

FOR UTILITY LOCATION PURPOSES, THIS PROJECT IS LOCATED IN THE SOUTHWEST QUARTER OF SECTION 5 AND SOUTHEAST QUARTER OF SECTION 6, TOWNSHIP 5 NORTH, RANGE 9 WEST OF THE THIRD PRINCIPAL MERIDIAN

UTILITY INFORMATION CAN BE OBTAINED BY CALLING J.U.L.I.E. AT (800) 892-0123

THE FOLLOWING UTILITY COMPANIES HAVE FACILITIES WITHIN THE LIMITS OF THIS PROJECT:

ILLINOIS AMERICAN WATER CO. 4436 INDUSTRIAL DRIVE ALTON, ILLINOIS 62002 (618) 486-2131  
 AT&T 203 GOETHE COLLINSVILLE, ILLINOIS 62234 (618) 346-6422

AMEREN IP 700 OAKWOOD AVENUE ALTON, ILLINOIS 62002 (618) 463-4041 (ELECTRIC) (618) 463-4027 (GAS)  
 ALTON PUBLIC WORKS 2 EMMA KAUS LANE ALTON, ILLINOIS 62002 (618) 466-3133

CHARTER COMMUNICATIONS 508 NIAGARA AVENUE EAST ALTON, ILLINOIS 62024 (618) 779-4179

STATE OF ILLINOIS 11-06-2015 LETTING ITEM 098  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 FEDERAL AID HIGHWAY

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
13-00236-00-BR	MADISON	21	1
FEDERAL AID PROJECT		CONTRACT NO. 97807	

NORTH RODGERS AVENUE BRIDGE REPLACEMENT  
 SECTION-13-00236-00-BR  
 PROJECT BRM 5011 (399)  
 CITY OF ALTON, ILLINOIS  
 MADISON COUNTY  
 JOB C-98-311-13

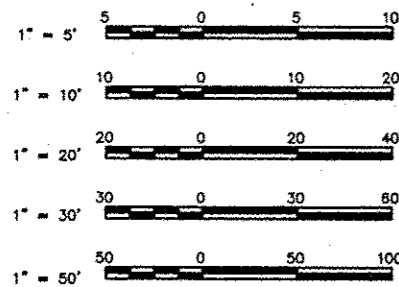
INDEX TO SHEETS

- COVER SHEET
- GENERAL NOTES, LEGENDS, AND SURVEY CONTROL DATA
- SUMMARY OF QUANTITIES AND EARTHWORK SCHEDULE
- TYPICAL SECTIONS
- PLAN & PROFILE
- SPOT ELEVATIONS, EROSION CONTROL AND PAVEMENT MARKING PLAN
- REMOVAL ITEMS
- BOX CULVERTS GENERAL PLANS
- BOX CULVERTS NOTES AND DETAILS
- TRAFFIC CONTROL AND DETOUR PLANS
- 18. CROSS SECTIONS - N. RODGERS AVE.
- 21. CROSS SECTIONS - CHANNEL

HIGHWAY STANDARDS

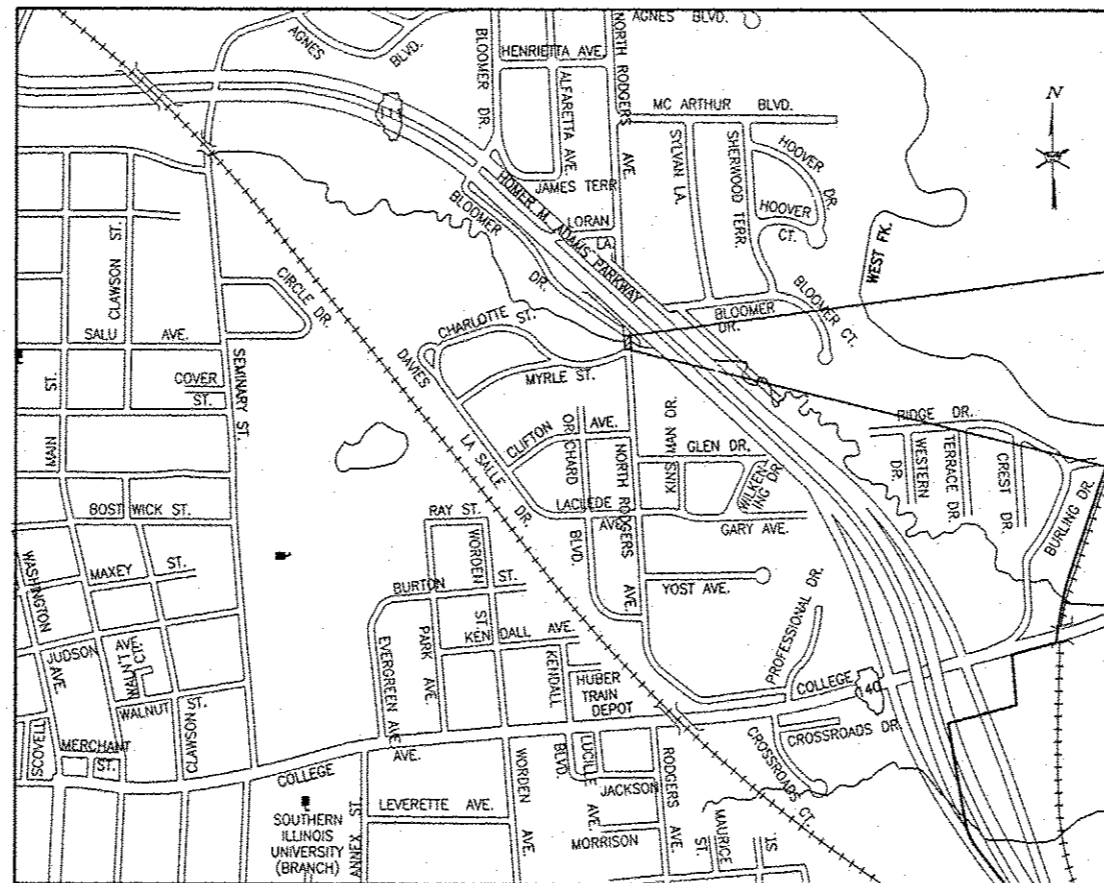
280001-07	606001-06
515001-03	701006-05
602301-04	701301-04
602401-03	701501-06
602601-03	701901-04
802701-02	720001-01
604001-04	780001-05

SCALES

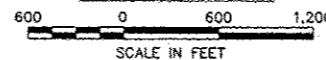


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS THE ABOVE SCALES MAY BE USED.

FUNCTIONAL CLASSIFICATION: LOCAL STREET  
 DESIGN SPEED = 30 M.P.H.  
 ADT = 1,420 (2016)



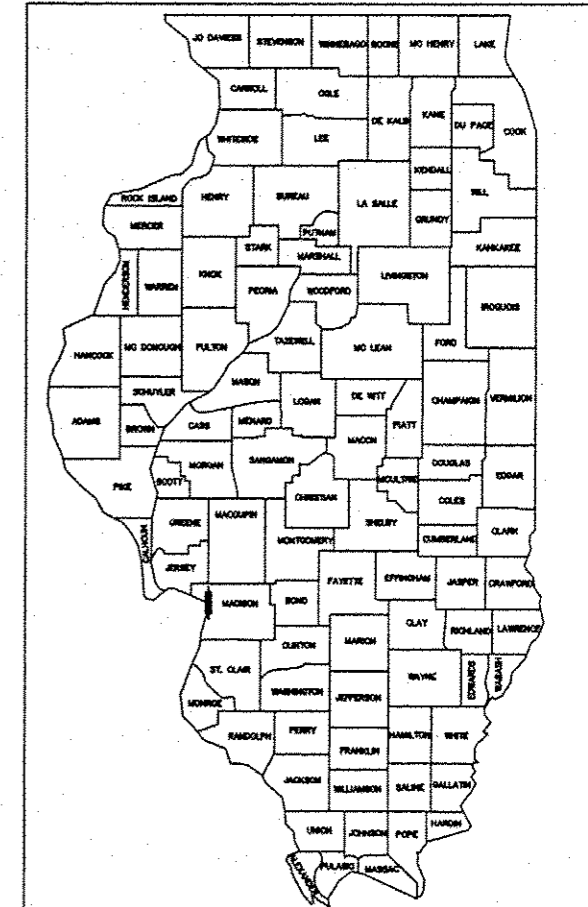
LOCATION MAP



LENGTH OF PROJECT = 114.6 FEET = 0.02 MILES

PROJECT ENDS  
 STA. 31+18.40

PROJECT BEGINS  
 STA. 30+03.78



LOCATION OF SECTION INDICATED THUS:-

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

APPROVED: 8-11-2015  
Brent Walker  
 MAYOR

PASSED: 8/27-2015  
Jeffrey Keirn  
 ACTING DISTRICT 8 ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID  
 BASED UPON LIMITED  
 REVIEW: 8/27-2015  
Jeffrey Keirn  
 JEFFREY KEIRN, P.E.  
 DEPUTY DIRECTOR OF HIGHWAYS  
 REGION FIVE ENGINEER

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS



Corey D. Daniels  
 DATE SIGNED 8-12-2015  
 EXPIRATION DATE 1/30/15

**SMS** Sheppard Morgan & Schwaab, Inc.  
 ENGINEERS CONSULTING ENGINEERS & LAND SURVEYORS  
 215 Market Street  
 Alton, Illinois 62002  
 P.O. Box 8  
 618/482-9755

**STANDARD SYMBOL LEGEND**

**STANDARD LINE TYPE LEGEND**

**EXISTING**

- EXISTING GUY POLE - -○-
- EXISTING LIGHT POLE - -X-
- EXISTING POWER POLE - -○-
- EXISTING TELEPHONE POLE - -○-
- EXISTING GUY WIRE - -←-
- EXISTING TRANSMISSION TOWER - -□-
- EXISTING ELECTRIC SPLICE BOX - -□<sup>E</sup>
- EXISTING TELEPHONE SPLICE BOX - -△
- EXISTING CABLE SPLICE BOX - -□<sup>TV</sup>
- EXISTING WATER HYDRANT - -⊕
- EXISTING GAS METER - -⊙
- EXISTING WATER METER - -⊙
- EXISTING WATER VALVE - -⊕
- EXISTING GAS VALVE - -⊙
- EXISTING FIRE HYDRANT - -⊕<sup>FH</sup>
- EXISTING SANITARY MANHOLE TOP - -⊙
- EXISTING STORM MANHOLE TOP - -○
- EXISTING TELEPHONE MANHOLE TOP - -⊙
- EXISTING SANITARY CLEAN OUT - -⊕
- CONTROL POINT - -△<sup>XXX</sup>
- BENCHMARK - -B.M.
- TEST PIT / NUMBER - -⊕<sup>T.P.# X</sup>
- BORING / NUMBER - -⊕<sup>B.# X</sup>
- RIGHT-OF-WAY MARKER - -⊕<sup>MON</sup>
- AXLE FOUND - -○<sup>AXLE</sup>
- BOLT FOUND - -○<sup>BOLT</sup>
- CHISELED "X" FOUND - -X
- PIN FOUND - -○<sup>IP</sup>
- PINCH PIPE FOUND - -○<sup>IP</sup>
- PK NAIL FOUND - -○<sup>PK</sup>
- RAILROAD SPIKE FOUND - -○<sup>RR</sup>
- STONE FOUND - -□<sup>STONE</sup>
- BRASS MONUMENT FOUND - -○<sup>MON</sup>
- IRON PIPE FOUND - -○<sup>IP</sup>
- MONUMENT FOUND - -□<sup>MON</sup>
- REBAR FOUND - -○<sup>RBR</sup>
- EXISTING MAILBOX - -⊕
- EXISTING FENCE POST - -⊕
- EXISTING GATE POST - -⊕
- EXISTING FLAG POLE - -⊕
- EXISTING GUARD POST - -○<sup>GP</sup>
- EXISTING ADVERTISING SIGN - -⊕
- EXISTING TRAFFIC SIGN - -⊕
- EXISTING PARKING METER - -⊕
- EXISTING RAILROAD MILE POST - -⊕<sup>MP</sup>
- EXISTING RAILROAD SIGNAL CONTROLLER - -⊕
- EXISTING RAILROAD CROSSING GATE - -⊕
- EXISTING TRAFFIC SIGNAL - -⊕
- EXISTING TRAFFIC SIGNAL CONTROLLER - -⊕
- EXISTING HANDHOLE - -⊕
- EXISTING DOUBLE HANDHOLE - -⊕
- EXISTING MAST ARM BASE - -○
- EXISTING DECIDUOUS TREE / SIZE - -⊕<sup>XX</sup>
- EXISTING EVERGREEN TREE / SIZE - -⊕<sup>XX</sup>
- EXISTING STUMP / SIZE - -⊕<sup>XX</sup>
- EXISTING BUSH - -⊕
- EXISTING SHRUB - -⊕
- EXISTING TREE TO BE REMOVED - -⊕<sup>XX</sup>

**PROPOSED**

- PROPOSED GUY POLE - -○-
- PROPOSED LIGHT POLE - -X-
- PROPOSED POWER POLE - -○-
- PROPOSED TELEPHONE POLE - -○-
- PROPOSED GUY WIRE - -←-
- PROPOSED TRANSMISSION TOWER - -□-
- PROPOSED ELECTRIC SPLICE BOX - -□<sup>E</sup>
- PROPOSED TELEPHONE SPLICE BOX - -△
- PROPOSED CABLE SPLICE BOX - -□<sup>TV</sup>
- PROPOSED WATER HYDRANT - -⊕
- PROPOSED GAS METER - -⊙
- PROPOSED WATER METER - -⊙
- PROPOSED WATER VALVE - -⊕
- PROPOSED GAS VALVE - -⊙
- PROPOSED FIRE HYDRANT - -⊕<sup>FH</sup>
- PROPOSED SANITARY MANHOLE TOP - -⊙
- PROPOSED STORM MANHOLE TOP - -○
- PROPOSED TELEPHONE MANHOLE TOP - -⊙
- PROPOSED SANITARY CLEAN OUT - -⊕
- PROPOSED MAILBOX - -⊕
- PROPOSED GUARD POST - -⊕<sup>GP</sup>
- PROPOSED ADVERTISING SIGN - -⊕
- PROPOSED TRAFFIC SIGN - -⊕
- PROPOSED RAILROAD MILE POST - -⊕<sup>MP</sup>
- PROPOSED RAILROAD SIGNAL CONTROLLER - -⊕
- PROPOSED RAILROAD CROSSING GATE - -⊕
- PROPOSED TRAFFIC SIGNAL - -⊕
- PROPOSED TRAFFIC SIGNAL CONTROLLER - -⊕
- PROPOSED HANDHOLE - -⊕
- PROPOSED DOUBLE HANDHOLE - -⊕
- PROPOSED MAST ARM BASE - -○
- PROPOSED DECIDUOUS TREE / SIZE - -⊕<sup>XX</sup>
- PROPOSED EVERGREEN TREE / SIZE - -⊕<sup>XX</sup>
- PROPOSED BUSH - -⊕
- PROPOSED PLANT - -\*

- PROPOSED EDGE OF PAVEMENT ELEVATION - + 512.00 EP
- PROPOSED PAVEMENT ELEVATION - + 505.50 P
- PROPOSED CURB ELEVATION - + 550.25 C
- PROPOSED SIDEWALK ELEVATION - + 515.15 SW
- PROPOSED FLOWLINE ELEVATION - + 501.58 FL
- \* PROPOSED CURB RAMP - -
- \* PROPOSED DETECTABLE WARNING - -
- \* PROPOSED LANDING - - L
- \* SEE GENERAL NOTE 10

**EXISTING FEATURES**

- EXISTING CENTERLINE - - - - -
- EXISTING BASELINE - - - - -
- EXISTING RIGHT-OF-WAY - - - - -
- EXISTING SECTION LINE - - - - -
- EXISTING PROPERTY LINE - - - - - P/L
- EXISTING EASEMENT - - - - -
- EXISTING SETBACK - - - - -
- EXISTING MAJOR CONTOUR - - - - - 500
- EXISTING MINOR CONTOUR - - - - - 501
- EXISTING DITCH - - - - -
- EXISTING POND, LAKE, BODY OF WATER, ETC. - - - - -
- EXISTING RAILROAD - - - - -
- EXISTING BRUSH / HEDGE / TREE LINE - - - - -
- EXISTING FENCE - - - - - X
- EXISTING GUARDRAIL - - - - -
- EXISTING CULVERT - - - - -
- EXISTING STORM SEWER - - - - -
- EXISTING SANITARY SEWER - - - - -
- EXISTING FORCEMAIN - - - - - FM
- EXISTING WATER - - - - - W
- EXISTING UNDERGROUND ELECTRIC - - - - - E
- EXISTING GAS - - - - - G
- EXISTING UNDERGROUND TELEPHONE - - - - - T
- EXISTING FIBER OPTIC - - - - - FO
- EXISTING UNDERGROUND CABLE TV - - - - - TV
- EXISTING OVERHEAD TELEPHONE - - - - - OT
- EXISTING OVERHEAD ELECTRIC - - - - - OE
- EXISTING OVERHEAD CABLE TV - - - - - OTV

**PROPOSED FEATURES**

- PROPOSED CENTERLINE - - - - -
- PROPOSED BASELINE - - - - -
- PROPOSED RIGHT-OF-WAY - - - - -
- PROPOSED LOT LINE - - - - -
- PROPOSED EASEMENT - - - - -
- PROPOSED CONSTRUCTION EASEMENT OR TEMPORARY USE PERMIT - - - - -
- PROPOSED CONSTRUCTION LIMITS - - - - -
- PROPOSED SETBACK - - - - -
- PROPOSED MAJOR CONTOUR - - - - - 500
- PROPOSED MINOR CONTOUR - - - - - 501
- PROPOSED DITCH - - - - -
- PROPOSED POND, LAKE, BODY OF WATER, ETC. - - - - -
- PROPOSED RAILROAD - - - - -
- PROPOSED FENCE - - - - - X
- PROPOSED GUARDRAIL - - - - -
- PROPOSED PERIMETER EROSION BARRIER - - - - -
- PROPOSED CULVERT - - - - -
- PROPOSED STORM SEWER - - - - -
- PROPOSED SANITARY SEWER - - - - -
- PROPOSED FORCEMAIN - - - - - FM
- PROPOSED WATER - - - - - W
- PROPOSED UNDERGROUND ELECTRIC - - - - - E
- PROPOSED GAS - - - - - G
- PROPOSED UNDERGROUND TELEPHONE - - - - - T
- PROPOSED FIBER OPTIC - - - - - FO
- PROPOSED UNDERGROUND CABLE TV - - - - - TV
- PROPOSED OVERHEAD TELEPHONE - - - - - OT
- PROPOSED OVERHEAD ELECTRIC - - - - - OE
- PROPOSED OVERHEAD CABLE TV - - - - - OTV

