LAX

FEBRUARY 2022

PROJECT ID: 5667-00-75

WITH: N/A

COUNTY: GRANT

ORDER OF SHEETS

TOTAL SHEETS = 198

N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

C OF FENNIMORE - T CASTLE ROCK

(US 61 TO CTH G)

CTH Q

GRANT COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5667-00-75	WISC 2022161	1

STATE PROJECT NUMBER

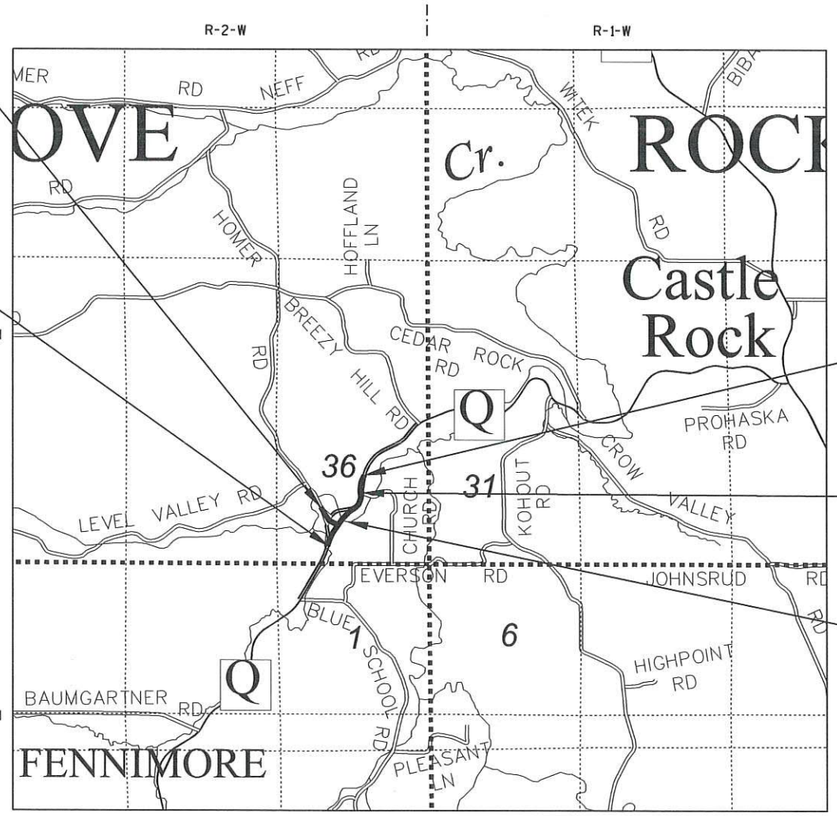
5667-00-75

DESIGN DESIGNATION 5667-00-05

A.A.D.T.	2022	=	820
A.A.D.T.	2042	=	920
D.H.V.		=	120
D.D.		=	62/38
T.		=	6.1%
DESIGN SPEED		=	45
ESALS		=	81,000

BEGIN CONSTRUCTION
STA. 00+38.00H
Y = 592,743.55
X = 858,782.33

BEGIN PROJECT
STA. 99+77.83
Y = 591,397.68
X = 859,167.99



END PROJECT
STA. 132+36.41

BEGIN CONSTRUCTION
STA. 00+53.23C
Y = 593,019.90
X = 860,472.32

STRUCTURE B-22-296
STA. 110+00

LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.617 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), GRANT NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE			
SLOPE INTERCEPT		CULVERT (Profile View)	
REFERENCE LINE	300'EB'	UTILITIES	
EXISTING CULVERT		ELECTRIC	E
PROPOSED CULVERT (Box or Pipe)		FIBER OPTIC	FO
		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
		TELEPHONE	T
MARSH AREA		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
WOODED OR SHRUB AREA		TELEPHONE POLE	

ACCEPTED FOR

GRANT COUNTY

Date 9-27 Jon A. Knaus
HIGHWAY DEPARTMENT COMMISSIONER

ORIGINAL PLANS PREPARED BY

MSA

1702 Pankratz Street, Madison, WI 53704
608-242-7779 1-800-446-0679 Fax: 608-242-5664

STATE OF WISCONSIN
AMANDA M. DeAMICO
NO.43334-6
MADISON WI
PROFESSIONAL ENGINEER

DATE: 9/27/21 Amanda DeAmico (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	MSA PROFESSIONAL SERVICES, INC.
Designer	MSA PROFESSIONAL SERVICES, INC.
Project Manager	ALEIGHA BURG
Regional Examiner	SW REGION
Regional Supervisor	JOHN STOLZMAN

APPROVED FOR THE DEPARTMENT

DATE: 10/7/2021 Aleigha Burg, P.E. Digitally signed by Aleigha Burg, P.E. Date: 2021.10.07 15:29:43-05'00' (Signature)

E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\010101-TI.DWG PLOT DATE : 8/30/2021 6:40 AM PLOT BY : SIMON SCHIFERL PLOT NAME :

GENERAL NOTES

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS SHALL BE FERTILIZED, SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER.

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

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

SILT FENCE TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER AND IN PLACE PRIOR TO BRIDGE REMOVAL.

TEMPORARY DITCH CHECKS SHALL BE PLACED AS DIRECTED BY THE ENGINEER.

THE EROSION CONTROL FEATURES ARE SHOWN ON THE EROSION CONTROL PLAN AND ARE AT SUGGESTED LOCATIONS, THE EXACT LOCATION WILL BE DETERMINED BY THE ENGINEER.

FINAL FIELD ENTRANCE LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

WETLANDS EXIST ALONG THE CREEK AND AT STA. 112+50. A STREAM EXISTS FROM STA. 127+00 TO STA. 131+75, WITH A SPRING AT STA. 127+00. DO NOT DISTURB AREAS OUTSIDE OF THE SLOPE INTERCEPT IN THESE AREAS.

PRIOR TO THE PLACEMENT OF BEAM GUARD, THE SHOULDERS SHALL BE IN PLACE, SHAPED, AND COMPACTED.

THE HMA PAVEMENT SHALL CONSIST OF A 2" UPPER LAYER OF 4 LT 58-28 S AND A 3" LOWER LAYER OF 3 LT 58-28 S.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 16.57 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 11.01 ACRES

DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC.
ATTN: AMANDA DEAMICO, P.E.
1702 PANKRATZ STREET
MADISON, WI 53704
PHONE: (608) 216-2060
EMAIL: ADEAMICO@MSA-PS.COM

GRANT COUNTY HIGHWAY COMMISSIONER
ATTN: JON KNAUTZ
1011 N. ADAMS ST., PO BOX 150
LANCASTER, WI 53813
PHONE: (608) 723-2595
EMAIL: JKNAUTZ@CO.GRANT.WI.GOV

UTILITIES

TELEPHONE:
TDS TELECOM
ATTN: JERRY MYERS
525 JUNCTION RD
MADISON, WI 53717
PHONE: (608) 664-4404
EMAIL: JERRY.MYERS@TDSTELECOM.COM

ELECTRIC:
SCENIC RIVERS ENERGY COOPERATIVE
ATTN: PHIL SCHNEIDER
231 NORTH SHERIDAN STREET
LANCASTER, WI 53813
PHONE: (608) 723-2121 EXT. 505
EMAIL: PSCHNEIDER@SREC,NET

GAS:
NORTHERN NATURAL GAS COMPANY
ATTN: SERGIO GONZALEZ
5557 COUNTY D
PLATTEVILLE, WI 53818
PHONE: (402) 530-2026
EMAIL: SERGIO.GONZALEZ@NNGCO.COM

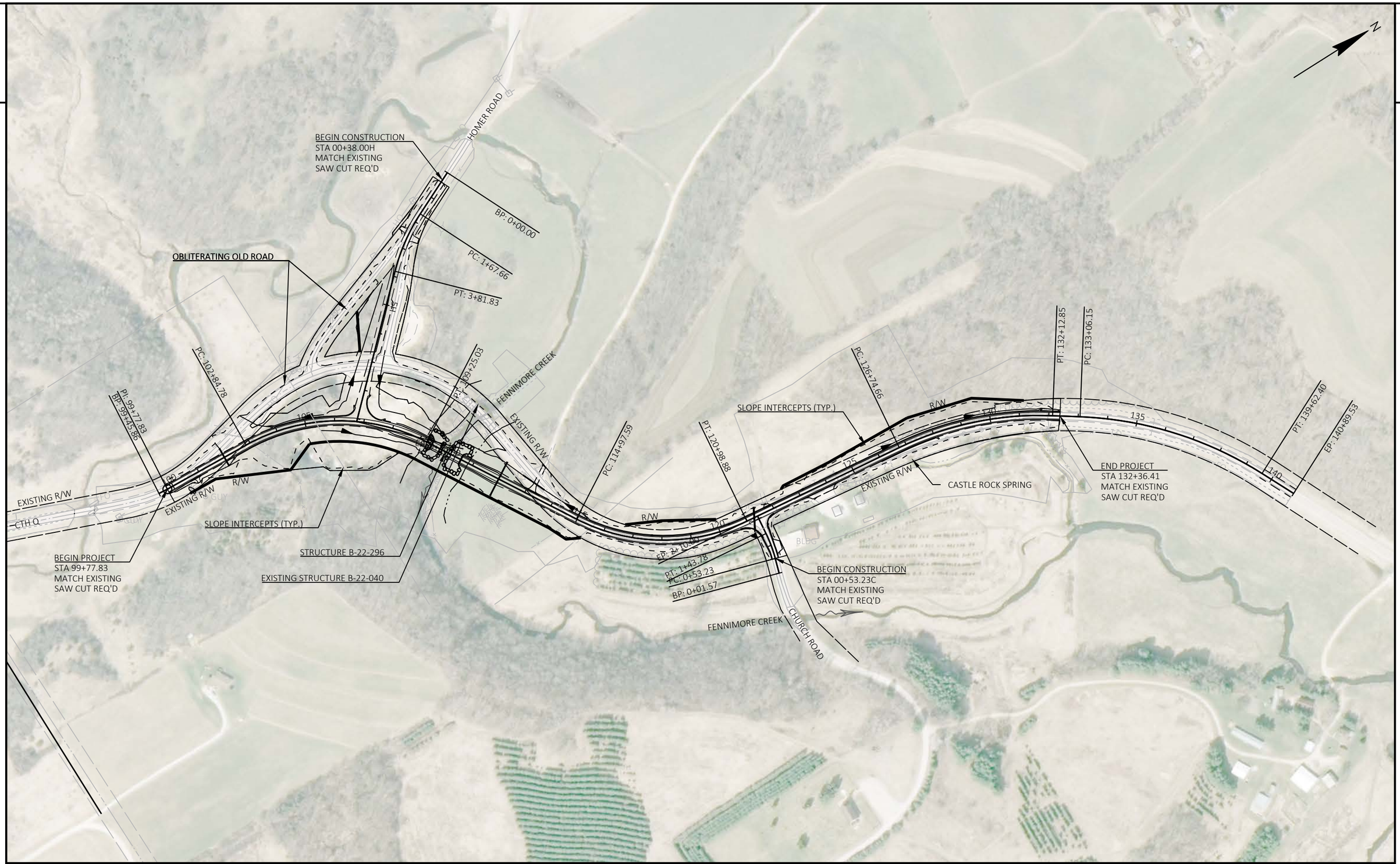
DNR LIAISON

DEPARTMENT OF NATURAL RESOURCES
ATTN: ANDY BARTA
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
PHONE: (608) 235-2955
EMAIL: ANDREW.BARTA@WISCONSIN.GOV

*LISTED UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

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

2

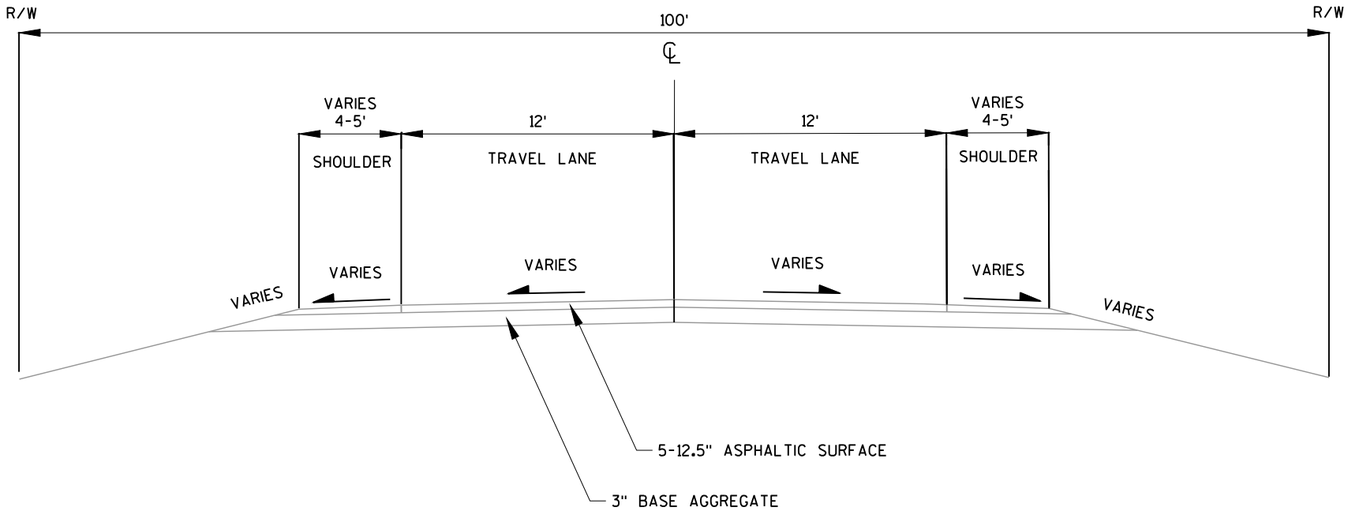


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - 020201-po

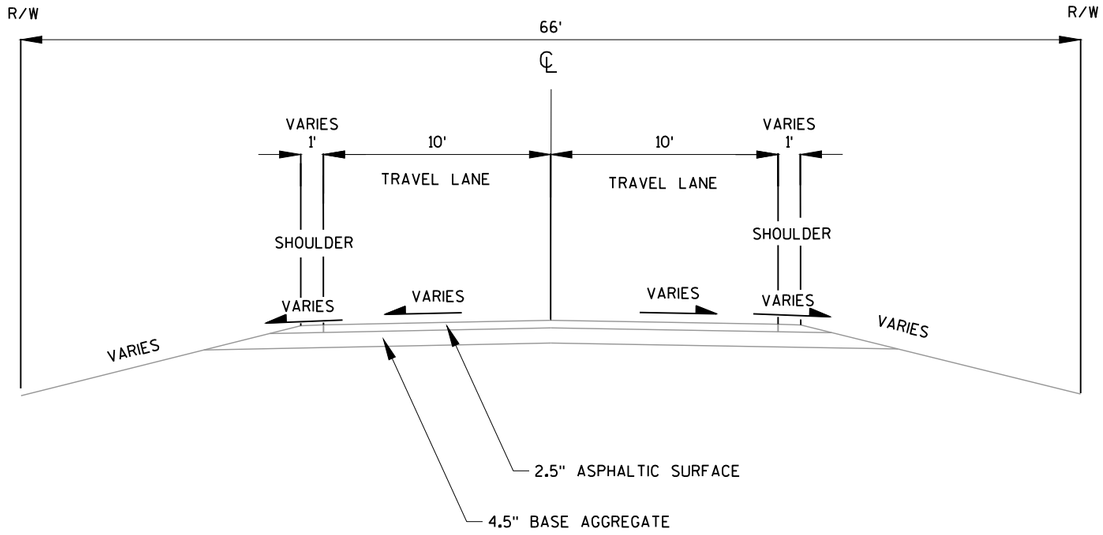
PLOT DATE : 10/29/2021 5:09 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN: 300 FT

2



EXISTING TYPICAL SECTION - CTH Q

STA. 99+77.83 - STA. 132+36.41

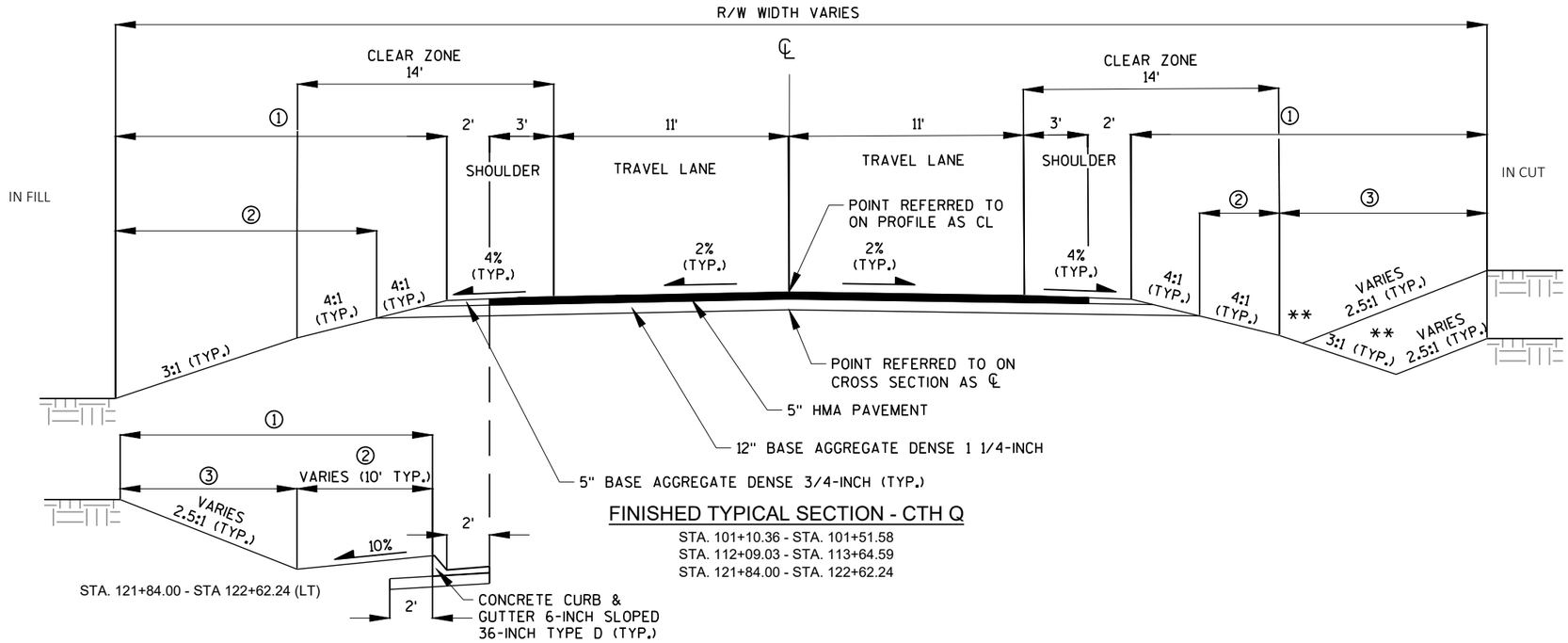


EXISTING TYPICAL SECTION - SIDE ROADS

HOMER ROAD

CHURCH ROAD

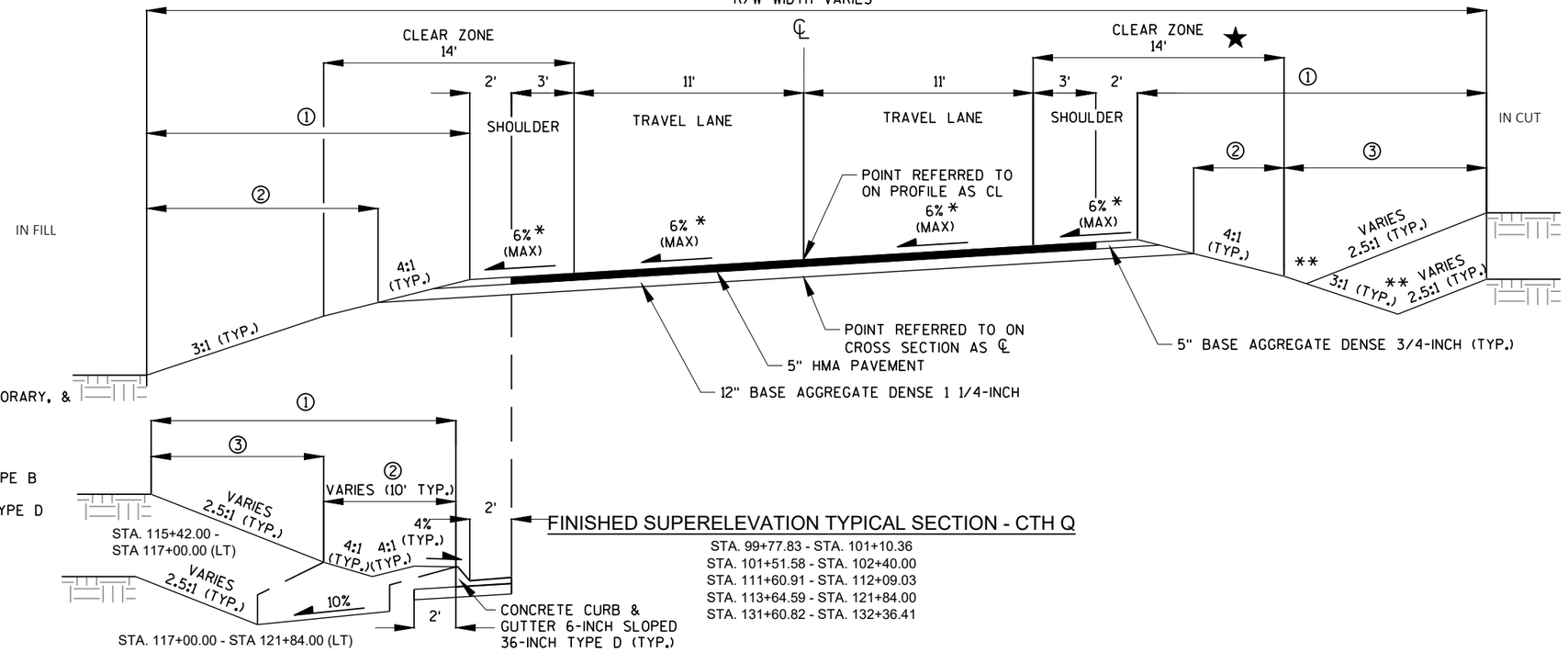
PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	EXISTING TYPICAL SECTIONS	SHEET 4	E



FINISHED TYPICAL SECTION - CTH Q

STA. 101+10.36 - STA. 101+51.58
STA. 112+09.03 - STA. 113+64.59
STA. 121+84.00 - STA. 122+62.24

★ 20' FROM STA. 114+97.59 TO STA. 122+31.88



① SEEDING MIXTURE #20, SEEDING TEMPORARY, & FERTILIZER TYPE B LIMITS

② TOPSOIL & MULCHING LIMITS

③ TOPSOIL & EROSION MAT CLASS I TYPE B

④ TOPSOIL & EROSION MAT CLASS III TYPE D

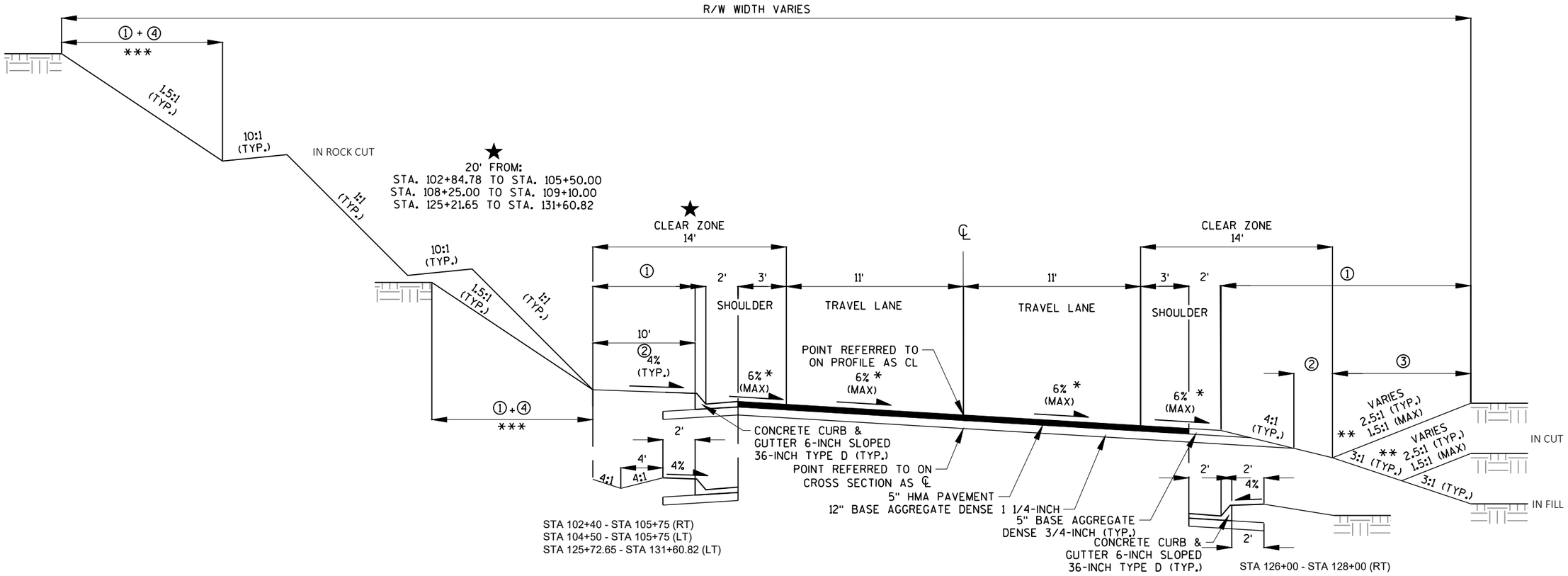
*SEE CROSS SECTIONS FOR ADDITIONAL SUPER ELEVATION INFORMATION

**SEE PLAN & PROFILE FOR SPECIAL DITCH LOCATION

FINISHED SUPERELEVATION TYPICAL SECTION - CTH Q

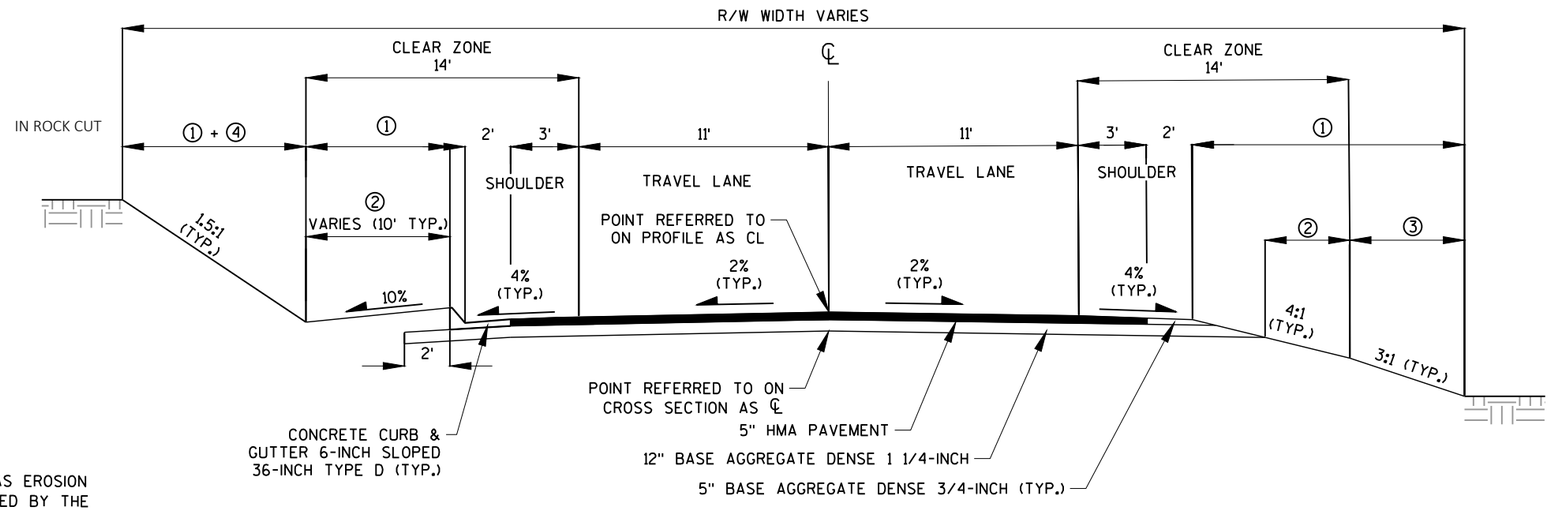
STA. 99+77.83 - STA. 101+10.36
STA. 101+51.58 - STA. 102+40.00
STA. 111+60.91 - STA. 112+09.03
STA. 113+64.59 - STA. 121+84.00
STA. 131+60.82 - STA. 132+36.41

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	FINISHED TYPICAL SECTIONS	SHEET 5	E



FINISHED SUPERELEVATION TYPICAL SECTION - CTH Q ROCK EXCAVATION AREAS

STA. 102+40.00 - STA. 105+75.00
STA. 125+21.65 - STA. 131+60.82



FINISHED TYPICAL SECTION - CTH Q ROCK EXCAVATION AREAS

STA. 122+62.24 - STA. 125+21.65

① SEEDING MIXTURE *20, SEEDING TEMPORARY, & FERTILIZER TYPE B LIMITS

② TOPSOIL & MULCHING LIMITS

③ TOPSOIL & EROSION MAT CLASS I TYPE B

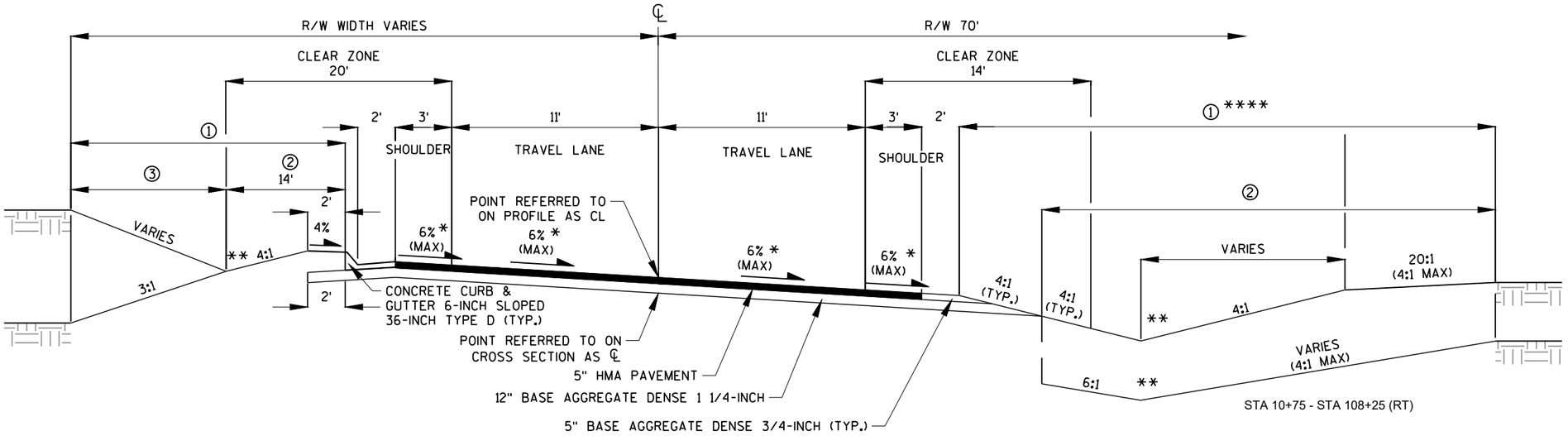
④ TOPSOIL & EROSION MAT CLASS III TYPE D

*SEE CROSS SECTIONS FOR ADDITIONAL SUPER ELEVATION INFORMATION

**SEE PLAN & PROFILE FOR SPECIAL DITCH LOCATION

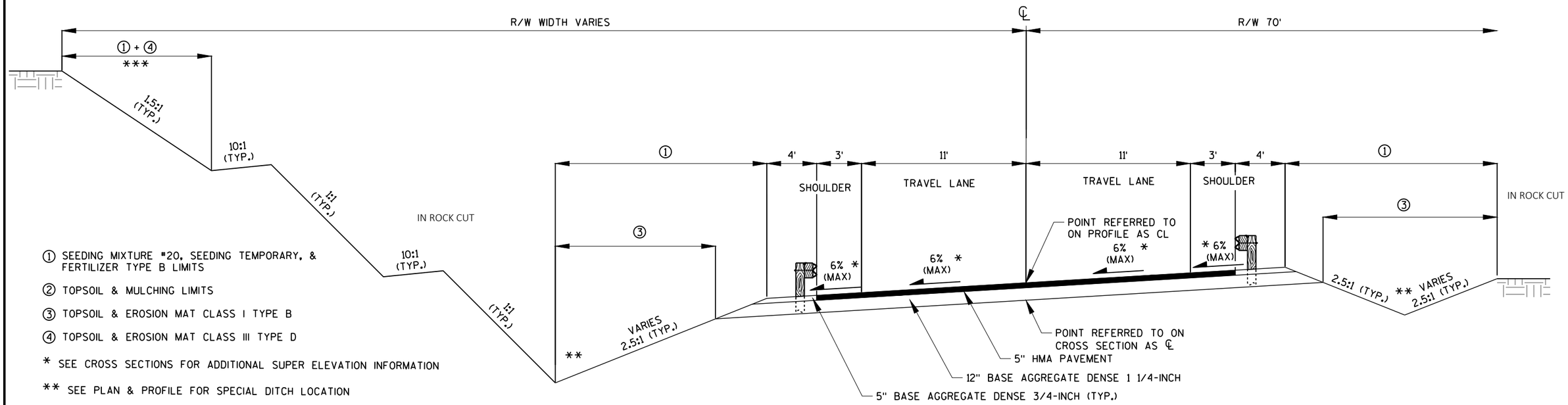
***PLACE SEEDING, TOPSOIL, AND EROSION MAT IN AREAS INDICATED AS EROSION MAT CLASS III TYPE D ON THE EROSION CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	FINISHED TYPICAL SECTIONS	SHEET 6	E



FINISHED SUPERELEVATION TYPICAL SECTION - CTH Q QUARRY FILL AREAS

STA. 105+75.00 - STA. 108+25.00



① SEEDING MIXTURE *20, SEEDING TEMPORARY, & FERTILIZER TYPE B LIMITS

② TOPSOIL & MULCHING LIMITS

③ TOPSOIL & EROSION MAT CLASS I TYPE B

④ TOPSOIL & EROSION MAT CLASS III TYPE D

* SEE CROSS SECTIONS FOR ADDITIONAL SUPER ELEVATION INFORMATION

** SEE PLAN & PROFILE FOR SPECIAL DITCH LOCATION

***PLACE SEEDING, TOPSOIL, AND EROSION MAT IN AREAS INDICATED AS EROSION MAT CLASS III TYPE D ON THE EROSION CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

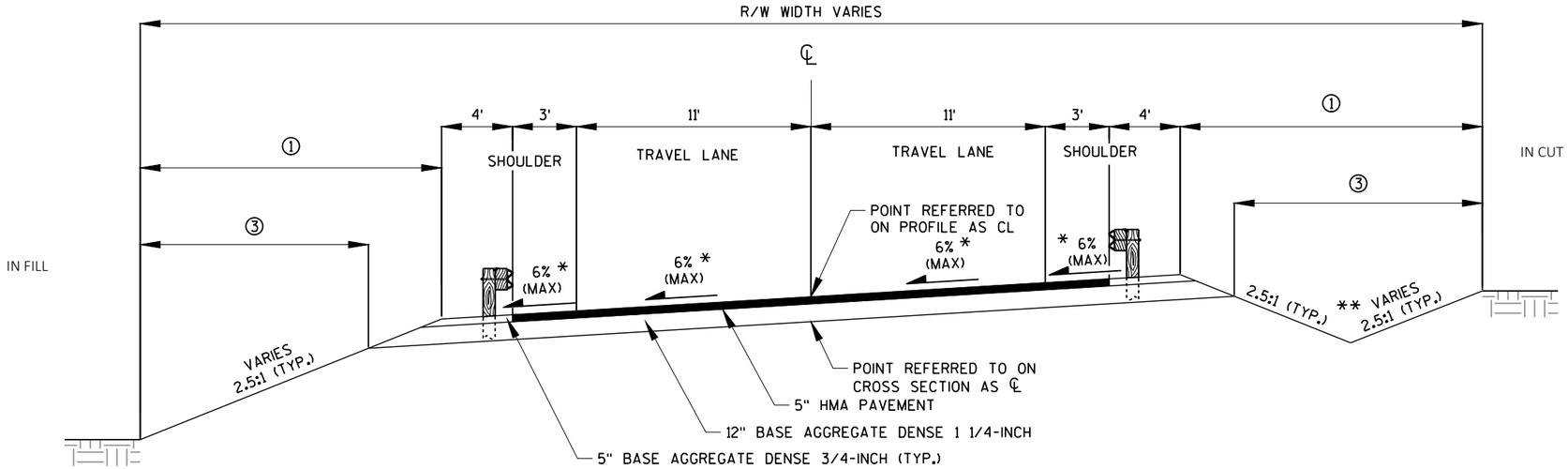
**** SEE EROSION CONTROL PLANS FOR SEEDING MIXTURE *70 LIMITS

FINISHED SUPERELEVATION TYPICAL SECTION - CTH Q ROCK EXCAVATION AREAS WITH BEAMGUARD

STA. 108+25.00 - STA. 109+25.00

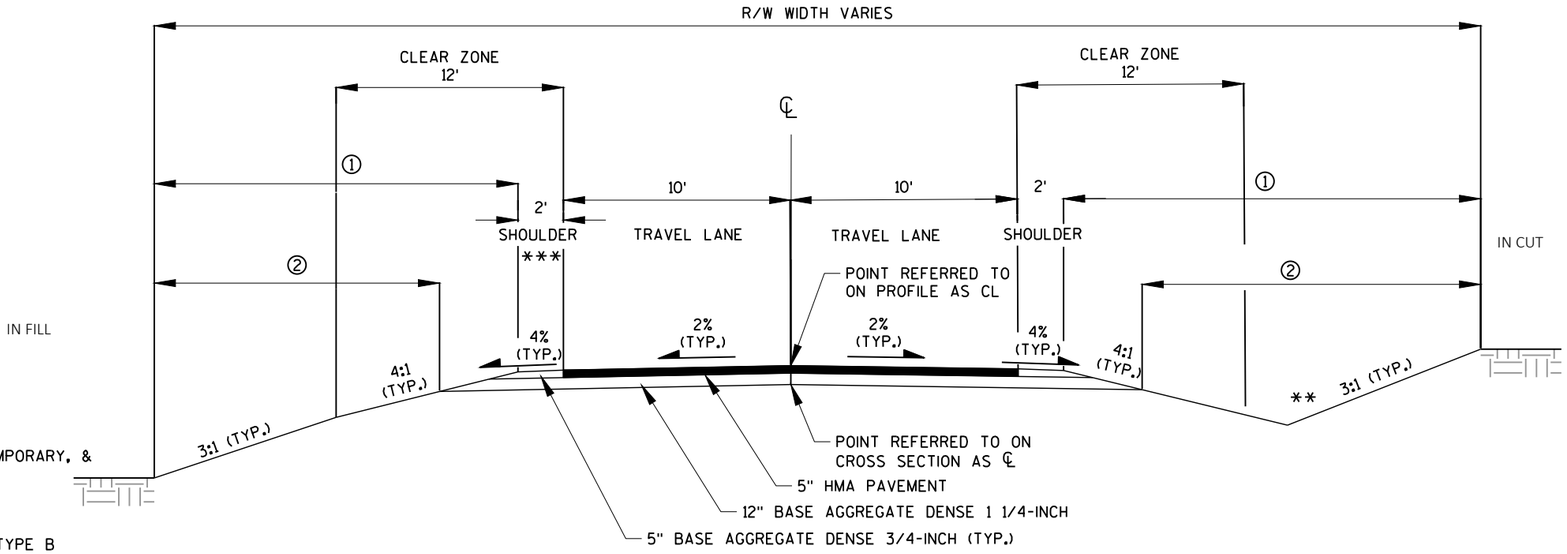
PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	FINISHED TYPICAL SECTIONS	SHEET 7	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\020101_GN_TS 2.DWG
LAYOUT NAME - 020305-ts 1in-10ft
PLOT DATE : 10/18/2021 4:41 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



FINISHED SUPERELEVATION TYPICAL SECTION - CTH Q BEAMGUARD

STA. 109+25.00 - STA. 109+42.67
STA. 110+57.17 - STA. 111+60.91



① SEEDING MIXTURE #20, SEEDING TEMPORARY, & FERTILIZER TYPE B LIMITS

② TOPSOIL & MULCHING LIMITS

③ TOPSOIL & EROSION MAT CLASS I TYPE B

④ TOPSOIL & EROSION MAT CLASS III TYPE D

*SEE CROSS SECTIONS FOR ADDITIONAL SUPER ELEVATION INFORMATION

**SEE PLAN & PROFILE FOR SPECIAL DITCH LOCATION

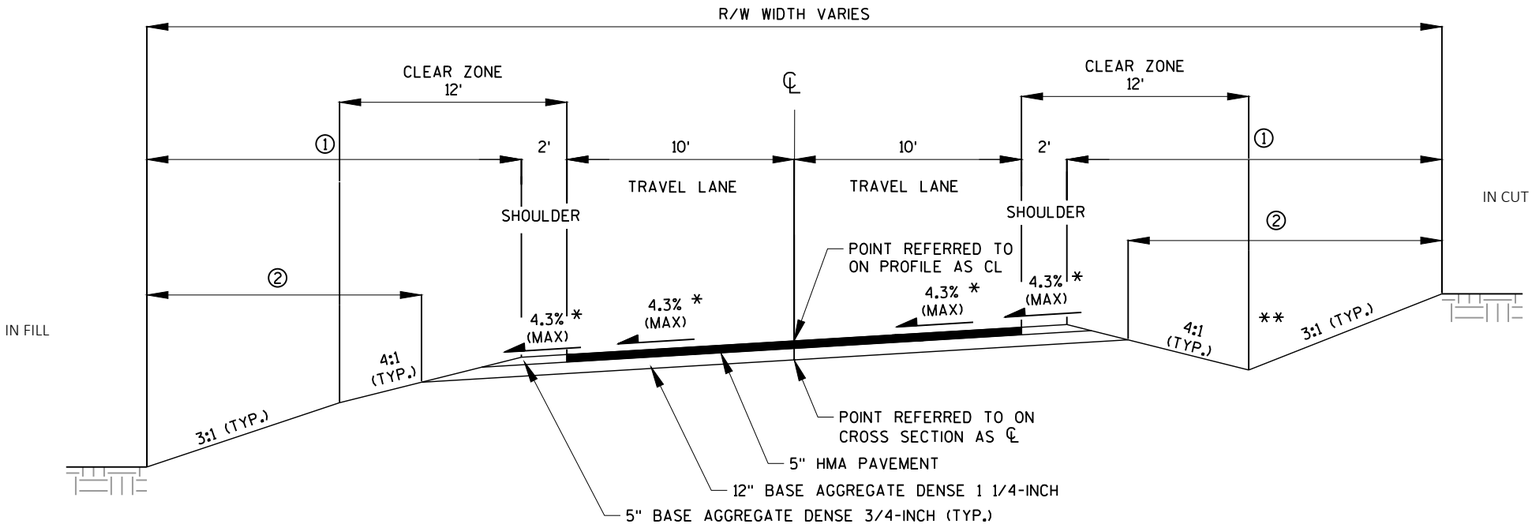
***10' FROM STA 4+32H TO STA 6+50H LT

FINISHED TYPICAL SECTION - SIDE ROADS

HOMER ROAD
CHURCH ROAD

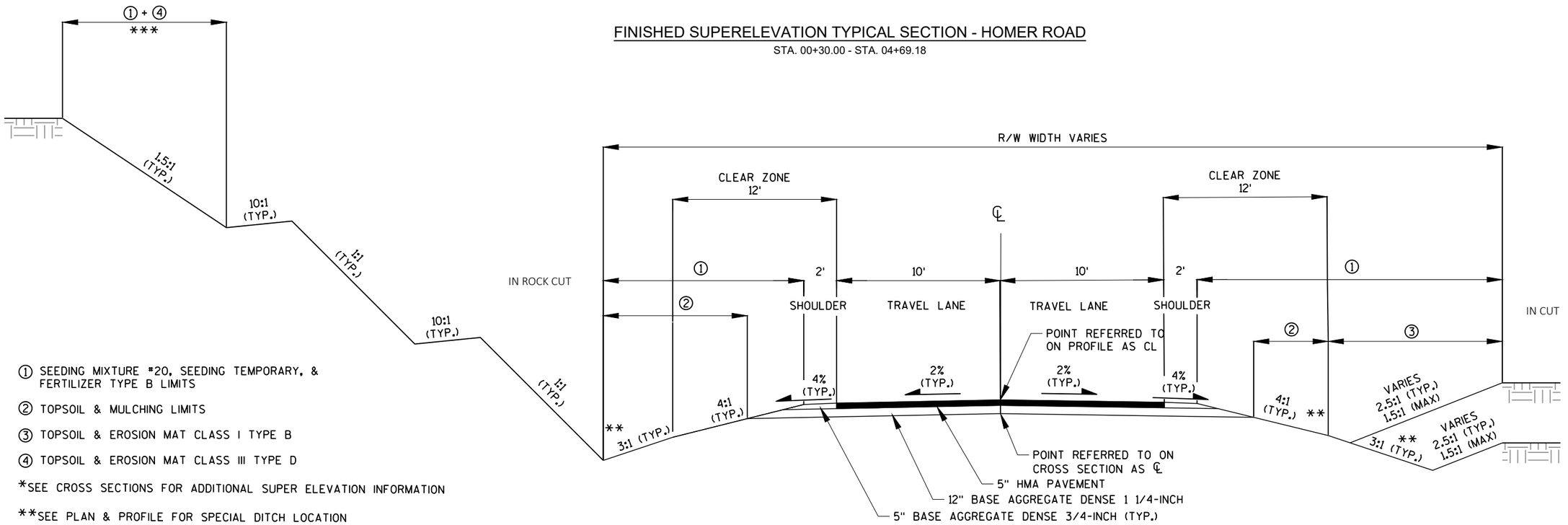
PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	FINISHED TYPICAL SECTIONS	SHEET 8	E

2



FINISHED SUPERELEVATION TYPICAL SECTION - HOMER ROAD

STA. 00+30.00 - STA. 04+69.18



① SEEDING MIXTURE *20, SEEDING TEMPORARY, & FERTILIZER TYPE B LIMITS

② TOPSOIL & MULCHING LIMITS

③ TOPSOIL & EROSION MAT CLASS I TYPE B

④ TOPSOIL & EROSION MAT CLASS III TYPE D

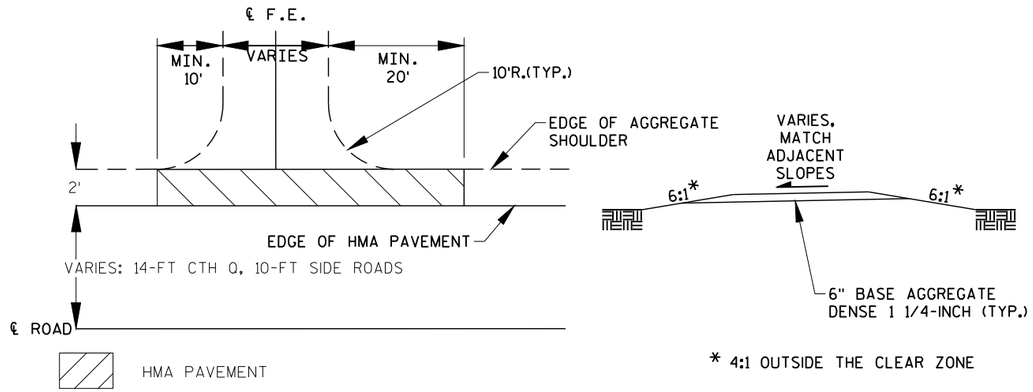
*SEE CROSS SECTIONS FOR ADDITIONAL SUPER ELEVATION INFORMATION

**SEE PLAN & PROFILE FOR SPECIAL DITCH LOCATION

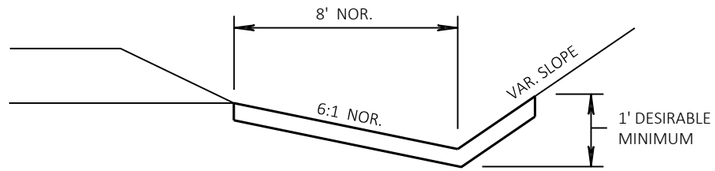
***PLACE SEEDING, TOPSOIL, AND EROSION MAT IN AREAS INDICATED AS EROSION MAT CLASS III TYPE D ON THE EROSION CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

FINISHED TYPICAL SECTION - HOMER ROAD ROCK EXCAVATION AREAS

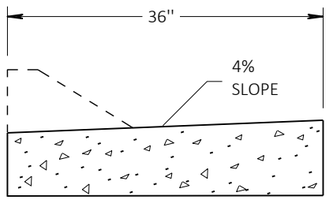
STA. 04+69.18 - STA. 06+00.00



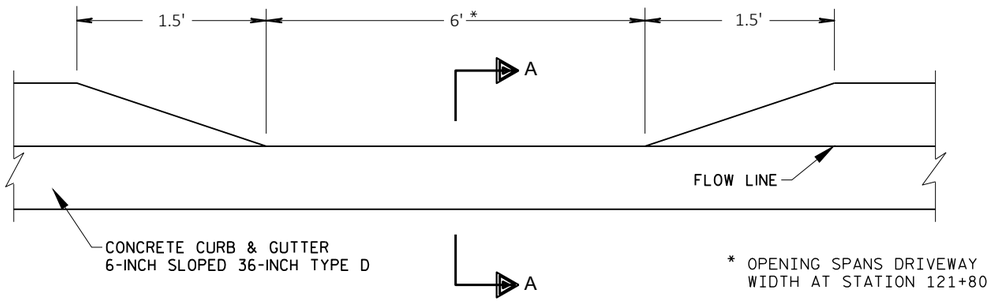
PRIVATE/FIELD ENTRANCE DETAIL



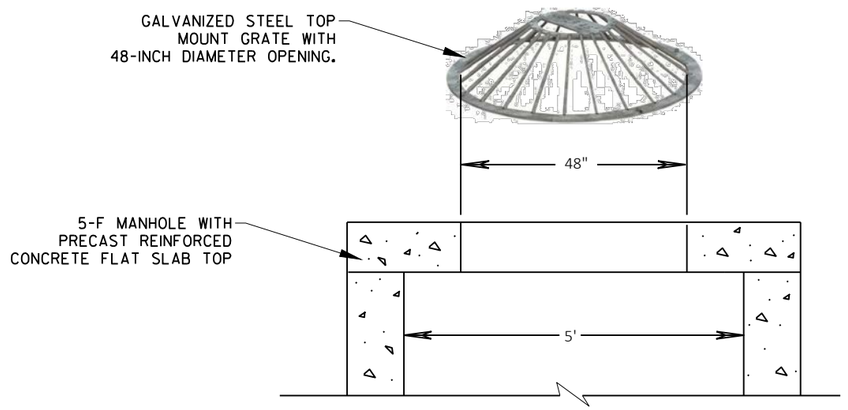
EROSION MAT DETAIL FOR DITCHES



SECTION A-A

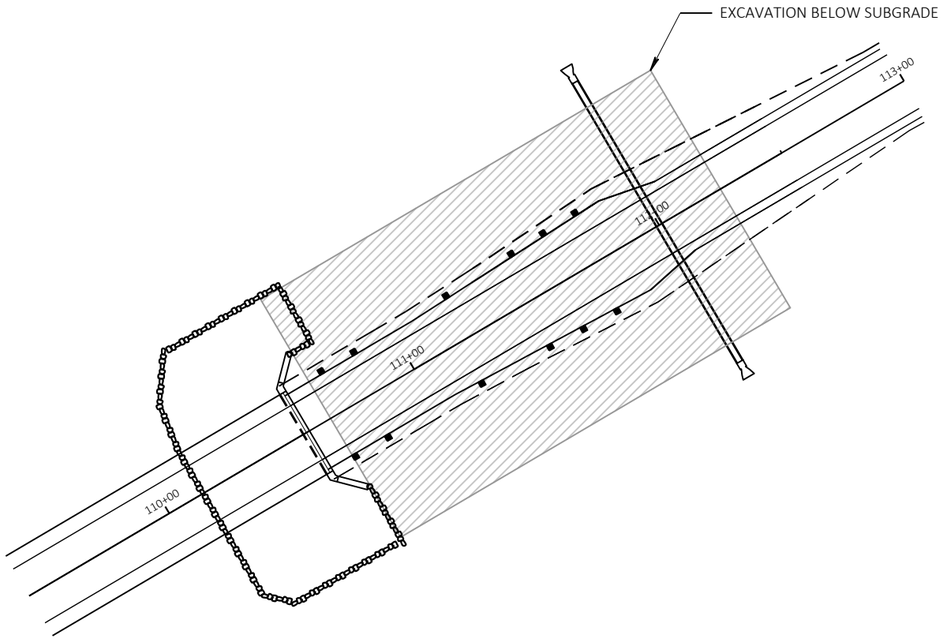


DETAIL OF CURB HEAD DEPRESSION FOR DRAINAGE AT CURB & GUTTER SECTION



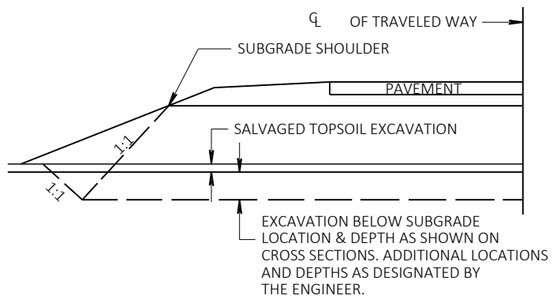
TOP MOUNT GRATE 48-INCH DETAIL ON 5-FT MANHOLE

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CONSTRUCTION DETAILS	SHEET 10	E



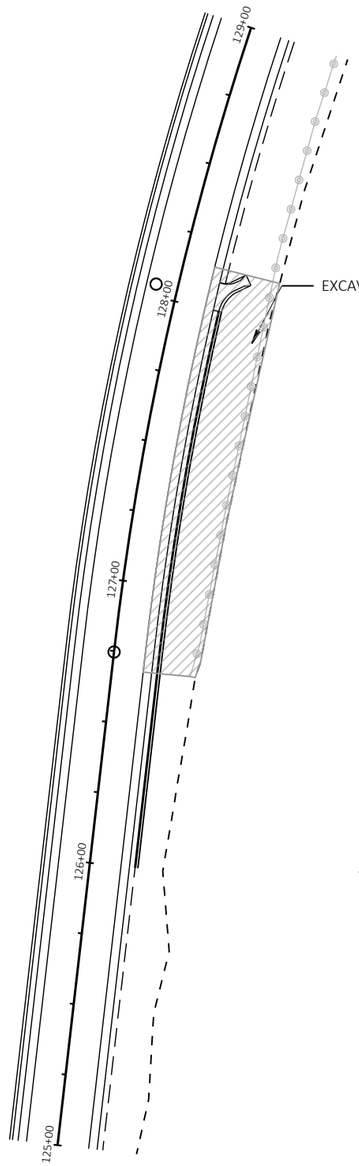
EXCAVATION BELOW SUBGRADE PLAN VIEW (EAST BRIDGE APPROACH)

STA. 110+57 - STA. 112+25



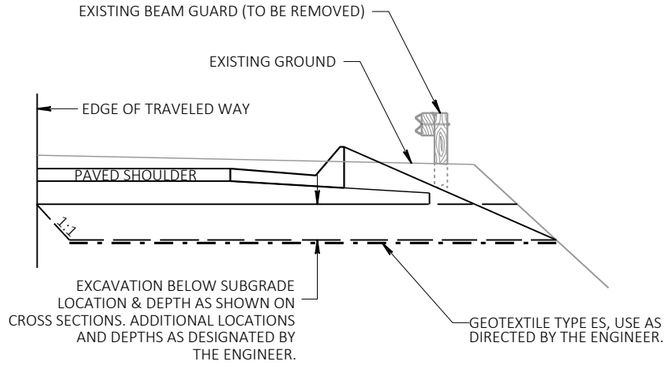
DETAIL FOR EXCAVATION BELOW SUBGRADE (EAST BRIDGE APPROACH)

STA. 110+57 - STA. 112+25



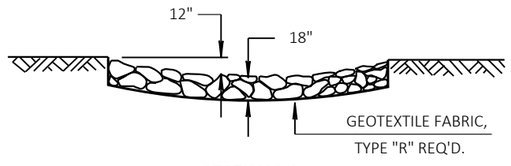
EXCAVATION BELOW SUBGRADE PLAN VIEW (SPIRNG AREA)

STA. 126+69 - STA. 128+15

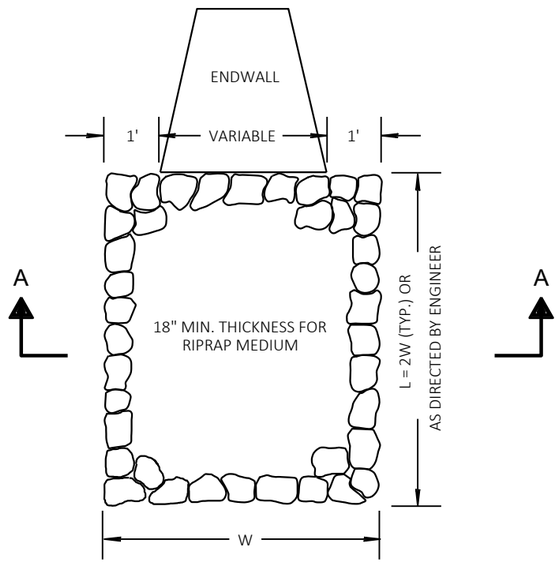


DETAIL FOR EXCAVATION BELOW SUBGRADE (SPRING AREA)

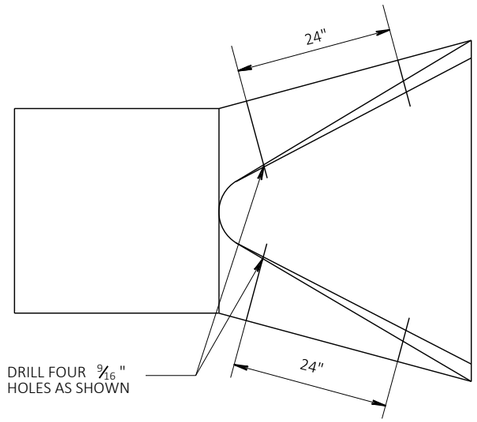
STA. 126+69 - STA. 128+15

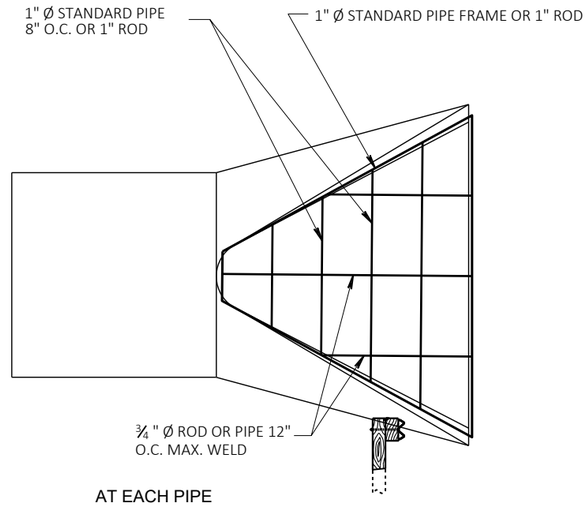


SECTION A-A

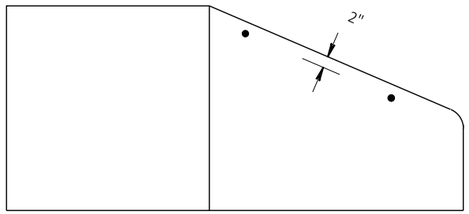


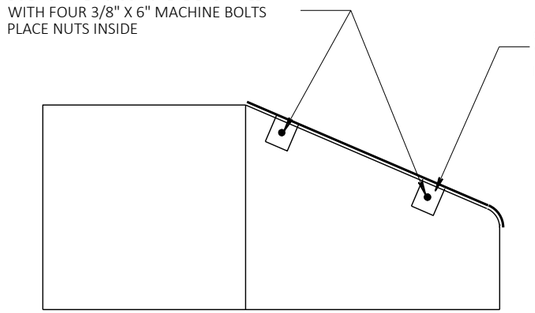
RIPRAP MEDIUM TREATMENT AT CULVERTS

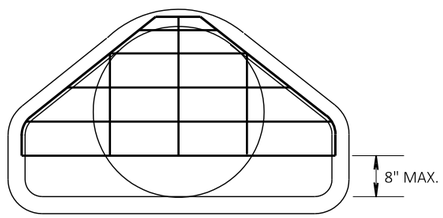




AT EACH PIPE







PIPE GRATE DETAIL

2

N

BP: 99+45.86

PI: 99+77.83

20' TAPER TO MATCH
EXISTING PAVEMENT
WIDTH

EXISTING CTH Q

PC: 102+84.78

100+00

101+00

102+00

103+00

104+00

CTH Q

CONCRETE SURFACE DRAINS (TYP.)

STA 104+00, -14.00' LT
PC/BEGIN CURB & GUTTER

CONCRETE CURB & GUTTER 6-INCH
SLOPED 36-INCH TYPE D

840.45 14' 840.99 841.57 842.26 843.14 844.11 845.04 14' 845.84 846.58 847.18

846.72 14' 847.47 848.26 848.81

CONCRETE SURFACE DRAINS

STA 102+40.45, 14.00' RT
BEGIN CURB & GUTTER
840.27

STA 102+84.59, 14.00' RT
PC 841.19

CONCRETE CURB & GUTTER 6-INCH
SLOPED 36-INCH TYPE D

STA 104+09.79, 14.00' RT
MID PT. 845.36

MATCH LINE STA. 105+00

GUY

NOTES:

1. ELEVATIONS ARE AT 25-FOOT INTERVALS.

2. GRADES SHOWN ON THE PLANS CAN BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	INTERSECTION, CURB & GUTTER, AND BEAM GUARD STAKING DETAILS	SHEET 13	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\021101-ID CG.DWG
LAYOUT NAME - 021101-id cg

PLOT DATE : 11/1/2021 6:30 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

EXISTING CTH Q

STA 7+46.69, 10.00' RT
BEND PT. 849.13

STA 7+46.69, -10.00' LT
BEND PT. 849.13

CONCRETE SURFACE DRAINS (TYP.)

STA 107+00.01, -80.80' LT
PC/BEGIN CURB & GUTTER 850.31

STA 107+53.39, -76.00' LT
58.0' RADIUS (F.O.C.)

CONCRETE CURB & GUTTER 6-INCH
SLOPED 36-INCH TYPE D

HOMER ROAD

STA 8+54.31, 14.60' RT
BEND PT. 850.31

STA 106+64.73, -37.28' LT
PT/END CURB & GUTTER 850.17

STA 106+31.74, -56.00' LT
38.0' RADIUS (F.O.C.)

STA 106+51.29, -21.78' LT
MID PT. 850.27

STA 106+31.74, -16.00' LT
PC 850.35

STA 106+04.44, -14.00' LT
PT 850.45

CONCRETE CURB & GUTTER 6-INCH
SLOPED 36-INCH TYPE D

STA 105+02.22, -14.00' LT
MID PT. 849.43

MATCH LINE STA 105+00

STA 105+35, 14.00' RT
PT/END CURB & GUTTER
848.27

CONCRETE CURB & GUTTER 6-INCH
SLOPED 36-INCH TYPE D

STA 107+12.38, -35.77' LT
MID PT. 850.19

STA 107+53.39, -16.00' LT
PT/END CURB & GUTTER 848.99

STA 108+28.94, -18.00' LT
BEND PT. 847.30

STA 108+80.72, -16.00' LT
BEND PT.845.94

BEND PT.

CTH Q

STA 108+11.11, 18.00' RT
BEND PT. 845.57

STA 108+65.64, 16.00' RT
BEND PT. 844.38

STA 108+91.23, 15.11' RT
BEND PT. 843.89

STRUCTURE
B-22-296

MATCH LINE STA. 111+00

NOTES:

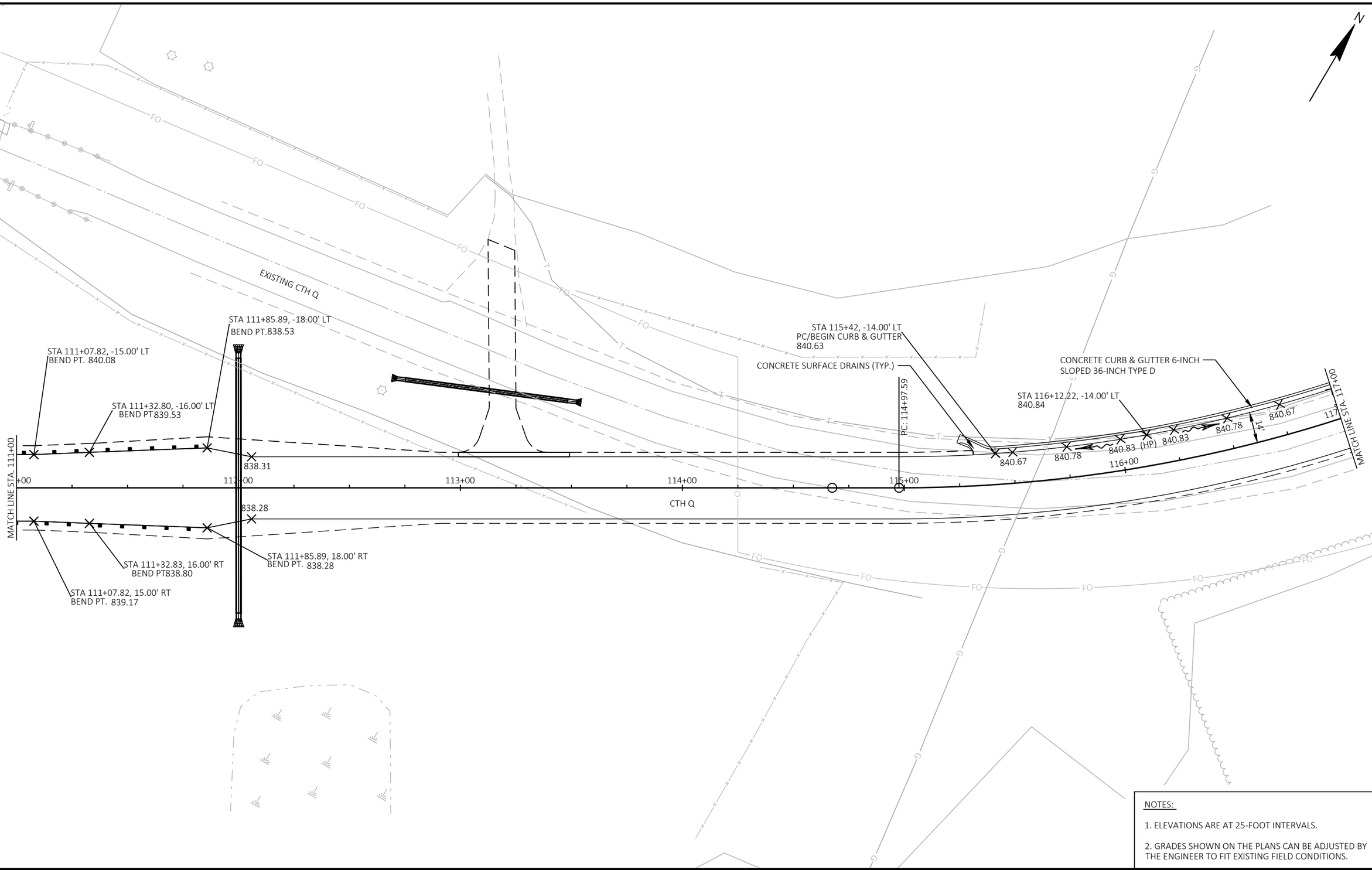
1. ELEVATIONS ARE AT 25-FOOT INTERVALS.

2. GRADES SHOWN ON THE PLANS CAN BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	INTERSECTION, CURB & GUTTER, AND BEAM GUARD STAKING DETAILS	SHEET 14	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\021101-ID CG.DWG
LAYOUT NAME - 021102-id cg
PLOT DATE : 11/1/2021 6:30 AM
PLOT BY : SIMON SCHIFERL
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2



NOTES:

1. ELEVATIONS ARE AT 25-FOOT INTERVALS.

2. GRADES SHOWN ON THE PLANS CAN BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	INTERSECTION, CURB & GUTTER, AND BEAM GUARD STAKING DETAILS	SHEET 15	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\021101-ID CG.DWG
LAYOUT NAME - 021103-id cg
PLOT DATE : 11/1/2021 6:30 AM
PLOT BY : SIMON SCHIFERL
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

NOTES:

1. ELEVATIONS ARE AT 25-FOOT INTERVALS.

2. GRADES SHOWN ON THE PLANS CAN BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	INTERSECTION, CURB & GUTTER, AND BEAM GUARD STAKING DETAILS	SHEET 16	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\021101-ID CG.DWG
LAYOUT NAME - 021104-id cg

PLOT DATE : 11/1/2021 6:30 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

CURB HEAD DEPRESSION FOR DRAINAGE
STA 123+15 - STA 123+21

CURB HEAD DEPRESSION FOR DRAINAGE
STA 124+41 - STA 124+47

CONCRETE CURB & GUTTER 6-INCH
SLOPED 36-INCH TYPE D

PC: 126+74.66

STA 126+74.66, -14.00' LT
PC 839.51

MATCH LINE STA. 123+00

837.22 837.67 838.19 14' 838.73 839.22 839.61 839.91 840.07 840.22 840.25 840.32 (HP) 840.29 840.16 839.95 14' 839.73 839.51 839.29 839.06 838.71 838.34 837.99 837.62 837.27 14' 836.90

+00 124+00 125+00 126+00 127+00 128+00 129

CTH Q

839.73 839.38 838.88 838.39 837.89 837.39 837.02 836.68 836.31

MATCH LINE STA. 129+00

OH

FO

STA 126+00, 14.00' RT
PT/END CURB & GUTTER

CONCRETE SURFACE DRAINS (TYP.)

STA 128+00, 14.00' RT
PT/END CURB & GUTTER

CONCRETE CURB & GUTTER 6-INCH
SLOPED 36-INCH TYPE D

NOTES:

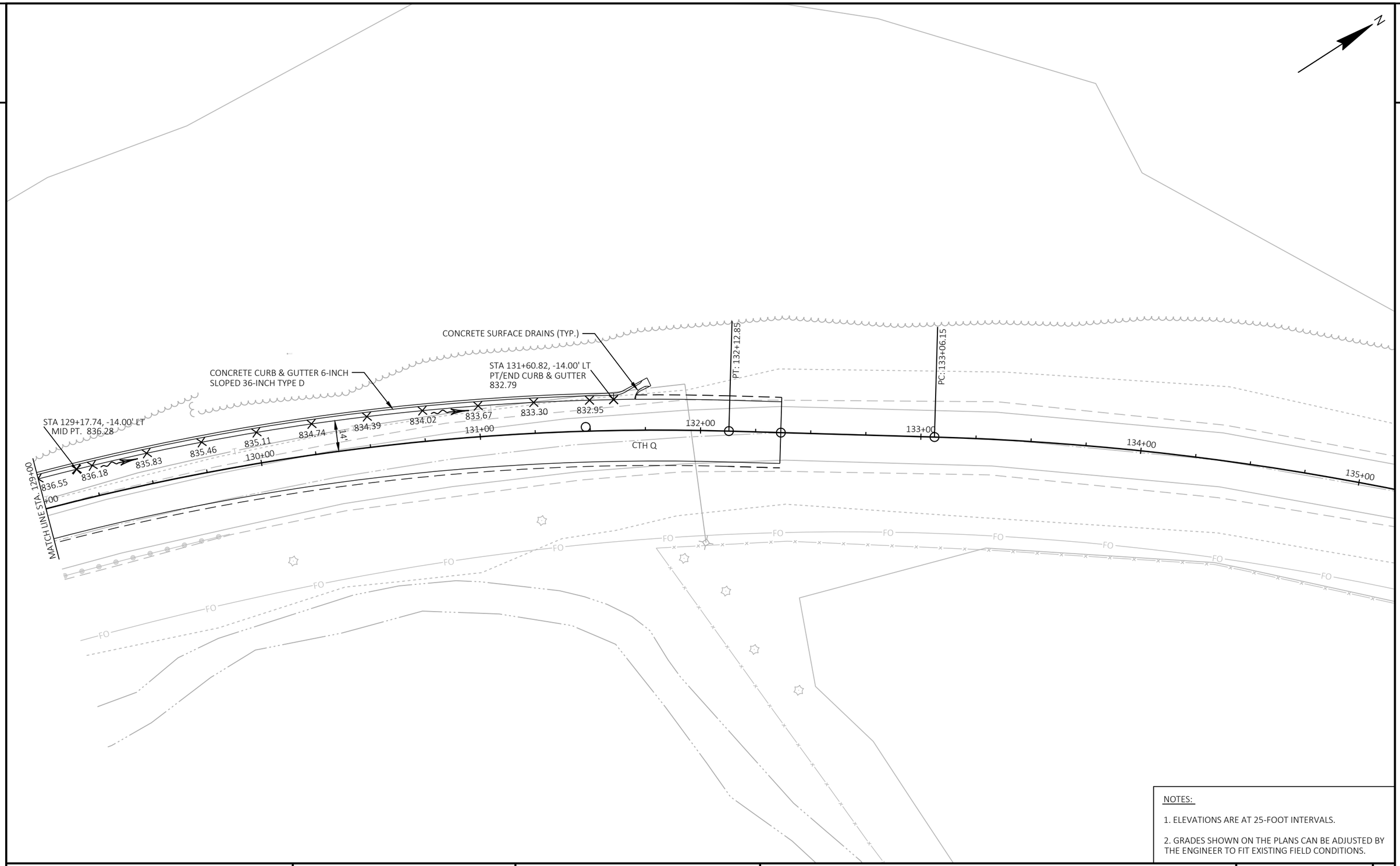
1. ELEVATIONS ARE AT 25-FOOT INTERVALS.

2. GRADES SHOWN ON THE PLANS CAN BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	INTERSECTION, CURB & GUTTER, AND BEAM GUARD STAKING DETAILS	SHEET 17	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\021101-ID CG.DWG
LAYOUT NAME - 021105-id cg
PLOT DATE : 11/1/2021 6:30 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2



NOTES:

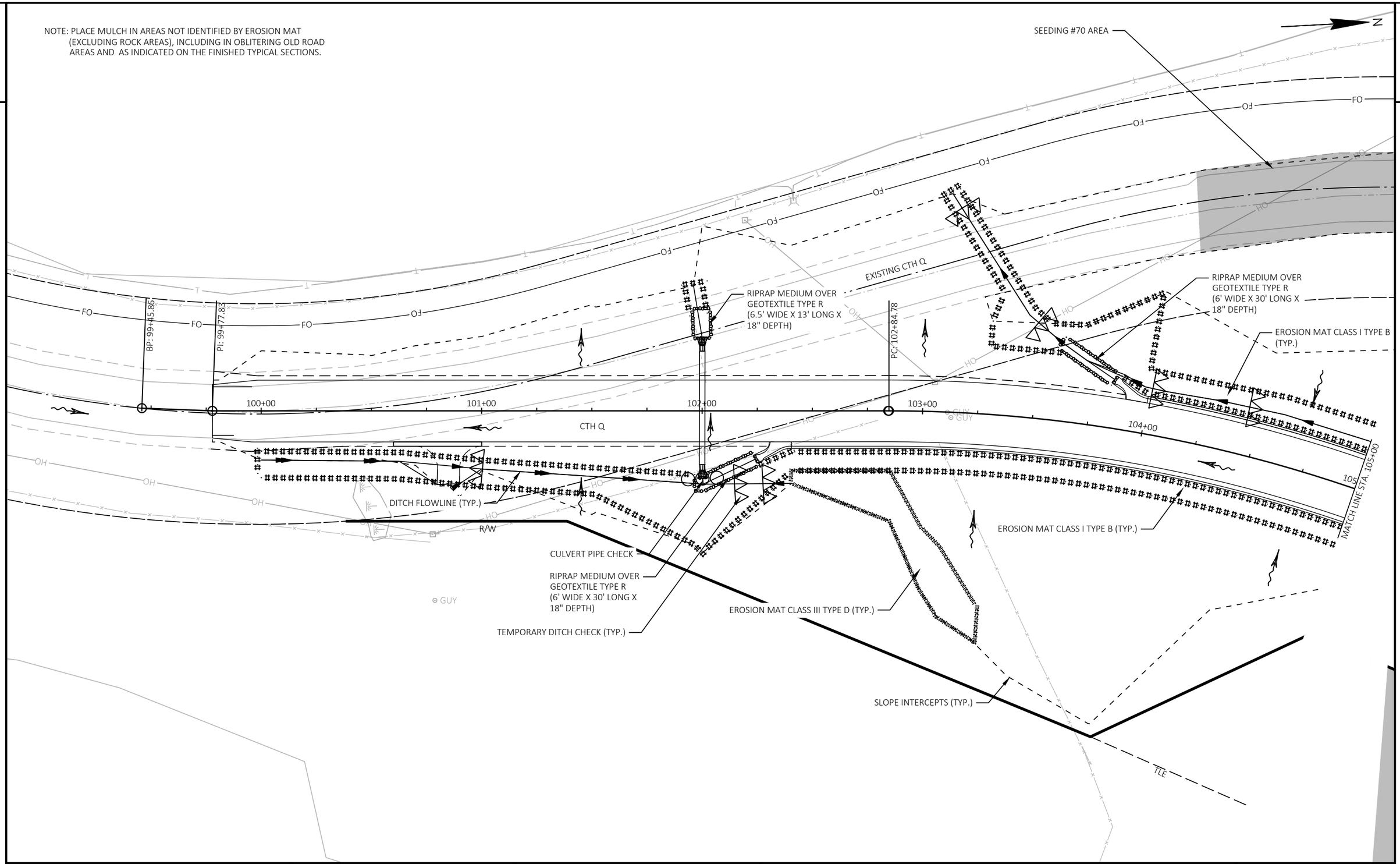
1. ELEVATIONS ARE AT 25-FOOT INTERVALS.

2. GRADES SHOWN ON THE PLANS CAN BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	INTERSECTION, CURB & GUTTER, AND BEAM GUARD STAKING DETAILS	SHEET 18	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\021101-ID CG.DWG
LAYOUT NAME - 021106-id cg
PLOT DATE : 11/1/2021 6:30 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

NOTE: PLACE MULCH IN AREAS NOT IDENTIFIED BY EROSION MAT (EXCLUDING ROCK AREAS), INCLUDING IN OBLITERING OLD ROAD AREAS AND AS INDICATED ON THE FINISHED TYPICAL SECTIONS.



PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	EROSION CONTROL	SHEET 19	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022001-ec

PLOT DATE : 10/29/2021 5:23 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

NOTE: PLACE MULCH IN AREAS NOT IDENTIFIED BY EROSION MAT (EXCLUDING ROCK AREAS), INCLUDING IN OBLITERING OLD ROAD AREAS AND AS INDICATED ON THE FINISHED TYPICAL SECTIONS.

MATCH LINE STA. 7+50

RIPRAP MEDIUM OVER GEOTEXTILE TYPE R (6' WIDE X 50' LONG X 18" DEPTH)

RIPRAP MEDIUM OVER GEOTEXTILE TYPE R (6' WIDE X 50' LONG X 18" DEPTH)

EROSION MAT CLASS I TYPE B (TYP.)

EROSION MAT CLASS I TYPE B (TYP.)

SLOPE INTERCEPTS (TYP.)

RIPRAP MEDIUM OVER GEOTEXTILE TYPE R (6' WIDE X 57' LONG X 18" DEPTH)

HOMER ROAD

8+00H

HOO+6

107+00

106+00

108+00

109+00

EP: 9+10.00

CTH Q

MATCH LINE STA. 105+00

+00

EROSION MAT CLASS I TYPE B (TYP.)

DITCH FLOWLINE (TYP.)

TEMPORARY DITCH CHECK (TYP.)

R/W

SEEDING #70 AREA (TYP.)

TLE

FO

SEEDING #70 AREA (TYP.)

EXISTING CTH Q

EXISTING STRUCTURE B-22-0040

TURBIDITY BARRIER

110+00

STRUCTURE B-22-296

111

MATCH LINE STA. 111+00

SILT FENCE

TURBIDITY BARRIER

SILT FENCE

N

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	EROSION CONTROL	SHEET 20	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022002-ec

PLOT DATE : 10/29/2021 5:23 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

NOTE: PLACE MULCH IN AREAS NOT IDENTIFIED BY EROSION MAT (EXCLUDING ROCK AREAS), INCLUDING IN OBLITERING OLD ROAD AREAS AND AS INDICATED ON THE FINISHED TYPICAL SECTIONS.

SEEDING #70 AREA (TYP.)

FO

EXISTING CTH Q

RIPRAP MEDIUM OVER GEOTEXTILE TYPE R (5.5' WIDE X 11' LONG X 18" DEPTH)

SLOPE INTERCEPTS (TYP.)

CULVERT PIPE CHECK

DITCH FLOWLINE (TYP.)

CULVERT PIPE CHECK

TEMPORARY DITCH CHECK (TYP.)

RIPRAP MEDIUM OVER GEOTEXTILE TYPE R (6' WIDE X 28' LONG X 18" DEPTH)

EROSION MAT CLASS I TYPE B (TYP.)

R/W

MATCH LINE STA. 111+00

111+00

112+00

113+00

114+00

115+00

116+00

MATCH LINE STA. 117+00

CTH Q

R/W

RIPRAP MEDIUM OVER GEOTEXTILE TYPE R (7' WIDE X 7.5' LONG X 18" DEPTH)

SILT FENCE

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	EROSION CONTROL	SHEET 21	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022005-ec

PLOT DATE : 10/29/2021 5:23 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

NOTE: PLACE MULCH IN AREAS NOT IDENTIFIED BY EROSION MAT (EXCLUDING ROCK AREAS), INCLUDING IN OBLITERING OLD ROAD AREAS AND AS INDICATED ON THE FINISHED TYPICAL SECTIONS.

N

MATCH LINE STA. 117+00

R/W

SLOPE INTERCEPTS (TYP.)

EROSION MAT CLASS I TYPE B (TYP.)

INLET PROTECTION TYPE D

118+00

119+00

120+00

121+00

122+00

123

MATCH LINE STA. 123+00

CTH Q

PC: 120+98.88

EP: 121+00.00

2+00C

1+00C

FO

SILT FENCE

RIPRAP MEDIUM OVER GEOTEXTILE TYPE R (6.5' WIDE X 8' LONG X 18" DEPTH)

PT: 1+43.78

CHURCH ROAD

PC: 0+53.23

BP: 0+01.97

BLDG

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	EROSION CONTROL	SHEET 22	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022006-ec

PLOT DATE : 10/29/2021 5:23 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

NOTE: PLACE MULCH IN AREAS NOT IDENTIFIED BY EROSION MAT (EXCLUDING ROCK AREAS), INCLUDING IN OBLITERING OLD ROAD AREAS AND AS INDICATED ON THE FINISHED TYPICAL SECTIONS.

N

EROSION MAT CLASS III TYPE D (TYP.)

SLOPE INTERCEPTS (TYP.)

R/W

EROSION MAT CLASS I TYPE B

DITCH FLOWLINE (TYP.)

TEMPORARY DITCH CHECK(TYP.)

MATCH LINE STA. 123+00

124+00

125+00

126+00

127+00

128+00

MATCH LINE STA. 129+00

CTH Q

SILT FENCE

SILT FENCE

RIPRAP MEDIUM OVER GEOTEXTILE TYPE R (6' WIDE X 54' LONG X 18" DEPTH)

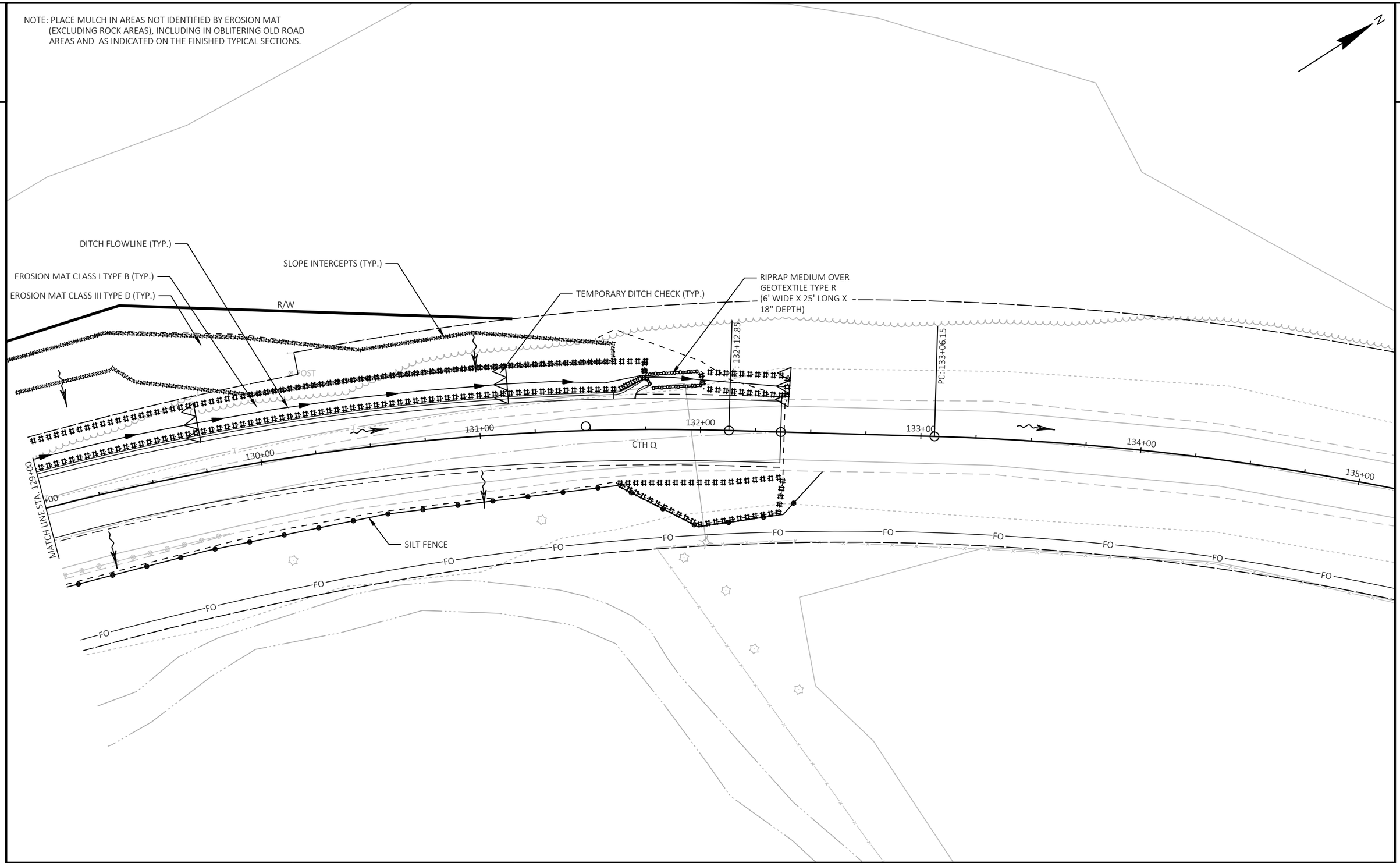
CASTLE ROCK SPRING

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	EROSION CONTROL	SHEET 23	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022007-ec

PLOT DATE : 10/29/2021 5:23 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:40 FT

NOTE: PLACE MULCH IN AREAS NOT IDENTIFIED BY EROSION MAT (EXCLUDING ROCK AREAS), INCLUDING IN OBLITERING OLD ROAD AREAS AND AS INDICATED ON THE FINISHED TYPICAL SECTIONS.

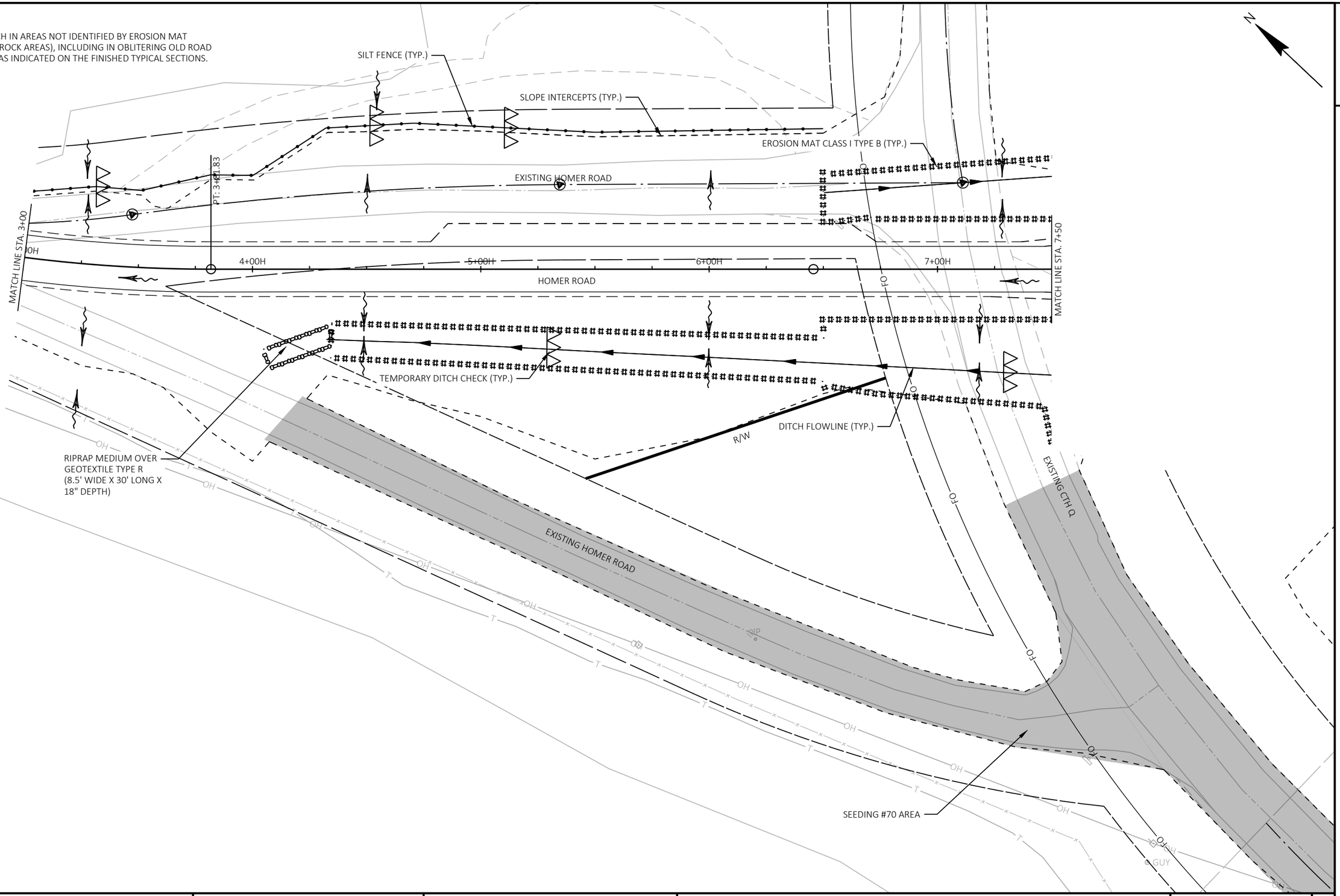


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	EROSION CONTROL	SHEET 24	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022008-ec

PLOT DATE : 10/29/2021 5:23 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:40 FT

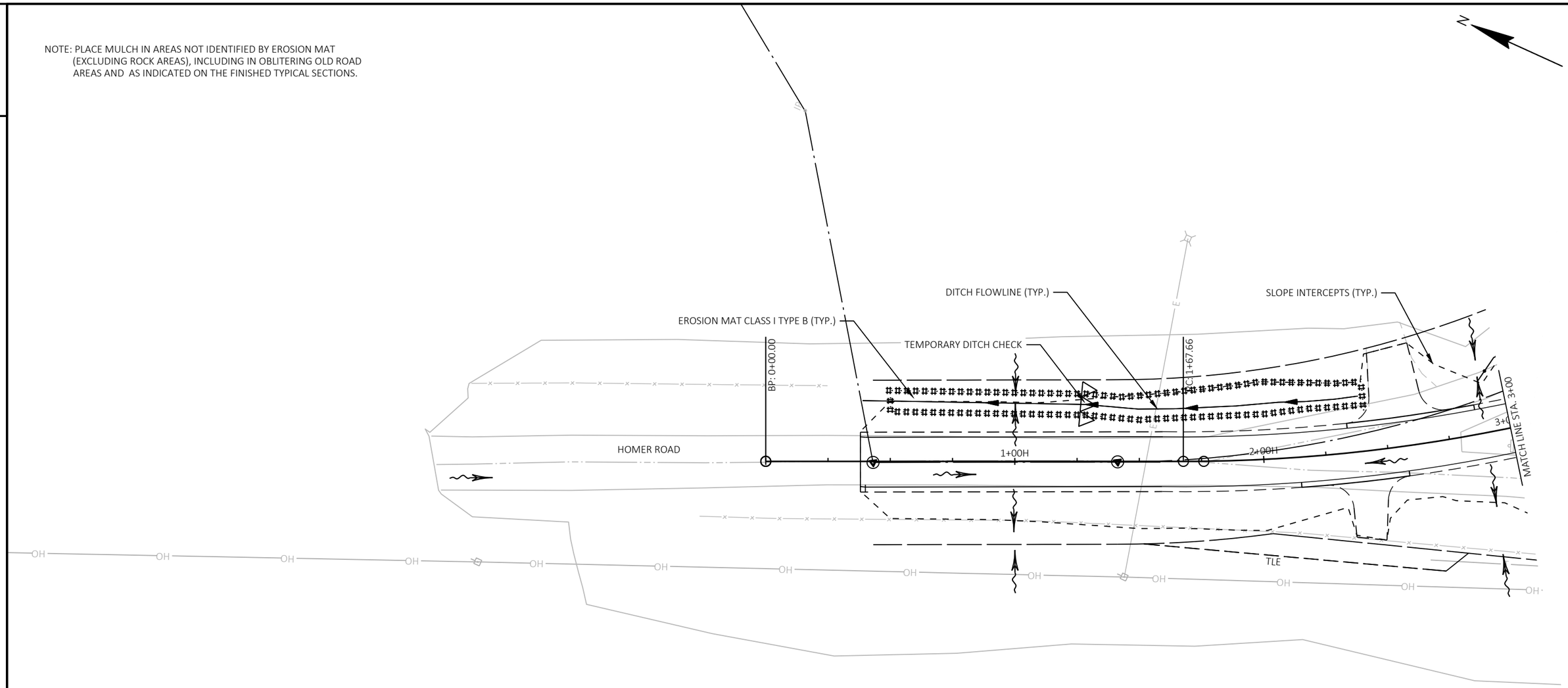
NOTE: PLACE MULCH IN AREAS NOT IDENTIFIED BY EROSION MAT (EXCLUDING ROCK AREAS), INCLUDING IN OBLITERING OLD ROAD AREAS AND AS INDICATED ON THE FINISHED TYPICAL SECTIONS.



PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	EROSION CONTROL	SHEET 25	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022003-ec
PLOT DATE : 10/29/2021 5:23 AM
PLOT BY : SIMON SCHIFERL
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

NOTE: PLACE MULCH IN AREAS NOT IDENTIFIED BY EROSION MAT (EXCLUDING ROCK AREAS), INCLUDING IN OBLITERING OLD ROAD AREAS AND AS INDICATED ON THE FINISHED TYPICAL SECTIONS.



PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	EROSION CONTROL	SHEET 26	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022004-ec
PLOT DATE : 10/29/2021 5:23 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

MATCH INTO EXISTING PAVEMENT MARKINGS

BP: 99+45.86

PI: 99+77.83

MARKING LINE EPOXY 4-INCH, SOLID WHITE

MARKING LINE EPOXY 4-INCH, DOUBLE YELLOW

EXISTING CTH Q

PC: 102+84.78

W1-2R
36"X36"

1.4

40 MPH

W13-1
18"X18"

1.5

100+00

101+00

102+00

103+00

CTH Q

104+00

MATCH LINE STA. 105+00

(SIGN IS LOCATED APPROX. 750' SOUTH OF PROJECT LIMITS)

E1.1

REPLACE WITH SIGN

REMOVE

40 MPH

TO REMAIN

HICKORY GROVE TOWNSHIP IS ZONED

TO REMAIN

W1-2L
36"X36"

1.1

MARKING LINE EPOXY 4-INCH, SOLID WHITE

W1-4R
36"X36"

1.2

45 MPH

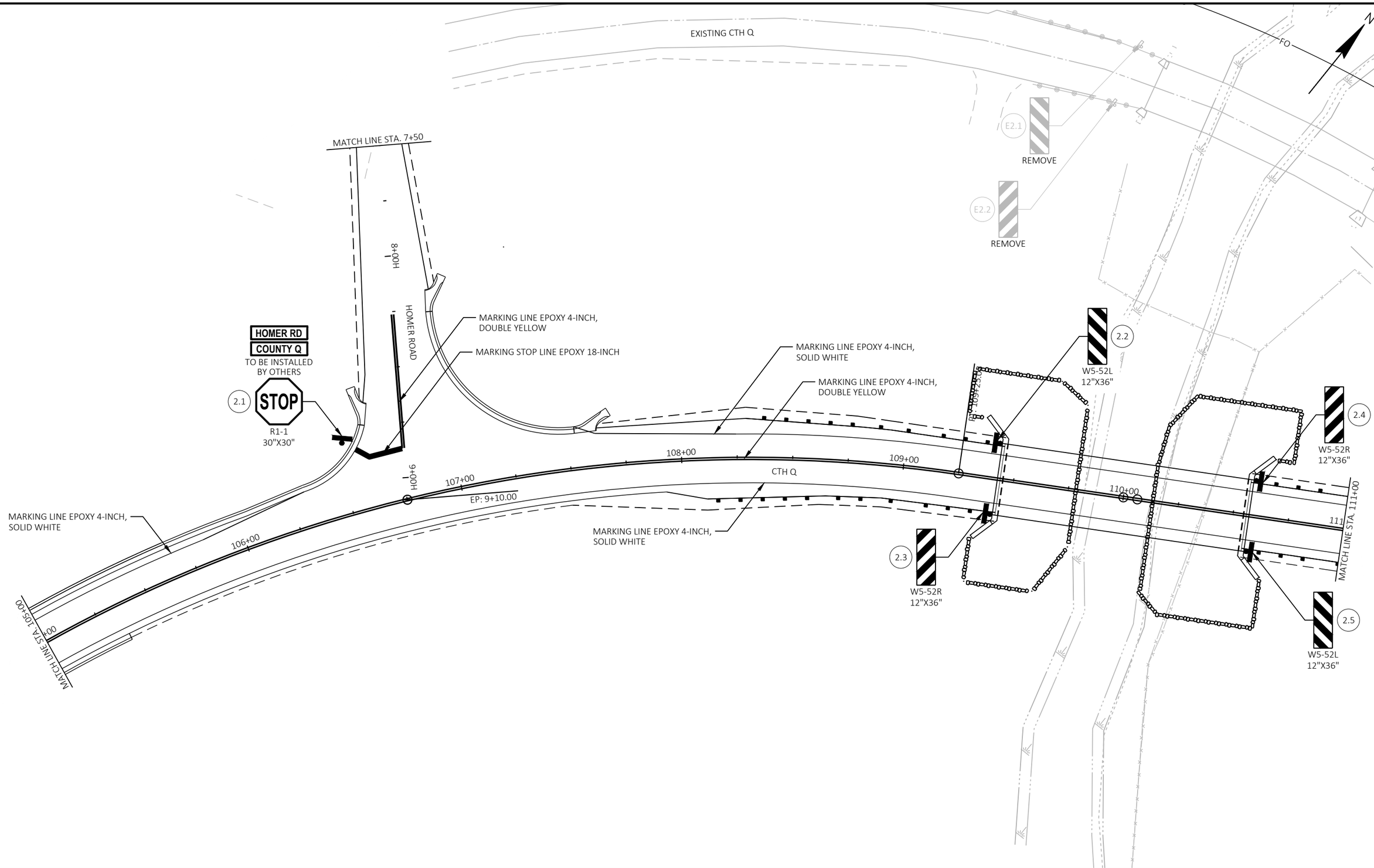
W13-1
18"X18"

1.3

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	PERMANENT SIGNING AND PAVEMENT MARKINGS	SHEET 27	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\020201 - PS & PM.DWG
LAYOUT NAME - 023201-ps pm

PLOT DATE : 10/29/2021 5:27 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:40 FT



PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	PERMANENT SIGNING AND PAVEMENT MARKINGS	SHEET 28	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\020201 - PS & PM.DWG
LAYOUT NAME - 023202-ps pm
PLOT DATE : 10/29/2021 5:27 AM
PLOT BY : SIMON SCHIFERL
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

N

REMOVE

REMOVE

FO

EXISTING CTH Q

MARKING LINE EPOXY 4-INCH, SOLID WHITE

MARKING LINE EPOXY 4-INCH, DOUBLE YELLOW

MARKING LINE EPOXY 4-INCH, SOLID WHITE

PC: 114+97.59

MATCH LINE STA. 111+00

MATCH LINE STA. 117+00

111+00

112+00

113+00

114+00

115+00

116+00

117

CTH Q

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	PERMANENT SIGNING AND PAVEMENT MARKINGS	SHEET 29	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\020201 - PS & PM.DWG
LAYOUT NAME - 023204-ps pm

PLOT DATE : 10/29/2021 5:27 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

MATCH LINE STA. 117+00

118+00

119+00

120+00

121+00

122+00

123

MATCH LINE STA. 123+00

MARKING LINE EPOXY 4-INCH, SOLID WHITE

MARKING LINE EPOXY 4-INCH, DOUBLE YELLOW

MARKING LINE EPOXY 4-INCH, SOLID WHITE

PT: 120+98.88

EP: 121+00.00

CTH Q

2+00C

FO

OH

T

PT: 1+43.78

MARKING STOP LINE EPOXY 18-INCH

MARKING LINE EPOXY 4-INCH, DOUBLE YELLOW

1+00C CHURCH ROAD

CHURCH RD
COUNTY Q
TO BE INSTALLED BY OTHERS

STOP 5.1
R1-1
30"X30"

CHURCH RD
COUNTY Q
SIGNS TO BE REMOVED BY OTHERS PRIOR TO CONSTRUCTION

STOP E5.1
REMOVE

SIGNS TO BE REMOVED BY OTHERS PRIOR TO CONSTRUCTION

ADOPT A HIGHWAY
CASTLE ROCK LUTHERAN CHURCH
5.2
MOVING SIGNS TYPE II, MOVING SMALL SIGN SUPPORTS

MARKING LINE EPOXY 4-INCH, SOLID WHITE

BLDG

PC: 0+53.23

BP: 0+01.57

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	PERMANENT SIGNING AND PAVEMENT MARKINGS	SHEET 30	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\020201 - PS & PM.DWG
LAYOUT NAME - 023205-ps pm

PLOT DATE : 10/29/2021 5:27 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

SIGNS TO BE REMOVED
BY OTHERS PRIOR
TO CONSTRUCTION

CASTLE ROCK LUTHERAN CHURCH

CASTLE ROCK LUTHERAN CHURCH

6.1

W1-4R
36"X36"

45 MPH

6.2

W13-1
18"X18"

MARKING LINE EPOXY 4-INCH,
SOLID WHITE

MARKING LINE EPOXY 4-INCH,
DOUBLE YELLOW

E6.1

REMOVE

40 MPH

REMOVE

REMOVE

PC: 126+74.66

MATCH LINE STA. 123+00

123+00

124+00

125+00

126+00

127+00

128+00

129+00

MATCH LINE STA. 129+00

CTH Q

MARKING LINE EPOXY 4-INCH,
SOLID WHITE

OH

FO

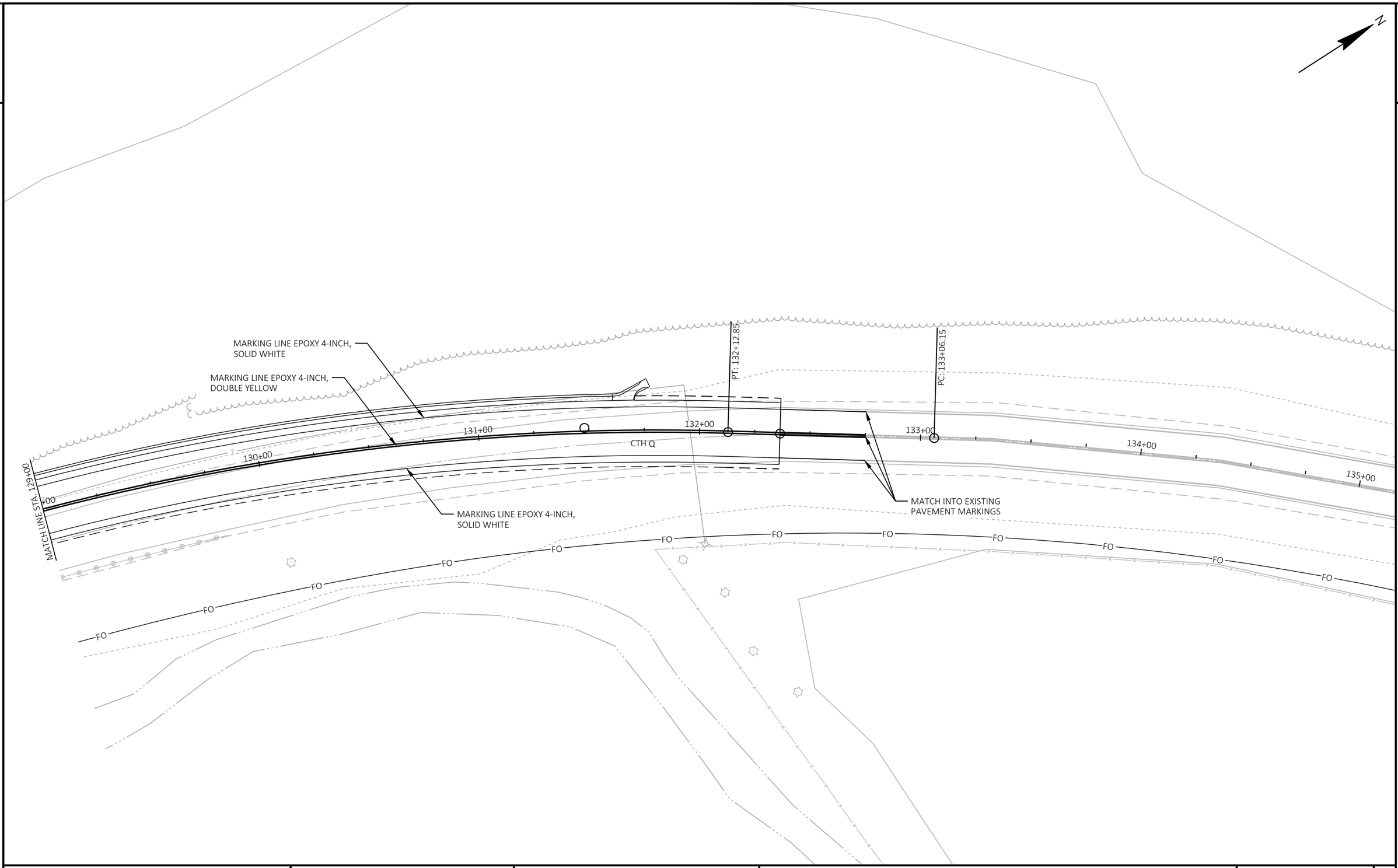
PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	PERMANENT SIGNING AND PAVEMENT MARKINGS	SHEET 31	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\020201 - PS & PM.DWG
LAYOUT NAME - 023206-ps pm

PLOT DATE : 10/29/2021 5:27 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	PERMANENT SIGNING AND PAVEMENT MARKINGS	SHEET 32	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\020201 - PS & PM.DWG
LAYOUT NAME - 023207-ps pm

PLOT DATE : 10/29/2021 5:27 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

STOP
E3.1
REMOVE

PT: 3+81.83

EXISTING HOMER ROAD

3+00H
4+00H
5+00H
6+00H
7+00H

HOMER ROAD

MATCH LINE STA. 7+50

HOMER RD
SIGN TO BE REMOVED
BY OTHERS PRIOR
TO CONSTRUCTION

E3.2
STOP
REMOVE

FO
OH
T
GUY

EXISTING HOMER ROAD

EXISTING CTH Q

E3.3
STOP
REMOVE

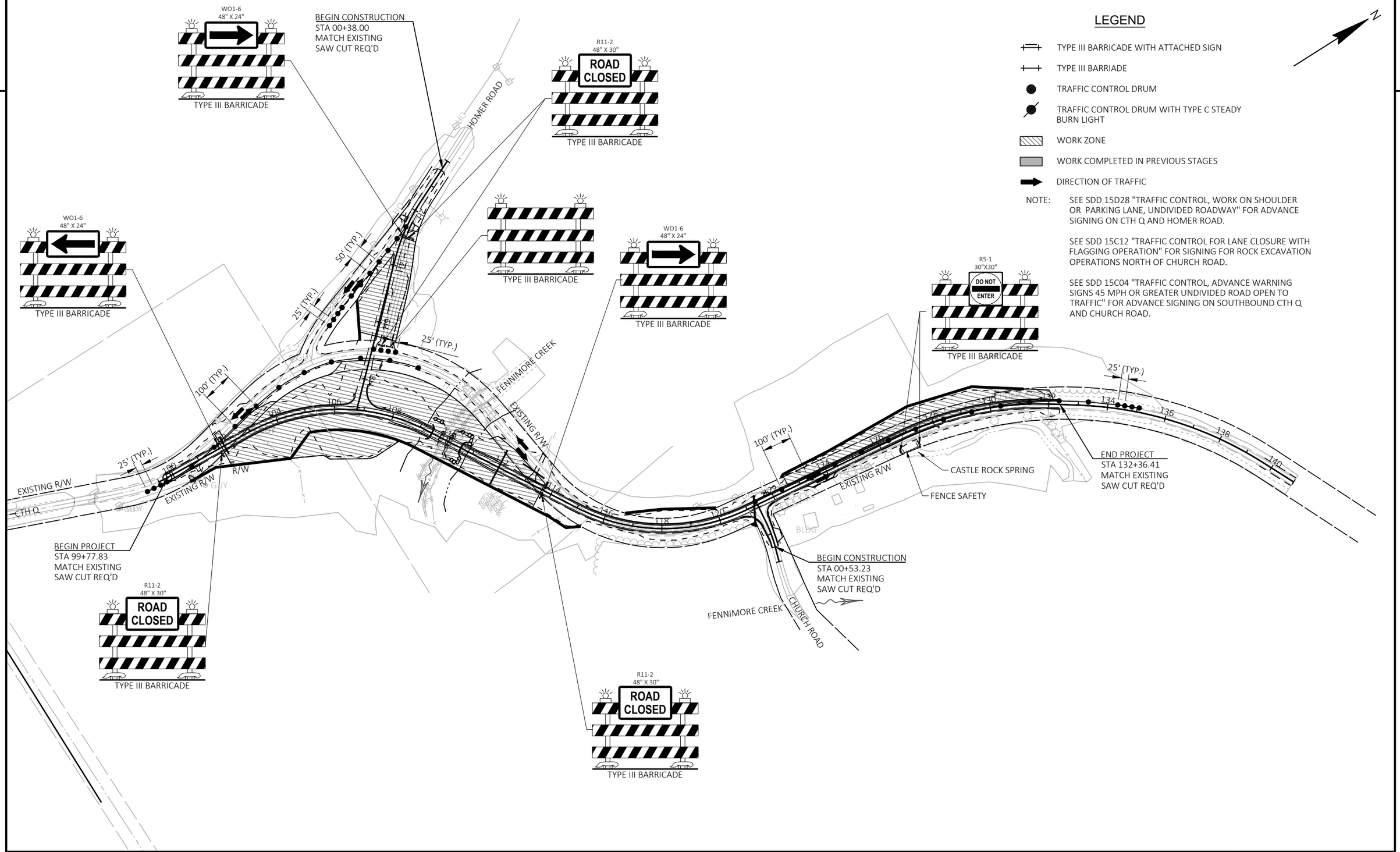
SIGNS TO BE REMOVED
BY OTHERS PRIOR
TO CONSTRUCTION

ATV/UTV ROUTE

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	PERMANENT SIGNING AND PAVEMENT MARKINGS	SHEET 33	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\020201 - PS & PM.DWG
LAYOUT NAME - 023203-ps pm

PLOT DATE : 10/29/2021 5:27 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:40 FT



2

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	STAGE CONSTRUCTION - STAGE 1	SHEET 34	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\026001-S1.DWG
LAYOUT NAME - 026001-s1
PLOT DATE : 10/29/2021 5:53 AM
PLOT BY : SIMON SCHIFERL
PLOT NAME :
PLOT SCALE : 1 IN: 300 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE III BARRIADE
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK ZONE
- WORK COMPLETED IN PREVIOUS STAGES
- DIRECTION OF TRAFFIC

NOTE: SEE SDD 15D28 "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" FOR ADVANCE SIGNING ON CTH Q.

