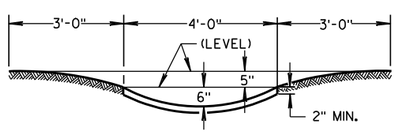


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

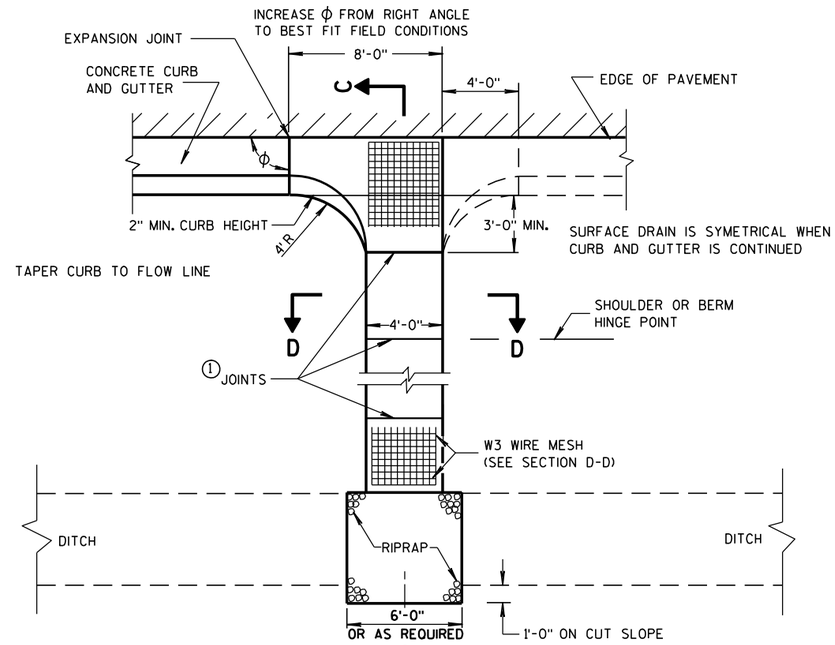
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

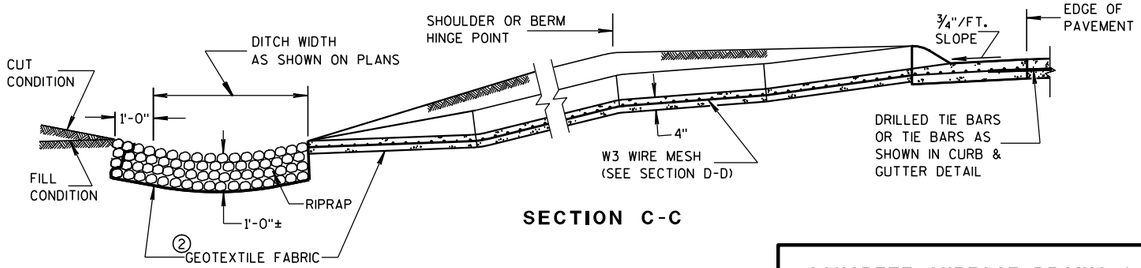
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

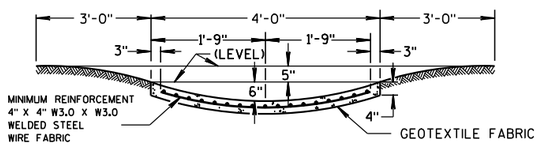
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

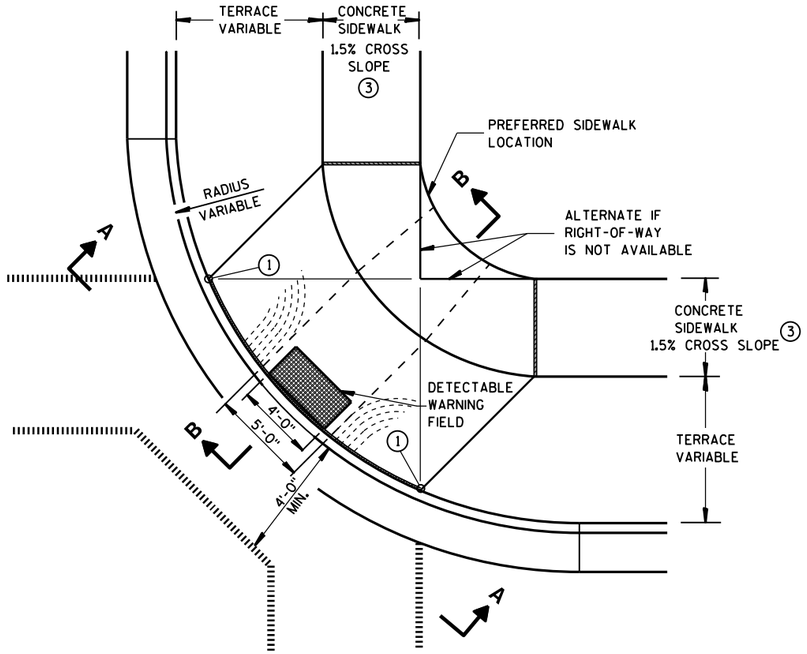
APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
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S.D.D. 8 D 4-5

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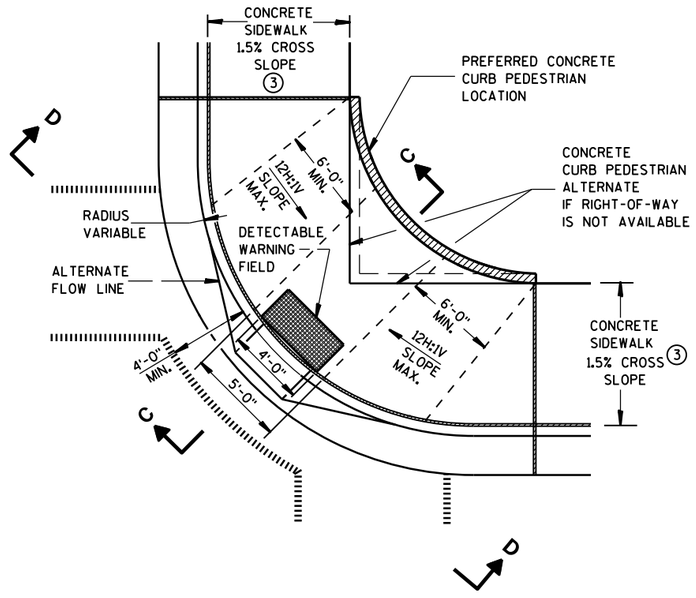
S.D.D. 8 D 4-5



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.

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

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

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

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

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.

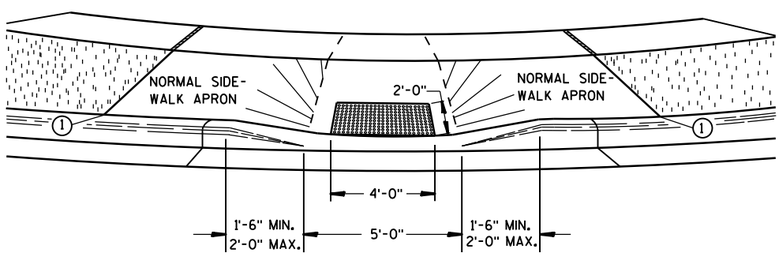
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

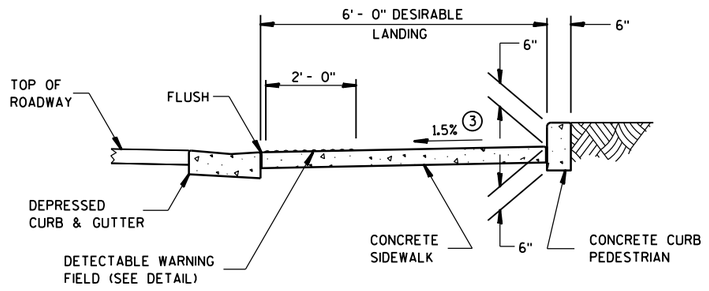
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

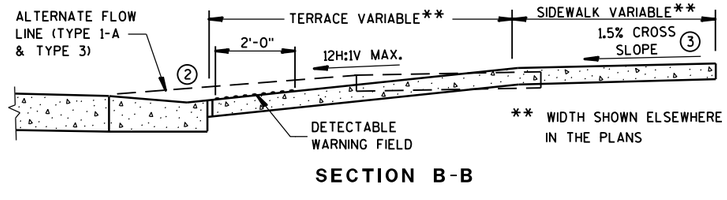
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



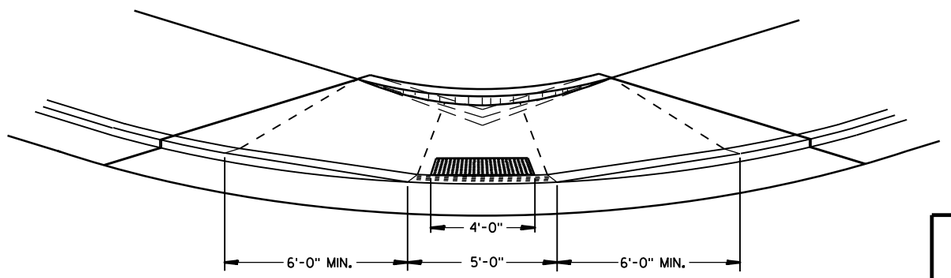
VIEW A-A



SECTION C-C



SECTION B-B



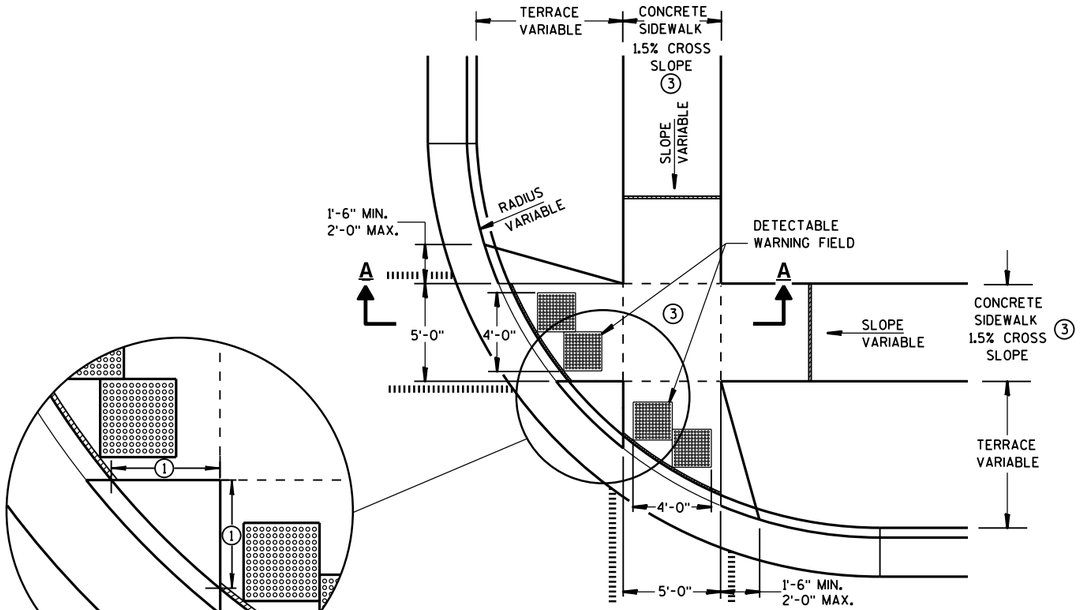
VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

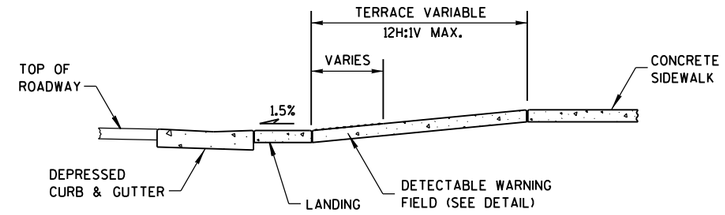
S.D.D. 8 D 5-15a



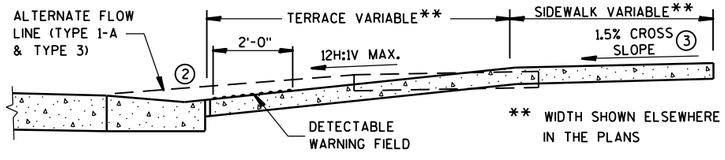
PLAN VIEW

TYPE 2 RAMP

(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

GENERAL NOTES

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

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

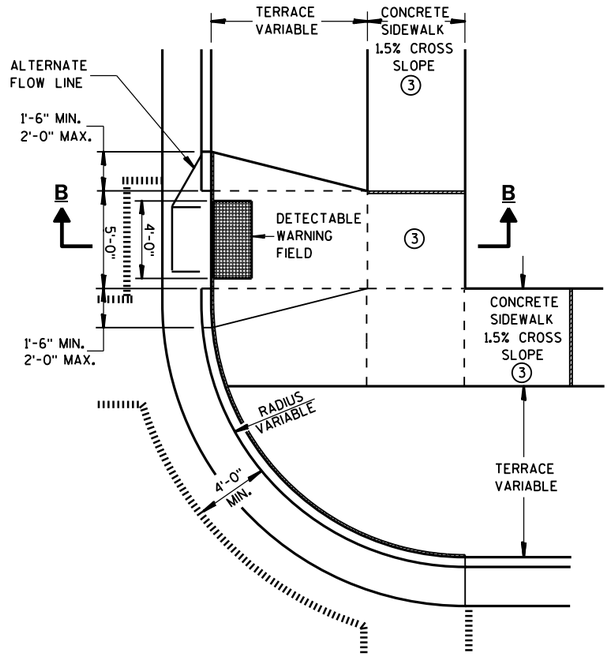
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



PLAN VIEW

TYPE 3 RAMP

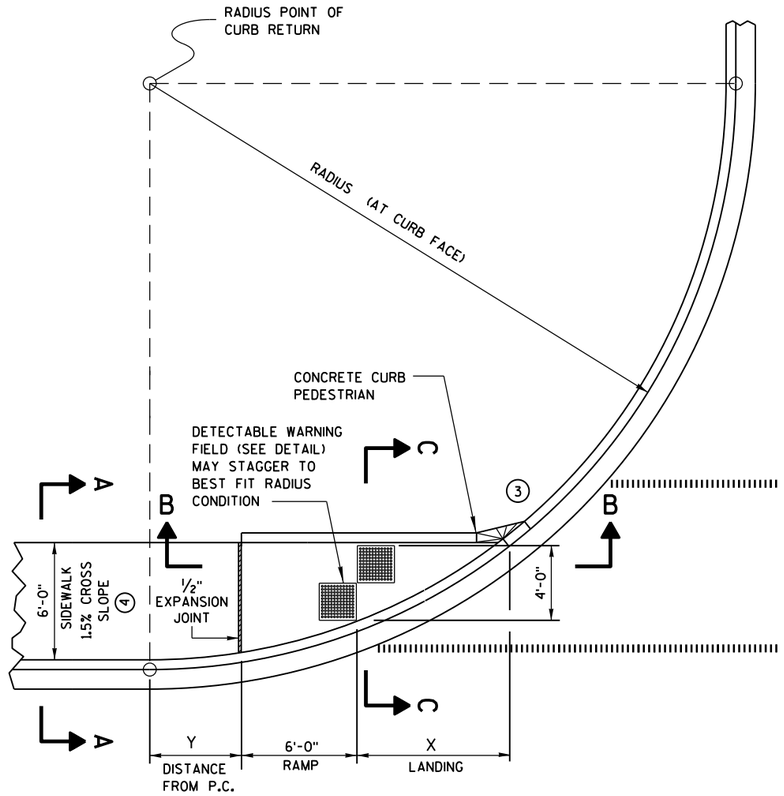
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS
TYPES 2 AND 3

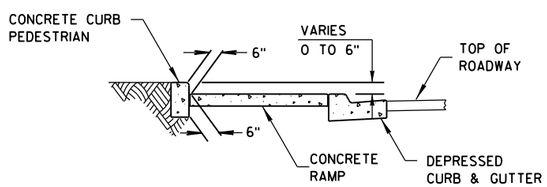
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

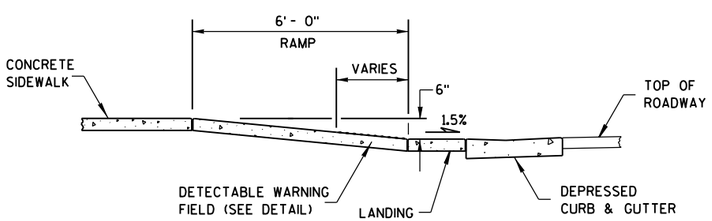
S.D.D. 8 D 5-15b



CURB RAMP TYPE 4A
PLAN VIEW



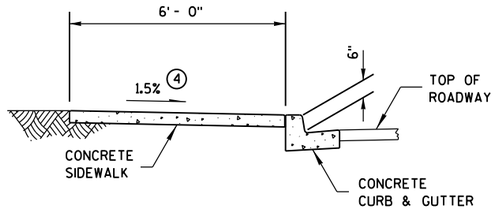
SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1¾"	2'-7¼"
30 FEET	7'-11¾"	4'-8¼"
40 FEET	9'-5¼"	6'-5"
50 FEET	10'-8¾"	7'-11¼"
60 FEET	11'-10¼"	9'-3½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

GENERAL NOTES

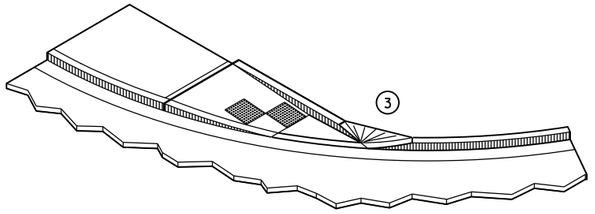
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

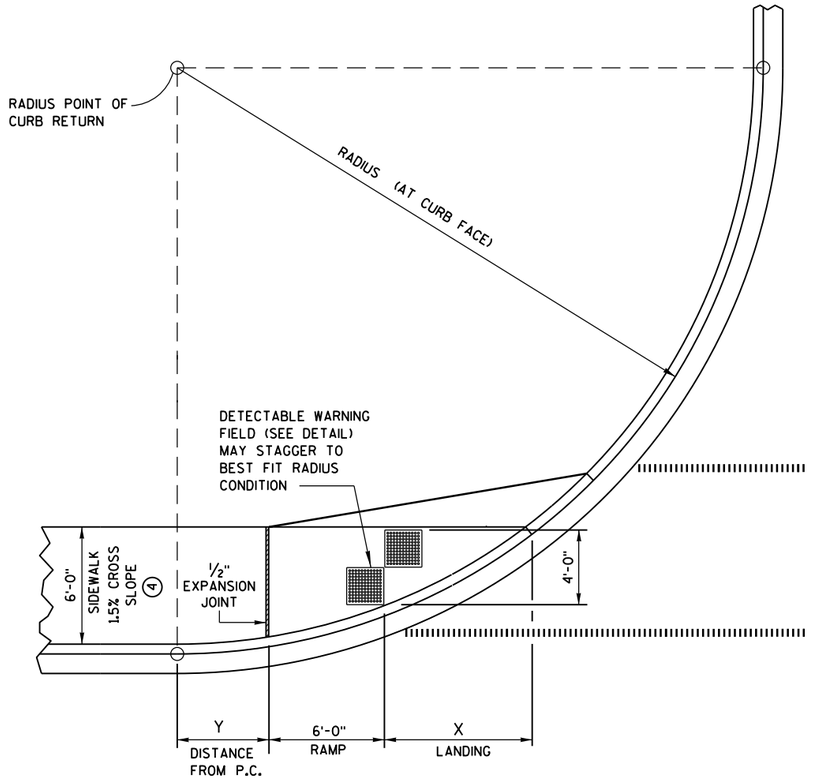
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

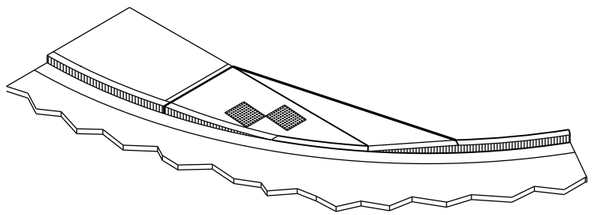
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

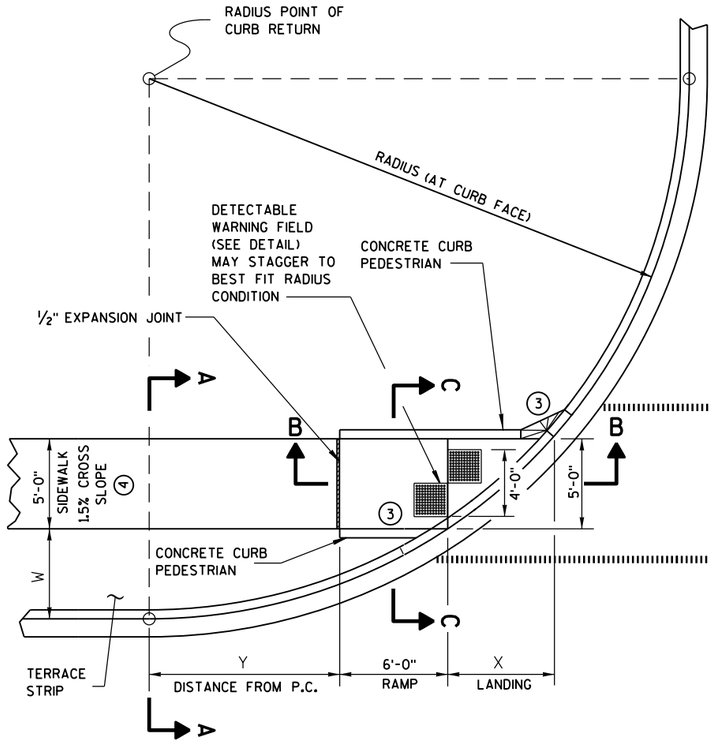
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

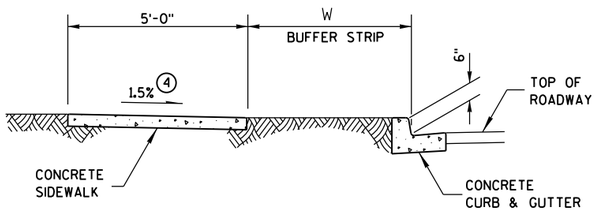
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

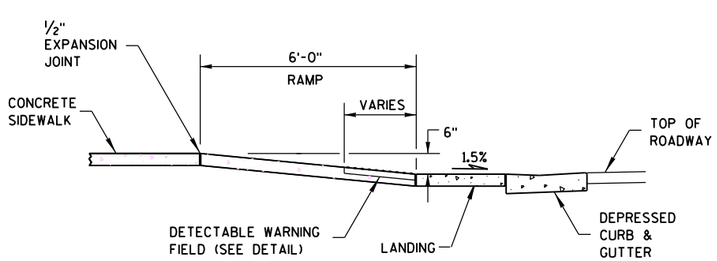
S.D.D. 8 D 5-15c



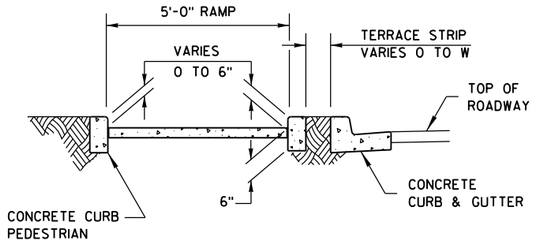
CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



SECTION B-B FOR TYPE 4B



SECTION C-C FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)

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'-5½"	4'-6½"	4'-8½"	6'-0"	4'-1"	7'-2¾"	3'-7"	8'-3½"	3'-1½"	9'-2½"
30 FEET	7'-3¾"	7'-1"	6'-5½"	8'-11½"	5'-9¼"	10'-7"	5'-2½"	12'-0"	4'-8¾"	13'-3¼"
40 FEET	8'-9½"	9'-2½"	7'-10"	11'-5¼"	7'-1"	13'-4½"	6'-5¾"	15'-¾"	5'-11½"	16'-7¼"
50 FEET	10'-¾"	11'-¾"	9'-¼"	13'-7¼"	8'-2½"	15'-9½"	7'-6½"	17'-9"	6'-11¾"	19'-6¼"
60 FEET	11'-2½"	12'-8¾"	10'-¾"	15'-6½"	9'-2¼"	17'-11¾"	8'-5¾"	20'-1¾"	7'-10½"	22'-1½"

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

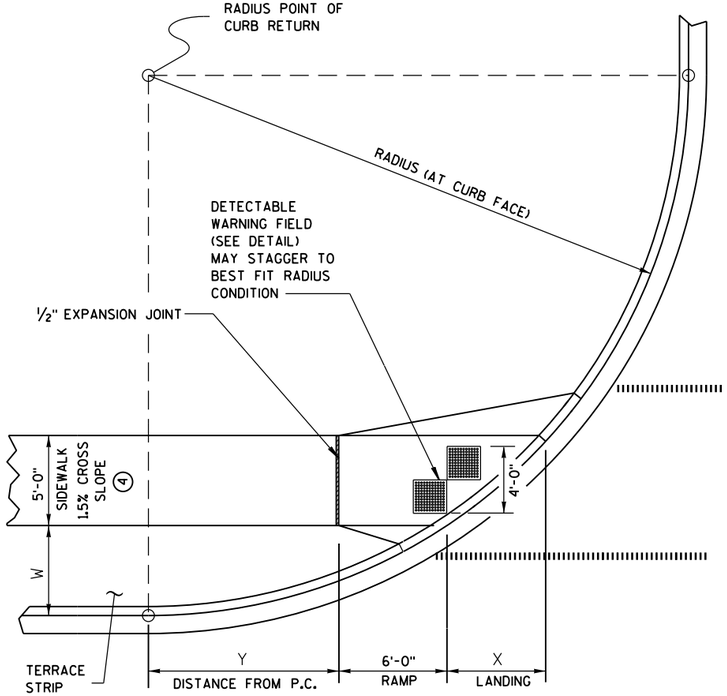
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

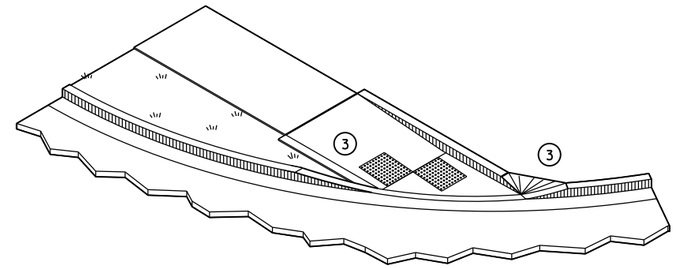
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

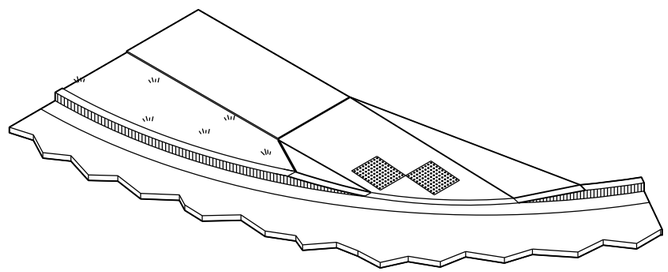
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



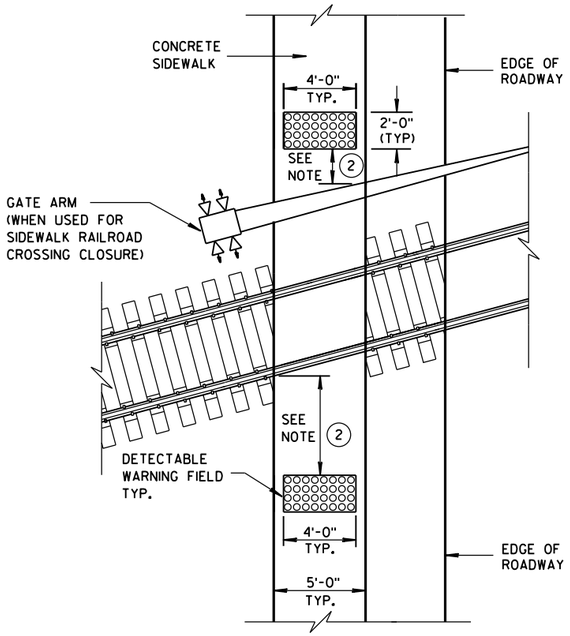
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

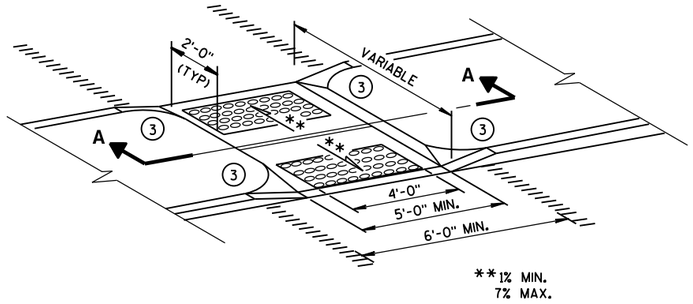
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-15d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

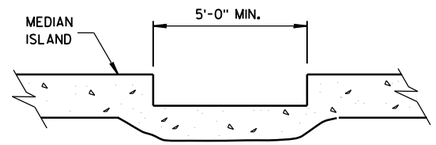
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(1) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

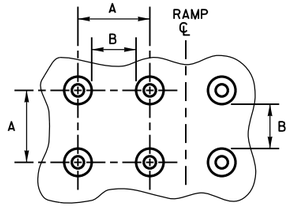
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

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

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



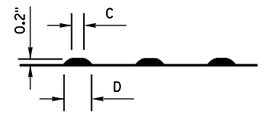
SECTION A-A



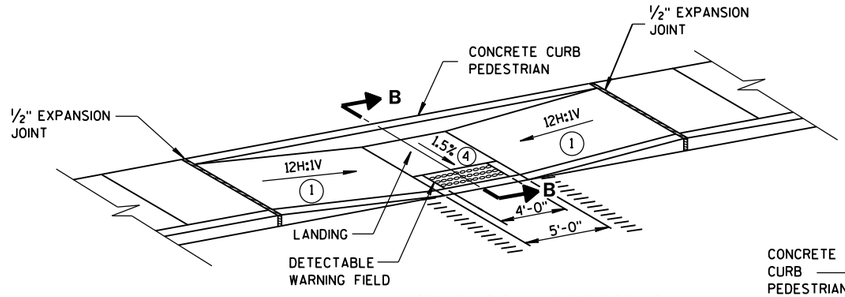
PLAN VIEW

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

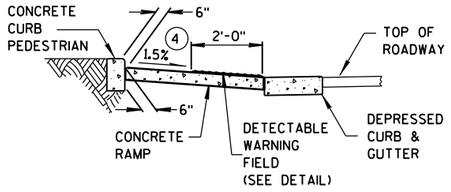
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

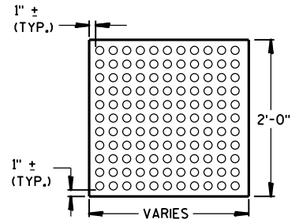


MID-BLOCK CROSSING
TYPE 7A



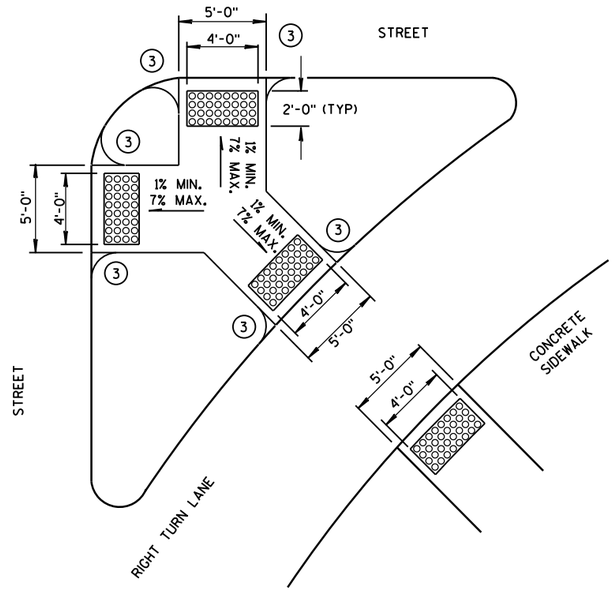
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

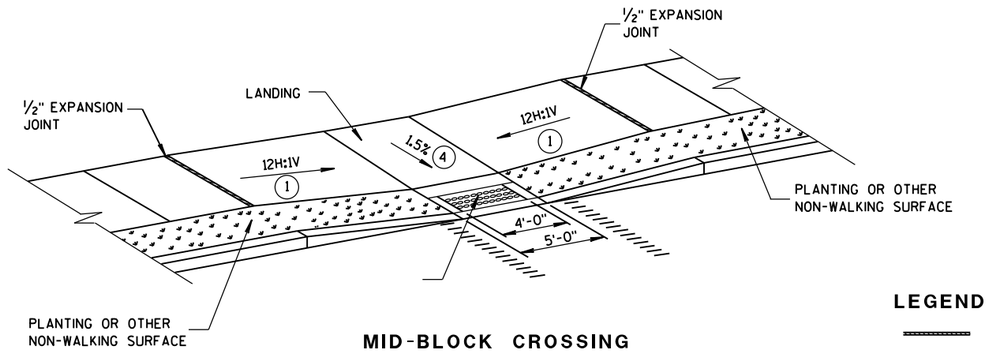


PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)



TYPE 6
DETECTABLE WARNING AT ISLANDS



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)

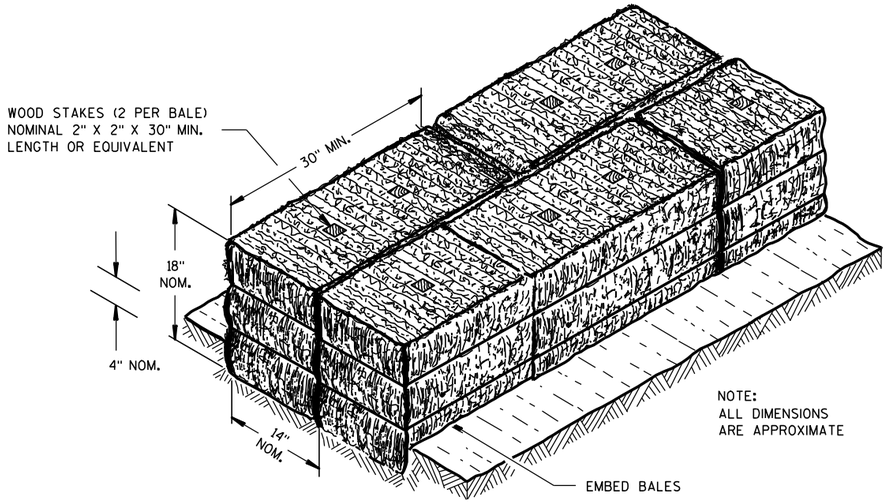
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

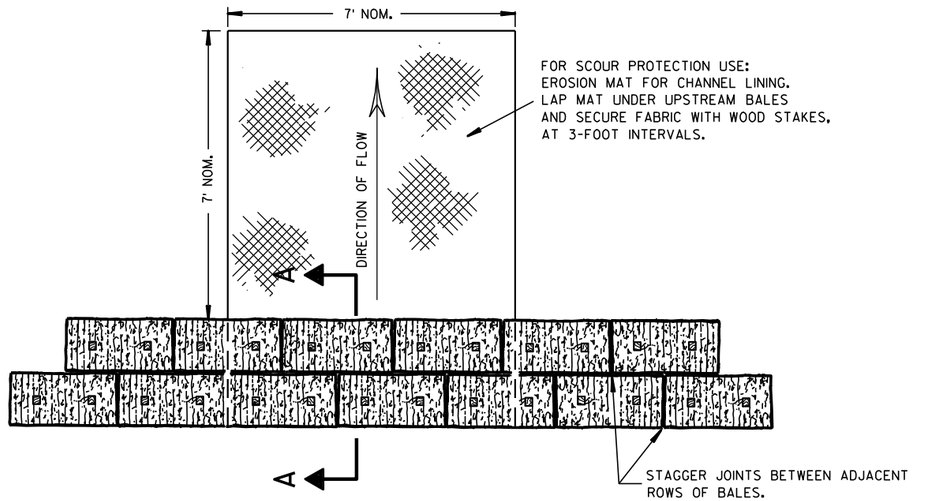
APPROVED
2-6-2013 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS [illegible] ENGINEER
FHWA

6

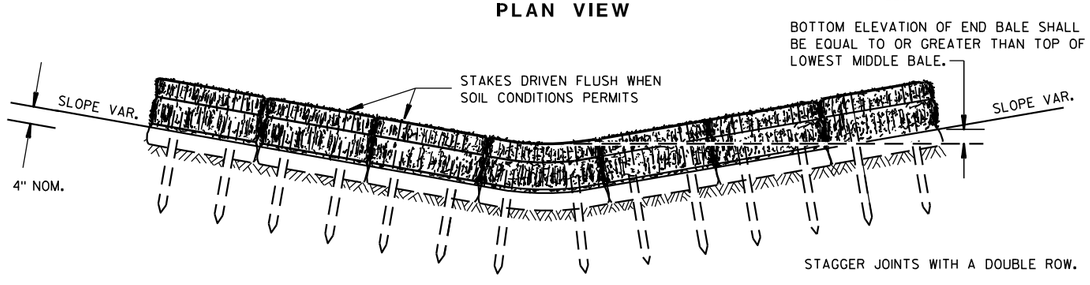
S.D.D. 8 D 5-15e



SECTION A-A



PLAN VIEW



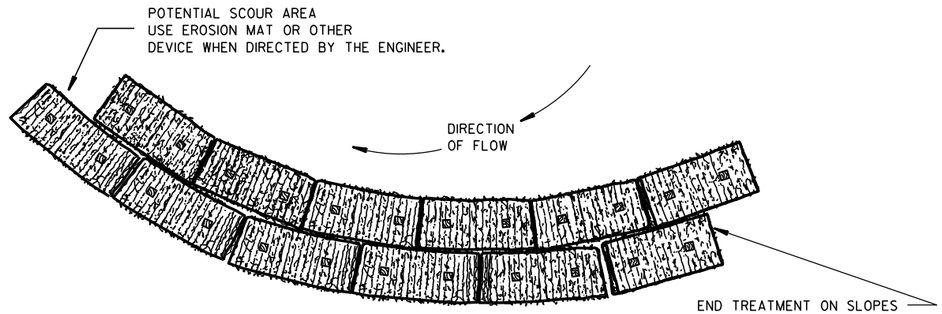
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

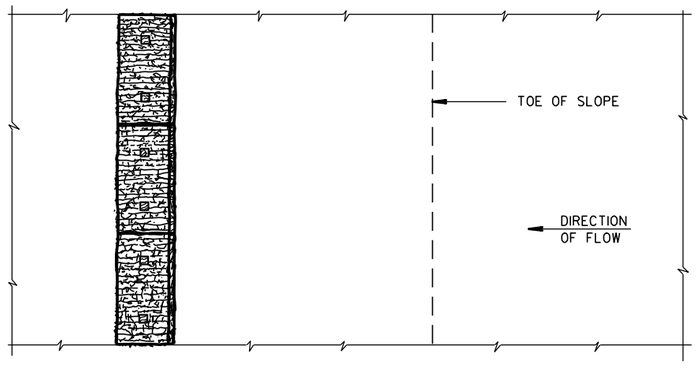
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

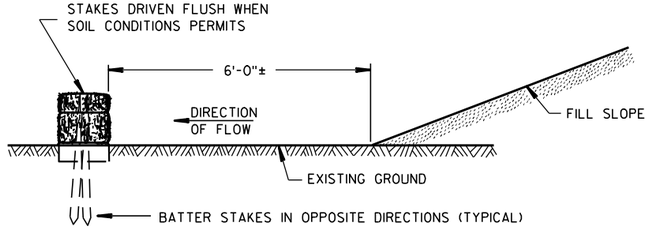


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

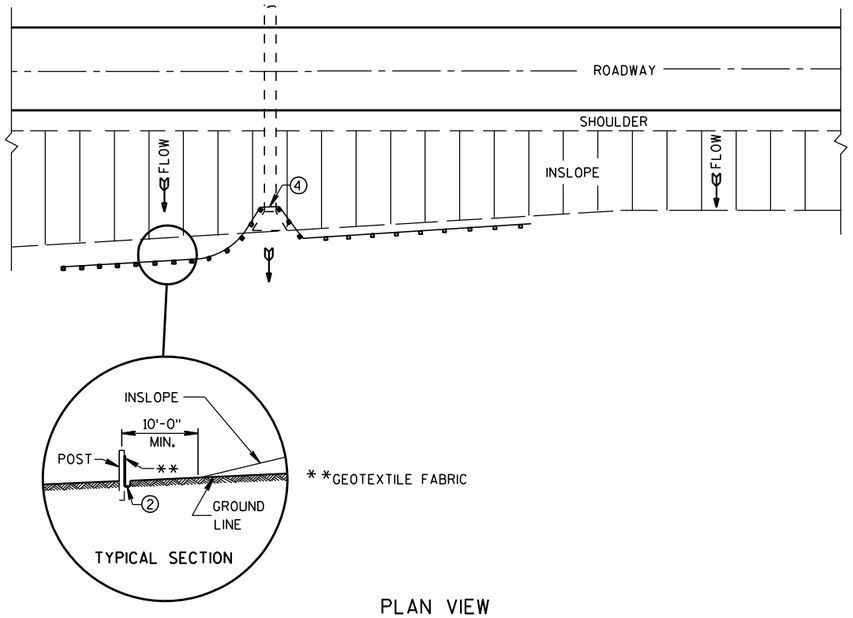
TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

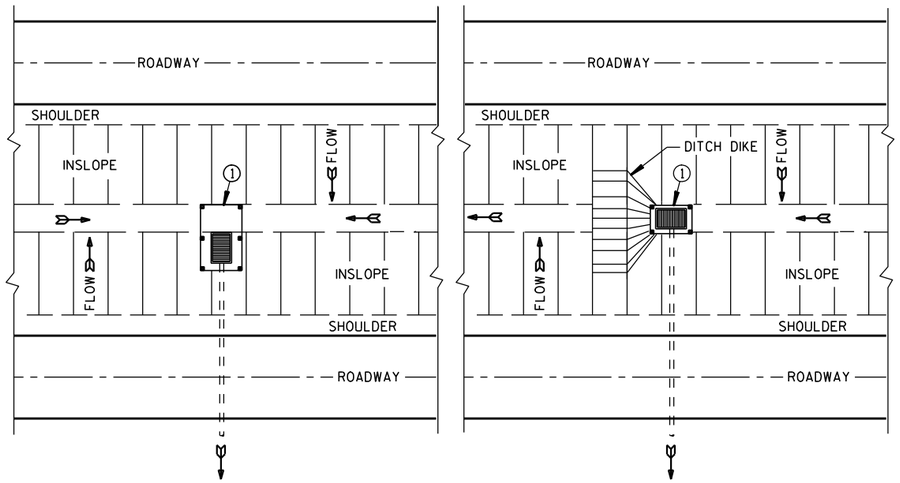
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



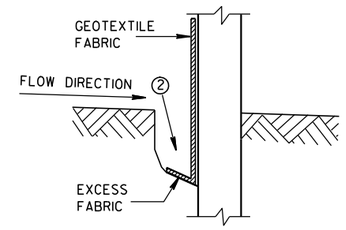
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

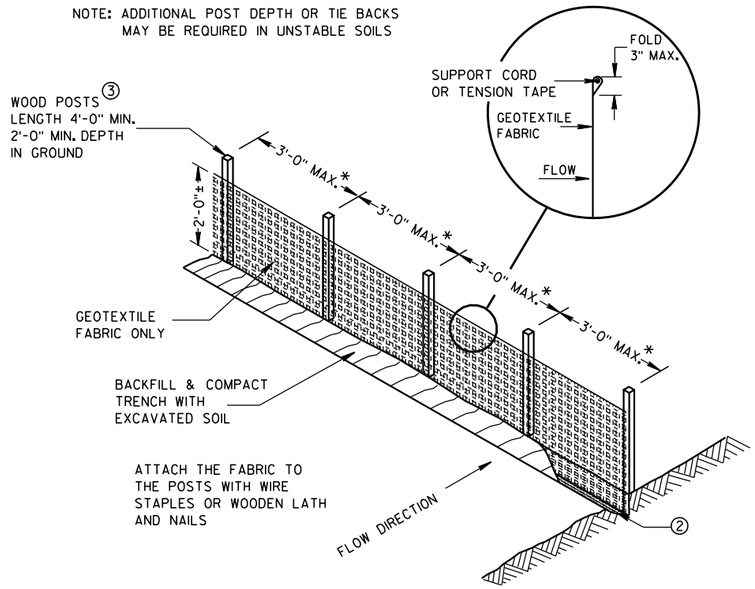
GENERAL NOTES

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

1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

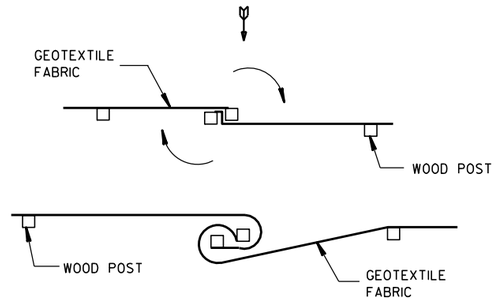


TRENCH DETAIL

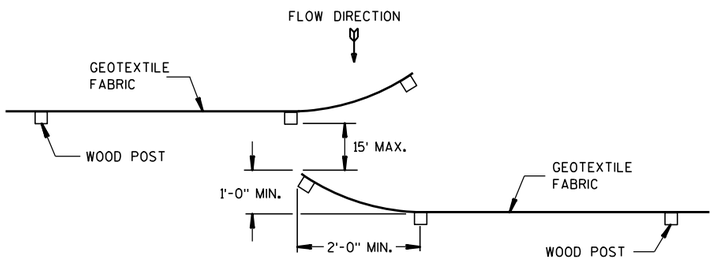


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

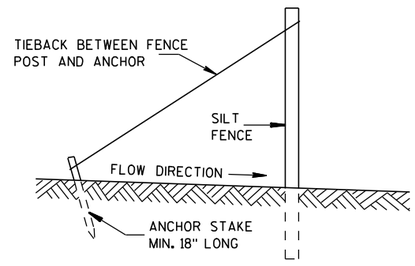


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

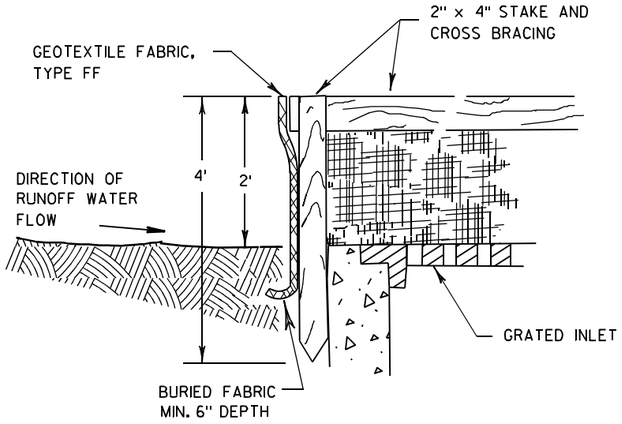
(WHEN REQUIRED BY THE ENGINEER)

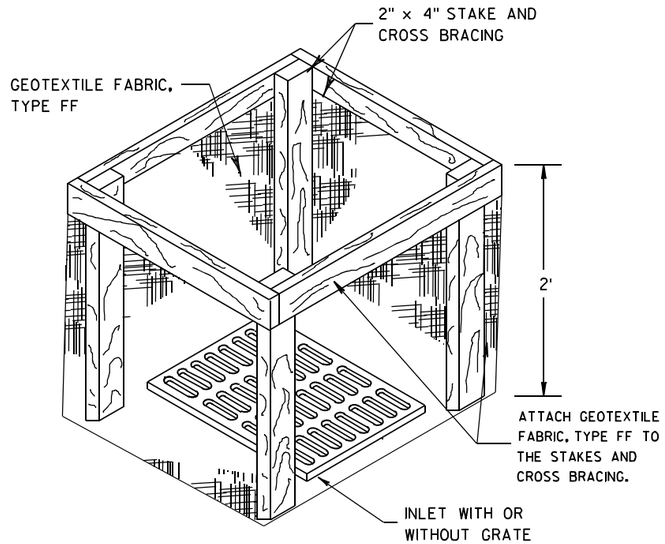
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

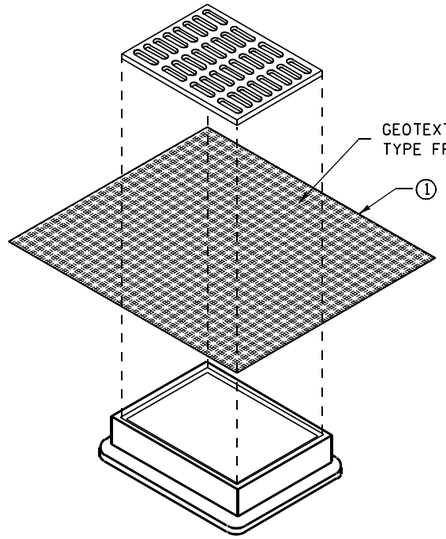
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 9-6



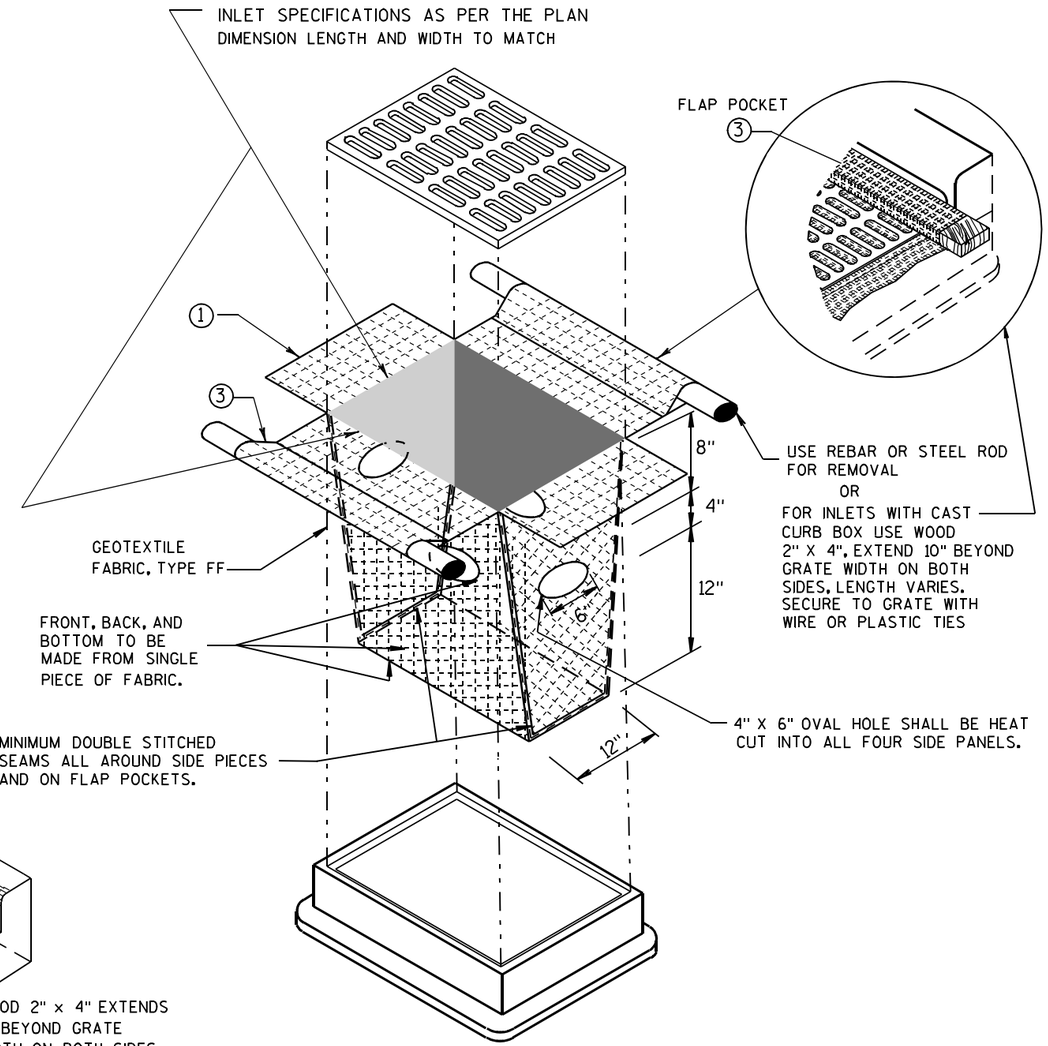


INLET PROTECTION, TYPE A



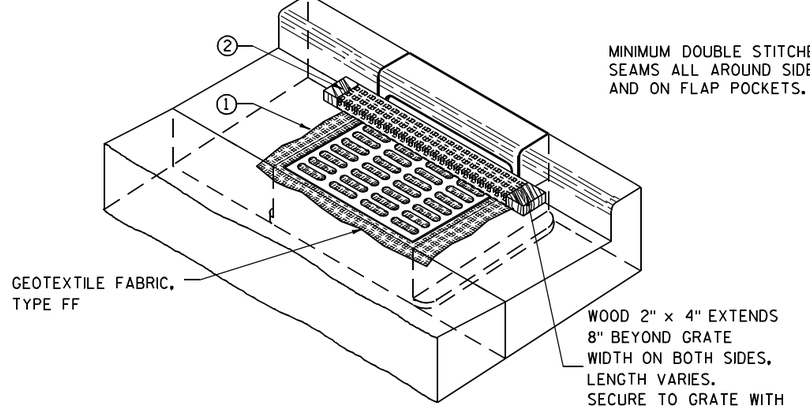
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

METAL APRON ENDWALLS

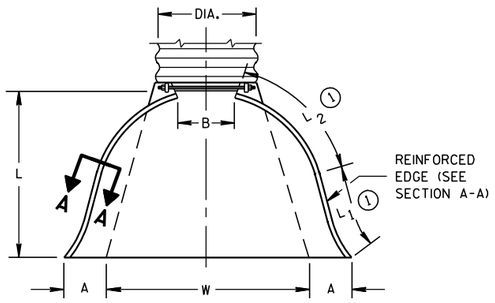
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	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

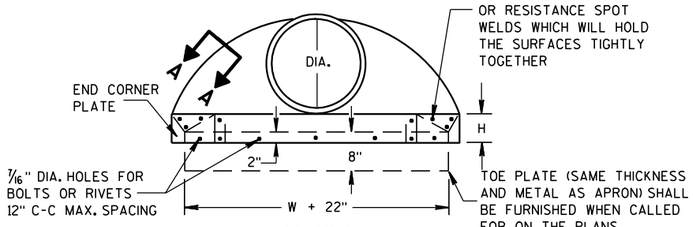
REINFORCED CONCRETE APRON ENDWALLS

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

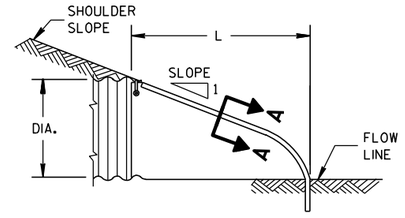
*MINIMUM
**MAXIMUM



PLAN VIEW

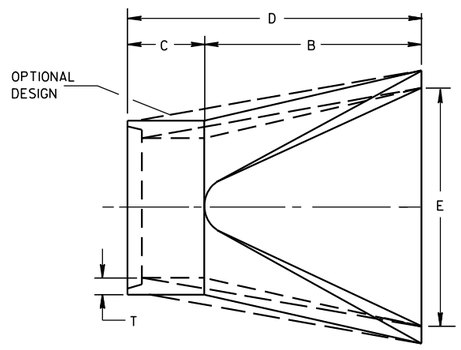


END VIEW

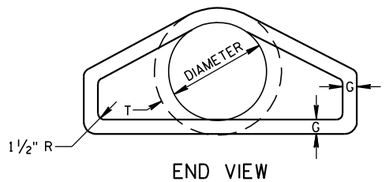


SIDE ELEVATION

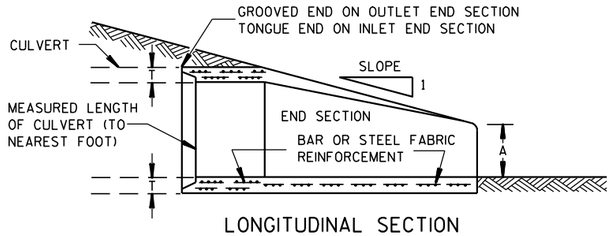
METAL ENDWALLS



PLAN

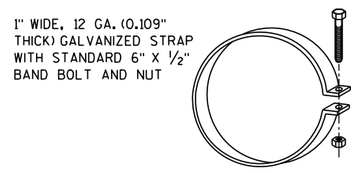


END VIEW



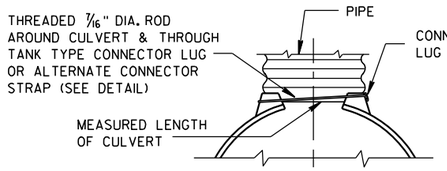
LONGITUDINAL SECTION

CONCRETE ENDWALLS

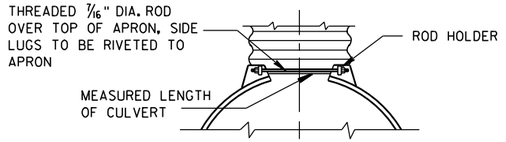


ALTERNATE FOR TYPE 1 CONNECTION

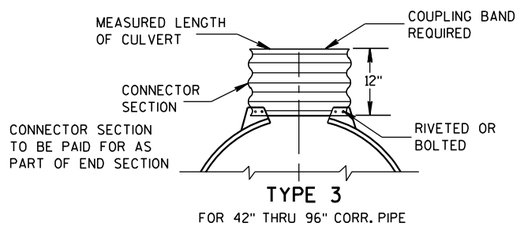
END SECTION CONNECTOR STRAP



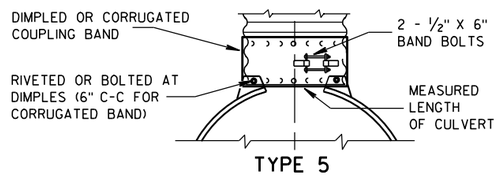
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

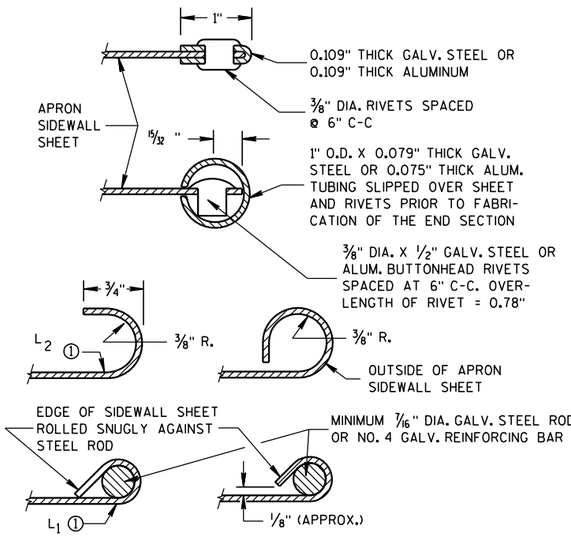
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

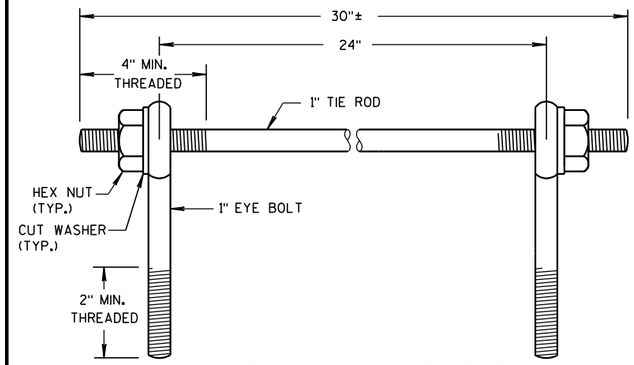
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

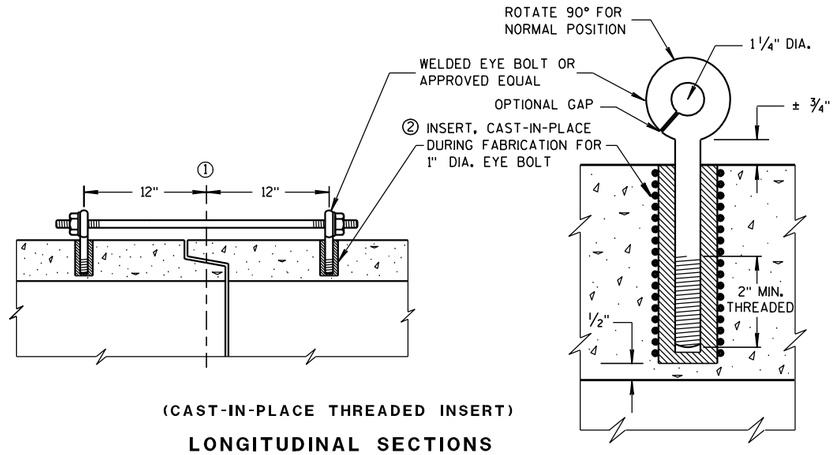
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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.

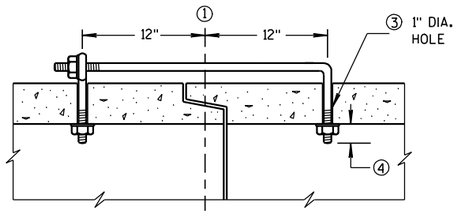
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

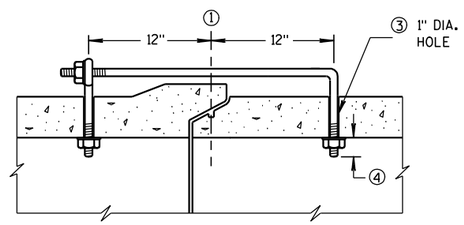
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

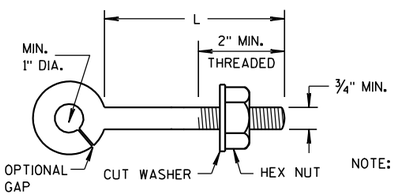


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

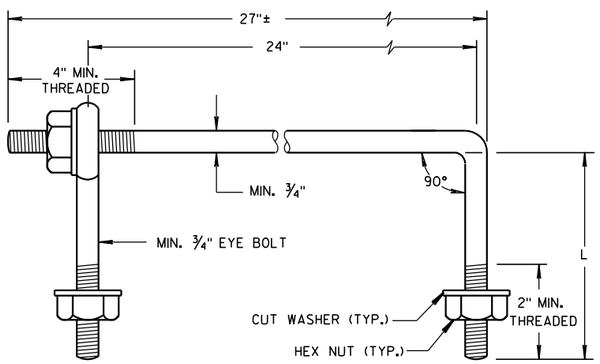
EYE BOLT DIMENSION TABLE

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"	



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

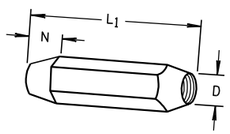
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

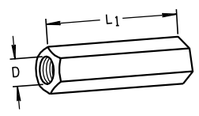
ADJUSTABLE TIE ROD TABLE

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



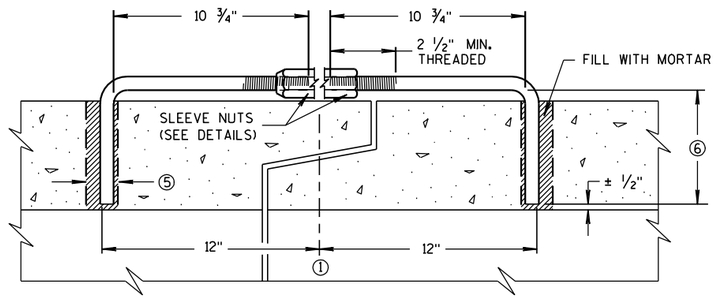
TAPERED



PLAIN

RIGHT AND LEFT THREADS

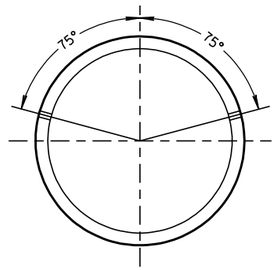
SLEEVE NUTS



LONGITUDINAL SECTION

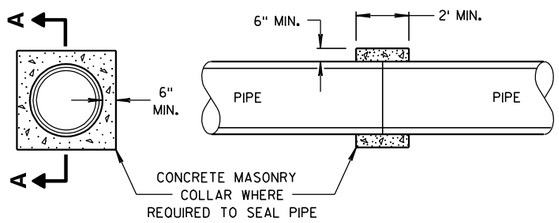
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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

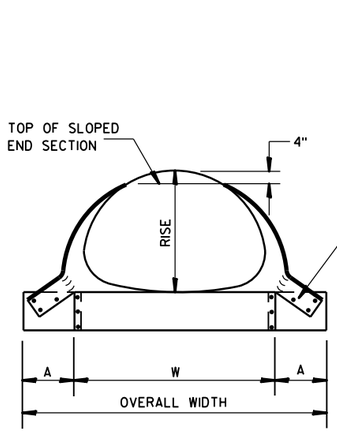
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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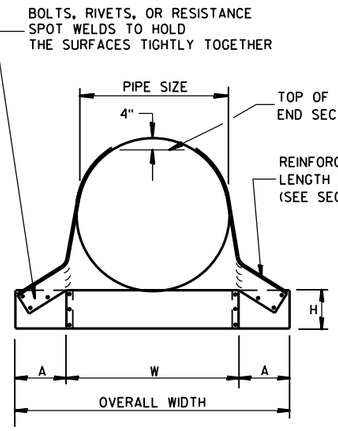
S.D.D. 8 F 4-7

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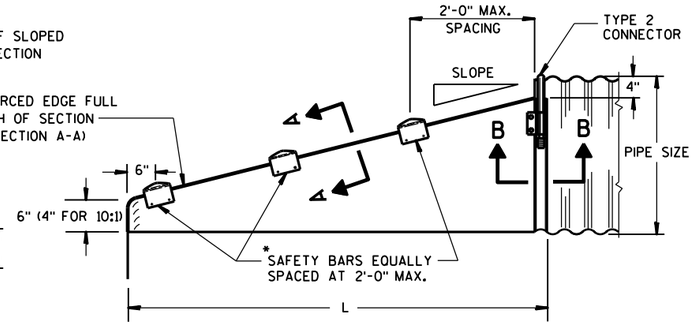
S.D.D. 8 F 4-7



FRONT VIEW



FRONT VIEW



SIDE VIEW

GENERAL NOTES

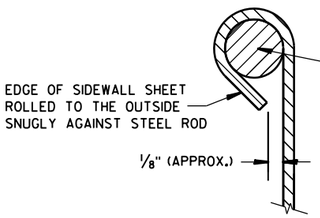
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

SLOPED END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, SECTION 521 FOR STEEL APRON ENDWALLS.