**ABBREVIATIONS**

ADT	AVERAGE DAILY TRAFFIC	OL	OPEN LID
BK	BACK	PC	POINT OF CURVE
BM	BENCHMARK	PE	PRIVATE ENTRANCE
BVCE	BEGIN VERTICAL CURVE ELEVATION	PI	POINT OF INTERSECTION
BVCS	BEGIN VERTICAL CURVE STATION	PK	PK NAIL
C&G	CURB AND GUTTER	PP	POWER POLE
C/L	CENTER LINE	PRCF	PRECAST REINFORCED CONCRETE FLARED
CE	COMMERCIAL ENTRANCE	PT	POINT OF TANGENT
CI	CAST IRON	PVC	POINT OF VERTICAL CURVE
CL	CLOSED LID	R	RADIUS
CM	CONCRETE MONUMENT	RBR	REBAR
CMP	CORRUGATED METAL PIPE	RDMH	RESTRICTED DEPTH MANHOLE
CONC	CONCRETE	ROW	RIGHT OF WAY
CT	CRIMP TOP PIPE	RR	RAILROAD
CUYD	CUBIC YARD	RRPM	RAISED REFLECTIVE PAVEMENT MARKER
DE	DRAINAGE EASEMENT	RT	RIGHT
DIP	DUCTILE IRON PIPE	S	SOUTH
E	EAST	SE	SOUTHEAST
ELEV	ELEVATION	SL	SECTION LINE
EP	EDGE OF PAVEMENT	SS1	STORM SEWER TYPE 1
EQN STA	EQUATION STATION	SS2	STORM SEWER TYPE 2
ES	EDGE OF SHOULDER	SS3	STORM SEWER TYPE 3
FE	FIELD ENTRANCE	STA	STATION
FH	FIRE HYDRANT	SW	SOUTHWEST
FL	FLOW LINE	TB	TRENCH BACKFILL
FT	FOOT	TBR	TO BE REMOVED
FWD	FORWARD	TC	TOP OF CURB
GP	GUARD POST	TCE	TEMPORARY CONSTRUCTION EASEMENT
HDPE	HIGH DENSITY POLYETHYLENE	TPM	TEMPORARY PAVEMENT MARKING
HMA	HOT-MIX ASPHALT	TPPM	THERMOPLASTIC PAVEMENT MARKING
IP	IRON PIPE	TUP	TEMPORARY USE PERMIT
LT	LEFT	TY	TYPE
MON	MONUMENT	TYP	TYPICAL
MP	MILE PIPE	VC	VERTICAL CURVE
N	NORTH	VCP	VITRIFIED CLAY PIPE
NE	NORTHEAST	W	WEST
NW	NORTHWEST	WMA	WATER MAIN QUALITY
O&C	OIL AND CHIP		

**GENERAL NOTES**

- THIS PROJECT SHALL BE CONSTRUCTED ACCORDING TO THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 1, 2012 AND THE SPECIAL PROVISIONS OF THE PROJECT CONTRACT.
- THE PLANS SHOW THE APPROXIMATE LOCATION OF KNOWN UTILITIES, BUT DO NOT SHOW HOUSE OR SERVICE CONNECTIONS. UTILITY INFORMATION PROVIDED IS BASED ON INFORMATION OBTAINED FROM UTILITY COMPANIES AND SHALL NOT BE CONSIDERED TO BE ACCURATE OR COMPLETE. THE CONTRACTOR SHALL USE ALL DUE PRECAUTION NOT TO DAMAGE OR DISTURB ANY UTILITIES AND THE ENTIRE COST OF MAKING REPAIRS TO, OR REPLACEMENT OF, ANY DAMAGED LINE WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- PROPOSED ELEVATIONS SHOWN ON THE PLANS AS +/- ARE APPROXIMATE, EXACT ELEVATIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. IF APPLICABLE, ELEVATIONS SHALL BE DETERMINED PRIOR TO FABRICATION OF THE DRAINAGE STRUCTURES.
- SEE TYPICAL SECTION SHEETS FOR TYPICAL SECTION NOTES.
- PLAN QUANTITIES FOR HOT-MIX ASPHALT ITEMS WERE CALCULATED BASED ON USING 112 LBS. / SQ. YD. / IN.
- FOR SIMPLICITY, STORM SEWER LENGTHS SHOWN ON THE PLANS ARE FROM CENTER TO CENTER OF STRUCTURES. ACTUAL PIPE REQUIRED WILL BE LESS. MEASUREMENT FOR PAYMENT PURPOSES SHALL BE ACCORDING TO ARTICLE 550.09 OF THE STANDARD SPECIFICATIONS.
- ALL SURPLUS MATERIALS RESULTING FROM SITE GRADING, CONSTRUCTION OPERATIONS, REMOVAL ITEMS, ETC. SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF BY AND AT THE EXPENSE OF THE CONTRACTOR ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS, UNLESS DIRECTED OTHERWISE BY THE ENGINEER. ANY OTHER FOREIGN DEBRIS ENCOUNTERED THAT IS NECESSARY TO BE REMOVED FOR CONSTRUCTION ACTIVITIES AND IS NOT SPECIFICALLY PAID FOR IN THE PLANS OTHERWISE SHALL BE REMOVED AND DISPOSED OF IN THE SAME MANNER AS SPECIFIED ABOVE.

**SURVEY CONTROL POINTS**

VERTICAL CONTROL (BENCH MARKS)			
CONTROL POINT	LOCATION	ELEVATION	DESCRIPTION
BM 15	STA. 30+44.79, 15.93' RT.	465.46	FND CUT BOX S.E. CORNER OF BRIDGE
BM 17	STA. 30+57.58, 117.24' RT.	459.30	SET R.R. SPIKE IN POWER POLE
BM 18	STA. 31+41.63, 32.49' LT.	458.86	SET R.R. SPIKE IN POWER POLE

**HORIZONTAL CONTROL**

CONTROL POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	817012.7860	2305092.4630	480.48	REBAR WITH CTRL PNT CAP
2	817369.0580	2305067.7130	462.28	FOUND CUT CROSS
12	817165.1940	2305129.7190	472.71	TOP OF CTRL PNT CAP
13	817171.8910	2305201.2330	466.29	TOP OF CTRL PNT CAP
14	817180.9430	2305232.2190	461.59	TOP OF CTRL PNT CAP
16	817268.1930	2305092.3680	458.06	TOP OF CTRL PNT CAP
19	817333.5940	2305012.8217	459.22	TOP OF CTRL PNT CAP
20	817343.6330	2304820.1530	461.36	TOP OF CTRL PNT CAP

\* ELEVATIONS SHOULD BE CHECKED FROM A BENCHMARK.

REVISIONS

**SMS ENGINEERS**  
 Sheppard, Morgan & Schwaab, Inc.  
 CONSULTING ENGINEERS AND LAND SURVEYORS  
 215 Market Street, P.O. Box E, Alton, IL 62002, 815.452.9735 E-mail: mail@smsengineers.com  
 10 Central Industrial Drive, Granite City, IL 62040, 815.877.4700 E-mail: mail@msmorgans.com  
 DESIGN FIRM # 184-000992

NORTH RODGERS AVE. BRIDGE REPLACEMENT  
 SECTION 13-00236-00-BR  
 CITY OF ALTON, IL  
 GENERAL NOTES AND LEGENDS

CONTRACT NO. 97607  
 DWG. NO. NORTH RODGERS GEN NOTES.dwg  
 REF. BK. PC  
 JOB NO. 208458.2  
 DSN. BY: CDD  
 DWN. BY: CDD  
 CHK. BY: DEG  
 DATE: AUGUST, 2015  
 SCALE: NONE  
 SHEET 2 OF 21

**SUMMARY OF QUANTITIES**

CODE NO.	CONSTRUCTION TYPE CODE ITEM	0011	
		UNIT	QUANTITY
20100500	TREE REMOVAL, ACRES	ACRE	0.1
20200100	EARTH EXCAVATION	CU YD	334
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	10
20300100	CHANNEL EXCAVATION	CU YD	594
20700220	POROUS GRANULAR EMBANKMENT	CU YD	436
25000115	SEEDING, CLASS 1B	ACRE	0.5
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	45
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	45
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	45
25000700	AGRICULTURAL GROUND LIMESTONE	TON	1
25100115	MULCH, METHOD 2	ACRE	0.5
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	100
28000400	PERIMETER EROSION BARRIER	FOOT	643
28000500	INLET AND PIPE PROTECTION	EACH	1
28100105	STONE RIPRAP, CLASS A3	SQ YD	184
28100107	STONE RIPRAP, CLASS A4	SQ YD	822
28200200	FILTER FABRIC	SQ YD	1450
28400100	GABIONS	CU YD	18
31101000	SUBBASE GRANULAR MATERIAL, TYPE B	TON	20
35101100	AGGREGATE BASE COURSE, TYPE A 12"	SQ YD	433
35501308	HOT-MIX ASPHALT BASE COURSE, 6"	SQ YD	358
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	806
40600535	LEVELING BINDER (MACHINE METHOD), N70	TON	30
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	30
42001300	PROTECTIVE COAT	SQ YD	76
44000100	PAVEMENT REMOVAL	SQ YD	274
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	169
* DENOTES SPECIALTY ITEM			


CODE NO.	CONSTRUCTION TYPE CODE ITEM	0011	
		UNIT	QUANTITY
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200450	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES	CU YD	520
51500100	NAME PLATES	EACH	1
54001001	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	2
54001002	BOX CULVERT END SECTIONS, CULVERT NO. 2	EACH	2
54011108	PRECAST CONCRETE BOX CULVERTS 11' X 8'	FOOT	161.17
550A0340	STORM SEWERS, CLASS A, TYPE 2 12"	FOOT	10
550A0360	STORM SEWERS, CLASS A, TYPE 2 15"	FOOT	5
55100700	STORM SEWER REMOVAL 15"	FOOT	5
60234200	INLETS, TYPE A, TYPE 1 FRAME, OPEN LID	EACH	1
60240215	INLETS, TYPE B, TYPE 1 FRAME, CLOSED LID	EACH	1
60255500	MANHOLES TO BE ADJUSTED	EACH	1
60260100	INLETS TO BE ADJUSTED	EACH	1
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	220
63200310	GUARDRAIL REMOVAL	FOOT	12.5
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	4
67100100	MOBILIZATION	LSUM	1
70300100	SHORT TERM PAVEMENT MARKING	FOOT	36
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	230
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	12
72400100	REMOVE SIGN PANEL ASSEMBLY - TYPE A	EACH	1
72400310	REMOVE SIGN PANEL - TYPE 1	SQ FT	6
72400710	RELOCATE SIGN PANEL - TYPE 1	SQ FT	1.5
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	230
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	520
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	LSUM	1
Z0055905	TEMPORARY CONSTRUCTION FENCE	FOOT	86
* DENOTES SPECIALTY ITEM			

**EARTH WORK SCHEDULE**

LOCATION	EARTH EXCAVATION (CUT) (CU. YD.)	CHANNEL EXCAVATION (CUT) (CU. YD.)	EARTH / CHANNEL EXCAVATION ADJUSTED FOR SHRINKAGE * (CU. YD.)	EMBANKMENT (FILL) (CU. YD.)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (CU. YD.)	FURNISHED EXCAVATION (CU. YD.)
STA. 30+03.78 TO 30+30.81	65	0	49	3	46	
STA. 31+11.16 TO 32+10.46	269	0	202	272	-70	
STA. 2+00 TO 2+56.18 (CHANNEL)	0	442	332	0	332	
STA. 3+79.85 TO 4+10 (CHANNEL)	0	152	114	0	114	
<b>Total :</b>	<b>334</b>	<b>594</b>	<b>696</b>	<b>275</b>	<b>421</b>	<b>0</b>

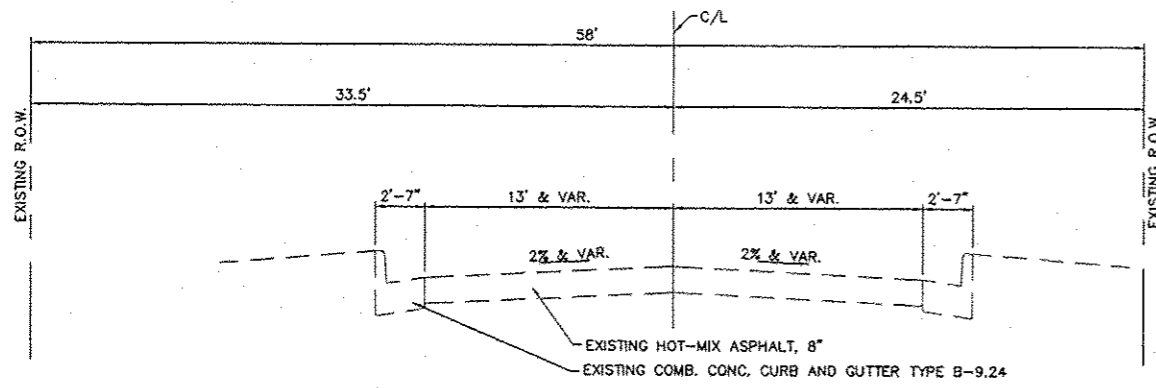
\* ASSUME SHRINKAGE FACTOR = 25%

REVISIONS

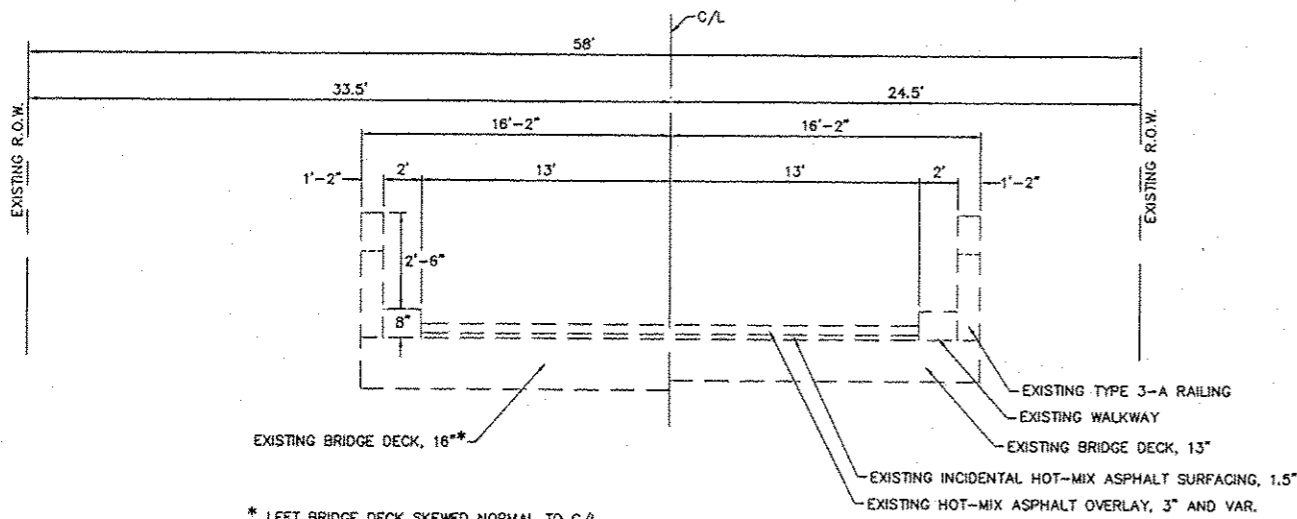

**Sheppard, Morgan & Schwaab, Inc.**  
 CONSULTING ENGINEERS AND LAND SURVEYORS  
215 Market Street, P.O. Box E, Alton, IL 62002 618/292-8765 Fax: 618/292-8765  
 10 Central Industrial Drive, Granite City, IL 62040 618/377-6700 E-mail: mail@smsengineers.com  
 DESIGN FIRM # 164-000892

NORTH RODGERS AVE. BRIDGE REPLACEMENT  
 SECTION 13-00236-00-BR  
 CITY OF ALTON, IL  
 SUMMARY OF QUANTITIES AND EARTHWORK SCHEDULE

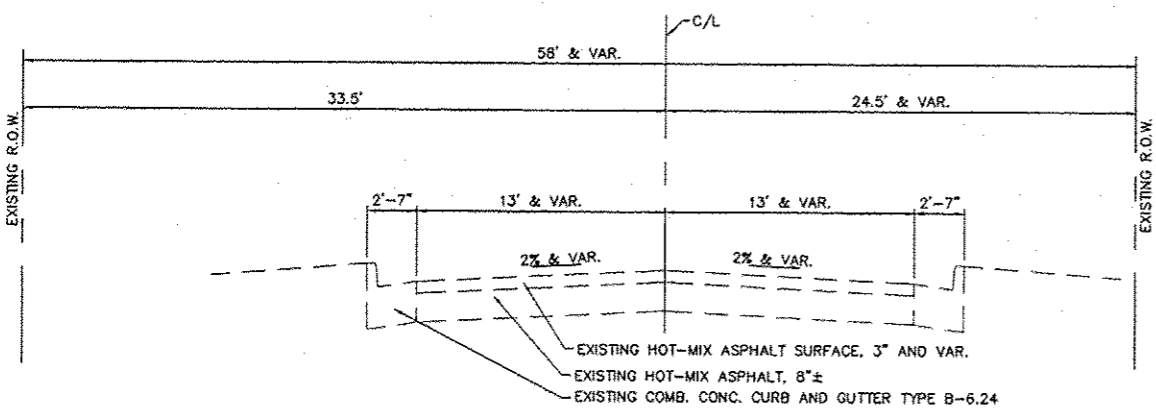
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 REF. BK. PG.  
 JOB NO. 208458.2  
 DSN. BY: CDD  
 DWN. BY: CDP  
 CHK. BY: DEG  
 DATE: AUGUST, 2015  
 SCALE: NONE  
 SHEET 3 OF 21



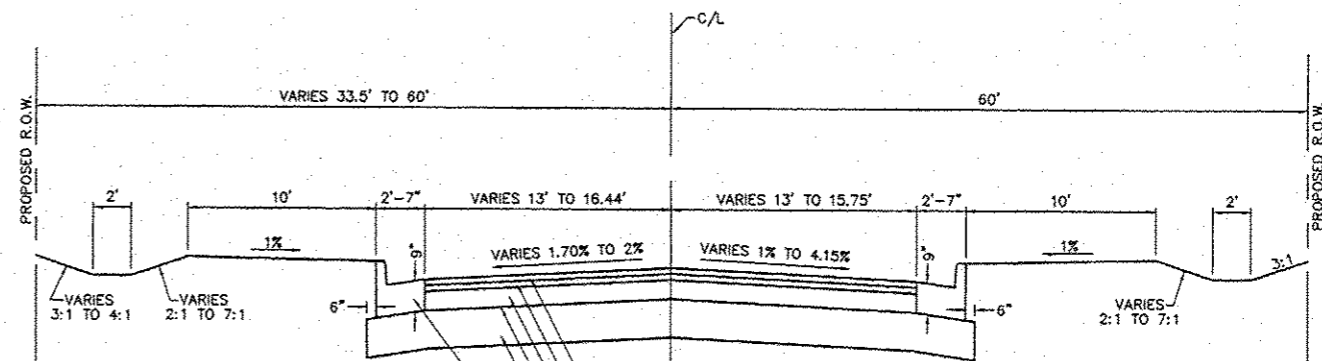
**EXISTING TYPICAL SECTION**  
**NORTH RODGERS AVE.**  
 STA. 30+03.78 TO STA. 30+45.70  
 SCALE: 1" = 5' H.  
 1" = 2' V.