SEE SDD 15C02 DETAIL C "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" FOR ADVANCE SIGNING ON SOUTH BOUND AND NORTH BOUND CTH Q.

SEE SDD 15C03 DETAIL 2 "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES" FOR ADVANCE SIGNING ON HOMER ROAD AND CHURCH ROAD.

WO1-6 48" X 24"
TYPE III BARRICADE

WO1-6 48" X 24"
TYPE III BARRICADE

BEGIN CONSTRUCTION
STA 00+38.00
MATCH EXISTING
SAW CUT REQ'D

HOMER ROAD

R11-2 48" X 30"
ROAD CLOSED
TYPE III BARRICADE

TYPE III BARRICADE

R5-1 30"X30"
DO NOT ENTER
TYPE III BARRICADE

TYPE III BARRICADE

50' (TYP.)
25' (TYP.)
100' (TYP.)
25' (TYP.)
100' (TYP.)

FENNIMORE CREEK
EXISTING R/W
EXISTING R/W
EXISTING R/W
EXISTING R/W
CTH Q
R/W

CASTLE ROCK SPRING
FENCE SAFETY
BLDG

END PROJECT
STA 132+36.41
MATCH EXISTING
SAW CUT REQ'D

BEGIN PROJECT
STA 99+77.83
MATCH EXISTING
SAW CUT REQ'D

BEGIN CONSTRUCTION
STA 00+53.23
MATCH EXISTING
SAW CUT REQ'D

CHURCH ROAD

R11-2 48" X 30"
ROAD CLOSED
TYPE III BARRICADE

TYPE III BARRICADE

R11-2 48" X 30"
ROAD CLOSED
TYPE III BARRICADE

R11-2 48" X 30"
ROAD CLOSED
TYPE III BARRICADE

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	STAGE CONSTRUCTION - STAGE 2A	SHEET 35	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\026001-S2A.DWG
LAYOUT NAME - 026001-s2a
PLOT DATE : 10/29/2021 5:53 AM
PLOT BY : SIMON SCHIFERL
PLOT NAME :
PLOT SCALE : 1 IN: 300 FT

2

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE III BARRIADE
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK ZONE
- WORK COMPLETED IN PREVIOUS STAGES
- DIRECTION OF TRAFFIC

NOTE: SEE SDD 15C02 DETAIL C "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" FOR ADVANCE SIGNING ON SOUTH BOUND AND NORTH BOUND CTH Q.

SEE SDD 15C03 DETAIL 2 "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES" FOR ADVANCE SIGNING ON HOMER ROAD AND CHURCH ROAD.

WO1-6
48" X 24"
TYPE III BARRICADE

BEGIN CONSTRUCTION
STA 00+38.00
MATCH EXISTING
SAW CUT REQ'D

HOMER ROAD

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

TYPE III BARRICADE

OBLITERATING OLD ROAD

TYPE III BARRICADE

FENNIMORE CREEK

EXISTING R/W

50' (TYP.)

EXISTING R/W

EXISTING R/W

CTH Q

BEGIN PROJECT
STA 99+77.83
MATCH EXISTING
SAW CUT REQ'D

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

WO1-6
48" X 24"
TYPE III BARRICADE

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

TYPE III BARRICADE

R5-1
30"X30"
DO NOT ENTER
TYPE III BARRICADE

TYPE III BARRICADE

END PROJECT
STA 132+36.41
MATCH EXISTING
SAW CUT REQ'D

CASTLE ROCK SPRING

FENCE SAFETY

EXISTING R/W

BLDG

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

FENNIMORE CREEK

CHURCH ROAD

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

BEGIN CONSTRUCTION
STA 00+53.23
MATCH EXISTING
SAW CUT REQ'D

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	STAGE CONSTRUCTION - STAGE 2B	SHEET 36	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\026001-S2B.DWG
LAYOUT NAME - 026001-s2b
PLOT DATE : 10/29/2021 5:53 AM
PLOT BY : SIMON SCHIFERL
PLOT NAME :
PLOT SCALE : 1 IN: 300 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE III BARRIADE
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- WORK ZONE
- WORK COMPLETED IN PREVIOUS STAGES
- DIRECTION OF TRAFFIC

NOTE: SEE SDD 15C02 DETAIL C "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" FOR ADVANCE SIGNING ON CTH Q, HOMER ROAD AND CHURCH ROAD.

ALTERNATE CLOSURES ON HOMER ROAD AND CHURCH ROAD TO ALLOW FOR LOCAL DETOURS.

SEE SDD 15C12 "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION" FOR SIGNING FOR PLACEMENT OF FINAL LAYER OF HMA PAVEMENT.

TYPE III BARRICADE

R11-2B 48" X 30" BRIDGE OUT — TYPE III BARRICADE

TYPE III BARRICADE

R11-2 48" X 30" ROAD CLOSED — TYPE III BARRICADE

WO1-6 48" X 24" — TYPE III BARRICADE

R11-2 48" X 30" ROAD CLOSED — TYPE III BARRICADE

R11-2 48" X 30" ROAD CLOSED — TYPE III BARRICADE

R5-1 30"X30" DO NOT ENTER — TYPE III BARRICADE

TYPE III BARRICADE

R11-2 48" X 30" ROAD CLOSED — TYPE III BARRICADE

R11-2B 48" X 30" BRIDGE OUT — TYPE III BARRICADE

R11-2 48" X 30" ROAD CLOSED — TYPE III BARRICADE

TYPE III BARRICADE

BEGIN CONSTRUCTION
STA 00+38.00
MATCH EXISTING
SAW CUT REQ'D

OBLITERATING OLD ROAD

HOMER ROAD

FENNIMORE CREEK

EXISTING R/W

CTH Q

BEGIN PROJECT
STA 99+77.83
MATCH EXISTING
SAW CUT REQ'D

CASTLE ROCK SPRING

FENCE SAFETY

END PROJECT
STA 132+36.41
MATCH EXISTING
SAW CUT REQ'D

CHURCH ROAD

BEGIN CONSTRUCTION
STA 00+53.23
MATCH EXISTING
SAW CUT REQ'D

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	STAGE CONSTRUCTION - STAGE 3	SHEET 37	E

Estimate Of Quantities

5667-00-75

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	24.000	24.000
0004	201.0120	Clearing	ID	12.000	12.000
0006	201.0205	Grubbing	STA	24.000	24.000
0008	201.0220	Grubbing	ID	12.000	12.000
0010	203.0100	Removing Small Pipe Culverts	EACH	3.000	3.000
0012	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. B-22-0040	EACH	1.000	1.000
0014	204.0165	Removing Guardrail	LF	524.000	524.000
0016	204.0170	Removing Fence	LF	1,190.000	1,190.000
0018	205.0100	Excavation Common	CY	14,410.000	14,410.000
0020	205.0200	Excavation Rock	CY	36,672.000	36,672.000
0022	206.1000	Excavation for Structures Bridges (structure) 01. B-22-296	LS	1.000	1.000
0024	210.1500	Backfill Structure Type A	TON	650.000	650.000
0026	213.0100	Finishing Roadway (project) 01. 5667-00-75	EACH	1.000	1.000
0028	214.0100	Obliterating Old Road	STA	12.000	12.000
0030	305.0110	Base Aggregate Dense 3/4-Inch	TON	580.000	580.000
0032	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	11,960.000	11,960.000
0034	311.0110	Breaker Run	TON	6,319.000	6,319.000
0036	416.1010	Concrete Surface Drains	CY	8.000	8.000
0038	455.0605	Tack Coat	GAL	643.000	643.000
0040	460.2000	Incentive Density HMA Pavement	DOL	2,300.000	2,300.000
0042	460.5223	HMA Pavement 3 LT 58-28 S	TON	2,160.000	2,160.000
0044	460.5224	HMA Pavement 4 LT 58-28 S	TON	1,440.000	1,440.000
0046	502.0100	Concrete Masonry Bridges	CY	234.000	234.000
0048	502.3200	Protective Surface Treatment	SY	518.000	518.000
0050	503.0155	Prestressed Girder Type I 54W-Inch	LF	452.000	452.000
0052	505.0400	Bar Steel Reinforcement HS Structures	LB	4,890.000	4,890.000
0054	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	28,680.000	28,680.000
0056	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	8.000	8.000
0058	506.4000	Steel Diaphragms (structure) 01. B-22-296	EACH	6.000	6.000
0060	513.4061	Railing Tubular Type M	LF	232.000	232.000
0062	516.0500	Rubberized Membrane Waterproofing	SY	24.000	24.000
0064	522.0118	Culvert Pipe Reinforced Concrete Class III 18-Inch	LF	74.000	74.000
0066	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	115.000	115.000
0068	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	52.000	52.000
0070	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	2.000	2.000
0072	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	4.000	4.000
0074	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	1.000	1.000
0076	550.0020	Pre-Boring Rock or Consolidated Materials	LF	153.000	153.000
0078	550.0500	Pile Points	EACH	9.000	9.000
0080	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	423.000	423.000
0082	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	2,492.000	2,492.000
0084	606.0200	Riprap Medium	CY	141.000	141.000
0086	606.0400	Riprap Extra-Heavy	CY	835.000	835.000
0088	608.0430	Storm Sewer Pipe Reinforced Concrete Class IV 30-Inch	LF	83.000	83.000
0090	611.2005	Manholes 5-FT Diameter	EACH	1.000	1.000
0092	611.9800.S	Pipe Grates	EACH	3.000	3.000
0094	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	190.000	190.000
0096	614.2300	MGS Guardrail 3	LF	137.500	137.500
0098	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600

5667-00-75

Line	Item	Item Description	Unit	Total	Qty
0100	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0102	616.0700.S	Fence Safety	LF	132.000	132.000
0104	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5667-00-75	EACH	1.000	1.000
0106	619.1000	Mobilization	EACH	1.000	1.000
0108	624.0100	Water	MGAL	175.000	175.000
0110	625.0100	Topsoil	SY	24,400.000	24,400.000
0112	625.0500	Salvaged Topsoil	SY	18,400.000	18,400.000
0114	627.0200	Mulching	SY	26,300.000	26,300.000
0116	628.1504	Silt Fence	LF	4,000.000	4,000.000
0118	628.1520	Silt Fence Maintenance	LF	8,000.000	8,000.000
0120	628.1905	Mobilizations Erosion Control	EACH	8.000	8.000
0122	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0124	628.2004	Erosion Mat Class I Type B	SY	14,500.000	14,500.000
0126	628.2039	Erosion Mat Class III Type D	SY	1,900.000	1,900.000
0128	628.6005	Turbidity Barriers	SY	444.000	444.000
0130	628.7020	Inlet Protection Type D	EACH	1.000	1.000
0132	628.7504	Temporary Ditch Checks	LF	560.000	560.000
0134	628.7555	Culvert Pipe Checks	EACH	13.000	13.000
0136	628.7560	Tracking Pads	EACH	3.000	3.000
0138	629.0210	Fertilizer Type B	CWT	46.900	46.900
0140	630.0120	Seeding Mixture No. 20	LB	844.000	844.000
0142	630.0170	Seeding Mixture No. 70	LB	25.000	25.000
0144	630.0200	Seeding Temporary	LB	437.000	437.000
0146	630.0400	Seeding Nurse Crop	LB	54.000	54.000
0148	630.0500	Seed Water	MGAL	1,700.000	1,700.000
0150	633.5100	Markers ROW	EACH	44.000	44.000
0152	633.5200	Markers Culvert End	EACH	7.000	7.000
0154	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0156	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	5.000	5.000
0158	637.2210	Signs Type II Reflective H	SF	10.360	10.360
0160	637.2230	Signs Type II Reflective F	SF	54.750	54.750
0162	638.2102	Moving Signs Type II	EACH	1.000	1.000
0164	638.2602	Removing Signs Type II	EACH	10.000	10.000
0166	638.3000	Removing Small Sign Supports	EACH	9.000	9.000
0168	638.4000	Moving Small Sign Supports	EACH	1.000	1.000
0170	642.5201	Field Office Type C	EACH	1.000	1.000
0172	643.0300	Traffic Control Drums	DAY	3,519.000	3,519.000
0174	643.0420	Traffic Control Barricades Type III	DAY	2,585.000	2,585.000
0176	643.0705	Traffic Control Warning Lights Type A	DAY	3,774.000	3,774.000
0178	643.0715	Traffic Control Warning Lights Type C	DAY	143.000	143.000
0180	643.0900	Traffic Control Signs	DAY	2,991.000	2,991.000
0182	643.5000	Traffic Control	EACH	1.000	1.000
0184	645.0111	Geotextile Type DF Schedule A	SY	70.000	70.000
0186	645.0115	Geotextile Type ES	SY	280.000	280.000
0188	645.0120	Geotextile Type HR	SY	1,118.000	1,118.000
0190	645.0130	Geotextile Type R	SY	280.000	280.000
0192	646.1020	Marking Line Epoxy 4-Inch	LF	13,454.000	13,454.000
0194	646.6120	Marking Stop Line Epoxy 18-Inch	LF	50.000	50.000
0196	650.4000	Construction Staking Storm Sewer	EACH	2.000	2.000

Estimate Of Quantities

5667-00-75

Line	Item	Item Description	Unit	Total	Qty
0198	650.4500	Construction Staking Subgrade	LF	4,161.000	4,161.000
0200	650.5000	Construction Staking Base	LF	4,161.000	4,161.000
0202	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	2,492.000	2,492.000
0204	650.6000	Construction Staking Pipe Culverts	EACH	3.000	3.000
0206	650.6500	Construction Staking Structure Layout (structure) 01. B-22-296	LS	1.000	1.000
0208	650.9910	Construction Staking Supplemental Control (project) 01. 5667-00-75	LS	1.000	1.000
0210	650.9920	Construction Staking Slope Stakes	LF	4,161.000	4,161.000
0212	690.0150	Sawing Asphalt	LF	191.000	191.000
0214	715.0502	Incentive Strength Concrete Structures	DOL	1,404.000	1,404.000
0216	740.0440	Incentive IRI Ride	DOL	2,469.000	2,469.000
0218	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 110+38	EACH	1.000	1.000
0220	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,000.000	2,000.000
0222	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	1,320.000	1,320.000
0224	SPV.0035	Special 01. Excavation Rock Special	CY	6,828.000	6,828.000
0226	SPV.0060	Special 01. Top Mount Grate 48-Inch	EACH	1.000	1.000
0228	SPV.0195	Special 01. Select Crushed Material for Travel Corridor	TON	130.000	130.000

EARTHWORK SUMMARY

DIVISION	FROM/TO STATION	205.0100 COMMON EXCAVATION (1) CUT (2)	205.0100 COMMON EXCAVATION (1) EBS EXCAVATION (3)	SALVAGED/ UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	ROCK EXCAVATION 205.0200 ROCK EXCAVATION	ROCK EXCAVATION SPV.0035.01 EXCAVATION ROCK SPECIAL	REDUCED EBS IN FILL (9) FACTOR 0.80	EXPANDED EBS BACKFILL (11) FACTOR 1.30	EXPANDED ROCK (12) FACTOR 1.10	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.25	MASS ORDINATE +/- (14)	WASTE (15)	311.0110 BREAKER RUN (TON)	COMMENT
STAGE 1																
CTH Q EW STAGE 1	101+95.918/132+12.845	4,544	2,513	0	4,544	31,155	6,828	2,010	3,267	41,781	36,863	-8,661	9,938	9,938	5,881	
HOMER EW STAGE 1	03+00/08+49.947	561	0	0	561	5,517	0	0	0	6,069	3,751	-2,897	3,458	3,458	0	
STAGE 1 SUBTOTAL		5,105	2,513	0	5,105	36,672	6,828	2,010	3,267	47,850	40,614	-11,558	13,396	13,396	5,881	
STAGE 2A																
CTH Q EW STAGE 2A	113+64.59/121+26.25	2,163	0	0	2,163	0	0	0	0	0	3,315	4,144	-1,981	-1,989	0	USE WASTE MATERIAL FROM STAGE 1
STAGE 2A SUBTOTAL		2,163	0	0	2,163	0	0	0	0	0	3,315	4,144	-1,981	-1,989	0	
STAGE 2B																
CTH Q EW STAGE 2B	99+78.767/132+35.78	2,788	187	0	2,788	0	0	150	243	0	168	23	2,765	2,765	438	
STAGE 2B SUBTOTAL		2,788	187	0	2,788	0	0	150	243	0	168	23	2,765	2,765	438	
STAGE 3																
CTH Q EW STAGE 3	120+49.989/132+35.78	897	0	0	897	0	0	0	0	0	53	66	831	831	0	
CHURCH EW STAGE 3	00+53.25/01+75	101	0	0	101	0	0	0	0	0	148	185	-84	-84	0	USE WASTE MATERIAL FROM PREVIOUS STAGES
HOMER EW STAGE 3	00+38.01/07+50.00	656	0	0	656	0	0	0	0	0	1,008	1,260	-604	-604	0	USE WASTE MATERIAL FROM PREVIOUS STAGES
STAGE 3 SUBTOTAL		1,654	0	0	1,654	0	0	0	0	0	1,209	1,511	143	143	0	
GRAND TOTAL		11,710	2,700	0	11,710	36,672	6,828	2,160	3,510	47,850	45,306	-5,880	14,323	14,315	6,319	
TOTAL COMMON EXC		14,410														

NOTES:
(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(3) EBS EXCAVATION TO BE BACKFILLED WITH BREAKER RUN MATERIAL.
(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
(9) REDUCED EBS IN FILL - EXCAVATED EBS MATERIAL IS USABLE IN FILLS OUTSIDE THE 1:1 SLOPE. EBS IN FILL REDUCTION FACTOR = 0.80
(11) EXPANDED EBS BACKFILL - THIS IS TO BE FILLED WITH BREAKER RUN MATERIAL. EBS BACKFILL FACTOR = 1.30
(12) EXPANDED ROCK FACTOR = 1.10
(13) EXPANDED FILL FACTOR = 1.25; EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED EBS) * FILL FACTOR
(14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
(15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

CLEARING AND GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0120 CLEARING ID	201.0205 GRUBBING STA	201.0220 GRUBBING ID
0010	101+00	-	110+00	LT & RT	9		9	
0010	115+00	-	120+00	LT	5		5	
0010	122+00	-	132+00	LT	10		10	
0010	113+00	-	113+00	LT		12		12
				TOTAL 0010	24	12	24	12

REMOVING GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF
0010	109+16	-	109+89	LT	74
0010	109+32	-	109+84	LT	50
0010	110+96	-	111+43	LT	50
0010	110+89	-	111+34	LT	50
0010	126+70	-	129+80	RT	300
				TOTAL 0010	524

3

REMOVING SMALL PIPE CULVERTS

CATEGORY	STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	REMARKS
0010	102+00	LT	1	44-ft 24-Inch CMP
0010	121+25	LT&RT	1	66-ft 24-Inch CMP
0010	121+81	LT	1	25-ft 12-Inch CMP
		TOTAL 0010	3	

CONCRETE SURFACE DRAINS

CATEGORY	STATION	LOCATION	416.1010 CONCRETE SURFACE DRAINS CY
0010	102+40	RT	1
0010	104+00	LT	1
0010	8+75H	RT	1
0010	8+26H	LT	1
0010	107+53	LT	1
0010	115+42	LT	1
0010	128+00	RT	1
0010	131+61	LT	1
		TOTAL 0010	8

OBLITERATING OLD ROAD

CATEGORY	STATION	TO	STATION	LOCATION	214.0100 OBLITERATING OLD ROAD STA
0010	103+00	-	111+00	LT	8
0010	4+00H	-	8+00H	RT	4
				TOTAL 0010	12

CULVERT AND STORM SEWER ITEMS

CATEGORY	STATION	LOCATION	INVERT STATION	INVERT ELEV.	OUTLET STATION	OUTLET ELEV.	MANHOLE* STATION	MANHOLE* RIM ELEV.	522.0118 CULVERT PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	522.0424 CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH EACH	608.0430 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF	611.2005 MANHOLES 5-FT DIAMETER EACH	611.9800.S PIPE GRATES EACH	628.7555 CULVERT PIPE CHECKS EACH	633.5200 MARKERS CULVERT END EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	SPV.0060.01 SPECIAL (01. TOP MOUNT GRATE 48-INCH) EACH	REMARKS
0010	102+00	LT&RT	102+00, 24.3' RT	834.94'	102+00, 27.0' LT	834.66'					52		2				2	3	2		1			
0010	112+00	LT&RT	112+00, 58.3' LT	824.55'	112+00, 56.5' RT	824.07'				115			2					3	2		1			
0010	113+02	LT	113+48, 39.2' LT	831.47'	112+75, 48.8' LT	827.85'			74			2						2	2		1			
0010	121+06	LT&RT	121+39	830.23'	121+08, 47.1' RT	829.94'	121+39, 29.8' LT	834.47						1	83	1	1	5	1	2		1		**MANHOLE DEPTH: 4.24' USE FLAT SLAB TOP WITH 48" OPENING
								TOTAL 0010	74	115	52	2	4	1	83	1	3	13	7	2	3	1	

* STATION AND OFFSET MEASURED TO CENTER OF STRUCTURE
**DEPTH=RIM ELEV - INVERT ELEV

BASE AGGREGATE DENSE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL
0010	99+78	-	109+43	LT & RT	130	2,800	41
0010	110+57	-	121+40	LT & RT	145	3,080	45
0010	121+40	-	132+37	LT & RT	105	3,165	46
0010	0+38H	-	8+97H	LT & RT	165	2,200	33
0010	0+53C	-	1+95C	LT & RT	35	490	7
0010	100+70	-	101+00	RT		5	0
0010	113+07	-	113+31	LT		45	1
0010	121+70	-	121+95	LT		5	0
0010	123+11	-	124+35	RT		50	1
0010	2+34H	-	2+48H	RT		15	0
0010	2+43H	-	2+76H	LT		20	0
0010	2+43H	-	2+76H	LT		55	1
0010	0+61C	-	1+22C	RT		30	0
				TOTAL 0010	580.00	11,960	175

INLET PROTECTION

CATEGORY	STATION	LOCATION	628.7020 INLET PROTECTION TYPE D EACH
0010	121+39	LT	1
		TOTAL 0010	1

EROSION CONTROL MOBILIZATION ITEMS

CATEGORY	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010	Project 5667-00-75	8	4
	TOTAL 0010	8	4

TURBIDITY BARRIERS

CATEGORY	STATION	TO	STATION	LOCATION	628.6005 TURBIDITY BARRIERS SY
0010	109+95	-	109+95	LT	132
0010	110+04	-	110+17	LT	76
0010	110+10	-	110+10	LT	160
0010	110+42	-	110+72	LT	76
				TOTAL 0010	444

REMOVING FENCE

CATEGORY	STATION	TO	STATION	LOCATION	204.0170 REMOVING FENCE LF
0030	101+17	-	103+92	LT	350
0030	109+80	-	114+72	LT&RT	840
				TOTAL 0030	1,190

3

ASPHALTIC ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	460.5223 HMA PAVEMENT 3 LT 58-28 S TON	460.5224 HMA PAVEMENT 4 LT 58-28 S TON
0010	99+78	-	109+43	LT & RT	157	528	352
0010	110+57	-	121+40	LT & RT	175	587	392
0010	121+40	-	132+37	LT & RT	173	580	387
0010	0+38H	-	8+97H	LT & RT	110	370	247
0010	0+53C	-	1+95C	LT & RT	28	95	62
				TOTAL 0010	643	2,160	1,440

GUARDRAIL ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
0010	108+11	-	109+44	RT	37.5	39.4	1
0010	108+29	-	109+44	LT	25.0	39.4	1
0010	110+56	-	111+86	RT	37.5	39.4	1
0010	110+56	-	111+86	LT	37.5	39.4	1
				TOTAL 0010	137.5	157.6	4

FINISHING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2004 EROSION MAT CLASS I TYPE B SY	628.2039 EROSION MAT CLASS III TYPE D SY	628.7504 TEMPORARY DITCH CHECKS LF	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0170 SEEDING MIXTURE NO. 70 LB	630.0200 SEEDING TEMPORARY LB	630.0400 SEEDING NURSE CROP LB	630.0500 SEED WATER MGAL
0010	99+78	-	109+43	LT & RT	3,959	5,977	6,857	280	560	2,877	202	240	13.0	286	10	148	20	461
0010	109+43	-	121+40	LT & RT	2,668	5,800	3,373	1,508	3,016	5,095		60	10.4	216	2	109	4	370
0010	121+40	-	132+37	LT & RT	4,012	983	2,096	1,092	2,184	1,574	1,325	50	6.4	137	0	69	0	227
0010	0+38H		8+97H	LT & RT	8,801	1,852	8,605	366	732	2,048		100	7.4	29	8	19	16	263
0010	0+53C		2+10C	LT & RT	13	86	37			62			0.3	7	0	4	0	8
			Undistributed		4947	3702	5332	754	1508	2844	373	110	9.4	169	5	88	14	371
				TOTAL 0010	24,400	18,400	26,300	4,000	8,000	14,500	1,900	560	46.9	844	25	437	54	1,700

TRACKING PADS

CATEGORY	STATION	LOCATION	628.7560 TRACKING PADS EACH	REMARKS
0010	99+78		1	BEGINNING OF PROJECT
0010	132+36		1	END OF PROJECT
0010	0+38H		1	END OF CONSTRUCTION LIMITS
		TOTAL 0010	3	

ROW MARKERS

CATEGORY	LOCATION	633.5100 MARKERS ROW EACH
0010	Project	44
	TOTAL 0010	44

FENCE SAFETY

CATEGORY	STATION	TO	STATION	LOCATION	616.0700.S FENCE SAFETY LF
0010	126+65	-	127+21	RT	132
				TOTAL 0010	132

REMOVING SIGNS

CATEGORY	STATION	LOCATION	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	N/A	RT	1		E1.1 (W1-4L) 750' S OF PROJECT LIMITS
0010	109+71	LT	1	1	E2.1 (W5-52L)
0010	109+79	LT	1	1	E2.2 (W5-52R)
0010	110+97	LT	1	1	E4.1 (W5-52R)
0010	111+06	LT	1	1	E4.2 (W5-52L)
0010	1+72C	RT	1	1	E5.1 (R1-1)
0010	126+11	LT	1	1	E6.1 (W1-4R ASSEMBLY)
0010	2+98H	RT	1	1	E3.1 (R1-1)
0010	6+57H	LT	1	1	E3.2 (R1-1)
0010	7+66H	RT	1	1	E3.3 (R1-1)
		TOTAL 0010	10	9	

3

PERMANENT SIGNING

CATEGORY	STATION	LOCATION	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	REMARKS
0010	N/A	RT			-	9.00	1.1 (W1-2L) 750' S OF PROJECT LIMITS, REPLACE EXISTING W1-4L
0010	99+85	RT		1	-	9.00	1.2 (W1-4R)
0010	99+85	RT			-	2.25	1.3 (W13-1; 45 MPH)
0010	102+50	LT		1		9.00	1.4 (W1-2R)
0010	102+50	LT				2.25	1.5 (W13-1; 40 MPH)
0010	8+82H	RT (Homer)		1	5.18	-	2.1 (R1-1) {Signs installed by others on same post}
0010	109+41	LT	1		-	3.00	2.2 (W5-52L)
0010	109+42	RT	1		-	3.00	2.3 (W5-52R)
0010	110+58	LT	1		-	3.00	2.4 (W5-52R)
0010	110+58	RT	1		-	3.00	2.5 (W5-52L)
0010	1+78C	RT (Church)		1	5.18	-	5.1 (R1-1) {Signs installed by others on same post}
0010	124+00			1	-	9.00	6.1 (W1-4R)
0010	124+00				-	2.25	6.2(W13-1; 45 MPH)
		TOTAL 0010	4	5	10.36	54.75	

GEOTEXTILE

CATEGORY	STATION	TO	STATION	LOCATION	645.0115 GEOTEXTILE TYPE ES SY	REMARKS
0010	126+69	-	128+15	RT	280	USE AS DIRECTED BY THE ENGINEER
				TOTAL 0010	280	

TRAFFIC CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	643.0300 TRAFFIC CONTROL DRUMS EACH*	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH*	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH*	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH*	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0900 TRAFFIC CONTROL SIGNS EACH*	643.0900 TRAFFIC CONTROL SIGNS DAY	REMARKS
STAGE 1															
0010				PROJECT	29	1,740	14	840	20	1,200			22	1,320	
0010	122+50	-	132+36	LT	0	0	0	0	0	0			6	30	FLAGGING DURING ROCK EXCAVATION
0010	122+50	-	132+36	LT	17	680	0	0	0	0			1	40	WORK ON SHOULDER AFTER ROCK EXCAVATION
0010				UNDISTRIBUTED	5	300	3	180	6	360			4	240	
				STAGE 1 SUBTOTALS	51	2,720	17	1,020	26	1,560			33	1,630	
STAGE 2A															
0010				PROJECT	42	462	28	308	40	440			29	319	
				UNDISTRIBUTED	4	44	2	22	5	55			3	33	
				STAGE 2A SUBTOTALS	46	506	30	330	45	495			32	352	
STAGE 2B															
0010				PROJECT	9	99	36	396	48	528	9	99	30	330	
0010				UNDISTRIBUTED	4	44	4	44	6	66	4	44	4	44	
				STAGE 2B SUBTOTALS	13	143	40	440	54	594	13	143	34	374	
STAGE 3															
0010				PROJECT	0	0	49	735	70	1,050			37	555	
0010				FLAGGING	0	0	0	0		0			10	20	FLAGGING DURING FINAL LAYER HMA
0010				UNDISTRIBUTED	10	150	4	60	5	75			4	60	
				STAGE 3 SUBTOTALS	10	150	53	795	75	1,125			51	635	
				TOTAL 0010	120	3,519	140	2,585	200	3,774	13	143	150	2,991	

*FOR INFORMATION ONLY

MOVING SIGNS

CATEGORY	STATION	TO	STATION	LOCATION	638.2102 MOVING SIGNS TYPE II EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	122+65	-	122+66	RT	1	1	5.2 (Adopt a Highway)
				TOTAL 0010	1	1	

RIPRAP

CATEGORY	STATION	TO	STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	645.0130 GEOTEXTILE TYPE R SY
0010	102+00	-	102+00	LT	6	11
0010	101+96	-	102+25	RT	10	20
0010	103+59	-	103+85	LT	10	20
0010	4+04H	-	4+34H	RT	14	28
0010	7+68H		8+13H	LT	15	30
0010	8+00H	-	8+60H	RT	19	38
0010	107+53		107+53	LT	19	38
0010	111+96	-	112+04	RT	4	7
0010	112+88	-	113+00	LT	3	6
0010	114+98	-	115+26	LT	10	20
0010	121+06	-	121+06	RT	4	8
0010	128+15	-	128+50	RT	18	36
0010	131+76	-	132+00	LT	9	18
				TOTAL 0010	141	280

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PAVEMENT MARKINGS

CATEGORY	STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	646.6120 MARKING STOP LINE EPOXY 18-INCH LF	REMARKS
0010	99+46	-	110+57	CENTERLINE	2,222		YELLOW
0010	99+46	-	110+57	LT & RT	2,098		WHITE
0010	110+57	-	121+40	CENTERLINE	2,167		YELLOW
0010	110+57	-	121+40	LT & RT	2,189		WHITE
0010	121+40	-	132+75	CENTERLINE	2,270		YELLOW
0010	121+40	-	132+75	LT & RT	2,279		WHITE
0010	8+26H	-	8+87H	CENTERLINE	121		YELLOW
0010	8+85H	-	8+87H	RT	-	23	WHITE
0010	1+33C	-	1+87C	CENTERLINE	108		YELLOW
0010	1+80C	-	1+87C	RT	-	27	WHITE
				TOTAL 0010	13,454	50	

CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9910.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 5667-00-75) LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	99+78	-	109+43	LT & RT	965	965		965
0010	110+57	-	121+40	LT & RT	1,083	1,083		1,083
0010	121+40	-	132+37	LT & RT	1,097	1,097		1,097
0010	0+38H		8+97H	LT & RT	859	859		859
0010	0+53C		2+10C	LT & RT	157	157		157
0010			PROJECT 5667-00-75				1	
				TOTAL 0010	4,161	4,161	1	4,161

CURB & GUTTER ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF
0010	102+40	-	105+35	RT	290	290
0010	104+00	-	106+68	LT	291	291
0010	107+00	-	107+53	LT	97	97
0010	115+42	-	131+61	LT	1,614	1,614
0010	126+00	-	128+00	RT	200	200
				TOTAL 0010	2,492	2,492

SAWING ASPHALT

CATEGORY	STATION	TO	LOCATION	690.0150 SAWING ASPHALT LF	REMARKS
0010	99+78	-	LT&RT	25	
0010	132+36	-	LT&RT	25	
0010	0+38H	-	LT&RT	20	
0010	0+53C	-	LT&RT	21	
0010	UNDISTRIBUTED			100	FOR STAGING
			TOTAL 0010	191	

BIRD DETERRENT

CATEGORY	STATION	LOCATION	999.2000.S INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM EACH
0010	110+38	B-22-0040	1
		TOTAL 0010	1

CONVENTIONAL SYMBOLS

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

SECTION CORNER SYMBOL (N, 23, 24, 26, 25, W)
SECTION CORNER MONUMENT
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN — OFF-PREMISE SIGN (#1-25)
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED) — IP

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE	■	○
TELEPHONE POLE	■	⌀
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)	⧓	⧖

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

CONVENTIONAL UTILITY SYMBOLS

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

	NON-COMPENSABLE	COMPENSABLE
POWER POLE		■
TELEPHONE POLE		■
TELEPHONE PEDESTAL		■

CURVE DATA ABBREVIATIONS

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

CONVENTIONAL ABBREVIATIONS

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

NOTES:

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

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICALLY 3/4"X24" REBAR) AND ARE PLACED AT THE COMPLETION OF THE CONSTRUCTION PROJECT.

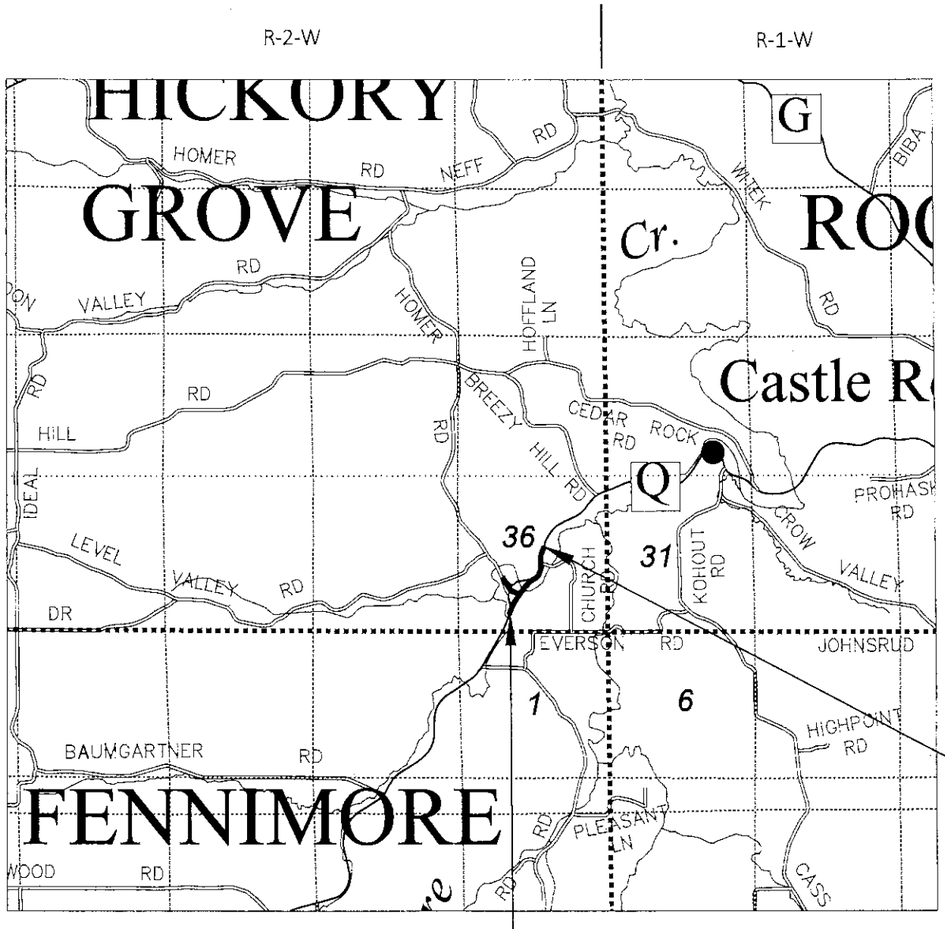
RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS" OF PUBLIC RECORD.

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

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

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

INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE ARE LISTED ON THE DETAIL PAGES.



N

T-7-N

T-6-N

PROJECT LOCATION

END RELOCATION ORDER
STA. 132+00.00
Y = 594,066.528
X = 860,558.615

577.03 FEET EAST OF AND 3448.58 FEET NORTH OF THE SOUTH QUARTER CORNER OF SECTION 36, T-7-N, R-2-W, TOWN OF HICKORY GROVE, GRANT COUNTY, WI

812.40 FEET WEST OF AND 801.87 FEET NORTH OF THE SOUTH QUARTER CORNER OF SECTION 36, T-7-N, R-2-W, TOWN OF HICKORY GROVE, GRANT COUNTY, WI

BEGIN RELOCATION ORDER
STA. 100+00.00
Y = 591,419.820
X = 859,169.183

LAYOUT
SCALE 0 — 1MI

TOTAL NET LENGTH OF CENTERLINE = 0.778 MI

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
5667-00-05		
CONSTRUCTION PROJECT NUMBER 5667-00-75	1	3

PLAT OF RIGHT OF WAY REQUIRED FOR

C OF FENNIMORE - T CASTLE ROCK (USH 61 TO CTH G)

CTH Q	GRANT COUNTY

ORIGINAL PLAT PREPARED BY

MSA
1702 Pankratz Street, Madison, WI 53704
608-242-7779 1-800-446-0679 Fax: 608-242-5664

WISCONSIN
BRADLEY L. TISDALE
S-2824
WAUNAKEE
WI
LAND SURVEYOR

05/10/2021 (DATE)

Bradley L Tisdale (Professional Land Surveyor)

CAUTION:
THIS PLAT IS FOR ILLUSTRATIVE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES.

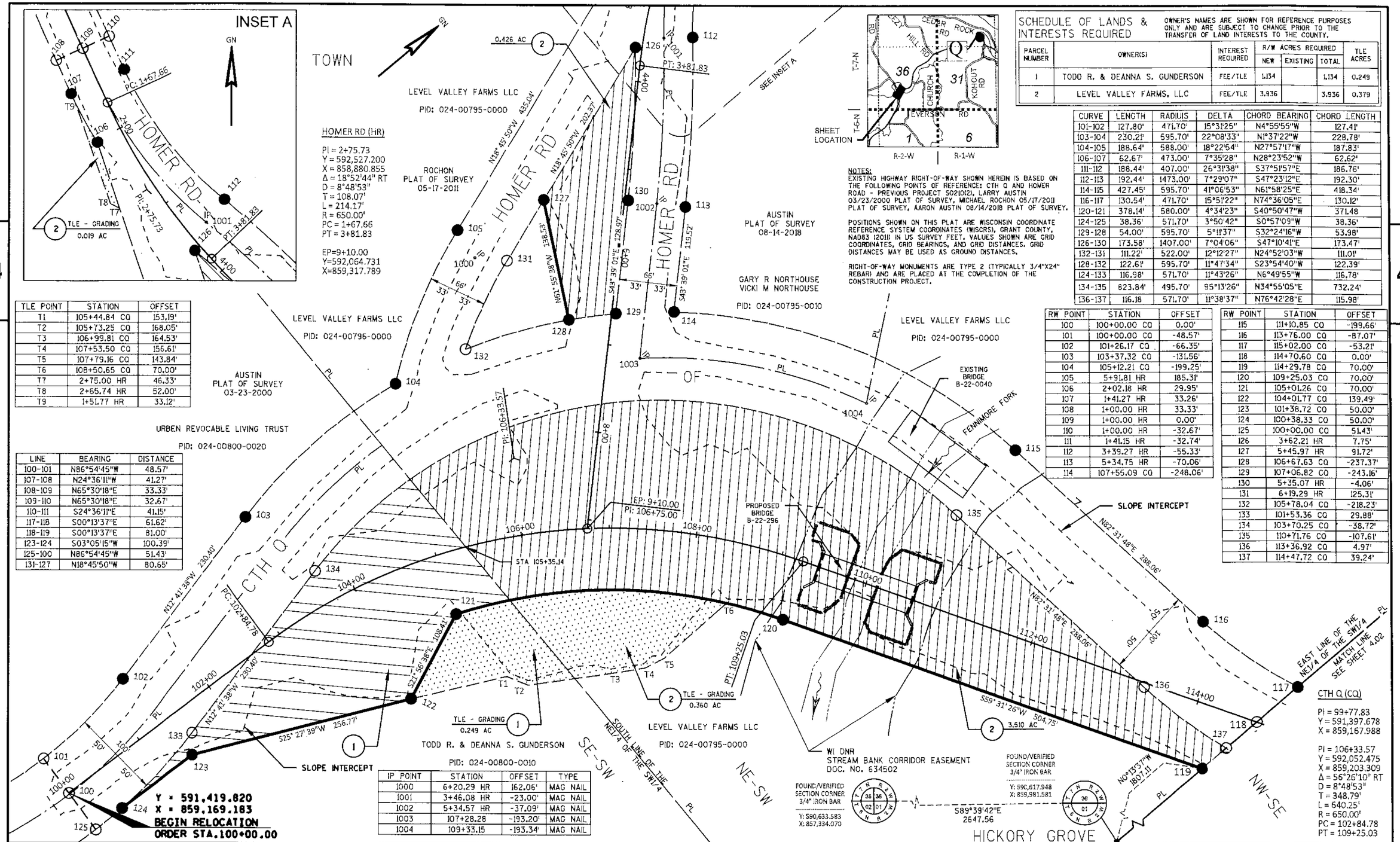
REVISION DATE
05/20/2021 - N.C.

GRANT COUNTY

APPROVED FOR THE COUNTY
DATE: 5-27-21 Jon P. Everett (Signature)

FILE NAME : G:\03\03405\03405011\CADD\RW\5667-00-75_CTH Q_GRANTCO_PLAT.DWG
PLOT DATE : 5/24/2021 2:05 PM
PLOT BY : BRAD TISDALE
PLOT NAME :

RECEIVED MAY 27 2021 Sonya White



4

4

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES REQUIRED			TLE ACRES
			NEW	EXISTING	TOTAL	
1	TODD R. & DEANNA S. GUNDERSON	FEE/TLE	1.134		1.134	0.249
2	LEVEL VALLEY FARMS, LLC	FEE/TLE	3.936		3.936	0.379

CURVE	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD LENGTH
101-102	127.80'	471.70'	15°31'25"	N4°55'55"W	127.41'
103-104	230.21'	595.70'	22°08'33"	N1°37'22"W	228.78'
104-105	188.64'	588.00'	18°22'54"	N27°57'17"W	187.83'
106-107	62.67'	473.00'	7°35'28"	N28°23'52"W	62.62'
111-112	188.44'	407.00'	26°31'38"	S37°51'57"E	186.76'
112-113	192.44'	1473.00'	7°29'07"	S47°23'12"E	192.30'
114-115	427.45'	595.70'	41°06'53"	N61°58'25"E	418.34'
116-117	130.54'	471.70'	15°51'22"	N74°36'05"E	130.12'
120-121	378.14'	580.00'	4°34'23"	S40°50'47"W	371.48
124-125	38.36'	571.70'	3°50'42"	S0°57'09"W	38.36'
129-128	54.00'	595.70'	5°11'37"	S32°24'16"W	53.98'
126-130	173.58'	1407.00'	7°04'06"	S47°10'41"E	173.47'
132-131	111.22'	522.00'	12°12'27"	N24°52'03"W	111.01'
128-132	122.61'	595.70'	11°47'34"	S23°54'40"W	122.39'
124-133	116.98'	571.70'	11°43'26"	N6°49'55"W	116.78'
134-135	823.84'	495.70'	95°13'26"	N34°55'05"E	732.24'
136-137	116.18	571.70'	11°38'37"	N76°42'28"E	115.98'

TLE POINT	STATION	OFFSET
T1	105+44.84 CQ	153.19'
T2	105+73.25 CQ	168.05'
T3	106+99.81 CQ	164.53'
T4	107+53.50 CQ	156.61'
T5	107+79.16 CQ	143.84'
T6	108+50.65 CQ	70.00'
T7	2+75.00 HR	46.33'
T8	2+65.74 HR	52.00'
T9	1+51.77 HR	33.12'

LINE	BEARING	DISTANCE
100-101	N86°54'45"W	48.57'
107-108	N24°36'11"W	41.27'
108-109	N65°30'18"E	33.33'
109-110	N65°30'18"E	32.67'
110-111	S24°36'11"E	41.15'
117-118	S00°13'37"E	61.62'
118-119	S00°13'37"E	81.00'
123-124	S03°05'15"W	100.39'
125-100	N86°54'45"W	51.43'
131-127	N18°45'50"W	80.65'

IP POINT	STATION	OFFSET	TYPE
1000	6+20.29 HR	162.06'	MAG NAIL
1001	3+46.08 HR	-23.00'	MAG NAIL
1002	5+34.57 HR	-37.09'	MAG NAIL
1003	107+28.28	-193.20'	MAG NAIL
1004	109+33.15	-193.34'	MAG NAIL

RW POINT	STATION	OFFSET
100	100+00.00 CQ	0.00'
101	100+00.00 CQ	-48.57'
102	101+26.17 CQ	-66.35'
103	103+37.32 CQ	-131.56'
104	105+12.21 CQ	-199.25'
105	5+91.81 HR	185.31'
106	2+02.18 HR	29.95'
107	1+41.27 HR	33.26'
108	1+00.00 HR	33.33'
109	1+00.00 HR	0.00'
110	1+00.00 HR	-32.67'
111	1+41.15 HR	-32.74'
112	3+39.27 HR	-55.33'
113	5+34.75 HR	-70.06'
114	107+55.09 CQ	-248.06'

RW POINT	STATION	OFFSET
115	111+10.85 CQ	-199.66'
116	113+76.00 CQ	-87.07'
117	115+02.00 CQ	-53.21'
118	114+70.60 CQ	0.00'
119	114+29.78 CQ	70.00'
120	109+25.03 CQ	70.00'
121	105+01.26 CQ	70.00'
122	104+01.77 CQ	139.49'
123	101+38.72 CQ	50.00'
124	100+38.33 CQ	50.00'
125	100+00.00 CQ	51.43'
126	3+62.21 HR	7.75'
127	5+45.97 HR	91.72'
128	106+67.63 CQ	-237.37'
129	107+06.82 CQ	-243.16'
130	5+35.07 HR	-4.06'
131	6+19.29 HR	125.31'
132	105+78.04 CQ	-218.23'
133	101+53.36 CQ	29.88'
134	103+70.25 CQ	-38.72'
135	110+71.76 CQ	-107.61'
136	113+36.92 CQ	4.97'
137	114+47.72 CQ	39.24'

CTH Q (CQ)

PI = 99+77.83
Y = 591,397.678
X = 859,167.988

PI = 106+33.57
Y = 592,052.475
X = 859,203.309
Δ = 56°26'10" RT
D = 8°48'53"
T = 348.79'
L = 640.25'
R = 650.00'
PC = 102+84.78
PT = 109+25.03

REVISION DATE
05/20/2021 - N.C.

DATE 05/10/2021

GRID FACTOR

SCALE, FEET
0 50 100

HWY: CTH Q

COUNTY: GRANT

STATE R/W PROJECT NUMBER 5667-00-05

CONSTRUCTION PROJECT NUMBER 5667-00-75

PLAT SHEET 4.02

PS&E SHEET F

47

FILE NAME : S667-00-75_CTH Q_GRANTCO_PLAT.DWG
LAYOUT NAME - PLAT 4.01

PLOT DATE : 5/24/2021 2:05 PM PLOT BY : BRAD TISDALE PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 75

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

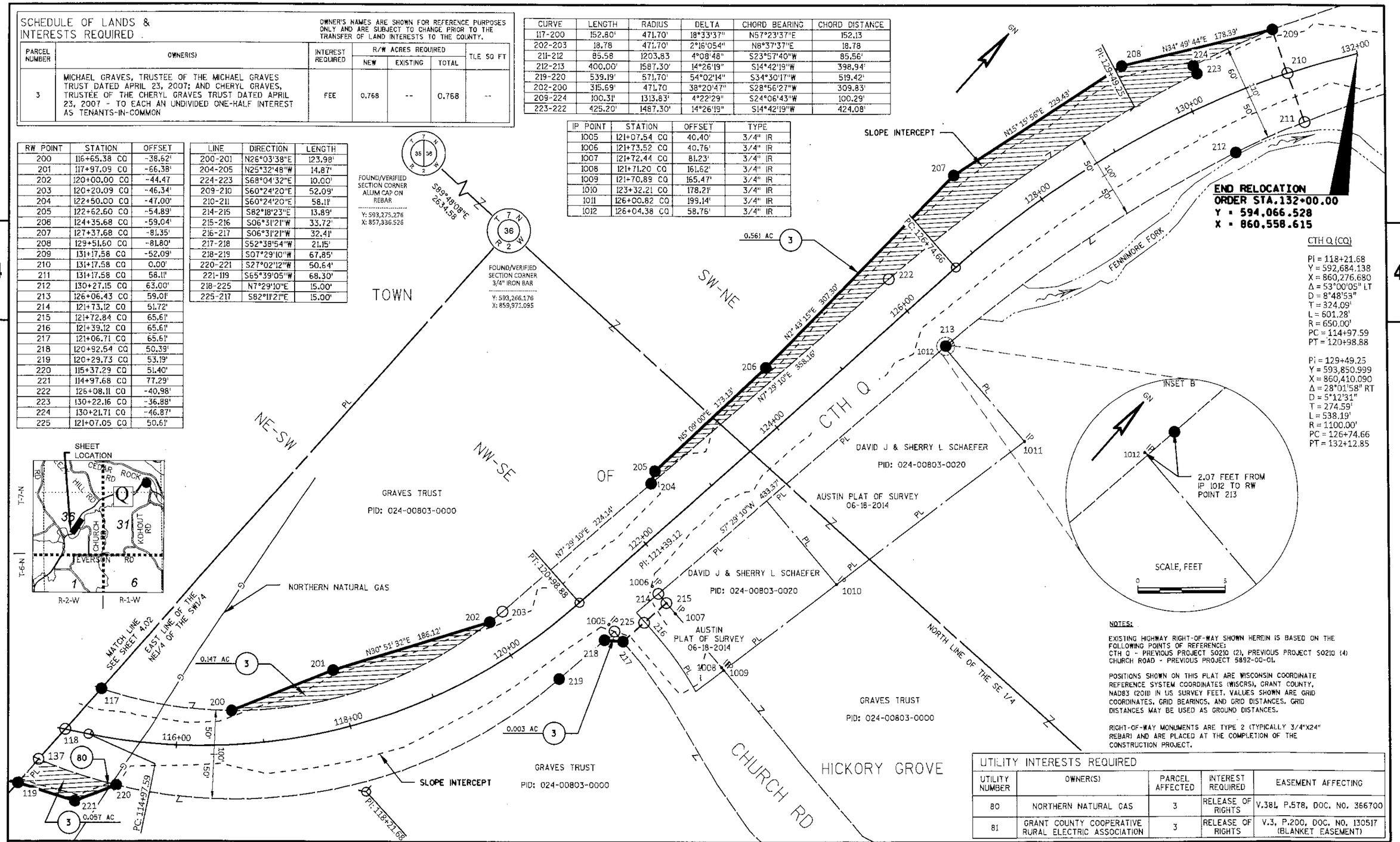
PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES REQUIRED			TLE SQ FT
			NEW	EXISTING	TOTAL	
3	MICHAEL GRAVES, TRUSTEE OF THE MICHAEL GRAVES TRUST DATED APRIL 23, 2007; AND CHERYL GRAVES, TRUSTEE OF THE CHERYL GRAVES TRUST DATED APRIL 23, 2007 - TO EACH AN UNDIVIDED ONE-HALF INTEREST AS TENANTS-IN-COMMON	FEE	0.768	--	0.768	--

CURVE	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
117-200	152.80'	471.70'	18°33'37"	N57°23'37"E	152.13
202-203	18.78	471.70'	2°16'054"	N8°37'37"E	18.78
211-212	85.58	1203.83	4°08'48"	S23°57'40"W	85.56'
212-213	400.00'	1587.30'	14°26'19"	S14°42'19"W	398.94'
219-220	539.19'	571.70'	54°02'14"	S34°30'17"W	519.42'
202-200	315.69'	471.70	38°20'47"	S28°56'27"W	309.83'
209-224	100.31'	1313.83'	4°22'29"	S24°06'43"W	100.29'
223-222	425.20'	1487.30'	14°26'19"	S14°42'19"W	424.08'

IP POINT	STATION	OFFSET	TYPE
1005	121+07.54 CQ	40.40'	3/4" IR
1006	121+73.52 CQ	40.76'	3/4" IR
1007	121+72.44 CQ	81.23'	3/4" IR
1008	121+71.20 CQ	161.62'	3/4" IR
1009	121+70.89 CQ	165.47'	3/4" IR
1010	123+32.21 CQ	178.21'	3/4" IR
1011	126+00.82 CQ	199.14'	3/4" IR
1012	126+04.38 CQ	58.76'	3/4" IR

RW POINT	STATION	OFFSET
200	116+65.38 CQ	-38.62'
201	117+97.09 CQ	-66.38'
202	120+00.00 CQ	-44.47
203	120+20.09 CQ	-46.34'
204	122+50.00 CQ	-47.00'
205	122+62.60 CQ	-54.89'
206	124+35.68 CQ	-59.04'
207	127+37.68 CQ	-81.35'
208	129+51.60 CQ	-81.80'
209	131+17.58 CQ	-52.09'
210	131+17.58 CQ	0.00'
211	131+17.58 CQ	58.11'
212	130+27.15 CQ	63.00'
213	126+06.43 CQ	59.01'
214	121+73.12 CQ	51.72'
215	121+72.84 CQ	65.61'
216	121+39.12 CQ	65.61'
217	121+06.71 CQ	65.61'
218	120+92.54 CQ	50.39'
219	120+29.73 CQ	53.19'
220	115+37.29 CQ	51.40'
221	114+97.68 CQ	77.29'
222	125+08.11 CQ	-40.98'
223	130+22.16 CQ	-36.88'
224	130+21.71 CQ	-46.87'
225	121+07.05 CQ	50.61'

LINE	DIRECTION	LENGTH
200-201	N26°03'38"E	123.98'
204-205	N25°32'48"W	14.87'
224-223	S68°04'32"E	10.00'
209-210	S60°24'20"E	52.09'
210-211	S60°24'20"E	58.11'
214-215	S82°18'23"E	13.89'
215-216	S06°31'21"W	33.72'
216-217	S06°31'21"W	32.41'
217-218	S52°38'54"W	21.15'
218-219	S07°29'10"W	67.85'
220-221	S27°02'12"W	50.64'
221-119	S65°39'05"W	68.30'
218-225	N7°29'10"E	15.00'
225-217	S82°11'21"E	15.00'



UTILITY INTERESTS REQUIRED

UTILITY NUMBER	OWNER(S)	PARCEL AFFECTED	INTEREST REQUIRED	EASEMENT AFFECTING
80	NORTHERN NATURAL GAS	3	RELEASE OF RIGHTS	V.381, P.578, DOC. NO. 366700
81	GRANT COUNTY COOPERATIVE RURAL ELECTRIC ASSOCIATION	3	RELEASE OF RIGHTS	V.3, P.200, DOC. NO. 130517 (BLANKET EASEMENT)

NOTES:

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
CTH Q - PREVIOUS PROJECT 5021Q (2), PREVIOUS PROJECT 5021Q (4)
CHURCH ROAD - PREVIOUS PROJECT 5892-00-01.

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

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICALLY 3/4"X24" REBAR) AND ARE PLACED AT THE COMPLETION OF THE CONSTRUCTION PROJECT.

REVISION DATE
05/20/2021 - CORRECT TYPOGRAPHICAL ERROR OF THE ACREAGE IN THE SCHEDULE OF LANDS AND INTERESTS.

DATE 05/10/2021

GRID FACTOR _____

SCALE, FEET 0 50 100

HWY: CTH Q

COUNTY: GRANT

STATE R/W PROJECT NUMBER 5667-00-05

CONSTRUCTION PROJECT NUMBER 5667-00-75

PLAT SHEET 4.03

PS&E SHEET _____ F

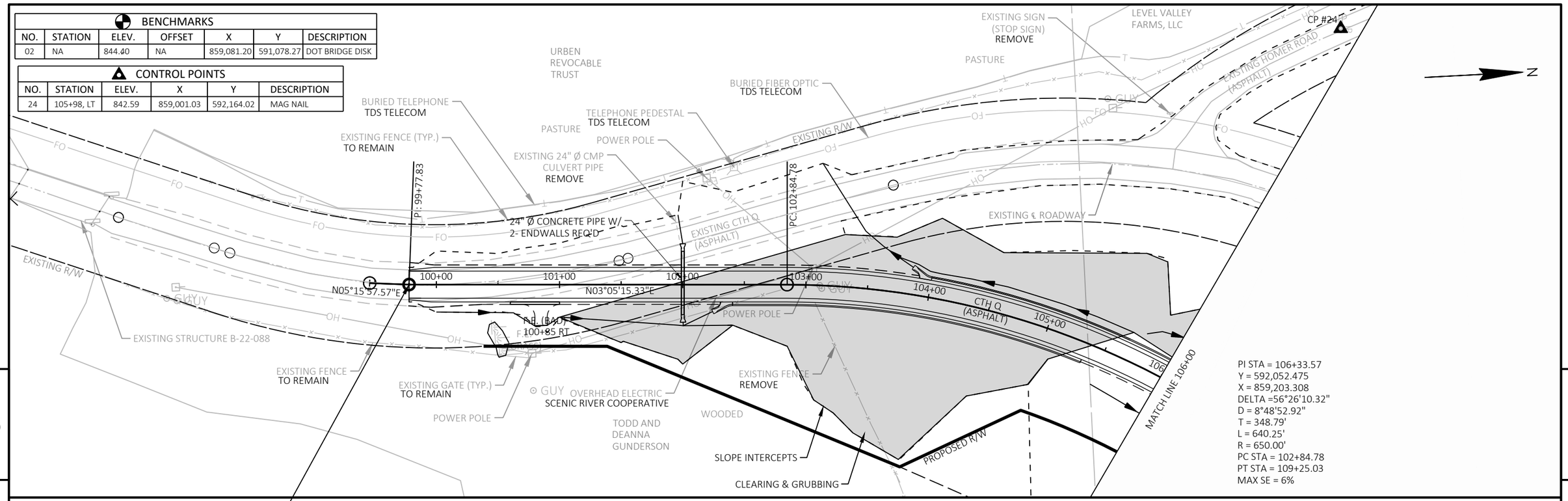
FILE NAME: 5667-00-75_CTH Q_GRANTCO_PLAT.DWG
LAYOUT NAME - PLAT 4.02

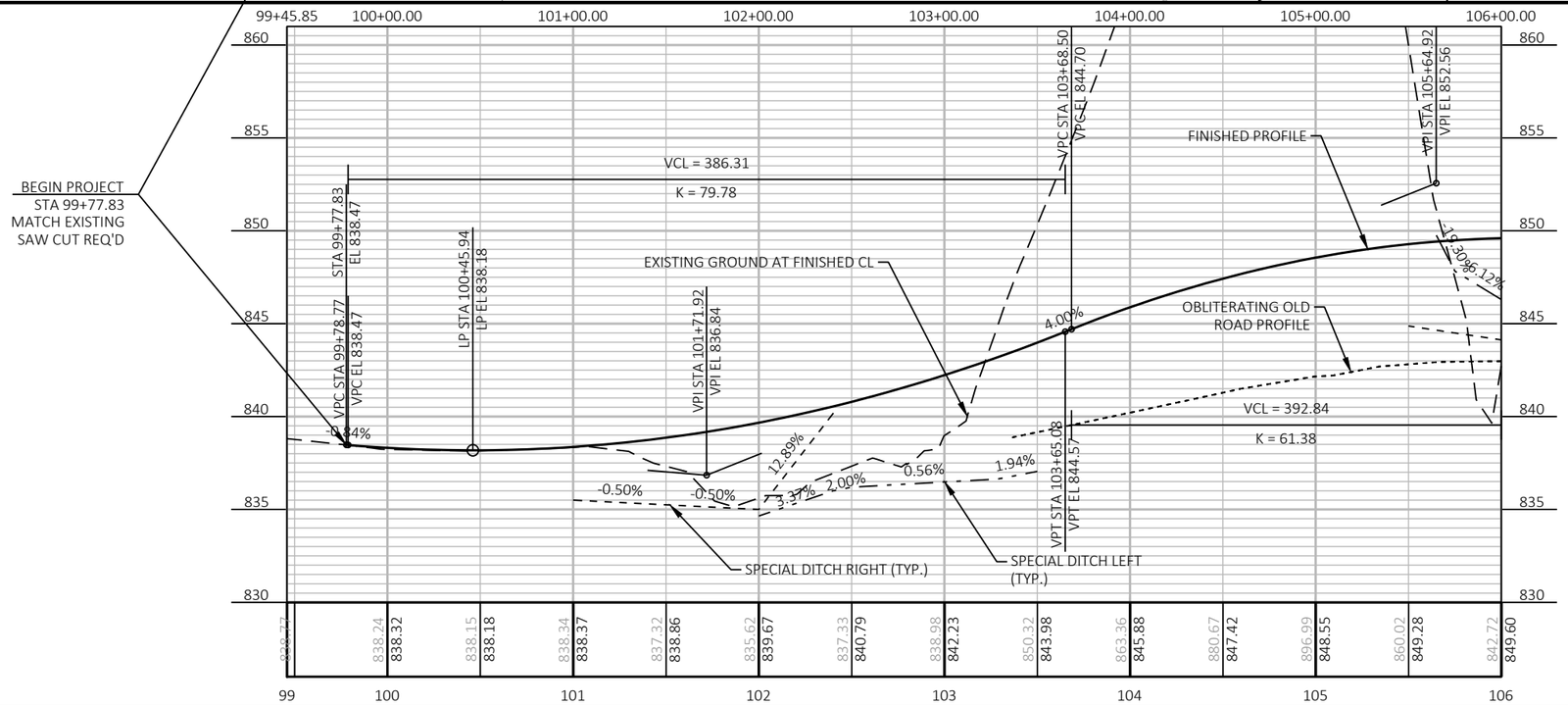
PLOT DATE: 5/24/2021 3:09 PM PLOT BY: BRAD TISDALE PLOT NAME: PLOT SCALE: 1 IN:100 FT

WISDOT/CADDS SHEET 75

BENCHMARKS						
NO.	STATION	ELEV.	OFFSET	X	Y	DESCRIPTION
02	NA	844.40	NA	859,081.20	591,078.27	DOT BRIDGE DISK

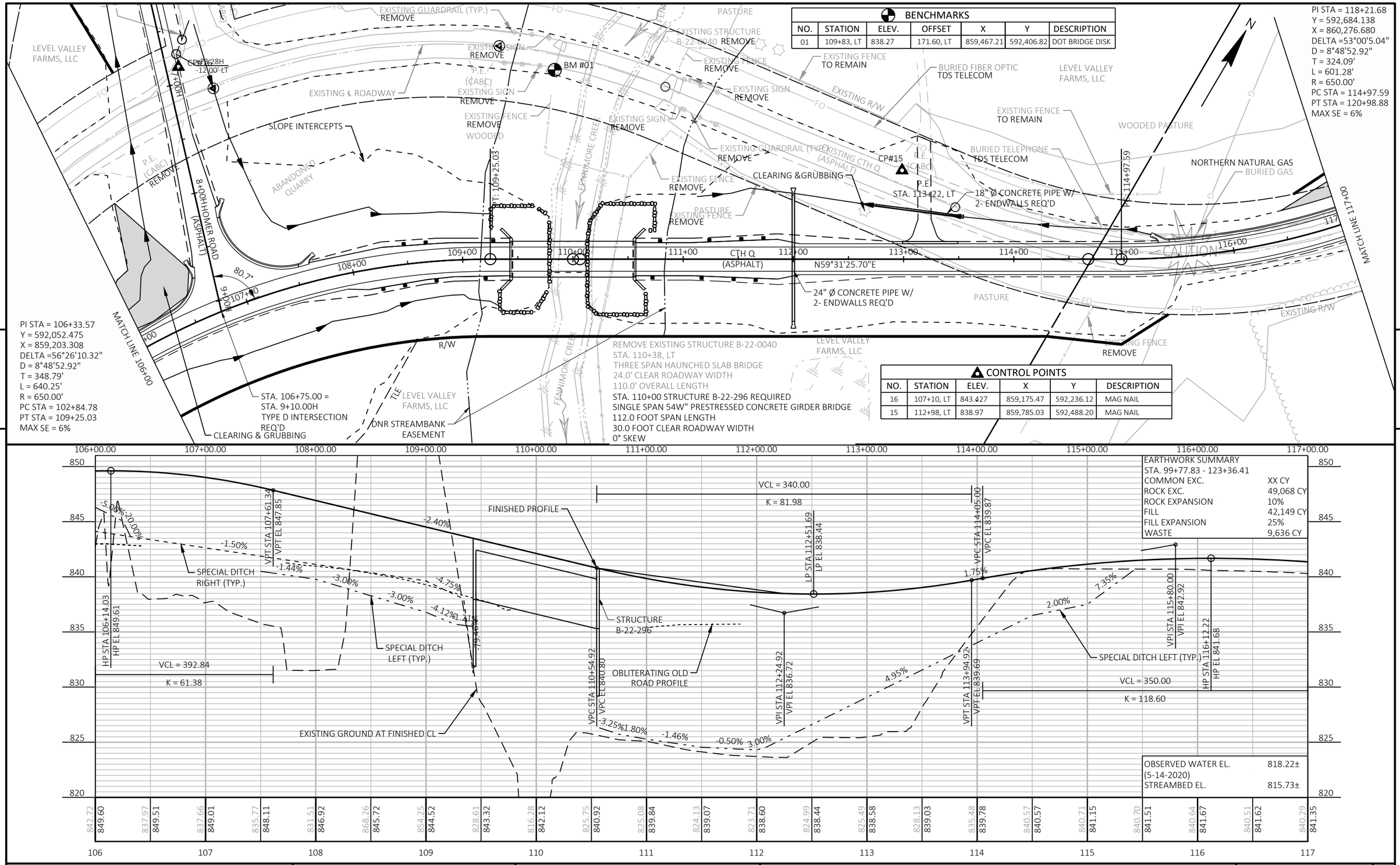
CONTROL POINTS					
NO.	STATION	ELEV.	X	Y	DESCRIPTION
24	105+98, LT	842.59	859,001.03	592,164.02	MAG NAIL





PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	PLAN AND PROFILE: CTH Q	SHEET 49	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 050135-pp
PLOT DATE : 11/1/2021 5:55 AM
PLOT BY : SIMON SCHIFERL
PLOT NAME :
PLOT SCALE : 1 IN: 80 FT



PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	PLAN AND PROFILE: CTH Q

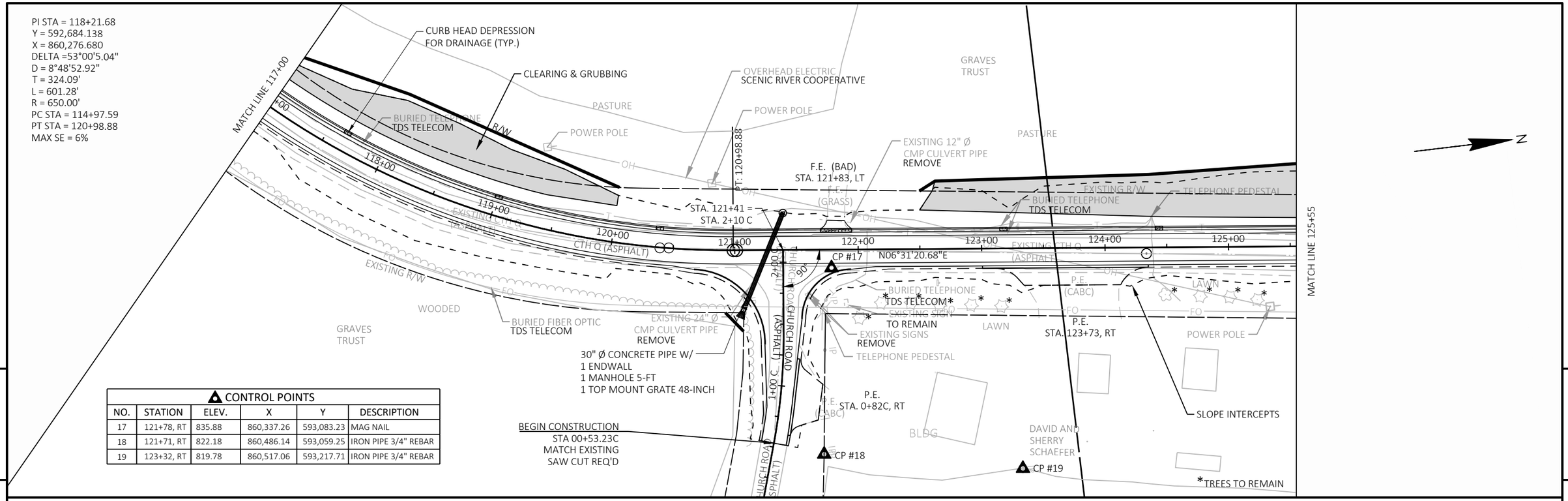
SHEET 50 E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 050136-pp

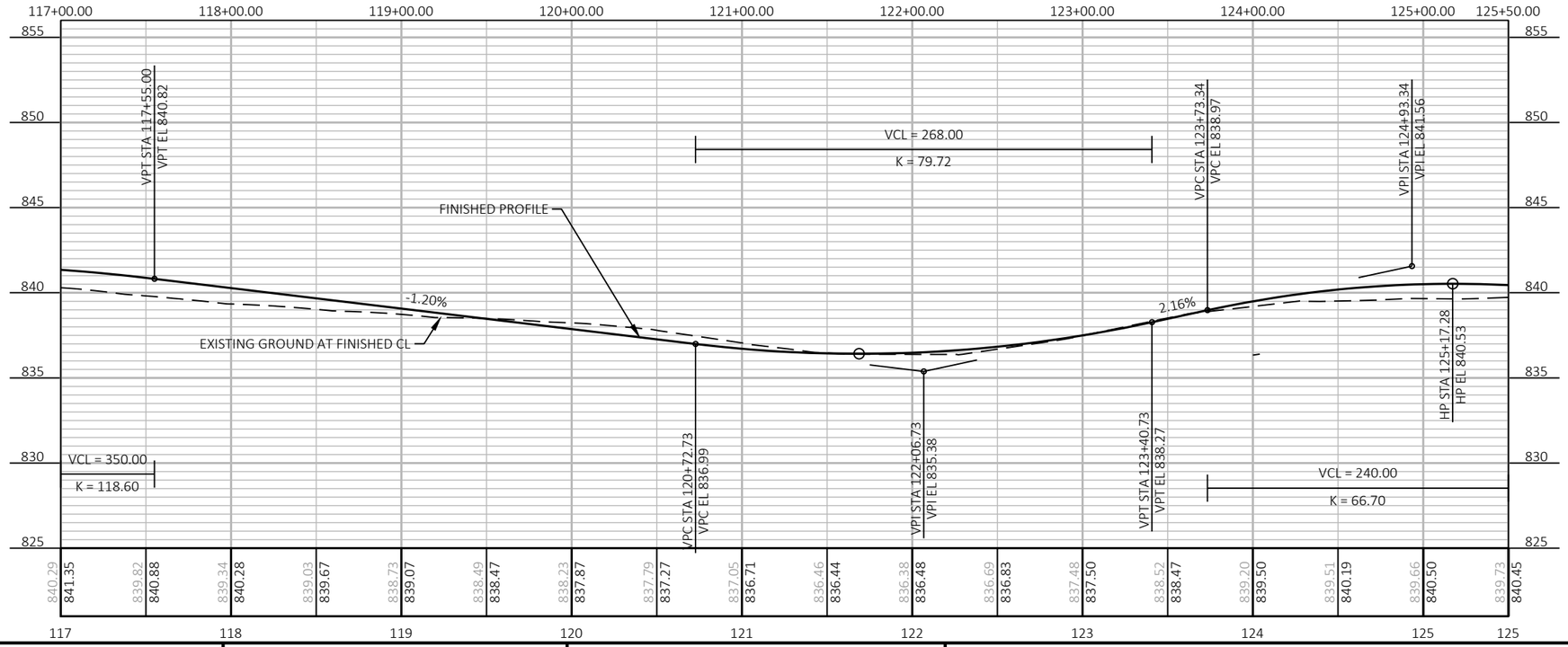
PLOT DATE : 11/1/2021 5:55 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN: 80 FT

WISDOT/CADDS SHEET 44

PI STA = 118+21.68
Y = 592,684.138
X = 860,276.680
DELTA =53°00'5.04"
D = 8°48'52.92"
T = 324.09'
L = 601.28'
R = 650.00'
PC STA = 114+97.59
PT STA = 120+98.88
MAX SE = 6%



CONTROL POINTS					
NO.	STATION	ELEV.	X	Y	DESCRIPTION
17	121+78, RT	835.88	860,337.26	593,083.23	MAG NAIL
18	121+71, RT	822.18	860,486.14	593,059.25	IRON PIPE 3/4" REBAR
19	123+32, RT	819.78	860,517.06	593,217.71	IRON PIPE 3/4" REBAR

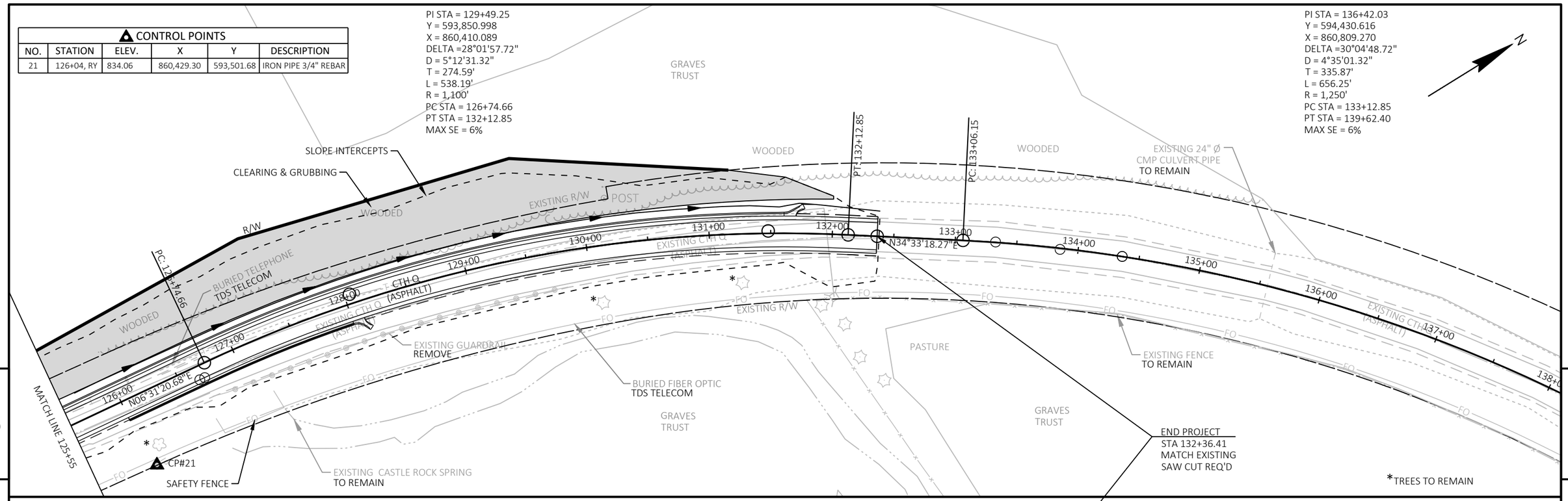


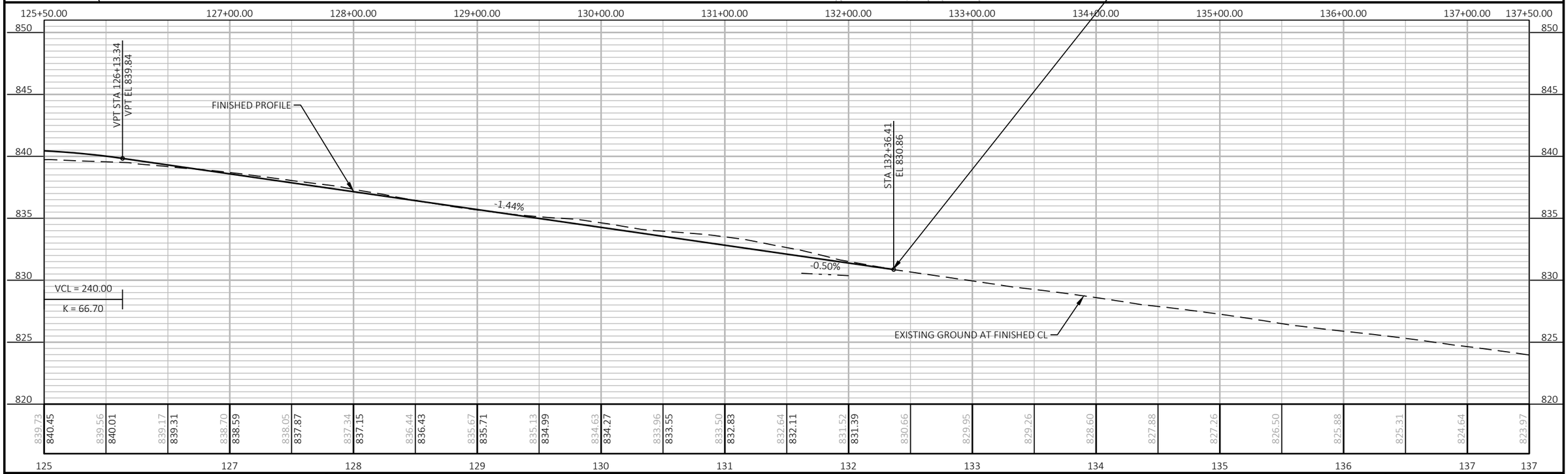
PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	PLAN AND PROFILE: CTH Q	SHEET 51	E

CONTROL POINTS					
NO.	STATION	ELEV.	X	Y	DESCRIPTION
21	126+04, RY	834.06	860,429.30	593,501.68	IRON PIPE 3/4" REBAR

PI STA = 129+49.25
Y = 593,850.998
X = 860,410.089
DELTA =28°01'57.72"
D = 5°12'31.32"
T = 274.59'
L = 538.19'
R = 1,100'
PC STA = 126+74.66
PT STA = 132+12.85
MAX SE = 6%

PI STA = 136+42.03
Y = 594,430.616
X = 860,809.270
DELTA =30°04'48.72"
D = 4°35'01.32"
T = 335.87'
L = 656.25'
R = 1,250'
PC STA = 133+12.85
PT STA = 139+62.40
MAX SE = 6%





PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	PLAN AND PROFILE: CTH Q	SHEET 52	E

CONTROL POINTS					
NO.	STATION	ELEV.	X	Y	DESCRIPTION
24	105+98, LT	842.59	859,001.03	592,164.02	MAG NAIL
16	107+10, LT	843.43	859,175.47	592,236.12	MAG NAIL

PI STA = 2+75.73
Y = 592,527.199
X = 858,880.855
DELTA =18°52'43.68"
D = 8°48'52.92"
T = xxx.xx
L = 214.17'
R = 650.00'
PC STA = 1+67.66
PT STA = 3+81.83
MAX SE = 4.3%

BENCHMARKS					
NO.	STATION	ELEV.	OFFSET	X	Y	DESCRIPTION
03	NA	833.16	NA	858,722.10	592,907.10	DOT BRIDGE DISK

LEVEL VALLEY FARMS, LLC
EXISTING FENCE TO REMAIN
EXISTING HOMER ROAD (ASPHALT)
PASTURE
GARY NORTHOUSE
BURIED FIBER OPTIC TDS TELECOM
SLOPE INTERCEPTS
ABANDONED QUARRY
STA. 106+75.00 = STA. 9+10.00H TYPE D INTERSECTION REQ'D
PROPOSED TLE
CLEARING & GRUBBING
EXISTING R/W
P.E. (CABC)
P.E. STA. 2+57, LT
P.E.T. (CABC)
PC: 1+67.66
PT: 3+81.83
1+00H
2+00H
3+00H
4+00H
5+00H
6+00H
7+00H
8+00H
9+00H
S24°29'41.68"E
S43°22'25.42"E
+78.04H -12.00' LT
+85.60H -20.00' LT
+161.78H -20.00' LT
+73.28H -12.00' LT
CP#16
HOMER RD (ASPHALT)
EXISTING SIGN (STOP SIGN) REMOVE
EXISTING FENCE TO REMAIN
EXISTING GATE TO REMAIN
F.E. (BAD) STA. 2+42, RT
BURIED TELEPHONE TDS TELECOM
OVERHEAD ELECTRIC SCENIC RIVER ENERGY COOPERATIVE
POWER POLE
R/W
CP#24
108+00
107+00
106+00
105+00

BEGIN CONSTRUCTION
STA 00+38.00H
MATCH EXISTING
SAW CUT REQ'D

STA 0+38.00 EL 833.17
VPC STA 0+92.00 VPC EL 832.91
LP STA 1+10.10 LP EL 832.87
VPI STA 1+92.00 VPI EL 832.44
VPT STA 2+92.00 VPT EL 837.18
VPC STA 3+29.00 VPC EL 838.94
VPI STA 3+89.00 VPI EL 841.79
VPT STA 4+49.00 VPT EL 843.05
VPC STA 7+78.50 VPC EL 850.00
VPI STA 8+23.50 VPI EL 850.94
VPT STA 8+68.50 VPT EL 850.49
STA 8+93.85 EL 850.24
STA 9+10.00 EL 849.31
HP STA 8+39.54 HP EL 850.64

VCL = 200.00
K = 38.34
VCL = 120.00
K = 45.50
VCL = 90.00
K = 28.96

FINISHED PROFILE
OBLITERATING OLD ROAD PROFILE
EXISTING GROUND AT FINISHED CL
SPECIAL DITCH LEFT (TYP.)
SPECIAL DITCH RIGHT (TYP.)
-0.47% 4.75% 2.11% -1.00% -5.78%
1.88% 0.80% 3.00% 0.61% 0.20% 1.44% 1.50% -1.42%

0+00.00	1+00.00	2+00.00	3+00.00	4+00.00	5+00.00	6+00.00	7+00.00	8+00.00	9+00.00	9+20.00
833.33	833.11	833.11	833.11	832.88	833.34	833.08	833.65	833.92	834.13	835.42
834.74	837.56	837.69	839.89	849.81	841.75	842.59	843.07	840.89	844.13	838.93
845.18	838.12	846.23	839.18	847.29	844.01	848.34	841.81	849.39	839.16	850.37
838.48	850.62	838.26	849.89							

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	PLAN AND PROFILE: HOMER ROAD	SHEET 53	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 050139-pp
PLOT DATE : 11/1/2021 5:55 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN: 80 FT

PI STA = 0+98.64
DELTA = 10°48'28" LT
D = 11°56'12"
T = 45.41'
L = 90.54'
R = 480.00'
PC STA = 0+53.23
PT STA = 1+43.78

STA. 121+41.00 =
STA. 2+10.00C
TYPE C INTERSECTION REQ'D
SLOPE INTERCEPTS

CLEARING & GRUBBING

CURB HEAD DEPRESSION
FOR DRAINAGE (TYP)

PT: 120+98.88

30" Ø CONCRETE PIPE W/
1 ENDWALL
1 MANHOLE 5-FT
1 TOP MOUNT GRATE 48-INCH

BM #04

CHURCH ROAD
(ASPHALT)

1+00 C

2+00 C

P.E.
STA. 0+82C, BT

90°

CTH Q (ASPHALT)

EXISTING 24" Ø
CMP CULVERT PIPE

EXISTING 12" Ø
CMP CULVERT PIPE

POWER POLE

OVERHEAD ELECTRIC

PASTURE

TELEPHONE PEDESTAL

EXISTING SIGNS

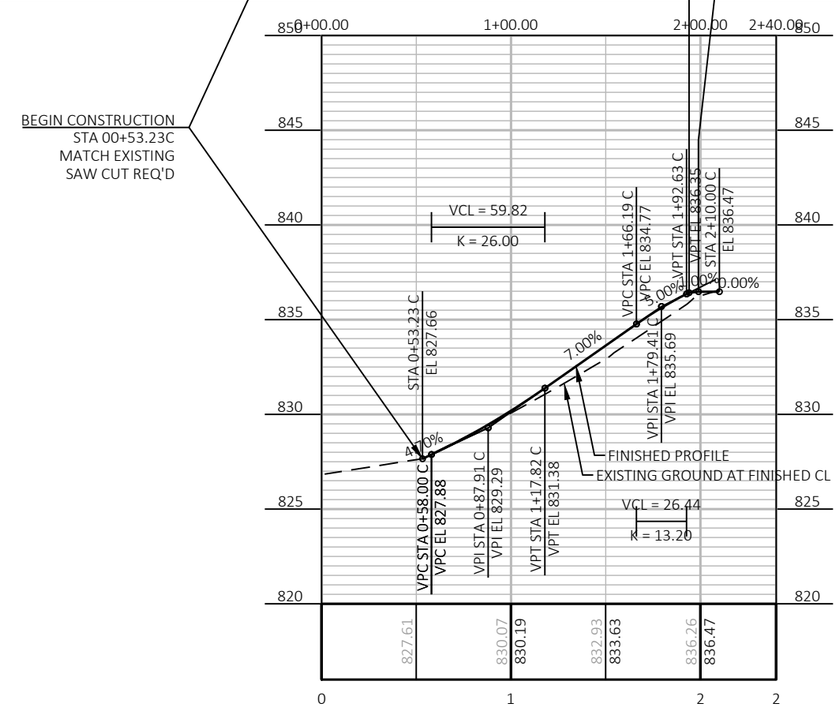
BURIED TELEPHONE

LAWN

BLDG

BENCHMARKS						
NO.	STATION	ELEV.	OFFSET	X	Y	DESCRIPTION
04	NA	828.01	NA	860,634.43	592,961.89	DOT BRIDGE DISK

BEGIN CONSTRUCTION
STA 00+53.23C
MATCH EXISTING
SAW CUT REQ'D



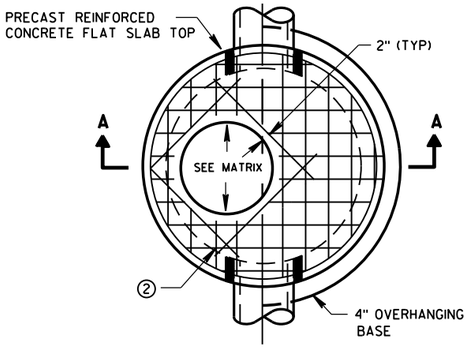
PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	PLAN AND PROFILE: CHURCH ROAD	SHEET 54	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 050140-pp
PLOT DATE : 11/1/2021 5:55 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN: 80 FT

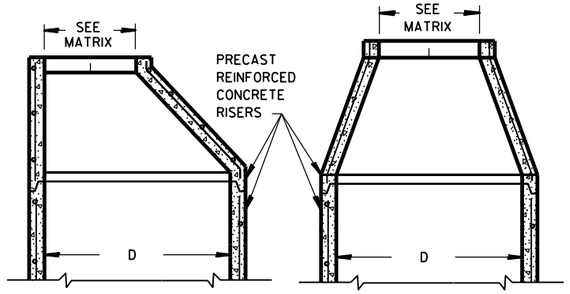
Standard Detail Drawing List

08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E11-02	TURBIDITY BARRIER
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09A01-13B	AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"
12A03-10	NAME PLATE (STRUCTURES)
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A01-13A	MARKER POST FOR RIGHT-OF-WAY
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

6

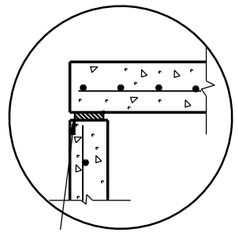


PLAN VIEW CIRCULAR OPENING

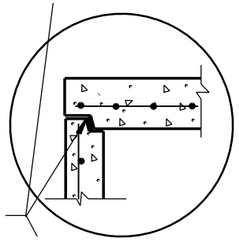


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

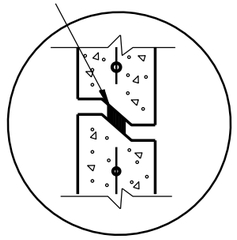


TOP WITH PLAIN END JOINT



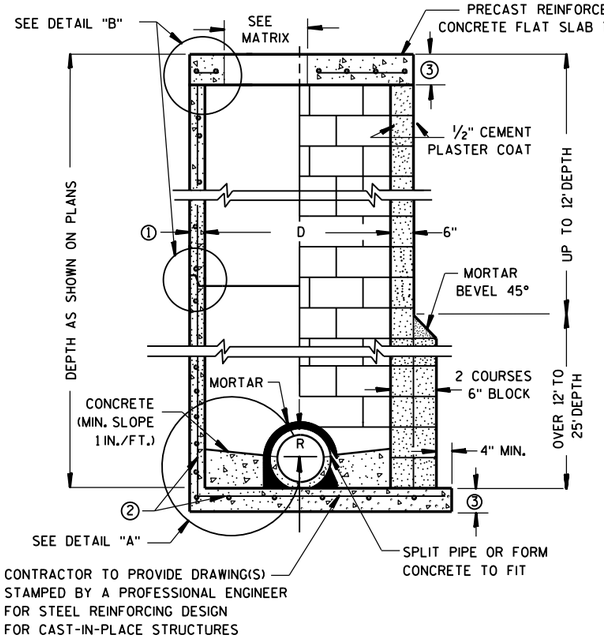
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



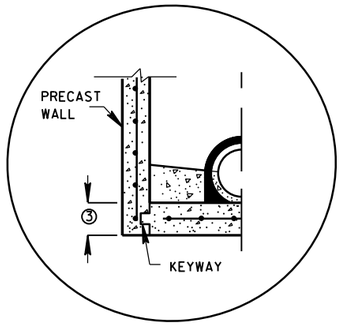
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

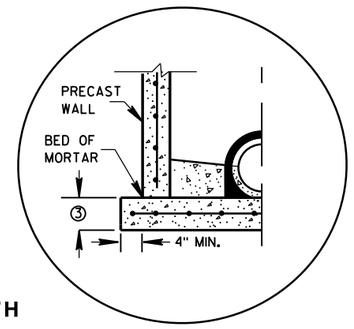


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

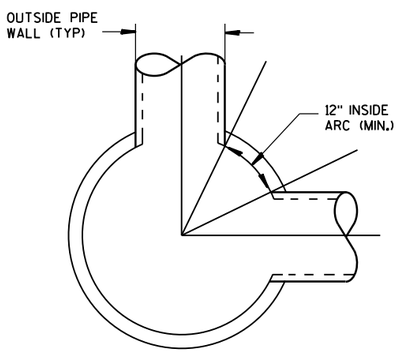


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

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

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

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

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

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

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

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

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

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

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

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

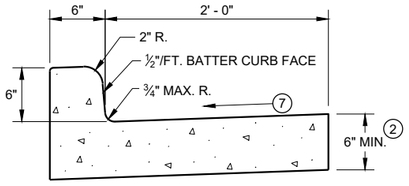
APPROVED

Sept., 2016
DATE

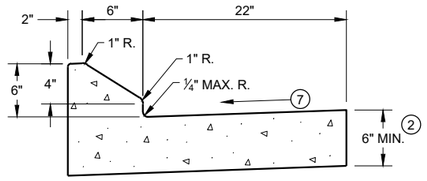
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERV

FHWA

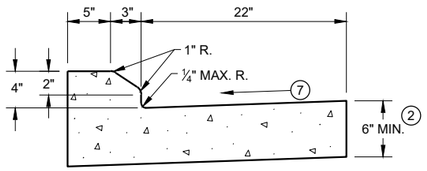
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER



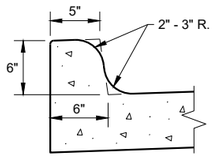
TYPES A[1] & D



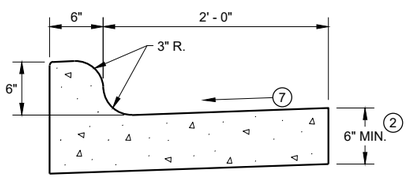
6" SLOPED CURB TYPES G[1] & J



4" SLOPED CURB TYPES G[1] & J

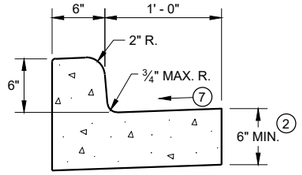


TYPES K[1] & L
(OPTIONAL CURB SHAPE)



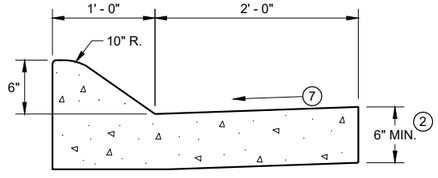
TYPES K[1] & L

CONCRETE CURB AND GUTTER 30"

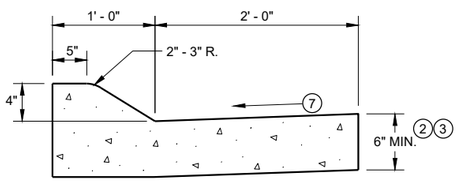


TYPES A[1] & D

CONCRETE CURB AND GUTTER 18"

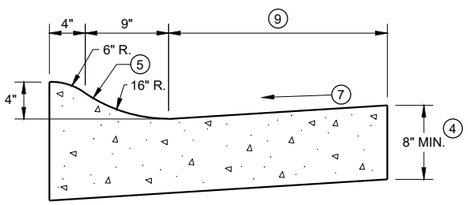


6" SLOPED CURB TYPES A[1] & D



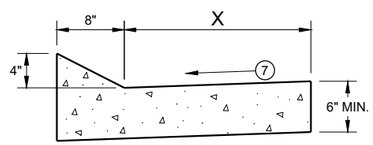
4" SLOPED CURB TYPES A[1] & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R[1] & T

TBT & TBTT	X
30"	22"
36"	28"

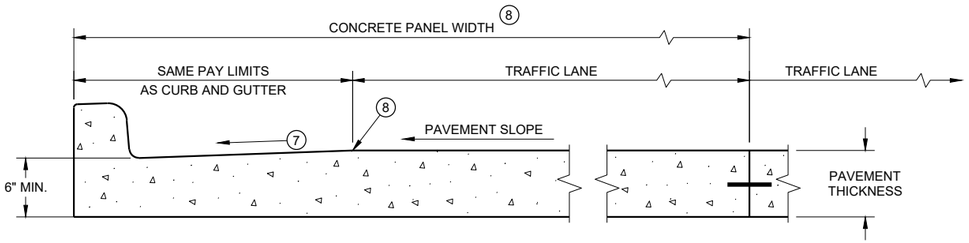


TYPES TBT & TBTT[1]

CONCRETE CURB AND GUTTER

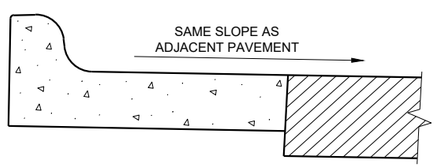
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER[6]
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

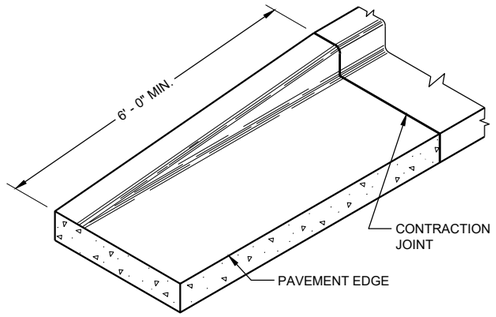
1. TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
2. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
3. USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
4. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
5. UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
6. WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
7. USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
8. INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
9. CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
   CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

CONCRETE CURB AND GUTTER

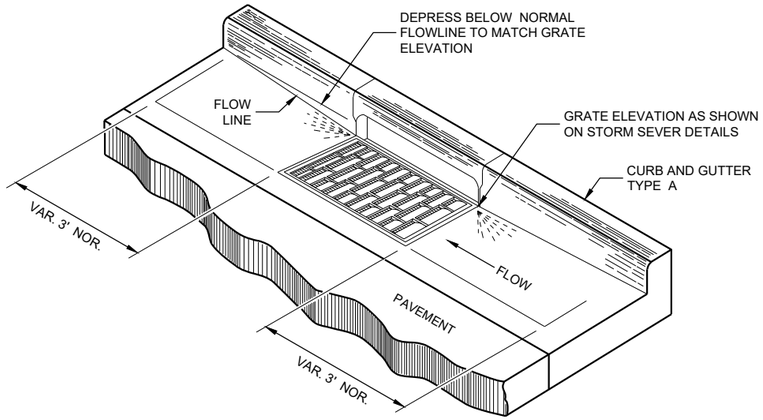
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D01 - 22a
SDD 08D01 - 22a



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS
(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

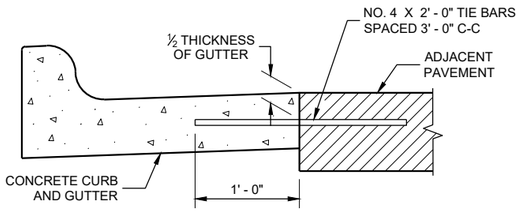
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

