PROJECT	DESIGNATION
1383332	1383509 NBL & 3510 SBL
CONTRACT	BRIDGE FILE
R-37053	I69-210-05318 DNBL & 05318 DSBL

INDEX				
STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
I69-210-05318 DNBL & 05318 DSBL	TWIN CONTINUOUS R.C. SLAB	3 SPANS: 31'-3", 41'-6" 31'-3" SKEW 15°00'00" RIGHT	MUD CREEK	621+71.96 "AR" (NB) 622+21.32 "A" (SB)

KIN DESIGNATION NUMBERS		
DESIGNATION	DESCRIPTION	TYPE
1383332	I-69 ADDED TRAVEL LANES FROM 116TH ST. TO 0.56 MILE EAST OF CAMPUS PKWY/SOUTHEASTERN PKWY	ROADWAY
1383488	BROOKS SCHOOL RD OVER I-69	BRIDGE
1383489 & 1383490	CAMPUS PARKWAY INTERCHANGE	ROADWAY/BRIDGE
1383336	I-69 ADDED TRAVEL LANES FROM 0.56 MILE EAST OF CAMPUS PKWY/SOUTHEASTERN PKWY TO 0.42 MILE EAST OF S.R. 13	ROADWAY
1383486 & 1383487	I-69 OVER SAND CREEK	BRIDGE
1383512 & 1383513	I-69 OVER THORPE CREEK	BRIDGE
1383514 & 1383515	I-69 OVER S.R. 13	BRIDGE
1383337	I-69 ADDED TRAVEL LANES FROM 0.42 MILE EAST OF S.R. 13 TO LAPEL ROAD	ROADWAY
1383623	C.R. 650 W. OVER I-69	BRIDGE
1383624 & 1383625	I-69 OVER FOSTERS BRANCH	BRIDGE

R-37053
SET 8 OF 12

INDIANA DEPARTMENT
OF TRANSPORTATION

BRIDGE REHABILITATION PLANS

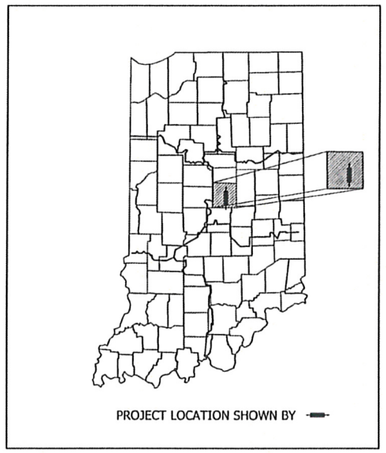
FOR SPANS OVER 20 FEET
I-69
OVER
MUD CREEK

PROJECT NO. 1383332 P.E.

RP 211+30

Bridge Rehabilitation and Widening Project on Structure I-69-210-05318CNBL & 5318CSBL over Mud Creek Located in Section 24, of Township 18 North, Range 5 East, in Fall Creek Township, Hamilton County Indiana.

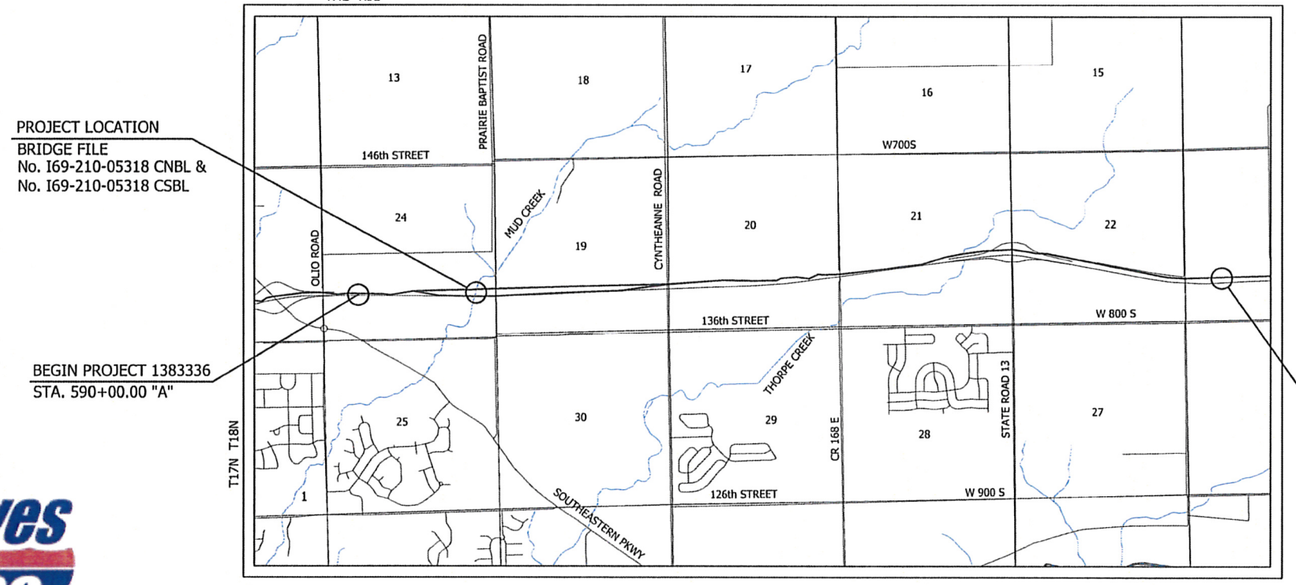
TRAFFIC DATA	I-69
A.D.T. (2015)	56,140 V.P.D.
A.D.T. (2035)	66,190 V.P.D.
D.H.V. (2035)	5,296 V.P.H.
DIRECTIONAL DISTRIBUTION	49% NB/51% SB
TRUCKS	10% A.A.D.T.
	5% D.H.V.
DESIGN DATA	**I-69**
DESIGN SPEED	70 M.P.H.
PROJECT DESIGN CRITERIA	PARTIAL RECONSTRUCTION (4R) (FREEWAY)
FUNCTIONAL CLASSIFICATION	INTERSTATE
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	FULL



PROJECT LOCATION SHOWN BY

LATITUDE: 39°59'28"N LONGITUDE: 85°54'09"W

BRIDGE LENGTH :	0.020 MI.
ROADWAY LENGTH :	"SEE ROADWAY PLANS"
TOTAL LENGTH :	"SEE ROADWAY PLANS"
MAX GRADE :	+0.92%



Scale 1" = 2000'

