08-03-2018 LETTING ITEM 051

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
272	16-00158-00-BR	GRUNDY	46	1
FED. ROAD DIST. NO. _	ILLINOIS	CONTRACT NO. 87642		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY
STP-BR FUNDS
GRUNDY COUNTY
SECTION 16-00158-00-BR
PROJECT S3KW(328)
JOB NO. C-93-043-16
CH C41, BRACEVILLE ROAD

INDEX OF SHEETS

HIGHWAY STANDARDS

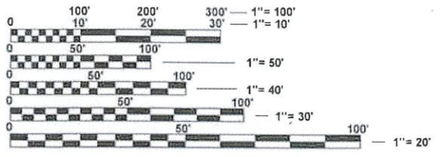
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
542401-03	METAL END SECTION FOR PIPE CULVERTS
601101-02	CONCRETE HEADWALL FOR PIPE UNDERDRAIN
630001-12	STEEL PLATE BEAM GUARDRAIL
630201-07	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-08	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-10	TRAFFIC BARRIER TERMINAL, TYPE 2
631032-09	TRAFFIC BARRIER TERMINAL, TYPE 6A
635001-02	DELINEATORS
701901-07	TRAFFIC CONTROL DEVICES
725001-01	OBJECT AND TERMINAL MARKERS
780001-05	TYPICAL PAVEMENT MARKINGS
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 22-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR RURAL LOCAL HIGHWAYS (TWO-LANE TWO WAY RURAL TRAFFIC) (ROAD CLOSED TO THRU TRAFFIC)

BENCHMARKS

BENCHMARK A
RAILROAD SPIKE IN POWER POLE 600'± WEST OF WEST ABUTMENT OF EXISTING BRIDGE ON SOUTH SIDE OF BRACEVILLE ROAD.
ELEV. 561.41

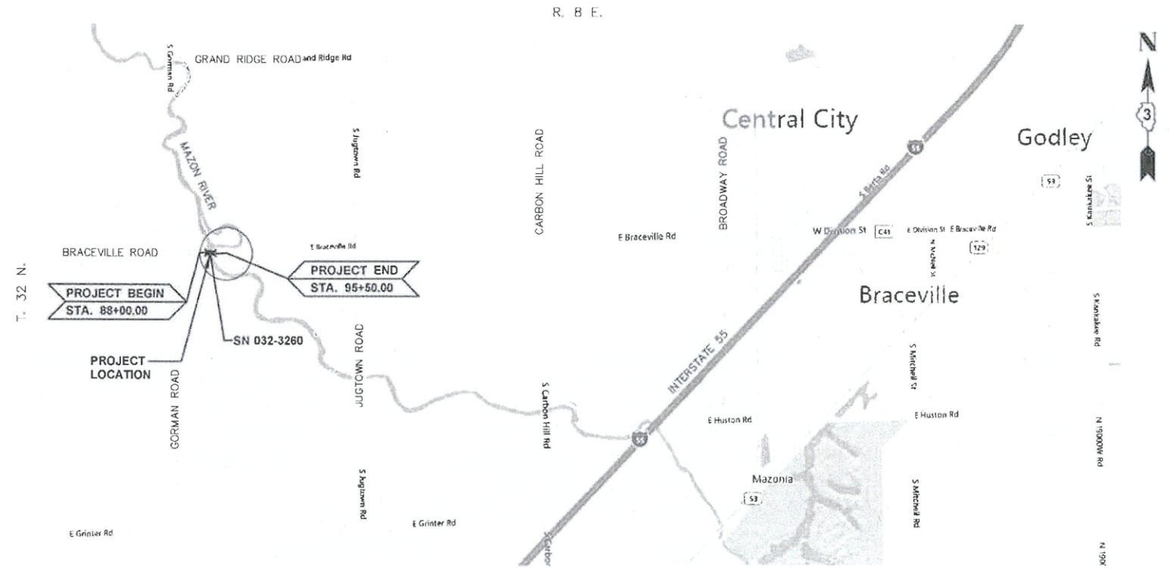
BENCHMARK B
NORTHWEST CORNER OF WINGWALL AT SOUTHWEST WINGWALL OF EXISTING BRIDGE.
ELEV. 566.42

BENCHMARK C
RAILROAD SPIKE IN POWER POLE 585'± EAST OF EAST ABUTMENT OF EXISTING BRIDGE ON SOUTH SIDE OF BRACEVILLE ROAD.
ELEV. 560.32



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

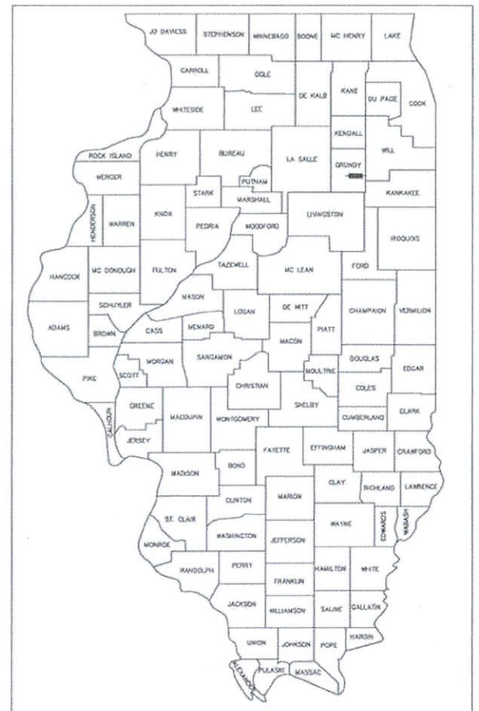
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811



LOCATION MAP

GRAPHIC SCALE
0 1 MILE 2 MILE

NET LENGTH OF SECTION - 750' (0.142 MILES)
GROSS LENGTH OF SECTION -- 750' (0.142 MILES)



LOCATION OF SECTION INDICATED THUS: -

BRACEVILLE ROAD
FUNCTION CLASSIFICATION: MAJOR COLLECTOR
ADT= < 750 (2015)
REGULATORY SPEED - 55 MPH
DESIGN SPEED - 50 MPH

5/22/18
date

PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-001717

JAMES K CLINARD
CHAMLIN & ASSOCIATES
815.223.3344

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 5/22 20 18
ACTING GRUNDY COUNTY ENGINEER

PASSED 5/29 20 18
DISTRICT 3 LOCAL ROADS & STREETS ENGINEER

RELEASED FOR BID BASED ON LIMITED REVIEW 5/29 20 18
REGION 2 ENGINEER

PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS

CONTRACT NO. 87642

TOWNSHIP SECTION GRUNDY COUNTY SECTION: 16-00158-00-BR ROUTE: CH 41

GENERAL NOTES

THE THICKNESS OF HMA SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA IS PLACED.

EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.

BEFORE ORDERING PIPE CULVERTS OR PIPE DRAINS, THE CONTRACTOR SHALL CONSULT THE ENGINEER FOR EXACT LENGTHS.

THE ENGINEER WILL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS HMA LIFTS.

FOR STABILIZATION, ALL TYPE III BARRICADES WILL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.

SEEDING WILL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.

THE FINISHED EARTHWORK SHALL HAVE A VEGETATION SUSTAINING SOIL COVERING THE TOP FOUR INCHES IN AREAS TO BE SEEDED OR SODDED THE VEGETATION SUSTAINING SOIL REQUIRED WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

ON EXISTING PAVEMENT WHICH MAY BE SUPERELEVATED, THE NEW HMA PAVEMENT SHALL BE BUILT WITH THE SAME SUPERELEVATION UNLESS NEW SUPERELEVATION RATES ARE GIVEN ON THE PLANS.

ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.

ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH
CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER SHOWN IN THE LIST OF STANDARDS OR THE COPY INCLUDED IN THESE PLANS.

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

GRANULAR MATERIALS	2.05	TONS / CU YD
HMA RESURFACING	112	LBS / SQ YD / IN

MEMBERS OF JULIE KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE:

NON-MEMBERS OF JULIE KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE:

COMED
1910 S. BRIGGS STREET
JOLIET, IL 60433

THE CONTRACTOR SHALL CONTACT JULIE AT LEAST 48 HOURS PRIOR TO EXCAVATION TO DETERMINE WHICH UTILITIES ARE IN THE AREA.

COMMITMENTS

NONE

(1) ROAD CLOSED PER BLR 21 AT STA 87+75

(2) ROAD CLOSED PER BLR 21 AT STA 94+50

ROAD CLOSED PLAN
N.T.S.

SEE SHEET 35 FOR DETOUR SIGNING

CONTRACT NO. 87642

DRAWN BY: NV	REVISIONS				CHAMLIN & ASSOCIATES, INC. PERU MORRIS ILLINOIS	BRACEVILLE ROAD SECTION 16-00158-00-BR GRUNDY COUNTY	GENERAL NOTES	CONSTRUCTION PLANS	CURRENT AS OF: 03/28/2017	
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION					SCALE: NONE	SHEET 2
DATE: 02/2017									FILE NO.: 111158.00 Y–	OF 46

Drawing Name: G:\Users\111158-00-BRACEVILLE-ROAD-BRIDGE\CAD\CSD\Y_ – PLANS\1-PRELIMINARY\002-GEN-NOTES.dwg Last Modified: Mar 28, 2017 – 9:20am Plotted on: Mar 31, 2017 – 4:25pm by lynngass

				CONSTRUCTION CODE	
				FED 80% / LA 20%	FED 80% / LA 20%
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0004 RURAL	BRIDGE 0013 RURAL
20200100	EARTH EXCAVATION	CU YD	1180	1180	--
20400800	FURNISHED EXCAVATION	CU YD	991	991	--
25000200	SEEDING, CLASS 2	ACRE	0.75	0.75	--
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	72	72	--
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	72	72	--
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	72	72	--
25100630	EROSION CONTROL BLANKET	SQ YD	3855	3855	--
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	161	161	--
28000305	TEMPORARY DITCH CHECKS	FOOT	32	32	--
28000400	PERIMETER EROSION BARRIER	FOOT	344	344	--
28000500	INLET AND PIPE PROTECTION	EACH	1	1	--
28100105	STONE RIPRAP, CLASS A3	SQ YD	119	119	--

* SPECIALTY ITEM

DRAWN BY: NV
CHECKED BY: JKC
DATE: 02/2017

REVISIONS			
LEVEL	BY	DATE	DESCRIPTION

CHAMLIN & ASSOCIATES, INC.
PERU MORRIS ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

SUMMARY OF QUANTITIES

CONSTRUCTION PLANS

CONTRACT NO. 87642
CURRENT AS OF: 03/28/2017
SCALE: NONE
SHEET 3
FILE NO.: 111158.00 Y-
OF 46

				CONSTRUCTION CODE	
				FED 80% / LA 20%	FED 80% / LA 20%
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0004 RURAL	BRIDGE 0013 RURAL
28100107	STONE RIPRAP, CLASS A4	SQ YD	682	–	682
28200200	FILTER FABRIC	SQ YD	682	–	682
35100100	AGGREGATE BASE COURSE, TYPE A	TON	44	44	–
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	55	55	–
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	55	55	–
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	546	546	–
40800025	BITUMINOUS MATERIALS (PRIME COAT)	POUND	144	144	–
40800029	BITUMINOUS MATERIALS (TACK COAT)	POUND	747	747	–
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	188	188	–
44000100	PAVEMENT REMOVAL	SQ YD	60	60	–
48101200	AGGREGATE SHOULDERS, TYPE B	TON	50	50	–
48203013	HOT-MIX ASPHALT SHOULDERS, 4"	SQ YD	50	50	–
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1	–	1

* SPECIALTY ITEM

DRAWN BY: NV	REVISIONS			
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION
DATE: 02/2017				

CHAMLIN & ASSOCIATES, INC. PERU MORRIS ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

SUMMARY OF QUANTITIES

CONSTRUCTION PLANS

CONTRACT NO. 87642

CURRENT AS OF: 03/28/2017

SCALE: NONE | SHEET 4

FILE NO.: 111158.00 Y-- | OF 46

				CONSTRUCTION CODE	
				FED 80% / LA 20%	FED 80% / LA 20%
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0004 RURAL	BRIDGE 0013 RURAL
50102400	CONCRETE REMOVAL	CU YD	19.1	–	19.1
50105220	PIPE CULVERT REMOVAL	FOOT	49	49	–
50200100	STRUCTURE EXCAVATION	CU YD	158	–	158
50300225	CONCRETE STRUCTURES	CU YD	16.2	–	16.2
50300255	CONCRETE SUPERSTRUCTURE	CU YD	179.7	–	179.7
50300260	BRIDGE DECK GROOVING	SQ YD	697	–	697
50300300	PROTECTIVE COAT	SQ YD	697	–	697
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	–	1
50500505	STUD SHEAR CONNECTORS	EACH	3024	–	3024
50800105	REINFORCEMENT BARS	POUND	1830	–	1830
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	54340	–	54340
50800530	MECHANICAL SPLICERS	EACH	32	–	32
* 50901050	STEEL RAILING, TYPE SM	FOOT	451	–	451

* SPECIALTY ITEM

DRAWN BY: NV	REVISIONS			
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION
DATE: 02/2017		JKC	06/18	Stud Quantity

CHAMLIN & ASSOCIATES, INC.

PERU MORRIS
ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

SUMMARY OF QUANTITIES

CONSTRUCTION PLANS

CONTRACT NO. 87642

CURRENT AS OF: 06/03/2018	
SCALE: NONE	SHEET 5
FILE NO.: 111158.00 Y–	OF 46

				CONSTRUCTION CODE	
				FED 80% / LA 20%	FED 80% / LA 20%
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0004 RURAL	BRIDGE 0013 RURAL
51500100	NAME PLATES	EACH	1	–	1
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12	–	12
52100520	ANCHOR BOLTS, 1"	EACH	24	–	24
52100530	ANCHOR BOLTS, 1 1/4"	EACH	8	–	8
54213459	END SECTIONS 24"	EACH	2	2	–
542D1069	PIPE CULVERTS, CLASS D, TYPE 2 24"	FOOT	52	52	–
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	76	–	76
61133100	FIELD TILE JUNCTION VAULTS, 2' DIA.	EACH	1	1	–
61140100	STORM SEWERS (SPECIAL), 10"	FOOT	26	26	–
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	175	175	–
* 63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2	2	–
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4	4	–
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	1	1	–

* SPECIALTY ITEM

CONTRACT NO. 87642

DRAWN BY: NV	REVISIONS				CHAMLIN & ASSOCIATES, INC. PERU MORRIS ILLINOIS	BRACEVILLE ROAD SECTION 16-00158-00-BR GRUNDY COUNTY	SUMMARY OF QUANTITIES	CONSTRUCTION PLANS	CURRENT AS OF: 03/28/2017	
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION					SCALE: NONE	SHEET 6
DATE: 02/2017									FILE NO.: 111158.00 Y–	OF 46

					CONSTRUCTION CODE	
					FED 80% / LA 20%	FED 80% / LA 20%
	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0004 RURAL	BRIDGE 0013 RURAL
*	63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	1	1	–
	63200310	GUARDRAIL REMOVAL	FOOT	612	612	–
	67100100	MOBILIZATION	L SUM	1	0.25	0.75
*	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	2	2	–
*	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	750	750	–
*	78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	190	190	–
*	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	10	10	–
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0.25	0.75
	Z0046304	PIPE UNDERDRAINS FOR STRUCTURES, 4"	FOOT	134	–	134
	X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	153	–	153
	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	0.25	0.75

* SPECIALTY ITEM

DRAWN BY: NV
CHECKED BY: JKC
DATE: 02/2017

REVISIONS			
LEVEL	BY	DATE	DESCRIPTION

CHAMLIN & ASSOCIATES, INC.
PERU MORRIS ILLINOIS

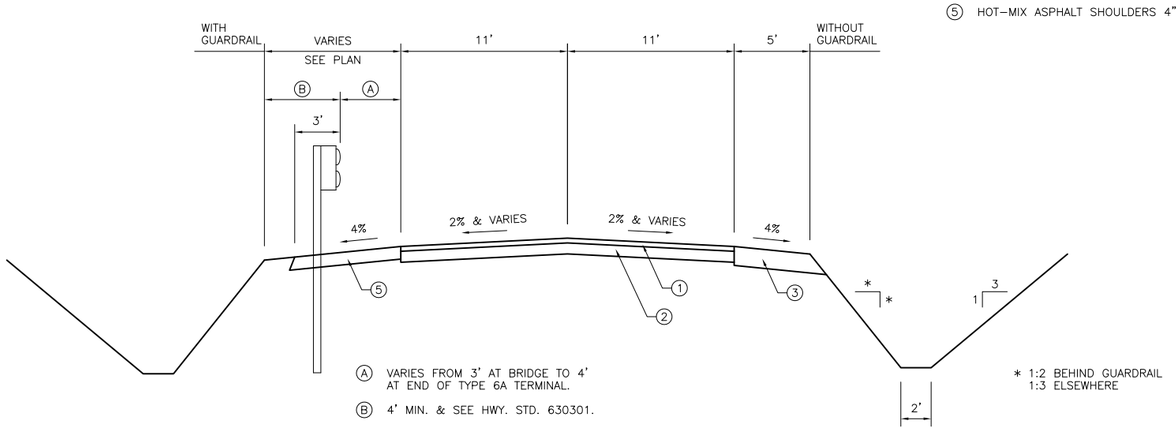
BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

SUMMARY OF QUANTITIES

CONSTRUCTION PLANS

CONTRACT NO. 87642
CURRENT AS OF: 03/28/2017
SCALE: NONE
SHEET 7
FILE NO.: 111158.00 Y–
OF 46

1. INCIDENTAL HOT-MIX ASPHALT SURFACING 1 1/2"
2. INCIDENTAL HOT-MIX ASPHALT SURFACING VAIRES 3/4" TO 3 1/2"
3. AGGREGATE SHOULDERS, TYPE B 6"
4. AGGREGATE BASE COURSE, TYPE A 12"
5. HOT-MIX ASPHALT SHOULDERS 4"



(A) VARIES FROM 3' AT BRIDGE TO 4' AT END OF TYPE 6A TERMINAL.

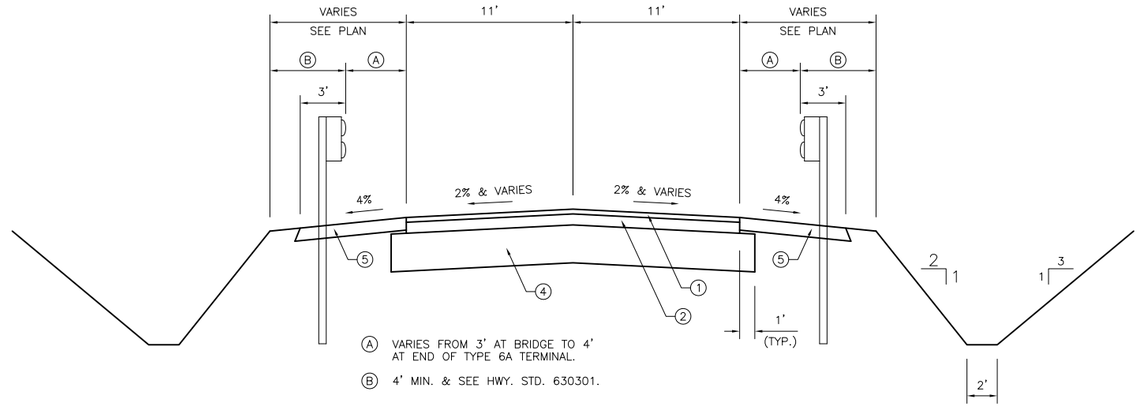
(B) 4' MIN. & SEE HWY. STD. 630301.

* 1:2 BEHIND GUARDRAIL
1:3 ELSEWHERE

BRACEVILLE ROAD PROPOSED TYPICAL SECTION

N.T.S.
STA 88+00 TO STA 89+68
AND
STA 92+16 TO STA 95+50

BRIDGE OMISSION STA 89+80 TO STA 92+04

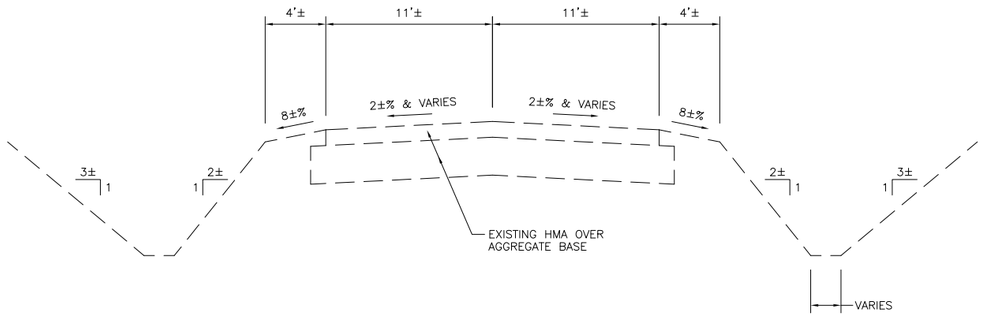


(A) VARIES FROM 3' AT BRIDGE TO 4' AT END OF TYPE 6A TERMINAL.

(B) 4' MIN. & SEE HWY. STD. 630301.

BRACEVILLE ROAD PROPOSED TYPICAL SECTION

N.T.S.
STA 89+68 TO STA 89+80
AND
STA 92+04 TO STA 92+16



BRACEVILLE ROAD EXISTING TYPICAL SECTION

N.T.S.

HMA MIXTURE REQUIREMENT TABLE	
LOCATIONS(S):	ENTIRE PROJECT
MIXTURE USE(S):	INCIDENTAL HMA
BINDER GRADE (PG):	PG 64-22
DESIGN AIR VOIDS:	4.0% @ N50
MIXTURE COMPOSITION: (MIXTURE GRADATION)	IL 9.5
FRICTION AGGREGATE:	MIXTURE C
MIXTURE WEIGHT:	112.0 LB/SY/IN
QUALITY MANAGEMENT PROGRAM:	QCQA
SUBLOT SIZE:	NA
DENSITY TEST METHOD:	LR 1030

SEE SHEET 14 FOR PROPOSED BRIDGE TYPICAL SECTION
SEE SHEET 29 FOR EXISTING BRIDGE TYPICAL SECTION

CONTRACT NO. 87642

DRAWN BY: LAG/NV	REVISIONS				CHAMLIN & ASSOCIATES, INC. PERU MORRIS ILLINOIS	BRACEVILLE ROAD SECTION 16-00158-00-BR GRUNDY COUNTY	TYPICAL SECTIONS	CONSTRUCTION PLANS	CURRENT AS OF: 03/28/2017	
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION					SCALE: NONE	SHEET 8
DATE: 02/2017									FILE NO.: 111158.00 Y-	OF 46

EARTHWORK SCHEDULE*

LOCATION	20200100 EARTH EXCAVATION CU. YD.	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE* CU. YD.	EMBANKMENT CU. YD.	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) CU. YD.
STA 88+00 TO STA 89+90	661	495.8	567	-71.3
STA 92+04 TO STA 95+50	519	389.3	1309	-919.8
TOTAL	1180	885	1876	-991
				FURNISHED EXCAVATION

* 25% SHRINKAGE FACTOR

SEEDING SCHEDULE

LOCATION	25000200 SEEDING, CLASS 2 ACRE	25000400 NITROGEN FERTILIZER NUTRIENT POUND	25000500 PHOSPHORUS FETILIZER NUTRIENT POUND	25000600 POTASSIUM FERTILIZER NUTRIENT POUND	25100630 EROSION CONTROL BLANKET SQ YD	28000250 TEMPORARY EROSION CONTROL SEEDING POUND
MAINLINE						
88+00 TO 89+90, LT	0.19	16.79	16.79	16.79	903.00	37.31
88+00 TO 89+90, RT	0.15	13.16	13.16	13.16	707.82	29.25
92+04 TO 95+50, LT	0.18	15.86	15.86	15.86	852.72	35.24
92+04 TO 95+50, RT	0.30	26.68	26.68	26.68	1391.89	59.29
TOTAL	0.75	72	72	72	3855	161

EROSION CONTROL SCHEDULE

LOCATION	28000305 TEMPORARY DITCH CHECKS FOOT	28000400 PERIMETER EROSION BARRIER FOOT	28000500 INLET AND PIPE PROTECTION EACH	28100105 STONE RIPRAP, CLASS A3 SQ YD
LT STA 88+00 TO STA 88+50	--	--	--	119
LT & RT STA 89+50	16	--	--	--
LT & RT STA 92+50	16	--	--	--
LT STA 92+00 TO STA 95+50	--	344	--	--
RT STA 95+22.48	--	--	1	--
TOTAL	32	344	1	119

PAVING AND DRIVEWAY SCHEDULE

LOCATION	35100100 AGGREGATE BASE COURSE, TYPE A TON	40200800 AGGREGATE SURFACE COURSE, TYPE B TON	40201000 AGGREGATE FOR TEMPORARY ACCESS TON	40800025 BITUMINOUS MATERIALS (PRIME COAT) POUND	40800029 BITUMINOUS MATERIALS (TACK COAT) POUND	40800050 INCIDENTAL HOT-MIX ASPHALT SURFACING TON	48100200 AGGREGATE SHOULDERS, TYPE B TON	HOT-MIX ASPHALT SHOULDERS, 4" 48203013 SQ YD
STA 89+68 TO STA 89+80	21.9	--	--	72.0	--	--	--	--
STA 92+04 TO STA 92+16	21.9	--	--	72.0	--	--	--	--
STA 88+00 TO STA 89+80	--	--	--	--	189.3	63.8	--	--
STA 92+04 TO STA 95+50	--	--	--	--	557.7	124.2	--	--
RT STA 88+00 TO STA 88+69.79	--	--	--	--	--	--	7.6	--
LT STA 88+00 TO STA 89+12	--	--	--	--	--	--	12.4	--
RT STA 88+69.79 TO STA 89+79.17	--	--	--	--	--	--	--	85.4
LT STA 89+12 TO STA 89+79.17	--	--	--	--	--	--	--	49.0
RT STA 92+04.83 TO STA 94+73.08	--	--	--	--	--	--	--	205.4
LT STA 92+04.83 TO STA 93+20.02	--	--	--	--	--	--	--	101.9
RT STA 95+11.51 TO STA 95+50	--	--	--	--	--	--	4.2	--
LT STA 93+20.02 TO STA 95+50	--	--	--	--	--	--	25.7	--
RT STA 94+91	--	55.2	55.2	--	--	--	--	--
TOTAL	44	55	55	144	747	188	50	442

GUARDRAIL & BARRIER MARKER SCHEDULE

LOCATION	78200005 GUARDRAIL REFLECTORS, TYPE EACH	72501000 TERMINAL MARKER - DIRECT APPLIED EACH
RT STA 88+82.77 TO RT STA 94+66.11	6	1
LT STA 89+22.77 TO LT STA 92+98.87	4	1
TOTAL	10	2

GUARDRAIL REMOVAL SCHEDULE

LOCATION	63200310 GUARDRAIL REMOVAL FOOT
LT STA 88+67.79 TO STA 89+79.17	113
RT STA 88+92.84 TO STA 89+79.17	88
LT STA 92+04.83 TO STA 93+54.20	149
RT STA 92+04.83 TO STA 94+64.89	262
TOTAL	612

PAVEMENT MARKING SCHEDULE

LOCATION	78001110 PAINT PAVEMENT MARKING - LINE 4" EACH	78001130 PAINT PAVEMENT MARKING - LINE 6" FOOT
STA 88+00 TO STA 95+50 (CENTERLINE)	--	190
STA 88+00 TO STA 95+50 (NO PASSING)	750	--
TOTAL	750	190