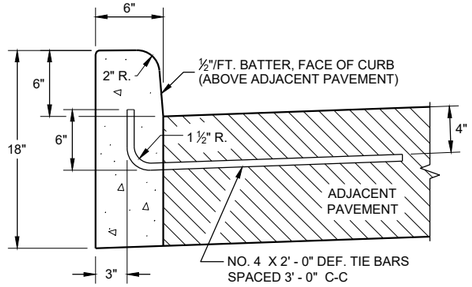
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

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

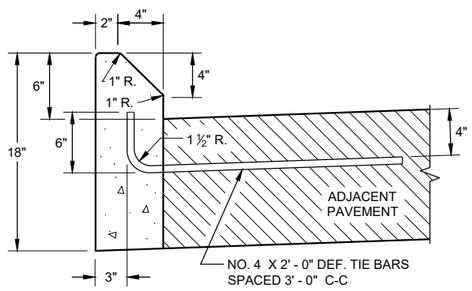
(9) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION (1)

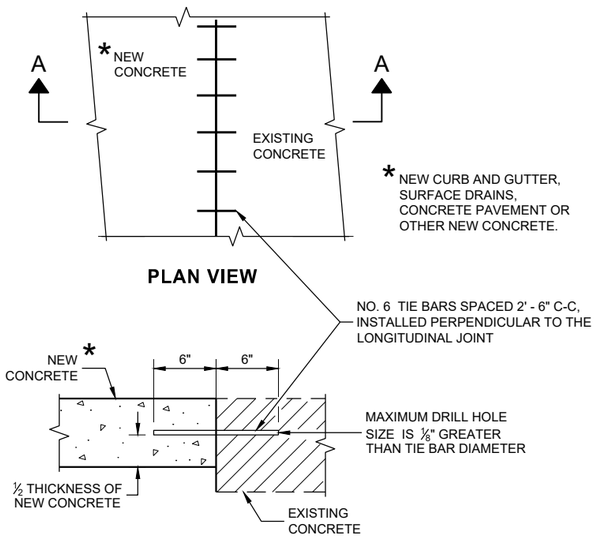


TYPES A (1) & D



TYPES G (1) & J

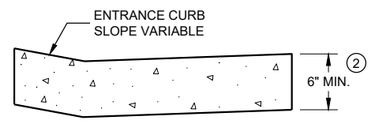
CONCRETE CURB



PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB (9)
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

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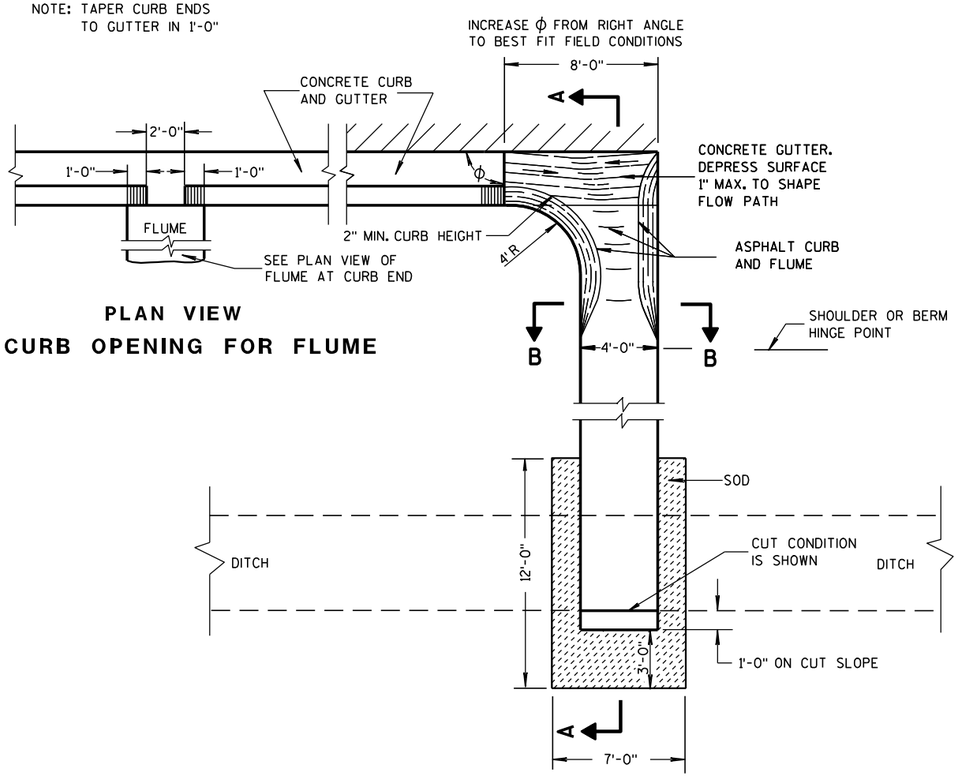
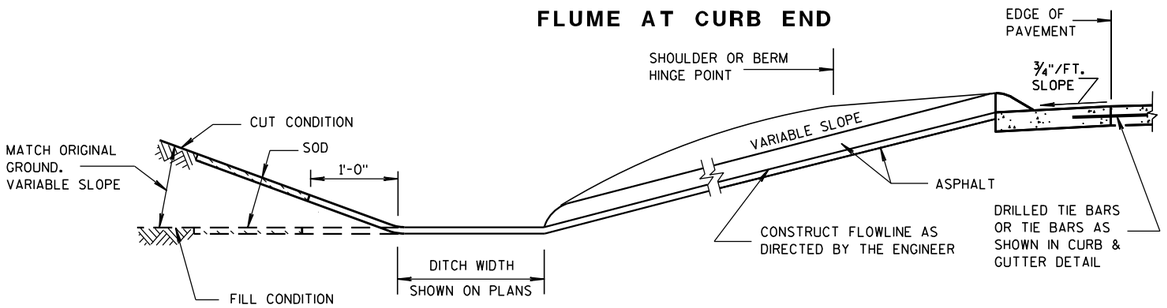
SDD08D01 - 22b

ASPHALTIC FLUME

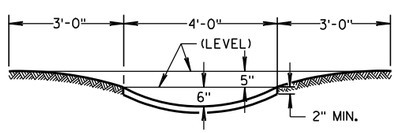


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

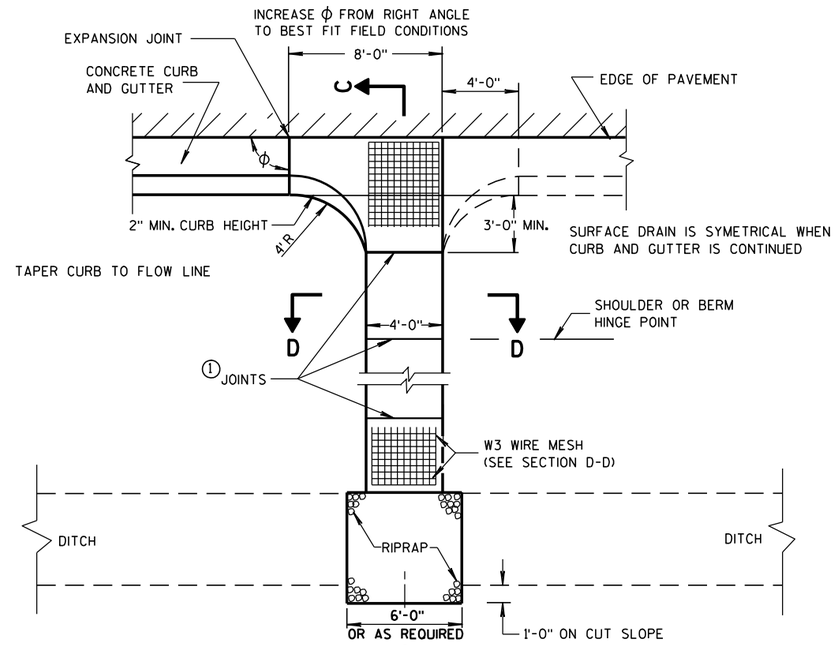
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE 1/8 TO 1/4 INCH WIDE BY 1 1/2 INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

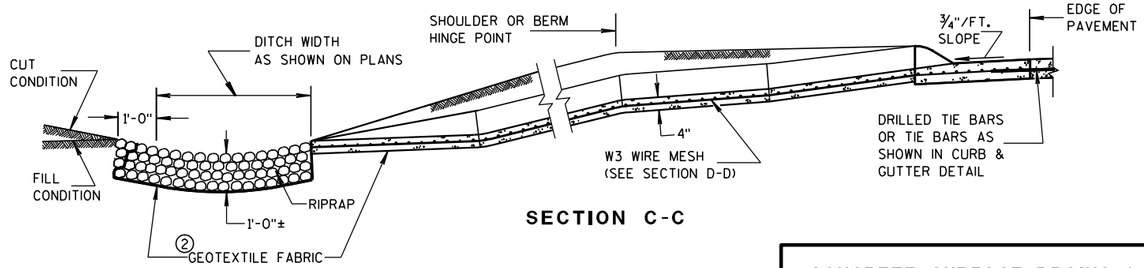
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

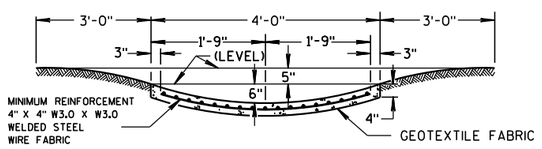
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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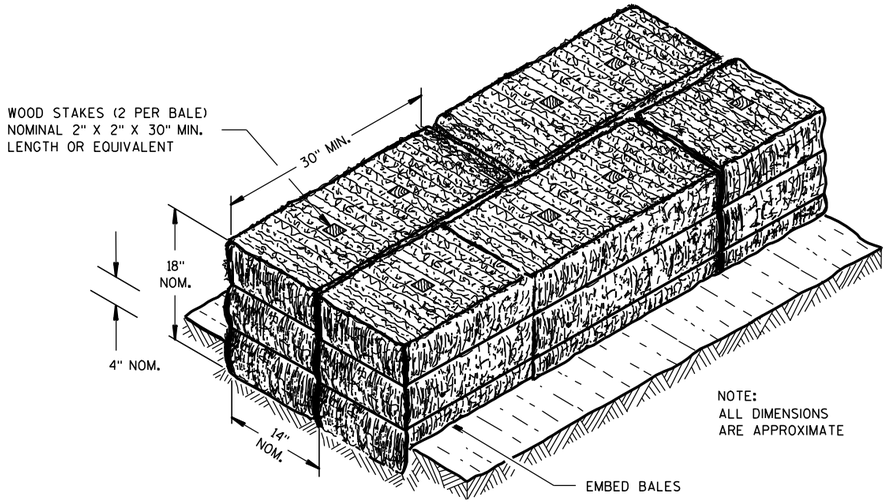
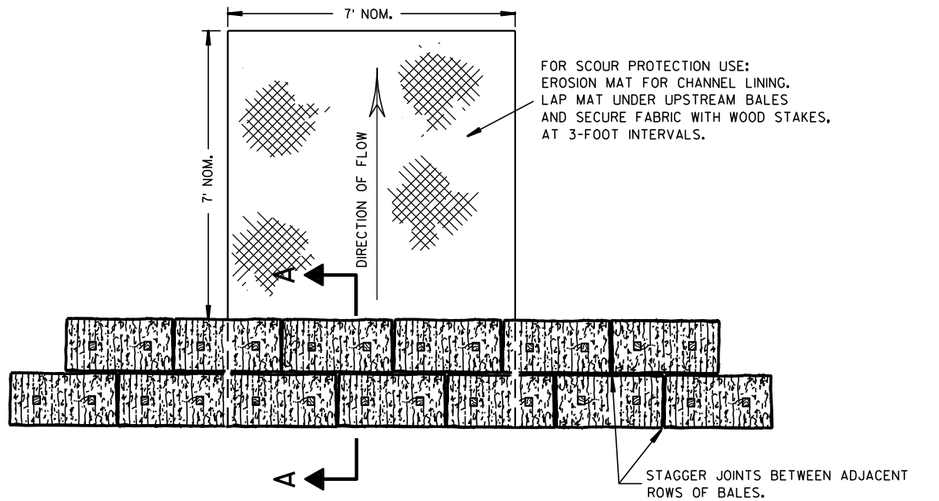
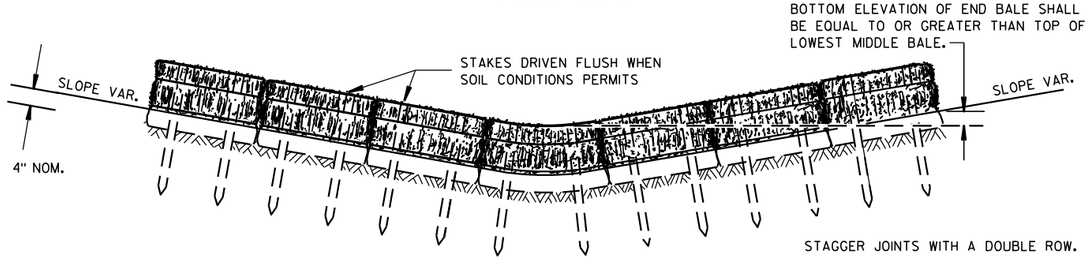


SECTION A-A



PLAN VIEW



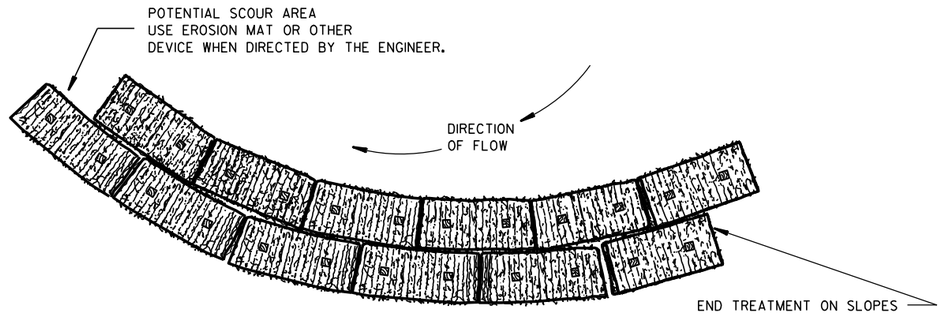
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

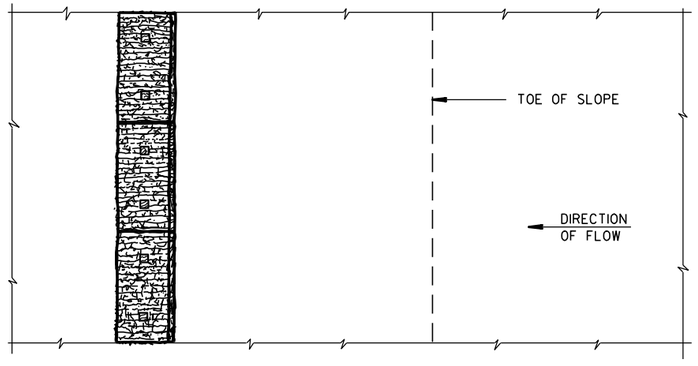
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

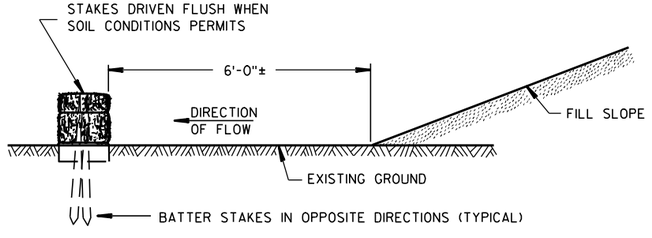


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

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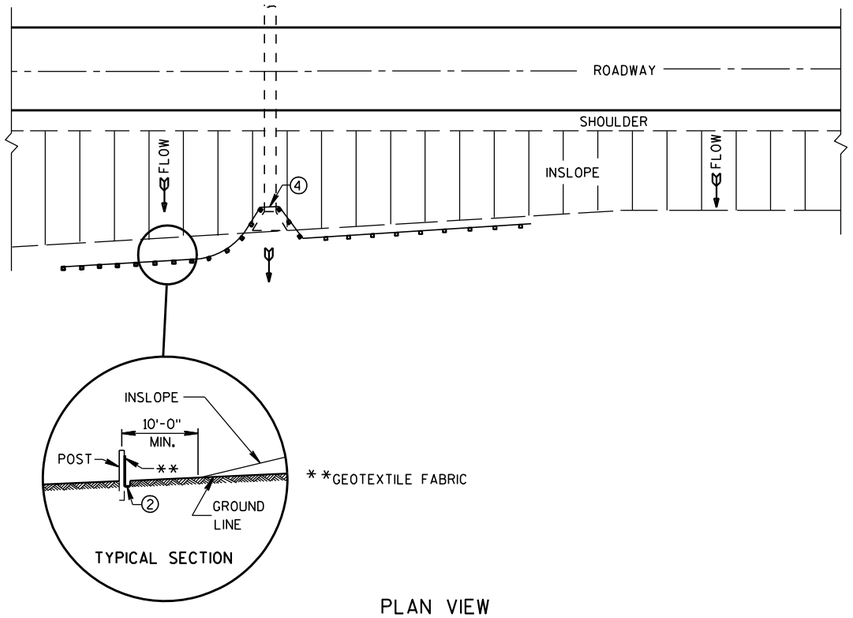
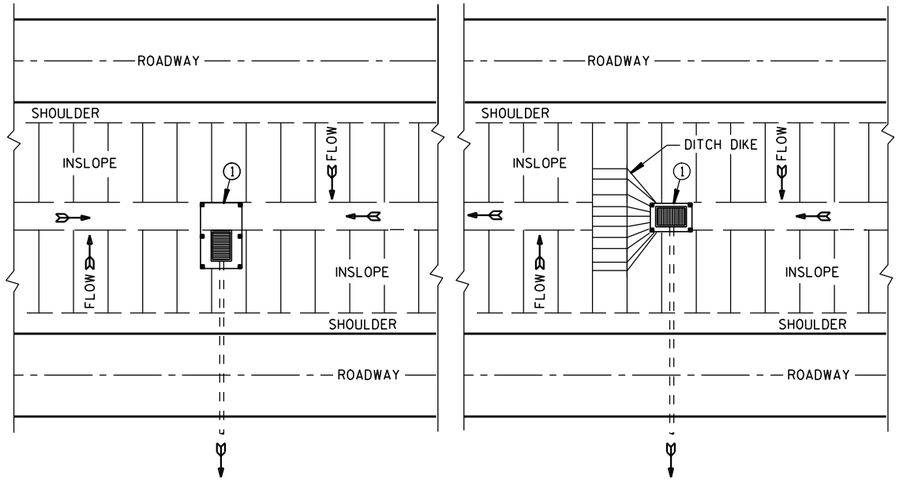
S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



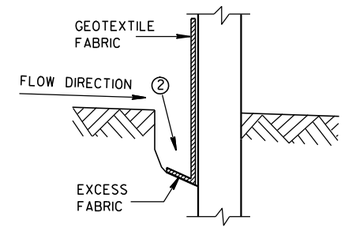
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

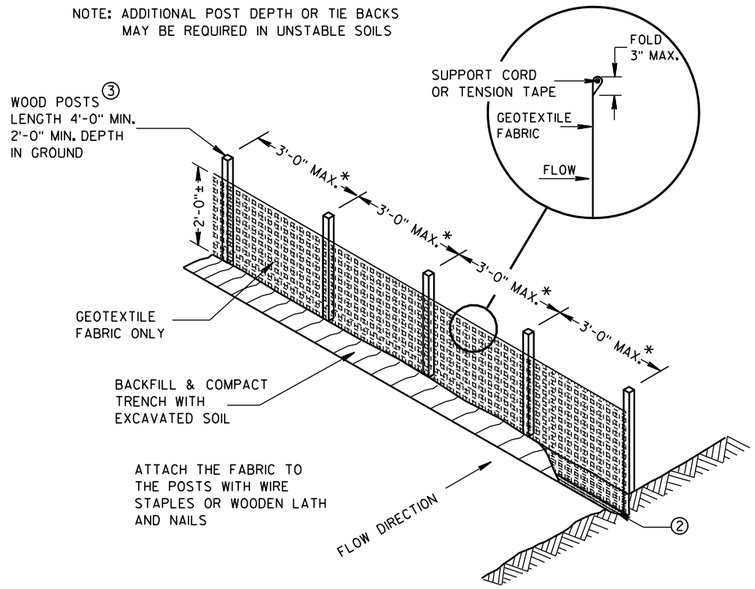
GENERAL NOTES

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

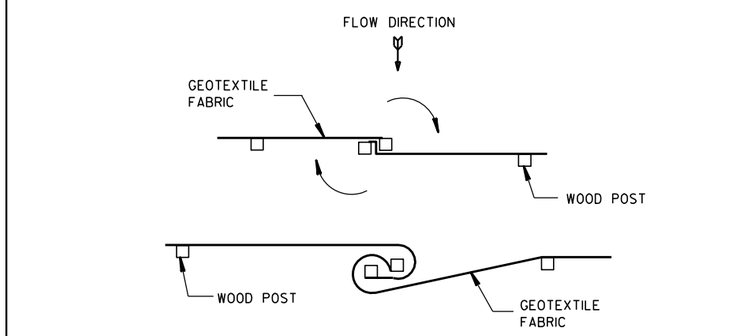
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



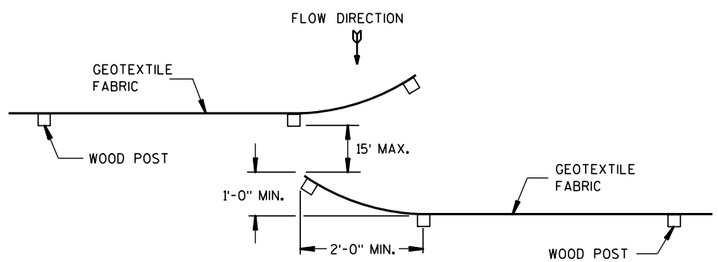
TRENCH DETAIL



SILT FENCE

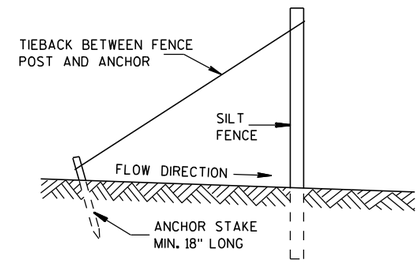


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 E 9-6

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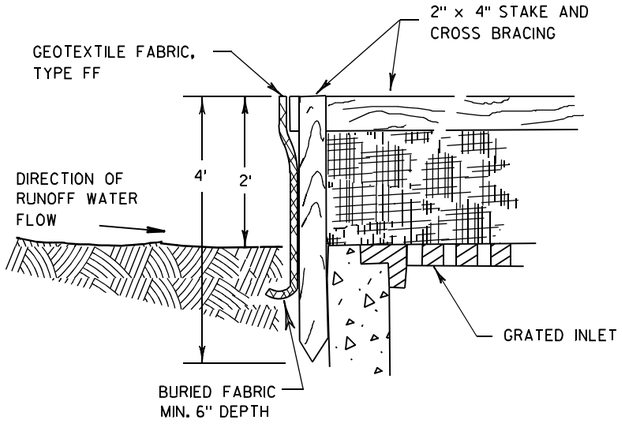
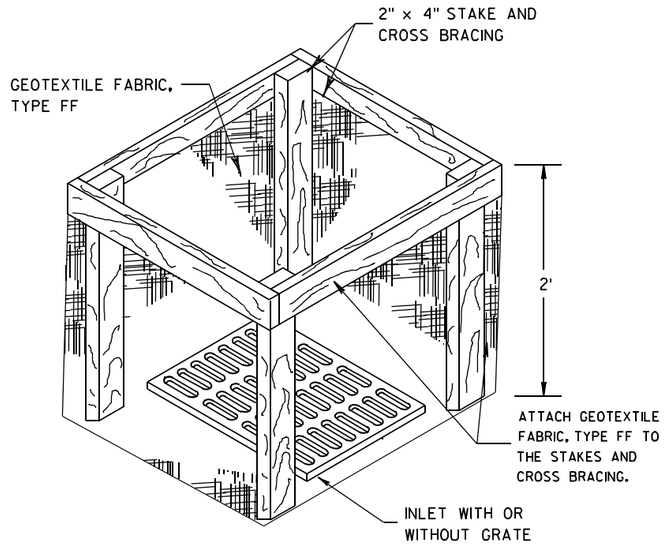
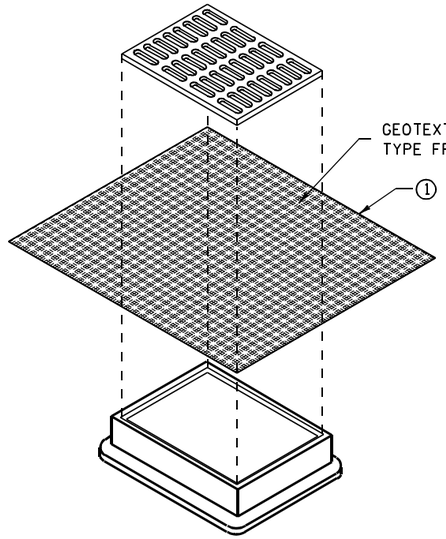
S.D.D. 8 E 9-6



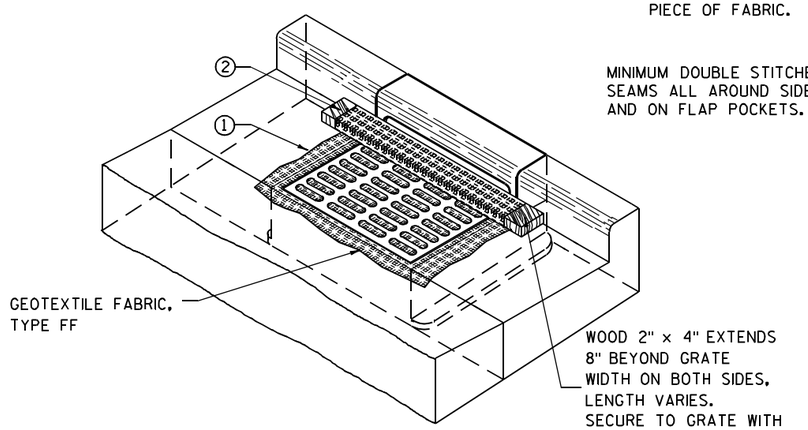


INLET PROTECTION, TYPE A

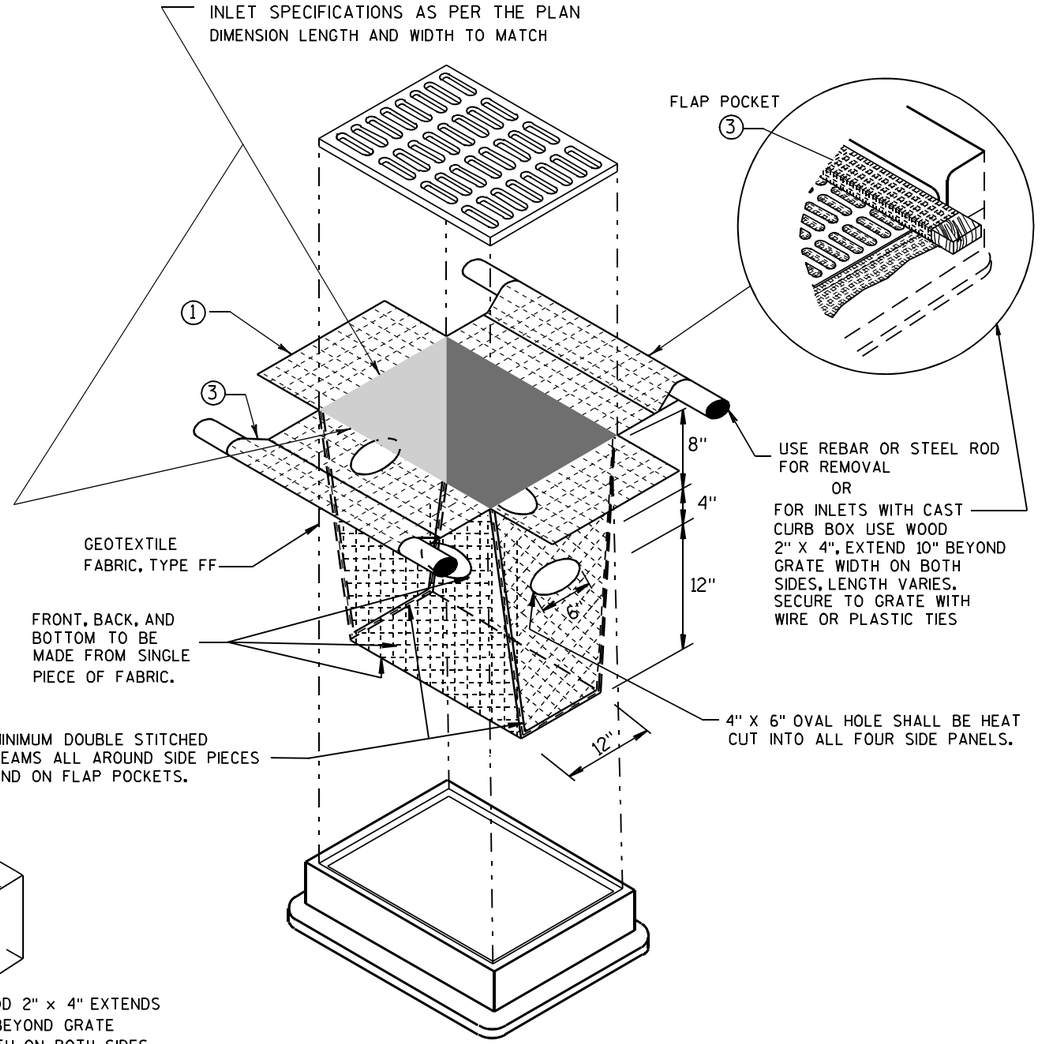


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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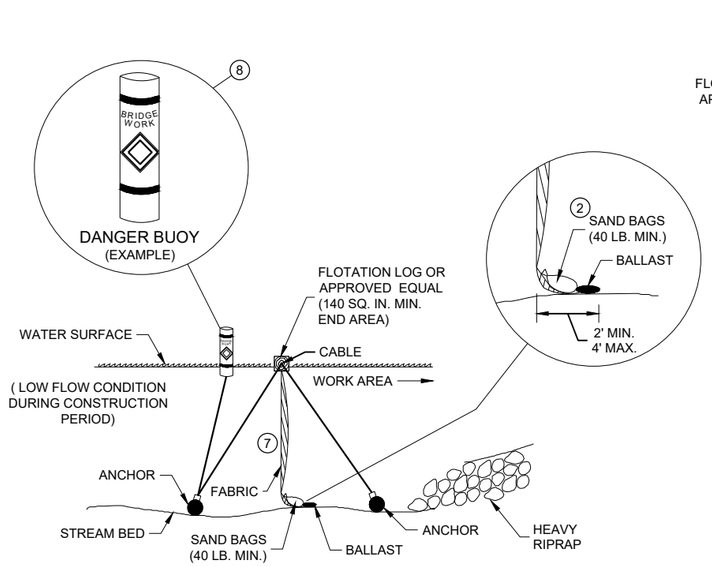
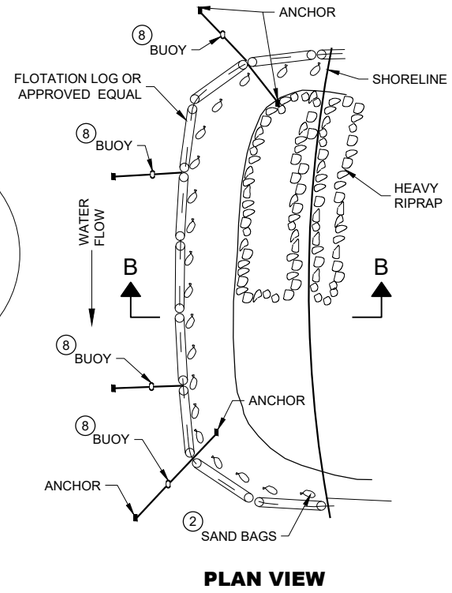
S.D.D. 8 E 10-2

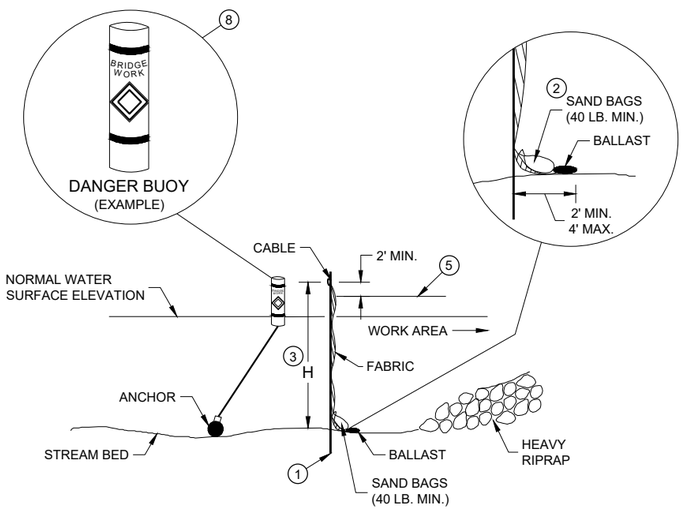


SECTION B - B

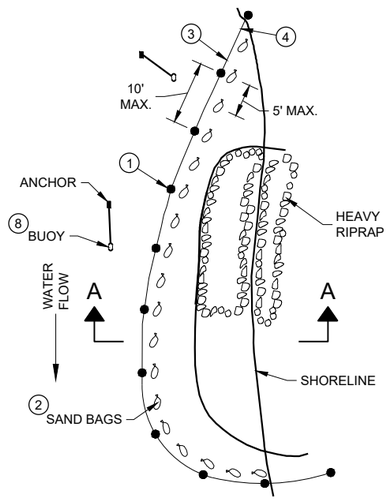


PLAN VIEW

TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A - A



PLAN VIEW

TURBIDITY BARRIER - STANDARD POST INSTALLATION

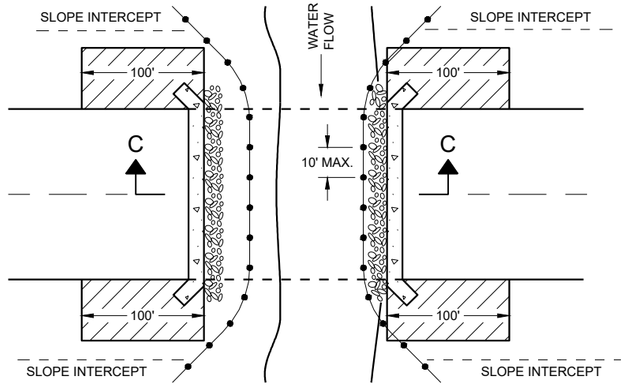
TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

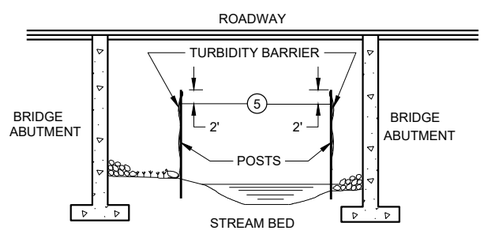
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

1. DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
2. SAND BAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
3. WHEN BARRIER HEIGHT "H" EXCEEDS 8 FEET, POST SPACING MAY NEED TO BE DECREASED.
4. IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
5. ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
6. FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.
7. ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
8. USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

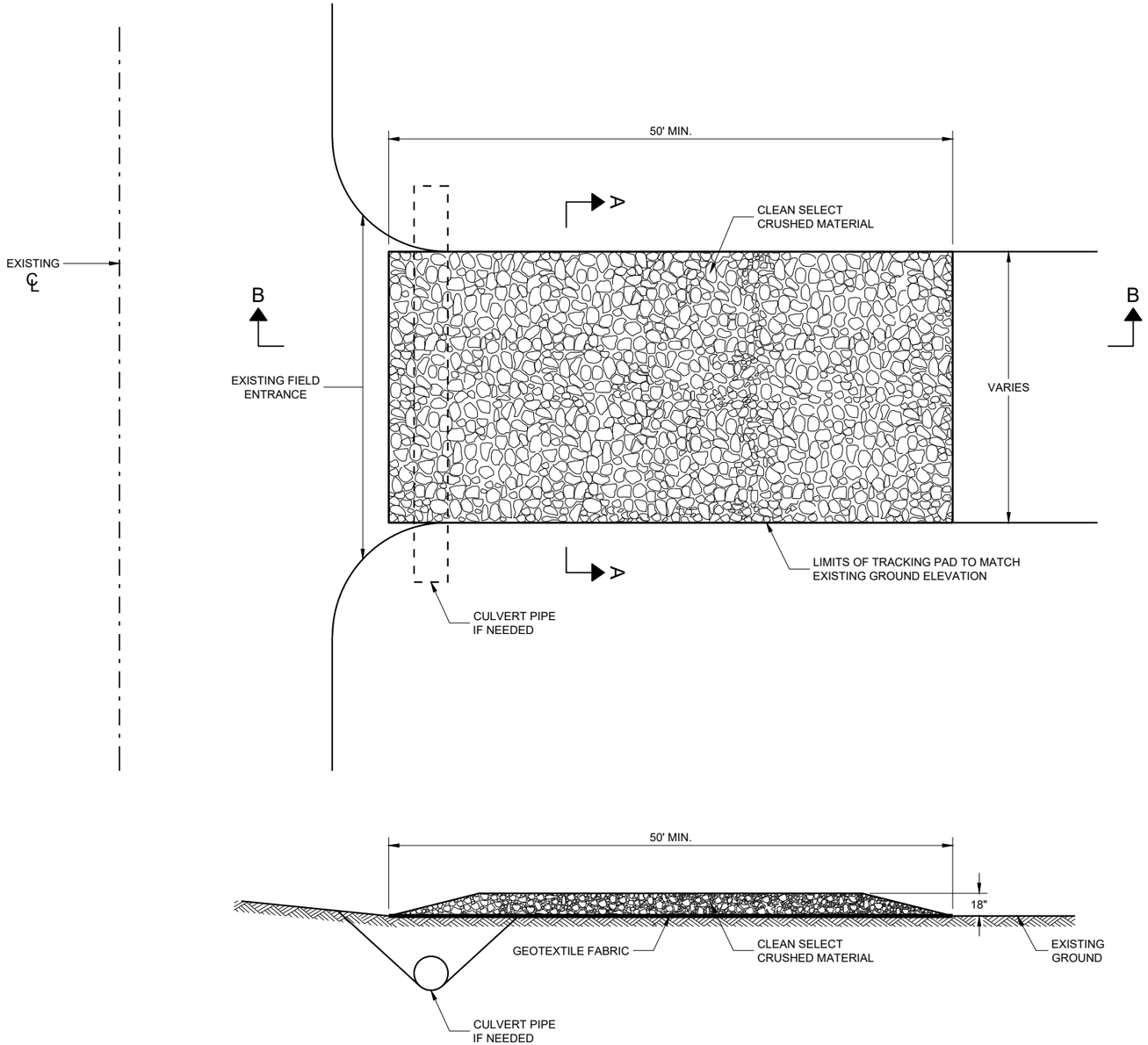
TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/4/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOI
ENGINEER

FHWA

6
SDD 08E11 - 02



SECTION B - B

GENERAL NOTES

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

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

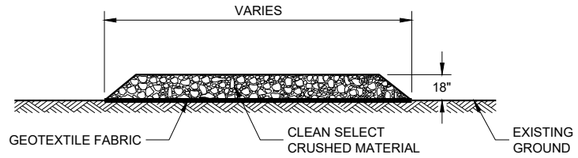
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A - A

6

SDD 08E14 - 01

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

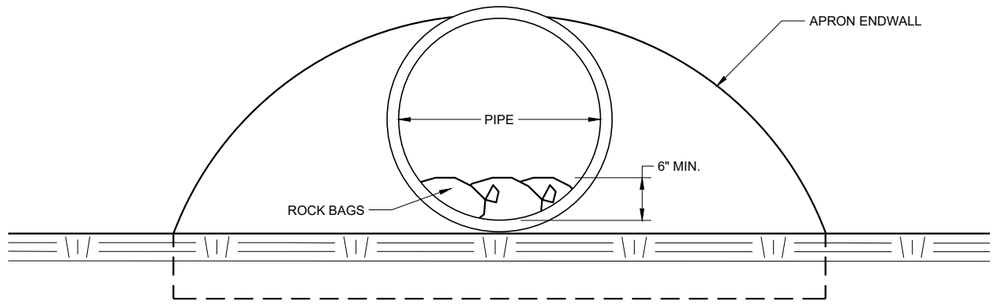
3/24/2011
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVE ENGINEER

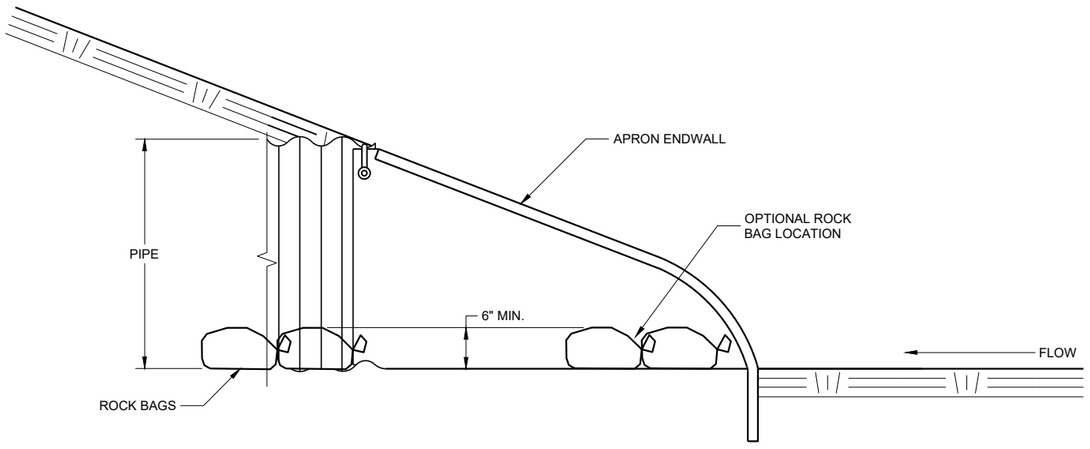
FHWA

6

SDD 08E14 - 01



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Daniel Schave
EROSION CONTROL ENGI

FHWA

6

SDD 08E15 - 01

6

SDD 08E15 - 01

METAL APRON ENDWALLS

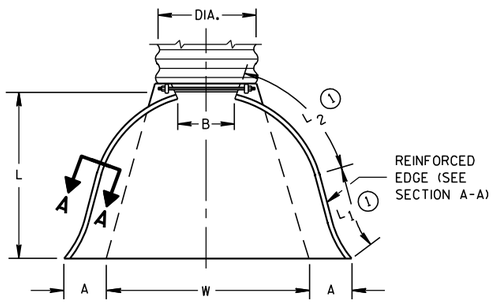
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

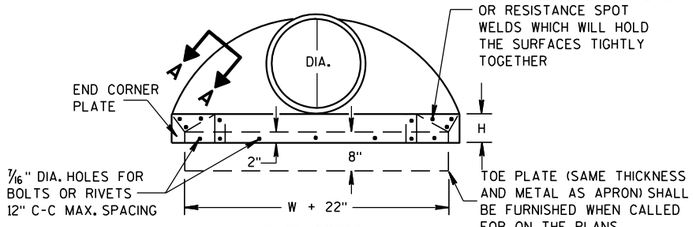
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

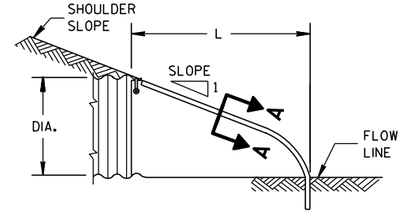
*MINIMUM
**MAXIMUM



PLAN VIEW

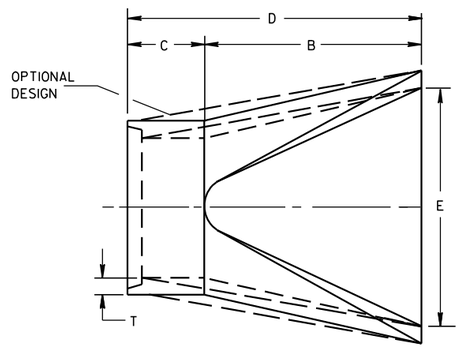


END VIEW

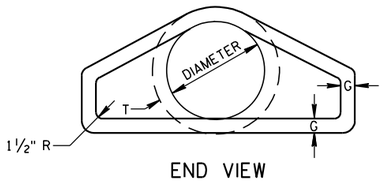


SIDE ELEVATION

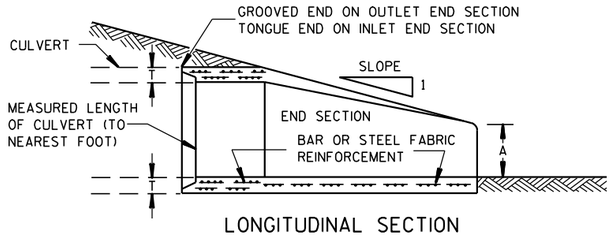
METAL ENDWALLS



PLAN

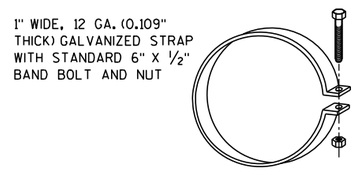


END VIEW



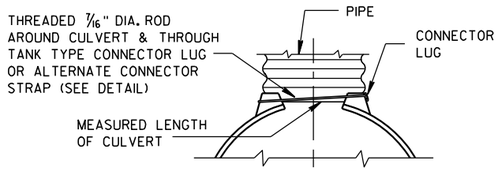
LONGITUDINAL SECTION

CONCRETE ENDWALLS

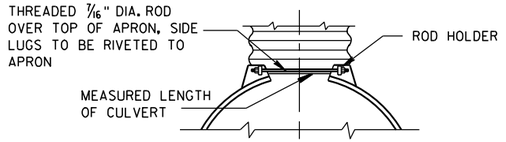


ALTERNATE FOR TYPE 1 CONNECTION

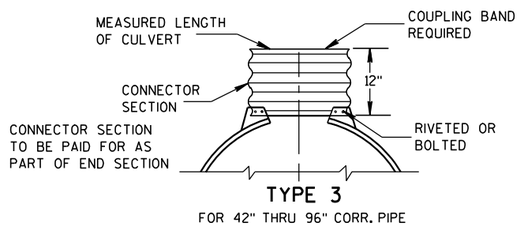
END SECTION CONNECTOR STRAP



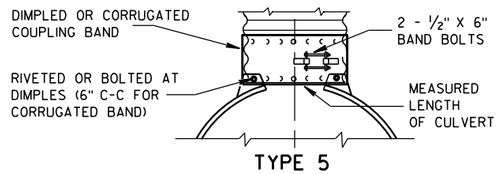
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

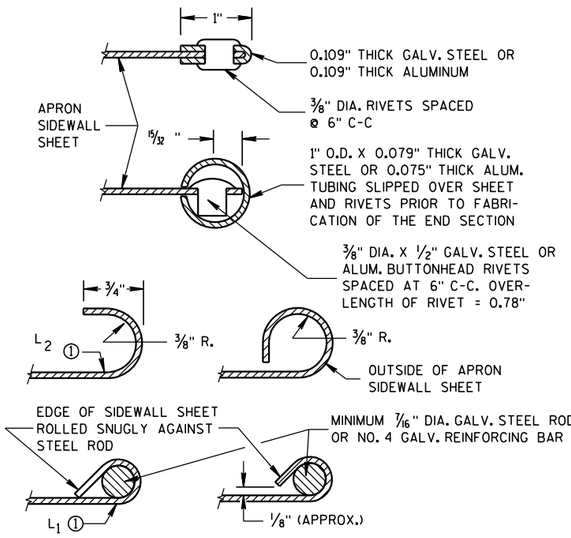
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

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

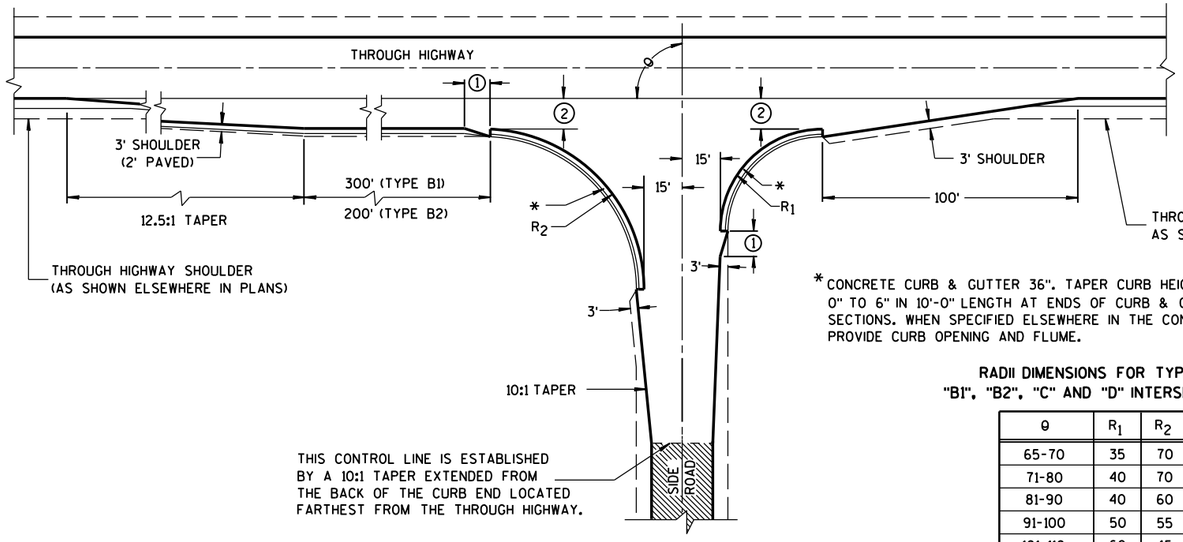
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 1-11

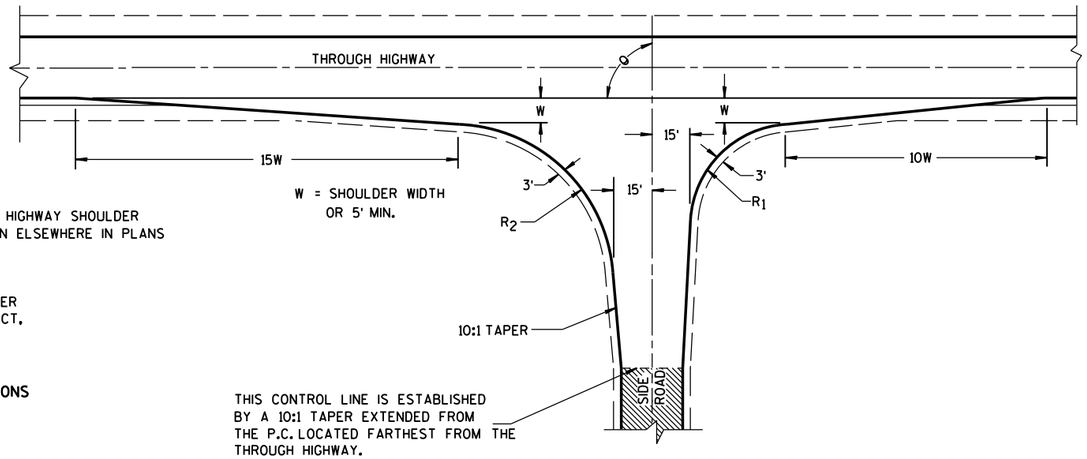


TYPE "B1" AND "B2"

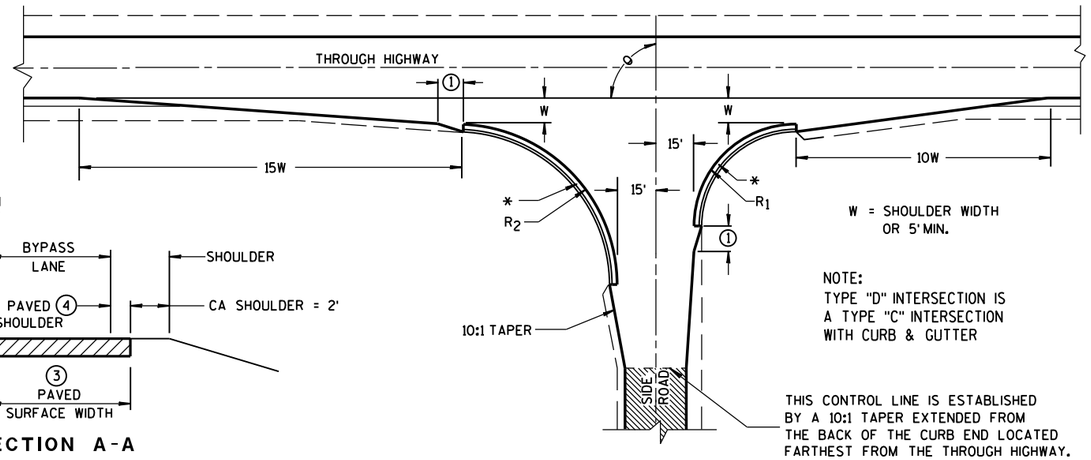
*CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R_1	R_2
65-70	35	70
71-80	40	70
81-90	40	60
91-100	50	55
101-110	60	45



TYPE "C"



TYPE "D"

GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING PAVED SURFACE

BYPASS LANE

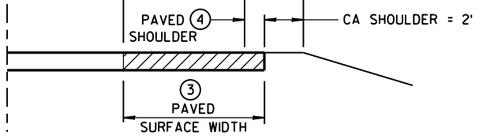
(1) 10-FT TYPICAL.

(2) 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

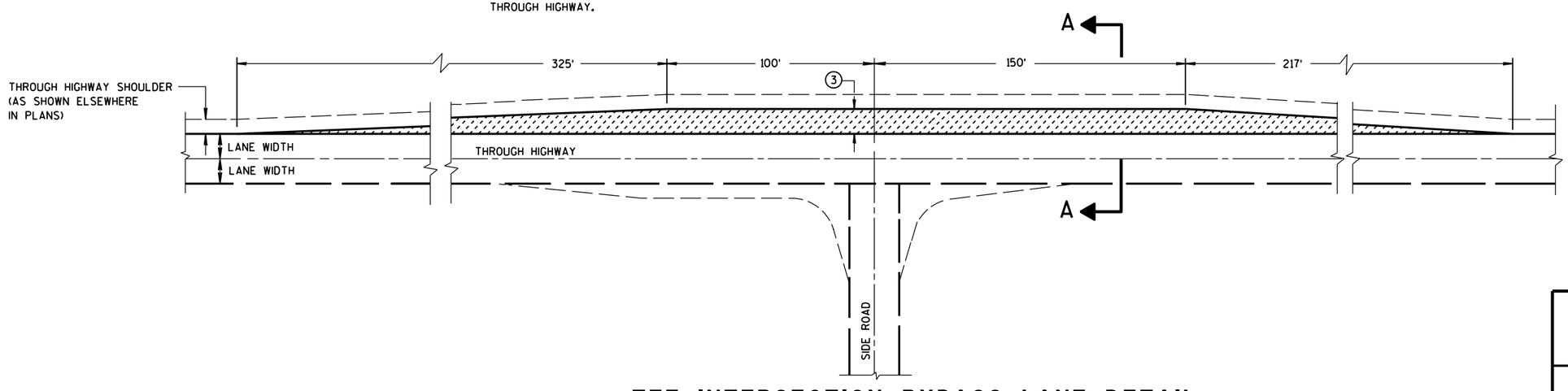
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

(3) BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.

(4) BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)



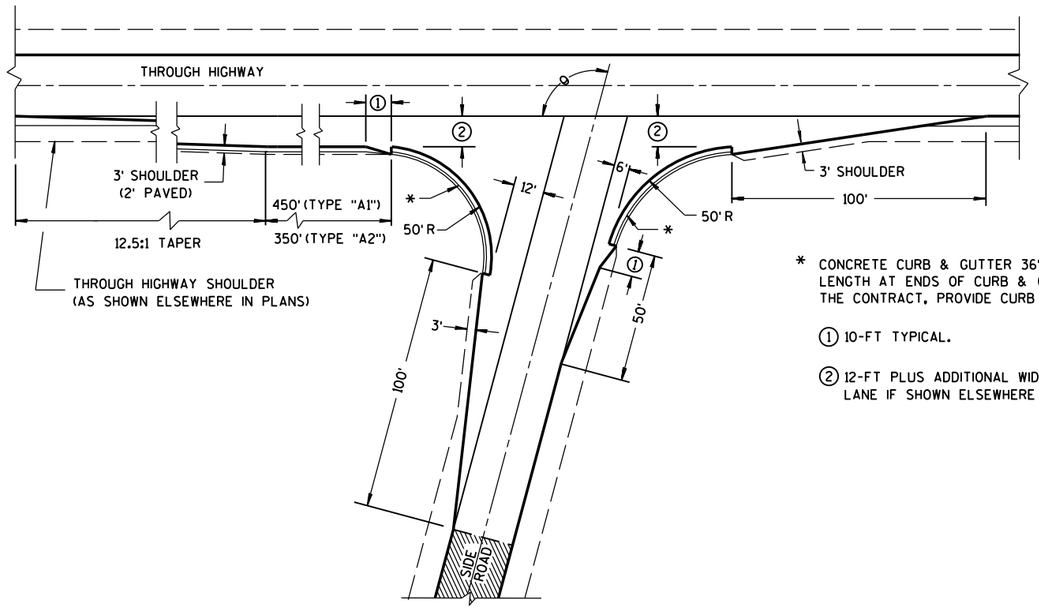
TEE INTERSECTION BYPASS LANE DETAIL

AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 9 A 1-13a



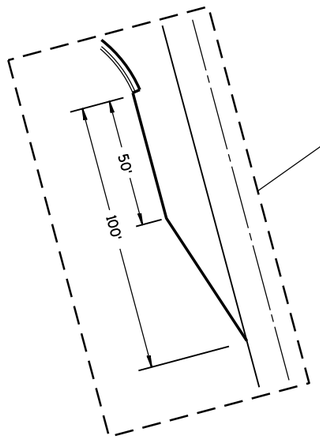
θ = MORE THAN 80°

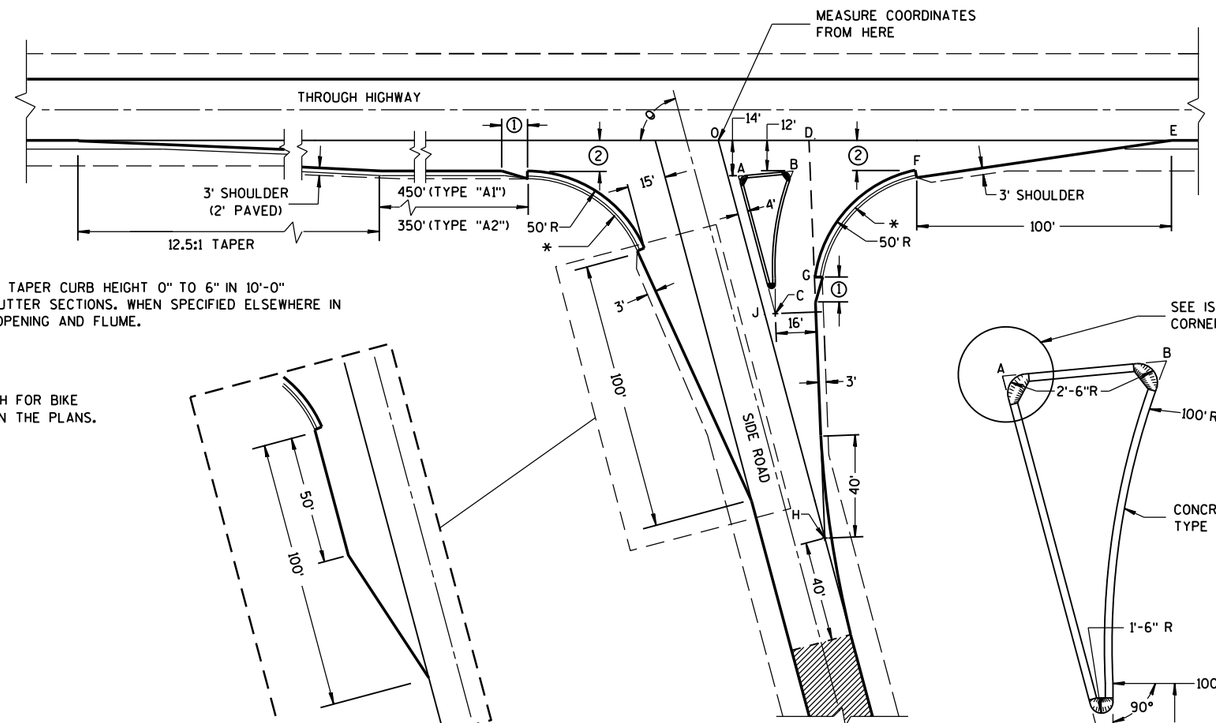
* CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

① 10-FT TYPICAL.

② 12-FT PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLANS.

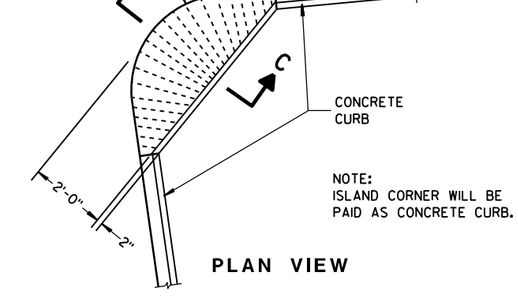
EXISTING PAVED SURFACE





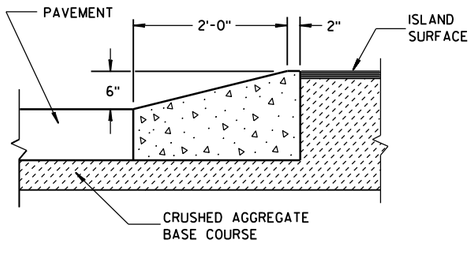
θ = ACUTE ANGLES 80° OR LESS

SIDE ROAD WIDENING AND TAPER REQUIRED WHERE THE THROUGH HIGHWAY CARRIES TWO-WAY TRAFFIC
θ = ACUTE ANGLES 70° OR LESS



NOTE:
ISLAND CORNER WILL BE PAID AS CONCRETE CURB.

PLAN VIEW



SECTION C-C

ISLAND CORNER DETAIL

(TO BE CONSTRUCTED AT ALL ISLAND CORNERS)

TABLE OF DIMENSIONS FOR
VARIABLE SIDE ROAD INTERSECTION ANGLES
(INTERPOLATE VALUES FOR ANGLES NOT SHOWN)

ANGLE θ DEGREES	COORDINATES IN FEET (MEASURED FROM POINT "O") X/Y								LENGTH IN FEET				
	A	B	C	D	E	F	G	H	AB	AC	T	OJ	OH
60	12.7 / -14.0	44.9 / -12.0	46.4 / -72.4	41.9 / 0.0	205.0 / 0.0	104.6 / -12.0	64.0 / -75.5	85.0 / -147.1	32.3	67.4	4.9	85.9	169.9
65	10.9 / -14.0	39.0 / -12.0	37.8 / -71.6	39.4 / 0.0	196.1 / 0.0	95.7 / -12.0	54.1 / -71.5	70.5 / -151.3	28.2	63.6	8.5	80.9	166.9
70	9.4 / -14.0	33.9 / -12.0	29.8 / -70.1	37.4 / 0.0	188.3 / 0.0	87.8 / -12.0	45.6 / -67.5	56.1 / -154.2	24.6	59.7	11.5	76.1	164.1
75	7.9 / -14.0	29.3 / -12.0	22.3 / -67.9	35.7 / 0.0	181.2 / 0.0	80.7 / -12.0	38.2 / -63.4	41.8 / -155.9	21.5	55.8	13.8	71.4	161.4
80	6.5 / -14.0	25.4 / -12.0	15.6 / -65.2	34.4 / 0.0	174.8 / 0.0	74.4 / -12.0	31.8 / -59.3	27.6 / -156.5	18.9	52.0	15.6	66.9	158.9

TYPE "A1" & "A2" SIDE ROAD INTERSECTION DETAILS

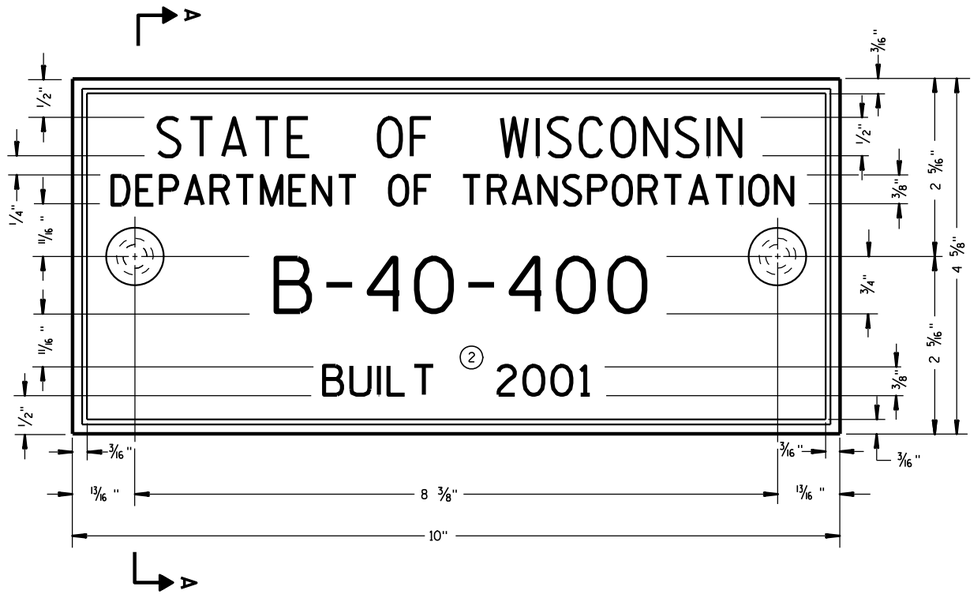
AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/18/12 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

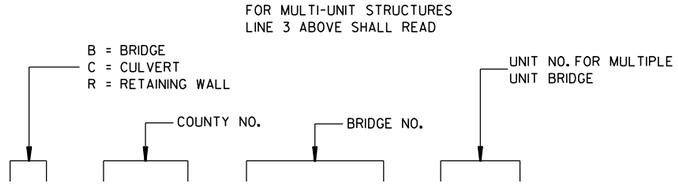
S.D.D. 9 A 1-13b

S.D.D. 9 A 1-13b



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

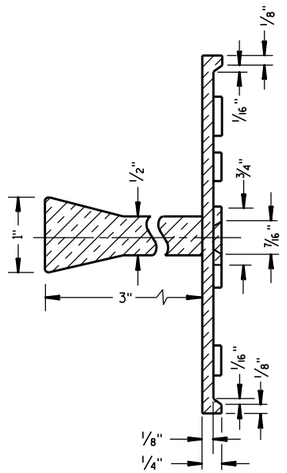
GENERAL NOTES

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

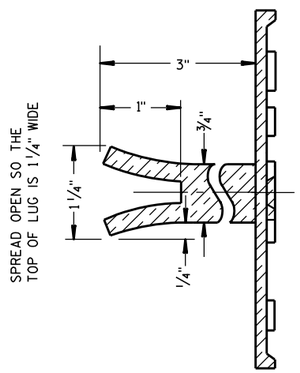
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

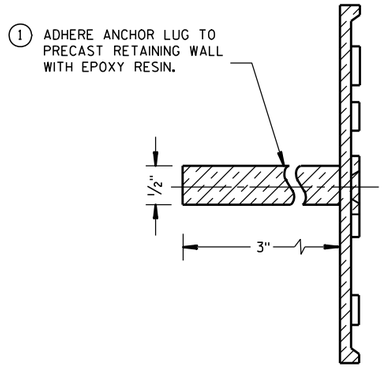
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
3/26/10 DATE	/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER
FHWA	

6

S.D.D. 12 A 3-10

6

S.D.D. 12 A 3-10

(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.

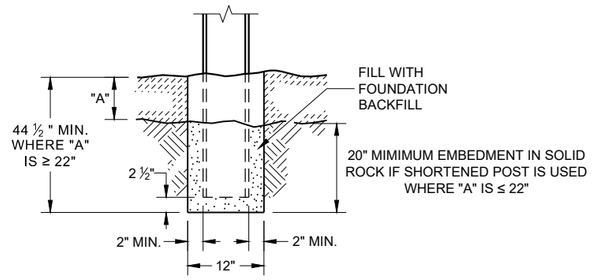
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

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

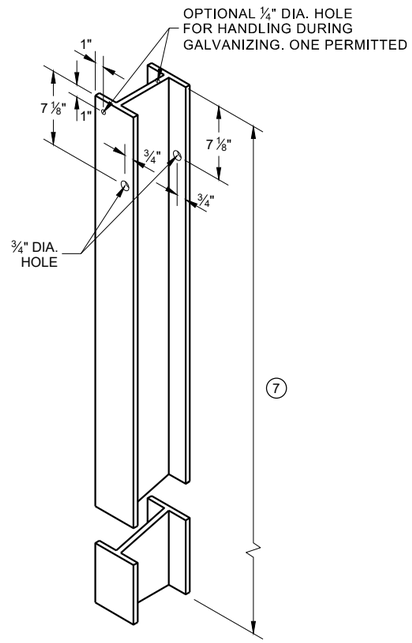
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(6) WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

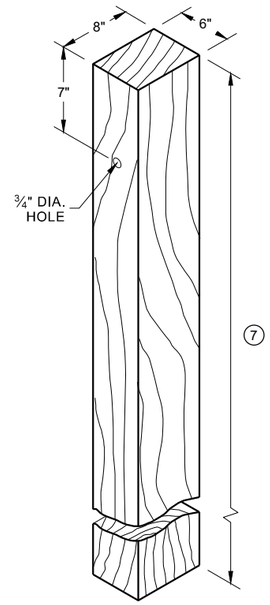
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



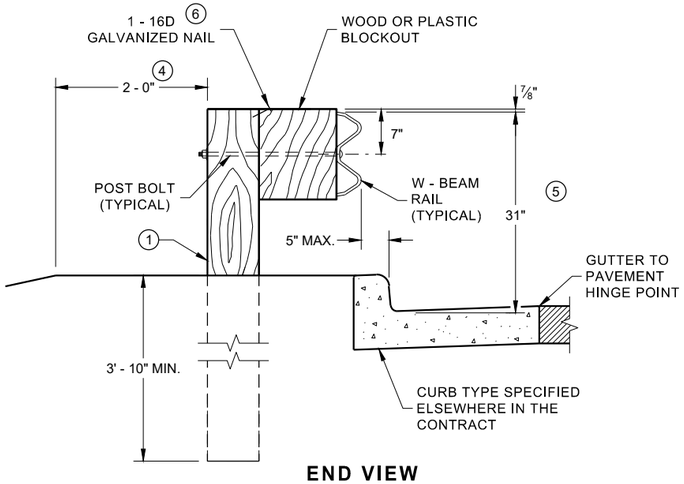
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



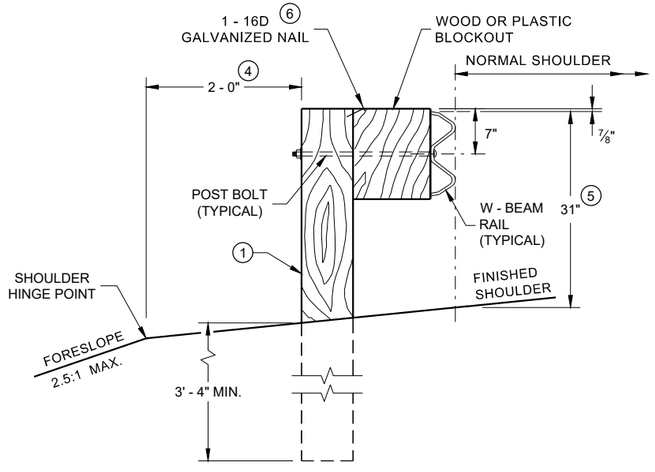
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



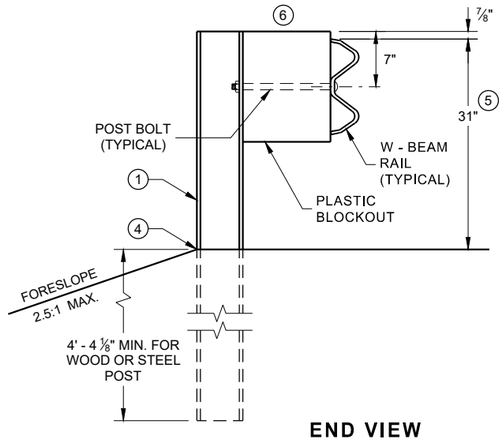
WOOD POST (6" X 8") NOMINAL (1)



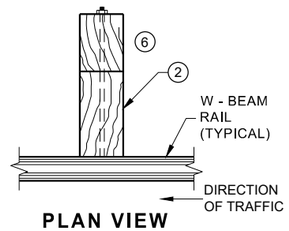
END VIEW
LOCATED ALONG A CURBED ROADWAY



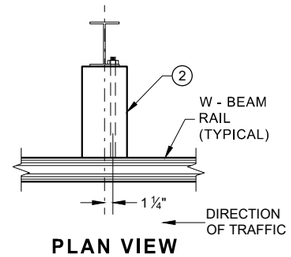
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



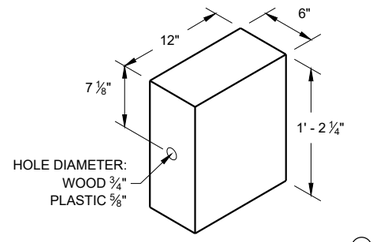
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

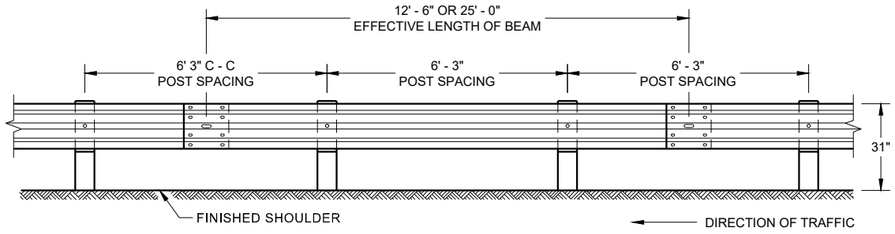
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

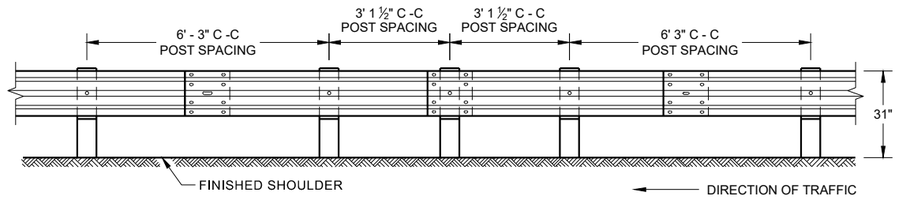
SDD 14B42 - 07a

6

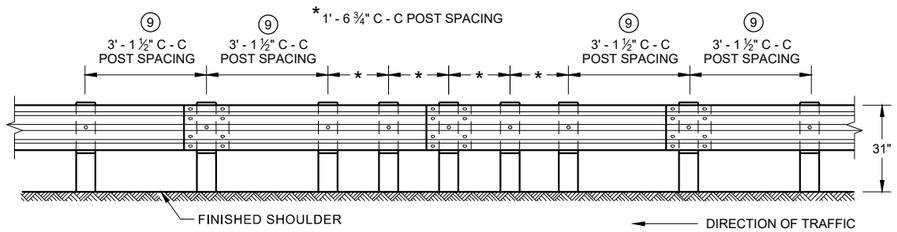
SDD 14B42 - 07a



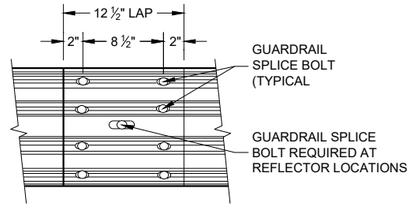
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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



FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE

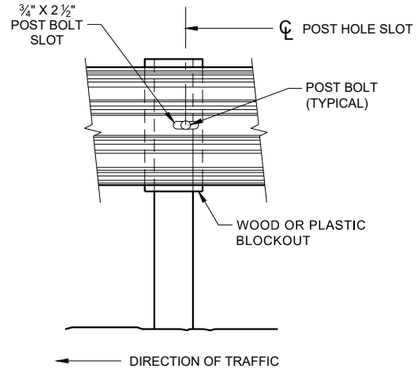
GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

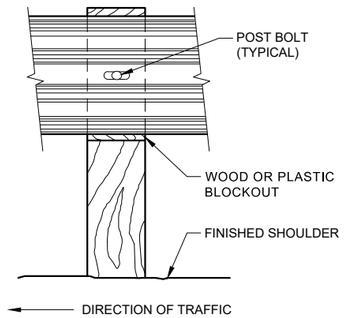
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

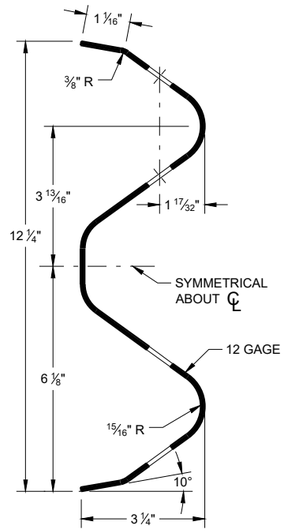
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



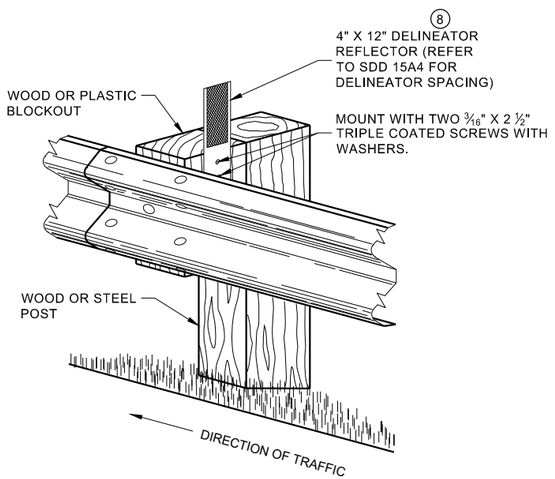
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



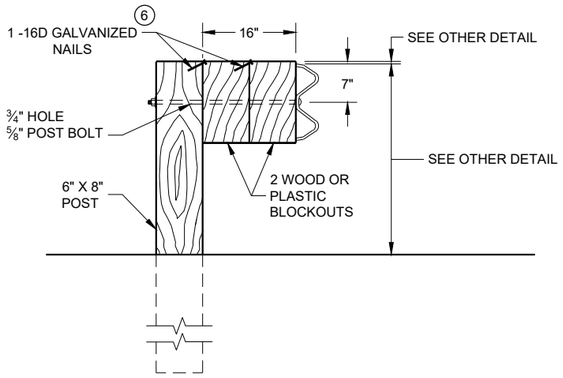
ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 07b
SDD 14B42 - 07b

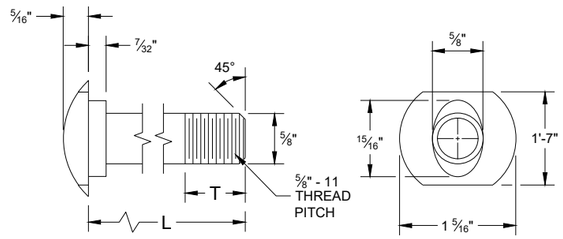


DETAIL FOR 16" BLOCKOUT DEPTH

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.

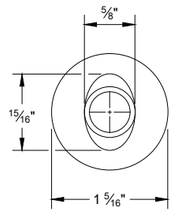
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

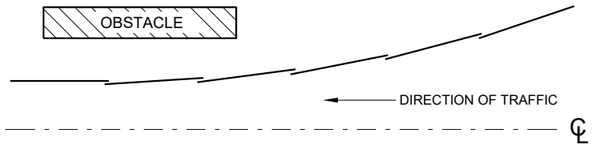


POST BOLT TABLE

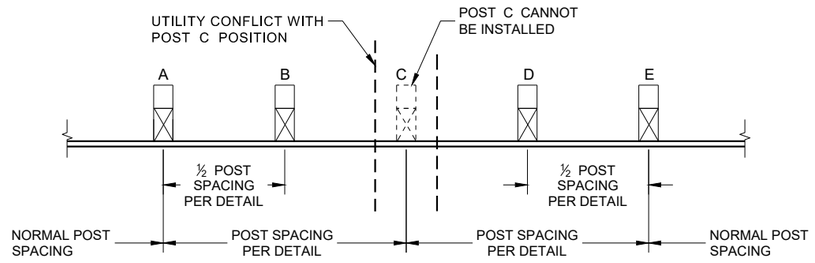
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



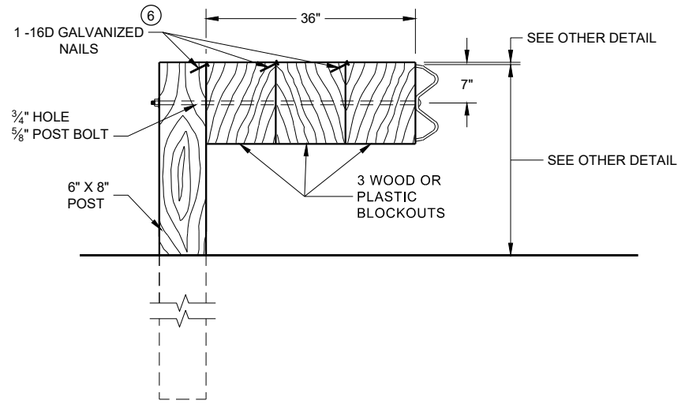
ALTERNATE BOLT HEAD



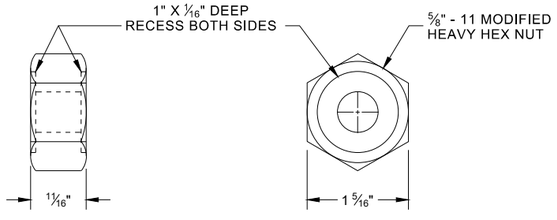
PLAN VIEW
BEAM LAPPING DETAIL



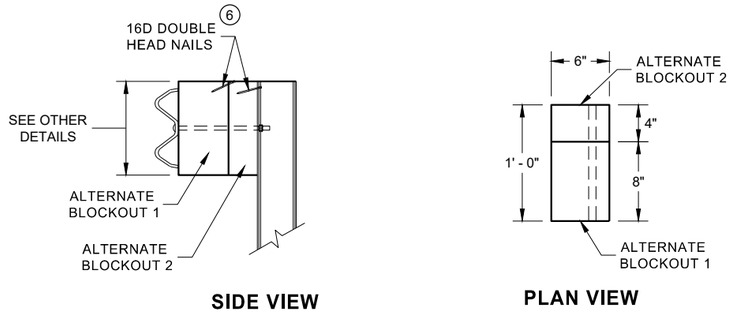
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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.

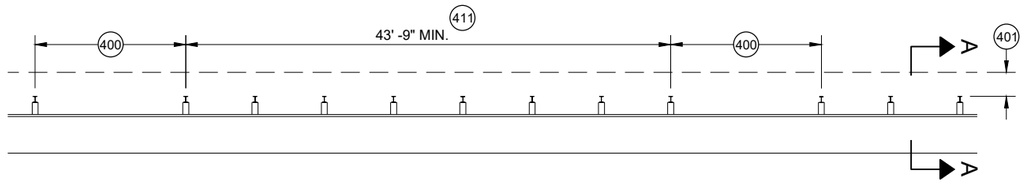
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

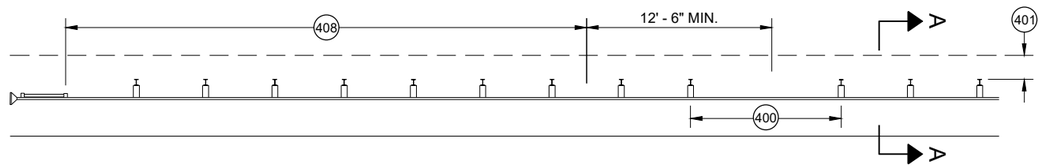
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

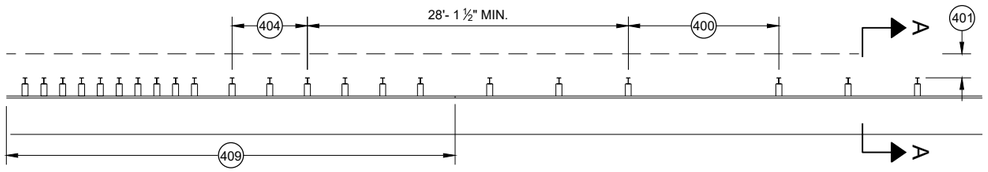
SDD 14B42 - 07c



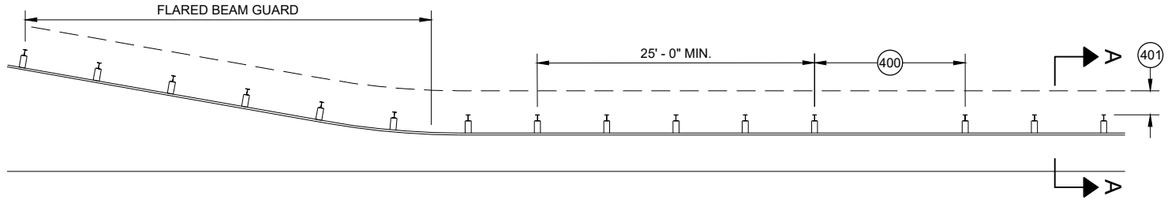
MISSING POST IN MGS GUARDRAIL



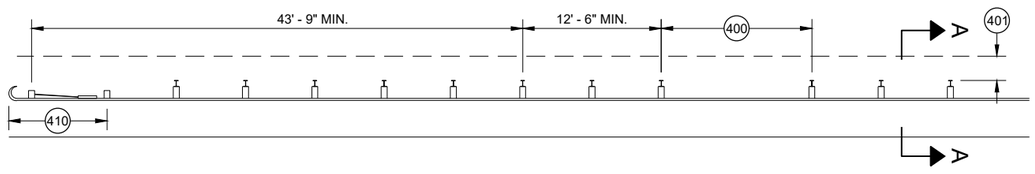
MISSING POST IN MGS GUARDRAIL NEAR EAT



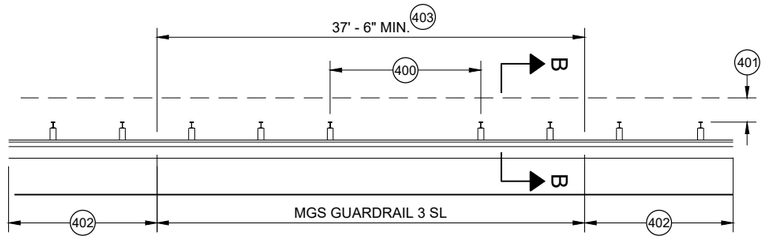
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

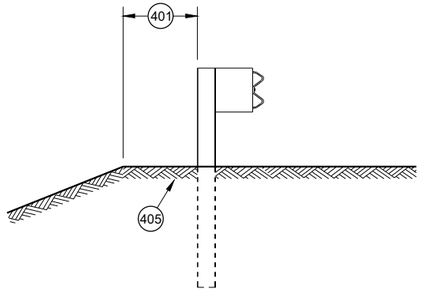


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

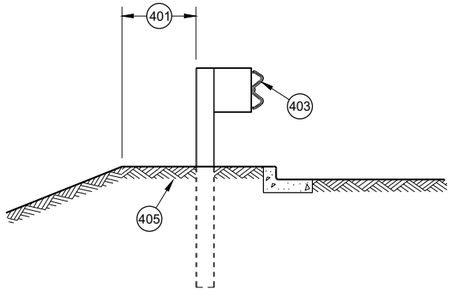


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(400) MAX SPAN 12' - 6"
(401) 2' MIN.
(402) MGS GUARDRAIL 3
(403) NESTING BEAM GUARD
(404) ASYMMETRIC TRANSITION
(405) SOIL WELL DRAINED AND COMPACTED
(406) SEE OTHER DRAWINGS IN THIS SDD
(407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
(408) SEE SDD 14B44
(409) SEE SDD 14B45
(410) SEE SDD 14B47
(411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR
FHWA

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SDD 14B42 - 07d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

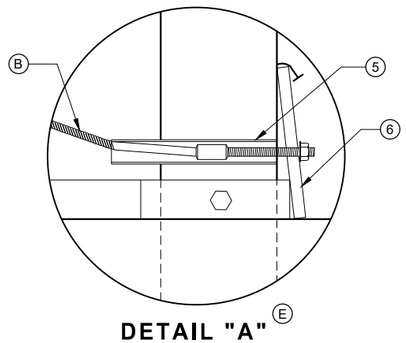
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

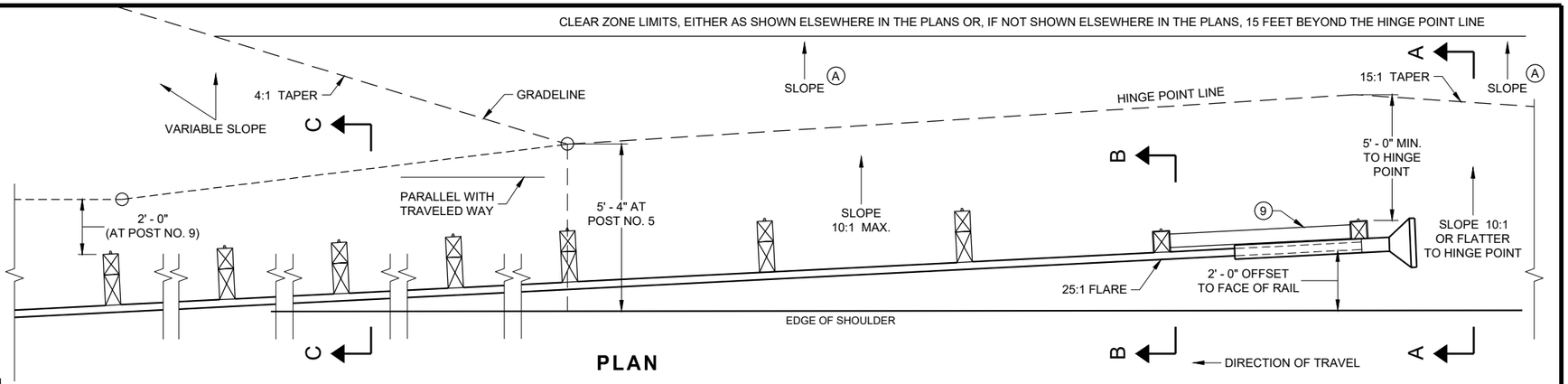
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

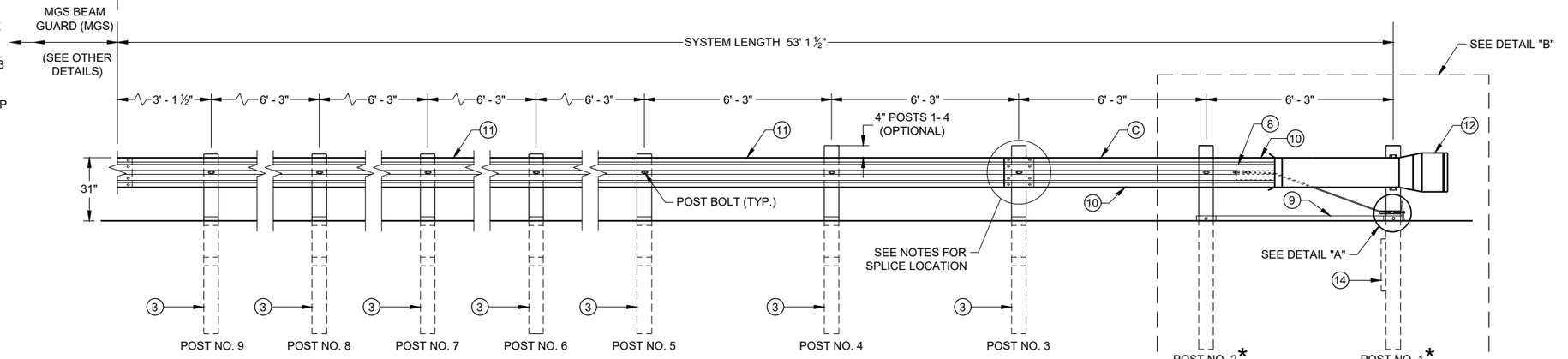
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



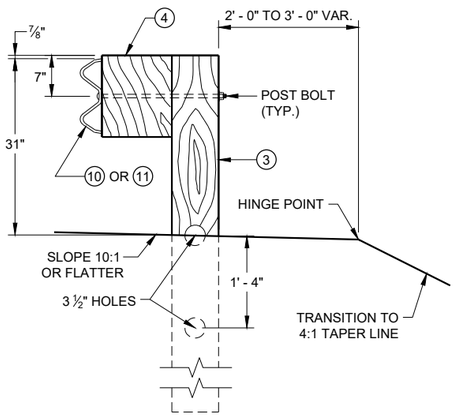
DETAIL "A" (E)



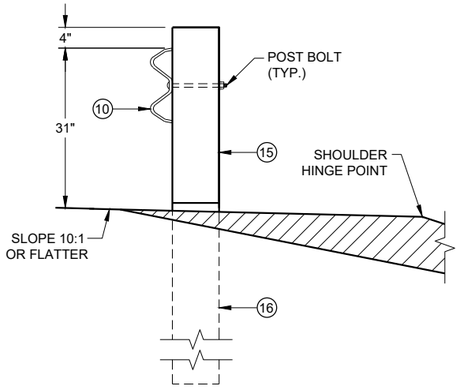
PLAN



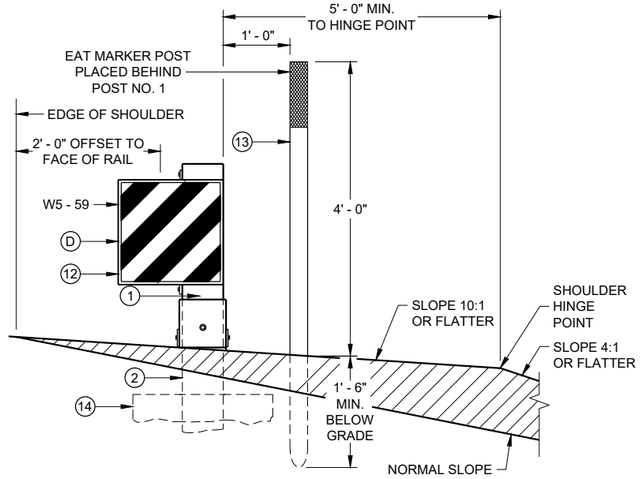
ELEVATION



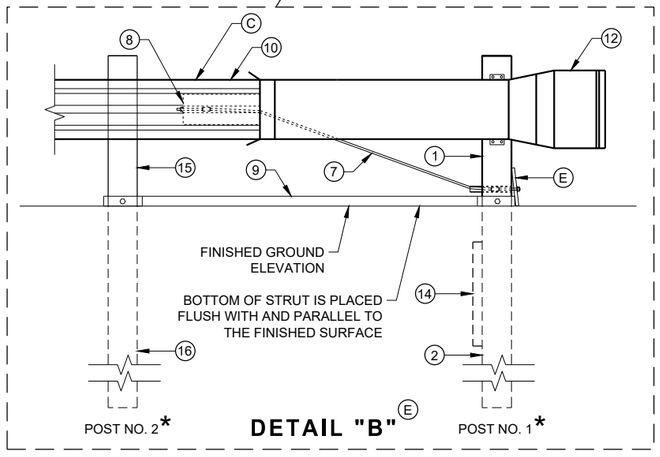
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



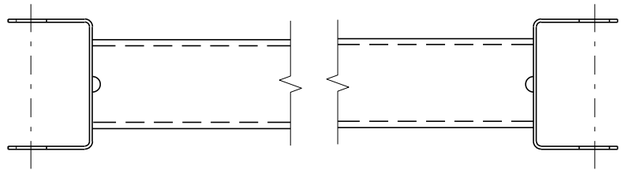
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

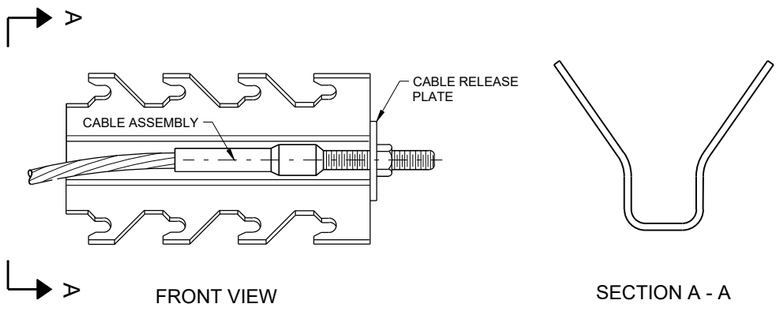
SDD 14B44 - 04a



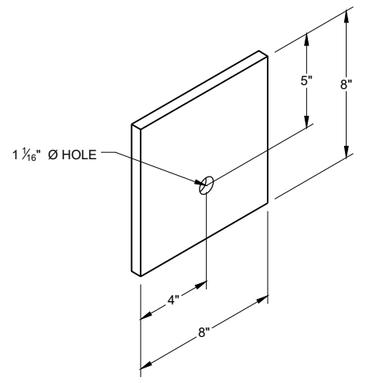
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
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	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

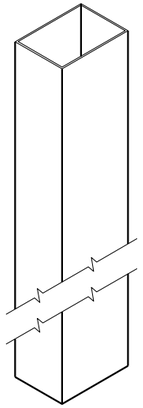
6

SDD 14B44 - 04b

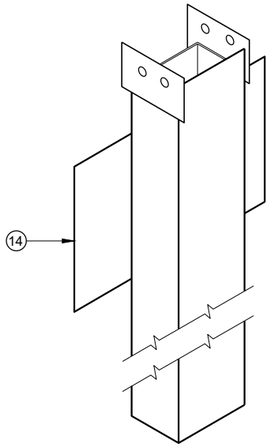
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

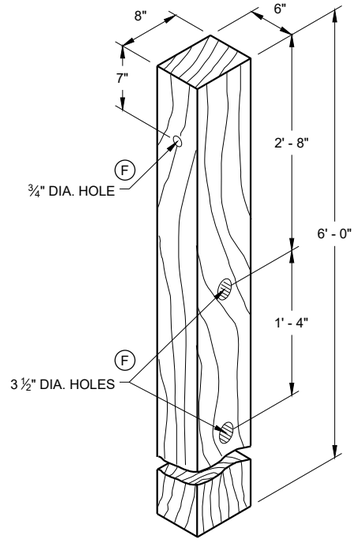
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



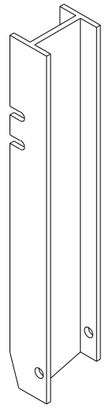
UPPER POST NO. 1 (1) (E)



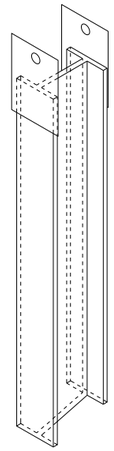
LOWER POST NO. 1 (2) (E)



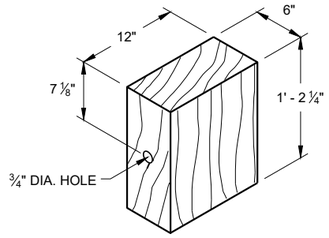
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



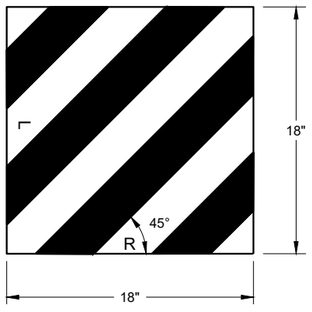
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

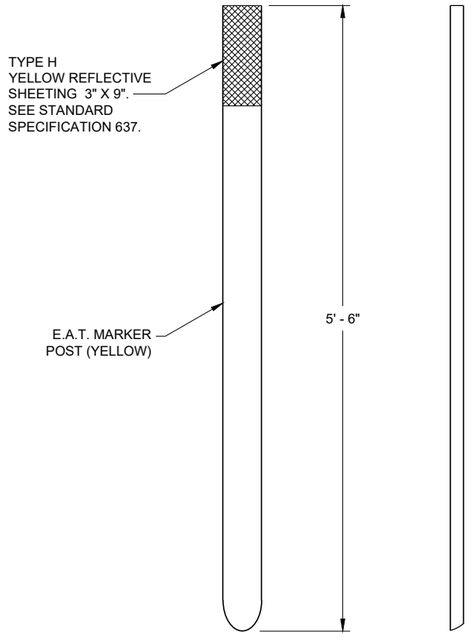


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



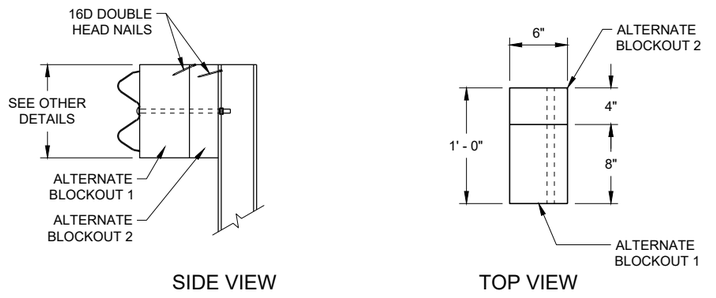
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

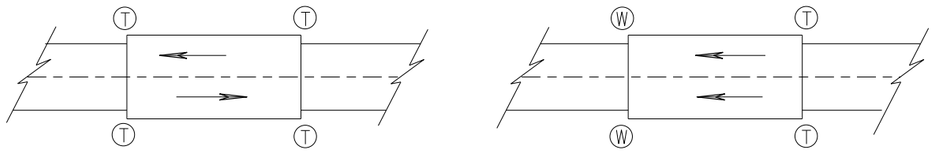
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

6

SDD 14B44 - 04c
SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

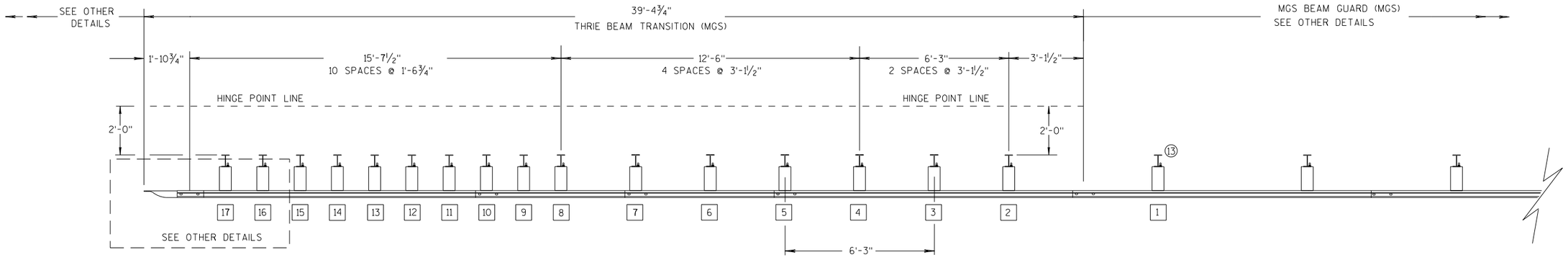
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

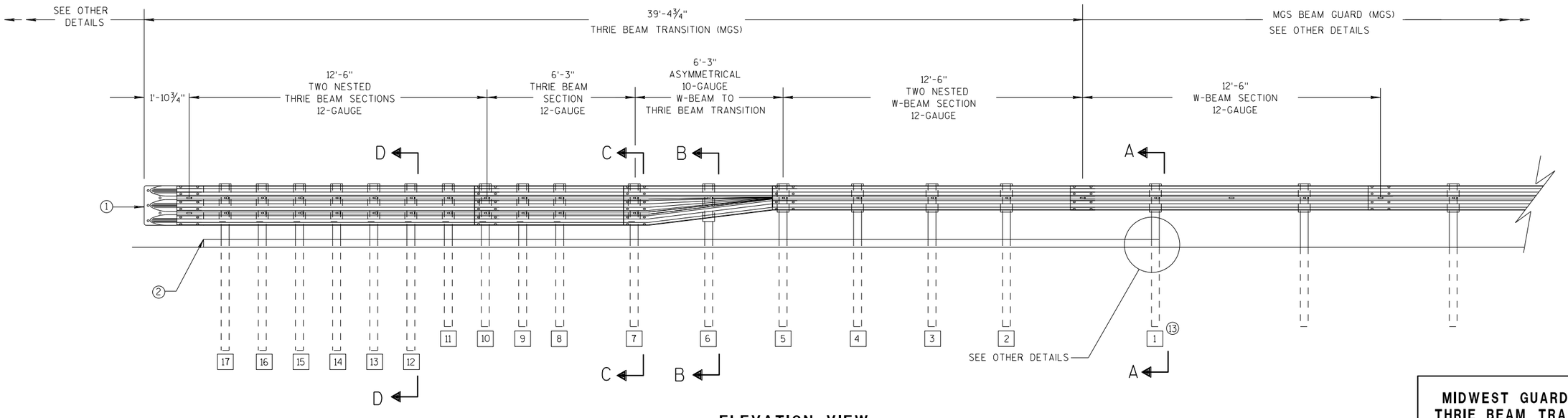
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 77