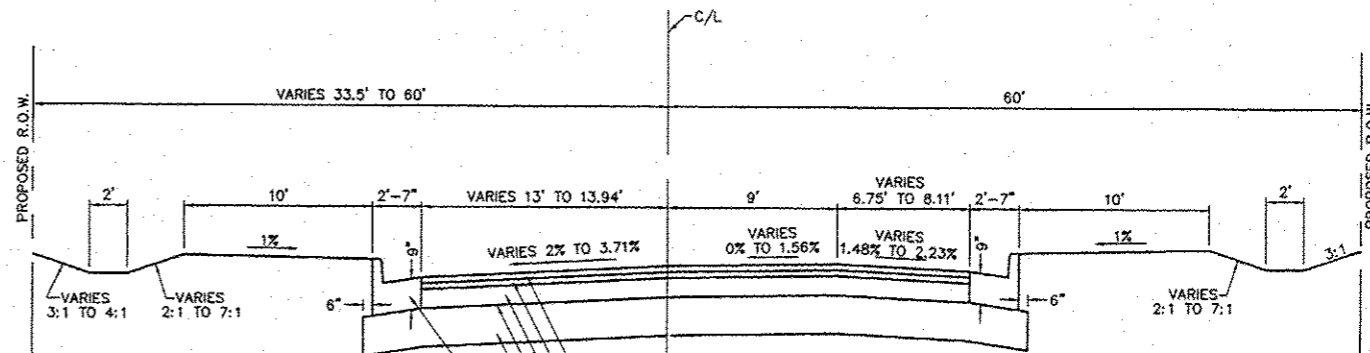
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**NORTH RODGERS AVE.**  
 STA. 30+45.70 TO STA. 30+70  
 SCALE: 1" = 5' H.  
 1" = 2' V.



**EXISTING TYPICAL SECTION**  
**NORTH RODGERS AVE.**  
 STA. 30+70 TO STA. 31+18.40  
 SCALE: 1" = 5' H.  
 1" = 2' V.



**PROPOSED TYPICAL SECTION**  
**NORTH RODGERS AVE.**  
 STA. 30+03.78 TO STA. 30+75  
 SCALE: 1" = 5' H.  
 1" = 2' V.



**PROPOSED TYPICAL SECTION**  
**NORTH RODGERS AVE.**  
 STA. 30+75 TO STA. 31+18.40  
 SCALE: 1" = 5' H.  
 1" = 2' V.

**TYPICAL SECTION NOTES**

- 1 SEE CROSS SECTIONS FOR GRADING BEYOND THE CURB AND GUTTER
- 2 THE PROPOSED LEVELING BINDER IS INTENDED TO BE A 1 1/2" BINDER COURSE, HOWEVER DUE TO THE THICKNESS OF 1 1/2", LEVELING BINDER MATERIAL MUST BE USED.
- 3 COMB. C.C. & G. TY. B-6.24 SHALL BE TRANSITIONED TO MEET THE EXISTING COMB. C.C. & G. TY. B-9.24 AT STATIONS 30+03.78 AND 30+12.96. TRANSITION SHALL BE APPROVED BY THE ENGINEER AND INCLUDED IN THE COST OF COMB. C.C. & G. TY. B-6.24.

**MIX DESIGNS**

MIXTURE USE	SURFACE	LEVEL BINDER	BASE COURSE
AC/PG	PG 64-22	PG 64-23	PG 64-24
MAX RAP %			
DESIGN AIR VOIDS	4% @ Noes = 70	4% @ Noes = 70	4% @ Noes = 70
MIX COMPOSITION (GRADATION MIXTURE)	IL - 9.5 OR IL12.5	IL - 9.5	IL - 19.0
FRICTION AGG	MX D	MX C	MX C

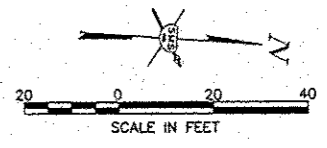
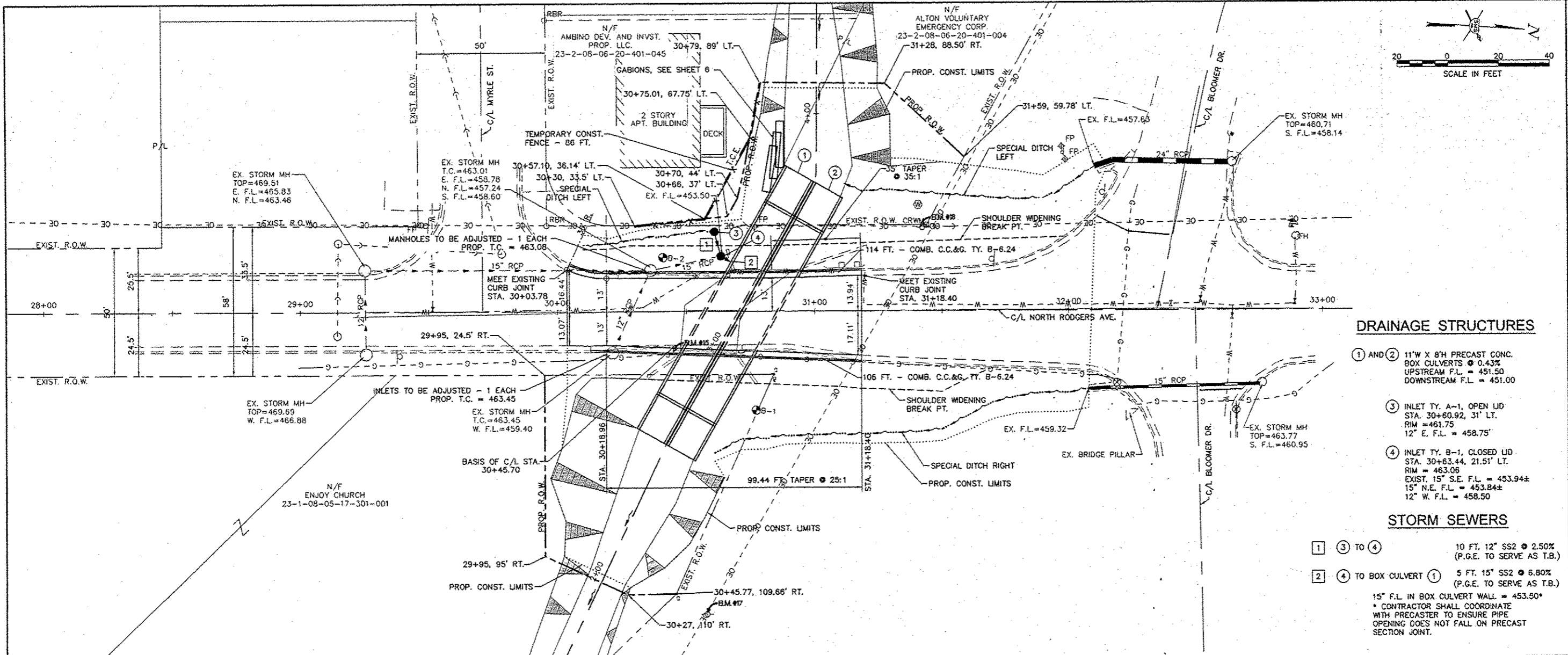
\* SEE SPECIAL PROVISIONS

NO.	DESCRIPTION

**SMS ENGINEERS**  
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 CONSULTING ENGINEERS AND LAND SURVEYORS  
 215 Market Street, P.O. Box 1, Alton, IL 62002 618/462-9755 E-mail: mail@smsengineers.com  
 DESIGN FIRM # 184-000992

**NORTH RODGERS AVE. BRIDGE REPLACEMENT**  
**SECTION 13-00236-00-BR**  
**CITY OF ALTON, IL**  
**TYPICAL SECTIONS**

CONTRACT NO. 97607  
 DWG. NO. NORTH RODGERS TYP. SEC. QUANT.  
 REF. BK. PG. JOB NO. 208458  
 DSN. BY: CDP  
 DWN. BY: CDP  
 CHK. BY: DEG  
 DATE: AUGUST, 2015  
 SCALE: NONE  
 SHEET 4 OF 21

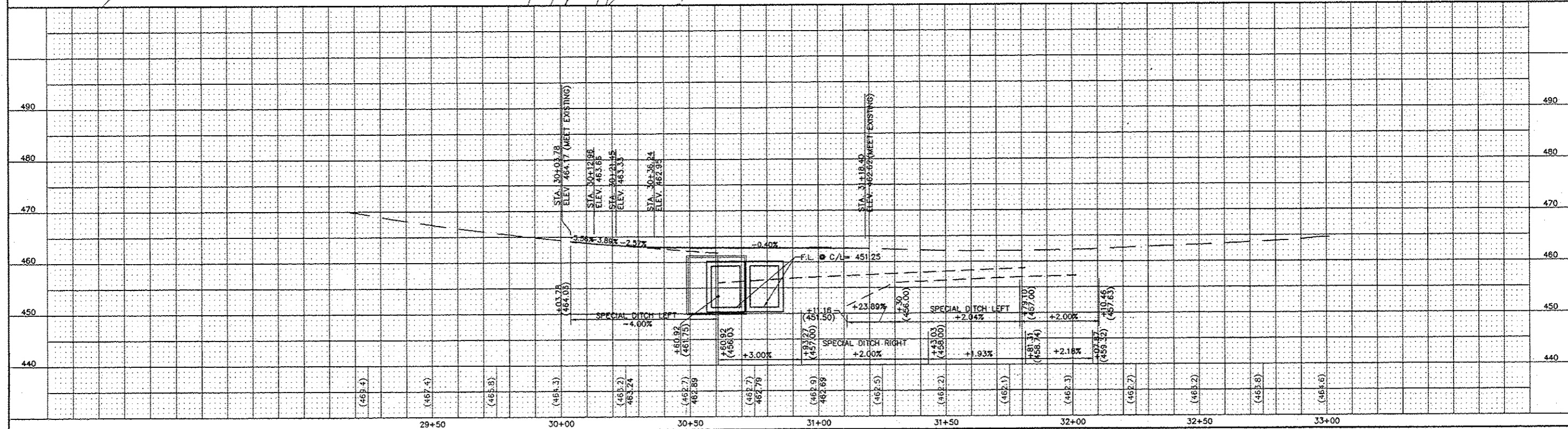


**DRAINAGE STRUCTURES**

- ① AND ② 11" X 8" PRECAST CONC. BOX CULVERTS @ 0.43%  
UPSTREAM F.L. = 451.50  
DOWNSTREAM F.L. = 451.00
- ③ INLET TY. A-1, OPEN IJD  
STA. 30+60.92, 31' LT.  
RIM = 461.75  
12" E. F.L. = 458.75"
- ④ INLET TY. B-1, CLOSED IJD  
STA. 30+63.44, 21.51' LT.  
RIM = 463.06  
EXIST. 15" S.E. F.L. = 453.94±  
15" N.E. F.L. = 453.84±  
12" W. F.L. = 458.50

**STORM SEWERS**

- ① ③ TO ④ 10 FT. 12" SS2 @ 2.50%  
(P.G.E. TO SERVE AS T.B.)
  - ② ④ TO BOX CULVERT ① 5 FT. 15" SS2 @ 6.80%  
(P.G.E. TO SERVE AS T.B.)
- 15" F.L. IN BOX CULVERT WALL = 453.50"  
\* CONTRACTOR SHALL COORDINATE WITH PRECASTER TO ENSURE PIPE OPENING DOES NOT FALL ON PRECAST SECTION JOINT.



REVISIONS


**SMS Sheppard, Morgan & Schwaab, Inc.**  
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10 Central Industrial Drive, Suite 3, Carlebi, IL 62000 618-877-8700 E-mail: mals@sms-engineers.com  
DESIGN FIRM # 184-000992

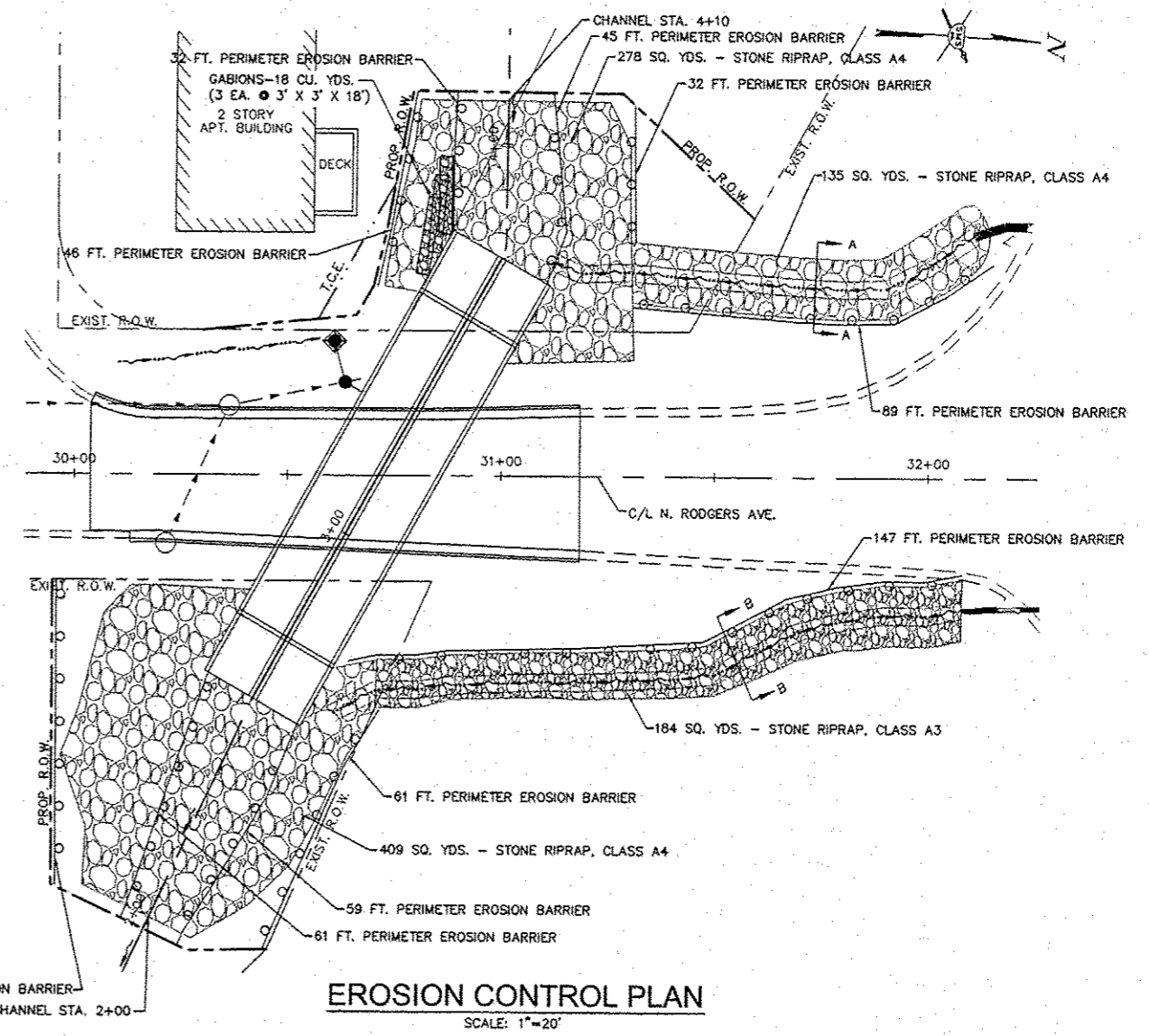
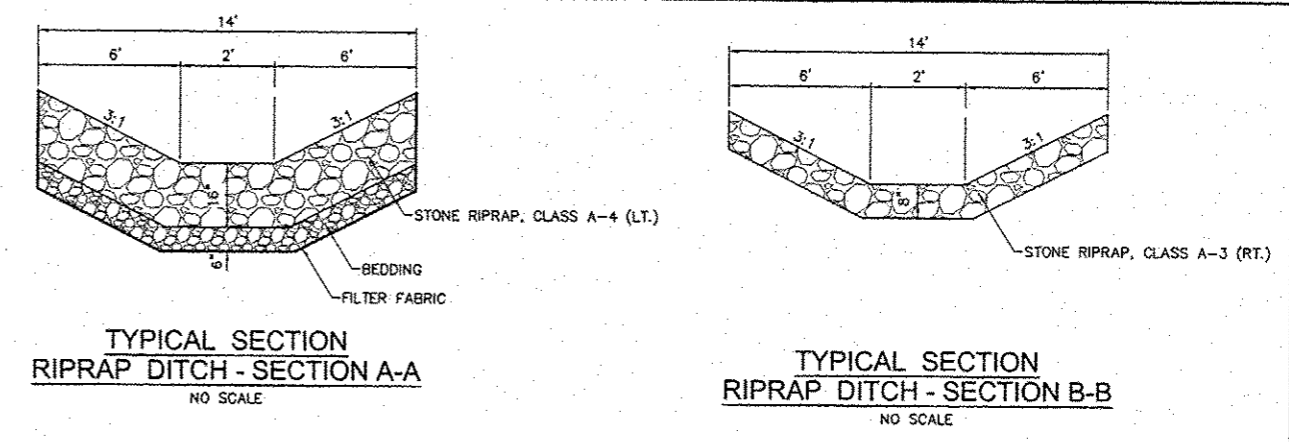
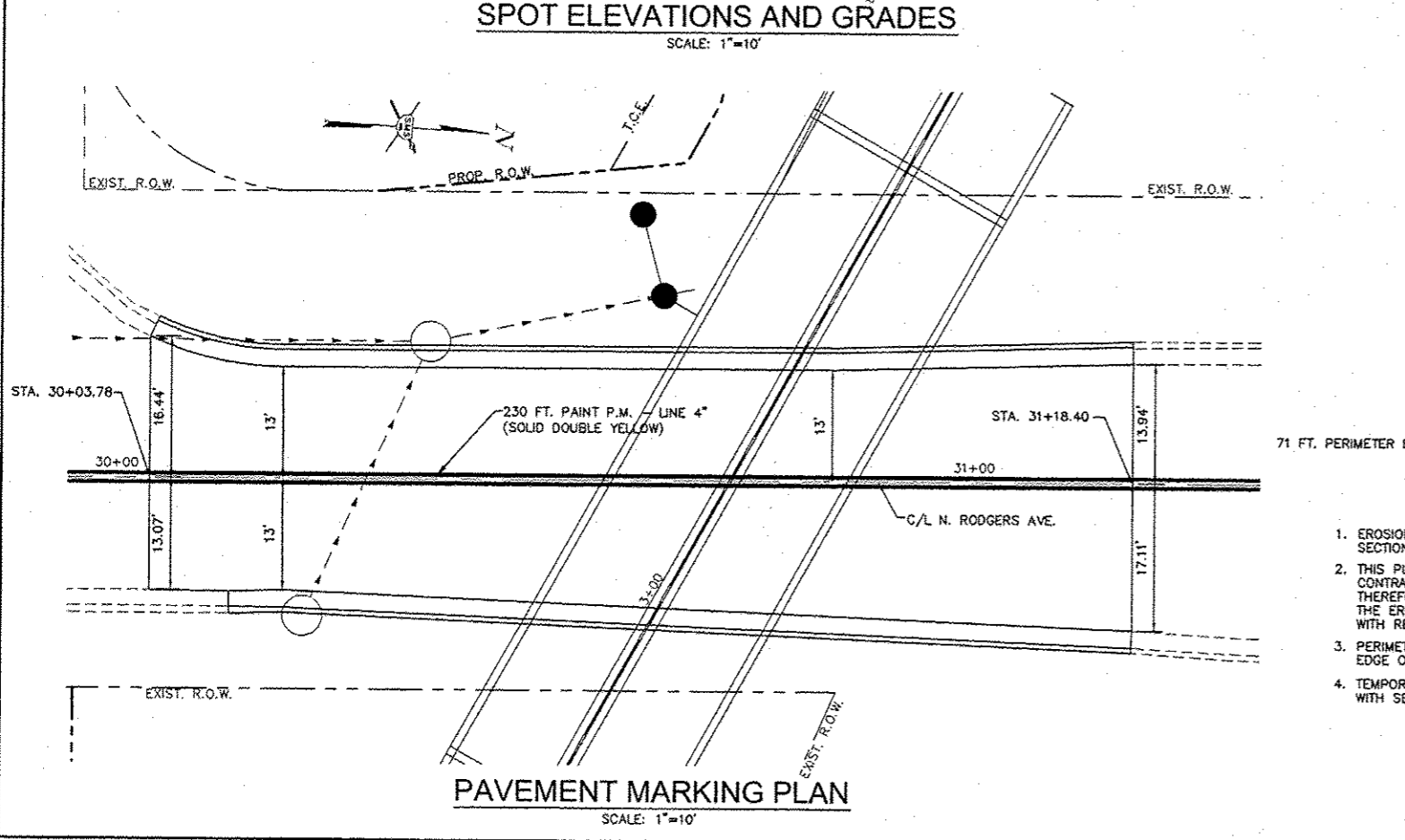
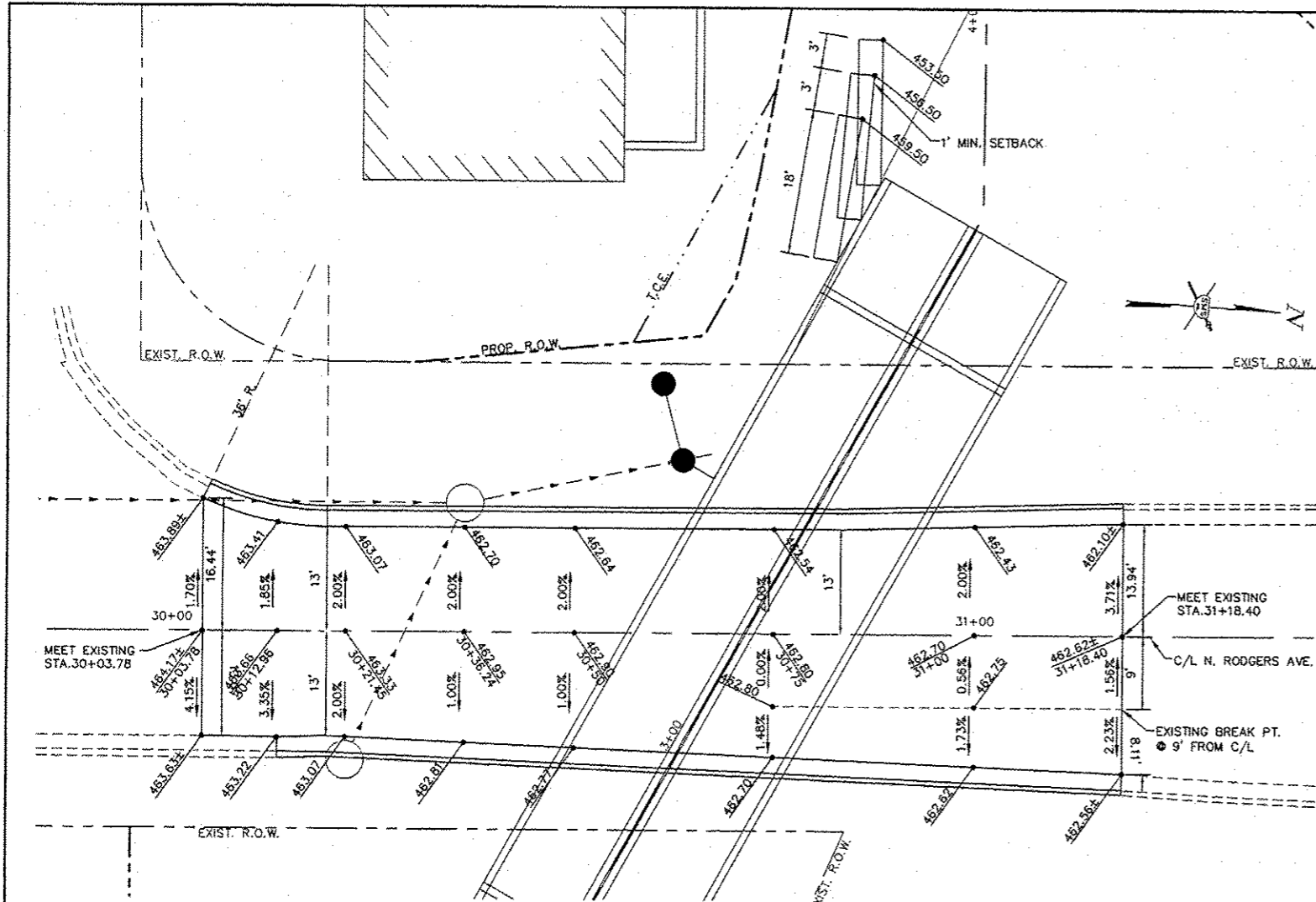
**SMS ENGINEERS**

