INDEX OF SHEETS

- COVER SHEET
 LIST OF STANDARDS & COMMITMENTS & GENERAL NOTES
- SUMMARY OF QUANTITIES
- TYPICAL SECTIONS
- 13-16 SCHEDULE OF QUANTITIES TIE POINTS & BENCHMARKS
- 18-27 PLAN SHEETS

0

0

0

0

- 28 PLAN AND PROFILE FOR PROPOSED SN 057-8235
- 29-30 STAGING SHEETS
- 31-37 DETAILS FOR PROPOSED SN 057-8235
- WIDTH RESTRICTION SIGNING
- CROSS SECTIONS

FOR LIST OF HIGHWAY STANDARDS, SEE SHEET NO. 2

PROPOSED HIGHWAY PLANS

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

FAP ROUTE 317 (US 24) SECTION (30,31)RS-2 PROJECT NHPP-VHF1(486) 3P RESURFACING - STANDARD OVERLAY MCLEAN COUNTY

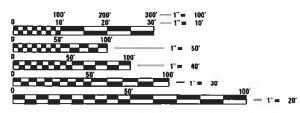
C-95-012-14 WOODFORD COUNTY LINE TO MCLEAN STREET IN GRIDLEY

TRAFFIC_DATA

2021 ADT = 3800 2041 ADT = 4200 77.6% PV% = SU% = 8.6% MU% = 13.8%

FUNCTIONAL CLASSIFICATION

OTHER PRINCIPAL ARTERIAL



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

PHONE NUMBER: (217) 465-4181 PROJECT ENGINEER: RYAN T. CARROLL

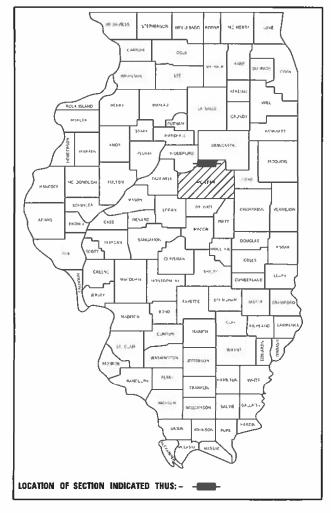
R2E R3E BEGIN PROJECT STA. 850+78.52 END PROJECT STA: 1132+85.32 - CULVERT REPLACEMENT EX SN 057-8077 PR SN 057-8235 PRECAST CONCRETE BOX CULVERT 1 @ 8' x 3' x 41.5' © STATION 1126+10.00 SKEW = 0° STA EQUATION STA. 989+98.74 BK = STA. 990+05.68 AH SCALE: 1" = 1.00 MI.

> GROSS LENGTH = 28199.86 FT. = 5.341 MILE NET LENGTH = 28199.86 FT. = 5.341 MILE

TIMOTHY B. PADGETT, PE EXPIRATION DATE LICENSE NO. 062-049162 2-28-2022

SECTION (30,31)RS-2 MCLEAN 60 1

D-95-012-14



PLANS PREPARED BY:



Design Firm No. 184-001220 Swansea, Illinois 62226 Tel: 618.624.4488 www.twm-inc.com License Expires: 04/30/2023

ILLINOIS - MISSOURI - TENNESSEE

		_
	STATE OF ILLINOIS	
	DEPARTMENT OF TRANSPORTATION	
100		
SUBMITTED	2/15 20 3-1	
×	emila Marnett swa	
	REGIONAL ENGINEER	
Februa	ry 4 20 22	
-	- 61 -71	
	ENGINEER OF DESIGN AND ENVIRONMENT	
Februa	- 1 62	
rebrua	1 - 1 - 1 -	
6	sephen Moralla	
DIREC	CTOR OF HIGHWAYS PROJECT IMPLEMENTATION	2

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

CONTRACT NO. 70988

GENERAL NOTES

G.N. - 100A

ELECTRONIC FILES AND/OR ELECTRONIC SURVEY INFORMATION INCLUDING CADD FILES WILL NOT BE AVAILABLE TO THE CONTRACTOR.

