MAD

JUNE 2013

PROJECT ID: 5845-05-71

WITH:

COUNTY: DANE

ORDER OF SHEETS

TOTAL SHEETS = 114

N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

JANESVILLE - STOUGHTON

CTH W TO SPRING ROAD

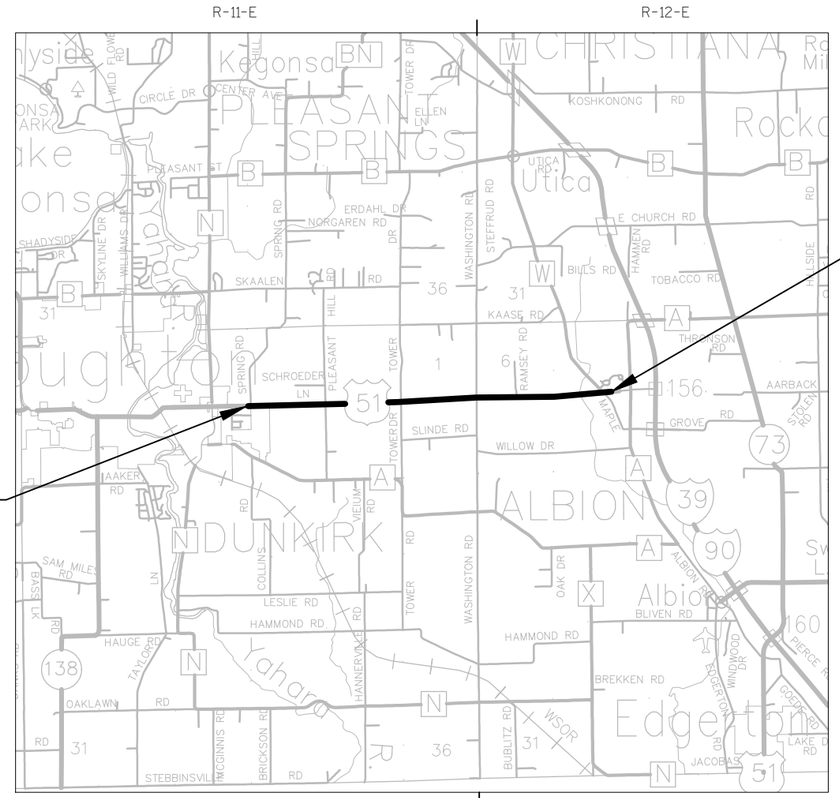
USH 51

DANE

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5845-05-71	WISC 2013304	1

STATE PROJECT NUMBER

5845-05-71



LAYOUT

SCALE 0 1.0 MI.

TOTAL NET LENGTH OF CENTERLINE = 4.80 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, DANE COUNTY, NAD 83 (1991), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NGVD 29.

DESIGN DESIGNATION

A.A.D.T.	2013	= 6300
A.A.D.T.	2023	= 7200
D.H.V.		= 11.5%
D.D.		= 60/40
T.		= 5.9%
DESIGN SPEED		= 60 MPH
ESALS		= 950,000

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	JOHN MORAN
Designer	CHARLENE BREGAUDIT
Project Manager	DAVID LAYTON
Regional Examiner	
Regional Supervisor	BRENDA SCHOENFELD
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 3-1-13 Brenda Schoenfeld (Signature)

E

ORDER OF SECTION 2 SHEETS

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

UTILITY CONTACTS

ALLIANT ENERGY - ELECTRICITY / GAS / PETROLEUM
JASON HOGAN
SUITE 1000
4902 N BILTMORE LANE
MADISON, WI 53718
(608) 458-4871

ANR PIPELINE COMPANY - GAS / PETROLEUM
LAWRENCE HUBER
W3925 PIPELINE LN
EDEN, WI 53019
(920) 477-2235

CHARTER COMMUNICATIONS - COMMUNICATION LINE
BRANDON STORM
2701 DANIELS ST.
MADISON, WI 53718
(608) 274-3822

CITY OF STOUGHTON UTILITIES - ELECTRICITY
SEAN GRADY
600 S 4TH ST
P.O. BOX 383
STOUGHTON, WI 53589-0383
(608) 873-3379

FRONTIER COMMUNICATIONS OF WI LLC - COMMUNICATION LINE
ROBERT CHURCH
118 DIVISION STREET
PLYMOUTH, WI 53073
(608) 837-1881

WEST SHORE PIPE LINE COMPANY - GAS / PETROLEUM
MATT VALE
3823 INDIANAPOLIS BLVD
E CHICAGO, IN 46312
(219) 397-3656

GENERAL NOTES

1. THE EXACT LOCATION AND LIMITS OF PRIVATE ENTRANCES AND FIELD ENTANCES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
2. WHEN THE QUANTITY OF THE ITEM OF BASE COURSE IS MEASURED BY PAYMENT OF THE TON, THE DEPTH OR THICKNESS OF THE COURSE IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON DISTRIBUTION OF MATERIAL AS DIRECTED BY THE ENGINEER.
3. HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.
4. THE CONTRACTOR'S PAVING OPERATION SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING OR PARKING LANE.
5. TACK COAT SHALL BE APPLIED TO THE EXISTING MILLED ASHALTIC SURFACE AND TO THE VERTICAL FACE OF LONGITUDINAL JOINTS.
6. THE EROSION CONTROL ITEMS ON THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER SHALL DETERMINE EXACT LOCATIONS. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURES ARE NO LONGER NECESSARY.
7. NO EQUIPMENT OR MATERIALS SHALL BE STORED OR IMPACT ANY WATERWAYS.
8. ALL EXISTING SIGNS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION OPERATIONS REQUIRE THEIR REMOVAL OR UNLESS THE ENGINEER APPROVES THEIR REMOVAL.
9. THE LOCATION OF STOP LINES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
10. THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.
11. THE ENGINEER SHALL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH THE EXISTING UTILITY FACILITIES.

DNR LIAISON

ERIC HEGGELUND
DEPT OF NATURAL RESOURCES
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
608-275-3301

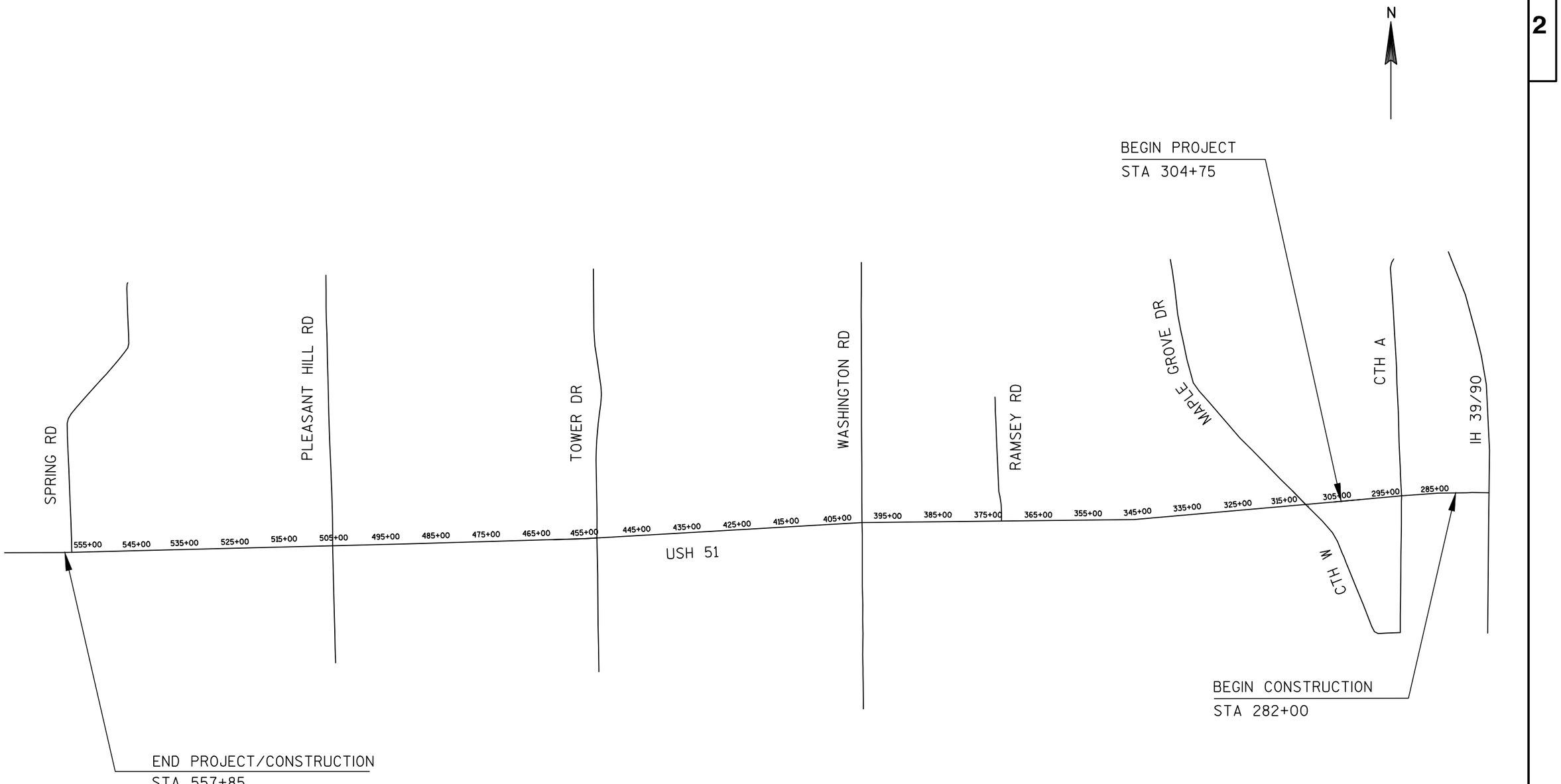
DESIGN CONTACT

CHARLENE BREGAUDIT
DEPT OF TRANSPORTATION
2101 WRIGHT STREET
MADISON, WI 53704
608-246-5338

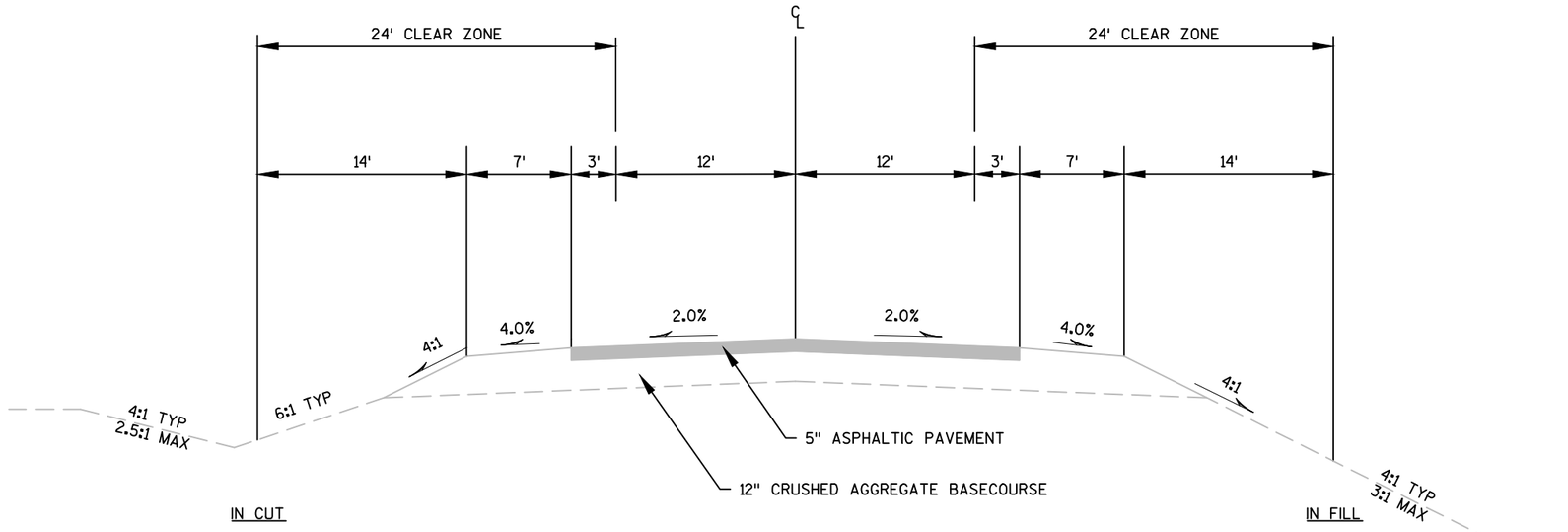
ABBREVIATIONS

A.D.T.	AVERAGE DAILY TRAFFIC
BM	BENCHMARK
BTWN	BETWEEN
C.E.	COMMERCIAL ENTRANCE
CONST.	CONSTRUCTION
CTR.	CENTER
D.D.	DIRECTIONAL DISTRIBUTION
D.H.V.	DESIGN HOURLY VOLUME
DMS	DYNAMIC MESSAGE SIGN
EXIST	EXISTING
GALV.	GALVANIZE
H.S.	HIGH STRENGTH
NB	NORTHBOUND
NOR	NORMAL
P.E.	PRIVATE ENTRANCE
PGL	PROFILE GRADE LINE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
REQ'D	REQUIRED
SB	SOUTHBOUND
SYM	SYMMETRICAL
T.	PERCENT TRUCKS
TYP	TYPICAL
VAR	VARIABLE
Wt.	WEIGHT

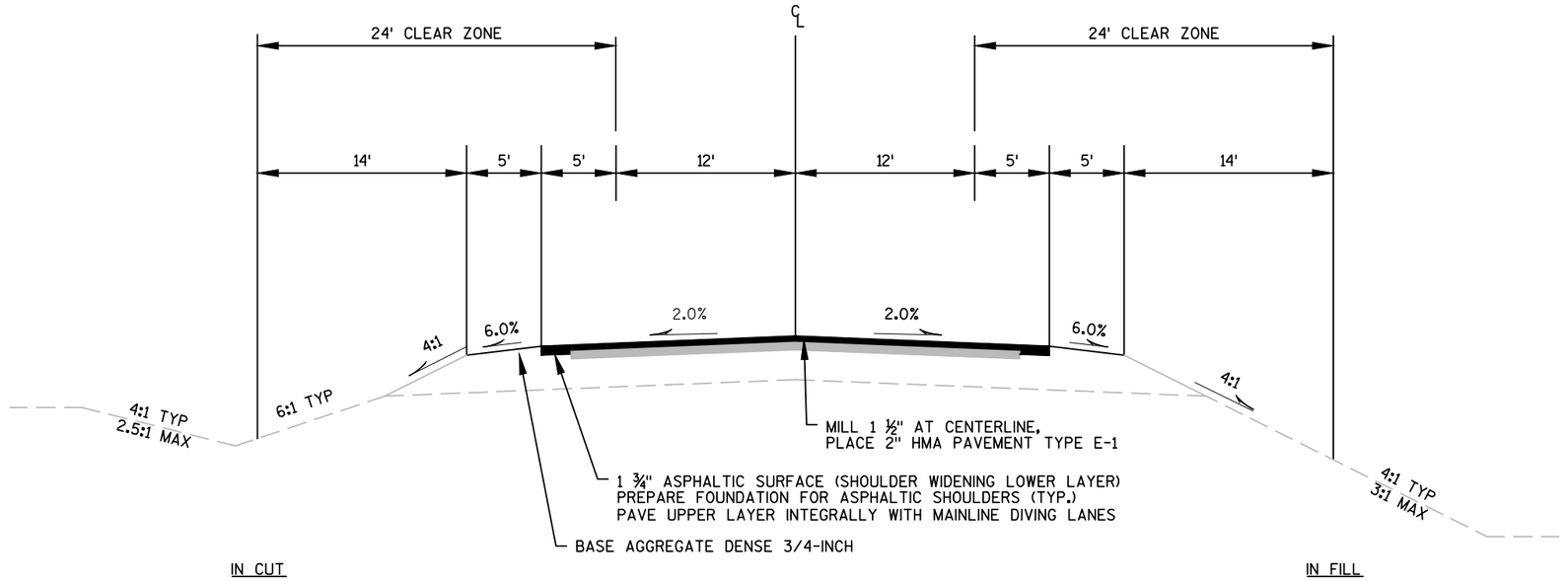
2



PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PROJECT OVERVIEW	SHEET 3	E



EXISTING TYPICAL SECTION

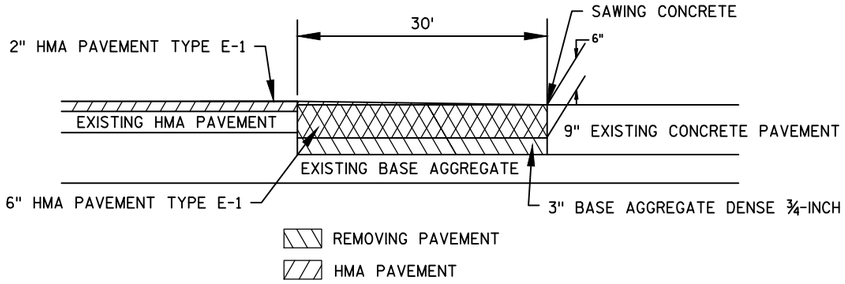


PROPOSED TYPICAL SECTION

STA 305+05 - 557+85

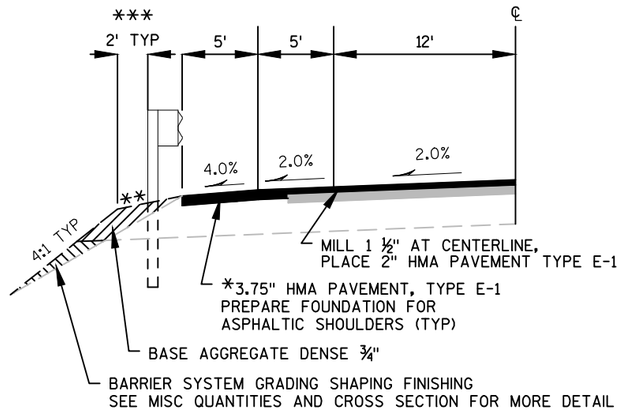
NOTE: SEE MAINLINE BUTT JOINT DETAIL
FOR BEGINING STATION 304+75

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	TYPICAL SECTIONS	SHEET 4	E



MAINLINE BUTT JOINT DETAIL

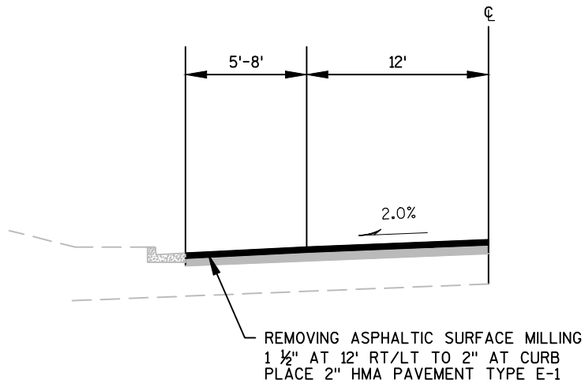
STA 304+75 - 305+05



GUARDRAIL HALF TYPICAL SECTION

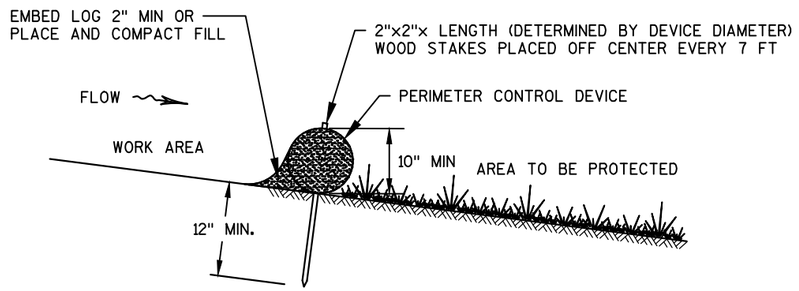
STA 364+47.26 - 366+09.76, RT
STA 365+03.26 - 366+40.76, LT
STA 480+05.60 - 480+89.98, RT
STA 480+35.86 - 482+10.86, LT
STA 481+14.98 - 481+55.60, RT

* 3.75" HMA PAVEMENT, TYPE E-1 SHALL BE CONSTRUCTED WITH ONE 1.75" LOWER LAYER AND ONE 2" UPPER LAYER.
** 10:1 SLOPE
*** 0' STA 480+89.98 - 481+14.98, RT



CURB HALF TYPICAL SECTION

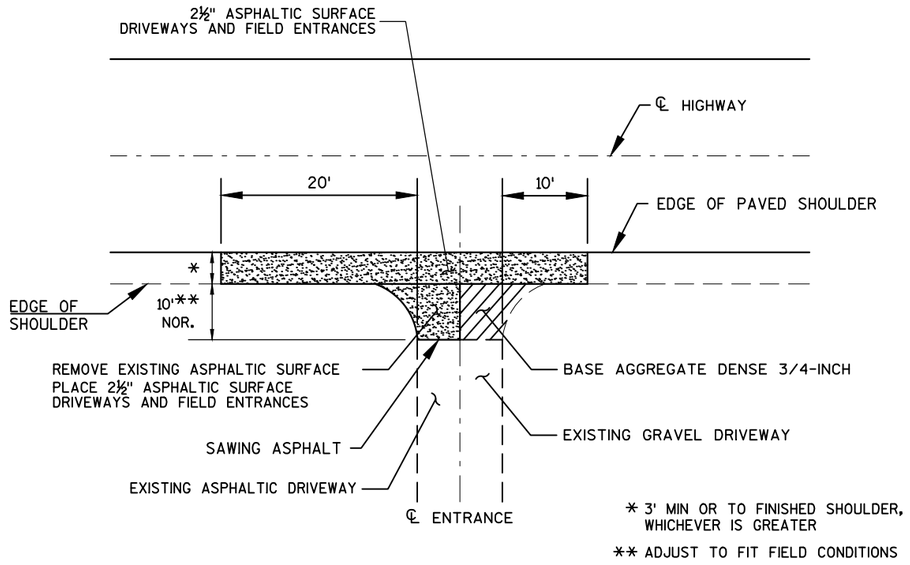
STA 331+90.14 - 334+59.60, LT
STA 534+66.22 - 535+92.04, LT
STA 541+09.32 - 544+38.82, RT
STA 555+30.35 - 557+85.80, LT



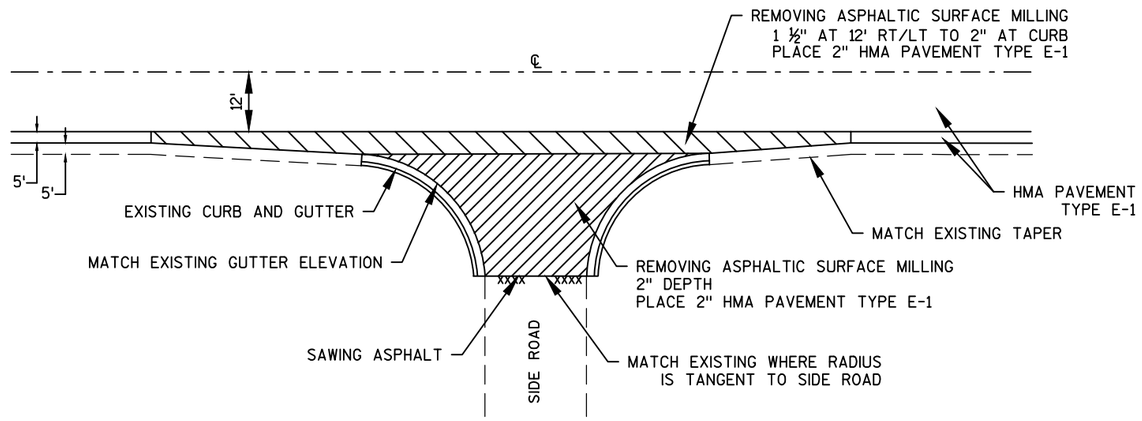
PERIMETER CONTROL LOGS

PROJECT NO:5845-05-71	HWY: USH 51	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET 5	E

2



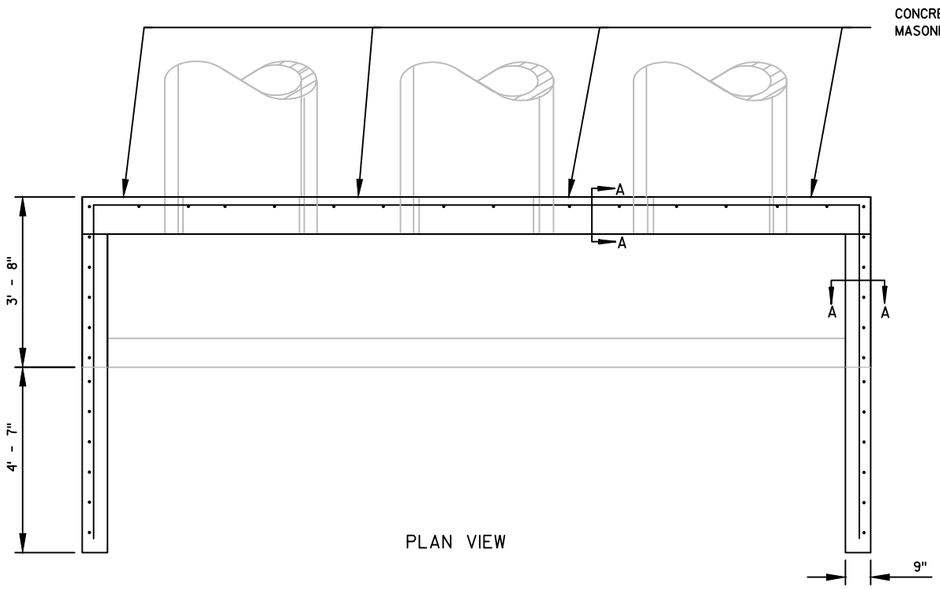
RURAL DRIVEWAY DETAIL



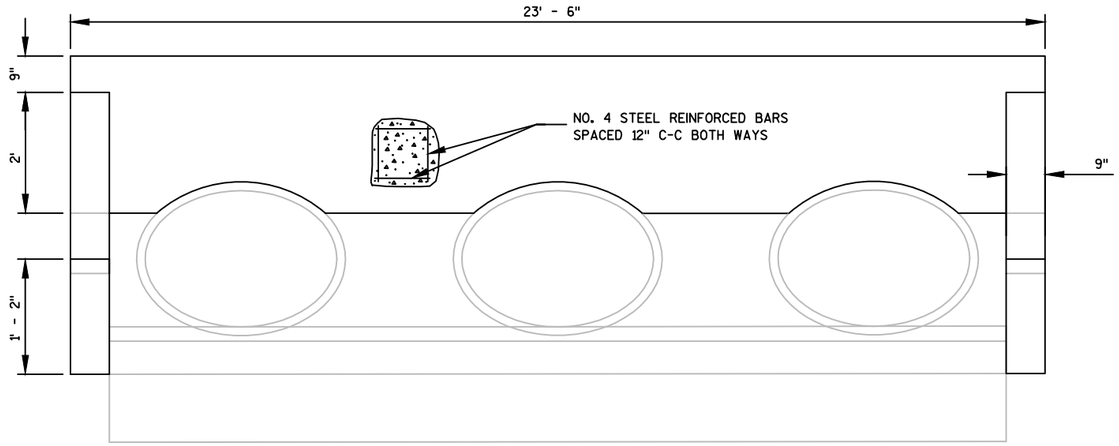
SIDE ROAD PAVING DETAIL

SPRING RD
PLEASANT HILL RD
TOWER DR
WASHINGTON RD
RAMSEY RD
CTH W/MAPLE GROVE DR

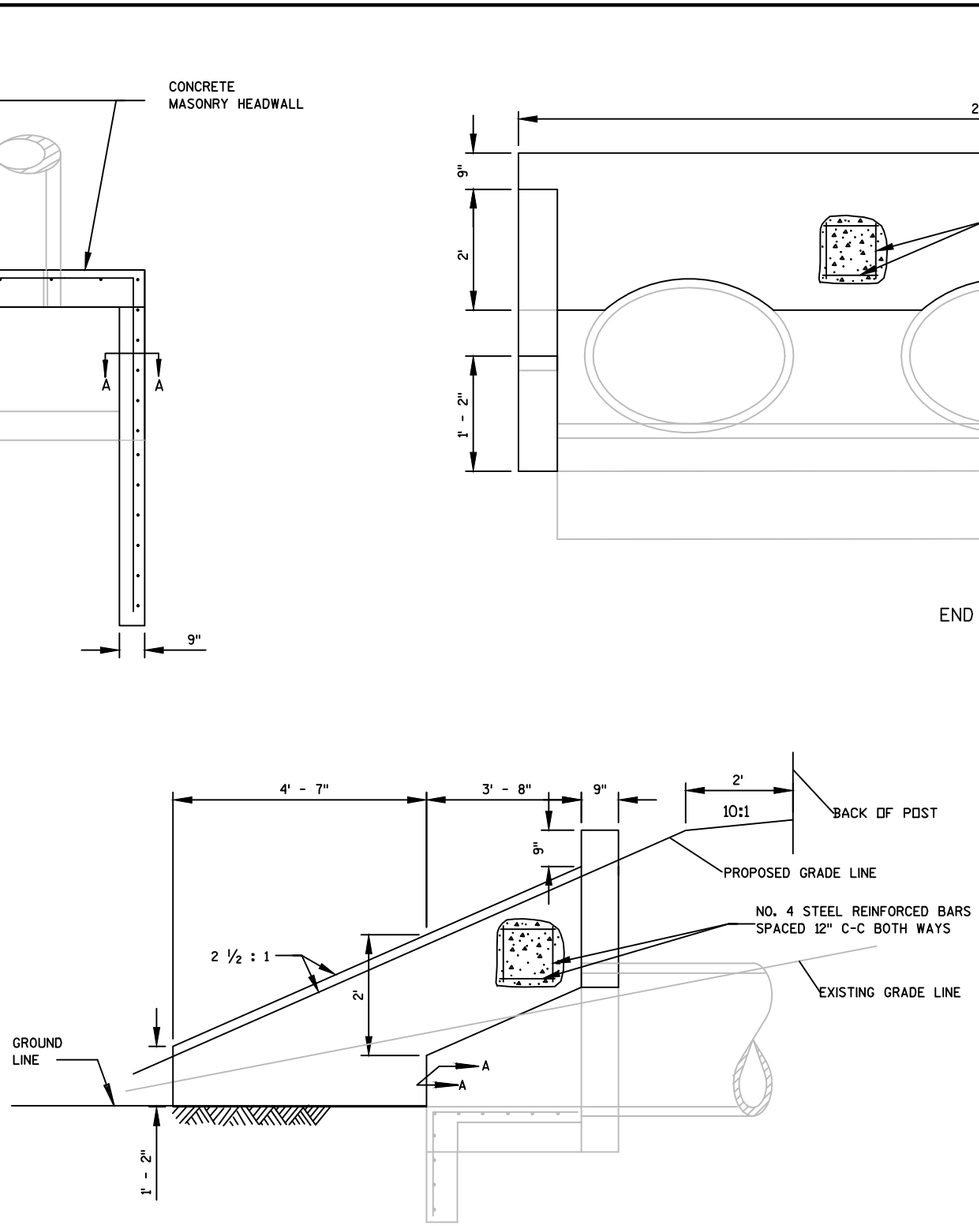
PROJECT NO:5845-05-71	HWY: USH 51	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET 6	E



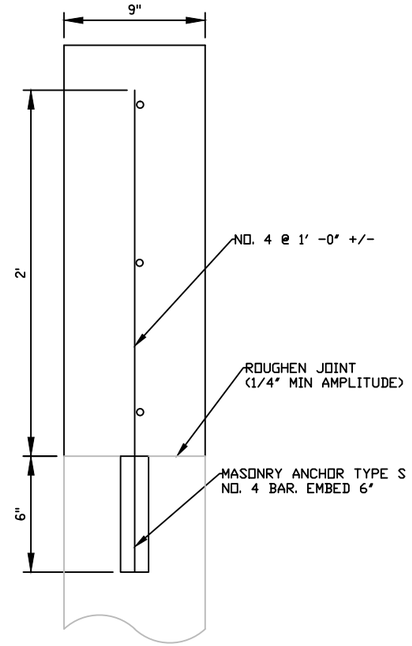
PLAN VIEW



END ELEVATION



SIDE ELEVATION



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.

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.

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

MASONRY ANCHOR TYPE S IS INCIDENTAL TO CONCRETE MASONRY ENDWALLS

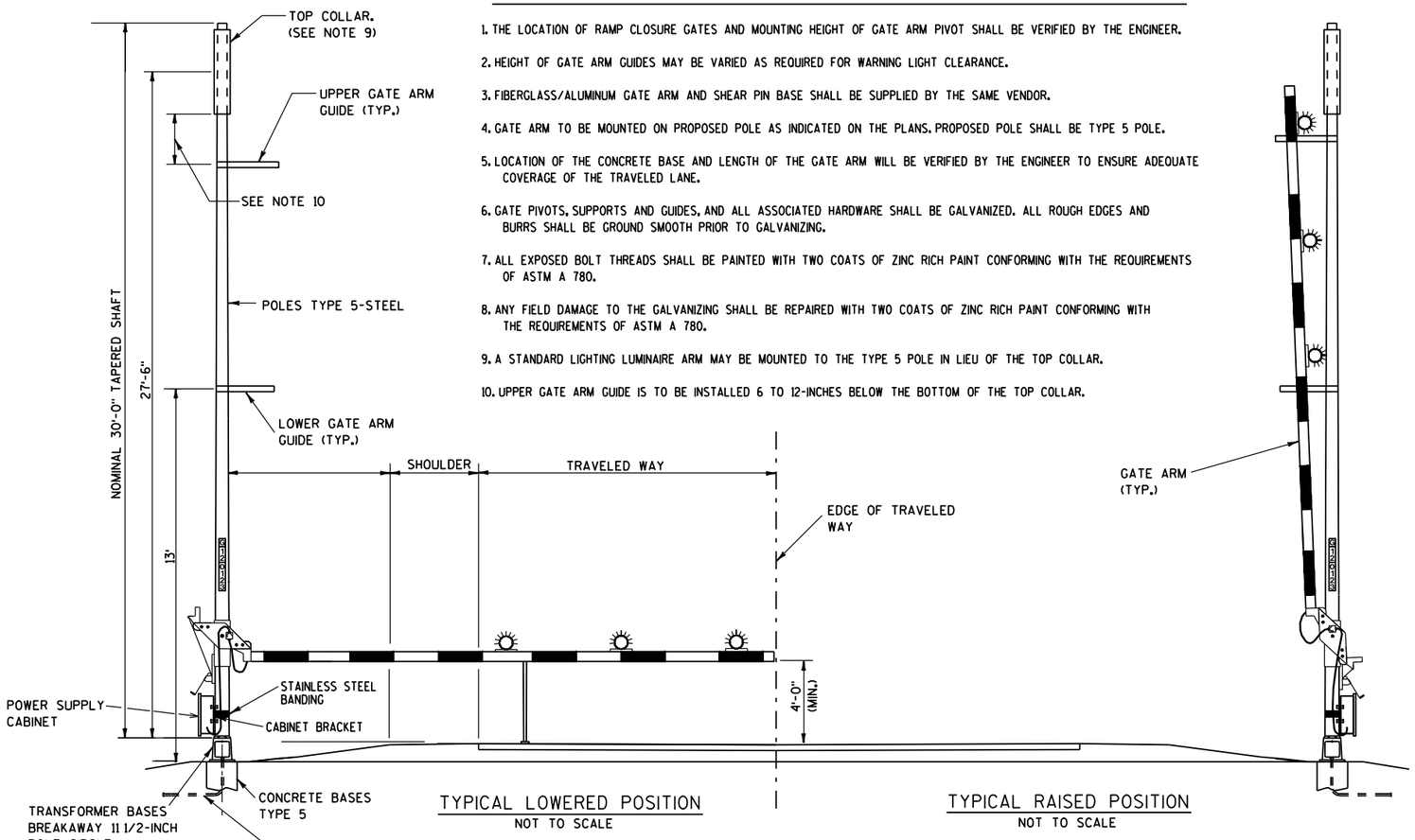
CULVERT MASONRY ENDWALL EXTENSION

STA 365+50, 27 FT LT

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET 7	E

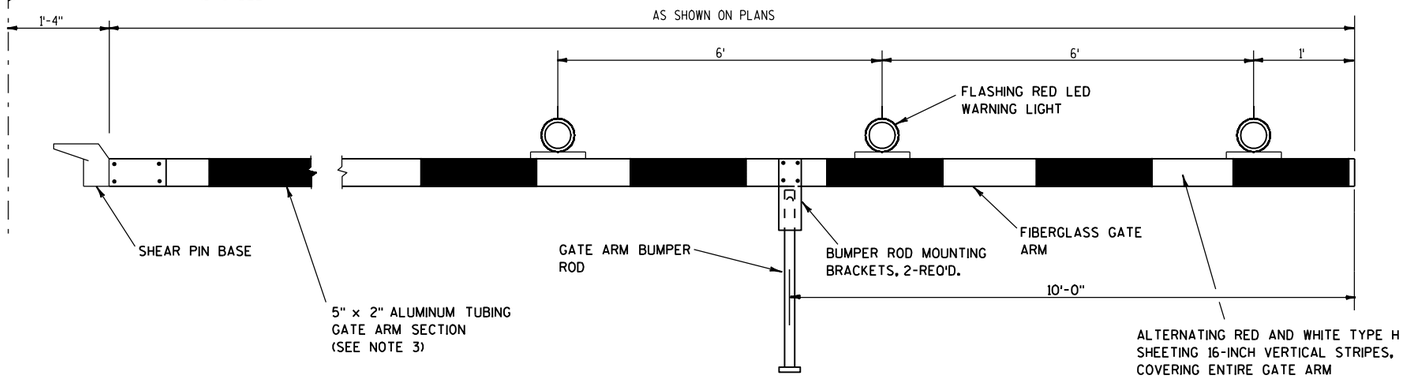
GENERAL NOTES

1. THE LOCATION OF RAMP CLOSURE GATES AND MOUNTING HEIGHT OF GATE ARM PIVOT SHALL BE VERIFIED BY THE ENGINEER.
2. HEIGHT OF GATE ARM GUIDES MAY BE VARIED AS REQUIRED FOR WARNING LIGHT CLEARANCE.
3. FIBERGLASS/ALUMINUM GATE ARM AND SHEAR PIN BASE SHALL BE SUPPLIED BY THE SAME VENDOR.
4. GATE ARM TO BE MOUNTED ON PROPOSED POLE AS INDICATED ON THE PLANS. PROPOSED POLE SHALL BE TYPE 5 POLE.
5. LOCATION OF THE CONCRETE BASE AND LENGTH OF THE GATE ARM WILL BE VERIFIED BY THE ENGINEER TO ENSURE ADEQUATE COVERAGE OF THE TRAVELED LANE.
6. GATE PIVOTS, SUPPORTS AND GUIDES, AND ALL ASSOCIATED HARDWARE SHALL BE GALVANIZED. ALL ROUGH EDGES AND BURRS SHALL BE GROUND SMOOTH PRIOR TO GALVANIZING.
7. ALL EXPOSED BOLT THREADS SHALL BE PAINTED WITH TWO COATS OF ZINC RICH PAINT CONFORMING WITH THE REQUIREMENTS OF ASTM A 780.
8. ANY FIELD DAMAGE TO THE GALVANIZING SHALL BE REPAIRED WITH TWO COATS OF ZINC RICH PAINT CONFORMING WITH THE REQUIREMENTS OF ASTM A 780.
9. A STANDARD LIGHTING LUMINAIRE ARM MAY BE MOUNTED TO THE TYPE 5 POLE IN LIEU OF THE TOP COLLAR.
10. UPPER GATE ARM GUIDE IS TO BE INSTALLED 6 TO 12-INCHES BELOW THE BOTTOM OF THE TOP COLLAR.

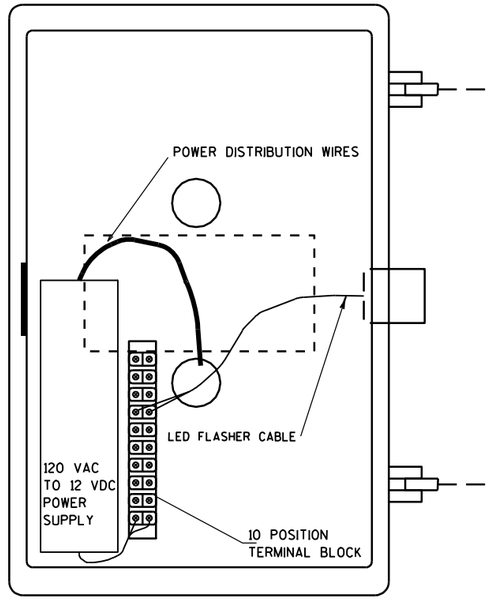


TYPICAL LOWERED POSITION
NOT TO SCALE

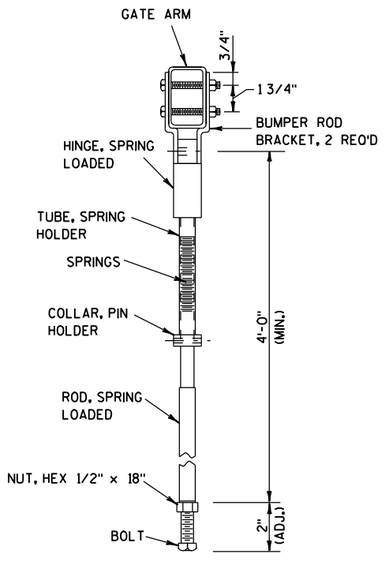
TYPICAL RAISED POSITION
NOT TO SCALE



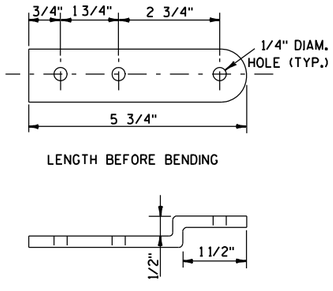
GATE DETAIL
(HARDWIRE POWER OPTION)



POWER SUPPLY CABINET



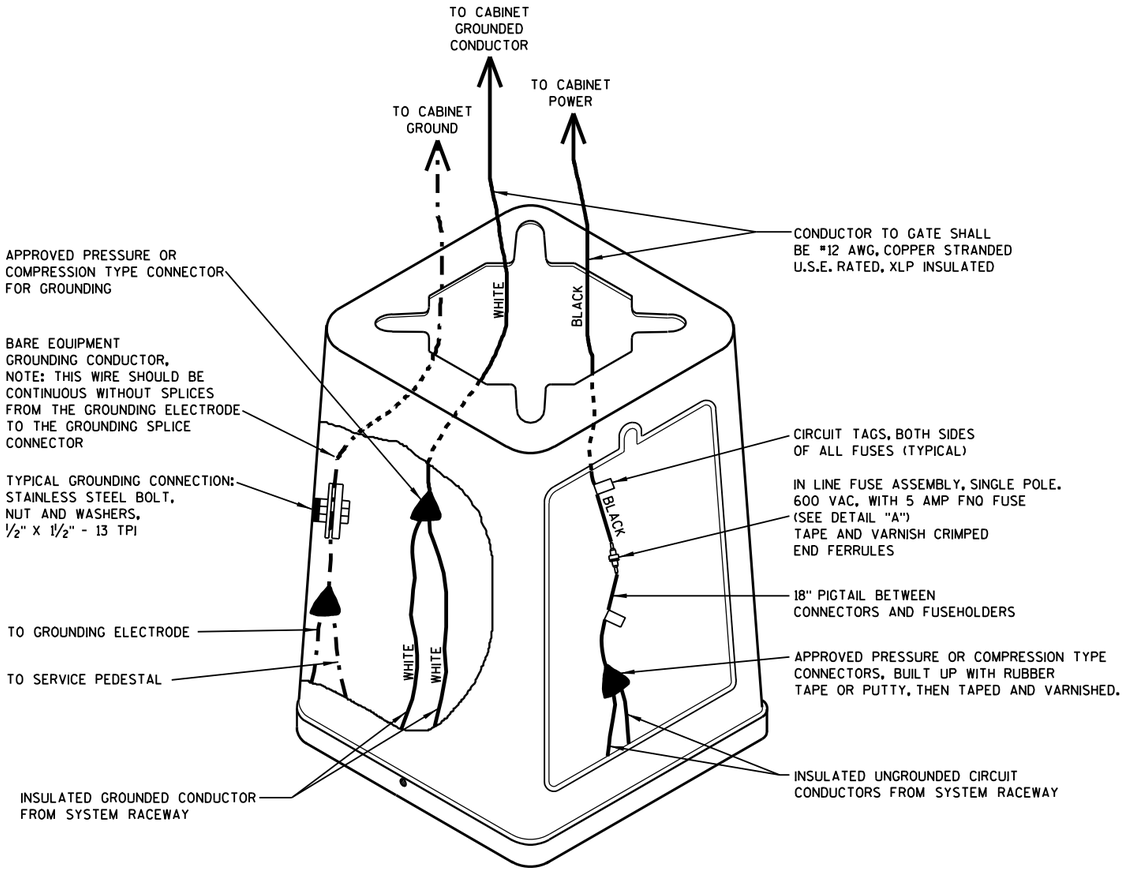
GATE ARM BUMPER ROD DETAIL

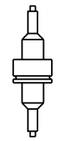


BUMPER ROD MOUNTING BRACKET DETAIL

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	RAMP GATE DETAIL	SHEET	E

2

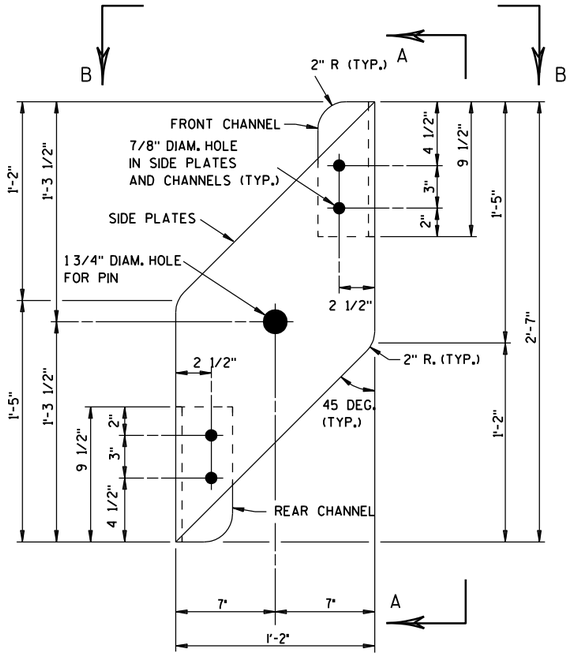




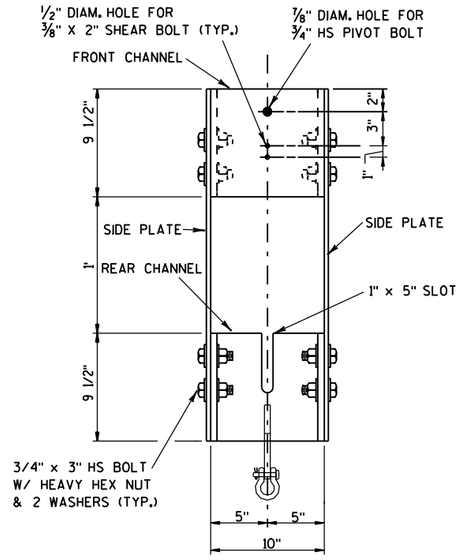
DETAIL "A"
SINGLE POLE

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	RAMP GATE DETAIL	SHEET	E

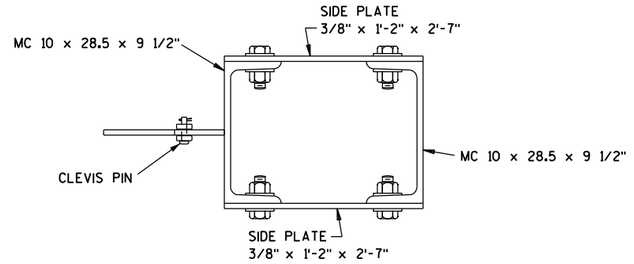
FILE NAME : w:\SPO\Operations\Traffic\d1_traffic\G13-08-09-10 I39-90 & USH 51\HARDGATE[1].dgn
PLOT DATE : 17-JAN-2013 13:21
PLOT BY : dotdgd
PLOT NAME :
PLOT SCALE : 200.000000:1.000000
WISDOT/CADDS SHEET 42



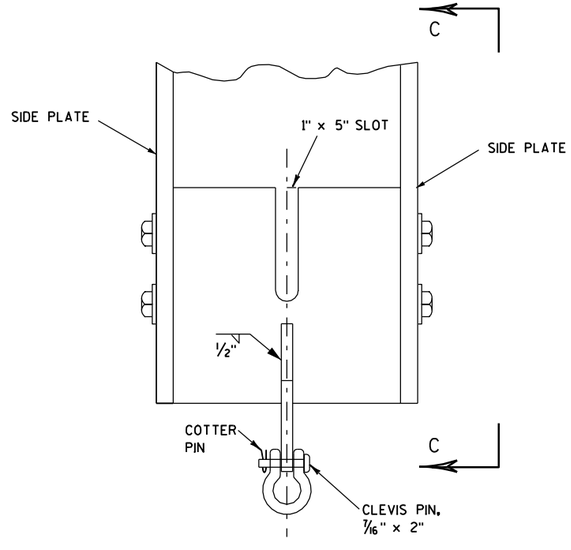
SIDE PLATE DETAIL



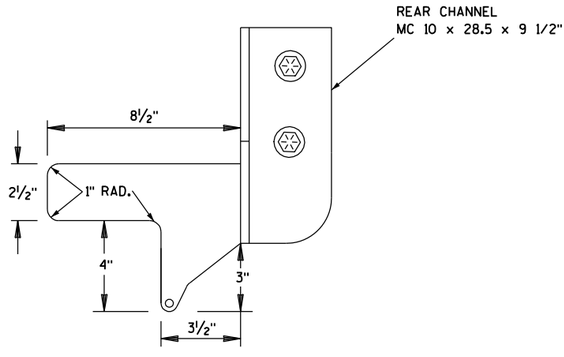
SECTION A-A



SECTION B-B



YOKE ASSEMBLY DETAIL



SECTION C-C

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	RAMP GATE DETAIL	SHEET	E

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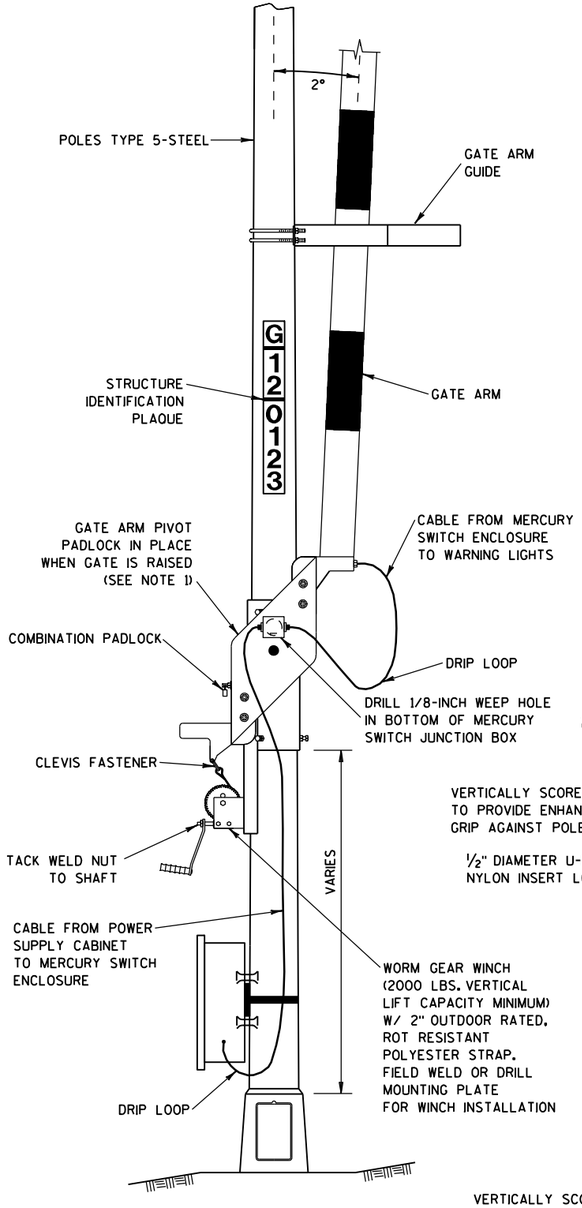
WISDOT/CADDS SHEET 42

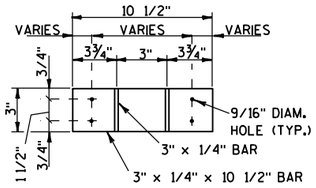
2

GENERAL NOTES

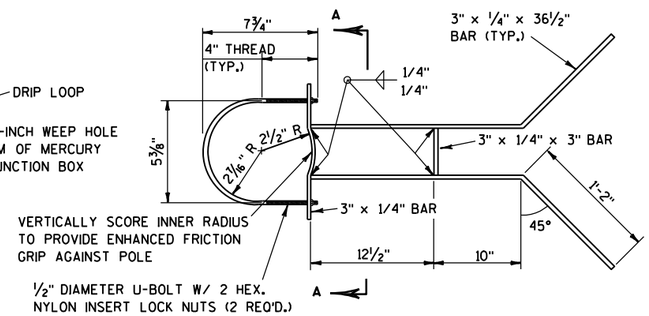
1. WHEN THE GATE IS FULLY RAISED, THE NUT AND WASHER SHALL BE PLACED SNUGLY AGAINST THE OUTSIDE OF THE REAR CHANNEL AND PADLOCKED IN PLACE.
2. WHEN THE GATE IS FULLY LOWERED, THE NUT AND WASHER SHALL BE PLACED SNUGLY AGAINST THE INSIDE OF THE REAR CHANNEL AND PADLOCKED INTO PLACE.
3. ANTI-SEIZE LUBRICATING MATERIAL SHALL BE USED ON ALL BOLT THREADS BEFORE INSTALLATION.
4. ALL BOLTS SHALL BE GALVANIZED AND CONFORM TO ASTM A307, GRADE A, UNLESS DESIGNATED AS HS (HIGH STRENGTH), WHICH SHALL CONFORM TO ASTM A325. BOLTS OF ½" NOMINAL DIAMTER OR LESS MAY BE STAINLESS STEEL.