GUARDRAIL SCHEDULE

LOCATION	63000001 STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS FOOT	63100087 TRAFFIC BARRIER TERMINAL, TYPE 6A EACH	63100045 TRAFFIC BARRIER TERMINAL, TYPE 2 EACH	63100167 TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT EACH	63100169 TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED EACH
RT STA 88+82.77 TO RT STA 89+79.02	--	1	--	1	--
RT STA 92+04.98 TO RT STA 94+66.16	175	1	1	--	--
LT STA 89+22.77 TO LT STA 89+79.02	--	1	1	--	--
LT STA 92+04.98 TO LT STA 92+98.87	--	1	--	--	1
TOTAL	175	4	2	1	1

CULVERT SCHEDULE

LOCATION	54213459 END SECTIONS 24" EACH	542D1069 PIPE CULVERTS. CLASS D,TYPE 2 24" FOOT
RT STA 94+59.41 TO RT STA 95+22.48	2	52
TOTAL	2	52

PAVEMENT REMOVAL SCHEDULE

LOCATION	44000100 PAVEMENT REMOVAL SQ YD
STA 89+68 TO STA 89+80	30
STA 92+04 TO STA 92+16	30
TOTAL	60

HMA SURFACE REMOVAL - BUTT JOINT SCHEDULE

LOCATION	40600982 HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT SQ YD
STA 88+00 TO STA 88+50	122
STA 92+90 TO STA 95+50	424
TOTAL	546

STORM SEWER SCHEDULE

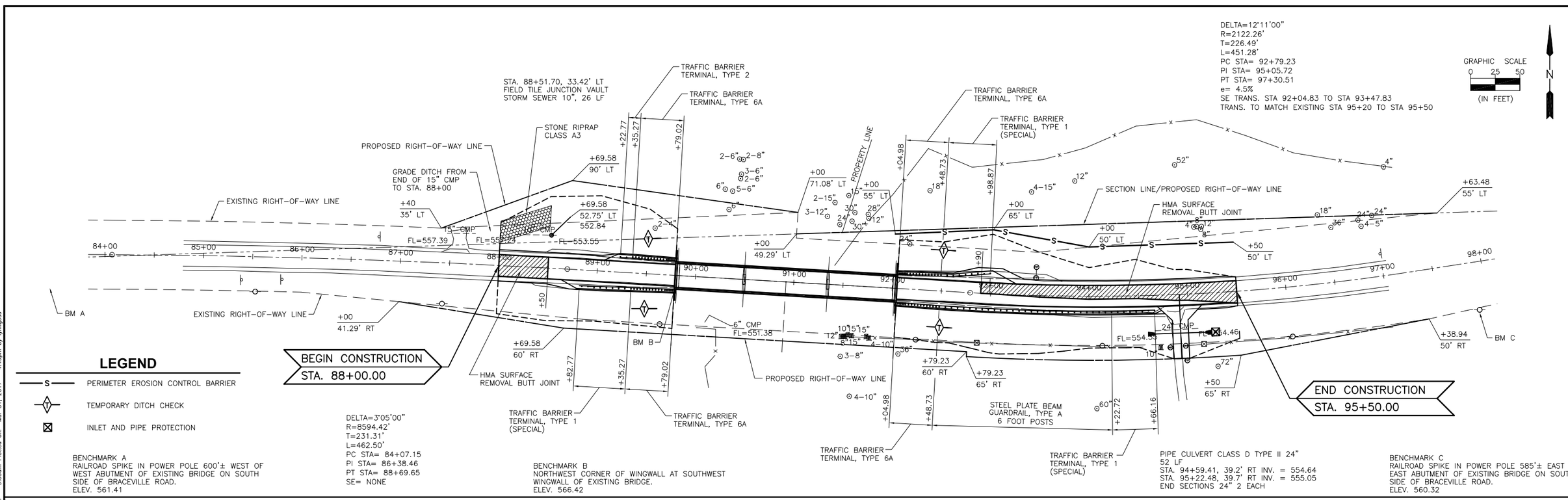
LOCATION	61133100 FIELD TILE JUNCTION VAULTS, 2' DIA. EACH	61140100 STORM SEWERS (SPECIAL), 10" FOOT
STA 88+51.70, 33.42' LT TO STA 88+69.59, 52.75' LT	1	26
TOTAL	1	26

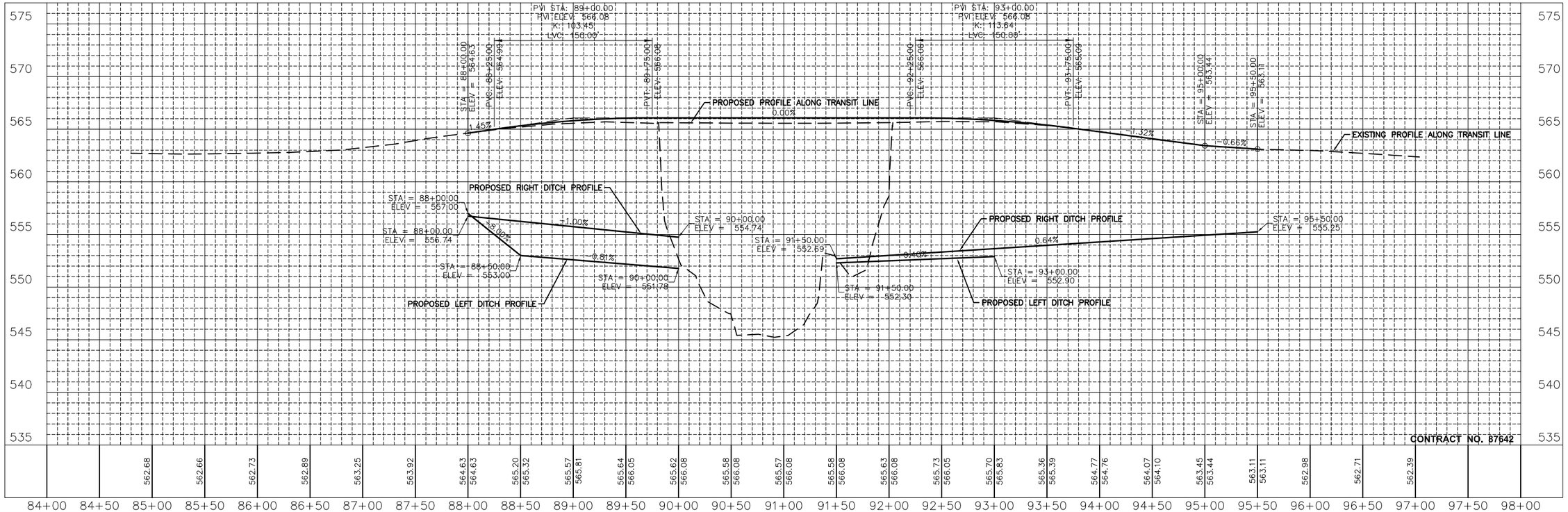
PIPE CULVERT REMOVAL SCHEDULE

LOCATION	CULVERT SIZE	50105220 PIPE CULVERT REMOVAL FEET
RT STA 95+00	24"	49
TOTAL	--	49

CONTRACT NO. 87642

DRAWN BY: NV	REVISIONS				CHAMLIN & ASSOCIATES, INC. PERU MORRIS ILLINOIS	BRACEVILLE ROAD SECTION 16-00158-00-BR GRUNDY COUNTY	SCHEDULE OF QUANTITIES	CONSTRUCTION PLANS	CURRENT AS OF: 03/28/2017
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION					SCALE: NONE / SHEET 9
DATE: 02/2017									FILE NO.: 111158.00 Y– / OF 46





DRAWN BY: LAG/NV	REVISIONS			
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION
DATE: 09/2016				

CHAMLIN & ASSOCIATES, INC.

PERU MORRIS ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

PLAN AND PROFILE
STA. 184+00 TO 198+00

CONSTRUCTION PLANS

CURRENT AS OF: 03/28/2017

SCALE: AS NOTED | SHEET 10

FILE NO.: 111158.00 Y– | OF 46

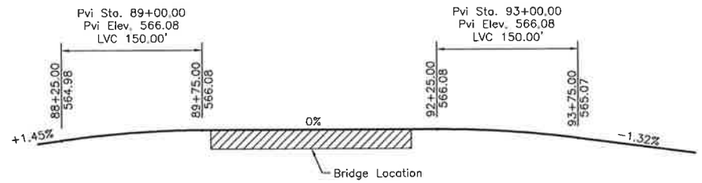
Benchmarks:

Benchmark A
Railroad spike in power pole 600'± west of west abutment of existing bridge on south side of Braceville Road.
Elev. 561.41

Benchmark B
Northwest corner of wingwall at southwest wingwall of existing bridge.
Elev. 566.42

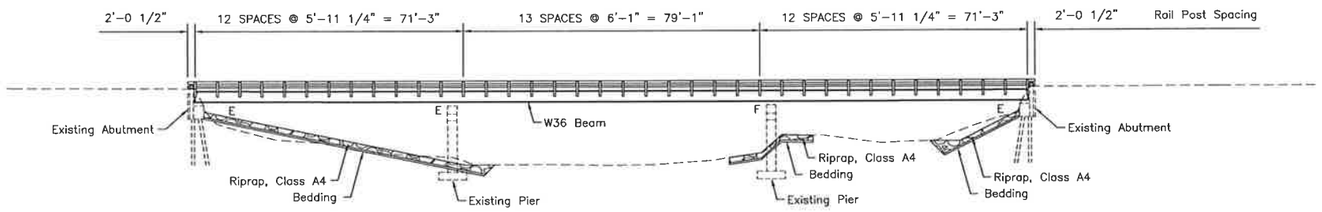
Benchmark C
Railroad spike in power pole 585'± east of east abutment of existing bridge on south side of Braceville Road.
Elev. 560.32

Existing Structure: S.N. 032-3260, originally built in 1970 as CH 9 Section 50-B. The existing structure consists of 3 continous steel spans, 225'-8" Bk. to Bk. abutments and 26'-0" Out to Out of deck, on pile supported abutments and spread footing piers. Superstructure to be removed and replaced. Traffic to be maintained by marked detour.
Re-use existing foundations.

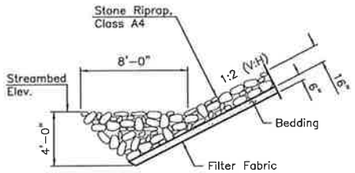


PROFILE GRADE

INDEX OF SHEETS



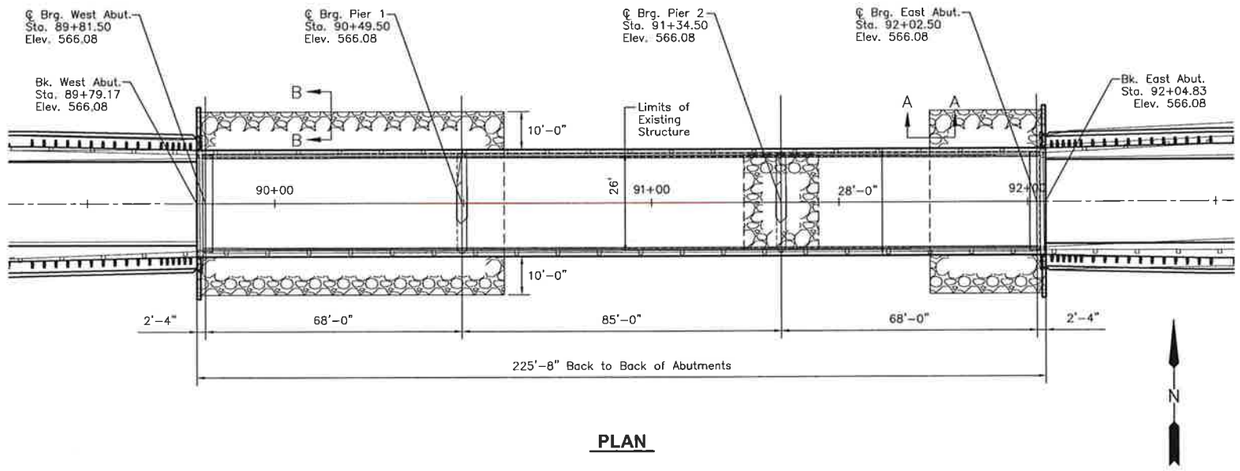
ELEVATION



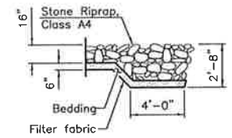
SECTION A-A

MAZON RIVER
RE-BUILT 20___ BY
GRUNDY COUNTY
SEC 16-00158-00-BR
F.A.S. RT. 272 STA 90+92
STR. NO. 032-3260 LOADING HL-93

NAME PLATE
See Std. 515001



PLAN

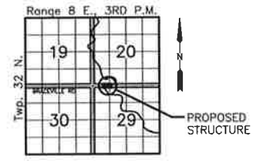


SECTION B-B

LOADING HL-93 (SUPERSTRUCTURE ONLY)
Allow 25#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
2014 AASHTO LRFD Bridge Design Specifications
with 2015-2016 Interims

DESIGN STRESSES
FIELD UNITS
f'c = 4,000 psi (Deck)
f'c = 3,500 psi (Substructure)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50W)



LOCATION SKETCH

WATERWAY INFORMATION TABLE

Drainage Area = 235 Square Miles			Overtopping Elev.=562.37'/562.37' (Exist/Prop.) @ STA 97+04										
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.						Nat. H.W.E.	Head - Ft.		Headwater El	
			Exist.			Prop.				Exist.	Prop.	Exist.	Prop.
			Bridge	O.T.R.	Total	Bridge	O.T.R.	Total					
	10	3790	1290	0	1290	1290	0	1290	556.1	0.1	0.1	556.2	556.2
Design	20	4450	1406	0	1406	1406	0	1406	556.7	0.1	0.1	556.8	556.8
Base	100	5880	1624	0	1624	1624	0	1624	557.8	0.1	0.1	557.9	557.9
Overtopping													
Max. Calc.	500	7250	1807	0	1807	1807	0	1807	558.7	0.1	0.1	558.8	558.8

Max. H.W.E.: 562.3 (ft.) Max. H.W.E. Date: 1958
Exist. 10 Year Velocity: 3.0 (ft./sec.)
Prop. 10 Year Velocity: 3.0 (ft./sec.)

DESIGN SCOUR ELEVATION TABLE

Event/Limit State	Design Scour Elevations (ft.)				Item 113
	W. Abut.	Pier 1	Pier 2	E. Abut.	
Q100	Not Computed	541.81	543.68	Not Computed	5
Q200	Not Computed	Not Computed	Not Computed	Not Computed	
Design	557.41	541.29	541.35	557.41	
Check	557.41	541.29	541.35	557.41	

I certify that to the best of knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO LRFD Bridge Design Specifications.

6/29/18
date

JAMES K. CLINARD
LICENSED STRUCTURAL ENGINEER
NO. 081-004655
STATE OF ILLINOIS
expires 11-30-2018
signature

PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-001717

GENERAL PLAN & ELEVATION
BRACEVILLE ROAD
OVER MAZON RIVER
F.A.S. 273 SEC. 16-00158-00-BR
GRUNDY COUNTY
STATION 90+92
STRUCTURE NO. 032-3260
CONTRACT NO. 87642

DRAWN BY: LAG
CHECKED BY: JKC
DATE: 09/2016

REVISIONS			
LEVEL	BY	DATE	DESCRIPTION

CHAMLIN & ASSOCIATES, INC.
PERU MORRIS ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 032-3260
SHEET 1 OF 17

CONSTRUCTION PLANS

CURRENT AS OF: 03/28/2017
SCALE: AS NOTED
SHEET 11
FILE NO.: 111158.00 Y-
OF 46

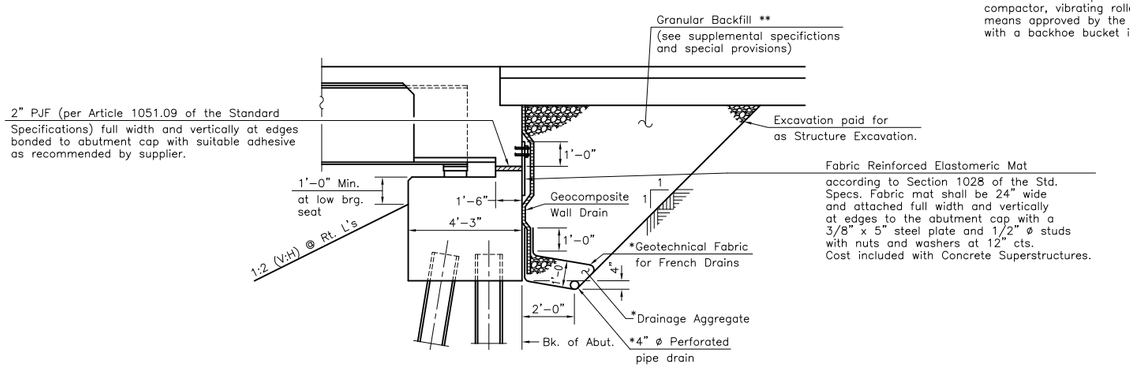
Drawing Name: G:\Users\11\111158-00-BRACEVILLE-ROAD-BRIDGE\CAD\C3D\Y_ - PLANS\1-PRELIM\NAP\011 - 001 - GENERAL PLAN.dwg Last Modified: Jun 28, 2018 - 9:57am Plotted on: Jun 28, 2018 - 3:31pm by nancy

GENERAL NOTES

1. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts in painted areas and ASTM A325 Type 3 in unpainted areas. Bolts 7/8 in. dia., holes 15/16 in. dia., unless otherwise noted.
2. Calculated weight of Structural Steel = M270 GR50 188430, M270 G36 17280.
3. All structural steel shall be AASHTO M 270 Grade 50W.
4. No field welding is permitted except as specified in the contract documents.
5. Reinforcement bars designed (E) shall be epoxy coated.
6. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
7. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
8. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
9. Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 18 in. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.
10. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
11. All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
12. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
13. The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 36W.
14. Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
15. Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
16. Existing name plate shall be cleaned and relocated next to new name plate. Cost included with Name Plates.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Granular Backfill for Structures	Cu. Yd.	–	153	153
Stone Riprap, Class A4	Sq. Yd.	–	682	682
Filter Fabric	Sq. Yd.	–	682	682
Removal of Existing Superstructures	Each	1	–	1
Concrete Removal	Cu. Yd.	–	19.1	19.1
Structure Excavation	Cu. Yd.	–	158	158
Concrete Structures	Cu. Yd.	–	16.2	16.2
Concrete Superstructure	Cu. Yd.	179.7	–	179.7
Bridge Deck Grooving	Sq. Yd.	697	–	697
Protective Coat	Sq. Yd.	697	–	697
Furnishing and Erecting Structural Steel	L. Sum	1	–	1
Stud Shear Connectors	Each	3024	–	3024
Reinforcement Bars	Pound	–	1830	1830
Reinforcement Bars, Epoxy Coated	Pound	54180	160	54340
Mechanical Splicers	Each	–	32	32
Steel Railing, Type SM	Foot	451	–	451
Name Plates	Each	1	–	1
Elastomeric Bearing Assembly, Type I	Each	12	–	12
Anchor Bolt, 1"	Each	24	–	24
Anchor Bolt, 1 1/4"	Each	8	–	8
Geocomposite Wall Drain	Sq. Yd.	–	76	76
Pipe Underdrains for Structures, 4"	Foot	–	134	134



** The material shall be placed in lifts of 6" and shall be compacted with vibrating plate compactor, vibrating roller or other vibrating means approved by the Engineer. Compaction with a backhoe bucket is not acceptable.

*Included in the cost of Pipe Underdrains for Structures.

All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

SECTION THRU SEMI-INTEGRAL ABUTMENT

CONTRACT NO. 87642

DRAWN BY: LAG	REVISIONS			
	LEVEL	BY	DATE	DESCRIPTION
CHECKED BY: JKC		JKC	06/18	Stud Quantity
DATE: 02/2017				

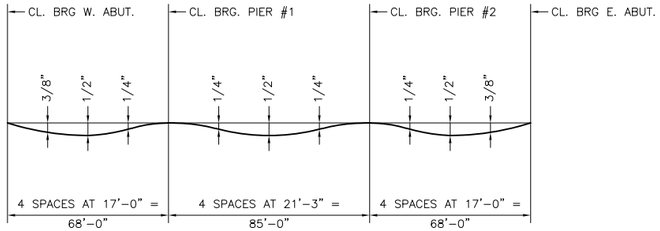
CHAMLIN & ASSOCIATES, INC. — PERU MORRIS ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

GENERAL DATA
STRUCTURE NO. 032-3260
SHEET 2 OF 17

CONSTRUCTION PLANS

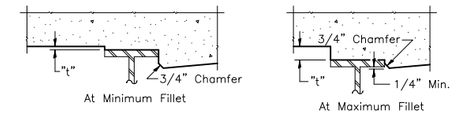
CURRENT AS OF: 06/03/2018
SCALE: AS NOTED — SHEET 12
FILE NO.: 111158.00 Y– — OF 46



DEAD LOAD DEFLECTION DIAGRAM

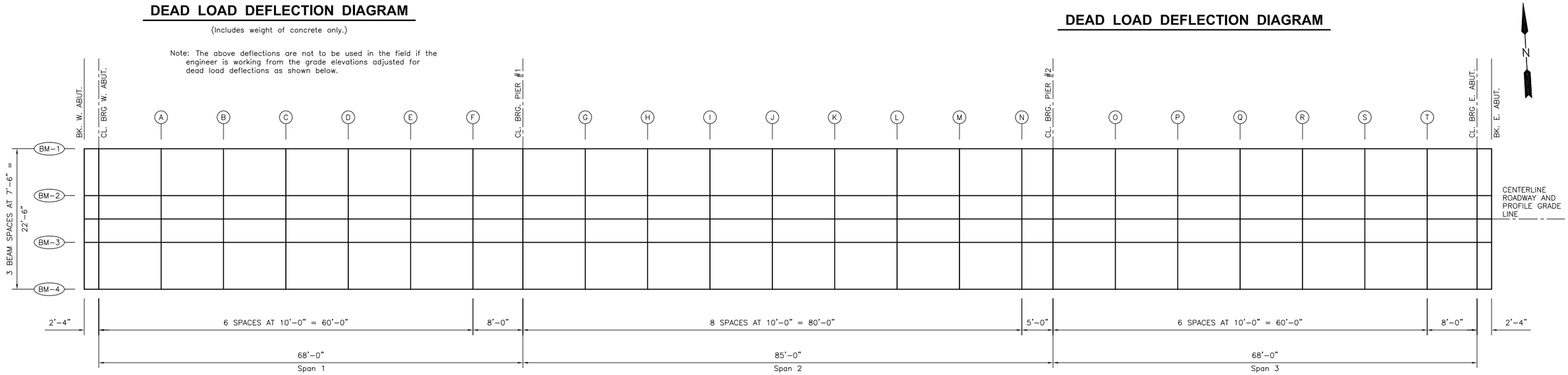
(Includes weight of concrete only.)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet heights "t" above top flange of beams.

DEAD LOAD DEFLECTION DIAGRAM



PLAN

BEAM 1				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
BK. W. ABUT.	89+79.17	-11.25	565.85	565.85
CL. BRG. W. ABUT.	89+81.50	-11.25	565.85	565.85
A	89+91.50	-11.25	565.85	565.87
B	90+01.50	-11.25	565.85	565.88
C	90+11.50	-11.25	565.85	565.89
D	90+21.50	-11.25	565.85	565.88
E	90+31.50	-11.25	565.85	565.87
F	90+41.50	-11.25	565.85	565.85
CL. BRG. PIER 1	90+49.50	-11.25	565.85	565.85
G	90+59.50	-11.25	565.85	565.86
H	90+69.50	-11.25	565.85	565.87
I	90+79.50	-11.25	565.85	565.88
J	90+89.50	-11.25	565.85	565.89
K	90+99.50	-11.25	565.85	565.89
L	91+09.50	-11.25	565.85	565.88
M	91+19.50	-11.25	565.85	565.86
N	91+29.50	-11.25	565.85	565.85
CL. BRG. PIER 1	91+34.50	-11.25	565.85	565.85
O	91+44.50	-11.25	565.85	565.86
P	91+54.50	-11.25	565.85	565.87
Q	91+64.50	-11.25	565.85	565.88
R	91+74.50	-11.25	565.85	565.89
S	91+84.50	-11.25	565.85	565.88
T	91+94.50	-11.25	565.85	565.87
CL. BRG. E. ABUT.	92+02.50	-11.25	565.85	565.85
BK. E. ABUT.	92+04.83	-11.25	565.85	565.85

BEAM 2				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
BK. W. ABUT.	89+79.17	-3.75	566.00	566.00
CL. BRG. W. ABUT.	89+81.50	-3.75	566.00	566.00
A	89+91.50	-3.75	566.00	566.02
B	90+01.50	-3.75	566.00	566.03
C	90+11.50	-3.75	566.00	566.04
D	90+21.50	-3.75	566.00	566.03
E	90+31.50	-3.75	566.00	566.02
F	90+41.50	-3.75	566.00	566.00
CL. BRG. PIER 1	90+49.50	-3.75	566.00	566.00
G	90+59.50	-3.75	566.00	566.01
H	90+69.50	-3.75	566.00	566.02
I	90+79.50	-3.75	566.00	566.03
J	90+89.50	-3.75	566.00	566.04
K	90+99.50	-3.75	566.00	566.04
L	91+09.50	-3.75	566.00	566.03
M	91+19.50	-3.75	566.00	566.01
N	91+29.50	-3.75	566.00	566.00
CL. BRG. PIER 1	91+34.50	-3.75	566.00	566.00
O	91+44.50	-3.75	566.00	566.01
P	91+54.50	-3.75	566.00	566.02
Q	91+64.50	-3.75	566.00	566.03
R	91+74.50	-3.75	566.00	566.04
S	91+84.50	-3.75	566.00	566.03
T	91+94.50	-3.75	566.00	566.02
CL. BRG. E. ABUT.	92+02.50	-3.75	566.00	566.00
BK. E. ABUT.	92+04.83	-3.75	566.00	566.00

CENTERLINE ROADWAY AND PROFILE GRADE				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
BK. W. ABUT.	89+79.17	0.00	566.08	566.08
CL. BRG. W. ABUT.	89+81.50	0.00	566.08	566.08
A	89+91.50	0.00	566.08	566.10
B	90+01.50	0.00	566.08	566.11
C	90+11.50	0.00	566.08	566.12
D	90+21.50	0.00	566.08	566.11
E	90+31.50	0.00	566.08	566.10
F	90+41.50	0.00	566.08	566.08
CL. BRG. PIER 1	90+49.50	0.00	566.08	566.08
G	90+59.50	0.00	566.08	566.09
H	90+69.50	0.00	566.08	566.10
I	90+79.50	0.00	566.08	566.11
J	90+89.50	0.00	566.08	566.12
K	90+99.50	0.00	566.08	566.12
L	91+09.50	0.00	566.08	566.11
M	91+19.50	0.00	566.08	566.09
N	91+29.50	0.00	566.08	566.08
CL. BRG. PIER 1	91+34.50	0.00	566.08	566.08
O	91+44.50	0.00	566.08	566.09
P	91+54.50	0.00	566.08	566.10
Q	91+64.50	0.00	566.08	566.11
R	91+74.50	0.00	566.08	566.12
S	91+84.50	0.00	566.08	566.11
T	91+94.50	0.00	566.08	566.10
CL. BRG. E. ABUT.	92+02.50	0.00	566.08	566.08
BK. E. ABUT.	92+04.83	0.00	566.08	566.08

BEAM 3				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
BK. W. ABUT.	89+79.17	3.75	566.00	566.00
CL. BRG. W. ABUT.	89+81.50	3.75	566.00	566.00
A	89+91.50	3.75	566.00	566.02
B	90+01.50	3.75	566.00	566.03
C	90+11.50	3.75	566.00	566.04
D	90+21.50	3.75	566.00	566.03
E	90+31.50	3.75	566.00	566.02
F	90+41.50	3.75	566.00	566.00
CL. BRG. PIER 1	90+49.50	3.75	566.00	566.00
G	90+59.50	3.75	566.00	566.01
H	90+69.50	3.75	566.00	566.02
I	90+79.50	3.75	566.00	566.03
J	90+89.50	3.75	566.00	566.04
K	90+99.50	3.75	566.00	566.04
L	91+09.50	3.75	566.00	566.03
M	91+19.50	3.75	566.00	566.01
N	91+29.50	3.75	566.00	566.00
CL. BRG. PIER 1	91+34.50	3.75	566.00	566.00
O	91+44.50	3.75	566.00	566.01
P	91+54.50	3.75	566.00	566.02
Q	91+64.50	3.75	566.00	566.03
R	91+74.50	3.75	566.00	566.04
S	91+84.50	3.75	566.00	566.03
T	91+94.50	3.75	566.00	566.02
CL. BRG. E. ABUT.	92+02.50	3.75	566.00	566.00
BK. E. ABUT.	92+04.83	3.75	566.00	566.00

BEAM 4				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
BK. W. ABUT.	89+79.17	11.25	565.85	565.85
CL. BRG. W. ABUT.	89+81.50	11.25	565.85	565.85
A	89+91.50	11.25	565.85	565.87
B	90+01.50	11.25	565.85	565.88
C	90+11.50	11.25	565.85	565.89
D	90+21.50	11.25	565.85	565.88
E	90+31.50	11.25	565.85	565.87
F	90+41.50	11.25	565.85	565.85
CL. BRG. PIER 1	90+49.50	11.25	565.85	565.85
G	90+59.50	11.25	565.85	565.86
H	90+69.50	11.25	565.85	565.87
I	90+79.50	11.25	565.85	565.88
J	90+89.50	11.25	565.85	565.89
K	90+99.50	11.25	565.85	565.89
L	91+09.50	11.25	565.85	565.88
M	91+19.50	11.25	565.85	565.86
N	91+29.50	11.25	565.85	565.85
CL. BRG. PIER 1	91+34.50	11.25	565.85	565.85
O	91+44.50	11.25	565.85	565.86
P	91+54.50	11.25	565.85	565.87
Q	91+64.50	11.25	565.85	565.88
R	91+74.50	11.25	565.85	565.89
S	91+84.50	11.25	565.85	565.88
T	91+94.50	11.25	565.85	565.87
CL. BRG. E. ABUT.	92+02.50	11.25	565.85	565.85
BK. E. ABUT.	92+04.83	11.25	565.85	565.85

CONTRACT NO. 87642

DRAWN BY: LAG
CHECKED BY: JKC
DATE: 09/2016

REVISIONS			
LEVEL	BY	DATE	DESCRIPTION

CHAMLIN & ASSOCIATES, INC.

