

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
***	15-00045-00-BR	KENDALL	40	1
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 87665		

INDEX OF SHEETS

11-09-2018 LETTING ITEM 091

- 1 COVER SHEET
- 2 LIST OF STANDARDS, GENERAL NOTES, & LEGEND
- 3 SUMMARY OF QUANTITIES
- 4-6 TYPICAL SECTIONS
- 7 SUPERELEVATION TRANSITION DETAILS
- 8-10 SCHEDULES OF QUANTITIES
- 11-12 REMOVAL PLANS
- 13-15 PLAN AND PROFILES
- 16-17 PAVEMENT MARKING AND SIGNING PLANS
- 18-19 EROSION CONTROL PLANS
- 20-32 STRUCTURE PLANS
- 33-34 SPECIAL DETAILS
- 35-40 CROSS SECTIONS

CITY OF PLANO PLANS FOR ILLINOIS MAJOR BRIDGE PROGRAM

**EAST MAIN ST. OVER
BIG ROCK CREEK
KENDALL COUNTY
SECTION 15-00045-00-BR
PROJECT NO. N43R(807)
STRUCTURE REPLACEMENT**

C-93-017-17

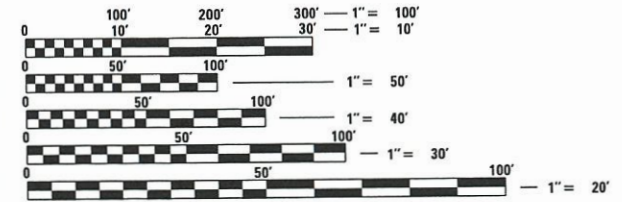
TR 21

**END IMPROVEMENT
MAIN ST
STA 110 + 73.33**

**EXISTING STRUCTURE SN 047-3028
SINGLE SPAN PRECAST PRE-STRESSED
CONCRETE DECK BEAM SUPERSTRUCTURE
ON CLOSED CONCRETE ENCASED
STONE MASONRY ABUTMENTS.
83'-0" BK TO BK AND 18'-0"
0-0 DECK NO SKEW (TO BE REMOVED)**

UTILITY COMPANIES

- AT&T
OAKBROOK, ILLINOIS
- NICOR
NAPERVILLE, ILLINOIS
- COMCAST
ELMHURST, ILLINOIS
- CommED
JOLIET, ILLINOIS



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

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



**BEGIN IMPROVEMENT
MAIN ST
STA 99 + 54.60**

**PROPOSED STRUCTURE SN 047-6401
THREE SPAN PRECAST PRE-STRESSED
CONCRETE DECK BEAM SUPERSTRUCTURE
ON CONCRETE SPILL THROUGH PILE
BENT ABUTMENTS AND CONCRETE
ENCASED PILE BENT PIERS**

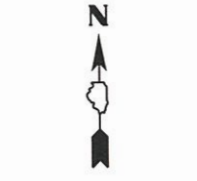
GROSS LENGTH = 1,118.73 FT. = 0.212 MILE
NET LENGTH = 1,118.73 FT. = 0.212 MILE

Hutchison Engineering, Inc.
Jacksonville • Peoria • Moline • Shorewood
Since 1945

2018 JOB #3892



LOCATION OF SECTION INDICATED THIS: - [black rectangle] -



LOCATION MAP
NOT TO SCALE

DESIGN CLASSIFICATION: LOCAL STREET
CURRENT ADT (2011): 600
DESIGN ADT (2032): 850
DESIGN SPEED: 30 MPH

APPROVED	2018
<i>Richard A. Hail</i> CITY OF PLANO MAYOR	
PASSED	2018
<i>Don R. E. O.</i> DISTRICT THREE ENGINEER OF LOCAL ROADS & STREETS	
RELEASED FOR BID BASED ON LIMITED REVIEW	2018
<i>Kevin Yarbrough</i> DEPUTY DIRECTOR OF HIGHWAYS, REGION TWO ENGINEER	
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	



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OF THE STATE OF ILLINOIS**

GENERAL NOTES

THE SCALE SHOWN ON THE DRAWINGS APPLIES ONLY TO FULL SIZE PLANS AND NOT TO THE REDUCED SIZE PLANS.

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

THE HOT-MIX ASPHALT SURFACE OF ALL MAILBOX TURNOUTS, PRIVATE ENTRANCES, COMMERCIAL ENTRANCES, AND SIDE ROADS SHALL BE MADE NEATLY, IN A WORKMANLIKE MANNER, AND SHALL ACCURATELY CONFORM TO THE SHAPES AND DIMENSIONS SHOWN ON THE PLAN DETAILS. IF REQUIRED BY THE ENGINEER, THE CONTRACTOR SHALL BE REQUIRED TO SAW CUT THE HOT-MIX ASPHALT SURFACE TO CONFORM TO THE SHAPES AND DIMENSIONS SHOWN ON THE PLAN DETAILS. THIS WORK SHALL BE INCLUDED IN THE COST OF THE HOT-MIX ASPHALT SURFACE.

THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTIES AT ALL TIMES DURING CONSTRUCTION OF THE PROJECT.

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

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

THE ENGINEER WILL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS HOT-MIX ASPHALT LIFTS.

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

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

ONLY THOSE TREES DESIGNATED BY THE ENGINEER OR LISTED IN THE TREE REMOVAL SCHEDULE SHALL BE REMOVED. THE CONTRACTOR SHALL PROTECT ALL REMAINING TREES FROM DAMAGE DUE TO HIS OPERATIONS.

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

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

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

ALL EXISTING GRANULAR MATERIAL AND HOT-MIX ASPHALT MATERIALS TO BE REMOVED AND NOT PAID AS A SPECIFIC ITEM SHALL BE CONSIDERED EARTH EXCAVATION AND WILL BE PAID FOR AT THE UNIT PRICE FOR EARTH EXCAVATION.

THE REMOVAL AND DISPOSAL OF ALL FENCING, DELINEATORS, DEBRIS, BRUSH, RIPRAP, STONE CONCRETE SLABS, TILE, ETC. NOT PAID SPECIFICALLY ON THE PLANS WILL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

ALL CONCRETE GUTTER SHALL INCLUDE CONSTRUCTION JOINTS WITH A MAXIMUM SPACING OF 75 FEET.

MEMBERS OF J.U.L.I.E. KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE:

1. COMED, AN EXELON COMPANY
2. AT&T
3. COMCAST CABLE

THE CONTRACTOR SHALL CONTACT J.U.L.I.E. AT LEAST 48 HOURS PRIOR TO EXCAVATION TO DETERMINE WHICH UTILITIES ARE IN THE AREA.

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

GRANULAR MATERIALS-----	2.05 TONS/CU YD		
BITUMINOUS MATERIALS PRIME COAT-----	0.05 LBS/SQ FT OR		
	0.025 LBS/SQ FT		
PRIME COAT FOR AGGREGATE BASES-----	0.25 TONS/SQ YD		
HOT-MIX ASPHALT SURFACE COURSE-----	112 LBS/SQ YD/INCH		
HOT-MIX ASPHALT BINDER COURSE-----	115 LBS/SQ YD/INCH		
LEVELING BINDER (MACHINE METHOD)-----	112 LBS/SQ YD/INCH		
NITROGEN FERTILIZER NUTRIENT-----	60 LBS/ACRE (SODDING)	90 LBS/ACRE (SEEDING)	
PHOSPHORUS FERTILIZER NUTRIENT-----	60 LBS/ACRE (SODDING)	90 LBS/ACRE (SEEDING)	
POTASSIUM FERTILIZER NUTRIENT-----	60 LBS/ACRE (SODDING)	90 LBS/ACRE (SEEDING)	

COMMITMENTS

TREE CLEARING SHALL NOT BE ALLOWED BETWEEN APRIL 1 AND SEPTEMBER 30.

HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
601001-05	PIPE UNDERDRAINS
601101-02	CONCRETE HEADWALL FOR PIPE UNDERDRAINS
606201-04	TYPE B GUTTER (INLET, OUTLET & ENTRANCE)
630001-12	STEEL PLATE BEAM GUARDRAIL
630301-08	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631032-09	TRAFFIC BARRIER TERMINAL, TYPE 6A
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 M) AWAY
701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
701011-04	OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W MOVING OPERATIONS - DAY ONLY
701901-07	TRAFFIC CONTROL DEVICES
780001-05	TYPICAL PAVEMENT MARKINGS
BLR 17-4	TRAFFIC CONTROL DEVICES - DAY LABOR CONSTRUCTION
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 22-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS (TWO-LANE TWO WAY RURAL TRAFFIC) (ROAD CLOSED TO THRU TRAFFIC)

ALIGNMENT COORDINATES

STA. 99+00.00	P.O.T.	N: 1,821,039.9607	E: 931,354.8088
STA. 100+30.83	P.C.	N: 1,821,128.6088	E: 931,451.0321
STA. 102+21.45	P.I.	N: 1,821,257.7645	E: 931,591.2243
STA. 103+78.30	P.T.	N: 1,821,205.5435	E: 931,774.5493
STA. 106+22.10	P.I.	N: 1,821,138.7513	E: 932,009.0272
STA. 108+44.54	P.I.	N: 1,821,074.0875	E: 932,221.8626
STA. 111+56.08	P.C.	N: 1,820,988.7410	E: 932,521.4763
STA. 113+29.70	P.I.	N: 1,820,941.1756	E: 932,688.4574
STA. 114+95.40	P.T.	N: 1,820,983.2106	E: 932,856.9158

PROJECT BENCHMARKS

- BM #1: SURVEY SPIKE IN POWER POLE STA. 103+13.3, 47.2' RT. - ELEVATION = 599.67
- BM #2: CHISLED "□" ON WING WALL AT SOUTH EAST CORNER OF BRIDGE STA. 107+88.1, 3.2' RT. - ELEVATION = 606.63
- BM #3: SURVEY SPIKE IN POWER POLE STA. 109+52.9, 24.8' RT. - ELEVATION = 609.17
- BM #4: RAILROAD SPIKE IN A 42" TREE STA. 112+92.0, 20.8' RT. ELEVATION = 639.35

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	PLOT SCALE = 16.0000' / in.	CHECKED -	REVISED -				1630	15-00045-00-BR	KENDALL	40	2
PLOT DATE = 8/14/2018	DATE -	REVISED -		SCALE: N/A	SHEET NO. 1 OF 1 SHEETS	STA. N/A TO STA. N/A	ILLINOIS CONTRACT NO. 87665				

SUMMARY OF QUANTITIES

ITEM NO.	SPECIALTY ITEM &/OR SPECIAL PROVISION	CODE NO.	DESCRIPTION	UNIT	TOTAL QUANTITY
1		20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	241
2		20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	181
3		20200100	EARTH EXCAVATION	CU YD	263
4		20400800	FURNISHED EXCAVATION	CU YD	1237
5		20300100	CHANNEL EXCAVATION	CU YD	690
6		21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	3388
7	SI	25000210	SEEDING, CLASS 2A	ACRE	0.7
8	SI	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	63
9	SI	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	63
10	SI	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	63
11	SI	25100115	MULCH, METHOD 2	ACRE	1.9
12		25100630	EROSION CONTROL BLANKET	SQ YD	3388
13		28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	200
14		28000305	TEMPORARY DITCH CHECKS	FOOT	20
15	SI	28000400	PERIMETER EROSION BARRIER	FOOT	1800
16		28000500	INLET AND PIPE PROTECTION	EACH	1
17		28100109	STONE RIPRAP, CLASS A5	SQ YD	830
18		28200200	FILTER FABRIC	SQ YD	650
19		30300112	AGGREGATE SUBGRADE IMPROVEMENT 12"	SQ YD	3632
20		35101800	AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	56
21		40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	57
22		40200100	AGGREGATE SURFACE COURSE, TYPE A	TON	29
23		40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	553
24		40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	843
25		40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	278
26		40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	7
27		42001300	PROTECTIVE COAT	SQ YD	59
28		44000100	PAVEMENT REMOVAL	SQ YD	2525
29		44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	34
30		48101200	AGGREGATE SHOULDERS, TYPE B	TON	272
31		48203027	HOT-MIX ASPHALT SHOULDERS, 7 1/2"	SQ YD	367
32		50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
33		50200100	STRUCTURE EXCAVATION	CU YD	45
34		50200300	COFFERDAM EXCAVATION	CU YD	160
35		50201101	COFFERDAM (TYPE 1) (LOCATION - 1)	EACH	1
36		50201102	COFFERDAM (TYPE 1) (LOCATION - 2)	EACH	1
37		50300225	CONCRETE STRUCTURES	CU YD	140.2
38		50300280	CONCRETE ENCASEMENT	CU YD	3.4
39		50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	1931

ITEM NO.	SPECIALTY ITEM &/OR SPECIAL PROVISION	CODE NO.	DESCRIPTION	UNIT	TOTAL QUANTITY
40		50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	2096
41		50800105	REINFORCEMENT BARS	POUND	10750
42		51201400	FURNISHING STEEL PILES HP10X42	FOOT	520
43		51201610	FURNISHING STEEL PILES HP12X63	FOOT	820
44		51202305	DRIVING PILES	FOOT	1340
45		51203400	TEST PILE STEEL HP10X42	EACH	2
46		51203610	TEST PILE STEEL HP12X63	EACH	2
47		51500100	NAME PLATES	EACH	1
48		58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	455
49		58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	220
50		59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	13.9
51		60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	4
52		60108100	PIPE UNDERDRAINS 4" (SPECIAL)	FOOT	160
53		60108501	PIPE UNDERDRAINS, TYPE 3	FOOT	1465
54		60600095	CLASS SI CONCRETE (OUTLET)	CU YD	3.9
55		60602800	CONCRETE GUTTER, TYPE B	FOOT	180
56	SI	63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	2
57	SI	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2
58		63200310	GUARDRAIL REMOVAL	FOOT	346
59	SI	66500105	WOVEN WIRE FENCE, 4'	FOOT	1275
60		67100100	MOBILIZATION	L SUM	1
61	SI	72000100	SIGN PANEL - TYPE 1	SQ FT	5
62	SI	72400100	REMOVE SIGN PANEL ASSEMBLY - TYPE A	EACH	3
63	SI	72400200	REMOVE SIGN PANEL ASSEMBLY - TYPE B	EACH	2
64	SI	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
65	SI	72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	13
66	SI	78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	9348
67	SI	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	8
68	SP	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1
69	SI, SP	XX006199	STEEL BRIDGE RAIL, TYPE SM (SPECIAL)	FOOT	256
70	SP	Z0013798	CONSTRUCTION LAYOUT	L SUM	1
71	SP	Z0022800	FENCE REMOVAL	FOOT	1272
72	SP	Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	42

SP=SPECIAL PROVISION SI=SPECIALITY ITEM BDE=BUREAU OF DESIGN AND ENVIRONMENT GBSP=GUIDE BRIDGE SPECIAL PROVISION RSP=RECURRING SPECIAL PROVISION CONSTRUCTION TYPE CODE: 0011

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 PLOT DATE = 8/14/2018

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 DATE -

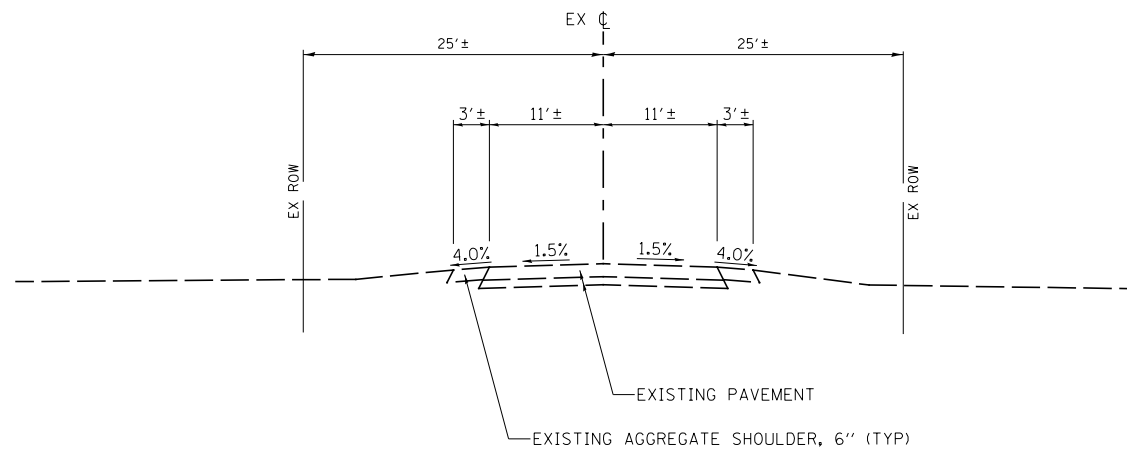
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CITY OF PLANO

MAIN ST.
 SUMMARY OF QUANTITIES

SCALE: N/A SHEET NO. 1 OF 1 SHEETS STA. N/A TO STA. N/A

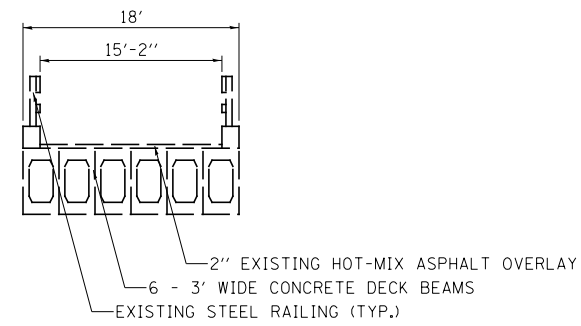
MUN. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1630	15-0045-00-BR	KENDALL	40	3
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 87665	



EXISTING TYPICAL SECTION

MAIN ST.

STA 99+54.60 TO STA 107+07.0
 STA 107+87.6 TO STA 110+73.3

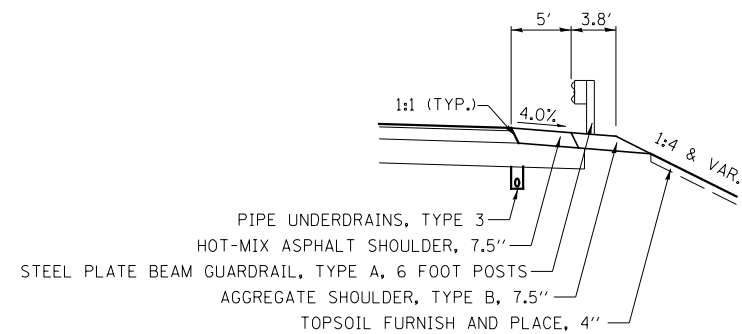


EXISTING TYPICAL SECTION

MAIN ST.

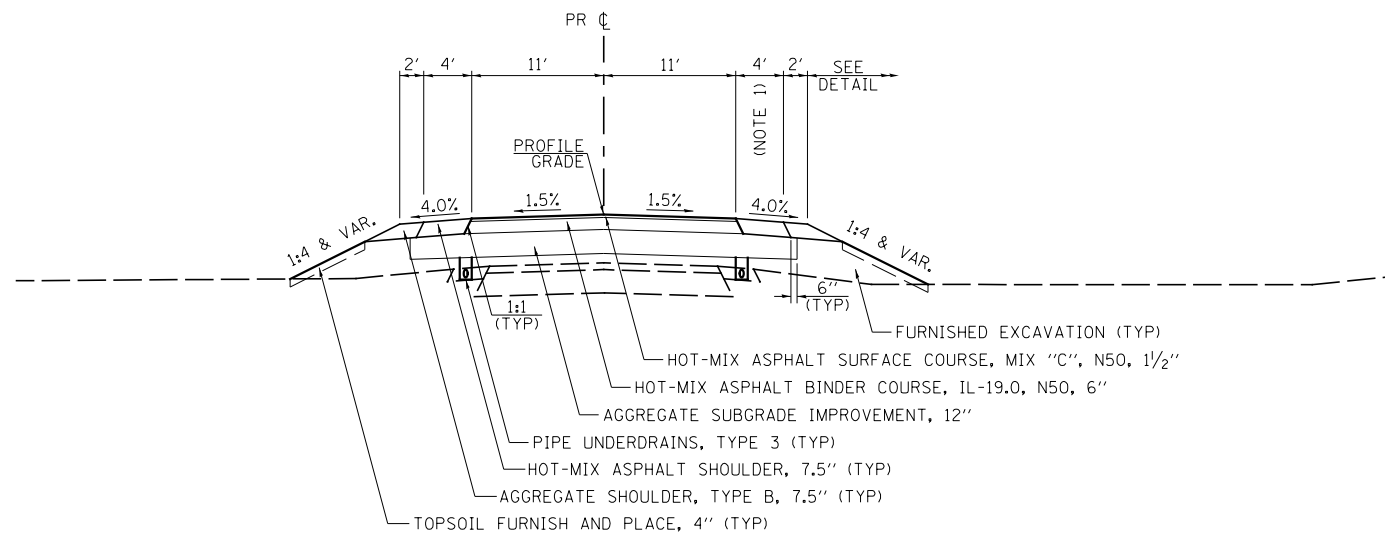
STA 107+07.0 TO STA 107+87.6

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PLOT DATE = 8/14/2018	DATE -	REVISED -	SCALE: N/A SHEET NO. 1 OF 3 SHEETS STA. N/A TO STA. N/A			ILLINOIS		CONTRACT NO. 87665				



DETAIL

STA. 105+95.7 TO STA. 106+85.5 RT



PROPOSED TYPICAL SECTION

MAIN ST.

STA 99+54.60 TO STA 106+85.5

NOTES:

1. VARIES FROM 4' @ STA. 105+61 TO 5' @ STA. 105+86

MAIN ST. STRUCTURAL PAVEMENT DESIGN

STRUCTURAL DESIGN TRAFFIC (S.D.T.) YEAR 2021

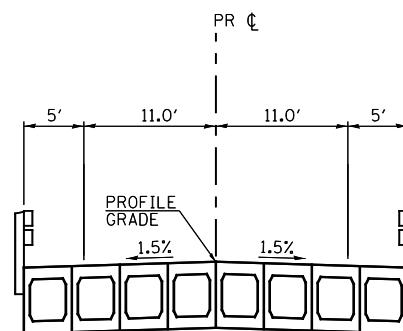
PV = 768 SU = 8 MU = 8

CLASS III ROAD
 SUBGRADE = POOR
 TRAFFIC FACTOR = 0.04

PAVEMENT STRUCTURE MATERIALS:

SURFACE COURSE TYPE: HOT-MIX ASPHALT SURFACE COURSE, MIX C, N50, 1 1/2"
 BINDER COURSE TYPE: HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, 6"
 SUB-BASE TYPE: AGGREGATE SUBGRADE IMPROVEMENT, 12"

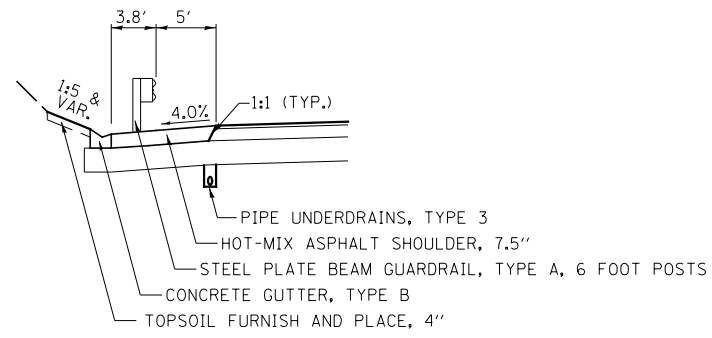
HOT-MIX ASPHALT MIXTURE REQUIREMENTS					
LOCATION(S):	ENTIRE PROJECT	ENTIRE PROJECT	ENTIRE PROJECT	ENTIRE PROJECT	ENTIRE PROJECT
MIXTURE USE(S):	HMA BINDER	HMA SURFACE	HMA SHOULDER BOTTOM LIFT(S)	HMA SHOULDER TOP LIFT	INCIDENTAL HMA
BINDER GRADE (PG):	PG64-22	PG64-22	PG64-22	PG64-22	PG64-22
DESIGN AIR VOIDS:	4.0% @ N50	4.0% @ N50	4.0% @ N50	4.0% @ N50	4.0% @ N50
MIXTURE COMPOSITION: (MIXTURE GRADATION):	IL 19.0	IL 9.5	IL 19.0	IL 9.5	IL 9.5
FRICTION AGGREGATE:		MIXTURE C			
MIXTURE WEIGHT:	112.0 LB/SY/IN	112.0 LB/SY/IN	112.0 LB/SY/IN	112.0 LB/SY/IN	112.0 LB/SY/IN
QUALITY MANAGEMENT PROGRAM:	OCQA	OCQA	OCQA	OCQA	OCQA
SUBLOT SIZE:	NA	NA	NA	NA	NA
DENSITY TEST METHOD:	CORES/NUCLEAR	CORES/NUCLEAR	CORES/NUCLEAR	CORES/NUCLEAR	SATISFACTION OF ENGINEER



PROPOSED TYPICAL SECTION

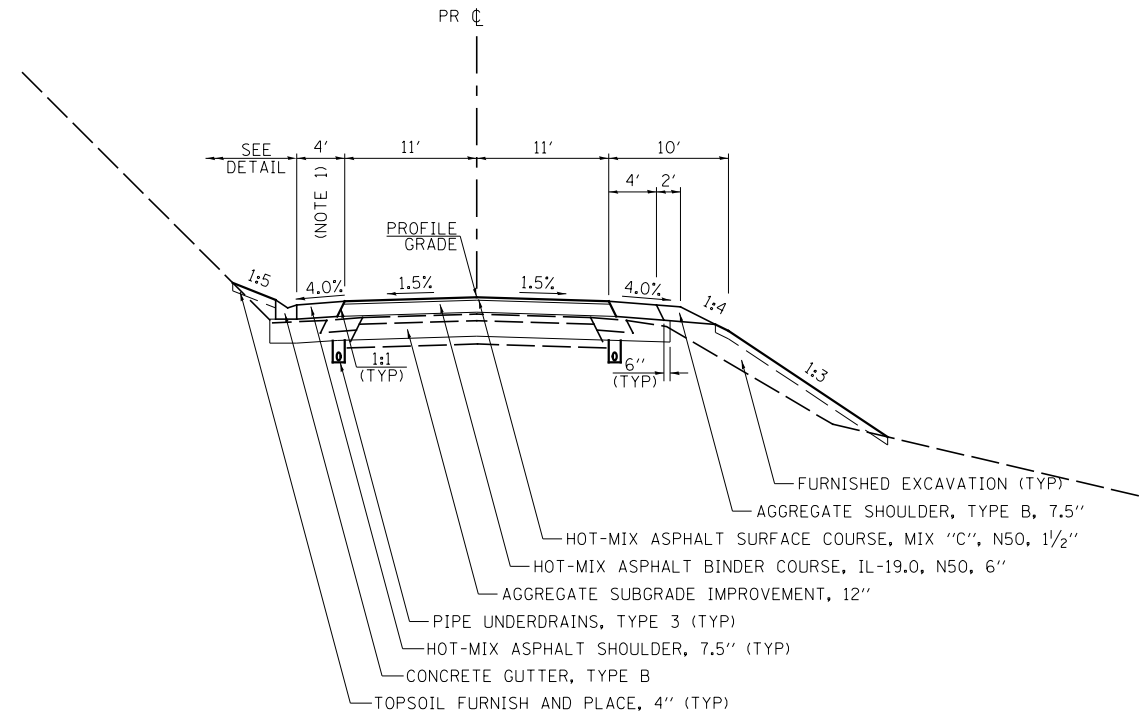
MAIN ST.

STA 106+85.5 TO STA 108+14.0



DETAIL

STA. 108+14.0 TO STA. 109+03.7 LT



PROPOSED TYPICAL SECTION

MAIN ST.