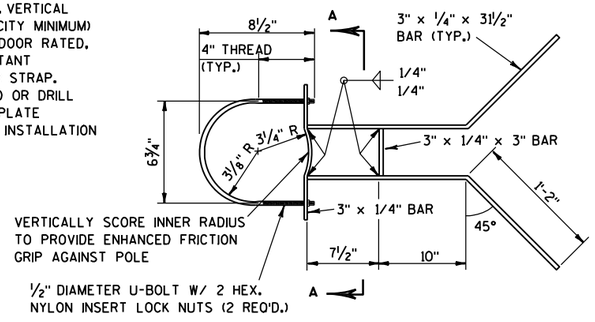
GATE PIVOT ASSEMBLY



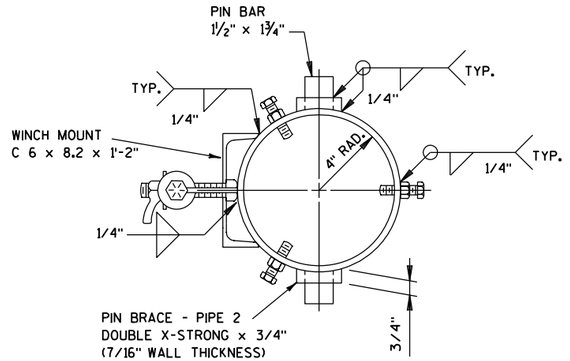
SECTION A-A
U-BOLTS NOT SHOWN



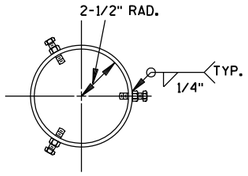
UPPER GATE ARM GUIDE DETAIL



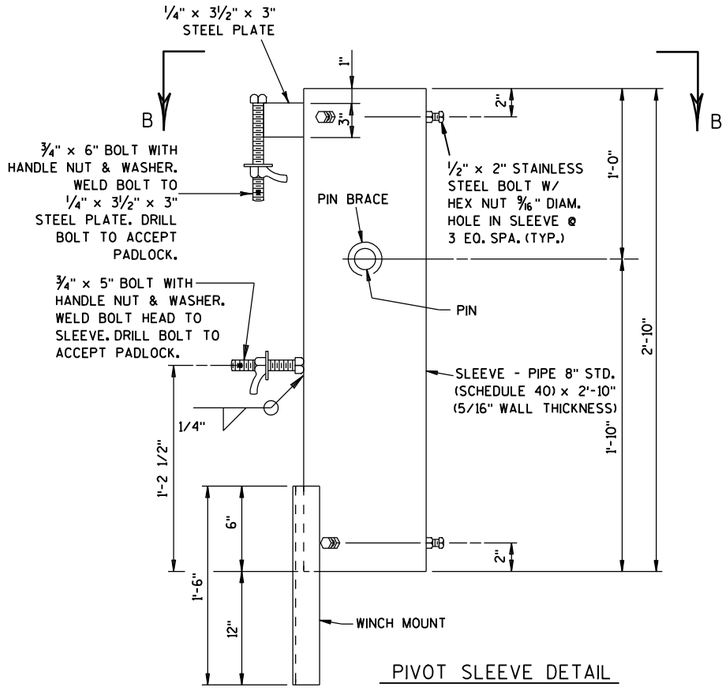
LOWER GATE ARM GUIDE DETAIL



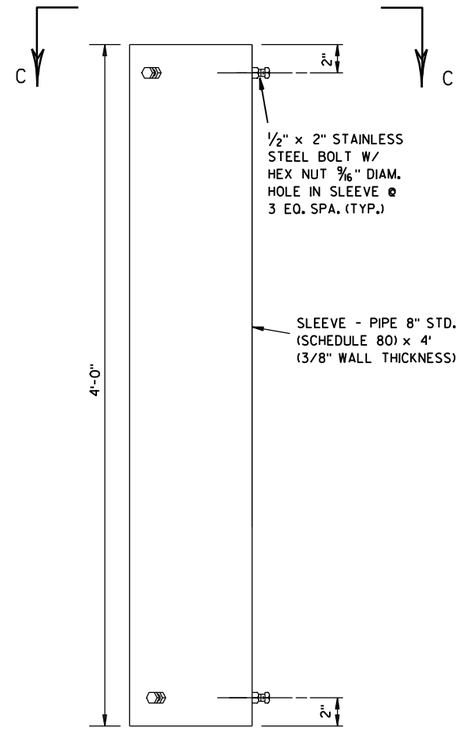
SECTION B-B



SECTION C-C

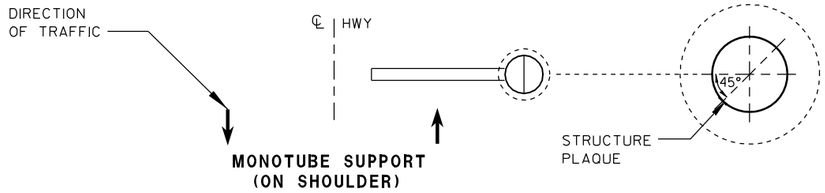


PIVOT SLEEVE DETAIL

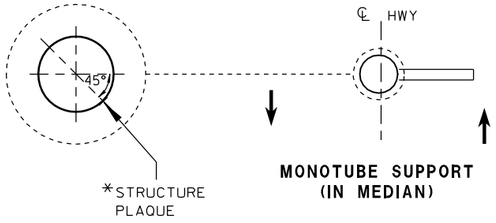


TOP COLLAR

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	RAMP GATE DETAIL	SHEET	E

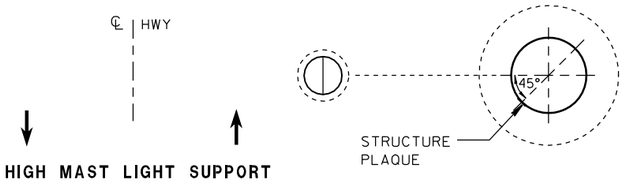


MONOTUBE SUPPORT (ON SHOULDER)

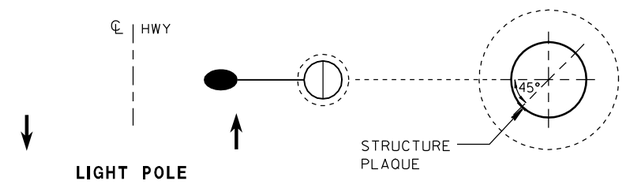


MONOTUBE SUPPORT (IN MEDIAN)

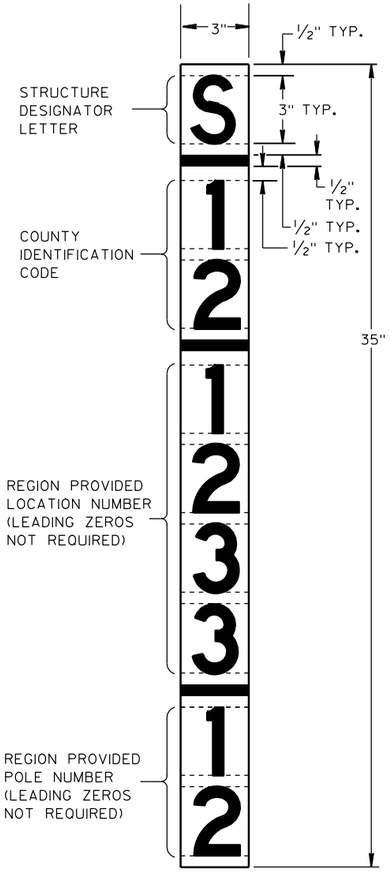
*WHEN MONOTUBES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN MONOTUBES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.



HIGH MAST LIGHT SUPPORT



LIGHT POLE (ON SHOULDER)



**LETTER "L" UTILIZED FOR LIGHTING STRUCTURES.
LETTER "S" UTILIZED FOR MONOTUBE STRUCTURES.
LETTER "G" UTILIZED FOR RAMP GATE STRUCTURES.

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

MOUNTING HEIGHT ON LIGHT POLES AND MONOTUBE POLES SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

SEE RAMP GATE DETAIL FOR PLACEMENT OF PLAQUE ON RAMP GATE POLE.

PLAQUE MATERIALS:

FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

STRUCTURE IDENTIFICATION PLAQUES
LIGHT, MONOTUBE & RAMP GATE POLES

SW REGION - MADISON

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	STRUCTURE IDENTIFICATION PLAQUE DETAIL	SHEET	E

FILE NAME : w:\SPO\Operations\Traffic\d1_traffic\G13-08-09-10 I39-90 & USH 51\SWR Electrical Structure Plaque.dgn PLOT DATE : 23-JAN-2013 14:00 PLOT BY : dotdgd PLOT NAME : PLOT SCALE : 65.616798:1.000000
WISDOT/CADDS SHEET 42

2

2

LEGEND

RAMP GATE

NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED

PULL BOX, 24" X 36"

N

CTH A

USH 51

MATCH LINE 289+50

290+00

295+00

PB-7

G13-22
RAMP CLOSURE GATE
HARDWIRED 37-FEET

CTH A

USH 51

RAMP GATE
I39/90 & USH 51
TOWN OF ALBION
DANE

INST NO: G13-8,9,22

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	RAMP GATE PLAN	SHEET	E

FILE NAME : w:\SPO\Operations\Traffic\d1_traffic\G13-08-09-10 I39-90 & USH 51\G13-08-09-22_01.dgn PLOT DATE : 04-FEB-2013 15:15 PLOT BY : dotdgd PLOT NAME : PLOT SCALE : 40.000000:1.000000

2

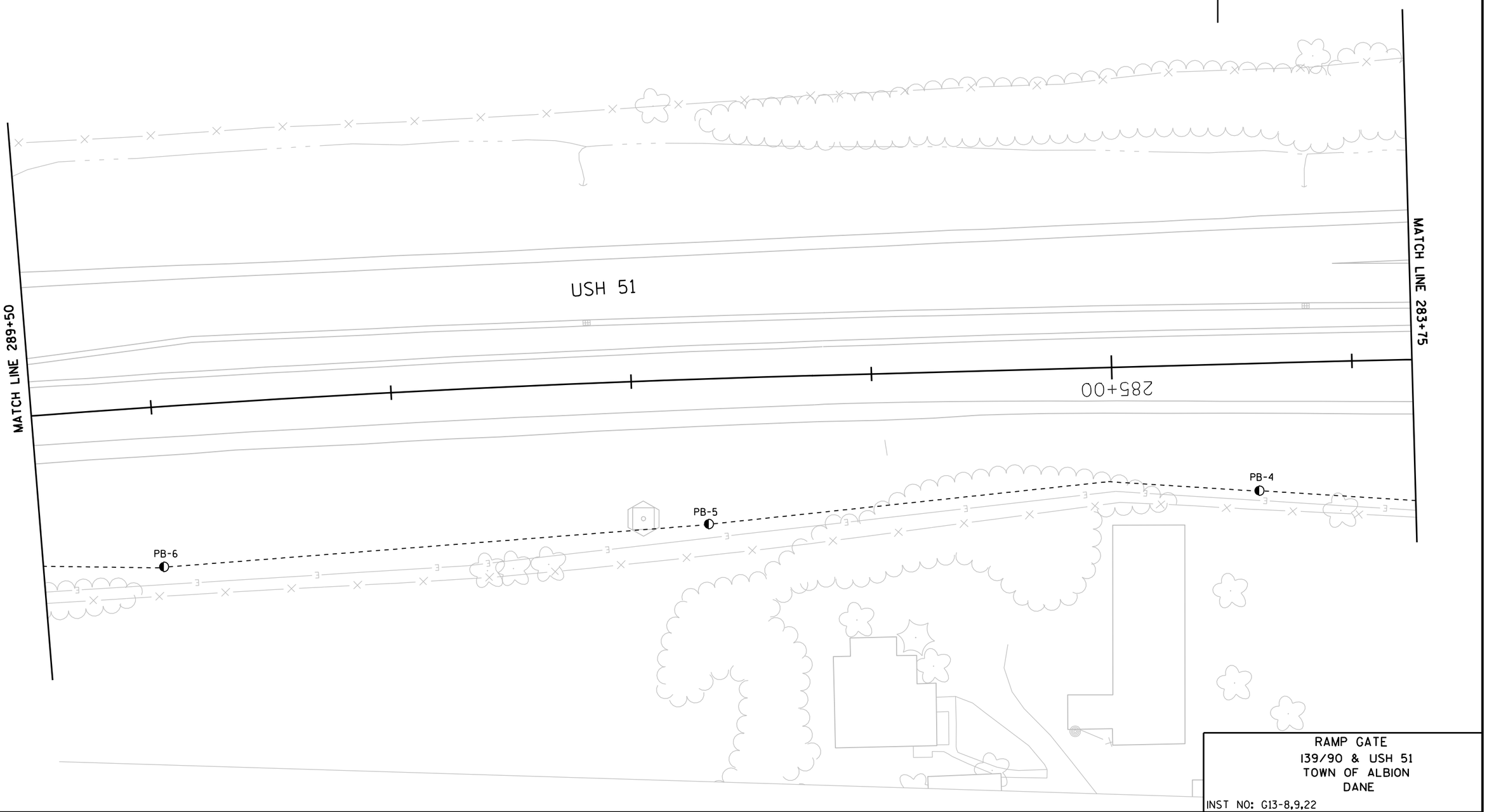
2

LEGEND

- - - - - - - NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED

◐ PULL BOX, 24" X 36"

N



RAMP GATE
I39/90 & USH 51
TOWN OF ALBION
DANE

INST NO: G13-8,9,22

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	RAMP GATE PLAN	SHEET	E

FILE NAME : w:\SPO\Operations\Traffic\d1_traffic\G13-08-09-10 I39-90 & USH 51\G13-08-09-22_01.dgn PLOT DATE : 04-FEB-2013 15:15 PLOT BY : dotdgd PLOT NAME : PLOT SCALE : 40.000000:1.000000

WISDOT/CADDS SHEET 42

2

N

I39/90 SB OFF RAMP

USH 51

I39/90 NB OFF RAMP

MATCH LINE 283+75

I39/90 NB ON RAMP

280+00

G13-09
RAMP CLOSURE GATE
HARDWIRED 24-FEET

EXPB-1

G13-08
RAMP CLOSURE GATE
HARDWIRED 24-FEET

EXPB-2

EXPB-3

I39/90 SB ON RAMP

LEGEND

- RAMP GATE
- METER PEDESTAL
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- PULL BOX, 24" X 36"

RAMP GATE
I39/90 & USH 51
TOWN OF ALBION
DANE

INST NO: G13-8,9,22

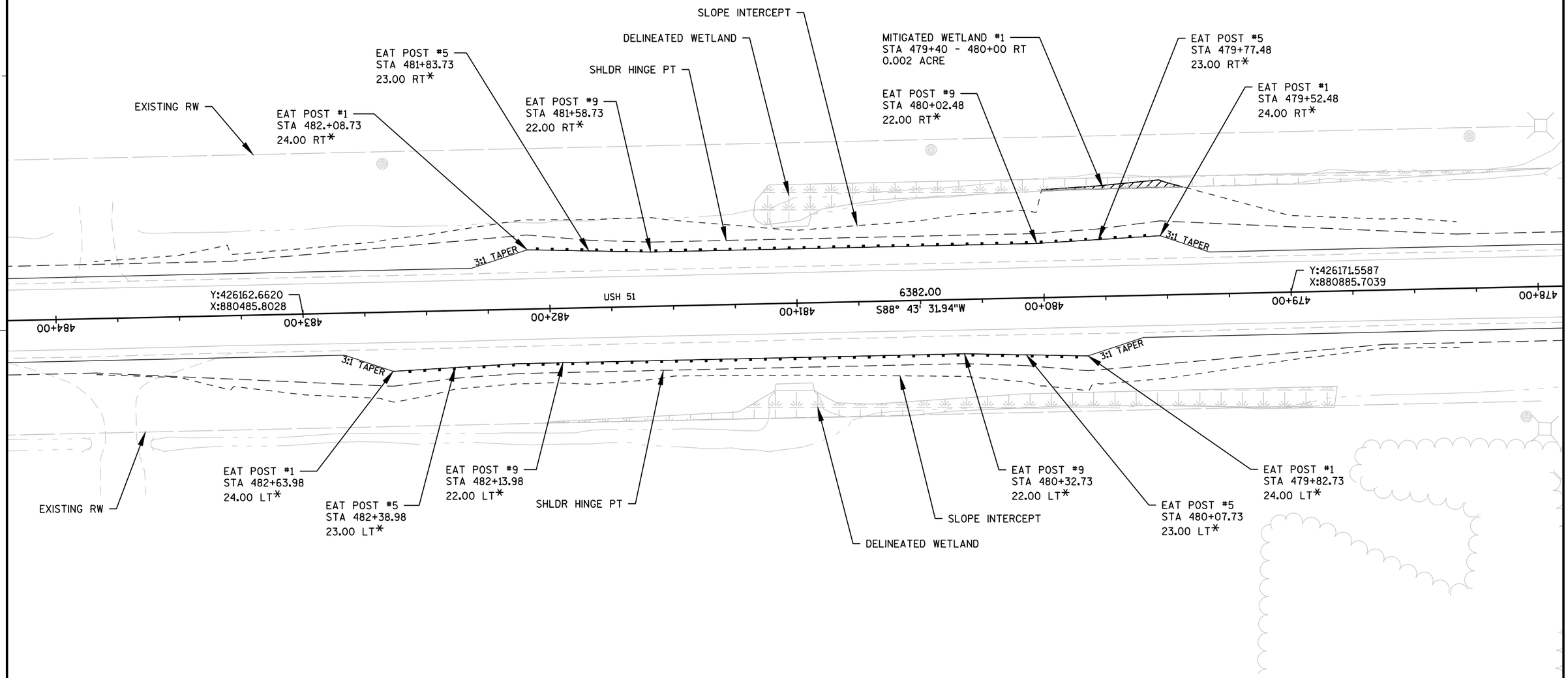
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	RAMP GATE PLAN	SHEET	E

FILE NAME : w:\SPO\Operations\Traffic\d1_traffic\G13-08-09-10 I39-90 & USH 51\G13-08-09-22_01.dgn PLOT DATE : 04-FEB-2013 15:15 PLOT BY : dotdgd PLOT NAME : PLOT SCALE : 40.000000:1.000000

STA 479+52.48 - 480+05.60, RT, MGS GUARDRAIL TERMINAL EAT
STA 480+05.60 - 480+89.98, RT, MGS GUARDRAIL 3
STA 480+89.98 - 481+14.98, RT, MGS GUARDRAIL 3 K
STA 481+14.98 - 481+55.60, RT, MGS GUARDRAIL 3
STA 481+55.60 - 482+08.73, RT, MGS GUARDRAIL TERMINAL EAT

* TO FACE OF RAIL

N



STA 479+82.73 - 480+35.86, LT, MGS GUARDRAIL TERMINAL EAT
STA 480+35.86 - 482+10.86, LT, MGS GUARDRAIL 3
STA 482+10.86 - 482+63.98, LT, MGS GUARDRAIL TERMINAL EAT

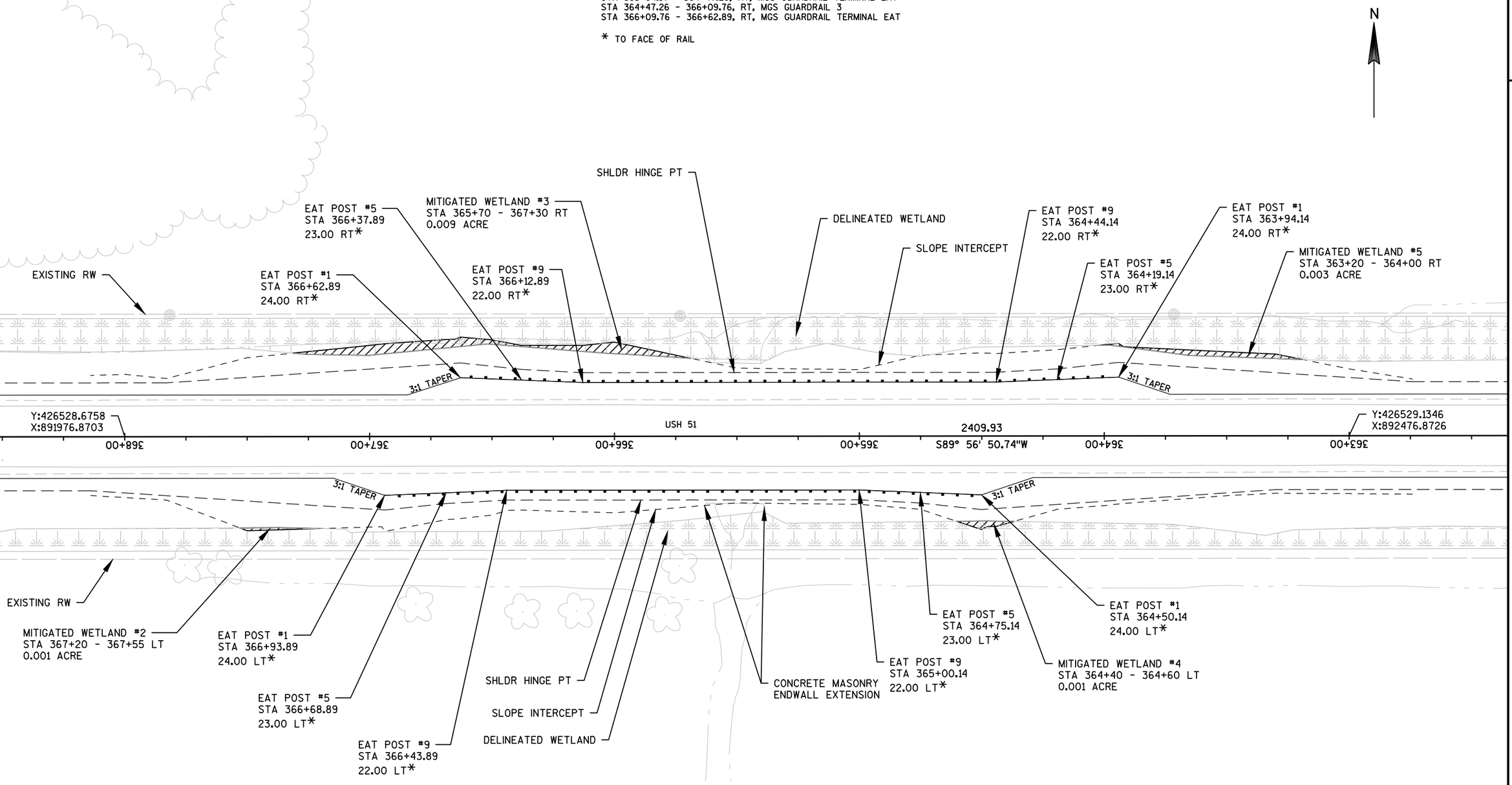
* TO FACE OF RAIL

NOTE: SEE PLAN DETAIL FOR BENCHMARKS AND CONTROL POINTS

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	GUARDRAIL LAYOUT DETAIL	SHEET 16	E

STA 363+94.14 - 364+47.26, RT, MGS GUARDRAIL TERMINAL EAT
STA 364+47.26 - 366+09.76, RT, MGS GUARDRAIL 3
STA 366+09.76 - 366+62.89, RT, MGS GUARDRAIL TERMINAL EAT

* TO FACE OF RAIL



STA 363+50.14 - 365+03.26, LT, MGS GUARDRAIL TERMINAL EAT
STA 365+03.26 - 366+40.76, LT, MGS GUARDRAIL 3
STA 366+40.76 - 366+93.89, LT, MGS GUARDRAIL TERMINAL EAT

* TO FACE OF RAIL

NOTE: SEE PLAN DETAIL FOR BENCHMARKS AND CONTROL POINTS

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	GUARDRAIL LAYOUT DETAIL	SHEET 17	E

2

N

MOVED BY OTHERS

Spring Rd.
USH 51

STOP
R1-1
30" X 30"
REPLACE
1-1

SPRING RD

REPLACE
SPEED LIMIT 45
R2-1
24"X30"
1-2

USH 51

555

EP: 558+64.79

END PROJECT 5845-05-71
STA 557+85

REPLACE CAST IRON
MONUMENT COVERS

REPLACE
SPEED LIMIT 55
R2-1
24"X30"
1-3

NO PASSING ZONE
W14-3
48" X 36"
REPLACE
1-4

*SPOTTING SIGHT DISTANCE SHALL BE .21 MILES

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PLAN DETAILS AND PERMANENT SIGNING	SHEET 18	E

2

N

REPLACE

NO PASSING ZONE

W14-3
48" X 36"
2-1

REPLACE

SPEED LIMIT 45

W3-5
36" X 36"
2-2

RUINS

MH

POOL

WALLS

WALLS

SIGN

SIGN

USH 51

550

545

540

PC: 551+18.45

PT: 543+37.67

*SPOTTING SIGHT DISTANCE SHALL BE .21 MILES

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PLAN DETAILS AND PERMANENT SIGNING	SHEET 19	E

2

2

N

REPLACE
D7-68
60" X 42"

ROAD TO
La Follette
County Park
1 mile

3-1

REPLACE
D7-52
66" X 42"

ROAD TO
Lake Kegonsa
State Park
1 mile

3-2

USH 51

535

530

525

PC: 532+97.62

PT: 531+21.17

PC: 524+38.20

REPLACE CAST IRON
MONUMENT COVERS

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PLAN DETAILS AND PERMANENT SIGNING	SHEET 20	E

2

2

N

MOVED BY OTHERS

Pleasant Hill Rd
USH 51

STOP

R1-1
30" X 30"
REPLACE
4-1

PLEASANT HILL RD

USH 51

520

515

510

100

REPLACE CAST IRON
MONUMENT COVERS

BP: 96+61.55

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PLAN DETAILS AND PERMANENT SIGNING	SHEET 21	E

2

N

PLEASANT HILL RD

USH 51

505

500

495

490

REPLACE
NO PASSING ZONE
W14-3
48" X 36"
5-1

REPLACE
SPONSOR SKAALEN NURSING HOME
I55-56
30"X36"
5-2

REPLACE
STOP
R1-1
30" X 30"
5-4

REPLACE
SPONSOR FIRST LUTHERA YOUTH GROUP STOUGHTON
I55-56
30"X36"
5-3

RUINS

*SPOTTING SIGHT DISTANCE SHALL BE .21 MILES

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PLAN DETAILS AND PERMANENT SIGNING	SHEET 22	E

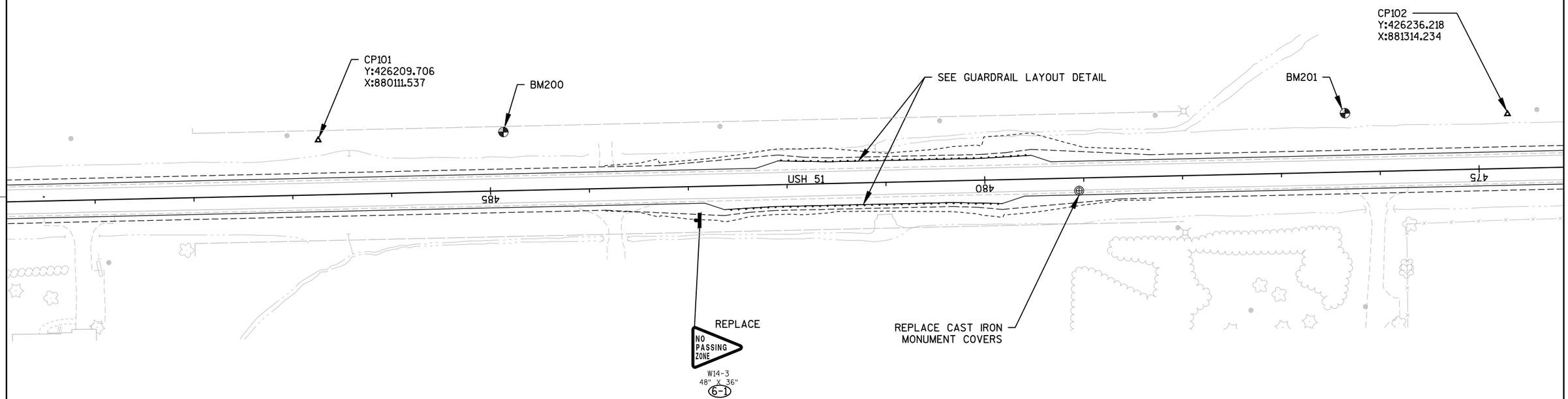
2

2

N

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
200	484+86	RR SPIKE PPOL #5-11-2, 20/1	905.46
201	476+34	RR SPIKE PPOL #5-11-2, 28/0	904.53



*SPOTTING SIGHT DISTANCE SHALL BE .21 MILES

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PLAN DETAILS AND PERMANENT SIGNING	SHEET 23	E

2

2

N

REPLACE
NO PASSING ZONE
W14-3
48" X 36"
7-1

USH 51

470

465

460

PT: 460+56.20

*SPOTTING SIGHT DISTANCE SHALL BE .21 MILES

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PLAN DETAILS AND PERMANENT SIGNING	SHEET 24	E

2

N

MOVED BY OTHERS

Tower Dr.
USH 51

STOP
R1-1
30" X 30"
REPLACE
8-1

REPLACE CAST IRON
MONUMENT COVERS

USH 51

455

450

445

PC: 453+17.32

TOWER DR

REPLACE
STOP
R1-1
30" X 30"
8-3

REPLACE
NO
PASSING
ZONE
W14-3
48" X 36"
8-2

*SPOTTING SIGHT DISTANCE SHALL BE .21 MILES

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PLAN DETAILS AND PERMANENT SIGNING	SHEET 25	E

2

N

REPLACE

NO PASSING ZONE

W14-3
48" X 36"
9-1

USH 51

440

435

430

PI: 439+00.45

SIGN

SEPC

*SPOTTING SIGHT DISTANCE SHALL BE .21 MILES

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PLAN DETAILS AND PERMANENT SIGNING	SHEET 26	E

2

N

USH 51

425

420

415

REPLACE CAST IRON
MONUMENT COVERS

Pt: 424+20.53

NO
PASSING
ZONE

W14-3
48" X 36"
REPLACE
10-1

*SPOTTING SIGHT DISTANCE SHALL BE .21 MILES

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PLAN DETAILS AND PERMANENT SIGNING	SHEET 27	E

FILE NAME : N:\PDS\C3D\58450501\SHEETSPLAN\PLAN DETAILS AND PERMANENT SIGNING.DWG PLOT DATE : 3/25/2013 1:18 PM PLOT BY : BREGAUDIT, CHARLENE PLOT NAME : ---------- PLOT SCALE : 1 IN:100 FT

2

N

MOVED BY OTHERS

Washington Rd
USH 51
STOP
R1-1
30" X 30"
REPLACE
11-2

REPLACE
SPONSOR
FIRST LUTHERA
YOUTH GROUP
STOUGHTON
I55-56
30"X36"
11-1

REPLACE CAST IRON
MONUMENT COVERS

WASHINGTON RD

USH 51

405

410

400

PT: 401+49.26

REPLACE
SPONSOR
STOUGHTON
FFA
CHAPTER
I55-56
30"X36"
11-4

REPLACE
STOP
R1-1
30" X 30"
11-3

REPLACE
W11-6
30" X 30"
11-5

*SPOTTING SIGHT DISTANCE SHALL BE .21 MILES

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PLAN DETAILS AND PERMANENT SIGNING	SHEET 28	E

2

N

REPLACE

W11-6
30" X 30"
12-1

SEPC

RIPRAP

RIPRAP

395

390

USH 51

385

PC: 393+88.28

PI: 387+19.38

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PLAN DETAILS AND PERMANENT SIGNING	SHEET 29	E

2

2

N

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
204	369+91	RR SPIKE PPOL #5-12-6, 29/0	873.45

REPLACE
STOP
R1-1
30" X 30"
13-2

RAMSEY RD

BM204

SEE GUARDRAIL LAYOUT DETAIL

USH 51

380 375 370

PI: 372+09.30

CP104
Y:426501.155
X:891638.954

REPLACE
NO PASSING ZONE
W14-3
48" X 36"
13-1

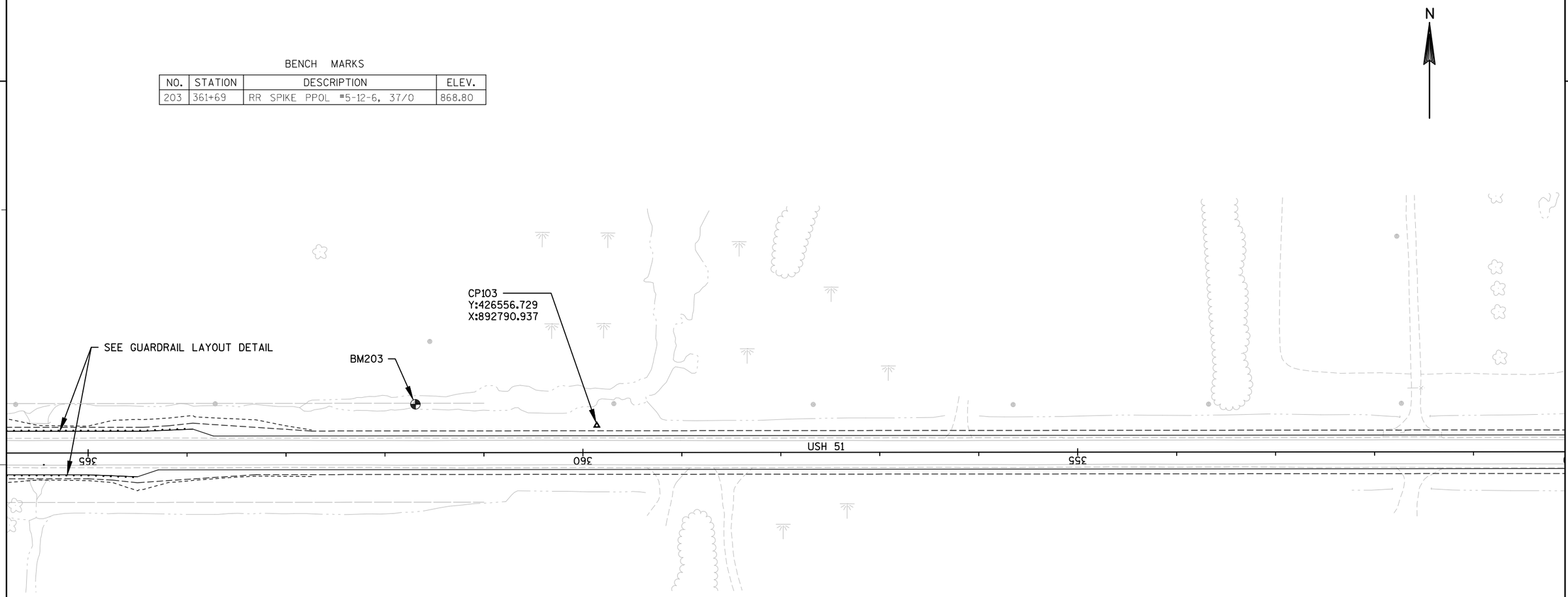
REPLACE CAST IRON MONUMENT COVERS

*SPOTTING SIGHT DISTANCE SHALL BE .21 MILES

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PLAN DETAILS AND PERMANENT SIGNING	SHEET 30	E

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
203	361+69	RR SPIKE PPOL #5-12-6, 37/0	868.80



2

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PLAN DETAILS AND PERMANENT SIGNING	SHEET 31	E

2

N

REPLACE

NO PASSING ZONE

W14-3
48" X 36"
15-1

REPLACE CAST IRON MONUMENT COVERS

USH 51

350

345

340

335

PT: 347+99.37

PC: 342+08.14

PT: 338+73.43

REMOVE
15-2

*SPOTTING SIGHT DISTANCE SHALL BE .21 MILES

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PLAN DETAILS AND PERMANENT SIGNING	SHEET 32	E

2

N

REPLACE
NO PASSING ZONE
W14-3
48" X 36"
16-3

USH 51

330
325
320

PC: 334+33.45

PT: 327+36.52

PC: 321+04.88

JCT
COUNTY
W
J1-1
24" X 39"
REPLACE
16-1

REPLACE
NO PASSING ZONE
W14-3
48" X 36"
16-2

*SPOTTING SIGHT DISTANCE SHALL BE .21 MILES

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PLAN DETAILS AND PERMANENT SIGNING	SHEET 33	E

2

N

REPLACE
NORTH
51
J4-1
24" X 36"
17-2

REPLACE
DO NOT ENTER
R5-1
30"X30"
17-3

REPLACE
STOP
R1-1
30" X 30"
17-4

NEW
DO NOT ENTER
R5-1
30"X30"
17-5

REMOVE
17-6

REPLACE
51
J13-1
24" X 45"
17-7

REPLACE
STOP
R1-1
30" X 30"
17-8

REPLACE
COUNTY
W
J13-1
24" X 45"
17-9

17-1
REPLACE
D2-1
78" X 15"
Stoughton 6

MAPLE GROVE RD

USH 51

315

310

305

PT: 316+82.16

PC: 311+09.68

CTH W

BEGIN PROJECT 5845-05-71
STA 304+75

REPLACE CAST IRON
MONUMENT COVERS

COUNTY
W
J13-1
24" X 45"
REPLACE
17-11

REPLACE
STOP
R1-1
30" X 30"
17-12

EXISTING
SIGN TO
REMAIN
Maple Grove Rd.
USH 51

REMOVE
17-13

NEW
DO NOT ENTER
R5-1
30"X30"
17-14

STOP
R1-1
30" X 30"
REPLACE
17-15

REPLACE
DO NOT ENTER
R5-1
30"X30"
17-17

SOUTH
51
J4-1
24" X 36"
REPLACE
17-16

REPLACE
W6-1
36" X 36"
17-10

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PLAN DETAILS AND PERMANENT SIGNING	SHEET 34	E

2

N

REPLACE
W6-3
36" X 36"
18-1

18-2
REPLACE
J1-1
24" X 39"
JCT
COUNTY
W

REPLACE
DO NOT
ENTER
R5-1
30"X30"
18-3

REPLACE
SPEED
LIMIT
55
R2-1
24"X30"
18-4

REPLACE
WRONG
WAY
R5-1A
36"X24"
18-5

REPLACE
I55-56
30"X36"
18-6

REPLACE
W4-2L
36" X 36"
18-7

REPLACE
W4-2L
36" X 36"
18-8

CTH A

USH 51

300

295

290

288

BP: 288+03.34

JCT
COUNTY
A
J1-1
24" X 39"
REPLACE
18-18

JCT
39
JCT
90
J1-2
48" X 39"
REPLACE
18-17

R4-7
24" X 30"
REPLACE
18-15

NEW
W5-54
18" X 18"
18-16

REPLACE
Albion ->
D1-1
54" X 15"
18-14

REPLACE
WRONG
WAY
R5-1A
36"X24"
18-13

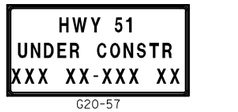
NEW
RAMP CLOSED
USE
ALT ROUTE
R11-54F
48" X 30"
18-12

R4-7
24"X30"
REPLACE
18-11

COUNTY
A
J13-1
24" X 45"
REPLACE
18-10

REPLACE
DO NOT
ENTER
R5-1
30"X30"
18-9

PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PLAN DETAILS AND PERMANENT SIGNING	SHEET 35	E



G20-57
96" X 48"

PLACE FIXED MESSAGE SIGN AT THE LIMITS OF THE PROJECT FOR 10 WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION

NOTE: ACTUAL DATES TO BE DETERMINED BY CONTRACTOR'S APPROVED SCHEDULE

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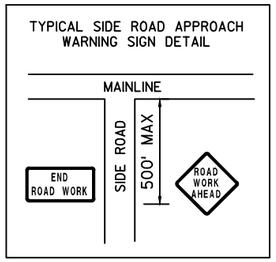
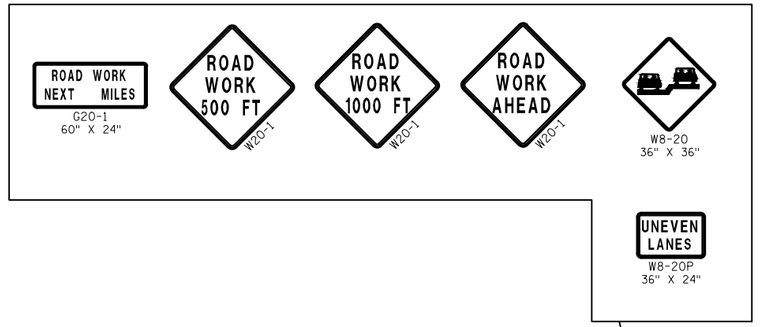
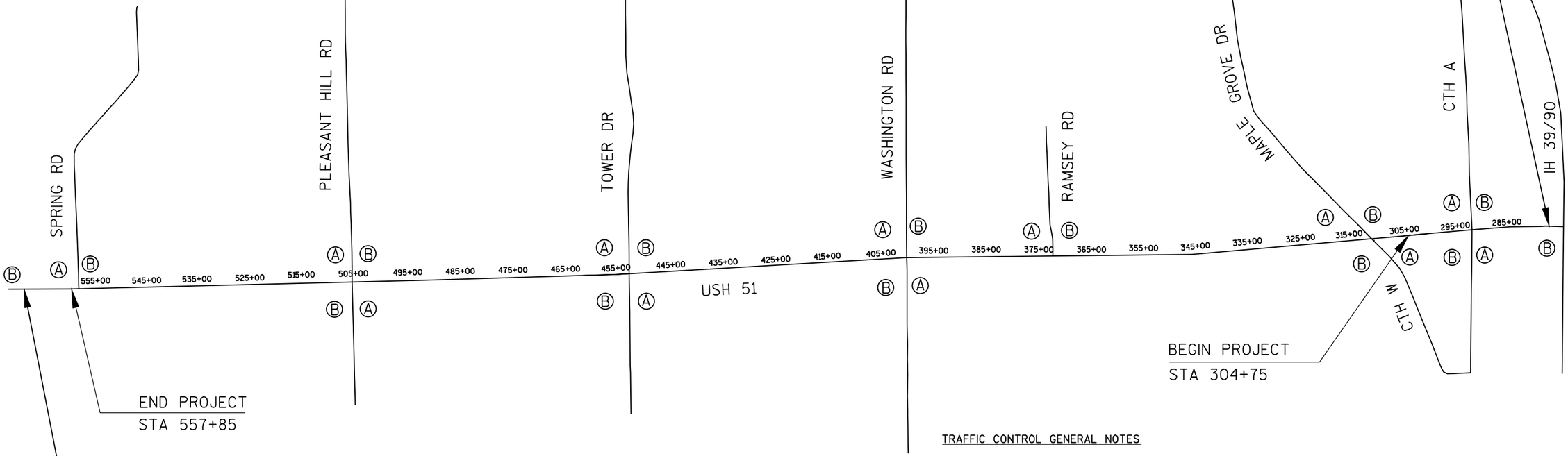
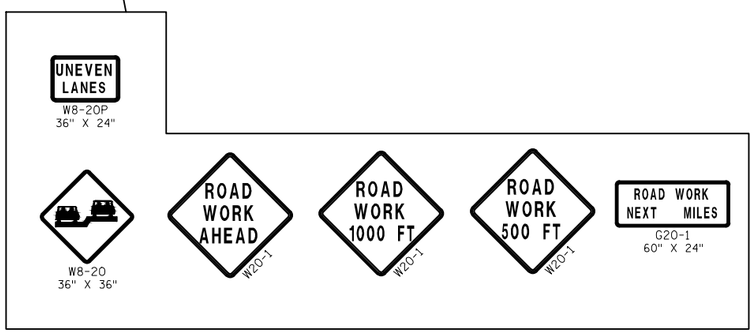
G20-2A
48" X 24"

TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL









TRAFFIC CONTROL GENERAL NOTES

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

ALL "W" SIGNS SHALL BE 48"X48" UNLESS OTHERWISE NOTED.

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

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FOR MOVING OPERATIONS SEE STANDARD DETAIL DRAWINGS "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)" AND "MOVING PAVEMENT MARKING OPERATIONS - TWO LANE TWO-WAY ROADWAY".
FOR SHOULDER CLOSURES SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL, WORK ON SHOULDER OF PARKING LANE, UNDIVIDED ROADWAY".