6

S.D.D. 14 B 45-5a

6

S.D.D. 14 B 45-5a

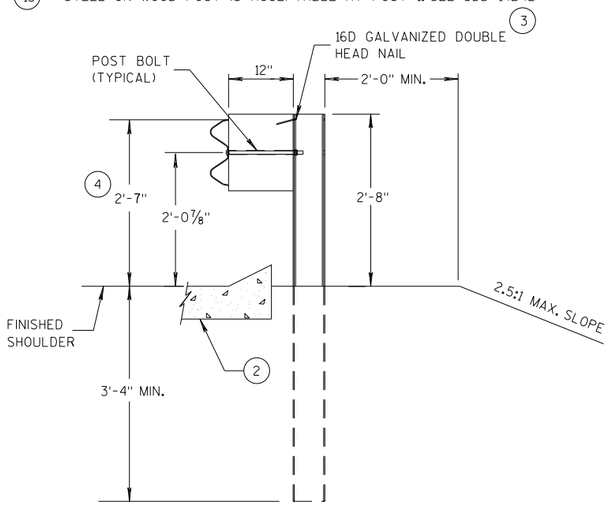
GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

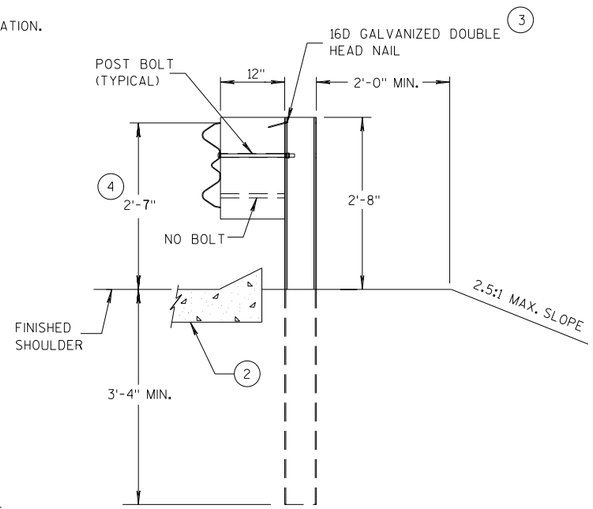
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



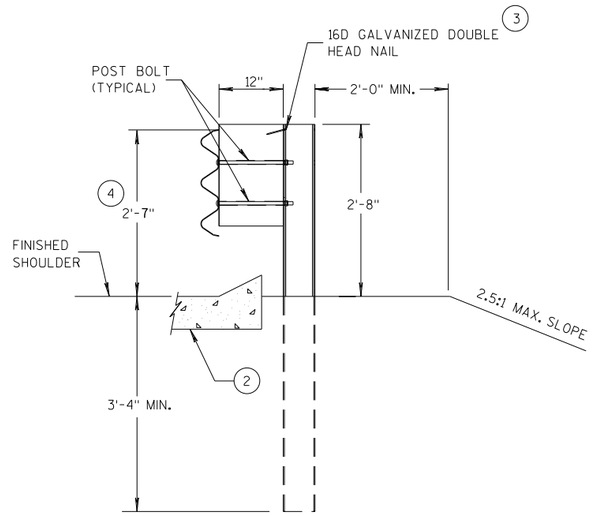
SECTION A-A (13)

POSTS 1-5



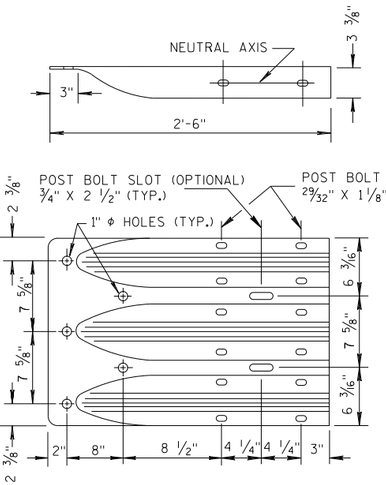
SECTION B-B

POST 6

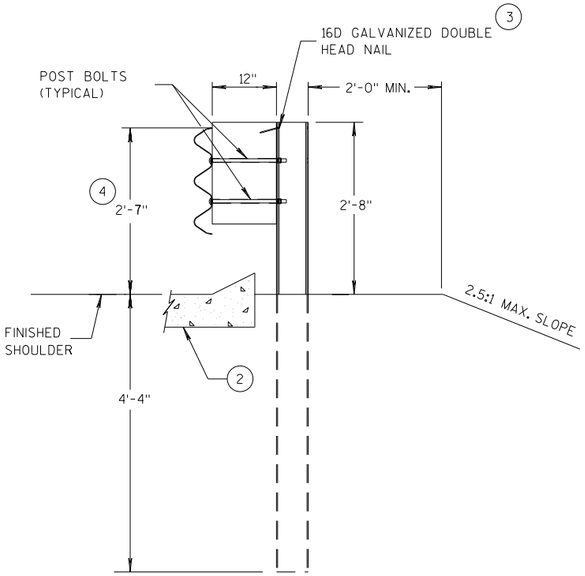


SECTION C-C

POSTS 7-11

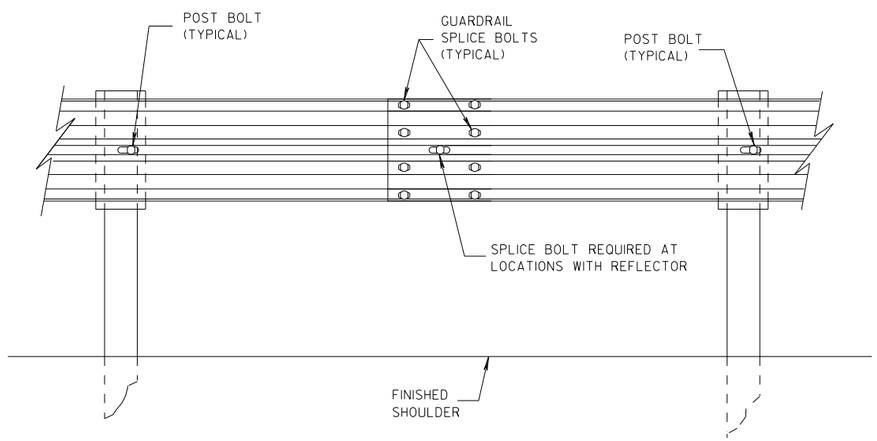


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

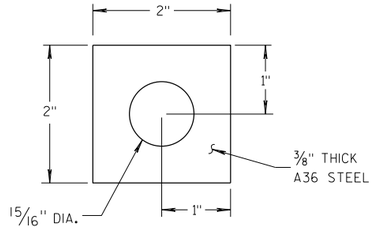
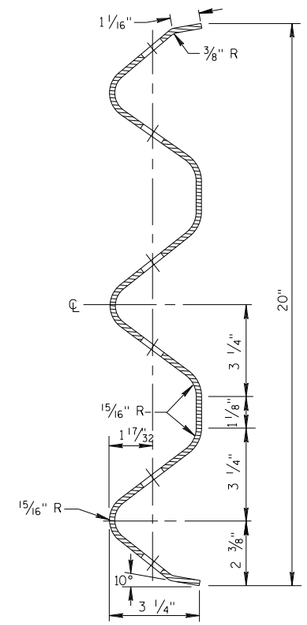


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

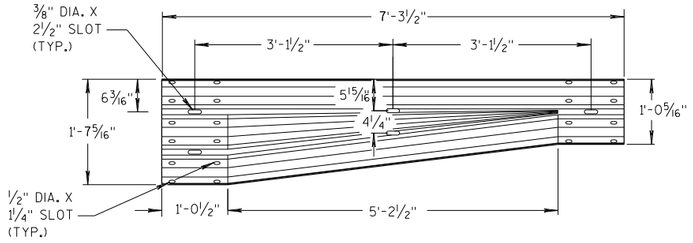
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 78

6

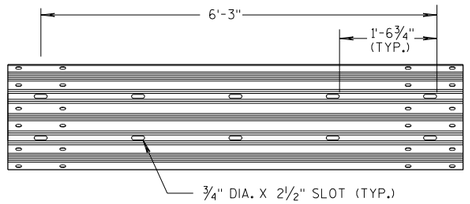
S.D.D. 14 B 45-5b

6

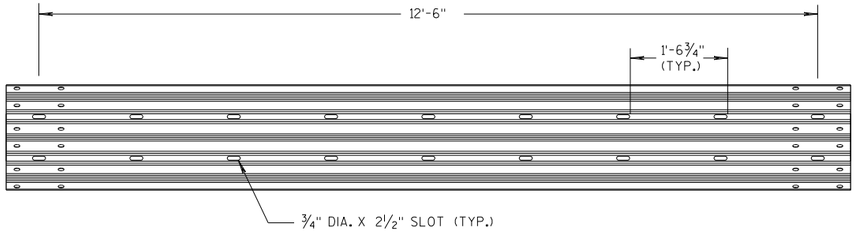
S.D.D. 14 B 45-5b



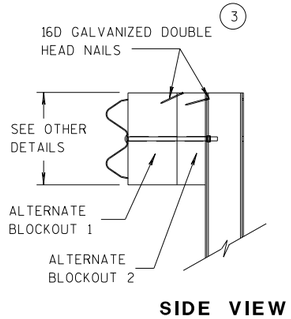
W-BEAM TO THRIE BEAM TRANSITION SECTION



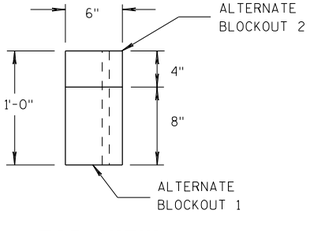
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

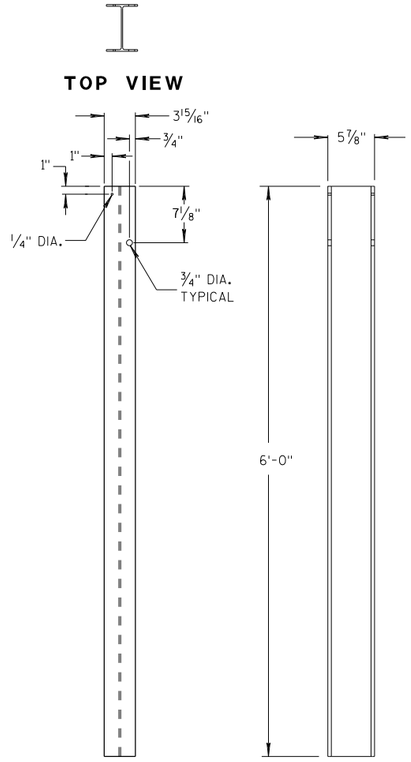


SIDE VIEW

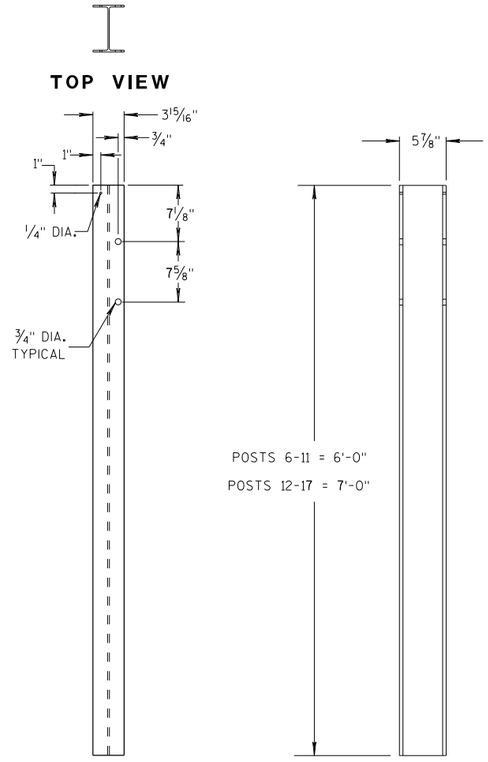


TOP VIEW

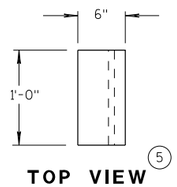
ALTERNATE WOOD BLOCKOUT DETAIL



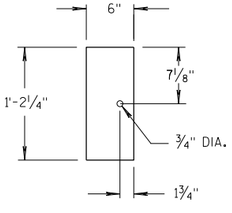
STEEL POSTS 1-5 (13)



STEEL POSTS 6-17

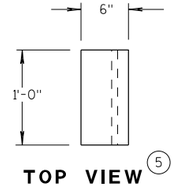


TOP VIEW (5)

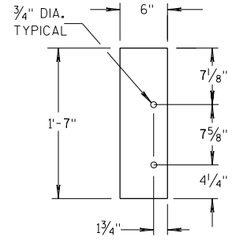


FRONT VIEW

BLOCKOUT POSTS 1-5



TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

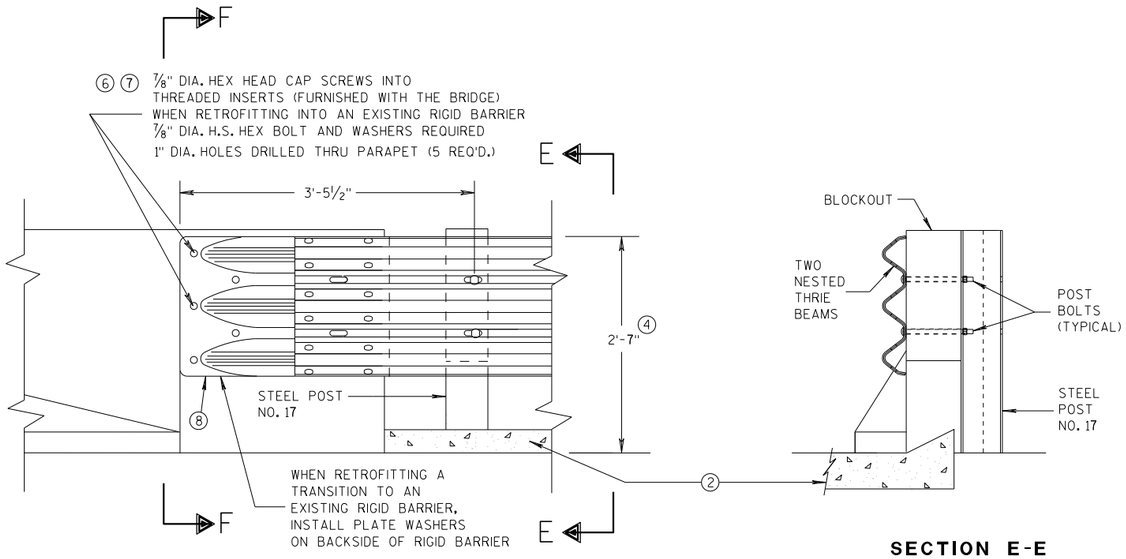
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-5c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

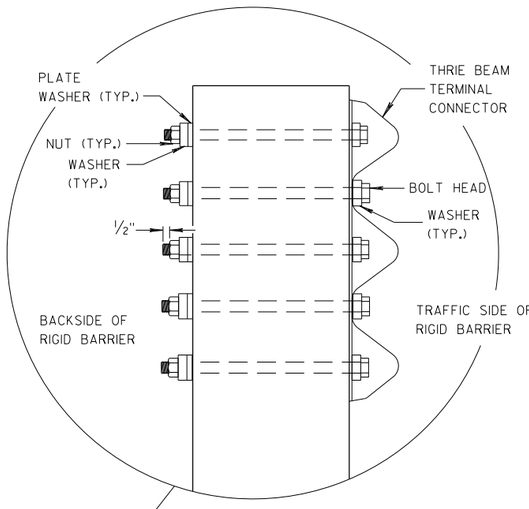
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

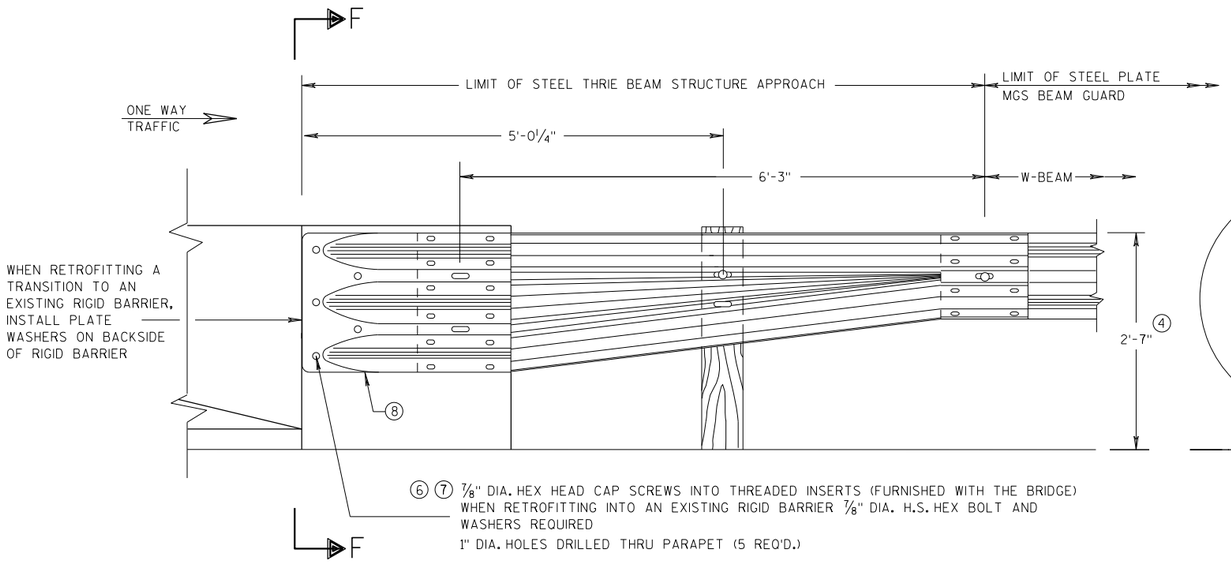
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

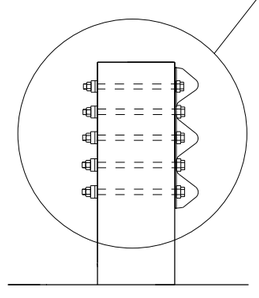
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

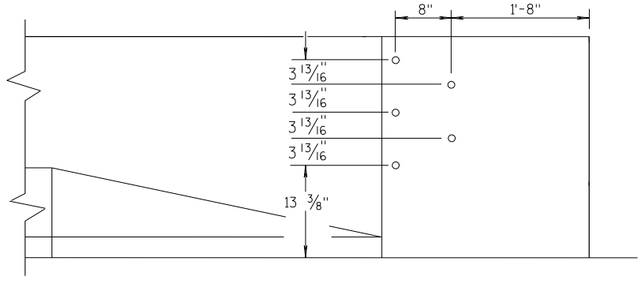




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

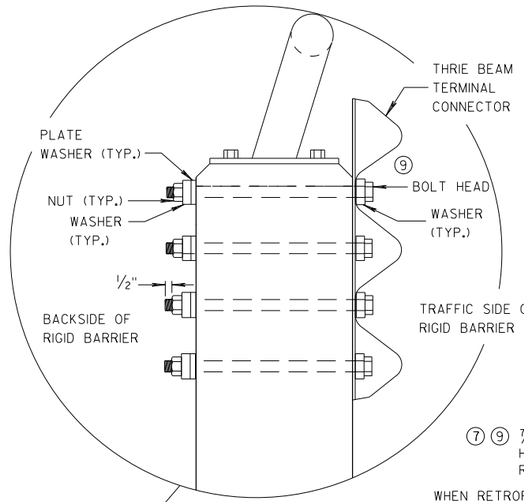
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

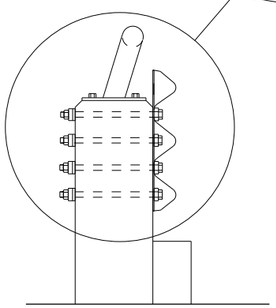
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

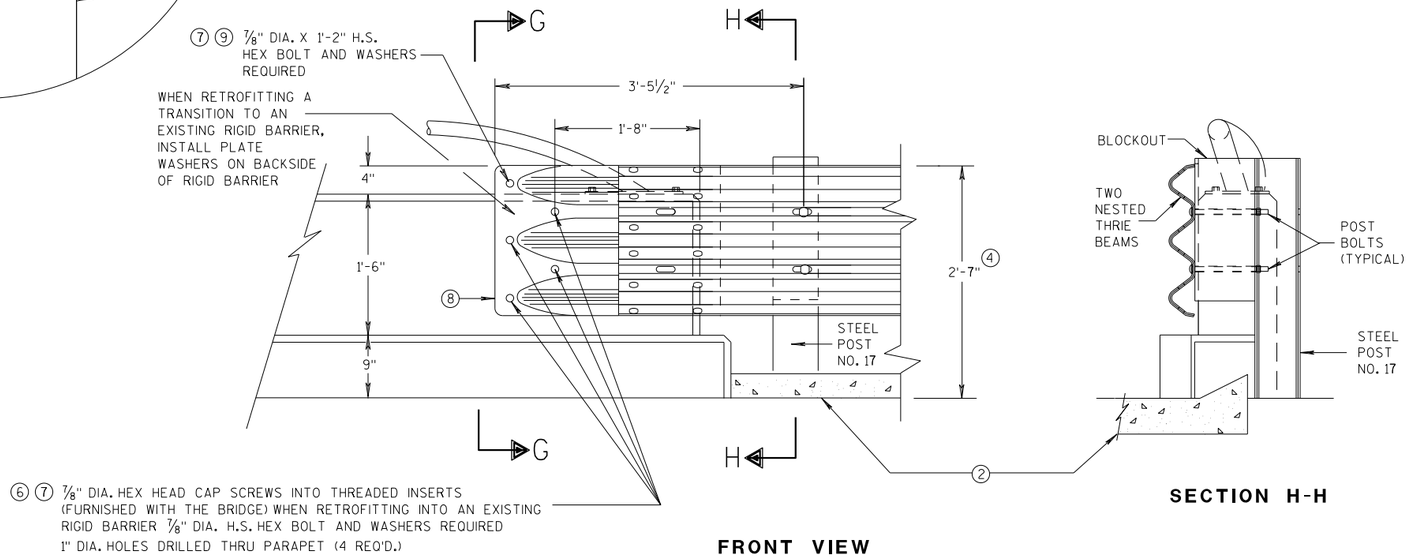
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





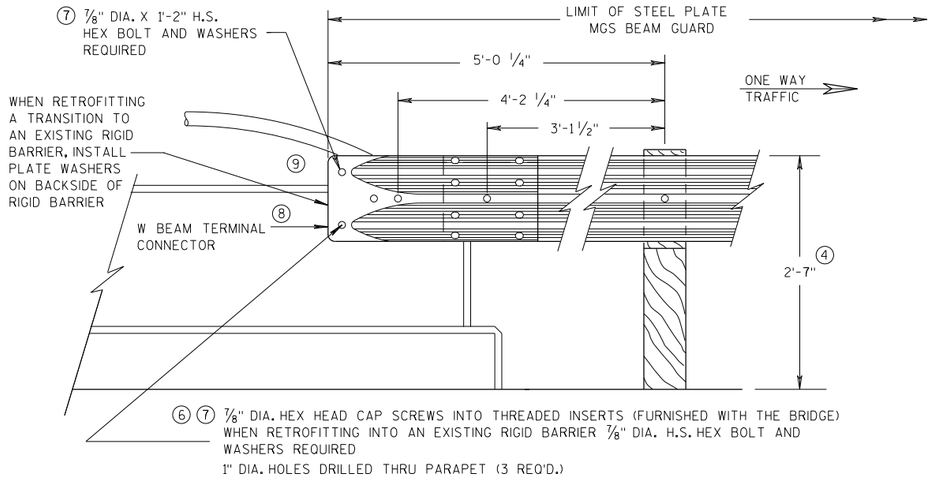
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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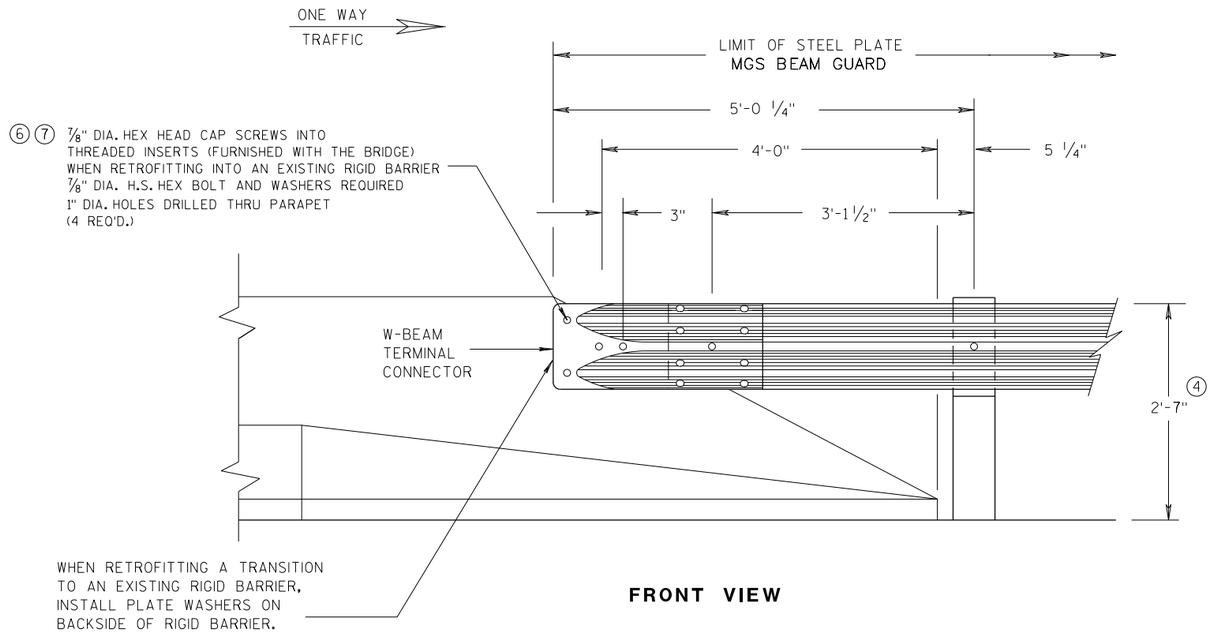


FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

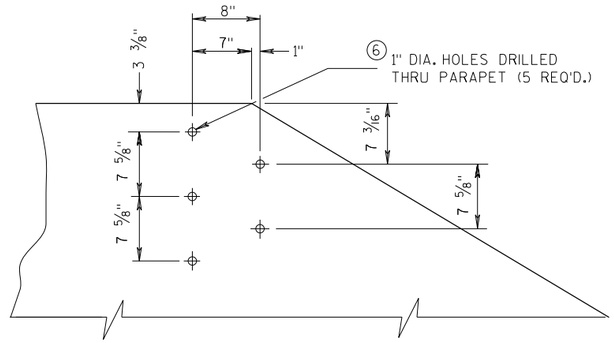
GENERAL NOTES

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

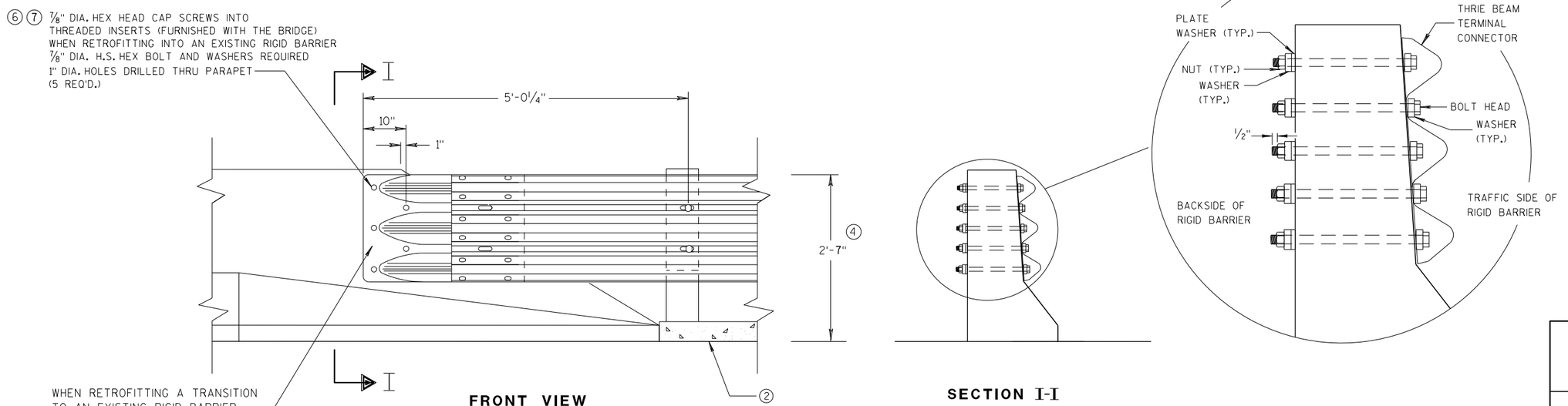
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW

SECTION I-I

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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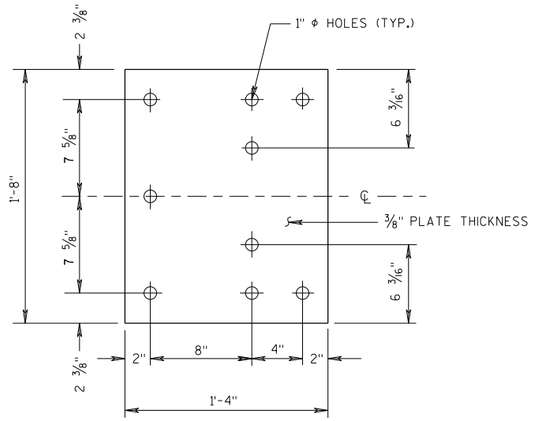
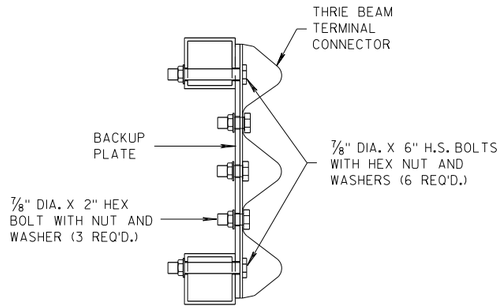
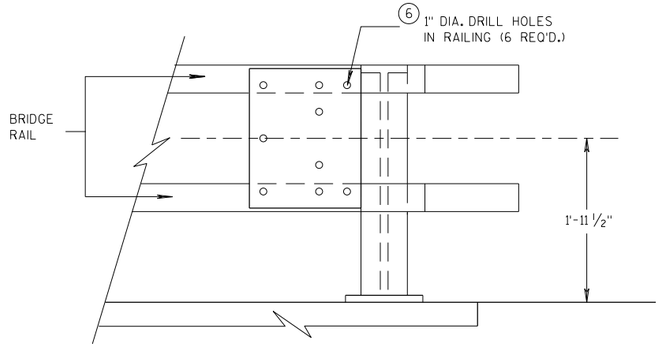


BACK-UP PLATE DETAIL



SECTION J-J

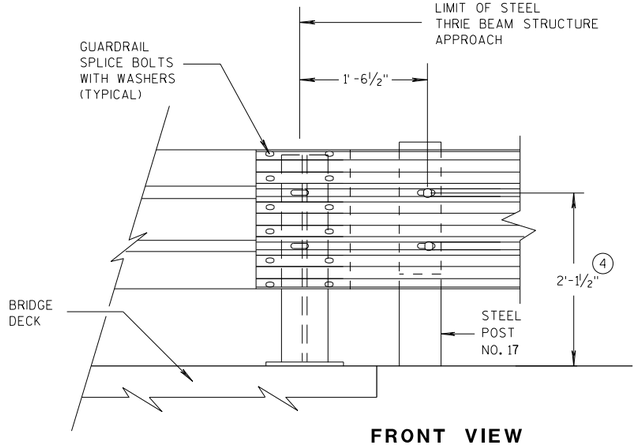


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

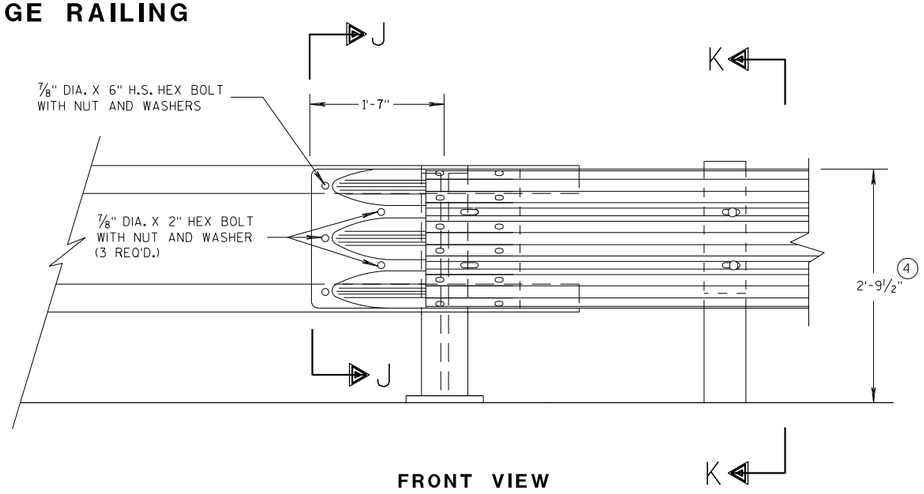
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(6) DRILLING HOLES THROUGH THE PAPRPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

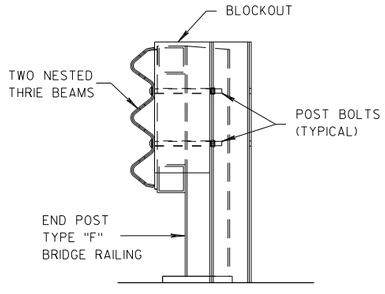


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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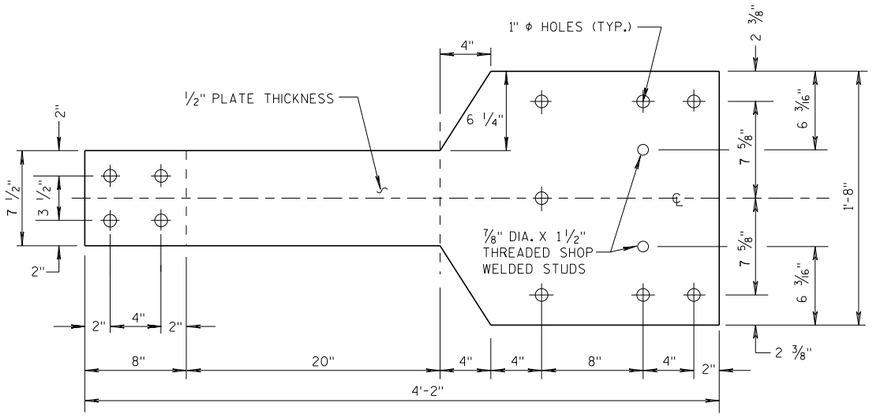
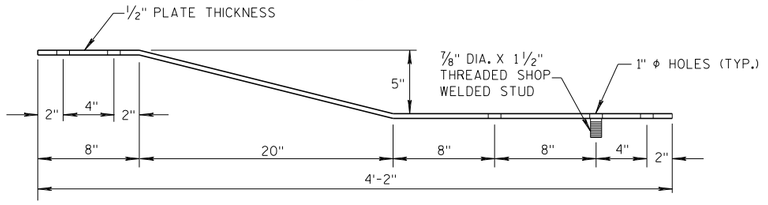
GENERAL NOTES

(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

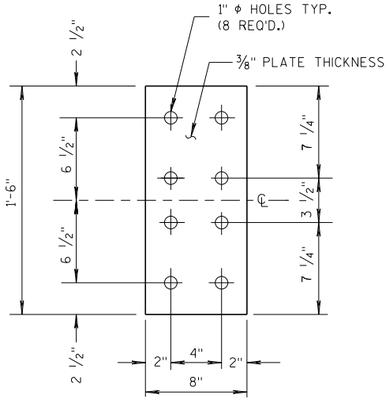


FRONT VIEW



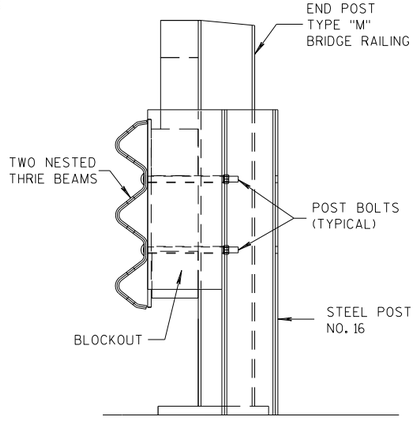
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

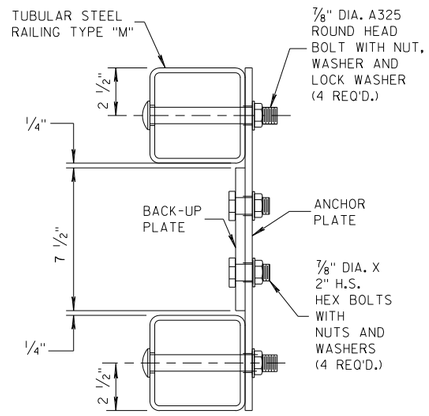


FRONT VIEW

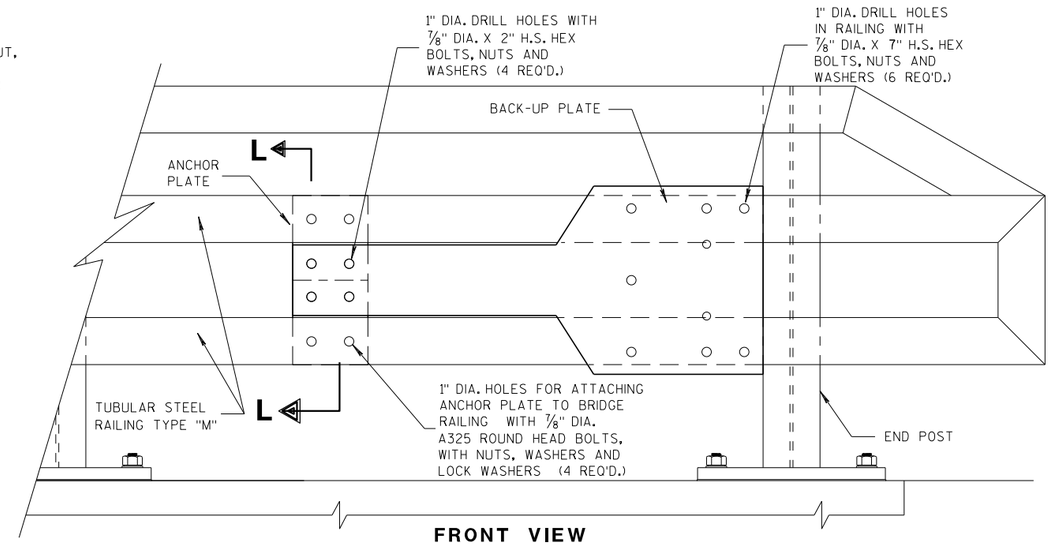
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

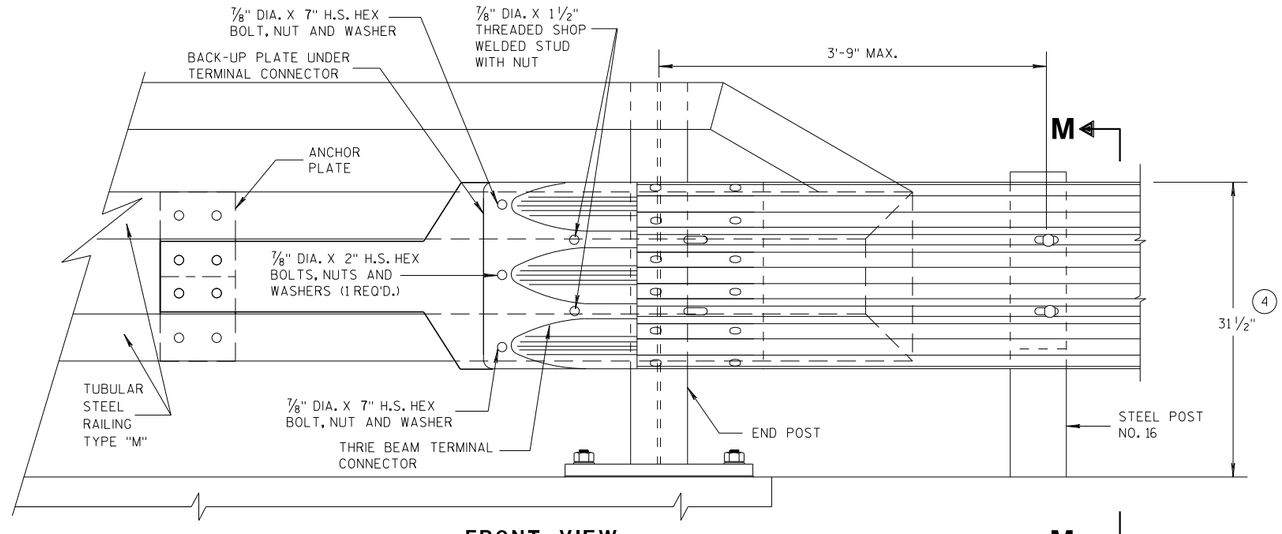


SECTION L-L

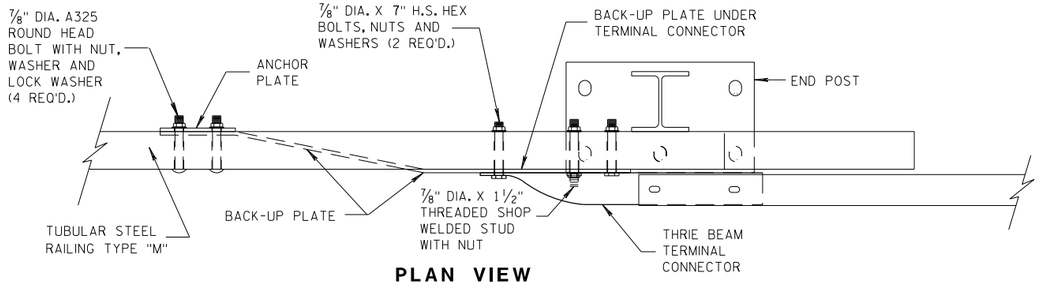


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

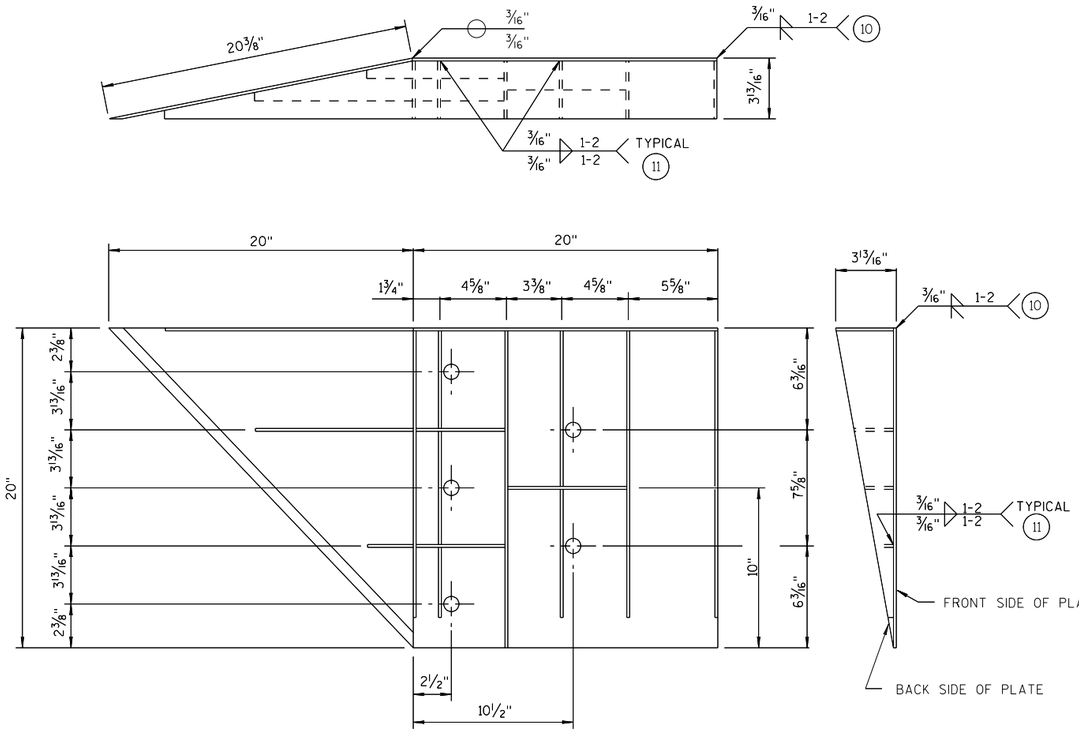
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

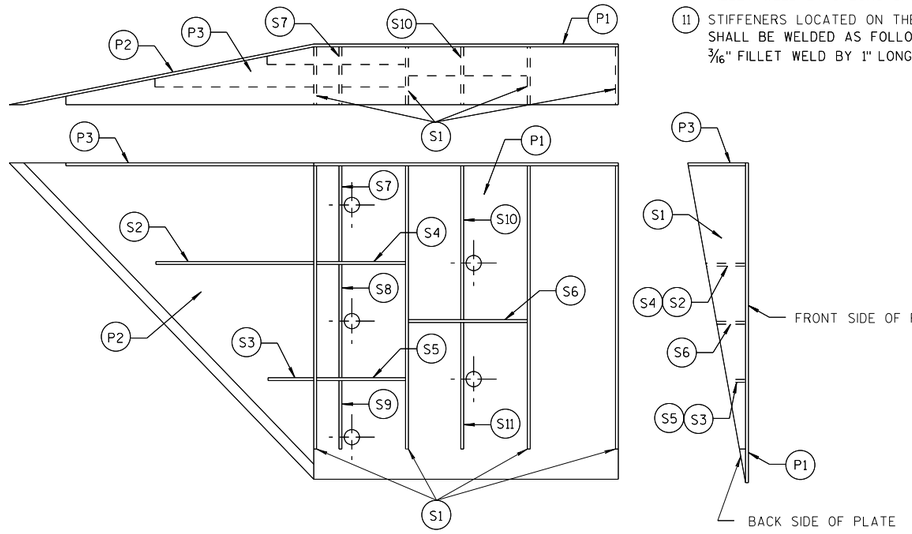


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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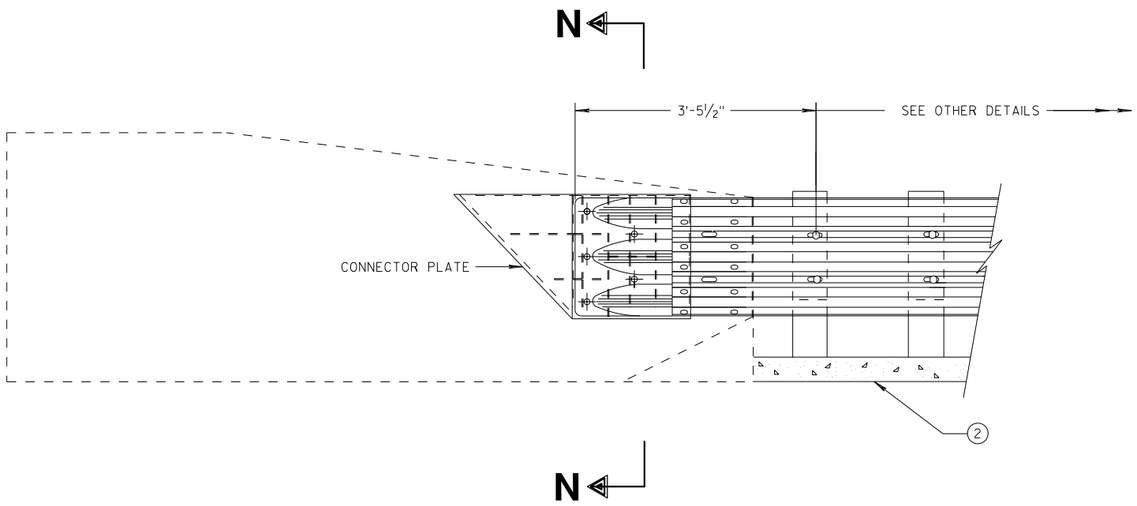
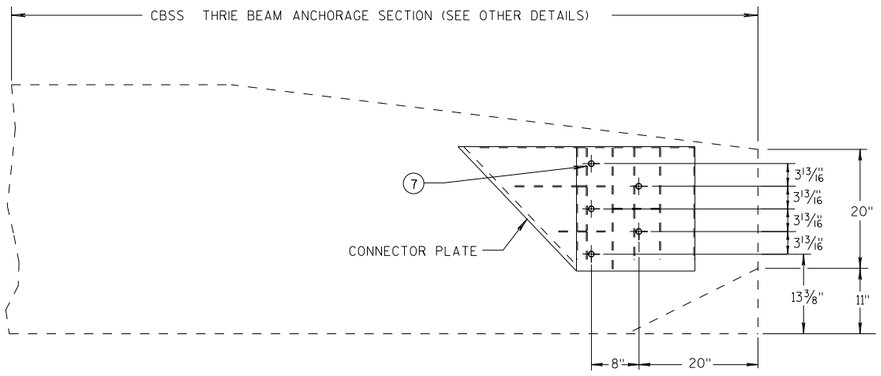


THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



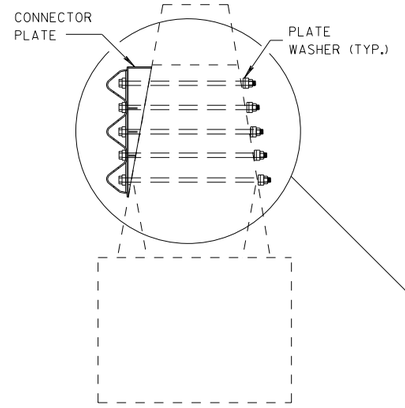
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

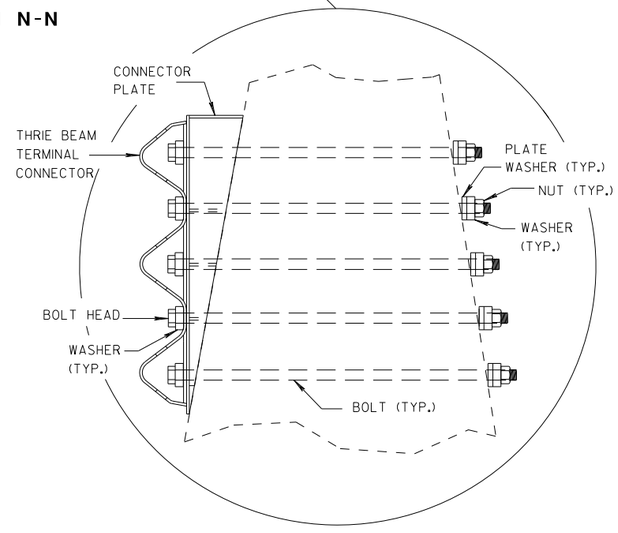
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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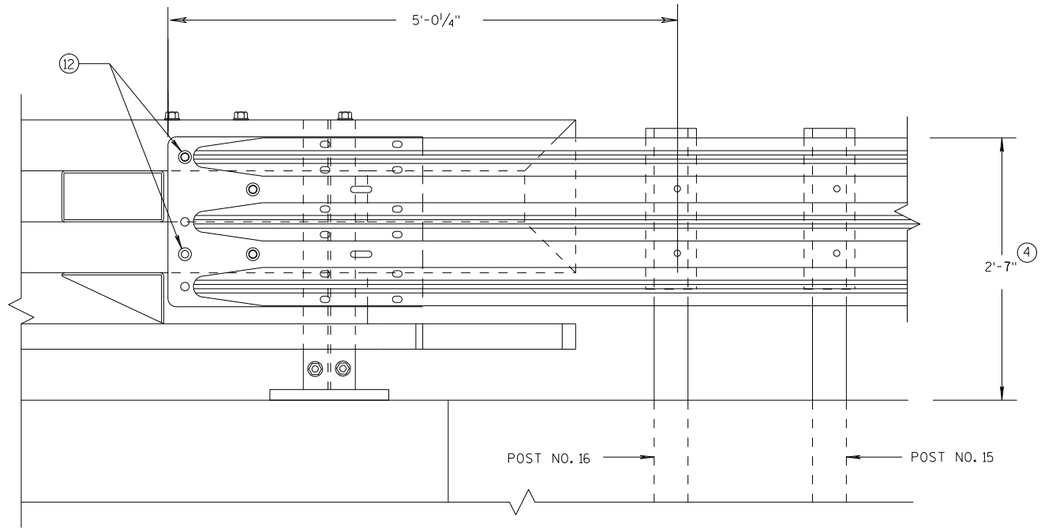
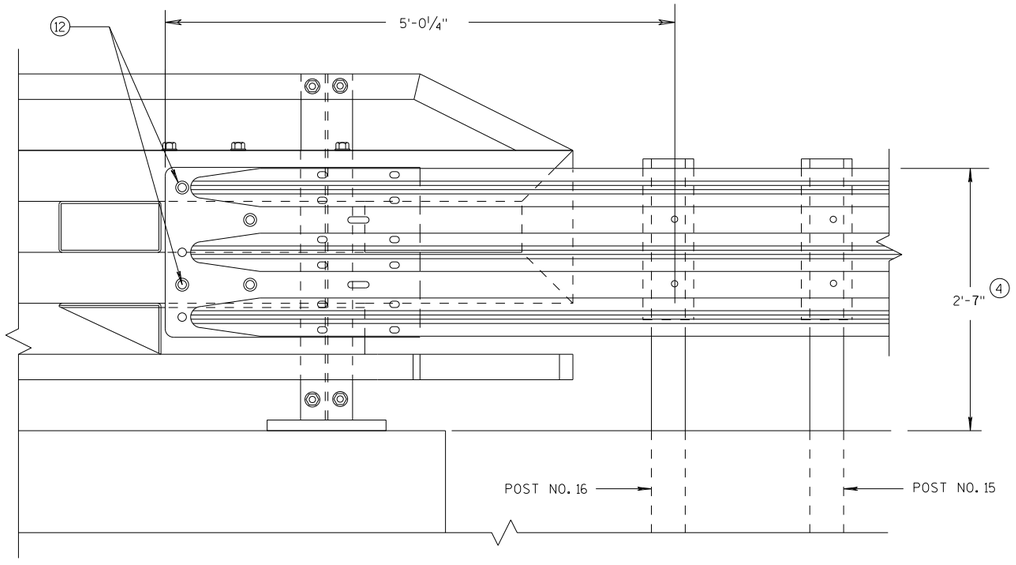


ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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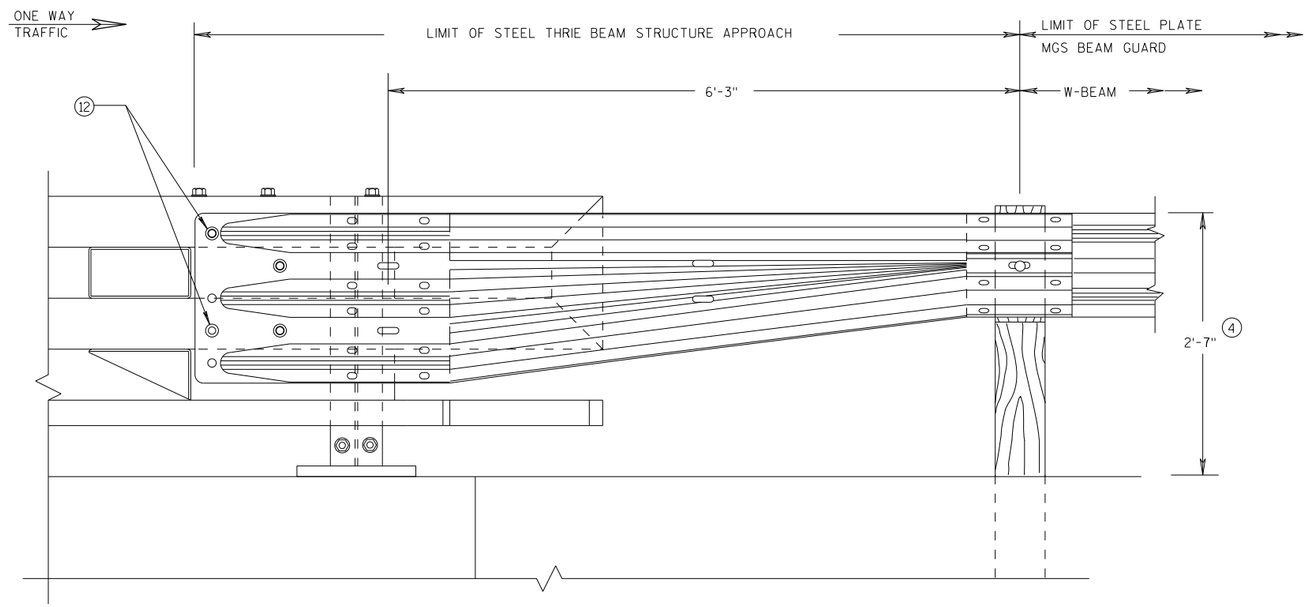


FRONT VIEW

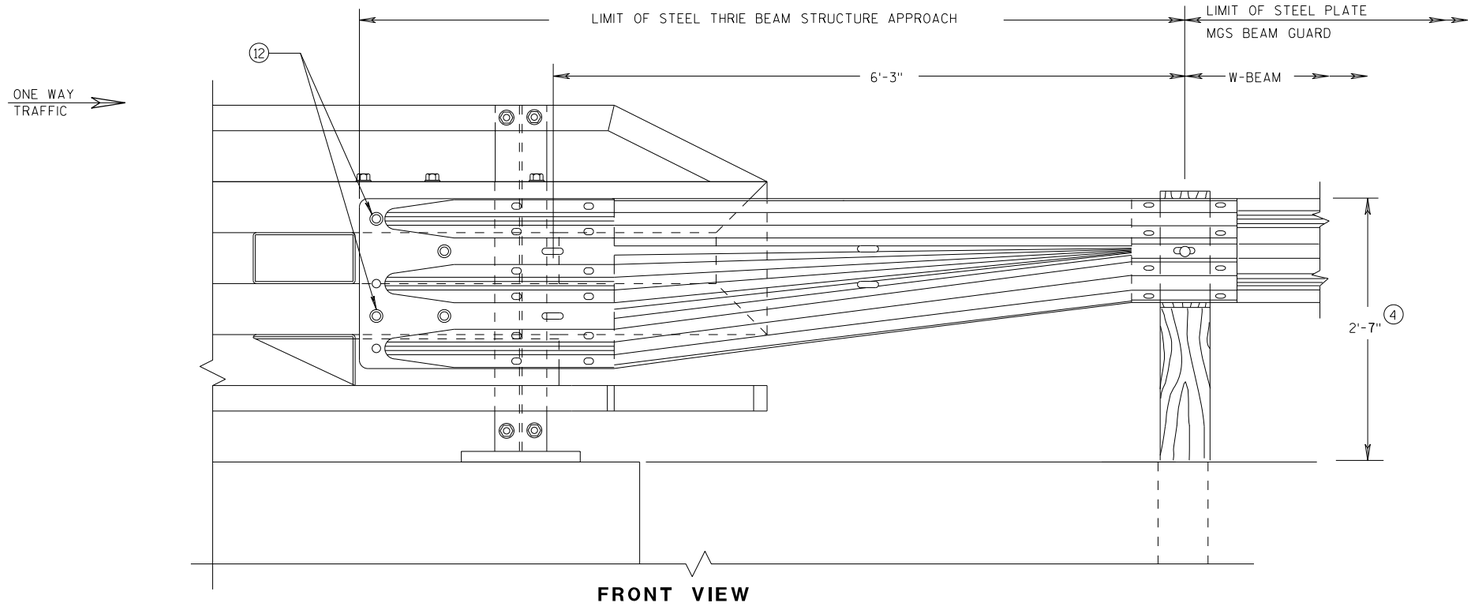
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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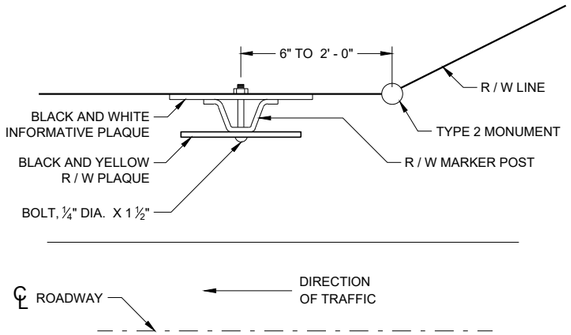
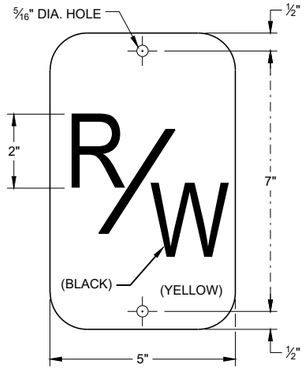


PLAN VIEW
STEEL MARKER POST



R / W PLAQUE

THE RIGHT-OF-WAY PLAQUE AND INFORMATIVE PLAQUE WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

INFORMATIVE PLAQUE

GENERAL NOTES

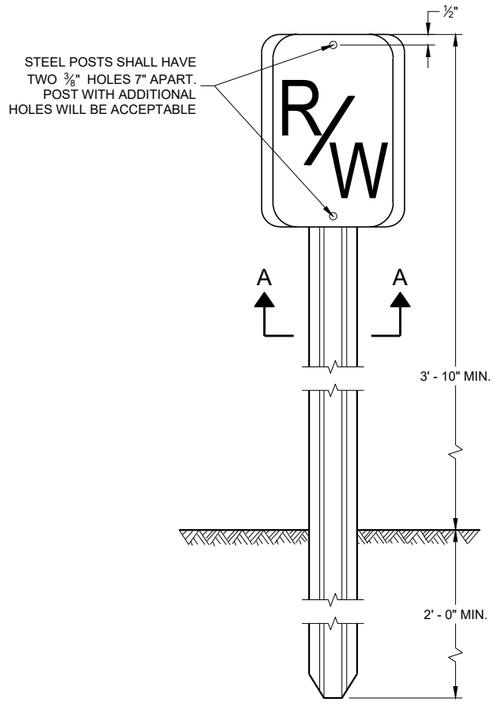
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

A STEEL MARKER POST FOR RIGHT -OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

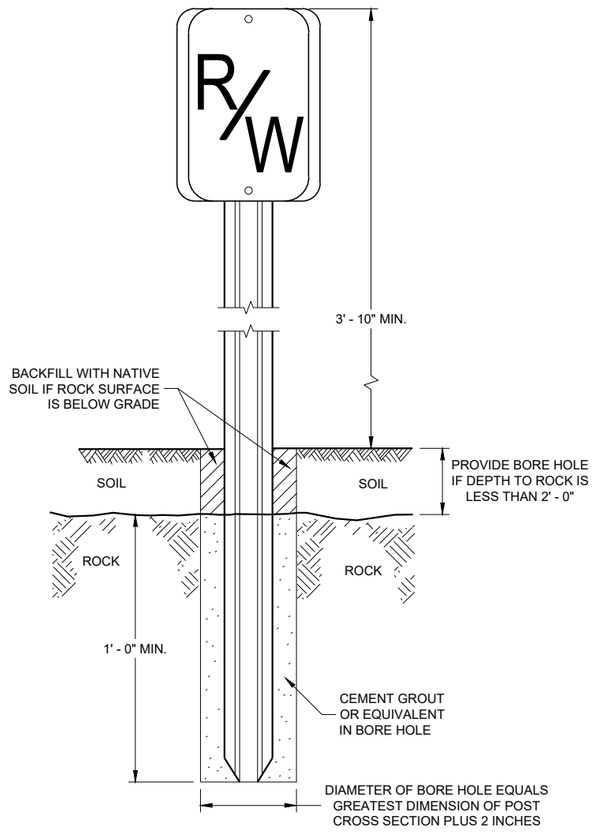
THE "R/W" PLAQUE SHALL FACE THE ROADWAY AND THE INFROMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. "R/W" AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

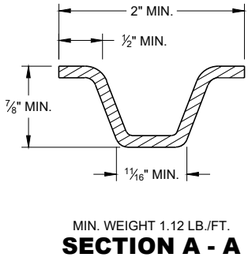
(1) IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3' - 10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR. FILL THE BORE HOLE WITH CEMENT GROUT OR EQUIVALENT, DEPENDING ON THE STABILITY OF THE ROCK.



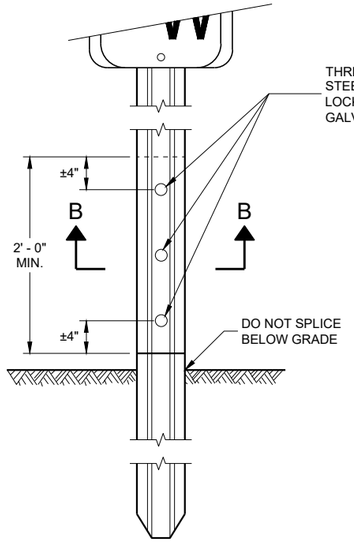
FRONT VIEW
STEEL MARKER POST



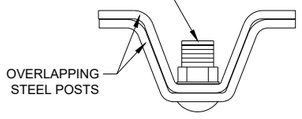
FRONT VIEW
ROCK INSTALLATION (1)



MIN. WEIGHT 1.12 LB./FT.
SECTION A - A



FRONT VIEW
SPLICE DETAIL



SECTION B - B

MARKER POST FOR RIGHT - OF - WAY

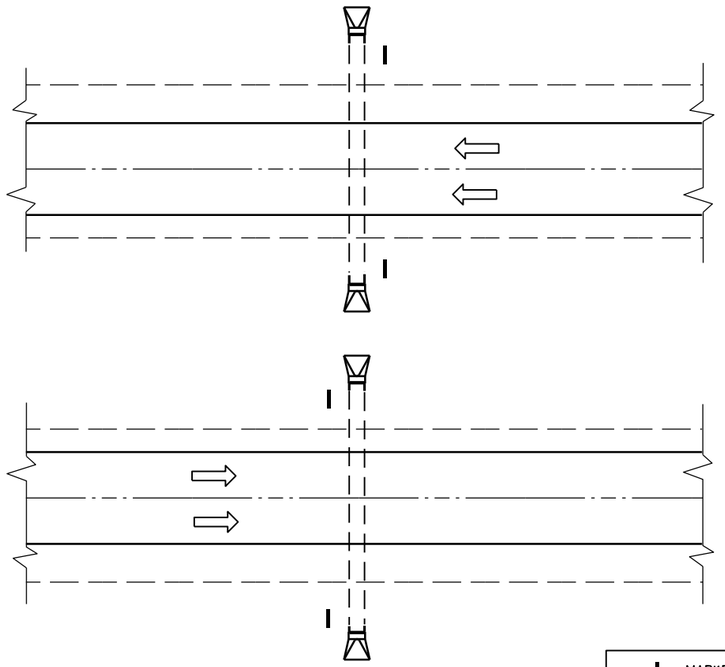
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/18/2016 — DATE
/S/ Ray Kumapayi — CHIEF SURVEYING AND MAPPING ENGINEER

FHWA

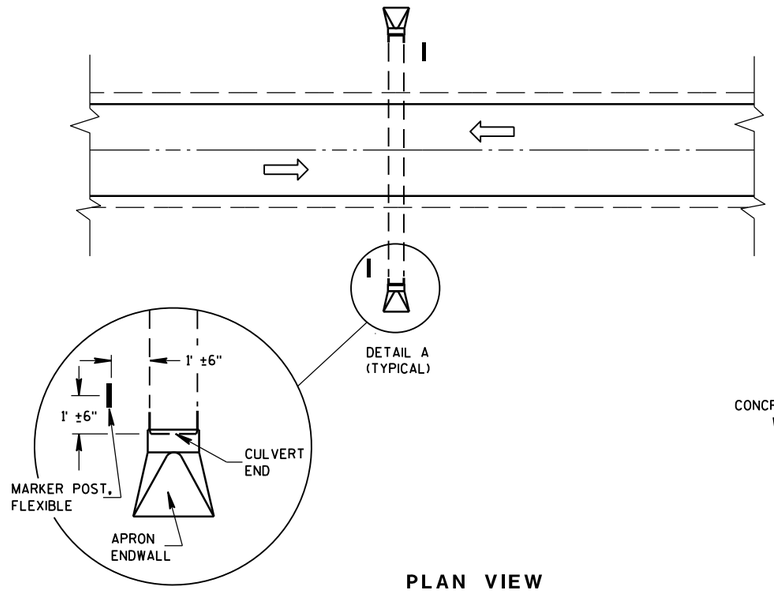
6

SDD15A01 - 13a



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

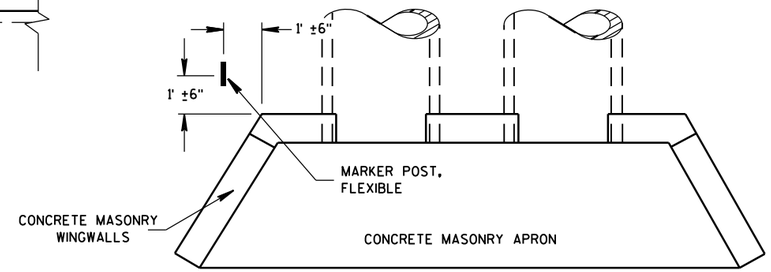
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

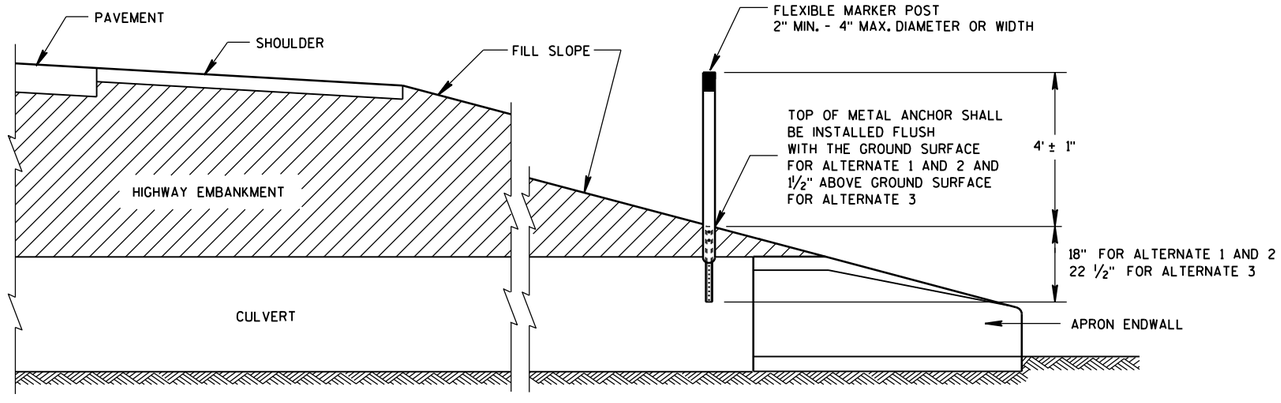
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

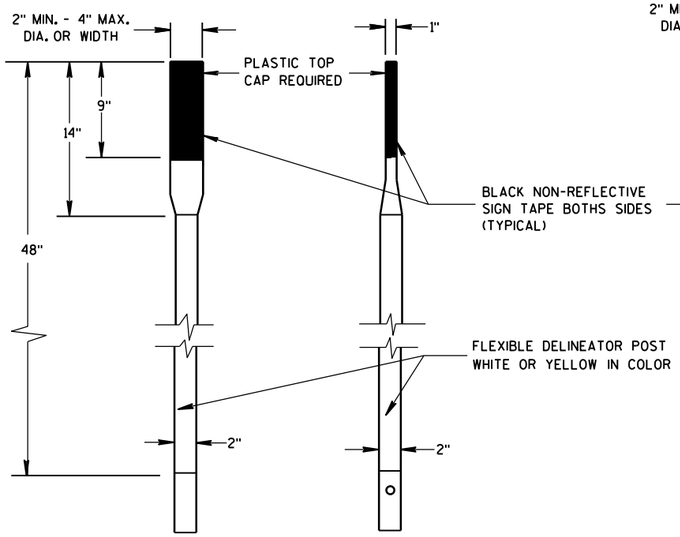
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

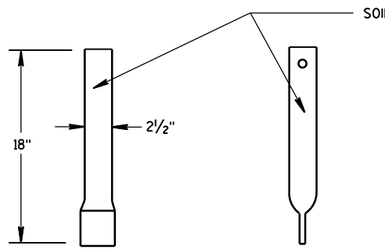
6

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

6

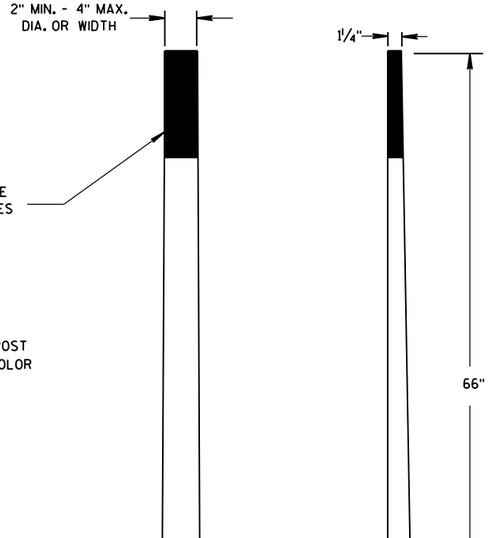
S.D.D. 15 A 3-2a





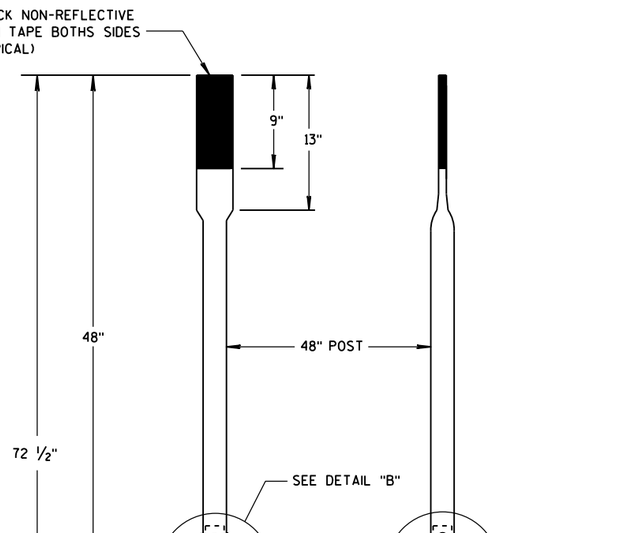
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

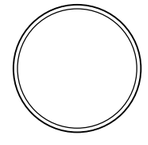
ALTERNATE 2



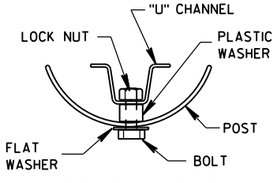
FRONT VIEW SIDE VIEW

ALTERNATE 3

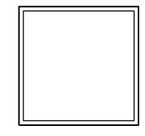
FLEXIBLE MARKER POSTS



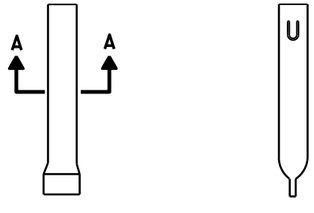
SECTION A-A



SECTION B-B

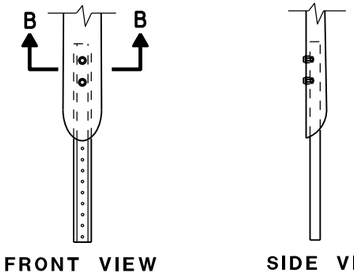


SECTION C-C



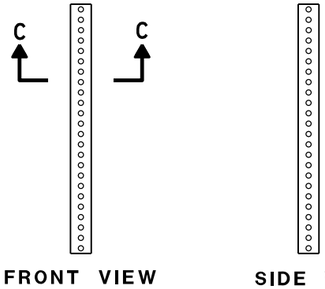
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

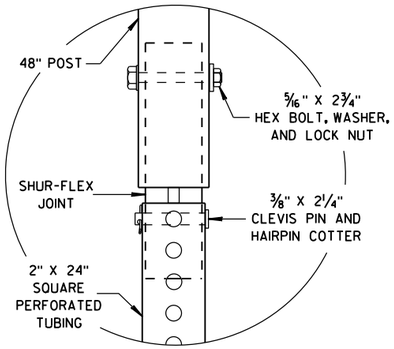
ALTERNATE 2



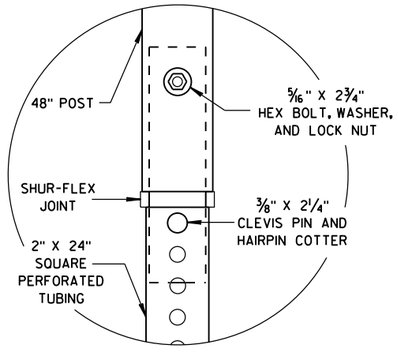
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

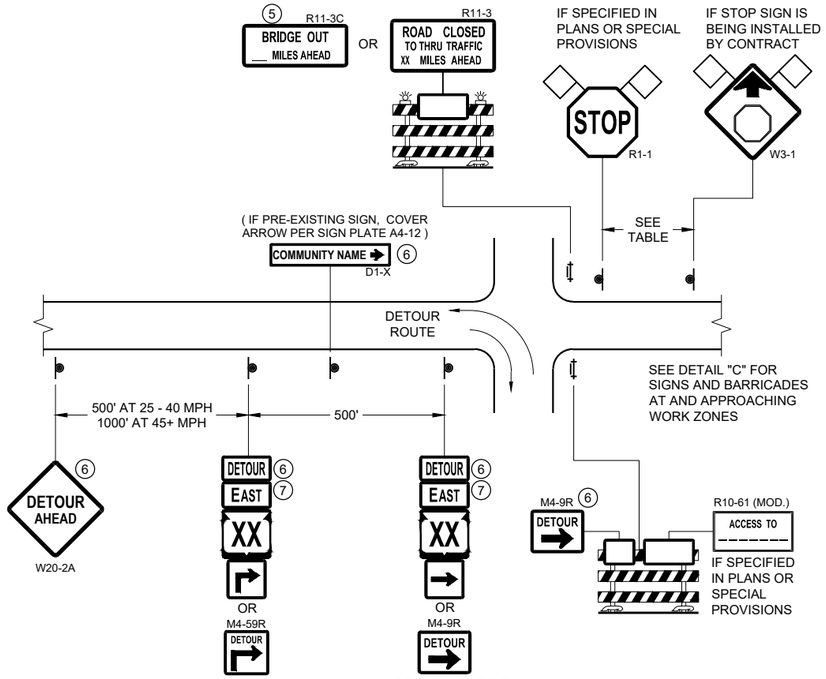
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

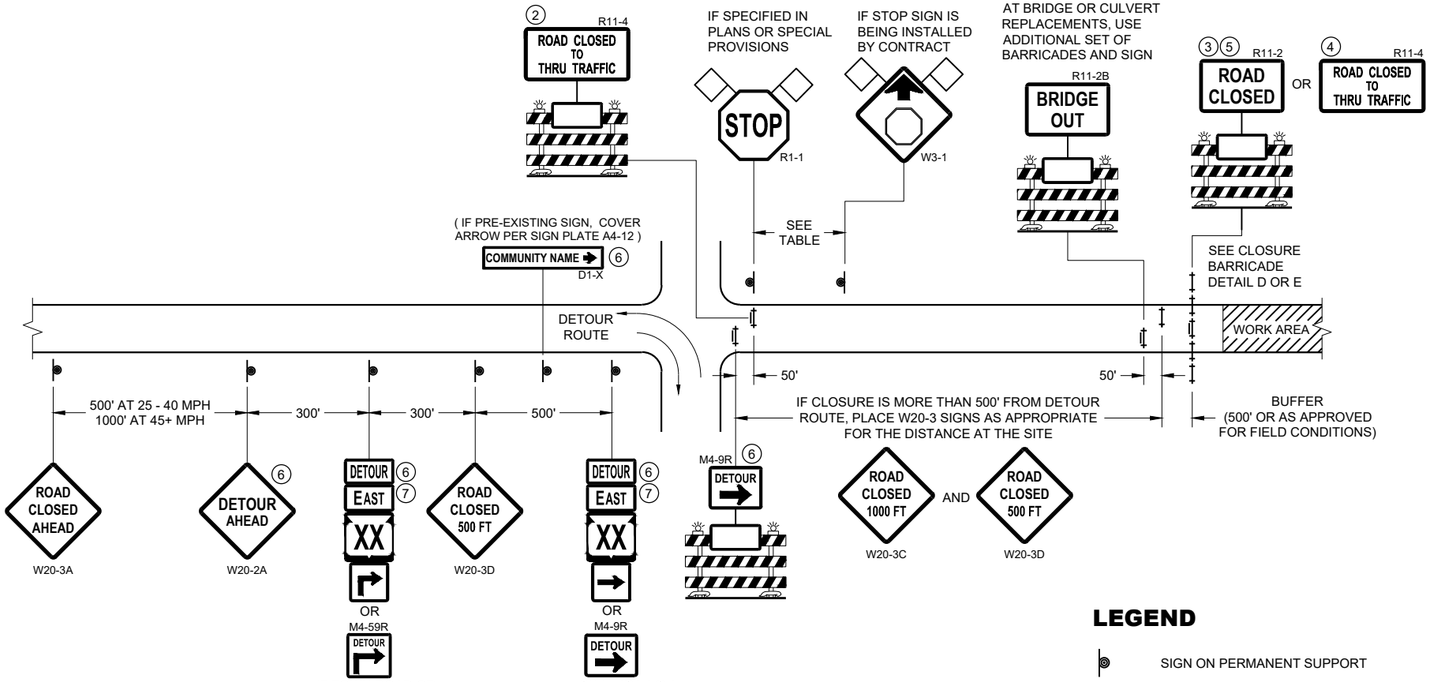
6

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

6

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





DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

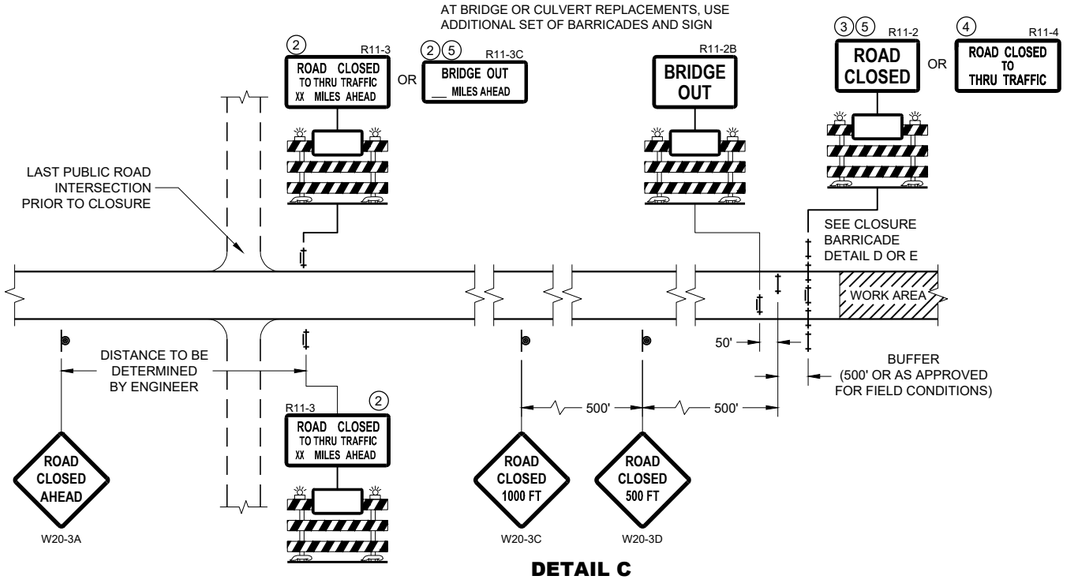
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

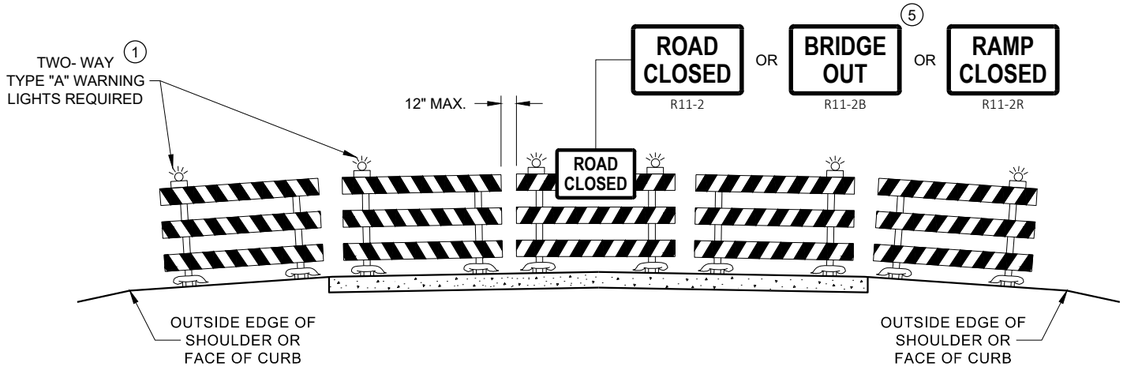
APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

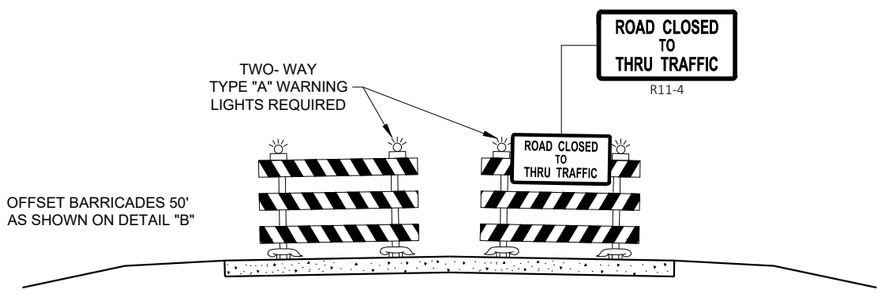
FHWA

6

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

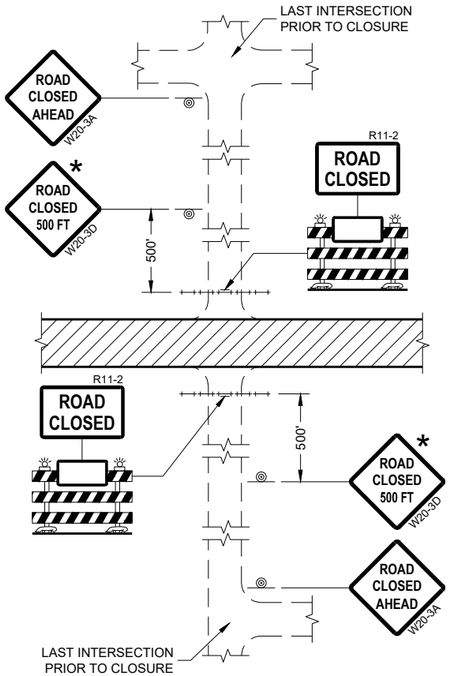
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA

6

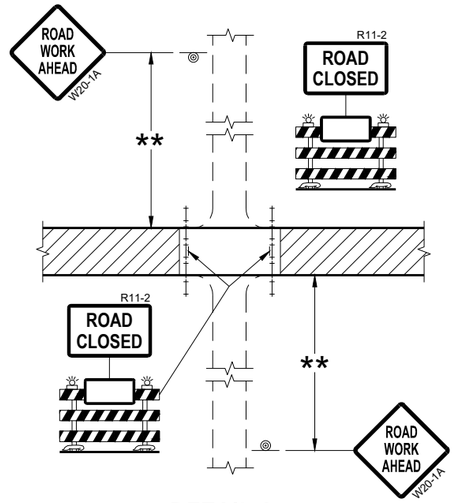
SDD 15C02 - 08b

6

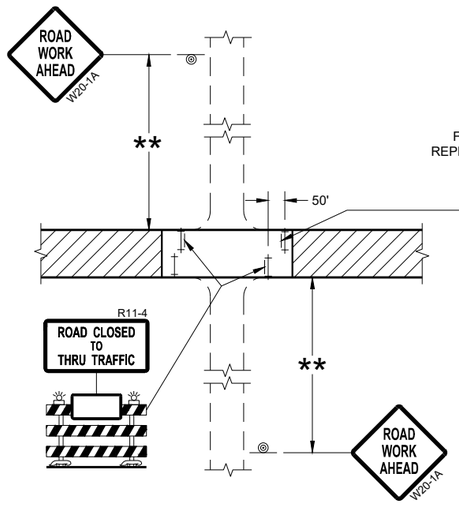
SDD 15C02 - 08b



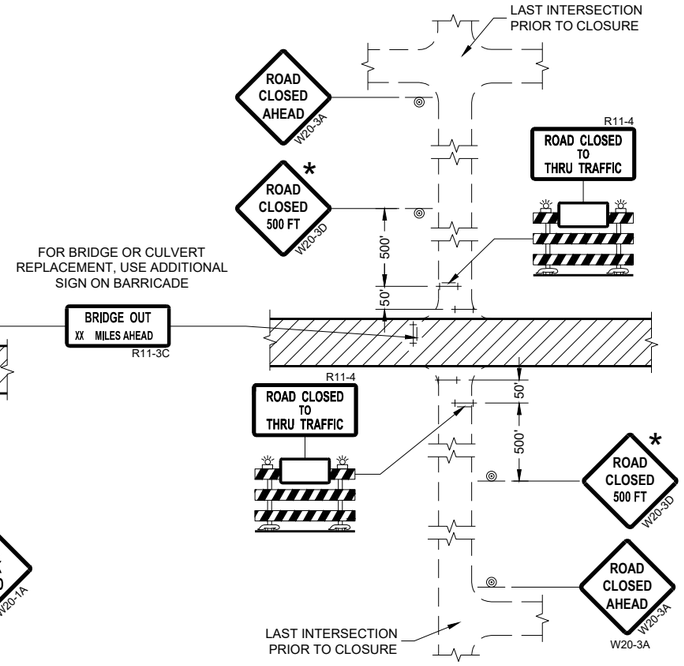
DETAIL 1
(NO ACCESS TO PROJECT)



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



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



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15C03 - 05

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.

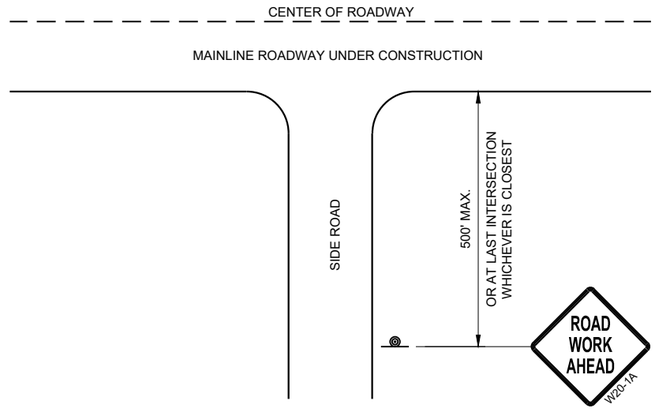
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN 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 REESTABLISHED.

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

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



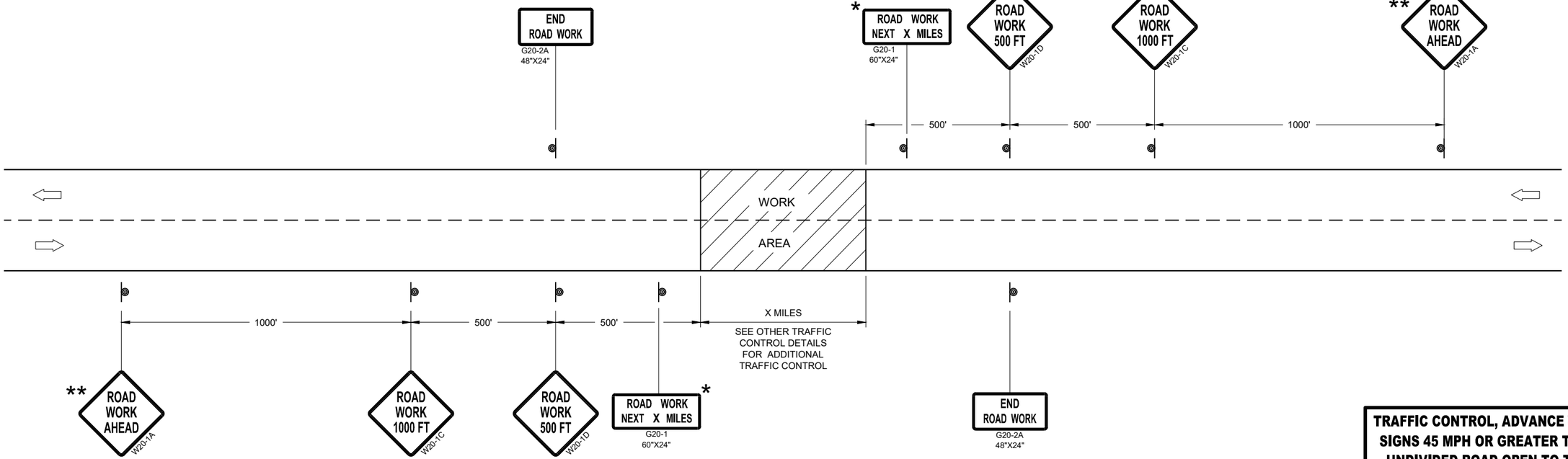
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

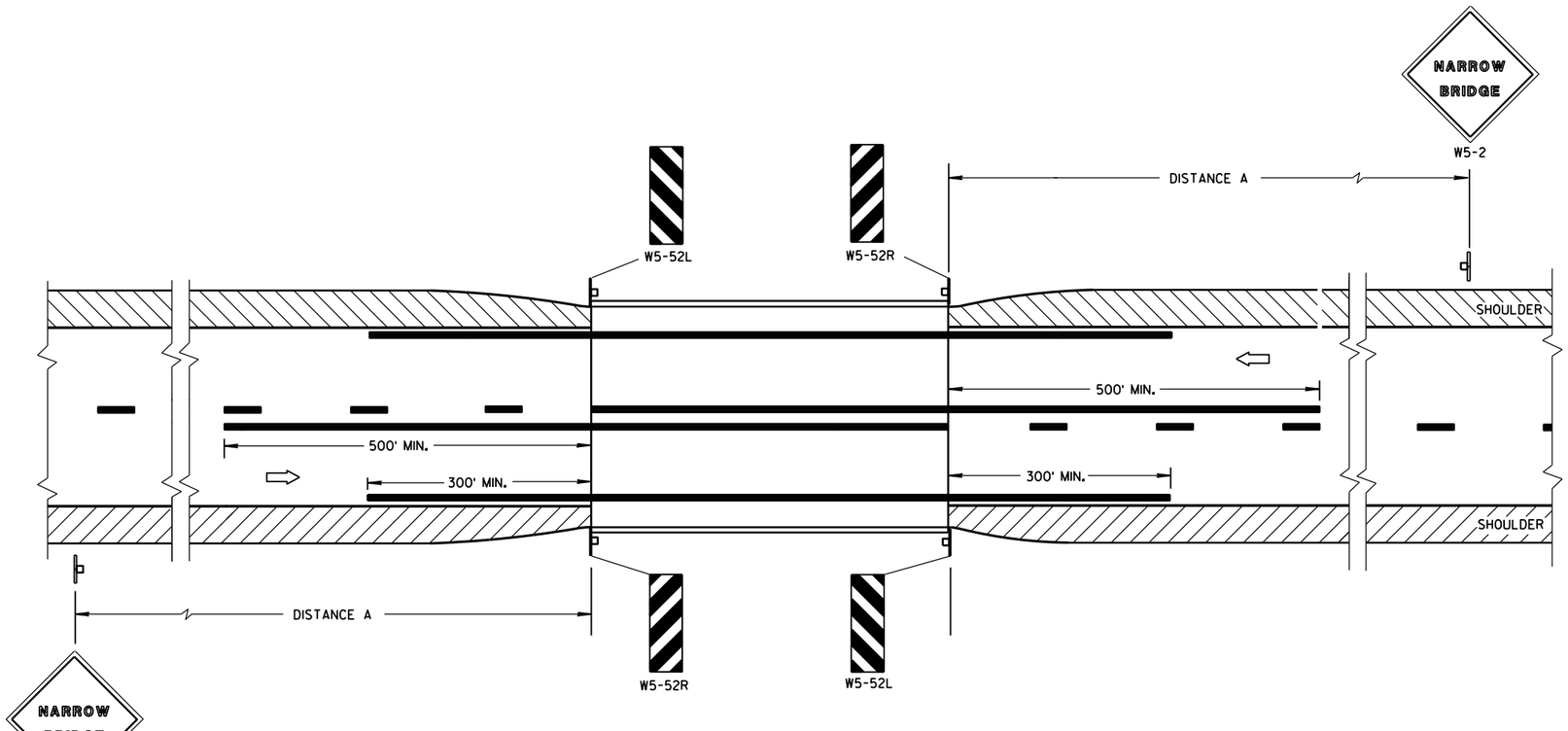
APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C04 - 05



SITUATION 1

WARRANTING CRITERIA:
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'

GENERAL NOTES

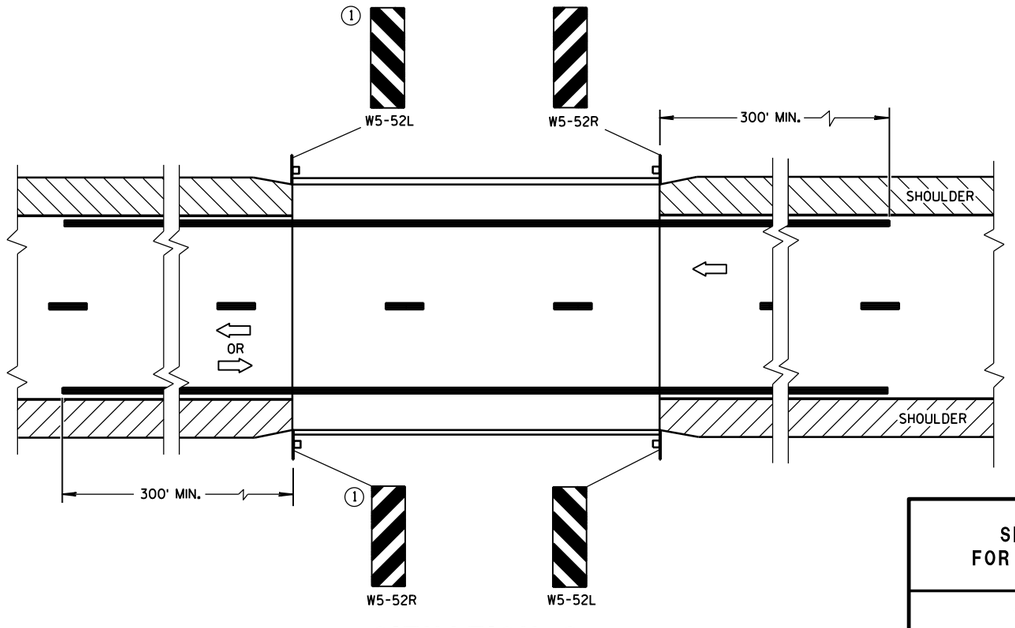
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET.

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

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S.D.D. 15 C 6-9

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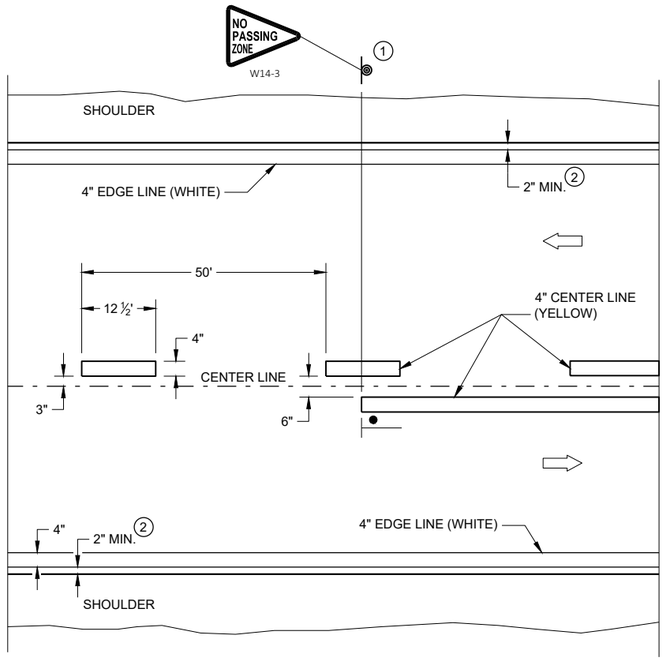
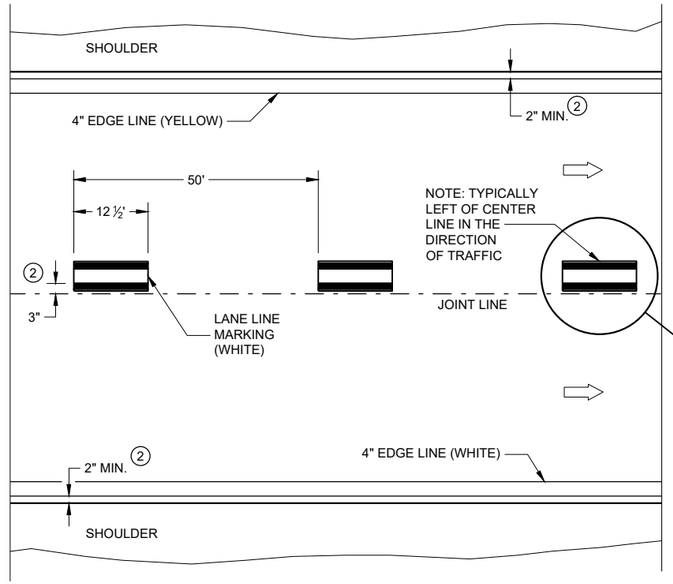
S.D.D. 15 C 6-9

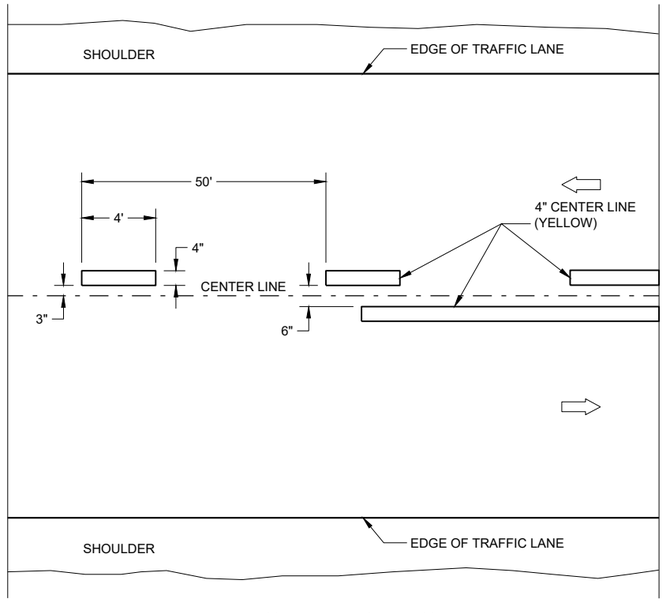


TWO WAY TRAFFIC

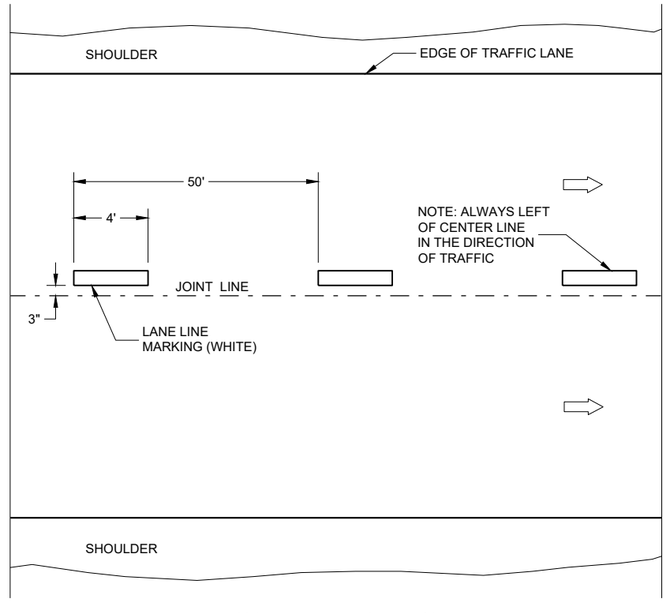


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

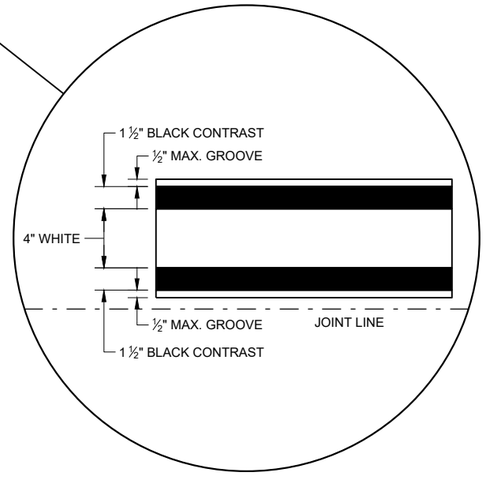
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Matthew Rauch
STATEWIDE SIGNING AND M
ENGINEER

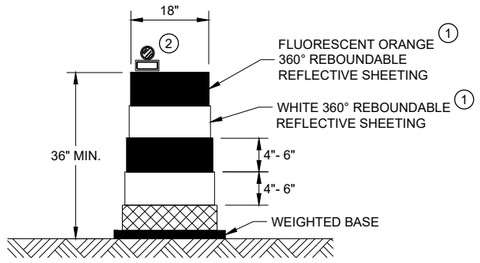
FHWA

SDD 15C08 - 20a

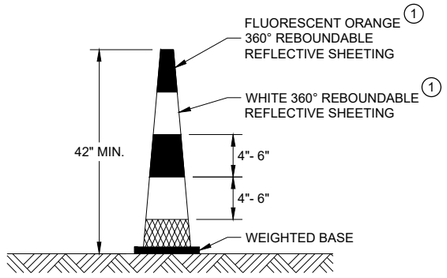
SDD 15C08 - 20a

GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

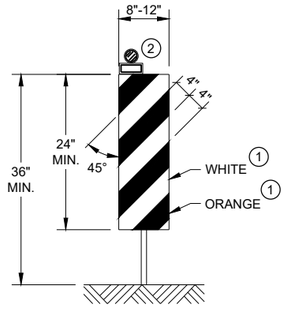


DRUM



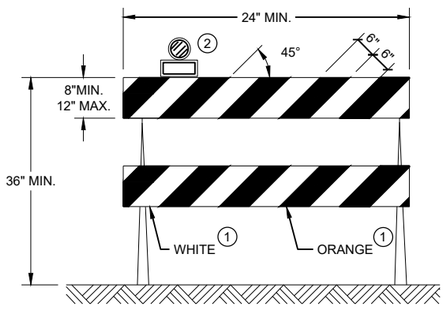
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



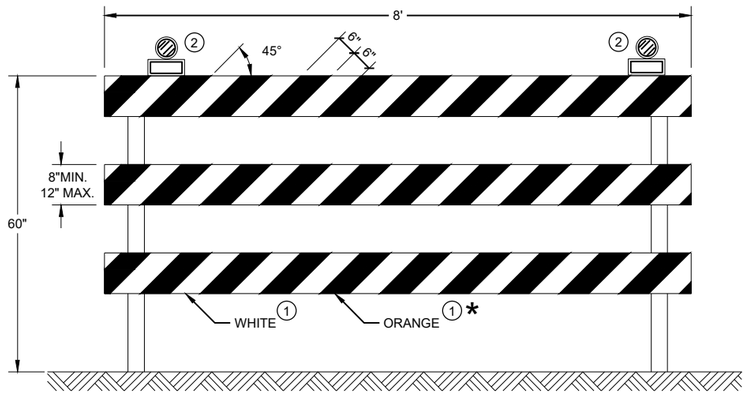
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD15C11 - 09b

6

SDD15C11 - 09b

LEGEND

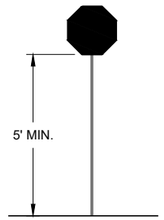
SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

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



STOP/SLOW PADDLE ON SUPPORT STAFF

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.