STA 108+14.0 TO STA 110+73.3

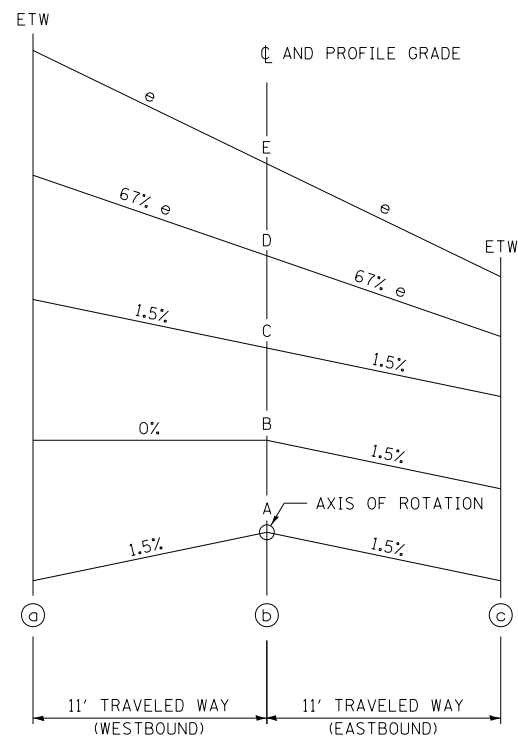
NOTES:

- 1. VARIES FROM 5' @ STA. 109+14 TO 4' @ STA. 109+44

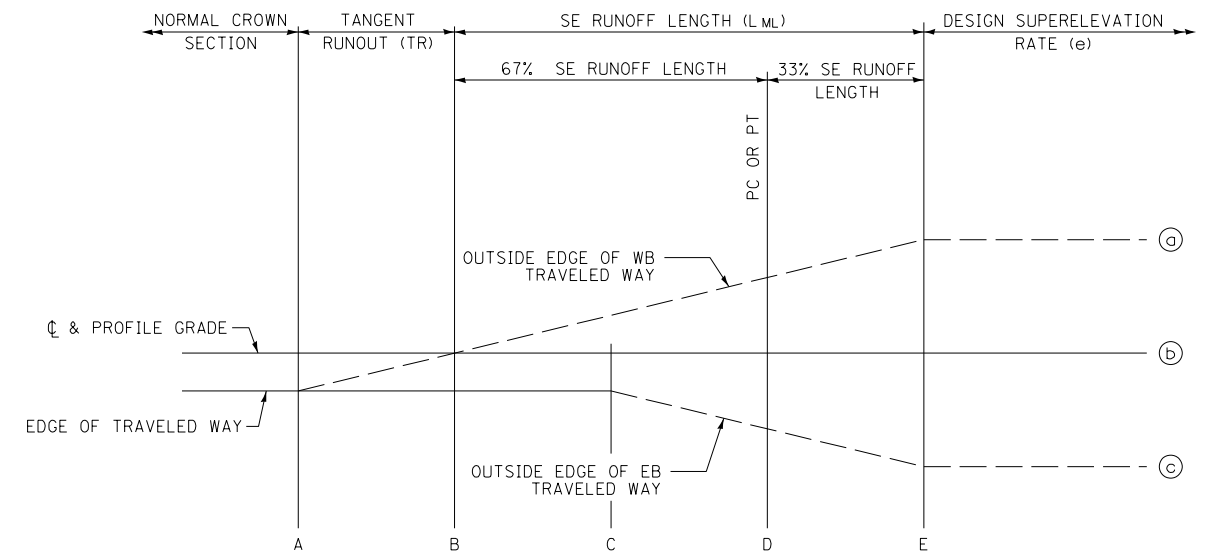
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		DRAWN -	REVISED -					1630	15-00045-00-BR	KENDALL	40	6	
		CHECKED -	REVISED -		SCALE: N/A			SHEET NO. 3 OF 3 SHEETS		STA. N/A TO STA. N/A		CONTRACT NO. 87665	
		DATE -	REVISED -		ILLINOIS								

CURVE MAINCUR1

CURVE NO	SECTION	STATION	WESTBOUND		PROFILE GRADE	EASTBOUND	
			OUTSIDE EDGE	SLOPE %		SLOPE %	OUTSIDE EDGE
MAINCUR1	A	99+55.59	598.41	-1.45%	598.73	-1.50%	598.40
	B	99+82.59	598.78	0.03%	598.77	-1.50%	598.44
	C	100+09.59	599.16	1.51%	598.83	-1.51%	598.50
	D	100+30.83	599.56	2.67%	598.97	-2.67%	598.38
	E	100+54.59	599.99	3.97%	599.12	-3.97%	598.25
FULL SUPERELEVATION							
	E	103+54.54	601.14	3.97%	600.27	-3.97%	599.40
	D	103+78.30	600.49	2.67%	599.90	-2.67%	599.31
	C	103+99.54	599.98	1.51%	599.65	-1.51%	599.32
	B	104+26.54	599.52	0.03%	599.51	-1.50%	599.18
	A	104+53.54	599.23	-1.45%	599.55	-1.50%	599.22



TYPICAL CROSS SECTION - SE TRANSITION



NOTE: ROUND ALL BREAK POINTS IN FIELD

TYPICAL PROFILE - SE TRANSITION

FILE NAME = V:\3892\CADD Sheets\3892-sht-superelevation.dgn	USER NAME = LZeller	DESIGNED - HLC	REVISED -	CITY OF PLANO	MAIN ST SUPERELEVATION TRANSITION DETAILS		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
PLOT SCALE = 16.000' / in.	CHECKED - CAS	DATE - 7/01/2014	REVISED -		SCALE: N/A	SHEET NO. 1 OF 1 SHEETS	STA. N/A	TO STA. N/A	15-00045-00-BR	KENDALL	40	7
PLOT DATE = 8/14/2018	DATE - 7/01/2014	REVISED -							CONTRACT NO. 87665			
ILLINOIS FED. AID PROJECT												

EARTHWORK										
1		2		3		4		5		
STATION	TO	STATION	EARTH EXCAVATION	EARTH EXCAVATION TO BE USED IN EMBANKMENT ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE(+) OR SHORTAGE(-)				
							CU YD			
EAST MAIN ST.										
99+54.6	TO	106+85.5	148	111	999	-888				
106+85.5	TO	108+14.0	SEE STRUCTURE PLANS							
108+14.0	TO	110+73.3	115	86	435	-349				
TOTAL			263	197	1434	-1237				
SHRINKAGE FACTOR: 25%										
EARTH EXCAVATION:										
COLUMN 1, 2, 3 & 4 - LOCATION AND QUANTITIES FROM CROSS SECTIONS										
CUT = EARTH EXCAVATION AND FILL = EMBANKMENT										
COLUMN 3 = COLUMN 2 x (1 - EARTH EXCAVATION SHRINKAGE FACTOR)										
COLUMN 5 = COLUMN 3 - COLUMN 4										
PAY ITEMS:										
COLUMN 2 IS			EARTH EXCAVATION = 263 CU YD							
COLUMN 4 IS			FURNISHED EXCAVATION = 1237 CU YD							

TEMPORARY DITCH CHECKS		
LOCATION		LENGTH
STATION	OFFSET	FOOT
EAST MAIN ST.		
106+00	39' LT	10
108+25	25' LT	10
TOTAL		20

TREE REMOVAL			
LOCATION		6 TO 15 UNITS DIAMETER	OVER 15 UNITS DIAMETER
STATION	OFFSET		
EAST MAIN ST.			
100+65	30' LT		22
100+79	32' LT	12	
100+80	30' LT	12	
102+23	31' LT	13	
102+58	24' LT		20
102+91	17' LT	12	
103+46	16' LT	12	
103+48	15' LT	12	
103+58	15' LT	12	
103+66	15' LT	12	
103+68	17' LT	12	
103+80	17' LT	12	
103+91	17' LT	11	
104+06	18' LT	11	
104+21	19' LT	10	
104+34	21' LT	10	
104+34	21' LT	10	
104+54	22' LT		16
105+55	27' LT		20
105+89	14' RT		29
105+91	13' RT		28
106+26	27' LT		20
106+48	34' LT	6	
106+48	34' LT	6	
106+48	34' LT	6	
106+48	34' LT	8	
106+48	34' LT	8	
106+48	34' LT	8	
106+64	36' LT	13	
108+88	13' RT		26
109+94	23' RT	13	
TOTAL		241	181
OFFSETS ARE FROM PROPOSED CENTERLINE			

SEEDING, EROSION CONTROL BLANKET & NUTRIENTS									
LOCATION				TOPSOIL FURNISH AND PLACE, 4"	SEEDING, CLASS 2A	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	EROSION CONTROL BLANKET
STATION +/-	TO	STATION +/-	SIDE	SQ YD	ACRE	POUND	POUND	POUND	SQ YD
EAST MAIN ST.									
99+55	TO	101+69	RT	146	0.03	3	3	3	146
99+55	TO	105+31	LT	872	0.18	16	16	16	872
101+69	TO	104+73	RT	436	0.09	8	8	8	436
104+73	TO	107+18	RT	339	0.07	6	6	6	339
105+31	TO	107+11	LT	388	0.08	7	7	7	388
107+74	TO	110+73	LT	146	0.03	3	3	3	146
107+84	TO	110+73	RT	630	0.13	12	12	12	630
TOTAL				2957	0.61	55	55	55	2957
USE				3388	0.7	63	63	63	3388
SEEDING NUTRIENTS RATE OF APPLICATION: 90 LBS/ACRE									

PERIMETER EROSION BARRIER				
STATION	TO	STATION	SIDE	LENGTH FOOT
EAST MAIN ST.				
99+55	TO	105+37	LT	620
99+55	TO	101+55	RT	195
101+72	TO	104+61	RT	274
104+85	TO	107+18	RT	238
105+47	TO	107+14	LT	177
107+85	TO	110+73	RT	296
TOTAL				1800
PERIMETER EROSION BARRIER IS SILT FENCE.				

TEMPORARY EROSION CONTROL SEEDING								
STATION +/- TO STATION +/-			SIDE	TEMP SEED ACRES	POUNDS PER APPLICATION PER ACRE	NUMBER OF APPLICATIONS	TOTAL POUND	MULCH, METHOD 2 ACRE
EAST MAIN ST.								
99+55	TO	101+69	RT	0.03	100	3	9	0.09
99+55	TO	105+31	LT	0.18	100	3	54	0.54
101+69	TO	104+73	RT	0.09	100	3	27	0.27
104+73	TO	107+18	RT	0.07	100	3	21	0.21
105+31	TO	107+11	LT	0.08	100	3	24	0.24
107+74	TO	110+73	LT	0.03	100	3	9	0.09
107+84	TO	110+73	RT	0.13	100	3	39	0.39
TOTAL							183	1.83
USE							200	1.9

INLET AND PIPE PROTECTION		
LOCATION		EACH
STATION	OFFSET	EACH
EAST MAIN ST.		
108+35	29' LT	1
TOTAL		1

MULCH METHOD 2 IS USED FOR TEMPORARY MULCHING

PAVEMENT							
LOCATION		AGGREGATE SUBGRADE IMPROVEMENT 12"	BITUMINOUS MATERIALS (TACK COAT)	HOT-MIX ASPHALT BINDER COURSE, IL- 19.0, N50	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	AGGREGATE SHOULDERS, TYPE B	HOT-MIX ASPHALT SHOULDERS, 7 1/2"
STATION TO	STATION	SQ YD	POUND	TON	TON	TON	SQ YD
EAST MAIN ST.							
99+54.6	TO 106+85.5	2622	408	622	152	229	272
106+85.5	TO 108+14.0	SEE STRUCTURE PLANS					
108+14.0	TO 110+73.3	1010	145	221	54	43	95
TOTAL		3632	553	843	206	272	367

DRIVEWAY PAVEMENT REMOVAL			
LOCATION		TYPE	HOT-MIX ASPHALT
STATION	SIDE		SQ YD
EAST MAIN ST.			
104+72.9	RT	CE	34
TOTAL			34

ENTRANCES						
LOCATION			EXISTING ENTRANCE MATERIAL	AGGREGATE BASE COURSE, TYPE B 6"	6" AGGREGATE SURFACE COURSE, TYPE A	2" INCIDENTAL HOT-MIX ASPHALT SURFACING
STATION	SIDE	TYPE		SQ YD	TON	TON
EAST MAIN ST.						
101+69.0	RT	FE	DIRT		12	
104+72.9	RT	CE	HMA	56		7
105+30.5	LT	FE	DIRT		17	
TOTAL				56	29	7

CONCRETE GUTTER					
LOCATION			PROTECTIVE COAT	CLASS SI CONCRETE (OUTLET)	CONCRETE GUTTER, TYPE B
STATION TO	STATION	SIDE	SQ YD	CU YD	FOOT
EAST MAIN ST.					
108+34.9	TO 108+81.5	LT	19	3.20	
108+81.5	TO 110+61.3	LT	36		180
110+61.3	TO 110+73.3	LT	4	0.64	
TOTAL			59	3.90	180

AGGREGATE FOR TEMPORARY ACCESS						
LOCATION		TYPE	WIDTH	LENGTH	THICKNESS	TOTAL
STATION +/-	SIDE		FOOT			TON
EAST MAIN ST.						
101+69.0	RT	FE	16	15	0.50	11
104+72.9	RT	CE	24	22	0.75	31
105+30.5	LT	FE	11	32	0.50	15
TOTAL						57

REMOVAL OF THE SUBBASE IS TO BE CONSIDERED INCLUDED IN THE COST OF AGGREGATE FOR TEMPORARY ACCESS.

LENGTHS MAY VARY DUE TO FIELD REQUIREMENTS.
WIDTHS OF ENTRANCES SHOULD MATCH EXISTING ENTRANCES..

SEE SPECIAL PROVISIONS.

STEEL PLATE BEAM GUARDRAIL							
STATION +/- TO		STATION +/-	SIDE	TRAFFIC BARRIER TERMINAL, TYPE 6A	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	GUARDRAIL REFLECTORS, TYPE A	TERMINAL MARKER - DIRECT APPLIED
				EACH	EACH	EACH	EACH
EAST MAIN ST.							
105+96	TO	106+90	RT - SW	1	1	4	1
108+10	TO	109+04	LT - NE	1	1	4	1
SEE STRUCTURE PLANS FOR ADDITIONAL TERMINAL MARKER - DIRECT APPLIED LOCATIONS							2
TOTAL				2	2	8	4

PAVEMENT REMOVAL			
LOCATION			AREA
STATION TO	STATION		SQ YD
EAST MAIN ST.			
99+54.6	TO	107+07.0	1846
107+87.6	TO	110+73.3	679
TOTAL			2525

GUARDRAIL REMOVAL				
STATION +/-	TO	STATION +/-	SIDE	FOOT
EAST MAIN ST.				
105+91	TO	107+07	LT	116
105+97	TO	107+07	RT	110
107+87	TO	108+40	LT	53
107+87	TO	108+54	RT	67
TOTAL				346

WOVEN WIRE FENCE, 4'				
STATION TO	STATION	SIDE	FOOT	
EAST MAIN ST.				
99+55	TO	105+24	LT	603
99+55	TO	101+50	RT	189
101+79	TO	104+57	RT	266
104+89	TO	105+86	RT	97
105+52	TO	106+71	LT	120
TOTAL				1275

MODIFIED URETHANE PAVEMENT MARKING - LINE 4"				
STATION	TO	STATION	DOUBLE	SOLID
			YELLOW	WHITE
			CENTERLINE	EOP
			FOOT	
EAST MAIN ST.				
99+54.6	TO	111+23	2337	2337
SUB-TOTAL			2337	2337
2ND APPLICATION FOR TEMPORARY MARKINGS IF NECESSARY			2337	2337
TOTAL			9348	

FENCE REMOVAL				
STATION +/-	TO	STATION +/-	SIDE	FENCE REMOVAL
				FOOT
EAST MAIN ST.				
99+55	TO	105+29	LT	597
99+55	TO	101+55	RT	194
101+74	TO	104+56	RT	261
104+91	TO	105+96	RT	106
105+58	TO	106+71	LT	114
TOTAL				1272






PIPE UNDERDRAINS						
STATION	TO	STATION	SIDE	PIPE UNDERDRAINS, TYPE 3	PIPE UNDERDRAINS 4" (SPECIAL)	CONCRETE HEADWALLS FOR PIPE UNDERDRAINS
				FOOT	FOOT	EACH
EAST MAIN ST.						
100+50	TO	103+00	LT	257	11	1
103+00	TO	104+33	LT	132	13	1
103+00	TO	104+33	RT	128	37	
104+33	TO	106+86	LT	245	13	1
104+33	TO	106+86	RT	252	37	
108+14	TO	110+41	LT	230	36	1
108+14	TO	110+41	RT	221	13	
TOTAL				1465	160	4

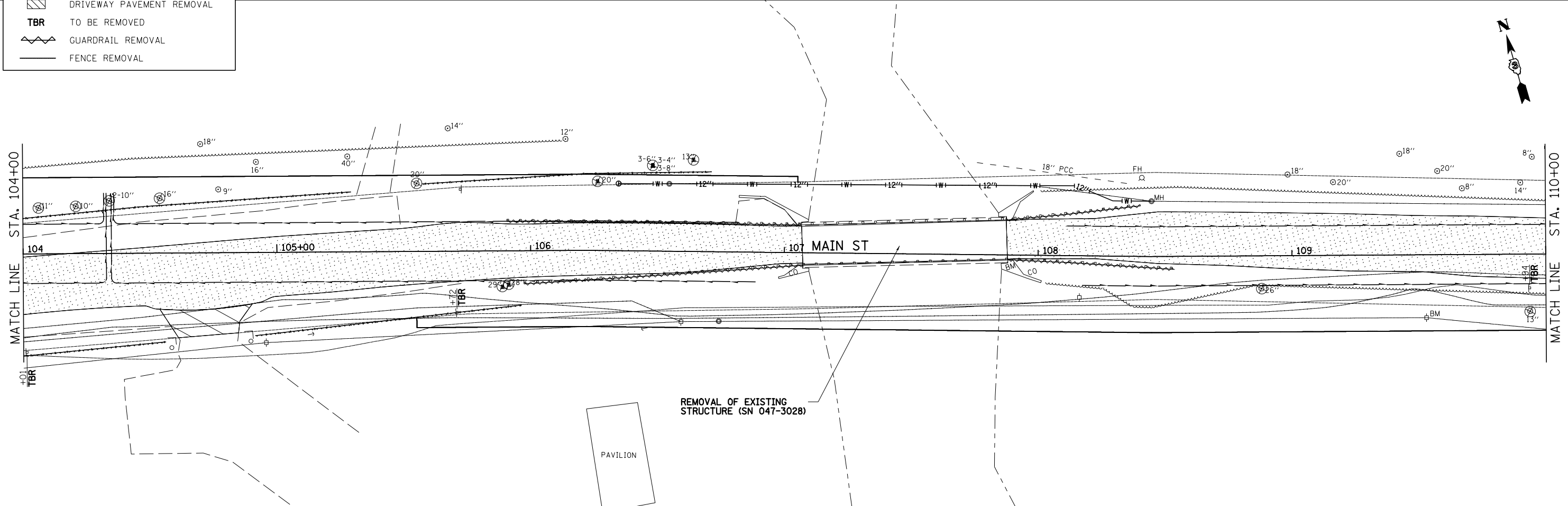
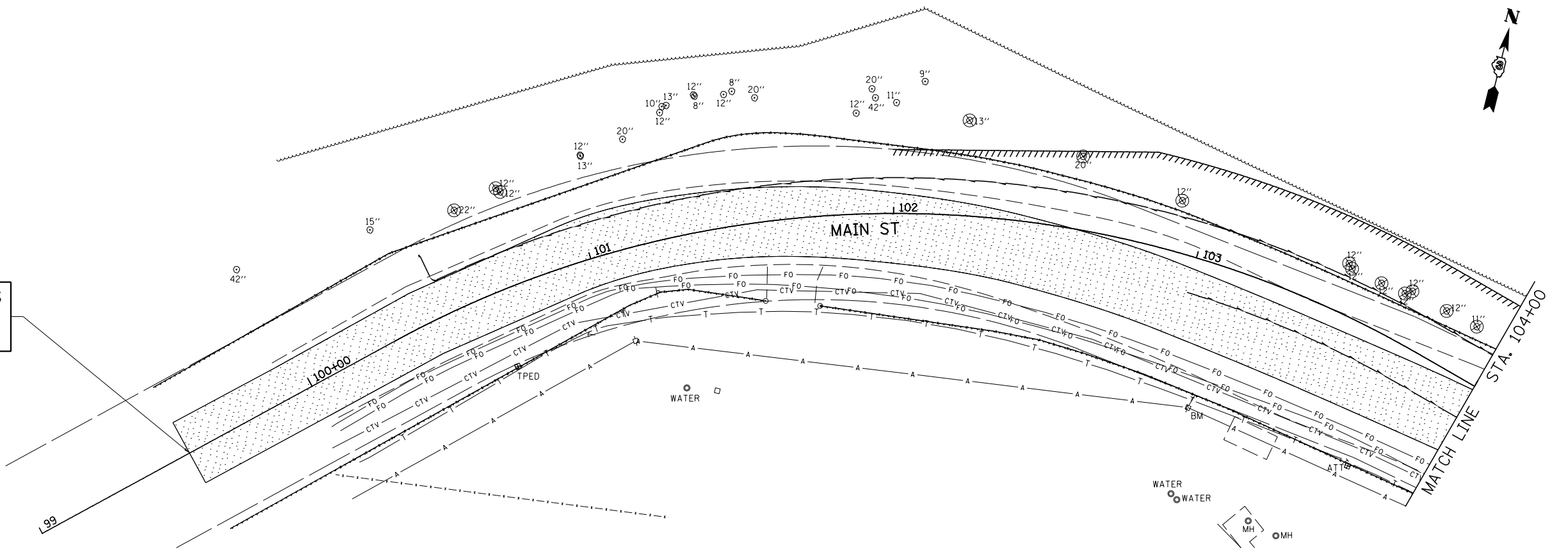
SIGN PANEL AND SIGN SUPPORTS				
LOCATION	SIGN DESIGNATION	SIGN PANEL	TELESCOPING STEEL SIGN SUPPORT	
		TYPE 1	SQ FT	FOOT
STATION	SIDE			
EAST MAIN ST.				
110+00	RT	R2-1	5.00	12.5
USE			5	13

SIGNING REMOVAL						
STATION	SIDE	SIGN DESCRIPTION	SIGN SIZE		REMOVE SIGN PANEL ASSEMBLY - TYPE A	REMOVE SIGN PANEL ASSEMBLY - TYPE B
			WIDTH	HEIGHT		
			INCHES		EACH	EACH
EAST MAIN ST.						
WEST OF START OF PROJECT		HORIZONTAL ALIGNMENT	30	30	1	
		20 MPH	18	12		
104+01	RT	ONE LANE BRIDGE	30	30		1
		15 FT WIDTH	24	24		
105+72	LT	HORIZONTAL ALIGNMENT	30	30	1	
		20 MPH	18	12		
109+94	RT	SPEED LIMIT 30 MPH	24	30	1	
111+78	LT	ONE LANE BRIDGE	30	30		1
		15 FT WIDTH	24	24		
TOTAL					3	2

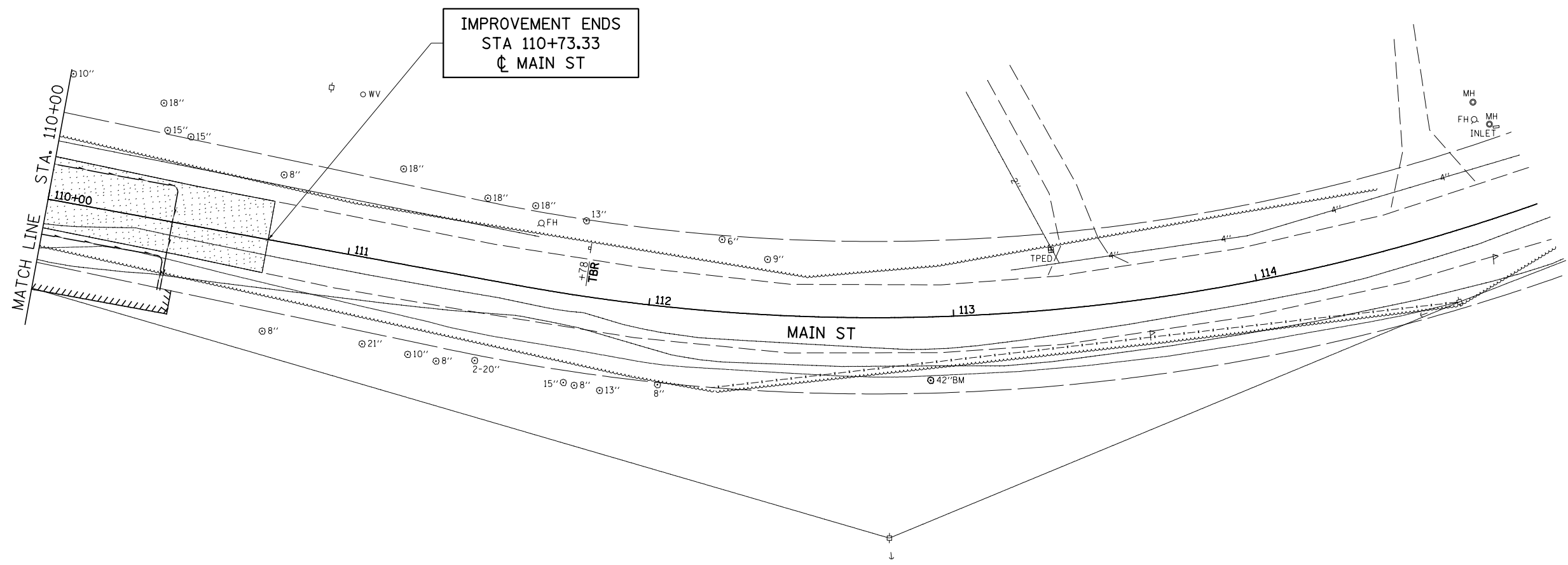
IMPROVEMENT BEGINS
STA 99+54.60
☩ MAIN ST

LEGEND

-  PAVEMENT REMOVAL
-  TREE REMOVAL (UNITS)
-  DRIVEWAY PAVEMENT REMOVAL
- TBR** TO BE REMOVED
-  GUARDRAIL REMOVAL
-  FENCE REMOVAL



FILE NAME = V:\3892\CADD Sheets\3892-sht-rem-1.dgn	USER NAME = LZeller	DESIGNED -	REVISED -	CITY OF PLANO	MAIN ST REMOVAL PLAN			RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -		SCALE: 1"=20' SHEET 1 OF 2 SHEETS STA. 100+00 TO STA. 110+00			15-00045-00-BR	KENDALL	40	11	
Default	PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -									CONTRACT NO. 87665
	PLOT DATE = 8/14/2018	DATE -	REVISED -									ILLINOIS



LEGEND	
	PAVEMENT REMOVAL
	TREE REMOVAL (UNITS)
	DRIVEWAY PAVEMENT REMOVAL
TBR	TO BE REMOVED
	GUARDRAIL REMOVAL
	FENCE REMOVAL

FILE NAME = V:\3892\CADD Sheets\3892-sht-rem-2.dgn	USER NAME = LZeller	DESIGNED -	REVISED -
		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -
Default	PLOT SCALE = 40.0000' / in.		
	PLOT DATE = 8/14/2018		

CITY OF PLANO

MAIN ST REMOVAL PLAN			
SCALE: 1"=20'	SHEET 2	OF 2 SHEETS	STA. 110+00 TO STA. 115+00

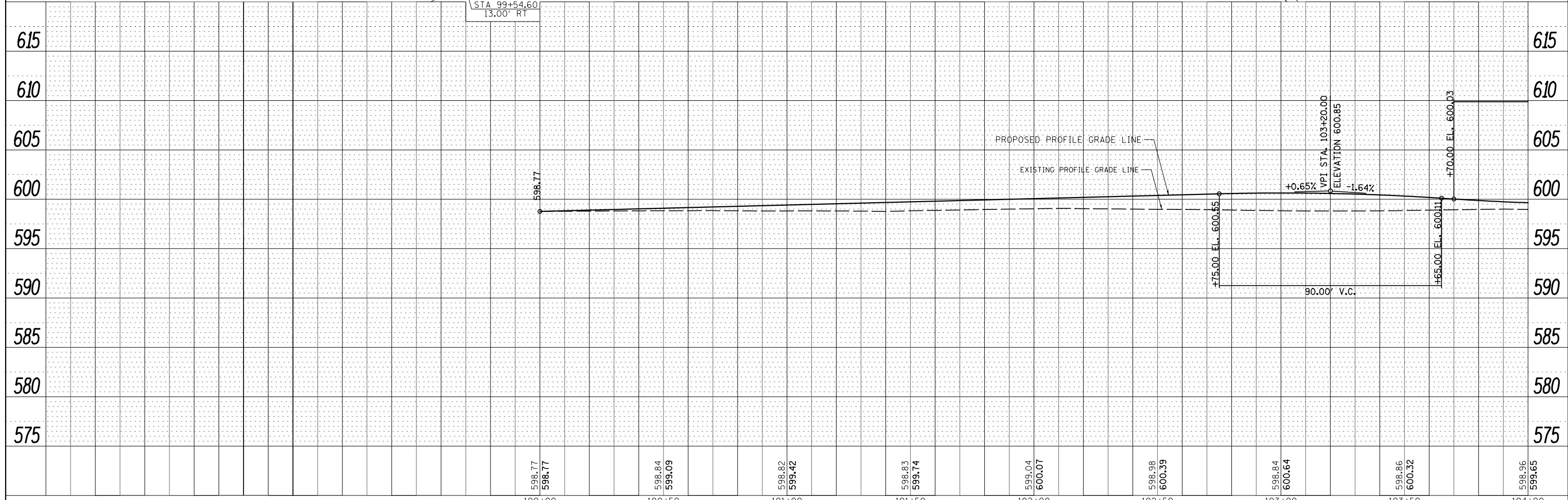
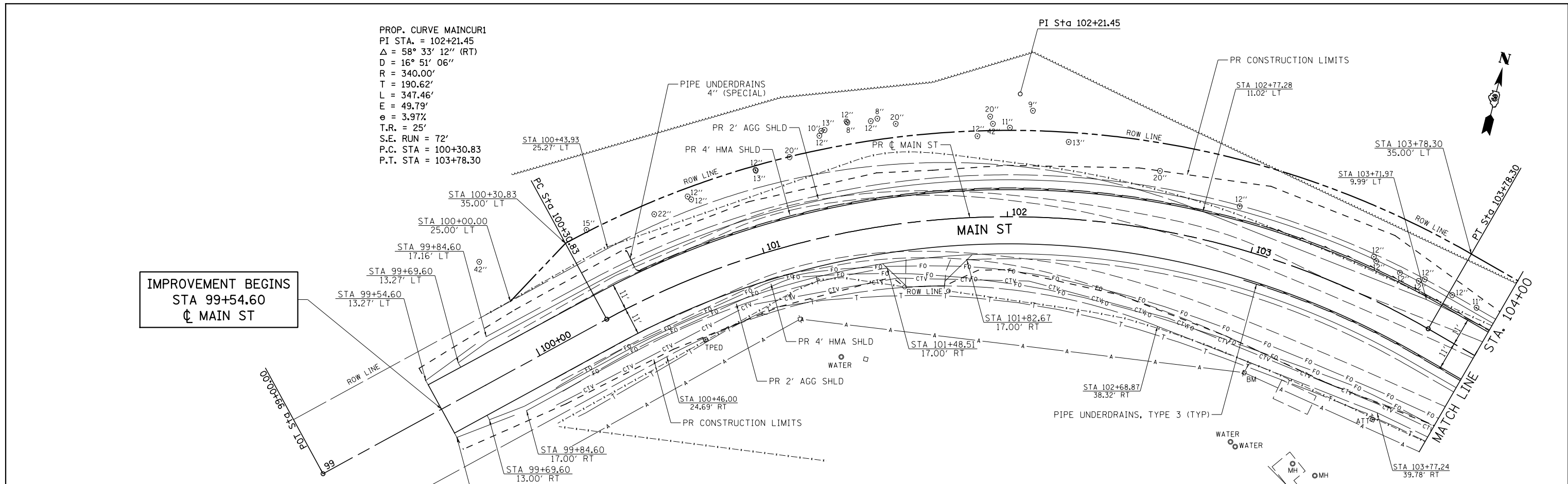
RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	15-00045-00-BR	KENDALL	40	12
			CONTRACT NO. 87665	
ILLINOIS				

PROP. CURVE MAINCUR1
 PI STA. = 102+21.45
 $\Delta = 58^\circ 33' 12''$ (RT)
 $D = 16^\circ 51' 06''$
 $R = 340.00'$
 $T = 190.62'$
 $L = 347.46'$
 $E = 49.79'$
 $e = 3.97\%$
 $T.R. = 25'$
 $S.E. RUN = 72'$
 $P.C. STA = 100+30.83$
 $P.T. STA = 103+78.30$

IMPROVEMENT BEGINS
 STA 99+54.60
 @ MAIN ST

PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
	FILED	
	NO.	