DATE 02APR13 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	5845-05-71 QUANTITY
0010	204.0100	REMOVING PAVEMENT	SY	80.000	80.000
0020	204.0110	REMOVING ASPHALTIC SURFACE	SY	1,335.000	1,335.000
0030	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	91,650.000	91,650.000
0040	204.0180	REMOVING DELINEATORS AND MARKERS	EACH	28.000	28.000
0050	211.0400	PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS	STA	504.000	504.000
0060	213.0100	FINISHING ROADWAY (PROJECT) 01. 5845-05-71	EACH	1.000	1.000
0070	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	6,700.000	6,700.000
0080	440.4410.S	INCENTIVE IRI RIDE	DOL	19,120.000	19,120.000
0090	455.0105	ASPHALTIC MATERIAL PG58-28	TON	631.000	631.000
0100	455.0605	TACK COAT	GAL	2,558.000	2,558.000
0110	460.1101	HMA PAVEMENT TYPE E-1	TON	11,471.000	11,471.000
0120	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	7,350.000	7,350.000
0130	460.4110.S	REHEATING HMA LONGITUDINAL JOINTS	LF	32,000.000	32,000.000
0140	465.0105	ASPHALTIC SURFACE	TON	1,159.000	1,159.000
0150	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	325.000	325.000
0160	504.0900	CONCRETE MASONRY ENDWALLS	CY	3.000	3.000
0170	614.0010	BARRIER SYSTEM GRADING SHAPING FINISHING	EACH	4.000	4.000
0180	614.2300	MGS GUARDRAIL 3	LF	600.000	600.000
0190	614.2330	MGS GUARDRAIL 3 K	LF	25.000	25.000
0200	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	8.000	8.000
0210	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 5845-05-71	EACH	1.000	1.000
0220	619.1000	MOBILIZATION	EACH	1.000	1.000
0230	625.0500	SALVAGED TOPSOIL	SY	550.000	550.000
0240	627.0200	MULCHING	SY	1,700.000	1,700.000
0250	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	2.000	2.000
0260	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0270	628.2004	EROSION MAT CLASS I TYPE B	SY	1,075.000	1,075.000
0280	629.0210	FERTILIZER TYPE B	CWT	1.200	1.200
0290	630.0110	SEEDING MIXTURE NO. 10	LB	24.000	24.000
0300	630.0200	SEEDING TEMPORARY	LB	48.000	48.000
0310	633.5200	MARKERS CULVERT END	EACH	28.000	28.000
0320	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	1.000	1.000
0330	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	60.000	60.000
0340	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	2.000	2.000
0350	637.0202	SIGNS REFLECTIVE TYPE II	SF	440.970	440.970
0360	637.0402	SIGNS REFLECTIVE FOLDING TYPE II	SF	10.000	10.000
0370	638.2602	REMOVING SIGNS TYPE II	EACH	64.000	64.000
0380	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	63.000	63.000
0390	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0400	643.0100	TRAFFIC CONTROL (PROJECT) 01. 5845-05-71	EACH	1.000	1.000
0410	643.0300	TRAFFIC CONTROL DRUMS	DAY	250.000	250.000
0420	643.0900	TRAFFIC CONTROL SIGNS	DAY	1,398.000	1,398.000
0430	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	64.000	64.000
0440	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	49,467.000	49,467.000
0450	646.0406	PAVEMENT MARKING SAME DAY EPOXY 4-INCH	LF	23,631.000	23,631.000
0460	647.0566	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	LF	94.000	94.000
0470	648.0100	LOCATING NO-PASSING ZONES	MI	4.780	4.780
0480	649.0100	TEMPORARY PAVEMENT MARKING 4-INCH	LF	23,631.000	23,631.000
0490	650.8000	CONSTRUCTION STAKING RESURFACING REFERENCE	LF	25,315.000	25,315.000

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DATE 02APR13 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	5845-05-71 QUANTITY
0500	650.8500	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01. 5845-05-71	LS	1.000	1.000
0510	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 5845-05-71	LS	1.000	1.000
0520	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	965.000	965.000
0530	653.0135	PULL BOXES STEEL 24X36-INCH	EACH	4.000	4.000
0540	654.0105	CONCRETE BASES TYPE 5	EACH	1.000	1.000
0550	655.0515	ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	LF	3,050.000	3,050.000
0560	657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	EACH	1.000	1.000
0570	659.0802	PLAQUES SEQUENCE IDENTIFICATION	EACH	1.000	1.000
0580	690.0150	SAWING ASPHALT	LF	687.000	687.000
0590	690.0250	SAWING CONCRETE	LF	30.000	30.000
0600	SPV.0060	SPECIAL 01. RAMP CLOSURE GATES HARDWIRED 37-FT	EACH	1.000	1.000
0610	SPV.0060	SPECIAL 02. CAST IRON MONUMENT COVERS	EACH	11.000	11.000
0620	SPV.0060	SPECIAL 03. VERIFY LANDMARK REFERENCE MONUMENTS	EACH	11.000	11.000
0630	SPV.0090	SPECIAL 01. PERIMETER CONTROL LOGS	LF	2,165.000	2,165.000

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MARKERS

STATION	LOCATION	204.0180 REMOVING DELINEATORS AND MARKERS EACH	633.5200 MARKERS CULVERT END EACH
311+30	RT	1	1
310+30	LT	1	1
327+20	LT	1	1
327+60	RT	1	1
345+50	LT & RT	2	2
365+50	LT & RT	2	2
390+10	RT	1	1
390+15	LT	1	1
397+50	LT & RT	2	2
403+10	LT & RT	2	2
454+40	LT & RT	2	2
481+00	LT & RT	2	2
486+40	LT & RT	2	2
506+40	LT & RT	2	2
520+10	LT & RT	2	2
539+20	LT & RT	2	2
552+40	LT & RT	2	2
	TOTAL	28	28

SHOULDER WIDENING

STATION	TO	STATION	LOCATION	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA	465.0105 ASPHALTIC SURFACE TON
305+05	-	557+00	MAINLINE SHOULDERS	504	1100
363+94	-	366+63	17' - 25' LT & RT	-	15
364+50	-	366+94	17' - 25' LT & RT	-	14
479+52	-	482+08	17' - 25' LT & RT	-	15
479+83	-	482+64	17' - 25' LT & RT	-	15
			TOTAL	504	1159

BASE AGGREGATE DENSE 3/4-INCH

STATION	TO	STATION	LOCATION	305.0110 TON
304+75	-	305+05	MAINLINE BUTT JOINT	20
305+05	-	557+85	SHOULDERS	6400
	-		GUARDRAIL	200
	-		FIELD ENTRANCES	100
			TOTAL	6700

PAVEMENT REMOVALS

STATION	TO	STATION	LOCATION	204.0100 REMOVING PAVEMENT SY	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0120 ASPHALTIC SURFACE MILLING SY	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	REMARKS
340+75	-	305+05	12' LT - 12' RT	80	-	-	36	30	-
305+05	-	557+85	-	-	-	84300	-	-	1 1/2"
MAPLE GROVE RD. N.			-	-	-	940	41	-	1 1/2" - 2"
MAPLE GROVE RD. S.			-	-	-	825	26	-	1 1/2" - 2"
RAMSEY RD.			-	-	-	480	28	-	1 1/2" - 2"
WASHINGTON RD. N.			-	-	-	660	32	-	1 1/2" - 2"
WASHINGTON RD. S.			-	-	-	695	30	-	1 1/2" - 2"
TOWER RD. N.			-	-	-	610	30	-	1 1/2" - 2"
TOWER RD. S.			-	-	-	805	30	-	1 1/2" - 2"
PLEASANT HILL RD. N.			-	-	-	590	32	-	1 1/2" - 2"
PLEASANT HILL RD. S.			-	-	-	635	32	-	1 1/2" - 2"
SPRING RD.			-	-	-	235	30	-	1 1/2" - 2"
557+85			15' LT - 15' RT	-	-	-	40	-	1 1/2" - 2"
DRIVEWAYS			-	-	1335	-	300	-	1 1/2" - 2"
331+10	-	335+30	12' LT - 20' LT	-	-	205	-	-	-
533+90	-	536+60	12' LT - 20' LT	-	-	110	-	-	-
537+55	-	545+05	12' RT - 20' RT	-	-	370	-	-	-
554+45	-	557+85	12' LT - 20' LT	-	-	190	-	-	-
			TOTAL	80	1335	91650	687	30	

PAVING

STATION	TO	STATION	LOCATION	455.0105 ASPHALTIC MATERIAL PG58-28* TON	455.0605 TACK COAT** GAL	460.1101 HMA PAVEMENT E-1*** TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	REMARKS
304+75	-	305+05	-	1	4	27	-	6" @ 2 - 3" LIFTS
305+05	-	557+85	17' RT - 17' LT	590	2400	10700	-	
MAPLE GROVE RD. N.			-	5	21	91	-	
MAPLE GROVE RD. S.			-	5	18	80	-	
363+94	-	366+63	17' RT - 22' RT	-	-	18	-	BEAMGUARD SHOULDER
364+50	-	366+94	17' LT - 22' LT	-	-	17	-	BEAMGUARD SHOULDER
RAMSEY RD.			-	3	11	47	-	
WASHINGTON RD. N.			-	4	15	63	-	
WASHINGTON RD. S.			-	4	15	69	-	
TOWER RD. N.			-	3	13	58	-	
TOWER RD. S.			-	4	16	72	-	
479+52	-	482+08	17' RT - 22' RT	-	-	17	-	BEAMGUARD SHOULDER
479+83	-	482+64	17' LT - 22' LT	-	-	19	-	BEAMGUARD SHOULDER
PLEASANT HILL RD. N.			-	3	13	56	-	
PLEASANT HILL RD. S.			-	4	14	60	-	
SPRING RD.			-	1	5	22	-	
SHPALT & GRAVEL DRIVEWAY			-	-	-	-	325	
331+30		335+05	17' LT - 20' LT	1	3	13	-	CURB SECTION
534+10	-	536+20	17' LT - 20' LT	1	2	7	-	CURB SECTION
537+85	-	544+85	17' RT - 20' RT	1	5	23	-	CURB SECTION
554+70	-	557+85	17' LT - 20' LT	1	3	12	-	CURB SECTION
			TOTAL	631	2558	11471	325	

*QUANTITY BASED ON 5.5% ASPHALT CONTENT
**QUANTITY BASED ON 0.025 GAL/SY APPLICATION RATE
***QUANTITY BASED ON 112 LB/SY/IN

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REHEATING HMA PAVEMENT LONGITUDINAL JOINTS

STATION TO	STATION	LOCATION	460.4110.S LF
305+05 -	557+85	CENTERLINE	25300
331+30 -	335+05	17' LT	380
534+10 -	536+20	17' LT	300
537+85 -	544+85	17' RT	700
554+70 -	557+85	17' LT	320
INTERSECTIONS		-	5000
		TOTAL	32000

CONCRETE MASONRY ENDWALLS

STATION	LOCATION	504.0900 CY	REMARKS
365+50	27' LT	3	SEE CONST. DETAIL
	TOTAL	3	

3

GUARDRAIL

STATION TO	STATION	LOCATION	614.0010 EACH	BARRIER SYSTEM GRADING SHAPING & FINISHING *SALVAGED TOPSOIL SY	*BORROW CY	*FERTILIZER TYPE B CWT	*SEEDING MIXTURE NO. 10 LB	*SEEDING TEMPORARY LB	614.2300 MGS GUARDRAIL 3 LF	614.2330 MGS GUARDRAIL 3 K LF	614.2610 MGS GUARDRAIL EAT EACH
363+94 -	366+63	RT	1	280	42.1	0.5	4	8	162.5	-	2
364+50 -	366+94	LT	1	275	14.6	0.5	4	8	137.5	-	2
479+52 -	482+08	RT	1	240	30.1	0.3	3	7	125.0	25	2
479+83 -	482+64	LT	1	220	5.7	0.3	3	7	175.0	-	2
		TOTAL	4	1015	92	2	14	30	600.0	25	8

* FOR INFORMATION ONLY
BORROW INCLUDES 4" OF SALVAGED TOPSOIL

EROSION CONTROL

STATION TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	628.2004 EROSION MAT CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0110 SEEDING MIXTURE NO. 10 LB	630.0200 SEEDING TEMPORARY LB	SPV.0090.01 PERIMETER CONTROL LOGS LF
282+00 -	291+75	LT	550	1700	60	1.2	24	48	-
362+80 -	366+80	RT	-	-	240	-	-	-	530
364+30 -	367+15	LT	-	-	220	-	-	-	515
478+30 -	483+25	RT	-	-	280	-	-	-	530
478+30 -	483+90	LT	-	-	275	-	-	-	590
		TOTAL	550	1700	1075	1.2	24	48	2165

SIGNING

SIGN NO.	LOCATION	SIGN CODE	SIGN SIZE (IN X IN)	SIGN MESSAGE	637.0202 SIGNS REFLECTIVE TYPE II SF	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6 INCH X 18-FT EACH	637.0402 SIGNS REFLECTIVE FOLDING TYPE II SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
1-1	RT	R1-1	30X30	STOP	5.18	-	1	-	-	1	1	-
1-2	RT	R2-1	24X30	SPEED LIMIT 45	5.00	-	1	-	-	1	1	-
1-3	LT	R2-1	24X30	SPEED LIMIT 55	5.00	-	1	-	-	1	1	-
1-4	LT	W14-3	48X36	NO PASSING ZONE	6.00	-	1	-	-	1	1	-
2-1	RT	W14-3	48X36	NO PASSING ZONE	6.00	-	1	-	-	1	1	-
2-2	RT	W3-5	36X36	RED. SPD. AHEAD	9.00	-	1	-	-	1	1	-
3-1	RT	D7-68	60X42	RD. TO CTY PARK	17.50	-	1	1	-	1	2	-
3-2	RT	D7-52	66X42	RD. TO ST. PARK	19.25	-	1	1	-	1	2	-
4-1	RT	R1-1	30X30	STOP	5.18	-	1	-	-	1	1	-
5-1	RT	W14-3	48X36	NO PASSING ZONE	6.00	-	1	-	-	1	1	-
5-2	LT	I55-56	30X36	ADOPT A HIGHWAY	7.50	-	1	-	-	1	1	-
5-3	RT	I55-56	30X36	ADOPT A HIGHWAY	7.50	-	1	-	-	1	1	-
5-4	LT	R1-1	30X30	STOP	5.18	-	1	-	-	1	1	-
6-1	LT	W14-3	48X36	NO PASSING ZONE	6.00	-	1	-	-	1	1	-
7-1	RT	W14-3	48X36	NO PASSING ZONE	6.00	-	1	-	-	1	1	-
8-1	RT	R1-1	30X30	STOP	5.18	-	1	-	-	1	1	-
8-2	LT	W14-3	48X36	NO PASSING ZONE	6.00	-	1	-	-	1	1	-
8-3	LT	R1-1	30X30	STOP	5.18	-	1	-	-	1	1	-
9-1	RT	W14-3	48X36	NO PASSING ZONE	6.00	-	1	-	-	1	1	-
10-1	LT	W14-3	48X36	NO PASSING ZONE	6.00	-	1	-	-	1	1	-
11-1	LT	I55-56	30X36	ADOPT A HIGHWAY	7.50	-	1	-	-	1	1	-
11-2	RT	R1-1	30X30	STOP	5.18	-	1	-	-	1	1	-
11-3	LT	R1-1	30X30	STOP	5.18	-	1	-	-	1	1	-
11-4	RT	I55-56	30X36	ADOPT A HIGHWAY	7.50	-	1	-	-	1	1	-
11-5	LT	W11-6	30X30	SNOWMOBILE XING	6.25	-	1	-	-	1	1	-
12-1	RT	W11-6	30X30	SNOWMOBILE XING	6.25	-	1	-	-	1	1	-
13-1	LT	W14-3	48X36	NO PASSING ZONE	6.00	-	1	-	-	1	1	-
13-2	LT	R1-1	30X30	STOP	5.18	-	1	-	-	1	1	-
15-1	RT	W14-3	48X36	NO PASSING ZONE	6.00	-	1	-	-	1	1	-
15-2	LT	S3-1	36X36	SCHOOL BUS STOP	-	-	-	-	-	1	1	REMOVE
16-1	LT	J1-1	24X39	JCT CTH W	6.50	-	1	-	-	1	1	-
16-2	LT	W14-3	48X36	NO PASSING ZONE	6.00	-	-	-	-	1	-	REPLACE, SAME POST AS 16-1
16-3	RT	W14-3	48X36	NO PASSING ZONE	6.00	-	1	-	-	1	1	-
17-1	RT	D2-1	78X15	STOUGHTON 6	8.13	1	1	-	-	1	2	-
17-2	RT	J4-1	24X36	NORTH 51	6.00	-	1	-	-	1	1	-
17-3	RT	R5-1	30X30	DO NOT ENTER	6.26	-	1	-	-	1	1	-
17-4	RT	R1-1	30X30	STOP	5.18	-	1	-	-	1	1	-
17-5	RT	R5-1	30X30	DO NOT ENTER	6.26	-	1	-	-	-	-	NEW
17-6	RT	R4-7	24X30	KEEP RIGHT SYMBOL	5.00	-	-	-	-	1	1	REMOVE
17-7	RT	J13-1	24X45	51 DOUBLE ARROW	7.50	-	1	-	-	1	1	-
17-8	RT	R1-1	30X30	STOP	5.18	-	1	-	-	1	1	-
17-9	RT	J13-1	24X45	W RIGHT ARROW	7.50	-	1	-	-	1	1	-
17-10	LT	W6-1	36X36	DIVIDED HIGHWAY	9.00	-	1	-	-	1	1	-
17-11	LT	J13-1	24X45	W LEFT ARROW	7.50	-	1	-	-	1	1	-
17-12	LT	R1-1	30X30	STOP	5.18	-	1	-	-	1	1	-
17-13	LT	R4-7	24X30	KEEP RIGHT SYMBOL	5.00	-	-	-	-	1	1	REMOVE
17-14	LT	R5-1	30X30	DO NOT ENTER	6.26	-	1	-	-	-	-	NEW
17-15	LT	R1-1	30X30	STOP	5.18	-	1	-	-	1	1	-
17-16	LT	J4-1	24X36	SOUTH 51	6.00	-	1	-	-	1	1	-
17-17	LT	R5-1	30X30	DO NOT ENTER	6.26	-	1	-	-	1	1	-
18-1	RT	W6-3	36X36	TWO-WAY TRAFFIC	9.00	-	1	-	-	1	1	-

CONTINUED ON NEXT PAGE

3

SIGNING

SIGN NO.	LOCATION	SIGN CODE	SIGN SIZE (IN X IN)	SIGN MESSAGE	637.0202 SIGNS REFLECTIVE TYPE II SF	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6 INCH X 18-FT EACH	637.0402 SIGNS REFLECTIVE FOLDING TYPE II SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
18-2	RT	J1-1	24X39	JCT CTY W	6.50	-	1	-	-	1	1	-
18-3	RT	R5-1	30X30	DO NOT ENTER	6.26	-	1	-	-	1	1	-
18-4	RT	R2-1	24X30	SPEED LIMIT 55	5.00	-	-	-	-	1	-	REPLACE, SAME POST AS 18-3
18-5	LT	R5-1A	36X24	WRONG WAY	6.00	-	-	-	-	1	1	-
18-6	RT	I55-56	30X36	ADOPT A HIGHWAY	7.50	-	1	-	-	1	1	-
18-7	RT	W4-2L	36X36	LEFT LANE ENDS	9.00	-	1	-	-	1	1	-
18-8	RT	W4-2L	36X36	LEFT LANE ENDS	9.00	-	1	-	-	1	1	-
18-9	LT	R5-1	30X30	DO NOT ENTER	6.26	-	-	-	-	1	-	REPLACE, SAME POST AS 18-10
18-10	LT	J13-1	24X45	CTH A DBL ARROW	7.50	-	1	-	-	1	1	-
18-11	RT	R4-7	24X30	KEEP RIGHT SYMBOL	5.00	-	1	-	-	1	1	-
18-12	LT	R11-54F	48X30	RAMP CLOSED	-	-	1	-	10	-	-	NEW
18-13	RT	R5-1A	36X24	WRONG WAY	6.00	-	1	-	-	1	1	-
18-14	LT	D2-1	54X15	ALBION ARROW	5.63	-	1	-	-	1	-	-
18-15	RT	R4-7	24X30	KEEP RIGHT SYMBOL	5.00	-	1	-	-	1	1	-
18-16	RT	W5-54	18X18	OBJECT MARKER	2.25	-	-	-	-	-	-	NEW, SAME POST AS 18-15
18-17	LT	J1-2	48X39	JCT 39/90	13.00	-	1	-	-	1	1	-
18-18	LT	J1-1	24X39	JCT CTY A	6.50	-	1	-	-	1	1	-
				TOTAL	440.97	1	60	2	10	64	63	

TRAFFIC CONTROL

LOCATION	DAYS	643.0100 TRAFFIC CONTROL (PROJECT) EACH	643.0300 TRAFFIC CONTROL DRUMS DAYS	643.0900 TRAFFIC CONTROL SIGNS DAYS	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF
PROJECT WIDE	30	1	-	1268	64
GUARDRAIL INSTALLATION	-	-	250	-	-
UNDISTRIBUTED	-	-	-	130	-
	TOTAL	1	250	1398	64

PAVEMENT MARKING

STATION TO	STATION	LOCATION	646.0106 PAVEMENT MARKING EPOXY 4-INCH LF	646.0406 PAVEMENT MARKING SAME DAY EPOXY 4-INCH LF	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH LF	649.0100 TEMPORARY PAVEMENT MARKING 4-INCH LF
304+75 -	557+85	CENTERLINE	-	23631	-	23631
304+75 -	557+85	LT	24813	-	-	-
304+75 -	557+85	RT	24504	-	-	-
310+40 -	310+65	LT	150	-	32	-
310+95 -	311+10	LT	-	-	15	-
311+60 -	311+75	RT	-	-	15	-
312+15 -	312+45	RT	-	-	32	-
		TOTAL	49467	23631	94	23631

PULL BOXES STEEL 24X36-INCH

NUMBER	STATION	LOCATION	653.0135 EACH
EXPB-1	281+30	EXIST	-
EXPB-2	281+40	EXIST	-
EXPB-3	282+10	EXIST	-
PB-4	284+40	45' LT	1
PB-5	286+70	60' LT	1
PB-6	289+00	70' LT	1
PB-7	291+40	30' LT	1
		TOTAL	4

RAMP GATE ITEMS

INST NO.	654.0105 CONCRETE BASES TYPE 5 EACH	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	659.0802 PLAQUES SEQUENCE I.D. EACH	SPV.0060.01 RAMP CLOSURE GATES HARDWIRED 37-FT EACH
G13-22	1	3050	1	1	1
TOTAL	1	3050	1	1	1

CONSTRUCTION STAKING RESURFACING REFERENCE

STATION TO	STATION	LOCATION	650.8000 LF
304+75 -	557+85	-	25315
		TOTAL	25315

3

CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

FROM	TO	652.0225 LF
MP-1	EXPB-3	10
EXPB-3	PB-4	230
PB-4	PB-5	230
PB-5	PB-6	230
PB-6	PB-7	240
PB-7	G13-22	25
	TOTAL	965

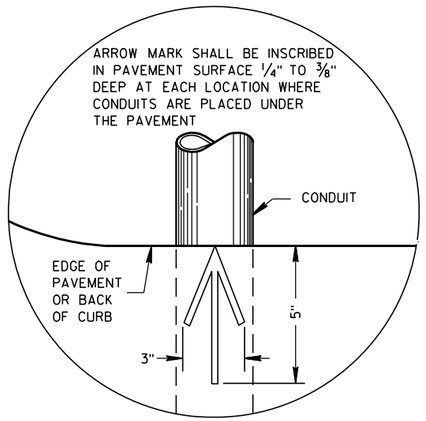
LANDMARKS

STATION	LOCATION	SPV.0060.02 CAST IRON MONUMENT COVERS EACH	SPV.0060.03 VERIFY LANDMARK REFERENCE MONUMENTS EACH
319+00	10' LT	1	1
345+62	5' LT	1	1
372+40	1' RT	1	1
399+95	1' RT	1	1
426+35	5' RT	1	1
452+76	10' LT	1	1
479+05	10' LT	1	1
505+34	30' LT	1	1
531+28	10' RT	1	1
557+33	12' RT	1	1
584+04	5' RT	1	1
	TOTAL	11	11

Standard Detail Drawing List

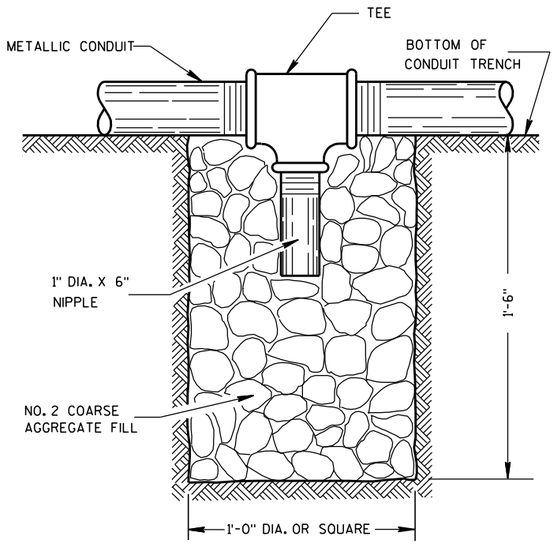
09B02-07	CONDUIT
09B04-09	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09C03-03	TRANSFORMER/PEDESTAL BASES
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C04-01	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-01	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-15A	PAVEMENT MARKING (MAINLINE)
15C08-15B	PAVEMENT MARKING (INTERSECTIONS)
15C12-03	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-01A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15D28-01	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
16A01-06	LANDMARK REFERENCE MONUMENTS AND COVERS

6



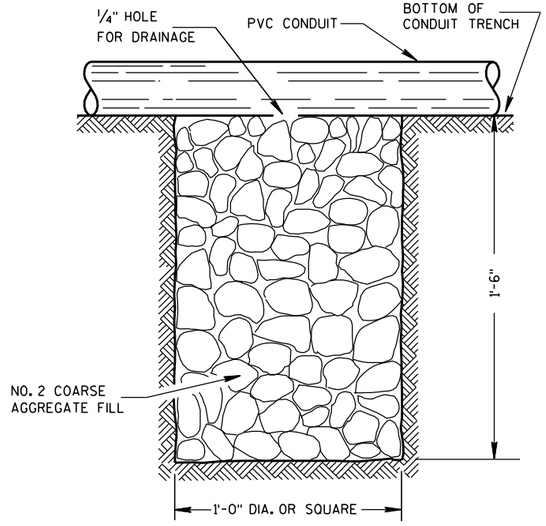
PLAN VIEW

ARROW MARK



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

DRAIN SUMP FOR METALLIC CONDUIT



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

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

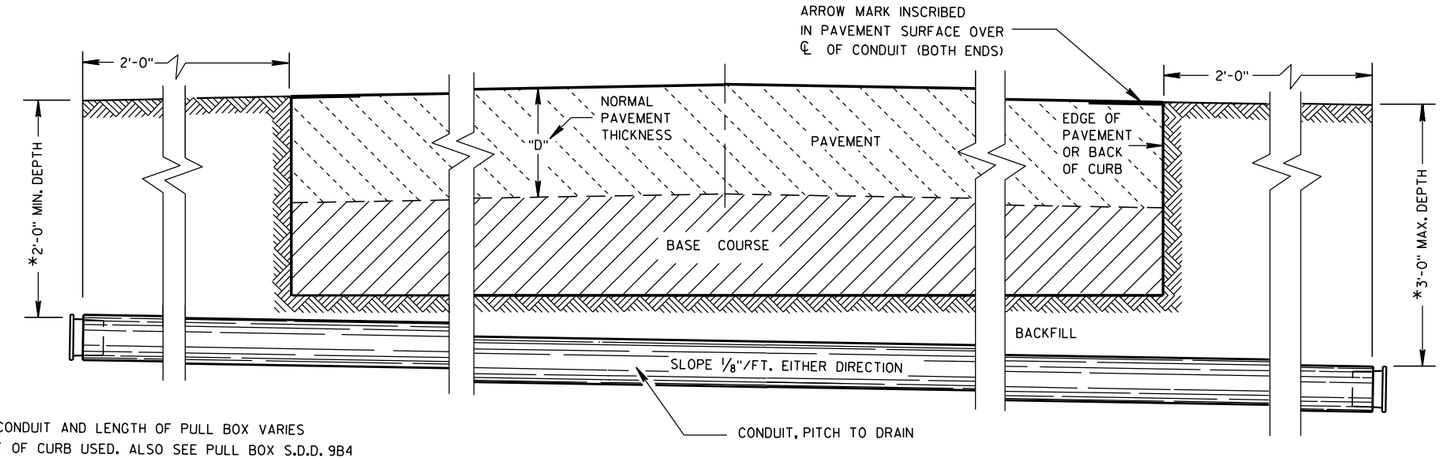
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

POLY ROPE OR A PULL WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



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

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/23/03 DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI

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6

S.D.D. 9 B 2-7

6

S.D.D. 9 B 2-7

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

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

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

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

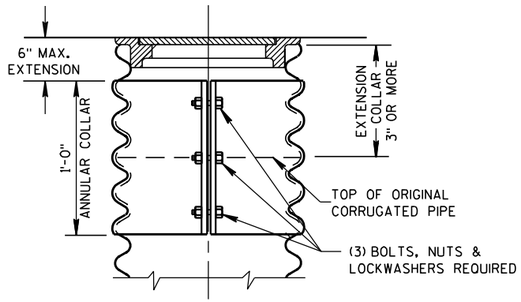
GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

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

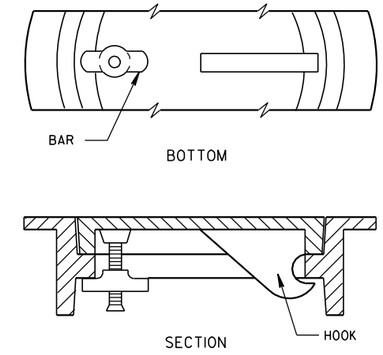
S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

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

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

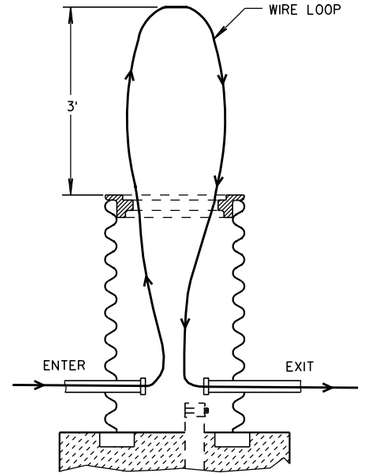


CORRUGATED PIPE EXTENDER

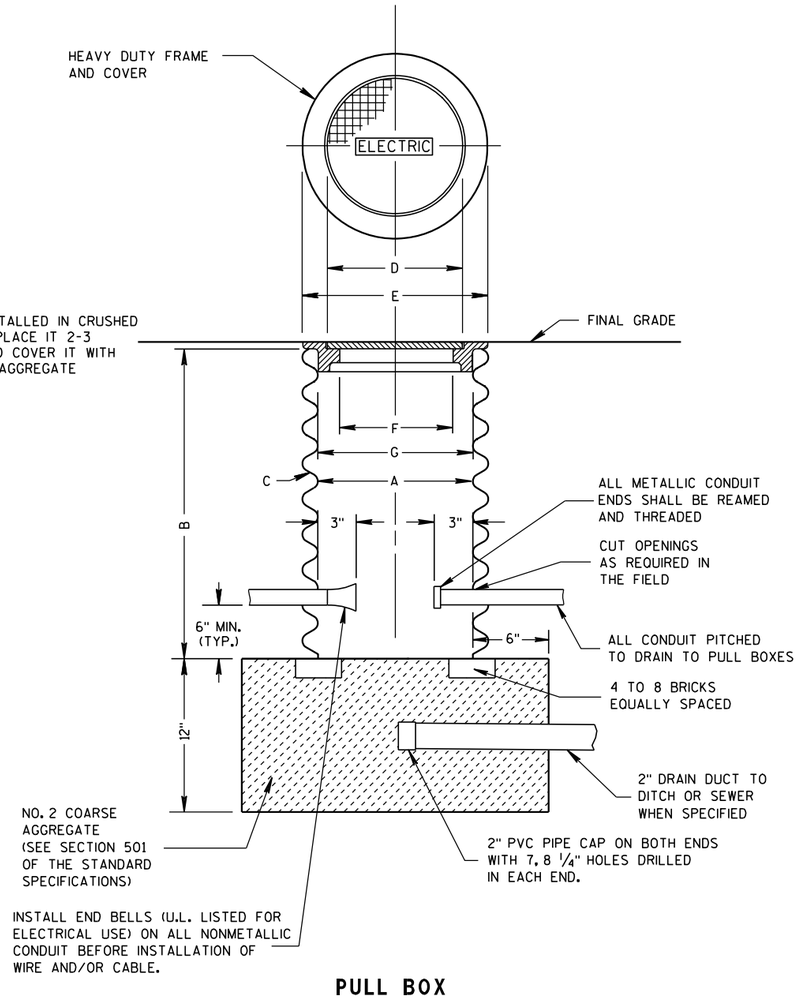


ALTERNATE COVER (LOCKING)

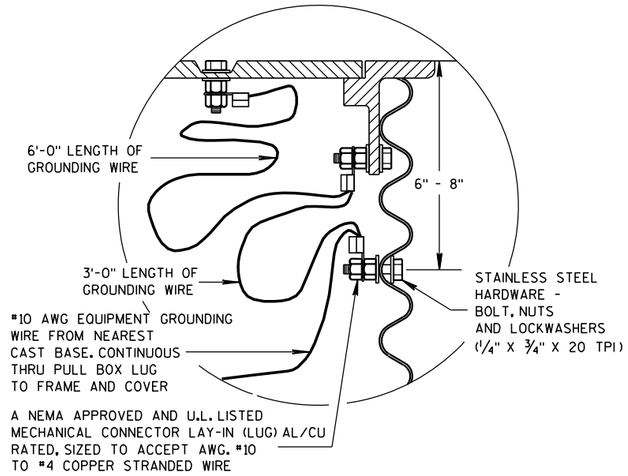
TIGHTENING BAR TYPE



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/27/06 DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI

HWYS

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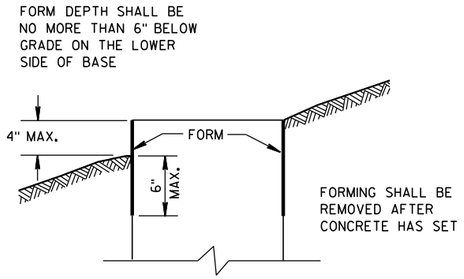
S.D.D. 9 B 4-9



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2 AND TYPE 5 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

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

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

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

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

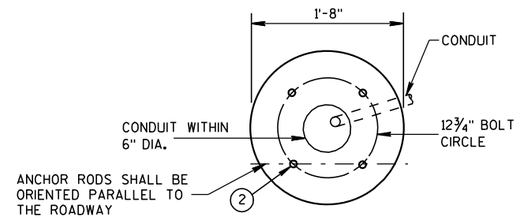
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

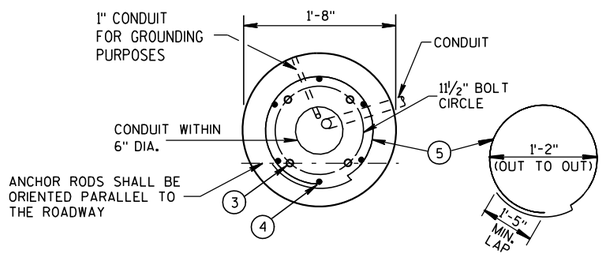
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

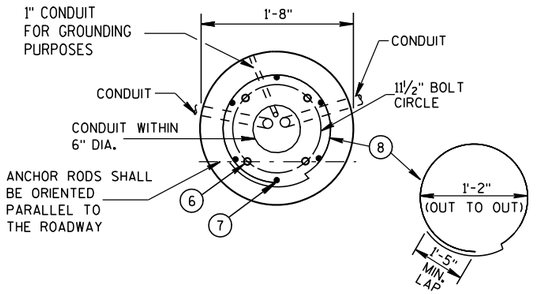
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.



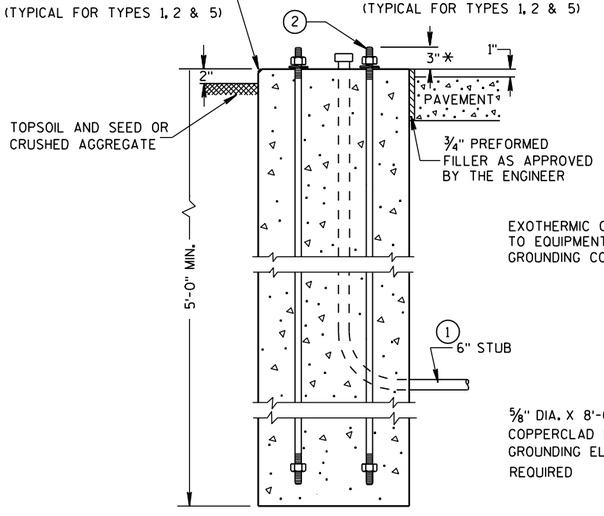




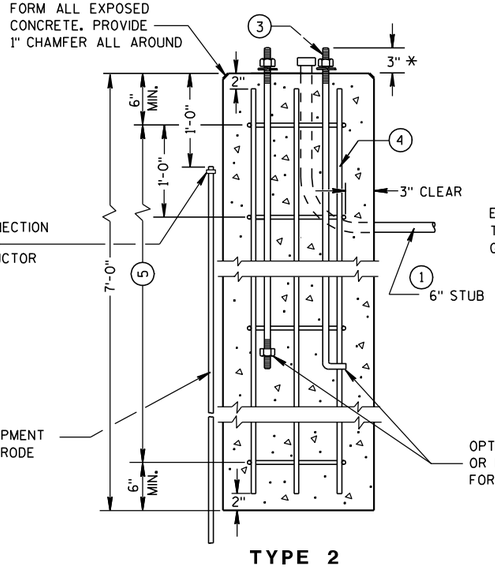
FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

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

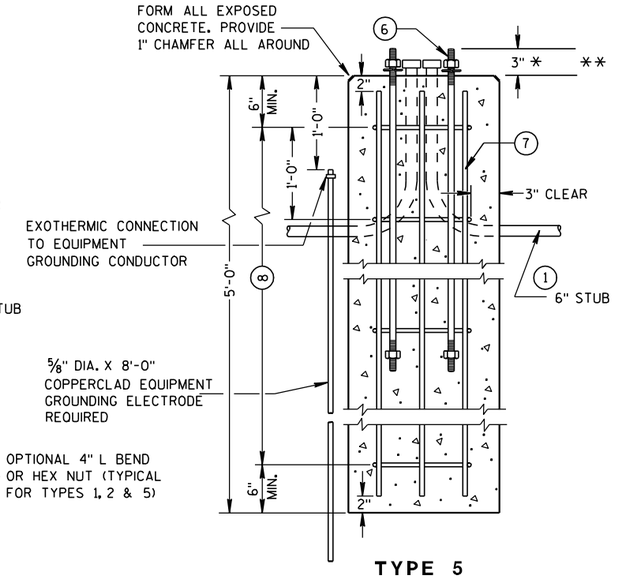
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2 & 5)



TYPE 1



TYPE 2



TYPE 5

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2 & 5

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/3/10 — DATE
/S/ Joanna L. Rush — STATE ELECTRICAL ENGI
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FHWA

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GENERAL NOTES

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

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

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

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

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

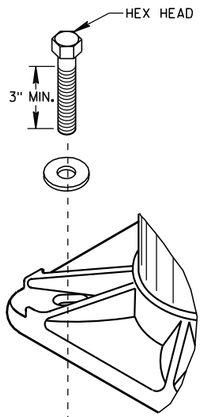
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

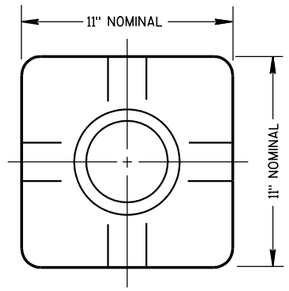
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

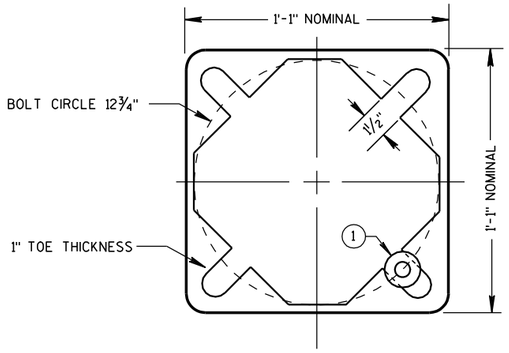
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1½", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

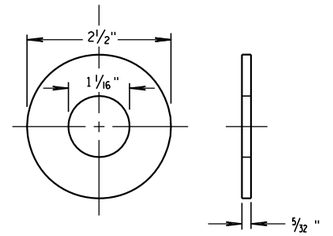




TOP VIEW
(PEDESTAL BASE)

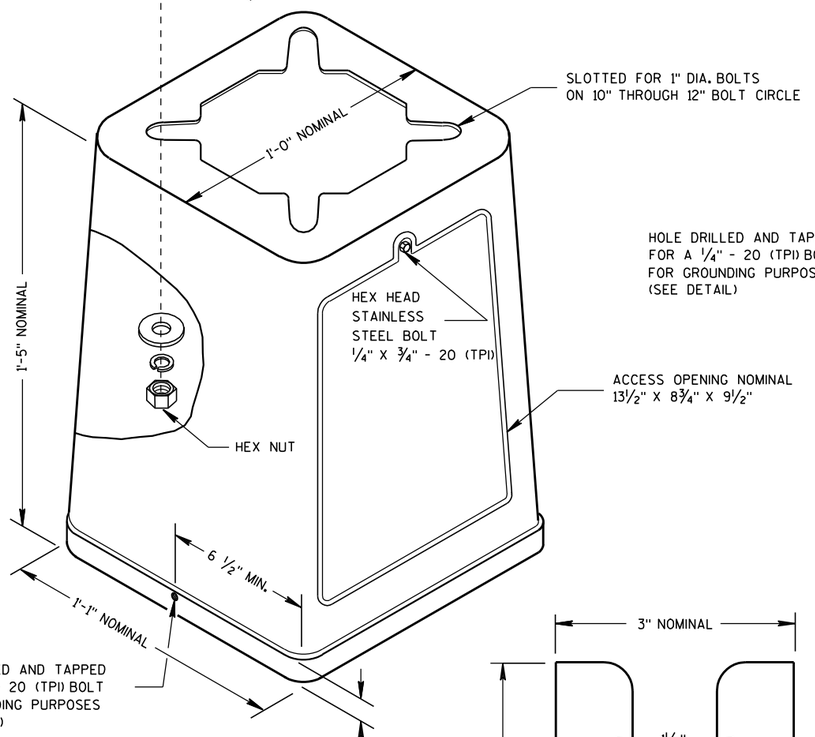


BOTTOM VIEW
(PEDESTAL BASE)

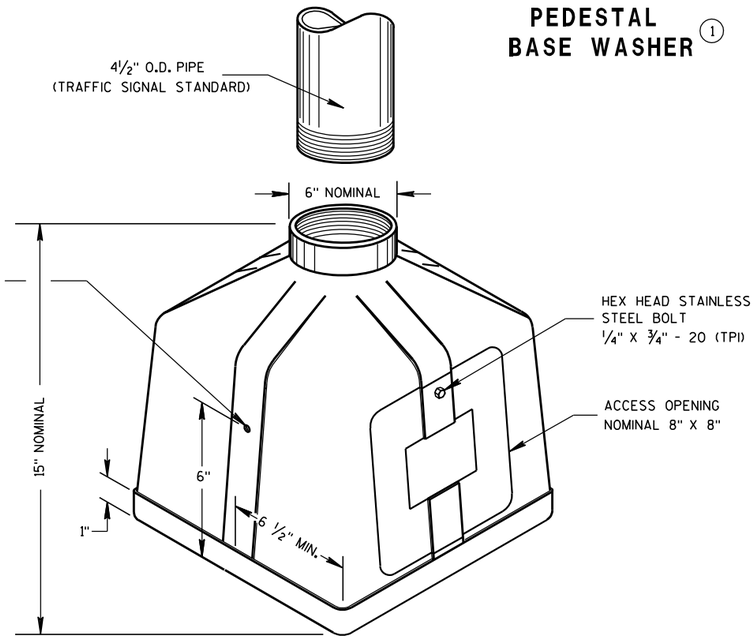


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

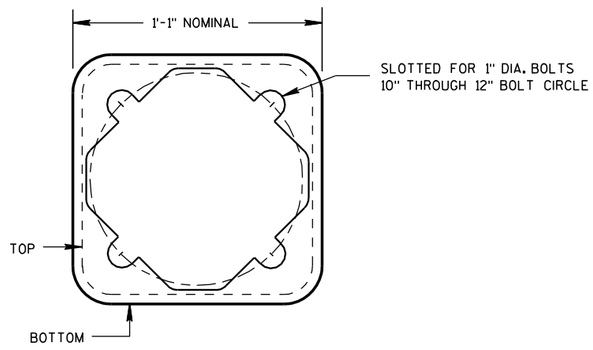


ISOMETRIC VIEW

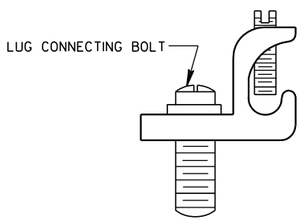


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

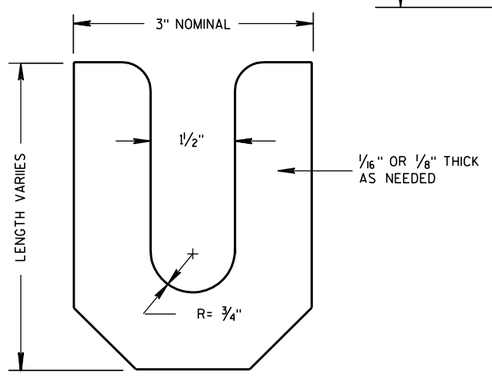


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

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



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/27/09 — DATE
/S/ Joanna L. [illegible] — STATE ELECTRICAL ENGI
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FHWA

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S.D.D. 9 C 3-3

GENERAL NOTES

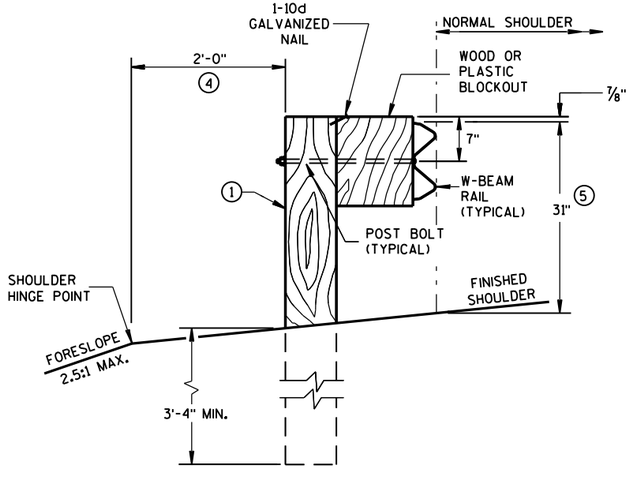
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

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 2½INCHES 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.

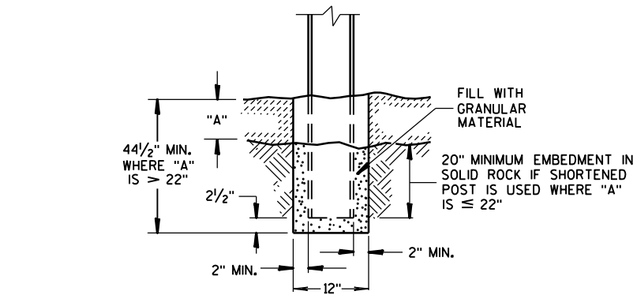
4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

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".



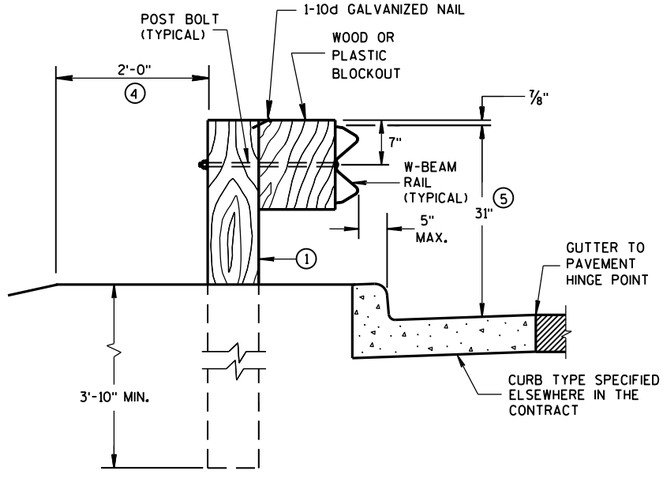
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



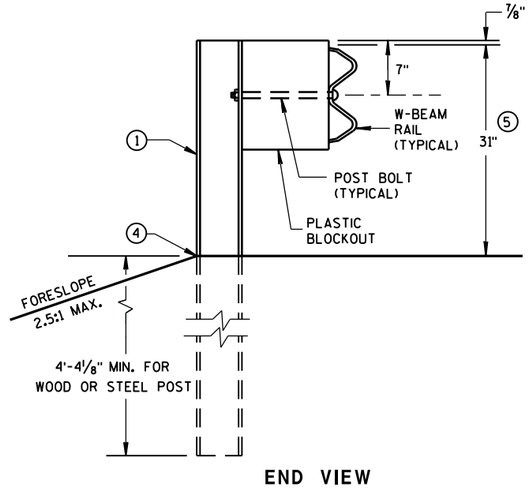
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



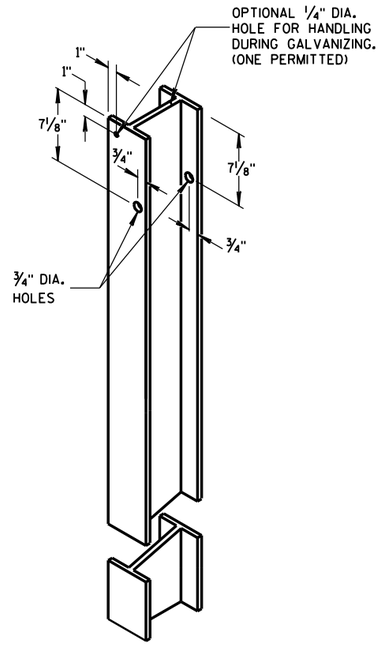
END VIEW

LOCATED ALONG A CURBED ROADWAY

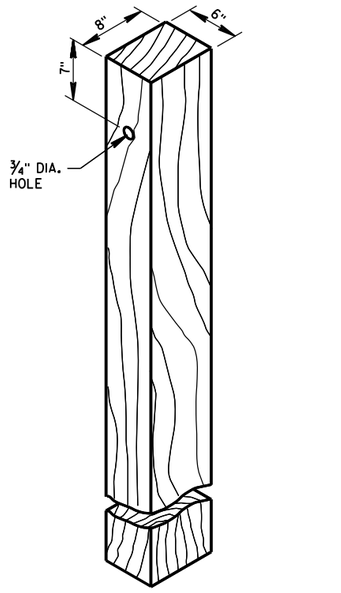


END VIEW

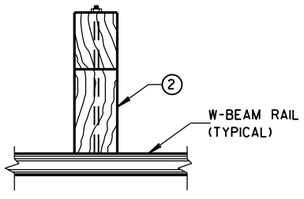
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



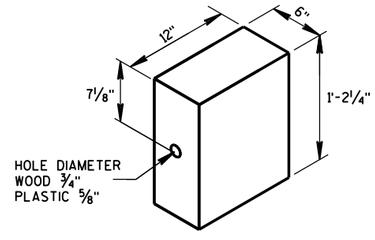
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



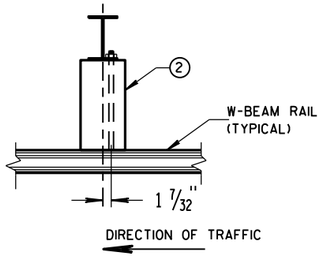
WOOD POST
(6" X 8") NOMINAL ①



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

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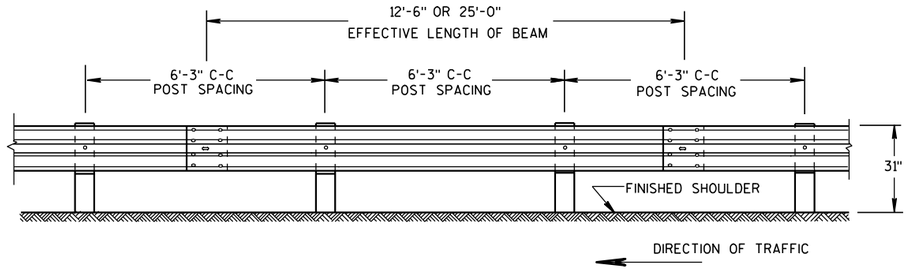
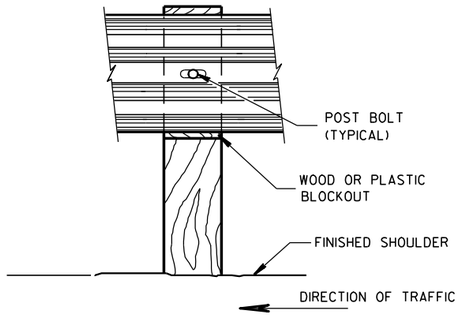
S.D.D. 14 B 42-2a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



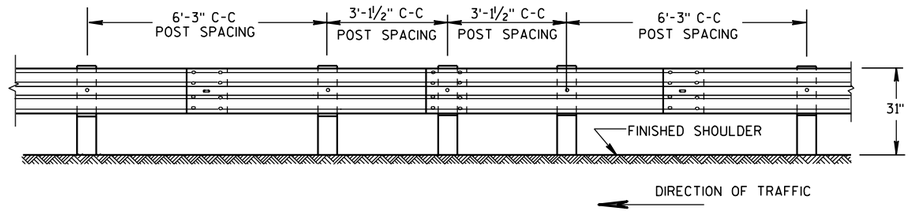
FRONT VIEW AT WOOD POST

GENERAL NOTES

1. PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
2. 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.
3. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
4. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
5. 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

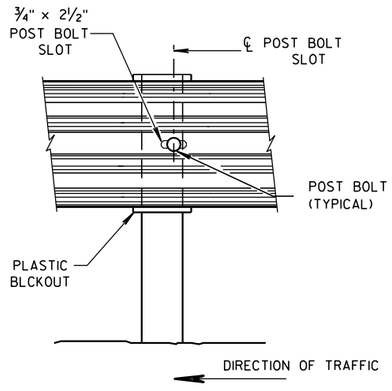
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

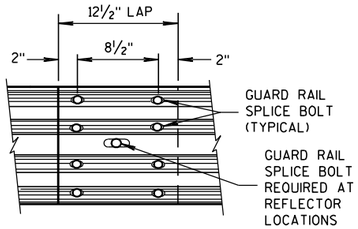


FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

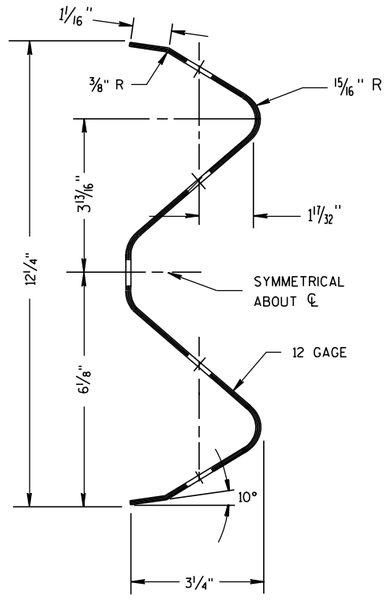


FRONT VIEW AT STEEL POST

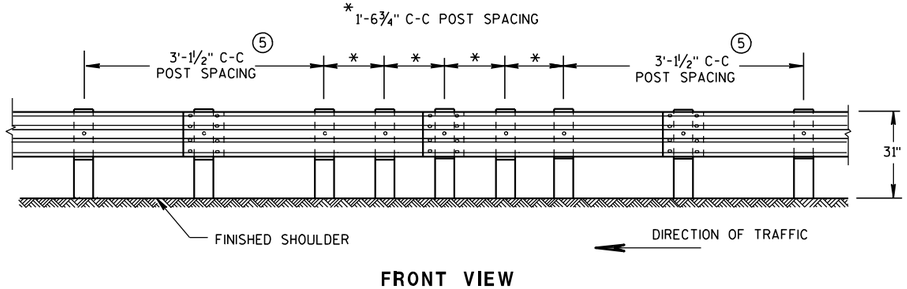


FRONT VIEW

MID-SPAN BEAM SPLICE

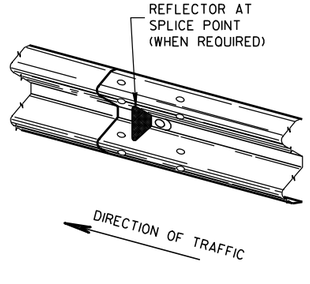


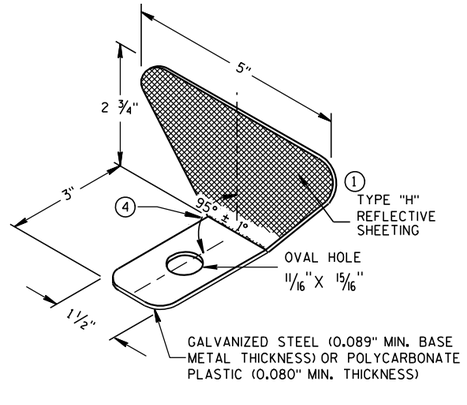
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ①

REFLECTOR SPACING ②

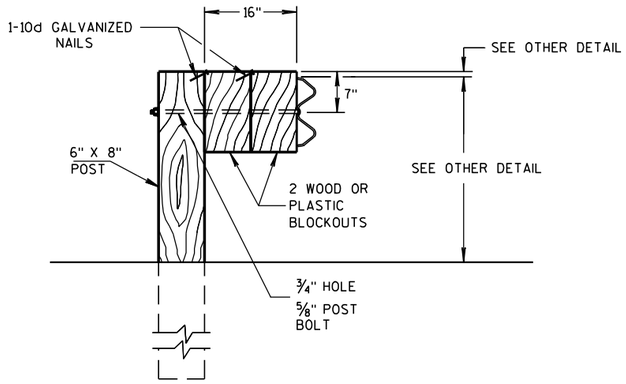
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 1 ③	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 ④	3

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

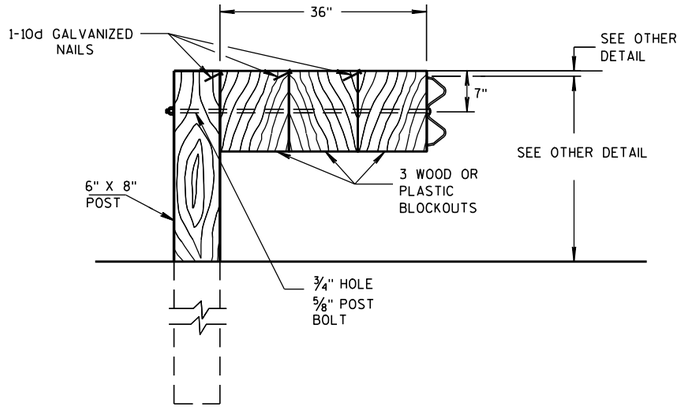
S.D.D. 14 B 42-2b

S.D.D. 14 B 42-2b



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.