LOCATION MAP
HAMILTON COUNTY

MajorMoves 2020

CERTIFIED TRUE COPY
SET 6 of 6

[INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED 2016 TO BE USED WITH THESE PLANS]

UNITED Consulting
1625 N. Post Road
Indianapolis, Indiana 46219
Phone: 317-895-2585
Fax: 317-895-2596 Web: www.ucindy.com

PLANS PREPARED BY: UNITED CONSULTING (317) 895-2585 PHONE NUMBER

CERTIFIED BY: Michael A. Rowe 9-17-15 DATE

APPROVED FOR LETTING: INDIANA DEPARTMENT OF TRANSPORTATION DATE

MICHAEL A. ROWE REGISTERED No. 10001062 STATE OF INDIANA PROFESSIONAL ENGINEER

	BRIDGE FILE
	I69-210-05318 DNBL & 05318 DSBL
	DESIGNATION
	1383509 NBL & 3510 SBL
SURVEY BOOK	SHEETS
	1 of 9
CONTRACT	PROJECT
R-37053	1383332

UTILITIES

Communication

AT&T Indiana
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bc3785@att.com

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Jason Kirkman 317-632-9077 x 258
jason.kirkman@brighthouse.com

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Rochester, NY 14618
Jim Highsmith 585-697-5145
jhighsmith@fibertech.com

First Mile Technologies, Inc.
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Westfield, IN 46074
Jeff Lacer 317-569-2800
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Indiana Fiber Network, LLC
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Sanitary Sewer

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Indianapolis, IN 46202
Tracey Trimpe
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197 W. Washington St.
Noblesville, IN 46060
Kirk Staley 317-776-6353

Fall Creek Regional Waste District
P.O. Box 59
Pendelton, IN 46064
Tim McCurdy 765-778-7544
tmccurdy@fcrwd.com

Hamilton Southeastern Utilities
11901 Lakeside Dr.
Fishers, IN 46038
Tom Kallio 317-690-1573
tkallio@samcoinc.us

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16000 Allisonville Rd. - P.O. Box 1700
Noblesville, IN 46204
Brian Harger 317-776-5534
bharger@vectren.com

Vectren Energy
2001 Rev Jt Menifee Street
Anderson, IN 46216-3741
Mike Johnson 765-648-3205
mejohnson@vectren.com

Petroleum

Marathon Pipe Line, LLC
539 South Main Street, RM 7642
Findlay, OH 45840
Dave Wisner 419-421-2211
dswisner@marathonpetroleum.com

Storm Sewer

Town of Fishers
1 Municipal Dr.
Fishers, IN 46038
Tami Otto 317-595-3160
ottot@fishers.in.us

Water

Citizens Energy Group
1220 Waterway Boulevard
Indianapolis, IN 46206
Scott Ritter
sritter@citizensenergygroup.com

Town of Ingalls
5835 Lawton Loop East Drive
Indianapolis, IN 46216
Lou Savka 317-377-5230
lsavka@triadassoc.net

Electric

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1619 W. Deffenbaugh St.
Kokomo, IN 46902
Connie Maus 765-454-6180
connie.maus@duke-energy.com

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Alpharetta, GA 30005
Joel McKinney 770-335-9816
jcmckinney@att.com

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Konstantin Veygman 317-899-8606
kveygman@indot.in.gov

Traffic Structures

HERE
425 West Randolph
Chicago, IL 60606
Alexandra Archer 773-747-4247
Alexandra.Archer@HERE.com

REVISIONS

SHEET No.	DATE	REVISION

INDEX

SHEET NO.	DESCRIPTION
1	TITLE
2	INDEX
3	MAINTENANCE OF TRAFFIC
4	LAYOUT
5-7	GENERAL PLAN
8	BENT DETAILS
9	PIER DETAILS

Know what's **below.** **Call** before you dig.
CALL TWO WORKING DAYS BEFORE YOU DIG
Call 811 or 800-382-5544

UNITED Consulting
1625 N. Post Road
Indianapolis, IN 46219
Phone 317-895-2585
Fax 317-895-2596
www.ucindy.com

JAY N. RIDENS REGISTERED No. 10403475 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 9/17/15 DATE

DESIGNED: NJK DRAWN: RSJ
CHECKED: JNR CHECKED: NJK

INDIANA
DEPARTMENT OF TRANSPORTATION

INDEX
I-69 OVER MUD CREEK

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	69-210-05318 DNBL & 05318 DSBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1383509 NBL & 3510 SBL
SURVEY BOOK	SHEETS
-	2 of 9
CONTRACT	PROJECT
R-37053	1383332

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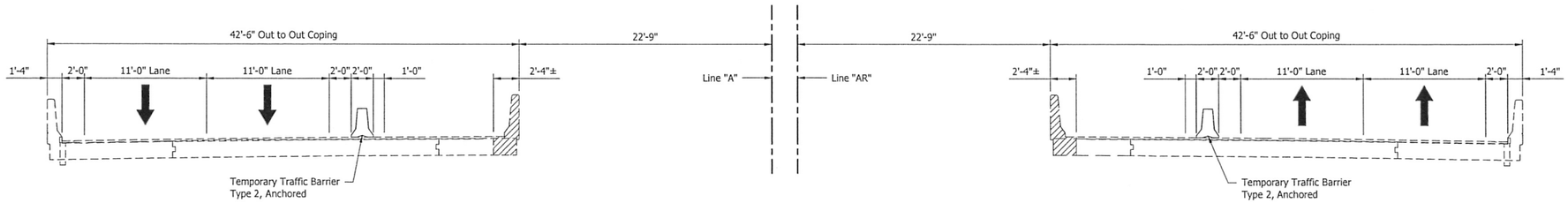
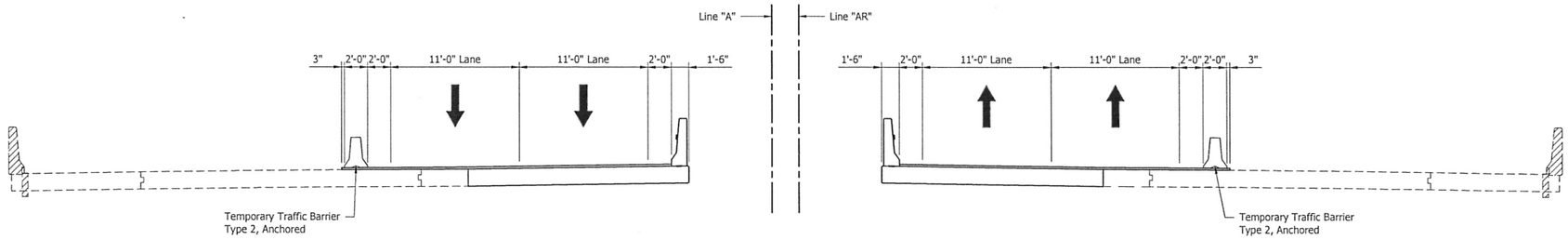