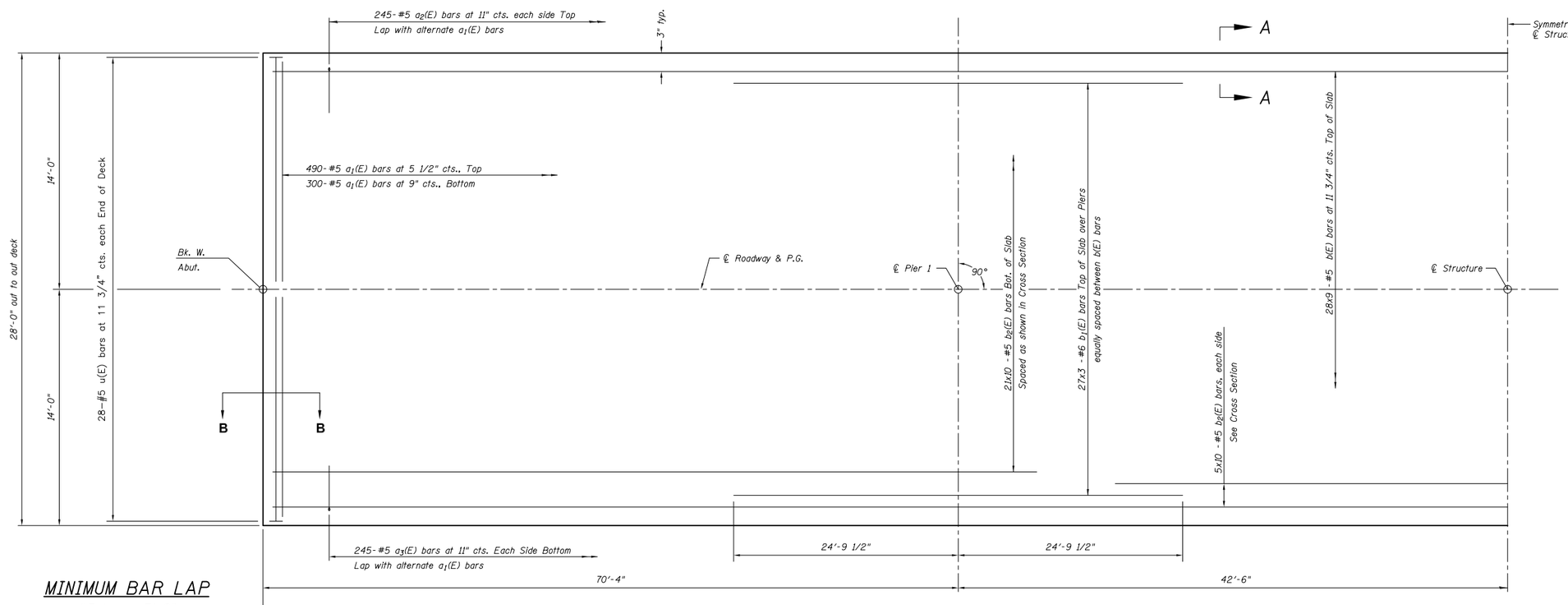
PERU MORRIS ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

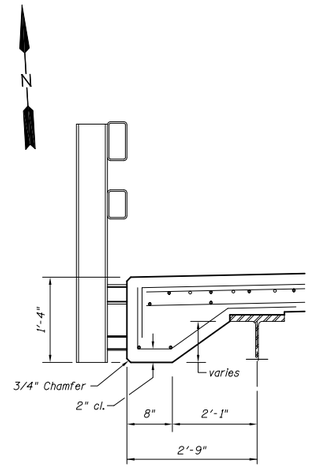
TOP OF DECK ELEVATIONS
STRUCTURE NO. 032-3260
SHEET 3 OF 17

CONSTRUCTION PLANS

CURRENT AS OF: 03/28/2017
SCALE: NONE | SHEET 13
FILE NO.: 111158.00 Y– | OF 46



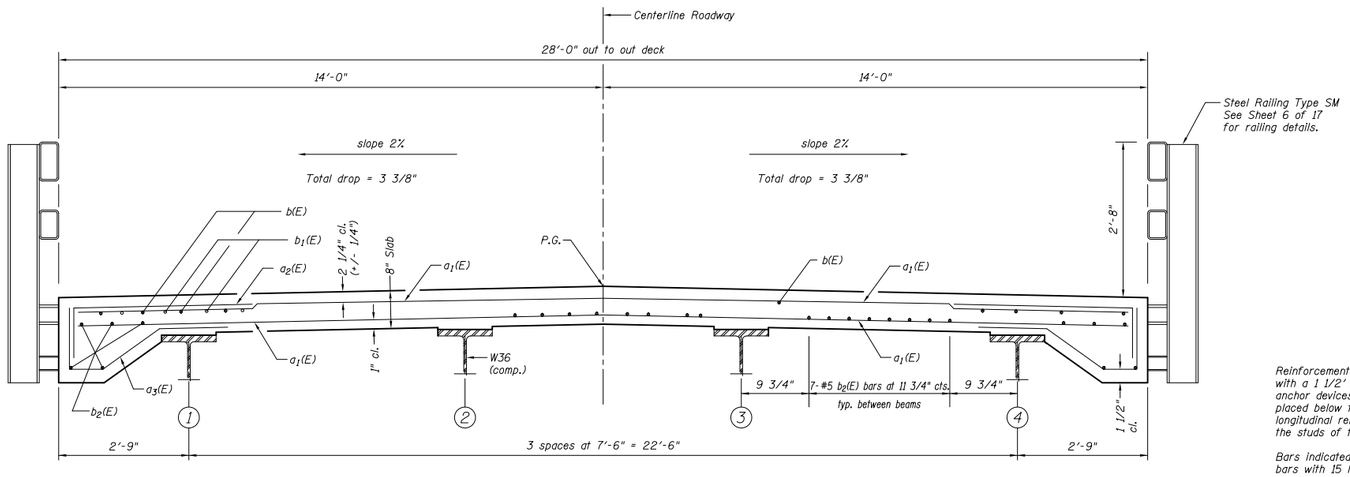
PARTIAL PLAN



SECTION A-A

MINIMUM BAR LAP

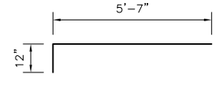
#5 bar = 3'-0"
#6 bar = 3'-7"



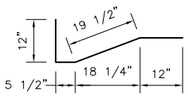
NEAR PIER NEAR MIDSPAN

CROSS SECTION

(Looking East)



Bar $a_2(E)$



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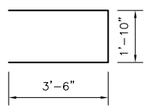
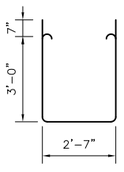
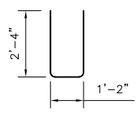


Bar s(E)



Bar $s_1(E)$



Bar u(E)

Reinforcement bars in the top of the deck shall be placed with a 1 1/2" minimum clearance in the area of the rail post anchor devices. The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

Bars indicated thus 6 x 15 - #5 etc. indicates 6 lines of bars with 15 lengths per line.

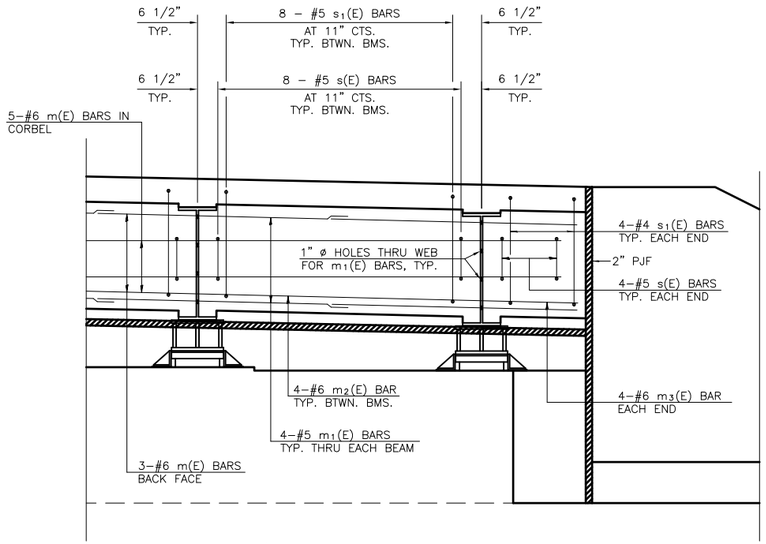
See sheet 1 of 17 for Rail Post Locations to locate Anchor Device.

SUPERSTRUCTURE BILL OF MATERIAL

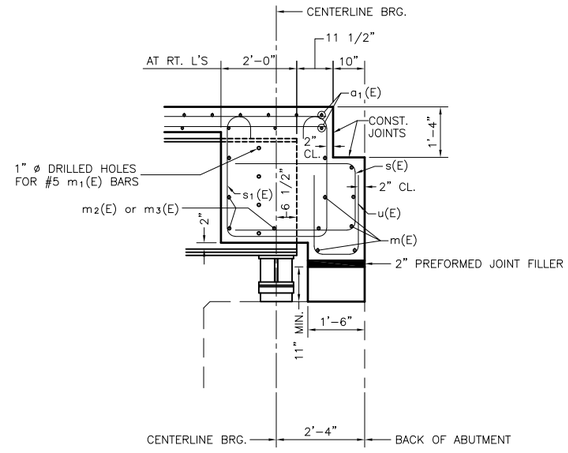
Bar	No.	Size	Length	Shape
$a_1(E)$	790	#5	27'-9"	
$a_2(E)$	490	#5	6'-7"	
$a_3(E)$	490	#5	4'-1"	
b(E)	252	#5	27'-8"	
$b_1(E)$	162	#6	18'-11"	
$b_2(E)$	310	#5	25'-2"	
m(E)	6	#6	27'-9"	
$m_1(E)$	32	#5	4'-0"	
$m_2(E)$	24	#6	7'-3"	
$m_3(E)$	16	#6	2'-6"	
s(E)	64	#5	8'-10"	
$s_1(E)$	64	#5	9'-9"	
u(E)	56	#5	5'-10"	
Reinforcement Bars, Epoxy Coated			Pound	54180
Concrete Superstructure			Cu. Yds.	179.7

CONTRACT NO. 87642

DRAWN BY: LAG	REVISIONS				CHAMLIN & ASSOCIATES, INC.	PERU MORRIS ILLINOIS	BRACEVILLE ROAD SECTION 16-00158-00-BR GRUNDY COUNTY	SUPERSTRUCTURE STRUCTURE NO. 032-3260 SHEET 4 OF 17	CONSTRUCTION PLANS	CURRENT AS OF: 03/28/2017	
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION						SCALE: NONE	SHEET 14
DATE: 09/2016										FILE NO.: 111158.00 Y–	OF 46



DIAPHRAGM ELEVATION AT ABUTMENT

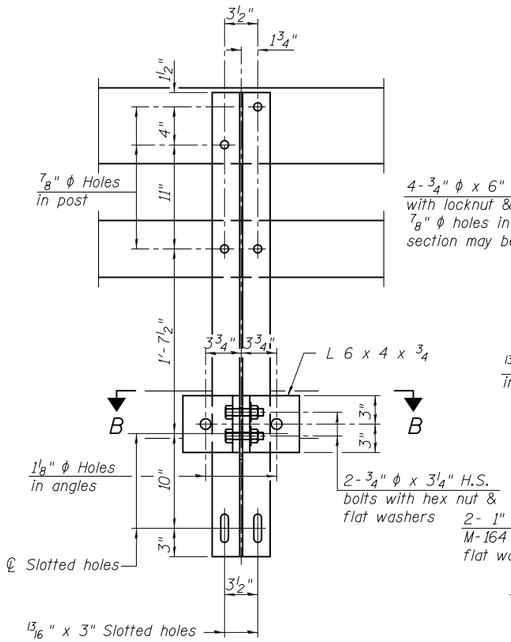


SECTION B-B

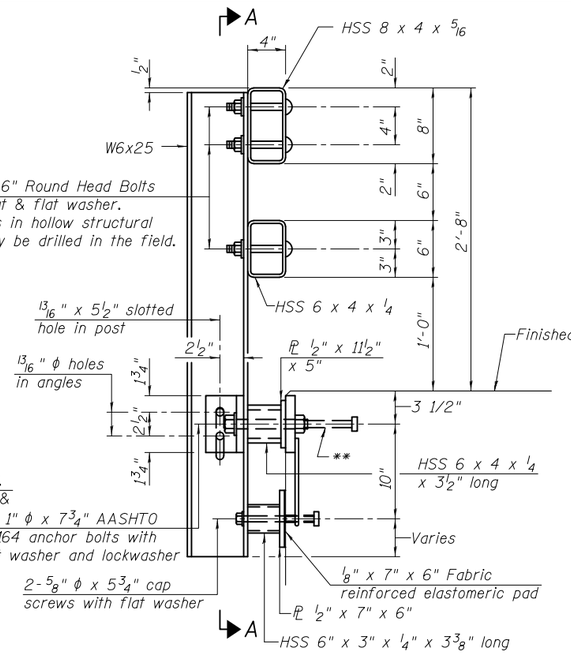
Dimensions at right angles to abutment, except as shown.

CONTRACT NO. 87642

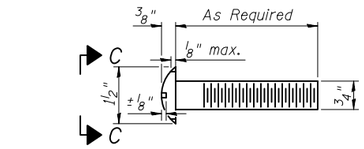
DRAWN BY: LAG	REVISIONS				CHAMLIN & ASSOCIATES, INC. PERU MORRIS ILLINOIS	BRACEVILLE ROAD SECTION 16-00158-00-BR GRUNDY COUNTY	DIAPHRAGM DETAILS STRUCTURE NO. 032-3260 SHEET 5 OF 17	CONSTRUCTION PLANS	CURRENT AS OF: 03/28/2017
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION					SCALE: NONE / SHEET 15
DATE: 09/2016									FILE NO.: 111158.00 Y– / OF 46



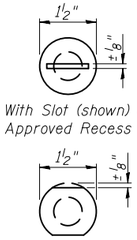
SECTION A-A



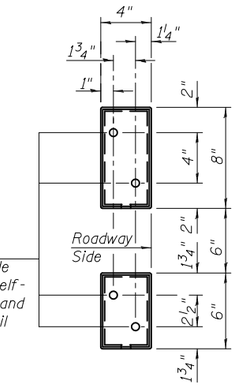
SECTION AT RAIL POST



DETAIL OF 3/4" ϕ ROUND HEAD BOLT

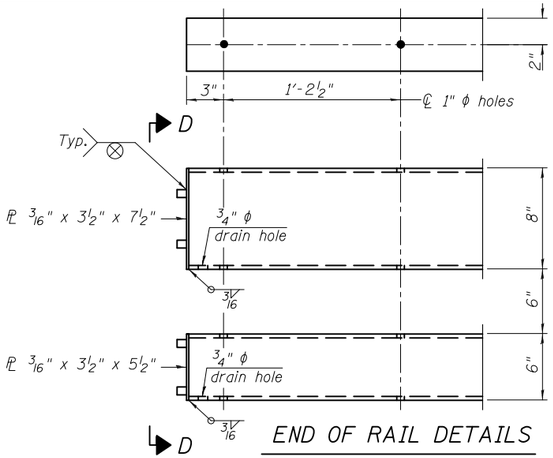


VIEW C-C

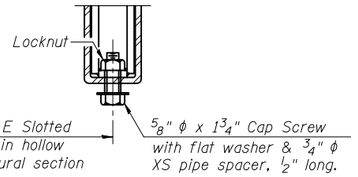


℄ - 5/8" reduced base welded studs. Provide 4- 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032 .

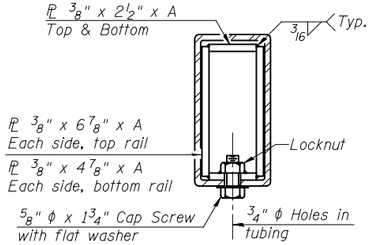
VIEW D-D



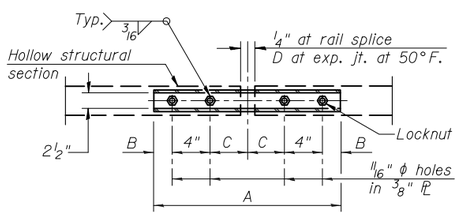
END OF RAIL DETAILS



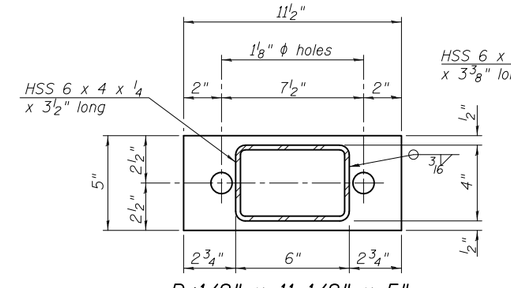
RAIL SPLICE CONNECTION AT EXPANSION JT.



SECTION AT RAIL SPLICE

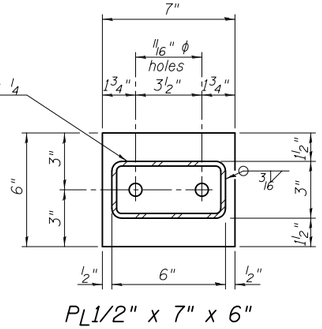


PLAN-BOTT. SPLICE PL TYPICAL

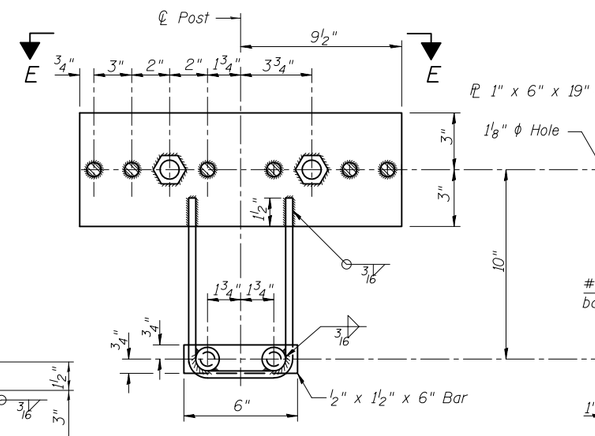


SECTION B-B

PL1/2" x 11 1/2" x 5"

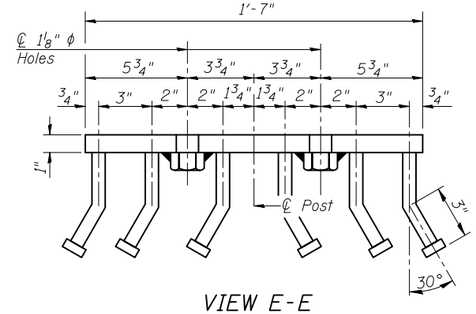


PL1/2" x 7" x 6"



ANCHOR DEVICE

*Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.



VIEW E-E

SPLICE DIMENSIONS

T	D	A	B	C	E
≤4"	2 1/2"	1'-8"	2"	4"	2 1/2"
>4" ≤6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
>6 1/2" ≤9"	5"	2'-4"	3 1/2"	6 1/2"	9"
>9" ≤13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	——

T = Total movement at expansion joint as shown on the design plans.

Notes:

For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.

Steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

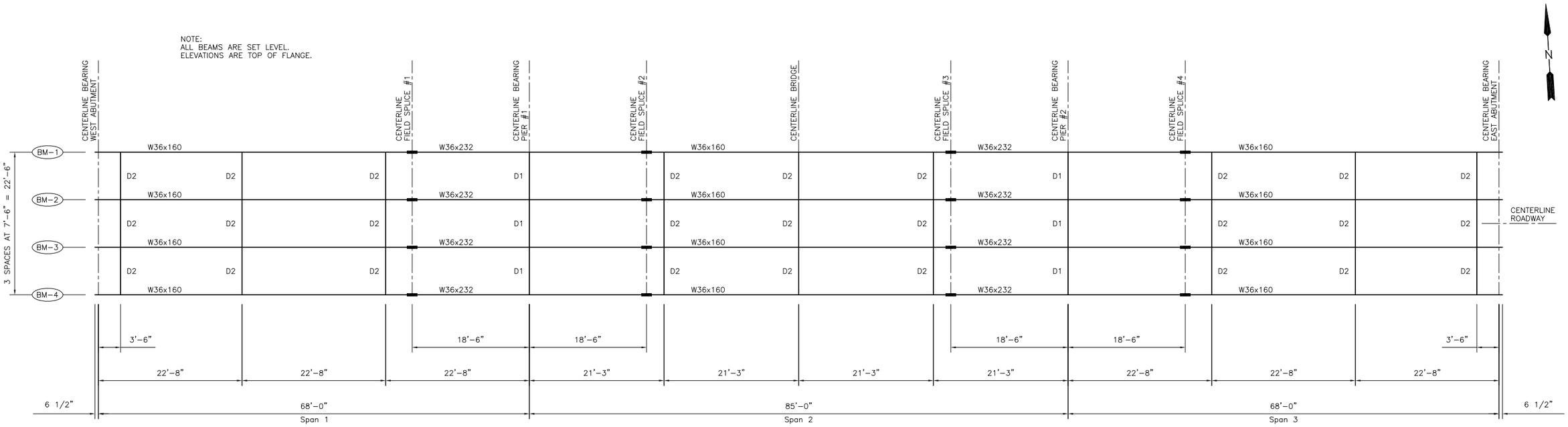
BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	451

1-12-15 (6'-3" Maximum Post Spacing)

CONTRACT NO. 87642

DRAWN BY: LAG	REVISIONS				CHAMLIN & ASSOCIATES, INC. PERU MORRIS ILLINOIS	BRACEVILLE ROAD SECTION 16-00158-00-BR GRUNDY COUNTY	STEEL RAILING, TYPE SM WITH CONCRETE WEARING SURFACE STRUCTURE NO. 032-3260 SHEET 6 OF 17	CONSTRUCTION PLANS	CURRENT AS OF: 03/28/2017	
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION					SCALE: NONE	SHEET 16
DATE: 09/2016									FILE NO.: 111158.00 Y–	OF 46

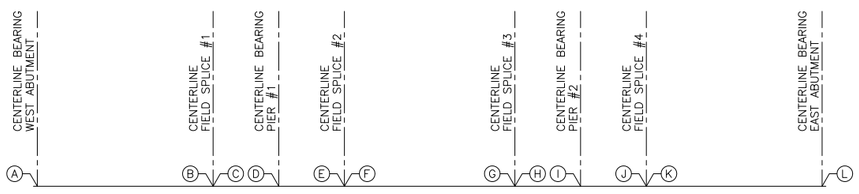


PLAN

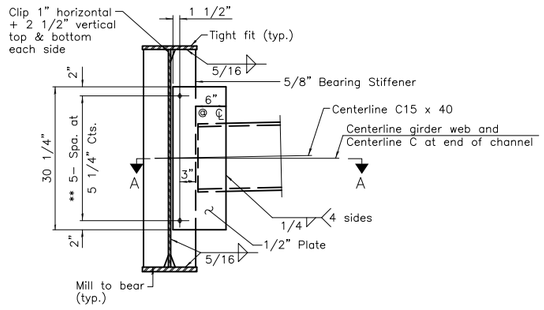
1. All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

2. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

TOP OF BEAM ELEVATIONS (For Fabrication Only)												
Beam #	A	B	C	D	E	F	G	H	I	J	K	L
1	565.12	565.03	565.08	565.08	565.08	565.03	565.03	565.08	565.08	565.08	565.03	565.12
2	565.27	565.18	565.23	565.23	565.23	565.18	565.18	565.23	565.23	565.23	565.18	565.27
3	565.27	565.18	565.23	565.23	565.23	565.18	565.18	565.23	565.23	565.23	565.18	565.27
4	565.12	565.03	565.08	565.08	565.08	565.03	565.03	565.08	565.08	565.08	565.03	565.12

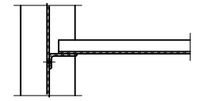


TOP OF BEAM DIAGRAM

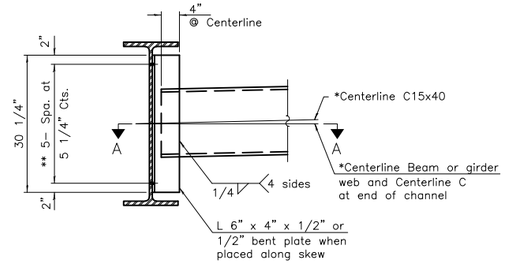


INTERIOR DIAPHRAGM - D1 (6 REQUIRED)

Note:
Two hardened washers required for each set of oversized holes.
*3/4" ø HS bolts, 15/16" ø holes.
Alternate channels C15x50 are permitted to facilitate material acquisition. Calculated weight of structural steel is based on C15x40 sections. The alternate, if utilized, shall be provided at no extra cost to the department.