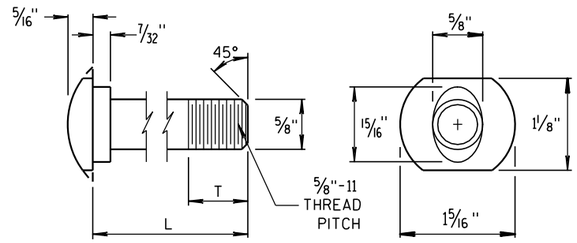


DETAIL FOR 36" BLOCKOUT DEPTH

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.

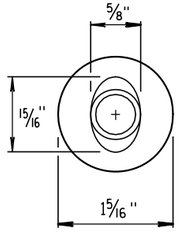
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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.

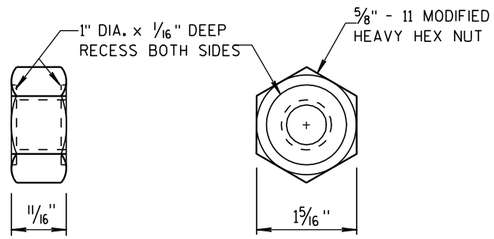


POST BOLT TABLE

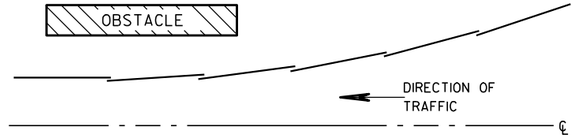
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

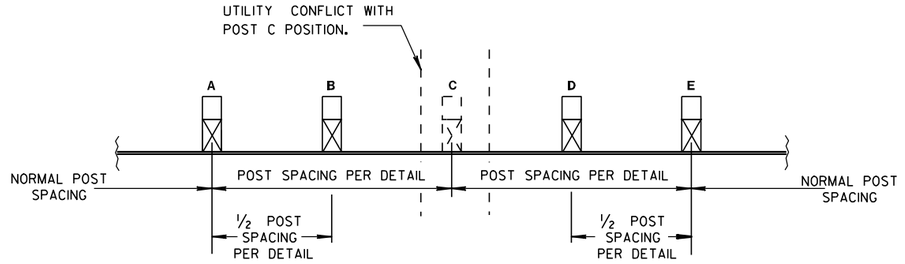


POST BOLT AND RECESS NUT

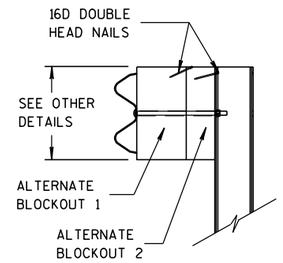


PLAN VIEW

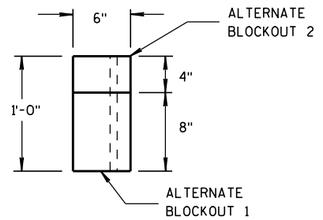
BEAM LAPPING DETAIL



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

11/15/2011 DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA

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6

S.D.D. 14 B 42-2c

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), 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) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.

(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.

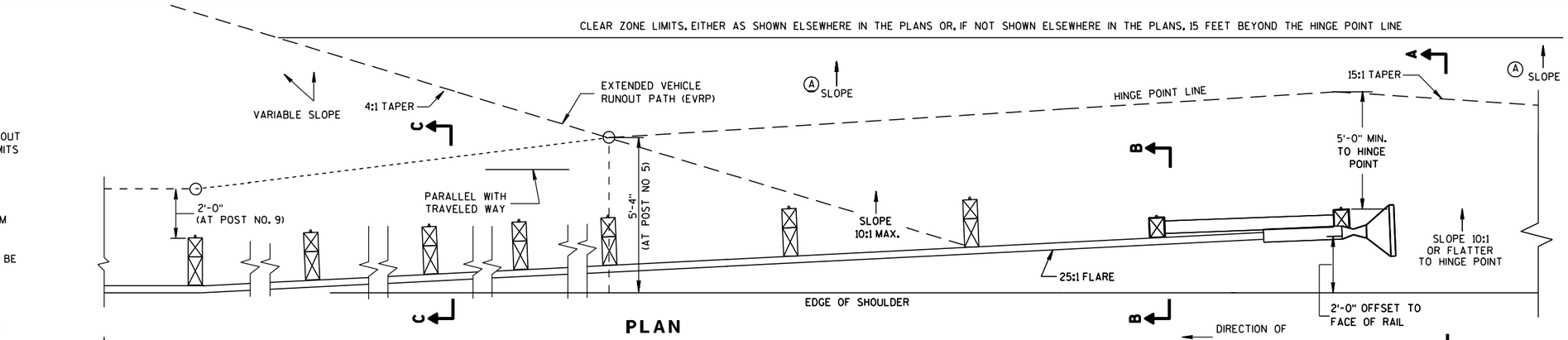
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

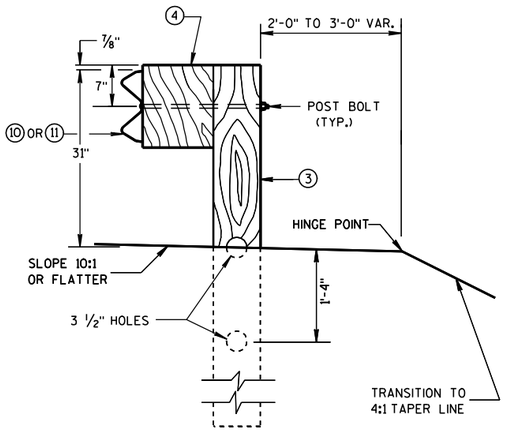
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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.

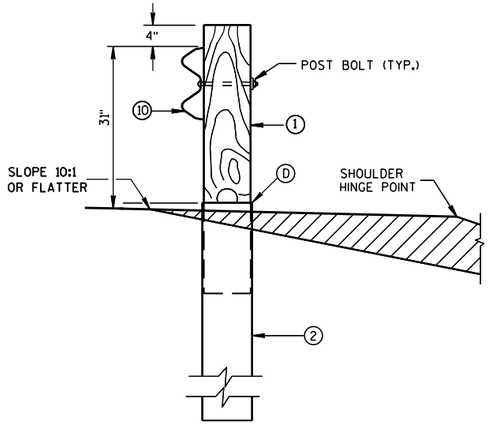
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE (± ¾")

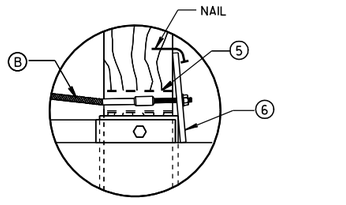




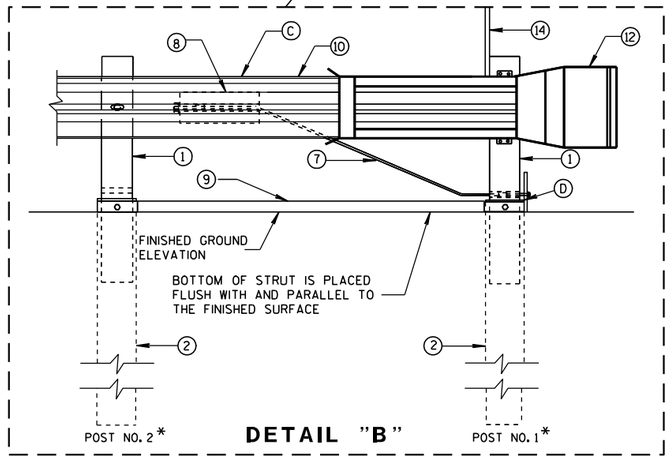
SECTION C-C
TYPICAL AT POST NOS. 3-9



SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

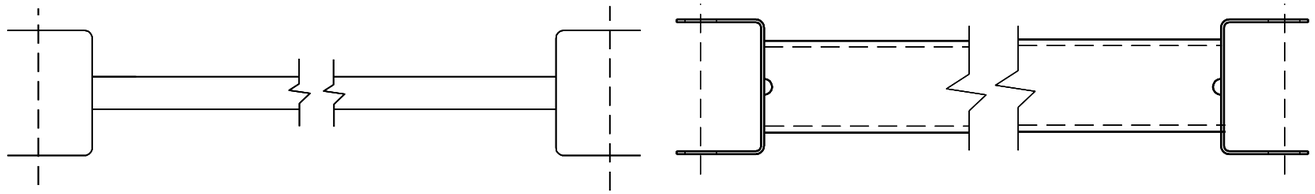
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 44-1a

6

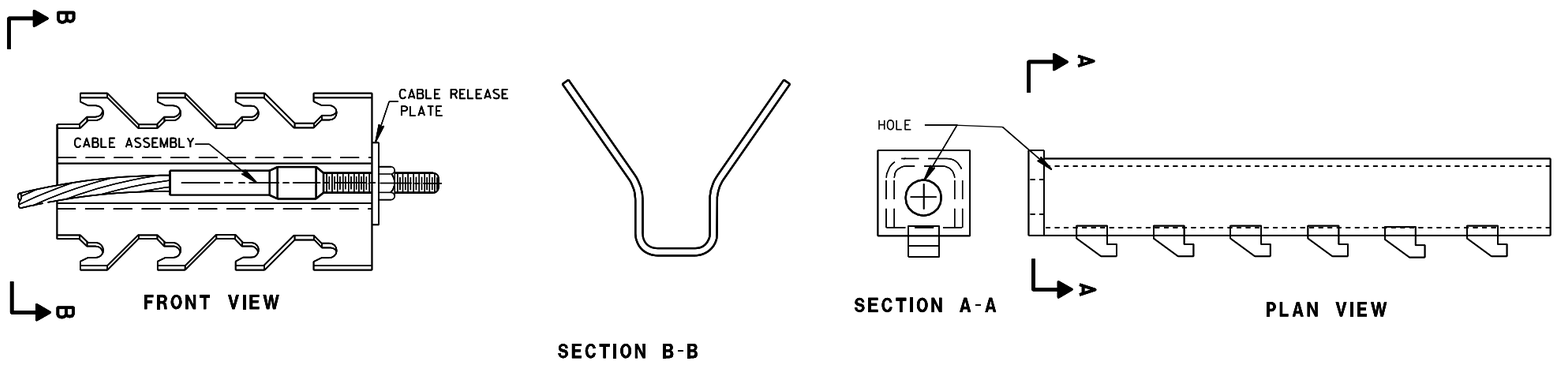
S.D.D. 14 B 44-1a



GENERIC GROUND STRUT (9) (H)

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 H (ONLY THE SHEETING IS SUPPLIED BY THE MANUFACTURER)
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



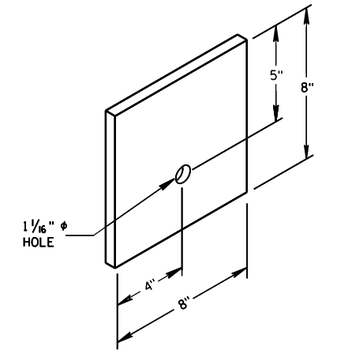
FRONT VIEW

SECTION B-B

SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



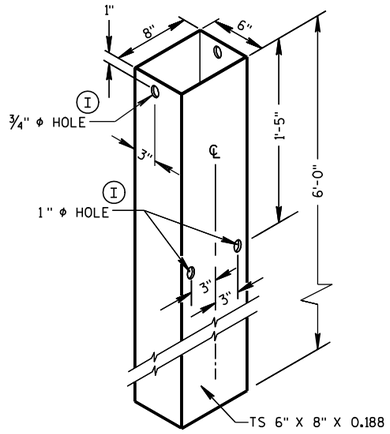
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

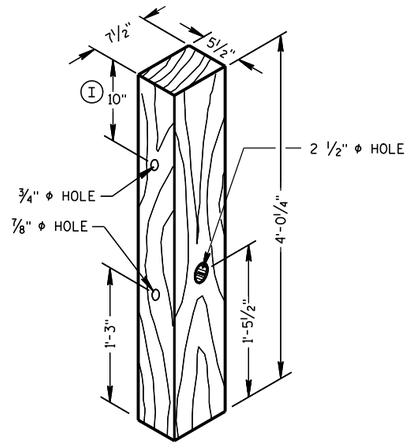
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 44-1b

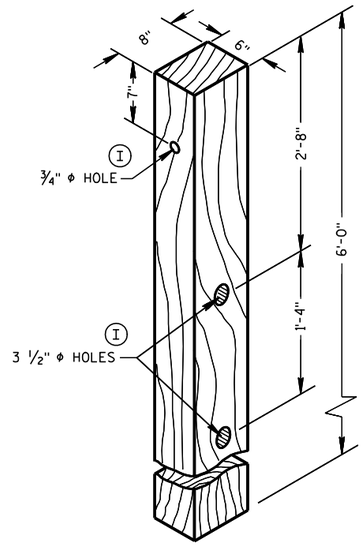


FOUNDATION TUBE (2)



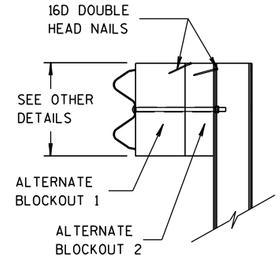
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

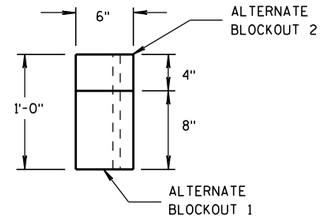


POSTS NUMBER 3-9

WOOD CRT POST (3)

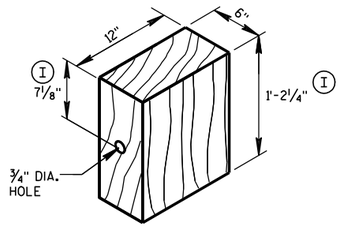


SIDE VIEW



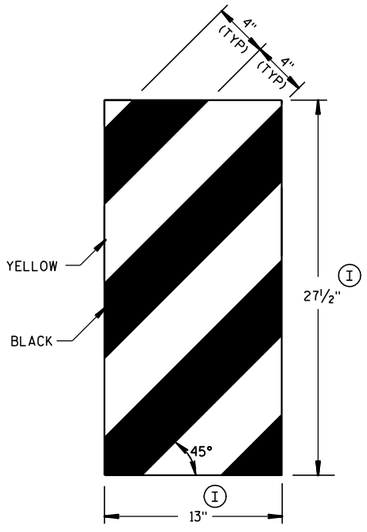
TOP VIEW

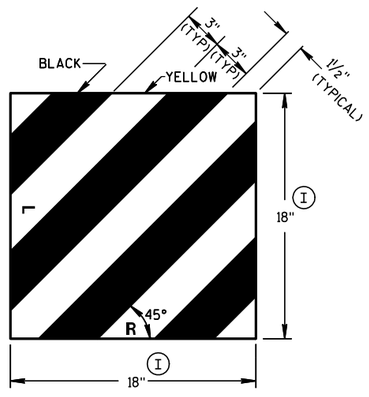
ALTERNATE WOOD BLOCKOUT DETAIL



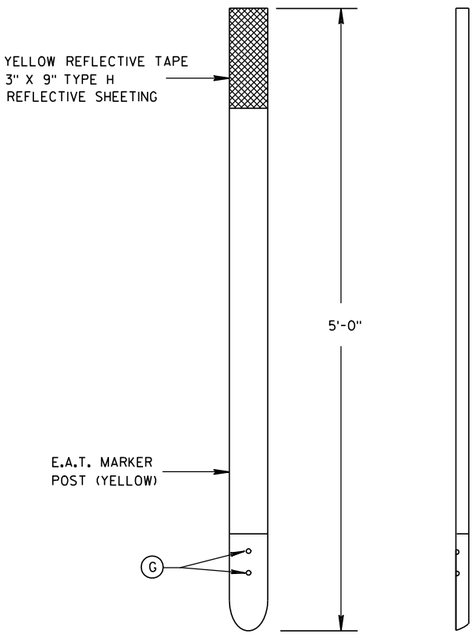
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





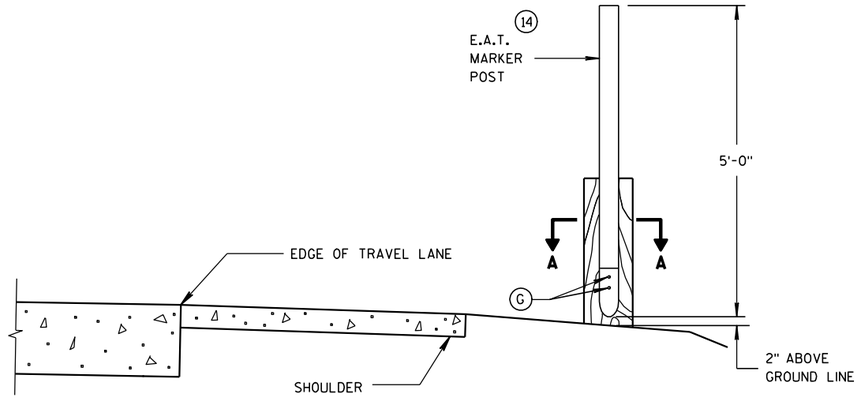
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

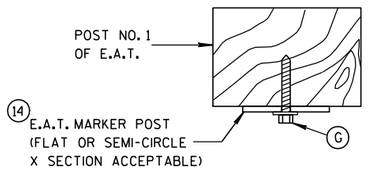
SIDE VIEW

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

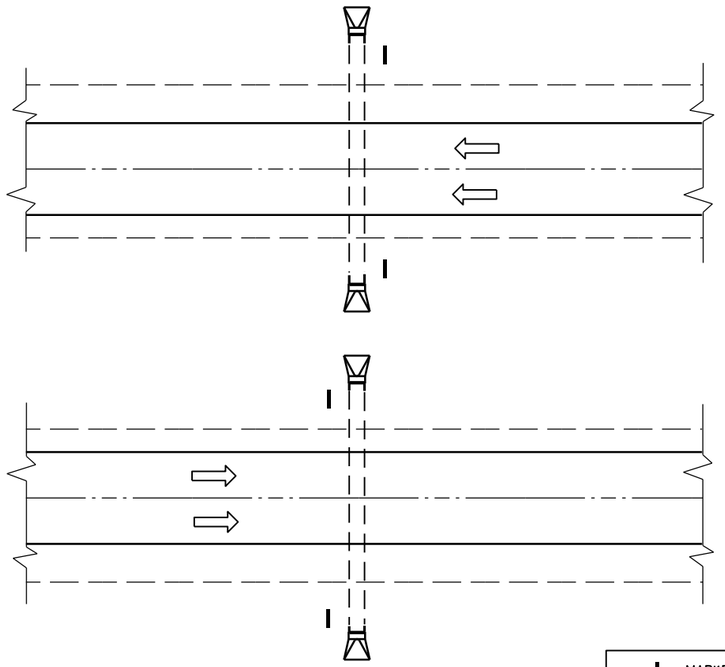
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2011 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS 53 ENGINEER
FHWA

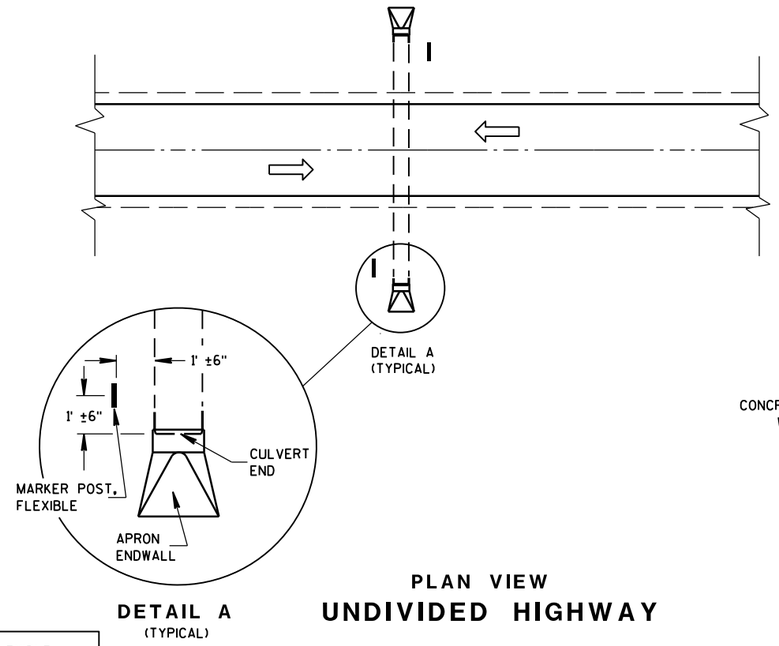
6

S.D.D. 14 B 44-1c



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

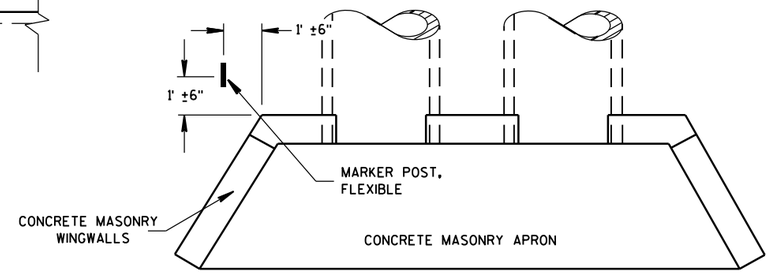
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

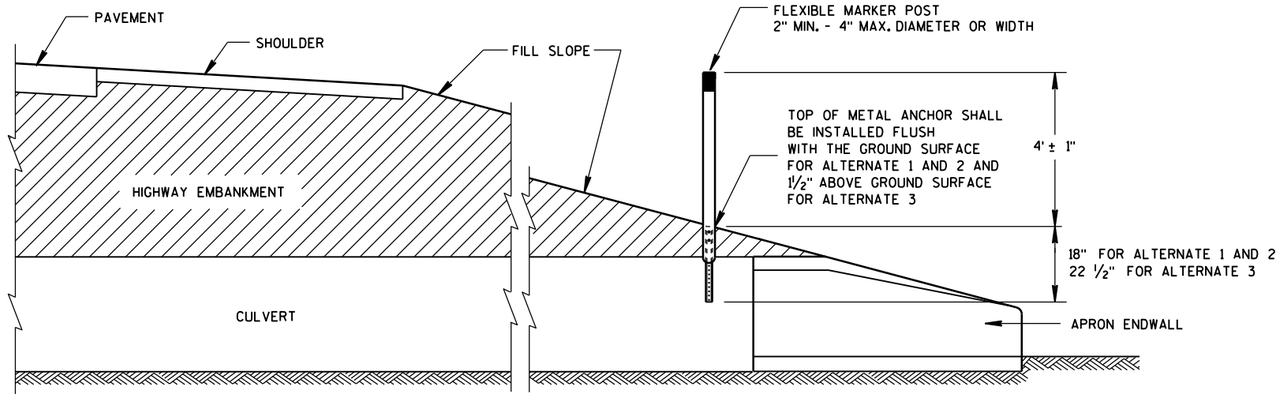
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

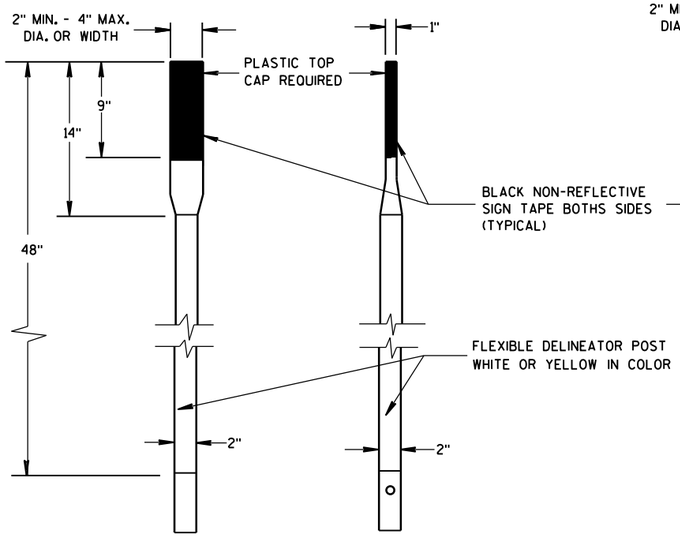
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

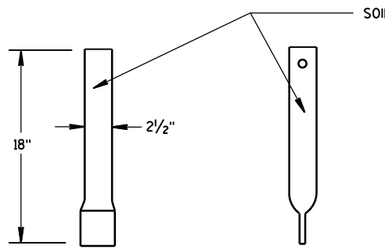
6

S.D.D. 15 A 3-2a

6

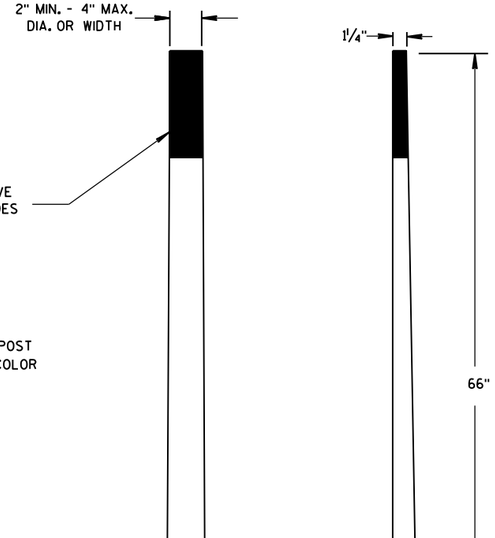
S.D.D. 15 A 3-2a





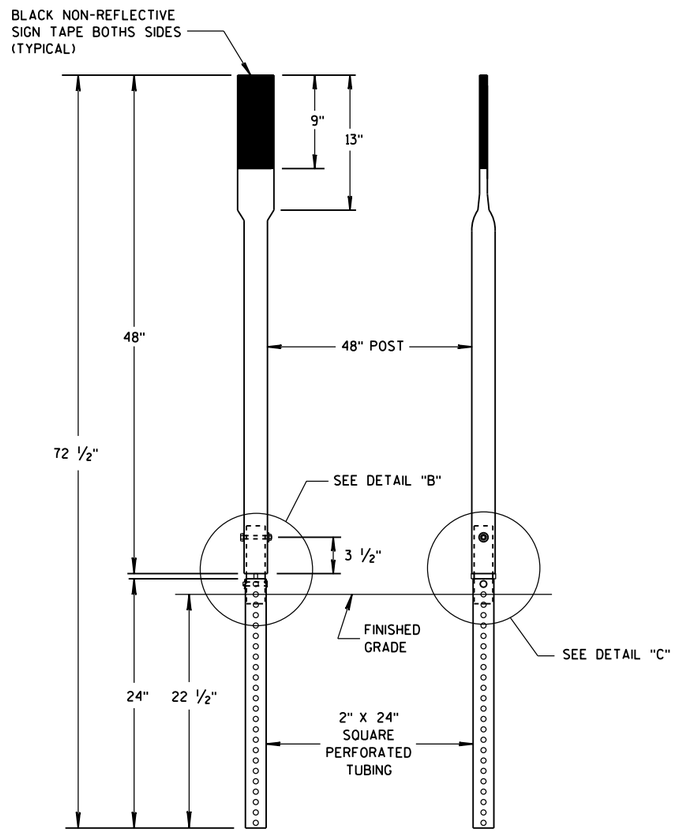
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

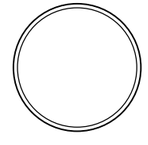
ALTERNATE 2



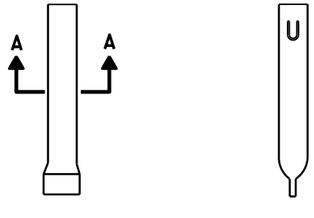
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

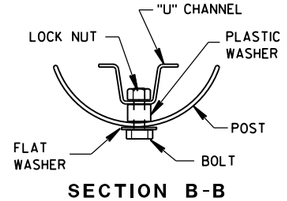


SECTION A-A

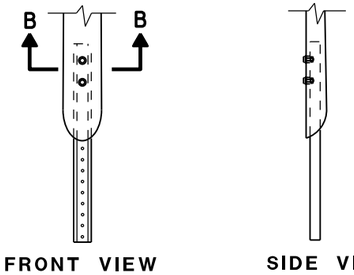


FRONT VIEW SIDE VIEW

ALTERNATE 1

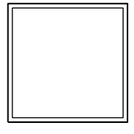


SECTION B-B

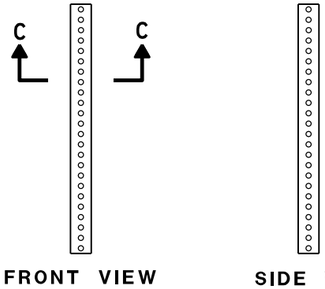


FRONT VIEW SIDE VIEW

ALTERNATE 2



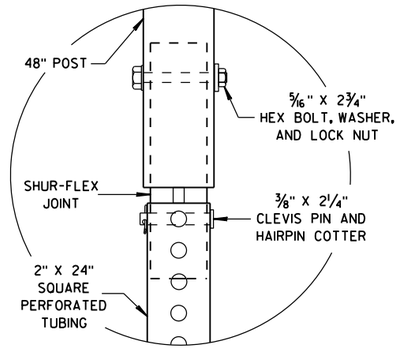
SECTION C-C



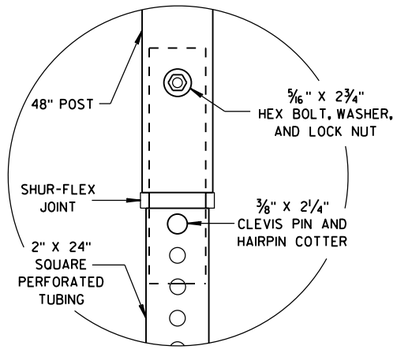
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

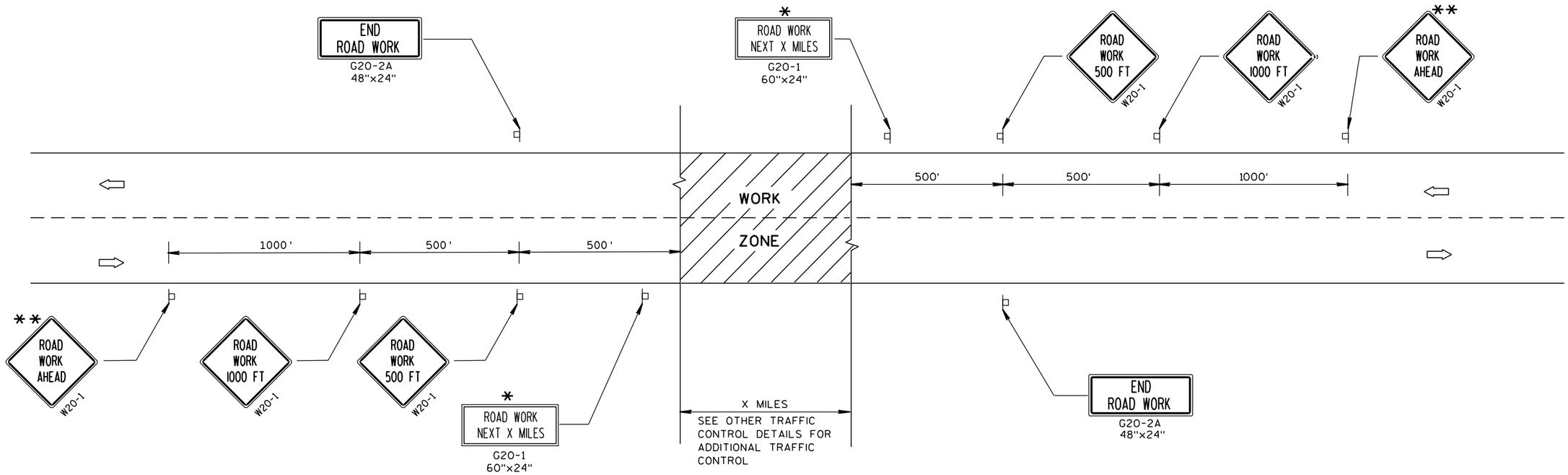
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 A 3-2b

6

S.D.D. 15 A 3-2b



GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

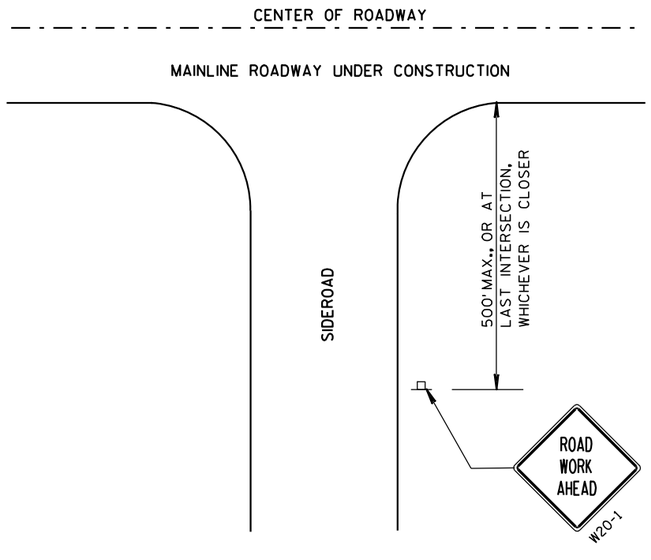
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

** PLACE ADDITIONAL W20-1 "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA OR SIGNING.

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



LEGEND

POST MOUNTED SIGN

DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

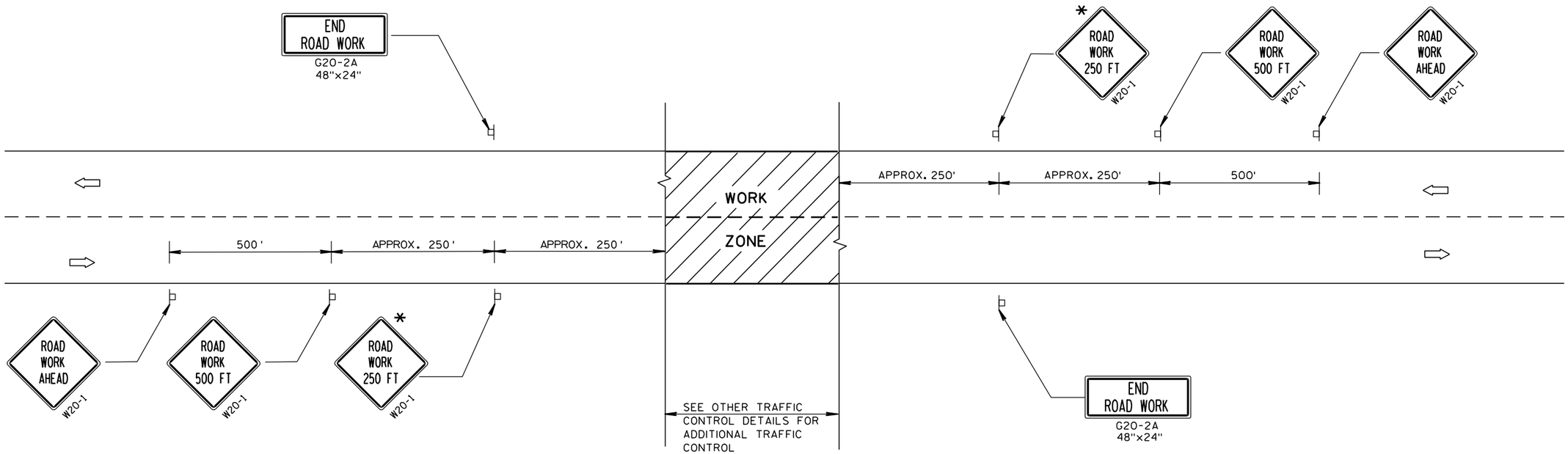
5/23/00 DATE

/S/ Chester J. [illegible] CHIEF SIGNS AND MARK[illegible]NEER

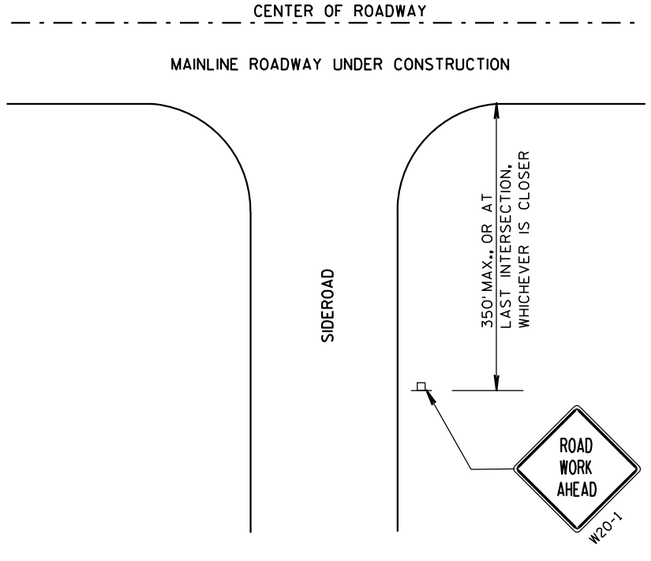
FHWA

6

S.D.D. 15 C 4-1



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS, IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

POST MOUNTED SIGN

DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/00
DATE

/S/ Chester J. [illegible]
CHIEF SIGNS AND MARKING ENGINEER

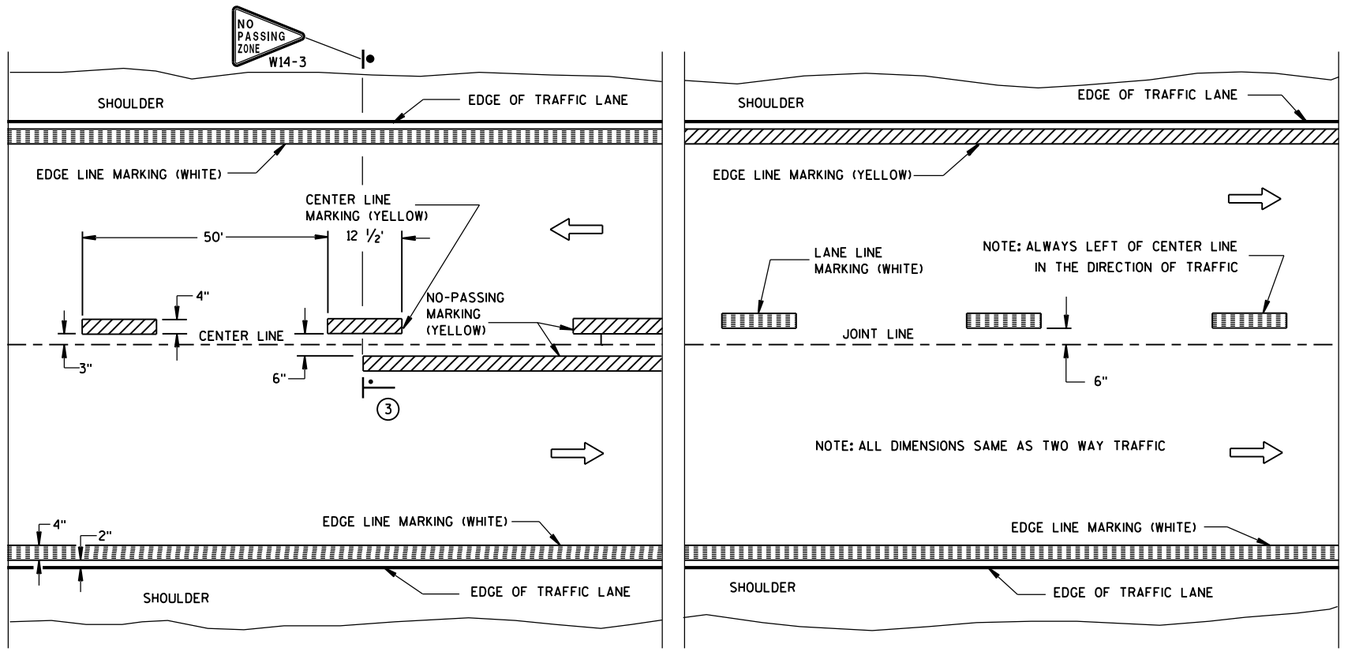
FHWA

6

S.D.D. 15 C 5-1

6

S.D.D. 15 C 5-1



TWO WAY TRAFFIC

ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

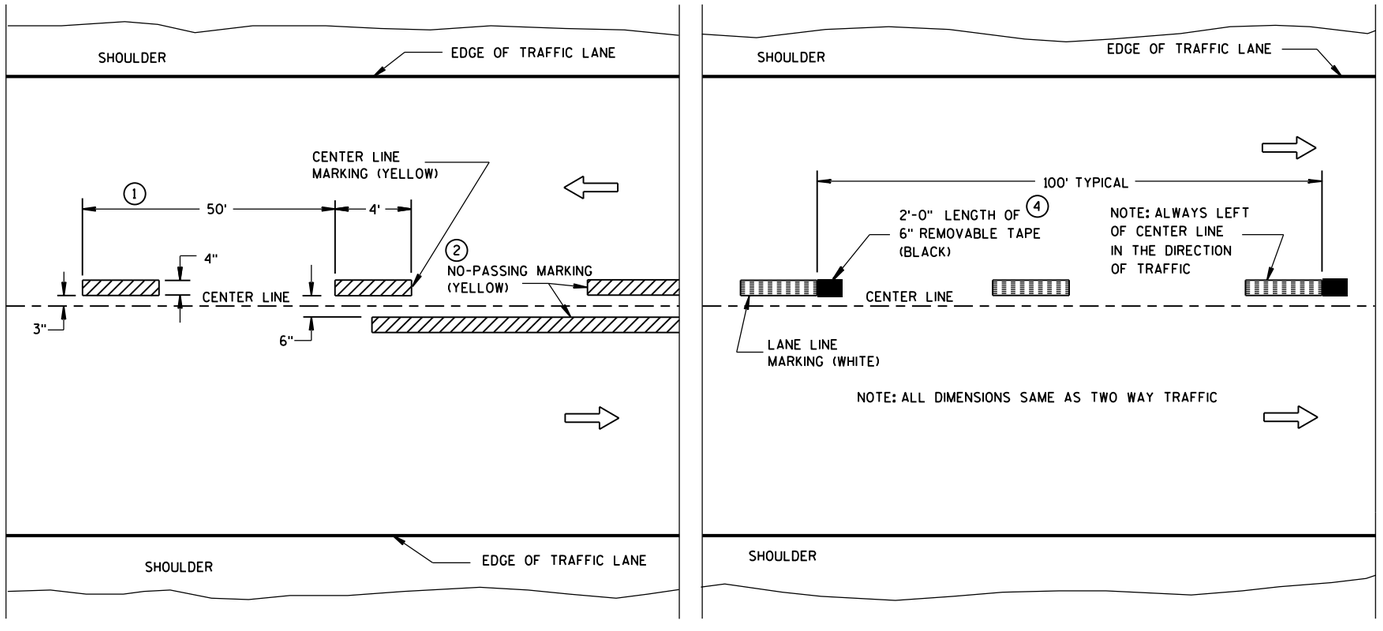
GENERAL NOTES

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

1. 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

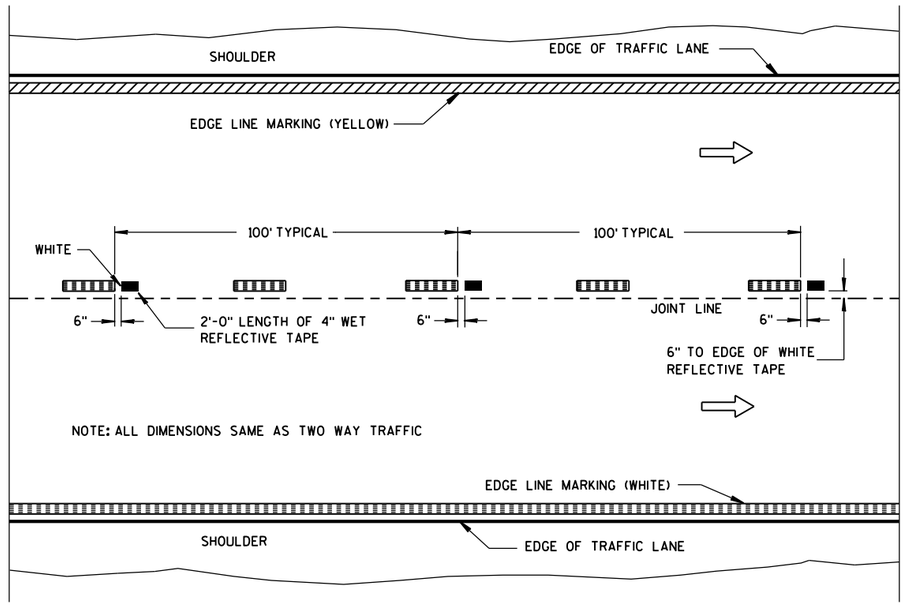


TWO WAY TRAFFIC

ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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



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

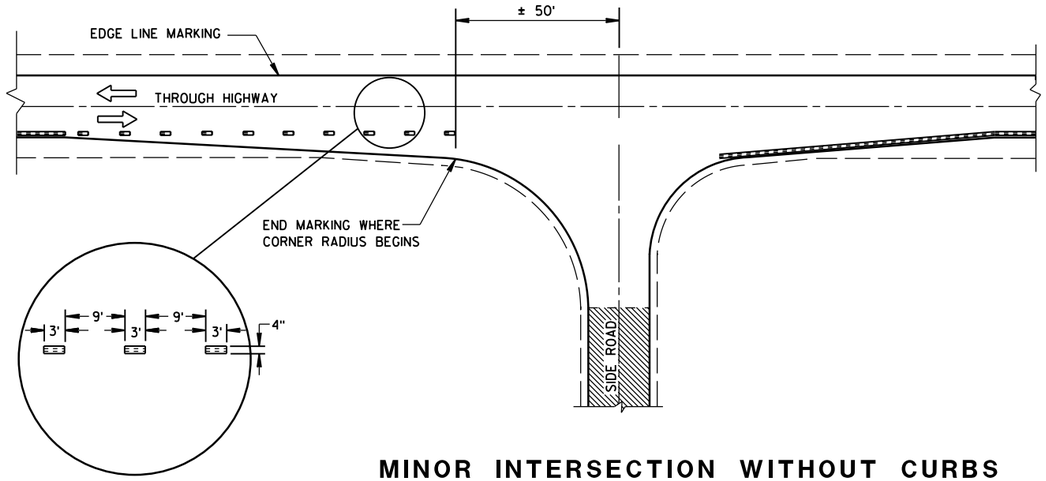
APPROVED
10-1-2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 8-15a

6

S.D.D. 15 C 8-15a



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

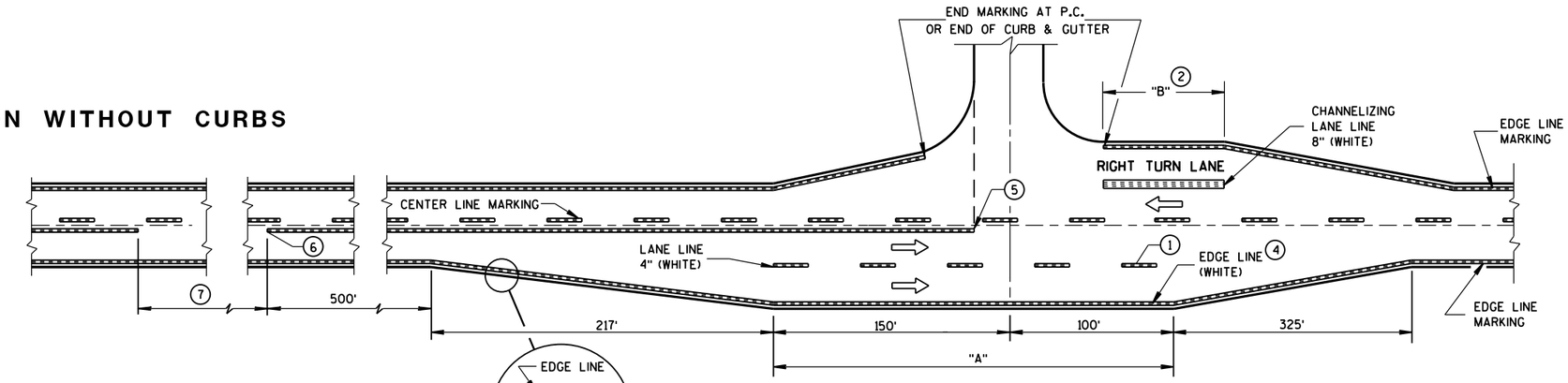
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

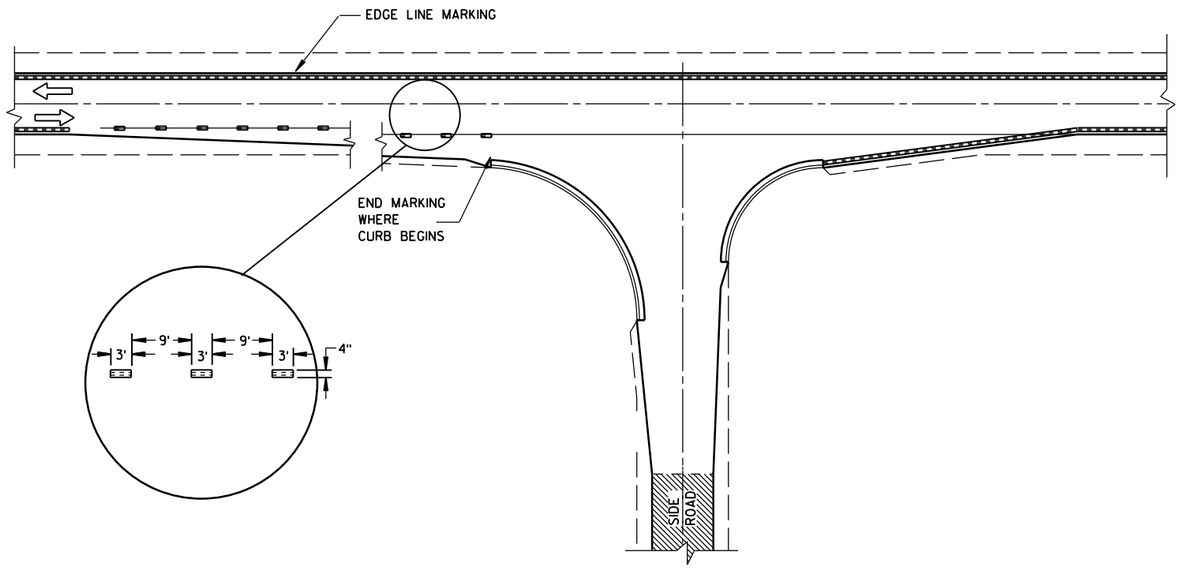
(7)