SAFETY BARS SHALL BE FABRICATED FROM GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL.

STEEL APRON ENDWALLS FOR CULVERT PIPE
SLOPED SIDE DRAINS

PIPE DIA. (IN.)	MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS					
		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	.064	8	6	21	37	4:1	20	6:1	30	10:1	70
18	.064	8	6	24	40	4:1	32	6:1	48	10:1	100
21	.064	8	6	27	43	4:1	44	6:1	66	10:1	130
24	.064	8	6	30	46	4:1	56	6:1	84	10:1	160
30	.109	12	9	36	60	4:1	80	6:1	120	10:1	220
36	.109	12	9	42	66	4:1	104	6:1	156	10:1	280
42	.109	16	12	48	80	4:1	128	6:1	192	——	——
48	.109	16	12	54	86	4:1	152	6:1	228	——	——
54	.109	16	12	60	92	4:1	176	6:1	264	——	——
60	.109	16	12	66	98	4:1	200	6:1	300	——	——



SECTION A-A

*NOTE:
THREE SAFETY BARS ARE SHOWN. ACTUAL NUMBER OF BARS REQUIRED AT A 2'-0" C-C MAX. SPACING WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

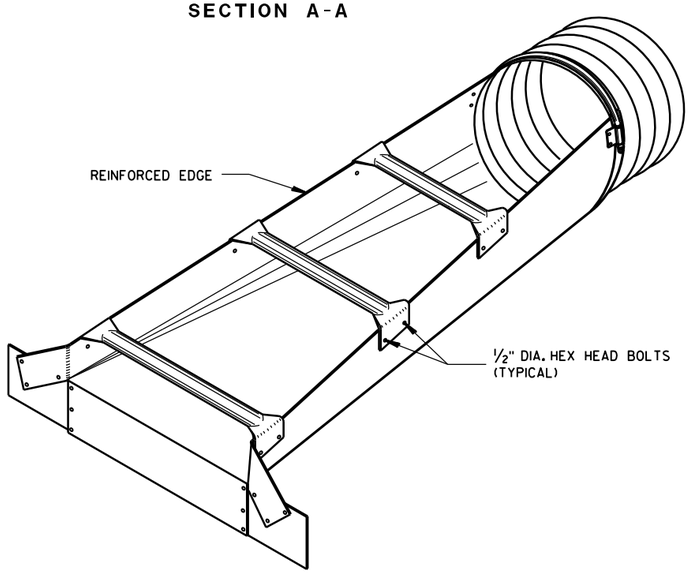
3" GALVANIZED PIPE. FLATTEN ENDS, THEN BEND OUTSIDE 4" TO MATCH END SECTION SIDES.

DETAIL OF SAFETY BAR

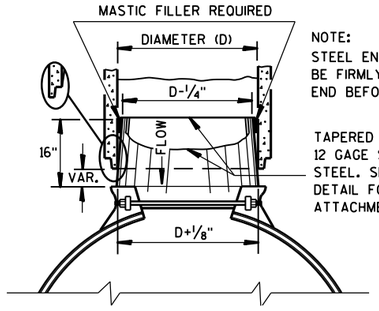
STEEL APRON ENDWALLS FOR PIPE ARCH
SLOPED SIDE DRAINS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) ①	DIMENSIONS (Inches) A	H	W	OVERALL WIDTH	L DIMENSIONS SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	17	13	.064 *	7	6	30	44	4:1	19	6:1	30	10:1 ②	70
18	21	15	.064 *	8	6	27	43	4:1	20	6:1	30	10:1	70
21	24	18	.064 *	8	6	30	46	4:1	32	6:1	48	10:1	100
24	28	20	.064 *	8	6	34	50	4:1	40	6:1	60	10:1	120
30	35	24	.079 *	12	9	41	65	4:1	56	6:1	84	10:1	160
36	42	29	.109 *	12	9	48	72	4:1	76	6:1	114	10:1	210
42	49	33	.109	16	12	55	87	4:1	92	6:1	138	——	——
48	57	38	.109	16	12	63	95	4:1	112	6:1	168	——	——
54	64	43	.109	16	12	70	102	4:1	132	6:1	198	——	——

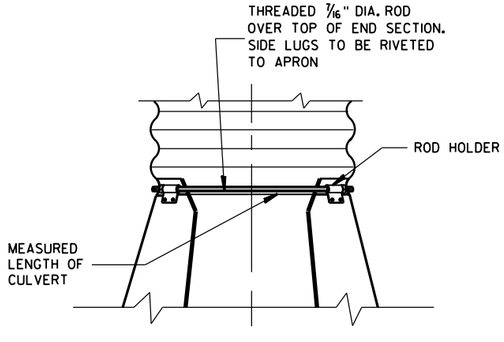
① * MINIMUM THICKNESS OF ALL 10:1 SLOPED SIDE DRAINS IS 0.109".
② ACTUAL SLOPE GREATER THAN 10:1.



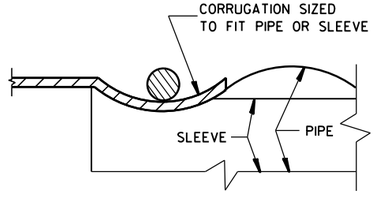
ISOMETRIC VIEW



STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



TYPE 2
CONNECTION DETAIL



SECTION B-B

STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

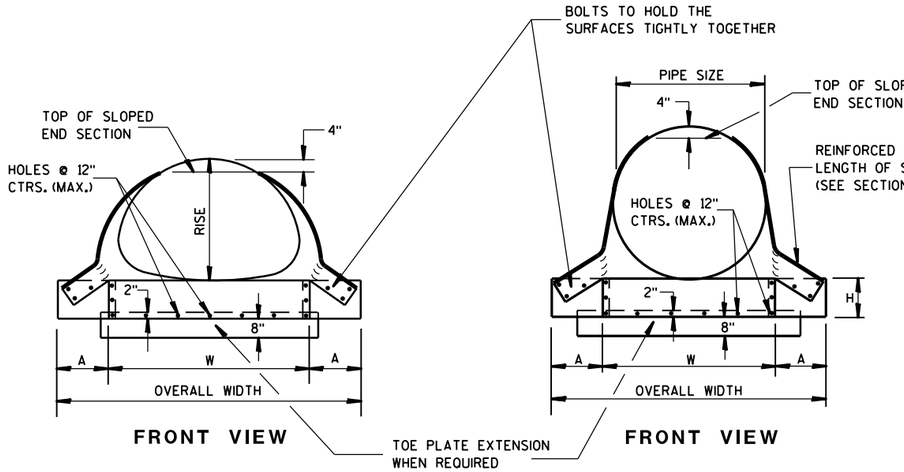
APPROVED
9/14/2012 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 8 F 7-5

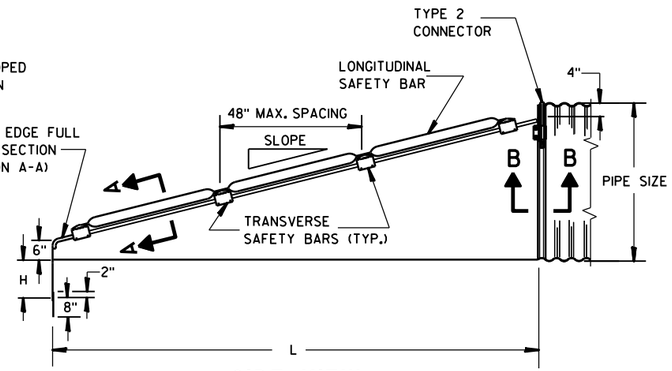
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S.D.D. 8 F 7-5



FRONT VIEW

FRONT VIEW



SIDE VIEW
(48" SIZE ILLUSTRATED)

GENERAL NOTES

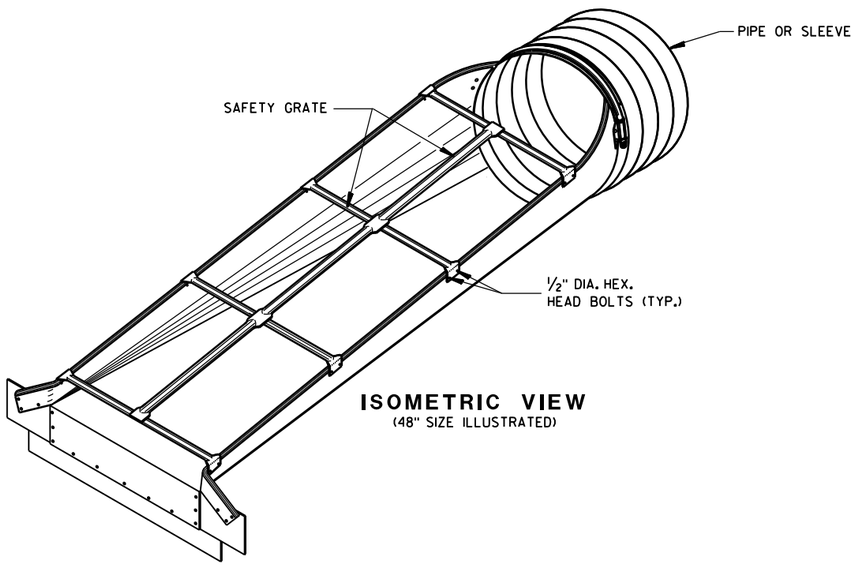
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

SAFETY GRATES SHALL BE FABRICATED FROM 3-INCH DIAMETER GALVANIZED PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL. THE LONGITUDINAL BAR SHALL BE WELDED TO THE TRANSVERSE BARS WHERE THE BARS CROSS. THE NUMBER OF TRANSVERSE BARS REQUIRED WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

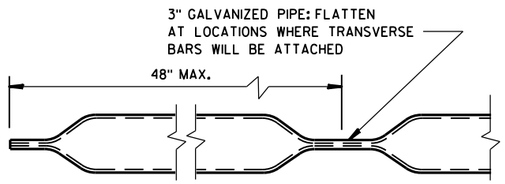
SLOPED STEEL ENDWALLS LOCATED AT THE ENDS OF CONCRETE CULVERT PIPE SHALL BE FURNISHED WITH STEEL ADAPTER SLEEVES.

STEEL APRON ENDWALLS FOR CULVERT PIPE CROSS DRAINS

PIPE DIA. (IN.)	MIN. THICK.		DIMENSIONS (Inches)				L DIMENSIONS			
	IN.	GAGE	A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
36	.109	12	12	9	42	66	4:1	104	6:1	156
42	.109	12	16	12	48	80	4:1	128	6:1	192
48	.109	12	16	12	54	86	4:1	152	6:1	228
54	.109	12	16	12	60	92	4:1	176	6:1	264
60	.109	12	16	12	66	98	4:1	200	6:1	300



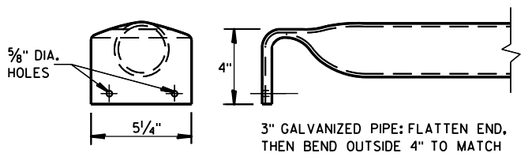
ISOMETRIC VIEW
(48" SIZE ILLUSTRATED)



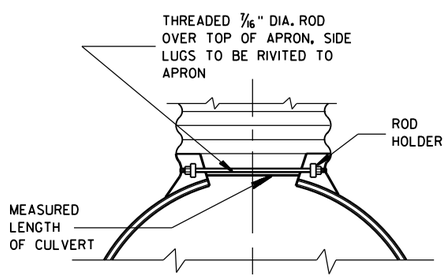
LONGITUDINAL SAFETY BAR

STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED CROSS DRAINS

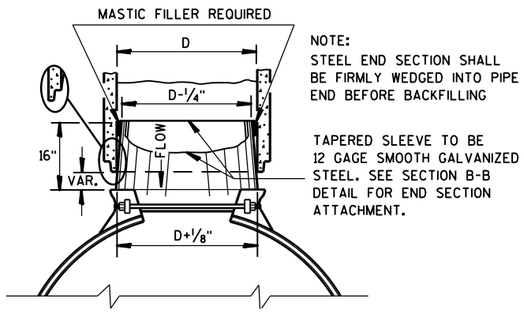
EQUIV. DIA. (IN.)	INCHES		MIN. THICK.		DIMENSIONS (Inches)				L DIMENSIONS			
	SPAN	RISE	IN.	GAGE	A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
30	35	24	.079	14	12	9	41	65	4:1	56	6:1	84
36	42	29	.109	12	12	9	48	72	4:1	76	6:1	114
42	49	33	.109	12	16	12	55	87	4:1	92	6:1	138
48	57	38	.109	12	16	12	63	95	4:1	112	6:1	168
54	64	43	.109	12	16	12	70	102	4:1	132	6:1	198
60	71	47	.109	12	16	12	77	109	4:1	148	6:1	222



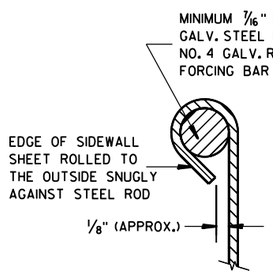
TRANSVERSE SAFETY BAR



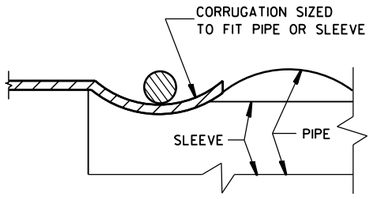
TYPE 2 CONNECTOR DETAIL



STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



SECTION A-A



SECTION B-B

STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

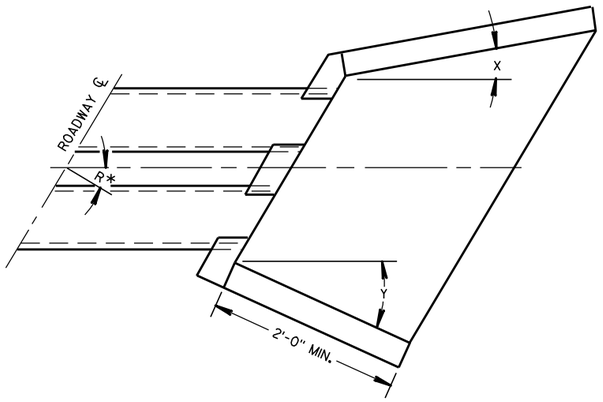
FHWA

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S.D.D. 8 F 8-2

6

S.D.D. 8 F 8-2



WINGWALL ANGLE DETAILS

INLET			OUTLET		
R*	X	Y	R*	X	Y
0 - 7°	30°	30°	0 - 15°	15°	15°
8 - 22°	25°	"	16 - 45°	10°	"
23 - 37°	20°	"	46 - 75°	5°	"
38 - 52°	15°	"	OVER 75°	0°	"
53 - 67°	10°	"			
68 - 82°	5°	"			
OVER 82°	0°	"			

*R = NUMBER OF DEGREES RIGHT OR LEFT HAND FORWARD

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.

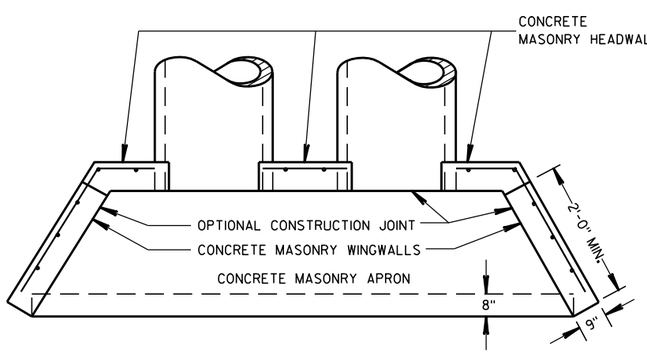
FILL SLOPES FLATTER THAN 2 ½:1 SHALL BE WARPED TO MEET THE TOP OF THE WINGWALLS.

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

(1) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS SPACED 12" C-C IN BOTH DIRECTIONS.

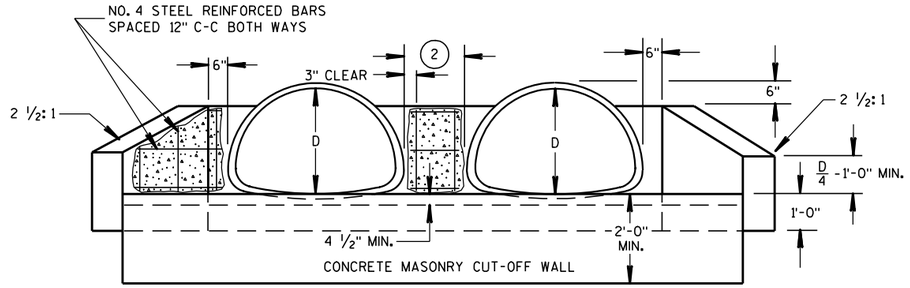
(2) THE SPACE BETWEEN PIPES SHALL BE AS FOLLOWS:

DIAMETER OR SPAN	SPACE
UP TO AND INCLUDING 48"	2'-0"
OVER 48" TO 72"	½ DIA. OR SPAN
OVER 72"	3'-0"



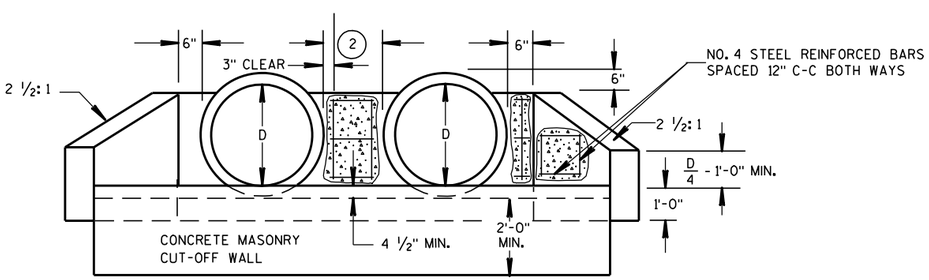
PLAN VIEW

CULVERT PIPE AND PIPE ARCH



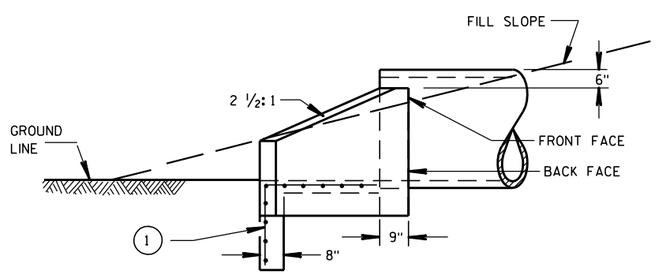
END ELEVATION

PIPE ARCH



END ELEVATION

CULVERT PIPE



SIDE ELEVATION

CULVERT PIPE AND PIPE ARCH

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

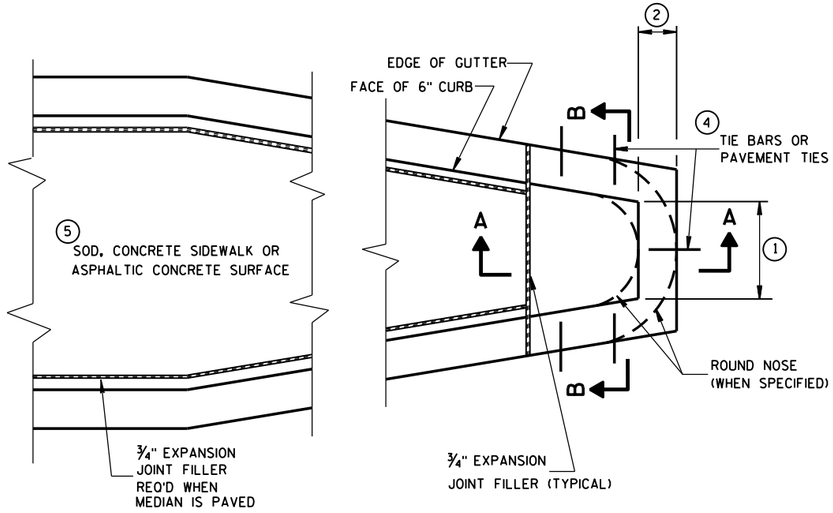
APPROVED
9/14/98 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

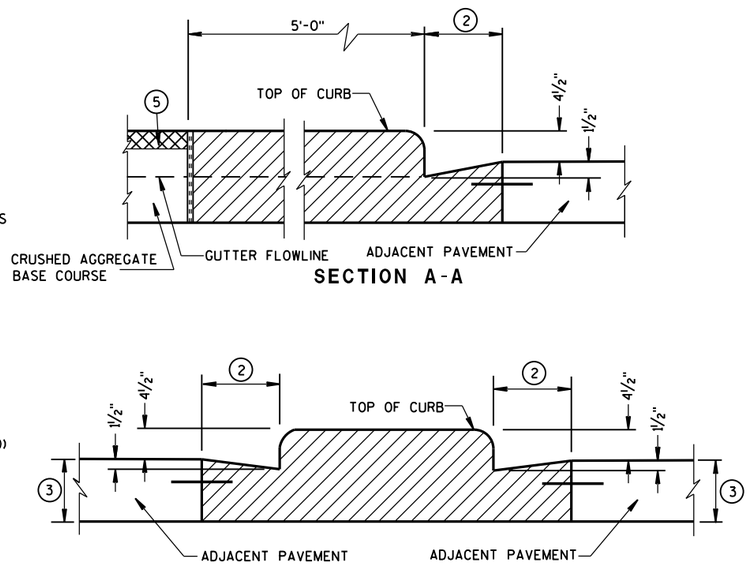
6

S.D.D. 8 F 10-1

6

S.D.D. 8 F 10-1





CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

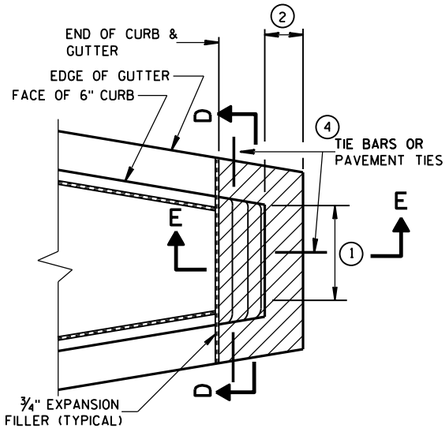
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

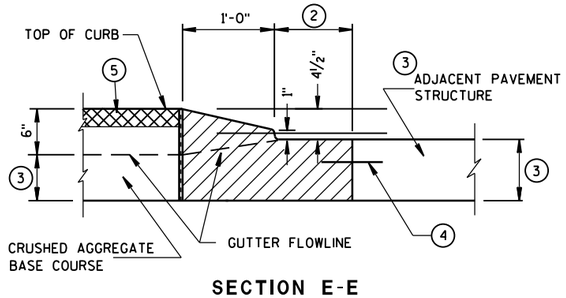
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

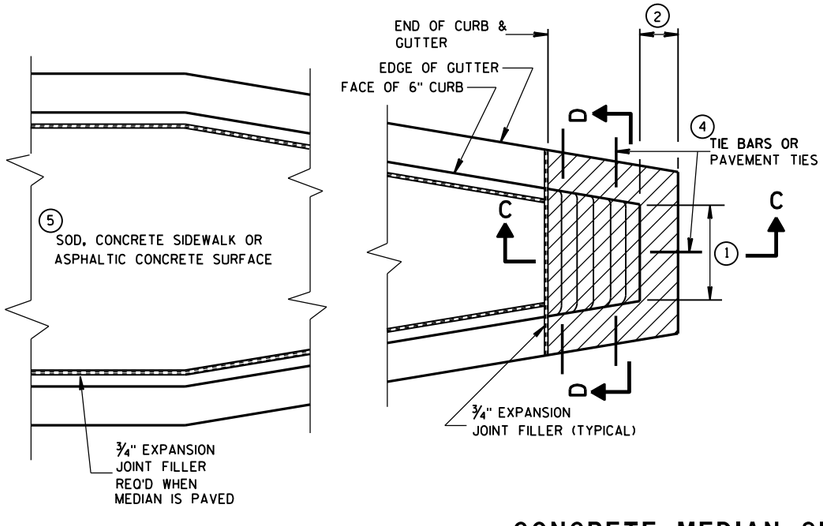
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

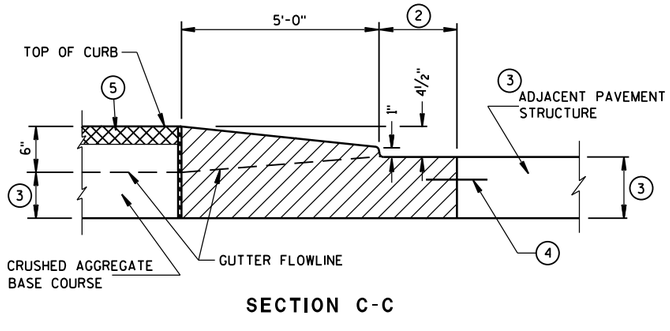




SECTION E-E

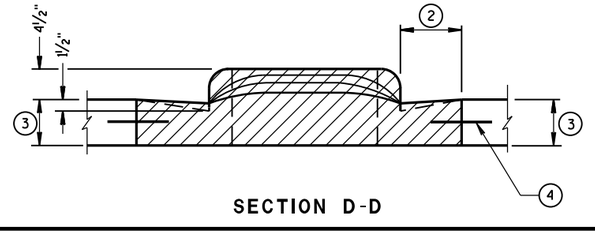
CONCRETE MEDIAN SLOPED NOSE TYPE 2





SECTION C-C

CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION D-D

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

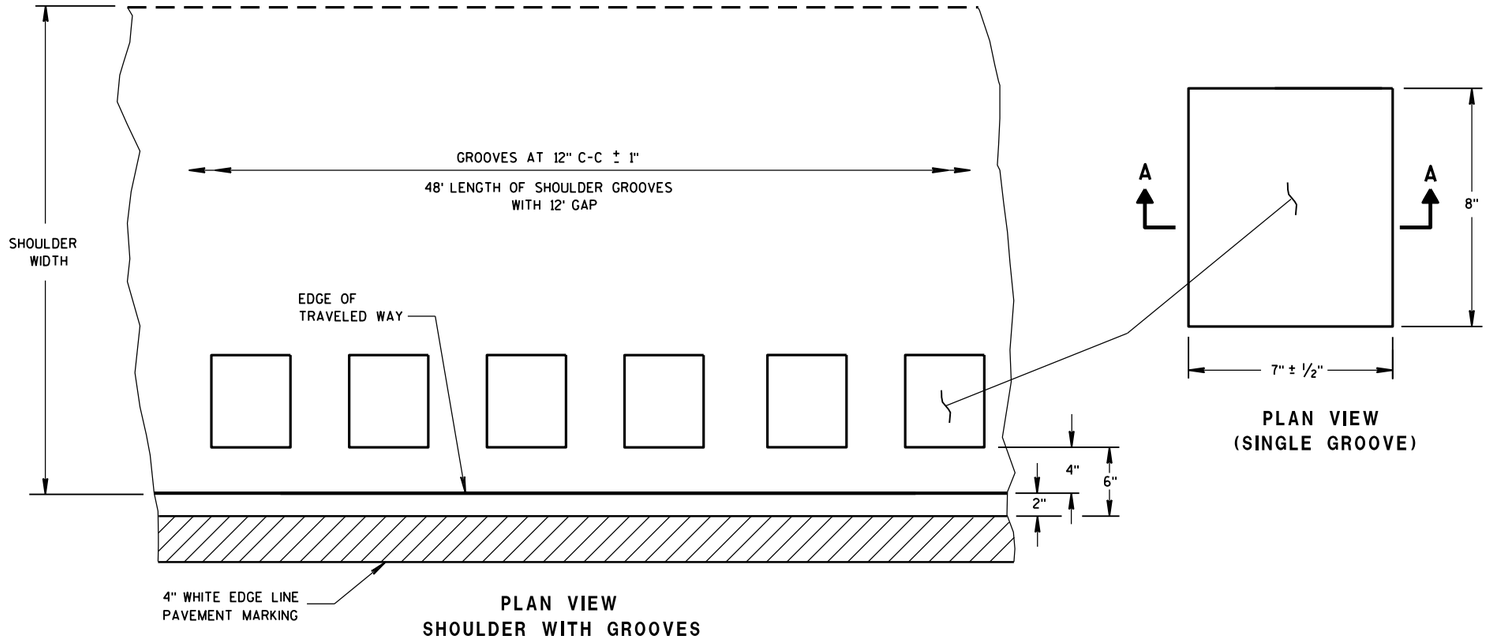
APPROVED
6/8/2006
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER
FHWA

6

S.D.D. 11 B 2-2

6

S.D.D. 11 B 2-2



PLAN VIEW
SHOULDER WITH GROOVES

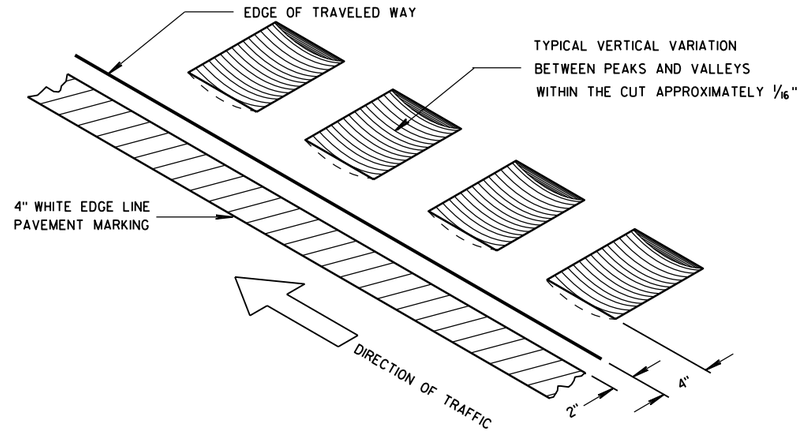
PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

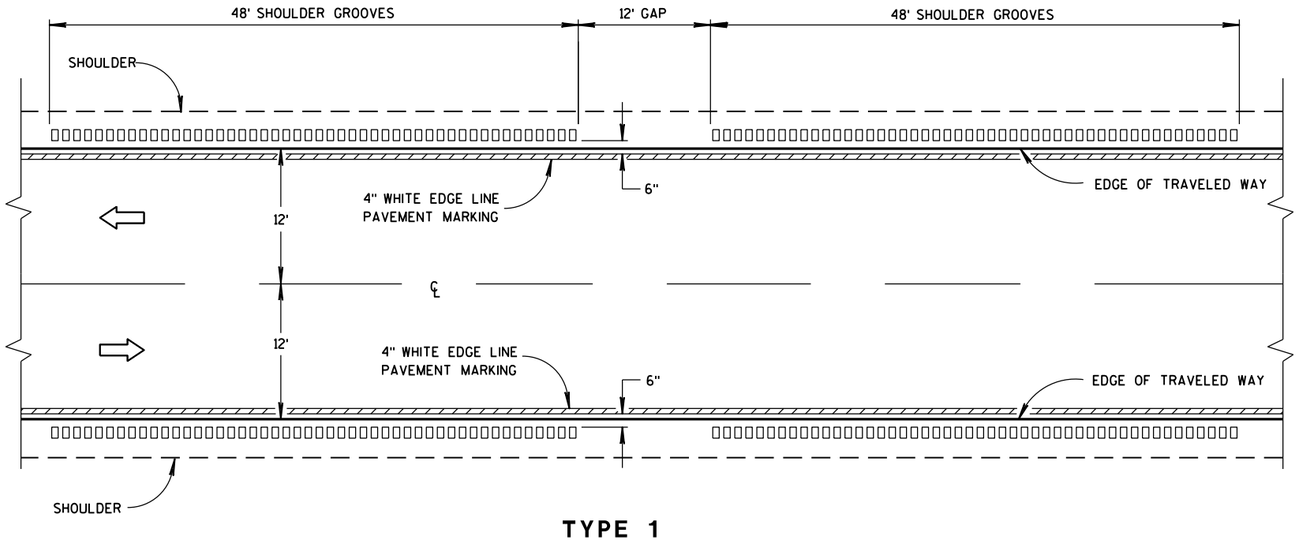
DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

(1) SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.

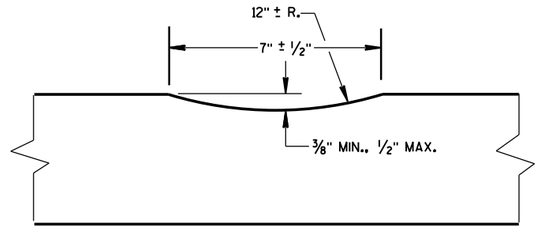


ISOMETRIC

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP



TYPE 1
2-LANE SHOULDER RUMBLE STRIP



SECTION A-A

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

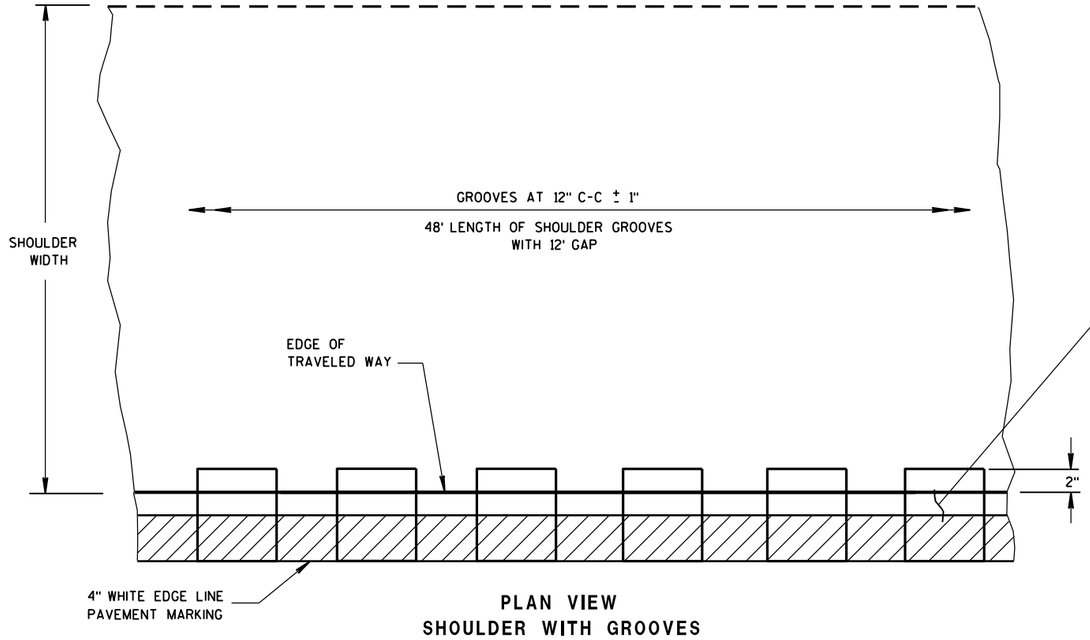
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

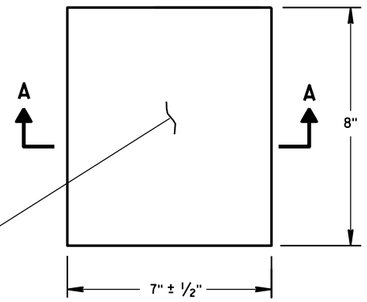
S.D.D. 13 A 10-1a

6

S.D.D. 13 A 10-1a



PLAN VIEW
SHOULDER WITH GROOVES



PLAN VIEW
(SINGLE GROOVE)

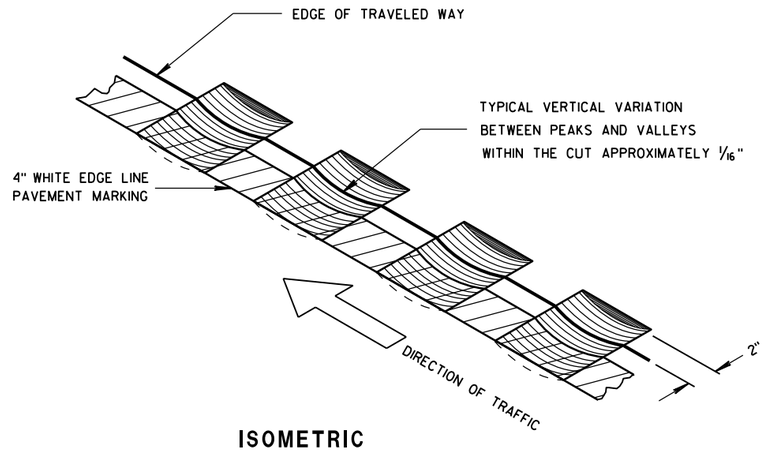
PLACEMENT DETAIL FOR TYPE 2 MILLED RUMBLE STRIP

GENERAL NOTES

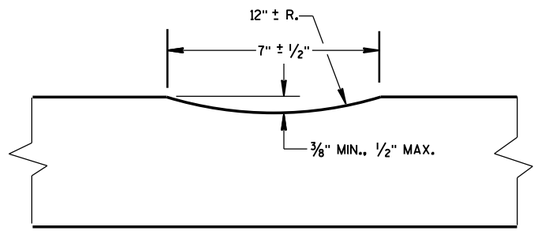
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

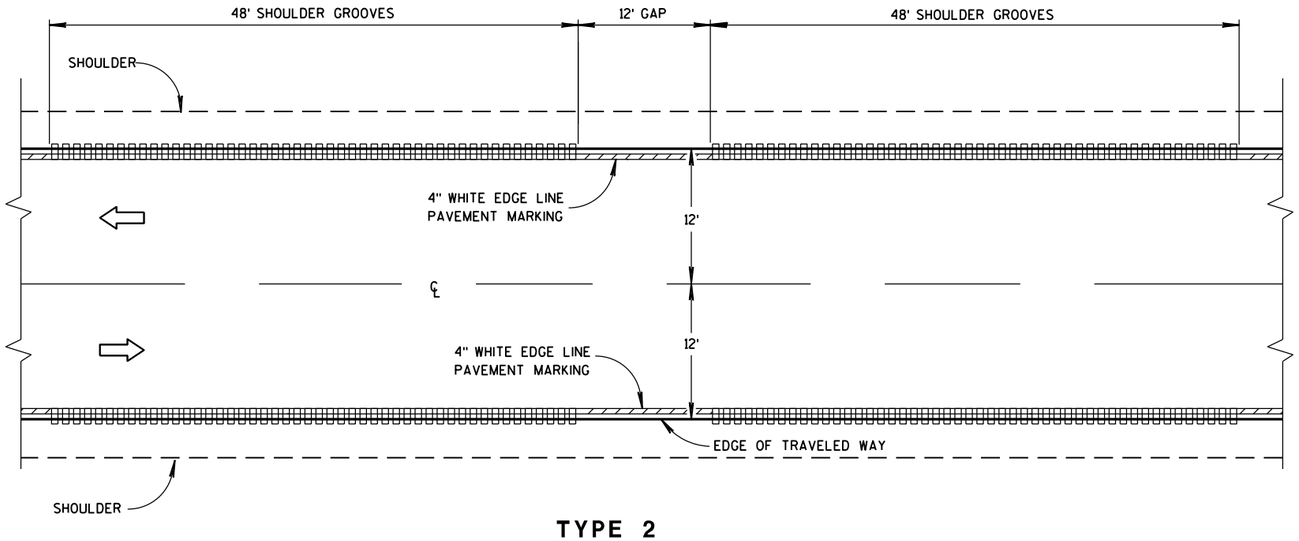
(1) SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



ISOMETRIC



SECTION A-A



TYPE 2
2-LANE SHOULDER RUMBLE STRIP

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

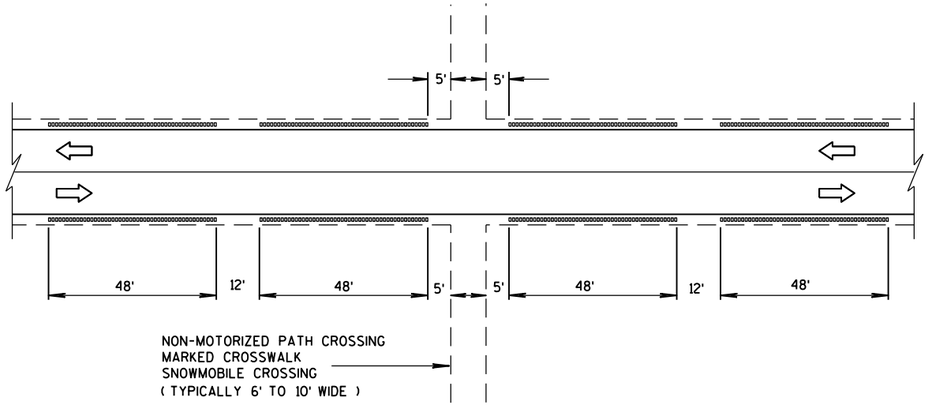
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

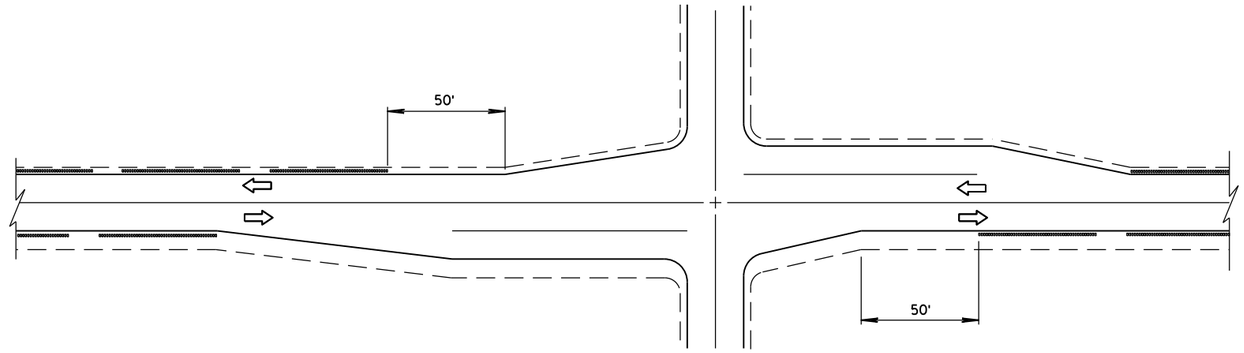
S.D.D. 13 A 10-1b

6

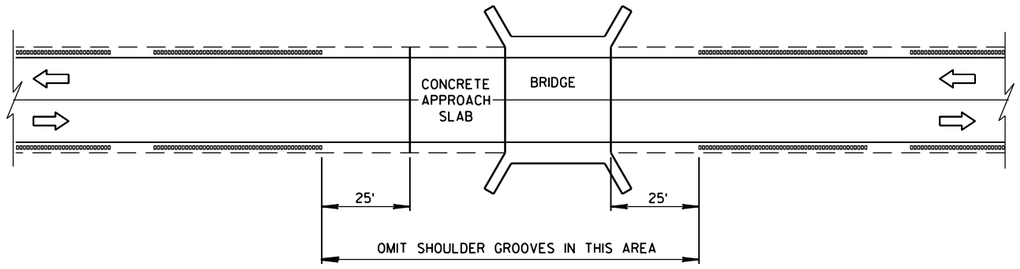
S.D.D. 13 A 10-1b



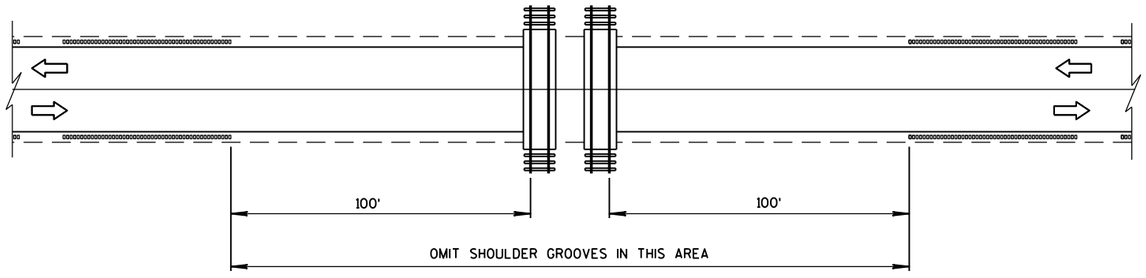
SHOULDER GROOVES AT MISCELLANEOUS CROSSINGS



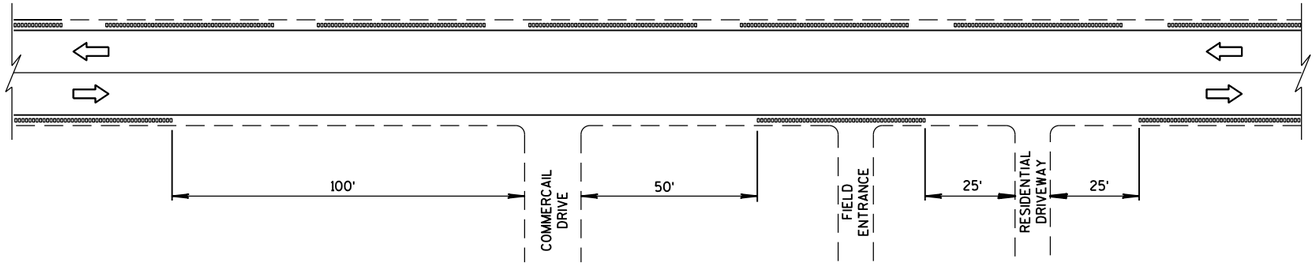
SHOULDER GROOVES AT INTERSECTIONS



SHOULDER GROOVES AT BRIDGES



SHOULDER GROOVES AT RAILROADS



SHOULDER GROOVES AT DRIVEWAYS (1)

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

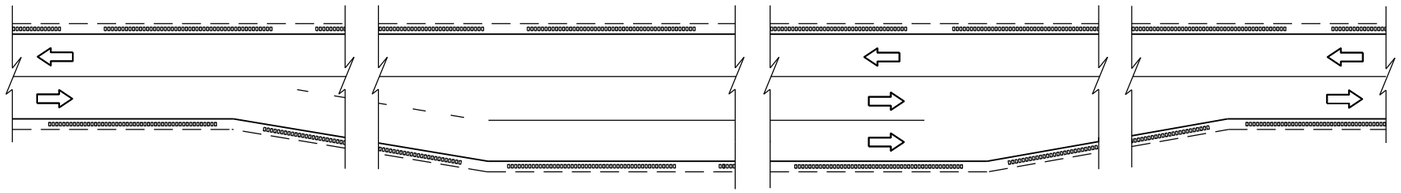
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

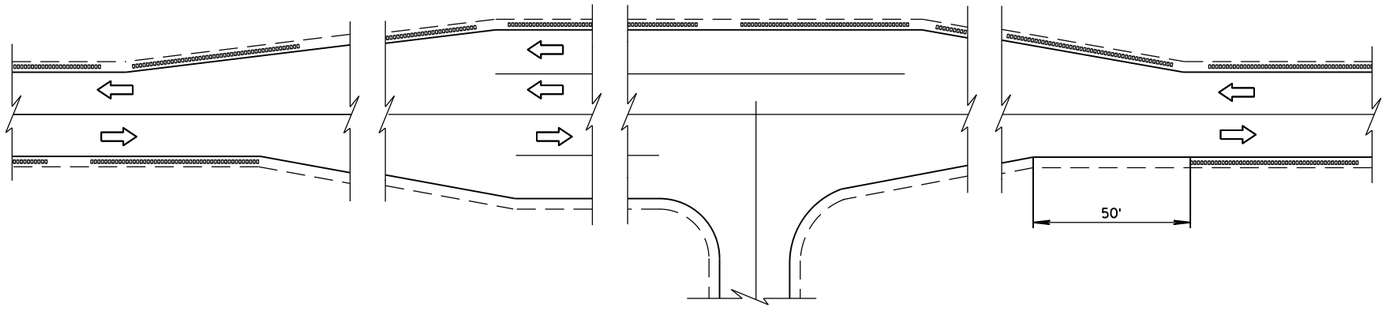
S.D.D. 13 A 10-1c

6

S.D.D. 13 A 10-1c



SHOULDER GROOVES AT PASSING AND CLIMBING LANES



SHOULDER GROOVES AT BYPASS LANES

6

6

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

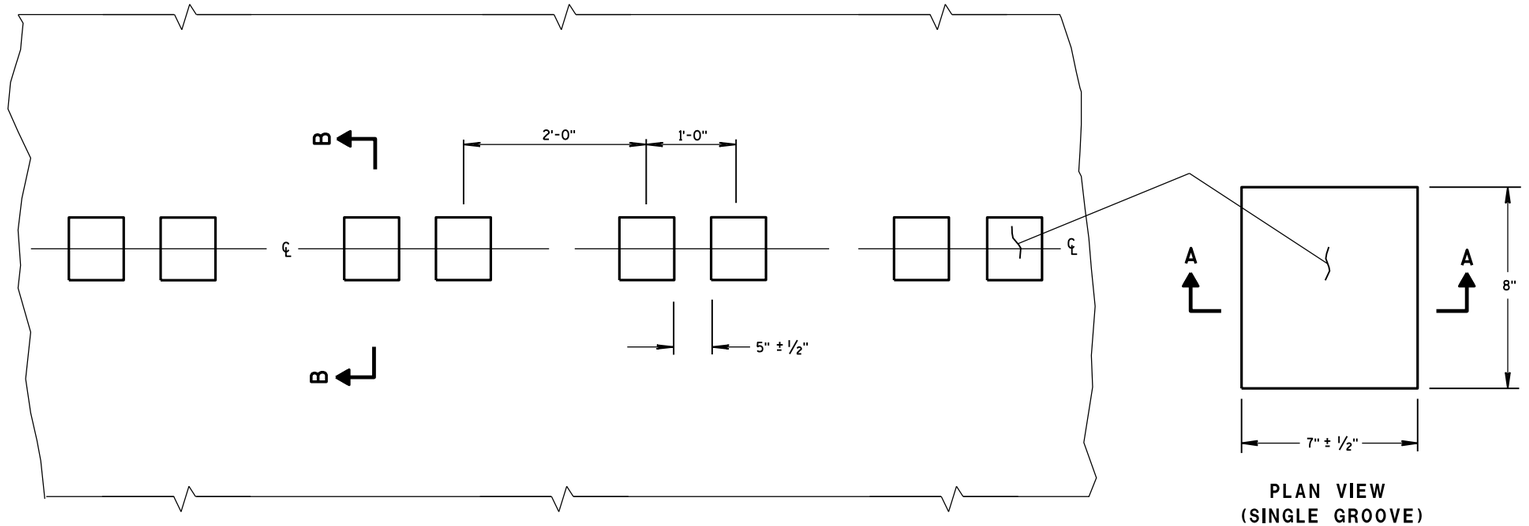
12/17/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

S.D.D. 13 A 10-1d

S.D.D. 13 A 10-1d



PLAN VIEW
CENTER LINE WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

GENERAL NOTES

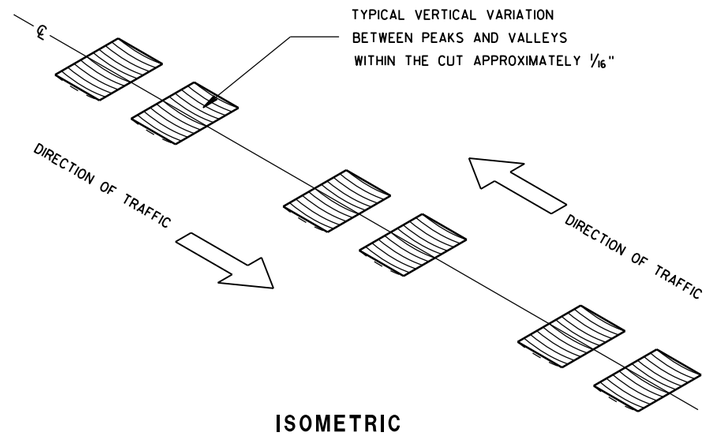
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTER LINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

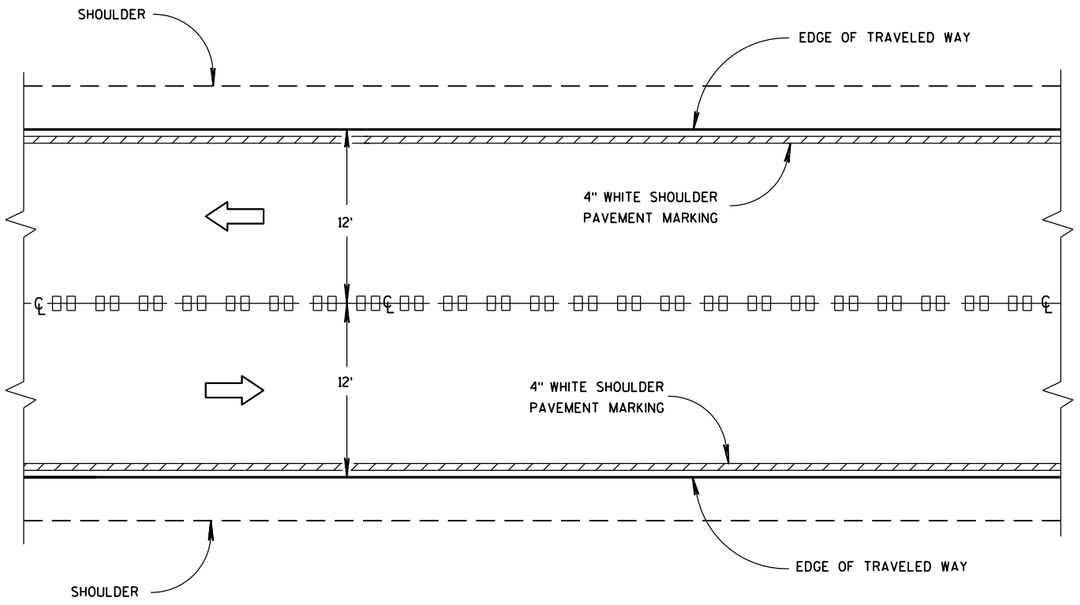
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

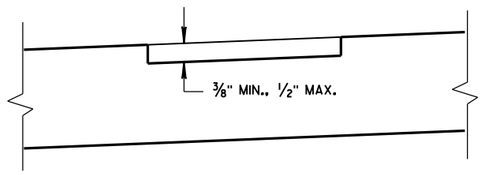
① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



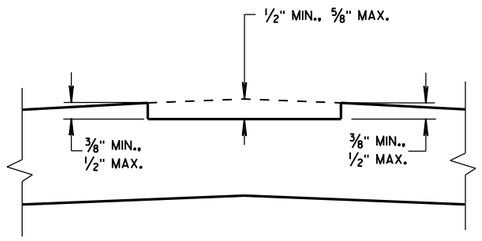
ISOMETRIC



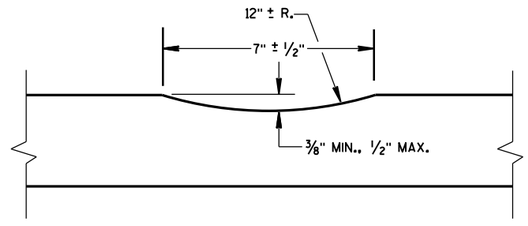
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



SECTION B-B
CROWNED ROADWAY



SECTION A-A

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

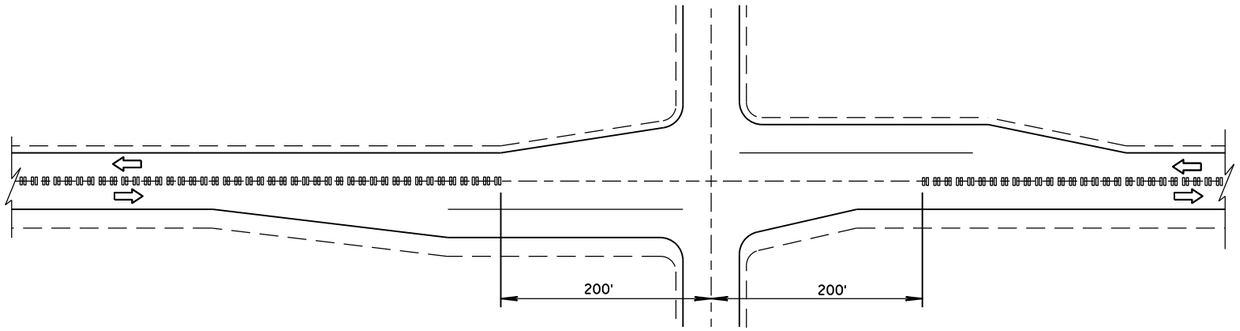
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

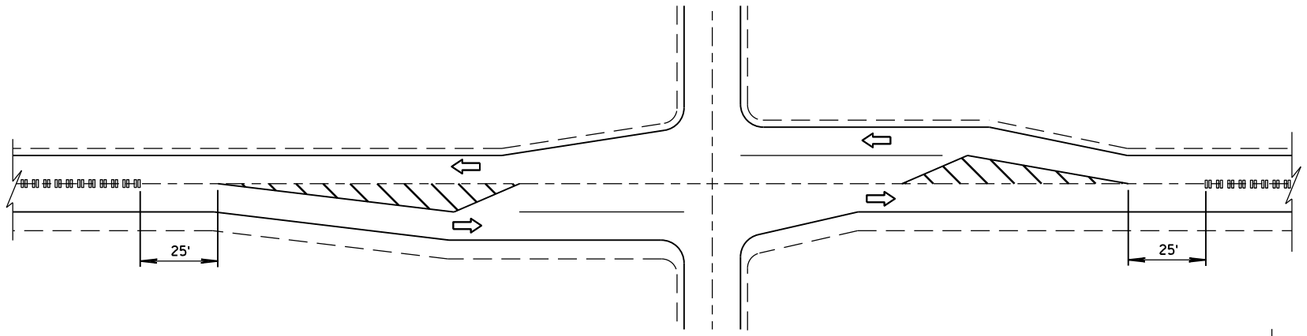
S.D.D. 13 A 11-2a

6

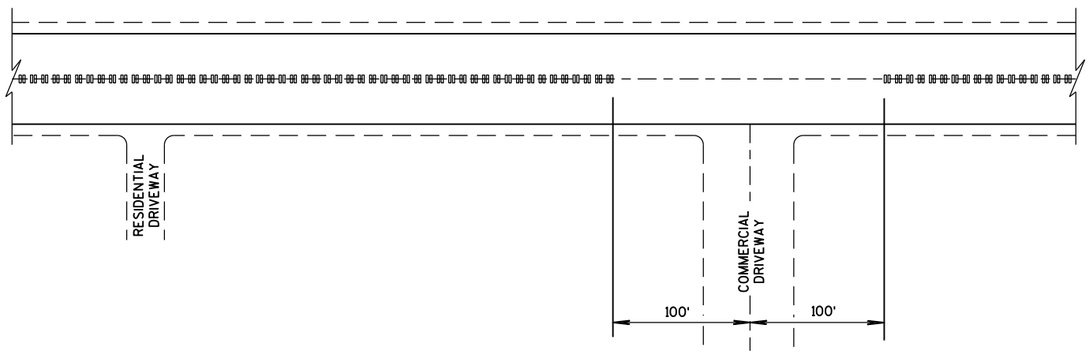
S.D.D. 13 A 11-2a



CENTER LINE GROOVES AT INTERSECTIONS

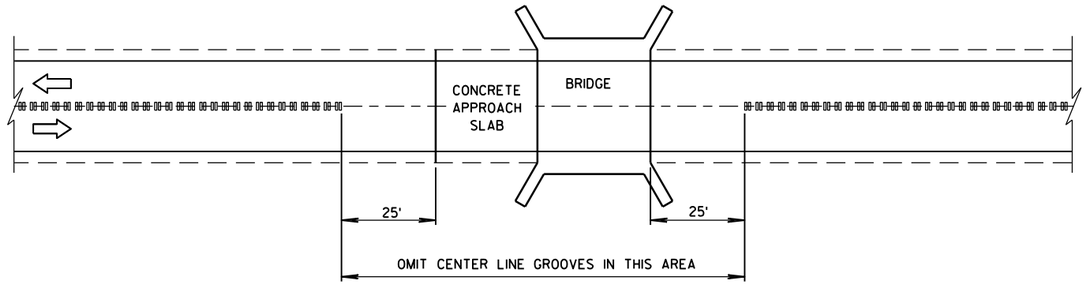


CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

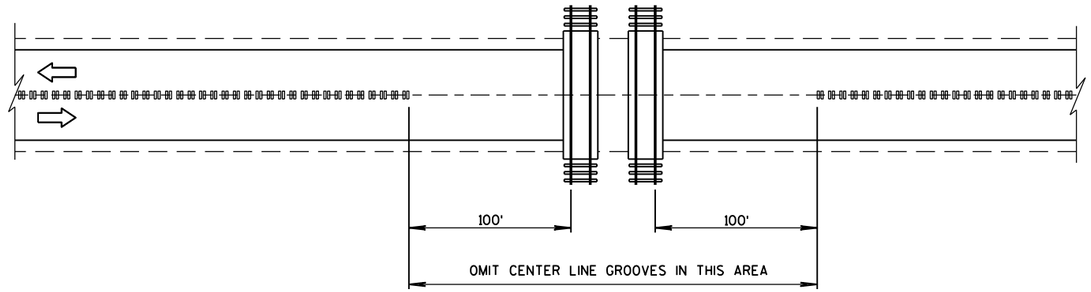


CENTER LINE GROOVES AT DRIVEWAYS (1)

(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



CENTER LINE GROOVES AT BRIDGES



CENTER LINE GROOVES AT RAILROADS

6

S.D.D. 13 A 11-2b

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/15/2013
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

NT

6

S.D.D. 13 A 11-2b

GENERAL NOTES

1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

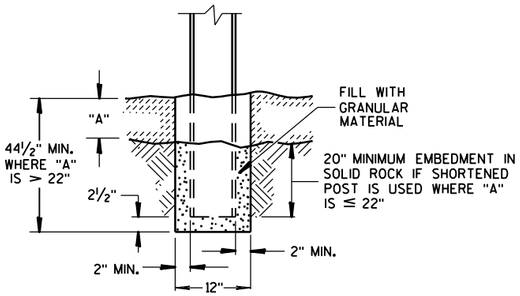
2. USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

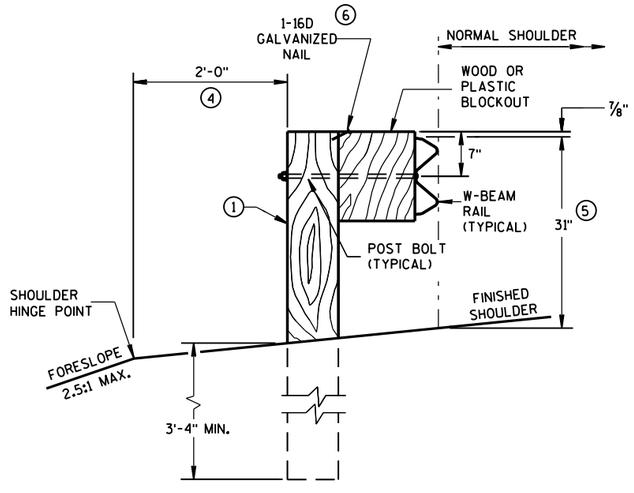
4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

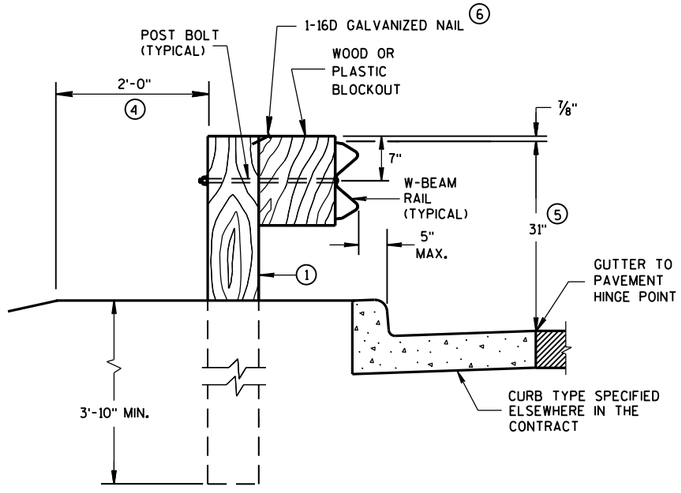
6. WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



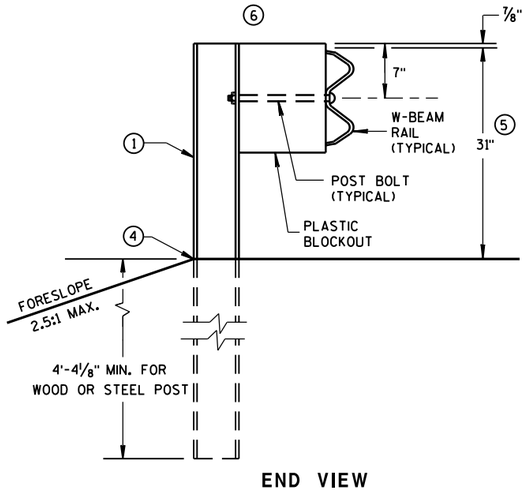
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



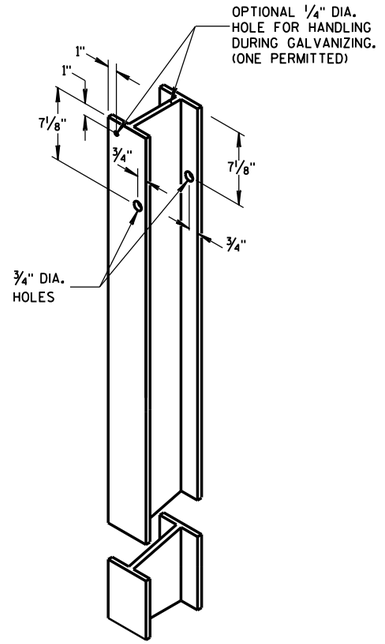
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