SECTION A-A

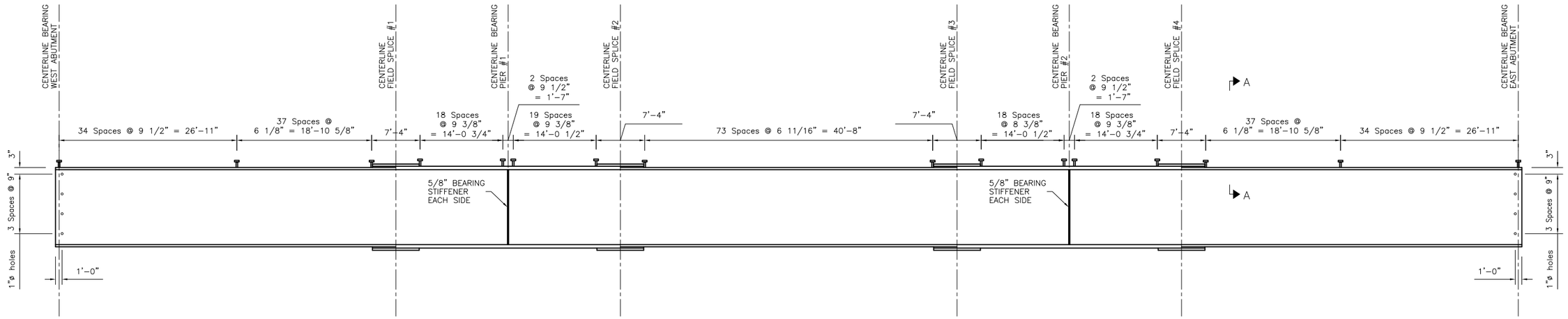


INTERIOR DIAPHRAGM - D2 - (27 REQUIRED)

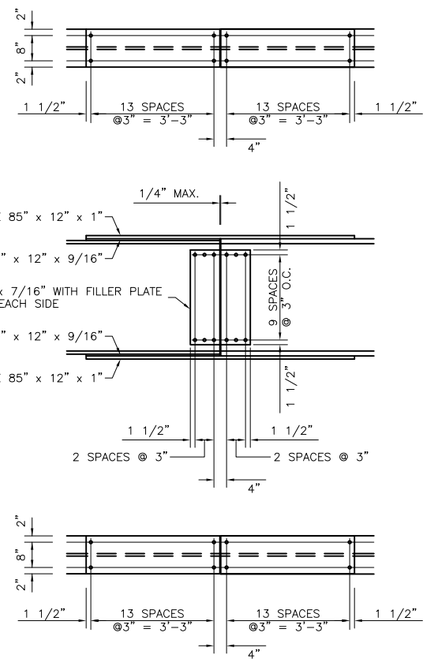
Note:
Two hardened washers required for each set of oversized holes.
*Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.
The alternate, if utilized, shall be provided at no additional cost to the Department.
** 3/4" ø HS bolts, 15/16" ø holes

CONTRACT NO. 87642

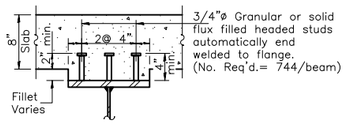
DRAWN BY: LAG	REVISIONS				CHAMLIN & ASSOCIATES, INC.	PERU MORRIS ILLINOIS	BRACEVILLE ROAD SECTION 16-00158-00-BR GRUNDY COUNTY	FRAMING PLAN STRUCTURE NO. 032-3260 SHEET 7 OF 17	CONSTRUCTION PLANS	CURRENT AS OF: 03/28/2017	
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION						SCALE: NONE	SHEET 17
DATE: 09/2016										FILE NO.: 111158.00 Y-	OF 46



BEAM ELEVATION



SPLICE #1 - #4 DETAIL



SECTION A-A

* Splice plate material shall be AASHTO M270 GR50W.

All plates except filler plates shall be "NTR".

Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

DRAWN BY: LAG	REVISIONS			
	LEVEL	BY	DATE	DESCRIPTION
CHECKED BY: JKC		JKC	06/18	Stud spacing
DATE: 09/2016				

CHAMLIN & ASSOCIATES, INC.
PERU MORRIS ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

FRAMING PLAN
STRUCTURE NO. 032-3260
SHEET 8 OF 17

CONSTRUCTION PLANS

CONTRACT NO. 87642

CURRENT AS OF: 06/03/2018		
SCALE: NONE	SHEET	18
FILE NO.: 111158.00 Y-	OF	46

BEAM MOMENT TABLE							
		0.4 Span 1 or 0.6 Span 3		Pier 1 or 2		0.5 Span 2	
		Interior	Exterior	Interior	Exterior	Interior	Exterior
Is	(in4)	9760	9760	15000	15000	9760	9760
Is(n)	(in4)	24816	24018	---	---	24816	24018
Is(3n)	(in4)	18556	17790	---	---	18556	17790
Is(cr)	(in4)	---	---	18303	17902	---	---
Ss	(in3)	542.2	542.2	808.8	808.8	542.2	542.2
Ss(n)	(in3)	769.1	761.4	---	---	769.1	761.4
Ss(3n)	(in3)	701.5	691.6	---	---	701.5	691.6
Ss(cr)	(in3)	---	---	880.9	873.0	---	---
DC1	(k")	0.95	0.95	0.95	0.95	0.95	0.95
MDC1	('k)	276.1	276.1	-624.1	-624.1	243.2	243.2
DC2	(k")	0.03	0.03	0.03	0.03	0.03	0.03
MDC2	('k)	8.4	8.4	-17.8	-17.8	7.5	7.5
DW	(k")	0.38	0.32	0.38	0.32	0.38	0.32
MDW	('k)	112.9	97.8	-238.0	-206.4	100.7	87.1
LLDF		0.607	0.840	0.611	0.840	0.572	0.840
MLL + IM	('k)	786.6	1089.5	-964.1	-1326.5	738.1	1084.4
Mu (Strength 1)	('k)	1901.5	2409.0	-2846.6	-3433.4	1756.1	2341.7
ϕf Mn	('k)	3955.8	3910.8	---	---	3980.6	3910.8
fs DC1	(ksi)	6.1	6.1	-9.3	-9.3	5.4	5.4
fs DC2	(ksi)	0.1	0.1	-0.3	-0.3	0.1	0.1
fs DW	(ksi)	1.9	1.7	-3.2	-2.8	1.7	1.5
fs (LL + IM)	(ksi)	12.3	17.2	-13.1	-18.2	11.5	17.1
fs (Service II)	(ksi)	24.1	30.3	-29.8	-36.1	22.2	29.2
0.95RhFyf	(ksi)	47.5	47.5	47.5	47.5	47.5	47.5
fs (Total)(Strength I)	(ksi)	---	---	-39.8	-48.1	---	---
ϕf Fn	(ksi)	---	---	50	50	---	---
Vf	(k)	25.9	33	26.9	34.2	21.9	27.9

BEAM REACTION TABLE					
		West or East Abument		Pier 1 or 2	
		Interior	Exterior	Interior	Exterior
LLDF		0.779	0.84	0.779	0.84
OCF		---	1.0	---	1.0
RDC1	(k)	23.0	23.0	82.2	82.2
RDC2	(k)	0.7	0.7	2.4	2.4
RDW	(k)	9.2	8.0	32.2	27.9
RLL	(k)	61.9	66.7	104.0	112.2
Rim	(k)	15.3	16.5	20.8	22.3
RTOTAL	(k)	110.1	114.9	241.6	247.0

Is, Ss: Non-composite moment of inertia and section modulus of the steel section used for computing fs (Total-Strength I, and Service II) due to non-composite dead loads (in.4 and in.3).

Ic(n), Ss (n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing fs (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in.4 and in.3).

Ic(3n), Ss (3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing fs (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in.4 and in.3).

Ic(cr), Ss (cr): Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing fs (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.4 and in.3).

DC1: Un-factored non-composite dead load (kips/ft.).

MDC1: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

MDC2: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

ML + IM: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

Mu (Strength I): Factored design moment (kip-ft.).
1.25 (MDC1 + MDC2) + 1.50 MDW + 1.75 MLL+IM

ϕfMn: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft).

fs DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
MDC1 / Sc

fs DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
MDC2 / Ss (3n) or MDC2 / S (cr) as applicable.

fs DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
MDW / Ss (3n) or MDW / S (cr) as applicable.

fs (LL+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
ML + IM / Ss (n) or ML + IM / S (cr) as applicable.

fs (Service II): Sum of stresses as computed below (ksi).
fsDC1 + fsDC2 + fsDW + 1.3 fs(LL+IM)

0.95Rh Fy f: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

fs (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
1.25 (fsDC1 + fsDC2) + 1.50 fsDW + 1.75 fs(LL+IM)

ϕfFn: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

Vf: Maximum factored shear range in span computed according to Article 6.10.10.

Note:
ML and fs include the effects of centrifugal force and superelevation.

CONTRACT NO. 87642

DRAWN BY: LAG
CHECKED BY: JKC
DATE: 09/2016

REVISIONS

LEVEL	BY	DATE	DESCRIPTION

CHAMLIN & ASSOCIATES, INC.

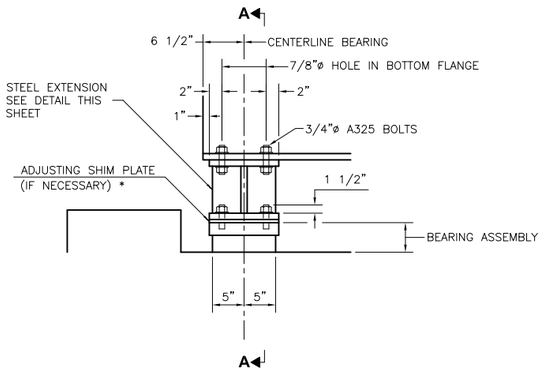
PERU MORRIS ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

FRAMING PLAN
STRUCTURE NO. 032-3260
SHEET 9 OF 17

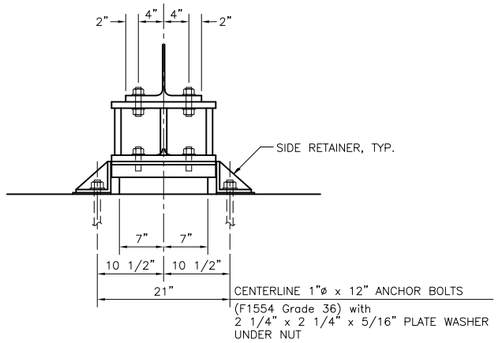
CONSTRUCTION PLANS

CURRENT AS OF: 03/28/2017
SCALE: NONE
SHEET 19
FILE NO.: 111158.00 Y-
OF 46



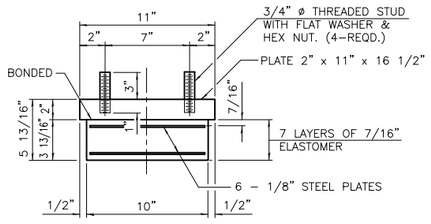
* USE 3/4" x 11" x 16 1/2" SHIM AT BEAMS 2 & 3.

ELEVATION AT WEST ABUT.



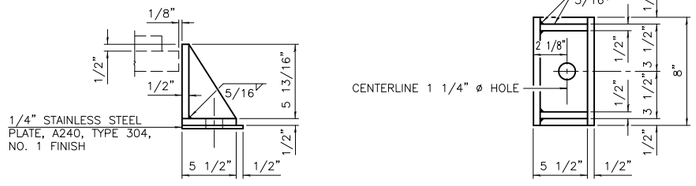
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

NOTE:
SHIM PLATES SHALL NOT BE PLACED UNDER BEARING ASSEMBLY.



SIDE RETAINER

EQUIVALENT ROLLED ANGLE WITH STIFFENERS WILL BE ALLOWED IN LIEU OF WELDED PLATES.

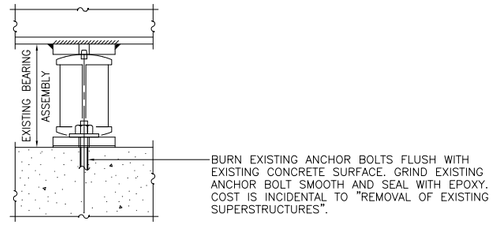
Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

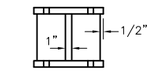
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

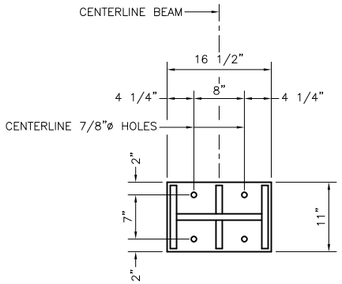
Steel extensions and shims required shall be included in the cost of Furnishing and Erecting Structural Steel.



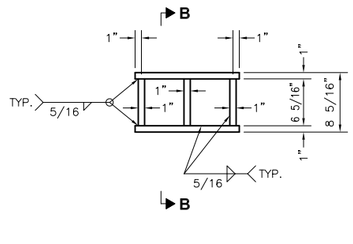
EXISTING BEARING REMOVAL DETAIL



SECTION B-B



PLAN STEEL EXTENSION



ELEVATION STEEL EXTENSION

STEEL EXTENSION DETAILS

4 REQUIRED

BILL OF MATERIAL

ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	4
ANCHOR BOLTS, 1"	EACH	8

I-2E-1

11-22-2016

CONTRACT NO. 87642

DRAWN BY: LAG	REVISIONS			
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION
DATE: 09/2016				

CHAMLIN & ASSOCIATES, INC.

PERU MORRIS ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

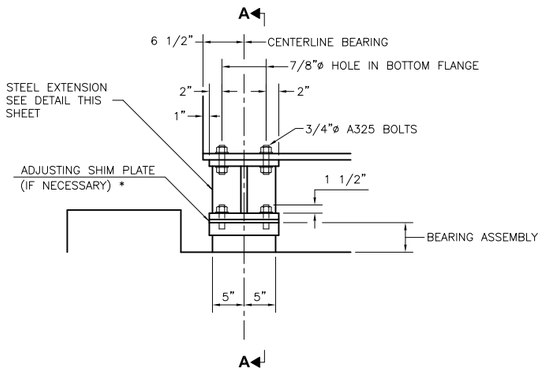
WEST ABUTMENT BEARING DETAILS
STRUCTURE NO. 032-3260
SHEET 10 OF 17

CONSTRUCTION PLANS

CURRENT AS OF: 03/28/2017

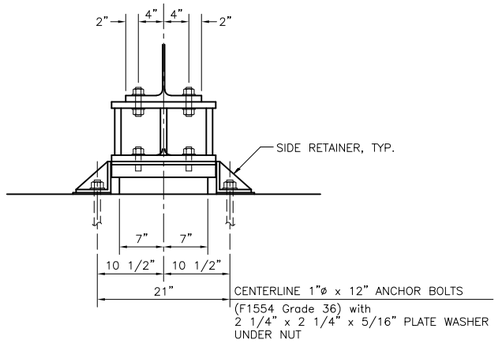
SCALE: NONE | SHEET 20

FILE NO.: 111158.00 Y- | OF 46



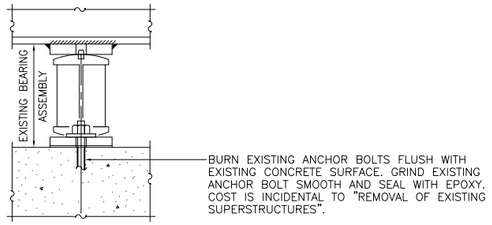
* USE 3/4" x 11" x 16 1/2" SHIM AT BEAMS 2 & 3.

ELEVATION AT EAST ABUT.

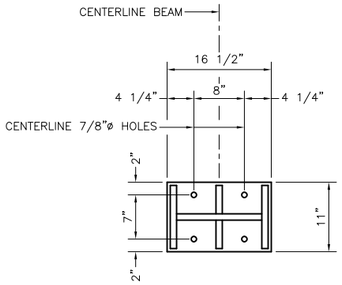


SECTION A-A

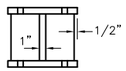
TYPE I ELASTOMERIC EXP. BRG.



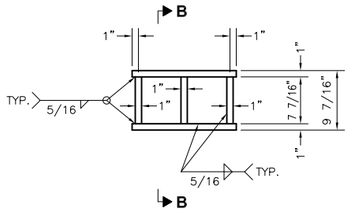
EXISTING BEARING REMOVAL DETAIL



PLAN STEEL EXTENSION



SECTION B-B



ELEVATION STEEL EXTENSION

STEEL EXTENSION DETAILS

4 REQUIRED

BEARING ASSEMBLY

NOTE:
SHIM PLATES SHALL NOT BE PLACED UNDER BEARING ASSEMBLY.

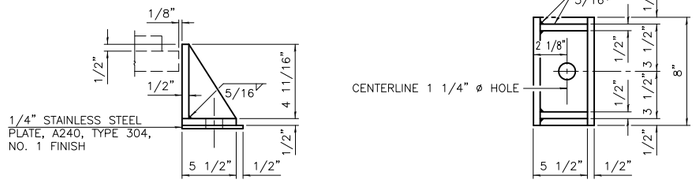
Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

Steel extensions and shims required shall be included in the cost of Furnishing and Erecting Structural Steel.



SIDE RETAINER

EQUIVALENT ROLLED ANGLE WITH STIFFENERS WILL BE ALLOWED IN LIEU OF WELDED PLATES.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	4
ANCHOR BOLTS, 1"	EACH	8

I-2E-1

11-22-2016

CONTRACT NO. 87642

DRAWN BY: LAG	REVISIONS			
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION
DATE: 09/2016				

CHAMLIN & ASSOCIATES, INC.

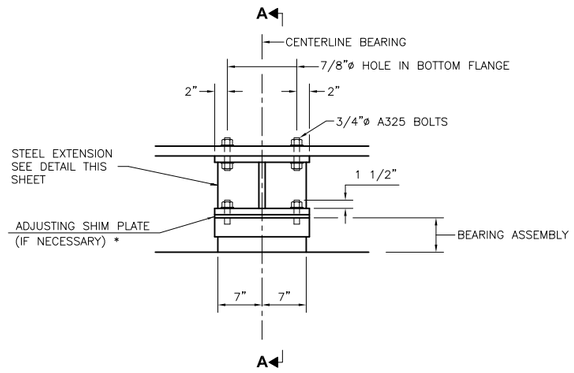
PERU MORRIS ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

EAST ABUTMENT BEARING DETAILS
STRUCTURE NO. 032-3260
SHEET 11 OF 17

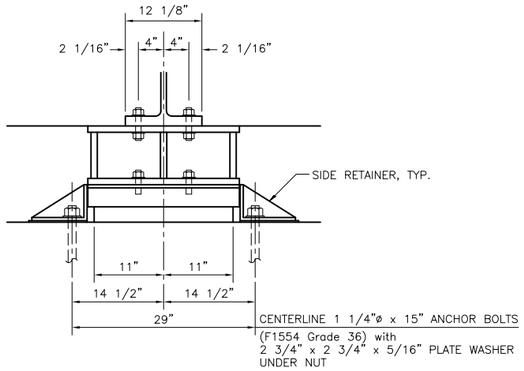
CONSTRUCTION PLANS

CURRENT AS OF: 03/28/2017		
SCALE: NONE	SHEET	21
FILE NO.: 111158.00 Y-	OF	46



* USE 3/4" x 15" x 24" SHIMS AT BEAMS 2 & 3 AT PIER 1.

ELEVATION AT PIER 1

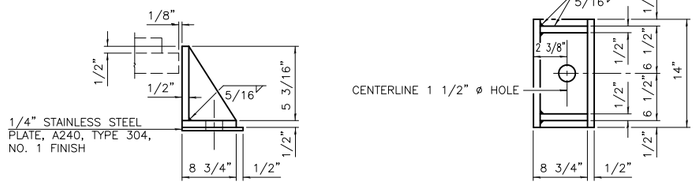


SECTION A-A

TYPE I ELASTOMERIC EXP. BRG. - PIER 1

BEARING ASSEMBLY

NOTE:
SHIM PLATES SHALL NOT BE PLACED UNDER BEARING ASSEMBLY.



SIDE RETAINER

EQUIVALENT ROLLED ANGLE WITH STIFFENERS WILL BE ALLOWED IN LIEU OF WELDED PLATES.

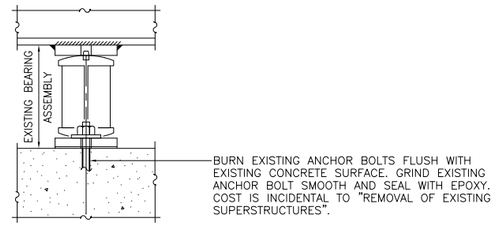
Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

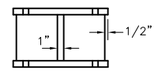
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

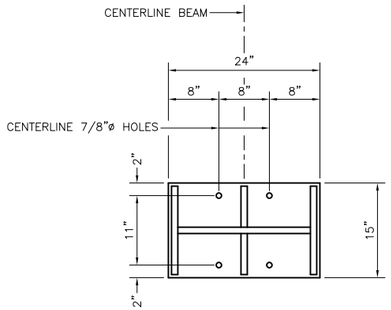
Steel extensions and shims required shall be included in the cost of Furnishing and Erecting Structural Steel.



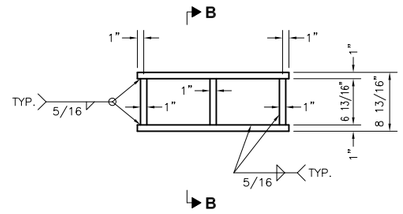
EXISTING BEARING REMOVAL DETAIL



SECTION B-B



PLAN STEEL EXTENSION



ELEVATION STEEL EXTENSION

STEEL EXTENSION DETAILS

4 REQUIRED

BILL OF MATERIAL

ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	4
ANCHOR BOLTS, 1 1/4"	EACH	8

I-2E-1

11-22-2016

CONTRACT NO. 87642

DRAWN BY: LAG	REVISIONS			
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION
DATE: 09/2016				

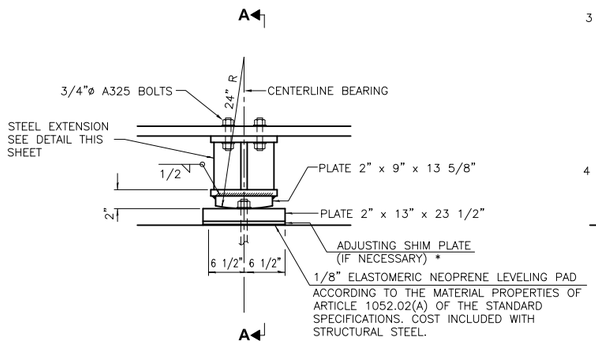
CHAMLIN & ASSOCIATES, INC.
PERU MORRIS ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

PIER 1 BEARING DETAILS
STRUCTURE NO. 032-3260
SHEET 12 OF 17

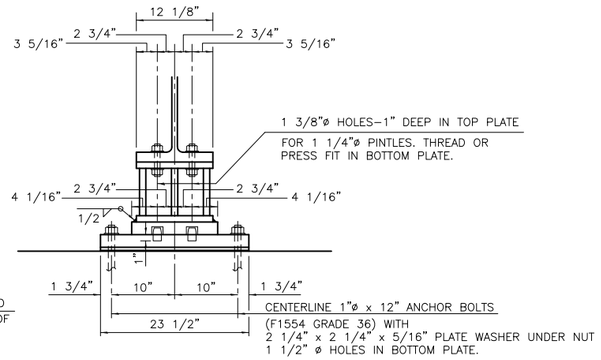
CONSTRUCTION PLANS

CURRENT AS OF: 03/28/2017
SCALE: NONE | SHEET 22
FILE NO.: 111158.00 Y- | OF 46



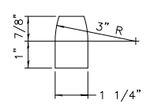
* USE 3/8" x 13" x 23 1/2" SHIMS AT BEAMS 1 & 4 AT PIER 2.
* USE 1 1/8" x 13" x 23 1/2" SHIMS AT BEAMS 2 & 3 AT PIER 2.

ELEVATION AT PIER 2



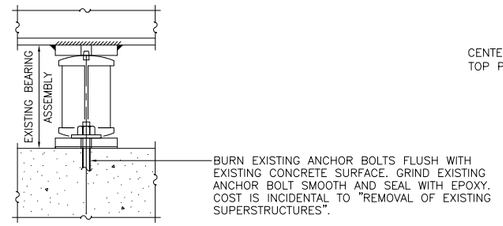
SECTION A-A

FIXED BEARING - PIER 2

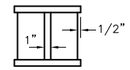


PINTLE

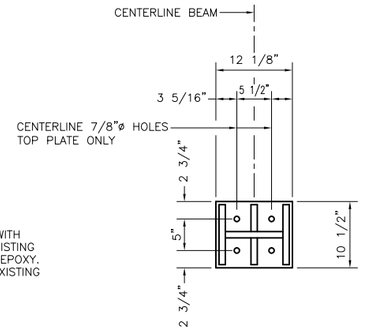
Notes:
Anchor bolts shall be ASTM F1554 all–thread (or an Engineer–approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.
Steel extensions and shims required shall be included in the cost of Furnishing and Erecting Structural Steel.