SOUTHBOUND LANE

TRAFFIC MAINTENANCE SECTION - PHASE II

SCALE: 3/16" = 1'-0"

NORTHBOUND LANE



SOUTHBOUND LANE

TRAFFIC MAINTENANCE SECTION - PHASE III

SCALE: 3/16" = 1'-0"

NORTHBOUND LANE

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www.ucindy.com

JAY N. RIDENS
REGISTERED
No. 10403475
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE 9/7/15

DESIGNED: SGM | DRAWN: RSJ

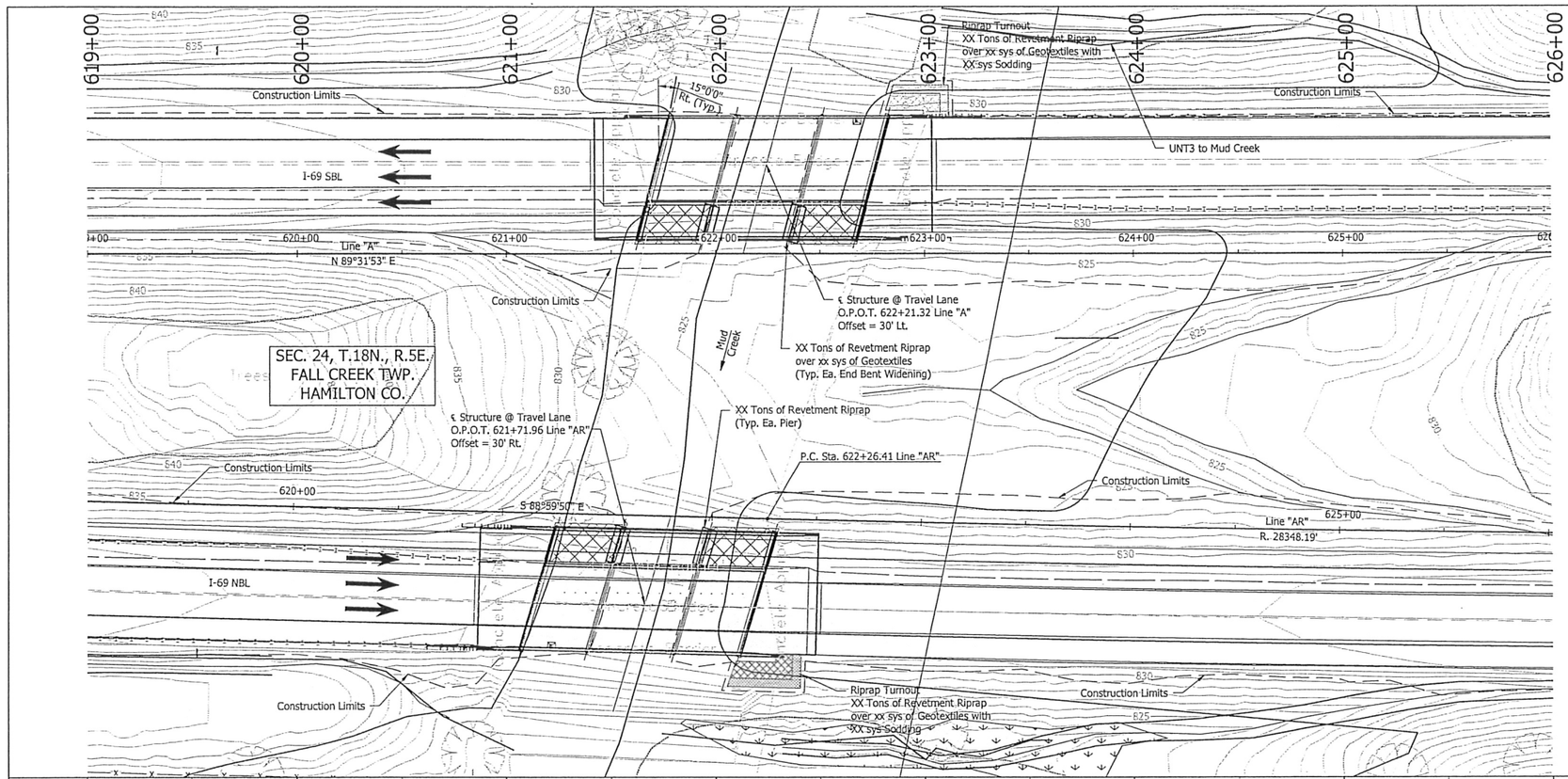
CHECKED: JNR | CHECKED: JNR

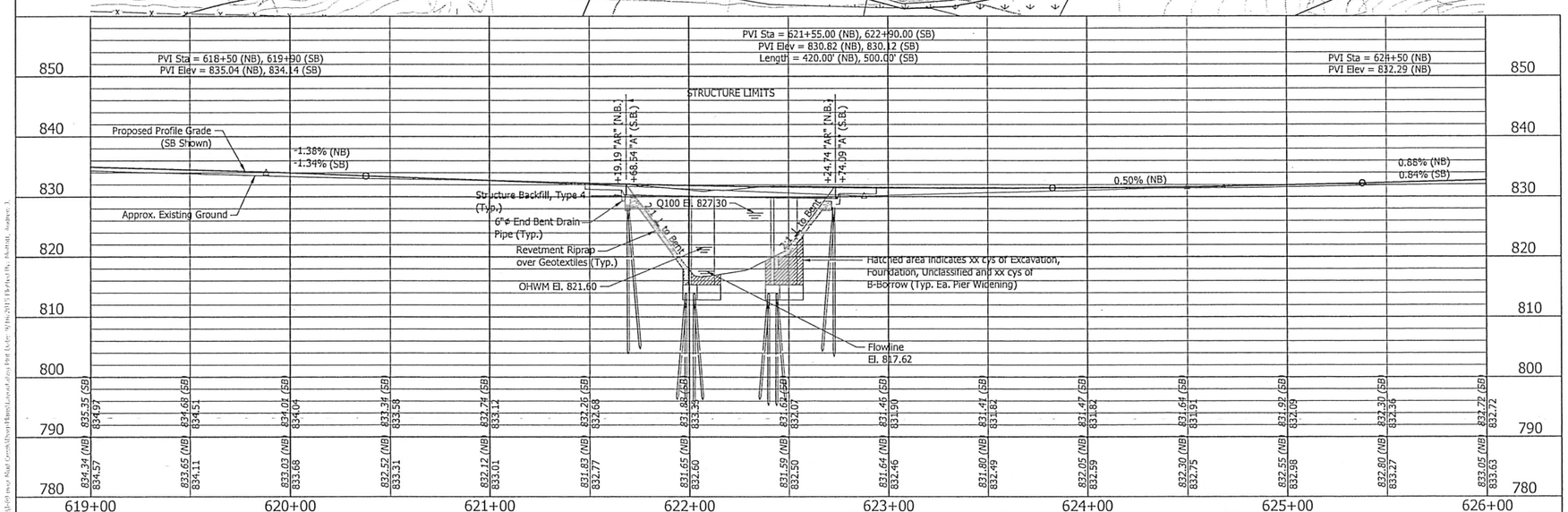
INDIANA
DEPARTMENT OF TRANSPORTATION

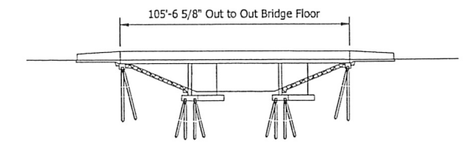
MAINTENANCE OF TRAFFIC
I-69 OVER MUD CREEK

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	169-210-05318 DNBL & 05318 DSBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1383509 NBL & 3510 SBL
SURVEY BOOK	SHEETS
-	3 of 9
CONTRACT	PROJECT
R-37053	1383332

File Name: P:\C3D\MK15-469\Bridge\I-69 over Mud Creek\Dwg\Plans\MOT.dwg Plot Date: 9/17/2015 Plotted By: Mufiatt, Andrew J.





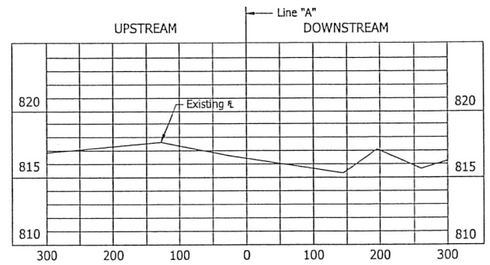


Existing Clear Roadway = 56'-0"

Portions of Existing Bridge Deck, End Bents, & Piers To Be Removed

EXISTING STRUCTURE

No Scale



EXISTING STREAM PROFILE

SCALES: 1" = 100' HORIZONTAL, 1" = 5' VERTICAL

HYDRAULIC DATA (NAVD 1988 DATUM)

