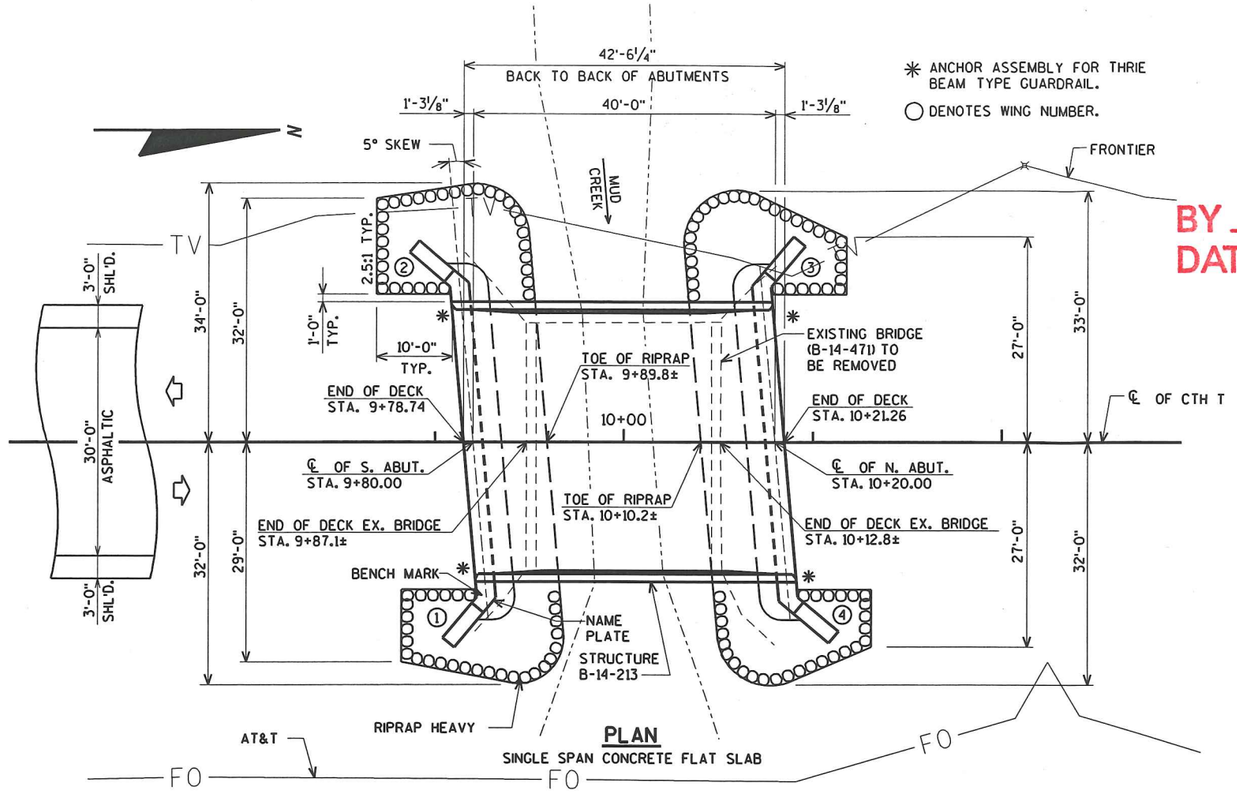
STATE PROJECT NUMBER

3909-00-70



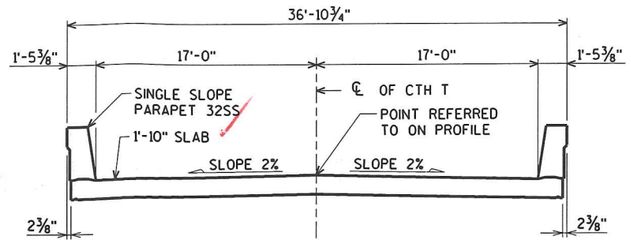
PLAN

SINGLE SPAN CONCRETE FLAT SLAB

✱ ANCHOR ASSEMBLY FOR THRIE BEAM TYPE GUARDRAIL.

◯ DENOTES WING NUMBER.

TYPE, SIZE & LOCATION APPROVED
BY MLH
DATE 10-20-2015



CROSS SECTION THRU ROADWAY

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR:
OPERATING RATING FACTOR:
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 #/S.F.

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)	f_y =	60,000 p.s.i.