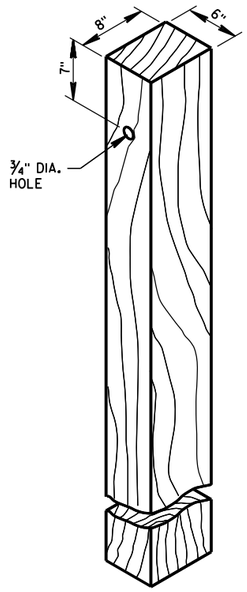
END VIEW
LOCATED ALONG A CURBED ROADWAY



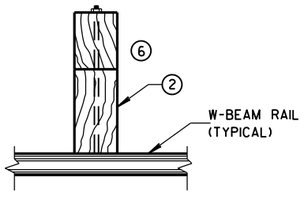
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



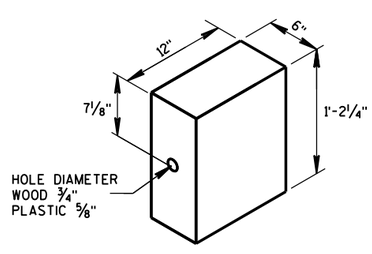
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) (1)



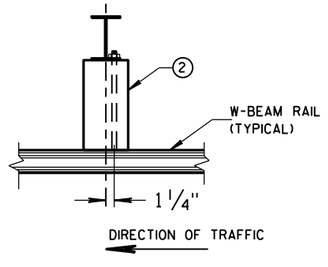
WOOD POST
(6" X 8") NOMINAL (1)



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT (2)

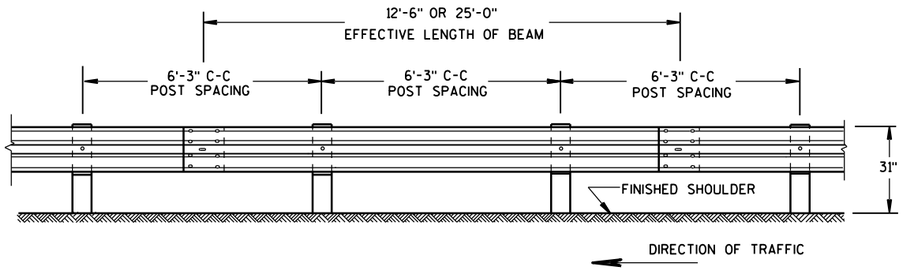


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

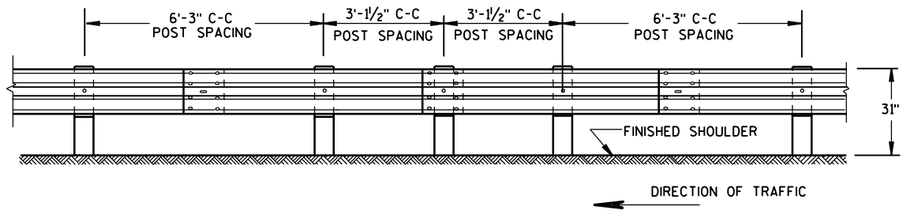
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 42-3a



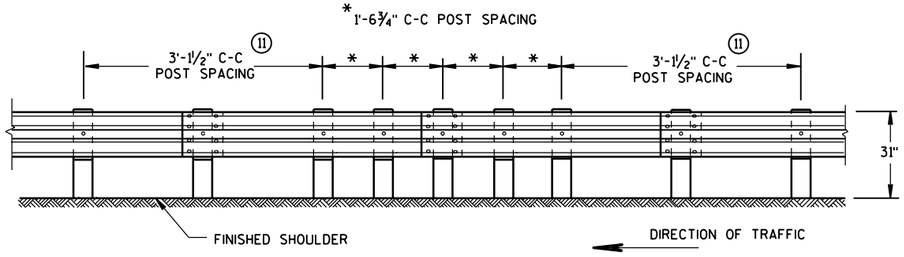
FRONT VIEW

POST SPACING STANDARD INSTALLATION



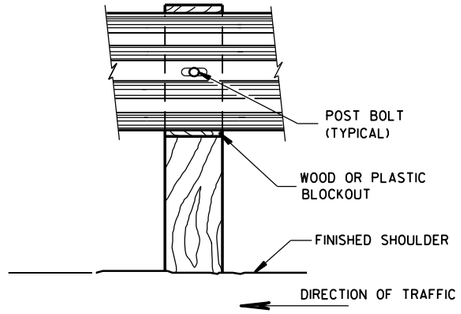
FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

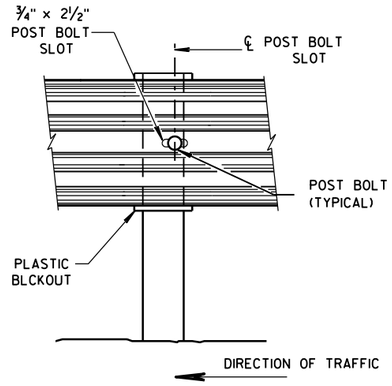


FRONT VIEW

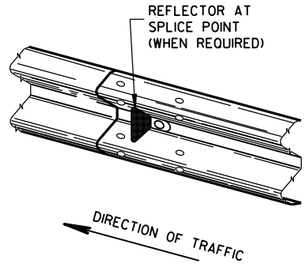
QUARTER POST SPACING (QS)

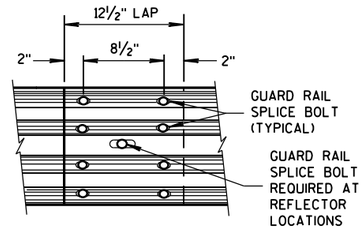


FRONT VIEW AT WOOD POST



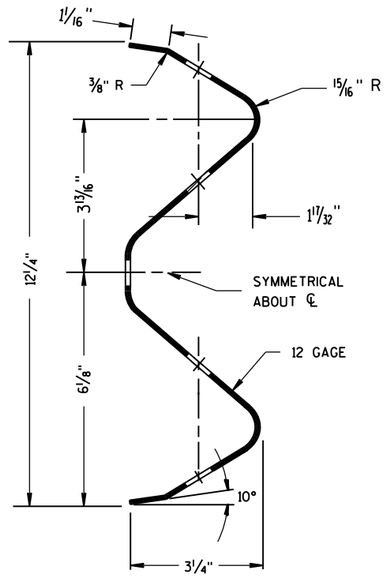
FRONT VIEW AT STEEL POST



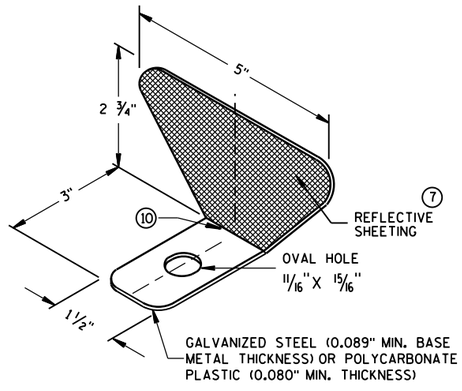


FRONT VIEW

MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ⑦

GENERAL NOTES

⑦ PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

⑨ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

⑩ PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

⑪ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

REFLECTOR SPACING ⑧

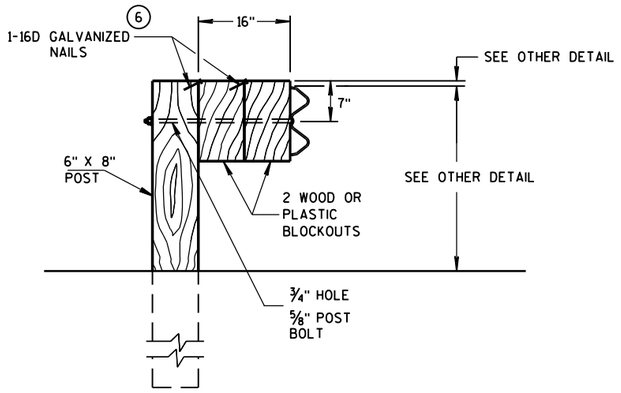
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 ⑨ 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 ⑩	3

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

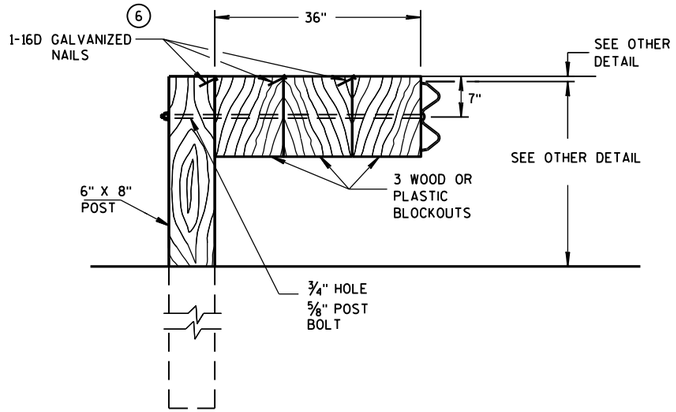
6

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DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

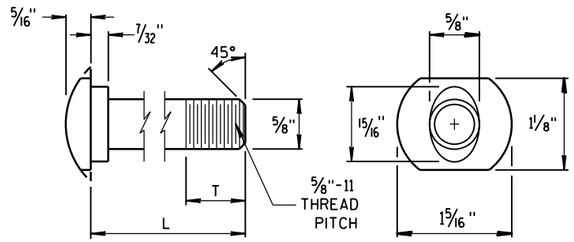


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

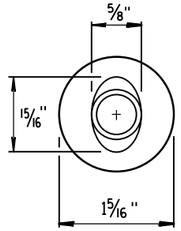
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

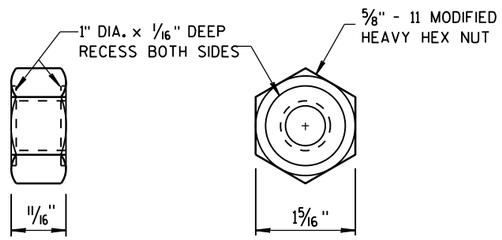


POST BOLT TABLE

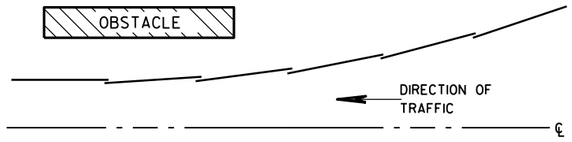
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

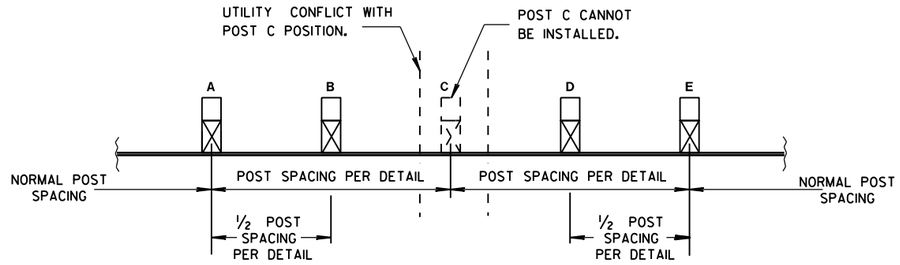


POST BOLT AND RECESS NUT

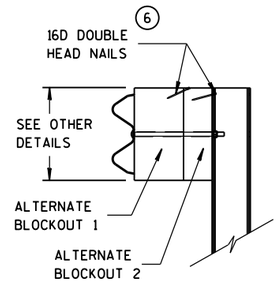


PLAN VIEW

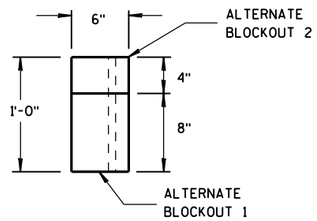
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6
S.D.D. 14 B 42-3c

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

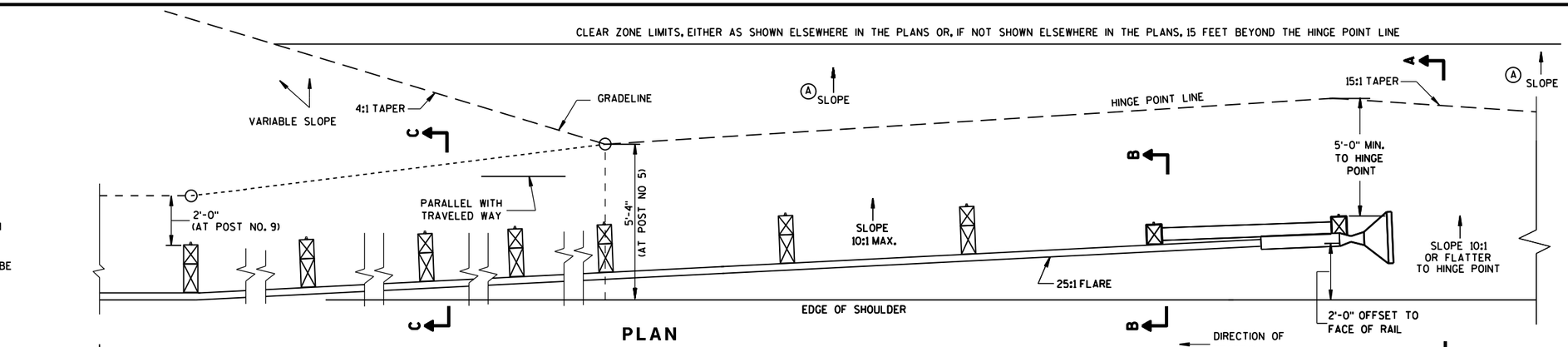
SEE SDD 14B42 FOR MORE INFORMATION.

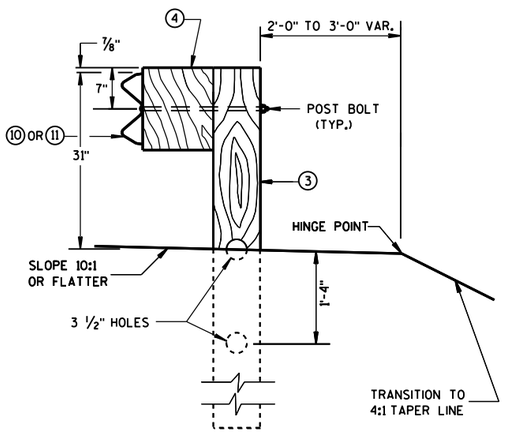
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

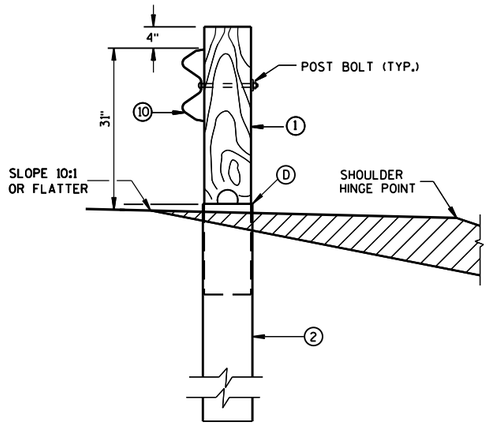
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

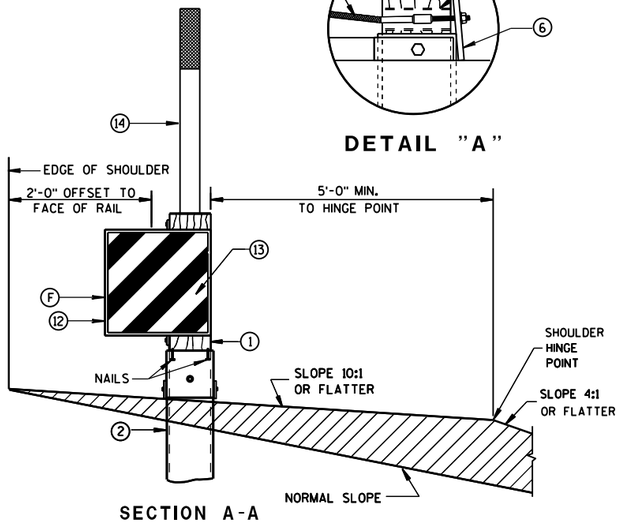




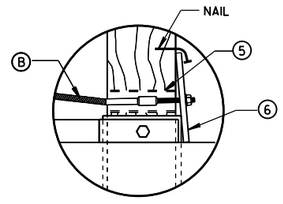
SECTION C-C
TYPICAL AT POST NOS. 3-9



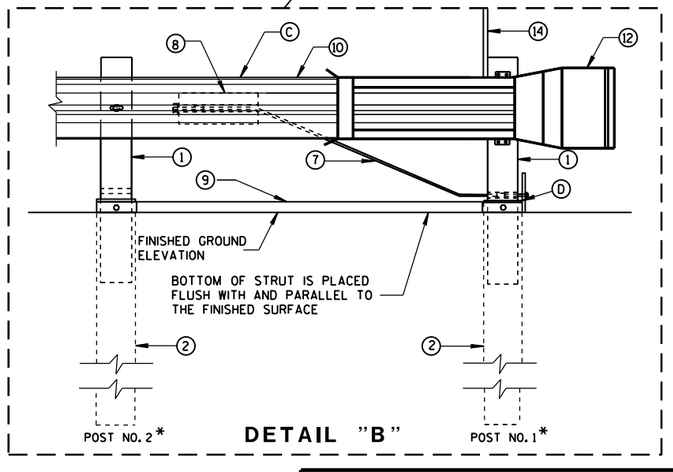
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



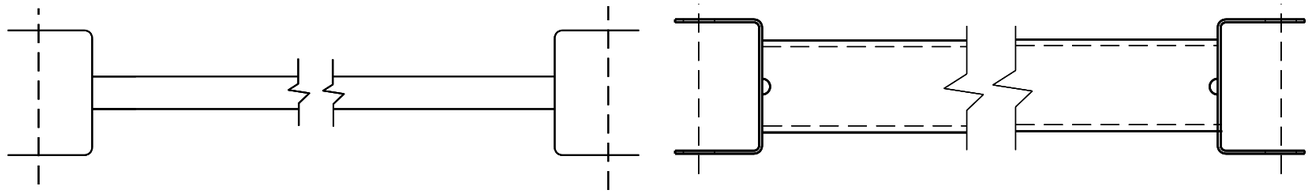
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

S.D.D. 14 B 44-2a

S.D.D. 14 B 44-2a

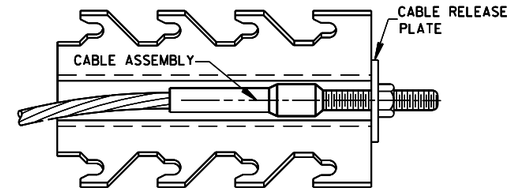


(9) (H)

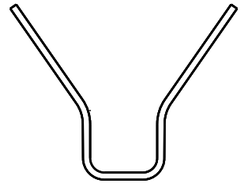
GENERIC GROUND STRUT

BILL OF MATERIALS

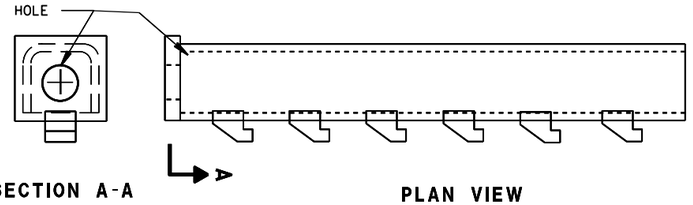
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



FRONT VIEW



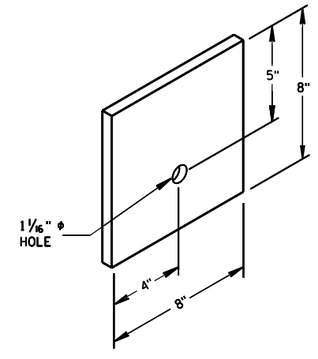
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



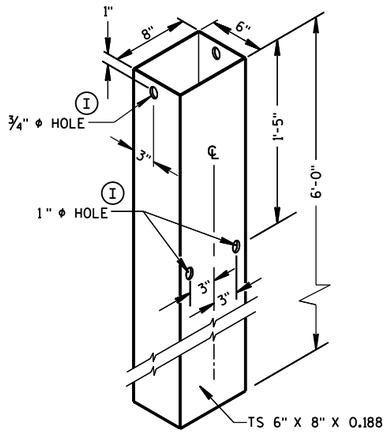
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

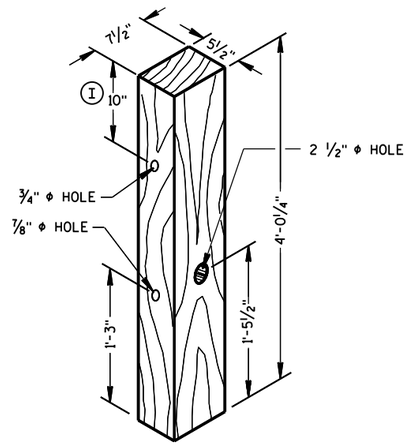
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 44-2b

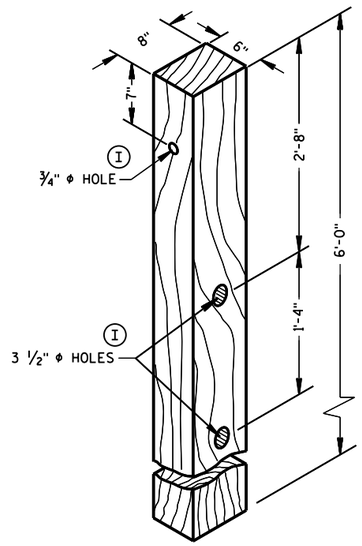


FOUNDATION TUBE (2)



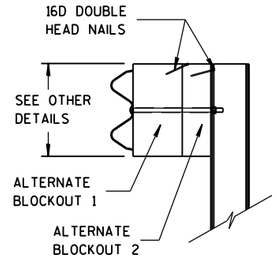
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

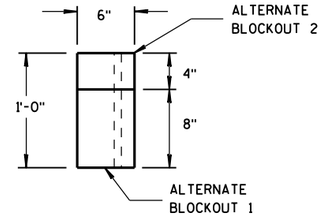


POSTS NUMBER 3-9

WOOD CRT POST (3)

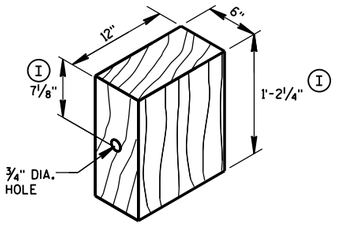


SIDE VIEW



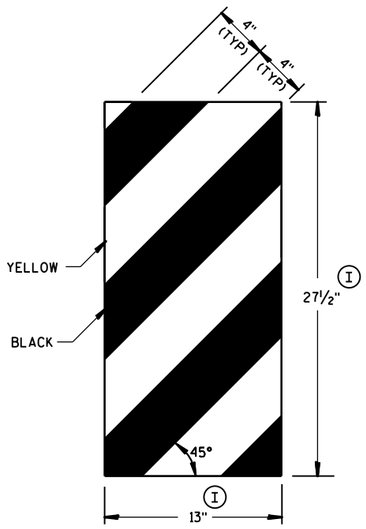
TOP VIEW

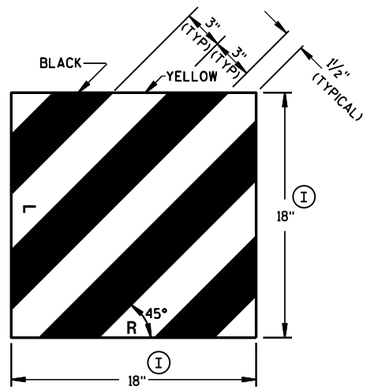
ALTERNATE WOOD BLOCKOUT DETAIL



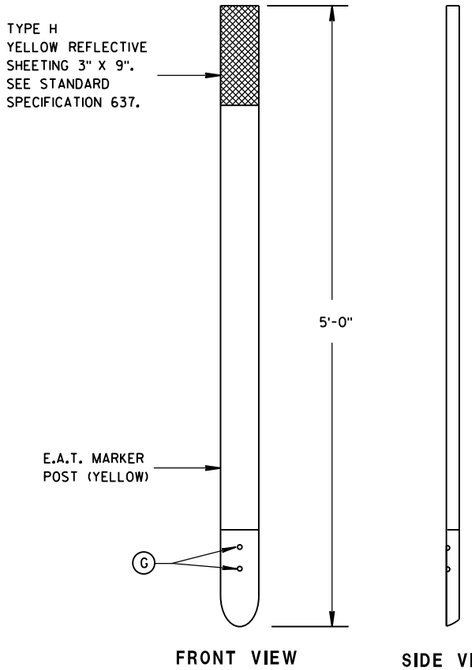
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





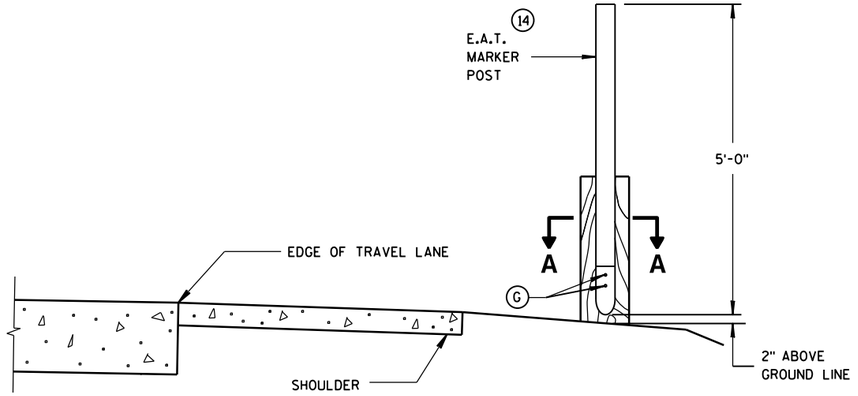
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

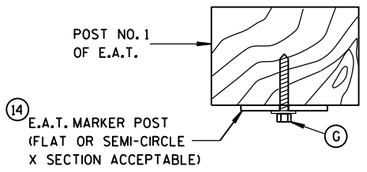
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

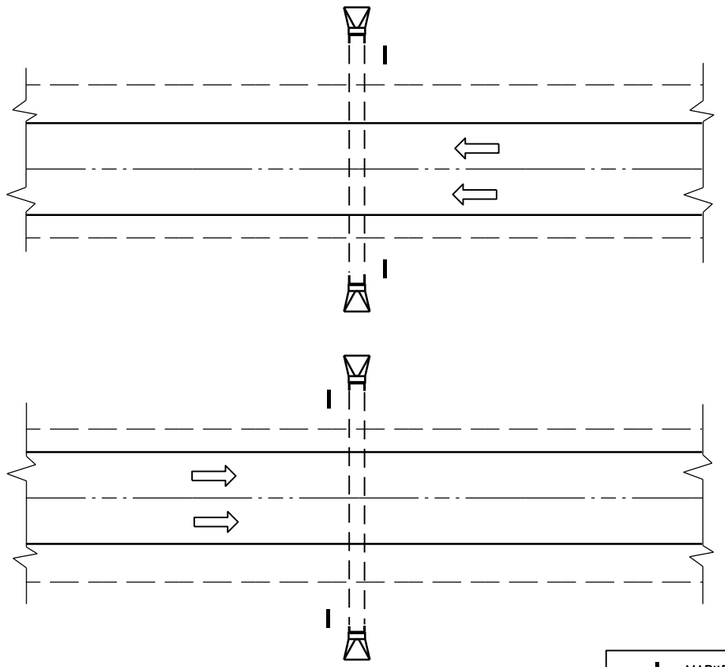
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

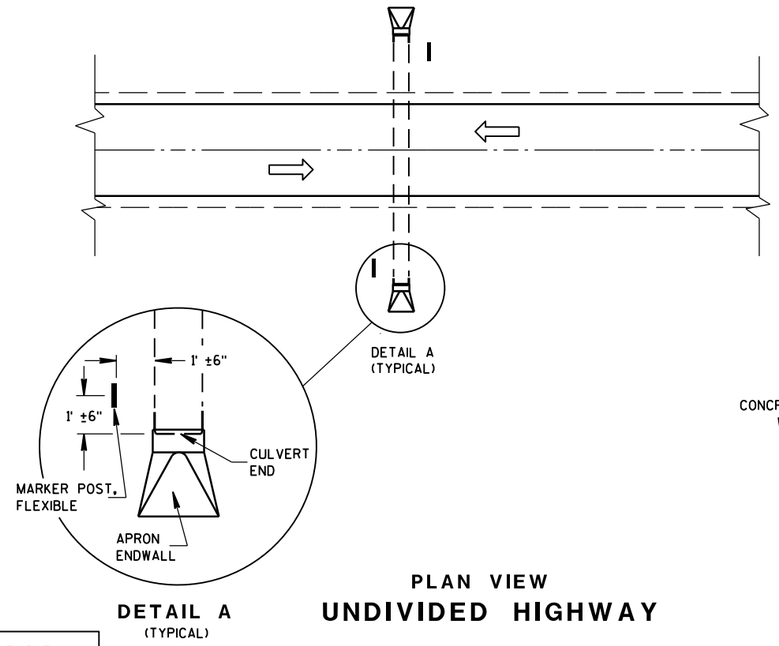
6

S.D.D. 14 B 44-2c



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

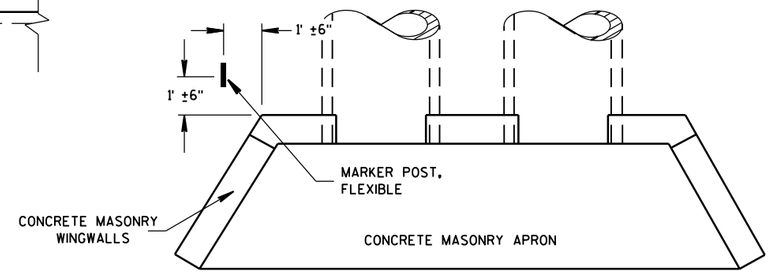
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

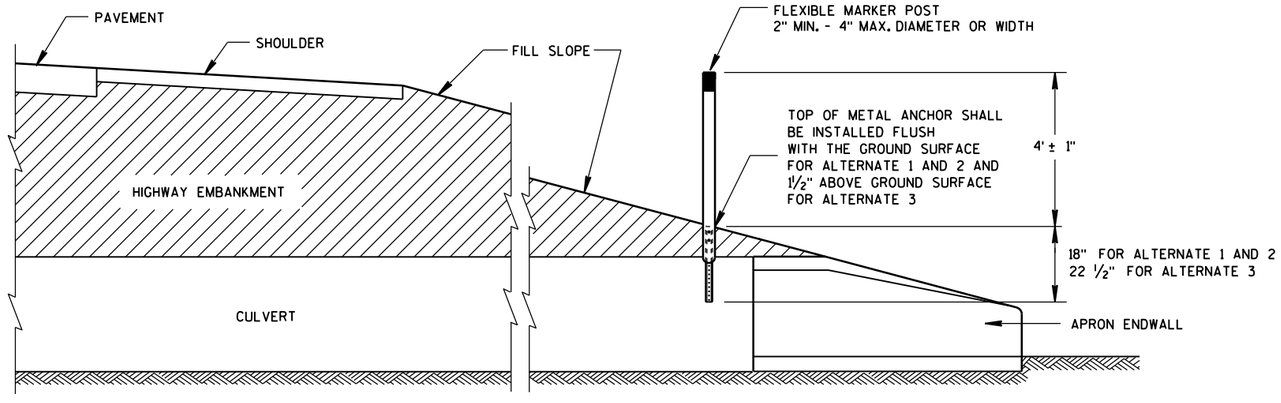
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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

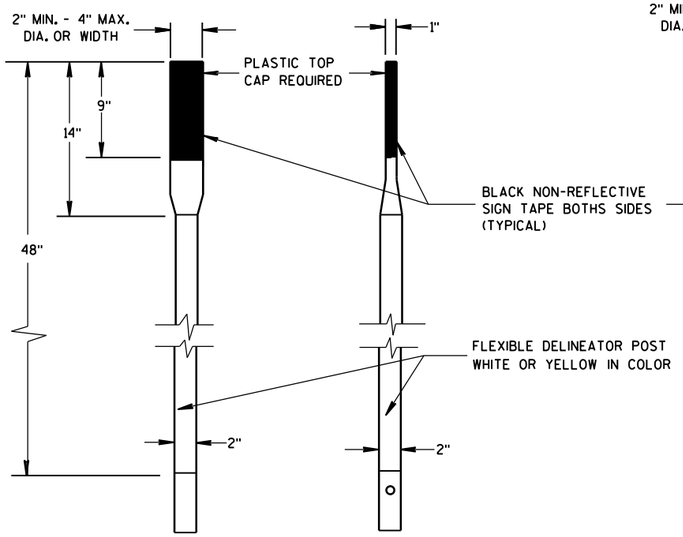
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

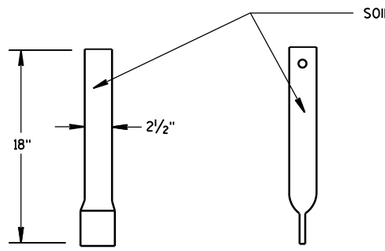
6

S.D.D. 15 A 3-2a

6

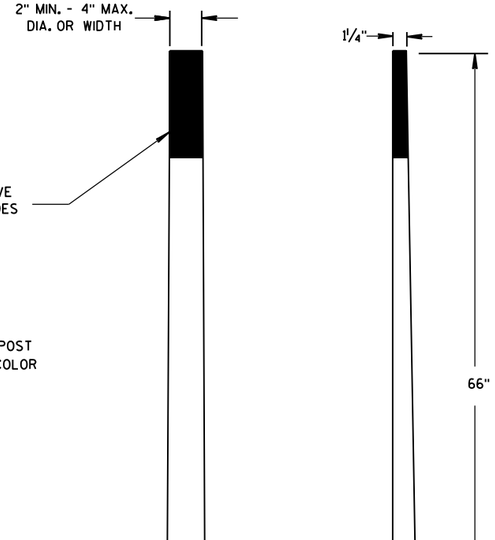
S.D.D. 15 A 3-2a





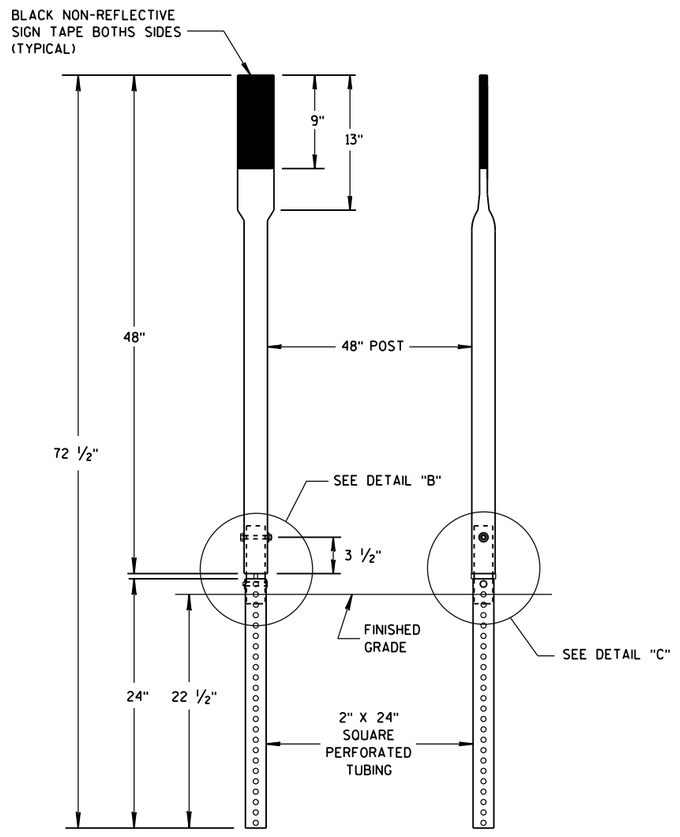
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

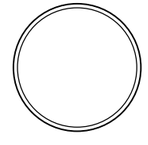
ALTERNATE 2



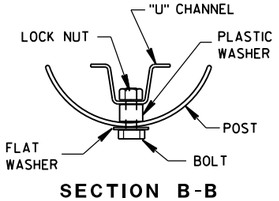
FRONT VIEW SIDE VIEW

ALTERNATE 3

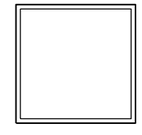
FLEXIBLE MARKER POSTS



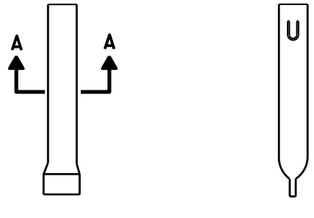
SECTION A-A



SECTION B-B

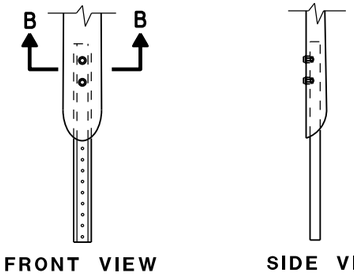


SECTION C-C



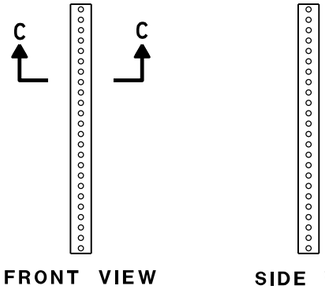
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

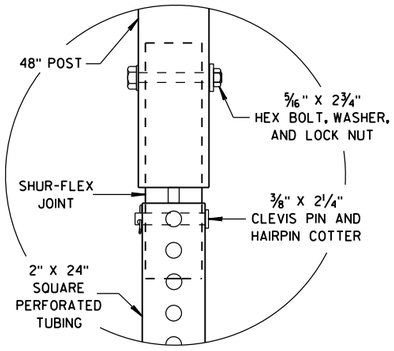
ALTERNATE 2



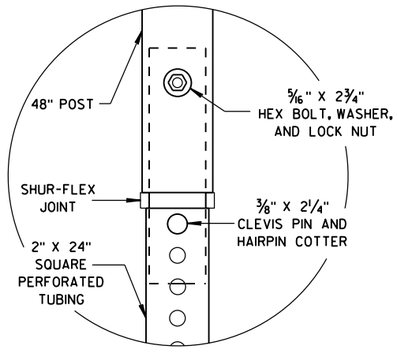
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

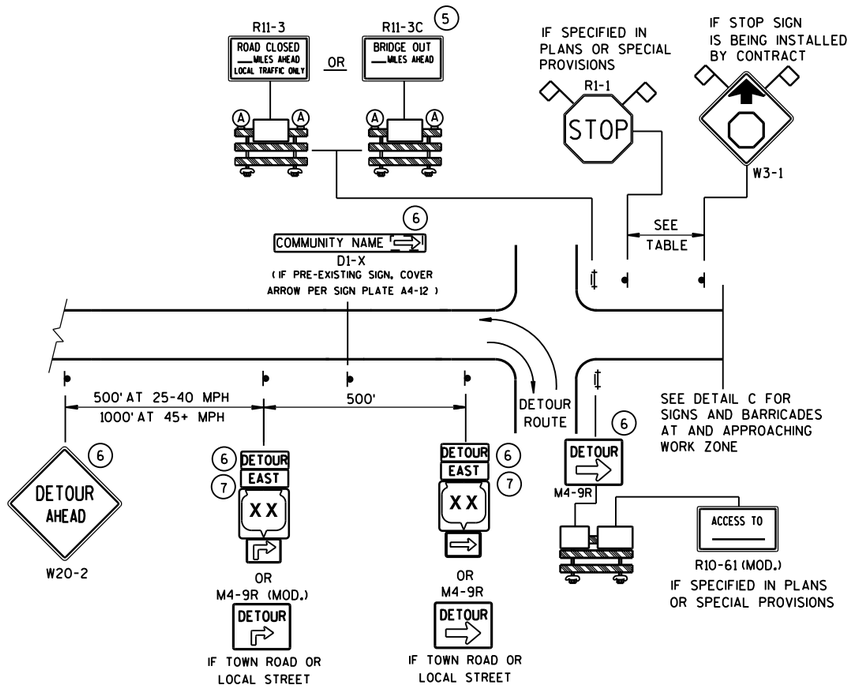
APPROVED
10/1/2012
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 A 3-2b

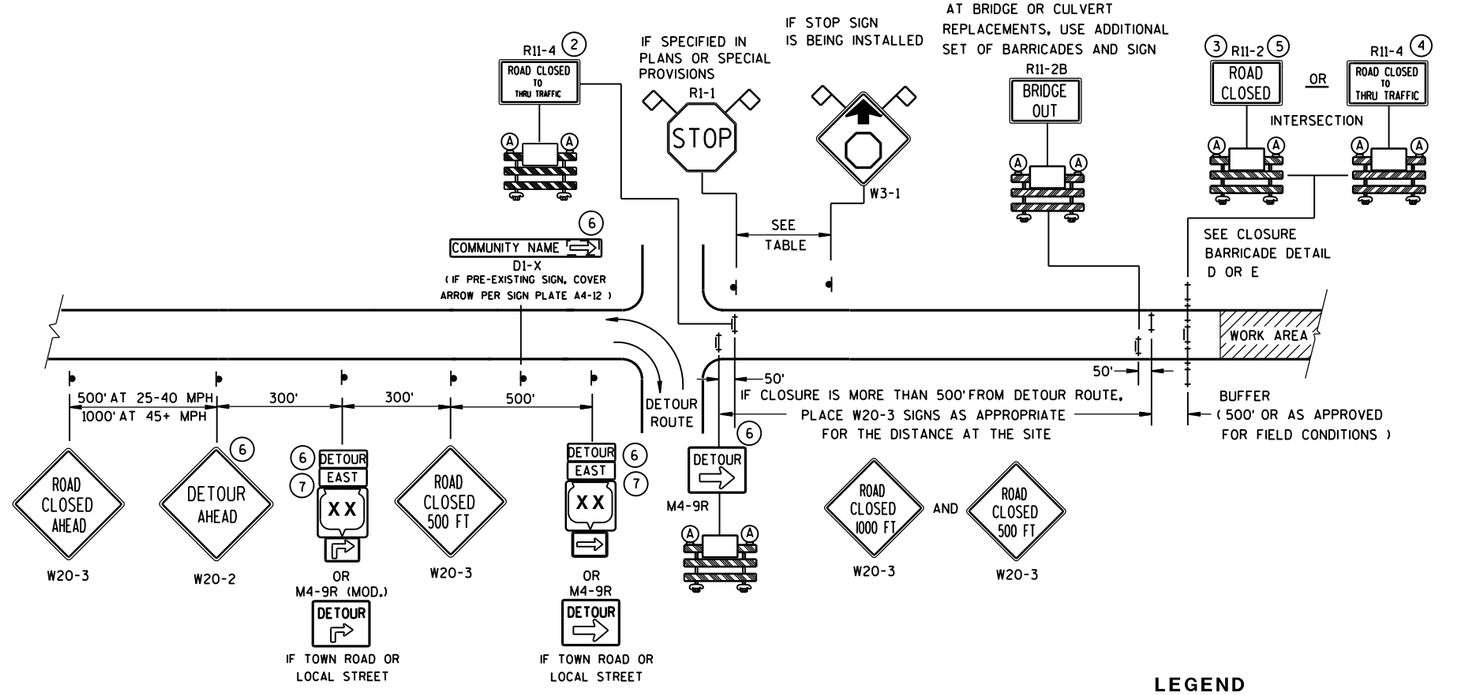
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S.D.D. 15 A 3-2b



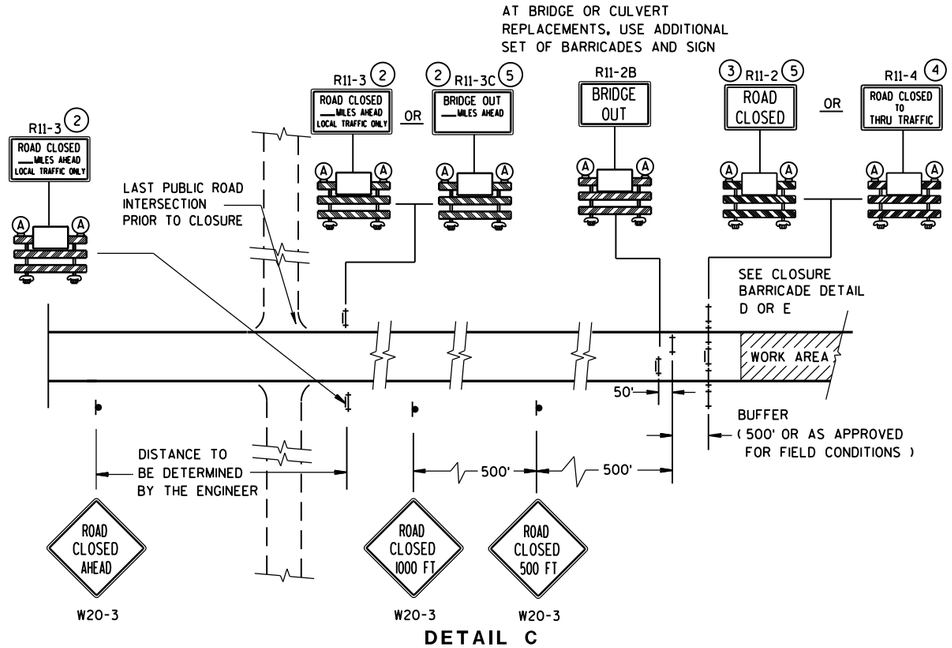
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

SEE SDD 15C2-SHEET "**b**" FOR GENERAL NOTES AND FOOTNOTES (1) THROUGH (7)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

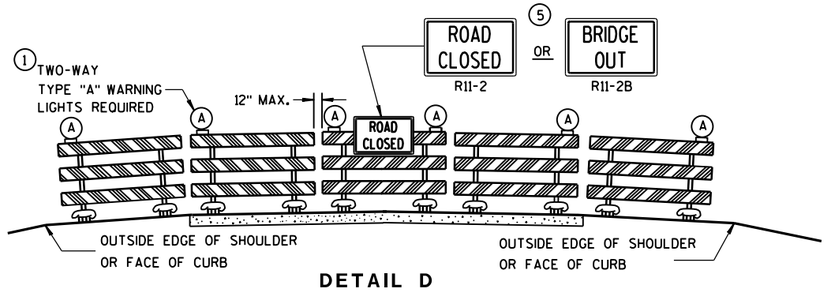
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

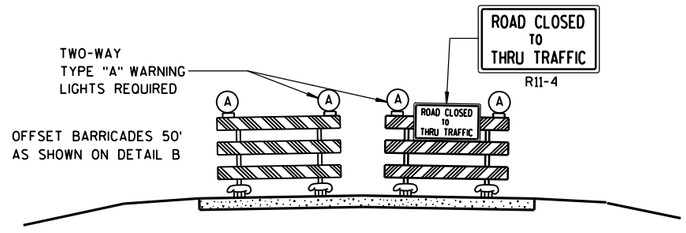
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
DESIGN
FHWA

6

S.D.D. 15 C 2-5b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

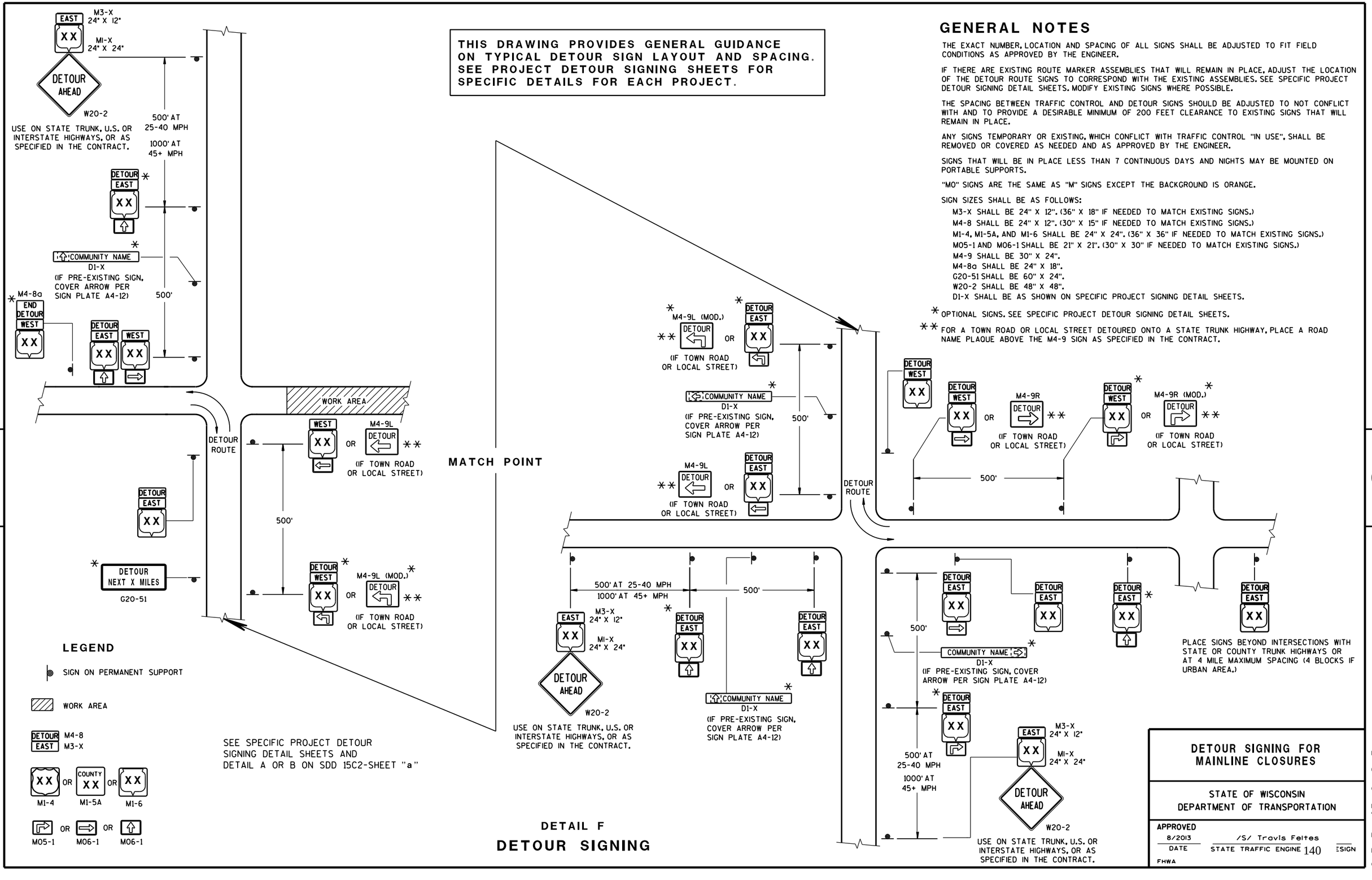
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



DETAIL F

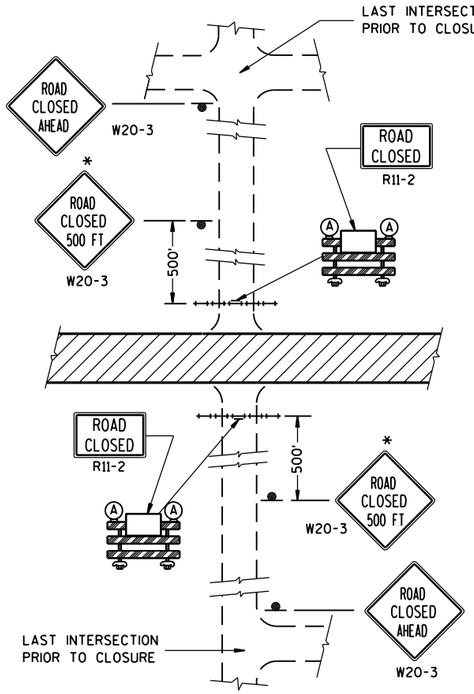
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

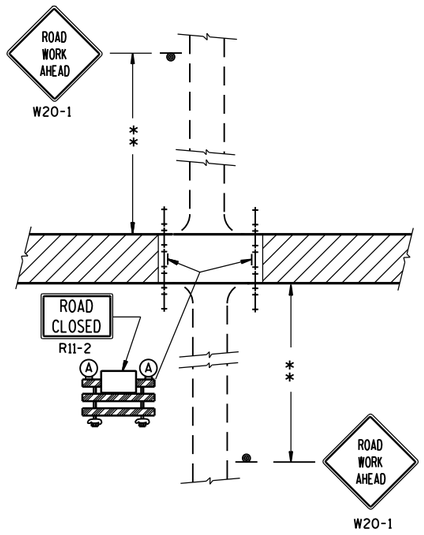
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6 S.D.D. 15 C 2-5c



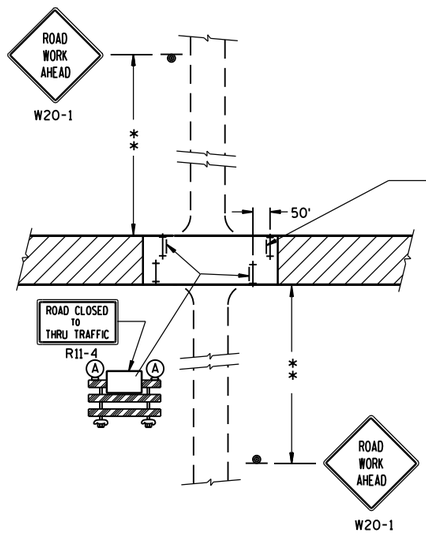
DETAIL 1

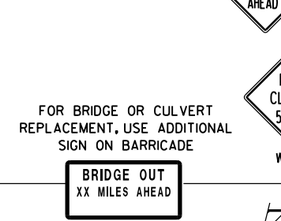
(NO ACCESS TO PROJECT)



DETAIL 2

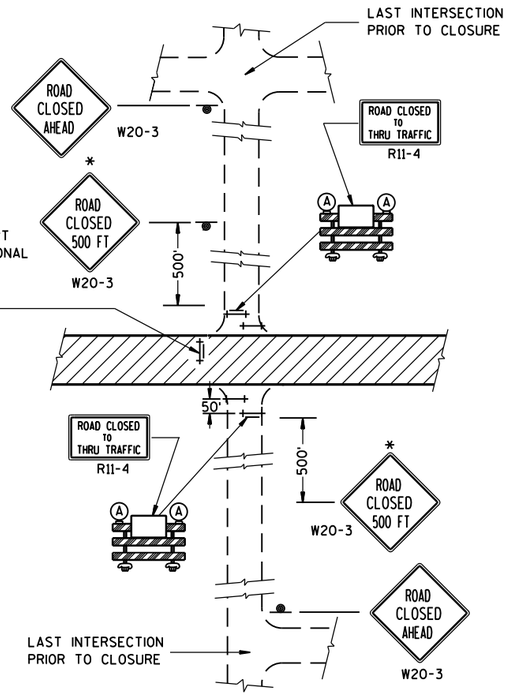
(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).





DETAIL 3

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



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 3-2

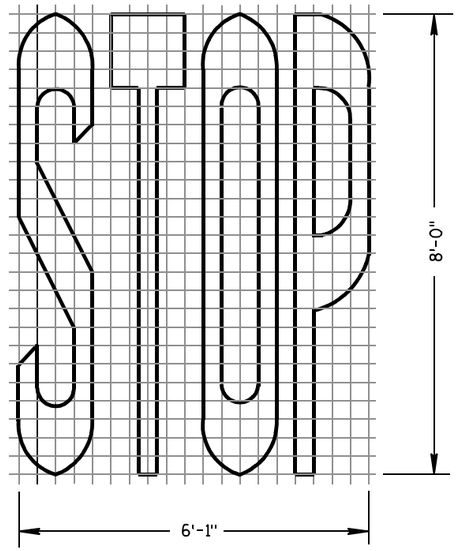
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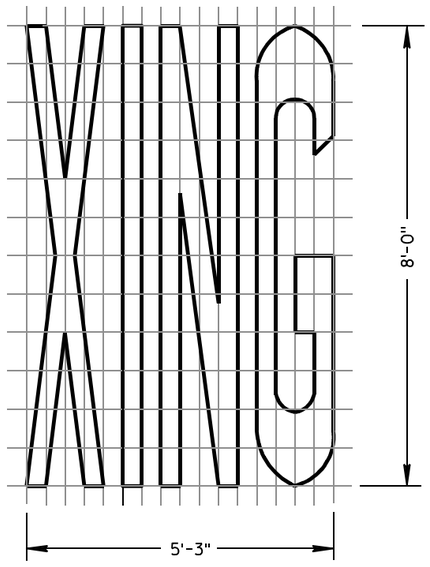
S.D.D. 15 C 3-2

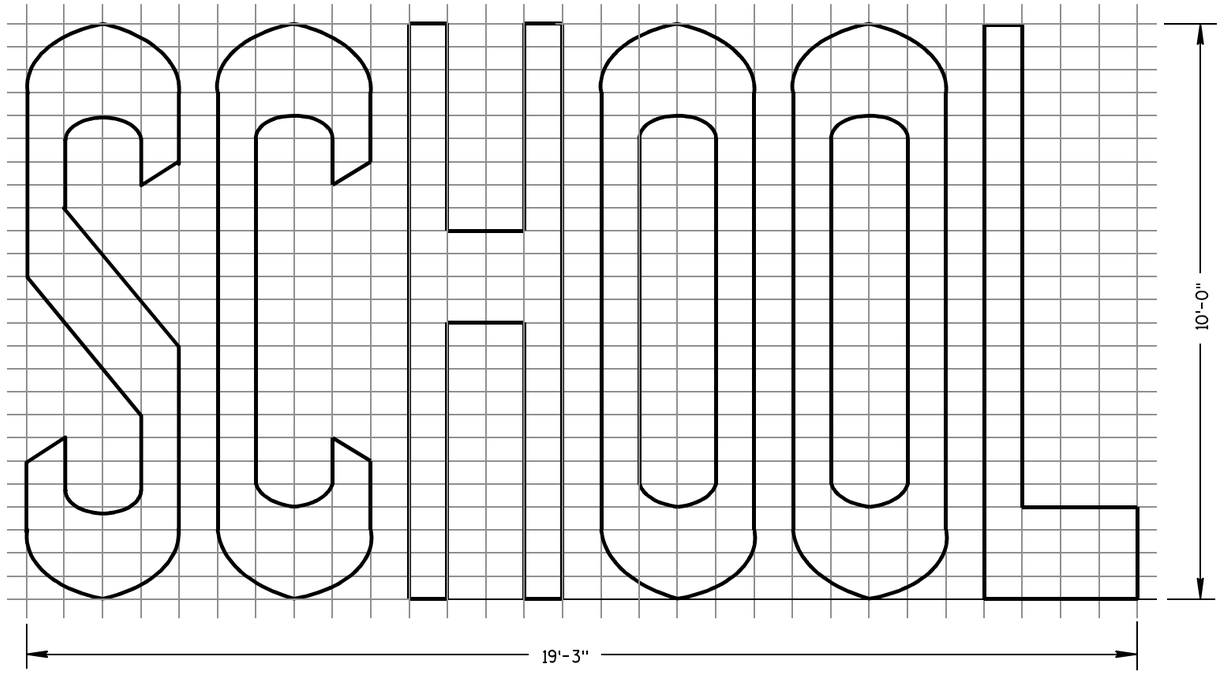
GENERAL NOTES

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

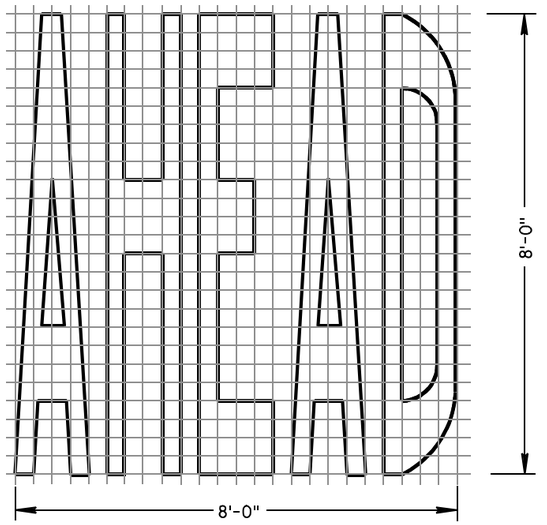
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES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

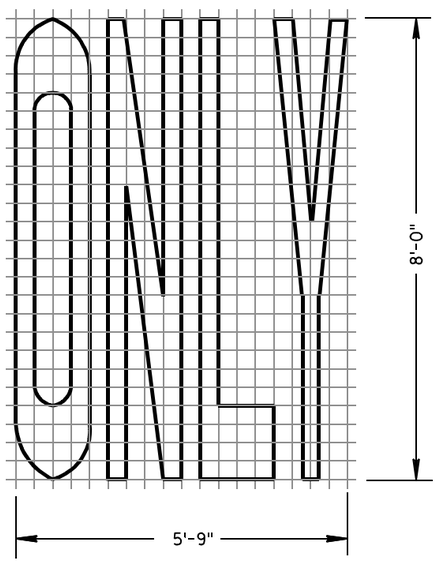


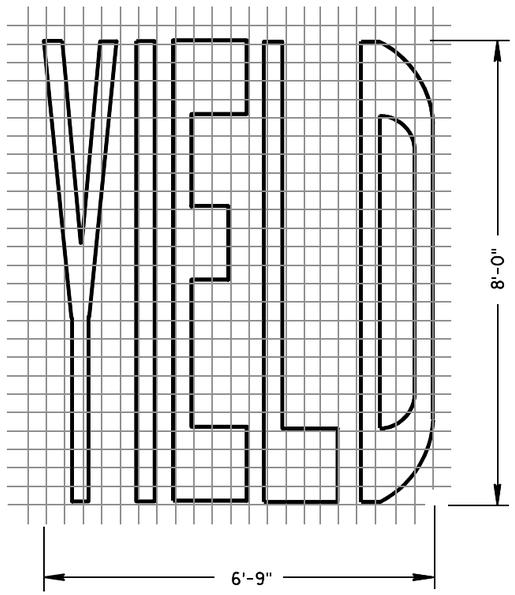


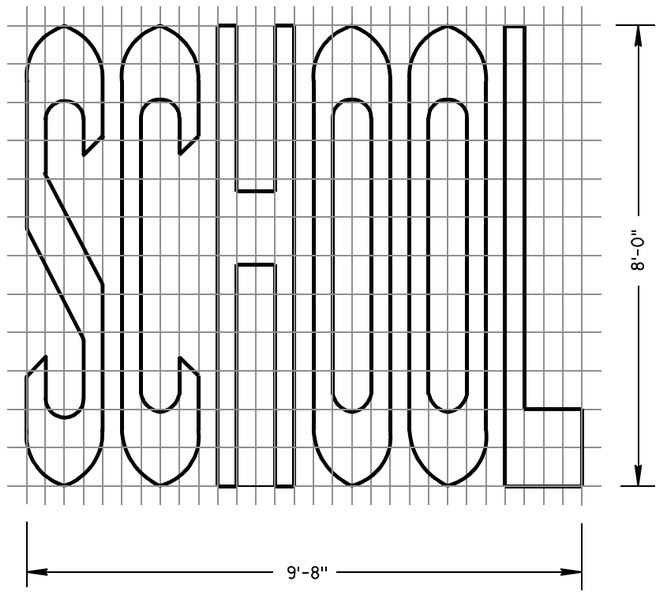


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-1-11 DATE — /S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER — IGN

FHWA

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S.D.D. 15 C 7-12b

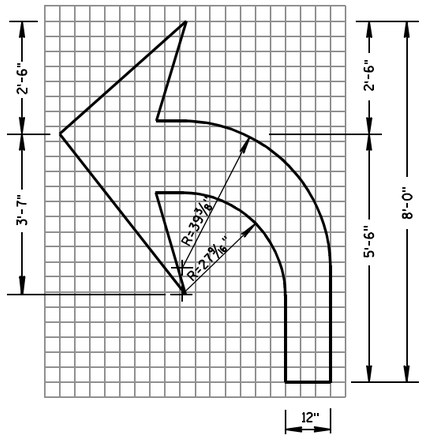
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S.D.D. 15 C 7-12b

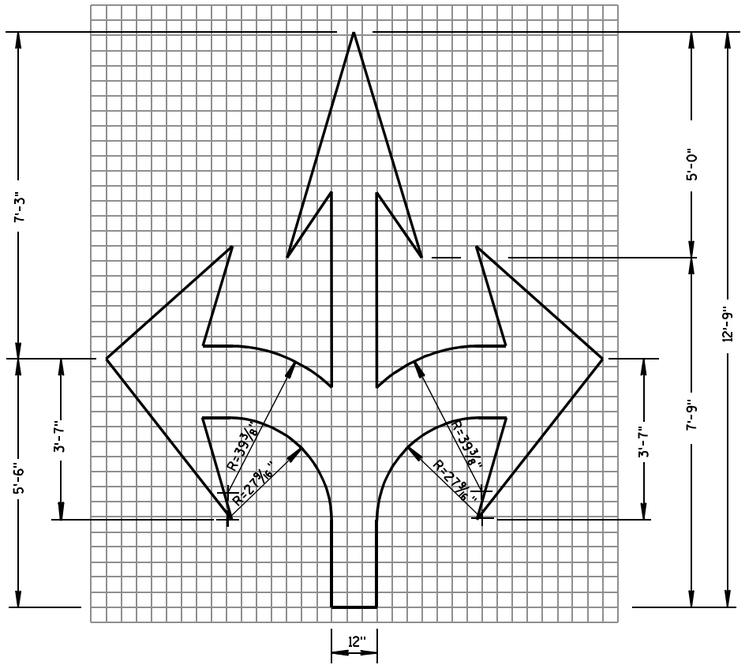
GENERAL NOTES

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

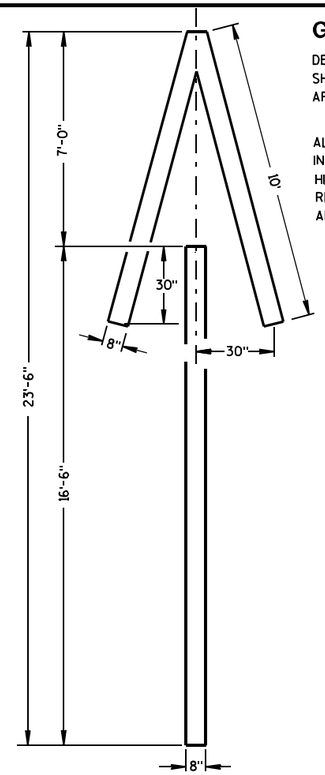
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES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