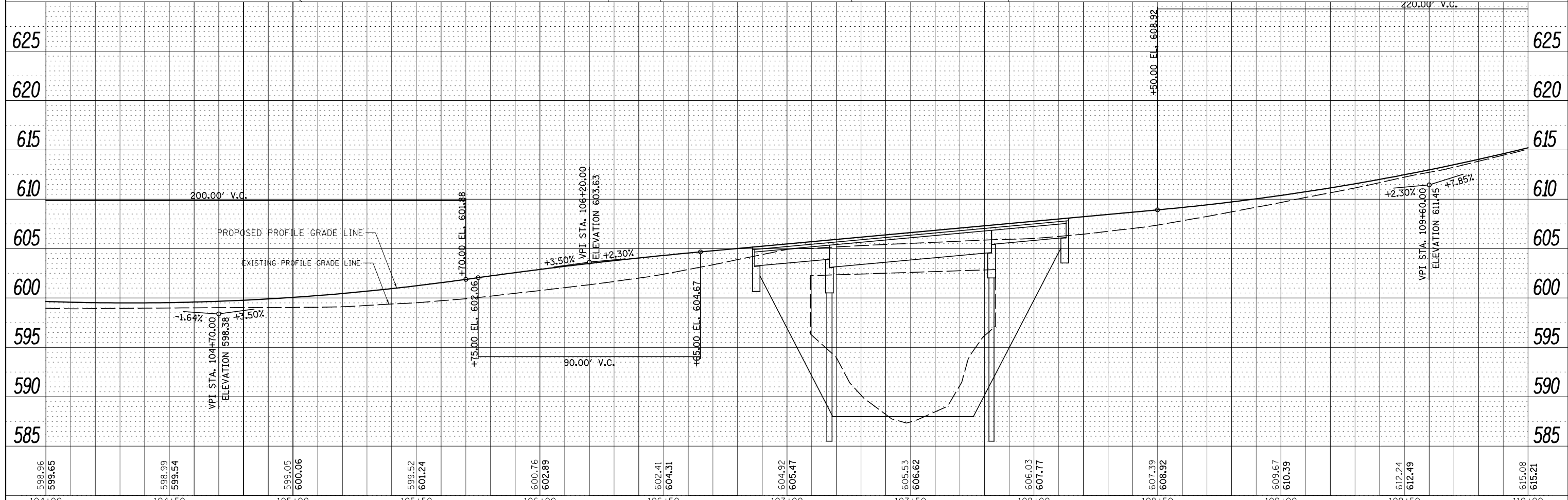
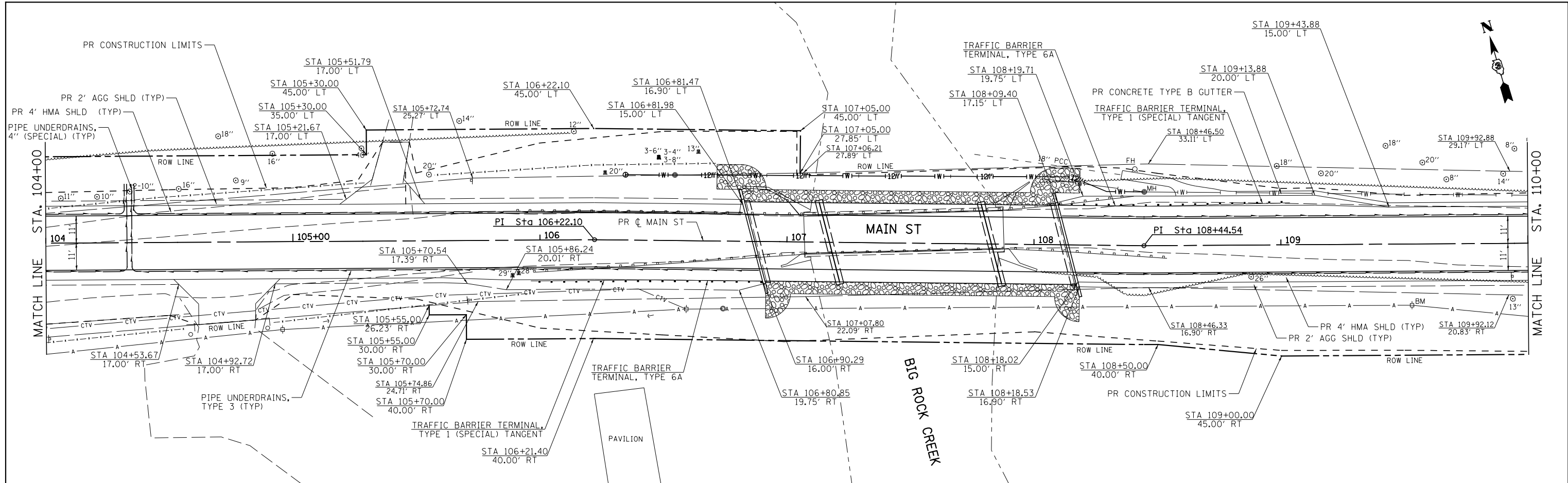
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	PLOTTED	
	GRADES	
	CHECKED	
	STRUCTURE	
	NOT AT THIS OFFICE	
	NO.	



FILE NAME = V:\3892\CADD Sheets\3892-sht-plnprf-1.dgn	USER NAME = LZeller	DESIGNED -	REVISED -	CITY OF PLANO				MAIN ST PLAN AND PROFILE				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Default	PLOT SCALE = 40.0000' / in.	DRAWN -	REVISED -									15-00045-00-BR	KENDALL	40	13	
PLOT DATE = 8/23/2018	CHECKED -	REVISED -	CONTRACT NO. 87665									ILLINOIS FED. AID PROJECT				
DATE -	REVISED -	SCALE: H=20 V=5	SHEET 1 OF 3 SHEETS									STA. 100+00 TO STA. 104+00				

PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNED	
	CHECKED	
	FILE NAME	
	NO.	

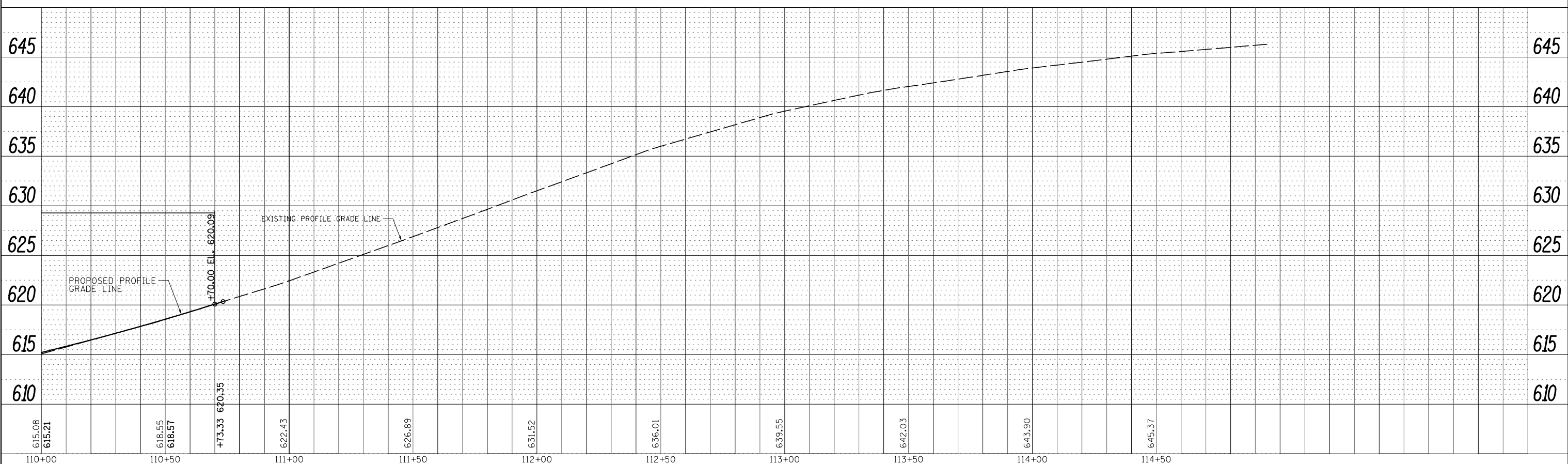
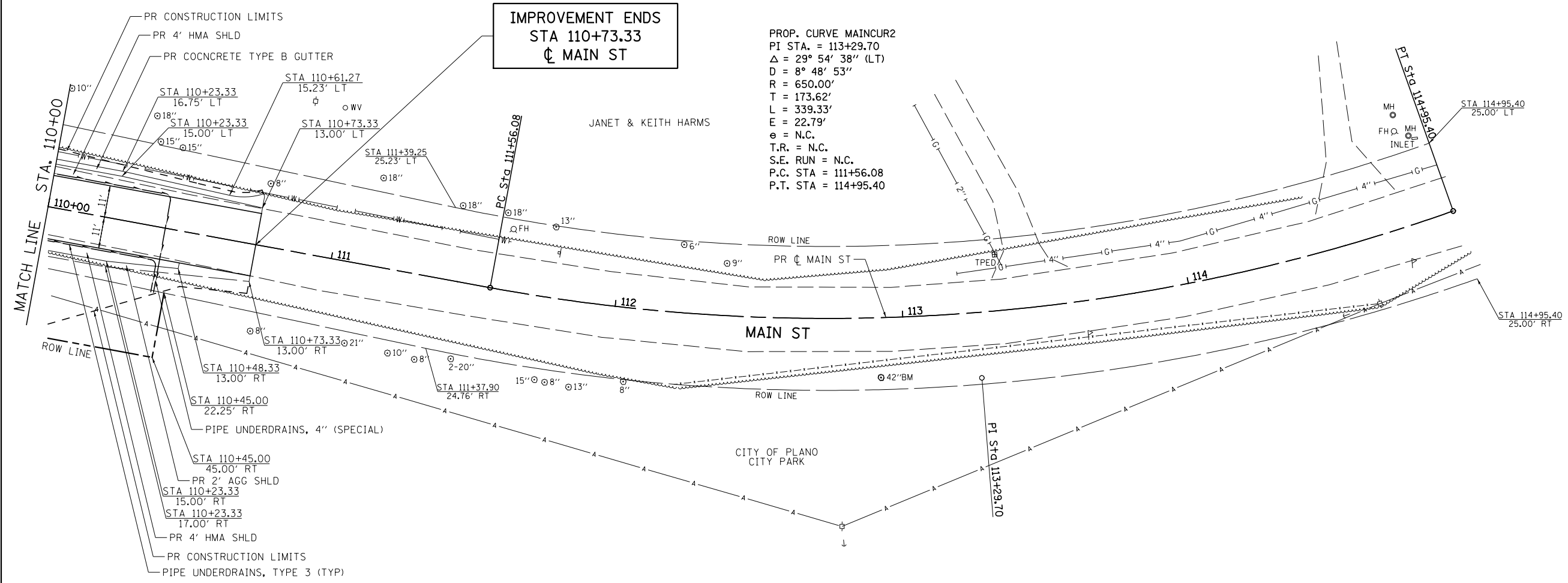
PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES	
	CHECKED	
	STRUCTURE	
	NOTATIONS	
	CHKD	
	NO.	



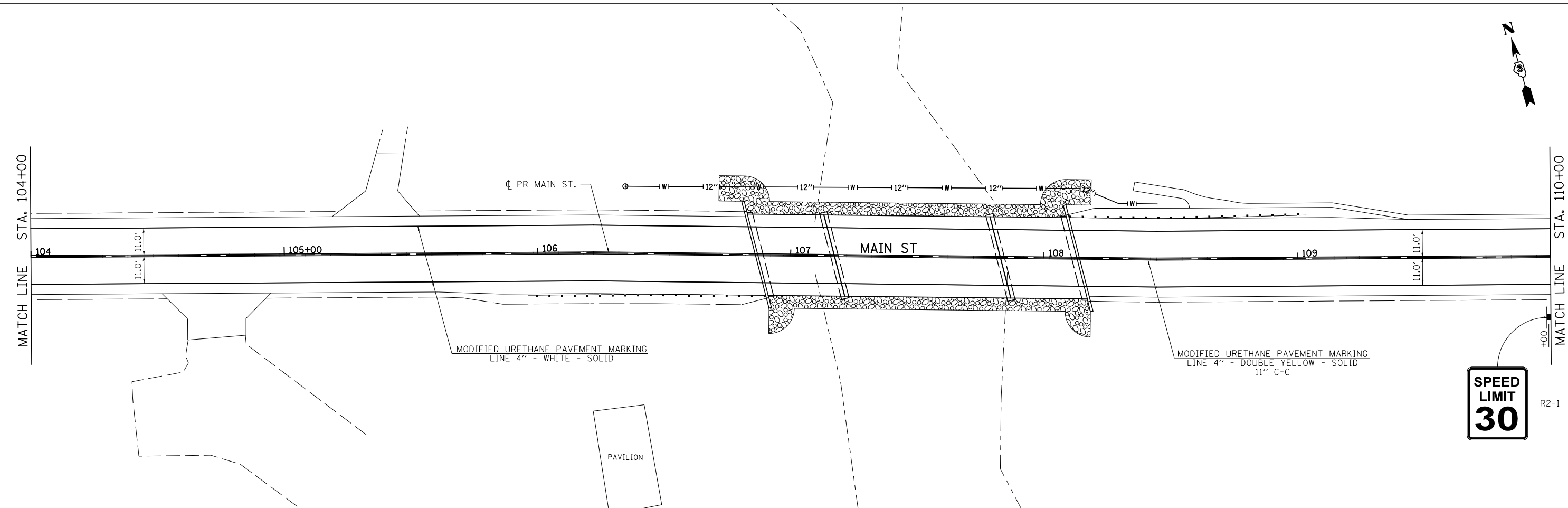
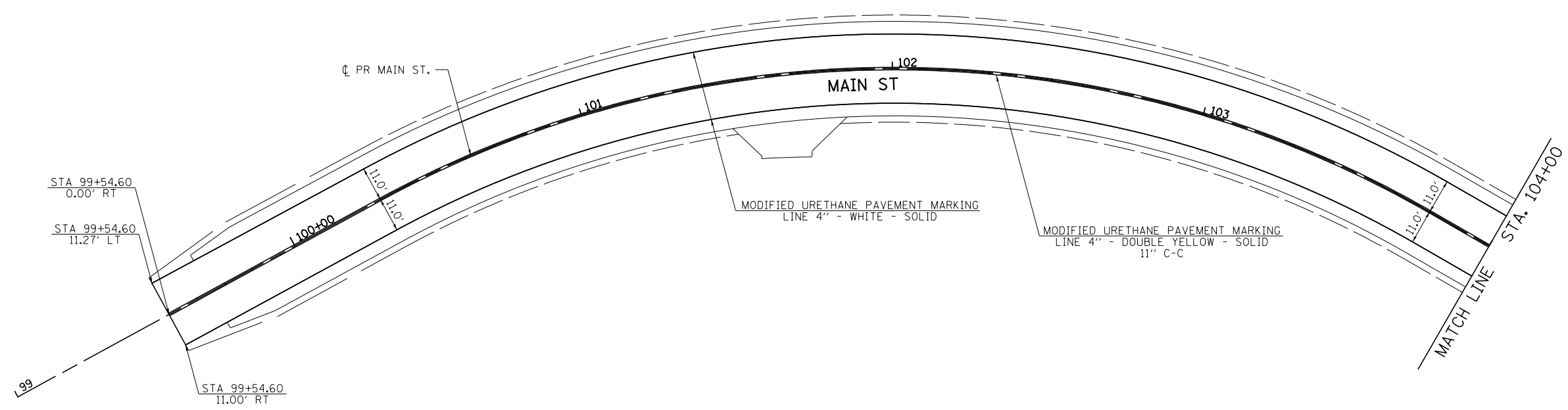
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104+00	104+50	105+00	105+50	106+00	106+50	107+00	107+50	108+00	108+50	109+00	109+50	110+00														

DATE	
BY	
SURVEYED	
PLOTTED	
ALIGNED	
CHECKED	
FILE NAME	
NO.	
PLAN	
NOTE BOOK	
NO.	

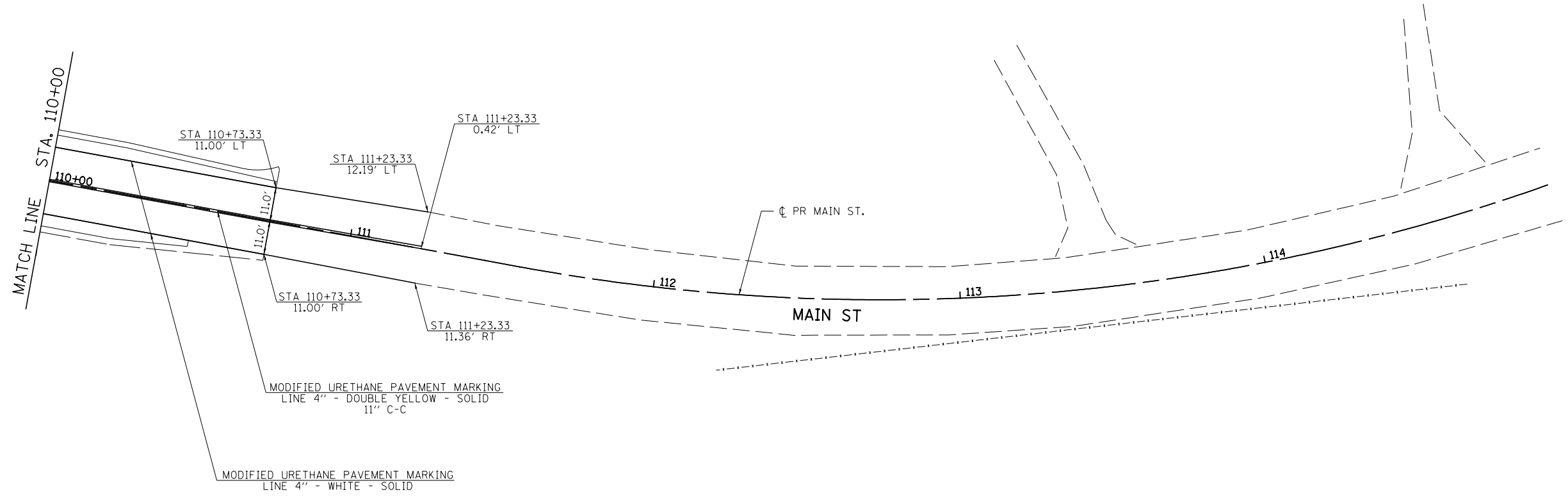
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BY	
SURVEYED	
PLOTTED	
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STRUCTURE	
NOTATIONS CHECKED	
NO.	
PROFILE	
NOTE BOOK	
NO.	



FILE NAME =	USER NAME = LZeller	DESIGNED -	REVISED -	CITY OF PLANO	MAIN ST PLAN AND PROFILE				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
V:\3892\CADD Sheets\3892-sht-plnprf-3.dgn		DRAWN -	REVISED -		SCALE: H=20 V=5 SHEET 3 OF 3 SHEETS STA. 110+00 TO STA. 114+95.40				15-00045-00-BR	KENDALL	40	15	
Default		CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT				CONTRACT NO. 87665				
		DATE -	REVISED -										



FILE NAME = V:\3892\CADD Sheets\3892-sht-pmk-1.dgn	USER NAME = BWedemeyer	DESIGNED -	REVISED -	CITY OF PLANO	MAIN ST PAVEMENT MARKING AND SIGNING PLAN	RT. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -			15-00045-00-BR	KENDALL	40	16	
Default	PLOT DATE = 8/14/2018	DATE -	REVISED -	SCALE: 1"=20'	SHEET 1 OF 2 SHEETS	STA. 100+00	TO STA. 110+00	CONTRACT NO. 87665		



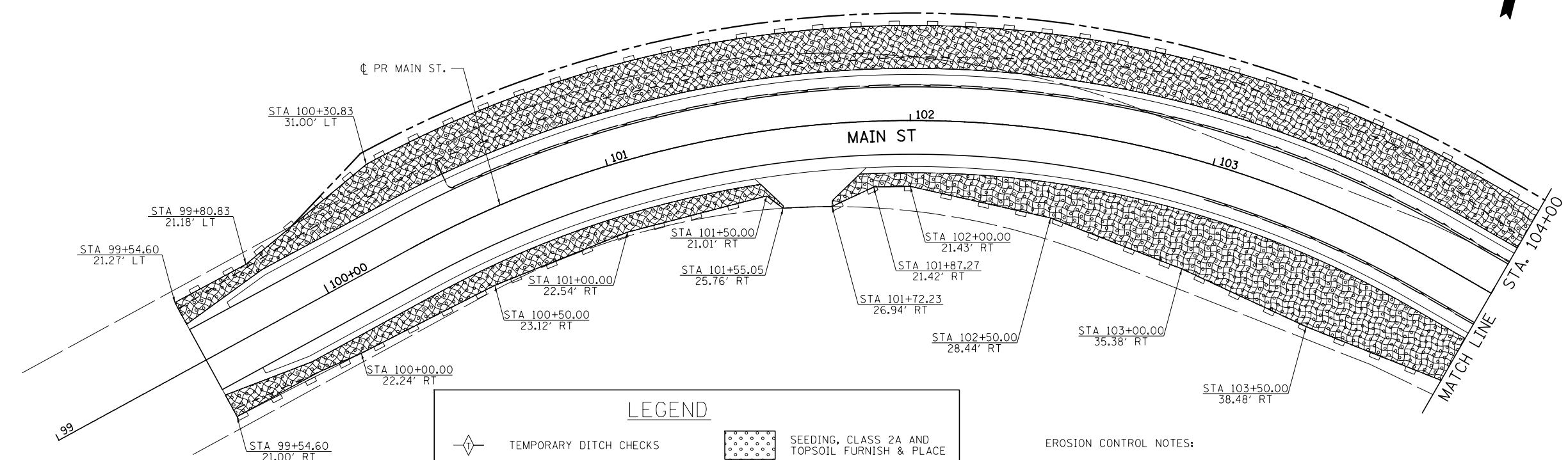
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Default		DRAWN -	REVISED -
	PLOT SCALE = 40.0000' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/14/2018	DATE -	REVISED -

CITY OF PLANO

**MAIN ST
PAVEMENT MARKING AND SIGNING PLAN**

SCALE: 1"=20' SHEET 2 OF 2 SHEETS STA. 110+00 TO STA. 115+00

RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	15-00045-00-BR	KENDALL	40	17
ILLINOIS			CONTRACT NO. 87665	

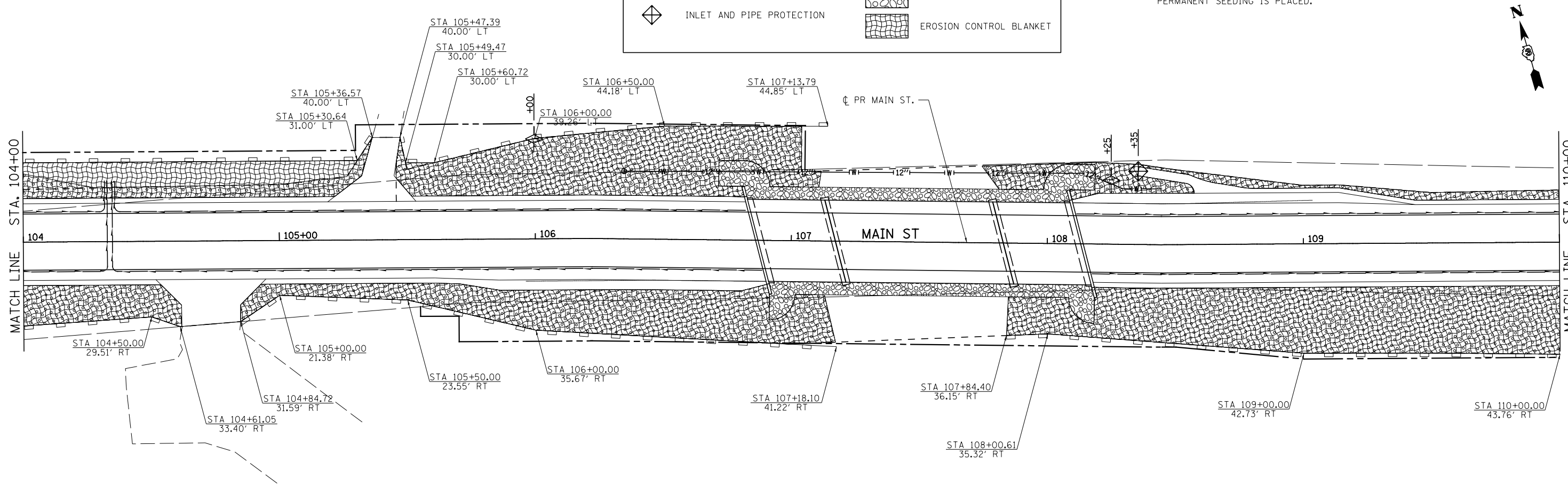


LEGEND

	TEMPORARY DITCH CHECKS		SEEDING, CLASS 2A AND TOPSOIL FURNISH & PLACE
	PERIMETER EROSION BARRIER		STONE RIPRAP
	INLET AND PIPE PROTECTION		EROSION CONTROL BLANKET

EROSION CONTROL NOTES:

- TEMPORARY EROSION CONTROL SEEDING SHALL BE PLACED ON ALL ERODIBLE / BARE AREAS AS REQUIRED BY ART. 280.04(f) UNTIL PERMANENT SEEDING IS PLACED.



FILE NAME = V:\3892\CADD Sheets\3892-sht-eros-1.dgn	USER NAME = LZeller	DESIGNED -	REVISED -	CITY OF PLANO	MAIN ST EROSION CONTROL PLAN			RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -		SCALE: 1"=20'				15-00045-00-BR	KENDALL	40	18
		CHECKED -	REVISED -		SHEET 1 OF 2 SHEETS							
		DATE -	REVISED -		STA. 100+00 TO STA. 110+00							
Default	PLOT DATE = 8/23/2018							CONTRACT NO. 87665				

B.M.: Survey Spike in Power Pole Sta. 103+13, 47' Rt. Elev. 599.67
 Survey Spike in Power Pole Sta. 109+53, 25' Rt. Elev. 609.17

Existing Structure:

Single span PPC deck beam superstructure on concrete & stone closed abutments. The structure is 83'-0" back to back of abutments, 18'-0" out to out deck, and is not skewed. The superstructure dates to 1968, while the substructure was originally constructed in ±1910. Str. No. 047-3028

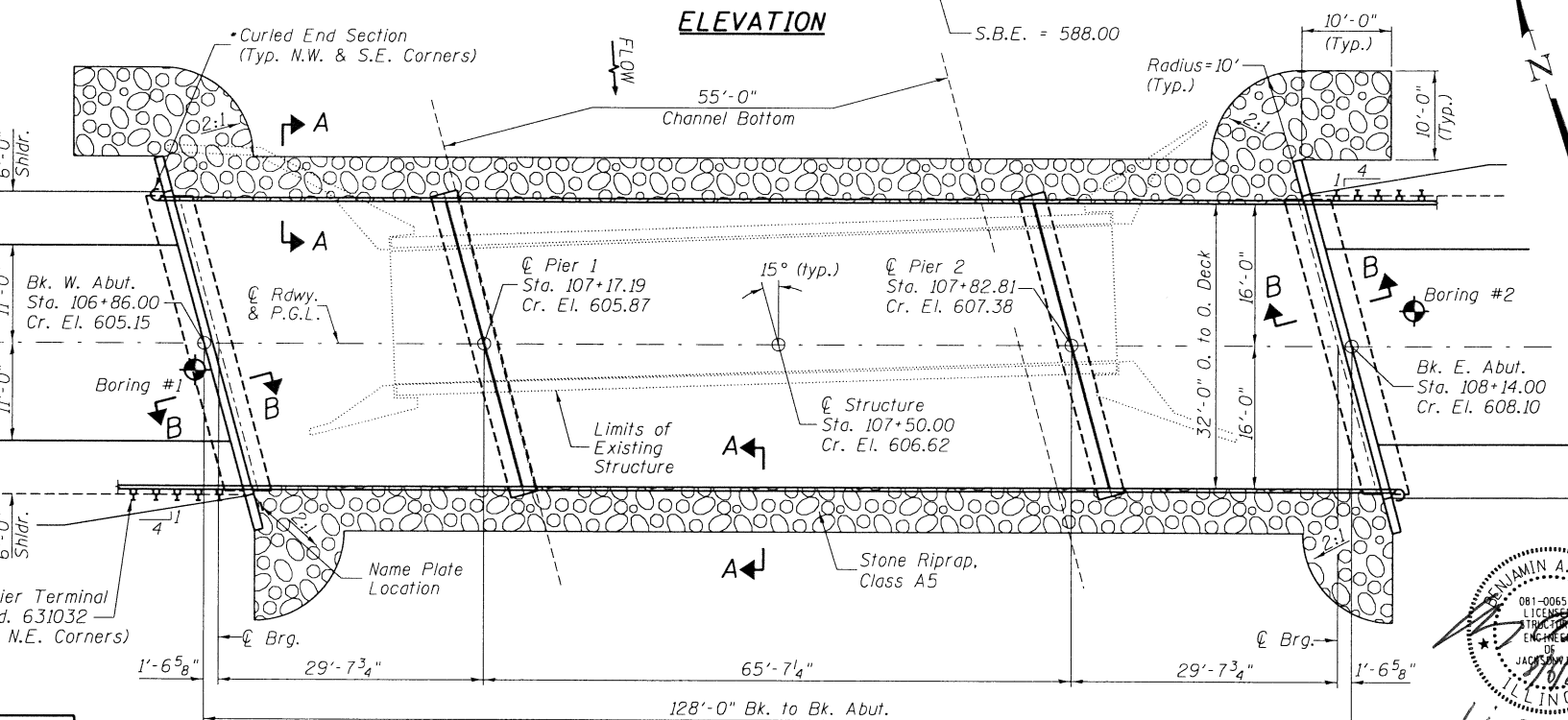
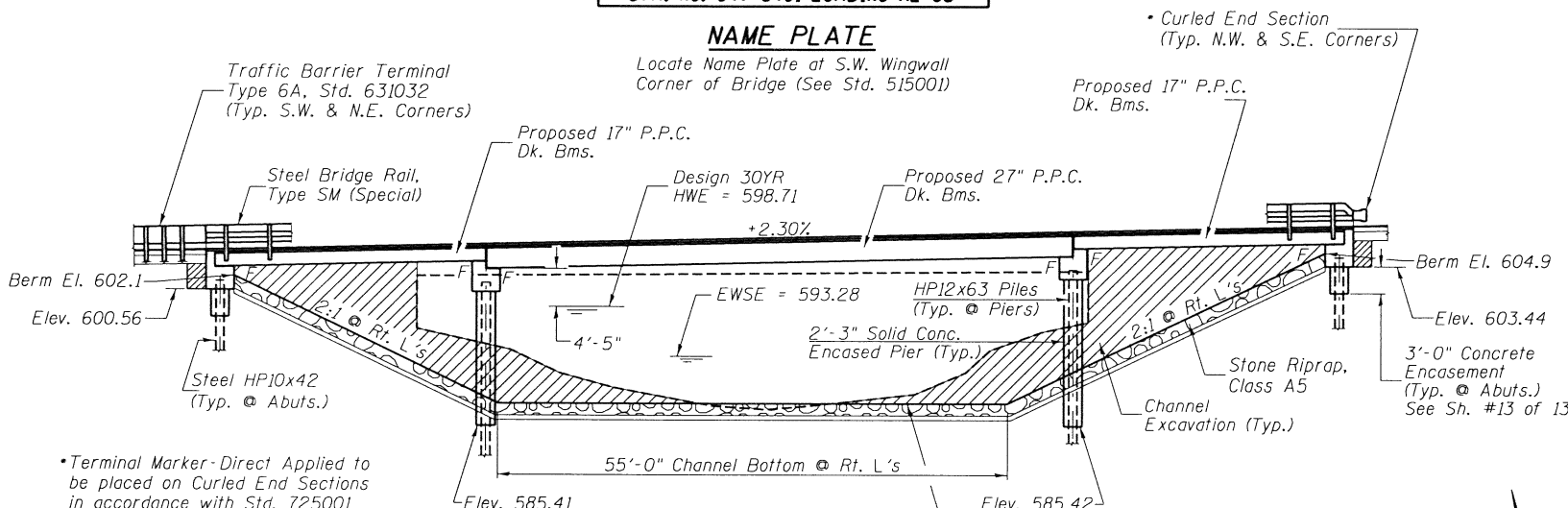
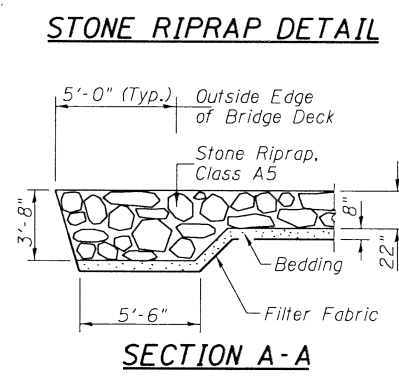
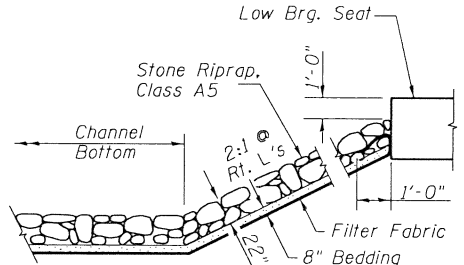
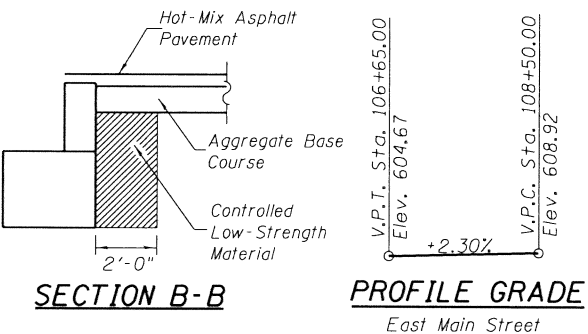
Salvage: None

Road to be closed to traffic during construction.