HYDRAULIC DATA:

100 YEAR FLOOD
DRAINAGE AREA = 10.3 sq. mi.
WATERWAY AREA = 158 sq. ft.
V = 2.8 f.p.s.
Q_{100} = 450 c.f.s.
HIGH WATER$_{100}$ EL. 809.7
HIGH WATER$_2$ EL. 807.6
RDWY. OVERFLOW = N/A
SCOUR CRITICAL CODE = 8
NAVD 88 DATUM

= 807.7

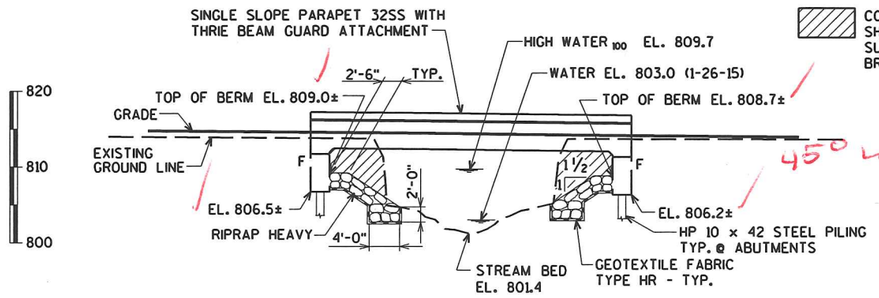
FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON HP 10 x 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ‡ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 35'-0".

‡ 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.

TRAFFIC DATA:

A.D.T. = 750 (2017)
A.D.T. = 830 (2037)
R.D.S. = 50 M.P.H.

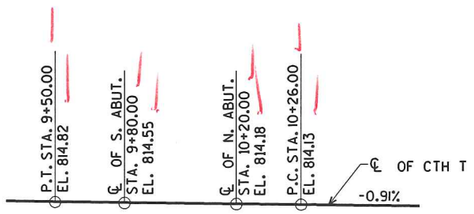


ELEVATION

(NORMAL TO ℄ OF CREEK)

45° WING ARE A-5 ABUTMENTS

COST OF EXCAVATION IN THE HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-14-213".



PROFILE GRADE LINE

(CTH T)

BENCH MARK:
RR SPK IN 10" BOXELDER
STA. 7+52, 45' LT.
EL. 815.57

LIST OF DRAWINGS

1. PRELIMINARY PLAN
2. QUANTITIES AND NOTES
3. SUBSURFACE EXPLORATION

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
CHRIS MCMAHON
(715)-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED _____ _____
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-14-213

CTH T OVER MUD CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
DODGE	PORTLAND

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
CBM		CLS	

PRELIMINARY PLAN

SHEET 1 OF 3

DATE:
DATE:
DATE:
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

8

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STATE PROJECT NUMBER

3909-00-70

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	S. ABUT.	N. ABUT.	SUPER.	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-14-213	LS	-----	-----	-----	1
210.0100	BACKFILL STRUCTURE	CY			-----	
502.0100	CONCRETE MASONRY BRIDGES	CY				
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-----	-----		
502.3210	PIGMENTED SURFACE SEALER	SY	-----	-----		
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB			-----	
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB				
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY			-----	
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF			-----	
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF			-----	
645.0120	GEOTEXTILE FABRIC TYPE HR	SY			-----	
	NON-BID ITEMS					
	FILLER	SIZE	-----	-----	-----	1/2" & 3/4"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE FABRIC TYPE HR TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS OTHERWISE APPROVED BY THE ENGINEER.

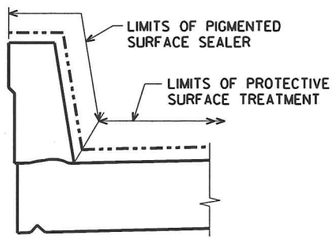
THE EXISTING GROUND LINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.

THE EXISTING STRUCTURE, P-14-471, TO BE REMOVED, IS A SINGLE SPAN STEEL DECK GIRDER BRIDGE 25.7' OVERALL LENGTH WITH A 32.0' CLEAR ROADWAY WIDTH.