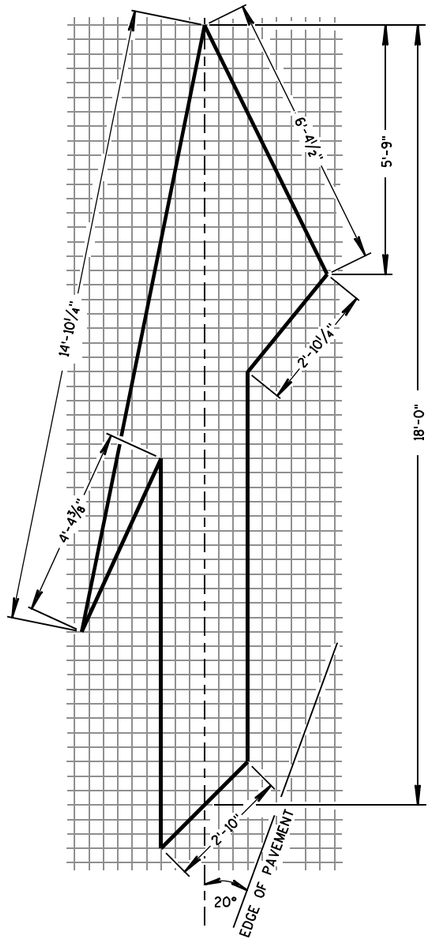
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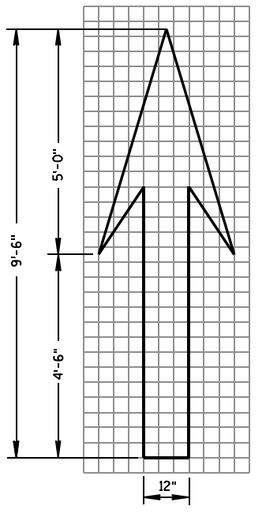
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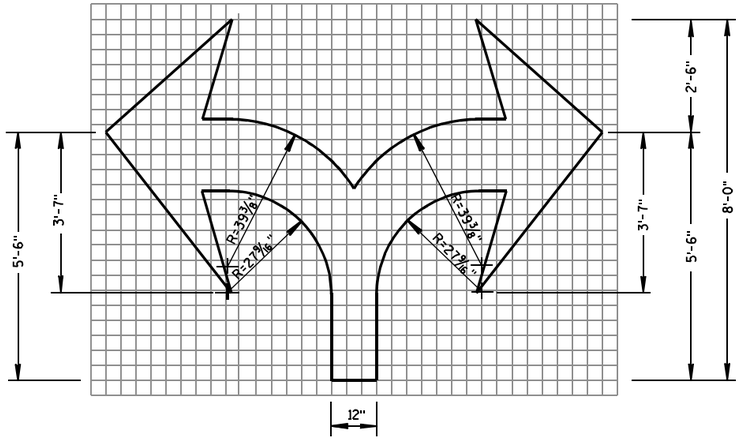
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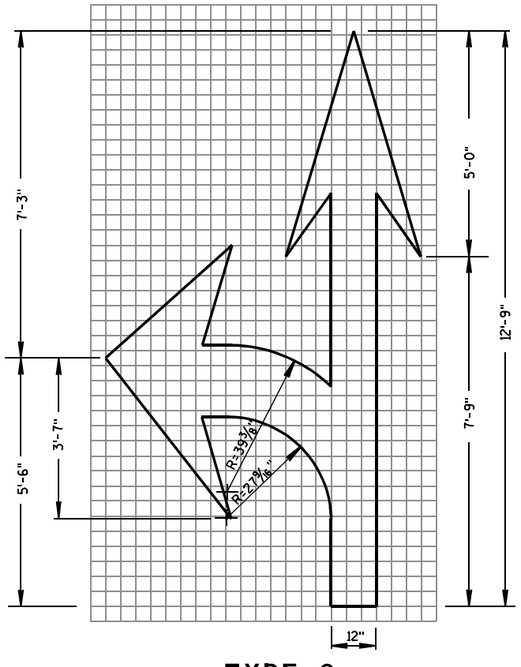
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

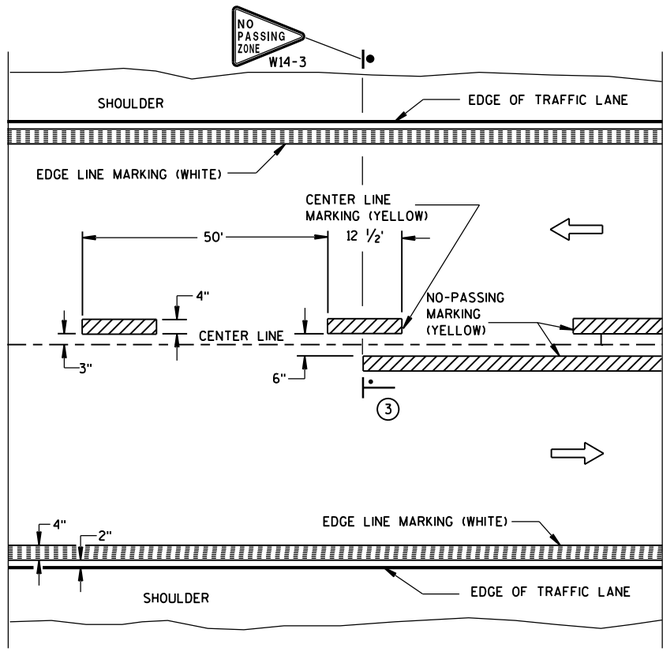
FHWA

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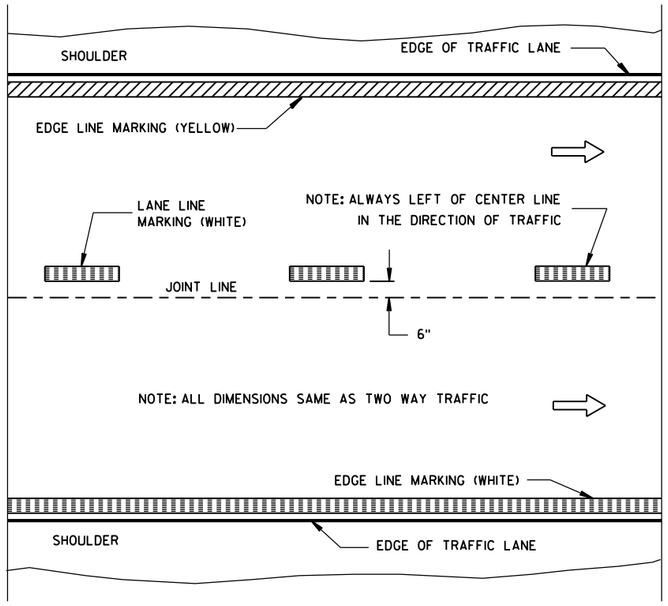
S.D.D. 15 C 7-12c

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S.D.D. 15 C 7-12c

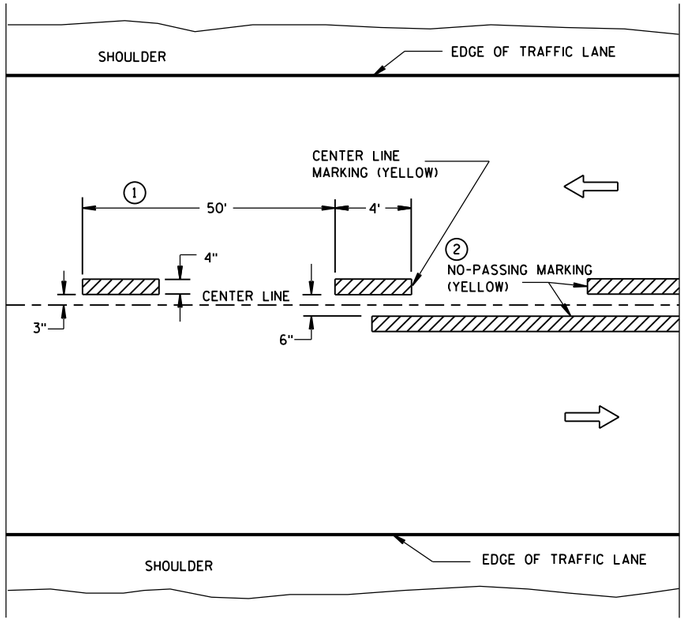


TWO WAY TRAFFIC

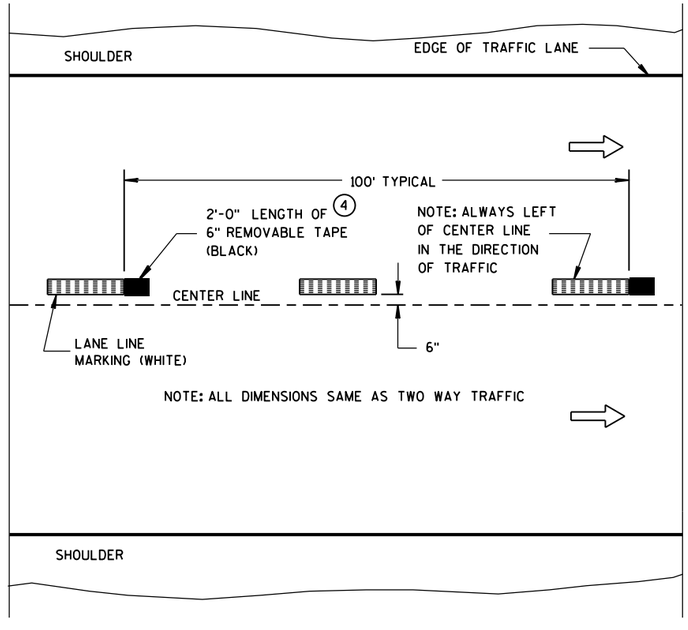


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

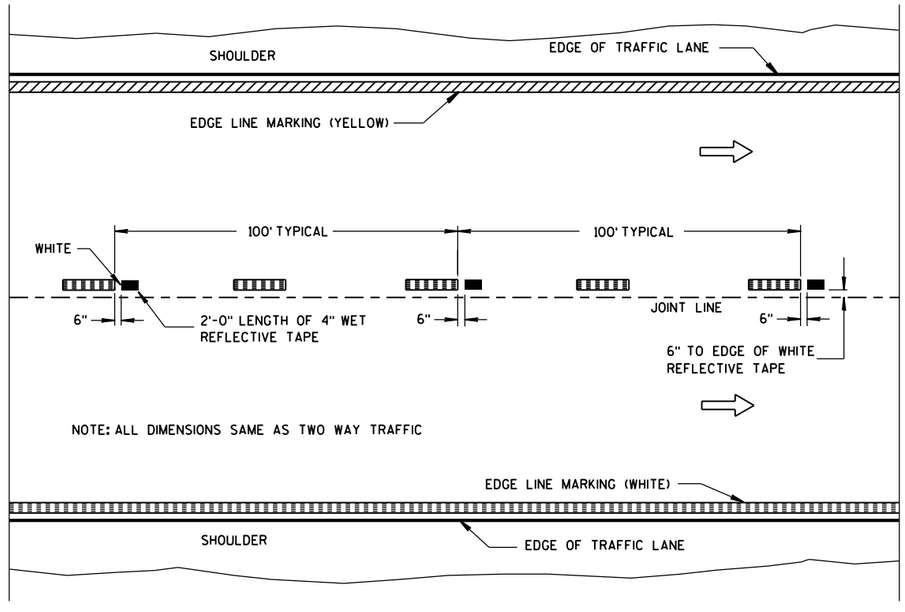
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



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

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

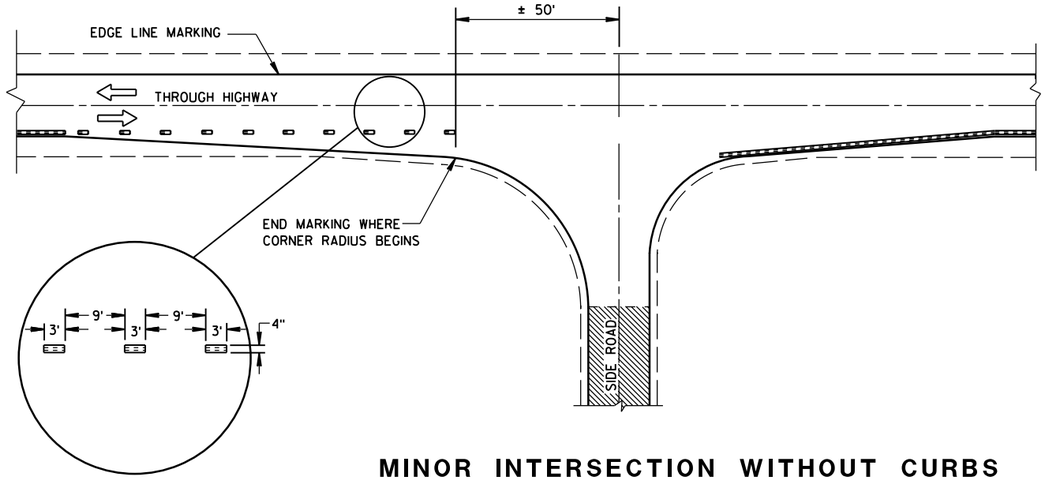
FHWA

6

S.D.D. 15 C 8-16a

6

S.D.D. 15 C 8-16a



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

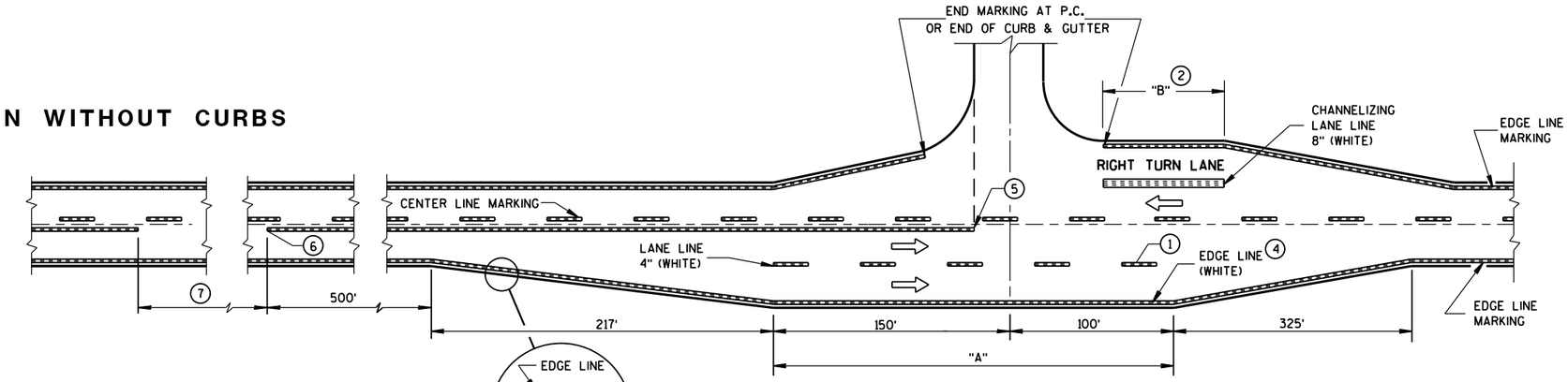
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

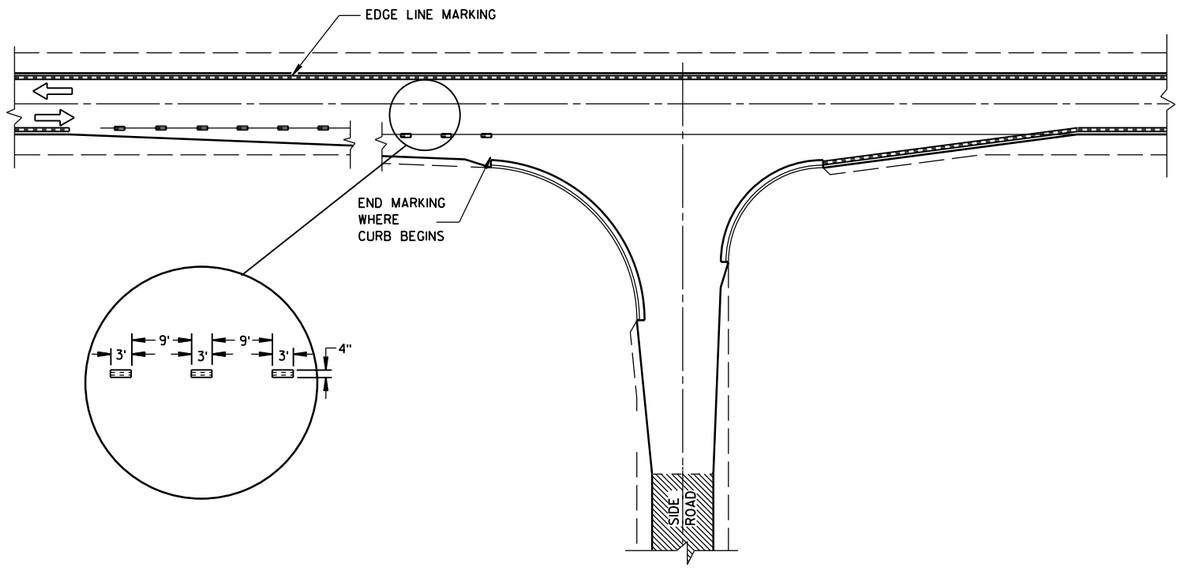
(7)

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



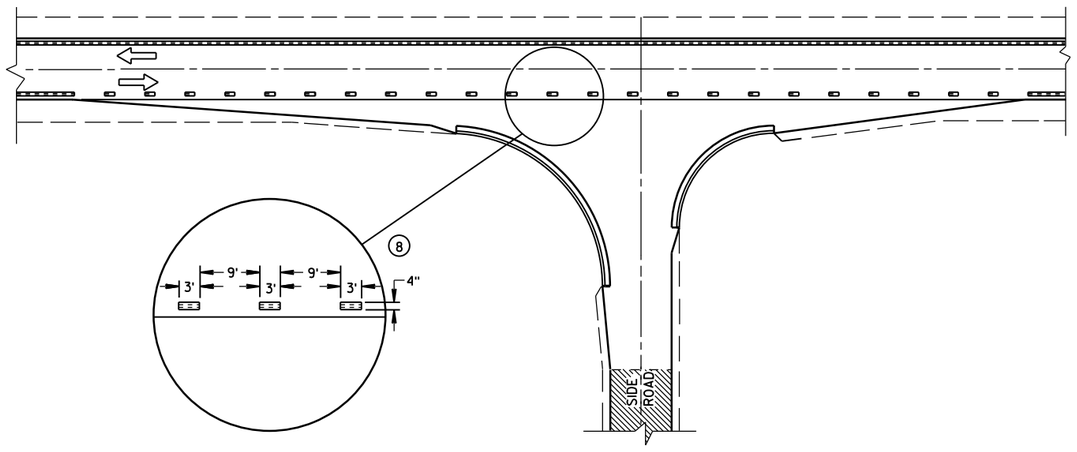
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

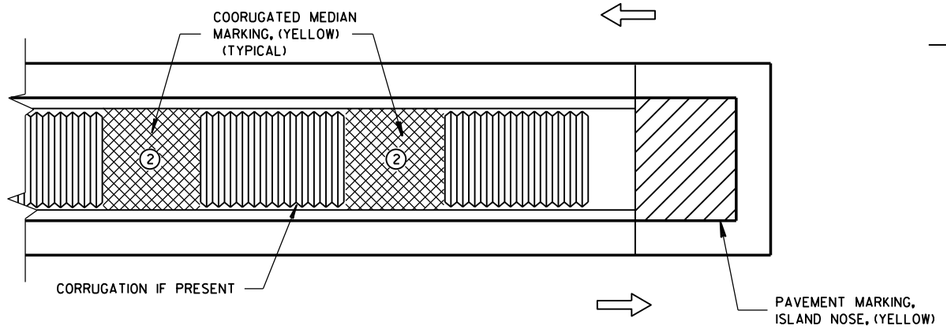
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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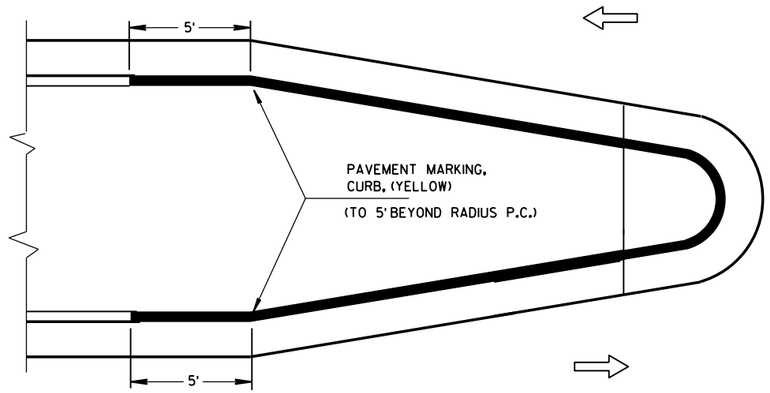
S.D.D. 15 C 8-16b

6

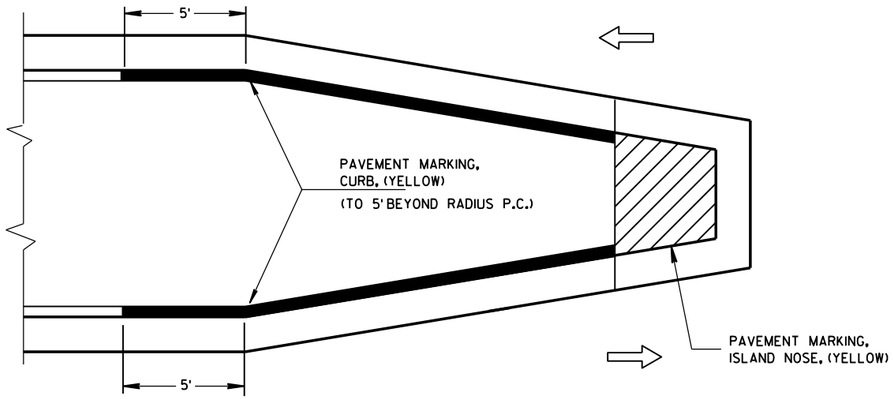
S.D.D. 15 C 8-16b



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

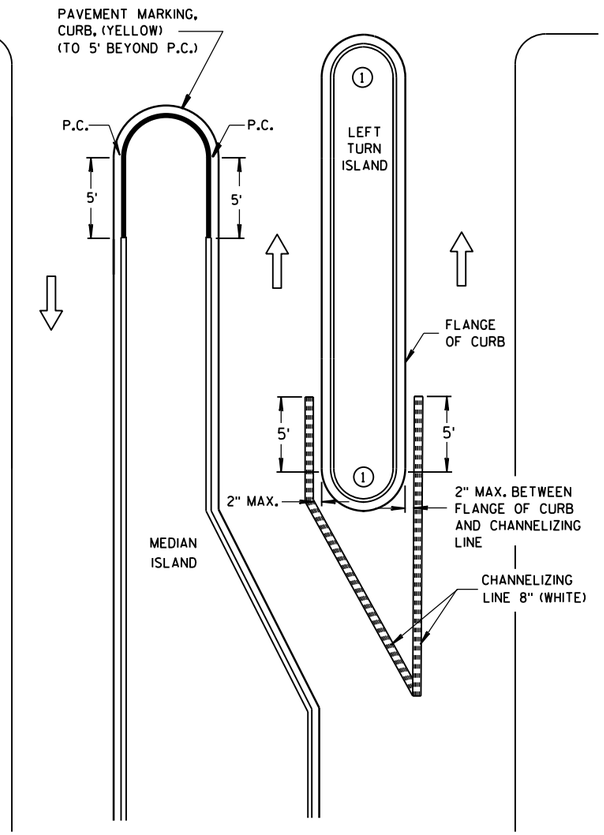


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

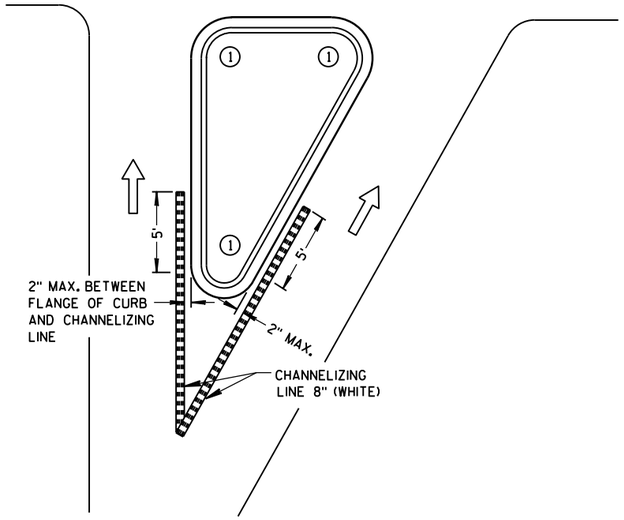


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.

2. WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND

LEGEND

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

PAVEMENT MARKING
(ISLANDS)

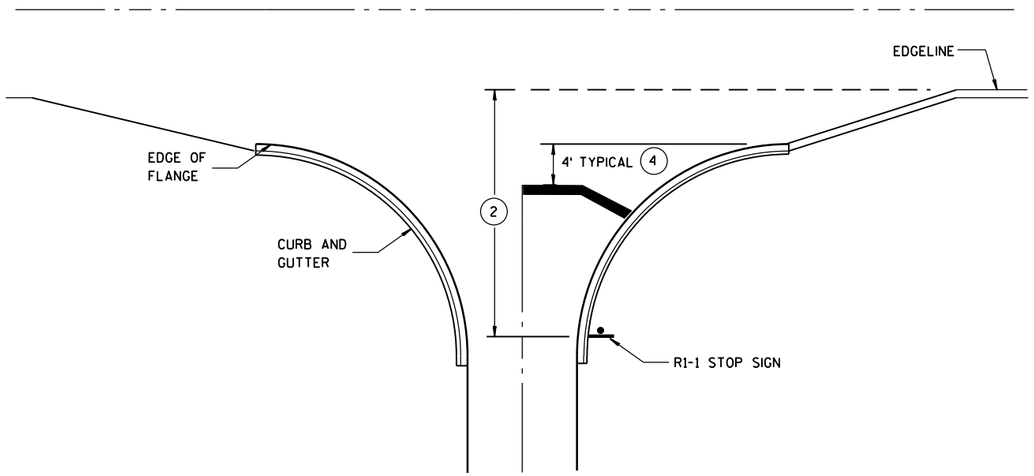
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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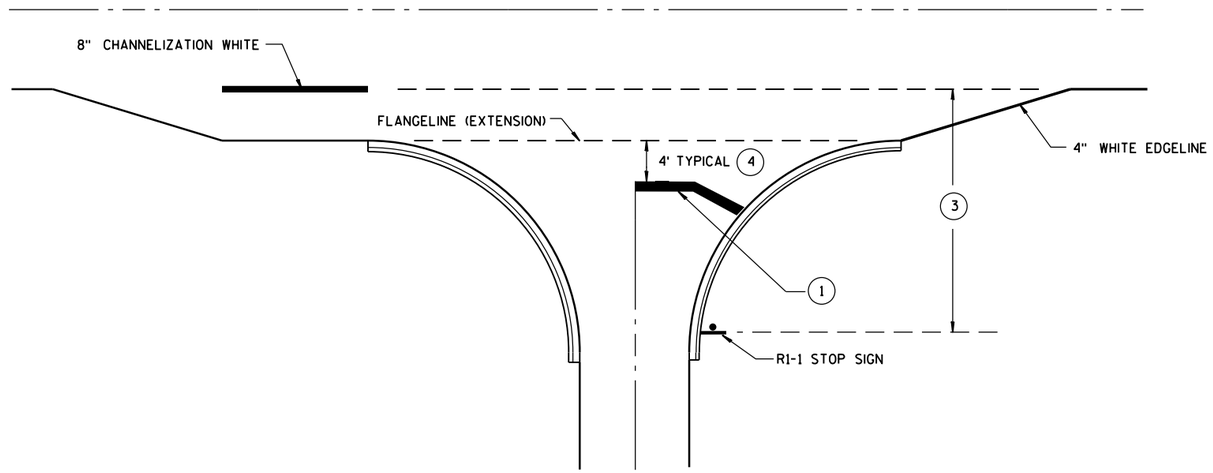
S.D.D. 15 C 8-16f

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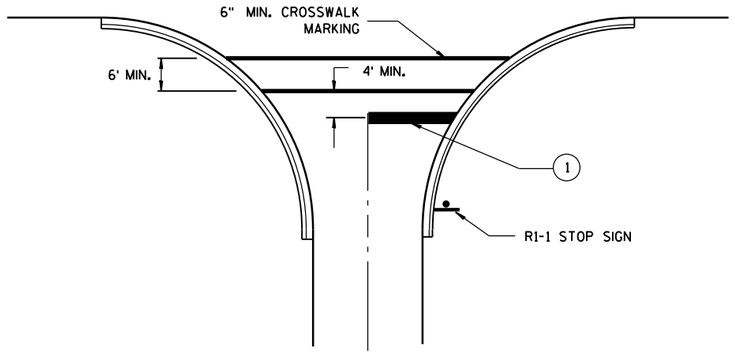
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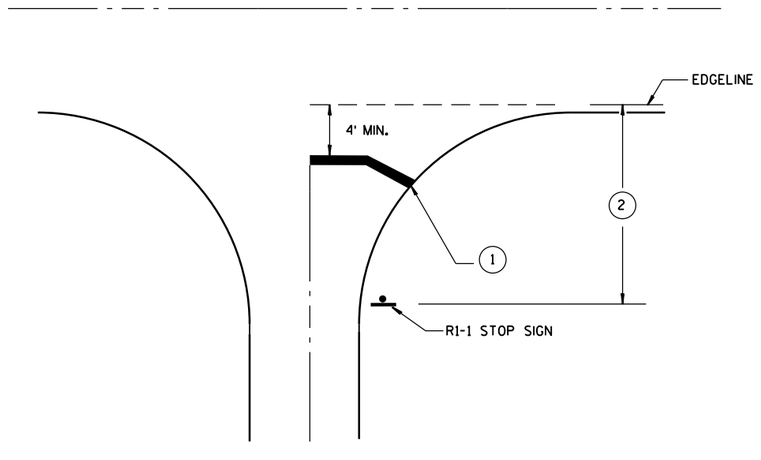
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
3. IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
4. MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/30/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

FHWA

6

S.D.D. 15 C 33-1

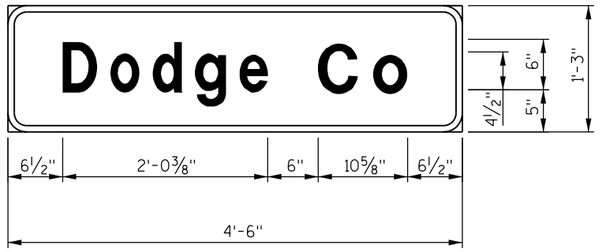
12-2

P104

A= 5.63 SQ. FT.

BORDER= 3/4"

RADIUS= 2 1/4"



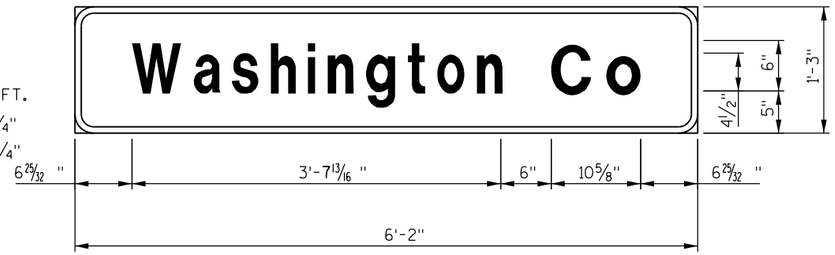
12-2

P105

A= 7.71 SQ. FT.

BORDER= 3/4"

RADIUS= 2 1/4"



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specifications for HIGHWAY and STRUCTURE CONSTRUCTION latest addition.

2. COLOR:
   Background - Green
   Message - White - Type H Reflective

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.

7

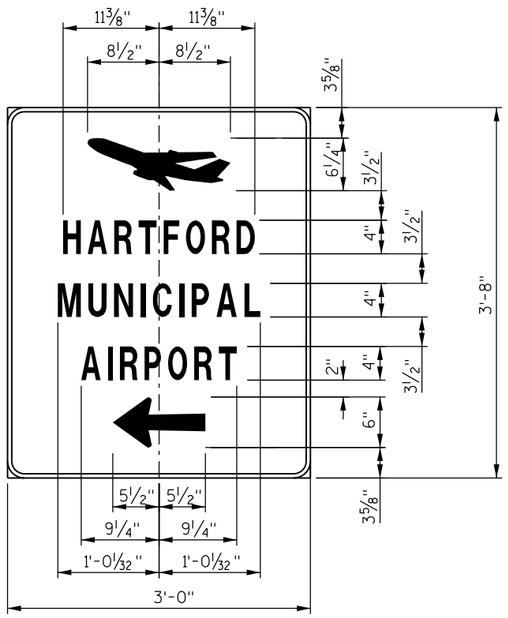
D9-52L

P402

A= 11.00 SQ. FT.

BORDER= 3/4"

RADIUS= 1 1/2"



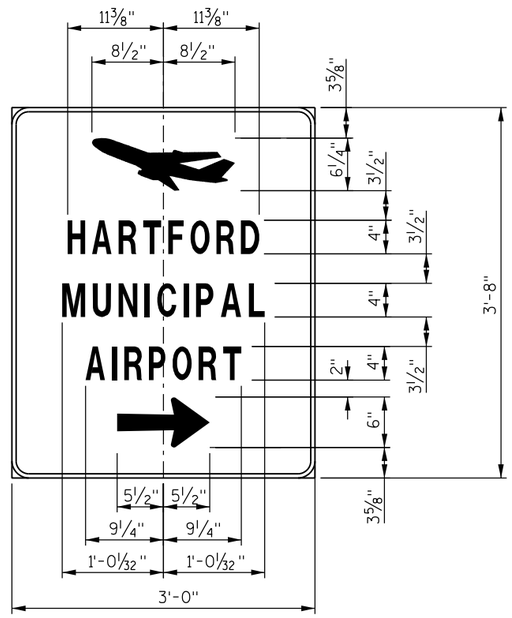
D9-52R

P406

A= 11.00 SQ. FT.

BORDER= 3/4"

RADIUS= 1 1/2"



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specifications for HIGHWAY and STRUCTURE CONSTRUCTION latest addition.

2. COLOR:
   Background - Green
   Message - White - Type H Reflective

3. Message Series - C

4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. when base material is metal, the corners and borders shall be rounded.

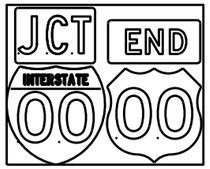
7

PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	SIGN DETAILS	SHEET 148	E

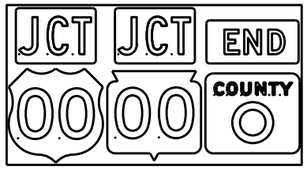
TYPICAL ASSEMBLIES



J1-1



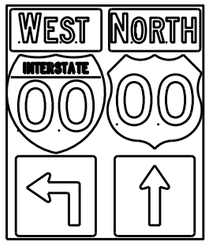
J1-2



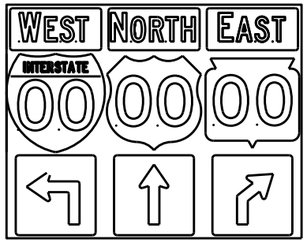
J1-3



J2-1



J2-2

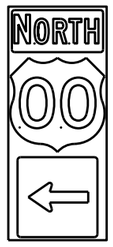


J2-3

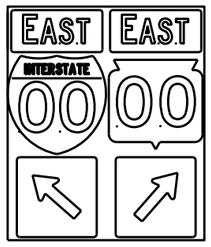


JV

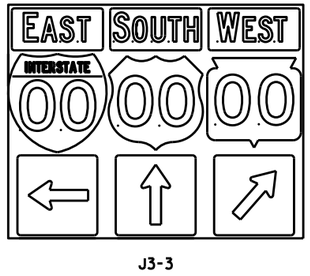
(Typical Vertical J-Assembly
See Note 10 and 11)



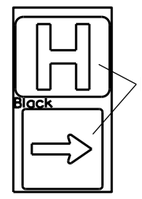
J3-1



J3-2



J3-3

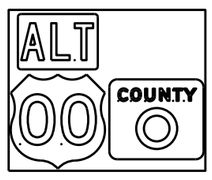


Blue Background

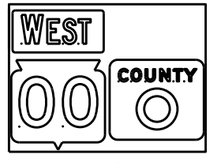
JH-1



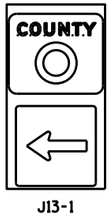
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

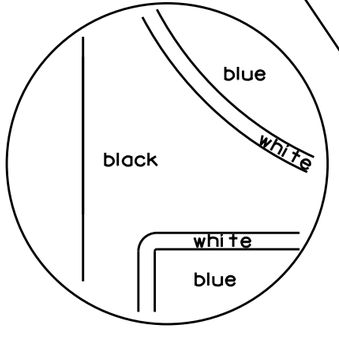


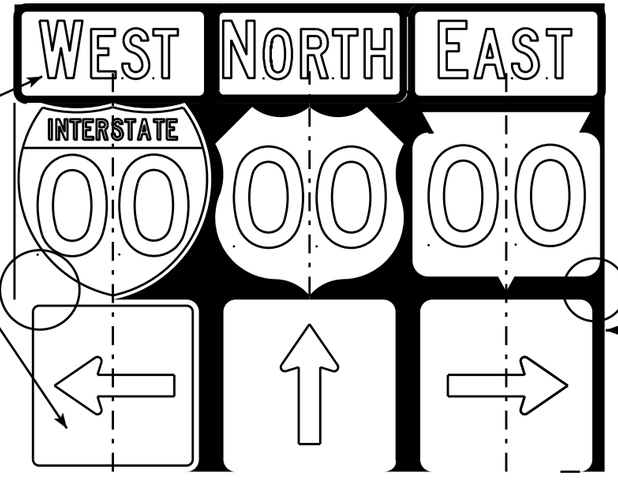
J23-1

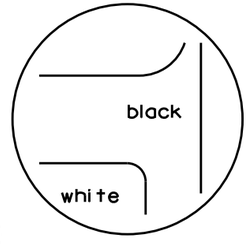


J22-1

blue background
with interstate







black background

NOTES

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

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

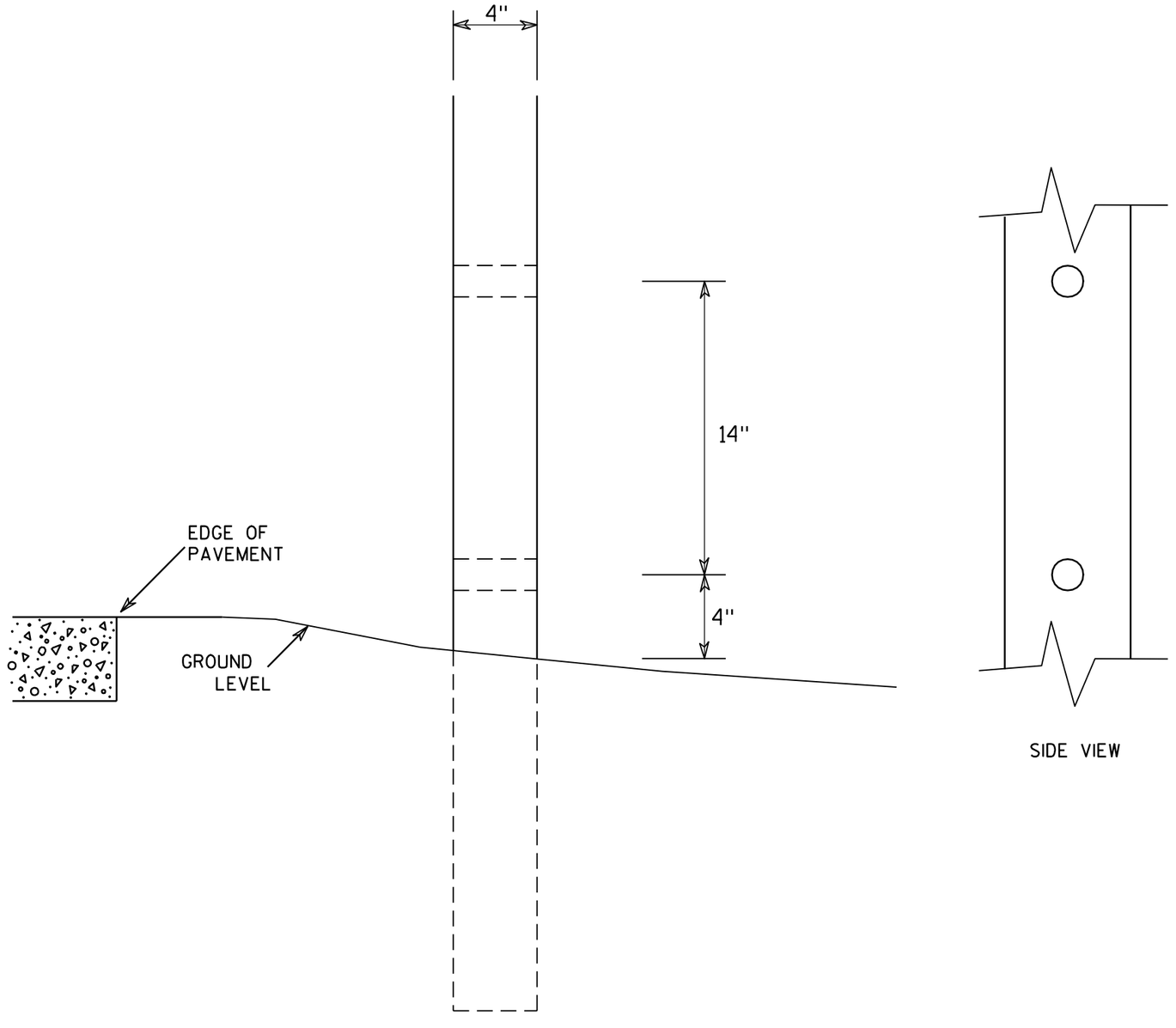
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

PROJECT NO: SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :
WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

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

4 X 6 WOOD POST MODIFICATIONS

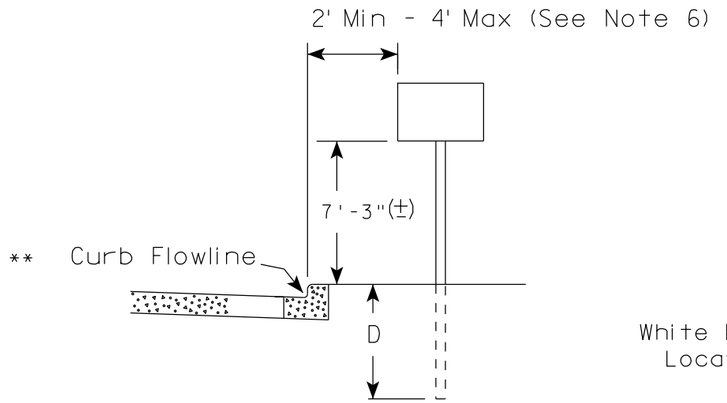
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

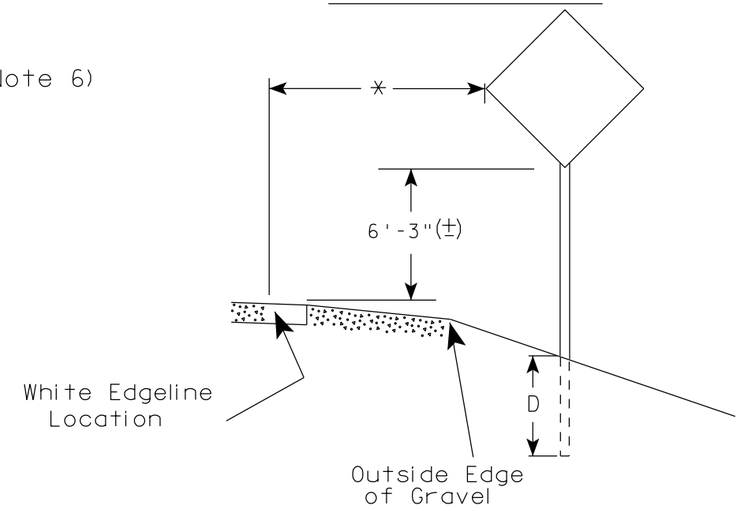
DATE 3/27/97 PLATE NO. A4-11.2

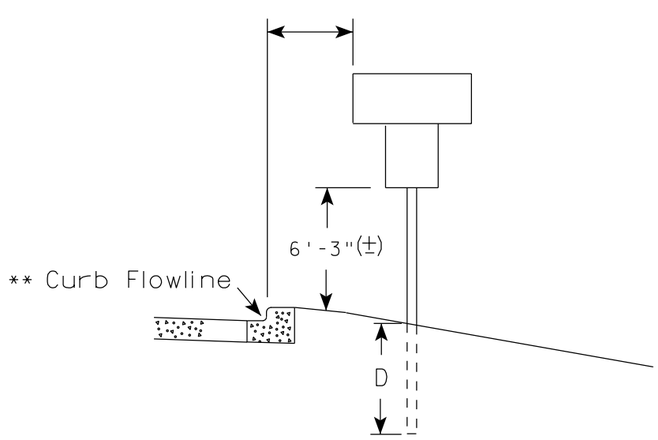
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 150	E

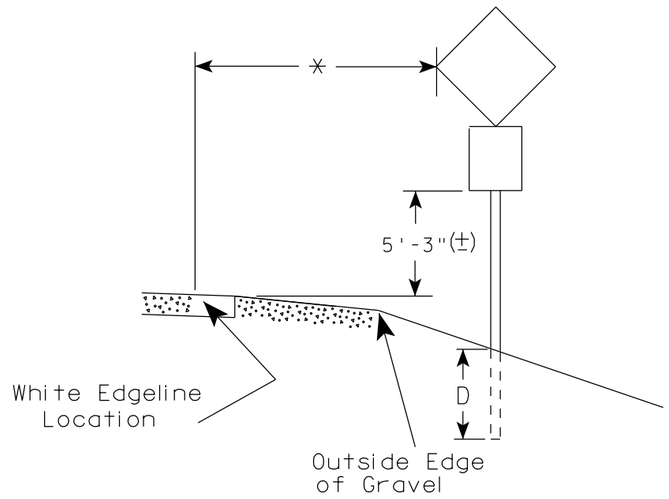
URBAN AREA



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.

GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (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 stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), 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" (±).

POST EMBEDMENT DEPTH

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

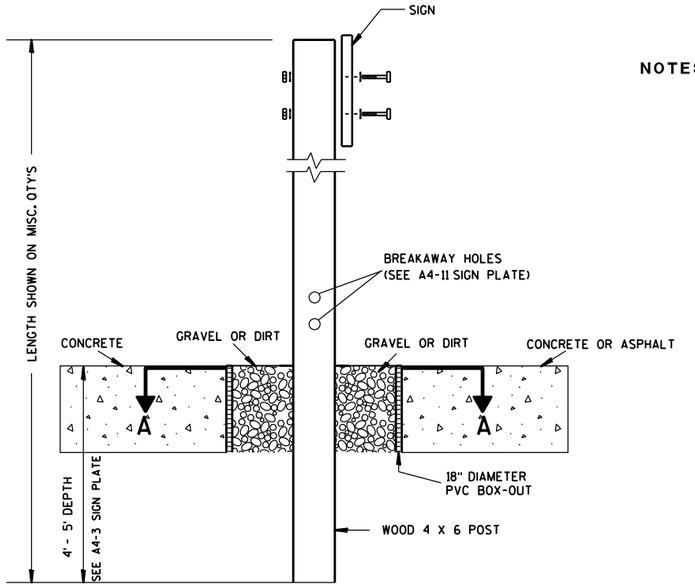
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 10/13/14 PLATE NO. A4-3.19

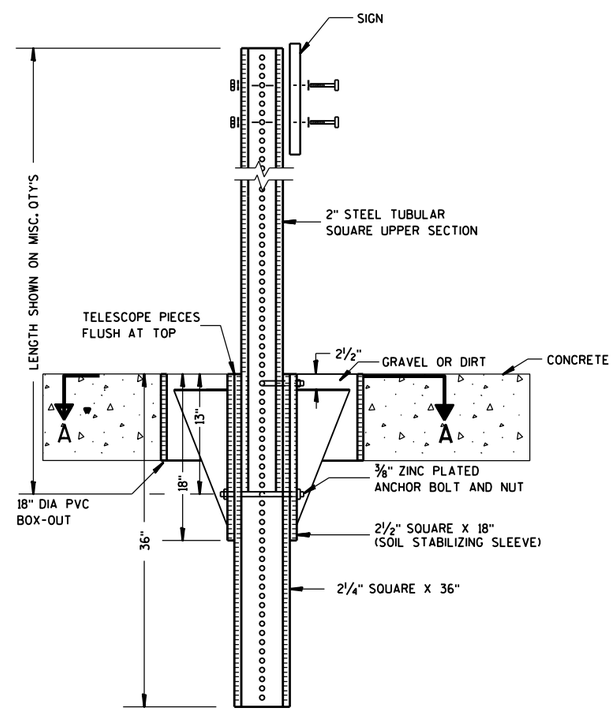
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

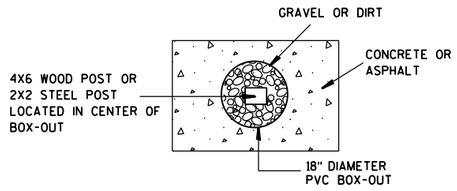
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

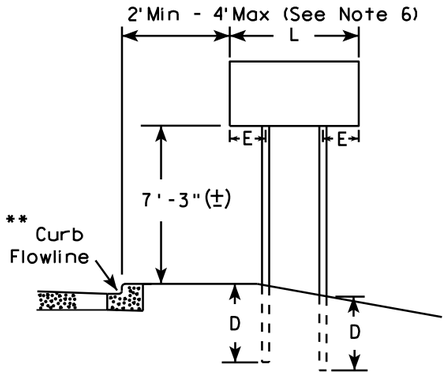
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

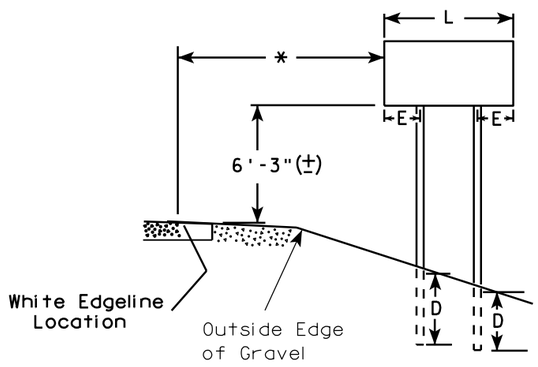
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

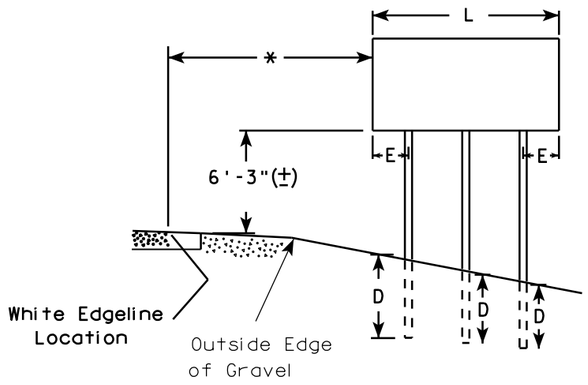
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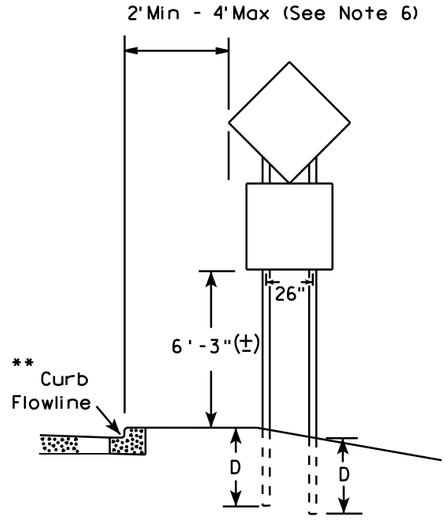
URBAN AREA



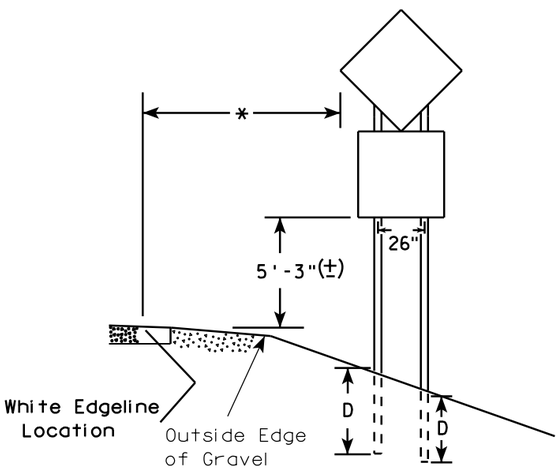
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

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

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

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

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

***

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

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

POST EMBEDMENT DEPTH

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

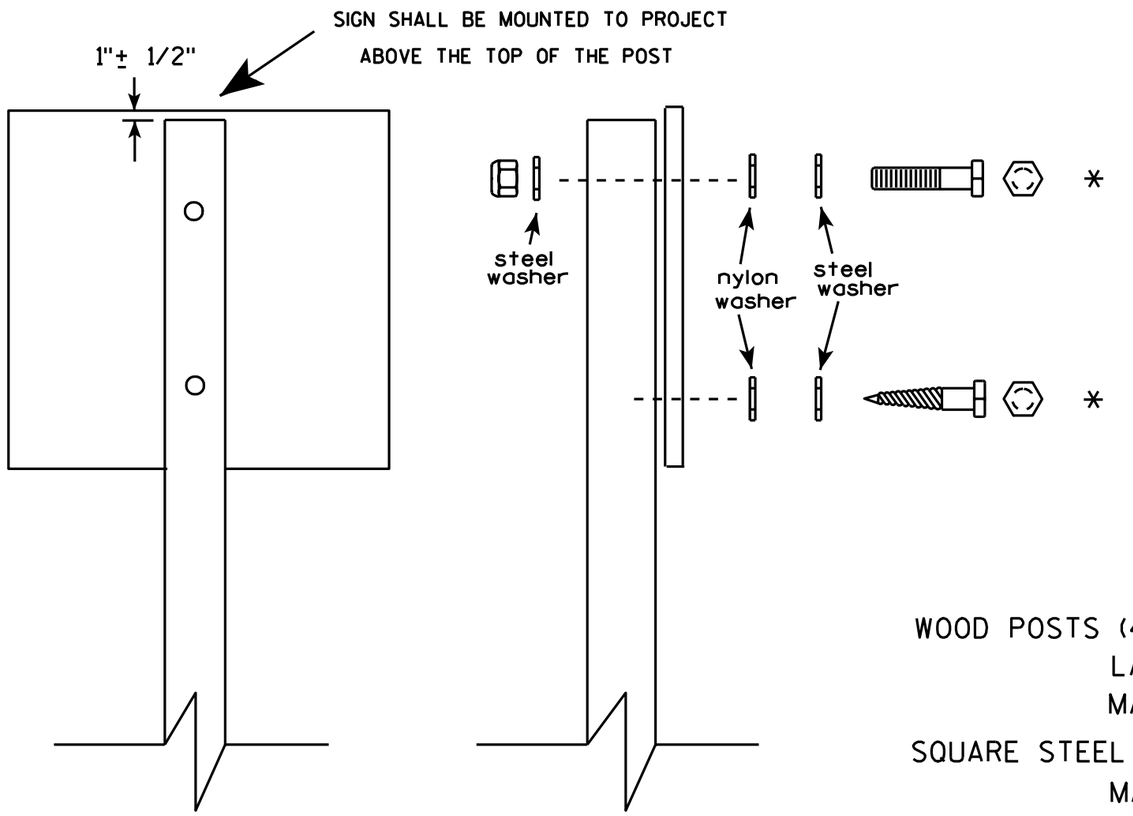
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE NO. A4-4 153 13

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

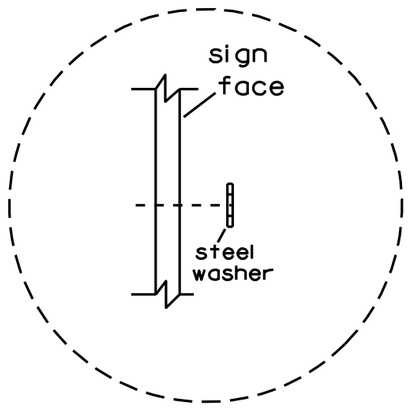
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

7

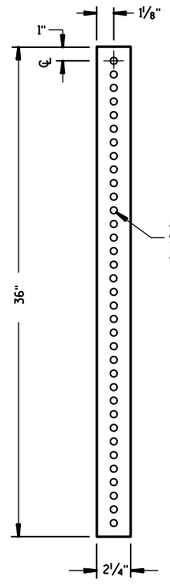
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PROJECT NO:

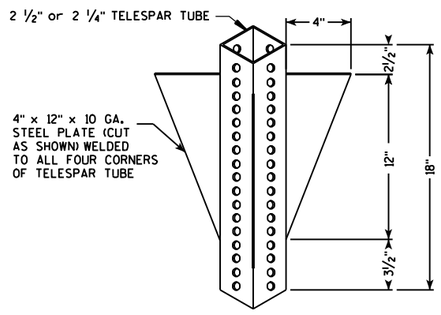
SHEET NO: 154 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

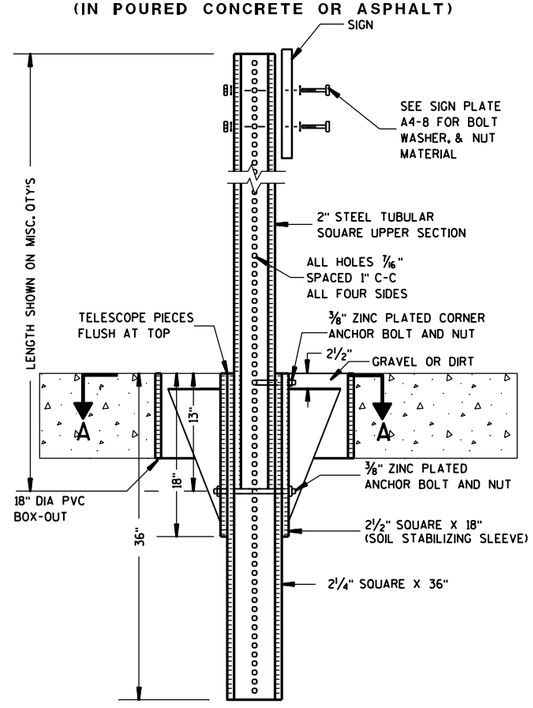
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



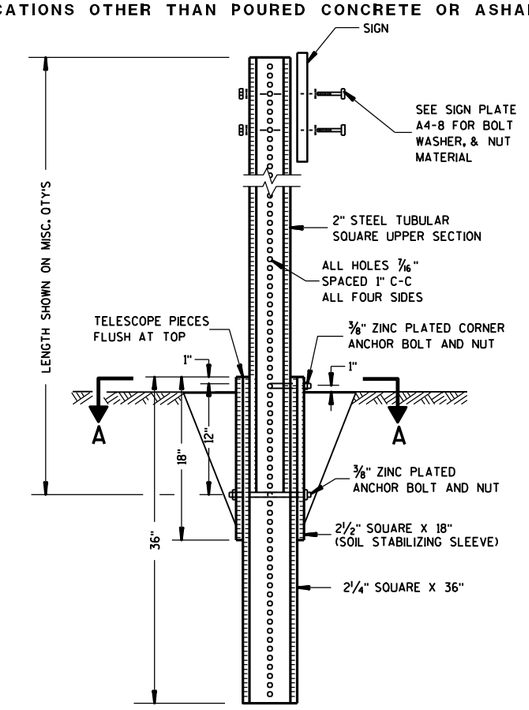
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

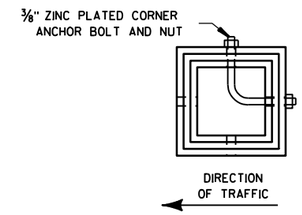


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASHALT)





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).

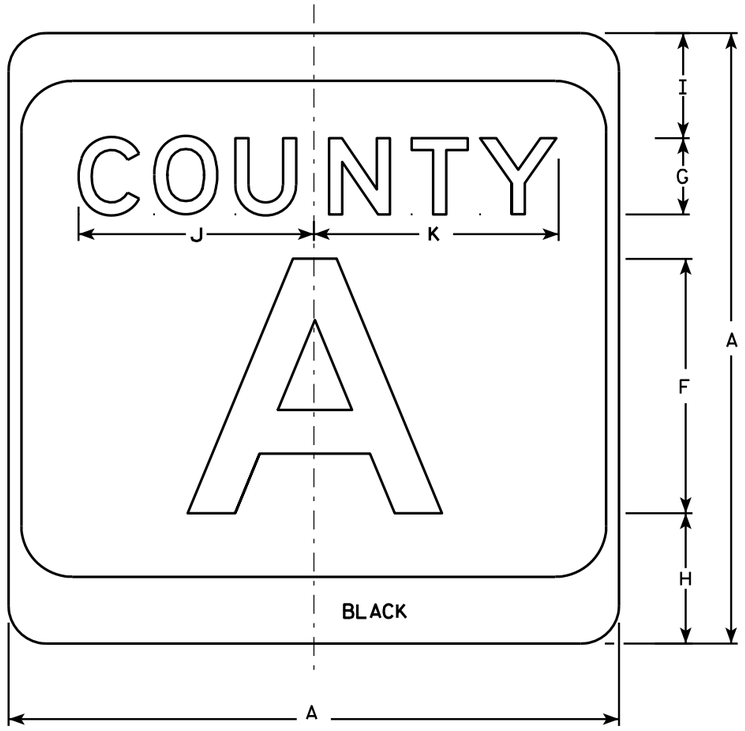
TUBULAR STEEL SIGN POST A4-9

WISCONSIN DEPT OF TRANSPORTATION

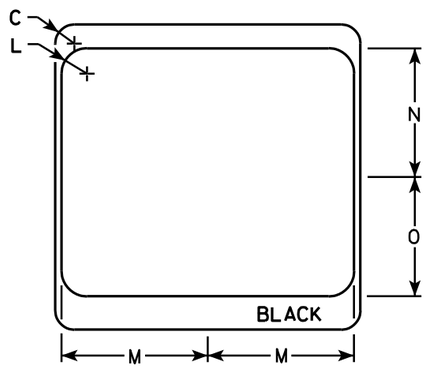
APPROVED Matthew R Rauch
for State Traffic Engineer

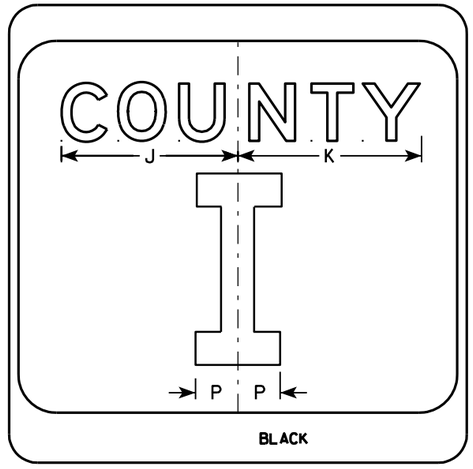
DATE 5/30/12 PLATE NO. A4-9.7

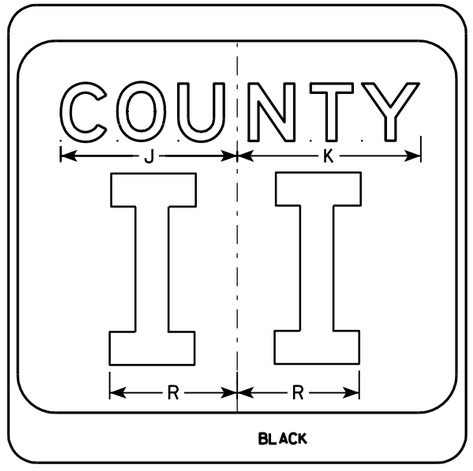
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 155	E



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

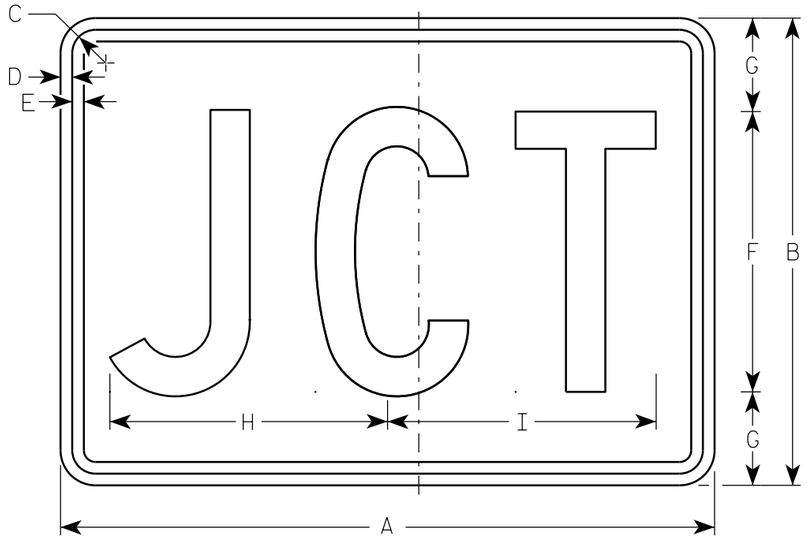
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

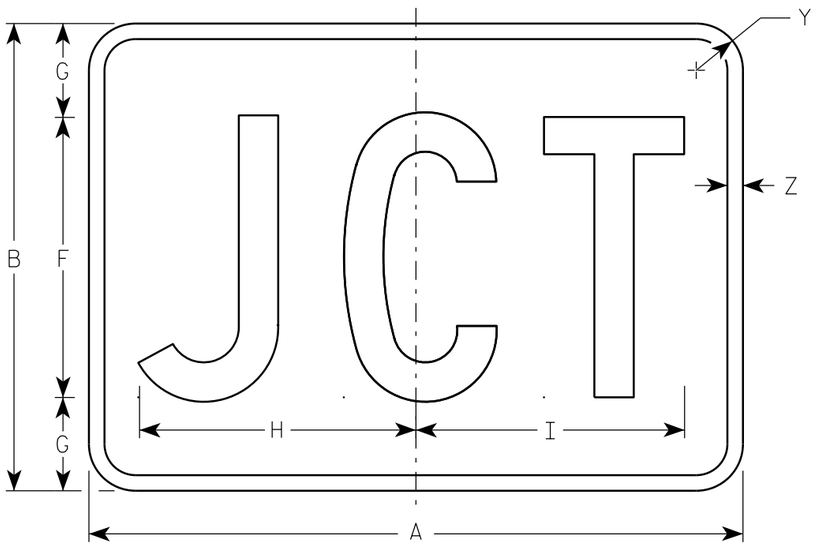
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 156	E



M2-1
MK2-1
MM2-1
MN2-1
MR2-1



MB2-1

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MR2-1 Background - Brown
   Message - Yellow

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	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

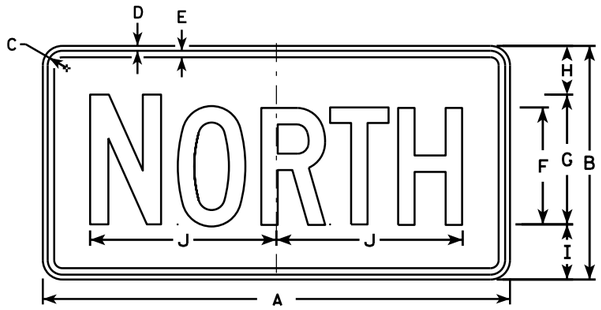
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

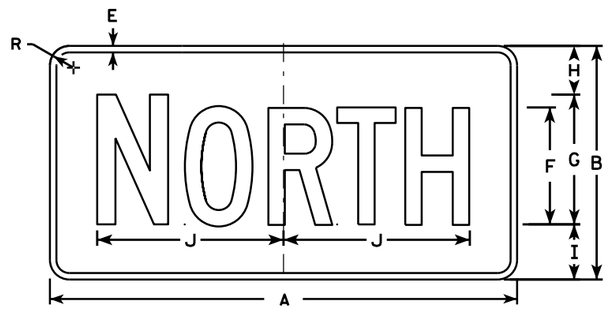
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/30/14 PLATE 157 12-1.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



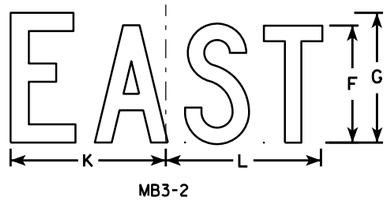
M3-1
MK3-1
MM3-1
MN3-1



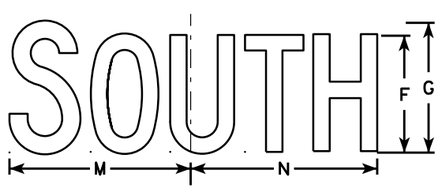
MB3-1



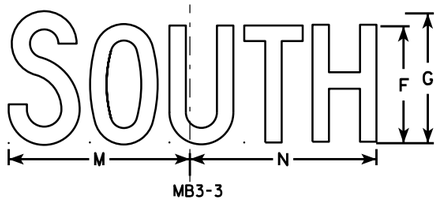
M3-2
MK3-2
MM3-2
MN3-2



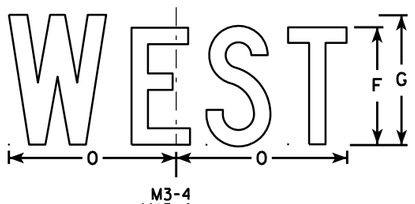
MB3-2



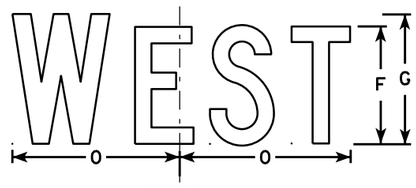
M3-3
MK3-3
MM3-3
MN3-3



MB3-3



M3-4
MK3-4
MM3-4
MN3-4



MB3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
6. Note the first letter of each direction is larger than the remainder of the message.