Drainage Area	= 16.70 Sq. Mi.
Discharge (Q100)	= 2280 Cfs.
Q100 Elev.	= 827.30 Ft.
Velocity @ Q100	= 4.16 Ft./Sec.
Existing Gross Waterway Opening (Below Q100)	= 596 Sft.
Proposed Waterway Opening (Below Q100)	= 596 Sft.
Q100 Contraction Scour	= 7.09 Ft.
Q100 Scour Elevation	= 806.09 Ft.
Q100 Total Scour	= 11.53 Ft.
Q100 Maximum Velocity	= 5.46 Ft./Sec.
Min. Low Structure Elevation	= 829.61 Ft.

NOTES:

For R/W, Earthwork Summary and Additional information see Roadway Plans, Des. No. 1383336.

For Utility Contacts, see Index Sheet No. 2.

I-69 OVER MUD CREEK
CONTINUOUS R.C. SLAB BRIDGE
3 SPANS: 31'-3", 41'-6", 31'-3"
SKEW: 15°00'00" RIGHT
57'-3" CLEAR ROADWAY
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RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE 9/17/15

DESIGNED: SGM — DRAWN: RSJ

CHECKED: JNR — CHECKED: JNR

INDIANA
DEPARTMENT OF TRANSPORTATION

LAYOUT
I-69 OVER MUD CREEK

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	I69-210-05318 DNBL & 05318 DSBL
VERTICAL SCALE	DESIGNATION
1" = 10'	1383509 NBL & 3510 SBL
SURVEY BOOK	SHEETS
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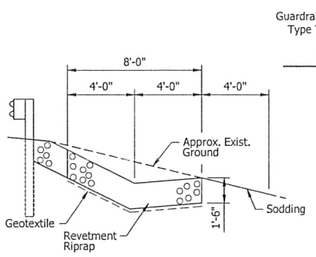
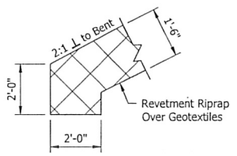
CONTRACT	PROJECT
R-37053	1383332