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



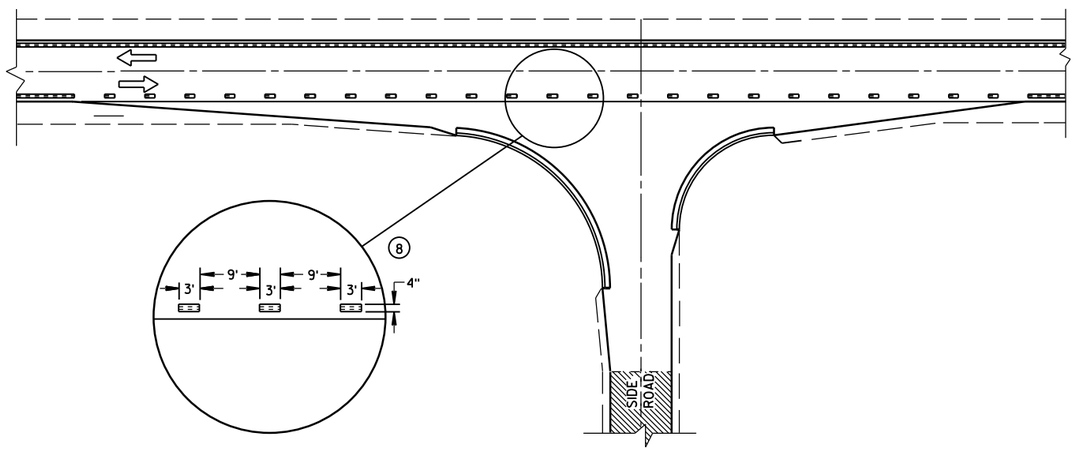
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 C 8-15b

6

S.D.D. 15 C 8-15b

TWO-LANE ROADWAY

SYMBOLS

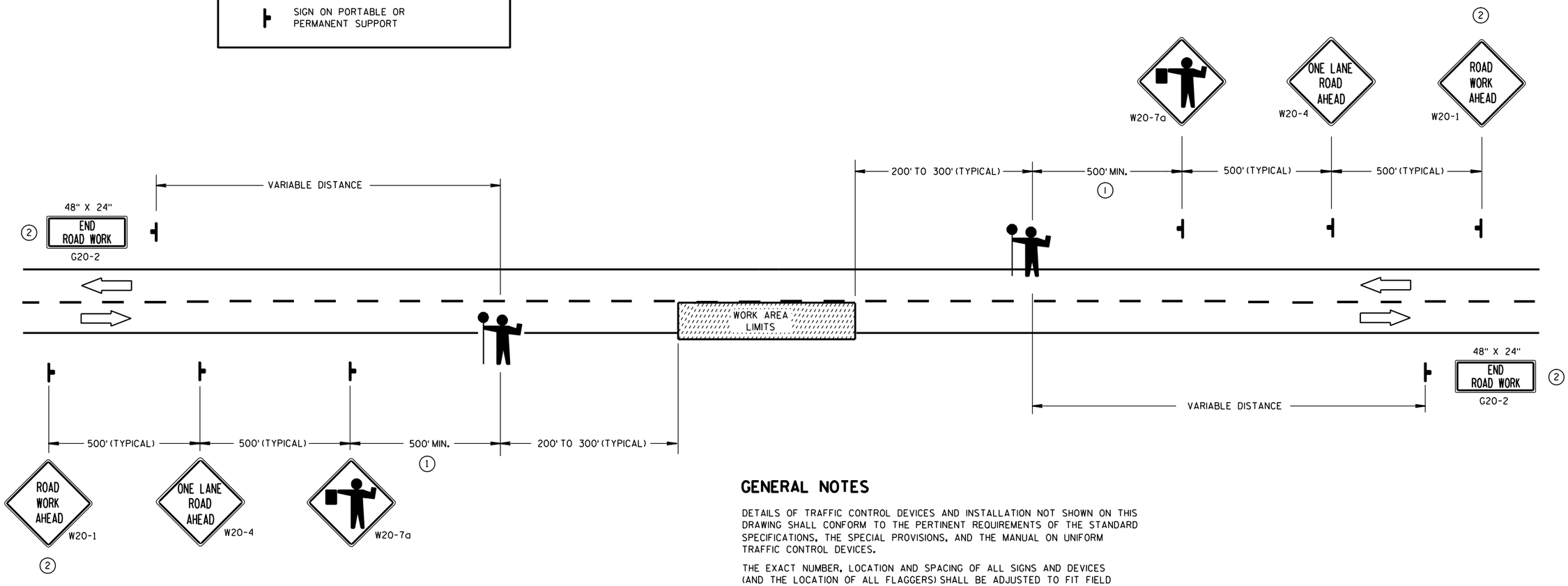
WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN ON PORTABLE OR PERMANENT SUPPORT

W3-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



(1) FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, THE "FLAGGER AHEAD", THE "ROAD WORK AHEAD" AND THE ONE LANE ROAD AHEAD" SIGNS SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

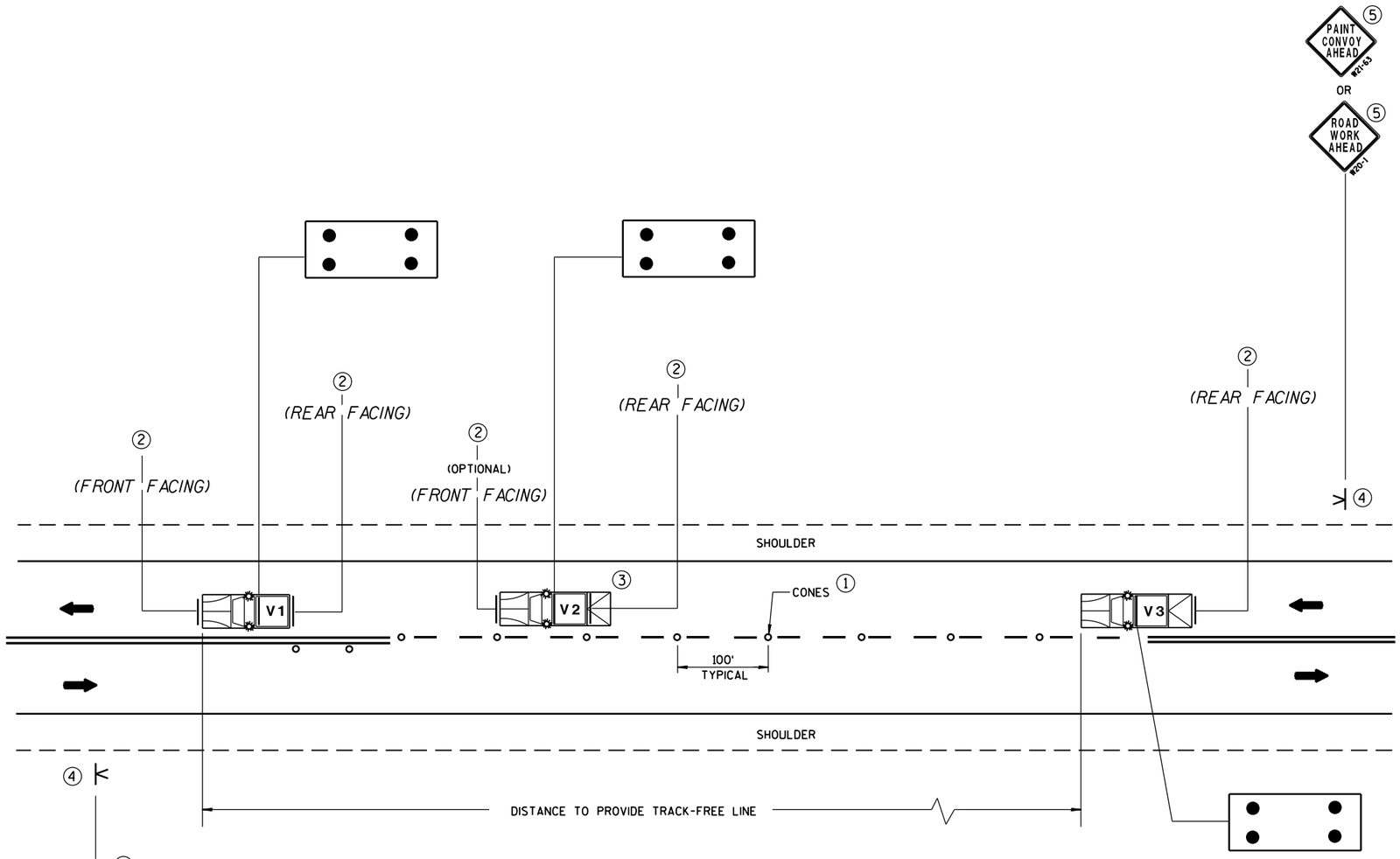
9/5/06 — DATE

/S/ Thomas N. Nathaam — STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 12-3



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

(4) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(5) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1	LEAD VEHICLE
V2	SHADOW VEHICLE
V3	TRAIL VEHICLE WITH TMA
TMA	TRUCK-MOUNTED ATTENUATOR
	SIGN ON PORTABLE SUPPORT
	DIRECTION OF TRAVEL
	CONES
	FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
12/6/2011 DATE	/S/ Thomas N. Notbohm STATE TRAFFIC ENGINEER
FHWA	

6

S.D.D. 15 C 19-1a

GENERAL NOTES

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

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

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

W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

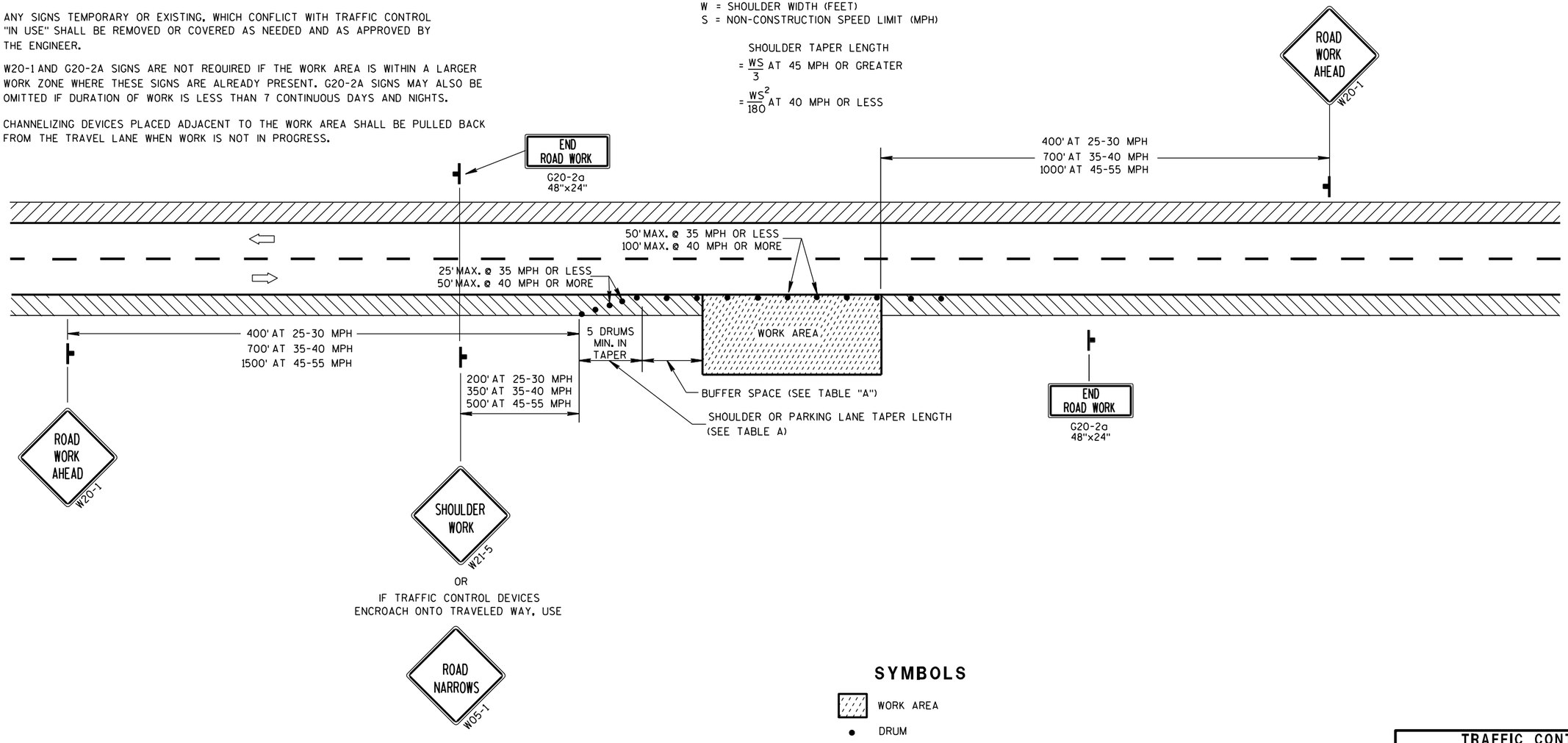
CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TABLE A

S \ W	SHOULDER TAPER LENGTH (FEET) 4	6	8	10	BUFFER SPACE (FEET)
30	20	30	40	50	85
35	30	45	55	70	120
40	40	55	75	90	170
45	60	90	120	150	220
50	70	100	135	170	280
55	75	110	150	185	335

W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

SHOULDER TAPER LENGTH
$= \frac{WS}{3}$ AT 45 MPH OR GREATER
$= \frac{WS^2}{180}$ AT 40 MPH OR LESS



SYMBOLS

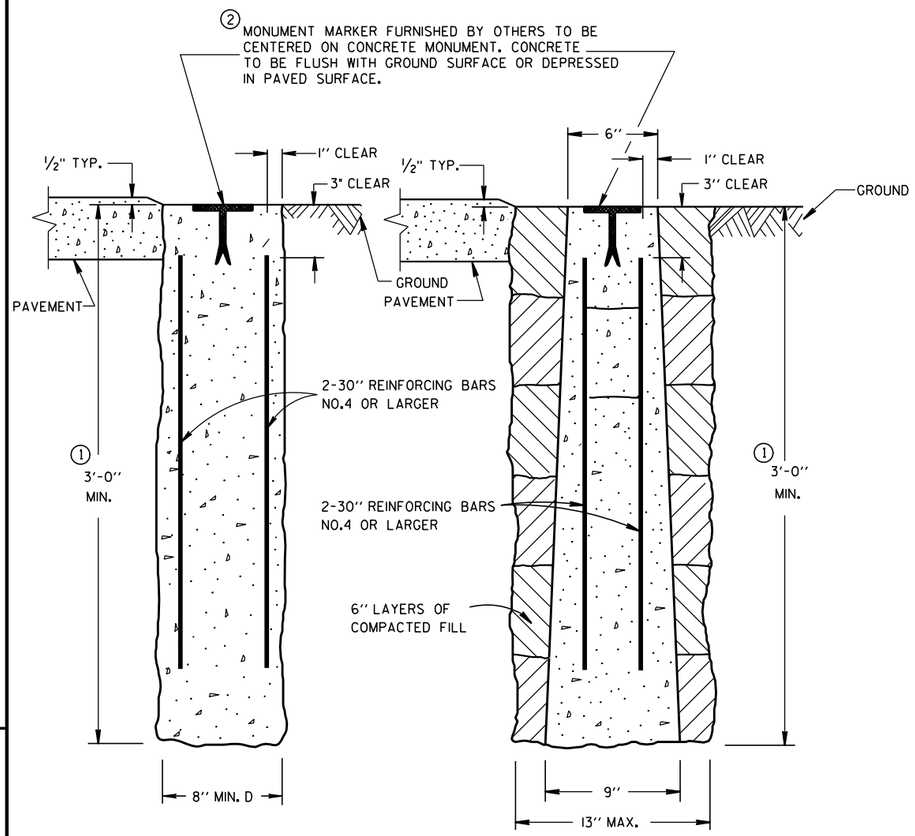
- WORK AREA
- DRUM
- POST MOUNTED SIGN
- DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/00 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK[illegible] ENGINEER
FHWA

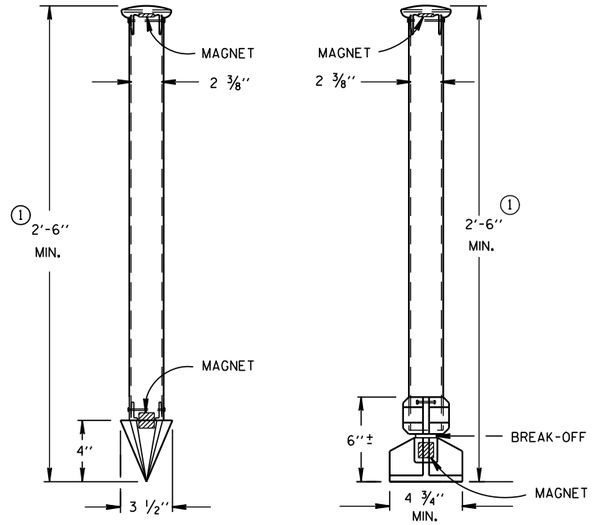
6
S.D.D. 15 D 28-1



CAST-IN-PLACE PRECAST

CONCRETE MONUMENTS

TYPE A



TYPE C DRIVE-IN MONUMENT

TYPE D BREAK-OFF MONUMENT

ALUMINUM MONUMENTS

(INCLUDES MARKER)

GENERAL NOTES

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

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

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

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

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

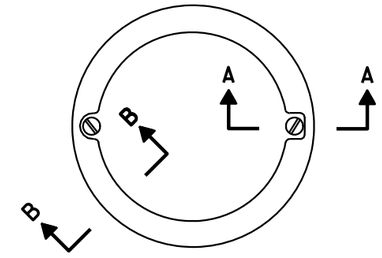
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

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

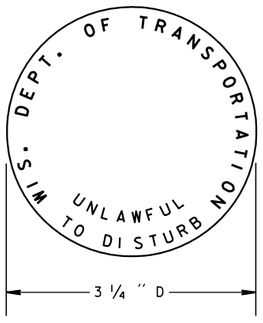
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

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

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

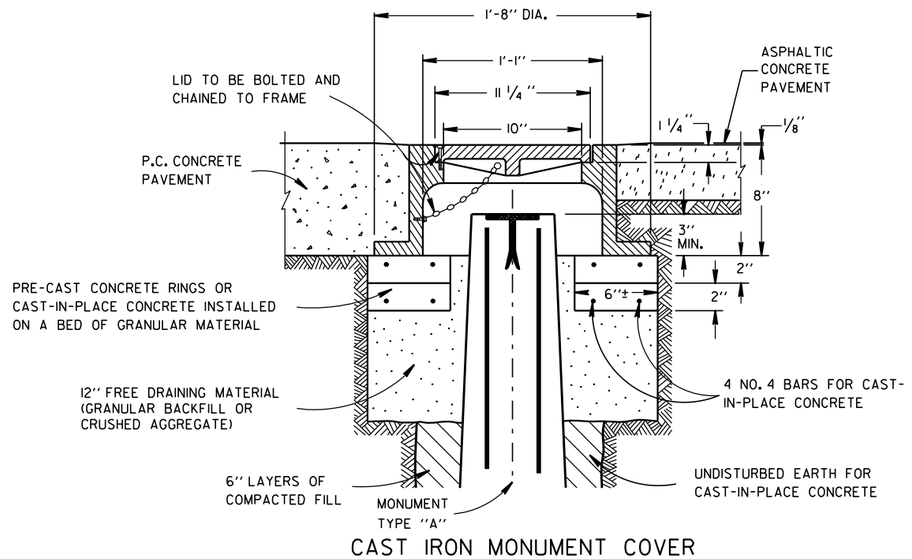


TOP VIEW



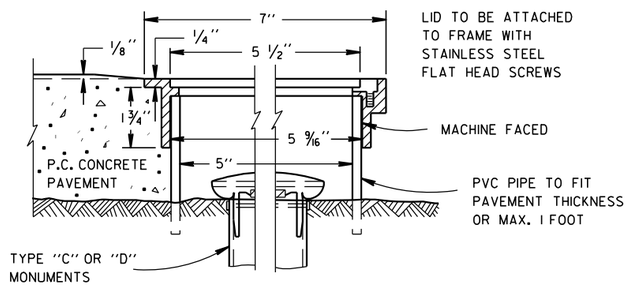
② WIS DOT MONUMENT MARKER LOGO

FOR TYPES "A", "C" & "D"



CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT - 95 LBS.)



SECTION B-B SECTION A-A

ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)

(FOR CONCRETE PAVEMENT ONLY)

LANDMARK REFERENCE MOUNMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

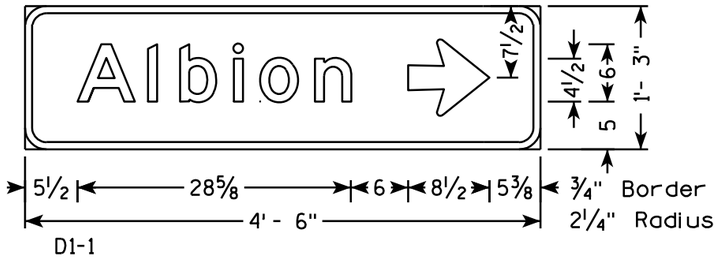
APPROVED
9/22/1999 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 16 A 1-6

6

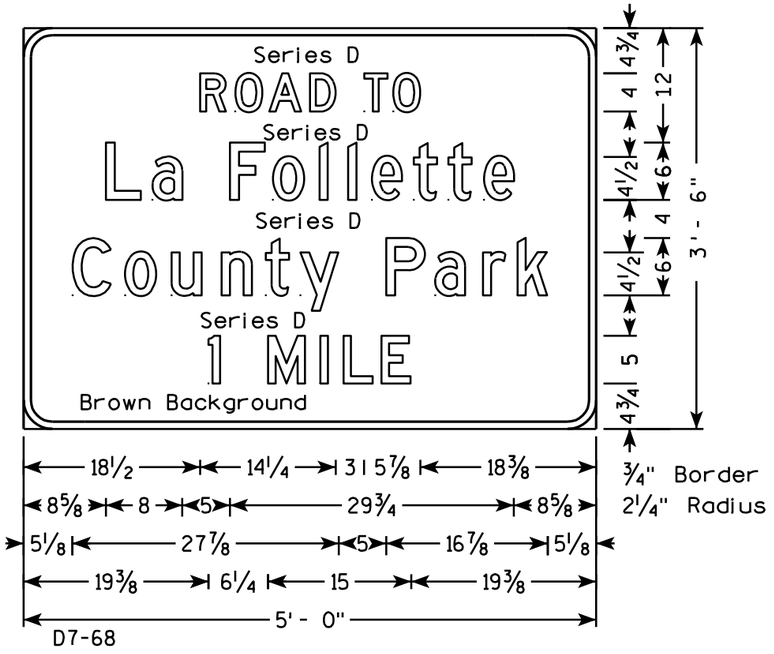
S.D.D. 16 A 1-6



D1-1

D2-1

D7-52



D7-68

NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green except as noted
   Message - White
3. Message Series - E except as noted

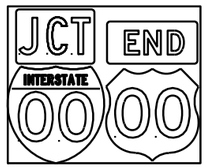
7

7

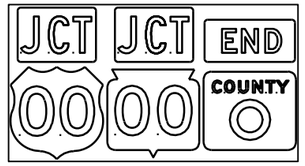
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	PERMANENT SIGNING	SHEET NO: 64	E

TYPICAL ASSEMBLIES

J1-1

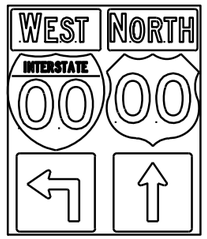


J1-2

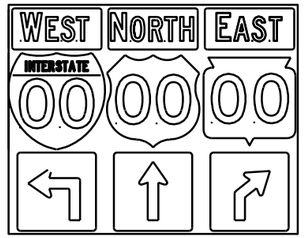


J1-3

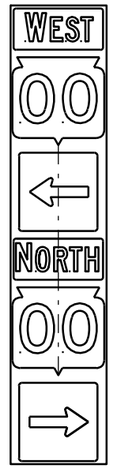
J2-1



J2-2

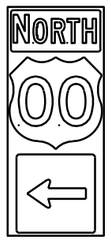


J2-3

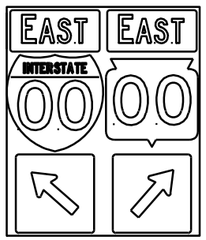


JV

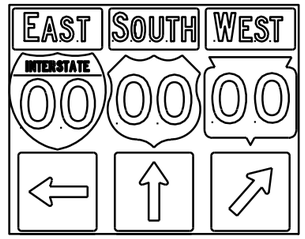
(Typical Vertical J-Assembly
See Note 10)



J3-1

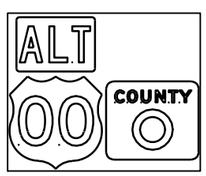


J3-2

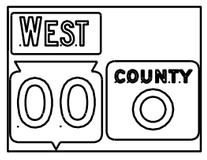


J3-3

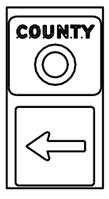
J4-1



J4-2



J4-2



J13-1

J12-1

J32-1

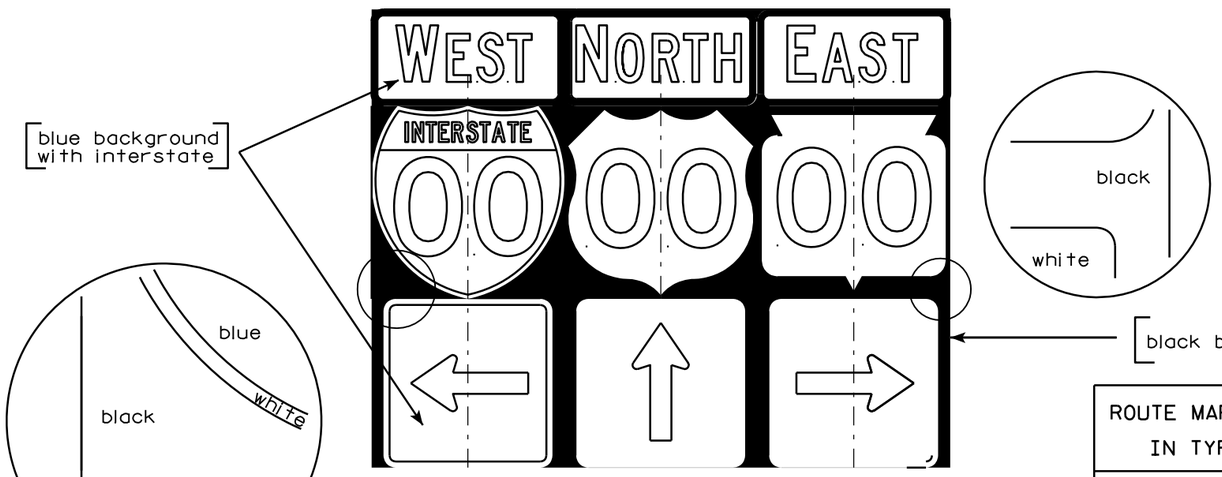
J33-1

J23-1

J22-1

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



ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

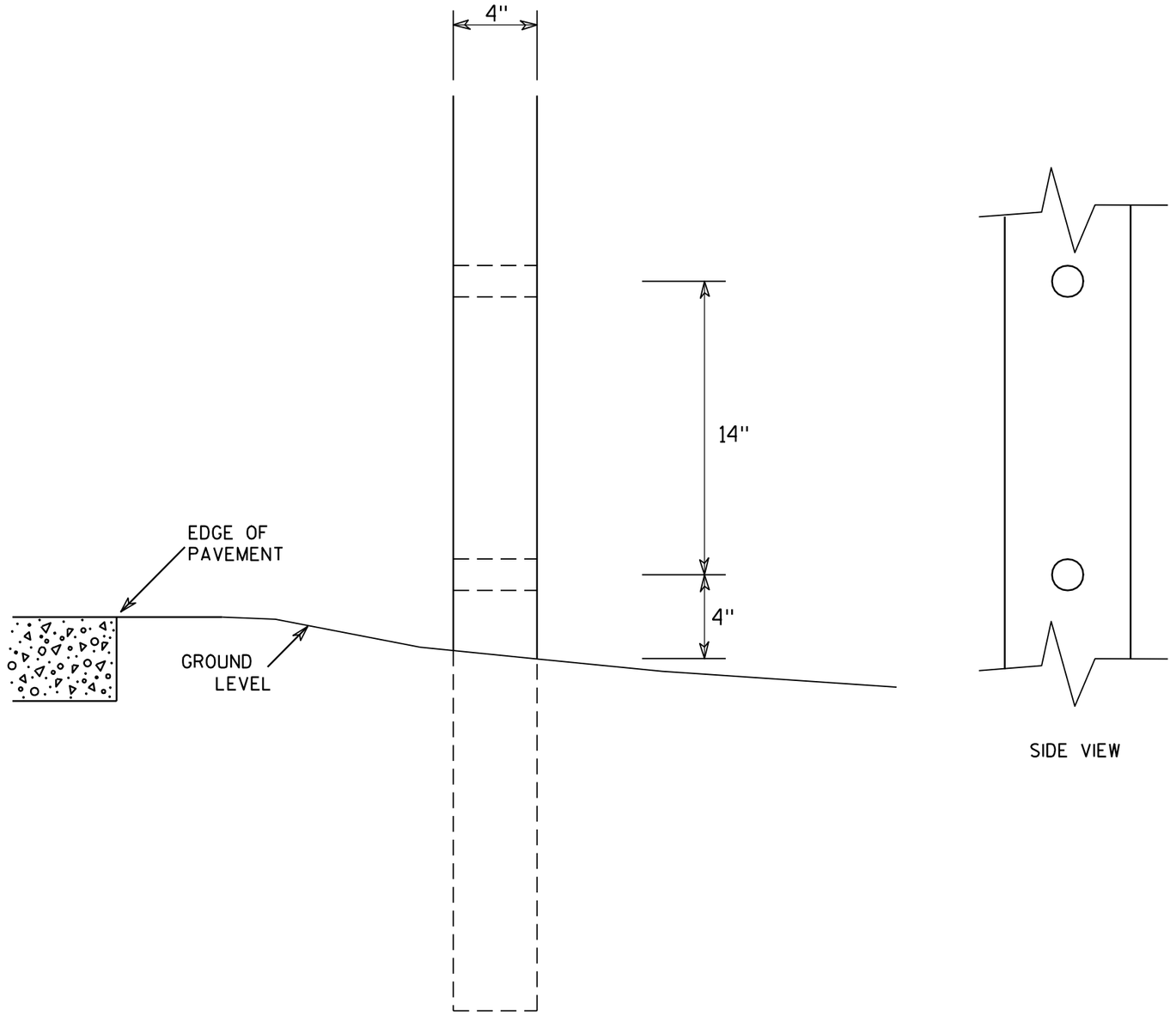
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/12/13 PLATE NO. A2-1S.7

PROJECT NO:

SHEET NO: 65 E



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

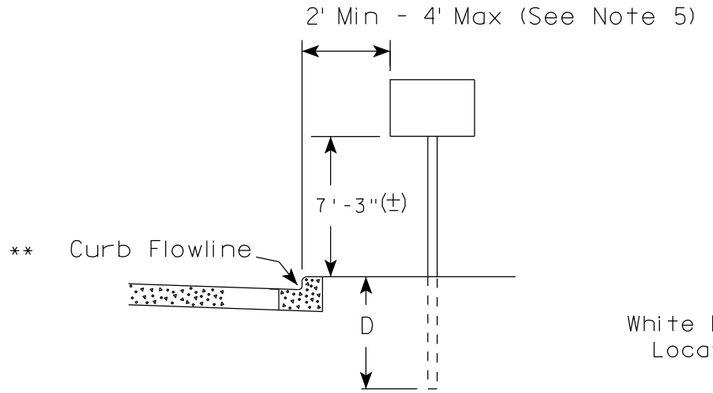
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

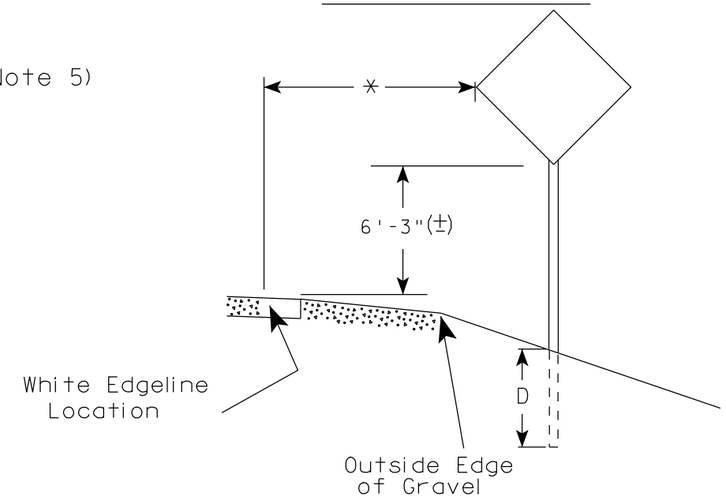
DATE 3/27/97 PLATE NO. A4-11.2

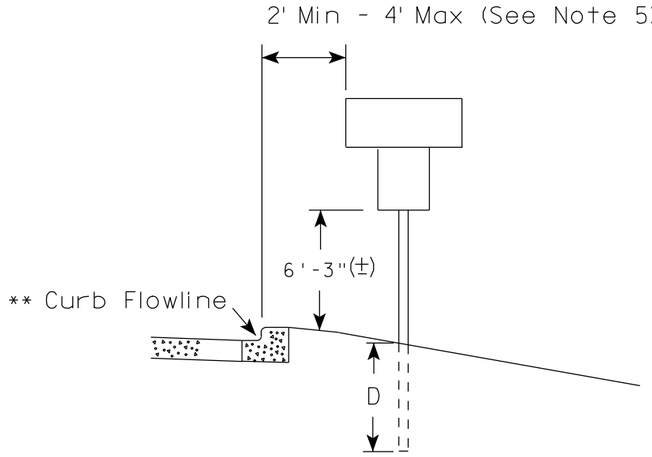
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 66	E

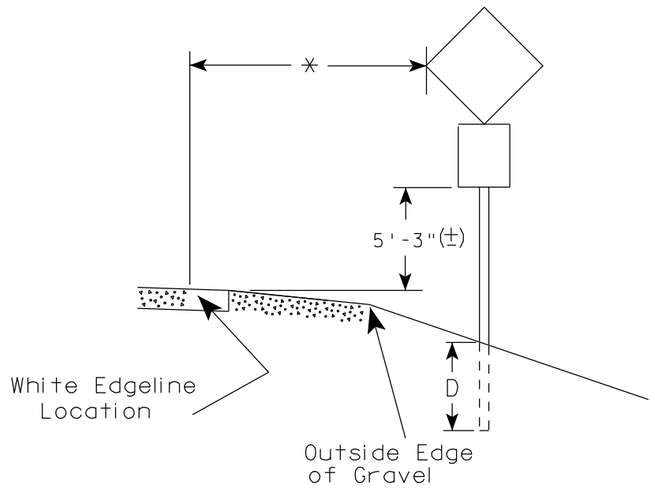
URBAN AREA



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

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

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

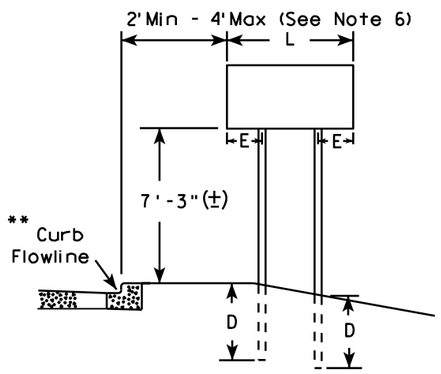
7

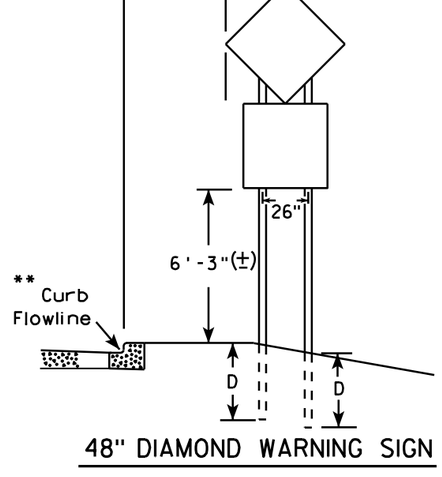
7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 67 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\A43.DGN PLOT DATE : 21-SEP-2011 13:33 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 101.303739:1.000000 WISDOT/CADDS SHEET 42

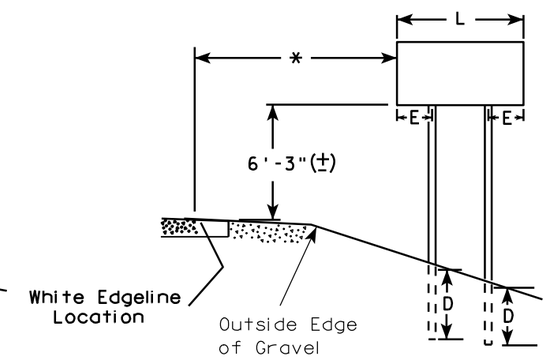
URBAN AREA

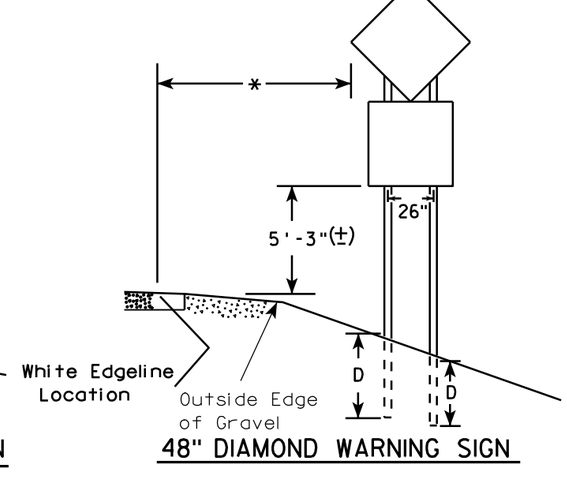




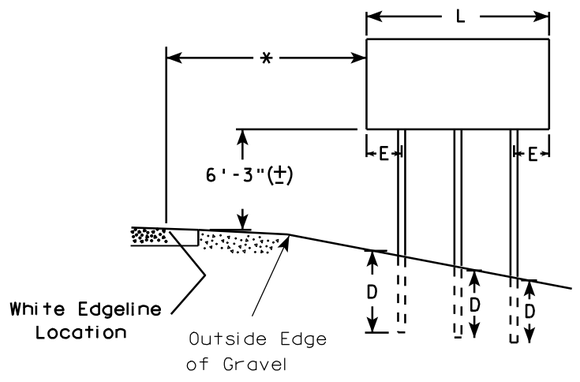
48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)





48" DIAMOND WARNING SIGN



GENERAL NOTES

1. For multiple 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 (A4-5) 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) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4"-3" (±).

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

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

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

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

***

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

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

POST EMBEDMENT DEPTH

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

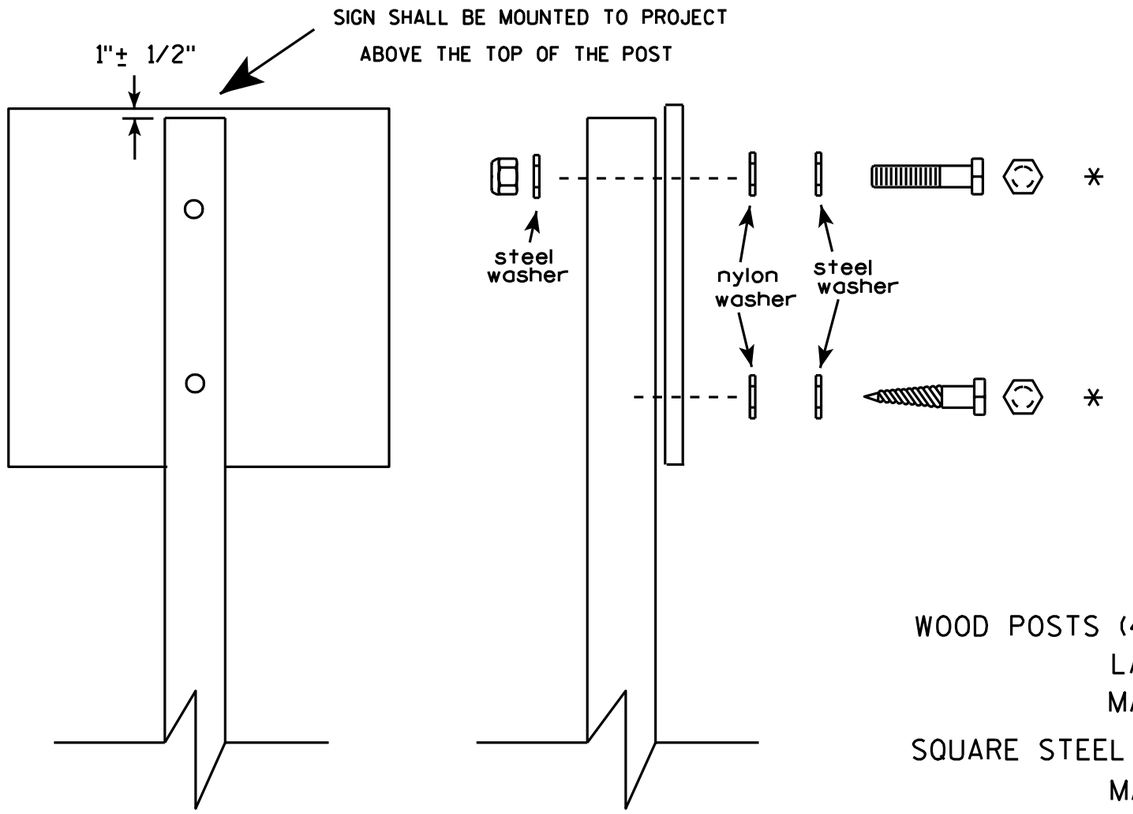
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 68	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

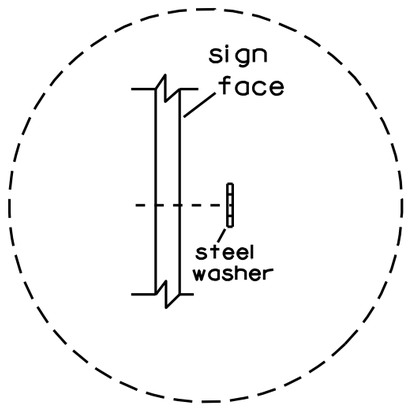
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

7

PROJECT NO:

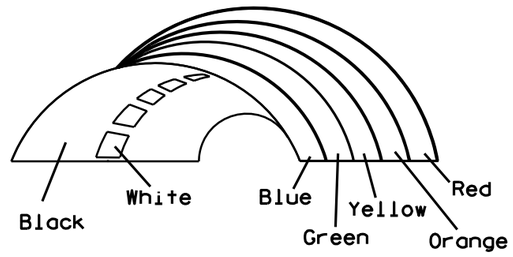
SHEET NO: 69 E

* VARIES

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - (See Note 5)
3. Message Series - (See Note 6)
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Border - Blue
   Line 1 - Red
   Line 2 - Black
   Line 3-5 - Blue
6. Line 1 - Dutch 8011L
   Line 2 - Series E
   Line 3-5 - Series C
7. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.

Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow

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	30	36	1 1/2	1/2	5/8	3	2	3 1/2	2 7/8	1	8	2 1/8	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2							7.5
3																											
4																											
5																											

STANDARD SIGN
I55-56

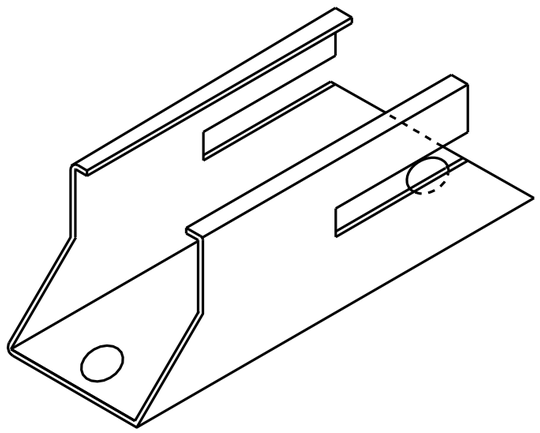
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/27/11 PLATE NO. 155-56.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 70

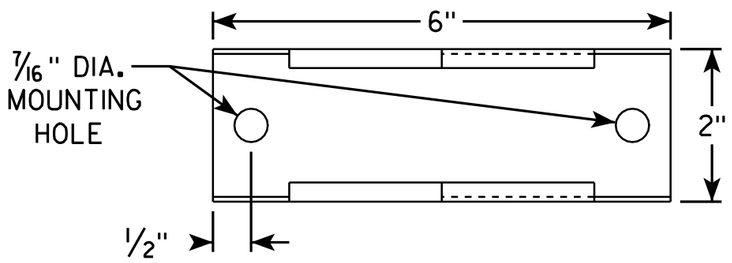
ISOMETRIC VIEW



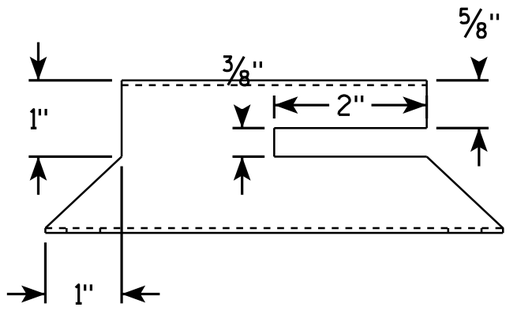
NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

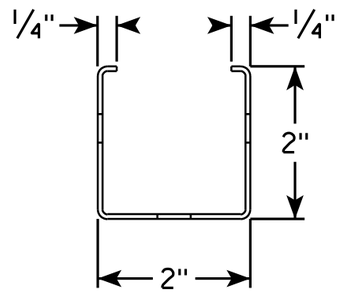
TOP VIEW



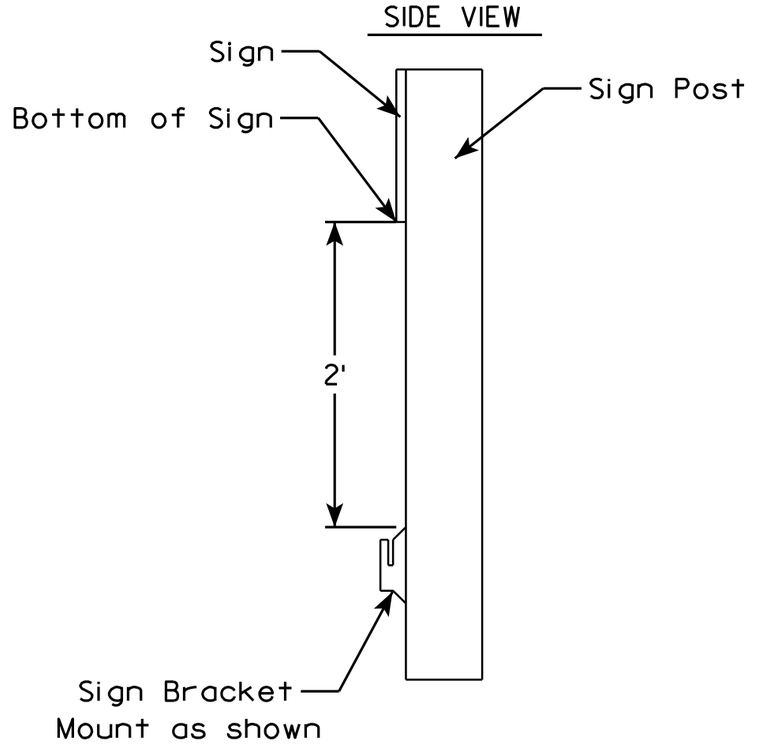
SIDE VIEW



END VIEW



SIDE VIEW



7

7

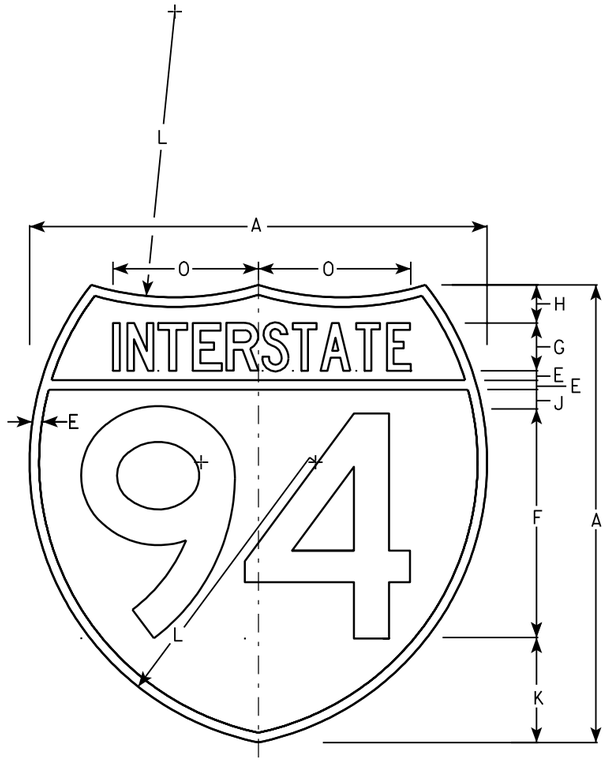
ROLLUP SIGN BRACKET I55-56B

WISCONSIN DEPT OF TRANSPORTATION

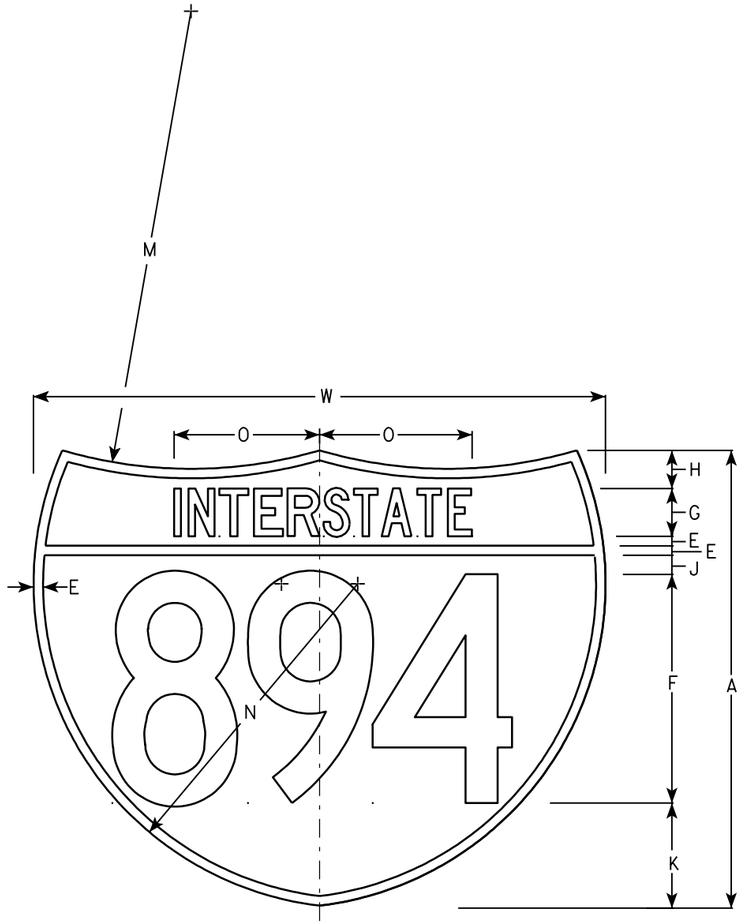
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 2/5/10 PLATE NO. I55-56B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 71	E



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

INTERSTATE ROUTE MARKER M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

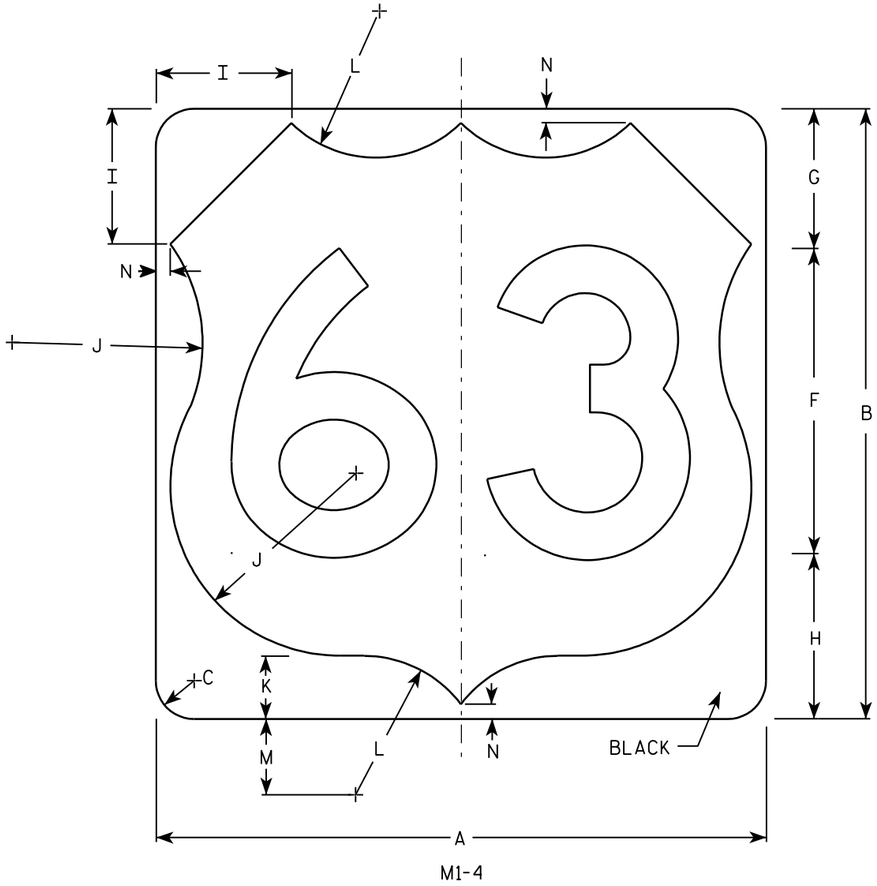
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

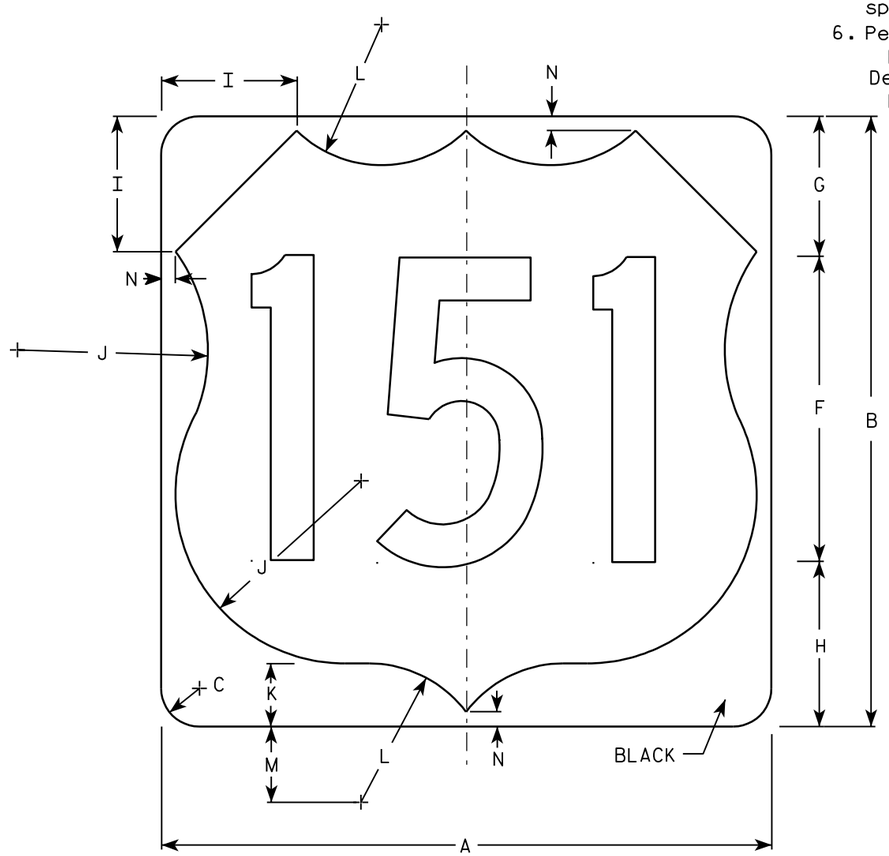
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 72	E

NOTES

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



M1-4



M1-4

7

7

Metric equivalent for this sign is:

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

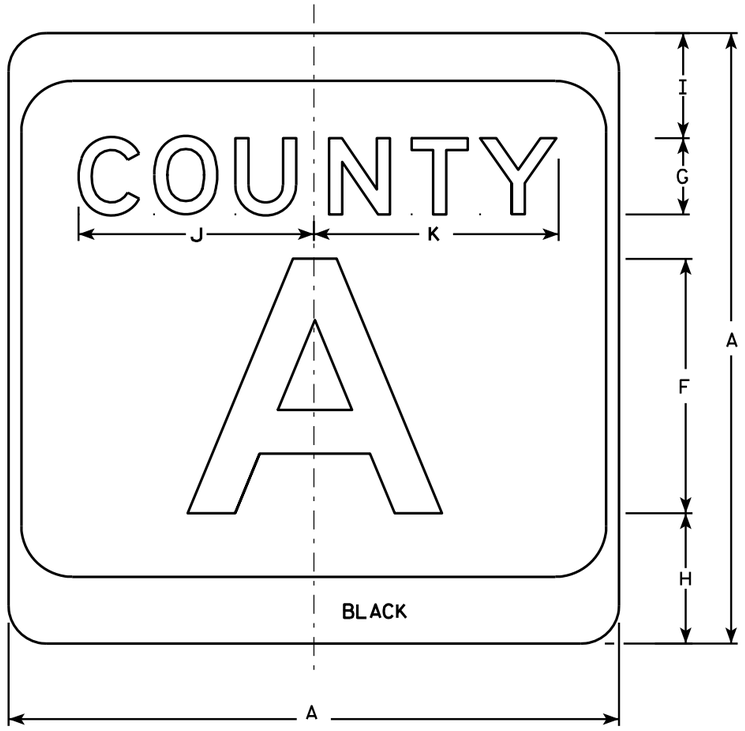
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

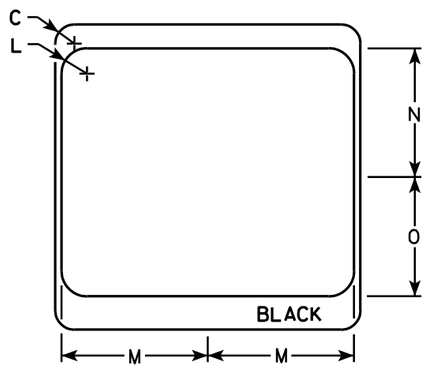
APPROVED Matthew R Rauch
for State Traffic Engineer

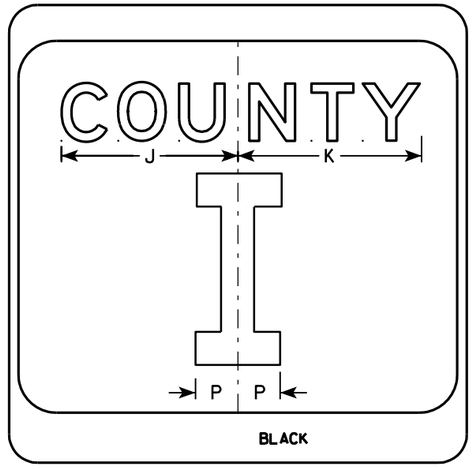
DATE 08/25/05 PLATE NO. M1-4.9

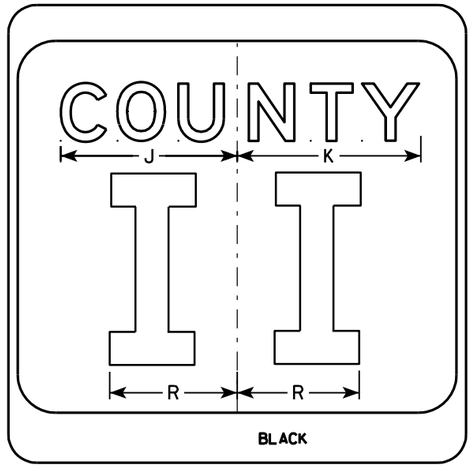
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 73	E



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

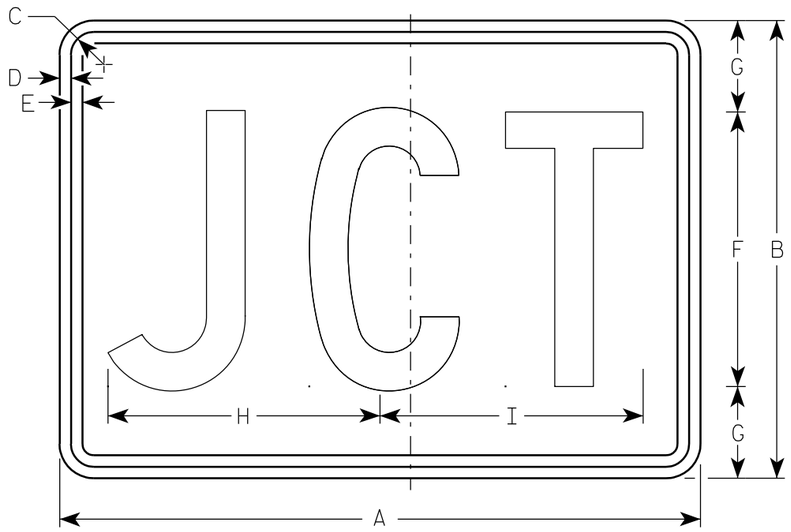
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

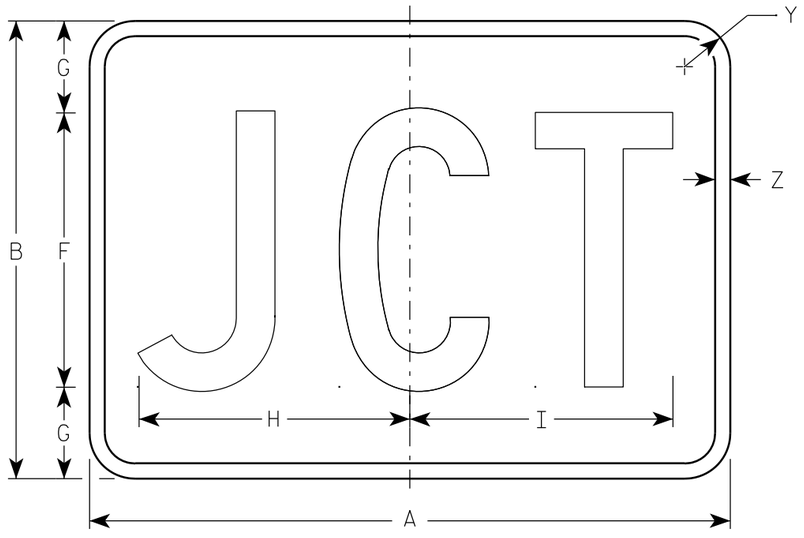
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 74 | E



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



MB2-1
MG2-1
MN2-1

NOTES

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

Metric equivalent for this sign is:

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20	0.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20

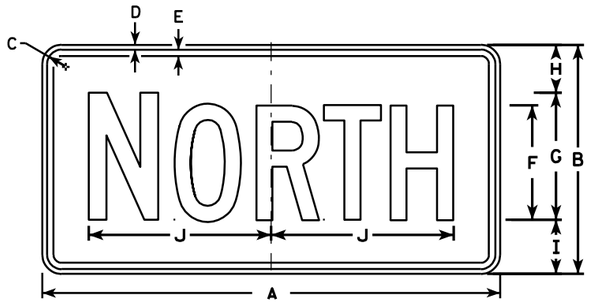
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

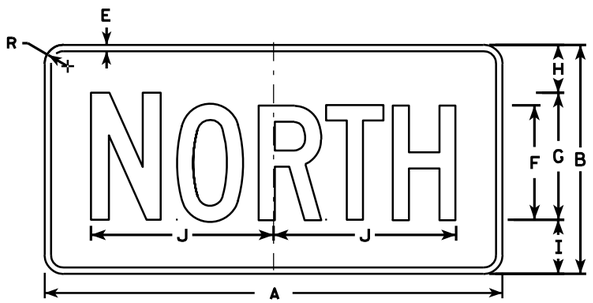
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 75	E



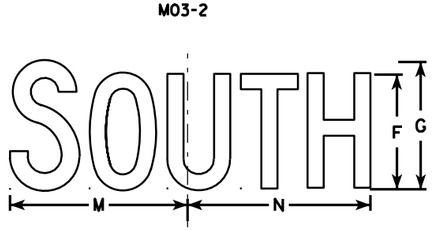
M3-1
MK3-1
MO3-1



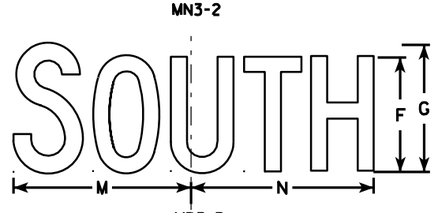
MB3-1
MG3-1
MM3-1
MN3-1

M3-2
MK3-2
MO3-2

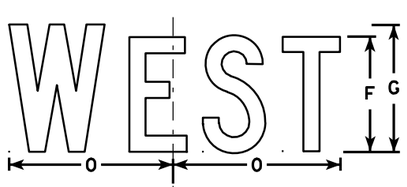
MB3-2
MG3-2
MM3-2
MN3-2



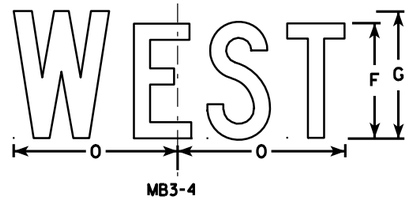
M3-3
MK3-3
MO3-3



MB3-3
MG3-3
MM3-3
MN3-3



M3-4
MK3-4
MO3-4



MB3-4
MG3-4
MM3-4
MN3-4

NOTES

1. All Signs Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White - Type H Reflective
   (Detour or temporary signs - Reflective)
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White - Type H Reflective
   (Detour or temporary signs - Reflective)
   MG3-1 thru MG3-4 Background - Green
   Message - White - Type H Reflective
   MK3-1 thru MK3-4 Background - Green
   Message - White - Type H Reflective
   MM3-1 thru MM3-4 Background - White - Type H Reflective
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White - Type H Reflective
   M03-1 thru M03-4 Background - Orange - Reflective
   Message - Black
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

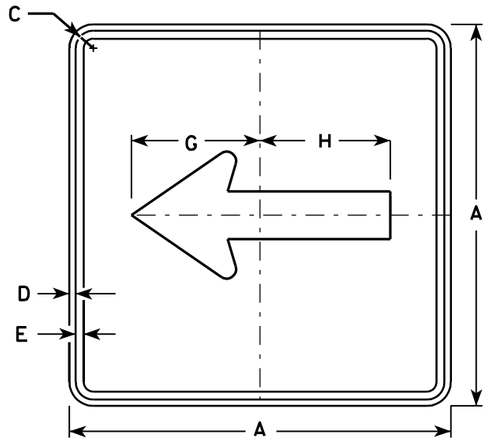
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

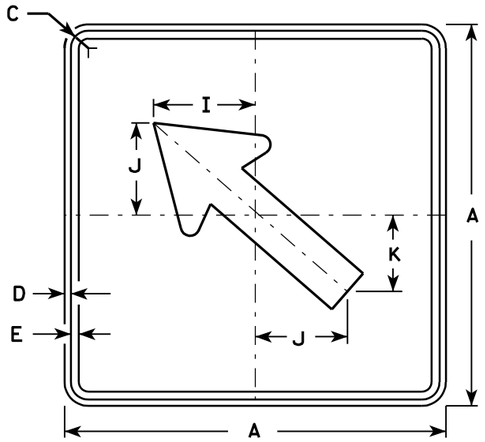
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/10/10 PLATE NO. M3-1.12

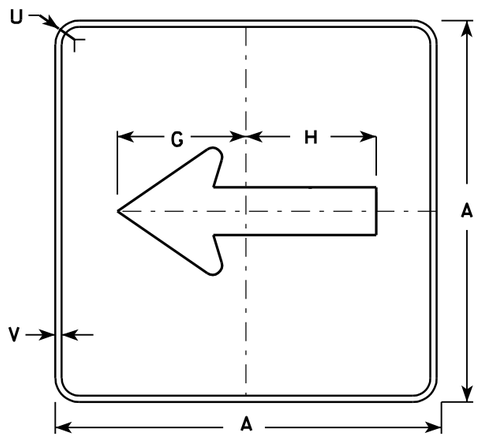
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 76	E



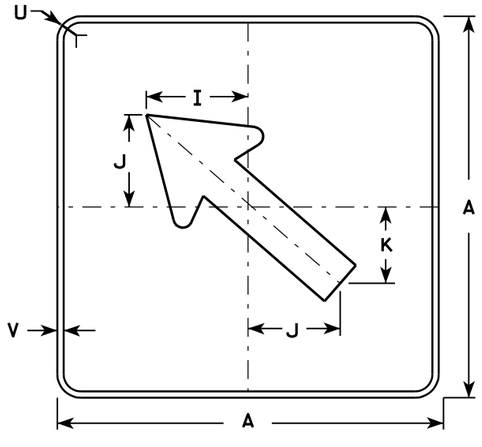
M6-1
MK6-1
MM6-1
MO6-1
MR6-1



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



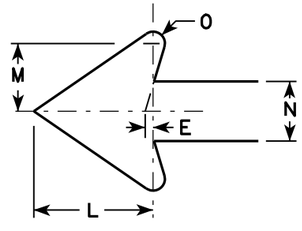
MB6-1
MG6-1
MN6-1



MB6-2
MG6-2
MN6-2

NOTES

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. M6-1 and M6-2 Background - White - Type H Reflective (Detour or temporary Signs - Reflective) Message - Black
   MB6-1 and MB6-2 Background - Blue Message - White - Type H Reflective (Detour or temporary Signs - Reflective)
   MG6-1 and MG6-2 Background - Green Message - White - Type H Reflective
   MK6-1 and MK6-2 Background - Green Message - White - Type H Reflective
   MM6-1 and MM6-2 Background - White - Type H Reflective Message - Green
   MN6-1 and MN6-2 Background - Brown Message - White - Type H Reflective
   MO6-1 and MO6-2 Background - Orange - Reflective Message - Black
   MR6-1 and MR6-2 Background - Brown Message - Yellow - Type H Reflective



Metric equivalent for this sign is:

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06	0.28
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25	0.56
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25	0.56
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25	0.56

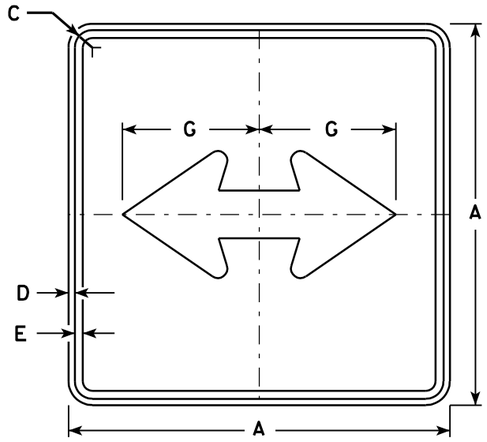
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

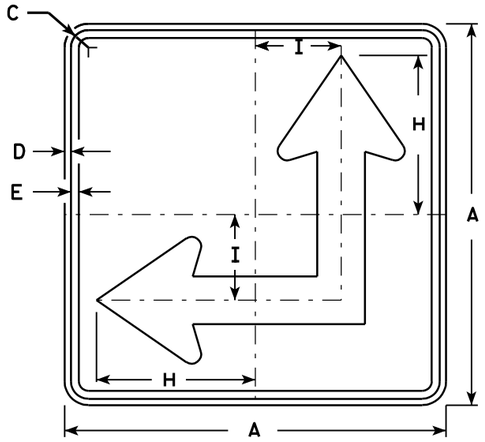
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M6-1.12

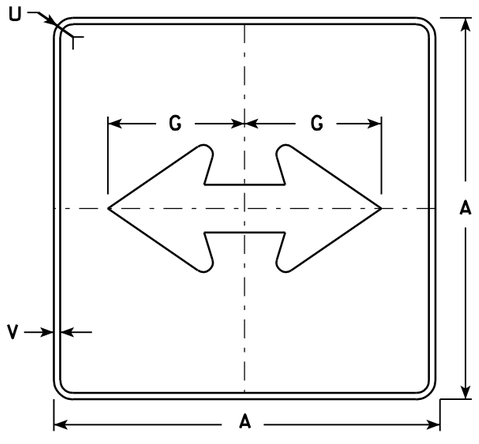
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 77	E



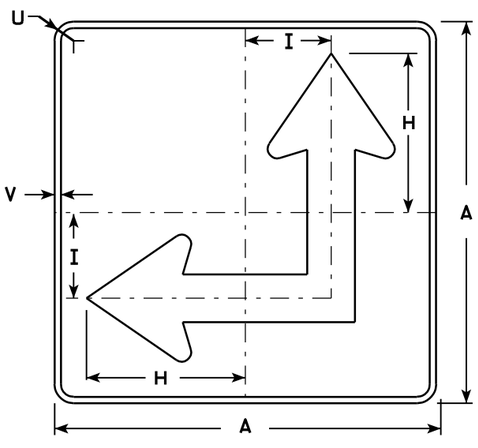
M6-4
MK6-4
MM6-4
MO6-4
MR6-4



M6-6
MK6-6
MM6-6
MO6-6
MR6-6



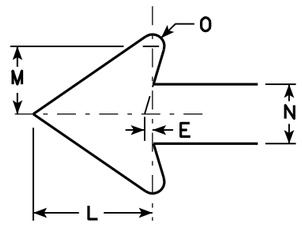
MB6-4
MG6-4
MN6-4



MB6-6
MG6-6
MN6-6

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. M6-4 and M6-6 Background - White - Type H Reflective
   (Detour or temporary Signs - Reflective)
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White - Type H Reflective
   (Detour or temporary Signs - Reflective)
   MG6-4 and MG6-6 Background - Green
   Message - White - Type H Reflective
   MK6-4 and MK6-6 Background - Green
   Message - White - Type H Reflective
   MM6-4 and MM6-6 Background - White - Type H Reflective
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White - Type H Reflective
   MO6-4 and MO6-6 Background - Orange - Reflective
   Message - Black
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow - Type H Reflective
5. M6-6R same as M6-6L except arrow points ahead and right.



Metric equivalent for this sign is:

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06	0.28
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25	0.56
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25	0.56
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25	0.56

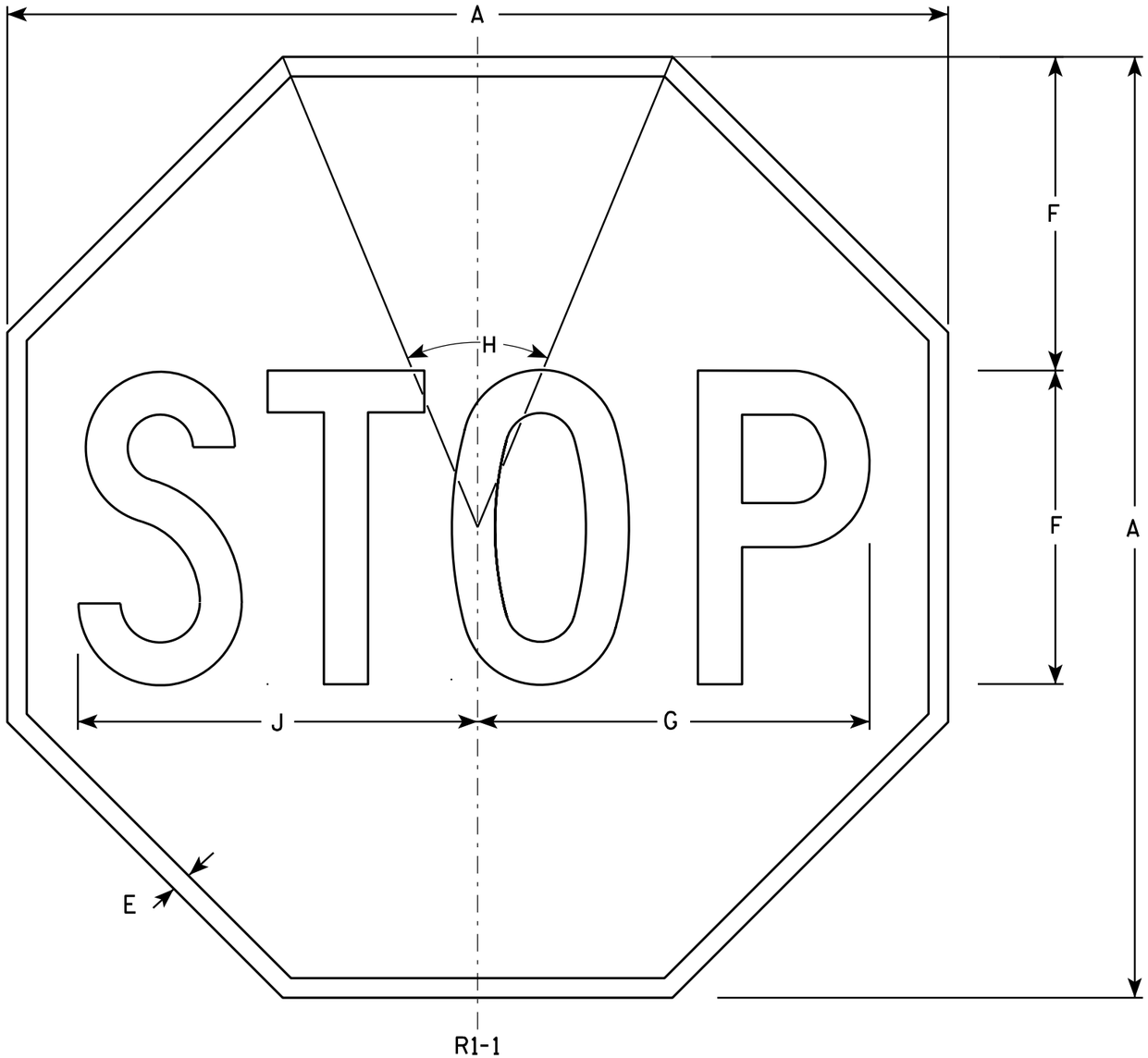
STANDARD SIGN M6-4 & M6-6 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/16/10 PLATE NO. M6-4.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 78	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

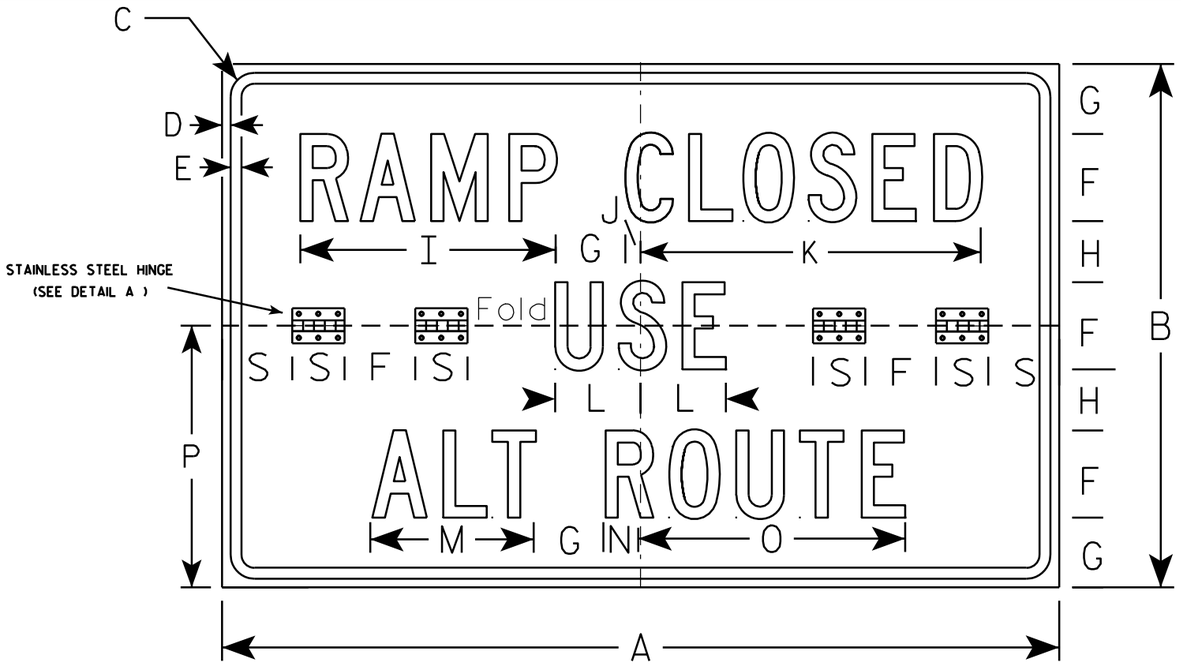
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

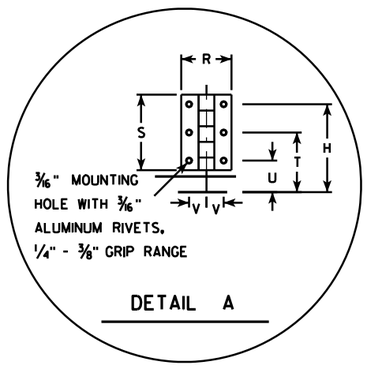
APPROVED Matthew R Rauch
for State Traffic Engineer

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

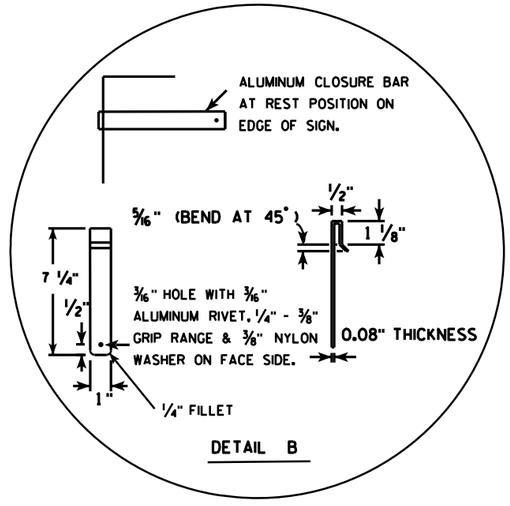
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 79	E



R11-54F



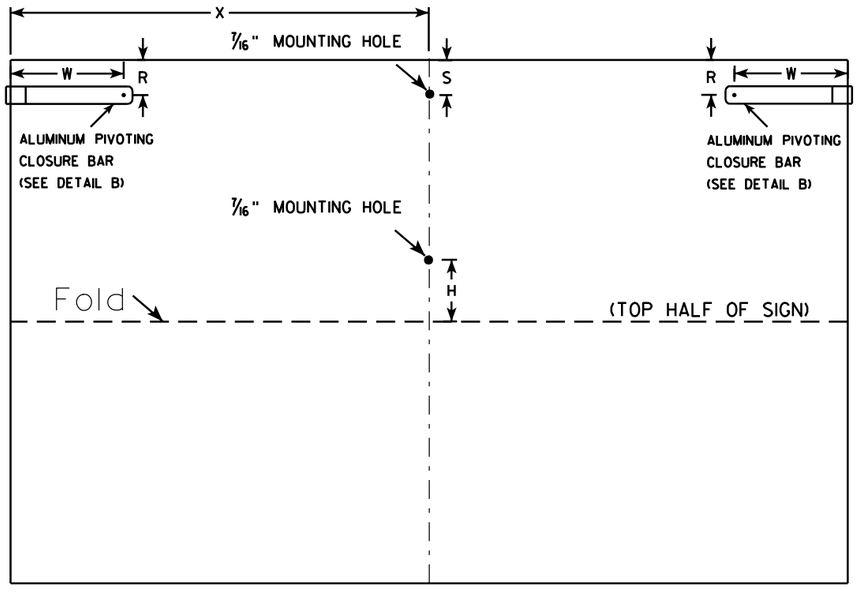
DETAIL A



DETAIL B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - C
4. Sign Base Material shall be aluminum corners and borders shall be rounded.
5. All hardware used on the folding sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



(BACK VIEW)

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	48	30	1 3/8	1/2	5/8	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
2M	48	30	1 3/8	1/2	5/8	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
3																											
4																											
5																											

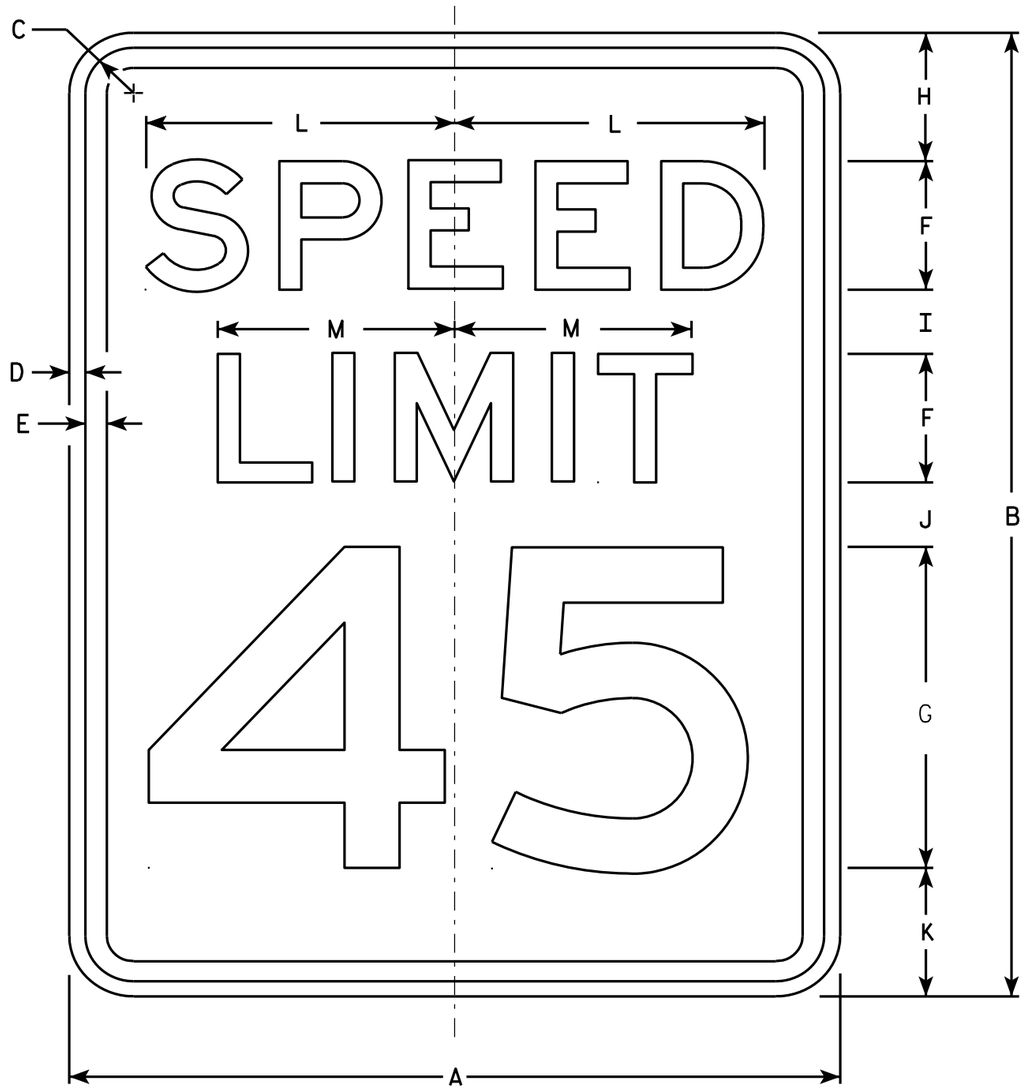
STANDARD SIGN
R11-54F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-54F.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 80	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

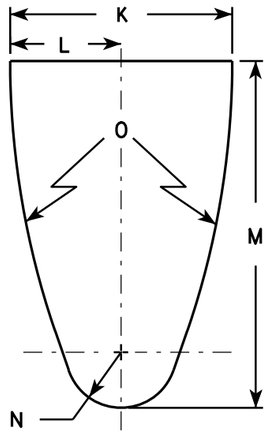
STANDARD SIGN
R2-1

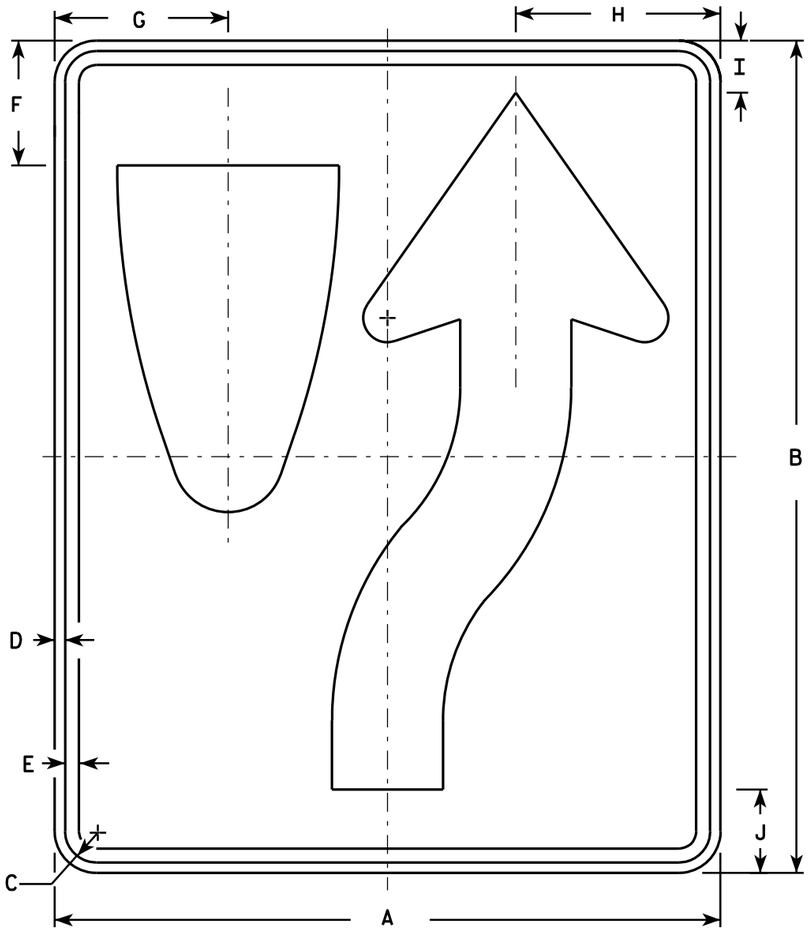
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 81 | E

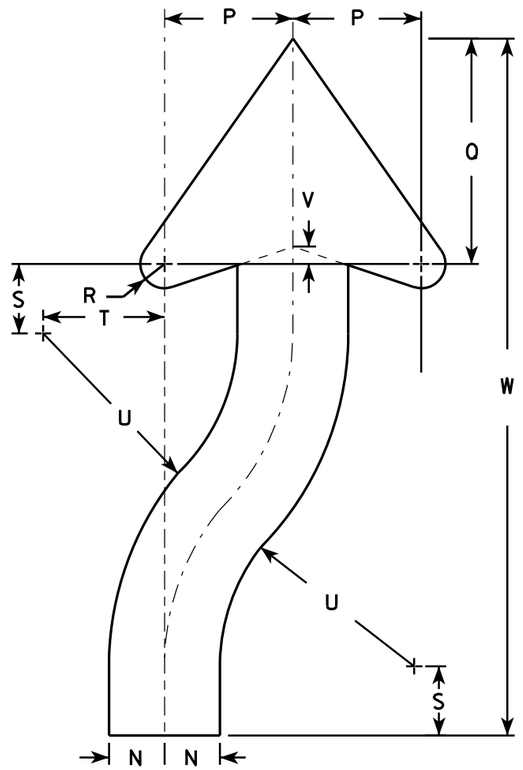




R4-7

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

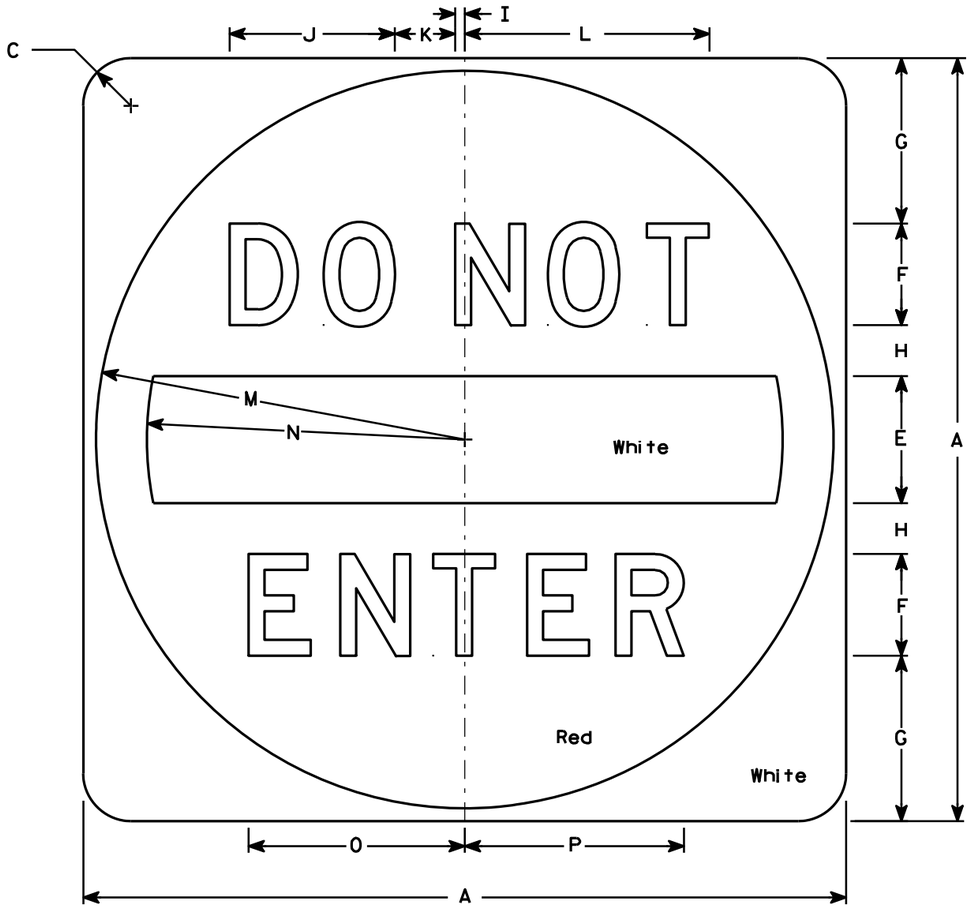
STANDARD SIGN
R4-7 & R4-8

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: 82	E



R5-1

NOTES

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

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

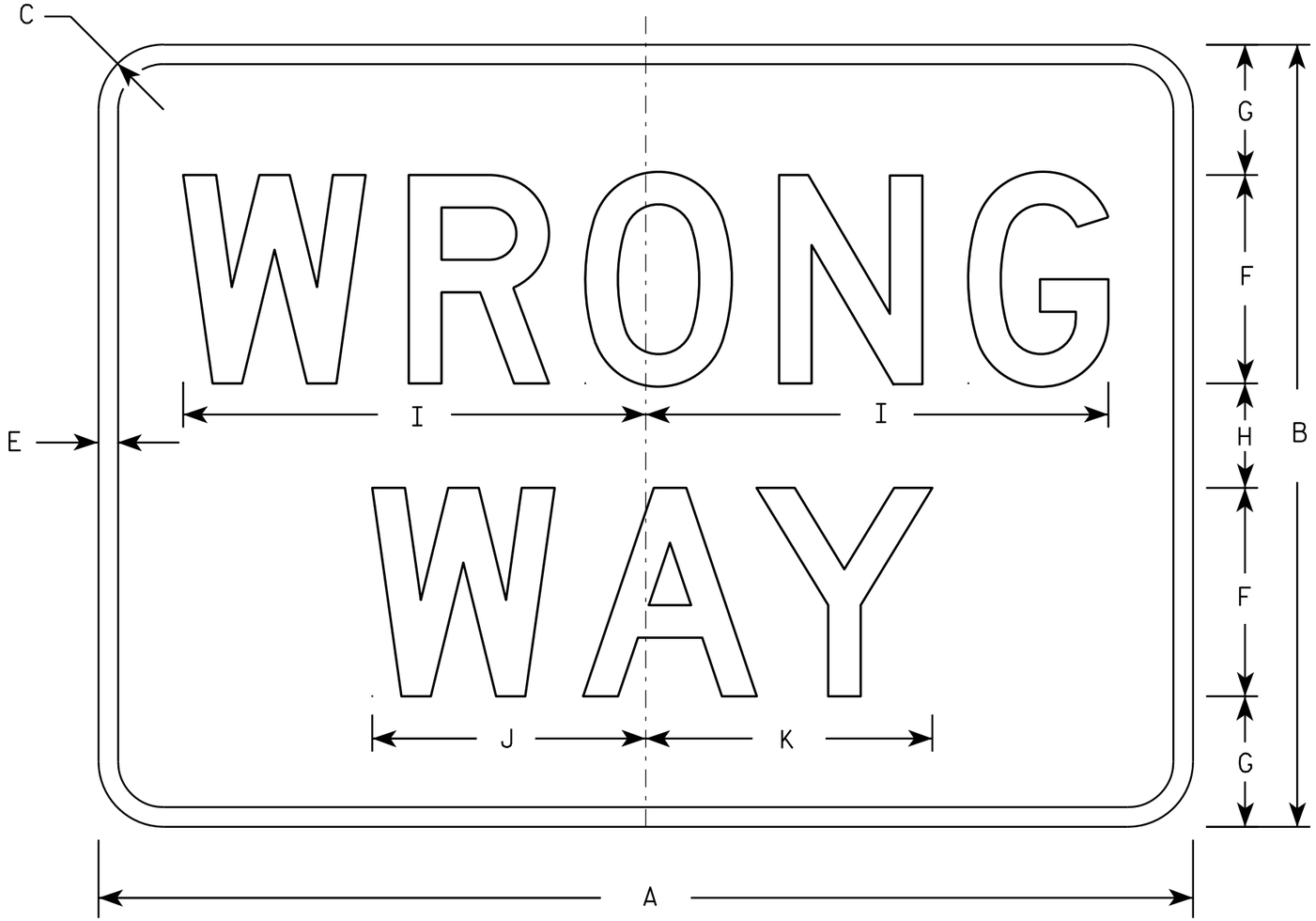
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 83 | E



R5-1A

NOTES

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

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

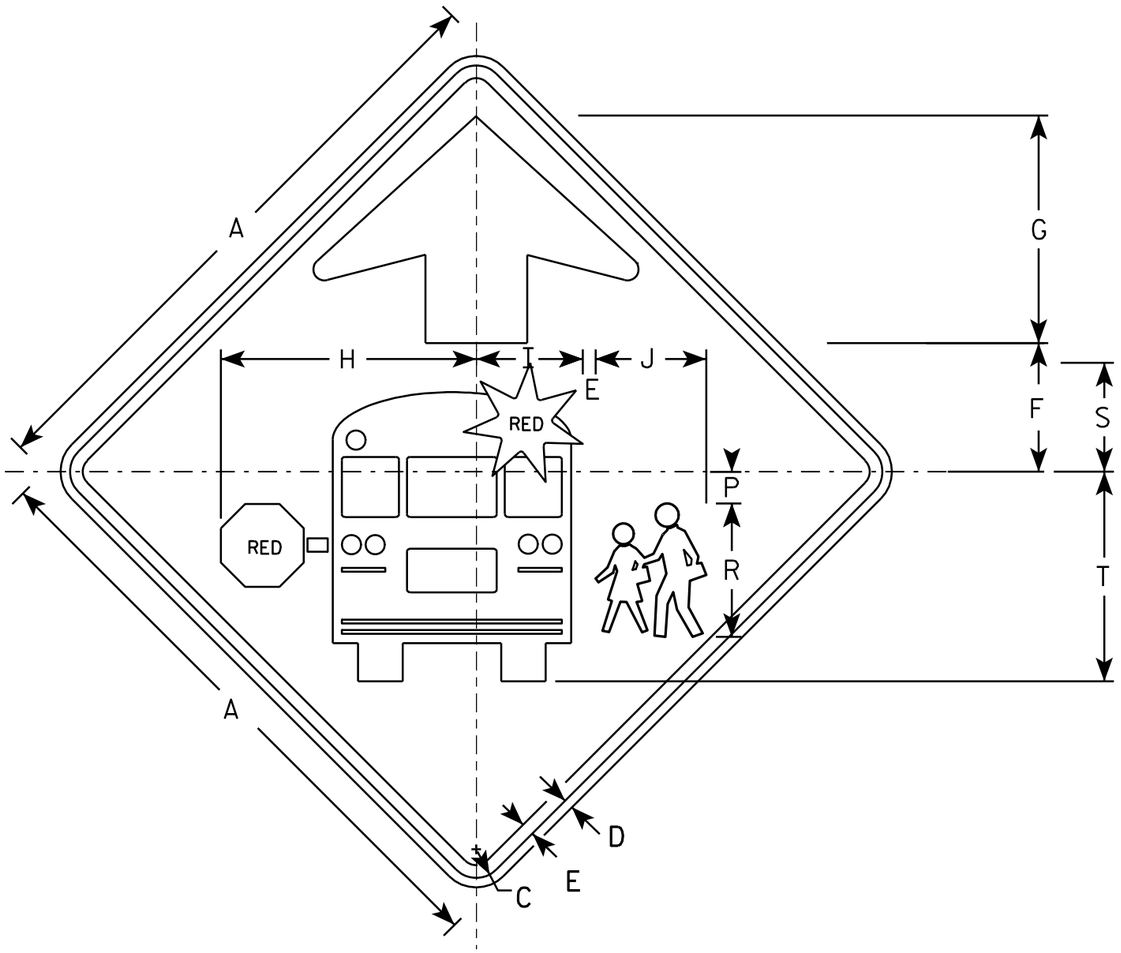
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

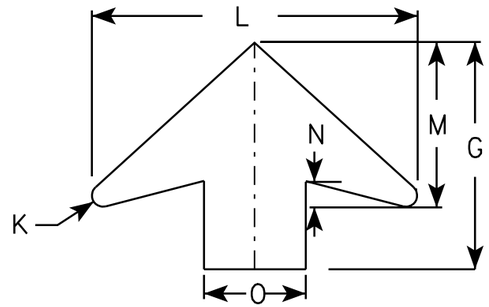
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 84 | E