**NORTH RODGERS AVE. BRIDGE REPLACEMENT**  
SECTION 13-00236-00-BR  
CITY OF ALTON, IL  
PLAN AND PROFILE

CONTRACT NO. 97607

DWG. NO. North Rodgers PP.dwg  
REF. BK. PG.  
JOB NO. 208458  
DSN. BY. CDD  
CHK. BY. DEG  
DATE: AUGUST, 2015  
SCALE: HORZ: 1"=20'  
VERT: 1"=10'

SHEET 5 OF 21



- EROSION CONTROL NOTES**
1. EROSION CONTROL ITEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 280 OF THE I.D.O.T. STANDARD SPECIFICATIONS.
  2. THIS PLAN SHOWS GENERAL LAYOUT OF EROSION CONTROL ITEMS. THE CONTRACTOR IS RESPONSIBLE FOR EROSION AND SEDIMENT CONTROL AND THEREFORE SHALL MONITOR THE SITE AND REPAIR, MAINTAIN OR MODIFY THE EROSION AND SEDIMENT CONTROL MEASURES AS NEEDED TO COMPLY WITH REGULATIONS.
  3. PERIMETER EROSION BARRIER SHALL BE PLACED ALONG THE UPSLOPE EDGE OF RIPRAP IF BARE SOIL EXISTS AT THE TIME RIPRAP IS PLACED.
  4. TEMPORARY SEEDING AND MULCH SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 280.04 (F) OF THE STANDARD SPECIFICATIONS.
  5. THE CONTRACTOR SHALL PROVIDE TEMPORARY INLET AND PIPE PROTECTION AT ALL STORM SEWER PIPE AND INLET STRUCTURES AS REQUIRED TO INTERCEPT WATER BORNE SILT AND SEDIMENT AND PREVENT IT FROM ENTERING STORM SEWER SYSTEMS. THIS ITEM MAY CONSIST OF EMBEDDED HAY OR STRAW BALES, SILT FILTER FENCE, SAND BAGS OR OTHER APPROVED METHODS.
  6. THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY (EXCLUDING RIPRAP) AS DIRECTED BY THE ENGINEER. ESTIMATED QUANTITIES: SEEDING, CLASS 1B = 0.5 ACRES AND MULCH, METHOD 2 = 0.5 ACRES
  7. LOWEST GABION SHALL BE EMBEDDED 12" BELOW FINISHED GRADE (MAX. 2 FT. EXPOSED VERTICALLY)
- EROSION CONTROL LEGEND**
- ○ ○ ○ ○ PERIMETER EROSION BARRIER - SILT FILTER FENCE OR OTHER AS APPROVED BY ENGINEER (643 FT.)
  - ◇ INLET AND PIPE PROTECTION (1 EACH)

REVISIONS

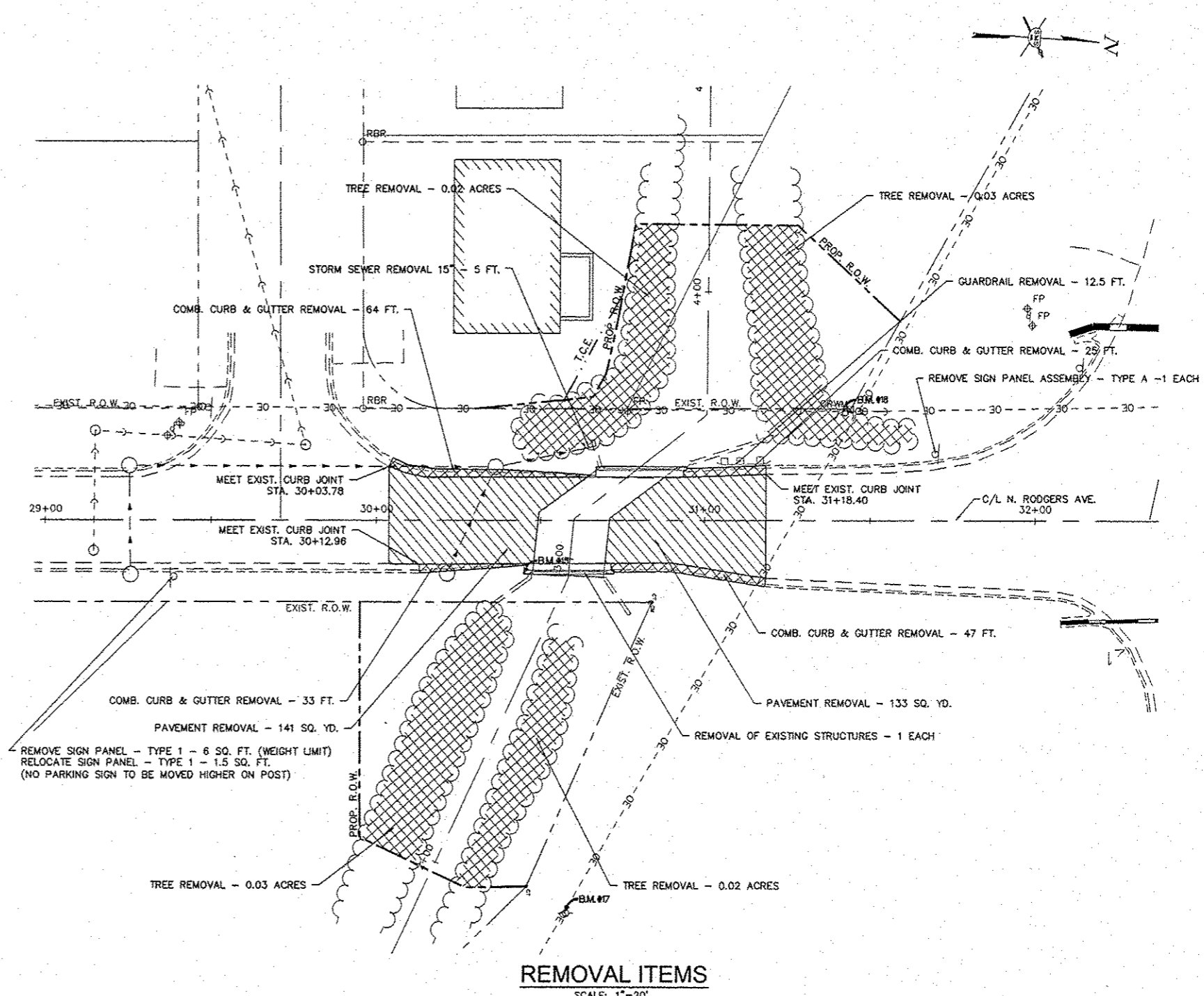
**SMS ENGINEERS**  
Sheppard, Morgan & Schwaab, Inc.  
CONSULTING ENGINEERS AND LAND SURVEYORS  
215 Market Street, P.O. Box E, Alton, IL 62002 618-462-9755 E-mail: mail@smsengineers.com  
10 Central Industrial Drive, Canada City, IL 62040 618-977-8700 E-mail: mail@smsengineers.com  
DESIGN FIRM # 184-000992

**NORTH RODGERS AVE. BRIDGE REPLACEMENT**  
**SECTION 13-00236-00-BR**  
**CITY OF ALTON, IL.**  
**SPOT ELEVATIONS, EROSION CONTROL**  
**AND PAVEMENT MARKING**

CONTRACT NO. 97607

DWG. NO. NORTH RODGERS ELEV DETAIL.dwg  
REF. BK. PG.  
JOB NO. 208458  
DSN. BY: CDP  
DWN. BY: CDP  
CHK. BY: DEG  
DATE: AUGUST, 2015

SCALE: AS SHOWN  
SHEET 6 OF 21



**REMOVAL ITEMS**  
SCALE: 1"=20'

**NOTES**  
 1 SIGN AND GUARDRAIL REMOVAL ITEMS TO BE REMOVED SHALL BE DELIVERED TO ALTON PUBLIC WORKS, 2 EMMA KAUS LN., ALTON, IL 62002, (618-463-3530). DELIVERY SHALL BE INCLUDED IN THE COST OF SAID ITEMS.

NO.	DATE	REVISIONS

**SMS ENGINEERS**  
 Sheppard, Morgan & Schwaab, Inc.  
 CONSULTING ENGINEERS AND LAND SURVEYORS  
 215 Market Street, P.O. Box E, Alton, IL 62002 618462-9155 E-mail: mail@smsengineers.com  
 10 Central Industrial Drive, Granite City, IL 62040 618377-8700 E-mail: mail@smsengineers.com  
 DESIGN FIRM # 184-000992

**NORTH RODGERS AVE. BRIDGE REPLACEMENT**  
**SECTION 13-00236-00-BR**  
**CITY OF ALTON, IL.**  
**REMOVAL ITEMS**

CONTRACT NO.	97607
DWG. NO.	NORTH RODGERS ELEV DATA 2.dwg
REF. BK.	PG.
JOB NO.	208458
DSN. BY:	CDP
OWN. BY:	CDP
CHK. BY:	DEG
DATE:	AUGUST, 2015
SCALE:	AS SHOWN
SHEET	7 OF 21

**BENCHMARKS**

BM# 15 FOUND CUT BOX ON S.E. CORNER OF BRIDGE  
 STA. 30+44.79, 15.93' RT., ELEV.=465.47  
 BM# 18 SET R.R. SPIKE IN POWER POLE  
 STA. 31+41.63, 32.49' LT., ELEV.=458.87

**EXISTING STRUCTURE**

A SINGLE SPAN DECK SLAB BRIDGE ON 22' BACK TO BACK CLOSED CONCRETE ABUTMENTS WITH SPREAD FOOTINGS. ABUTMENTS HAVE APPROXIMATELY 9'-6" OF EXPOSED HEIGHT. IN 1958 THE STRUCTURE WAS WIDENED 16"-2" NORMAL TO THE ROADWAY. THE WIDENED ABUTMENTS WERE CONSTRUCTED ON A VERY HIGH SKEW RELATIVE TO THE PRE-1958 STRUCTURE. THE WIDENED PORTION CONSISTS OF A CONCRETE SLAB SUPPORTED BY 14" TALL REINFORCED CAST-IN-PLACE CONCRETE CLOSED ABUTMENTS WITH SPREAD FOOTINGS.

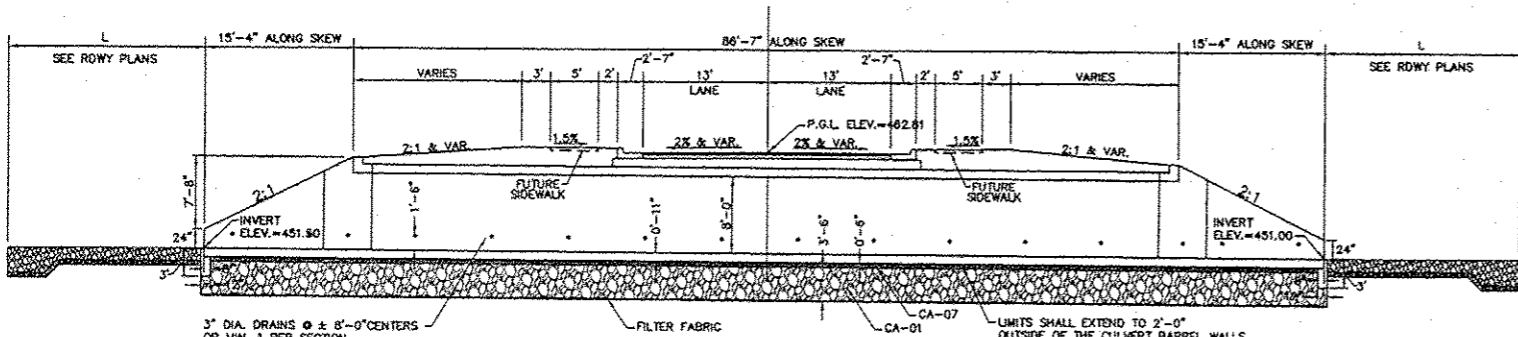
NO SALVAGE.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

WATERWAY INFORMATION  
 PROPOSED DOUBLE 11' X 8' PRECAST BOX CULVERT

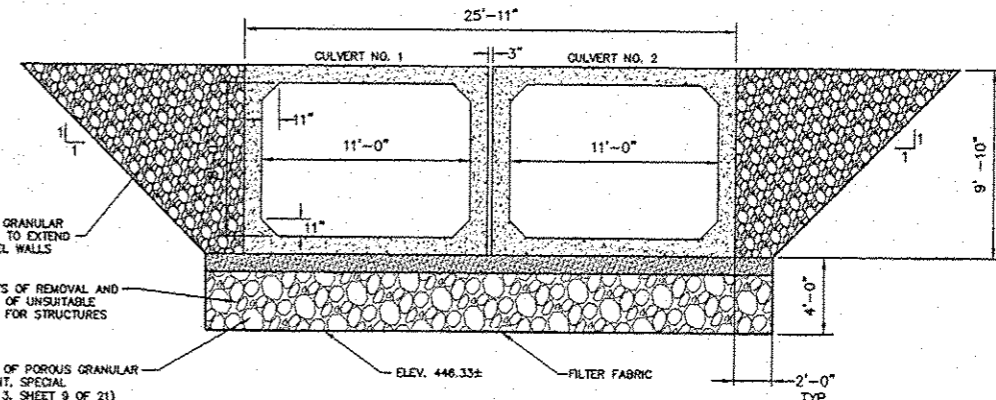
Drainage Area:	1.17 Sq. Mi.	Existing Low Grade Elev.		462.68 @ Sta. 30+82.09					
		Proposed Low Grade Elev.		462.81 @ Sta. 30+71.35					
Flood Freq. Yr.	Q, c.f.s.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater Elev.		
		Existing	Proposed		Existing	Proposed	Existing	Proposed	
Design	30	1,962	117	176	459.46	1.76	1.06	461.22	460.52
Base	100	1,722	155	176	460.72	2.35	2.27	463.07	462.99
Max. Calc.	500	2,310	155	176	463.77	1.18	0.79	464.95	464.56

Existing 10-year velocity = 6.77 ft/s  
 Proposed 10-year velocity = 3.29 ft/s



**LONGITUDINAL SECTION**

NOTE: HORIZONTAL DIMENSIONS AREA AT RIGHT ANGLES TO THE ROADWAY UNLESS NOTED OTHERWISE.  
 1"=10'