i.N. - 105.09A

ALL ELEVATIONS SHOWN IN THE PLANS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

G.N. - 406H

MIXTURE REQUIREMENTS

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THE PROJECT:

LOCATION	US 24	US 24	US 24	US 24
MIXTURE USE	BINDER	SURFACE	CLASS D	INCIDENTAL
AC/PG	PG 64-22	PG 64-22	PG 64-22	PG 64-22
DESIGN AIR VOIDS	4.0% @ NDES=70	4.0% @ NDES=70	4.0% @ NDES=70	4.0% @ NDES=70
MIX COMP (GRADATION)	IL 9.5 FG	IL 9.5	IL 19.0	IL 9.5
FRICTION AGGREGATE	N.A.	MIX C	N.A.	MIX C
MIXTURE WEIGHT	112	112	112	112
QUALITY MANAGEMENT PROGRAM	QCP	QCP	QC/QA	QC/QA
SUBLOT SIZE	1000	1000	N.A.	N.A.

G.N. - 542.07

AT LOCATIONS WHERE END SECTIONS ARE SPECIFIED, CAST-IN-PLACE CONCRETE HEADWALLS WILL NOT BE ALLOWED.

G.N. - 663A (MODIFIED)

CALCIUM CHLORIDE SHALL BE APPLIED FOR AGGREGATE SHOULDERS DURING STAGE CONSTRUCTION FOR THE SOLE PURPOSE OF CONTROLLING DUST. THIS WORK SHALL BE PERFORMED ON ALL FINAL SURFACES AS WELL AS ANY REMAINING AGGREGATE SURFACES THAT WOULD LAY OVER ANY PARTICULAR WEEKEND.

THE FOLLOWING APPLICATION RATE HAS BEEN USED TO CALCULATE THIS ESTIMATEED QUANTITY: $5LBS/SQ\ YD$.

ANY ADDITIONAL QUANTITY FOR MAINTENANCE WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 WHEN SPECIFIED BY THE ENGINEER.

G.N. - 703A

SHORT TERM PAVEMENT MARKING SHALL BE APPLIED TO THE PAVEMENT AFTER ANY OF THE FOLLOWING:

COLD MILLING AND/OR PLACING BITUMINOUS MATERIALS (TACK COAT), LEVELING BINDER (MACHINE METHOD), BINDER AND SURFACE COURSES.

SHORT TERM PAVEMENT MARKING PLACED ON THE SURFACE SHALL COINCIDE WITH THE FINAL PAVEMENT STRIPING.

SHORT TERM PAVEMENT MARKING PLACED PRIOR TO THE SURFACE SHALL COINCIDE WITH THE EXISTING PAVEMENT MARKINGS.

USE 4 FEET PER 40 FEET (OR 10% PER STATION).

G.N. - 78

THE FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING THE RAISED REFLECTIVE PAVEMENT MARKERS.

LIST OF STANDARDS

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420001-10	PAVEMENT JOINTS
420701-03	PAVEMENT WELDED WIRE REINFORCEMENT
442201-03	CLASS C AND D PATCHES
515001-04	NAME PLATE FOR BRIDGES
667101-02	PERMANENT SURVEY MARKERS
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5M) AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5M) TO 24" (600mm) FROM PAVEMENT EDGE
701011-04	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701206-05	LANE CLOSURE, 2L, 2W, NIGHT ONLY, FOR SPEEDS ≥ 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-04	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS DAY ONLY
701336-07	LANE CLOSURE, 2L, 2W, WORK AREAS IN SERIES, FOR SPEEDS ≥ 45 MPH
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701901-08	TRAFFIC CONTROL DEVICES
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

STRUCTURE INFORMATION

BASED ON STRUCTURAL ANALYSIS, THE FOLLOWING STRUCTURES CAN BE CROSSED WITH AN EMPTY MATERIAL TRANSFER DEVICE WITH THE FOLLOWING MAXIMUM GROSS WEIGHT RESTRICTIONS:

SN 057-8068 (40 TONS) SN 057-8071 (40 TONS) SN 057-8073 (32 TONS) SN 057-8074 (40 TONS) SN 057-8077 (32 TONS) SN 057-8222 (40 TONS) SN 057-8223 (40 TONS) SN 057-8224 (40 TONS)

COMMITMENTS

SCALE: NTS

THERE ARE NO COMMITMENTS FOR THIS CONTRACT.