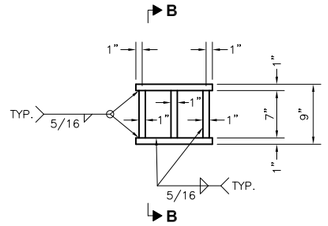
EXISTING BEARING REMOVAL DETAIL



SECTION B-B



PLAN STEEL EXTENSION



ELEVATION STEEL EXTENSION

STEEL EXTENSION DETAILS

4 REQUIRED

BILL OF MATERIAL

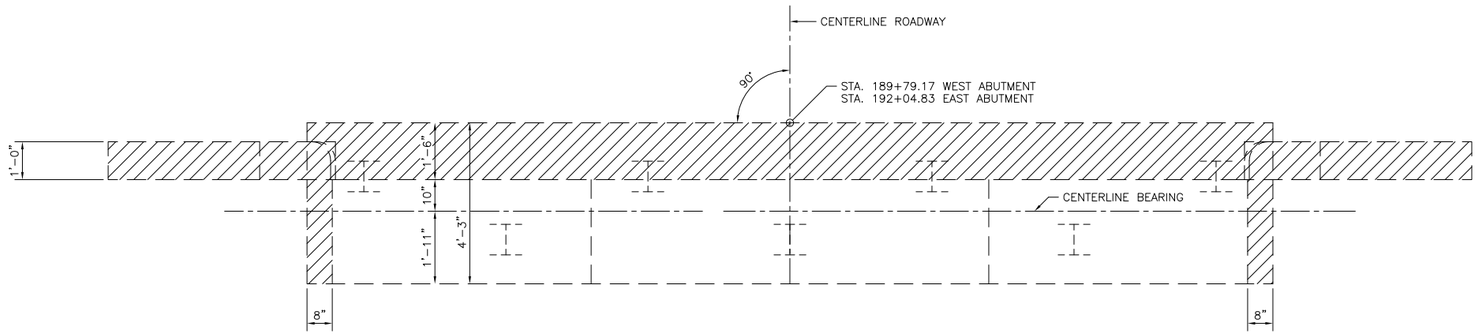
ITEM	UNIT	TOTAL
ANCHOR BOLTS, 1"	EACH	8

I-2E-1

11-22-2016

CONTRACT NO. 87642

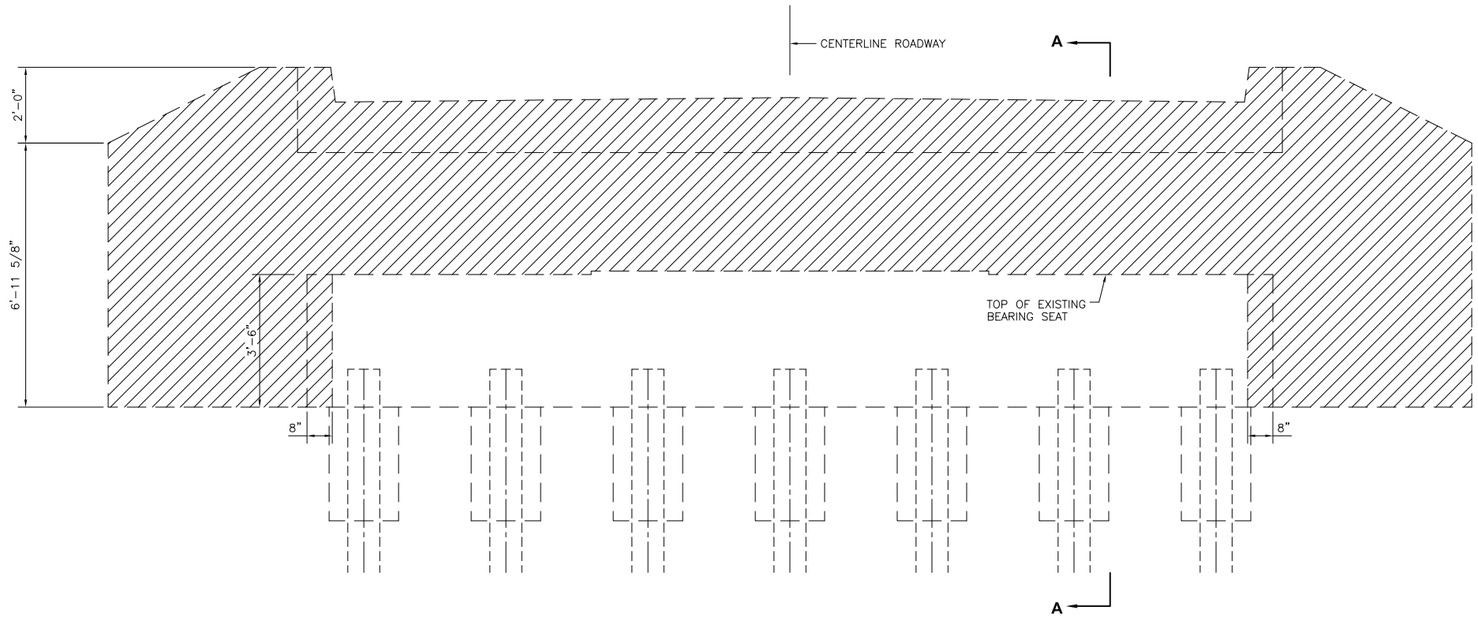
DRAWN BY: LAG	REVISIONS				CHAMLIN & ASSOCIATES, INC. PERU MORRIS ILLINOIS	BRACEVILLE ROAD SECTION 16-00158-00-BR GRUNDY COUNTY	PIER 2 BEARING DETAILS STRUCTURE NO. 032-3260 SHEET 13 OF 17	CONSTRUCTION PLANS	CURRENT AS OF: 03/28/2017	
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION					SCALE: NONE	SHEET 23
DATE: 09/2016									FILE NO.: 111158.00 Y–	OF 46



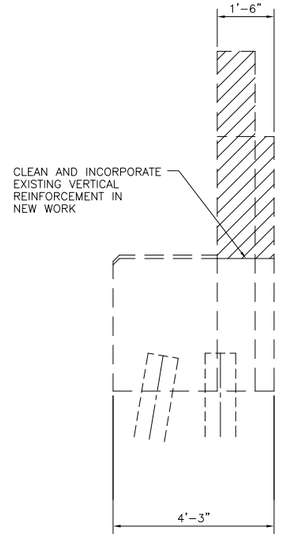
– CONCRETE REMOVAL

ABUTMENT PLAN

SEE SHEET 16 OF 17 FOR BILL OF MATERIAL



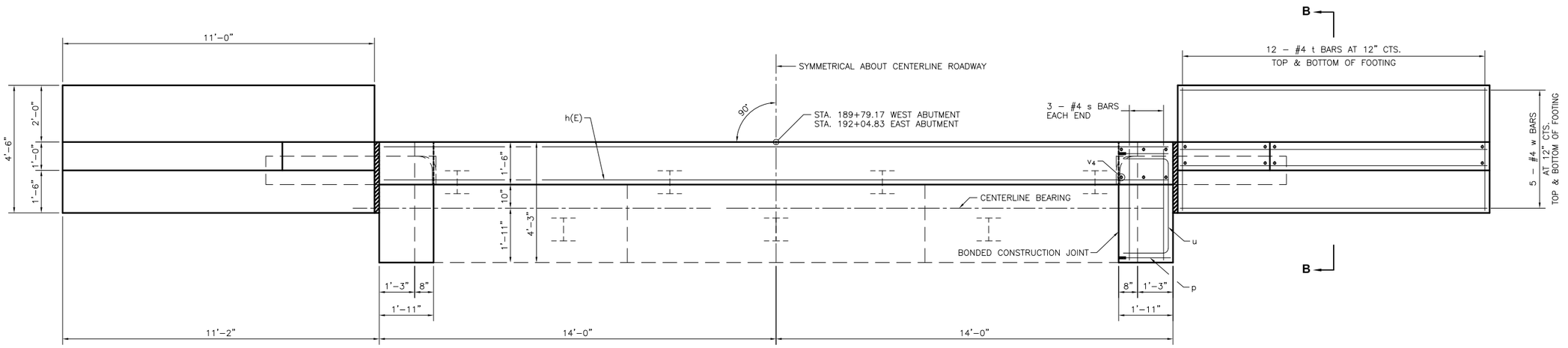
ABUTMENT ELEVATION



SECTION A-A

CONTRACT NO. 87642

DRAWN BY: LAG	REVISIONS				CHAMLIN & ASSOCIATES, INC.	PERU MORRIS ILLINOIS	BRACEVILLE ROAD SECTION 16-00158-00-BR GRUNDY COUNTY	CONCRETE REMOVAL AT ABUTMENTS STRUCTURE NO. 032-3260 SHEET 14 OF 17	CONSTRUCTION PLANS	CURRENT AS OF: 03/28/2017	
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION						SCALE: NONE	SHEET 24
DATE: 09/2016										FILE NO.: 111158.00 Y–	OF 46

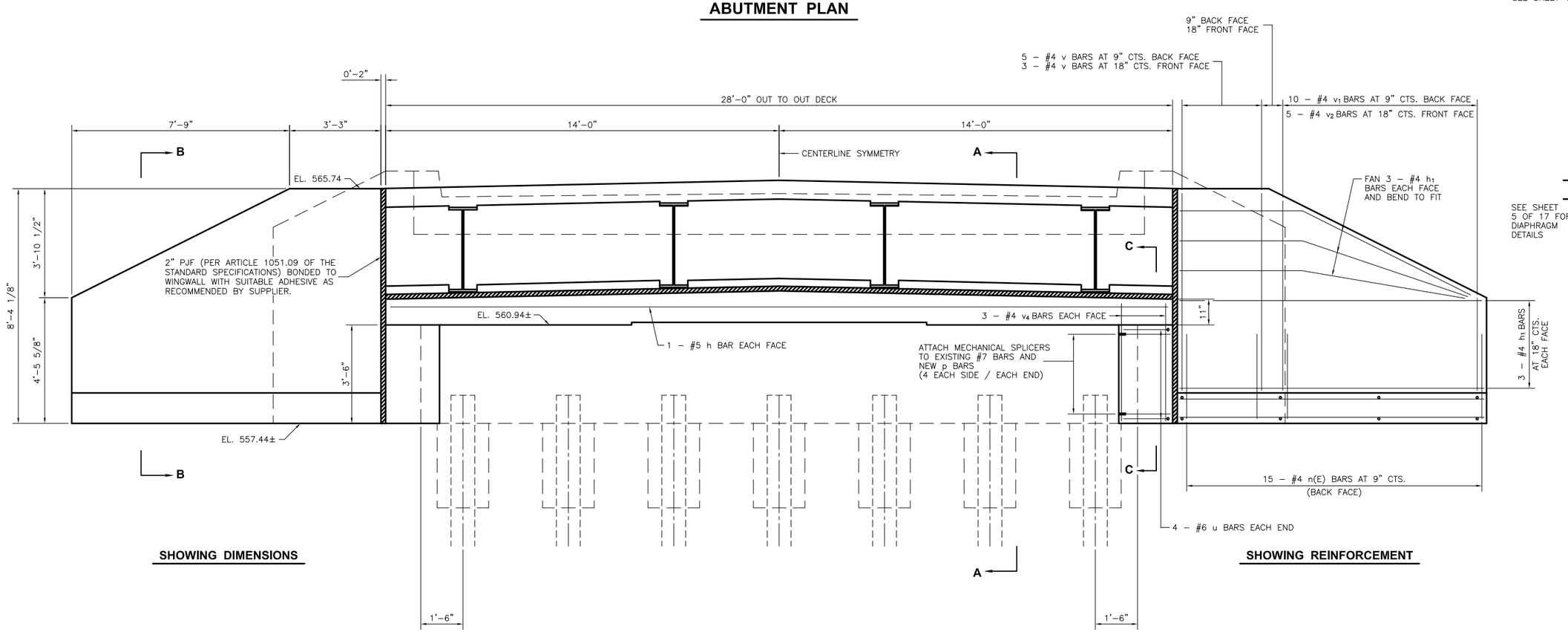


SHOWING DIMENSIONS

SHOWING REINFORCEMENT

SEE SHEET 16 OF 17 FOR SECTION B-B.
SEE SHEET 16 OF 17 FOR SECTION C-C.
SEE SHEET 16 OF 17 FOR BILL OF MATERIAL.
SEE SHEET 16 OF 17 FOR BENT BAR DETAILS.

ABUTMENT PLAN



SHOWING DIMENSIONS

SHOWING REINFORCEMENT

SECTION A-A

ABUTMENT ELEVATION

CHAMLIN & ASSOCIATES, INC. © 2016
Drawing Name: G:\Users\111158-00-BRACEVILLE-ROAD-BRIDGE\CAD\C3D\Y_ - PLANS\1-PRELIMINARY\024-26 - 014-16 - ABUTMENTS.dwg Last Modified: Jun 28, 2018 - 2:43pm Plotted on: Jun 28, 2018 - 3:24pm by nancyv

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DATE: 09/2016				

CHAMLIN & ASSOCIATES, INC.

PERU MORRIS
ILLINOIS

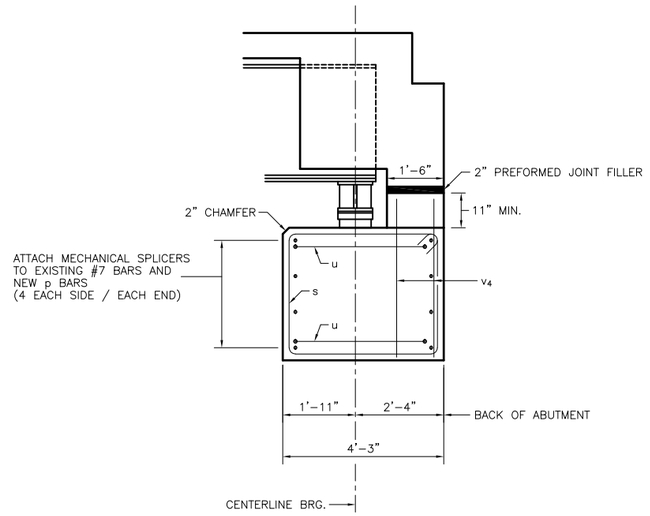
BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

NEW WORK AT ABUTMENTS
STRUCTURE NO. 032-3260
SHEET 15 OF 17

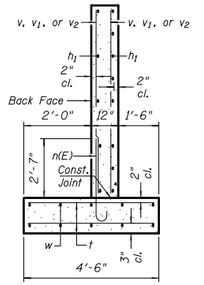
CONSTRUCTION PLANS

CONTRACT NO. 87642

CURRENT AS OF: 03/28/2017	
SCALE: NONE	SHEET 25
FILE NO.: 111158.00 Y-	OF 46

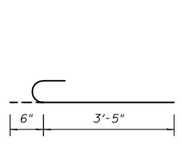


SECTION C-C

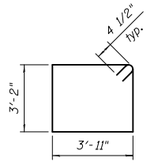


SECTION B-B

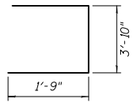
(Max. Applied Service Bearing Pressure = 1.55 ksf)



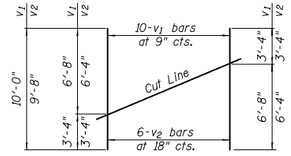
BAR n(E)



BAR s



BAR u



FIELD CUTTING DIAGRAM

Order bars shown full length. Cut as shown and use remainder of bars in opposite wingwall.

BILL OF MATERIAL
(TWO ABUTMENTS)

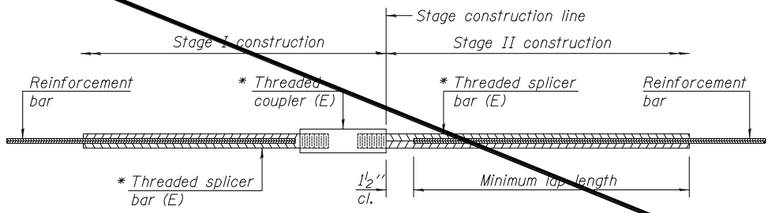
Bar	No.	Size	Length	Shape
h	4	#5	27'-9"	———
h_1	48	#4	10'-9"	———
n(E)	60	#4	3'-11"	⌐——
p	32	#7	1'-9"	———
s	12	#4	14'-11"	□
t	96	#4	4'-3"	———
v	32	#4	7'-11"	———
v_1	20	#4	10'-0"	———
v_2	10	#4	9'-8"	———
v_3	24	#4	4'-2"	———
u	16	#6	7'-4"	⌐¬
w	40	#4	10'-9"	———
Concrete Removal			Cu. Yd.	19.1
Concrete Structures			Cu. Yd.	16.2
Structure Excavation			Cu. Yd.	158
Reinforcement Bars			Pound	1830
Reinforcement Bars, Epoxy Coated			Pound	160
Mechanical Splicers			Each	32

CONTRACT NO. 87642

DRAWN BY: LAG	REVISIONS			CHAMLIN & ASSOCIATES, INC.	PERU MORRIS ILLINOIS
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION	BRACEVILLE ROAD SECTION 16-00158-00-BR GRUNDY COUNTY
DATE: 09/2016					NEW WORK AT ABUTMENTS STRUCTURE NO. 032-3260 SHEET 16 OF 17

CONSTRUCTION PLANS

CURRENT AS OF: 03/28/2017			
SCALE: NONE		SHEET	26
FILE NO.: 111158.00 Y–		OF	46

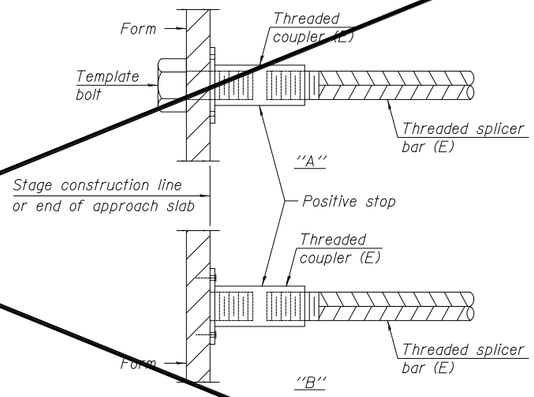


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + 1½'' + thread length

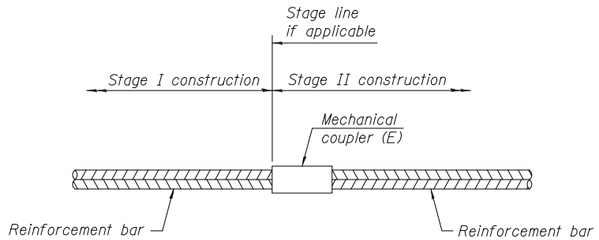
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length



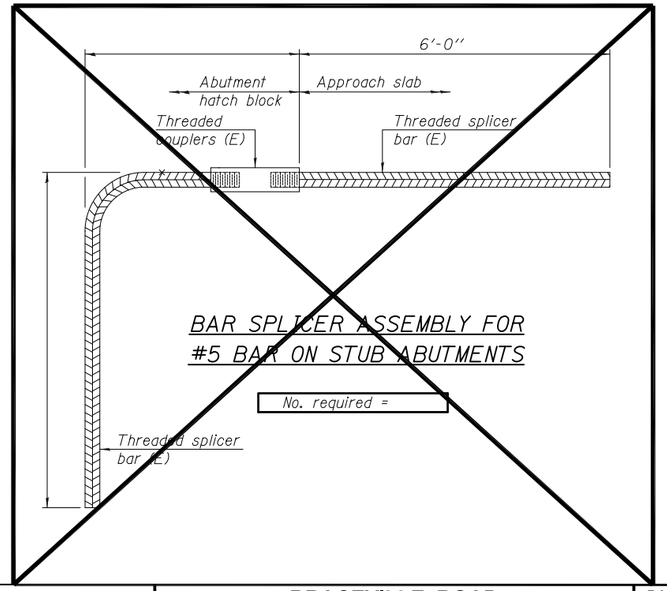
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
W. ABUT.	#7	16
E. ABUT.	#7	16



NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 11-22-2016

CONTRACT NO. 87642

DRAWN BY: LAG	REVISIONS			
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DATE: 02/2017				

CHAMLIN & ASSOCIATES, INC. — PERU MORRIS ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 032-3260
SHEET 17 OF 17

CONSTRUCTION PLANS

CURRENT AS OF: 03/28/2017		
SCALE: AS NOTED	SHEET	27
FILE NO.: 111158.00 Y-	OF	46

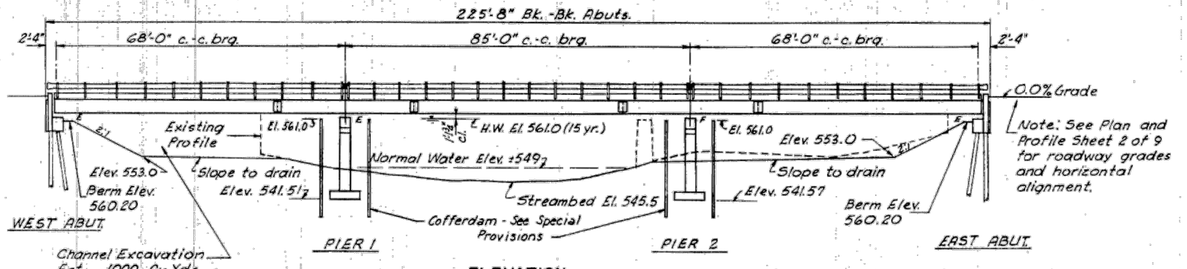
BM #6 ~ Cut □ Southwest corner of existing bridge curb. Elev. = 563.60

Existing structure ~ Steel trusses, 1 @ 90' & 1 @ 77', I-beam stringers on concrete floor, 15' roadway.

Substructure ~ Closed concrete West Abut., Stub concrete East Abut., Solid concrete Pier.

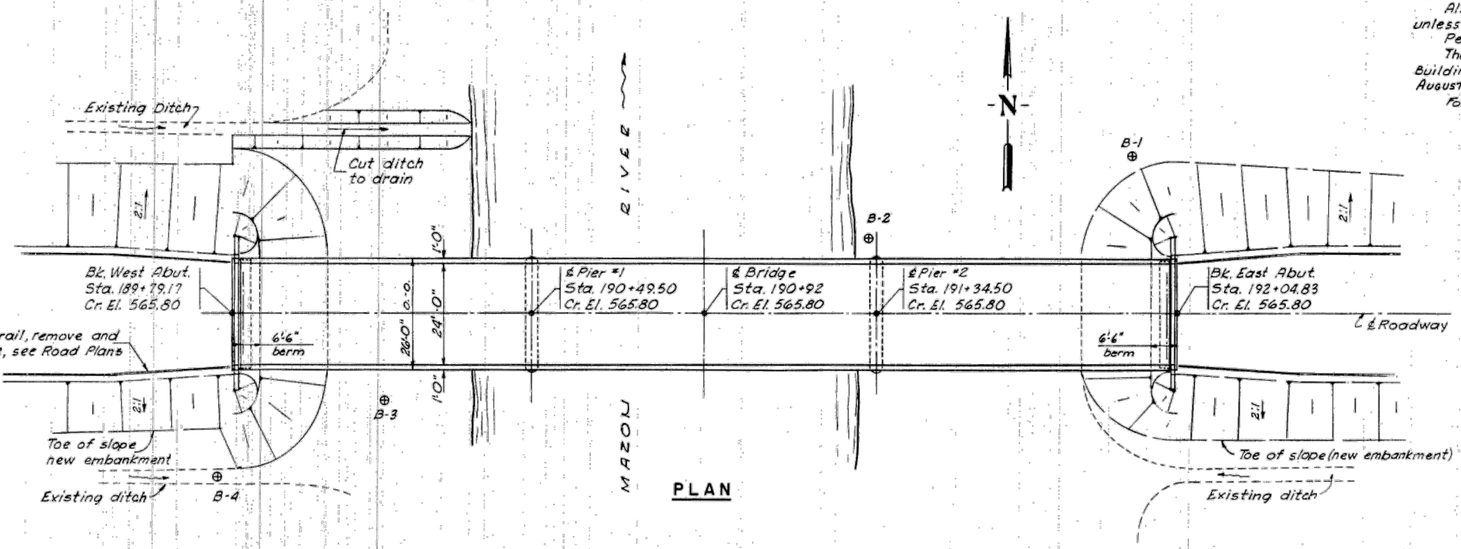
Contractor to remove existing structure before constructing new bridge.

Salvable steel trusses and floor beams to remain property of Grundy County.



ELEVATION

Note: Maximum footing pressure is 8.0 kips per square foot



PLAN

GENERAL NOTES

Class X Concrete shall be used in the Abutments and Superstructure.

Class A Concrete shall be used in the Piers.

The concrete floor slab shall be finished in accordance with Article 503.16 of the Standard Specifications and shall be poured in one continuous operation between construction joints.

Rivets shall be ¾"ϕ and open holes shall be 13/16"ϕ unless noted.

High strength steel bolts may be substituted for field rivets.

Structural Steel shall be ASTM Designation A-36.

All holes for splices shall be punched 1/16" ϕ and reamed to proper size (13/16"ϕ in web and 15/16"ϕ in flange) with all stringers assembled in the shop in proper position. Leave assembled in shop for inspection.

Except as otherwise provided, all structural steel shall receive one (1) shop coat of red lead paint and two (2) Field coats of aluminum paint. See Art. 509.01-509.05 inclusive of the Std. Specs.

For items Metal Plate Bridge Rail and Name Plates, see Special Provisions.

The Contractor shall drive two(2) steel H piles in permanent locations as directed by the Engineer before ordering the remainder of the piles. Drive one pile at each abutment.

All reinforcement bars shall be lapped a minimum of 24 diameters at splices, unless otherwise shown.

Permanent forms will not be permitted in forming the concrete deck.

The Standard Specifications adopted by the Department of Public Works and Buildings August 1, 1968 and the Supplemental Specifications effective August 1, 1968 shall apply to this work.

For item Bridge Seat Sealant, see Special Provisions.

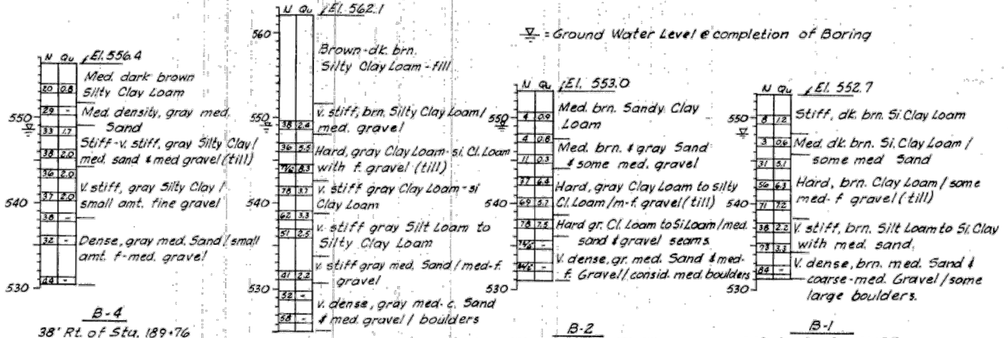
STATION 190+92
SEC. 50-B BUILT 1970
GRUNDY COUNTY
LOADING HS 15

LETTERING FOR NAME PLATE

Locate Name Plate at Southwest corner of bridge. See Special Provisions.

Note: Field welding of construction accessories to the bottom flanges or for a distance of ¼ of the span each way from the pier supports on the top flanges of beams will not be permitted.
Field welding in other areas will be permitted only when approved by the engineer.

BORING DATA



▽ = Ground Water Level @ completion of Boring

N = Blows delivered per foot by 140# hammer falling 30" (2" OD split spoon sampler)

Qu = Unconfined compressive strength of the soil in tons per sq. ft.

Note: Maximum flood of record occurred in 1958 - High water elev. 562.5

WATERWAY DATA

Drainage Area	149,000 acres
Present Opening	1,675 sq. ft.
Required Opening (15 yr.)	1,960 sq. ft.
Proposed Opening	1,960 sq. ft.
Design Discharge (Est.)	9,800 c.f.s.

