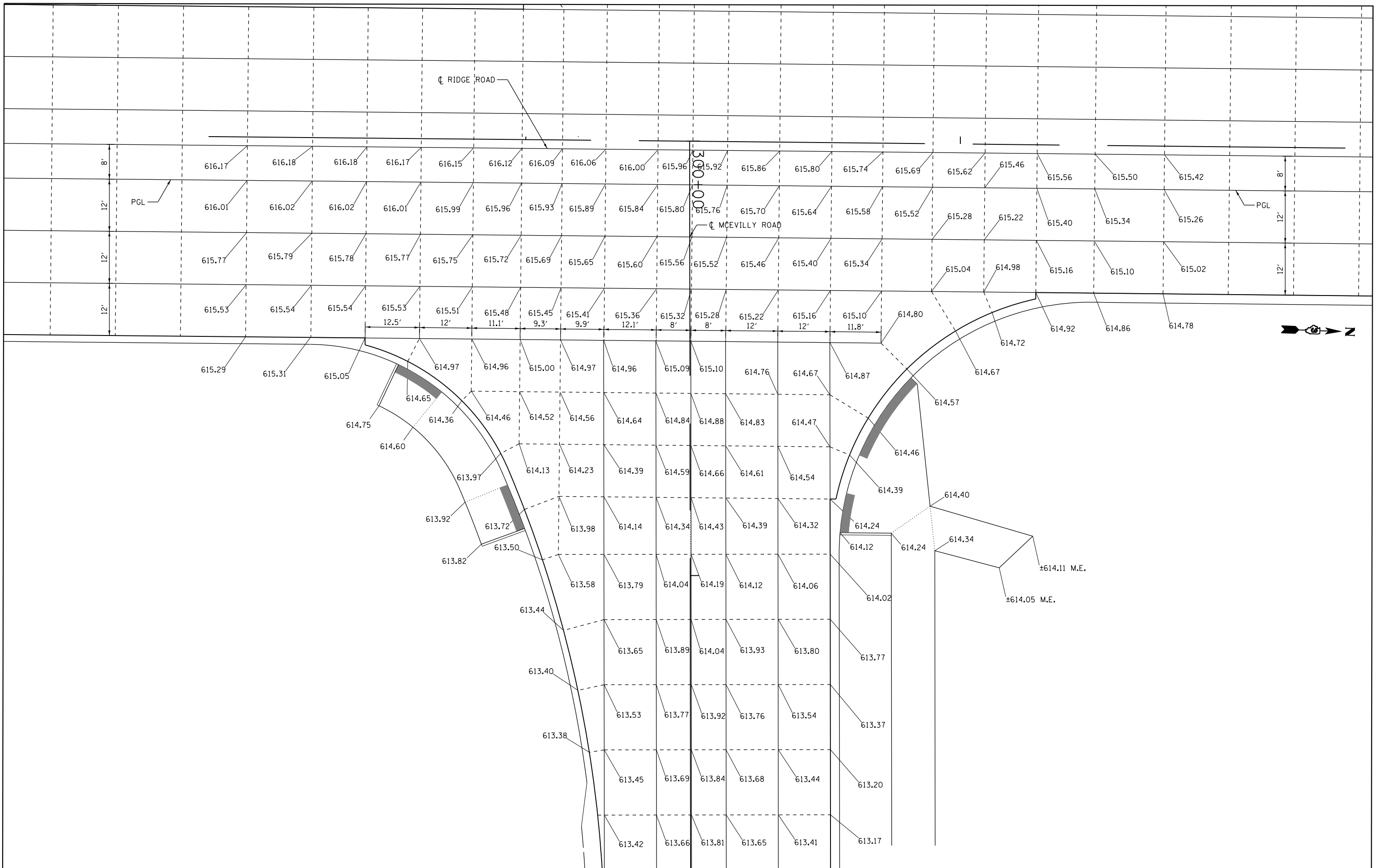


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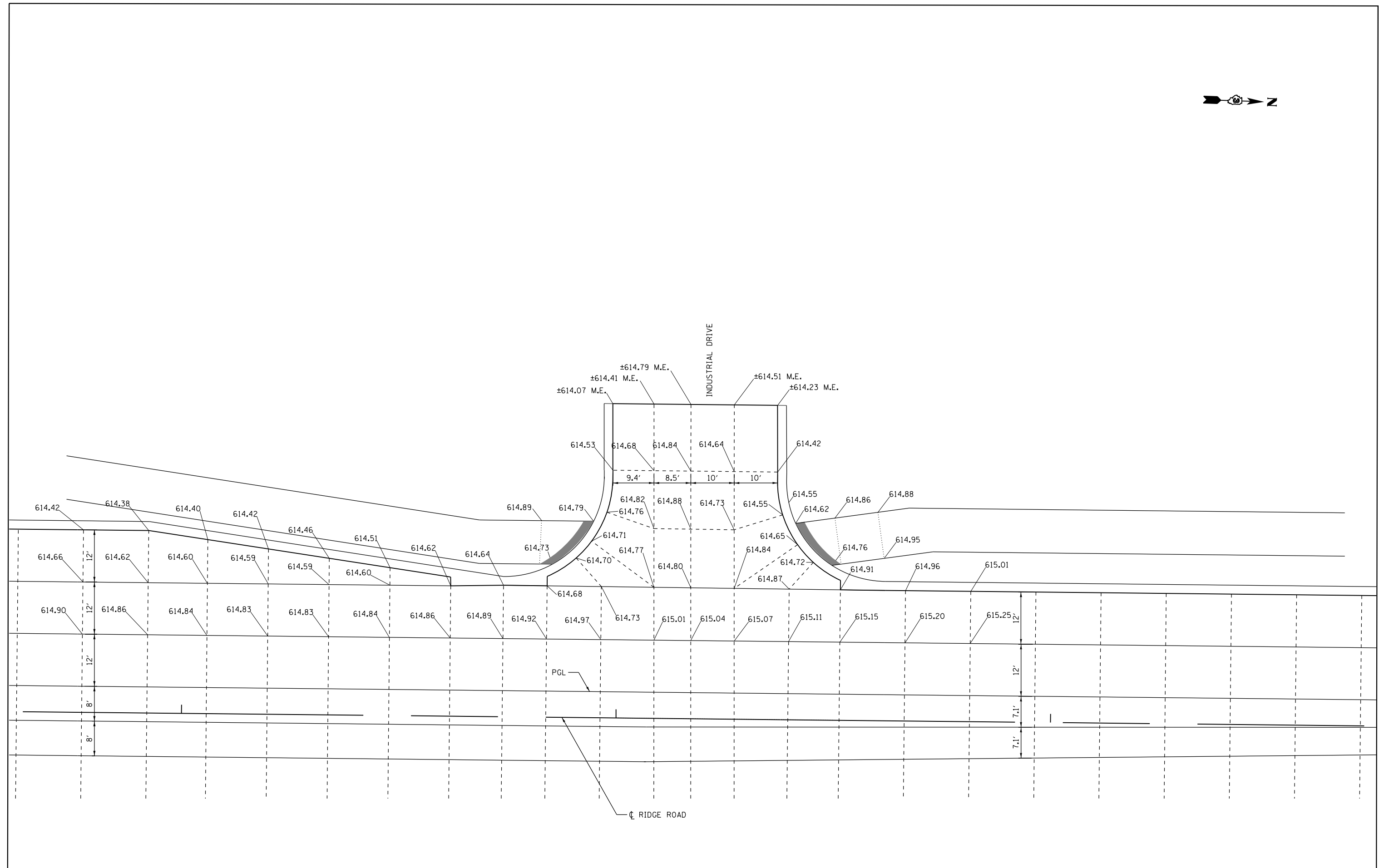
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PLOT DATE = 6/7/2019		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RIDGE ROAD & MCEVILLY DRIVE
INTERSECTION DETAILS**

SCALE: 1"=10' SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	101
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



FILE NAME = D387695-sh1-1m+Details2.dgn



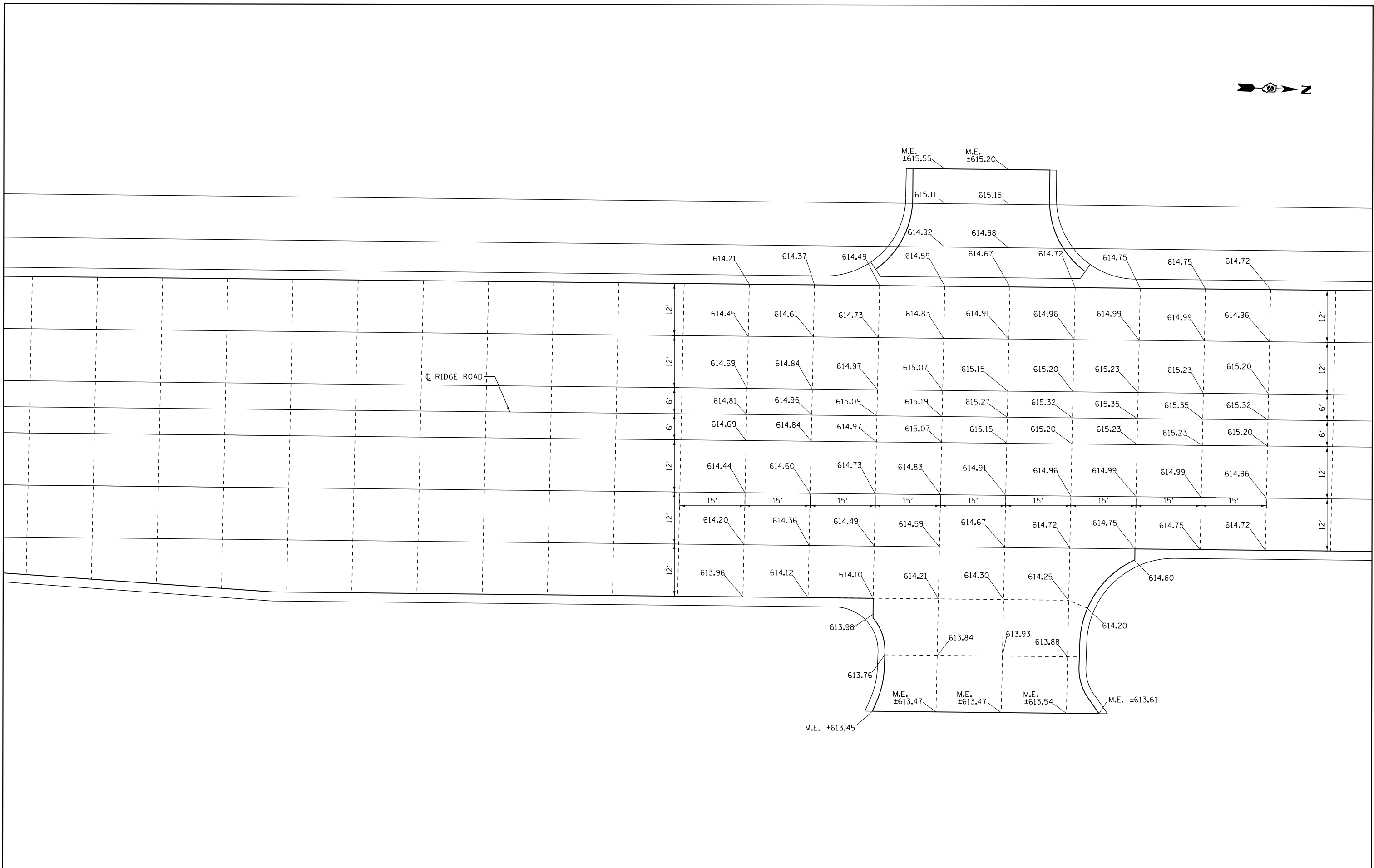
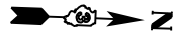
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PLOT DATE = 6/7/2019	CHECKED - KMB	REVISED -
	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RIDGE ROAD & INDUSTRIAL DRIVE
INTERSECTION DETAILS**

SCALE: 1"=10' SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE. 384	SECTION 11-00134-02-WR	COUNTY GRUNDY	TOTAL SHEETS 239	SHEET NO. 102
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



FILE NAME = D387695-sh1-1m+Details3.dgn



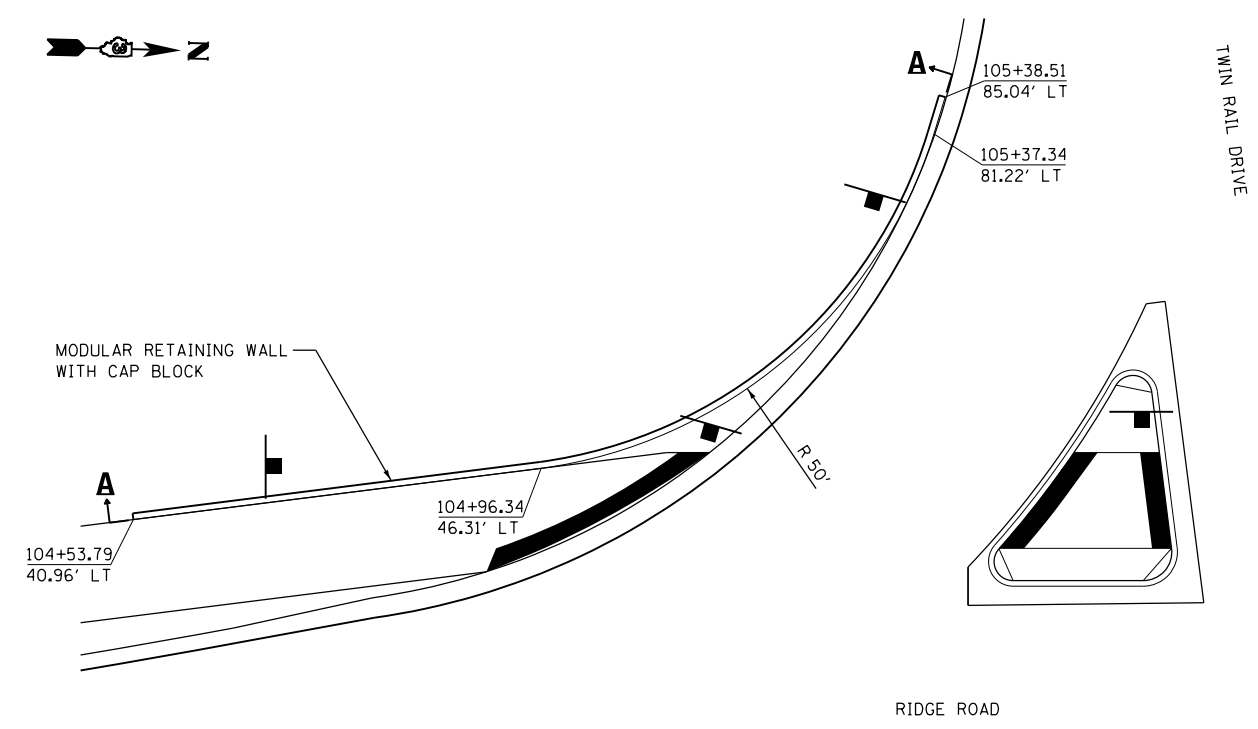
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PLLOT DATE = 6/7/2019		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

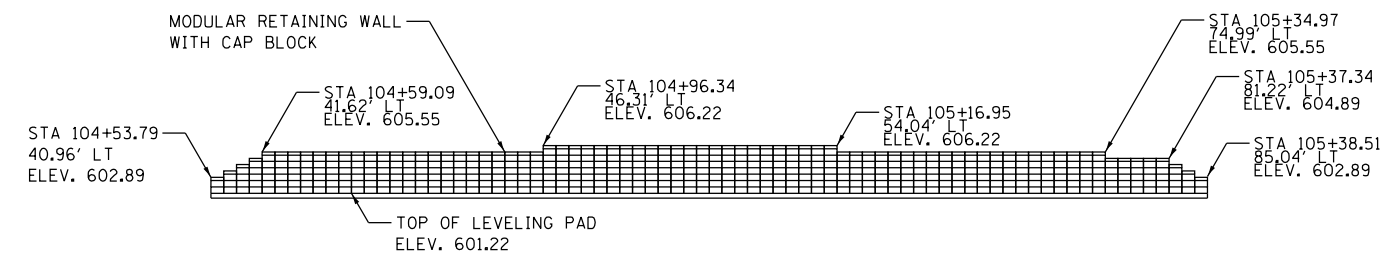
**RIDGE ROAD & SCHOOL ENTRANCE
INTERSECTION DETAILS**

SCALE: 1"=10' SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	103
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



PLAN VIEW
SCALE 1"=10'



ELEVATION VIEW A-A
(UNWRAPPED)

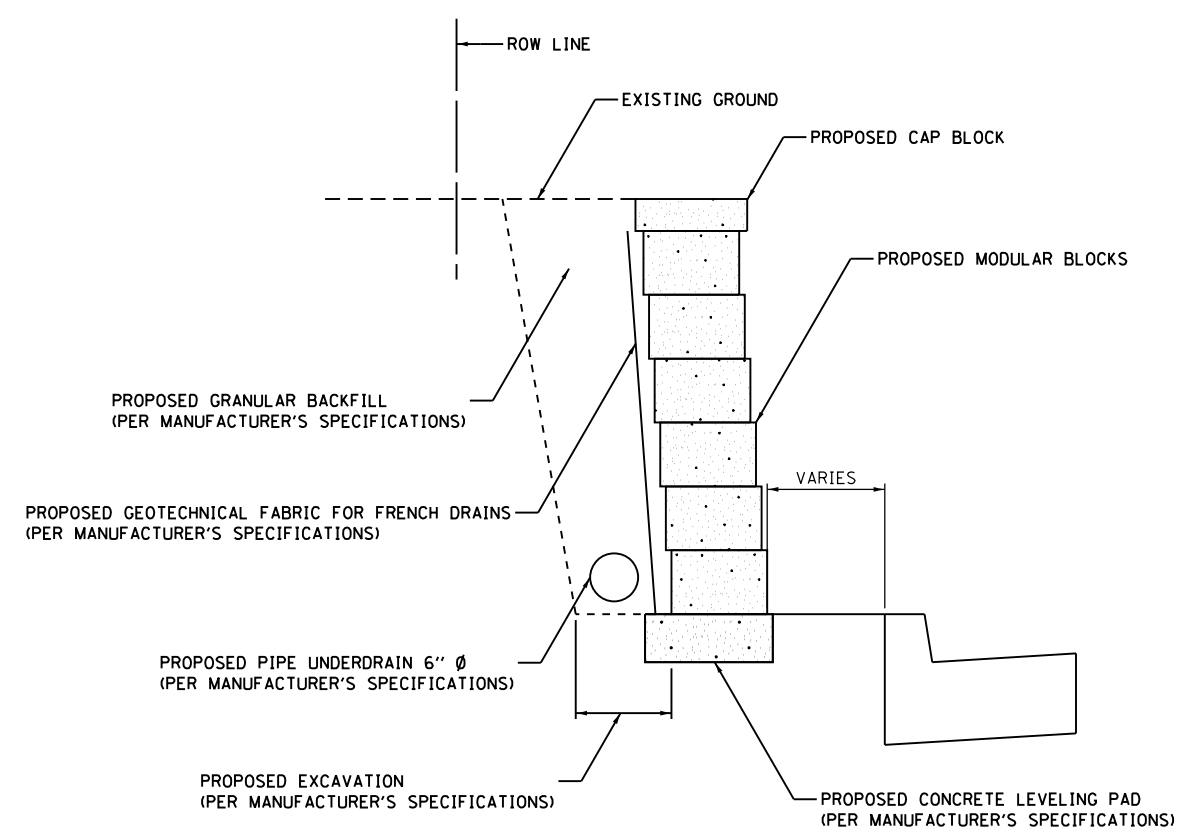
NOTES

OFFSETS REFER TO DISTANCE FROM C OF RIDGE ROAD TO THE FRONT FACE OF THE LOWEST BLOCK OF THE RETAINING WALL AT A GIVEN STATION.

MODULAR RETAINING WALL SHALL BE CONSTRUCTED TO THE MANUFACTURER'S SPECIFICATIONS AND TO THE APPROVAL OF THE ENGINEER.

SCHEMATIC REPRESENTATION SHOWN ASSUMES AN 8"X16" (HEIGHT X LENGTH) BLOCK WITH A 4"X16" (HEIGHT X LENGTH) CAP BLOCK. ADJUSTMENTS SHALL BE MADE AS NECESSARY TO SUIT THE MANUFACTURER'S PRODUCT SIZES.

THIS WORK, INCLUDING EXCAVATION, GRANULAR BACKFILL, CONCRETE BLOCKS, CONCRETE LEVELING PAD, PERFORATED PIPE UNDERDRAINS, GRAVEL, GEOTECHNICAL FABRIC FOR FRENCH DRAINS, AND ANY OTHER ACCESSORIES REQUIRED TO MEET MANUFACTURER'S SPECIFICATIONS SHALL BE INCLUDED IN THE PAY ITEM, "PRECAST MODULAR RETAINING WALL, SPECIAL."



TYPICAL SECTION
NOT TO SCALE

BILL OF MATERIALS FOR MODULAR RETAINING WALL												
STATION	TO	STATION	BLOCK WALLS					CONCRETE LEVELING PAD	CAP BLOCK	PIPE UNDERDRAIN	MODULAR RETAINING WALL	CAP BLOCK
			2 COURSE	3 COURSE	4 COURSE	5 COURSE	6 COURSE					
FOOT							SQUARE FEET					
104+53.79		104+59.09	1.33	1.33	1.33	1.33		5.33	5.33	5.33	12.41	1.78
104+59.09		104+96.34					29.33	29.33	29.33	29.33	117.33	9.78
104+96.34		105+16.95					30.67	30.67	30.67	30.67	143.13	10.22
105+16.95		105+34.97					28.00	28.00	28.00	28.00	112.01	9.33
105+34.97		105+37.34				6.67		6.67	6.67	6.67	22.23	2.22
105+37.34		105+38.51	1.33	1.33	1.33			4.00	4.00	4.00	7.98	1.33
TOTALS			2.67	2.67	2.67	8.00	57.33	30.67	104.00	104.00	415.15	34.66
TOTAL											450	

FILE NAME = D387695-sh1-TwinRailWall.dgn



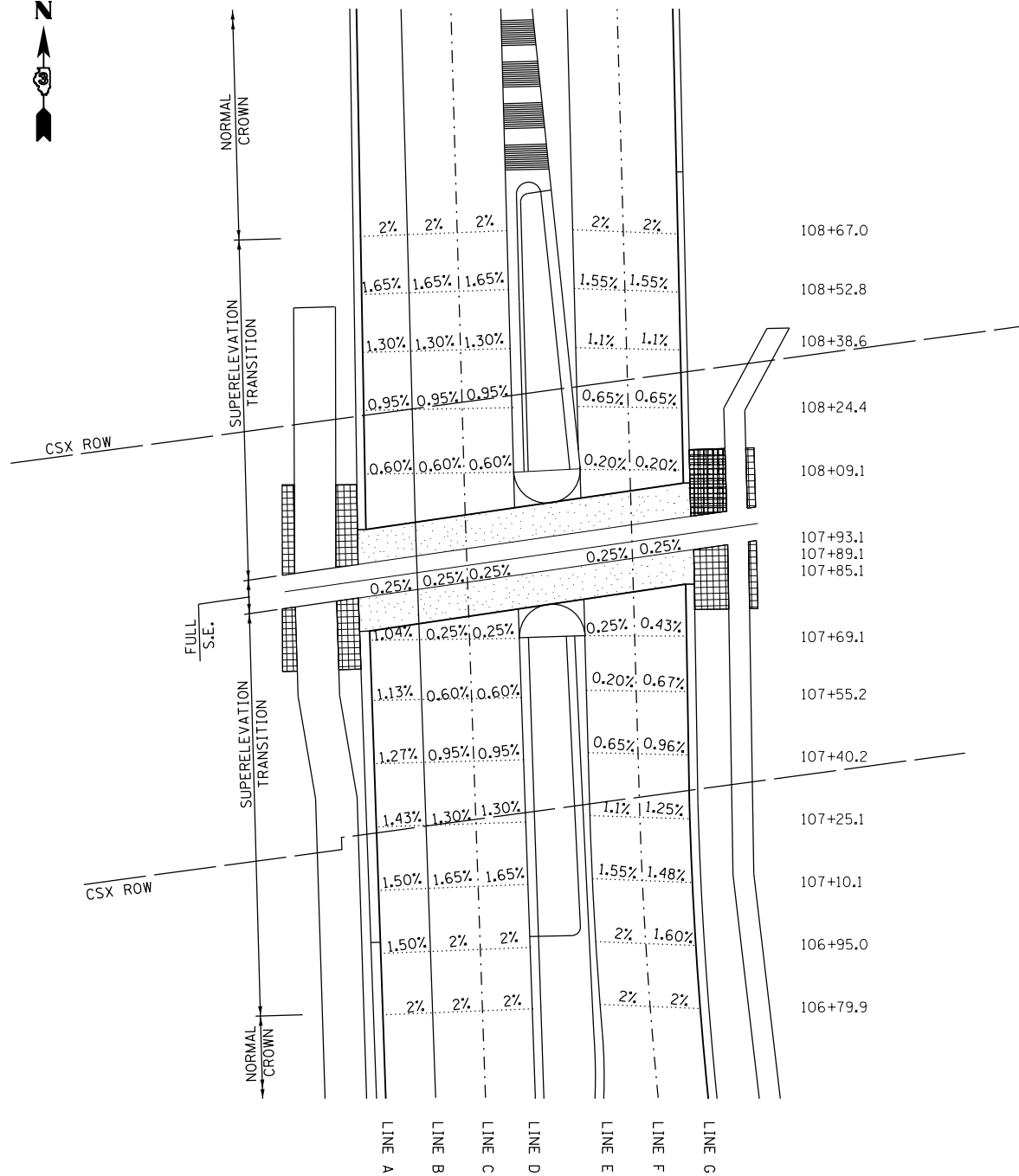
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DRAWN - JNH	REVISIONS -	
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PLOT DATE = 6/7/2019	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PRECAST MODULAR RETAINING WALL
SPECIAL**

SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	105
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



SUPERELEVATION TRANSITION SECTIONS

SUPERELEVATION TRANSITIONS							
ELEVATIONS AT LOCATIONS							
STATION	A	B	C	D	E	F	G
108+67.0	599.23	599.47	599.71	599.95	599.95	599.71	599.47
108+52.8	599.49	599.68	599.88	600.08	600.08	599.89	599.71
108+38.6	599.75	599.91	600.07	600.22	600.22	600.09	599.96
108+24.4	600.02	600.14	600.25	600.36	600.36	600.29	600.21
108+09.1	600.30	600.37	600.45	600.52	600.52	600.49	600.47
107+93.1	600.58	600.61	600.64	600.67	600.67	600.70	600.73
CSX	600.58	600.61	600.64	600.67	600.67	600.70	600.73
107+85.1	600.58	600.61	600.64	600.67	600.67	600.70	600.73
107+69.1	600.63	600.76	600.79	600.82	600.82	600.85	600.80
107+55.2	600.68	600.81	600.88	600.96	600.96	600.93	600.85
107+40.2	600.73	600.88	600.99	601.11	601.11	601.03	600.91
107+25.1	600.77	600.95	601.10	601.26	601.26	601.13	600.98
107+10.1	600.82	601.00	601.20	601.40	601.40	601.21	601.04
106+95.0	600.87	601.05	601.29	601.53	601.53	601.29	601.10
106+79.9	600.92	601.16	601.40	601.64	601.64	601.4	601.16

FILE NAME = D387695-sh1-CSXSuper.dgn



USER NAME = *USER*	DESIGNED - JNH	REVISED -
DRAWN - JNH	CHECKED - KMB	REVISED -
PLOT SCALE = 48.0000' / in.	DATE - 05-31-2019	REVISED -
PLOT DATE = 6/7/2019		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUPERELEVATION DETAILS
CSX CROSSING**

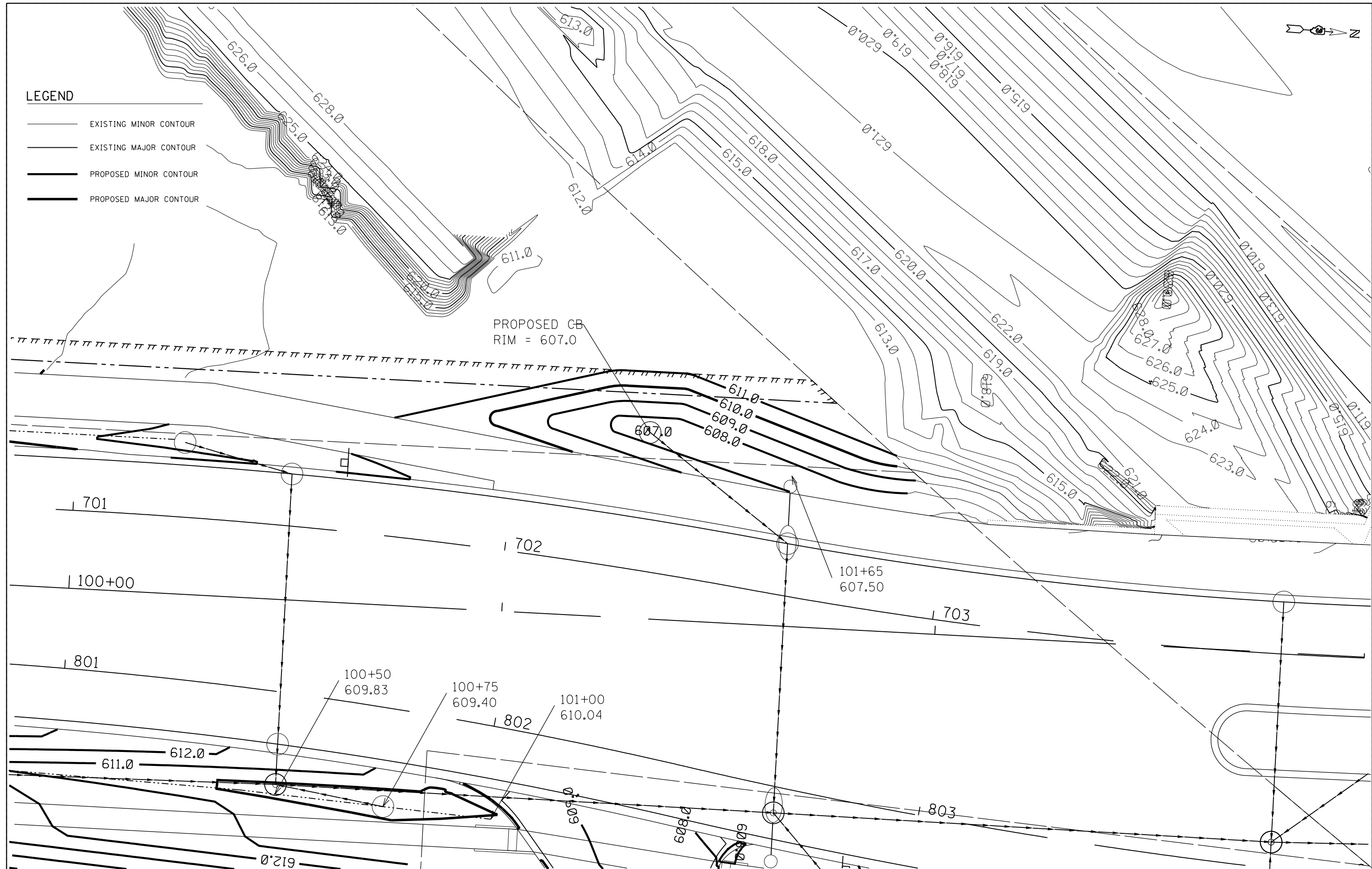
SHEET 1 OF 1 SHEETS STA. 106+50 TO STA. 109+20

F.A.U. RTE. 384	SECTION 11-00134-02-WR	COUNTY GRUNDY	TOTAL SHEETS 239	SHEET NO. 106
CONTRACT NO. 87695			ILLINOIS FED. AID PROJECT	



LEGEND

- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR



FILE NAME = D387695-shf-Grading1.dgn



USER NAME = \$USER*	DESIGNED - JNH	REVISED -
DRAWN - JNH	REVISED -	
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

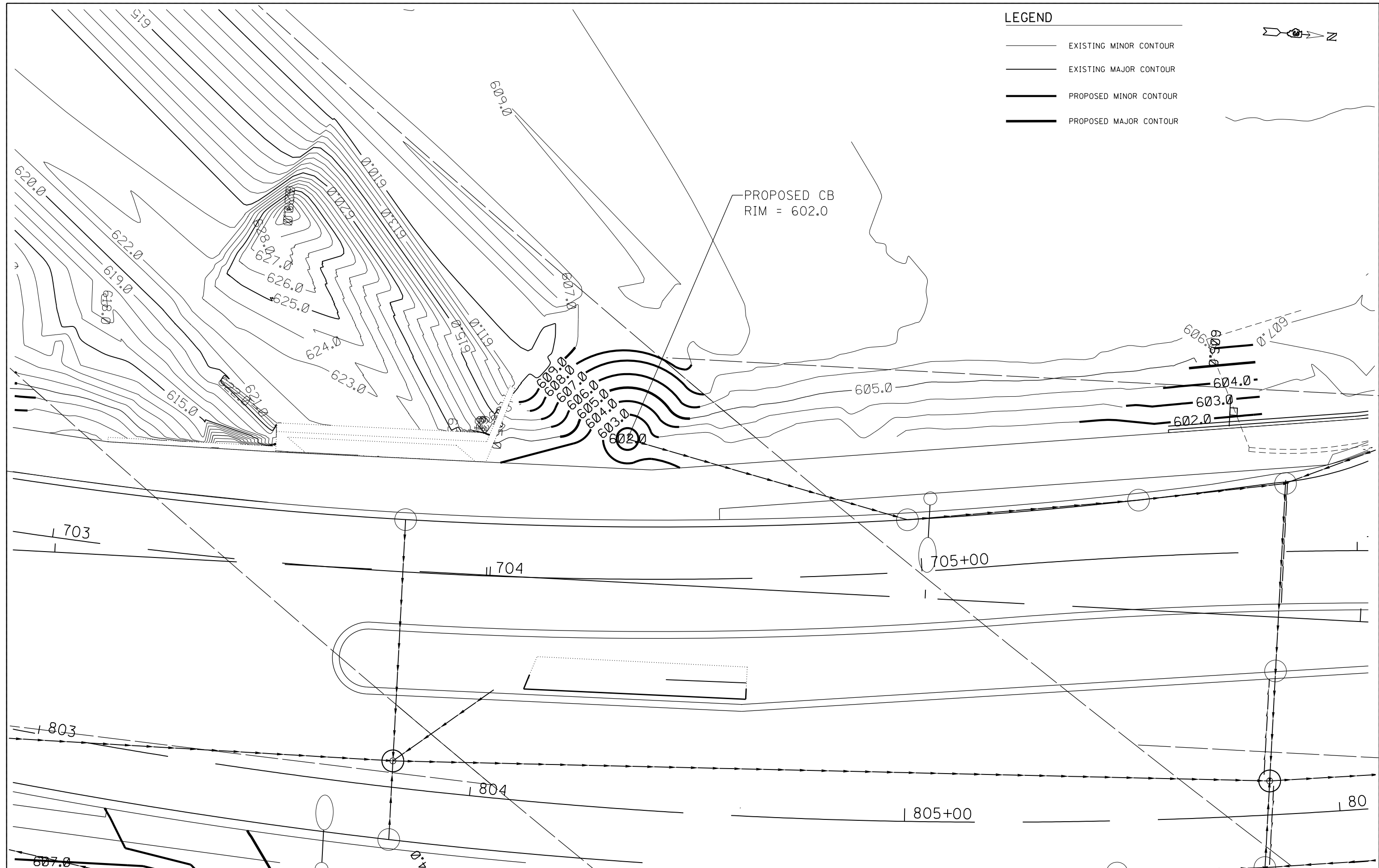
**PROPOSED GRADING
SOUTHWEST QUADRANT RIDGE ROAD /WCL**

SCALE: 1"=10' SHEET 2 OF 4 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	107
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

LEGEND

- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR



FILE NAME = D387695-sh1-Grading2.dgn



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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

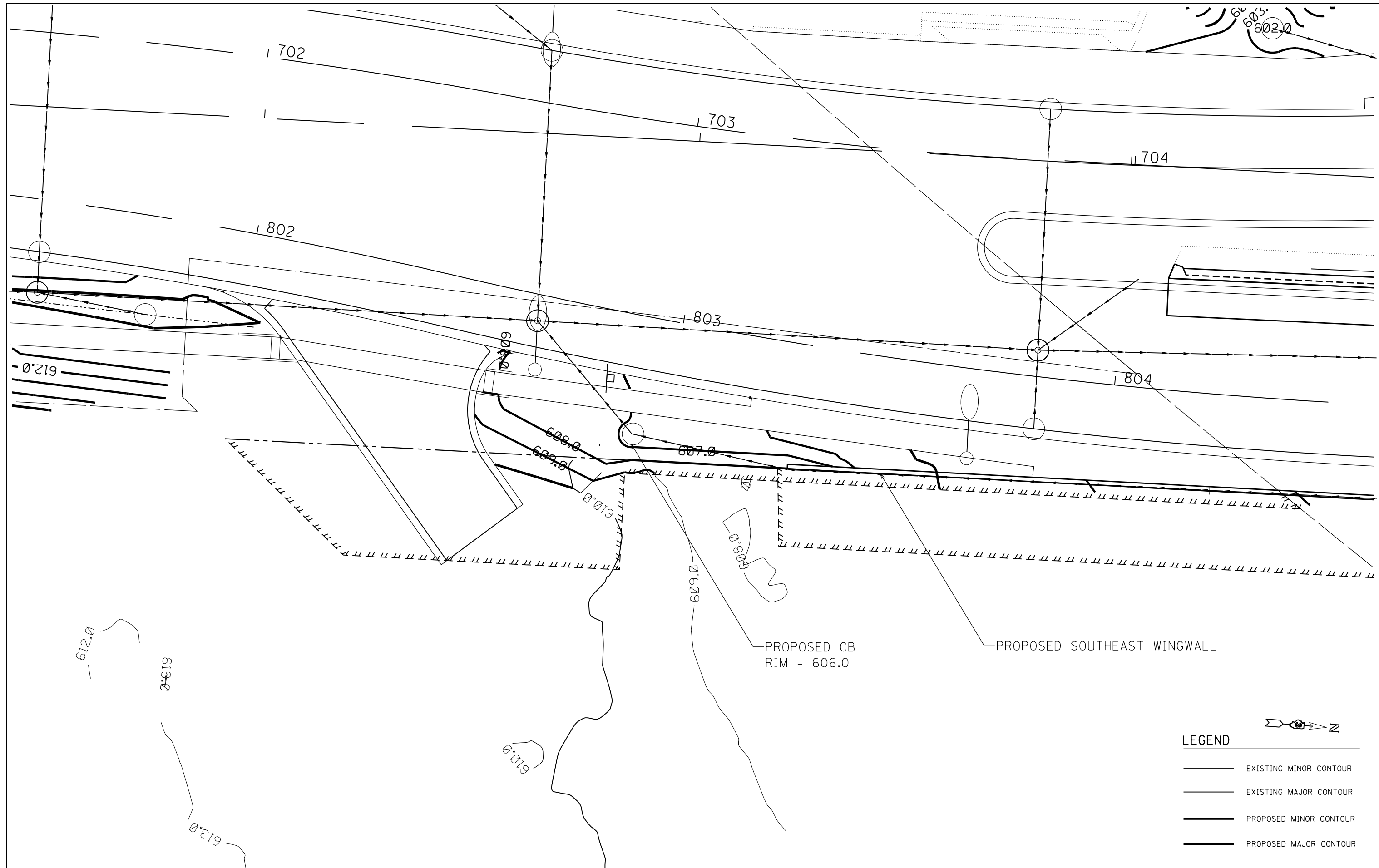
**PROPOSED GRADING
NORTHWEST QUADRANT RIDGE ROAD /WCL**

SCALE: 1"=10' SHEET 3 OF 4 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	108
CONTRACT NO. 87695				

ILLINOIS FED. AID PROJECT

FILE NAME = D387695-shr-Grading3.dgn



LEGEND

	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED MAJOR CONTOUR

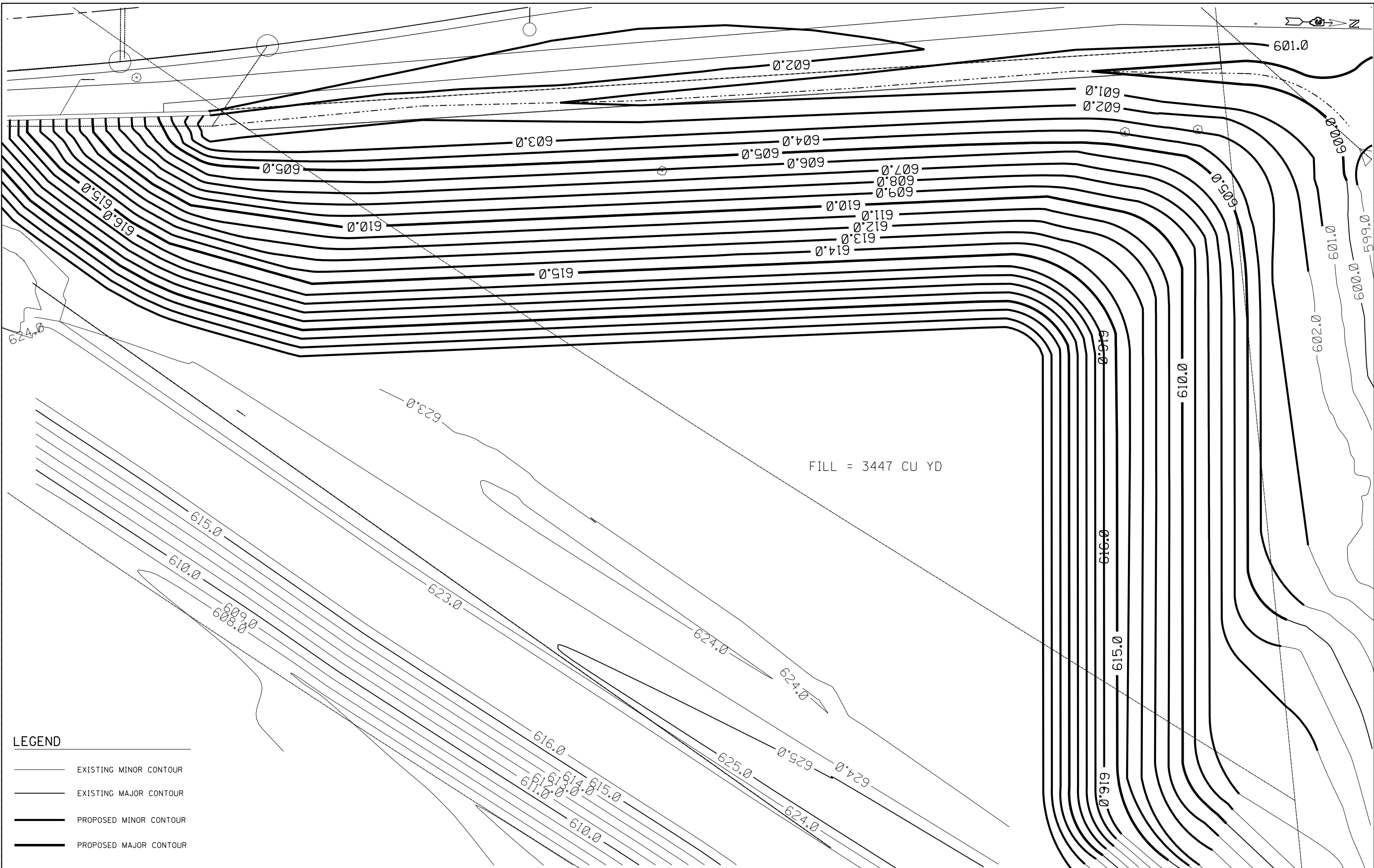


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PLOT SCALE = 20.0000' / in.	CHECKED - KMB	REVISED - _____
PLOT DATE = 6/7/2019	DATE - 05-31-2019	REVISED - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PROPOSED GRADING			
SOUTHEAST QUADRANT RIDGE ROAD /WCL			
SCALE: 1"=10'	SHEET 4 OF 4 SHEETS	STA.	TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	109
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



FILL = 3447 CU YD

LEGEND

	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED MAJOR CONTOUR

FILE NAME = D387695-sh1-Grading4.dgn



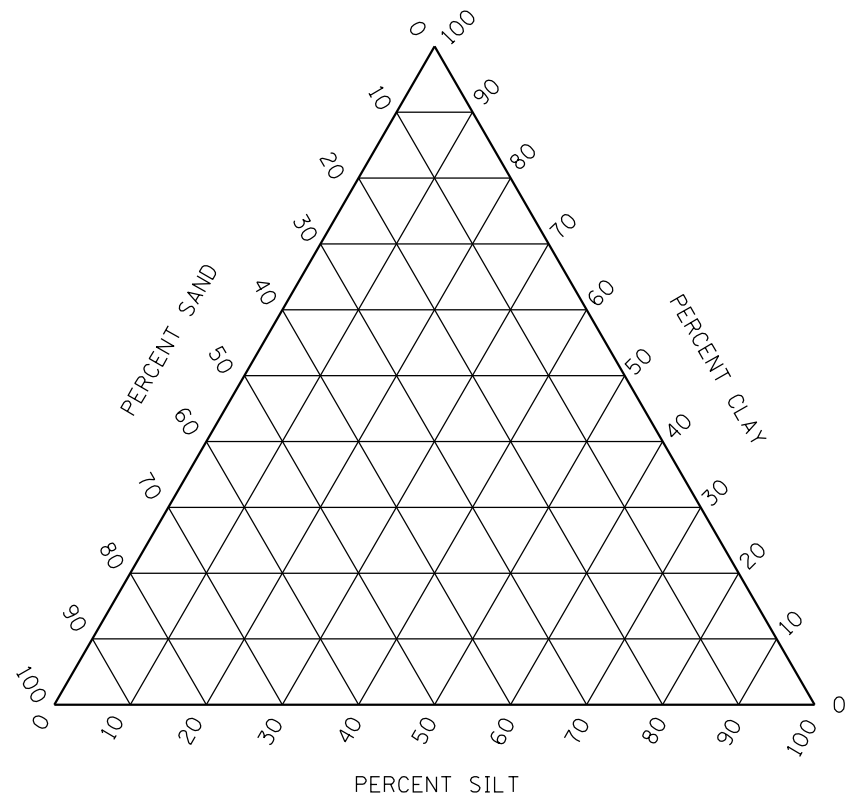
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PLOT DATE = 6/7/2019	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED GRADING
NORTHEAST QUADRANT RIDGE ROAD /WCL**

SCALE: 1"=10' SHEET 1 OF 4 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	110
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



CLASSIFICATION CHART

HORIZON

FILE NAME = D387695-sh1-D3details1.dgn



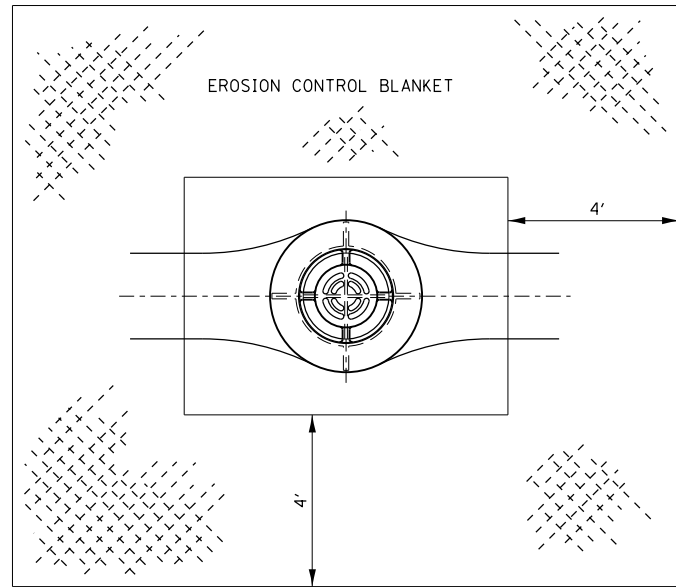
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

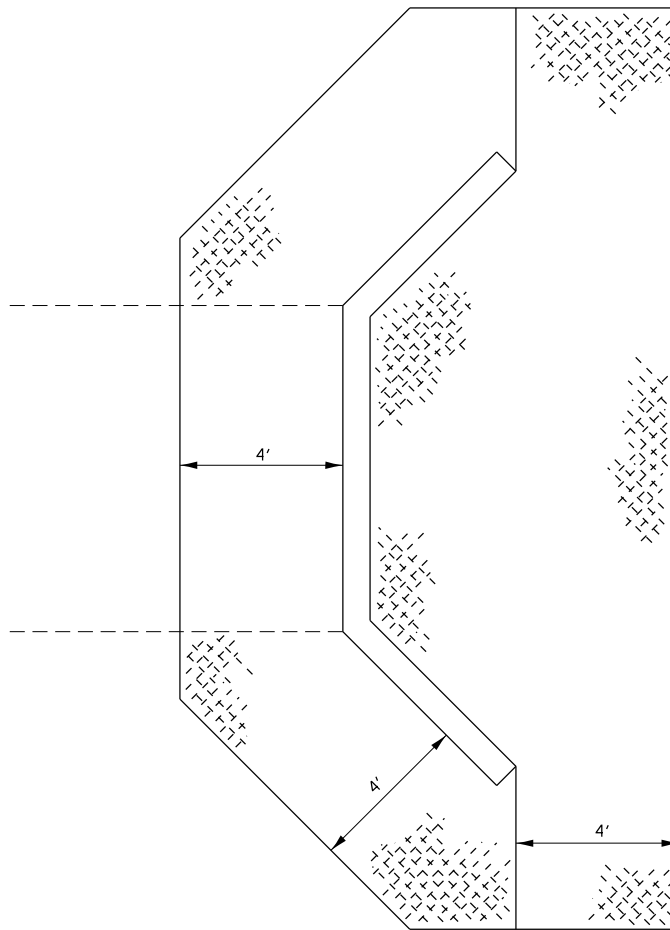
DISTRICT 3 STANDARDS

SHEET OF SHEETS STA. TO STA.

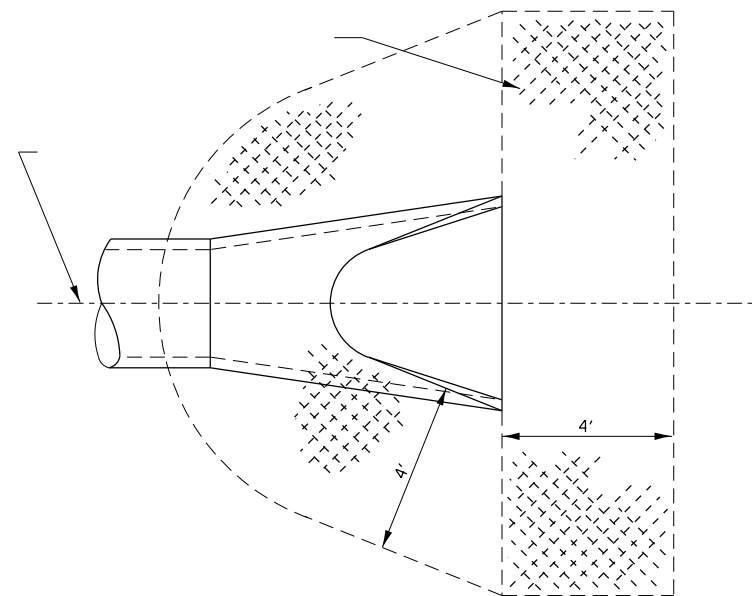
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384	11-00134-02-WR	GRUNDY	239	110A
				CONTRACT NO. 87695
ILLINOIS FED. AID PROJECT				



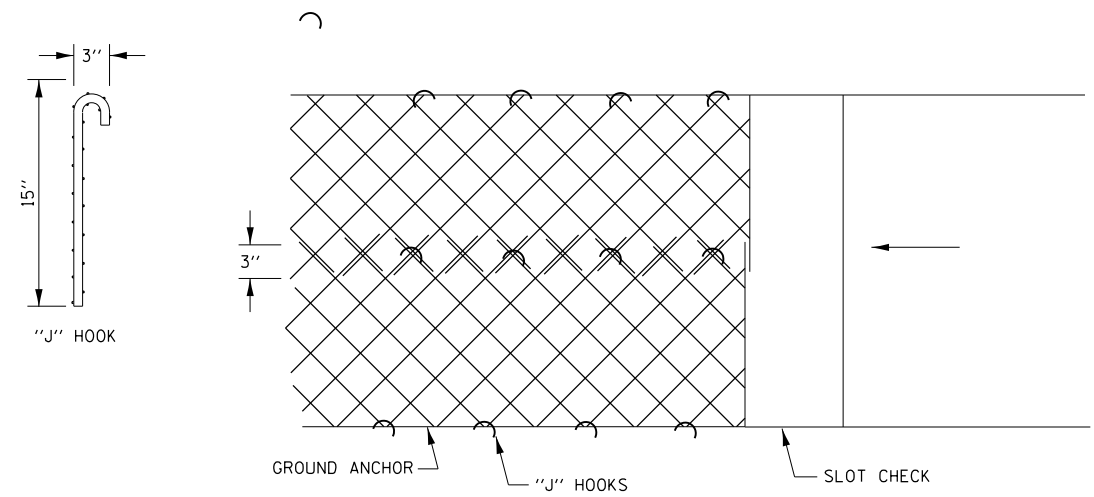
**EROSION CONTROL BLANKET
AT MEDIAN INLET STD. 604101 OR STD. 604106**



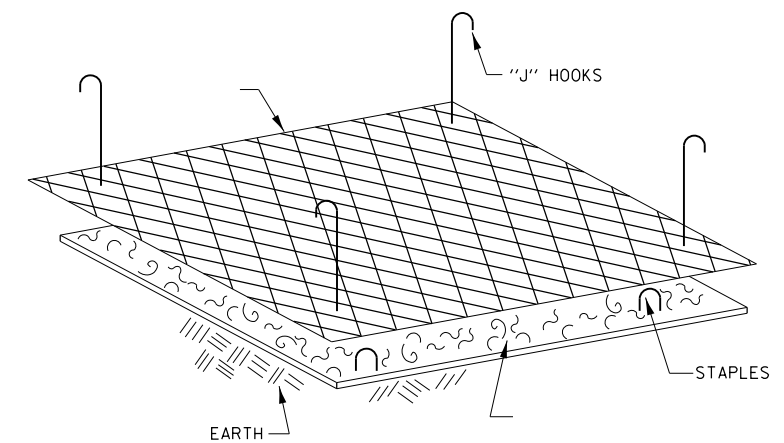
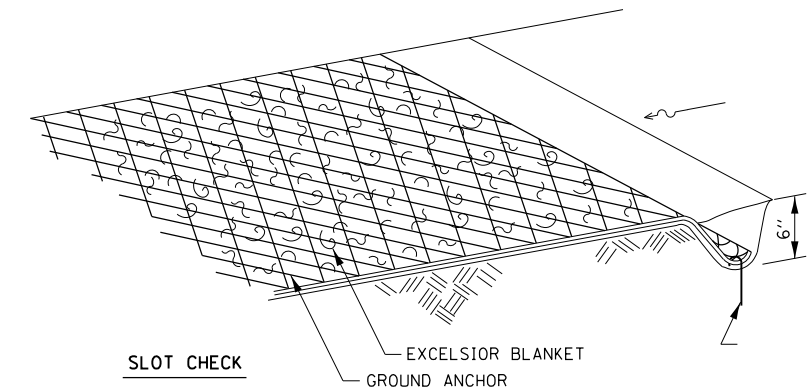
**EROSION CONTROL BLANKET
AT BOX CULVERT END SECTIONS**



**DETAIL OF EROSION CONTROL BLANKET
LINING AROUND END SECTION**



**TOP VIEW
OVERLAPPING OF GROUND ANCHOR**



EXCELSIOR BLANKET (SPECIAL) DETAILS

FILE NAME = D387695-sh1-D3detail1.dgn



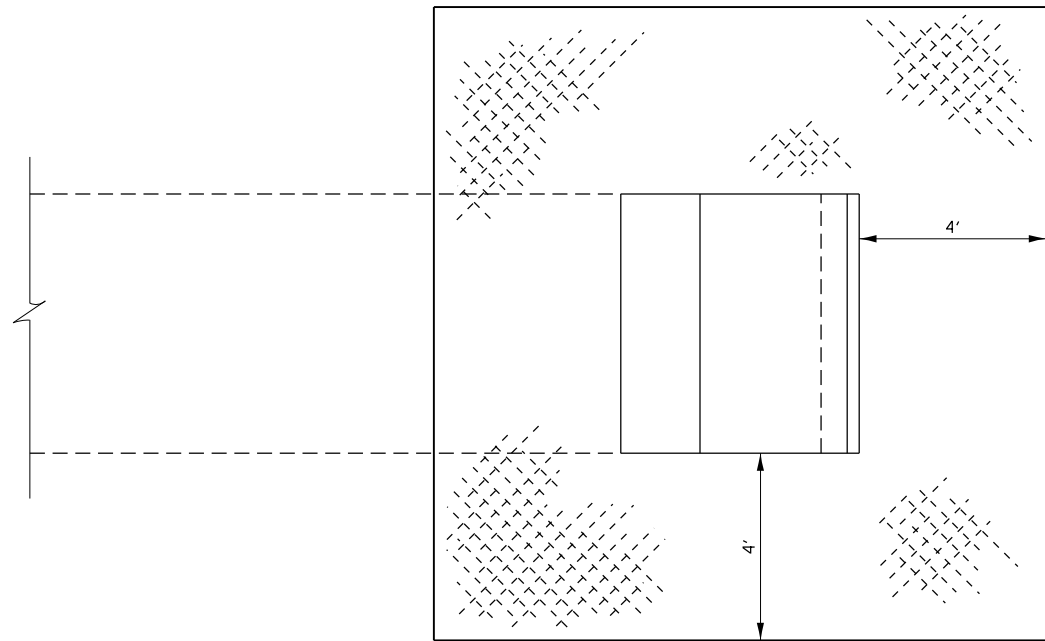
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

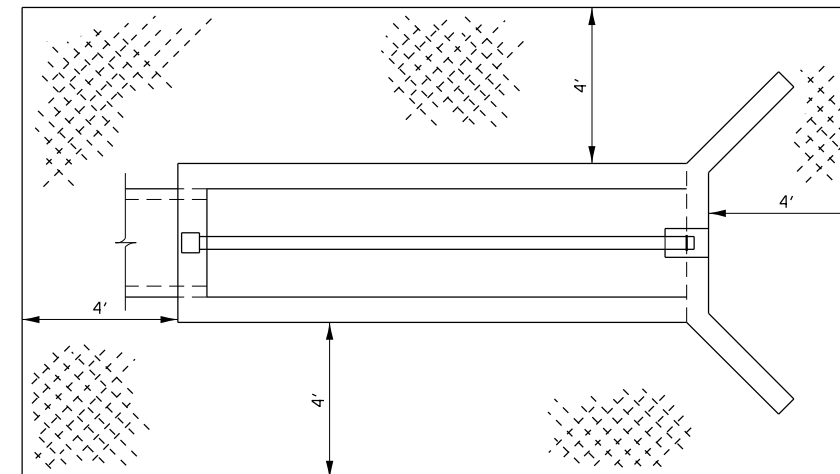
DISTRICT 3 STANDARDS

SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	110B
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



**EROSION CONTROL BLANKET AT PRECAST
BOX CULVERT END SECTIONS**



**EXCELSIOR BLANKET PLACEMENT FOR
INLET BOXES STD. 542501 THROUGH STD. 542546**

FILE NAME = D387695-shf-D3details1.dgn



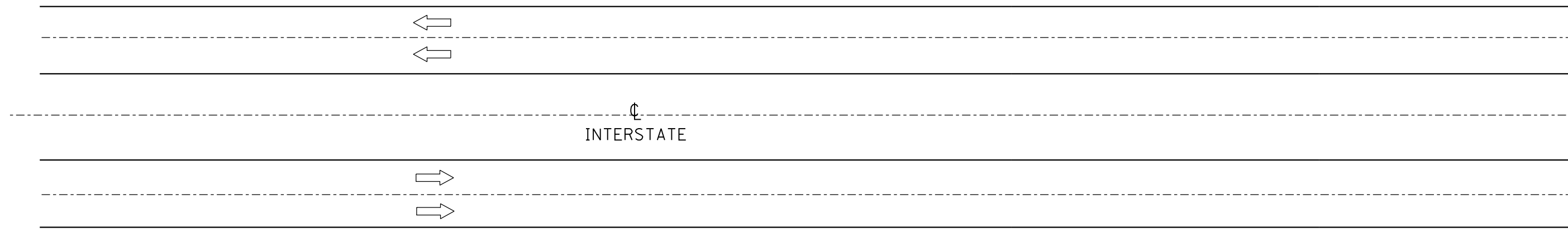
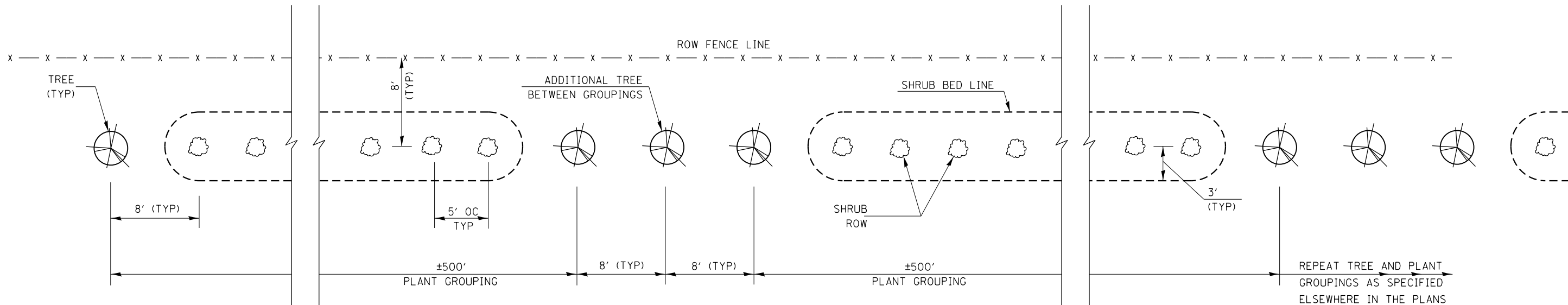
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT 3 STANDARDS

SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	110C
				CONTRACT NO. 87695
ILLINOIS FED. AID PROJECT				



TREE AND SHRUB PLACEMENT DETAIL

NOTES

- FOR E-W ROADWAYS, PLACE PLANTINGS NORTH OF HIGHWAY
FOR N-S ROADWAYS, PLACE PLANTINGS WEST OF HIGHWAY
- PLACEMENT OF SHRUBS AND TREES SHALL NOT INTERFERE WITH
EXISTING PREVIOUSLY DEPARTMENT PLANTED SHRUB OR TREE LINES
- EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER
- USE EXISTING SNOW FENCE LOCATIONS AS A GUIDE FOR PROPOSED
PLANTING LOCATIONS
- ONE ±500' PLANT GROUPING SHALL CONSIST OF 2 TREES AND
APPROXIMATELY 97 SHRUBS
- ONLY ONE TYPE OF SHRUB SHALL BE USED PER EACH ±500' PLANT
GROUPING

NOT TO SCALE

FILE NAME = D387695-shr-D3details1.dgn



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	DRAWN - JNH	REVISED -
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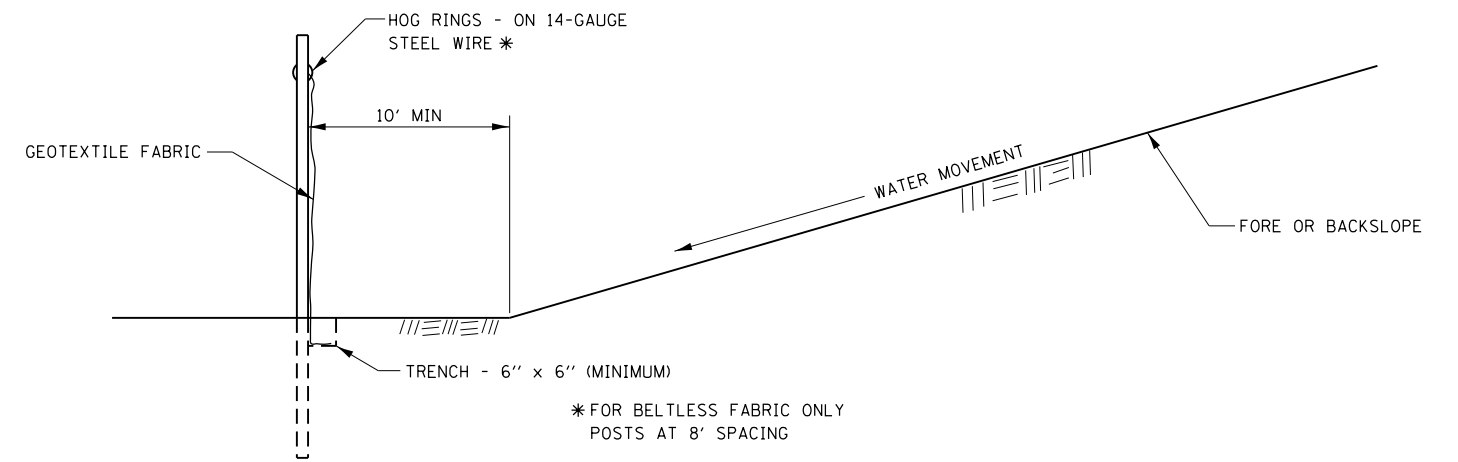
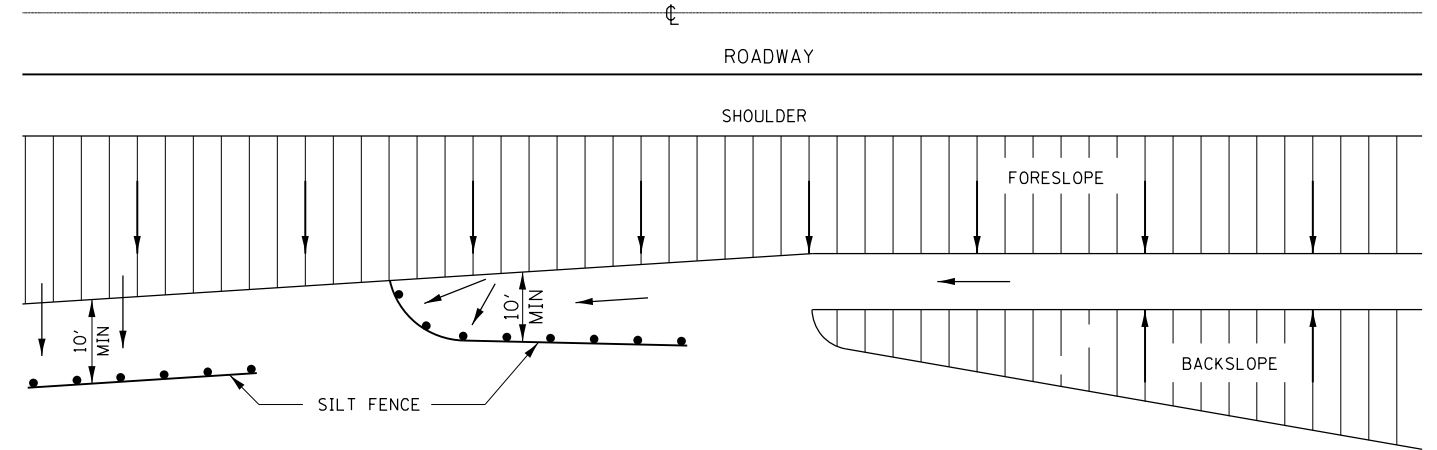
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT 3 STANDARDS

SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	1100
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

FILE NAME = D387695-shf-D3details1.dgn



DETAILS OF SILT FENCE

**EROSION CONTROL DETAILS
FOR SILT FENCE**



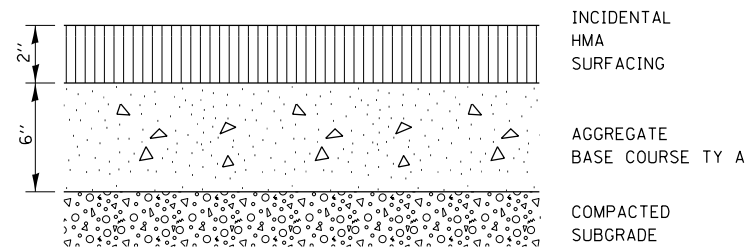
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

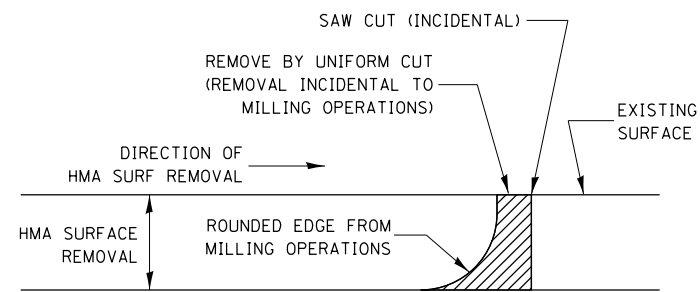
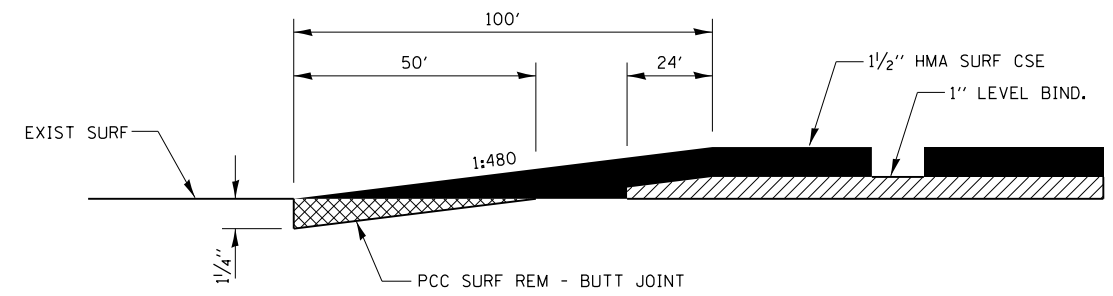
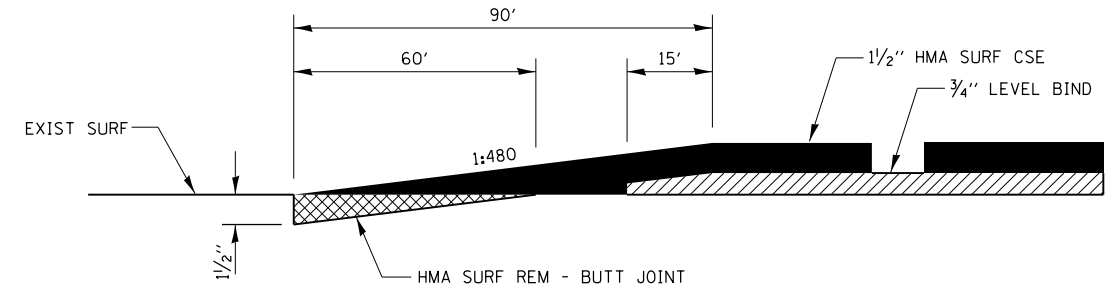
DISTRICT 3 STANDARDS

SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	110E
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

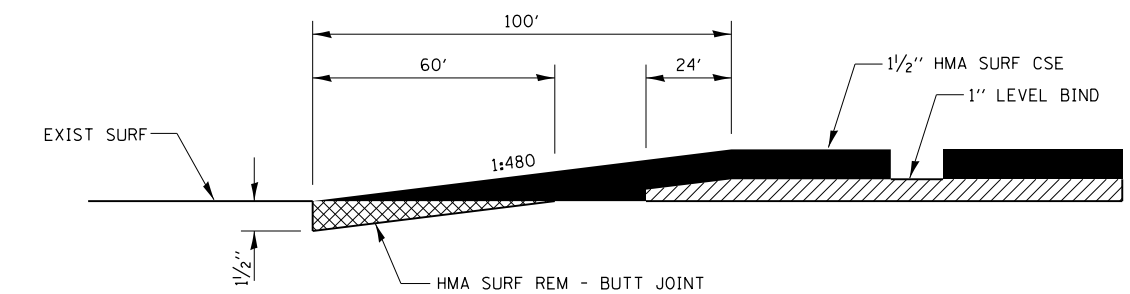


BICYCLE PATH OR SHARED-USE TRAIL CROSS SECTION



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

HMA DETAIL AT BUTT JOINTS



FILE NAME = D387695-shf-D3details2.dgn



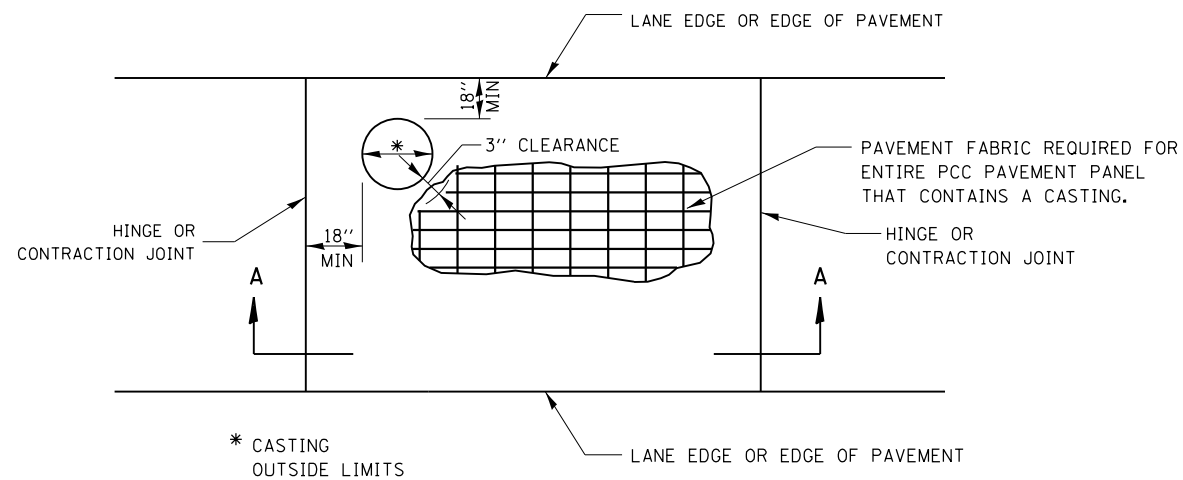
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	DATE - 05-31-2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

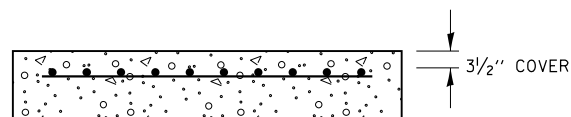
DISTRICT 3 STANDARDS

SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	110F
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



* CASTING OUTSIDE LIMITS



SECTION A-A

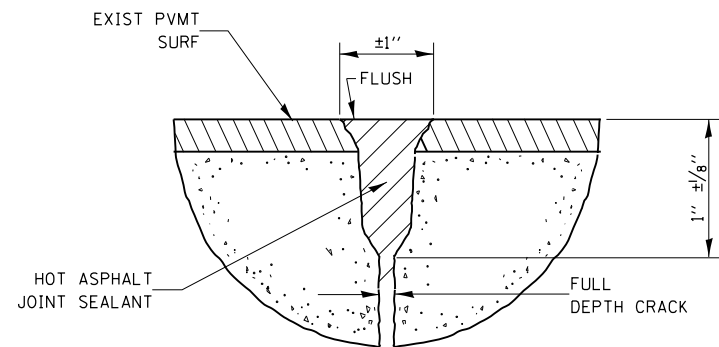
GENERAL NOTES

THE CASTING SHALL BE SET TO GRADE, ANCHORED, AND INCORPORATED INTO THE PCC PAVEMENT CONSTRUCTION. SEPARATE PAVEMENT BLOCKOUTS WILL NOT BE ALLOWED.

SEE STD 420701 FOR ADDITIONAL PAVEMENT FABRIC DETAILS.

PAVEMENT FABRIC WILL BE PAID FOR SEPARATELY. THE QUANTITY OF PAVEMENT FABRIC WILL BE THE COMPUTED SURFACE AREA OF THE PCC PAVEMENT PANEL IN WHICH THE PAVEMENT FABRIC IS INSTALLED. NO DEDUCTION WILL BE MADE FOR THE CASTING AREA.

CASTINGS IN PCC PAVEMENT



ROUTING & SEALING JOINTS

(CENTERLINE & TRANSVERSE PATCH BOUNDARIES)

FILE NAME = D387695-sh1-D3details2.dgn



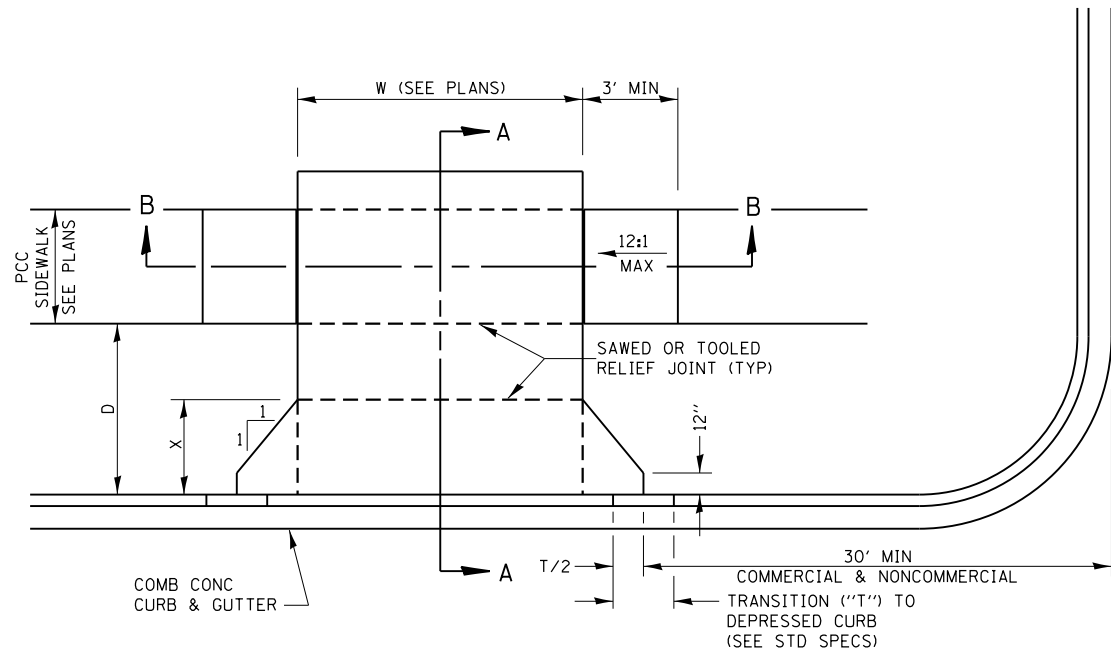
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	DRAWN - JNH	REVISED -
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PLOT DATE = 8/23/2019	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

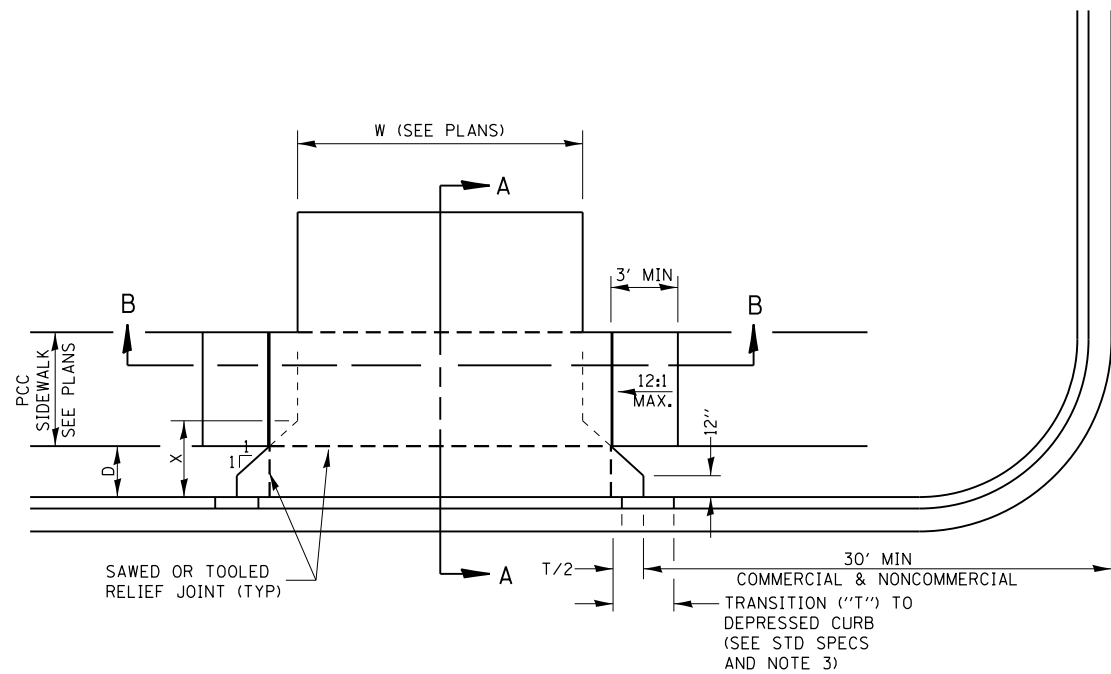
DISTRICT 3 STANDARDS

SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	110G
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



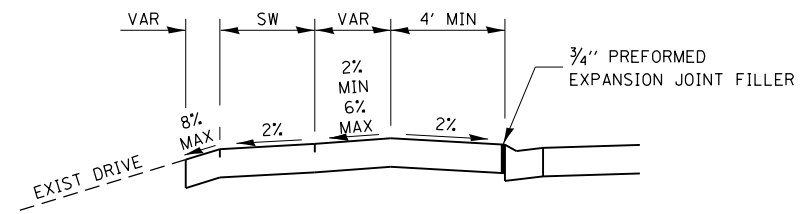
CASE I (D ≥ X)



CASE I (D < X)

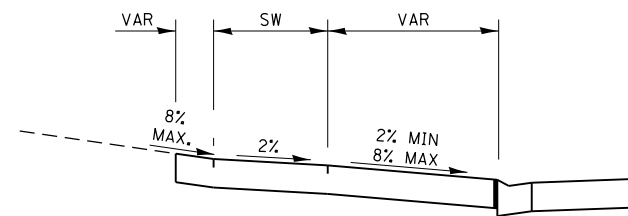
GENERAL NOTES:

1. X = 7' (NON-COMMERCIAL) X = 15' (COMMERCIAL)
2. COST OF EXPANSION JOINTS AND RELIEF JOINTS SHALL BE INCLUDED IN THE COST OF THE PCC DRIVEWAY PAVEMENT.
3. AS THE DIMENSION "D" APPROACHES ZERO, THE TRANSITION TO DEPRESSED CURB SHALL BE NO STEEPER THAN 12:1

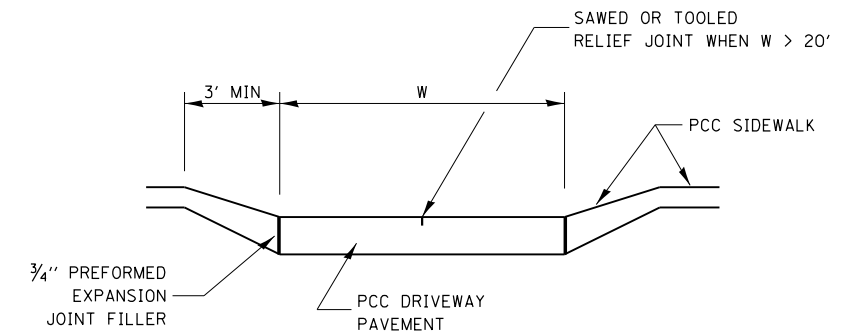


DEPRESSED ENTRANCE *
SECTION A-A

*(SEE X-SECTIONS FOR ENTRANCE PROFILE.)

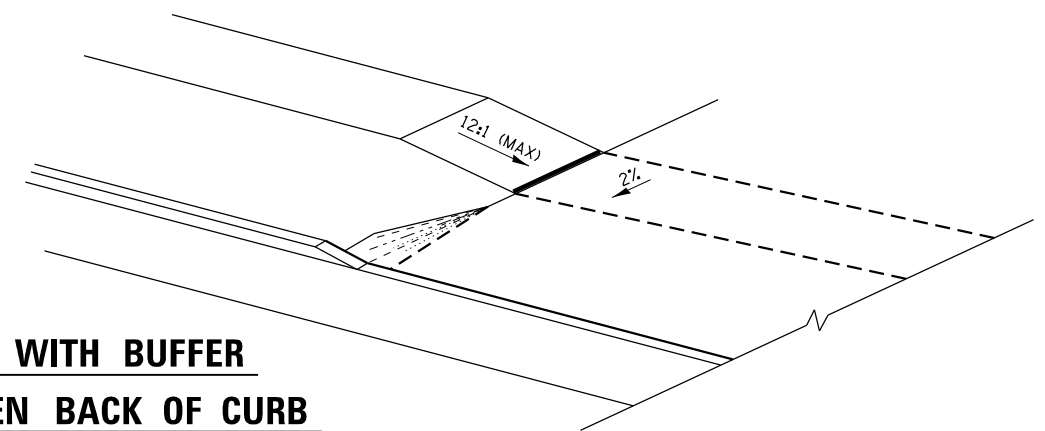


ELEVATED ENTRANCE *
SECTION A-A

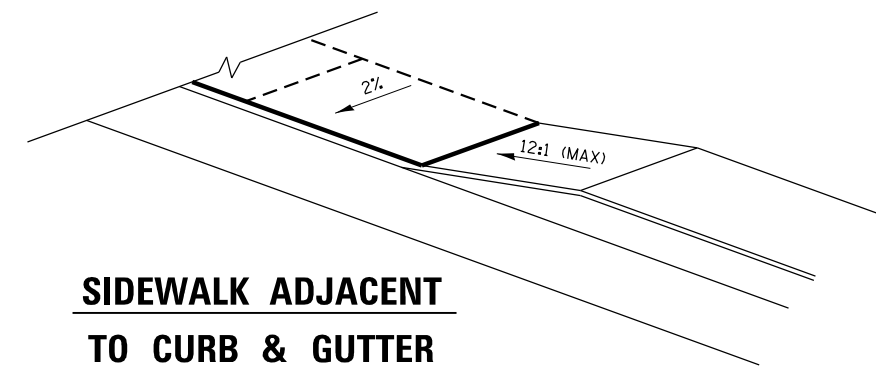


SECTION B-B

SIDEWALK WITH BUFFER
AREA BETWEEN BACK OF CURB



SIDEWALK ADJACENT
TO CURB & GUTTER



FILE NAME = D387695-sh1-D3detalls2.dgn



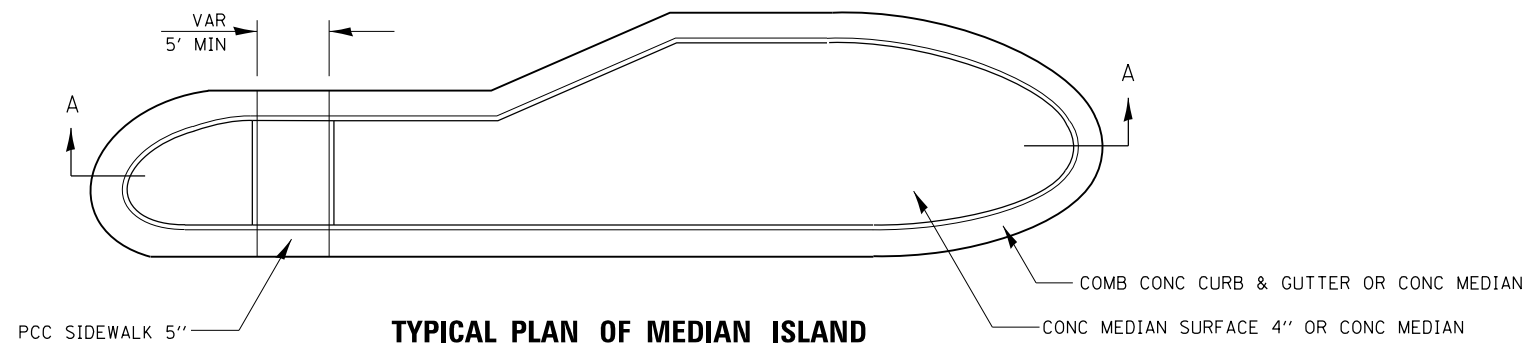
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DRAWN - JNH	REVISED -	
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PLOT DATE = 8/23/2019	DATE - 05-31-2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

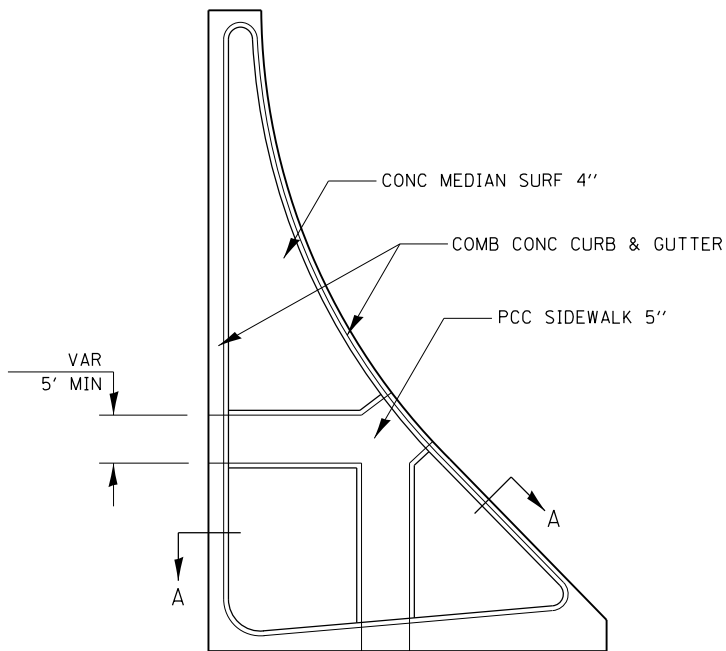
DISTRICT 3 STANDARDS

SHEET OF SHEETS STA. TO STA.

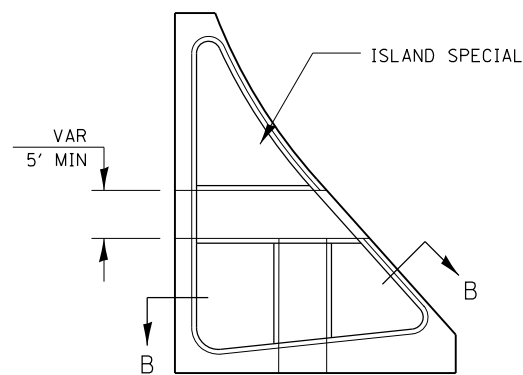
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	110H
CONTRACT NO. 87695			ILLINOIS FED. AID PROJECT	



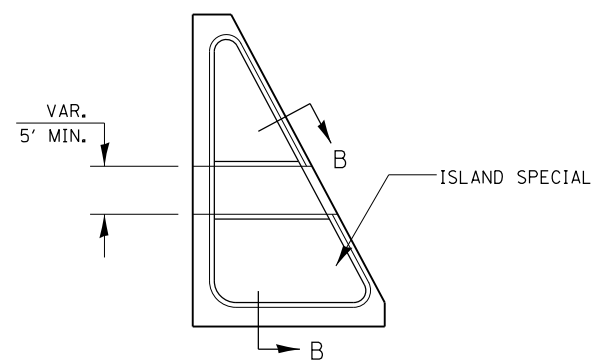
TYPICAL PLAN OF MEDIAN ISLAND



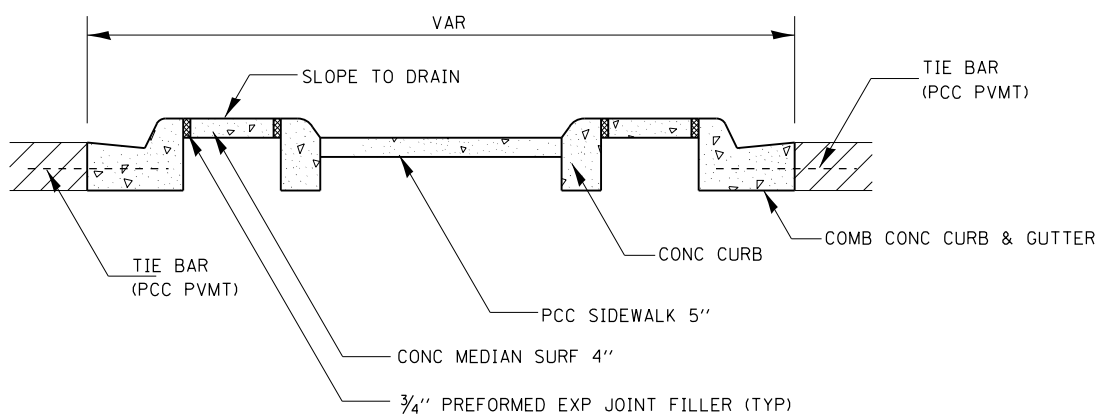
LARGE ISLAND
(FREE FLOW DESIGN)



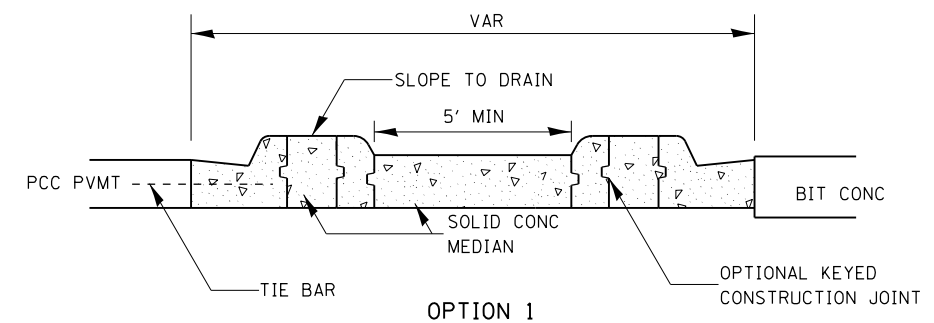
INTERMEDIATE ISLAND
(FOR RIGHT TURN LANE DESIGN)



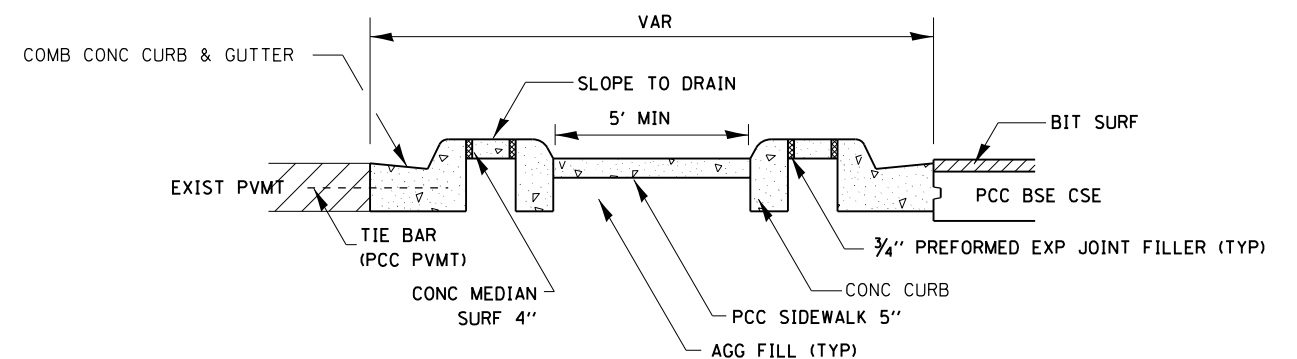
SMALL ISLAND
(FOR TYPICAL DESIGN)



SECTION A-A



OPTION 1



OPTION 2

SECTION B-B

GENERAL NOTES

SEE STANDARDS 606001, 606301, 424031, AND PLAN SHEETS FOR STATION, OFFSETS, RADII, DIMENSIONS, AND DETAILS NOT SHOWN.

THE SIDEWALK SHOULD DRAIN TO THE LOW SIDE OF THE ISLAND. IF NECESSARY THE SIDEWALK SHALL BE SLOPED TO DRAIN AT A MAXIMUM 2% GRADE.

SEE THE PLAN SHEETS FOR THE TYPE OF CURB & GUTTER TO BE USED ON ISLANDS.

THE SIDEWALK SHOULD NOT BE CLOSER THAN 3' FROM THE CORNER OF THE ISLAND.

KEYED LONGITUDINAL CONSTRUCTION JOINTS SHALL BE CONSTRUCTED WITHOUT TIE BARS.

MEDIANS AND LARGE ISLANDS SHALL CONSIST OF PCC SIDEWALK 5", CONCRETE MEDIANS SURFACE 4", CONCRETE CURB, AND COMBINATION CONCRETE CURB & GUTTER, TYPE M OR B OR THE SIZE SPECIFIED. MEDIAN ISLAND CAN ALSO BE SOLID CONCRETE MEDIANS.

LOCATIONS, LAYOUTS, AND WIDTHS OF THE FLUSH SIDEWALK AREA, SHALL BE DETERMINED BY THE DESIGNER AND SHOWN ON THE PLANS.

THE INTERMEDIATE AND SMALL ISLANDS WILL BE MEASURED FOR PAYMENT FROM EOP TO EOP USING EITHER OPTION 1 OR OPTION 2, AS DIRECTED BY THE ENGINEER, AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQ FT FOR CONCRETE MEDIAN (SPECIAL), WHICH SHALL INCLUDE THE CURB, COMBINATION CURB & GUTTER, SIDEWALK, AGGREGATE FILL, CONCRETE MEDIAN SURFACE, AND SOLID CONCRETE MEDIAN.

FILE NAME = D387695-sh1-D3details2.dgn



USER NAME = \$USER*	DESIGNED - JNH	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN - JNH	REVISED -
PLOT DATE = 8/23/2019	CHECKED - KMB	REVISED -
	DATE - 05-31-2019	REVISED -

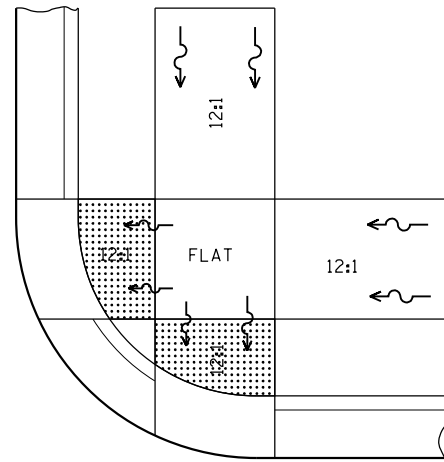
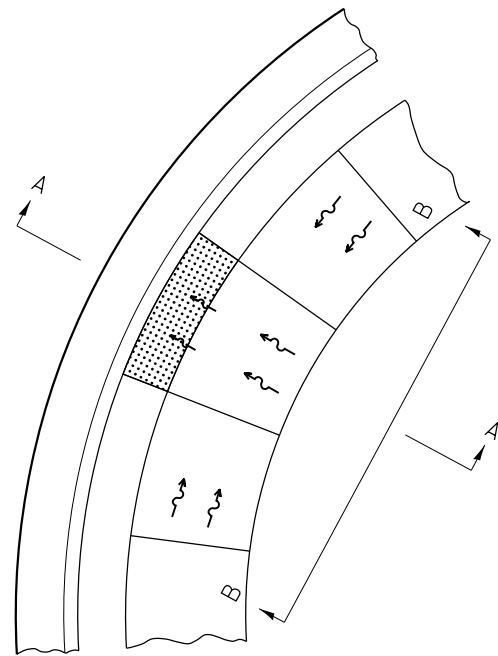
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 3 STANDARDS

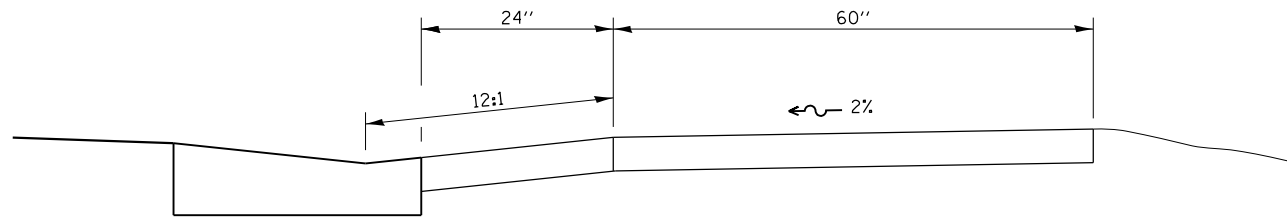
SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	1101
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

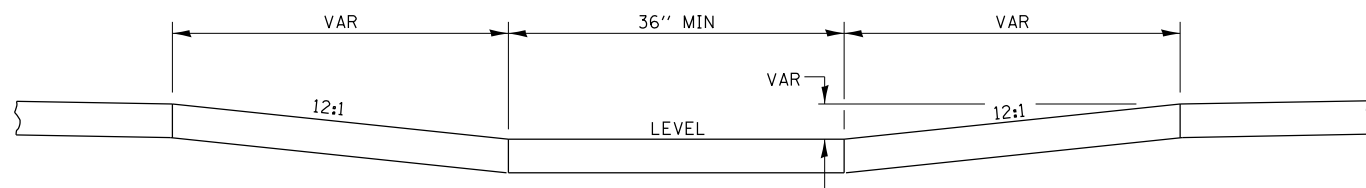
424-28



SEE STANDARD 424001 FOR SIDE FLARE
DETAIL & SEE PLANS FOR RAMP TYPE.



SECTION A-A



SECTION B-B

NOTES:

THIS DETAIL TO BE USED IN CONJUNCTION WITH STATE STANDARD 424001.

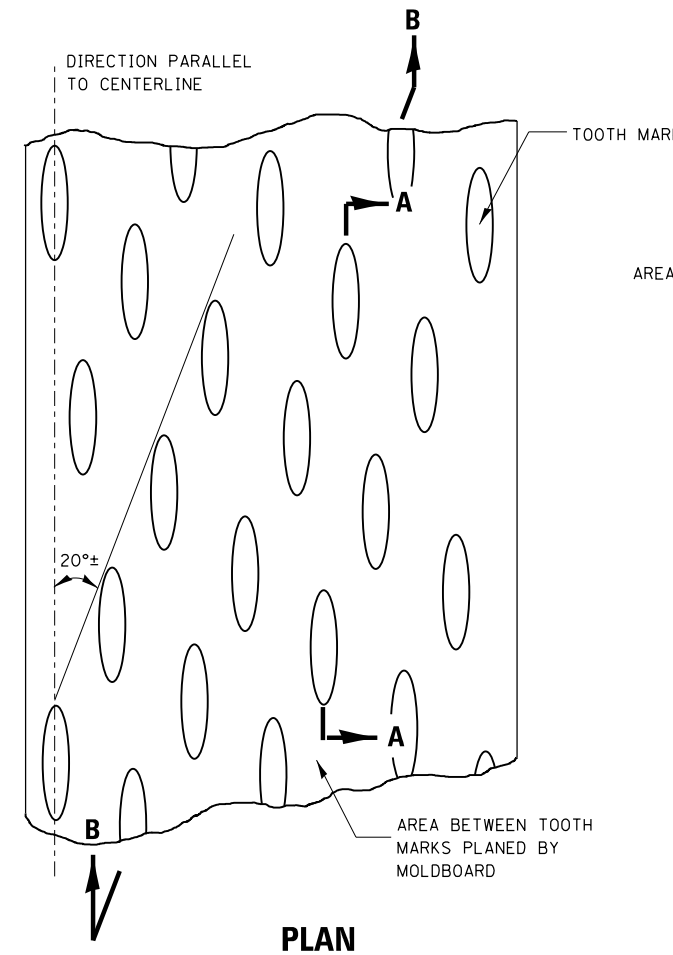
THE MAXIMUM ALLOWABLE CROSS SLOPE FOR SIDEWALK IS 2%.

THE MAXIMUM ALLOWABLE SIDEWALK GRADE IS 8%.

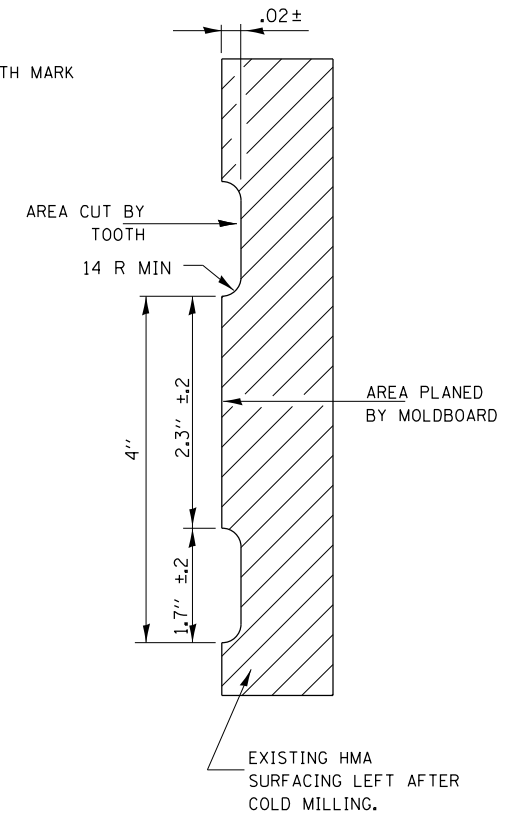
IF SPACE LIMITATIONS PROHIBIT THE USE OF THE 12:1 SLOPE, THEN SLOPES BETWEEN 10:1 AND 12:1 ARE PERMITTED FOR A MAXIMUM RISE OF 6". SLOPES 8:1 AND 10:1 ARE ALLOWED FOR A MAXIMUM RISE OF 3". SLOPES STEEPER THAN 8:1 ARE NOT PERMITTED.

THE DEPRESSED CURB IS NOT STANDARD. THE RISE IS 1/2" INSTEAD OF 1 1/2".

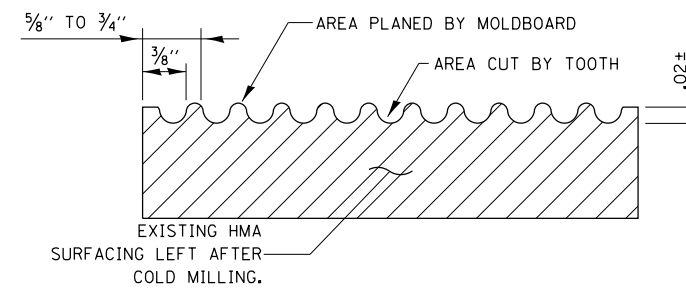
ADA SIDEWALK ACCESSIBILITY RAMP DETAIL



PLAN



SECTION A-A



SECTION B-B
PROJECTED PERPENDICULAR
TO CENTERLINE

REQUIRED COLD MILLED SURFACE TEXTURE

1. COLD MILLING SHALL CONSIST OF TWO PROCESSES: CUTTING WITH CARBIDE TEETH MOUNTED ON A ROTATING DRUM, AND PLANING WITH A MOLDBOARD MOUNTED IMMEDIATELY BEHIND THE CUTTING DRUM.
2. OTHER SIMILAR PATTERNS WILL BE ACCEPTABLE IF THEY CONSIST OF A SMOOTH, FLAT PLANED SURFACE INTERSPERSED WITH A PATTERN OF DISCONTINUOUS LONGITUDINAL STRIATIONS.

FILE NAME = D387695-sh1-D3details2.dgn



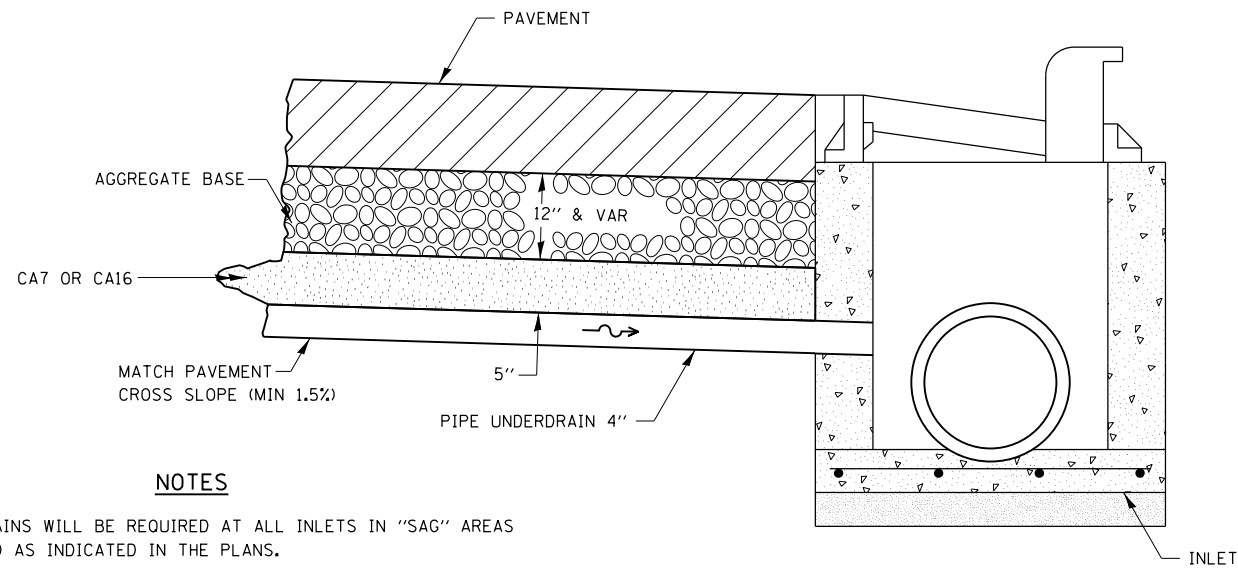
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PLOT SCALE = 100.0000' / 1" =	DRAWN - JNH	REVISED -
PLOT DATE = 8/23/2019	CHECKED - KMB	REVISED -
	DATE - 05-31-2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 3 STANDARDS

SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	110J
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



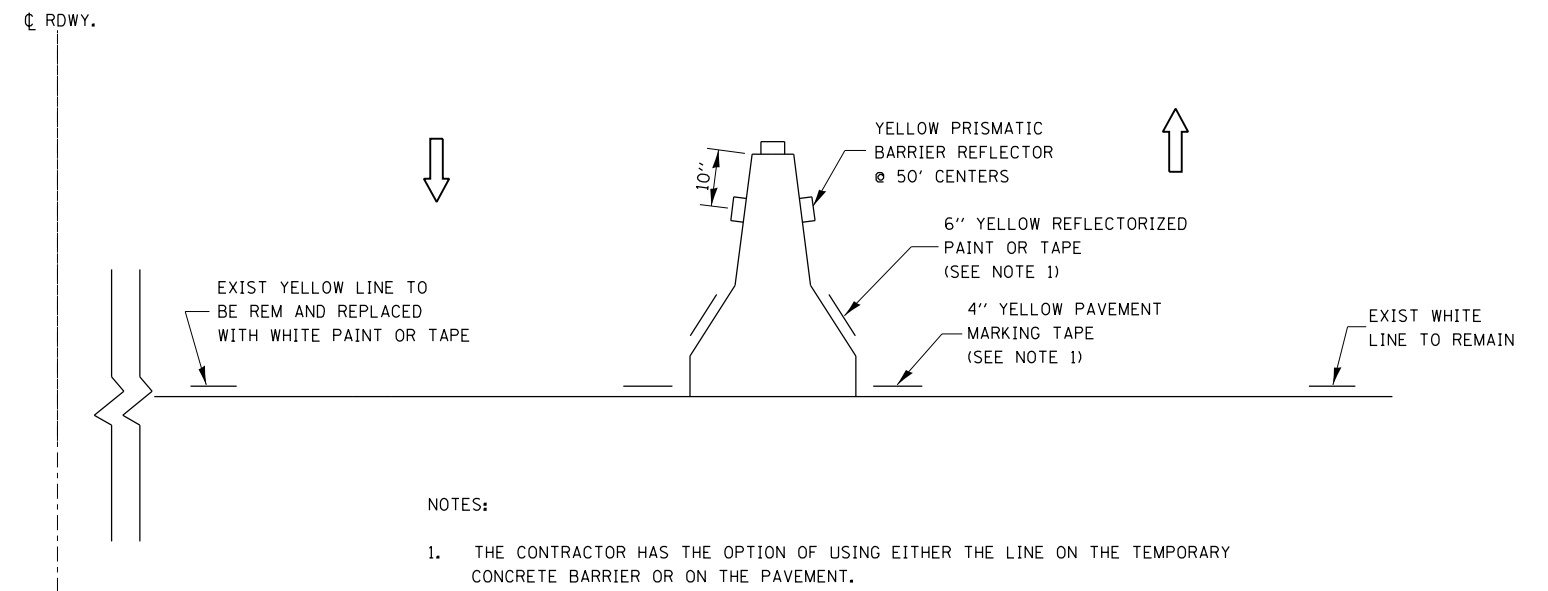
NOTES

DRAINS WILL BE REQUIRED AT ALL INLETS IN "SAG" AREAS AND AS INDICATED IN THE PLANS.

THIS WORK SHALL BE COMPLETED ACCORDING TO SECTION 601 OF THE STANDARD SPECIFICATIONS.

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR PIPE UNDERDRAINS OF THE DIAMETER SPECIFIED WHICH PRICE SHALL INCLUDE THE CA7 OR CA16 AND THE CONNECTION TO THE INLET.

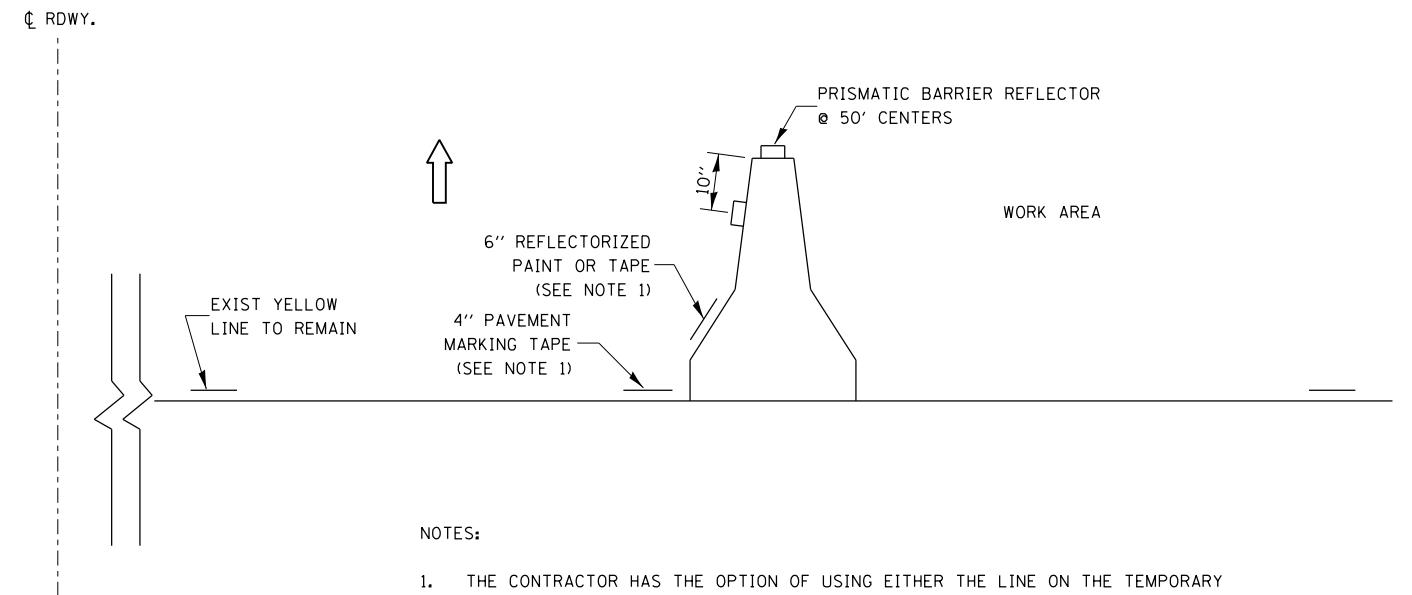
DRAIN FOR AGGREGATE BASES IN URBAN AREAS



NOTES:

1. THE CONTRACTOR HAS THE OPTION OF USING EITHER THE LINE ON THE TEMPORARY CONCRETE BARRIER OR ON THE PAVEMENT.
2. THE COST OF THE REFLECTORS AND THE BARRIER/PAVEMENT MARKING LINE IS INCLUDED IN THE COST OF THE TEMPORARY CONCRETE BARRIER.

TRAFFIC CONTROL DETAIL FOR TEMPORARY CONCRETE BARRIER



NOTES:

1. THE CONTRACTOR HAS THE OPTION OF USING EITHER THE LINE ON THE TEMPORARY CONCRETE BARRIER OR ON THE PAVEMENT.
2. THE COLOR OF THE REFLECTORS AND PAVEMENT/BARRIER MARKING LINE WILL VARY WITH STAGING AND SHALL MATCH THE EXISTING LINE IN THE WORK AREA.
3. THE COST OF THE REFLECTORS AND THE PAVEMENT/BARRIER MARKING LINE IS INCLUDED IN THE COST OF THE TEMPORARY CONCRETE BARRIER.

TRAFFIC CONTROL DETAIL FOR TEMPORARY CONCRETE BARRIER

FILE NAME = D387695-sh1-D3details3.dgn



USER NAME = \$USER*	DESIGNED - JNH	REVISED -
	DRAWN - JNH	REVISED -
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PLOT DATE = 8/23/2019	DATE - 05-31-2019	REVISED -

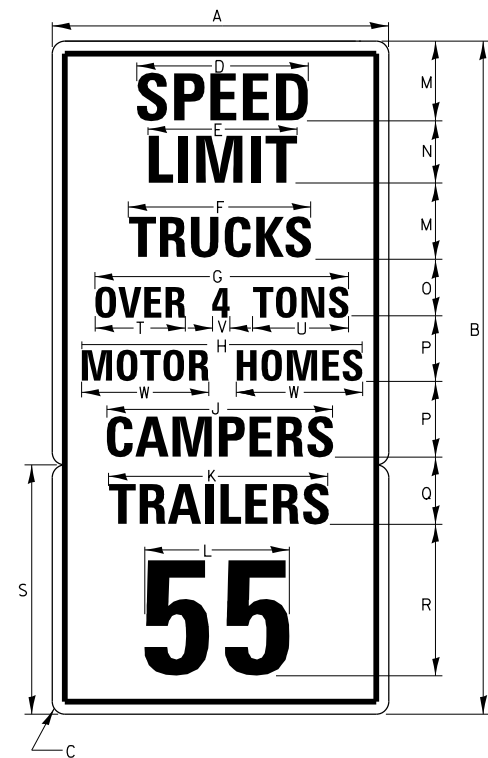
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT 3 STANDARDS

SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	110K
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

**ILLINOIS STANDARD
R2-I104a**



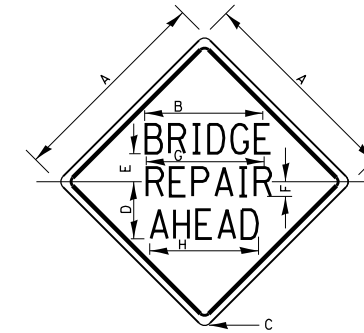
COLOR: LEGEND AND BORDER BACKGROUND BLACK NON-REFLECTORIZED WHITE REFLECTORIZED

SIGN SIZE	DIMENSIONS										
	A	B	C	D	E	F	G	H	J	K	
48 x 96	48.0	96.0	3.0	28.3	22.1	24.5	29.0	32.2	29.5	30.4	

DIMENSIONS											
L	M	N	O	P	Q	R	S	T	U	V	W
23.2	11.0	9.0	7.0	10.0	8.0	22.0	36.0	10.9	10.5	8.5	16.1

SIGN SIZE	SERIES LINES								MARGIN	BORDER	BLANK STD
	1	2	3	4	5	6	7	8			
	48 x 96	6E	6E	6C	4C	6B	6C	6C			

**ILLINOIS STANDARD
W21-I102**

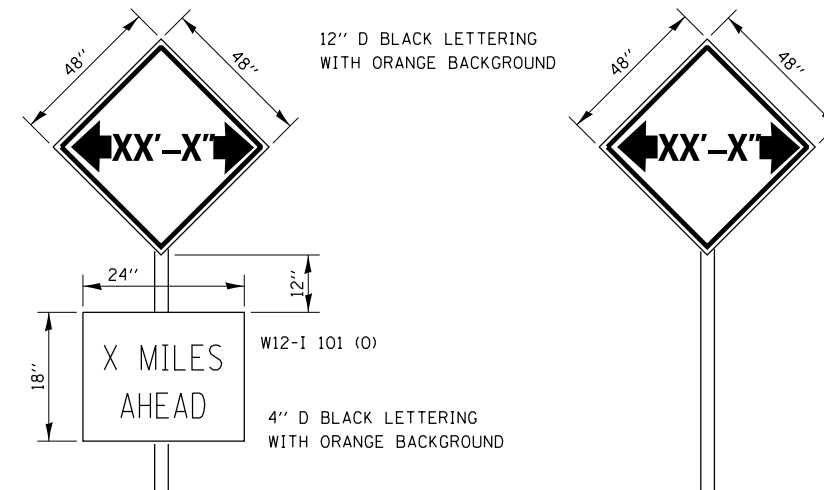


COLOR: LEGEND AND BORDER BACKGROUND BLACK NON-REFLECTORIZED ORANGE REFLECTORIZED

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
36 x 36	36.0	22.3	2.25	10.8	5.6	3.0	21.9	20.7
48 x 48	48.0	26.0	3.0	14.5	7.5	3.5	25.5	24.1

SIGN SIZE	SERIES LINES			MARGIN	BORDER	BLANK STD
	1	2	3			
	36 x 36	5C	5C			
48 x 48	7C	7C	7C	0.8	1.2	B4-48D

ALL DIMENSIONS IN INCHES.



TO BE POST MOUNTED AS SHOWN ELSEWHERE IN THE PLANS.

COST OF SUPPLYING, INSTALLING, MAINTAINING AND REMOVING WIDTH RESTRICTION SIGNS SHALL BE INCLUDED IN THE COST OF THE TRAFFIC CONTROL AND PROTECTION PAY ITEMS.