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	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

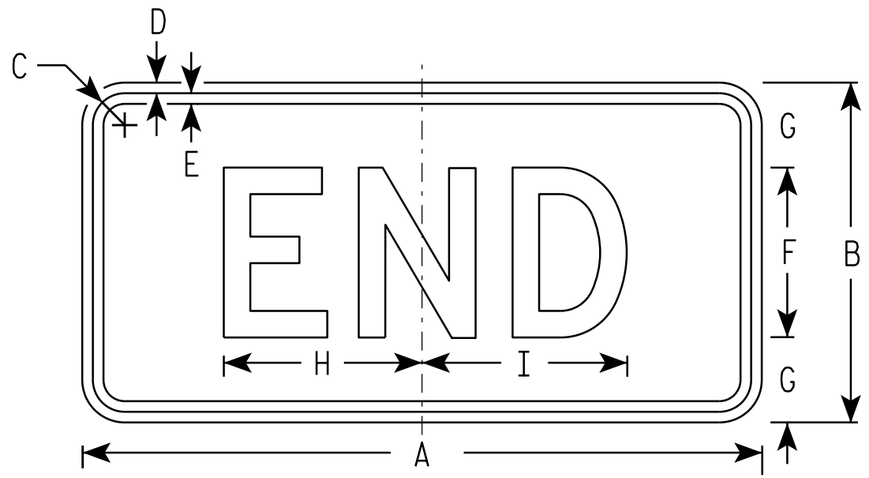
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

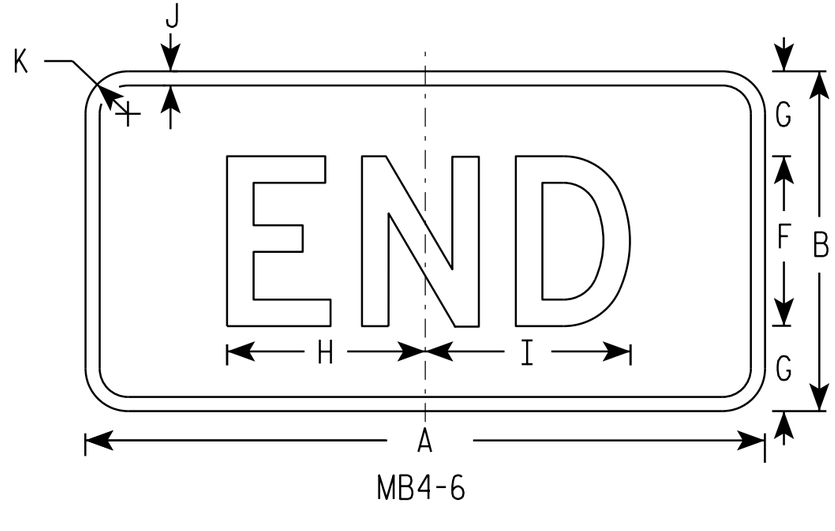
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/30/14 PLATE NO M3-1.13

PROJECT NO: | HWY: | COUNTY: | | SHEET NO: E



M4-6
MK4-6
MM4-6
MN4-6
MR4-6



MB4-6

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
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. M4-6 Background - White
   Message - Black

   MB4-6 Background - Blue
   Message - White

   MK4-6 Background - Green
   Message - White

   MM4-6 Background - White
   Message - Green

   MN4-6 Background - Brown
   Message - White

   MR4-6 Background - Brown
   Message - Yellow

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	12	1 1/8	3/8	3/8	6	3	7	7 1/4	1/2	1 1/2																2.00
3	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
4	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
5	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5

STANDARD SIGN
M4-6

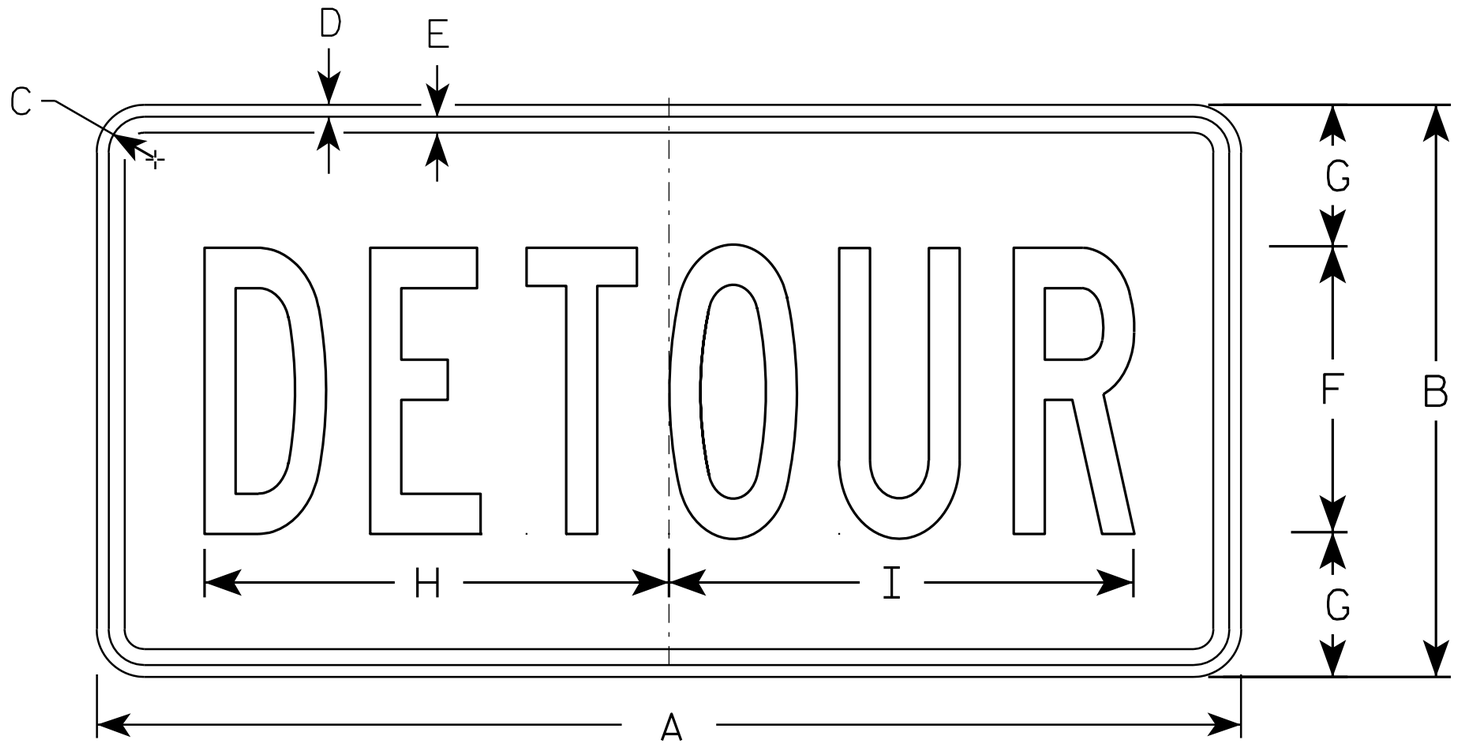
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/30/14 PLATE 14-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M46.DGN PLOT DATE : 30-JUN-2014 15:51 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.351066:1.000000 WISDOT/CADDS SHEET 42



M4-8

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

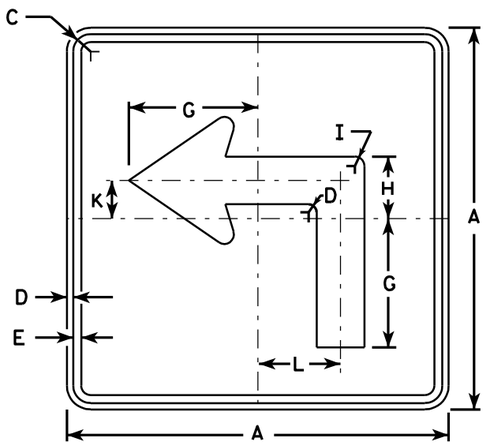
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

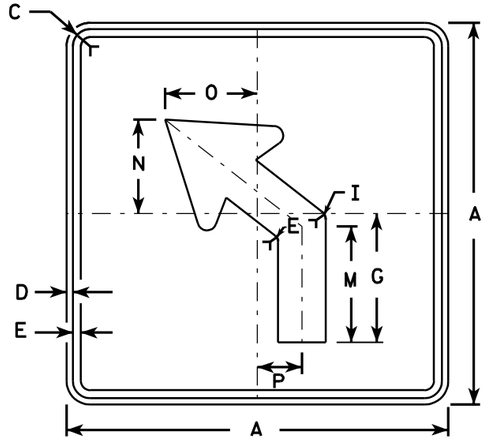
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

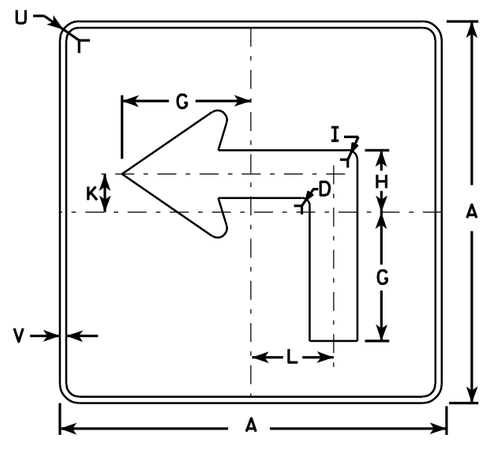
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 160	E



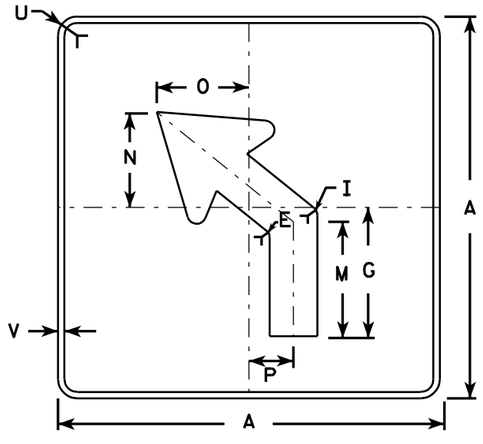
M5-1L
MK5-1L
MM5-1L
MO5-1L
MP5-1L
MR5-1L



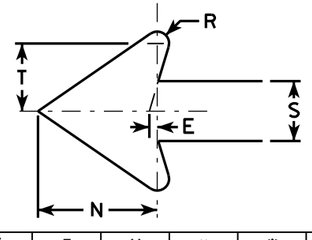
M5-2L
MK5-2L
MM5-2L
MO5-2L
MP5-2L
MR5-2L



MB5-1L
MG5-1L
MN5-1L



MB5-2L
MG5-2L
MN5-2L



NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White - Type H Reflective
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White - Type H Reflective
   MG5-1 and MG5-2 Background - Green
   Message - White - Type H Reflective
   MK5-1 and MK5-2 Background - Green
   Message - White Type H Reflective
   MM5-1 and MM5-2 Background - White - Type H Reflective
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White - Type H Reflective
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow - Type H Reflective
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

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	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 1/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

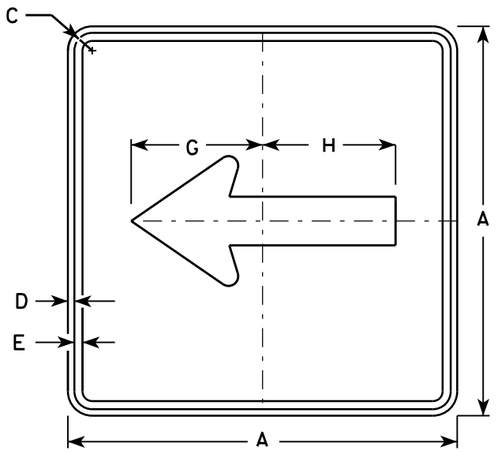
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

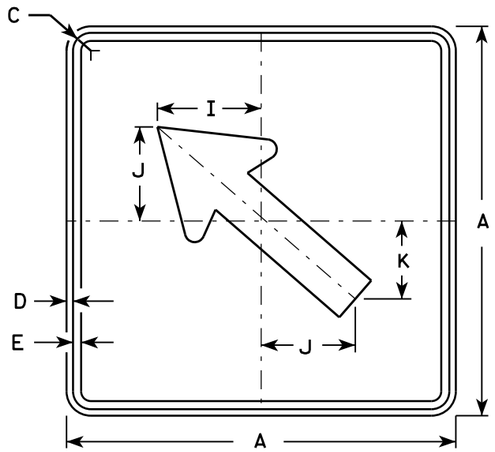
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M5-1.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 161 | E



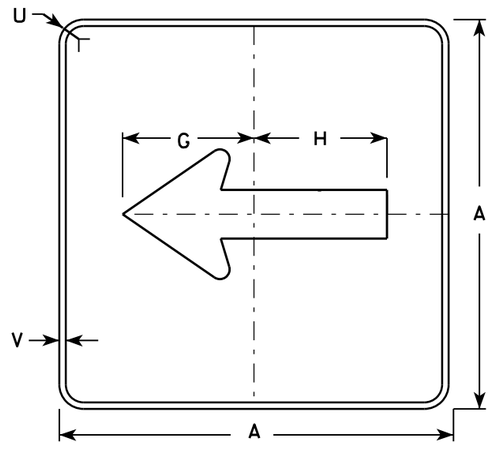
M6-1
MK6-1
MM6-1
MN6-1
MO6-1
MP6-1
MR6-1



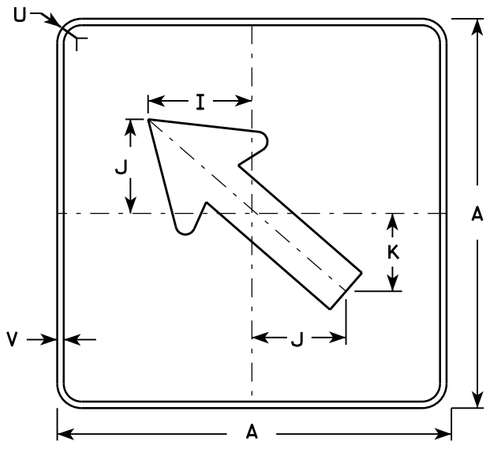
M6-2
MK6-2
MM6-2
MN6-2
MO6-2
MP6-2
MR6-2

NOTES

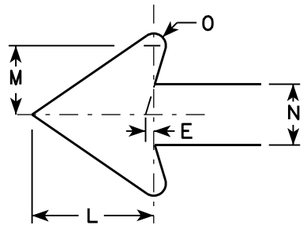
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MG6-1 and MG6-2 Background - Green
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1



MB6-2



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

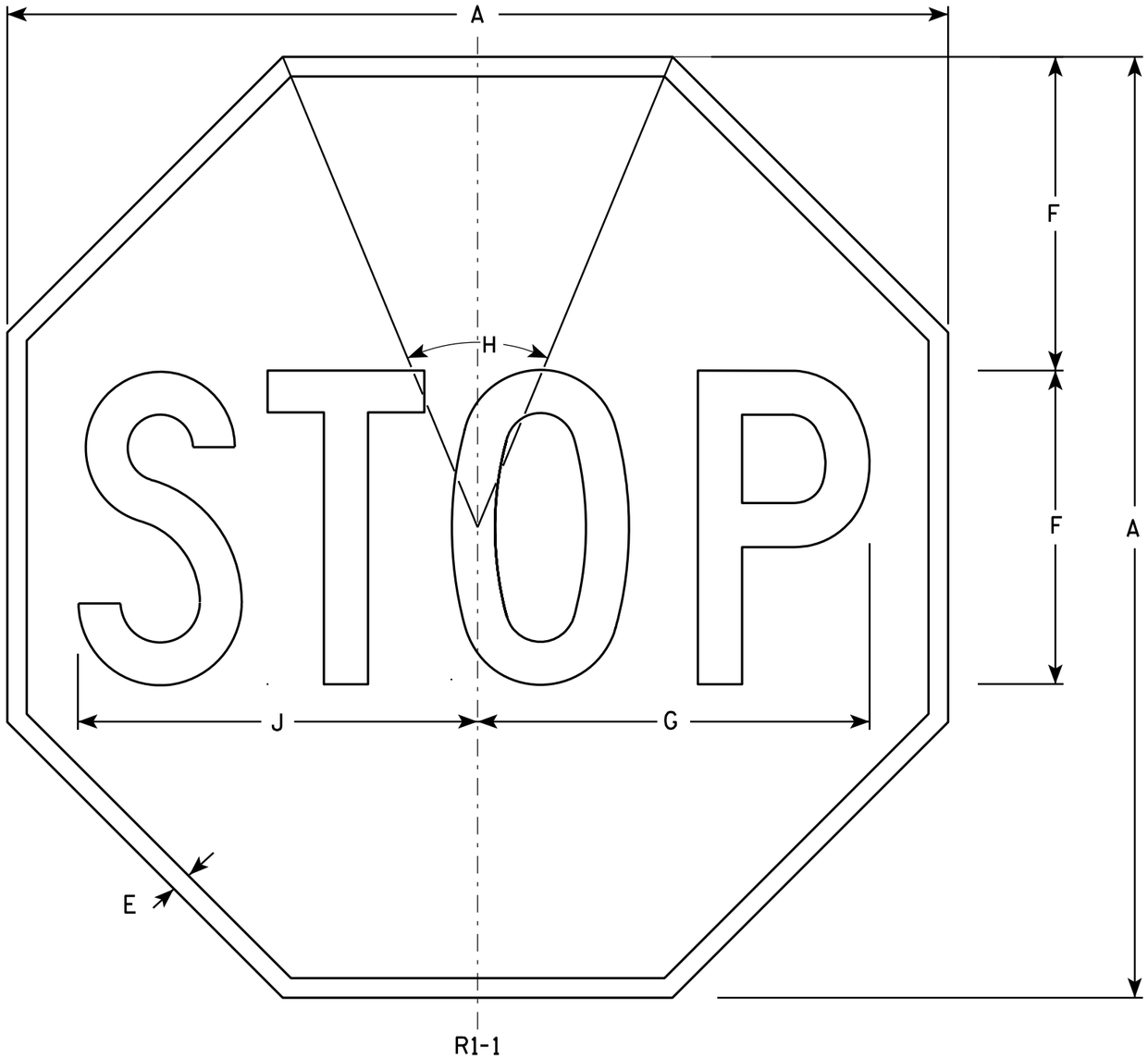
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 7/03/14 PLATE 162 M6-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - 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	24				3/8	8	10	45°		10 1/4																	3.31
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

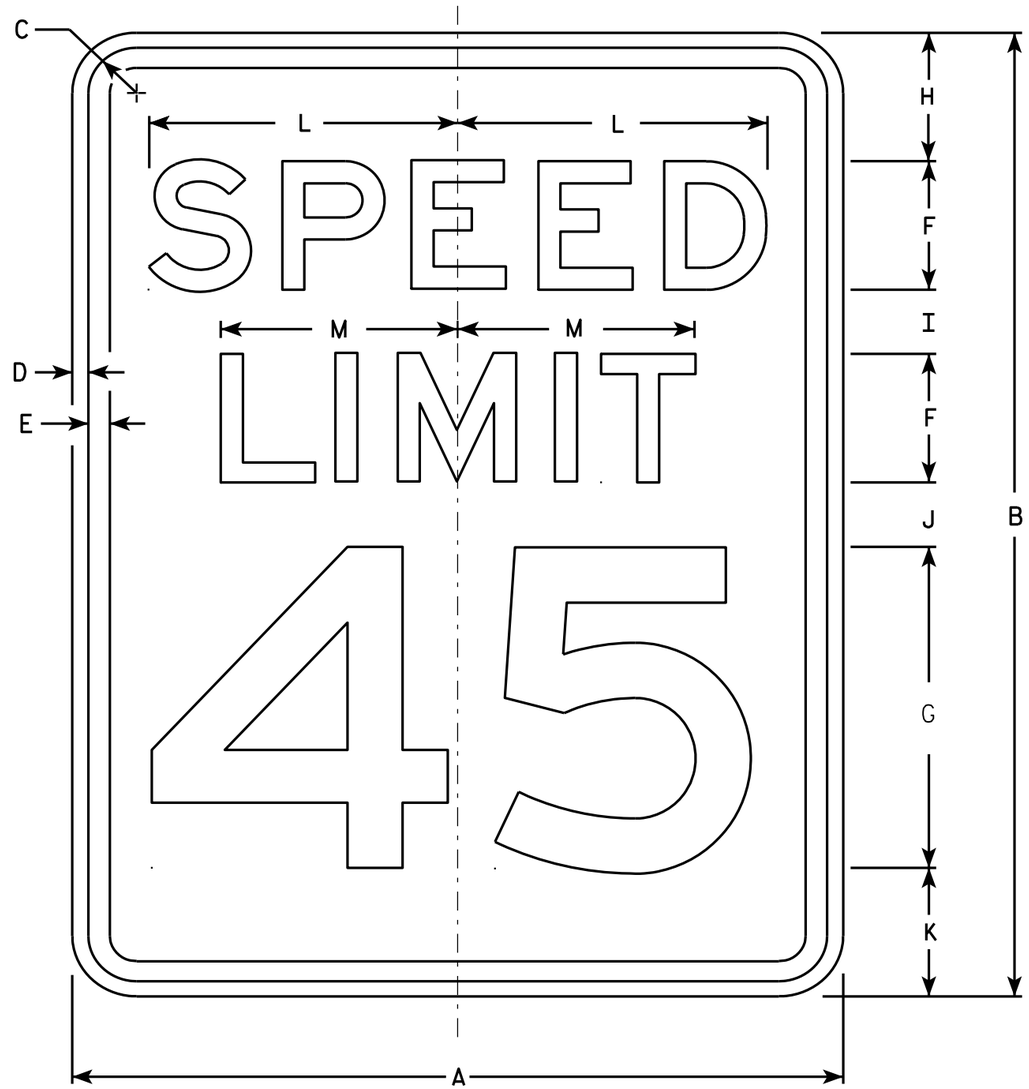
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 163	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

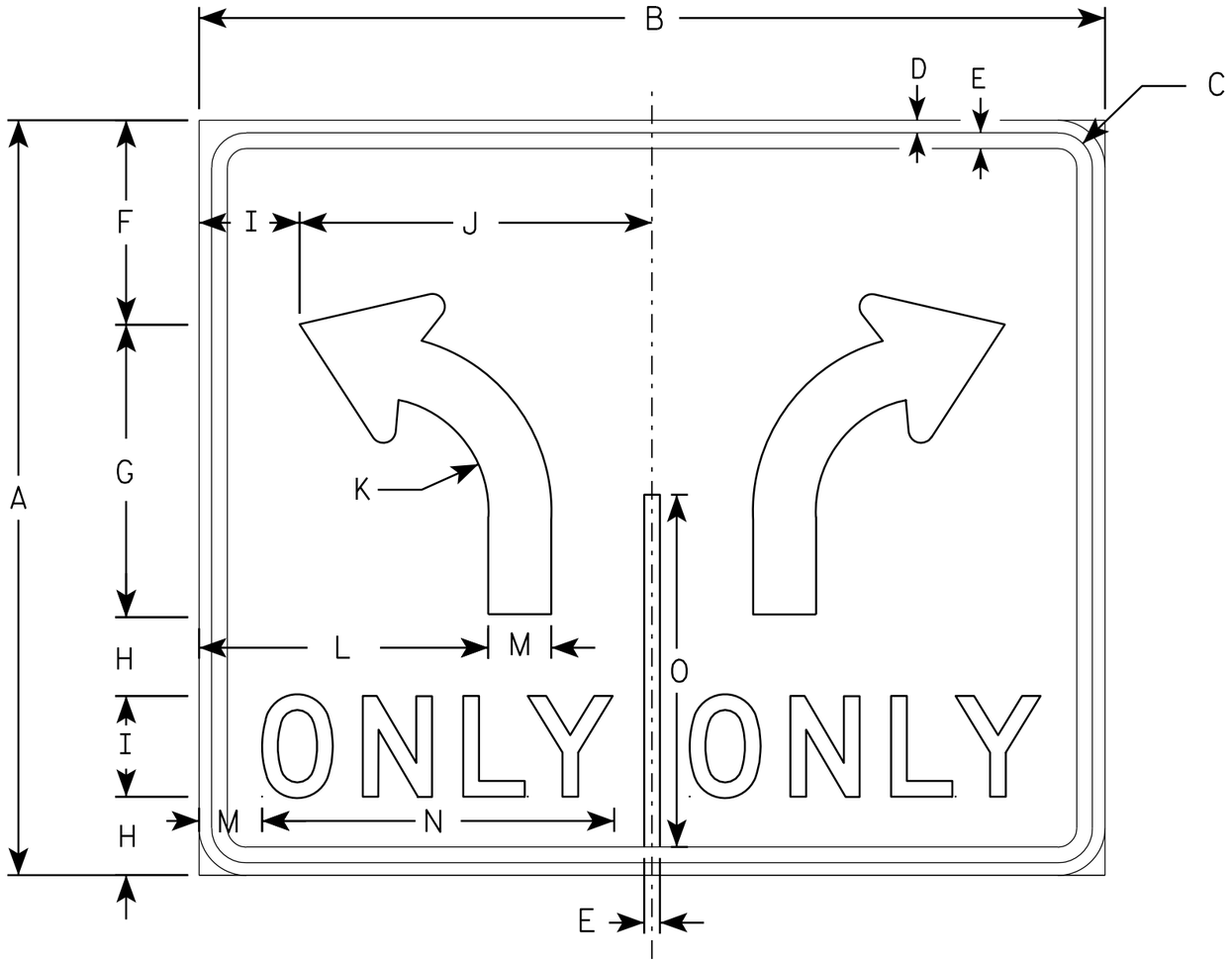
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 164 | E

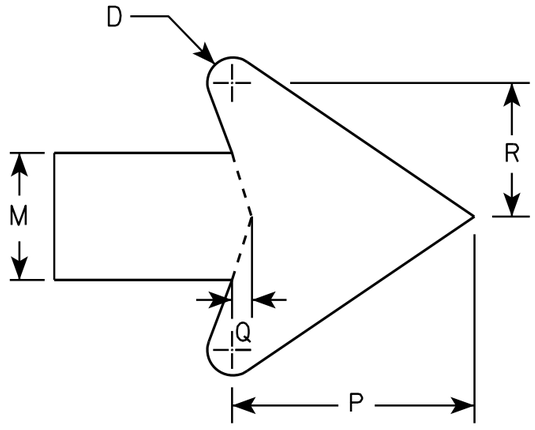
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R21.DGN PLOT DATE : 28-MAY-2010 08:32 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 4.717577:1.000000
WISDOT/CADDS SHEET 42



R3-8F

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.



ARROW DETAIL

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

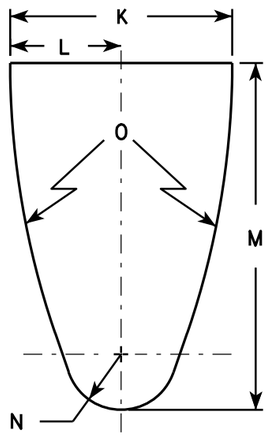
STANDARD SIGN
R3-8F

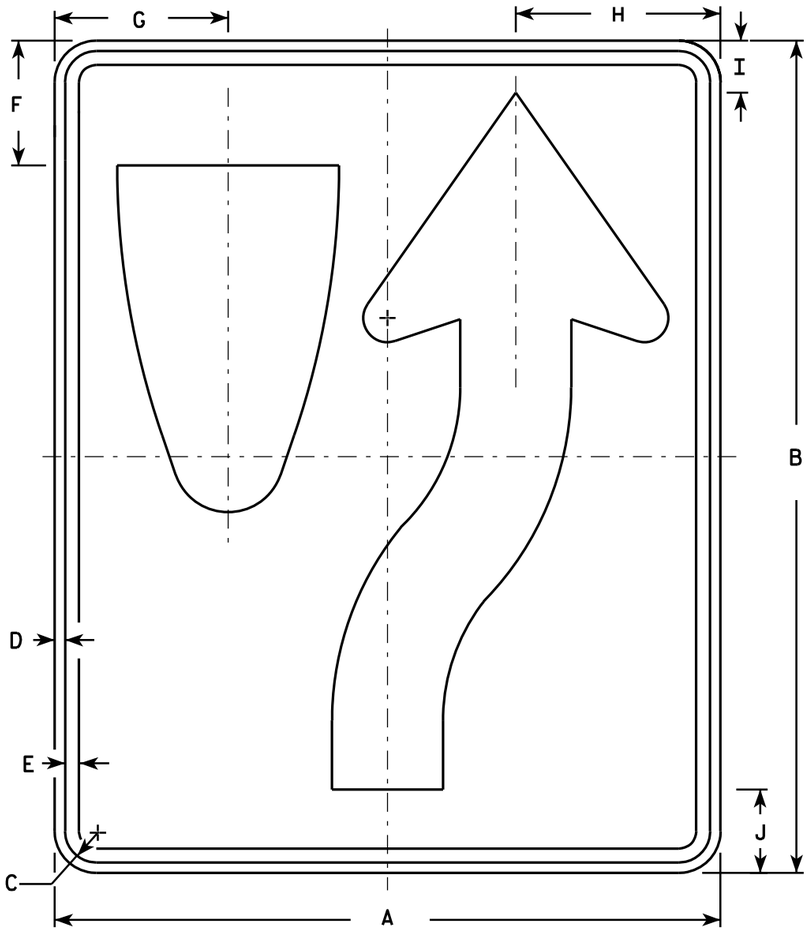
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-8F.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 165 | E

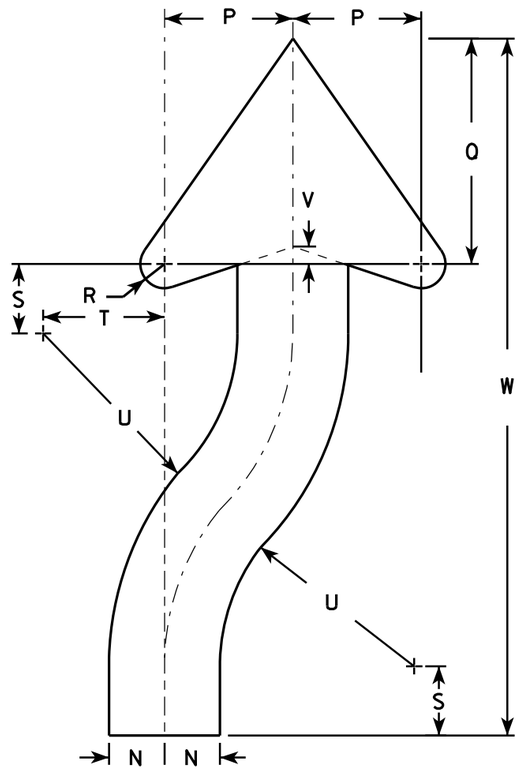




R4-7

NOTES

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



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	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

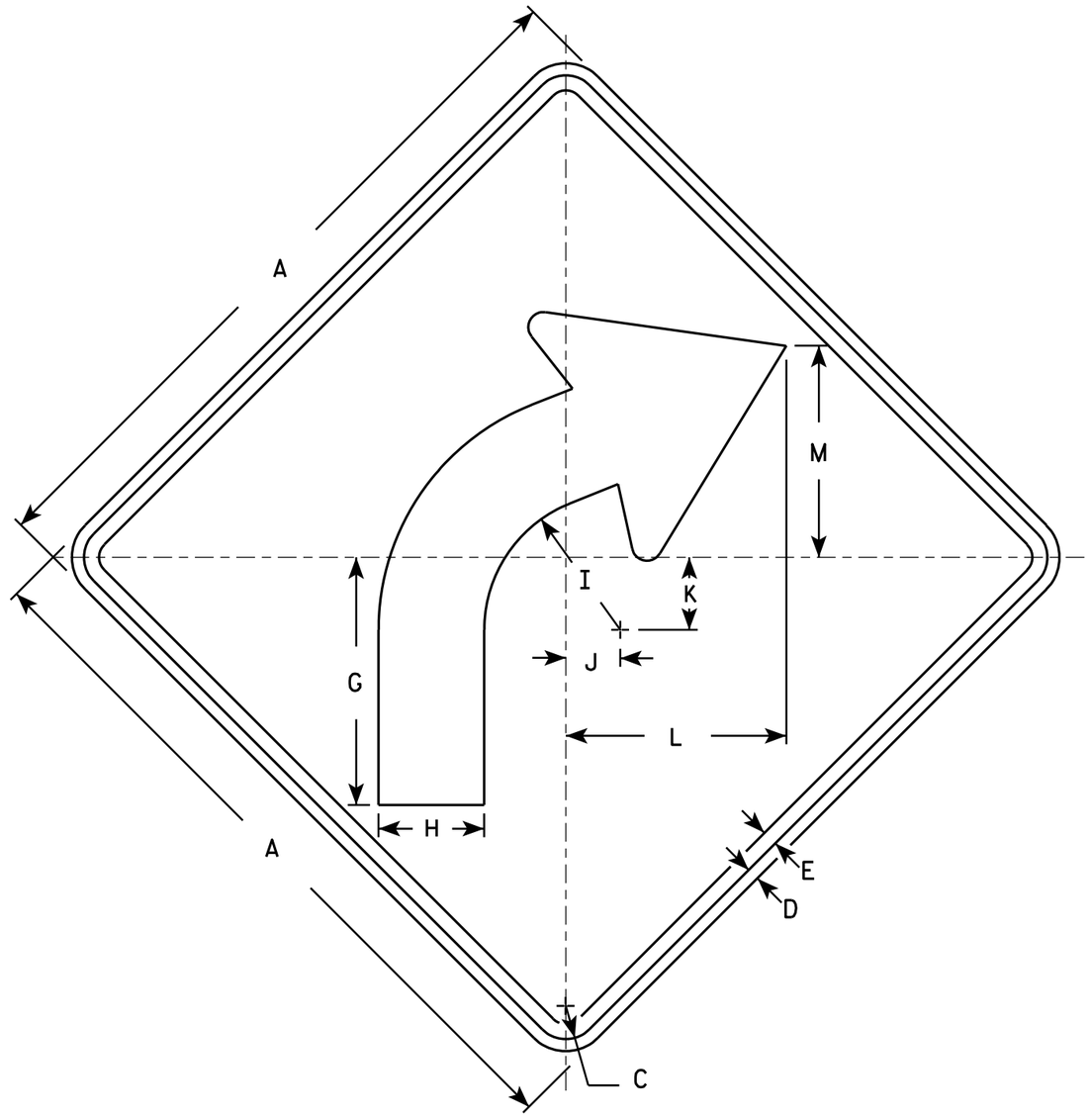
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

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

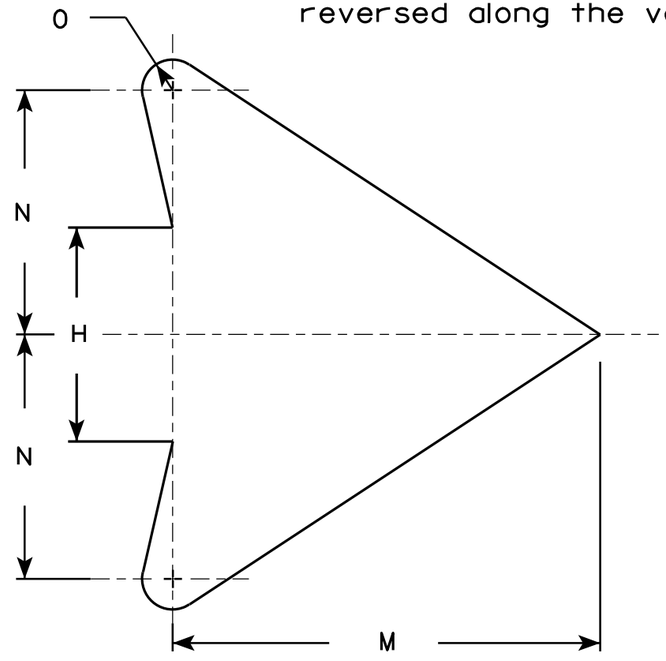
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 166	E



W1-2R

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. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



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	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

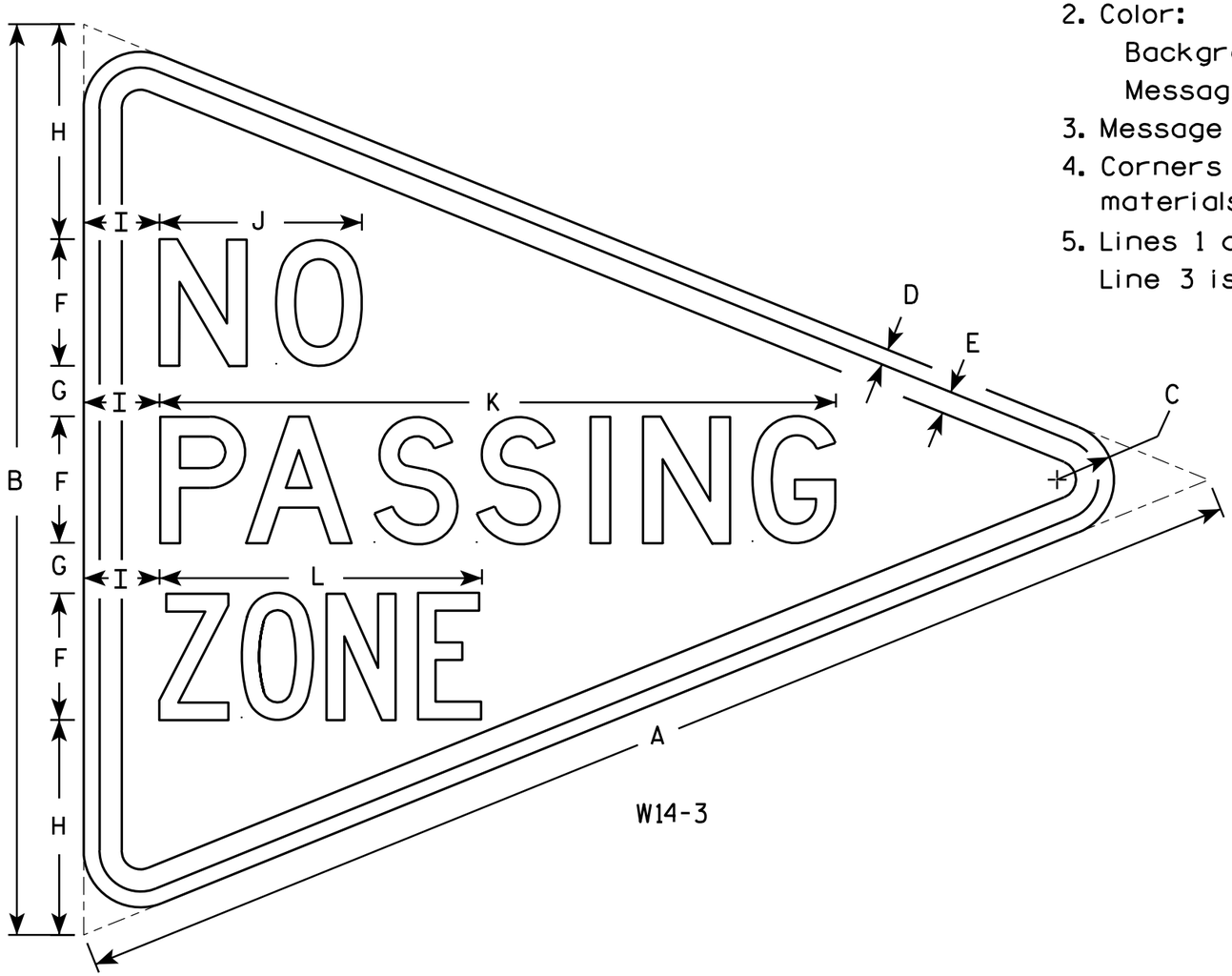
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 167	E

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See note 5
4. Corners and borders shall be rounded on all base materials for this sign.
5. Lines 1 and 2 are Series D.
   Line 3 is series C.



W14-3

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2															10.7
4																											
5																											

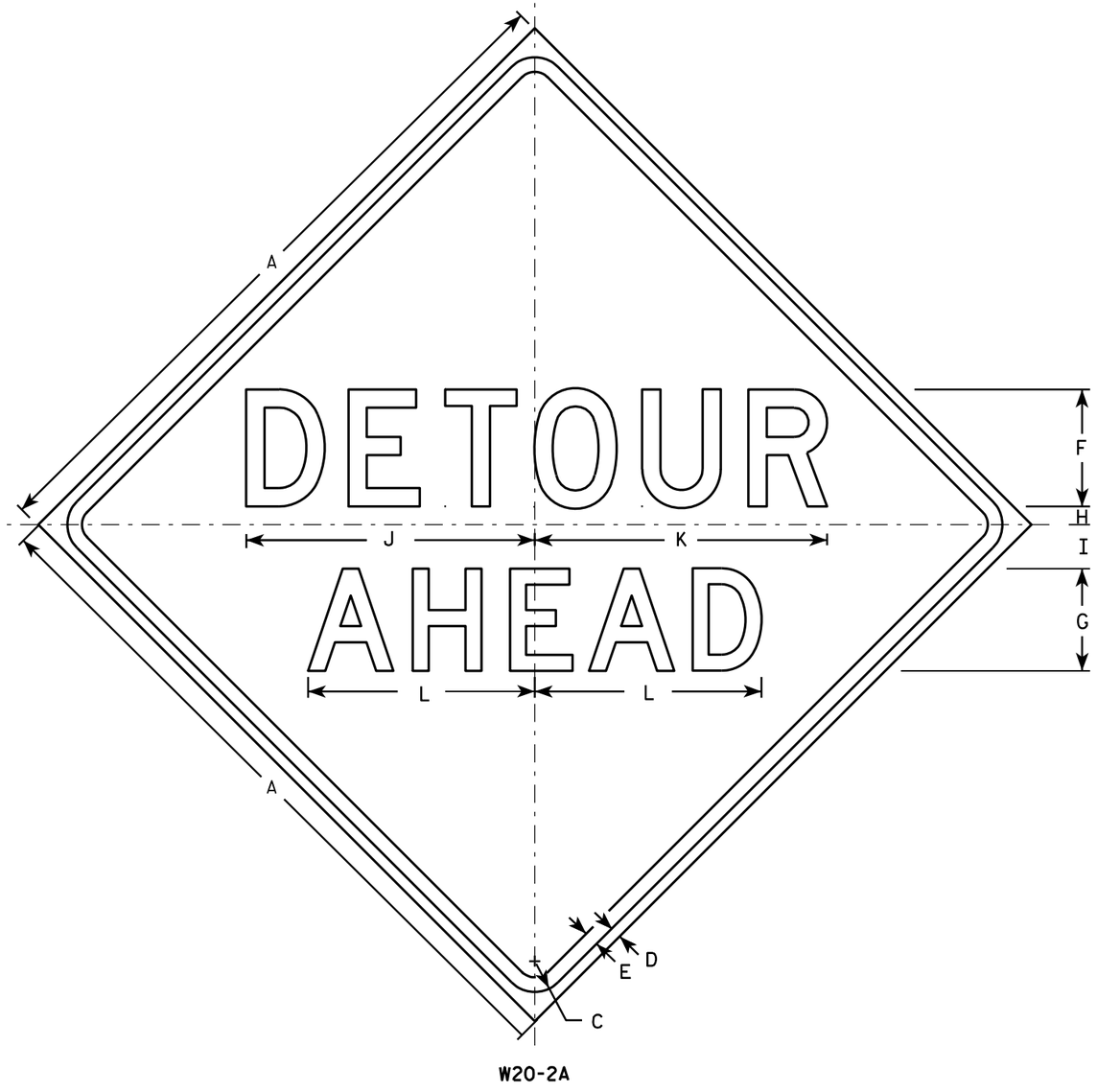
STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

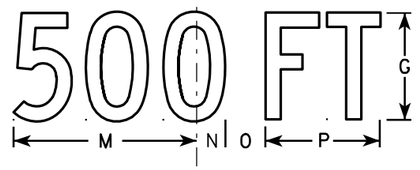
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W14-3.9

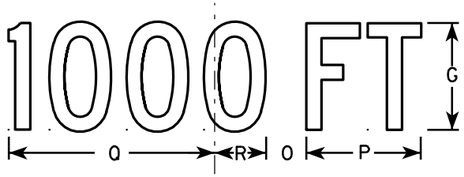
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 168	E



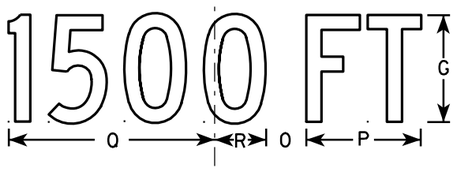
W20-2A



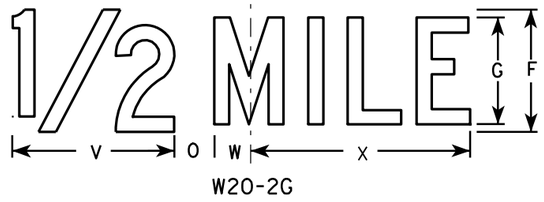
W20-2D



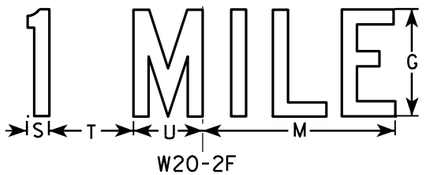
W20-2C



W20-2B



W20-2G



W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

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		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

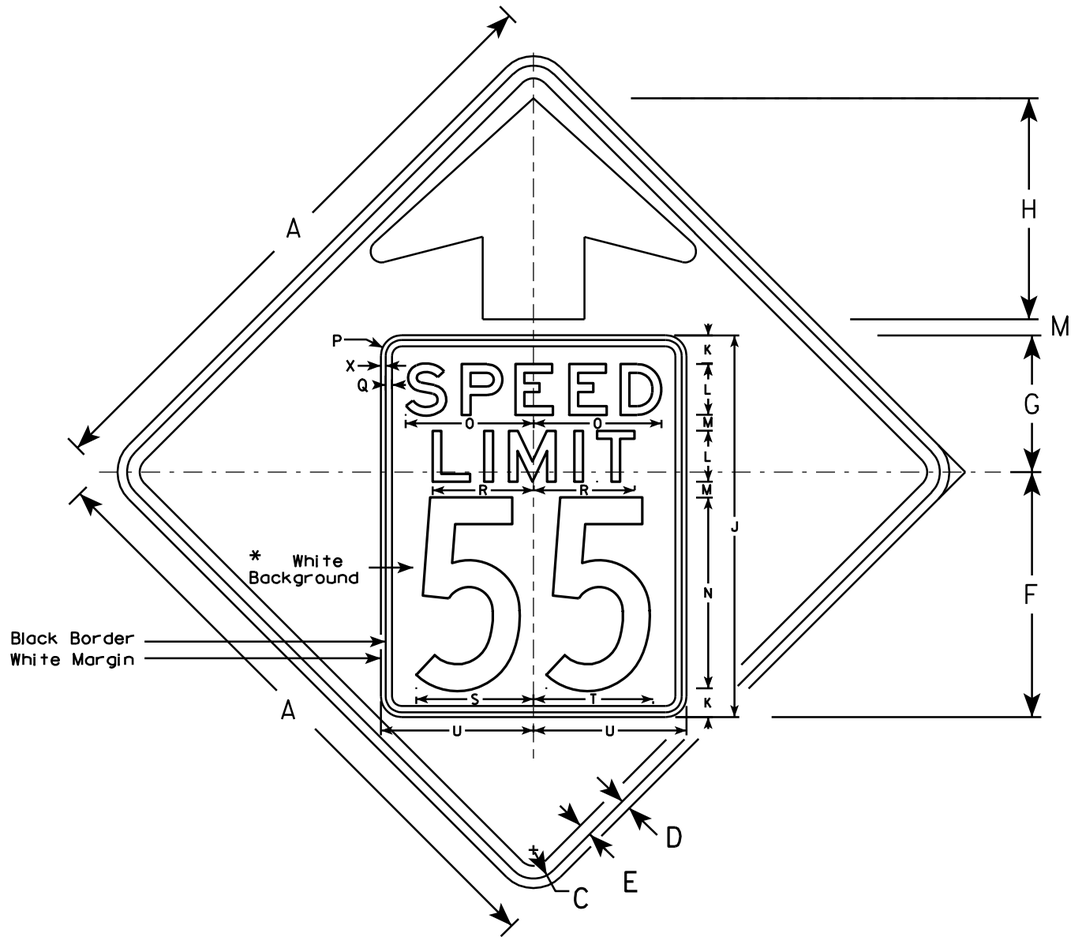
STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 169 | E

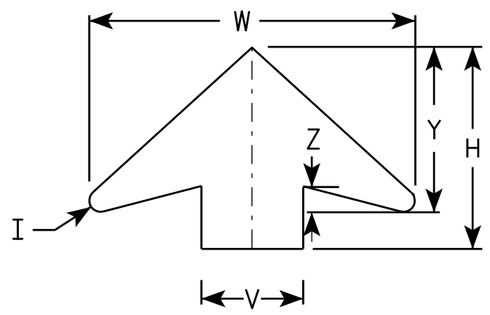


W3-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color: *
   Background - YELLOW*
   Message - BLACK
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White 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																											
2S	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2M	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
3	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN
W3-5

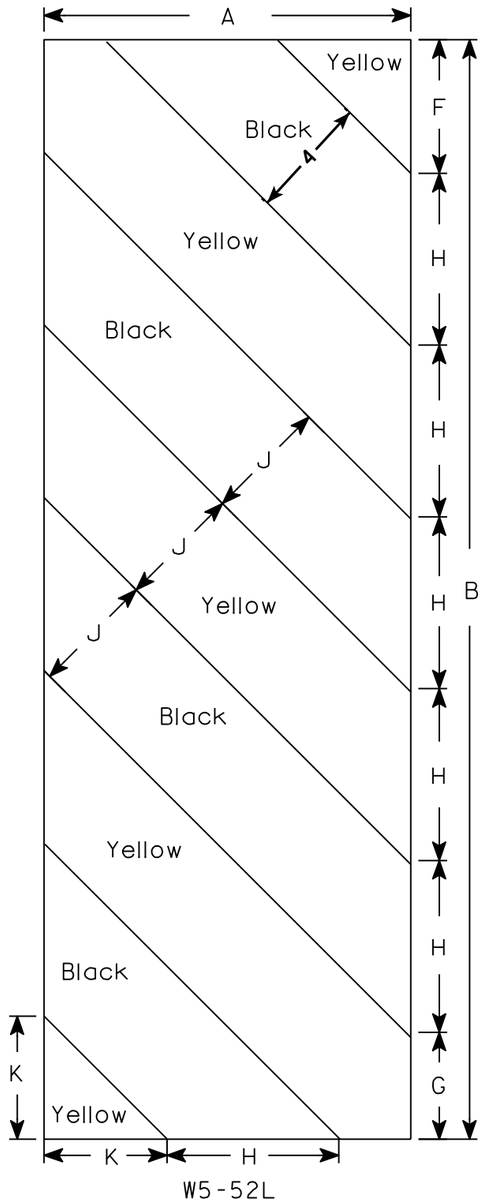
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

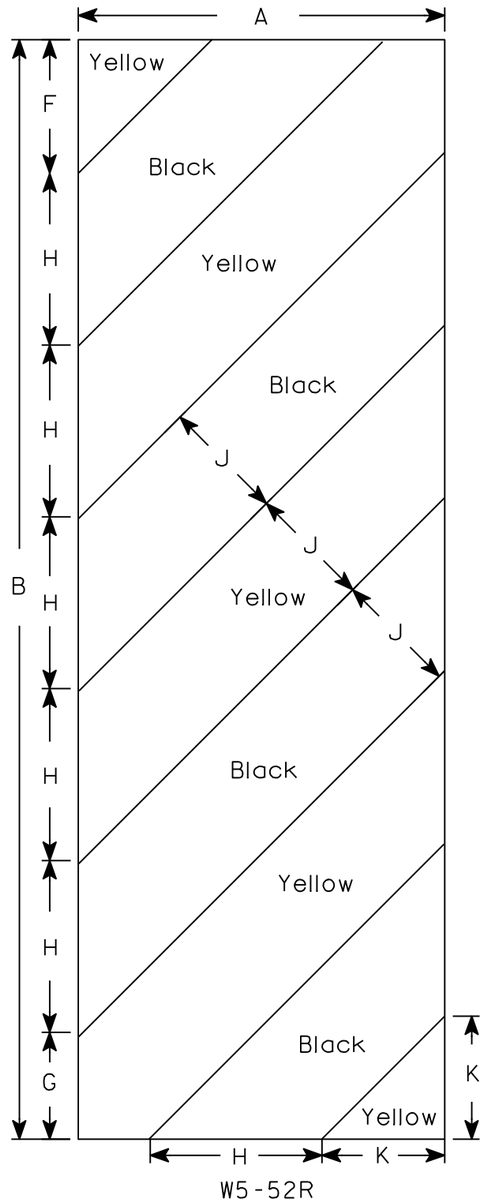
DATE 5/29/12 PLATE NO. W3-5.5

PROJECT NO:

SHEET NO: 170 E



W5-52L



W5-52R

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. Alternate colors of stripes as shown.