**SECTION THRU CONCRETE BARREL**

**DESIGN SPECIFICATIONS**

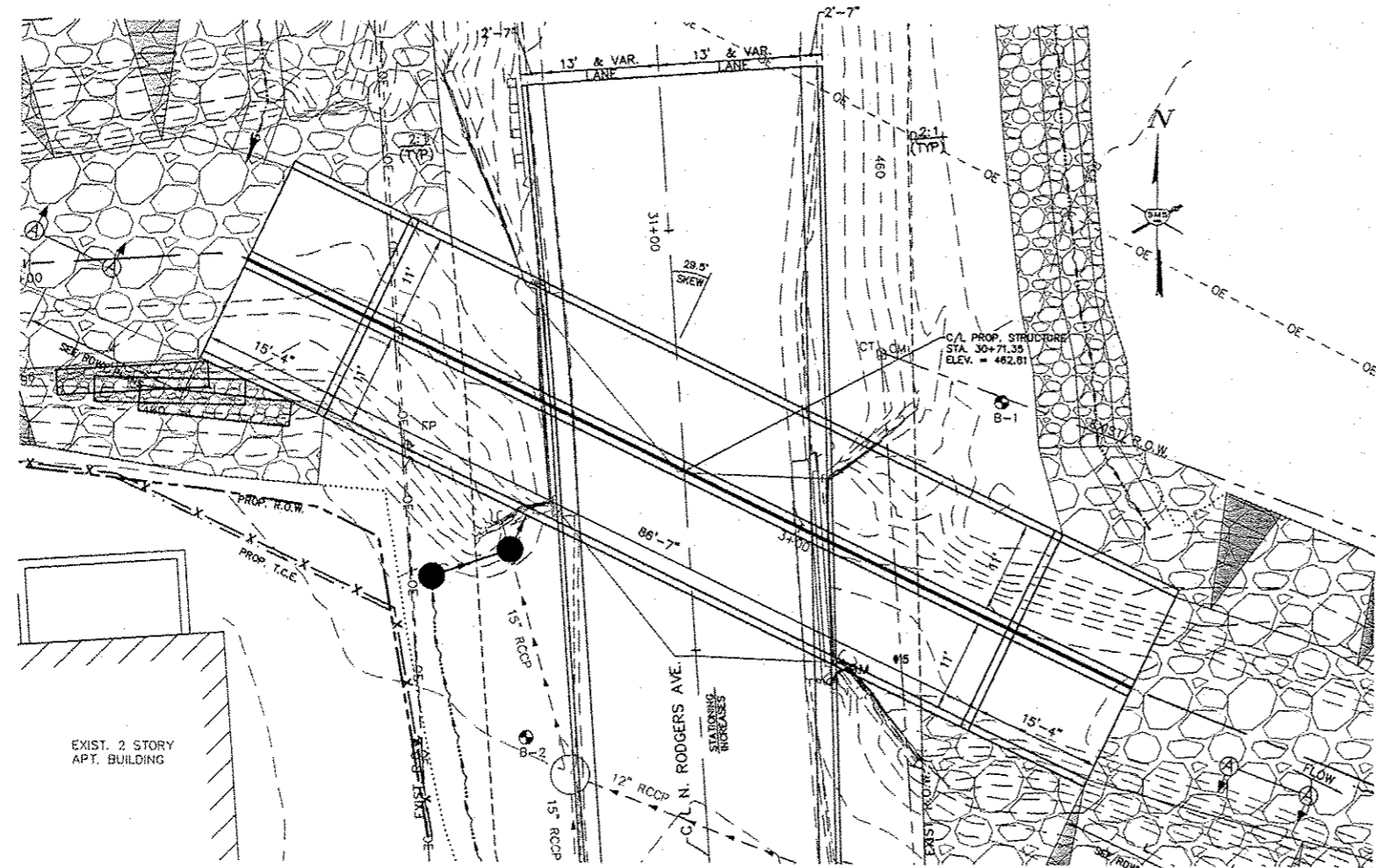
2014 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 7TH EDITION  
 ASTM C 1577  
 FILL HEIGHT = 2.6 FT

**DESIGN STRESSES**

FIELD UNITS  
 $f_c = 3,000$  PSI  
 $f_y = 60,000$  PSI (REINFORCEMENT)  
 PRECAST UNITS  
 $f_c = 3,000$  PSI  
 $f_y = 65,000$  PSI (WELDED WIRE FABRIC)

**LOADING HL93**

ALLOW 50#/SQ. FT. FOR FUTURE WEARING SURFACE

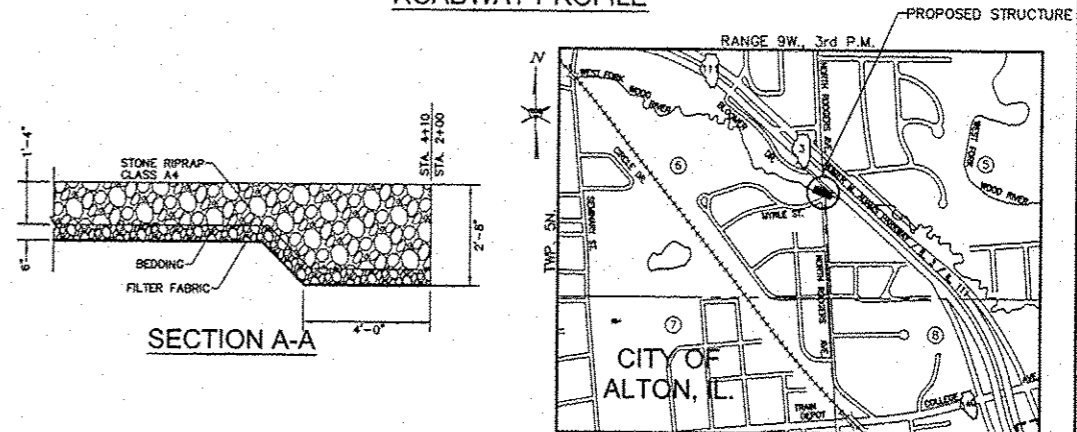


**PLAN**

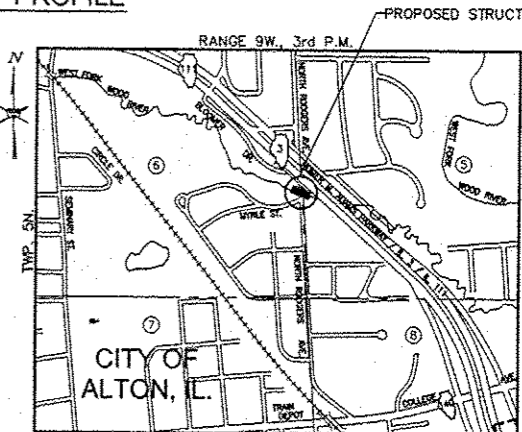
1"=10'



**ROADWAY PROFILE**



**SECTION A-A**



**LOCATION SKETCH**

GENERAL PLAN STA. 30+71.35  
 STRUCTURE NO. 060-6112  
 CITY OF ALTON, IL

ROUTE: NORTH RODGERS AVE.  
 WATERWAY: TRIBUTARY TO WEST FORK OF WOOD RIVER

REVISIONS

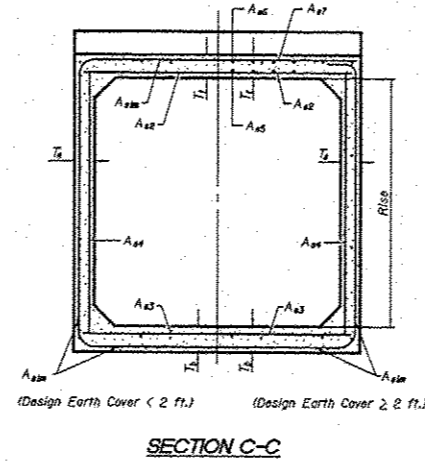
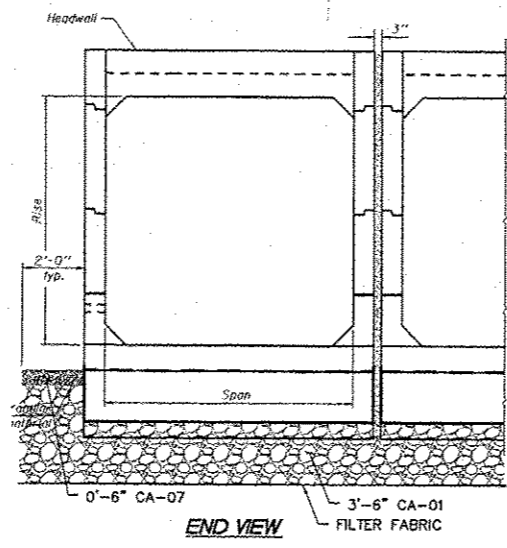
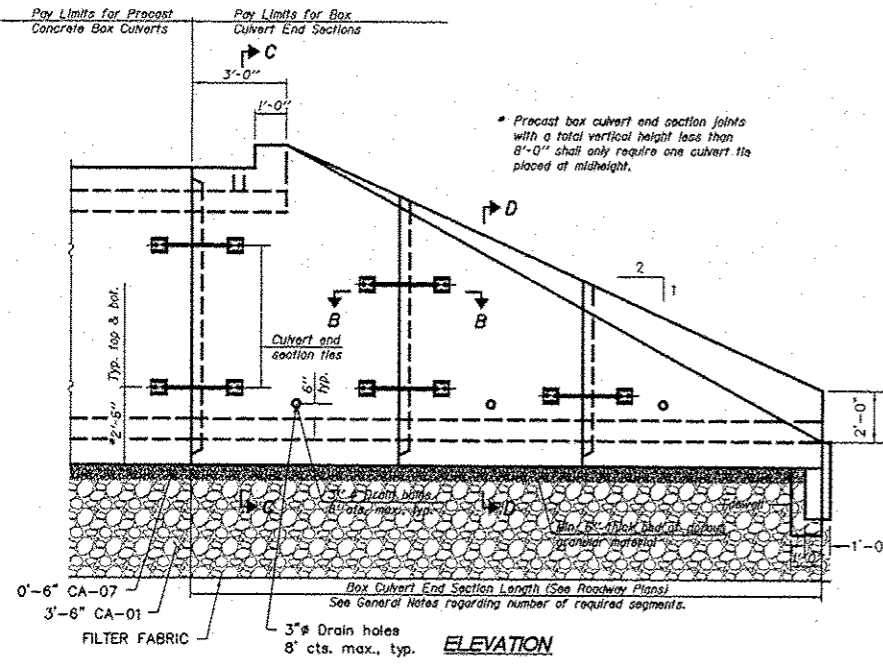
Sheppard, Morgan & Schwaab, Inc.  
 CONSULTING ENGINEERS AND LAND SURVEYORS  
 215 Market Street, P.O. Box E, Alton, IL 62821  
 10 Central Industrial Drive, Granite City, IL 62040  
 Phone: 618.467.4735 Fax: 618.467.4735  
 Email: mail@smsengineers.com  
 DESIGN FIRM # 184-000992

**SMS ENGINEERS**

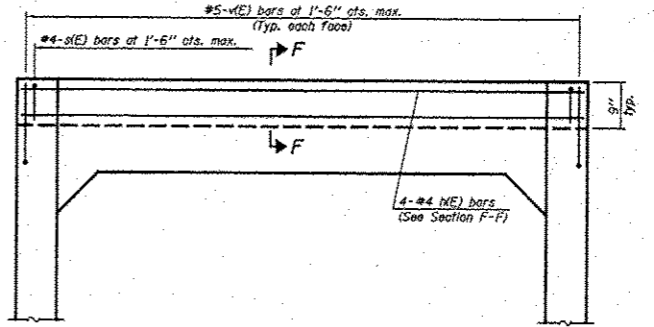
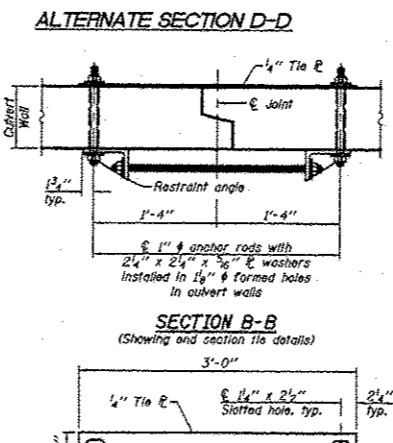
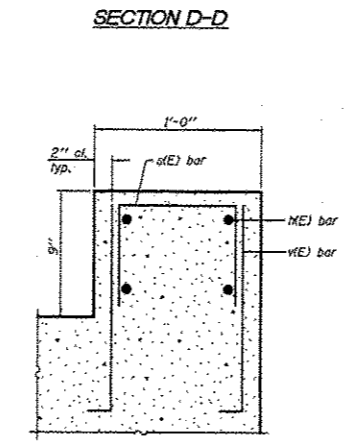
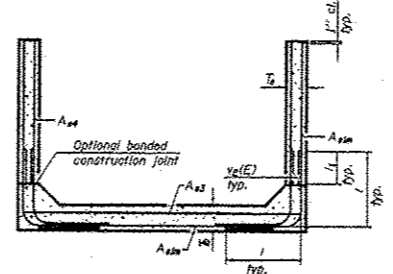
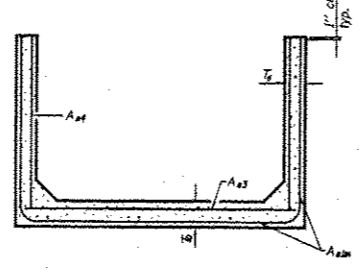
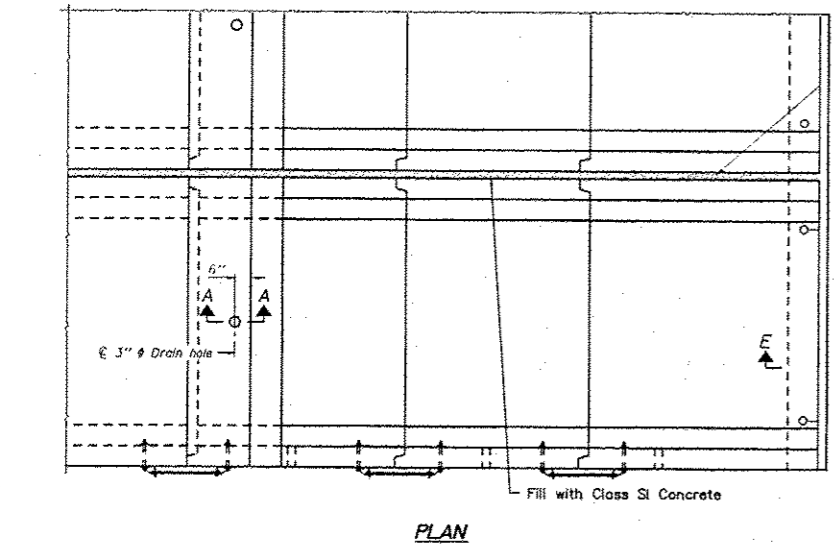
NORTH RODGERS AVE. BRIDGE REPLACEMENT  
 SECTION 13-00236-00-BR  
 CITY OF ALTON, IL  
 BOX CULVERTS

CONTRACT NO. 97607  
 DWG. NO. NORTH RODGERS BOX CULVERT.dwg  
 REF. BK. PG.  
 JOB NO. 208458  
 DSN. BY: CDD  
 DWN. BY: CDD  
 CHK. BY: DEG  
 DATE: AUGUST, 2015  
 SCALE: SEE DETAILS  
 SHEET 8 OF 21



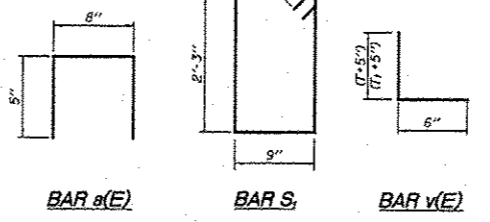
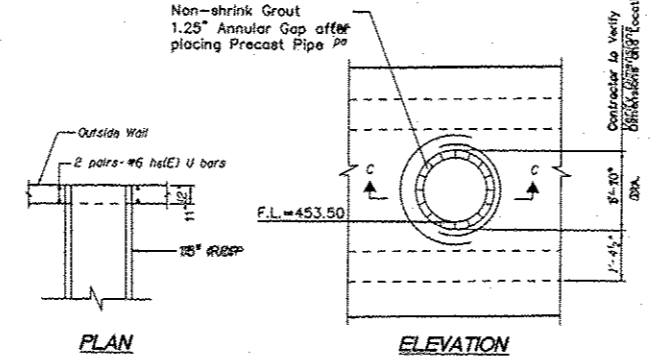
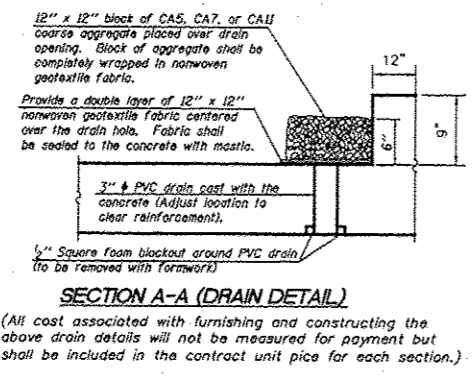
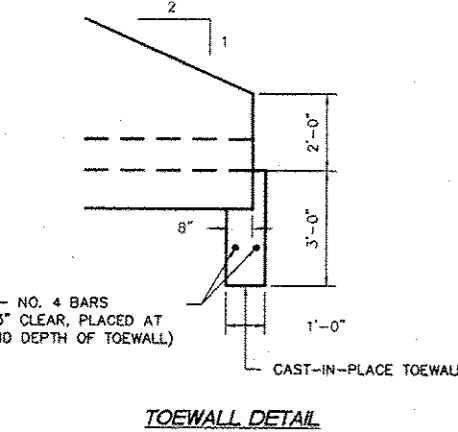
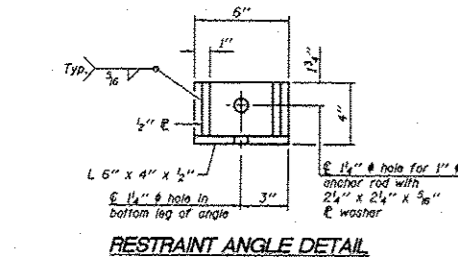


- BOX CULVERT GENERAL NOTES**
- All earth excavation and removal that is required for construction of box culverts and end sections shall be included in the cost of PRECAST CONCRETE BOX CULVERTS. This includes all earth excavation and removal that is remaining in place after the removal of the existing bridge. It shall be up to the ENGINEER to determine whether any earth excavation during box culvert construction is suitable for reuse (embankment) at other locations on the project.
  - The limits and quantities of REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES are based on the geotechnical report and soil borings and may be modified by the DISTRICT GEOTECHNICAL ENGINEER and the ENGINEER for variable subsurface conditions encountered in the field. All other excavation required for box culvert construction shall be included in the cost of PRECAST CONCRETE BOX CULVERTS.
  - The material used to replace the unsuitable material for structures removed below the bottom of the proposed box culverts and end sections shall be cleaned crushed material CA-01 on the bottom 3'-6" layer and CA-07 on the top 0'-6" layer and shall be paid for as POROUS GRANULAR EMBANKMENT, SPECIAL.
  - The excavation and work area shall be properly drained at all times during construction. All wet, loose, frozen or other unsuitable material shall be removed prior to placement of concrete or compacted backfill. The cost of any pumping required shall be included in the cost of PRECAST CONCRETE BOX CULVERTS.
  - It shall be the responsibility of the Contractor to divert any stream flow during construction in order to keep the construction areas free of water. The method of stream flow diversion shall be subject to the approval of the ENGINEER and shall be included in the cost of PRECAST CONCRETE BOX CULVERTS.
  - Box culvert and sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. This work will be measured for payment as each, with each end of each culvert being one each. End sections will be paid for at the contract unit price per each for BOX CULVERT END SECTIONS of the culvert number specified.
  - Typical box section dimensions, material, and reinforcement details for BOX CULVERT END SECTIONS shall be according to the requirements of ASTM C 1577 as required for the design of the precast concrete box culverts except as modified herein.
  - The number of segments shown in Side Elevation is for example only. Length and number of precast box sections required to construct BOX CULVERT END SECTIONS shall be determined by the Contractor.
  - See roadway plans for embankment slope.
  - 1" dia. anchor rods for the culvert ties shall conform to the requirements of ASTM F 1554, Grade 105. Structural steel for tie plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable. 2-1/4" x 2-1/4" x 5/16" plate washers shall be provided under each nut required for the anchor rods. All anchor rods in a culvert tie assembly shall be snug tightened by a few impacts of an impact wrench or the full force of a worker using an ordinary spud wrench. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of using formed holes.
  - Alternate culvert ties similar in strength and stiffness to the plan details may be provided by the Contractor. Alternate culvert ties shall be subject to approval of the ENGINEER.
  - All cost associated with furnishing and installing or constructing the headwall drains, geotextile fabric, and culvert ties will not be measured for payment but shall be included in the contract unit price for BOX CULVERT END SECTIONS of the culvert number specified.
  - Reinforcement bars designated (E) shall be epoxy coated.
  - Reinforcement bars shall conform to the requirements of ASTM A 706 Gr. 60.
  - Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications unless noted otherwise.
  - Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01. The minimum weight of the fabric shall be 6 oz. / sq. yd.
  - The cast-in-place toewalls will not be paid for separately, but shall be included in the cost for BOX CULVERT END SECTIONS of the culvert number specified. Approximately 4.5 cu. yds. of concrete will be needed for all four (4) toewalls.
  - Contractor shall coordinate with precast concrete box culvert manufacturer to account for possible creep between box segments. Creep shall be determined prior to constructing second cast-in-place toewall, if necessary.
  - 3" void between box culvert barrel runs shall be filled with Class SI concrete per Article 540.06 and shall be included in the cost of PRECAST CONCRETE BOX CULVERTS.