WIDTH RESTRICTION SIGNING DETAILS

FILE NAME = D387695-shr-D3details4.dgn



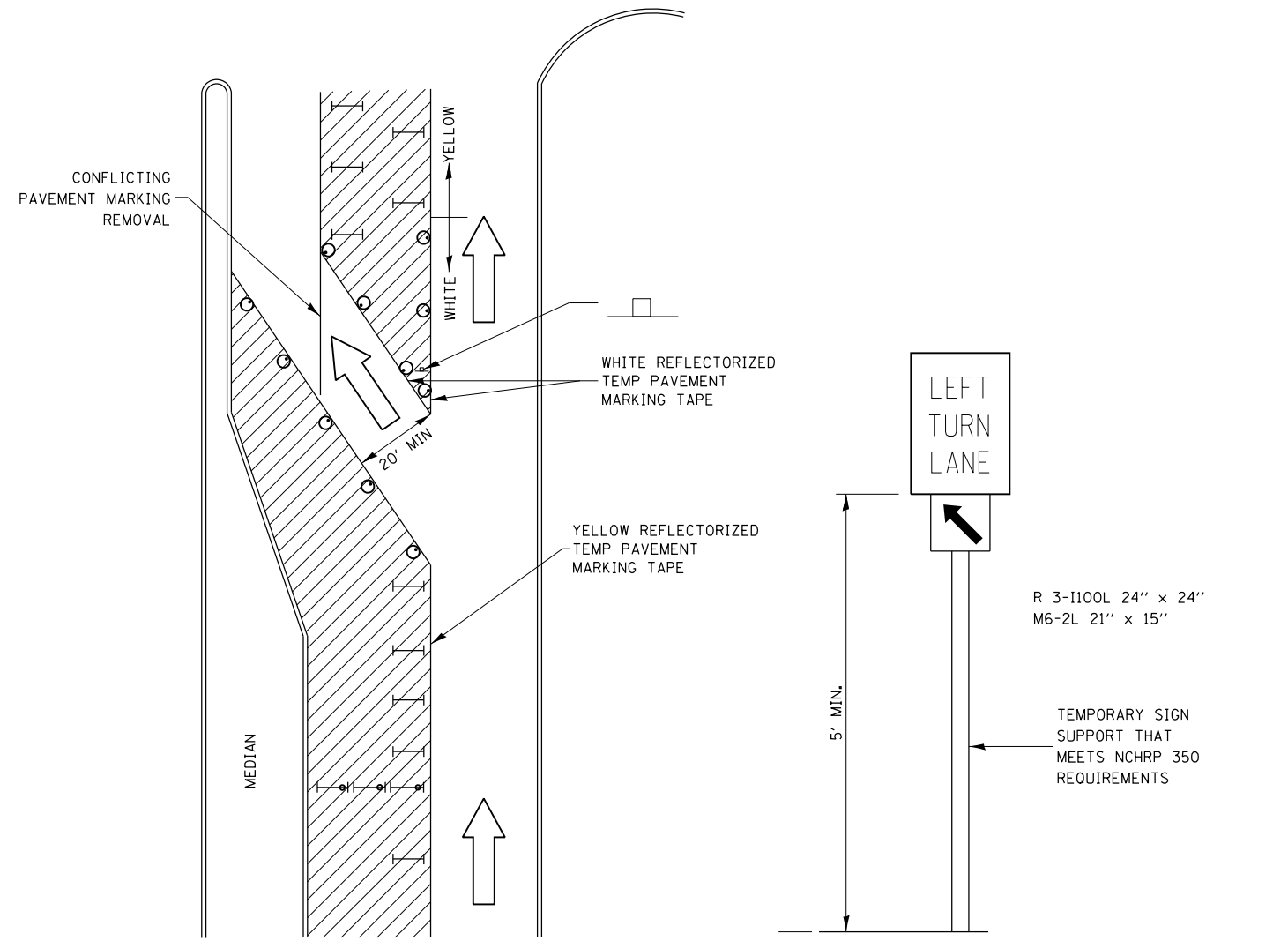
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	DRAWN - JNH	REVISED -
PLOT SCALE = 100.0000' / 1"	CHECKED - KMB	REVISED -
PLOT DATE = 8/23/2019	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT 3 STANDARDS

SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	110L
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ILLINOIS FED. AID PROJECT				



LEGEND

- WORK AREA
- LANE OPEN TO TRAFFIC
- TYPE I OR II BARRICADE OR DRUM WITH FLASHING BURNING LIGHT
- DRUM OR BARRICADE WITH STEADY BURN LIGHT
- SIGN (SEE DETAIL)
- TYPE I OR II CHECK BARRICADE WITH STEADY LIGHT BURN

GENERAL NOTE:

CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING THE DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28" IN HEIGHT.

STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS WILL BE MONODIRECTIONAL.

REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.

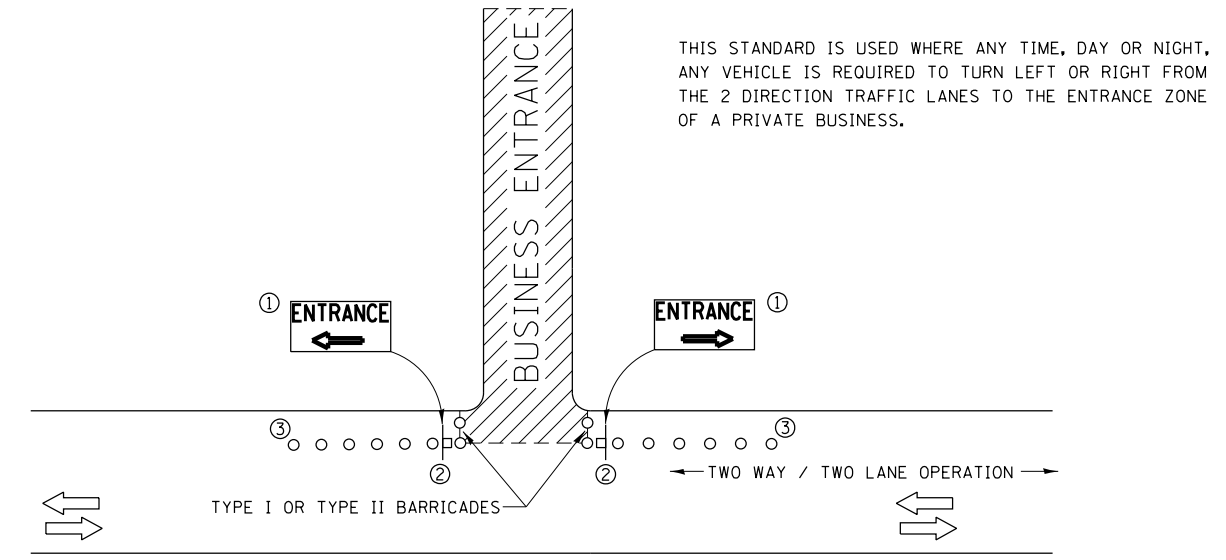
THIS APPLICATION ALSO APPLIEES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24" x 24" AND M6-2R 21" x 15" SHALL BE USED.

THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL TOR LANE CLOSURES.

LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.

TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

**TRAFFIC CONTROL AND PROTECTION AT TURN BAYS
(TO REMAIN OPEN TO TRAFFIC)**

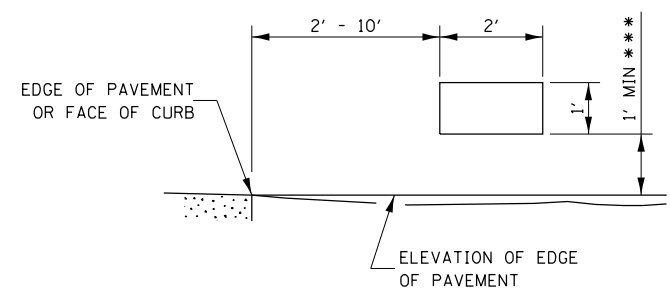


THIS STANDARD IS USED WHERE ANY TIME, DAY OR NIGHT, ANY VEHICLE IS REQUIRED TO TURN LEFT OR RIGHT FROM THE 2 DIRECTION TRAFFIC LANES TO THE ENTRANCE ZONE OF A PRIVATE BUSINESS.

SYMBOLS

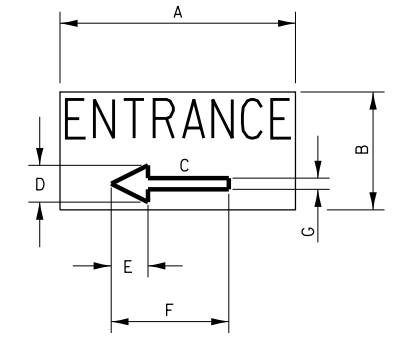
- BUSINESS ENTRANCE ZONE
- BARRICADE OR DRUM WITH FLASHING LIGHT
- SIGN ON TEMPORARY SUPPORT

- ① REFER TO BUSINESS ENTRANCE SIGN TABLE FOR DIMENSIONS.
- ② SEE "SIGNS ON TEMPORARY SUPPORTS" DETAIL.
- ③ DRUMS



SIGNS ON TEMPORARY SUPPORTS

*** WHEN WORK OPERATIONS EXCEED FOUR DAYS, THIS DIMENSION SHALL BE 5' MIN IF LOCATED BEHIND OTHER DEVICES, THE HEIGHT SHALL BE SUFFICIENT TO BE SEEN BY MOTORISTS.



BUSINESS ENTRANCE SIGN

4" BLUE LETTERING NON-REFLECTIVE WITH WHITE REFLECTIVE BACKGROUND

SIGN SIZE	DIMENSIONS						
	A	B	C	D	E	F	G
24 X 12	24	12	8.25	4.75	3.75	12	2.25

SIGNS FOR BUSINESSES ABUTTING THE WORK ZONE, DELINEATING THE WAY THROUGH THE BARRICADES TO RESPECTIVE ENTRANCES.

BUSINESS ABUTTING WORK ZONE ENTRANCE SIGN

FILE NAME = D387695-sh1-D3details4.dgn



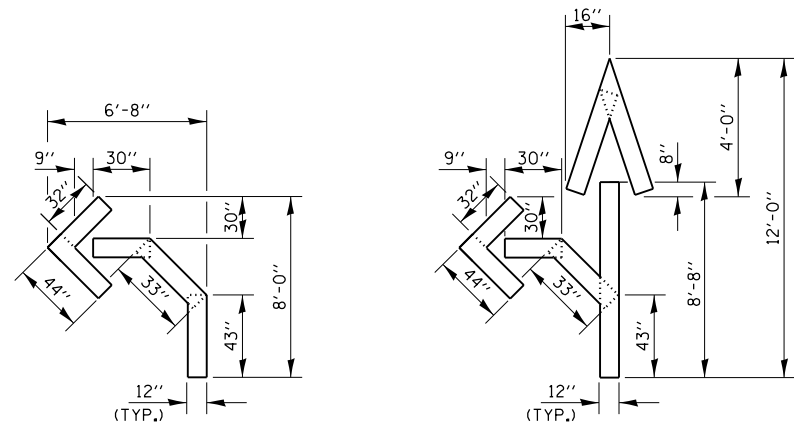
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	DRAWN - JNH	REVISED -
PLOT SCALE = 100.0000' / 1"	CHECKED - KMB	REVISED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT 3 STANDARDS

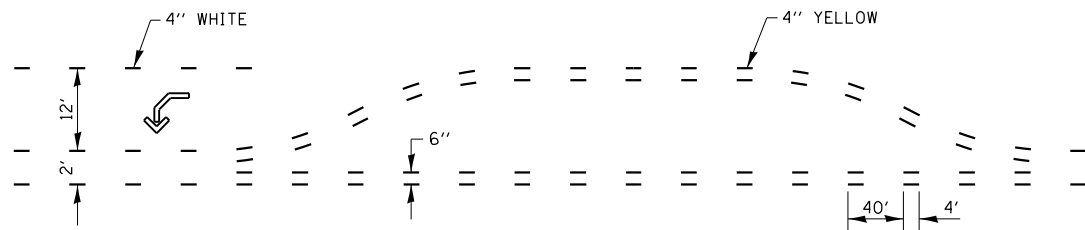
SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	110M
CONTRACT NO. 87695			ILLINOIS FED. AID PROJECT	

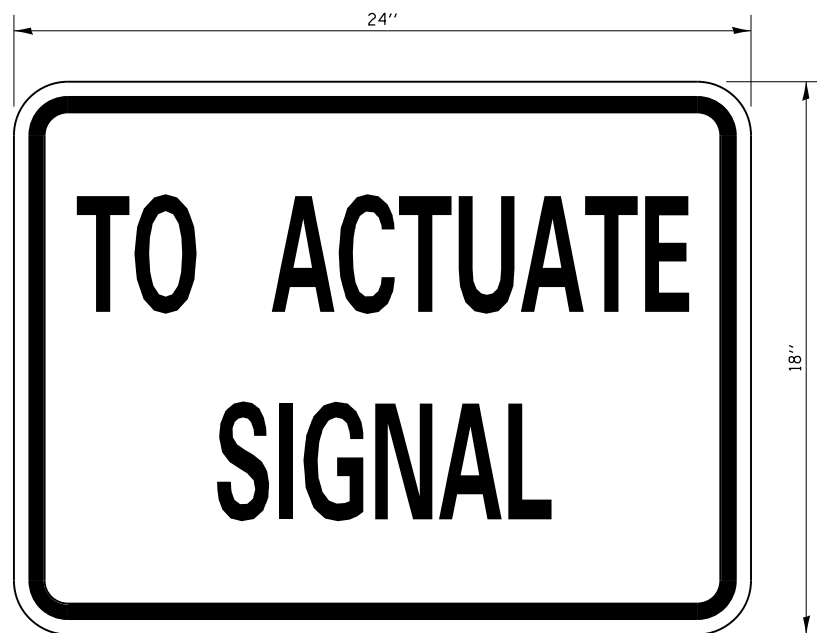


QUANTITY
12" LINE = 16 LIN FT
OR 4" LINE = 48 LIN FT

QUANTITY
12" LINE = 29 LIN FT
OR 4" LINE = 87 LIN FT



**SHORT-TERM PAVEMENT MARKING
FOR MEDIANS AND ARROWS**

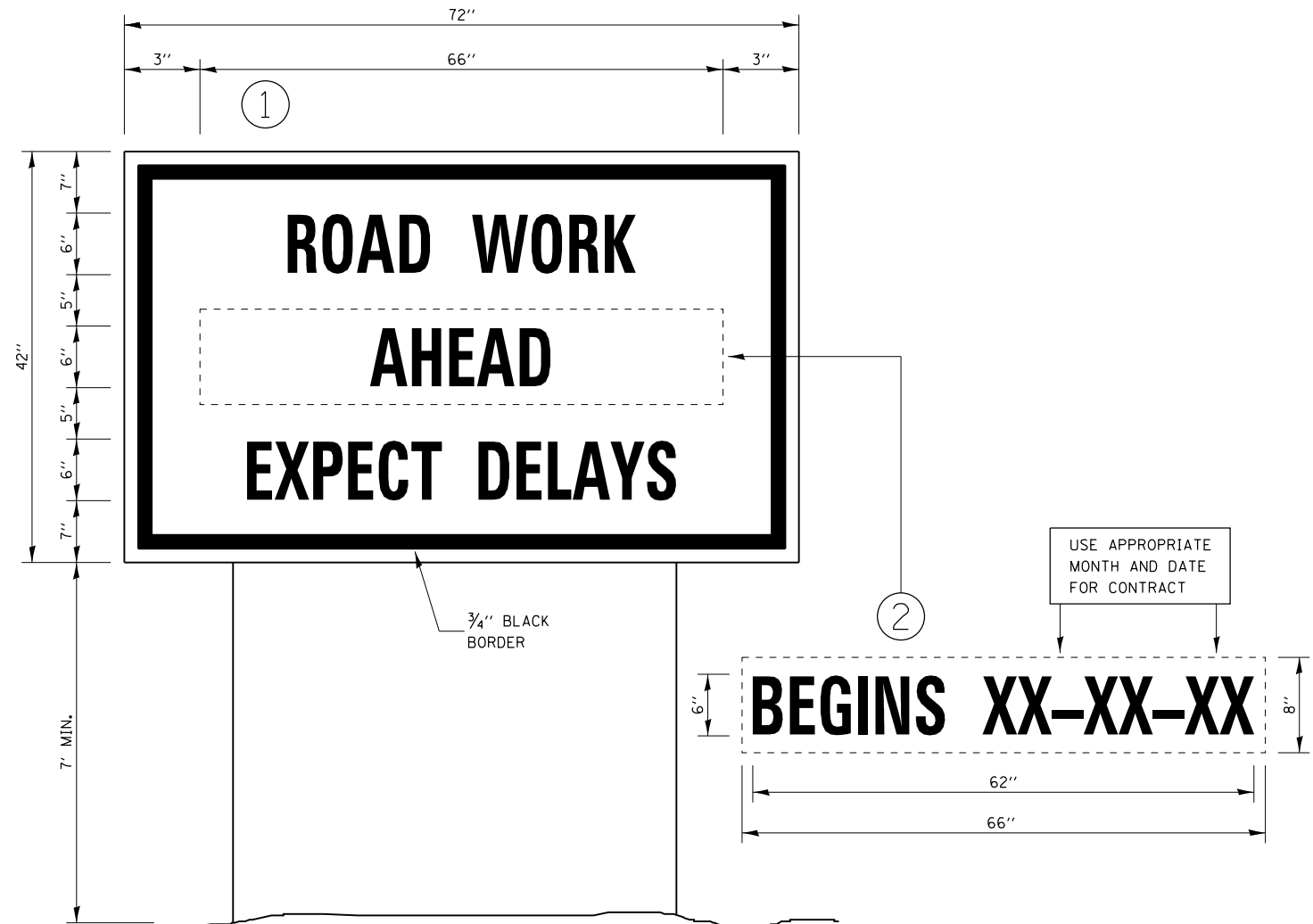


STOP LINE SIGN FOR TEMPORARY SIGNALS

SIZE: 24" x 18"
4" CAPITAL LETTERS - BLACK
1/2" BORDER - BLACK
WHITE REFLECTIVE - TYPE B
ENGINEERING GRADE SHEETING

GENERAL NOTE:

THIS SIGN SHALL BE INSTALLED AT THE STOP LINE AS DIRECTED BY THE ENGINEER.



TEMPORARY INFORMATION SIGNING

NOTES:

- USE 6" D BLACK LETTERING ON FLUORESCENT ORANGE BACKGROUND.
- ERECT SIGNS AT LOCATIONS IN ADVANCE OF THE "ROAD CONSTRUCTION AHEAD" SIGNS AS DIRECTED BY THE ENGINEER.
- ERECT SIGN ① WITH INSTALLED PANEL ② A MINIMUM OF ONE WEEK PRIOR TO THE START OF THE LANE CLOSURE.
- REMOVE PANEL ② ON THAT DATE.
- SEE SPECIAL PROVISION "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
- WILL BE PAID FOR PER SQ FT AS "TEMPORARY INFORMATION SIGNING". EACH SIGN = 21 SQ FT AND THE DATE PANEL ② WILL NOT BE MEASURED SEPARATELY FOR PAYMENT.

FILE NAME = D387695-shr-D3details4.dgn



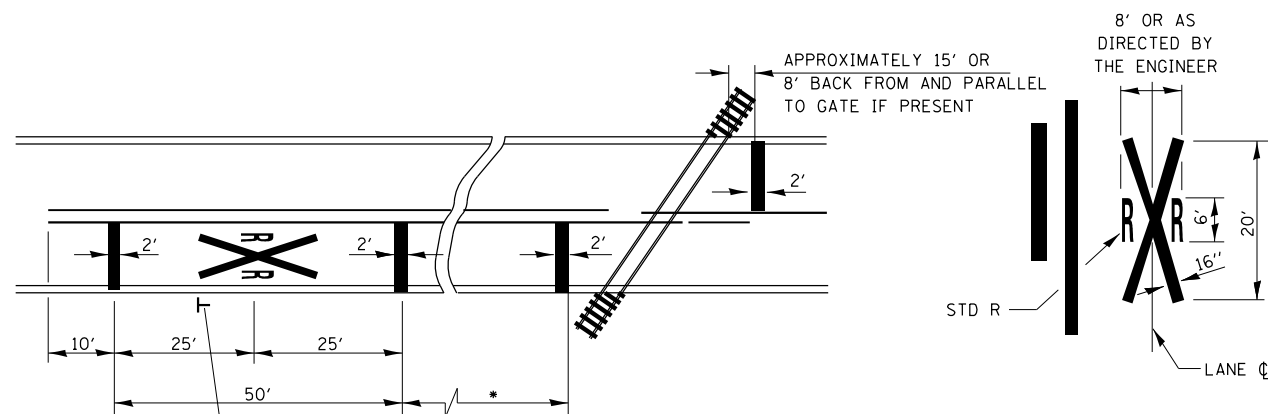
USER NAME = \$USER\$	DESIGNED - JNH	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN - JNH	REVISED -
PLOT DATE = 8/23/2019	CHECKED - KMB	REVISED -
	DATE - 05-31-2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 3 STANDARDS

SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	110N
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



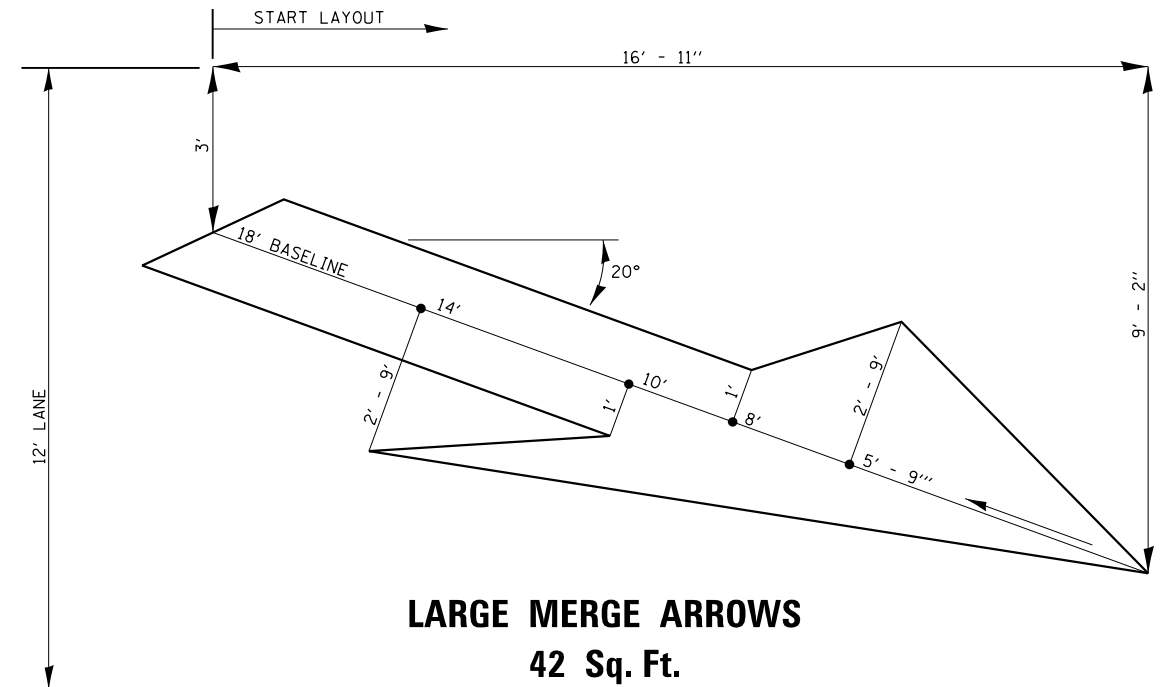
**PAVEMENT MARKINGS AT
RAILROAD-HIGHWAY GRADE CROSSING**

* MINIMUM DISTANCE
400' FOR 55 MPH
250' FOR 45 MPH
100' FOR 35 MPH OR LESS

NOTES:
THE TRANSVERSE SPREAD OF THE "X"
MAY VARY ACCORDING TO LANE WIDTH.

ON MULTI-LANE ROADS, THE STOP LINES
SHALL EXTEND ACROSS ALL APPROACH
LANES AND SEPARATE RXR SYMBOLS SHALL
BE PLACED ADJACENT TO EACH OTHER
IN EACH LANE.

WHEN THE PAVEMENT MARKING SYMBOL
IS USED, A PORTION OF THE SYMBOL
SHOULD BE LOCATED DIRECTLY ADJACENT
TO THE ADVANCE WARNING SIGN (W10-1).



**LARGE MERGE ARROWS
42 Sq. Ft.**

FILE NAME = D387695-sh1-D3details4.dgn



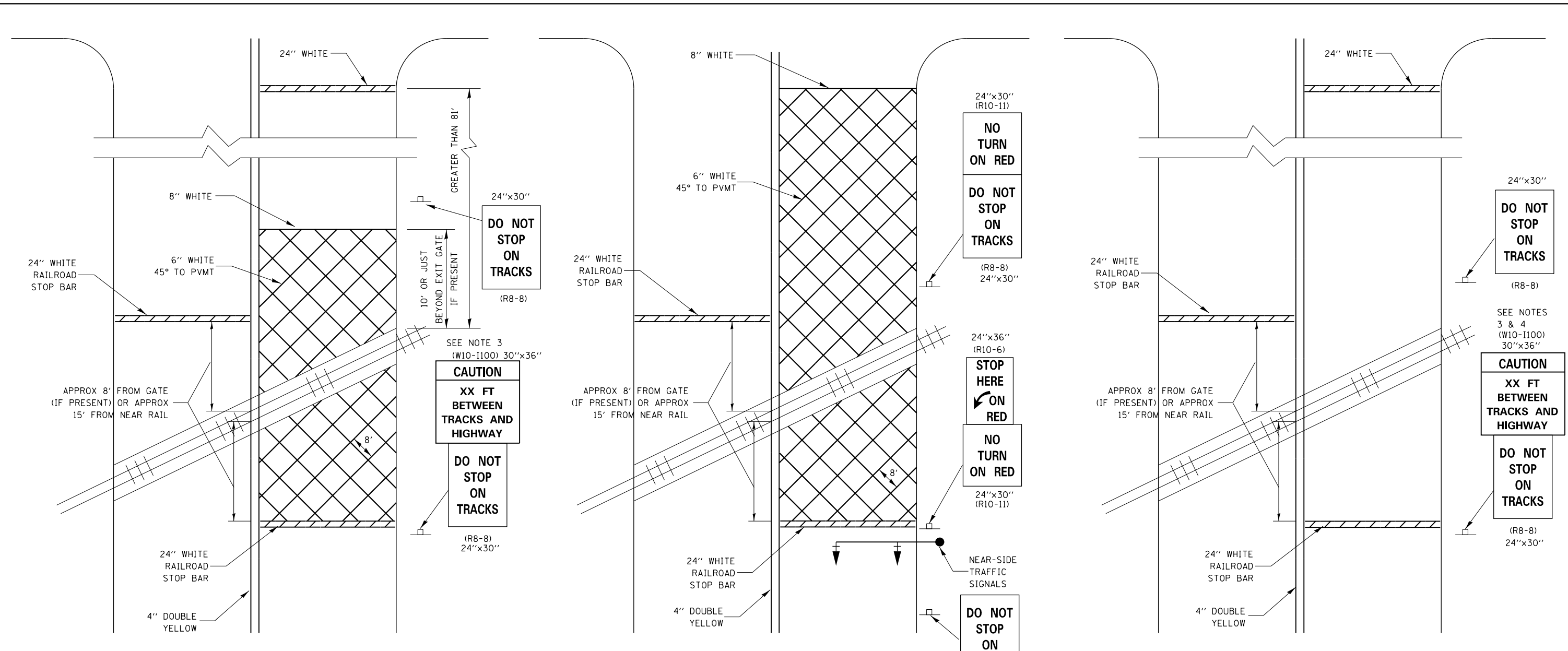
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	DRAWN - JNH	REVISED -
PLOT SCALE = 100.0000' / 1"	CHECKED - KMB	REVISED -
PLOT DATE = 8/23/2019	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT 3 STANDARDS

SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	1100
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



WITH INTERSECTION TRAFFIC SIGNALS

WITH NEAR-SIDE TRAFFIC SIGNALS

WITH NONSIGNALIZED INTERSECTION

- NOTE:
1. PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
 2. WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED THE PAVEMENT MARKINGS EXTEND TO THE INTERSECTION.
 3. DISTANCE TO BE SHOWN ON SIGN MEASURED FROM A POINT 6 FEET FROM THE RAIL CLOSEST TO THE INTERSECTION OR FROM THE CLOSEST POINT ALONG THE EXIT GATE IF PRESENT OVER THE ROADWAY WHEN IN THE LOWERED POSITION TO THE STOP BAR OR CROSSWALK, WHICH EVER IS CLOSEST, ROUNDED DOWN TO NEAREST 5 FEET. WHERE THERE IS NO STOP LINE, MEASURE TO POINT WHERE DRIVER HAS A VIEW OF APPROACHING TRAFFIC.
 4. THE CLEARANCE SIGN IS ALSO TO BE USED AS AN INTERIM MEASURE AT LOCATIONS WITH INTERCONNECTED INTERSECTION TRAFFIC SIGNALS WHERE IT IS PLANNED TO CHANGE THEM TO NEAR-SIDE SIGNALS AT A FUTURE TIME. IN THIS CASE, THE DISTANCE TO BE SHOWN ON THE SIGN IS MEASURED FROM THE EDGE OF THE STRIPED-OUT AREA INSTEAD OF 6 FEET FROM THE RAIL. THE SIGN IS TO BE REMOVED WHEN THE NEAR-SIDE SIGNALS ARE INSTALLED AND THE PAVEMENT MARKINGS EXTEND TO THE INTERSECTION.

FILE NAME = D387695-sh1-D3detailis4.dgn



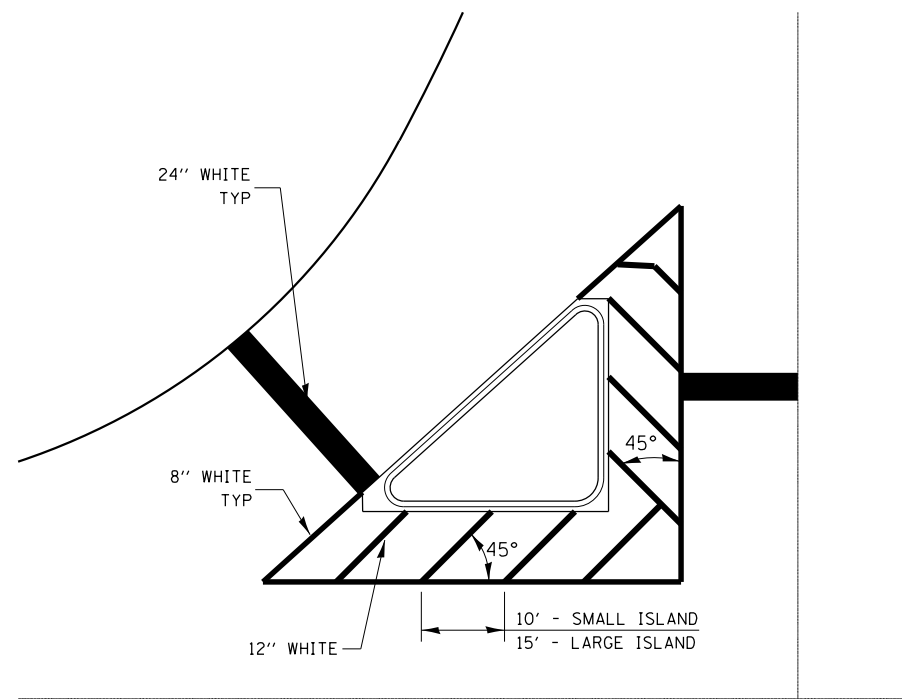
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	DRAWN - JNH	REVISED -
PLOT SCALE = 100.0000' / 1"	CHECKED - KMB	REVISED -
PLOT DATE = 8/23/2019	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

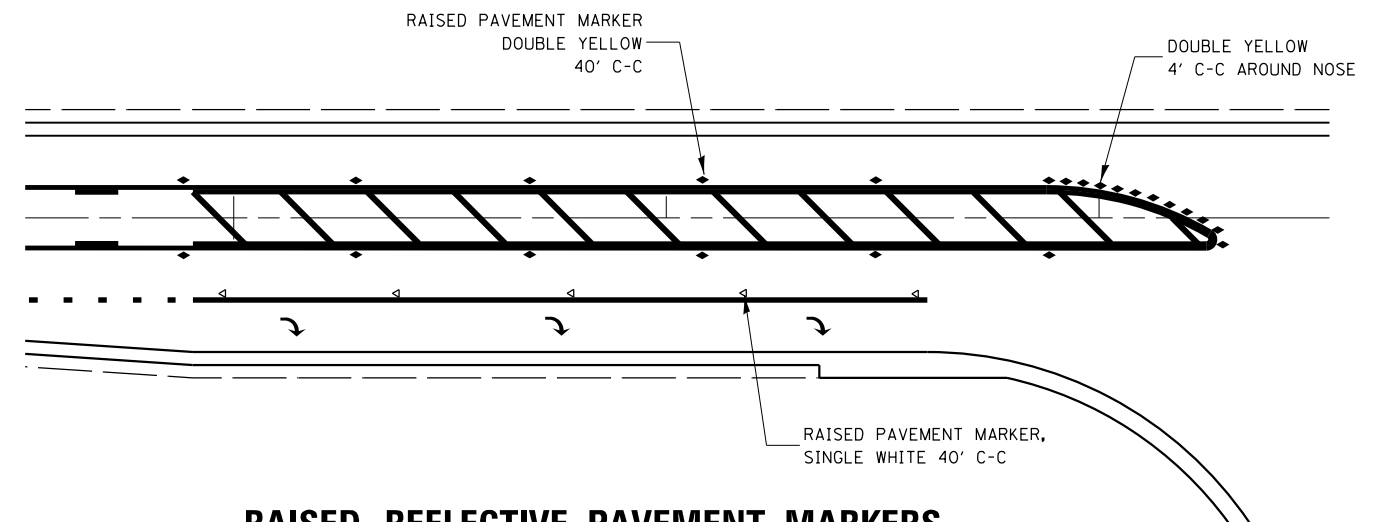
DISTRICT 3 STANDARDS

SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	110P
CONTRACT NO. 87695			ILLINOIS FED. AID PROJECT	



TYPICAL ISLAND



**RAISED REFLECTIVE PAVEMENT MARKERS
RIGHT TURN LANE**

FILE NAME = D387695-sh1-D3details4.dgn



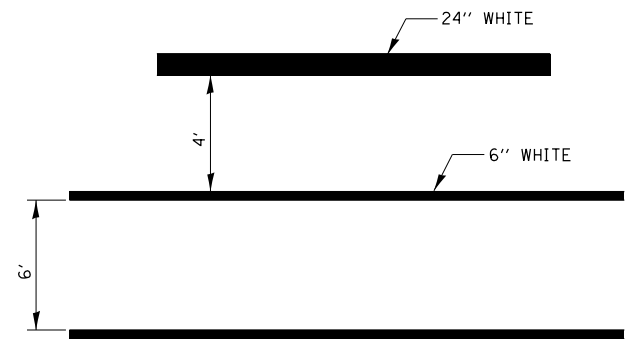
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	DRAWN - JNH	REVISED -
PLOT SCALE = 100.0000' / 1"	CHECKED - KMB	REVISED -
PLOT DATE = 8/23/2019	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

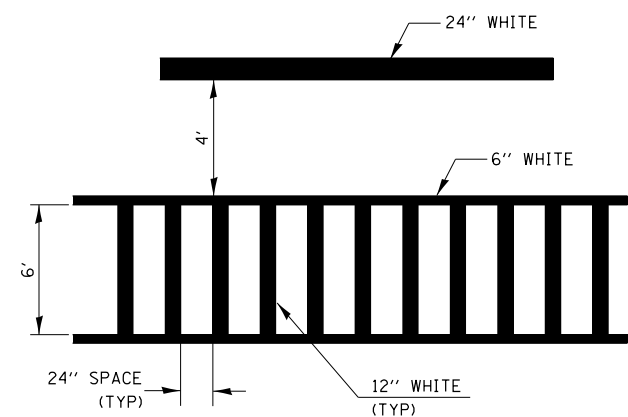
DISTRICT 3 STANDARDS

SHEET OF SHEETS STA. TO STA.

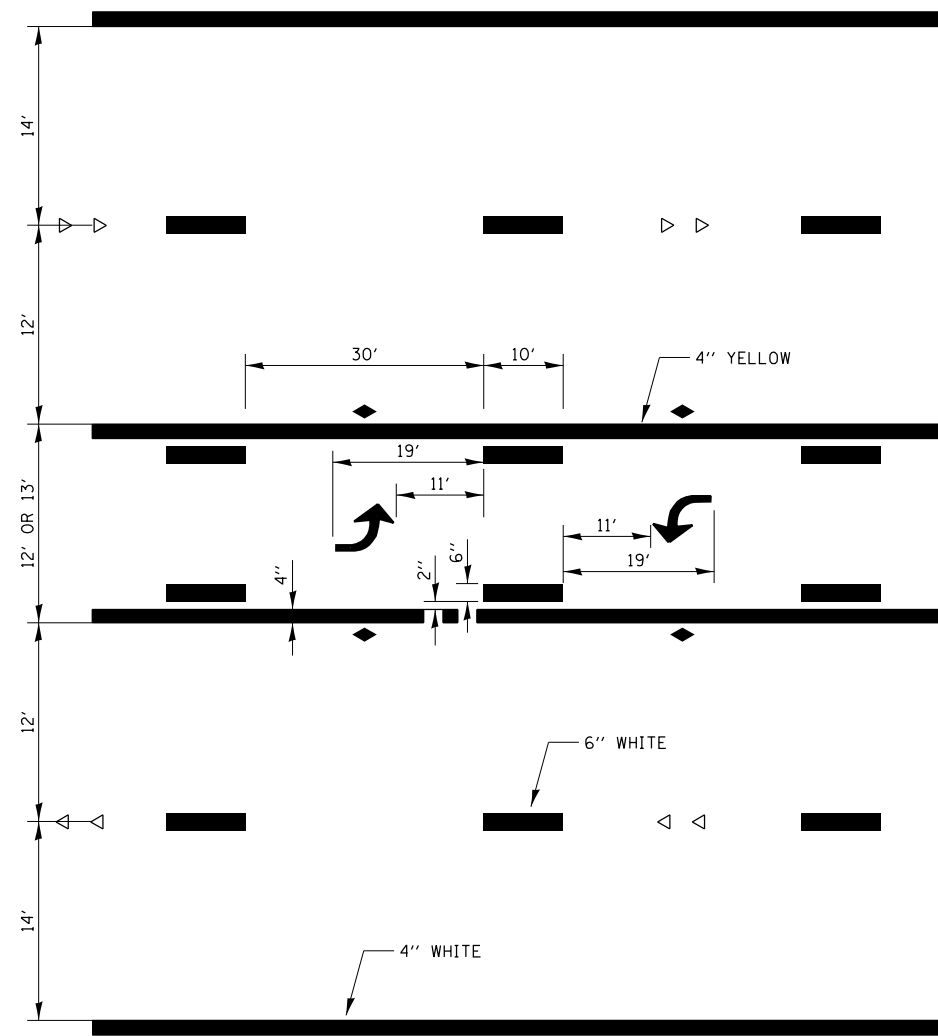
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	1100
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



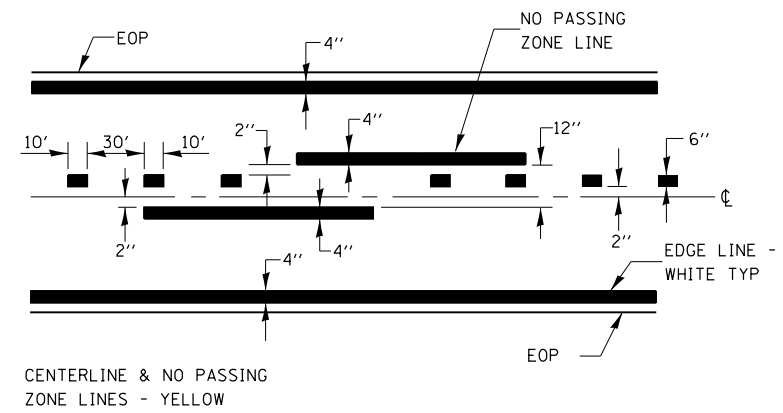
TYPICAL SPACING DETAIL FOR CROSSWALKS AND STOP BARS



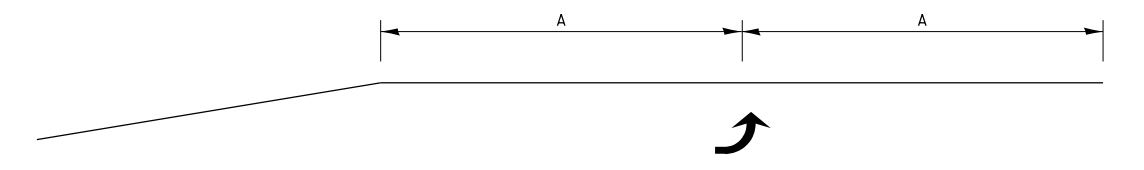
TYPICAL SPACING DETAIL FOR CROSSWALKS AND STOP BARS



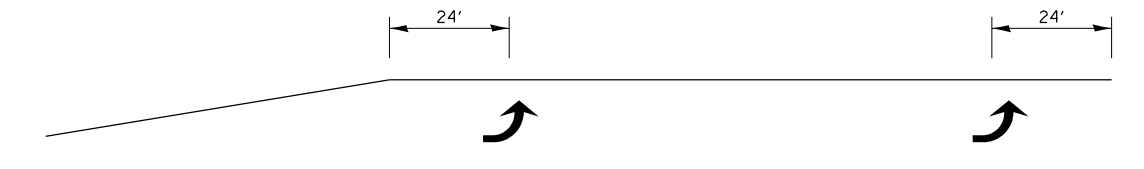
TYPICAL APPLICATION TWO WAY LEFT TURN LANE (TWLTL)



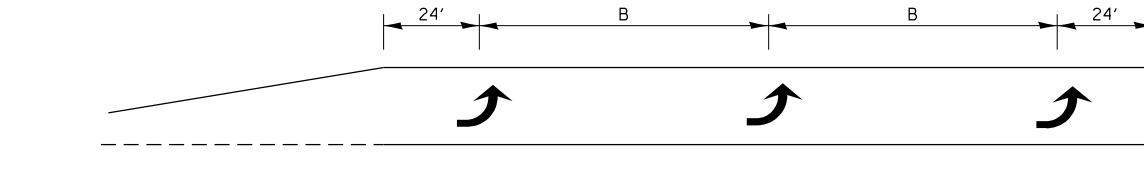
PAVEMENT MARKING



99' AND UNDER



100' TO 149'



150' AND LONGER

TYPICAL PLACEMENT OF ARROWS IN TURN LANES

URBAN PAVEMENT MARKING

FILE NAME = D387695-shr-D3detailis4.dgn



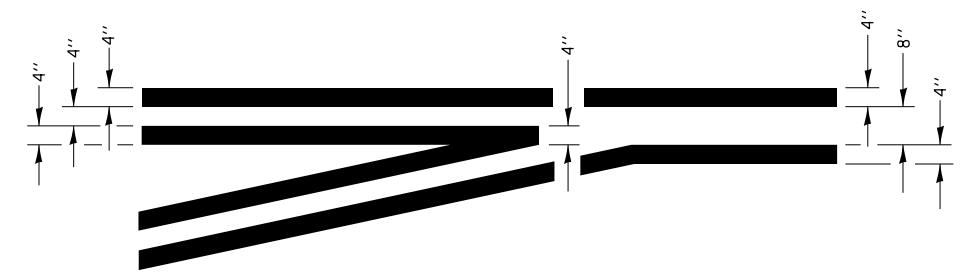
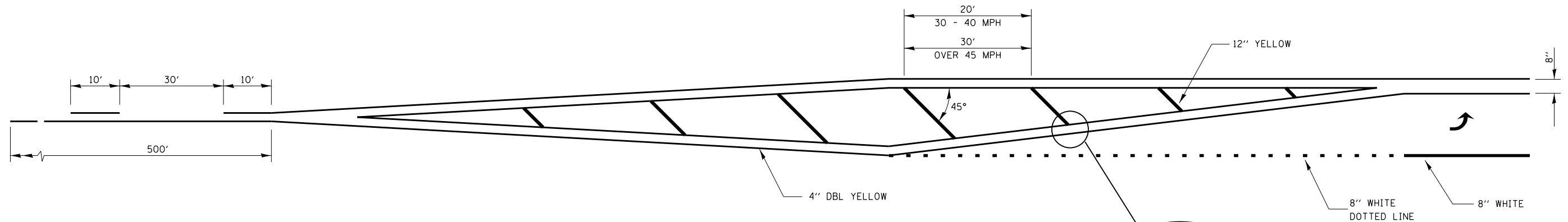
USER NAME = \$USER*	DESIGNED - JNH	REVISED -
PLOT SCALE = 100.0000' / 1"	DRAWN - JNH	REVISED -
PLOT DATE = 8/23/2019	CHECKED - KMB	REVISED -
	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

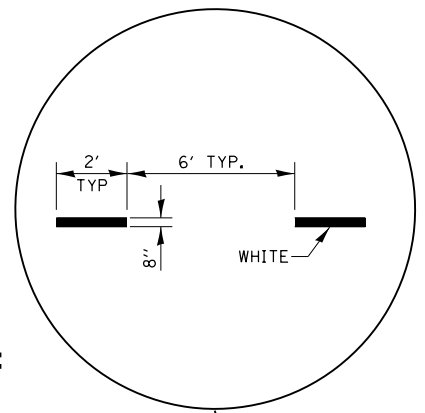
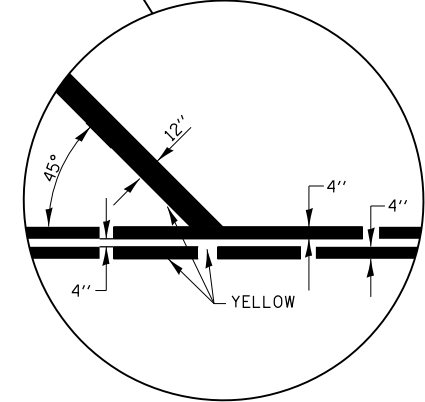
DISTRICT 3 STANDARDS

SHEET OF SHEETS STA. TO STA.

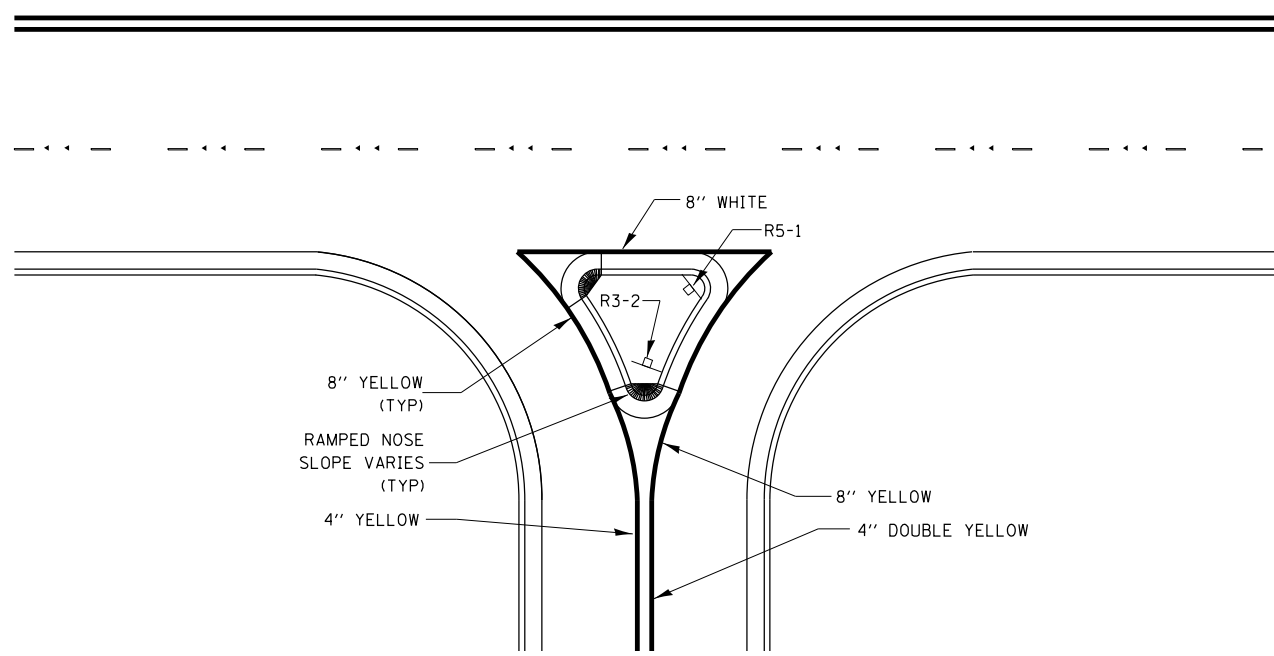
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	110R
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



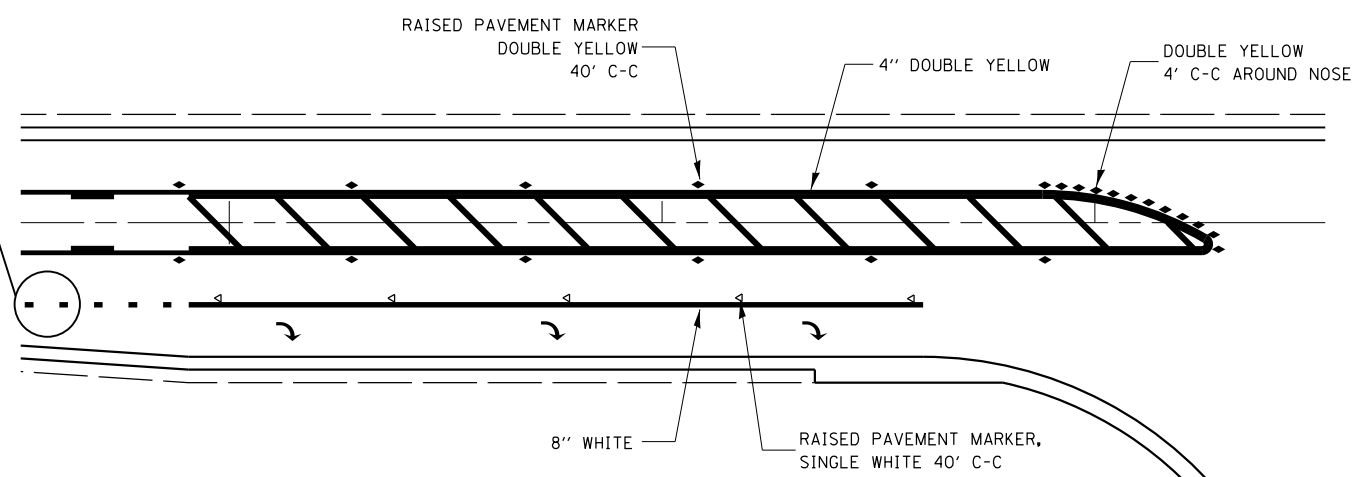
**TYPICAL APPLICATION
LEFT TURN LANES**



**ADVANCE AND INTERSECTION LANE
DIVIDER LINES**



RIGHT IN RIGHT OUT ACCESS PAVEMENT MARKING



**RAISED REFLECTIVE AND PAVEMENT MARKERS
RIGHT TURN LANE**

URBAN PAVEMENT MARKING

FILE NAME = D387695-shr-D3details4.dgn



USER NAME = \$USER\$	DESIGNED - JNH	REVISED -
DRAWN - JNH	REVISOR -	
PLOT SCALE = 100.0000' / 1" =	CHECKED - KMB	REVISOR -
PLOT DATE = 8/23/2019	DATE - 05-31-2019	REVISOR -

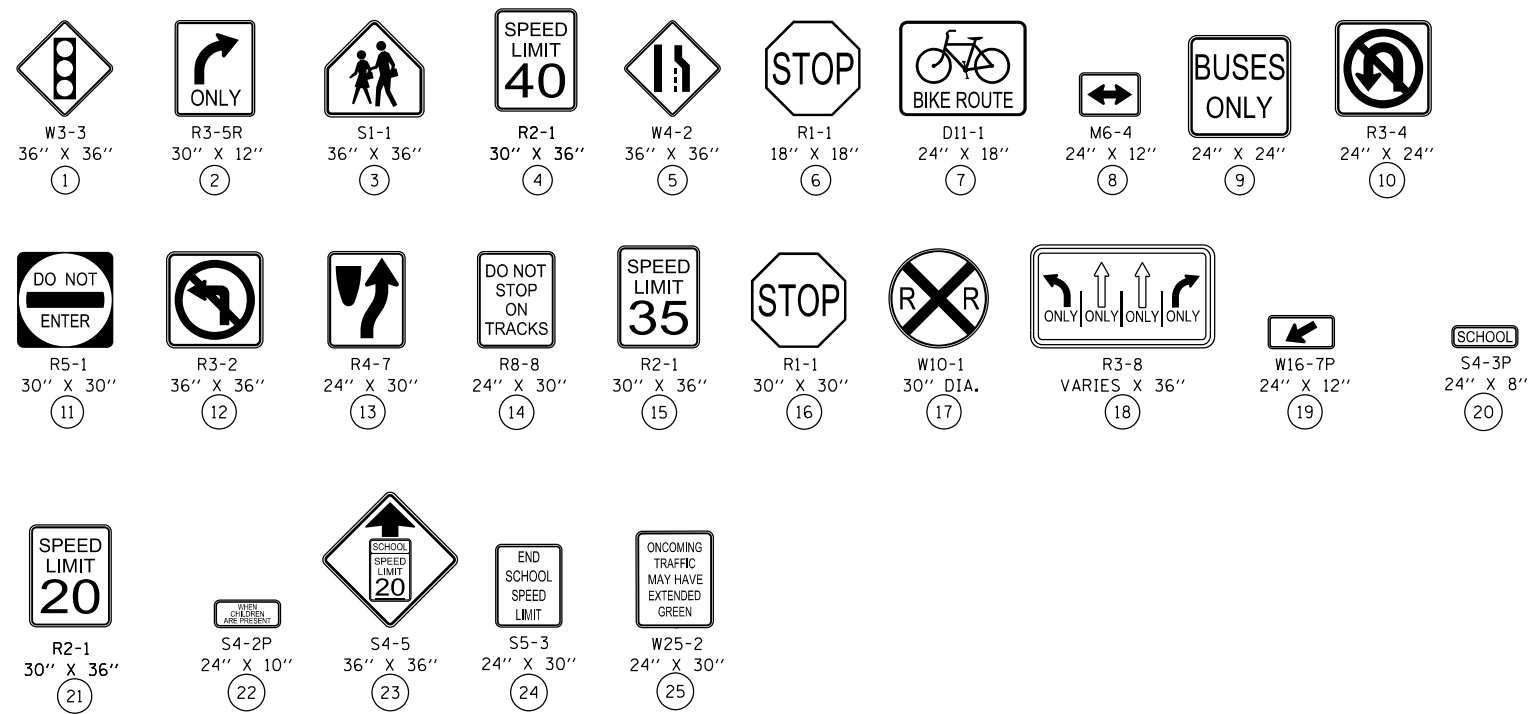
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT 3 STANDARDS

SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	1105
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

SIGN LEGEND



SIGN NOTES:

1. USE WOOD SIGN SUPPORTS FOR ALL SIGNS.
2. PROVIDE BLOCK OUTS IN CONCRETE MEDIAN FOR SIGN INSTALLATION.

PAVEMENT MARKING LEGEND

- | | | | | |
|--|--|---|--|--|
| 1 POLYUREA PAVEMENT MARKING TYPE 1 LINE 4" DOUBLE YELLOW 2 @ 12" C-C | 5 POLYUREA PAVEMENT MARKING TYPE 1 LINE 8" WHITE 2' DASH, 6' SKIP | 9 POLYUREA PAVEMENT MARKING TYPE 1 YELLOW LETTERS & SYMBOLS | 13 THERMOPLASTIC PAVEMENT MARKING LINE 8" WHITE 2' DASH, 6' SKIP | 17 THERMOPLASTIC PAVEMENT MARKING LINE 6" WHITE SOLID |
| 2 POLYUREA PAVEMENT MARKING TYPE 1 LINE 12" YELLOW @ 45° | 6 POLYUREA PAVEMENT MARKING TYPE 1 WHITE LETTERS & SYMBOLS | 10 POLYUREA PAVEMENT MARKING TYPE 1 LINE 24" WHITE SOLID | 14 THERMOPLASTIC PAVEMENT MARKING LINE 6" WHITE 10' DASH, 30' SKIP | 18 THERMOPLASTIC PAVEMENT MARKING LINE 12" WHITE @ 45° |
| 3 POLYUREA PAVEMENT MARKING TYPE 1 LINE 8" WHITE SOLID | 7 POLYUREA PAVEMENT MARKING TYPE 1 LINE 6" WHITE SOLID | 11 POLYUREA PAVEMENT MARKING TYPE 1 LINE 12" WHITE @ 45° | 15 THERMOPLASTIC PAVEMENT MARKING LINE 8" WHITE SOLID | 19 THERMOPLASTIC PAVEMENT MARKING LINE 12" WHITE SOLID |
| 4 POLYUREA PAVEMENT MARKING TYPE 1 LINE 6" WHITE 10' DASH, 30' SKIP | 8 POLYUREA PAVEMENT MARKING TYPE 1 LINE 6" YELLOW 10' DASH, 30' SKIP | 12 THERMOPLASTIC PAVEMENT MARKING WHITE LETTERS & SYMBOLS | 16 THERMOPLASTIC PAVEMENT MARKING LINE 24" WHITE SOLID | |

RAISED REFLECTIVE MARKER LEGEND

- ◄ ONE-WAY AMBER MARKER
- ◆ TWO-WAY AMBER MARKER
- ◄ ONE-WAY CRYSTAL MARKER

MARKER NOTES:

1. CURB REFLECTORS ARE NOT DEPICTED. INSTALL CURB REFLECTORS ON RAISED MEDIANS ACCORDANCE WITH STANDARD 782001.

FILE NAME = D387695-sh1-PavementMarking6.dgn



USER NAME = \$USER\$	DESIGNED - JNH	REVISED - _____
	DRAWN - JNH	REVISED - _____
PLOT SCALE = 48.0000' / in.	CHECKED - KMB	REVISED - _____
PLOT DATE = 6/7/2019	DATE - 05-31-2019	REVISED - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

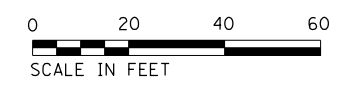
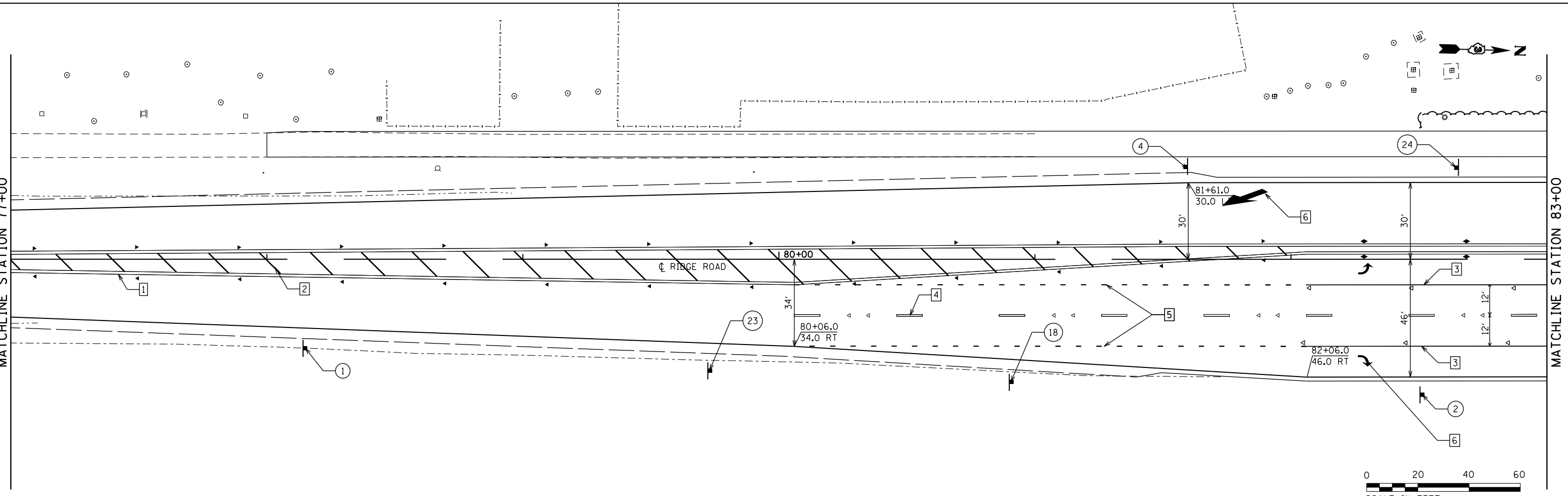
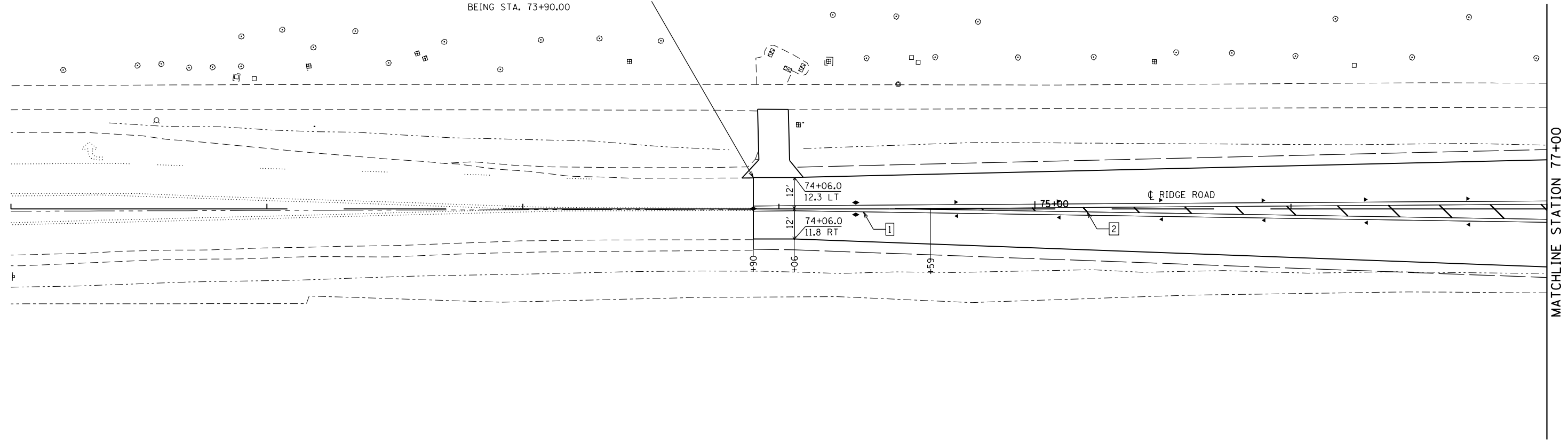
**RIDGE ROAD
PAVEMENT MARKING & SIGNAGE LEGEND**

SCALE: 1"=20' SHEET 1 OF 6 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	111
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



MATCH EXISTING PAVEMENT MARKINGS
BEING STA. 73+90.00



FILE NAME = D387695-shf-PavementMarking1.dgn

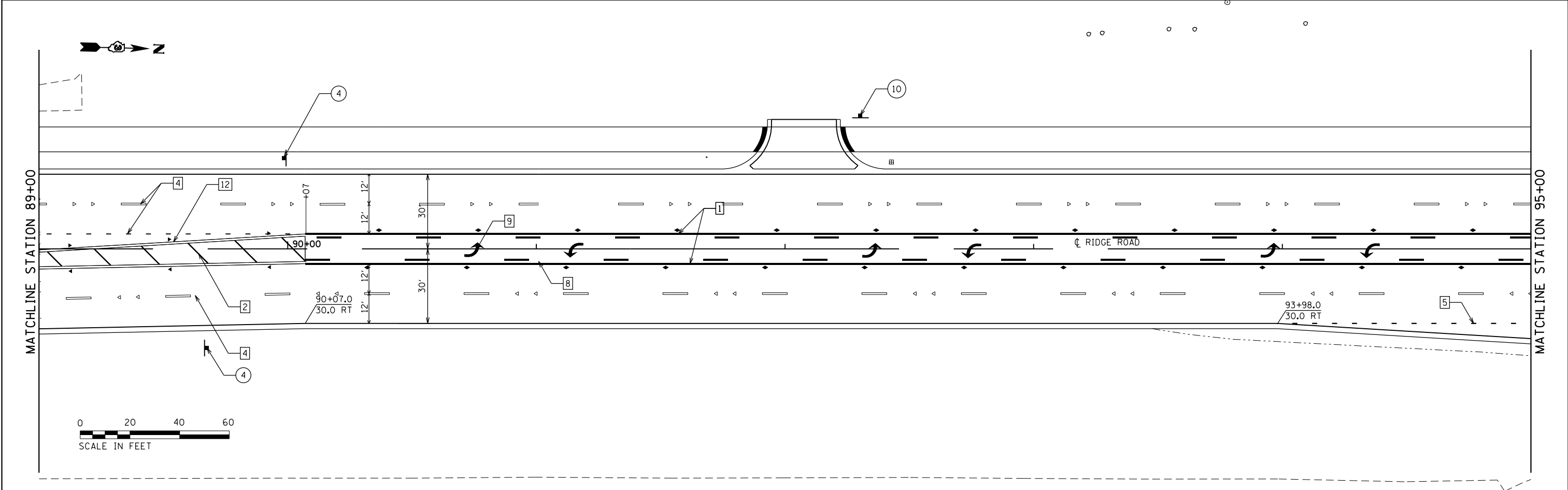
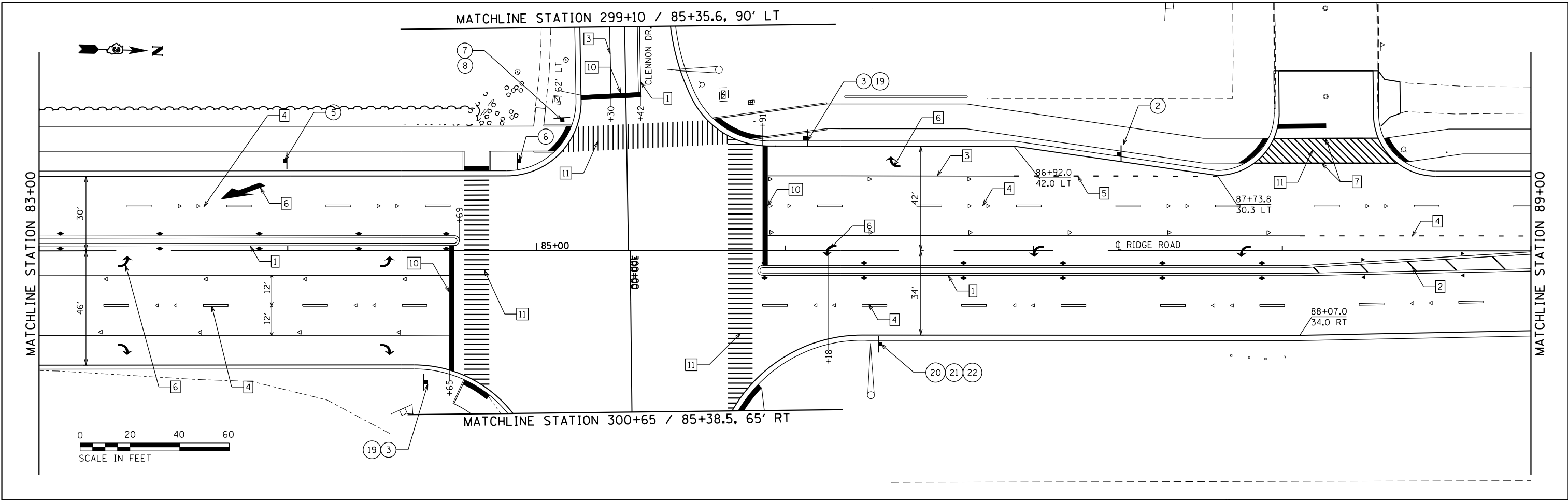


USER NAME = \$USER*	DESIGNED - JNH	REVISED -
DRAWN - JNH	REVISIONS -	
PLOT SCALE = 48.0000' / in.	CHECKED - KMB	REVISED -
PLOT DATE = 6/7/2019	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

RIDGE ROAD PAVEMENT MARKING PLAN		
SCALE: 1"=20'	SHEET 2 OF 6 SHEETS	STA. 71+00 TO STA. 83+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	112
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



FILE NAME = D387695-shf-PavementMarking2.dgn



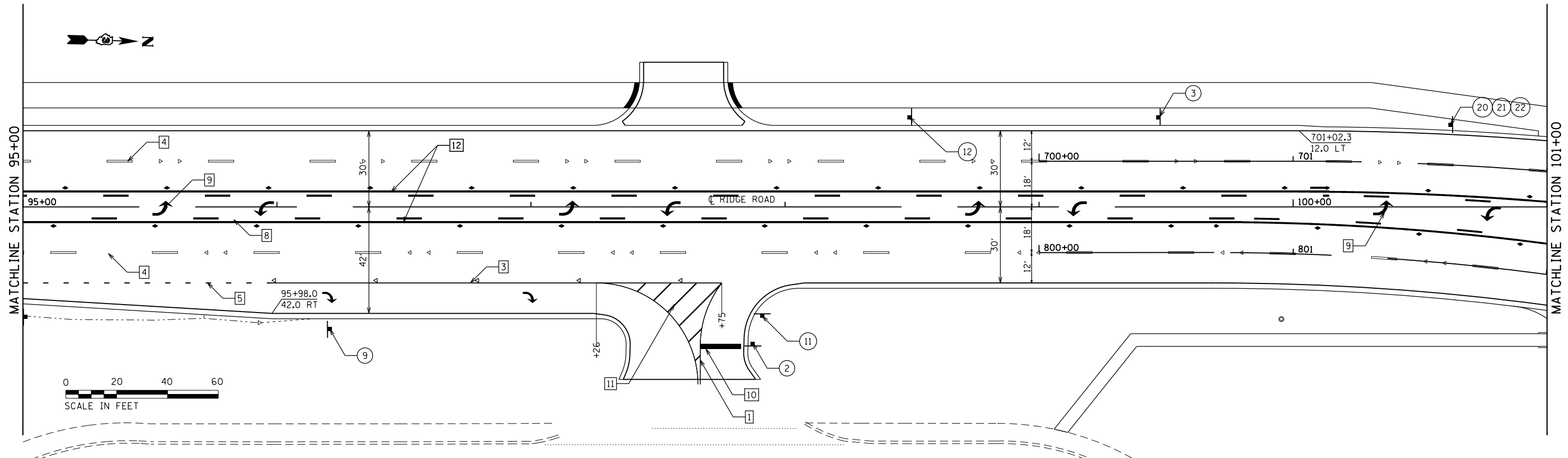
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DRAWN - JNH	REVISOR -	
PLOT SCALE = 48.0000' / in.	CHECKED - KMB	REVISOR -
PLOT DATE = 6/7/2019	DATE - 05-31-2019	REVISOR -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RIDGE ROAD
PAVEMENT MARKING PLAN**

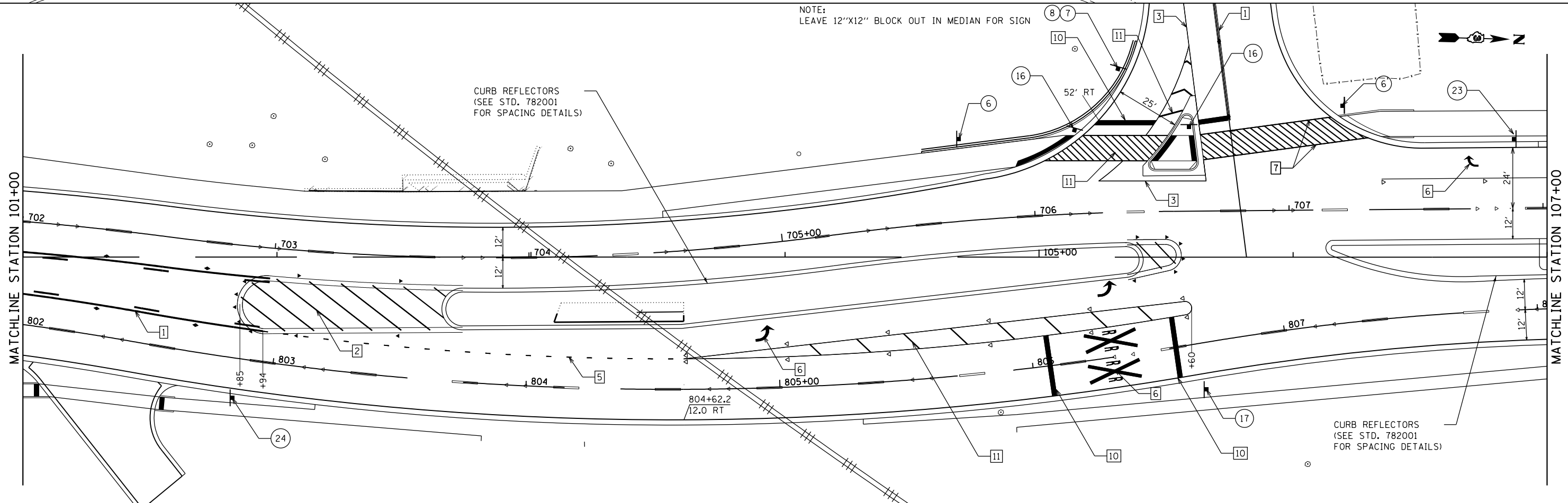
SCALE: 1"=20' SHEET 3 OF 6 SHEETS STA. 83+00 TO STA. 95+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	113
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



NOTE:
LEAVE 12"x12" BLOCK OUT IN MEDIAN FOR SIGN

CURB REFLECTORS
(SEE STD. 782001
FOR SPACING DETAILS)



CURB REFLECTORS
(SEE STD. 782001
FOR SPACING DETAILS)

FILE NAME = D387695-shf-PavementMarking3.dgn



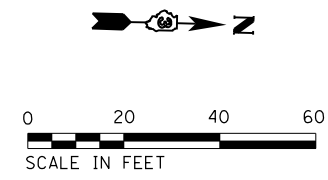
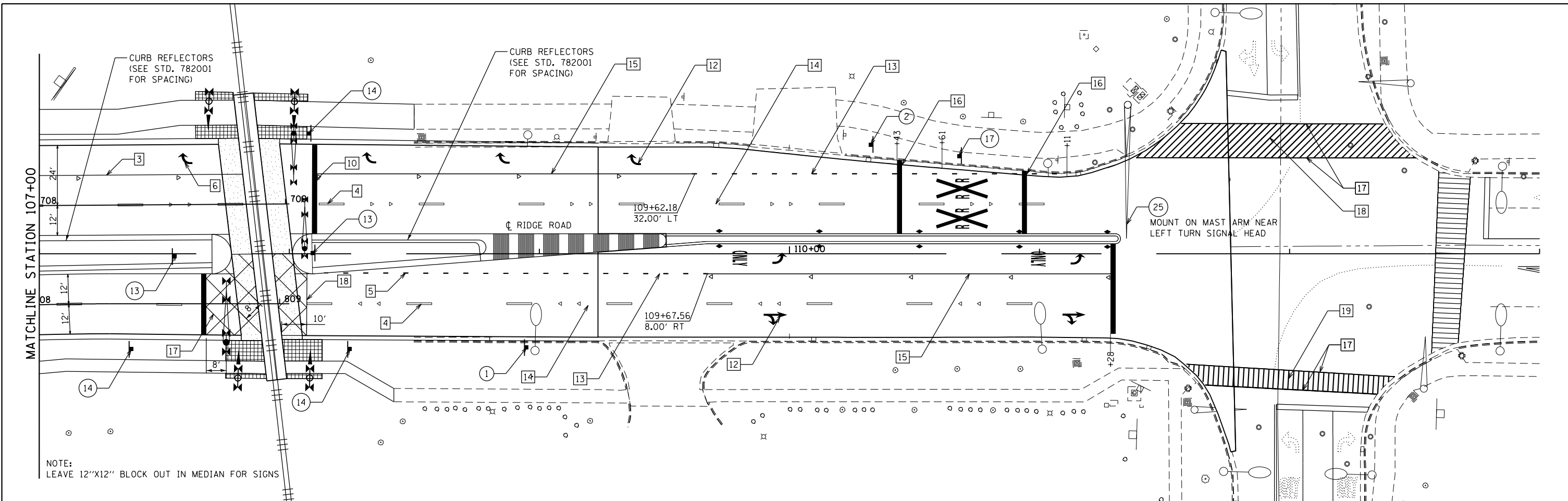
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DRAWN - JNH	REVISED -	
PLOT SCALE = 48.0000' / in.	CHECKED - KMB	REVISED -
PLOT DATE = 6/7/2019	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RIDGE ROAD
PAVEMENT MARKING PLAN**

SCALE: 1"=20' SHEET 4 OF 6 SHEETS STA. 95+00 TO STA. 107+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	114
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



FILE NAME = D387695-sh1-PavementMarking4.dgn



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DRAWN - JNH	REVISÉD -	
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PLOT DATE = 6/7/2019	DATE - 05-31-2019	REVISED -

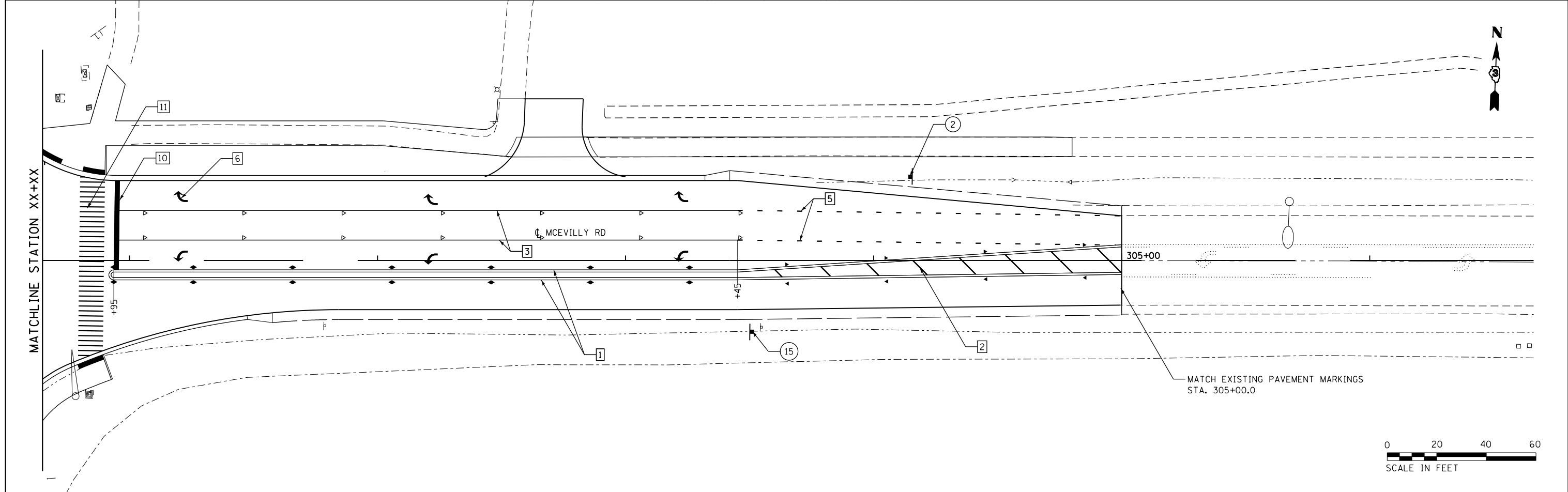
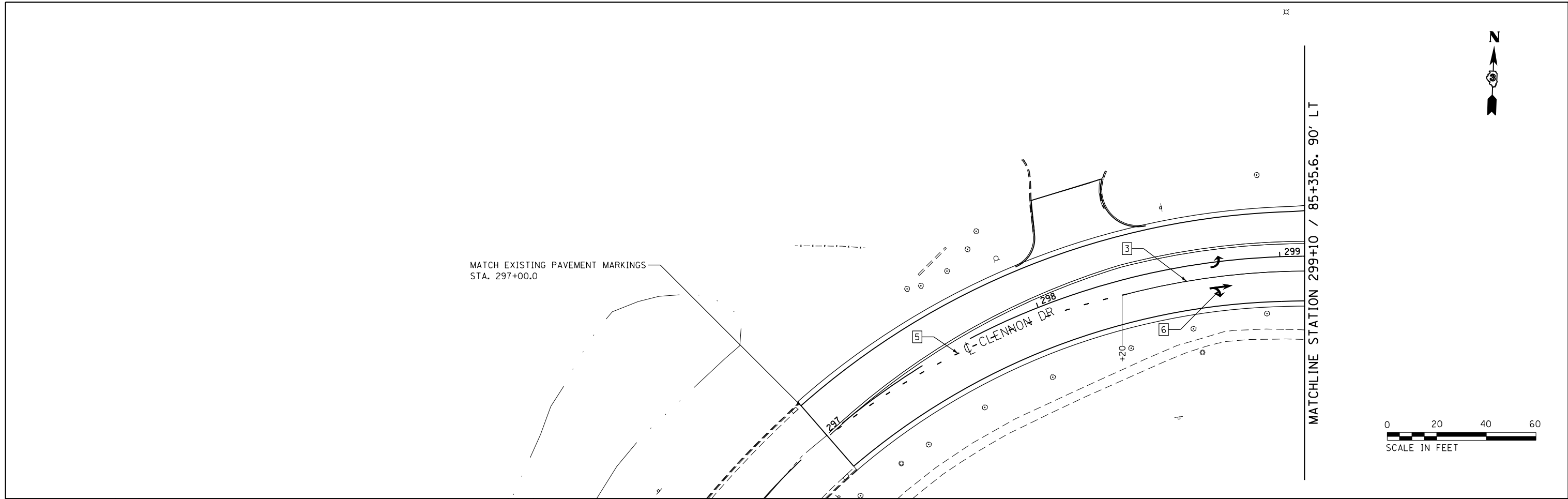
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RIDGE ROAD
PAVEMENT MARKING PLAN**

SCALE: 1"=20' SHEET 5 OF 6 SHEETS STA. 107+00 TO STA. 113+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	115
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

FILE NAME = D387695-shf-PavementMarking5.dgn



USER NAME = *USER*	DESIGNED - JNH	REVISED -
PLOT SCALE = 48.0000' / in.	DRAWN - JNH	REVISED -
PLOT DATE = 6/7/2019	CHECKED - KMB	REVISED -
	DATE - 05-31-2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLENNON DRIVE / MCEVILLY ROAD
PAVEMENT MARKING PLAN

SCALE: 1"=20' SHEET 6 OF 6 SHEETS STA. 297+00 TO STA. 305+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	116
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

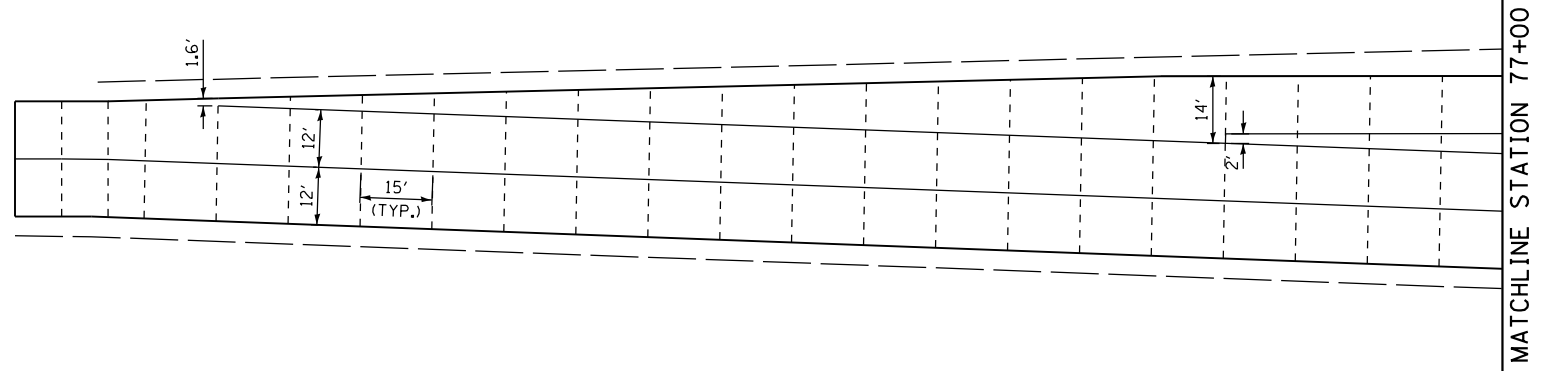
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LEGEND

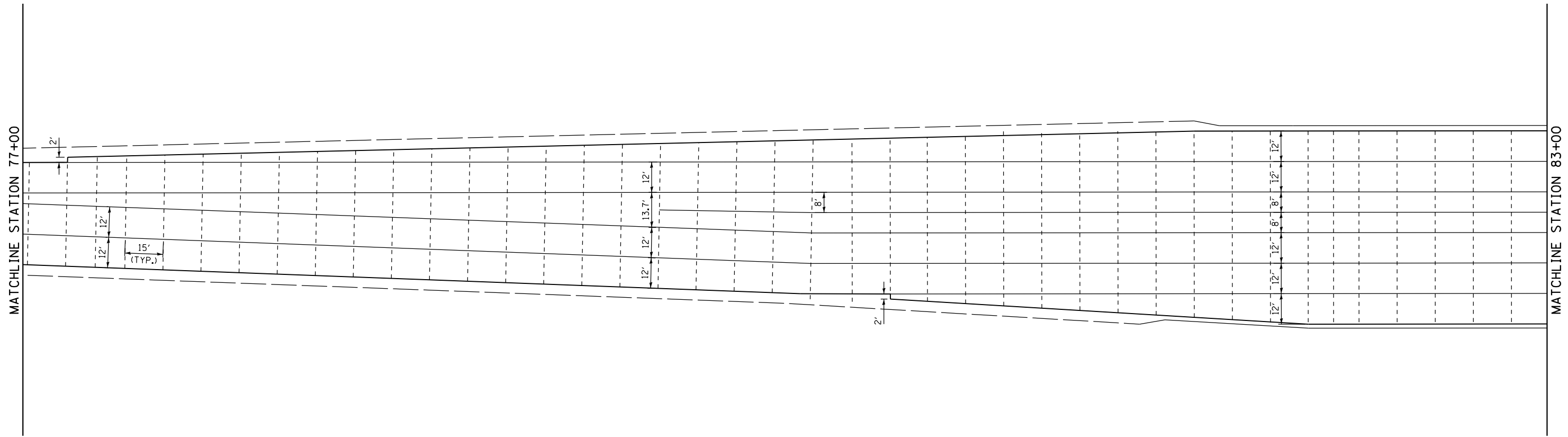
— PROPOSED LONGITUDINAL JOINT

- - - PROPOSED TRANSVERSE JOINT

REFER TO STANDARDS 420101, 420106, AND 420111 FOR DETAILS NOT DEPICTED.



MATCHLINE STATION 77+00



MATCHLINE STATION 77+00

MATCHLINE STATION 83+00



USER NAME = \$USER*	DESIGNED - JNH	REVISED -
	DRAWN - JNH	REVISED -
PLOT SCALE = 40.0000' / in.	CHECKED - KMB	REVISED -
PLOT DATE = 6/7/2019	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RIDGE ROAD
JOINTING PLAN**

SCALE: 1"=20' SHEET 1 OF 4 SHEETS STA. 71+00 TO STA. 83+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	117
ILLINOIS FED. AID PROJECT			CONTRACT NO. 87695	

LEGEND

- PROPOSED LONGITUDINAL JOINT
- - - PROPOSED TRANSVERSE JOINT

REFER TO STANDARDS 420101, 420106, AND 420111 FOR DETAILS NOT DEPICTED.

MATCHLINE STATION 299+10 / 85+35.6, 90' LT



MATCHLINE STATION 83+00

MATCHLINE STATION 89+00

12'
12'
8'
8'
12'
12'
15'
(TYP.)

15' 12.5' 12.5' 12.1' 11.1' 9.3' 10' 12' 8' 8' 12' 12' 11.8' 11.5' 12' 12'

MATCHLINE STATION 300+65 / 85+38.5, 65' RT

2.0'
(TYP.)

15'
(TYP.)

9.5' 8.5' 10' 10'

MATCHLINE STATION 89+00

MATCHLINE STATION 95+00

12'
12'
6'
6'
12'
12'
15'
(TYP.)

2.3'



FILE NAME = D387695-sh1-joint2.dgn



USER NAME = \$USER*	DESIGNED - JNH	REVISED -
DRAWN - JNH	REVISIONS -	
PLOT SCALE = 40.0000' / in.	CHECKED - KMB	REVISED -
PLOT DATE = 6/7/2019	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RIDGE ROAD
JOINTING PLAN**

SCALE: 1"=20' SHEET 1 OF 1 SHEETS STA. 83+00 TO STA. 95+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	118
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

LEGEND

— PROPOSED LONGITUDINAL JOINT

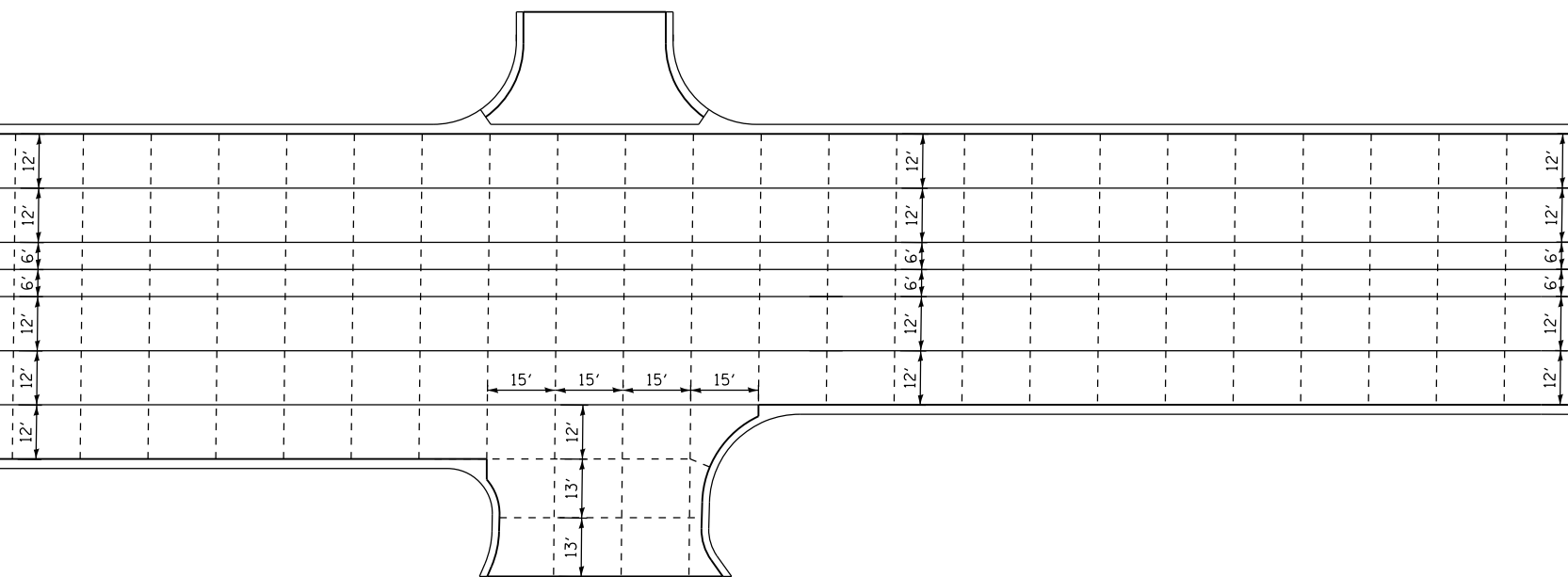
- - - PROPOSED TRANSVERSE JOINT

REFER TO STANDARDS 420101, 420106, AND 420111 FOR DETAILS NOT DEPICTED.



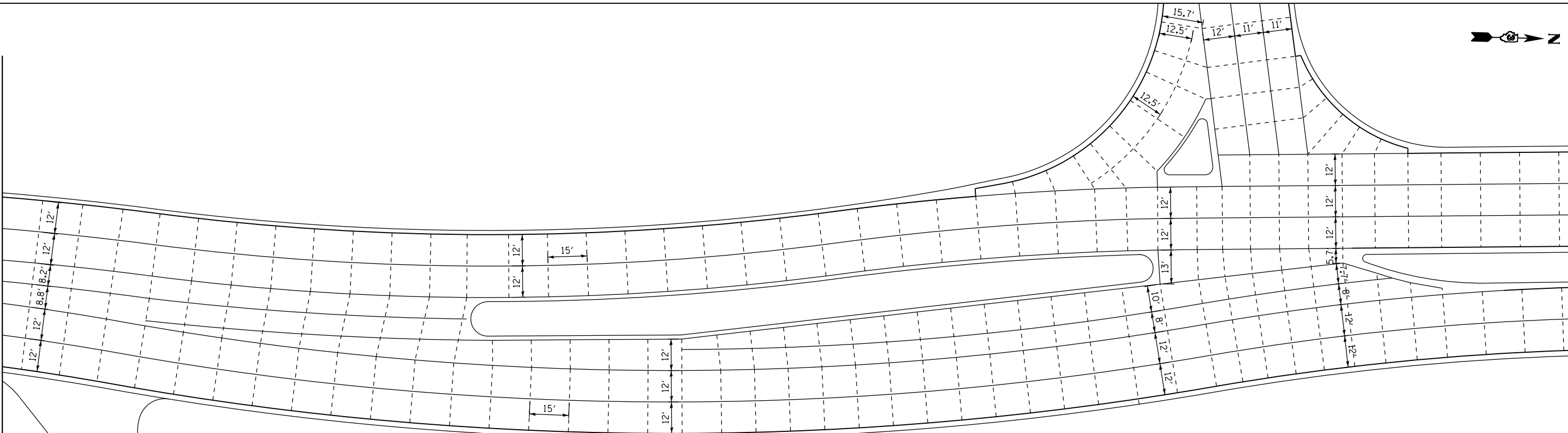
MATCHLINE STATION 95+00

MATCHLINE STATION 101+00



MATCHLINE STATION 101+00

MATCHLINE STATION 107+00



FILE NAME = D387695-shft-joint3.dgn



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PLOT DATE = 6/7/2019	CHECKED - KMB	REVISED -
	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RIDGE ROAD
JOINTING PLAN**

SCALE: 1"=20' SHEET 3 OF 4 SHEETS STA. 95+00 TO STA. 107+00

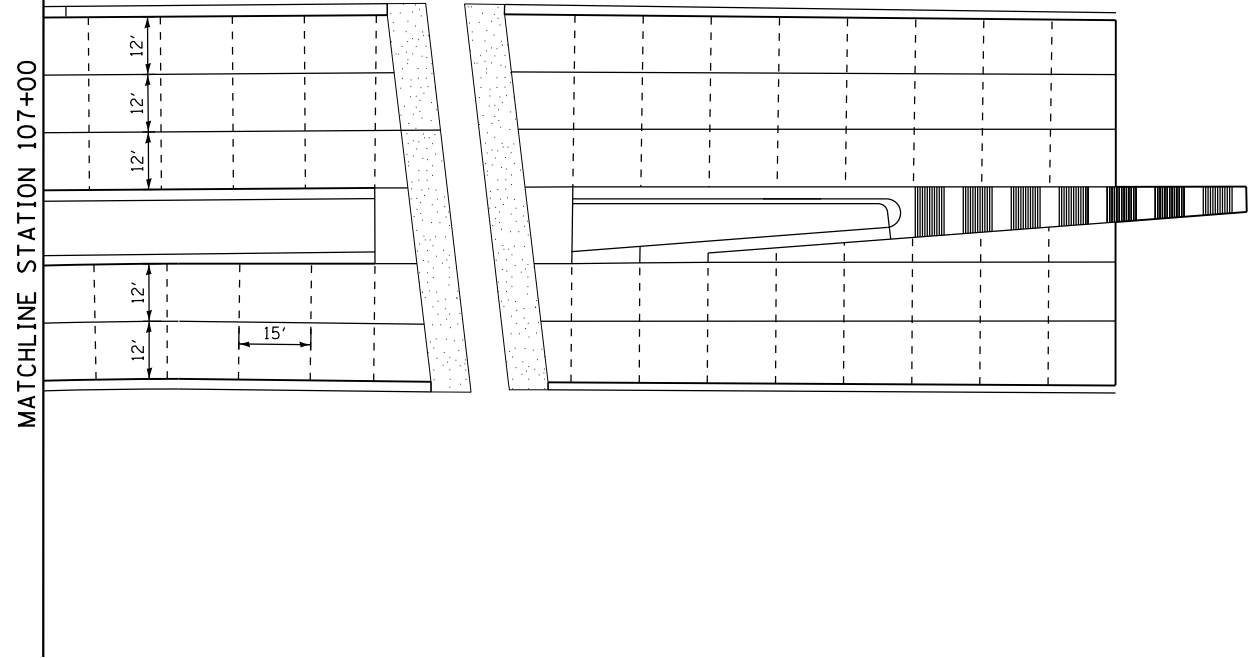
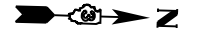
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	119
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

LEGEND

— PROPOSED LONGITUDINAL JOINT

- - - PROPOSED TRANSVERSE JOINT

REFER TO STANDARDS 420101, 420106, AND 420111 FOR DETAILS NOT DEPICTED.



FILE NAME = D387695-shf-joint-4.dgn



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	DRAWN - JNH	REVISED -
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PLOT DATE = 6/7/2019	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RIDGE ROAD
JOINTING PLAN**

SCALE: 1"=20' SHEET 4 OF 4 SHEETS STA. 107+00 TO STA. 113+00

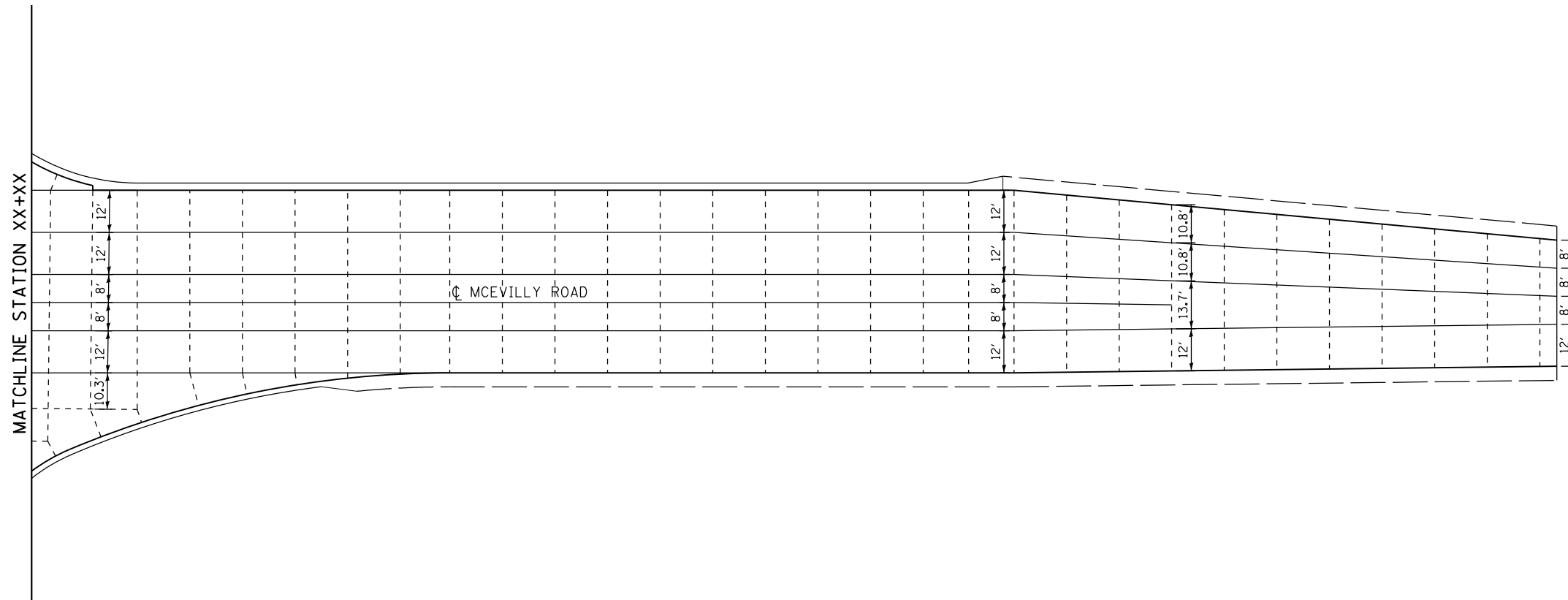
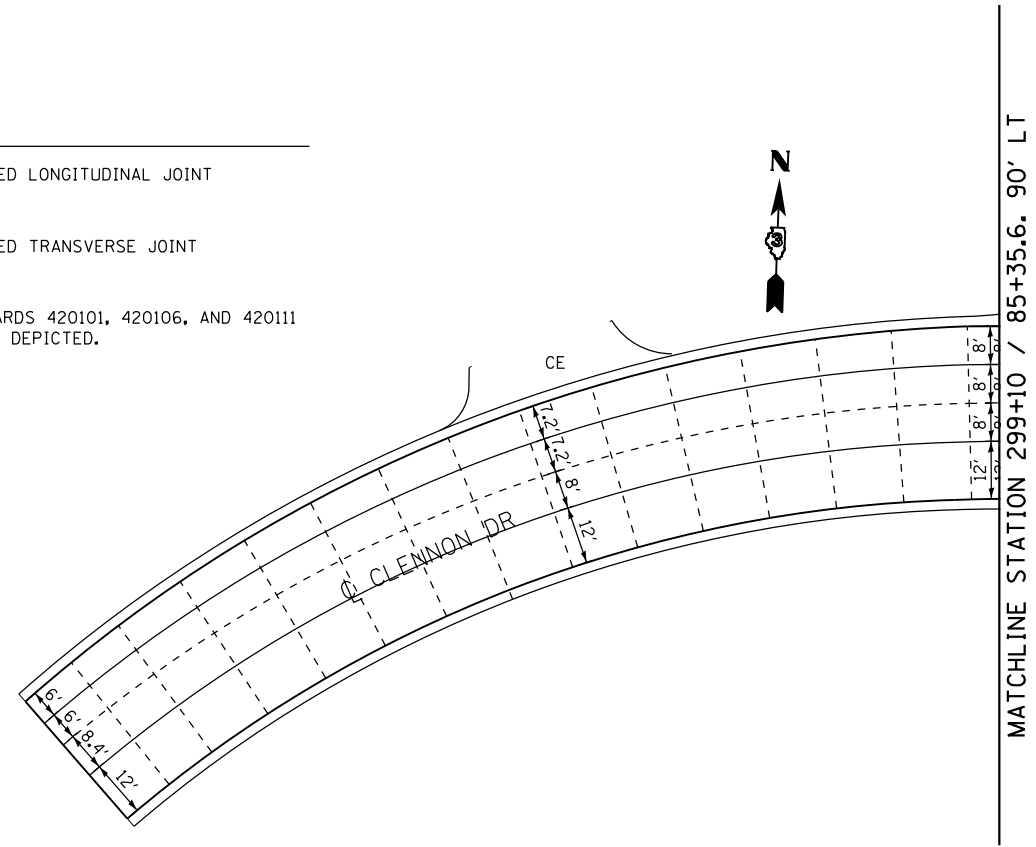
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	120
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

LEGEND

— PROPOSED LONGITUDINAL JOINT

- - - PROPOSED TRANSVERSE JOINT

REFER TO STANDARDS 420101, 420106, AND 420111 FOR DETAILS NOT DEPICTED.



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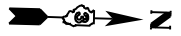
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DRAWN - JNH	REVISIONS -	
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PLOT DATE = 6/7/2019	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

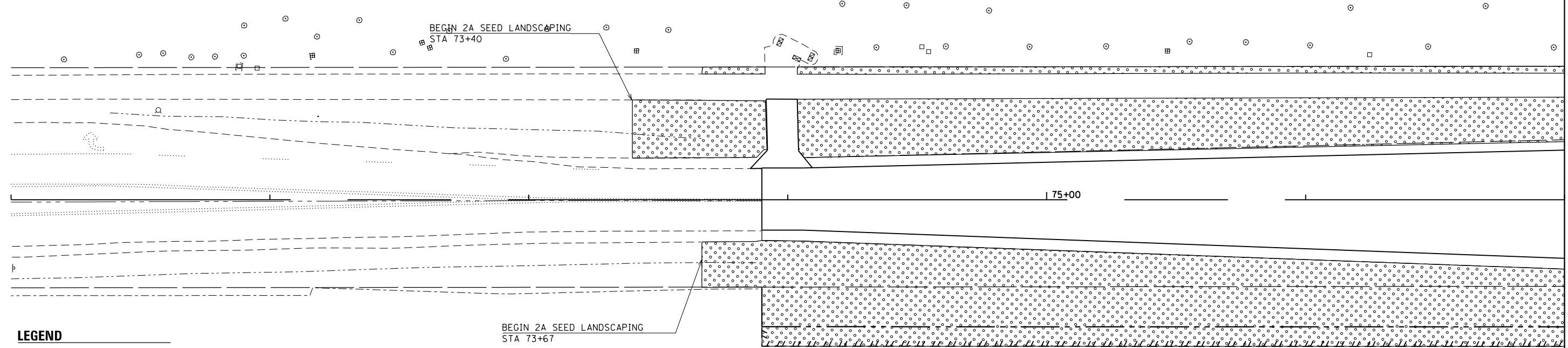
**CLENNON DRIVE / MCEVILLY ROAD
JOINTING PLAN**

SCALE: 1"=20' SHEET 1 OF 1 SHEETS STA. 297+00 TO STA. 305+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	121
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				




BEGIN 2A SEED LANDSCAPING
STA 73+40

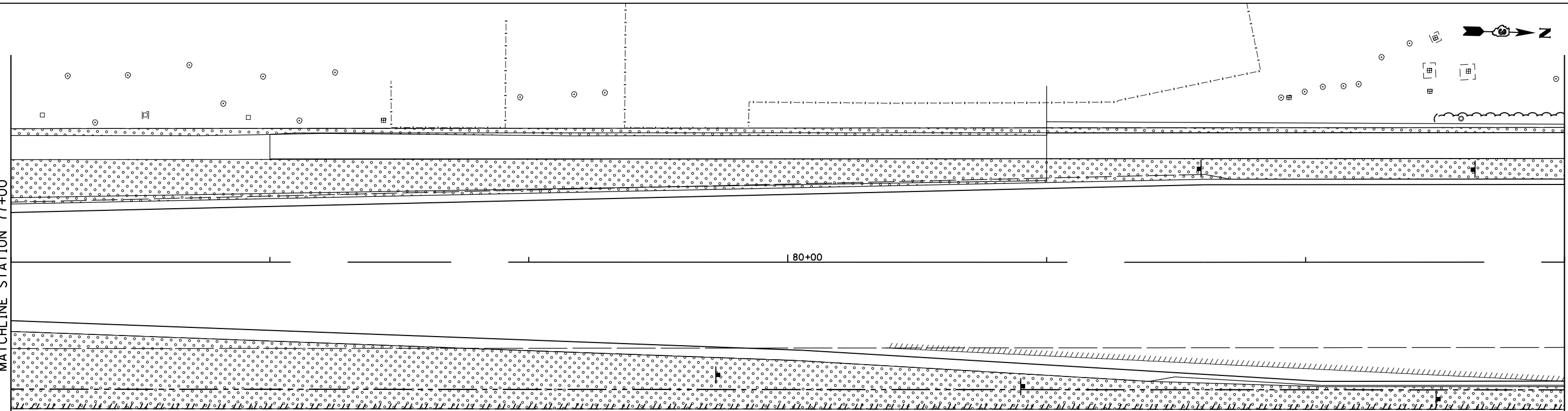
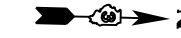
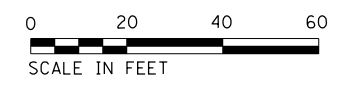


MATCHLINE STATION 77+00

LEGEND

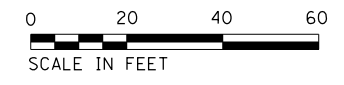
 TYPE 2A SEED W/ EROSION CONTROL BLANKET

BEGIN 2A SEED LANDSCAPING
STA 73+67



MATCHLINE STATION 77+00

MATCHLINE STATION 83+00



FILE NAME = D387695-sh1-ind.dgn



USER NAME = *USER*	DESIGNED - JNH	REVISED -
DRAWN - JNH	REVISED -	
PLOT SCALE = 40.0000' / in.	CHECKED - KMB	REVISED -
PLOT DATE = 6/7/2019	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RIDGE ROAD
LANDSCAPING PLAN**

SCALE: 1"=20' SHEET 1 OF 4 SHEETS STA. 71+00 TO STA. 83+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	122
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

MATCHLINE STATION 299+10 / 85+35.6, 90' LT

MATCHLINE STATION 83+00


MATCHLINE STATION 89+00

85+00

00+00E

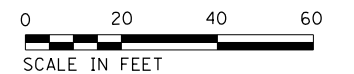
MATCHLINE STATION 300+65 / 85+38.5, 65' RT

LEGEND

 TYPE 2A SEED W/ EROSION CONTROL BLANKET

+38

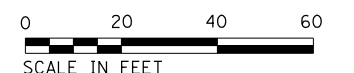
+48



MATCHLINE STATION 89+00

MATCHLINE STATION 95+00

90+00



FILE NAME = D387695-sh1-Ind1.dgn



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
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RIDGE ROAD
LANDSCAPING PLAN**

SCALE: 1"=20' SHEET 2 OF 4 SHEETS STA. 83+00 TO STA. 95+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	123
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

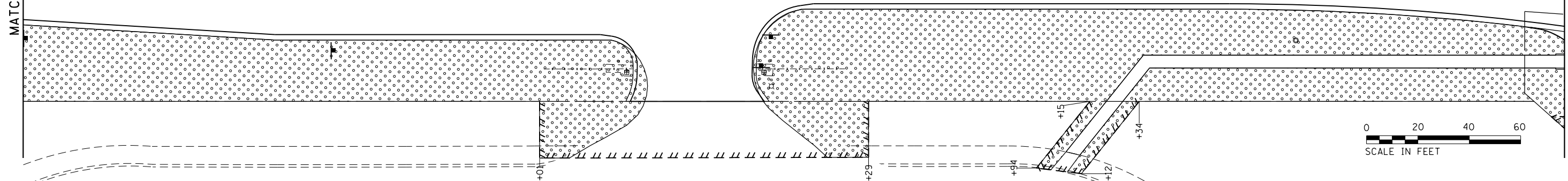
LEGEND

 TYPE 2A SEED W/ EROSION CONTROL BLANKET



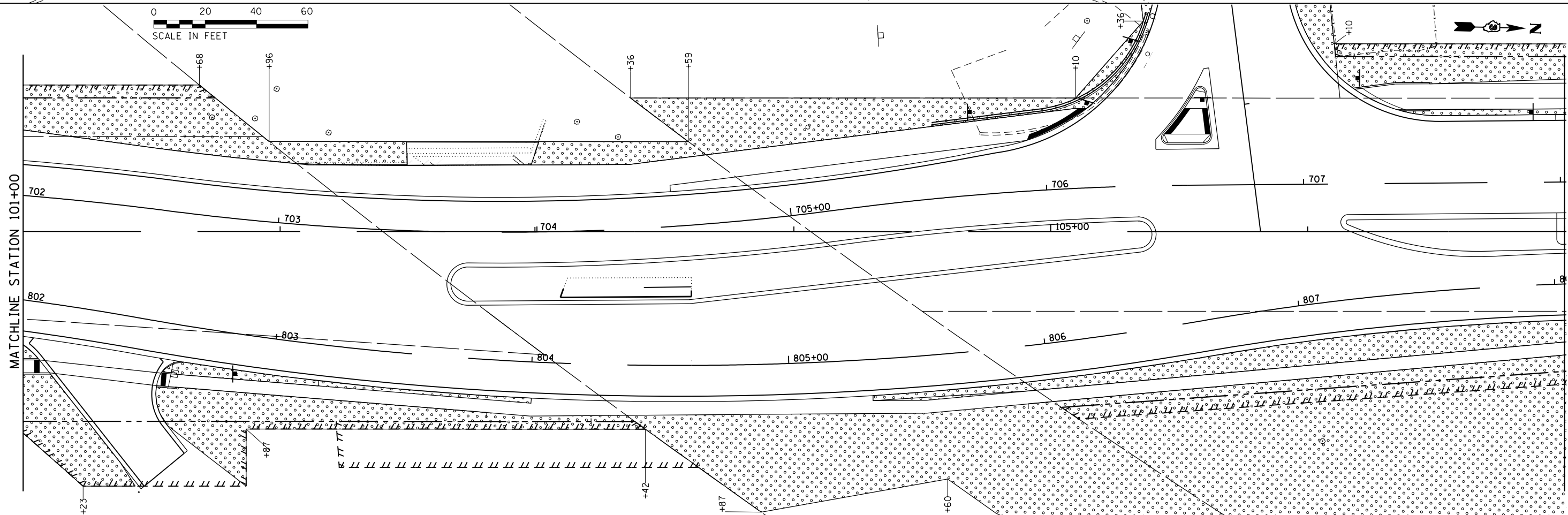
MATCHLINE STATION 95+00

MATCHLINE STATION 101+00



MATCHLINE STATION 101+00

MATCHLINE STATION 107+00



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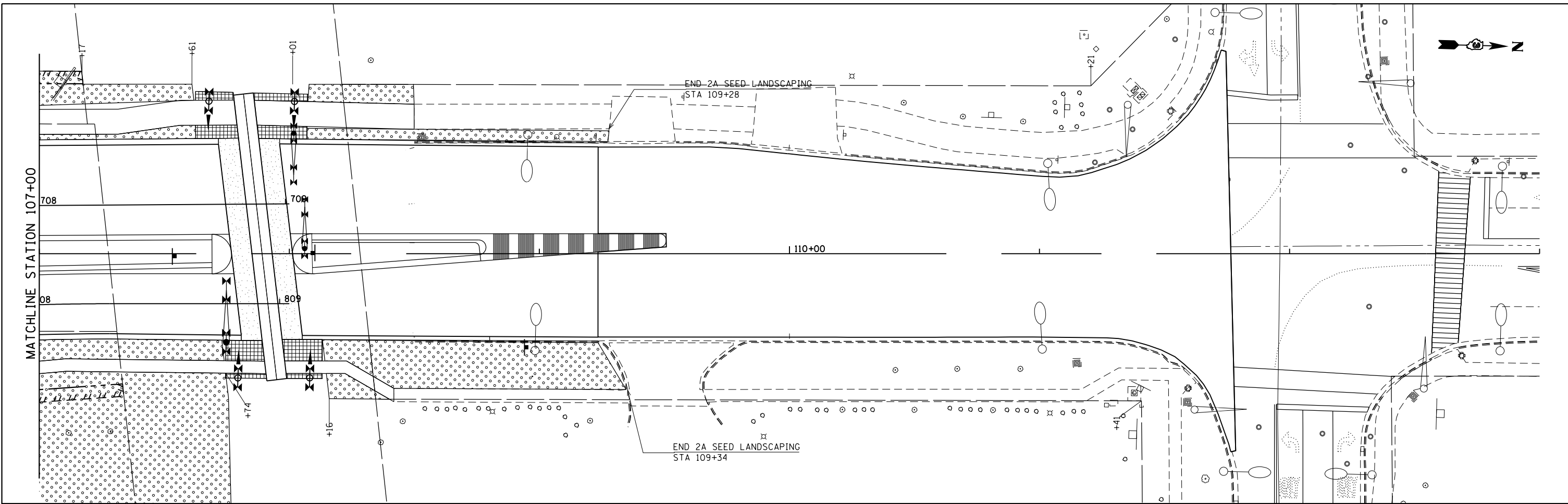


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	DATE - 05-31-2019	REVISED -


**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

RIDGE ROAD LANDSCAPING PLAN	
SCALE: 1"=20'	SHEET 3 OF 4 SHEETS
STA. 95+00	TO STA. 107+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	124
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



LEGEND

 TYPE 2A SEED W/ EROSION CONTROL BLANKET



FILE NAME = D387695-sh1-ind3.dgn



USER NAME = *USER*	DESIGNED - JNH	REVISED -
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
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

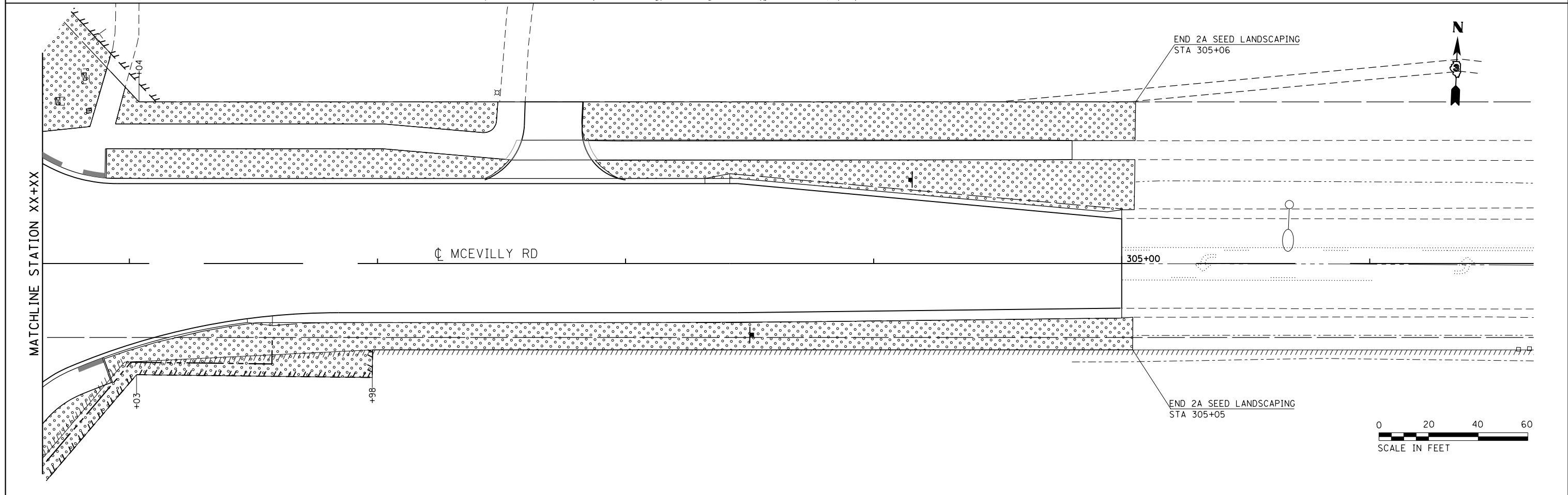
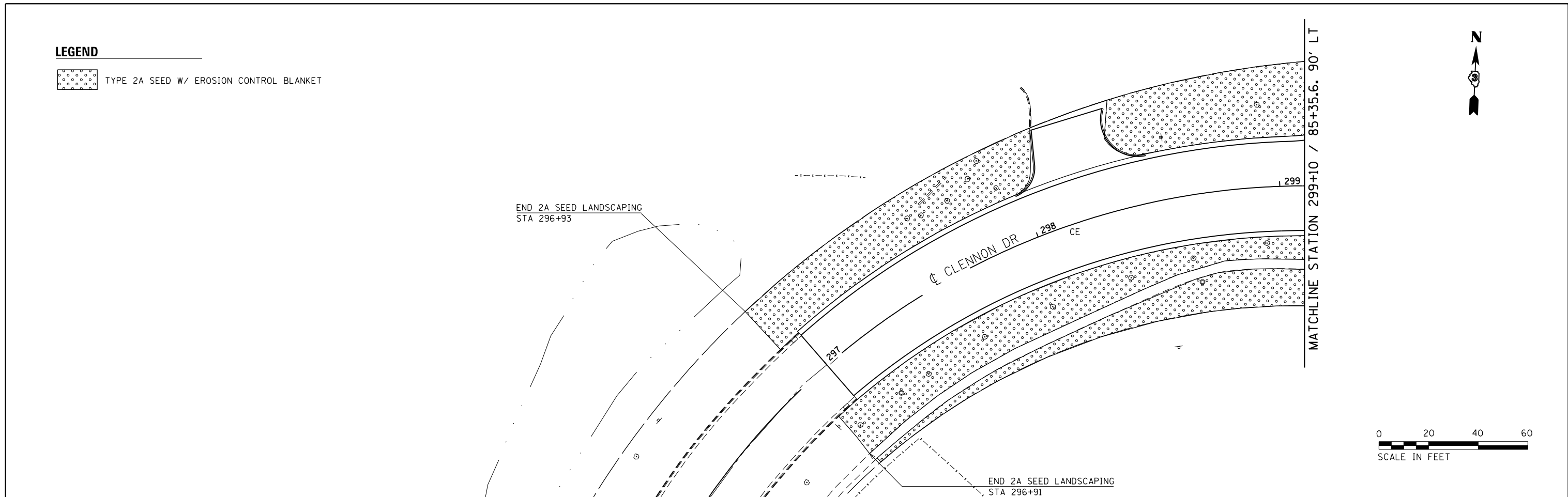
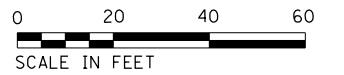
**RIDGE ROAD
LANDSCAPING PLAN**

SCALE: 1"=20' SHEET 4 OF 4 SHEETS STA. 107+00 TO STA. 113+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	125
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

LEGEND

 TYPE 2A SEED W/ EROSION CONTROL BLANKET



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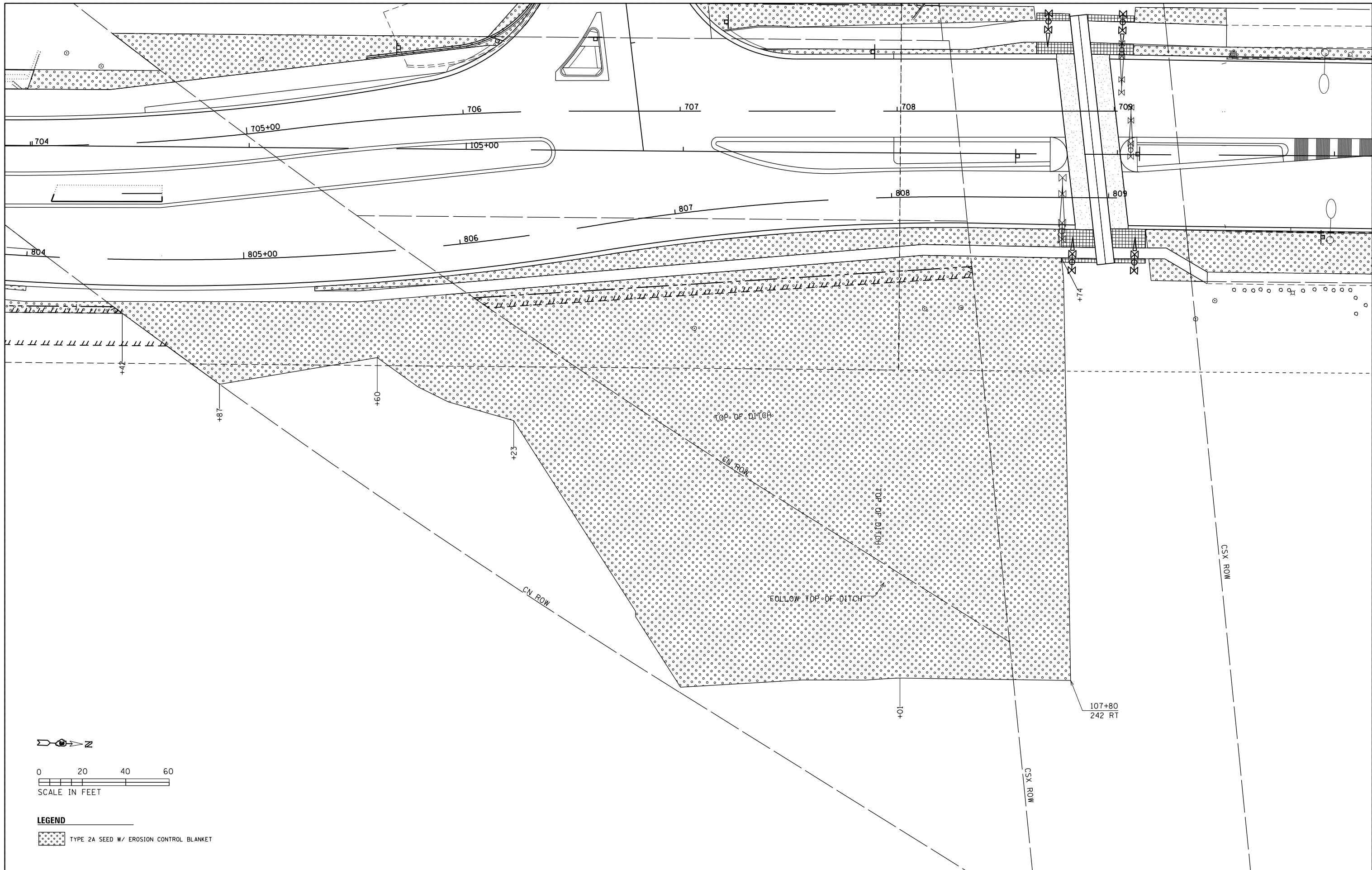
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PLOT DATE = 6/7/2019	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

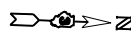
**CLENNON DRIVE / MCEVILLY ROAD
LANDSCAPING PLAN**

SCALE: 1"=20' SHEET 1 OF 1 SHEETS STA. 297+00 TO STA. 305+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	126
CONTRACT NO. 87695			ILLINOIS FED. AID PROJECT	




FILE NAME = D387695-sh1-ind5.dgn



0 20 40 60
SCALE IN FEET

LEGEND

 TYPE 2A SEED W/ EROSION CONTROL BLANKET



USER NAME = #USER*	DESIGNED - JNH	REVISED - _____
DRAWN - JNH	REVISED - _____	
PLOT SCALE = 48.0000' / in.	CHECKED - KMB	REVISED - _____
PLOT DATE = 6/7/2019	DATE - 05-31-2019	REVISED - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**NORTHEAST QUADRANT RIDGE ROAD /WCL
LANDSCAPING PLAN**

SCALE: 1"=20' SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	127
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

TRAFFIC SIGNAL GENERAL NOTES

1. THE CONTRACTOR SHALL CONTACT THE CITY OF MINOOKA A MINIMUM OF 72 HOURS PRIOR TO BEGINNING WORK.
2. THE TRAFFIC SIGNAL SECTION AT THE DEPARTMENT OF TRANSPORTATION, DISTRICT 3, SHALL BE NOTIFIED AT 815-434-8506 AT LEAST 72 HOURS PRIOR TO TURNING ON ANY FLASHER OR CONTROL UNIT.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED FOR NON -EMERGENCY WORK. THE JULIE NUMBER IS 800-892-0123.
4. ALL TRAFFIC CONTROL AND OTHER ADVISORY SIGNS NEEDED FOR CONSTRUCTION ARE FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 701 OF THE STANDARD SPECIFICATIONS.
5. ALL TRAFFIC SIGNAL HEADS SHALL BE 12-INCH POLYCARBONATE.
6. TRAFFIC SIGNAL HEADS SHALL BE PROPERLY COVERED PRIOR TO INTERSECTION TURN-ON OR AS DIRECTED BY THE ENGINEER. THIS COST SHALL BE INCLUDED WITH THE COST OF THE ASSOCIATED TRAFFIC SIGNAL PAY ITEMS.
7. A ¼" DIAMETER CONTINUOUS RODENT RESISTANT NYLON ROPE SHALL BE FURNISHED AND LEFT IN PLACE IN ALL CONDUITS BETWEEN HANDHOLES AND FOUNDATIONS OR CONTROLLER. THIS COST SHALL BE INCLUDED IN THE COST OF CONDUIT PAY ITEM.
8. THE CONTRACTOR SHALL ARRANGE FOR A FACTORY OR SUPPLIER REPRESENTATIVE TO BE PRESENT AT THE INTERSECTION WHEN THE SIGNAL IS TURNED ON. COST TO BE INCLUDED IN THE TRAFFIC SIGNAL CONTROLLER PAY ITEM.
9. ALL CONDUIT IN TRENCH SHALL BE PVC. CONDUIT PUSHED MAY BE PVC OR GALVANIZED STEEL. CONDUIT ATTACHED TO STRUCTURES SHALL BE GALVANIZED STEEL.
10. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR PLACING CONDUIT AT GREATER THAN 2' MINIMUM DEPTH TO AVOID OBSTACLES SUCH AS UNDERGROUND UTILITIES.
11. THE ELECTRICAL CONDUCTORS FOR ALL TRAFFIC SIGNAL HEADS SHALL BE SOLID, SOFT COPPER.
12. ALL THREADS OF BOLTS USED IN ASSEMBLY OF TRAFFIC SIGNAL COMPONENTS SHALL BE COATED WITH NON- LEAD BASED ANTI -SEIZE COMPOUND, SIMILAR TO LEAD PLATE, PRIOR TO ASSEMBLY.
13. ALL HARDWARE SHALL BE TIGHTENED AND WELL SECURED. CABLES SHALL BE NEATLY WOUND IN HANDHOLES. CABLES SHALL BE NEATLY TRAINED IN THE CONTROLLER CABINET.
14. ALL TRAFFIC SIGNAL WIRING SHALL EXTEND FROM CONTROLLER TO SIGNAL. SPLICES IN JUNCTION BOXES WILL NOT BE ALLOWED.
15. THE CONTROLLER CABINET SHALL BE PLACED SO THAT A TECHNICIAN MAY SEE THE INTERSECTION OVER THE TOP OF CABINET WHILE WATCHING THE COMPONENTS OF THE CABINET.
16. THE PROPOSED TRAFFIC SIGNAL CONTROLLER CABINET SHALL BE FURNISHED WITH A MANUAL CONTROL SWITCH AND MANUAL CONTROL CHORD WITHIN THE POLICE DOOR COMPARTMENT. THIS WORK SHALL BE INCLUDED IN THE CONTROLLER CABINET PAY ITEM.
17. THE CONTRACTOR SHALL PROVIDED A SELF- ADHERED PHASE DIAGRAM ON THE INSIDE OF THE CONTROLLER CABINET DOOR.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ELECTRICAL SERVICE FOR THE TRAFFIC SIGNAL. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY PRIOR TO BEGINNING OF WORK TO OBTAIN THE UTILITY COMPANY REQUIREMENTS FOR THE SERVICE INSTALLATION.
19. THE CONTRACTOR SHALL CONTACT THE CITY OF MINOOKA, IDOT AND UTILITY COMPANY FOR THE TELEPHONE CONNECTION TO THE MASTER CONTROLLER.
20. THE ELEVATION OF THE TOP OF THE DOUBLE HANDHOLE SHALL BE LESS THAN ELEVATION OF THE TOP OF THE CONTROLLER FOUNDATION.
21. ALL UNINTERRUPTABLE POWER SUPPLIES SHALL BE EQUIPPED WITH ALPHA GUARD MONITORS.
22. ALL GROUNDING MATERIALS FOR CONCRETE FOUNDATIONS SHALL REFER TO SECTION 806 OF THE STANDARD SPECIFICATIONS.
23. ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED WITH SEED OR SOD TO THE SATISFACTION OF THE ENGINEER. SEEDING OR SODDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET OR IN AN UNTILLABLE CONDITION.
24. THE FIBER OPTIC CABLE SHALL BE LABELED WITH DIRECTION AND ASSIGNMENT NUMBER.
25. THE SURGE PROTECTOR IN THE CONTROLLER CABINET SHALL HAVE AN INDICATOR LIGHT.
26. THE MAST ARM FOUNDATIONS SHALL BE LOCATED A MINIMUM 6' FROM THE FACE OF THE CURB OR A MINIMUM OF 18' FROM THE EDGE OF THE PAVEMENT TO THE FACE OF THE FOUNDATION WHERE THERE IS NO CURB. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, IN CURB AREA, GET MORE THAN 6' POSSIBLE IF THE SIGNAL HEAD STILL LINES UP WITH THE CENTER OF LANE.
27. ONE WEEK PRIOR TO SIGNAL TURN-ON FOR BOTH DIRECTIONS, THE CHANGEABLE MESSAGE SIGNS SHOULD READ "NEW SIGNAL AHEAD/TURN ON DATE FOR THREE WEEKS. AFTER THE SIGNALS ARE TURNED ON THE MESSAGE SIGN SHOULD READ "NEW SIGNAL AHEAD/BE PREPARED TO STOP", FOR FOUR WEEKS.
28. ALL MAST ARM MOUNTED SIGNAL HEADS ON INDIVIDUAL MAST ARM SHALL BE MOUNTED SO THAT THE RED INDICATIONS ARE LEVEL WITH EACH OTHER.
29. BACKPLATES SHALL BE POLYCARBONATE, LOUVERED FORMED BACKPLATES.
30. ALL VEHICLE AND PEDESTRIAN SIGNAL HEADS SHALL HAVE POLYCARBONATE BLACK HOUSING AND BLACK BACKPLATES.