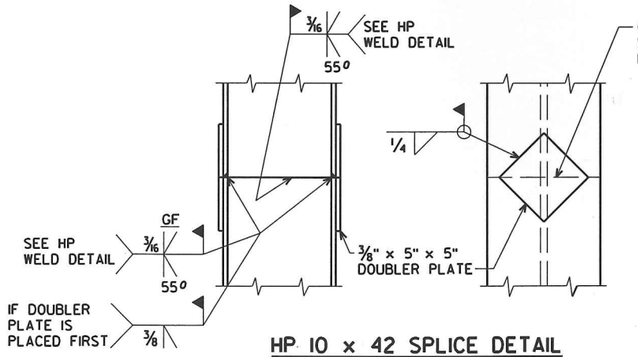
AT BACKFACE OF ABUTMENTS ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

PROTECTIVE SURFACE TREATMENT AND PIGMENTED SURFACE SEALER IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET.

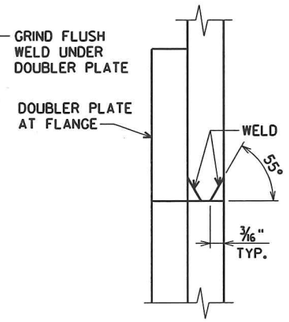
THE QUANTITY OF BACKFILL STRUCTURE, BID ITEM 210.0100, IS CALCULATED BASED ON APPLICABLE FIGURES 12.6-1 AND 12.6-2 IN THE WISCONSIN DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL.



SURFACE TREATMENT DETAIL



HP 10 x 42 SPLICE DETAIL



HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-14-213

DRAWN BY CLS | PLANS CK'D.

QUANTITIES AND NOTES

SHEET 2 OF 3

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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$PRFNAME$
U:\41-0695.10 - Dodge Co, CTH T over Mud Creek\BRIDGE\41069510 gpPREL.dgn