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	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 171 | E

EARTHWORK CTH N

BASELINE STATION	CUT AREA (SF)	CUT VOLUME (CY)	FILL AREA (SF)	UNADJUSTED FILL VOLUME (CY)	ADJUSTED FILL VOLUME (CY)	MASS HAUL (CY)
95+50.	51	0	0	0	0	0
96+00.	66	108	4	4	4	104
96+50.	95	149	4	7	8	245
97+00.	96	177	1	5	5	417
97+50.	59	144	12	12	14	547
98+00.	133	178	18	28	32	693
98+50.	203	311	30	44	51	953
99+00.	230	401	65	88	101	1253
99+50.	258	452	101	154	177	1528
100+00.	293	510	120	205	235	1803
100+50.	359	603	174	272	313	2093
101+00.	390	694	75	230	264	2523
101+50.	358	693	31	97	112	3104
102+00.	437	736	0	28	32	3808
102+50.	565	928	0	0	0	4736
103+00.	695	928	2	2	3	5661
103+50.	777	1243	9	10	12	6892
104+00.	796	1456	6	14	16	8332
104+50.	605	1297	1	6	7	9622
105+00.	410	940	0	1	1	10561
105+50.	273	632	3	3	3	11190
106+00.	255	489	0	3	3	11676
106+50.	264	480	0	0	0	12156
107+00.	264	489	0	0	0	12645
107+50.	254	480	0	0	0	13125
108+00.	246	463	0	0	0	13588
108+50.	226	437	0	0	0	14025
109+00.	184	380	0	0	0	14405
109+50.	160	319	20	19	22	14702
110+00.	137	275	17	34	39	14938
110+50.	137	253	16	31	35	15156
111+00.	178	291	8	22	25	15422
111+50.	206	355	3	10	12	15765
112+00.	222	396	2	4	5	16156
112+50.	212	401	3	4	4	16553
113+00.	140	326	2	4	5	16874
113+50.	136	255	3	4	5	17124
114+00.	99	217	4	6	7	17334
114+50.	93	178	5	8	10	17502
115+00.	62	144	8	13	14	17632
115+50.	49	103	20	26	29	17706
116+00.	33	76	27	43	49	17733
116+50.	24	52	53	74	85	17700
117+00.	17	37	84	127	146	17591
117+50.	21	35	119	189	217	17409

EARTHWORK CTH N (CONTINUED)

BASELINE STATION	CUT AREA (SF)	CUT VOLUME (CY)	FILL AREA (SF)	UNADJUSTED FILL VOLUME (CY)	ADJUSTED FILL VOLUME (CY)	MASS HAUL (CY)
118+00.	22	40	155	254	292	17157
118+50.	26	44	178	308	354	16847
119+00.	26	48	197	347	399	16496
119+50.	27	49	210	376	433	16112
120+00.	28	51	219	397	456	15707
120+50.	30	53	201	389	447	15313
121+00.	35	60	182	354	408	14965
121+50.	28	59	184	339	390	14634
122+00.	47	69	159	317	365	14338
122+50.	54	93	137	274	316	14115
123+00.	54	99	114	232	267	13947
123+50.	54	99	83	182	209	13837
124+00.	60	105	36	110	127	13815
124+50.	92	141	11	44	50	13906
125+00.	139	214	1	11	13	14107
125+50.	195	309	0	1	1	14415
126+00.	223	386	0	0	0	14801
126+50.	273	460	0	0	0	15261
127+00.	323	552	0	0	0	15813
127+50.	335	609	0	0	0	16422
128+00.	124	424	20	18	21	16825
128+50.	0	115	235	236	271	16669
129+00.	3	3	487	669	769	15903
129+50.	0	3	496	911	1047	14859
130+00.	0	0	305	741	853	14006
130+50.	0	0	201	468	538	13468
131+00.	26	24	140	315	363	13129
131+50.	59	79	50	176	203	13005
132+00.	124	170	1	48	55	13120
132+50.	136	241	0	1	2	13359
133+00.	156	270	0	0	0	13629
133+50.	120	255	1	1	1	13883
134+00.	89	194	2	2	3	14074
134+50.	85	161	9	10	12	14223
135+00.	75	148	18	25	29	14342
135+50.	78	141	34	49	56	14427
136+00.	79	145	52	80	92	14480
136+50.	110	174	69	112	129	14525
137+00.	114	207	87	144	166	14566
137+50.	120	216	106	178	205	14577
138+00.	125	227	104	195	224	14580
138+50.	140	245	118	206	237	14588
139+00.	174	290	147	245	282	14596
139+50.	212	357	137	263	303	14650
140+00.	34	228	112	231	265	14613

EARTHWORK CTH N (CONTINUED)

BASELINE STATION	CUT AREA (SF)	CUT VOLUME (CY)	FILL AREA (SF)	UNADJUSTED FILL VOLUME (CY)	ADJUSTED FILL VOLUME (CY)	MASS HAUL (CY)
140+50.	27	57	80	178	205	14465
141+00.	35	57	40	112	129	14393
141+50.	72	99	8	45	52	14440
142+00.	112	171	0	8	9	14602
142+50.	156	248	0	0	0	14850
143+00.	165	297	0	0	0	15147
143+50.	165	305	0	0	0	15452
144+00.	159	300	0	0	0	15752
144+50.	147	283	12	11	13	16022
145+00.	124	251	14	24	27	16246
145+50.	120	226	26	37	42	16430
146+00.	134	235	32	54	62	16603
146+50.	149	262	24	52	60	16805
147+00.	57	191	12	33	38	16958
147+50.	67	114	5	15	17	17055
148+00.	62	119	3	7	8	17166
148+50.	137	184	3	6	7	17343
149+00.	70	192	14	16	18	17517
149+50.	33	95	64	72	82	17530
150+00.	25	54	95	147	169	17415
150+50.	16	38	103	184	212	17241
151+00.	10	24	116	203	234	17031
151+50.	6	15	143	240	276	16770
152+00.	3	8	146	268	308	16470
152+50.	2	4	131	256	295	16179
153+00.	1	2	125	237	272	15909
153+50.	0	1	119	226	259	15651
154+00.	0	0	82	186	214	15437
154+50.	0	0	81	151	174	15263
155+00.	0	0	69	139	160	15103
155+50.	0	0	68	128	147	14956
156+00.	18	17	56	115	132	14841
156+50.	3	20	57	104	120	14741
157+00.	2	4	69	116	134	14611
157+50.	3	4	61	120	138	14477
158+00.	9	11	53	106	122	14366
158+50.	12	19	44	90	104	14281
159+00.	11	21	49	86	99	14203
159+50.	9	18	57	98	112	14109
160+00.	10	17	58	106	122	14004
160+50.	7	15	53	103	119	13900
161+00.	6	12	37	83	96	13816
161+50.	43	45	16	49	56	13805
162+00.	214	238	0	15	17	14026
162+50.	347	520	0	0	0	14546

STATE PROJECT NUMBER: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	COMPUTER EARTHWORK DATA	SHEET NO: 172 E

FILE NAME: S:\Wash_Co\CO_Gov\110232 CTH N\Quantities\090101_EW.ppt ORIGINATOR: NICHOLAS BOBINSKI ORIG. DATE: JANUARY 14, 2014 PLOTTED DATE: 7/29/2014 9:55 AM

EARTHWORK CTH N (CONTINUED)

BASELINE STATION	CUT AREA (SF)	CUT VOLUME (CY)	FILL AREA (SF)	UNADJUSTED FILL VOLUME (CY)	ADJUSTED FILL VOLUME (CY)	MASS HAUL (CY)
163+00.	573	852	0	0	0	15398
163+50.	803	1274	0	0	0	16672
164+00.	962	1634	0	0	0	18306
164+50.	943	1764	0	0	0	20070
165+00.	835	1646	0	0	0	21716
165+50.	669	1393	0	0	0	23109
166+00.	582	1159	0	0	0	24268
166+50.	552	1050	0	0	0	25318
167+00.	469	945	0	0	0	26263
167+50.	465	865	0	0	0	27128
168+00.	393	795	0	0	0	27923
168+50.	303	644	0	0	0	28567
169+00.	150	419	2	2	2	28984
169+50.	65	199	11	12	14	29169
170+00.	41	98	82	87	100	29167
170+50.	31	67	122	190	218	29016
171+00.	24	51	202	300	345	28722
171+50.	11	33	267	434	499	28256
172+00.	12	21	302	527	606	27671
172+50.	7	17	296	554	637	27051
173+00.	8	14	291	543	624	26441
173+50.	10	17	274	523	601	25857
174+00.	17	25	242	478	550	25332
174+50.	13	28	213	421	484	24876
175+00.	19	29	186	369	424	24481
175+50.	20	36	164	324	372	24145
176+00.	28	45	145	286	329	23861
176+50.	38	61	124	249	286	23636
177+00.	58	89	88	196	225	23500
177+50.	105	151	70	146	168	23483
178+00.	194	277	101	158	182	23578
178+50.	59	235	86	173	198	23615
179+00.	15	68	210	274	315	23368
179+50.	6	19	222	400	460	22927
180+00.	12	16	164	357	410	22533
180+50.	3	14	174	313	360	22187
181+00.	0	3	135	286	329	21861
181+50.	0	0	171	283	326	21535
182+00.	4	3	68	222	255	21283
182+50.	29	30	8	71	82	21231
183+00.	136	153	0	8	9	21375
183+50.	316	418	0	0	0	21793
184+00.	333	600	0	0	0	22393
184+50.	313	598	0	0	0	22991
185+00.	299	566	0	0	0	23557

EARTHWORK CTH N (CONTINUED)

BASELINE STATION	CUT AREA (SF)	CUT VOLUME (CY)	FILL AREA (SF)	UNADJUSTED FILL VOLUME (CY)	ADJUSTED FILL VOLUME (CY)	MASS HAUL (CY)
185+50.	302	556	0	0	0	24113
186+00.	304	561	0	0	0	24674
186+50.	297	557	0	0	0	25231
187+00.	294	547	0	0	0	25778
187+50.	296	546	0	0	0	26324
188+00.	291	543	0	0	0	26867
188+50.	276	525	0	0	0	27392
189+00.	263	499	0	0	0	27891
189+50.	236	462	0	0	0	28353
190+00.	207	411	0	0	0	28764
190+50.	200	377	0	0	0	29141
191+00.	206	375	0	0	0	29516
191+50.	157	336	0	0	0	29852
192+00.	116	253	1	1	2	30103
192+50.	105	204	2	3	4	30303
193+00.	75	167	7	8	9	30461
193+50.	67	131	20	24	28	30564
194+00.	69	126	33	49	56	30634
194+50.	78	136	43	71	81	30689
195+00.	89	155	12	51	59	30785
195+50.	90	166	42	50	58	30893
196+00.	83	160	16	54	62	30991
196+50.	60	132	57	68	78	31045
197+00.	30	83	78	125	144	30984
197+50.	67	89	52	120	137	30936
198+00.	44	102	48	92	105	30933
198+50.	41	78	0	44	51	30960
TOTALS		**58859**		**24262**	**27899**	

EARTHWORK INDEPENDENCE AVE

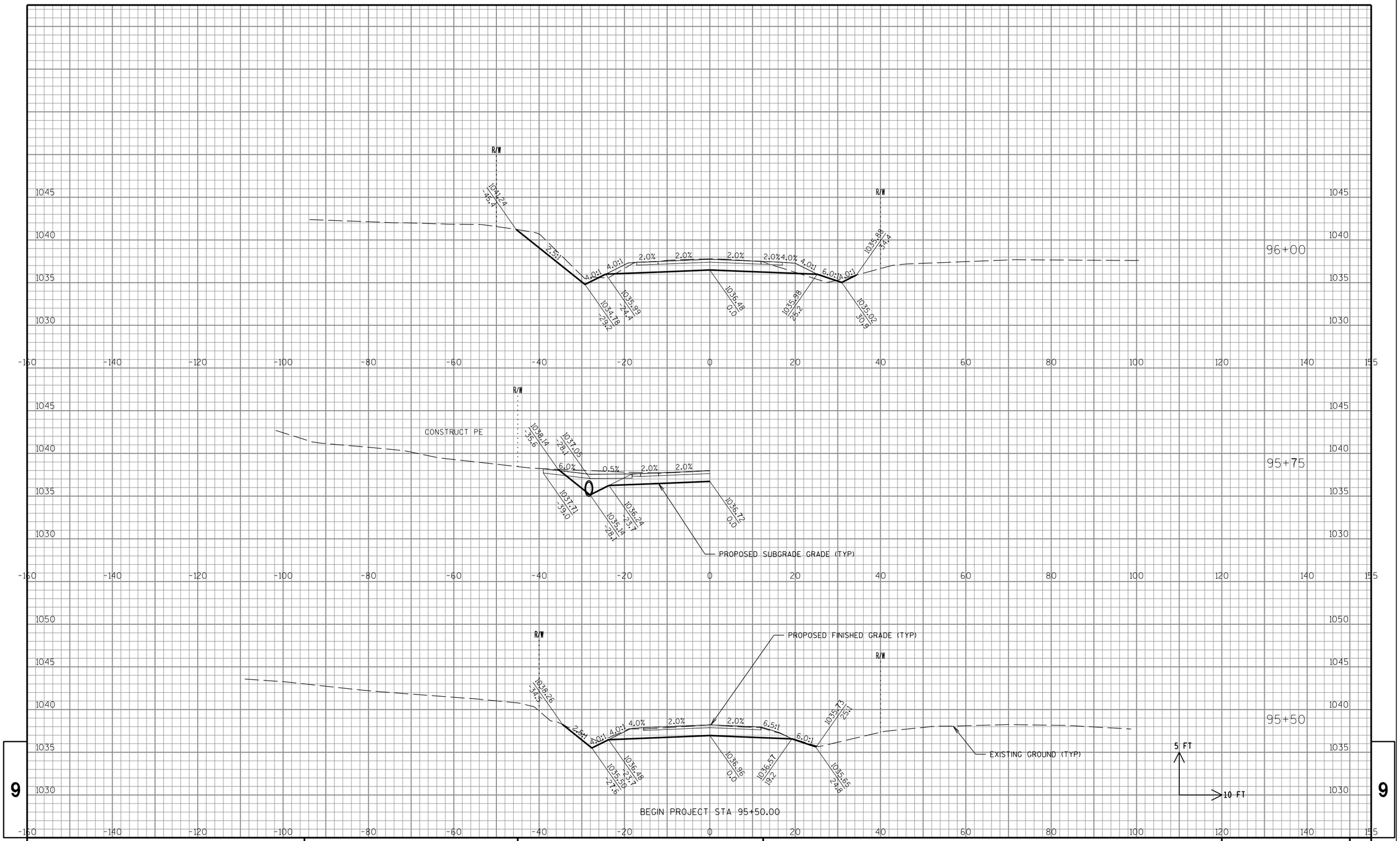
BASELINE STATION	CUT AREA (SF)	CUT VOLUME (CY)	FILL AREA (SF)	UNADJUSTED FILL VOLUME (CY)	ADJUSTED FILL VOLUME (CY)	MASS HAUL (CY)
7+17.	45	0	0	0	0	0
7+50.	44	55	55	6	7	48
8+00.	61	97	7	7	8	89
8+50.	125	172	3	3	4	216
9+00.	142	248	2	2	2	335
9+50.	210	326	0	0	0	542
9+71.	518	283	0	0	0	618
TOTALS		**1181**		**18**	**21**	

EARTHWORK AIRPORT DR S

BASELINE STATION	CUT AREA (SF)	CUT VOLUME (CY)	FILL AREA (SF)	UNADJUSTED FILL VOLUME (CY)	ADJUSTED FILL VOLUME (CY)	MASS HAUL (CY)
28+60.	48	0	0	0	0	0
29+00.	43	67	2	1	2	65
29+50.	34	71	4	5	6	130
29+78.	42	39	35	20	23	146
TOTALS		**177**		**26**	**31**	

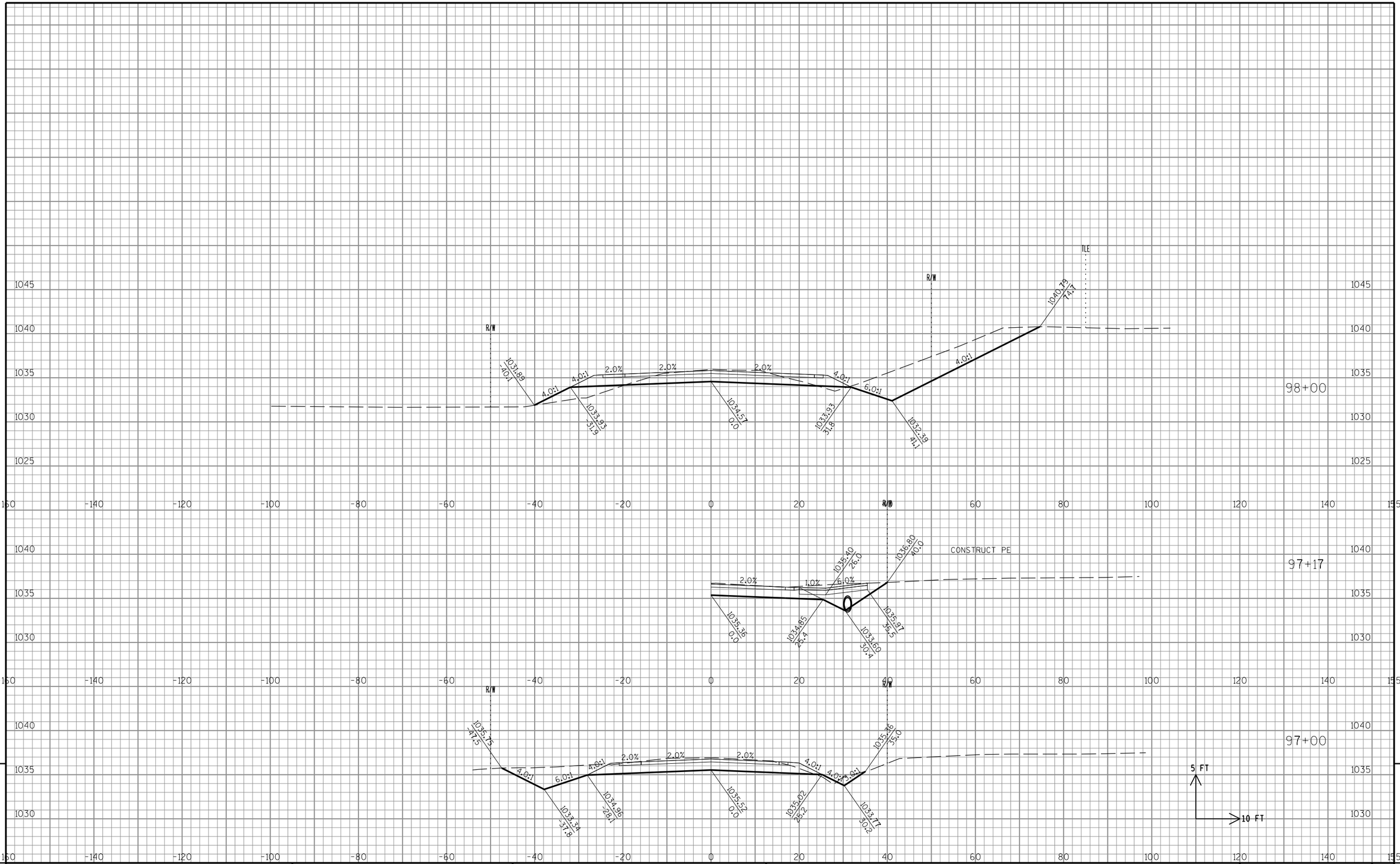
EARTHWORK AIRPORT DR N

BASELINE STATION	CUT AREA (SF)	CUT VOLUME (CY)	FILL AREA (SF)	UNADJUSTED FILL VOLUME (CY)	ADJUSTED FILL VOLUME (CY)	MASS HAUL (CY)
30+19.	52	0	0	0	0	0
30+50.	100	87	0	0	0	87
31+00.	111	196	0	0	0	283
31+50.	94	190	0	0	0	473
32+00.	59	142	1	1	1	614
32+50.	41	93	3	3	4	703
32+55.	41	8	4	1	1	710
TOTALS		**716**		**5**	**6**	



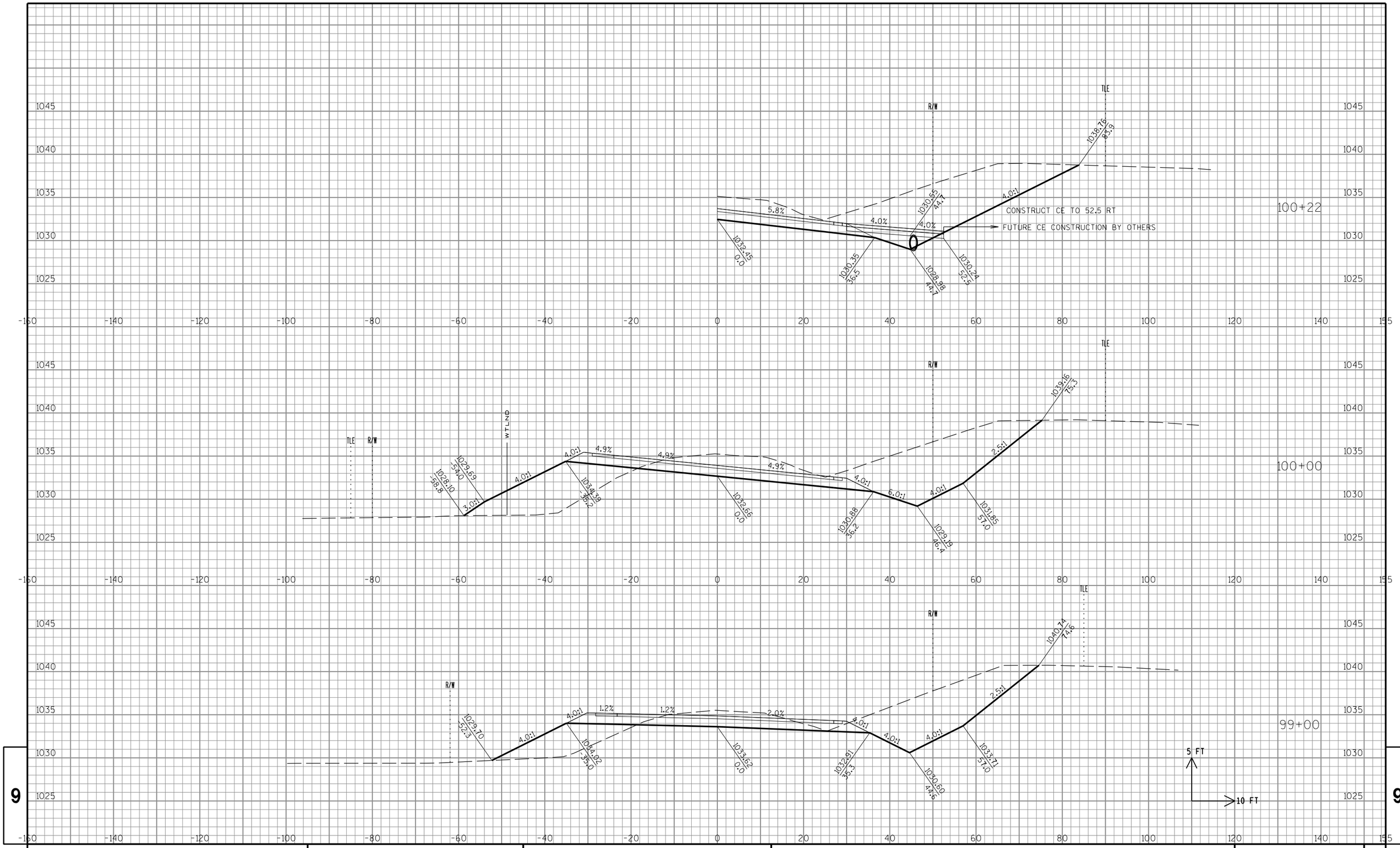
STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 174	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



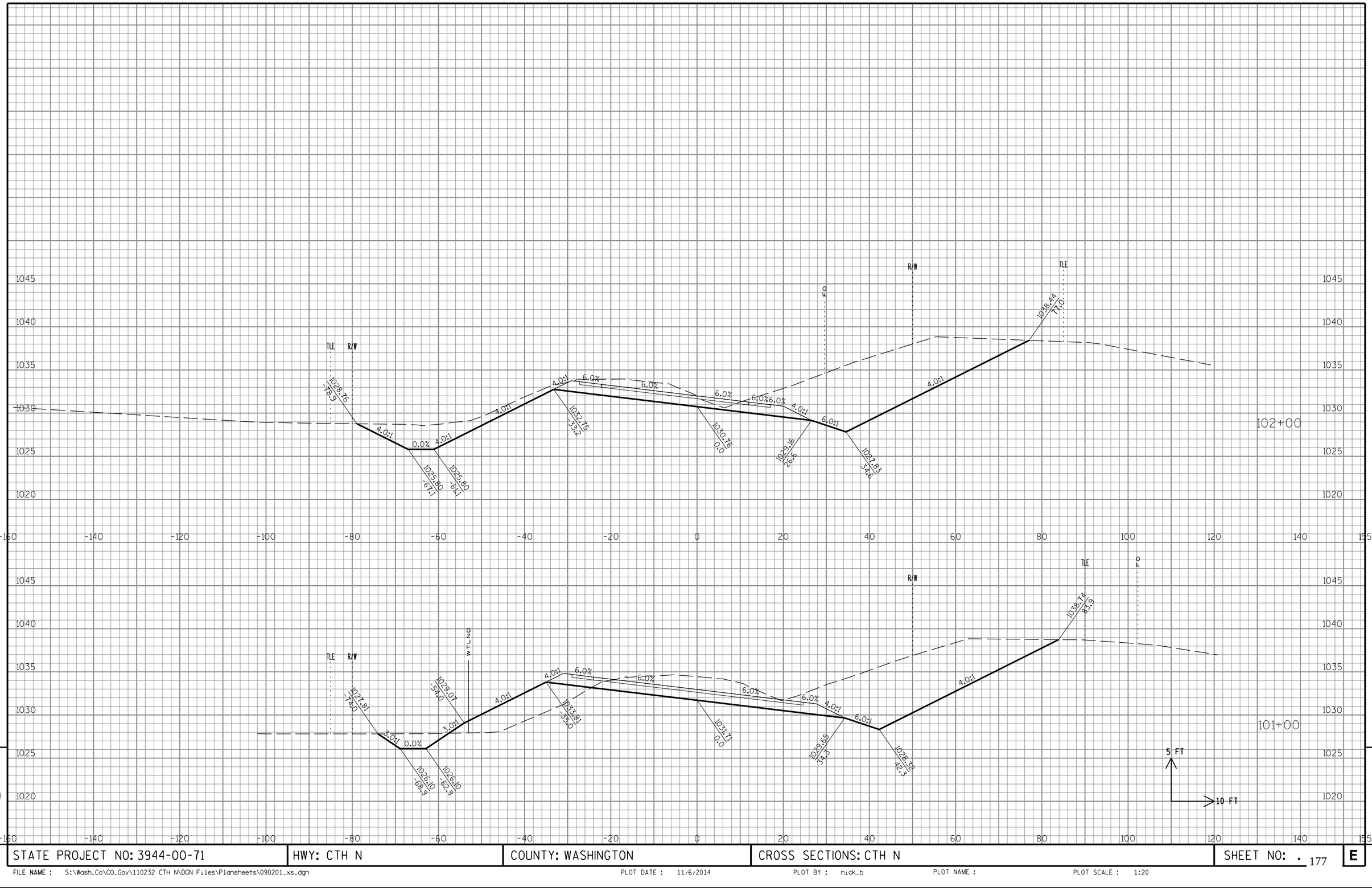
STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 175	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: 176	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20

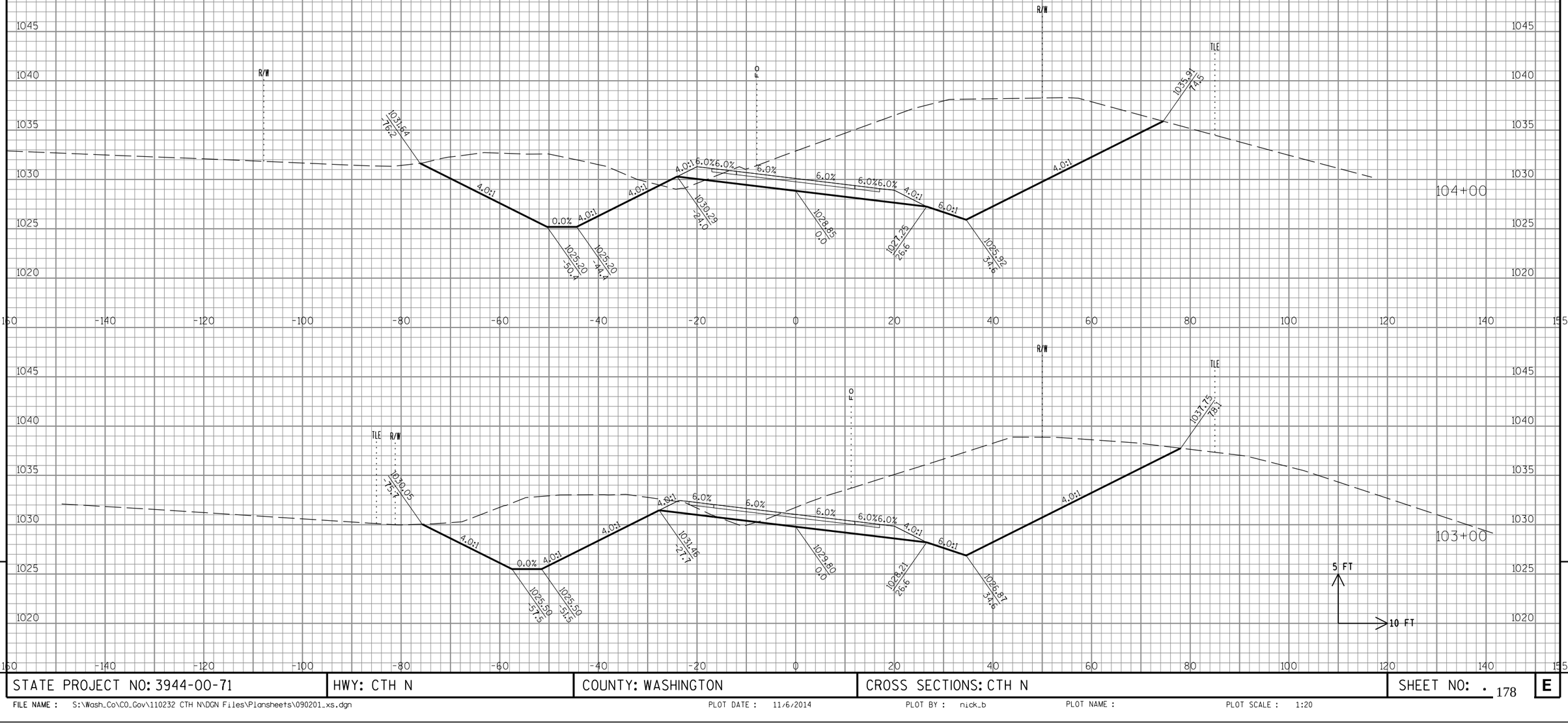


9

STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 177	E

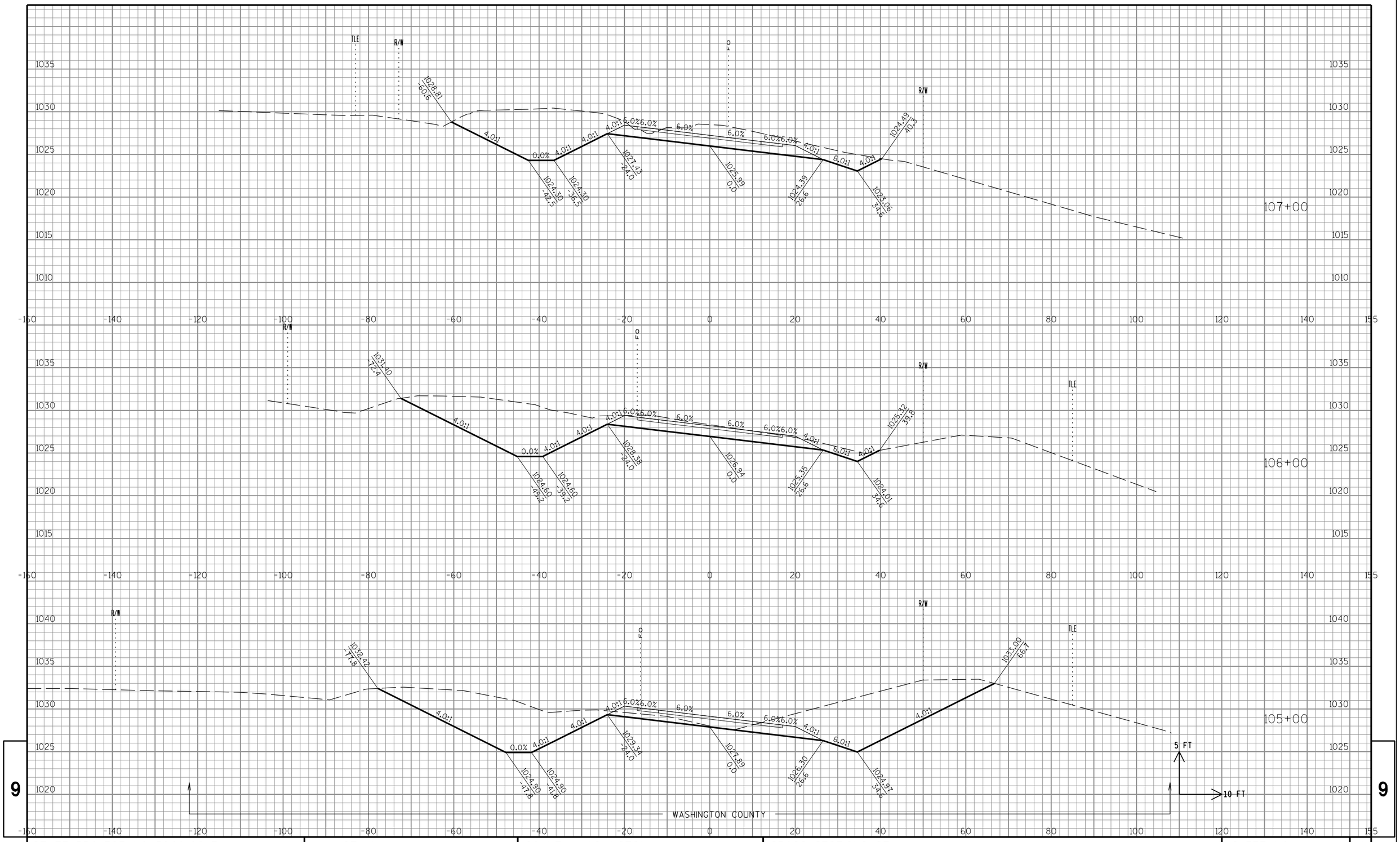
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DODGE COUNTY



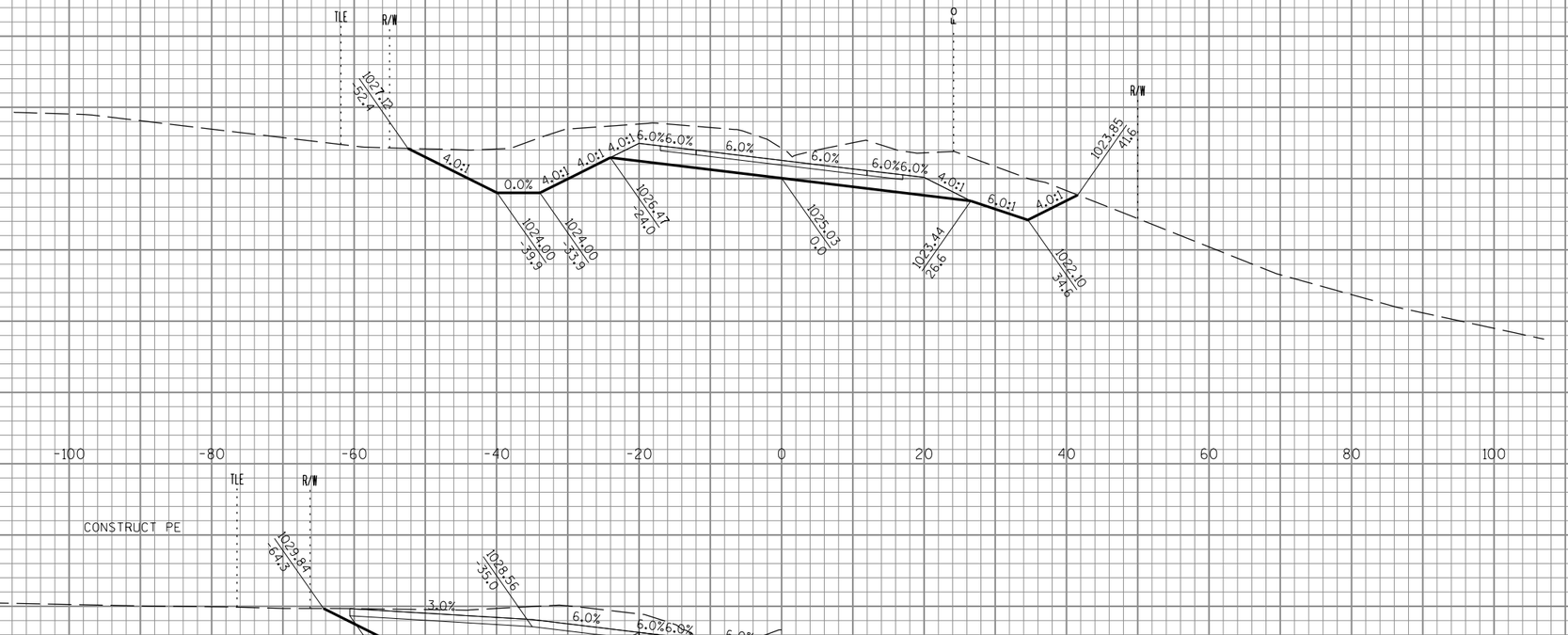
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FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: 179	E

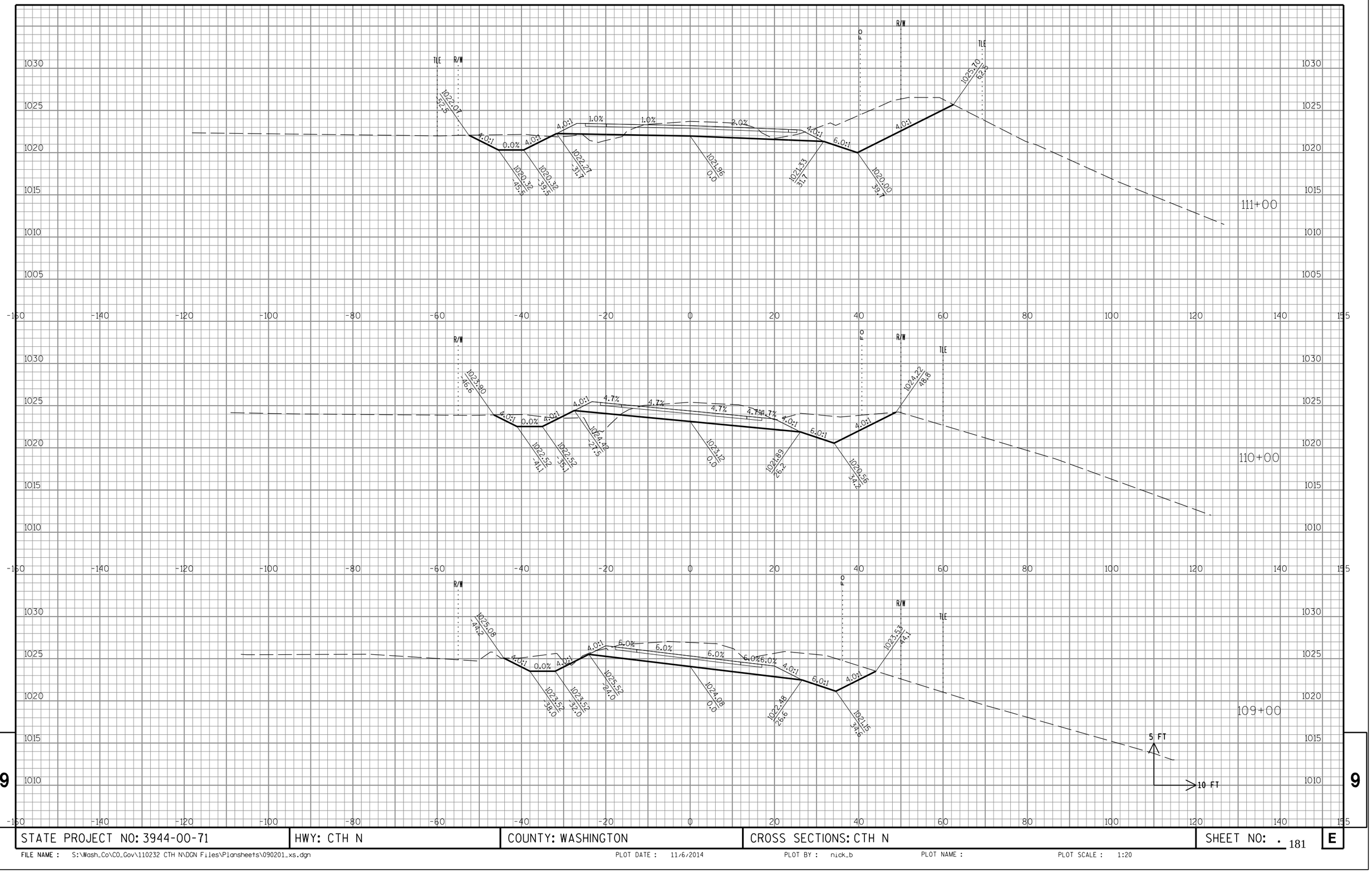
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STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 180 E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20

9 9

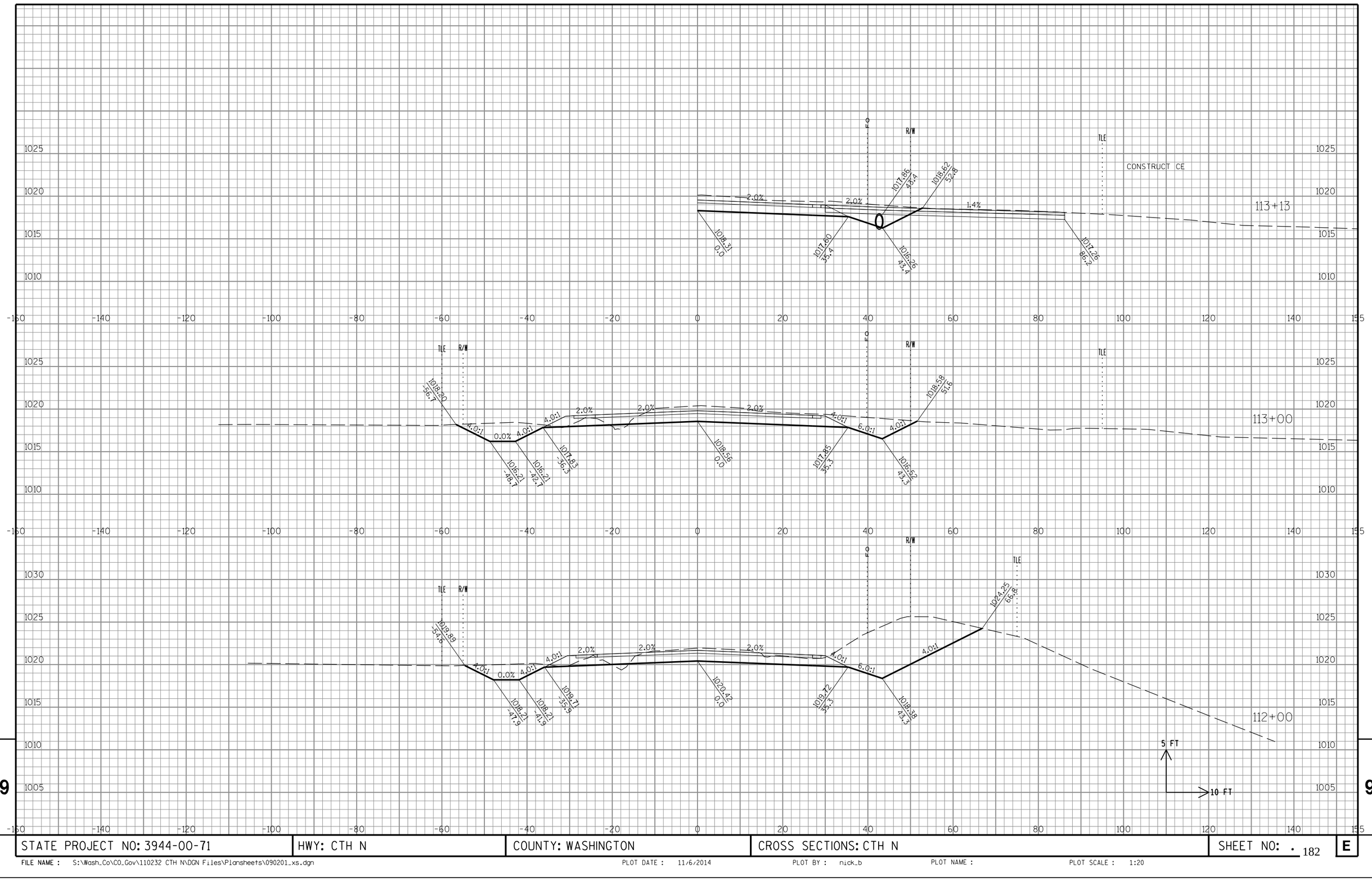


9

9

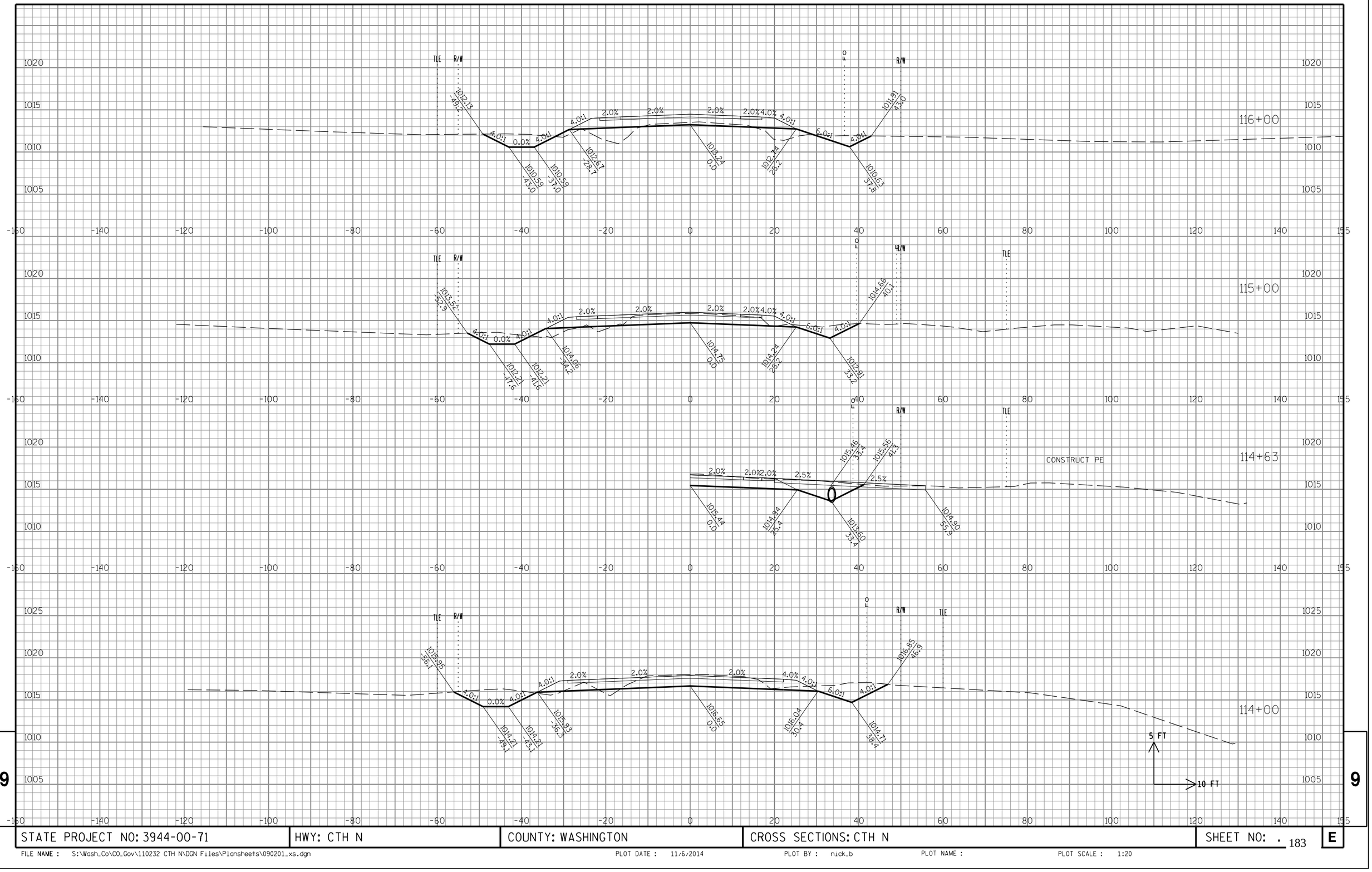
STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 181	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 182 E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20

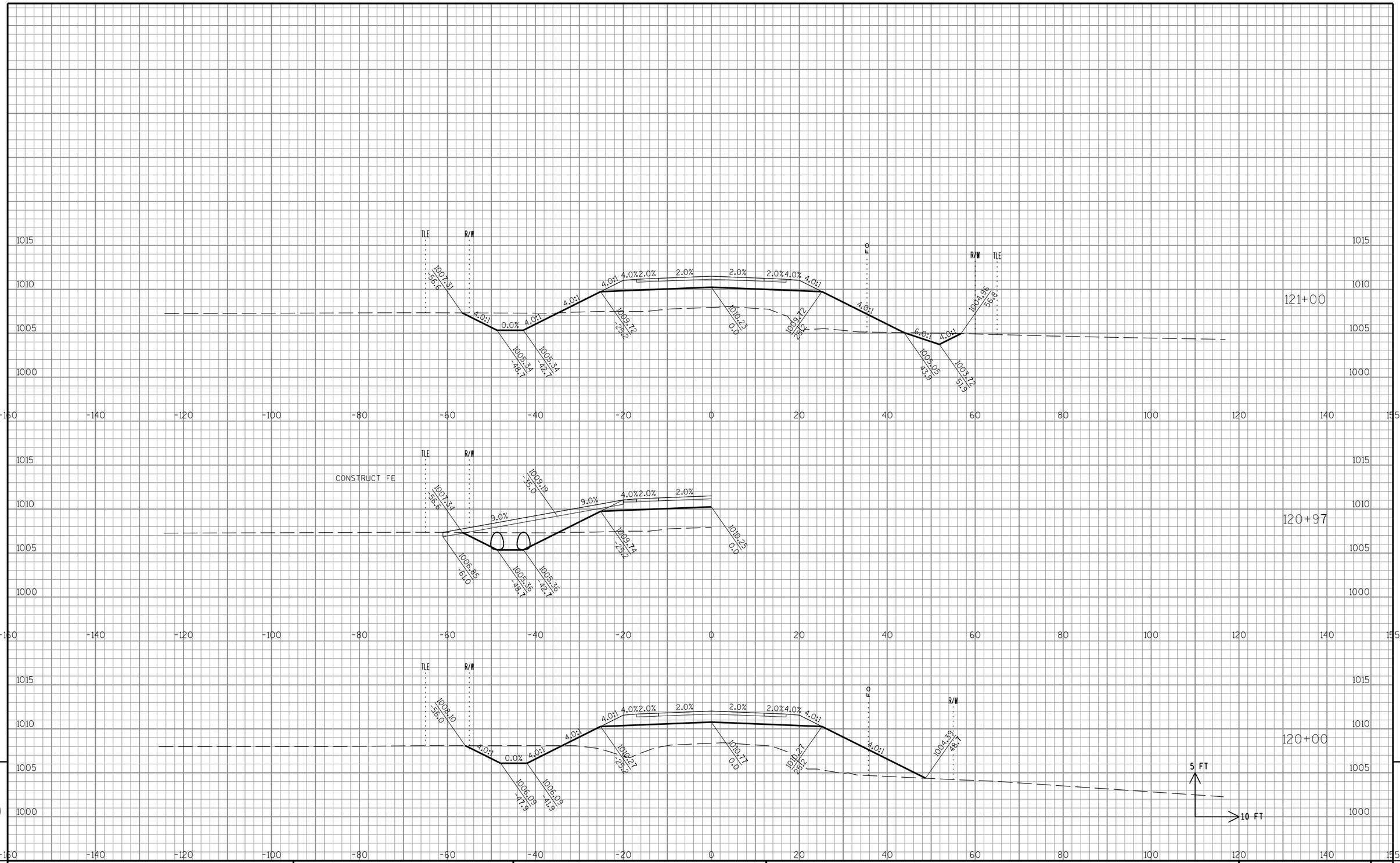


STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 183	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20

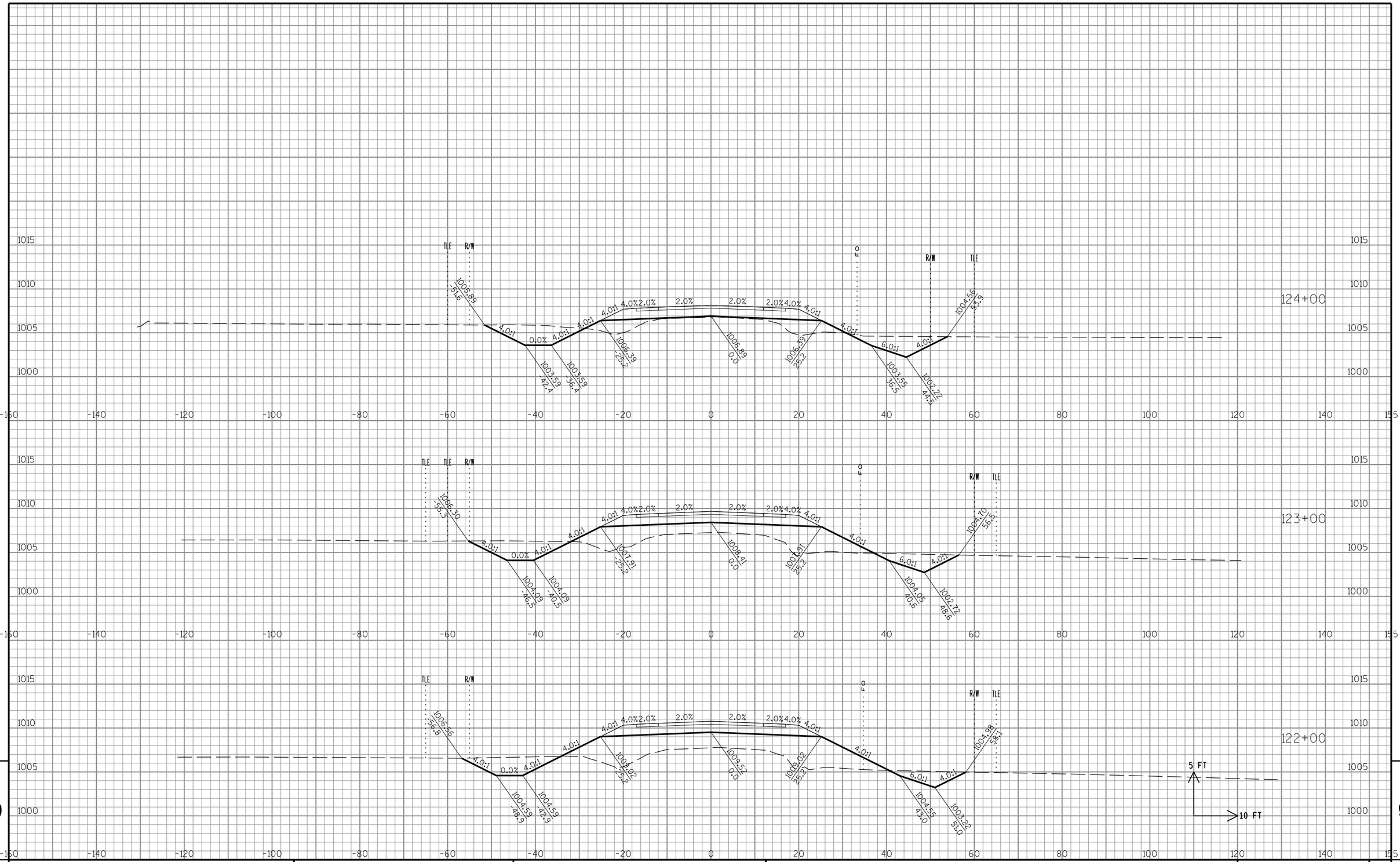
STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 184	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: 185

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20

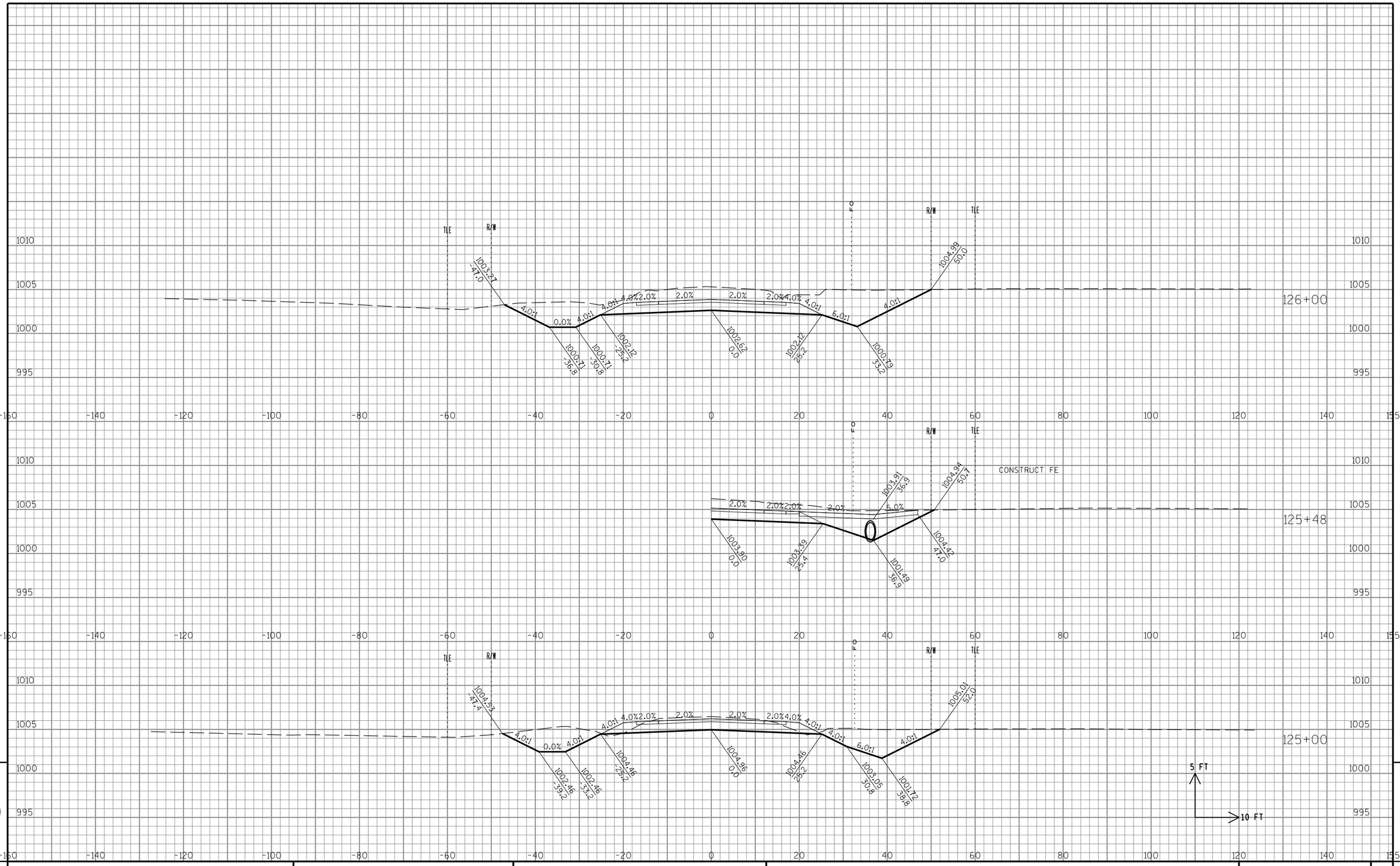


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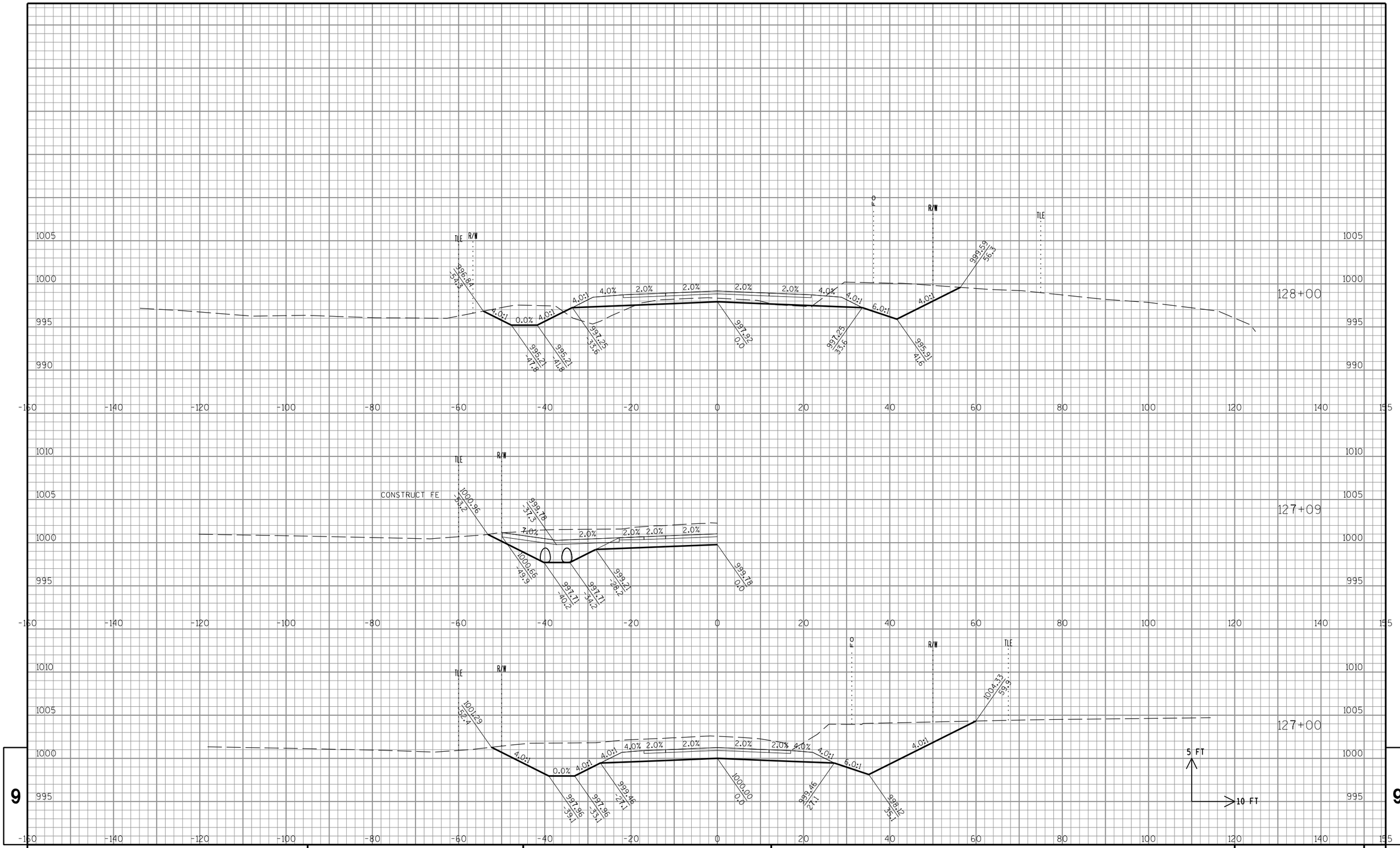
STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 186	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



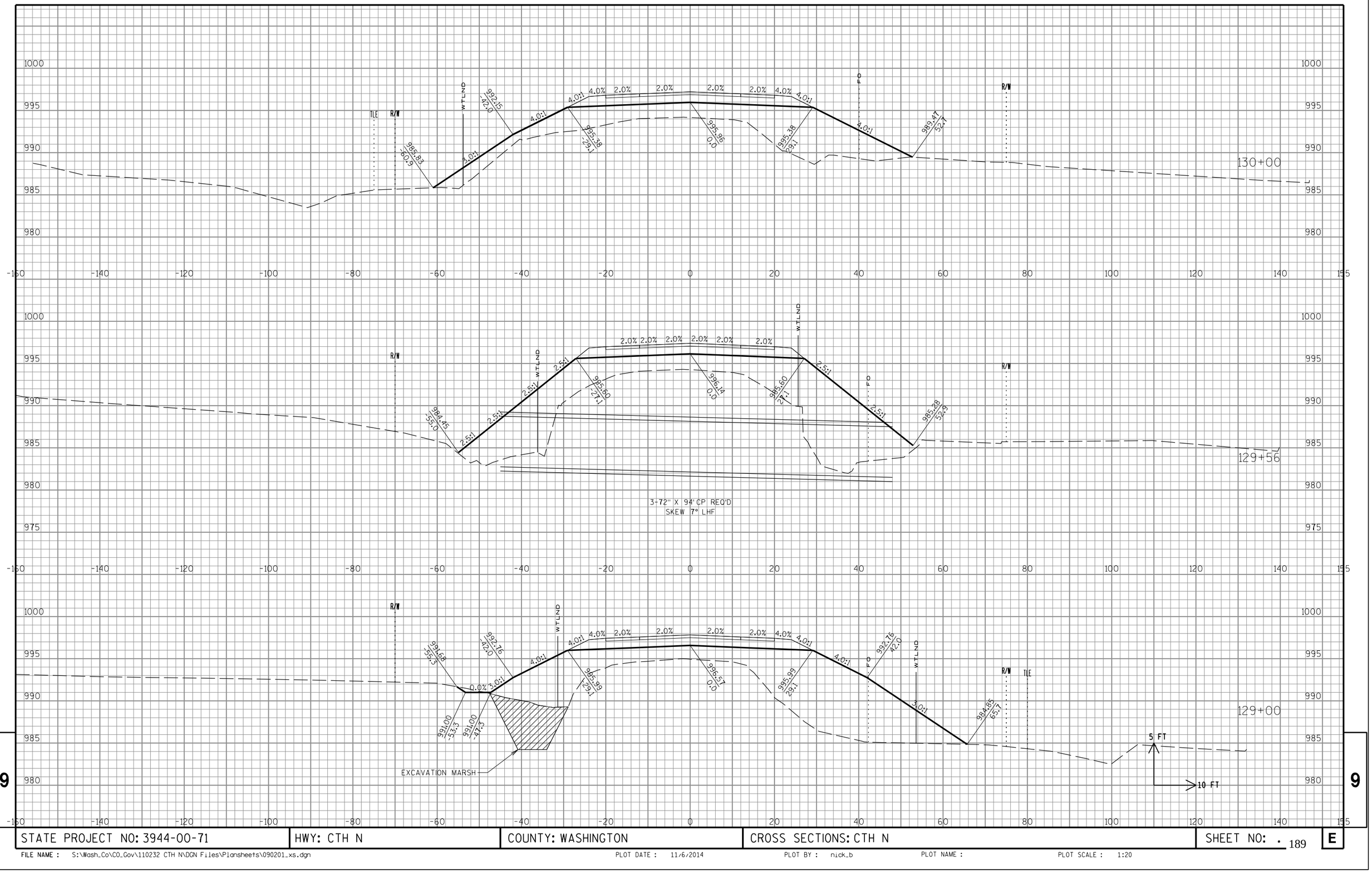
STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 187 E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



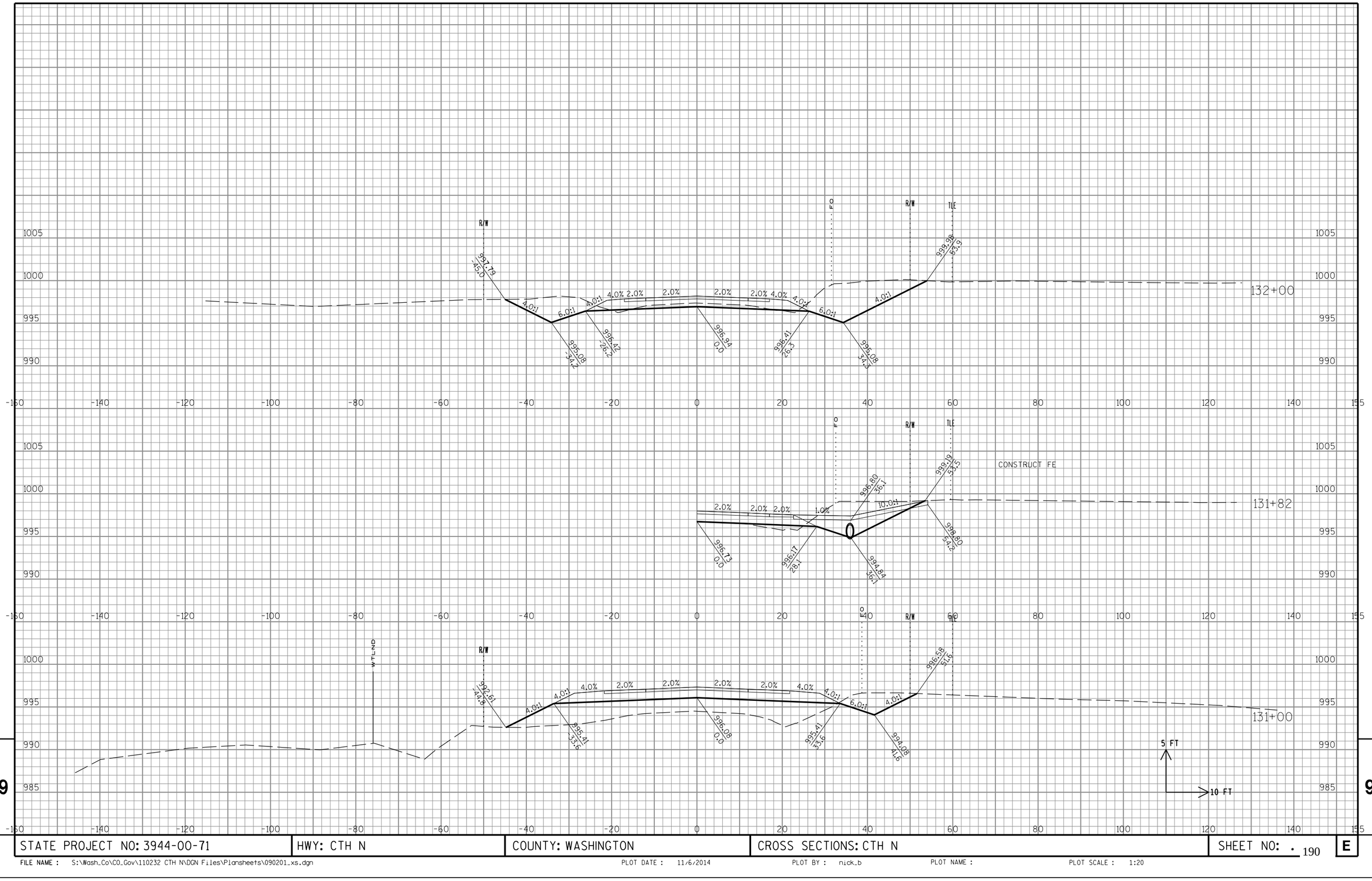
STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: 188	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 189	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20

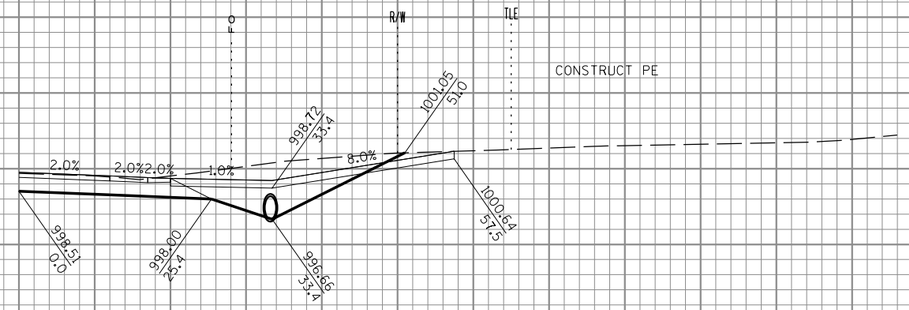


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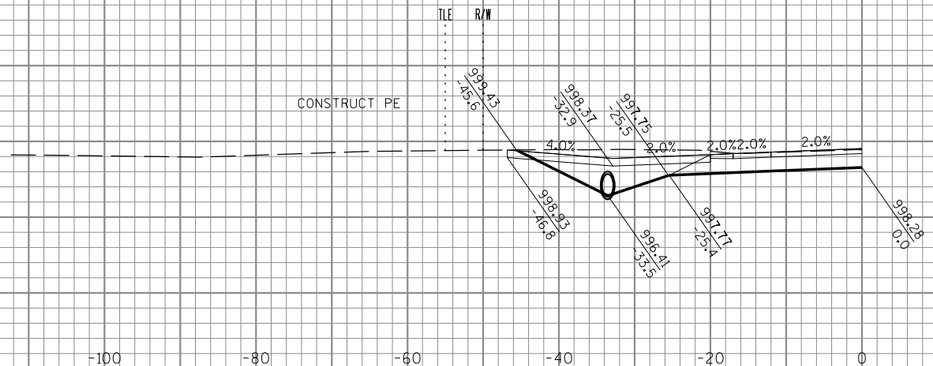
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STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 190	E

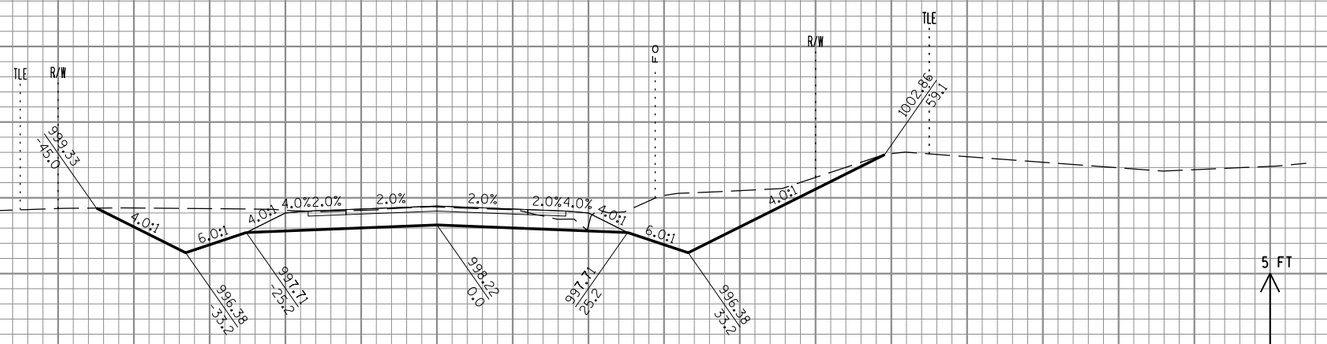
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133+23