TEMPORARY TRAFFIC SIGNAL GENERAL NOTES

1. ALL SIGNAL HEADS ON INDIVIDUAL SPAN WIRE SHALL BE MOUNTED SO THAT THE "RED"INDICATIONS ARE LEVEL WITH EACH OTHER.
2. THE CONTRACTOR SHALL PROVIDE 3' OF SLACK CABLE IN THE CONTROLLER AND ON THE WOOD POLES. THE SLACK IS IN ADDITION TO THE VERTICAL LENGTH OF THE CABLE DEFINED IN THE STANDARD SPECIFICATIONS AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR ELECTRICAL CABLE OF THE TYPE SPECIFIED.
3. TEMPORARY WOOD POLES SHALL BE LOCATED A MINIMUM OF 6' FROM THE FACE OF CURB OR MINIMUM OF 18' FROM THE EDGE OF PAVEMENT WHERE THERE IS NO CURB, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
4. ALL TEMPORARY WOOD POLES SHALL BE INSTALLED SO THAT THE MINIMUM OF 30' OF POLE ABOVE THE EXISTING PAVEMENT ELEVATIONS ADJACENT TO THE POLE. A SUFFICIENT LENGTH OF POLE SHALL BE BURIED AND BACK GUYED TO ALLOW THE INSTALLATION TO WITHSTAND A 70 MPH SUSTAINED WIND LOADING.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE WOOD POLE LOCATION BEFORE ORDERING TO DETERMINE IF LONGER POLES ARE REQUIRED.
6. TEMPORARY SIGNAL HEADS SHALL BE RELOCATED AS NECESSARY TO LINE UP WITH STAGE TRAFFIC LANES. THIS WORK SHALL BE INCLUDED IN THE COST OF TEMPORARY TRAFFIC SIGNAL INSTALLATION.

LIGHTING GENERAL NOTES

1. UNDERGROUND SPLICING IS NOT PERMITTED. ALL SPLICING SHALL BE DONE IN POLE HANDHOLES IN ACCORDANCE WITH ARTICLE 817.05 OF THE STANDARD SPECIFICATIONS.

MODEL: Default
FILE NAME: \\010119\projects\18222004_CADD\CADD_Sheets\03787595.rvt_001A-Ridge_Road_General_Notes.dgn



USER NAME = mgarvida	DESIGNED - MG	REVISED -
PLOT SCALE = 39.9999 ' / in.	DRAWN - EC	REVISED -
PLOT DATE = 4/3/2019	CHECKED - KP	REVISED -
	DATE - 04/05/2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RIDGE ROAD AT MCEVILLY ROAD AND MINOOKA ROAD
TRAFFIC SIGNAL AND LIGHTING PLANS
GENERAL NOTES**

SCALE: NTS SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	128
			CONTRACT NO. 87695	
		ILLINOIS	FED. AID PROJECT	

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.	RIDGE RD AT MCEVILLY	RIDGE RD AT MINOOKA
SIGN PANEL - TYPE 1	SQ FT	5	5	-
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	126	126	-
UNDERGROUND CONDUIT, PVC, 3" DIA.	FOOT	150	-	150
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	1260	1260	-
AERIAL CABLE, 2-1/C NO. 8 WITH MESSENGER WIRE	FOOT	450	450	-
LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	8	8	-
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2	1	1
UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	2	1	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1623	1623	-
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1679	1679	-
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	478	478	-
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2147	2147	-
ELECTRIC CABLE IN CONDUIT, RAILROAD, NO. 14 3C	FOOT	475	-	475
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	158	158	-
TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	1	1	-
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	3	3	-
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 22 FT.	EACH	1	1	-
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 24 FT.	EACH	1	1	-
CONCRETE FOUNDATION, TYPE A	FOOT	16	16	-
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	20	20	-
DRILL EXISTING HANDHOLE	EACH	7	6	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	2	2	-
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2	2	-
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	6	6	-
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED	EACH	4	4	-
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	10	10	-
PEDESTRIAN PUSH-BUTTON	EACH	4	4	-
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1	1	-
RELOCATE EXISTING SIGNAL HEAD	EACH	2	2	-
RELOCATE EXISTING PEDESTRIAN SIGNAL HEAD	EACH	4	4	-
RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON	EACH	4	4	-
MODIFY EXISTING CONTROLLER	EACH	1	1	-
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	2900	2900	-
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1	1	-
REMOVE EXISTING CONCRETE FOUNDATION	EACH	4	4	-
LUMINAIRE, LED, SPECIAL	EACH	6	6	-
COMBINATION LIGHTING CONTROLLER	EACH	1	1	-
MAST ARM, ALUMINUM, 15 FT.	EACH	8	8	-
REMOVAL OF TEMPORARY LUMINAIRE	EACH	8	8	-
FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	1	-	1
RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	-	1
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1	1	-

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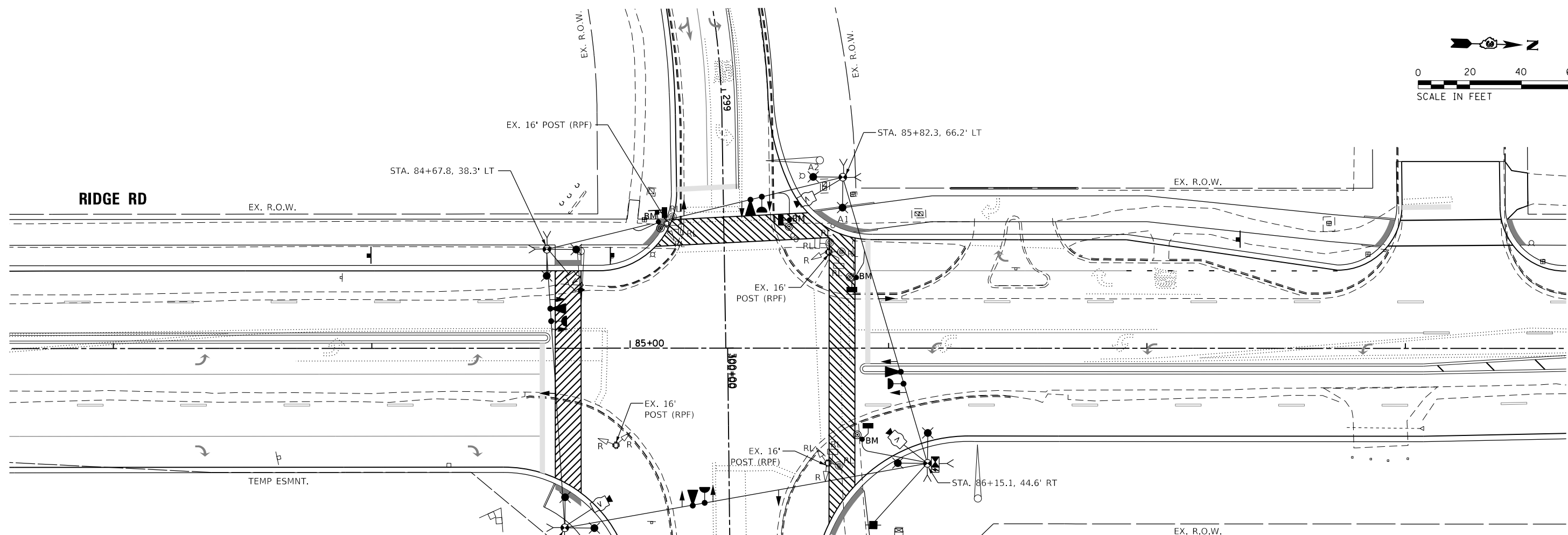
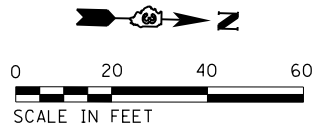
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES
RIDGE ROAD AT MCEVILLY ROAD AND MINOOKA ROAD**

SCALE: NTS SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	129
			CONTRACT NO. 87695	
		ILLINOIS	FED. AID PROJECT	



NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 3, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300MM) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS, AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
6. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
7. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS, AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
8. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE REQUIREMENTS OF GRUNDY COUNTY / VILLAGE OF MINOOKA, AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.

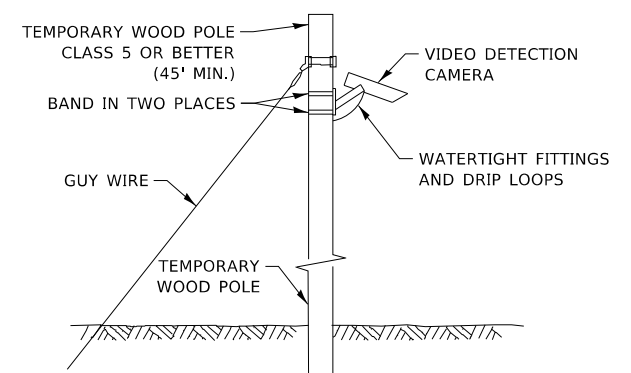
TRAFFIC SIGNAL LEGEND

TEMPORARY CONTROLLER CABINET WITH UPS	
SERVICE INSTALLATION - POLE MOUNTED	
TEMPORARY SIGNAL HEAD	
PEDESTRIAN SIGNAL HEAD	
TEMPORARY WOOD POLE, 60-FT WOOD POLE, 15-FT MAST ARM	
TEMPORARY LUMINAIRE	
PEDESTRIAN PUSH BUTTON	
VIDEO DETECTION CAMERA	
EMERGENCY VEHICLE LIGHT DETECTOR / CONFIRMATION BEACON	
SPAN WIRE	
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE	
REMOVE	R
RELOCATE	RL
REMOVE POST FOUNDATION	RPF
BARREL MOUNTED POST (TEMPORARY)	● BM

REMOVAL NOTES

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACTOR'S BID PRICE.

4	EACH	TRAFFIC SIGNAL POST
1	EACH	3-SECTION SIGNAL HEAD
3	EACH	5-SECTION SIGNAL HEAD



TEMPORARY VIDEO DETECTION MOUNTING DETAIL

(NOT TO SCALE)

PRE-STAGE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL EQUIPMENT REMOVAL AND TEMPORARY PLAN
RIDGE ROAD AT MCEVILLY ROAD

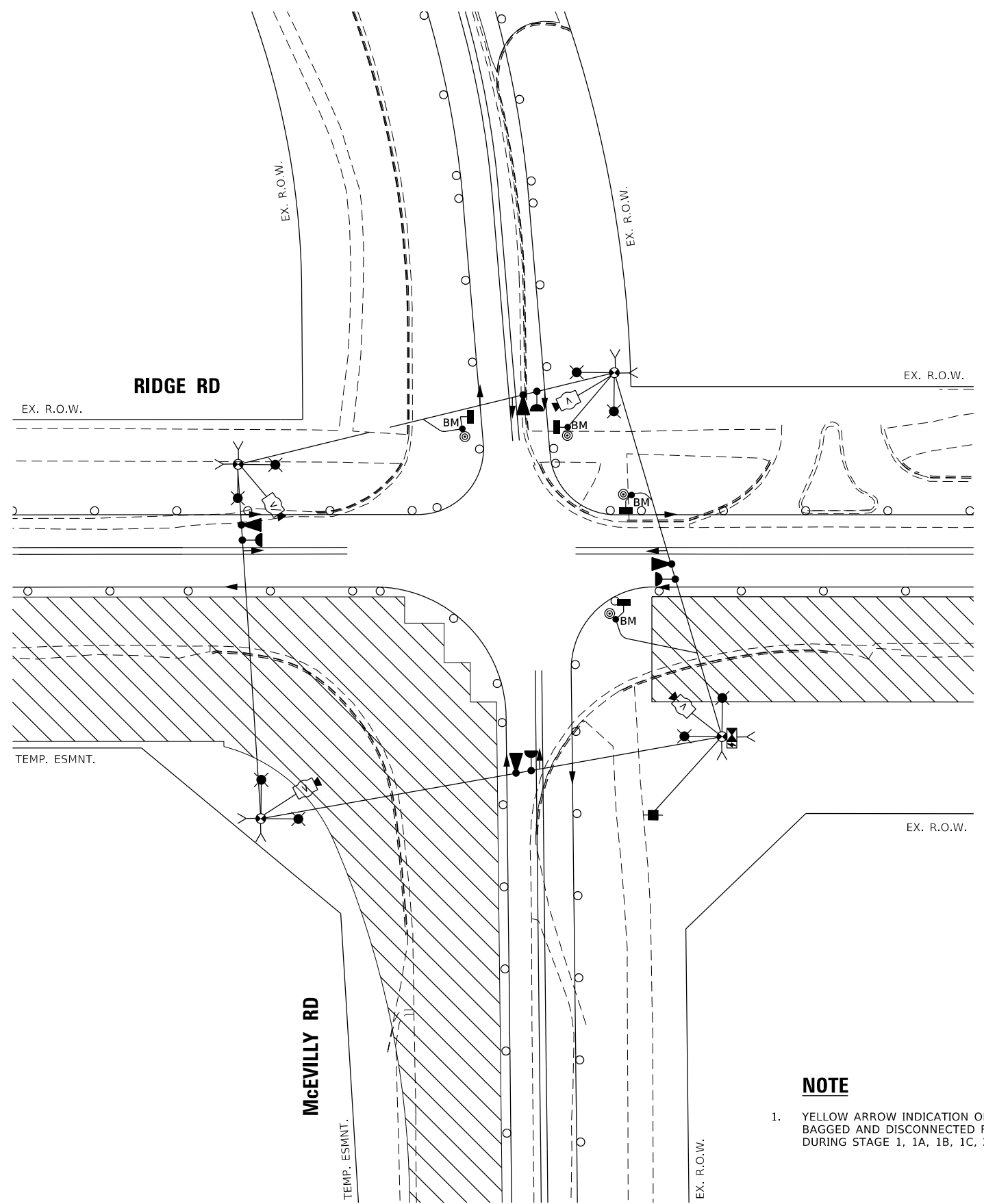
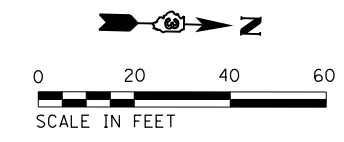
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	130
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

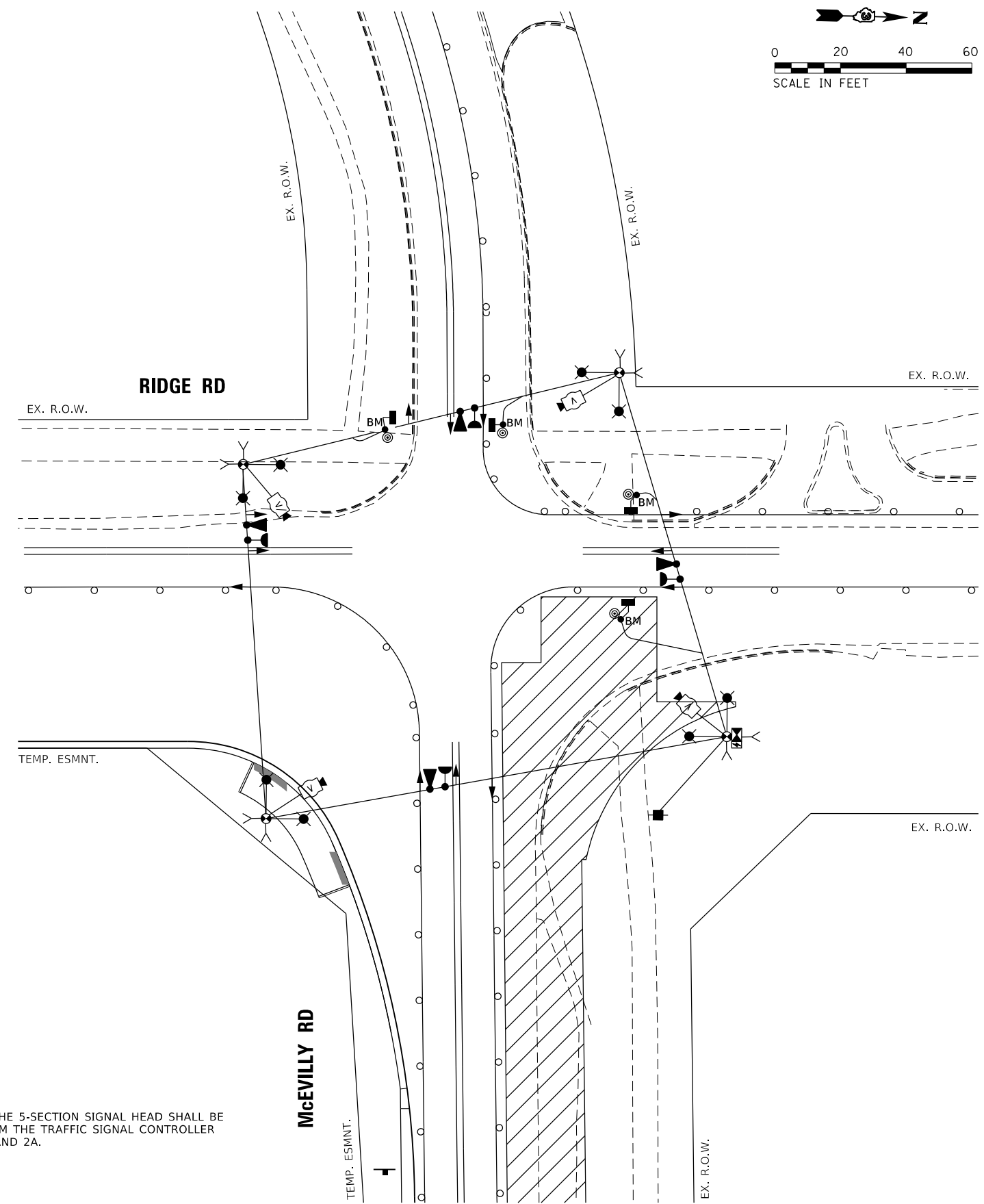


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STAGE 1 & 1A



STAGE 1B & 1C

NOTE

1. YELLOW ARROW INDICATION ON THE 5-SECTION SIGNAL HEAD SHALL BE BAGGED AND DISCONNECTED FROM THE TRAFFIC SIGNAL CONTROLLER DURING STAGE 1, 1A, 1B, 1C, 2, AND 2A.

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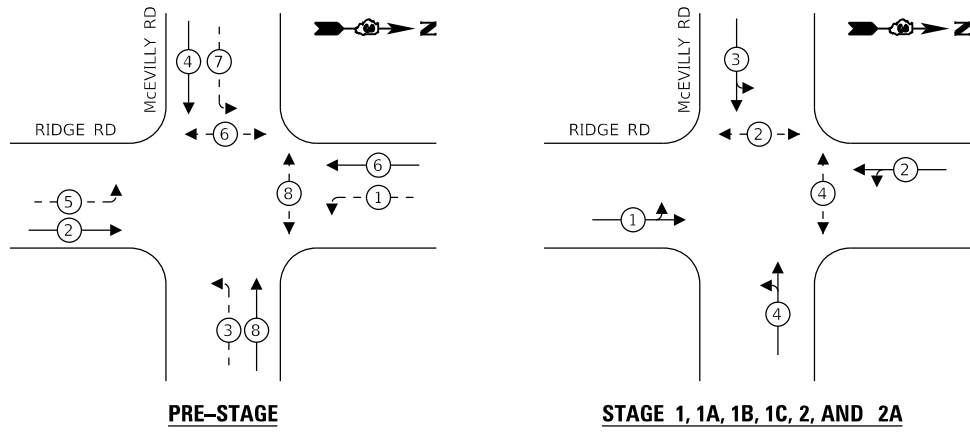
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY TRAFFIC SIGNAL INSTALLATION AT STAGE 1, 1A, 1B, & 1C
RIDGE ROAD AT MCEVILLY ROAD**

SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

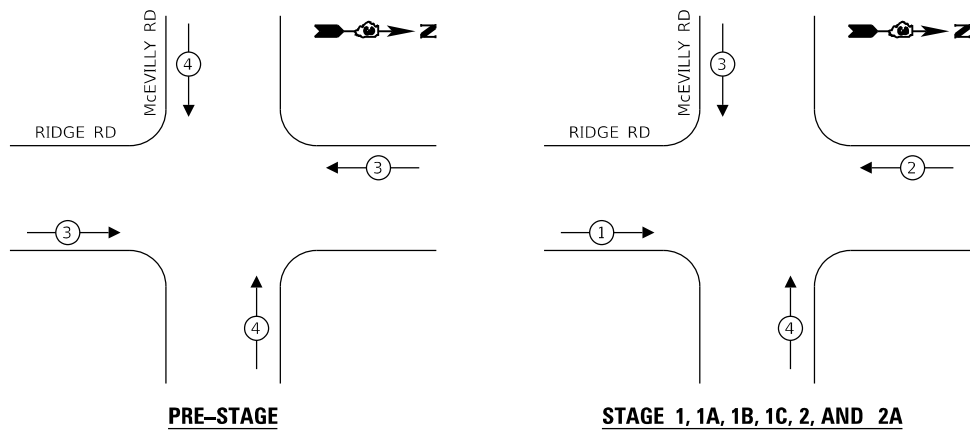
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	131
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

TEMPORARY CONTROLLER SEQUENCE



- LEGEND:**
- ← ⊛ → PROTECTED PHASE
 - ← ⊛ - - ⊛ → PROTECTED/PERMITTED PHASE
 - ← ⊛ ⊙ → PEDESTRIAN PHASE
 - ← ⊛ ⊙ OL → OVERLAP

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE

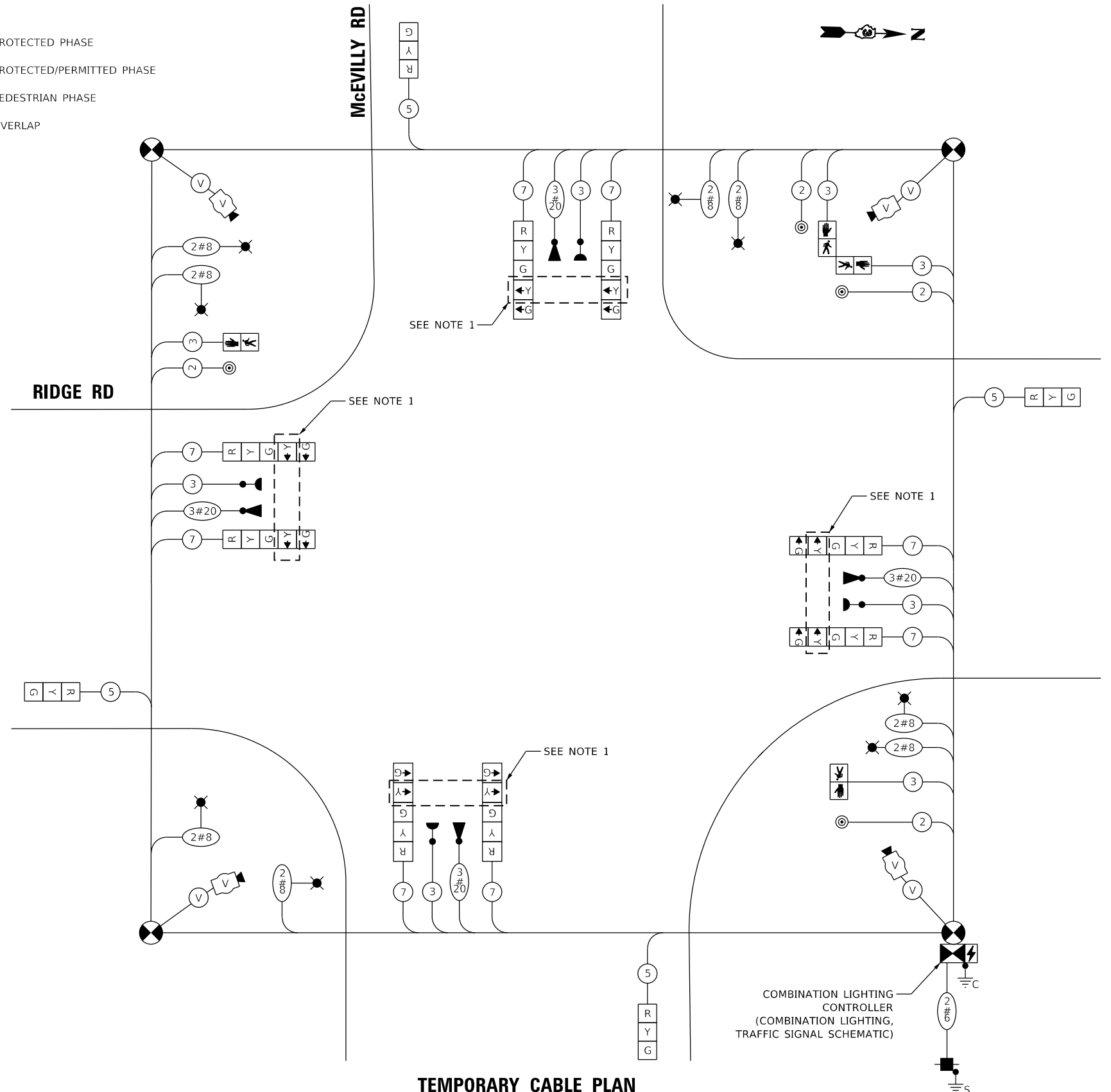


TEMPORARY CABLE PLAN LEGEND

- CONTROLLER CABINET
- UNINTERRUPTABLE POWER SUPPLY
- SERVICE INSTALLATION - POLE MOUNTED
- TEMPORARY LUMINAIRE, 120V, 1-PHASE, 2-WIRE
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSH BUTTON
- VIDEO DETECTION CAMERA
- EMERGENCY VEHICLE LIGHT DETECTOR / CONFIRMATION BEACON
- GROUND ROD
- SIGNAL HEAD
- DENOTES NUMBER OF CONDUCTORS. ALL CABLE ARE NO. 14 EXCEPT AS INDICATED.
- WOOD POLE

McEVILLY RD

RIDGE RD



TEMPORARY CABLE PLAN

NOTE

1. YELLOW ARROW INDICATION ON THE 5-SECTION SIGNAL HEAD SHALL BE BAGGED AND DISCONNECTED FROM THE TRAFFIC SIGNAL CONTROLLER DURING STAGE 1, 1A, 1B, 1C, 2, AND 2A.

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	11	50	66.0
(YELLOW)	12	20	5	12.0
(GREEN)	12	12	45	64.8
PERMISSIVE ARROW	16	10	10	16.0
PED. SIGNAL	4	20	100	80.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	1	150	100	150.0
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	8	185	50	740.0
TOTAL =				1253.8

ENERGY COSTS TO:
VILLAGE OF MINOOKA
 121 EAST MCEVILLY ROAD
 MINOOKA, IL 60447

ENERGY SUPPLY: CONTACT: _____
 PHONE: _____
 COMPANY: COMMONWEALTH EDISON
 ACCOUNT NUMBER: _____

SINGH
 SINGH & ASSOCIATES INC.
 CONSULTING ENGINEERS

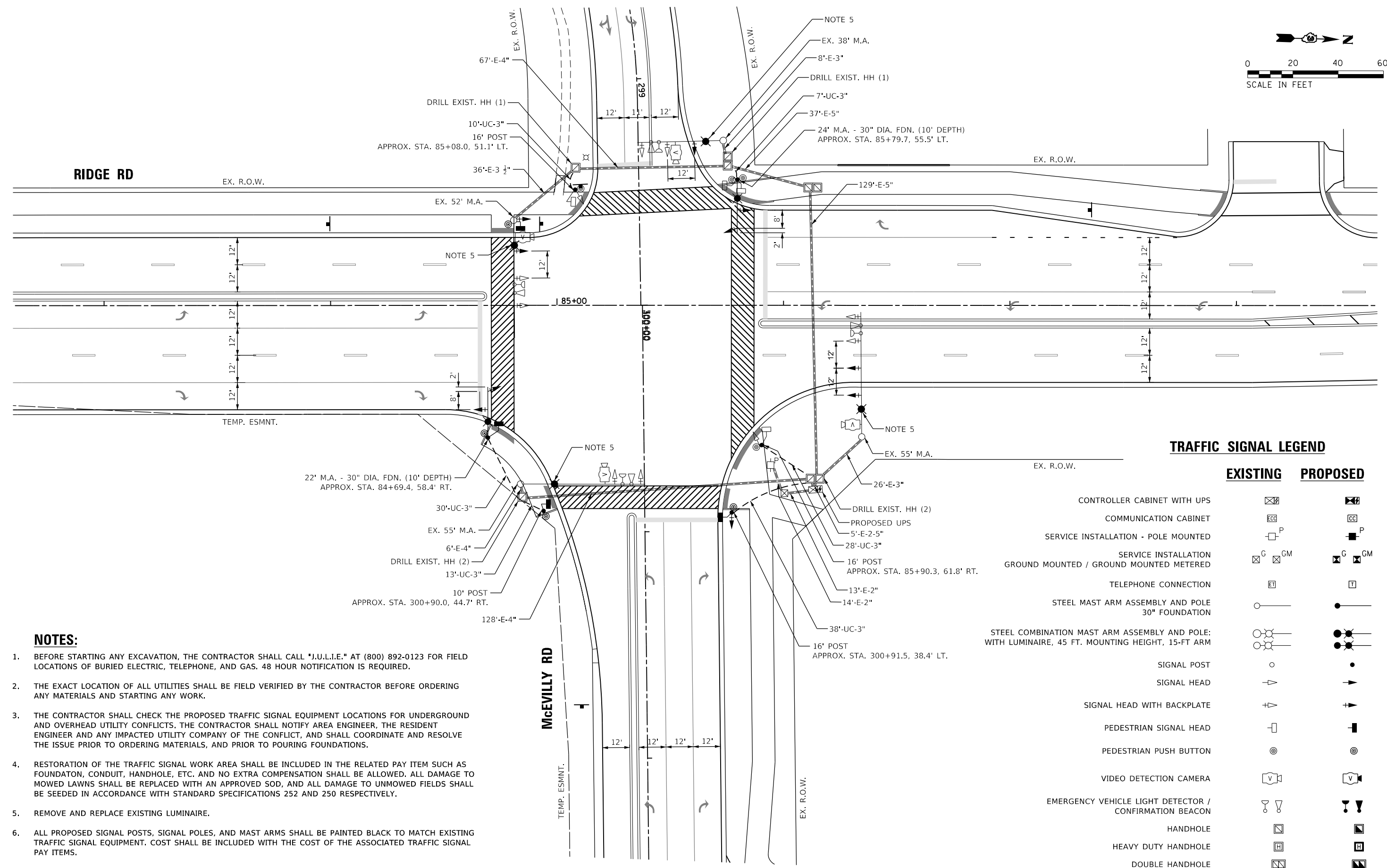
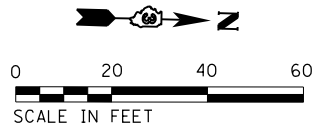
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 DATE - 04/05/2019
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY CABLE PLAN, PHASE DESIGNATION DIAGRAM,
 AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 RIDGE ROAD AT MCEVILLY ROAD**

SCALE: NTS SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	133
				CONTRACT NO. 87695
		ILLINOIS FED. AID PROJECT		



TRAFFIC SIGNAL LEGEND

	EXISTING	PROPOSED
CONTROLLER CABINET WITH UPS		
COMMUNICATION CABINET		
SERVICE INSTALLATION - POLE MOUNTED		
SERVICE INSTALLATION GROUND MOUNTED / GROUND MOUNTED METERED		
TELEPHONE CONNECTION		
STEEL MAST ARM ASSEMBLY AND POLE 30\"/>		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE: WITH LUMINAIRE, 45 FT. MOUNTING HEIGHT, 15-FT ARM		
SIGNAL POST		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
PEDESTRIAN SIGNAL HEAD		
PEDESTRIAN PUSH BUTTON		
VIDEO DETECTION CAMERA		
EMERGENCY VEHICLE LIGHT DETECTOR / CONFIRMATION BEACON		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		

NOTES:

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800) 892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS. 48 HOUR NOTIFICATION IS REQUIRED.
- THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ORDERING ANY MATERIALS AND STARTING ANY WORK.
- THE CONTRACTOR SHALL CHECK THE PROPOSED TRAFFIC SIGNAL EQUIPMENT LOCATIONS FOR UNDERGROUND AND OVERHEAD UTILITY CONFLICTS. THE CONTRACTOR SHALL NOTIFY AREA ENGINEER, THE RESIDENT ENGINEER AND ANY IMPACTED UTILITY COMPANY OF THE CONFLICT, AND SHALL COORDINATE AND RESOLVE THE ISSUE PRIOR TO ORDERING MATERIALS, AND PRIOR TO POURING FOUNDATIONS.
- RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, ETC. AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.
- REMOVE AND REPLACE EXISTING LUMINAIRE.
- ALL PROPOSED SIGNAL POSTS, SIGNAL POLES, AND MAST ARMS SHALL BE PAINTED BLACK TO MATCH EXISTING TRAFFIC SIGNAL EQUIPMENT. COST SHALL BE INCLUDED WITH THE COST OF THE ASSOCIATED TRAFFIC SIGNAL PAY ITEMS.
- ALL LUMINAIRES SHALL HAVE A PHOTOCELL. COST OF PHOTOCELL SHALL BE INCLUDED IN THE "LUMINAIRE, LED, SPECIAL".

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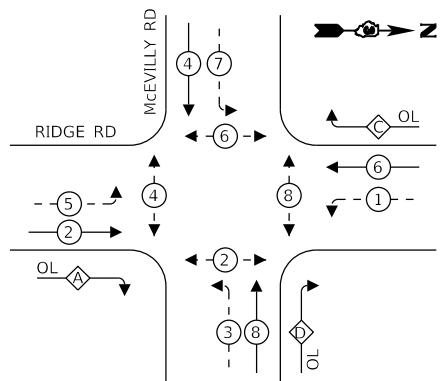
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL EQUIPMENT MODIFICATION PLAN
RIDGE ROAD AT MCEVILLY ROAD**

SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

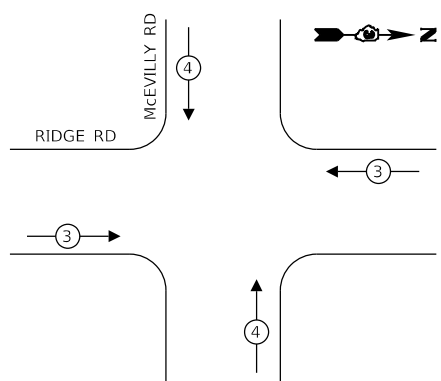
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 87695	

PROPOSED CONTROLLER SEQUENCE



OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A =	2	+ 3
C =	6	+ 7
D =	8	+ 1

PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



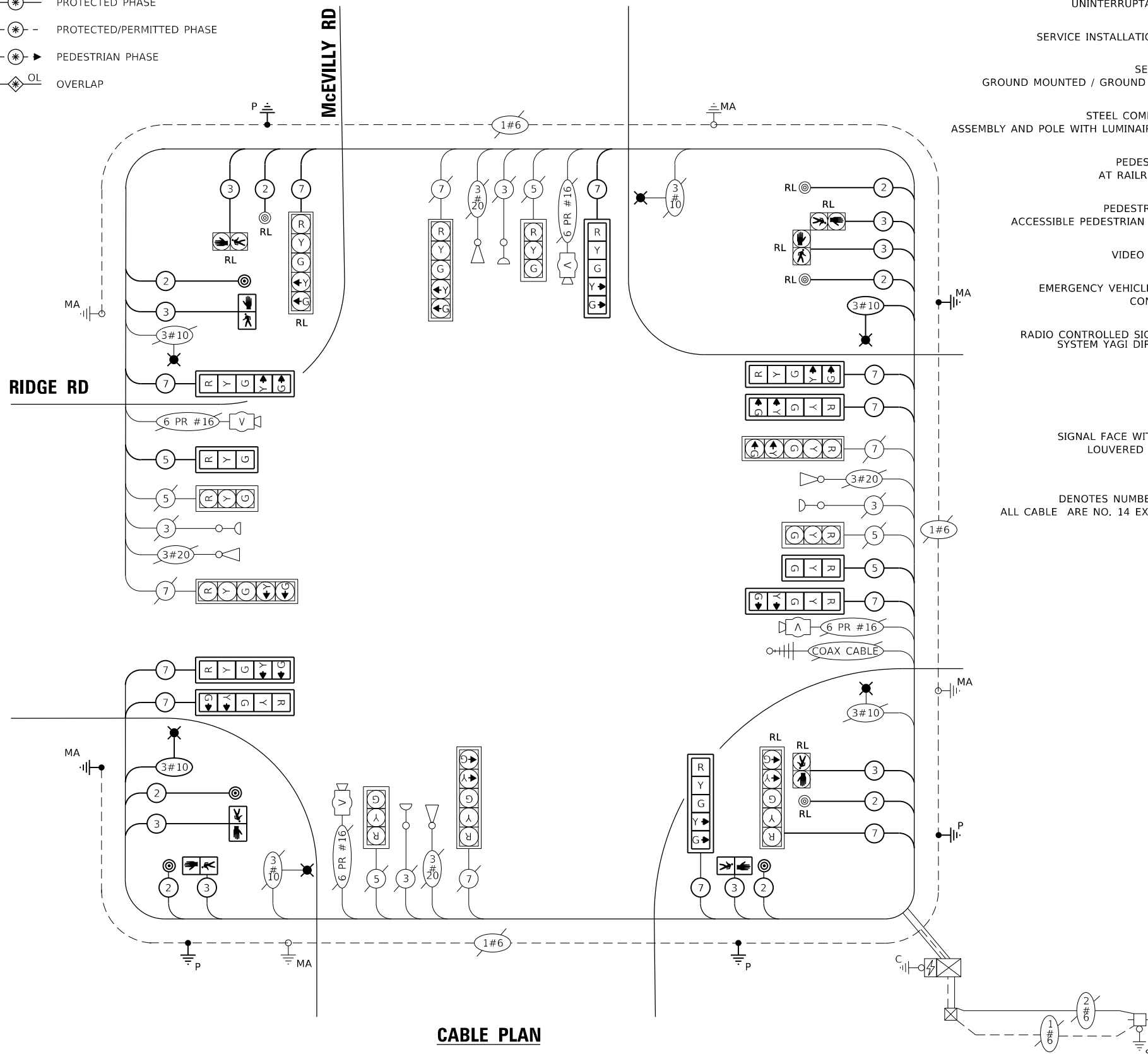
LEGEND:

- ⊙ — PROTECTED PHASE
- ⊙ — PROTECTED/PERMITTED PHASE
- ⊙ — PEDESTRIAN PHASE
- ⊙ OL — OVERLAP

CABLE PLAN LEGEND

EXISTING PROPOSED

- CONTROLLER CABINET
 - UNINTERRUPTIBLE POWER SUPPLY
 - SERVICE INSTALLATION - POLE MOUNTED
 - SERVICE INSTALLATION GROUND MOUNTED / GROUND MOUNTED METERED
 - STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE WITH PHOTOCELL
 - PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS
 - PEDESTRIAN PUSH BUTTON / ACCESSIBLE PEDESTRIAN PUSH BUTTON (APS)
 - VIDEO DETECTION CAMERA
 - EMERGENCY VEHICLE LIGHT DETECTOR / CONFIRMATION BEACON
 - RADIO CONTROLLED SIGNAL COORDINATION SYSTEM YAGI DIRECTIONAL ANTENNA
 - GROUND ROD
 - SIGNAL FACE WITH POLYCARBONATE, LOUVERED FORMED BACKPLATE
- ⊙ DENOTES NUMBER OF CONDUCTORS. ALL CABLE ARE NO. 14 EXCEPT AS INDICATED.



CABLE PLAN

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	18	11	50	99.0
(YELLOW)	18	20	5	18.0
(GREEN)	18	12	45	97.2
PERMISSIVE ARROW	28	10	10	28.0
PED. SIGNAL	8	20	100	160.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	1	150	100	150.0
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	6	185	50	555.0
TOTAL =				1232.2

ENERGY COSTS TO:
VILLAGE OF MINOOKA
 121 EAST MCEVILLY ROAD
 MINOOKA, IL 60447

ENERGY SUPPLY: CONTACT: _____
 PHONE: _____
 COMPANY: COMMONWEALTH EDISON
 ACCOUNT NUMBER: _____

SINGH SINGH & ASSOCIATES INC. CONSULTING ENGINEERS

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 PLOT DATE = 4/3/2019

REVISED -
 REVISED -
 REVISED -
 REVISED -

DATE = 04/05/2019

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
RIDGE ROAD AT MCEVILLY ROAD

SCALE: NTS SHEET OF SHEETS STA. TO STA.

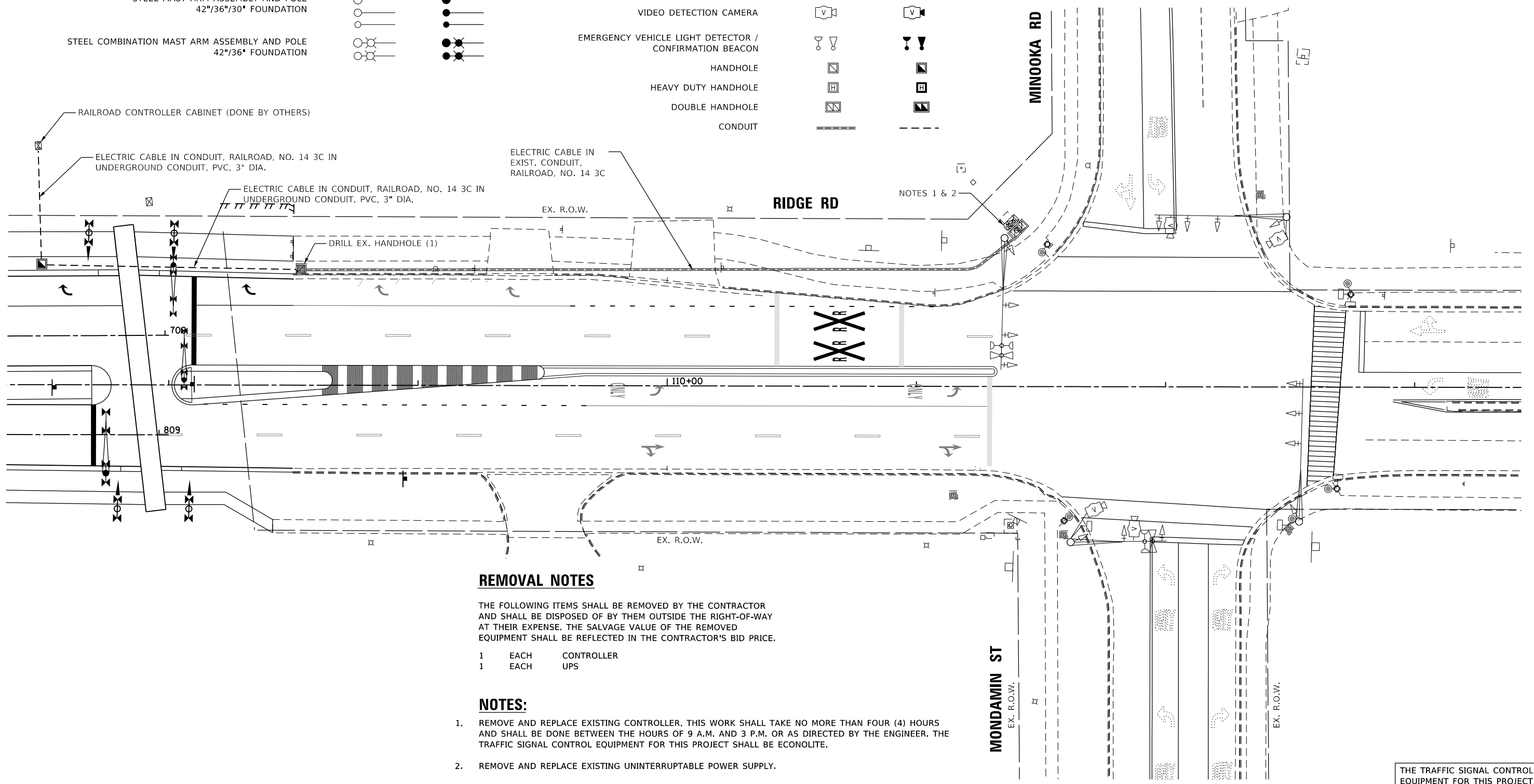
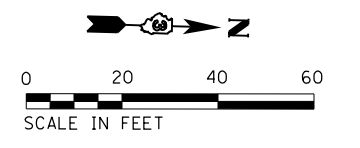
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384	11-00134-02-WR	GRUNDY	239	135

CONTRACT NO. 87695

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TRAFFIC SIGNAL LEGEND

EXISTING		PROPOSED		EXISTING		PROPOSED	
CONTROLLER CABINET WITH UPS			SIGNAL POST				
COMMUNICATION CABINET			SIGNAL HEAD / SIGNAL HEAD OPTICALLY PROGRAMMED				
SERVICE INSTALLATION - POLE MOUNTED			SIGNAL HEAD / SIGNAL HEAD OPTICALLY PROGRAMMED - WITH BACKPLATE				
SERVICE INSTALLATION GROUND MOUNTED / GROUND MOUNTED METERED			PEDESTRIAN SIGNAL HEAD				
TELEPHONE CONNECTION			PEDESTRIAN PUSH BUTTON / ACCESSIBLE PEDESTRIAN PUSH BUTTON (APS)				
STEEL MAST ARM ASSEMBLY AND POLE 42"/36"/30" FOUNDATION			VIDEO DETECTION CAMERA				
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 42"/36" FOUNDATION			EMERGENCY VEHICLE LIGHT DETECTOR / CONFIRMATION BEACON				
			HANDHOLE				
			HEAVY DUTY HANDHOLE				
			DOUBLE HANDHOLE				
			CONDUIT				



REMOVAL NOTES

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACTOR'S BID PRICE.

- 1 EACH CONTROLLER
- 1 EACH UPS

NOTES:

1. REMOVE AND REPLACE EXISTING CONTROLLER. THIS WORK SHALL TAKE NO MORE THAN FOUR (4) HOURS AND SHALL BE DONE BETWEEN THE HOURS OF 9 A.M. AND 3 P.M. OR AS DIRECTED BY THE ENGINEER. THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE ECONOLITE.
2. REMOVE AND REPLACE EXISTING UNINTERRUPTABLE POWER SUPPLY.
3. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT TO REMAIN IN PLACE UNLESS NOTED OTHERWISE.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL "ECONOLITE".

MODEL: Default; FILE NAME: \\010119\projects\18222\04_CADD\CADD_Sheets\18222\04_CADD\CADD_Sheets\18222\04_Ridge_Road_at_Minooka_Street.dgn



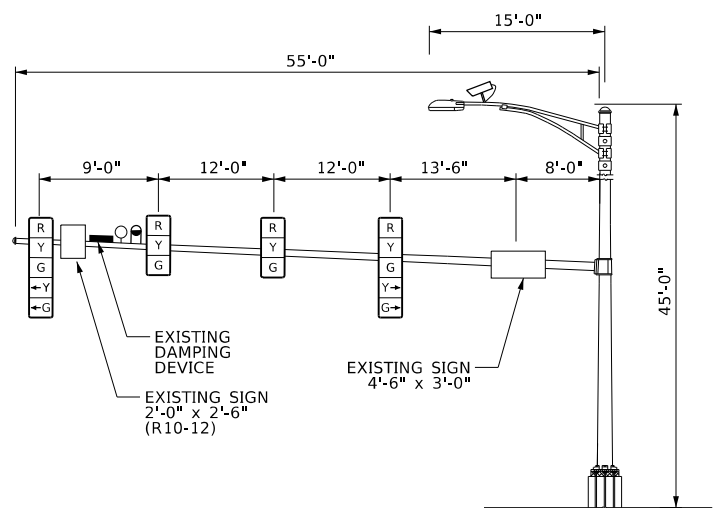
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

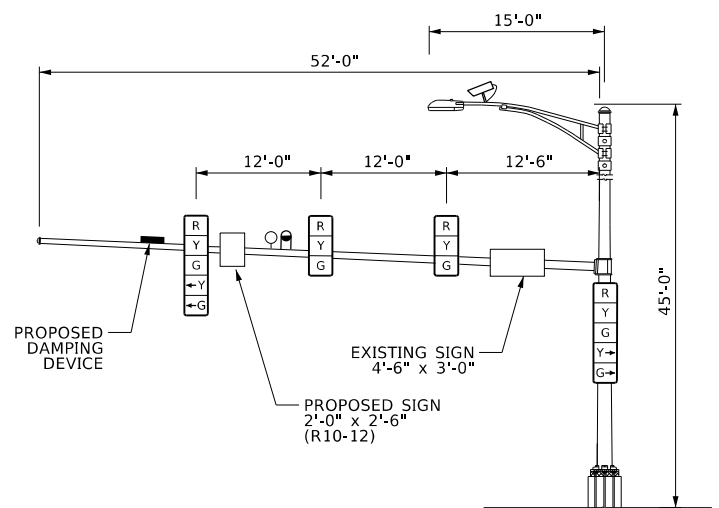
TRAFFIC SIGNAL EQUIPMENT MODERNIZATION PLAN
RIDGE ROAD AT MINOOKA RD/MONDAMIN ST

SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

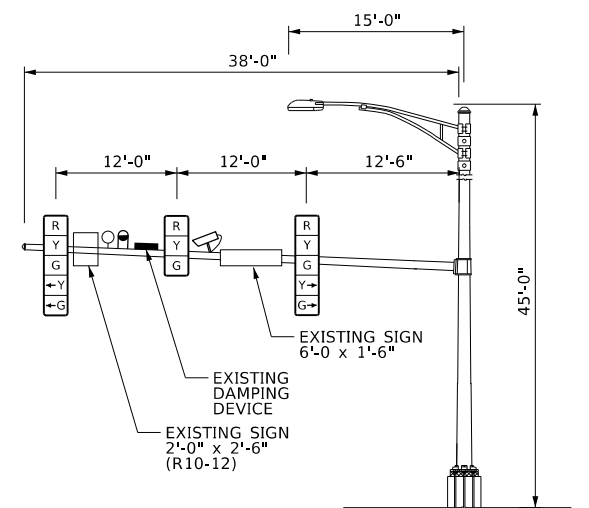
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CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



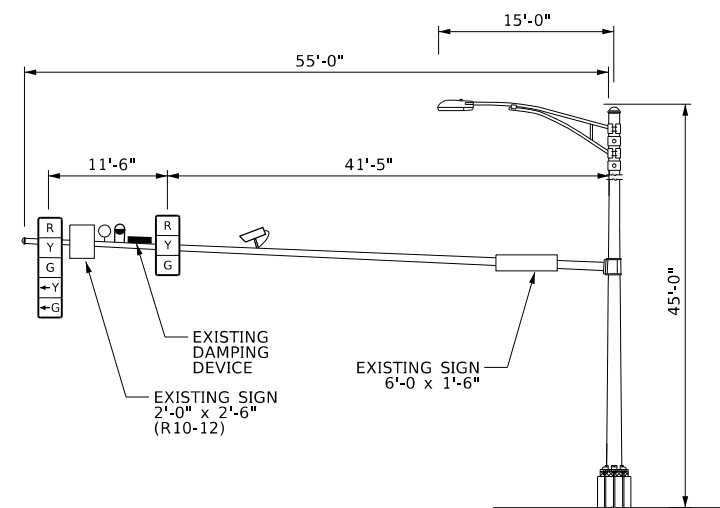
MAST ARM LOADING DIAGRAM
 RIDGE ROAD & MCEVILLY ROAD
 NE QUADRANT
 NORTHBOUND VIEW



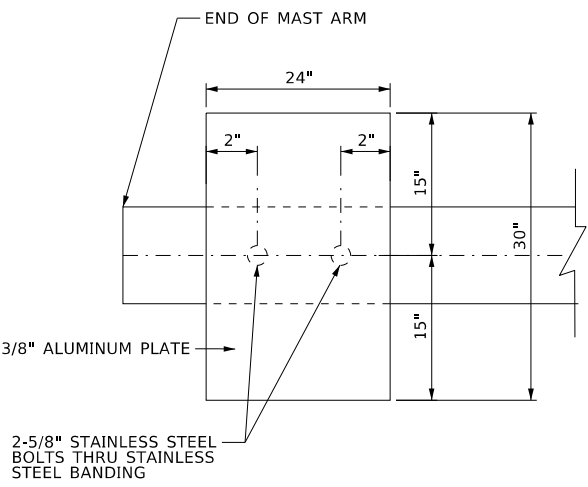
MAST ARM LOADING DIAGRAM
 RIDGE ROAD & MCEVILLY ROAD
 SW QUADRANT
 SOUTHBOUND VIEW



MAST ARM LOADING DIAGRAM
 RIDGE ROAD & MCEVILLY ROAD
 NW QUADRANT
 WESTBOUND VIEW



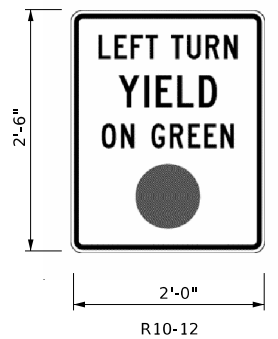
MAST ARM LOADING DIAGRAM
 RIDGE ROAD & MCEVILLY ROAD
 SE QUADRANT
 EASTBOUND VIEW



DAMPING PLATE DETAIL - TOP VIEW

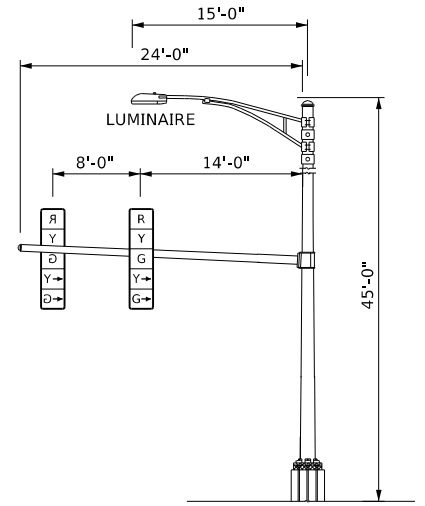
FOUNDATION DEPTH TABLE		
TYPE	LOCATION	FOUNDATION DEPTH *
24' COMBINATION MAST ARM	NW QUADRANT RIDGE RD & MCEVILLY RD	10'
22' COMBINATION MAST ARM	SE QUADRANT RIDGE RD & MCEVILLY RD	10'

* SEE STANDARD 878001-10

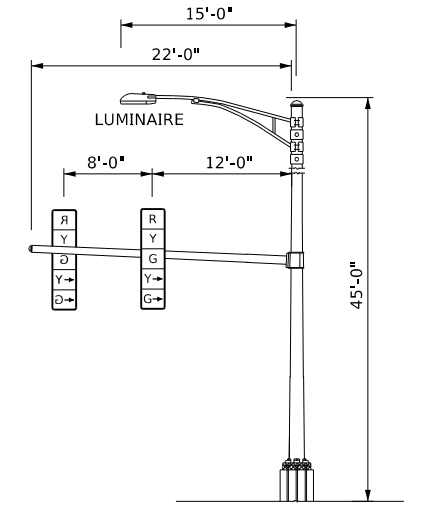


1 SIGN REQUIRED;
 = 5 SQ. FT. TOTAL

THIS SIGN SHALL BE LOCATED 6" TO 12" TO THE RIGHT OF EACH 5 SECTION MAST ARM MOUNTED LEFT TURN SIGNAL AND DIRECTLY BELOW AND PARALLEL TO THE BACKPLATE OF EACH POST BRACKETED 5 SECTION LEFT TURN SIGNAL.



MAST ARM LOADING DIAGRAM
 RIDGE ROAD & MCEVILLY ROAD
 NW QUADRANT
 SOUTHBOUND VIEW



MAST ARM LOADING DIAGRAM
 RIDGE ROAD & MCEVILLY ROAD
 SE QUADRANT
 NORTHBOUND VIEW

NOTES:

1. ALL SIGNAL HEADS HAVE BACKPLATES.
2. ALL MAST ARM FOUNDATIONS TO BE 36" DIAMETER.
3. ARM SUPPORT FOR LUMINAIRE SHALL BE PARALLEL TO MAST ARM UNLESS SHOWN ON PLAN.
4. FOUNDATION DEPTHS ARE BASED ON HIGHWAY STANDARD 878001-08. THE CONTRACTOR SHALL VERIFY THE SOIL STRENGTH TO THE DEPTH OF FOUNDATION AT EACH PROPOSED LOCATION. BUREAU OF BRIDGES & STRUCTURES SHOULD BE CONTACTED FOR A REVISED DESIGN IF CONDITIONS OTHER THAN STATED IN STANDARD 878001-08 ARE ENCOUNTERED.

MODEL: Default; FILE NAME: \\0101\p\g\c\18222004_CADD\CADD_Sheets\03787695-2\18_08\Detail.dgn



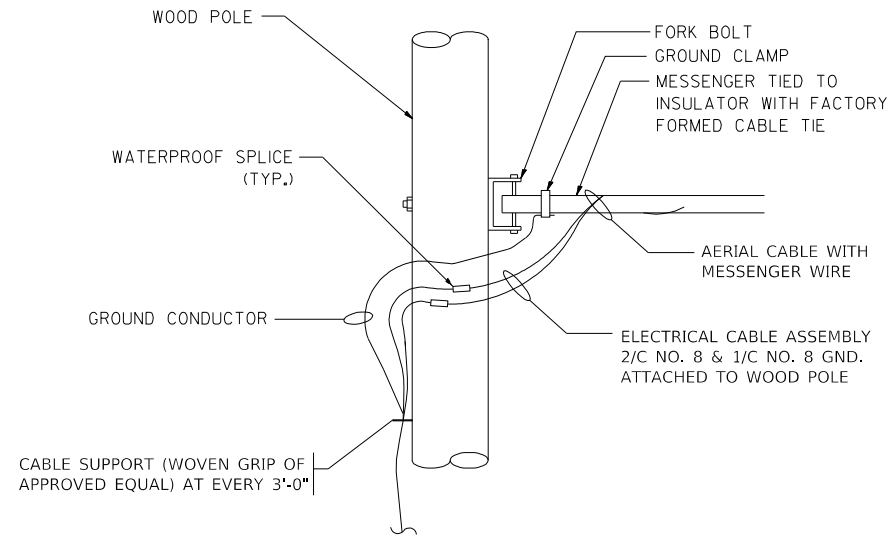
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	DATE - 04/05/2019	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL EQUIPMENT MODIFICATION PLAN
 RIDGE ROAD AT MCEVILLY ROAD

SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	137
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

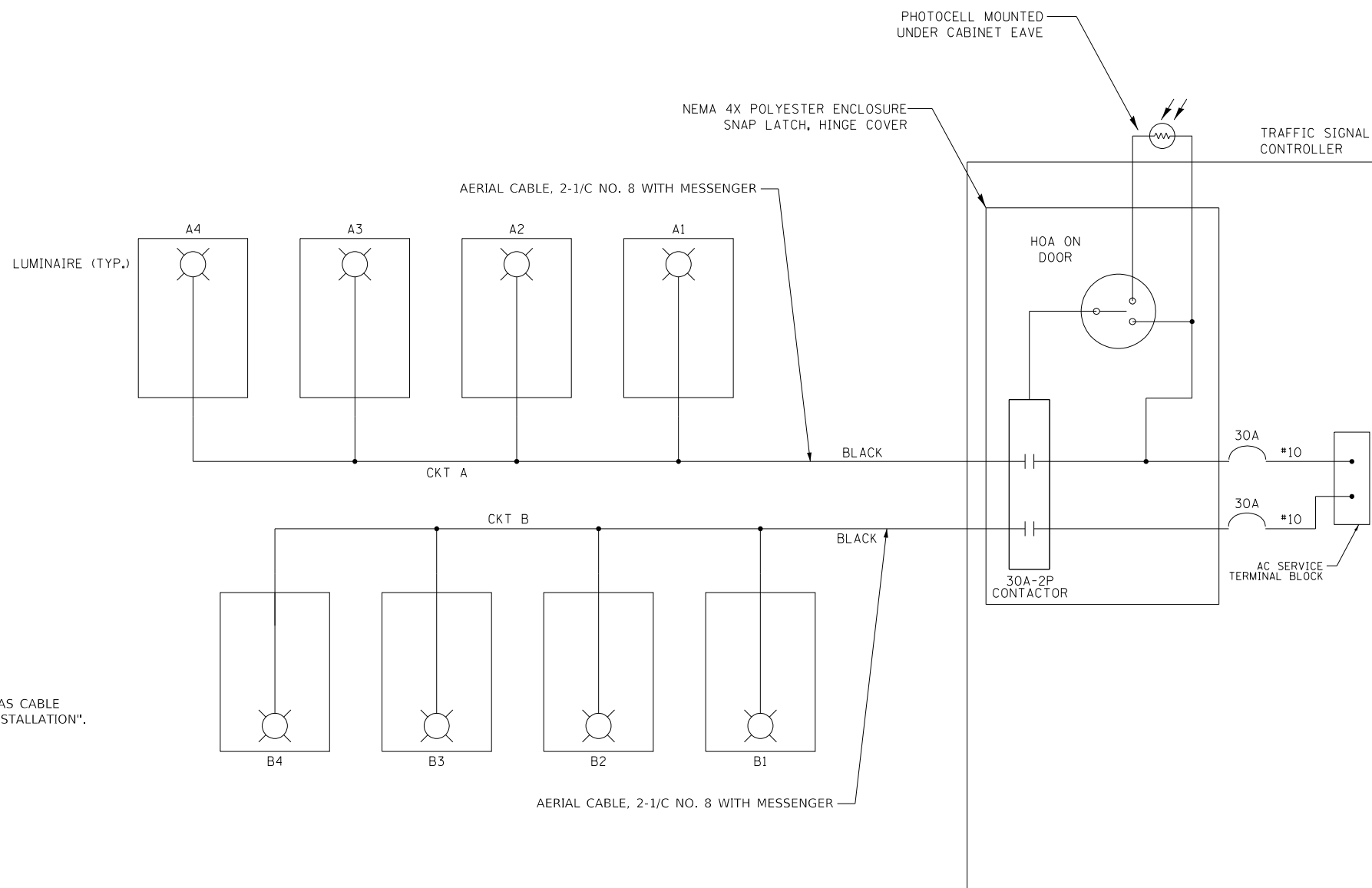


AERIAL CABLE CONNECTION DETAIL

N.T.S.

NOTES:

- PROVIDE A 3" DIA. RGC ATTACHED TO POLE AT LEAST 10' FROM GROUND UP TO SERVE AS CABLE GUARD. THIS ITEM SHALL BE INCLUDED IN THE COST OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION".



NOTES:

- 4 LUMINAIRES PER CIRCUIT, MAXIMUM.
- MULTI-CONDUCTOR CABLE ASSEMBLY FOR LIGHTING CIRCUITS.
- TEMPORARY TRAFFIC SIGNAL CONTROLLER TO HAVE TWO FUSED LIGHTING BRANCH CIRCUITS.
- THE H.O.A. SWITCH SHALL BE LABELED AS "LIGHTING CONTROL" WITH THE POSITIONS "AUTO", "OFF" AND "TEST" WITH ENGRAVED NAME PLATES.
- LIGHTING CONNECTED TO UPS BYPASS CIRCUIT.
- COMBINATION LIGHTING MUST BE INSTALLED PRIOR TO SIGNAL TURN ON.
- LUMINAIRE VOLTAGE SHALL BE 120V.
- COST OF SPLICES AND MOUNTING HARDWARE SHALL BE INCLUDED IN THE UNIT PRICE FOR AERIAL CABLE.

MODEL: Default
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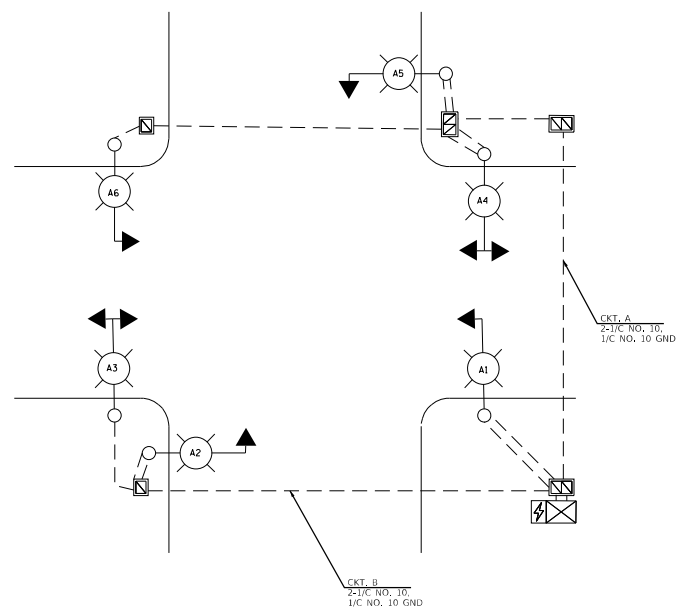
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

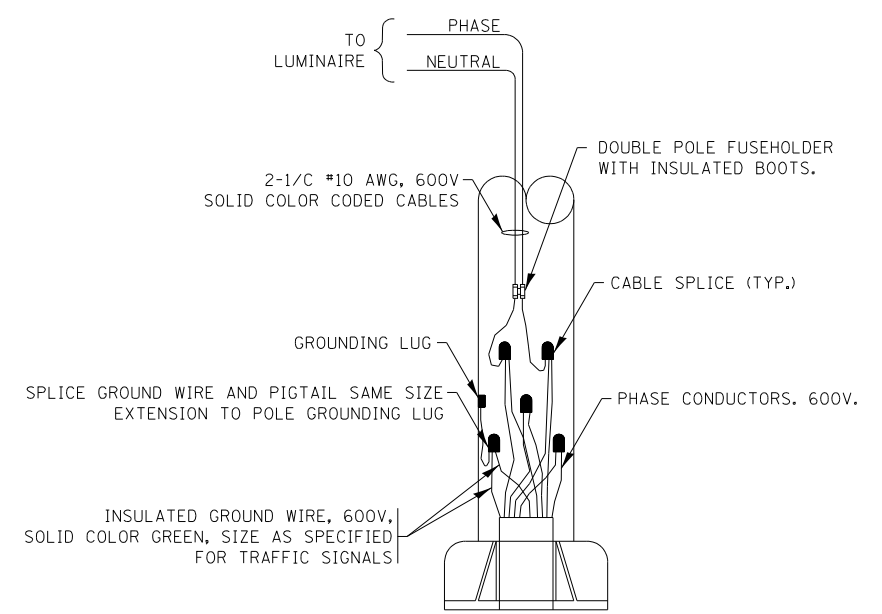
COMBINATION LIGHTING, TRAFFIC SIGNAL SCHEMATIC (TEMPORARY)

SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	138
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



LIGHTING CIRCUIT



COMBINATION POLE WIRING DETAIL

(NOT TO SCALE)

MODEL: D:\default
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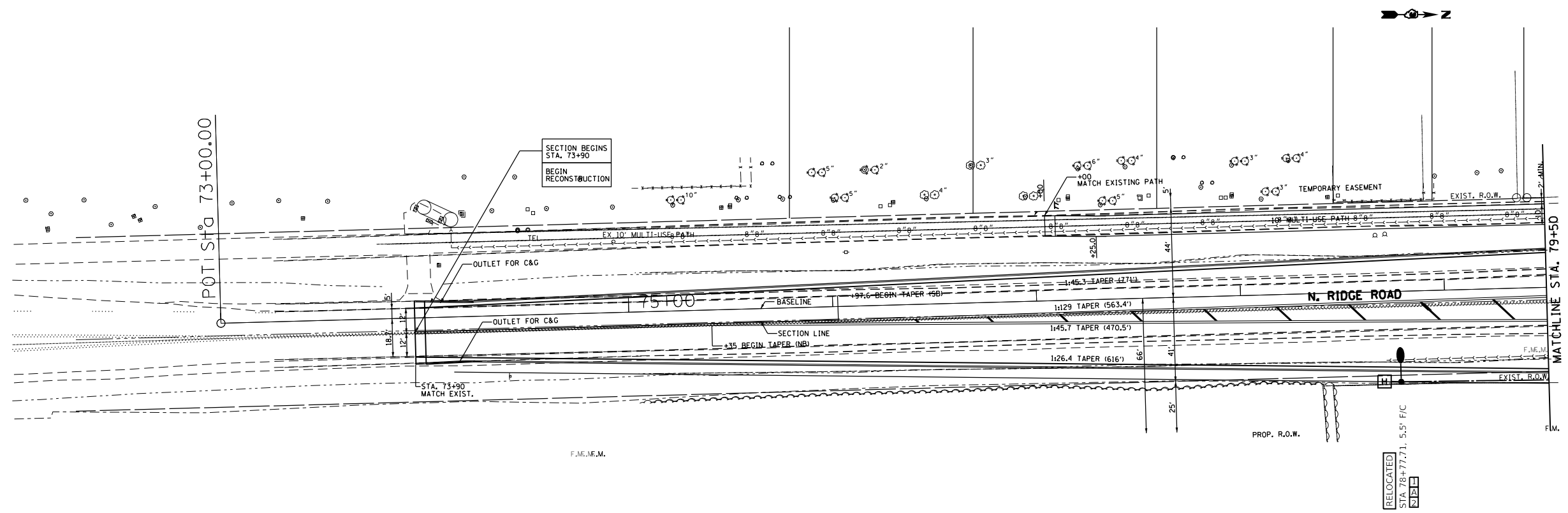
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

COMBINATION LIGHTING, TRAFFIC SIGNAL SCHEMATIC (PROPOSED)

SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	139
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

MODEL: D:\64bit
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- LEGEND:**
- EXISTING STREET LIGHT
 - PROPOSED OR RELOCATED STREET LIGHT-16,400 LUMENS
 - PROPOSED OR RELOCATED STREET LIGHT-22,900 LUMENS
 - ⊠ PROPOSED LIGHTING HANDHOLE
 - ⊞ PROPOSED CONTROLLER (RELOCATED)
 - T CONDUIT, TRENCHED, GALVANIZED STEEL
 - UNIT DUCT, W/6-1/C, NO.4 AWG AND 1/C NO.6 GROUND, 600V (XLP TYPE USE) IN 1-1/2" DIAMETER POLYETHYLENE
 - (R) EXISTING STREET LIGHT TO BE RELOCATED
 - (RO) REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
 - F/C SETBACK FROM FACE OF CURB
 - BOTB BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE

PREPARED BY OR UNDER THE DIRECT SUPERVISION OF:
Daniel W. Skilling
 12-20-18
 D. W. SKILLING
 62-4511
 REGISTERED
 PROFESSIONAL
 ENGINEER
 STATE OF ILLINOIS
 LICENSE EXPIRES: 11/30/19

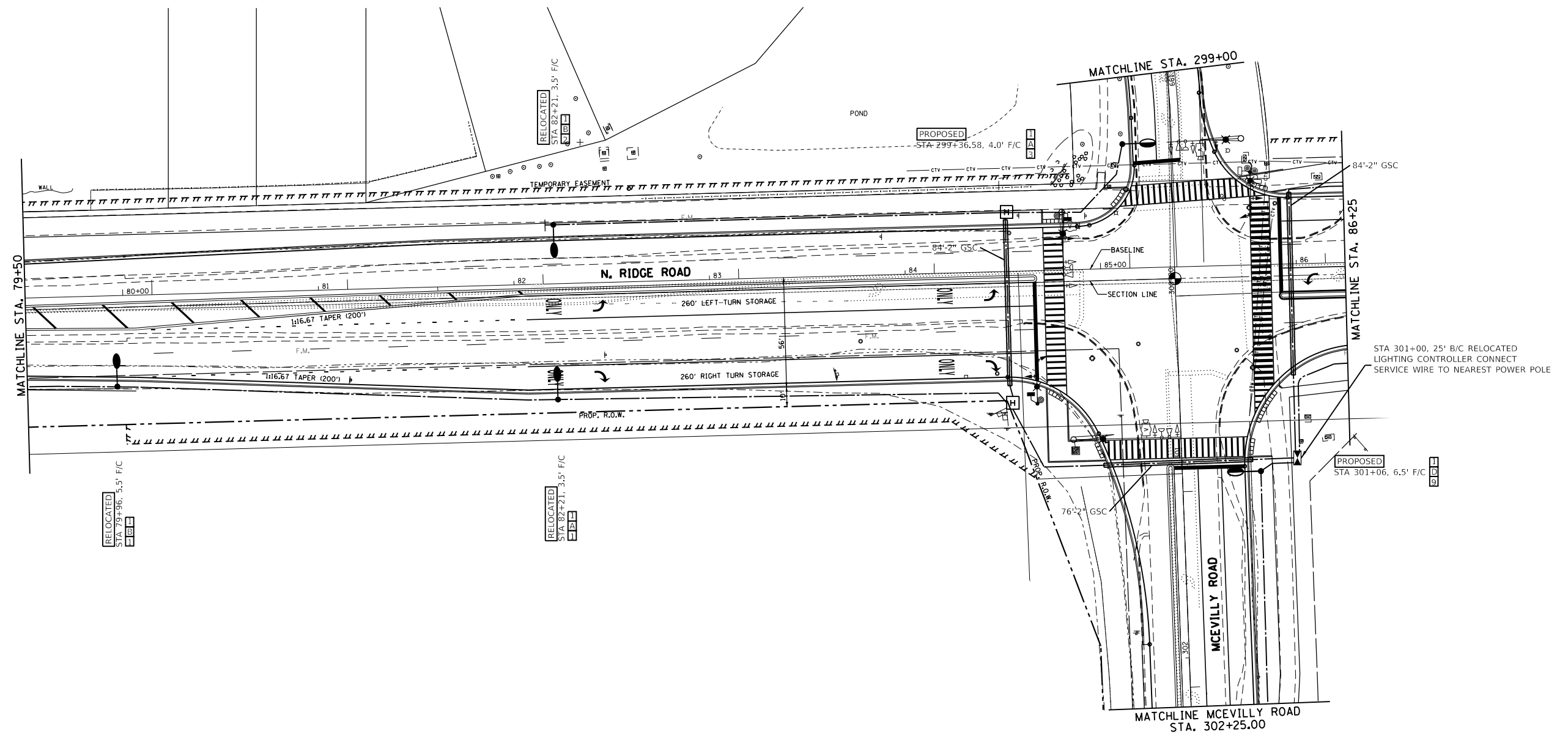


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PLOT DATE = 4/3/2019	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

RIDGE ROAD STREET LIGHTING PLAN	
SCALE: 1"=30'	SHEET OF SHEETS
STA. 73+00	TO STA. 79+50

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	140
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



- LEGEND:**
- EXISTING STREET LIGHT
 - PROPOSED OR RELOCATED STREET LIGHT-16,400 LUMENS
 - PROPOSED OR RELOCATED STREET LIGHT-22,900 LUMENS
 - PROPOSED LIGHTING HANDHOLE
 - PROPOSED CONTROLLER (RELOCATED)
 - CONDUIT, TRENCHED, GALVANIZED STEEL
 - UNIT DUCT, W/6-1/C, NO.4 AWG. AND 1/C NO.6 GROUND, 600V (XLP TYPE USE) IN 1-1/2" DIAMETER POLYETHYLENE
 - (R) EXISTING STREET LIGHT TO BE RELOCATED
 - (RO) REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
 - F/C SETBACK FROM FACE OF CURB
 - BDTB BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE

MODEL: D:\46411
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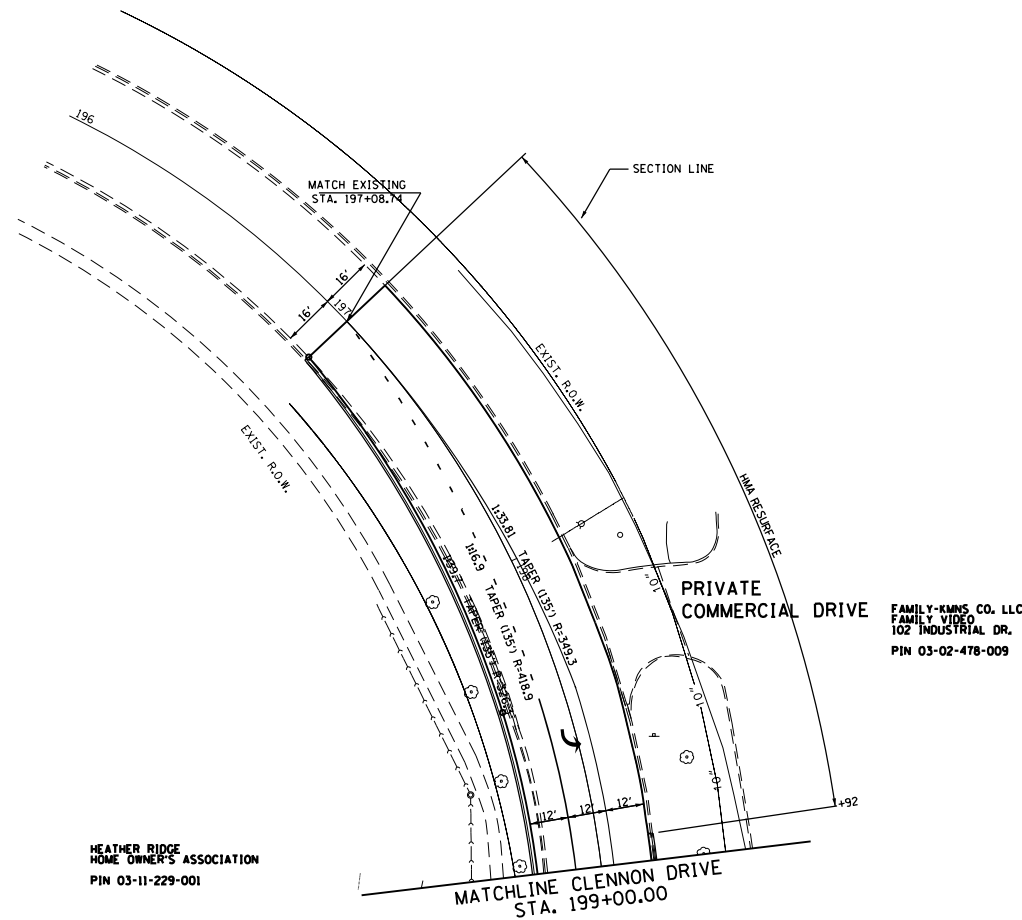
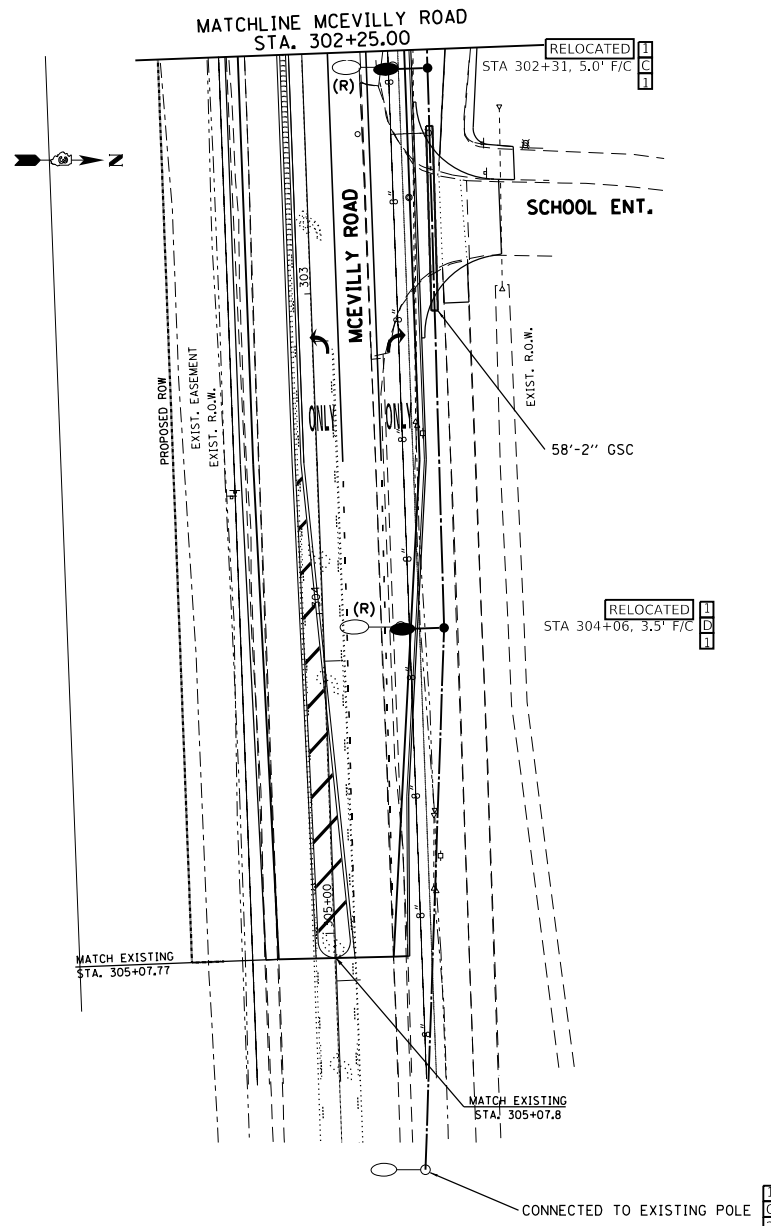


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PLOT DATE = 4/3/2019	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

RIDGE ROAD STREET LIGHTING PLAN			
SCALE: 1"=30'	SHEET	OF	SHEETS
	STA. 79+50		TO STA. 86+25

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	141
				CONTRACT NO. 87695
ILLINOIS FED. AID PROJECT				



- LEGEND:**
- EXISTING STREET LIGHT
 - PROPOSED OR RELOCATED STREET LIGHT-16,400 LUMENS
 - PROPOSED OR RELOCATED STREET LIGHT-22,900 LUMENS
 - PROPOSED LIGHTING HANDHOLE
 - PROPOSED CONTROLLER (RELOCATED)
 - T CONDUIT, TRENCHED, GALVANIZED STEEL
 - UNIT DUCT, W/6-1/C, NO.4 AWG. AND 1/C NO.6 GROUND, 600V (XLP TYPE USE) IN 1-1/2" DIAMETER POLYETHYLENE
 - (R) EXISTING STREET LIGHT TO BE RELOCATED
 - (RO) REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
 - F/C SETBACK FROM FACE OF CURB
 - BOTB BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE

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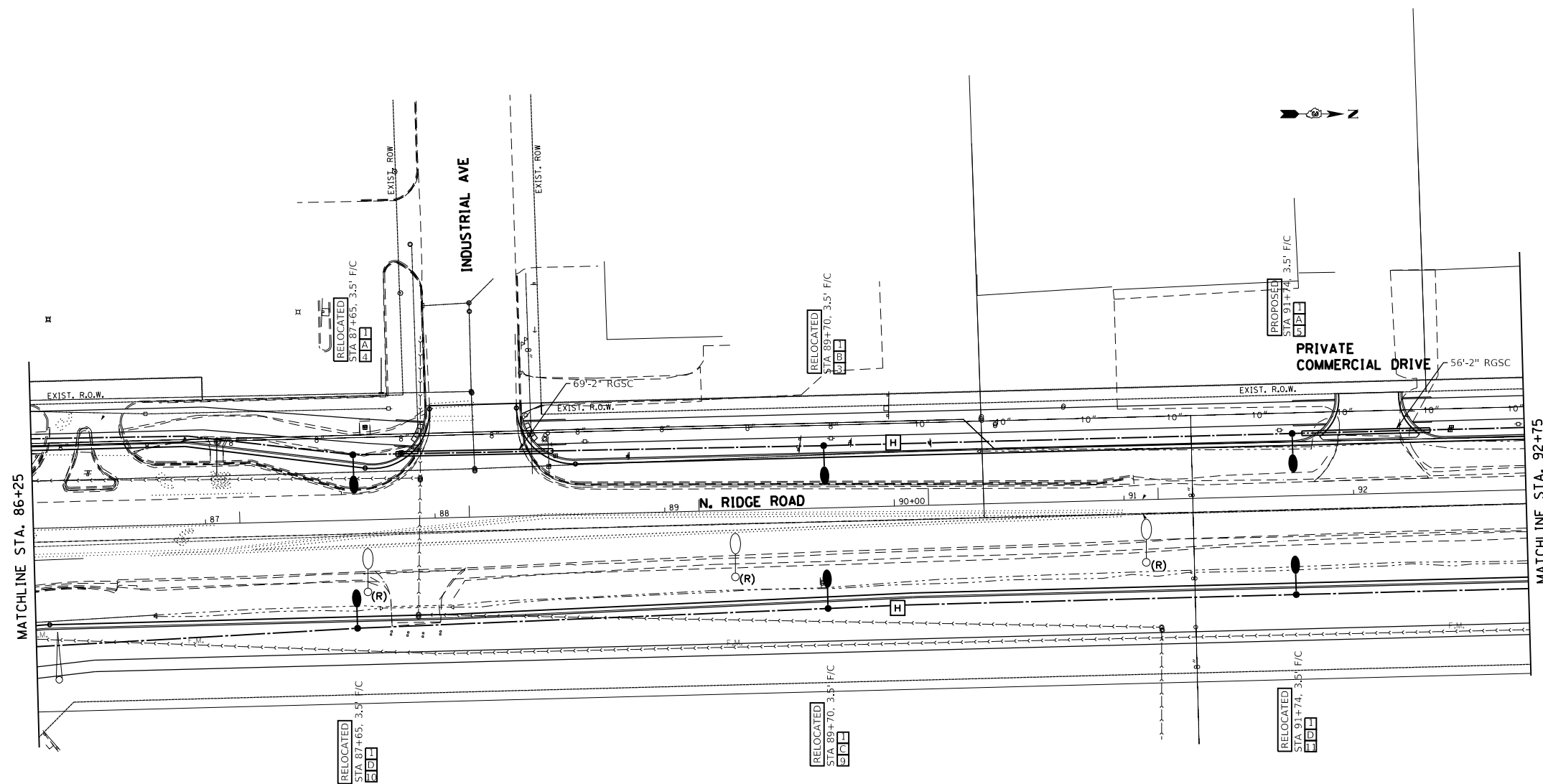
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MCEVILLY ROAD AND CLENNON DRIVE
STREET LIGHTING PLAN

SCALE: 1"=30' SHEET OF SHEETS STA. 302+25 TO STA. 305+50

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	142
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



- LEGEND:**
- EXISTING STREET LIGHT
 - PROPOSED OR RELOCATED STREET LIGHT-16,400 LUMENS
 - PROPOSED OR RELOCATED STREET LIGHT-22,900 LUMENS
 - ⊠ PROPOSED LIGHTING HANDHOLE
 - ⊠ PROPOSED CONTROLLER (RELOCATED)
 - CONDUIT, TRENCHED, GALVANIZED STEEL
 - UNIT DUCT, W/6-1/C, NO.4 AWG AND 1/C NO.6 GROUND, 600V (XLP TYPE USE) IN 1-1/2" DIAMETER POLYETHYLENE
 - (R) EXISTING STREET LIGHT TO BE RELOCATED
 - (RO) REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
 - F/C SETBACK FROM FACE OF CURB
 - BOTB BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE

MODEL: D:\46411
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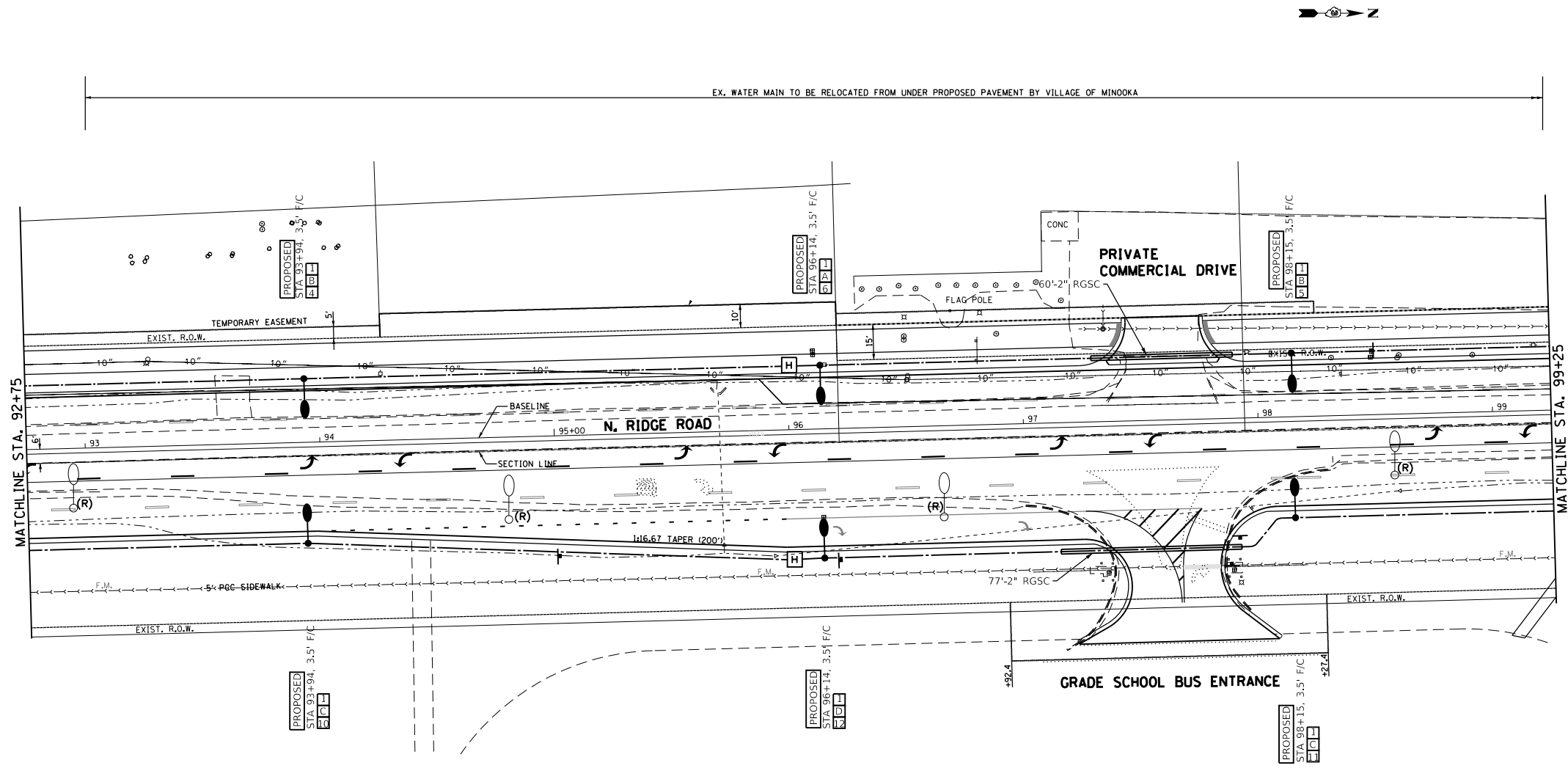
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	DRAWN -	REVISED -
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PLOT DATE = 4/3/2019	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**RIDGE ROAD
 STREET LIGHTING PLAN**

SCALE: 1"=30' SHEET OF SHEETS STA. 86+25 TO STA. 92+75

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	143
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



- LEGEND:**
- EXISTING STREET LIGHT
 - PROPOSED OR RELOCATED STREET LIGHT-16,400 LUMENS
 - PROPOSED OR RELOCATED STREET LIGHT-22,900 LUMENS
 - PROPOSED LIGHTING HANDHOLE
 - PROPOSED CONTROLLER (RELOCATED)
 - CONDUIT, TRENCHED, GALVANIZED STEEL
 - UNIT DUCT, W/6-1/C, NO.4 AWG, AND 1/C NO.6 GROUND, 600V (XLP TYPE USE) IN 1-1/2" DIAMETER POLYETHYLENE
 - EXISTING STREET LIGHT TO BE RELOCATED
 - REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
 - SETBACK FROM FACE OF CURB
 - BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE

MODEL: D:\d4\11
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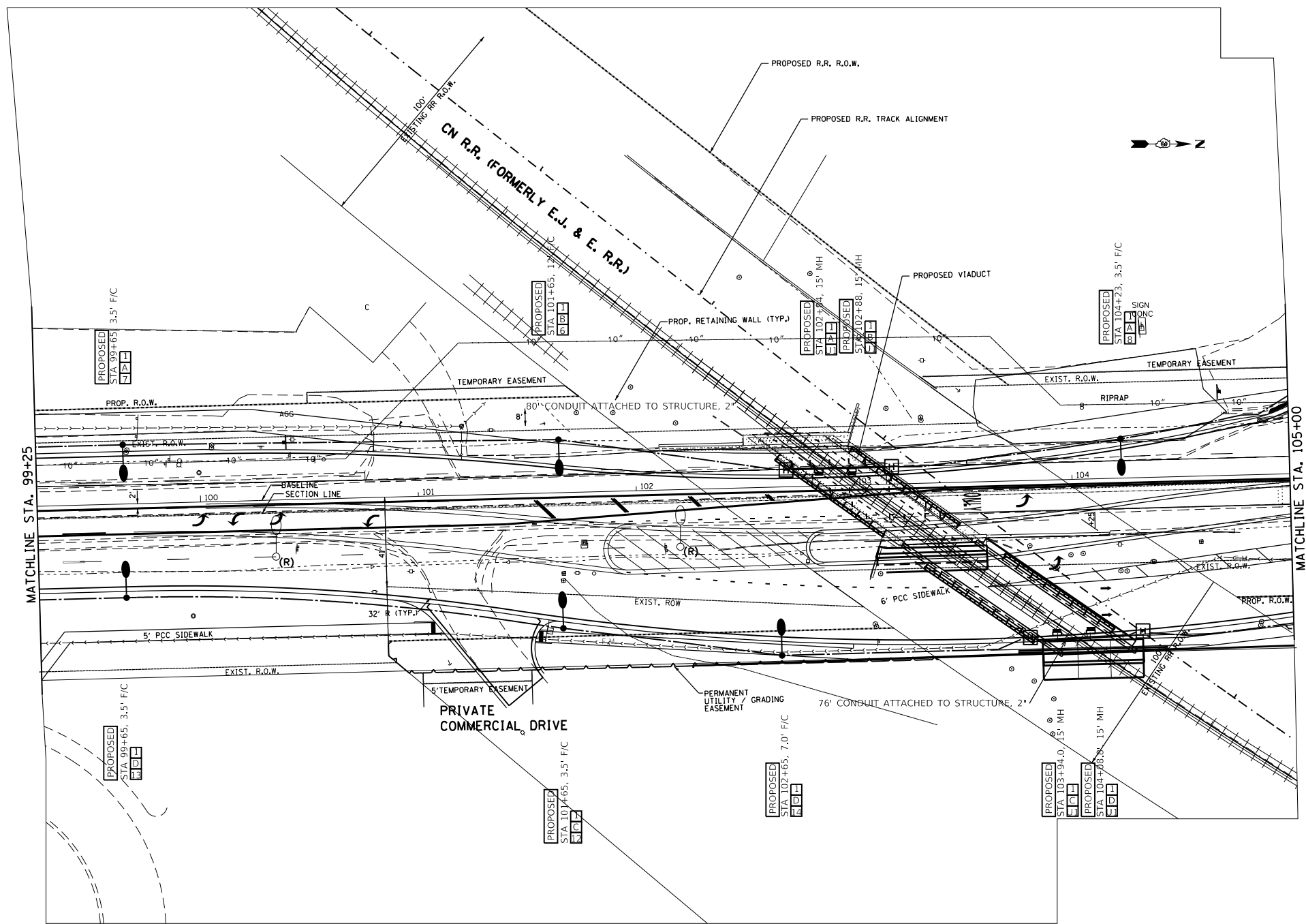
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PLOT DATE = 4/3/2019	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIDGE ROAD
STREET LIGHTING PLAN

SCALE: 1"=30' SHEET OF SHEETS STA. 92+75 TO STA. 99+25

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	144
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



- LEGEND:**
- EXISTING STREET LIGHT
 - PROPOSED OR RELOCATED STREET LIGHT-16,400 LUMENS
 - PROPOSED OR RELOCATED STREET LIGHT-22,900 LUMENS
 - PROPOSED LIGHTING HANDHOLE
 - PROPOSED CONTROLLER (RELOCATED)
 - CONDUIT, TRENCHED, GALVANIZED STEEL
 - UNIT DUCT, W/6-1/2, NO.4 AWG, AND 1/C NO.6 GROUND, 600V (XLP TYPE USE) IN 1-1/2" DIAMETER POLYETHYLENE
 - (R) EXISTING STREET LIGHT TO BE RELOCATED
 - (RO) REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
 - F/C SETBACK FROM FACE OF CURB
 - BDTB BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE

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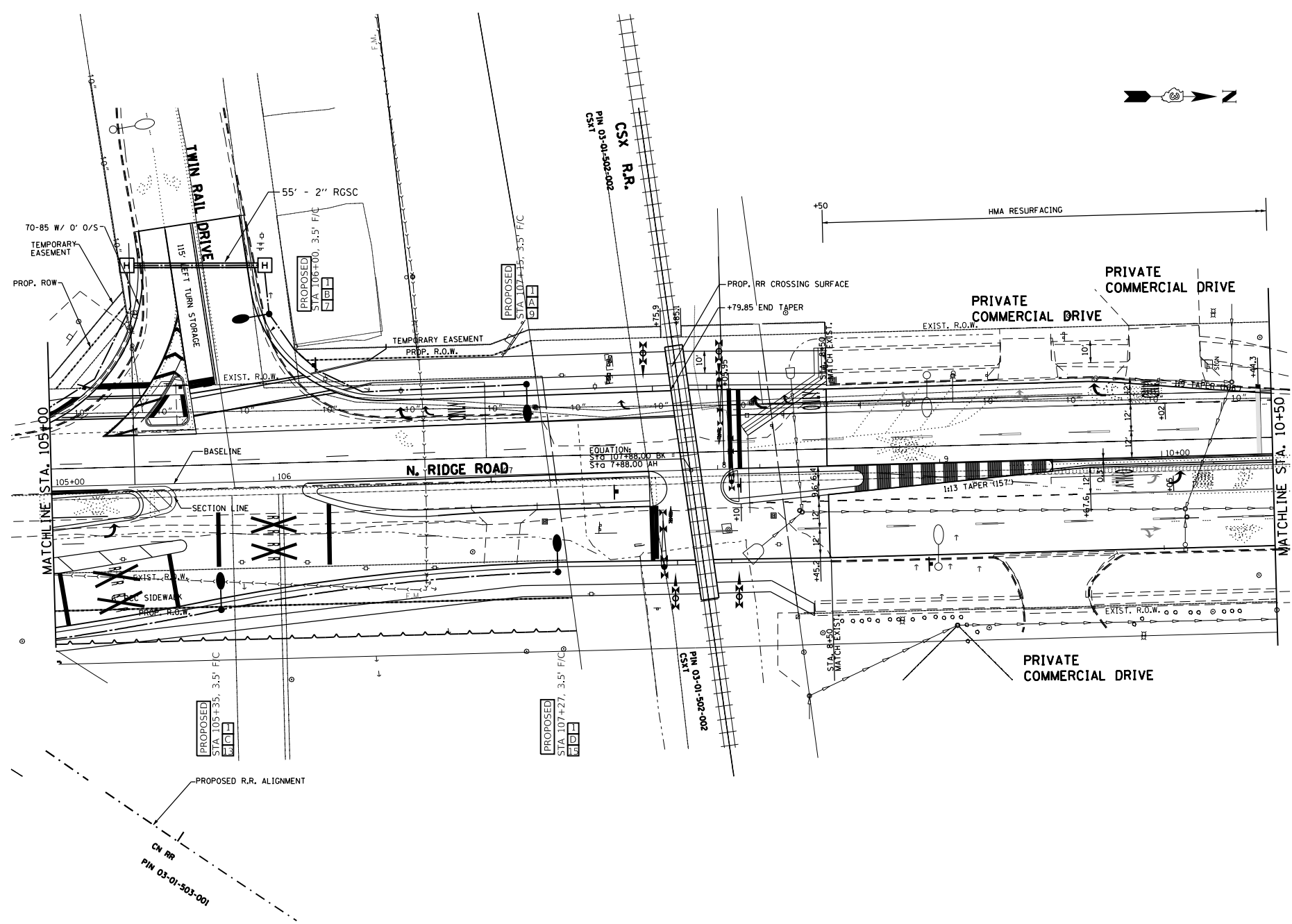
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PLOT DATE = 4/3/2019	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIDGE ROAD
STREET LIGHTING PLAN

SCALE: 1"=30' SHEET OF SHEETS STA. 99+25 TO STA. 105+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	145
				CONTRACT NO. 87695
ILLINOIS FED. AID PROJECT				



- LEGEND:**
- EXISTING STREET LIGHT
 - PROPOSED OR RELOCATED STREET LIGHT-16,400 LUMENS
 - PROPOSED OR RELOCATED STREET LIGHT-22,900 LUMENS
 - ⊠ PROPOSED LIGHTING HANDHOLE
 - ⊞ PROPOSED CONTROLLER (RELOCATED)
 - T — CONDUIT, TRENCHED, GALVANIZED STEEL
 - UNIT DUCT, W/6-1/C, NO.4 AWG AND 1/C NO.6 GROUND, 600V (XLP TYPE USE) IN 1-1/2" DIAMETER POLYETHYLENE
 - (R) EXISTING STREET LIGHT TO BE RELOCATED
 - (RO) REMOVAL OF EXISTING STREET LIGHT (BY OTHERS)
 - F/C SETBACK FROM FACE OF CURB
 - BDTB BREAKAWAY DEVICE, TRANSFORMER BASE, 15" BOLT CIRCLE

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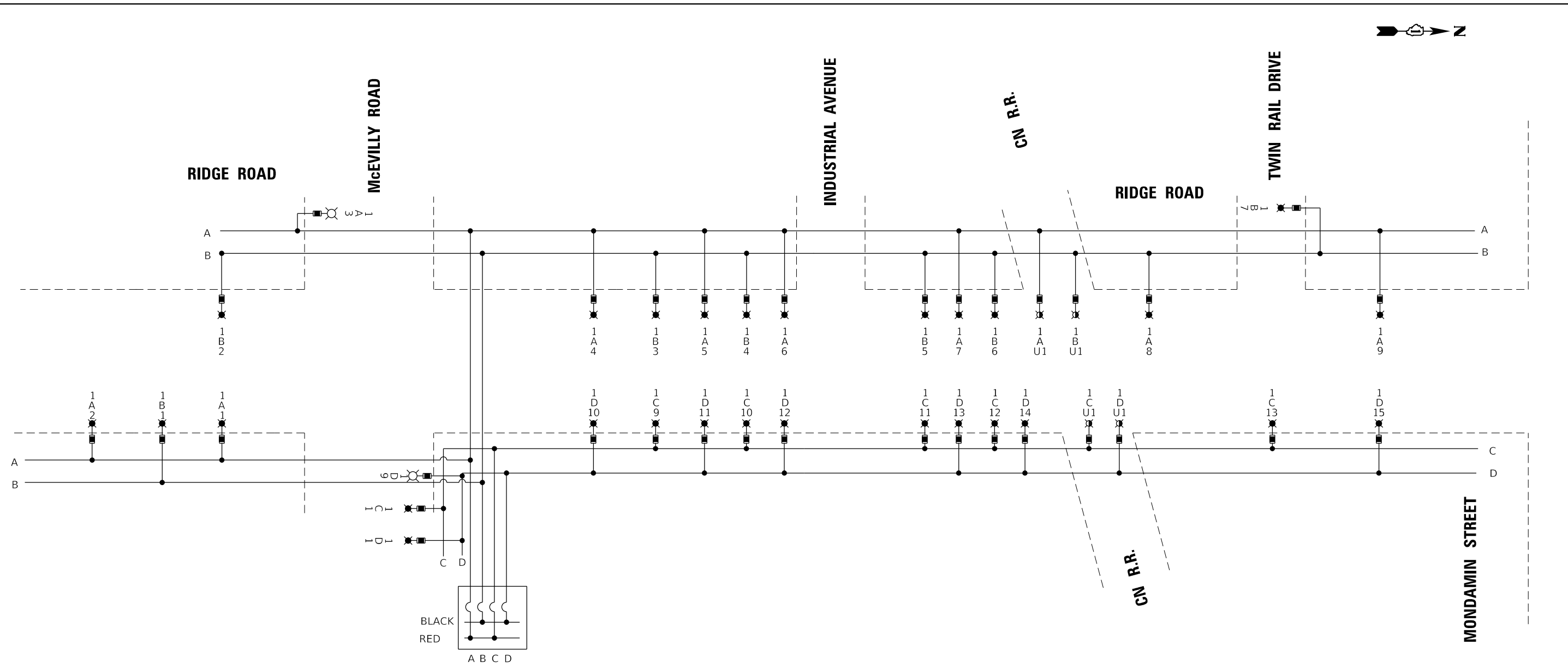
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PLOT DATE = 4/3/2019	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**RIDGE PLAN
 STREET LIGHTING PLAN**

SCALE: 1"=30' SHEET OF SHEETS STA. 105+00 TO STA. 10+50

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	146
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



RELOCATED CONTROLLER #1
 240/480V, 1 Ø, 3 WIRE, 60HZ, 200 AMP

CIRCUIT	WATTS	AMPS @ 240V	
		RED PHASE	BLACK PHASE
A	1569	7.10	
B	1226		5.11
C	1963	8.18	
D	2098		8.74
AA	1620	13.50	
BB	1440		12.00
CC	2340	19.50	
DD	2700		22.50
SUBTOTAL	14956	48.28	48.35
TOTAL AMPS @ 240 V		96.63	

NOTES

- EQUIPMENT GROUND CONDUCTORS SHALL BE SPLICED AND BOUNDED AT EACH LIGHT POLE OR OTHER EQUIPMENT.

LEGEND

- ⊗ PROPOSED INTERSECTION LUMINAIRE, 208W LED
- ⊗ PROPOSED UNDERPASS LUMINAIRE, 94W LED
- ⊗ PROPOSED ROADWAY LUMINAIRE, 135W LED
- PROPOSED FUSE - REFER TO FUSE SIZE TABLE
- A LUMINAIRE CIRCUIT, 240V
- { CIRCUIT BREAKER
- CONNECTION

MODEL: D:\46411
 FILE NAME: P:\2018\18-00300\MicroStation Files\Civil\18-00300-DTL15-02.dgn



USER NAME = mdowns
 PLOT SCALE = 2,0000' / in.
 PLOT DATE = 4/3/2019

DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

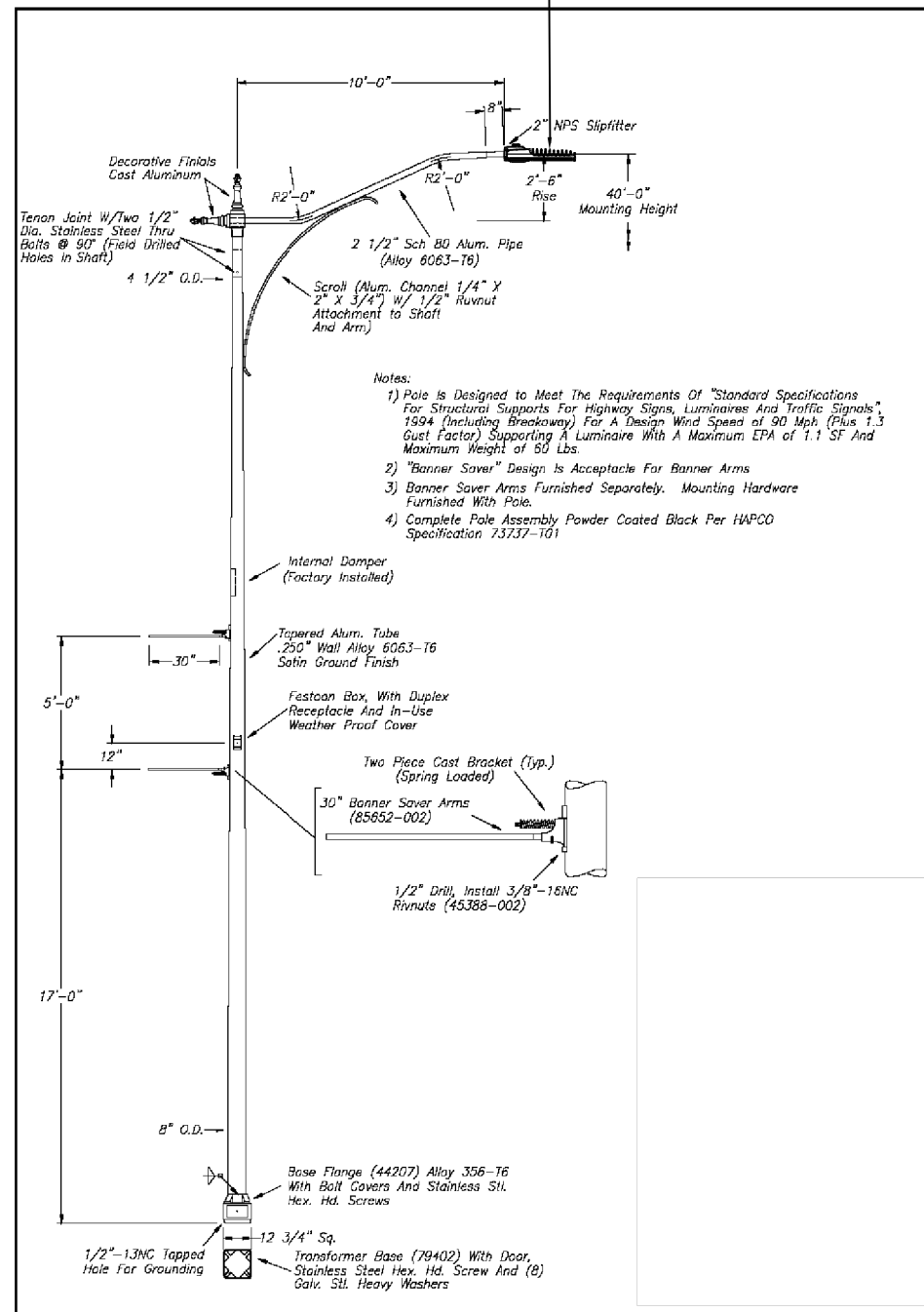
RIDGE ROAD
SINGLE LINE WIRING DIAGRAM

SCALE: NONE SHEET OF SHEETS STA. TO STA.

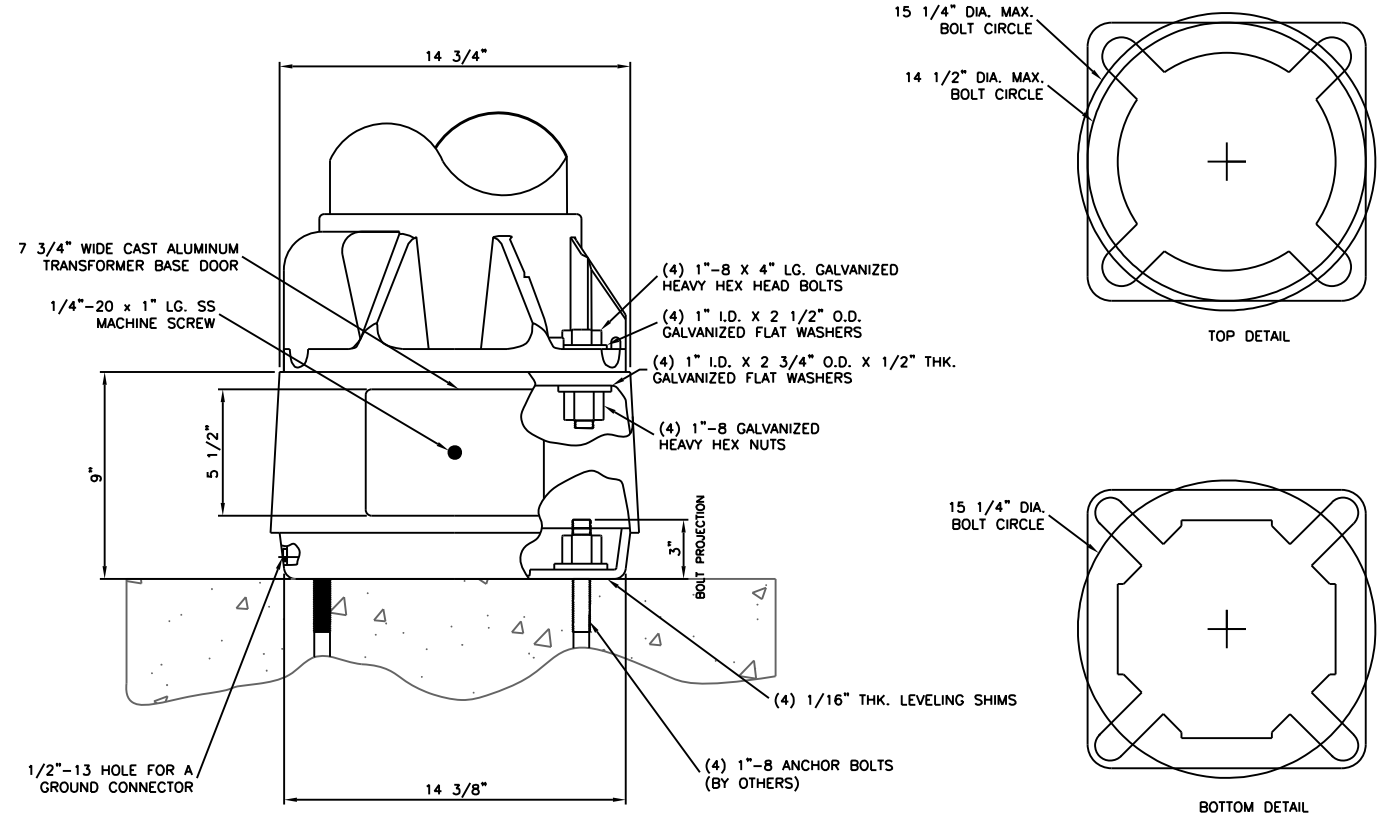
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	147
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

LUMINAIRE:	
135 WATT LED 240 VOLT DRIVER 16,400 LUMENS 100,000 HOURS (L90) TYPE II DISTRIBUTION	OR
208 WATT LED 240 VOLT DRIVER 22,900 LUMENS 100,000 HOURS (L90) TYPE III DISTRIBUTION	

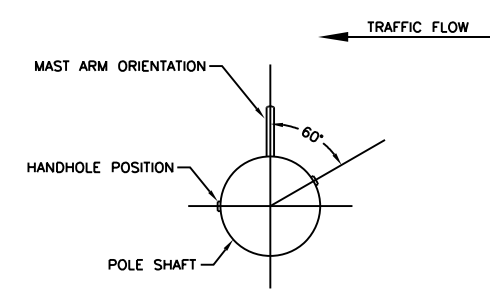
IMPORTANT NOTE:
TRANSFORMER BASE AND LIGHTPOLE
TO BE LEVELED AS ONE UNIT. USING
LEVELING SHIMS IF REQUIRED.