10/7/2015

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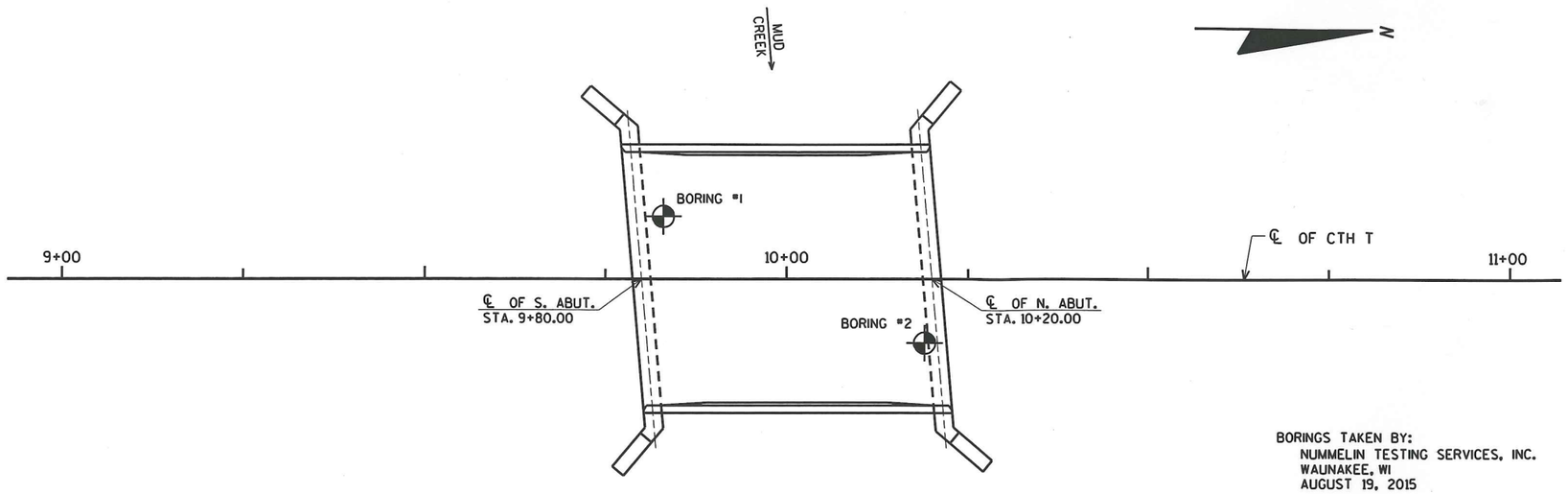
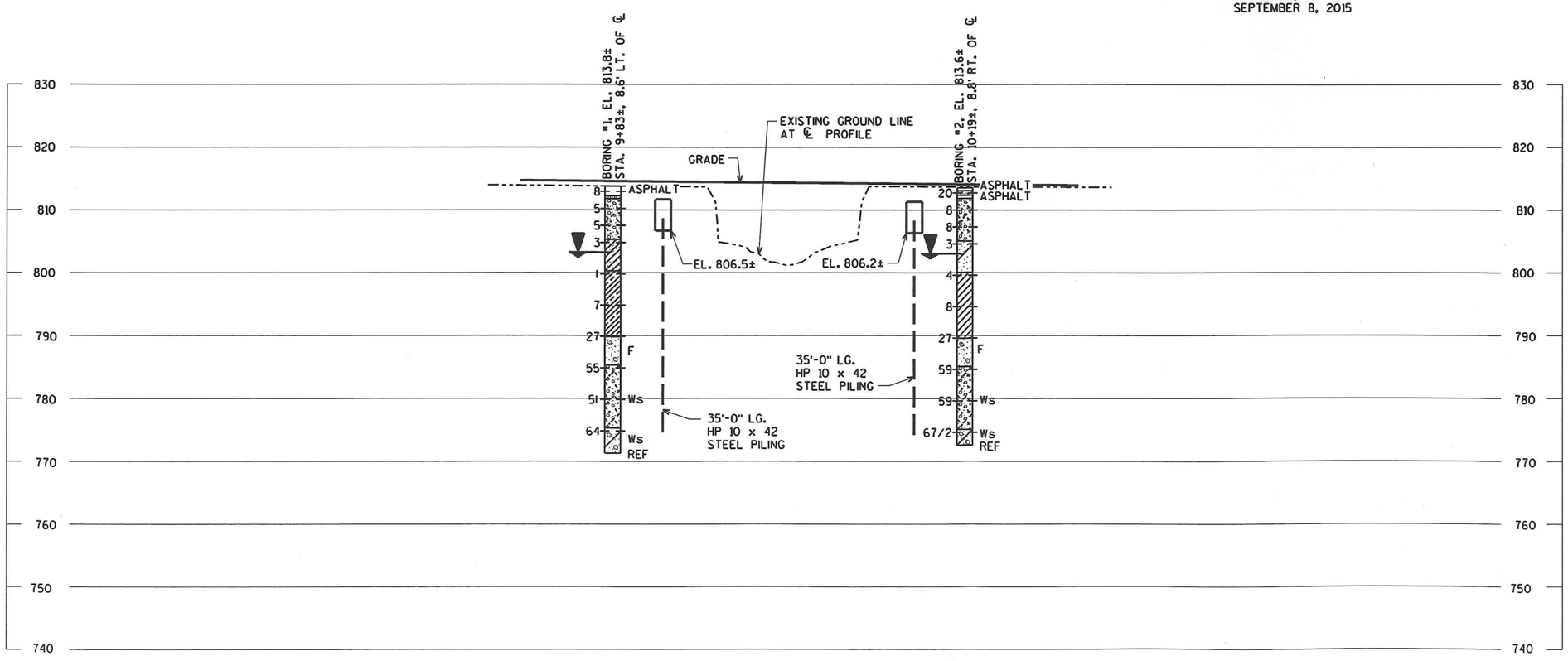


BORINGS TAKEN BY:
NUMMELIN TESTING SERVICES, INC.
WAUNAKEE, WI
AUGUST 19, 2015

GEOTECHNICAL REPORT BY:
NUMMELIN TESTING SERVICES, INC.
WAUNAKEE, WI
SEPTEMBER 8, 2015



STATE PROJECT NUMBER

3909-00-70

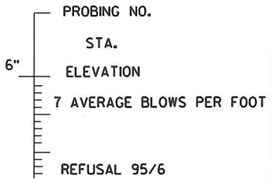
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

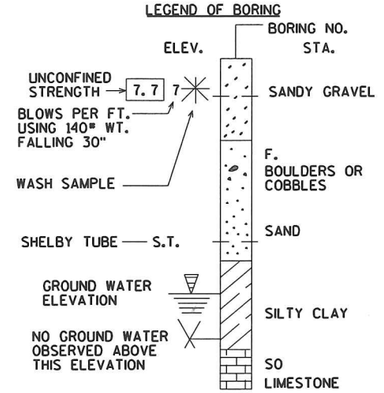
TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-14-213

DRAWN BY CLS | PLANS CK'D.