**BIG ROCK CREEK
 BUILT 20... BY
 CITY OF PLANO
 SEC. 15-00045-00-BR
 EAST MAIN STREET STATION 107+50.00
 F.A. PROJ. N43R(807)
 STR. NO. 047-6401 LOADING HL-93**

NAME PLATE

Locate Name Plate at S.W. Wingwall Corner of Bridge (See Std. 515001)



GENERAL NOTES

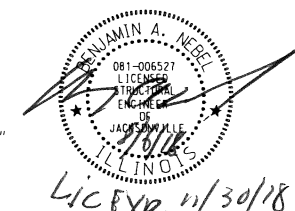
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at the substructures specified or approved by the Engineer before ordering the remainder of the piles.
 For Soil Boring Logs, See Special Provisions.
 A Corrosion Inhibitor shall be used in the concrete for Precast Prestressed Concrete Deck Beams according to Article 1020.05(b)(10) of the Standard Specifications.
 Reinforcement Bars designated (E) shall be epoxy coated.
 Layout of the slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
 Excavation behind the existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.
 The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.

TOTAL BILL OF MATERIAL

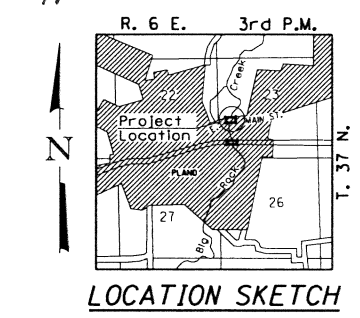
ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	CU YD	—	690	690
Stone Riprap, Class A5	TON	—	830	830
Filter Fabric	SQ YD	—	650	650
Removal of Existing Structures	EACH	—	—	1
Structure Excavation	CU YD	—	45	45
Cofferdam Excavation	CU YD	—	160	160
Concrete Structures	CU YD	—	140.2	140.2
Precast Prestressed Concrete Deck Beams (17" Depth)	SQ FT	1,931	—	1,931
Precast Prestressed Concrete Deck Beams (27" Depth)	SQ FT	2,096	—	2,096
Reinforcement Bars	POUND	—	10,750	10,750
Steel Bridge Rail, Type SM (Special)	FOOT	256	—	256
Furnishing Steel Piles HP10x42	FOOT	—	520	520
Furnishing Steel Piles HP12x63	FOOT	—	820	820
Driving Piles	FOOT	—	1,340	1,340
Test Pile Steel HP10x42	EACH	—	2	2
Test Pile Steel HP12x63	EACH	—	2	2
Concrete Encasement	CU YD	—	3.4	3.4
Name Plates	EACH	—	1	1
Waterproofing Membrane System	SQ YD	455	—	455
Portland Cement Mortar Fairing Course	FOOT	220	—	220
Controlled Low-Strength Material	CU YD	—	13.9	13.9
Cofferdam (Type 1) (Location-1) (Pier #1)	EACH	—	1	1
Cofferdam (Type 1) (Location-2) (Pier #2)	EACH	—	1	1
Hot-Mix Asphalt Surface Course	TON	72	—	72
Terminal Marker - Direct Applied	EACH	2	—	2

① See Special Provisions

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 current AASHTO Standard Specification for Highway Bridges.
 This design complies with all requirements of the current AASHTO Guide Specifications for Seismic Design of highway bridges.



[Signature]
 Illinois Structural No. 6527
 Expires 11/30/2018



**GENERAL PLAN & ELEVATION
 EAST MAIN STREET
 OVER BIG ROCK CREEK
 SECTION 15-00045-00-BR
 CITY OF PLANO
 KENDALL COUNTY
 STATION 107+50.00
 STRUCTURE NO. 047-6401**

DESIGN SCOUR ELEVATION TABLE

Item 113	Design Scour Elevations (ft.)			
	W. Abut.	Pier 1	Pier 2	E. Abut.
Q100	600.6	583.6	586.4	603.4
Q200	600.6	582.7	585.6	603.4
Design	600.6	583.6	586.4	603.4
Check	600.6	582.7	585.6	603.4

WATERWAY INFORMATION

Drainage Area = 114.5 Sq. Mi. Low Grade Elev. = 598.77 @ Sta. 100+00.00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Nat. H.W.E. Exist.	Prop.	Head - Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	30	4,371	549	784	598.71	0.69	0.05	599.40	598.76	
Base	100	5,515	602	855	599.45	0.84	0.49	600.29	599.94	

OVER-THE-ROAD AREA

Freq. Yr.	Existing	Proposed
30	0	0
100	223	44

Construction of this project complies with IDNR, Office of Water Resources Permit No. DS2017038

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 & 2016 Interims

DESIGN STRESSES

(PRECAST PRESTRESSED UNITS)
 f'_c = 6,000 p.s.i.
 f'_{ci} = 5,000 p.s.i.
 f'_s = 270,000 p.s.i. (1/2" Strands)
 f'_{si} = 201,960 p.s.i. (1/2" Strands)

(FIELD UNITS)
 f'_c = 3,500 p.s.i.
 f_y = 60,000 p.s.i. (Rein.)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.091g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.163g
 Soil Site Class = D

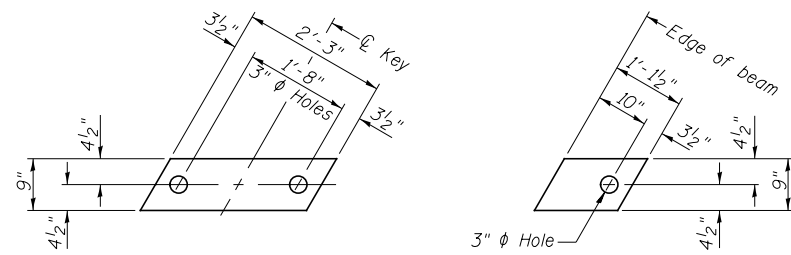
LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGNED	S.T.M.
CHECKED	C.T.M.
DRAWN	S.T.M.
CHECKED	C.T.M.

Hutchison Engineering, Inc.
 JACKSONVILLE-SHOREWOOD-PEORIA-MOLINE
 2017 JOB#3892

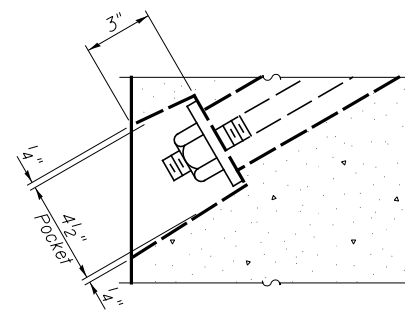
SHEET NO. 1 13 SHEETS	STREET		COUNTY KENDALL	TOTAL SHEETS	SHEET NO.
	E. MAIN	15-00045-00-BR		40	20
	SN 047-6401			CONTRACT NO. 87665	
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT N43R(807)			



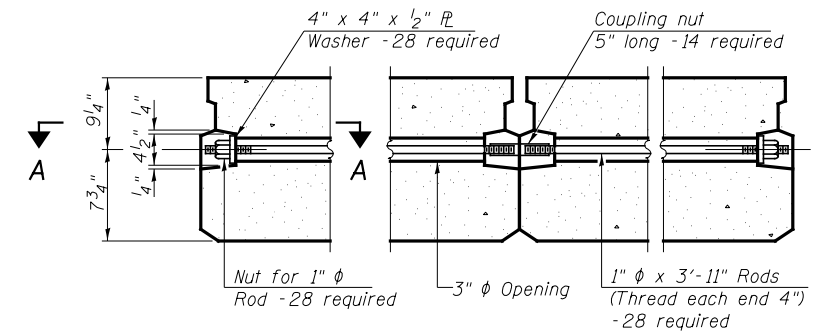
1/2" FABRIC BEARING PAD
(Interior) 28 Required

1/2" FABRIC BEARING PAD
(Exterior) 8 Required

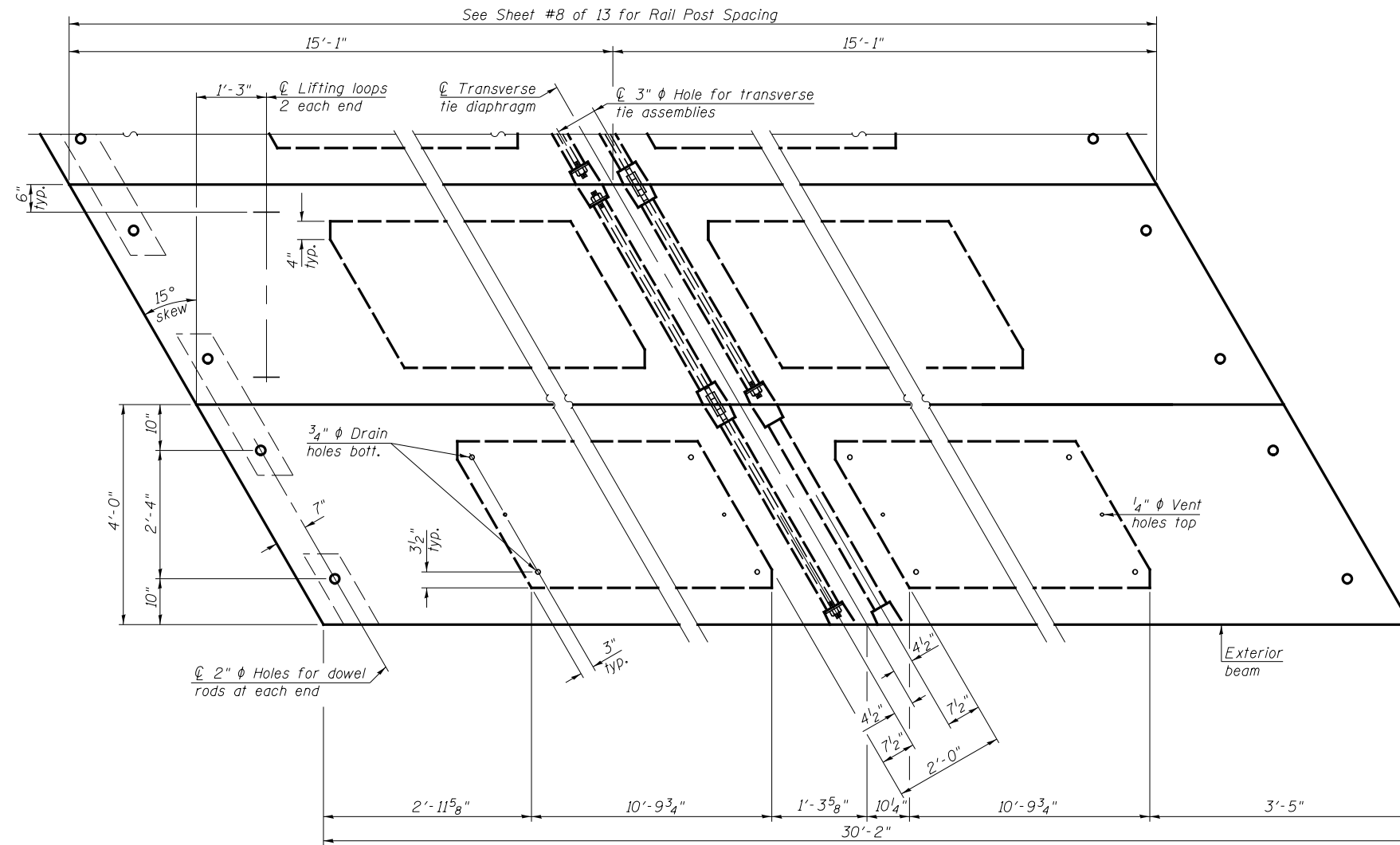
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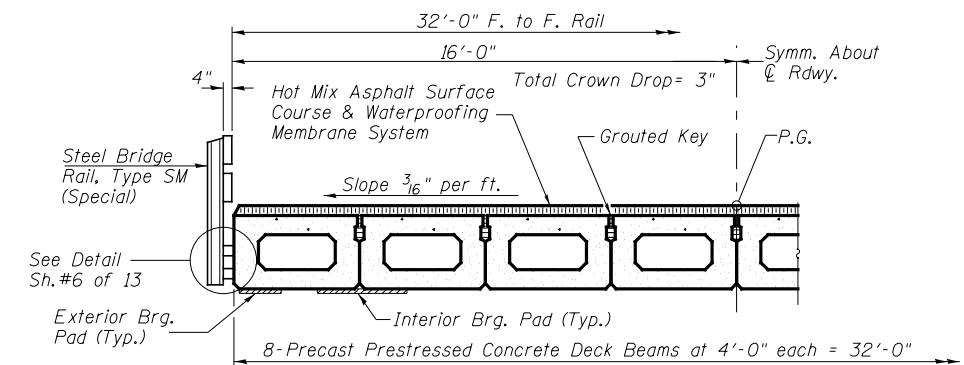
SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY



PLAN VIEW



HALF CROSS SECTION

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (17" Depth)	SQ FT	1,931

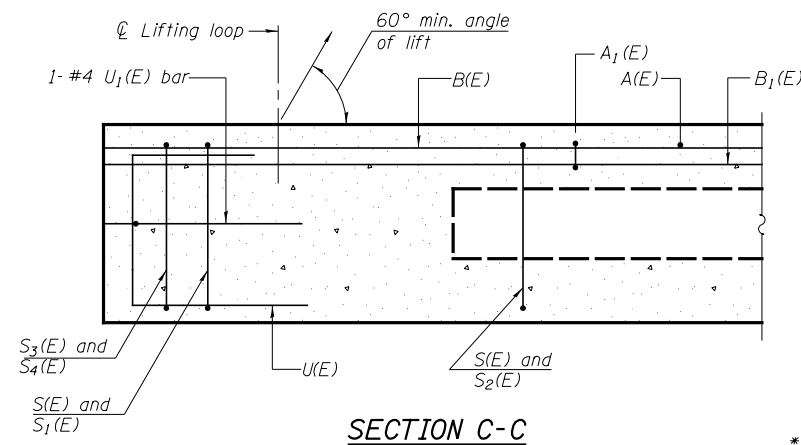
Note: Connect beams in pairs with the transverse tie configuration shown.

NOTES

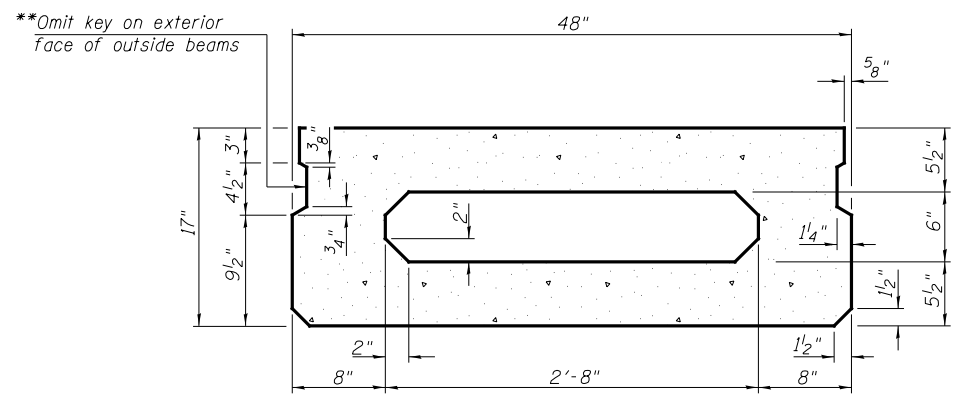
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads is in place. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place. Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. Compressive strength of prestressed concrete, f'c, shall be 6000 psi. Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

SUPERSTRUCTURE - SPANS 1 & 3
CITY OF PLANO
SECTION 15-00045-00-BR
E. MAIN STREET OVER
BIG ROCK CREEK

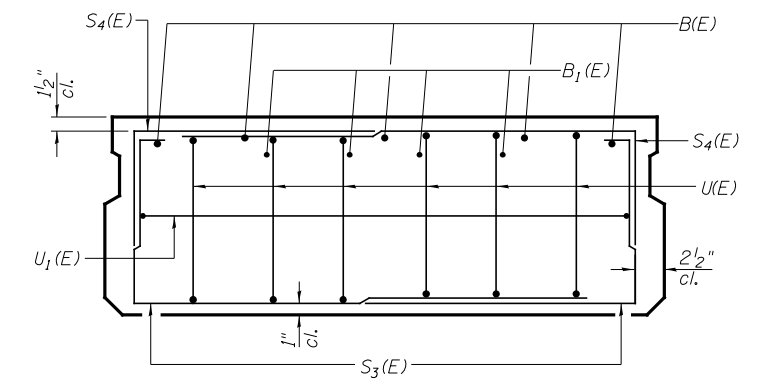
SHEET NO. 2	STREET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
13 SHEETS	E. MAIN	15-00045-00-BR	KENDALL	40	21
		SN 047-6401		CONTRACT NO. 87665	
	FED. ROAD DIST. NO. 7	ILLINOIS		FED. AID PROJECT N43R(807)	



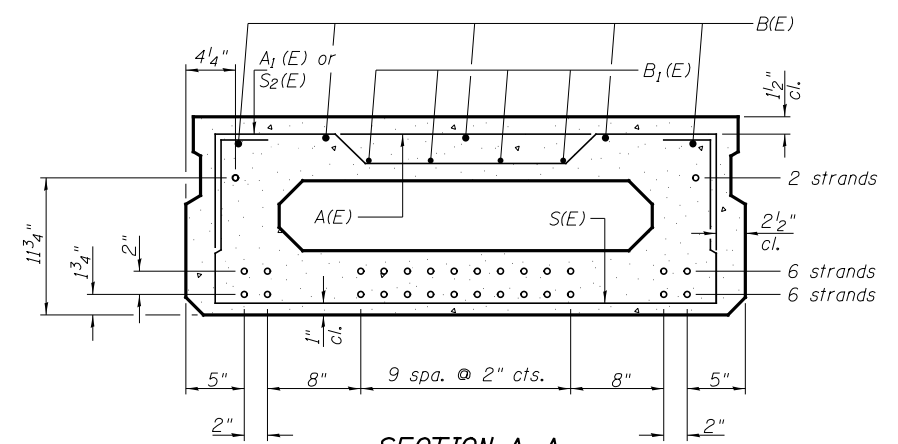
SECTION C-C



SECTION A-A
(Showing dimensions)

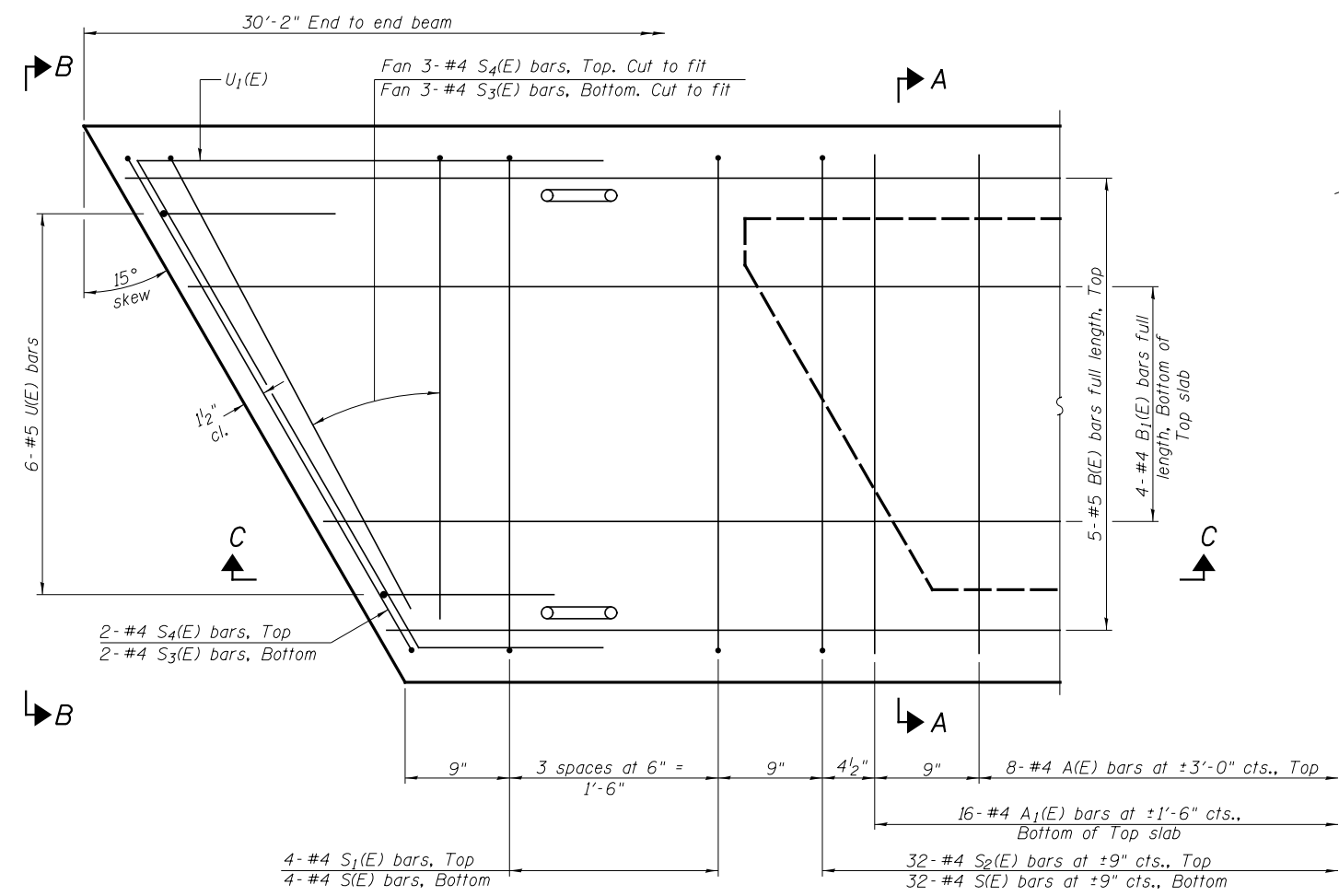


VIEW B-B



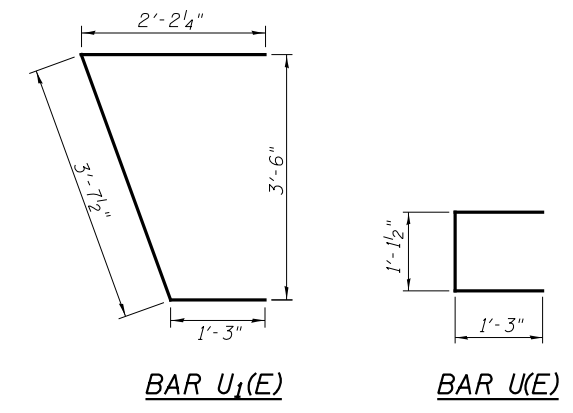
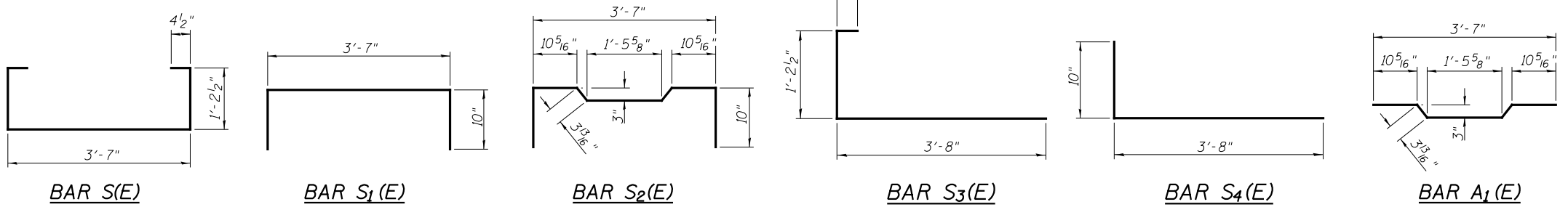
SECTION A-A

14- 1/2" ϕ Strands Each Strand Stressed to 30,900 Lbs.
6- Strands 1 3/4" up, 6- Strands 3 3/4" up, 2- Strands 1 1/4" up
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

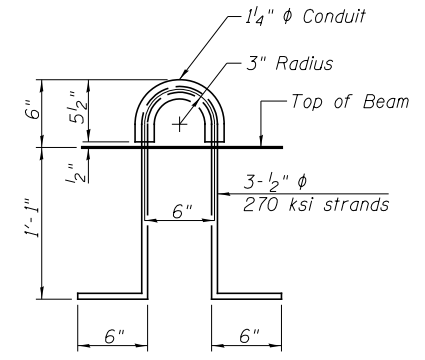


PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



BAR U1(E) **BAR U(E)**



LIFTING LOOP DETAIL

MINIMUM BAR LAP
#4 bar = 1'-11"
#5 bar = 2'-6"

BAR LIST-ONE BEAM ONLY
(For information only)

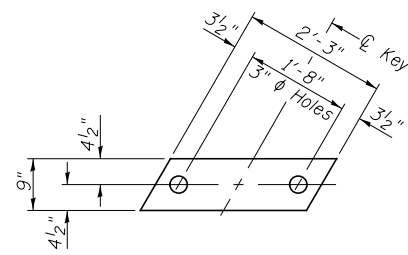
BAR NO.	SIZE	LENGTH	SHAPE
A(E)	#4	3'-7"	—
A1(E)	#4	3'-10"	—
B(E)	#5	*29'-11"	—
B1(E)	#4	*29'-11"	—
S(E)	#4	6'-9"	□
S1(E)	#4	5'-3"	□
S2(E)	#4	5'-6"	□
S3(E)	#4	5'-3"	□
S4(E)	#4	4'-6"	□
U(E)	#5	3'-8"	□
U1(E)	#4	7'-1"	□

*Total Length, Lap as Necessary.

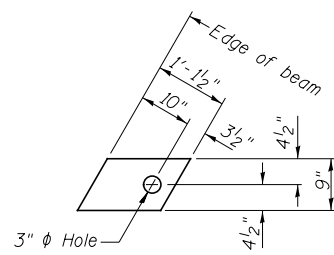
Note: See Sheet 2 of 13 for additional details and Bill of Material.