- Notes:
- 1) Pole is Designed to Meet the Requirements of "Standard Specifications For Structural Supports For Highway Signs, Luminaires And Traffic Signals", 1994 (Including Brackaway) For A Design Wind Speed of 90 Mph (Plus 1.3 Gust Factor) Supporting A Luminaire With A Maximum EPA of 1.1 SF And Maximum Weight of 90 Lbs.
 - 2) "Banner Saver" Design is Acceptable For Banner Arms
 - 3) Banner Saver Arms Furnished Separately. Mounting Hardware Furnished With Pole.
 - 4) Complete Pole Assembly Powder Coated Black Per HAPCO Specification 73737-101



BREAKAWAY TRANSFORMER BASE DETAIL



POSITION OF HANDHOLE AND NUMERALS ON POLE

Ref: 85994		WARNING: DO NOT INSTALL LIGHTING POLES WITHOUT LUMINAIRES	
* TITLE 40' LIGHTING POLE		CUSTOMER VILLAGE OF MINOOKA, IL	
SCALE 3/2		DATE 6/17/2009	
BY KDP		CHK'D SKKP061709C	
DRAWN -		DESIGNED -	
CHECKED -		REVISED -	
DATE -		REVISED -	

TYPICAL POLE INSTALLATION

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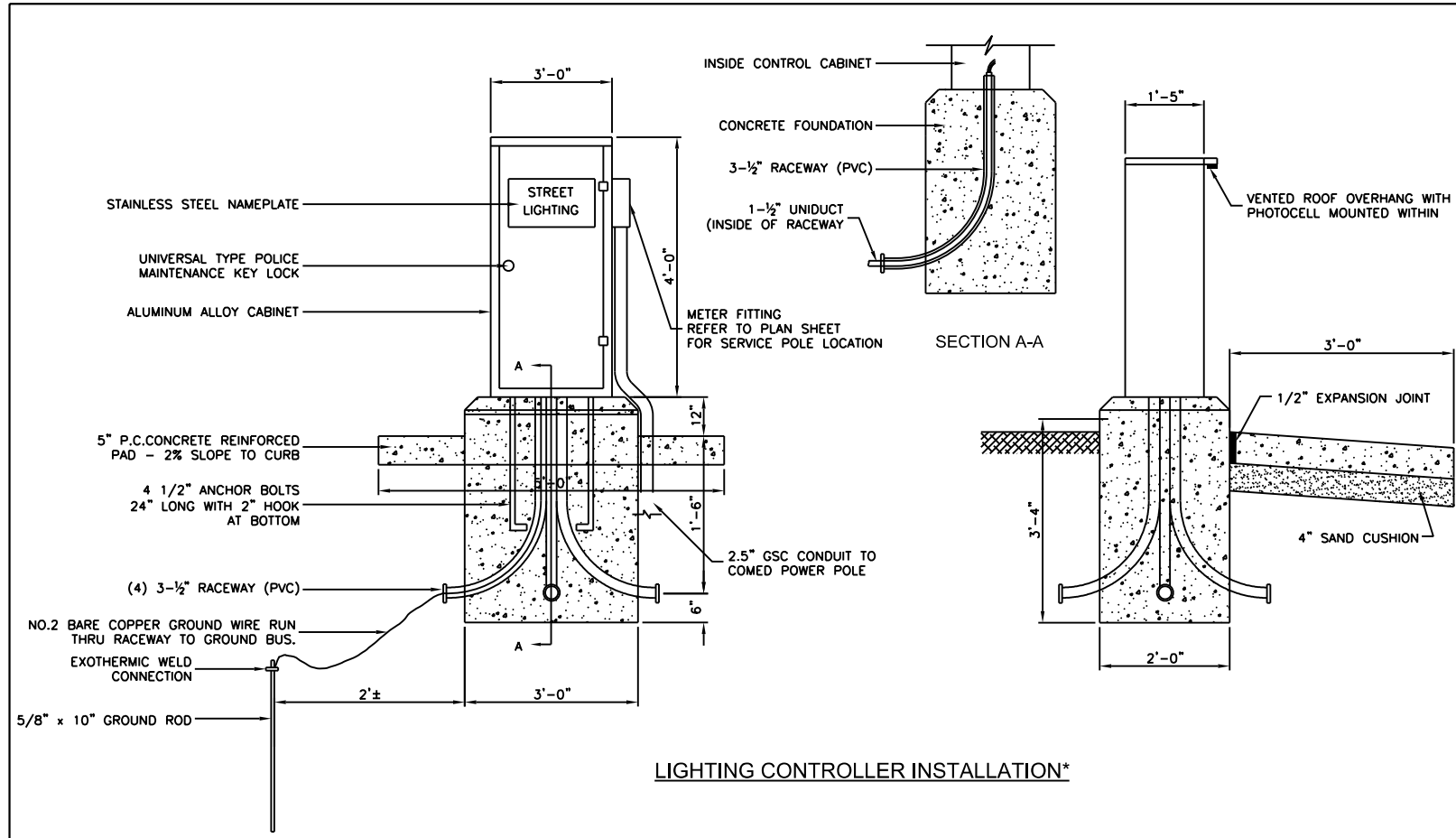
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PLOT DATE = 4/3/2019	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RIDGE ROAD
STREET LIGHTING DETAILS**

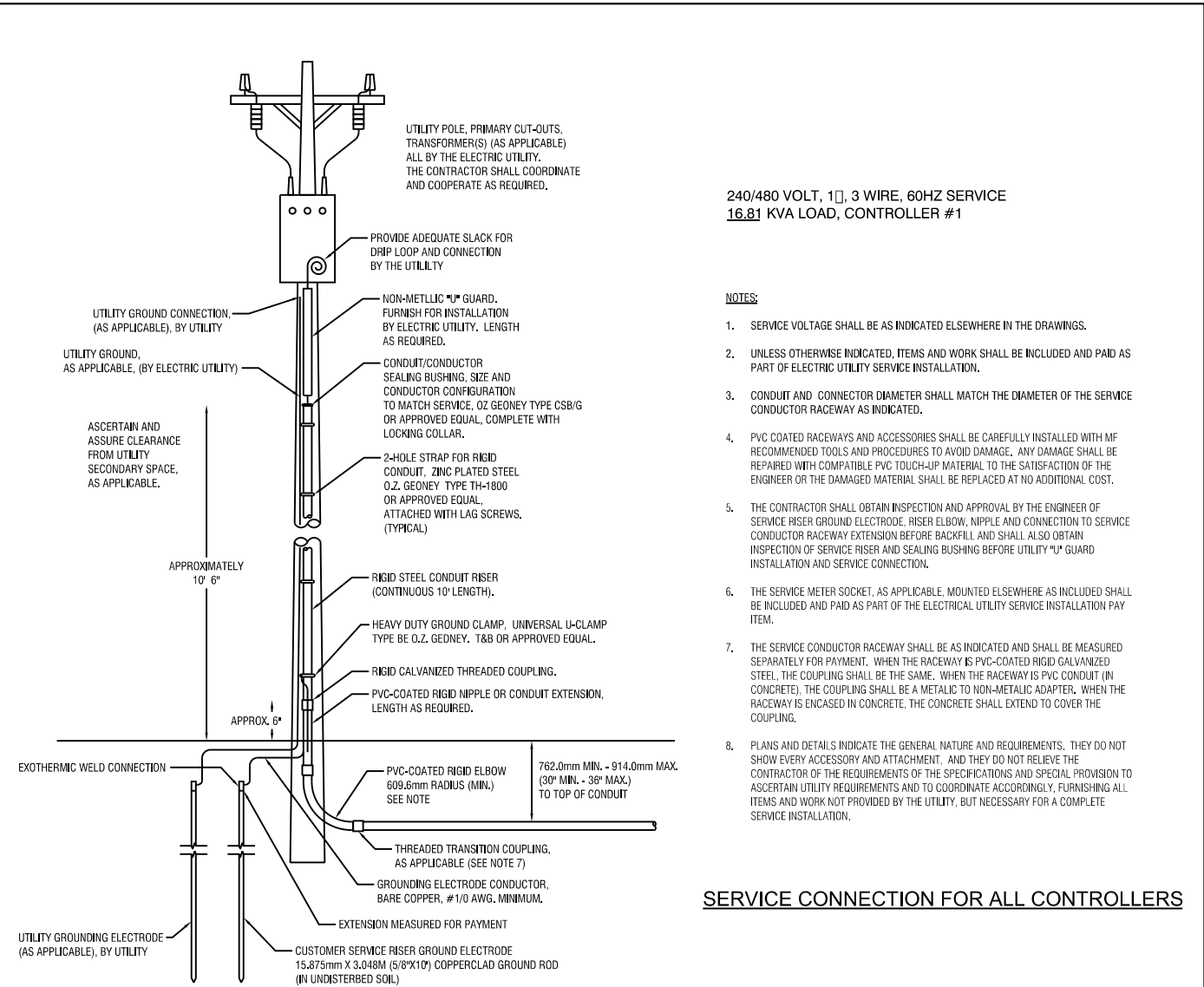
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



LIGHTING CONTROLLER INSTALLATION*

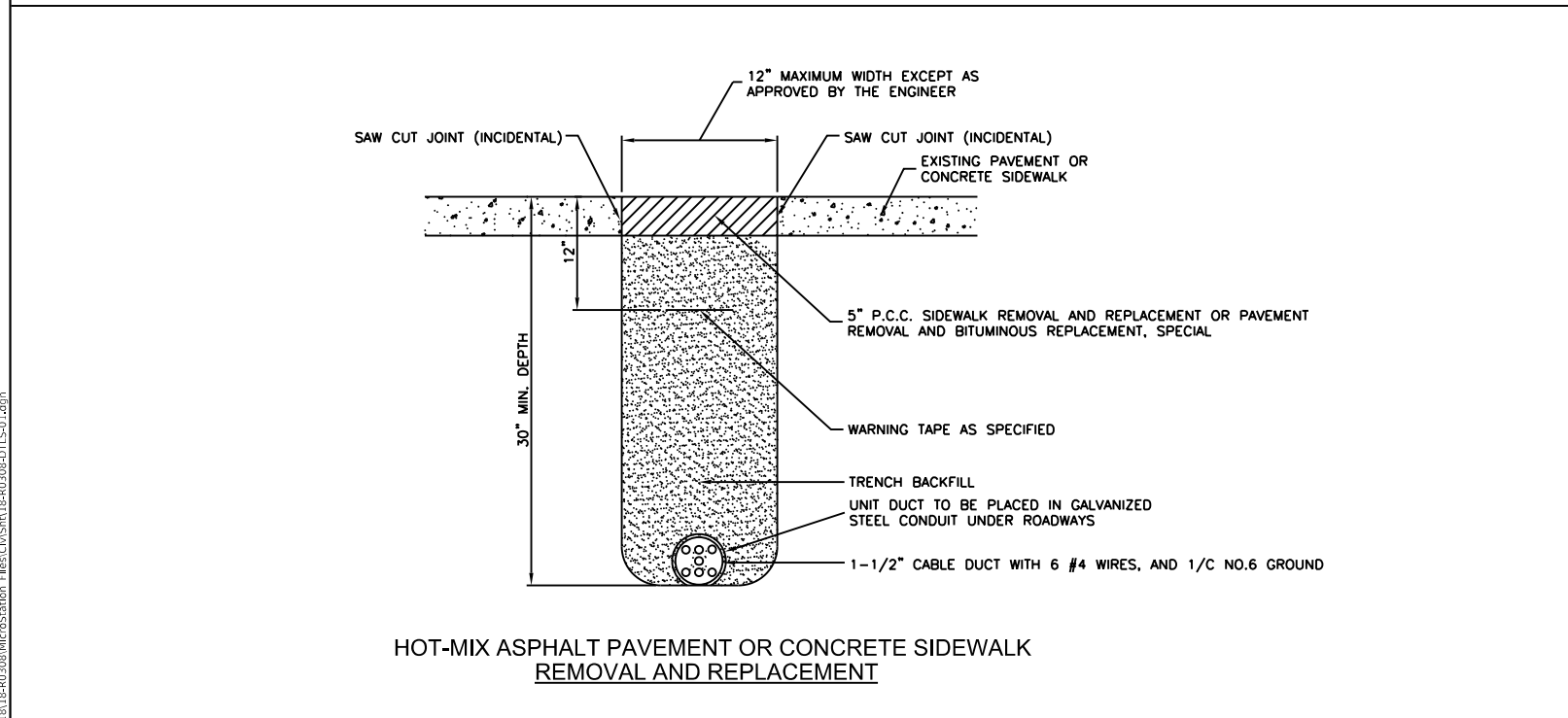
* EXISTING CONTROLLER TO BE RELOCATED



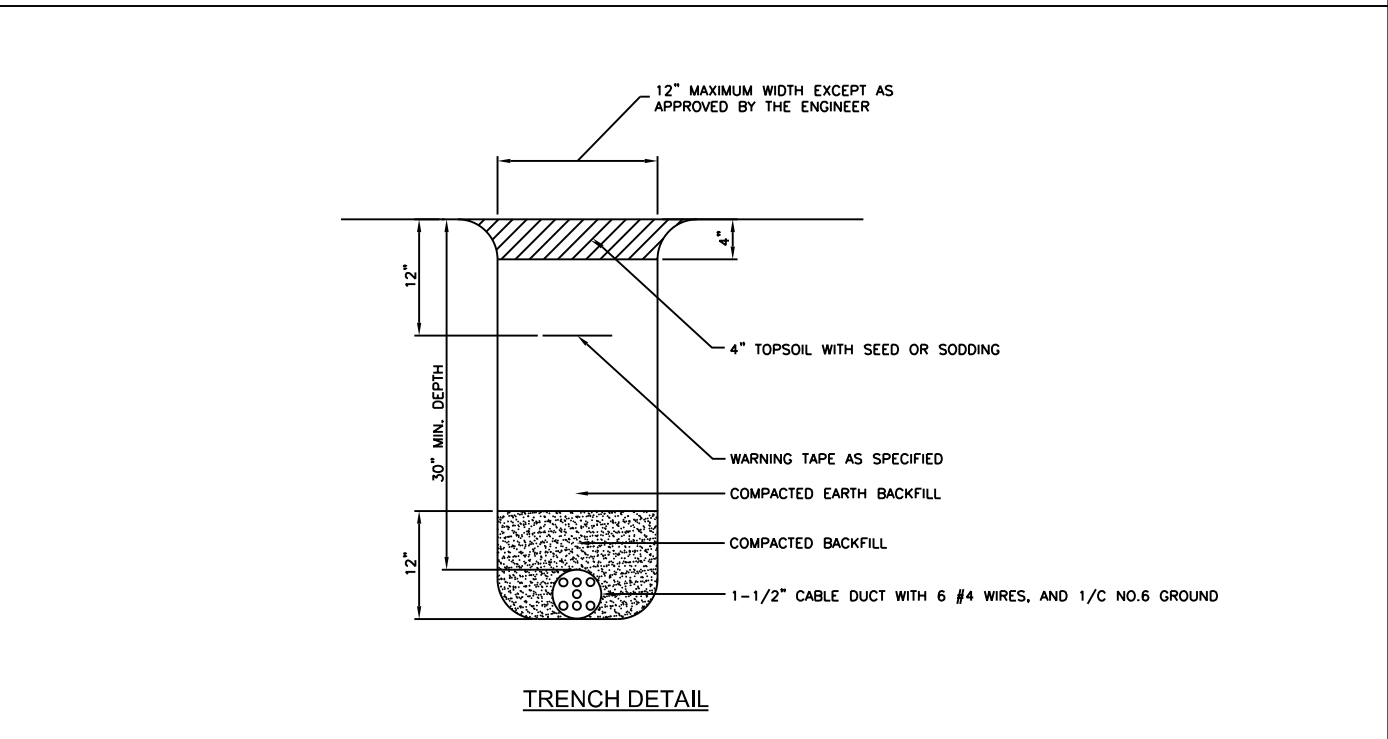
240/480 VOLT, 1[], 3 WIRE, 60HZ SERVICE
16.81 KVA LOAD, CONTROLLER #1

- NOTES:**
- SERVICE VOLTAGE SHALL BE AS INDICATED ELSEWHERE IN THE DRAWINGS.
 - UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF ELECTRICAL UTILITY SERVICE INSTALLATION.
 - CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED.
 - PVC COATED RACEWAYS AND ACCESSORIES SHALL BE CAREFULLY INSTALLED WITH MF RECOMMENDED TOOLS AND PROCEDURES TO AVOID DAMAGE, ANY DAMAGE SHALL BE REPAIRED WITH COMPATIBLE PVC TOUCH-UP MATERIAL TO THE SATISFACTION OF THE ENGINEER OR THE DAMAGED MATERIAL SHALL BE REPLACED AT NO ADDITIONAL COST.
 - THE CONTRACTOR SHALL OBTAIN INSPECTION AND APPROVAL BY THE ENGINEER OF SERVICE RISER GROUND ELECTRODE, RISER ELBOW, NIPPLE AND CONNECTION TO SERVICE CONDUCTOR RACEWAY EXTENSION BEFORE BACKFILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY "UP" GUARD INSTALLATION AND SERVICE CONNECTION.
 - THE SERVICE METER SOCKET, AS APPLICABLE, MOUNTED ELSEWHERE AS INCLUDED SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRICAL UTILITY SERVICE INSTALLATION PAY ITEM.
 - THE SERVICE CONDUCTOR RACEWAY SHALL BE AS INDICATED AND SHALL BE MEASURED SEPARATELY FOR PAYMENT. WHEN THE RACEWAY IS PVC-COATED RIGID GALVANIZED STEEL, THE COUPLING SHALL BE THE SAME. WHEN THE RACEWAY IS PVC CONDUIT (IN CONCRETE), THE COUPLING SHALL BE A METALLIC TO NON-METALLIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
 - PLANS AND DETAILS INDICATE THE GENERAL NATURE AND REQUIREMENTS. THEY DO NOT SHOW EVERY ACCESSORY AND ATTACHMENT. AND THEY DO NOT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS AND SPECIAL PROVISION TO ASCERTAIN UTILITY REQUIREMENTS AND TO COORDINATE ACCORDINGLY, FURNISHING ALL ITEMS AND WORK NOT PROVIDED BY THE UTILITY, BUT NECESSARY FOR A COMPLETE SERVICE INSTALLATION.

SERVICE CONNECTION FOR ALL CONTROLLERS



HOT-MIX ASPHALT PAVEMENT OR CONCRETE SIDEWALK REMOVAL AND REPLACEMENT



TRENCH DETAIL

MODEL: Mod41
FILE NAME: P:\2018\18-00308\MicroStation Files\Civil\18-00308-01\15-01.dgn



USER NAME = mdowns	DESIGNED -	REVISED -
PLOT SCALE = 2.00' / in.	DRAWN -	REVISED -
PLOT DATE = 4/3/2019	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

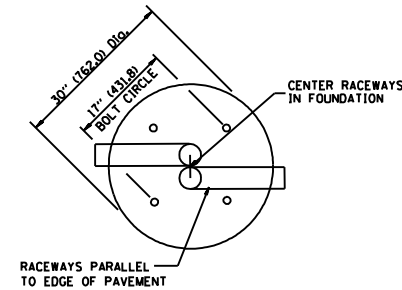
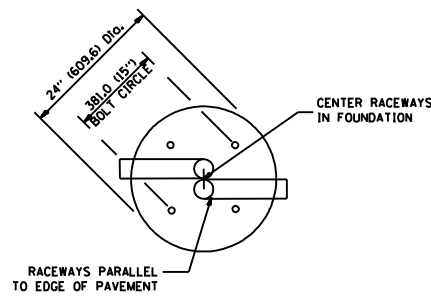
**RIDGE ROAD
STREET LIGHTING DETAIL**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	149
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

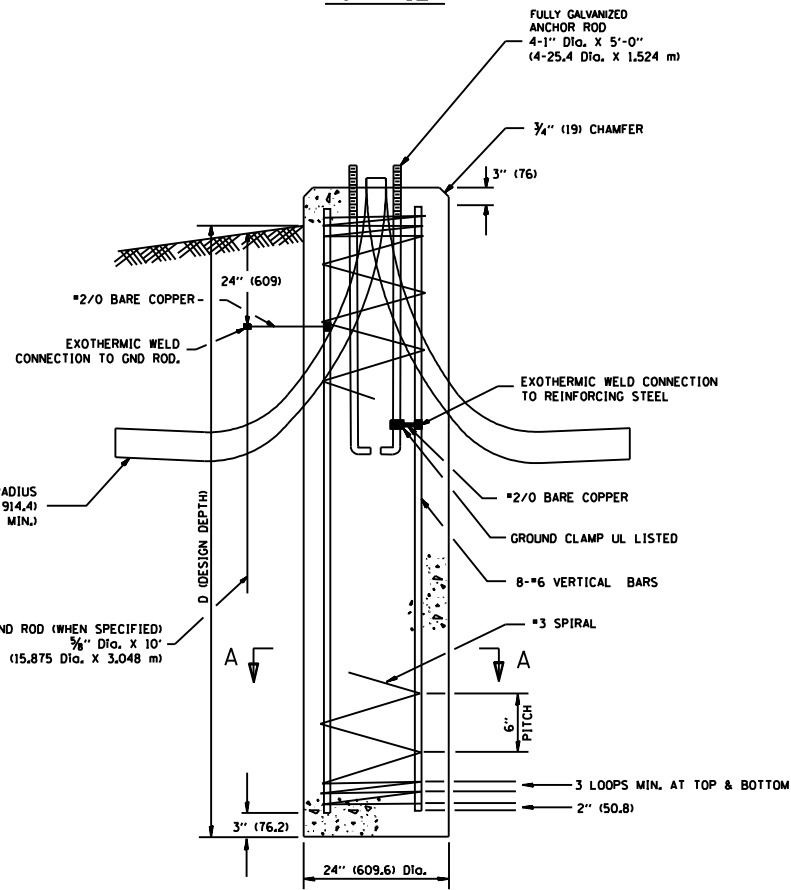
LIGHT POLE FOUNDATION DEPTH TABLE
40 FT. (12.82 ?) TO 47.5 FT. (14.47 ?) MOUNTING HEIGHT

SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	13'-0" (3.96 m)	15'-0" (4.57 m)
MEDIUM CLAY Qu = 0.75 TON/SQ.FT	9'-6" (2.93 m)	10'-9" (3.23 m)
STIFF CLAY Qu = 1.50 TON/SQ. FT.	7'-0" (2.13 m)	8'-0" (2.44 m)
LOOSE SAND φ = 34°	9'-0" (2.74 m)	10'-0" (3.05 m)
MEDIUM SAND φ = 37.5°	8'-3" (2.52 m)	9'-0" (2.74 m)
DENSE SAND φ = 40°	7'-9" (2.36 m)	9'-0" (2.74 m)

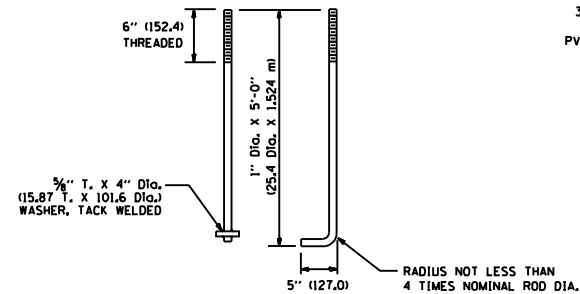


TOP VIEW

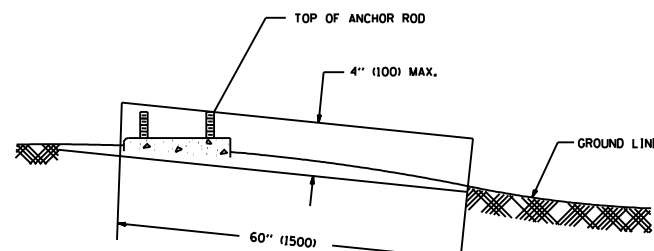
TOP VIEW



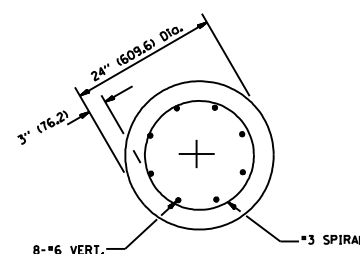
FOUNDATION DETAIL



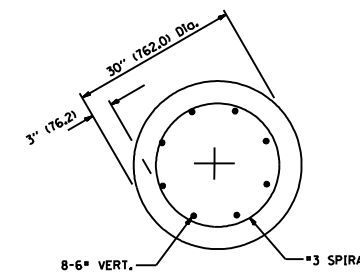
ANCHOR ROD DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A



SECTION A-A

NOTES

- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED.
- THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 IN.) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
- THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
- THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 3/4-IN. (20 mm).
- THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
- THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 0H, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
- ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UMG MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
- THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
- ANCHOR RODS SHALL PROJECT 2 3/4" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
- THE CONTRACTOR SHALL USE A *3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE *3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
- THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
- THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIDGE ROAD
STREET LIGHTING DETAILS

SCALE: SHEET OF SHEETS STA. TO STA.

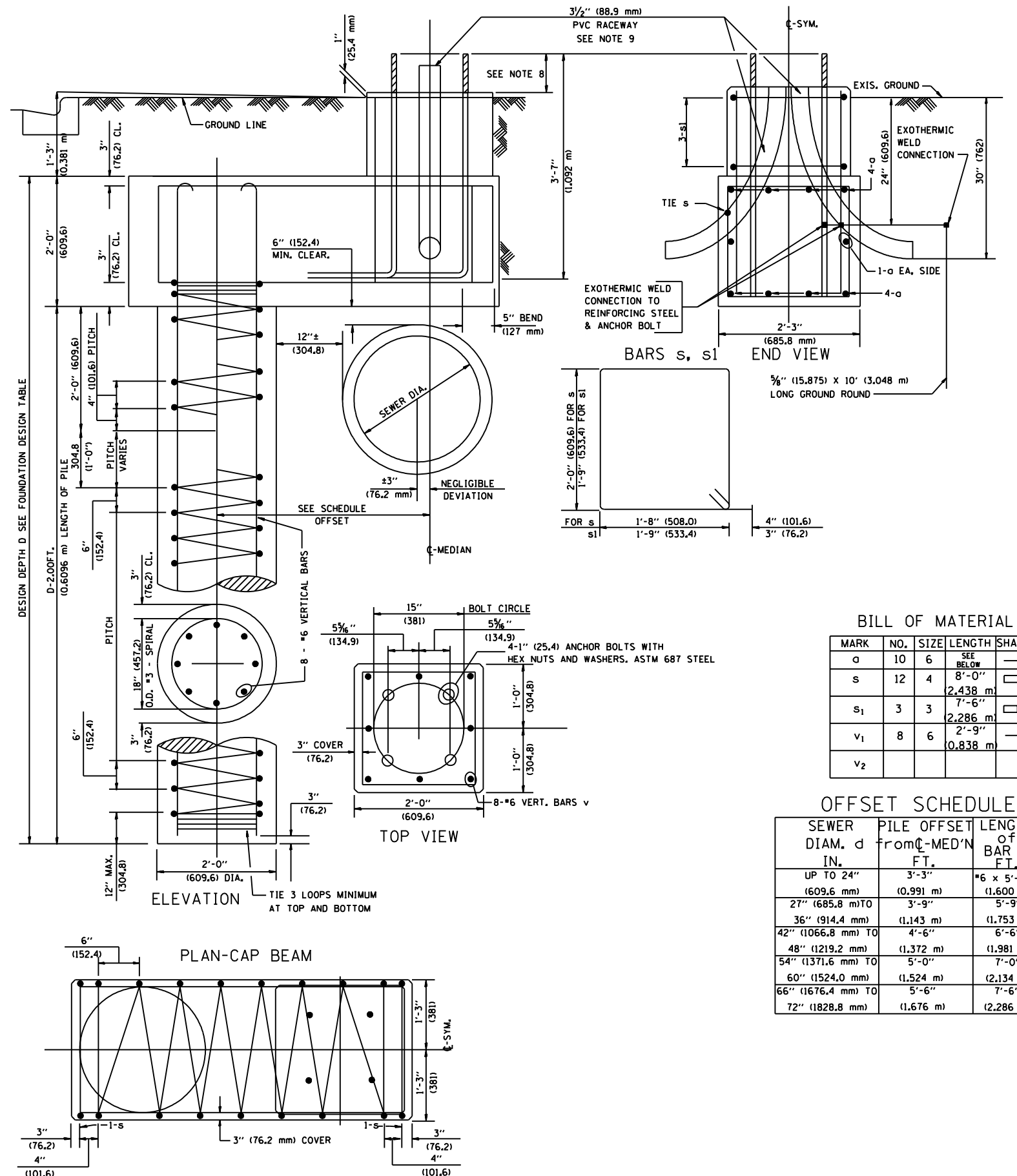
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			239	150
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

FOUNDATION DESIGN TABLE

TYPE OF SOIL	DESIGN DEPTH OF FOUNDATION		REINFORCEMENT IN FOUNDATION			
	SINGLE ARM D	TWIN ARM D	SINGLE ARM		TWIN ARM	
			VERT BARS	SPIRAL	VERT BARS	SPIRAL
SOFT CLAY	13'-0" (3.962 m)	15'-0" (4.572 m)	8-#6X12'-6" (3.810 m)	*3X122' (37.186 m)	8-#6X14'-3" (4.343 m)	*3X141' (42.977 m)
MEDIUM CLAY	9'-6" (2.896 m)	10'-9" (3.277 m)	8-#6X9'-0" (2.743 m)	*3X90' (27.432 m)	8-#6X10'-0" (3.048 m)	*3X100' (30.480 m)
STIFF CLAY	7'-0" (2.134 m)	8'-0" (2.438 m)	8-#6X6'-6" (1.981 m)	*3X66' (20.112 m)	8-#6X7'-6" (2.286 m)	*3X76' (23.165 m)
LOOSE SAND	9'-0" (2.743 m)	10'-0" (3.048 m)	8-#6X8'-6" (2.591 m)	*3X85' (25.908 m)	8-#6X9'-6" (2.896 m)	*3X94' (28.651 m)
MEDIUM SAND	8'-3" (2.515 m)	9'-0" (2.743 m)	8-#6X8'-0" (2.438 m)	*3X78' (23.774 m)	8-#6X8'-6" (2.591 m)	*3X85' (25.908 m)
DENSE SAND	7'-9" (2.362 m)	9'-0" (2.743 m)	8-#6X7'-6" (2.286 m)	*3X73' (22.250 m)	8-#6X8'-6" (2.591 m)	*3X85' (25.908 m)
ROCK OR SOLIDIFIED SLAG	5'-0" (1.524 m)	5'-0" (1.524 m)	NONE	NONE	NONE	NONE

NOTES

- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ENGINEER SHALL DETERMINE THE CLASS OF SOIL DURING EXCAVATION AND SELECT THE DESIGN DEPTH OF FOUNDATION FROM THE DESIGN TABLE.
- EXCAVATION OF THE POLE FOUNDATION SHALL BE MADE WITH AN AUGER, 24" (609.6 mm) OR 30" (762.0 mm) IN DIAMETER.
- THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- THE ANCHOR BOLTS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED IN THE FORM.
- THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
- THE CONTRACTOR SHALL COORDINATE EXTENSION OF ANCHOR BOLTS ABOVE TOP OF FOUNDATION WITH THE BREAKAWAY DEVICE MANUFACTURER'S REQUIREMENTS. IF LIGHT POLE IS MOUNTED WITHOUT BREAKAWAY DEVICE, ANCHOR BOLTS SHALL PROJECT 2 3/4" (69.9 mm) ABOVE TOP OF THE FOUNDATION. THE CONTRACTOR SHALL CONFIRM ANCHOR BOLT EXTENSION WITH ENGINEER.
- RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.
- THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE LIGHT IS ERECTED.



BILL OF MATERIAL

MARK	NO.	SIZE	LENGTH	SHAPE
a	10	6	SEE BELOW	—
s	12	4	8'-0" (2.438 m)	□
s ₁	3	3	7'-6" (2.286 m)	□
v ₁	8	6	2'-9" (0.838 m)	—
v ₂				

OFFSET SCHEDULE

SEWER DIAM. d IN.	PILE OFFSET from C-MED'N FT.	LENGTH of BAR a FT.
UP TO 24"	3'-3"	#6 x 5'-3"
(609.6 mm)	(0.991 m)	(1.600 m)
27" (685.8 mm) TO	3'-9"	5'-9"
36" (914.4 mm)	(1.143 m)	(1.753 m)
42" (1066.8 mm) TO	4'-6"	6'-6"
48" (1219.2 mm)	(1.372 m)	(1.981 m)
54" (1371.6 mm) TO	5'-0"	7'-0"
60" (1524.0 mm)	(1.524 m)	(2.134 m)
66" (1676.4 mm) TO	5'-6"	7'-6"
72" (1828.8 mm)	(1.676 m)	(2.286 m)

MODEL: Mod4
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PLOT SCALE = 2.00' / in.	DRAWN -	REVISED -
PLOT DATE = 4/3/2019	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIDGE ROAD
STREET LIGHTING DETAILS

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			239	151
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

CONTROLLER BILL OF MATERIALS

- ① 3-1/2" NO. 1/0, 600V SERVICE WIRE IN 3" DIA. GALVANIZED STEEL CONDUIT FOR 240/480 VOLT, 1Ø, 3 WIRE, 60HZ. SERVICE.
- ② (1) 100 AMP MAIN CIRCUIT BREAKER, 2 POLE, 600 VOLT, 100 AMP BASE, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA - 14000 AMP AT 480 V.
- ③ (1) 100 AMP REMOTE CONTROL CONTACTOR SWITCH, ELECTRICALLY OPERATED, MECHANICALLY HELD, 2 POLE, SINGLE THROW, MINIMUM 60 AMP, 600 VOLT
- ④ (4) 30 AMP CIRCUIT BREAKER, 1 POLE, 240 VOLT, 100 AMP BASE, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA - 14000 AMP AT 240 VOLTS.
- ⑤ (3) 20 AMP CONTROL CIRCUIT-CIRCUIT BREAKER, 1 POLE, 240 VOLT, 100 AMP BASE, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA 14000 AMP AT 240 V.
- ⑥ (1) 20 AMP, 1 POLE DOUBLE THROW, 240 VOLT RELAY
- ⑦ (1) 1.5 KVA, SINGLE PHASE, ENCAPSULATED TRANSFORMER 240x480/120x240 VOLT, 60 HZ.
- ⑧ (1) 20 AMP, 120 VOLT DUPLEX GFCI RECEPTACLE.
- ⑨ NEUTRAL BUS BAR, 1/4"x1"x12" LONG MOUNTED ON PANEL WITH TAPS.
- ⑩ 3 POSITION SELECTOR SWITCH
- ⑪ SWITCH FOR LIGHTING FIXTURE MOUNTED IN BOX.
- ⑫ WEATHER-PROOF INCANDESCENT LIGHTING FIXTURE WITH 60 WATT, 120 V LAMP.
- ⑬ PHOTOCCELL MOUNTED TO CABINET, 240 V.
- ⑭ NO.2 AWG INSULATED GROUND WIRE.
- ⑮ IN-LINE FUSEHOLDER WITH FUSE AS NOTED IN FUSE TABLE.
- ⑯ GROUND BUS BAR 1/4"x1"x12" MINIMUM LENGTH MOUNTED ON PANEL WITH TAPS.
- ⑰ LUMINAIRE
- ⑱ (4) 30 AMP CIRCUIT BREAKER, 1 POLE, 600 VOLT, 250 AMP BASE, NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA - 14000 AMP AT 240 VOLTS.
- ⑳ 5.0 KVA, SINGLE PHASE, ENCAPSULATED TRANSFORMER 240x480/120x240 V, 60HZ
- ㉑ (3) 20 AMP CIRCUIT BREAKER, 2 POLE, 600 VOLT, 250 AMP BASE, NONE-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA - 14000 AMP AT 480 VOLTS.
- ㉒ WARNING PLATE TO READ: WARNING, MAINTENANCE CIRCUIT IS LIVE WHEN MAIN BREAKER IS SWITCHED OFF.

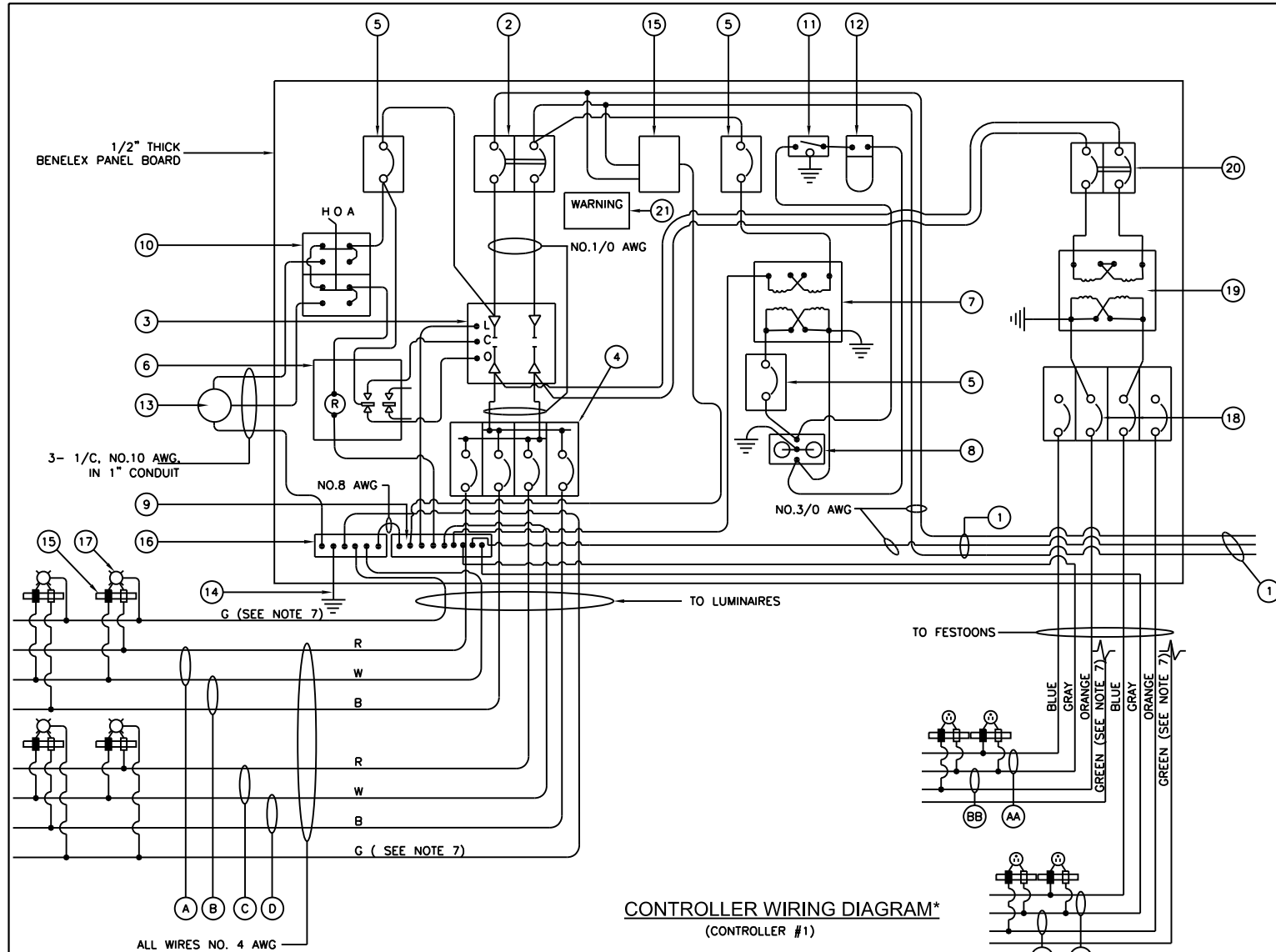
NOMINAL WATTAGE	FUSE SIZE
LUMINAIRE	3.5 AMP
FESTOON	6.0 AMP

FUSE SIZE TABLE

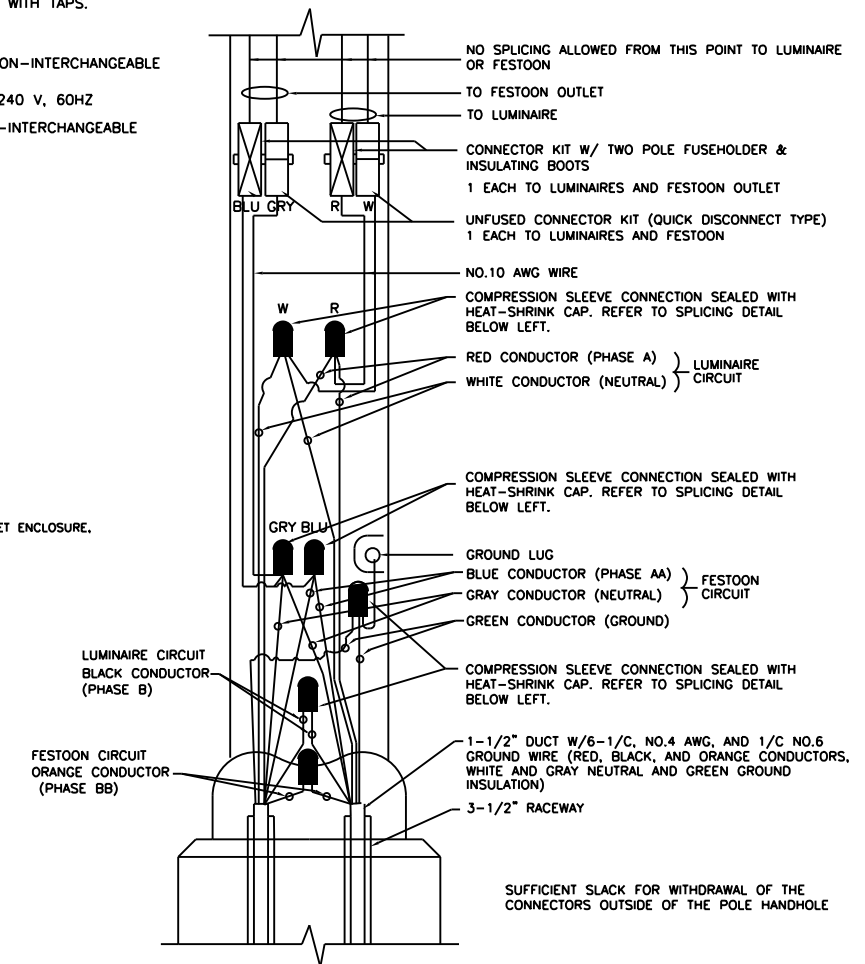
- Ⓐ LUMINAIRE CIRCUIT, 240V
- Ⓑ LUMINAIRE CIRCUIT, 240V
- Ⓒ LUMINAIRE CIRCUIT, 240V
- Ⓓ LUMINAIRE CIRCUIT, 240V
- ⒶⒶ FESTOON CIRCUIT, 120V
- ⒷⒷ FESTOON CIRCUIT, 120V
- ⒸⒸ FESTOON CIRCUIT, 120V
- ⒹⒹ FESTOON CIRCUIT, 120V

GENERAL NOTES FOR CONTROL CABINET

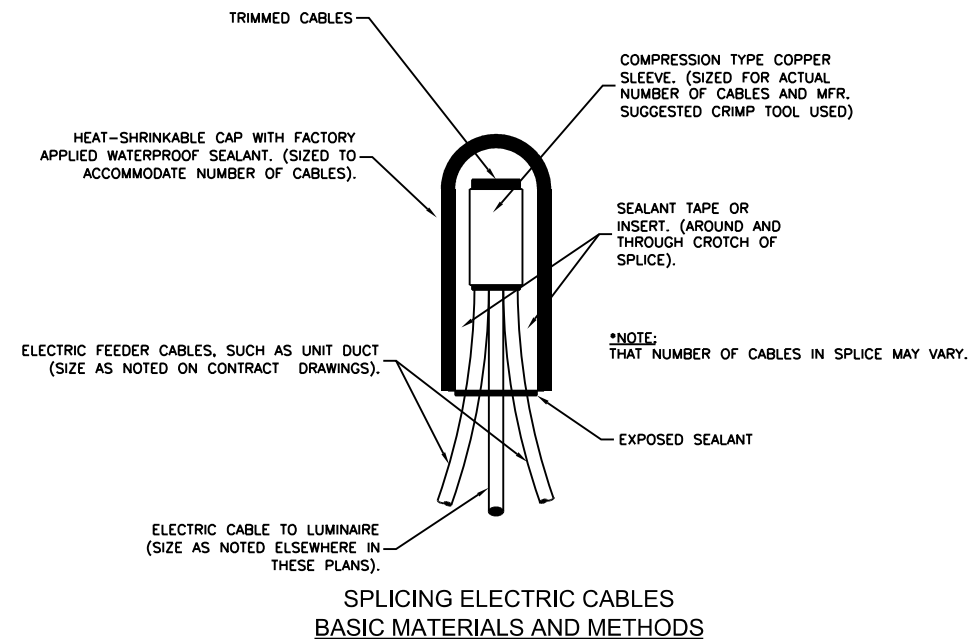
1. ENTIRE CONTROL CABINET SHALL BE GROUNDED.
 2. ALL WIRING SHALL BE TAGGED WITH SELF-STICKING WIRE MARKERS.
 3. GROUND BUS TO BE COLOR CODED GREEN, NEUTRAL BUS WHITE, AND BONDED TO CABINET ENCLOSURE, BY LISTED PRESSURE CONNECTORS OR LISTED CLAMPS.
 4. ALL INTERNAL CONTROLLER WIRING TO BE NO.12 AWG UNLESS OTHERWISE SPECIFIED.
 5. CABINET WIRING INSULATION TO BE TYPE XHHW OR APPROVED EQUAL.
 6. CABINET SHALL BE SUITABLE FOR USE AS SERVICE ENTRANCE RATED.
 7. FESTOON AND LIGHTING CIRCUITS SHALL SHARE A COMMON GROUND CONDUCTOR.
- * EXISTING CONTROLLER TO BE RELOCATED.



CONTROLLER WIRING DIAGRAM*
(CONTROLLER #1)



POLE HANDHOLE WIRING DIAGRAM
TYPICAL FOR LUMINAIRE INSTALLATION WITH FESTOON
(A & AA PHASE SHOWN)



SPlicing Electric Cables
BASIC MATERIALS AND METHODS

MODEL: Mod41
FILE NAME: P:\2018\11-18-2018\MicroStation Files\Civil\11-18-2018\01-15-01.dgn

USER NAME = midowns	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 2.00' / in.	CHECKED -	REVISED -	
PLOT DATE = 4/3/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

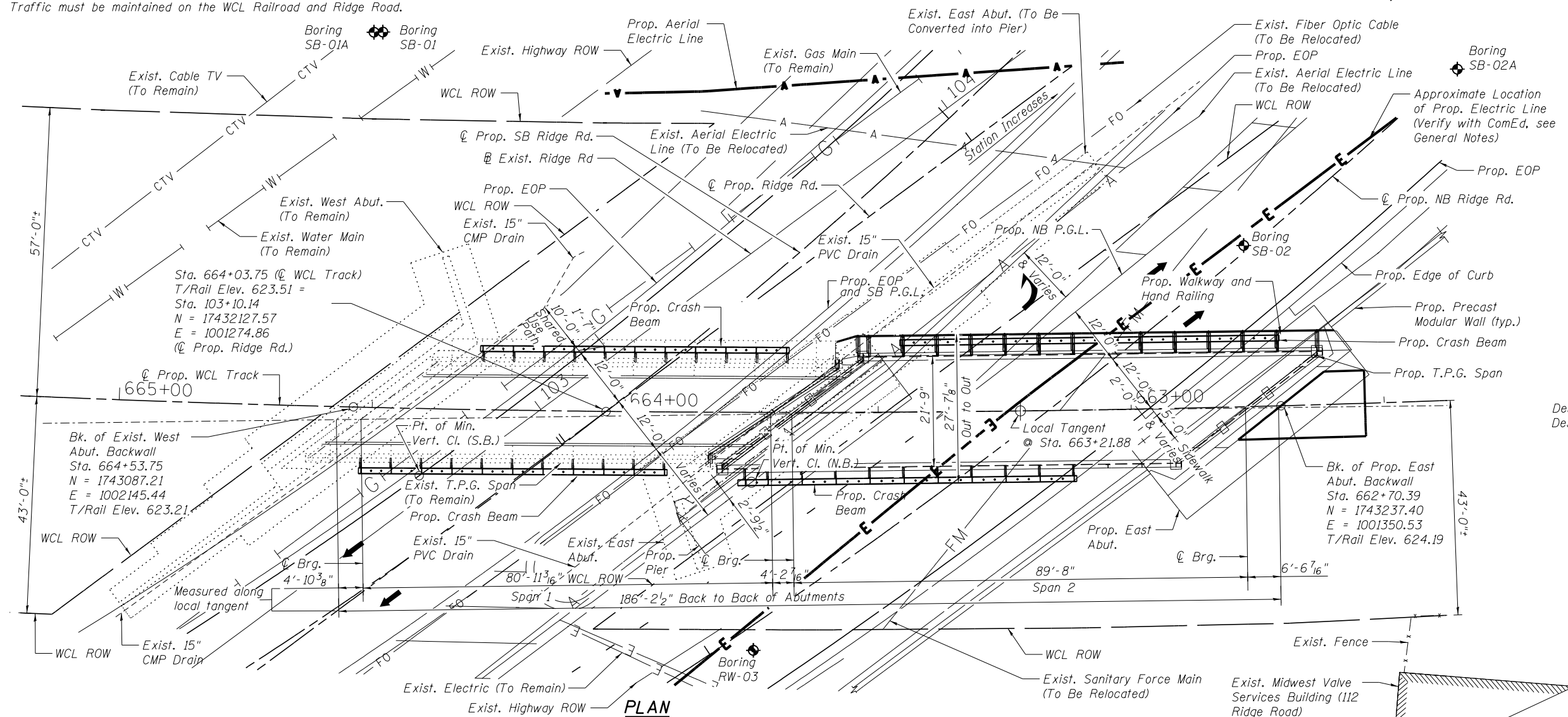
RIDGE ROAD
STREET LIGHTING DETAILS

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0384	11-00134-02-WR	GRUNDY	239	152
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

Bench Mark: Chiseled "□" on top of wingwall at SE corner of railroad bridge, S.N. 032-3400 Elev: 618.96

Existing Structure: S.N. 032-3400 originally built in 1974 carries one Wisconsin Central Ltd. Railway (WCL) (Formerly E.J.&E.) track over F.A.S. Rt. 285 Section 23-S at Station 123+34.2. The existing structure is a 79'-0" single span steel through-plate girder, 19'-0" c-c of girders, with closed abutments having metal shell piles. The existing structure is to remain in place while a second single span steel through-plate girder is added to the structure to accommodate the expansion of Ridge Road. A temporary jump span bridge will be constructed to facilitate the maintenance of Railroad traffic. Traffic must be maintained on the WCL Railroad and Ridge Road.



PLAN

LOADING COOPER E90

Impact: Impact without Hammer Blow
Allow Imposed Dead Load of 28" of Ballast

DESIGN SPECIFICATIONS

2018 AREMA Manual for Railway Engineering
Live Load Deflection: L/750
Permanent Bridge Design Speed: 60 mph
Permanent Track Design Speed: 30 mph
Jump Span Design Speed: 60 mph

DESIGN STRESSES

FIELD UNITS

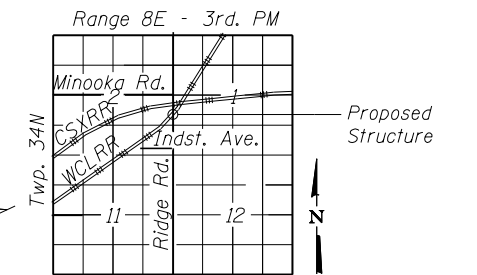
$f'_c = 5,000$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (Grade 50)

EXISTING ELEMENTS

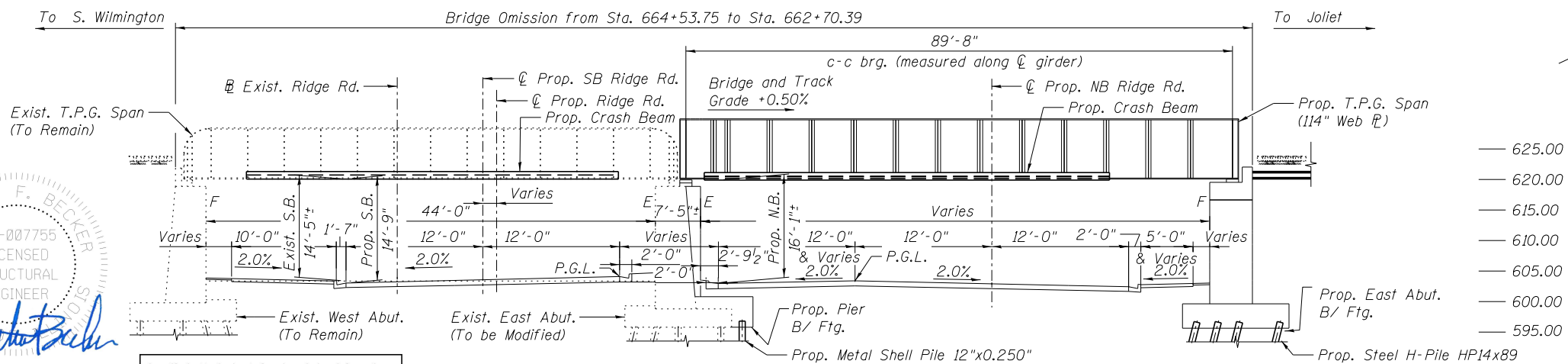
f'_c allow. = 1,600 psi
 f_s allow. = 16,000 psi (Reinforcement)
 f_s allow. = 20,000 psi (A36)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{DS}) = 0.097g
Design Spectral Acceleration at 0.2 sec. (S^0_2) = 0.170g
Soil Site Class = D

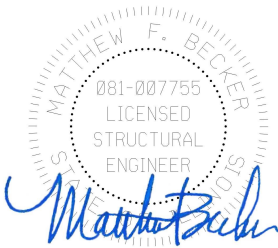


LOCATION SKETCH



ELEVATION

Note: Unless Noted Otherwise, Horizontal Dimensions are at Right Angles



EXPIRATION DATE 11-30-2020
DATE: 05-14-2019

I certify that to the best of my 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 2018 AREMA Manual for Railway Engineering.

DESIGNED - MMW	REVISED -
CHECKED - MFB	REVISED -
DRAWN - RR	REVISED -
CHECKED - MMW	REVISED -

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**GENERAL PLAN AND ELEVATION
STRUCTURE NO. 032-3400**

SHEET NO. S- 01 OF 51 SHEETS

**GENERAL PLAN & ELEVATION
WISCONSIN CENTRAL LTD.
ILLINOIS RIVER SUBDIVISION
MP 22.38 OVER RIDGE ROAD
F.A.U. ROUTE 384 - SECTION 11-00134-02-WR
GRUNDY COUNTY
STATION 663+62.07
STRUCTURE NO. 032-3400**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	153
			CONTRACT NO. 87695	

ILLINOIS FED. AID PROJECT



PLOT DATE = 5/13/2019

GENERAL NOTES

SPECIFICATIONS FOR DESIGN, MATERIAL, FABRICATION AND CONSTRUCTION

The American Railway Engineering And Maintenance Of Way Association (AREMA) "Manual For Railway Engineering", Chapter 8 "Concrete Structures And Foundations" And Chapter 15 "Steel Structures", 2018 Edition, Applies Unless Noted On The Contract Drawings And/Or Modified By CN Guidelines For Design Of Railway Structures, 2006. In The Event Of Conflicts Between Specifications The More Restrictive Shall Apply. Fabricator Must Report Any Discrepancies Between The Fabrication Specifications And The Plans To The Railroad For Clarifications In Shop Drawing Preparation Stage Prior To Any Material Ordering And Fabrication.

DESIGN LOADING

The Design Live Load For The New Span Is E90 at 60 mph Speed.

FIELD SURVEYS AND VERIFICATIONS

This Contract Requires That The Contractor Work With An Existing Structure. The Contract Drawings Have Been Prepared Based On The Available Survey Information And The Original Contract And Shop Drawings. The Contractor Can Expect And Shall Plan On Encountering Variances And Deviations Between The Contract Drawings And The Site Conditions. Actual Field Conditions May Require Modifications In Geometry, Details, Dimensions, And Construction Method And Sequence. The Contractor Shall Perform The Work To Meet Field Conditions. The Contractor Shall Conduct Field Surveys And Perform Necessary Field Measurements To Determine Existing Conditions, And Shall Verify All Geometric Controls, Elevations Including But Not Limited To Rail Elevations, Ridge Road Elevations, And Elevations Of Various Supporting Structural Elements Shown On The Contract Drawings Prior To Preparation Of Shop Drawings And Fabrication Of Materials. The Contractor Shall Submit To The Project Engineer Copies Of All Field Surveys And Verifications Prior To Submitting Shop Drawings And Shall Make Required Modifications To The Contract Drawings In The Shop Drawing Stage To Accommodate The Verified Field Conditions, Subject To Approval Of The Wisconsin Central Ltd. (WCL). The Contractor Shall Also Provide Means For Field Adjustments As Required To Ensure Proper Installations Of The New Span.

ORIGINAL SHOP DRAWINGS

Contract Drawings for the Original Structure Included. The County And Railroad Does Not Guarantee That The Original Drawings Or Repair Drawings Conform To The Existing Conditions In The Field And Shall Not Be Liable For Any Difference Between The Existing Conditions And Drawings.

Contractor Shall Field Verify All Dimensions.

STRUCTURAL STEEL

All Structural Steel Shall Be High-Strength, Low Alloy Structural Steel Conforming To ASTM A709 Grade 50, Ballast Stop Plates, Deck Plates And Apron Plates Shall Be ASTM A709 Grade 50W. Unless Otherwise Noted.

Through Plate Girders, Floorbeams Including Their Connection Angles, And Plates, And Any Components Marked "FCM" On The Plans Are Fracture Critical Members (FCM). Plates And Rolled Sections Used To Fabricate The Fracture Critical Members Shall Conform To ASTM A709 Grade 50F3 And The FCM Requirements Specified In AREMA. All Plates Used To Fabricate The "FCM" Members Shall Be Furnished To Charpy Impact Requirements As Described In AREMA. Longitudinal Charpy V-Notch Impact Testing Shall Be Performed And Reported To The Project Engineer For Each Plate. Rolled Plates And Shapes Other Than Those Applications Shall Be Ordered To Heat-Lot Qualifications In Accordance With The AREMA Specifications.

Deck Plate Girders (Flanges And Webs) Shall Be Fabricated From ASTM A709 50WF3 And FCM Requirements Specified In AREMA.

All Other Members Shall Conform To ASTM A588 Gr. 50.

All Members Noted On The Plans As (CR) Shall Be Corrosion Resistant Steel In Accordance With ASTM A588.

The Upper Floor Plate Must Be Raised Pattern Steel Floor Plates Conforming To The Requirements of ASTM A786 And Be Corrosion Resistant Steel In Accordance With ASTM A588 As Noted On The Plans As (CR*).

Steel For Bearing Bed Plates, Shoe Plates And Stop Bars Shall Be In Accordance With ASTM A709 Grade 50W.

Furnishing And Erecting Structural Steel, Special Shall Include All Steel Elements Of Proposed Through Plate Girder Span Including Bearings, Anchor Bolts, Walkway Elements Including Grating, Crash Beam For Existing And Proposed Spans And All Bolts And Related Materials For Connections Throughout.

BOLTED CONNECTIONS

All Bolted Connections, Unless Otherwise Noted On The Contract Drawings, Shall Be Made With High-Strength (H.S.) Bolts Conforming To ASTM F3125 Grade A325, Type 3. Bolts Shall Be Supplied With Heavy Hex Nuts (ASTM A563 Grade C1 Or Dh1) And Hardened Washers (ASTM F436, Type 3). High-Strength Bolts Shall Be Tightened By The Turn-Of-Nut Method As Described In AREMA. A Hardened Washer Will Be Required Under The Turned Element When Tightening. High Strength Bolts Shall Be 7/8" In Diameter Unless Otherwise Noted On The Plans. Bolted Connections Are Designed As Friction Type. Bolt Holes Shall Be Sized 1/16" Larger Than The Nominal Bolt Diameter Unless Noted Otherwise.

All bolted surfaces are designed for F3125 Grade A325 Class B (Slip Coefficient = 0.5) requiring all surfaces to be blast cleaned to a min. standard of SPSC 6.

ANCHOR BOLTS

Anchor Bolts Shall Be Galvanized F1554, Grade 105. All Anchor Bolt Washers And Nuts Shall Be Galvanized.

NAME PLATES

A Name Plate Will Be Required For The Span. Name Plates Will Be Supplied And Installed By The Fabricator Per CN Std Drawing TD-05-L-II (Revision C).

SHOP DRAWINGS

The Contractor Shall Prepare And Submit Fabrication Shop Drawings For All New Materials To The Railroad For Review And Approval. The Shop Drawings Shall Incorporate Any Adjustments Made To The Geometries, Dimensions, And Details Shown On The Contract Drawings, Based On Contractor's Field Verified Conditions. No Fabrication Shall Be Commenced Without The Approved Shop Drawings.

FABRICATION

All Bolt Holes Shall Be Subpunched And Reamed To Size, Subdrilled And Reamed To Size, Or Drilled From The Solid To Size. Full Size Punching Of Holes Is Prohibited. Bolt Holes In Structural Metal Work Shall Be Sized 1/16 Greater Than The Nominal Diameter Of The Fastener, Unless Otherwise Noted On The Plans.

All Fabricated Steel Pieces May Be Flame-Cut Provided That A Smooth Surface Free From Cracks And Notches Is Secured And Provided That An Accurate Profile Is Secured By The Use Of A Mechanical Guide. No Free-Hand Flame Cutting Is Allowed. Cut Surfaces Shall Not Exceed ANSI B46.1 Surface Texture Of 500, Unless Noted On The Contract Drawings. Grind Smooth All Copes And Interior Radii To Obtain A Roughness Not To Exceeding Asa 1000. All Re-Entrant Cuts Shall Have 1" Minimum Radius, Unless Otherwise Noted On The Plans. The Fracture Critical Members Shall Be Fabricated In Accordance With AREMA Manual Chapter 15 FCM Plans For Zone 3 Temperature. Steel Plates For Main Members Shall Be Cut And Fabricated So That The Principal Direction Of Rolling Is Parallel To The Direction Of Primary Tensile And/Or Compressive Stresses.

Dimensional Tolerances Shall Not Exceed The Requirements Of AREMA Manual, Chapter 15, Sections 3.1 And 3.2. Bottom Flanges Of Girders Over Bearings Shall Be True And Square; Maximum Measured Deviation At Outside Edge Of Bearing Plates Shall Not Exceed 1/25". Deviation From Straightness Of Main Girders Shall Not Exceed 1/8". Deviation Resulting From Negative Camber Shall Not Be Permitted.

The Spans Shall Be Shop Assembled And Match Marked.

WELDING

Welding Shall Conform To The Bridge Welding Code C.S.A. CAN3-W59-2013 & AWS D1.5, Current Revision, Unless Modified Or Supplemented By The AREMA Specifications. All Welds Shall Be Shop Welds Unless Specifically Shown In The Plans As Field Welds. No Backing Bars Are Permitted Unless Approved By The Project Engineer. No Tack Welds Shall Be Used To Attach Parts During Assembly Or For Shipment Unless Detailed On The Shop Detail Drawings And Specifically Approved By The Project Engineer.

Welds: E70XX Weld Strength Level, Low Hydrogen Electrode.

STEEL PILING

Metal Shell Piles Shall Be ASTM A252, Grade 3, With A Minimum Yield Strength Of 50,000 psi.

Steel H-Piles Shall Be ASTM A572, Grade 50.

PAINTING

The New Structural Steel Shall Be Painted As Shown On The Contract Drawing Or Noted In The Specifications.

All Non-Sliding Surfaces Of Bearing Plates Shall Be Zinc Metallized As Per C.S.A. G189; A.S.T.M. A123 Zinc Coating Shall Not Be Less Than 0.25mm.

SELF LUBRICATING BRONZE BEARING

Bronze Plates Should Be ASTM B22 Copper Alloy Uns No. C86300 Or C91300. Self Lubricating Bronze Bearing Plates Shall Be As Detailed On The Drawings. Either One Or Both Surfaces, As Indicated On The Drawings, Shall Be Provided With Trepanned Recesses Which Shall Be Filled With A Lubricating Compound Capable Of Withstanding The Atmospheric Elements And Consisting Of Graphite And Metallic Substance With A Lubricating Binder; The Compound Shall Be Pressed Into The Recesses By Hydraulic Presses So As To Form Dense, Non-Plastic Lubricating Inserts. The Lubricating Area Shall Comprise Approximately 25% Of The Total Area. The Coefficient Of Friction Shall Not Exceed 0.10. Acceptable Lubricant: G1 Lubrite Lubricant, Supplied By Lubrite Technologies.

ERECTION

All Connections Shall Be Accurately Aligned By Driving Sufficient Drift Pins In A Pattern To Fair-Up The Holes. It Is Contractor's Responsibility To Develop The Sequence Of Construction And Erection Procedures Including Any False Work Required. The Contractor Shall Submit To The Engineer For Examination And Approval The Erection Drawings Including His Method And Procedures Of Span Change Outs And The False Work. The False Work Shall Be Designed And Stamped By A Licensed Structural Engineer Registered In The State Of Illinois. The Safe Erection By Any Method Is The Contractor's Sole Responsibility.

RAILROAD TRAFFIC

The Contractor Shall Provide For Continuous Railroad Use Of The Existing Structure During The Construction Period, Except For Predetermined Windows Of Track Outage For Span Change Outs And Other Preapproved Tasks. The Contractor Shall Request Permission From The Railroad For The Limits Of Track Outages Required For The Construction Work, And Such Permission Shall Be Granted Only At The Discretion Of The Railroad. The Contractor Is Not Permitted To Use The Tracks, To Block The Tracks, Or To Store Equipment And Materials Within The Railroad Right-Of-Way Without The Railroad's Written Permissions. Railroad Traffic Shall Not Be Impeded By The Contractor's Activities. Care, Custody, And Control Of Railroad Operations Remain With The Railways.

ROADWAY TRAFFIC

The Contractor Shall Provide For Continuous Use Of The Street During The Construction Period, Except For Predetermined Lane Closures For Span Change Outs And Other Preapproved Tasks. The Contractor Shall Coordinate With And Obtain Permission From Grundy County And The Village Of Minooka On Any Lane Closures Required During The Construction, And Design And Arrange For Maintenance Of Traffic With The County's And The Village's Approval.

UTILITIES

Locations Of Existing Utilities Shown On The Contract Drawings Were Determined From Information Supplied By Local Utility Agencies. It Shall Be The Contractor's Responsibility To Field Verify The Location Of All Utilities Near The Construction Area Prior To Commencement Of The Work. During The Construction, The Contractor Shall Take Extreme Caution To Avoid Any Damage To Existing Utilities. All Cost Incurred For Repairing, Replacing, And Restoring Damaged Existing Utilities Shall Be At The Contractor's Sole Expense.

The Contractor Shall Contact ComEd's Project Manager, Kyle Isek, At Kyle.Isek@ComEd.com Or (779) 231-1740 A Minimum Of THREE Weeks Prior To Commencing Pile Driving Operations To Allow For Locating/De-Energizing Underground Lines.

RIGHT OF WAY

The Contractor Shall Obtain Permissions From The Right Of Way Owners To Conduct Construction Activities On Their Properties. The Right Of Way Map Will Be Made Available To The Contractor.

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DRAWN - BJW	REVISED -
PLOT DATE = 7/10/2019	CHECKED - APW
	REVISED -

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**GENERAL NOTES 1
STRUCTURE NO. 032-3400**

SHEET NO. S- 02 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	154
				CONTRACT NO. 87695
ILLINOIS FED. AID PROJECT				

GENERAL NOTES (cont.)

CONCRETE NOTES

Foundations

All Foundations Shall Be Placed At Elevations Shown On Drawings. If The Underside Of The Foundations Are Lower Than Shown On The Drawings, The Footing Thickness Shall Be Increased.

Concrete Construction

Before Concrete Is Placed, Drawings Shall Be Examined For Provision Of Openings, Anchor Rods, Inserts, Post Installed Rebar And Anchors Etc.

Anchor Rods And Inserts Shall Be Located In Plan And Elevation To Within $\pm \frac{1}{8}$ " Of The Dimensions Shown On The Drawings.

Where Concrete Is To Bond To Previously Hardened Concrete Or Rock Surface, The Surface Shall Be Thoroughly Clean And Roughened To A Minimum Amplitude Of $\frac{1}{4}$ ".

Where Holes Are Drilled For Dowels, The Holes Shall Be Thoroughly Cleaned And Free Of Debris Prior To Installing Dowels.

Bearing Seats Shall Be Finished Smooth And Level To Exact Elevations Shown. If Poured High, They Shall Be Bush Hammered And Grounded To Elevations Indicated. They May Not Be Poured Low Since Grout Will Not Be Permitted Unless Noted Otherwise On The Drawings.

Concrete Protection Of Reinforcement Minimum Clear Cover For Reinforcement Shall Be As Follows Unless Otherwise Noted On The Drawings:

Unformed Areas In Contact With Earth = 3"

Formed Areas Exposed To Earth Or Weather:
Principal Reinforcement 2"
Stirrups, Ties & Spirals 1½"

All Areas Not Exposed To Earth Or Weather:
Principal Reinforcement 1½"
Stirrups, Ties & Spirals 1"

Construction And Control Joints Shall Be Located As Shown On The Drawings.

Do Not Place Concrete Without Prior Inspection And Approval Of Steel Reinforcement And Formwork By The Engineer.

Unless Otherwise Noted On Drawings:

All Exposed Faces Shall Have A $\frac{3}{4}$ " Chamfer Unless Noted Otherwise.
Concrete Additives Shall Not Be Used Unless Approved By The Engineer.

Form Liner Textured Surface Facing Pattern Applied To East Abutment And Wingwalls Shall Consist Of A Stacked Stone Finish. See Specifications For Details.

Coordination Will Be Required Between The Contractors And Precast Facilities To Ensure The Form Liners Utilized Are Consistent Between East Abutment Cast-In-Place Stem, Precast Backwall, North Wingwall and South Wingwall.

All Precast Concrete Products Shall Conform To Section 1042 Of The Standard Specifications.

Reinforcing Steel

All Reinforcing Steel Shall Be New Billet Steel, Grade 60 In Accordance With ASTM A706.

Welding Of Reinforcing Steel Shall Not Be Permitted.

Mechanical Couplers Shall Not Be Used Unless Approved By The Engineer.

ESTIMATED QUANTITIES FOR ANTI-GRAFFITI PROTECTION SYSTEM

Location	Unit	Qty.
East Abutment	Sq. Ft.	903
North Wingwall	Sq. Ft.	943
South Wingwall	Sq. Ft.	1,676

ESTIMATED QUANTITIES FOR STAINING CONCRETE STRUCTURES

Location	Unit	Qty.
West Abutment	Sq. Ft.	1,710
Pier	Sq. Ft.	2,079
East Abutment	Sq. Ft.	903
North Wingwall	Sq. Ft.	943
South Wingwall	Sq. Ft.	1,676

TRACK WORK

Contractor Shall Coordinate And Cooperate With The Railroad.

Contractor Will Assist Railroad Forces With The Removal And Replacement Of Track Panels, Or Components Of These Panels, In Area Of Temporary Spans And Portion On Existing Bridge As Cut For Removal By Railroad Forces.

Contractor Is Responsible For Supplying And Installing Tie Deck On Temporary Spans. The Railroad Will Supply And Install Tie Plate And Rail On Temporary Spans. Contractor Is Also Responsible For The Interim Support Of Track And Installation Of The Temporary Ballast Retainer On The East End Of The Existing Span To Railroad Requirements.

For The Installation Of The Through Girder Span, The Railroad Will Supply Ballast. To Be Placed By Contractor On The Existing Span, New Span And East Approach Slabs. The Railroad Will Supply And Install Track Panels.

DESIGN CRITERIA

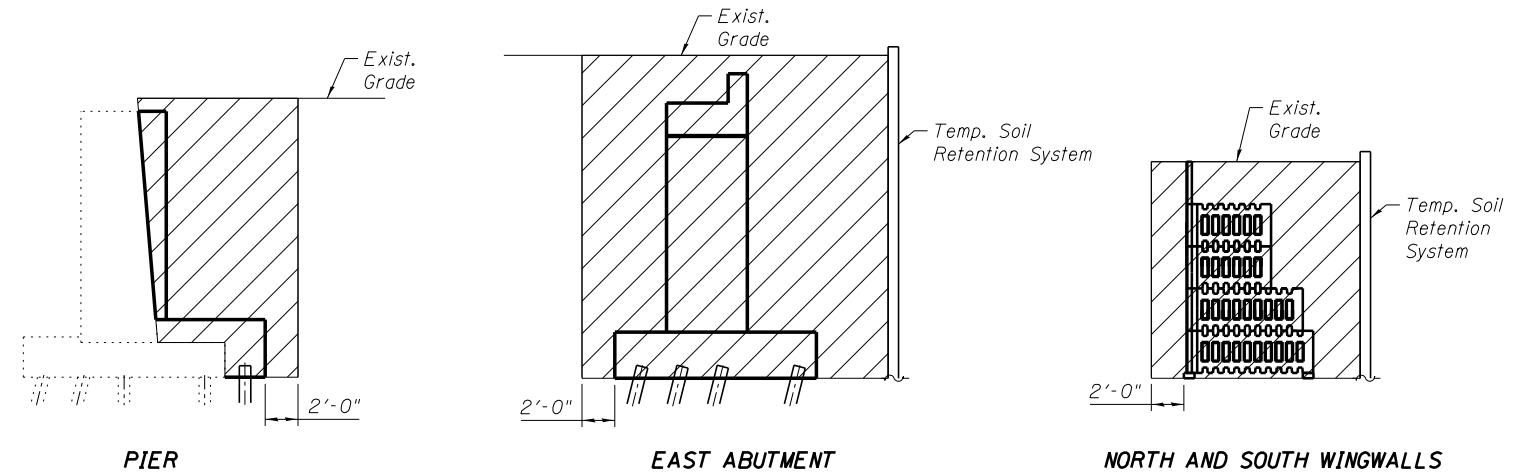
Live Load: Cooper E90 Plus Impact For Equipment Without Hammer Blow.

ALLOWABLE STRESSES:

<i>f_s</i> (Tension) High Strength Low Alloy Structural Steel (Grade 50)	27,500 psi
<i>f_s</i> (Tension) Structural Steel (Grade 36)	19,800 psi
<i>f_s</i> (Tension) Reinforcement Bars (Grade 60)	24,000 psi
<i>f'_c</i> (Compressive Strength) C.I.P. Concrete	5,000 psi
<i>f'_c</i> (Compressive Strength) Precast Concrete	5,000 psi

Maximum Live Load Plus Impact Deflection: L/750 For Railroad Superstructure

Foundations: Supported on Driven Steel H-Piles and Driven Steel Shell Piles as shown on Plans.

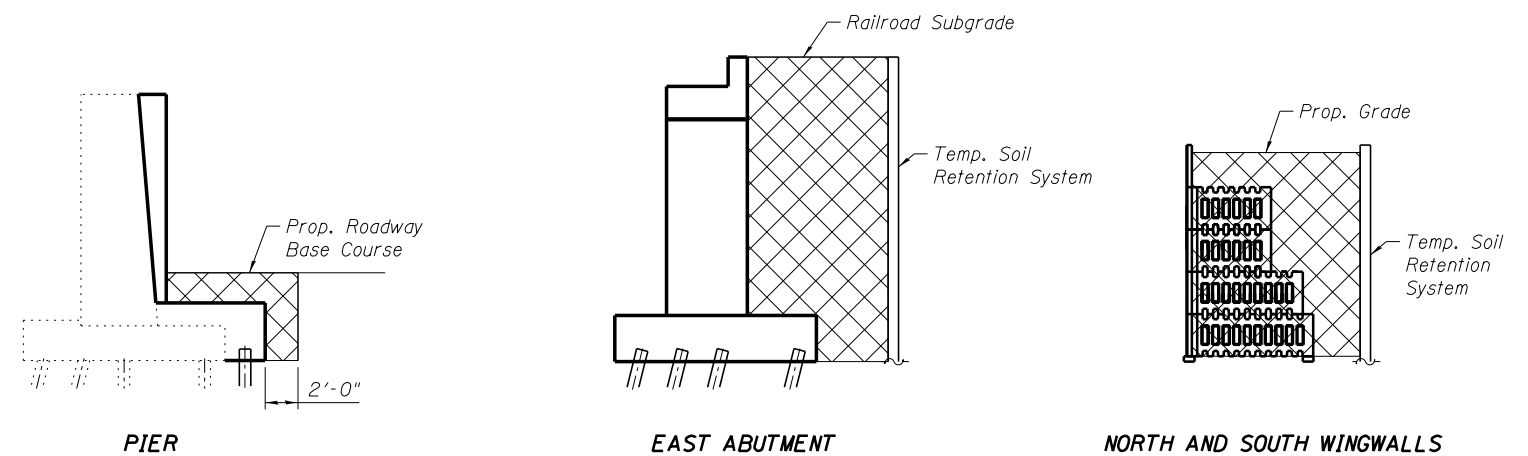


LEGEND

- Structure Excavation (Special)
- Porous Granular Embankment, Special

STRUCTURE EXCAVATION (SPECIAL)

The quantities for Structure Excavation (Special) are calculated for the above limits:



POROUS GRANULAR EMBANKMENT, SPECIAL

The quantities for Porous Granular Embankment, Special are calculated for the above limits:

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**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**GENERAL NOTES 2
STRUCTURE NO. 032-3400**

SHEET NO. S- 03 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	155
CONTRACT NO. 87695				

ILLINOIS FED. AID PROJECT

TOTAL BILL OF MATERIAL

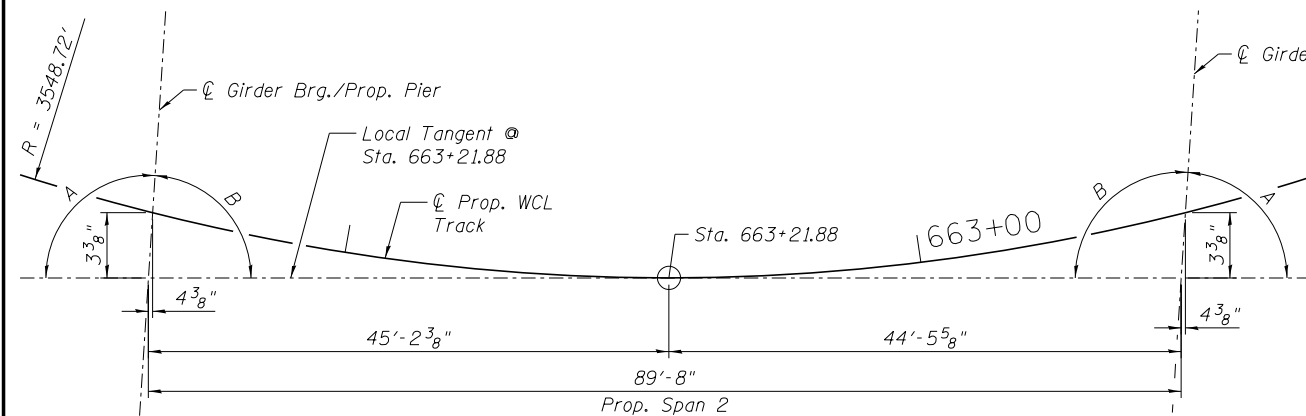
PAY ITEMS NO.	DESCRIPTION	UNIT	QUANTITY
50102400	Concrete Removal	Cu. Yd.	78.3
50300285	Form Liner Textured Surface	Sq. Ft.	3,401
50606701	Cleaning and Painting Structural Steel, Location 1	L. Sum	1
50800205	Reinforcement Bars, Epoxy Coated	Pound	40,470
51200957	Furnishing Metal Shell Piles 12" X 0.250"	Foot	224
51201900	Furnishing Steel Piles HP14x89	Foot	2,266
51202305	Driving Piles	Foot	2,490
51203200	Test Pile Metal Shells	Each	1
51203900	Test Pile Steel HP14x89	Each	1
51500100	Name Plates	Each	1
59000200	Epoxy Crack Injection	Foot	63
59100100	Geocomposite Wall Drain	Sq. Yd.	111
Z0007101	Containment and Disposal of Lead Paint Cleaning Residues No. 1	L. Sum	1
Z0012754	Structural Repair of Concrete (Depth equal to or less than 5 inches)	Sq. Ft.	6
Z0018800	Drainage System	L. Sum	1
Z0046304	Pipe Underdrains For Structures 4"	Foot	58
XX009242	Anti-Graffiti Protection System	Sq. Ft.	3,522
X0327357	Construction Vibration Monitoring	L. Sum	1
X0327645	Temporary Soil Retention System (Special)	Sq. Ft.	4,129
X0327976	Track Monitoring	Cal. Day	330
X2070304	Porous Granular Embankment, Special	Cu. Yd.	2,263
	Deck Waterproofing	Sq. Ft.	1,788
X5020200	Structure Excavation (Special)	Cu. Yd.	3,669
X5030225	Concrete Structures (Special)	Cu. Yd.	435.8
X5030290	Staining Concrete Structures	Sq. Ft.	7,311
X5040050	Precast Concrete Substructure	L. Sum	1
X5040100	Precast Bridge Approach Slab	Sq. Ft.	211
X5051200	Furnishing and Erecting Structural Steel, Special	L. Sum	1
X5091765	Pipe Handrail, Special	Foot	258
X5130105	Temporary Bridge	L. Sum	1
XZ127902	Retaining Wall, Special	Sq. Ft.	2,619

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S-05	Plan and Profile
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S-07	Soil Borings 2
S-08	Soil Borings 3
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S-51	Temporary Bridge Superstructure Details 4

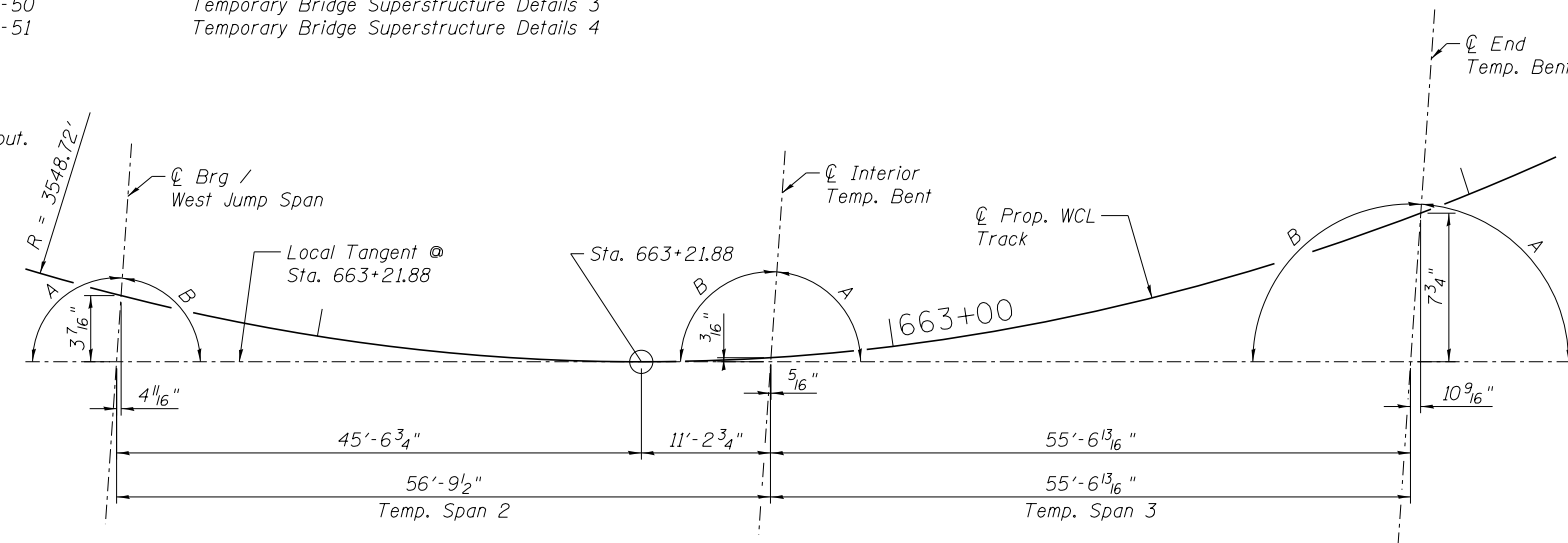
ABUTMENT, PIER, & BENT ANGLES

Location	A	B
End Temp Bent	36°12'08"	143°47'52"
Interior Temp Bent	36°12'08"	143°47'52"
Brg./West Jump Span	143°47'41"	36°12'19"
Girder Brg./Prop. Abut.	37°43'25"	142°16'35"
Girder Brg./Prop. Pier	142°16'35"	37°43'25"



PROP. SPAN OFFSET SKETCH

(Exaggerated Vertically 20:1)



TEMP. SPAN OFFSET SKETCH

(Exaggerated Vertically 20:1)

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PLOT DATE = 6/13/2019	

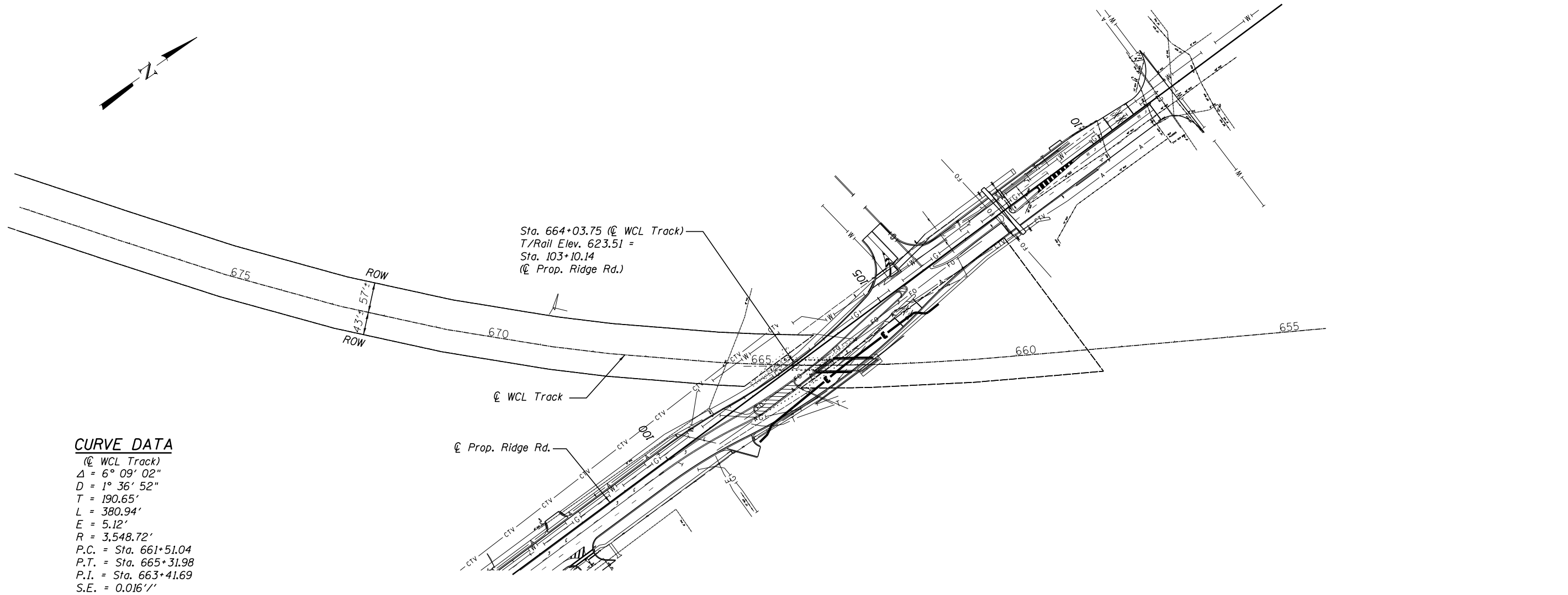
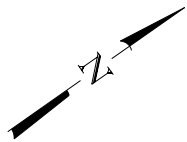
**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**QUANTITIES AND SHEET INDEX
STRUCTURE NO. 032-3400**

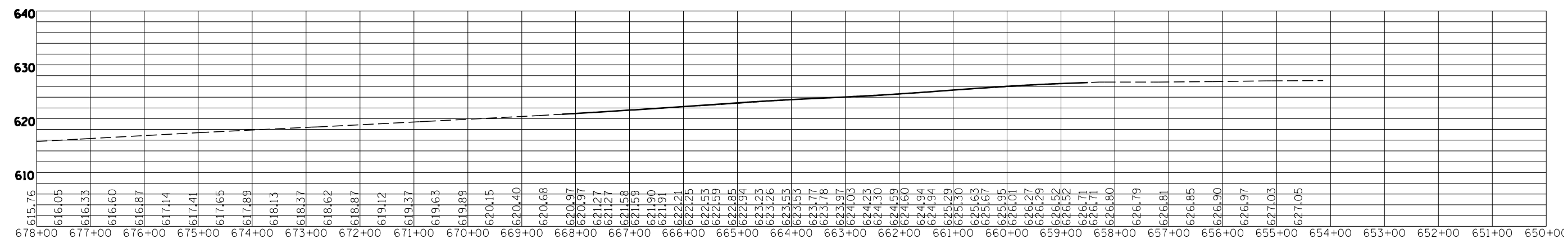
SHEET NO. S- 04 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	156
				CONTRACT NO. 87695

ILLINOIS FED. AID PROJECT



CURVE DATA
 (☉ WCL Track)
 $\Delta = 6^\circ 09' 02''$
 $D = 1^\circ 36' 52''$
 $T = 190.65'$
 $L = 380.94'$
 $E = 5.12'$
 $R = 3,548.72'$
 P.C. = Sta. 661+51.04
 P.T. = Sta. 665+31.98
 P.I. = Sta. 663+41.69
 S.E. = 0.016'/'



RAILROAD PROFILE
 ☉ WCL TRACK

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PLOT DATE = 4/2/2019	

**GRUNDY COUNTY, ILLINOIS
 HIGHWAY DEPARTMENT**

**PLAN AND PROFILE
 STRUCTURE NO. 032-3400**

SHEET NO. S-05 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	157
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



BORING LOG SB-1

wangeng@wangeng.com
1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

Client **Wight & Company**
Project **CN Railway and Ridge Road Rehabilitation**
Location **Minooka, Grundy County, Illinois**

Datum: NAVD88
Elevation: 608.48 ft
North: 1743134.51 ft
East: 1001188.16 ft
Station: 103+17.3
Offset: 78.5 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
608.32	32-inch thick, black SILTY LOAM --TOPSOIL-- Hard, brown CLAY LOAM --FILL--	0	1	10 9 11	4.50 P	16	608.48		0	11	5 7 7	1.23 B	20
		5	2	6 6 8	4.50 P	14			30	12	5 8 9	2.46 B	19
		10	3	6 9 11	4.84 B	16	576.5	Dense, gray GRAVELLY SAND	35	13	11 14 16	NP	15
600.5	Very Stiff to hard, brown and gray SILTY CLAY, trace gravel	10	4	6 8 11	6.97 B	17			40	14	6 7 8	1.07 B	17
		15	5	9 11 13	3.94 B	18	572.0	Stiff, gray CLAY, trace gravel	45	15	6 7 9	1.07 B	17
595.5	Medium stiff to very stiff, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel	15	6	8 10 12	1.48 B	16			50	16	5 14 11	NP	12
		20	7	4 6 8	1.64 B	17							
		25	8	4 7 8	1.56 B	18							
			9	4 5 7	0.98 B	17	561.7	Medium dense, gray SANDY LOAM, some gravel					
			10	6 7 10	1.48 B	17							

--L_L(%)=27, P_L(%)=15--
--%Gravel=3.6--
--%Sand=11.0--
--%Silt=62.3--
--%Clay=23.1--
--A-6(B)--

GENERAL NOTES

Begin Drilling **09-01-2011** Complete Drilling **09-01-2011**
Drilling Contractor **WTS** Drill Rig **D 50 ATV**
Driller **K&J** Logger **F. Bozga** Checked by **CLM**
Drilling Method **3.25 IDA HSA; Boring backfilled upon completion**

WATER LEVEL DATA

While Drilling **WASHED**
At Completion of Drilling **WASHED**
Time After Drilling **NA**
Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



BORING LOG SB-1

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Lombard, IL 60148
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Fax: 630 953-9938

Client **Wight & Company**
Project **CN Railway and Ridge Road Rehabilitation**
Location **Minooka, Grundy County, Illinois**

Datum: NAVD88
Elevation: 608.48 ft
North: 1743134.51 ft
East: 1001188.16 ft
Station: 103+17.3
Offset: 78.5 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
556.7	Stiff, gray CLAY	55	17	8 9 10	1.48 B	16			80	22	5 7 9	1.56 B	33
		60	18	6 8 6	1.56 B	17			85				
		65	19	6 9 9	1.64 B	21			90				
		70	20	6 8 9	1.80 B	27			95				
		75	21	6 6 8	1.48 B	33			100				
							521.5	Possible WEATHERED BEDROCK					
							520.0	--HARD DRILLING STARTING AT 87.0 FT-- --AUGER REFUSAL AT 88.5 FT-- Boring terminated at 88.50 ft		23	50/0	NR	

GENERAL NOTES

Begin Drilling **09-01-2011** Complete Drilling **09-01-2011**
Drilling Contractor **WTS** Drill Rig **D 50 ATV**
Driller **K&J** Logger **F. Bozga** Checked by **CLM**
Drilling Method **3.25 IDA HSA; Boring backfilled upon completion**

WATER LEVEL DATA

While Drilling **WASHED**
At Completion of Drilling **WASHED**
Time After Drilling **NA**
Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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DESIGNED - MMW	REVISED -
CHECKED - MFB	REVISED -
DRAWN - RR	REVISED -
PLLOT DATE = 4/2/2019	CHECKED - MMW
	REVISED -

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**SOIL BORINGS 1
STRUCTURE NO. 032-3400**

SHEET NO. S- 06 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	158
CONTRACT NO. 87695				

ILLINOIS FED. AID PROJECT



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 Lombard, IL 60148
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BORING LOG SB-1A

WEI Job No.: 485-32-01

Client: **Wight & Company**
 Project: **CN Railway and Ridge Road Rehabilitation**
 Location: **Minooka, Grundy County, Illinois**

Datum: NAVD88
 Elevation: 608.62 ft
 North: 1743133.05 ft
 East: 1001187.18 ft
 Station:
 Offset:

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
501.1				2											
	Boring terminated at 107.50 ft														

WANGENGINC 4853201.GPJ WANGENG.GDT 11/2/17

GENERAL NOTES				WATER LEVEL DATA		
Begin Drilling	11-07-2013	Complete Drilling	11-07-2013	While Drilling	NA	
Drilling Contractor	WTS	Drill Rig		At Completion of Drilling	15.00 ft	
Driller	R&N	Logger	F. Bozga	Checked by	CLM	
Drilling Method	2.25 SSA to 10'; mud rotarey thereafter; Boring backfilled upon completion				Time After Drilling	NA
				Depth to Water	NA	
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.						

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DESIGNED - MMW	REVISED -
CHECKED - MFB	REVISED -
DRAWN - RR	REVISED -
CHECKED - MMW	REVISED -
PLOT DATE = 4/2/2019	

**GRUNDY COUNTY, ILLINOIS
 HIGHWAY DEPARTMENT**

**SOIL BORINGS 3
 STRUCTURE NO. 032-3400**

SHEET NO. 5-08 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	160
CONTRACT NO. 87695			ILLINOIS FED. AID PROJECT	



BORING LOG SB-2

wangeng@wangeng.com
1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

WEI Job No.: 485-32-01
Client **Wight & Company**
Project **CN Railway and Ridge Road Rehabilitation**
Location **Minooka, Grundy County, Illinois**

Datum: NAVD88
Elevation: 612.34 ft
North: 1743249.55 ft
East: 1001320.38 ft
Station: 104+32.3
Offset: 56.7 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
612.22	2.2-inch thick, black SILTY LOAM --TOPSOIL-- Medium stiff to hard, brown SILTY CLAY, trace gravel --FILL--	0	1	14 10 10	4.50 P	14	612.34		0	11	2 4 5	1.56 B	18
		5	2	7 7 7	4.50 P	16			30	12	2 4 4	1.48 B	13
		10	3	3 2 3		18			35	13	2 4 5	1.48 B	11
		15	4	2 2 3	0.90 B	24			40	14	7 10 13	NP	9
599.6	Stiff to very stiff, gray CLAY, trace gravel	15	5	2 2 3	1.25 B	17	574.3	Medium dense, gray GRAVELLY SAND	40	14	7 10 13	NP	9
		20	6	1 4 6	3.20 B	16			45	15	7 8 8	1.72 B	16
		25	7	5 6 7	3.53 B	16	570.3	Stiff, gray CLAY, trace gravel	45	15	7 8 8	1.72 B	16
			8	2 3 5	2.30 B	16			50	16	6 7 8	NP	12
			9	3 5 6	2.13 B	18	565.3	Medium dense, gray SANDY LOAM, trace rock fragments					
			10	2 3 4	1.89 B	23							

--L_L(%)=37, P_L(%)=19--
--%Gravel=6.4--
--%Sand=10.9--
--%Silt=54.3--
--%Clay=28.5--
--A-6(14)--

GENERAL NOTES

Begin Drilling **08-30-2011** Complete Drilling **08-31-2011**
Drilling Contractor **WTS** Drill Rig **D 50 ATV**
Driller **K&J** Logger **F. Bozga** Checked by **CLM**
Drilling Method **3.25 IDA HSA; Boring backfilled upon completion**

WATER LEVEL DATA

While Drilling **38.00 ft**
At Completion of Drilling **WASHED**
Time After Drilling **NA**
Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



BORING LOG SB-2

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WEI Job No.: 485-32-01
Client **Wight & Company**
Project **CN Railway and Ridge Road Rehabilitation**
Location **Minooka, Grundy County, Illinois**

Datum: NAVD88
Elevation: 612.34 ft
North: 1743249.55 ft
East: 1001320.38 ft
Station: 104+32.3
Offset: 56.7 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
560.3	Stiff to very stiff, gray CLAY, trace gravel	55	17	3 7 9	2.38 B	21	532.3	Boring terminated at 80.00 ft	80	22	4 6 8	2.05 B	29
		60	18	6 9 10	2.13 B	22			85				
		65	19	5 8 10	1.97 B	21			90				
		70	20	6 8 10	2.54 B	26			95				
		75	21	4 6 7	1.64 B	28			100				

GENERAL NOTES

Begin Drilling **08-30-2011** Complete Drilling **08-31-2011**
Drilling Contractor **WTS** Drill Rig **D 50 ATV**
Driller **K&J** Logger **F. Bozga** Checked by **CLM**
Drilling Method **3.25 IDA HSA; Boring backfilled upon completion**

WATER LEVEL DATA

While Drilling **38.00 ft**
At Completion of Drilling **WASHED**
Time After Drilling **NA**
Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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DESIGNED - MMW	REVISED -
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DRAWN - RR	REVISED -
PLLOT DATE = 4/2/2019	CHECKED - MMW
	REVISED -

GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT

SOIL BORINGS 4
STRUCTURE NO. 032-3400

SHEET NO. S- 09 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	161
				CONTRACT NO. 87695

ILLINOIS FED. AID PROJECT



BORING LOG SB-2A

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Fax: 630 953-9928

Client **Wight & Company**
Project **CN Railway and Ridge Road Rehabilitation**
Location **Minooka, Grundy County, Illinois**

Datum: NAVD88
Elevation: 607.34 ft
North: 1743304.12 ft
East: 1001316.10 ft
Station:
Offset:

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--Drilled without sampling--									--Drilled without sampling--						
			5									30					
			10									35					
			15									40					
			20									45					
			25									50					

GENERAL NOTES

Begin Drilling **11-04-2013** Complete Drilling **11-04-2013**
 Drilling Contractor **WTS** Drill Rig
 Driller **R&N** Logger **F. Bozga** Checked by **CLM**
 Drilling Method **2.25 SSA to 10'; mud rotarey thereafter; Boring backfilled upon completion**

WATER LEVEL DATA

While Drilling **NA**
 At Completion of Drilling **10 WASHED**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



BORING LOG SB-2A

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Client **Wight & Company**
Project **CN Railway and Ridge Road Rehabilitation**
Location **Minooka, Grundy County, Illinois**

Datum: NAVD88
Elevation: 607.34 ft
North: 1743304.12 ft
East: 1001316.10 ft
Station:
Offset:

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--Drilled without sampling--									--Drilled without sampling--						
			55									80					
			60									85					
			65									90					
			70									95					
			75									100					

521.3
520.8
--HARD DRILLING--
--WEATHERED BEDROCK--

Strong, light gray, poor to fair rock mass quality, thin bedded fresh DOLOSTONE, up to 10-inch beds, little shale partings, 1- to 10-inch spaced joints, horizontal joints with less than 0.5-inch infilling, hard joint wall, with stylolitic surfaces, and moderately vuggy

--Run 1 - RECOVERY=100%--
--RQD=52%--

--Run 2 - RECOVERY=92%--
--RQD=50%--

GENERAL NOTES

Begin Drilling **11-04-2013** Complete Drilling **11-04-2013**
 Drilling Contractor **WTS** Drill Rig
 Driller **R&N** Logger **F. Bozga** Checked by **CLM**
 Drilling Method **2.25 SSA to 10'; mud rotarey thereafter; Boring backfilled upon completion**

WATER LEVEL DATA

While Drilling **NA**
 At Completion of Drilling **10 WASHED**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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DESIGNED - MMW	REVISED -
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DRAWN - RR	REVISED -
CHECKED - MMW	REVISED -

PLOT DATE = 4/2/2019

GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT

SOIL BORINGS 5
STRUCTURE NO. 032-3400

SHEET NO. 5- 10 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	162
CONTRACT NO. 87695				

ILLINOIS FED. AID PROJECT



BORING LOG SB-2A

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Telephone: 630 953-9928
Fax: 630 953-9928

Client **Wight & Company**
Project **CN Railway and Ridge Road Rehabilitation**
Location **Minooka, Grundy County, Illinois**

Datum: NAVD88
Elevation: 607.34 ft
North: 1743304.12 ft
East: 1001316.10 ft
Station:
Offset:

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
506.8	Boring terminated at 100.50 ft														

GENERAL NOTES

Begin Drilling **11-04-2013** Complete Drilling **11-04-2013**
 Drilling Contractor **WTS** Drill Rig
 Driller **R&N** Logger **F. Bozga** Checked by **CLM**
 Drilling Method **2.25 SSA to 10'; mud rotarey thereafter; Boring backfilled upon completion**

WATER LEVEL DATA

While Drilling **NA**
 At Completion of Drilling **10 WASHED**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



BORING LOG RW-3

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Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

Client **Wight & Company**
Project **CN Railway and Ridge Road Rehabilitation**
Location **Minooka, Grundy County, Illinois**

Datum: NAVD88
Elevation: 608.46 ft
North: 1743112.17 ft
East: 1001325.27 ft
Station: 102+94.9
Offset: 58.0 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
608	14-inch thick, black SILTY CLAY LOAM --TOPSOIL-- Hard, brown CLAY LOAM, trace to little gravel --FILL--			1	11 11 12	4.50 P	12					11	3 5 7	2.71 B	17
				2	7 8 8	4.50 P	14					12	3 7 8	1.64 B	14
603.0	Stiff, brown CLAY LOAM, trace gravel and organic matter			3	4 3 4	1.97 B	18								
600.5	Stiff to very stiff, brown and gray CLAY to SILTY CLAY, trace gravel			4	3 3 3	NR						13	5 6 10	2.00 P	17
				5	4 5 9	2.21 B	15	572.0	Medium dense, gray GRAVELLY SAND						
				6	2 4 6	1.89 B	16					14	8 12 16	NP	10
				7	4 6 8	2.30 B	16								
				8	3 4 6	2.54 B	17								
				9	3 4 6	1.72 B	15								
				10	3 5 7	1.80 B	16	568.5	Boring terminated at 40.00 ft						

GENERAL NOTES

Begin Drilling **09-02-2011** Complete Drilling **09-02-2011**
 Drilling Contractor **WTS** Drill Rig **D 50 ATV**
 Driller **K&J** Logger **F. Bozga** Checked by **CLM**
 Drilling Method **3.25 IDA HSA; Boring backfilled upon completion**

WATER LEVEL DATA

While Drilling **36.50 ft**
 At Completion of Drilling **36.50 ft**
 Time After Drilling **NA**
 Depth to Water **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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DESIGNED - MMW	REVISED -
CHECKED - MFB	REVISED -
DRAWN - RR	REVISED -
CHECKED - MMW	REVISED -

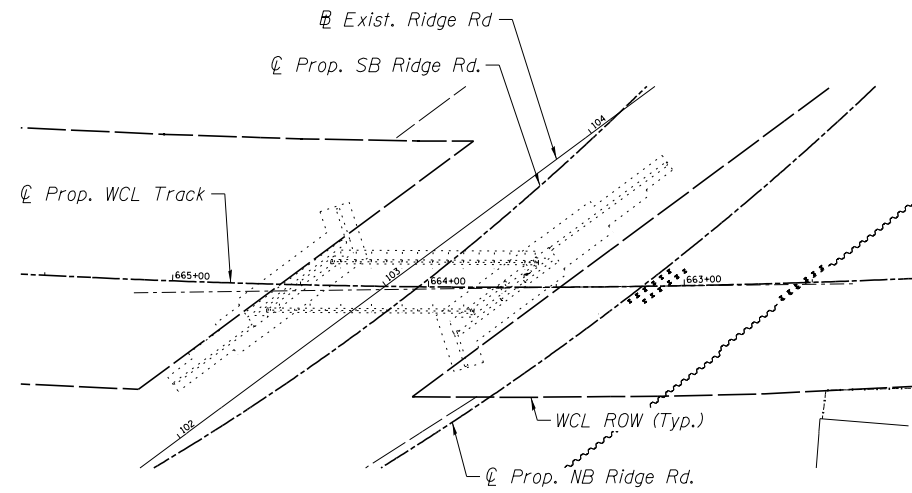
GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT

SOIL BORINGS 6
STRUCTURE NO. 032-3400

SHEET NO. S- 11 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	163
CONTRACT NO. 87695				

ILLINOIS FED. AID PROJECT



PLAN

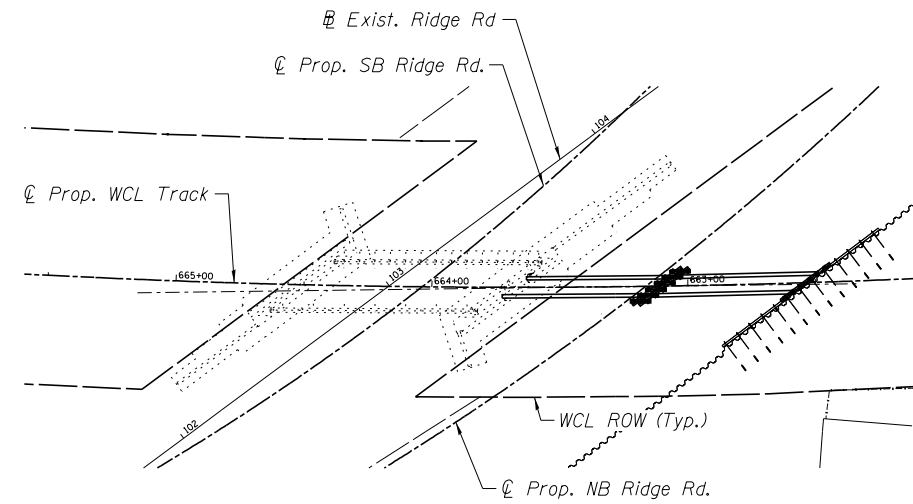


ELEVATION

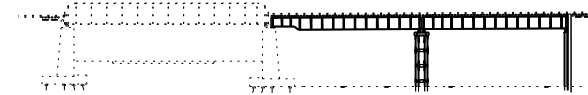
STAGE 1

Flagger Control

1. Drive temporary piling through tracks
2. Drive sheeting clear of tracks



PLAN

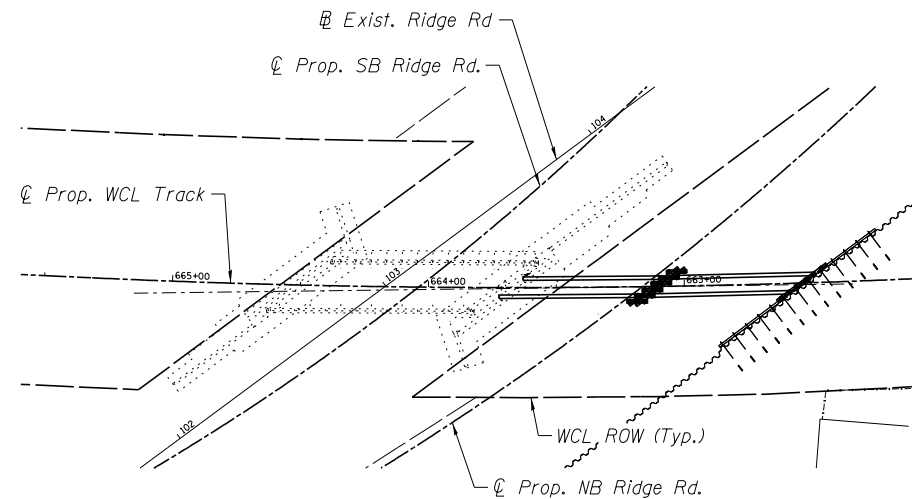


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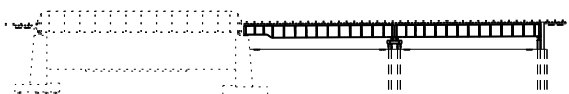
STAGE 3

Flagger Control

1. Excavate below temporary bridge
2. Install temporary pier bracing
3. Install remaining wall anchor/bracing



PLAN

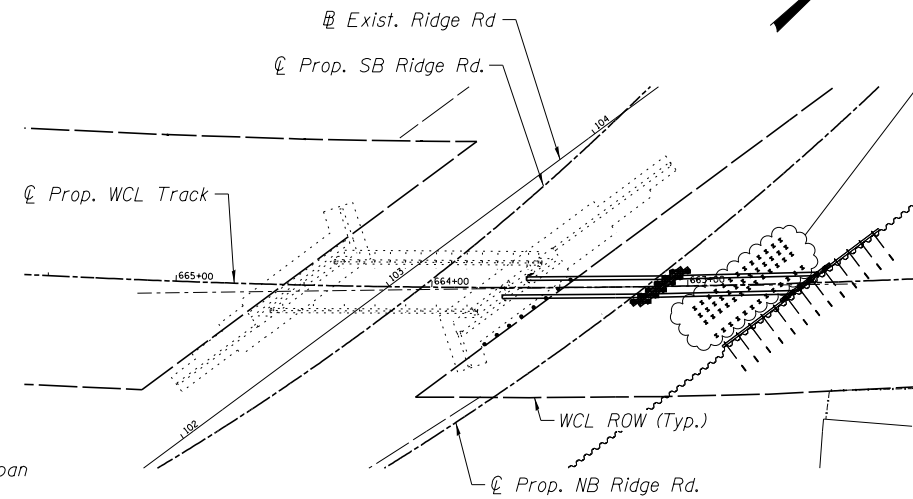


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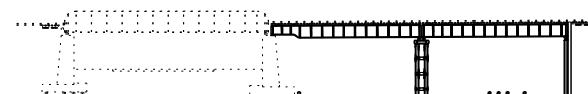
STAGE 2

Full Closure (Estimated 48 Hours)

1. Drive remaining sheeting
2. Install top row of wall anchor/bracing
3. Install temporary pier caps
4. Remove waterproofing at end of existing span and cut existing span floor plate
5. Remove existing east abutment backwall
6. Set temporary superstructure



PLAN



ELEVATION

STAGE 4

Flagger Control

1. Drive permanent piling

Contractor at their discretion may drive conflicting piles at stage 1 with approval of the railroad and the engineer. Contractor shall note that additional load capacity may be required due to additional soil depth. Contractor shall note that additional driving lengths of cutoff lengths will not be compensated. Pay item is for driven length in place below cutoff elevation.

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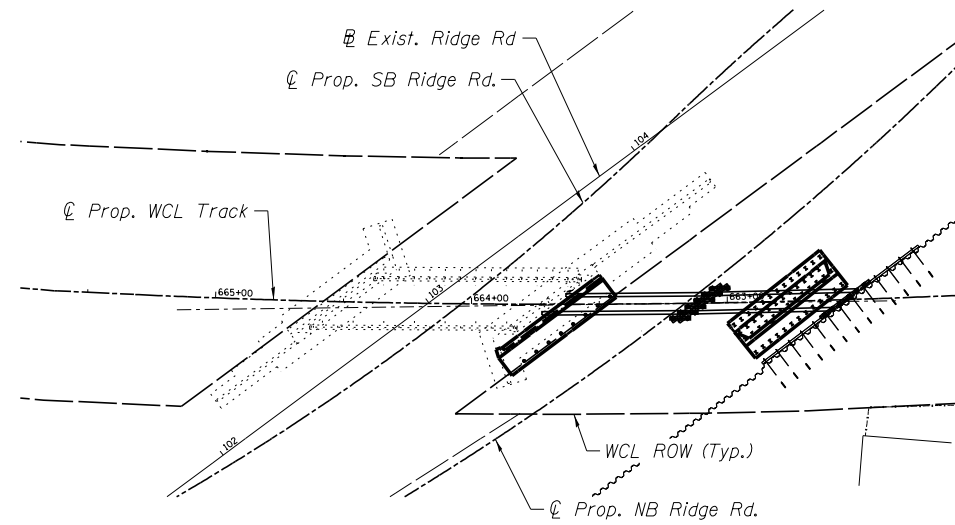
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CHECKED - MFB	REVISED -
DRAWN - RR	REVISED -
CHECKED - MMW	REVISED -
PLOT DATE = 5/13/2019	

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

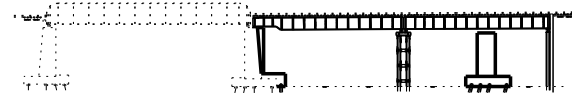
**STAGING 1
STRUCTURE NO. 032-3400**

SHEET NO. S- 12 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	164
CONTRACT NO. 87695			ILLINOIS FED. AID PROJECT	



PLAN

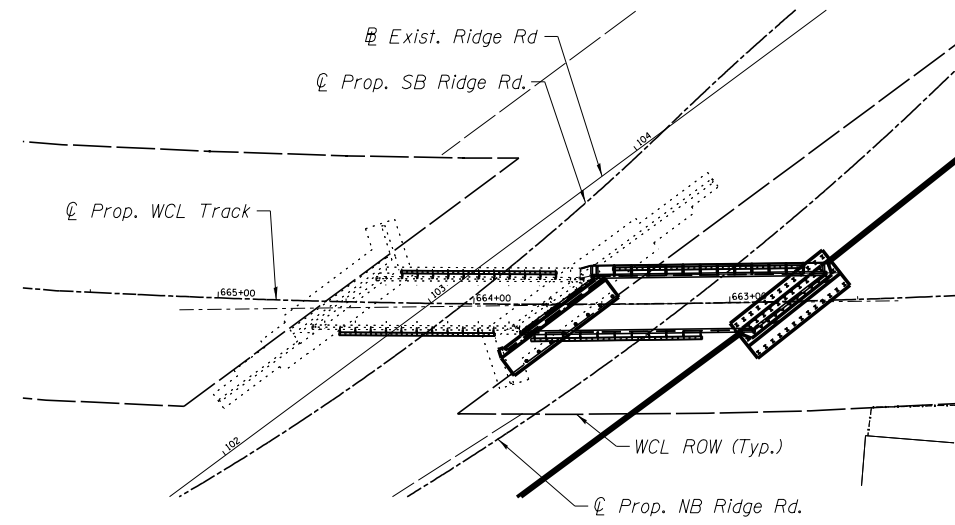


ELEVATION

STAGE 5

Flagger Control

1. Construct cast in place portion of proposed east abutment below temporary east span
2. Complete pier modification below temporary west span



PLAN

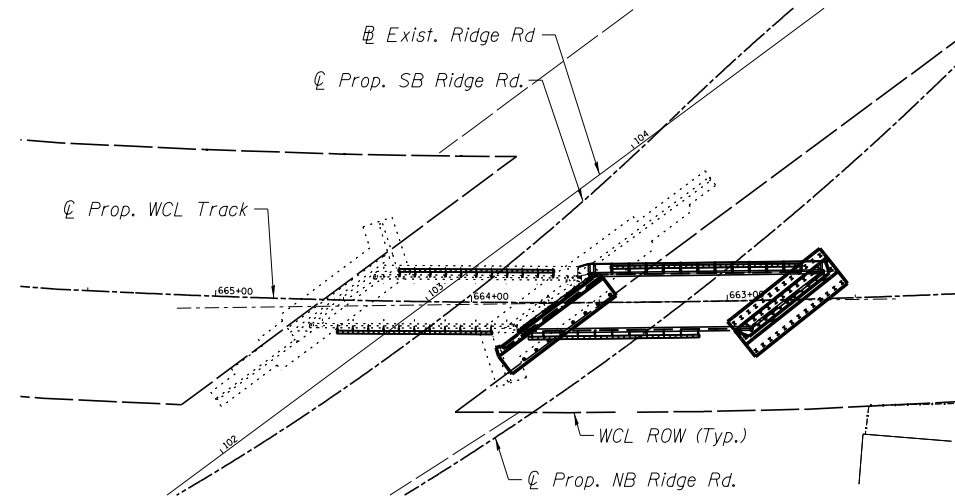


ELEVATION

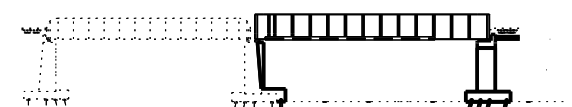
STAGE 7

Flagger Control

1. Construct crash beam along existing span
2. Connect existing span walkway to proposed walkway
3. Construct east abutment wingwalls



PLAN



ELEVATION

STAGE 6

Full Closure (Estimated 36 Hours)

1. Remove temporary bridge spans, piles and sheeting
2. Install precast portion of proposed east abutment
3. Backfill behind abutment
4. Set proposed TPG. span

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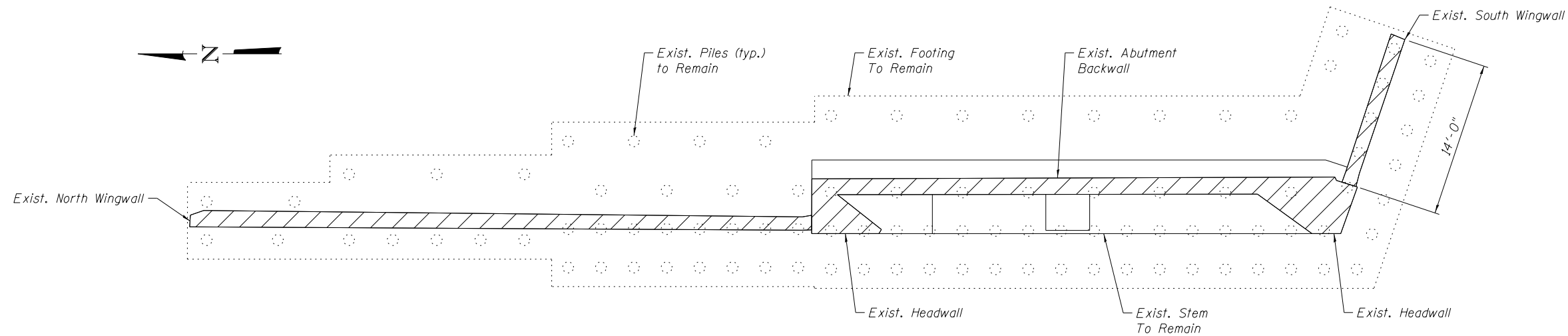
DESIGNED - MMW	REVISED -
CHECKED - MFB	REVISED -
DRAWN - RR	REVISED -
CHECKED - MMW	REVISED -
PLOT DATE = 4/2/2019	

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

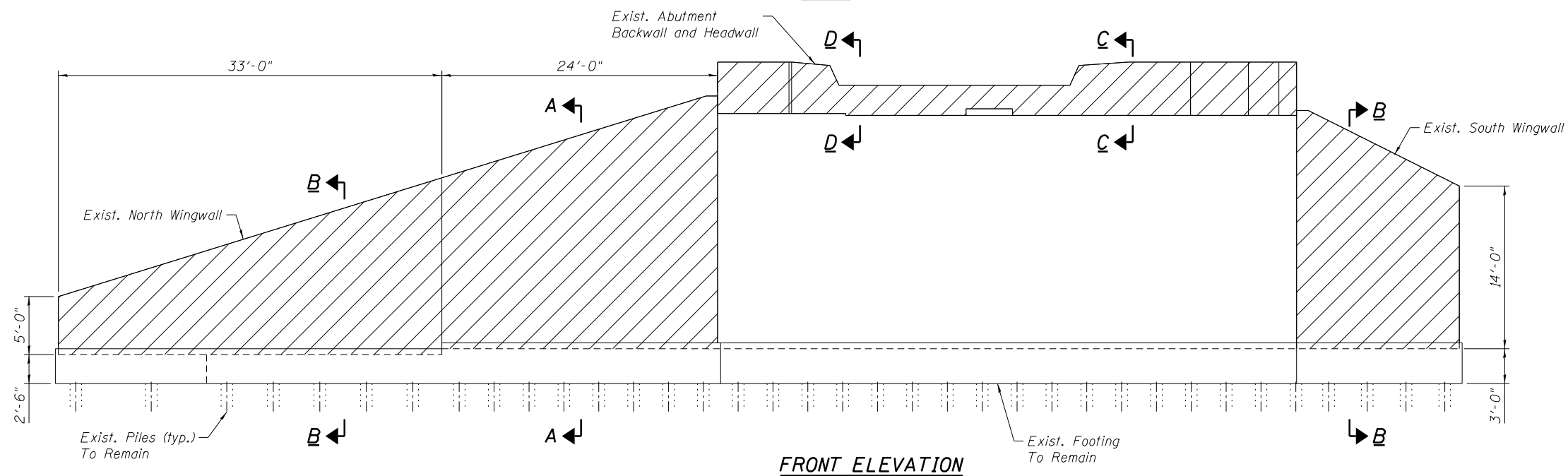
**STAGING 2
STRUCTURE NO. 032-3400**

SHEET NO. S- 13 OF 51 SHEETS

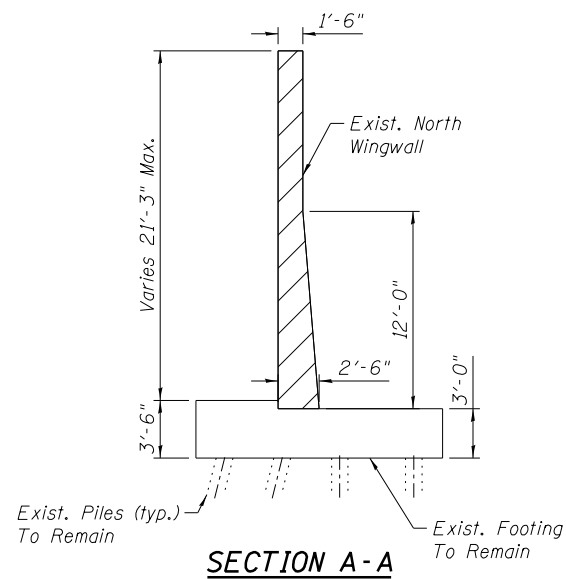
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	165
CONTRACT NO. 87695			ILLINOIS FED. AID PROJECT	



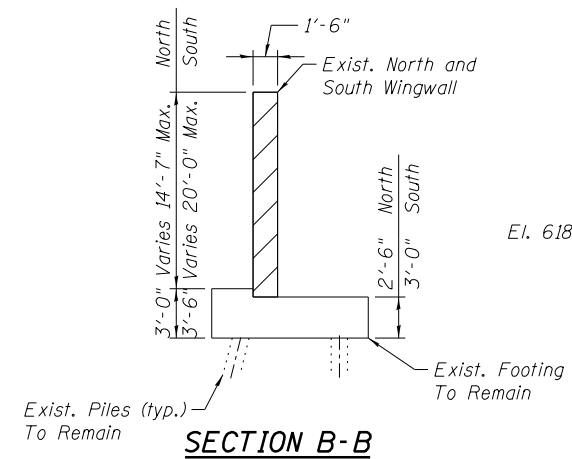
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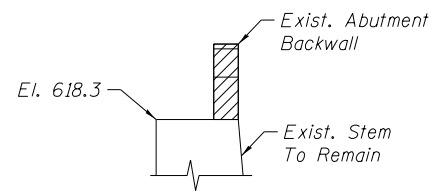
FRONT ELEVATION



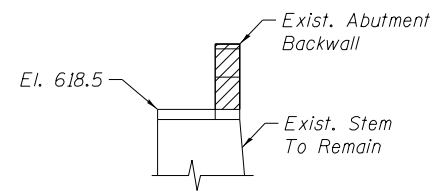
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D



BILL OF MATERIAL

Item	Unit	Quantity
Concrete Removal	Cu. Yd.	78.3

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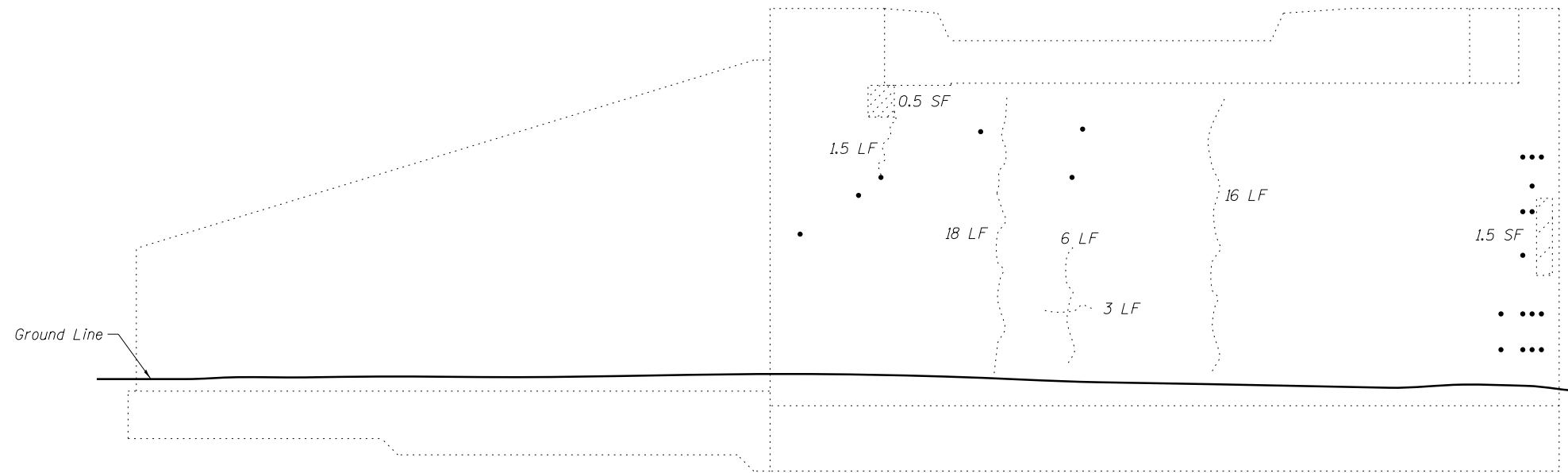
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CHECKED - MFB	REVISED -
DRAWN - RR	REVISED -
CHECKED - MMW	REVISED -
PLOT DATE = 4/2/2019	

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**EXISTING EAST ABUTMENT - REMOVAL
STRUCTURE NO. 032-3400**

SHEET NO. S- 14 OF 51 SHEETS

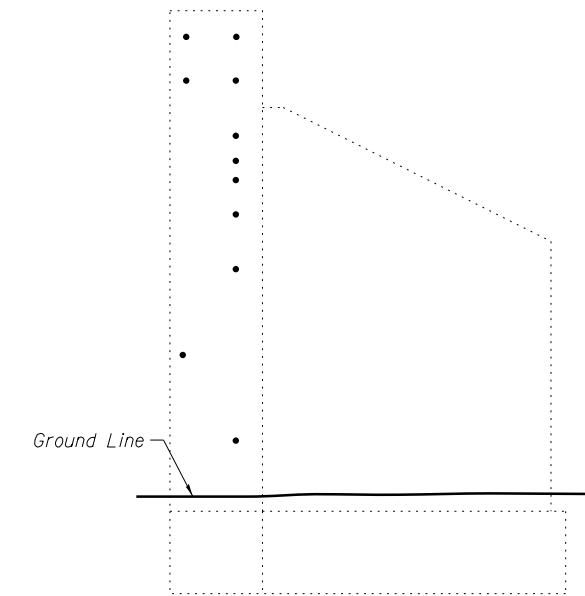
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	166
CONTRACT NO. 87695			ILLINOIS FED. AID PROJECT	



SOUTHWEST WINGWALL

WEST ABUTMENT

FRONT ELEVATION



NORTH END OF WEST ABUTMENT
AND NORTHWEST WINGWALL

(Looking South)

SIDE ELEVATION

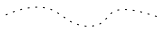
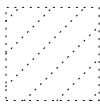

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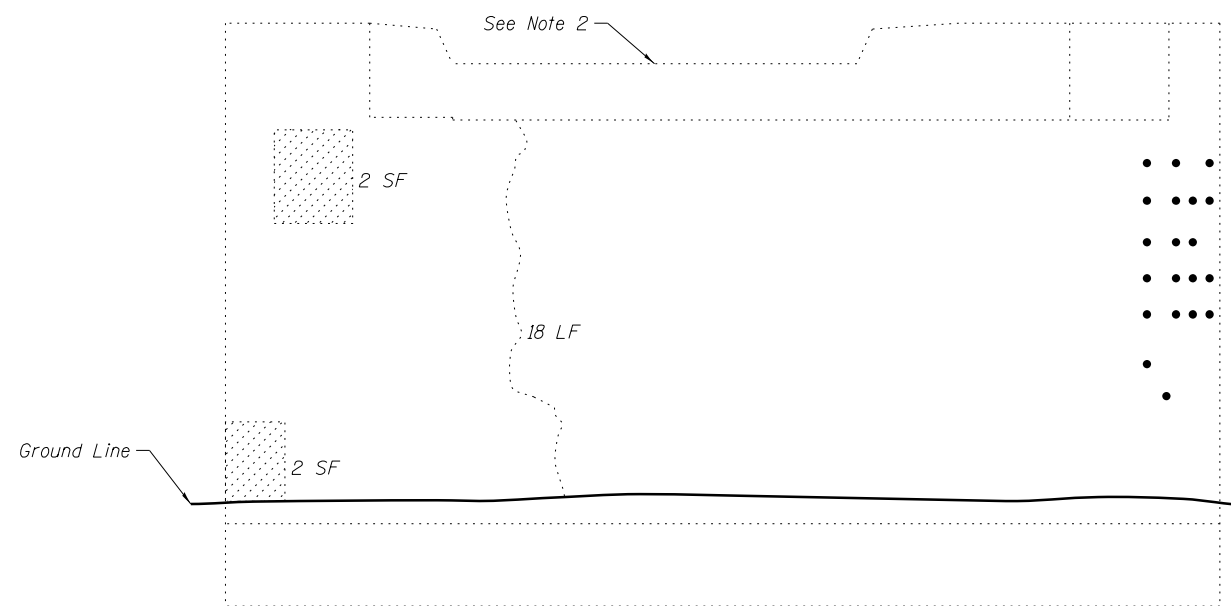
Item	Unit	
Epoxy Crack Injection	Foot	63
Structural Repair of Concrete (Depth Equal to or less than 5 inches)	Sq. Ft.	6

NOTES:

1. Form Tie Holes/Pop-Outs shall be plugged and sealed using a method approved by the Engineer. Cost included with Structural Repair of Concrete (Depth Equal to or less than 5 inches).
2. Headwall and backwall of existing east abutment to be removed, see Existing East Abutment - Removal sheet for limits.