DESIGN STRESSES

fc = 1,200 p.s.i.
fs = 20,000 p.s.i. (Reinf. & A-36 struct. steel)
v = 75 p.s.i. max. (pier footings)
n = 10
Allow. LL. Δ = Span/1200 (Composite)

Loading H 15-44

TOTAL BILL OF MATERIAL

ITEM		SUPER	SUB	TOTAL
Channel Excavation	Cu. Yds.	—	—	1000
Removal of Existing Structures	Each	—	—	1
Cofferdam Excavation	Cu. Yds.	—	152	152
Cofferdam Pier 1	Each	—	1	1
Cofferdam Pier 2	Each	—	1	1
Class A Concrete	Cu. Yds.	—	57.4	57.4
Class X Concrete	Cu. Yds.	155.0	43.7	198.7
Protective Coat	Sq. Yds.	688	—	688
Furnishing & Erecting Structural Steel	Lbs.	150,520	—	150,520
Reinforcement Bars	Lbs.	35,080	11,760	46,840
Furnishing Steel Piles, 10BP42	Lin. Ft.	—	192	192
Test Piles Steel, 10BP42	Each	—	2	2
Driving Steel Piles	Lin. Ft.	—	192	192
Class X Concrete Encasement	Cu. Yds.	—	5.2	5.2
Name Plates	Each	1	—	1
Metal Plate Bridge Rail	Lin. Ft.	441	—	441
Bridge Seat Sealant	Lump Sum	—	—	1

Carl Rebok
Ill. Structural #2695

CARL REBOK JR. 2695 REGISTERED STRUCTURAL ENGINEER ILLINOIS

GENERAL PLAN & ELEVATION

MAZON RIVER BRIDGE
COUNTY HWY. 9 SEC. 50-B
GRUNDY COUNTY
STATION 190+92

Oglesby, Rebok & Bartolomucci
CONSULTING CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
208 W. CANEDY SPRINGFIELD, ILLINOIS

DESIGNED CR DRAWN T.E.B. DATE 3-6-68
CHECKED REO CHECKED CR JOB NO. 67-45

Revised by CR 4-15-68

CONTRACT NO. 87642

DRAWN BY: LAG
CHECKED BY: JKC
DATE: 02/2017

REVISIONS			
LEVEL	BY	DATE	DESCRIPTION

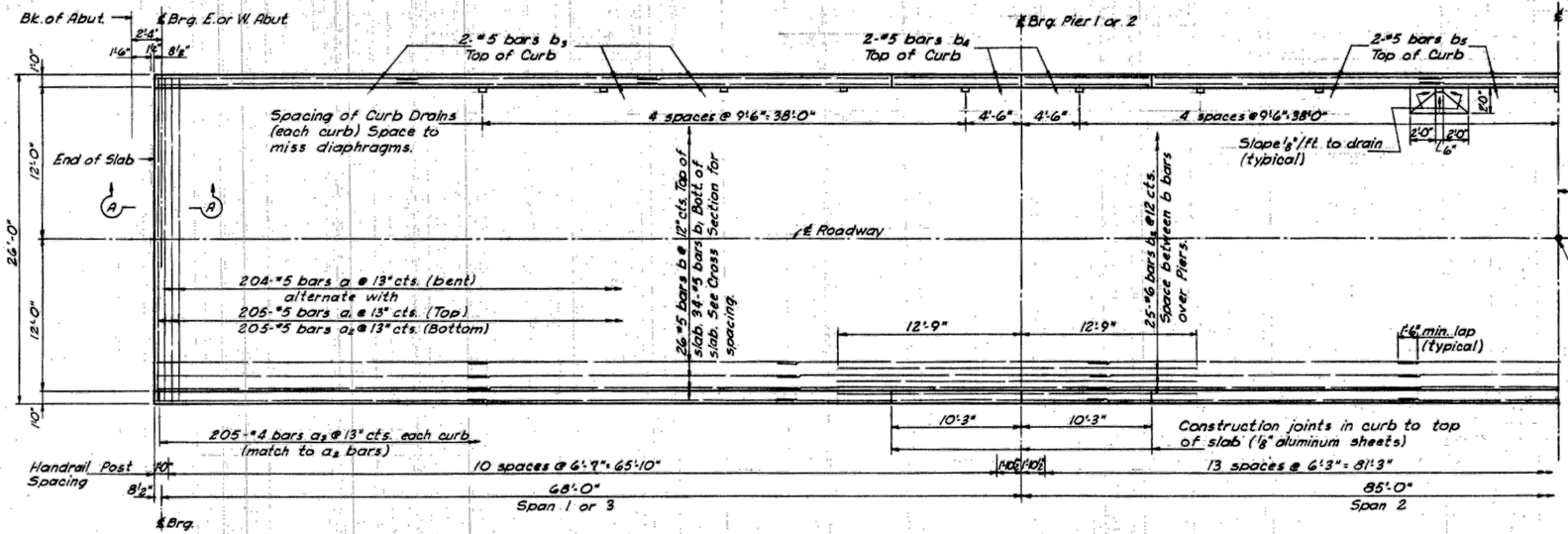
CHAMLIN & ASSOCIATES, INC.
PERU MORRIS ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

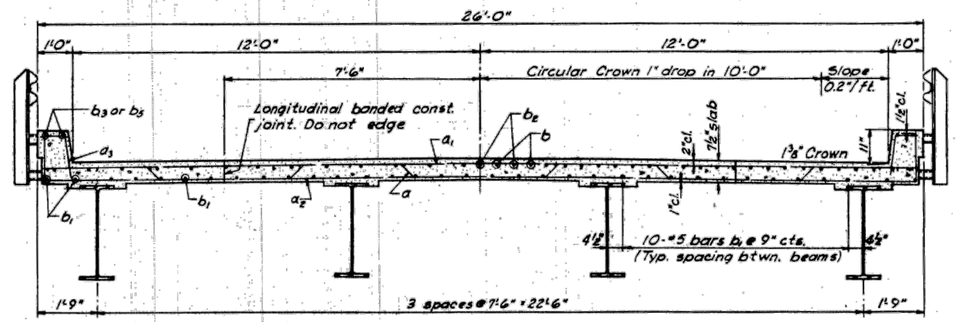
EXISTING BRIDGE PLANS
STRUCTURE NO. 032-3260

CONSTRUCTION PLANS

CURRENT AS OF: 03/28/2017
SCALE: AS NOTED SHEET 28
FILE NO.: 111158.00 Y- OF 46

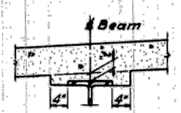


HALF PLAN



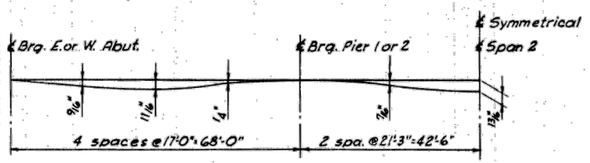
AT ℄ SPANS AT PIERS

CROSS SECTION



METHOD OF DETERMINING FILLET HEIGHTS "t"

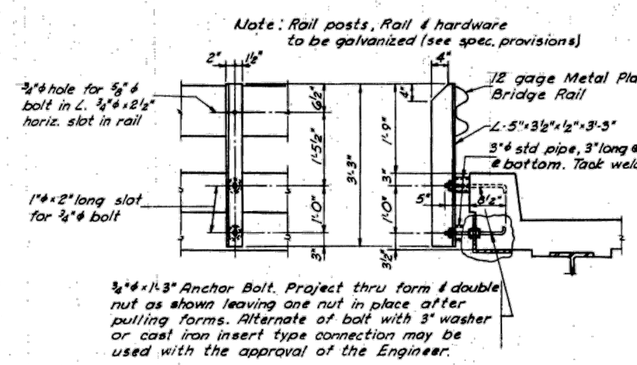
After all Structural Steel has been erected, elevations of the top flanges of the beams shall be taken at intervals not to exceed 10 ft. From these elevations subtract the increment of deflection for these points, determined from the Dead Load Deflection diagram. The elevations so attained subtracted from the theoretical grade elevations, minus floor thickness, equals the fillet heights above top of beam.



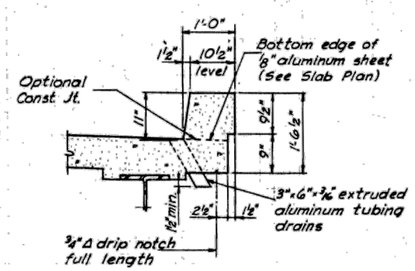
D.L. DEFLECTION DIAGRAM

Weight of slab only

Note: D.L. Diagram is for all beams

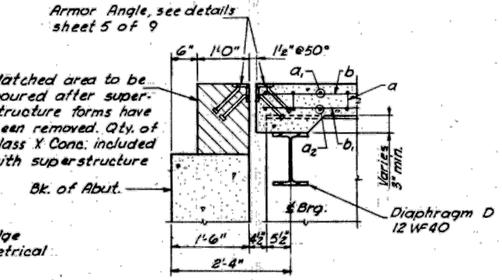


HANDRAIL POST DETAILS

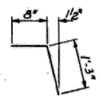


CURB & DRAIN DETAIL

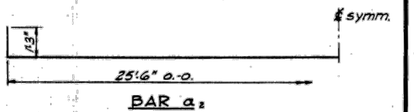
Aluminum Alloy Extruded Tubing shall conform to ASTM Spec. B-235, 6S11A-Condition T6.



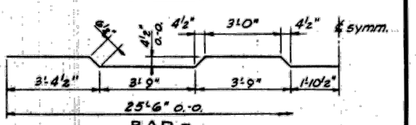
SECTION A-A



BAR a3



BAR a2



BAR a

BILL OF MATERIAL - SUPERSTRUCTURE

BAR	NO.	SIZE	LENGTH	SHAPE
a	204	#5	26'-6"	
a1	205	#5	25'-6"	
a2	205	#5	28'-0"	
a3	410	#4	1'-11"	
b	234	#3	26'-0"	
b1	238	#5	33'-3"	
b2	50	#6	25'-6"	
b3	24	#5	20'-5"	
b4	16	#5	10'-0"	
b5	12	#5	22'-6"	
Class X Concrete		Cu. Yds.	155.0	
Reinforcement Bars		Lbs.	35080	
* Furnishing & Erecting Structural Steel		Lbs.	150,520	
Metal Plate Bridge Rail Lin. Ft.			441	

* Weight of bearing assemblies with lead plates, anchor bolts and armor angles are included as structural steel. Est. Wt. = 5560 lbs.

SUPERSTRUCTURE

MAZON RIVER BRIDGE
COUNTY HWY. 9 SEC. 50-B
GRUNDY COUNTY
STATION 190+92

Oglesby, Rebok & Bartolomucci
CONSULTING CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
506 W. CANEDY SPRINGFIELD, ILLINOIS

DESIGNED CR DRAWN TEB DATE 3-6-68
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Revised by CR 4-15-68

CONTRACT NO. 87642

DRAWN BY: LAG	REVISIONS			
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CHAMLIN & ASSOCIATES, INC.
PERU MORRIS ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

EXISTING BRIDGE PLANS
STRUCTURE NO. 032-3260

CONSTRUCTION PLANS

CURRENT AS OF: 03/28/2017
SCALE: AS NOTED
SHEET 29
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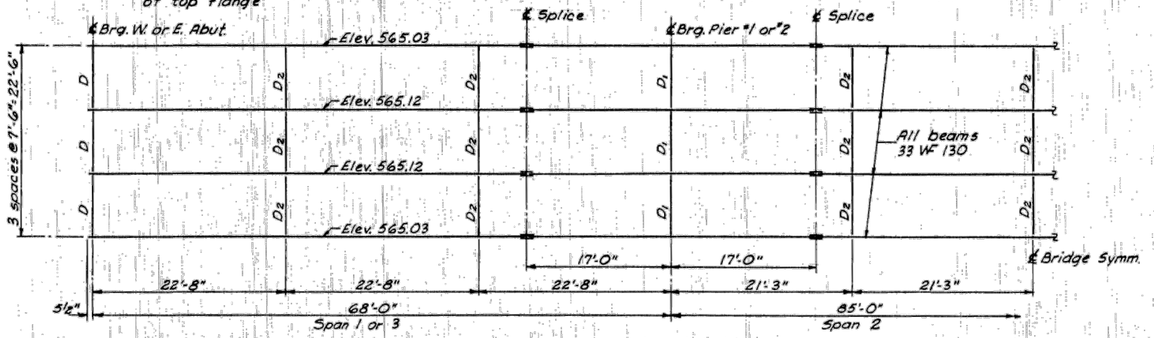
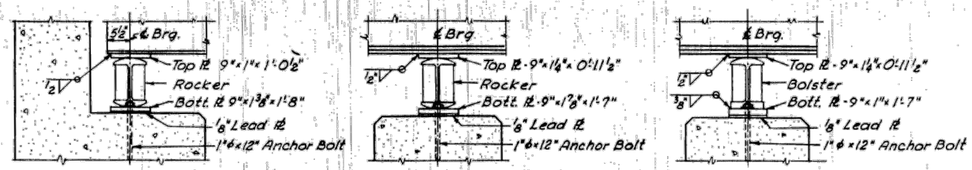
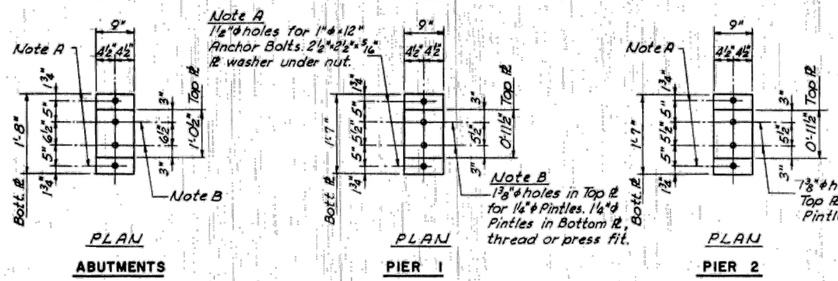
OF 46

Note:
All beams are set level. Elevations are top of top flange

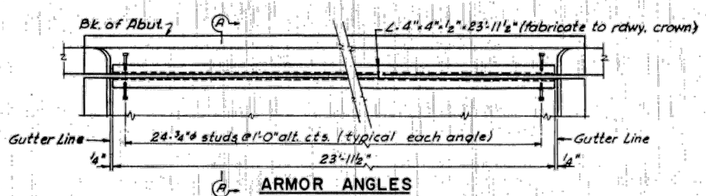


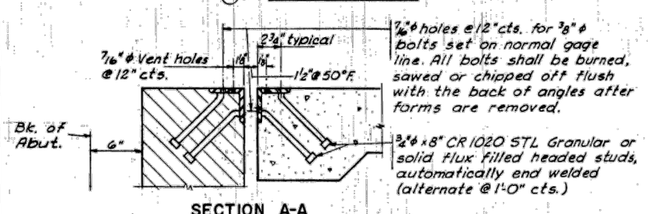
HALF PLAN - STRUCTURAL STEEL





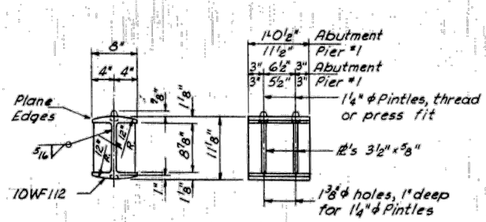
BEARING DETAILS



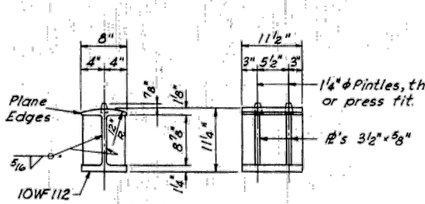


7/16"ϕ holes @ 12" cts. for ⅞" ϕ bolts set on normal gage line. All bolts shall be burned, sawed or chipped off flush with the back of angles after forms are removed.

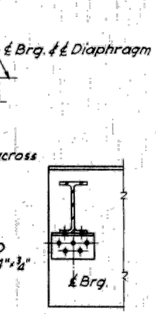
¾"ϕ×8" CR 1020 STL Granular or solid flux filled headed studs, automatically end welded (alternate @ 1'-0" cts.)



ROCKER DETAILS

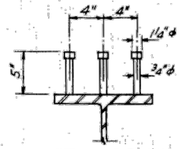


BOLSTER DETAILS

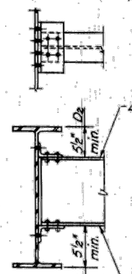


DIAPHRAGM D

PINTLE

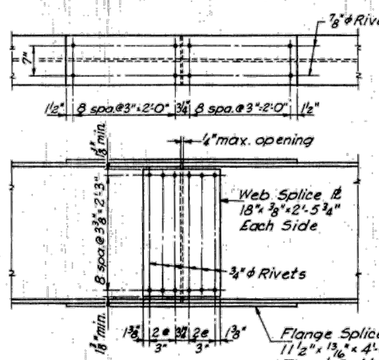


STUD DETAIL

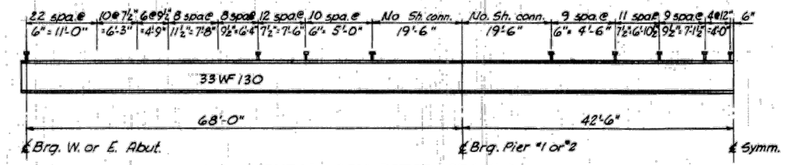


DIAPHRAGMS D_1 & D_2

Note:
Stud shear connectors on the beam flanges shall be placed in the field after the steel has been erected and the deck forms are in place.
Flange shear connectors are included in the quantity of structural steel.
No. req'd. = 2664 Est. wt. 1970 lbs.

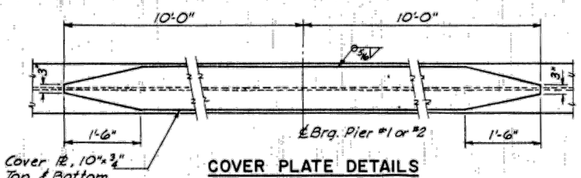


SPLICE DETAIL



SHEAR CONNECTOR SPACING

Note: Granular or solid flux filled studs shall be used. Studs shall be automatically welded to steel beams. All stud welds shall be made in accordance with recommendations of the manufacturer.



COVER PLATE DETAILS

Note: All structural steel shall conform to A S T M designation A-36.

SECTION PROPERTIES

SECTION	MOMENT OF INERTIA IN INCHES 4	SECTION MODULUS IN INCHES 3
AT Pier 33WF130 with 2-10"×⅜" cov. pls.	11,000	636
IN SPANS 33WF130 with †7½" concrete slab (comp. section)	17,730	542 (top) 1562 (bott.)

† Includes ½" wearing surface

STRESS TABLE

TABLE OF MOMENTS AND REACTIONS - INTERIOR BEAMS

	MOMENTS IN FT. KIPS			REACTION IN KIPS	
	0.4 Pt. Span 1	Pier 1	0.5 Pt. Span 2	Abut.	Pier
DL	253	560	278	22.8	76.6
LL	401	371	408	31.6	43.8
IMP	100	93	102	7.9	11.0
Total	754	1024	788	62.3	131.4
(Overload)	*838		*866	*67.9	

*Governs

STRUCTURAL STEEL
MAZON RIVER BRIDGE
COUNTY HWY. 9 SEC. 50-B
GRUNDY COUNTY
STATION 190+92

Oglesby, Rebok & Bartolomucci
CONSULTING CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

ZOE W. CANEDY			SPRINGFIELD, ILLINOIS
DESIGNED CR	DRAWN T.E.B.	DATE 5-6-68	
CHECKED REO	CHECKED CR	JOB NO. 67-45	

Revised by CR 4-15-68

CONTRACT NO. 87642

DRAWN BY: LAG	REVISIONS			
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION
DATE: 02/2017				

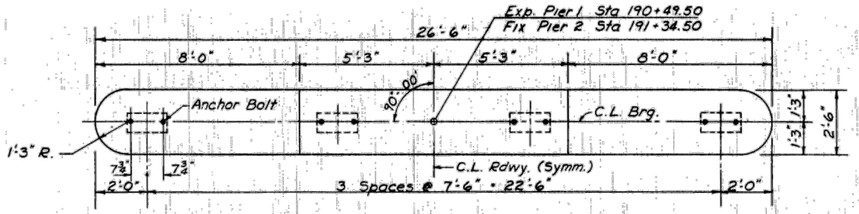
CHAMLIN & ASSOCIATES, INC.
PERU MORRIS ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

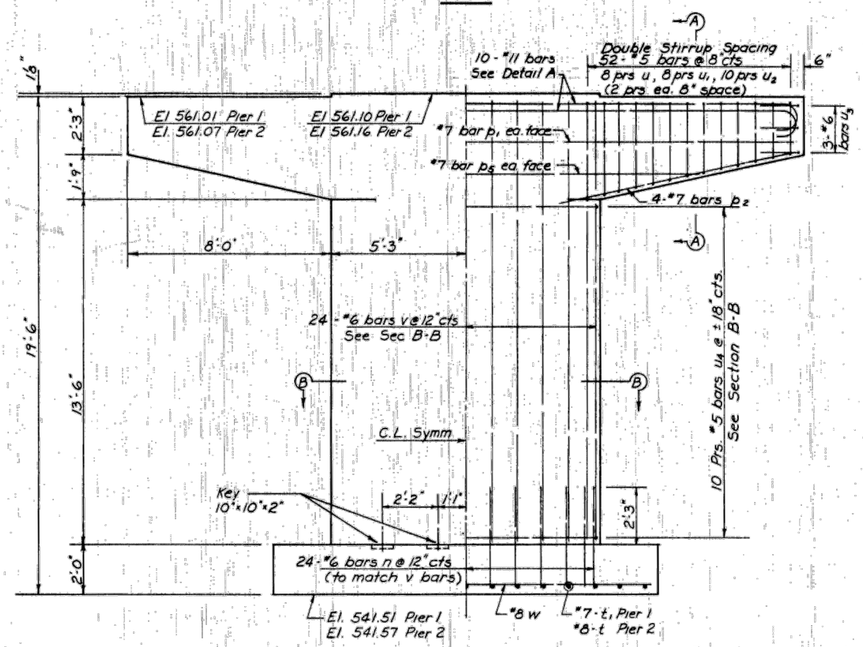
EXISTING BRIDGE PLANS
STRUCTURE NO. 032-3260

CONSTRUCTION PLANS

CURRENT AS OF: 03/28/2017
SCALE: AS NOTED
SHEET 30
FILE NO.: 111158.00 Y-
OF 46

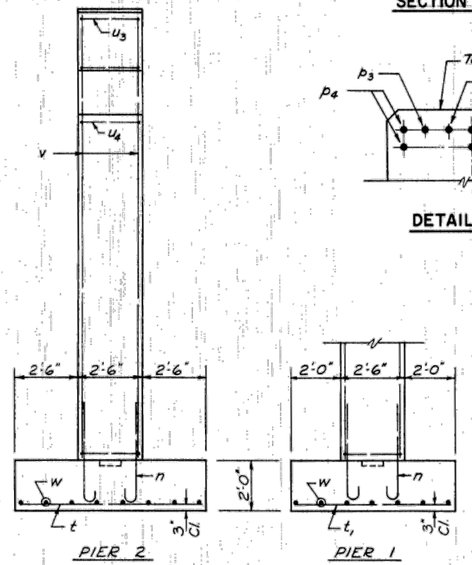


PLAN

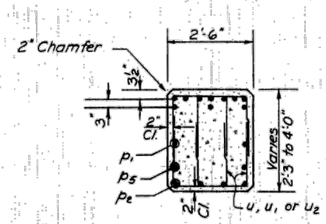


ELEVATION

Note : Exceptional care shall be taken to assure a dry surface before pouring concrete for footing. The final removal of foundation material shall be made just prior to placing the footing concrete. See Sections 50.8 and 50.9 of the Standard Specifications.

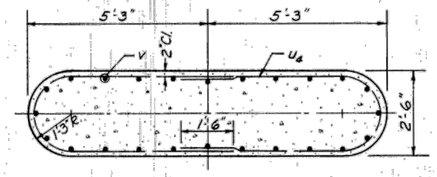


END VIEW



SECTION A-A

DETAIL A

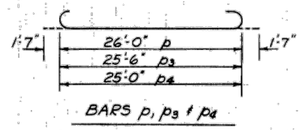


SECTION B-B

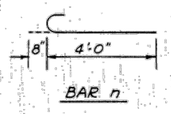
BILL OF MATERIAL - 2 PIERS

BAR	SIZE	LENGTH	SHAPE	NUMBER Pier 1	NUMBER Pier 2	TOTAL
p	#11	29'-2"		4	4	8
p1	#7	26'-0"		2	2	4
p2	#7	9'-6"		8	8	16
p3	#11	28'-8"		2	2	4
p4	#11	28'-2"		4	4	8
p5	#7	20'-0"		2	2	4
n	#6	4'-8"		24	24	48
t	#8	7'-3"		-	15	15
t1	#7	6'-3"		15	-	15
u	#5	6'-6"		32	32	64
u1	#5	6'-0"		32	32	64
u2	#5	5'-6"		40	40	80
u3	#6	5'-2"		6	6	12
u4	#5	12'-11"		20	20	40
v	#6	17'-5"		24	24	48
w	#8	14'-9"		7	8	15

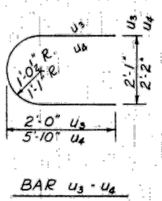
Cofferdam Excavation	Cu Yd	152
Cofferdam, Pier 1	Each	1
Cofferdam, Pier 2	Each	1
Class A Concrete	Cu Yd	57.4
Reinforcement Bars	Lbs	8320



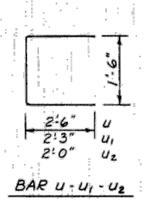
BARS p, p3 & p4



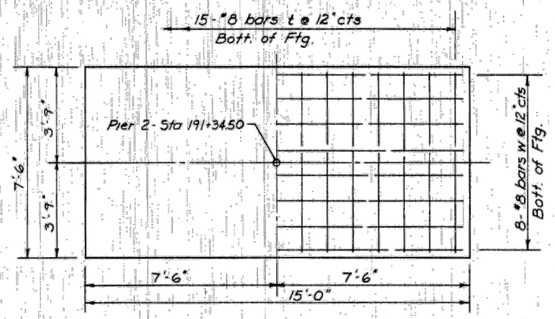
BAR n



BAR u_3 - u_4

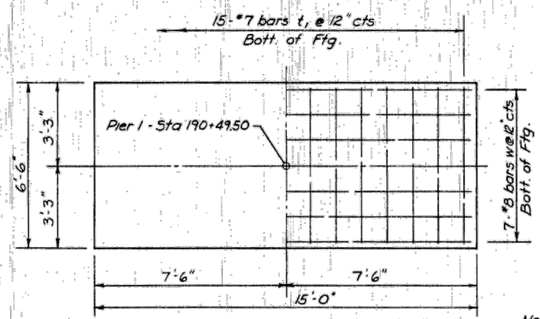


BAR u - u_1 - u_2



FOOTING PLAN - PIER 2

Fixed Pier



FOOTING PLAN - PIER 1

Expansion Pier

Note - Maximum footing pressure is 8.0 kips per square foot.