VM. INC.	USER NAME = bbillhartz	DESIGNED -	REVISED -
v.TWM-INC.COM		DRAWN -	REVISED -
ESIGN FIRM	PLOT SCALE = 2.0000 / in	CHECKED -	REVISED -
CENSE NO: 34-001220	PLOT DATE = 12/14/2021	DATE -	REVISED -

	TRUCTION CODE			
	FAP 317 (US 24)	FAP 317 (US 24)		
	CULVERT NO. 1	ROADWAY		
	STA. 1126+10	STA. 850+78.52 TO STA. 1132+85.32		
	SN 057-8235			
	MCLEAN COUNTY	MCLEAN COUNTY		
	80% FEDERAL / 20% STATE	80% FEDERAL / 20% STATE		
	0004	0005		
	RURAL	RURAL		
	80			
	57			
	0.5			
	0.3			
	45			
	45			
	45			
	0.5			
	100			
	44			
_				
_	200			

				MCLEAN COUNTY	MCLEAN COUNTY	
				80% FEDERAL / 20% STATE	80% FEDERAL / 20% STATE	
CODE NO.	PAY ITEM	UNIT	TOTAL QUANT I TY	0004	0005	
1101			25/111777	RURAL	RURAL	
20200100	EARTH EXCAVATION	CU YD	80	80		
20700220	POROUS GRANULAR EMBANKMENT	CU YD	57	57		
25000210	SEEDING, CLASS 2A	ACRE	0.5	0.5		
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	45	45		
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	45	45		
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	45	45		
25100115	MULCH, METHOD 2	ACRE	0.5	0.5		
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	100	100		
28000305	TEMPORARY DITCH CHECKS	FOOT	44	44		
28000400	PERIMETER EROSION BARRIER	FOOT	200	200		
28000500	INLET AND PIPE PROTECTION	EACH	1	1		
28100201	STONE RIPRAP, CLASS A1	TON	52	52		
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	50		50	

TWM, INC IL DESIGN FIRI LICENSE NO: 184-001220

C.	USER NAME = efisher	DESIGNED -	REVISED -
сом		DRAWN -	REVISED -
IRM	PLOT SCALE = 2 0000 / in	CHECKED -	REVISED -
0:	PLOT DATE = 12/15/2021	DATE -	REVISED -

STATI	OF II	LLINOIS
DEPARTMENT	OF TR	ANSPORTATION

	SUMMARY OF QUANTITIES						F.A.P. RTE	SECT	ПОИ	COUNTY	TOTAL SHEETS	SHEET NO.
							317	317 (30, 31)RS-2		MCLEAN	60	3
									CONTRACT	T NO. 70	988	
	SCALE: N.T.S. SHEET 1 OF 5 SHEETS STA. TO STA.								ILLINOIS FED	AID PROJECT		