SUPERSTRUCTURE DETAILS - SPANS 1 & 3
CITY OF PLANO
SECTION 15-00045-00-BR
E. MAIN STREET OVER
BIG ROCK CREEK

SHEET NO.	STREET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SHEET NO. 3	E. MAIN	15-00045-00-BR	KENDALL	40	22
13 SHEETS		SN 047-6401		CONTRACT NO. 87665	
	FED. ROAD DIST. NO. 7	ILLINOIS		FED. AID PROJECT N43R(807)	

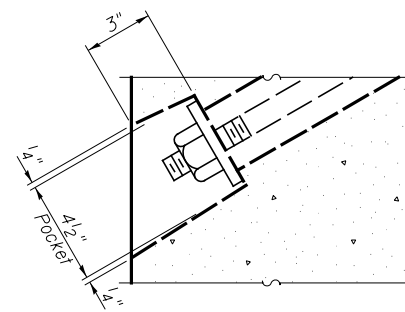


1/2" FABRIC BEARING PAD
(Interior) 14 Required

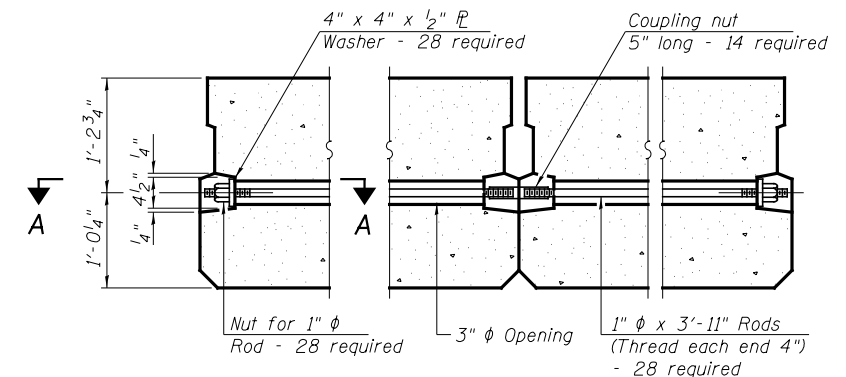


1/2" FABRIC BEARING PAD
(Exterior) 4 Required

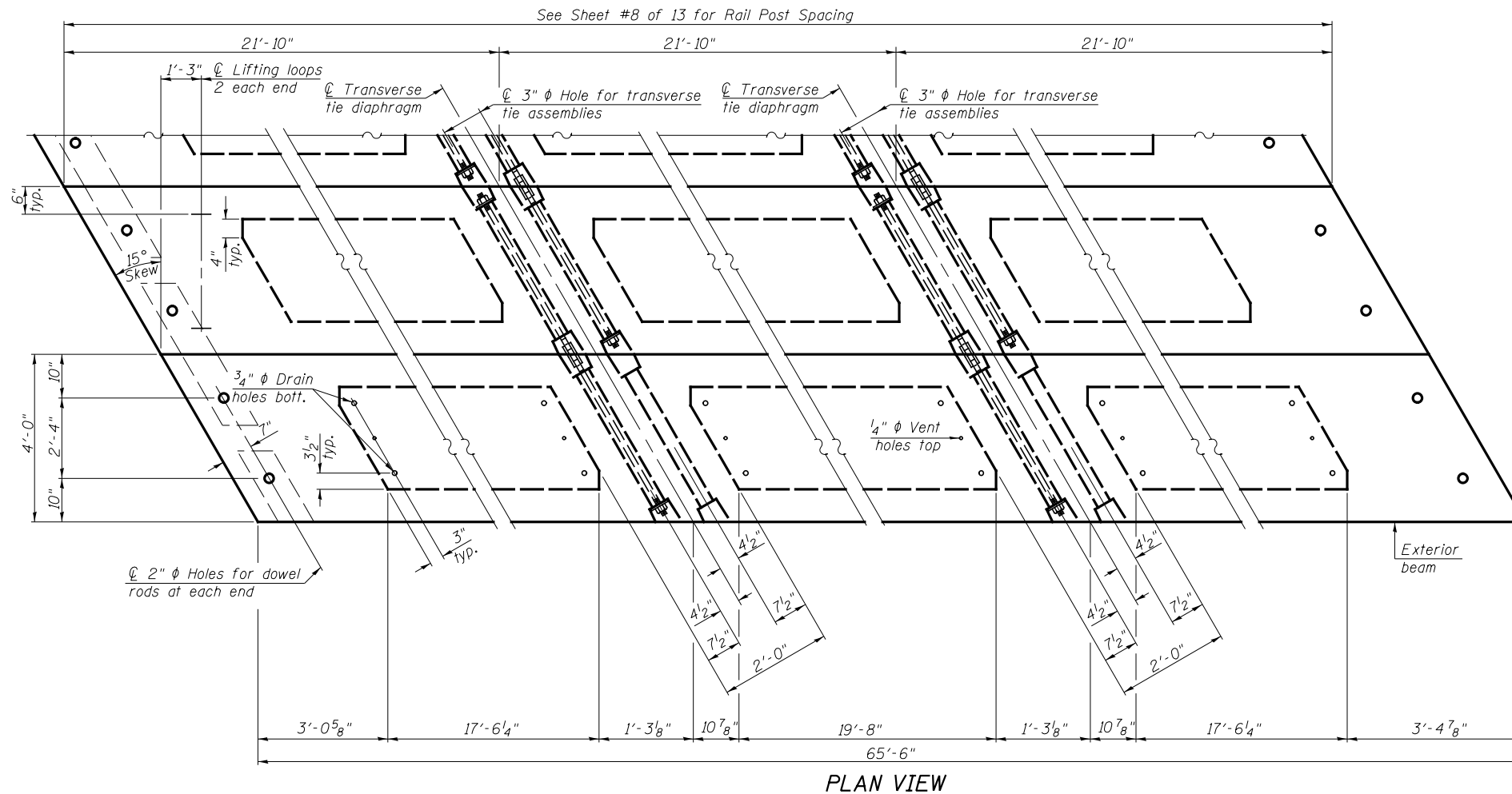
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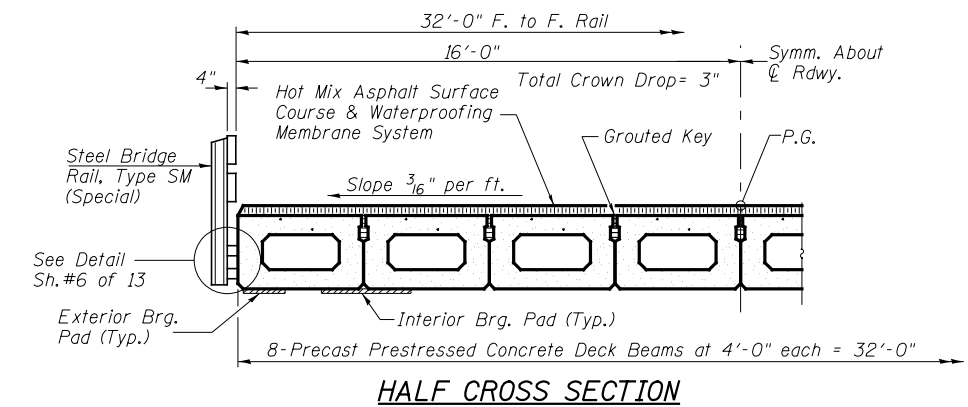
SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY



PLAN VIEW



HALF CROSS SECTION

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (27" Depth)	SQ FT	2,096

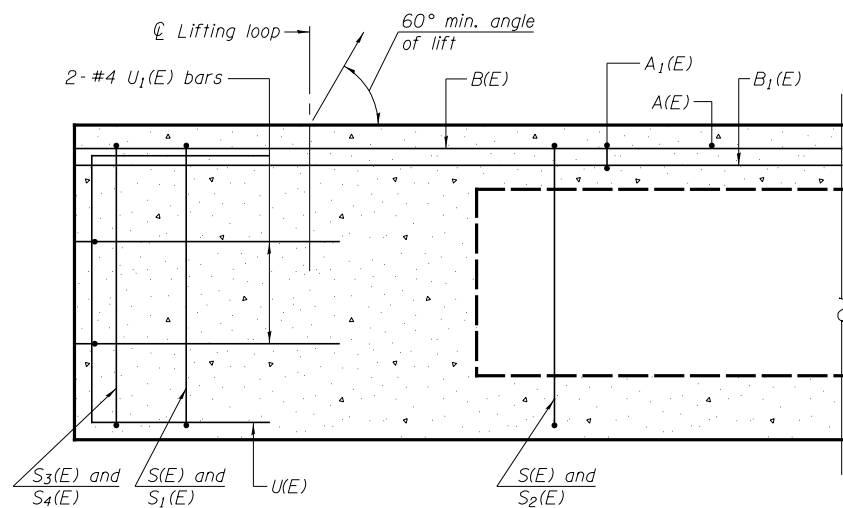
Note: Connect beams in pairs with the transverse tie configuration shown.

NOTES

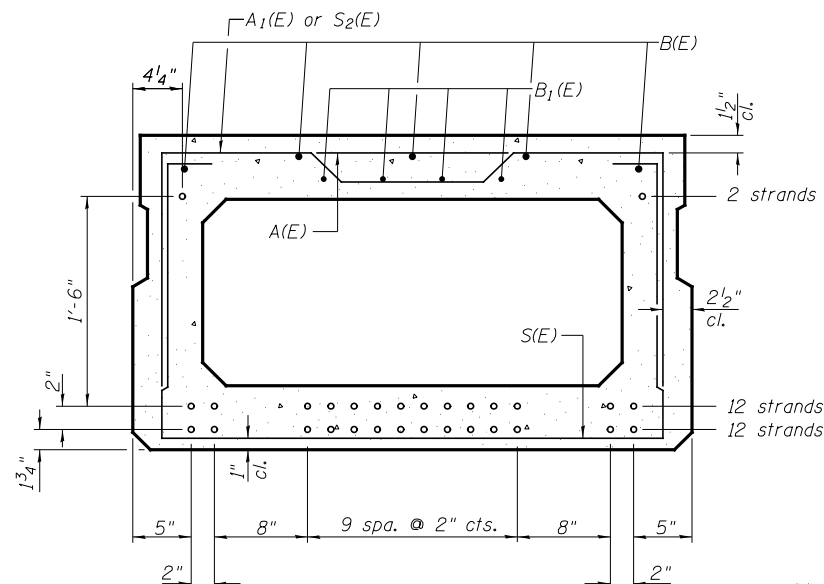
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place. Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. Compressive strength of prestressed concrete, f'c, shall be 6000 psi. Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

SUPERSTRUCTURE - SPAN 2
CITY OF PLANO
SECTION 15-00045-00-BR
E. MAIN STREET OVER
BIG ROCK CREEK

SHEET NO. 4	STREET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
13 SHEETS	E. MAIN	15-00045-00-BR	KENDALL	40	23
		SN 047-6401		CONTRACT NO. 87665	
	FED. ROAD DIST. NO. 7	ILLINOIS		FED. AID PROJECT N43R(807)	



SECTION C-C

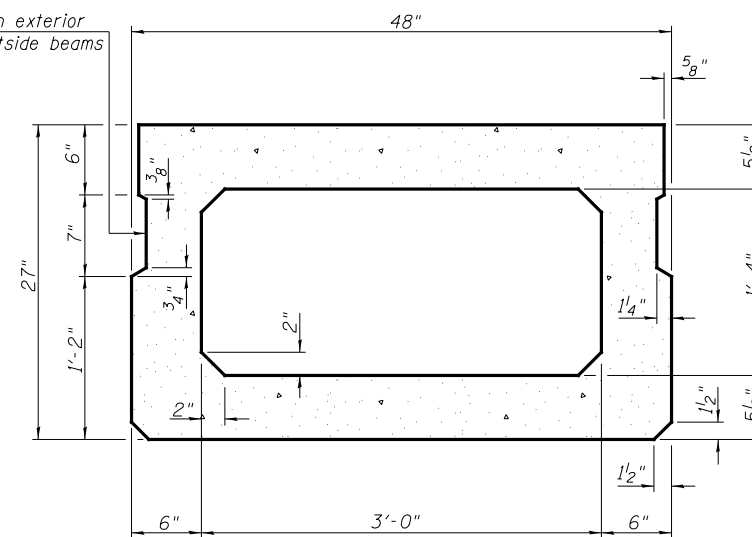


SECTION A-A

26- $\frac{1}{2}$ " ϕ Strands Each Strand Stressed to 30,900 Lbs.
12-Strands $1\frac{3}{4}$ " up, 12-Strands $3\frac{3}{4}$ " up,
2-Strands $1'-9\frac{3}{4}$ " up

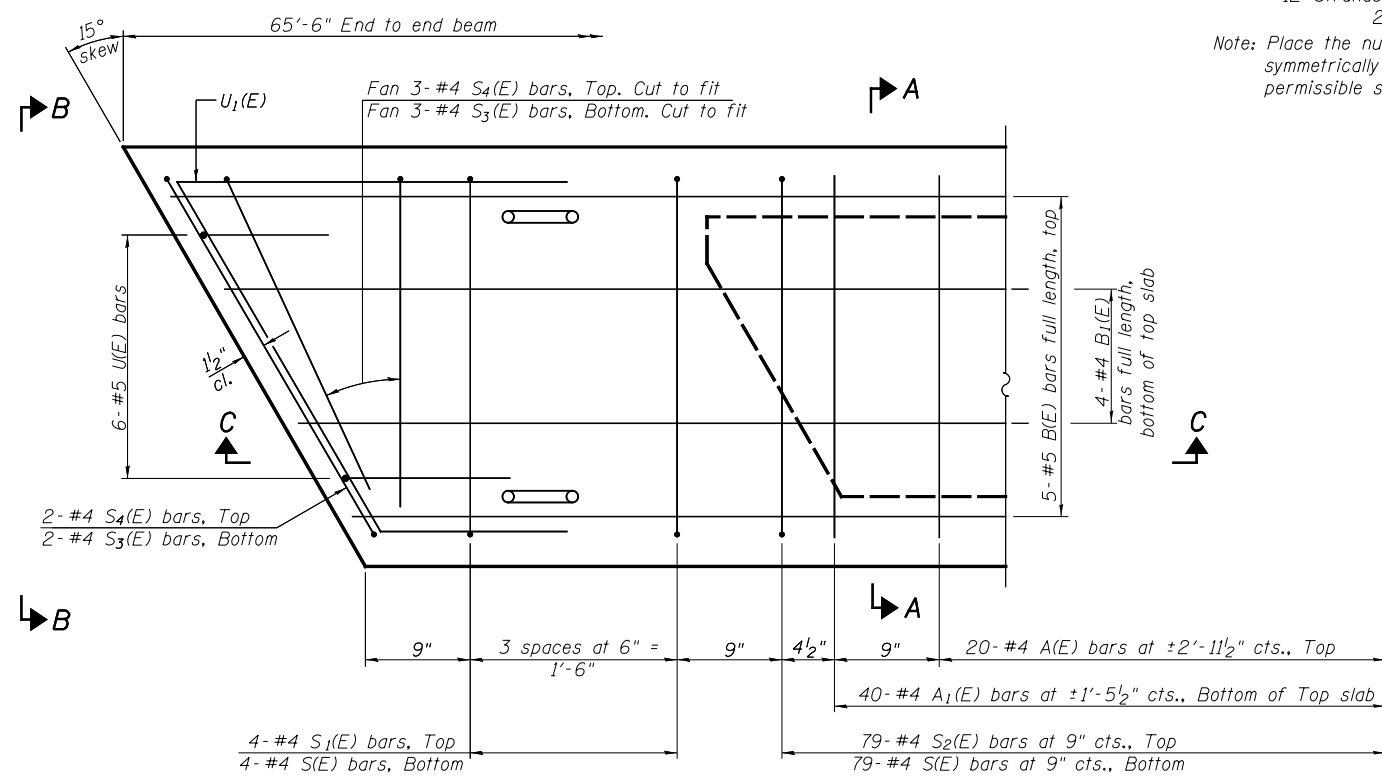
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

**Omit key on exterior face of outside beams



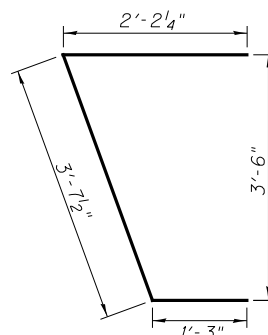
SECTION A-A (Showing dimensions)

**Rail post anchor devices (Sheet 6 of 13) to be cast into exterior face of outside beams.



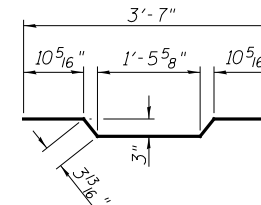
PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

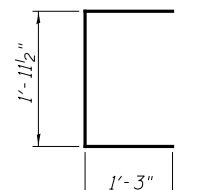


BAR U₁(E)

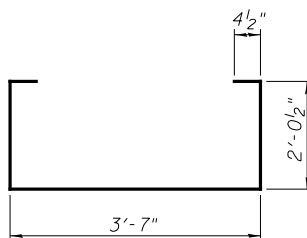
MIN. BAR LAP
#4 bar = 1'-11"
#5 bar = 2'-6"



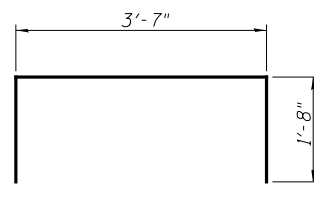
BAR A₁(E)



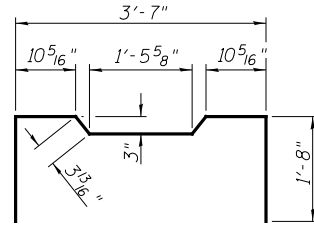
BAR U(E)



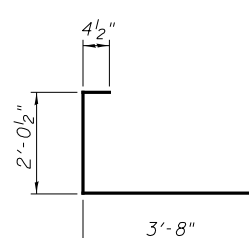
BAR S(E)



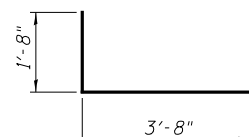
BAR S₁(E)



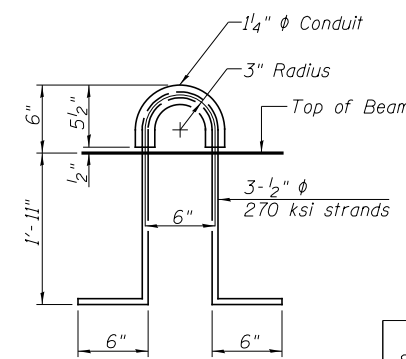
BAR S₂(E)



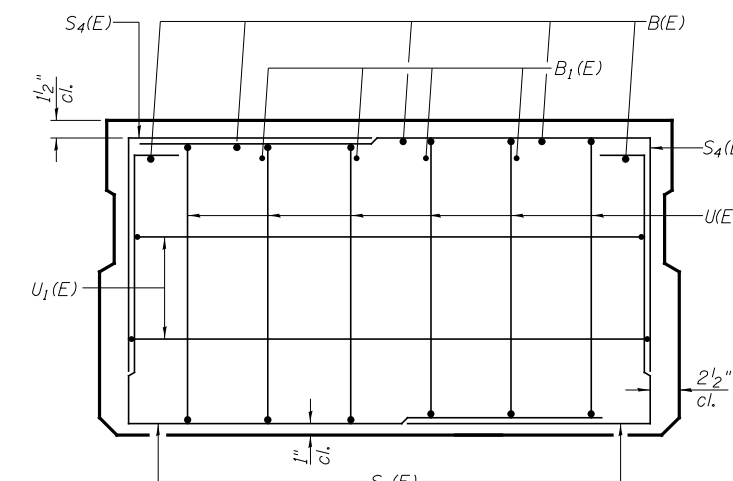
BAR S₃(E)



BAR S₄(E)



LIFTING LOOP DETAIL



VIEW B-B

BAR LIST-ONE BEAM ONLY (For Information Only)

BAR NO.	SIZE	LENGTH	SHAPE
A(E)	20 #4	3'-7"	—
A ₁ (E)	40 #4	3'-10"	—
B(E)	5 #5	*65'-3"	—
B ₁ (E)	4 #4	*65'-3"	—
S(E)	87 #4	8'-5"	—
S ₁ (E)	8 #4	6'-11"	—
S ₂ (E)	79 #4	7'-2"	—
S ₃ (E)	10 #4	6'-1"	—
S ₄ (E)	10 #4	5'-4"	—
U(E)	12 #5	4'-6"	—
U ₁ (E)	4 #4	7'-1"	—

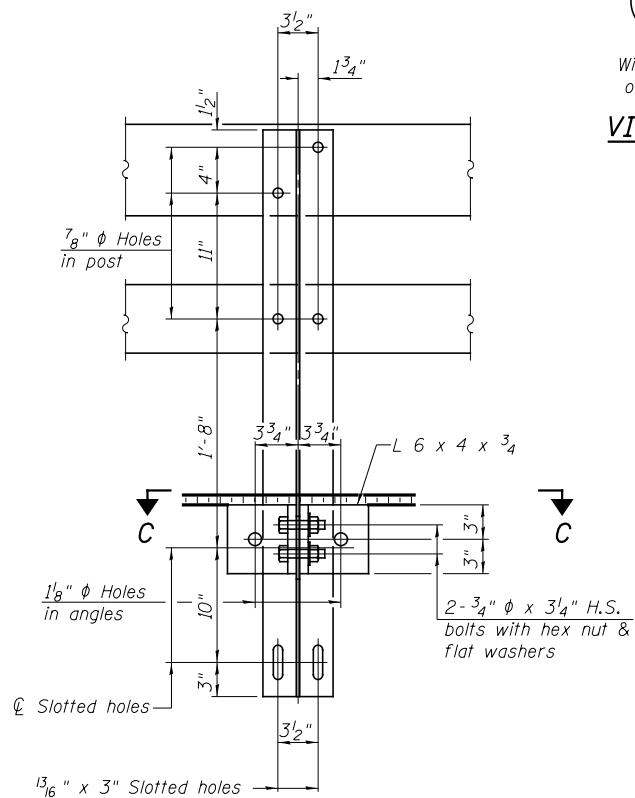
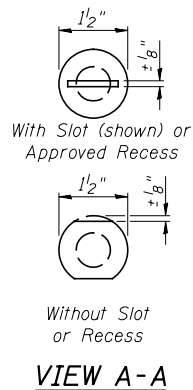
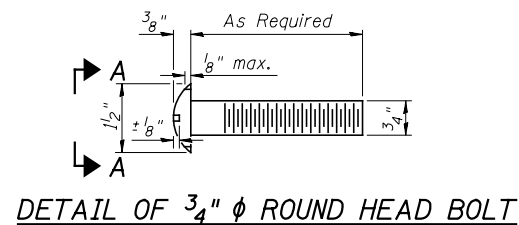
*Total Length, Lap as necessary

Note: See Sheet 4 of 13 for additional details and Bill of Material.

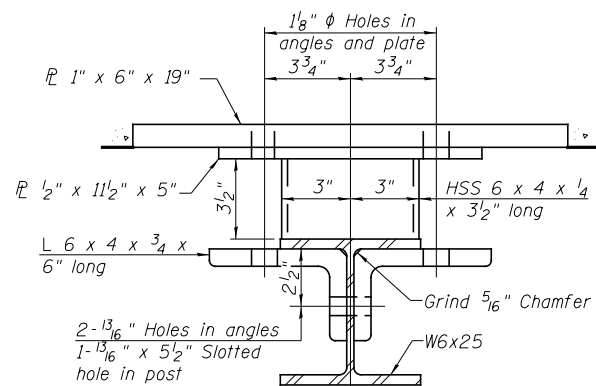
SUPERSTRUCTURE DETAILS - SPAN 2
CITY OF PLANO
SECTION 15-00045-00-BR
E. MAIN STREET OVER
BIG ROCK CREEK

SHEET NO. 5 13 SHEETS	STREET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	E. MAIN	15-00045-00-BR	KENDALL	40	24
	SN 047-6401		CONTRACT NO. 87665		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT N43R(807)			

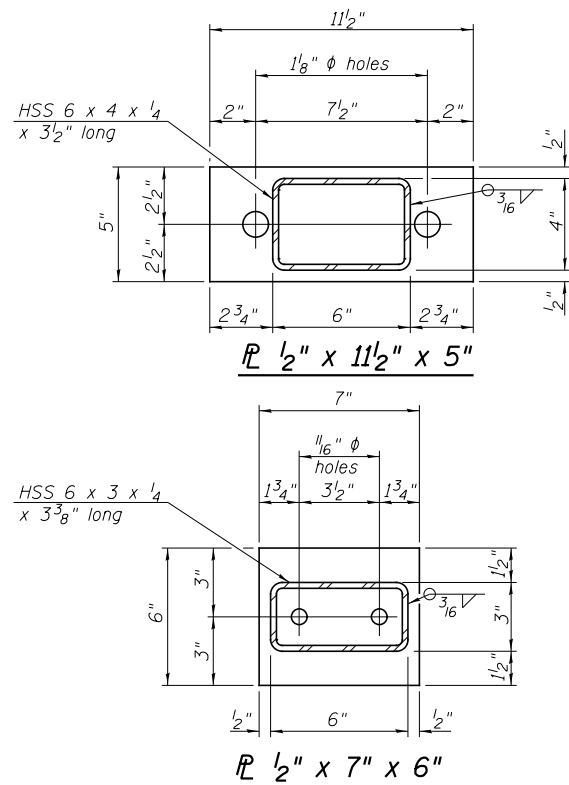
FOR RAIL POST SPACING SEE SH.#8 OF 13



SECTION B-B

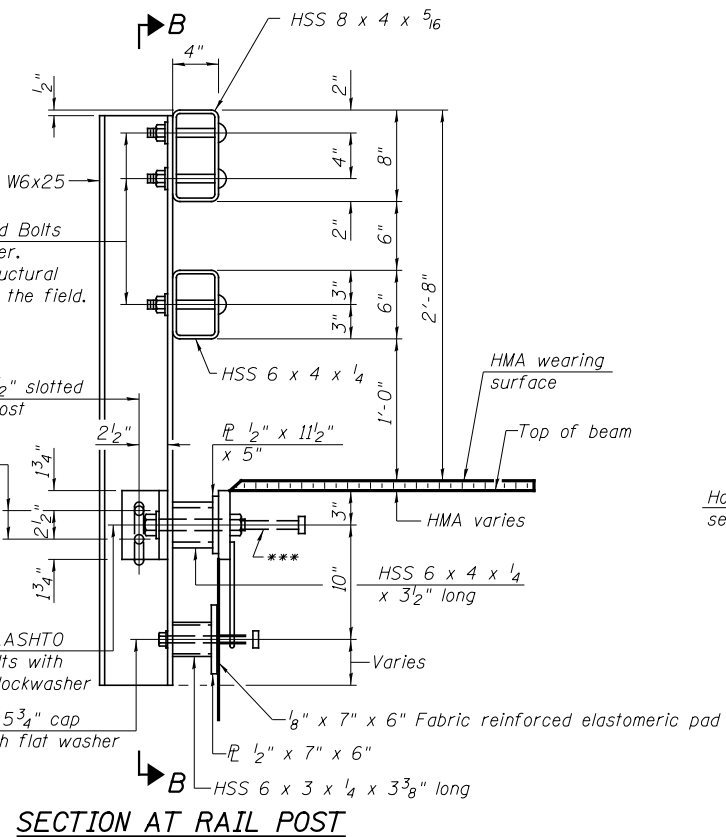


SECTION C-C

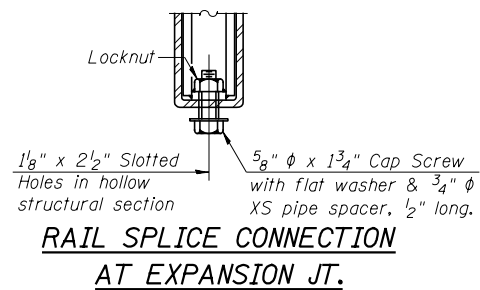


ANCHOR DEVICE

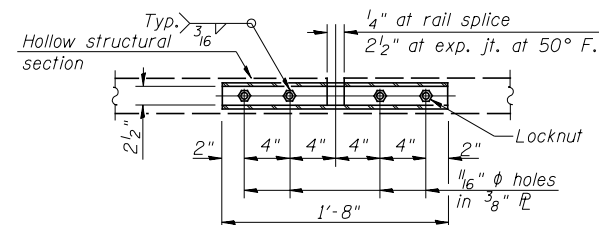
*Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.



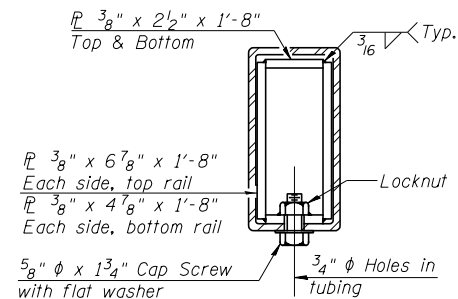
SECTION AT RAIL POST



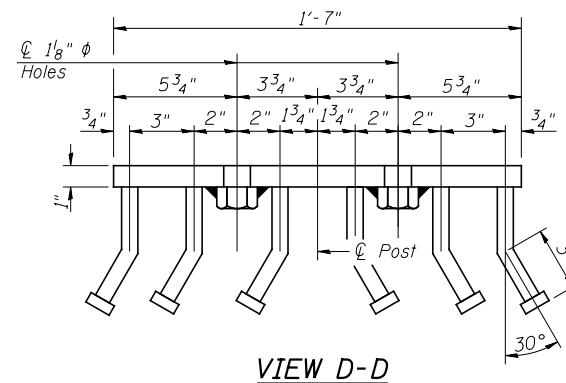
RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE R TYPICAL



SECTION AT RAIL SPLICE



VIEW D-D

Notes:
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Bridge Rail, Type SM (Special).
 All steel rail members shall be galvanized according to Article 509.05 of the Standard Specifications.
 *** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

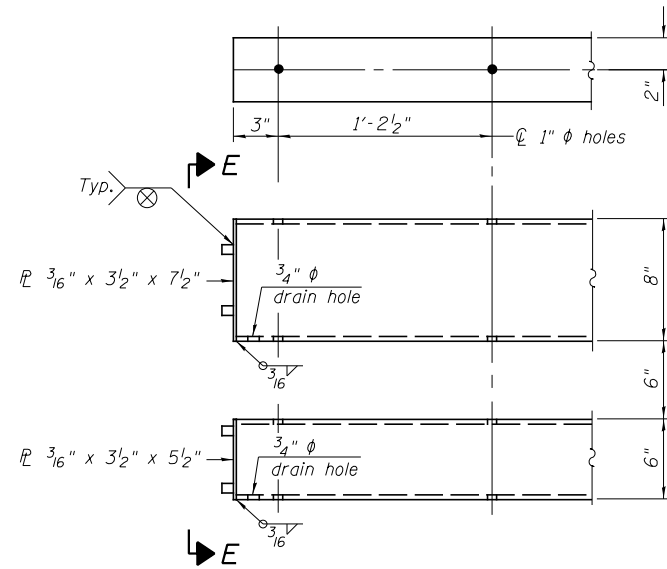
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Steel Bridge Rail, Type SM (Special)	FOOT	256

STEEL BRIDGE RAIL, TYPE SM (SPECIAL)
 CITY OF PLANO
 SECTION 15-00045-00-BR
 E. MAIN STREET OVER
 BIG ROCK CREEK

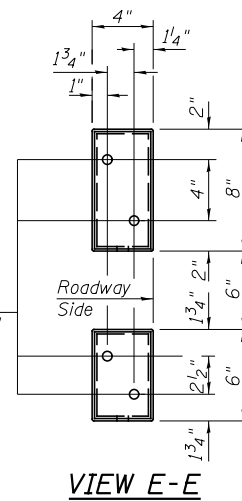
SHEET NO. 6	STREET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	13 SHEETS	E. MAIN	15-00045-00-BR	KENDALL	40
		SN 047-6401		CONTRACT NO. 87665	
	FED. ROAD DIST. NO. 7	ILLINOIS		FED. AID PROJECT N43R(807)	

FOR RAIL POST SPACING SEE SH.#8 OF 13

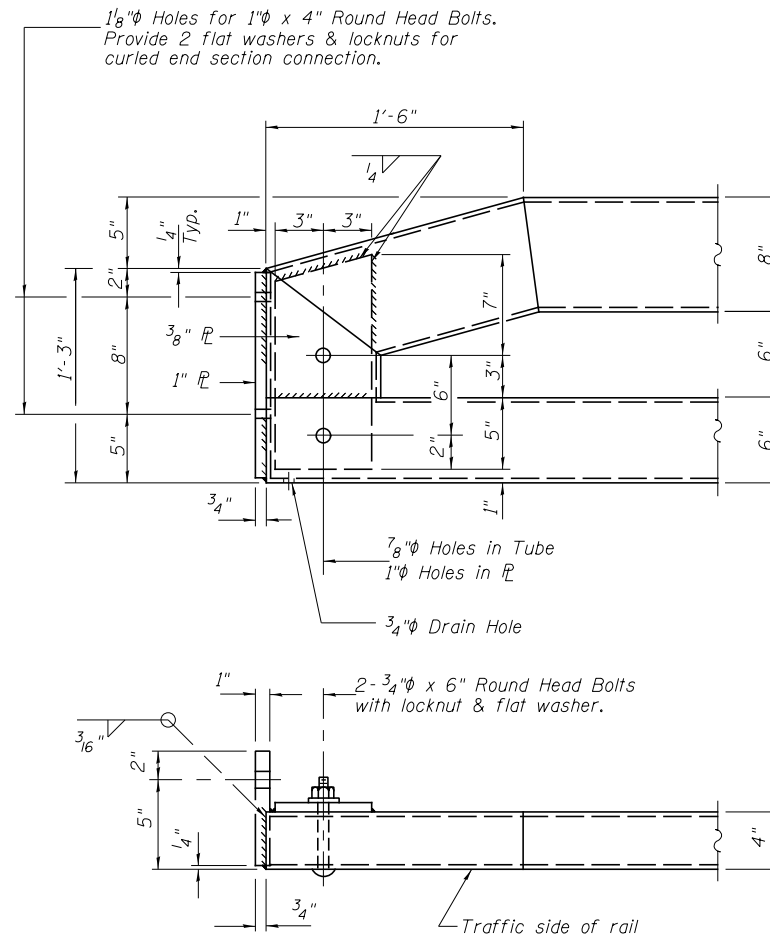


**END OF RAIL DETAILS
S.W. & N.E. CORNERS**

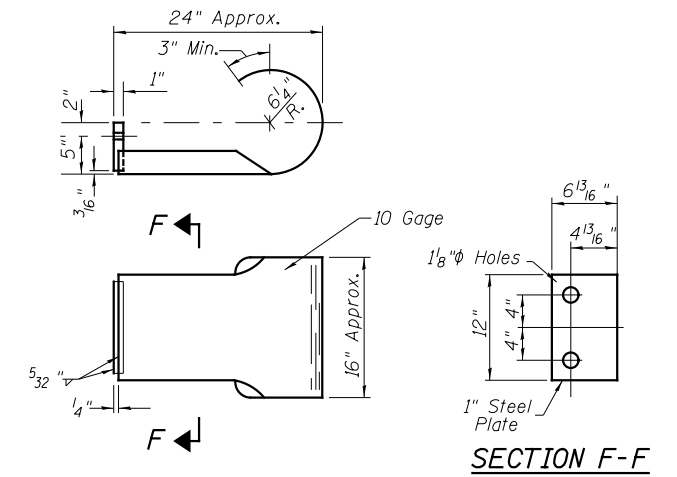
④ - 5/8" reduced base welded studs. Provide 4 - 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032.