STRUCTURE TO BE BUILT TO A VERTICAL CURVE



RIPRAP DRAINAGE TURNOUT SECTION A-A
NO SCALE



RIPRAP KEY DETAIL
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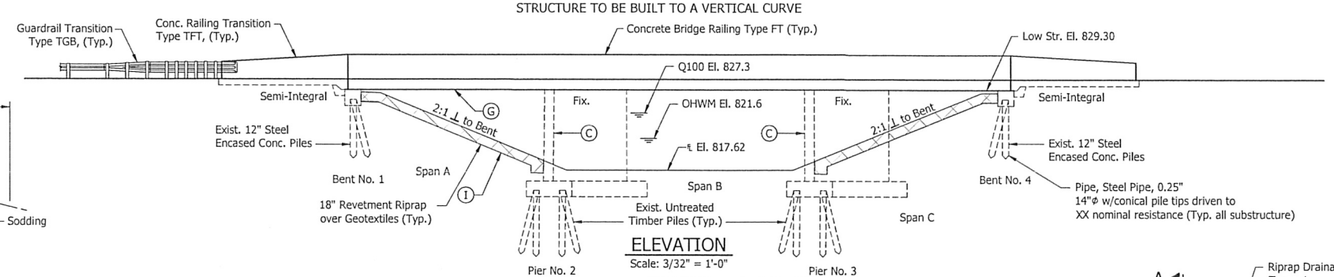
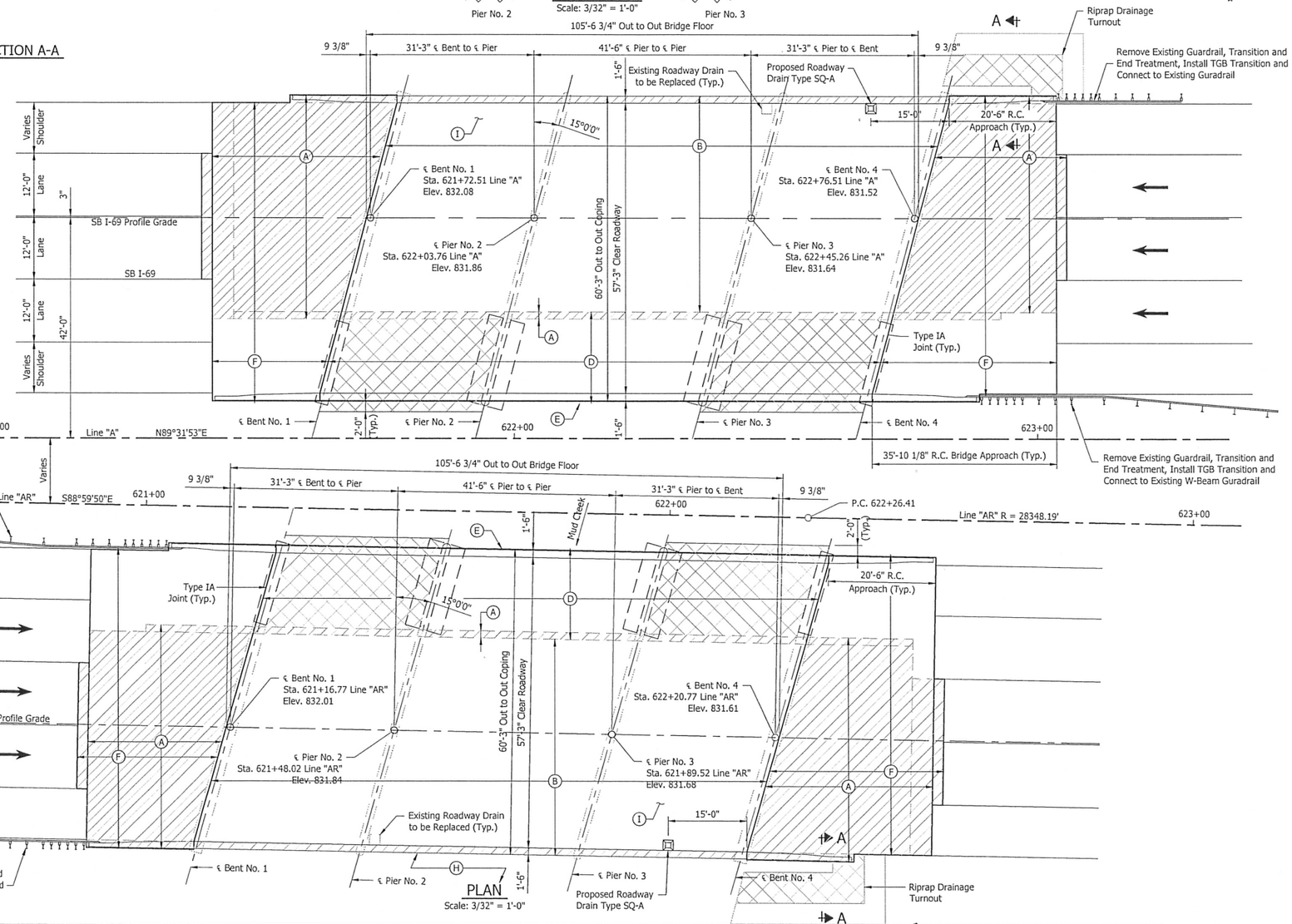


ELEVATION
Scale: 3/32" = 1'-0"



PLAN
Scale: 3/32" = 1'-0"

GENERAL NOTES

Reinforcing steel covering shall be 2½" in top and 1" min. in bottom of floor slabs, 3" in footing except bottom steel which shall be 4", and 2" in all other parts, unless noted.

All new reinforcement shall be epoxy coated.

Surface seal shall be applied to the approach slabs, all exposed surfaces of concrete railings and railing transitions, deck copings, and new bridge concrete. (Est. Quantity = XX,XXX per bridge)

Plans for the existing structure are on file in the central office, Indiana Dept. of Transportation as Bridge File No.'s I69-13-5318, I69-13-5318A, I69-13-5318B, I69-13-5318C and are available upon request.

DESIGN DATA

Superstructure & Substructure Designed for HS-20 Loading in accordance with AASHTO Standard Specifications Seventeenth Edition, 2002, and subsequent interims. Designed for actual dead load plus 35 psf. of future wearing surface.

SEISMIC DESIGN DATA

Seismic Performance Zone = Zone 1
Acceleration Coefficient (S_{D1}) = 0.114
Seismic Soil Profile Type = Site Class D

DESIGN STRENGTHS

Class "A" Concrete	f'c = 3,500 p.s.i.
Class "B" Concrete	f'c = 3,000 p.s.i.
Class "C" Concrete	f'c = 4,000 p.s.i.
Reinforcing Steel (Grade 60)	fy = 60,000 p.s.i.

LEGEND

(A) Remove Existing Bridge Approach Railings, Approach Slabs, Joint Material, Terminal Joints, Portions of Existing Deck Coping and both Railings.

(B) Perform ½" Deck scarification and Hydraulic Demolition.

(C) Remove Median Side Pier Noses to Facilitate Widening.

(D) Construct Lengthened Piers and End Bents as well as Full Depth Concrete Slab, to Accomodate New Clear Roadway Width.

(E) Install New Type FT Concrete Bridge Railings.

(F) Construct New R.C. Bridge Approach Slabs, Slab Extensions, Bridge Railing Transitions and Terminal Joints.

(G) Remove Unsound Concrete and Place Pneumatically Placed Mortar on Underside of Decks.

(H) Remove Debris and Downed Trees in Channel.

(I) Hand-Place Riprap in Eroded Areas Near End Bents.

Limits of Removal

Limits of Additional Revetment Riprap

NOTES:

See Typical Sections and Substructure Details for Additional Information.