				CONSTRUCTION CODE			
				FAP 317 (US 24)	FAP 317 (US 24)		
				CULVERT NO. 1	ROADWAY		
				STA. 1126+10	STA. 850+78.52 TO STA. 1132+85.32		
				SN 057-8235			
				MCLEAN COUNTY	MCLEAN COUNTY		
				80% FEDERAL / 20% STATE	80% FEDERAL / 20% STATE		
CODE NO.	PAY ITEM	UNIT	TOTAL QUANTITY	0004	0005		
NO.			QUANTITI	RURAL	RURAL		
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	54990		54990		
40600370	LONGITUDINAL JOINT SEALANT	FOOT	28200		28200		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	157		157		
40602970	HOT-MIX ASPHALT BINDER COURSE, IL-9.5FG, N70	TON	4848		4848		
40604052	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N70	TON	5823		5823		
40800029	BITUMINOUS MATERIALS (TACK COAT)	POUND	1412		1412		
10000023	BITOMINOUS MATERIALS (MARK COM)	1 00112	1112		1112		
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	310		310		
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	18836		18836		
	1 272	34 .5	10050		10050		
44000160	HOT-MIX ASPHALT SURFACE REMOVAL, 2 3/4"	SQ YD	68933		68933		
44200050	WELDED WIRE REINFORCEMENT	SQ YD	68	68			
		1 2 1 2					
44201409	CLASS C PATCHES, TYPE IV, 14 INCH	SQ YD	68	68			
44201815	CLASS D PATCHES, TYPE II, 14 INCH	SQ YD	749		749		
44201819	CLASS D PATCHES, TYPE III, 14 INCH	SQ YD	138		138		
		_					

M TWI
SIC
1 0

M. INC.	USER NAME = efisher	DESIGNED -	REVISED -
TWM-INC.COM		DRAWN -	REVISED -
	PLOT SCALE = 2 0000 / in	CHECKED -	REVISED -
NSE NO: 1-001220	PLOT DATE = 12/15/2021	DATE -	REVISED -

F SUMMARY OF CUANTITIES							SEC ⁻	TION		COUNTY	TOTAL SHEETS	SHEET NO.
SUMMARY OF QUANTITIES					317	(30, 3	1)RS-2		MCLEAN	60	4	
										CONTRACT	NO. 70	0988
SCALE: N.T.S.	SHEET 2	OF 5	SHEETS	STA.	TO STA.			ILLINOIS	FED. A	D PROJECT		

CONSTRUCTION CODE

CONSTRUCTION CODE									
FAP 317 (US 24)	FAP 317 (US 24)								
CULVERT NO. 1	ROADWAY								
STA. 1126+10	STA. 850+78.52 TO STA. 1132+85.32								
SN 057-8235									
MCLEAN COUNTY	MCLEAN COUNTY								
80% FEDERAL / 20% STATE	80% FEDERAL / 20% STATE								
0004	0005								
RURAL	RURAL								
<u> </u>									

				SN 057-8235	
				MCLEAN COUNTY	MCLEAN COUNTY
				80% FEDERAL / 20% STATE	80% FEDERAL / 20% STATE
CODE	PAY ITEM	UNIT	TOTAL	0004	0005
NO.	· · · · · · ·		QUANTITY	RURAL	RURAL
44212204	THE DADG 2/AII	F A CI I	1.1		
44213204	TIE BARS 3/4"	EACH	11	11	
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	369	369	
48101300	AGGNEGATE SHOOLDERS, TITE B 0	30 10	309	309	
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	5559		5559
.01011					
48203003	HOT-MIX ASPHALT SHOULDERS, 1 1/2"	SQ YD	18800		18800
		· ·			
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1	1	
51500100	NAME PLATES	EACH	1	1	
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	56	56	
54001001	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	2	2	
54010803	PRECAST CONCRETE BOX CULVERTS 8' X 3'	FOOT	42	42	
54260315	TRAVERSARIE DIRE CRATE FOR CONCRETE END SECTION	FOOT	95	95	
34200313	TRAVERSABLE PIPE GRATE FOR CONCRETE END SECTION	1001	95	9.5	
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	59	59	
		34 .5			
64200108	SHOULDER RUMBLE STRIPS, 8 INCH	FOOT	54033		54033
66300105	CALCIUM CHLORIDE APPLIED	TON	1	1	

TWM	TWM www.rw
	IL DESIG
ENGINEERING	LICENS
GEOSPATIAL SERVICES	184-0

M, INC.	USER NAME = efisher	DESIGNED -	REVISED -
TWM-INC.COM		DRAWN -	REVISED -
SIGN FIRM	PLOT SCALE = 2.0000 / in	CHECKED -	REVISED -
ENSE NO: 1-001220	PLOT DATE = 12/15/2021	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	-		F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS				
SUMMARY OF QUANTITIES						317	(30, 31)RS-2	MCLEAN	60	5
								CONTRACT	T NO. 70	0988
SCALE: N.T.S.	SHEET 3	OF 5	SHEETS	STA.	TO STA.		ILLINOIS FED.	AID PROJECT		