VIEW E-E



**END OF RAIL DETAILS
N.W. & S.E. CORNERS**



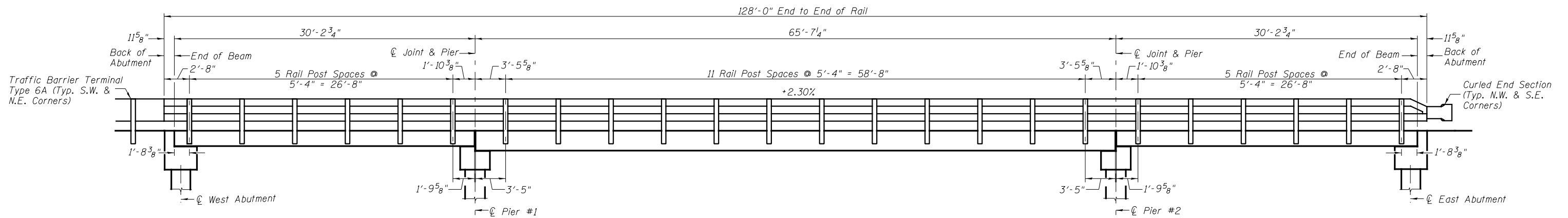
CURLED END SECTION

(2 Req'd) Cost Included with Steel Bridge Rail, Type SM (Special). Terminal Markers - Direct Applied shall be placed on end of each Curled End Section. (N.W. & S.E. Corners)

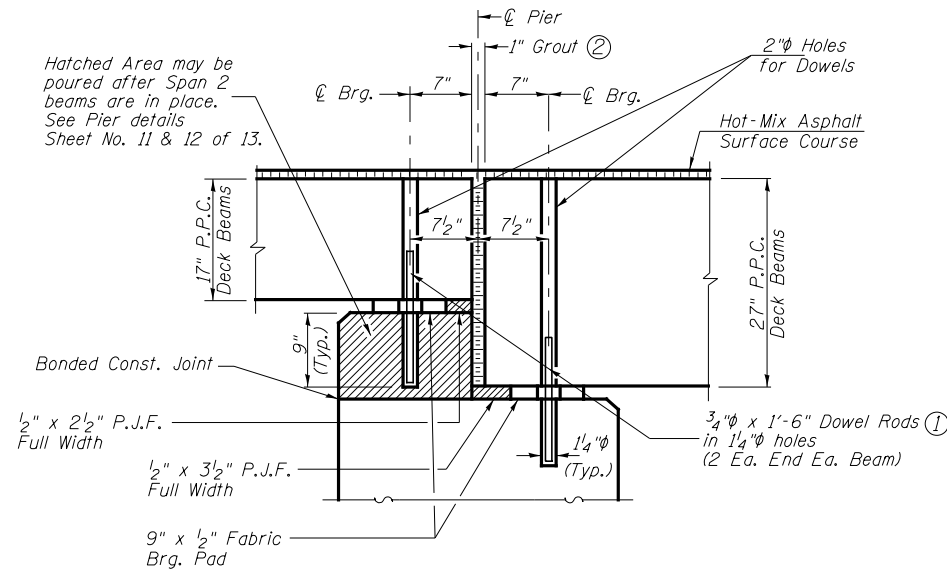
**STEEL BRIDGE RAIL, TYPE SM (SPECIAL)
CITY OF PLANO
SECTION 15-00045-00-BR
E. MAIN STREET OVER
BIG ROCK CREEK**

(Sheet 2 of 2)

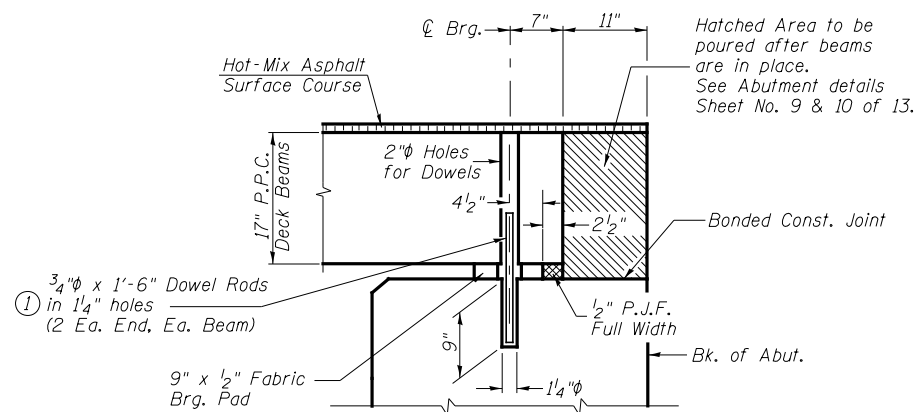
SHEET NO. 7	STREET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
13 SHEETS	E. MAIN	15-00045-00-BR	KENDALL	40	26
		SN 047-6401		CONTRACT NO. 87665	
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT N43R(807)		



RAIL POST SPACING

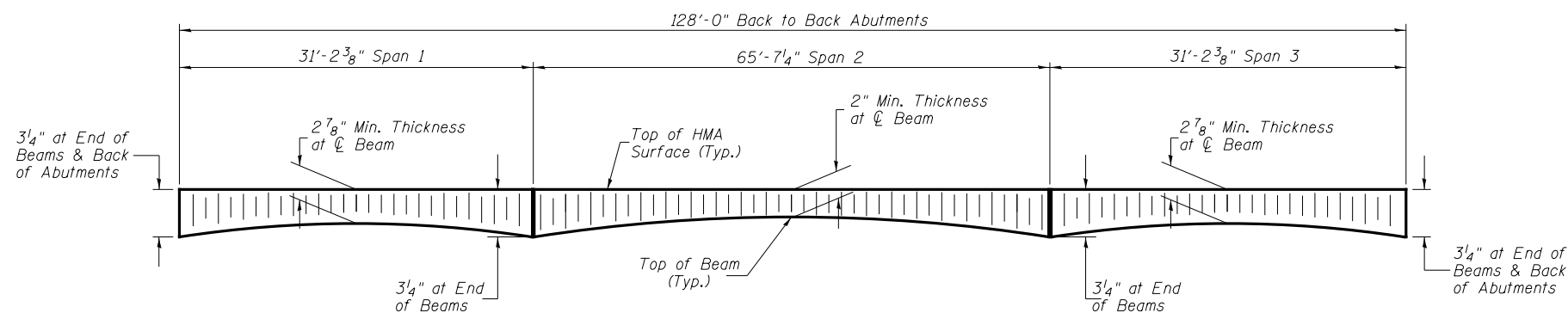


SECTION THRU PIERS
(At Right Angles)



SECTION THRU ABUTMENTS
(At Right Angles)

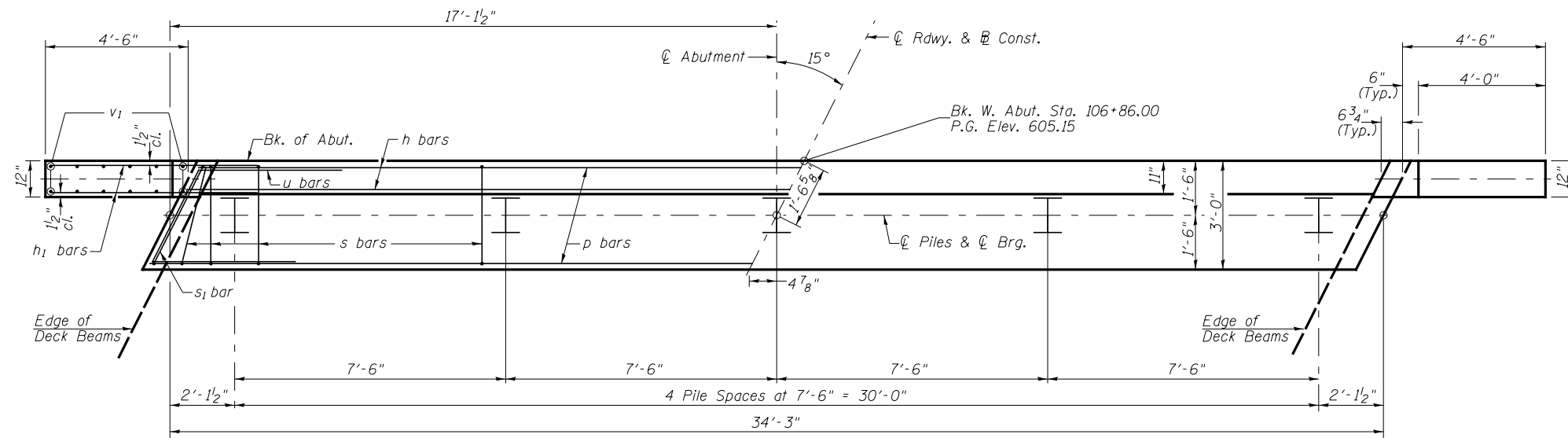
- ① Dowel Rods to be grouted after beams are in place and allowed to cure (Min. 24 hr.) prior to grouting the shear keys.
- ② 1" Joint shall be packed with nonshrink grout in accordance with Standard Specifications. 1" Dimension may vary plus or minus to accommodate tolerance in beam lengths.



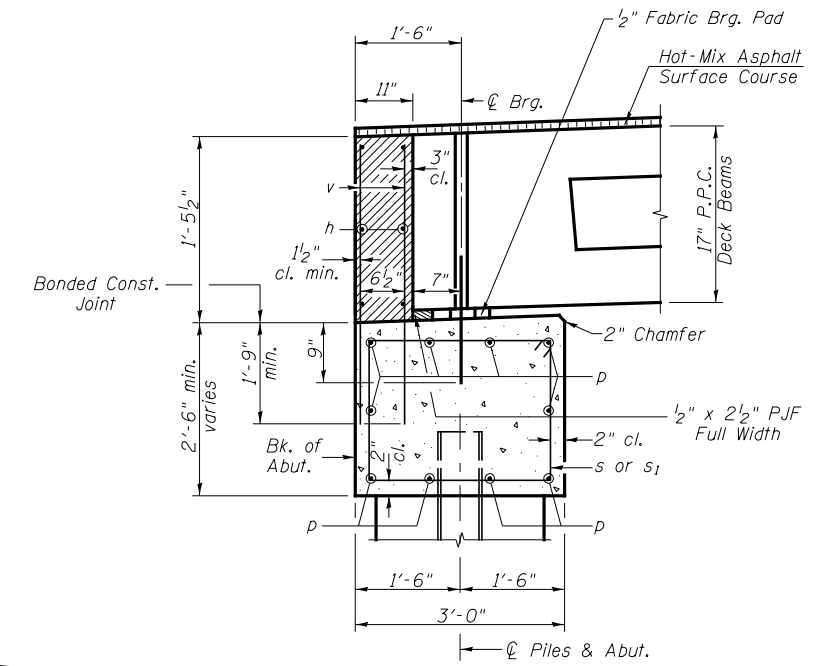
HOT-MIX ASPHALT SURFACE PROFILE
Includes Waterproofing Membrane System

**RAIL POST SPACING AND
SUPERSTRUCTURE DETAILS
CITY OF PLANO
SECTION 15-00045-00-BR
E. MAIN STREET OVER
BIG ROCK CREEK**

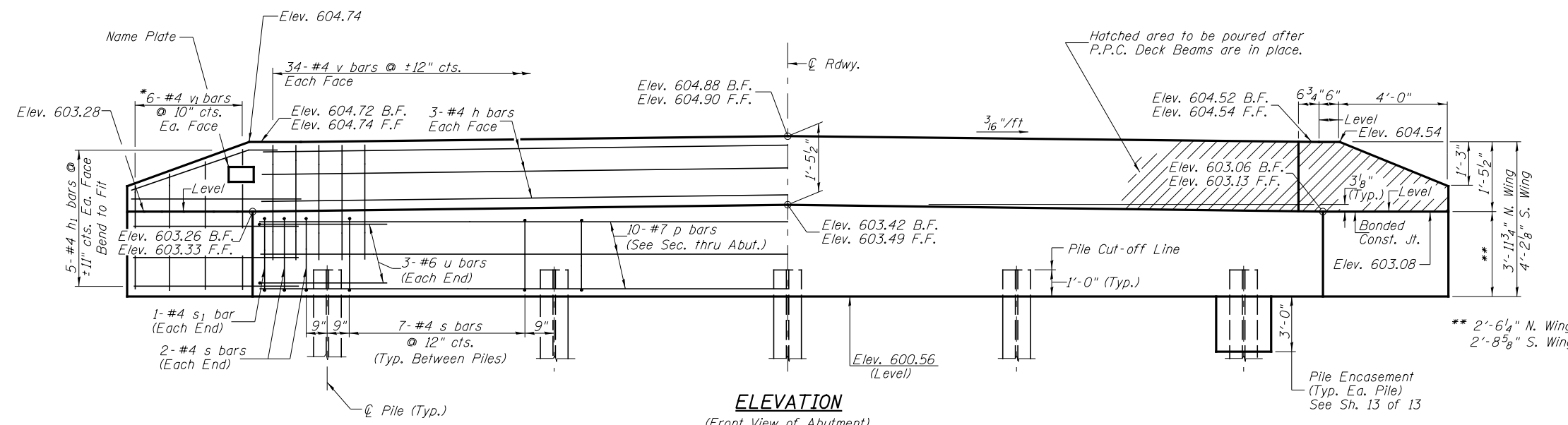
SHEET NO. 8 13 SHEETS	STREET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	E. MAIN	15-00045-00-BR	KENDALL	40	27
	SN 047-6401		CONTRACT NO. 87665		
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT N43R(807)		



PLAN



SECTION THRU ABUT.
(At Right Angles)



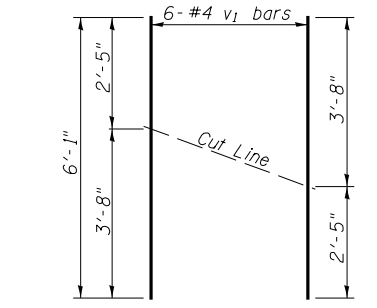
ELEVATION
(Front View of Abutment)

**WEST ABUTMENT
BILL OF MATERIAL**

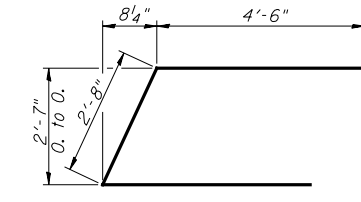
BAR	NO.	SIZE	LENGTH	SHAPE
h	6	#4	34'-0"	—
h ₁	20	#4	6'-6"	—
p	10	#7	34'-0"	—
s	32	#4	10'-5"	□
s ₁	2	#4	10'-7"	□
u	6	#6	11'-8"	▤
v	68	#4	3'-2"	—
v ₁	12	#4	6'-1"	—
Concrete Structures	CU YD		13.4	
Reinforcement Bars	POUND		1,450	
Structure Excavation	CU YD		25	
Name Plates	EACH		1	
Furnishing Steel Piles	FOOT		240	
HP10x42				
Driving Piles	FOOT		240	
Test Pile Steel HP10x42	EACH		1	
Concrete Encasement	CU YD		1.7	

**WEST ABUTMENT
CITY OF PLANO
SECTION 15-00045-00-BR
E. MAIN STREET OVER
BIG ROCK CREEK**

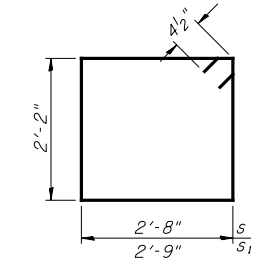
PILE DATA
Type & Size: Steel HP10x42
Nominal Required Bearing: 164 kips
Factored Resistance Available: 90 kips
Est. Length: 60'
No. Req'd.: 5 (Includes 1 Test Pile)



BAR CUTTING DIAGRAM



BAR u



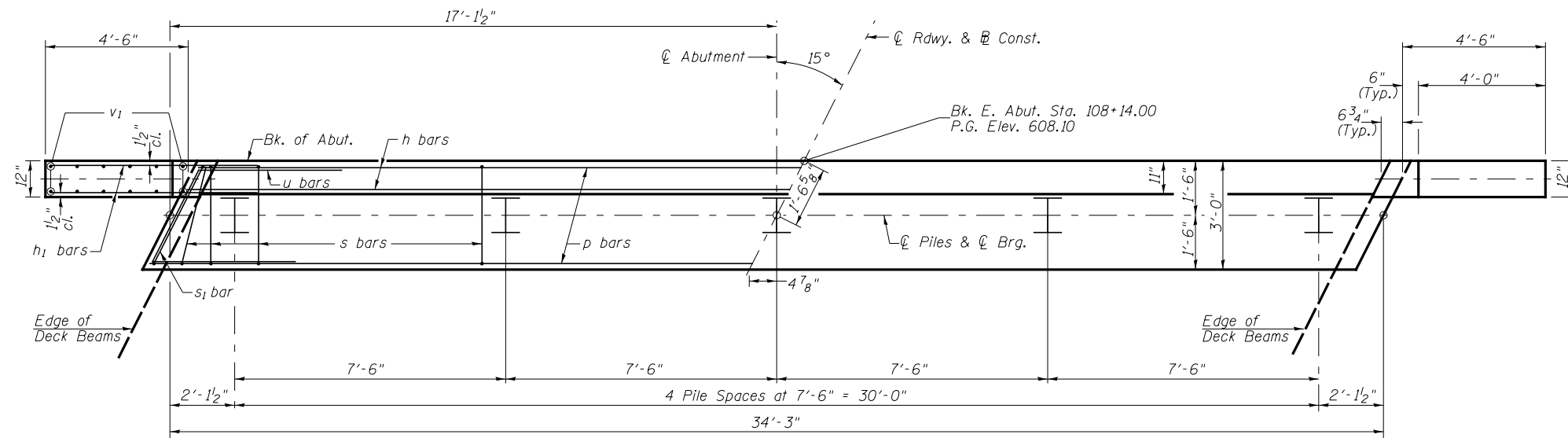
BAR s & s₁

NOTES

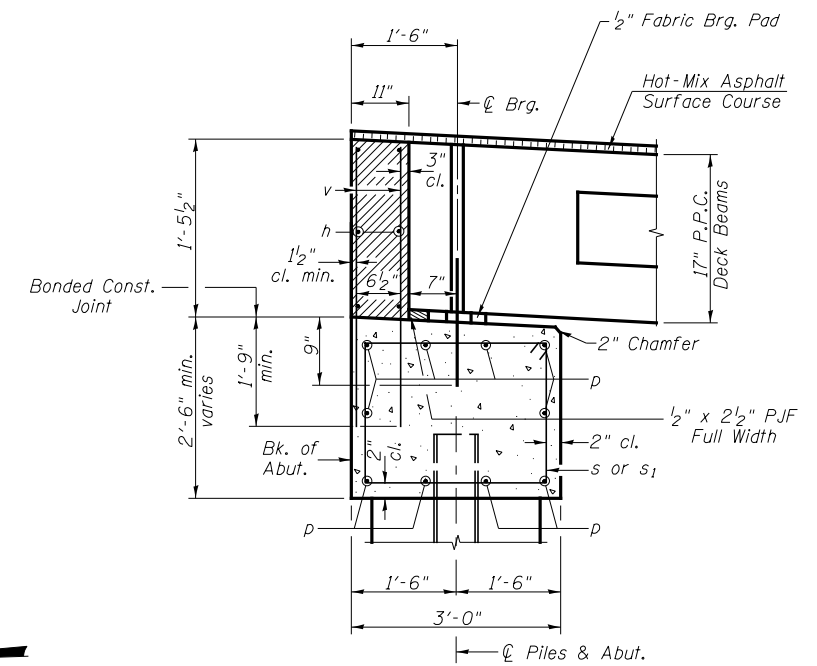
1. The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.

*Order v₁ bars full length. Cut as shown and use remainder of bars in opposite face.

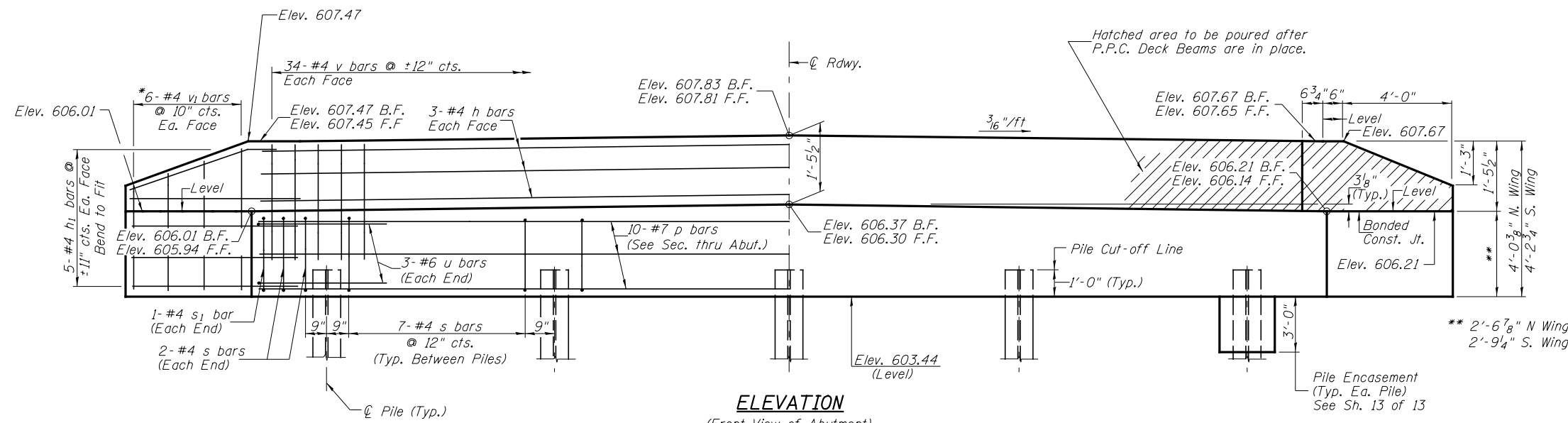
SHEET NO. 9	STREET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	E. MAIN	15-00045-00-BR	KENDALL	40	28
13 SHEETS	SN 047-6401	CONTRACT NO. 87665			
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT N43R(807)		



PLAN



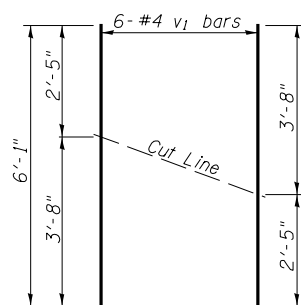
SECTION THRU ABUT.
(At Right Angles)



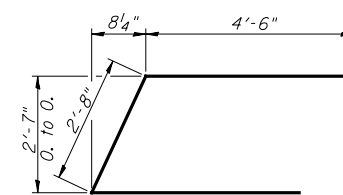
ELEVATION
(Front View of Abutment)

**EAST ABUTMENT
BILL OF MATERIAL**

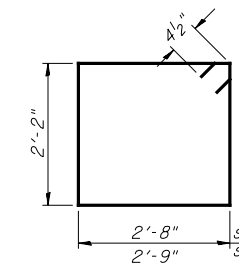
BAR	NO.	SIZE	LENGTH	SHAPE
h	6	#4	34'-0"	—
h ₁	20	#4	6'-6"	—
p	10	#7	34'-0"	—
s	32	#4	10'-5"	□
s ₁	2	#4	10'-7"	□
u	6	#6	11'-8"	▤
v	68	#4	3'-2"	—
v ₁	12	#4	6'-1"	—
Concrete Structures	CU YD	13.4		
Reinforcement Bars	POUND	1,450		
Structure Excavation	CU YD	20		
Furnishing Steel Piles	FOOT	280		
HP10x42				
Driving Piles	FOOT	280		
Test Pile Steel HP10x42	EACH	1		
Concrete Encasement	CU YD	1.7		



BAR CUTTING DIAGRAM



BAR u



BAR s & s₁

**EAST ABUTMENT
CITY OF PLANO
SECTION 15-00045-00-BR
E. MAIN STREET OVER
BIG ROCK CREEK**

NOTES
1. The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.

PILE DATA
Type & Size: Steel HP10x42
Nominal Required Bearing: 164 kips
Factored Resistance Available: 90 kips
Est. Length: 70'
No. Req'd.: 5 (Includes 1 Test Pile)

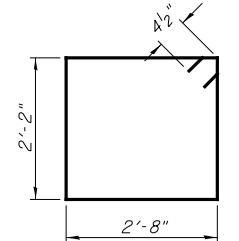
*Order v₁ bars full length. Cut as shown and use remainder of bars in opposite face.

SHEET NO. 10 13 SHEETS	STREET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	E. MAIN	15-00045-00-BR	KENDALL	40	29
	SN 047-6401		CONTRACT NO. 87665		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT N43R(807)			

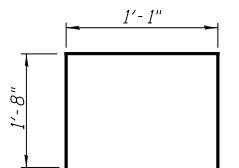
TABLE OF ELEVATIONS

LOCATION	DESCRIPTION	ELEVATION
1	Top of Cap	603.11
2	Top of Cap	603.15
3	Top of Cap	603.19
4	Top of Cap	603.27
5	Top of Cap	603.31
6	Top of Cap	603.34
7	Top of Cap	602.91
8	Top of Cap	602.94
9	Top of Cap	602.97
10	Top of Step	603.94
11	Top of Step	603.98
12	Top of Step	604.10
13	Top of Step	604.14
14	Top of Step	603.74
15	Top of Step	603.77

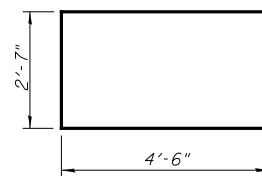
NOTES:
All edges shall have standard 3/4" chamfer.