I-69 OVER MUD CREEK
CONTINUOUS R.C. SLAB BRIDGE
3 SPANS: 31'-3", 41'-6", 31'-3"
SKEW: 15°00'00" RT
57'-3" CLEAR ROADWAY
HAMILTON COUNTY

UNITED Consulting
1625 N. Post Road
Indianapolis, IN 46219
Phone 317-895-2555
Fax 317-895-2596
www.ucindy.com

JAY N. RIDENS REGISTERED No. 10403475 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER — DATE 9/17/15

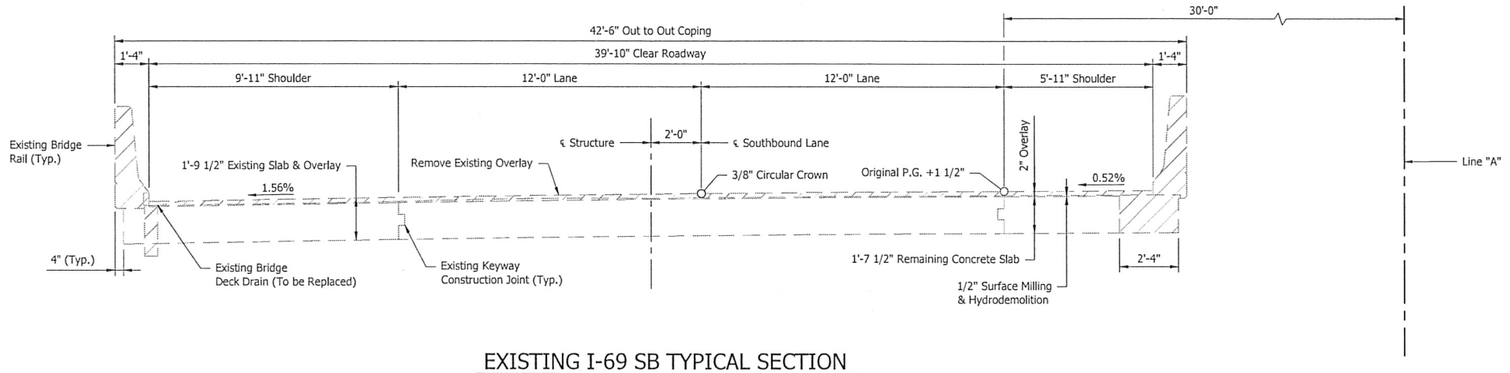
DESIGNED: SGM | DRAWN: RSJ | CHECKED: JNR | CHECKED: JNR

INDIANA DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
I-69 OVER MUD CREEK

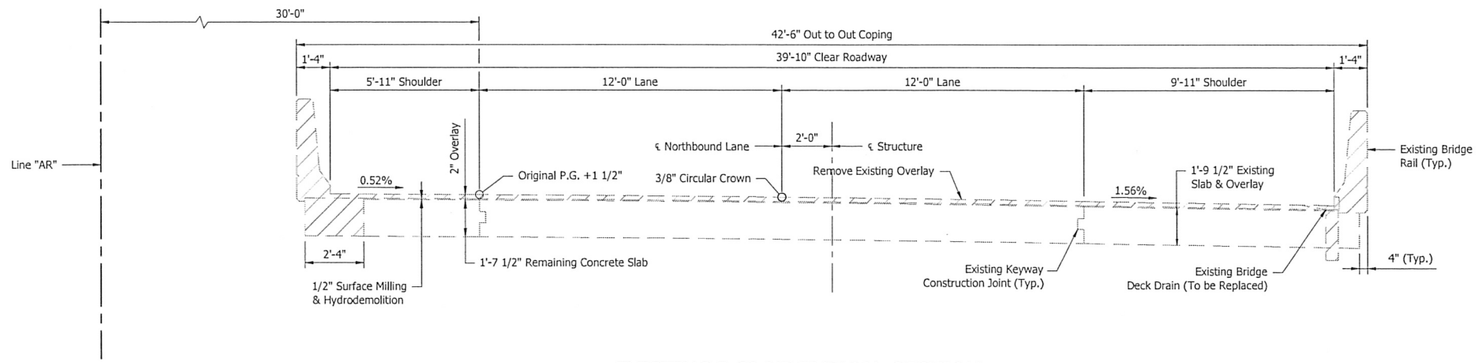
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I69-210-05318 DNBL & 05318 DSBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1383509 NBL & 3510 SBL
SURVEY BOOK	SHEETS
-	5 of 9
CONTRACT	PROJECT
R-37053	1383332

File Name: P:\C3D\MK15-469\Bridge\I-69 over Mud Creek\Dwg\Plans\GP.dwg Plot Date: 9/17/2015 Plotted By: Moffatt, Andrew J.



EXISTING I-69 SB TYPICAL SECTION

Scale: 3/8" = 1'-0"



EXISTING I-69 NB TYPICAL SECTION

Scale: 3/8" = 1'-0"

LEGEND

Limits of Removal

I-69 OVER MUD CREEK
CONTINUOUS R.C. SLAB BRIDGE
3 SPANS: 31'-3", 41'-6", 31'-3"
SKEW: 15°00'00" RT
57'-3" CLEAR ROADWAY
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INDIANA DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
I-69 OVER MUD CREEK