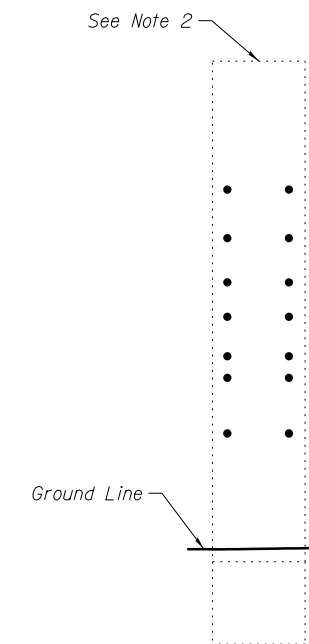
LEGEND

-  Epoxy Crack Injection
-  Formed Concrete Repair Depth < 5"
-  Form Tie Hole/Pop Out



EXISTING EAST ABUTMENT

FRONT ELEVATION



SOUTH END OF
EXISTING EAST ABUTMENT

(Looking North)

SIDE ELEVATION

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DRAWN - MRC	REVISED -
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	REVISED -

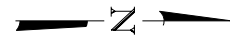
**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**CONCRETE REPAIRS
STRUCTURE NO. 032-3400**




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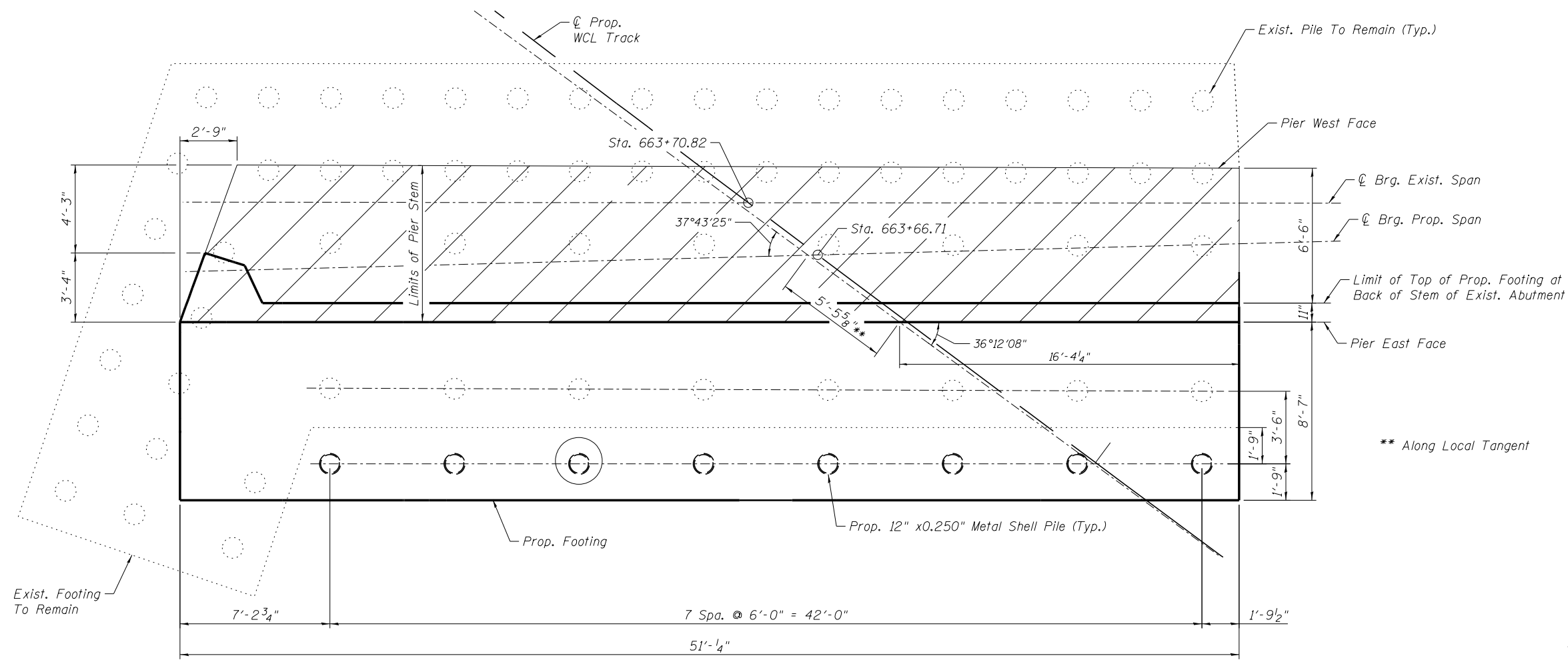
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	167
CONTRACT NO. 87695				

ILLINOIS FED. AID PROJECT



LEGEND

-  Denotes Vertical Pile
-  Test Pile
-  Denotes Existing Pile To Remain



PIER PILE LAYOUT

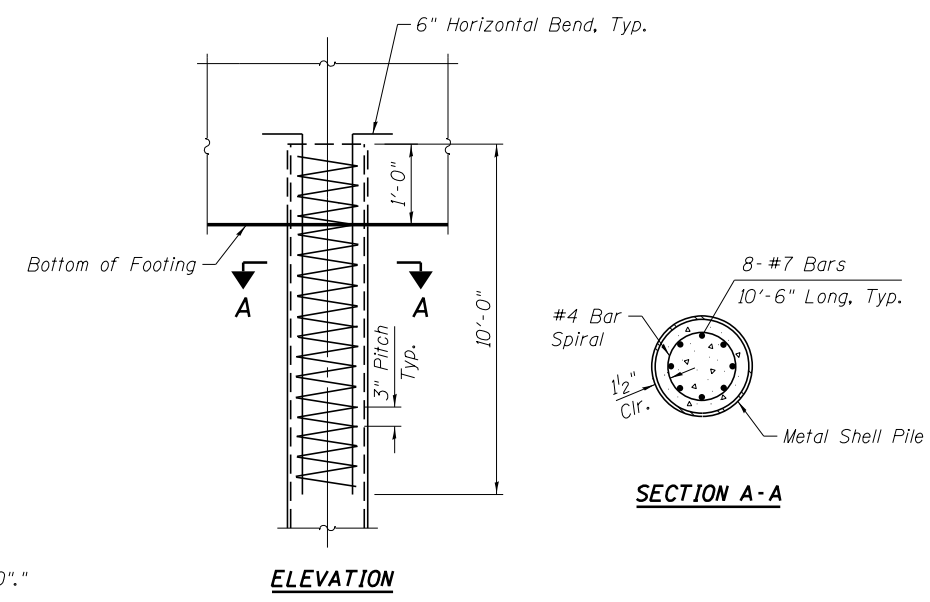
12" x 0.250" METAL SHELL PILES (Includes Test Piles)						
LOCATION	TYPE	No.	ESTIMATED LENGTH (FEET)		ALLOWABLE RESIST. AVAILABLE	CUT-OFF ELEVATION
			EACH LIN. FT.	TOTAL LIN. FT.		
Pier	Vertical	8	32	256	45 Tons	596.2

PILE DATA

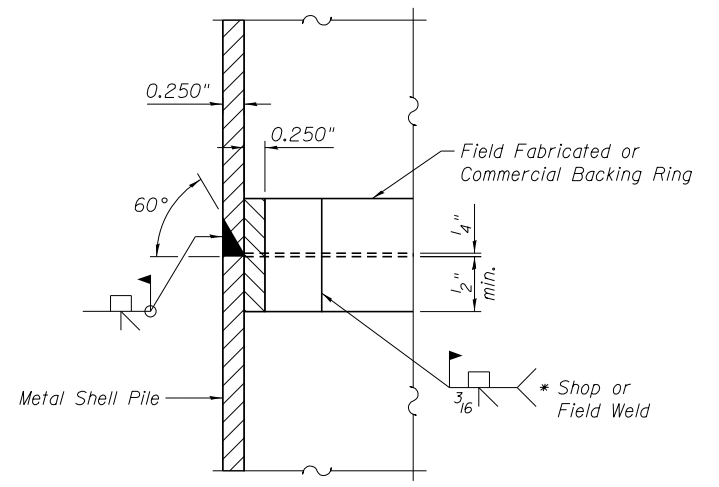
All Piles 12" x 0.250" metal shell piles
 Estimated Pile Tip Elev. = 565.0
 Nominal Resistance Required = 90 tons
 Test pile length furnished shall be at least 10' greater than estimated production pile lengths shown.

NOTES

The metal shell piles shall be according to Article 1006.05 of the Standard Specifications and shall be installed according to Article 512.04 of the Standard Specifications.
 Reinforcement and concrete quantities required for metal shell piles are included in the cost of "Furnishing Metal Shell Piles 12" X 0.250".
 See IDOT Metal Shell Pile Details standard sheet for additional details, including End Plate Attachment.



REINFORCEMENT DETAILS



COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.

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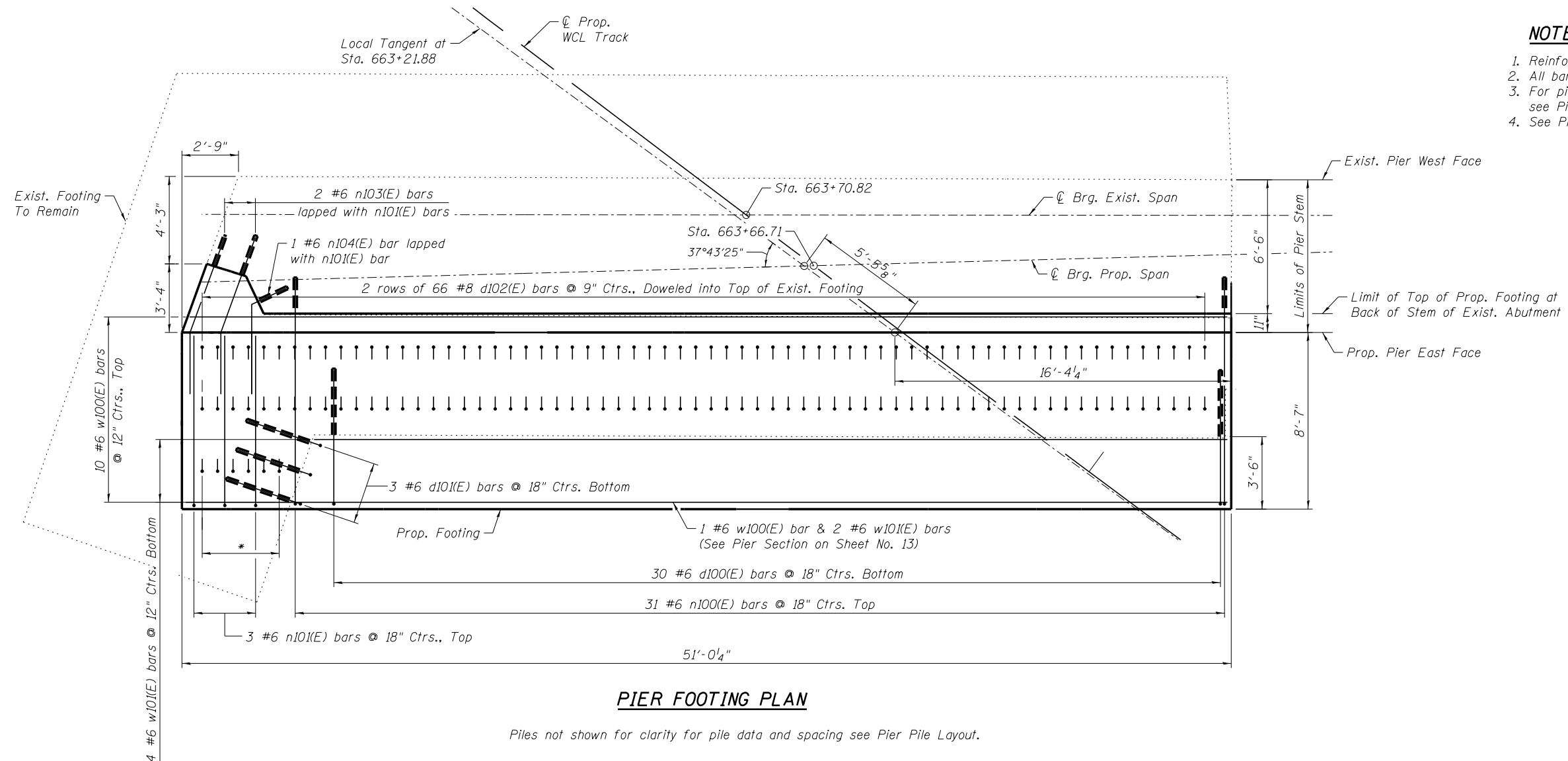
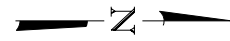
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DRAWN - RR	REVISED -
CHECKED - MMW	REVISED -
PLOT DATE = 6/7/2019	

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**PIER PILE LAYOUT
STRUCTURE NO. 032-3400**

SHEET NO. S- 16 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	168
CONTRACT NO. 87695			ILLINOIS FED. AID PROJECT	



PIER FOOTING PLAN

Piles not shown for clarity for pile data and spacing see Pier Pile Layout.

* 6 #8 d102(E) bars @ 9" Ctrs., Doweled into Top of Exist. Footing

NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. All bar dimensions are out to out.
3. For pier section, bar bend details and reinforcing bar schedule, see Pier Sections and Details sheet.
4. See Pier Stem sheet for footing dowel bars.

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DRAWN - RR	REVISED -
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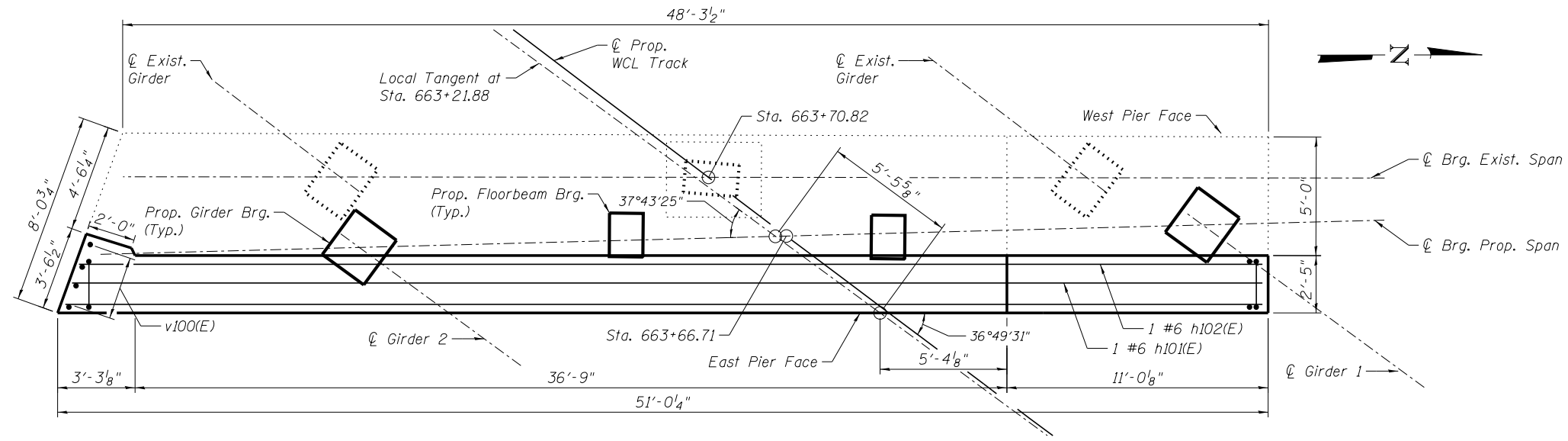
**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**PIER FOOTING
STRUCTURE NO. 032-3400**

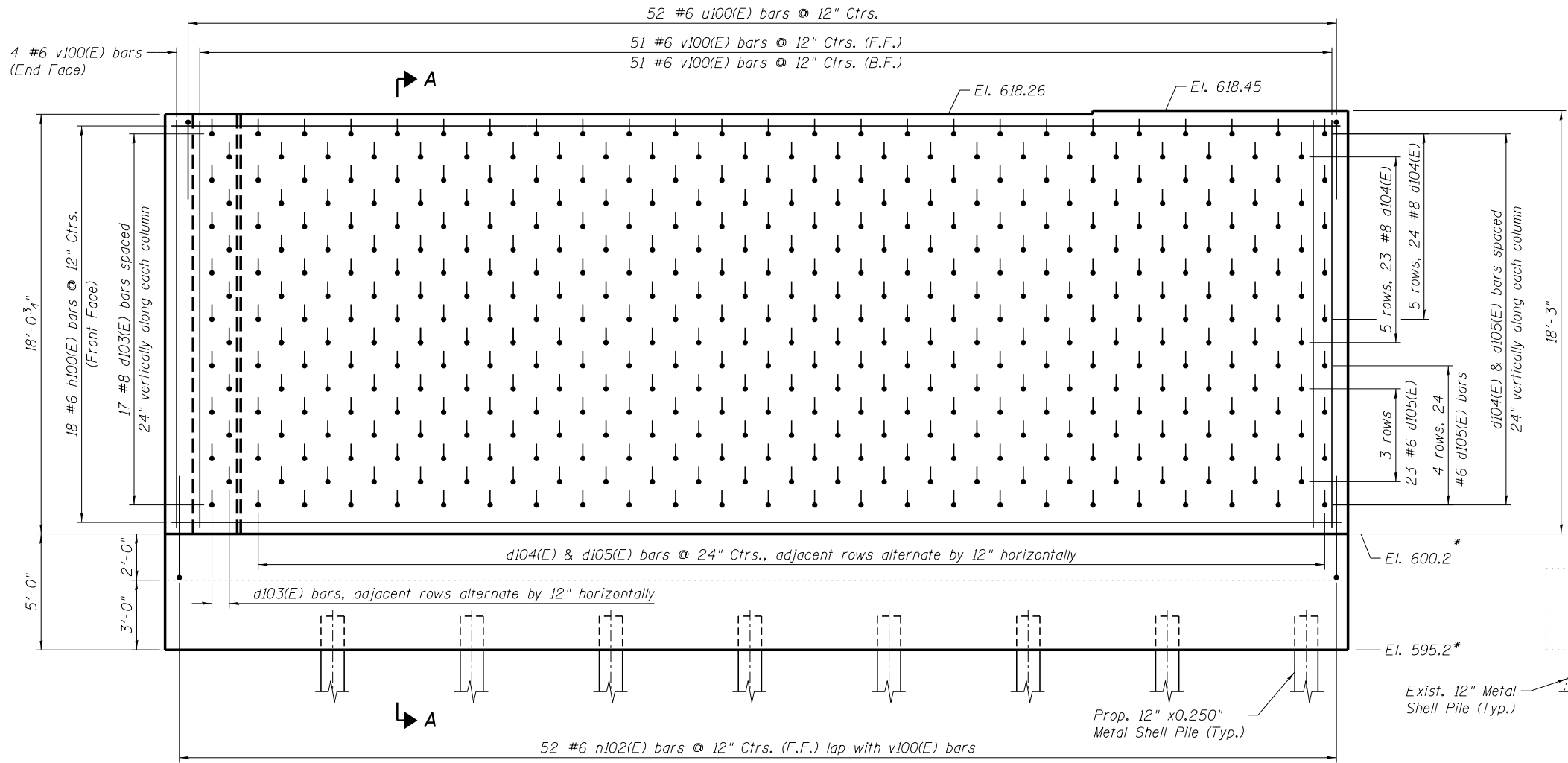
SHEET NO. S- 17 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	169
CONTRACT NO. 87695				

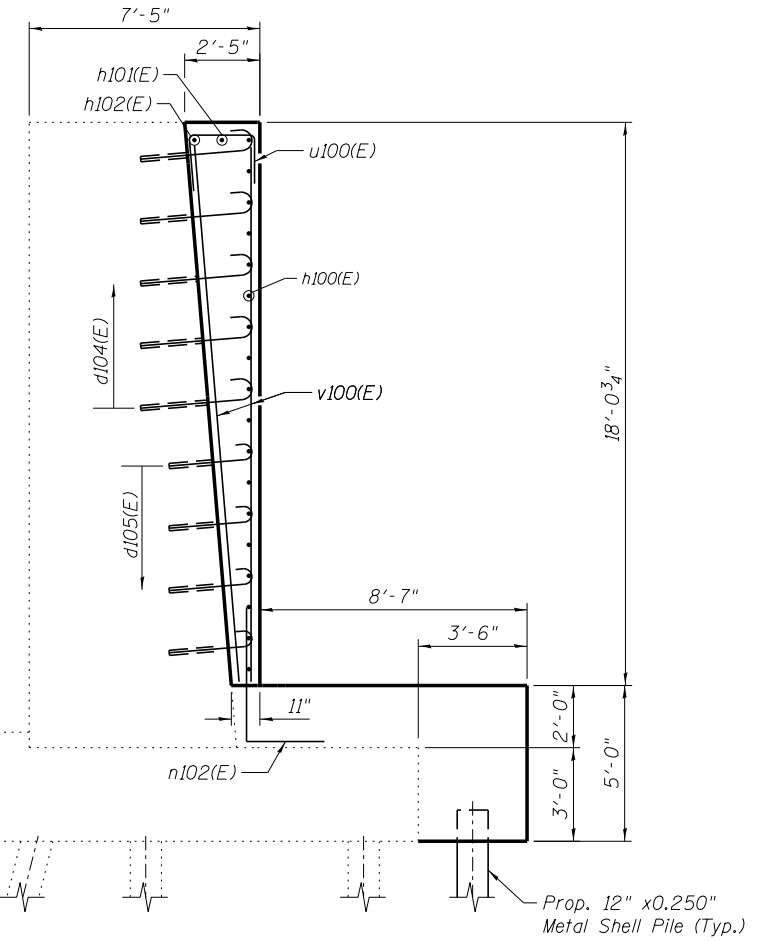
ILLINOIS FED. AID PROJECT



TOP PLAN



ELEVATION



SECTION A-A

* Field-verify elevation of existing footing.
Proposed T/Footing elevation shall be min.
2'-0" higher than Existing T/Footing elevation.

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**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**PIER STEM
STRUCTURE NO. 032-3400**

SHEET NO. S- 18 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	170
CONTRACT NO. 87695				

ILLINOIS FED. AID PROJECT

BILL OF MATERIAL PIER

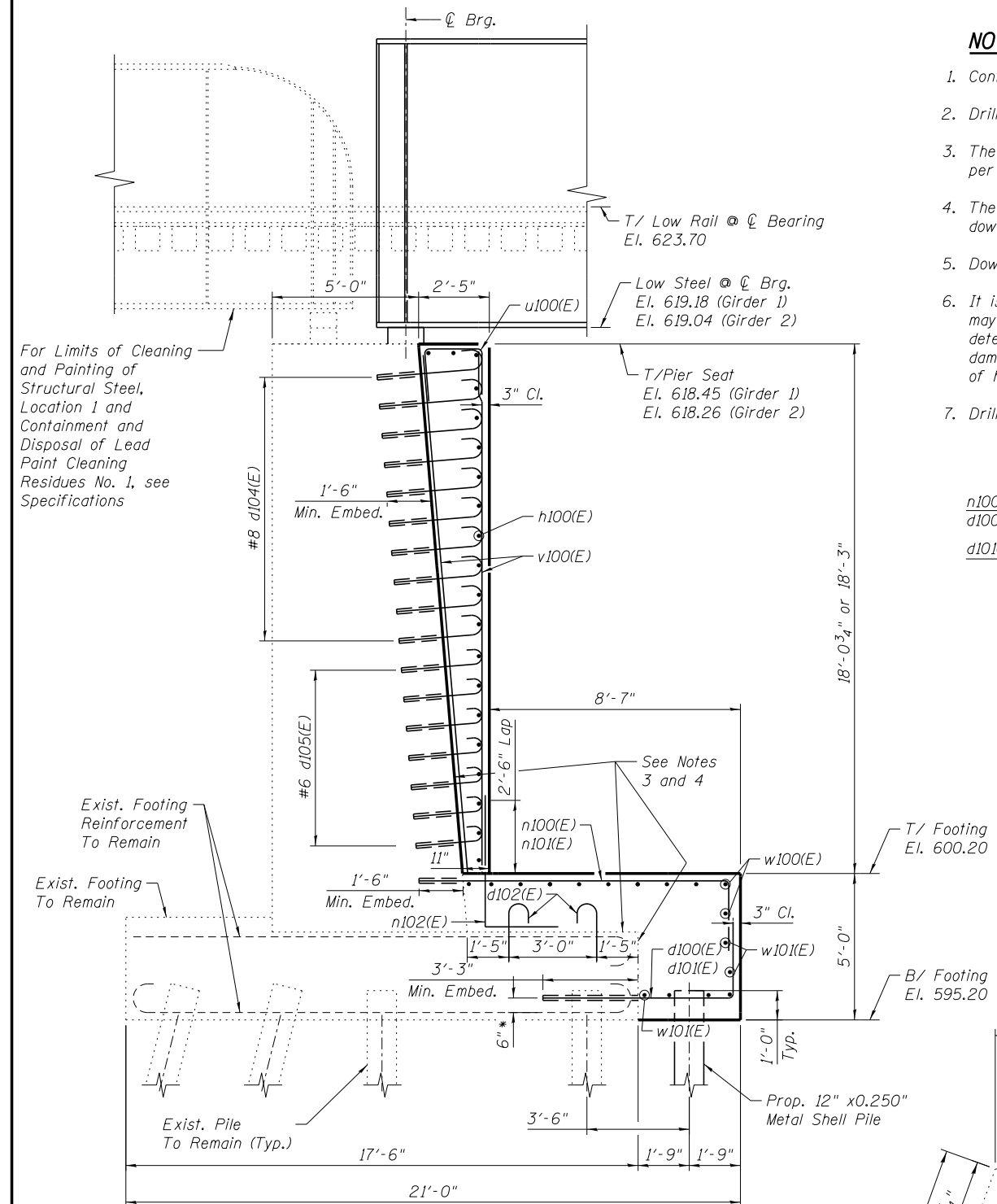
Bar	No.	Size	Length	Shape
h100(E)	18	#6	50'-6"	—
n101(E)	1	#6	50'-0"	—
h102(E)	1	#6	49'-6"	—
w100(E)	11	#6	50'-6"	—
w101(E)	6	#6	45'-2"	—
v100(E)	106	#6	17'-10"	—
n100(E)	31	#6	15'-0"	—
n101(E)	3	#6	9'-9"	—
n102(E)	52	#6	7'-0"	—
n103(E)	2	#6	7'-10"	—
n104(E)	1	#6	6'-2"	—
u100(E)	52	#6	6'-11"	—
d100(E)	30	#6	10'-9"	—
d101(E)	3	#6	7'-11"	—
d102(E)	138	#8	3'-5"	—
d103(E)	17	#8	5'-2"	—
d104(E)	235	#8	4'-7"	—
d105(E)	165	#6	3'-5"	—

Item	Unit	Quantity
Reinforcement Bars, Epoxy Coated	Pound	13,200
Furnishing Metal Shell Piles 12" X 0.250"	Foot	224
Driving Piles	Foot	224
Test Pile Metal Shells	Each	1
Porous Granular Embankment, Special	Cu. Yd.	59
Structure Excavation (Special)	Cu. Yd.	533
Concrete Structures (Special)	Cu. Yd.	113.8
Cleaning and Painting Structural Steel, Location 1	L. Sum	1
Containment and Disposal of Lead Paint Cleaning Residues No. 1	L. Sum	1

NOTES

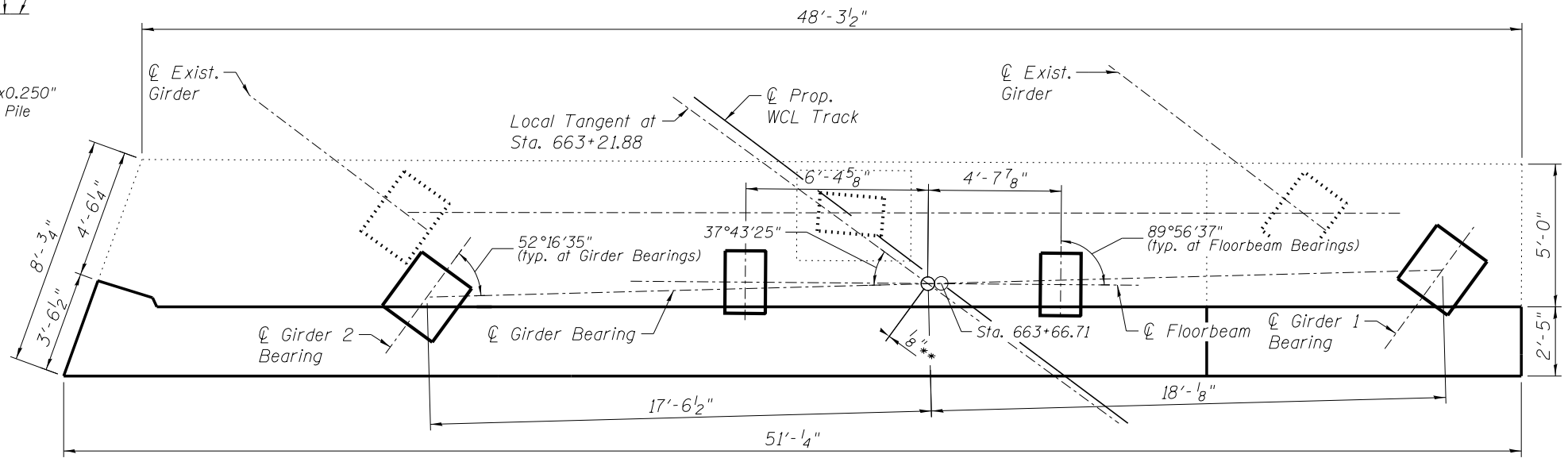
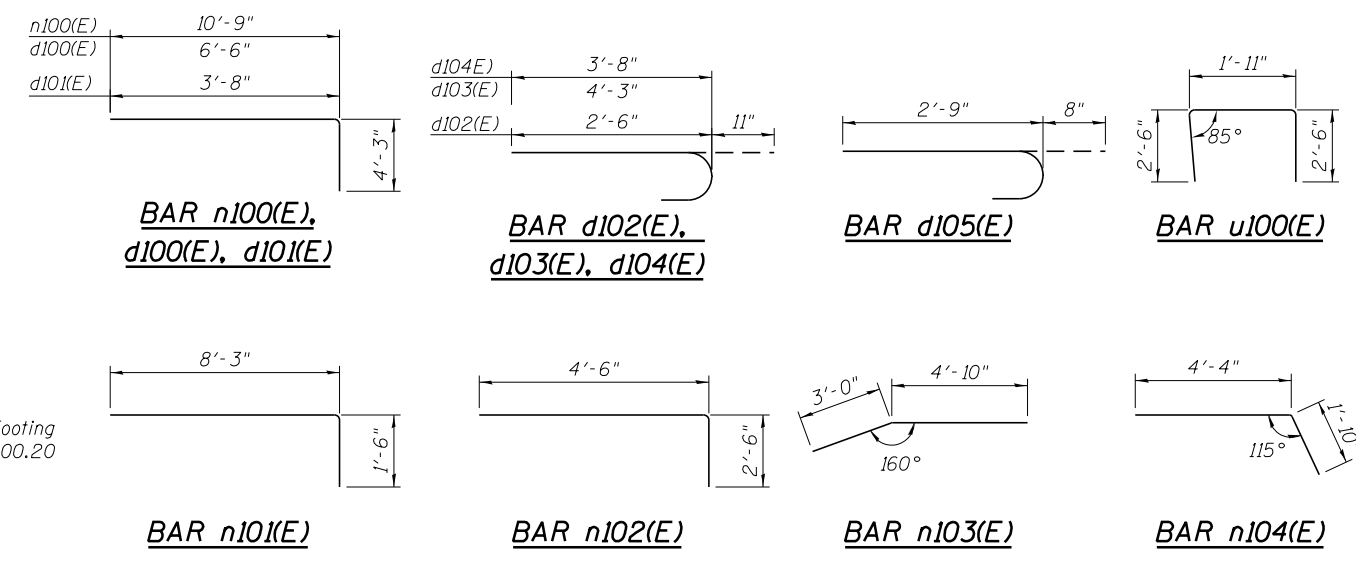
- Contractor shall verify all controlling field dimensions before ordering or fabricating any material.
- Drill holes for proposed reinforcement to miss existing reinforcement.
- The entire pier surface to be in contact with the new concrete shall be prepared by sandblasting to expose clean well bonded aggregate per Section 503.09(B) of the Standard Specifications.
- The area of the existing pier, where designated, shall be intentionally roughened to an amplitude of 1/4" prior to drilling and grouting of dowel bars. The construction joint shall then be treated as a bonded construction joint.
- Dowel bars shall be installed using an adhesive that provides adequate pull-out strength for embedment depth specified on plans.
- It is anticipated that holes drilled in existing footings will hit and damage existing reinforcement. As much as one bar in each direction may be severed at each hole location without compromising the final footing design. If bore holes do strike reinforcement, use holes to determine in place elevation of existing reinforcement and adjust proposed drill and grout reinforcement as much as 3" to avoid further damage to existing reinforcement. All drilled bars shall maintain a minimum 6" distance from nearest edge of existing concrete to center of hole.
- Drilling and grouting of dowel bars to be included in the cost of Concrete Structures (Special).

For Limits of Cleaning and Painting of Structural Steel, Location 1 and Containment and Disposal of Lead Paint Cleaning Residues No. 1, see Specifications



PIER SECTION

* See Note 6 on this sheet.



PIER BEARING LAYOUT

** along Local Tangent

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DESIGNED - MMW	REVISED -
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CHECKED - MMW	REVISED -
PLOT DATE = 4/2/2019	

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**PIER SECTIONS AND DETAILS
STRUCTURE NO. 032-3400**

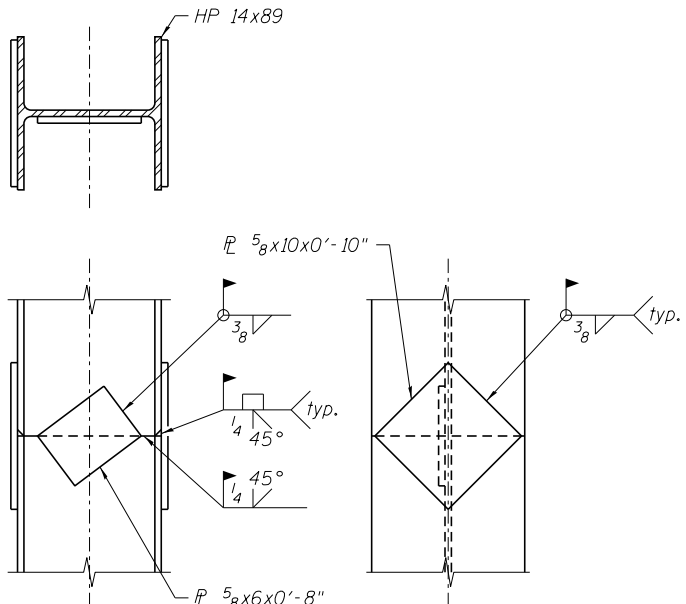
SHEET NO. S- 19 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	171
				CONTRACT NO. 87695
ILLINOIS FED. AID PROJECT				

HP14x89 PILES (Includes Test Piles)						
LOCATION	TYPE	NO.	ESTIMATED LENGTH (FEET)		ALLOWABLE RESIST. AVAILABLE	CUT-OFF ELEVATION
			EACH LIN. FT.	TOTAL LIN. FT.		
EAST ABUTMENT	Vertical	2	44	88	55 Tons	596.20
EAST ABUTMENT	Batter 0.5:12	1	44	44	55 Tons	596.20
EAST ABUTMENT	Batter 1:12	18	44	792	55 Tons	596.20
EAST ABUTMENT	Batter 2:12	9	44	396	55 Tons	596.20
EAST ABUTMENT	Batter 3:12	22	45	990	55 Tons	596.20

PILE DATA

All Piles HP14x89
 Estimated Pile Tip Elev. = 553.00
 Nominal Resistance Required = 110 tons
 Test pile length furnished shall be at least 10' greater than estimated production pile lengths shown.



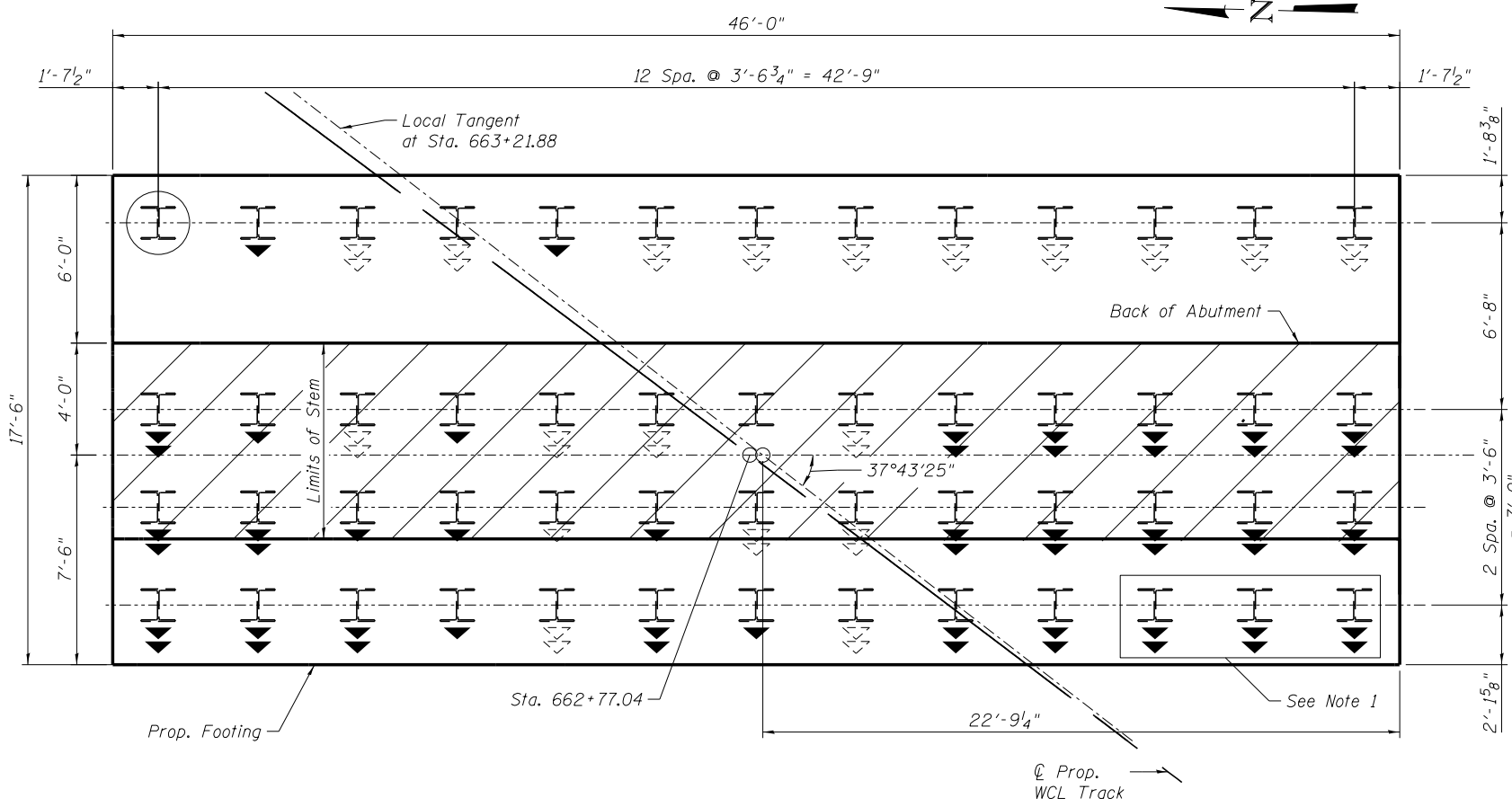
PILE SPLICE DETAIL

LEGEND

- Denotes Vertical Pile
- Denotes 0.5:12 Battered Pile
- Denotes 1:12 Battered Pile
- Denotes 2:12 Battered Pile
- Denotes 3:12 Battered Pile
- Test Pile

NOTES:

- Indicated pile locations may conflict with temporary bent piles if test pile results indicate pile length will be greater than estimated length.
- Degree of batter has been adjusted to allow for driving of piles around temporary span. Contractor may need to adjust pile batter or location slightly due to actual field conditions. Any modifications shall be submitted to Engineer for approval prior to driving.



PILE LAYOUT

4/2/2019 6:28:29 PM ...\\0323400-016-EastAbutPiles.dgn



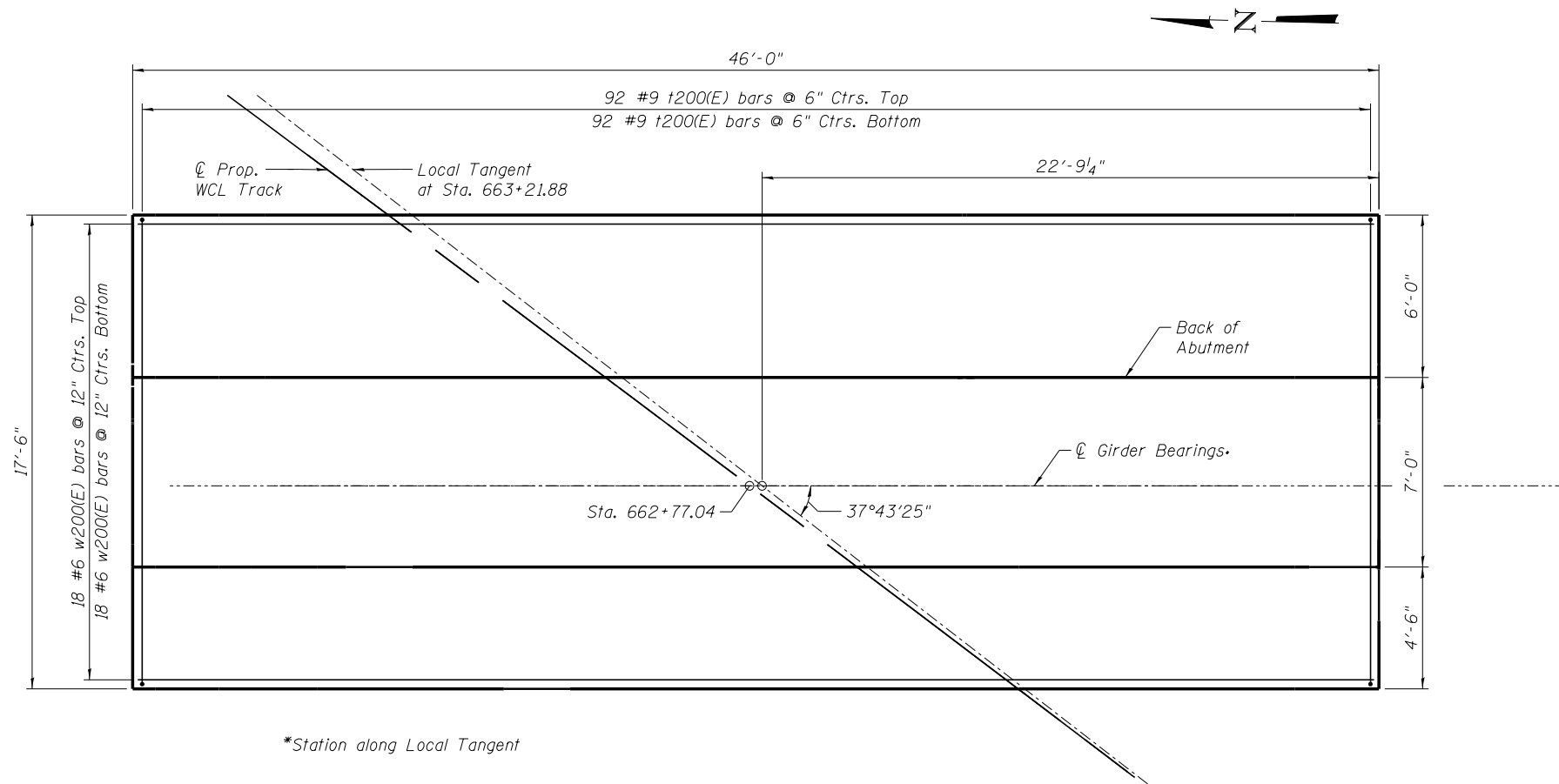
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CHECKED - MFB	REVISED -
DRAWN - RR	REVISED -
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**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**EAST ABUTMENT PILE LAYOUT
STRUCTURE NO. 032-3400**

SHEET NO. S-20 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	172
CONTRACT NO. 87695			ILLINOIS FED. AID PROJECT	



*Station along Local Tangent

FOOTING PLAN

(Note: Piles not shown for clarity.)

NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. All bar dimensions are out to out.
3. For abutment section, bar bend details and reinforcing bar schedule, see East Abutment Sections and Details.
4. For footing dowel bars see East Abutment Stem.
5. For pile data see East Abutment Pile Layout.

4/2/2019 6:28:31 PM ...\\0323400-017-EastAbutF...dgn



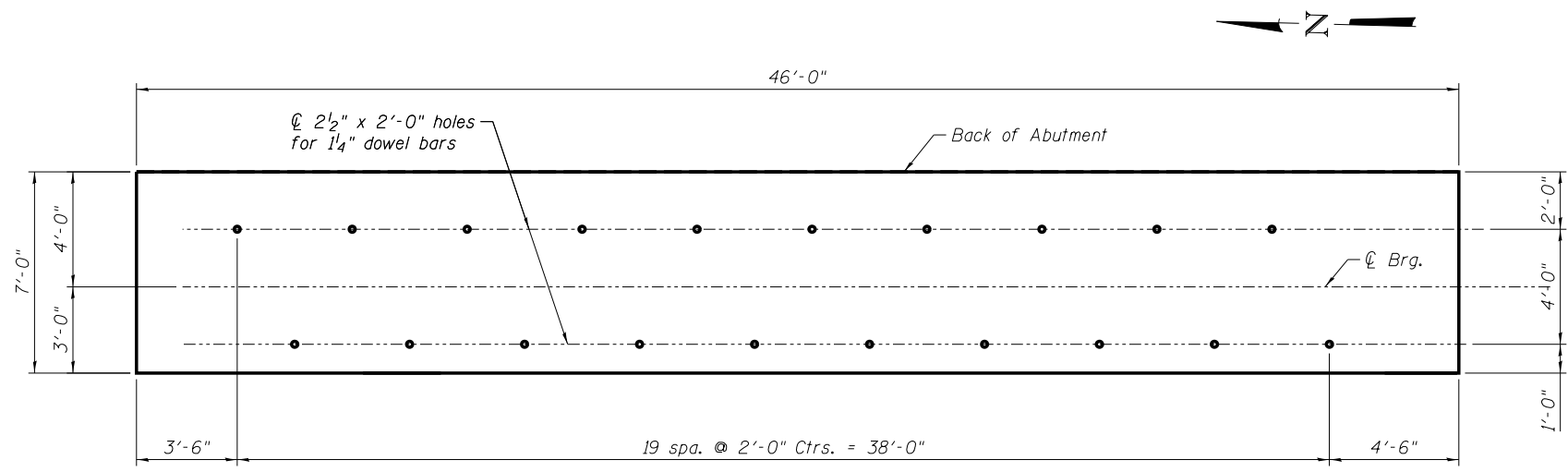
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DRAWN - RR	REVISED -
CHECKED - MMW	REVISED -
PLOT DATE = 4/2/2019	

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**EAST ABUTMENT FOOTING
STRUCTURE NO. 032-3400**

SHEET NO. S- 21 OF 51 SHEETS

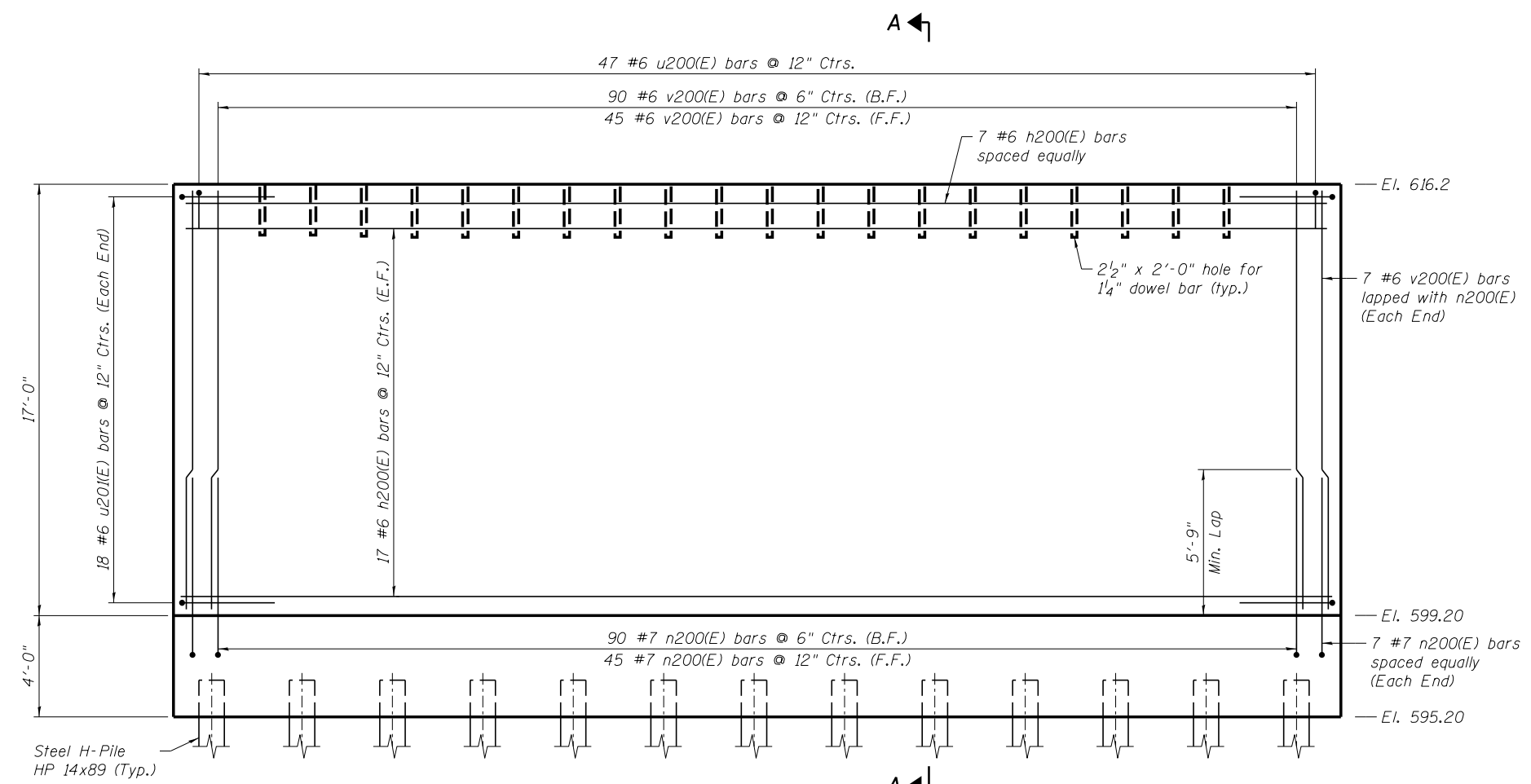
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	173
CONTRACT NO. 87695			ILLINOIS FED. AID PROJECT	



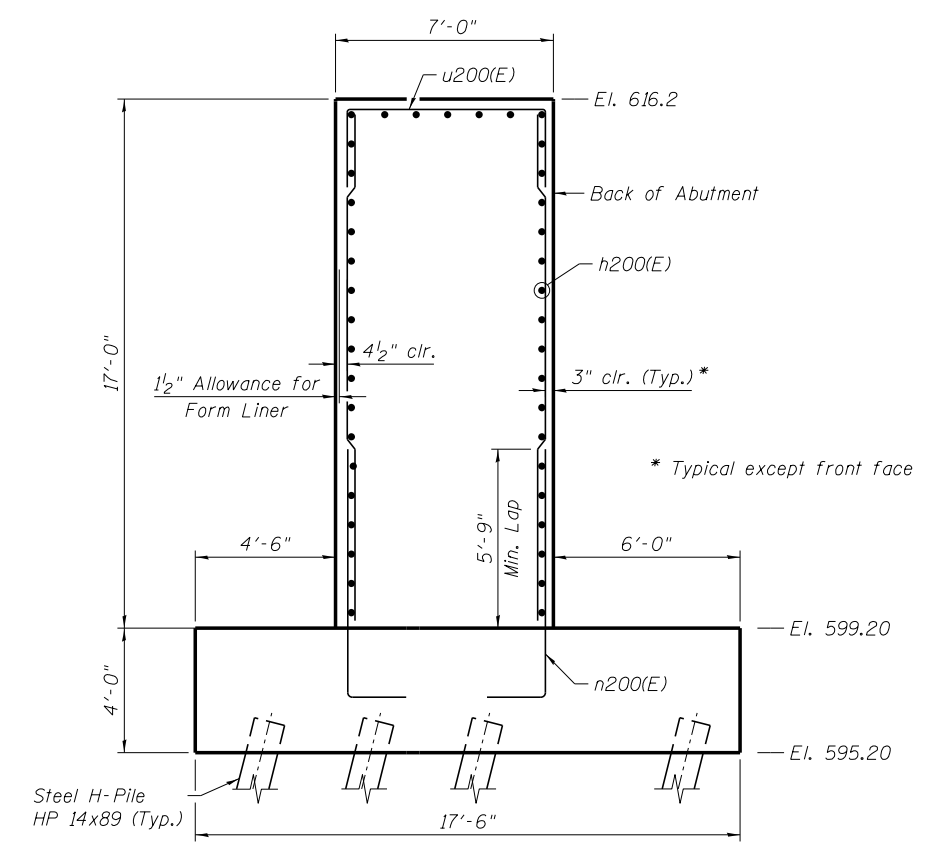
TOP PLAN

NOTES:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. All bar dimensions are out to out.
3. For reinforcement schedule and bar bend details, see East Abutment Sections and Details
4. Space reinforcement to miss dowel bars.
5. B.F. = Back Face
E.F. = Each Face
F.F. = Front Face



ELEVATION



SECTION A-A

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DRAWN - RR	REVISED -
CHECKED - MMW	REVISED -

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

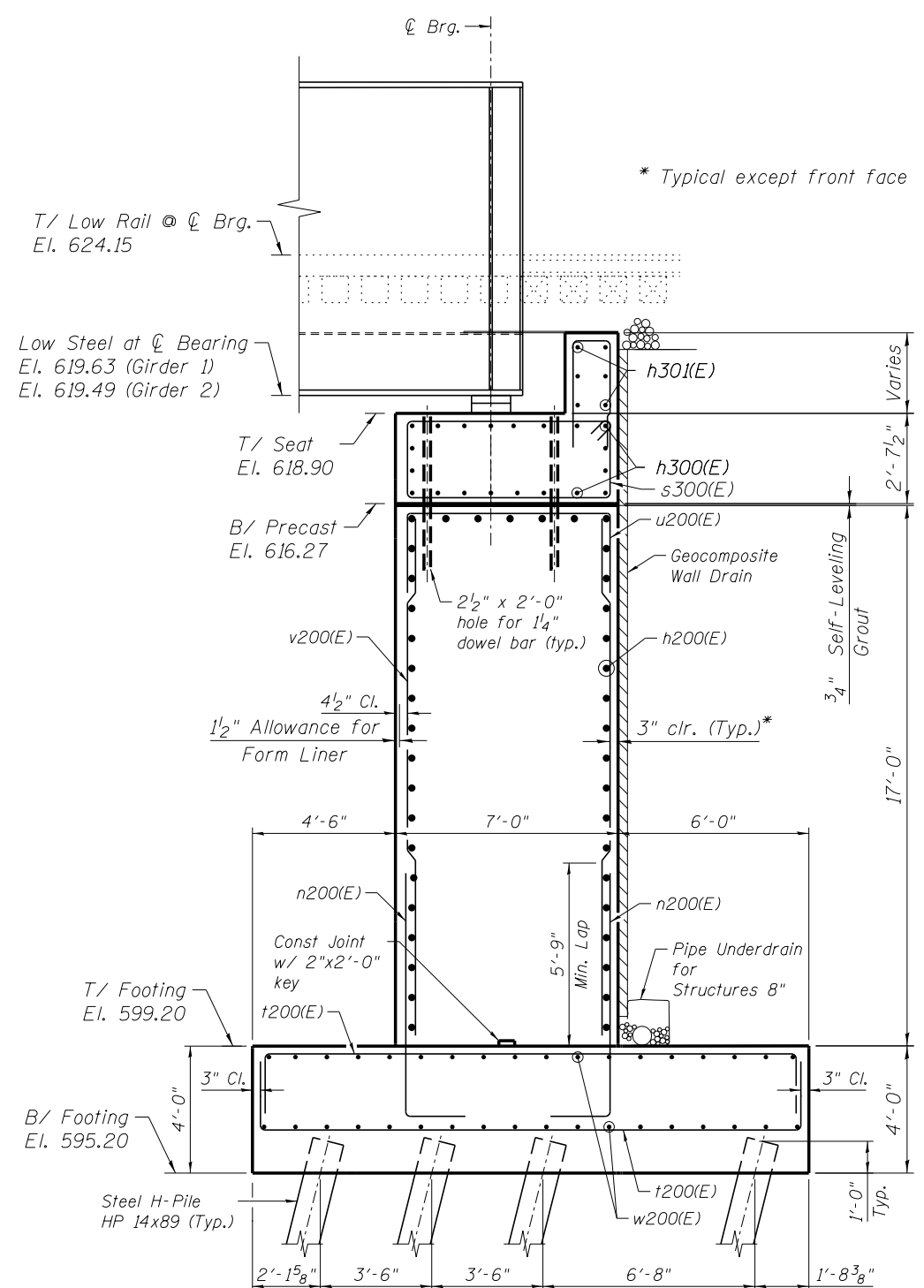
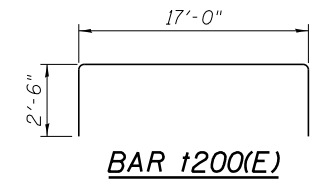
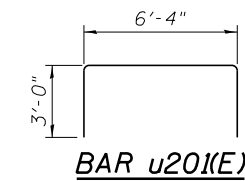
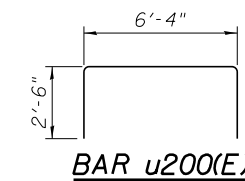
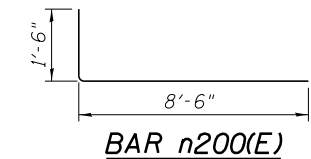
**EAST ABUTMENT STEM
STRUCTURE NO. 032-3400**

SHEET NO. S- 22 OF 51 SHEETS

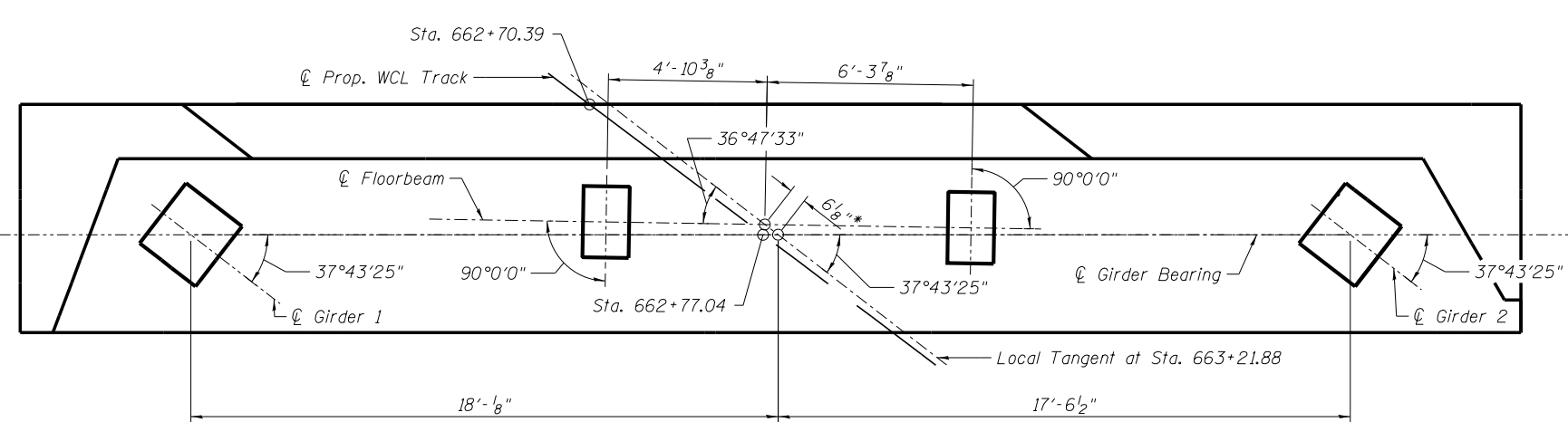
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	174
				CONTRACT NO. 87695
ILLINOIS FED. AID PROJECT				

**BILL OF MATERIAL
EAST ABUTMENT**

Bar	No.	Size	Length	Shape
h200(E)	41	#6	45'-6"	—
w200(E)	36	#6	45'-6"	—
v200(E)	149	#6	16'-8"	—
n200(E)	149	#7	10'-0"	—
u200(E)	47	#6	11'-4"	—
u20(E)	36	#6	12'-4"	—
t200(E)	184	#9	22'-0"	—
Form Liner Textured Surface	Sq. Ft.		782	
Reinforcement Bars, Epoxy Coated	Pound		27,270	
Furnishing Steel Piles HP14x89	Foot		2,266	
Driving Piles	Foot		2,266	
Test Pile Steel HP14x89	Each		1	
Porous Granular Embankment, Special	Cu. Yd.		467	
Structure Excavation (Special)	Cu. Yd.		1,174	
Concrete Structures (Special)	Cu. Yd.		322.0	



EAST ABUTMENT SECTION



EAST ABUTMENT BEARING LAYOUT

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CHECKED - MMW	REVISED -

PLOT DATE = 4/2/2019

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**EAST ABUTMENT SECTIONS AND DETAILS
STRUCTURE NO. 032-3400**

SHEET NO. S-23 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	175
				CONTRACT NO. 87695

ILLINOIS FED. AID PROJECT

**BILL OF MATERIAL
EAST ABUTMENT BACKWALL**

Bar	No.	Size	Length	Shape
h300(E)	20	#6	45'-6"	—
h301(E)	6	#5	45'-6"	—
h302(E)	4	#5	13'-2"	—
h303(E)	4	#5	11'-8"	—
h304(E)	2	#5	6'-2"	—
h305(E)	2	#5	12'-10"	—
h306(E)	2	#5	4'-9"	—
h307(E)	2	#5	14'-3"	—
s300(E)	47	#5	17'-11"	—
u300(E)	8	#5	11'-4"	—
u301(E)	4	#5	6'-6"	—
v300(E)	28	#5	8'-8"	—
v301(E)	13	#5	11'-8"	—
v302(E)	1	#5	17'-0"	—
v303(E)	1	#5	15'-9"	—
v304(E)	1	#5	13'-0"	—
v305(E)	1	#5	12'-8"	—
v306(E)	1	#5	14'-5"	—
v307(E)	1	#5	16'-0"	—
Precast Concrete Substructure	L. Sum		1	

**ESTIMATED QUANTITIES FOR
PRECAST BACKWALL**

Item	Unit	Qty.
Form Liner Textured Surface	Sq. Ft.	121
Reinforcing Bars, Epoxy Coated	Pound	3,340
Concrete	Cu. Yd.	43.7

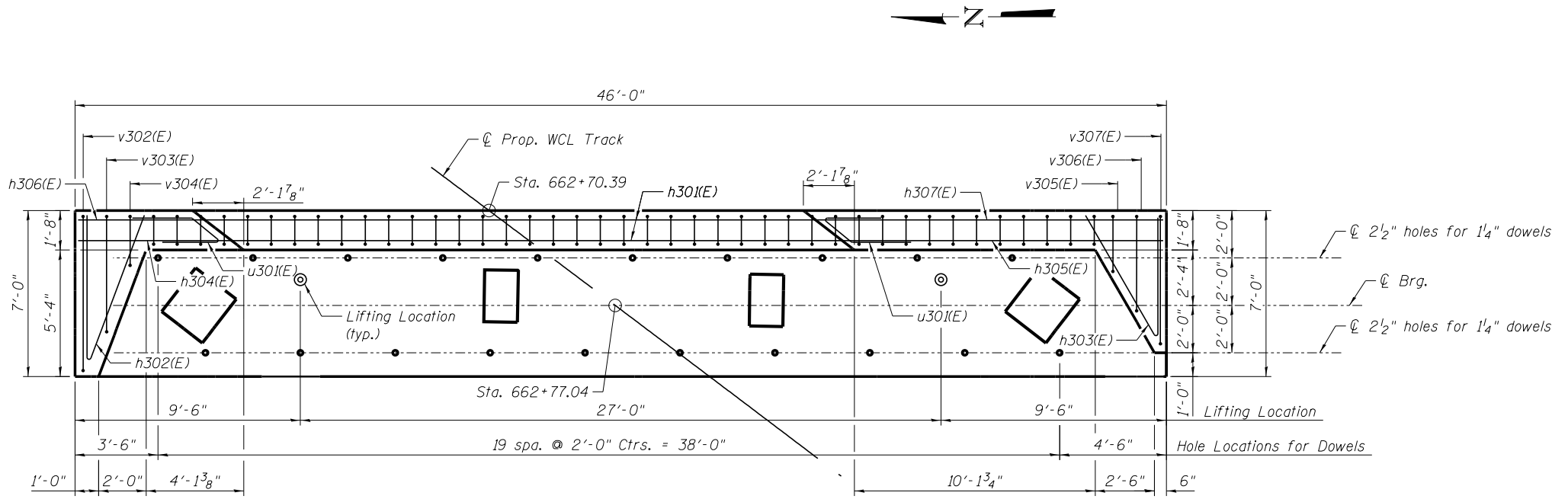
For information only. Items are included in cost of "Precast Concrete Substructure"

BARS h302(E), h303(E)

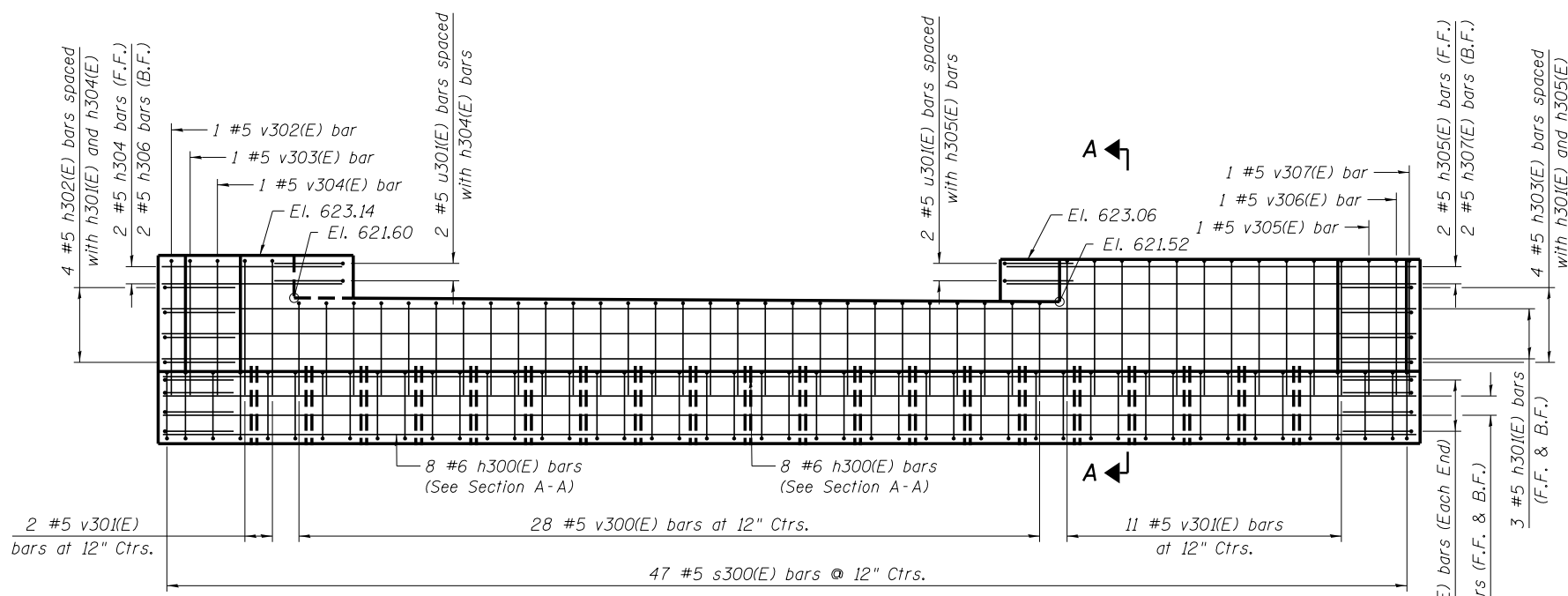
BAR	A	B	D
h302(E)	6'-9"	6'-5"	20°
h303(E)	6'-3"	5'-5"	30°

BARS u300(E), v300(E) THRU v307(E)

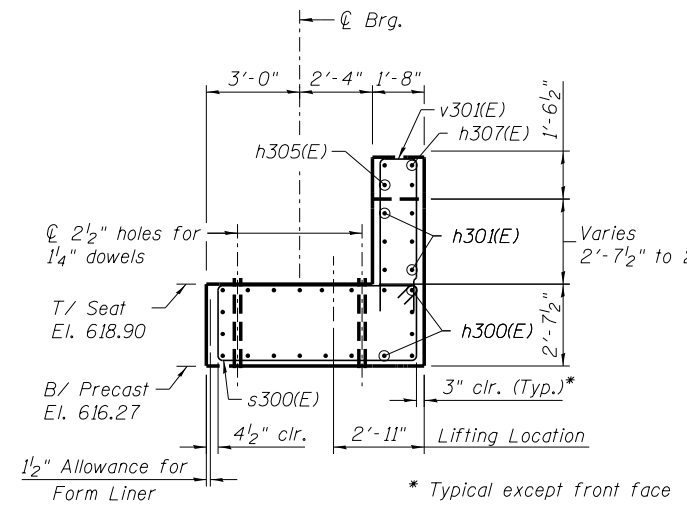
BAR	A	B
u300(E)	6'-4"	2'-6"
v300(E)	1'-2"	3'-9"
v301(E)	1'-2"	5'-3"
v302(E)	6'-6"	5'-3"
v303(E)	5'-3"	5'-3"
v304(E)	2'-6"	5'-3"
v305(E)	2'-2"	5'-3"
v306(E)	3'-11"	5'-3"
v307(E)	5'-6"	5'-3"



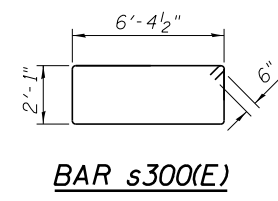
PLAN



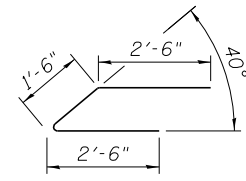
ELEVATION



SECTION A-A



BAR s300(E)



BAR u301(E)

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DESIGNED - MFB	REVISED -
CHECKED - MMW	REVISED -
DRAWN - RR	REVISED -
CHECKED - MFB	REVISED -

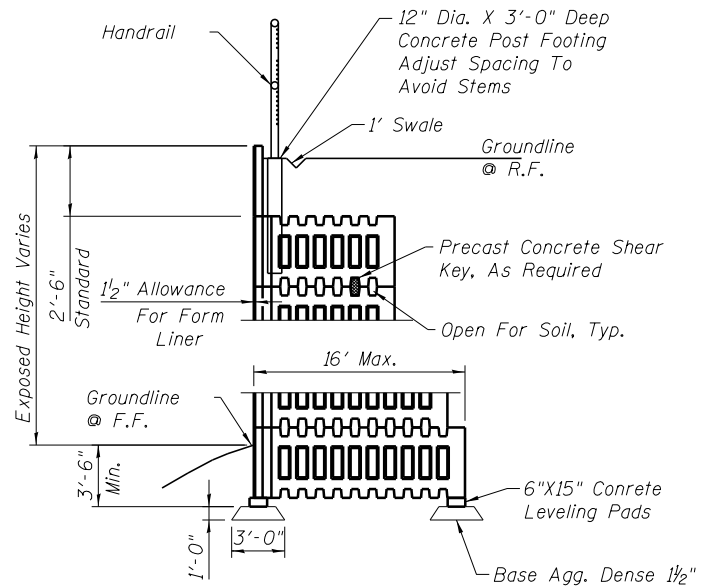
PLOT DATE = 4/2/2019

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

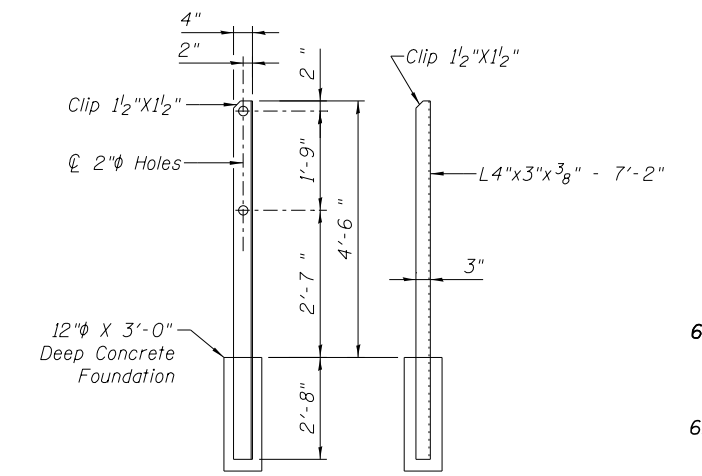
**EAST ABUTMENT PRECAST BACKWALL
STRUCTURE NO. 032-3400**

SHEET NO. S-24 OF 51 SHEETS

F.A.U. RT.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	176
CONTRACT NO. 87695			ILLINOIS FED. AID PROJECT	



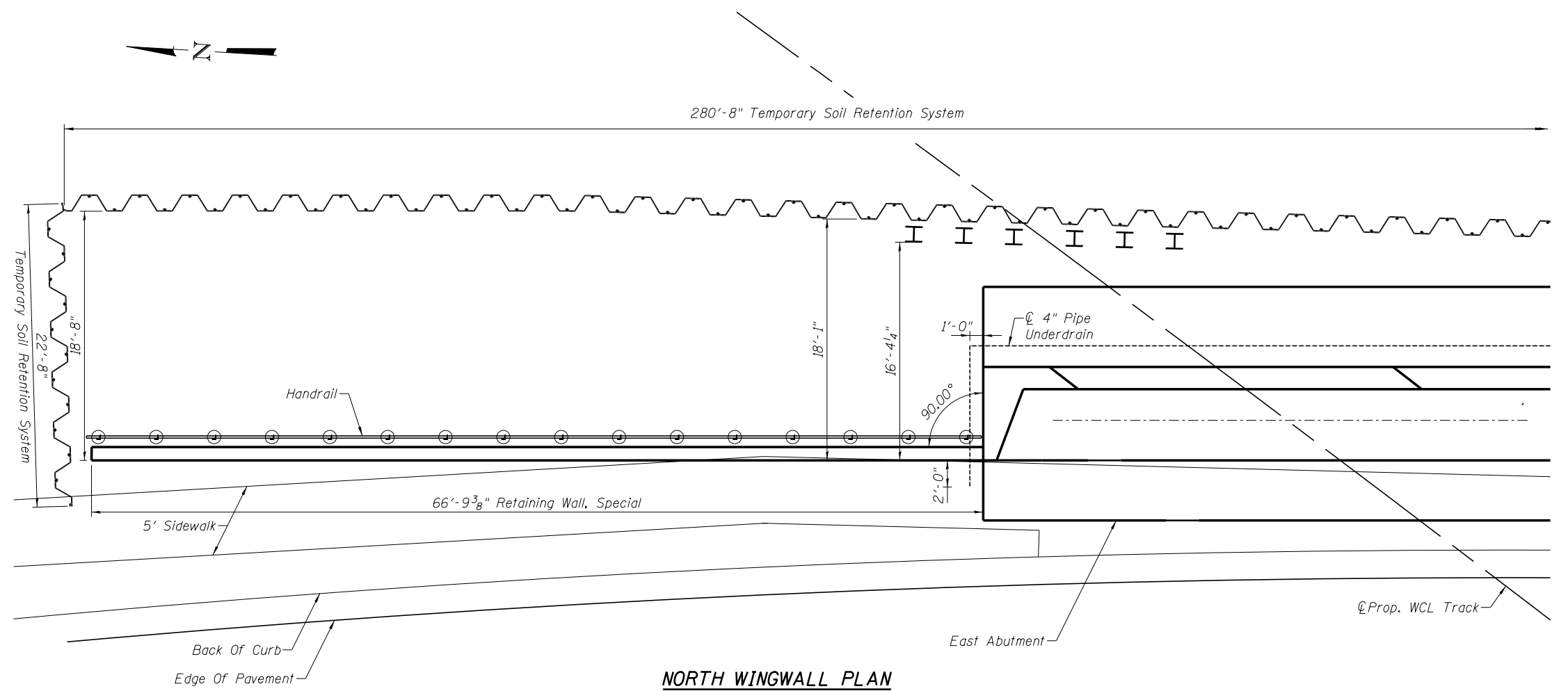
TYPICAL SECTION
Not To Scale



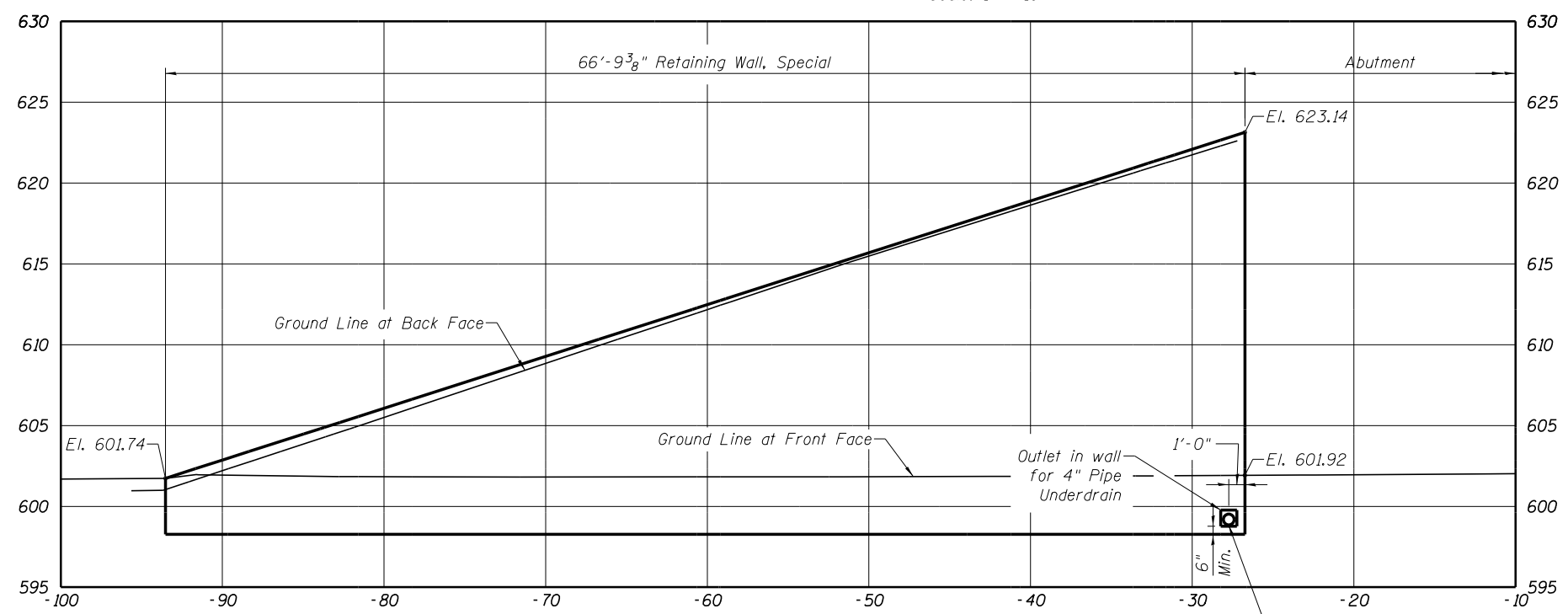
HANDRAIL POST
Not To Scale

ESTIMATED QUANTITIES FOR NORTH WINGWALL

Item	Unit	Qty.
Form Liner Textured Surface	Sq. Ft.	943
Porous Granular Embankment, Special Structure	Cu. Yd.	642
Excavation (Special)	Cu. Yd.	733
Pipe Handrail, Special	Foot	71
Retaining Wall, Special	Sq. Ft.	943



NORTH WINGWALL PLAN
Scale: 1" = 10'



NORTH WINGWALL ELEVATION
Scale: 1" = 10'
(Handrail not shown for clarity)

4/2/2019 6:28:38 PM ...\\Sheets\0323400-021-NW.rdg



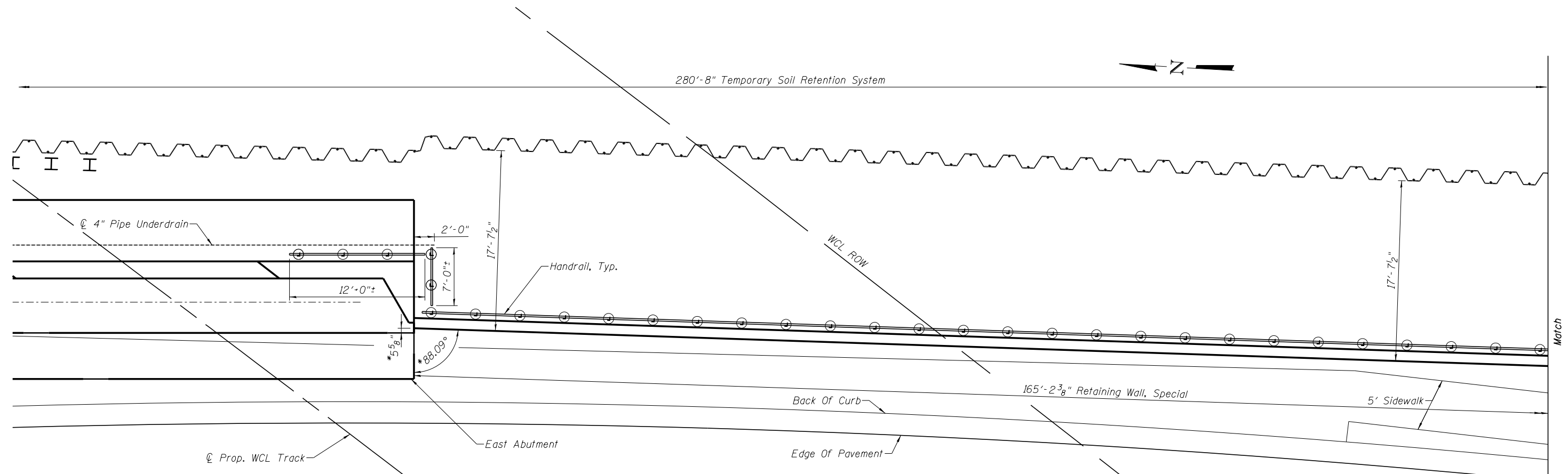
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CHECKED - APW	REVISED -
DRAWN - BJW	REVISED -
CHECKED - MMW	REVISED -

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**EAST ABUTMENT NORTH WINGWALL
STRUCTURE NO. 032-3400**

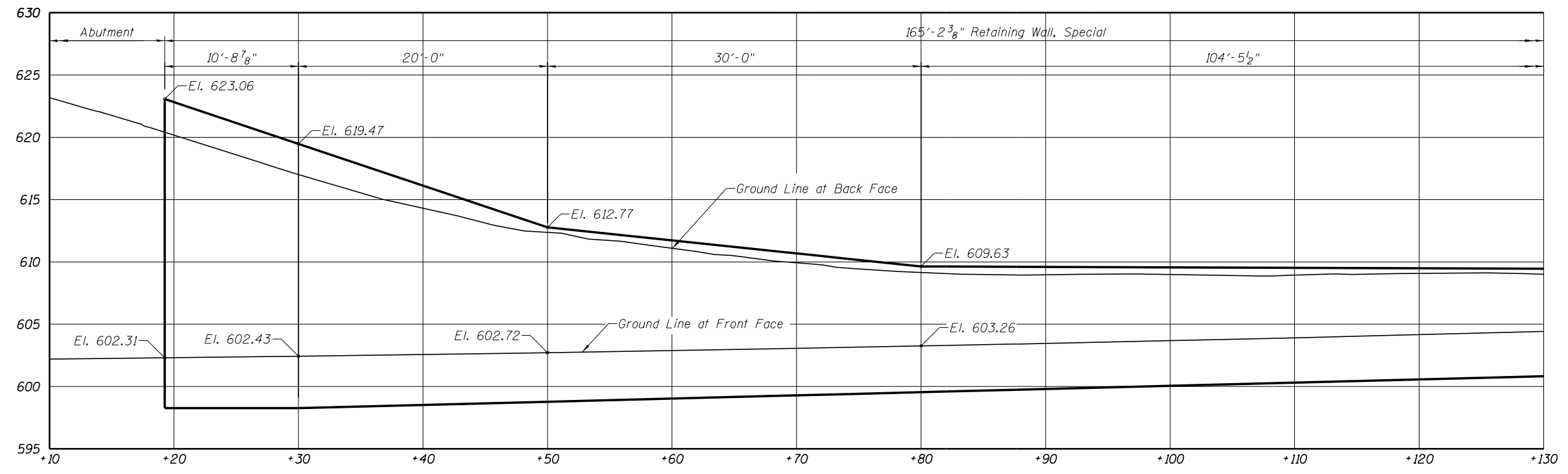
SHEET NO. S-25 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	177
CONTRACT NO. 87695			ILLINOIS FED. AID PROJECT	



* Rear face of South Wingwall wall panels shall be located within Roadway ROW along entire length of wall. Contractor shall verify Roadway ROW limits prior to wall placement.

SOUTH WINGWALL PLAN
Scale: 1" = 10'



SOUTH WINGWALL ELEVATION
Scale: 1" = 10'
(Handrail not shown for clarity)

4/2/2019 6:28:48 PM ...:\Sheets\0323400-022-SWing.dgn



DESIGNED - MMW	REVISED -
CHECKED - APW	REVISED -
DRAWN - BJW	REVISED -
CHECKED - MMW	REVISED -

DESIGNED - MMW	REVISED -
CHECKED - APW	REVISED -
DRAWN - BJW	REVISED -
CHECKED - MMW	REVISED -

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**EAST ABUTMENT SOUTH WINGWALL 1
STRUCTURE NO. 032-3400**

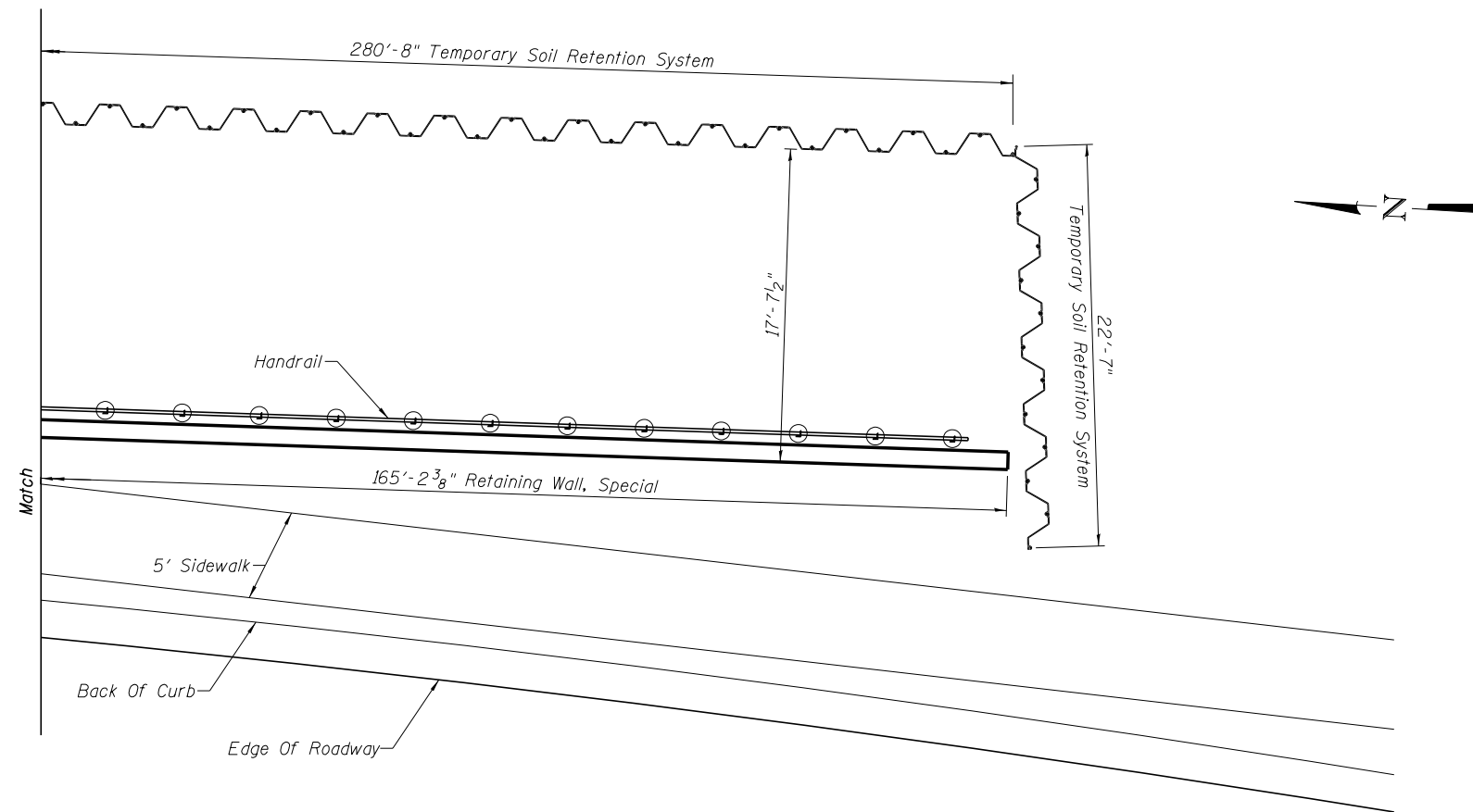
SHEET NO. S-26 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	178
CONTRACT NO. 87695				

ILLINOIS FED. AID PROJECT

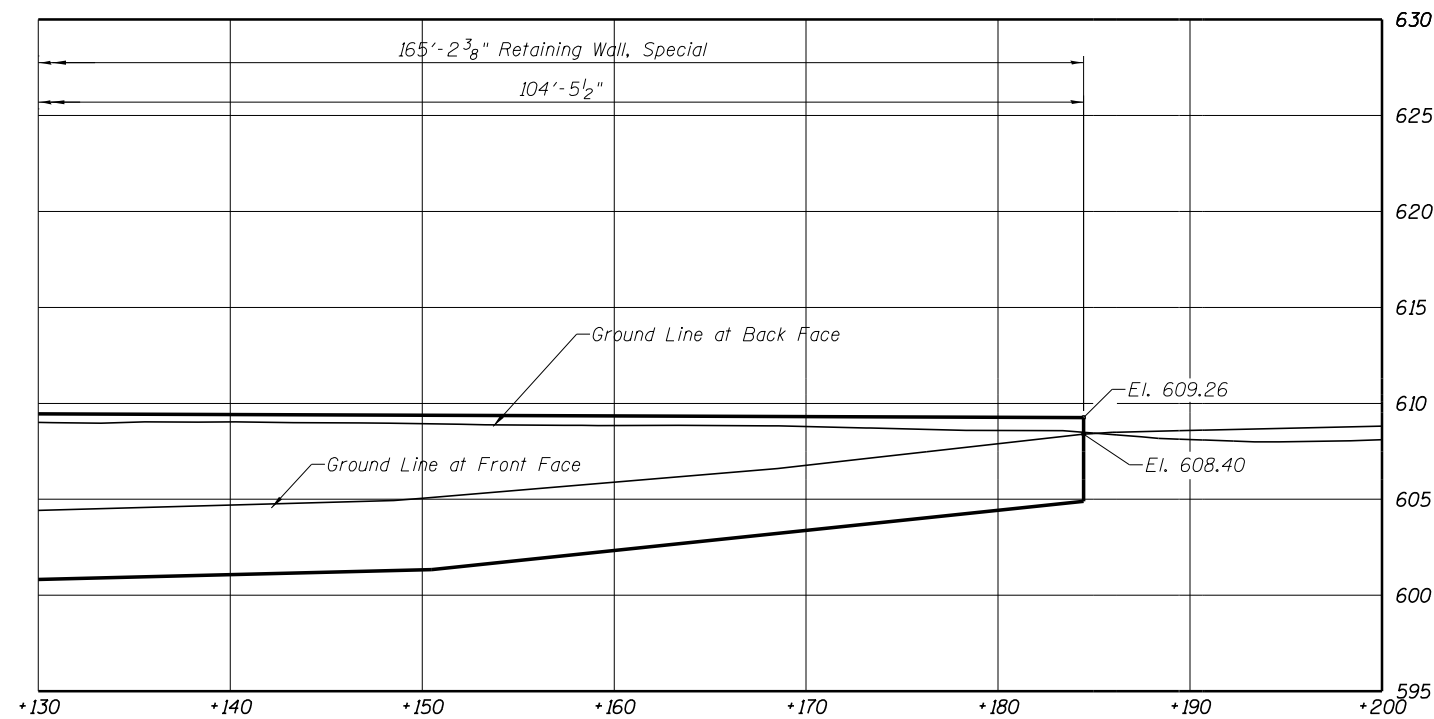
**ESTIMATED QUANTITIES FOR
SOUTH WINGWALL**

Item	Unit	Qty.
Form Liner Textured Surface	Sq. Ft.	1,676
Porous Granular Embankment, Special	Cu. Yd.	1,095
Structure Excavation (Special)	Cu. Yd.	1,229
Pipe Handrail, Special	Foot	187
Retaining Wall, Special	Sq. Ft.	1,676



SOUTH WINGWALL PLAN

Scale: 1" = 10'



SOUTH WINGWALL ELEVATION

Scale: 1" = 10'
(Handrail not shown for clarity)

4/2/2019 6:28:48 PM ...\Sheets\0323400-023-SWing.dgn



DESIGNED - MMW	REVISED -
CHECKED - APW	REVISED -
DRAWN - BJW	REVISED -
CHECKED - MMW	REVISED -
PLOT DATE = 4/2/2019	

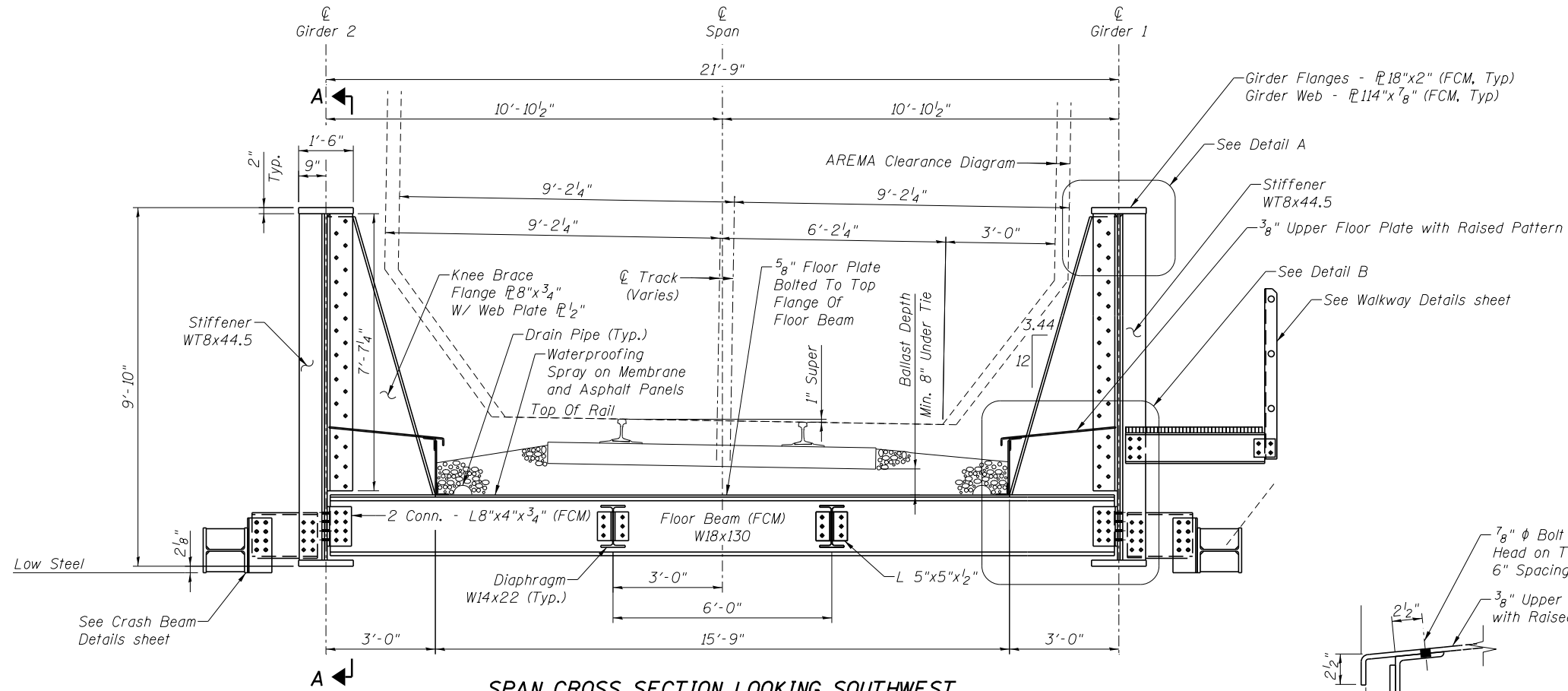
**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**EAST ABUTMENT SOUTH WINGWALL 2
STRUCTURE NO. 032-3400**

SHEET NO. S- 27 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	179
CONTRACT NO. 87695				

ILLINOIS FED. AID PROJECT



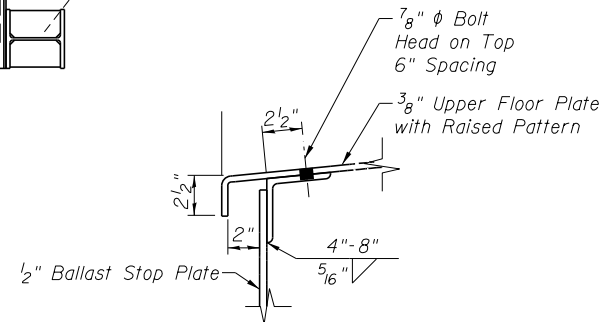
SPAN CROSS SECTION LOOKING SOUTHWEST

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

NOTES:

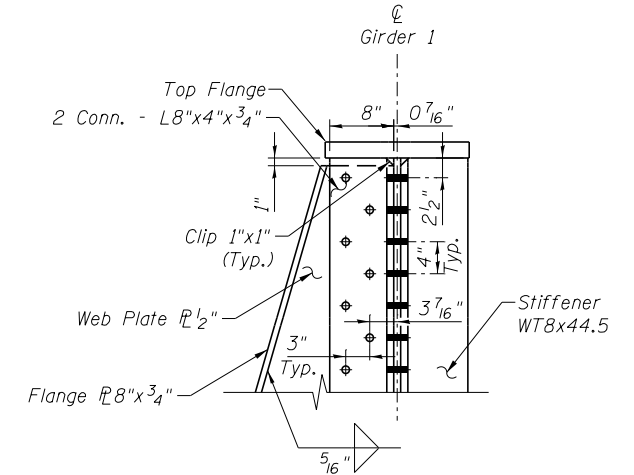
FCM - Fracture Critical Member

NTR - Notch Toughness Requirement



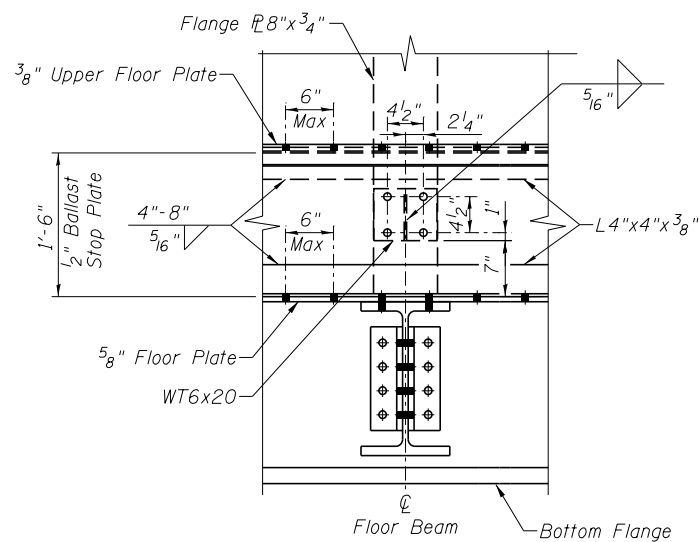
DETAIL C

Scale: 1" = 1'-0"



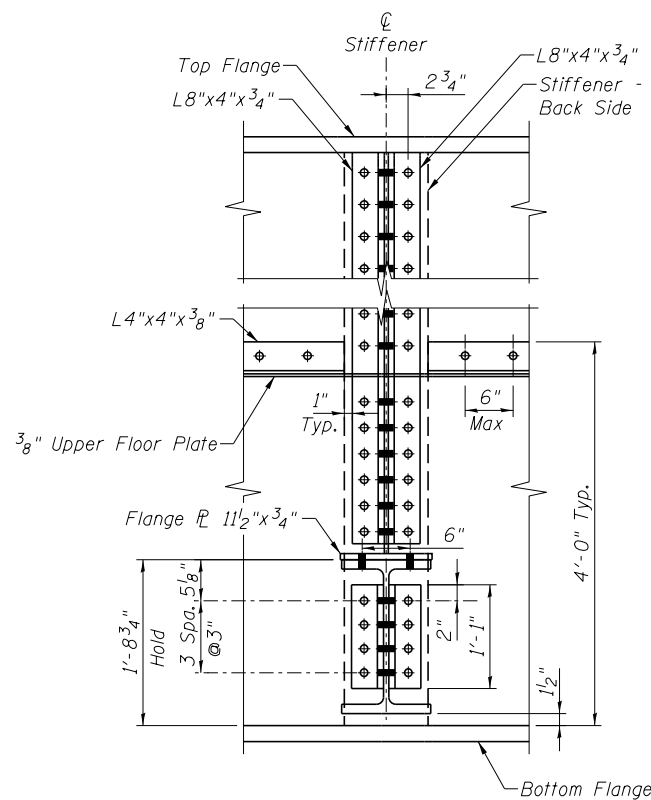
DETAIL A AT KNEE BRACE

Scale: 1/2" = 1'-0"



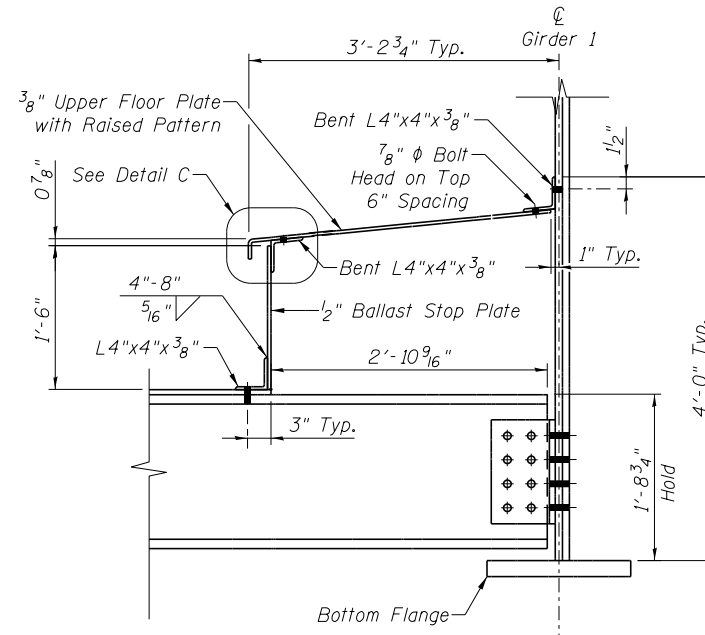
SECTION B-B

Scale: 1/2" = 1'-0"



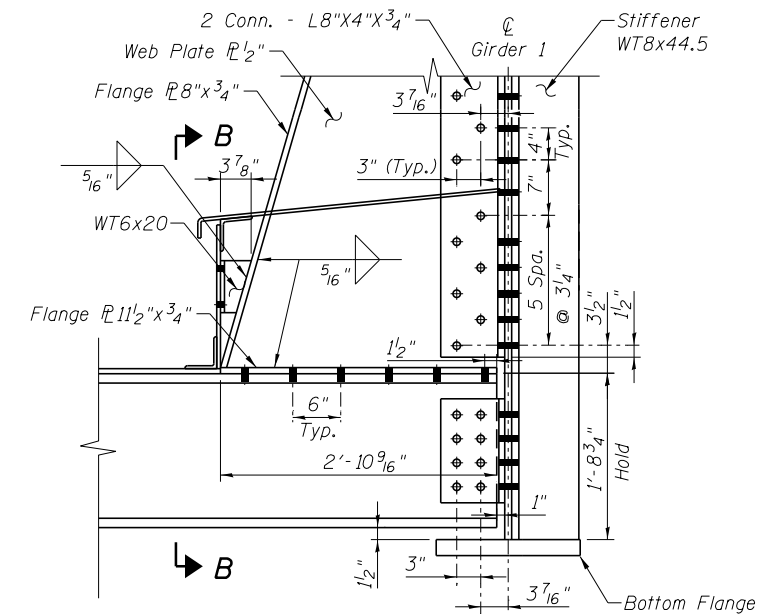
SECTION A-A

Scale: 1/2" = 1'-0"



DETAIL B

Scale: 1/2" = 1'-0"



DETAIL B AT KNEE BRACE

Scale: 1/2" = 1'-0"

6/6/2019 6:04:16 PM ...\\0323400-024-Deck\Section.dgn



DESIGNED - APW	REVISD -
CHECKED - MFB	REVISD -
DRAWN - BJW	REVISD -
CHECKED - APW	REVISD -
PLOT DATE = 6/6/2019	

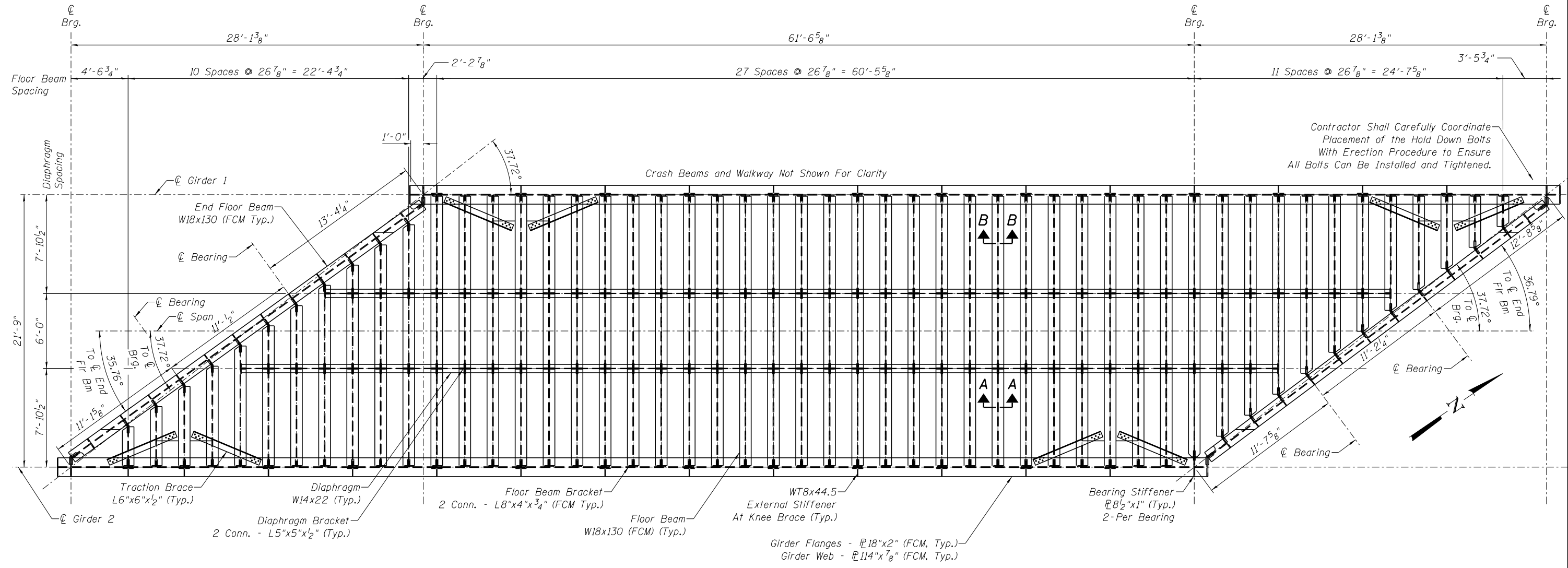
**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**DECK CROSS SECTION
STRUCTURE NO. 032-3400**

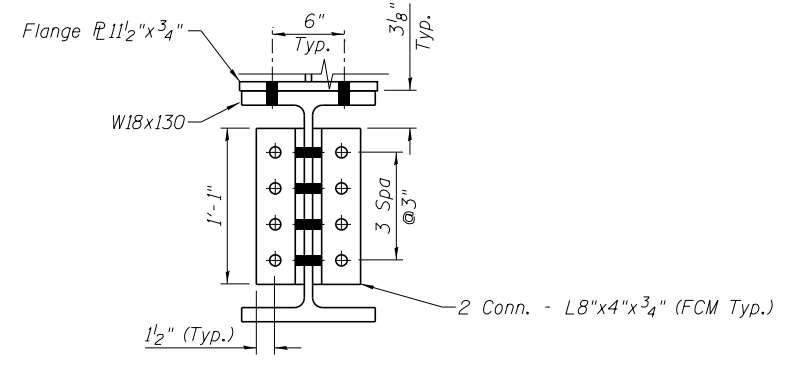
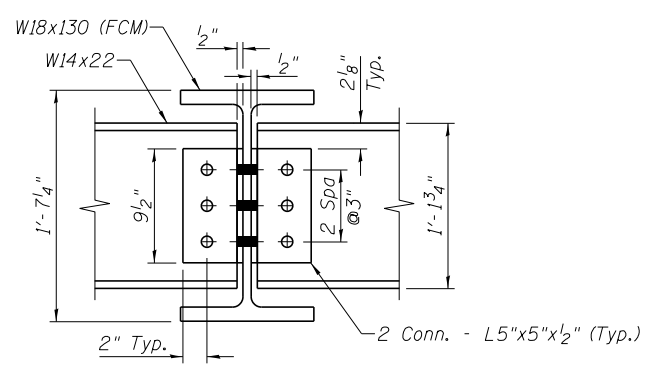
SHEET NO. S- 28 OF 51 SHEETS

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	180
CONTRACT NO. 87695				

ILLINOIS FED. AID PROJECT



FRAMING PLAN
Scale: 1/8" = 1'-0"



NOTES:
FCM Indicates Fracture Critical Member

All Edges Of Steel (Bearing Plates, Etc.) To Be Metallized Or Galvanized Shall Be Slightly Rounded For The Coating To Adhere.

Carlisle CCW-201 Shall Be Used To Fill Gaps Between Field Welded Deck Plates At The Rate Of One Gallon Per 37.9 Linear Feet. Carlisle CCW-201 Is A Multi-Component, Single Base, Non-Sag Polyurethane Sealant By:

Carlisle Coating & Waterproofing Incorporated
900 Hensley Lane
Wylie, TX 78098
800-527-7092

Follow Manufacturer's Instructions For Mixing, Surface Preparation, And Application.

Bolt Heads Shall Be Installed On The Roadside Surfaces Of The Girders Unless Noted Otherwise.