S3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW-GREEN
   Message - BLACK except as noted
   Circles except PEDS- RED BACKGROUND
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.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	12 1/2	5 1/4	5 1/2	1/2	16	8	1 1/4	5	1 1/2		6 5/8	5 3/8	10 3/8							6.25
2	36		1 5/8	5/8	3/4	7 1/2	13 1/2	15 1/8	6 1/4	6 1/2	5/8	19 1/4	9 3/4	1 5/8	6	1 7/8		7 7/8	6 3/8	12 3/8							9.0
3	48		2 1/4	3/4	1	10	17 7/8	20 1/8	8 3/8	8 3/4	7/8	25 5/8	13	2	8	2 1/2		10 1/2	8 1/2	16 1/2							16.0
4	48		2 1/4	3/4	1	10	17 7/8	20 1/8	8 3/8	8 3/4	7/8	25 5/8	13	2	8	2 1/2		10 1/2	8 1/2	16 1/2							16.0
5																											

STANDARD SIGN
S3-1

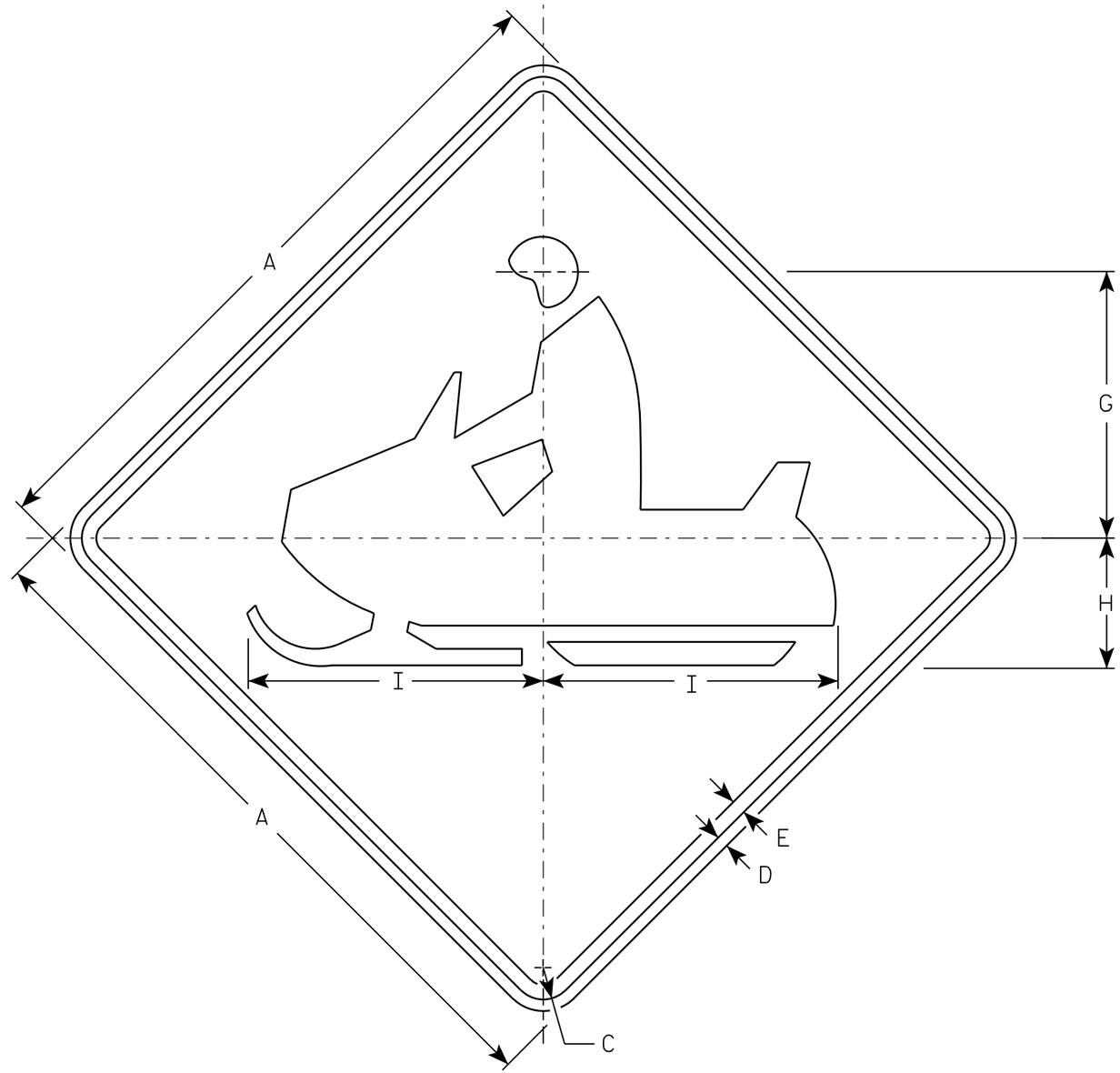
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/8/10 PLATE NO. S3-1.6

PROJECT NO:

SHEET NO: 85 E



W11-6

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		9 1/2	4 1/2	10 1/4																		4.0
2S	30		1 3/8	1/2	5/8		11 1/2	5 5/8	12 3/4																		6.25
2M	30		1 3/8	1/2	5/8		11 1/2	5 5/8	12 3/4																		6.25
3	36		1 5/8	5/8	3/4		14 1/8	6 3/4	15 1/4																		9.0
4	48		2 1/4	3/4	1		19	9	20 1/2																		16.0
5																											

STANDARD SIGN
W11-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W11-6.8

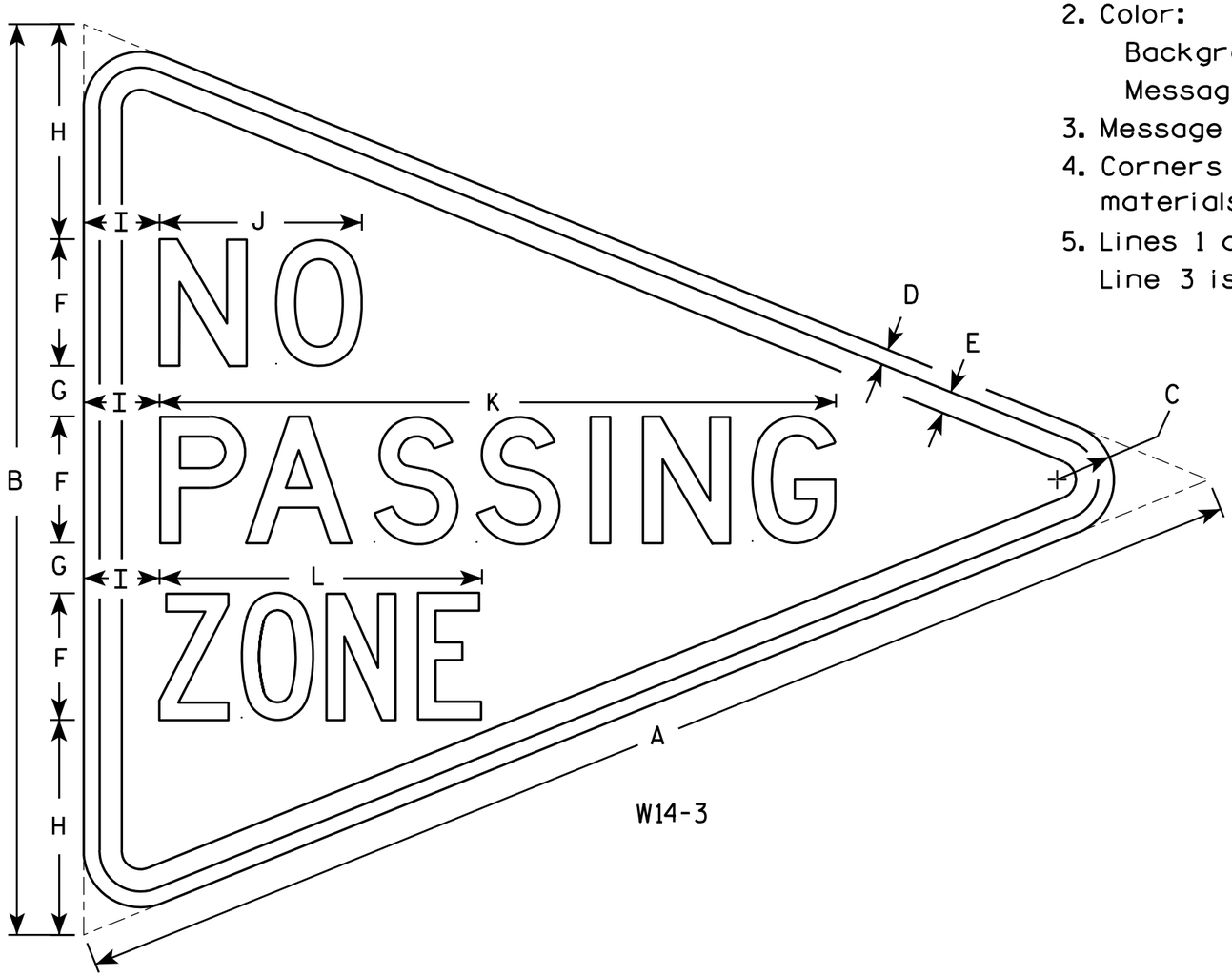
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 86	E

7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W116.DGN PLOT DATE : 13-MAR-2013 12:57 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.954276:1.000000
WISDOT/CADDS SHEET 42

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																											

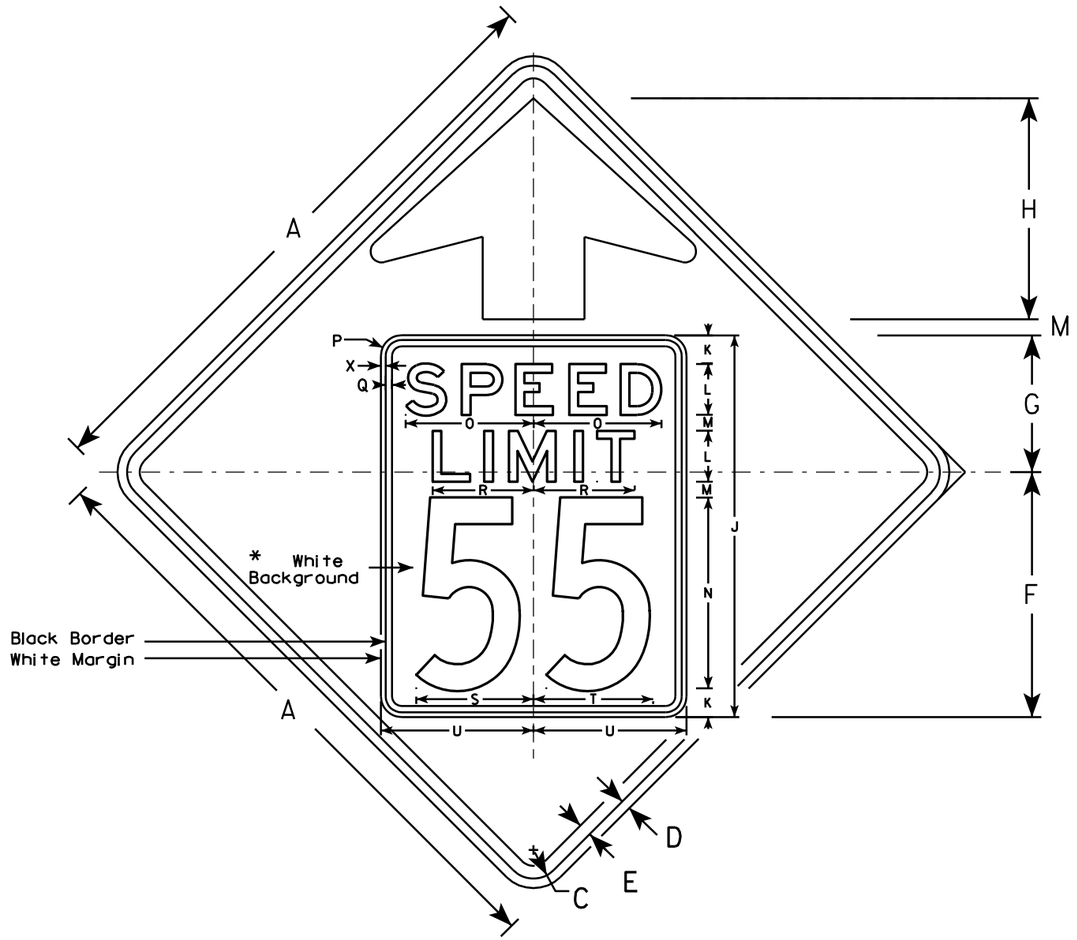
STANDARD SIGN
W14-3

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: 87	E

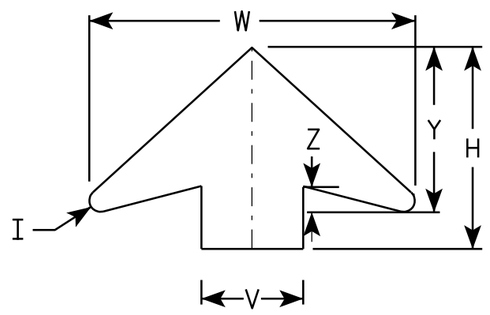


W3-5

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

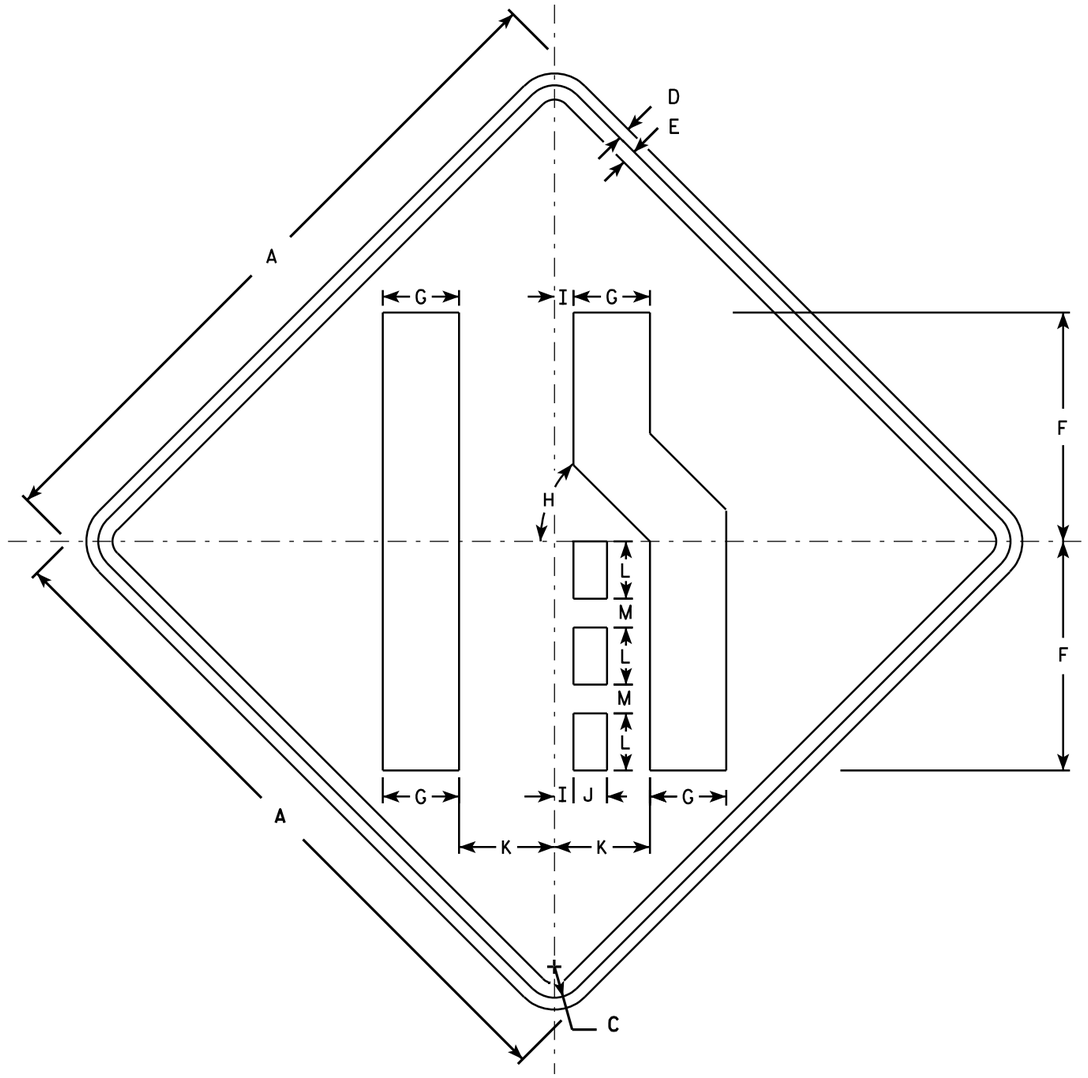
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W3-5.5

PROJECT NO:

SHEET NO: 88 E



W4-2R

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. W4-2L is the same as W4-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	10	3 3/8	45°	7/8	1 1/2	4 1/4	2 1/2	1 1/4														6.25
2S	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2M	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
3	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W4-2

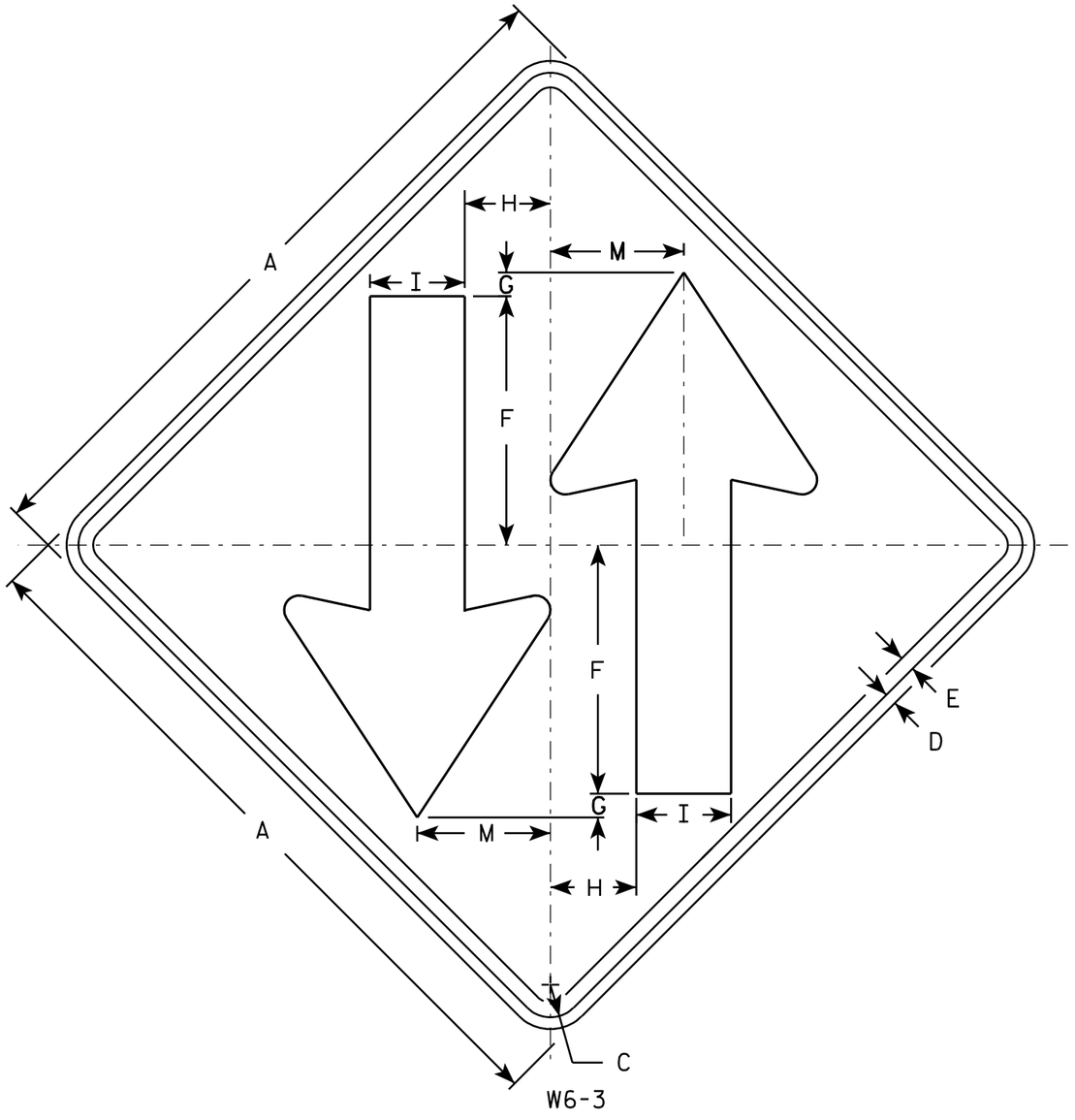
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/12/13 PLATE NO. W4-2.14

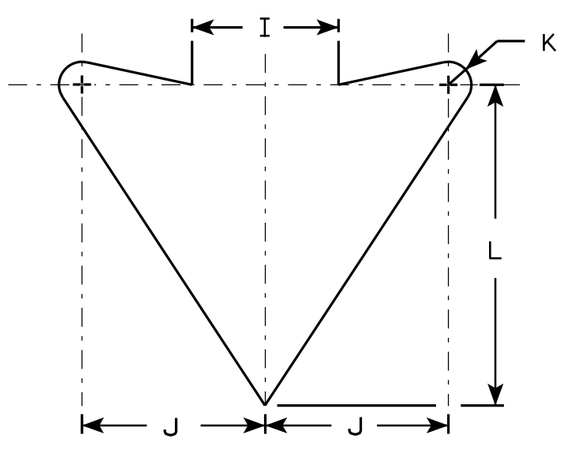
PROJECT NO:

SHEET NO: 89 E



NOTES

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



ARROW DETAIL

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

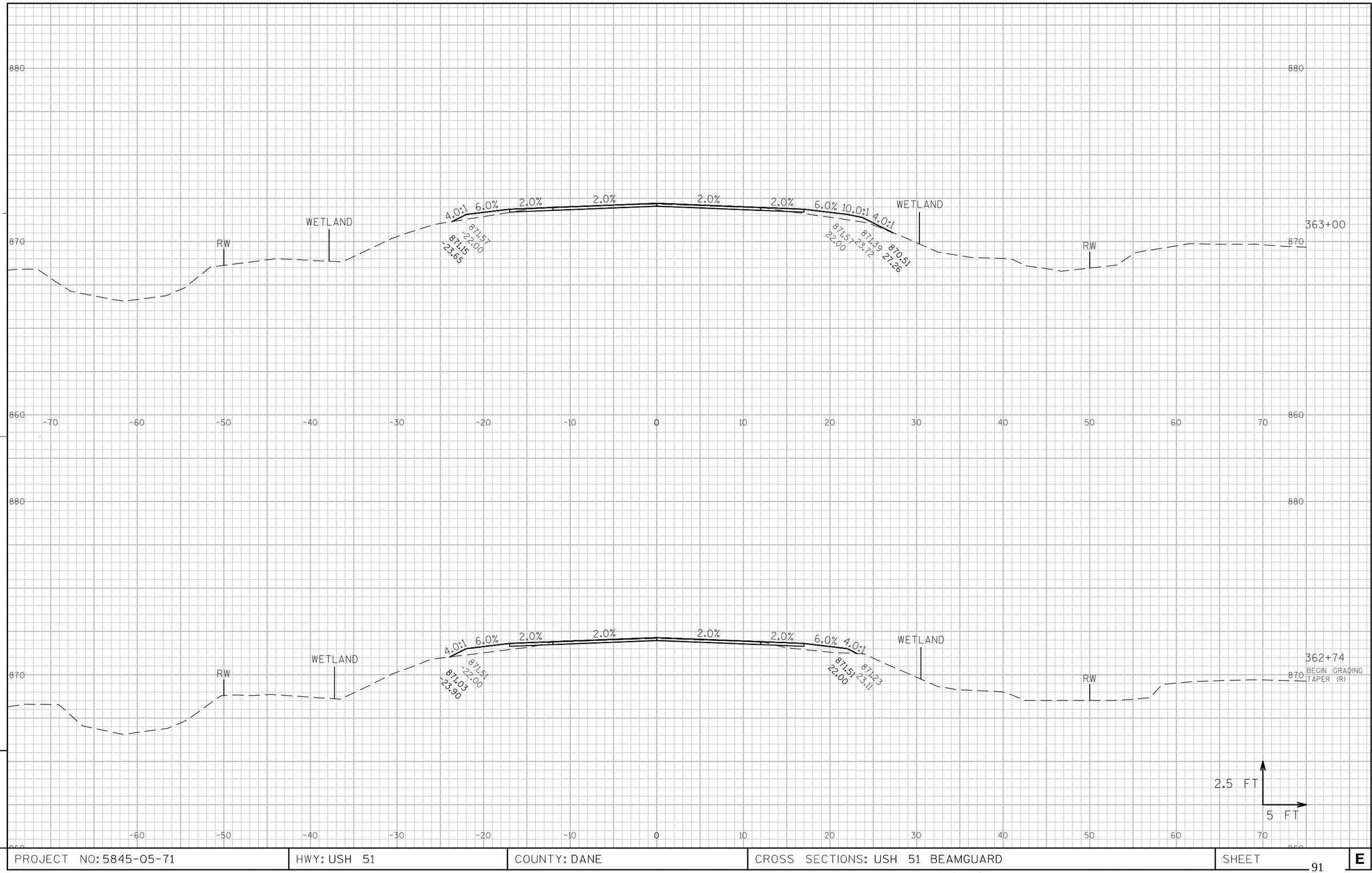
STANDARD SIGN
W6-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W6-3.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 90 | E



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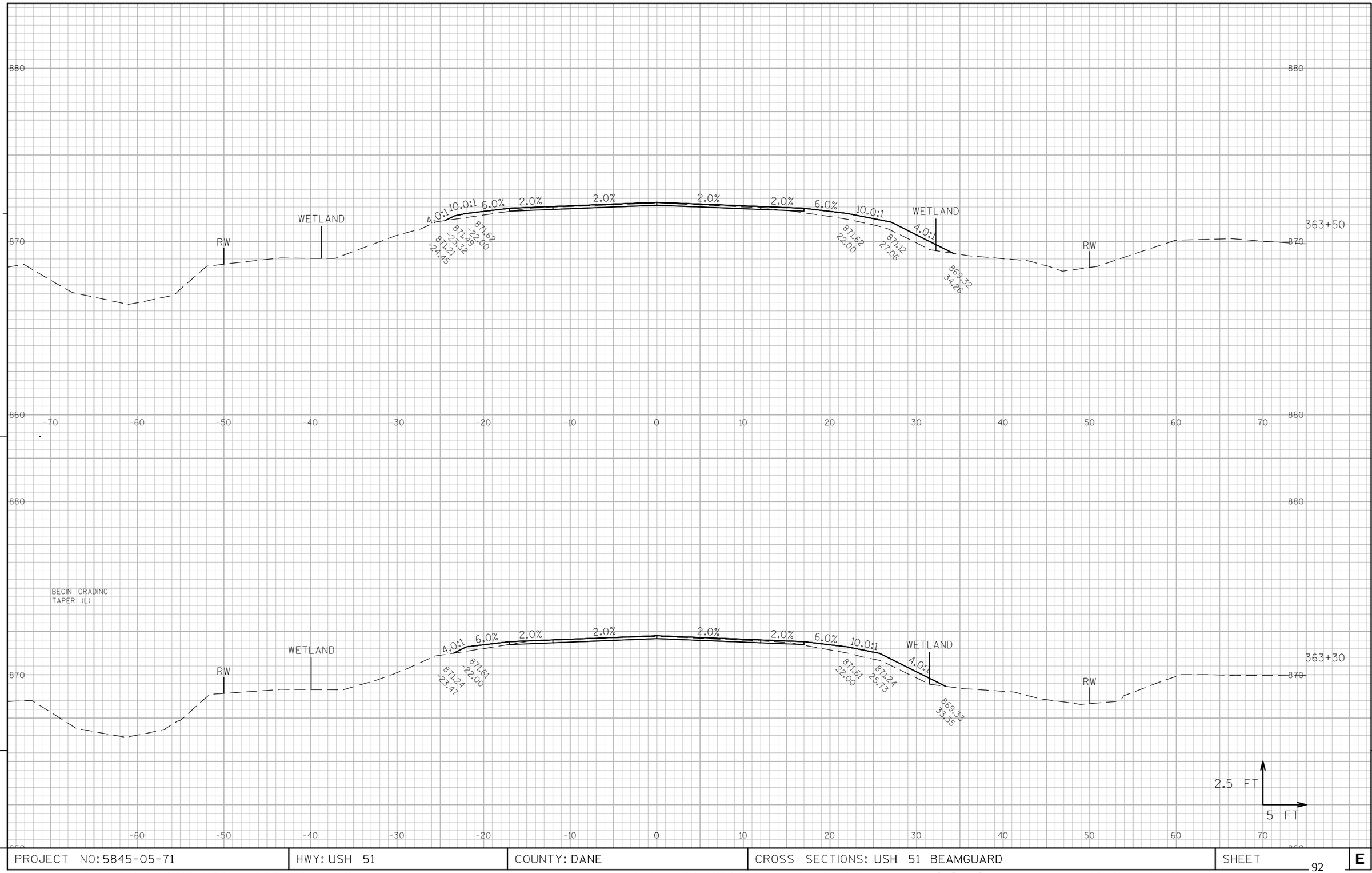
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET 91	E

FILE NAME : N:\PDS\C3D\58450501\DESIGN\CORRIDORS\USH 51-CROSS SECTION EDITS.DWG PLOT DATE : 12/13/2012 1:00 PM PLOT BY : BREGAUDIT, CHARLENE PLOT NAME : _____ PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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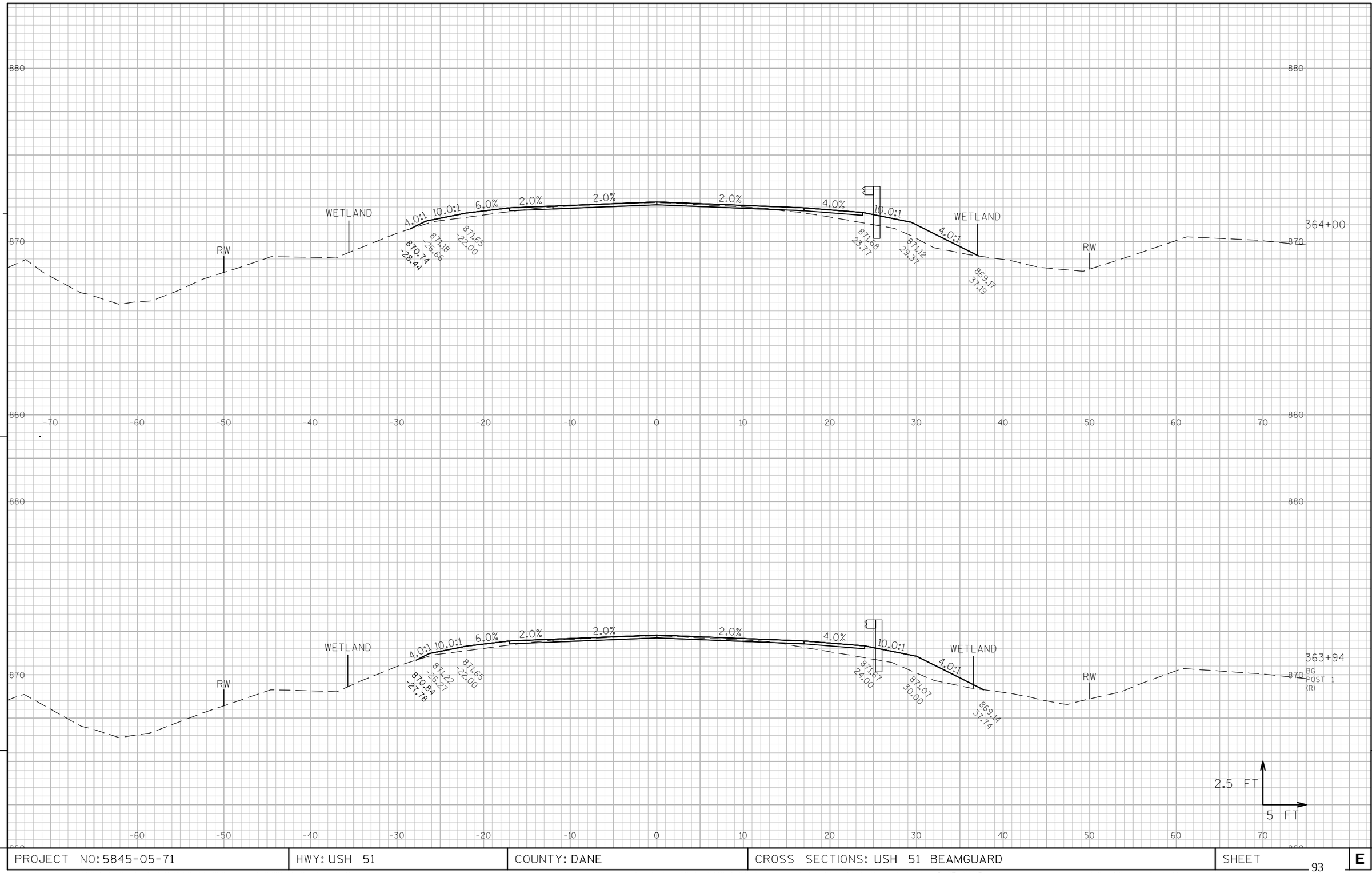
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET 92	E



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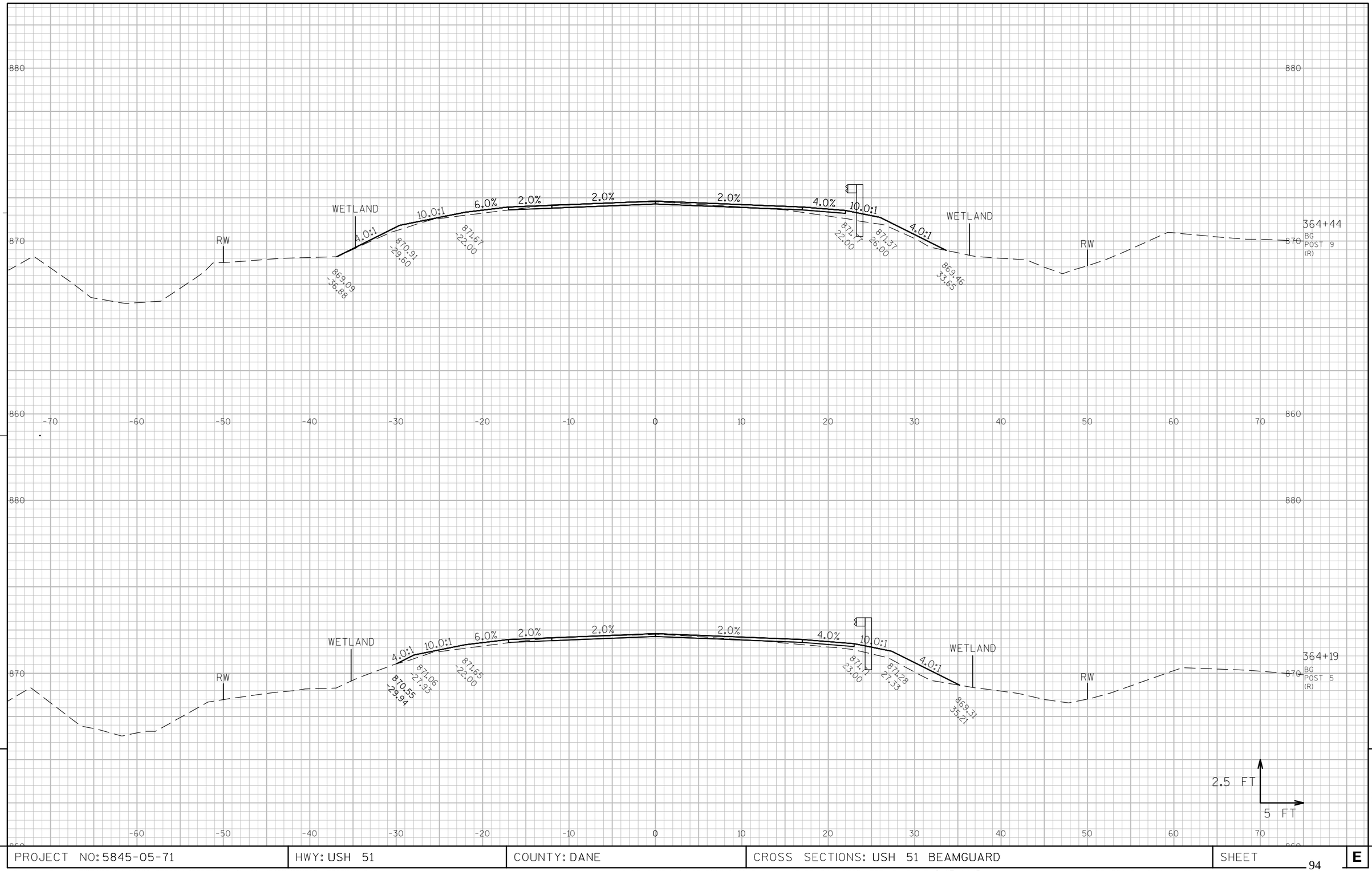
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET 93	E

FILE NAME : N:\PDS\C3D\58450501\DESIGN\CORRIDORS\USH 51-CROSS SECTION EDITS.DWG PLOT DATE : 12/13/2012 1:01 PM PLOT BY : BREGAUDIT, CHARLENE PLOT NAME : _____ PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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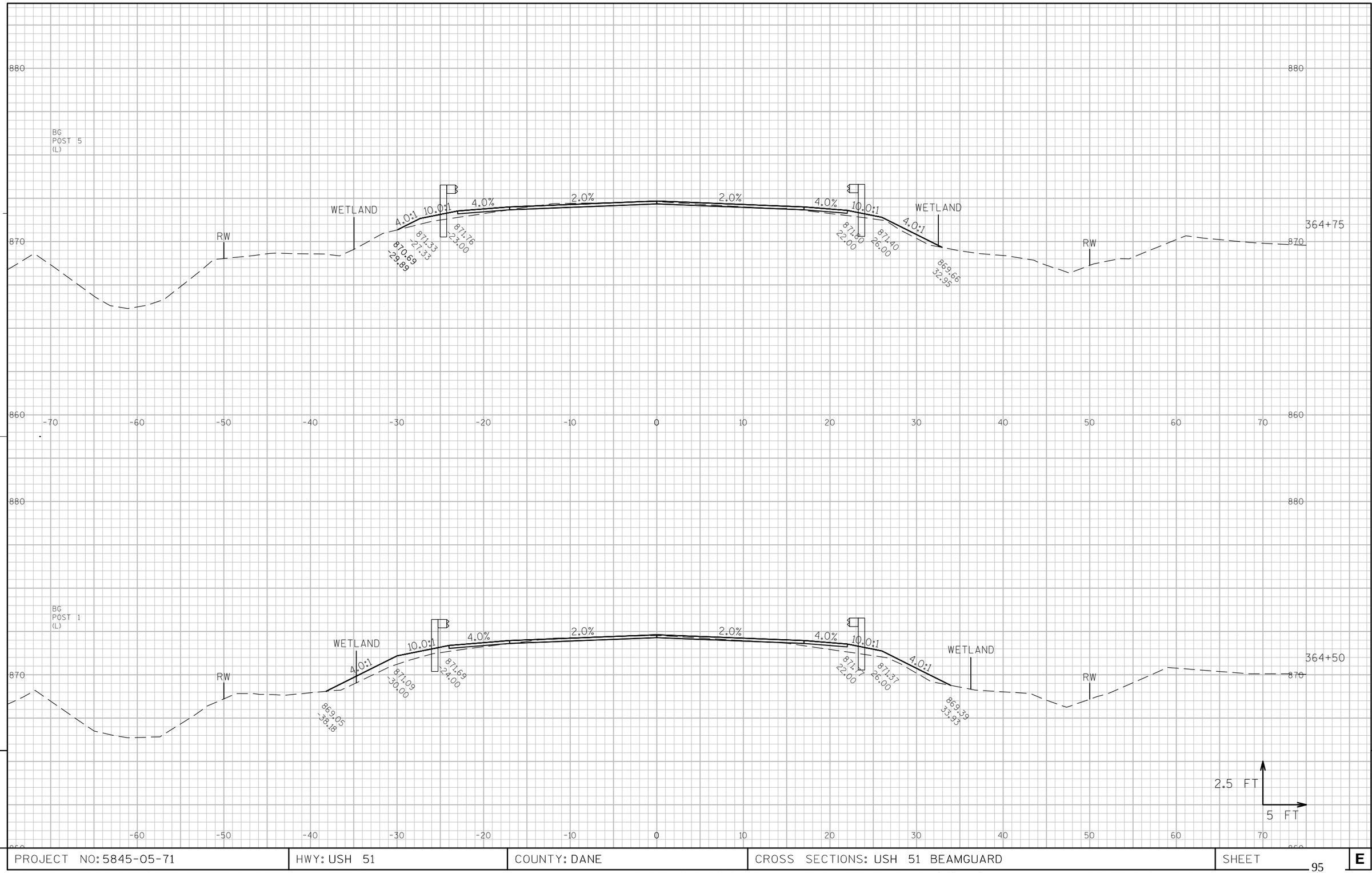
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET 94	E

FILE NAME : N:\PDS\C3D\58450501\DESIGN\CORRIDORS\USH 51-CROSS SECTION EDITS.DWG PLOT DATE : 12/13/2012 1:01 PM PLOT BY : BREGAUDIT, CHARLENE PLOT NAME : _____ PLOT SCALE : 1 IN:10 FT



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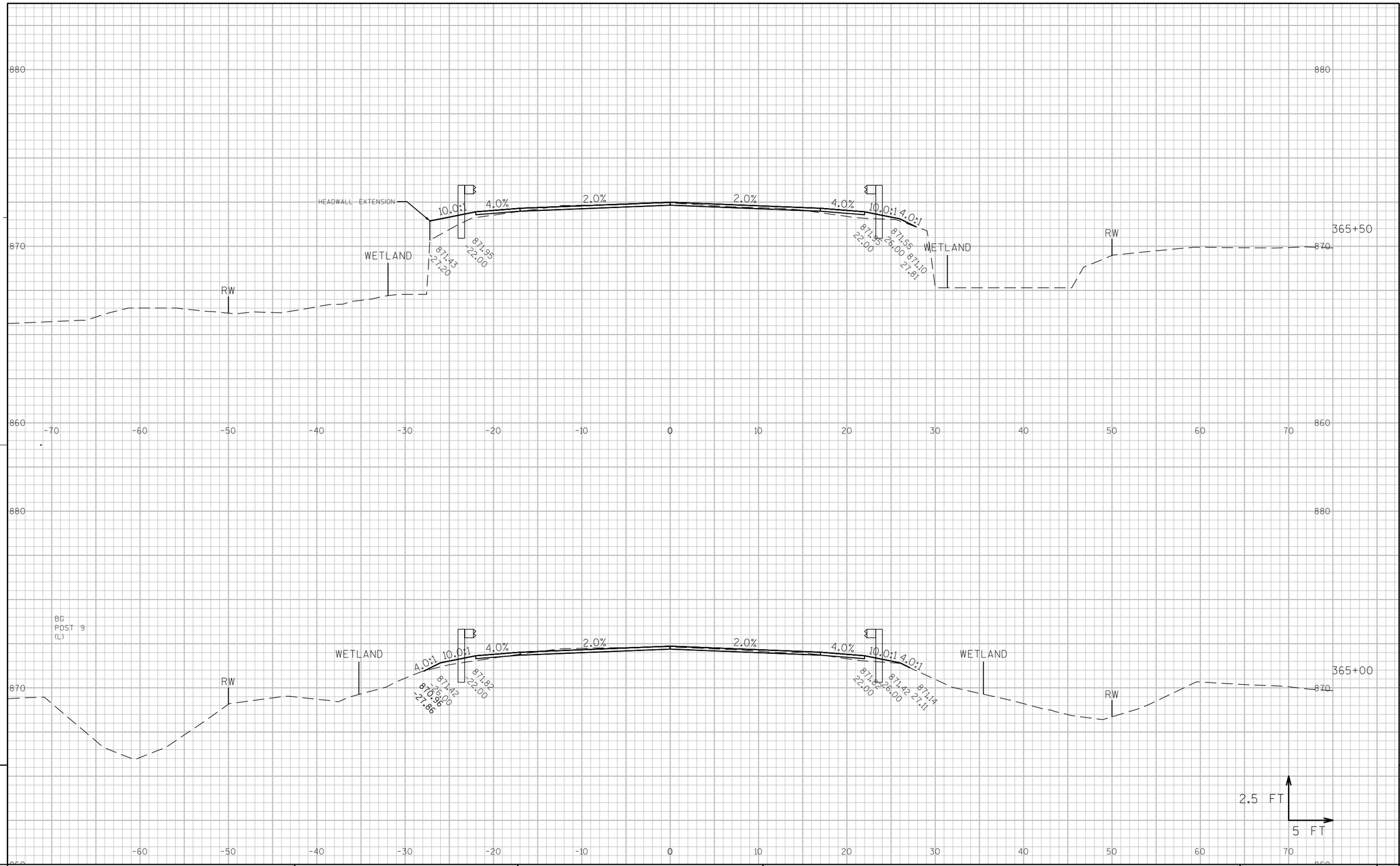
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET 95	E



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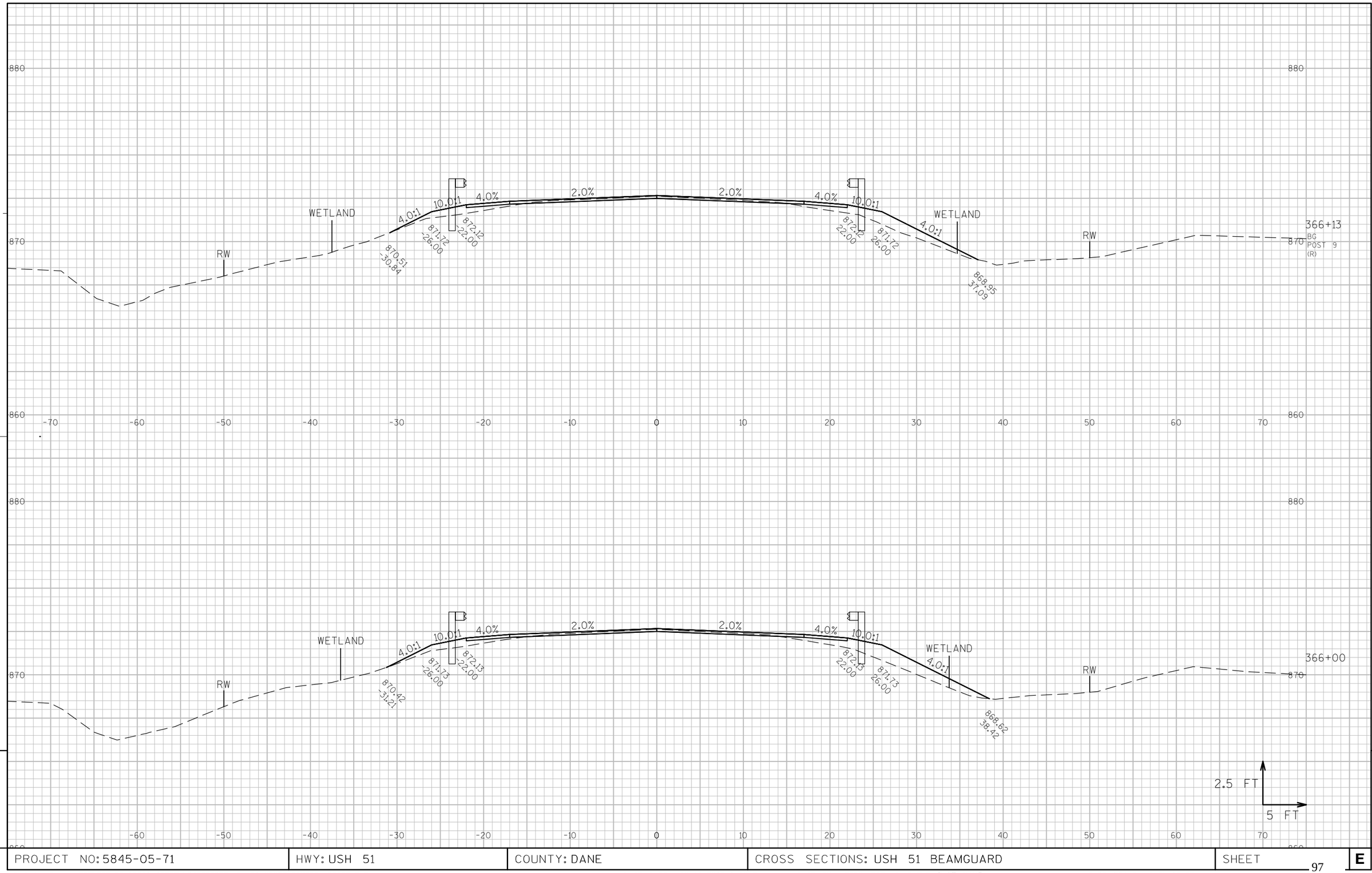
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET 96	E



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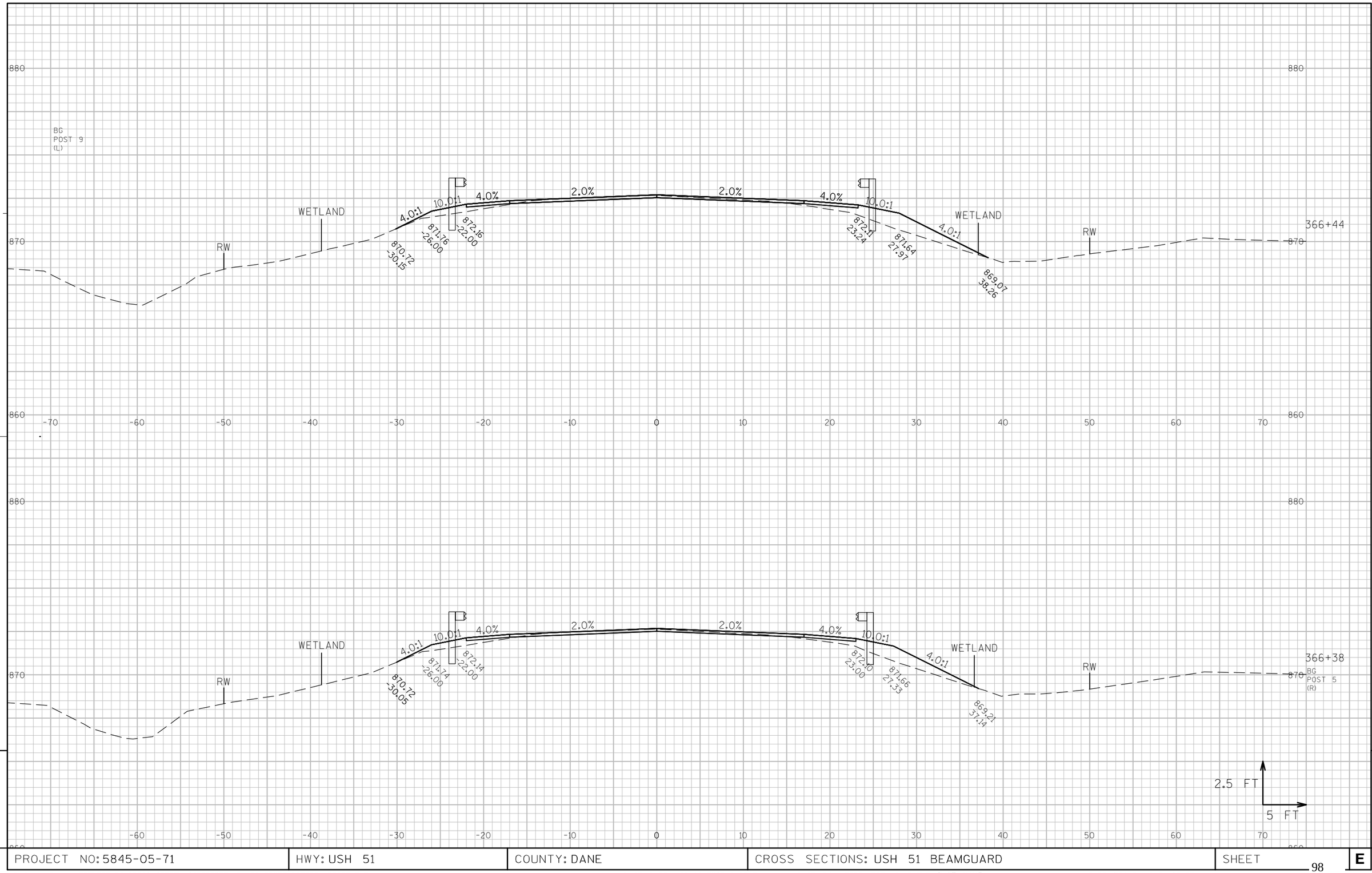
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET 97	E