STATION 30+71  
BUILT 20 BY  
CITY OF ALTON  
SEC. 13-00236-00-BR  
LOADING HL93  
STR. NO. 060-6112

**NAME PLATE**  
SEE STD. S15001



T (in.)	Reinforcing Steel $A_{stn}$ (in. <sup>2</sup> / ft.)											
	2	3	4	5	6	7	8	9	10	11	12	
2	0.29	0.17										
3	0.26	0.21	0.18									
4		0.26	0.23	0.22								
5			0.33	0.29	0.27							
6				0.43	0.39	0.36	0.34	0.40				
7					0.43	0.40	0.37	0.36	0.48			
8						0.47	0.44	0.41	0.38	0.42	0.56	
9							0.54	0.46	0.41	0.50	0.65	
10								0.58	0.50	0.45	0.46	0.75

( $A_{stn}$  reinforcement based upon welded wire fabric conforming to AASHTO M 55 or M 221.)

**4. DIMENSION**

#3 bar = 2'-0"  
#4 bar = 2'-9"  
#5 bar = 3'-4"  
#6 bar = 3'-11"

**Notes:**  
Alternate Section D-D is provided to allow the Contractor the option of casting the bottom slab of the end section first followed by construction of the sidewalls using conventional forming methods. Shop drawings that detail slab thickness and reinforcement layout shall be submitted to the Engineer for review and approval when using Alternate Section D-D.  
The size and spacing of the v(E) bars shall provide a minimum reinforcement area along each face of the walls (in.<sup>2</sup>/ft.) equal to 1.03T<sub>w</sub>. v(E) bars may consist of #3 thru #6 size reinforcing bars and the longitudinal spacing shall not exceed the lesser of the wall thickness or 8 inches.  
Bonded construction joints shall be prepared according to Article 503.09 of the Standard Specifications.

**SMS ENGINEERS**  
CONSULTING ENGINEERS AND LAND SURVEYORS

Sheppard, Morgan & Schwaab, Inc.  
15 Main Street, P.O. Box E, Alton, IL 62002 618425-8755 E-mail: mail@smsengineers.com  
10 Central Industrial Drive, Granite City, IL 62040 618877-9700 E-mail: mail@smsengineers.com  
DESIGN FIRM # 184-000992

**NORTH RODGERS AVE. BRIDGE REPLACEMENT**  
SECTION 13-00236-00-BR  
CITY OF ALTON, IL.  
BOX CULVERTS NOTES AND DETAILS

**CONTRACT NO.**  
97607

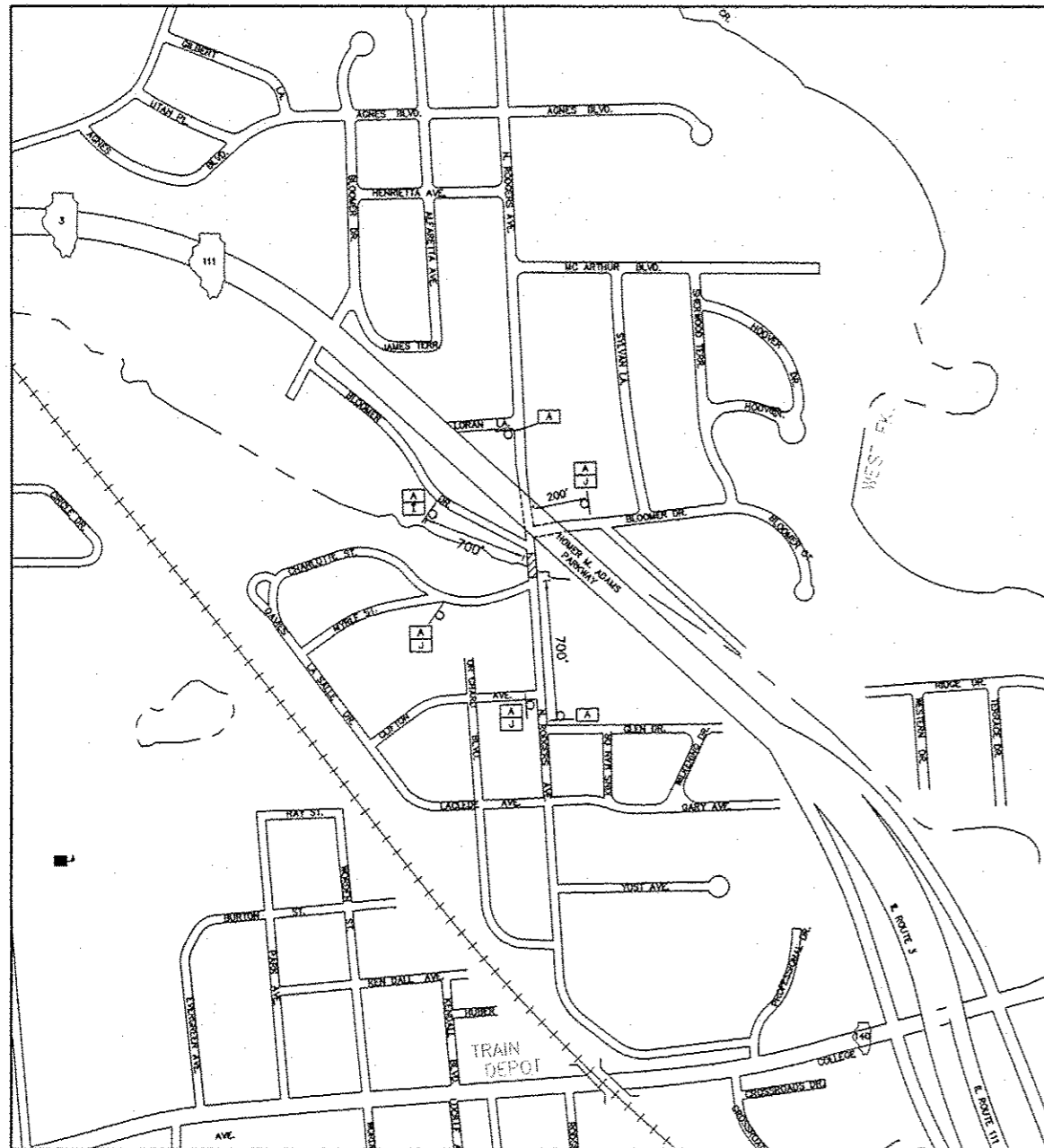
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NORTH RODGERS AVE. BRIDGE REPLACEMENT - BOX CULVERTS NOTES AND DETAILS

**REF. BK.** PG.  
JOB NO. 208458

**DSN. BY:** CDD  
**OWN. BY:** CDD  
**CHK. BY:** DEG  
**DATE:** AUGUST, 2015

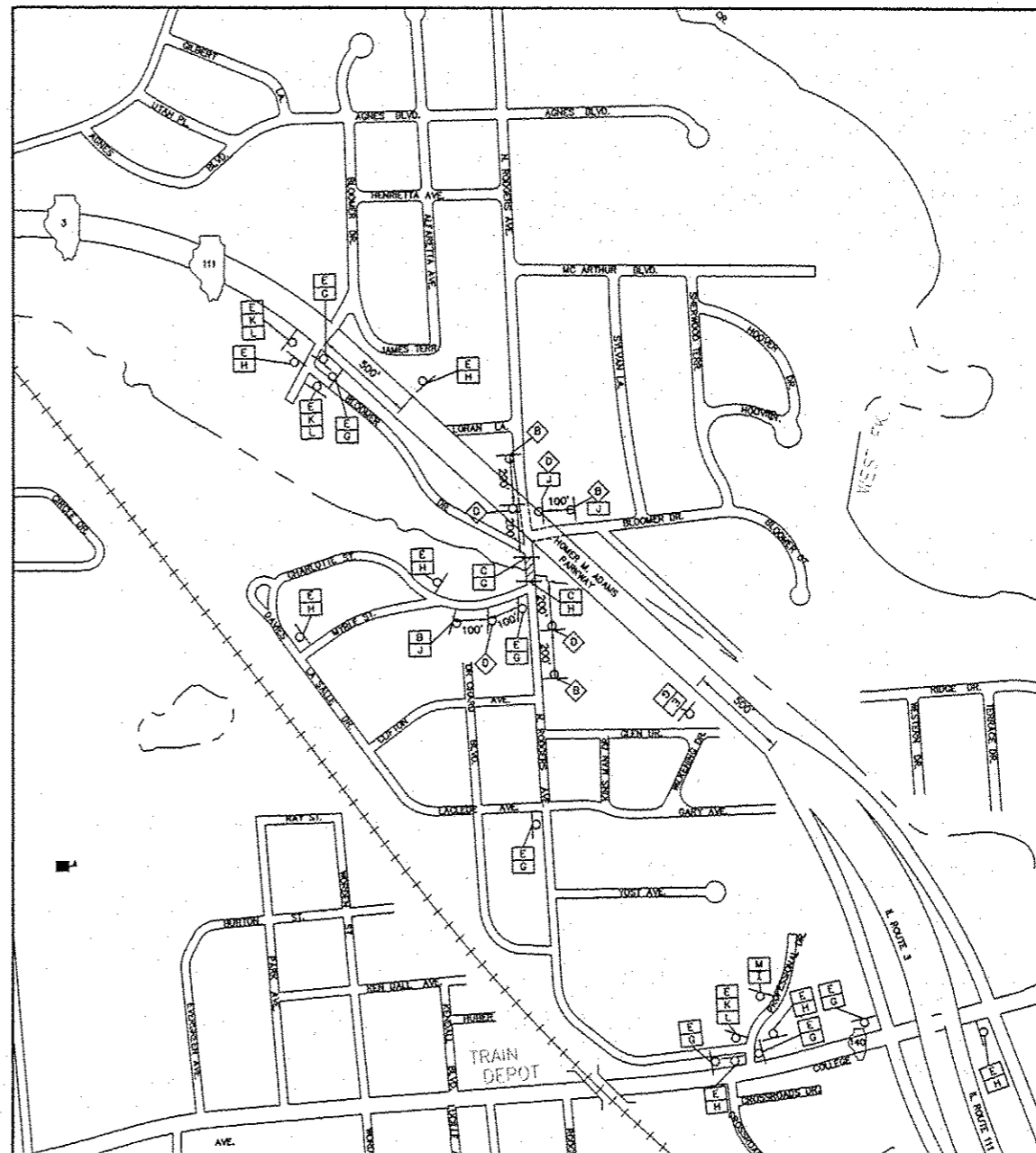
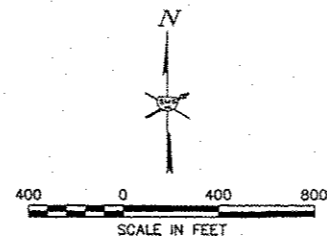
**SCALE:** AS SHOWN

**SHEET** 9 OF 21



GENERAL TRAFFIC CONTROL PLAN

SCALE: 1"=400'



TRAFFIC DETOUR PLAN

SCALE: 1"=400'

**TRAFFIC CONTROL LEGEND**

- WORK AREA
- TYPE III BARRICADE WITH REFLECTORIZED STRIPING ON BOTH SIDES WITH FLASHING LIGHTS
  - DRUM OR BARRICADE
- SIGN "ROAD CONSTRUCTION AHEAD" W20-1(0) - 48" x 48" WITH MONODIRECTIONAL FLASHING LIGHT
- SIGN "ROAD CLOSED AHEAD" W20-3 48" x 48"
- SIGN "ROAD CLOSED" R11-2 48" x 30"
- SIGN "DETOUR AHEAD" W 20-2 48" x 48"
- SIGN "N. RODGERS AVE." BLACK LETTERS ON ORANGE BACKGROUND 24" x 24"
- SIGN BLACK LETTERS ON ORANGE BACKGROUND 24" x 24"
- SIGN M4-9R 30" x 24" DETOUR
- SIGN M4-9L 30" x 24" DETOUR
- SIGN BLACK ARROW ON ORANGE BACKGROUND 24" x 18"
- SIGN BLACK ARROW ON ORANGE BACKGROUND 24" x 18"
- SIGN M4-8 24" x 12" DETOUR
- SIGN BLACK ARROW ON ORANGE BACKGROUND 18" x 18"
- SIGN "ROAD CLOSED TO THRU TRAFFIC" R11-2 48" x 30"

**TRAFFIC CONTROL NOTES**

1. THE CONTRACTOR SHALL PROVIDE THE TRAFFIC CONTROL SHOWN ON THE GENERAL TRAFFIC CONTROL PLAN AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT. ADDITIONAL TRAFFIC CONTROL SHALL BE PROVIDED AS SPECIFIED BELOW AND IN ACCORDANCE WITH THE SPECIFIED HIGHWAY STANDARDS.
2. AT TIMES WHEN ALL TRAFFIC LANES ARE OPEN, PROVIDE TRAFFIC CONTROL AS NEEDED PER HIGHWAY STANDARD 701006, 701301 OR 701501.
3. STAGE 1 - WORK TO BE PERFORMED DURING THIS STAGE INCLUDES TREE REMOVAL, PAVEMENT REMOVAL, STRUCTURE REMOVAL, EARTHWORK, BOX CULVERT CONSTRUCTION, STORM SEWERS, BACKFILLING, CURB AND GUTTER, PAVING, AND OTHER RELATED ITEMS AS NECESSARY. TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH THE GENERAL TRAFFIC CONTROL PLAN AND THE TRAFFIC DETOUR PLAN.
4. STAGE 2 - WORK TO BE PERFORMED DURING THIS STAGE INCLUDES REMAINING RIPRAP AND EARTHWORK, PAVEMENT MARKING, FINAL GRADING, SEEDING, AND OTHER RELATED ITEMS AS NECESSARY. TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH THE GENERAL TRAFFIC CONTROL PLAN AND APPLICABLE HIGHWAY STANDARDS.
5. WHERE A HIGHWAY STANDARD REQUIRES A "ROAD CONSTRUCTION AHEAD" SIGN, THIS REQUIREMENT WILL BE CONSIDERED FULFILLED BY THE SIGNS REQUIRED ON THE GENERAL TRAFFIC CONTROL PLAN.
6. ALL HAZARDS WITHIN WORK ZONES SHALL BE PROTECTED WITH TYPE I BARRICADES OR DRUMS WITH FLASHING LIGHTS.
7. ALL CONSTRUCTION SIGNS SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"
8. IF THE CONTRACTOR WISHES TO DEVIATE FROM THIS TRAFFIC CONTROL PLAN, HE SHALL PROVIDE A REVISED TRAFFIC CONTROL PLAN IN WRITING FOR THE REVIEW AND APPROVAL OF THE ENGINEER.
9. CONTRACTOR SHALL NOTIFY CITY OF ALTON PUBLIC WORKS (463-3530), CITY OF ALTON POLICE (463-3505) AND FIRE (463-3565) DEPARTMENTS, CITY OF ALTON POSTMASTER (462-2501), AND ENJOY CHURCH (465-5433) AT LEAST TWO (2) WEEKS PRIOR TO THE ANTICIPATED CLOSURE / DETOURING OF N. RODGERS AVENUE FOR SAID AGENCIES PLANNING PURPOSES. CONTRACTOR SHALL ALSO NOTIFY THESE AGENCIES THE DAY N. RODGERS AVE. IS RE-OPENED TO TRAFFIC.
10. THE DATE / TIME OF THE PROPOSED CLOSURE OF N. RODGERS AVE. SHALL BE AGREED TO BY THE ENGINEER AND CITY OF ALTON PUBLIC WORKS DEPT.