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

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

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND 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.

FLAGGING

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 REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' 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.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

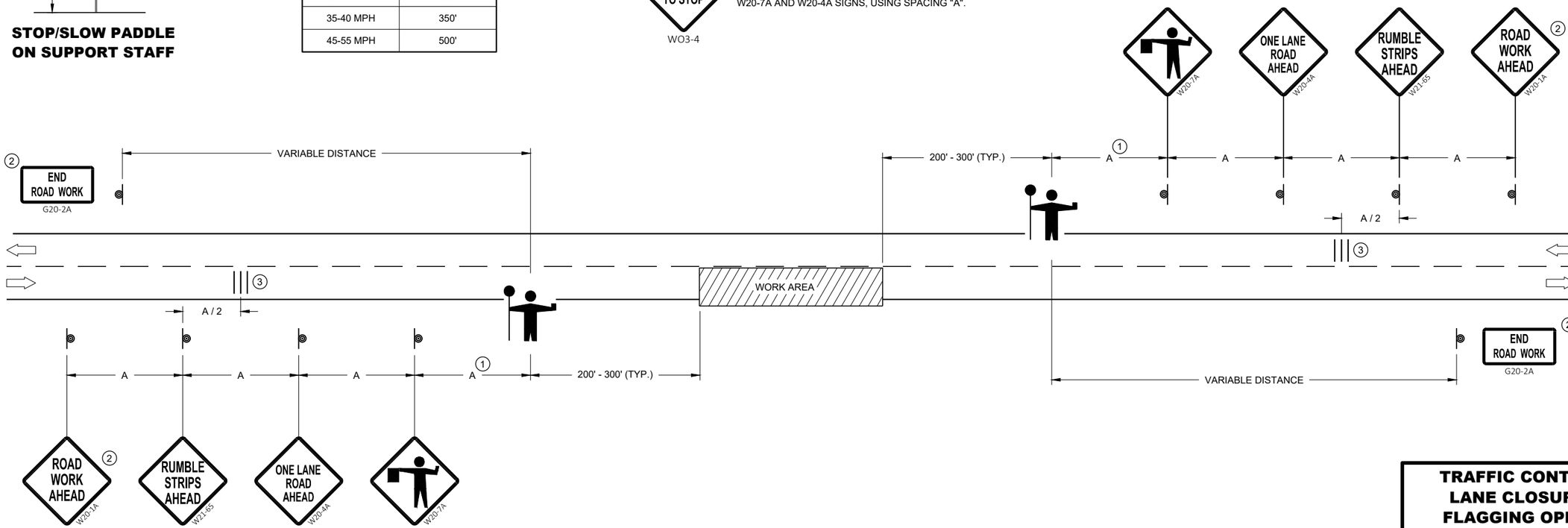
DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C12 - 07

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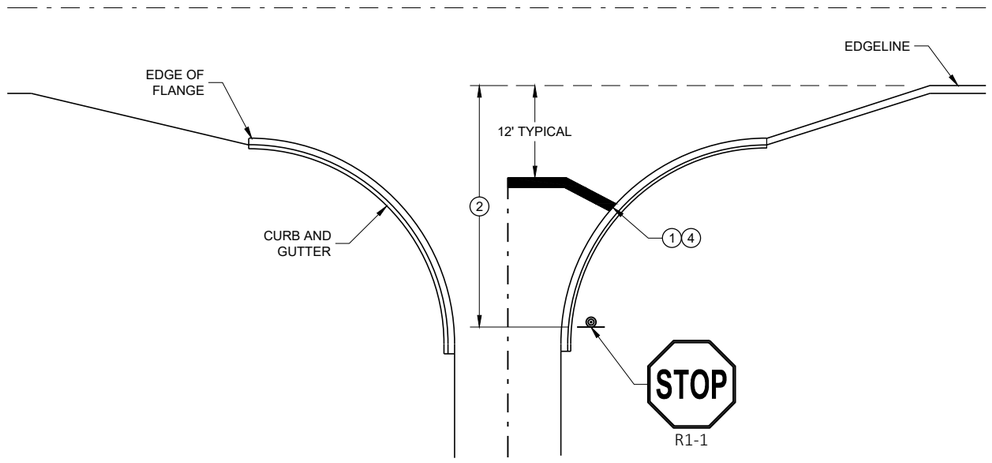
SDD 15C12 - 07

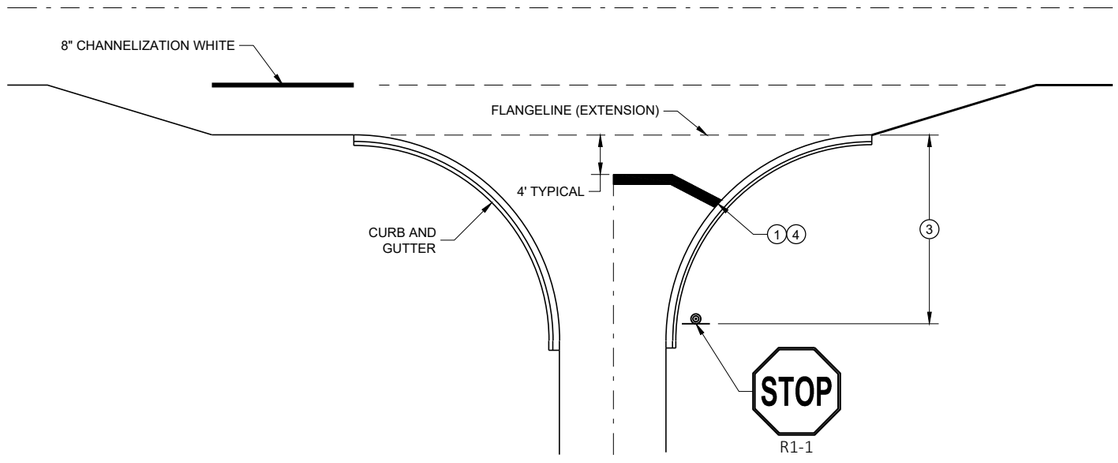
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

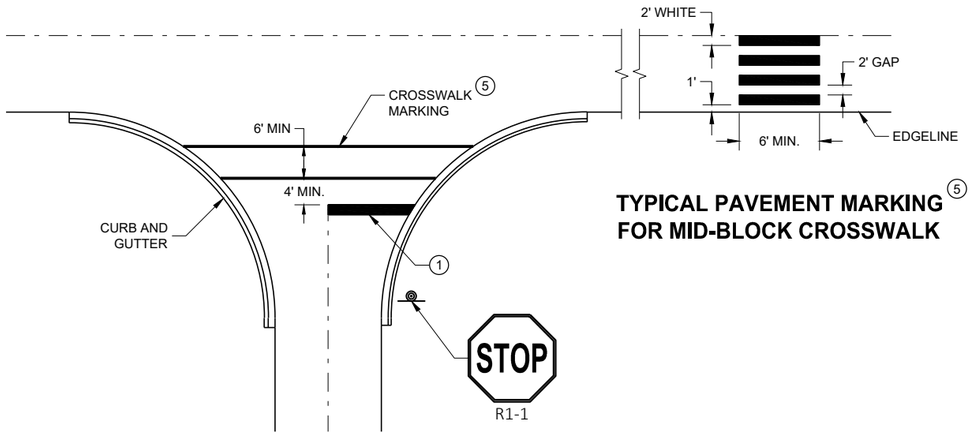
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
4. MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
5. LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

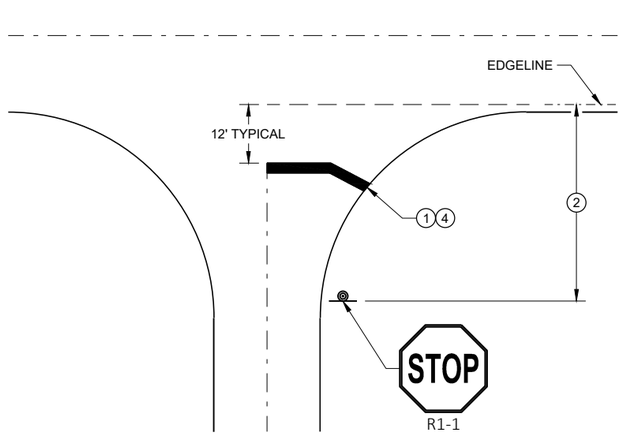


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK (5)

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

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SDD 15C33 - 04

6

SDD 15C33 - 04

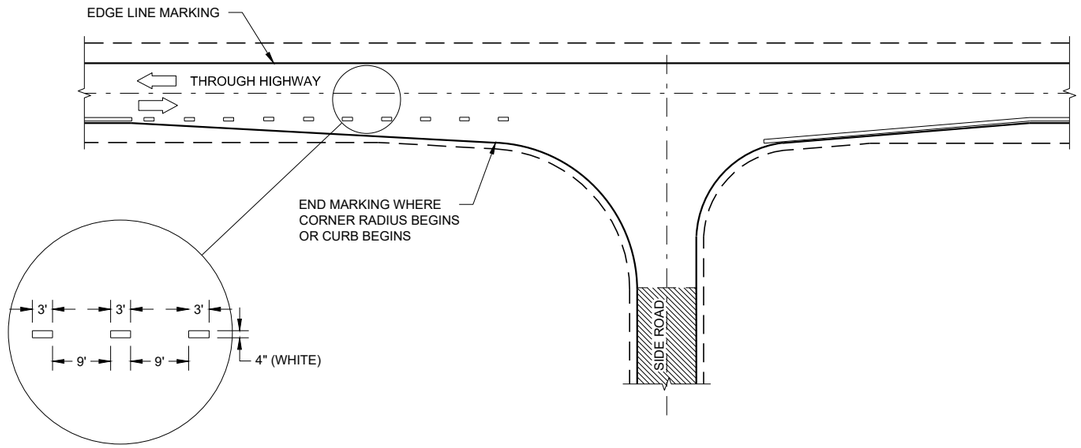
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

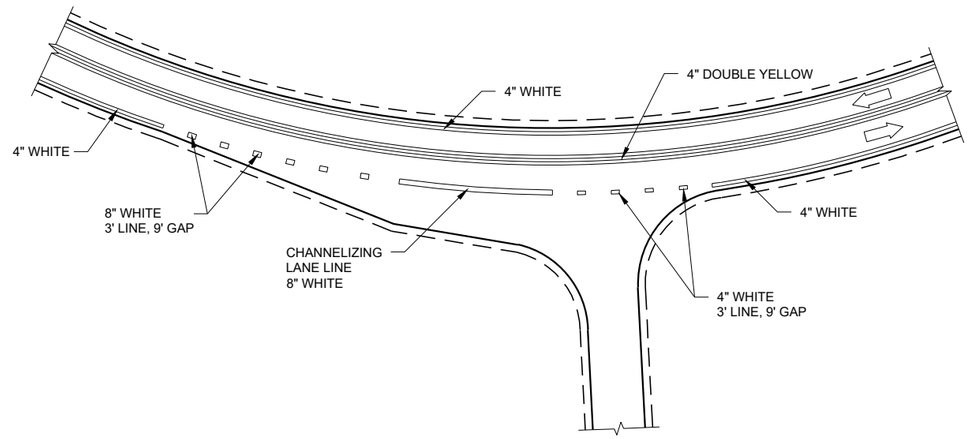
1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

LEGEND

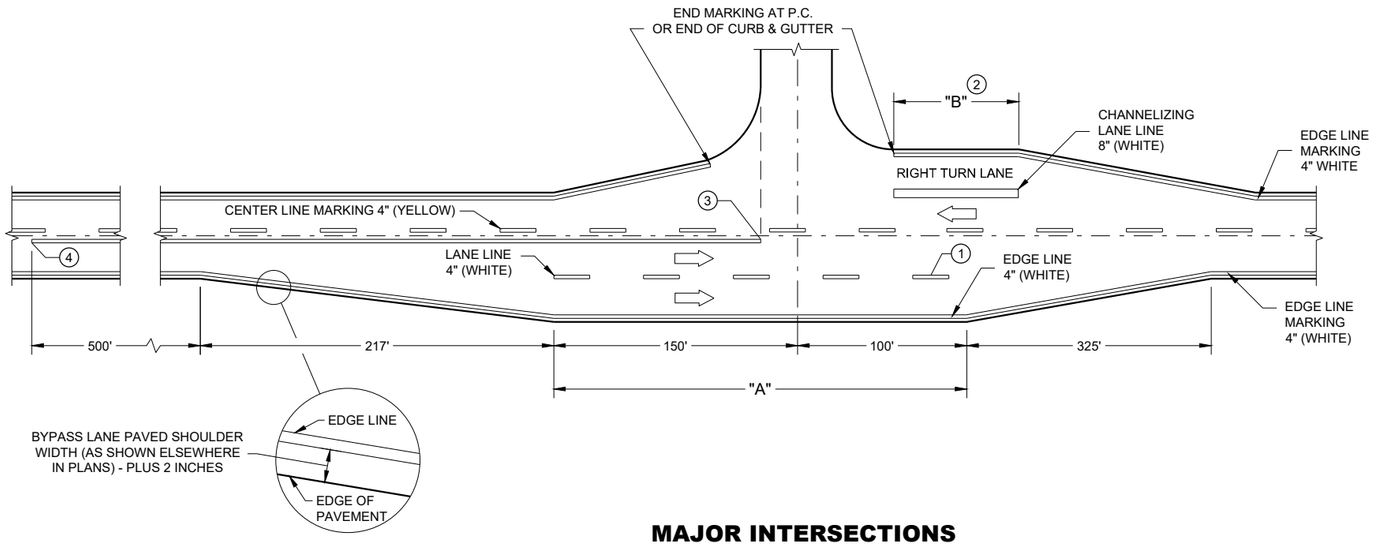
DIRECTION OF TRAVEL



MINOR INTERSECTION



INTERSECTION ON OUTSIDE OF CURVE



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15C35 - 04a

6

SDD 15C35 - 04a

LEGEND

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

WORK ZONE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

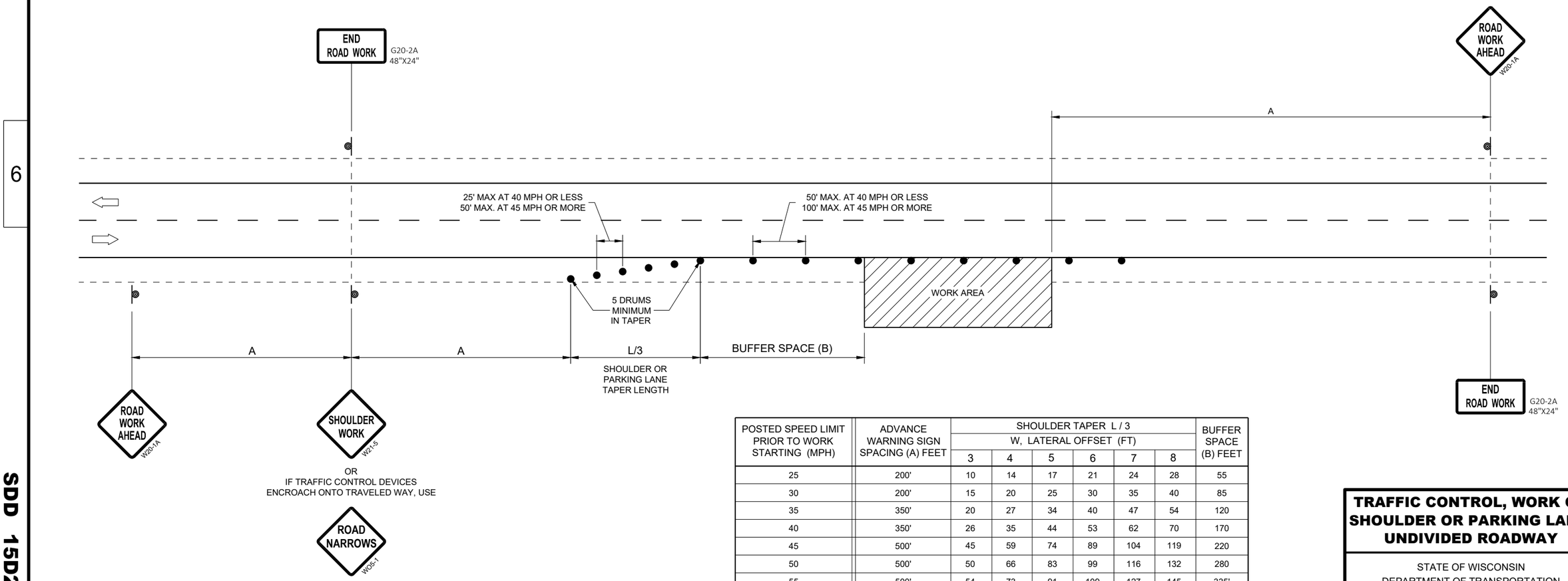
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

W20-1A 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.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

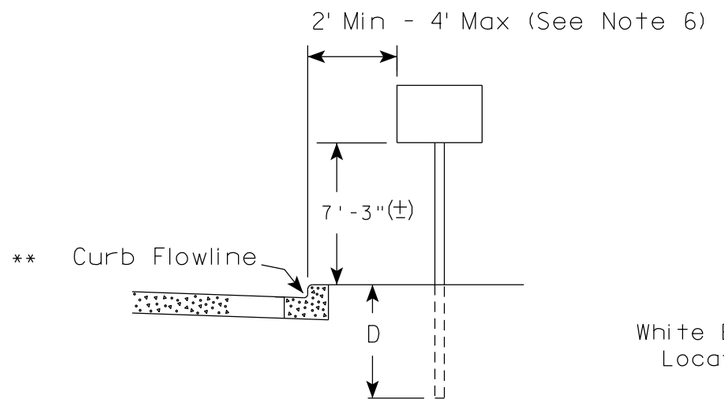
/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

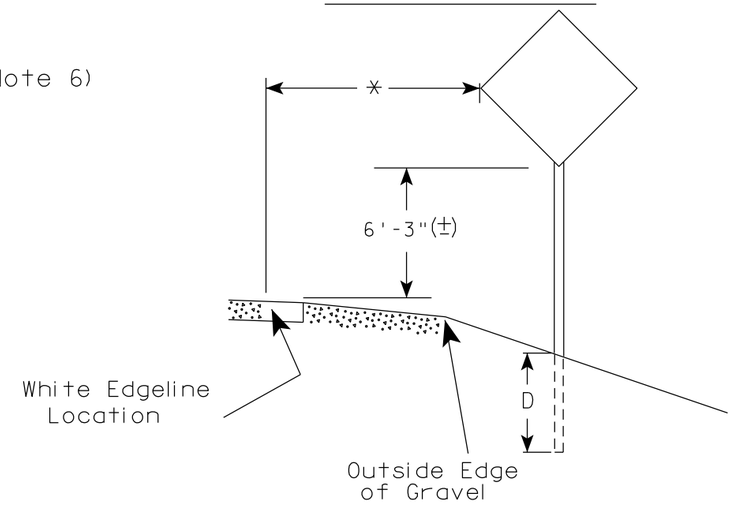
6

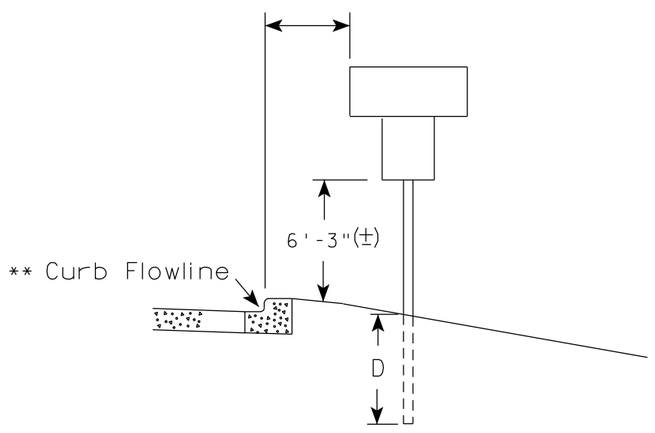
SDD 15D28 - 04

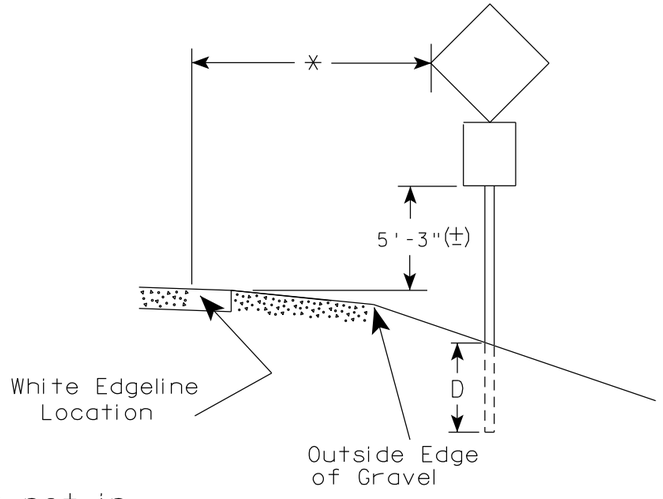
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
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 signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.

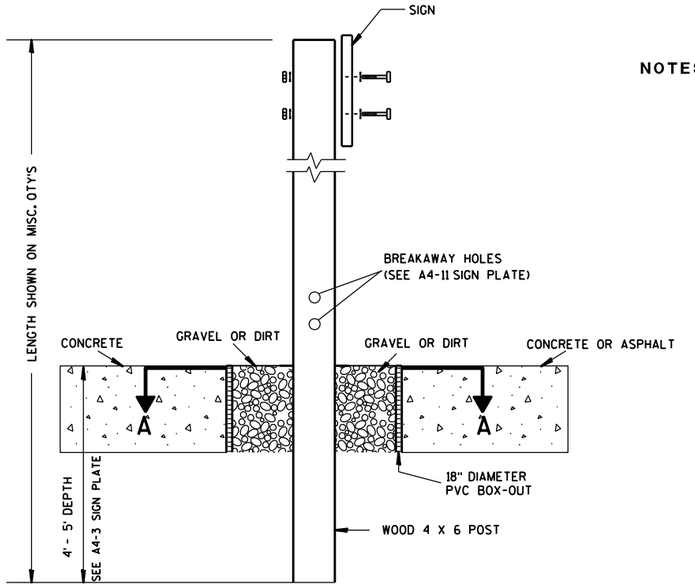
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

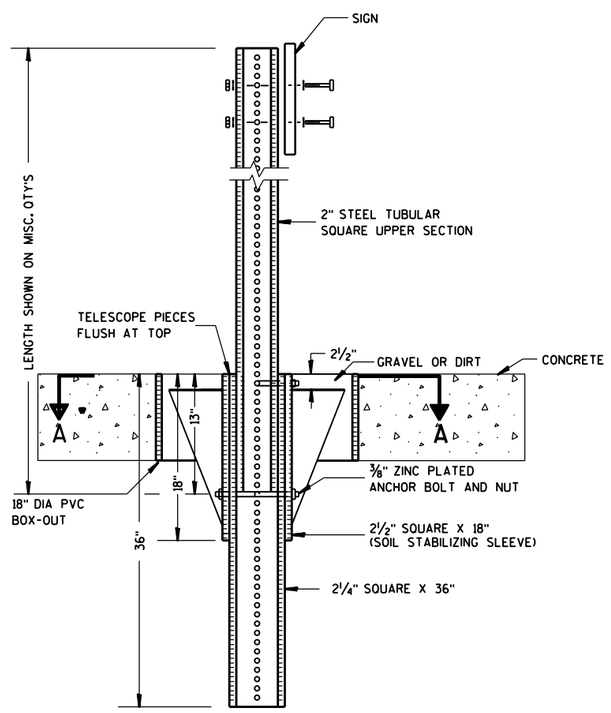
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 103	E



ELEVATION VIEW

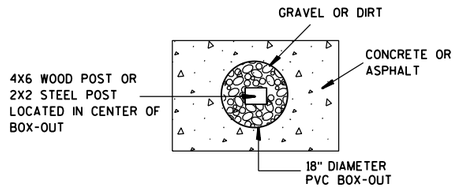
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

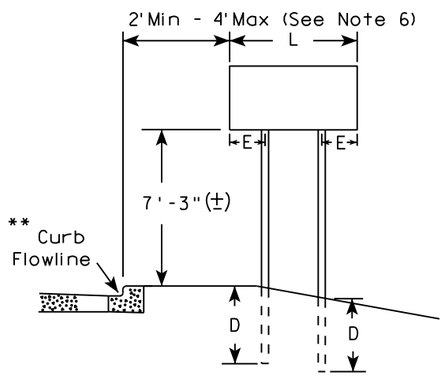
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

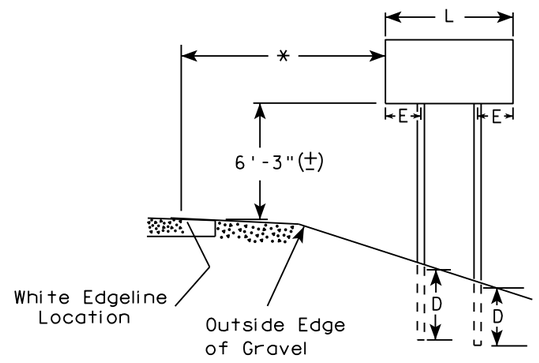
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

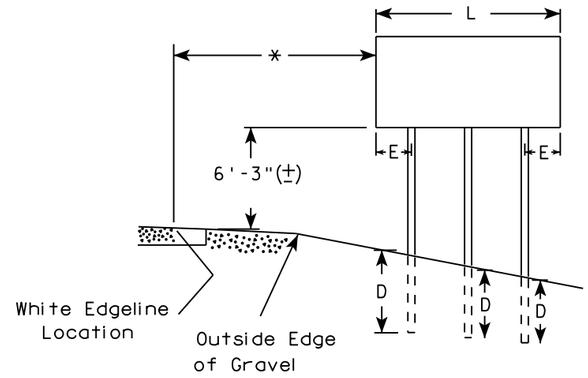
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

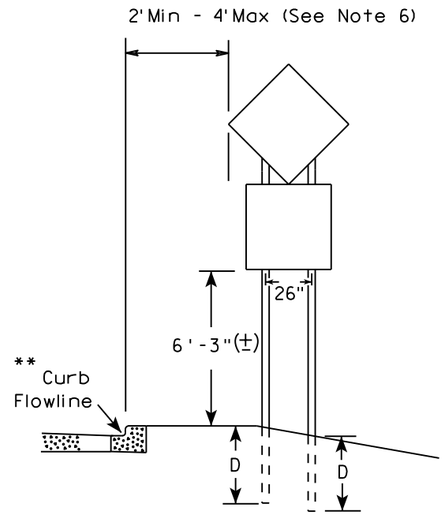
URBAN AREA



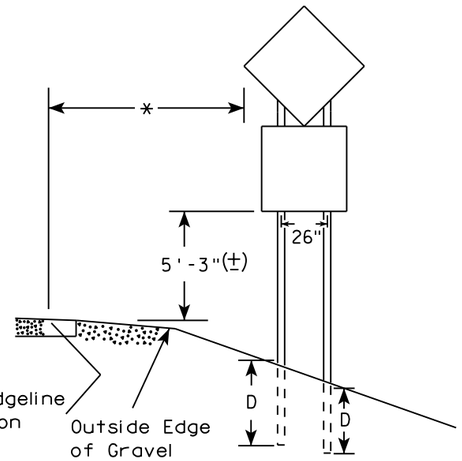
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

***

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

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

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

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

POST EMBEDMENT DEPTH

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

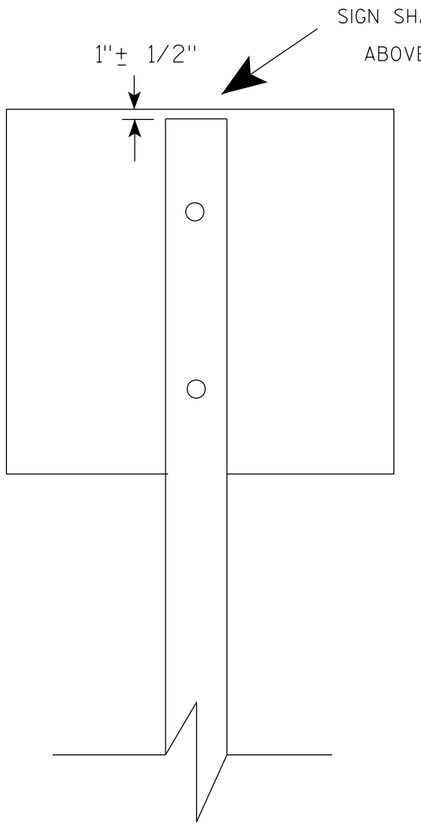
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

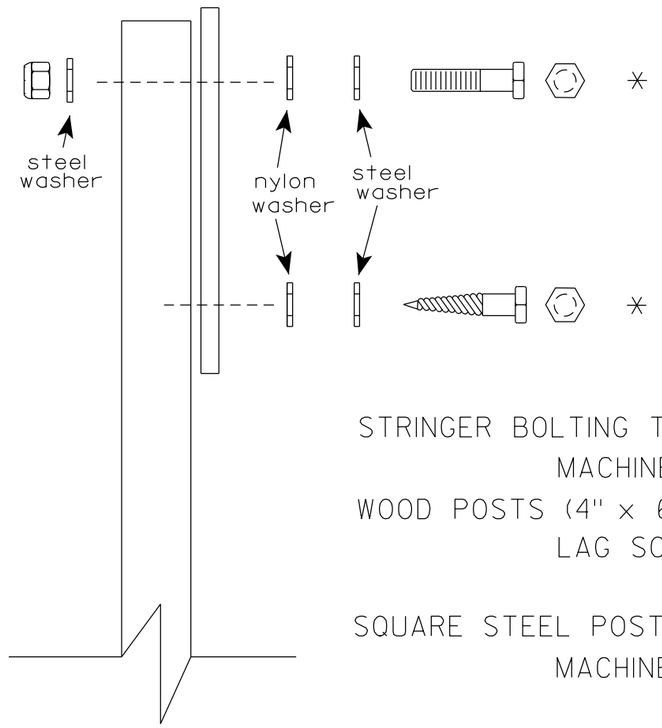
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 105	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.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

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

* 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

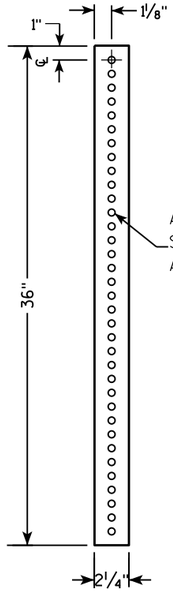
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

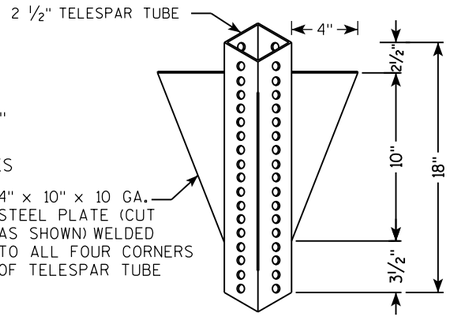
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

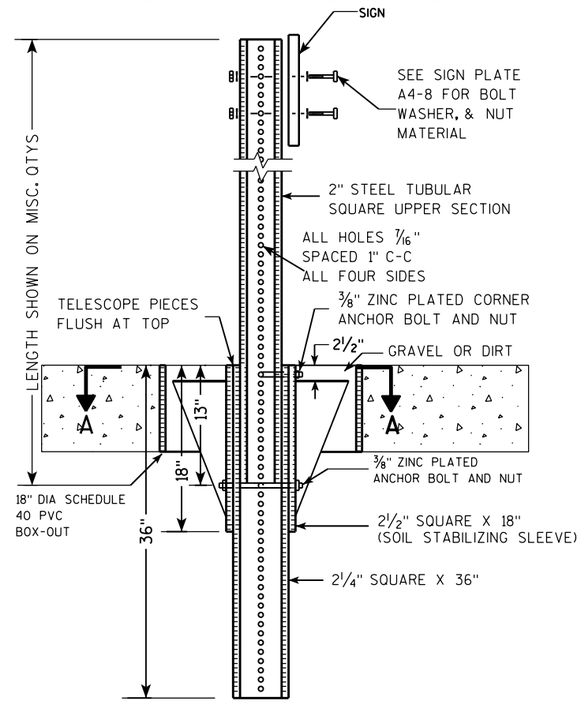
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



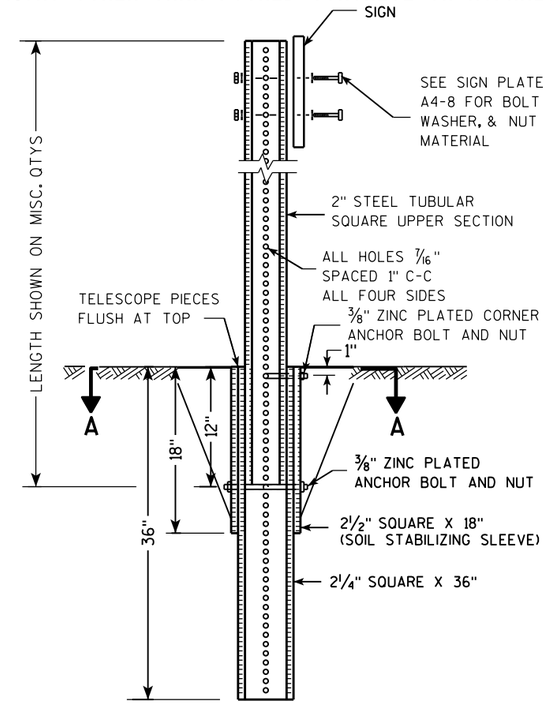
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

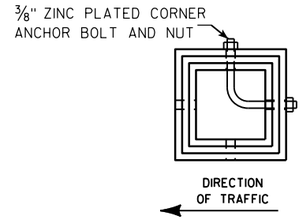


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

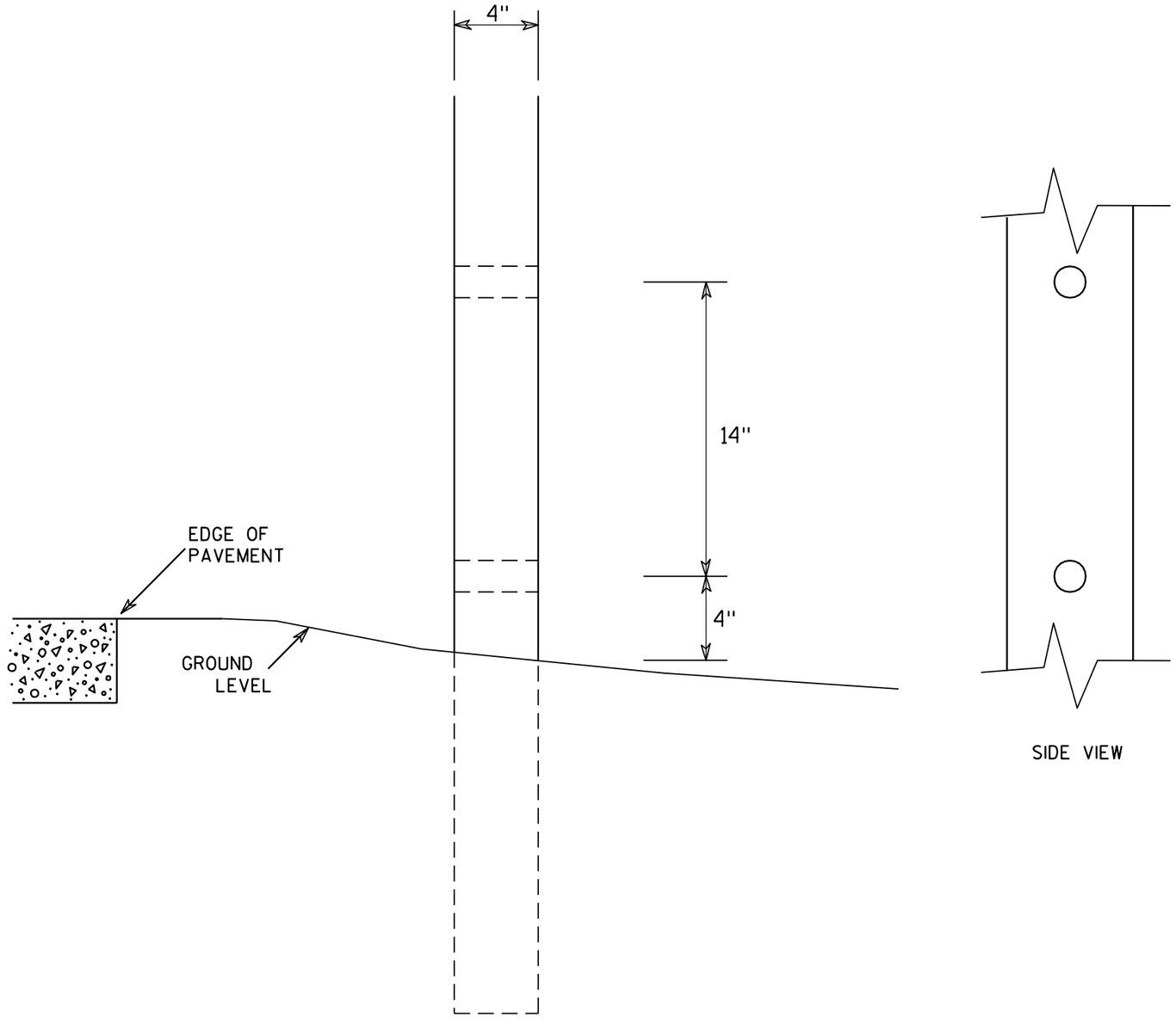
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000
WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

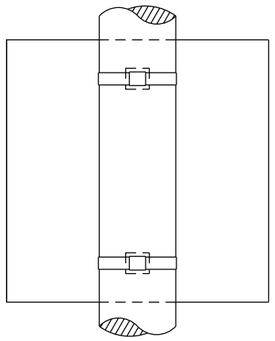
APPROVED Chester J Spang for State Traffic Engineer

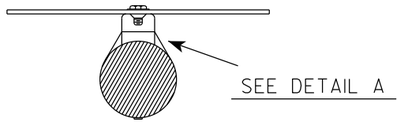
DATE 3/27/97 PLATE NO. A4-11.2

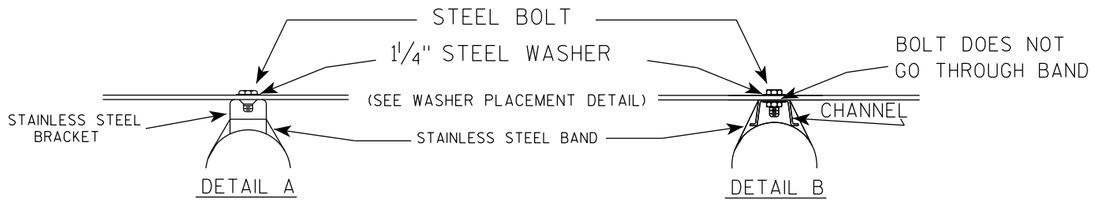
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 108	E

BANDING

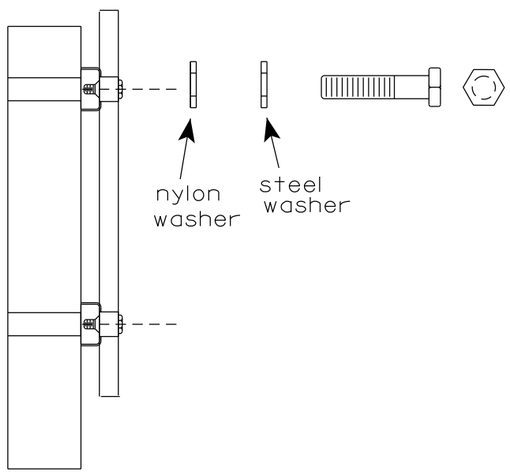
SINGLE SIGN







WASHER PLACEMENT

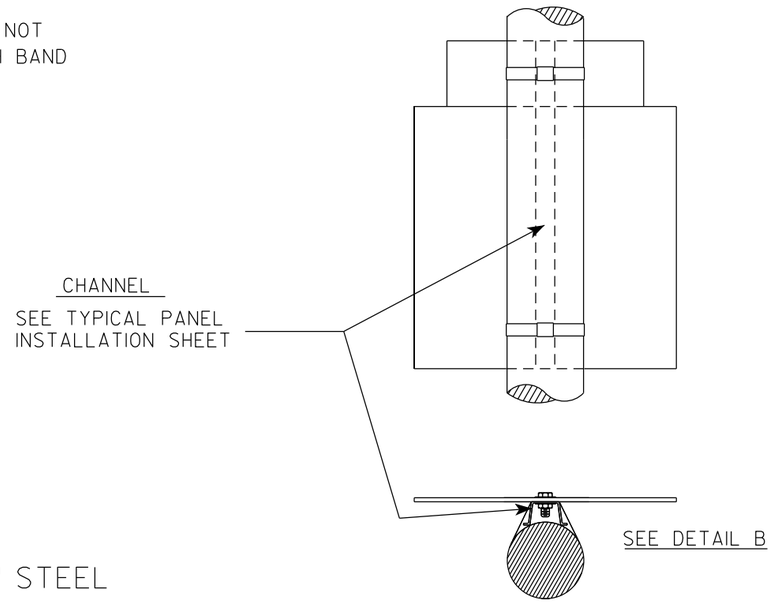


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

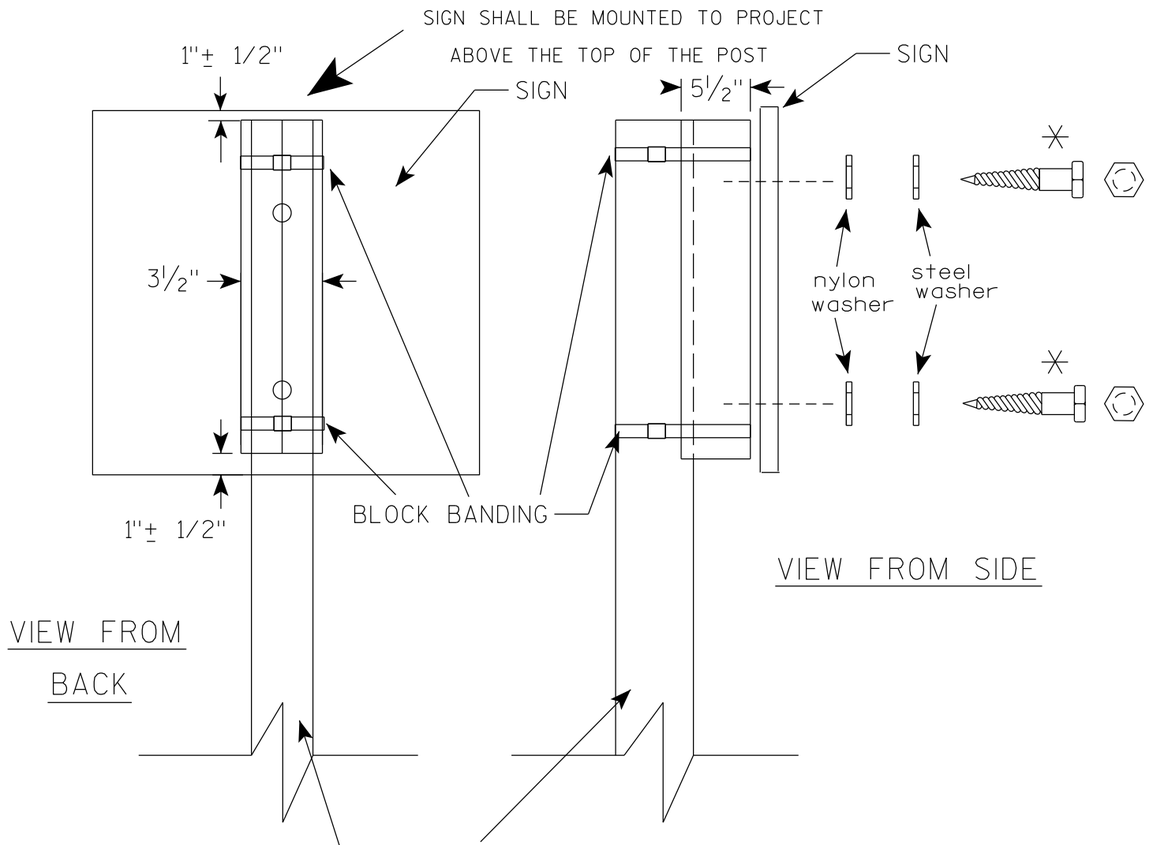
DATE 6/10/19 PLATE NO. A5-9.4

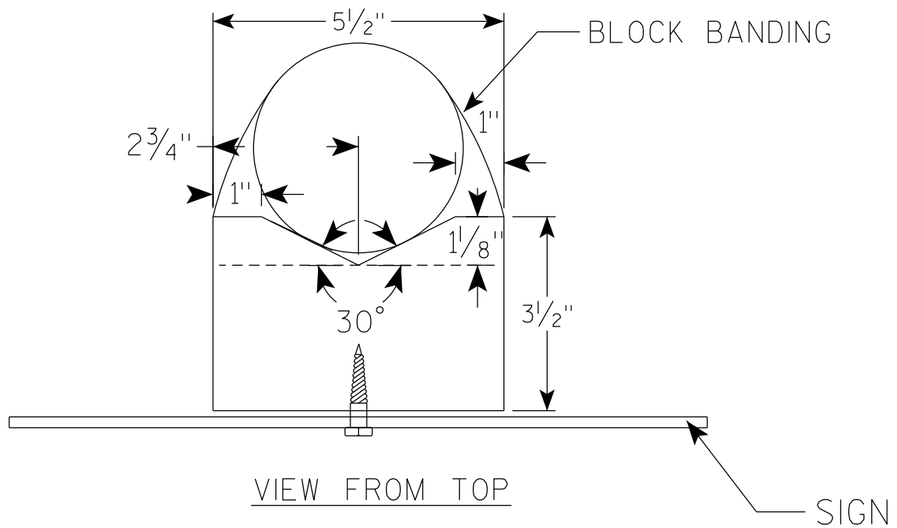
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 109	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

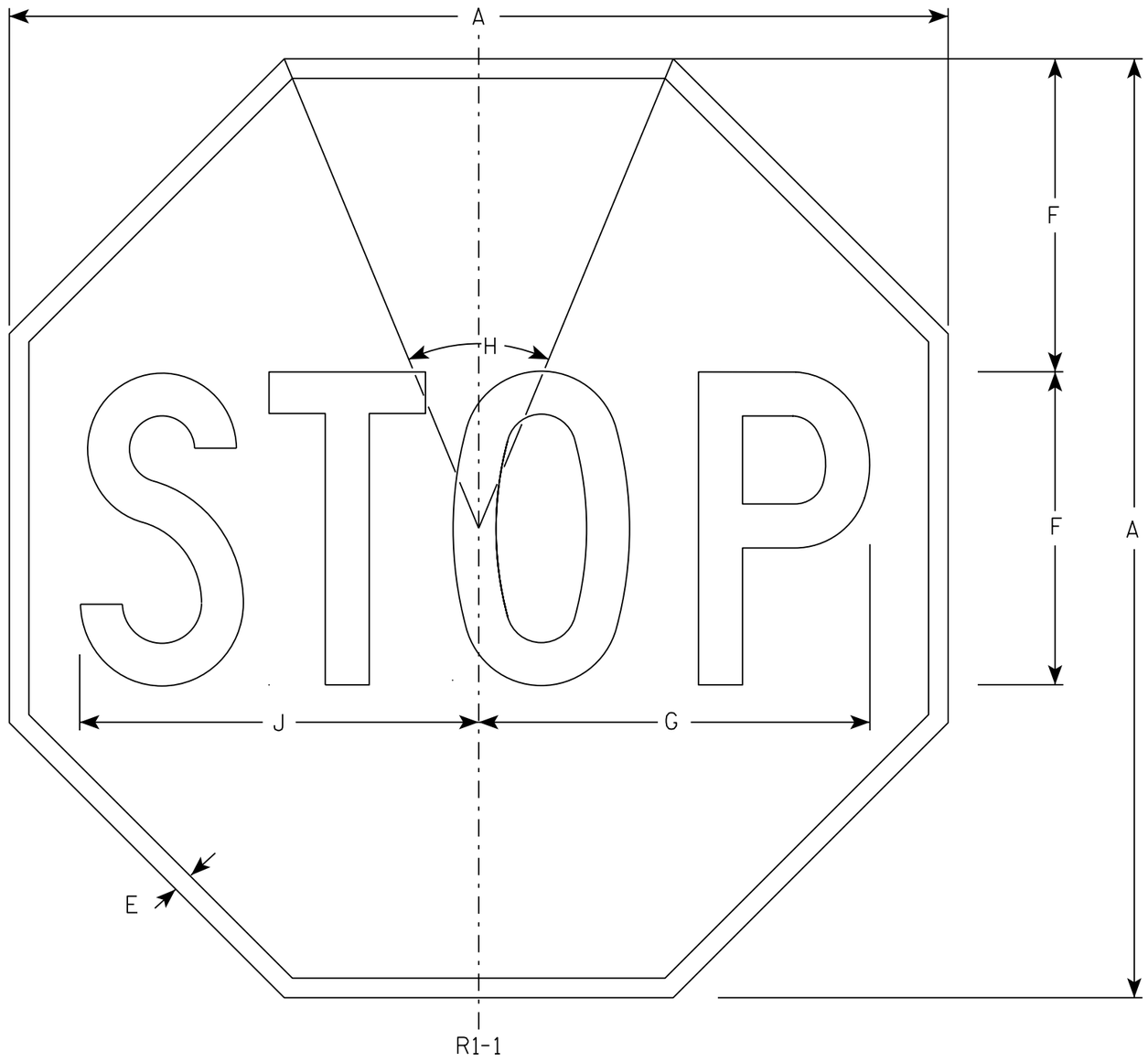
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

PROJECT NO:				SHEET NO: 110	E



NOTES

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

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

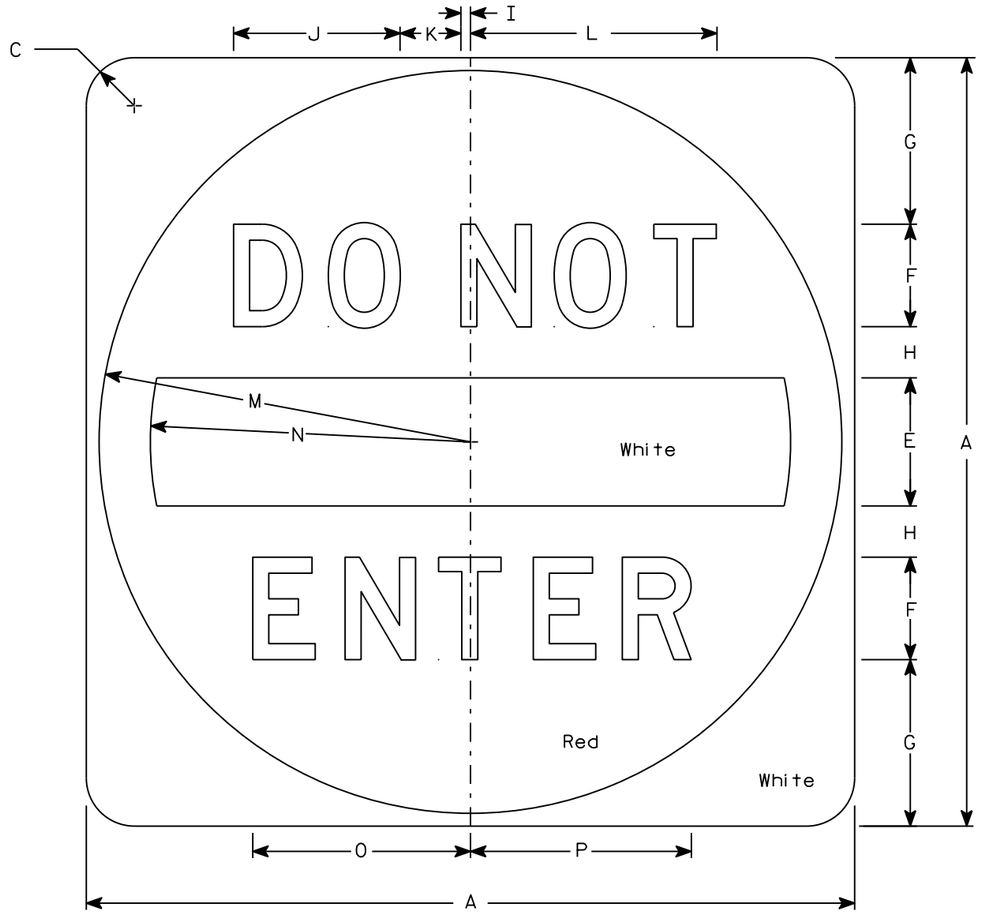
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 111	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See detail
   Message - White
3. Message Series - D

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											6.25
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

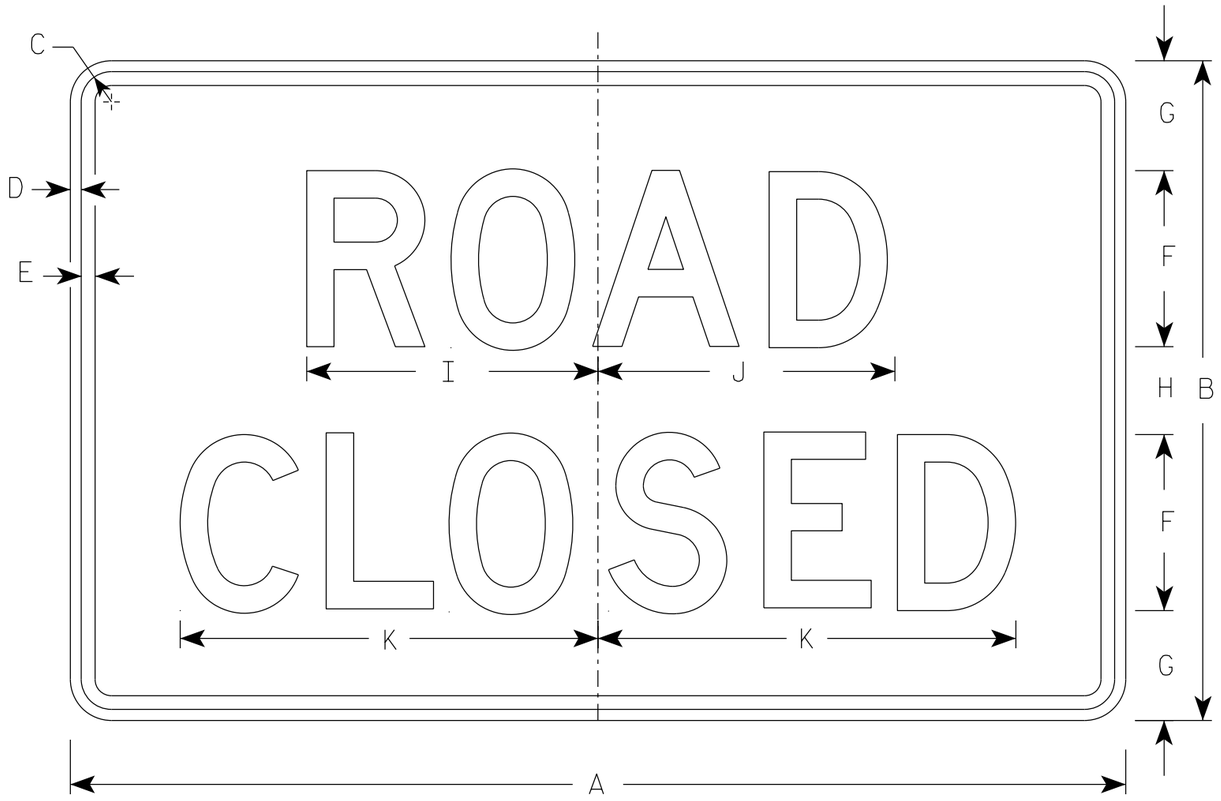
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

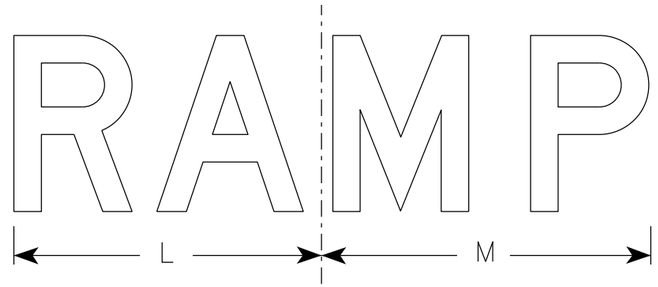
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 112 | E



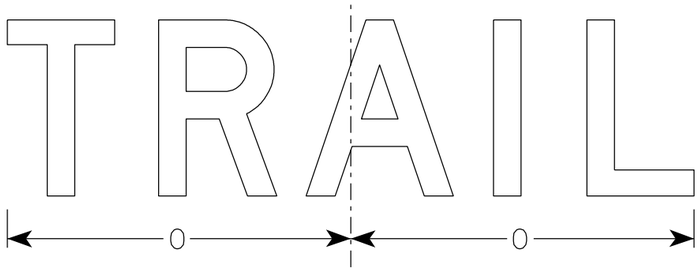
R11-2

NOTES

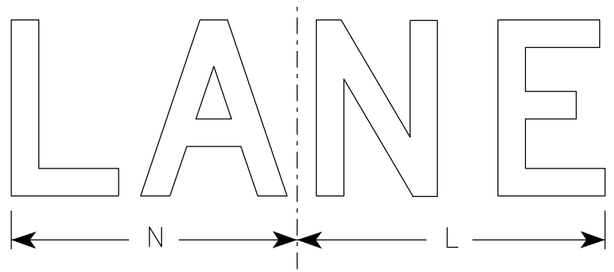
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2T



R11-2L

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	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

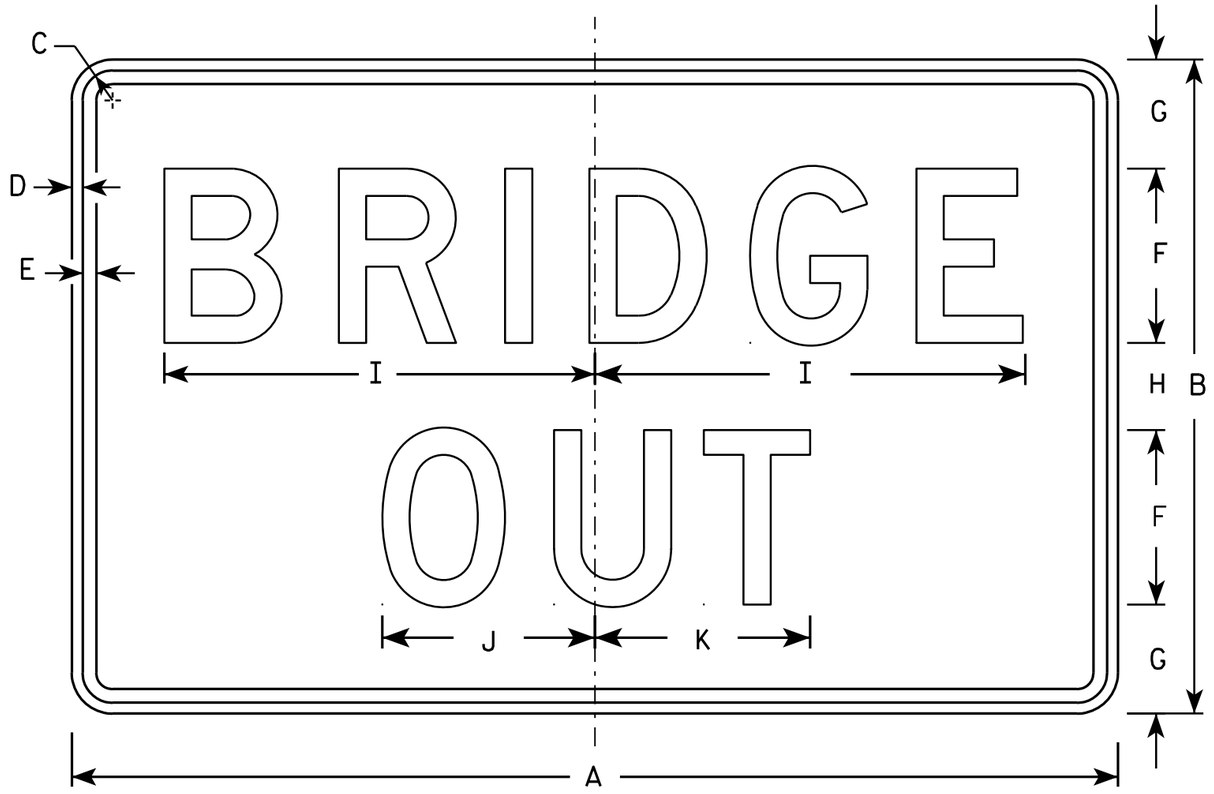
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2021 PLATE NO. R11-2.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 113 E



R11-2B

NOTES

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

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	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2B.2

PROJECT NO:

SHEET NO: 114 E

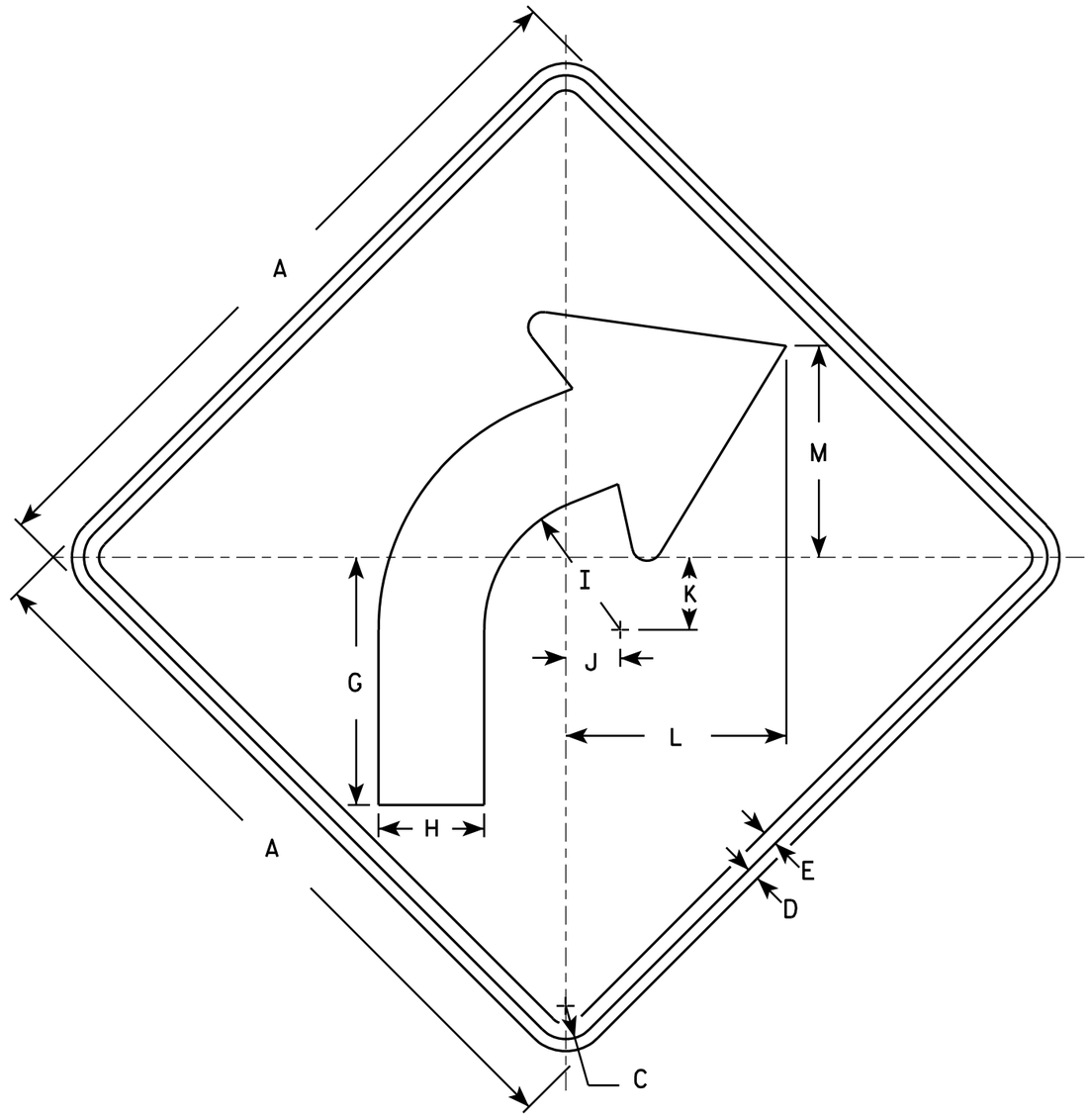
7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112B.DGN PLOT DATE : 01-APR-2011 14:23 PLOT BY : mscj9h

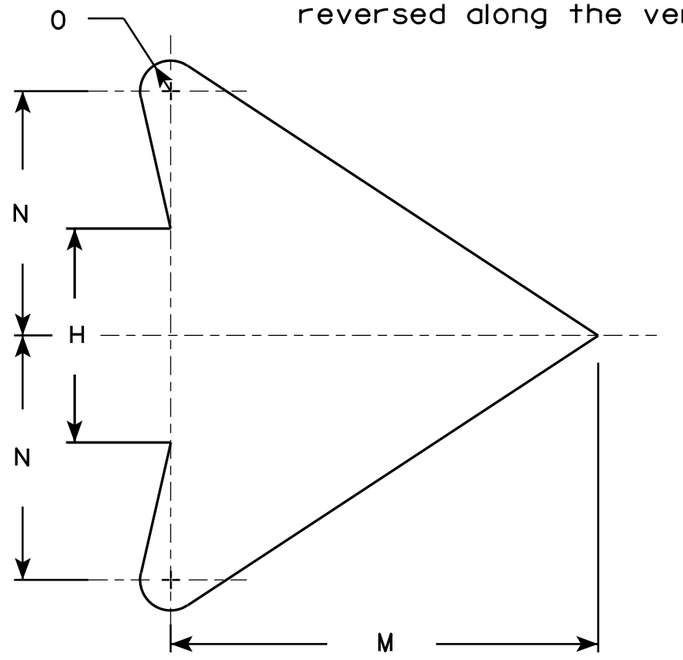
WISDOT/CADDS SHEET 42

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. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



W1-2R



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

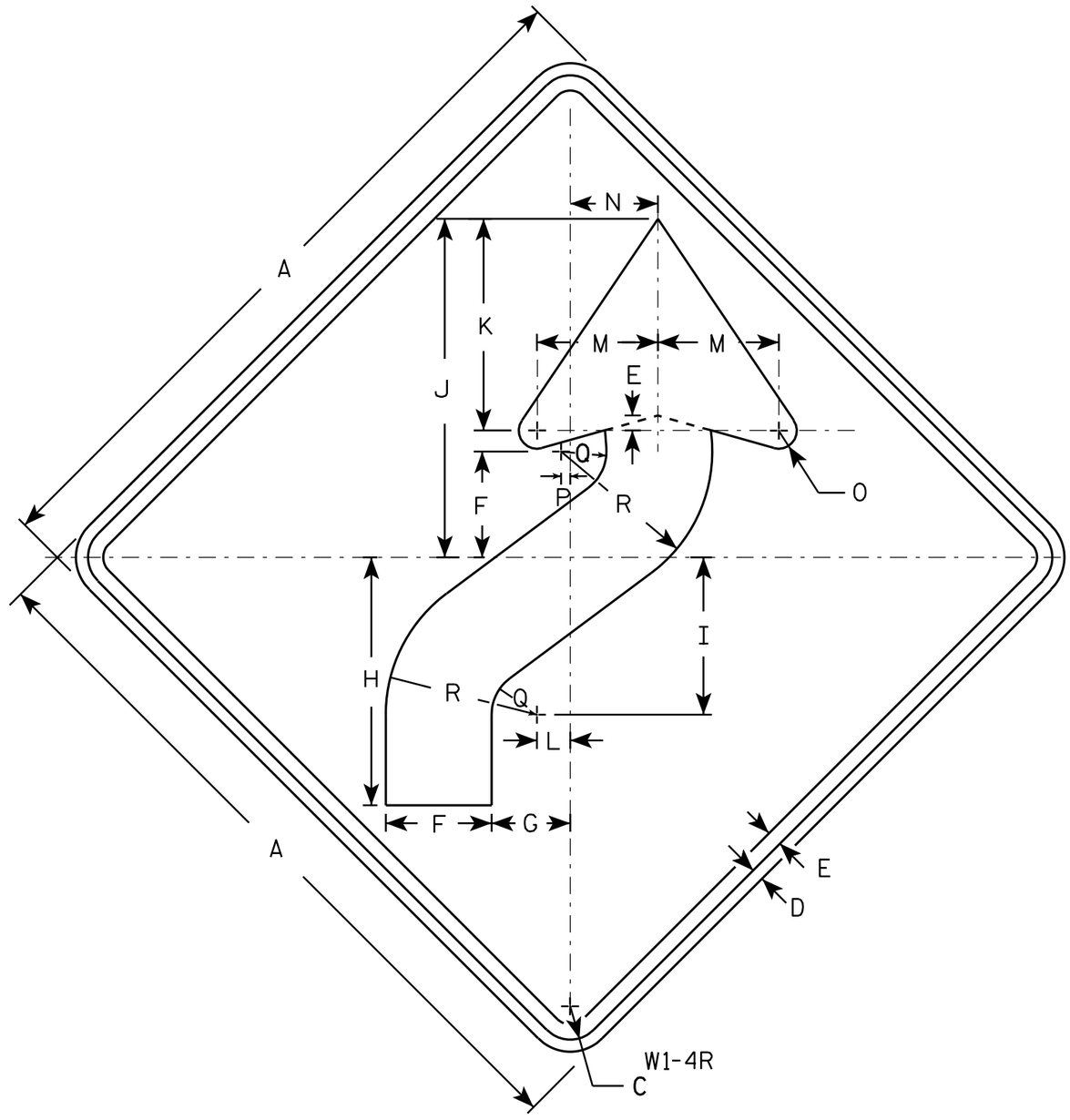
STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 115	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.
4. W1-4L is the same as W1-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	3 1/2	2 5/8	8 1/4	5 1/4	11 1/4	7	1 1/8	4	3	5/8	1/4	1 1/2	5									4.0
2S	30		1 3/8	1/2	5/8	4 3/8	3 1/4	10 1/4	6 1/2	14	8 3/4	1 3/8	5	3 5/8	3/4	3/8	1 7/8	6 1/4									6.25
2M	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
3	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
4	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN

W1-4

WISCONSIN DEPT OF TRANSPORTATION

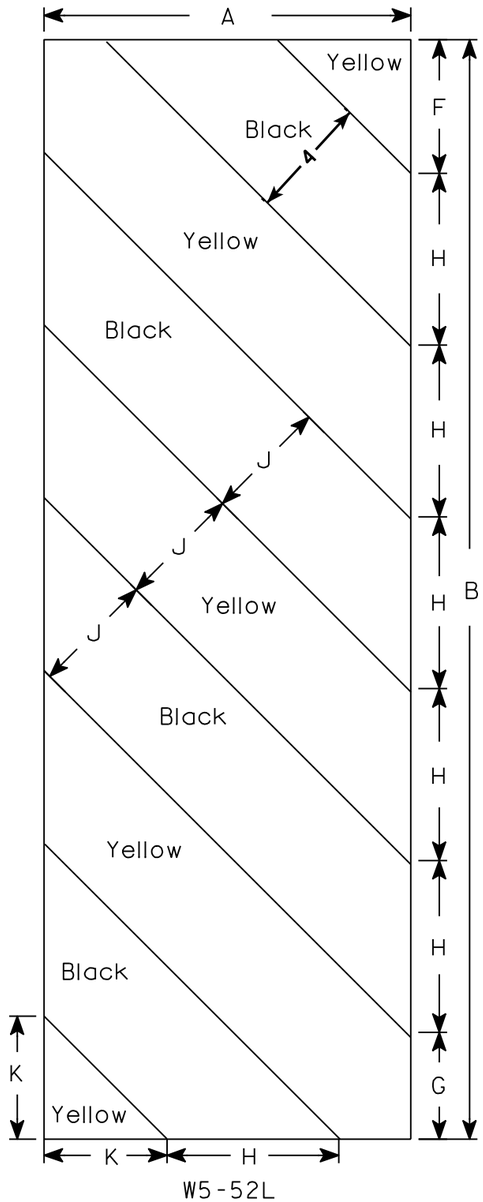
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 5/17/12 PLATE NO. W1-4.11

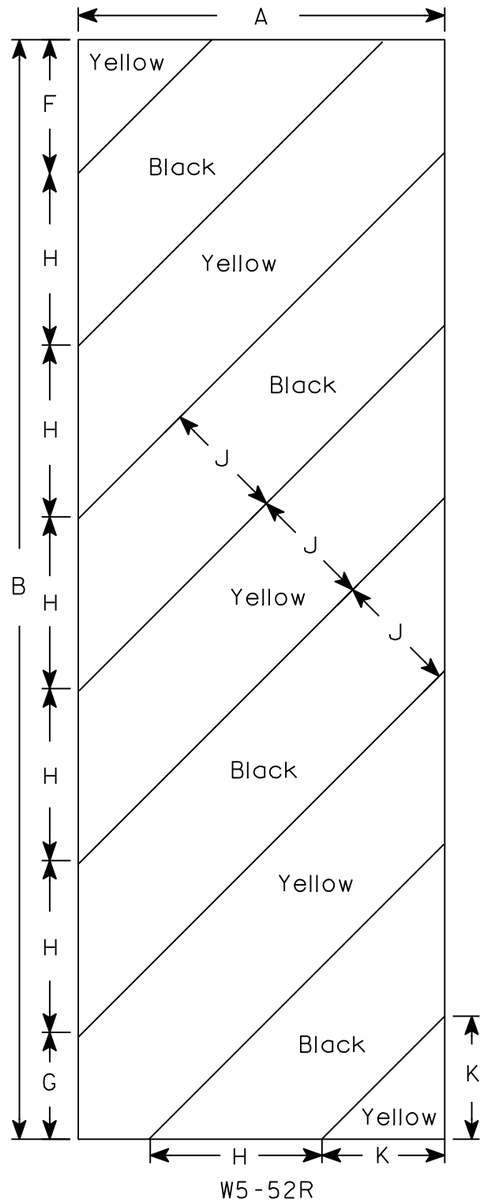
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 116 | E

7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W14.DGN PLOT DATE : 17-MAY-2012 13:20 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.706180:1.000000



W5-52L



W5-52R

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

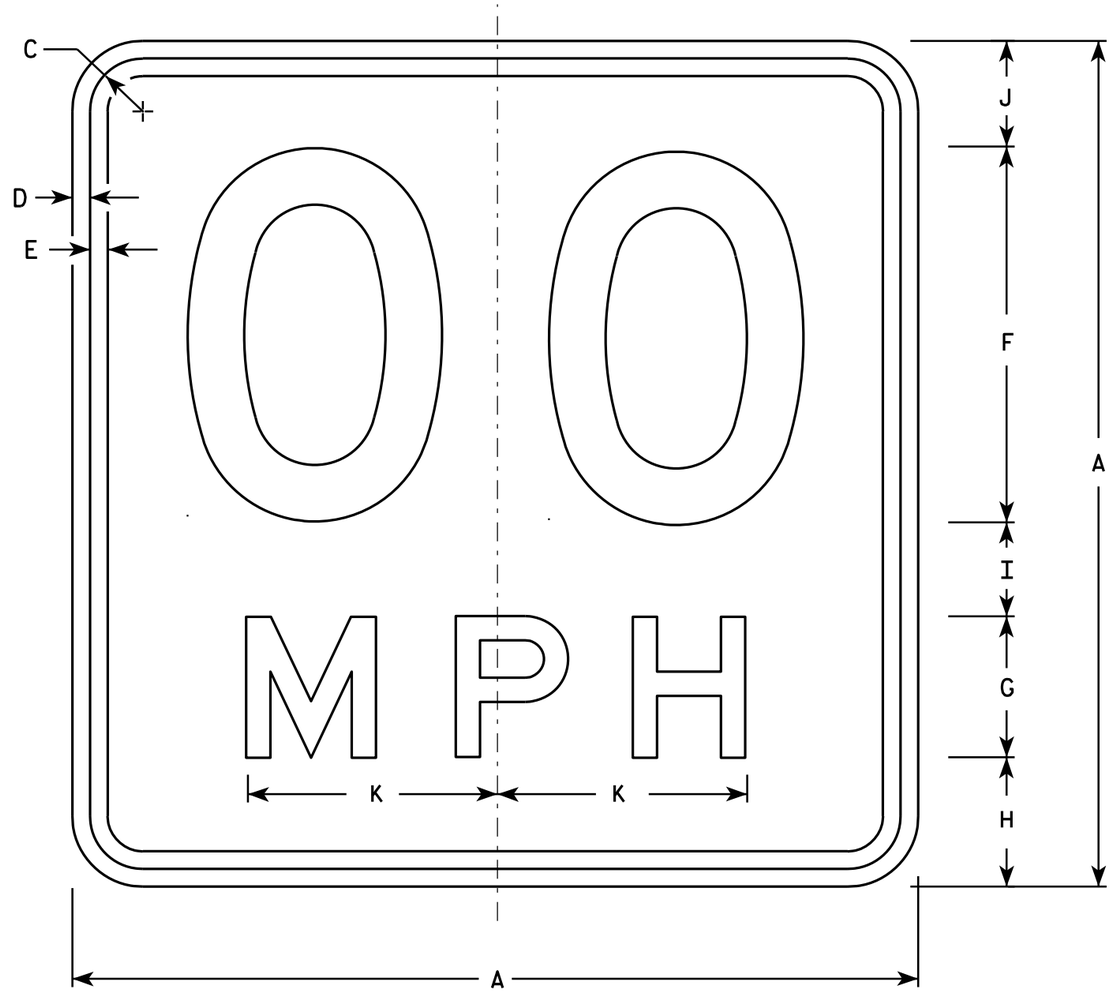
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 117 | E



W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

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 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. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
	1	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
	3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
	4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
	5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

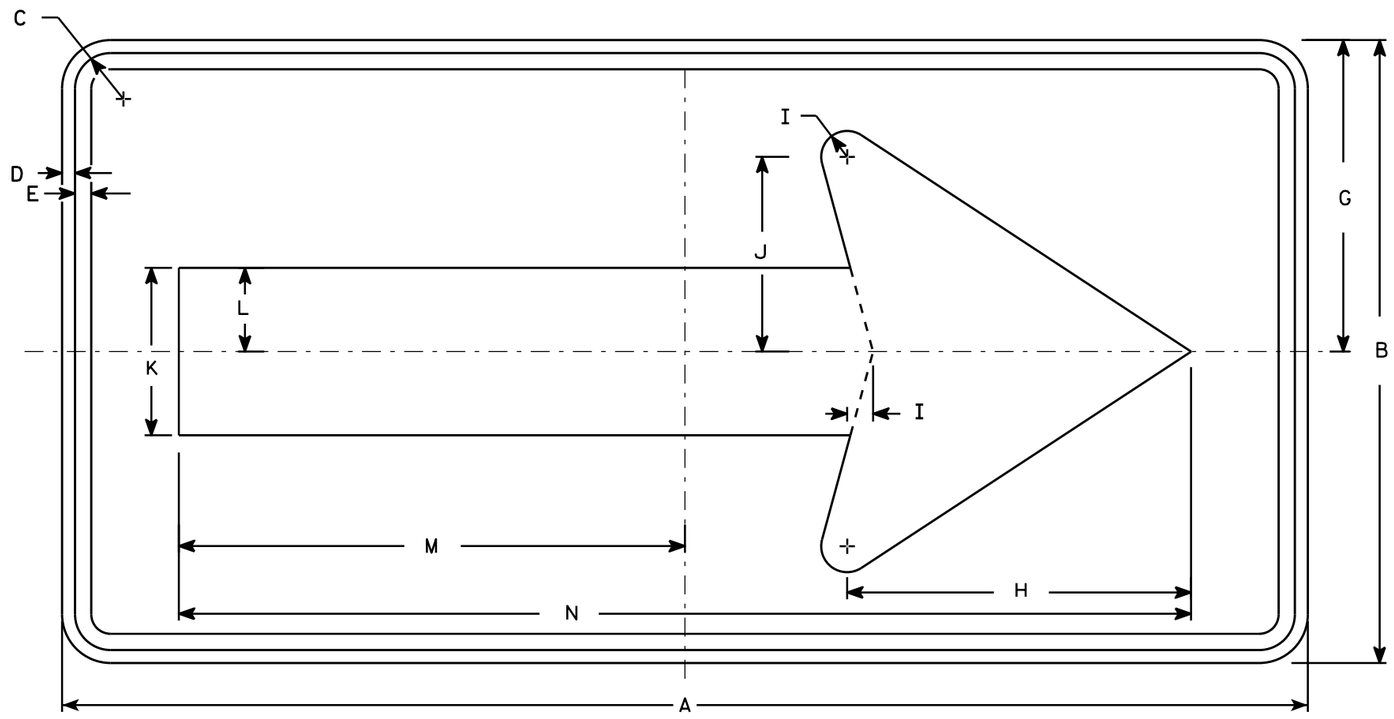
STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 118	E



W01-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   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																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

WISCONSIN DEPT OF TRANSPORTATION

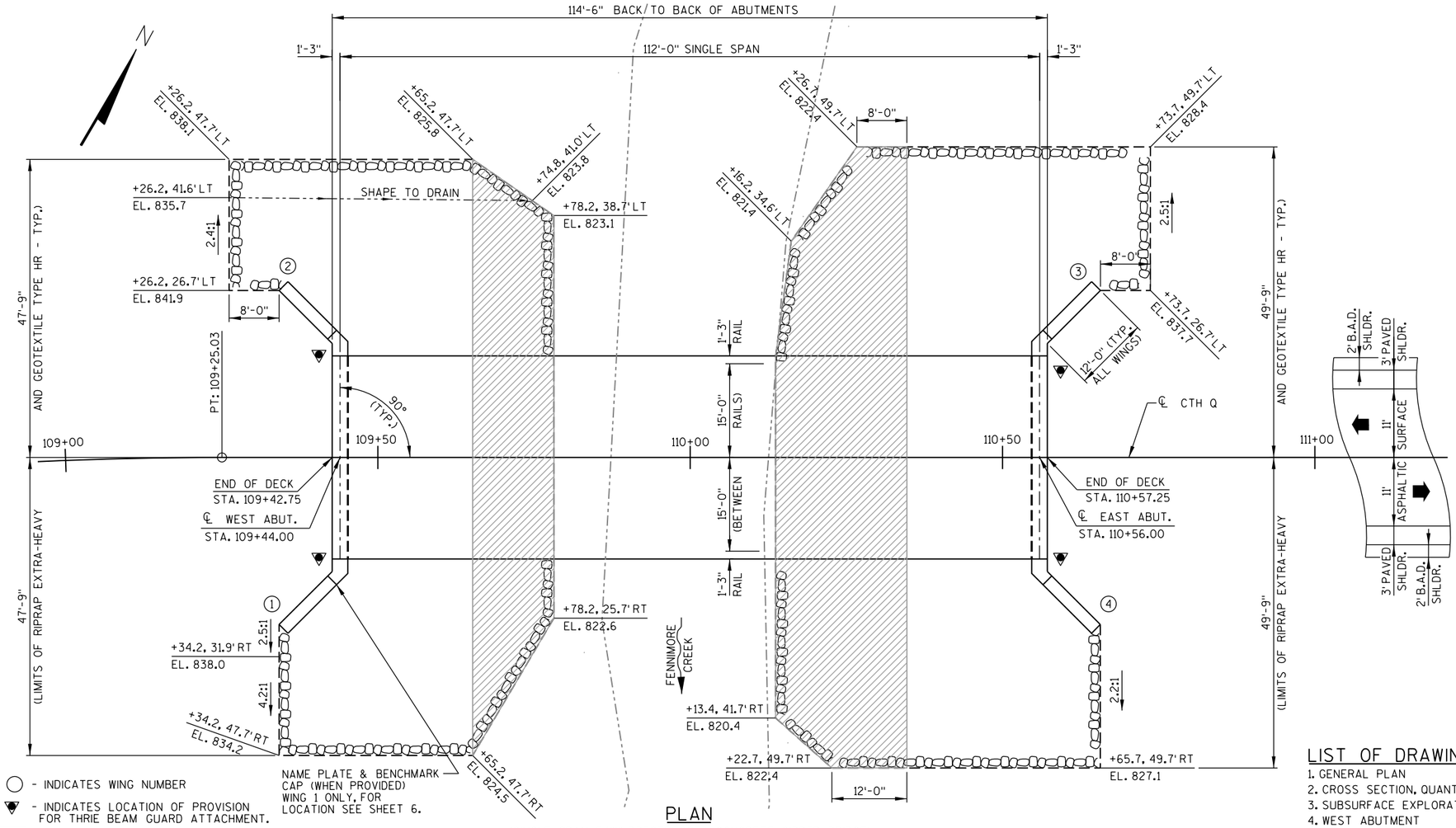
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE W01-6.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

STATE PROJECT NUMBER

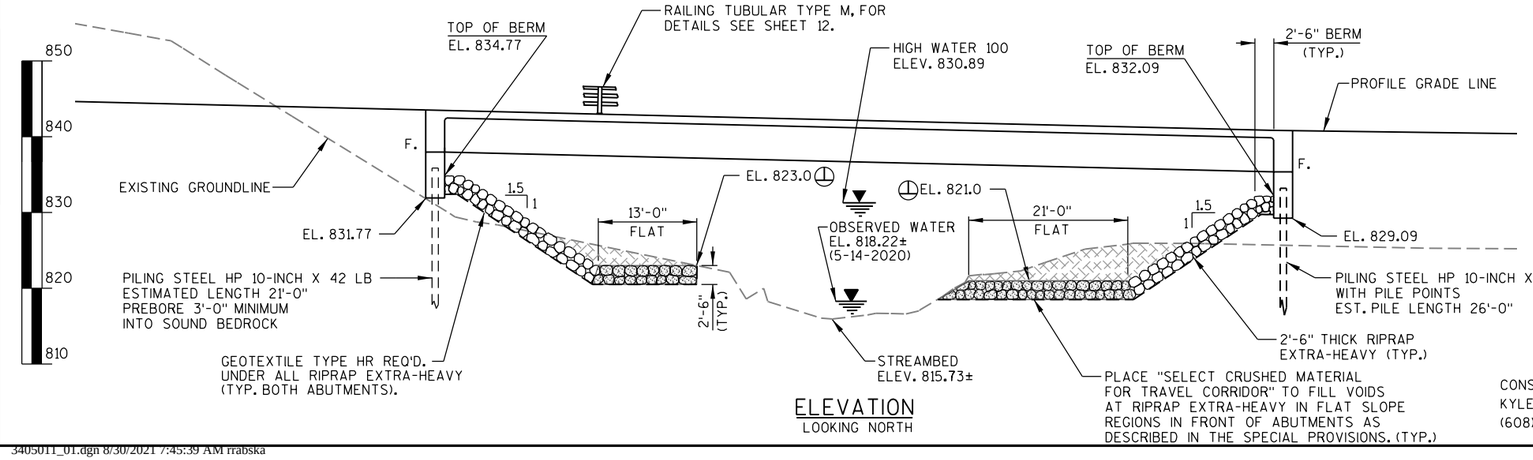
5667-00-75



PLAN

(SINGLE SPAN 54W" PRESTRESSED CONCRETE GIRDER BRIDGE)

- ◯ - INDICATES WING NUMBER
- ▼ - INDICATES LOCATION OF PROVISION FOR THRIE BEAM GUARD ATTACHMENT.
- ▨ - LIMITS OF "SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR" TO FILL VOIDS AT RIPRAP EXTRA-HEAVY.
- ▨ - REMOVAL OF THIS MATERIAL IS INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-22-296".
- ⏚ - TOP OF RIPRAP ELEVATIONS AT THE FLAT REGIONS SHOWN IN ELEVATION VIEW SHALL BE MAINTAINED UNDER BRIDGE. SEE PLAN VIEW FOR OTHER ELEVATIONS.



ELEVATION

LOOKING NORTH

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.19
OPERATIONAL RATING FACTOR: 1.89

TRAFFIC DATA:

A.A.D.T. (2022) = 820
A.A.D.T. (2042) = 920
R.D.S. = 45 MPH

WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS.

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY, SUPERSTRUCTURE — $f'c$ = 4,000 P.S.I.
ALL OTHER — $f'c$ = 3,500 P.S.I.

HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

54W-INCH PRESTRESSED GIRDERS
CONCRETE MASONRY — $f'c$ = 8,000 P.S.I.
STRANDS - 0.60" Φ WITH AN ULTIMATE TENSILE STRENGTH OF — fy = 270,000 P.S.I.

FOUNDATION DATA:

WEST ABUTMENT TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB PREBORED 3'-0" MINIMUM INTO SOUND BEDROCK. SEAT PREBORED PILING BY TAPPING IN PLACE, DRIVING NOT REQUIRED. THE BEARING RESISTANCE OF THE SEATED PILES IS TO BE 180 TONS. ESTIMATED "PREBORING ROCK OR CONSOLIDATED MATERIALS" IS 17'-0" PER PILE AT THE WEST ABUTMENT.
EAST ABUTMENT TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB WITH PILE POINTS DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 170 TONS ✳ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS ARE 21'-0" AT THE WEST ABUTMENT AND 26'-0" AT THE EAST ABUTMENT.

✳ THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

HYDRAULIC DATA:

100 YEAR FREQUENCY

DRAINAGE AREA	23.2 SQ. MI.
Q_{100}	6,300 C.F.S.
VELOCITY	10.4 FT./SEC.
WATERWAY AREA	605 SQ. FT.
SCOUR CRITICAL CODE	5
HIGH WATER $_{100}$ ELEVATION	830.89
Q_2	960 C.F.S.
Q_2 ELEVATION	824.93
Q_2 VELOCITY	3.26 FT./SEC.

ROADWAY OVERFLOW DESIGN FREQUENCY

OVERTOPPING FREQUENCY — > 100 YEARS

LIST OF DRAWINGS

WISCONSIN
KYLE H. BUSCH
E-46187
MADISON
WI
PROFESSIONAL ENGINEER

8/31/2021

CONSULTANT DESIGN CONTACT:
KYLE BUSCH
(608) 216-2063

BRIDGE OFFICE CONTACT:
AARON BONK
(608) 261-0261

NO.	DATE	REVISION	BY

MSA
ENGINEERING | ARCHITECTURE | SURVEYING
FUNDING | PLANNING | ENVIRONMENTAL
1702 PANKRATZ STREET, MADISON WI 53704
(608) 242-7779 www.msa-ps.com
© MSA Professional Services, Inc.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 11/09/21
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-22-296

CTH Q OVER FENNIMORE CREEK

COUNTY	TOWN ~~CITY/VILLAGE~~
GRANT	HICKORY GROVE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KHB	JFM	RLR	KHB

GENERAL PLAN

SHEET 1 OF 13
120

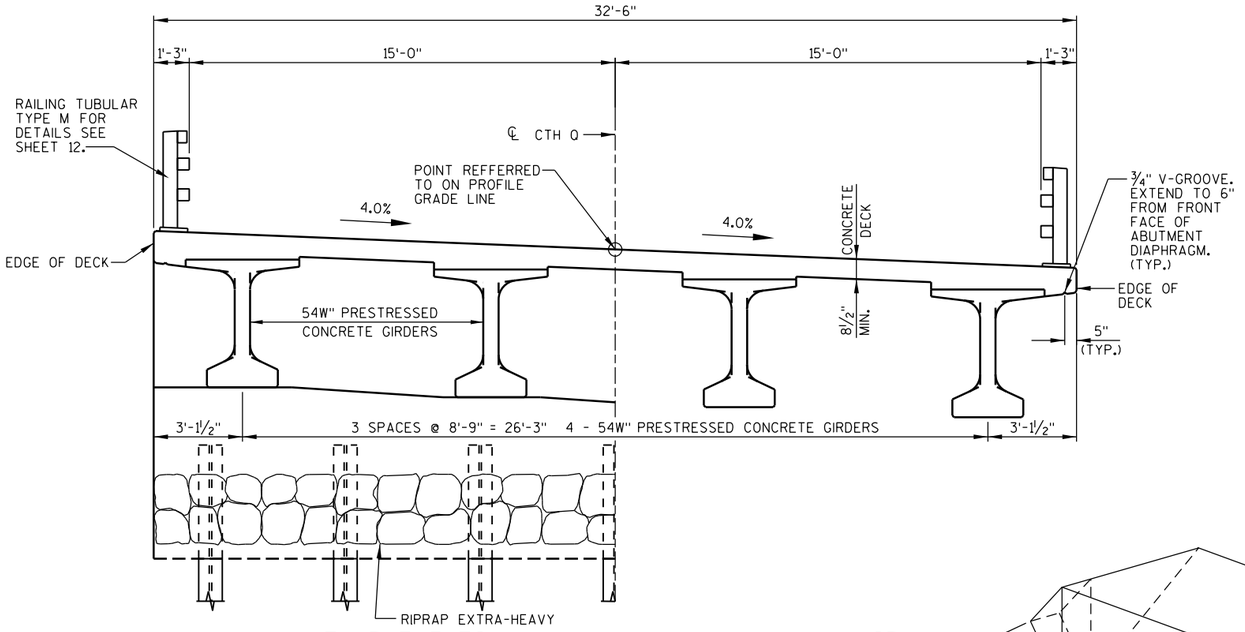
8

8

FILE= 11512013_01.DGN
DATE= 8/30/2021

3405011_01.dgn 8/30/2021 7:45:39 AM rrabska

STATE PROJECT NUMBER
5667-00-75



AT ABUTMENTS IN SPAN

CROSS SECTION THRU BRIDGE

(LOOKING EAST)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

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

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP EXTRA-HEAVY AND GEOTEXTILE TYPE HR TO THE LIMITS SHOWN ON SHEET 1 AND ON THE ABUTMENT SHEETS, OR AS DIRECTED BY THE ENGINEER. AFTER THE PLACEMENT OF RIPRAP EXTRA-HEAVY, PLACE SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR TO FILL VOIDS ON ALL RIPRAP SURFACES WITHIN LIMITS SHOWN ON SHEET 1.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGE B-22-296" FOR THE ABUTMENTS.

THIS STRUCTURE WILL REPLACE THE EXISTING STRUCTURE, B-22-040, A 110.0'FT LONG THREE-SPAN HAUNCHED CONCRETE SLAB BRIDGE ON CONCRETE ABUTMENTS AND SOLID SHAFT PIERS WITH A 24.0 FT CLEAR ROADWAY WIDTH.

Ⓑ - BACKFILL PAY LIMITS, BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

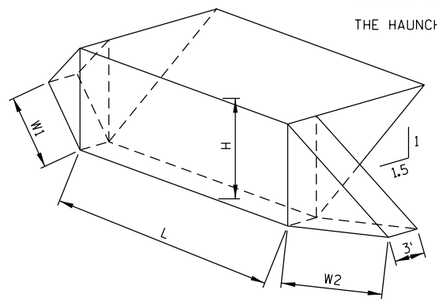
PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP AND EDGES OF DECK, TO THE OUTSIDE 1'-1½" OF THE UNDERSIDE OF DECK TO THE EDGE OF THE GIRDER FLANGE, TO THE TOP AND EXTERIOR EXPOSED FACES OF WINGS, AND TO THE END 1'-0" OF THE FRONT FACE OF ABUTMENTS.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (2012 ADJUSTED). BENCHMARK REFERENCES AT THE PROJECT SITE WERE SET BY THE CONSULTANT USING GPS TECHNOLOGY.

THE HAUNCH CONCRETE QUANTITIY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE GIRDER SHEET, SHEET 9.