FILE NAME : N:\PDS\C3D\58450501\DESIGN\CORRIDORS\USH 51-CROSS SECTION EDITS.DWG PLOT DATE : 12/13/2012 1:02 PM PLOT BY : BREGAUDIT, CHARLENE PLOT NAME : _____ PLOT SCALE : 1 IN:10 FT



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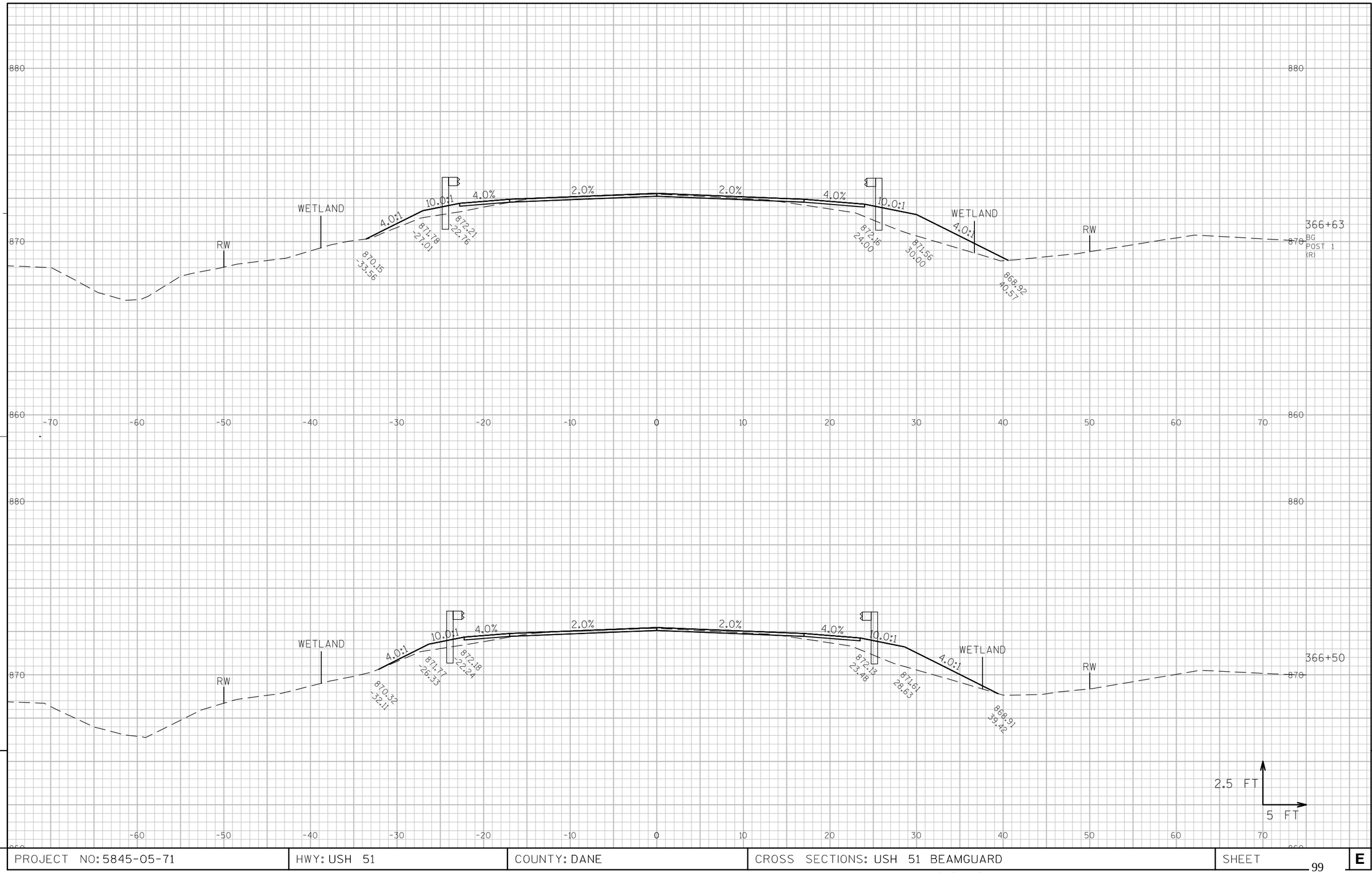
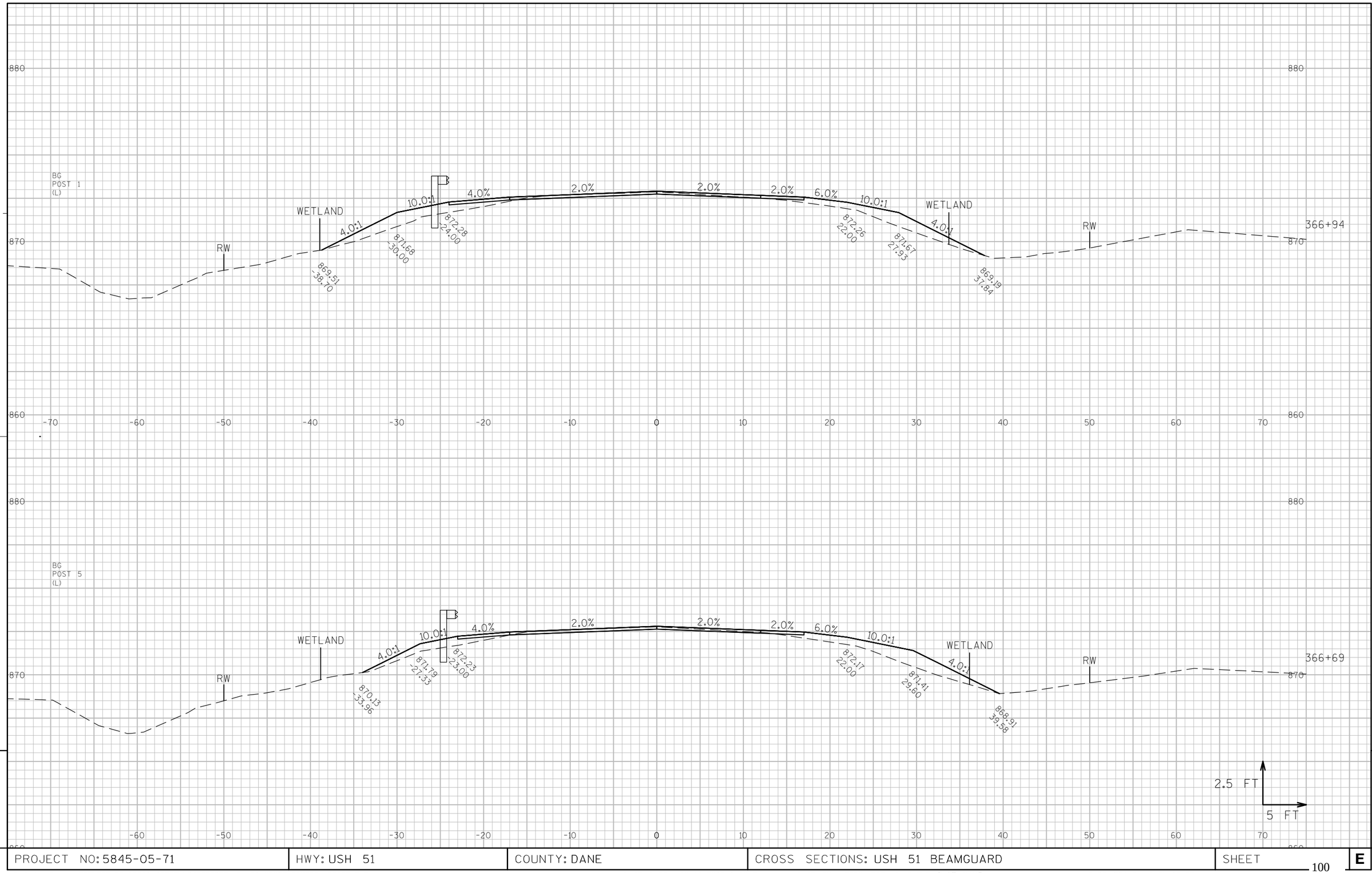
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET 98	E



PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET 99	E



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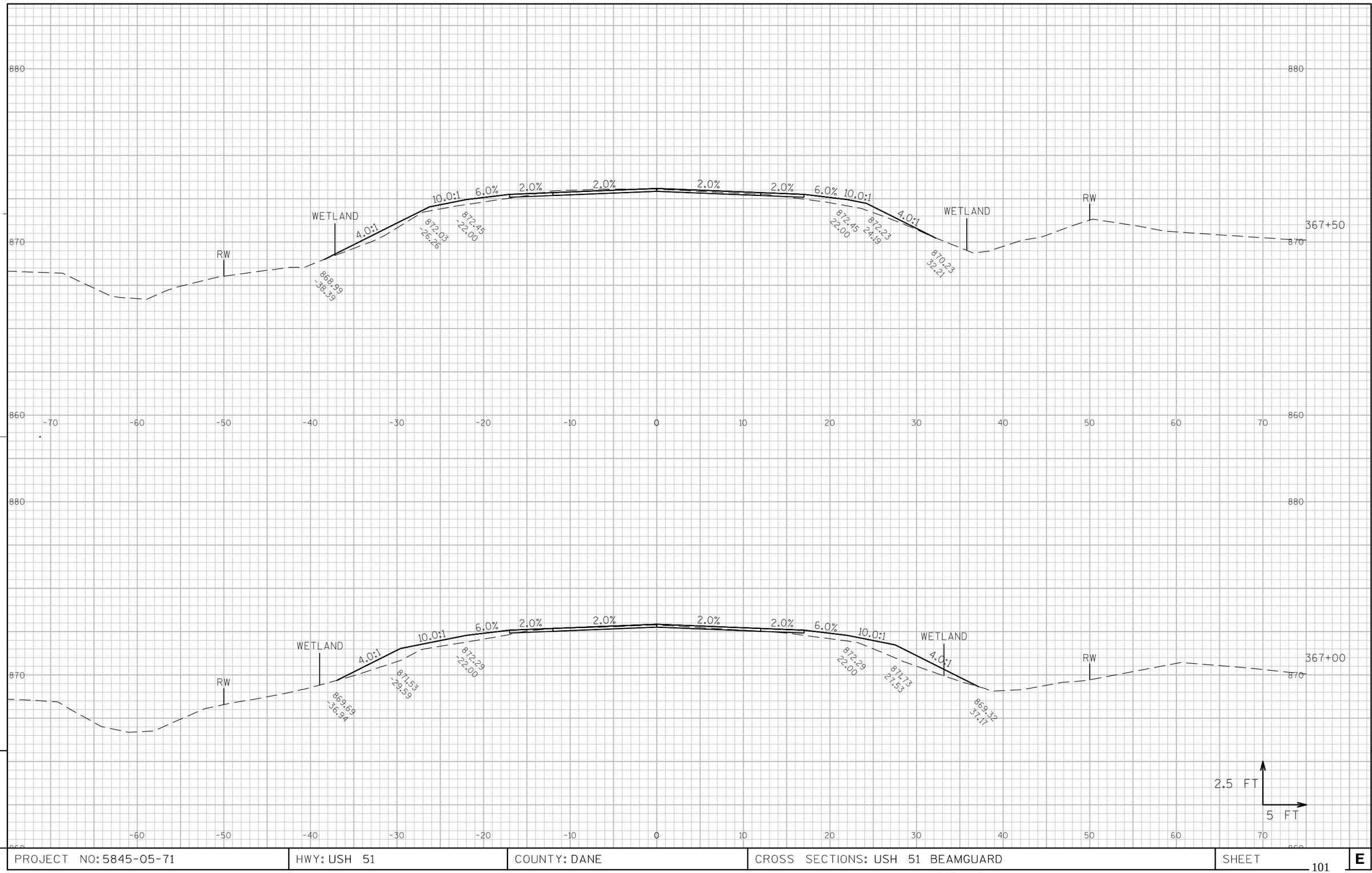
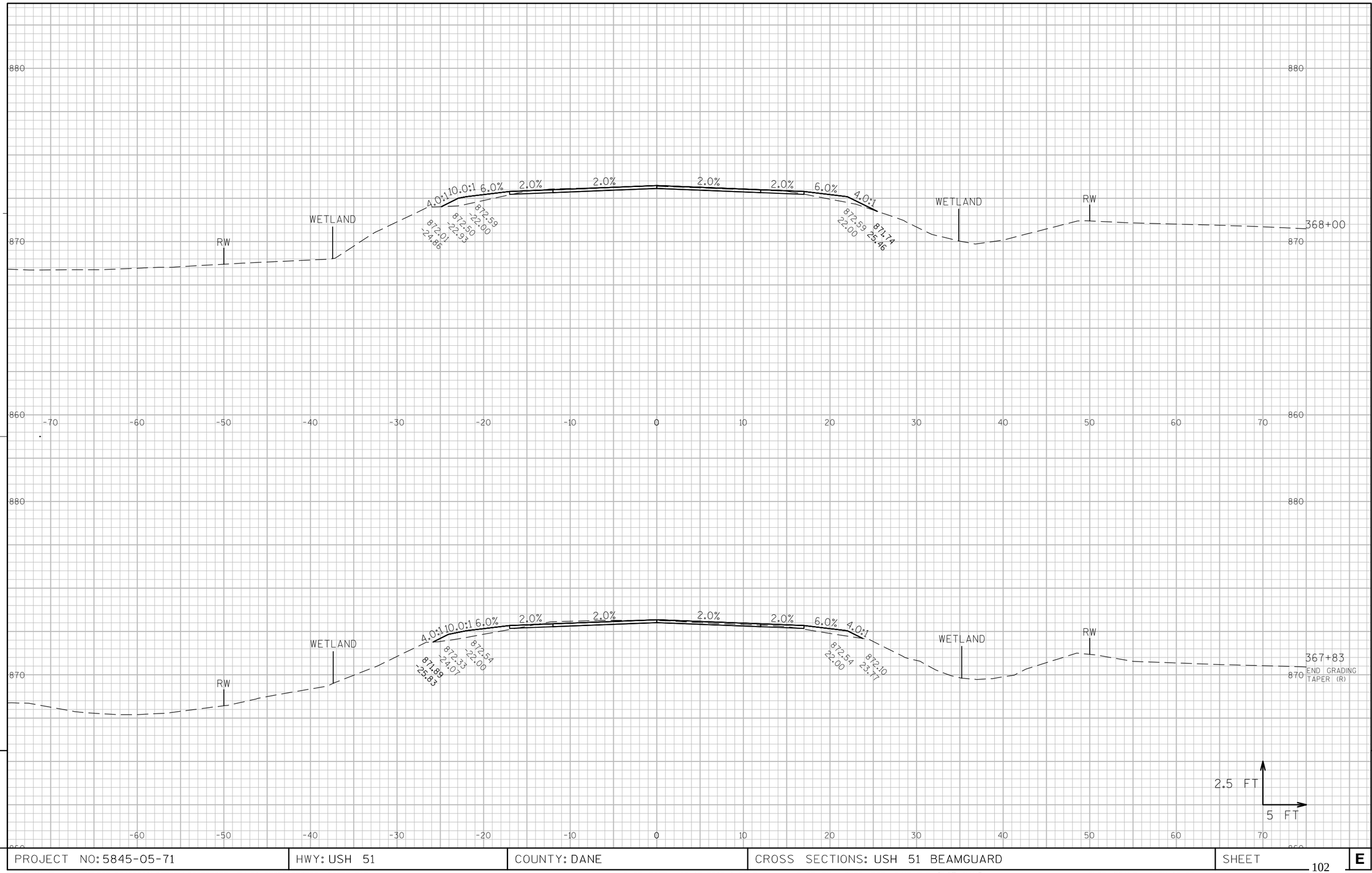
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET 100	E



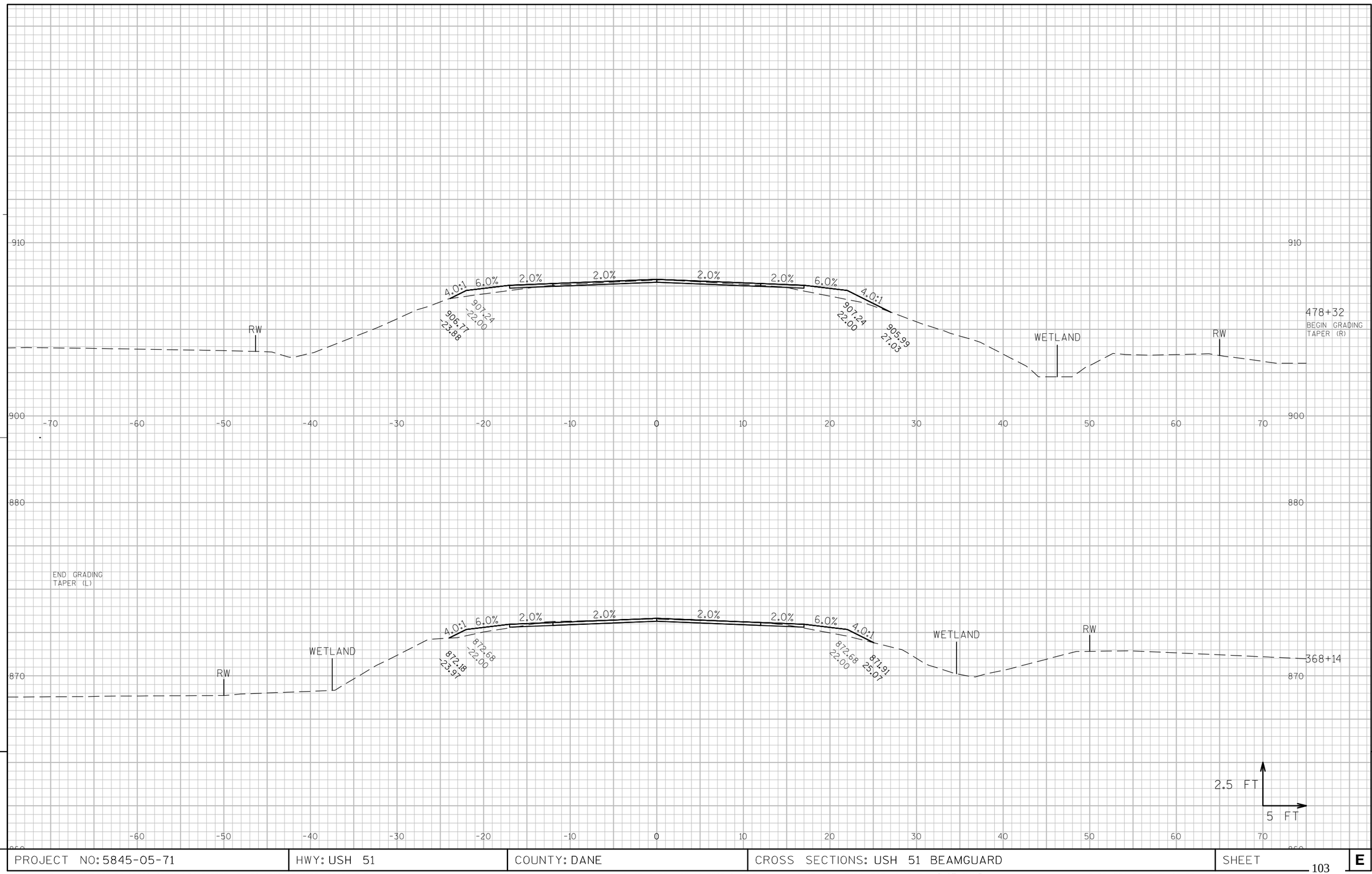
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET 101	E

FILE NAME : N:\PDS\C3D\58450501\DESIGN\CORRIDORS\USH 51-CROSS SECTION EDITS.DWG PLOT DATE : 12/13/2012 1:03 PM PLOT BY : BREGAUDIT, CHARLENE PLOT NAME : _____ PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



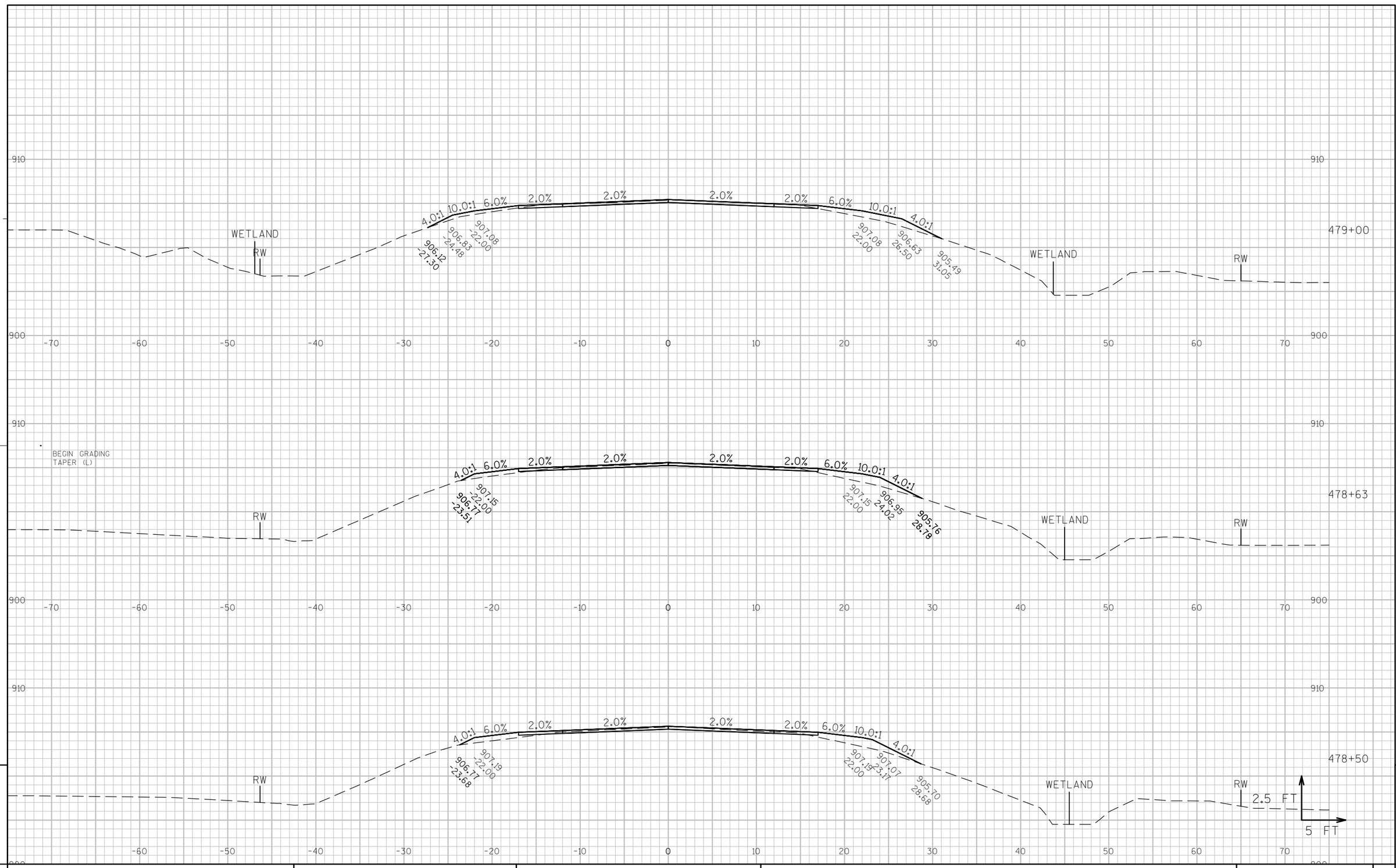
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET 102 E



PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET 103	E

FILE NAME : N:\PDS\C3D\58450501\DESIGN\CORRIDORS\USH 51-CROSS SECTION EDITS.DWG PLOT DATE : 12/13/2012 1:03 PM PLOT BY : BREGAUDIT, CHARLENE PLOT NAME : _____ PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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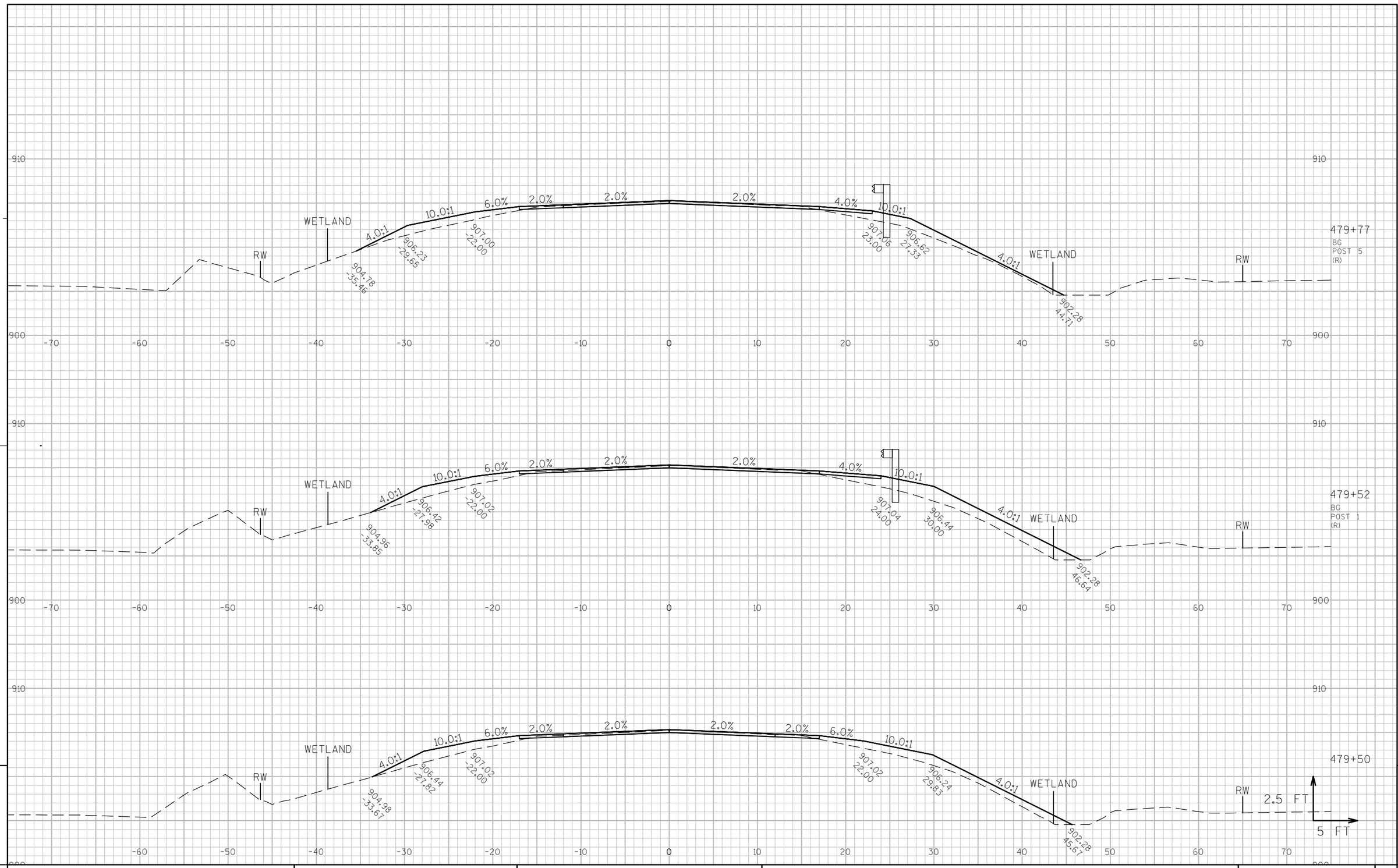
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET	E

FILE NAME : N:\PDS\C3D\58450501\DESIGN\CORRIDORS\USH 51-CROSS SECTION EDITS.DWG PLOT DATE : 12/13/2012 1:03 PM PLOT BY : BREGAUDIT, CHARLENE PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49



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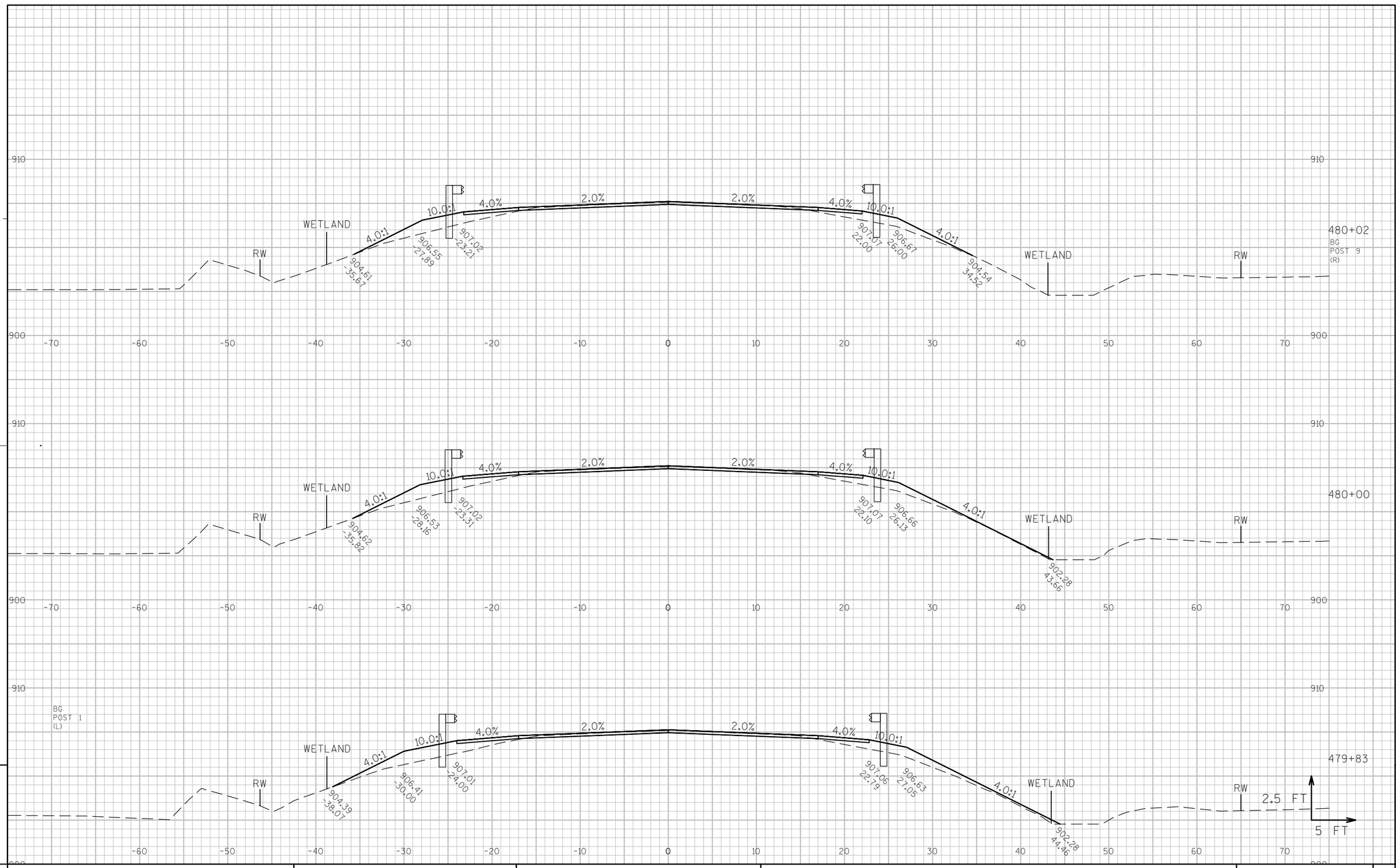
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET	E

FILE NAME : N:\PDS\C3D\58450501\DESIGN\CORRIDORS\USH 51-CROSS SECTION EDITS.DWG PLOT DATE : 12/13/2012 1:03 PM PLOT BY : BREGAUDIT, CHARLENE PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



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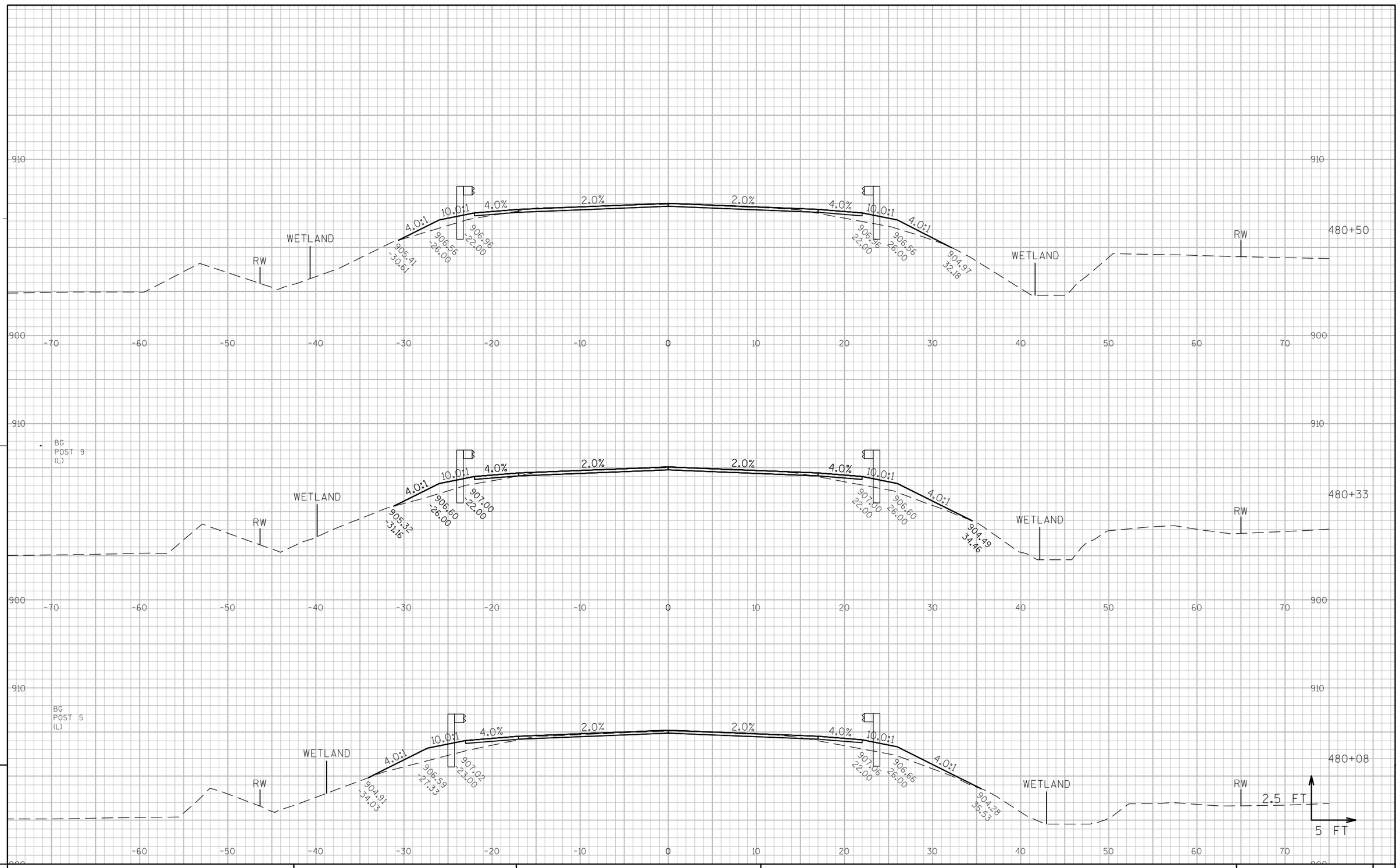
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET 106	E

FILE NAME : N:\PDS\C3D\58450501\DESIGN\CORRIDORS\USH 51-CROSS SECTION EDITS.DWG PLOT DATE : 12/13/2012 1:04 PM PLOT BY : BREGAUDIT, CHARLENE PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

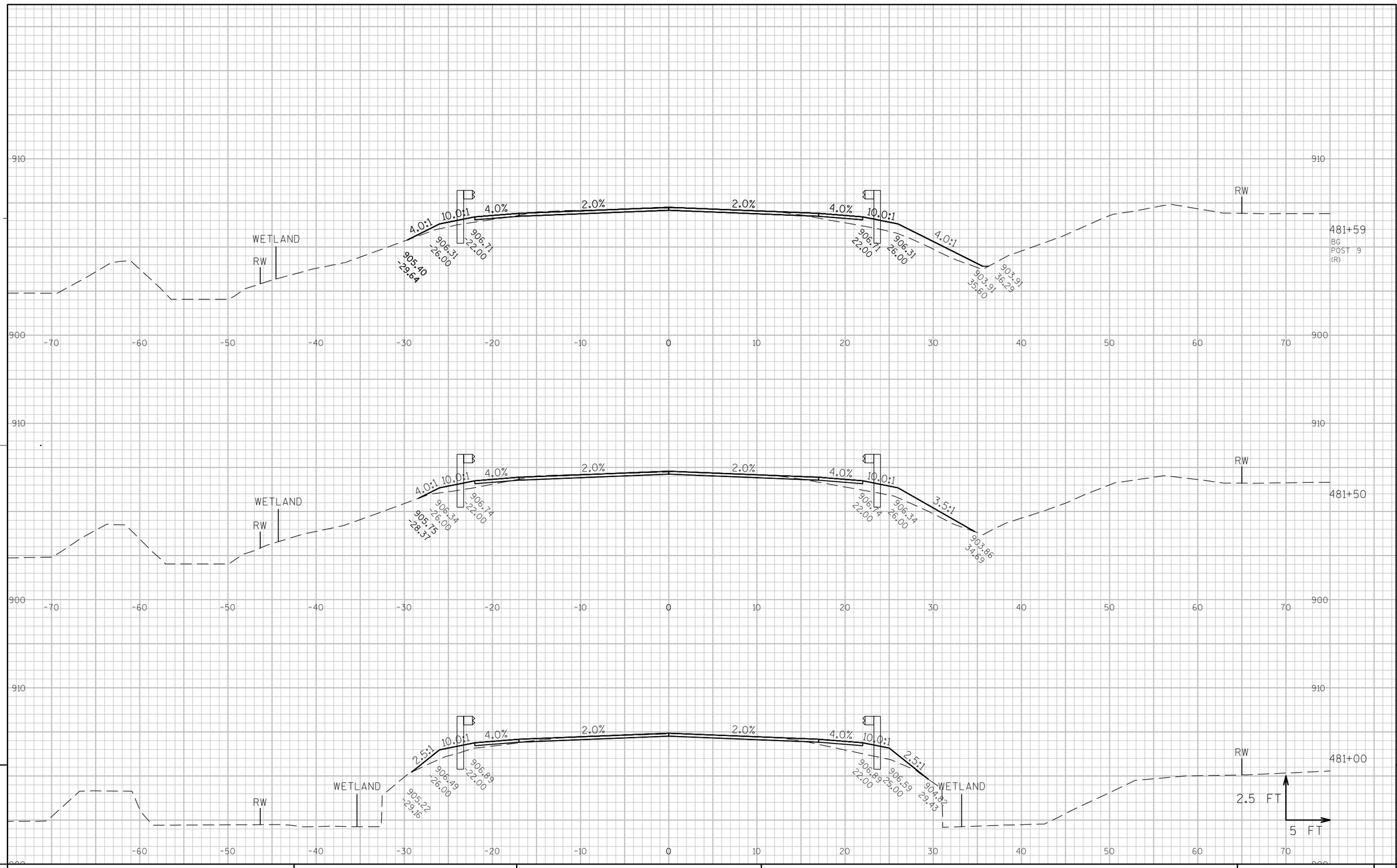
WISDOT/CADDS SHEET 49



PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET 107	E

FILE NAME : N:\PDS\C3D\58450501\DESIGN\CORRIDORS\USH 51-CROSS SECTION EDITS.DWG PLOT DATE : 12/13/2012 1:04 PM PLOT BY : BREGAUDIT, CHARLENE PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET	E

FILE NAME : N:\PDS\C3D\58450501\DESIGN\CORRIDORS\USH 51-CROSS SECTION EDITS.DWG PLOT DATE : 12/13/2012 1:04 PM PLOT BY : BREGAUDIT, CHARLENE PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

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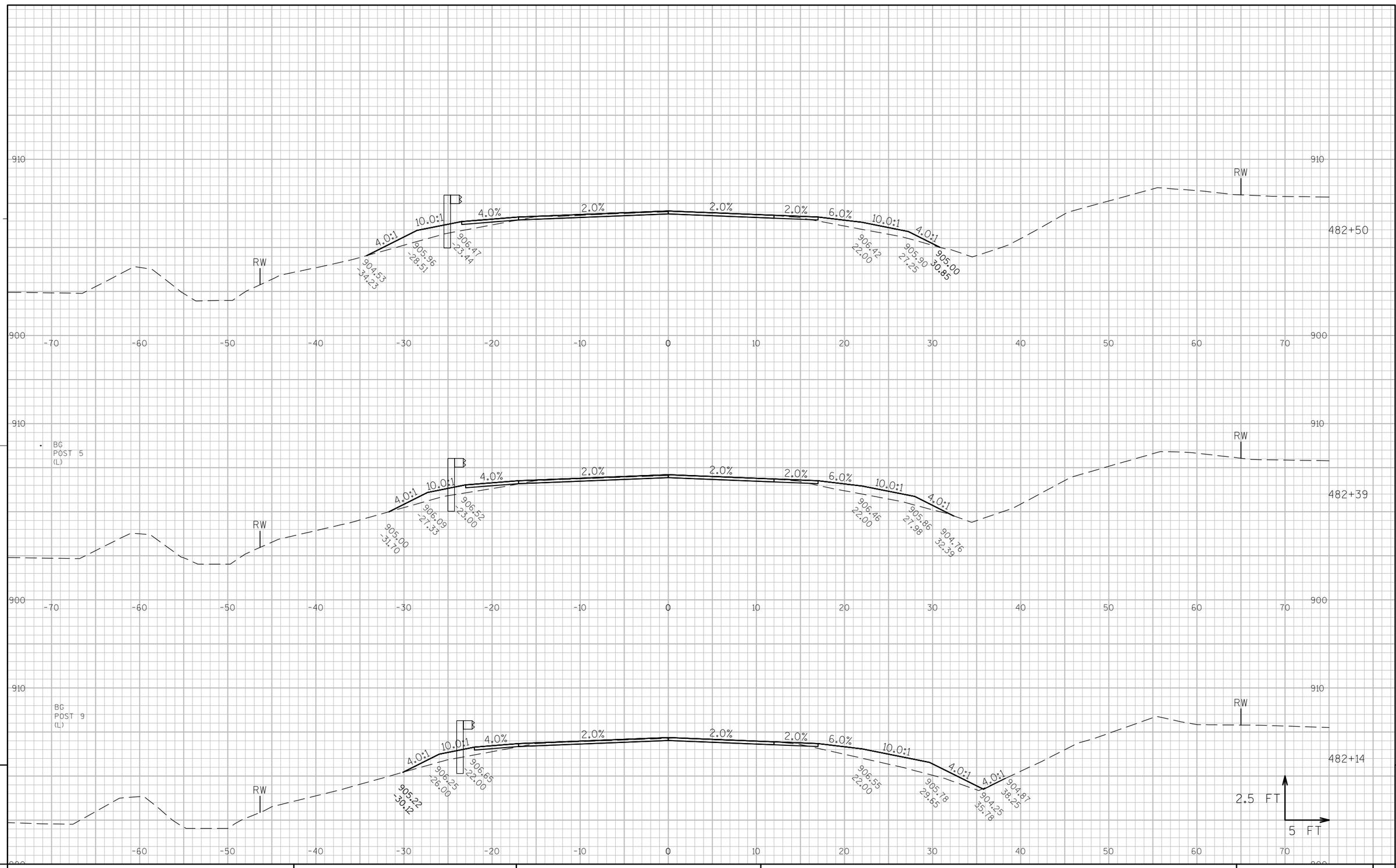
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET	E

FILE NAME : N:\PDS\C3D\58450501\DESIGN\CORRIDORS\USH 51-CROSS SECTION EDITS.DWG PLOT DATE : 12/13/2012 1:04 PM PLOT BY : BREGAUDIT, CHARLENE PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



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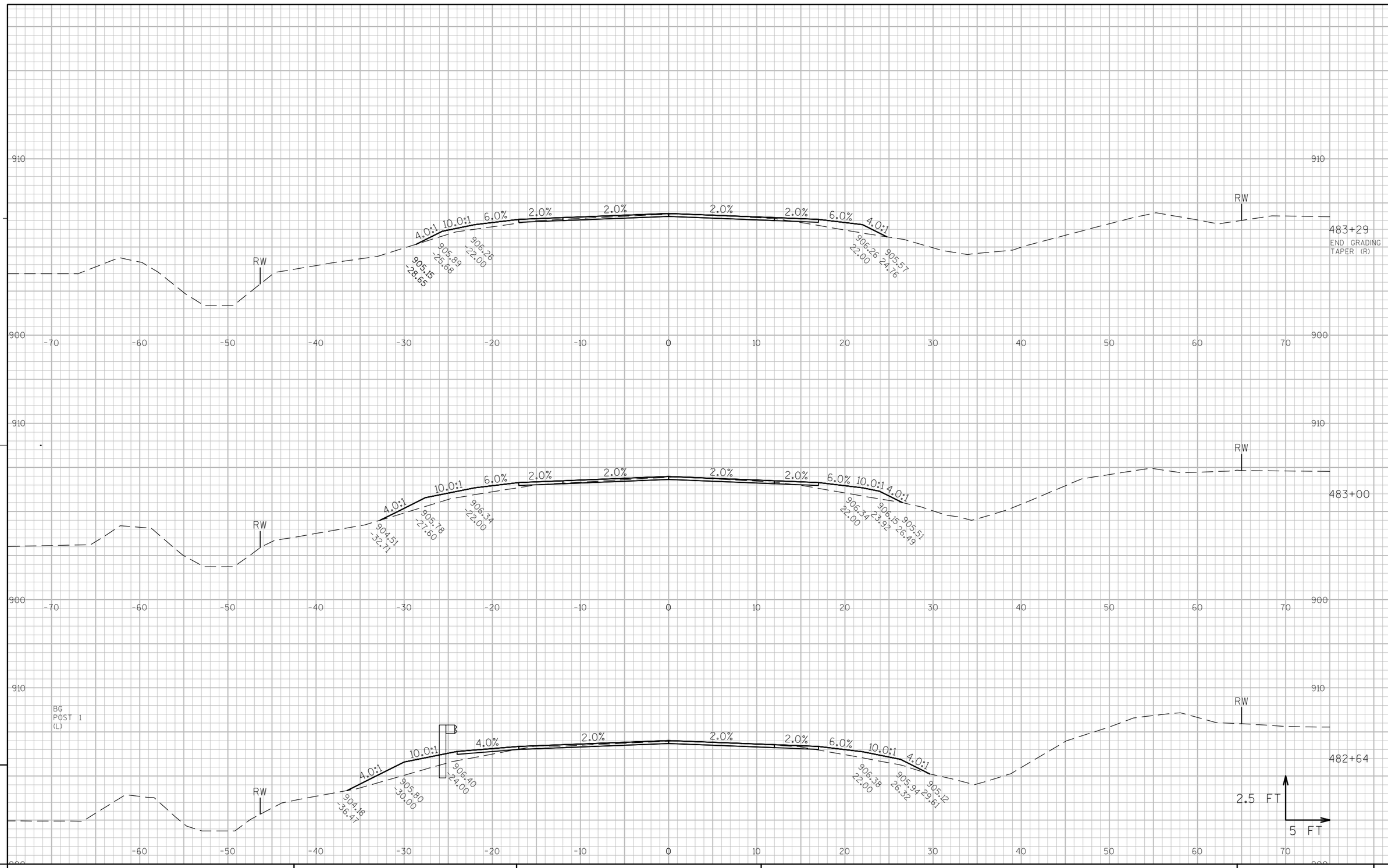
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET 110	E



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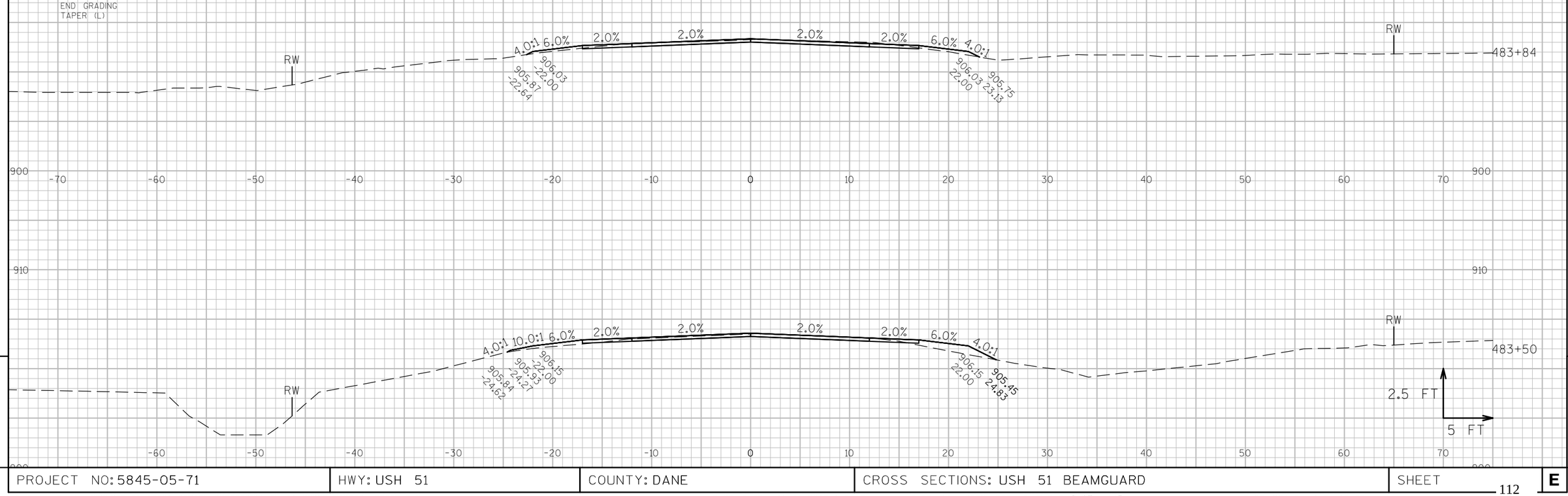
PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET	E

FILE NAME : N:\PDS\C3D\58450501\DESIGN\CORRIDORS\USH 51-CROSS SECTION EDITS.DWG PLOT DATE : 12/13/2012 1:05 PM PLOT BY : BREGAUDIT, CHARLENE PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49

END GRADING
TAPER (L)



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PROJECT NO: 5845-05-71	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 BEAMGUARD	SHEET 112	E

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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