REVISIONS

**SMS ENGINEERS**  
 Sheppard, Morgan & Schwaab, Inc.  
 CONSULTING ENGINEERS AND LAND SURVEYORS  
 215 Market Street, P.O. Box E, Alton, IL 62002 618492-9155 E-mail: mail@smsengineers.com  
 10 Central Industrial Drive, Geneva, NY, IL 60130 618877-3700 E-mail: mail@smsengineers.com  
 DESIGN FIRM # 184-000992

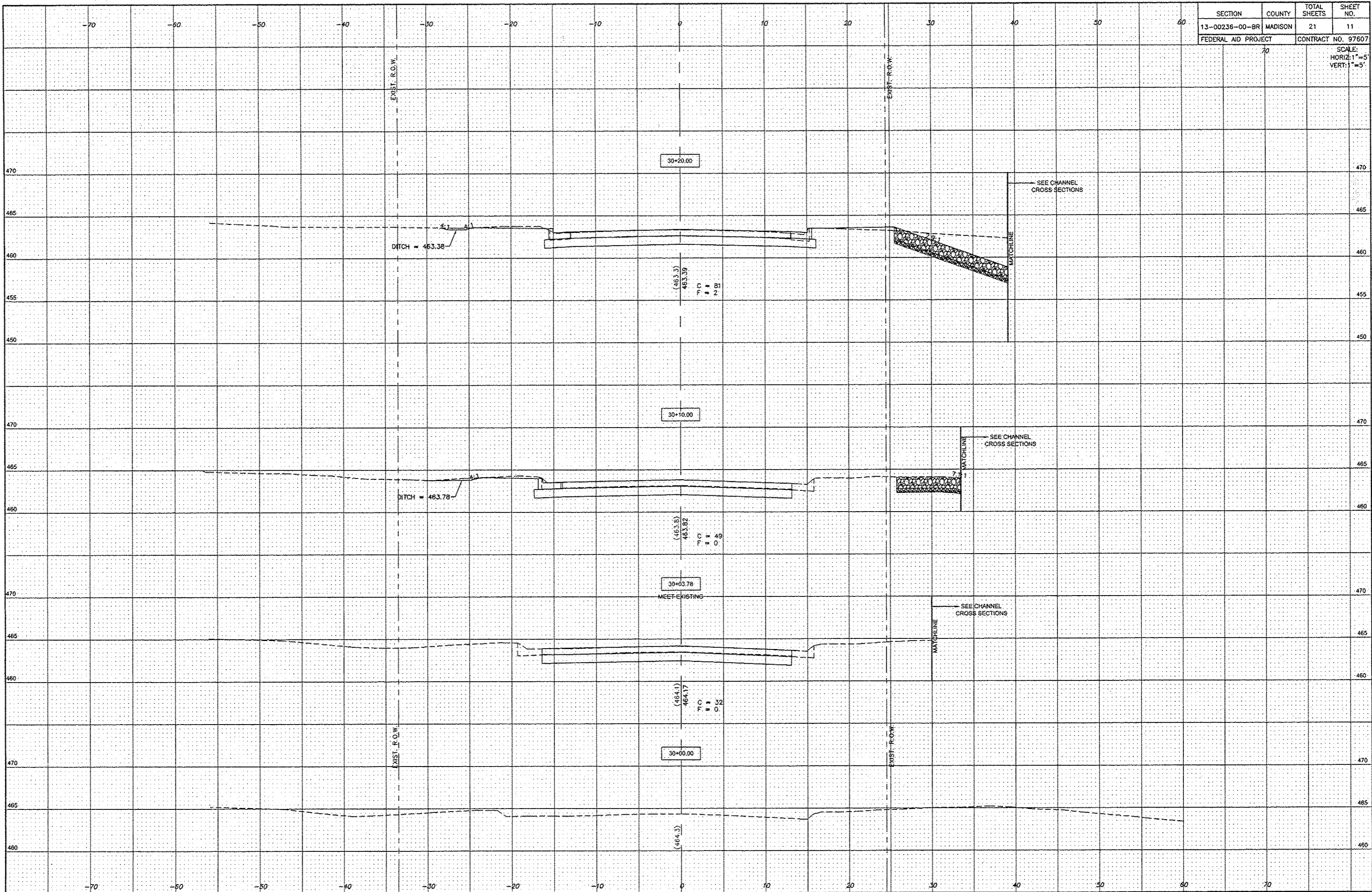
CITY OF ALTON, ILLINOIS  
 SECTION 13-00236-00-BR  
 NORTH RODGERS AVE. BRIDGE REPLACEMENT  
 TRAFFIC CONTROL PLAN

CONTRACT NO. 97607

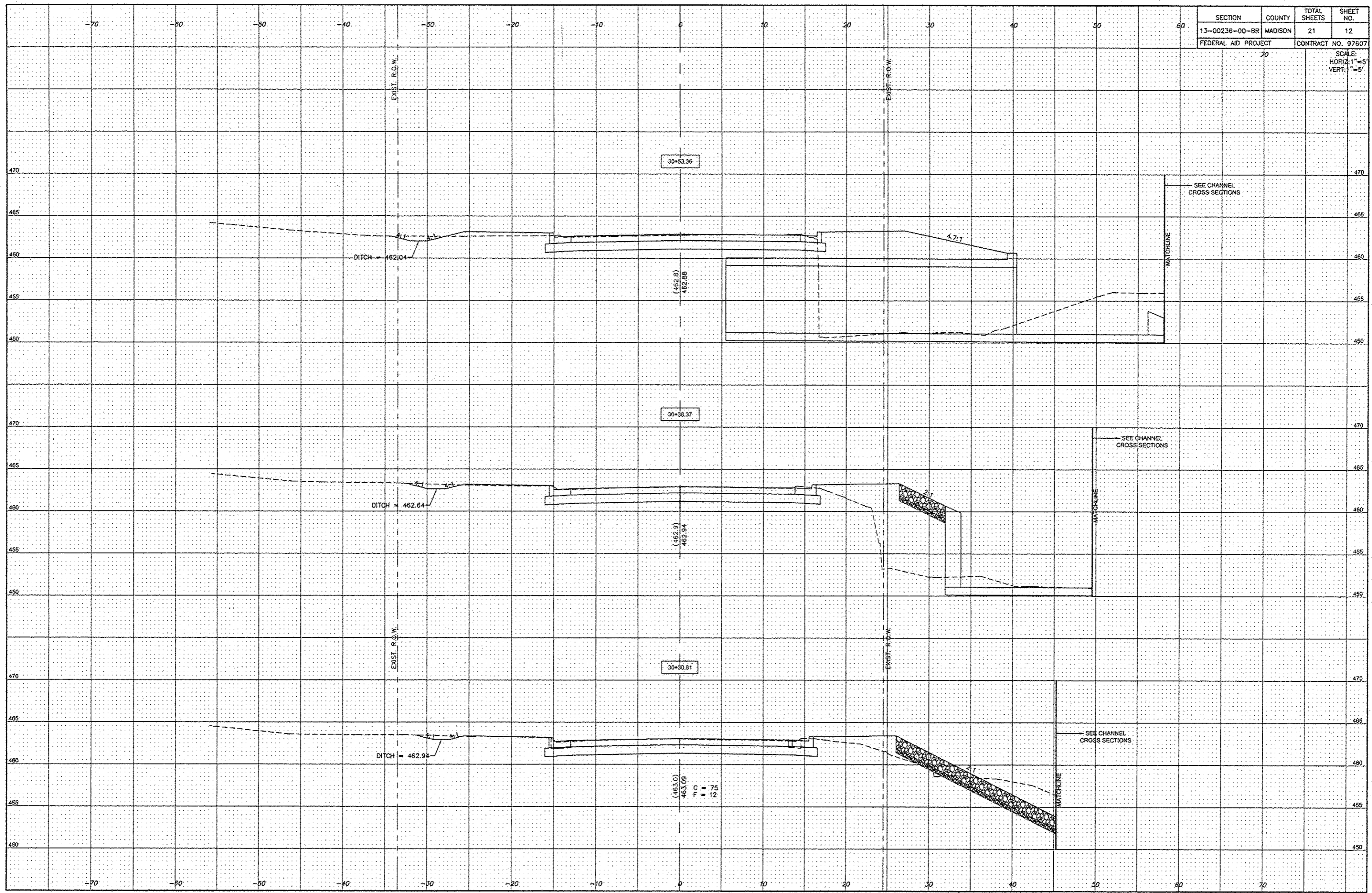
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REF. BK.	PG.
JOB NO.	
DSN. BY:	CDP
OWN. BY:	CDP
CHK. BY:	CDP
DATE:	AUGUST, 2015

SCALE: 1" = 400'  
 SHEET 10 OF 21

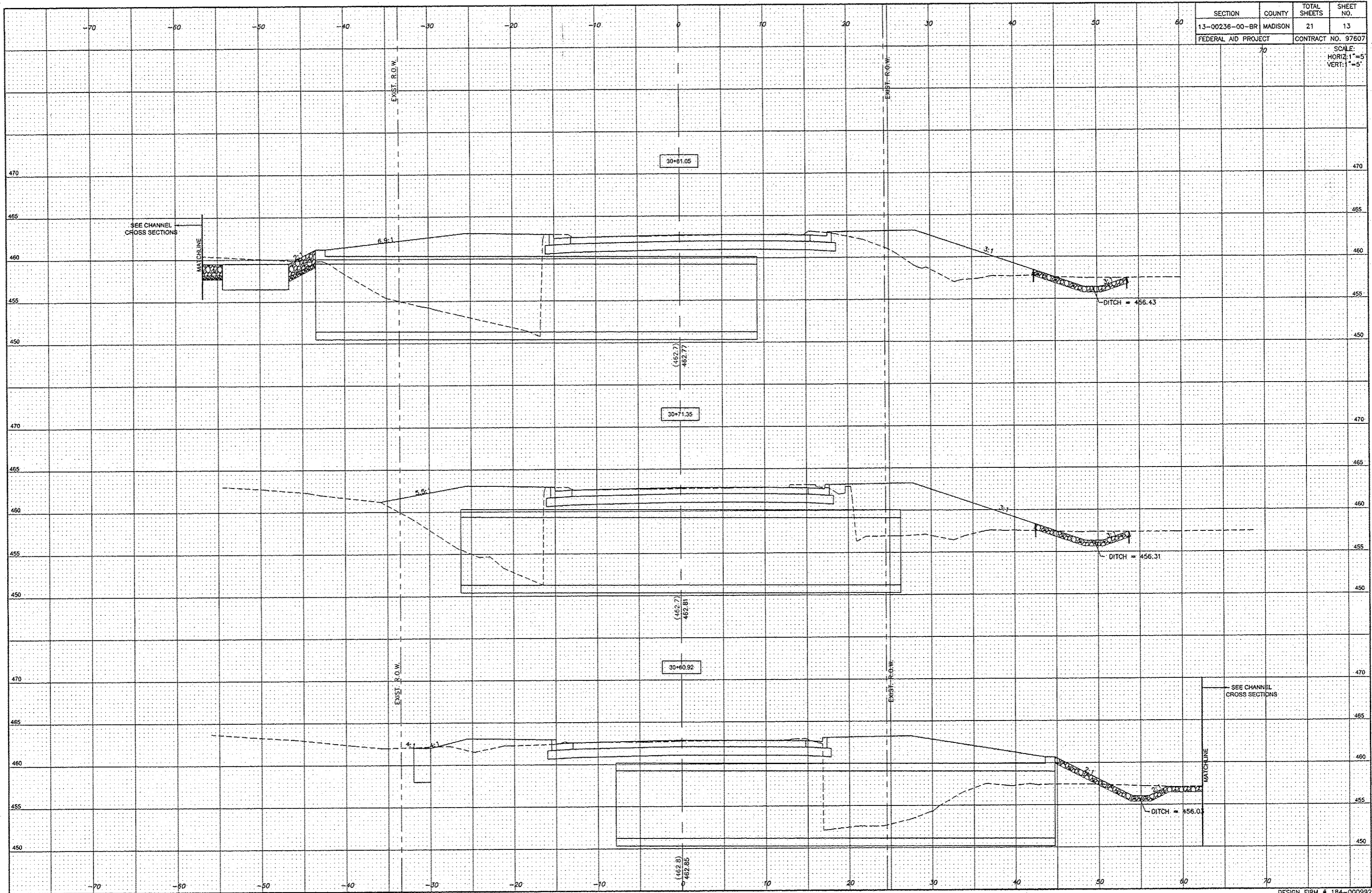
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13-00236-00-BR	MADISON	21	11
FEDERAL AID PROJECT		CONTRACT NO. 97607	
SCALE: HORIZ: 1"=5' VERT: 1"=5'			



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
13-00236-00-8R	MADISON	21	12
FEDERAL AID PROJECT		CONTRACT NO. 97807	
SCALE: HORIZ. 1"=5' VERT. 1"=5'			

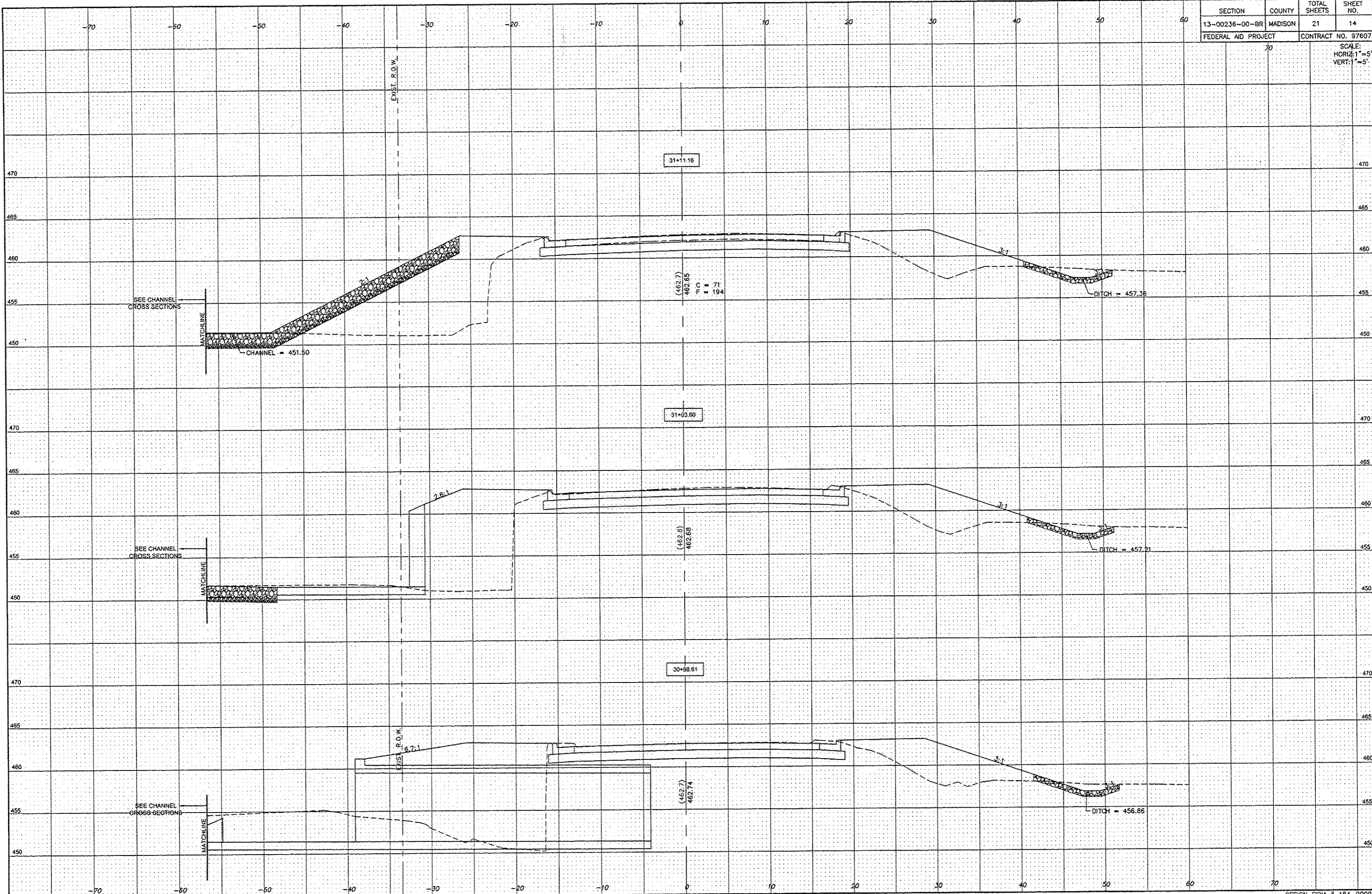


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13-00236-00-BR	MADISON	21	13
FEDERAL AID PROJECT		CONTRACT NO. 97607	
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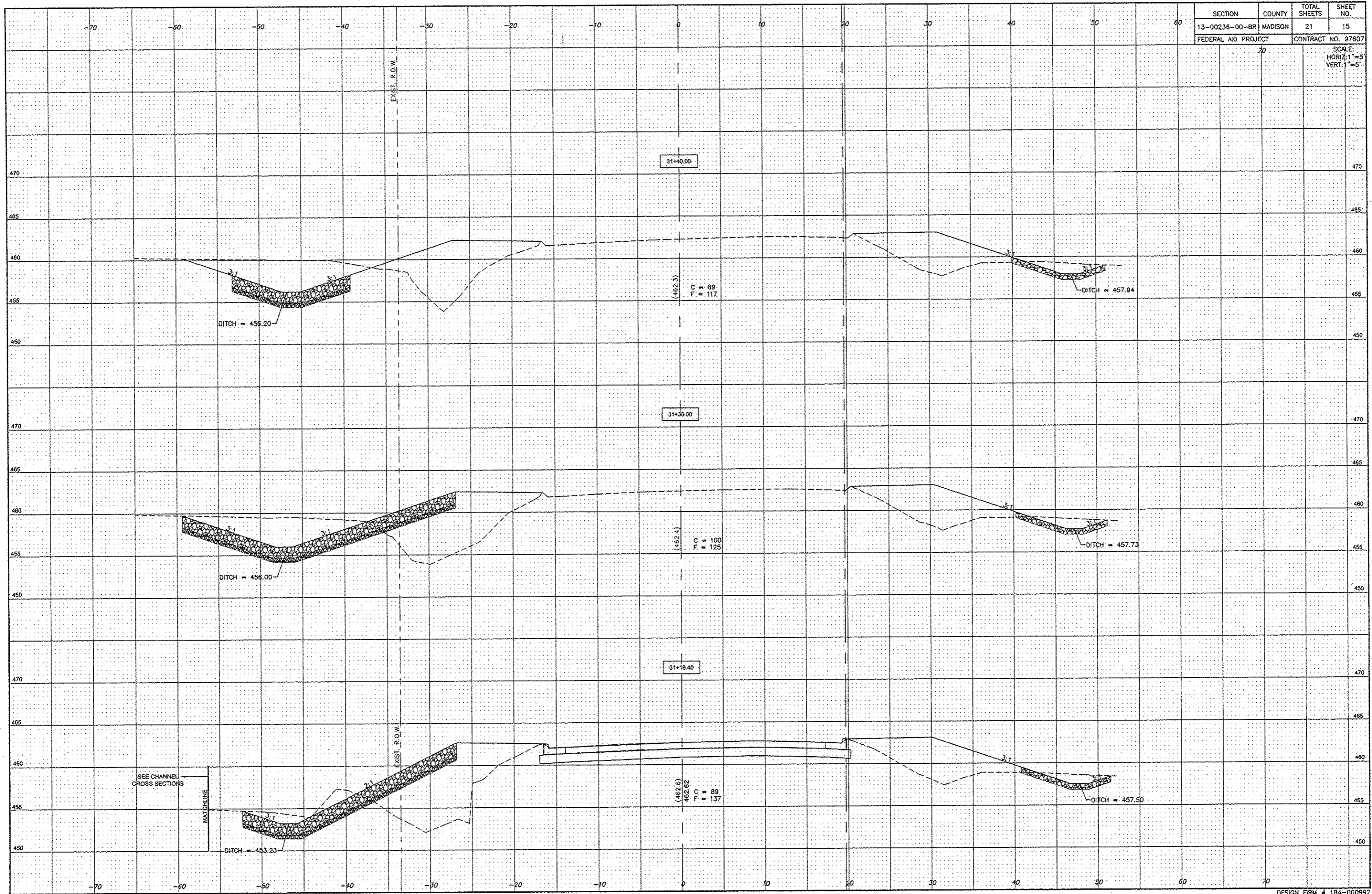


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13-00236-00-BR	MADISON	21	14
FEDERAL AID PROJECT		CONTRACT NO. 97607	

SCALE:  
HORIZ: 1"=5'  
VERT: 1"=5'