TOTAL ESTIMATED QUANTITIES

	ITEM NUMBER	BID ITEM	UNIT	WEST ABUT.	EAST ABUT.	SUPER	TOTAL
	203.0260.01	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS (B-22-0040)	EACH	-	-	-	1
	206.1000.01	EXCAVATION FOR STRUCTURES BRIDGES B-22-296	LS	-	-	-	1
Ⓑ -	210.1500	BACKFILL STRUCTURE TYPE A	TON	325	325	-	650
	502.0100	CONCRETE MASONRY BRIDGES	CY	42.8	42.8	148.3	234
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	28	28	462	518
	503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	-	-	452	452
	505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,445	2,445	-	4,890
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2,140	2,140	24,400	28,680
	506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-	-	8	8
	506.4000.01	STEEL DIAPHRAGMS B-22-296	EACH	-	-	6	6
	513.4061	RAILING TUBULAR TYPE M	LF	-	-	232	232
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	12	12	-	24
	550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	153	-	-	153
	550.0500	PILE POINTS	EACH	-	9	-	9
	550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	189	234	-	423
	606.0400	RIPRAP EXTRA-HEAVY	CY	370	465	-	835
	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	95	95	-	190
	645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	35	35	-	70
	645.0120	GEOTEXTILE TYPE HR	SY	508	610	-	1118
	SPV.0195.01	SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	46	84	-	130
		NON-BID ITEMS					
		PREFORMED FILLER	SIZE				½" & ¾"

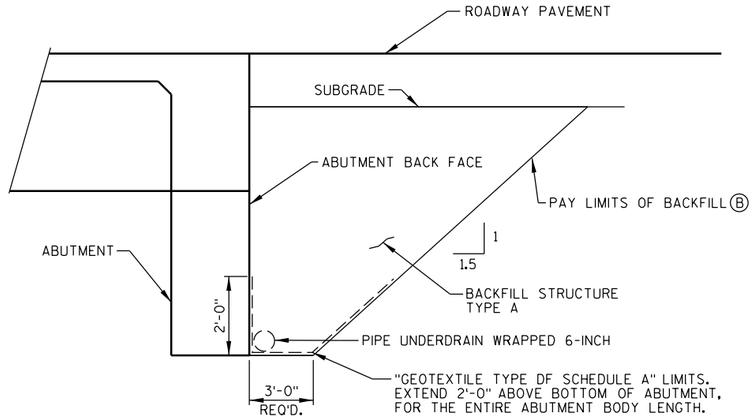


ABUTMENT BACKFILL DIAGRAM

L = OUT-TO-OUT OF ABUTMENT BODY
H = AVERAGE ABUTMENT FILL HEIGHT
W1 = WING 1 LENGTH
W2 = WING 2 LENGTH

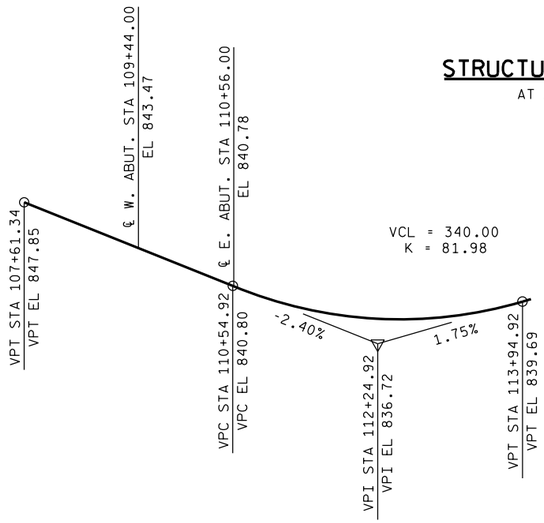
$V_{CF} = (L)(3.0')(H)+(L)(0.5)(1.5H)(H)+(0.5)(H)(W1+W2)(3.0')$

$V_{TON} = V_{CF}(2.0)/27$



STRUCTURE BACKFILL DETAIL

AT ABUTMENT BACK FACE



PROFILE GRADE LINE - CTH Q

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-22-296

DRAWN BY RLR | PLANS CK'D. KHB

CROSS SECTION, QUANTITIES & NOTES

SHEET 7 OF 13
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FILE= 3405011_02.DGN
DATE= 8/30/2021

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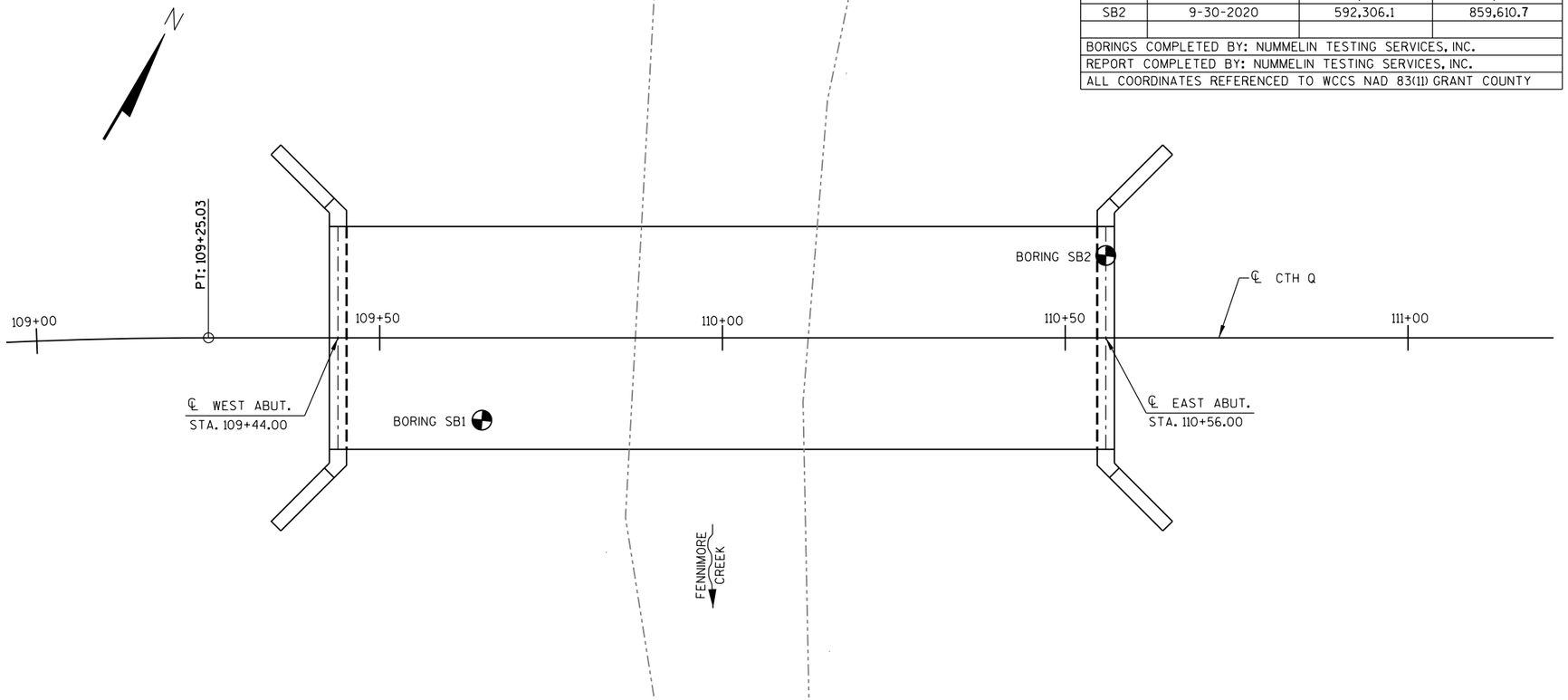
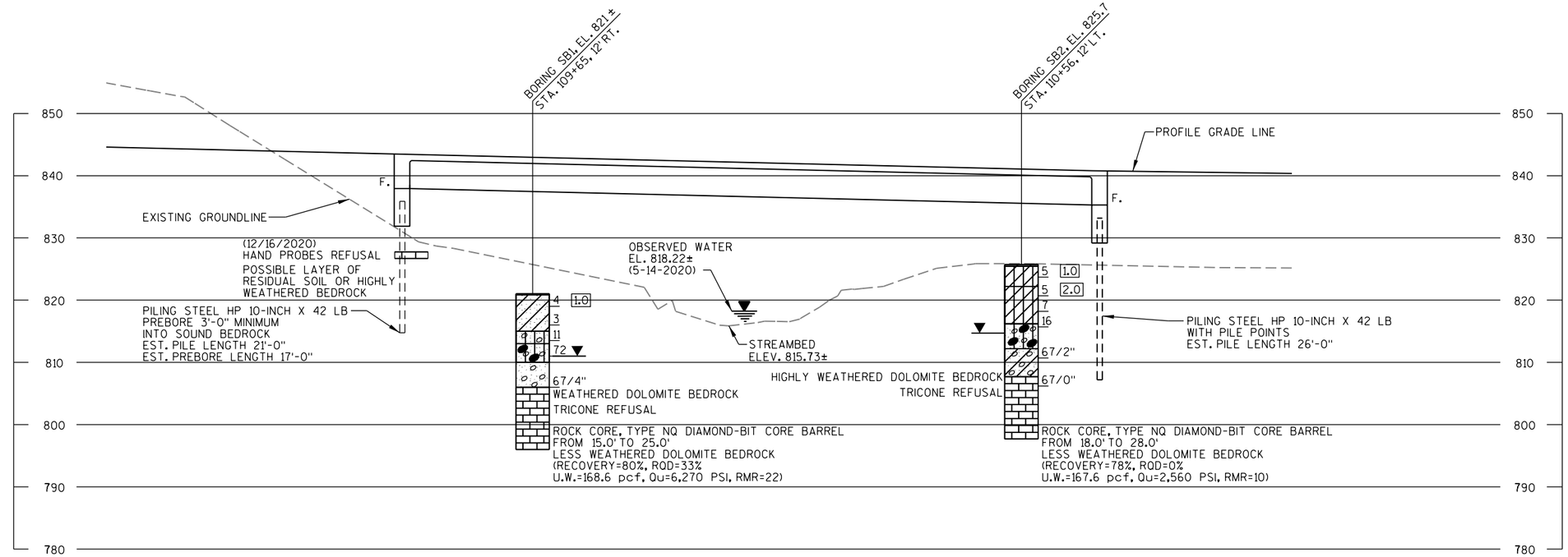
3405011_02.dgn 8/30/2021 3:28:06 PM rrabska

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
SB1	9-30-2020	592,239.3	859,544.4
SB2	9-30-2020	592,306.1	859,610.7
BORINGS COMPLETED BY: NUMMELIN TESTING SERVICES, INC.			
REPORT COMPLETED BY: NUMMELIN TESTING SERVICES, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(11) GRANT COUNTY			





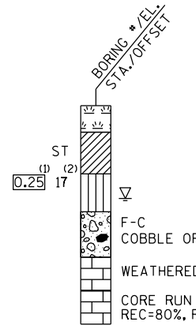
STATE PROJECT NUMBER

5667-00-75

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-22-296

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SUBSURFACE EXPLORATION

SHEET 3 OF 13
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FILE= 7052032_03.DGN

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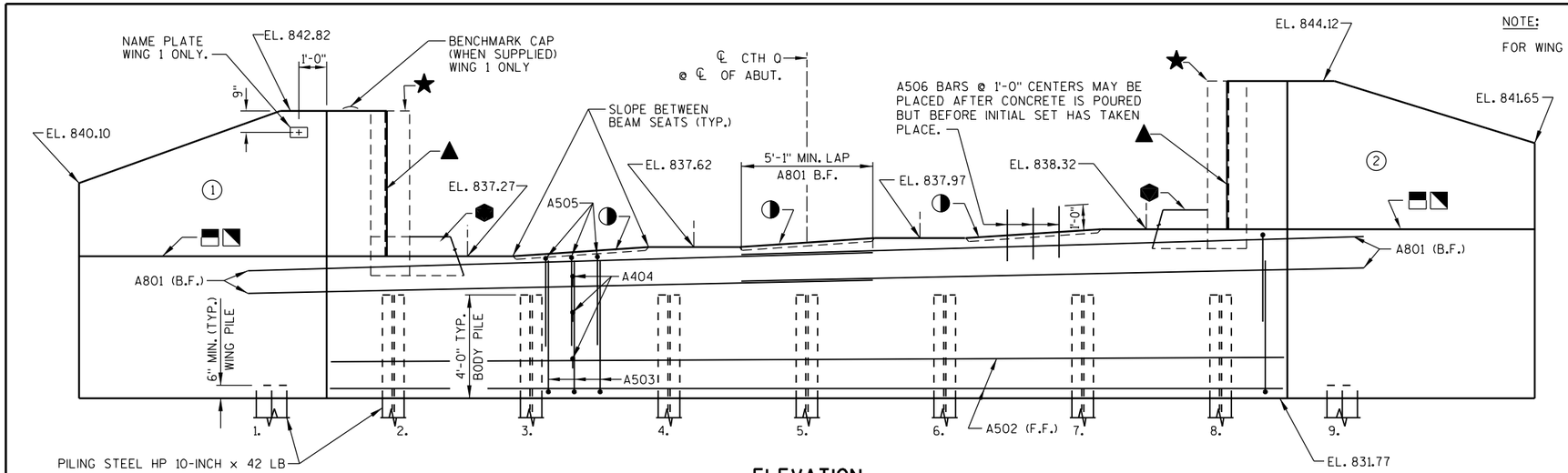
STATE PROJECT NUMBER

5667-00-75

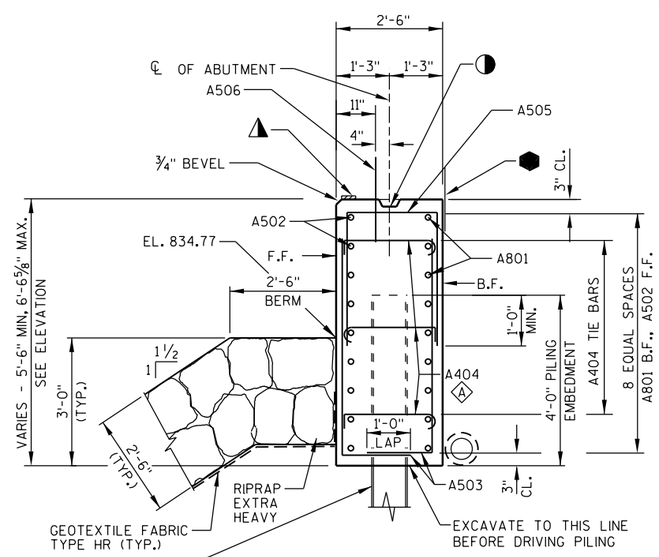
NOTE:

FOR WING DETAILS, SEE SHEET 5.



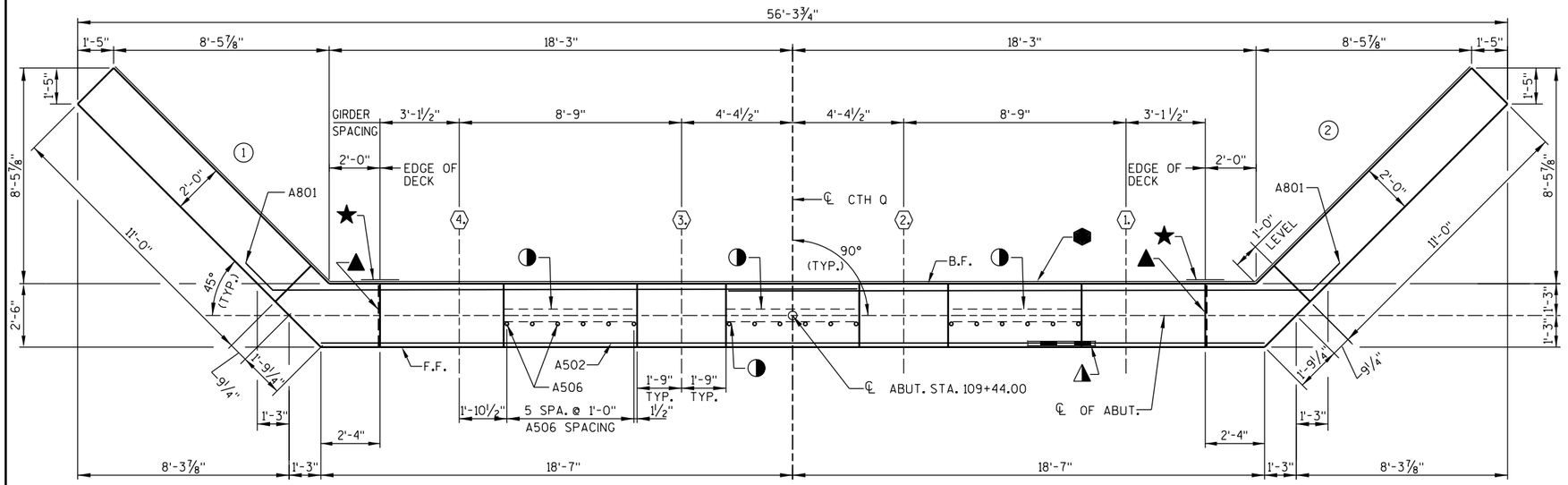
ELEVATION

(WEST ABUTMENT LOOKING WEST)

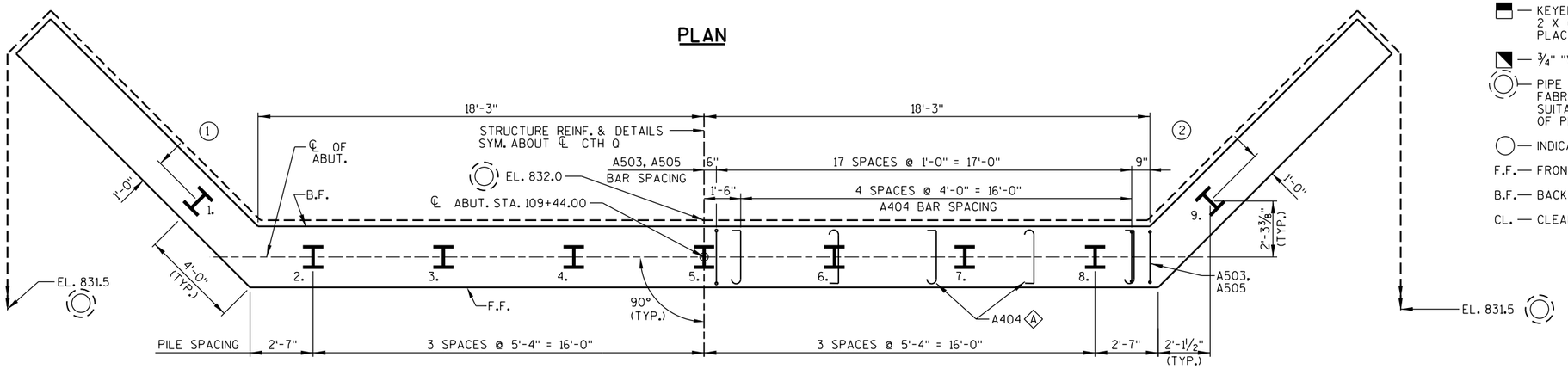


WEST ABUTMENT TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB. PILING SHALL BE PREBORED 3'-0" MINIMUM INTO SOUND BEDROCK. SEAT PREBORED PILING BY TAPPING IN PLACE, DRIVING NOT REQUIRED. THE BEARING RESISTANCE OF THE SEATED PILES IS TO BE 180 TONS. ESTIMATED PILE LENGTHS ARE 21'-0" AT THE WEST ABUTMENT. ESTIMATED "PRE-BORING ROCK OR CONSOLIDATED MATERIALS" IS 17'-0" PER PILE AT THE WEST ABUTMENT. SEE SHEET 7 FOR PILE SPLICE DETAILS.

TYPICAL SECTION THRU ABUTMENT



PLAN



PILE PLAN

LEGEND

- ◑ — KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- ◇4 — ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.
- ▲ — ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE).
- ◭ — 4"x ½" FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF SLAB.
- ★ — VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM 9" BELOW BRIDGE SEAT TO TOP OF WINGS.
- ⬢ — HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WING TIPS.
- ◓ — KEYED CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2 X 6. POUR CONCRETE ABOVE JOINT AFTER DECK IS IN PLACE AND PLACE ⬢ ON B.F. OF WING.
- ◥ — ¾" "V" GROOVE ON FRONT FACE OF WING WALL.
- ◯ — PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE FABRIC AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. FOR RODENT SHIELD DETAILS, SEE SHEET 5.
- ◯ — INDICATES WING NUMBER ⬡ — INDICATES GIRDER NUMBER
- F.F. — FRONT FACE
- B.F. — BACK FACE
- CL. — CLEAR

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-22-296

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WEST ABUTMENT

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DATE= 8/30/2021

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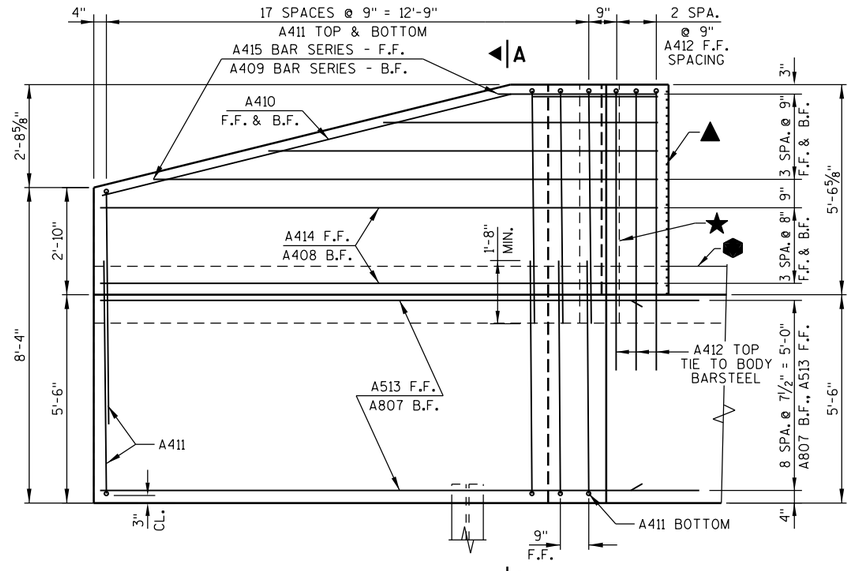
STATE PROJECT NUMBER

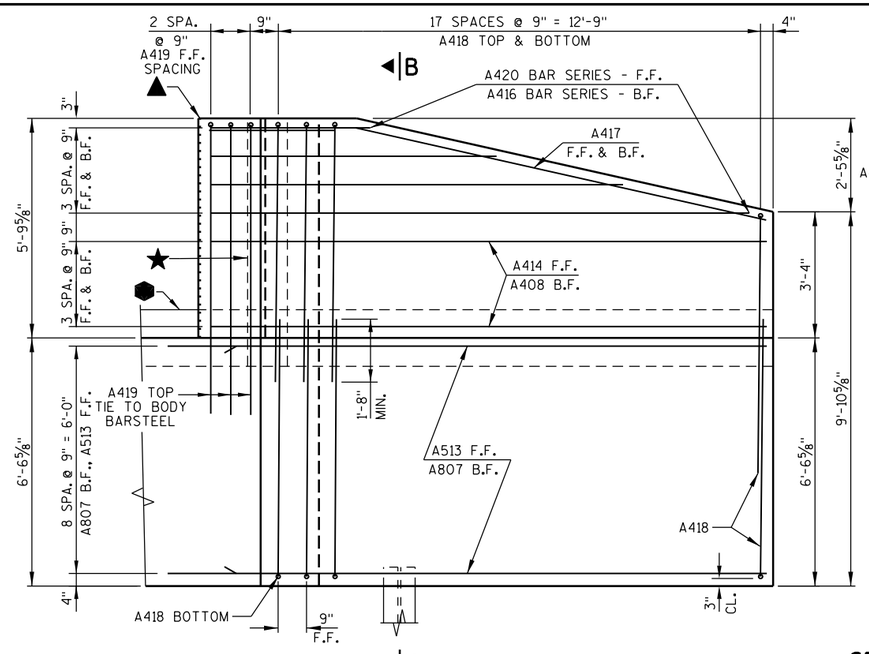
5667-00-75



◀|A

ELEVATION - WING 1

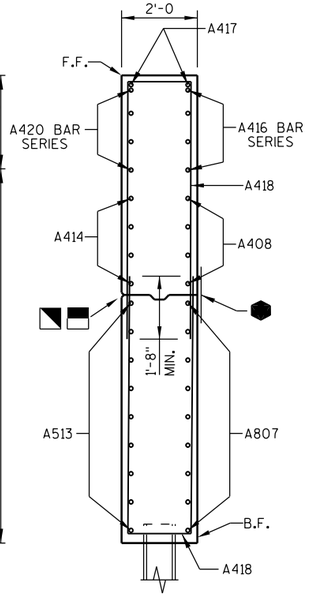
(LOOKING AT F.F. OF WING)



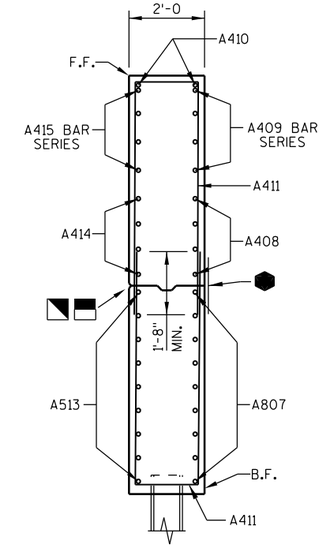
◀|B

ELEVATION - WING 2

(LOOKING AT F.F. OF WING)



SECTION B-B THRU WING 2



SECTION A-A THRU WING 1

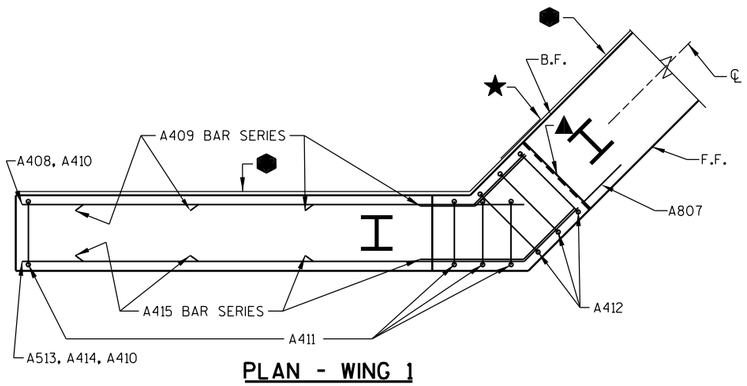
UNCOATED 2,445 LBS.
COATED 2,140 LBS.

BILL OF BARS (WEST ABUTMENT)

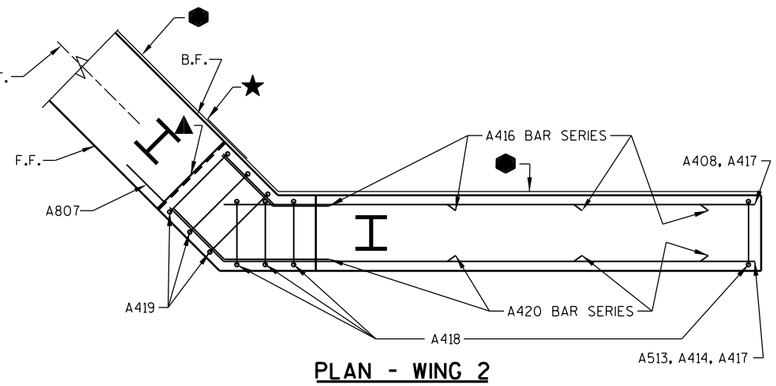
MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION
A801	-	18	24'-5"	X		ABUTMENT BODY - B.F. - HORIZ.
A502	-	9	37'-0"			ABUTMENT BODY - F.F. - HORIZ.
A503	-	76	6'-6"	X		ABUTMENT BODY - F.F. & B.F. - VERT.
A404	-	30	3'-0"	X		ABUTMENT BODY - TIES - HORIZ.
A505	-	38	8'-9"	X		ABUTMENT BODY - TOP - VERT.
A506	18	-	2'-0"			ABUTMENT BODY - TOP DOWELS - VERT.
A807	18	-	16'-2"	X		WINGS - B.F. - HORIZ.
A408	8	-	13'-9"	X		WINGS - B.F. - HORIZ.
A409	4	-	7'-10"	X	Ⓢ	WING 1 - B.F. - HORIZ.
A410	2	-	13'-6"	X		WING 1 - F.F. & B.F. - TOP - HORIZ.
A411	36	-	13'-10"	X		WING 1 - TOP & BOTTOM - VERT.
A412	3	-	16'-10"	X		WING 1 - TOP - VERT.
A513	18	-	14'-8"	X		WINGS - F.F. - HORIZ.
A414	8	-	15'-3"	X		WINGS - F.F. - HORIZ.
A415	4	-	9'-4"	X	Ⓢ	WING 1 - F.F. - HORIZ.
A416	4	-	8'-3"	X	Ⓢ	WING 2 - B.F. - HORIZ.
A417	2	-	13'-6"	X		WING 2 - TOP - HORIZ.
A418	36	-	15'-2"	X		WING 2 - TOP & BOTTOM - VERT.
A419	3	-	17'-4"	X		WING 2 - TOP - VERT.
A420	4	-	9'-9"	X	Ⓢ	WING 2 - F.F. - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

Ⓢ - LENGTH SHOWN FOR BAR IS AN AVERAGE AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS. BENT BARS USED IN BAR SERIES TABLE SHALL BE BENT AFTER CUTTING.



PLAN - WING 1

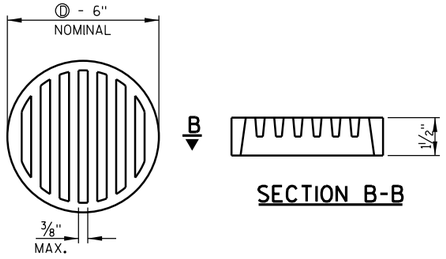


PLAN - WING 2

RODENT SHIELD NOTES:

ORIENT SHIELD SO SLOTS ARE VERTICAL.

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER.
A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 × 1-INCH STAINLESS STEEL SHEET METAL SCREWS. THE RODENT SHIELD, PIPE COUPLING AND SCREWS, SHALL BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".



RODENT SHIELD

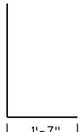
Ⓓ - DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

SECTION B-B

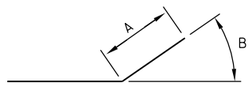
BAR MARK	NO. REQ'D.	LENGTH
A409	1 SERIES OF 4	3'-3" TO 12'-4"
A415	1 SERIES OF 4	4'-9" TO 13'-10"
A416	1 SERIES OF 4	3'-3" TO 13'-3"
A420	1 SERIES OF 4	4'-9" TO 14'-9"

BAR SERIES TABLE

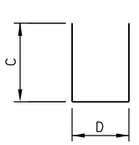
SEE LEGEND ON SHEET 4 FOR DESCRIPTION OF ★⬢◥▬▲◑



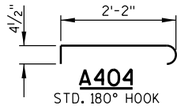
A503



MARK	A	B
A801 A807 A513	1'-6"	45°
A408 A409 A416	1'-10"	45°
A410	2'-5"	14°
A414 A415 A420	2'-0"	45°
A417	2'-5"	13°



MARK	C	D
A505	3'-5"	2'-2"
A411	6'-2"	1'-8"
A412	7'-5"	2'-2"
A418	6'-10"	1'-8"
A419	7'-8"	2'-2"



A404

STD. 180° HOOK

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-22-296

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WEST ABUTMENT DETAILS

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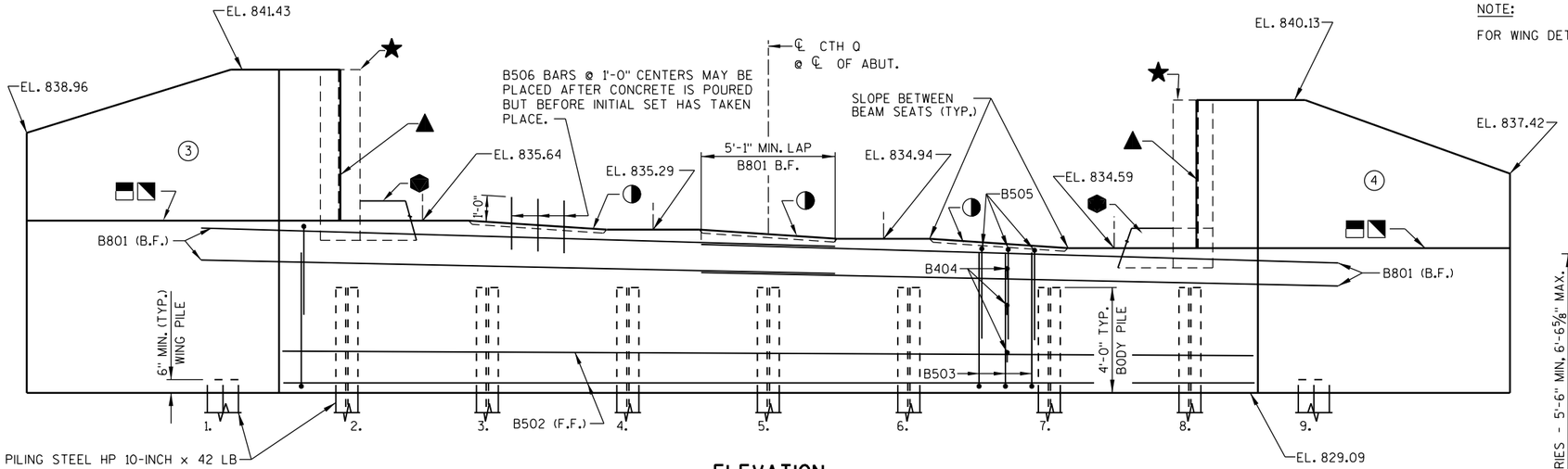
STATE PROJECT NUMBER

5667-00-75

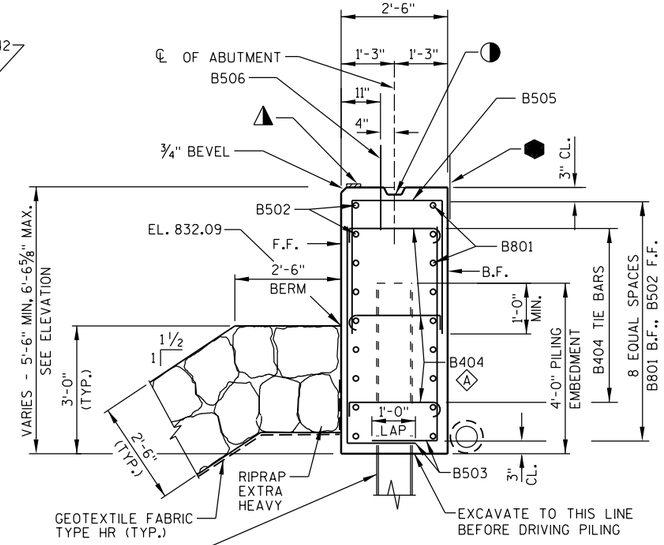
NOTE:

FOR WING DETAILS, SEE SHEET 7.



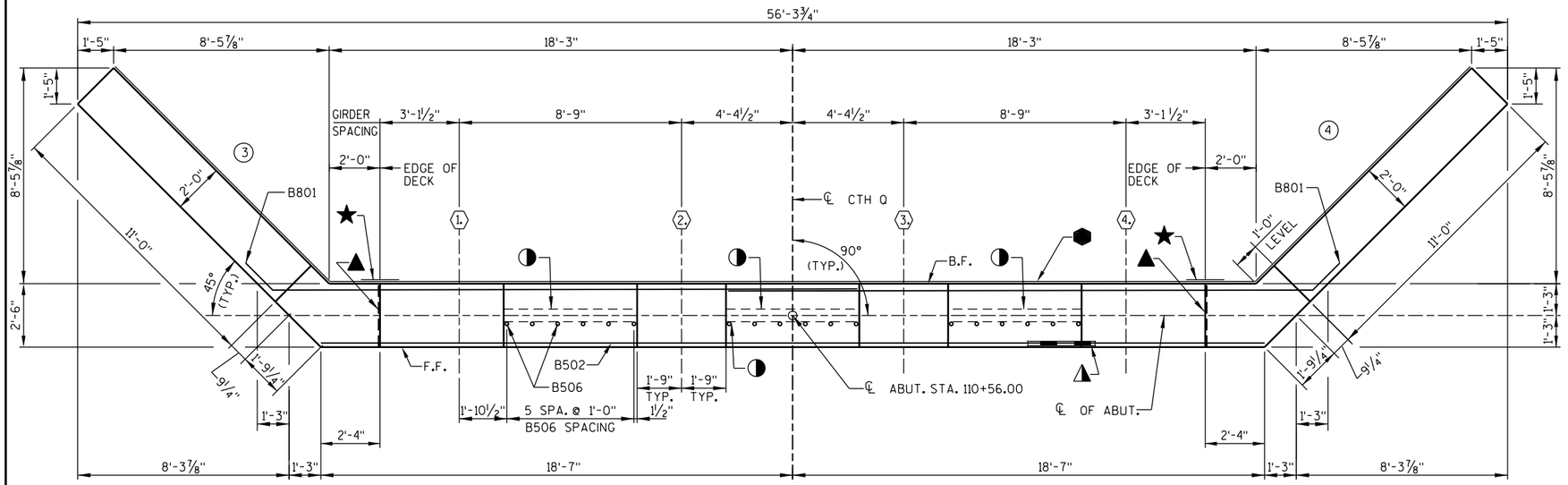
ELEVATION

(EAST ABUTMENT LOOKING EAST)

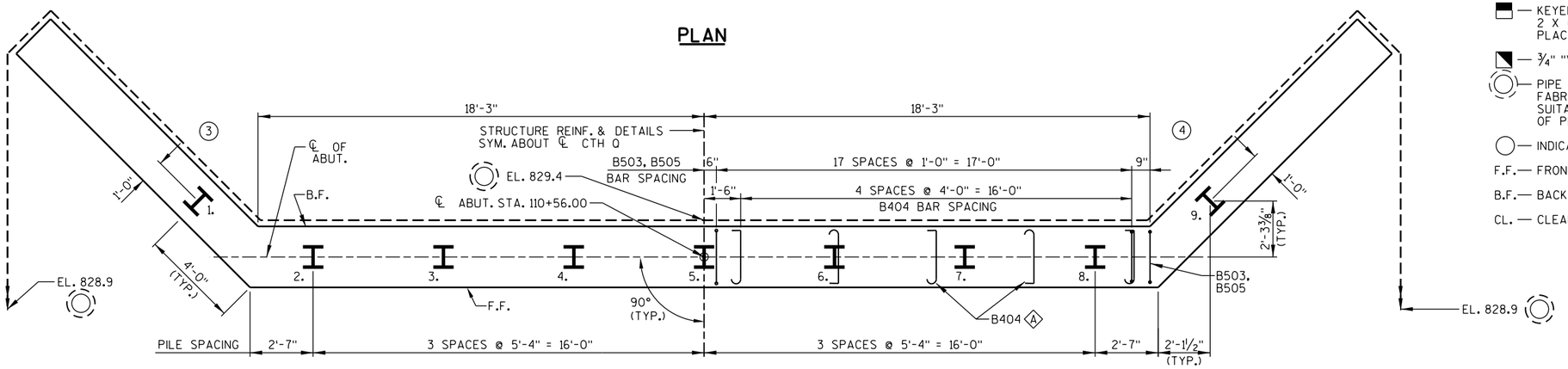


EAST ABUTMENT TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB WITH PILE POINTS DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 170 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED EAST ABUTMENT PILE LENGTHS ARE 26'-0". SEE SHEET 7 FOR PILE SPLICE DETAILS.

TYPICAL SECTION THRU ABUTMENT



PLAN



PILE PLAN

LEGEND

- ◑ — KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- ◇4 — ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.
- ▲ — ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE).
- ◭ — 4"x ½" FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF SLAB.
- ★ — VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM 9" BELOW BRIDGE SEAT TO TOP OF WINGS.
- ⬢ — HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WING TIPS.
- ◓ — KEYED CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2 X 6. POUR CONCRETE ABOVE JOINT AFTER DECK IS IN PLACE AND PLACE ⬢ ON B.F. OF WING.
- ◥ — ¾" "V" GROOVE ON FRONT FACE OF WING WALL.
- ◯ — PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE FABRIC AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. FOR RODENT SHIELD DETAILS, SEE SHEET 5.
- ◯ — INDICATES WING NUMBER ⬡ — INDICATES GIRDER NUMBER
- F.F. — FRONT FACE
- B.F. — BACK FACE
- CL. — CLEAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-22-296

DRAWN BY RLR | PLANS CK'D. KHB

EAST ABUTMENT

SHEET 6 OF 13
125

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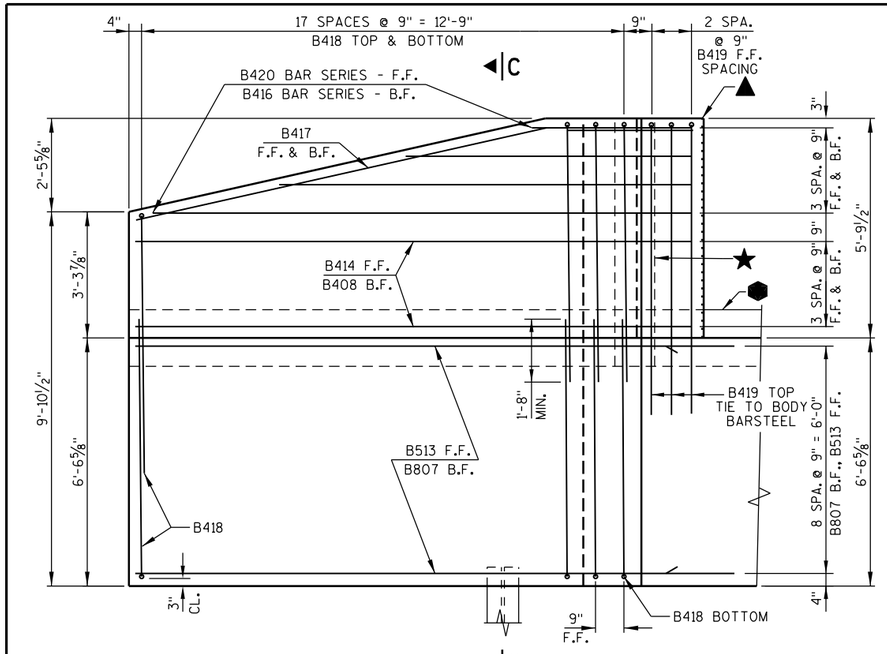
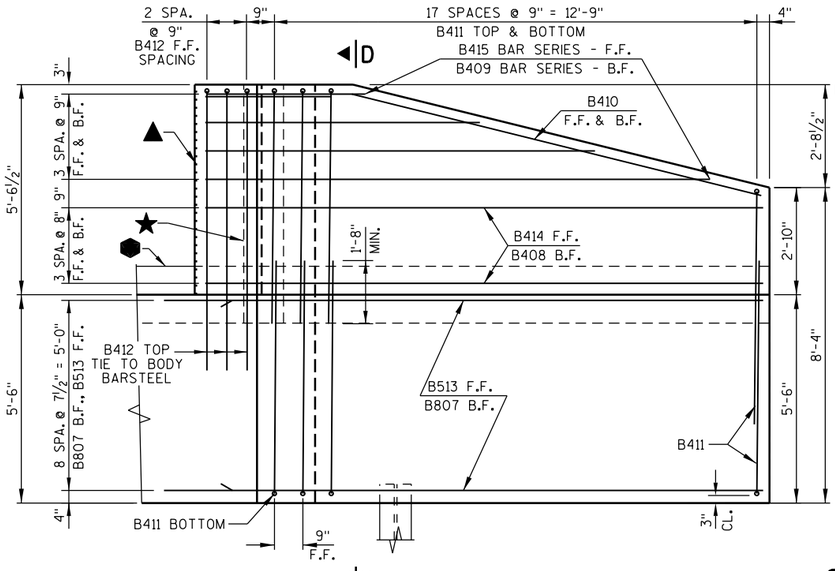


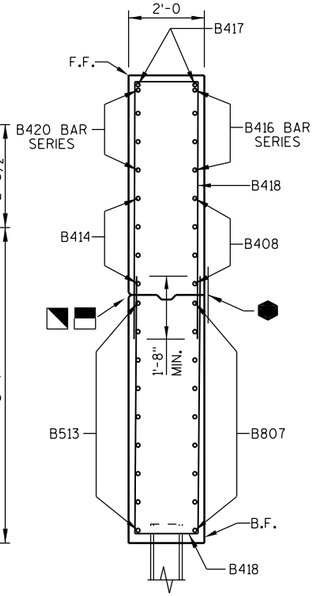
ELEVATION - WING 3

(LOOKING AT F.F. OF WING)

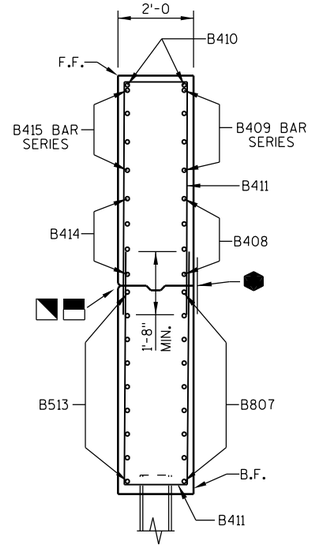


ELEVATION - WING 4

(LOOKING AT F.F. OF WING)



SECTION C-C THRU WING 3



SECTION D-D THRU WING 4

STATE PROJECT NUMBER

5667-00-75

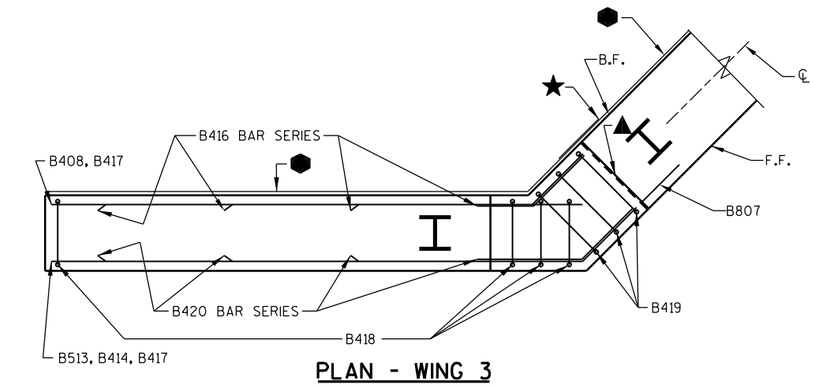
UNCOATED 2,445 LBS.
COATED 2,140 LBS.

BILL OF BARS (EAST ABUTMENT)

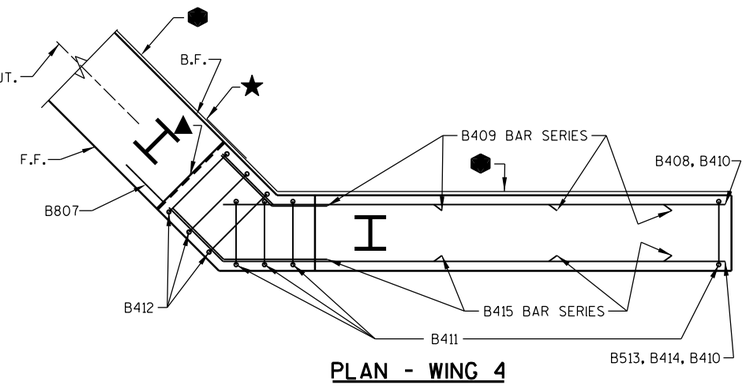
MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION
B801	-	18	24'-5"	X		ABUTMENT BODY - B.F. - HORIZ.
B502	-	9	37'-0"			ABUTMENT BODY - F.F. - HORIZ.
B503	-	76	6'-6"	X		ABUTMENT BODY - F.F. & B.F. - VERT.
B404	-	30	3'-0"	X		ABUTMENT BODY - TIES - HORIZ.
B505	-	38	8'-9"	X		ABUTMENT BODY - TOP - VERT.
B506	18	-	2'-0"			ABUTMENT BODY - TOP DOWELS - VERT.
B807	18	-	16'-2"	X		WINGS - B.F. - HORIZ.
B408	8	-	13'-9"	X		WINGS - B.F. - HORIZ.
B409	4	-	7'-10"	X	Ⓢ	WING 4 - B.F. - HORIZ.
B410	2	-	13'-6"	X		WING 4 - F.F. & B.F. - TOP - HORIZ.
B411	36	-	13'-10"	X		WING 4 - TOP & BOTTOM - VERT.
B412	3	-	16'-10"	X		WING 4 - TOP - VERT.
B513	18	-	14'-8"	X		WINGS - F.F. - HORIZ.
B414	8	-	15'-3"	X		WINGS - F.F. - HORIZ.
B415	4	-	9'-4"	X	Ⓢ	WING 4 - F.F. - HORIZ.
B416	4	-	8'-3"	X	Ⓢ	WING 3 - B.F. - HORIZ.
B417	2	-	13'-6"	X		WING 3 - TOP - HORIZ.
B418	36	-	15'-2"	X		WING 3 - TOP & BOTTOM - VERT.
B419	3	-	17'-4"	X		WING 3 - TOP - VERT.
B420	4	-	9'-9"	X	Ⓢ	WING 3 - F.F. - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

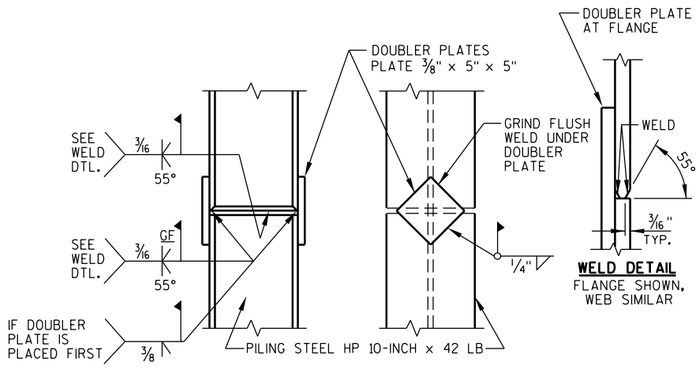
Ⓢ - LENGTH SHOWN FOR BAR IS AN AVERAGE AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS. BENT BARS USED IN BAR SERIES TABLE SHALL BE BENT AFTER CUTTING.



PLAN - WING 3



PLAN - WING 4



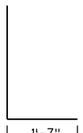
WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAILS

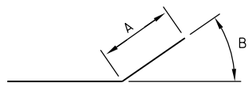
BAR MARK	NO. REQ'D.	LENGTH
B409	1 SERIES OF 4	3'-3" TO 12'-4"
B415	1 SERIES OF 4	4'-9" TO 13'-10"
B416	1 SERIES OF 4	3'-3" TO 13'-3"
B420	1 SERIES OF 4	4'-9" TO 14'-9"

BAR SERIES TABLE

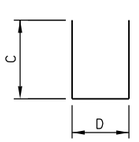
SEE LEGEND ON SHEET 6 FOR DESCRIPTION OF ★ ⬢ ◥ ▬ ▲ ◑



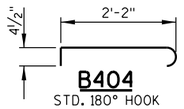
B503



MARK	A	B
B801 B807 B513	1'-6"	45°
B408 B409 B416	1'-10"	45°
B410	2'-5"	14°
B414 B415 B420	2'-0"	45°
B417	2'-5"	13°



MARK	C	D
B505	3'-5"	2'-2"
B411	6'-2"	1'-8"
B412	7'-5"	2'-2"
B418	6'-10"	1'-8"
B419	7'-8"	2'-2"



B404
STD. 180° HOOK

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STRUCTURE B-22-296

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EAST ABUTMENT DETAILS

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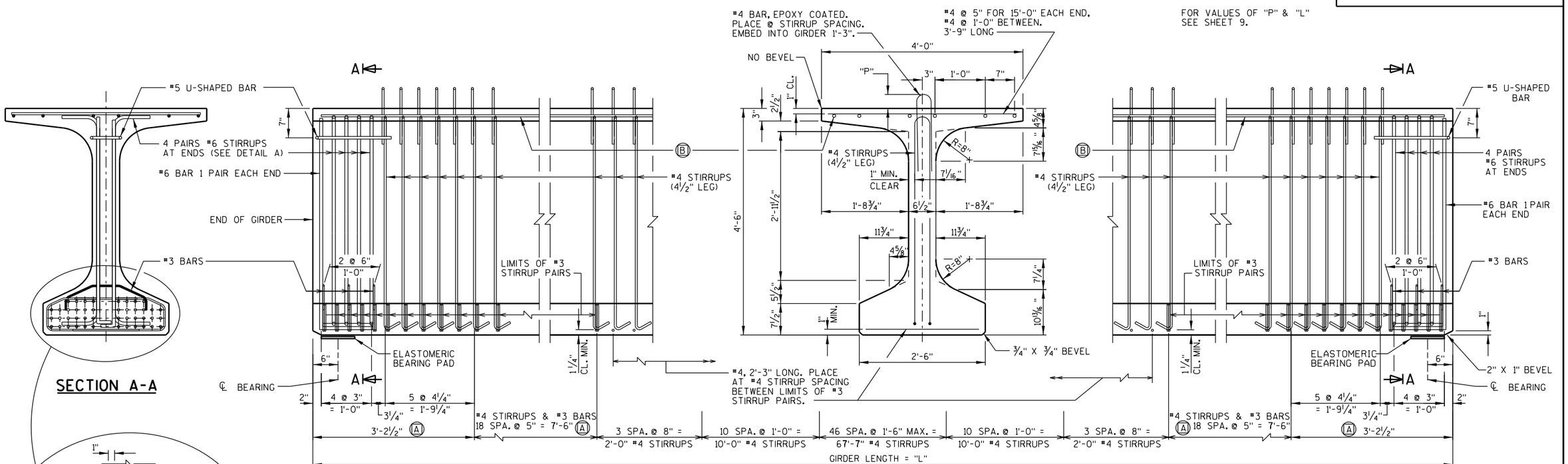
STATE PROJECT NUMBER

5667-00-75



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STATE OF WISCONSIN
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STRUCTURE B-22-296

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54W" PRESTRESSED GIRDER

SHEET 8 OF 13

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DATE= 8/20/2021

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STATE PROJECT NUMBER
5667-00-75

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

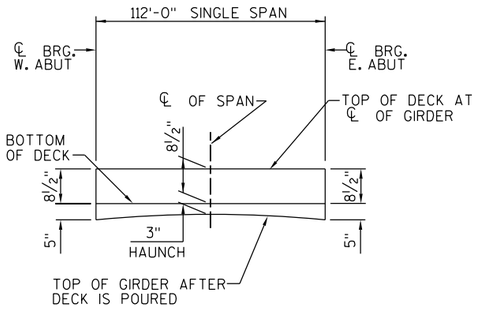
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON ACCEPTANCE OF THE STRUCTURES MAINTENANCE SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO SHOP DRAWING SUBMITTAL.

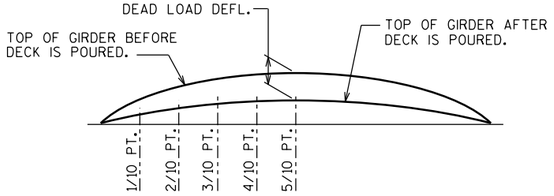
PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET 13.



HAUNCH HEIGHTS FOR GIRDER STIRRUP PROJECTION

NOTE: HAUNCH HEIGHTS ARE BASED ON THE TIME DEPENDENT VARIABLE "PRESTRESSED CAMBER" ASSUMING NORMAL CONSTRUCTION SCHEDULING.



DEAD LOAD DEFLECTION DIAGRAM

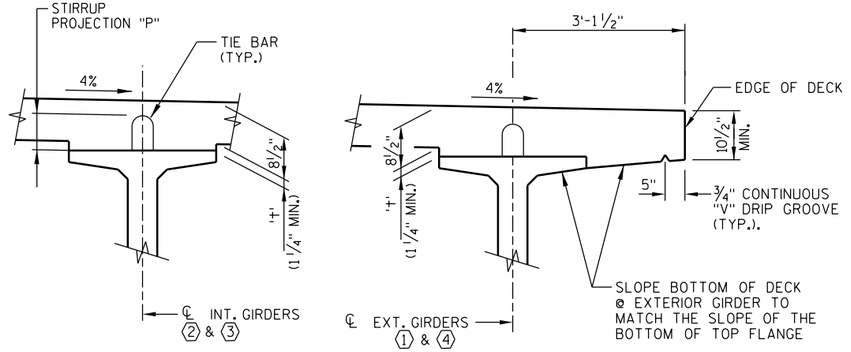
TO DETERMINE 't', ELEV. OF TOP OF GIRDERS AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF THE SPAN SHALL BE TAKEN. TO DETERMINE THE TOP OF DECK ELEVATION FOR POINT REFERRED USE TABLE ON THIS SHEET AND ADJUST FOR CROSS SLOPE OVER GIRDER. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS

= HAUNCH HEIGHT 't'

IF 1¼" MINIMUM HAUNCH HEIGHT 't' AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

NOTE: AN AVERAGE HAUNCH ("t") OF 3¾" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES."



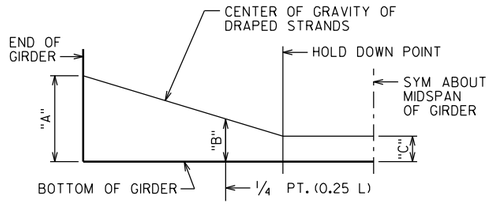
DECK HAUNCH DETAIL

*THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	4"

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

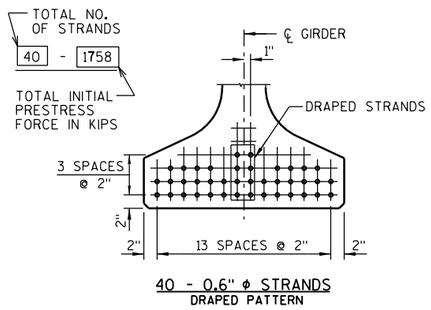
THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



DRAPED STRAND PROFILE

TOP OF DECK ELEVATIONS @ ℄ OF GIRDERS

LOCATION	SPAN POINT	SOUTH DECK EDGE	C/L GIRDER 4	C/L GIRDER 3	C/L CTH Q	C/L GIRDER 2	C/L GIRDER 1	NORTH DECK EDGE
W. ABUT.	1	842.81	842.94	843.29	843.46	843.64	843.99	844.11
	1.1	842.54	842.67	843.02	843.19	843.37	843.72	843.84
	1.2	842.27	842.40	842.75	842.92	843.10	843.45	843.57
	1.3	842.01	842.13	842.48	842.66	842.83	843.18	843.31
	1.4	841.74	841.86	842.21	842.39	842.56	842.91	843.04
	1.5	841.47	841.59	841.94	842.12	842.29	842.64	842.77
	1.6	841.20	841.32	841.67	841.85	842.02	842.37	842.50
	1.7	840.93	841.06	841.41	841.58	841.76	842.11	842.23
	1.8	840.66	840.79	841.14	841.31	841.49	841.84	841.96
	1.9	840.39	840.52	840.87	841.04	841.22	841.57	841.69
E. ABUT.	2	840.12	840.25	840.60	840.77	840.95	841.30	841.42



40 - 0.6" ϕ STRANDS
DRAPED PATTERN

SECTION THRU GIRDER AT ℄ SPAN

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L" (FEET)	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (P.S.I.)	"P" (IN.) 1ST 1/3 OF GIRDER	MID 1/3 OF GIRDER	END 1/3 OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) *
1	1&4	113'-0"	0.6	1.1	1.6	1.8	1.9	1.8	1.6	1.1	0.6	8000	9½"	7½"	9½"	0.6	40	6800	49	16	19	5	-	-
1	2&3	113'-0"	0.7	1.3	1.8	2.1	2.2	2.1	1.8	1.3	0.7	8000	9½"	7½"	9½"	0.6	40	6800	49	16	19	5	-	-

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STRUCTURE B-22-296

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54W" PRESTRESSED GIRDER & DECK FORMING DETAILS

SHEET 9 OF 13
128

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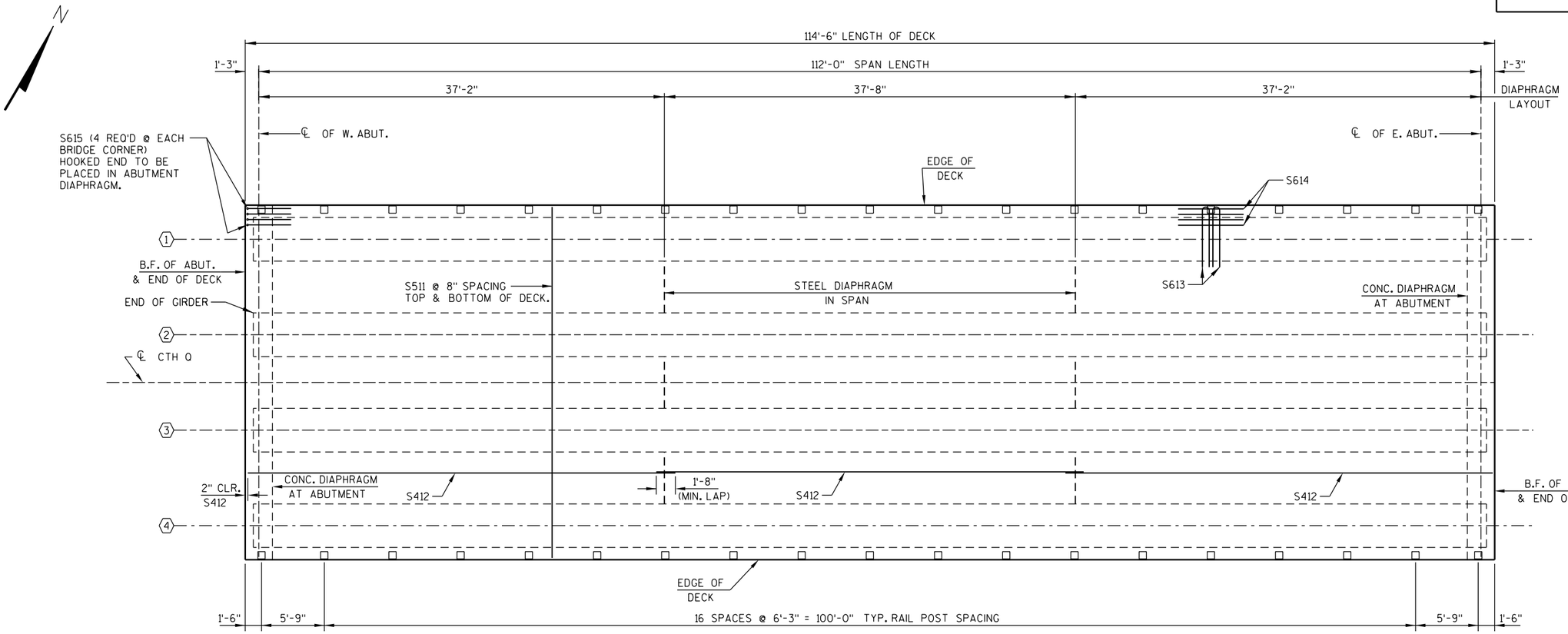
5667-00-75



PLAN

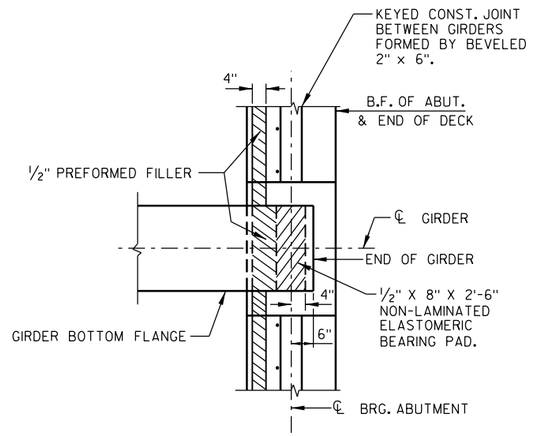
GENERAL NOTES

SEE SHEET 9 FOR DECK HAUNCH DETAIL AND HAUNCH HEIGHTS FOR GIRDER STIRRUP PROJECTION.

SEE SHEET 11 FOR CROSS SECTION AND LONGITUDINAL SECTION THRU BRIDGE SHOWING BAR SPACING.

SEE SHEET 12 FOR RAILING TUBULAR TYPE M DETAILS.

⬡ - INDICATES GIRDER NUMBER



BEARING PAD DETAIL

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STRUCTURE B-22-296

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SUPERSTRUCTURE

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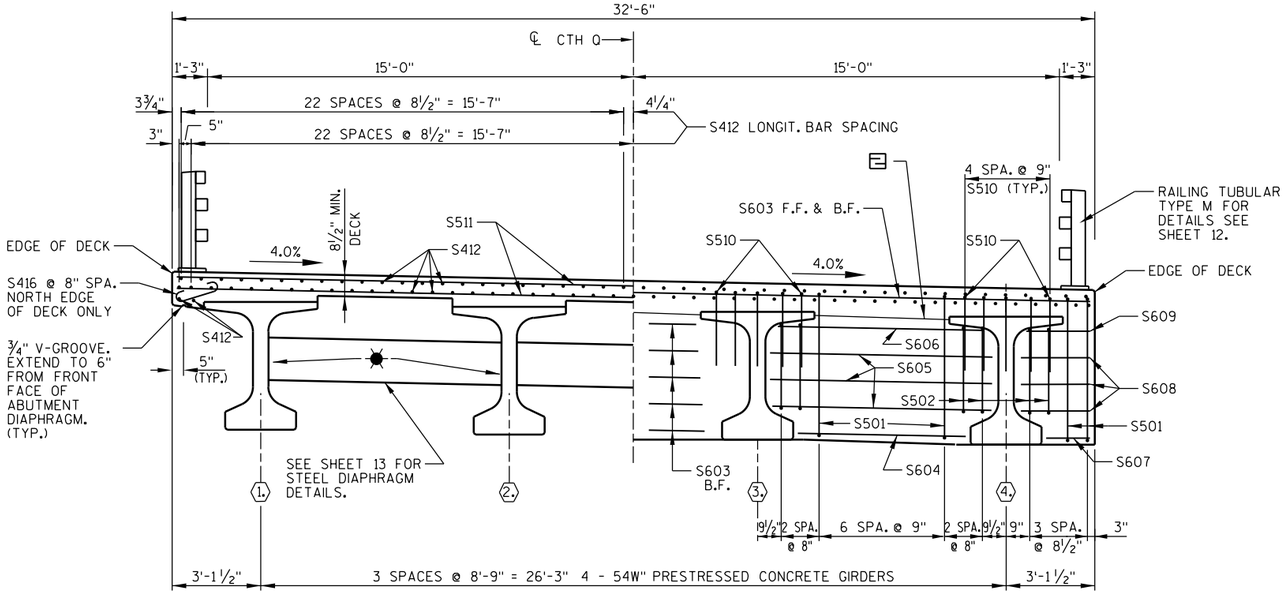


IN SPAN AT ABUTMENTS

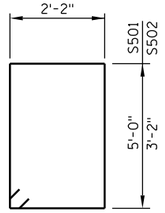
CROSS SECTION THRU BRIDGE

(LOOKING EAST)

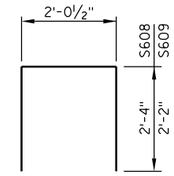
BILL OF BARS (COATED) 24,400 LBS.

MARK	NUMBER REQ'D.	LENGTH	BENT	DESCRIPTION
S501	50	15'-0"	X	DIAPH. @ ABUT. - STIRRUP - VERT.
S502	32	11'-4"	X	DIAPH. @ ABUT. - STIRRUP - VERT.
S603	14	32'-2"		DIAPH. @ ABUT. - B.F. & TOP - HORIZ.
S604	6	5'-10"		DIAPH. @ ABUT. - F.F. BETWEEN GIRDERS - HORIZ.
S605	18	7'-8"		DIAPH. @ ABUT. - F.F. BETWEEN GIRDERS - HORIZ.
S606	6	7'-3"		DIAPH. @ ABUT. - F.F. BETWEEN GIRDERS - HORIZ.
S607	4	1'-6"		DIAPH. @ ABUT. - F.F. @ ENDS - HORIZ.
S608	12	6'-5"	X	DIAPH. @ ABUT. - F.F. @ ENDS - HORIZ.
S609	4	6'-1"	X	DIAPH. @ ABUT. - F.F. @ ENDS - HORIZ.
S510	40	5'-0"	X	DIAPH. @ ABUT. - OVER & BEHIND GIRDERS - VERT.
S511	343	32'-2"		DECK - TOP & BOTTOM - TRANS.
S412	285	39'-2"		DECK - TOP & BOTTOM - LONGIT.
S613	76	11'-3"	X	DECK @ RAIL POSTS, 2 PER POST - TRANS.
S614	136	6'-0"		DECK @ RAIL POSTS, 4 PER POST - LONGIT.
S615	16	4'-8"	X	DECK @ RAIL POSTS, 4 PER END POST - LONGIT.
S416	171	2'-6"	X	DECK - HOOK BAR @ DECK NORTH EDGE BOTTOM - TRANS.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
EPOXY COAT ALL SUPERSTRUCTURE BAR REINFORCEMENT.

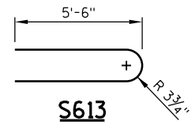


S501, S502

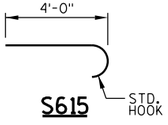


S608, S609

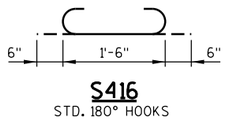
S510



S613



S615



S416
STD. 180° HOOKS

LEGEND

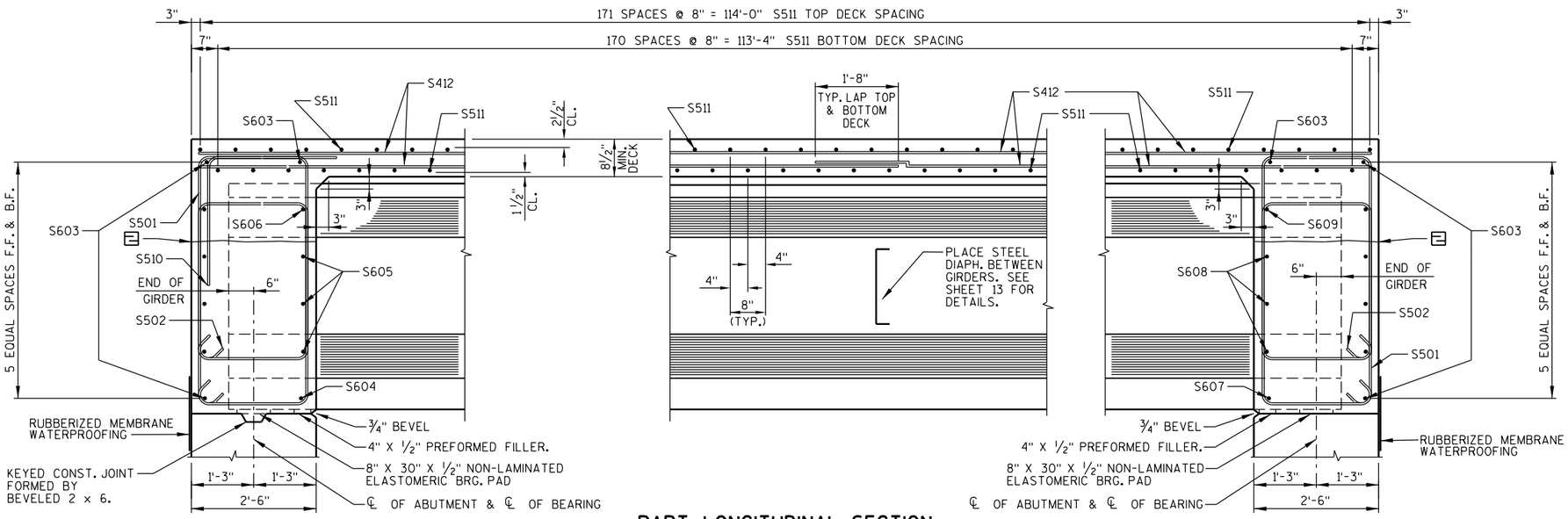
⬡ - INDICATES GIRDER NUMBER

⊟ - OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDERS. IF USED DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR AND PLACE RUBBERIZED MEMBRANE WATERPROOFING ON B.F. AT JOINT. (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".

✷ - FOR DETAILS OF STEEL DIAPHRAGMS AND DIAPHRAGM INSERTS, SEE SHEET 13. FOR LAYOUT OF STEEL DIAPHRAGMS, SEE PLAN SHEET 10.

F.F. - FRONT FACE

B.F. - BACK FACE



PART LONGITUDINAL SECTION

TYP. INTERIOR BAY

TYP. END BAY

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STRUCTURE B-22-296

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SUPERSTRUCTURE SECTIONS & DETAILS

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130

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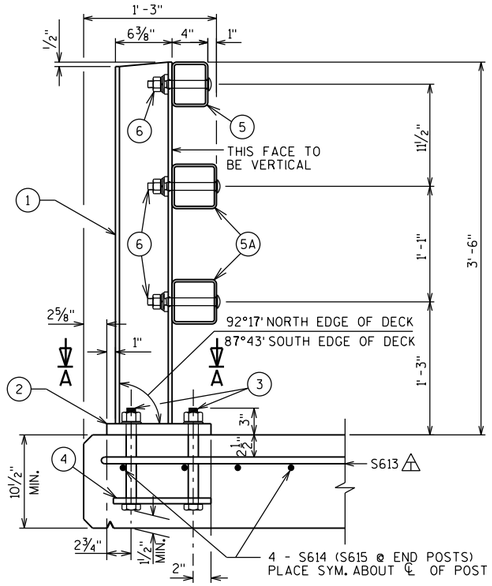
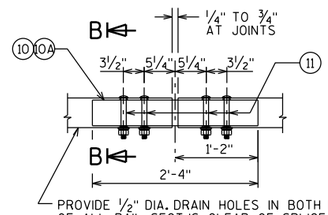
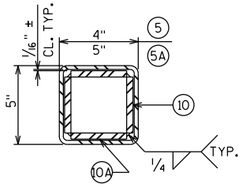


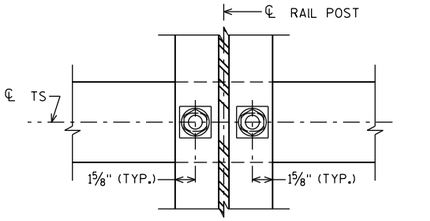
SECTION THRU RAILING ON DECK



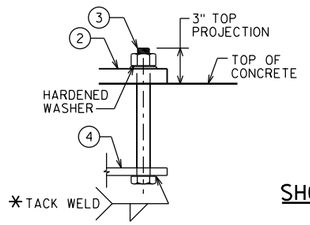
FIELD ERECTION JOINT DETAIL



SECTION B-B

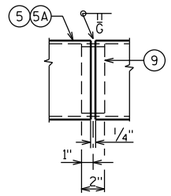


SECTION THRU POST WEB



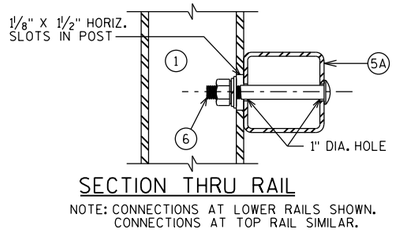
ANCHOR BOLTS

✳ ANCHOR BOLT ASSEMBLY MAY BE TACK WELDED, EITHER IN THE SHOP, OR IN THE FIELD AFTER THE ANCHOR PLATE IS PLACED.



SHOP RAIL SPLICE DETAIL

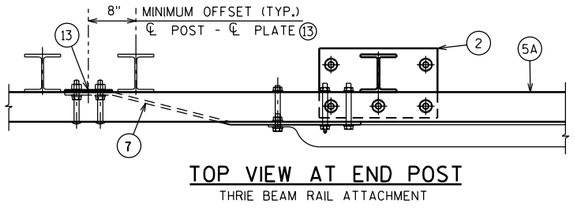
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



SECTION THRU RAIL

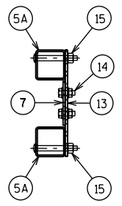
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS

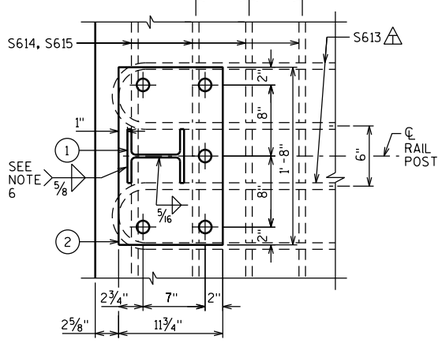


TOP VIEW AT END POST

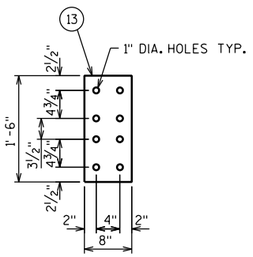
THRIE BEAM RAIL ATTACHMENT



SECTION C-C

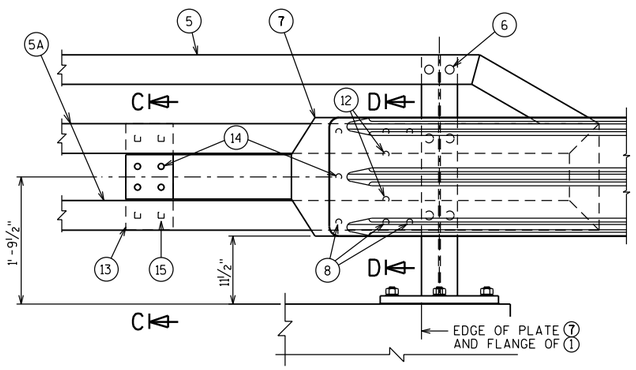


SECTION A-A



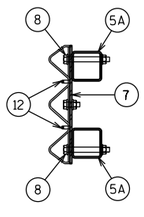
ANCHOR PLATE

AT BEAM GUARD ATTACHMENT



DETAIL AT END POST

THRIE BEAM RAIL ATTACHMENT



SECTION D-D

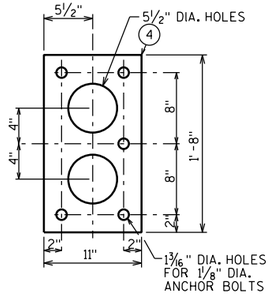
LEGEND

1. W6 x 25 WITH 1⅛" X 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1¼" x 11¾" x 1'-8" WITH 1 7/16" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
3. ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 10¾" LONG ON CONCRETE SUPERSTRUCTURE.
4. ⅝" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3
5. TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" X 1⅝" X 1⅝" MIN. WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
7. ½" THK. BACK-UP PLATE WITH 2 - ⅞" X 1½" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
8. 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
9. SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".
10. ⅜" X 3⅝" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
10A. ⅜" X 2⅝" X 2'-4" PLATE USED IN NO. 5, ⅜" X 3⅝" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
11. ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16" X 1¼" LONGIT. SLOTTED HOLES IN PLATE NO. 10A AT FIELD JOINTS. PROVIDE 15/16" DIA. ROUND HOLES IN TUBES NO. 5 AND NO. 5A.
12. ⅞" DIA. X 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
13. ⅜" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
14. ⅞" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
15. 1" DIA. HOLES IN TUBES NO. 5A FOR ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

GENERAL NOTES

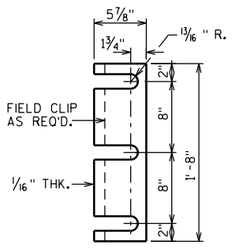
1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.
10. PAINTING IS NOT REQUIRED.
11. THIS RAILING MEETS AASHTO MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) FOR TEST LEVEL 2 (TL-2).

⚠ TIE TO TOP MAT OF STEEL.

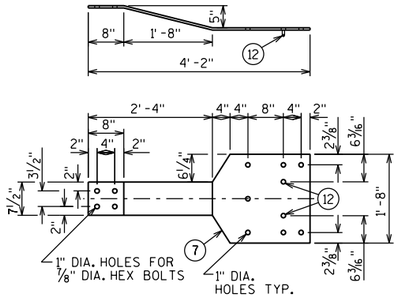


ANCHOR PLATE

AT RAIL TO DECK CONNECTION

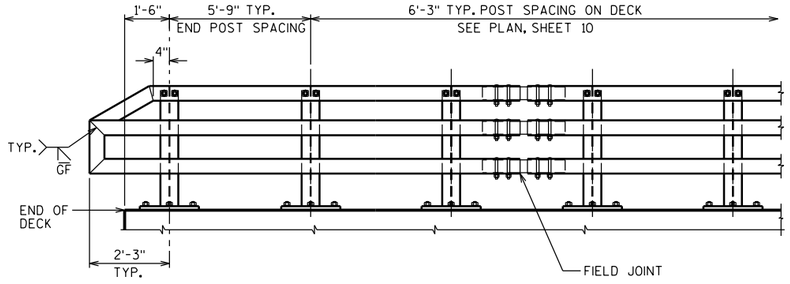


POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-22-296

DRAWN BY RLR | PLANS CK'D. KHB

RAILING TUBULAR TYPE M

SHEET 12 OF 13
131

STATE PROJECT NUMBER
5667-00-75

FILE= 3405011_12.DGN
DATE= 8/30/2021

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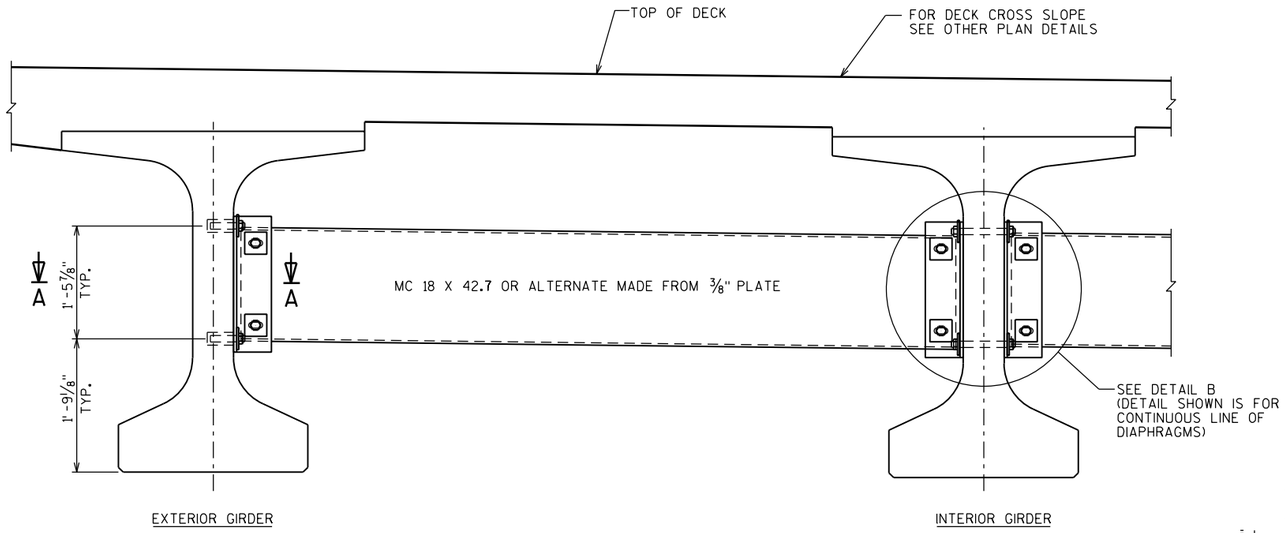
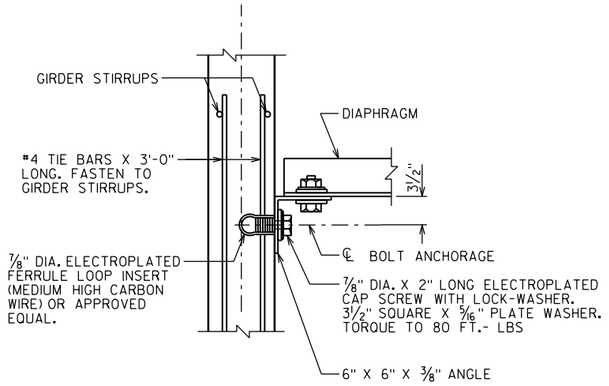
STATE PROJECT NUMBER

5667-00-75

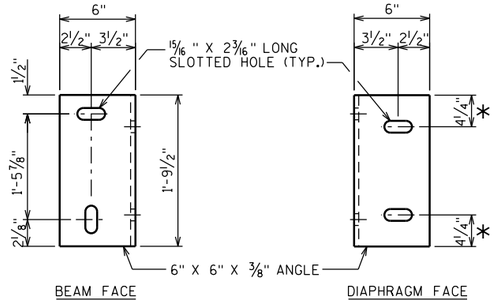


PART TRANSVERSE SECTION AT DIAPHRAGM



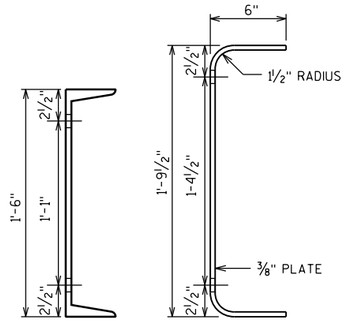
SECTION A-A

(FOR EXTERIOR ATTACHMENT)

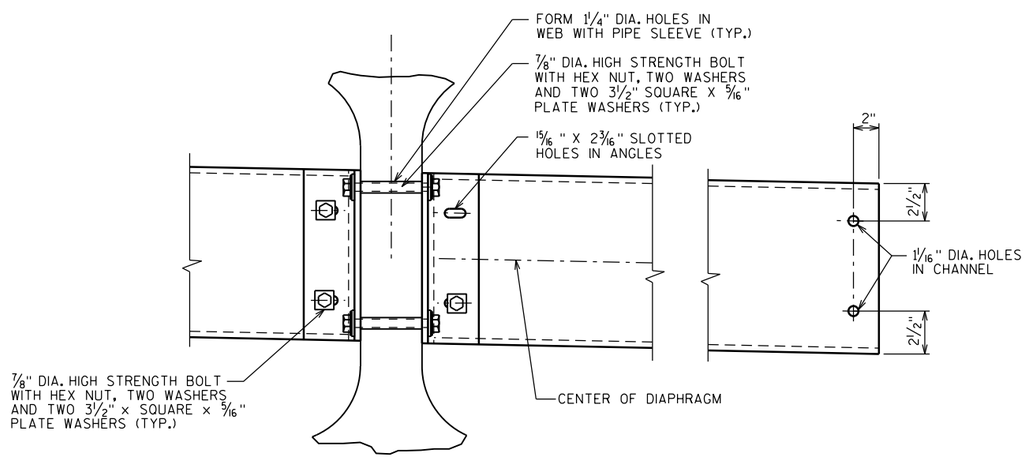


DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM



SECTION THRU DIAPHRAGM



DETAIL B

(FOR CONTINUOUS LINE OF DIAPHRAGMS)

NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-22-296", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS ¼ TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-22-296

DRAWN BY RLR | PLANS CK'D. KHB

STEEL DIAPHRAGM

SHEET 13 OF 13
132

FILE= 3405011_13.DGN
DATE= 8/30/2021

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Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
5 - EXPANDED EBS	WILL BE BACKFILLED WITH BREAKER RUN
7 - REDUCED EBS IN FILL	REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL OUTSIDE THE 1:1 SLOPE
8 - MASS ORDINATE	EBS TO BE BACKFILLED WITH BREAKER RUN: [CUT - ((FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

Stage 1 - CTH Q

STATION	REAL STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)						
			CUT	FILL	ROCK EXC	EBS	CUT	FILL	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE	311.0110 BREAKER RUN (TON)
							NOTE 1	NOTE 3			1.00 NOTE 1	1.25	1.10	1.30 NOTE 5	0.80 NOTE 7	NOTE 8	
101+95.918	10195.92	0.00	78.07	80.33	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0
102+00	10200.00	4.08	94.41	82.57	0.00	0.00	13	12	0	0	13	15	0	0	0	-2	0
102+40.45	10240.45	40.45	0.00	96.30	15.44	0.00	71	134	12	0	84	166	13	0	0	-82	0
102+50	10250.00	9.55	0.00	99.10	29.90	0.00	0	35	8	0	84	199	22	0	0	-115	0
102+84.585	10284.58	34.58	0.00	116.78	189.95	0.00	0	138	141	0	84	177	177	0	0	-93	0
103+00	10300.00	15.42	0.00	111.70	330.37	0.00	0	65	149	0	84	54	341	0	0	30	0
103+29.112	10329.11	29.11	0.00	136.66	791.27	0.00	0	134	605	0	84	-611	1,007	0	0	695	0
103+50	10350.00	20.89	0.00	67.77	1315.83	0.00	0	79	815	0	84	-1,633	1,903	0	0	1,717	0
104+00	10400.00	50.00	0.00	3.92	3118.28	0.00	0	66	4,106	0	84	-7,196	6,420	0	0	7,280	0
104+50	10450.00	50.00	0.00	0.00	3515.15	0.00	0	4	6,142	0	84	-15,636	13,176	0	0	15,720	0
105+00	10500.00	50.00	0.00	0.00	3776.30	0.00	0	0	6,751	0	84	-24,919	20,602	0	0	25,003	0
105+50	10550.00	50.00	0.00	2164.52	1557.72	0.00	0	2,004	4,939	0	84	-29,205	26,035	0	0	29,289	0
105+75	10575.00	25.00	0.00	1843.12	516.05	0.00	0	1,855	960	0	84	-28,206	27,091	0	0	28,290	0
106+00	10600.00	25.00	0.00	2006.72	0.00	0.00	0	1,782	239	0	84	-26,307	27,354	0	0	26,391	0
106+25	10625.00	25.00	0.00	1519.81	37.76	0.00	0	1,633	17	0	84	-24,289	27,372	0	0	24,373	0
106+50	10650.00	25.00	0.00	2546.55	0.00	0.00	0	1,883	17	0	84	-21,959	27,391	0	0	22,043	0
106+75	10675.00	25.00	0.00	3124.56	0.00	0.00	0	2,626	0	0	84	-18,676	27,391	0	0	18,760	0
107+00	10700.00	25.00	0.00	2870.37	0.00	0.00	0	2,775	0	0	84	-15,208	27,391	0	0	15,292	0
107+50	10750.00	50.00	0.00	1628.49	16.30	0.00	0	4,166	15	0	84	-10,021	27,408	0	0	10,105	0
108+00	10800.00	50.00	0.00	2452.16	0.00	0.00	0	3,778	15	0	84	-5,319	27,424	0	0	5,403	0
108+50	10850.00	50.00	0.00	175.83	2155.53	0.00	0	2,433	1,996	0	84	-5,022	29,620	0	0	5,106	0
108+80.703	10880.70	30.70	0.00	0.00	1870.95	0.00	2,289	100	2,289	0	2,373	-8,045	32,138	0	0	10,418	0
109+00	10900.00	19.30	0.00	4.09	1188.21	0.00	1,093	1	1,093	0	3,466	-9,546	33,340	0	0	13,012	0
109+26.2	10926.20	26.20	0.00	10.65	328.63	0.00	736	7	736	0	4,202	-10,549	34,150	0	0	14,751	0
109+34	10934.00	7.80	0.00	251.33	141.85	0.00	68	38	68	0	4,270	-10,595	34,224	0	0	14,865	0
109+50	10950.00	16.00	0.00	0.00	0.00	0.00	42	74	42	0	4,312	-10,561	34,271	0	0	14,873	0
BRIDGE																	
110+57.18	11057.18	0.00	0.00	1099.26	0.00	389.67	0	0	0	0	4,312	-10,561	34,271	0	0	14,873	0
110+75.032	11075.03	17.85	0.00	1082.28	0.00	389.11	0	721	0	257	4,312	-9,916	34,271	334	206	14,228	601
111+00	11100.00	24.97	0.00	1048.20	0.00	385.45	0	985	0	358	4,312	-9,043	34,271	800	492	13,355	1,439
111+50	11150.00	50.00	0.00	1175.54	0.00	394.22	0	2,059	0	722	4,312	-7,191	34,271	1,738	1,070	11,503	3,129
112+00	11200.00	50.00	0.00	1213.69	0.00	405.23	0	2,212	0	740	4,312	-5,166	34,271	2,700	1,662	9,478	4,860
112+09.032	11209.03	9.03	0.00	1188.01	0.00	397.88	0	402	0	134	4,312	-4,798	34,271	2,874	1,769	9,110	5,174
112+50	11250.00	40.97	0.00	934.28	0.00	0.00	0	1,610	0	302	4,312	-3,087	34,271	3,267	2,010	7,399	5,880
113+00	11300.00	50.00	0.00	741.81	0.00	0.00	0	1,552	0	0	4,312	-1,147	34,271	3,267	2,010	5,459	5,880
113+24.737	11324.74	24.74	0.00	663.17	0.00	0.00	0	644	0	0	4,312	-342	34,271	3,267	2,010	4,654	5,880
113+50	11350.00	25.26	0.00	558.10	0.00	0.00	0	571	0	0	4,312	371	34,271	3,267	2,010	3,941	5,880
113+64.59	11364.59	14.59	0.00	498.08	0.00	0.00	0	285	0	0	4,312	728	34,271	3,267	2,010	3,584	5,880
CTH Q NORTH END (123+00 - 132+12)																	
123+00	12300.00	37.76	0.00	0.00	92.88	0.00	76	0	76	0	4,388	623	34,354	3,267	2,010	3,765	5,880
123+50	12350.00	50.00	0.00	0.00	66.39	0.00	147	0	147	0	4,535	421	34,516	3,267	2,010	4,114	5,880
124+00	12400.00	50.00	0.00	0.00	77.50	0.00	0	0	133	0	4,535	238	34,662	3,267	2,010	4,297	5,880
124+50	12450.00	50.00	0.00	0.00	130.69	0.00	0	0	193	0	4,535	-27	34,874	3,267	2,010	4,562	5,880
125+00	12500.00	50.00	0.00	0.00	176.35	0.00	0	0	284	0	4,535	-418	35,187	3,267	2,010	4,953	5,880
125+50	12550.00	50.00	0.00	0.00	202.70	0.00	0	0	351	0	4,535	-900	35,573	3,267	2,010	5,435	5,880
126+00	12600.00	50.00	0.00	0.00	183.18	0.00	0	0	357	0	4,535	-1,391	35,966	3,267	2,010	5,926	5,880
126+50	12650.00	50.00	0.00	0.00	233.95	0.00	0	0	386	0	4,535	-1,922	36,390	3,267	2,010	6,457	5,880
127+00	12700.00	50.00	0.00	0.00	354.02	0.00	0	0	544	0	4,535	-2,670	36,989	3,267	2,010	7,205	5,880
127+50	12750.00	50.00	0.00	0.00	353.13	0.00	0	0	655	0	4,535	-3,571	37,709	3,267	2,010	8,106	5,880
128+00	12800.00	50.00	0.00	0.00	405.98	0.00	0	0	703	0	4,535	-4,537	38,482	3,267	2,010	9,072	5,880
128+50	12850.00	50.00	0.00	0.00	345.42	0.00	0	0	696	0	4,535	-5,494	39,248	3,267	2,010	10,029	5,880
129+00	12900.00	50.00	0.00	0.00	266.83	0.00	0	0	567	0	4,535	-6,274	39,872	3,267	2,010	10,809	5,880
129+50	12950.00	50.00	0.00	0.00	326.98	0.00	0	0	550	0	4,535	-7,030	40,477	3,267	2,010	11,565	5,880
130+00	13000.00	50.00	0.00	0.00	271.83	0.00	0	0	554	0	4,535	-7,792	41,086	3,267	2,010	12,327	5,880
130+50	13050.00	50.00	0.00	0.00	106.12	0.00	0	0	350	0	4,535	-8,273	41,471	3,267	2,010	12,808	5,880
131+00	13100.00	50.00	0.00	0.00	64.05	0.00	0	0	158	0	4,535	-8,490	41,645	3,267	2,010	13,025	5,880
131+50	13150.00	50.00	0.00	0.00	34.87	0.00	0	0	92	0	4,535	-8,617	41,746	3,267	2,010	13,152	5,880
132+00	13200.00	50.00	6.95	0.00	0.00	0.00	6	0	32	0	4,541	-8,661	41,781	3,267	2,010	13,202	5,880
132+12.845	13212.85	12.85	7.50	0.00	0.00	0.00	3	0	0	0	4,544	-8,661	41,781	3,267	2,010	13,205	5,880
							4,544	36,863	37,983	2,513							

Stage 1 - HOMER RD

STATION	REAL STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)					
			CUT	FILL	ROCK EXC	EBS	CUT	FILL	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
											1.00	1.25	1.10	1.30	0.80	
							NOTE 1	NOTE 3			NOTE 1			NOTE 5	NOTE 7	NOTE 8
03+50	350.00	0.00	0.02	34.58	0.00	0.00	0	0	0	0	0	0	0	0	0	0
03+55.837	355.84	5.84	9.39	16.09	0.00	0.00	1	5	0	0	1	6	0	0	0	-5
03+61.279	361.28	5.44	44.75	10.85	0.00	0.00	5	3	0	0	6	10	0	0	0	-4
03+97.558	397.56	36.28	0.00	2.13	440.22	0.00	30	9	296	0	36	-386	326	0	0	422
04+00	400.00	2.44	0.00	1.80	486.11	0.00	0	0	42	0	36	-444	372	0	0	480
04+33.837	433.84	33.84	35.94	0.11	600.79	0.00	23	1	681	0	59	-1,379	1,121	0	0	1,438
04+50	450.00	16.16	48.10	12.19	655.47	0.00	25	4	376	0	84	-1,891	1,535	0	0	1,975
04+70.116	470.12	20.12	58.50	33.49	618.36	0.00	40	17	475	0	124	-2,523	2,057	0	0	2,647
05+00	500.00	29.88	39.94	58.65	787.44	0.00	54	51	778	0	178	-3,529	2,913	0	0	3,707
05+50	550.00	50.00	20.15	162.05	927.55	0.00	56	204	1,588	0	234	-5,457	4,660	0	0	5,691
06+00	600.00	50.00	10.44	297.48	227.57	0.00	28	425	1,070	0	262	-6,397	5,837	0	0	6,659
06+50	650.00	50.00	20.31	308.91	0.00	0.00	28	561	211	0	290	-5,986	6,069	0	0	6,276
06+73.28	673.28	23.28	48.49	249.56	0.00	0.00	30	241	0	0	320	-5,685	6,069	0	0	6,005
EXISTING CTH Q ROADWAY																
07+50	750.00	0.00	84.02	315.45	0.00	0.00	0	0	0	0	320	-5,685	6,069	0	0	6,005
08+00	800.00	50.00	88.23	496.96	0.00	0.00	159	752	0	0	479	-4,745	6,069	0	0	5,224
08+49.947	849.95	49.95	0.89	1100.65	0.00	0.00	82	1,478	0	0	561	-4,745	6,069	0	0	3,458
							561	**3,751**	**5,517**	**0**						

STAGE 2A - CTH Q

STATION	REAL STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)					
			CUT	FILL	ROCK EXC	EBS	CUT	FILL	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
											1.00	1.25	1.10	1.30	0.80	
							NOTE 1	NOTE 3			NOTE 1			NOTE 5	NOTE 7	NOTE 8
113+64.59	11364.59	0.00	190.06	498.08	0.00	0.00	0	0	0	0	0	0	0	0	0	0
114+00	11400.00	35.41	106.41	390.04	0.00	0.00	194	582	0	0	194	728	0	0	0	-534
114+08.923	11408.92	8.92	87.82	370.68	0.00	0.00	32	126	0	0	226	885	0	0	0	-659
114+50	11450.00	41.08	46.62	286.50	0.00	0.00	102	500	0	0	328	1,510	0	0	0	-1,182
114+53.256	11453.26	3.26	43.83	277.38	0.00	0.00	5	34	0	0	333	1,553	0	0	0	-1,220
114+97.59	11497.59	44.33	30.36	159.42	0.00	0.00	61	359	0	0	394	2,001	0	0	0	-1,607
115+00	11500.00	2.41	29.91	161.50	0.00	0.00	3	14	0	0	397	2,019	0	0	0	-1,622
115+41.923	11541.92	41.92	17.64	37.65	0.00	0.00	37	155	0	0	434	2,213	0	0	0	-1,779
115+50	11550.00	8.08	15.65	18.39	0.00	0.00	5	8	0	0	439	2,223	0	0	0	-1,784
116+00	11600.00	50.00	10.51	8.25	0.00	0.00	24	25	0	0	463	2,254	0	0	0	-1,791
116+50	11650.00	50.00	14.19	5.62	0.00	0.00	23	13	0	0	486	2,270	0	0	0	-1,784
117+00	11700.00	50.00	26.42	9.03	0.00	0.00	38	14	0	0	524	2,288	0	0	0	-1,764
117+50	11750.00	50.00	74.73	747.00	0.00	0.00	94	700	0	0	618	3,163	0	0	0	-2,545
118+00	11800.00	50.00	180.84	4.17	0.00	0.00	237	696	0	0	855	4,033	0	0	0	-3,178
118+50	11850.00	50.00	195.31	2.67	0.00	0.00	348	6	0	0	1,203	4,040	0	0	0	-2,837
119+00	11900.00	50.00	129.65	2.54	0.00	0.00	301	5	0	0	1,504	4,046	0	0	0	-2,542
119+50	11950.00	50.00	114.42	2.63	0.00	0.00	226	5	0	0	1,730	4,053	0	0	0	-2,323
120+00	12000.00	50.00	80.91	7.43	0.00	0.00	181	9	0	0	1,911	4,064	0	0	0	-2,153
120+49.989	12049.99	49.99	65.12	11.73	0.00	0.00	135	18	0	0	2,046	4,086	0	0	0	-2,040
120+50	12050.00	0.01	65.12	11.72	0.00	0.00	0	0	0	0	2,046	4,086	0	0	0	-2,040
120+94.322	12094.32	44.32	61.81	31.81	0.00	0.00	104	36	0	0	2,150	4,131	0	0	0	-1,981
121+00	12100.00	5.68	62.85	62.13	0.00	0.00	13	10	0	0	2,163	4,144	0	0	0	-1,981
							2,163	**3,315**	**0**	**0**						

STAGE 2B - CTH Q

STATION	REAL STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)						
			CUT	FILL	ROCK EXC	EBS	CUT	FILL	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE	311.0110 BREAKER RUN (TON)
							NOTE 1	NOTE 3			1.00 NOTE 1	1.25	1.10	1.30 NOTE 5	0.80 NOTE 7	NOTE 8	
CTH Q SOUTH END (99+79 - 104+00)																	
99+78.767	9978.77	0.00	39.64	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0
100+00	10000.00	21.23	51.53	0.00	0.00	0.00	36	0	0	0	36	0	0	0	0	36	0
100+50	10050.00	50.00	52.98	0.00	0.00	0.00	97	0	0	0	133	0	0	0	0	133	0
101+00	10100.00	50.00	43.63	0.00	0.00	0.00	89	0	0	0	222	0	0	0	0	222	0
101+10.362	10110.36	10.36	43.57	0.00	0.00	0.00	17	0	0	0	239	0	0	0	0	239	0
101+50	10150.00	39.64	81.46	0.00	0.00	0.00	92	0	0	0	331	0	0	0	0	331	0
101+51.585	10151.58	1.58	80.50	0.00	0.00	0.00	5	0	0	0	336	0	0	0	0	336	0
101+95.918	10195.92	44.33	82.61	0.00	0.00	0.00	134	0	0	0	470	0	0	0	0	470	0
102+00	10200.00	4.08	100.72	0.00	0.00	0.00	14	0	0	0	484	0	0	0	0	484	0
102+40.45	10240.45	40.45	106.67	0.00	0.00	0.00	155	0	0	0	639	0	0	0	0	639	0
102+50	10250.00	9.55	107.68	0.00	0.00	0.00	38	0	0	0	677	0	0	0	0	677	0
102+84.585	10284.58	34.58	128.80	0.00	0.00	0.00	151	0	0	0	828	0	0	0	0	828	0
103+00	10300.00	15.42	147.69	0.00	0.00	0.00	79	0	0	0	907	0	0	0	0	907	0
103+29.112	10329.11	29.11	0.00	0.00	0.00	0.00	80	0	0	0	987	0	0	0	0	987	0
103+50	10350.00	20.89	0.00	0.00	0.00	0.00	0	0	0	0	987	0	0	0	0	987	0
104+00	10400.00	50.00	0.00	0.00	0.00	0.00	0	0	0	0	987	0	0	0	0	987	0
CTH Q NORTH END (122+00 - 132+36)																	
122+00	12200.00	0.00	37.67	25.79	0.00	0.00	0	0	0	0	987	0	0	0	0	987	0
122+31.88	12231.88	31.88	37.45	17.50	0.00	0.00	44	26	0	0	1,031	33	0	0	0	999	0
122+50	12250.00	18.12	43.56	11.77	0.00	0.00	27	10	0	0	1,058	45	0	0	0	1,013	0
123+00	12300.00	50.00	50.16	2.42	0.00	0.00	87	13	0	0	1,145	61	0	0	0	1,084	0
123+50	12350.00	50.00	51.56	5.64	0.00	0.00	94	7	0	0	1,239	70	0	0	0	1,169	0
124+00	12400.00	50.00	40.73	2.93	0.00	0.00	85	8	0	0	1,324	80	0	0	0	1,244	0
124+50	12450.00	50.00	27.35	2.51	0.00	0.00	63	5	0	0	1,387	86	0	0	0	1,301	0
125+00	12500.00	50.00	22.31	2.60	0.00	0.00	46	5	0	0	1,433	93	0	0	0	1,341	0
125+50	12550.00	50.00	24.17	1.76	0.00	0.00	43	4	0	0	1,476	98	0	0	0	1,379	0
126+00	12600.00	50.00	30.74	5.09	0.00	0.00	51	6	0	0	1,527	105	0	0	0	1,422	0
126+50	12650.00	50.00	43.66	3.53	0.00	0.00	69	8	0	0	1,596	115	0	0	0	1,481	0
127+00	12700.00	50.00	55.13	2.48	0.00	30.48	91	6	0	28	1,687	95	0	36	22	1,593	66
127+50	12750.00	50.00	50.66	1.00	0.00	34.46	98	3	0	60	1,785	38	0	114	70	1,747	206
128+00	12800.00	50.00	63.47	0.62	0.00	36.18	106	2	0	65	1,891	-24	0	199	122	1,915	358
128+50	12850.00	50.00	42.24	0.04	0.00	0.00	98	1	0	34	1,989	-57	0	243	150	2,046	438
129+00	12900.00	50.00	41.72	0.15	0.00	0.00	78	0	0	0	2,067	-57	0	243	150	2,124	438
129+50	12950.00	50.00	49.22	0.23	0.00	0.00	84	0	0	0	2,151	-57	0	243	150	2,208	438
130+00	13000.00	50.00	66.65	0.28	0.00	0.00	107	0	0	0	2,258	-57	0	243	150	2,315	438
130+50	13050.00	50.00	68.32	0.73	0.00	0.00	125	1	0	0	2,383	-56	0	243	150	2,439	438
131+00	13100.00	50.00	69.65	4.65	0.00	0.00	128	5	0	0	2,511	-50	0	243	150	2,561	438
131+50	13150.00	50.00	60.26	2.55	0.00	0.00	120	7	0	0	2,631	-41	0	243	150	2,672	438
132+00	13200.00	50.00	45.31	30.94	0.00	0.00	98	31	0	0	2,729	-2	0	243	150	2,731	438
132+35.78	13235.78	35.78	43.60	0.00	0.00	0.00	59	20	0	0	2,788	23	0	243	150	2,765	438
							2,788	**168**	**0**	**187**							

STAGE 3 - CTH Q

STATION	REAL STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)					
			CUT	FILL	ROCK EXC	EBS	CUT NOTE 1	FILL NOTE 3	ROCK EXC	EBS	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	EXPANDED ROCK 1.10	EXPANDED EBS BACKFILL 1.30 NOTE 5	REDUCED EBS IN FILL 0.80 NOTE 7	MASS ORDINATE NOTE 8
112+00	11200.00	0.00	27.12	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0
112+09.032	11209.03	9.03	40.56	0.00	0.00	0.00	11	0	0	0	11	0	0	0	0	11
112+50	11250.00	40.97	90.69	0.00	0.00	0.00	100	0	0	0	111	0	0	0	0	111
113+00	11300.00	50.00	123.73	0.00	0.00	0.00	199	0	0	0	310	0	0	0	0	310
113+24.737	11324.74	24.74	118.20	0.00	0.00	0.00	111	0	0	0	421	0	0	0	0	421
113+50	11350.00	25.26	278.18	0.00	0.00	0.00	185	0	0	0	606	0	0	0	0	606
113+64.59	11364.59	14.59	190.06	0.00	0.00	0.00	127	0	0	0	733	0	0	0	0	733
CTH Q HOMER INTERSECTION																
121+00	12100.00	0.00	62.85	61.73	0.00	0.00	0	0	0	0	733	0	0	0	0	733
121+39.14	12139.14	39.14	59.21	25.37	0.00	0.00	43	18	0	0	776	23	0	0	0	754
121+50	12150.00	10.86	66.16	18.41	0.00	0.00	25	9	0	0	801	34	0	0	0	767
121+83.46	12183.46	33.46	46.03	7.34	0.00	0.00	70	16	0	0	871	54	0	0	0	817
122+00	12200.00	16.54	37.67	26.02	0.00	0.00	26	10	0	0	897	66	0	0	0	831
							897	**53**	**0**	**0**						

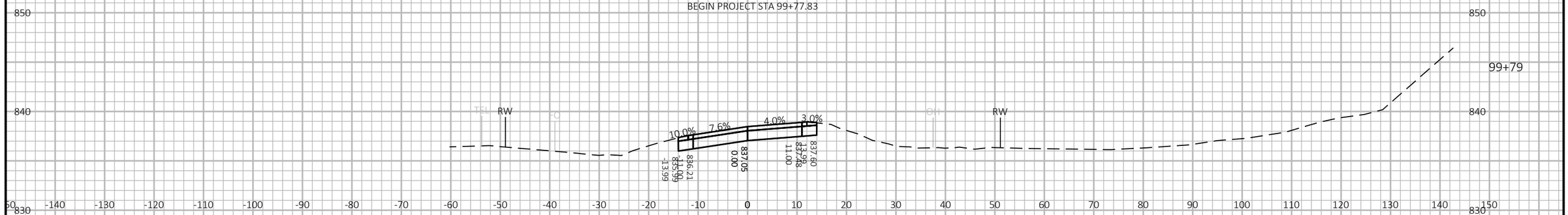
STAGE 3 - HOMER RD

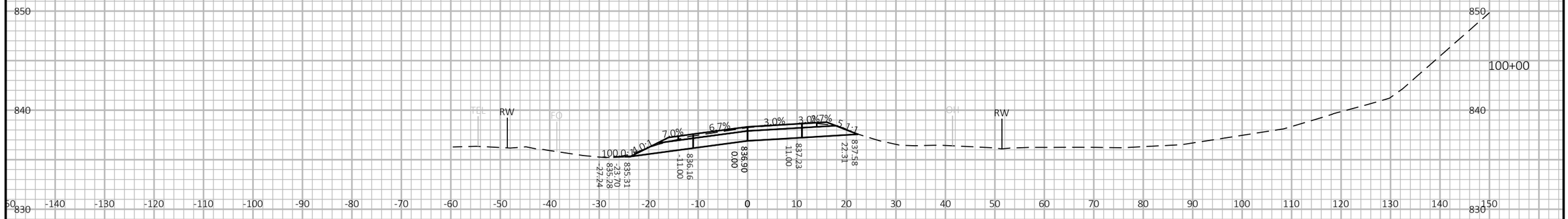
STATION	REAL STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)					
			CUT	FILL	ROCK EXC	EBS	CUT NOTE 1	FILL NOTE 3	ROCK EXC	EBS	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	EXPANDED ROCK 1.10	EXPANDED EBS BACKFILL 1.30 NOTE 5	REDUCED EBS IN FILL 0.80 NOTE 7	MASS ORDINATE NOTE 8
00+38.01	38.01	0.00	33.35	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0
00+50	50.00	11.99	38.23	3.31	0.00	0.00	16	1	0	0	16	1	0	0	0	15
01+00	100.00	50.00	45.57	4.06	0.00	0.00	78	7	0	0	94	10	0	0	0	84
01+50	150.00	50.00	49.72	11.67	0.00	0.00	88	15	0	0	182	29	0	0	0	153
01+88.217	188.22	38.22	59.24	10.57	0.00	0.00	77	16	0	0	259	49	0	0	0	210
01+93.659	193.66	5.44	58.62	10.77	0.00	0.00	12	2	0	0	271	51	0	0	0	220
02+00	200.00	6.34	56.98	11.79	0.00	0.00	14	3	0	0	285	55	0	0	0	230
02+50	250.00	50.00	17.31	5.92	0.00	0.00	69	16	0	0	354	75	0	0	0	279
03+00	300.00	50.00	0.80	54.29	0.00	0.00	17	56	0	0	371	145	0	0	0	226
03+50	350.00	140.00	0.02	41.01	0.00	0.00	2	247	0	0	373	454	0	0	0	-81
03+55.837	355.84	5.84	9.39	42.33	0.00	0.00	1	9	0	0	374	465	0	0	0	-91
03+61.279	361.28	5.44	44.75	38.60	0.00	0.00	5	8	0	0	379	475	0	0	0	-96
03+97.558	397.56	36.28	43.00	2.13	0.00	0.00	59	27	0	0	438	509	0	0	0	-71
04+00	400.00	2.44	43.00	1.80	0.00	0.00	4	0	0	0	442	509	0	0	0	-67
HOMER ROAD OVER EXISTING CTH Q (6+73 - 7+50)																
06+73.28	673.28	0.00	48.49	249.56	0.00	0.00	0	0	0	0	442	509	0	0	0	-67
07+00	700.00	26.72	79.33	130.42	0.00	0.00	63	188	0	0	505	744	0	0	0	-239
07+50	750.00	50.00	84.02	315.45	0.00	0.00	151	413	0	0	656	1,260	0	0	0	-604
							656	**1,008**	**0**	**0**						