7/10/2019 6:45:37 PM ...\\Sheets\0323400-025-Frame.dgn



DESIGNED - APW	REVISD -
CHECKED - MFB	REVISD -
DRAWN - BJW	REVISD -
CHECKED - APW	REVISD -

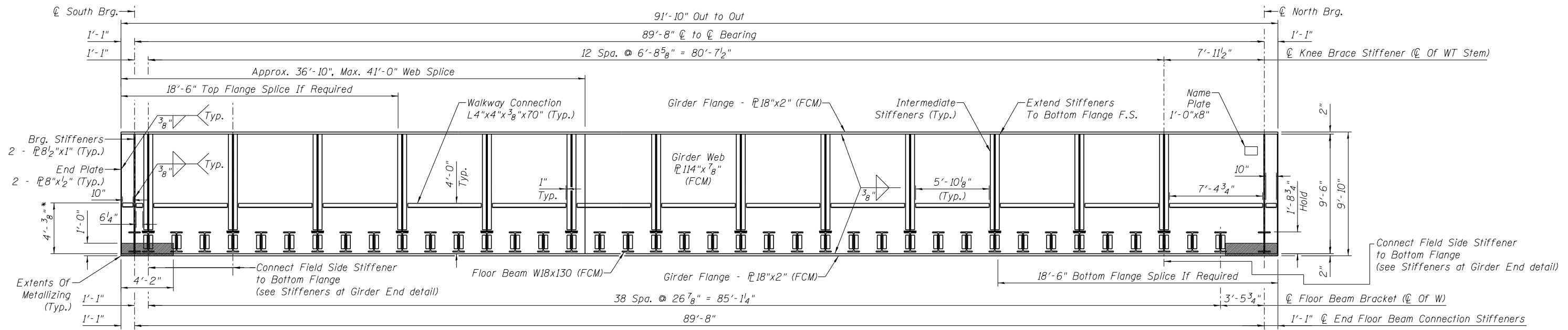
**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**FRAMING PLAN
STRUCTURE NO. 032-3400**

SHEET NO. S- 29 OF 51 SHEETS

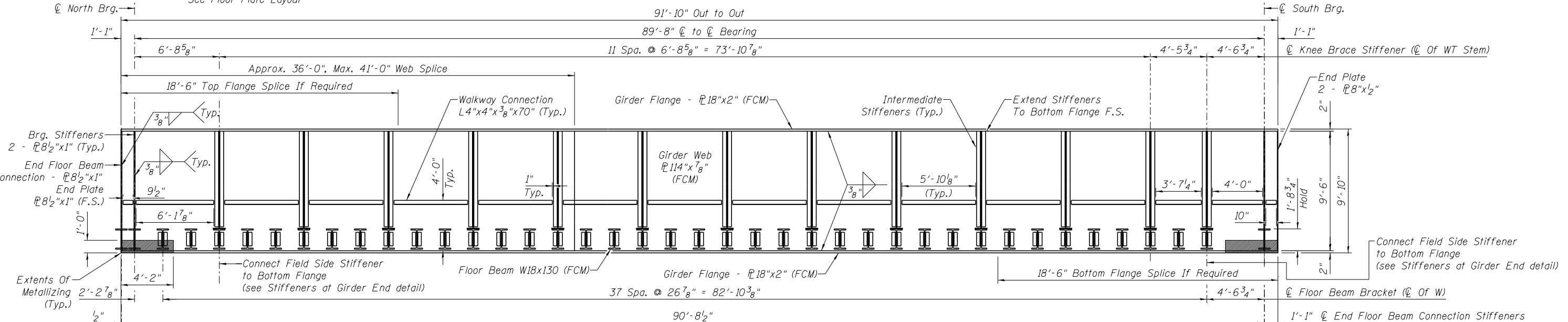
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	181
				CONTRACT NO. 87695

ILLINOIS FED. AID PROJECT



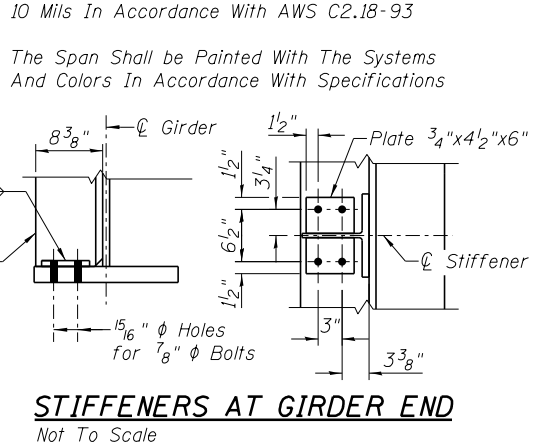
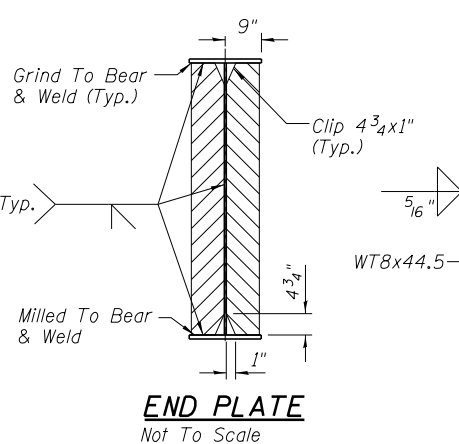
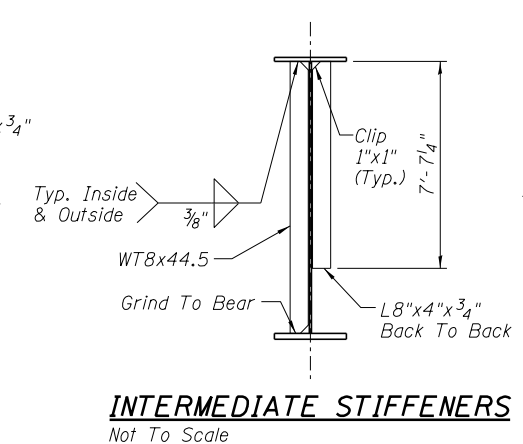
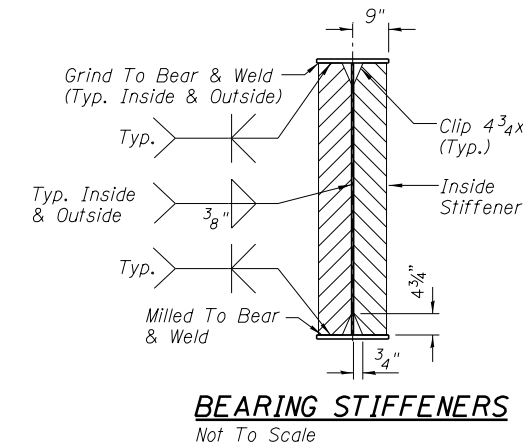
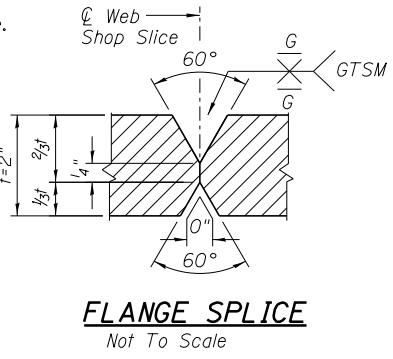
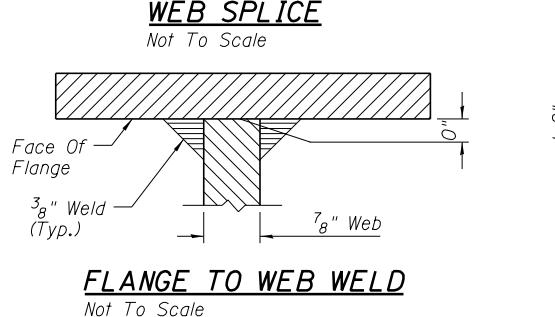
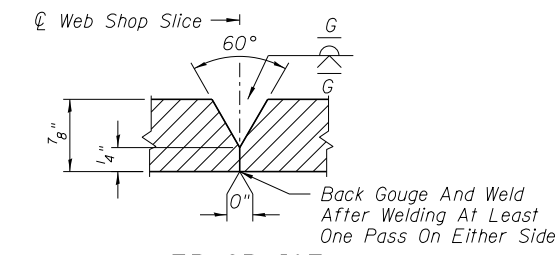
INSIDE ELEVATION - GIRDER 1

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



INSIDE ELEVATION - GIRDER 2

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



NOTES:
 FCM Indicates Fracture Critical Member
 Girder Ends, To Extent Indicated On The Drawings Shall Be Zinc Metallized With A Minimum Coating Of 10 Mills In Accordance With AWS C2.18-93
 The Span Shall be Painted With The Systems And Colors In Accordance With Specifications

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DESIGNED - APW	REVISD -
CHECKED - MFB	REVISD -
DRAWN - BJW	REVISD -
CHECKED - APW	REVISD -

**GRUNDY COUNTY, ILLINOIS
 HIGHWAY DEPARTMENT**

**GIRDER DETAILS
 STRUCTURE NO. 032-3400**

SHEET NO. S- 30 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	182
				CONTRACT NO. 87695

ILLINOIS FED. AID PROJECT

MOMENT AND SHEAR PER GIRDER

DESCRIPTION		MOMENT
SPAN LENGTH (C. TO C. BRGS.)		89'-8"
DEAD LOAD		4645 ft-k
LIVE LOAD (E90)		5972 ft-k
IMPACT		1647 ft-k
CENTRIFUGAL		418 ft-k
TOTAL		12682 ft-k
SECTION	WEB	114"x ⁷ / ₈ "
	FLANGES	18"x2"
GROSS I FURN.		350,261 in ⁴
NET I FURN.		335,515 in ⁴
NET SECT. MOD.		5687 in ³
ALLOW MAX. TENSILE STRESS IN FLANGE		27.5 ksi
ACTUAL MAX. TENSILE STRESS IN FLANGE		26.8 ksi
ALLOWABLE FATIGUE STRESS		16 ksi
ACTUAL FATIGUE STRESS		14.3 ksi
ALLOW MAX. COMPRESSIVE STRESS IN FLANGE		27.1 ksi
ACTUAL MAX. COMPRESSIVE STRESS IN FLANGE		25.6 ksi
ALLOW MAX. DEFLECTION LIVE LOAD + IMPACT		1.44 in
ACTUAL MAX. DEFLECTION LIVE LOAD + IMPACT		1.15 in
SHEAR		
DEAD LOAD		207 k
LIVE LOAD		308 k
IMPACT		85 k
CENTRIFUGAL		22 k
TOTAL		622 k
WEB SHEAR		6.2 ksi
ALLOWABLE SHEAR		17.5 ksi
END STIFFENER COLUMN AREA REQD.		15.24 in ²
SECTION (2 PLATES)		8½"x1"
END STIFFENER COLUMN AREA FURN.		15.5 in ²

FLOOR BEAMS

DESCRIPTION	TYPICAL FLOORBEAM	END FLOORBEAM
MOMENT		
DEAD LOAD	48.5 ft-k	42.9 ft-k
LIVE LOAD (ALT)	216.7 ft-k	152.2 ft-k
IMPACT	85.3 ft-k	59.8 ft-k
CENTRIFUGAL	18 ft-k	18 ft-k
TOTAL	368.4 ft-k	254.9 ft-k
SECTION	W18x130	W18x130
GROSS I FURN.	2460 in ⁴	2460 in ⁴
LESS HOLES	227 in ⁴	0 in ⁴
NET I FURNISHED	2233 in ⁴	2460 in ⁴
NET SECTION MOD.	231.4 in ³	256 in ³
ALLOW MAX. TENSILE STRESS IN FLANGE	27.5 ksi	27.5 ksi
ACTUAL MAX. TENSILE STRESS IN FLANGE	19.1 ksi	11.9 ksi
ALLOWABLE FATIGUE STRESS	16 ksi	16 ksi
ACTUAL FATIGUE STRESS	12.8 ksi	9.9 ksi
ALLOWABLE MAX. COMPRESSIVE STRESS IN FLANGE	26.8 ksi	27.5 ksi
ACTUAL MAX. COMPRESSIVE STRESS IN FLANGE	17.3 ksi	10.8 ksi
ALLOW MAX. DEFLECTION LIVE LOAD + IMPACT	0.35 in	0.21 in
ACTUAL MAX. DEFLECTION LIVE LOAD + IMPACT	0.35 in	0.08 in
SHEAR		
DEAD LOAD	7.3 k	17.7 k
LIVE LOAD	25.9 k	62.1 k
IMPACT	10.2 k	24.4 k
CENTRIFUGAL	1.8 k	---
TOTAL	45.1 k	104.2 k
WEB SHEAR	3.5 ksi	8.1 ksi
ALLOWABLE SHEAR	17.5 ksi	17.5 ksi

BEARING ON MASONRY

DESCRIPTION	
TOTAL REACTION	640 k
BEARING AREA FURN.	728 in ²
AVERAGE BRG. PRESSURE	0.9 ksi

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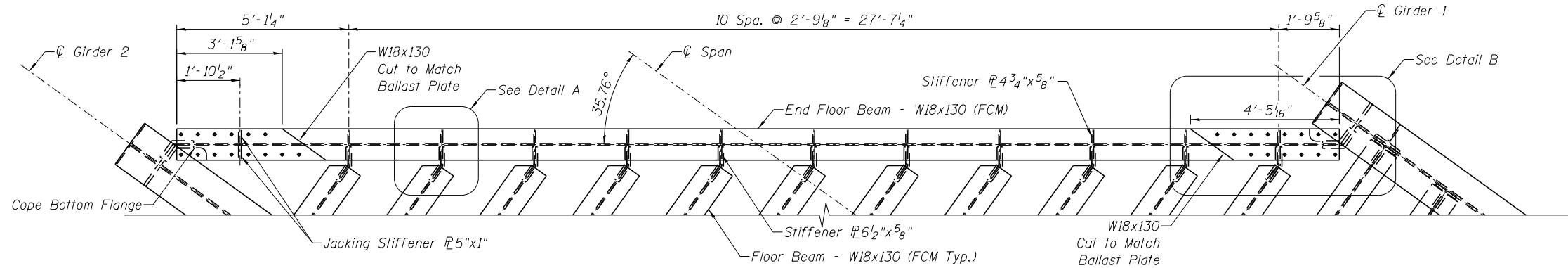
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CHECKED - MFB	REVISED -
DRAWN - BJW	REVISED -
CHECKED - APW	REVISED -

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**DESIGN DATA
STRUCTURE NO. 032-3400**

SHEET NO. S- 31 OF 51 SHEETS

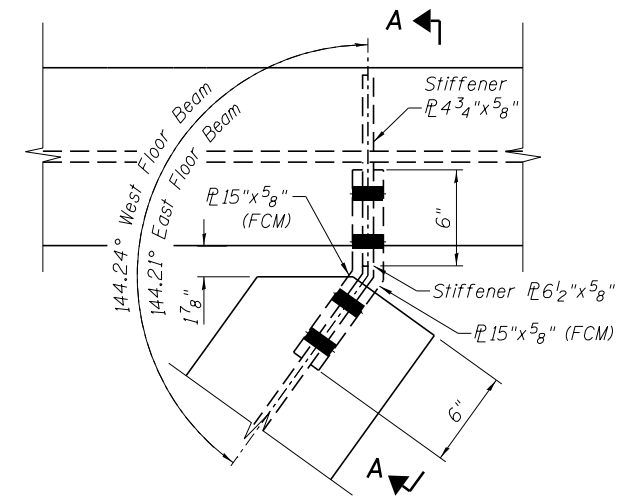
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	183
				CONTRACT NO. 87695
ILLINOIS FED. AID PROJECT				



WEST END FLOOR BEAM PLAN

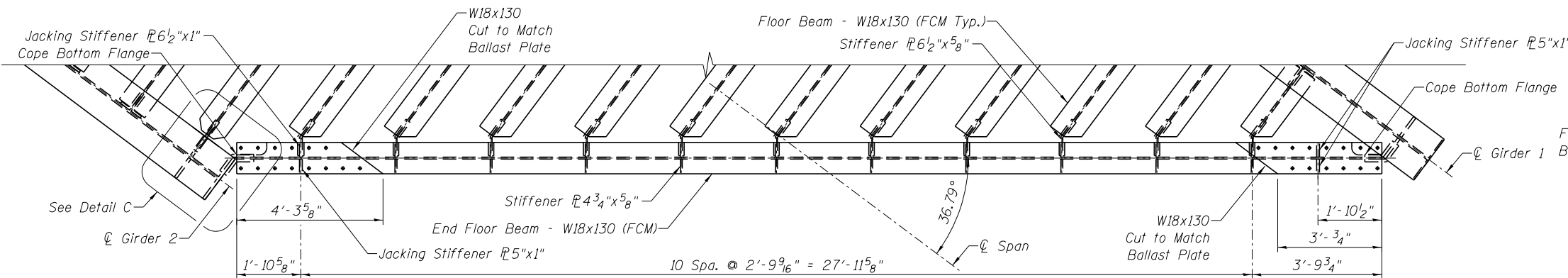
Scale: 1/4" = 1'-0"

Note: Floorplate and corresponding bolt holes not shown, for clarity. See Detail A on Deck Details sheet.



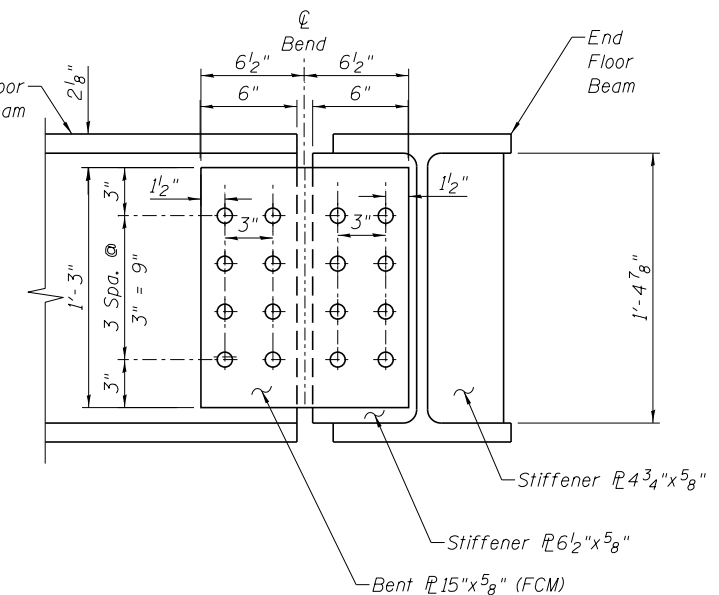
DETAIL A

Scale: 1" = 1'-0"



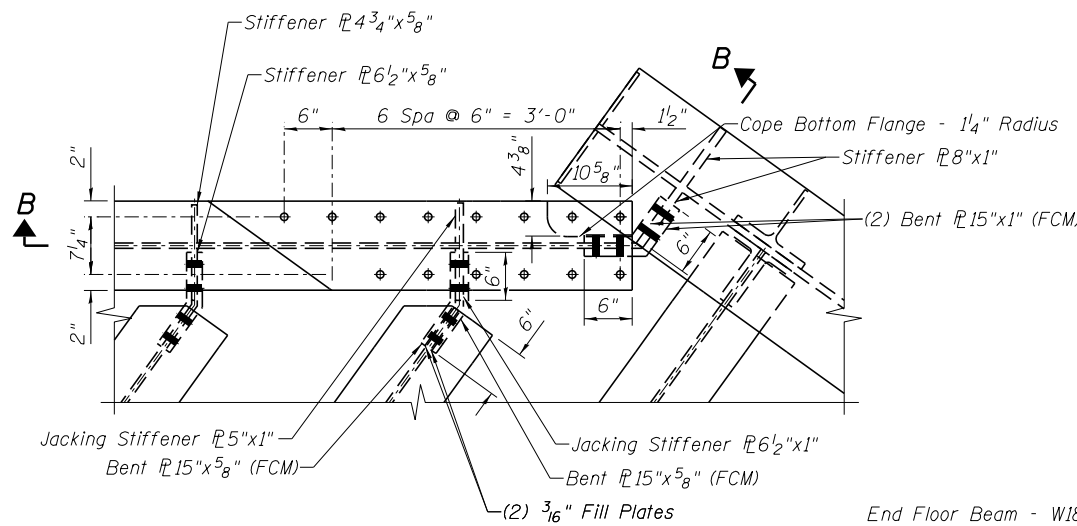
EAST END FLOOR BEAM PLAN

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



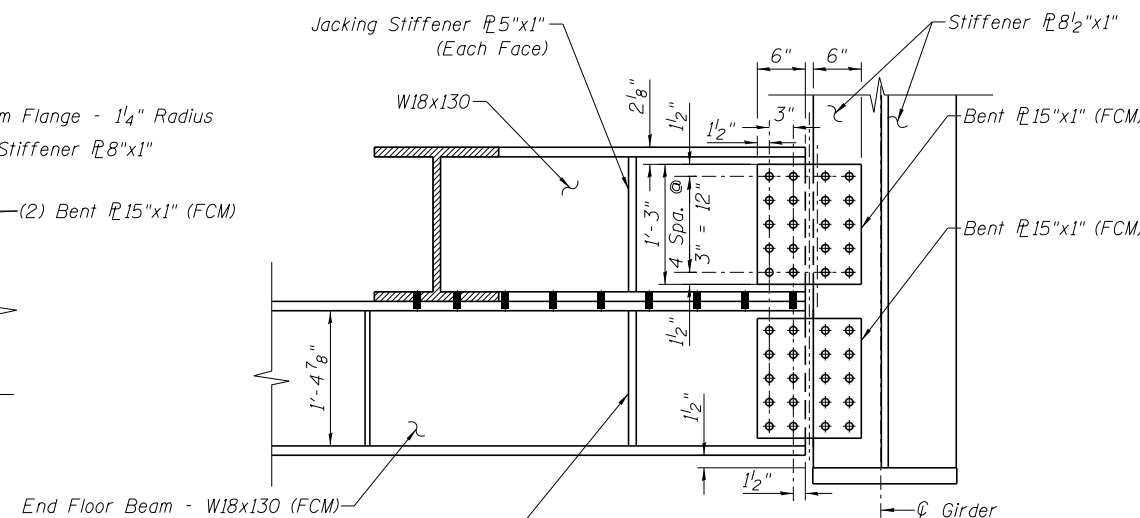
SECTION A-A

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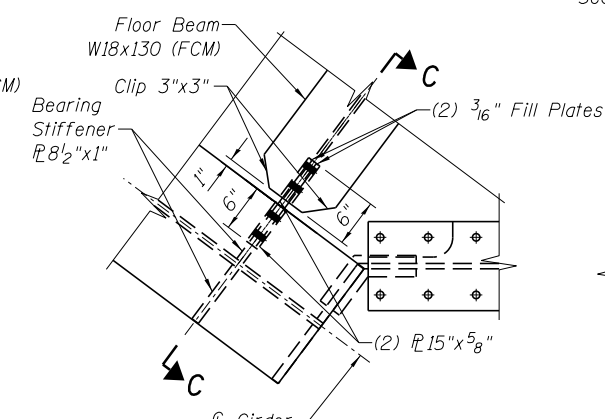
DETAIL B

Scale: 1/2" = 1'-0"



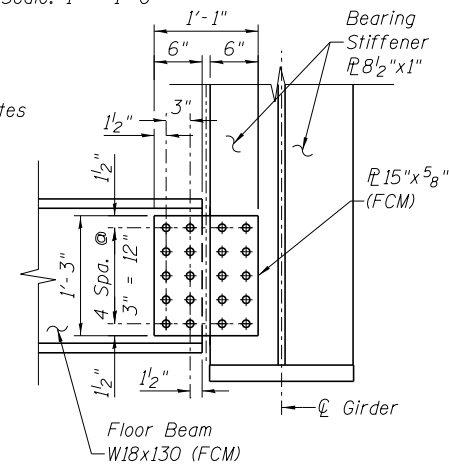
SECTION B-B

Scale: 1/2" = 1'-0"



DETAIL C

Scale: 1/2" = 1'-0"



SECTION C-C

Scale: 1/2" = 1'-0"

5/13/2019 6:43:34 PM ...\\0321400-028-FloorBeam.dgn



DESIGNED - APW	REVISED -
CHECKED - MFB	REVISED -
DRAWN - BJW	REVISED -
CHECKED - APW	REVISED -

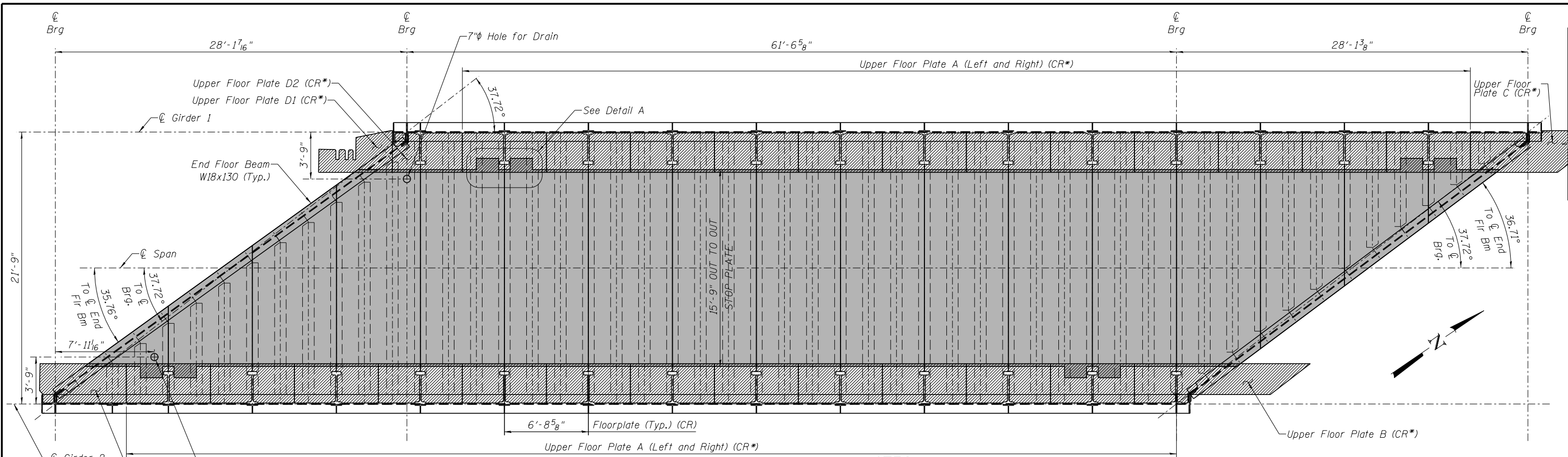
**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**END FLOORBEAM DETAILS
STRUCTURE NO. 032-3400**

SHEET NO. S- 32 OF 51 SHEETS

F.A.U. RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	184
CONTRACT NO. 87695				

ILLINOIS FED. AID PROJECT



PLAN

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

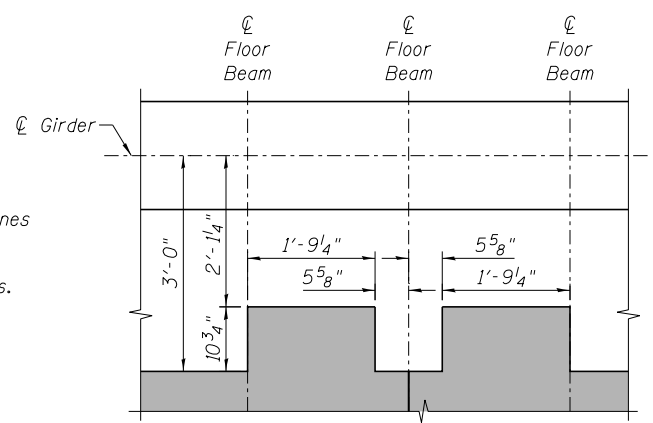
NOTES:

- (CR) Corrosion Resistant A588 Steel
- (CR*) Corrosion Resistant A588 Steel With Additional Requirements Due To Raised Pattern Surface.
- Increase Measured Gap 1" In Each Direction At 50°.

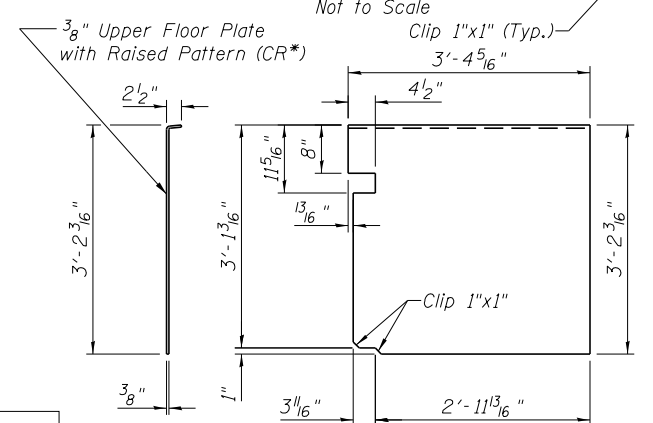
GENERAL NOTES

- Waterproofing** - Apply Spray On Membrane to Deck and Ballast Retainers per CN Standards as noted in the CN Guidelines for Design of Railway Structures. Protect Membrane with Two Layers of 3/8" Asphalt Panels, Stagger Joints.
- Design And Workmanship** - Per Current AREMA Manual For Railway Engineering
- Material** - Structural Steel Shall Be Per Current ASTM A588 Weathering Steel (CR) Or (CR*) High Strength Bolts Shall Be 7/8" φ Except As Noted. High Strength Bolts Shall Be Per ASTM A325, Type 3.
- Open Holes** - 15/16" Dia. For 7/8" φ H.S. Bolts And As Noted.
- Welding** - Per Current AREMA Manual For Railway Engineering and the AWS D1.5 Bridge Welding Code
- Fabrication** - All Shop And Field Welds On the Deck Shall Result in a Watertight Deck. Remove Sharp Edges Or Any Projections From Floor Plates Or Welds.

Estimated Weight (Not Including Bolts)
 - Structural Steel = 359,025 Lbs.
 (Includes Weight of Floor Plates, Ballast Stop Plates, Apron Plates and Walkway).

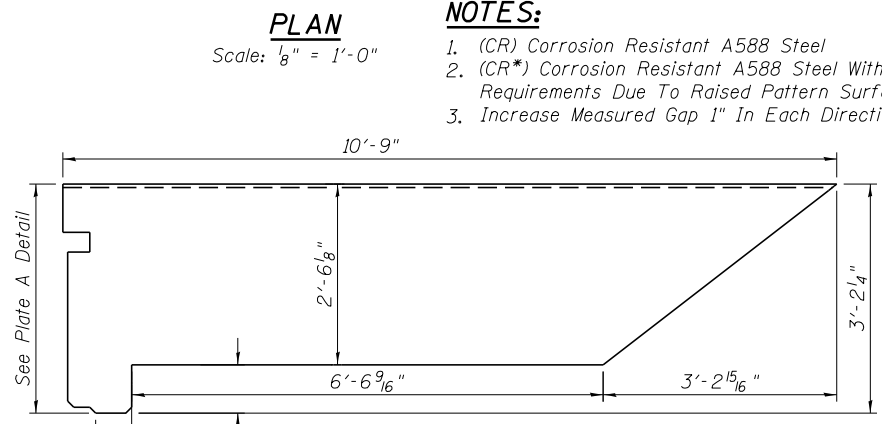


DETAIL A
Not to Scale

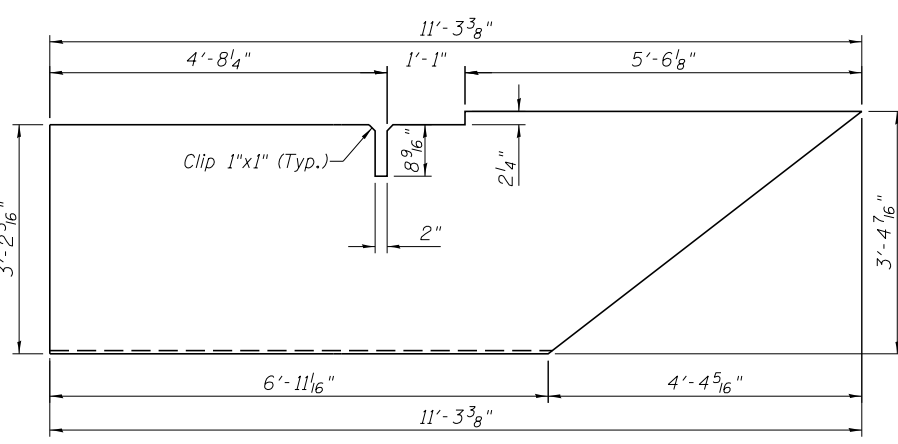


UPPER FLOOR PLATE A DETAIL

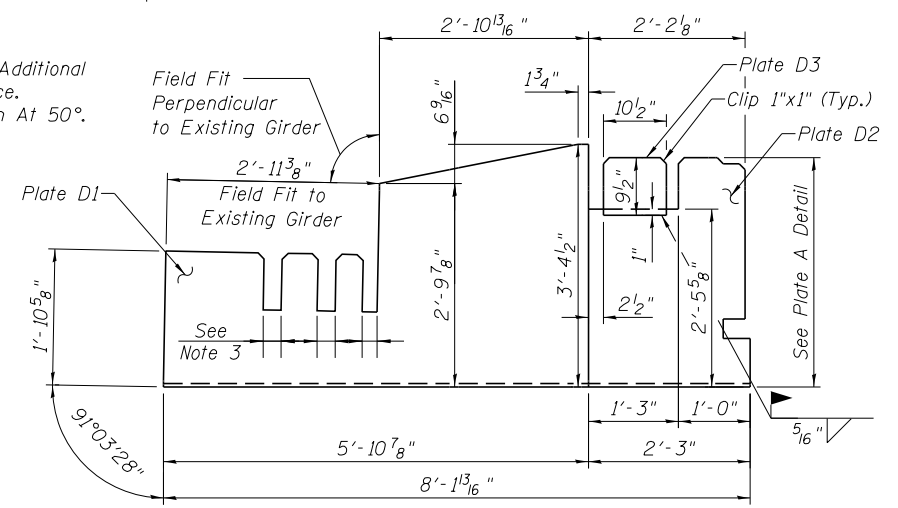
Left Plate Shown
 Right Plate is Mirror Image of Left Plate



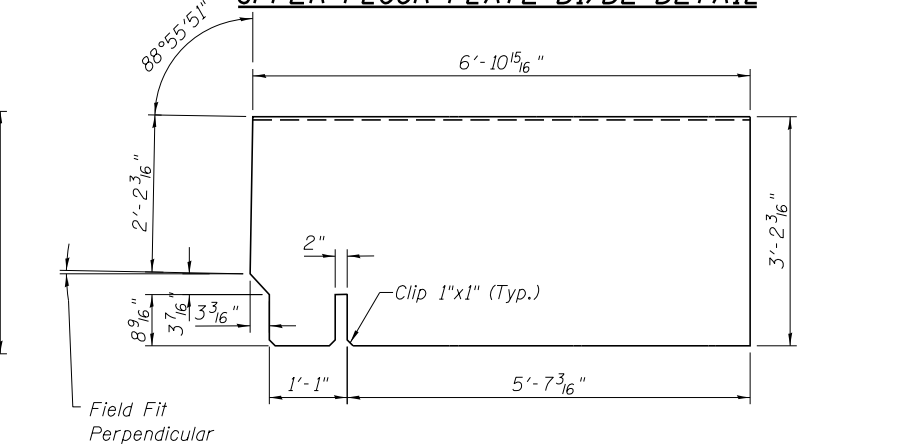
UPPER FLOOR PLATE B DETAIL



UPPER FLOOR PLATE C DETAIL



UPPER FLOOR PLATE D1/D2 DETAIL



UPPER FLOOR PLATE E DETAIL

**GRUNDY COUNTY, ILLINOIS
 HIGHWAY DEPARTMENT**

**FLOOR PLATE LAYOUT
 STRUCTURE NO. 032-3400**

SHEET NO. S- 33 OF 51 SHEETS

DESIGNED - APW	REVISED -
CHECKED - MFB	REVISED -
DRAWN - BJW	REVISED -
CHECKED - APW	REVISED -

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	185
CONTRACT NO. 87695				

ILLINOIS FED. AID PROJECT

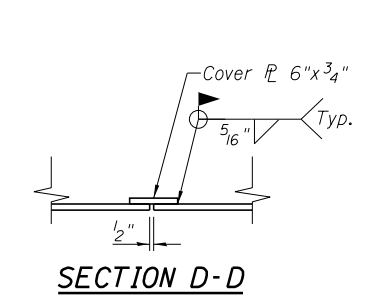
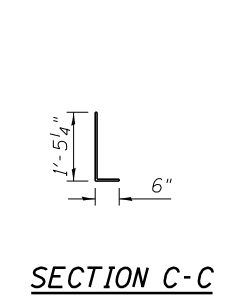
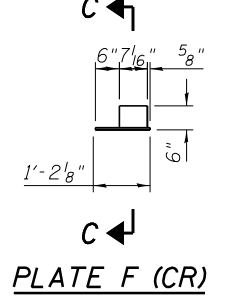
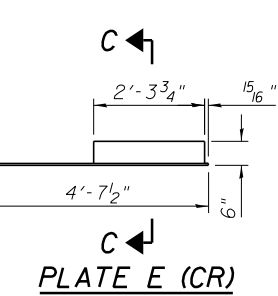
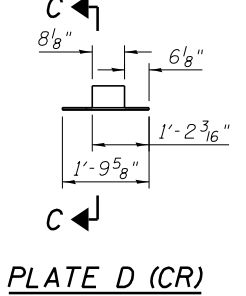
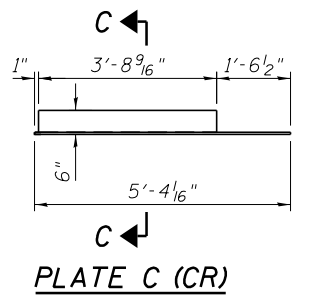
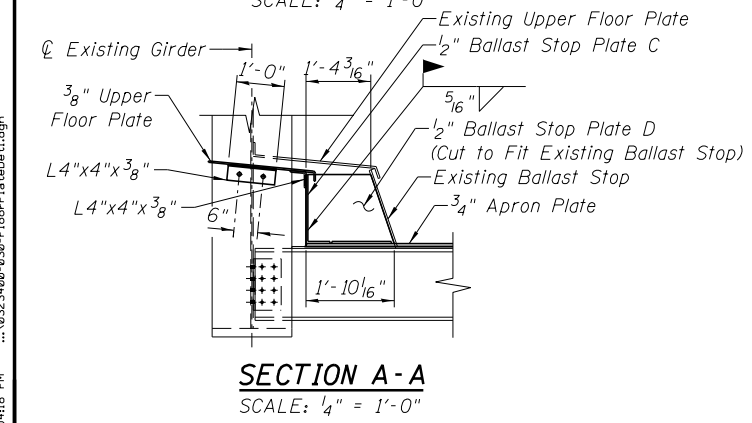
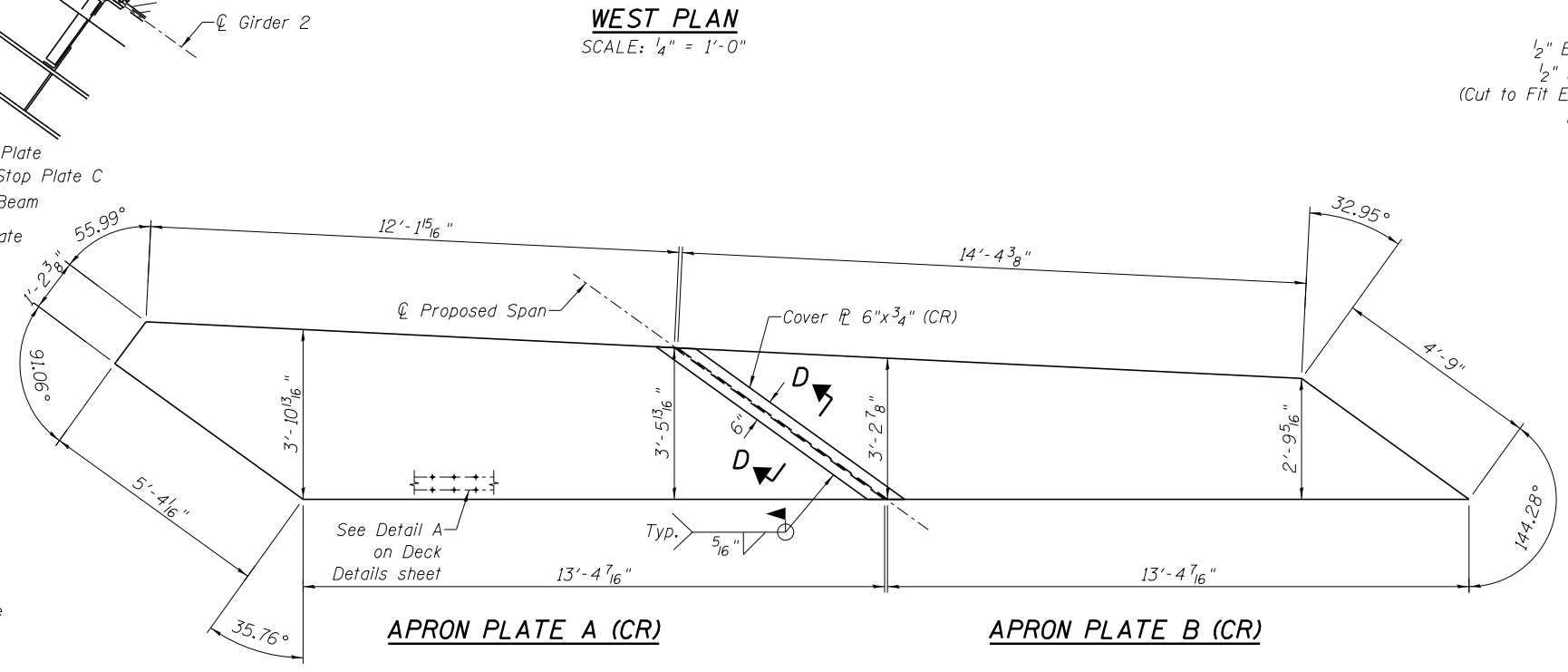
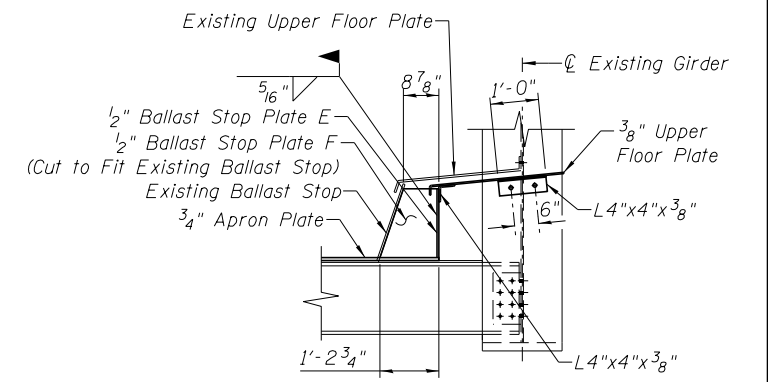
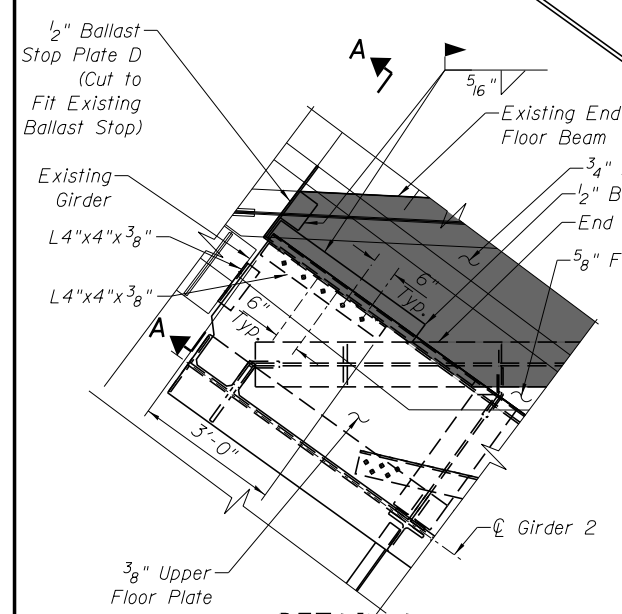
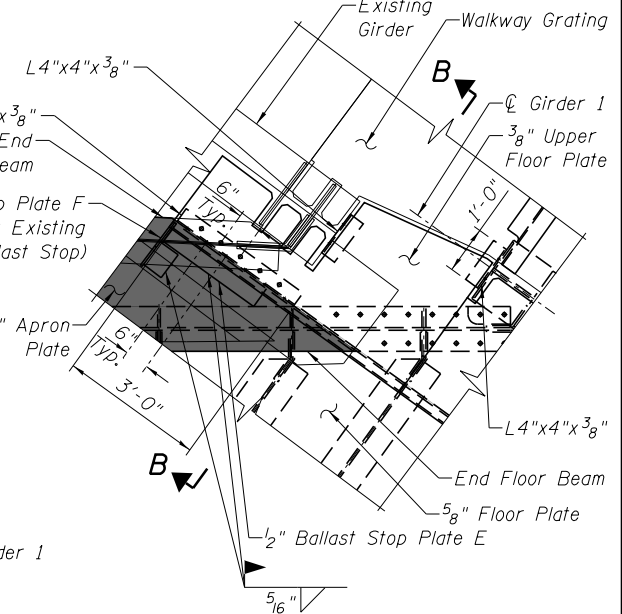
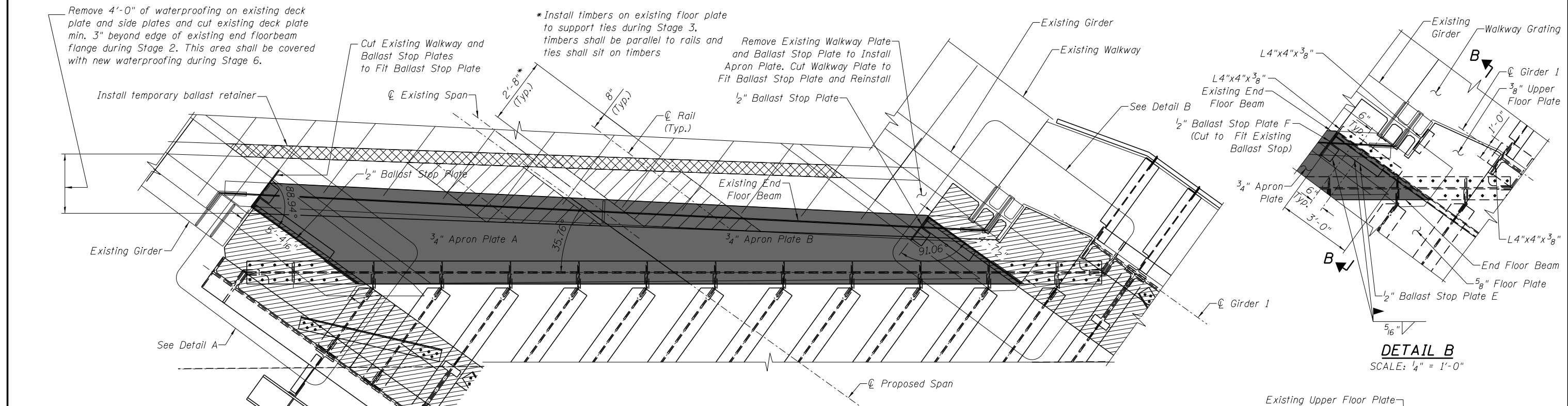
6/6/2019 6:04:17 PM ...\\0323400-02\FloorPlate.dgn



Remove 4'-0" of waterproofing on existing deck plate and side plates and cut existing deck plate min. 3" beyond edge of existing end floorbeam flange during Stage 2. This area shall be covered with new waterproofing during Stage 6.

*Install timbers on existing floor plate to support ties during Stage 3. timbers shall be parallel to rails and ties shall sit on timbers

Remove Existing Walkway Plate and Ballast Stop Plate to Install Apron Plate. Cut Walkway Plate to Fit Ballast Stop Plate and Reinstall



NOTES:
1. (CR) Corrosion Resistant A588 Steel

6/6/2019 6:04:18 PM ...\\0323400-030-FloorPlateDetail.dgn



DESIGNED - APW	REVISD -
CHECKED - MFB	REVISD -
DRAWN - BJW	REVISD -
CHECKED - APW	REVISD -

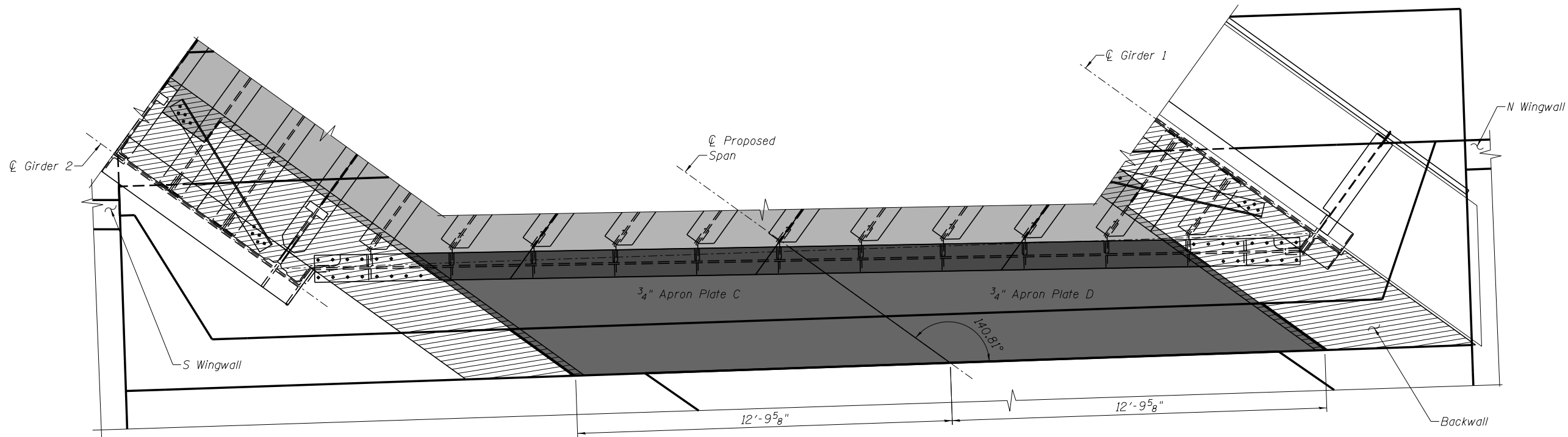
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**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

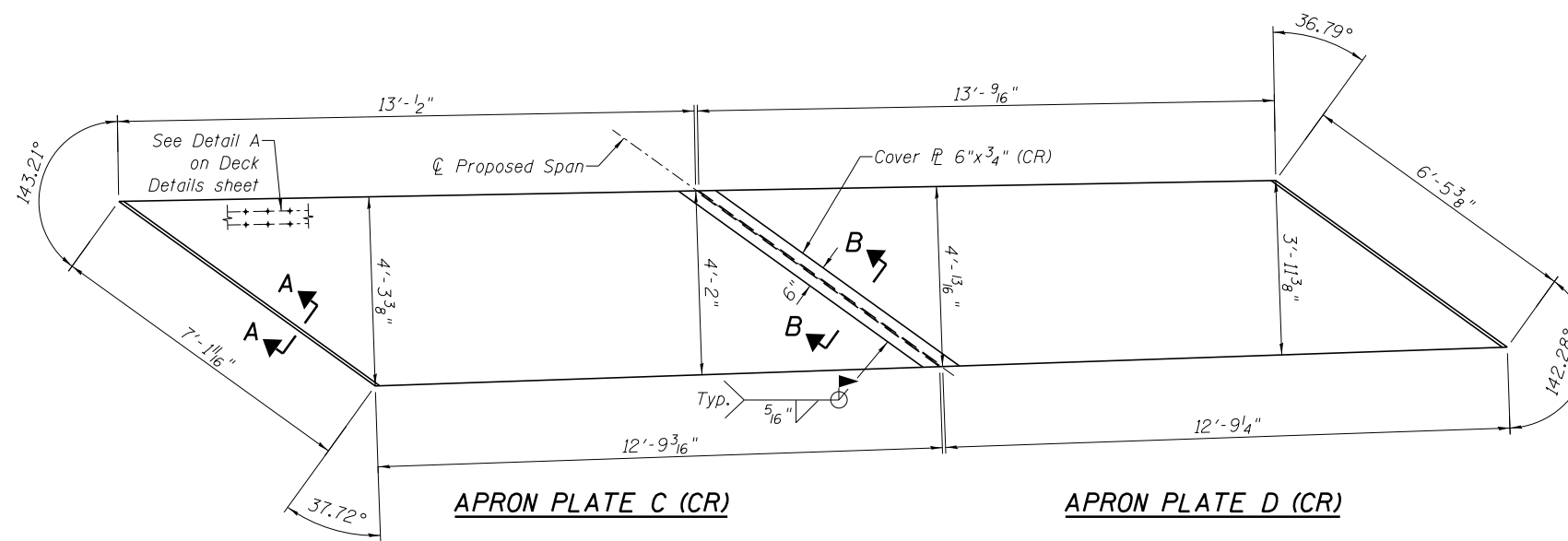
**FLOOR PLATE DETAILS 1
STRUCTURE NO. 032-3400**

SHEET NO. S- 34 OF 51 SHEETS

F.A.U. RTE. 384	SECTION 11-00134-02-WR	COUNTY GRUNDY	TOTAL SHEETS 239	SHEET NO. 186
CONTRACT NO. 87695			ILLINOIS FED. AID PROJECT	



EAST PLAN
SCALE: 1/4" = 1'-0"



APRON PLATE C (CR)

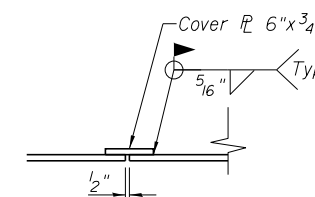
APRON PLATE D (CR)

NOTES:

1. (CR) Corrosion Resistant A588 Steel



SECTION A-A



SECTION B-B

5/13/2019 6:43:37 PM ...\\0323480-031-FloorPlateDet2.dgn



DESIGNED - APW	REVISED -
CHECKED - MFB	REVISED -
DRAWN - BJW	REVISED -
CHECKED - APW	REVISED -

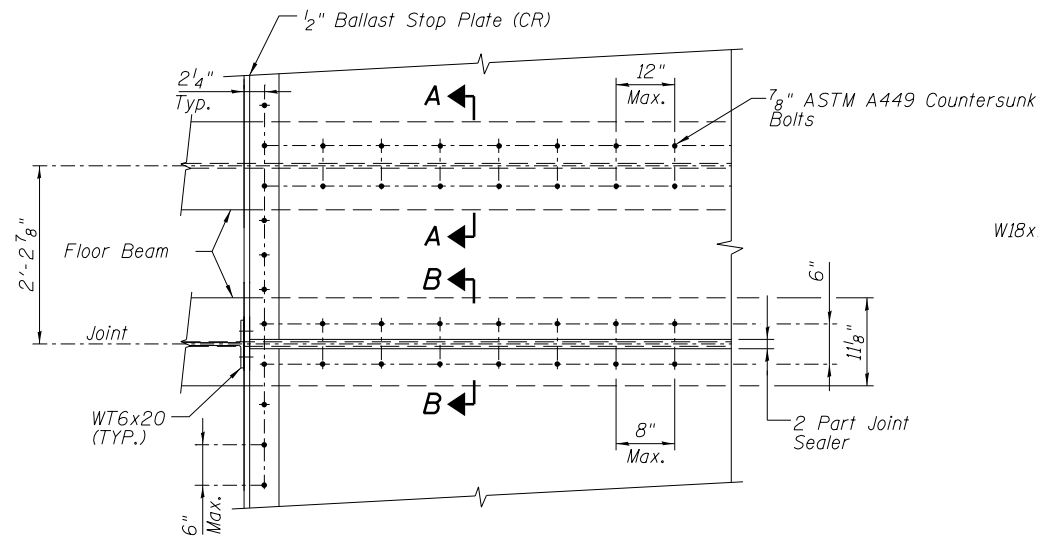
**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**FLOOR PLATE DETAILS 2
STRUCTURE NO. 032-3400**

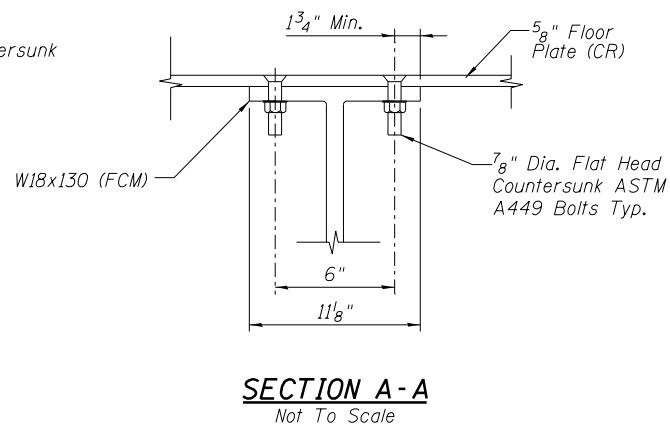
SHEET NO. S- 35 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	187
CONTRACT NO. 87695				

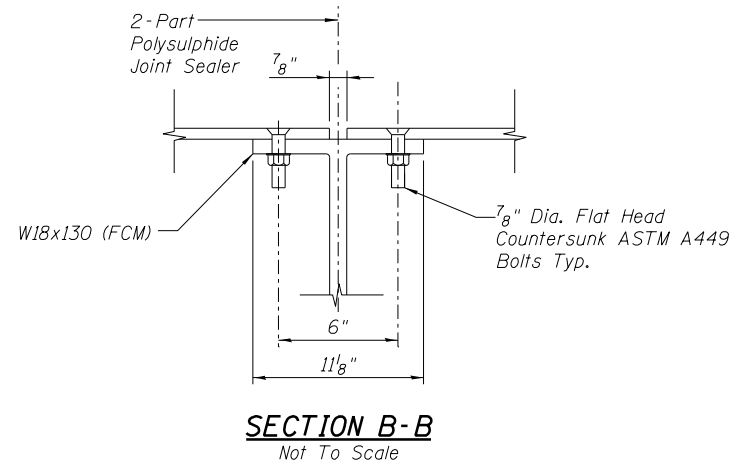
ILLINOIS FED. AID PROJECT



PLAN: DECK PLT CONN.
Not To Scale



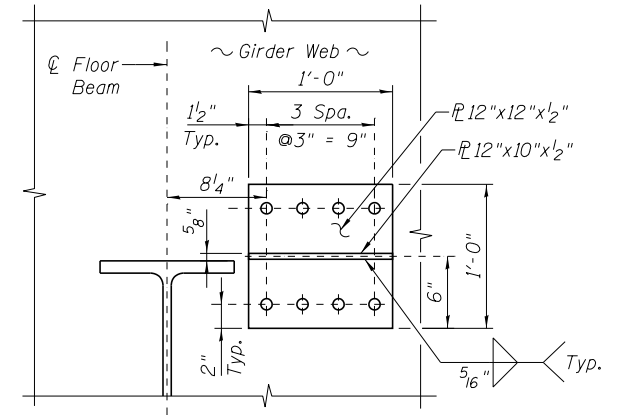
SECTION A-A
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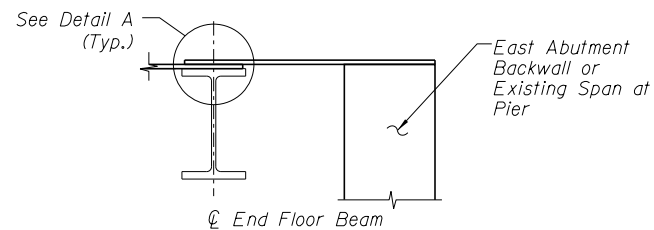
SECTION B-B
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NOTES:

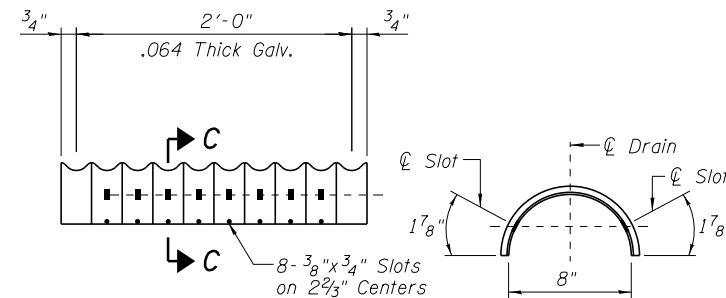
1. (CR) Corrosion Resistant A588 Steel



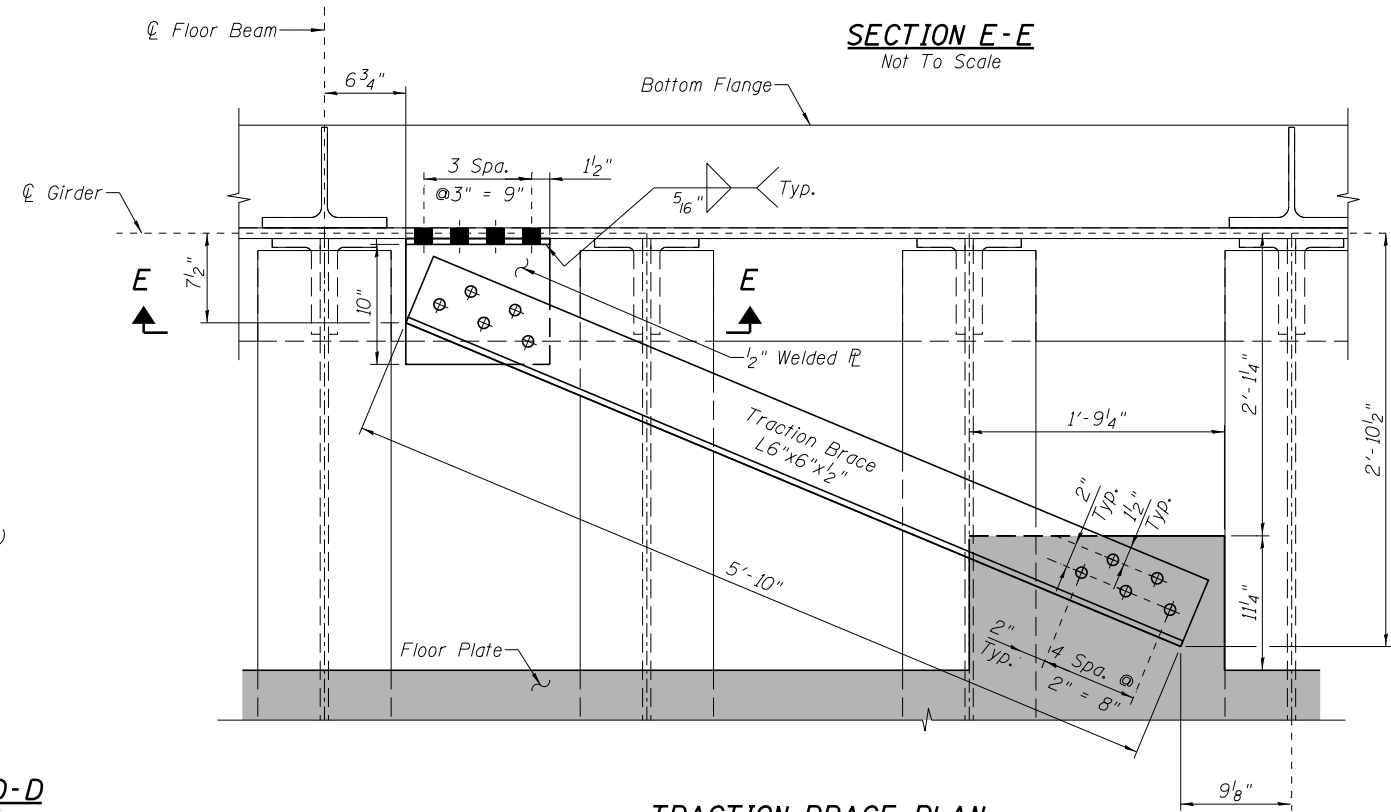
SECTION E-E
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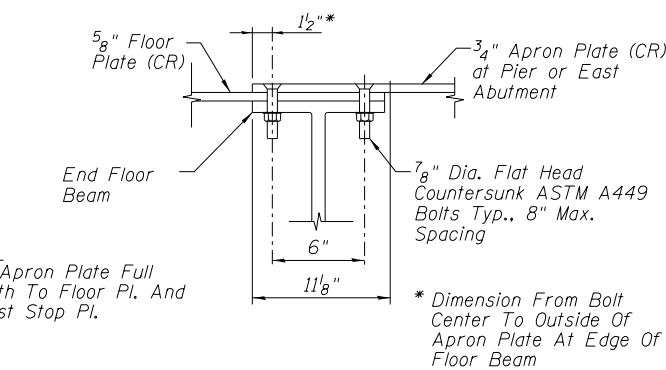
APRON PLATE ELEVATION
Not To Scale



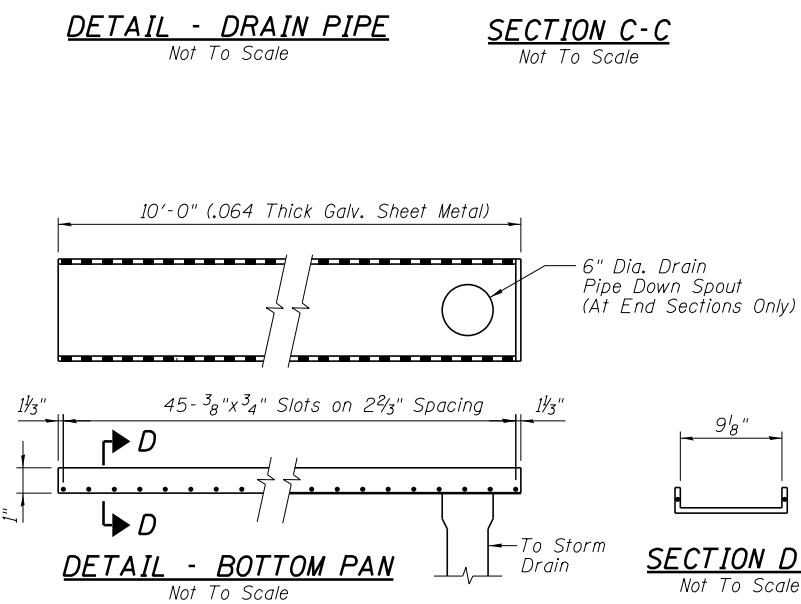
SECTION C-C
Not To Scale



TRACTION BRACE PLAN
Not To Scale



DETAIL A
Not To Scale



SECTION D-D
Not To Scale

5/13/2019 6:43:37 PM ...:\Sheets\0323480-032-DeckDet.dgn



DESIGNED - APW	REVISED -
CHECKED - MFB	REVISED -
DRAWN - BJW	REVISED -
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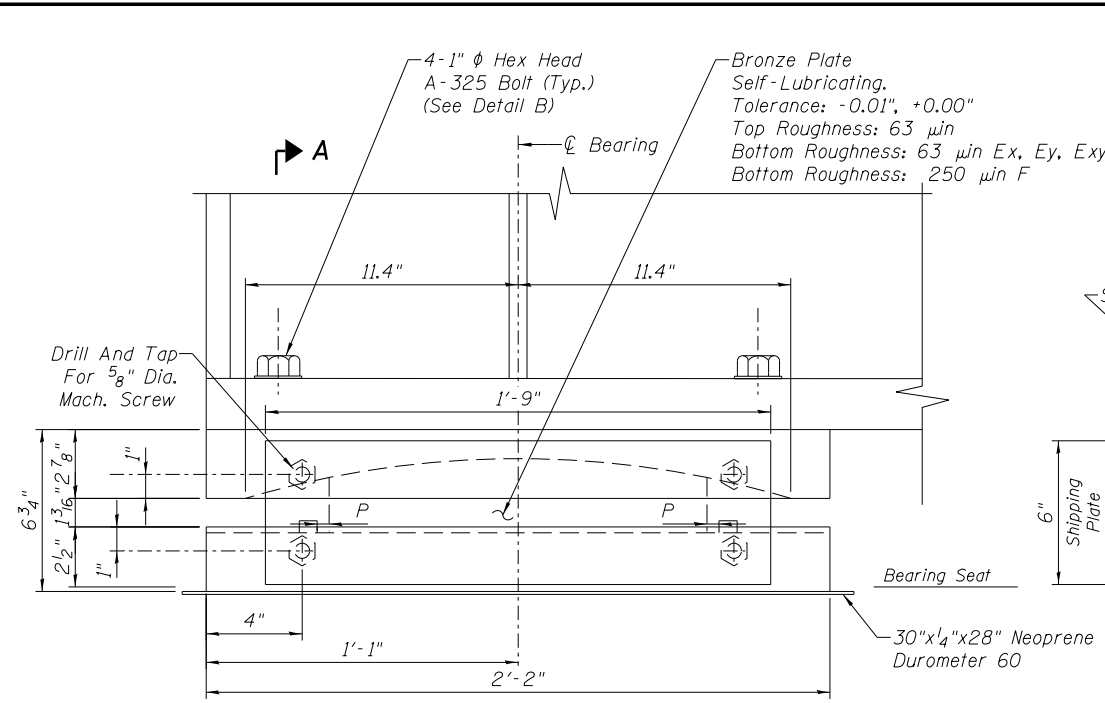
**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**DECK DETAILS
STRUCTURE NO. 032-3400**

SHEET NO. S- 36 OF 51 SHEETS

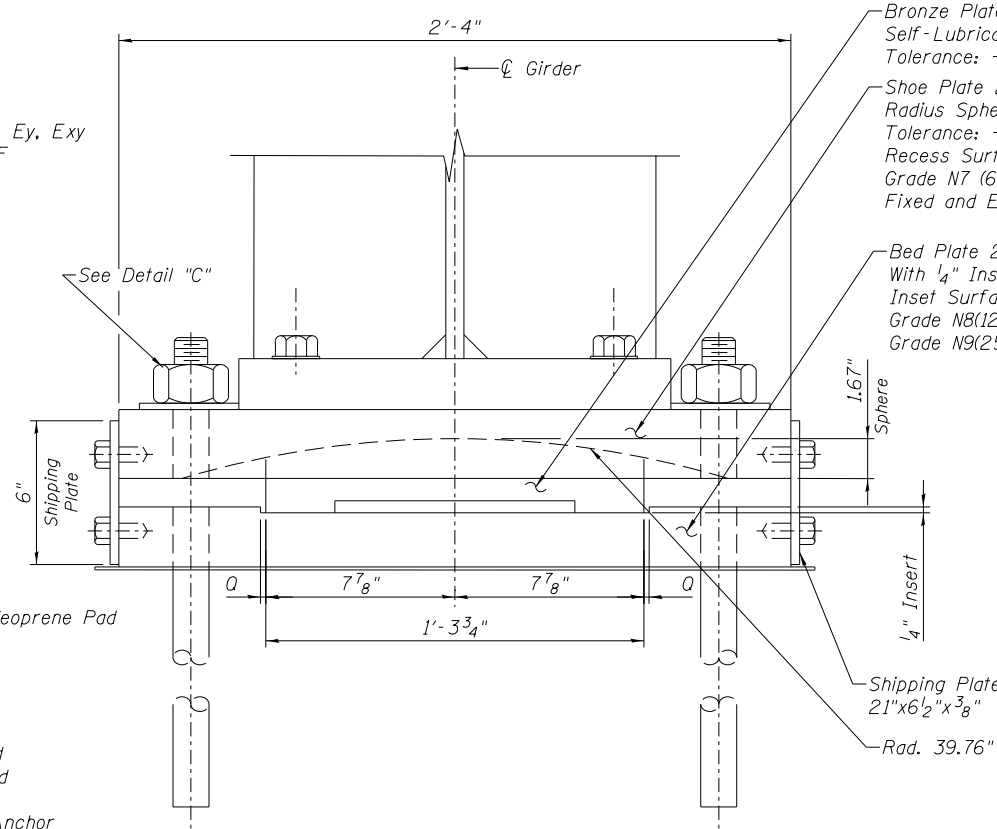
F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	188
				CONTRACT NO. 87695

ILLINOIS FED. AID PROJECT



ELEVATION: BEARING
Not To Scale

NOTES:
Bearings Shall Be Shipped Assembled With Plates And 5/8" Machine Bolts. Plates Shall Be Removed After Anchor Bolts Have Been Installed. (3 Plates Per Bearing). Reinstall Shipping Bolts in Holes.



SECTION A-A
Not To Scale

SHIM PLATE THICKNESS

Location	Total Shim Thickness
Pier, Girder 1	1 ¹³ / ₁₆ "
Pier, Girder 2	2 ³ / ₈ "
Abutment, Girder 1	1 ¹¹ / ₁₆ "
Abutment, Girder 2	0"

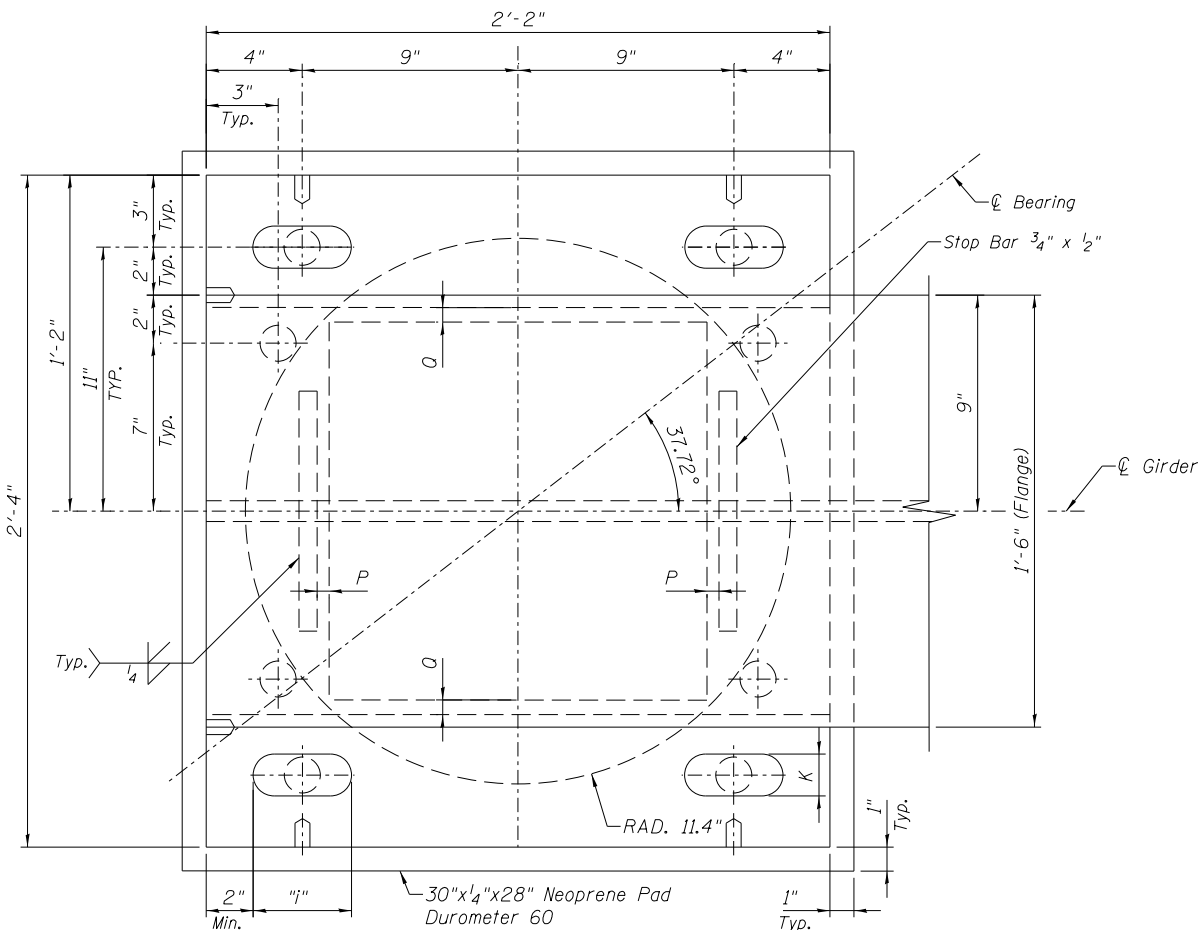
BEARING SERVICE LOADS

V_D	=	209 kips/Bearing
V_{L+IM}	=	416 kips/Bearing
V_{TOT}	=	625 kips/Bearing
$H_{MIN} = \frac{V_{TOT}}{10}$	=	63 kips/Bearing

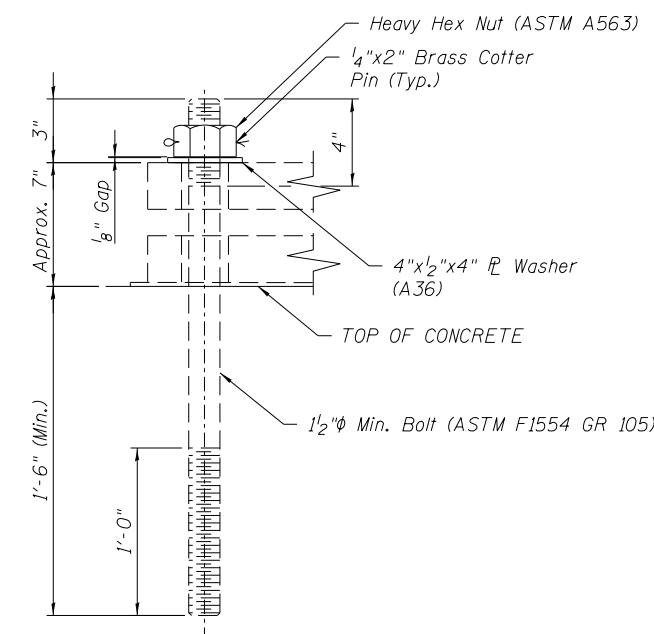
DETAIL "B"
Not To Scale

Note: Girders Bearings require Shim Plates under Bed Plates. Contractor shall submit Shim Plate plan to Engineer for approval prior to ordering steel. Cost to be included with Furnishing and Erecting Structural Steel, Special.

Bearing Position	Dimensions			
	P (in)	Q (in)	i (in)	k (in)
F	.039	.039	1.92	Round
Ey	.039	.63	1.92	Round
Ex	1.3	.039	4.10	1.92
Exy	1.3	.63	4.10	1.92



PLAN: BEARING
Not To Scale



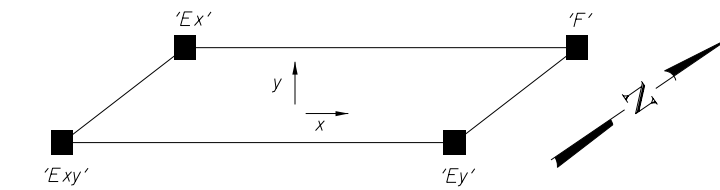
NOTES:

Concrete To Be Drilled After Determining Bolt Location. Bolts To Be Grouted Using Non-Shrink Grout. Bolts, Nuts & Washers Shall Be Fully Galvanized.

Bolt Threaded 12" To Extend 1'-6" Into Concrete. Concrete To Be Drilled After Determining Bolt Location. Bolts To Be Grouted By Using Non-Shrink Grout. Bolts Shall Be Fully Galvanized.

Contractor Shall Carefully Coordinate Placement of the Hold Down Bolts With Erection Procedure to Ensure All Bolts Can Be Installed and Tightened.

DETAIL "C"
Not To Scale



BEARING POSITIONS
NOT TO SCALE

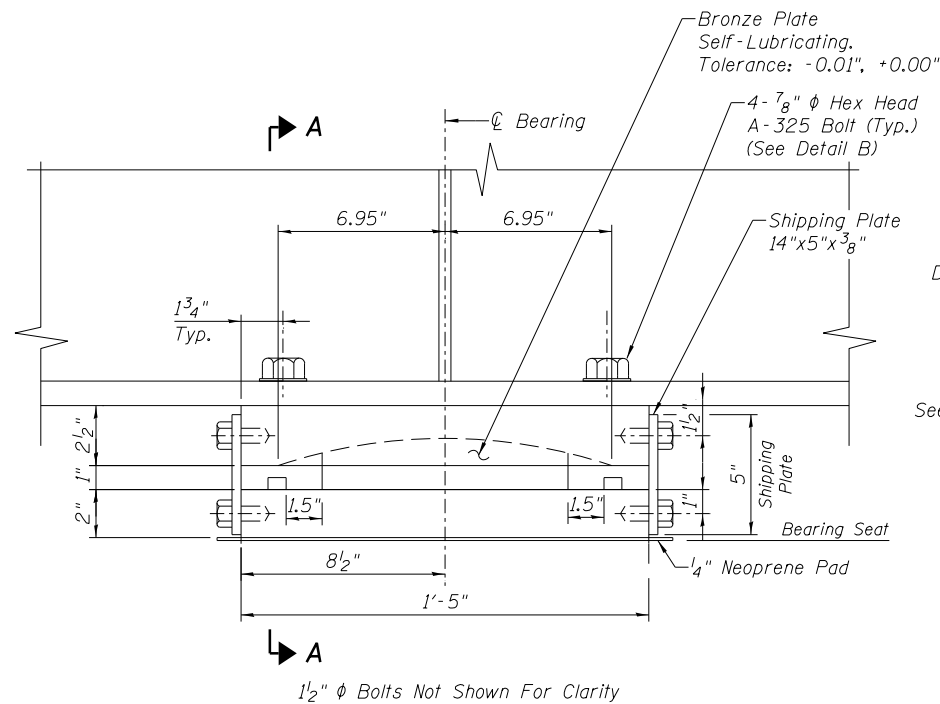
STANDARD NOTES

- Design And Workmanship Shall Be In Accordance With AREMA Manual Chap. 15.
- Material Shall Be In Accordance With The Following Specifications:
 - Structural Steel: ASTM A709 Grade 50W for Bearing Plates.
 - Bronze Plates: ASTM B22-82 Copper Alloy UNS No. C86300
 - Welding: AWS 1.5
 - Anchor Bolts: ASTM F1554-Grade 105
 - HS Bolts: ASTM F3125 A325 Type 3
- All Holes Shall Be Drilled Or Sub-Punched And Reamed.
- All Non-Sliding Surfaces Of Bearings Shall Be Zinc-Metalized In Accordance With CSA G189. Zinc Coating Shall Not Be Less Than 0.01".

Self Lubricating Bronze Bearing Plates Shall Be As Detailed On The Drawings. Either One Or Both Surfaces, As Indicated On The Drawings, Shall Be Provided With Trepanned Recesses Which Shall Be Filled With A Lubricating Compound Capable Of Withstanding The Atmospheric Elements And Consisting Of Graphite And Metallic Substance With A Lubricating Binder; The Compound Shall Be Pressed Into The Recesses By Hydraulic Presses So As To Form Dense, Non-Plastic Lubricating Inserts. The Lubricating Area Shall Comprise Approximately 25% Of The Total Area. The Bearing Metal Shall Meet The Requirements Of ASTM Specification B22-79, Copper Alloy UNS No. C86300 (Formerly Alloy E). The Coefficient Of Friction Shall Not Exceed 0.10. Acceptable Lubricant: G1 Lubrite Lubricant, Supplied By Lubrite Technologies.

Bearing "F," Lubricate Top Only
Bearings "Ex," "Ey," & "Exy," Lubricate Top And Bottom
Estimated Weight: Structural Steel = 1,380 Lbs. (Per Bearing)
(Does Not Include Weight of Shim Plates, Anchor Bolts, or Other Bolts)

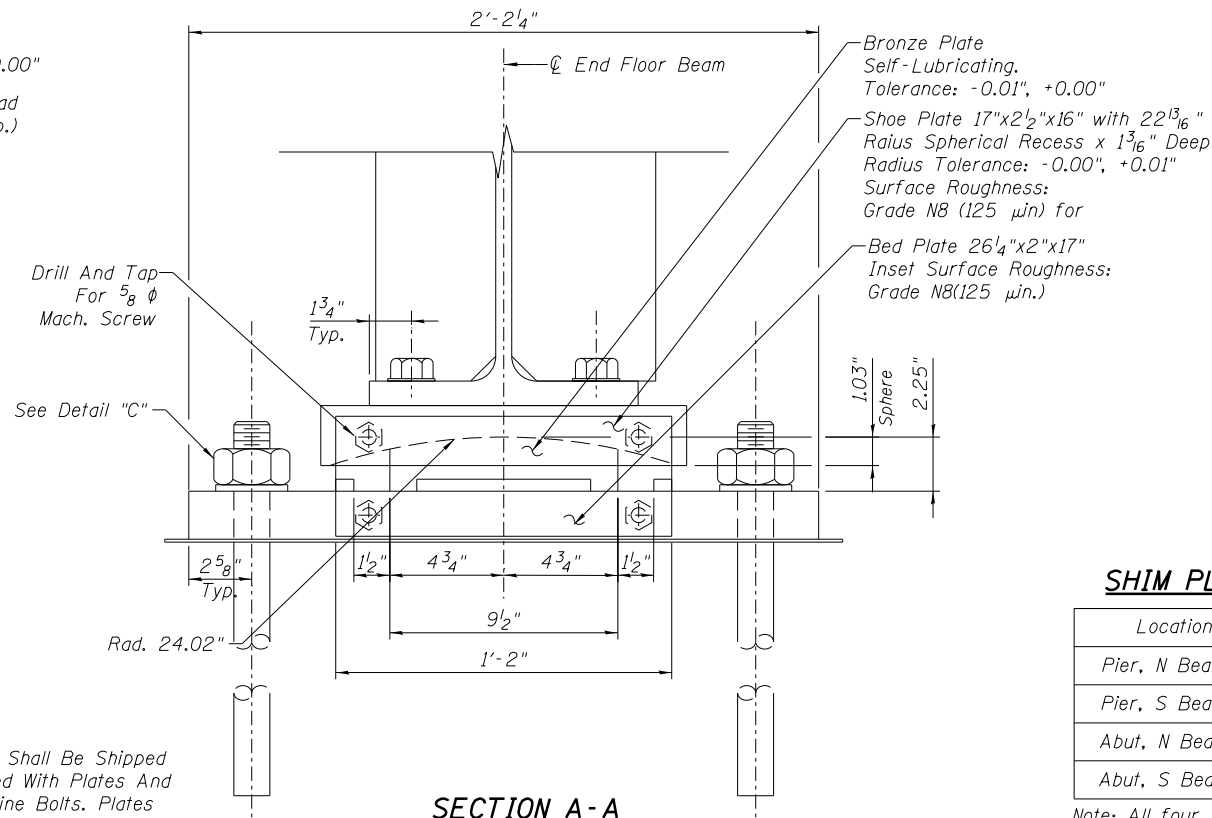
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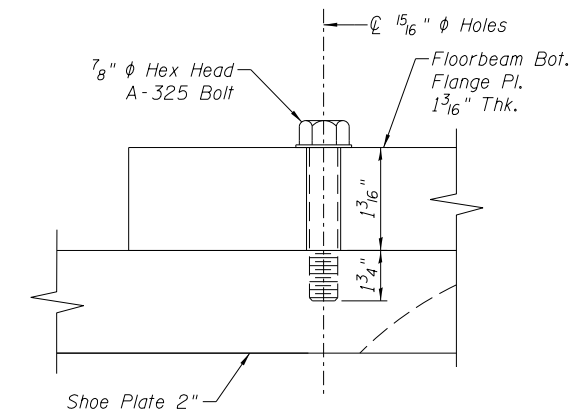
1/2" ϕ Bolts Not Shown For Clarity

BEARING ELEVATION
Not To Scale

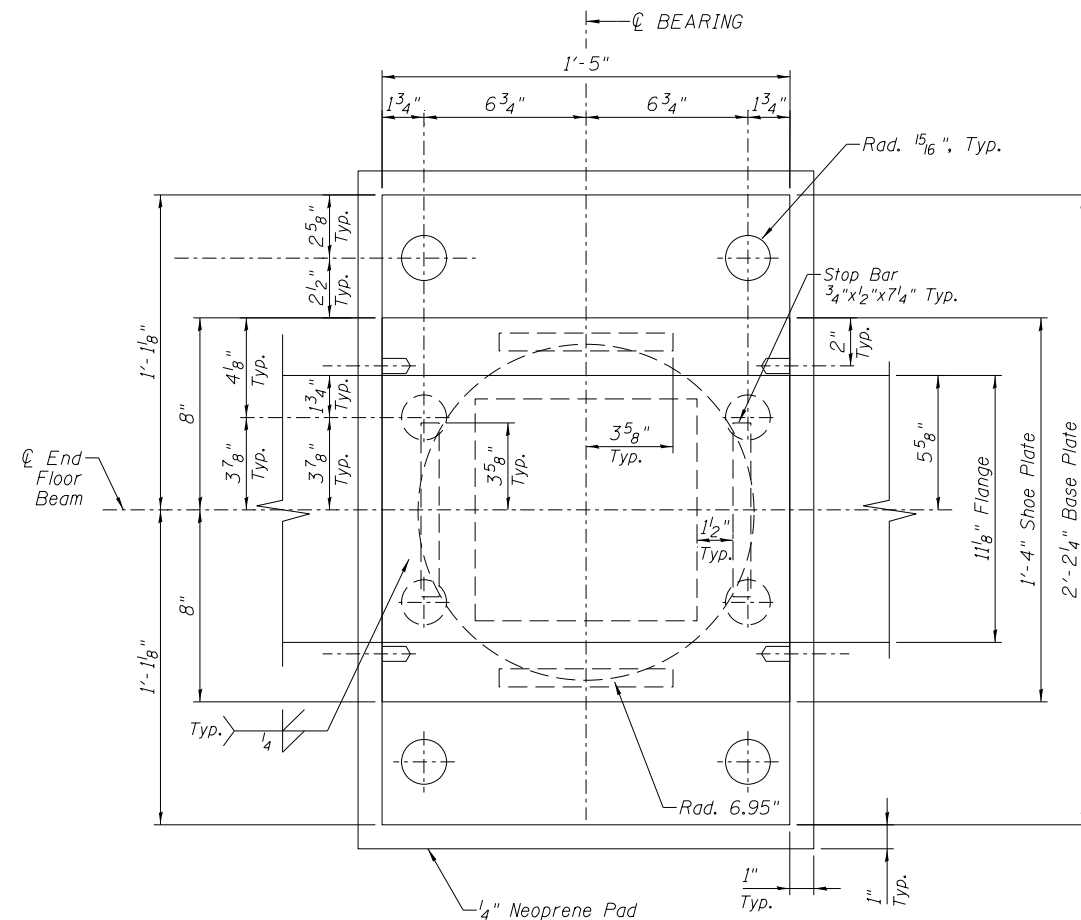
NOTES:
Bearings Shall Be Shipped Assembled With Plates And 5/8" Machine Bolts. Plates Shall Be Removed After Anchor Bolts Have Been Installed. (2 Plates Per Bearing).



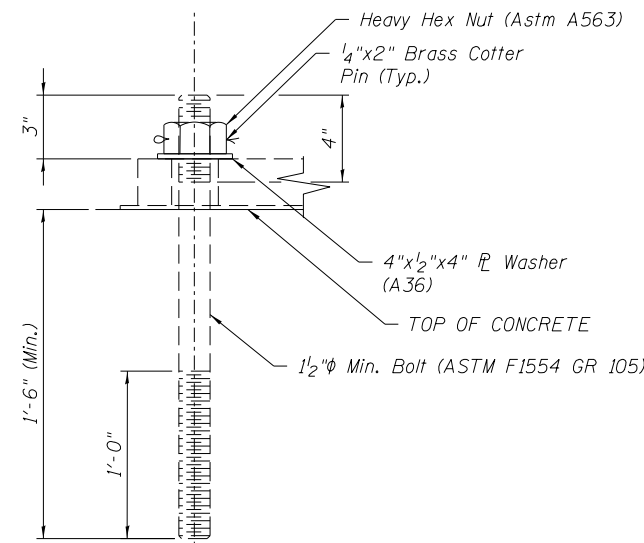
SECTION A-A
Not To Scale



DETAIL "B"
Not To Scale



BEARING PLAN @ SHOE PLATE
Not To Scale



NOTES:
Concrete To Be Drilled After Determining Bolt Location. Bolts To Be Grouted Using Non-Shrink Grout. Bolts, Nuts & Washers Shall Be Fully Galvanized.
Bolt Threaded 12" To Extend 1'-6" Into Concrete. Concrete To Be Drilled After Determining Bolt Location. Bolts To Be Grouted By Using Non-Shrink Grout. Bolts Shall Be Fully Galvanized.

Contractor Shall Carefully Coordinate Placement of the Hold Down Bolts With Erection Procedure to Ensure All Bolts Can Be Installed and Tightened.

DETAIL "C"
Not To Scale

SHIM PLATE THICKNESS

Location	Total Shim Thickness
Pier, N Bearing	8 1/4"
Pier, S Bearing	7 3/4"
Abut, N Bearing	5 5/16"
Abut, S Bearing	5 7/16"

Note: All four Floorbeam Bearings require Shim Plates under Bed Plates. Contractor shall submit Shim Plate plan to Engineer for approval prior to ordering steel. Cost to be included with Furnishing and Erecting Structural Steel, Special.

BEARING SERVICE LOADS

V_D	=	-- kips/Bearing
V_{L+IM}	=	-- kips/Bearing
V_{TOT}	=	227 kips/Bearing
$H_{MIN} = \frac{V_{TOT}}{10}$	=	23 kips/Bearing

STANDARD NOTES

- Design And Workmanship Shall Be In Accordance With AREMA Manual Chap. 15.
- Material Shall Be In Accordance With The Following Specifications:

- Structural Steel: ASTM A709 Grade 50W for Bearing Plates.
- Bronze Plates: ASTM B22-82 Copper Alloy UNS No. C86300
- Welding: CSA W59-03(2008)
- Anchor Bolts: ASTM F1554-Grade 105
- HS Bolts: ASTM F3125 A325 Type 3

- All Holes Shall Be Drilled Or Sub-Punched And Reamed.
- All Non-Sliding Surfaces Of Bearings Shall Be Zinc-Metalized In Accordance With CSA G189. Zinc Coating Shall Not Be Less Than 0.01".

Self Lubricating Bronze Bearing Plates Shall Be As Detailed On The Drawings. Either One Or Both Surfaces, As Indicated On The Drawings, Shall Be Provided With Trepanned Recesses Which Shall Be Filled With A Lubricating Compound Capable Of Withstanding The Atmospheric Elements And Consisting Of Graphite And Metallic Substance With A Lubricating Binder; The Compound Shall Be Pressed Into The Recesses By Hydraulic Presses So As To Form Dense, Non-Plastic Lubricating Inserts. The Lubricating Area Shall Comprise Approximately 25% Of The Total Area. The Bearing Metal Shall Meet The Requirements Of ASTM Specification B22-79, Copper Alloy UNS No. C86300 (Formerly Alloy E). The Coefficient Of Friction Shall Not Exceed 0.10. Acceptable Lubricant: G1 Lubrite Lubricant, Supplied By Lubrite Technologies.

Bearings Lubricate Top And Bottom

Estimated Weight
- Structural Steel = 525 Lbs. (Per Bearing)
(Does Not Include Weight Of Shim Plates, Anchor Bolts or Other Bolts)

7/10/2019 6:56:33 PM ...\\0323480-034-FBBearing.dgn



DESIGNED - APW	REVISIONS -
CHECKED - MFB	REVISIONS -
DRAWN - BJW	REVISIONS -
CHECKED - APW	REVISIONS -

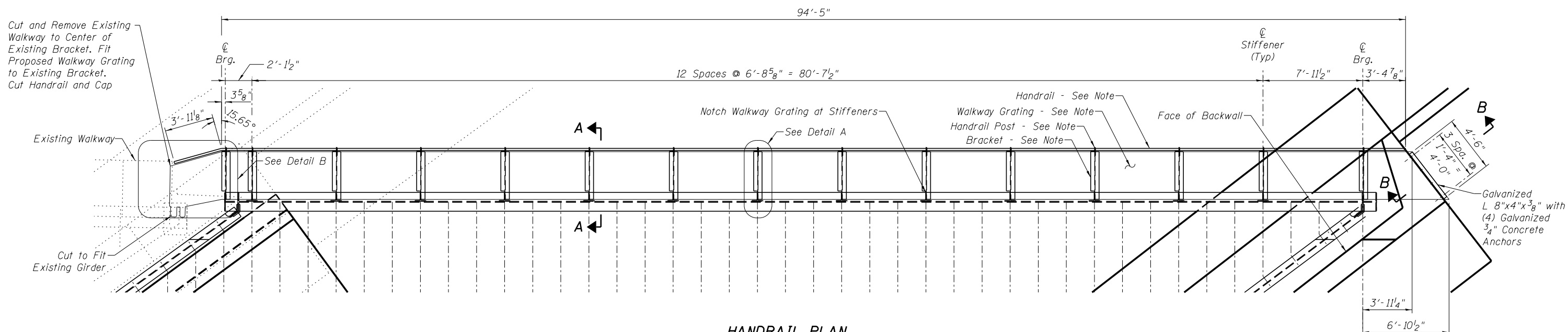
**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**FLOORBEAM BEARING DETAILS
STRUCTURE NO. 032-3400**

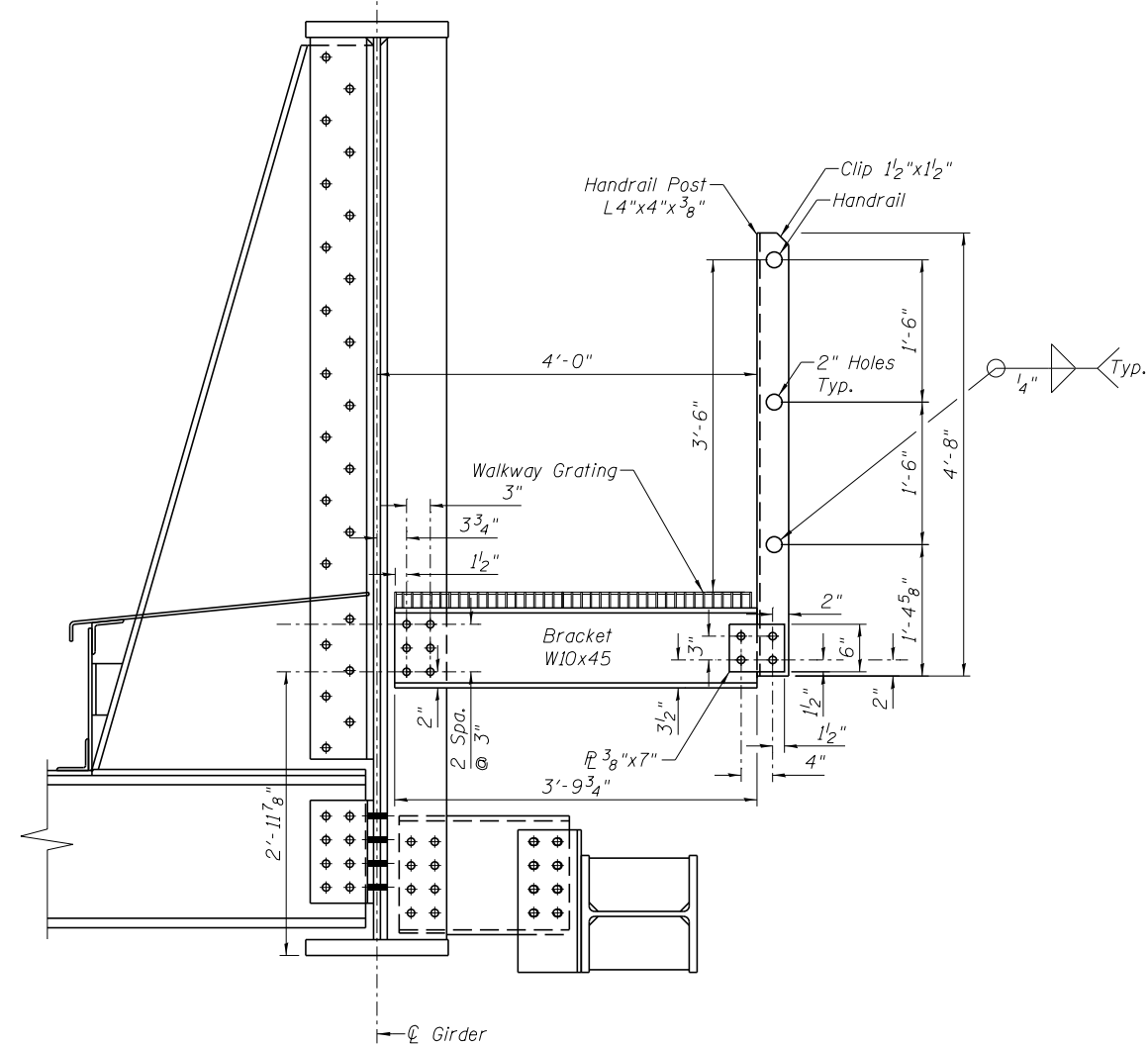
SHEET NO. S- 38 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	190
				CONTRACT NO. 87695

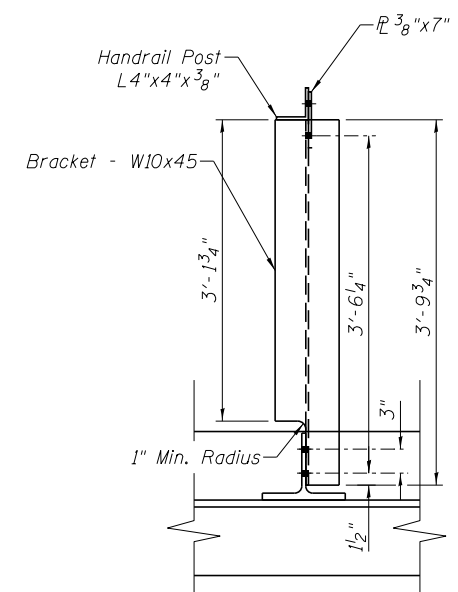
ILLINOIS FED. AID PROJECT



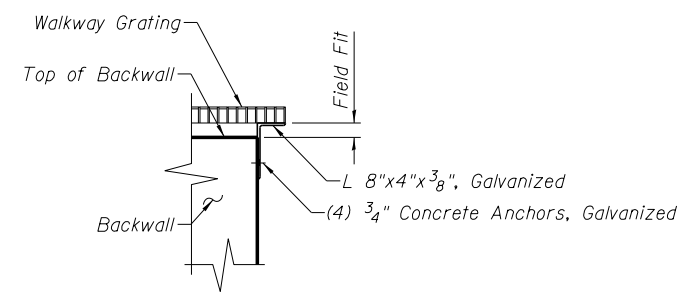
HANDRAIL PLAN
Scale: 1/8" = 1'-0"



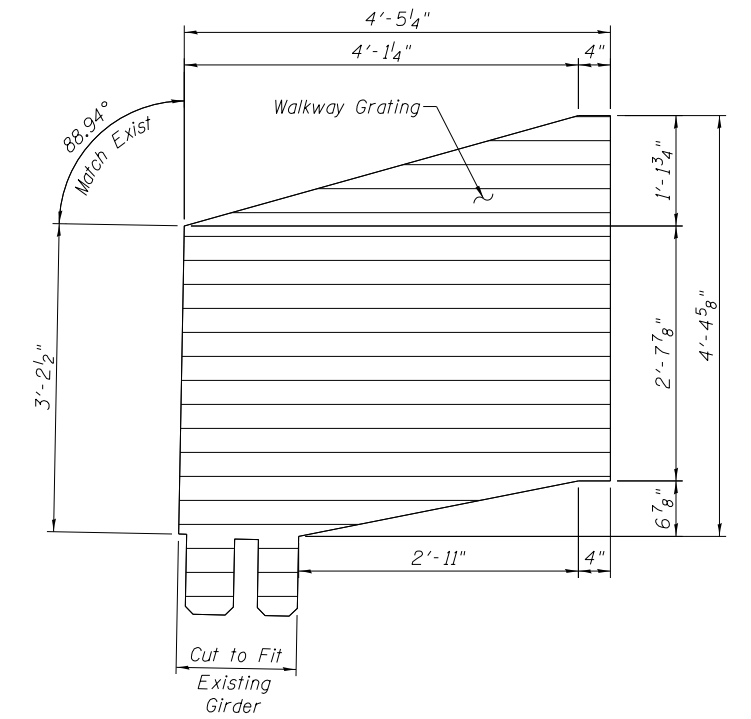
SECTION A-A
Scale: 1/2" = 1'-0"



DETAIL A
Scale: 1/2" = 1'-0"



SECTION B-B
Scale: 1/2" = 1'-0"



DETAIL B
Scale: 1/2" = 1'-0"

GENERAL NOTES

- Walkway Grating - Fisher & Ludlow Type 19-4 2"x 3/8" Galvanized
- Grating Fasteners - Type "D" Clips Bolted to Brackets per Manufacturer Specifications Galvanized
- Handrail - 1/2" Standard Steel Pipe Galvanized
- Handrail Post - L4"x4"x 3/8" - A572 Grade 50 Galvanized

4/2/2019 6:28:49 PM ...\\Sheets\0323480-035-Walkway.dgn



DESIGNED - APW	REVISED -
CHECKED - MFB	REVISED -
DRAWN - BJW	REVISED -
CHECKED - APW	REVISED -

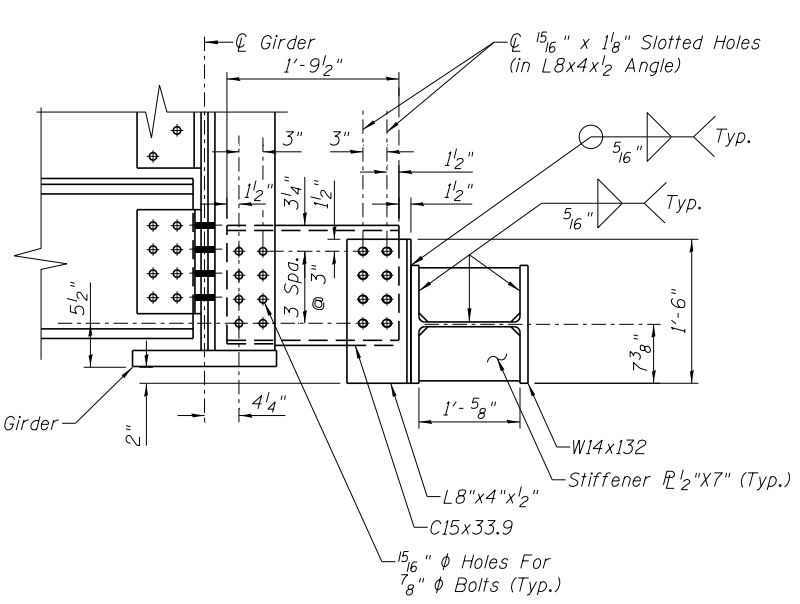
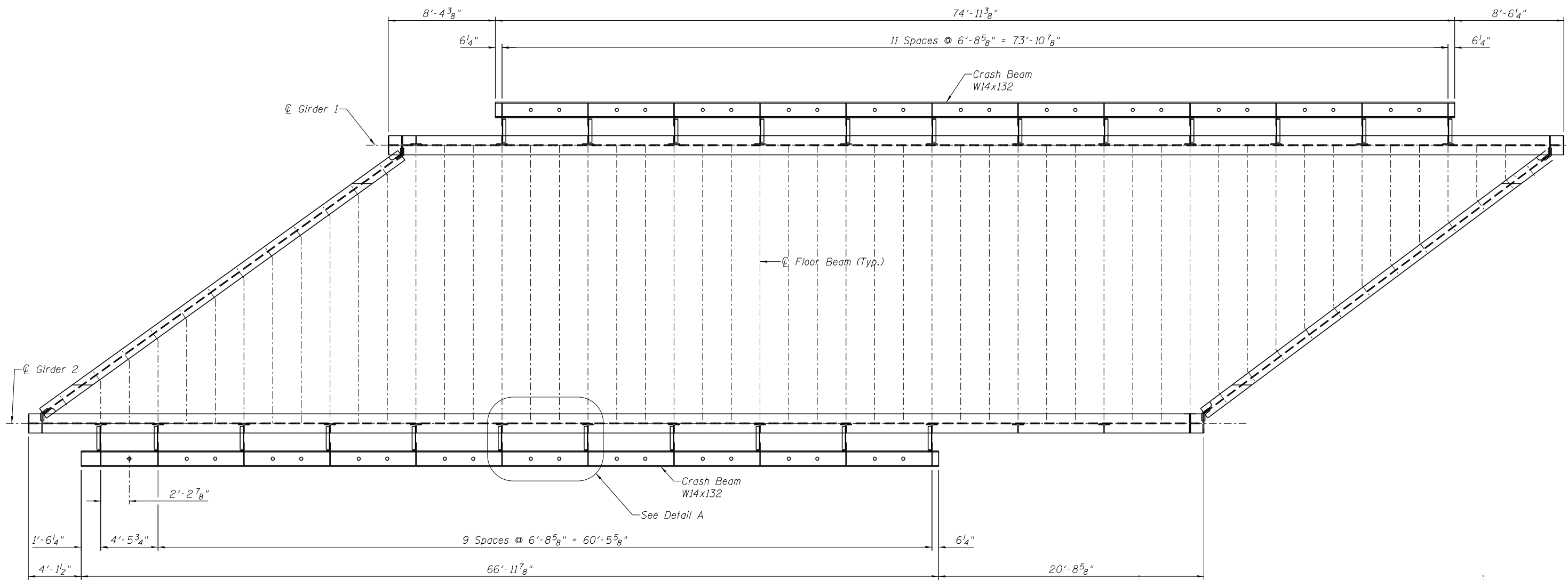
**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**WALKWAY DETAILS
STRUCTURE NO. 032-3400**

SHEET NO. S- 39 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	191
				CONTRACT NO. 87695

ILLINOIS FED. AID PROJECT



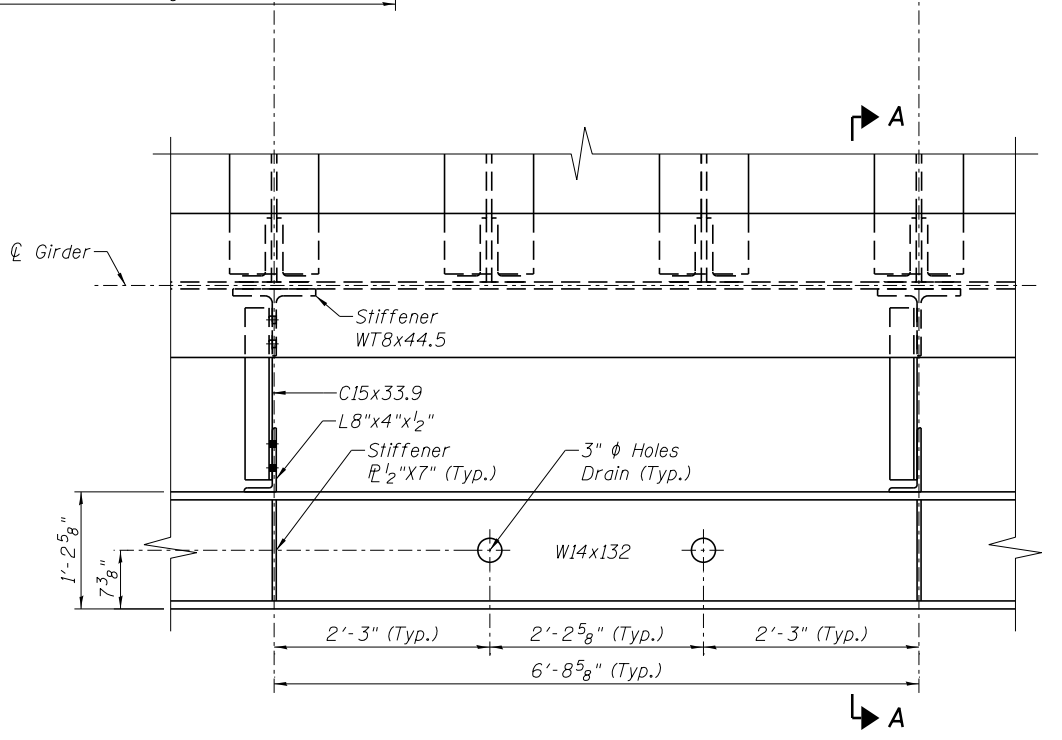
SECTION A-A
Scale: 1/2" = 1'-0"

CRASH BEAM PLAN
Scale: 1/8" = 1'-0"

NOTES:

1. For general notes, see General Notes sheets
2. Material shall be in accordance with the following specs
3. Structural steel: ASTM A709/A588/A572/A36 grade 50W
For all members on this sheet
4. Welding: AWS D1.5
5. H.S. bolts: ASTM F3125 A325 Type 3 7/8" dia. u.n.o.
6. All holes to be drilled or sub-punched and reamed
7. All H.S. bolts to be tightened by turn of nut method

Estimated Weight
 - Structural Steel = 11,850 Lbs. (Crash Beam Assembly at Girder 1)
 = 10,130 Lbs. (Crash Beam Assembly at Girder 2)
 (Does Not Include Weight of Bolts)



DETAIL A
Scale: 1/2" = 1'-0"

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DESIGNED - APW	REVISIONS
CHECKED - MFB	REVISIONS
DRAWN - BJW	REVISIONS
CHECKED - APW	REVISIONS
PLOT DATE = 5/13/2019	

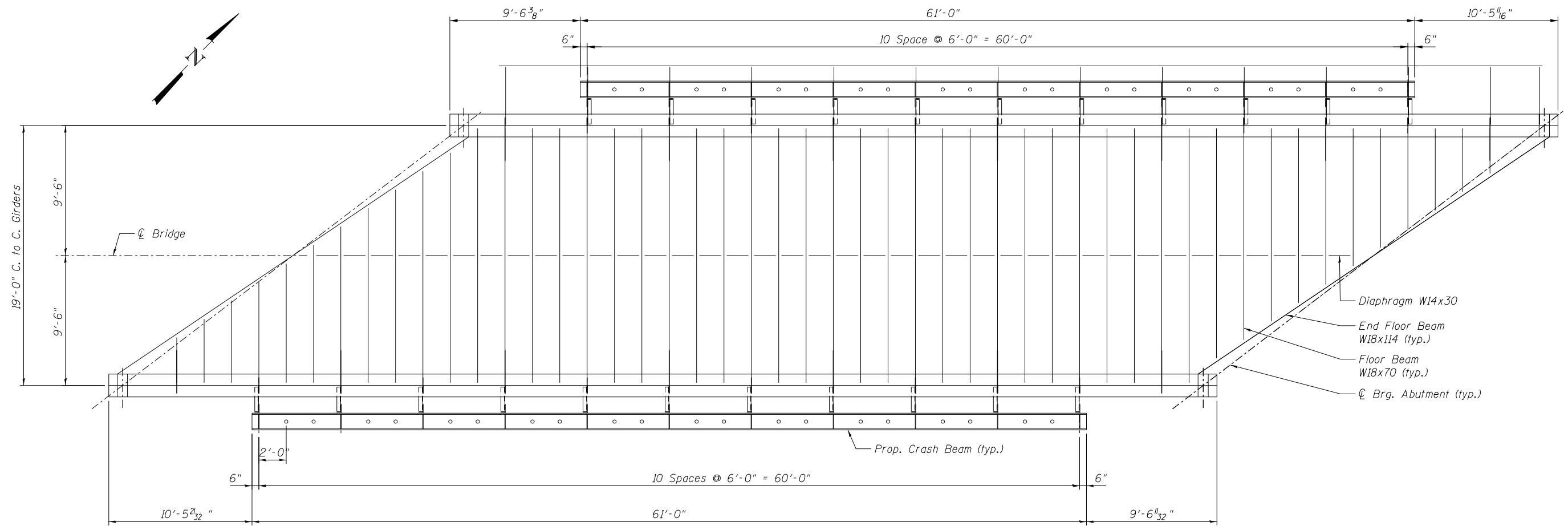
**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**CRASH BEAM DETAILS
STRUCTURE NO. 032-3400**

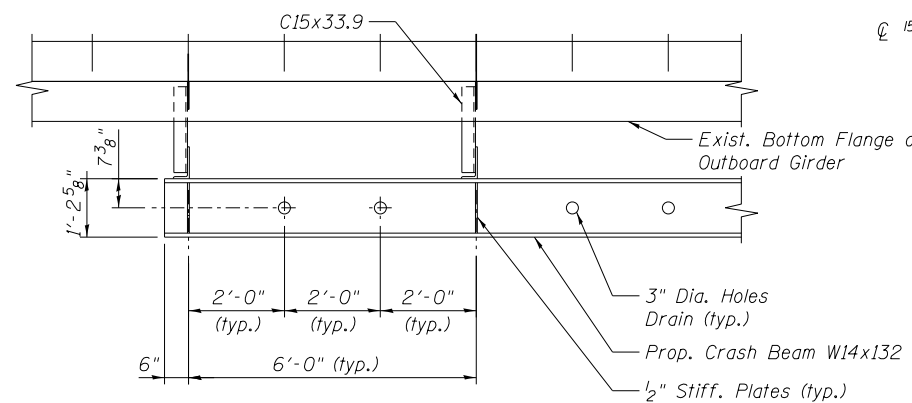
SHEET NO. S- 40 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	192
CONTRACT NO. 87695				

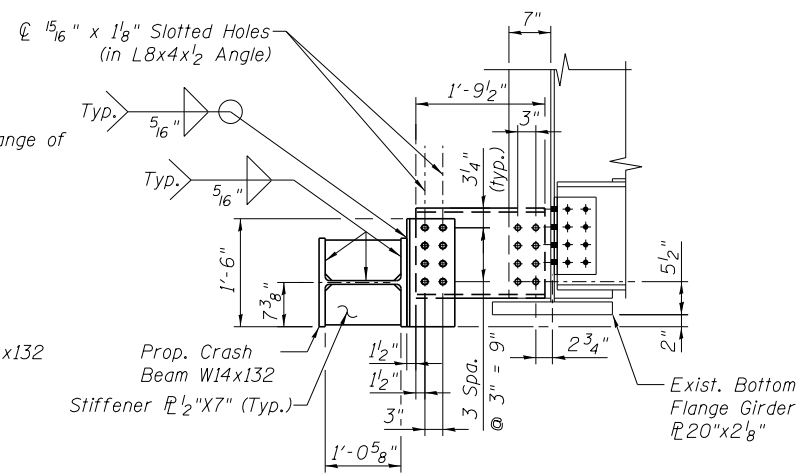
ILLINOIS FED. AID PROJECT



EXISTING SPAN

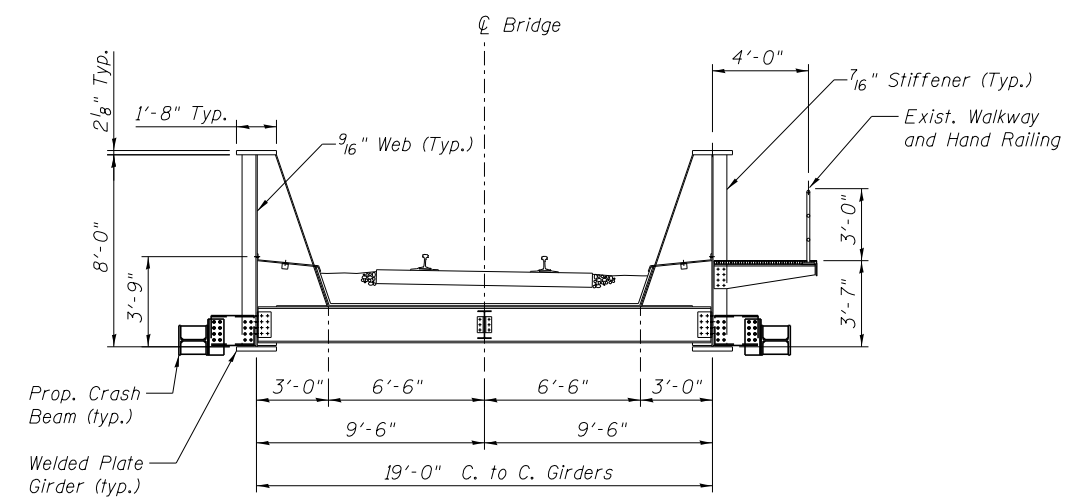


PROP. CRASH BEAM PLAN



PROP. CRASH BEAM SECTION

Note: Elevation of Protection Beam



EXISTING SECTION

NOTES:

1. For general notes, see General Notes sheets
2. Material shall be in accordance with the following specs
3. Structural steel: ASTM A709/A588/A572/A36 grade 50W
For all members on this sheet
4. Welding: AWS D1.5
5. H.S. bolts: ASTM F3125 A325 Type 3 7/8" dia. u.n.o.
6. All holes to be drilled or sub-punched and reamed
7. All H.S. bolts to be tightened by turn of nut method

Estimated Weight
- Structural Steel = 9,800 Lbs. (Per Crash Beam Assembly)
(Does Not Include Weight of Bolts)

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DESIGNED - APW	REVISED -
CHECKED - MFB	REVISED -
DRAWN - RR	REVISED -
CHECKED - APW	REVISED -
PLOT DATE = 5/13/2019	

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**EXISTING SPAN CRASH BEAM DETAILS
STRUCTURE NO. 032-3400**

SHEET NO. S- 41 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	193
CONTRACT NO. 87695				

ILLINOIS FED. AID PROJECT

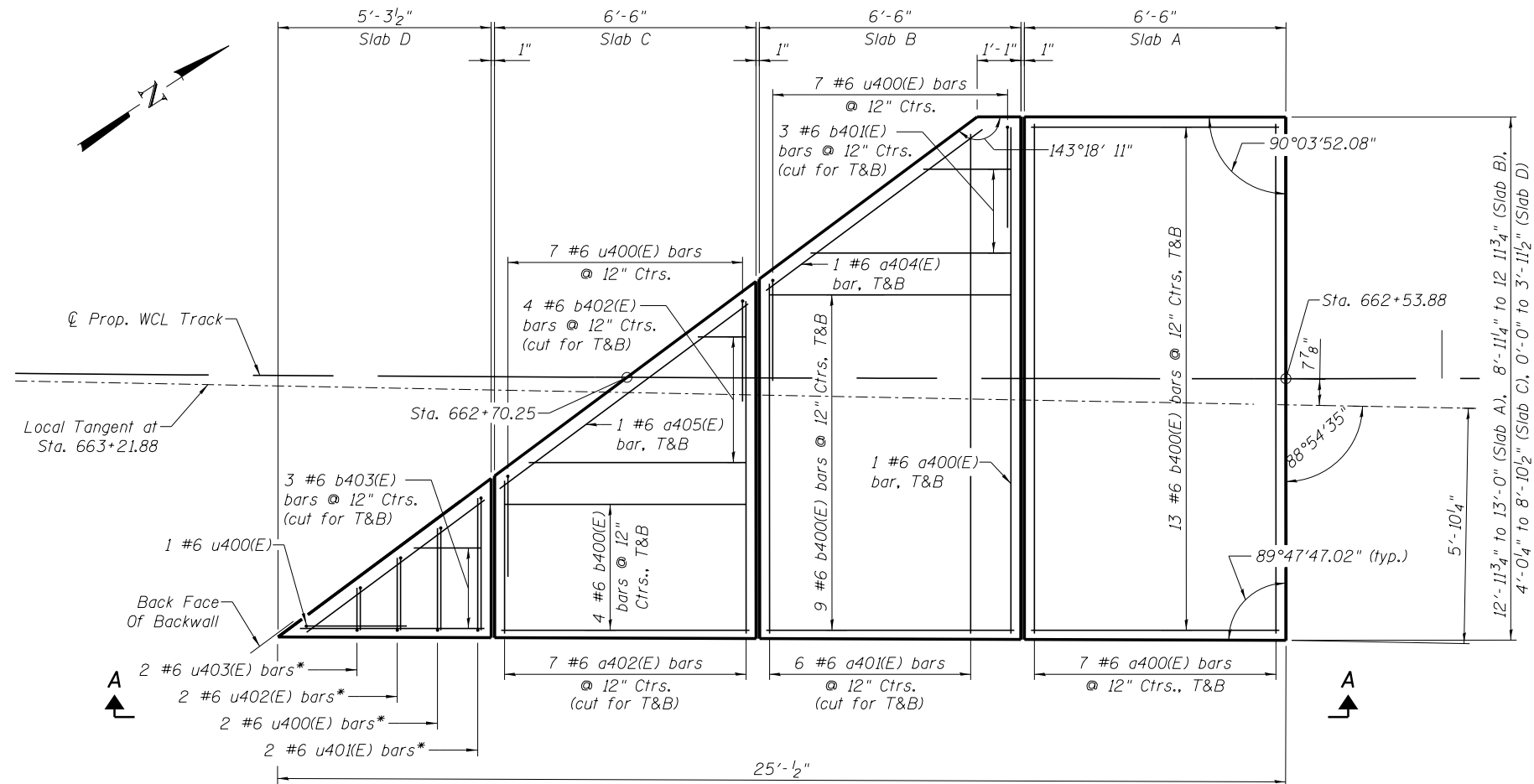
ESTIMATED QUANTITIES FOR SLABS

Item	Unit	Qty.
Reinforcing Bars, Epoxy Coated	Pound	1,430
Concrete	Cu. Yd.	8.0

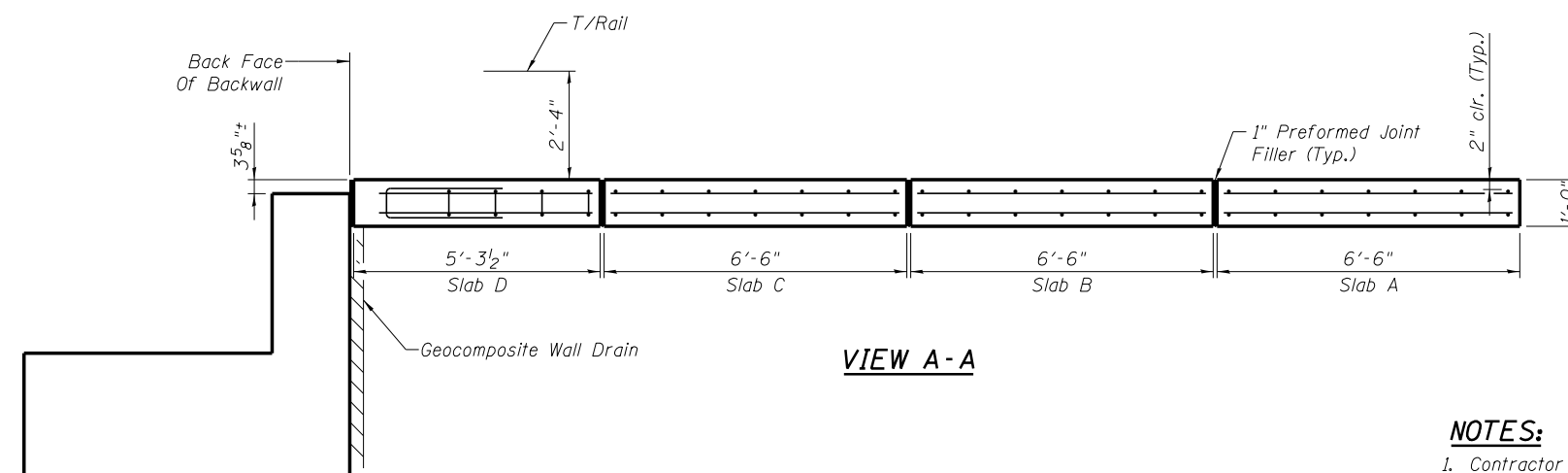
For information only. Items are included in cost of "Precast Bridge Approach Slab"

**BILL OF MATERIAL
APPROACH SLAB**

Bar	No.	Size	Length	Shape
SLAB A				
a400(E)	14	#6	12'-8"	—
b400(E)	26	#6	6'-2"	—
SLAB B				
a400(E)	2	#6	12'-8"	—
a401(E)	6	#6	20'-11"	—
a404(E)	2	#6	6'-8"	—
b400(E)	18	#6	6'-2"	—
b401(E)	3	#6	7'-2"	—
u400(E)	7	#6	5'-8"	□
SLAB C				
a402(E)	7	#6	11'-10"	—
a405(E)	2	#6	7'-8"	—
b400(E)	8	#6	6'-2"	—
b402(E)	4	#6	6'-7"	—
u400(E)	7	#6	5'-8"	□
SLAB D				
b403(E)	3	#6	6'-2"	—
u400(E)	3	#6	5'-8"	□
u401(E)	2	#6	7'-2"	□
u402(E)	2	#6	4'-2"	□
u403(E)	2	#6	2'-8"	□
Precast Bridge Approach Slab		Sq. Ft.	211	



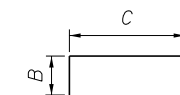
APPROACH SLAB PLAN
Scale: 1/4" = 1'-0"



VIEW A-A

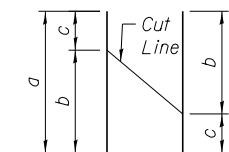
NOTES:

- Contractor shall determine lifting requirements based on equipment to be used.
- Contractor shall determine if any lifting devices are to be cast in units, their location and verify stresses for lifting.
- Contractor shall submit all lifting plans, details and calculations to Engineer prior to casting slab units.
- All concrete edges shall be chamfered 3/4".