133+05



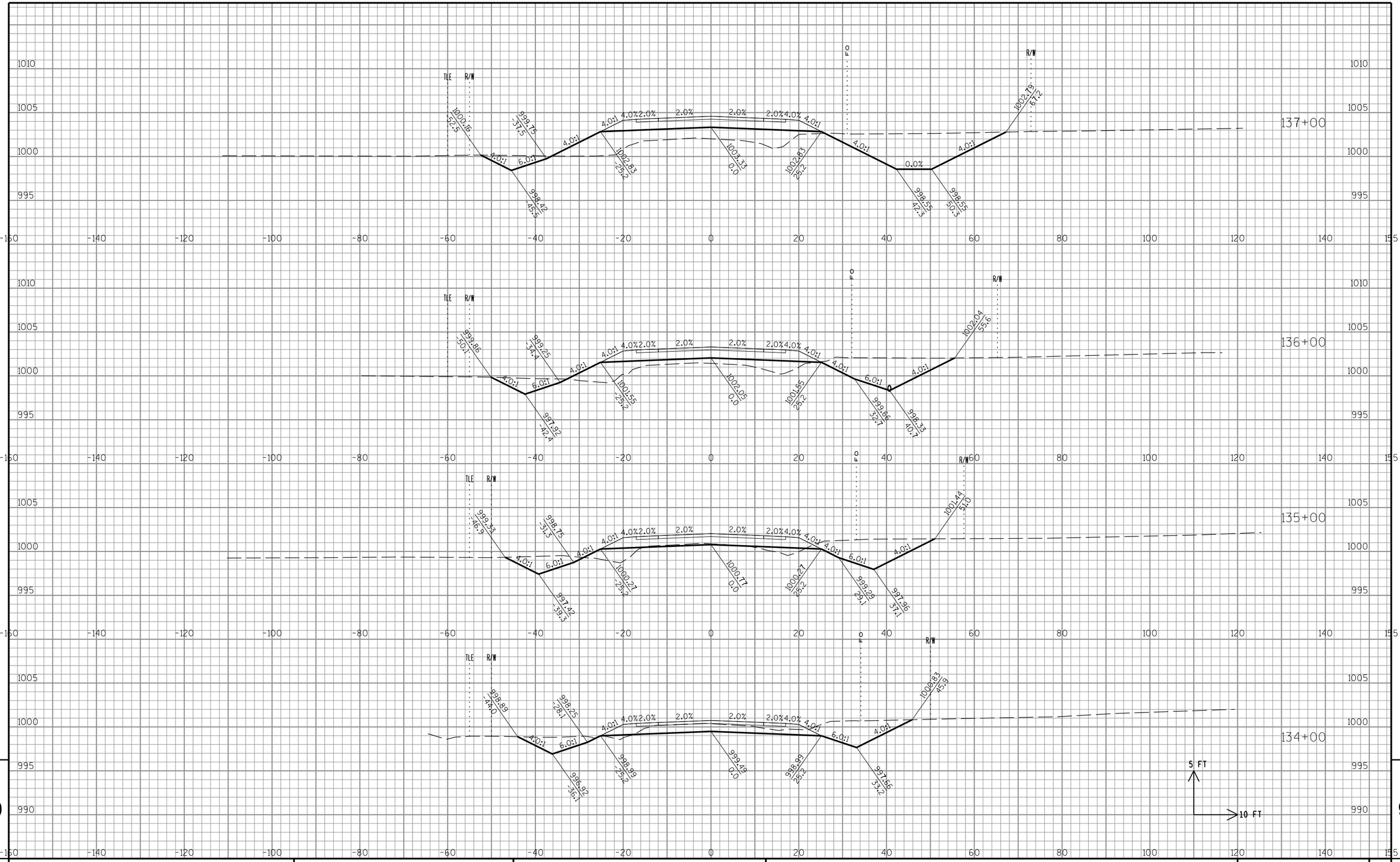
133+00

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STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: 191	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20

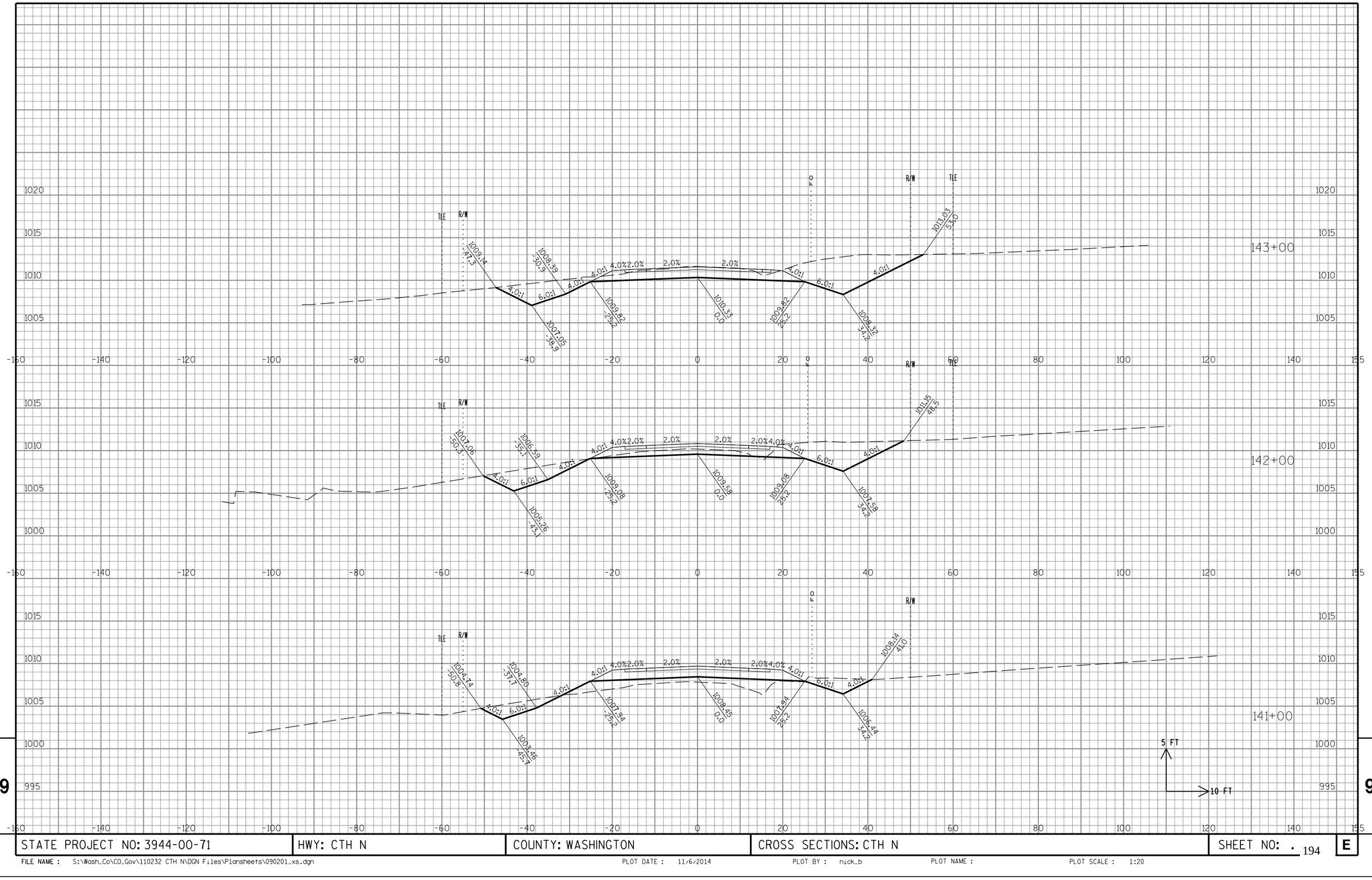


STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 192	E

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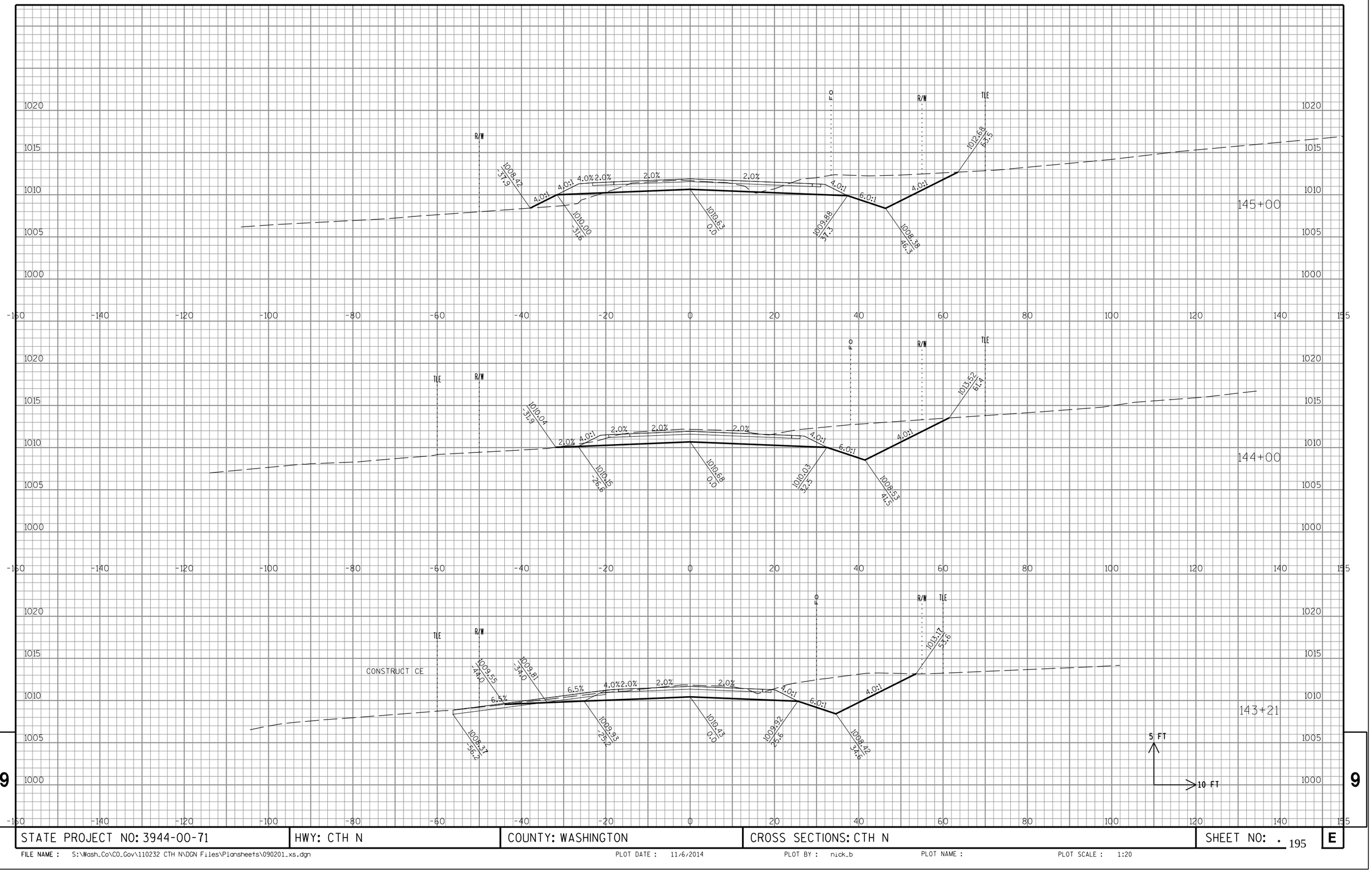
STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: 193	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



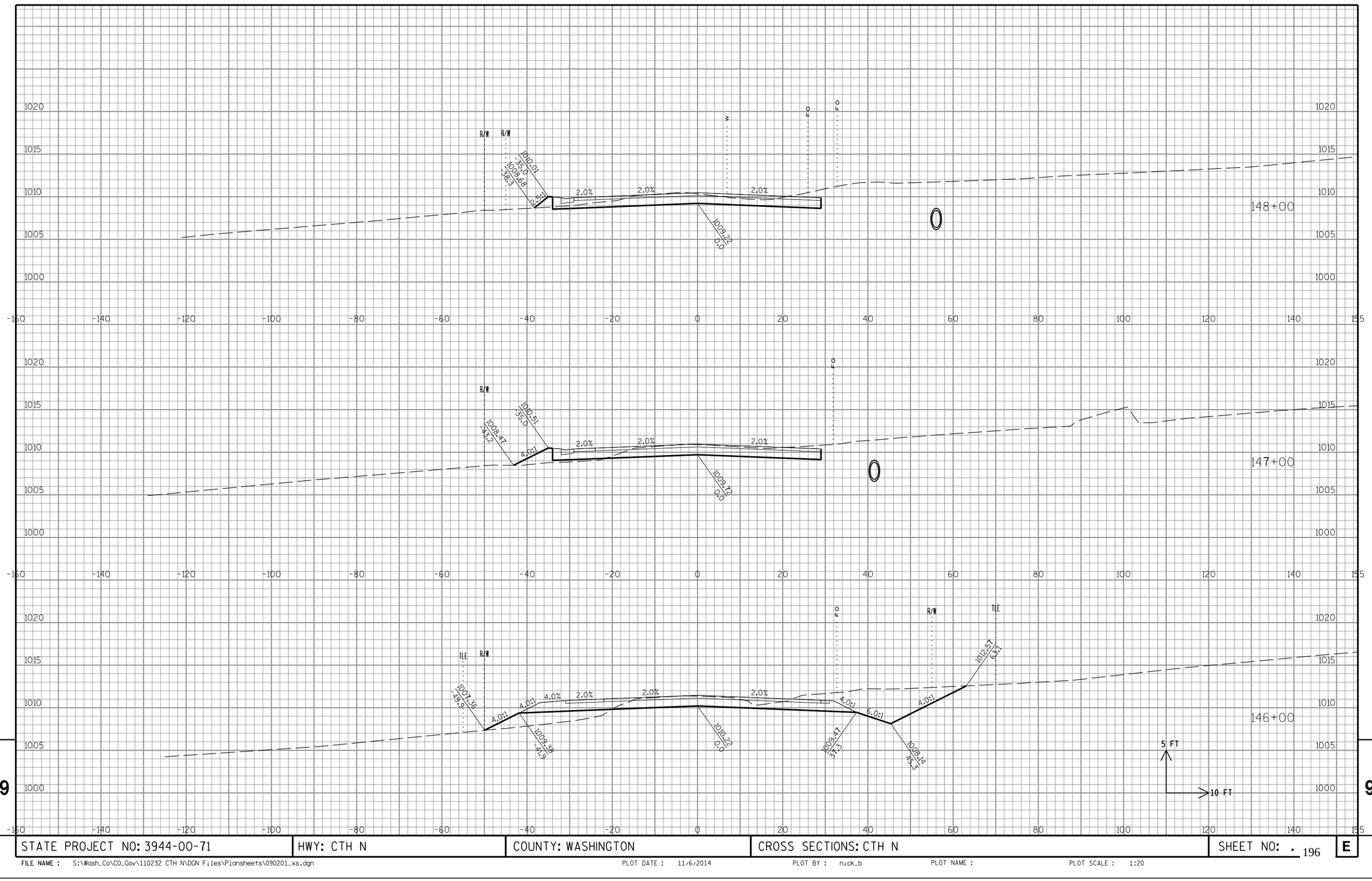
STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 194 E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



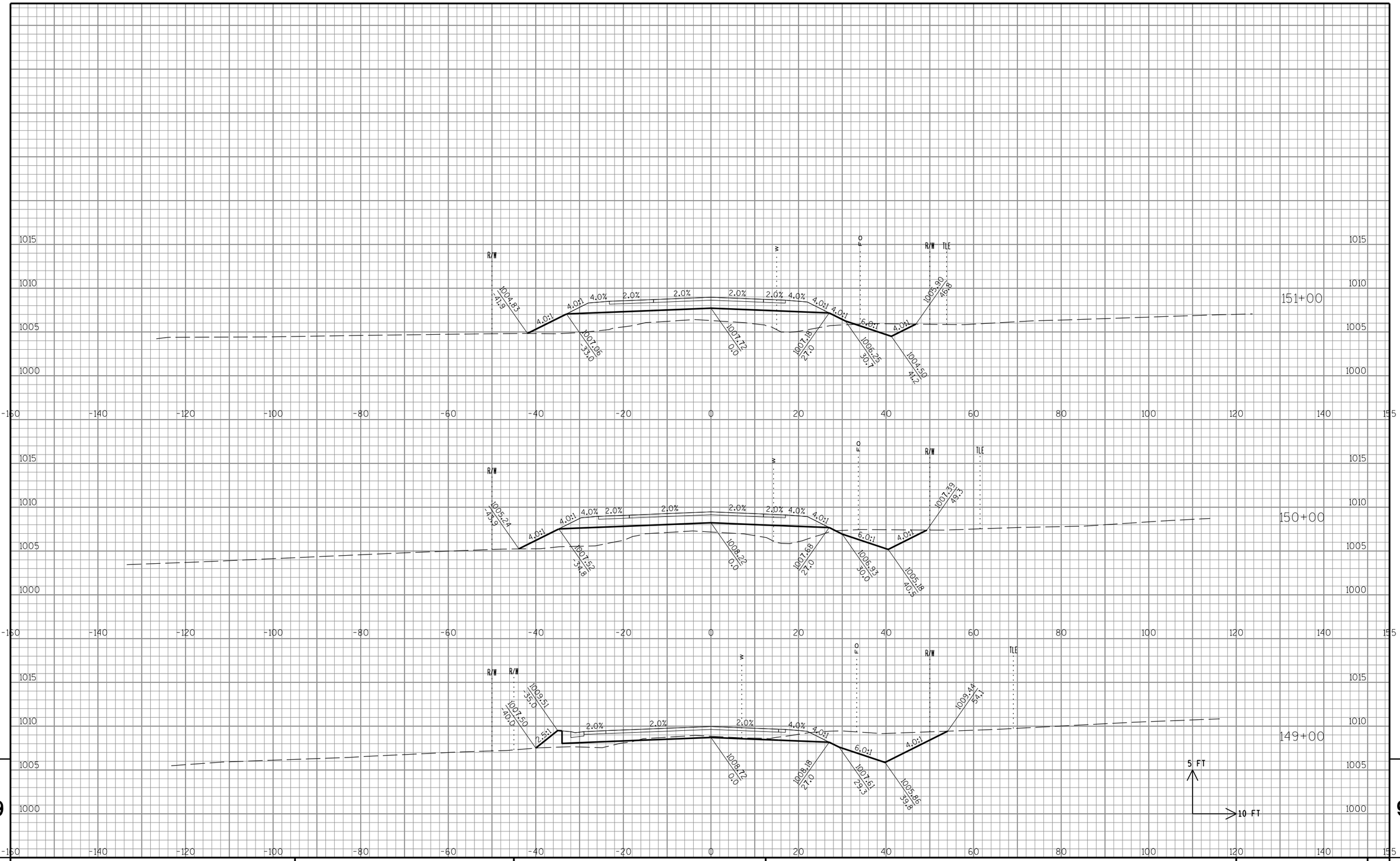
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FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



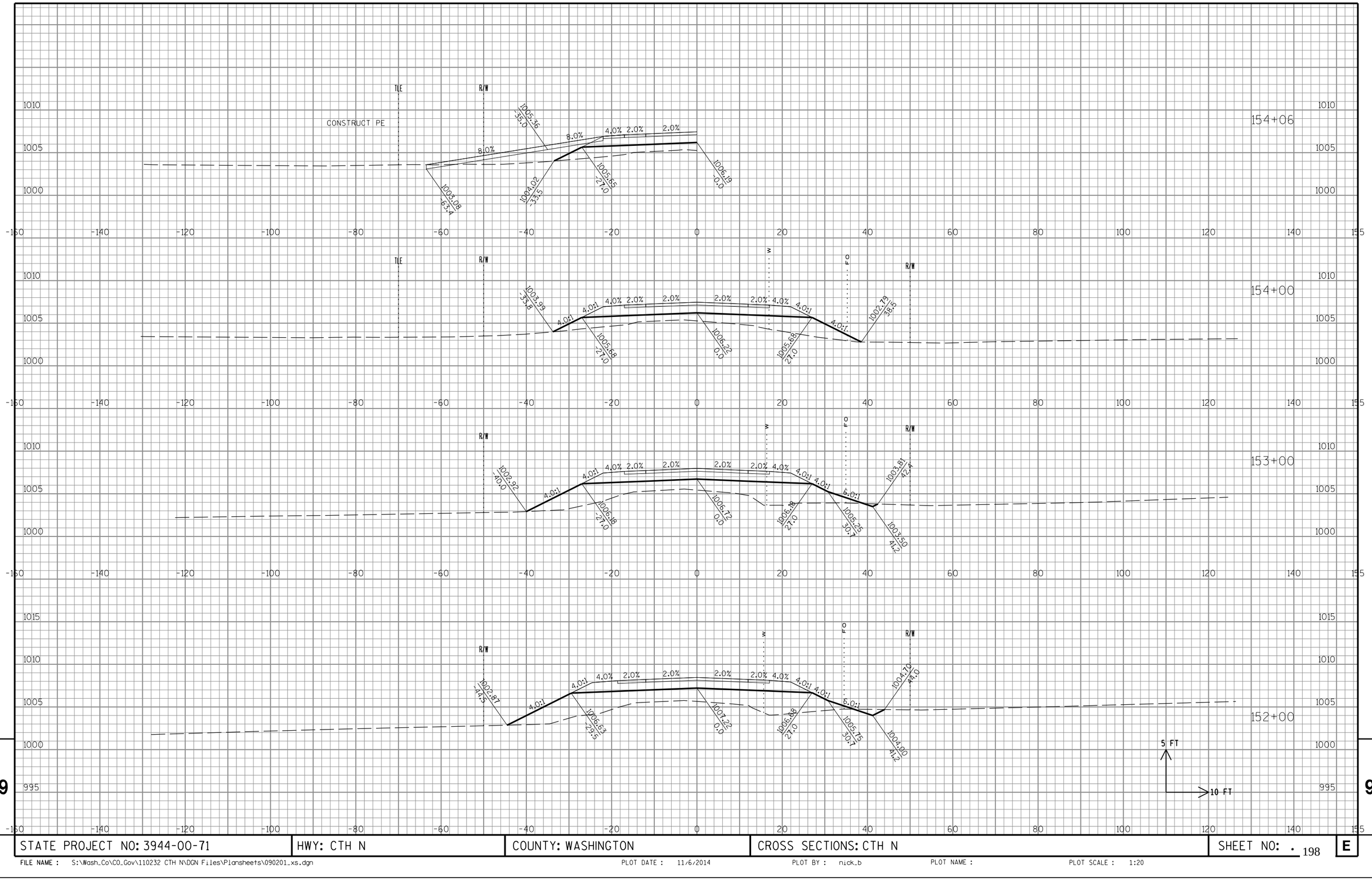
STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: 196

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STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: 197	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20

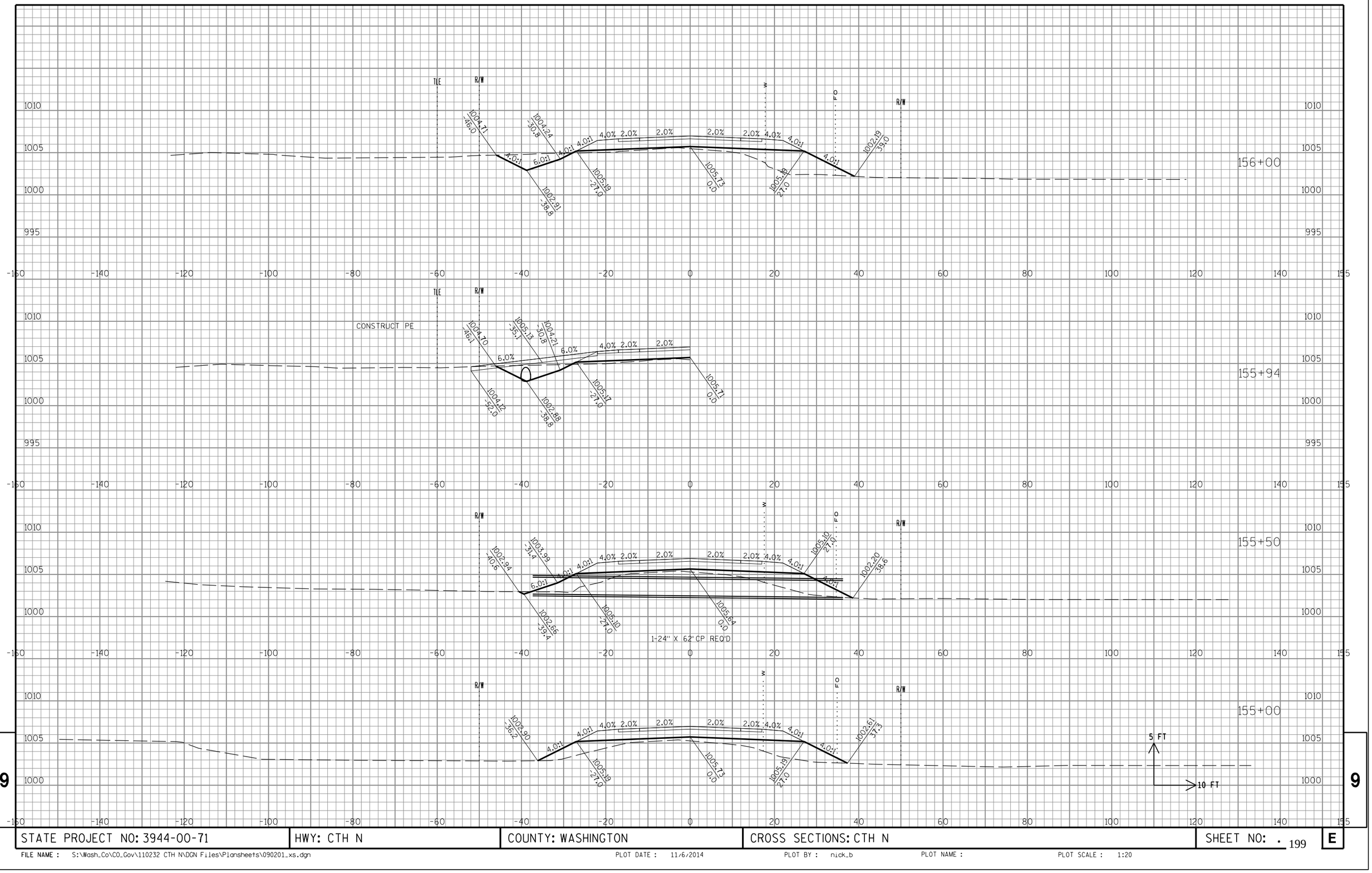


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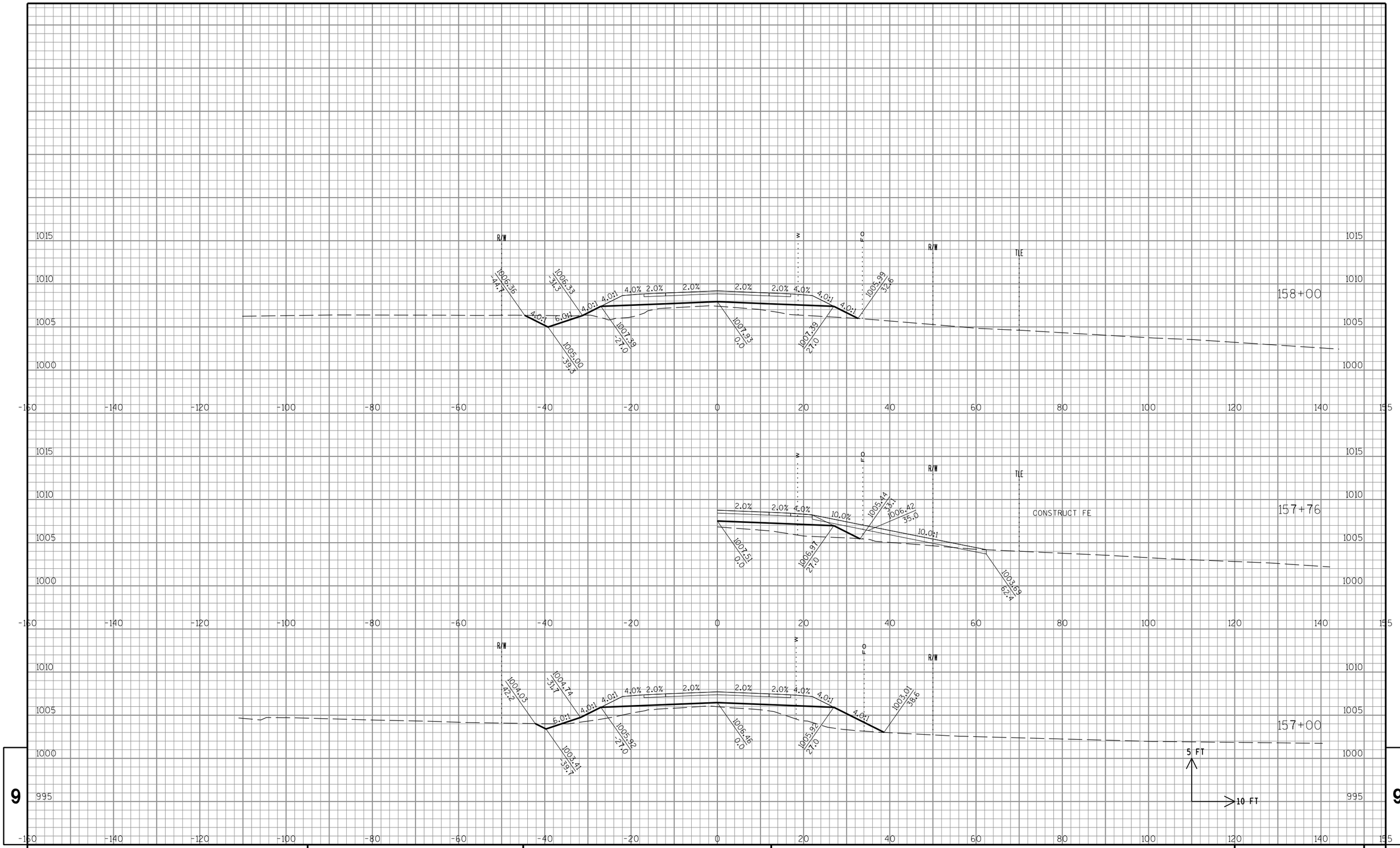
STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 198	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



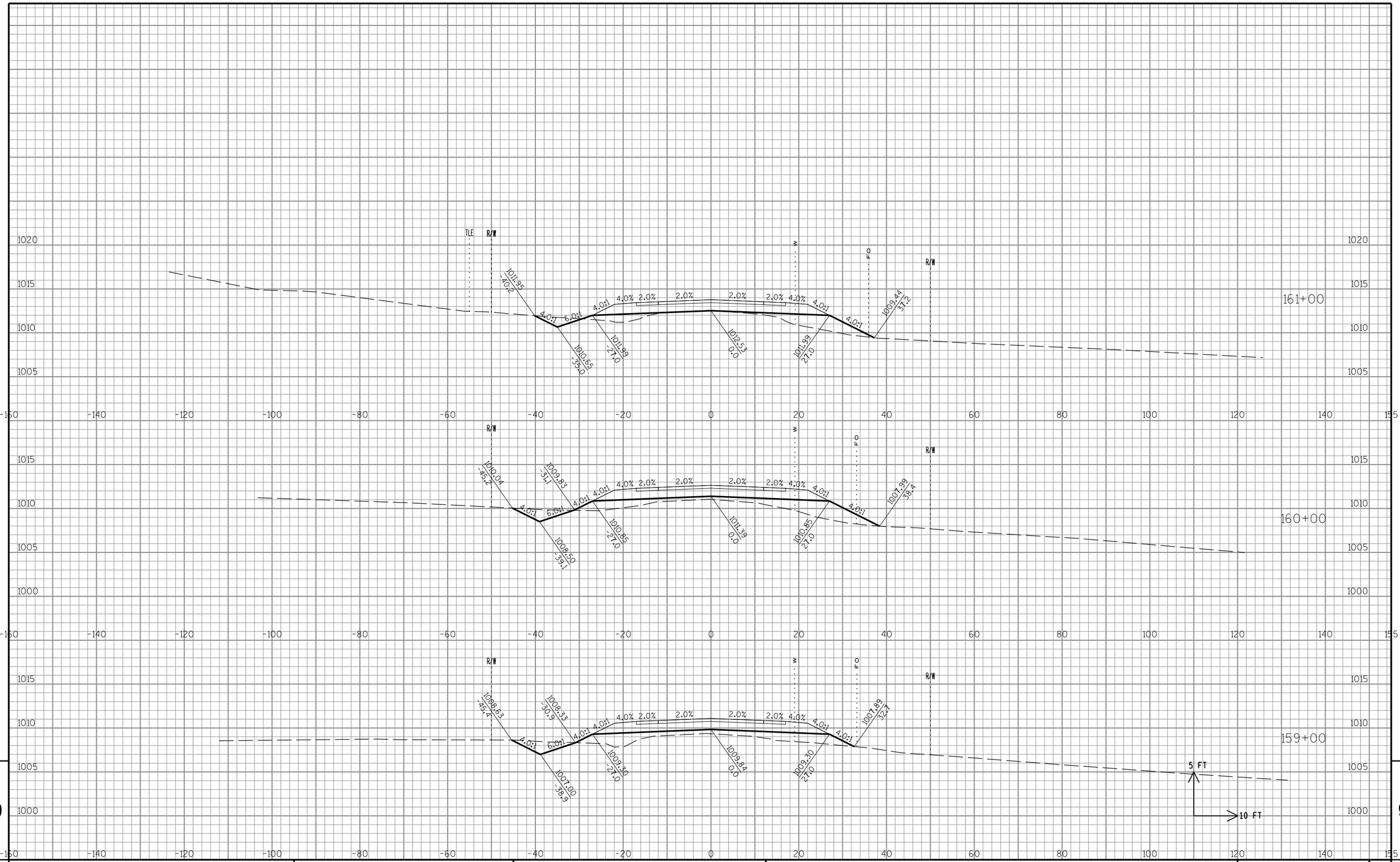
STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 199	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



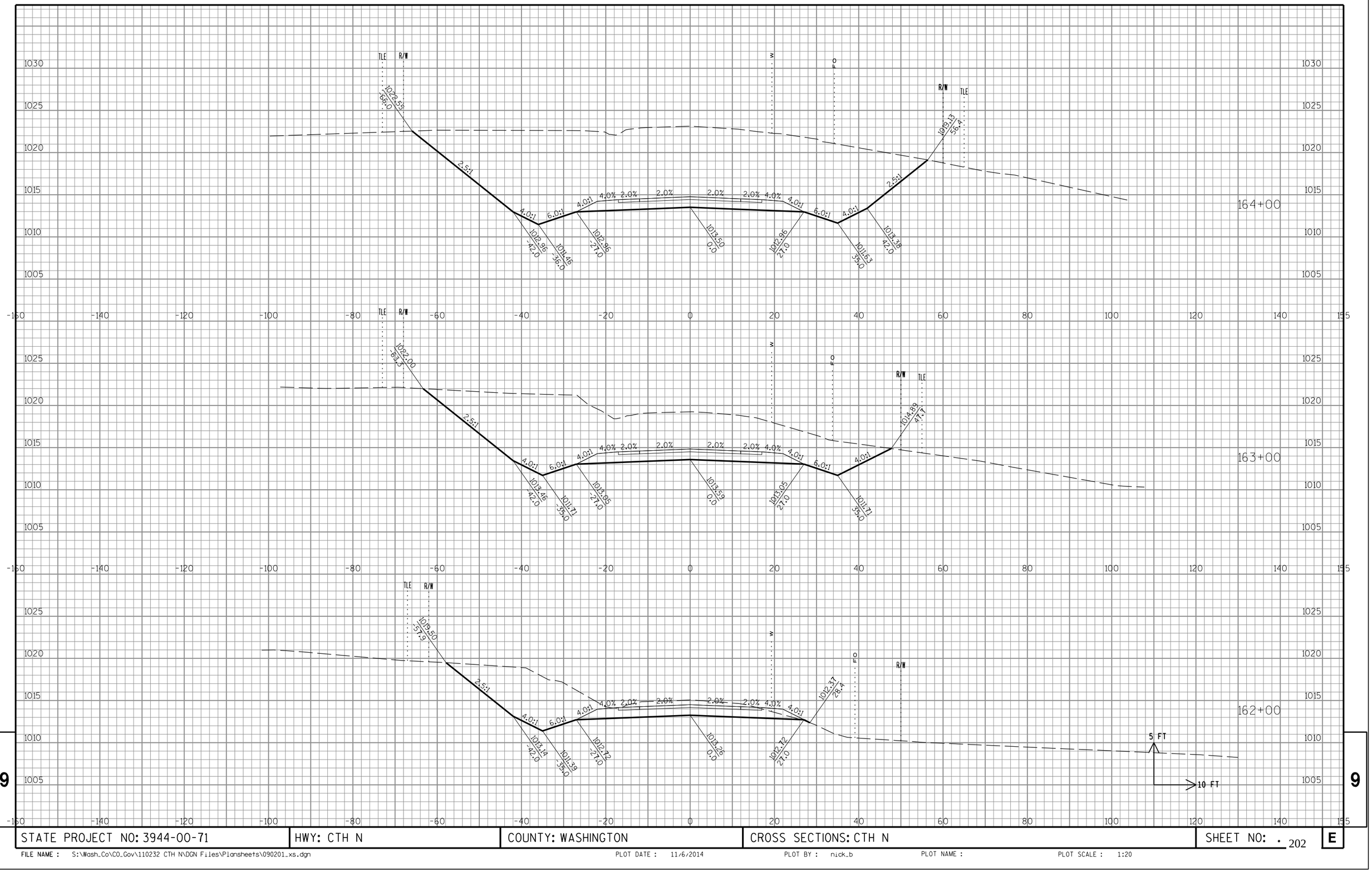
STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 200	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



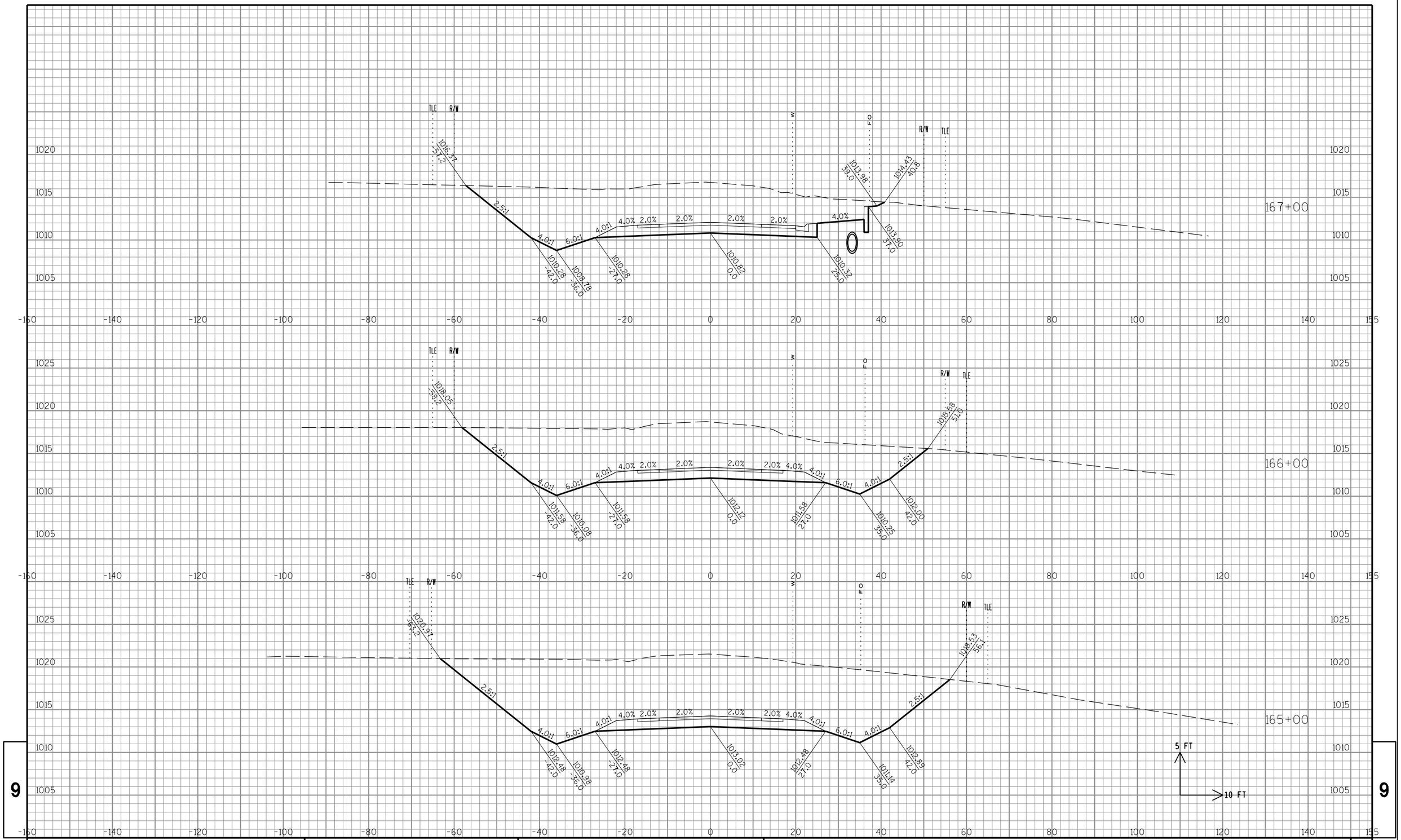
STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 201	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



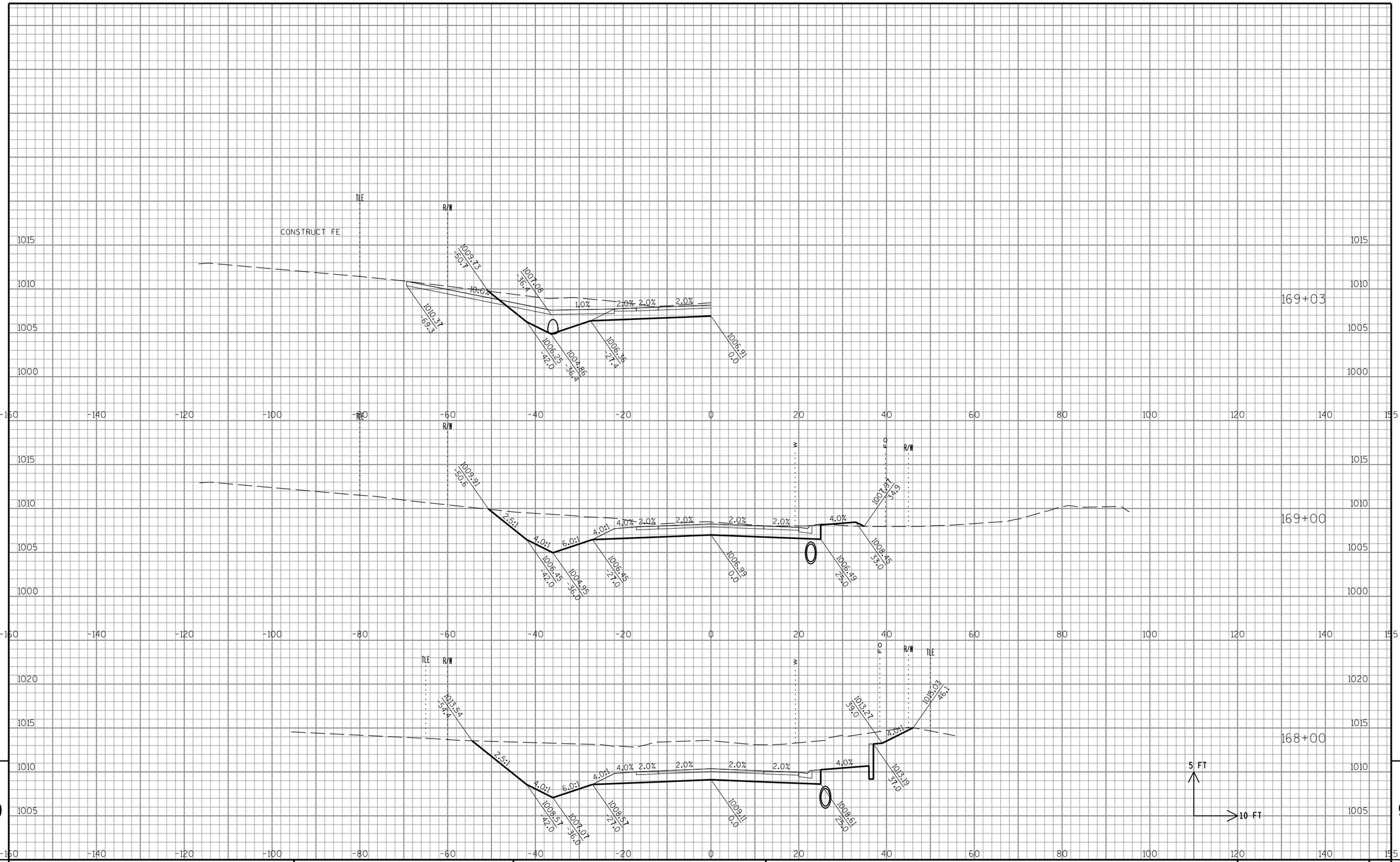
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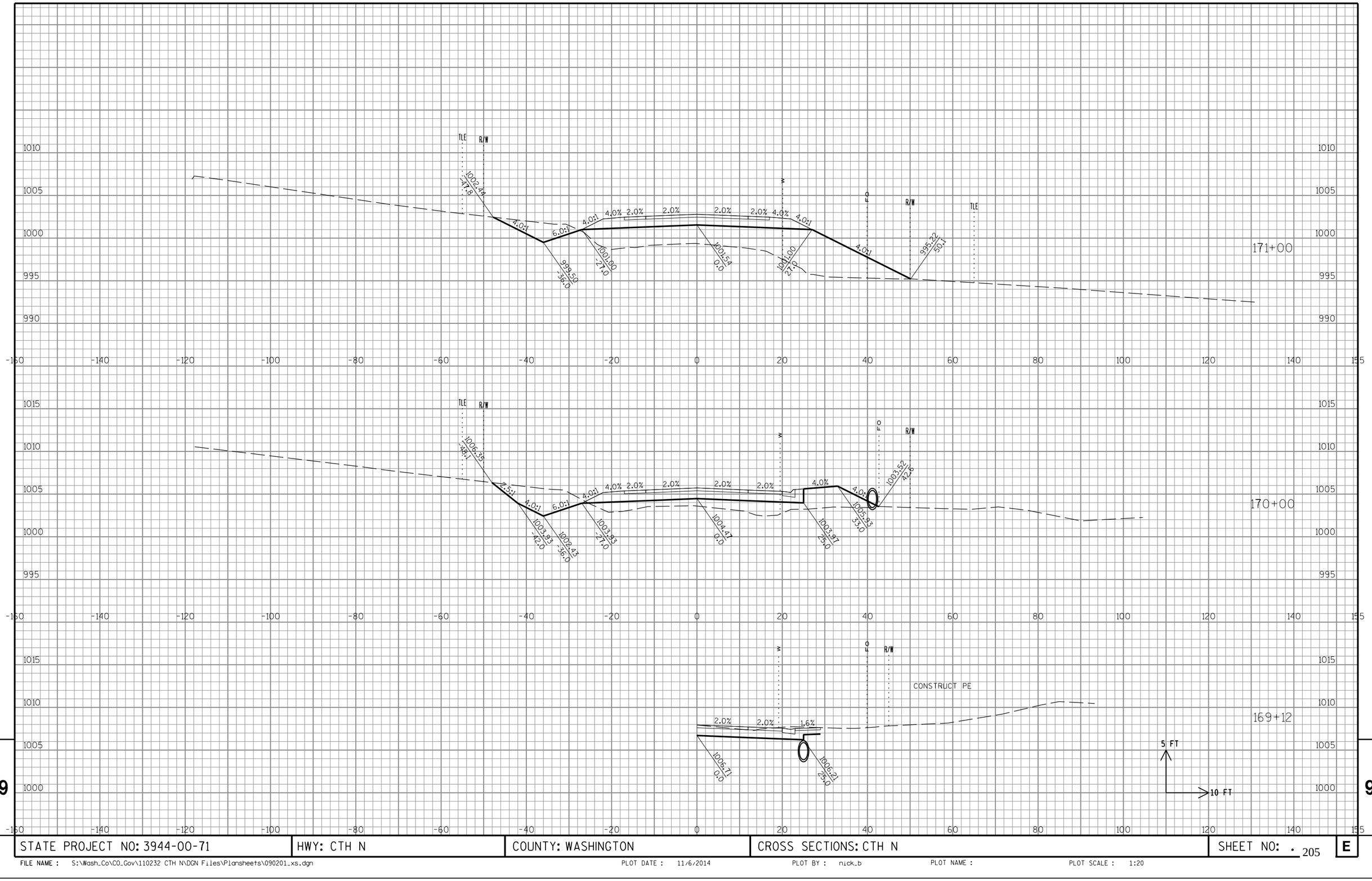
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STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: 203	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20


TLE
R/W
CONSTRUCT FE
1009.73
-50.7
1007.08
-36.4
10.0%
1.0%
2.0%
2.0%
2.0%
1010.37
-69.3
1006.25
-42.0
1004.86
-36.4
1006.36
-27.4
1006.91
0.0
169+03
-160
-140
-120
-100
-80
-60
-40
-20
0
20
40
60
80
100
120
140
155
1015
1010
1005
1000
R/W
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-50.6
2.5:1
4.0:1
6.0:1
4.0:1
4.0%
2.0%
2.0%
2.0%
2.0%
2.0%
4.0%
W
F O
R/W
1007.97
34.9
1006.45
-42.0
1004.95
-36.0
1006.45
-27.0
1006.99
0.0
1006.49
25.0
1008.45
33.0
169+00
1020
1013.54
-54.4
1013.27
39.0
1015.03
46.1
4.0:1
1008.57
-42.0
1007.07
-36.0
1008.57
-27.0
1009.11
0.0
1008.61
25.0
1012.19
37.0
168+00
5 FT
10 FT
9
STATE PROJECT NO: 3944-00-71
HWY: CTH N
COUNTY: WASHINGTON
CROSS SECTIONS: CTH N
SHEET NO: 204
E
FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn
PLOT DATE : 11/6/2014
PLOT BY : nick_b
PLOT NAME :
PLOT SCALE : 1:20

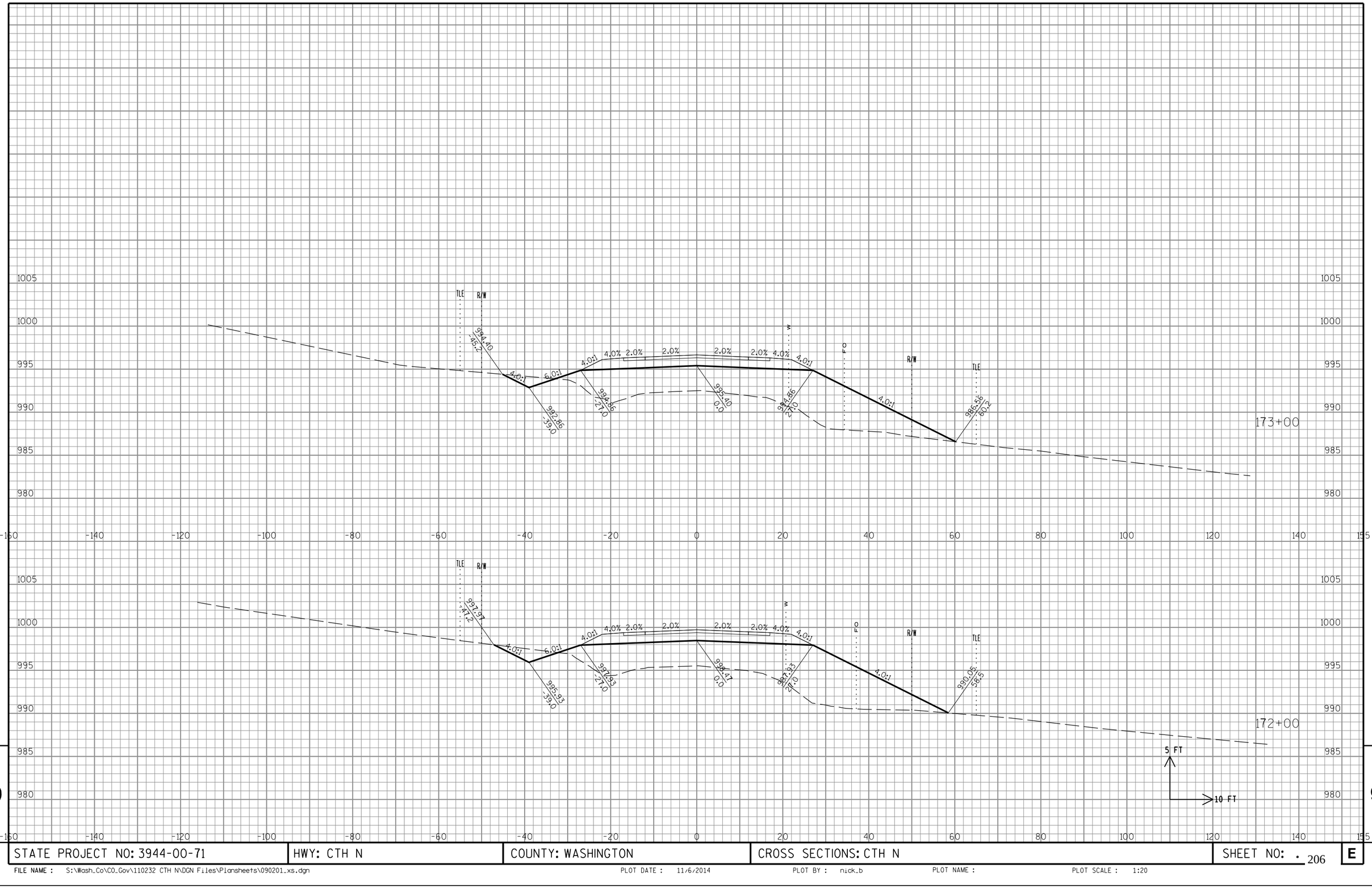


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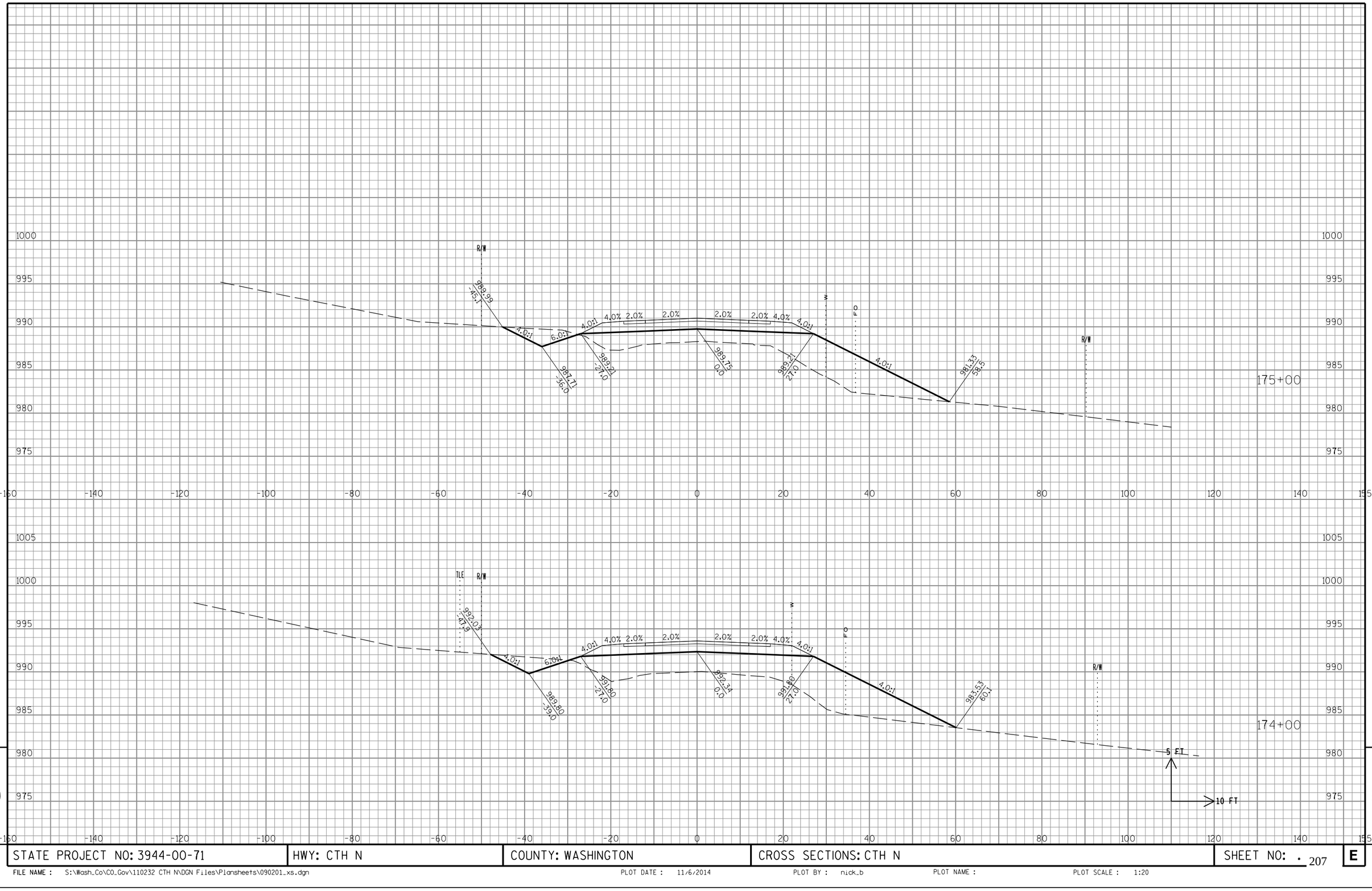
STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 205	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 206 E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20

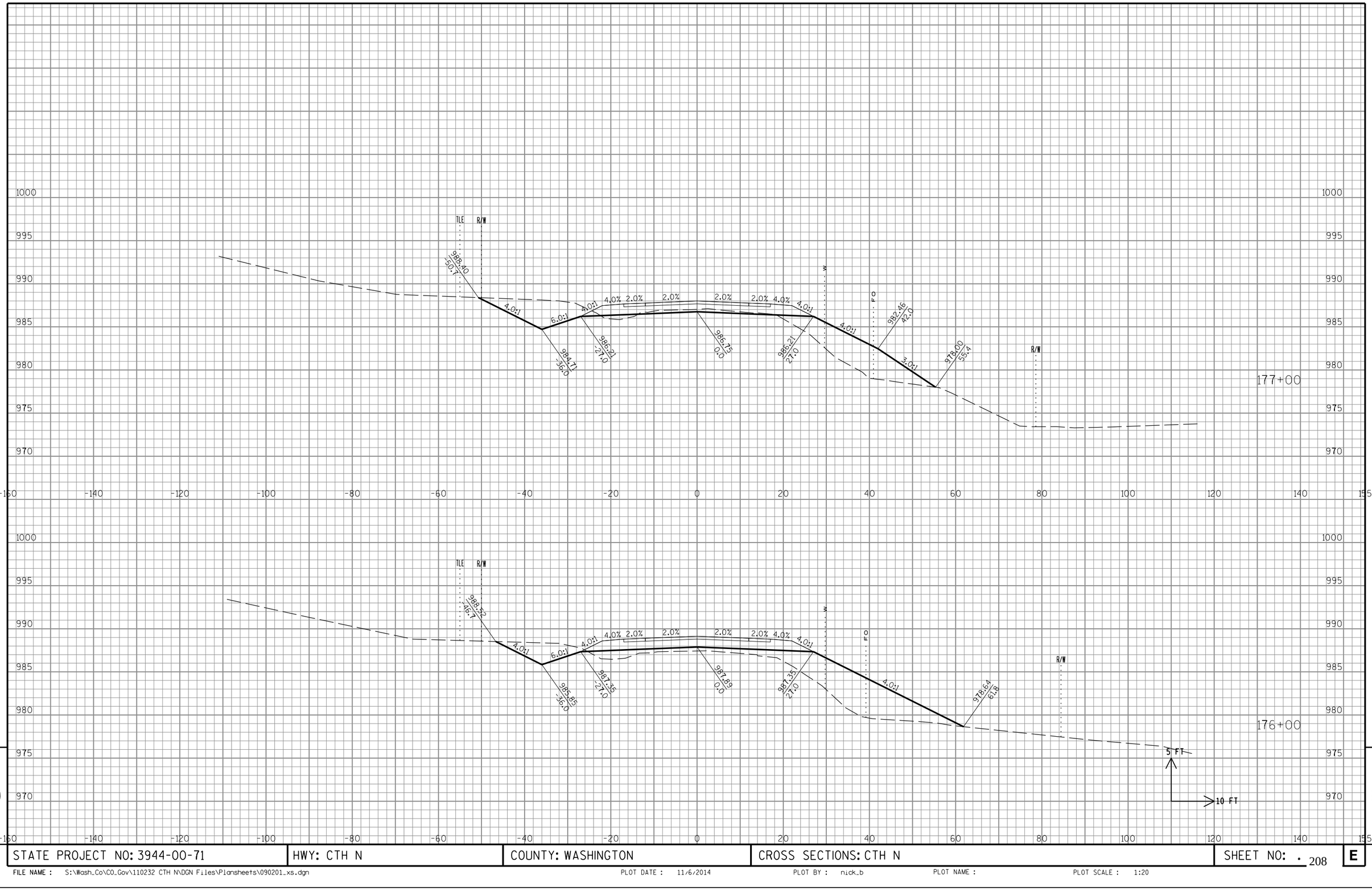


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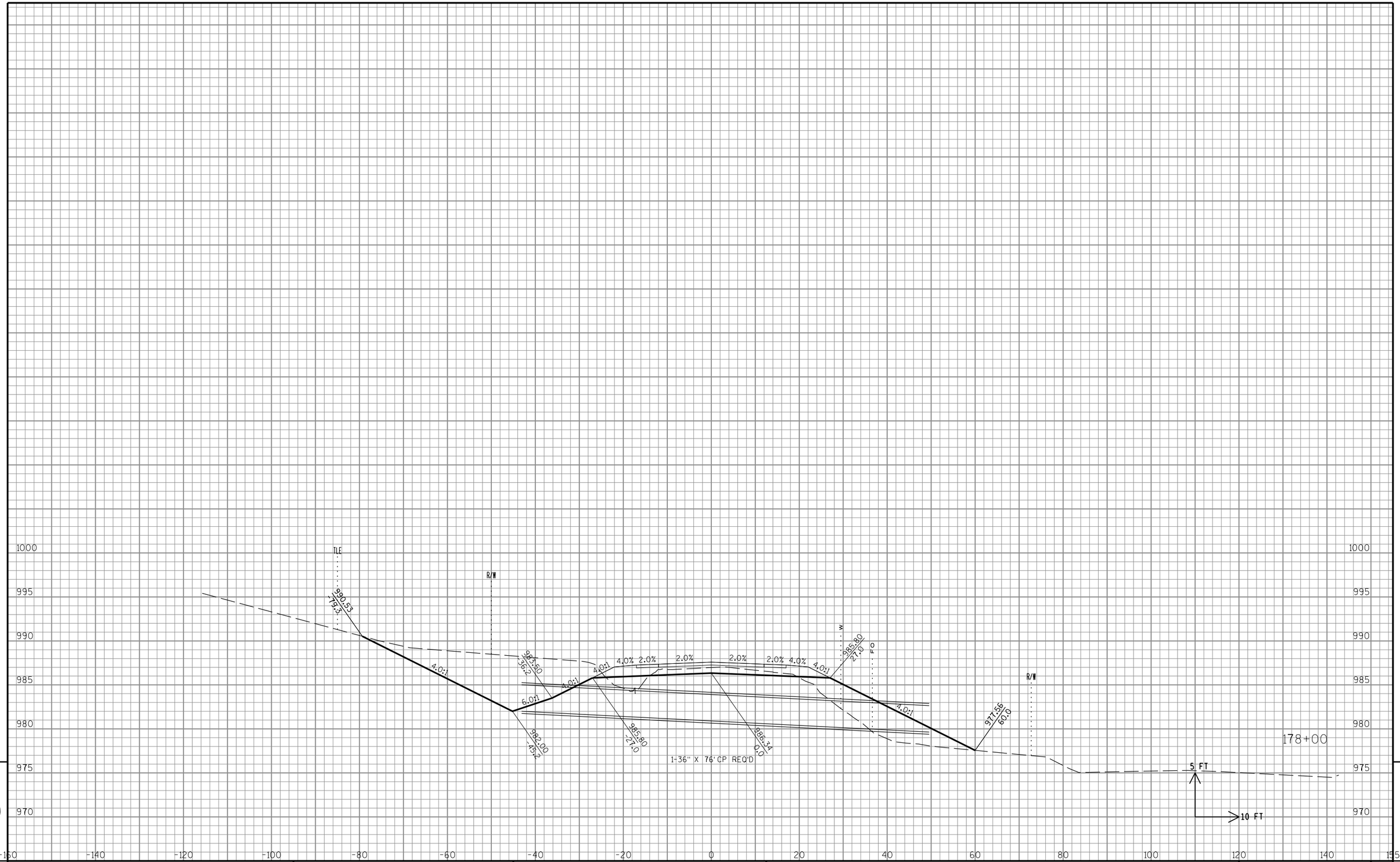
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FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 208	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20