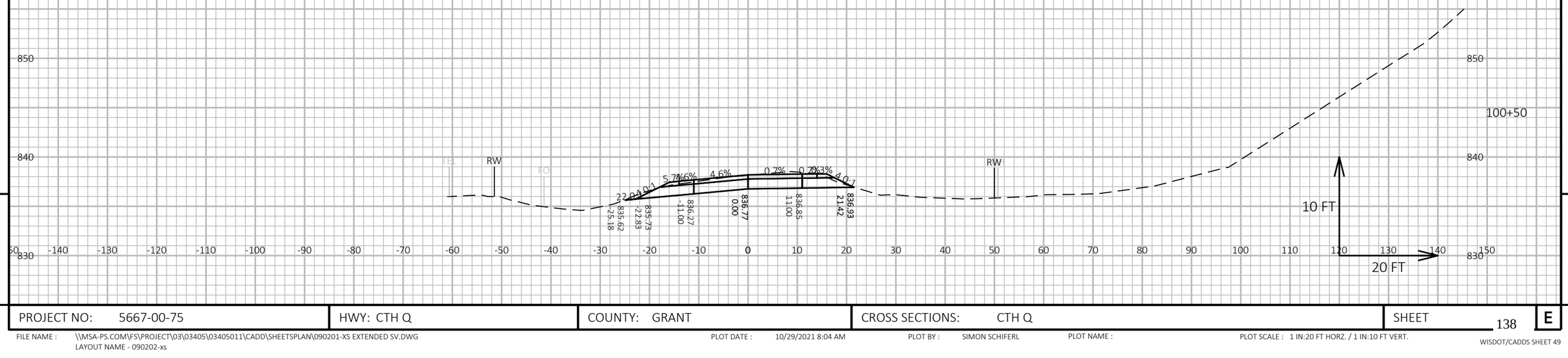
STAGE 3 - CHURCH ROAD

STATION	REAL STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)					
			CUT	FILL	ROCK EXC	EBS	CUT NOTE 1	FILL NOTE 3	ROCK EXC	EBS	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	EXPANDED ROCK 1.10	EXPANDED EBS BACKFILL 1.30 NOTE 5	REDUCED EBS IN FILL 0.80 NOTE 7	MASS ORDINATE NOTE 8
00+53.232	53.23	0.00	34.46	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0
01+00	100.00	46.77	16.45	34.61	0.00	0.00	44	30	0	0	44	38	0	0	0	7
01+50	150.00	50.00	18.84	35.39	0.00	0.00	33	65	0	0	77	119	0	0	0	-42
01+75	175.00	25.00	33.00	79.57	0.00	0.00	24	53	0	0	101	185	0	0	0	-84
							101	**148**	**0**	**0**						

BEGIN PROJECT STA 99+77.83







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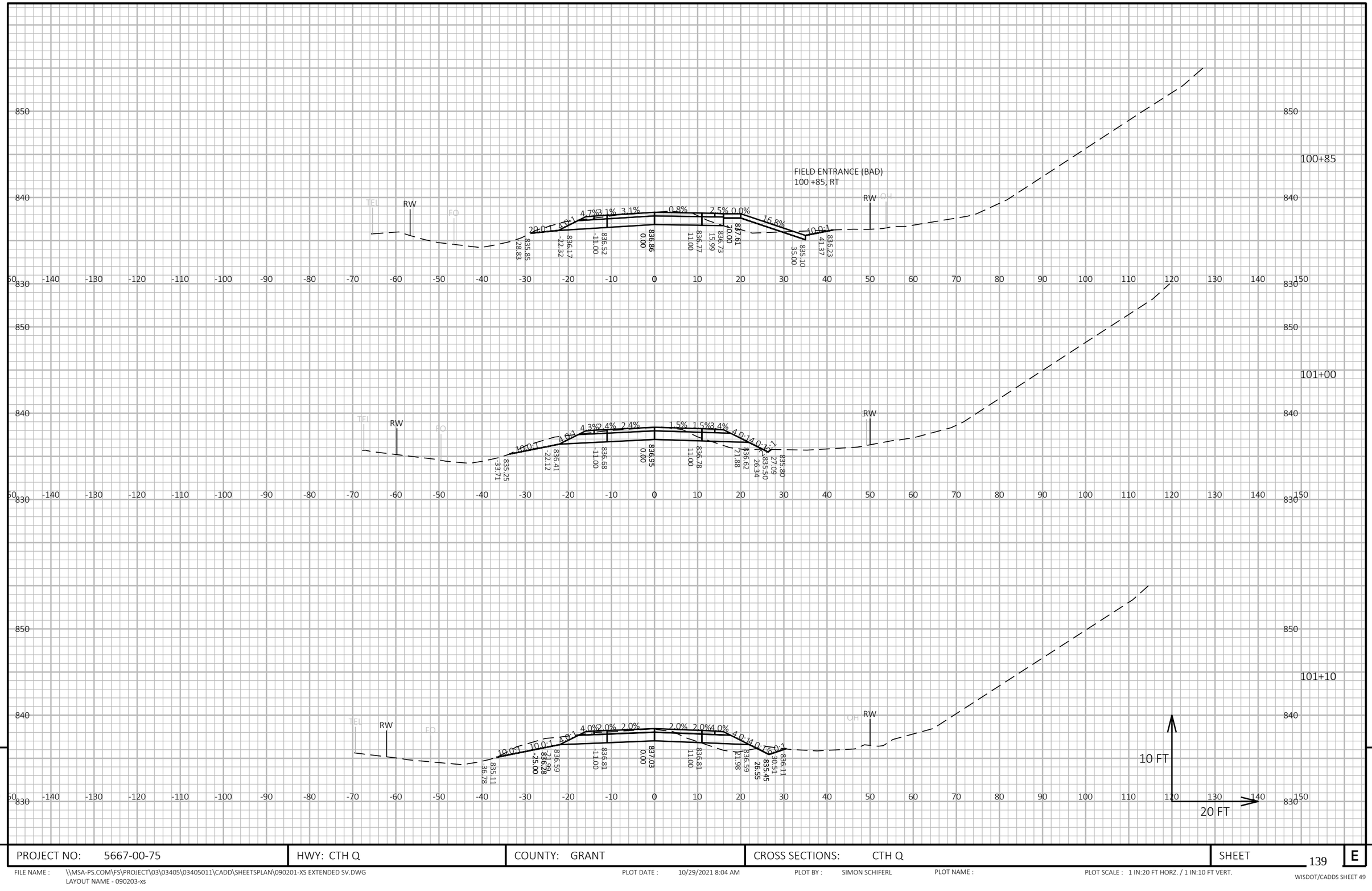
9

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 138	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090202-xs

PLOT DATE : 10/29/2021 8:04 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

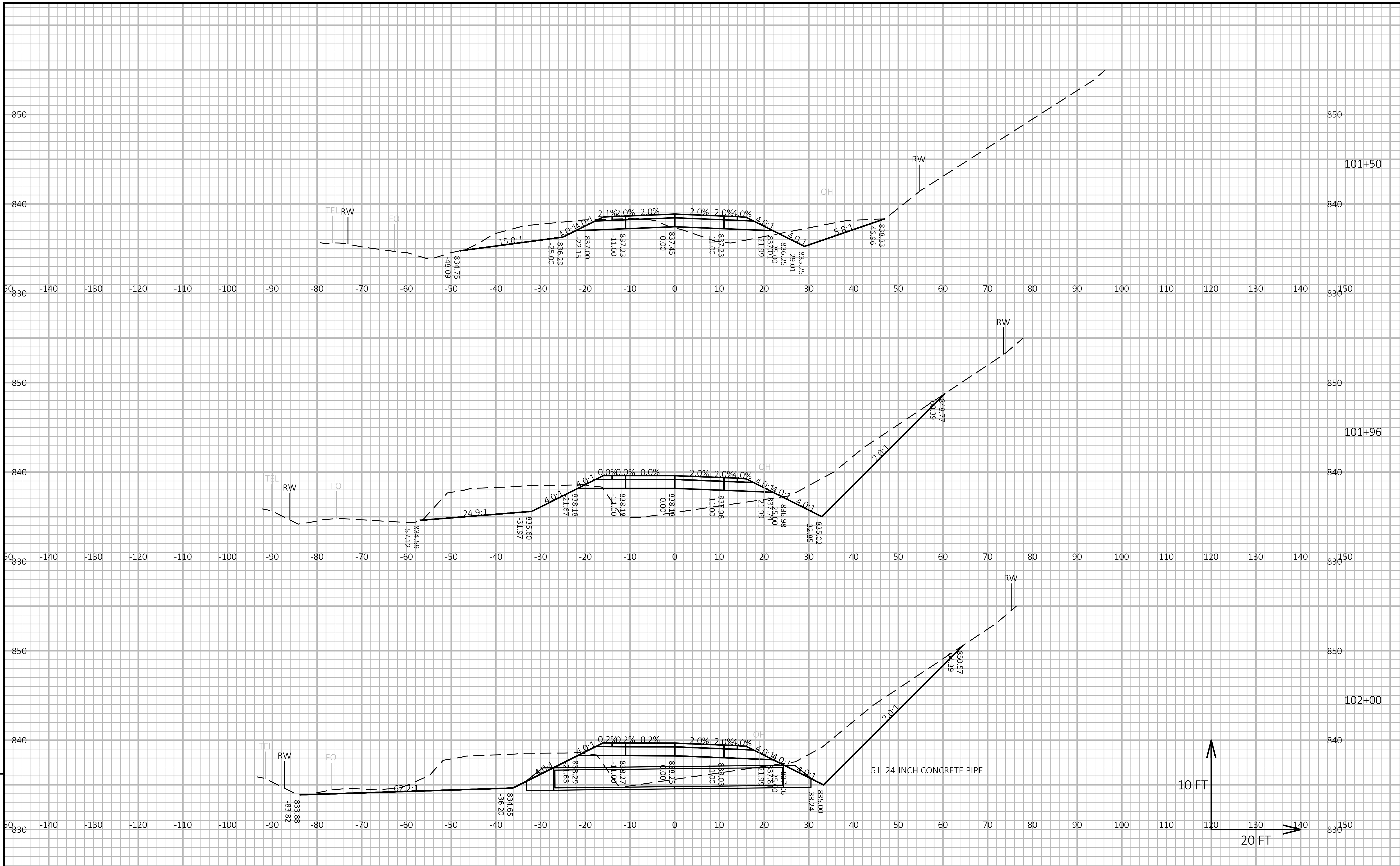
9

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 139	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090203-xs

PLOT DATE : 10/29/2021 8:04 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

9

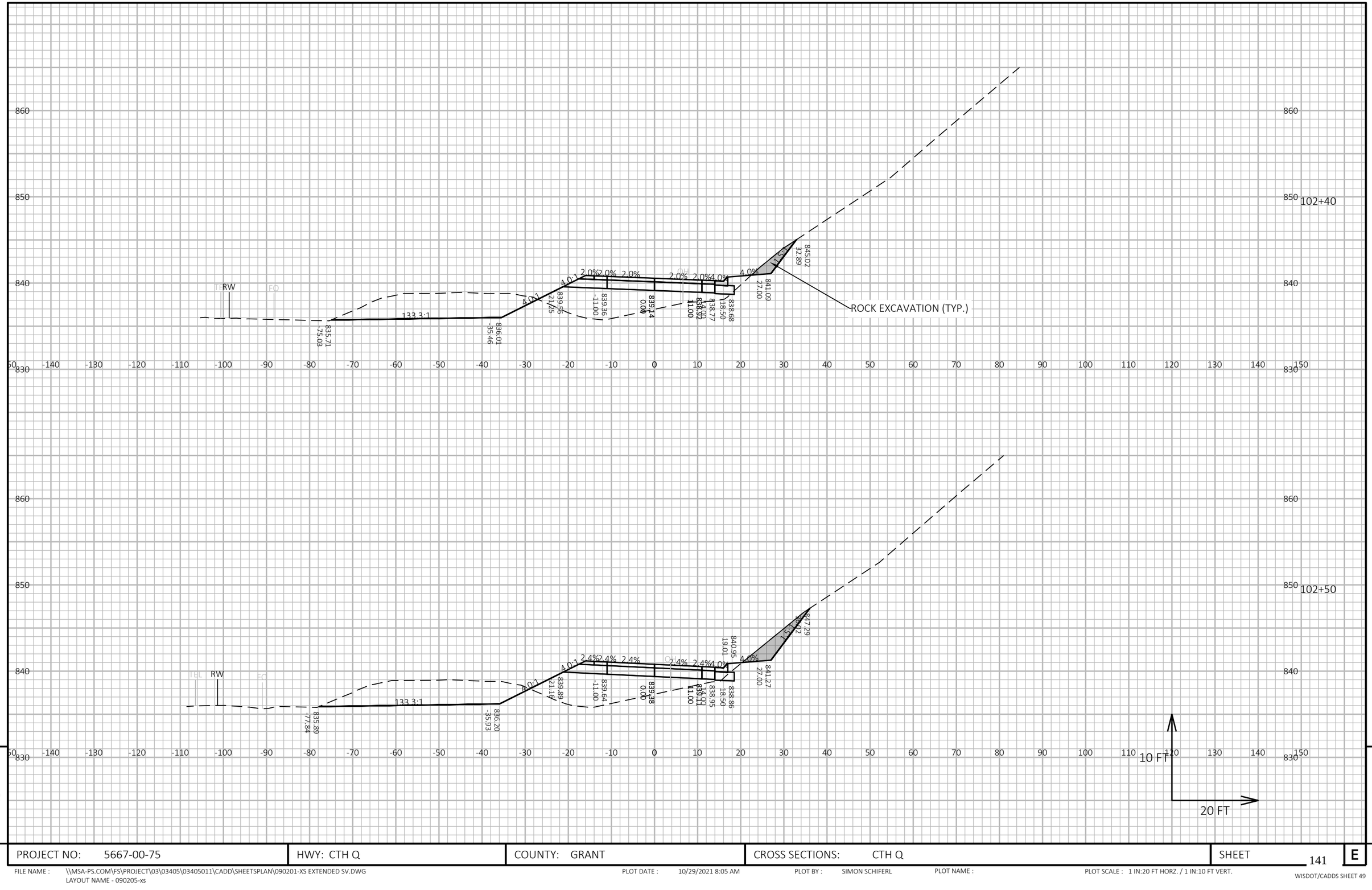


9

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 140	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090204-xs

PLOT DATE : 10/29/2021 8:05 AM
PLOT BY : SIMON SCHIFERL
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49



PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 141	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090205-xs

PLOT DATE : 10/29/2021 8:05 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

102+85

ROCK EXCAVATION (TYP.)

103+00

10 FT

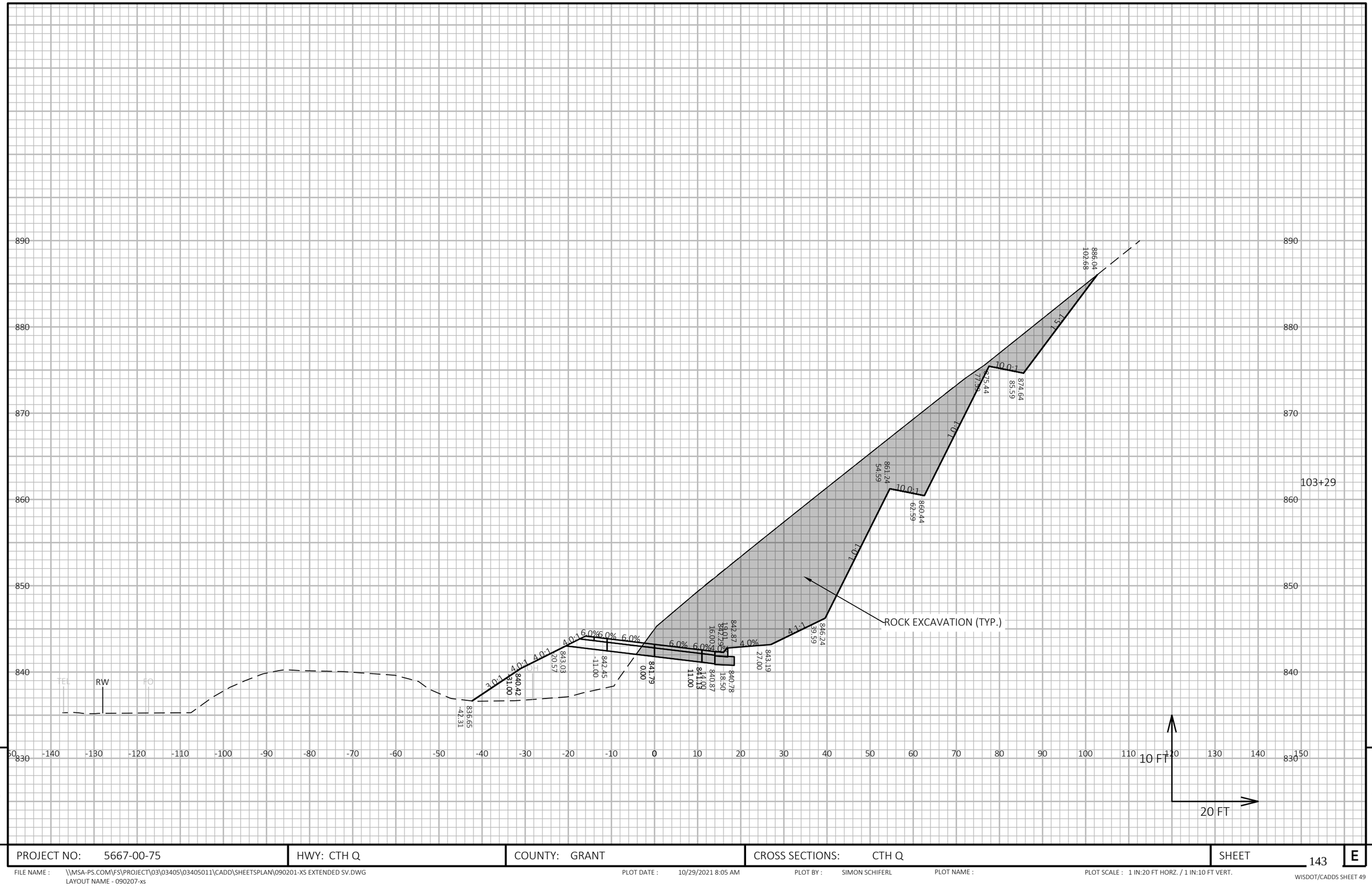
20 FT

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 142	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090206-xs

PLOT DATE : 10/29/2021 8:05 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

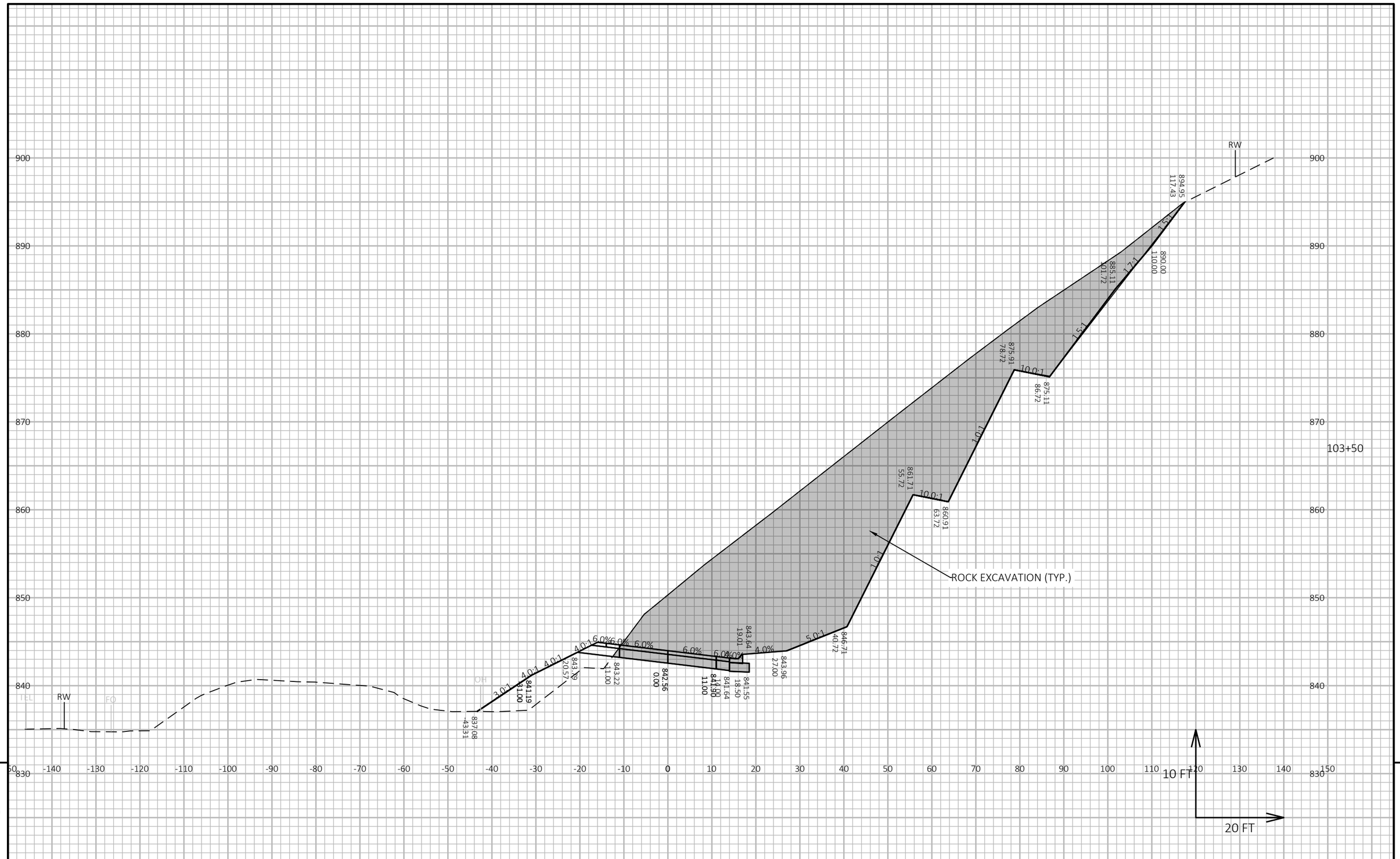


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 143	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090207-xs

PLOT DATE : 10/29/2021 8:05 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



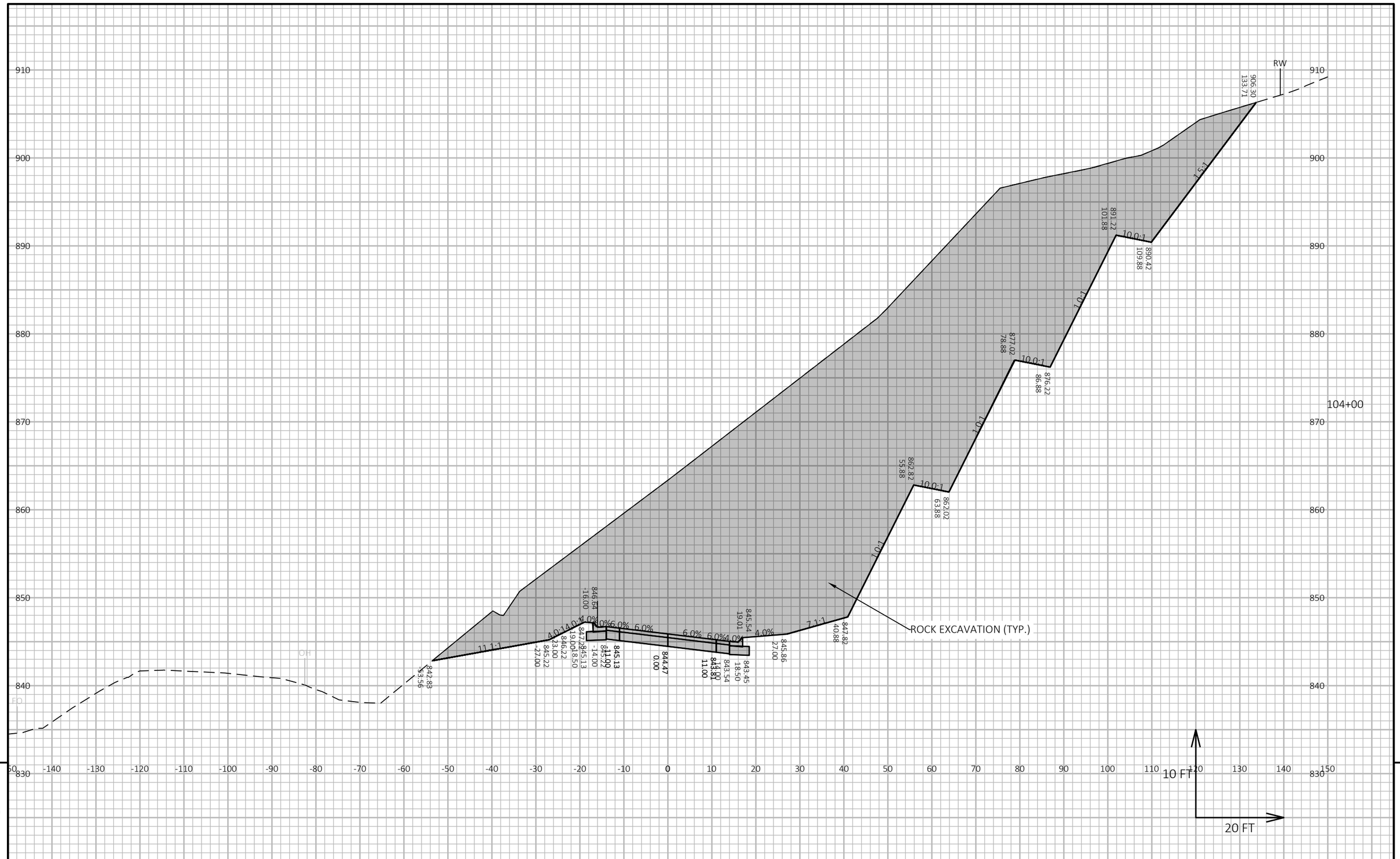
9

9

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 144	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090208-xs

PLOT DATE : 10/29/2021 8:05 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 145 E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090209-xs

PLOT DATE : 10/29/2021 8:06 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

104+50

105+00

ROCK EXCEDATION (TYP.)

RW

OH

10 FT

20 FT

9

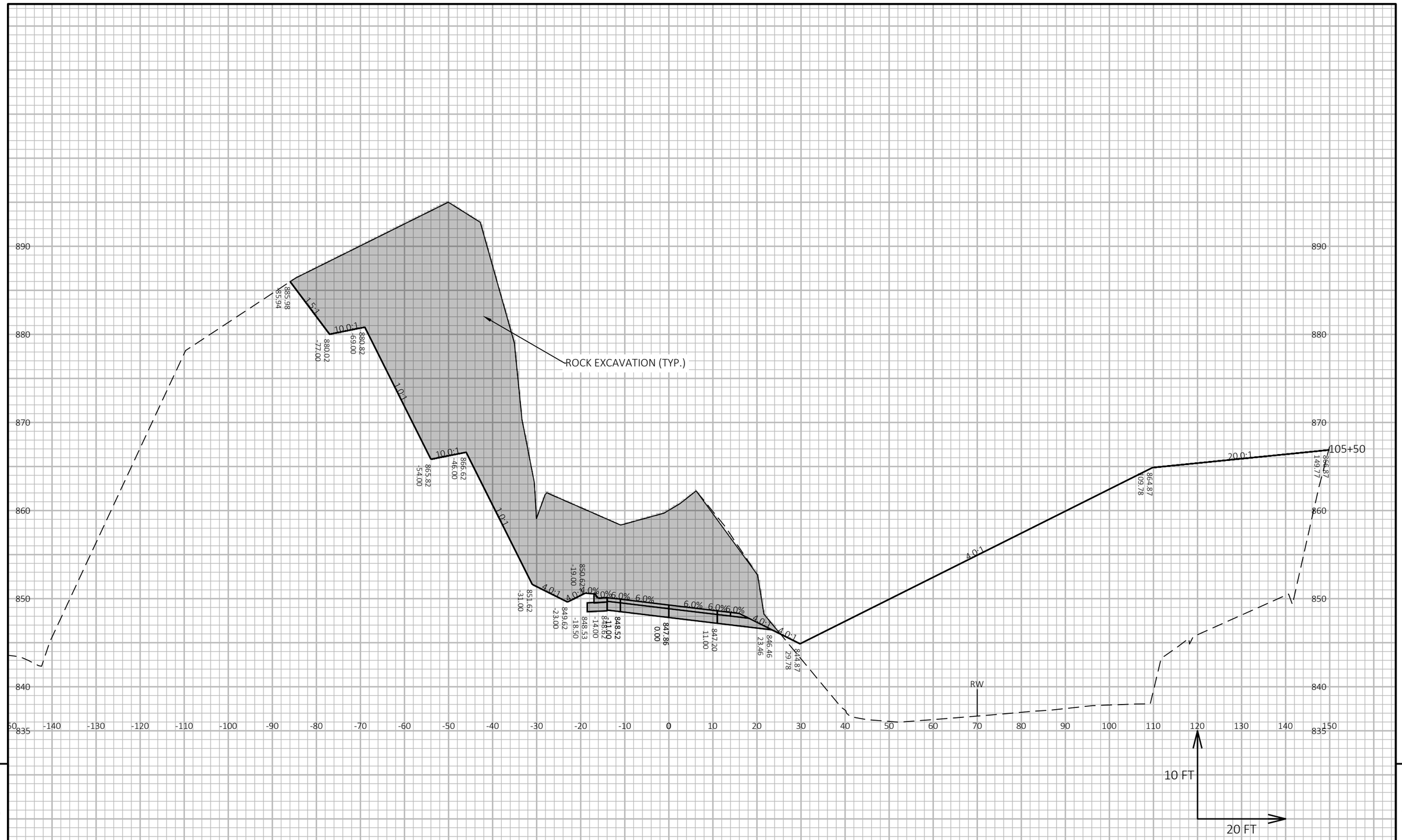
9

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 146	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090210-xs

PLOT DATE : 10/29/2021 8:06 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

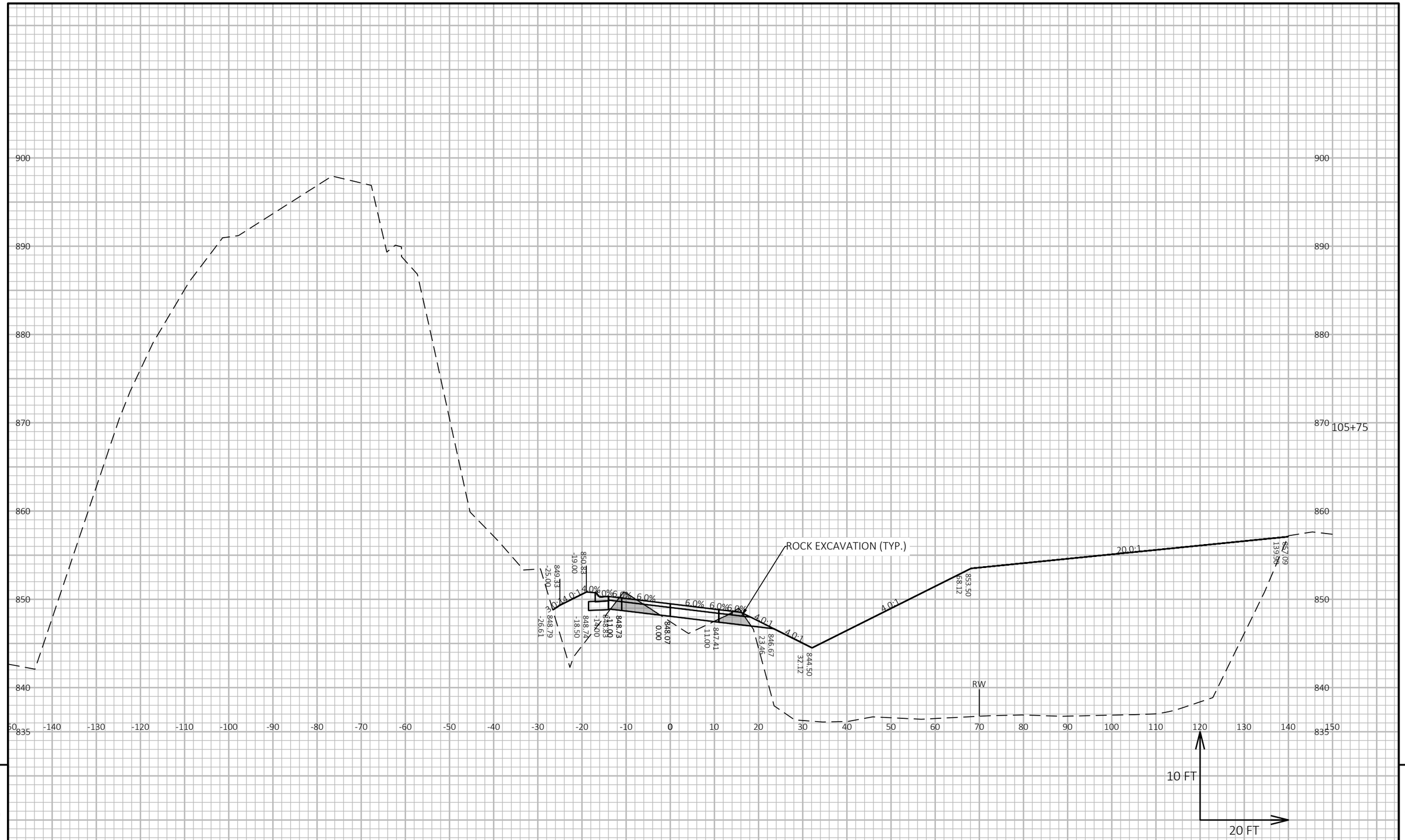


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 147	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090211-xs

PLOT DATE : 10/29/2021 8:06 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

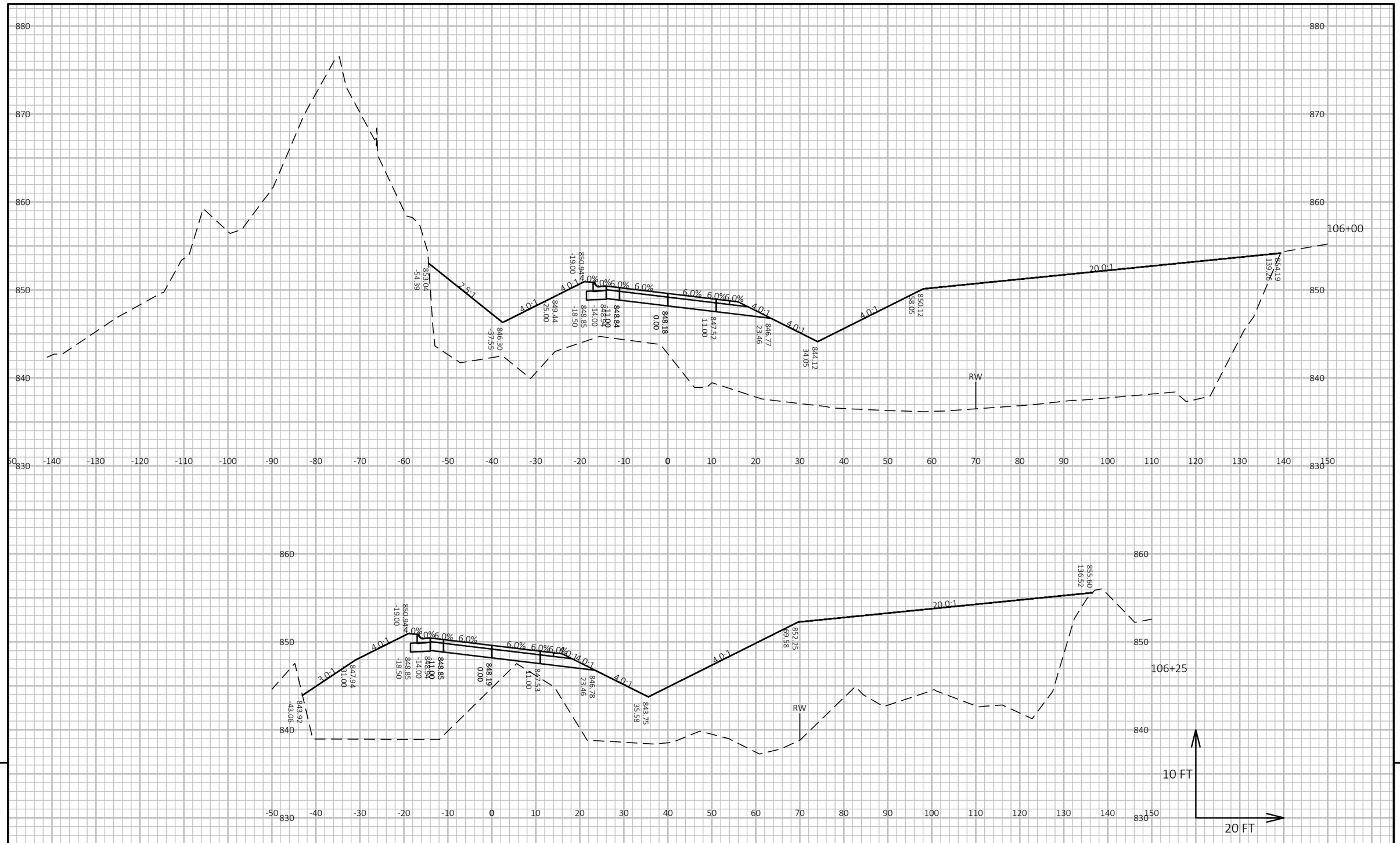
9

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 148	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090212-xs

PLOT DATE : 10/29/2021 8:06 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

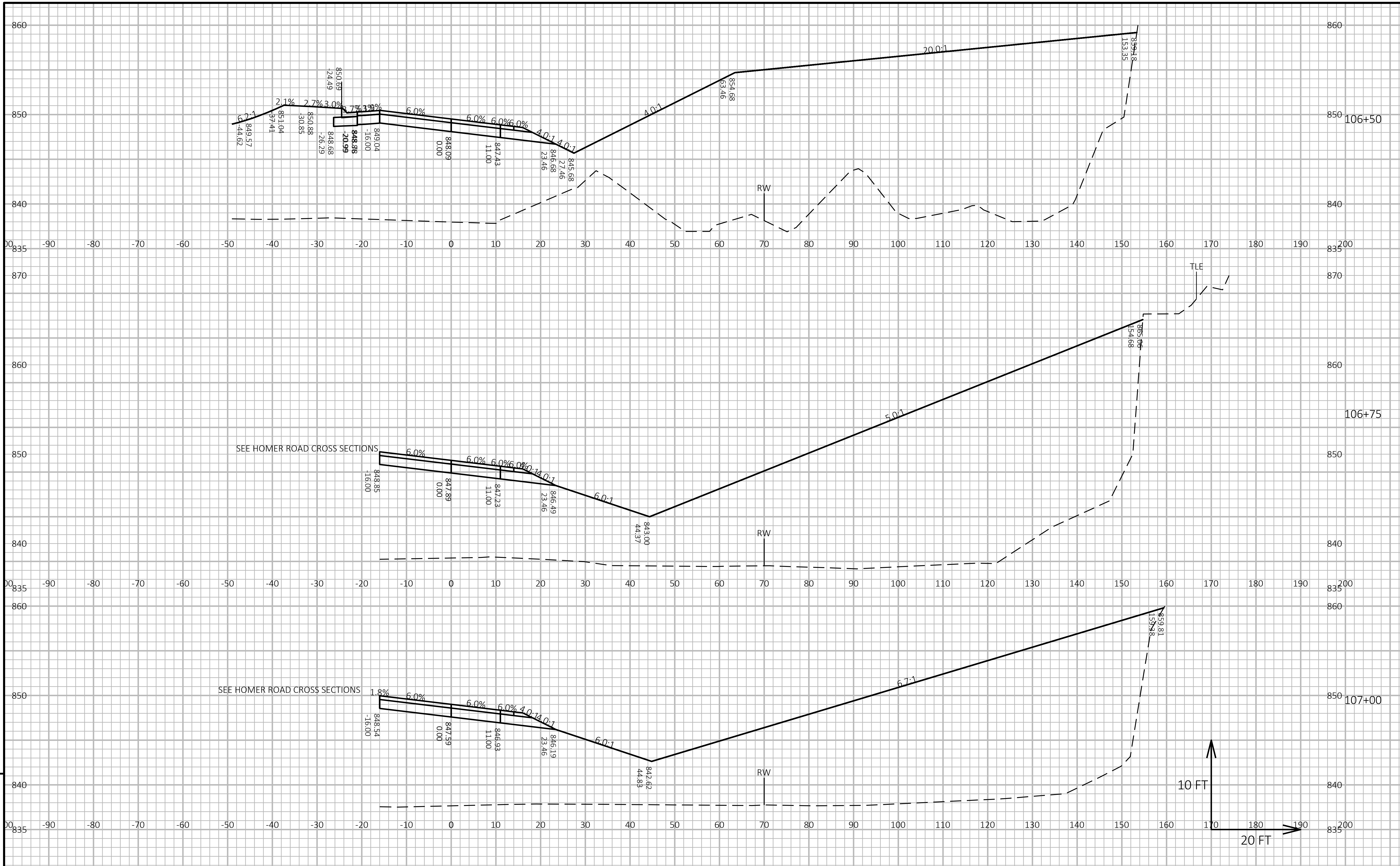


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 149	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090213-xs

PLOT DATE : 10/29/2021 8:06 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 150	E

SEE HOMER ROAD CROSS SECTIONS

107+50

6.0%
6.0%
6.0%
4.0:1
4.0:1
6.0:1
10.0:1
RW
846.69
0.00
846.03
11.00
845.28
23.46
841.87
43.90
845.51
86.27

108+00

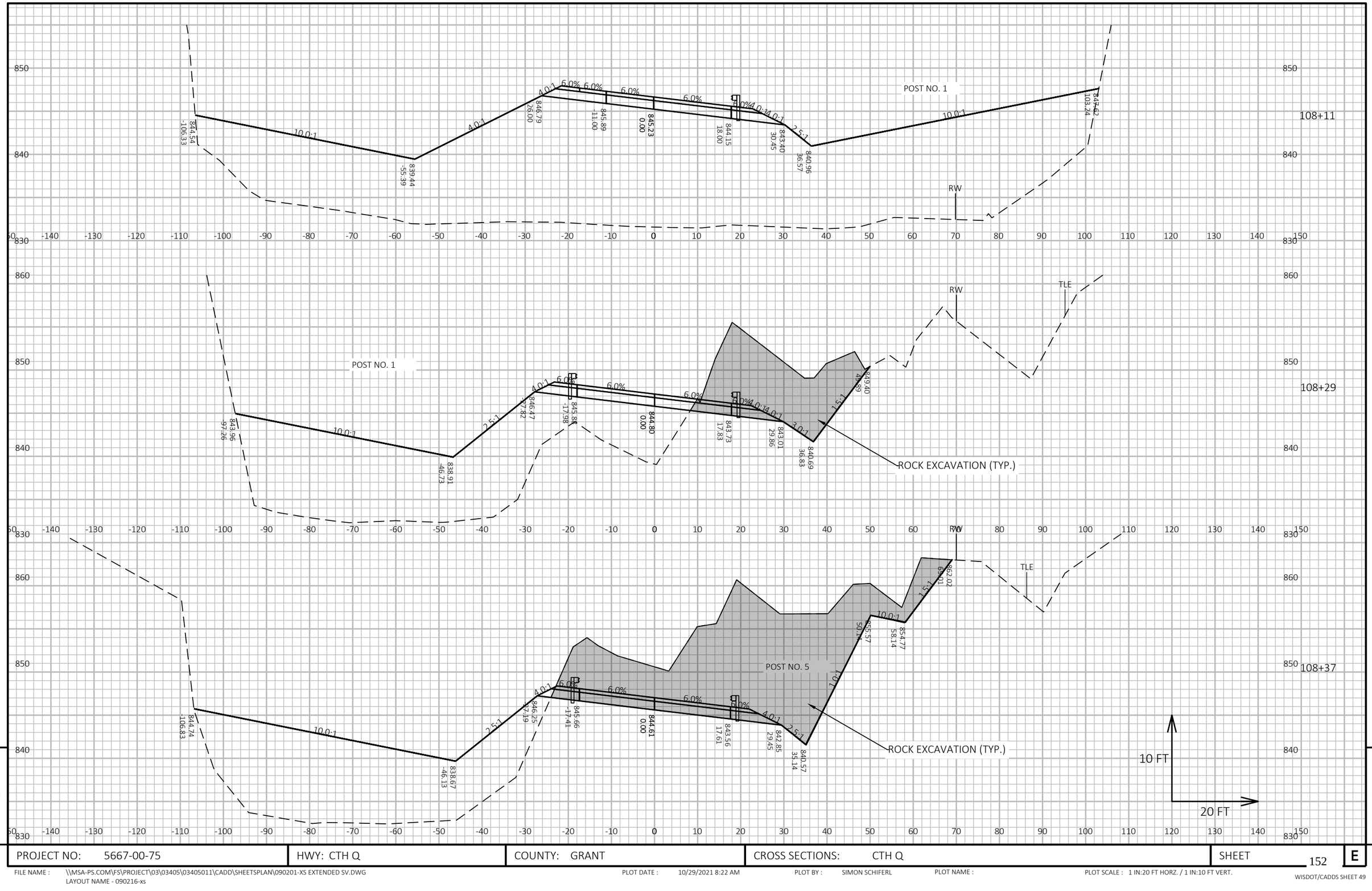
TLE
RW
10 FT
20 FT
10.0:1
4.0:1
6.0%
4.0:1
6.0:1
847.01
25.11
846.16
-11.00
845.50
0.00
844.84
11.00
843.72
29.65
841.12
40.04
844.77
-103.97
839.78
-54.03
845.74
106.50

9

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 151	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090215-xs

PLOT DATE : 10/29/2021 8:22 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

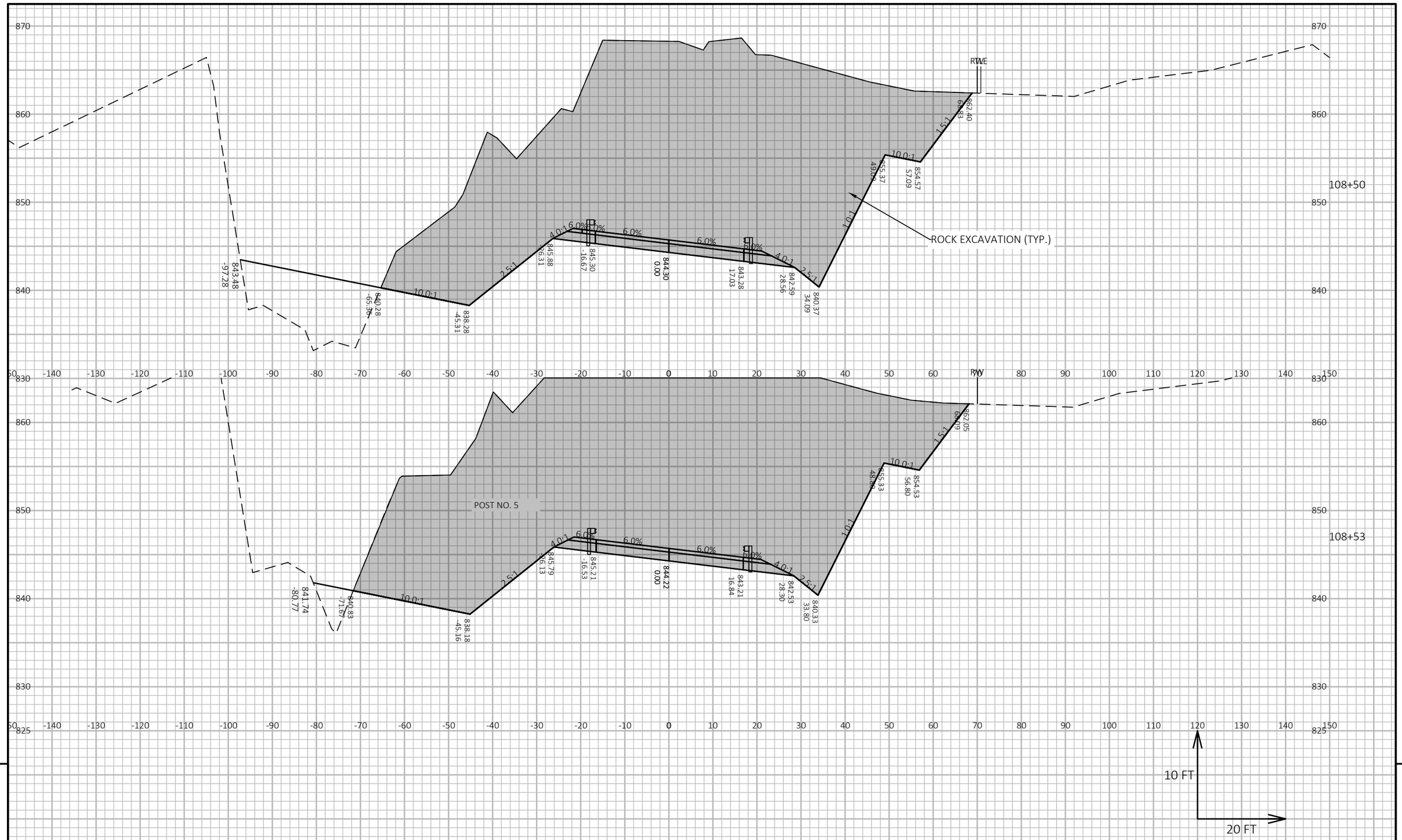


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 152	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090216-xs

PLOT DATE : 10/29/2021 8:22 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

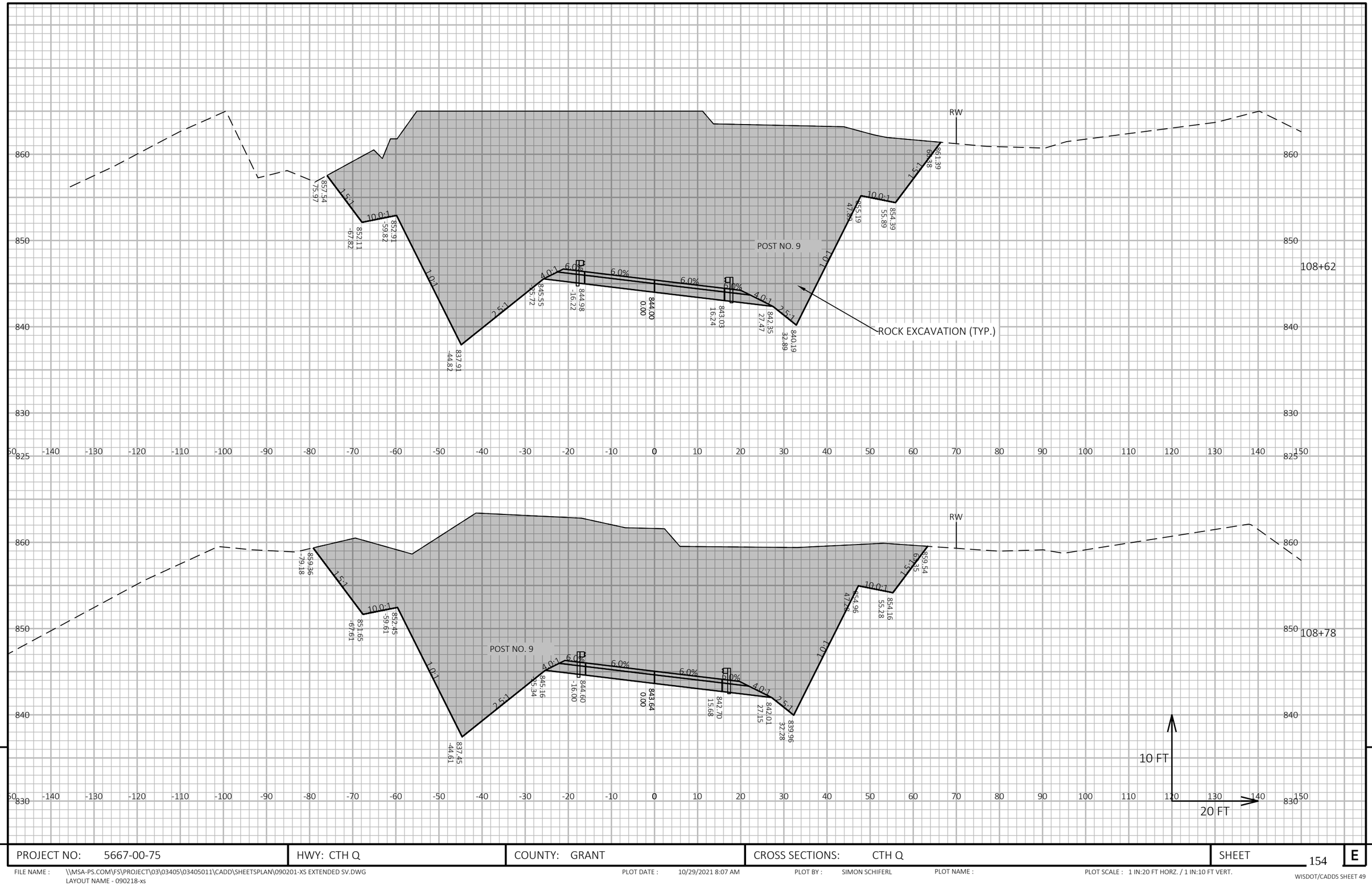


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 153	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090217-xs

PLOT DATE : 11/1/2021 6:08 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



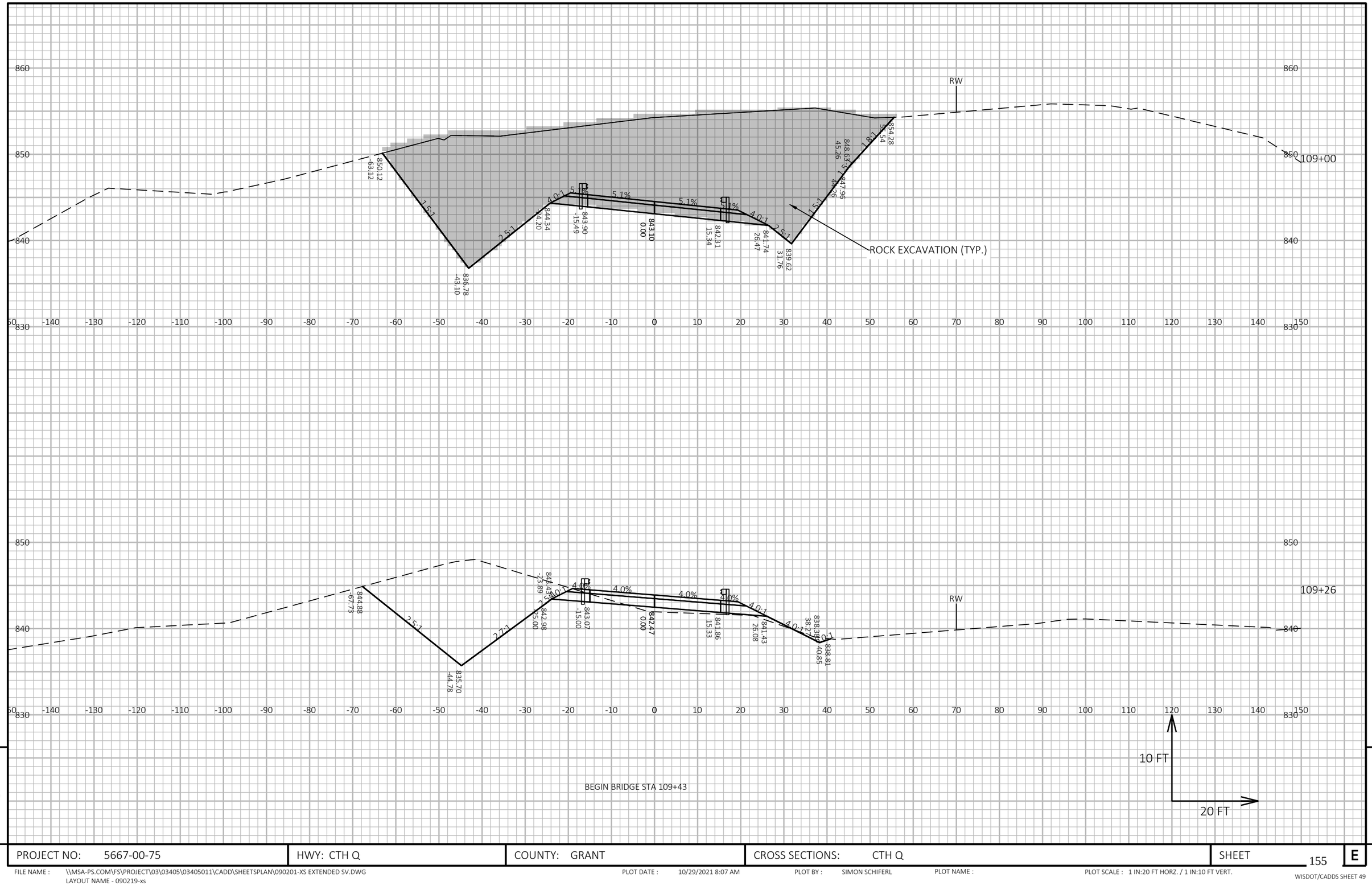
PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 154 E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090218-xs

PLOT DATE : 10/29/2021 8:07 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

9 9

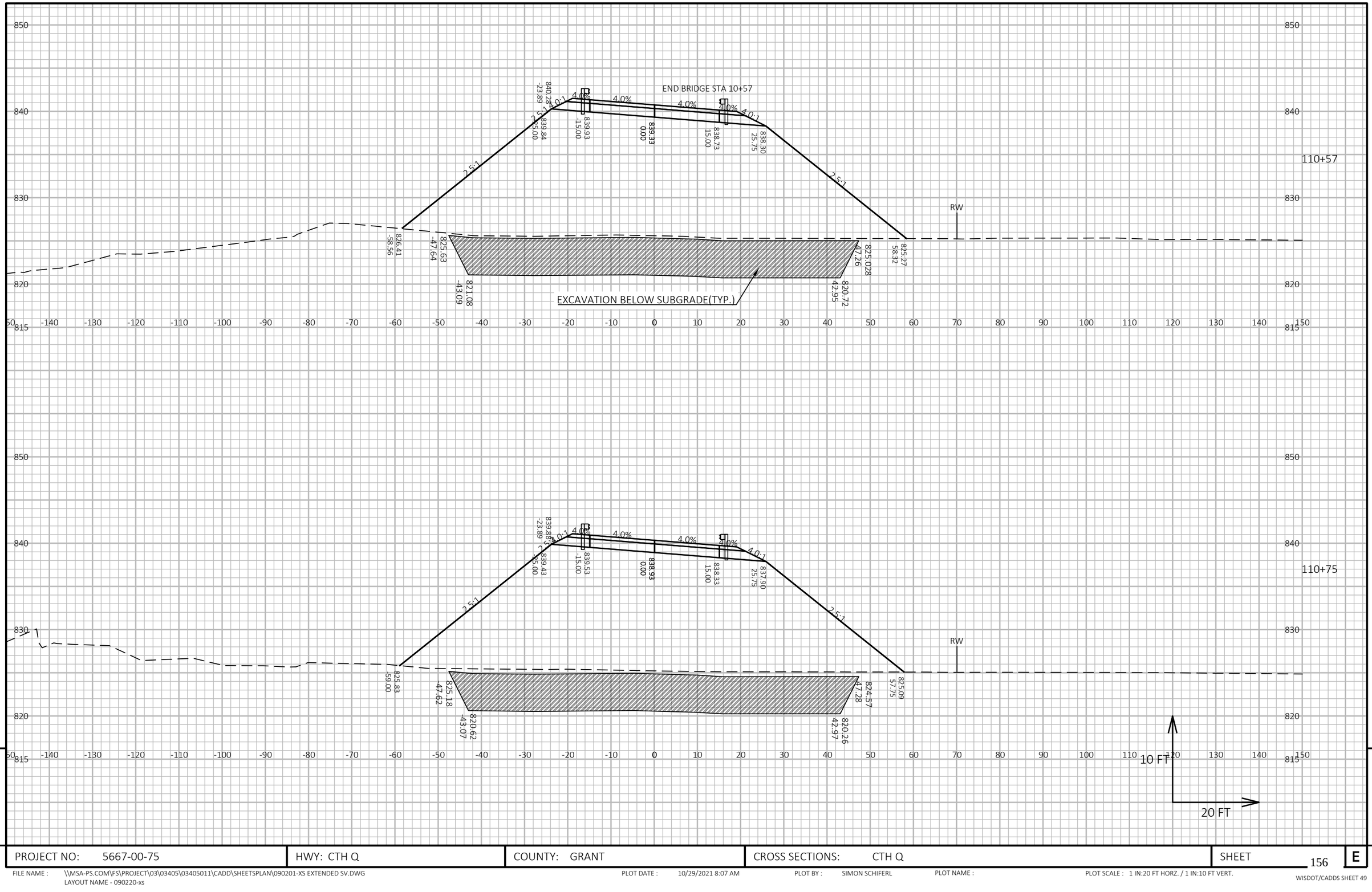


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 155	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090219-xs

PLOT DATE : 10/29/2021 8:07 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 156	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090220-xs

PLOT DATE : 10/29/2021 8:07 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

111+00

2.5:1 4.0:1 2.9% 2.9% 3.6% 3.6% 4.0:1 2.5:1

838.86 -15.00 | 838.43 0.00 | 837.88 15.00 | 837.50 25.63

825.31 -58.60 | 824.95 -47.82 | 820.40 -43.27 | 820.04 43.53 | 824.35 47.85 | 824.81 57.33

RW

EXCAVATION BELOW SUBGRADE(TYP.)

111+36

POST NO. 9 POST NO. 9

4.0:1 2.5:1 1.3% 1.3% 3.1% 3.1% 4.0:1 2.5:1

838.16 -15.53 | 838.04 -16.13 | 837.84 0.00 | 837.54 16.13 | 837.02 26.60

824.53 -59.61 | 824.20 -48.48 | 819.67 -43.94 | 819.31 -43.95 | 823.62 48.26 | 824.42 58.09

RW

111+50

10.0:1 2.5:1 0.6% 0.6% 2.9% 2.9% 4.0:1 2.5:1

837.82 -36.50 | 837.76 -16.65 | 837.65 0.00 | 837.17 16.65 | 836.86 27.35

827.71 -91.24 | 824.55 -59.68 | 823.77 -50.238 | 819.22 -45.69 | 819.00 40.50 | 823.63 45.13 | 824.27 58.83

RW

10 FT

20 FT

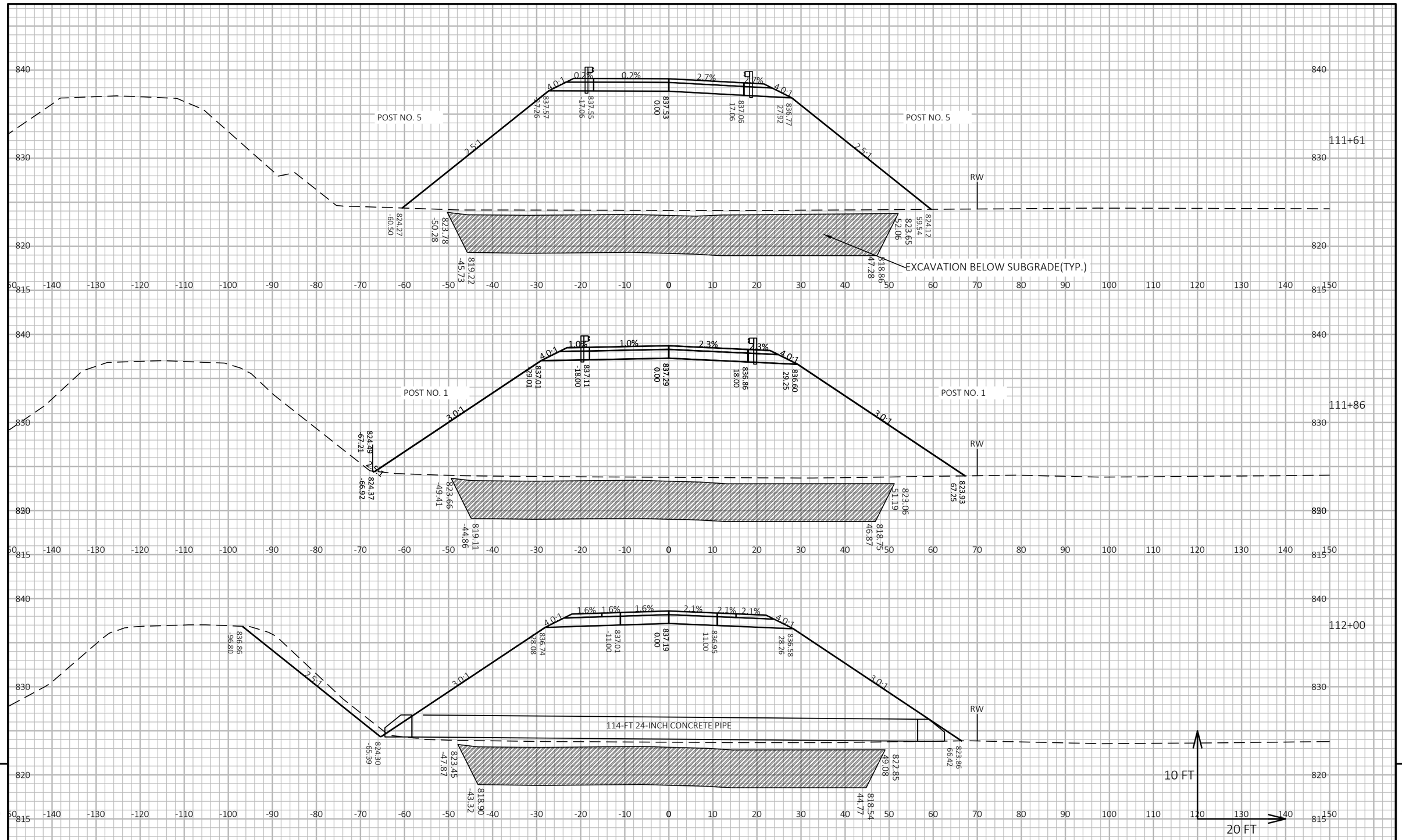
9 9

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 157	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090221-xs

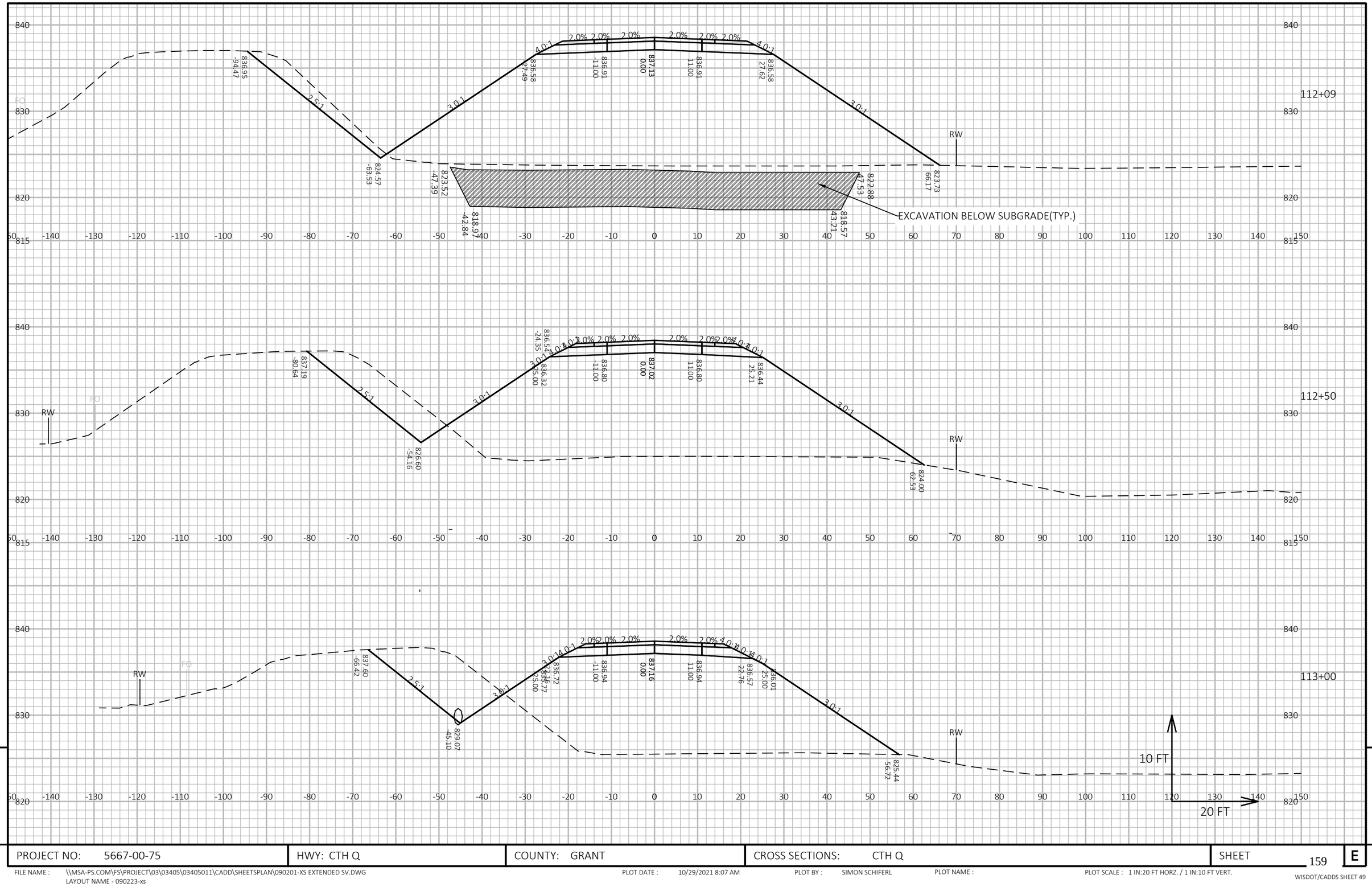
PLOT DATE : 10/29/2021 8:07 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 158 E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090222-xs
PLOT DATE : 10/29/2021 8:07 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 159	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090223-xs

PLOT DATE : 10/29/2021 8:07 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

DRIVEWAY (BAD)
113+22,LT

RW
834.96
-107.98
3.3%
3.5%
2.0%
2.0%
2.0%
2.0%
3.5%
4.0:1
4.0:1
3.0:1
837.00
-15.99
837.10
-11.00
837.32
0.00
837.10
11.00
836.88
22.03
836.14
25.00
825.60
56.64
RW
38-FT 18-INCH CONCRETE PIPE
113+22

RW
834.96
-97.68
17.2:1
832.55
-39.02
3.0:1
3.0:1
4.0:1
837.17
-35.00
837.22
-22.16
837.39
-11.00
837.61
0.00
837.39
11.00
836.93
23.11
836.46
25.00
825.59
57.59
RW
113+50

RW
835.84
-73.13
10.0:1
832.27
-37.41
3.0:1
3.0:1
4.0:1
836.41
-35.00
837.36
-22.16
837.58
-11.00
837.80
0.00
837.58
11.00
837.36
22.16
836.65
25.00
825.58
58.18
RW
113+65

10 FT
20 FT

9

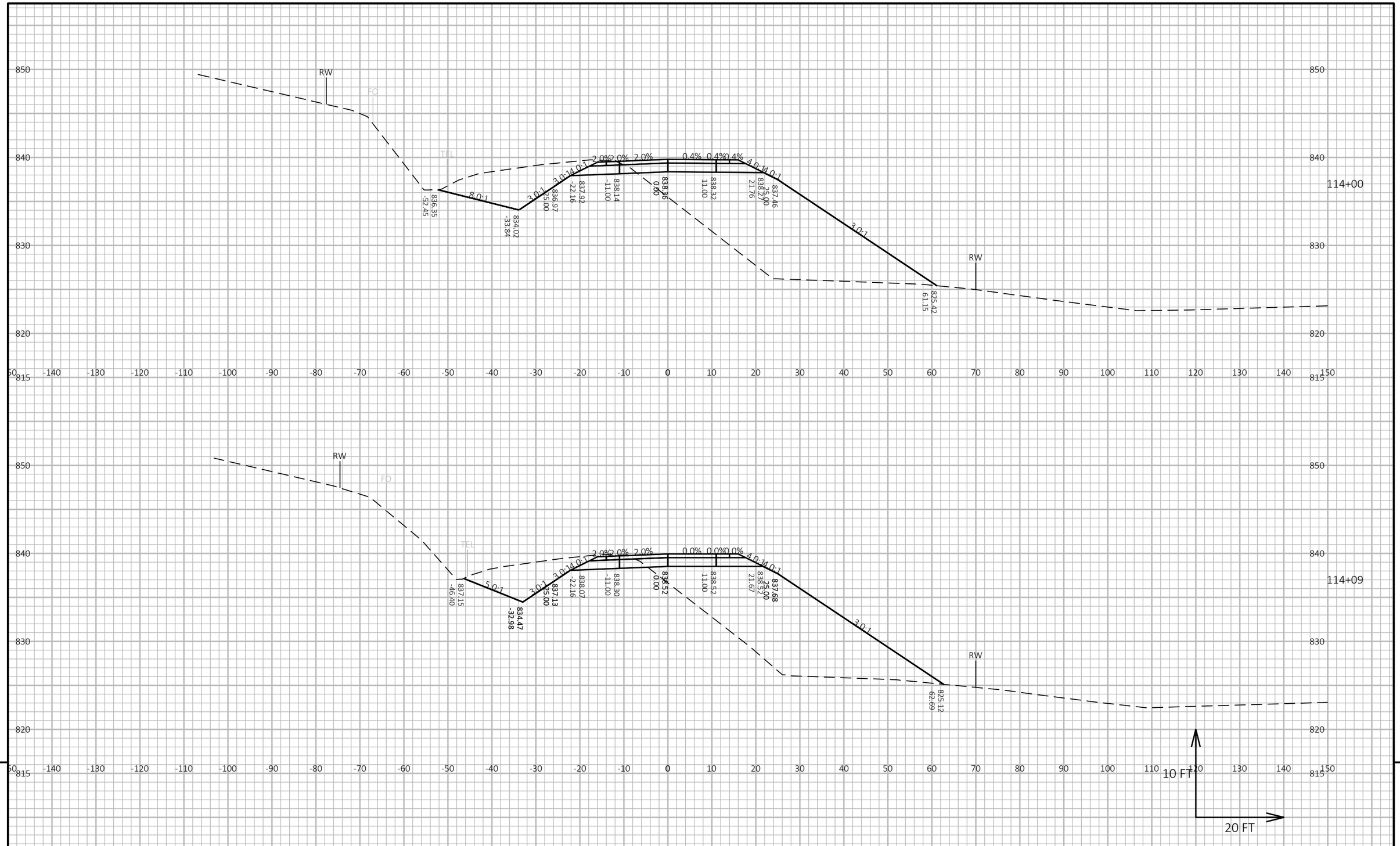
9

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 160	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090224-xs

PLOT DATE : 10/29/2021 8:07 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

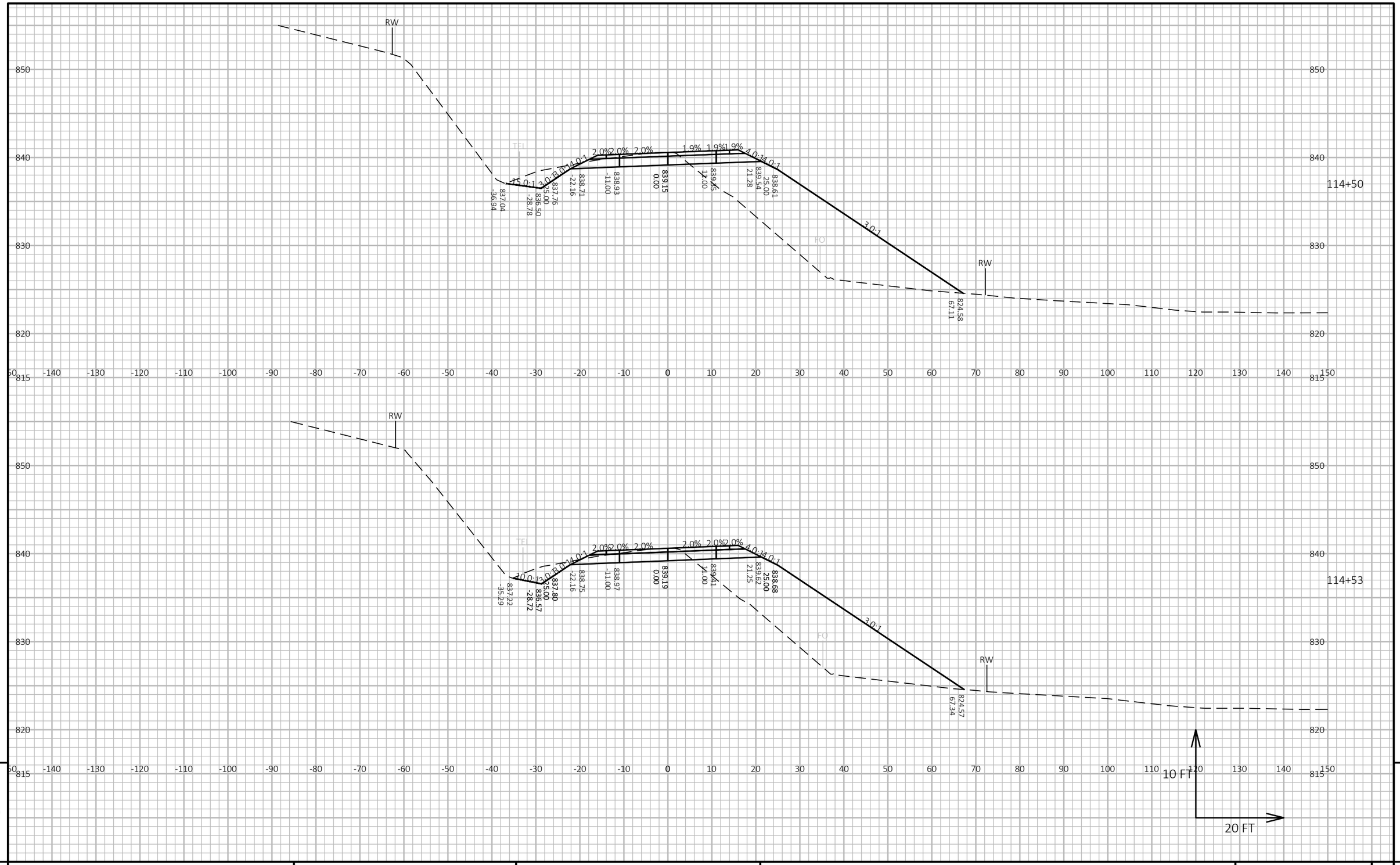
9

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 161	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090225-xs

PLOT DATE : 10/29/2021 8:08 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

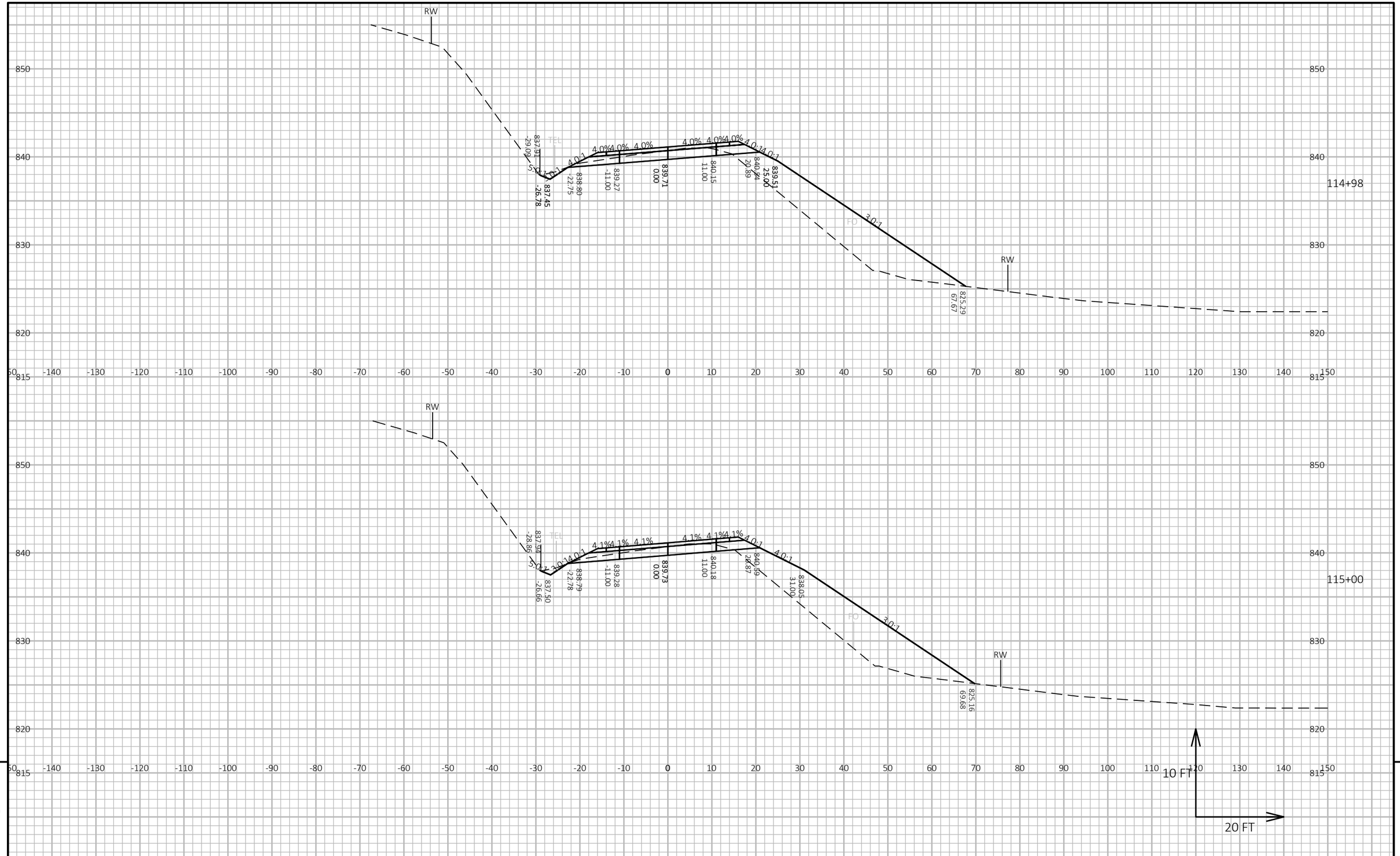


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 162	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090226-xs

PLOT DATE : 10/29/2021 8:08 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



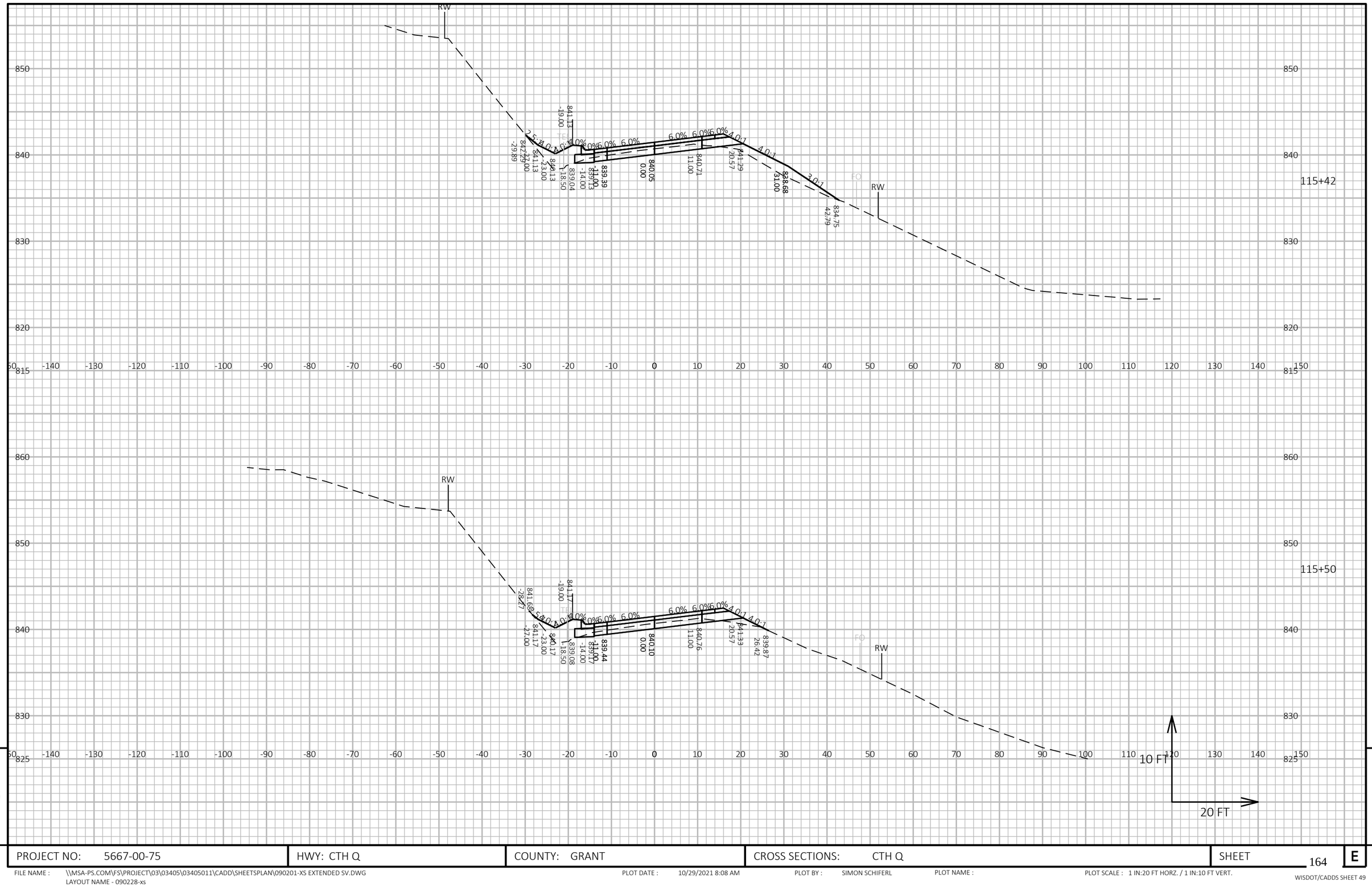
9

9

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 163	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090227-xs

PLOT DATE : 10/29/2021 8:08 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

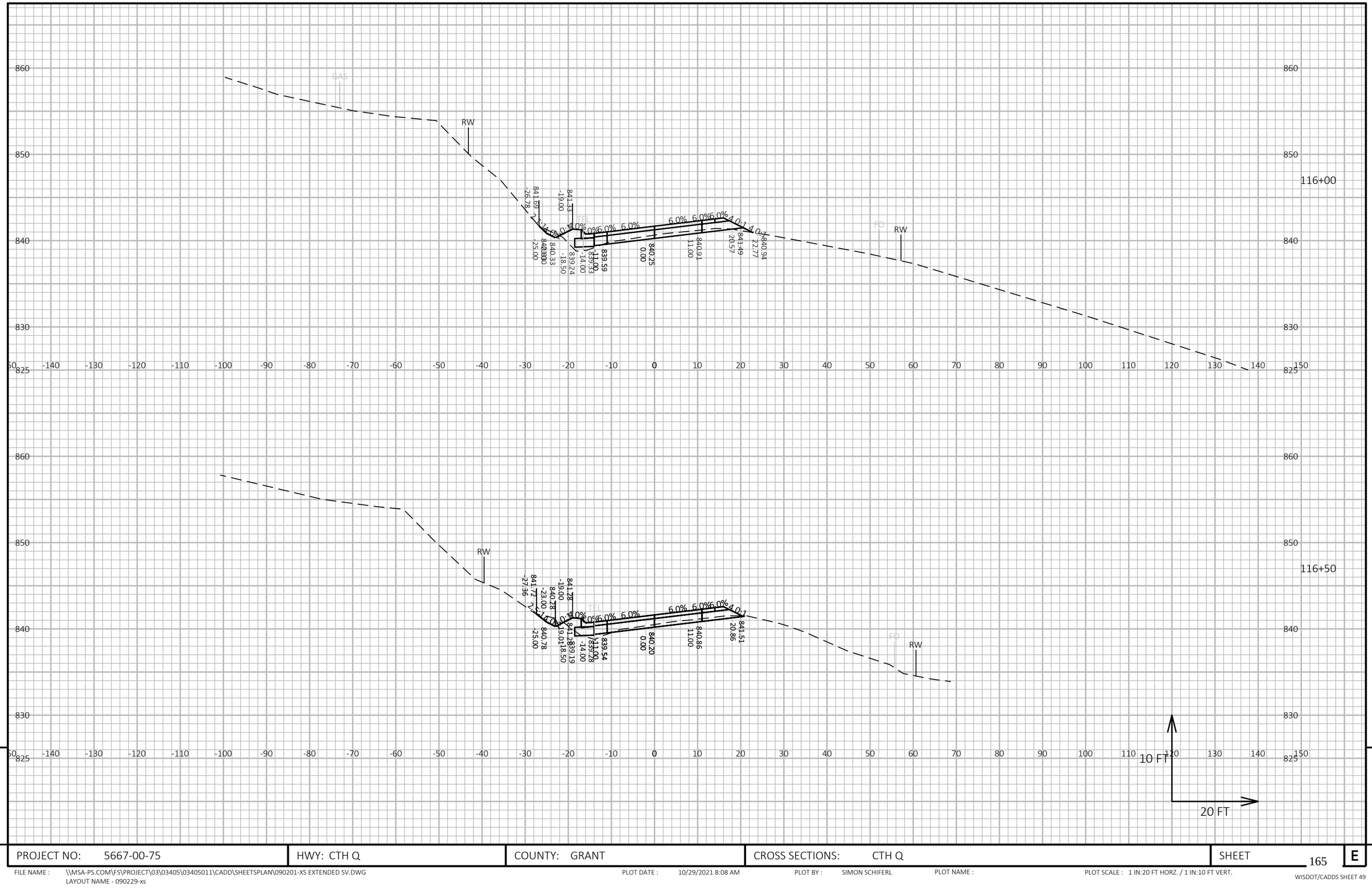


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 164	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090228-xs

PLOT DATE : 10/29/2021 8:08 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

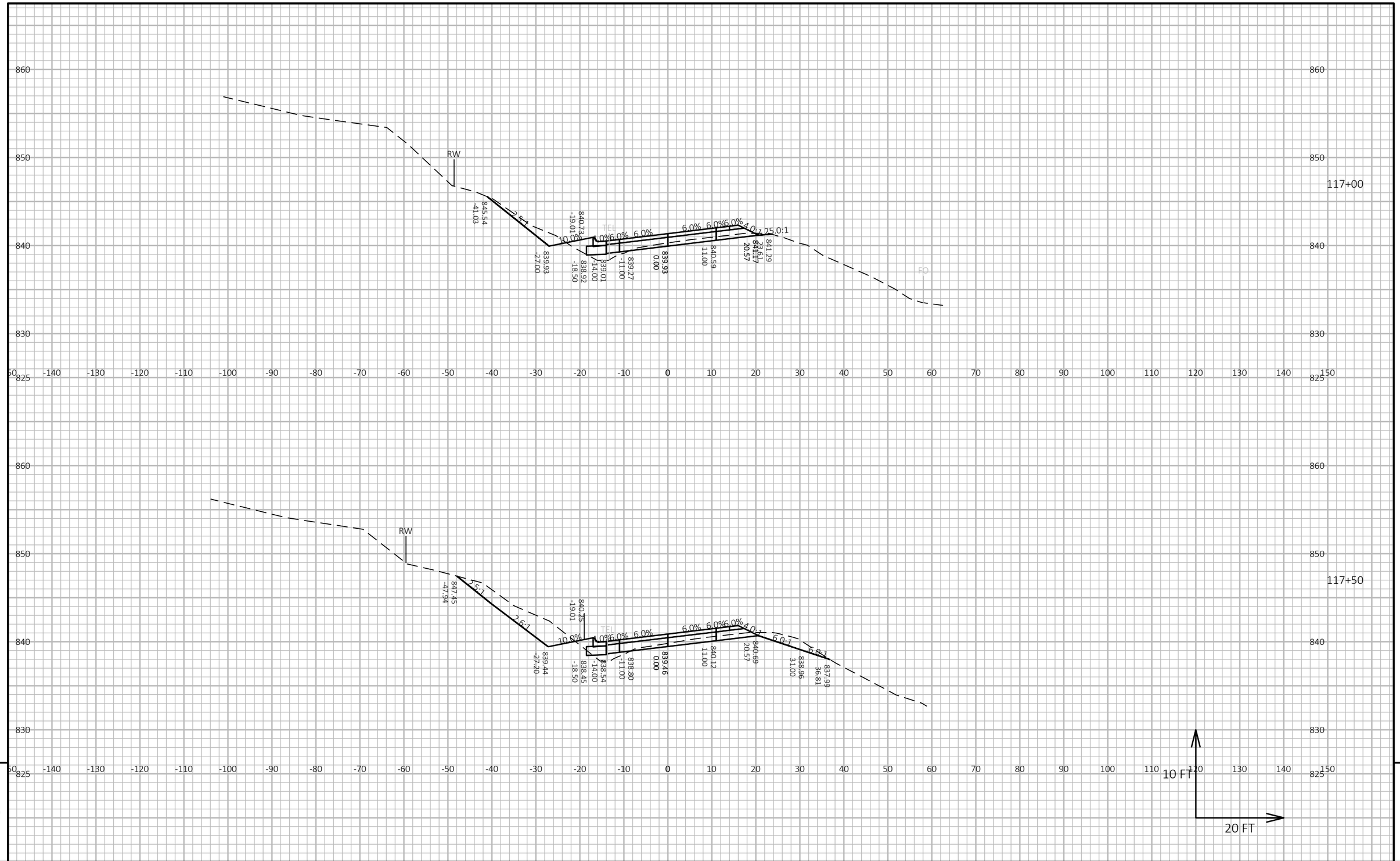


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 165	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090229-xs

PLOT DATE : 10/29/2021 8:08 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

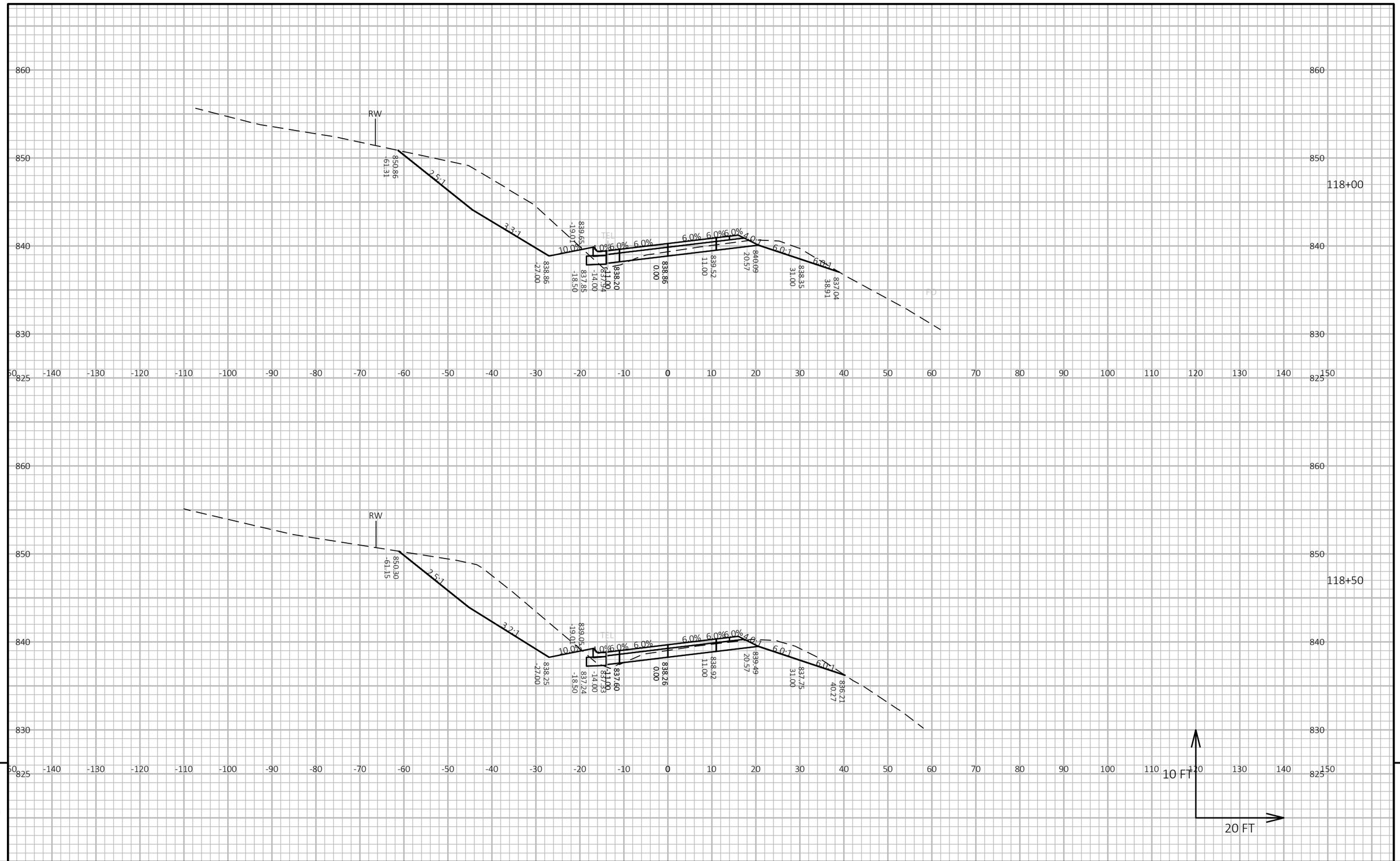


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 166 E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090230-xs

PLOT DATE : 10/29/2021 8:08 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

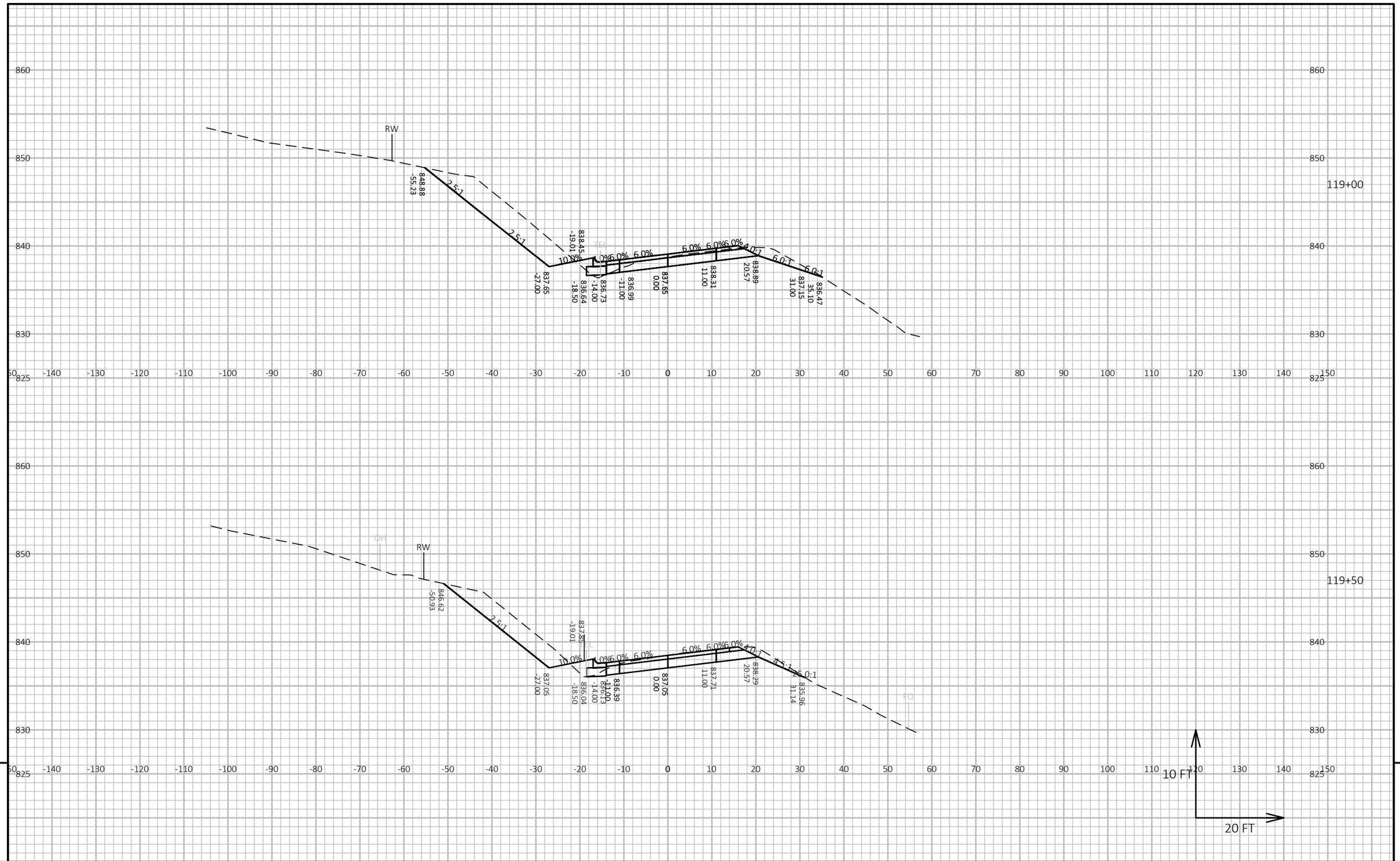


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 167	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090231-xs

PLOT DATE : 10/29/2021 8:08 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

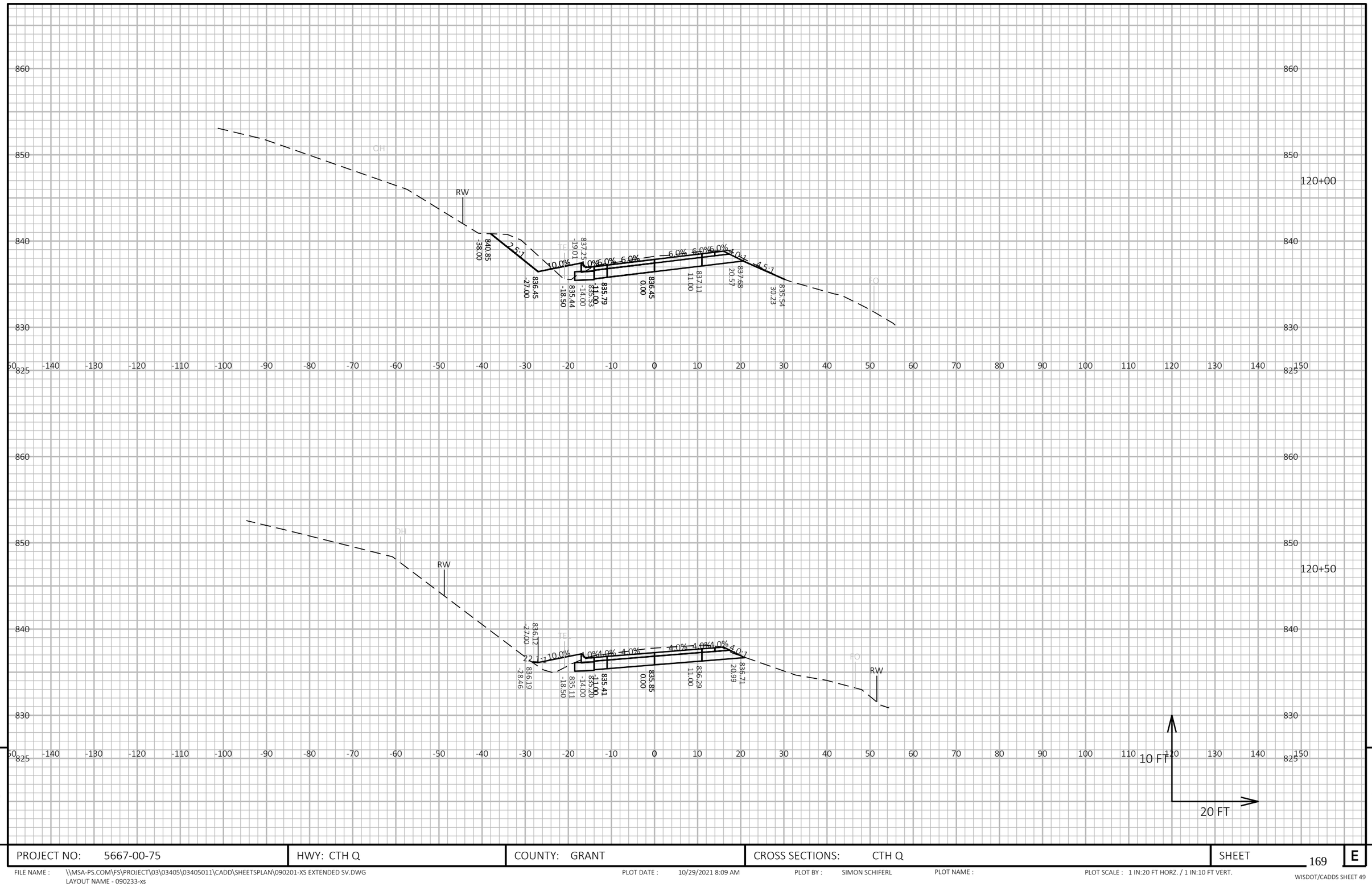


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 168	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090232-xs