**BARS u400(E), u401(E),
u402(E), u403(E)**

BAR	B	C
u400(E)	2'-6"	8"
u401(E)	3'-3"	8"
u402(E)	1'-9"	8"
u403(E)	1'-0"	8"



CUT LINE DIAGRAM

BAR	NO.	a	b	c
a401(E)	6	20'-11"	12'-4"	8'-7"
a402(E)	7	11'-10"	8'-2"	3'-8"
b401(E)	3	7'-2"	5'-0"	2'-2"
b402(E)	4	6'-7"	5'-5"	1'-2"
b403(E)	3	6'-2"	4'-6"	1'-8"

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DESIGNED - APW	REVISED -
CHECKED - MFB	REVISED -
DRAWN - MFB	REVISED -
CHECKED - MRC	REVISED -

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

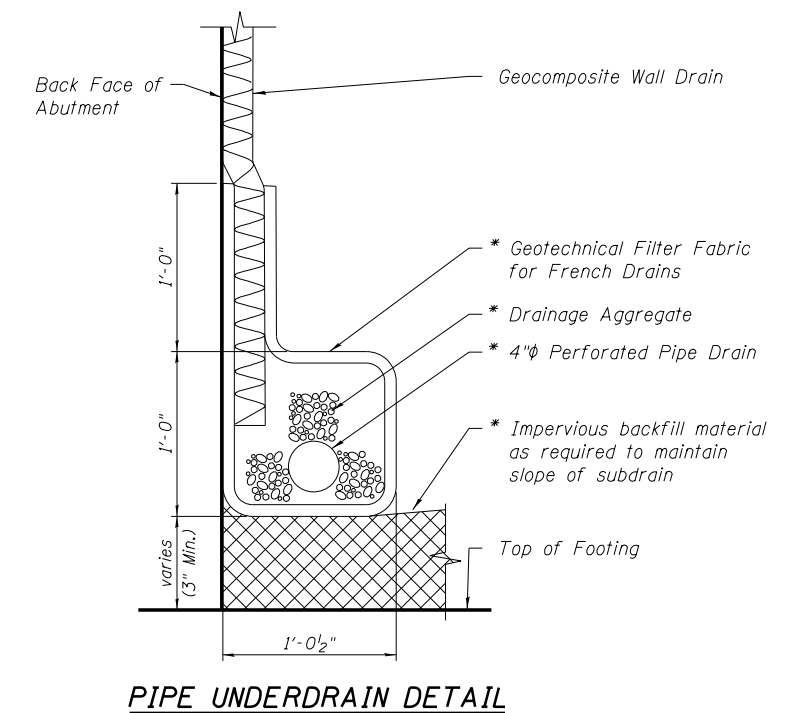
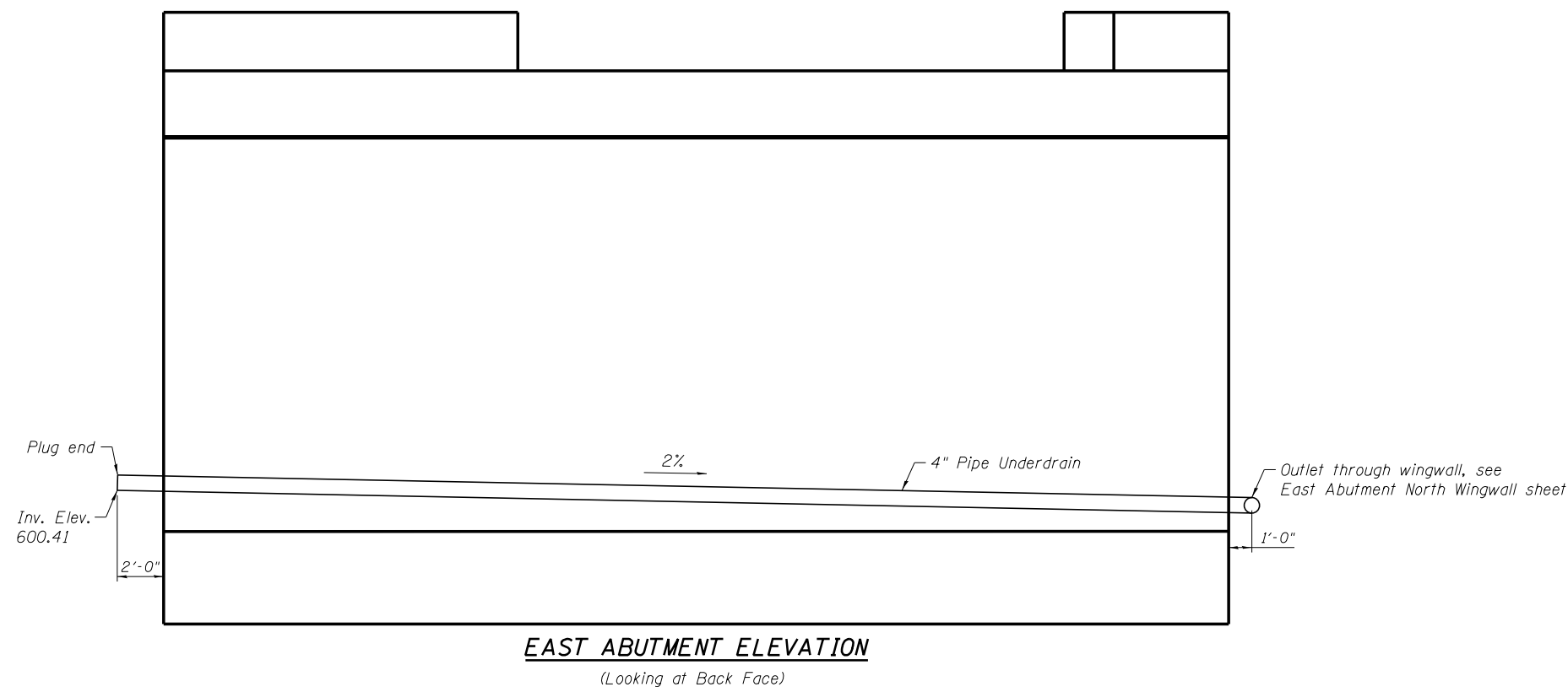
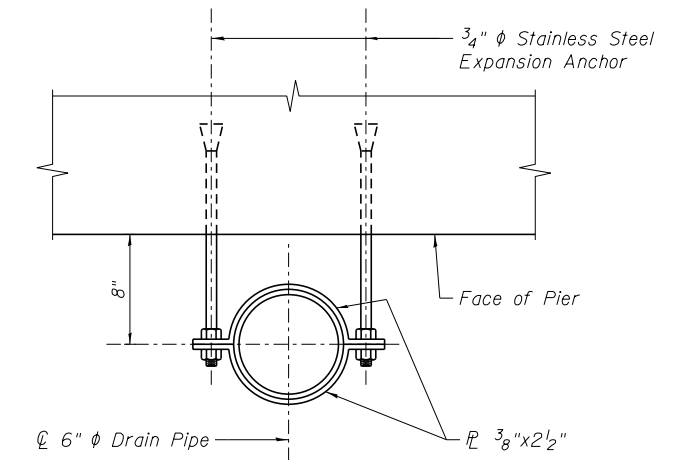
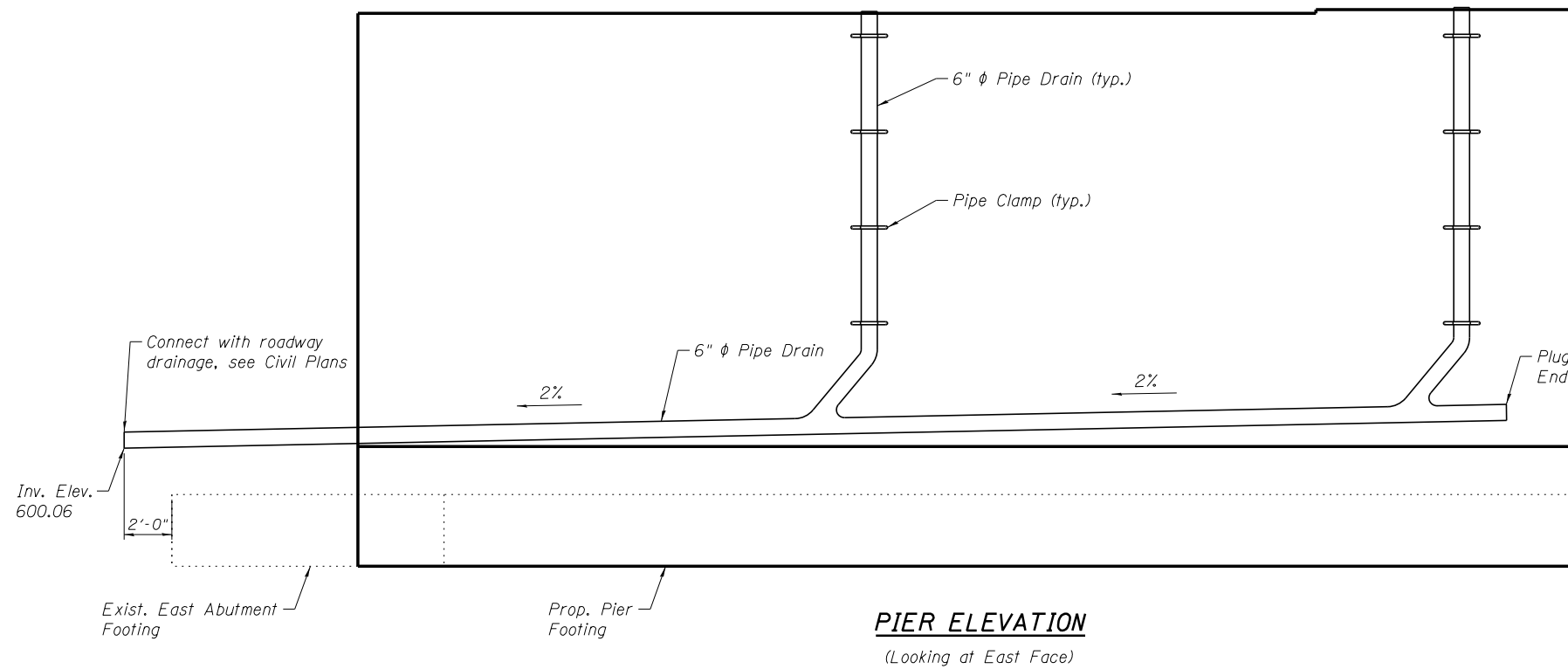
**APPROACH SLAB PLAN AND DETAILS
STRUCTURE NO. 032-3400**

SHEET NO. S-42 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	194
CONTRACT NO. 87695			ILLINOIS FED. AID PROJECT	

BILL OF MATERIAL

ITEM	UNIT	PIER	E. ABUT.
Drainage System	L. Sum	1	--
Geocomposite Wall Drain	Sq. Yd.	--	111
Pipe Underdrains for Structures 4"	Foot	--	58



* Included in the cost of Pipe Underdrains for Structures 4"

4/2/2019 6:28:51 PM ... \0323480-039-DrainDet.dgn



DESIGNED - MMW	REVISED -
CHECKED - MFB	REVISED -
DRAWN - RR	REVISED -
CHECKED - MMW	REVISED -
PLOT DATE = 4/2/2019	

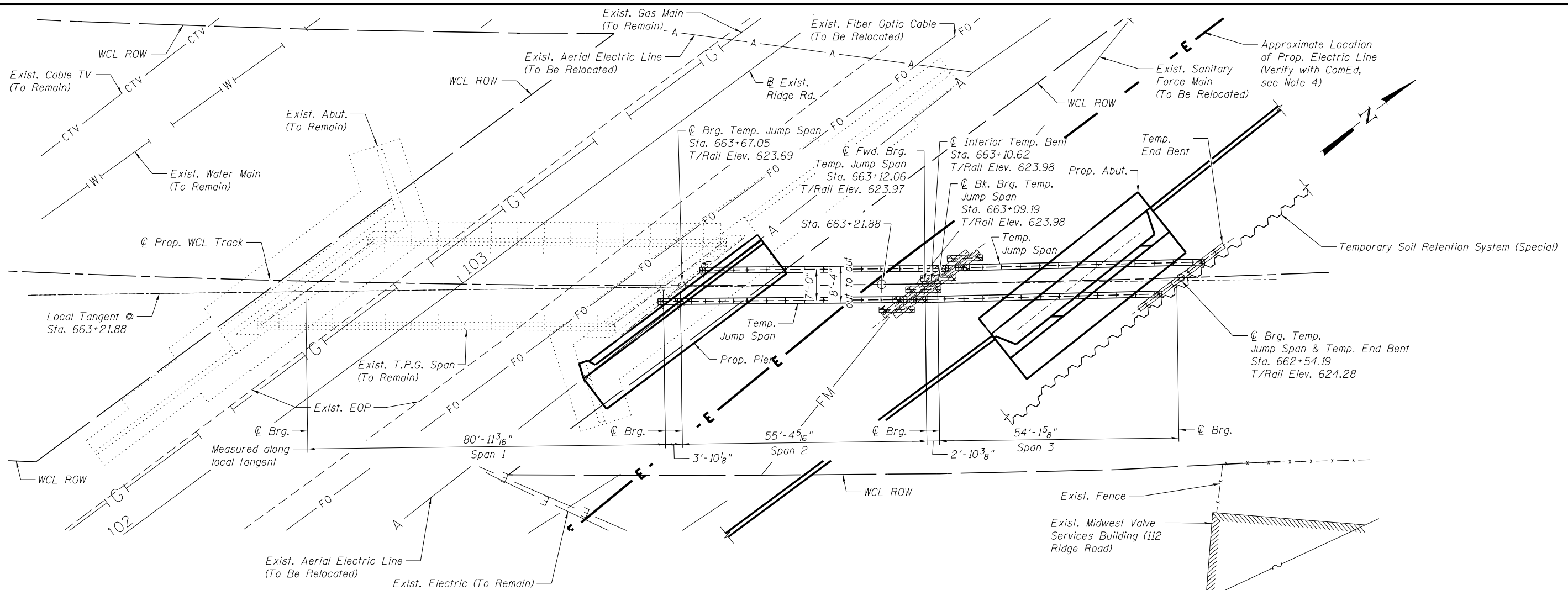
**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**DRAINAGE DETAILS
STRUCTURE NO. 032-3400**

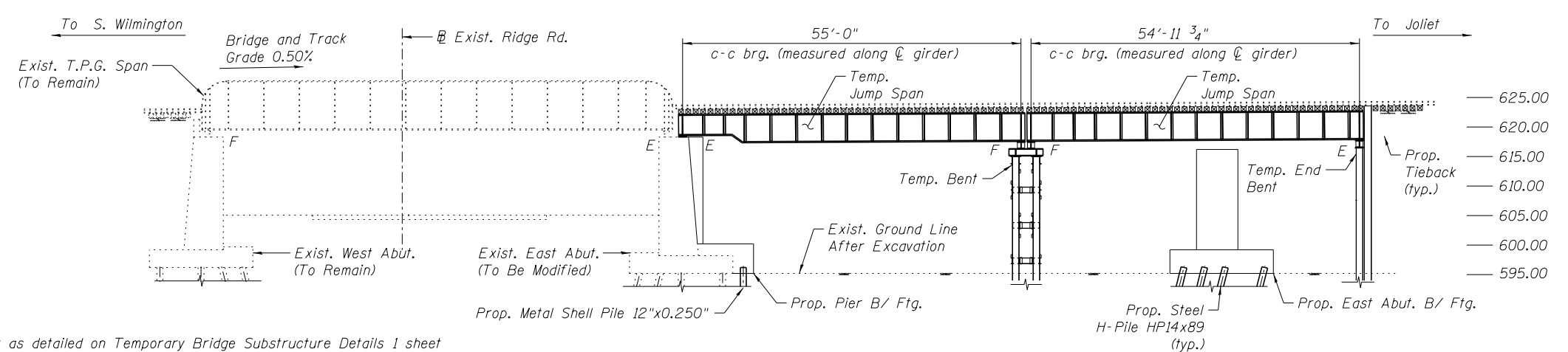
SHEET NO. S- 43 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	195
CONTRACT NO. 87695				

ILLINOIS FED. AID PROJECT



STAGE CONSTRUCTION PLAN

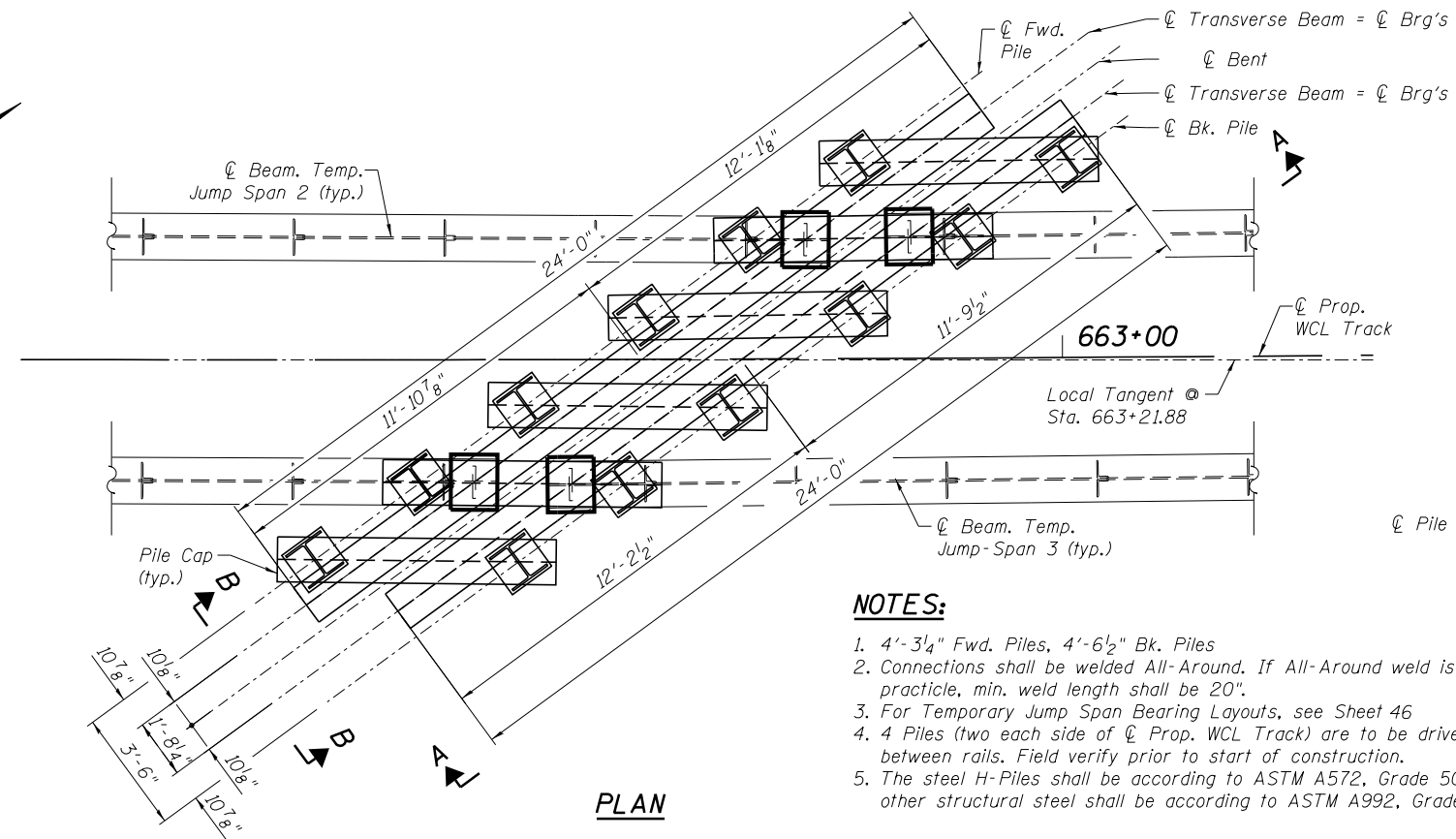
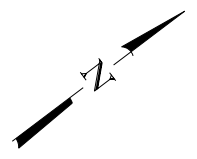


STAGE CONSTRUCTION ELEVATION

- NOTES:**
- Interior Temp. Bent as detailed on Temporary Bridge Substructure Details 1 sheet designed for dexcavation down to Elev. 595.20.
 - Contractor shall install bracing on Interior Temp. Bent as soon as excavation allows.
 - Temp. Bent Piles shall be driven between existing rails during short track windows. Contractor shall verify pile locations in field prior to driving.
 - Contractor shall contact ComEd prior to driving piles, see General Notes 1 sheet.

4/2/2019 6:28:54 PM ...\\0323480-040-TempBridgE.dgn

	DESIGNED - MRC	REVISD -	GRUNDY COUNTY, ILLINOIS HIGHWAY DEPARTMENT	TEMPORARY BRIDGE PLAN AND ELEVATION STRUCTURE NO. 032-3400	F.A.U. RTE. 384	SECTION 11-00134-02-WR	COUNTY GRUNDY	TOTAL SHEETS 239	SHEET NO. 196
	CHECKED - MJO	REVISD -			CONTRACT NO. 87695				
	DRAWN - RR	REVISD -	SHEET NO. S- 44 OF 51 SHEETS			ILLINOIS FED. AID PROJECT			
	CHECKED - MRC	REVISD -							



PLAN

NOTES:

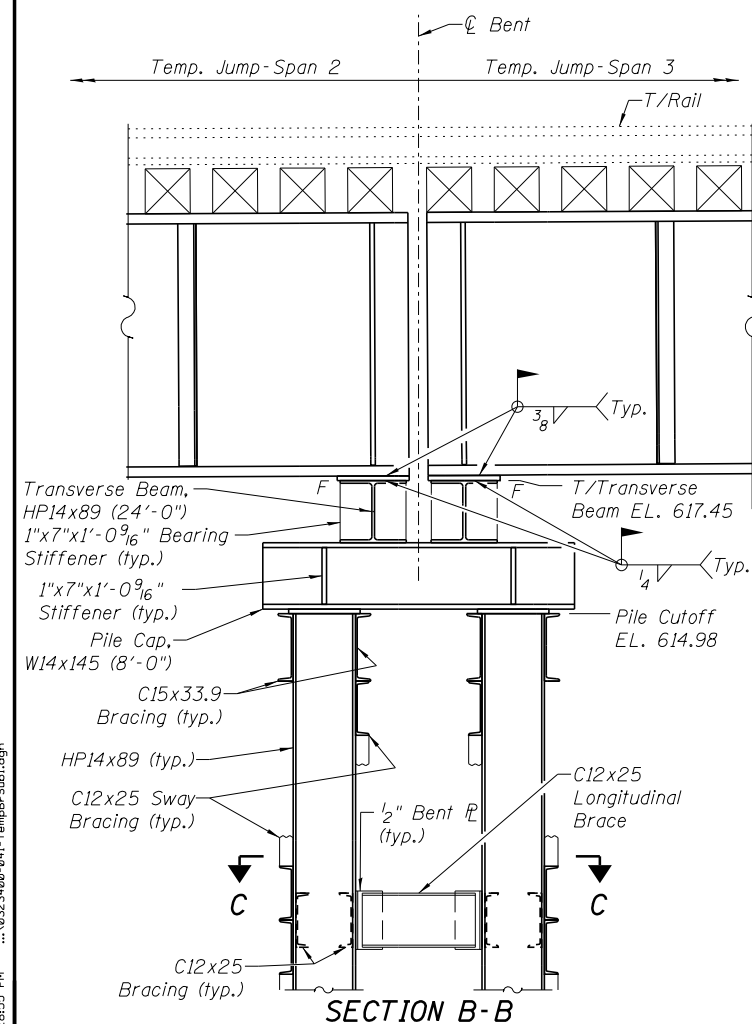
1. 4'-3 1/4" Fwd. Piles, 4'-6 1/2" Bk. Piles
2. Connections shall be welded All-Around. If All-Around weld is not practicable, min. weld length shall be 20".
3. For Temporary Jump Span Bearing Layouts, see Sheet 46
4. 4 Piles (two each side of \varnothing Prop. WCL Track) are to be driven between rails. Field verify prior to start of construction.
5. The steel H-Piles shall be according to ASTM A572, Grade 50. All other structural steel shall be according to ASTM A992, Grade 50.

HP14x89 (Includes Test Piles)						
LOCATION	TYPE	No.	ESTIMATED LENGTH (FEET) EACH LIN. FT.	TOTAL LIN. FT.	ALLOWABLE RESIST. AVAILABLE	CUT-OFF ELEVATION
Int. Bent	Vertical	12	67	804	65 Tons	614.98

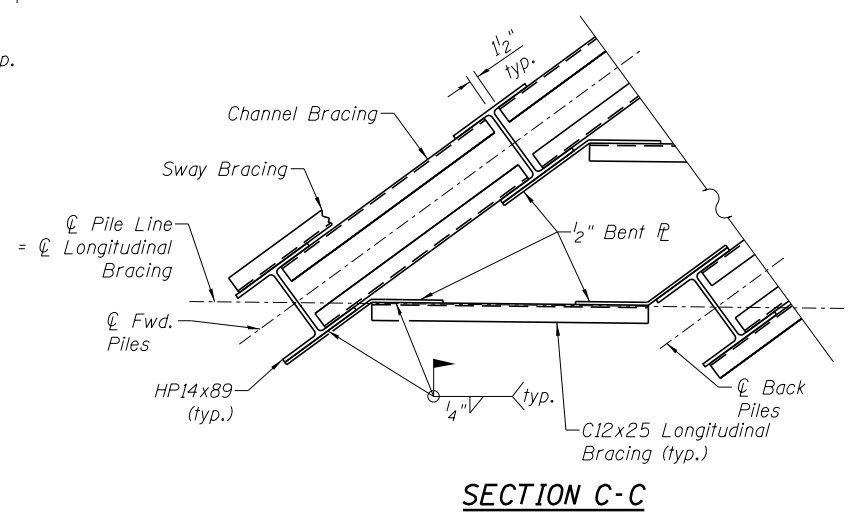
BILL OF MATERIAL FOR INTERIOR BENT

DESCRIPTION	UNIT	QUANTITY
Furnishing Steel Piles HP14x89	Foot	737
Driving Piles	Foot	737
Test Pile Steel HP14x89	Each	1
Structural Steel	Pound	32,250

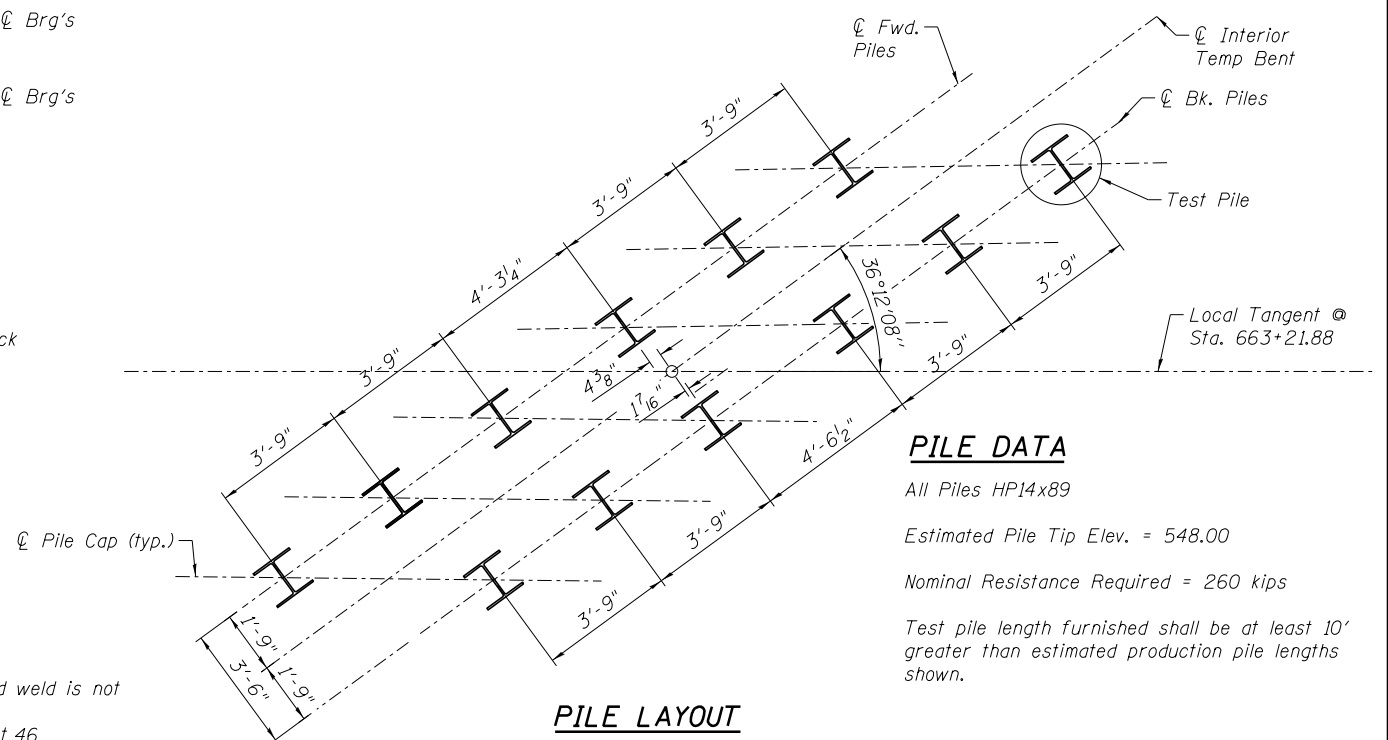
For information only. Items are included in cost of "Temporary Bridge"



SECTION B-B



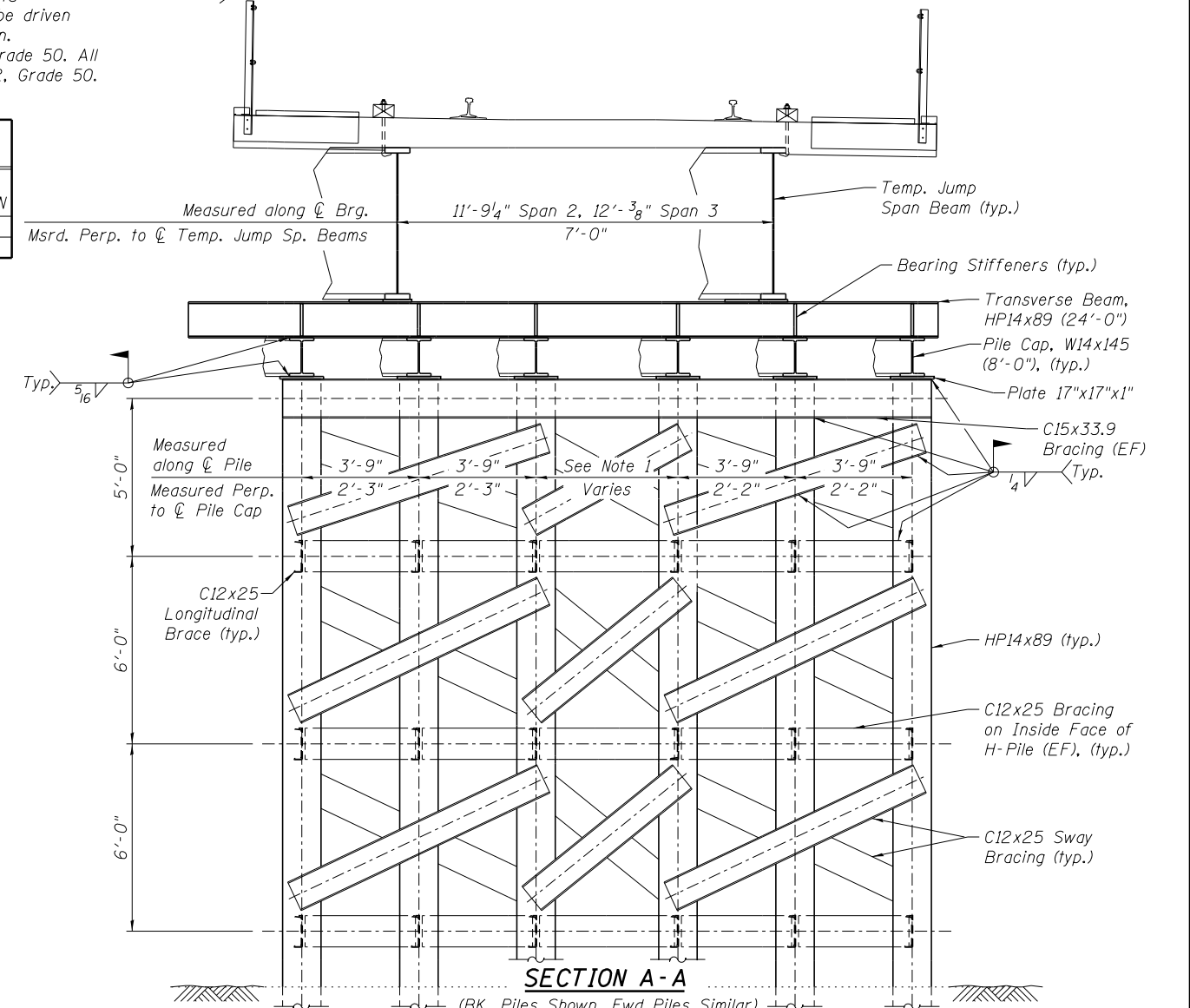
SECTION C-C



PILE LAYOUT

PILE DATA

All Piles HP14x89
 Estimated Pile Tip Elev. = 548.00
 Nominal Resistance Required = 260 kips
 Test pile length furnished shall be at least 10' greater than estimated production pile lengths shown.



SECTION A-A

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DESIGNED - MRC	REVISD -
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DRAWN - RR	REVISD -
CHECKED - MRC	REVISD -

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**TEMPORARY BRIDGE SUBSTRUCTURE DETAILS 1
STRUCTURE NO. 032-3400**

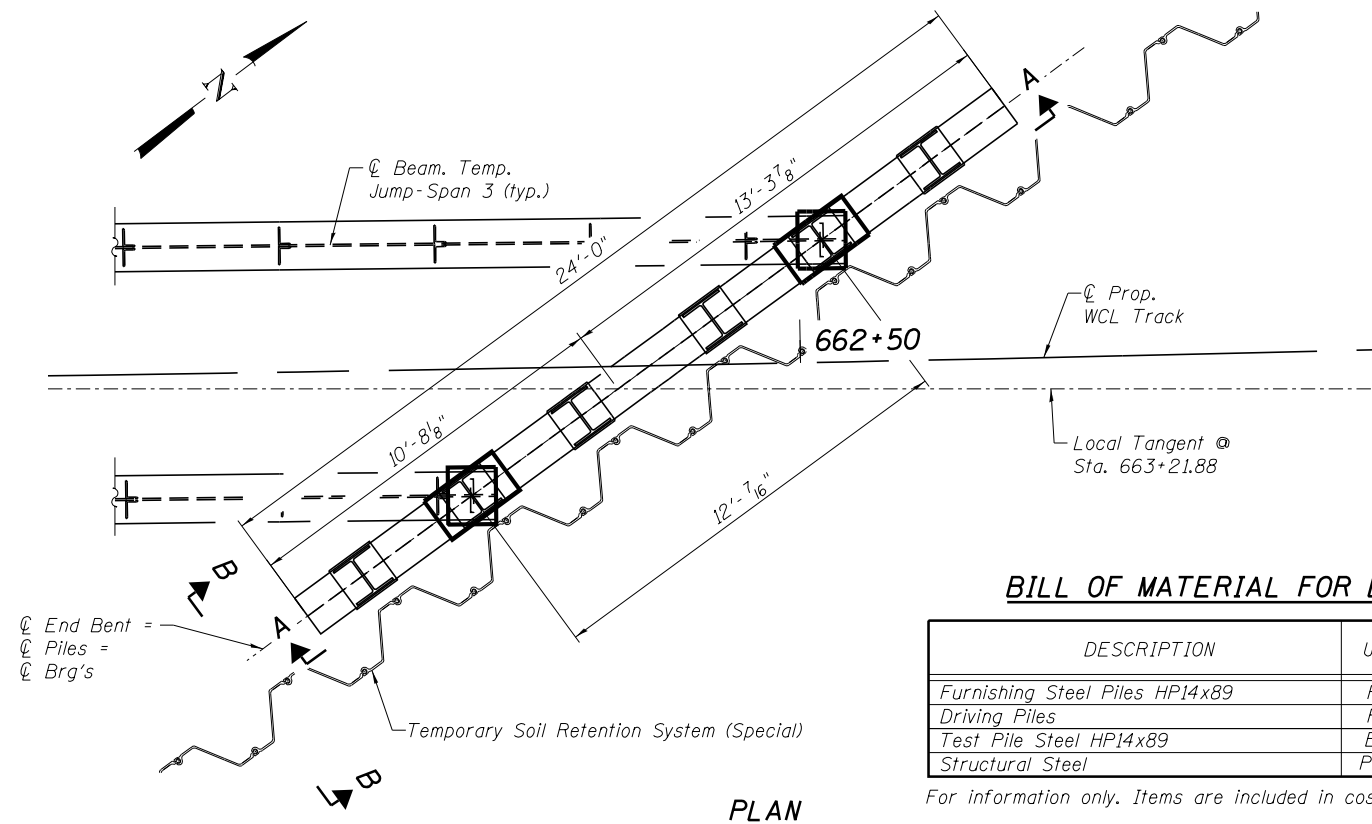
SHEET NO. S- 45 OF 51 SHEETS

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	197
				CONTRACT NO. 87695

ILLINOIS FED. AID PROJECT

NOTES:

1. For Temporary Jump Span Bearing Layouts, see Sheet 46
2. Two Piles (one on each side of ϕ Prop. WCL Track) are to be driven between rails. Field verify prior to start of construction.
3. Contractor is responsible for the design of lateral bracing system of temporary end bent and shall submit plan to engineer for review.
4. Contractor is responsible for design of Temporary Soil Retention System (Special) and shall submit plan to engineer for review.
5. The steel H-Piles shall be according to ASTM A572, Grade 50. All other structural steel shall be according to ASTM A992, Grade 50.

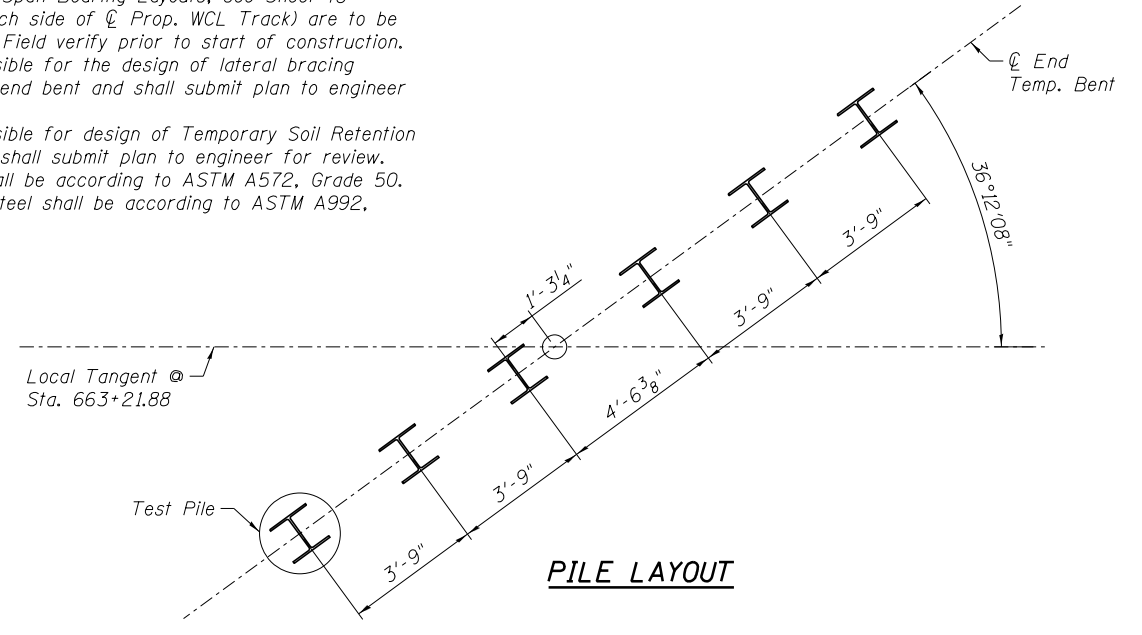


BILL OF MATERIAL FOR END BENT

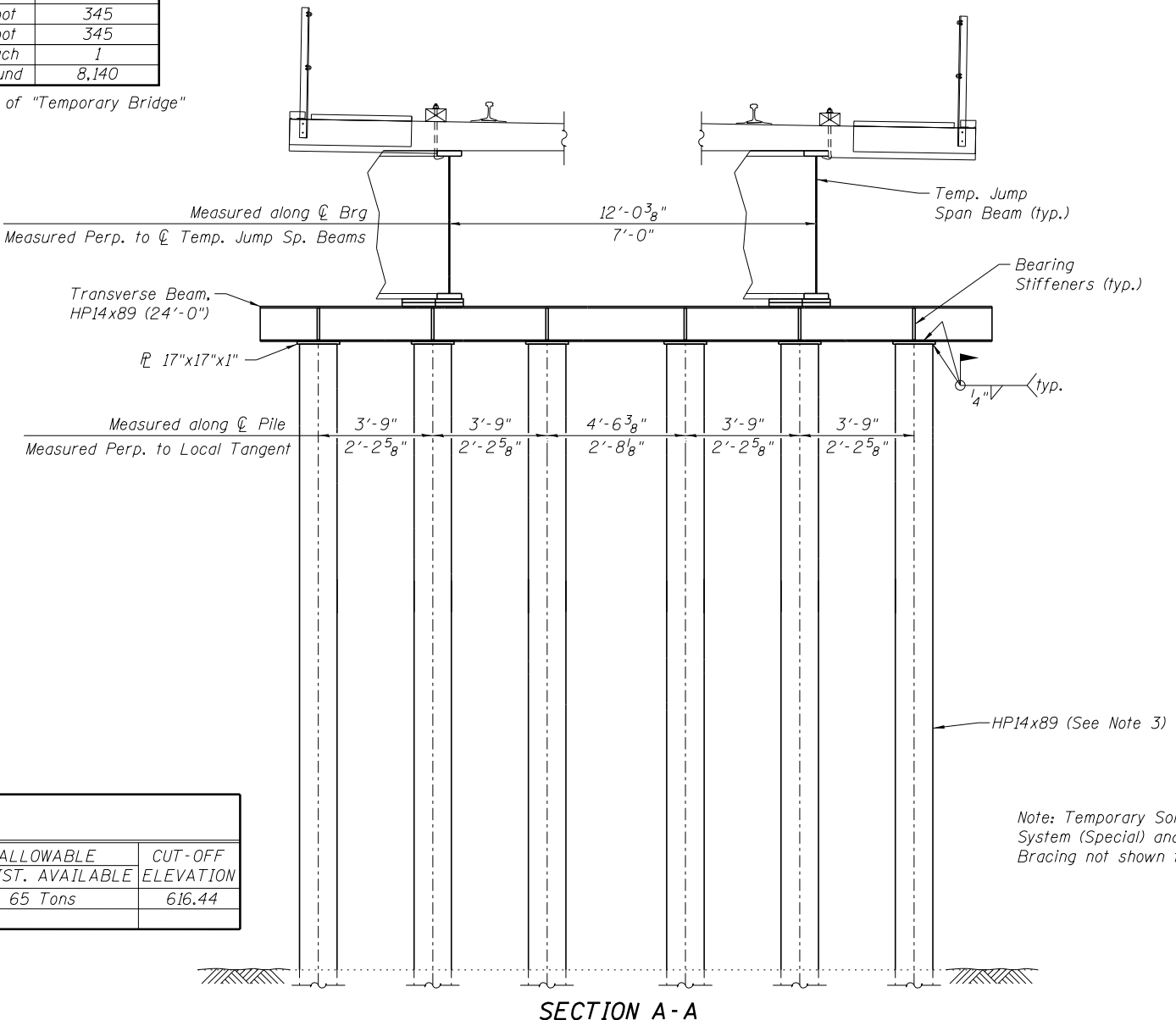
DESCRIPTION	UNIT	QUANTITY
Furnishing Steel Piles HP14x89	Foot	345
Driving Piles	Foot	345
Test Pile Steel HP14x89	Each	1
Structural Steel	Pound	8,140

For information only. Items are included in cost of "Temporary Bridge"

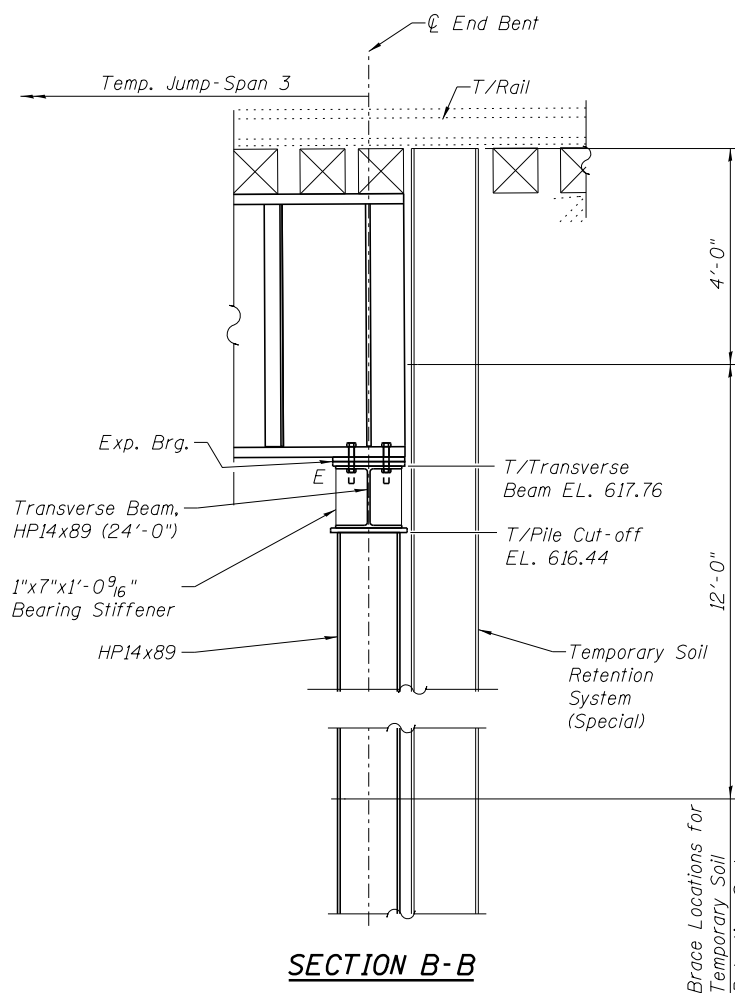
PLAN



PILE LAYOUT



SECTION A-A



SECTION B-B

PILE DATA

All Piles HP14x89
 Estimated Pile Tip Elev. = 548.00
 Nominal Resistance Required = 260 kips
 Test pile length furnished shall be at least 10' greater than estimated production pile lengths shown.

HP14x89 (Includes Test Piles)						
LOCATION	TYPE	No.	ESTIMATED LENGTH (FEET)		ALLOWABLE RESIST. AVAILABLE	CUT-OFF ELEVATION
			EACH LIN. FT.	TOTAL LIN. FT.		
End Bent	Vertical	6	69	414	65 Tons	616.44

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DESIGNED - MRC	REVISD -
CHECKED - MJO	REVISD -
DRAWN - RR	REVISD -
CHECKED - MRC	REVISD -

PLOT DATE = 4/2/2019

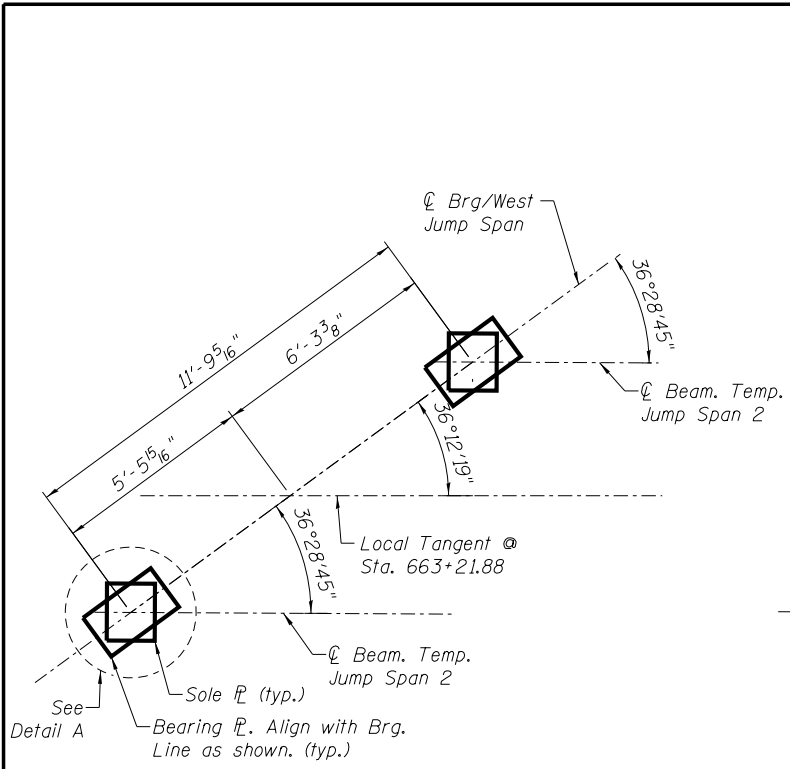
**GRUNDY COUNTY, ILLINOIS
 HIGHWAY DEPARTMENT**

**TEMPORARY BRIDGE SUBSTRUCTURE DETAILS 2
 STRUCTURE NO. 032-3400**

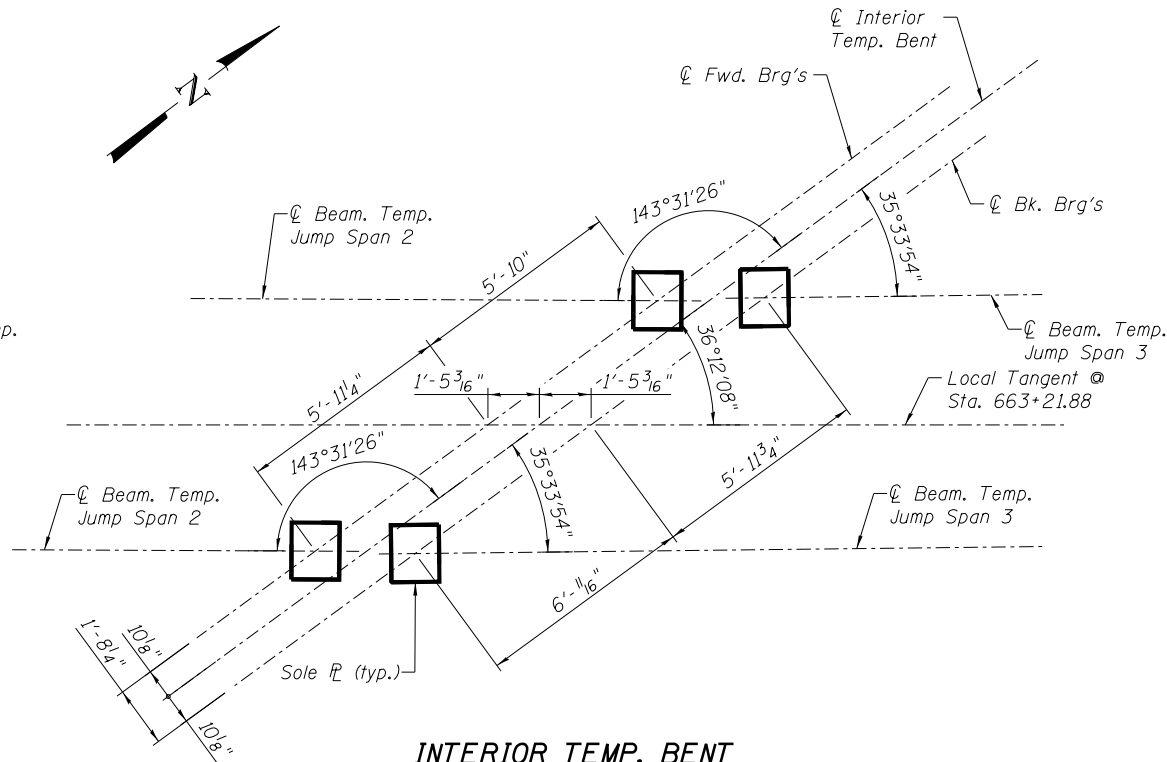
SHEET NO. S- 46 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	198
				CONTRACT NO. 87695

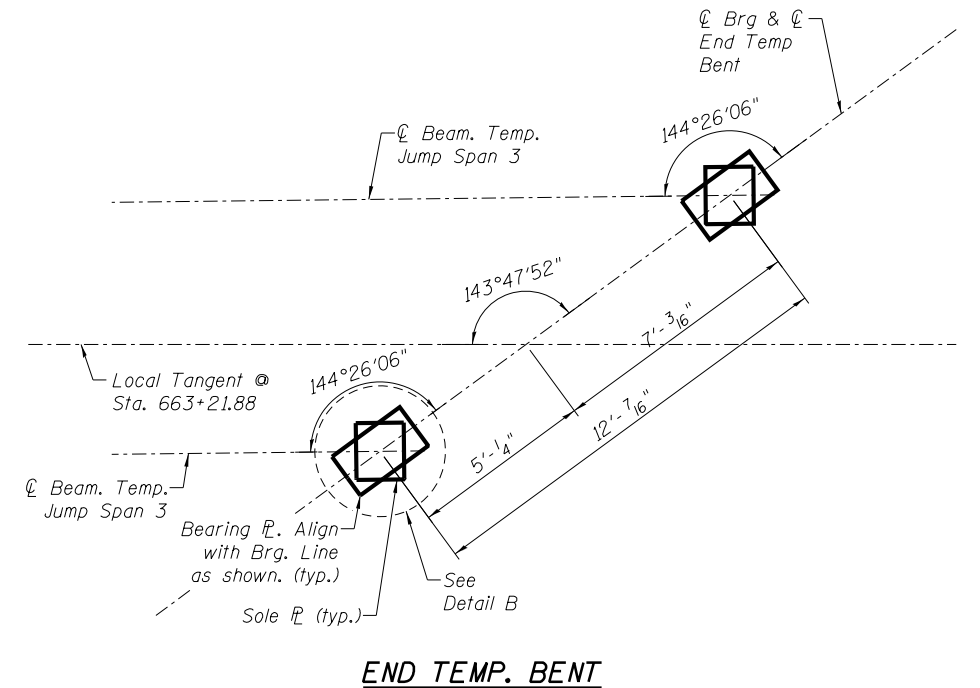
ILLINOIS FED. AID PROJECT



TEMP WEST BRG - JUMP SPAN 2



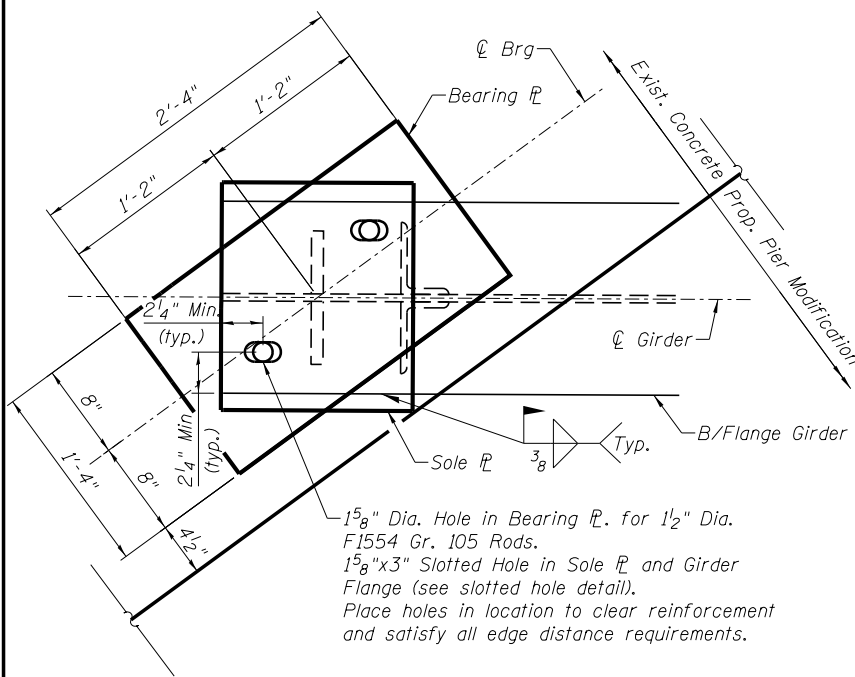
INTERIOR TEMP. BENT



END TEMP. BENT

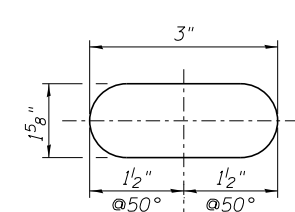
NOTES:

1. All Brg. Plates shall be aligned orthogonal to Temp. Beams U.N.O.
2. At Temp. W. Brg. of Jump Span 2, anchor rods shall be field drilled into the concrete substructure. Anchor rods shall be swaged, threaded or shall have rolled deformations to secure a satisfactory bond with the concrete. 12" min. Embedment into concrete.
3. 2 1/4" min. edge distance for open holes.
4. Sole plates of plate girders shall be in full contact with the girder flanges. Sole plates and bearing plates shall be planed or straightened.
5. Holes in bearing plates may be formed in the field by drilling, punching, or accurately controlled oxygen cutting. Burrs shall be removed by grinding.
6. Steel plates used in or on concrete, sole plates, base plates and shim plates, unless otherwise specified, shall conform to ASTM A36
7. Anchor rods shall meet the requirements of ASTM F1554 Gr. 105.
8. Washers shall meet the requirements of ASTM F436 Type 3. Nuts shall be provided in accordance with the requirements of the ASTM A563 Type C3 or DH3.
9. The contact surfaces of the concrete and steel shall be thoroughly cleaned prior to installation of Bearing Plates.
10. The contact surfaces of the concrete shall be ground flat or have self-leveling grout placed to support the bearing plates. This work shall be coordinated with bearing plate thicknesses provided on sheet Temporary Bridge Superstructure Details 2.



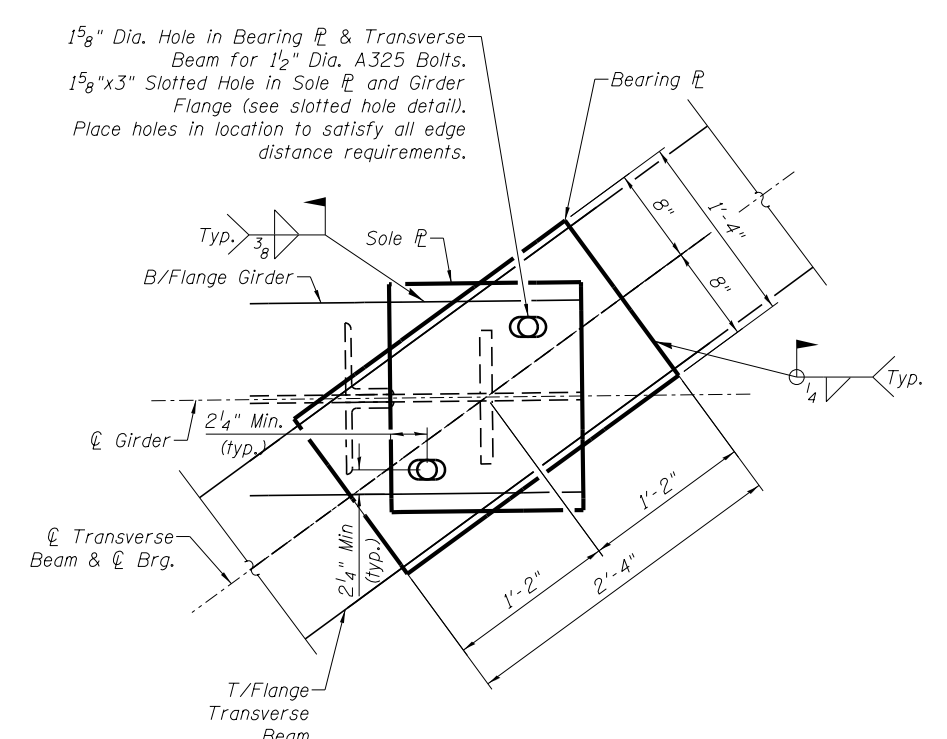
DETAIL A

1 5/8" Dia. Hole in Bearing PL. for 1 1/2" Dia. F1554 Gr. 105 Rods.
 1 5/8"x3" Slotted Hole in Sole PL and Girder Flange (see slotted hole detail).
 Place holes in location to clear reinforcement and satisfy all edge distance requirements.



1/4" Dia. Anchor Rod & 1 5/8" Dia. hole in base PL

SLOTTED HOLE DETAIL



DETAIL B

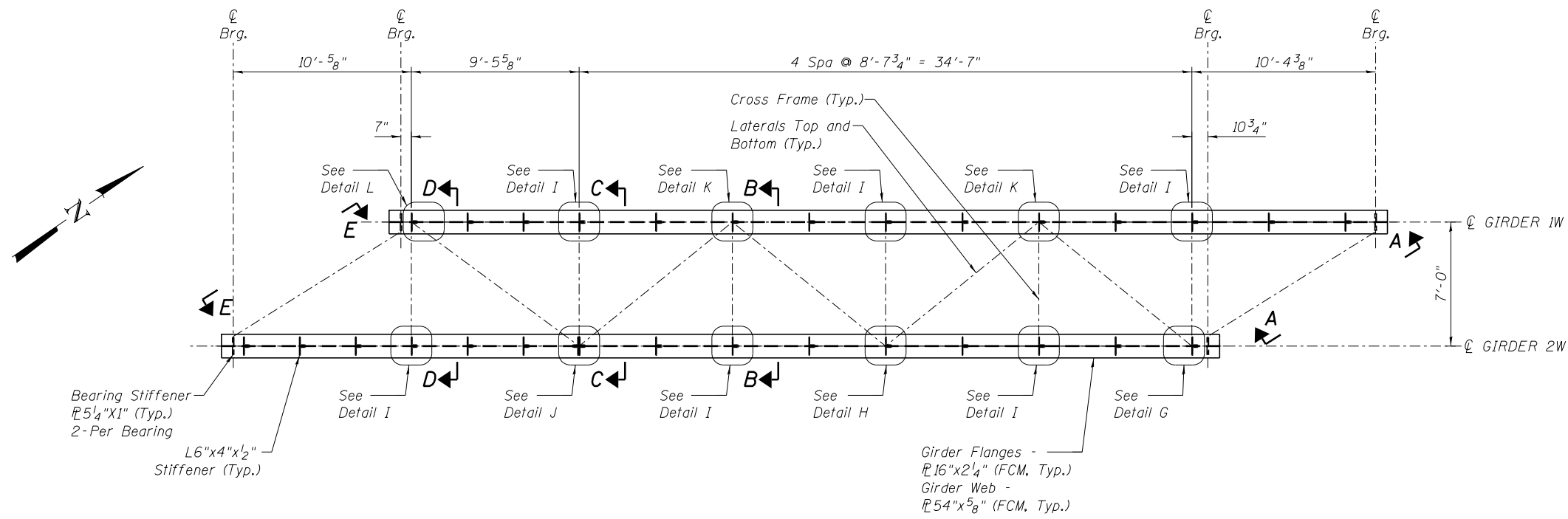
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	DESIGNED - MRC	REVISED -	GRUNDY COUNTY, ILLINOIS HIGHWAY DEPARTMENT	TEMPORARY BRIDGE - BEARING LAYOUT STRUCTURE NO. 032-3400	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - MJO	REVISED -			384	11-00134-02-WR	GRUNDY	239	199
	DRAWN - RR	REVISED -			CONTRACT NO. 87695				
	CHECKED - MRC	REVISED -			ILLINOIS FED. AID PROJECT				
	PLOT DATE = 5/13/2019				SHEET NO. S- 47 OF 51 SHEETS				

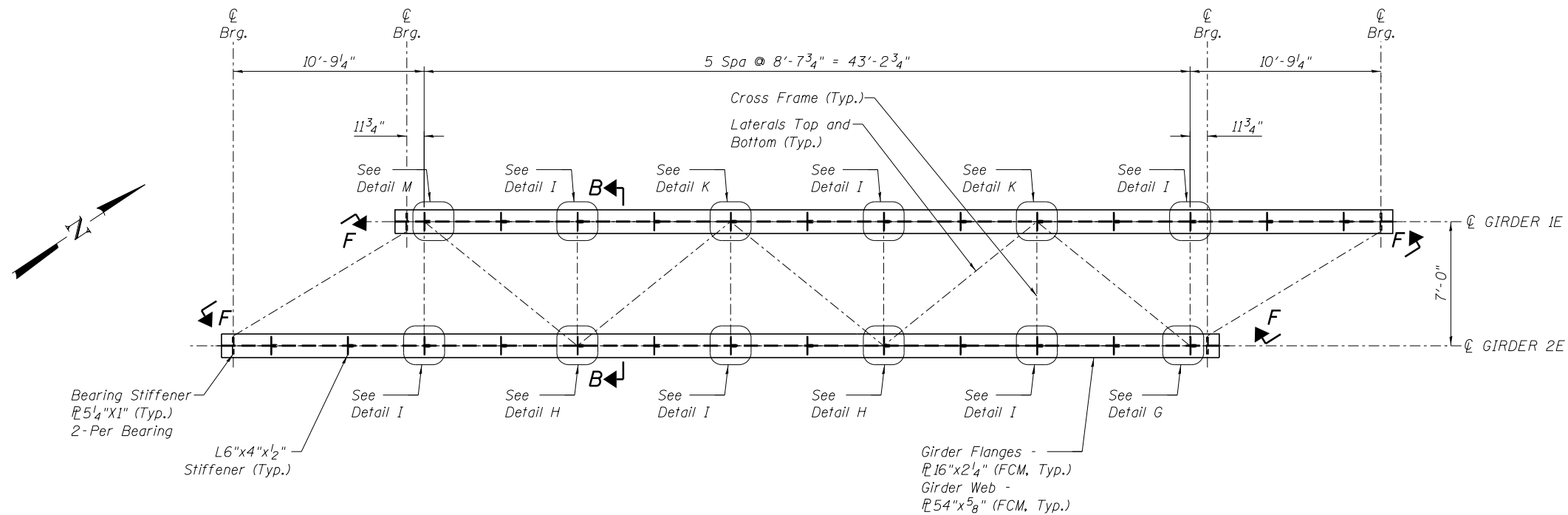
BILL OF MATERIAL FOR TEMPORARY SUPERSTRUCTURE

DESCRIPTION	UNIT	QUANTITY
Structural Steel - West Span	Pound	57,170
Structural Steel - East Span	Pound	57,280

For information only. Items are included in cost of "Temporary Bridge"



FRAMING PLAN - WEST SPAN
Scale: 1/8" = 1'-0"



FRAMING PLAN - EAST SPAN
Scale: 1/8" = 1'-0"

NOTES:
FCM - Fracture Critical Member

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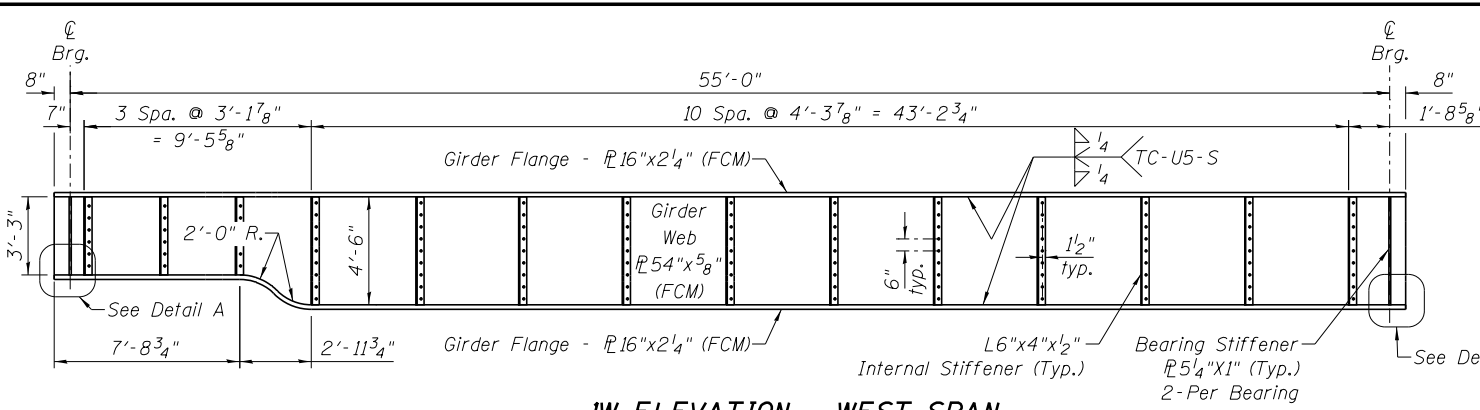
DESIGNED - APW	REVISED -
CHECKED - MFB	REVISED -
DRAWN - RR	REVISED -
CHECKED - APW	REVISED -
PLOT DATE = 4/2/2019	

**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**TEMPORARY BRIDGE SUPERSTRUCTURE DETAILS 1
STRUCTURE NO. 032-3400**

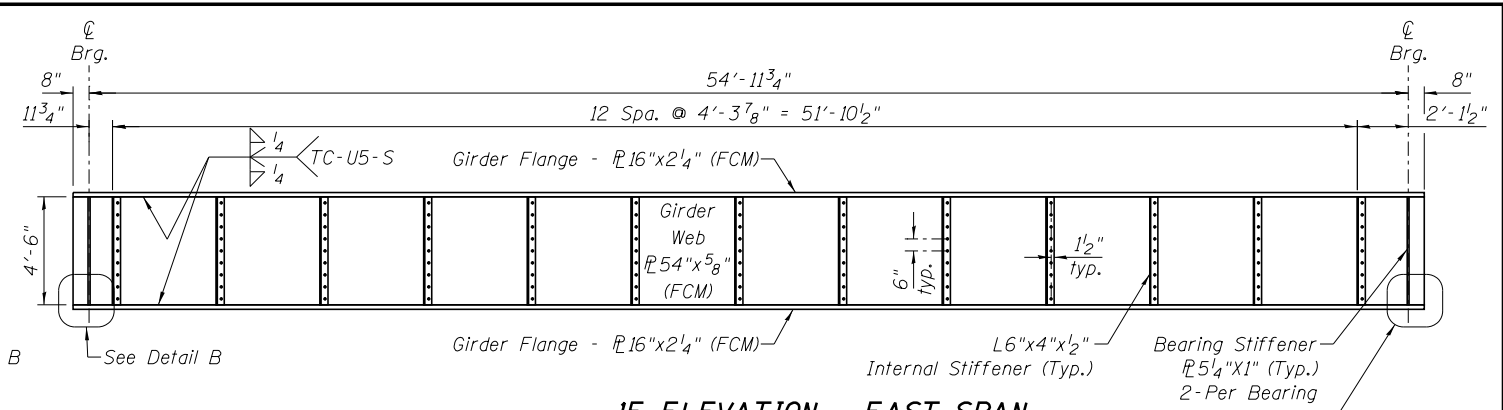
SHEET NO. S- 48 OF 51 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	200
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



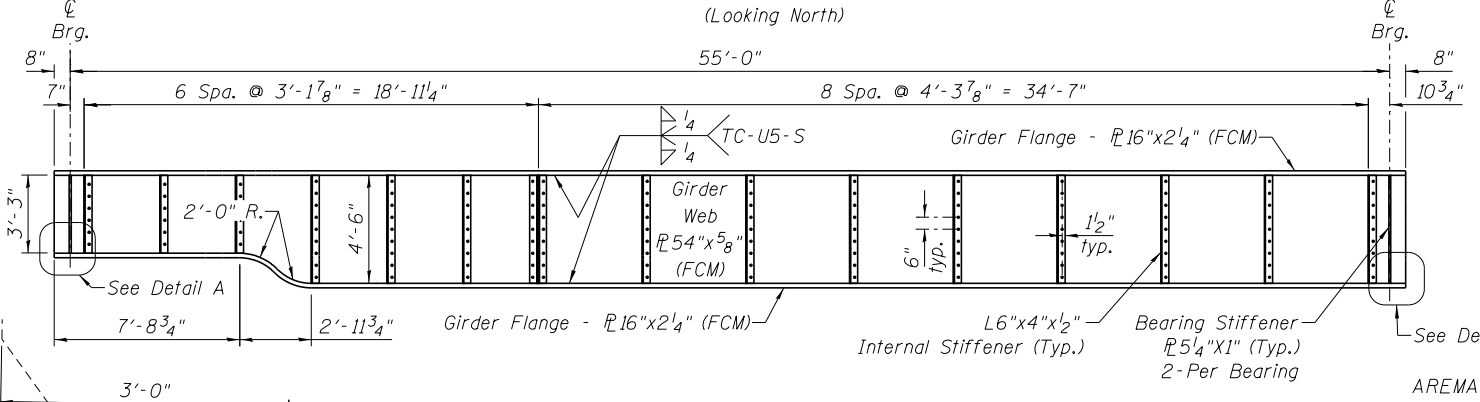
IW ELEVATION - WEST SPAN

(Looking North)



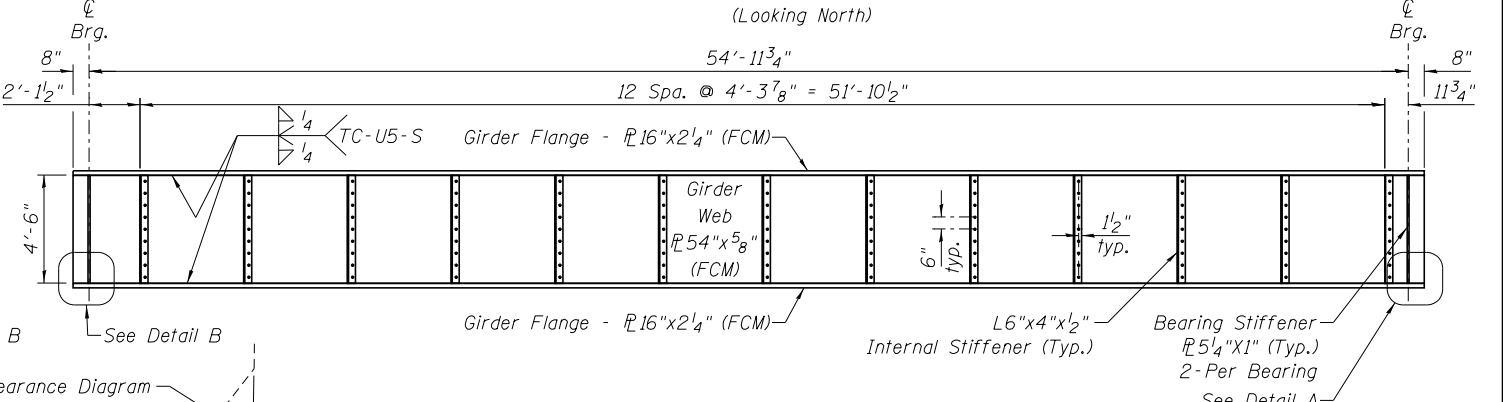
IE ELEVATION - EAST SPAN

(Looking North)



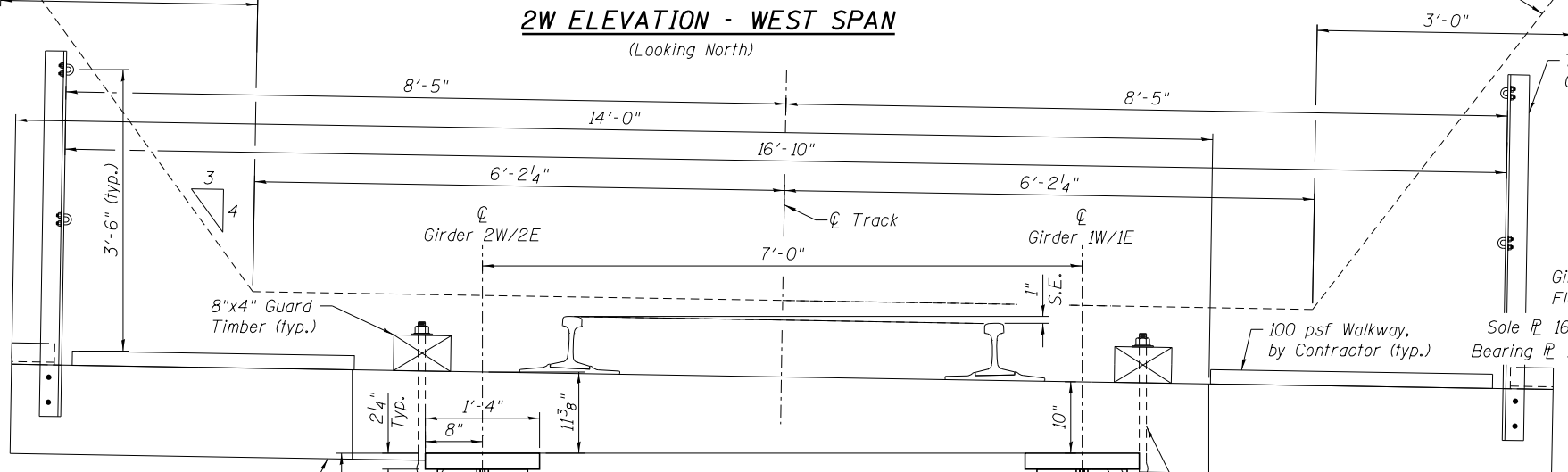
2W ELEVATION - WEST SPAN

(Looking North)



2E ELEVATION - EAST SPAN

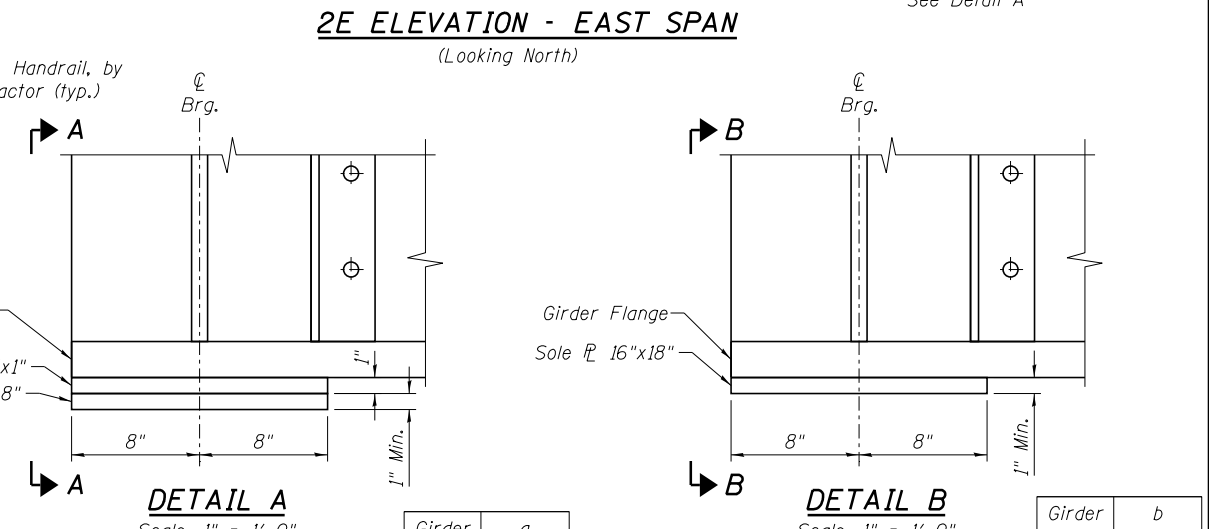
(Looking North)



Southern Pine Solid Sawn Timber Tie 8"x12"x10'-0" (1st, 2nd & 3rd Tie of Group)
Left Walkway Tie 8"x12"x14'-0" (4th Tie of Group)
Right Walkway Tie 8"x12"x14'-0" (5th Tie of Group)
Repeat Tie Group Along Bridge. Notch All Ties on Flanges. Ties at 12" Spacing.

SPAN CROSS SECTION AT MIDSPAN LOOKING WEST

Scale: 1/2" = 1'-0"



DETAIL A

Scale: 1" = 1'-0"

DETAIL B

Scale: 1" = 1'-0"

Girder	a
1W	2.500"
2W	1.9375"
1E	1.625"
2E	1.000"

Girder	b
1W	1.5625"
2W	1.0000"
1E	1.6875"
2E	1.1250"

NOTES:

1. FCM - Fracture Critical Member
2. Timber tie deck, walkway, handrail, and all fasteners are included in cost of Temporary Bridge.
3. Timber ties shall be Southern Pine Solid Sawn Material Treated per AREMA.

SECTION A-A

Scale: 1" = 1'-0"

SECTION B-B

Scale: 1" = 1'-0"

a or b = Total depth of plate and/or shims required to set temporary girder at proper elevation

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DESIGNED - APW	REVISED -
CHECKED - MFB	REVISED -
DRAWN - RR	REVISED -
CHECKED - APW	REVISED -

PLOT DATE = 5/13/2019

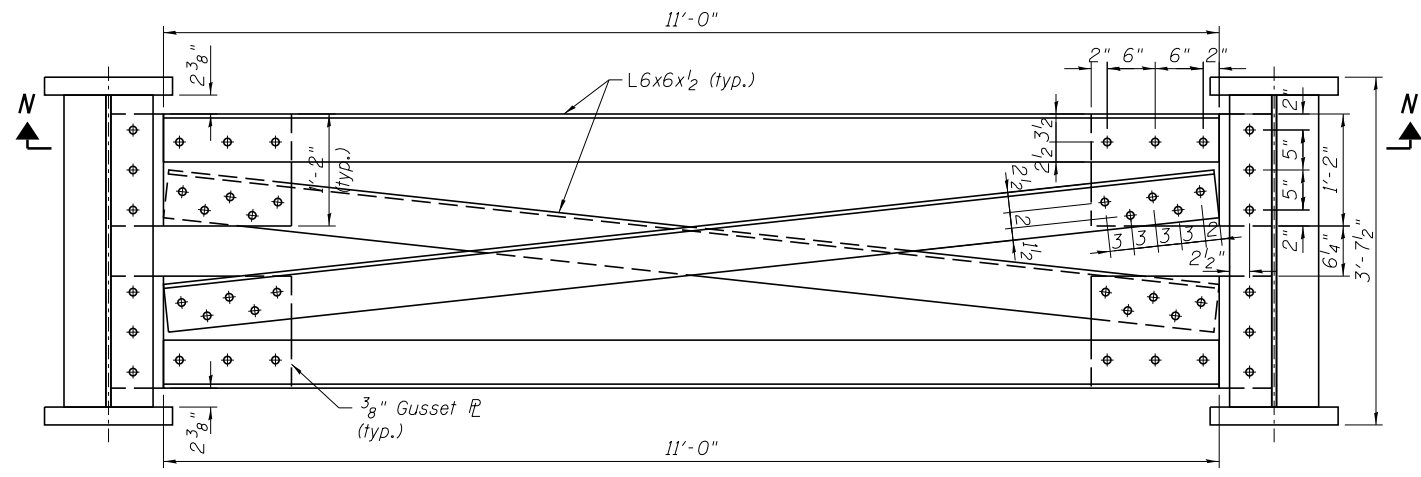
**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**TEMPORARY BRIDGE SUPERSTRUCTURE DETAILS 2
STRUCTURE NO. 032-3400**

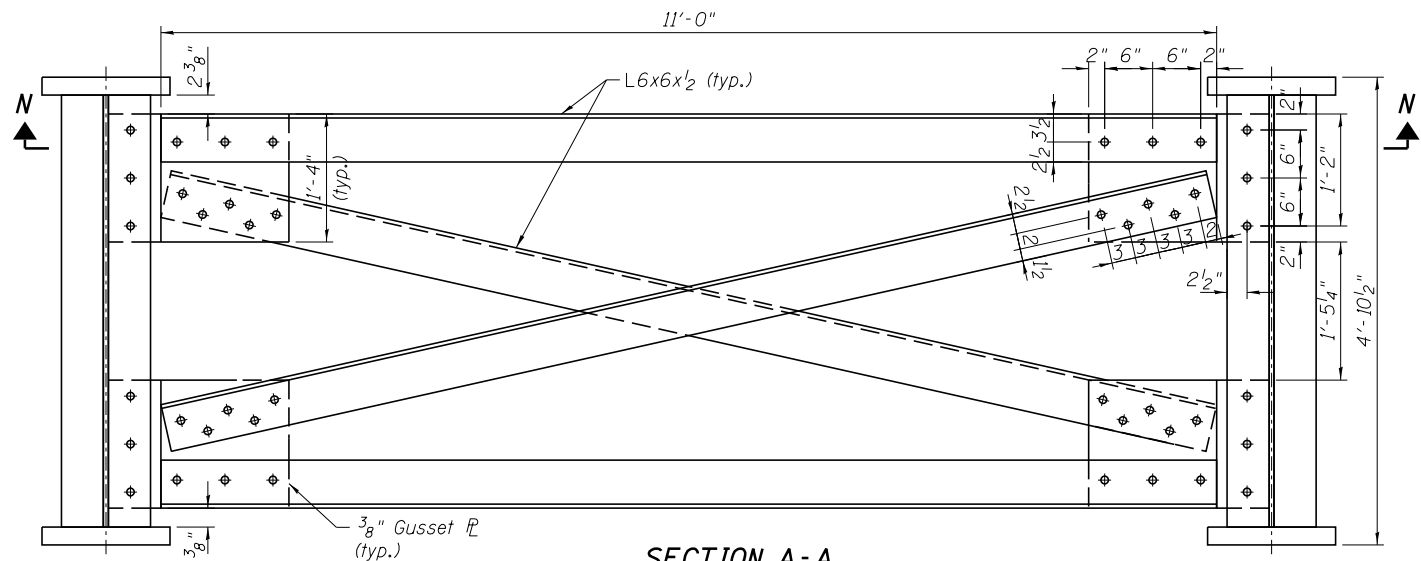
SHEET NO. S- 49 OF 51 SHEETS

F.A.U. RTE. 384	SECTION 11-00134-02-WR	COUNTY GRUNDY	TOTAL SHEETS 239	SHEET NO. 201
			CONTRACT NO. 87695	

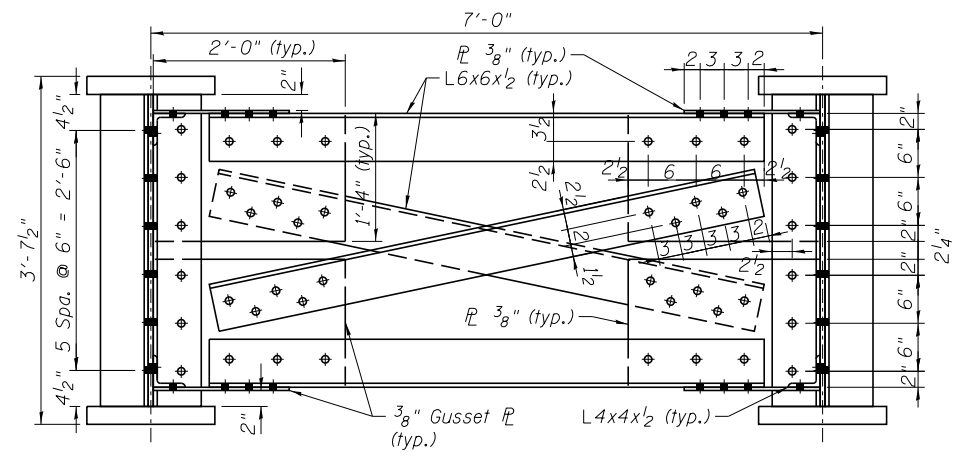
ILLINOIS FED. AID PROJECT



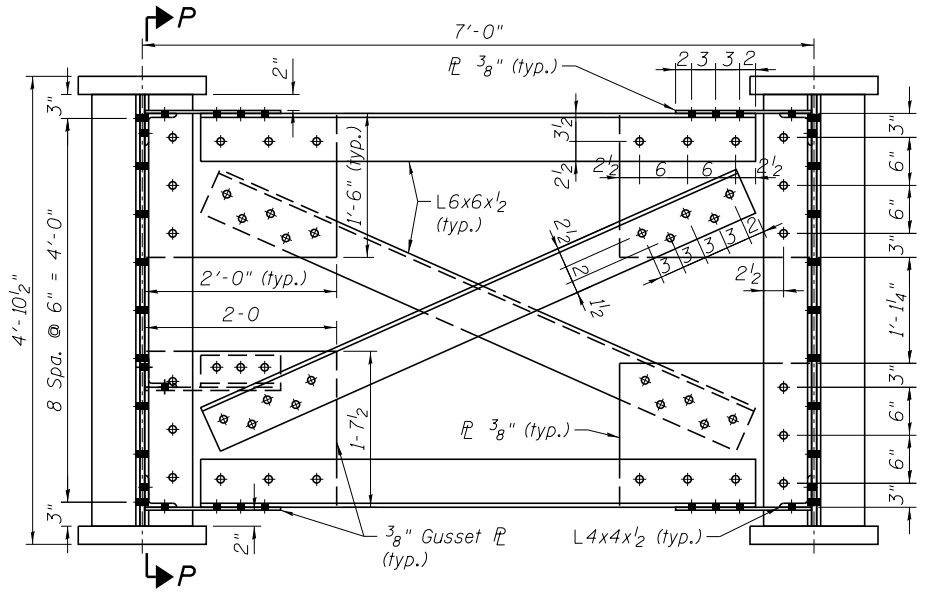
SECTION E-E



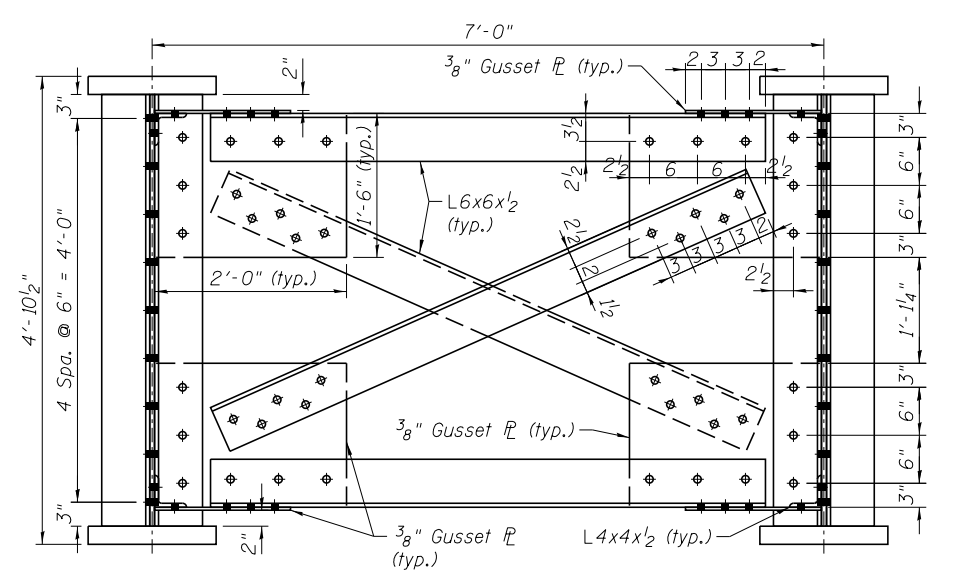
SECTION A-A



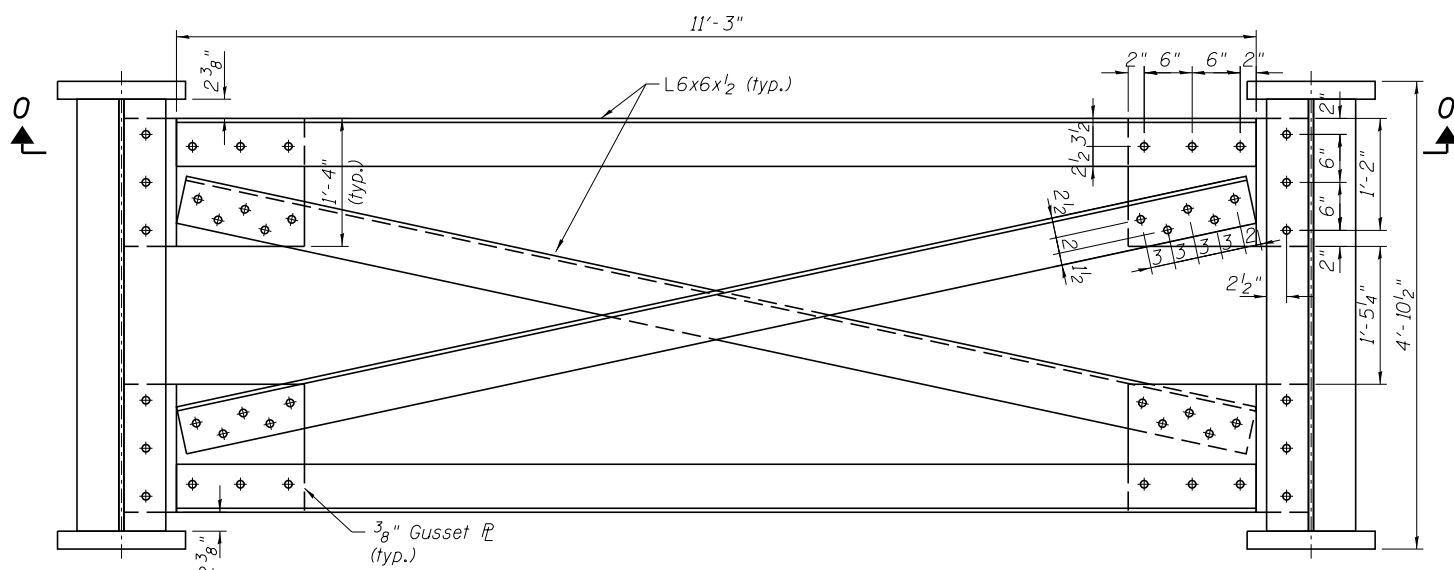
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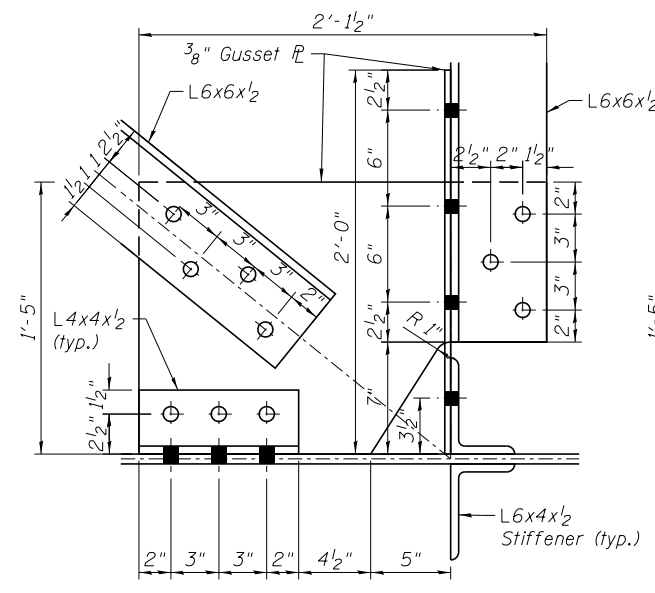
SECTION C-C



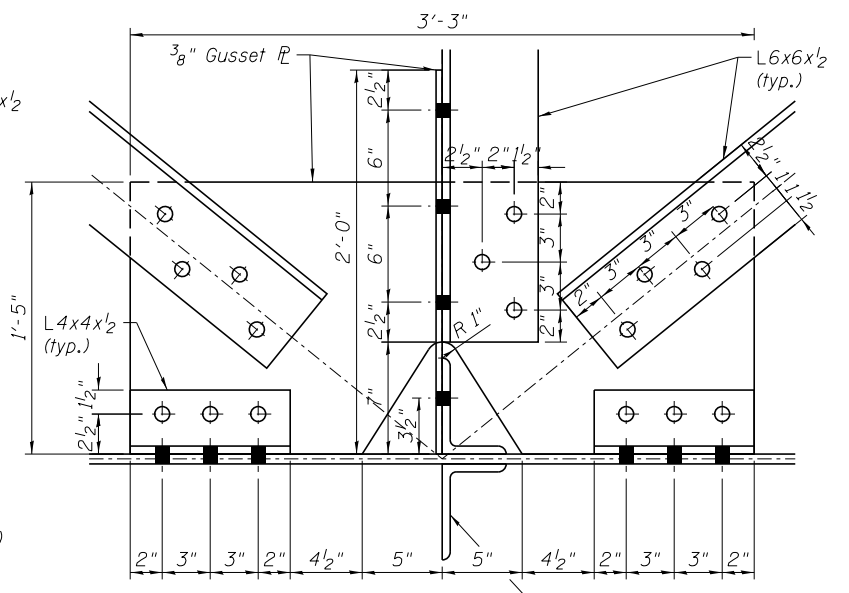
SECTION B-B



SECTION F-F



DETAIL G



DETAIL H

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CHECKED - MFB	REVISED -
DRAWN - RR	REVISED -
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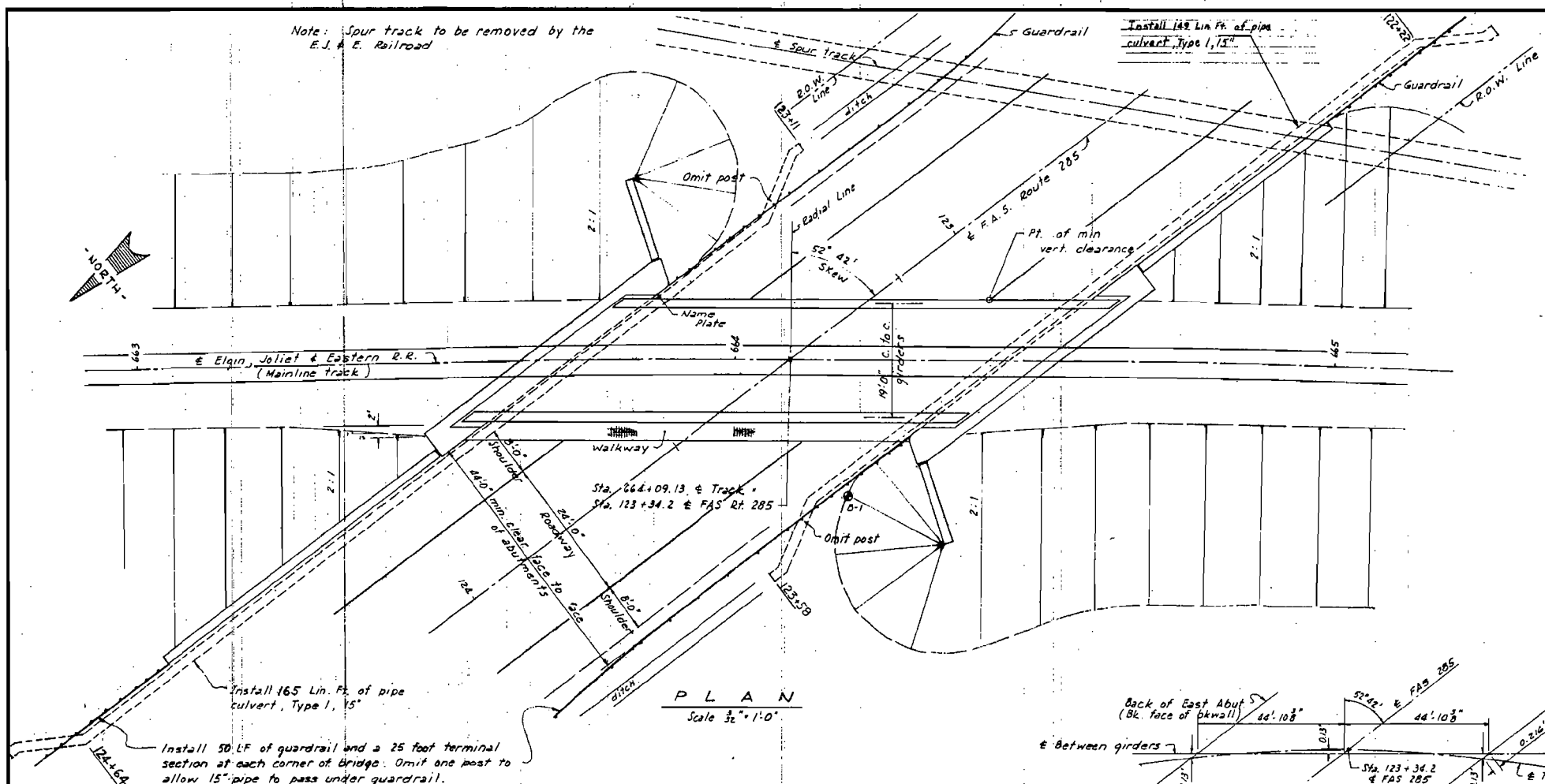
**GRUNDY COUNTY, ILLINOIS
HIGHWAY DEPARTMENT**

**TEMPORARY BRIDGE SUPERSTRUCTURE DETAILS 3
STRUCTURE NO. 032-3400**

SHEET NO. S- 50 OF 51 SHEETS

F.A.U. RT.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	202
CONTRACT NO. 87695				

ILLINOIS FED. AID PROJECT



GENERAL NOTES

The Standard Specifications for Road and Bridge Construction of the State of Illinois shall apply to this work. The current specifications were adopted January 2, 1971.

The bridge is designed in accordance with the 1969 AREA Specifications for Steel Railway Bridges.

Steel fabrication shall be in accordance with AREA Specifications.

Structural steel shall conform to ASTM A-36. The ballast plate shall conform to ASTM A-242.

The contract unit price for "Structural Steel" shall include structural steel, corrosion resistant steel, steel for bearings and lead plates.

All structural steel shall receive one shop coat of red lead paint and two field coats of paint. See Special Provisions for high strength bolts with 1/8" open holes unless otherwise noted.

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.

The back faces of wingwalls and abutments shall be waterproofed in accordance with Article 503.11 of the Standard Specifications.

The Contractor shall drive one test pile in a permanent location in each abutment as directed by the Engineer before ordering the remainder of the piles.

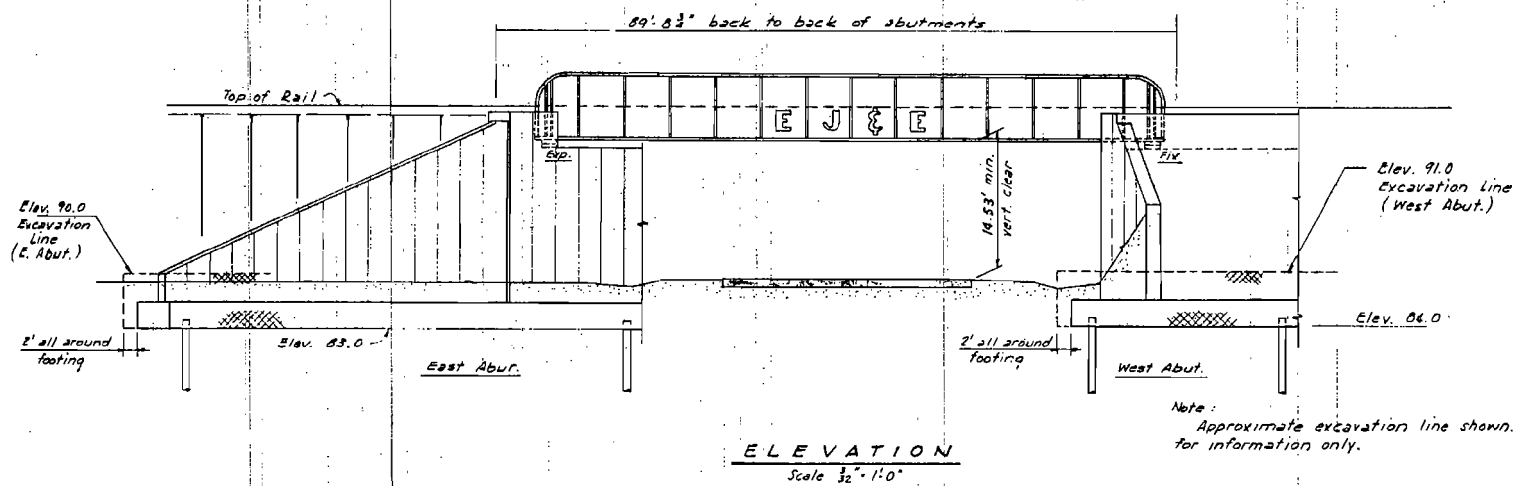
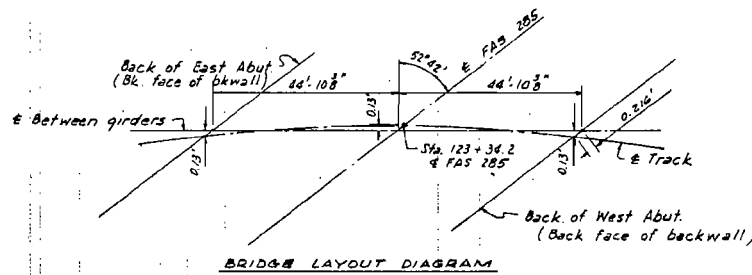
All welding shall be done in accordance with Specifications for Welded Highway and Railway Bridges, current edition.

Reinforcing steel shall conform to ASTM-A615, Grade 40 Specification.

Calculated plan weight of Structural Steel = 210,000 lbs.

The weight of Structural Steel shall include the items listed below and are to be paid for at the lump sum price for "Structural Steel".

Structural Steel (A-36)	174,275 lbs
Corrosion Resistant Steel (ASTM A-242)	30,000
Bearings and assemblies	5,725
Total	210,000 lbs



DESIGN STRESSES

$f_s = 20,000$ psi Structural (A-36)

$f_s = 20,000$ psi Reinforcement

$f_c = 1,600$ psi

$n = 10$

Loading - Cooper E-80 (Impact without hammer)

E. J. & E. RAILWAY
BUILT 1973
PROJECT S-SG-285 (103)
SECTION 23-S
STATION 123 + 34.2
LOADING E-80

NAME PLATE
See Std. 2113

GENERAL PLAN AND ELEVATION

ELGIN, JOLIET & EASTERN RAILWAY OVER FAS ROUTE 285

SECTION 23-S GRUNDY COUNTY

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

206 W. CANEY SPRINGFIELD, ILLINOIS

DESIGNED CR	DRAWN CR	DATE 7-30-71
CHECKED REO	CHECKED REO	JOB NO. 70-29

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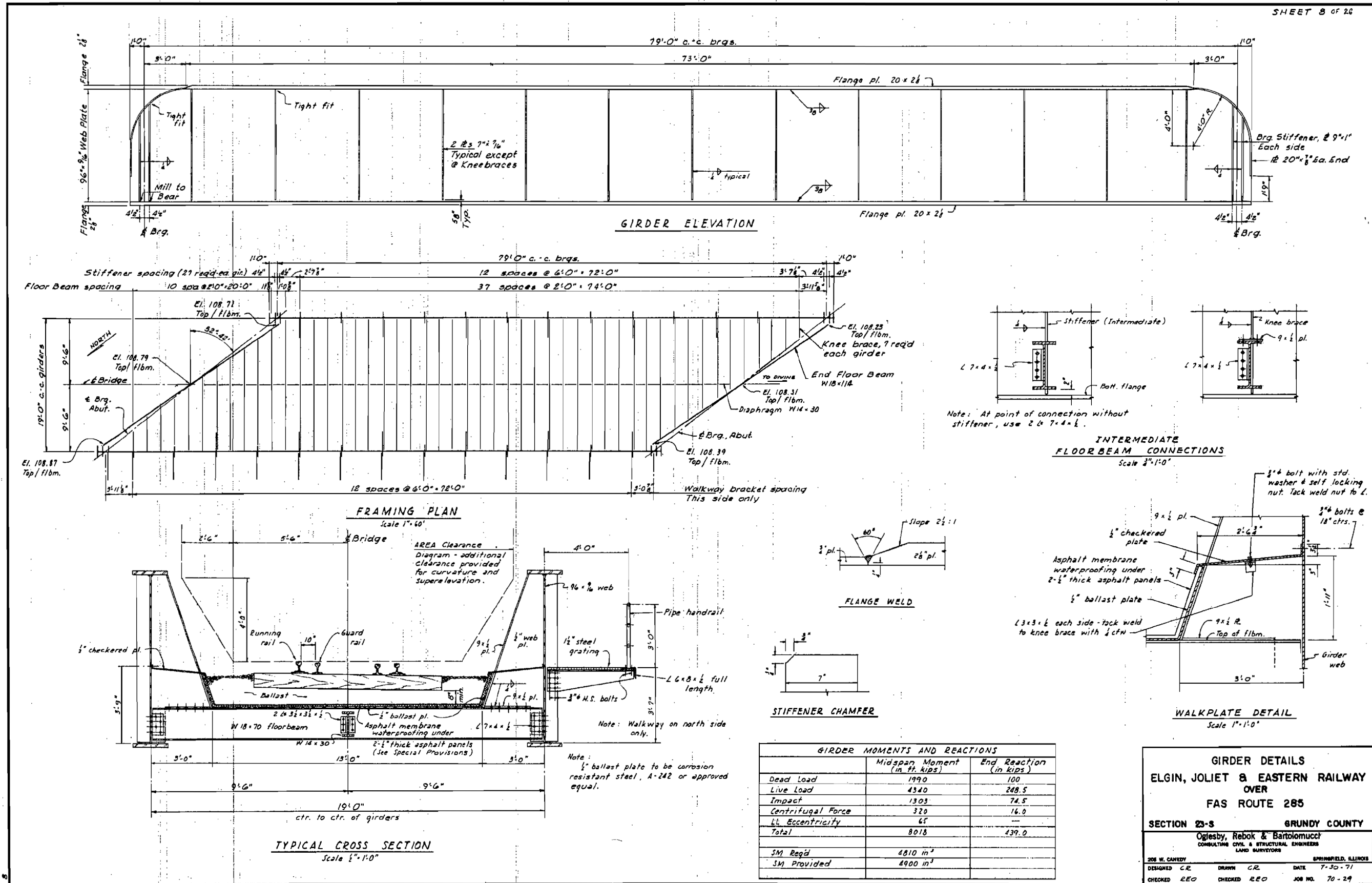
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS
STRUCTURE NO. 032-3400

SHEET 1 OF 15 SHEETS STA. TO STA.

FOR INFORMATION ONLY

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	204
				CONTRACT NO. 87695
ILLINOIS FED. AID PROJECT				



FOR INFORMATION ONLY

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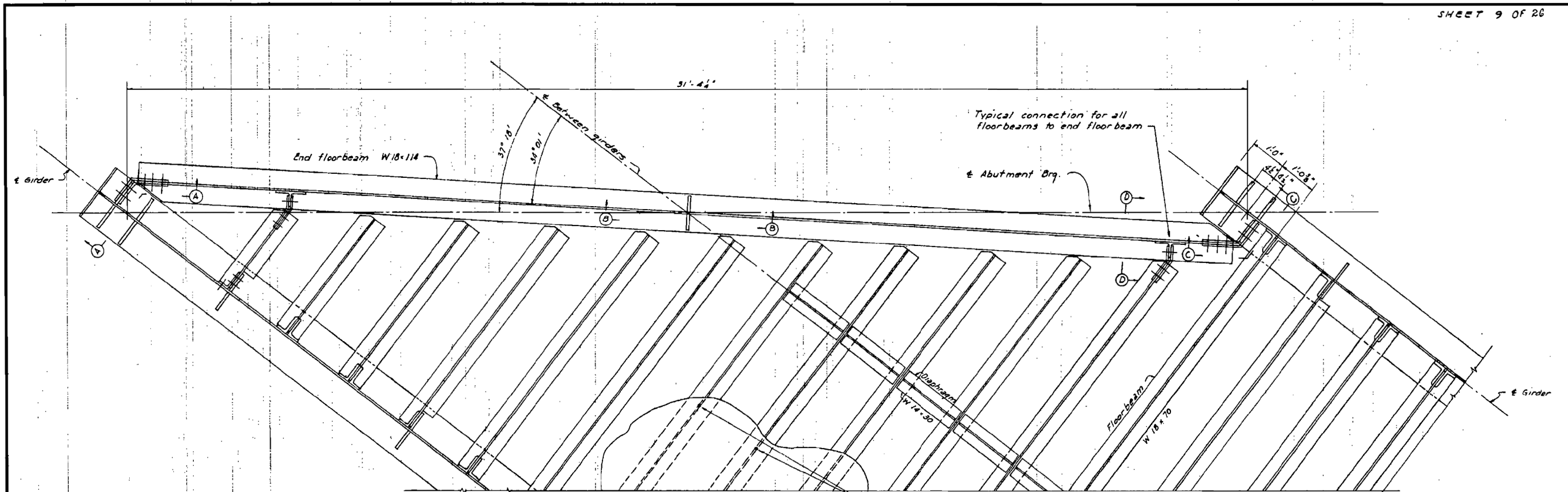
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING PLANS
 STRUCTURE NO. 032-3400

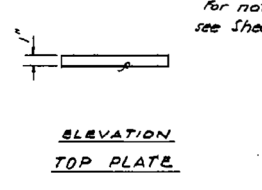
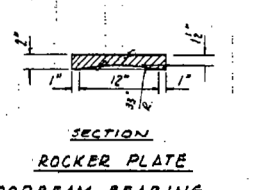
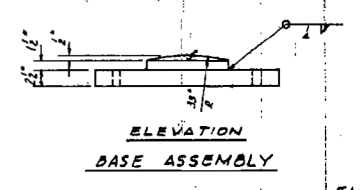
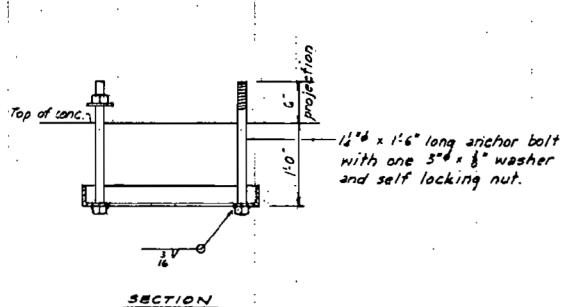
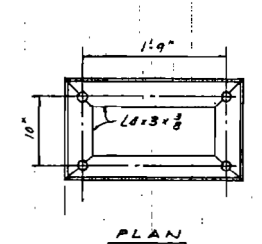
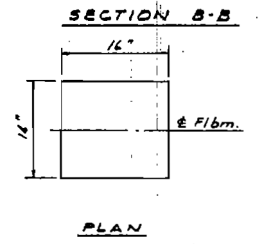
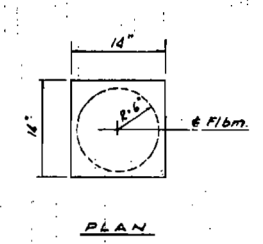
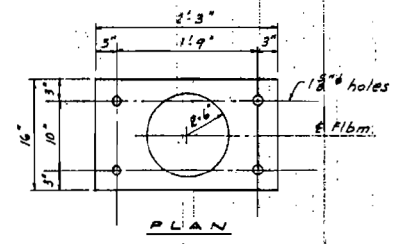
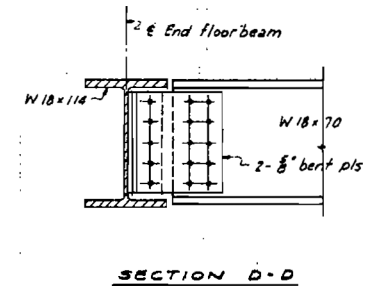
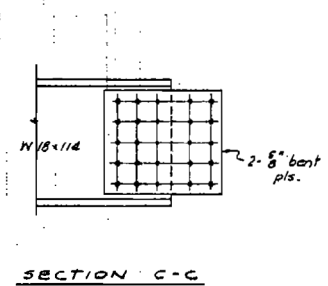
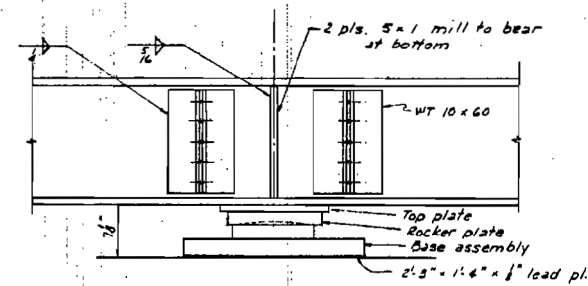
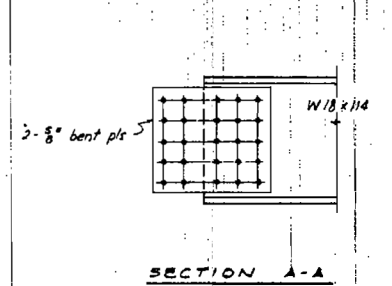
SHEET 2 OF 15 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	205
				CONTRACT NO. 87695
ILLINOIS FED. AID PROJECT				



PLAN AT END FLOORBEAM
Scale 3/4" = 1'-0"

Plug weld ballast plate to floorbeams with 10 welds on 2'-0" ctrs each floorbeam. Weld plates together with a single v-groove weld with depth of chamfer 3/8".



ANCHOR BOLT ASSEMBLY
(for end flbm. brg.)
2 req'd

Note: for notes on bearings see Sheet 11.