HORIZONTAL SCALE	BRIDGE FILE
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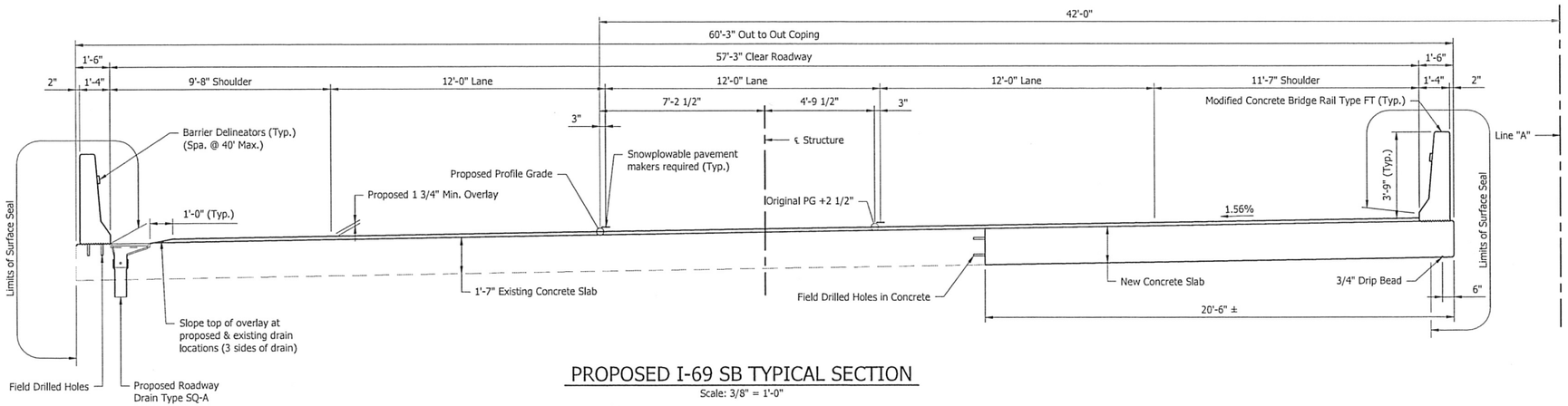
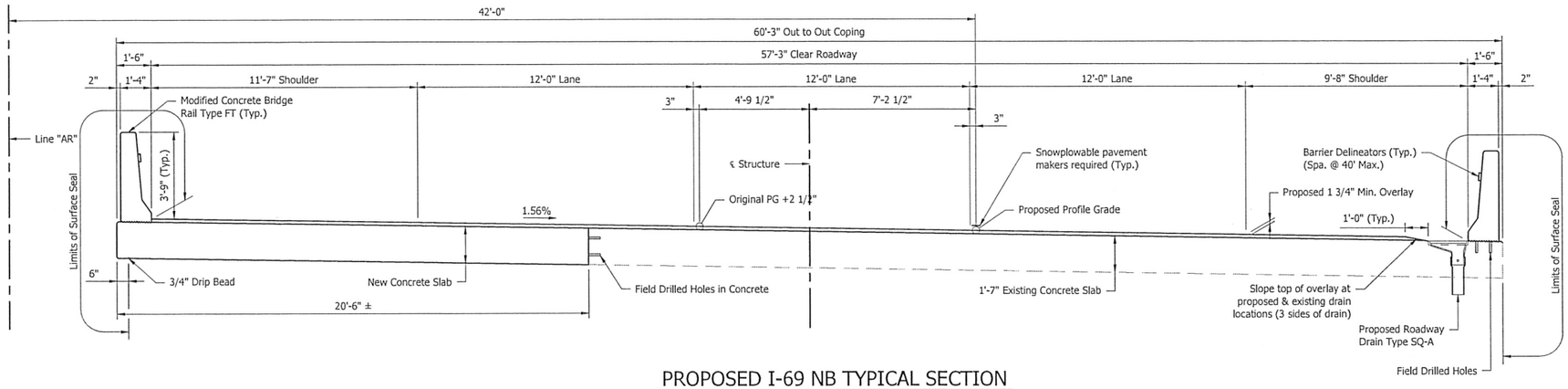


PROPOSED I-69 SB TYPICAL SECTION

Scale: 3/8" = 1'-0"



PROPOSED I-69 NB TYPICAL SECTION

Scale: 3/8" = 1'-0"

I-69 OVER MUD CREEK
CONTINUOUS R.C. SLAB BRIDGE
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STATE OF INDIANA
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RECOMMENDED FOR APPROVAL _____ 9/17/15
DESIGN ENGINEER DATE

DESIGNED: SGM DRAWN: RSJ
CHECKED: JNR CHECKED: JNR

INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
I-69 OVER MUD CREEK

HORIZONTAL SCALE	BRIDGE FILE
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VERTICAL SCALE	DESIGNATION
AS NOTED	1383509 NBL & 3510 SBL
SURVEY BOOK	SHEETS
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CONTRACT	PROJECT
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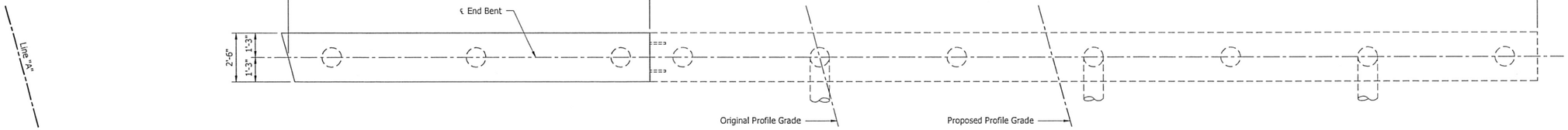
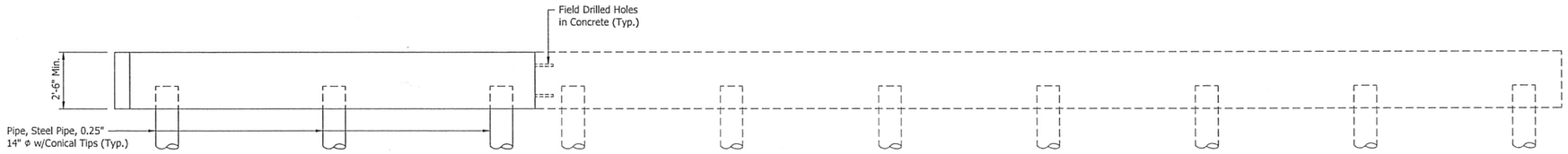


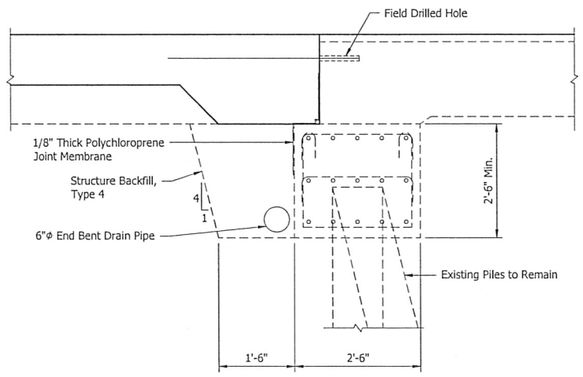
PLAN - TYPICAL END BENT WIDENING

(SOUTHBOUND END BENT NO. 1 SHOWN)
Scale: 3/8" = 1'-0"