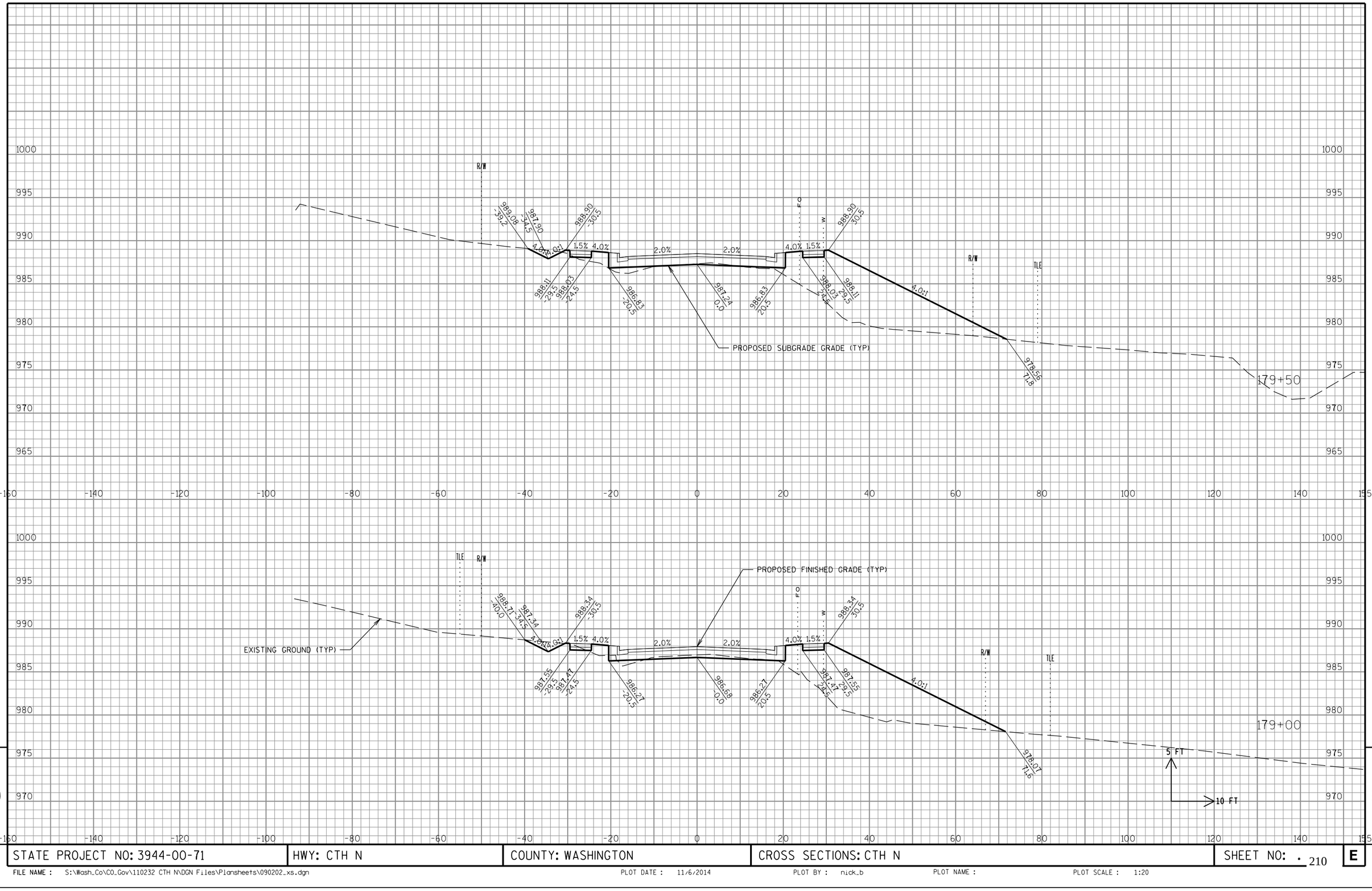


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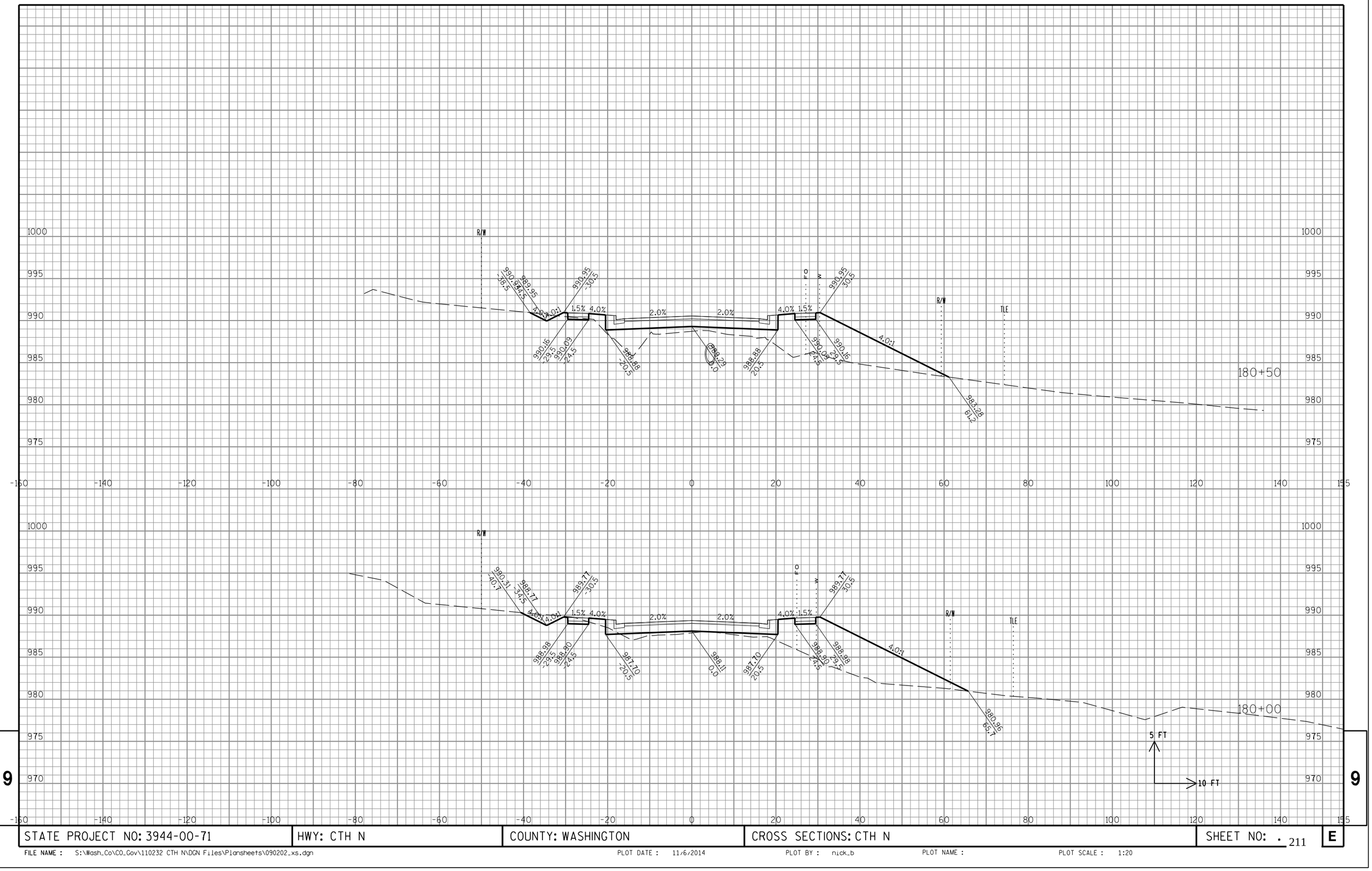
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FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090201_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: 210	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090202_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20

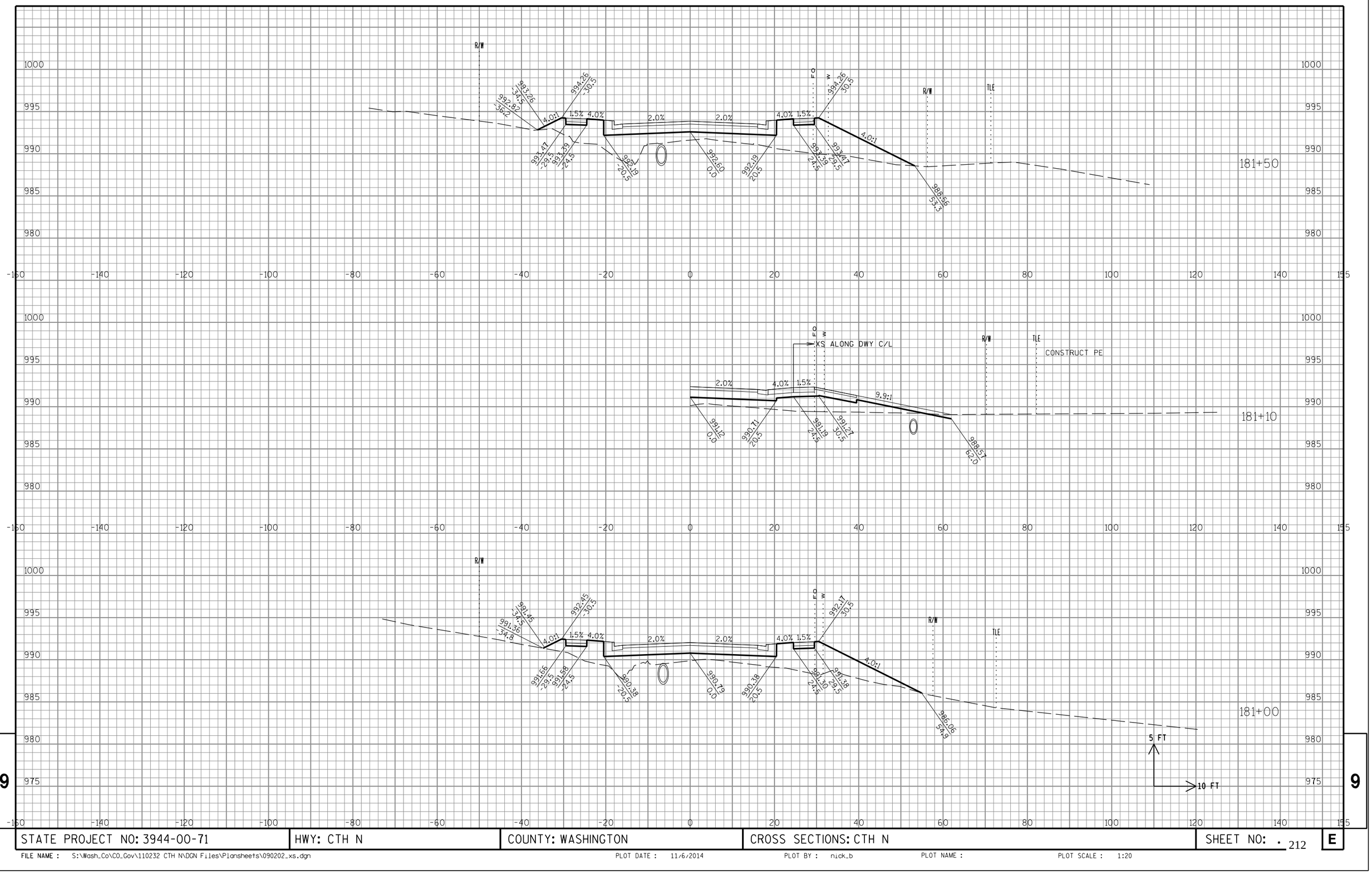


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STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 211	E

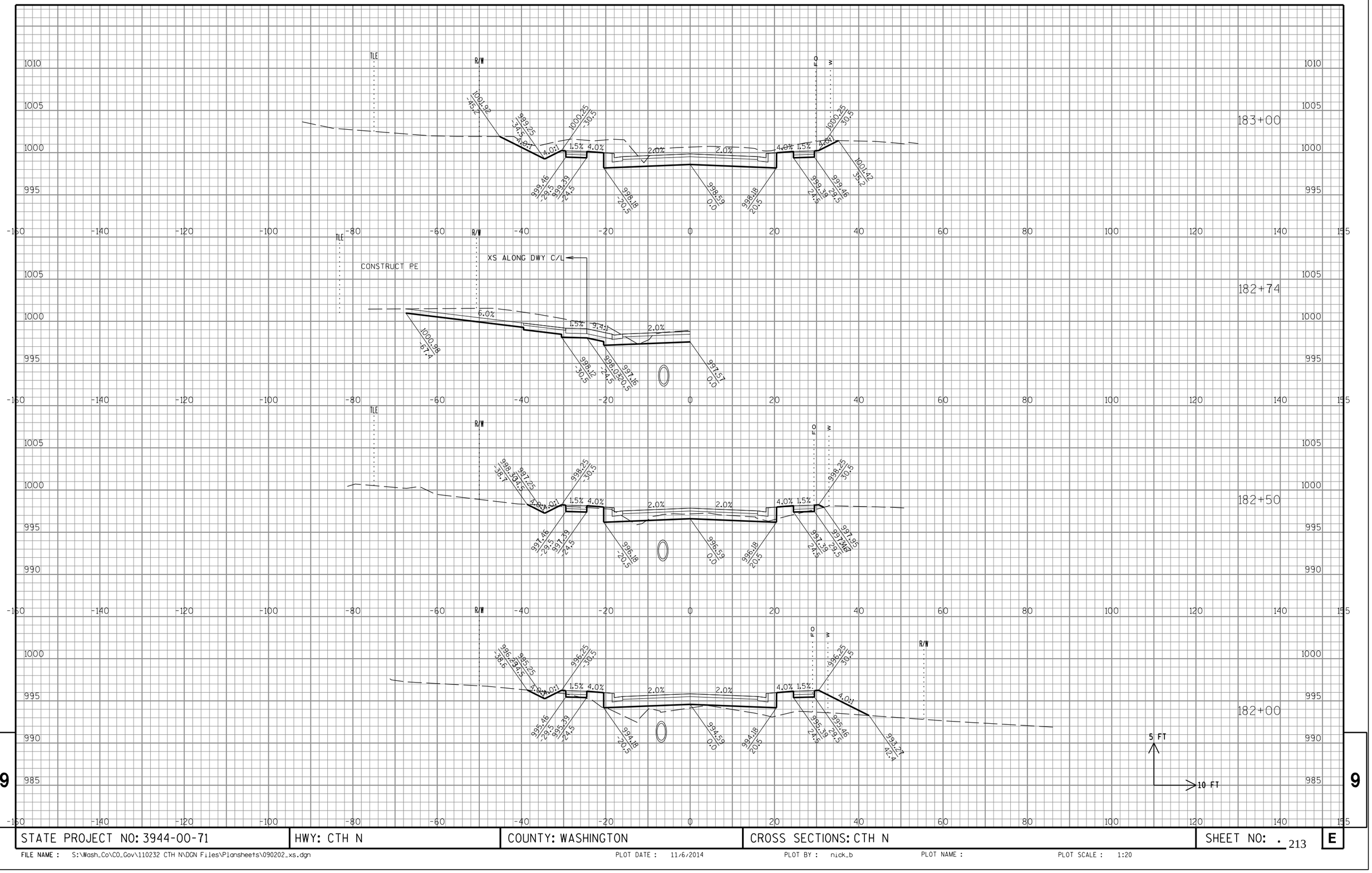
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STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 212

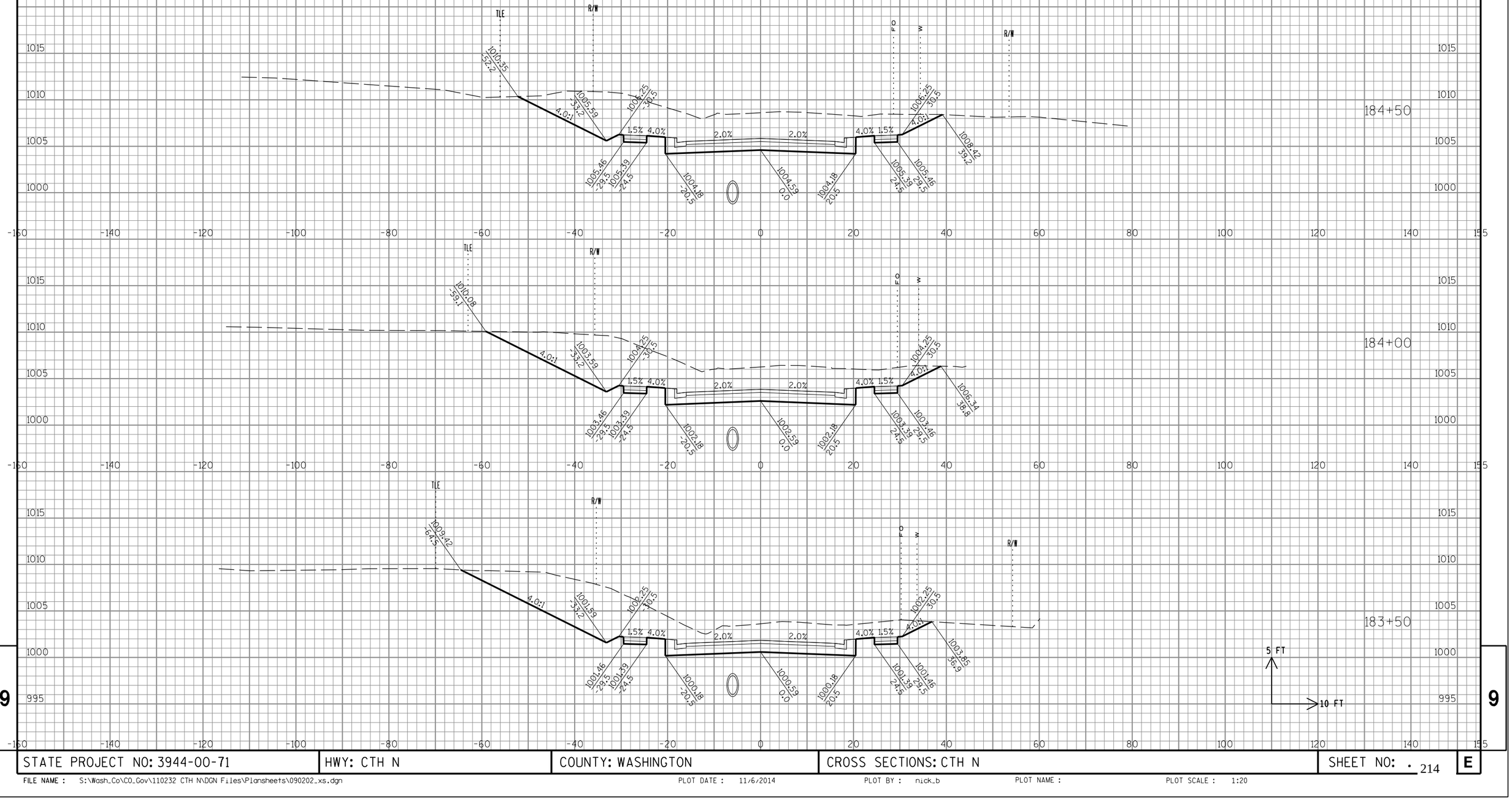
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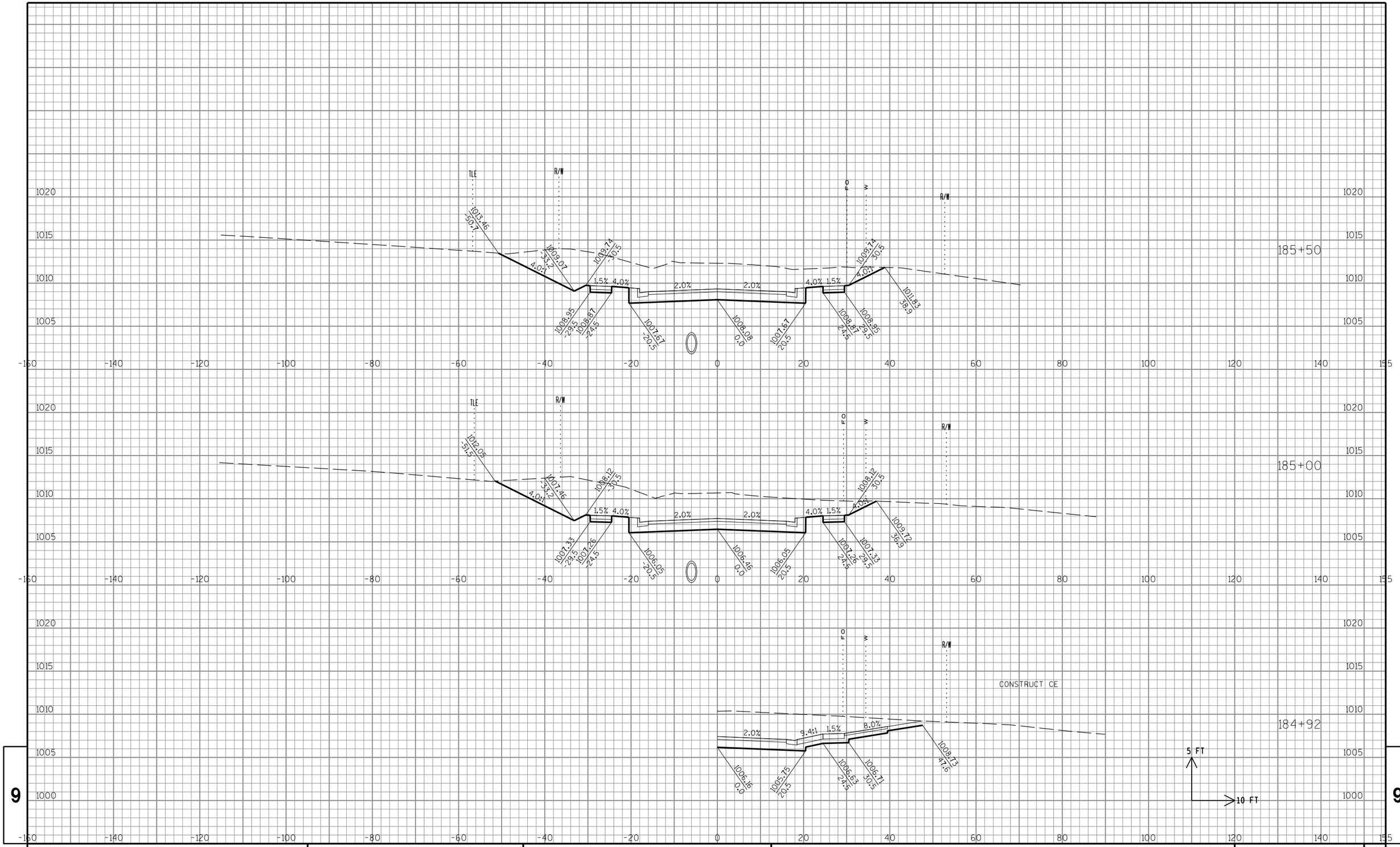
STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 213 E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090202_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: 214	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090202_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



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STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: 215	E

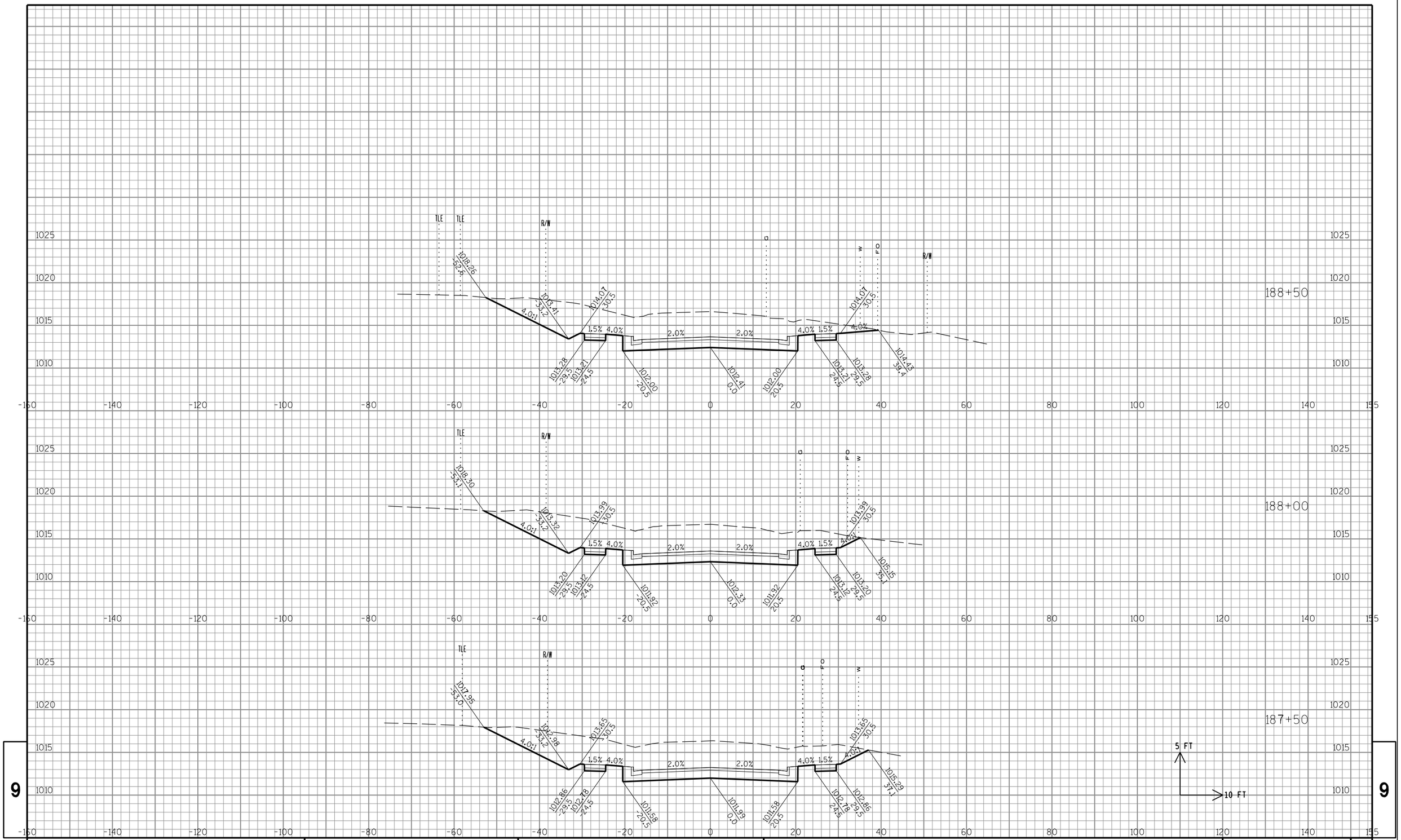
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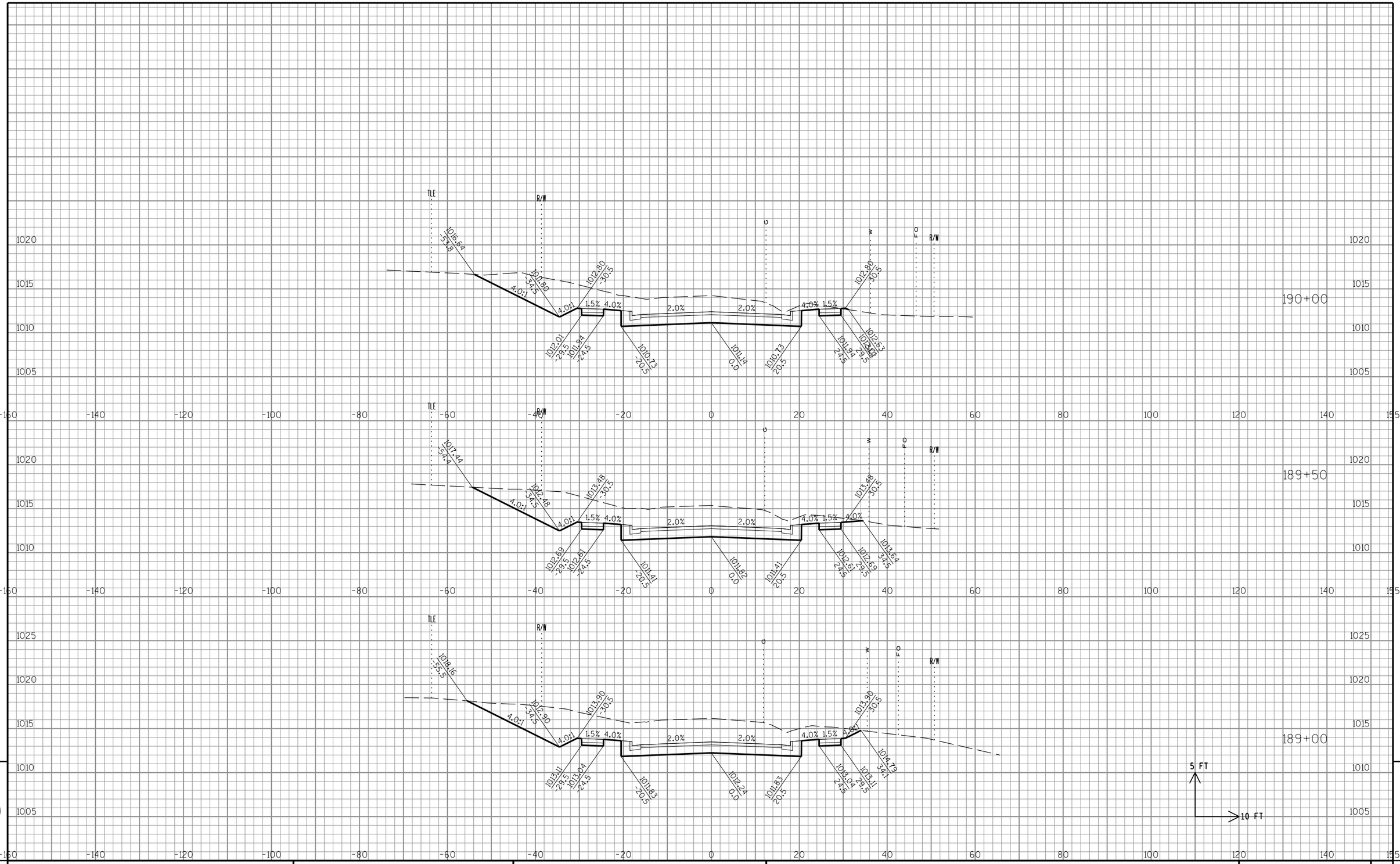
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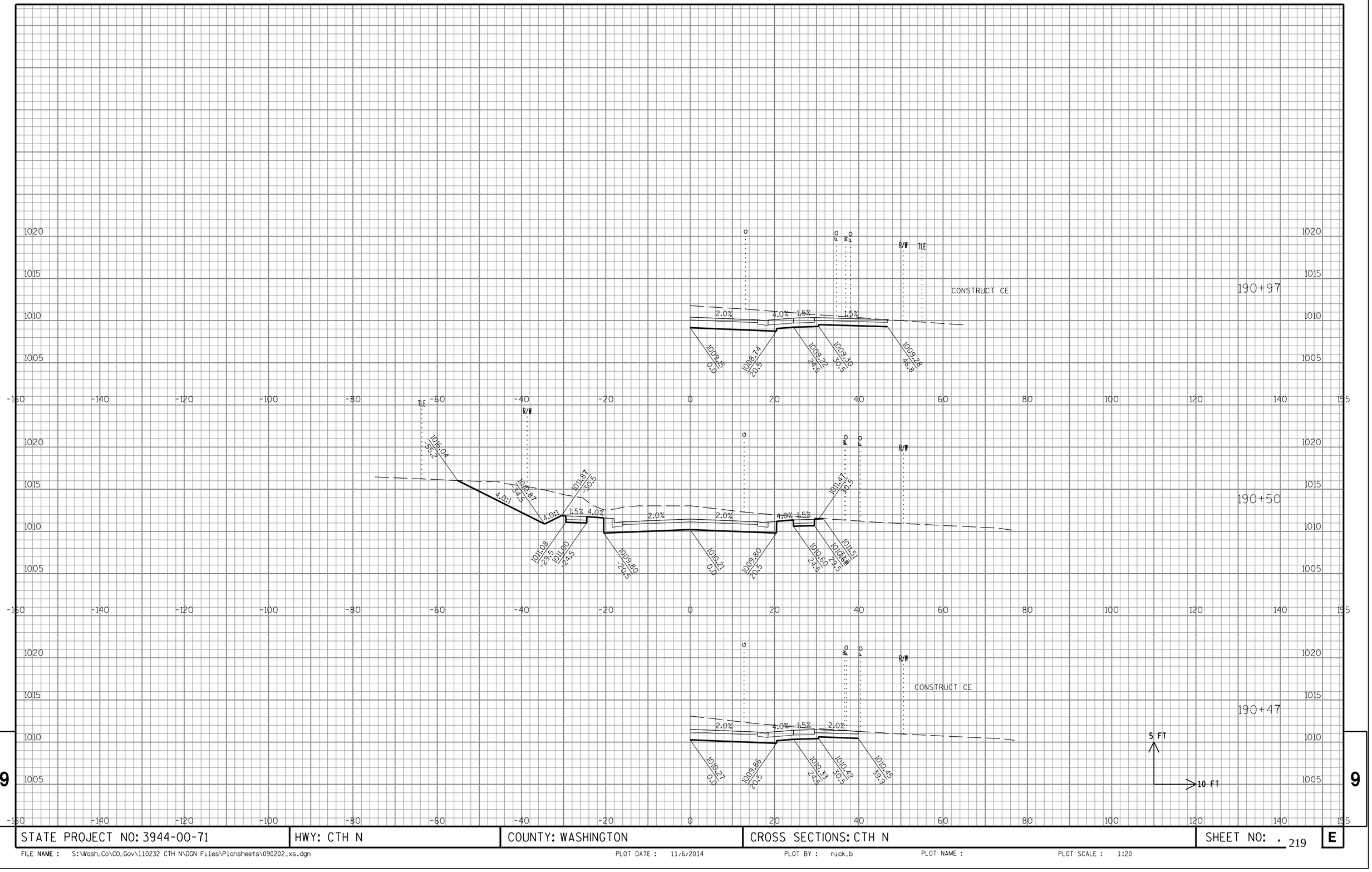
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STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: 218	E

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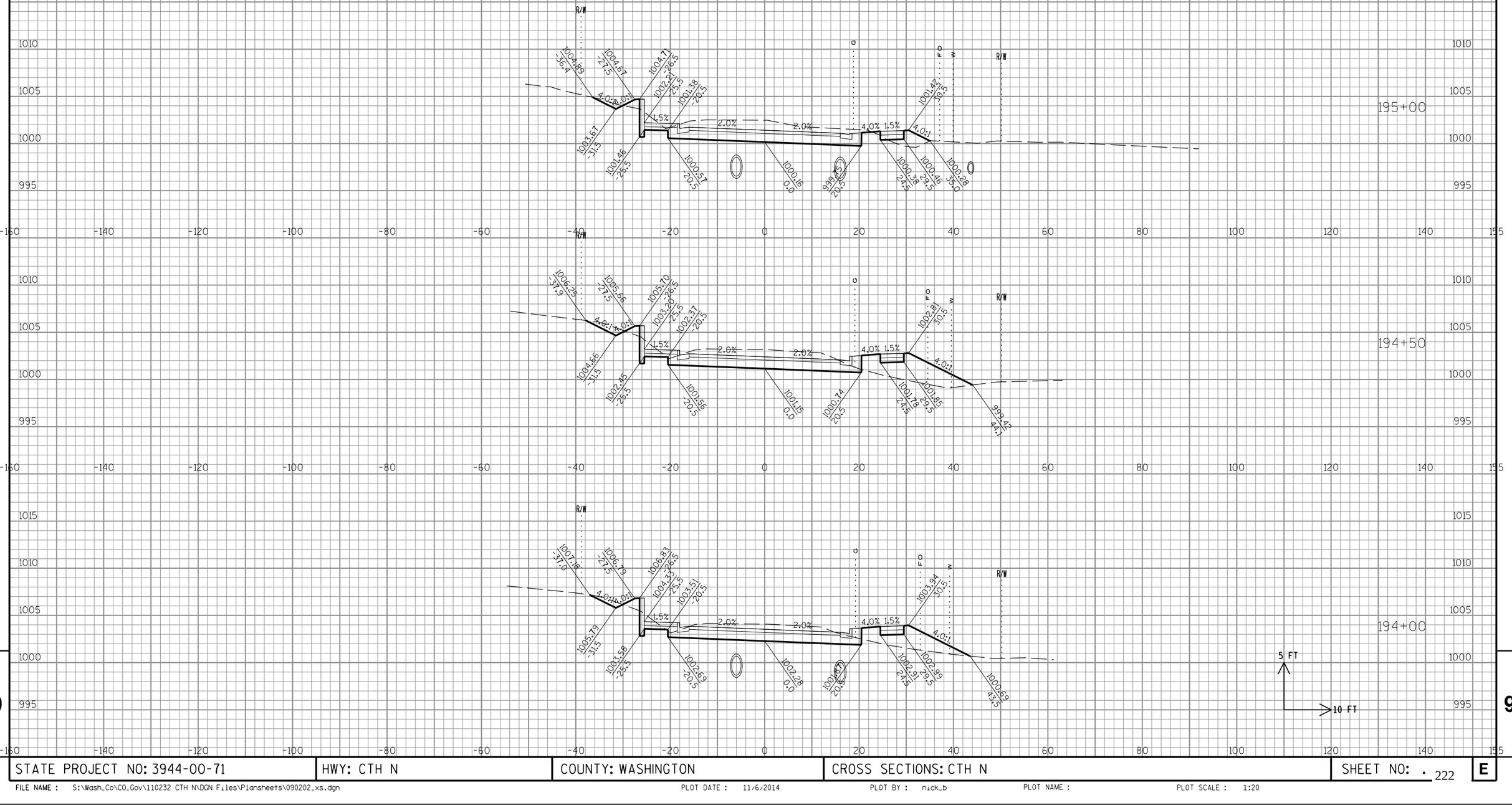
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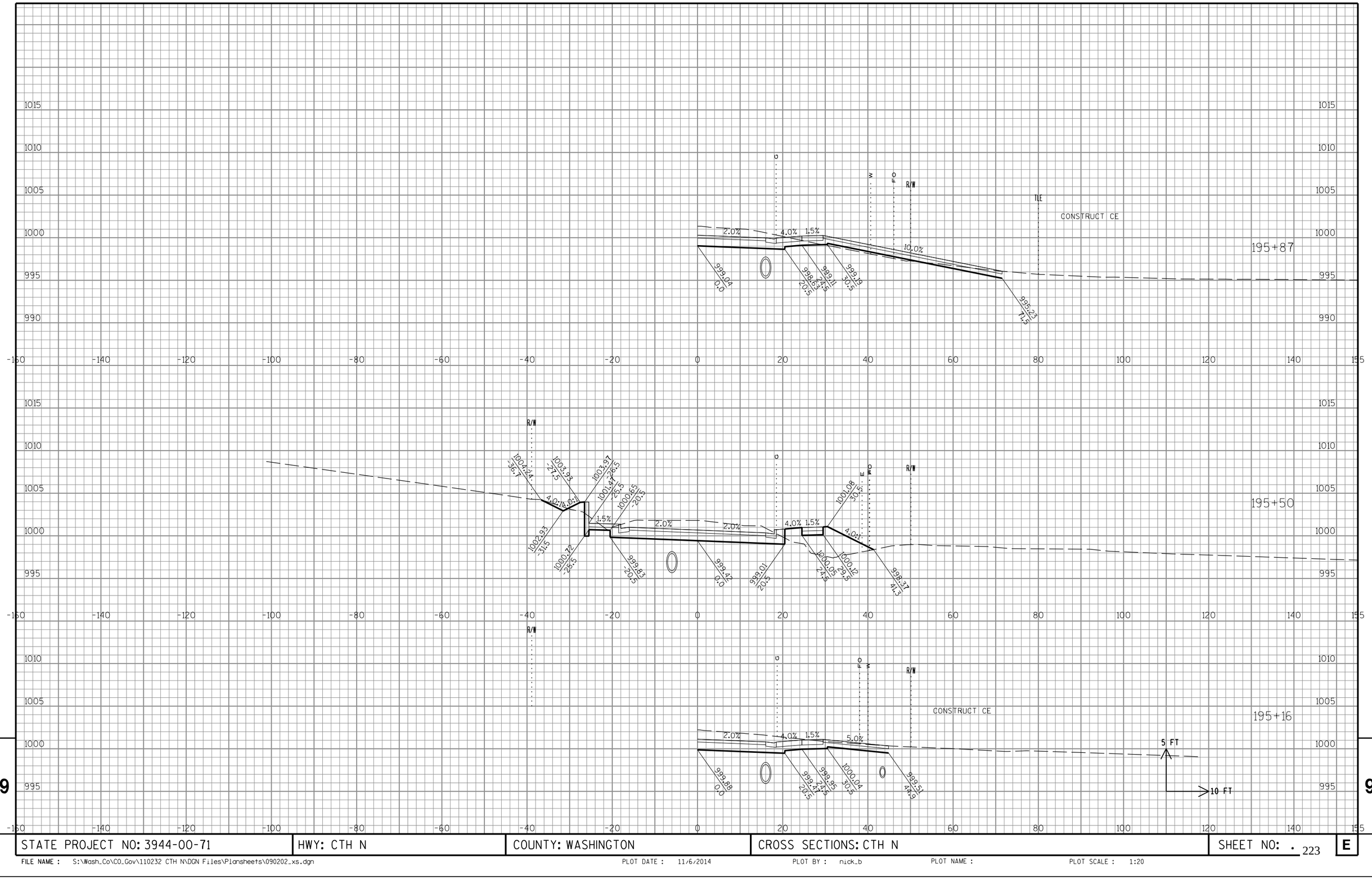
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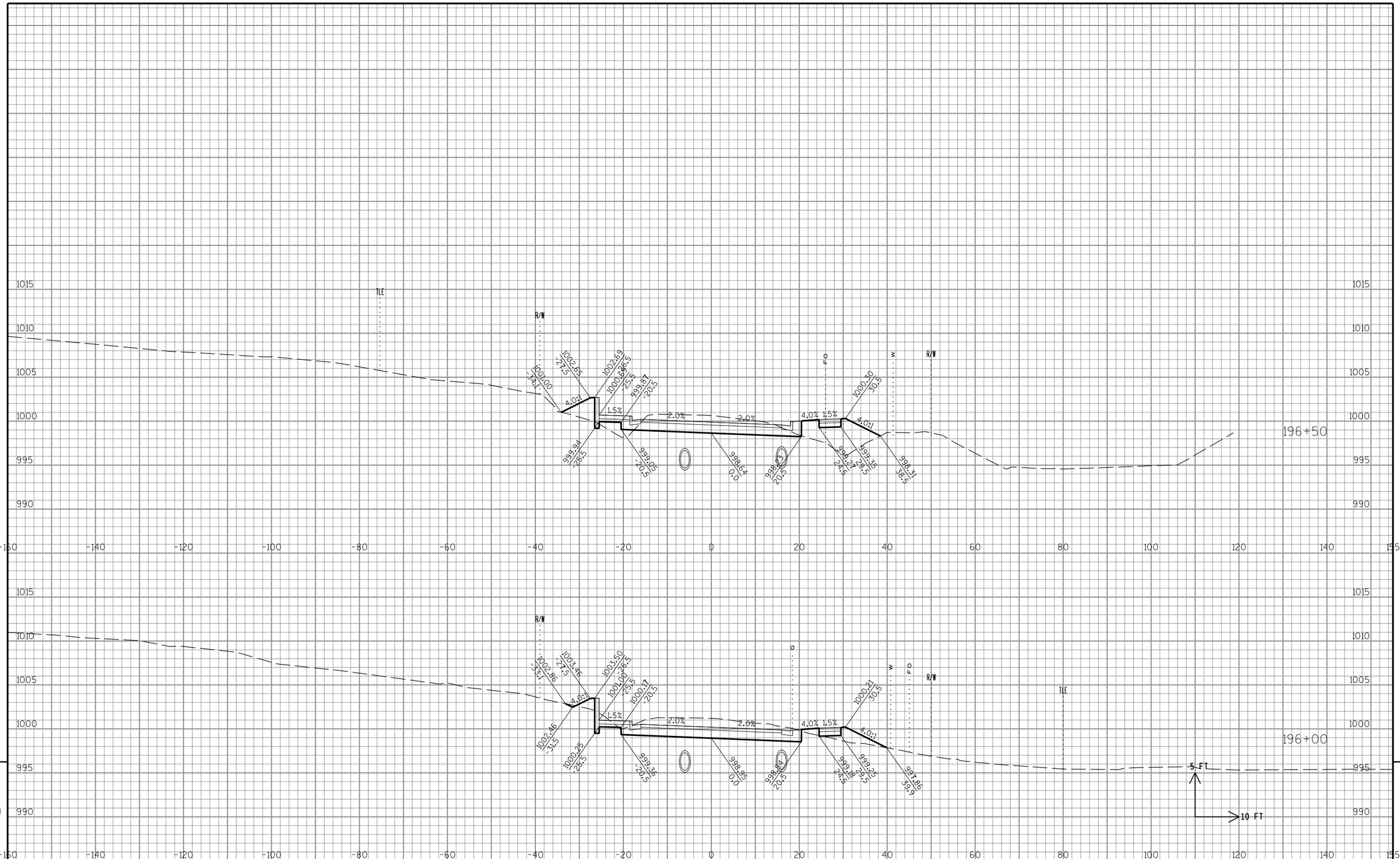
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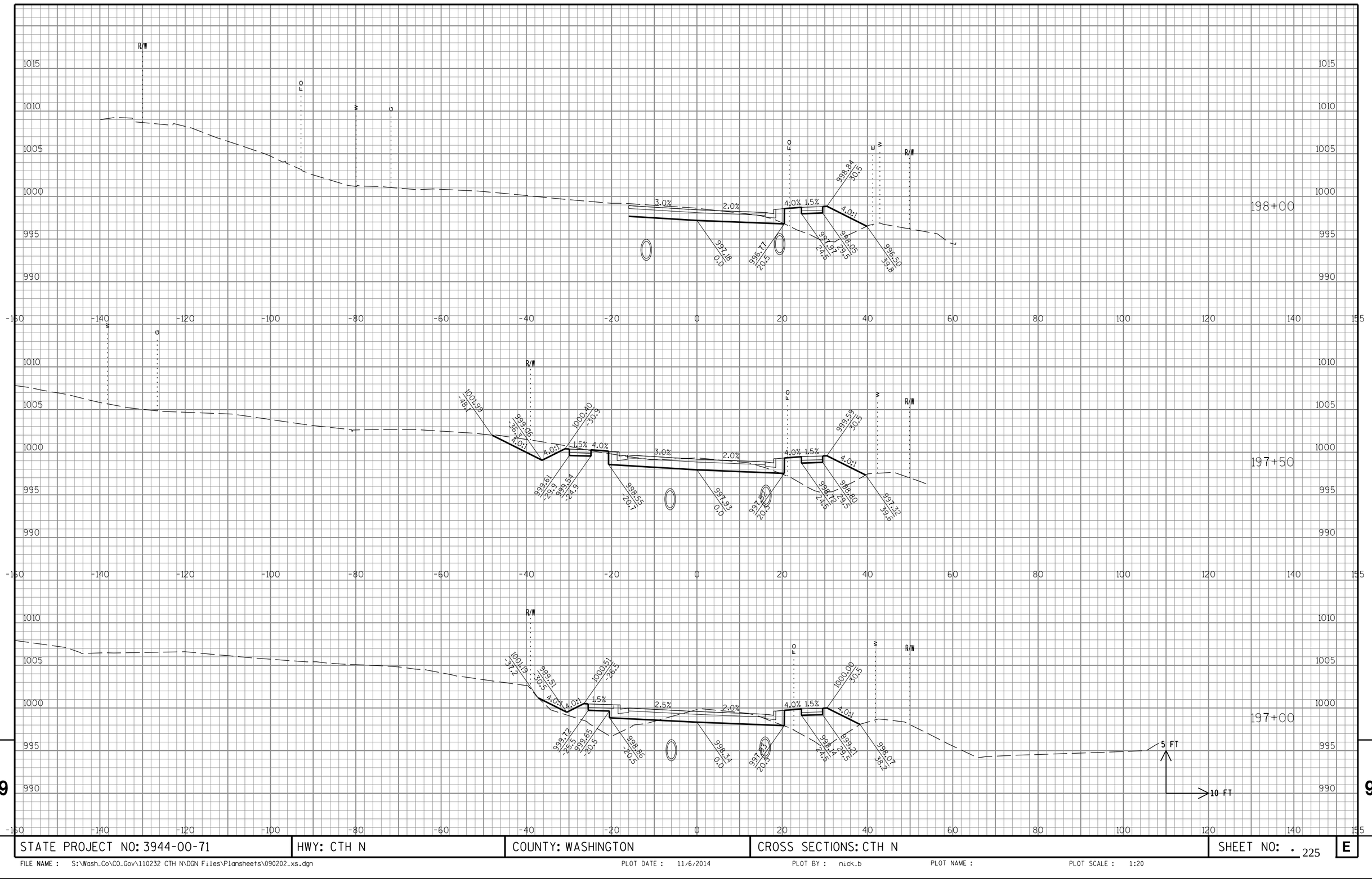
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STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: . 224	E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090202_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20



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STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: CTH N	SHEET NO: 225	E

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END PROJECT STA 201+65.00

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5 FT
10 FT

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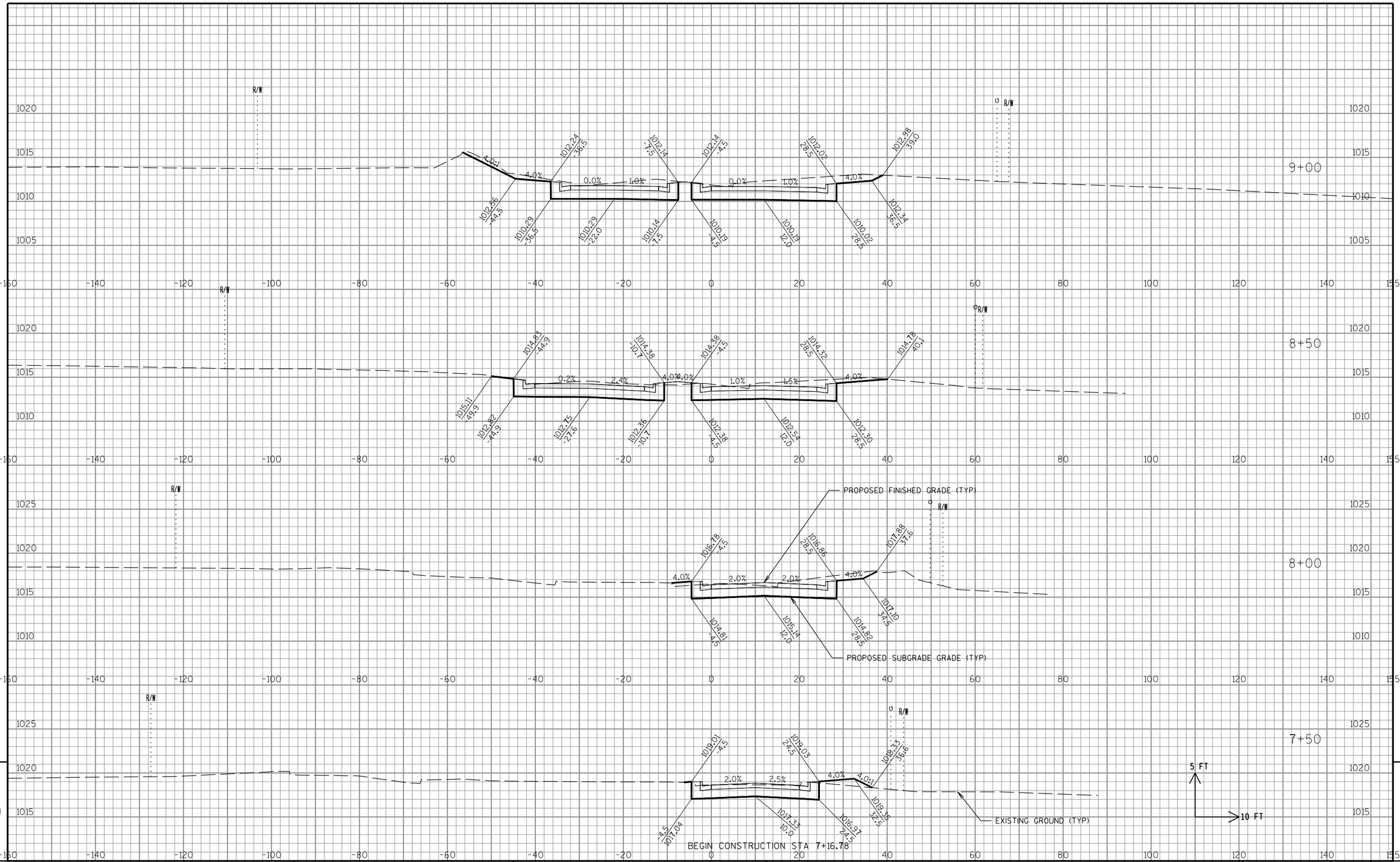
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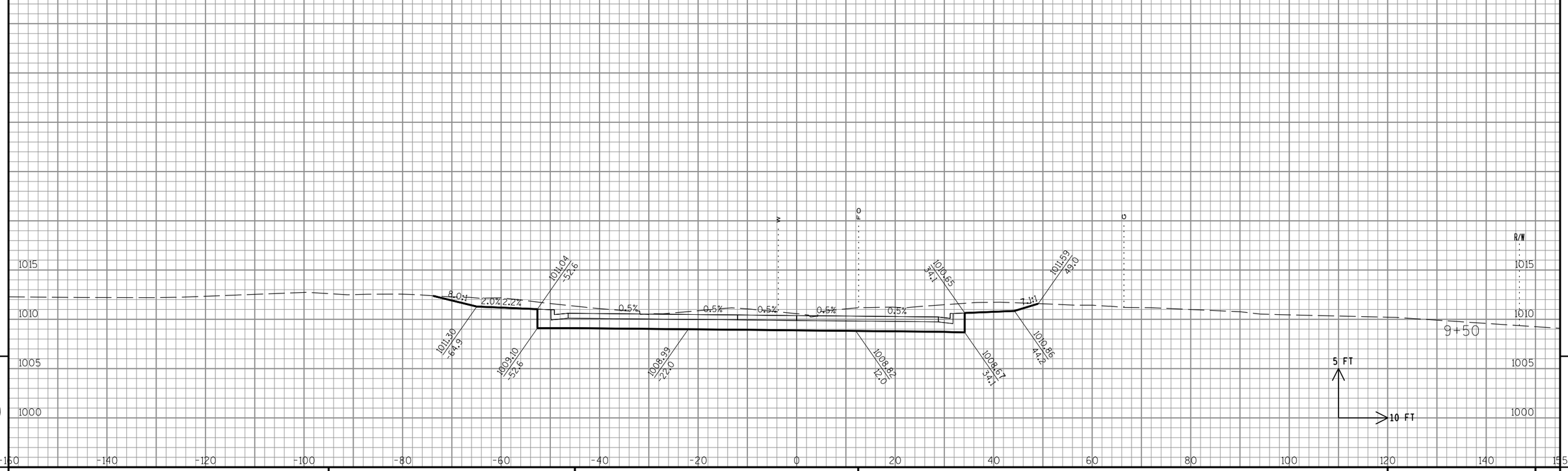
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STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: INDEPENDENCE AVE	SHEET NO: . 227 E

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090203_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20

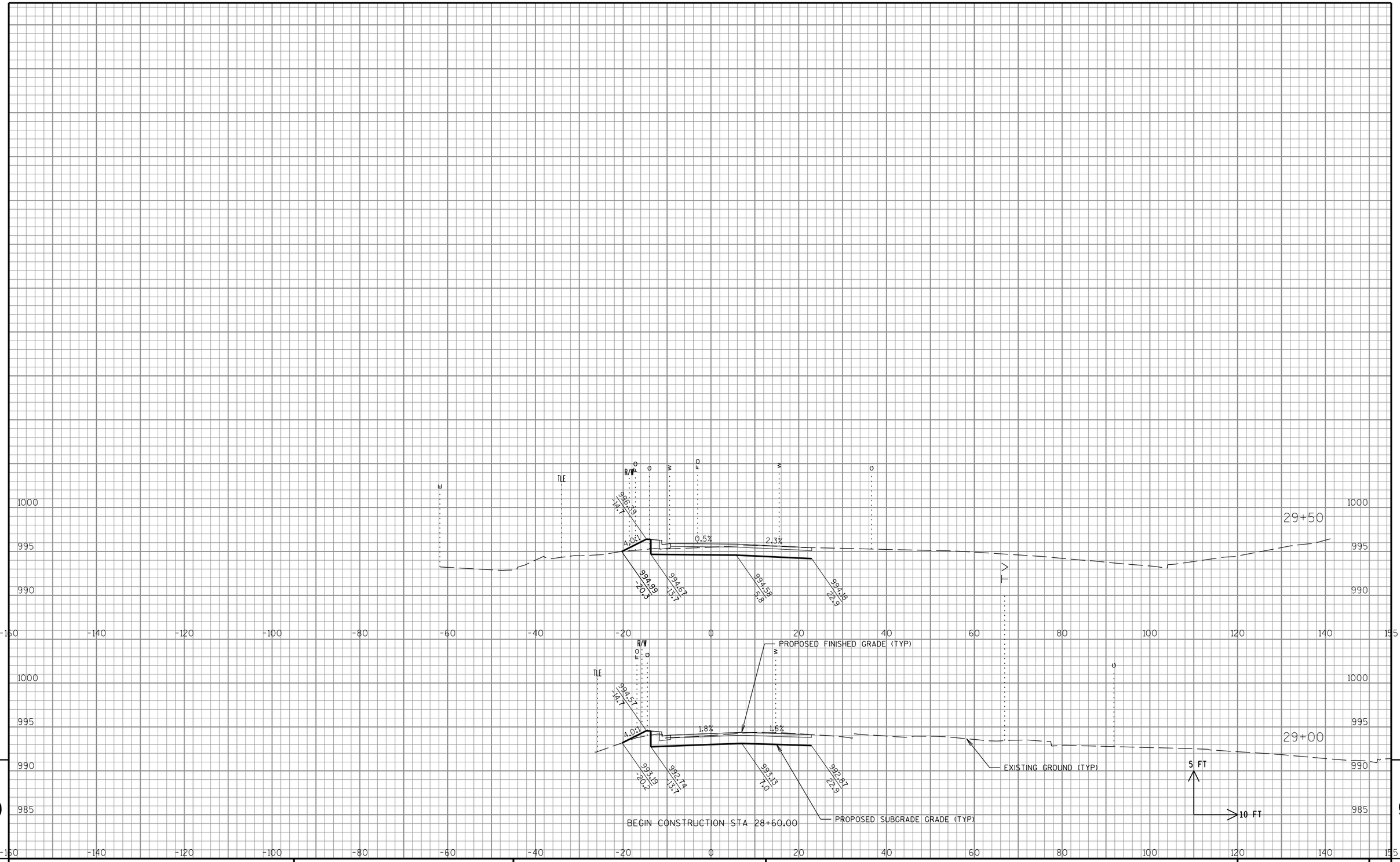


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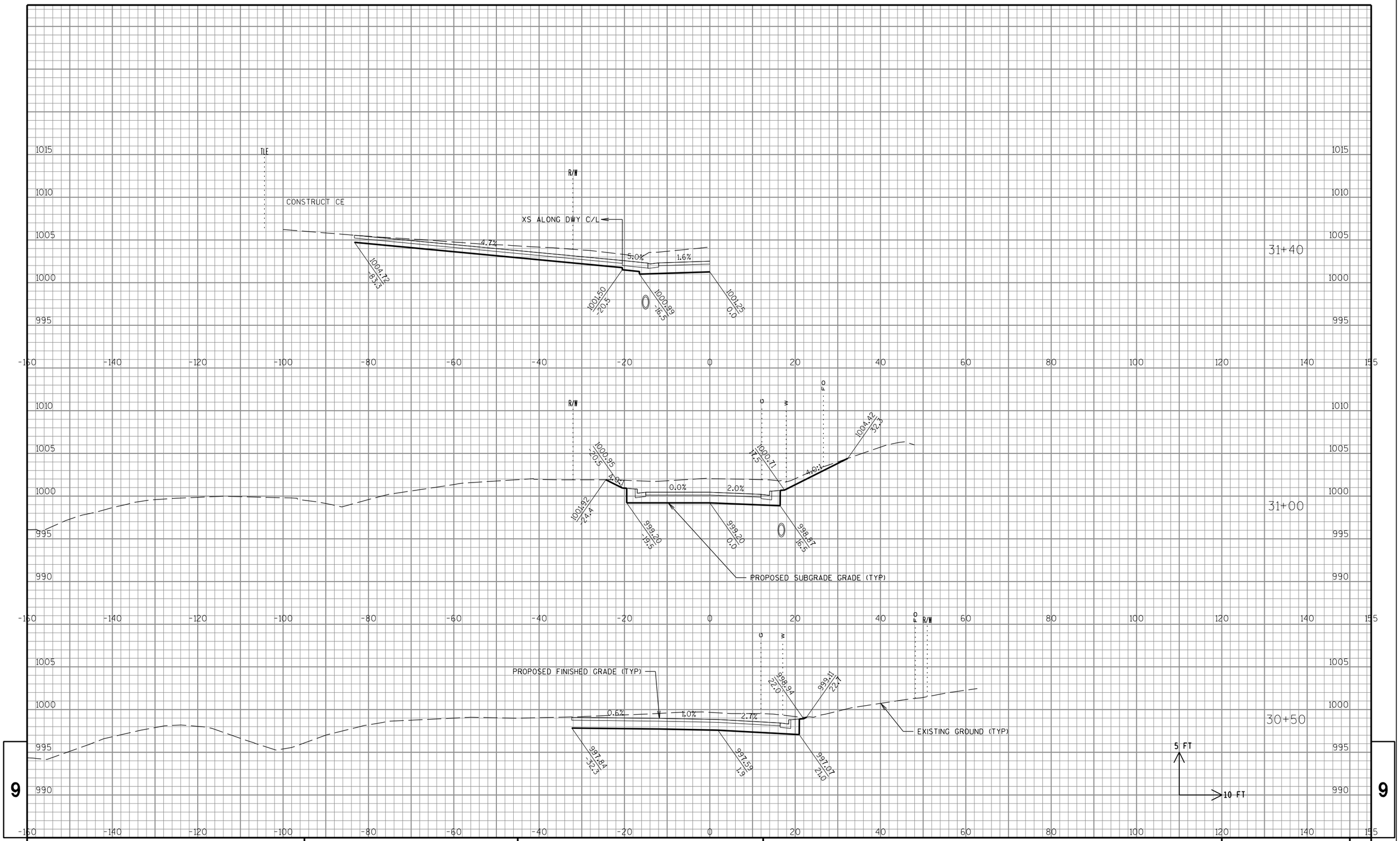
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STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: AIRPORT DR	SHEET NO: 229	E

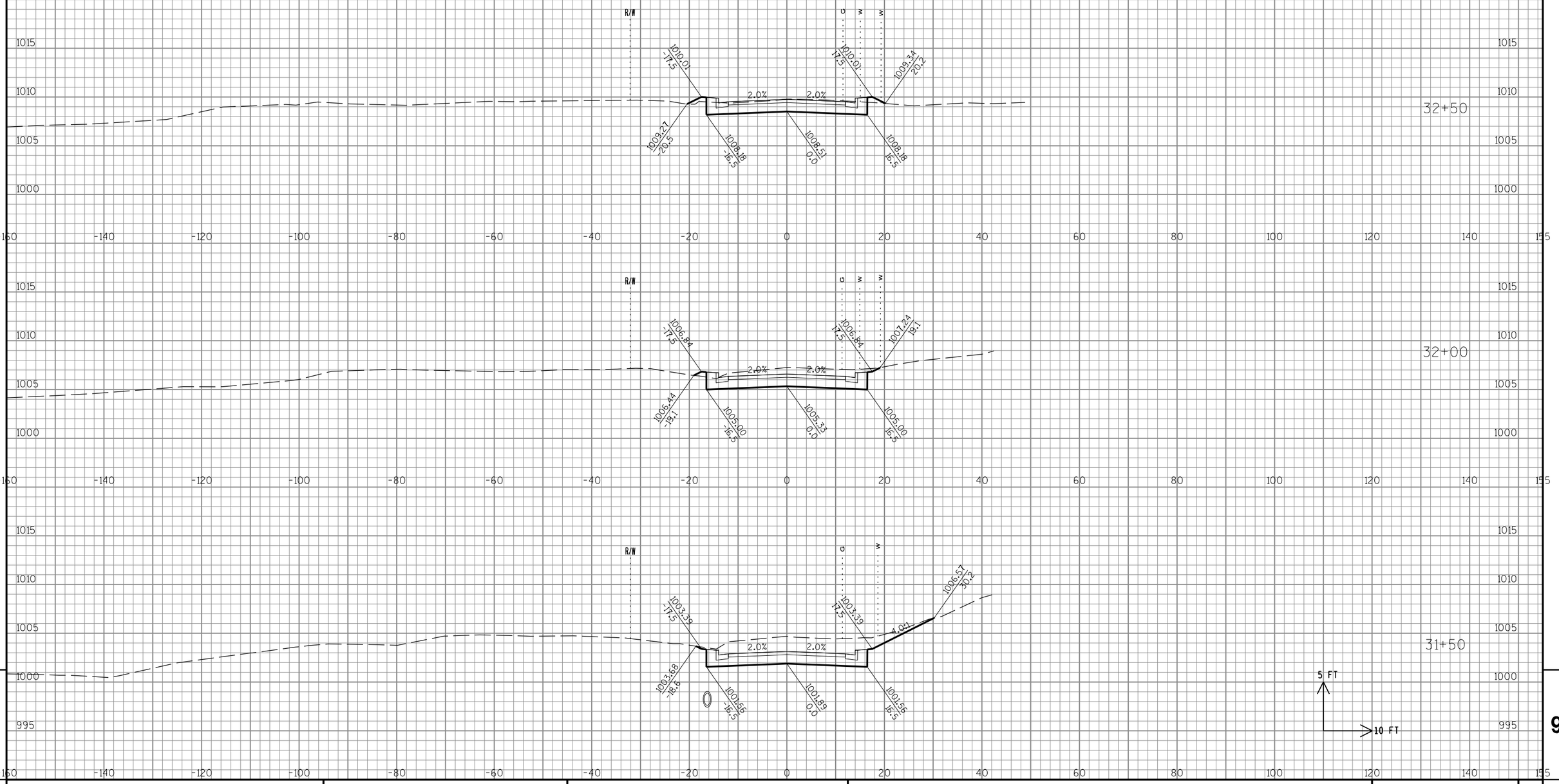
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STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: AIRPORT DR	SHEET NO: 230

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090205_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20

END CONSTRUCTION STA 32+55.00



STATE PROJECT NO: 3944-00-71	HWY: CTH N	COUNTY: WASHINGTON	CROSS SECTIONS: AIRPORT DR	SHEET NO: 231

FILE NAME : S:\Wash_Co\CO_Gov\110232 CTH N\DGN Files\Plansheets\090205_xs.dgn PLOT DATE : 11/6/2014 PLOT BY : nick_b PLOT NAME : PLOT SCALE : 1:20

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
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