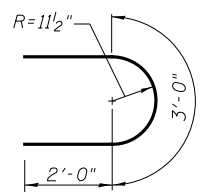
BAR s



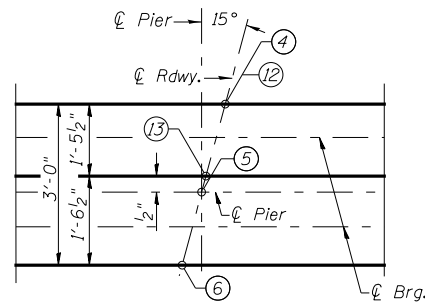
BAR u1



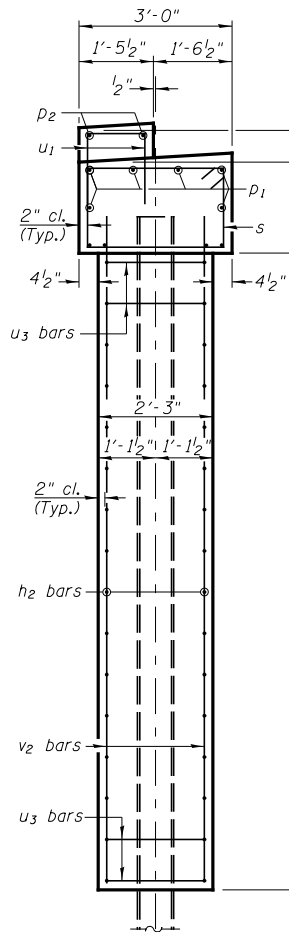
BAR u2



BAR u3



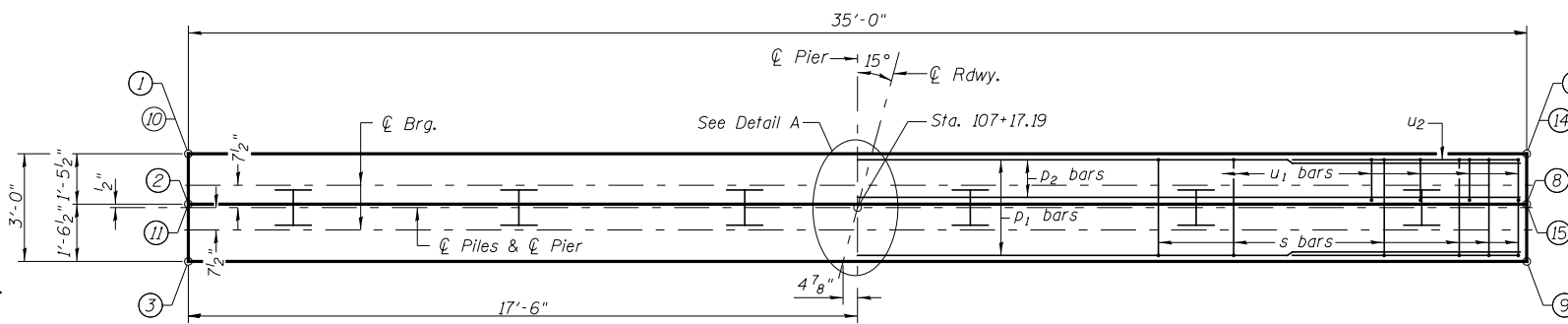
DETAIL A



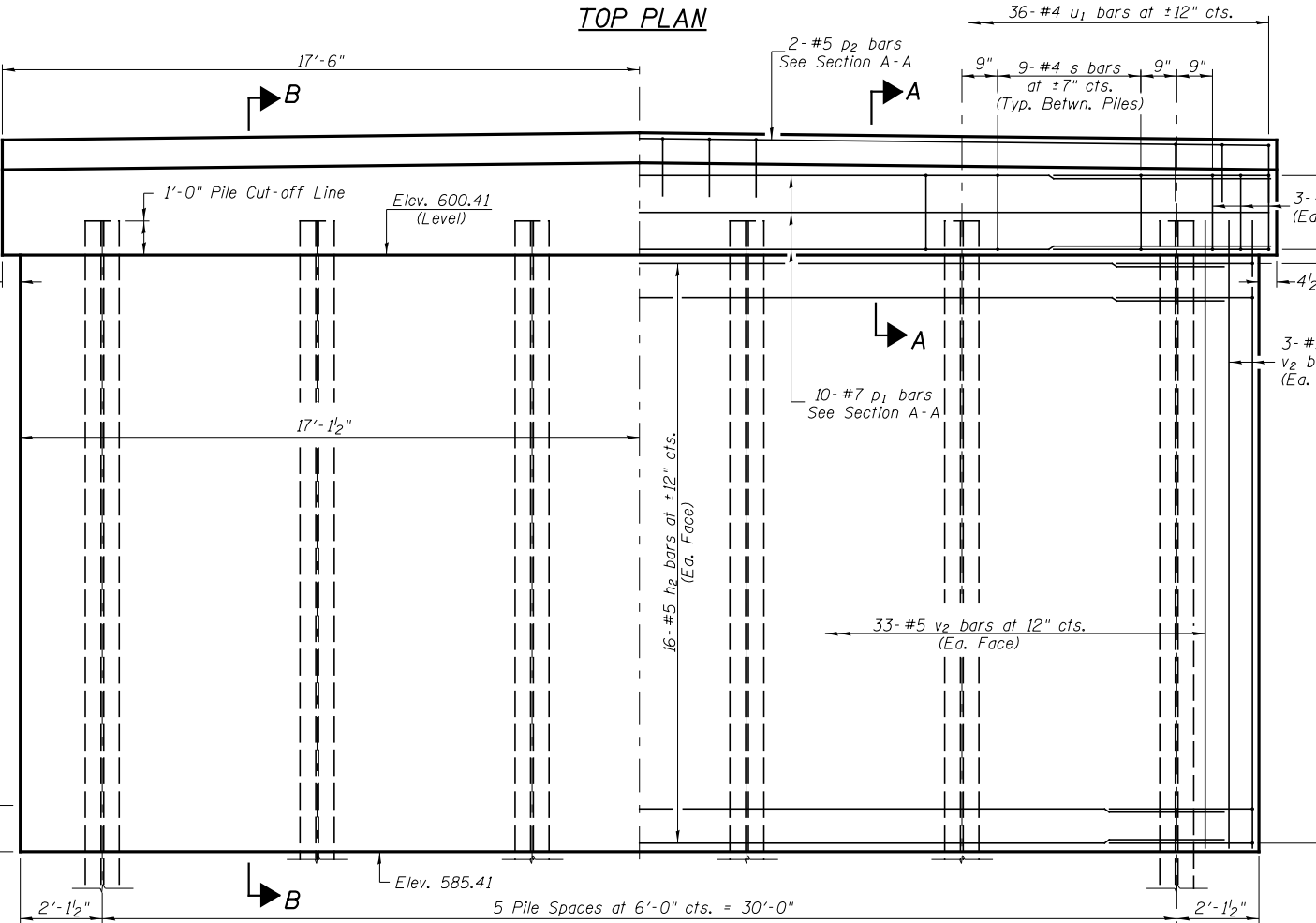
SECTION B-B

PILE DATA

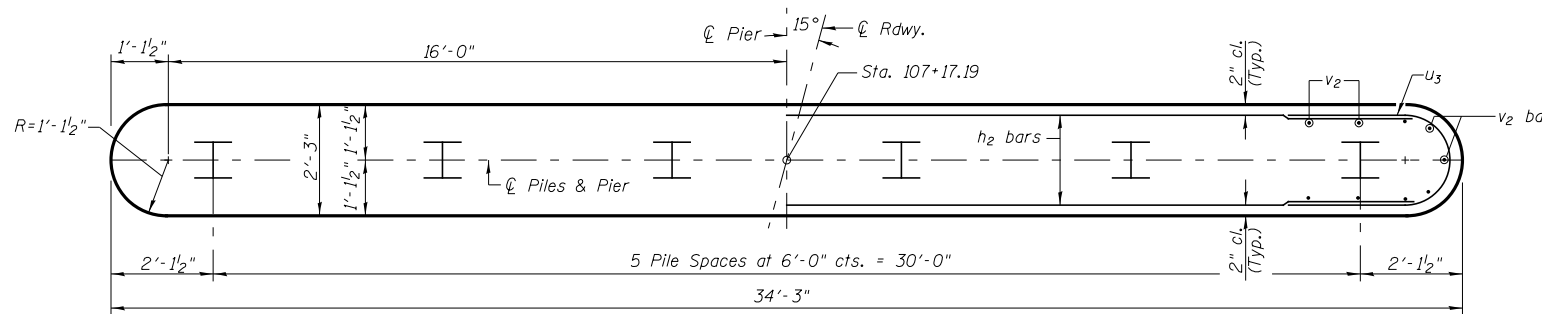
Type & Size: Steel HP12x63
Nominal Required Bearing: 497 kips
Factored Resistance Available: 273 kips
Est. Length: 81'
No. Req'd.: 6 (Includes 1 Test Pile)



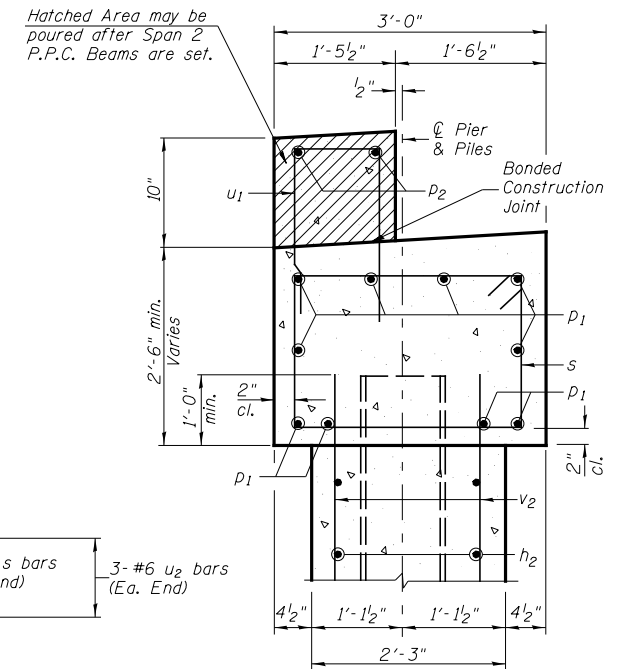
TOP PLAN



ELEVATION
(Looking West)



FOOTING PLAN



SECTION A-A

PIER #1
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h2	32	#5	31'-9"	—
p1	10	#7	34'-9"	—
p2	2	#5	34'-9"	—
s	51	#4	10'-5"	□
u1	36	#4	4'-5"	┌
u2	6	#6	11'-7"	┌
u3	32	#5	7'-0"	U
v2	72	#5	15'-10"	—
Concrete Structures	CU YD		54.6	
Reinforcement Bars	POUND		3,830	
Cofferdam Excavation	CU YD		60	
Furnishing Steel Piles	FOOT		405	
HP12x63				
Driving Piles	FOOT		405	
Test Pile Steel HP12x63	EACH		1	
Cofferdam (Type 1) (Location-1)	EACH		1	

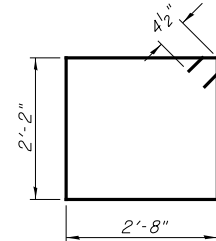
PIER #1
CITY OF PLANO
SECTION 15-00045-00-BR
E. MAIN STREET OVER
BIG ROCK CREEK

SHEET NO. 11 13 SHEETS	STREET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	E. MAIN	15-00045-00-BR	KENDALL	40	30
	SN 047-6401		CONTRACT NO. 87665		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT N43R(807)			

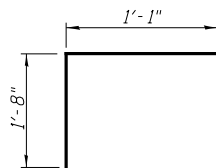
TABLE OF ELEVATIONS

LOCATION	DESCRIPTION	ELEVATION
1	Top of Cap	604.48
2	Top of Cap	604.45
3	Top of Cap	604.42
4	Top of Cap	604.86
5	Top of Cap	604.82
6	Top of Cap	604.79
7	Top of Cap	604.70
8	Top of Cap	604.66
9	Top of Cap	604.62
10	Top of Step	605.31
11	Top of Step	605.28
12	Top of Step	605.69
13	Top of Step	605.65
14	Top of Step	605.53
15	Top of Step	605.49

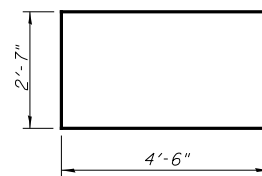
NOTES:
All edges shall have standard 3/4" chamfer.



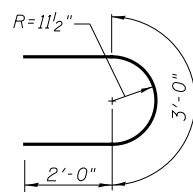
BAR s



BAR u1



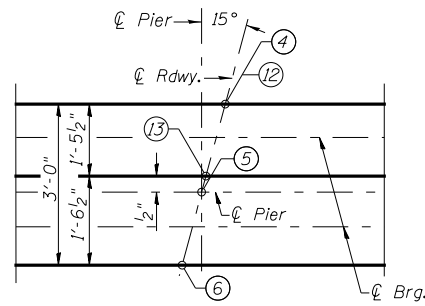
BAR u2



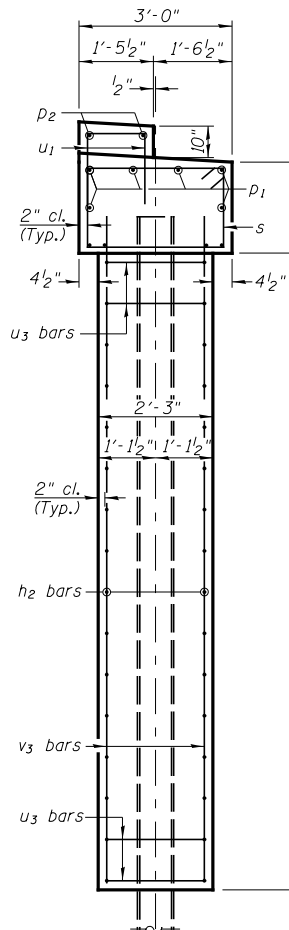
BAR u3

PILE DATA

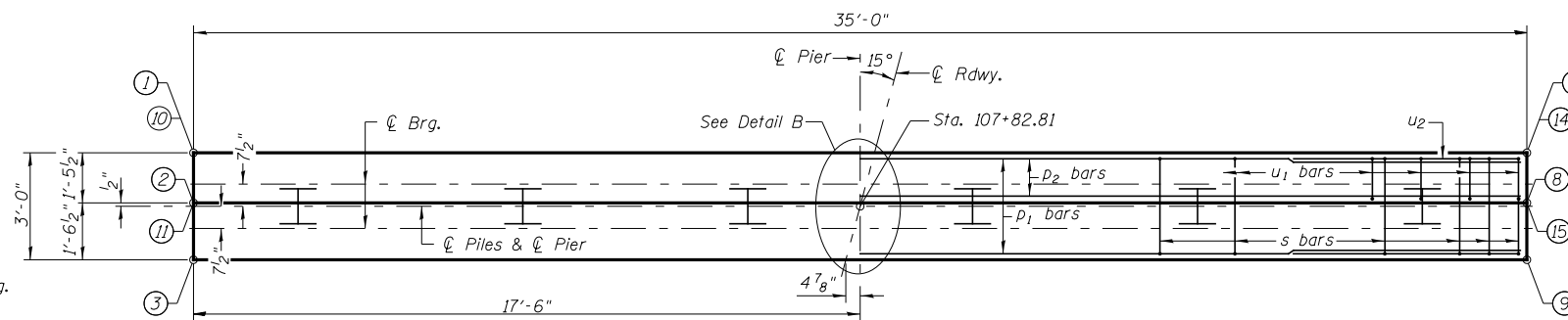
Type & Size: Steel HP12x63
Nominal Required Bearing: 497 kips
Factored Resistance Available: 273 kips
Est. Length: 83'
No. Req'd.: 6 (Includes 1 Test Pile)



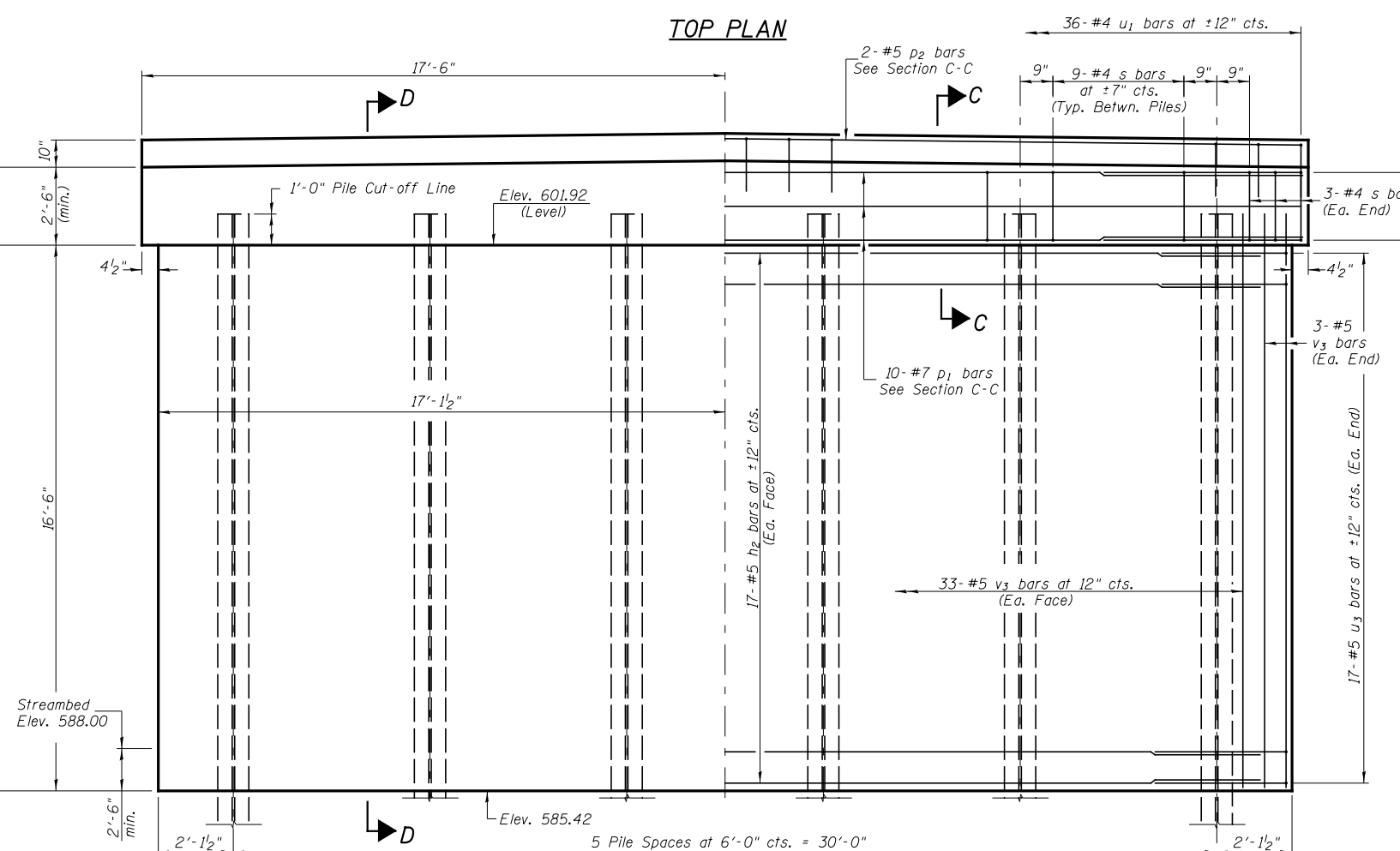
DETAIL B



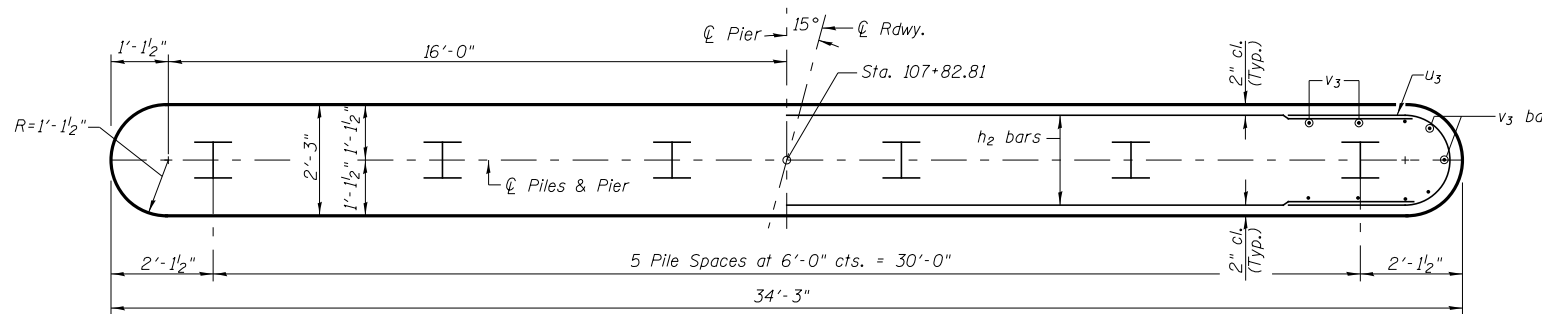
SECTION D-D



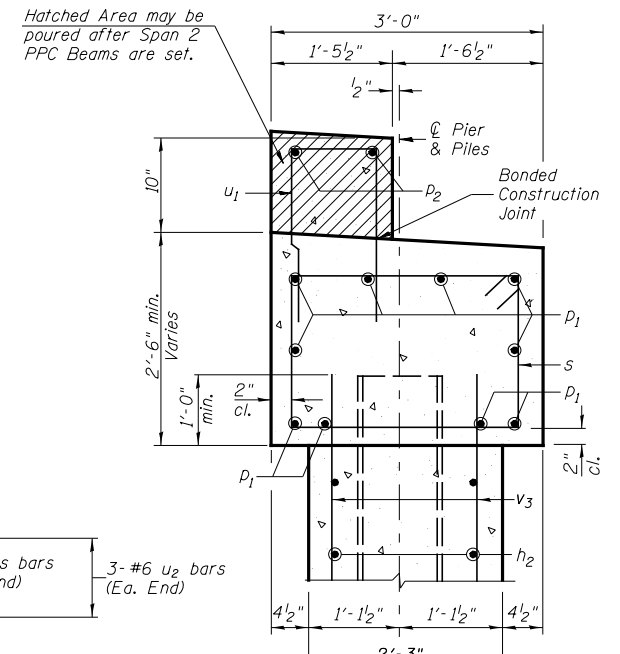
TOP PLAN



ELEVATION
(Looking East)



FOOTING PLAN



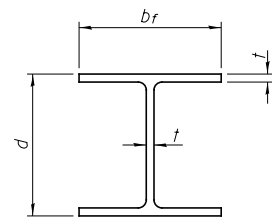
SECTION C-C

PIER #2
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h2	34	#5	31'-9"	—
p1	10	#7	34'-9"	—
p2	2	#5	34'-9"	—
s	51	#4	10'-5"	□
u1	36	#4	4'-5"	U
u2	6	#6	11'-7"	U
u3	34	#5	7'-0"	U
v3	72	#5	17'-4"	—
Concrete Structures	CU YD		58.8	
Reinforcement Bars	POUND		4,020	
Cofferdam Excavation	CU YD		100	
Furnishing Steel Piles	FOOT		415	
HP12x63				
Driving Piles	FOOT		415	
Test Pile Steel HP12x63	EACH		1	
Cofferdam (Type 1)	EACH		1	
(Location-2)				

PIER #2
CITY OF PLANO
SECTION 15-00045-00-BR
E. MAIN STREET OVER
BIG ROCK CREEK

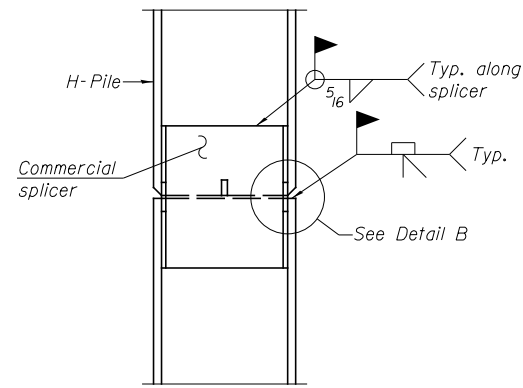
SHEET NO. 12	STREET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
13 SHEETS	E. MAIN	15-00045-00-BR	KENDALL	40	31
		SN 047-6401		CONTRACT NO. 87665	
	FED. ROAD DIST. NO. 7	ILLINOIS		FED. AID PROJECT N43R(807)	



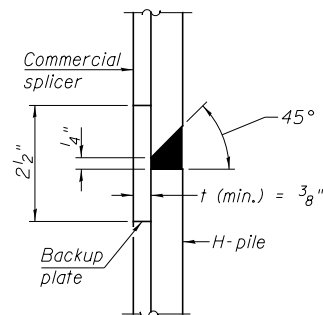
STEEL PILE TABLE

Designation	Depth d	Flange width b _f	Web and Flange thickness t	Encasement diameter
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

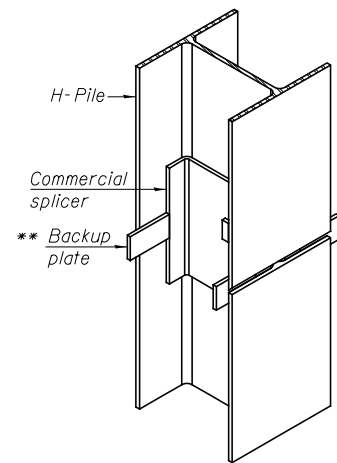
Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.



ELEVATION

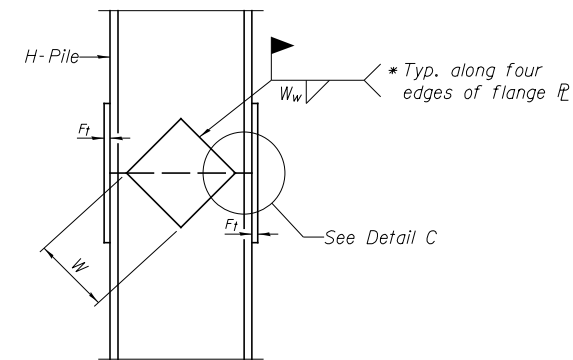


DETAIL "B"

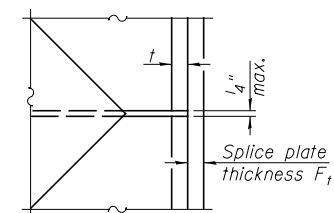


ISOMETRIC VIEW

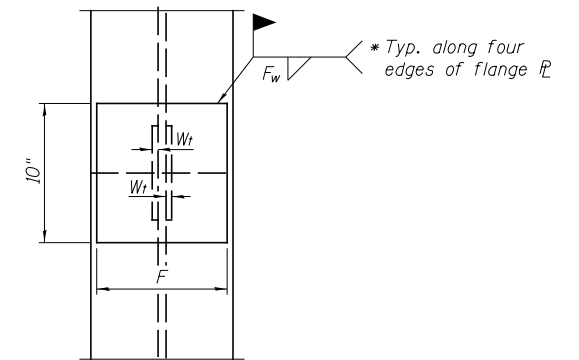
WELDED COMMERCIAL SPLICE



ELEVATION



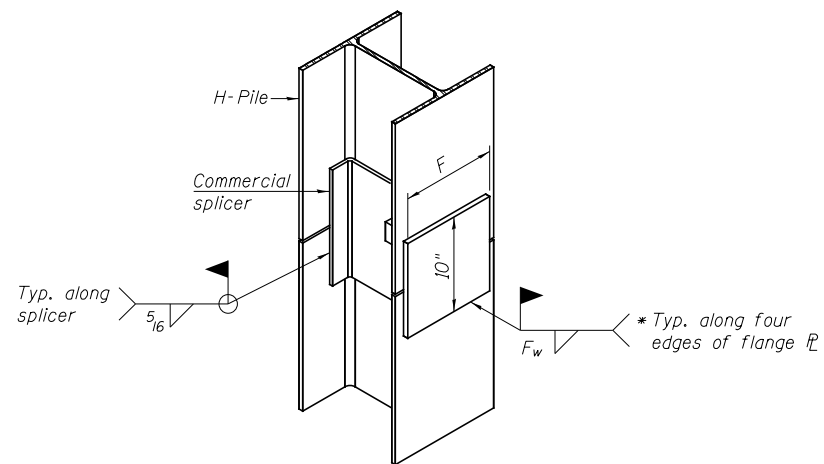
DETAIL C



END VIEW

Designation	F	F _t	F _w	W	W _t	W _w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

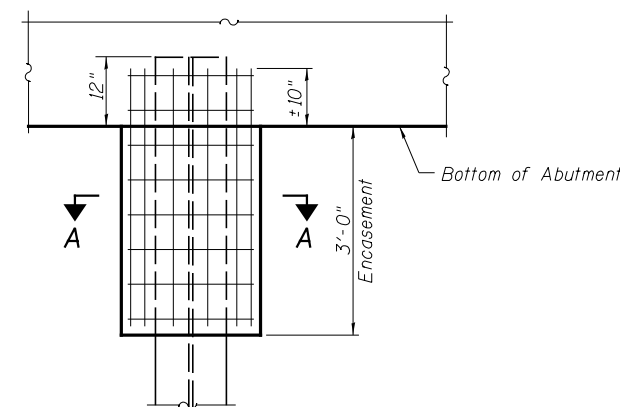
WELDED PLATE FIELD SPLICE



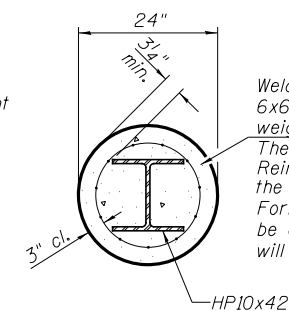
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

* Interrupt welds 1/4" from end of web and/or each flange.
** Remove portions of backup plates that extend outside the flanges.



ABUTMENT ELEVATION



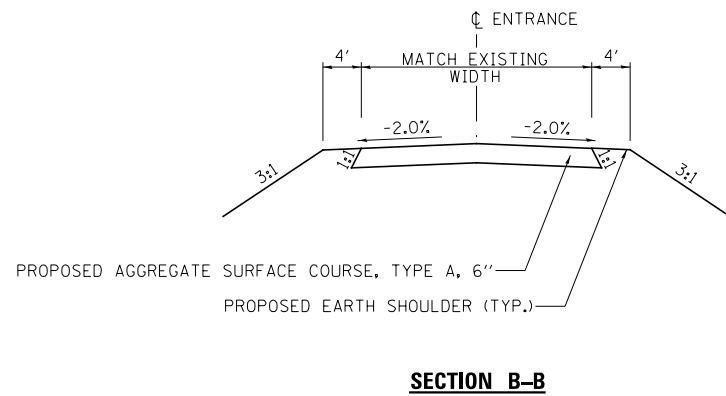
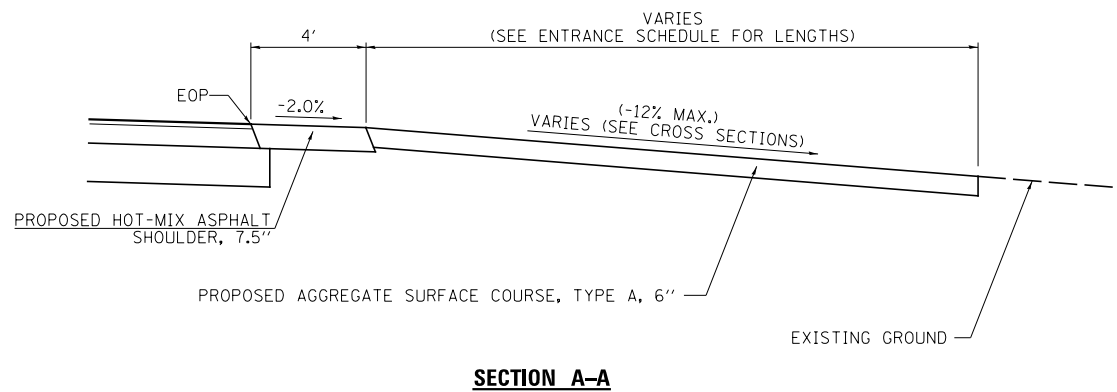
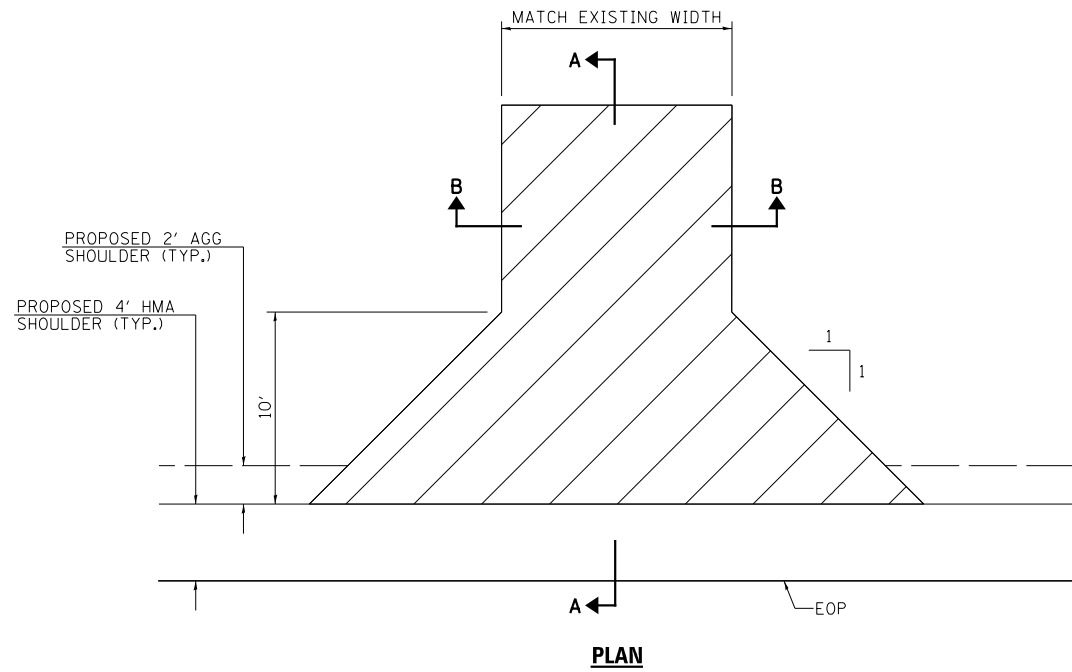
SECTION A-A

Welded wire fabric
6x6-W4.0xW4.0
weighing 58#/100 sq. ft.
The cost of Excavation and
Reinforcement is included with
the cost of Concrete Encasement.
Forms for encasement may
be omitted when soil conditions
will permit.