SUBSURFACE EXPLORATION

SHEET 3 OF 3

8

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10/7/2015

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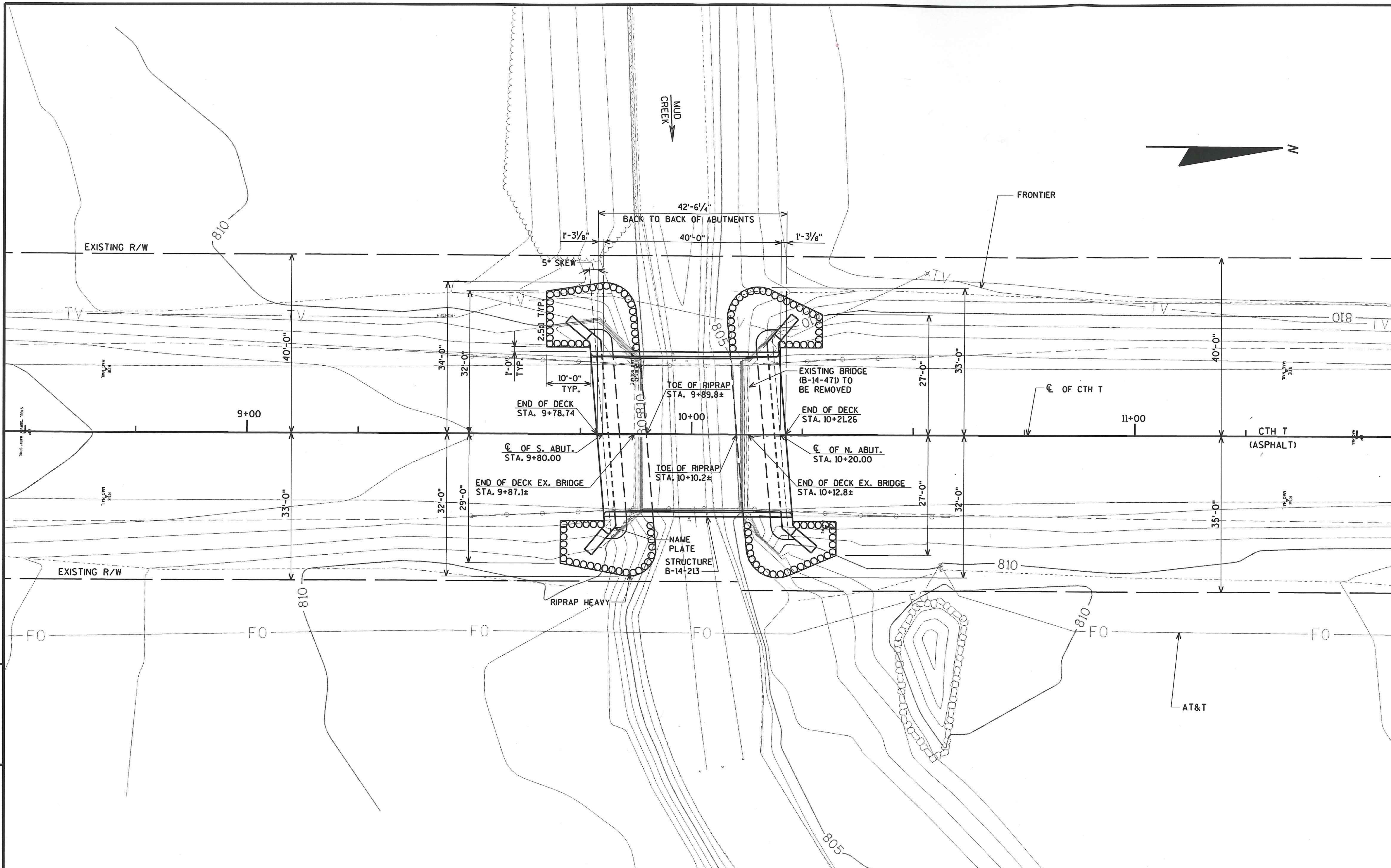
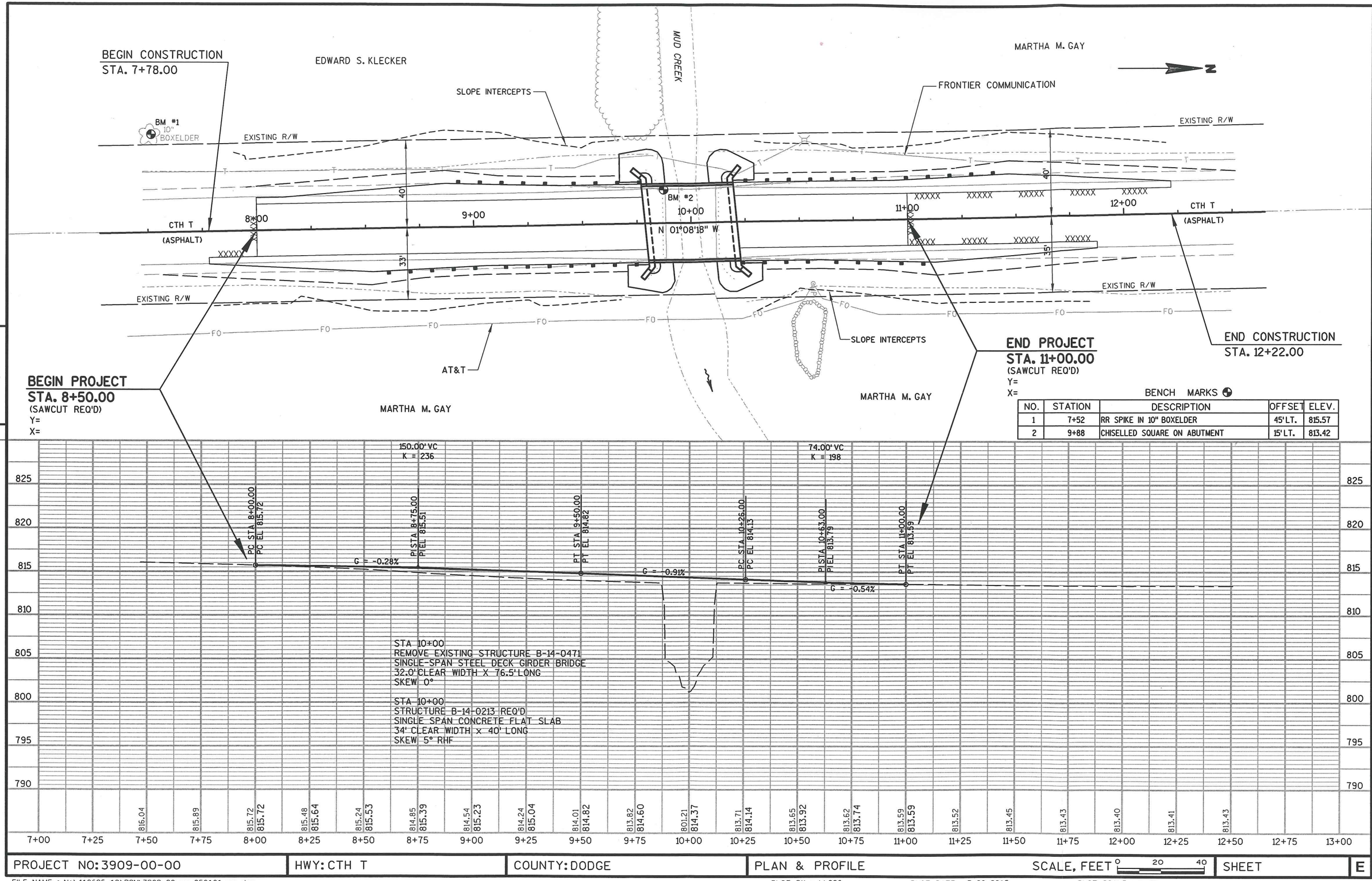


PROJECT NO: 3909-00-70	HWY: CTH T	COUNTY: DODGE	CONTOUR MAP	SCALE, FEET 0 10 20	SHEET	E

U:\41-0695.10 - Dodge Co. CTH T over Mud Creek\RDWY\410695 cnsh.dgn PENTABLE:BReu_shd_util.tbl BRIDGE 1:20 WISDOT/CADDS SHEET 42



BENCH MARKS

NO.	STATION	DESCRIPTION	OFFSET	ELEV.
1	7+52	RR SPIKE IN 10" BOXELDER	45'LT.	815.57
2	9+88	CHISELLED SQUARE ON ABUTMENT	15'LT.	813.42

PROJECT NO: 3909-00-00	HWY: CTH T	COUNTY: DODGE	PLAN & PROFILE	SCALE, FEET 0 20 40	SHEET	E

FILE NAME : N:\410695.10\DGN\3909-00-xx_050101_pp.dgn

PLOT BY : kk226 PLOT DATE : 7/20/2015 PLOT SCALE : 1:40

WISDOT/CADDS SHEET 30