PLOT DATE : 10/29/2021 8:08 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

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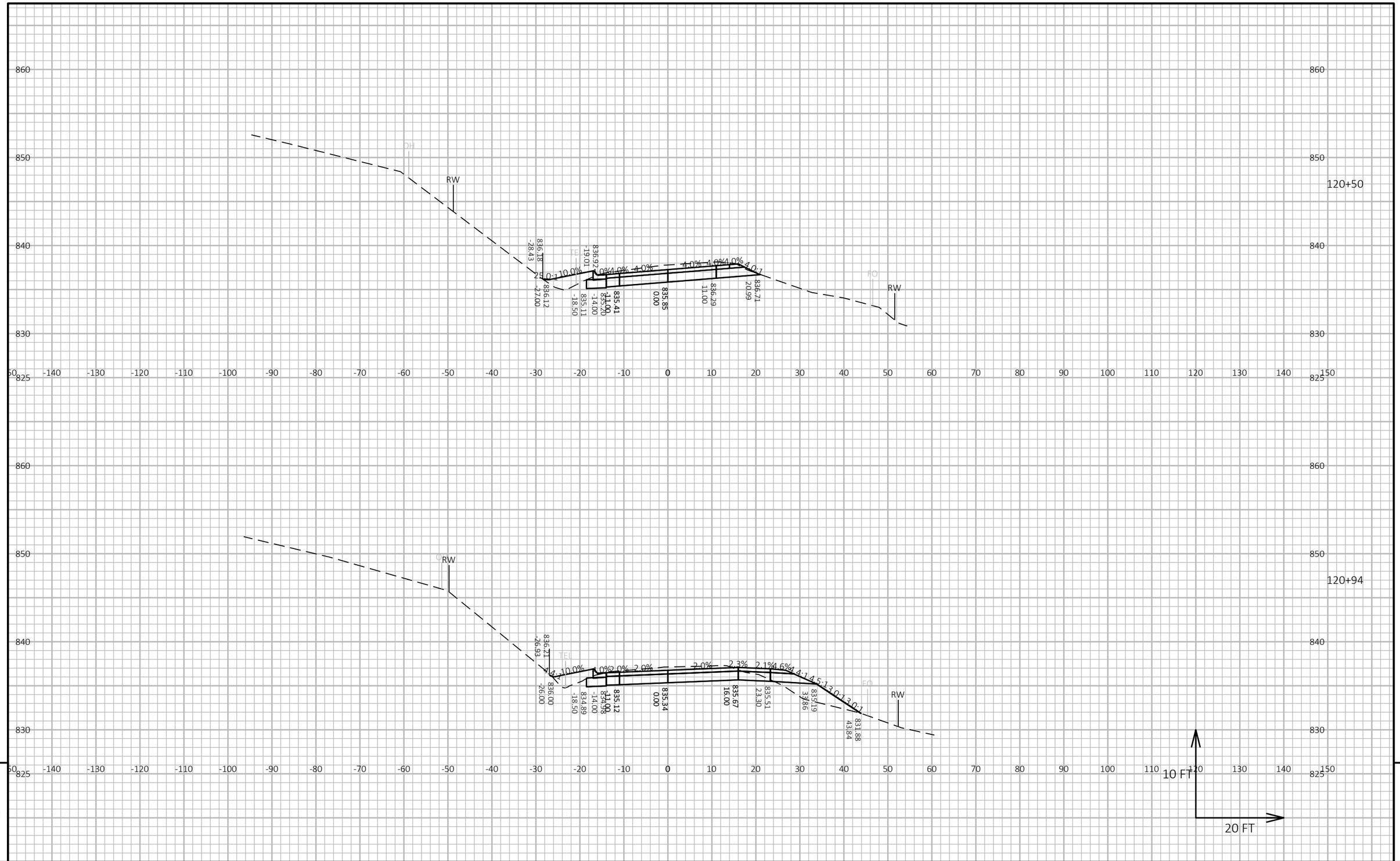
PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 169	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090233-xs

PLOT DATE : 10/29/2021 8:09 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



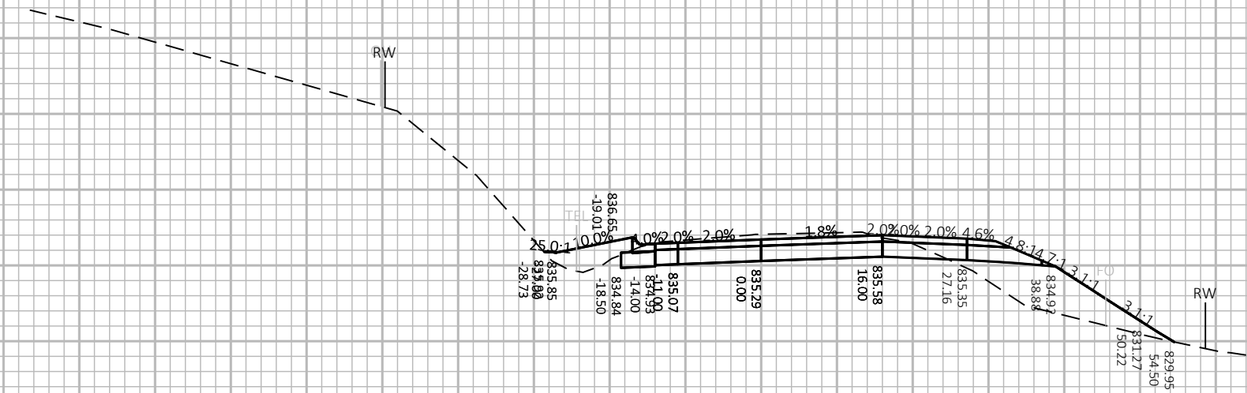
PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 170	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090234-xs

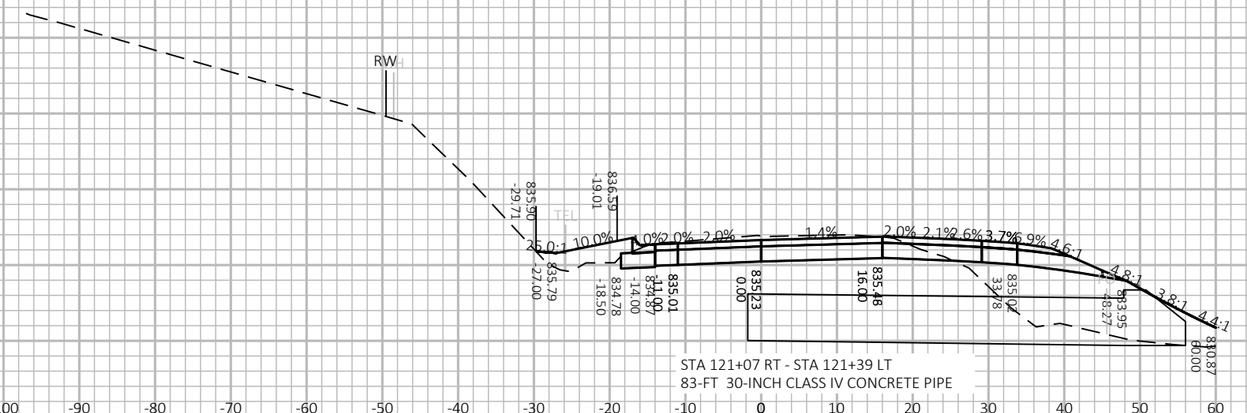
PLOT DATE : 10/29/2021 8:09 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

121+00

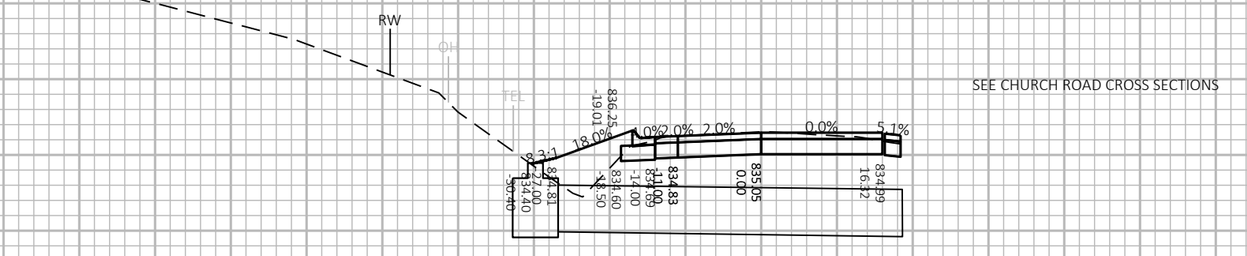


121+07

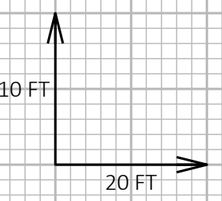


STA 121+07 RT - STA 121+39 LT
83-FT 30-INCH CLASS IV CONCRETE PIPE

121+39



SEE CHURCH ROAD CROSS SECTIONS

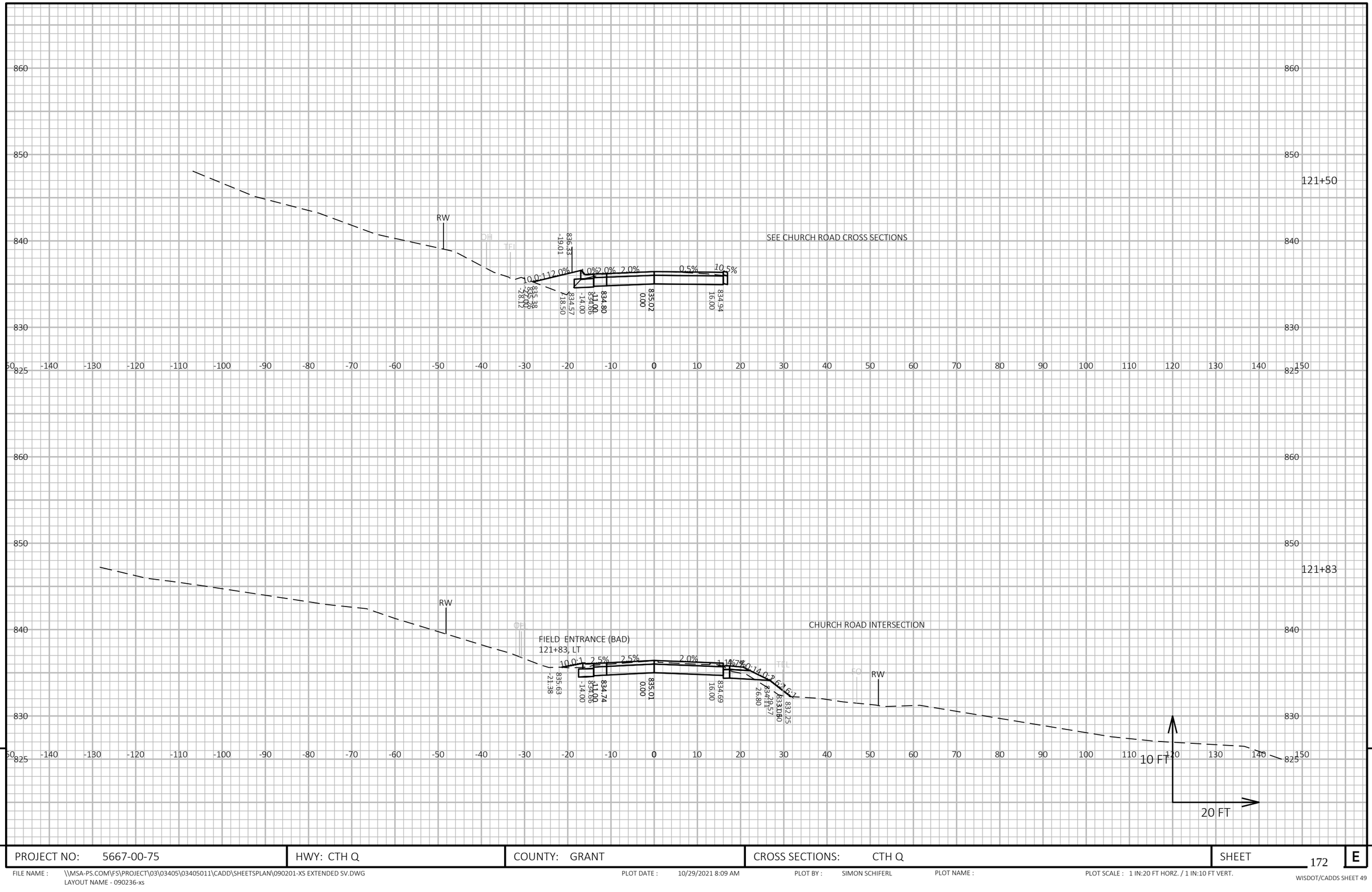


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 171	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090235-xs

PLOT DATE : 10/29/2021 8:09 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

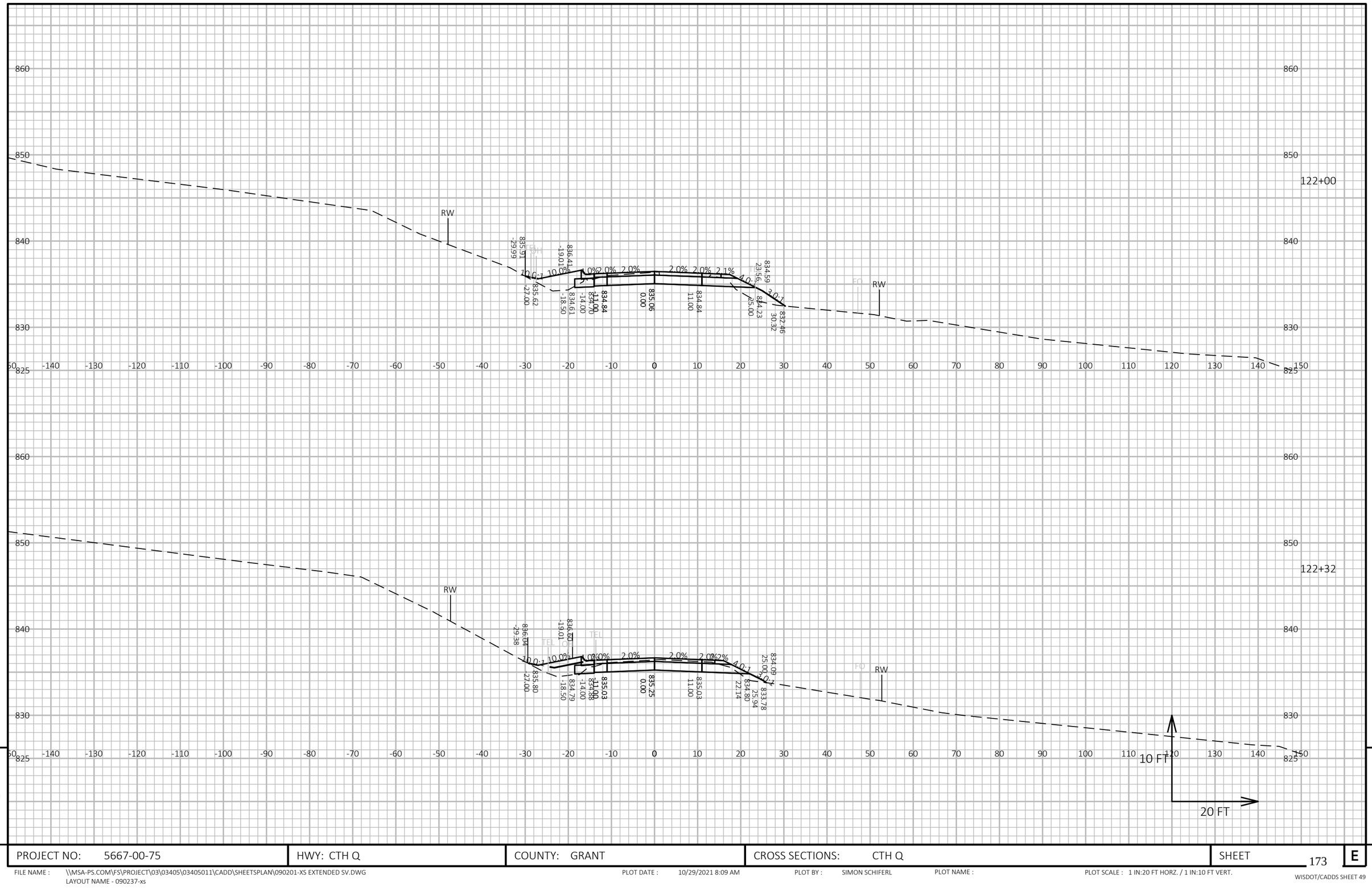


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 172	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090236-xs

PLOT DATE : 10/29/2021 8:09 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

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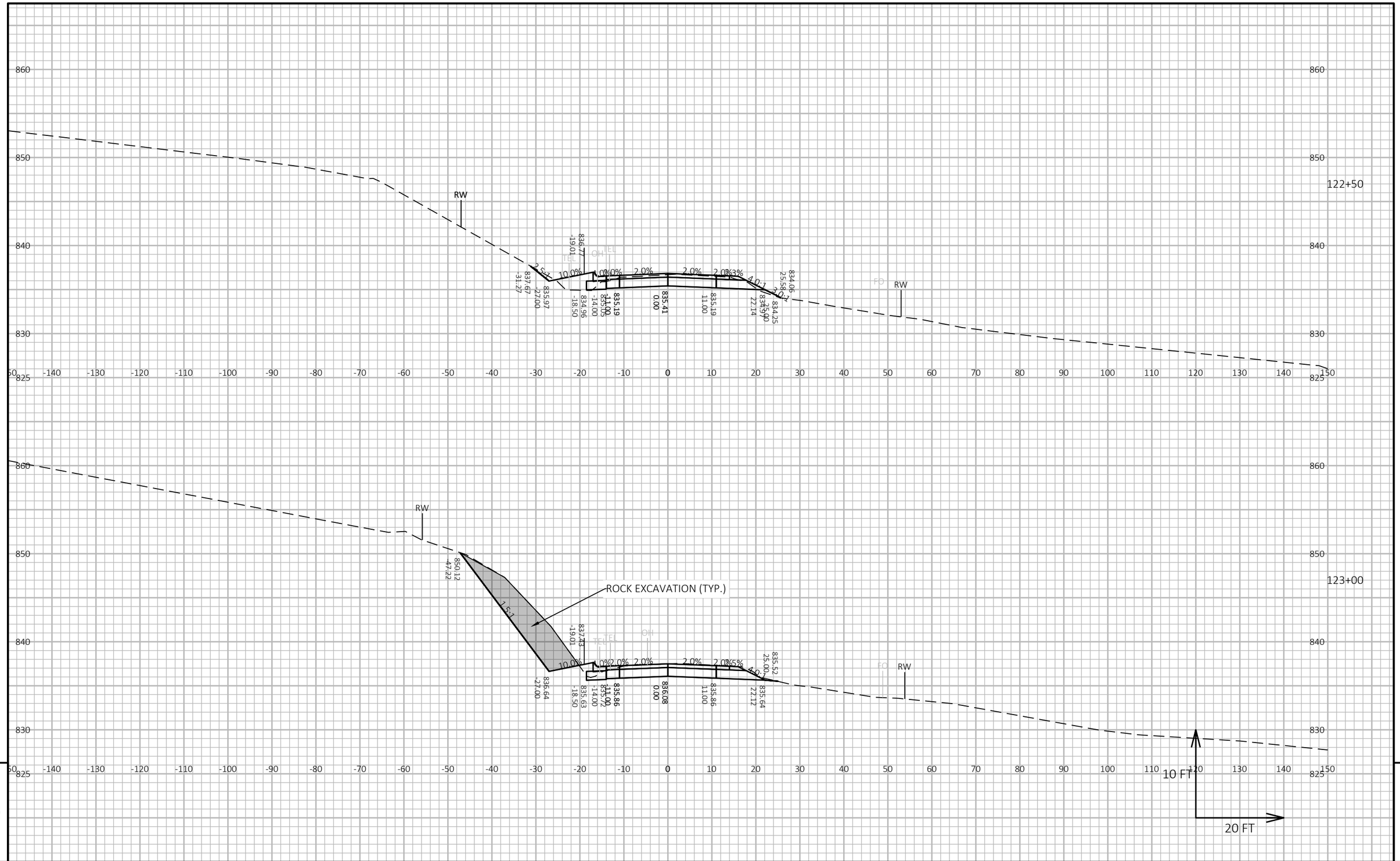
PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 173	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090237-xs

PLOT DATE : 10/29/2021 8:09 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

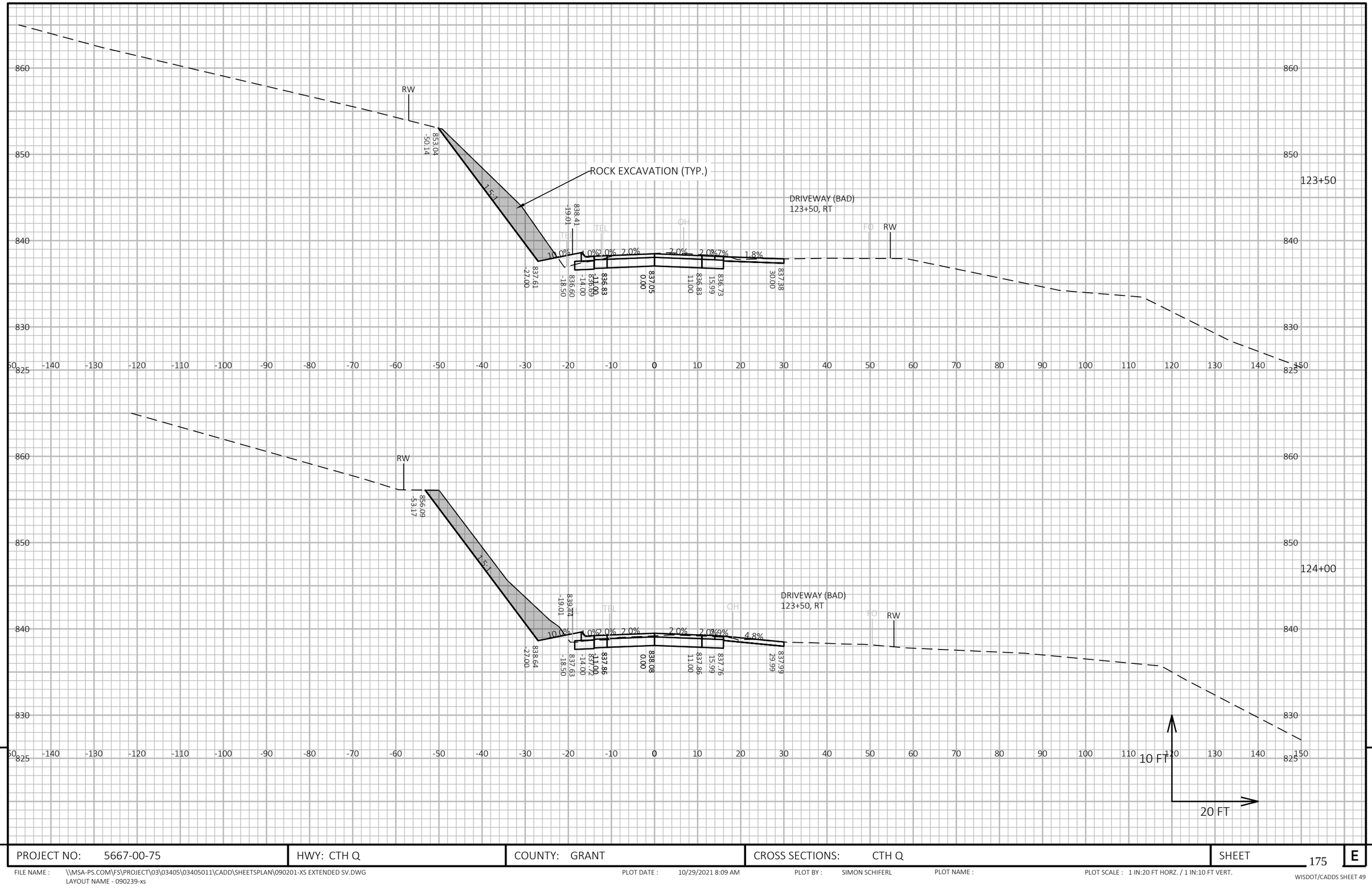


9 9

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 174	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090238-xs

PLOT DATE : 10/29/2021 8:09 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



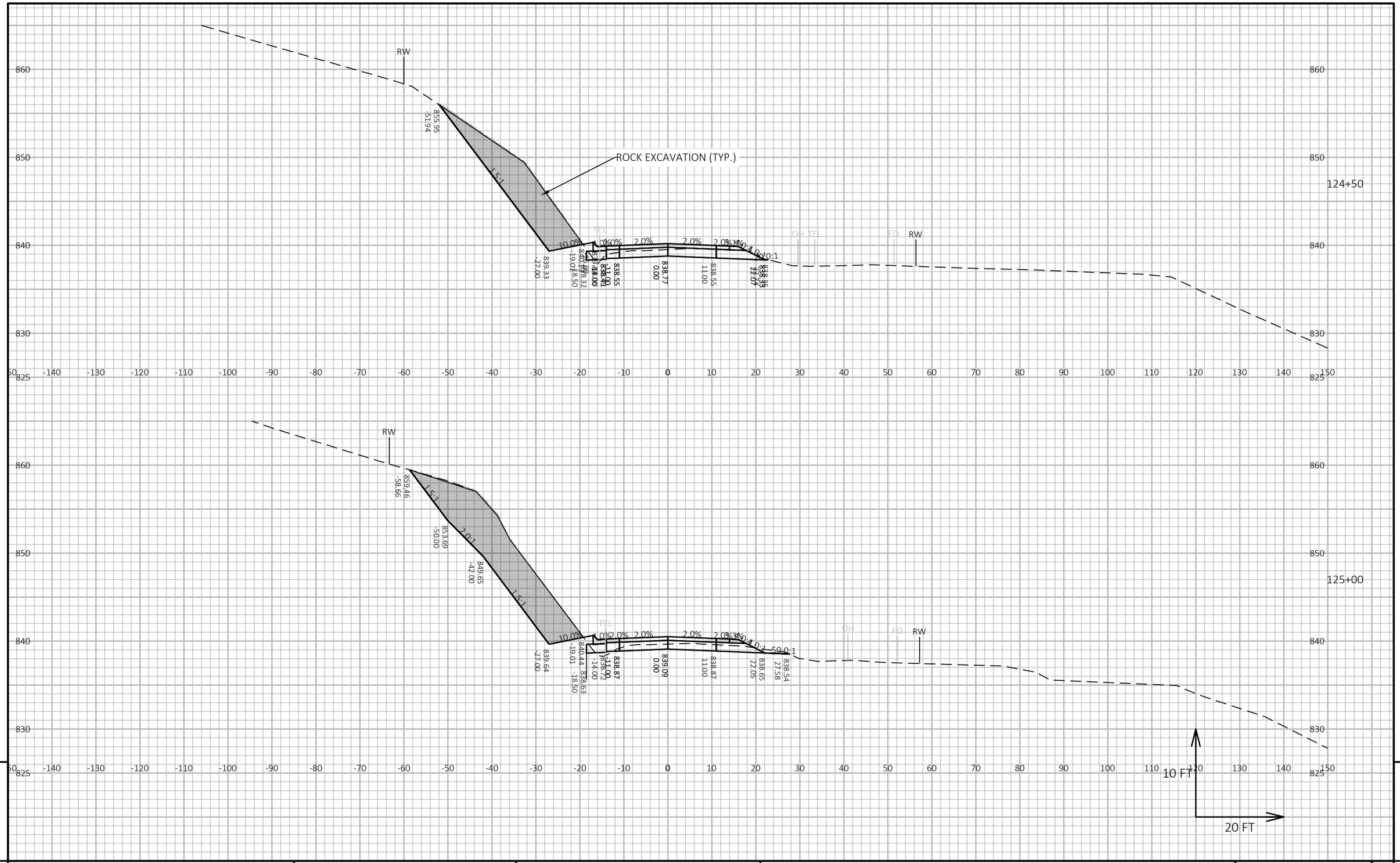
9

9

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 175	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090239-xs

PLOT DATE : 10/29/2021 8:09 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

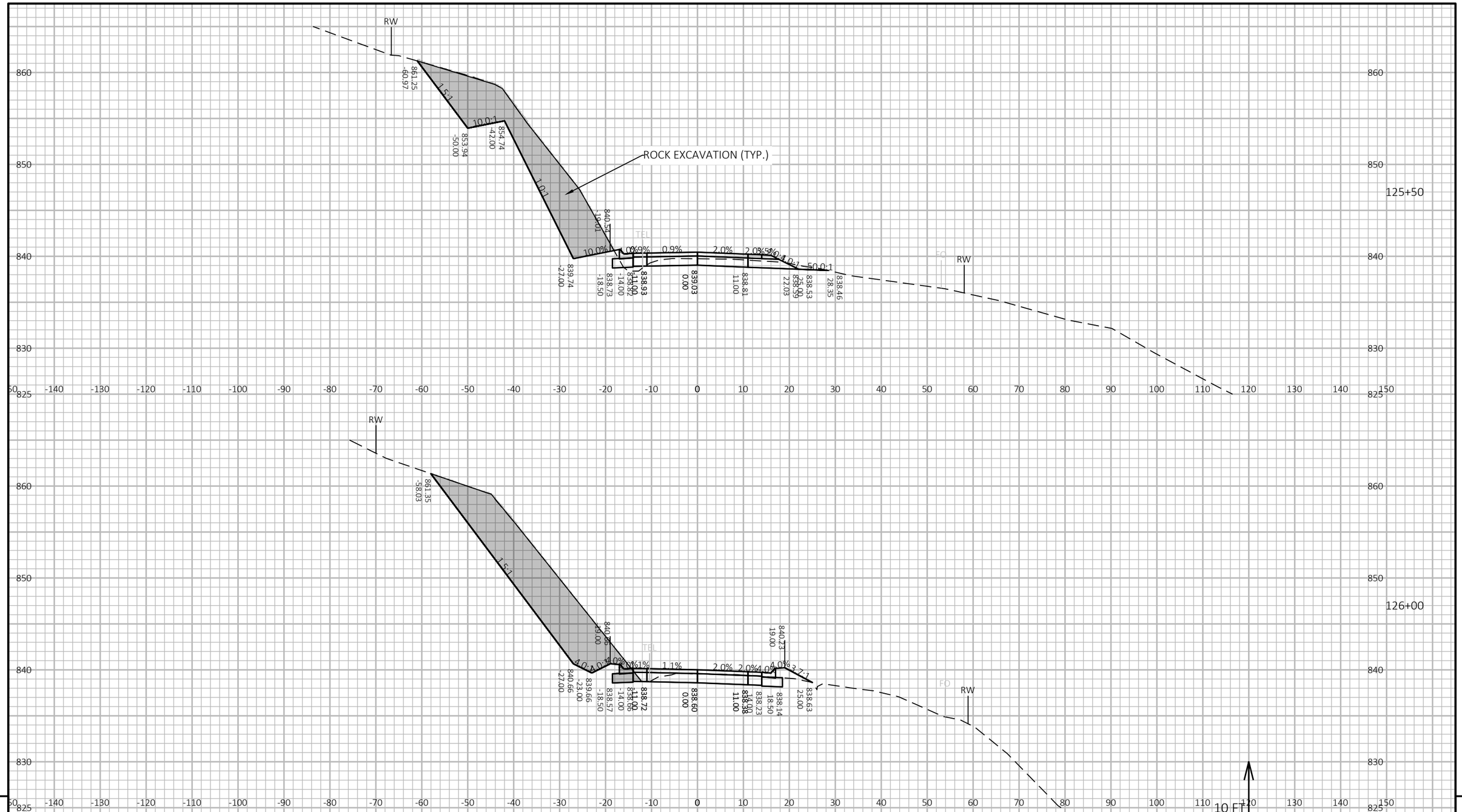


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 176 E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090240-xs

PLOT DATE : 10/29/2021 8:09 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

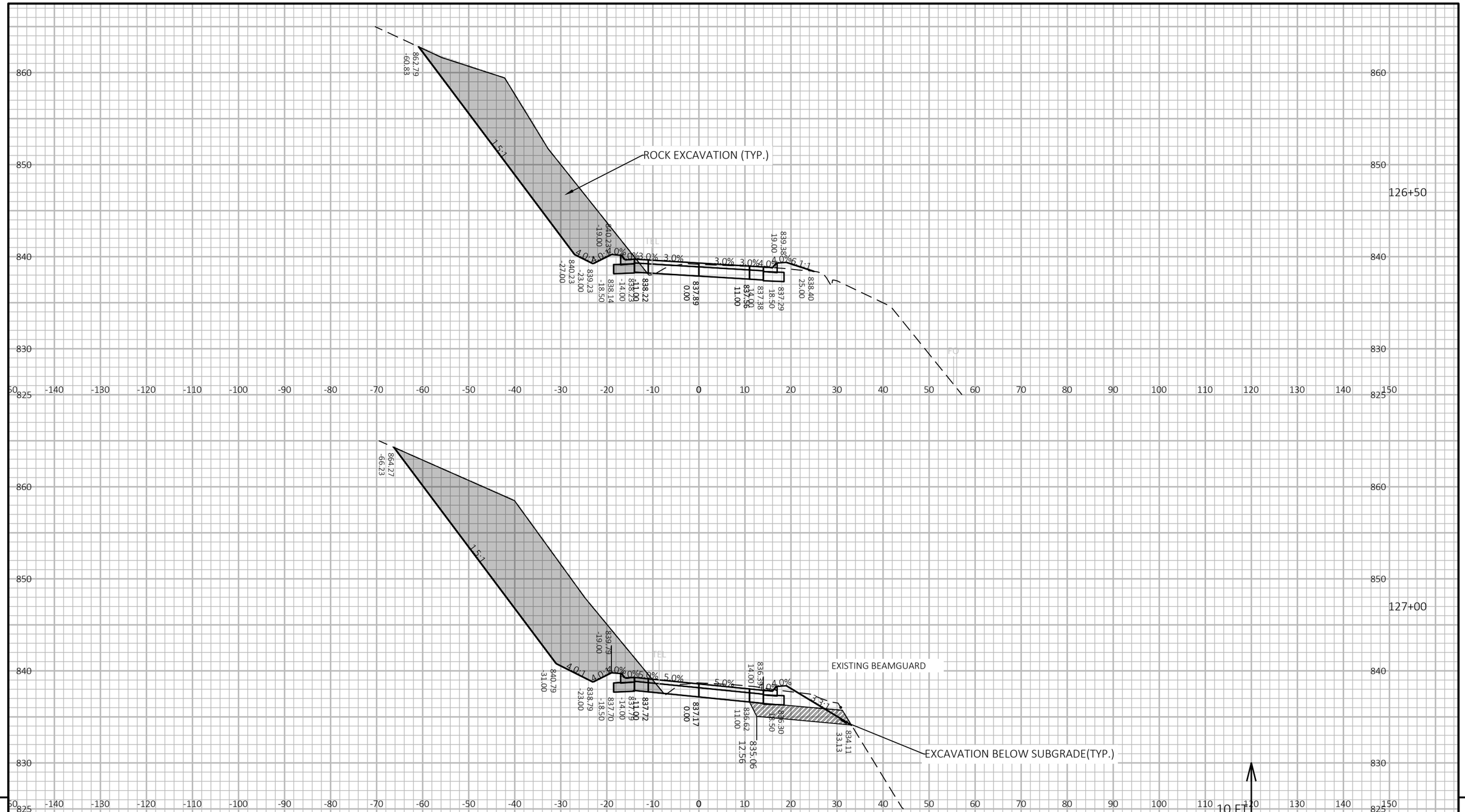


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 177 E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090241-xs

PLOT DATE : 10/29/2021 8:10 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

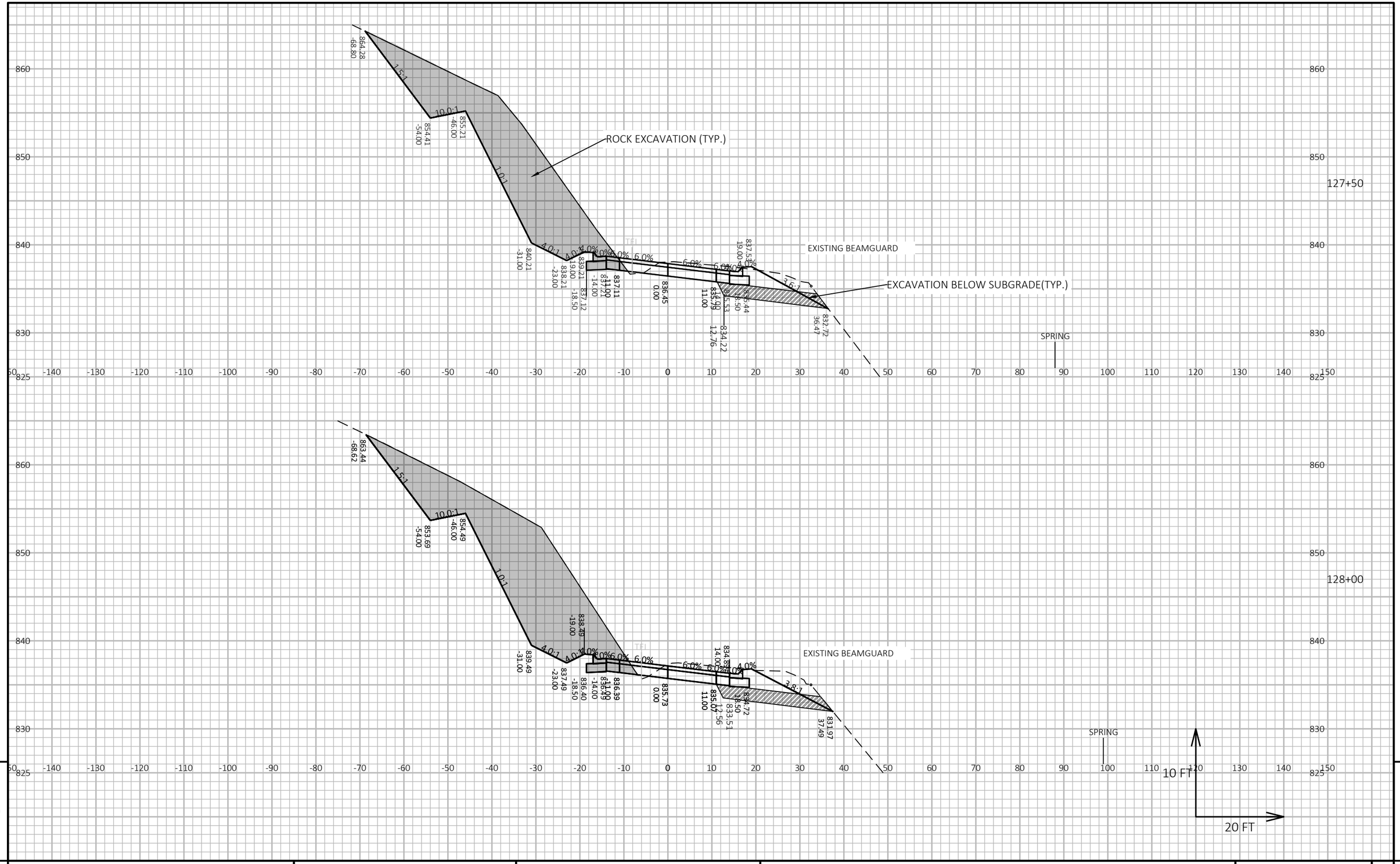


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 178 E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090242-xs

PLOT DATE : 10/29/2021 8:10 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 179	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090243-xs

PLOT DATE : 10/29/2021 8:10 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

RW

859.47
-63.75

1.5:1

852.97
-54.00

10.0:1

853.77
-46.00

1.0:1

837.77
-19.00

838.77
-31.00

4.0:1

4.0:1

4.0%

6.0%

6.0%

6.0%

6.0%

6.0%

6.0%

4.0:1

4.0:1

20.0:1

ROCK EXCAVATION (TYP.)

EXISTING BEAMGUARD

836.77
-23.00

835.68
-18.50

835.67
0.00

834.99
-11.00

834.97
-14.00

835.01
0.00

834.35
11.00

833.60
23.46

833.04
34.70

SPRING

128+50

862.43
-69.27

1.5:1

852.25
-54.00

10.0:1

853.05
-46.00

1.0:1

837.05
-19.00

838.05
-31.00

4.0:1

4.0:1

4.0%

6.0%

6.0%

6.0%

6.0%

6.0%

6.0%

4.0:1

4.0:1

20.0:1

EXISTING BEAMGUARD

836.05
-23.00

834.96
-18.50

834.95
0.00

834.97
-11.00

834.97
-14.00

834.29
0.00

833.63
11.00

832.88
23.46

832.27
35.66

SPRING

129+00

10 FT

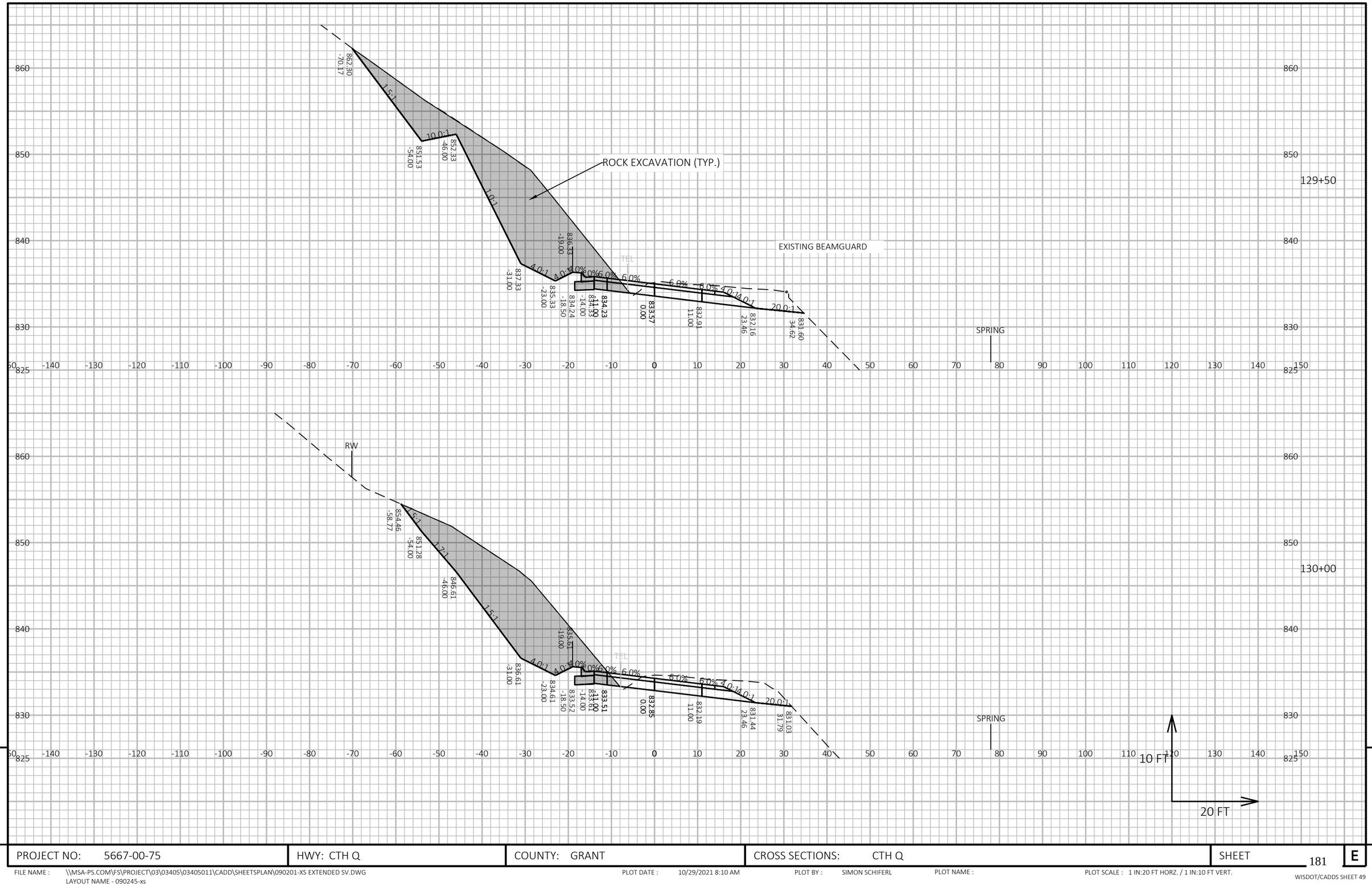
20 FT

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 180	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090244-xs

PLOT DATE : 10/29/2021 8:10 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

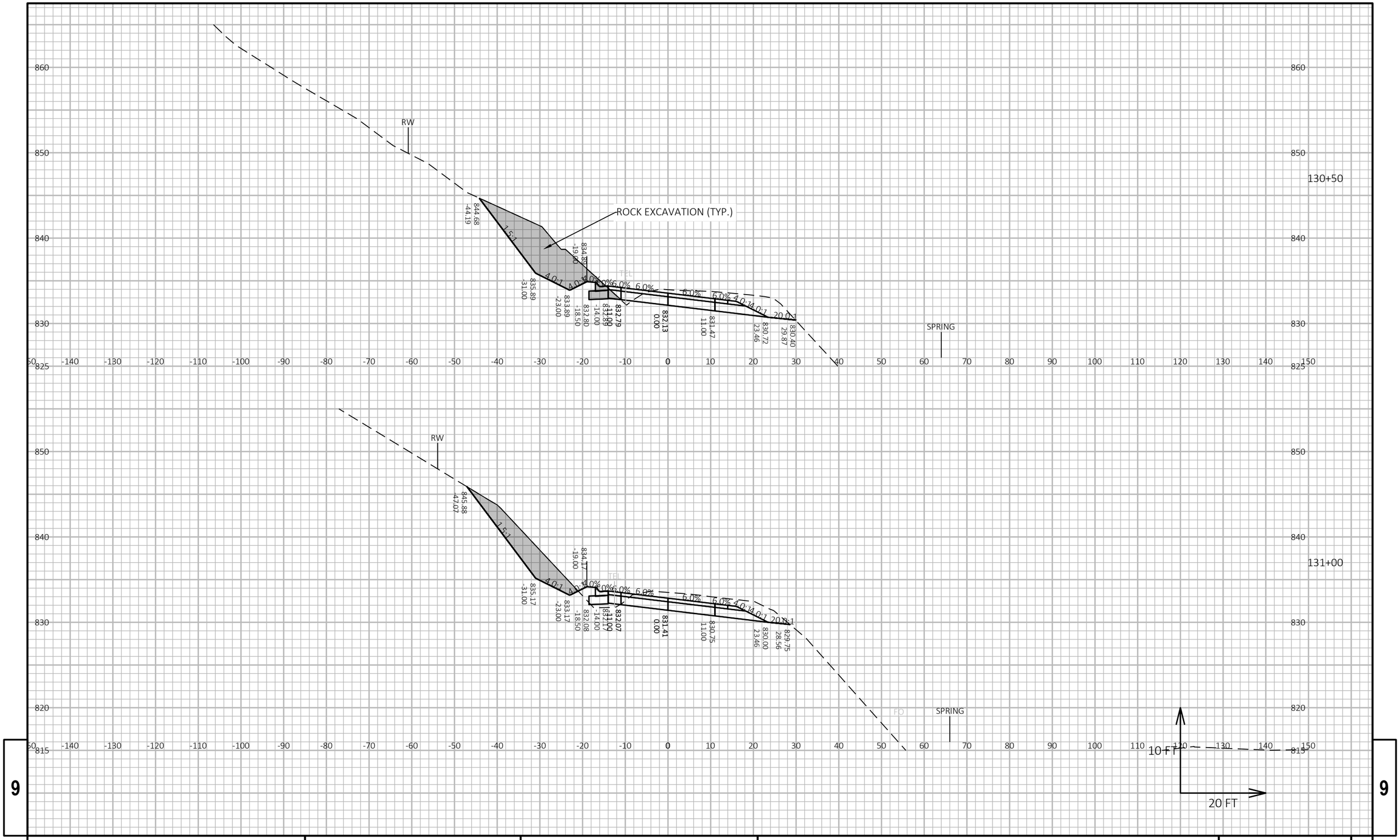


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 181 E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090245-xs

PLOT DATE : 10/29/2021 8:10 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

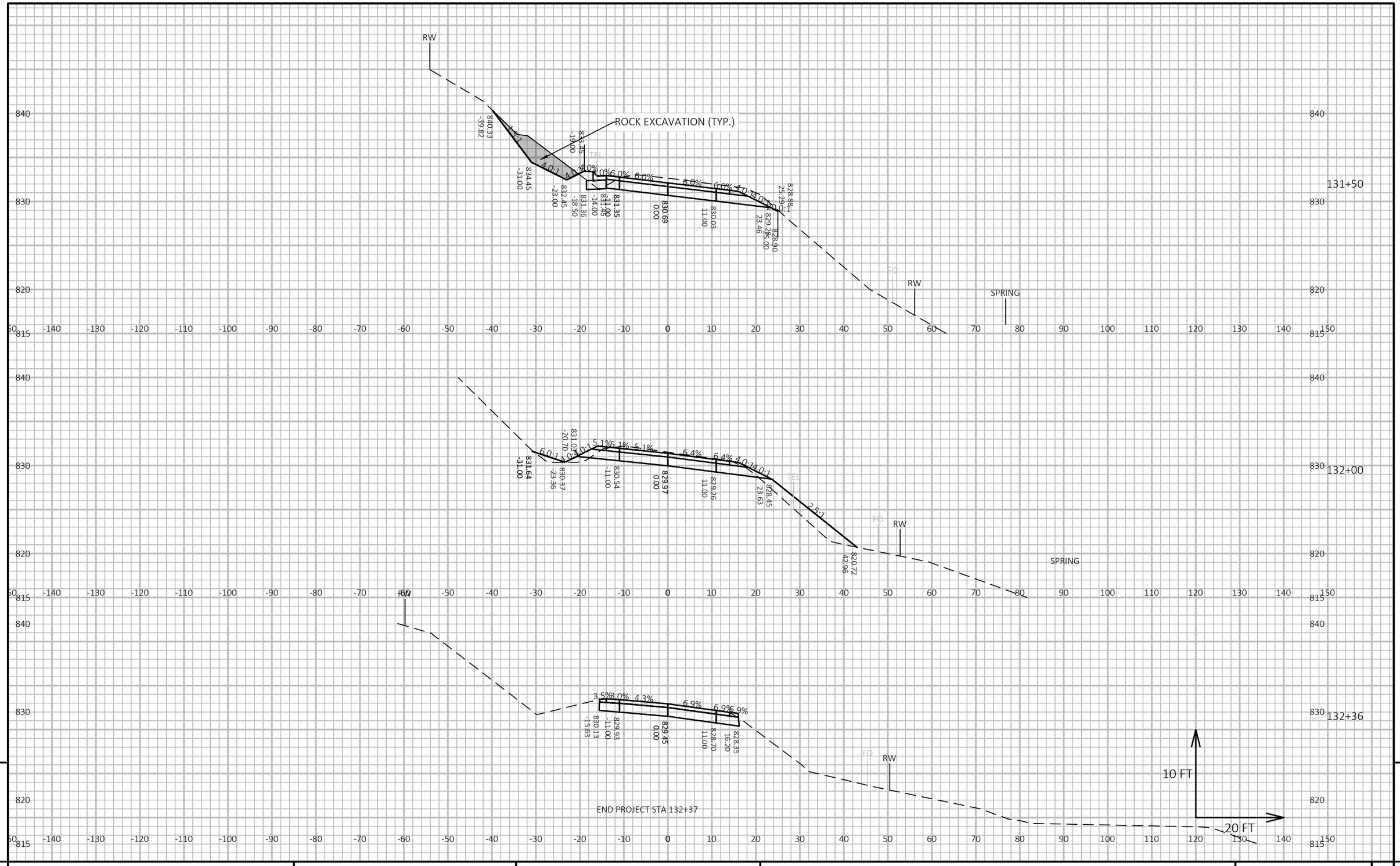


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 182	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090246-xs

PLOT DATE : 10/29/2021 8:10 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

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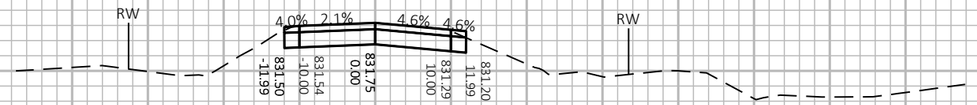
PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CTH Q	SHEET 183	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090247-xs

PLOT DATE : 10/29/2021 8:10 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

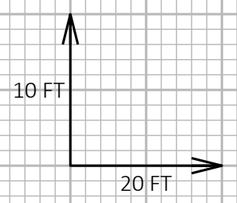
WISDOT/CADDS SHEET 49

BEGIN CONSTRUCTION STA 0+38H



0+38

0+50

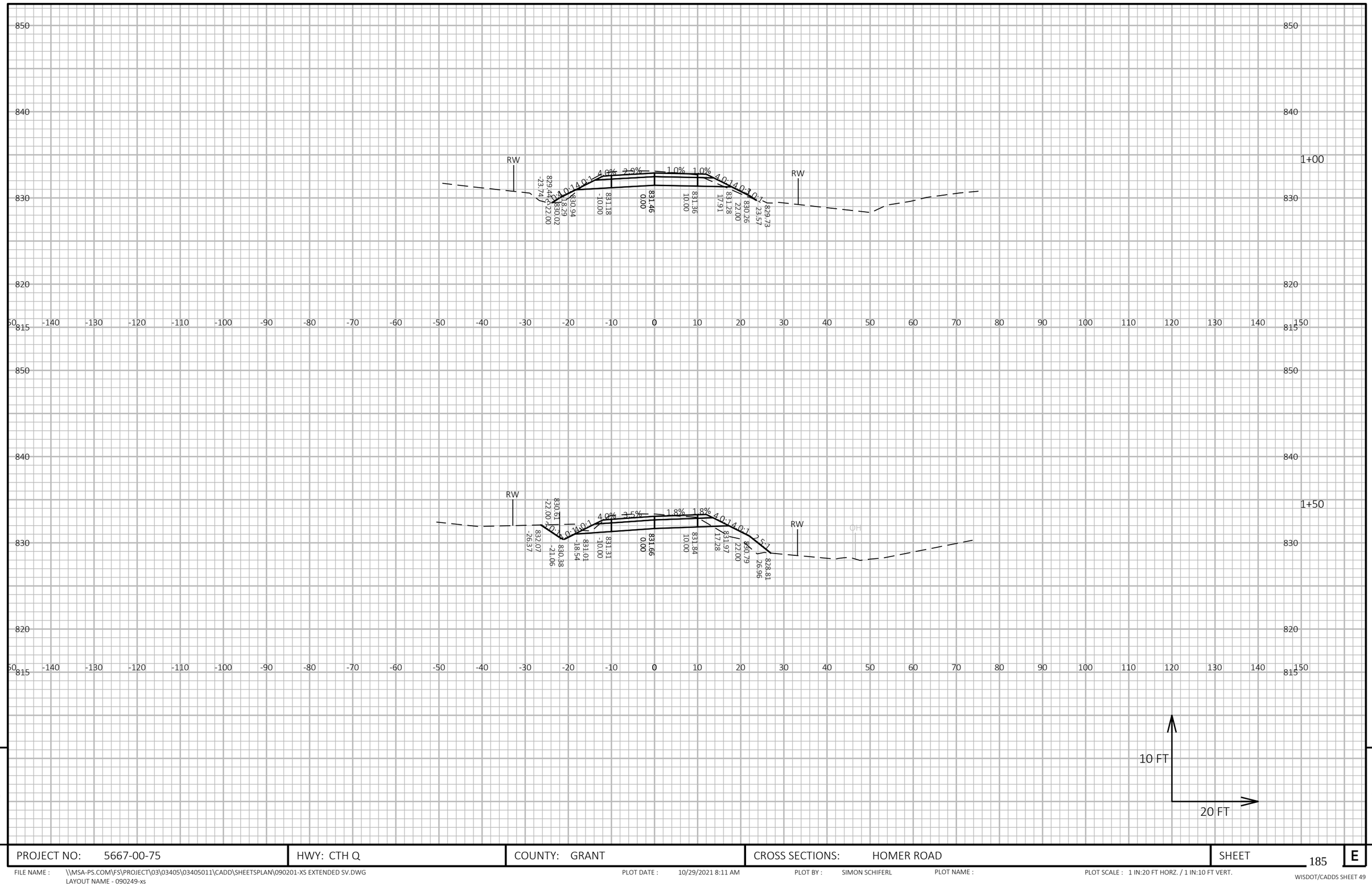


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: HOMER ROAD	SHEET 184	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090248-xs

PLOT DATE : 10/29/2021 8:11 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



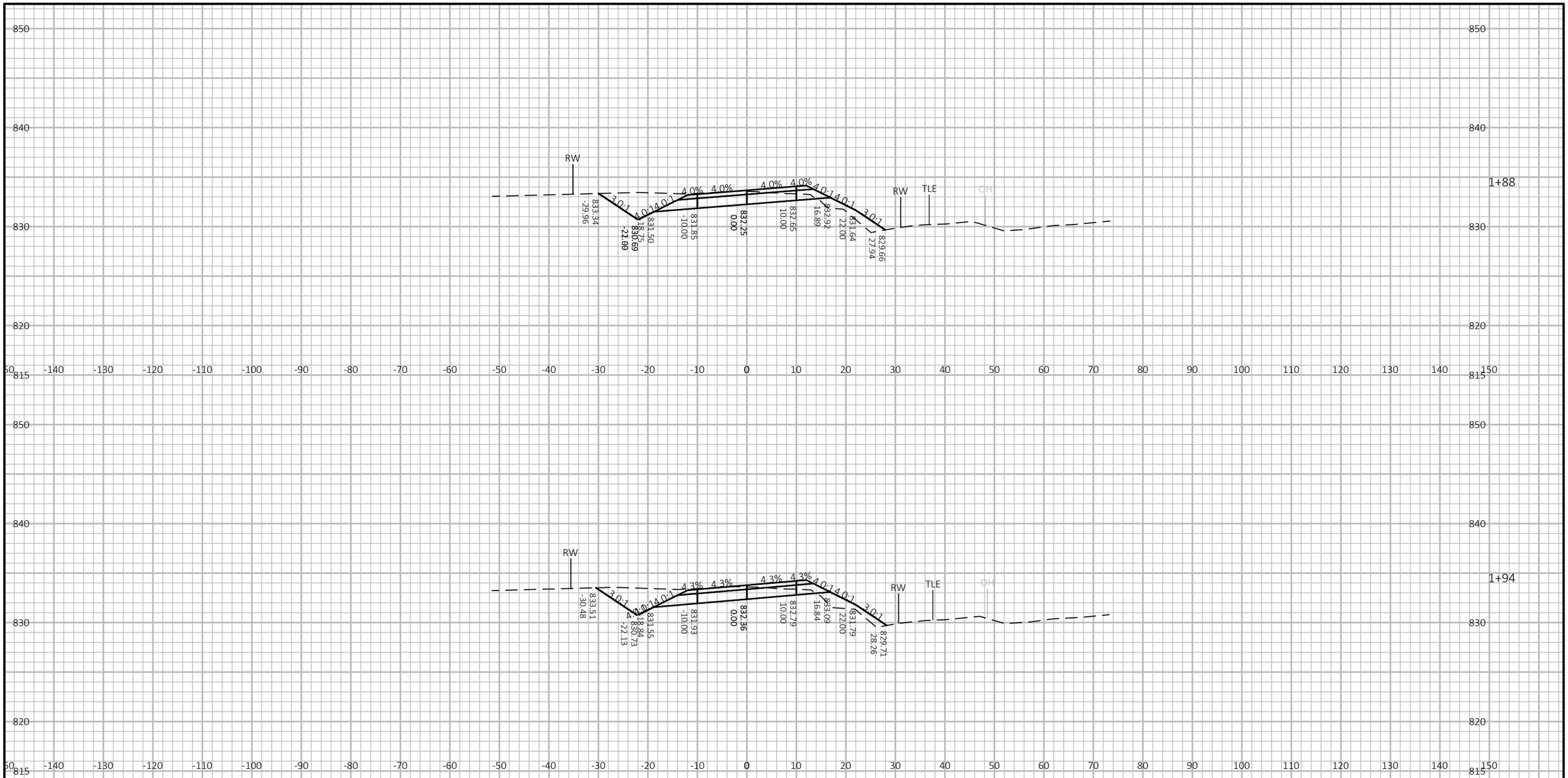
9

9

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: HOMER ROAD	SHEET 185	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090249-xs

PLOT DATE : 10/29/2021 8:11 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

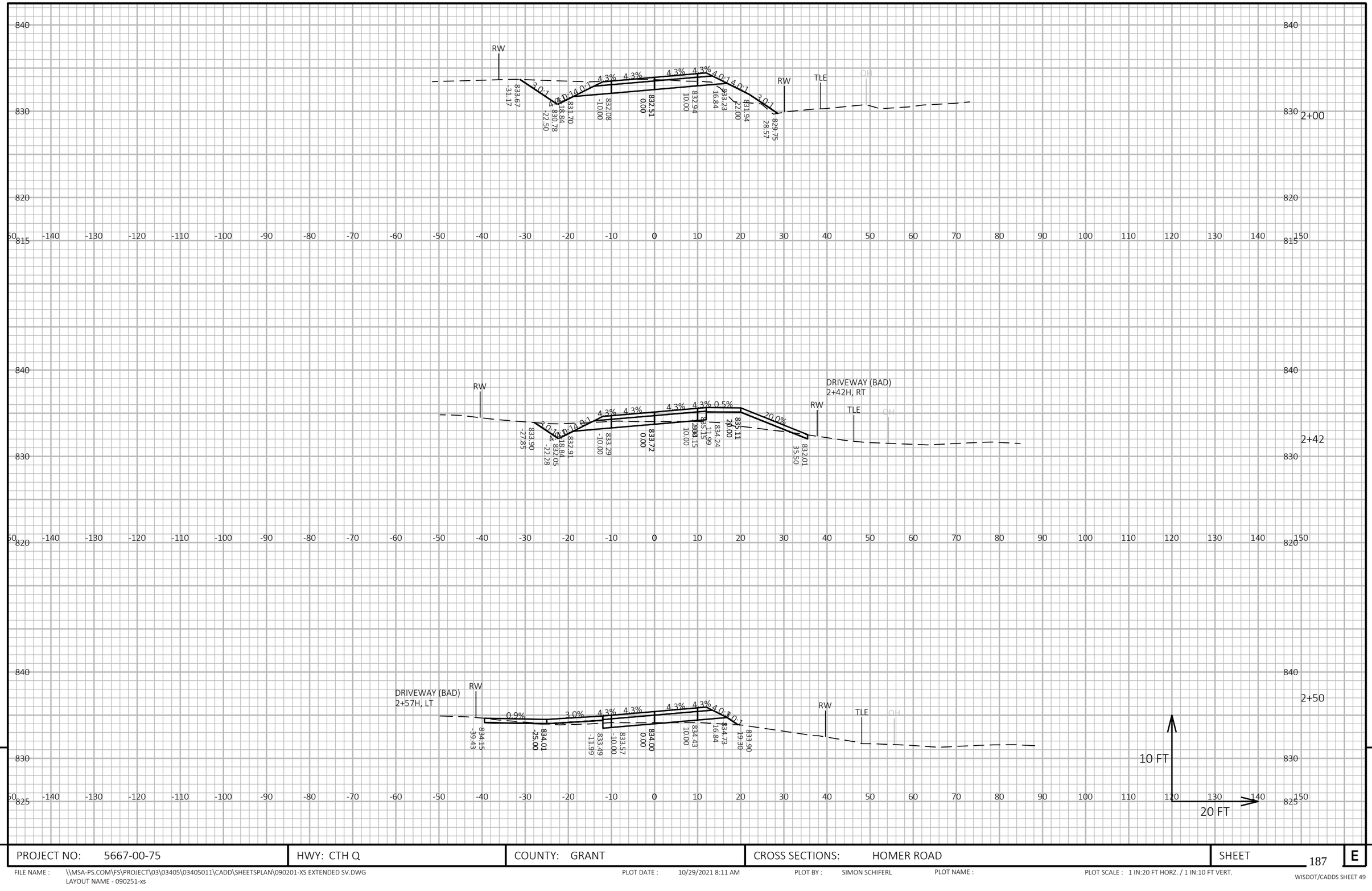


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: HOMER ROAD	SHEET 186	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090250-xs

PLOT DATE : 10/29/2021 8:11 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

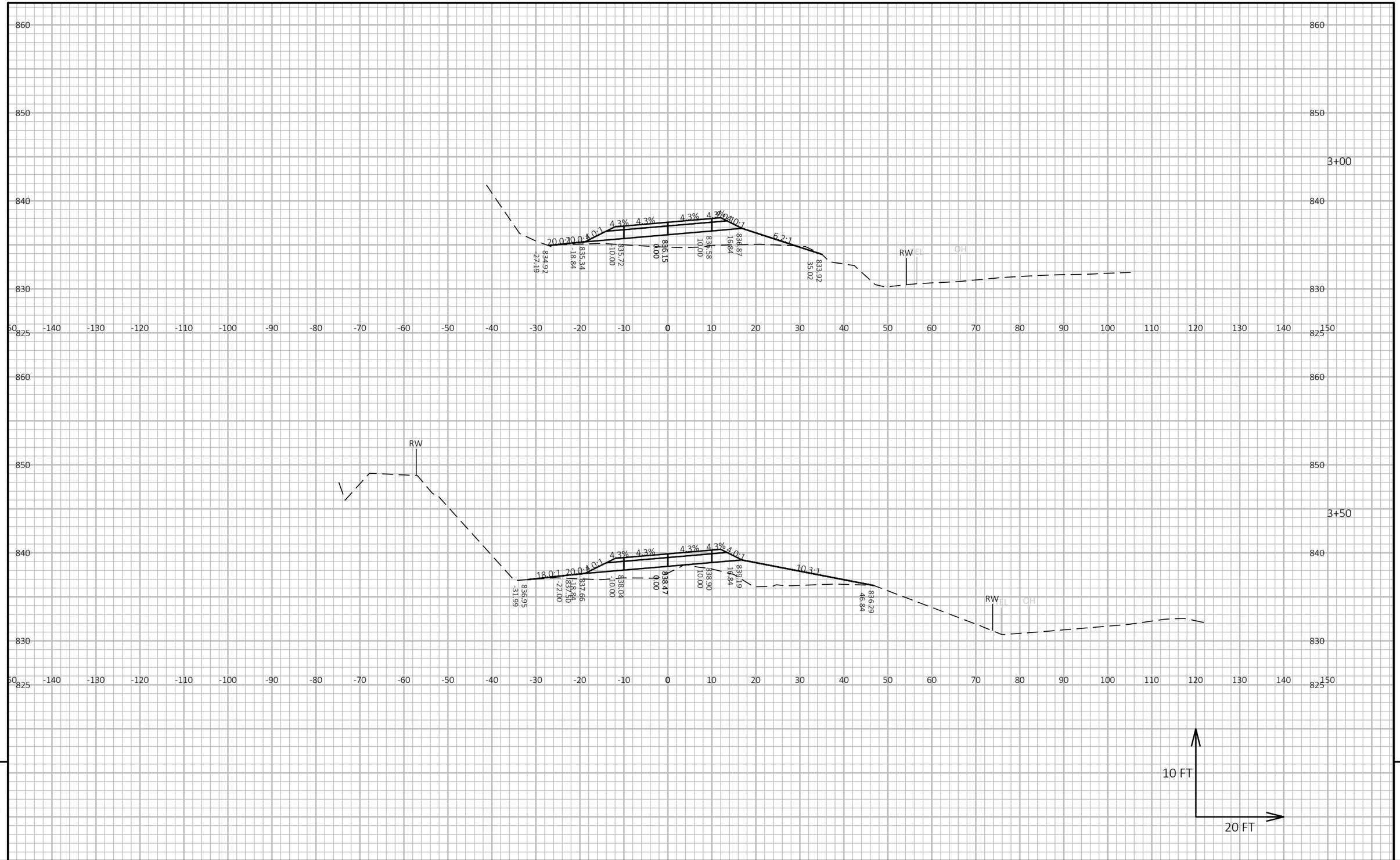
9

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: HOMER ROAD	SHEET 187	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090251-xs

PLOT DATE : 10/29/2021 8:11 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

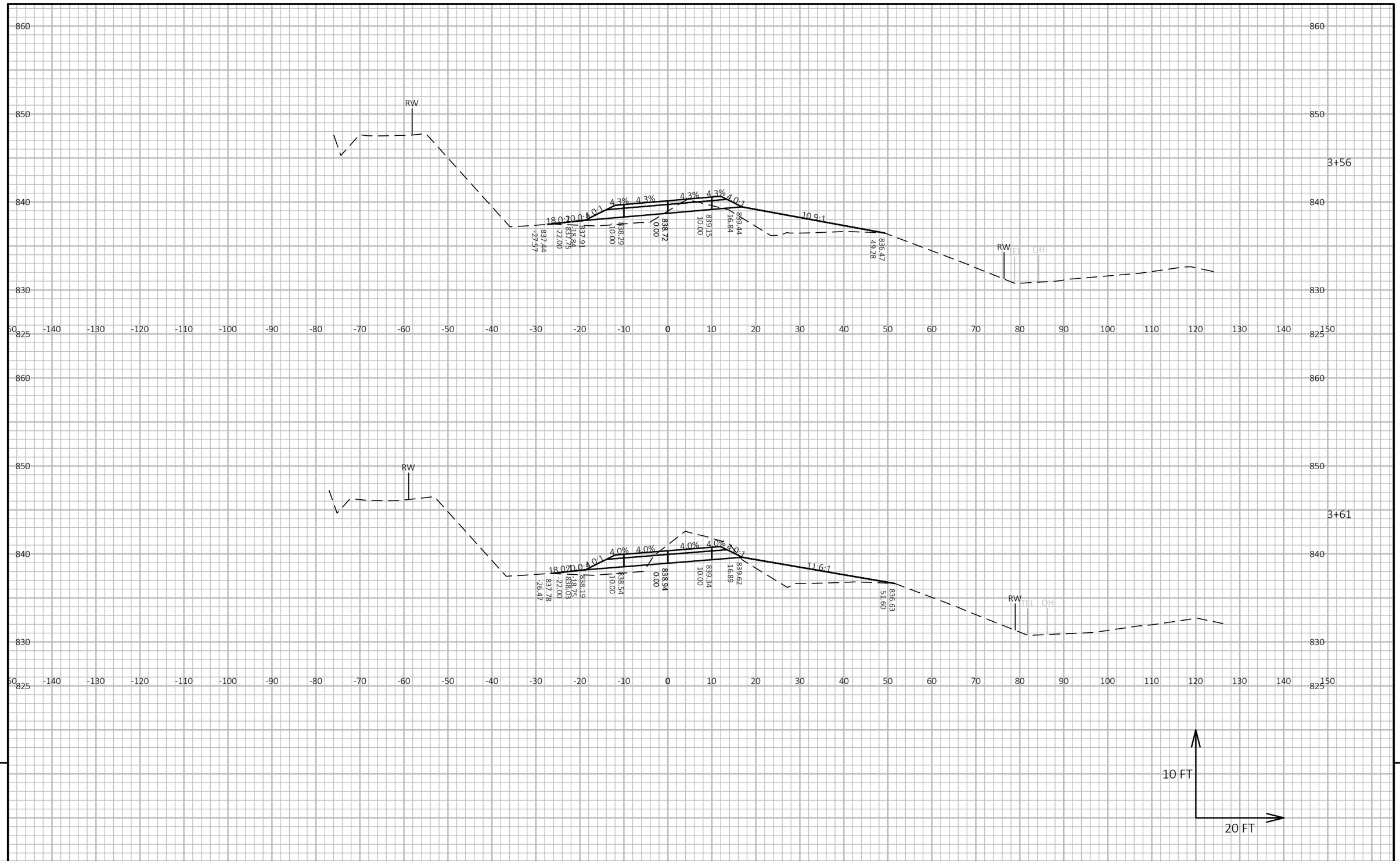


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: HOMER ROAD	SHEET 188	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090252-xs

PLOT DATE : 10/29/2021 8:11 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

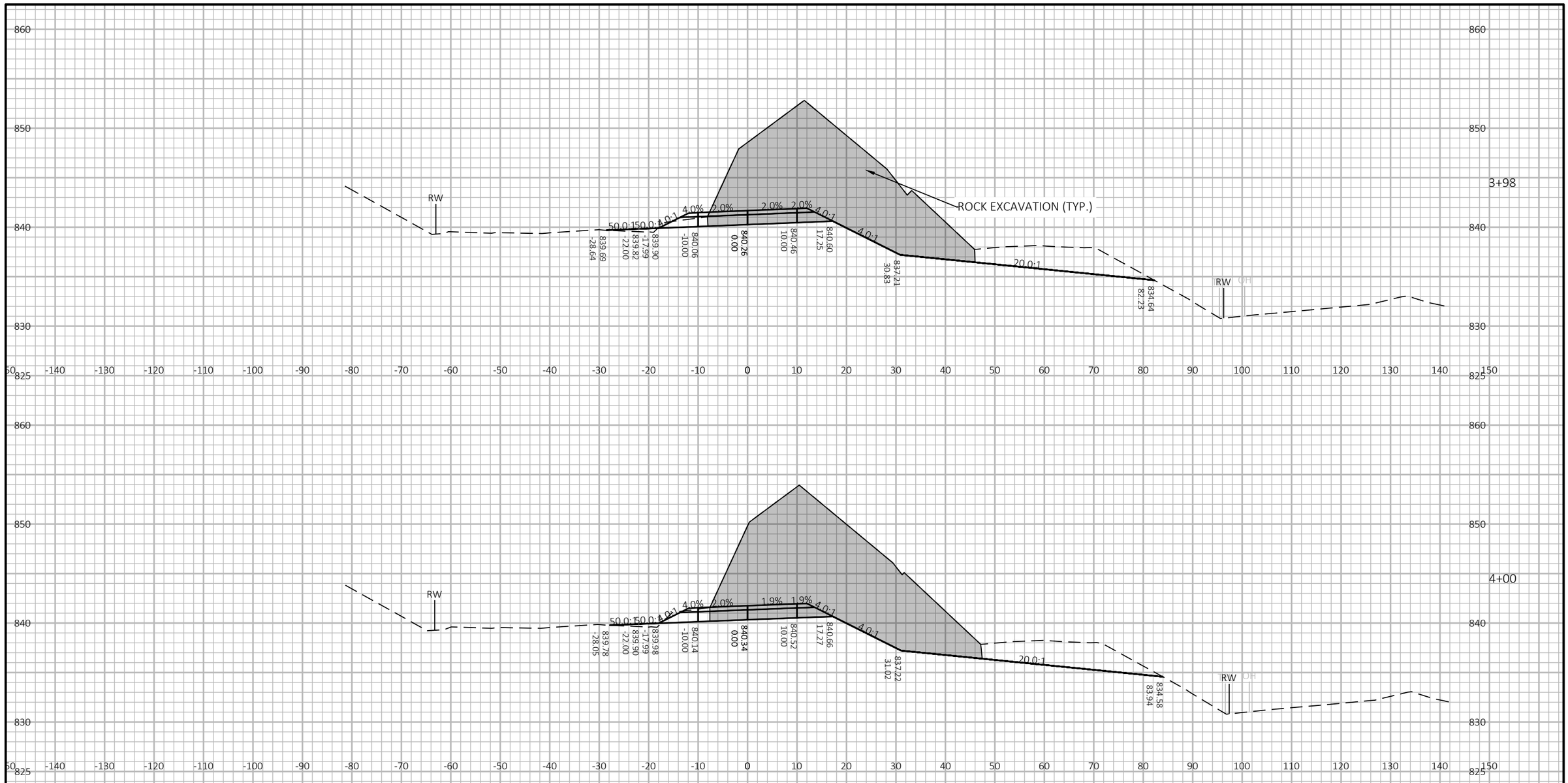
9

PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: HOMER ROAD	SHEET 189	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090253-xs

PLOT DATE : 10/29/2021 8:12 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

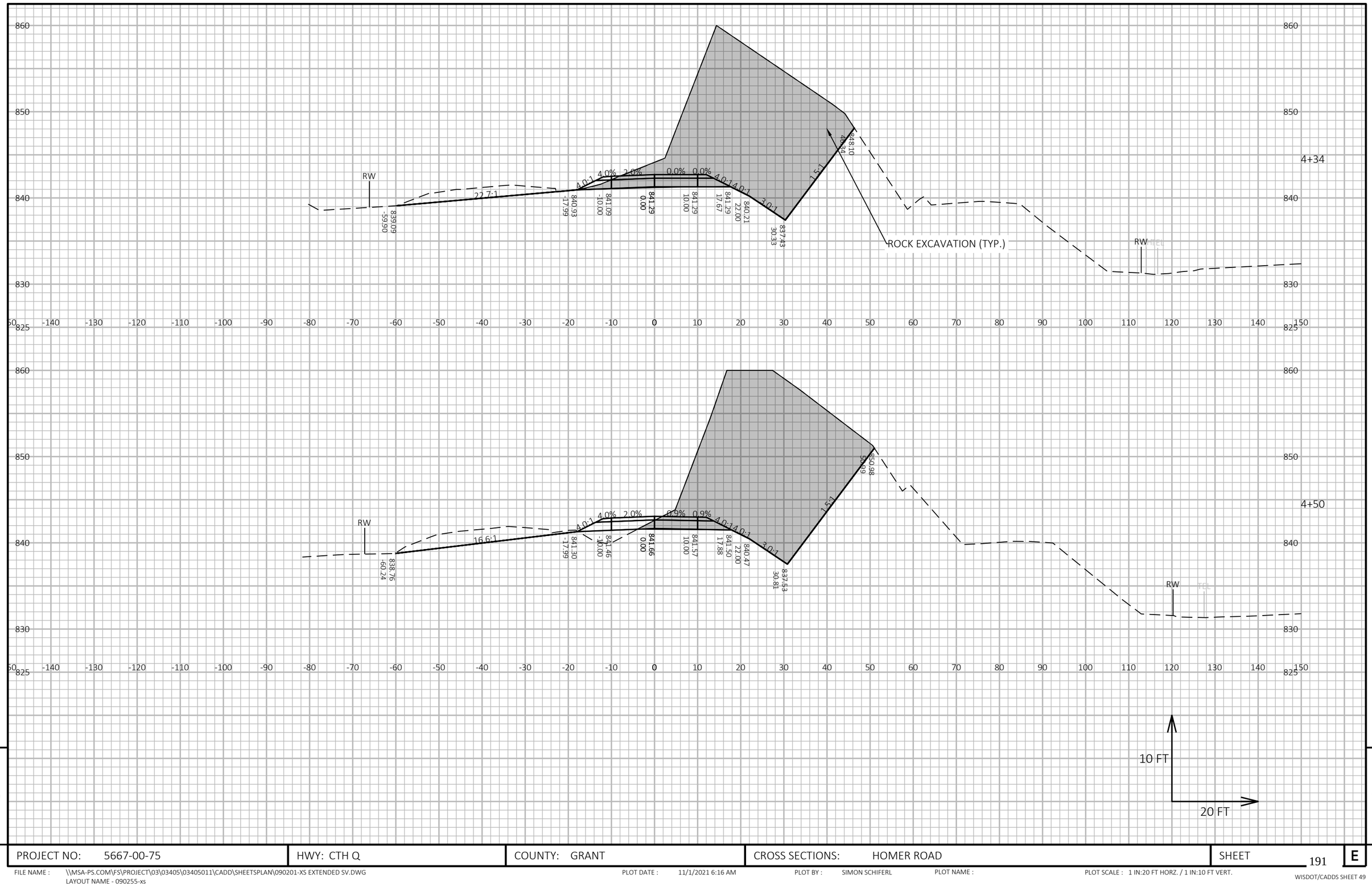


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: HOMER ROAD	SHEET 190 E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090254-xs

PLOT DATE : 10/29/2021 8:12 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

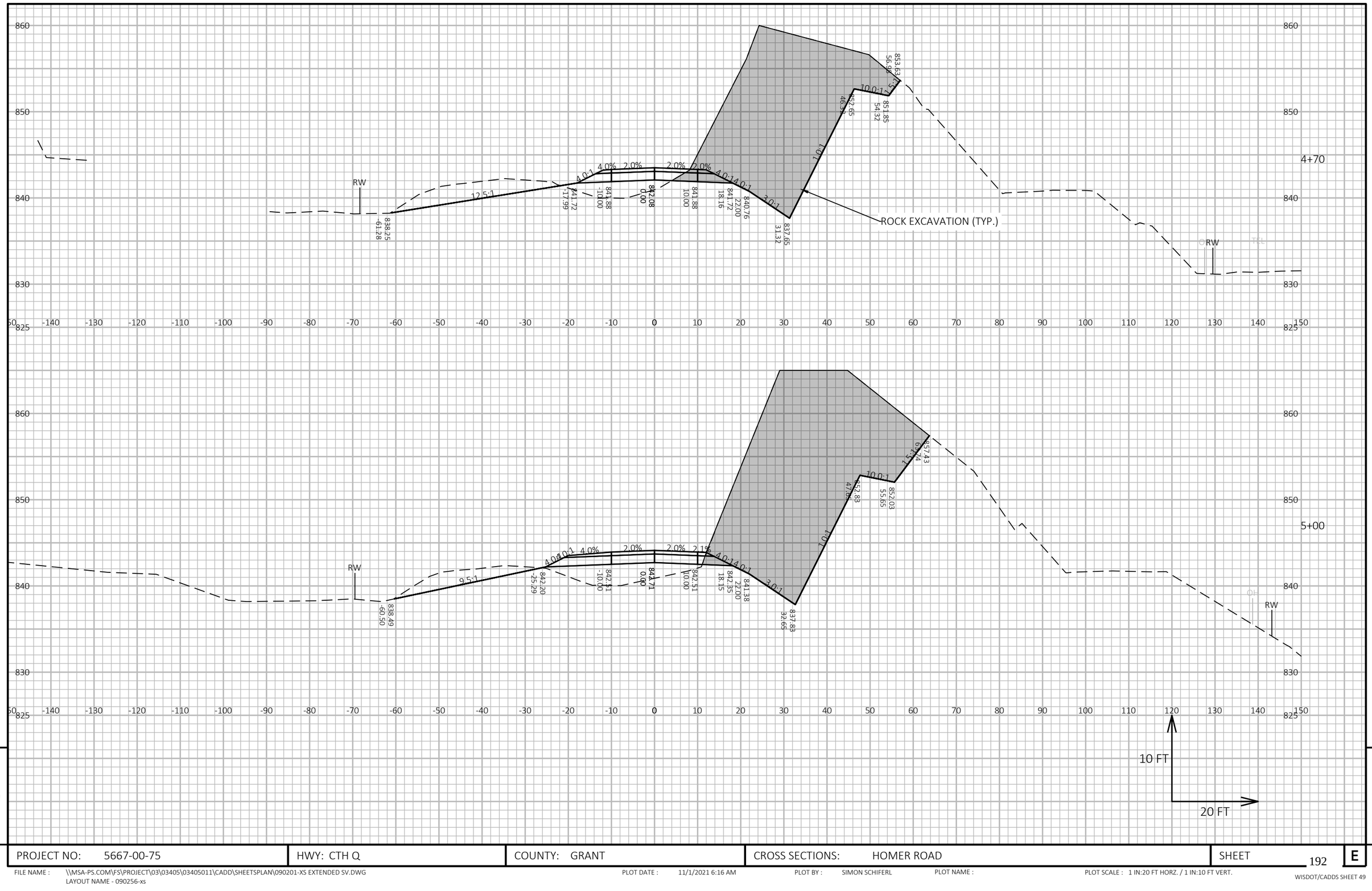


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: HOMER ROAD	SHEET 191	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090255-xs

PLOT DATE : 11/1/2021 6:16 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

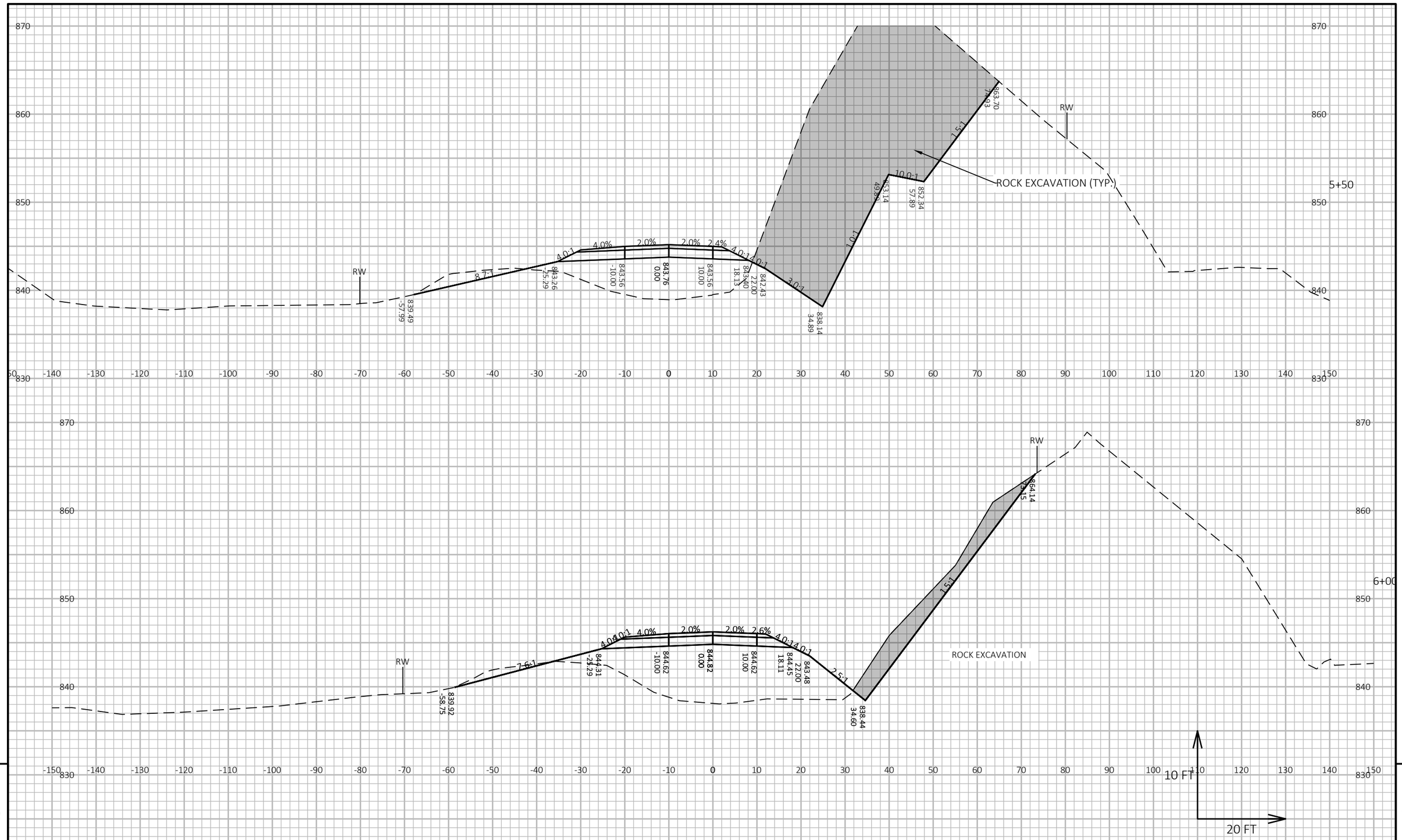


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: HOMER ROAD	SHEET 192	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090256-xs

PLOT DATE : 11/1/2021 6:16 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

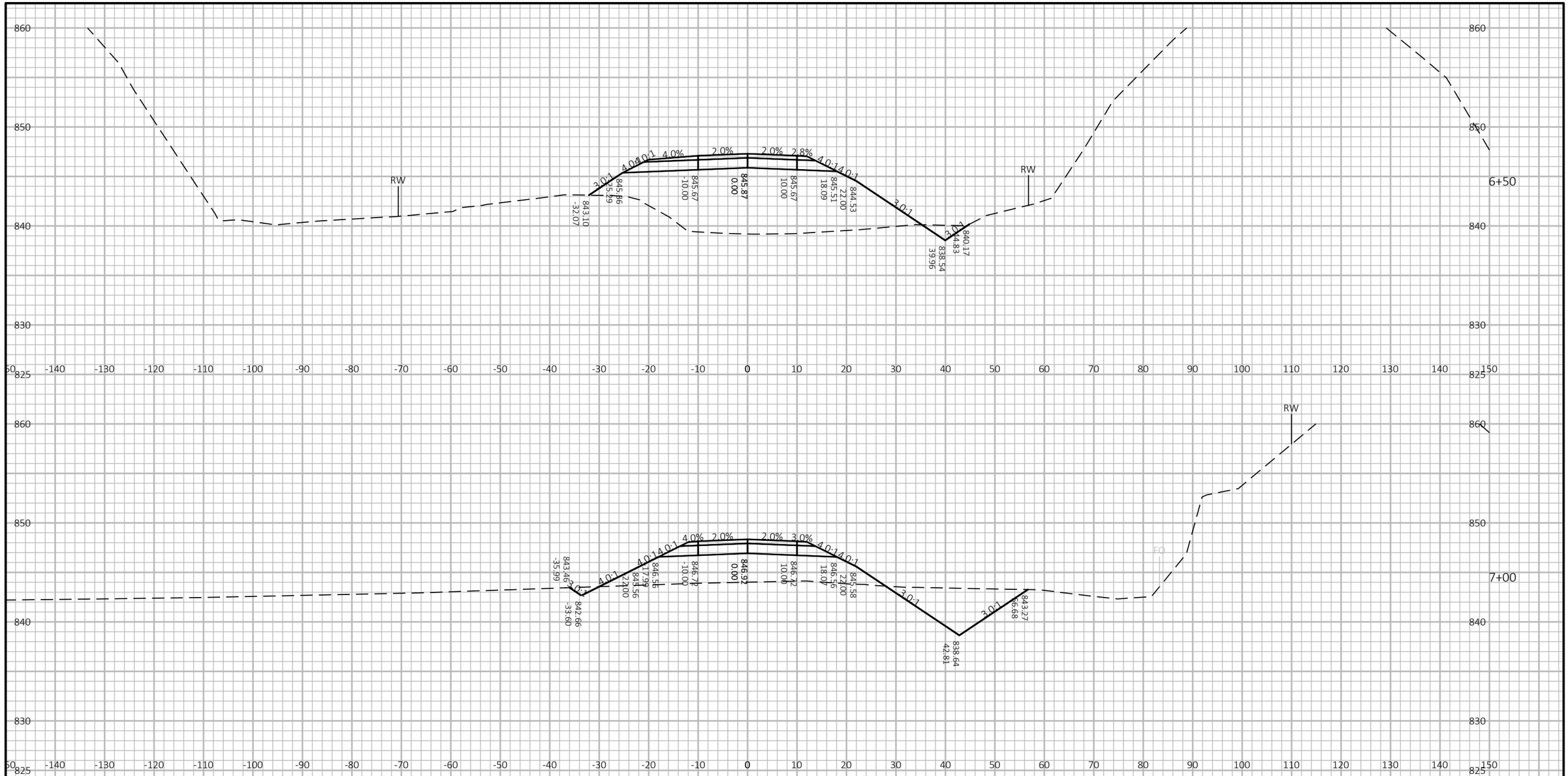


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: HOMER ROAD	SHEET 193	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090257-xs

PLOT DATE : 11/1/2021 6:16 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

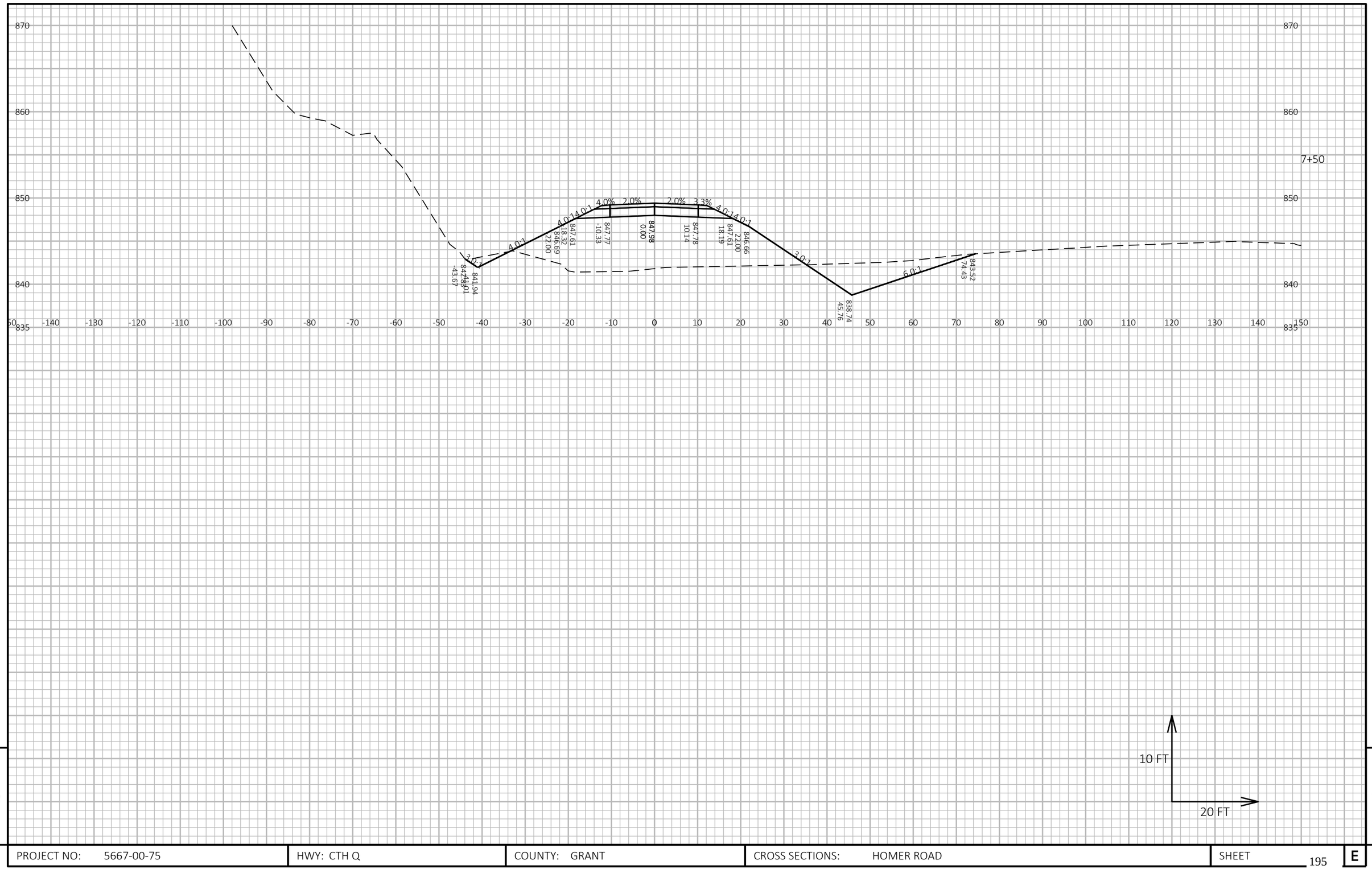


PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: HOMER ROAD	SHEET 194	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090258-xs

PLOT DATE : 10/29/2021 8:12 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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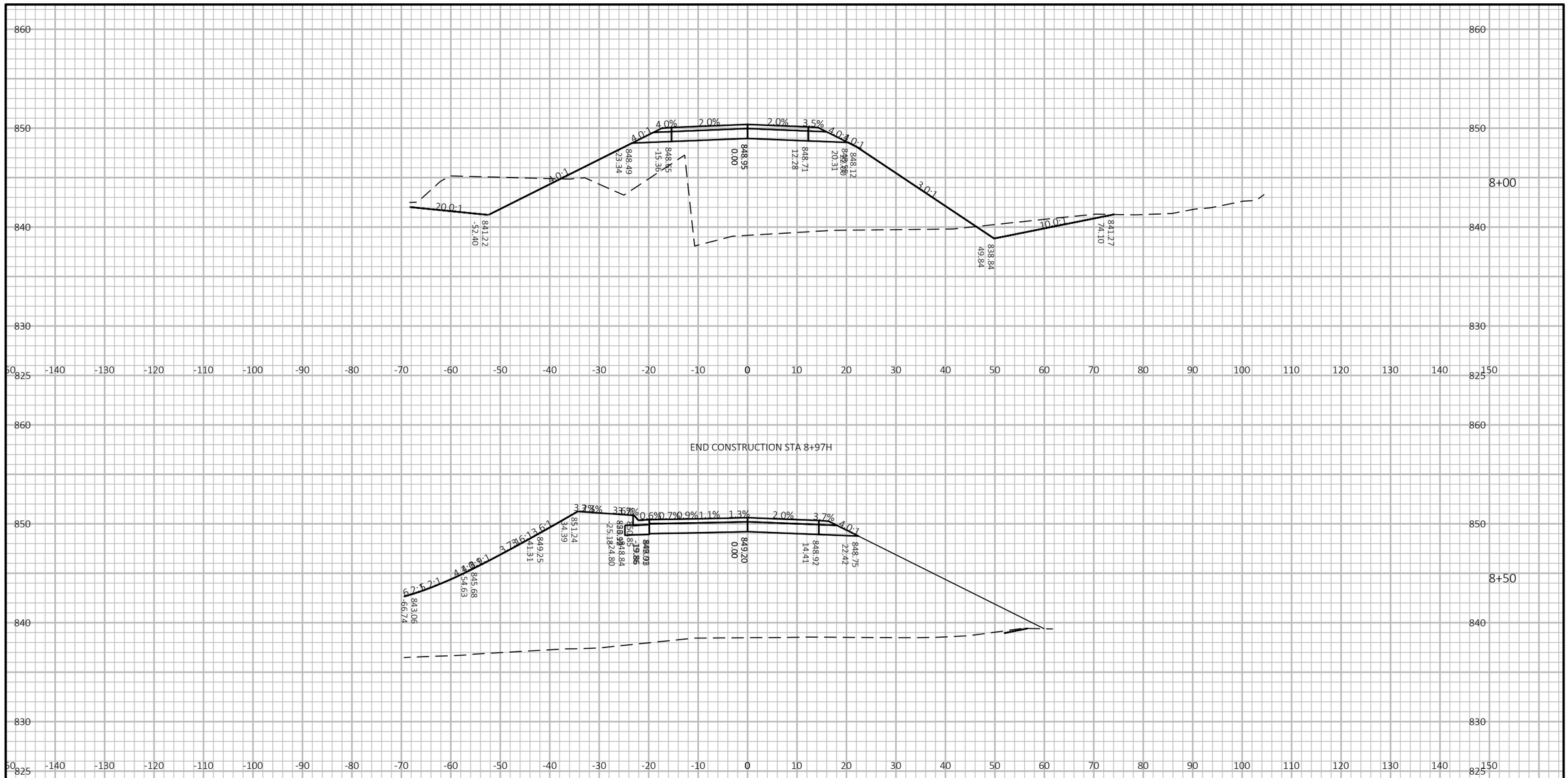
PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: HOMER ROAD	SHEET 195	E

9

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090259-xs

PLOT DATE : 10/29/2021 8:13 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



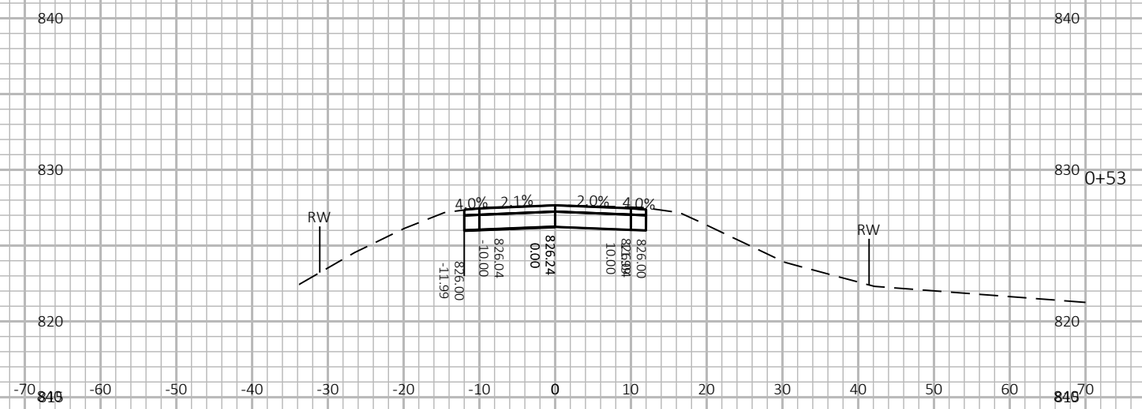
PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: HOMER ROAD	SHEET 196	E

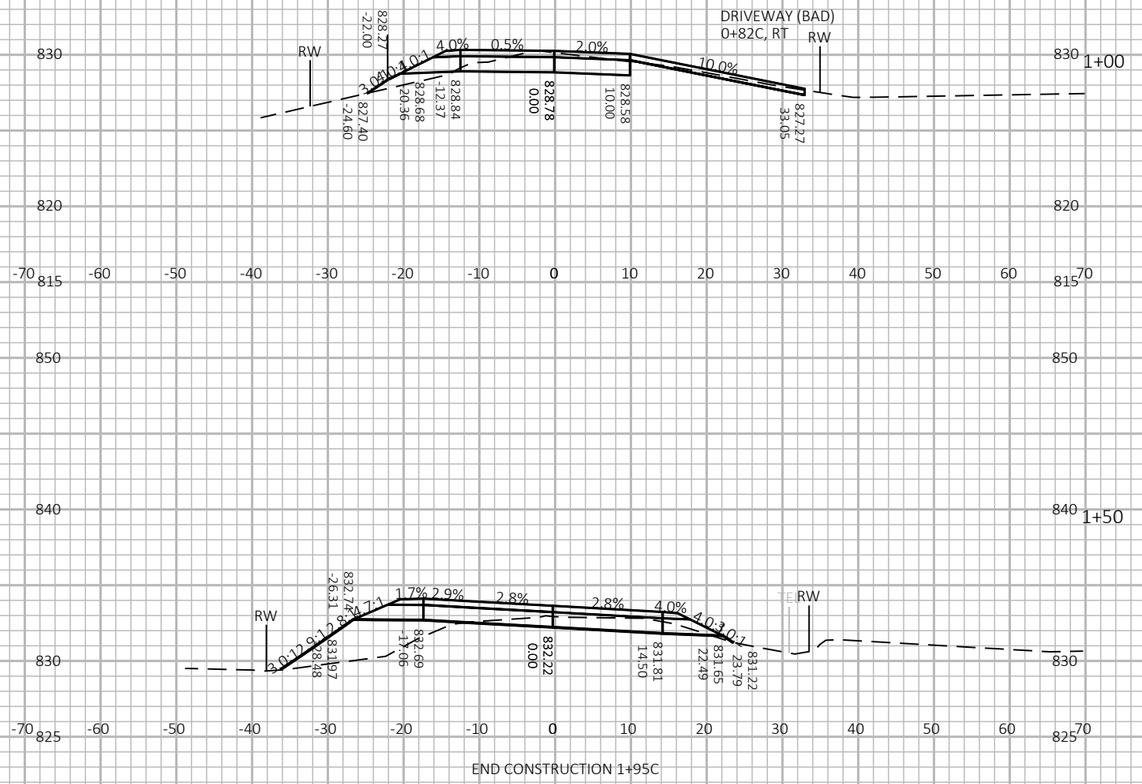
FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090260-xs

PLOT DATE : 10/29/2021 8:13 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

BEGIN CONSTRUCTION STA 0+53C





PROJECT NO: 5667-00-75	HWY: CTH Q	COUNTY: GRANT	CROSS SECTIONS: CHURCH ROAD	SHEET 197	E

FILE NAME : \\MSA-PS.COM\FS\PROJECT\03\03405\03405011\CADD\SHEETSPLAN\090201-XS EXTENDED SV.DWG
LAYOUT NAME - 090261-xs

PLOT DATE : 10/29/2021 8:13 AM PLOT BY : SIMON SCHIFERL PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

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through innovation and exceptional service.

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