PIERS

MAZON RIVER BRIDGE
COUNTY HWY. 9 SEC. 50-B
GRUNDY COUNTY
STATION 190+92

Oglesby, Rebok & Bartolomucci
CONSULTING CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

206 W. CANEDY — SPRINGFIELD, ILLINOIS

DESIGNED CR	DRAWN REO	DATE	3-6-68
CHECKED REO	CHECKED CR	JOB NO.	67-45

CONTRACT NO. 87642

DRAWN BY: LAG	REVISIONS			
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION
DATE: 02/2017				

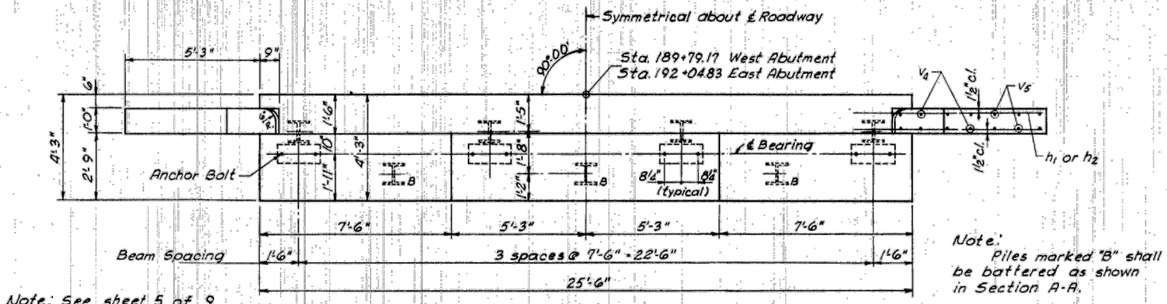
CHAMLIN & ASSOCIATES, INC.
PERU MORRIS ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

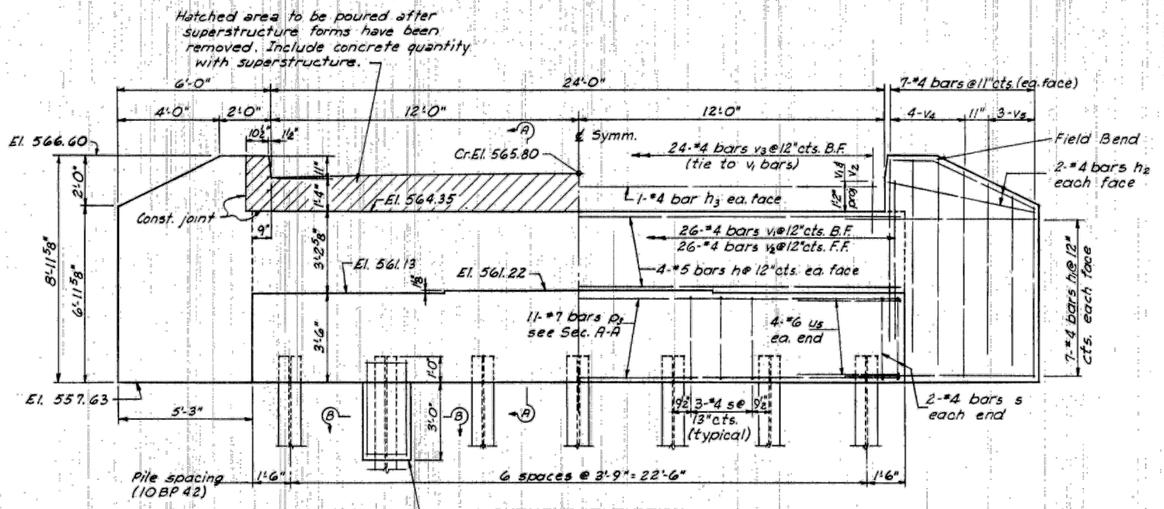
EXISTING BRIDGE PLANS
STRUCTURE NO. 032-3260

CONSTRUCTION PLANS

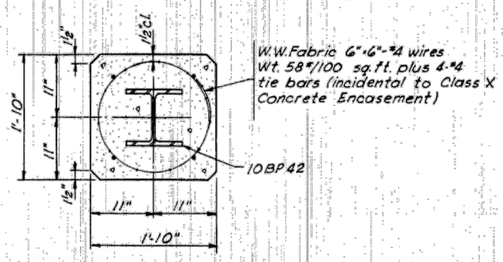
CURRENT AS OF: 03/28/2017	
SCALE: AS NOTED	SHEET 31
FILE NO.: 111158.00 Y–	OF 46



ABUTMENT PLAN



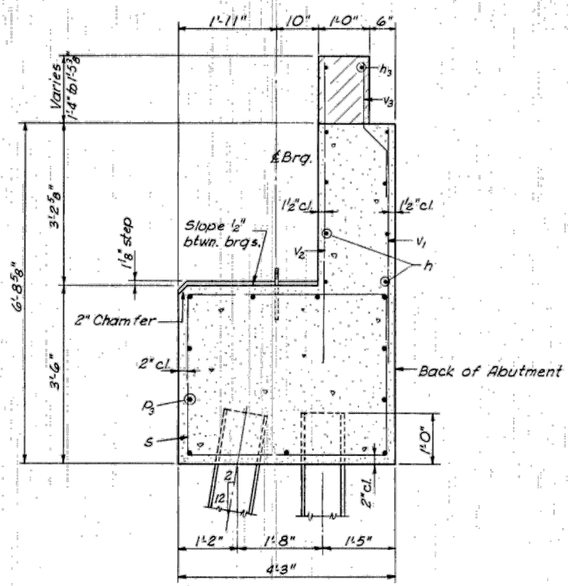
ABUTMENT ELEVATION



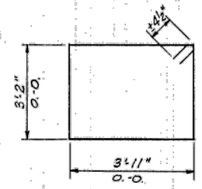
PILE DATA

	West Abut	East Abut
Type	10BP42	10BP42
Min. Capacity	36 tons	36 tons
Est. Length	16 feet	16 feet
No. Required	7*	7*

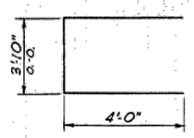
* Includes one test pile (see General Plan)



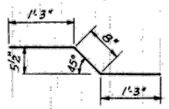
SECTION A-A



BAR s



BAR u_5



BAR v_3

BILL OF MATERIAL - 2 ABUTS.

BAR	NO	SIZE	LENGTH	SHAPE
h	16	#5	25'-2"	
h_1	56	#4	7'-6"	
h_2	16	#4	6'-0"	
h_3	4	#4	23'-8"	
p_3	22	#7	25'-2"	
s	44	#4	14'-11"	
u_5	16	#6	11'-10"	
v_1	52	#4	4'-9"	
v_2	52	#4	6'-0"	
v_3	48	#4	3'-2"	
v_4	32	#4	8'-0"	
v_5	24	#4	6'-9"	
Class X Concrete			Cu.Yds.	43.7
Reinforcement Bars			Lbs.	3440
Steel Piles (10BP42)			Lin.Ft.	192
Test Piles (10BP42)			Each	2
Cl. X Conc. Encasement			Cu.Yds.	5.2

ABUTMENTS

MAZON RIVER BRIDGE
COUNTY HWY. 9 SEC. 50-B
GRUNDY COUNTY
STATION 190+92

Oglesby, Rebok & Bartolomucci
CONSULTING CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
206 W. CANEDY — SPRINGFIELD, ILLINOIS
DESIGNED CR — DRAWN T.E.B. — DATE 5-6-68
CHECKED REO — CHECKED CR — JOB NO. 67-45

CONTRACT NO. 87642

DRAWN BY: LAG	REVISIONS			
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION
DATE: 02/2017				

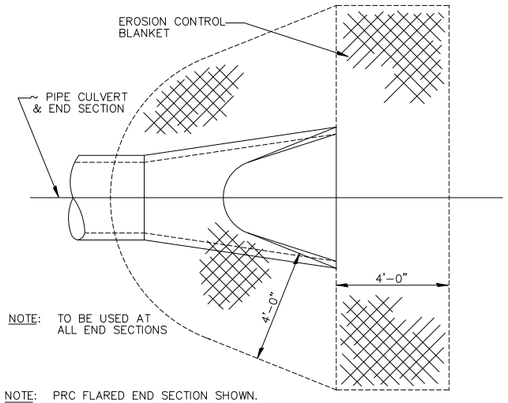
CHAMLIN & ASSOCIATES, INC. PERU MORRIS ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

EXISTING BRIDGE PLANS
STRUCTURE NO. 032-3260

CONSTRUCTION PLANS

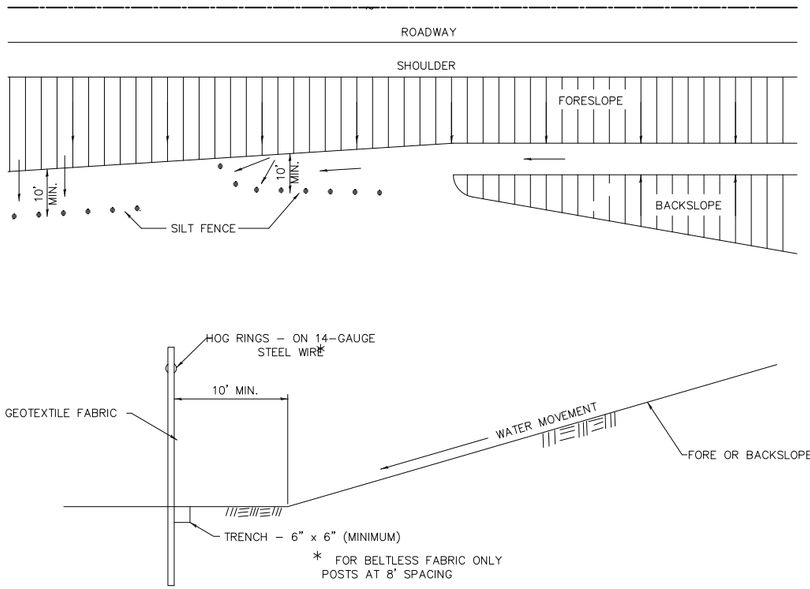
CURRENT AS OF: 03/28/2017
SCALE: AS NOTED — SHEET 32
FILE NO.: 111158.00 Y— — OF 46



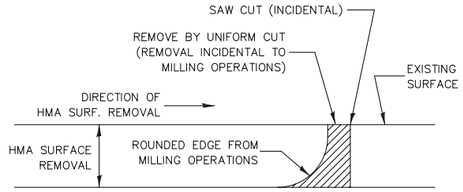
NOTE: TO BE USED AT ALL END SECTIONS

NOTE: PRC FLARED END SECTION SHOWN. TREATMENT SAME FOR OTHER END SECTIONS.

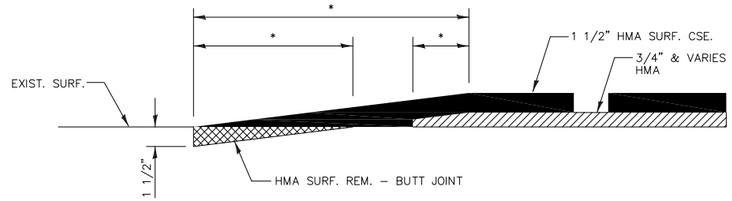
DETAIL OF EROSION CONTROL BLANKET LINING AROUND END SECTION



DETAILS OF SILT FENCE



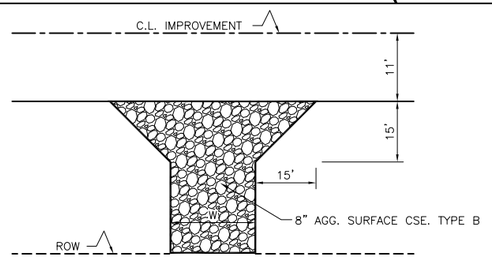
NOTE:
WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAW CUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL



* AS REQUIRED BY PROFILE GRADE AND SUPERELEVATION CORRECTION

HMA DETAIL AT BUTT JOINTS

TYPICAL PRIVATE ENTRANCE DETAIL (AGGREGATE)



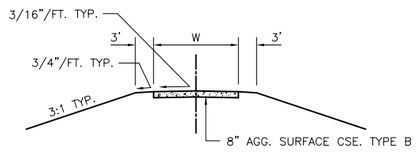
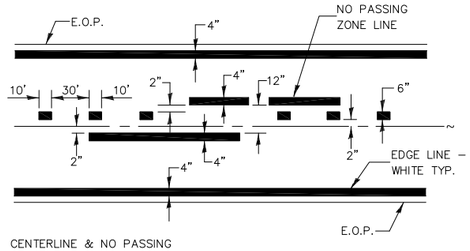


TABLE OF ENTRANCES

STATION	SIDE	W (FT)	AGG. SURF. CSE., TY. B (TON)
94+91.56	RT	16	55.2
TOTAL			55.2

EROSION CONTROL DETAILS FOR SILT FENCE



CENTERLINE & NO PASSING ZONE LINES – YELLOW

(SEE TYPICAL SECTIONS)

PAVEMENT MARKING

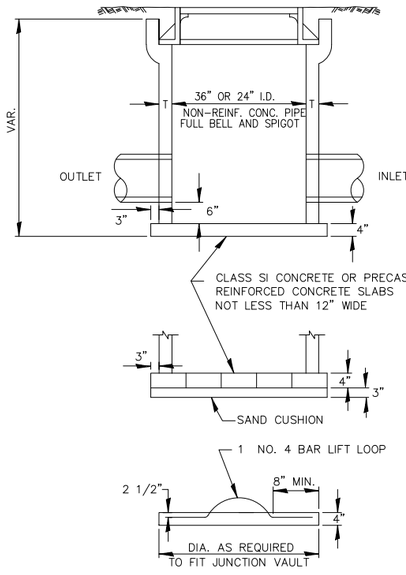
CONTRACT NO. 87642

DRAWN BY: NV	REVISIONS				CHAMLIN & ASSOCIATES, INC.	BRACEVILLE ROAD SECTION 16-00158-00-BR GRUNDY COUNTY	DETAILS	CONSTRUCTION PLANS	CURRENT AS OF: 03/28/2017	
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION	PERU MORRIS ILLINOIS				SCALE: NONE	SHEET 33
DATE: 02/2017									FILE NO.: 111158.00 Y–	OF 46

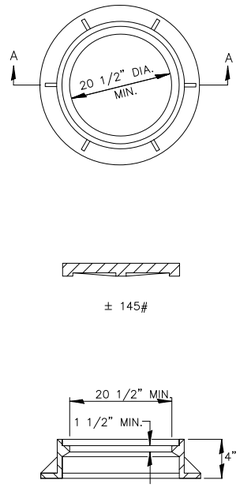
ALTERNATE MATERIALS FOR WALLS	T
PRECAST REINFORCED CONCRETE RISERS	4"
CONCRETE MASONRY UNIT	5"
MONOLITHIC CONCRETE	6"
BUILDING BRICK, GRADE SW FROM CLAY OR SHALE	8"
CONCRETE BUILDING BRICK, GRADE A	8"

NOTES

1. THE CONTRACT UNIT PRICE FOR FIELD TILE JUNCTION VAULT SHALL INCLUDE THE COST OF FURNISHING AND PLACING THE FRAME AND GRATE OR PRECAST CONCRETE LID AND WHEN REQUIRED, THE SAND CUSHION.
2. ALL FIELD TILE JUNCTION VAULTS SHALL BE 2'-0" IN DIAMETER UNLESS OTHERWISE NOTED ON THE PLANS.



FIELD TILE JUNCTION VAULT



SECTION A-A

DRAWN BY: NV
CHECKED BY: JKC
DATE: 02/2017

REVISIONS

LEVEL	BY	DATE	DESCRIPTION

CHAMLIN & ASSOCIATES, INC.
PERU MORRIS
ILLINOIS

BRACEVILLE ROAD
SECTION 16-00158-00-BR
GRUNDY COUNTY

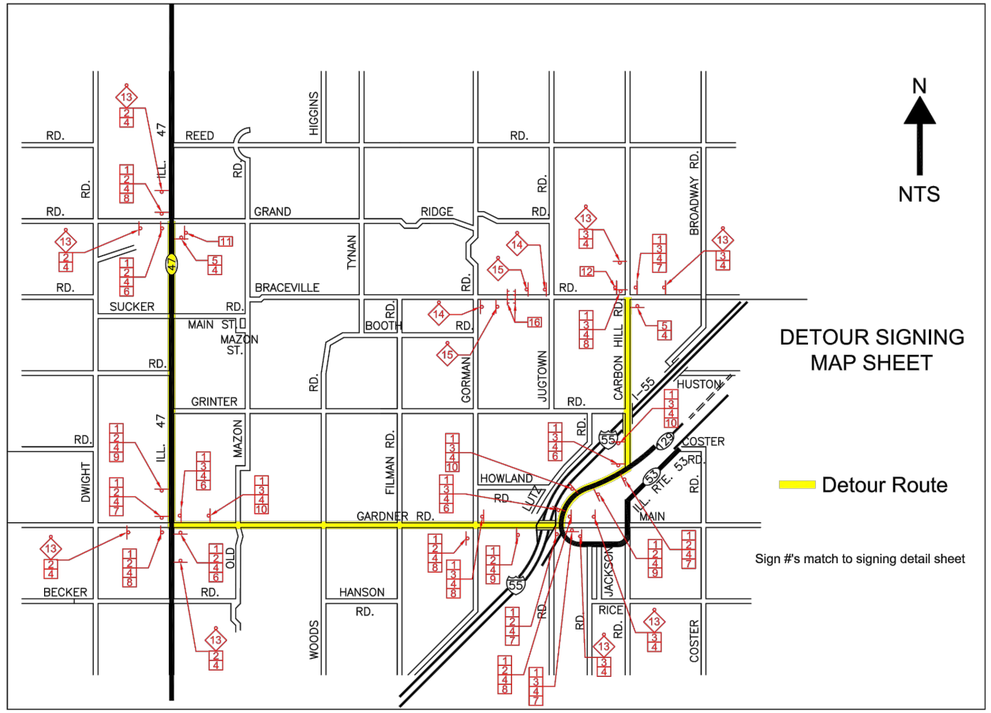
DETAILS

CONSTRUCTION PLANS

CONTRACT NO. 87642
CURRENT AS OF: 03/28/2017
SCALE: NONE
SHEET 34
FILE NO.: 111158.00 Y-
OF 46

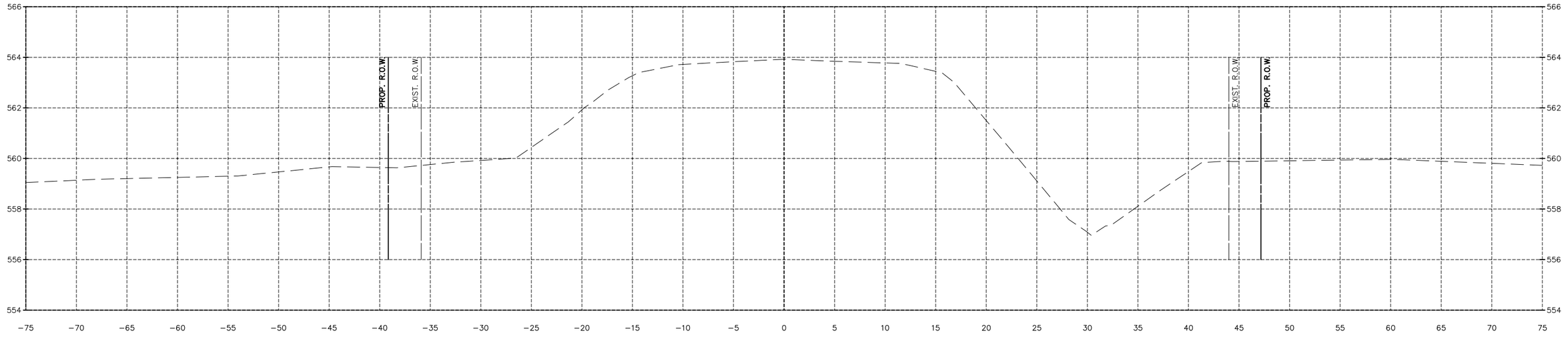
DETOUR SIGNING DETAIL SHEET

①	DETOUR	M4-8 (22 REQ'D)	⑪	ROAD CLOSED 5 1/4 MILES AHEAD LOCAL TRAFFIC ONLY	R11-3 (1 REQ'D)
②	EAST	M3-2 (15 REQ'D)			
③	WEST	M3-4 (15 REQ'D)	⑫	ROAD CLOSED 1 3/4 MILES AHEAD LOCAL TRAFFIC ONLY	R11-3 (1 REQ'D)
④	GRAND RIDGE/ BRACEVILLE RD	M1-I100 (32 REQ'D)			
⑤	END DETOUR	M4-8A (2 REQ'D)	⑬	DETOUR AHEAD	W20-2, 48" X 48" WITH AMBER FLASHING LIGHT (8 REQ'D)
⑥		M6-1 R (5 REQ'D)			
⑦		M3-4 (5 REQ'D)	⑭	ROAD CLOSED AHEAD	W20-3, 48" X 48" WITH AMBER FLASHING LIGHT (2 REQ'D)
⑧		M6-3 (6 REQ'D)			
⑨		M5-1 L (3 REQ'D)	⑮	ROAD CLOSED 500 FT	W20-3, 48" X 48" WITH AMBER FLASHING LIGHT (2 REQ'D)
⑩		M5-1 R (3 REQ'D)			
			⑯		TYPE III BARRICADES (4 REQ'D)



CONTRACT NO. 87642

DRAWN BY: NV	REVISIONS				CHAMLIN & ASSOCIATES, INC.	BRACEVILLE ROAD SECTION 16-00158-00-BR GRUNDY COUNTY	DETOUR PLAN	CONSTRUCTION PLANS	CURRENT AS OF: 04/17/2017	
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION	PERU MORRIS ILLINOIS				SCALE: NONE	SHEET 35
DATE: 02/2017	1	NV	04/17/17	ADDED SIGNS					FILE NO.: 111158.00 Y–	OF 46



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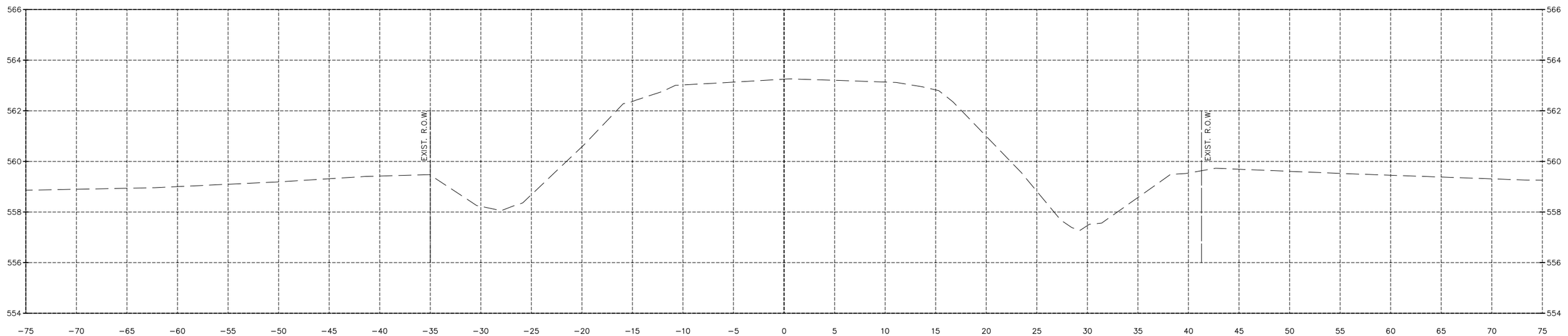

87+00.00

DRAWN BY: LAG/NV	
CHECKED BY: JKC	
DATE: 09/2016	

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PERU MORRIS
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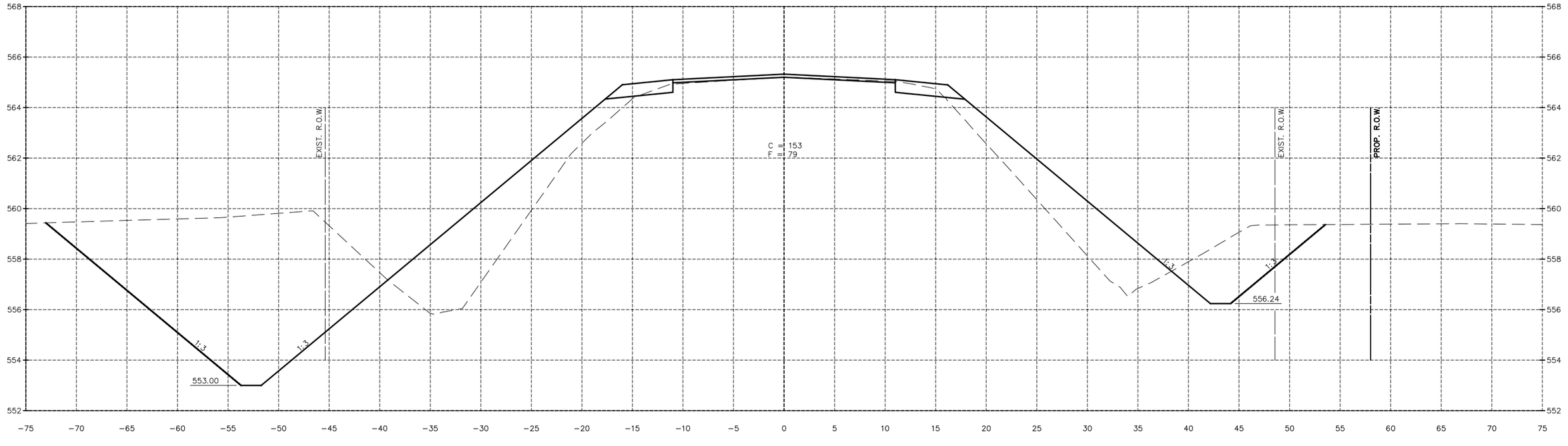
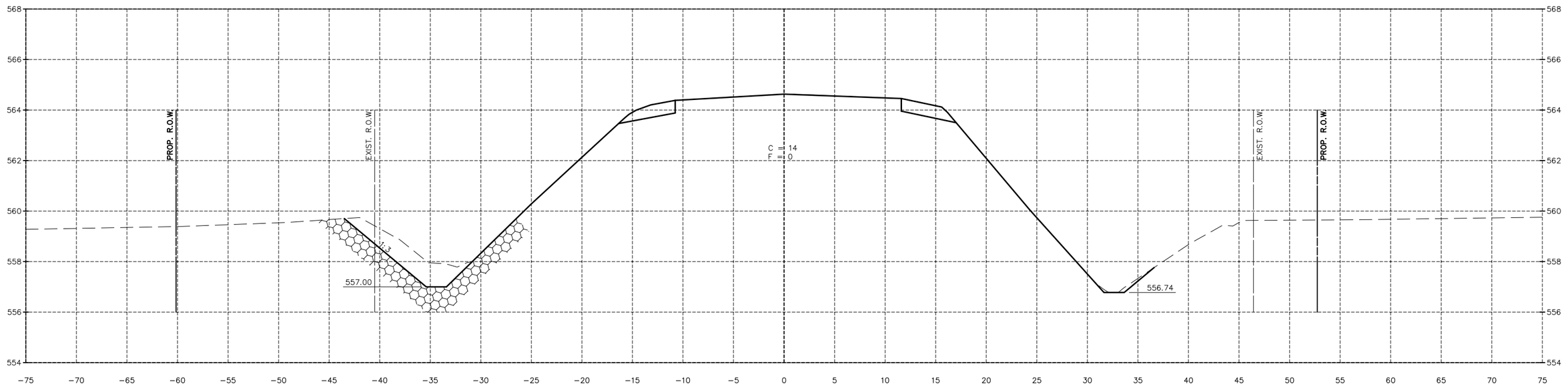


88+50.00



88+00.00

DRAWN BY: LAG/NV	
CHECKED BY: JKC	
DATE: 09/2016	

REVISIONS			
LEVEL	BY	DATE	DESCRIPTION

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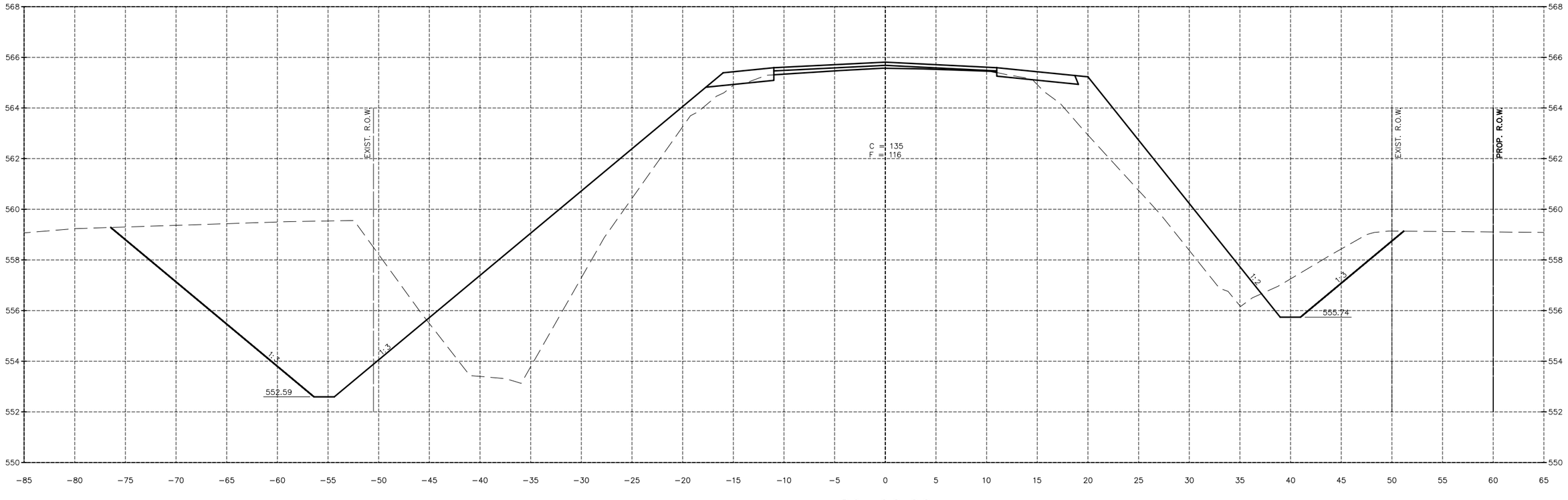