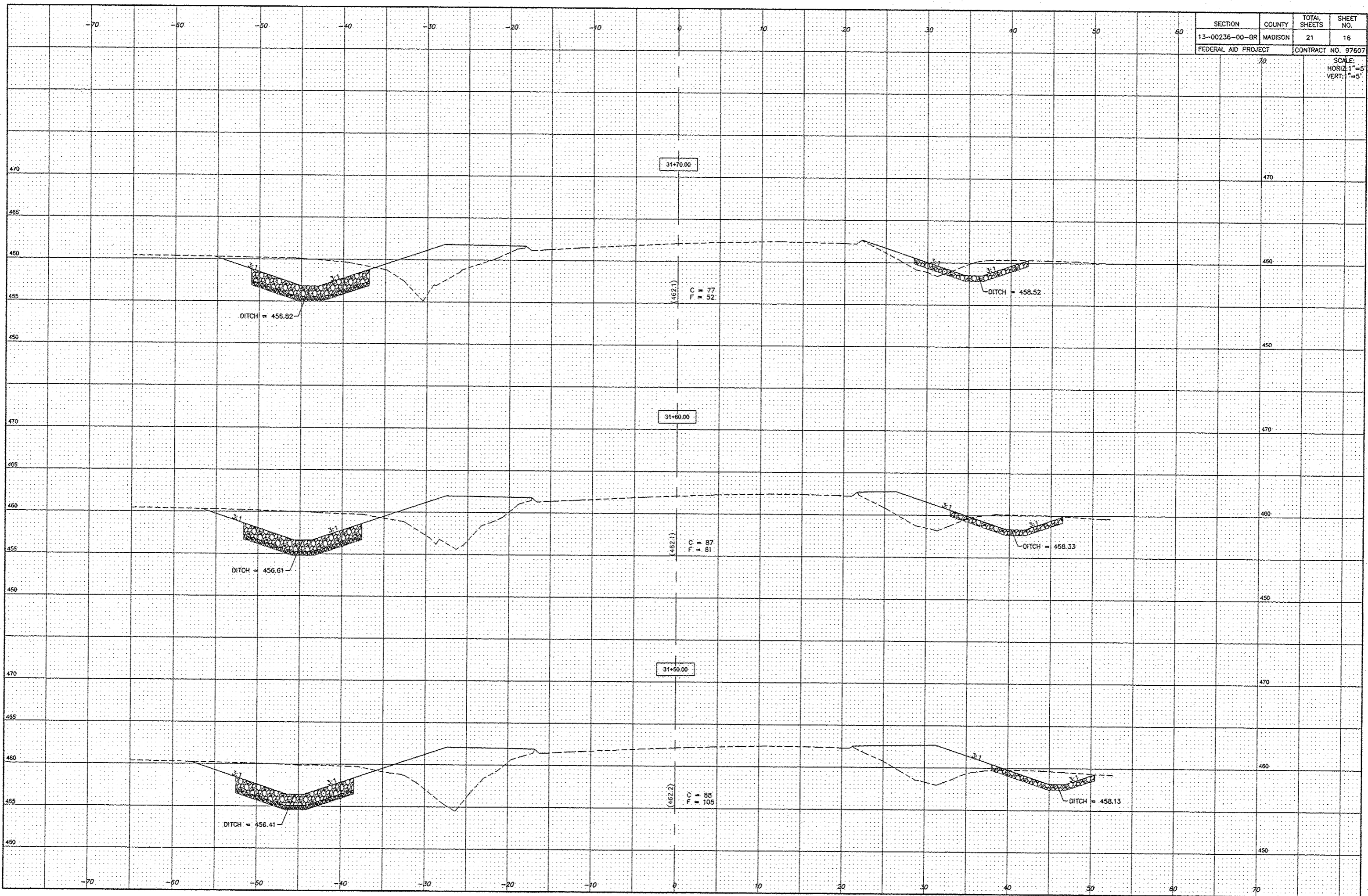


SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
13-00236-00-BR	MADISON	21	15
FEDERAL AID PROJECT		CONTRACT NO. 97607	
70		SCALE: HORIZ: 1"=5' VERT: 1"=5'	



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
13-00236-00-BR	MADISON	21	16
FEDERAL AID PROJECT		CONTRACT NO. 97607	

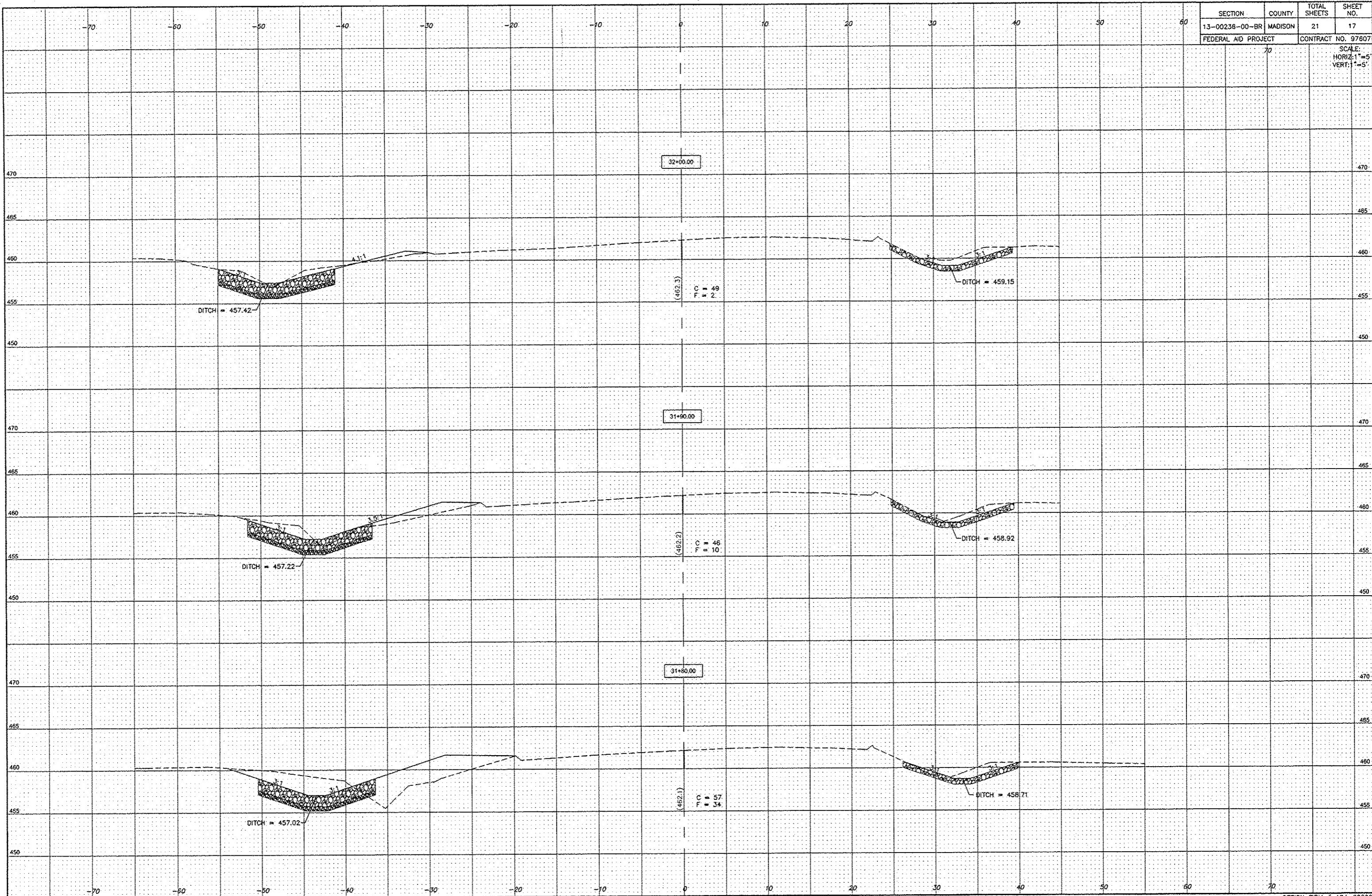
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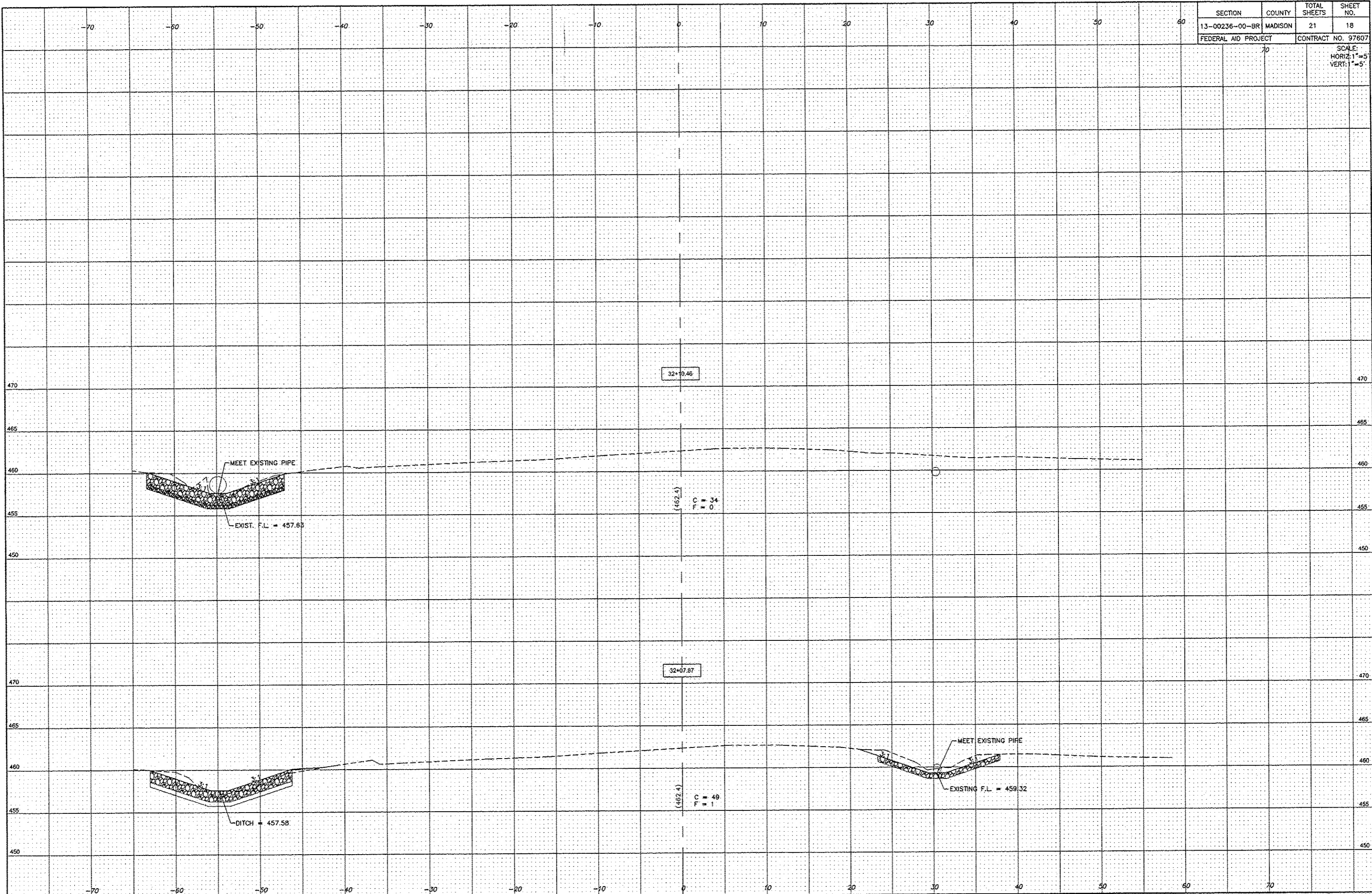
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13-00238-00-BR	MADISON	21	17
FEDERAL AID PROJECT		CONTRACT NO. 97607	

SCALE:  
HORIZ: 1"=5'  
VERT: 1"=5'



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
13-00236-00-BR	MADISON	21	18
FEDERAL AID PROJECT		CONTRACT NO. 97807	

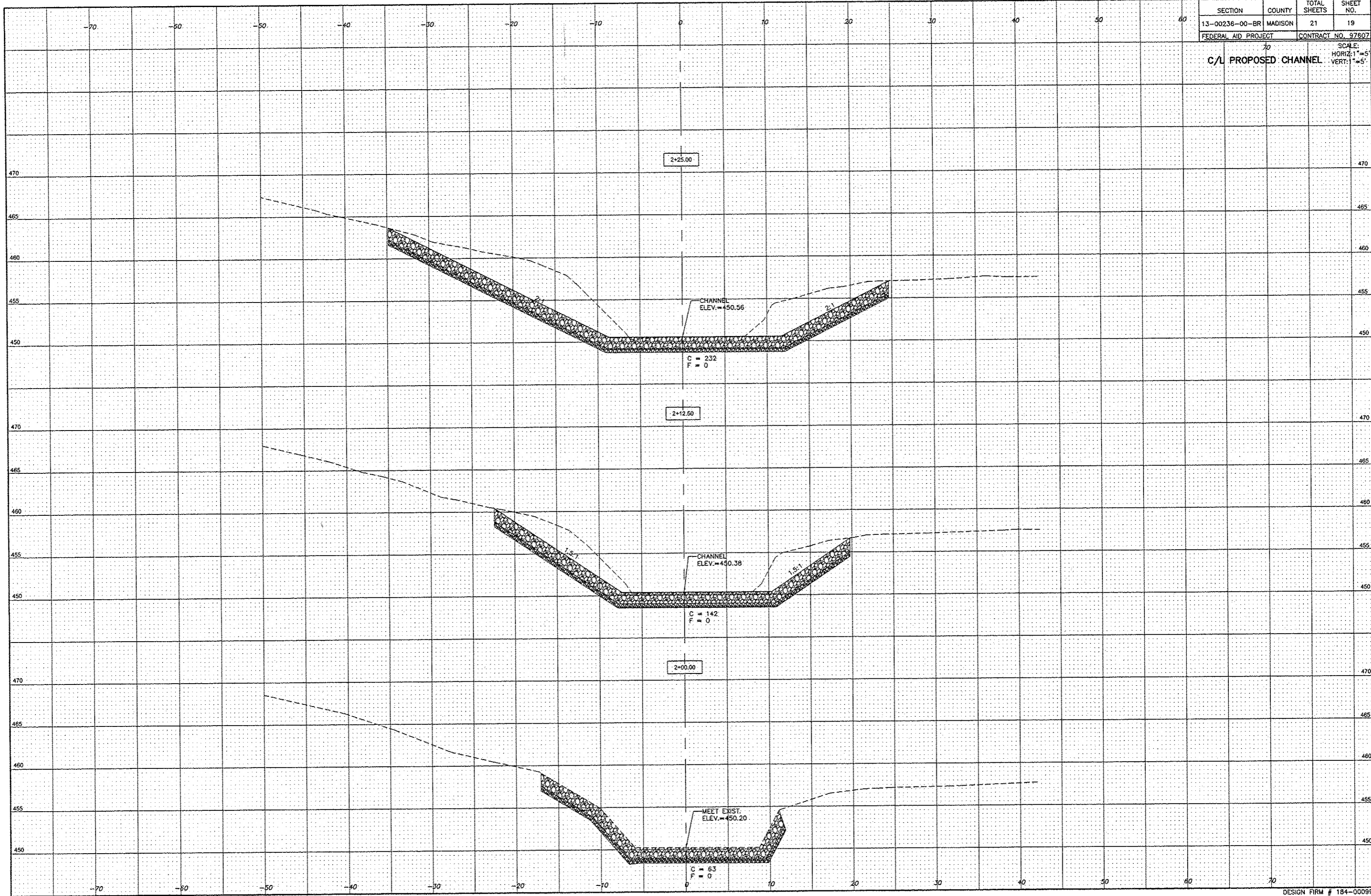
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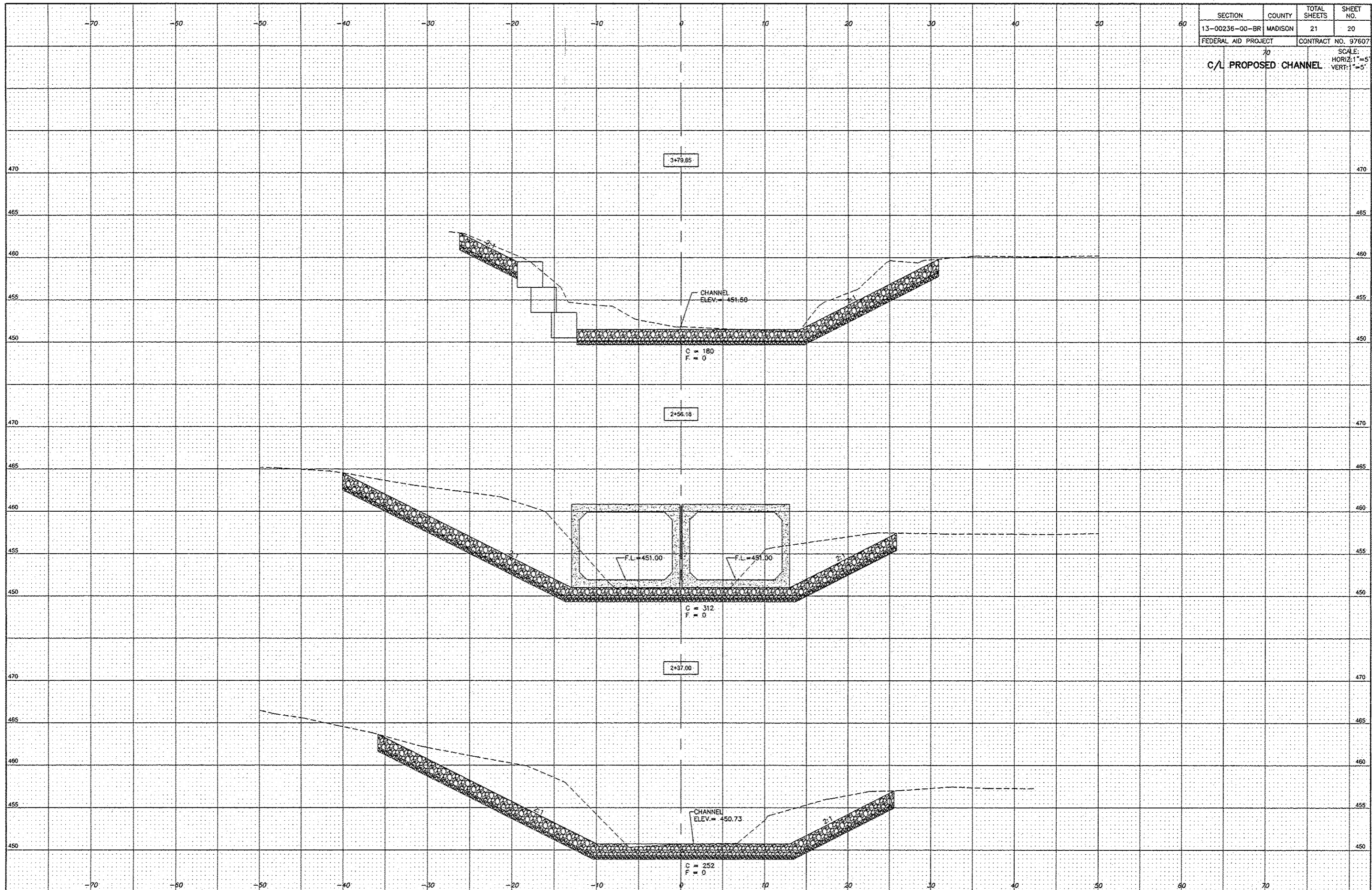
SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
13-00236-00-BR	MADISON	21	19
FEDERAL AID PROJECT		CONTRACT NO. 97607	

C/L PROPOSED CHANNEL

SCALE:  
HORIZ: 1"=5'  
VERT: 1"=5'



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
13-00236-00-BR	MADISON	21	20
FEDERAL AID PROJECT		CONTRACT NO. 97607	
C/L PROPOSED CHANNEL			SCALE: HORIZ: 1" = 5' VERT: 1" = 5'



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
13-00236-00-BR	MADISON	21	21
FEDERAL AID PROJECT		CONTRACT NO. 97607	

C/L PROPOSED CHANNEL  
 SCALE:  
 HORIZ: 1"=5'  
 VERT: 1"=5'