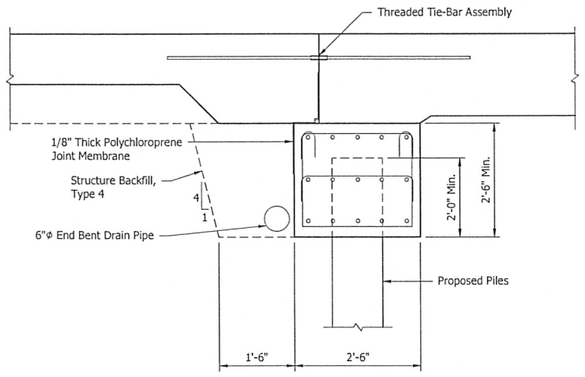
ELEVATION - TYPICAL END BENT WIDENING

(SOUTHBOUND END BENT NO. 1 SHOWN)
Scale: 3/8" = 1'-0"



TYPICAL SECTION - EXISTING END BENT TO REMAIN

Scale: 3/4" = 1'-0"



TYPICAL SECTION - PROPOSED END BENT WIDENING

Scale: 3/4" = 1'-0"

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JAY N. RIDENS REGISTERED No. 10403475 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE 9/17/15

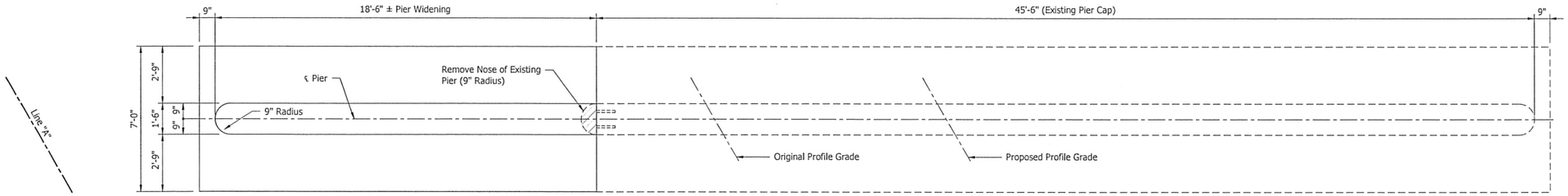
DESIGNED: SGM | DRAWN: RSJ | CHECKED: JNR | CHECKED: JNR

INDIANA
DEPARTMENT OF TRANSPORTATION

END BENT DETAILS
I-69 OVER MUD CREEK

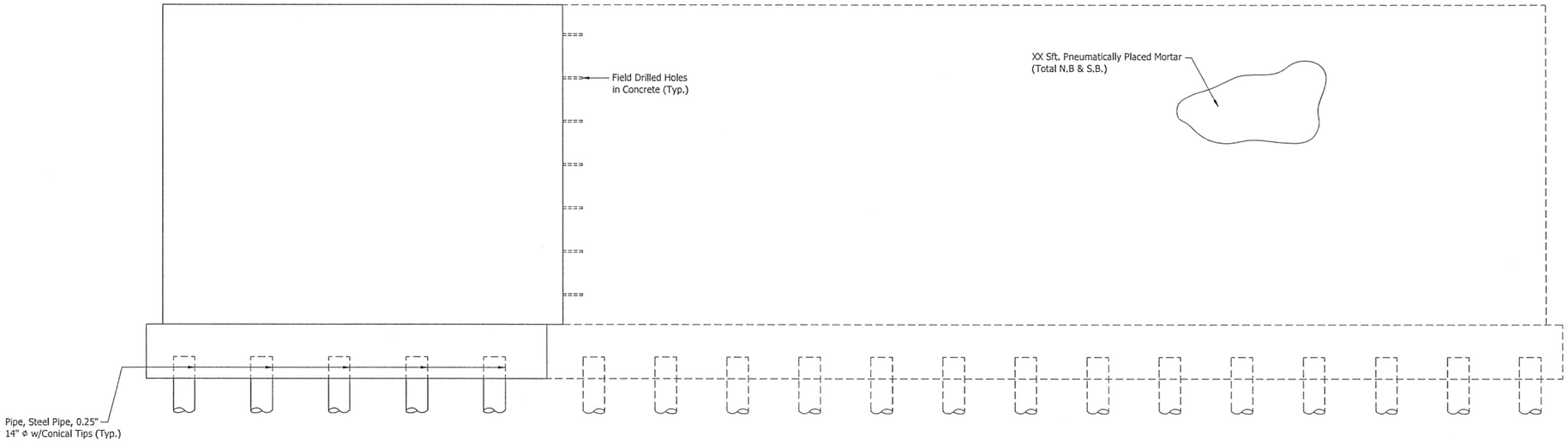
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I69-210-05318 DNBL & 05318 DSBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1383509 NBL & 3510 SBL
SURVEY BOOK	SHEETS
-	8 of 9
CONTRACT	PROJECT
R-37053	1383332

File Name: P:\CD\DM\15-469\Bridge\I-69 over Mud Creek\Dwg\Plans\Substructure.dwg Plot Date: 9/17/2015 Plotted By: Moffatt, Andrew J.

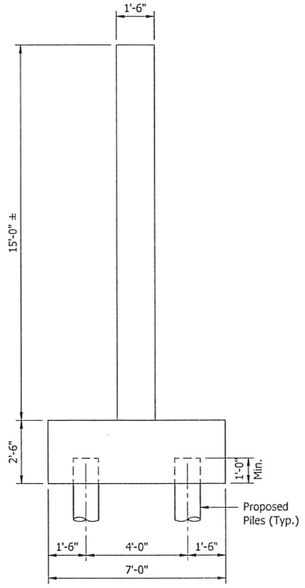


PLAN - TYPICAL PIER WIDENING
(NORTHBOUND PIER NO. 2 SHOWN)
Scale: 3/8" = 1'-0"

Indicates Limits of Removal



ELEVATION - TYPICAL PIER WIDENING
(NORTHBOUND PIER NO. 2 SHOWN)
Scale: 3/8" = 1'-0"



TYPICAL SECTION
Scale: 3/8" = 1'-0"

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DESIGNED: SGM | DRAWN: RSJ
CHECKED: JNR | CHECKED: JNR

INDIANA
DEPARTMENT OF TRANSPORTATION

PIER DETAILS
I-69 OVER MUD CREEK

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I69-210-05318 DNBL & 05318 DSBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1383509 NBL & 3510 SBL
SURVEY BOOK	SHEETS
-	9 of 9
CONTRACT	PROJECT
R-37053	1383332

File Name: P:\CD\PM\I5-469\Bridge\I-69 over Mud Creek\Dwg\Plans\Substructure.dwg Plot Date: 9/17/2015 Plotted By: Moffatt, Andrew J.