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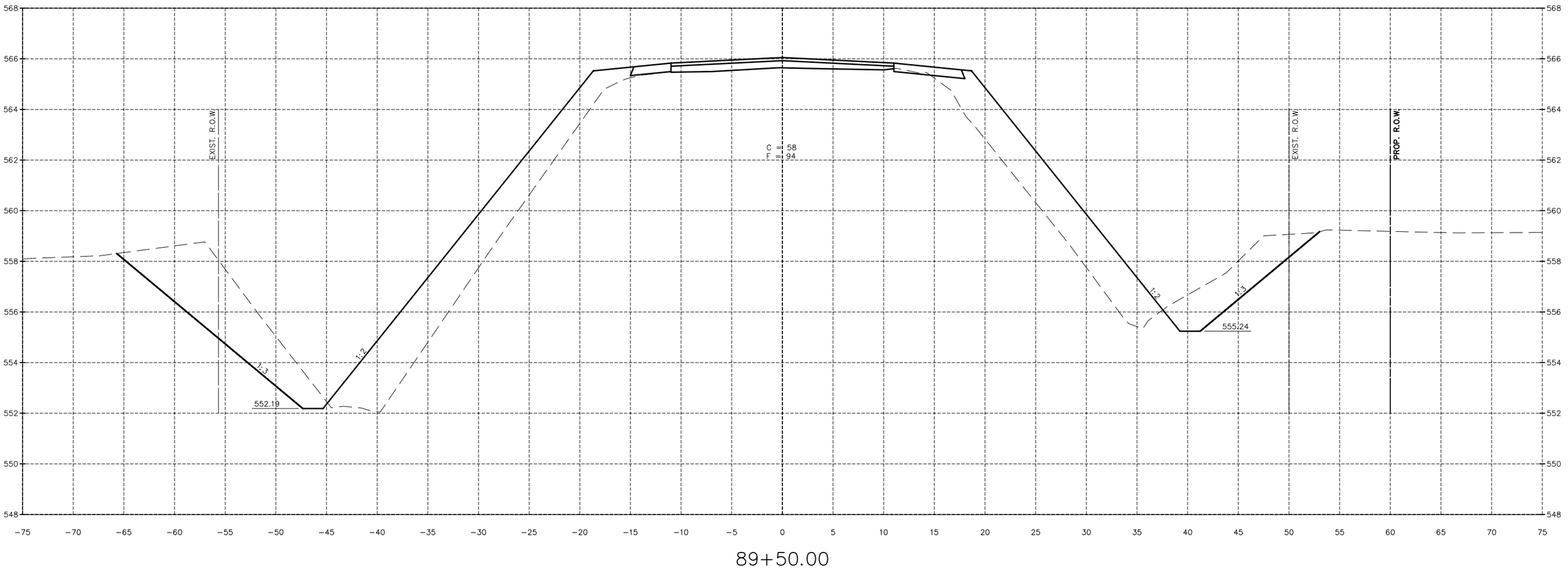

89+50.00

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DATE: 09/2016				

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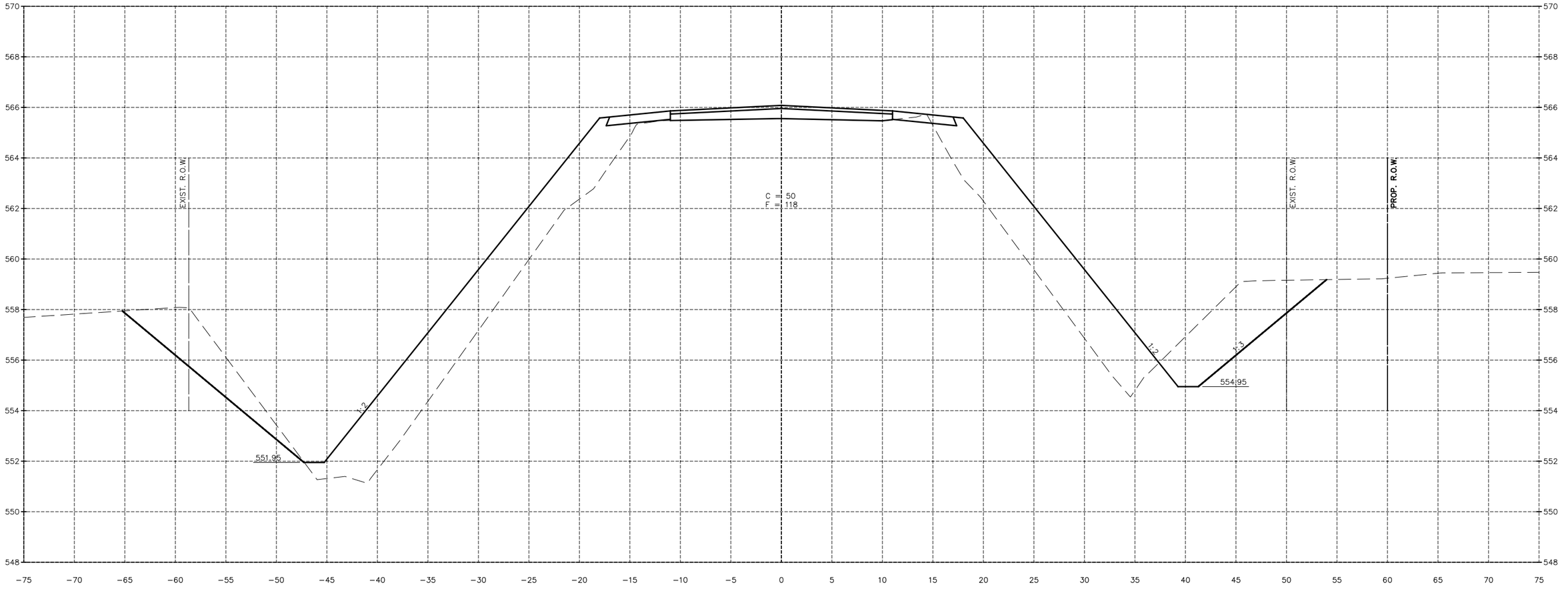

89+79.17

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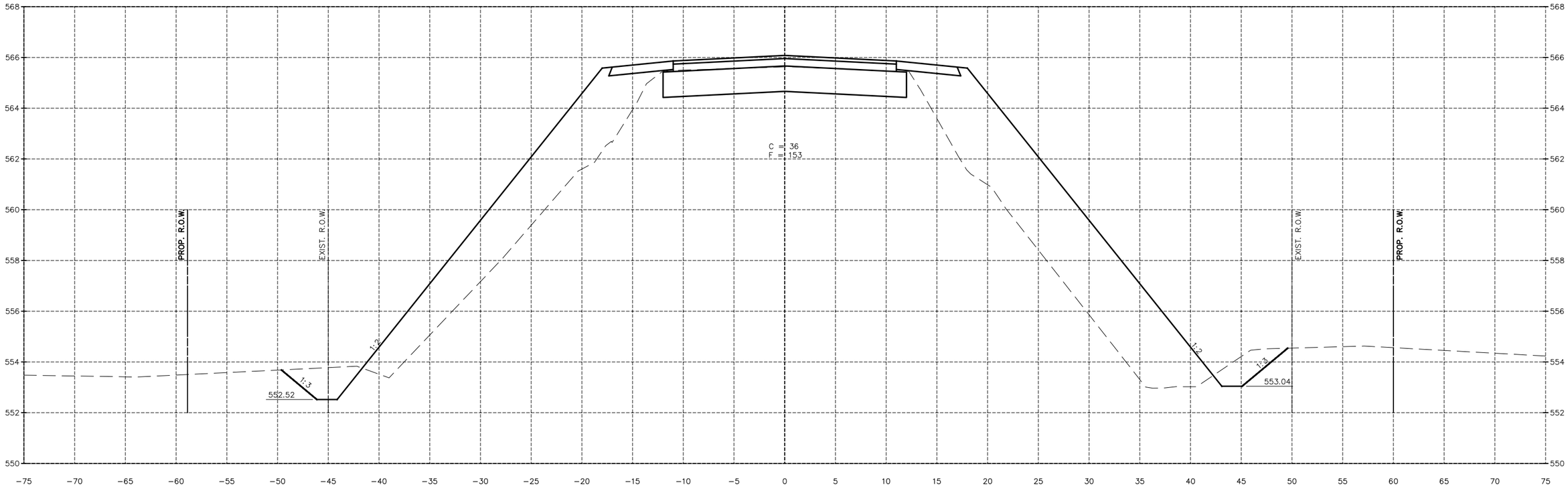
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION					SCALE: AS NOTED	SHEET 40
DATE: 09/2016									FILE NO.: 111158.00 Y–	OF 46



92+04.83

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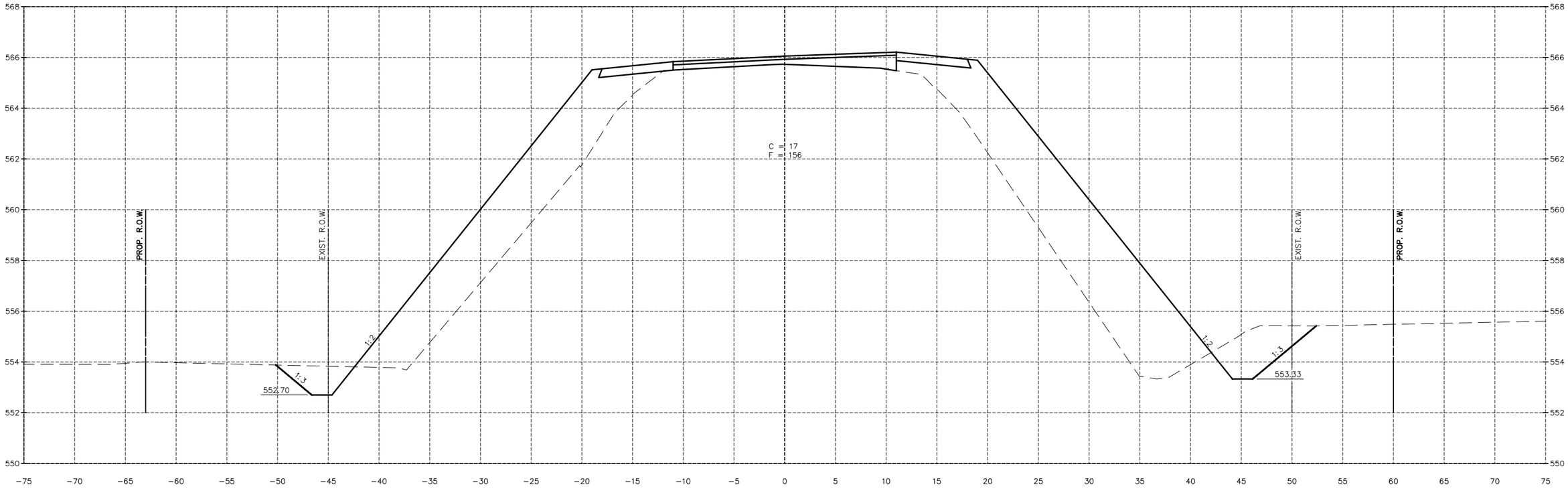
CHECKED BY: JKC	LEVEL	BY	DATE	DESCRIPTION					SCALE: AS NOTED	SHEET 41
DATE: 09/2016									FILE NO.: 111158.00 Y–	OF 46



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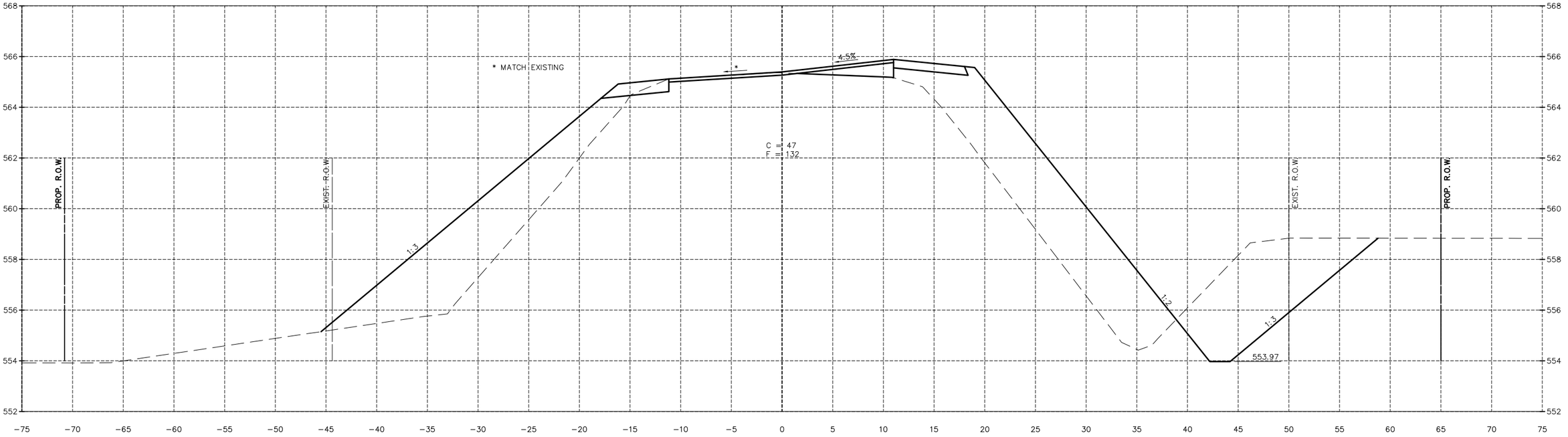
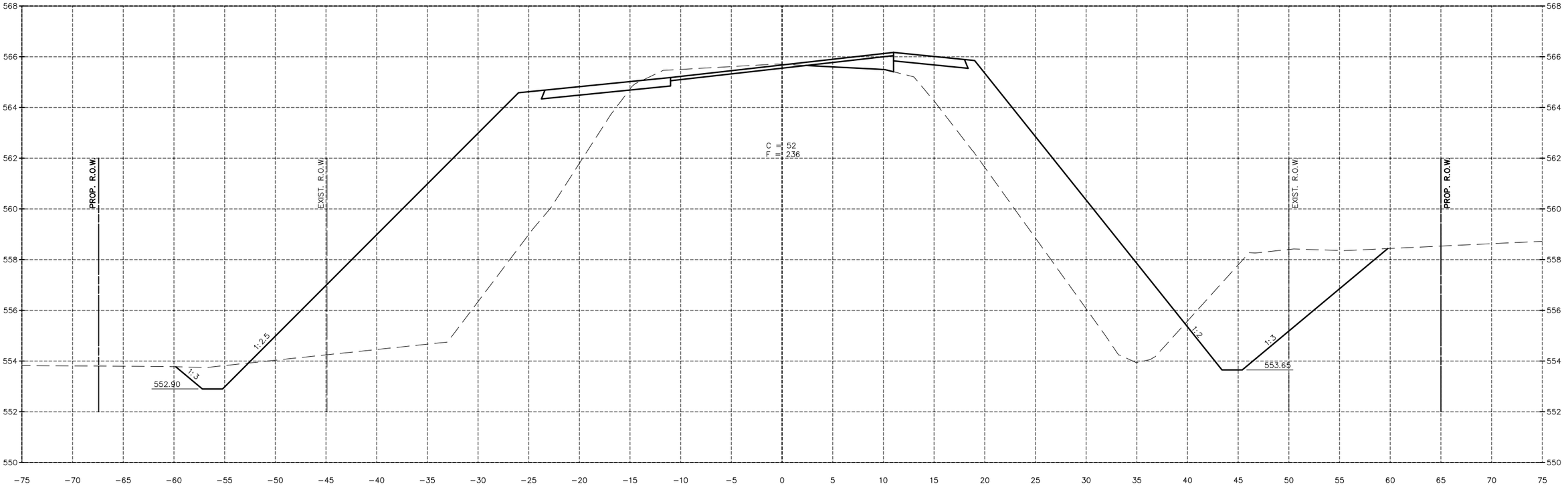


93+50.00



93+00.00

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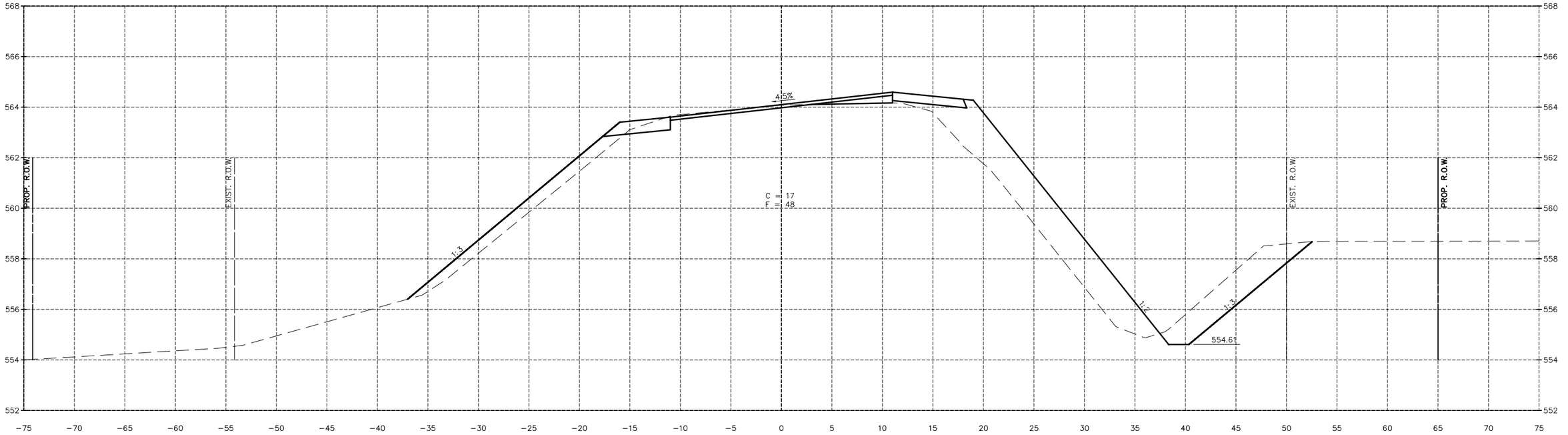
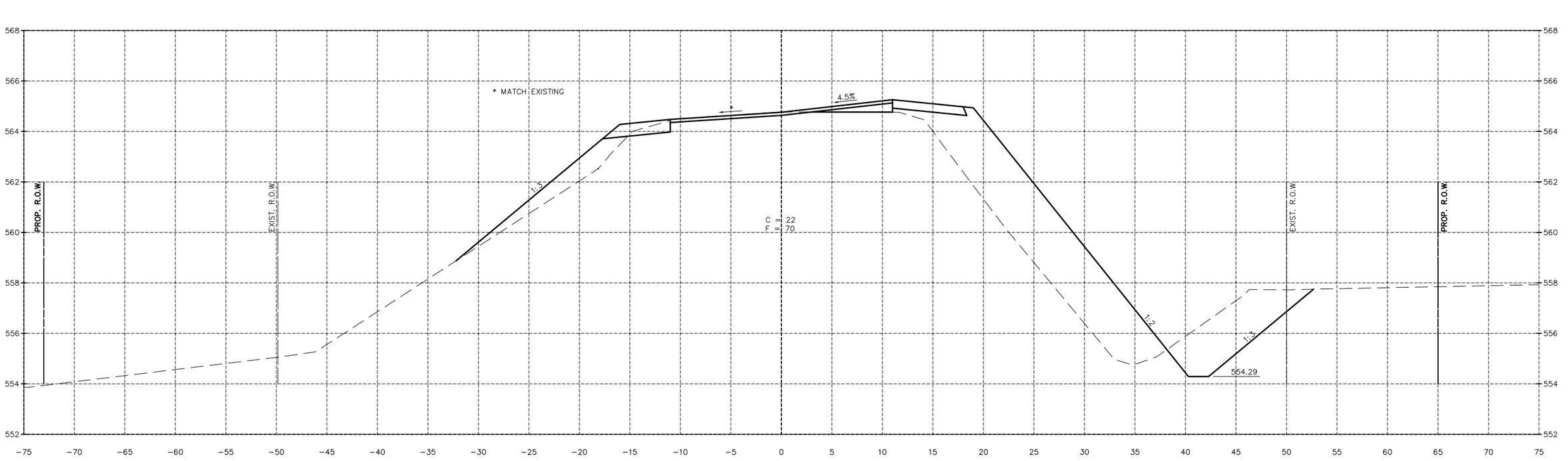


94+50.00



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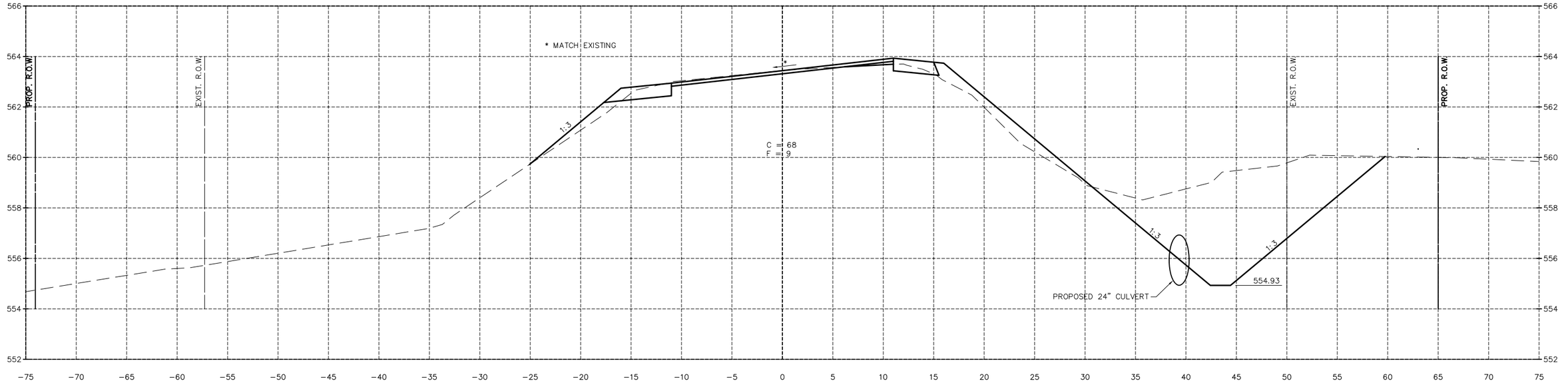

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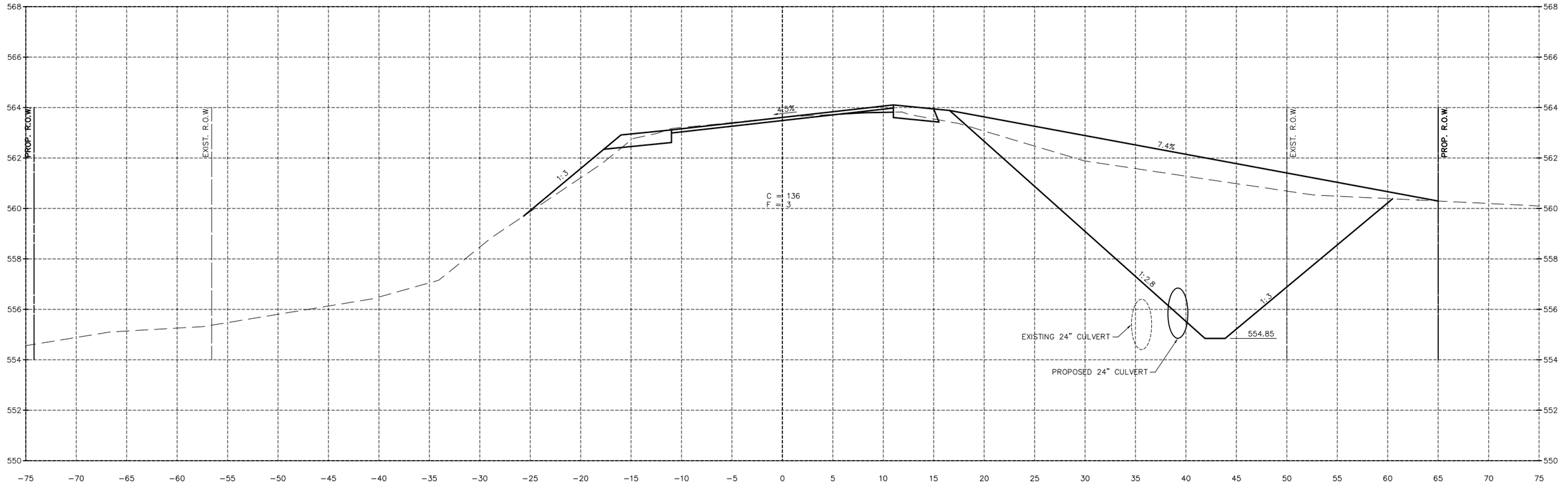

94+87.00

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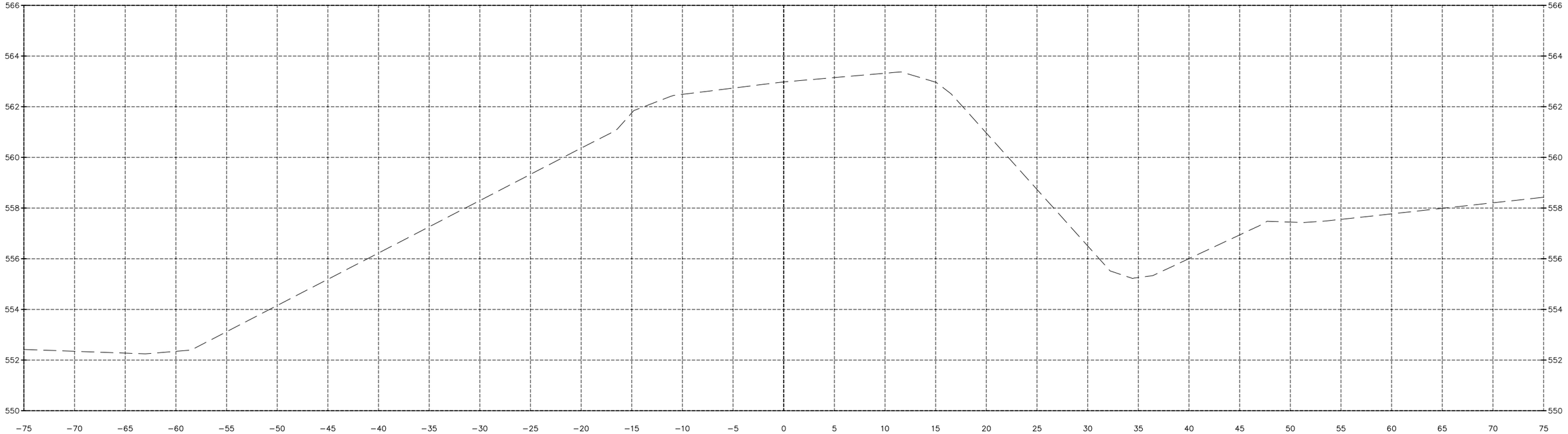

96+00.00

95+50.00

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