PILE ENCASEMENT

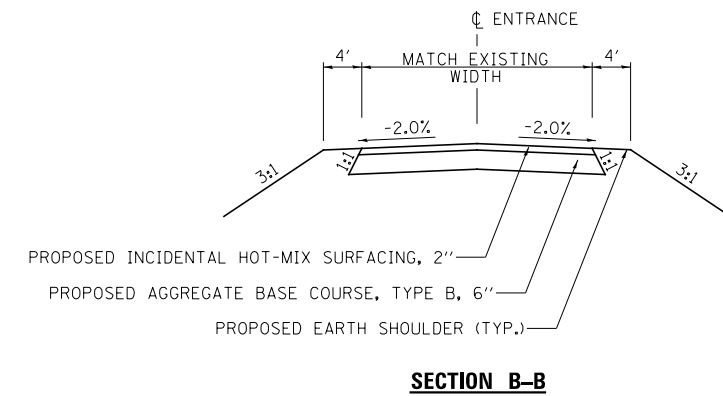
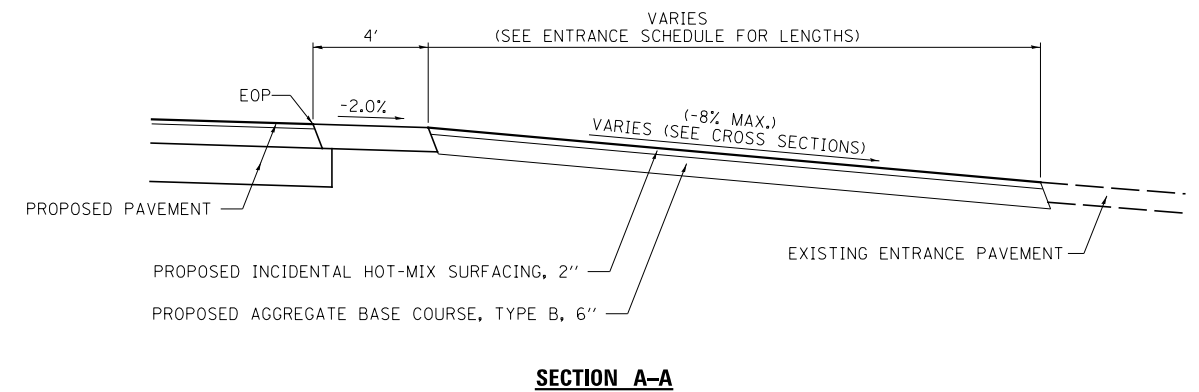
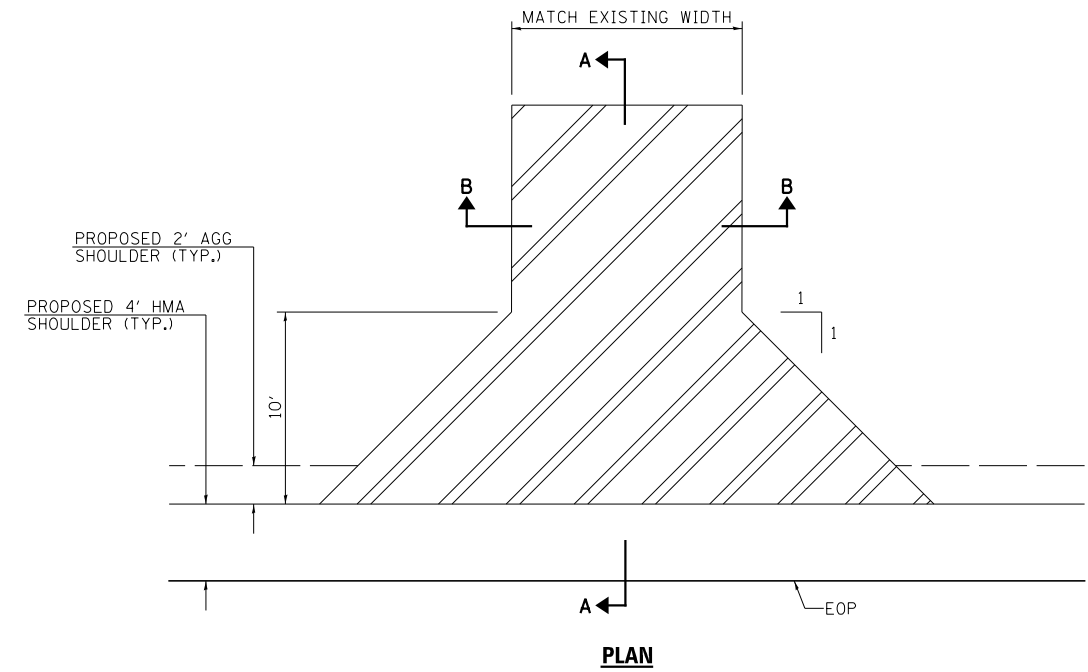
PILE DETAILS
CITY OF PLANO
SECTION 15-00045-00-BR
E. MAIN STREET OVER
BIG ROCK CREEK

SHEET NO. 13	STREET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
13 SHEETS	E. MAIN	15-00045-00-BR	KENDALL	40	32
		SN 047-6401		CONTRACT NO. 87665	
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT N43R(807)		



FIELD ENTRANCE (FE) DETAILS

SEE ENTRANCE SCHEDULE FOR LOCATIONS



COMMERCIAL ENTRANCE (CE) DETAILS

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	PLOT DATE = 8/14/2018	DATE -	REVISED -

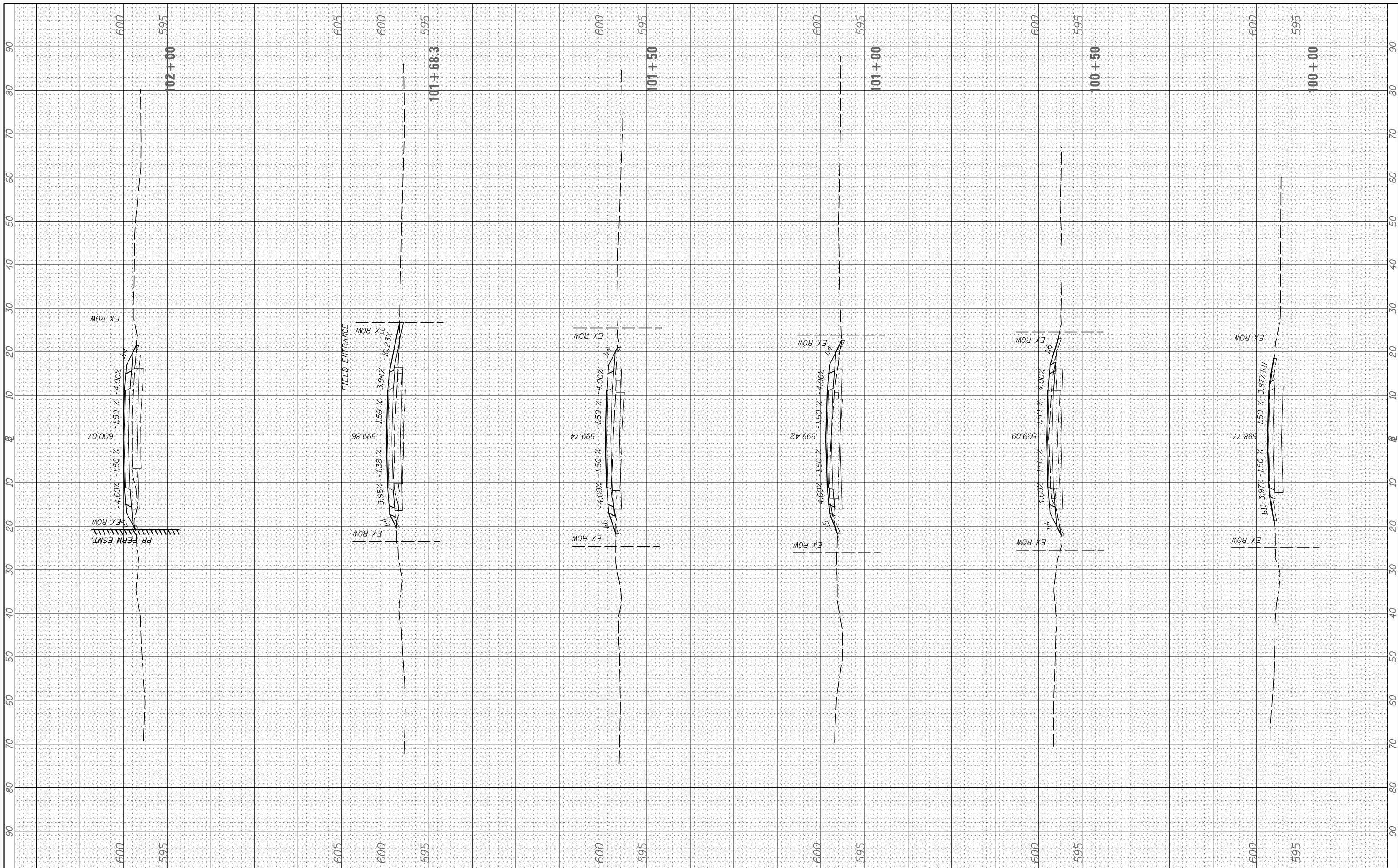
CITY OF PLANO

MAIN ST. ENTRANCE DETAILS			
SCALE: N/A	SHEET NO. 1 OF 1 SHEETS	STA. N/A	TO STA. N/A

MUN. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1630	15-00045-00-BR	KENDALL	40	33
CONTRACT NO. 87665				
ILLINOIS				

BY	DATE

ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED



FILE NAME = V:\3892\CADD Sheets\3892-sht-xs-main.dgn
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	DRAWN -	REVISED -
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PLOT DATE = 8/14/2018	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

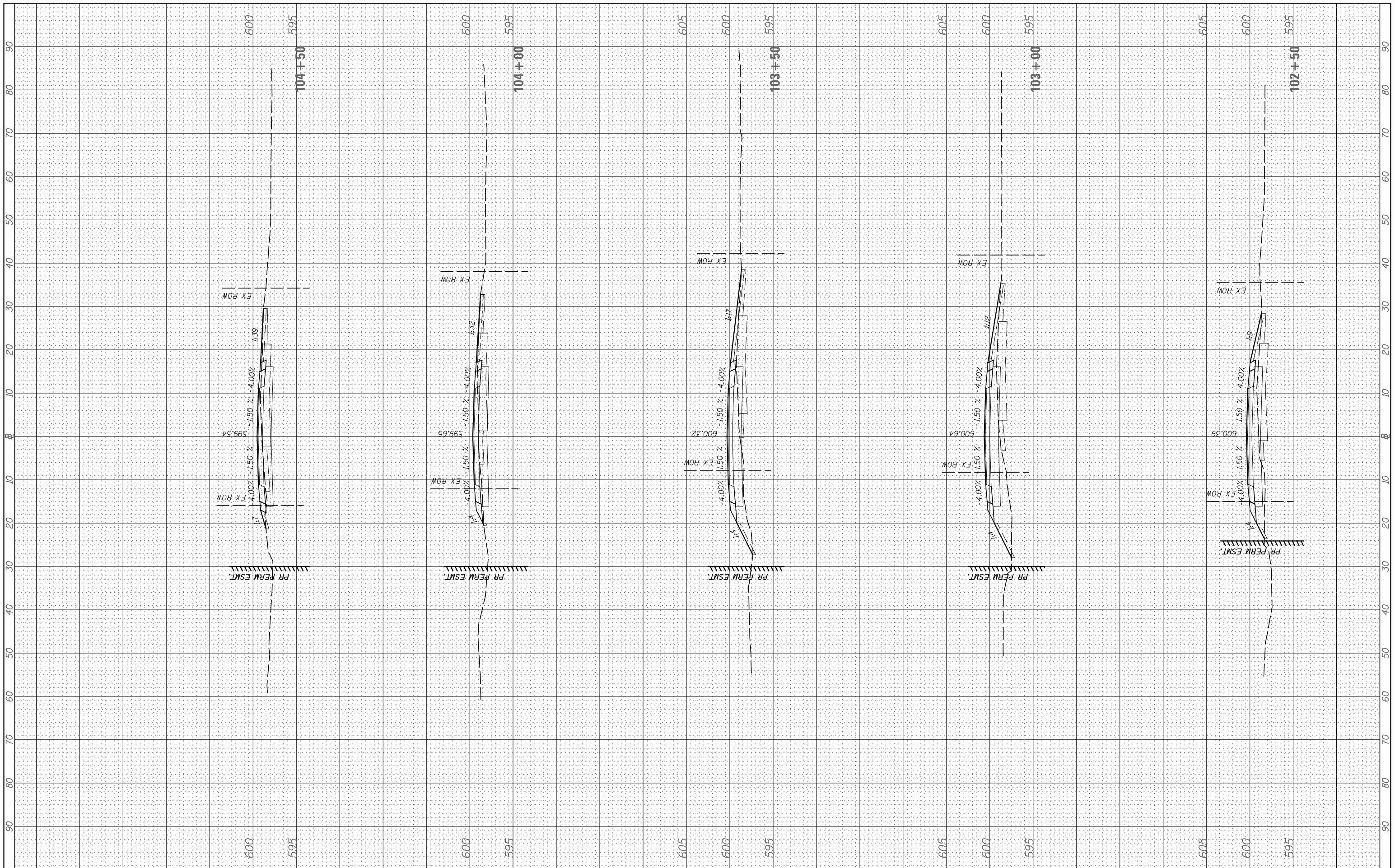
**MAIN ST
 CROSS SECTIONS**

SCALE: H=10 V=5 SHEET 1 OF 6 SHEETS STA. 100+00 TO STA. 102+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	15-00045-00-BR	KENDALL	40	35
				CONTRACT NO. 87665
ILLINOIS FED. AID PROJECT				

BY	DATE
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS
	CHECKED
	AREAS
	CHECKED

BY	DATE
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS
	CHECKED
	AREAS
	CHECKED



FILE NAME = V:\3892\CADD Sheets\3892-sht-xs-main.dgn
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USER NAME = LZeller
 PLOT SCALE = 20.0000' / in.
 PLOT DATE = 8/14/2018

DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**MAIN ST
 CROSS SECTIONS**

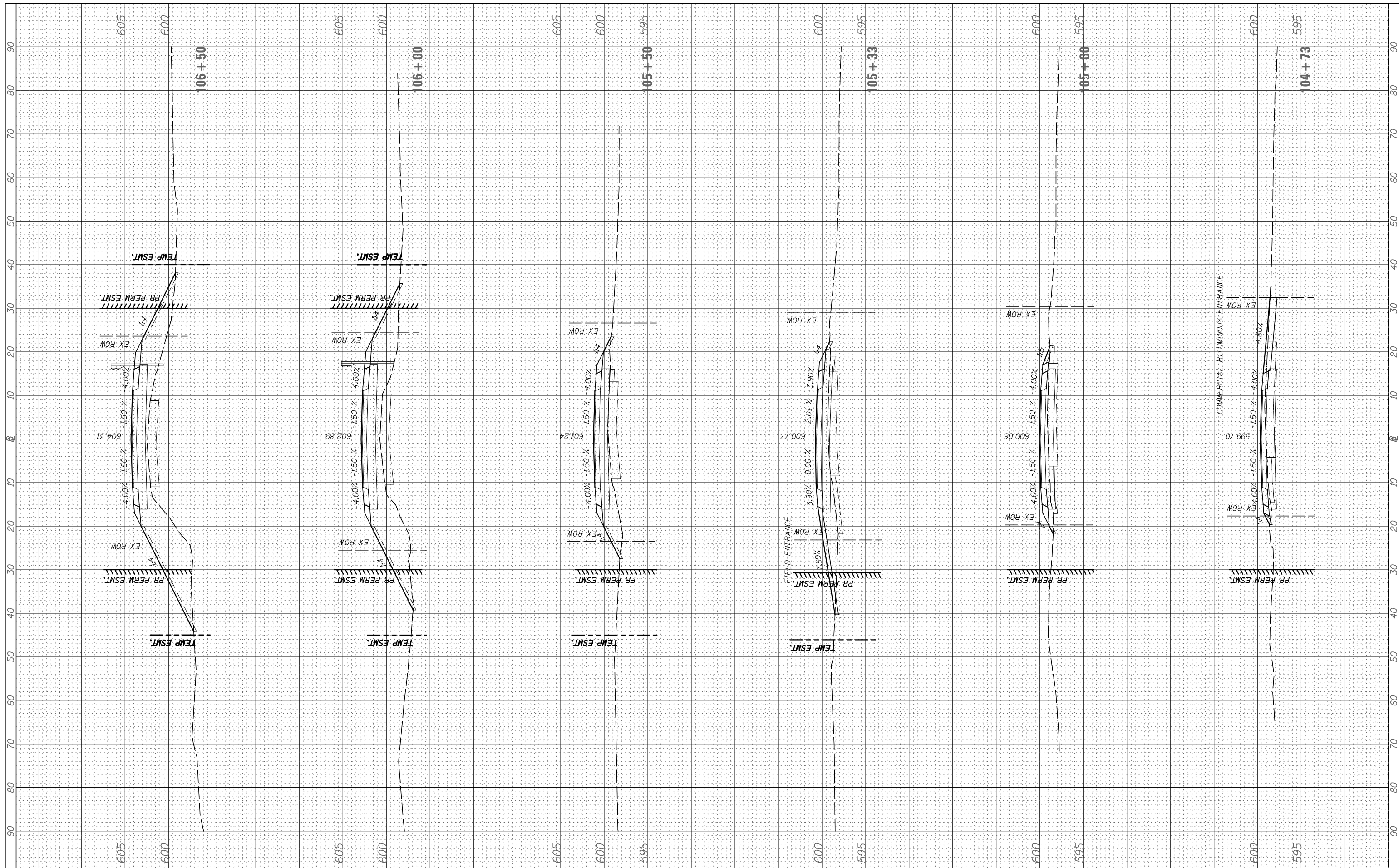
SCALE: H=10 V=5 SHEET 2 OF 6 SHEETS STA. 102+50 TO STA. 104+50

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	15-00045-00-BR	KENDALL	40	36
CONTRACT NO. 87665				

ILLINOIS FED. AID PROJECT

BY	DATE
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS	
CHECKED	
NO.	

BY	DATE
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS	
CHECKED	
NO.	



FILE NAME = V:\3892\CADD Sheets\3892-sht-xs-main.dgn
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 PLOT SCALE = 20.0000' / in.
 PLOT DATE = 8/14/2018

DESIGNED	-
DRAWN	-
CHECKED	-
DATE	-

REVISED	-
REVISED	-
REVISED	-
REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

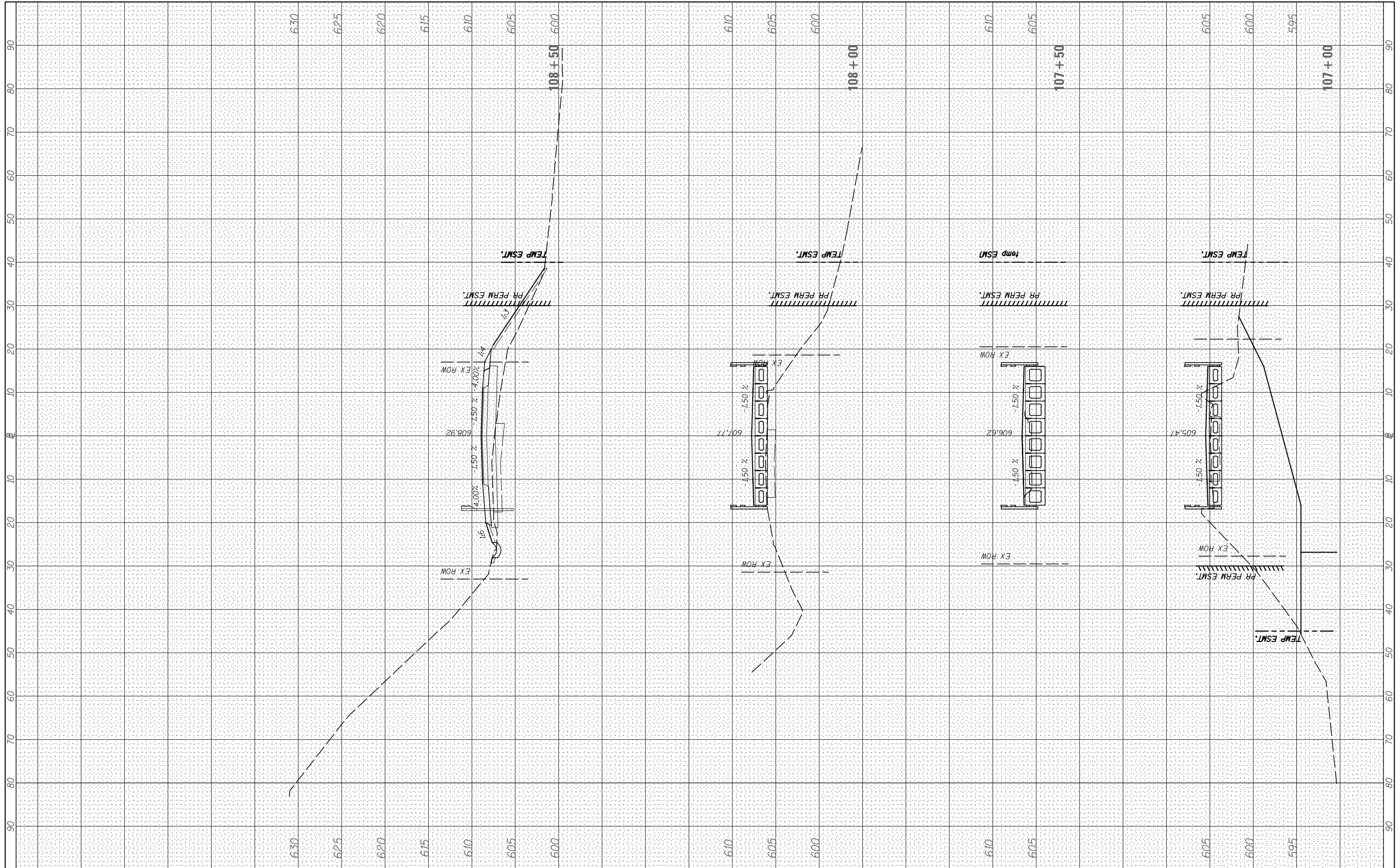
**MAIN ST
CROSS SECTIONS**

SCALE: H=10 V=5 SHEET 3 OF 6 SHEETS STA. 104+73 TO STA. 106+50

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	15-00045-00-BR	KENDALL	40	37
CONTRACT NO. 87665				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	DATE



FILE NAME = V:\3892\CADD Sheets\3892-sht-xs-main.dgn
Default

USER NAME = LZeller
PLOT SCALE = 20.0000' / in.
PLOT DATE = 8/14/2018

DESIGNED -
DRAWN -
CHECKED -
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

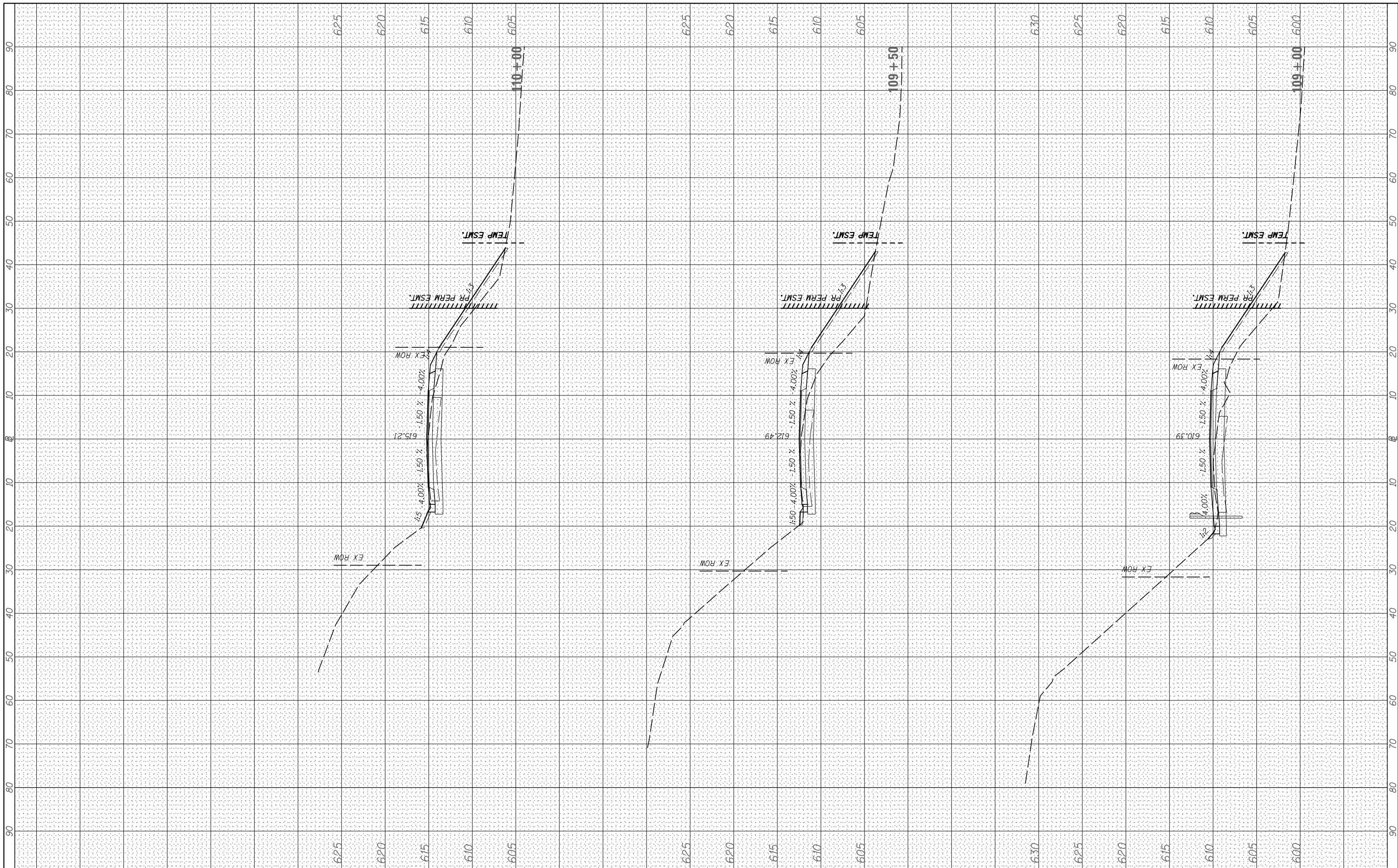
**MAIN ST
CROSS SECTIONS**

SCALE: H=10 V=5 SHEET 4 OF 6 SHEETS STA. 107+00 TO STA. 108+50

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	15-00045-00-BR	KENDALL	40	38
CONTRACT NO. 87665				
ILLINOIS FED. AID PROJECT				

BY	DATE

ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS CHECKED



FILE NAME = V:\3892\CADD Sheets\3892-sht-xs-main.dgn
 USER NAME = LZeller

DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

REVISED -
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 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

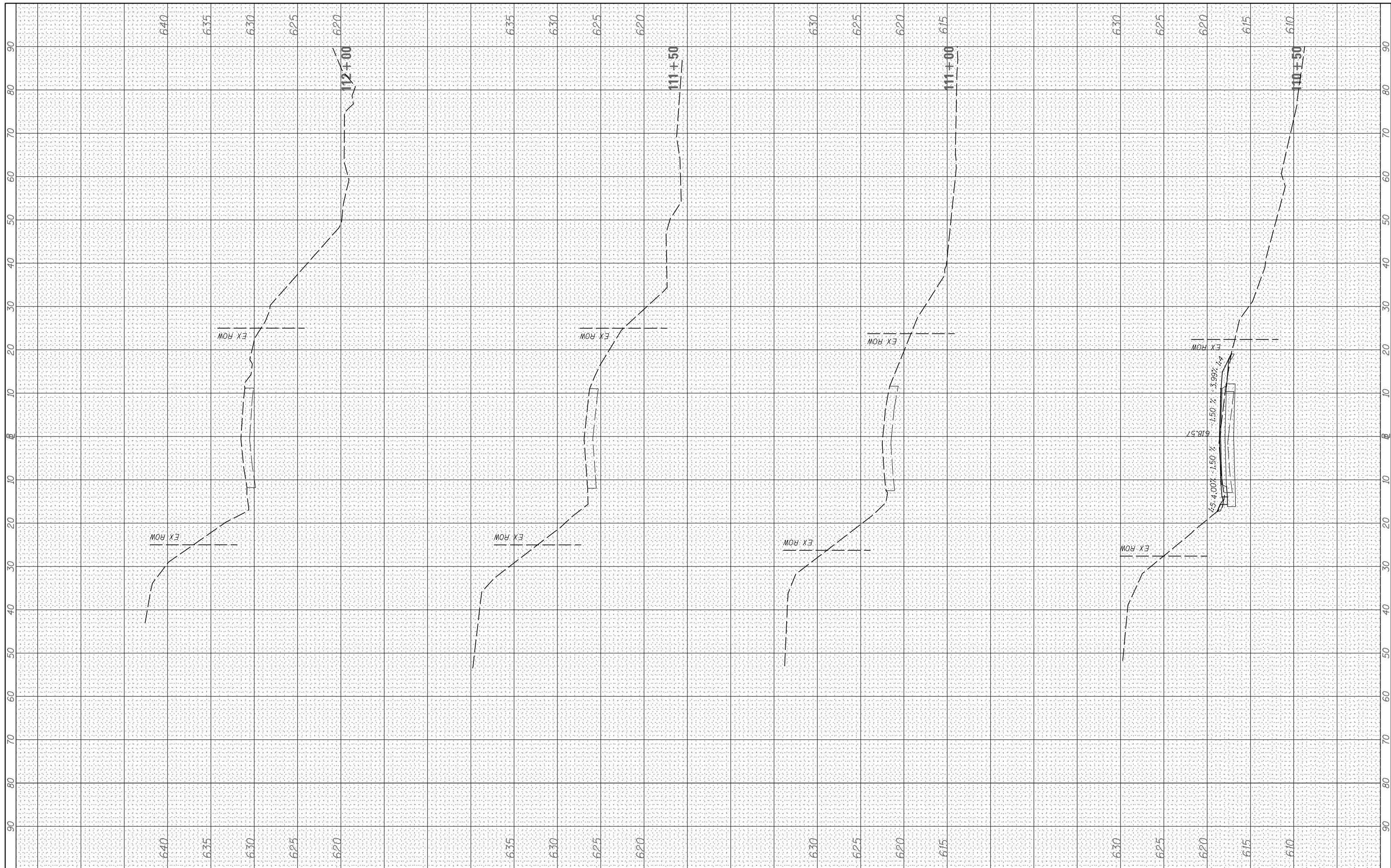
**MAIN ST
 CROSS SECTIONS**

SCALE: H=10 V=5 SHEET 5 OF 6 SHEETS STA. 109+00 TO STA. 110+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	15-00045-00-BR	KENDALL	40	39
CONTRACT NO. 87665				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS CHECKED		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS CHECKED		
	AREAS CHECKED		



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 DRAWN -
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 CHECKED -
 PLOT DATE = 8/14/2018
 DATE -

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**MAIN ST
 CROSS SECTIONS**

SCALE: H=10 V=5 SHEET 6 OF 6 SHEETS STA. 110+50 TO STA. 112+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	15-00045-00-BR	KENDALL	40	40
CONTRACT NO. 87665				
ILLINOIS FED. AID PROJECT				