END FLOORBEAM BEARING

MISCELLANEOUS DECK DETAILS
ELGIN, JOLIET & EASTERN RAILWAY
OVER
FAS ROUTE 285
SECTION 23-S GRUNDY COUNTY
Ogiesby, Rebok & Barbiolomucci
CONSULTING CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
306 W. GARNEY SPRINGFIELD, ILLINOIS
DESIGNED CR DRAWN CR DATE 7-30-71
CHECKED REO CHECKED REO JOB NO. 70-29

FOR INFORMATION ONLY

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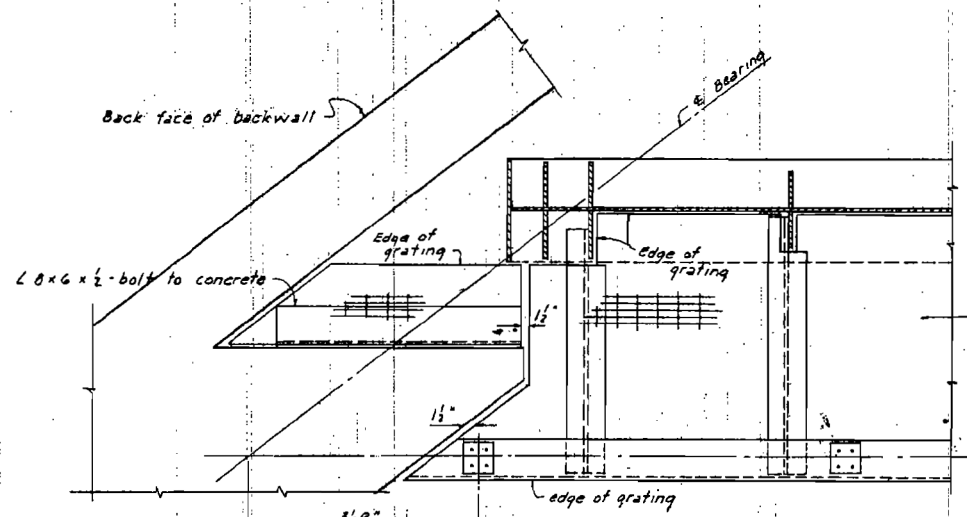
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

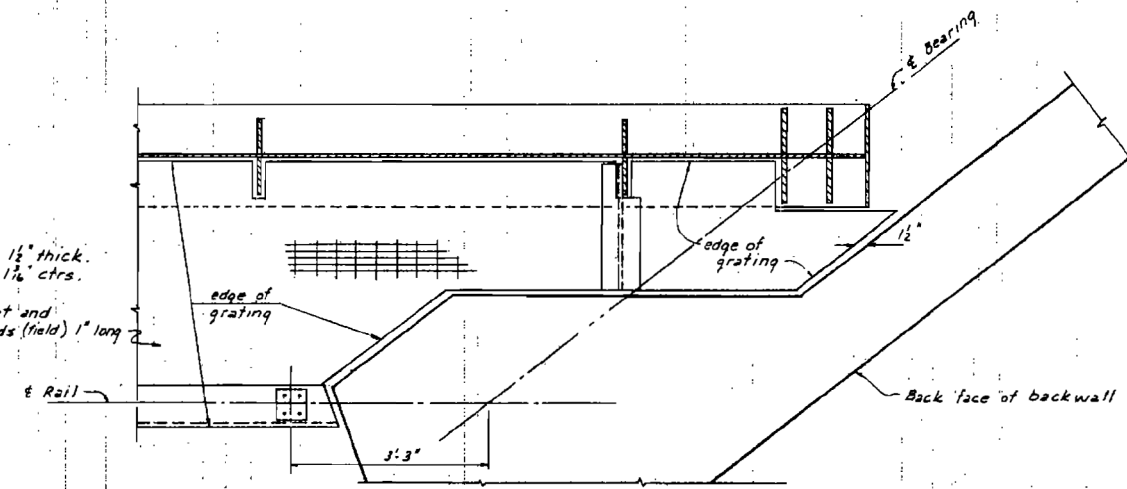
EXISTING PLANS
STRUCTURE NO. 032-3400

SHEET 3 OF 15 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 87695	
ILLINOIS FED. AID PROJECT				

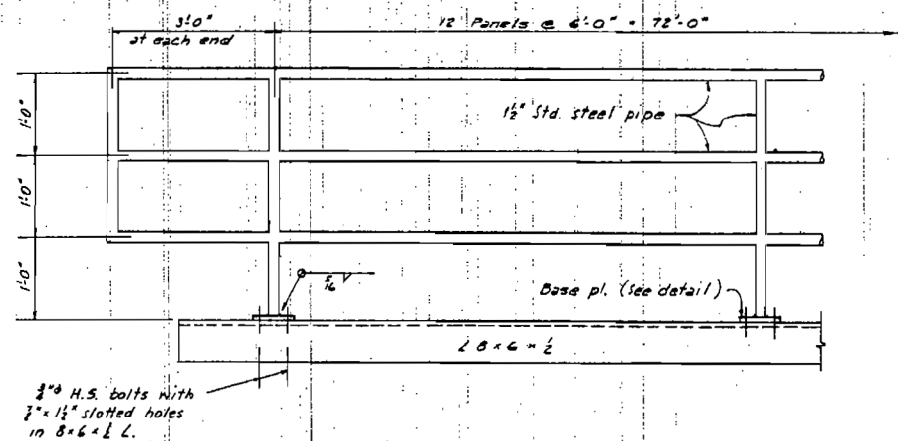


PLAN AT NORTHEAST CORNER

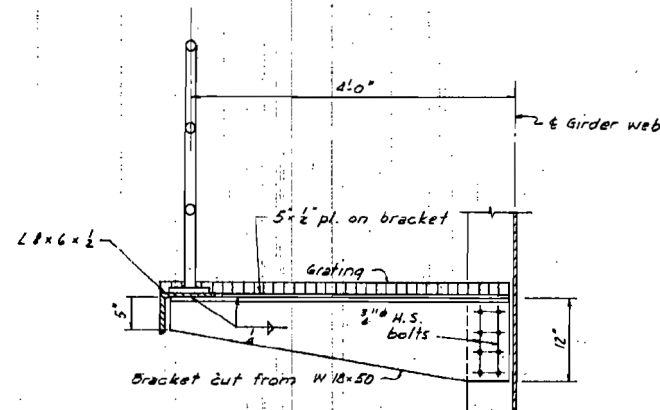


PLAN AT NORTHWEST CORNER

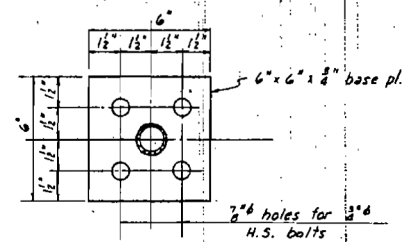
PLAN OF WALKWAY
Scale 3/4" = 1'-0"



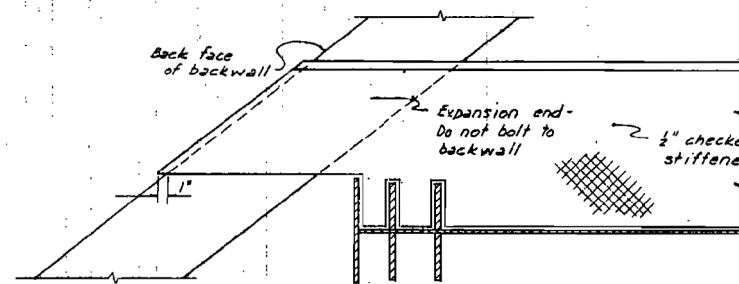
ELEVATION OF RAIL



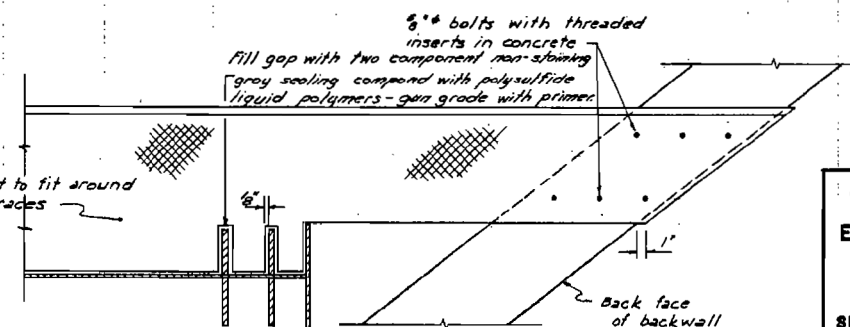
SECTION AT BRACKET



RAIL POST BASE PLATE



PLAN AT NORTHEAST CORNER



PLAN AT NORTHWEST CORNER

CHECKERED WALKPLATE DETAIL

WALKWAY & WALKPLATE DETAILS			
ELGIN, JOLIET & EASTERN RAILWAY OVER FAS ROUTE 285			
SECTION 23-S		GRUNDY COUNTY	
Oglesby, Rebok & Bartolomucci CONSULTING CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS			
DESIGNED	CR	DRAWN	CR
CHECKED	REO	CHECKED	REO
DATE 7-30-71		JOB NO. 70-29	

FOR INFORMATION ONLY



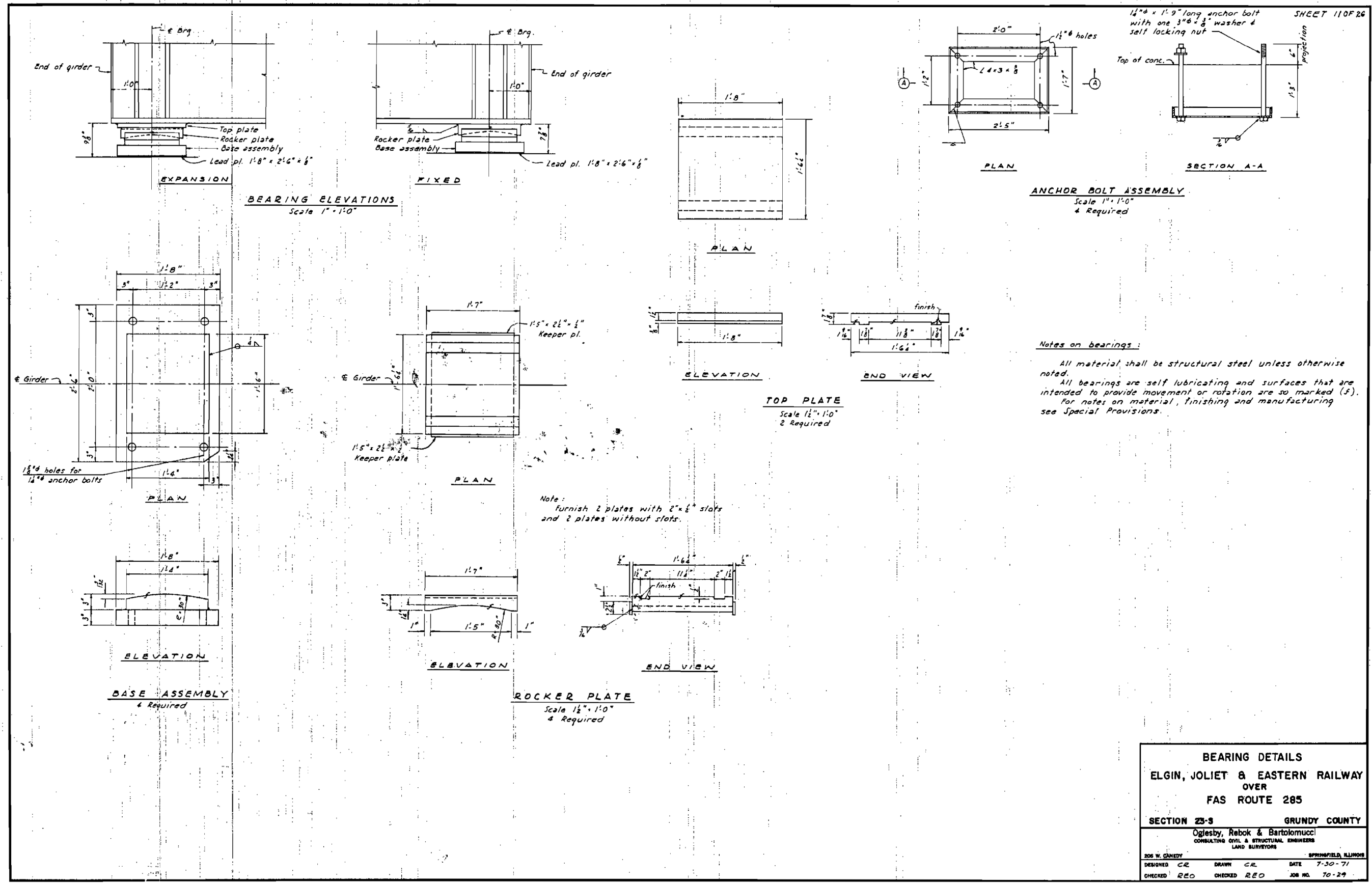
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS
STRUCTURE NO. 032-3400

SHEET 4 OF 15 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	207
			CONTRACT NO. 87695	
ILLINOIS FED. AID PROJECT				



BEARING DETAILS			
ELGIN, JOLIET & EASTERN RAILWAY OVER FAS ROUTE 285			
SECTION 23-S		GRUNDY COUNTY	
Oglesby, Rebok & Bartolomucci CONSULTING CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS			
<small>306 W. CANEDY SPRINGFIELD, ILLINOIS</small>			
DESIGNED	CR	DRAWN	CR
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		JOB NO.	70-29

FOR INFORMATION ONLY

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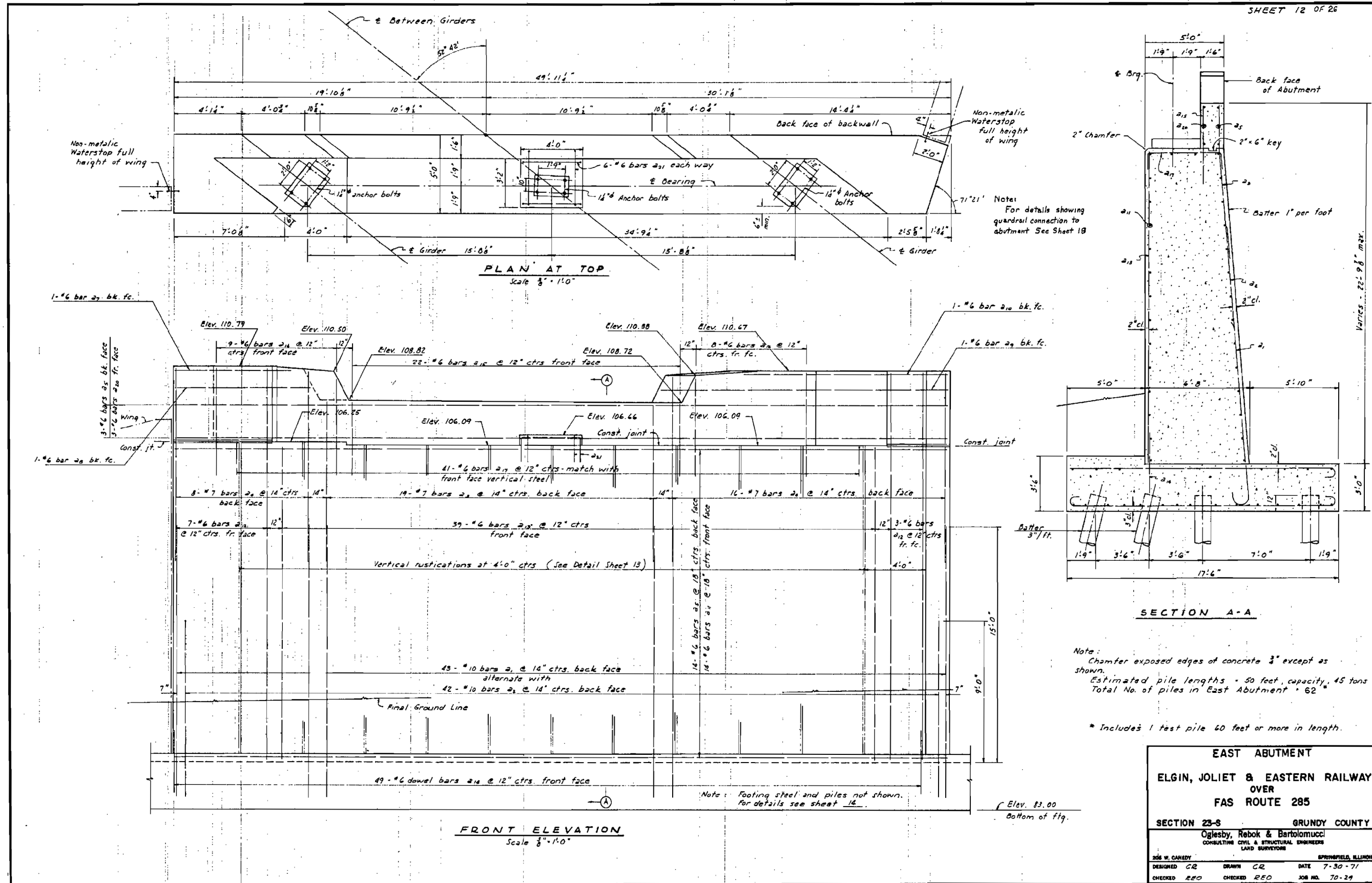
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	DATE - 04-05-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXISTING PLANS
STRUCTURE NO. 032-3400**

SHEET 5	OF 15 SHEETS	STA.	TO STA.
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	208
			CONTRACT NO. 87695	
<small>ILLINOIS FED. AID PROJECT</small>				



Note:
 Chamfer exposed edges of concrete 3" except as shown.
 Estimated pile lengths = 50 feet, capacity, 45 tons
 Total No. of piles in East Abutment = 62
 * Includes 1 test pile 60 feet or more in length.

EAST ABUTMENT
ELGIN, JOLIET & EASTERN RAILWAY
OVER
FAS ROUTE 285

SECTION 23-8 GRUNDY COUNTY
 Oglesby, Rebok & Bartolomucci
 CONSULTING CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS

308 W. CANEDY SPRINGFIELD, ILLINOIS

DESIGNED CR	DRAWN CR	DATE 7-30-71
CHECKED REO	CHECKED REO	JOB NO. 70-29

FOR INFORMATION ONLY

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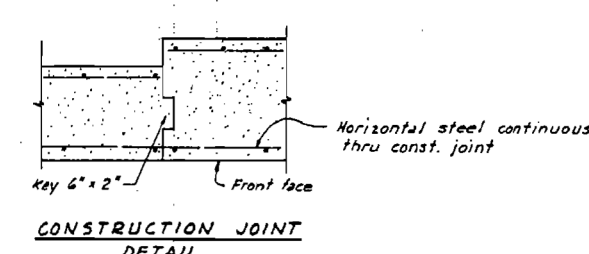
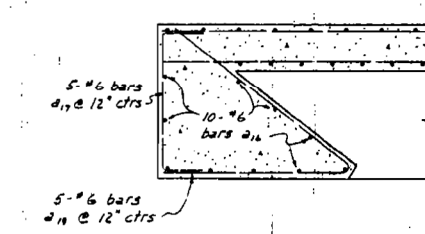
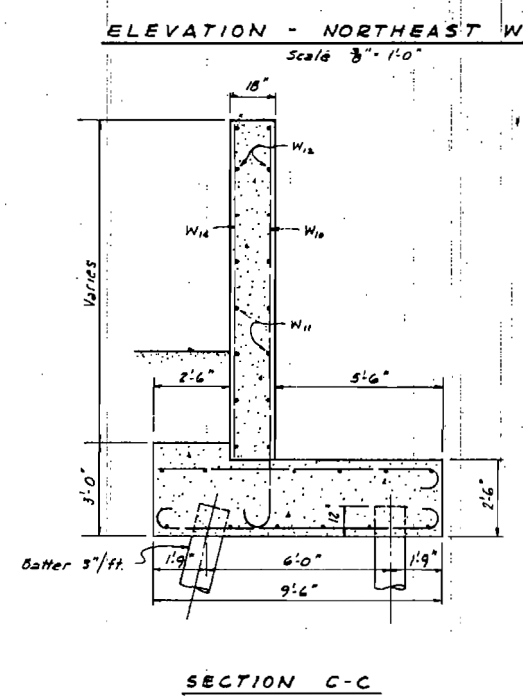
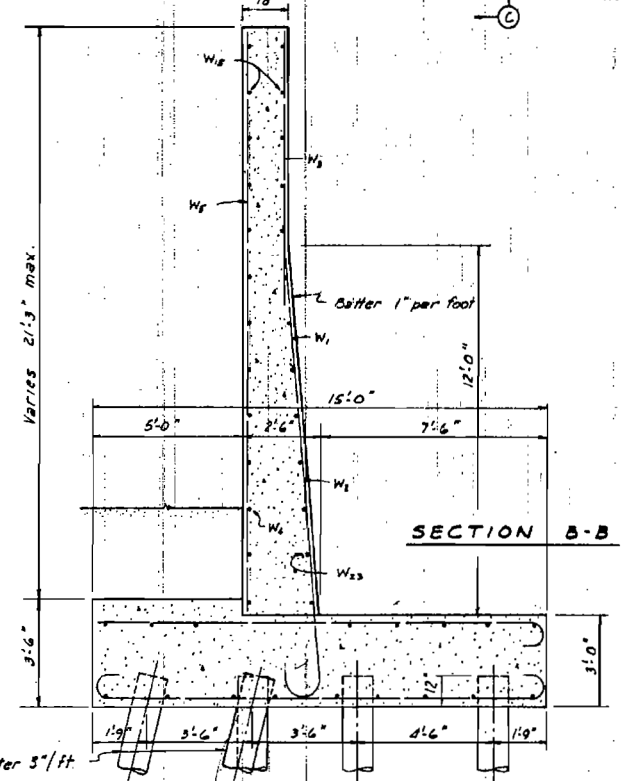
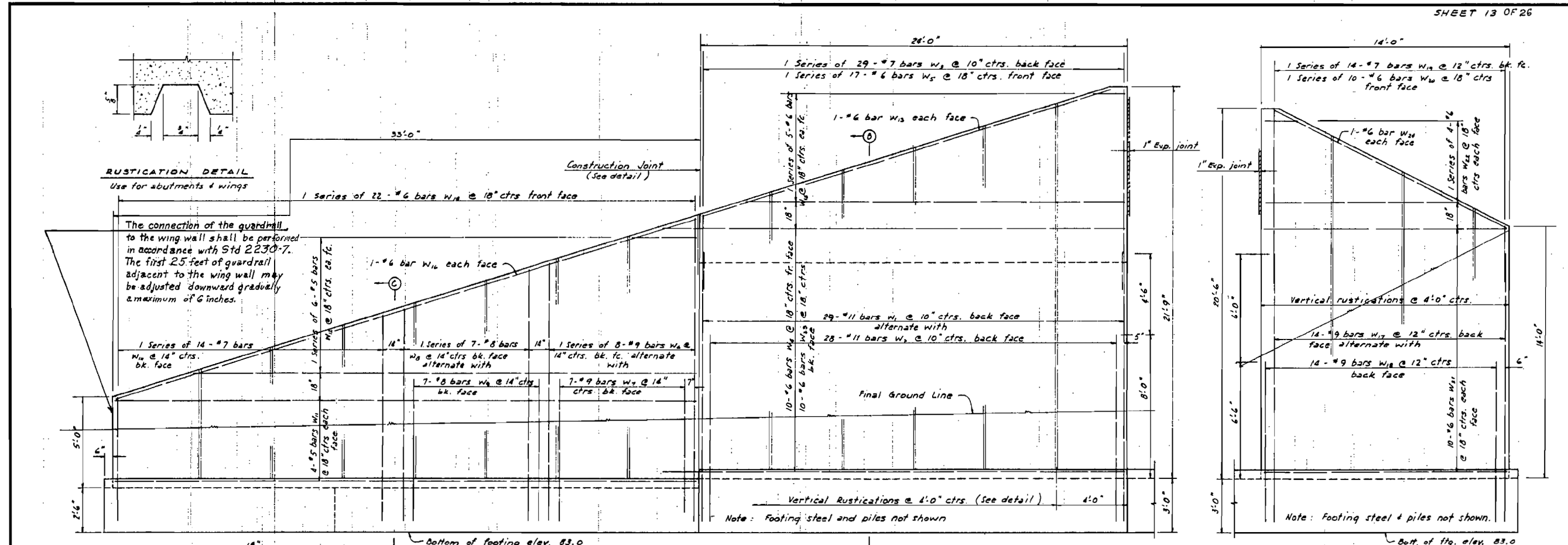
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	DATE - 04-05-2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS
STRUCTURE NO. 032-3400

SHEET 6 OF 15 SHEETS STA. TO STA.

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	209
				CONTRACT NO. 87695
ILLINOIS FED. AID PROJECT				



EAST ABUTMENT			
ELGIN, JOLIET & EASTERN RAILWAY OVER FAS ROUTE 285			
SECTION 23-5		GRUNDY COUNTY	
Oglesby, Rebok & Bartolomucci CONSULTING CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS			
DESIGNED CR		DATE 7-30-71	SPRINGFIELD, ILLINOIS
DRAWN CR		CHECKED REO	JOB NO. 70-29

FOR INFORMATION ONLY

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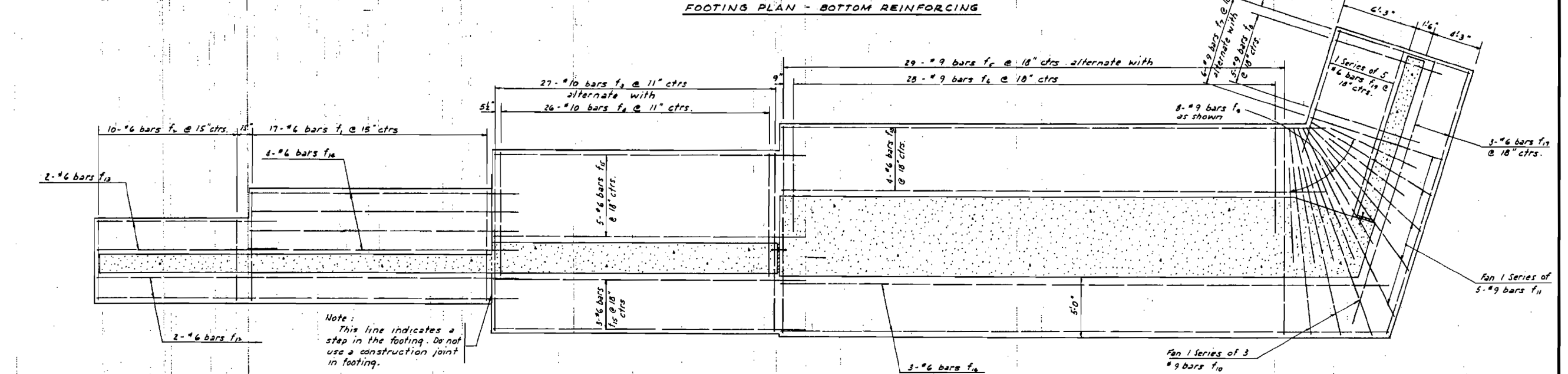
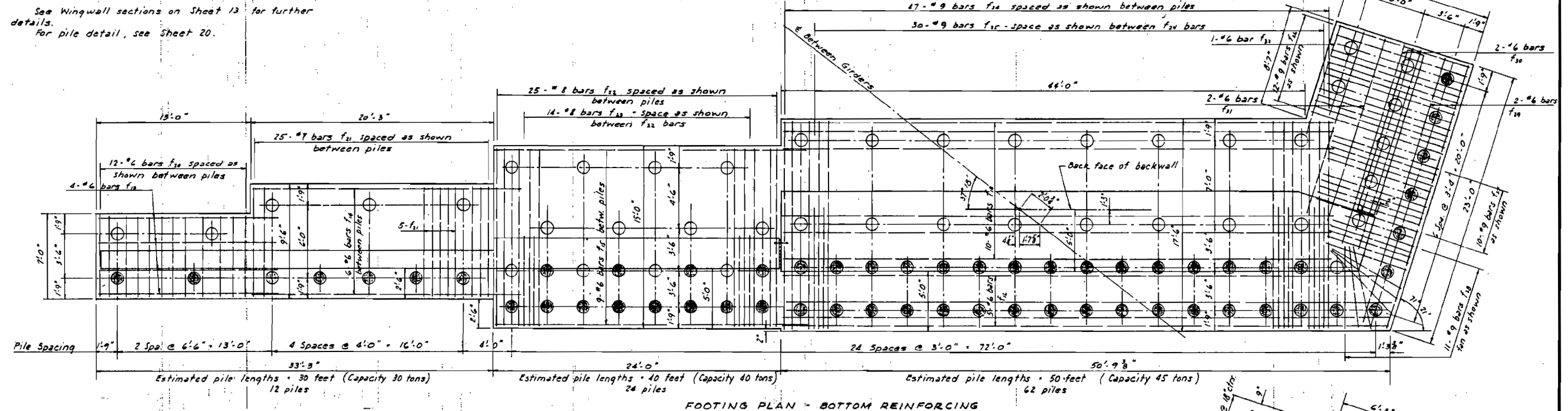
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXISTING PLANS
STRUCTURE NO. 032-3400**

SHEET 7 OF 15 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	210
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

Notes:
 Steel in bottom of footing shall be carefully placed to miss the piles.
 Piles shaded as shown shall be battered 3" per foot.
 ● - Battered Pile
 See Wingwall sections on Sheet 13 for further details.
 For pile detail, see Sheet 20.



EAST ABUTMENT
ELGIN, JOLIET & EASTERN RAILWAY
OVER
FAS ROUTE 285
SECTION 23-8 GRUNDY COUNTY
 Oglesby, Rebok & Bartolomucci
 CONSULTING CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS
 308 W. CAREY SPRINGFIELD, ILLINOIS
 DESIGNED CR DRAWN CR DATE 7-30-71
 CHECKED REO CHECKED REO JOB NO. 70-29

FOR INFORMATION ONLY

FILE NAME = D387695-shf-EXStructur.e7.dgn



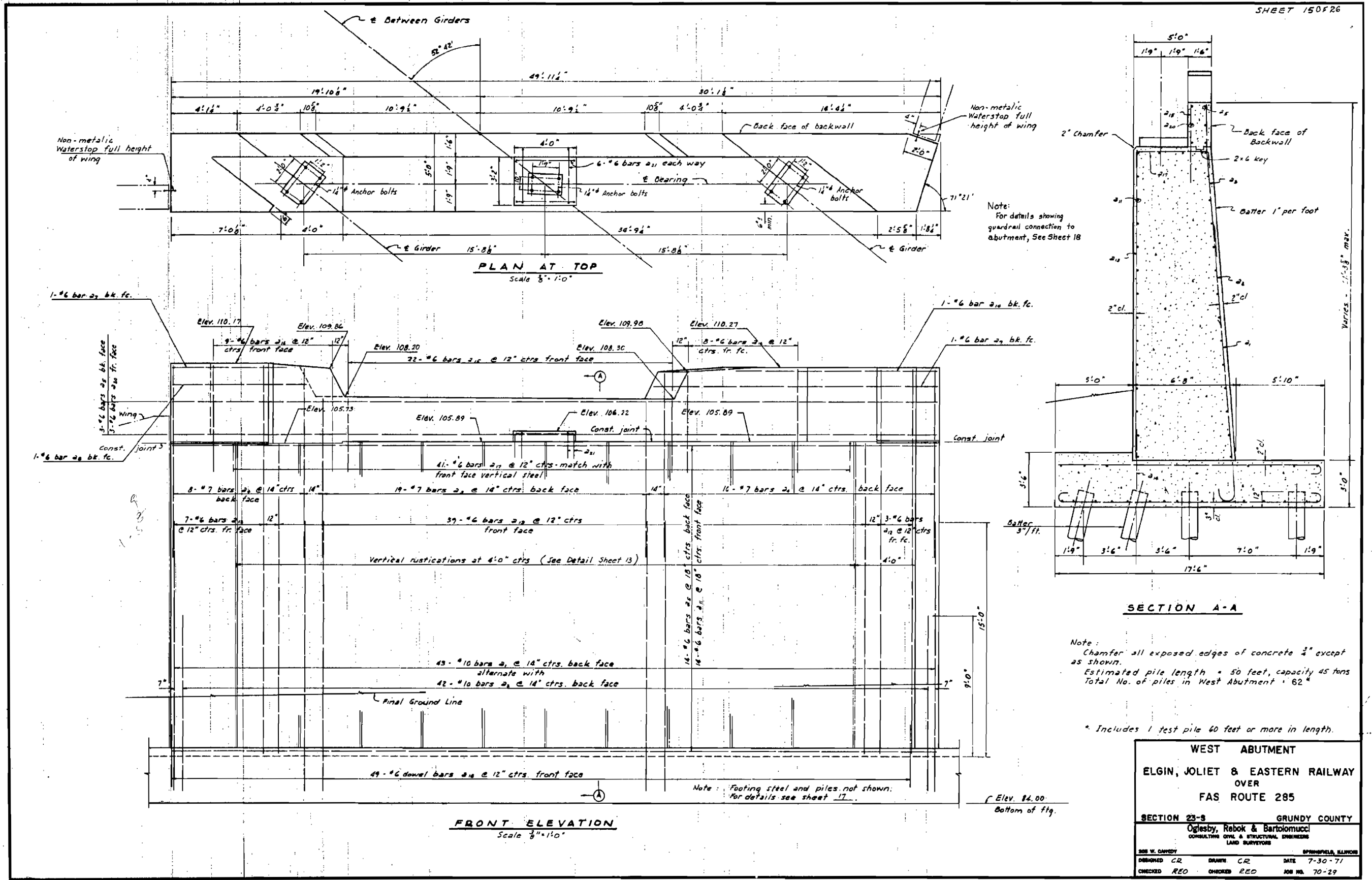
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	DRAWN - JNH	REVISED -
PLOT SCALE = 2.0000' / in.	CHECKED - KMB	REVISED -
PLOT DATE = 4/2/2019	DATE - 04-05-2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS
STRUCTURE NO. 032-3400

SHEET 8 OF 15 SHEETS STA. TO STA.

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	211
				CONTRACT NO. 87695
ILLINOIS FED. AID PROJECT				



Note:
For details showing
guardrail connection to
abutment, See Sheet 18

Note:
Chamfer all exposed edges of concrete 3/4" except
as shown.
Estimated pile length = 50 feet, capacity 45 tons
Total No. of piles in West Abutment = 62

* Includes 1 test pile 60 feet or more in length.

WEST ABUTMENT	
ELGIN, JOLIET & EASTERN RAILWAY OVER FAS ROUTE 285	
SECTION 23-S	GRUNDY COUNTY
Oglesby, Rebok & Bartolomucci CONSULTING CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS	
DESIGNED CR	DRAWN CR
CHECKED RED	CHECKED RED
DATE 7-30-71	JOB NO. 70-29

FOR INFORMATION ONLY

FILE NAME = D387695-sht-EXSTRUCtur.eb.dgn



USER NAME = JSUR5*	DESIGNED - JNH	REVISED -
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PLOT DATE = 4/2/2019	CHECKED - KMB	REVISED -
	DATE - 04-05-2019	REVISED -

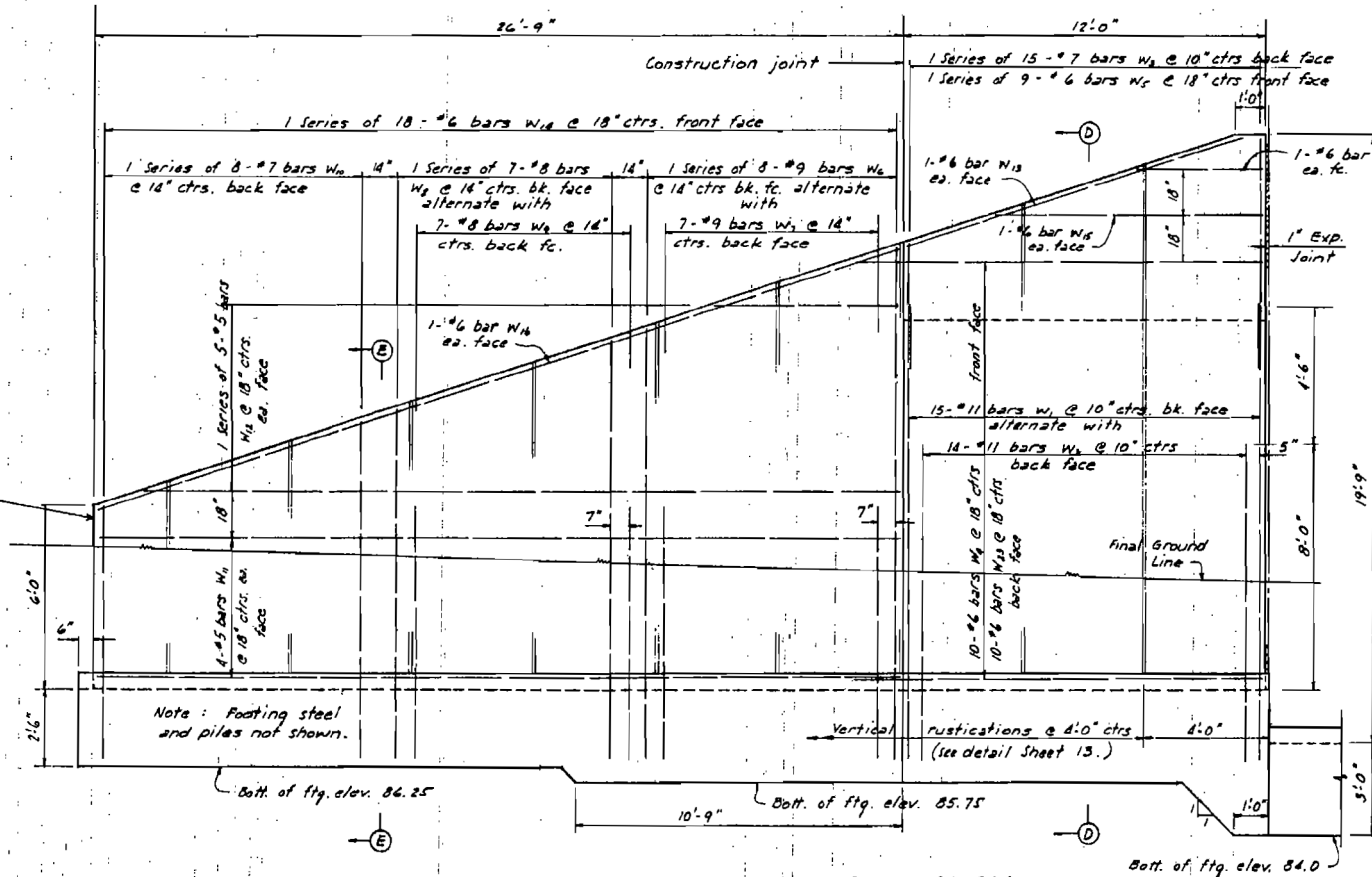
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXISTING PLANS
STRUCTURE NO. 032-3400**

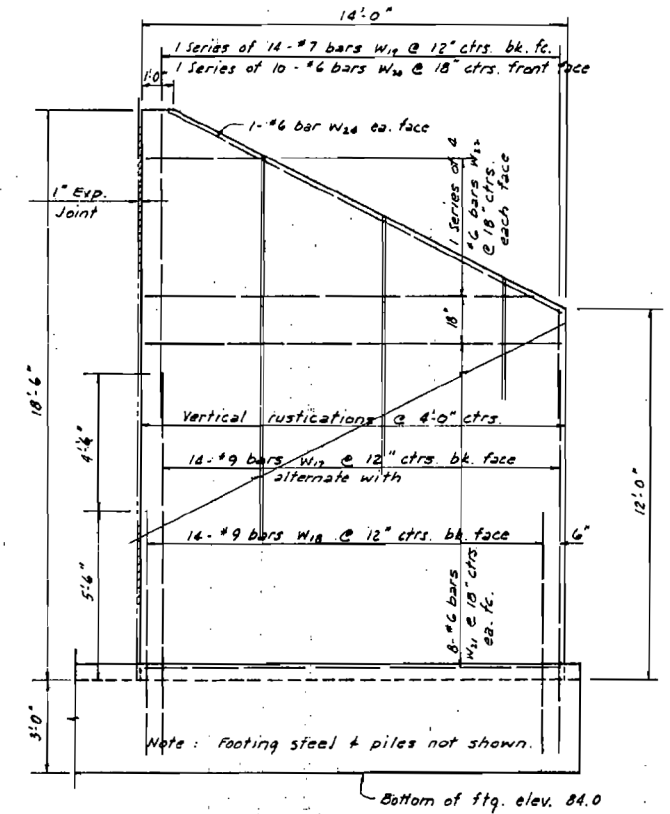
SHEET 9 OF 15 SHEETS	STA.	TO STA.
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	212
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

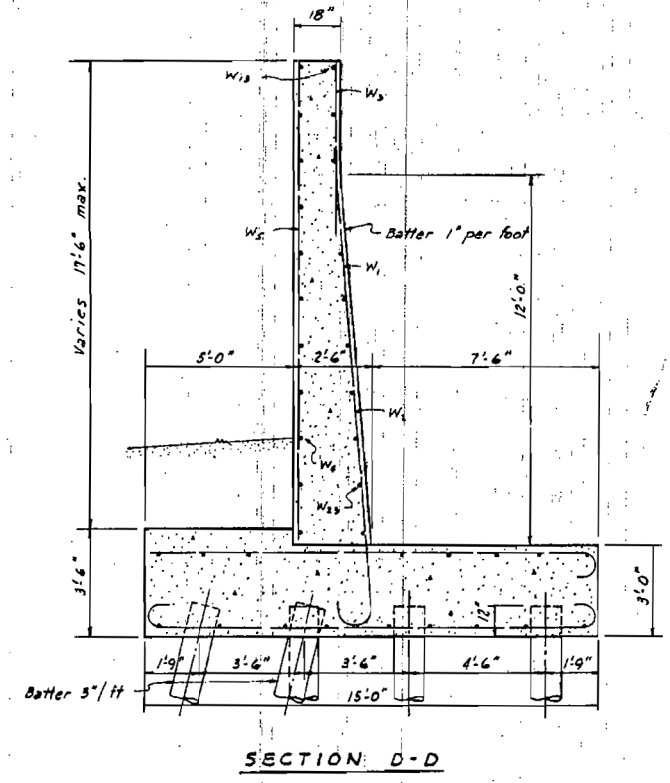
The connection of the guardrail to the wing wall shall be performed in accordance with Std 2230-7. The first 25 feet of guardrail adjacent to the wing wall may be adjusted downward gradually a maximum of 6 inches



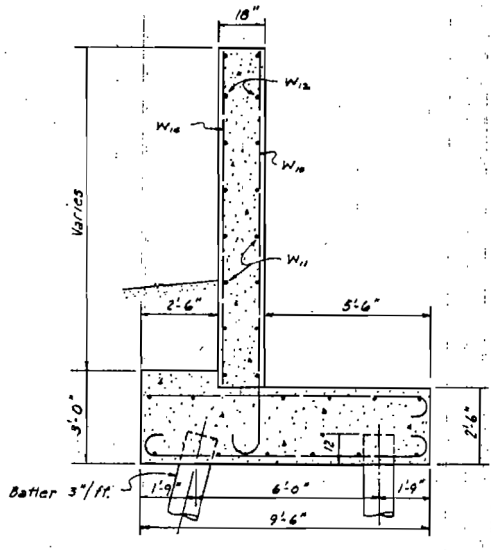
ELEVATION - SOUTHWEST WINGWALL



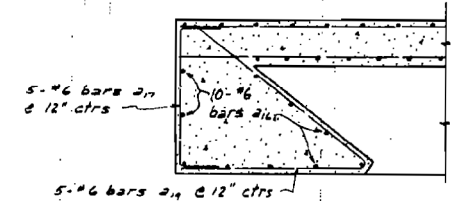
ELEVATION - NORTHWEST WINGWALL



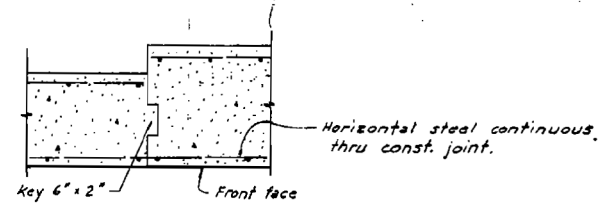
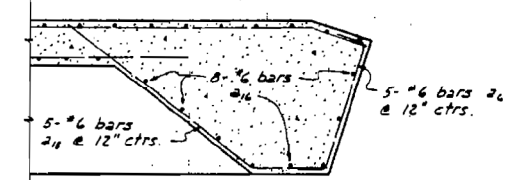
SECTION D-D



SECTION E-E



ABUTMENT - CORNER REINFORCING



CONSTRUCTION JOINT DETAIL

WEST ABUTMENT			
ELGIN, JOLIET & EASTERN RAILWAY			
OVER			
FAS ROUTE 285			
SECTION 23-8		GRUNDY COUNTY	
Oglesby, Rebok & Bartolomucci			
<small>CONSULTING CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS</small>			
<small>SDS W. CANNEDY</small>	<small>SPRINGFIELD, ILLINOIS</small>		
<small>DESIGNED: CR</small>	<small>DRAWN: CR</small>	<small>DATE: 7-30-71</small>	
<small>CHECKED: EEO</small>	<small>CHECKED: EEO</small>	<small>JOB NO. 70-29</small>	

FOR INFORMATION ONLY



USER NAME = \$USER\$	DESIGNED - JNH	REVISED -
	DRAWN - JNH	REVISED -
PLOT SCALE = 2.0000' / in.	CHECKED - KMB	REVISED -
PLOT DATE = 4/2/2019	DATE - 04-05-2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

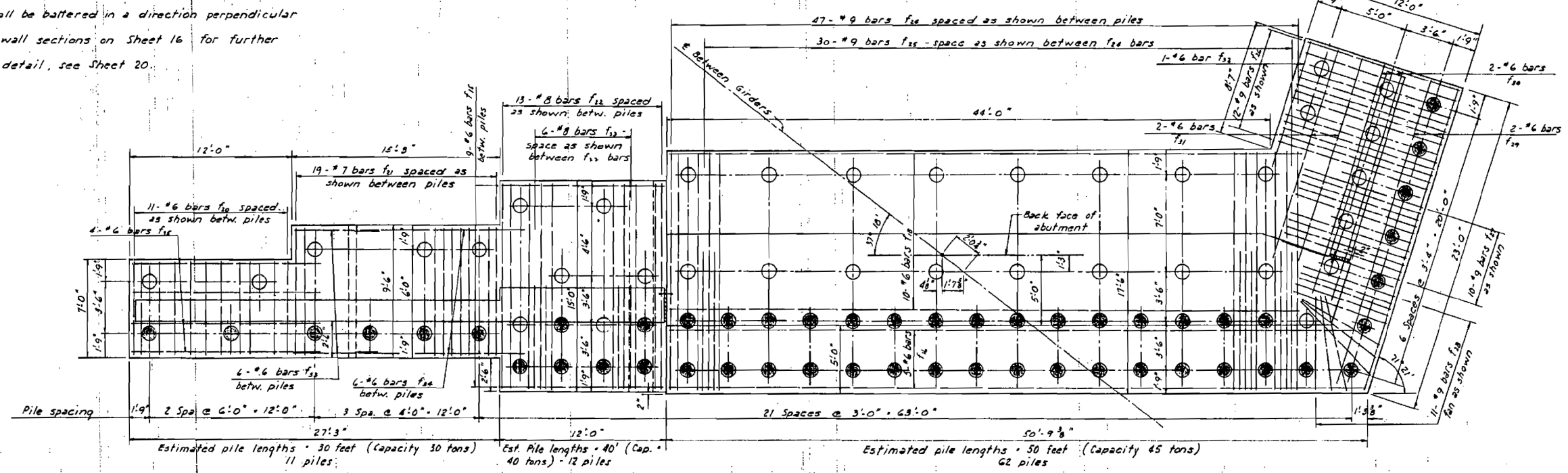
EXISTING PLANS
STRUCTURE NO. 032-3400

SHEET 10 OF 15 SHEETS STA. TO STA.

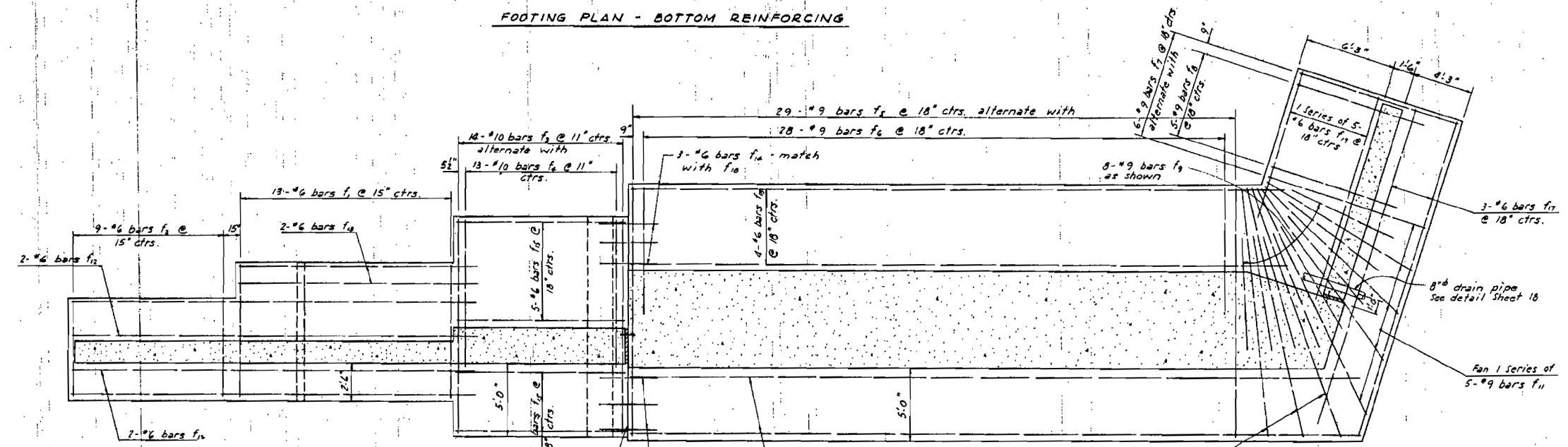
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	213
			CONTRACT NO. 87695	
<small>ILLINOIS FED. AID PROJECT</small>				

FILE NAME = D387695-sht-EXStructur.e9.dgn

Notes:
 Steel in bottom of footing shall be carefully placed to miss the piles.
 Piles shaded as shown shall be battered 3" per foot.
 Battered pile
 Piles shall be battered in a direction perpendicular to the walls.
 See wingwall sections on Sheet 16 for further details.
 For pile detail, see Sheet 20.



FOOTING PLAN - BOTTOM REINFORCING



FOOTING PLAN - TOP REINFORCING

Note:
 This line indicates a step in the footing. Do not use a construction joint in footing.

WEST ABUTMENT
ELGIN, JOLIET & EASTERN RAILWAY
OVER
FAS ROUTE 285
SECTION 23-8 GRUNDY COUNTY
 Oglesby, Rebok & Bartolomucci
 CONSULTING CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS
 206 W. CANEY SPRINGFIELD, ILLINOIS
 DESIGNED CR DRAWN CR DATE 7-30-71
 CHECKED REO CHECKED REO JOB NO. 70-29

FOR INFORMATION ONLY



USER NAME = \$USER\$	DESIGNED - JNH	REVISED -
PLOT SCALE = 2.0000' / in.	DRAWN - JNH	REVISED -
PLOT DATE = 4/2/2019	CHECKED - KMB	REVISED -
	DATE - 04-05-2019	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING PLANS
 STRUCTURE NO. 032-3400

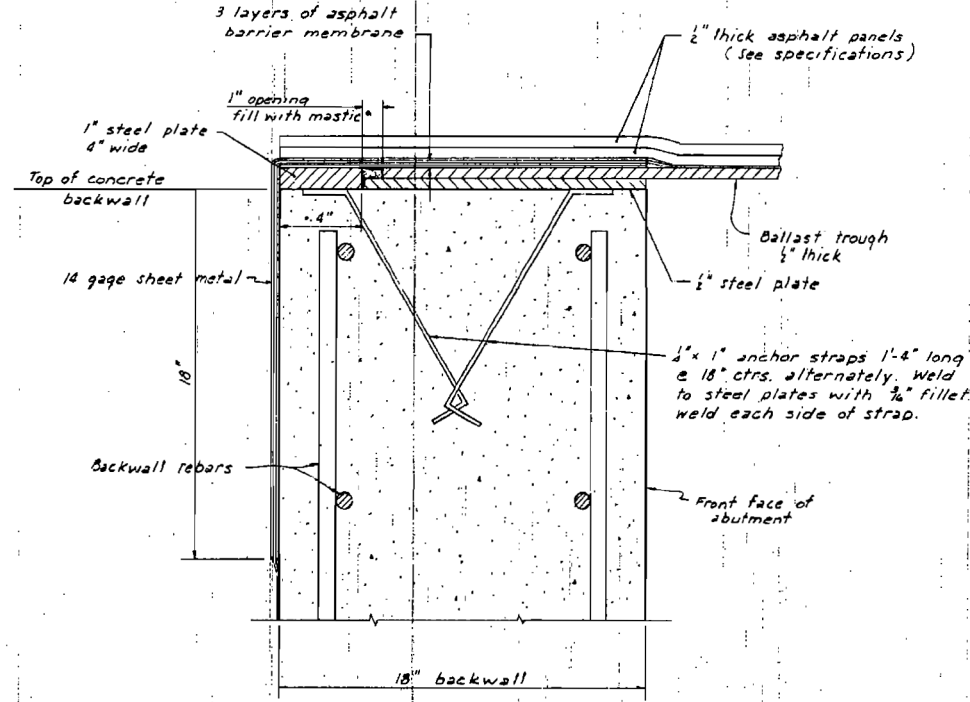
SHEET 11 OF 15 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	214
				CONTRACT NO. 87695
ILLINOIS FED. AID PROJECT				

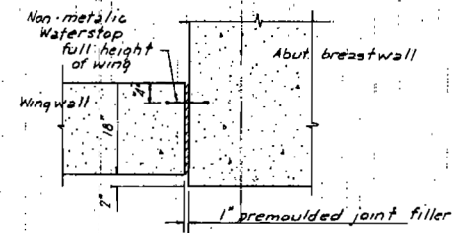
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* Use a non-hardening mastic similar to Colma Joint Sealer as manufactured by Sika, or approved equal.

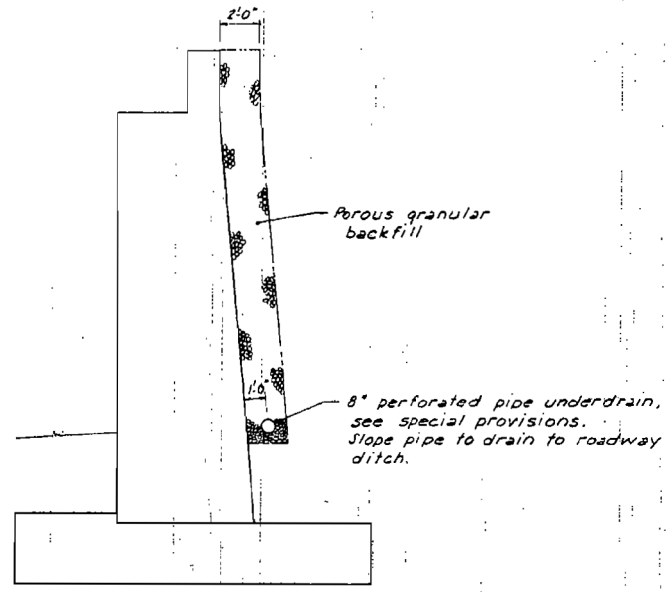
Note: The 1" and 1/2" steel plates anchored to the backwall shall extend vertically to include the full section of the ballast trough.



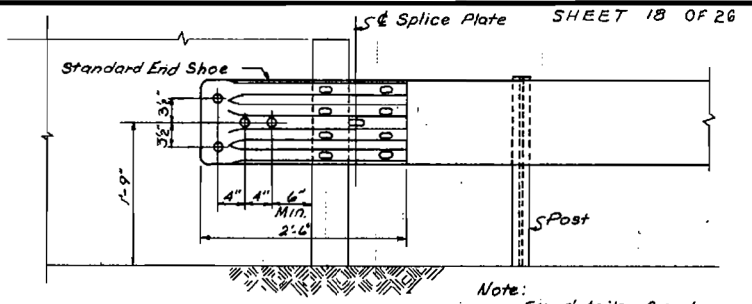
DETAIL AT TOP OF BACKWALL



EXPANSION JOINT DETAIL

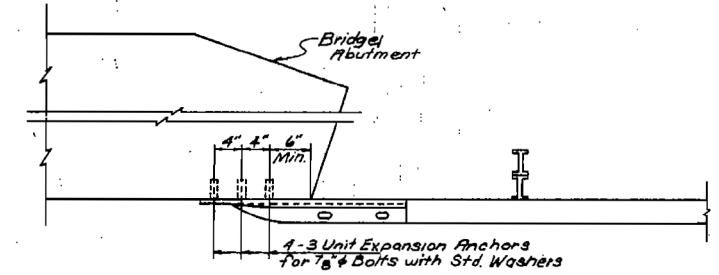


ABUTMENT SECTION SHOWING GRANULAR BACKFILL



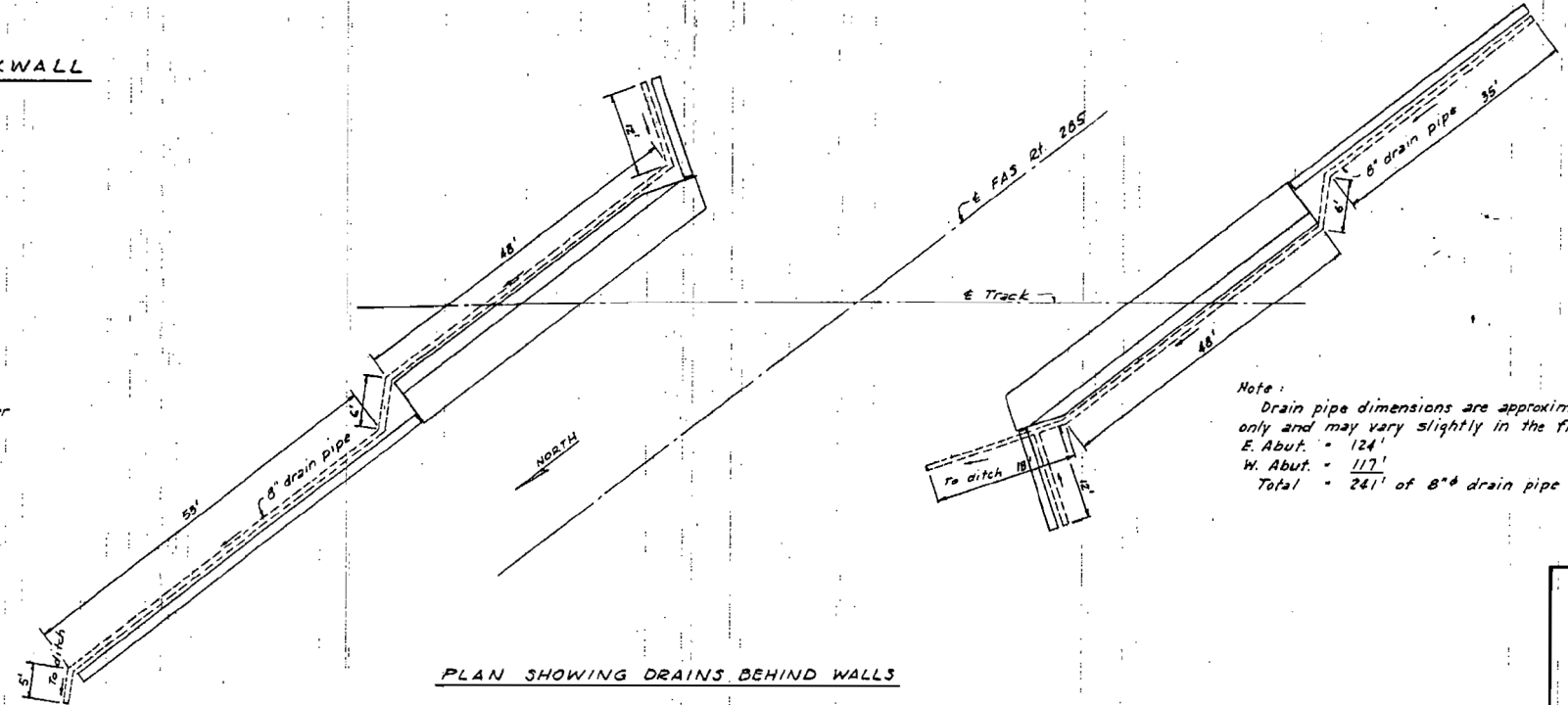
ELEVATION

Note: For details of end shoe and splice plate, see Standard 232b.



PLAN Scale 1" = 1'-0"

GUARD RAIL CONNECTION TO BRIDGE ABUTMENT



PLAN SHOWING DRAINS BEHIND WALLS

Note: Drain pipe dimensions are approximate only and may vary slightly in the field.
 E. Abut. = 124'
 W. Abut. = 117'
 Total = 241' of 8" drain pipe

ABUTMENT DETAILS			
ELGIN, JOLIET & EASTERN RAILWAY			
OVER			
FAS ROUTE 285			
SECTION 23-S		GRUNDY COUNTY	
Oglesby, Rebok & Bartolomucci CONSULTING CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS			
208 W. CAHEDY		SPRINGFIELD, ILLINOIS	
DESIGNED CR	DRAWN CR	DATE	7-30-71
CHECKED REO	CHECKED REO	JOB NO.	70-29

FOR INFORMATION ONLY

FILE NAME = D387695-shr-EXStructur.e11.dgn



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PLOT SCALE = 2.0000' / in.	DRAWN - JNH	REVISED -
PLOT DATE = 4/2/2019	CHECKED - KMB	REVISED -
	DATE - 04-05-2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS
STRUCTURE NO. 032-3400

SHEET 12 OF 15 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	215
			CONTRACT NO. 87695	
ILLINOIS FED. AID PROJECT				

REINFORCEMENT SCHEDULE

EAST ABUTMENT

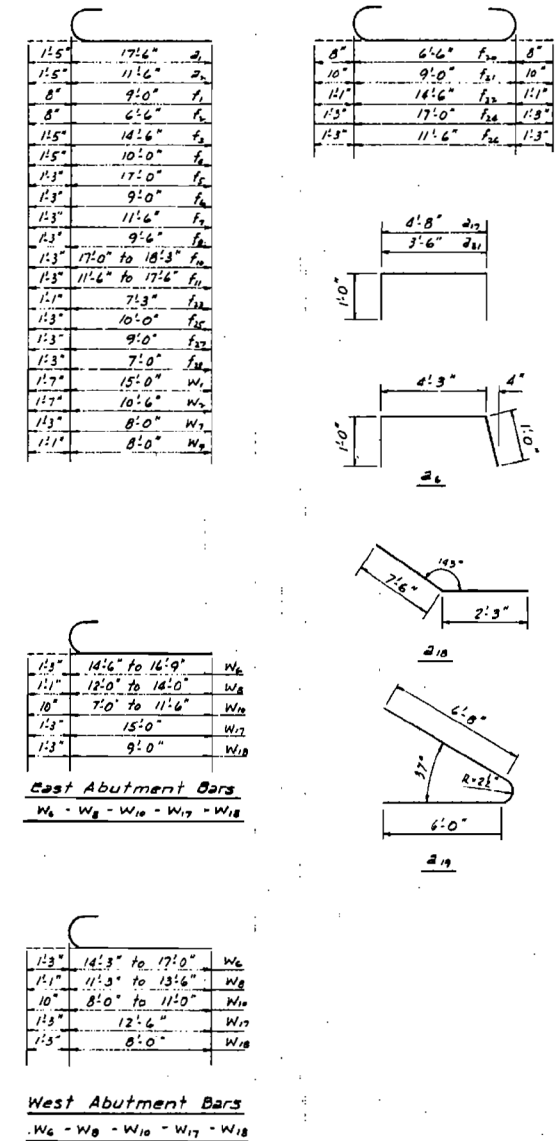
Bar	Number	Size	Length	Shape
a1	43	10	18'-11"	C
a2	42	10	12'-11"	C
a3	19	7	10'-0"	C
a4	24	7	12'-0"	C
a5	17	6	49'-6"	C
a6	5	6	6'-3"	C
a7	1	6	7'-6"	C
a8	1	6	8'-6"	C
a9	1	6	18'-3"	C
a10	1	6	17'-0"	C
a11	14	6	47'-10"	C
a12	10	6	24'-4"	C
a13	39	6	19'-11"	C
a14	49	6	4'-0"	C
a15	22	6	4'-6"	C
a16	35	6	6'-9"	C
a17	44	6	6'-8"	C
a18	5	6	9'-9"	C
a19	5	6	13'-5"	C
a20	3	6	43'-0"	C
a21	12	6	5'-6"	C
f1	17	6	9'-8"	C
f2	10	6	7'-2"	C
f3	27	10	15'-11"	C
f4	26	10	11'-5"	C
f5	29	9	18'-3"	C
f6	28	9	10'-3"	C
f7	6	9	12'-9"	C
f8	5	9	10'-9"	C
f9	8	9	8'-0"	C
f10	1 Series of 3	9	18'-3" to 19'-6"	C
f11	1 Series of 5	9	12'-9" to 18'-9"	C
f12	2	6	35'-6"	C
f13	6	6	15'-0"	C
f14	10	6	22'-6"	C
f15	17	6	26'-0"	C
f16	8	6	51'-0"	C
f17	3	6	22'-9"	C
f18	14	6	45'-6"	C
f19	1 Series of 5	6	10'-6" to 15'-0"	C
f20	12	6	7'-10"	C
f21	25	7	10'-8"	C
f22	25	8	16'-8"	C
f23	14	8	8'-4"	C
f24	47	9	19'-6"	C
f25	30	9	11'-3"	C
f26	12	9	14'-0"	C
f27	10	9	10'-3"	C
f28	11	9	8'-3"	C
f29	2	6	22'-6"	C
f30	2	6	17'-0"	C
f31	2	6	15'-6"	C
f32	1	6	9'-6"	C
w1	29	11	16'-7"	C
w2	28	11	12'-1"	C
w3	1 Series of 29	7	4'-2" to 11'-0"	C
w4	10	6	26'-0"	C
w5	1 Series of 17	6	18'-6" to 21'-6"	C
w6	1 Series of 8	9	15'-9" to 18'-0"	C

Bar	Number	Size	Length	Shape
w7	7	9	9'-3"	C
w8	1 Series of 7	8	13'-1" to 15'-1"	C
w9	7	8	9'-1"	C
w10	1 Series of 14	7	7'-10" to 12'-4"	C
w11	8	5	32'-6"	C
w12	2 Series of 6	5	3'-9" to 28'-3"	C
w13	2	6	24'-0"	C
w14	1 Series of 22	6	4'-9" to 18'-10"	C
w15	2 Series of 5	6	1'-9" to 21'-3"	C
w16	2	6	34'-0"	C
w17	14	9	16'-3"	C
w18	14	9	10'-3"	C
w19	1 Series of 14	7	3'-0" to 9'-6"	C
w20	1 Series of 10	6	13'-9" to 20'-3"	C
w21	20	6	13'-6"	C
w22	2 Series of 4	6	2'-0" to 11'-0"	C
w23	10	6	23'-6"	C
w24	2	6	14'-6"	C

WEST ABUTMENT

Bar	Number	Size	Length	Shape
a1	43	10	18'-11"	C
a2	42	10	12'-11"	C
a3	19	7	8'-3"	C
a4	24	7	10'-0"	C
a5	17	6	49'-6"	C
a6	5	6	6'-3"	C
a7	1	6	7'-6"	C
a8	1	6	8'-6"	C
a9	1	6	18'-3"	C
a10	1	6	17'-0"	C
a11	14	6	47'-10"	C
a12	10	6	22'-9"	C
a13	39	6	18'-6"	C
a14	49	6	4'-0"	C
a15	22	6	4'-6"	C
a16	35	6	6'-9"	C
a17	44	6	6'-8"	C
a18	5	6	9'-9"	C
a19	5	6	13'-5"	C
a20	3	6	43'-0"	C
a21	12	6	5'-6"	C
f1	13	6	9'-8"	C
f2	9	6	7'-2"	C
f3	14	10	15'-11"	C
f4	13	10	11'-5"	C
f5	29	9	18'-3"	C
f6	28	9	10'-3"	C
f7	6	9	12'-9"	C
f8	5	9	10'-9"	C
f9	8	9	8'-0"	C
f10	1 Series of 3	9	18'-3" to 19'-6"	C
f11	1 Series of 5	9	12'-9" to 18'-9"	C
f12	4	6	28'-6"	C
f13	2	6	16'-9"	C
f14	6	6	4'-0"	C
f15	17	6	11'-6"	C
f16	8	6	51'-0"	C

BAR BENDING DIAGRAMS

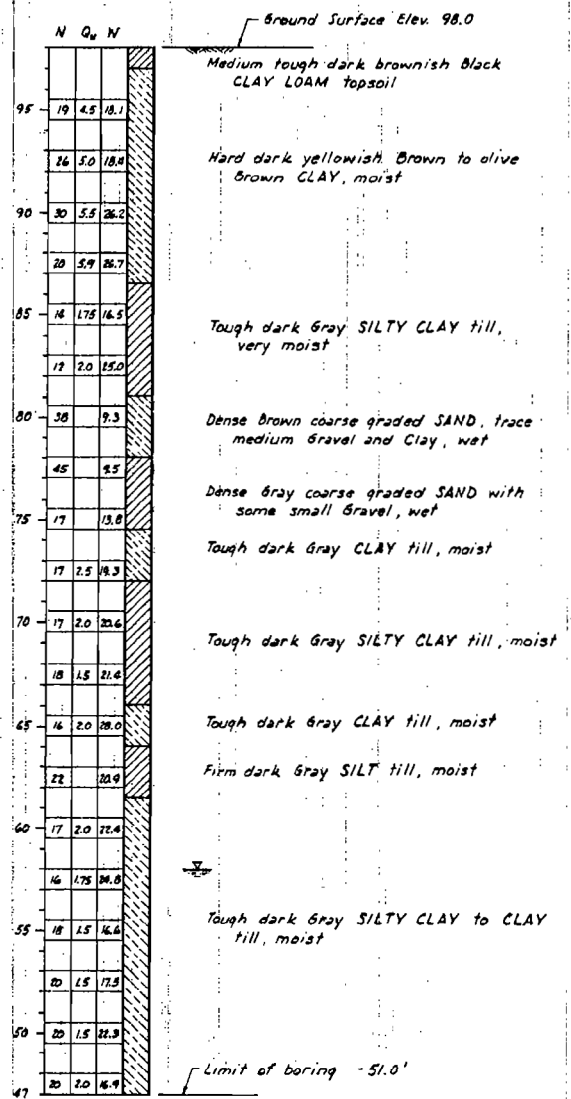


Notes on reinforcing:
 Dimensions shown on bending diagrams are out to out.
 Length shown on "series bars" is for shortest bar and longest bar.
 Bar list for East Abutment is independent of bar list for West Abutment.
 All footing bars are designated "f", wingwall bars "w", and abutment wall bars "a".

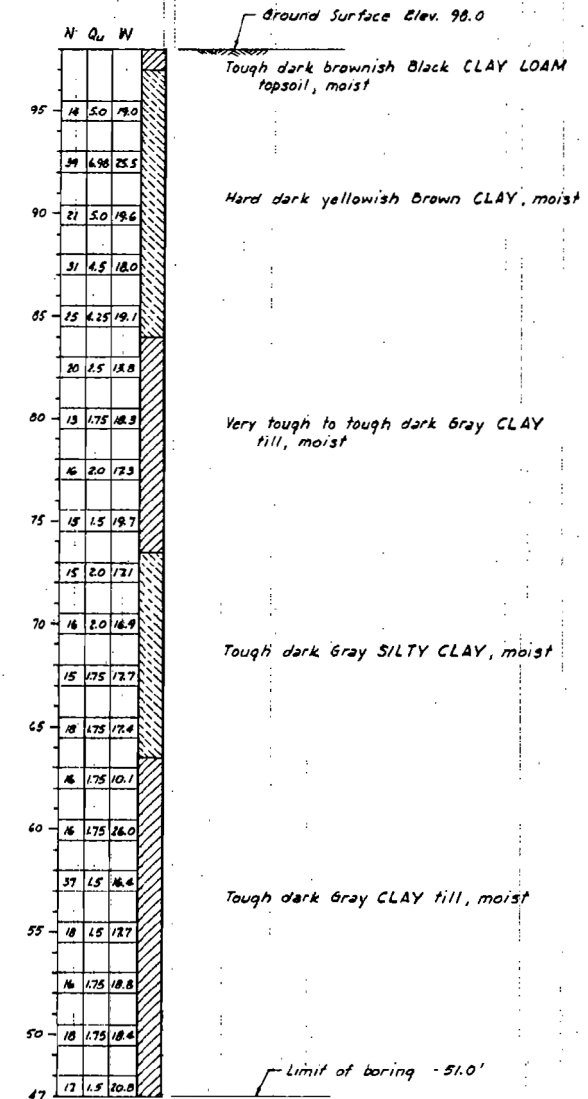
REINFORCEMENT SCHEDULE
 ELGIN, JOLIET & EASTERN RAILWAY
 OVER
 FAS ROUTE 285
 SECTION 23-S GRUNDY COUNTY
 Oglesby, Rebok & Bartolucci
 CONSULTING CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS
 206 W. CANEY SPRINGFIELD, ILLINOIS
 DESIGNED C.R. DRAWN C.R. DATE 7-30-71
 CHECKED CHECKED JOB NO. 70-29

FOR INFORMATION ONLY

FILE NAME = D387695-shr-EXSTRUCR@12.dgn



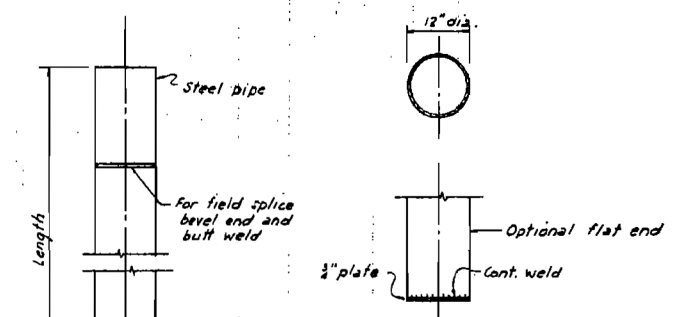
BORING NO. 1
24' left of Station 123 + 40



BORING NO. 2
20' right of Station 123 + 30

LEGEND

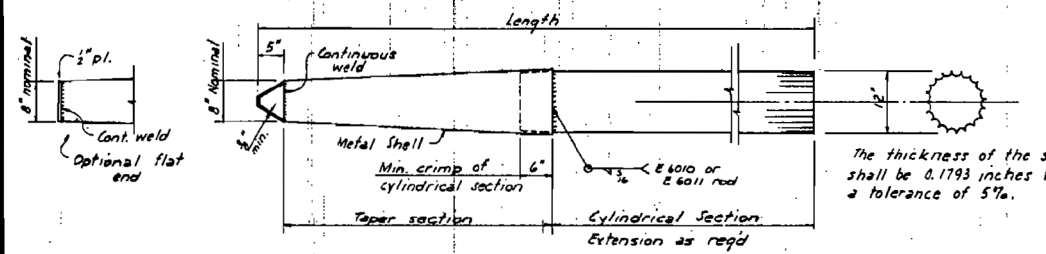
- N = Number of blows required to drive a 2" O.D. split spoon sampler 12" with a 140 pound weight falling 30".
- Qu = Approximate unconfined compressive strength of soil in tons per square foot based on measurements taken with a calibrated penetrometer. (Max. range 5.0 tons/sf.)
- W = Natural water content (% dry weight).
- ☉ = Water level at completion of boring.



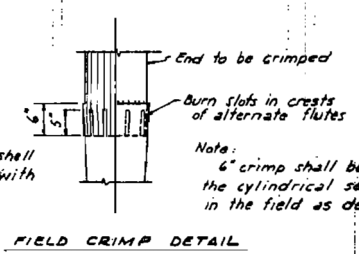
DETAIL OF CYLINDRICAL STEEL SHELL
(For cast-in-place concrete piles)

Notes:
Driving and bearing ends of pipe shall be cut square.
The shell thickness shall be 0.1793 inches with a tolerance of 5%.

Note:
For pile lengths and pile capacities see Sheets 14 and 17, Abutment details.
For details showing concrete pile alternates, see Sheet 21.



DETAIL OF TAPERED METAL SHELL



FIELD CRIMP DETAIL

The thickness of the shell shall be 0.1793 inches with a tolerance of 5%.

Note:
6" crimp shall be supplied on the cylindrical section or made in the field as detailed.

ALLOWABLE TAPER SECTIONS

- 18' length - Taper 1" in 2'-6"
- 17' length - Taper 1" in 4'-0"
- 25' length - Taper 1" in 7'-0"
- 30' length - Taper 1" in 7'-0"

BORINGS & PILE DETAILS			
ELGIN, JOLIET & EASTERN RAILWAY OVER FAS ROUTE 285			
SECTION 23-8		GRUNDY COUNTY	
Oglesby, Rebok & Bartolomucci CONSULTING CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS			
DESIGNED CR		DATE 7-30-71	
DRAWN CR		JOB NO. 70-24	
CHECKED RCO		CHECKED RCO	

FOR INFORMATION ONLY



USER NAME = \$USER\$	DESIGNED - JNH	REVISED -
PLOT SCALE = 2.0000' / in.	DRAWN - JNH	REVISED -
PLOT DATE = 4/2/2019	CHECKED - KMB	REVISED -
	DATE - 04-05-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXISTING PLANS
STRUCTURE NO. 032-3400**

SHEET 14 OF 15 SHEETS STA. TO STA.

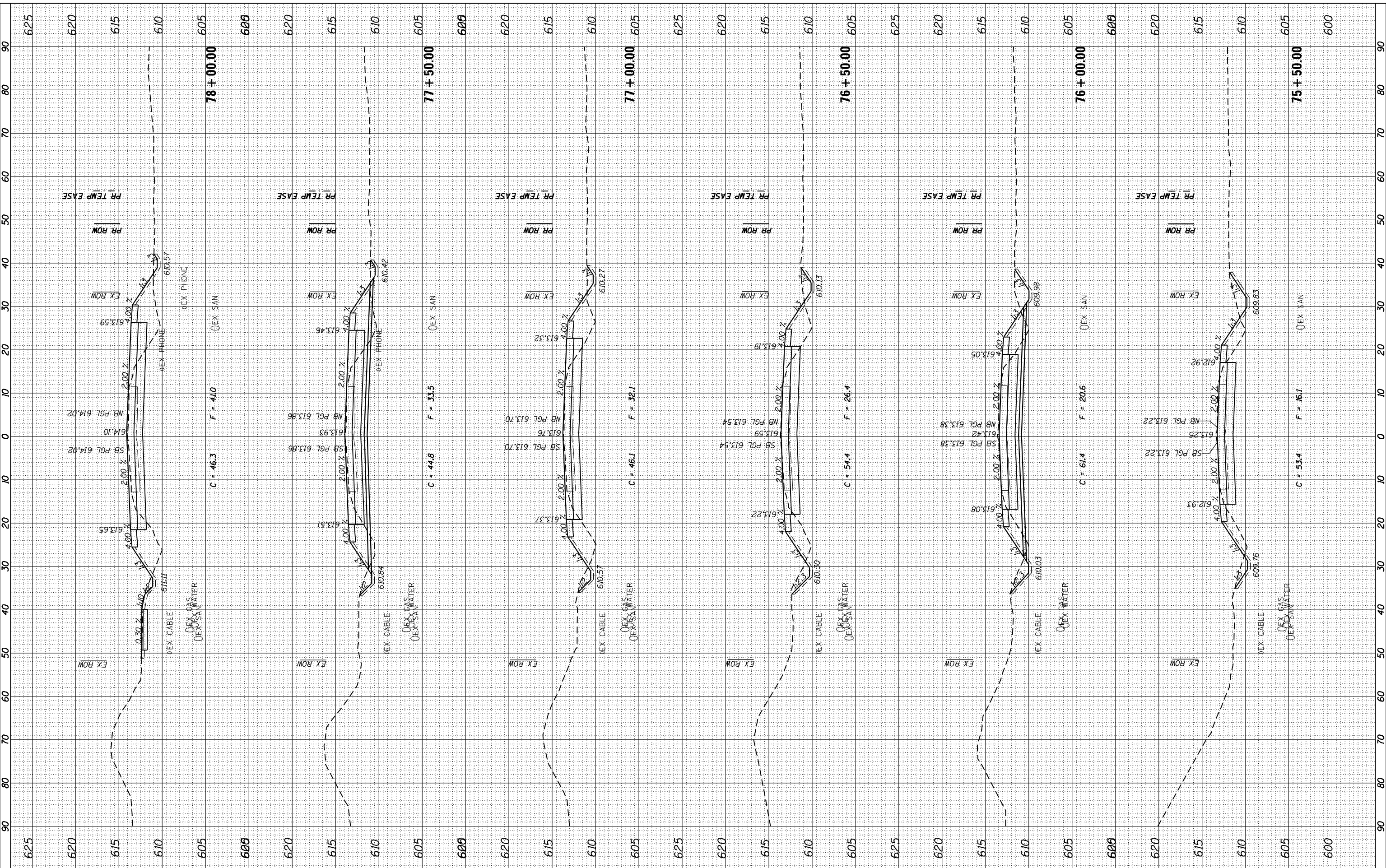
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	217
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

FILE NAME = D387695-sht-EXStructur.e13.dgn

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	
NO.	TEMPLATE	
	AREAS CHECKED	
	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	
NO.	TEMPLATE	
	AREAS CHECKED	
	AREAS CHECKED	

FILE NAME = D:\2019\11-00134-02-WR\KMB.dgn



USER NAME = *USER*	DESIGNED - JNH	REVISIONS
PLOT SCALE = 20.0000' / 1"	DRAWN - JNH	REVISIONS
PLOT DATE = 6/7/2019	CHECKED - KMB	REVISIONS
	DATE - 05-31-2019	REVISIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: 1"=10'H 1"=5'V	SHEET	OF	SHEETS	STA. 75+50.00	TO STA. 78+00.00
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RIDGE ROAD
CROSS SECTIONS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	220
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	SURVEYED	DATE
NO.	PLOTTED	
	TEMPLATE	
	NOTE BOOK	
	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NO.	PLOTTED	
	TEMPLATE	
	NOTE BOOK	
	AREAS CHECKED	

FILE NAME = D:\2019\11-384.dgn



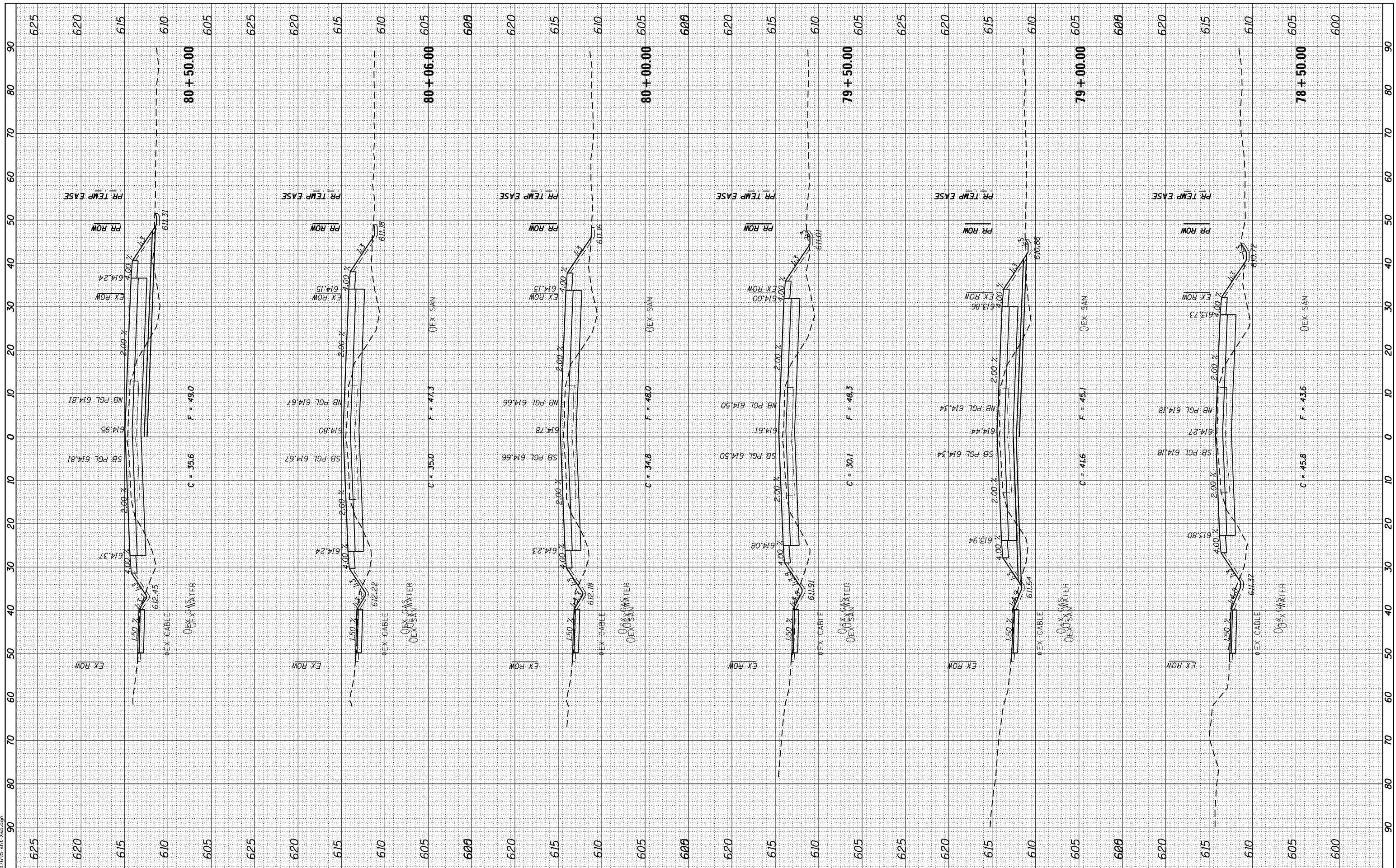
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PLOT DATE = 6/7/2019	CHECKED - KMB	REVISED -
	DATE - 05-31-2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: 1"=10'H 1"=5'V SHEET OF SHEETS STA. 78+50.00 TO STA. 80+50.00

RIDGE ROAD
CROSS SECTIONS

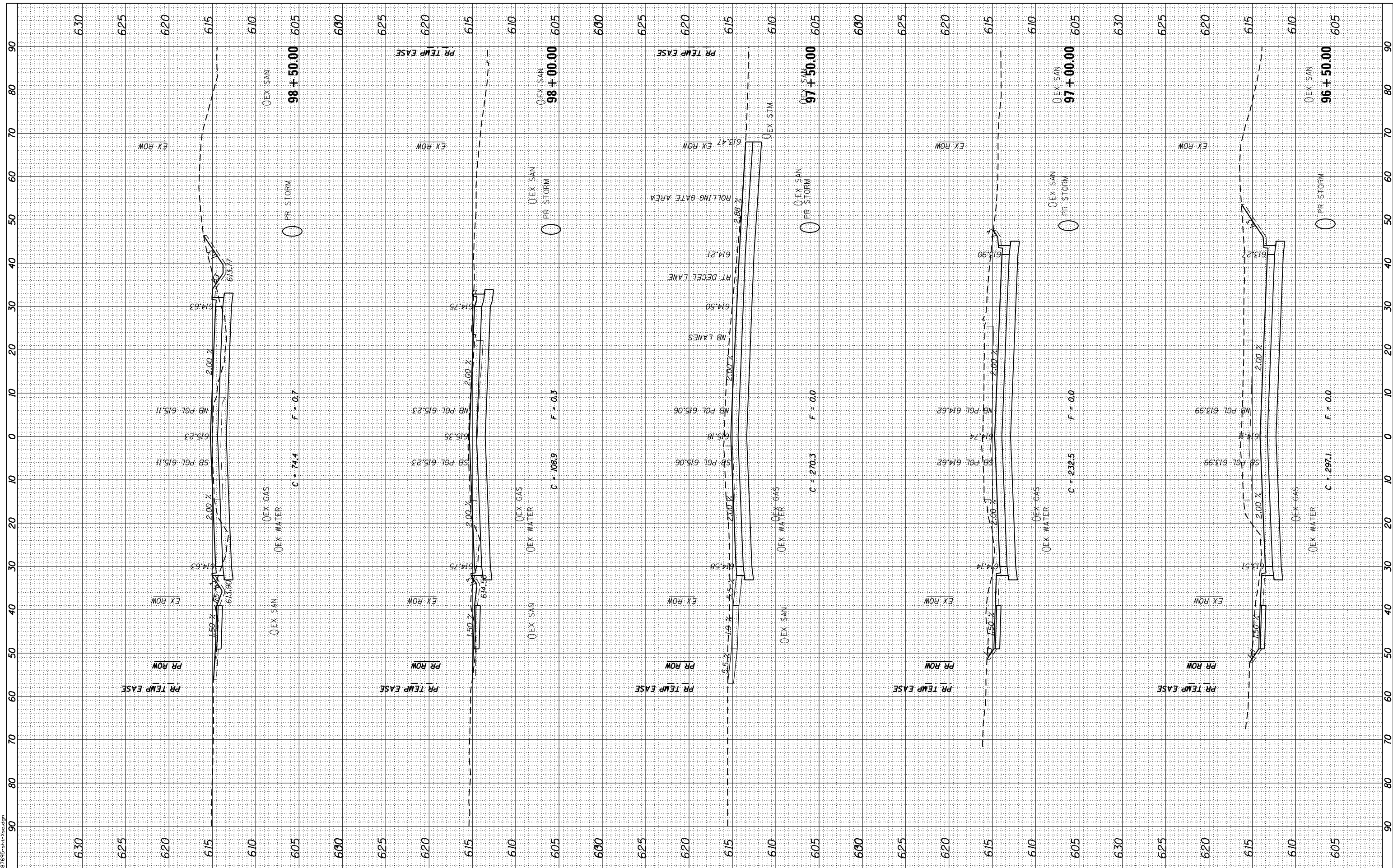
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	221
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				



BY	DATE
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	

ORIGINAL	DATE
SURVEY	
NOTE BOOK	
NO.	

FILE NAME = D:\B\7515-INT-XS.dgn



USER NAME = JUSER*	DESIGNED - JNH	REVISED -
PLOT SCALE = 20.0000' / in.	DRAWN - JNH	REVISED -
PLOT DATE = 6/7/2019	CHECKED - KMB	REVISED -
	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RIDGE ROAD
CROSS SECTIONS**

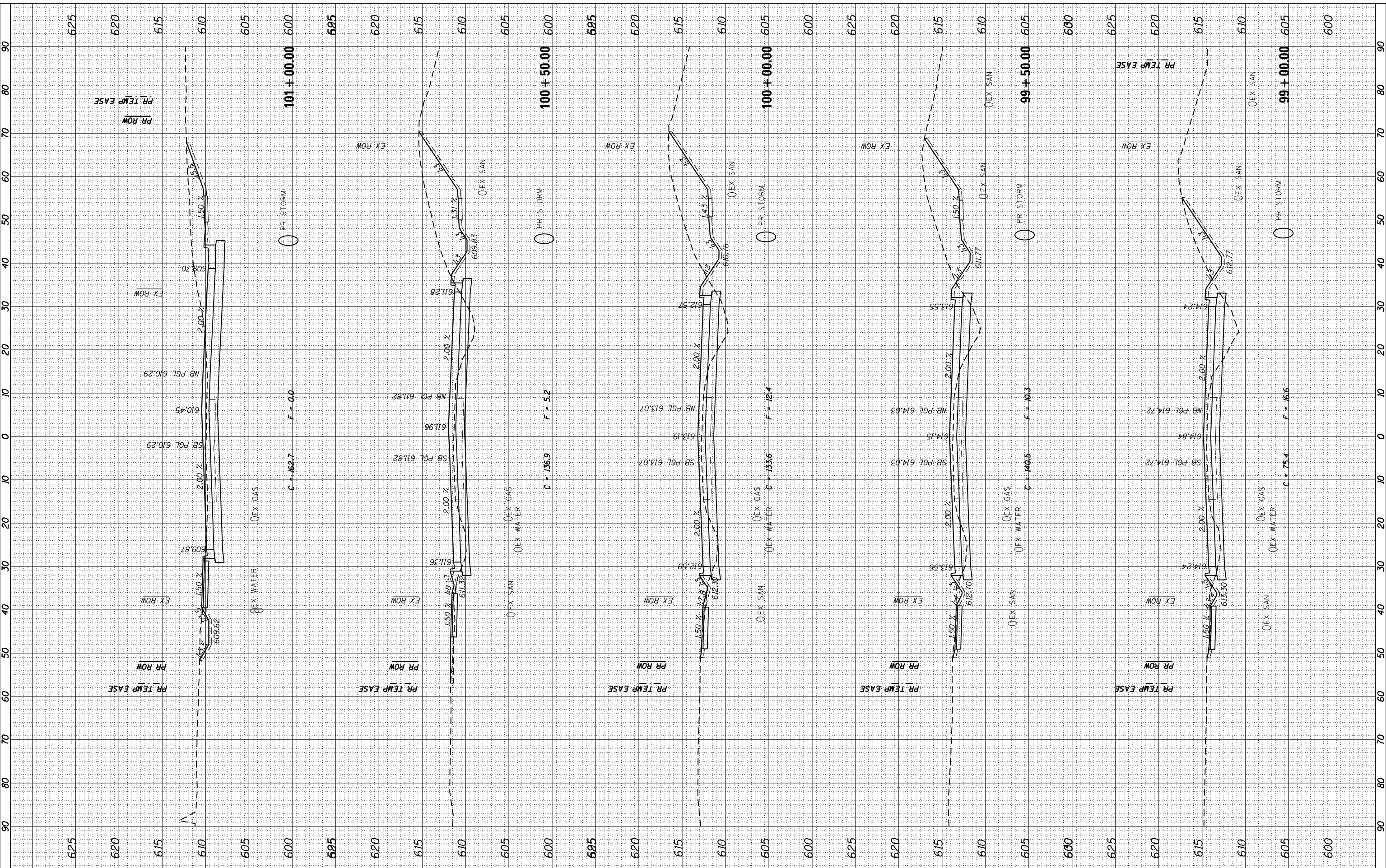
SCALE: 1"=10'H 1"=5'V SHEET OF SHEETS STA. 96+50.00 TO STA. 98+50.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	228
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	TEMPLATE	
	AREAS	
	CHECKED	

ORIGINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	TEMPLATE	
	AREAS	
	CHECKED	

FILE NAME = D:\2019\11-00134-02-WR\11-00134-02-WR.dgn



USER NAME = JSUR*	DESIGNED - JNH	REVISED -
PLOT SCALE = 20.0000' / in.	DRAWN - JNH	REVISED -
PLOT DATE = 6/7/2019	CHECKED - KMB	REVISED -
	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RIDGE ROAD
CROSS SECTIONS**

SCALE: 1"=10'H 1"=5' SHEET OF SHEETS STA. 99+00.00 TO STA. 101+00.00

F.A.U. RTE. 384	SECTION 11-00134-02-WR	COUNTY GRUNDY	TOTAL SHEETS 239	SHEET NO. 229
CONTRACT NO. 87695				ILLINOIS FED. AID PROJECT

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
NO.	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
NO.	AREAS CHECKED		

FILE NAME = D:\B\7505-11-13-10.dgn



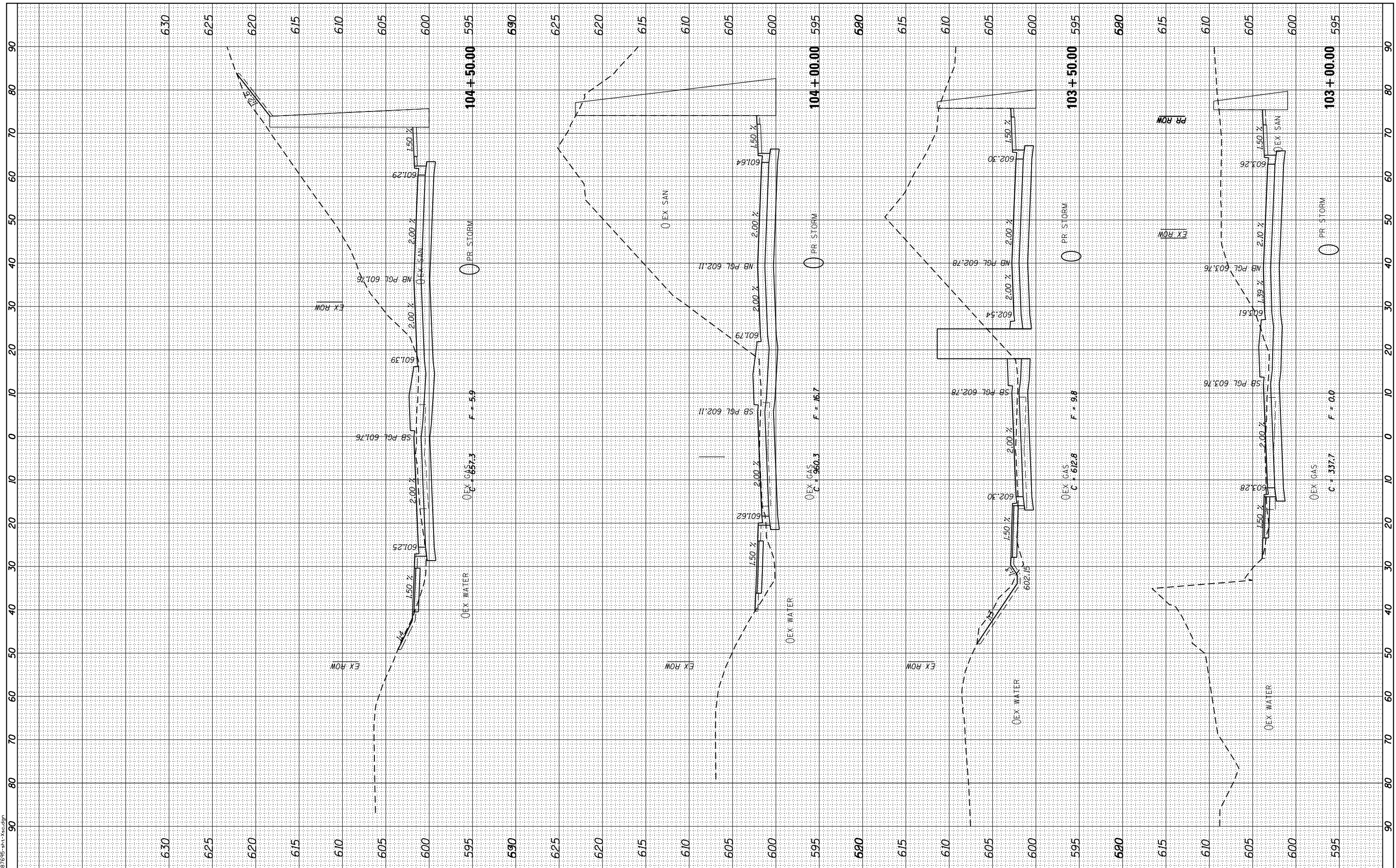
USER NAME = *USER*	DESIGNED - JNH	REVISED -
PLOT SCALE = 20.0000' / in.	DRAWN - JNH	REVISED -
PLOT DATE = 6/7/2019	CHECKED - KMB	REVISED -
	DATE - 05-31-2019	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: 1"=10'H 1"=5'V SHEET OF SHEETS STA. 103+00.00 TO STA. 104+50.00

RIDGE ROAD
CROSS SECTIONS

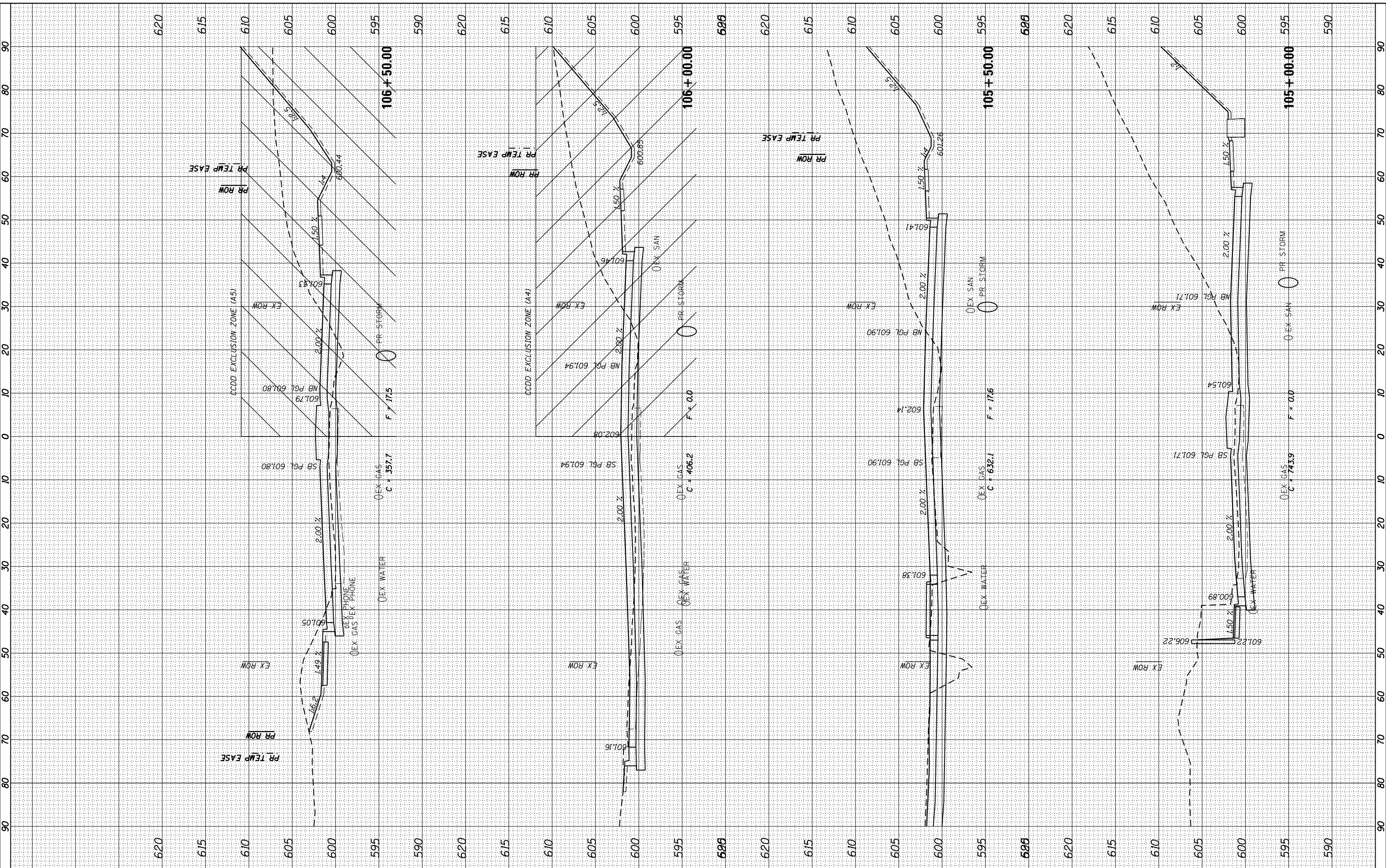
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	231
				CONTRACT NO. 87695
ILLINOIS FED. AID PROJECT				



FINAL SURVEY	SURVEYED	BY	DATE
NO.	PLOTTED		
	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NO.	PLOTTED		
	TEMPLATE		
	AREAS CHECKED		

FILE NAME = D:\2019\11-00134-02-WR\KSC.dgn



USER NAME = JUSERS*	DESIGNED - JNH	REVISIONS
PLOT SCALE = 20.0000' / 1" IN.	DRAWN - JNH	REVISIONS
PLOT DATE = 6/7/2019	CHECKED - KMB	REVISIONS
	DATE - 05-31-2019	REVISIONS

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCALE: 1"=10'H 1"=5'V SHEET		OF SHEETS	STA. 105+00.00 TO STA. 106+50.00
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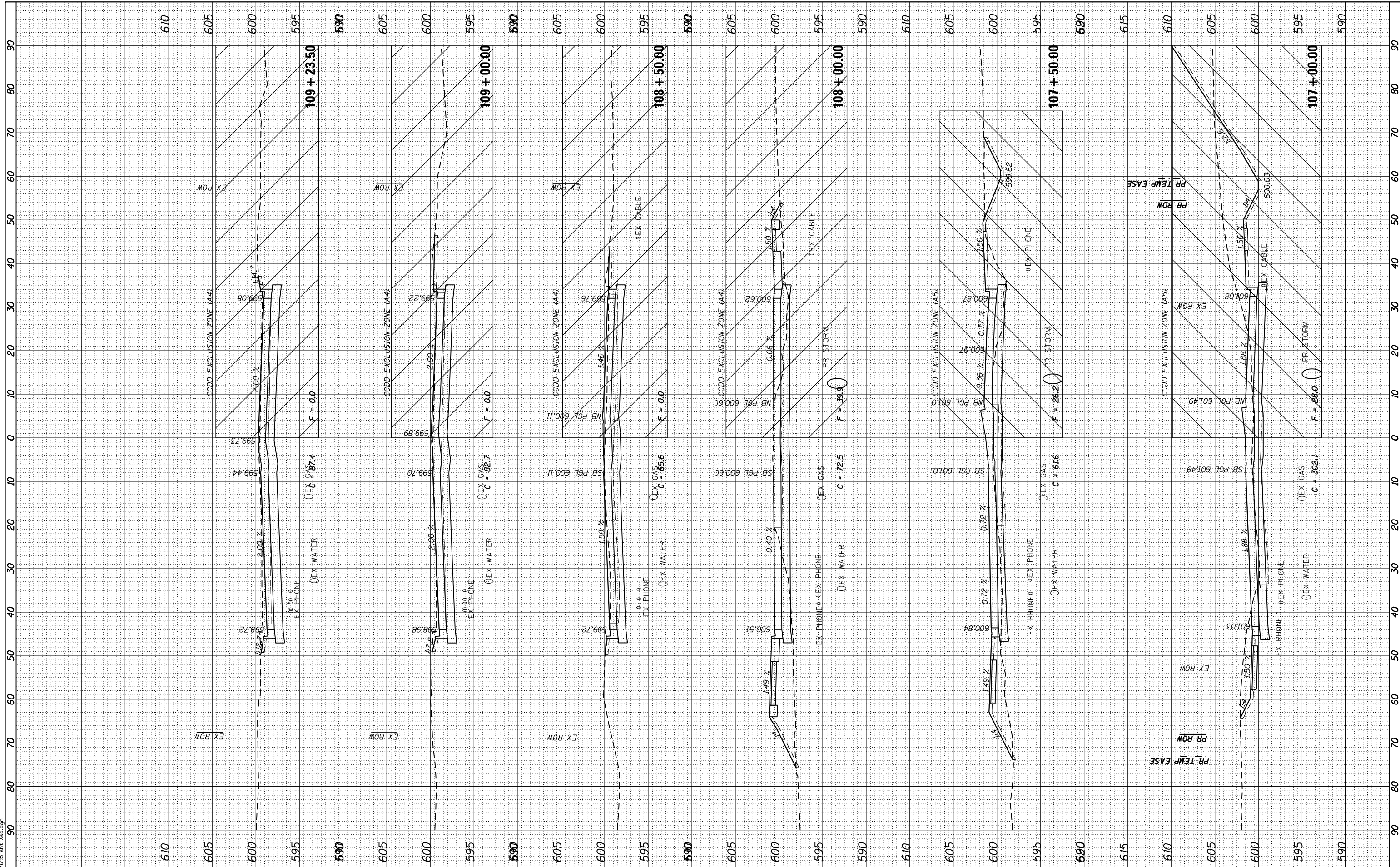
**RIDGE ROAD
CROSS SECTIONS**

F.A.U. RTE. 384	SECTION 11-00134-02-WR	COUNTY GRUNDY	TOTAL SHEETS 239	SHEET NO. 232
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
NO.	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
NO.	AREAS CHECKED		

FILE NAME = D:\2019\11-02\11-02-02-WR-11-02-02-WR-11-02-02-WR.dgn



USER NAME = JNS*	DESIGNED - JNH	REVISD -
PLOT SCALE = 20.0000' / 1"	DRAWN - JNH	REVISD -
PLOT DATE = 6/7/2019	CHECKED - KMB	REVISD -
	DATE - 05-31-2019	REVISD -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCALE: 1"=10'H 1"=5'V SHEET	
OF SHEETS	STA. 107+00.00 TO STA. 109+23.50

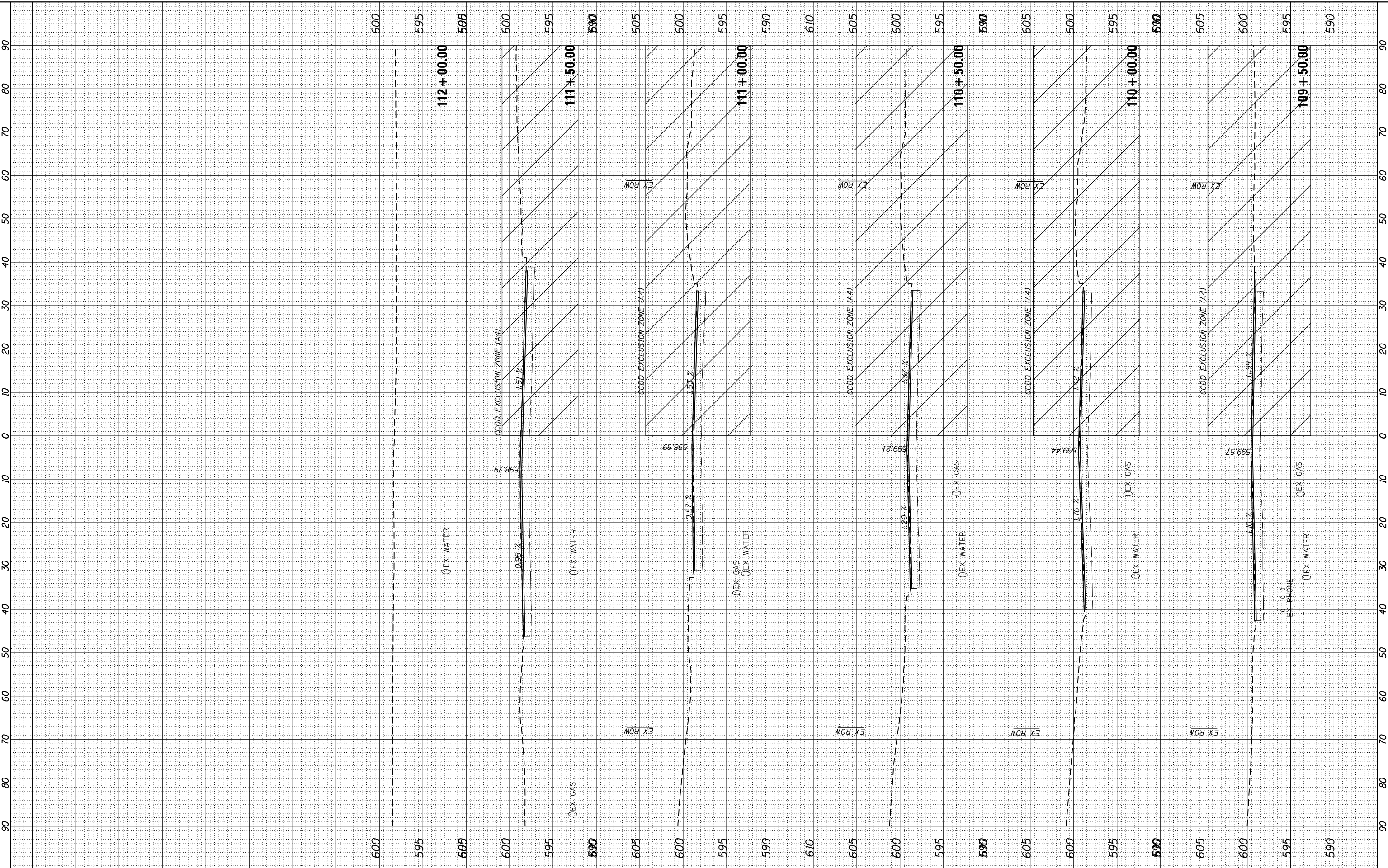
**RIDGE ROAD
CROSS SECTIONS**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	233
				CONTRACT NO. 87695
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

FILE NAME = D:\2015\15-INT-XSEC.dgn



USER NAME = JSUR*	DESIGNED - JNH	REVISED -
PLOT SCALE = 20.0000' / in.	DRAWN - JNH	REVISED -
PLOT DATE = 6/7/2019	CHECKED - KMB	REVISED -
	DATE - 05-31-2019	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**RIDGE ROAD
CROSS SECTIONS**

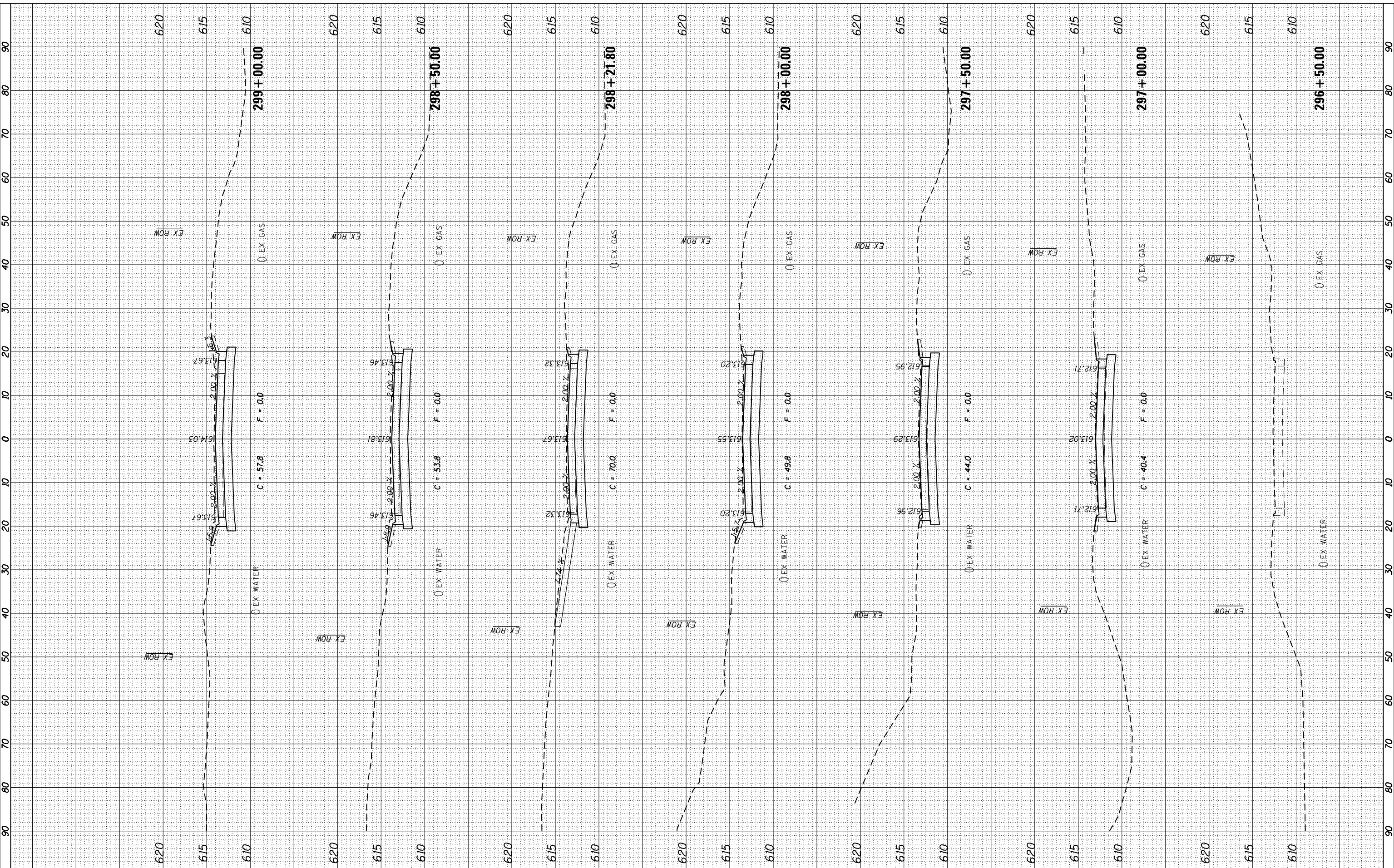
SCALE: 1"=10'H 1"=5'V SHEET OF SHEETS STA. 109+50.00 TO STA. 112+00.00

F.A.U. RTE. 384	SECTION 11-00134-02-WR	COUNTY GRUNDY	TOTAL SHEETS 222	SHEET NO. 234
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED
BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED
BY	DATE

FILE NAME = D:\2019\11-16-2019\11-16-2019-11-16-2019.dgn



USER NAME = *USER*	DESIGNED - JNH	REVISIED -
PLOT SCALE = 20.0000' / in.	DRAWN - JNH	REVISIED -
PLOT DATE = 6/7/2019	CHECKED - JWK	REVISIED -
	DATE - 11/16/2018	REVISIED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CLENNON DRIVE
CROSS SECTIONS**

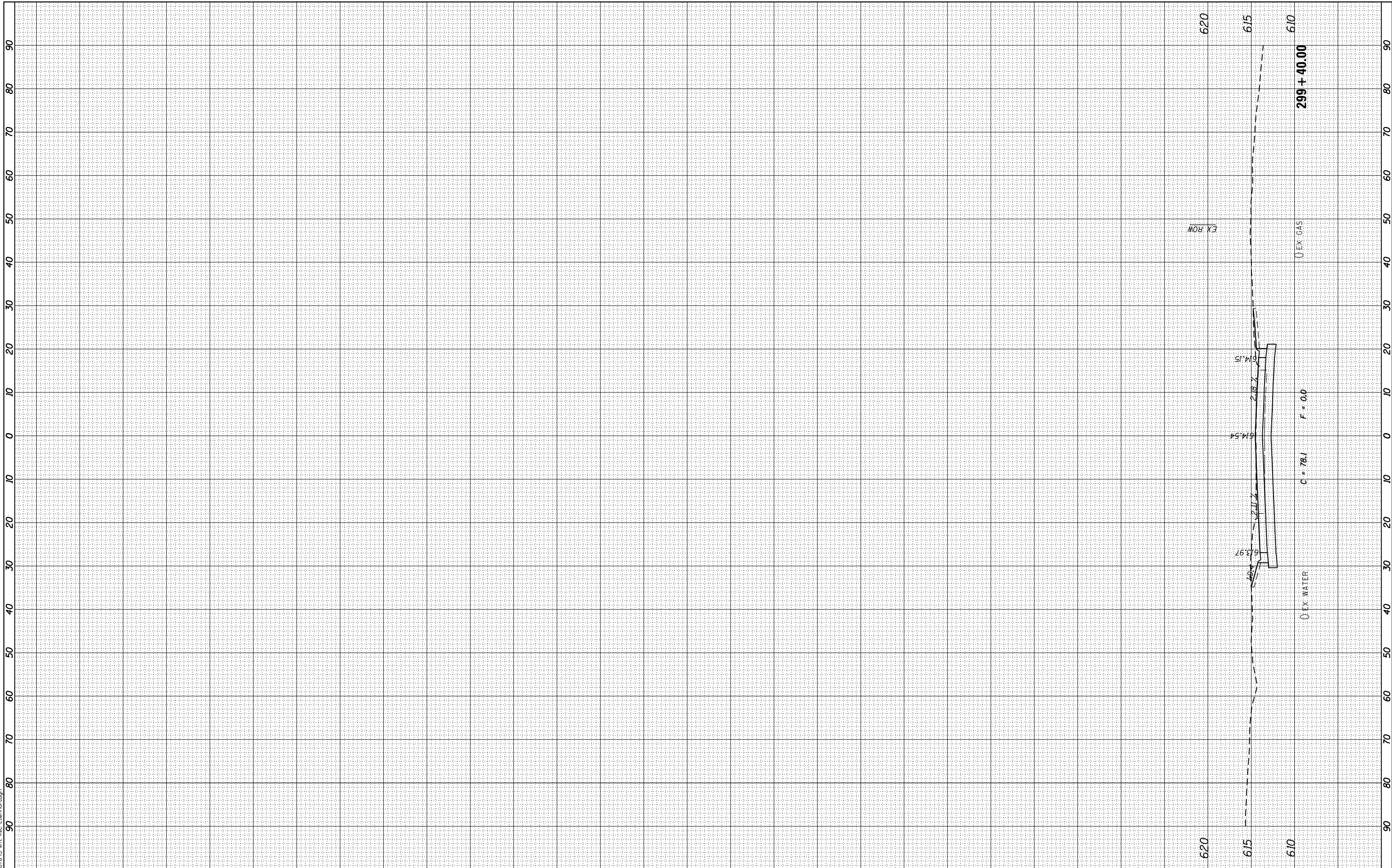
SCALE: 1"=10'H 1"=5'V SHEET 1 OF 2 SHEETS STA. 296+50.00 TO STA. 299+00.00

F.A.U. RTE. 384	SECTION 11-00134-02-WR	COUNTY GRUNDY	TOTAL SHEETS 239	SHEET NO. 235
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

FILE NAME = D:\2019\15-ht-Xsc-clennon.dgn



USER NAME = *USER*	DESIGNED - JNH	REVISED -
PLOT SCALE = 20.0000' / in.	DRAWN - JNH	REVISED -
PLOT DATE = 6/7/2019	CHECKED - JWK	REVISED -
	DATE - 11/16/2018	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CLENNON DRIVE
CROSS SECTIONS**

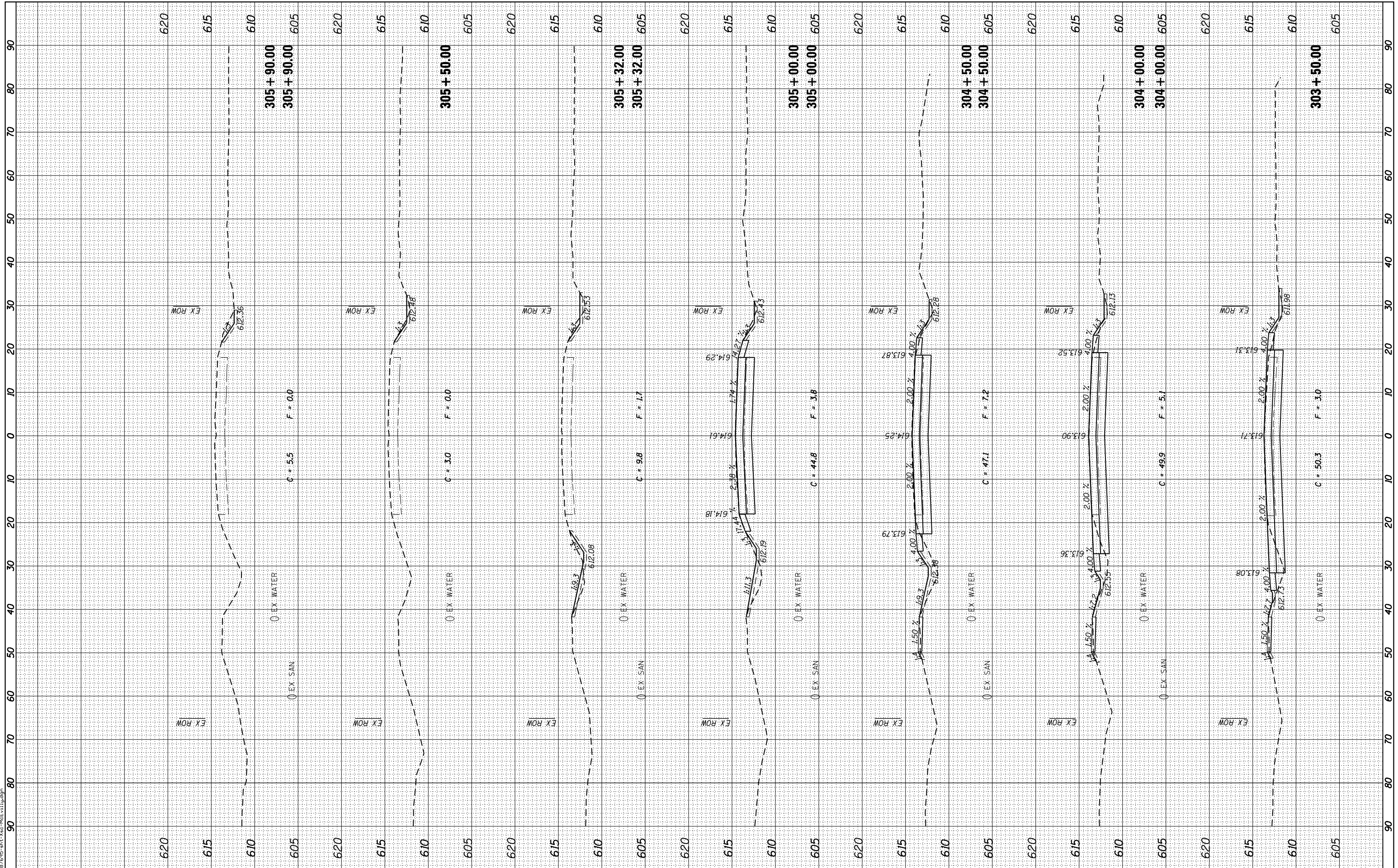
SCALE: 1"=10'H 1"=5'V SHEET 2 OF 2 SHEETS STA. 299+40.00 TO STA. 299+40.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	236
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED	DATE
NOTE BOOK	TEMPLATE	
AREAS CHECKED	AREAS CHECKED	

ORIGINAL SURVEY NO.	SURVEYED PLOTTED	DATE
NOTE BOOK	TEMPLATE	
AREAS CHECKED	AREAS CHECKED	

FILE NAME = D:\9795-11-KC-McEvilly.dwg



USER NAME = *USER*	DESIGNED - JNH	REVISIONS
PLOT SCALE = 20.0000' / in.	DRAWN - JNH	REVISIONS
PLOT DATE = 6/7/2019	CHECKED - JWK	REVISIONS
	DATE - 11/16/2018	REVISIONS

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MCEVILLY ROAD
CROSS SECTIONS**

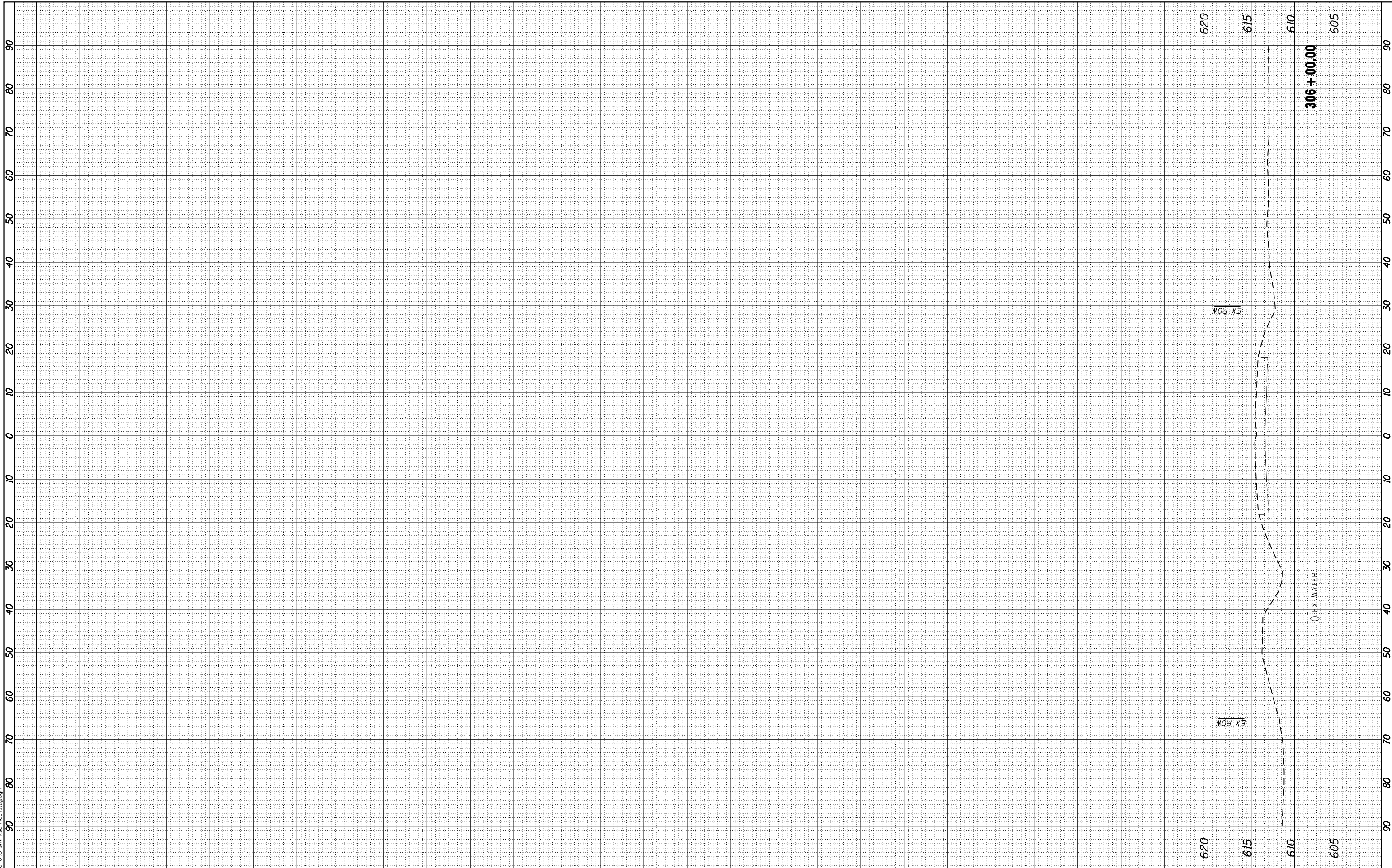
SCALE: 1"=10'H 1"=5'V SHEET OF SHEETS STA. 303+50.00 TO STA. 305+90.00

F.A.U. RTE. 384	SECTION 11-00134-02-WR	COUNTY GRUNDY	TOTAL SHEETS 239	SHEET NO. 238
CONTRACT NO. 87695			ILLINOIS FED. AID PROJECT	

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

FILE NAME = D:\2019\11-16-2018\11-16-2018\11-16-2018.dwg



USER NAME = *USER*	DESIGNED - JNH	REVISED -
PLOT SCALE = 20.0000' / in.	DRAWN - JNH	REVISED -
PLOT DATE = 6/7/2019	CHECKED - JWK	REVISED -
	DATE - 11/16/2018	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MCEVILLY ROAD
CROSS SECTIONS**

SCALE: 1"=10'H 1"=5'V SHEET OF SHEETS STA. 306+00.00 TO STA. 306+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
384	11-00134-02-WR	GRUNDY	239	239
CONTRACT NO. 87695				
ILLINOIS FED. AID PROJECT				