CONSTRUCTION CODE							
FAP 317 (US 24)	FAP 317 (US 24)						
CULVERT NO. 1	ROADWAY						
STA. 1126+10	STA. 850+78.52 TO STA. 1132+85.32						
SN 057-8235							
MCLEAN COUNTY	MCLEAN COUNTY						
80% FEDERAL / 20% STATE	80% FEDERAL / 20% STATE						
0004	0005						
RURAL	RURAL						
	6						

				SN 057-8235	
				MCLEAN COUNTY	MCLEAN COUNTY
				80% FEDERAL / 20% STATE	80% FEDERAL / 20% STATE
CODE	PAY ITEM	UNIT	TOTAL	0004	0005
NO.	17.7	0	QUANTITY	RURAL	RURAL
67000500	ENGINEERIC FIELD OFFICE TYPE D				
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	6		6
67100100	MOBILIZATION	L SUM	1		1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1		1
70100455	TRAFFIC CONTROL AND PROTECTION, STANDARD 701206	L SUM	1		1
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1		1
70100400	TRAITIC CONTROL AND TROTECTION, STANDARD 701300	L 30M	1		1
70100600	TRAFFIC CONTROL AND PROTECTION, STANDARD 701336	L SUM	1		1
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1		1
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	18		18
70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	1	
70300100	SHORT TERM PAVEMENT MARKING	FOOT	8460		8460
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	940		940
	STORT TENET TWEETEN PRINCIPLO REPOVAL	34 11	310		J70
70300221	TEMPORARY PAVEMENT MARKING - LINE 4" - PAINT	FOOT	62655		62655
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	62655		62655

*= SPECIALTY ITEM



TWM, INC.

DESIGNED -REVISED TWM, INC.
WWW.TWM INC.COM

ENGINEERING
LICENSE NO:
LICENSE NO:
184-001220

USER NAME = enising

PLOT SCALE = 2.0000 ' / in.
PLOT DATE = 12/15/2021 DRAWN REVISED PLOT SCALE = 2.0000 ' / in. CHECKED -REVISED DATE

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

		SUMM	ARY	OF QU	ANTITIES	
CALE: N.T.S.	SHEET	4 OF	5	SHEETS	STA.	TO STA.

					CONS	TRUCTION CODE
					FAP 317 (US 24)	FAP 317 (US 24)
					CULVERT NO. 1	ROADWAY
					STA. 1126+10	STA. 850+78.52 TO STA. 1132+85.32
					SN 057-8235	
_					MCLEAN COUNTY	MCLEAN COUNTY
					80% FEDERAL / 20% STATE	80% FEDERAL / 20% STATE
	CODE NO.	PAY ITEM	UNIT	TOTAL QUANTITY	0004	0005
	110.			20/11/11/1	RURAL	RURAL
*	70100100	DATCED DEFLECTIVE DAVEMENT MADKED	FACIL	252		25.2
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	352		352
_						
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	352		352
F						
	78300202	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	20885		20885
	70300202	TAVERENT PRINCING REPOVAL WATER BEASTING	30 11	20003		20003
H						
	X0900064	MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES	SQ YD	59	59	
	X4400196	HOT-MIX ASPHALT SURFACE REMOVAL, SPECIAL	SQ YD	2161		2161
-						
	V7200201	WIDTH DECEDICATION CLONING	I CLIM	1		1
	X7200201	WIDTH RESTRICTION SIGNING	L SUM	1		1
H						
*	XZ193400	SURVEY MARKER, TYPE 2 (SPECIAL)	EACH	2		2
ı						
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1		1
-						
	70020700	DEDMANENT DENCH MADIC	FACIL	1		
*	Z0038700	PERMANENT BENCH MARKS	EACH	1	1	
-						
*	Z0070100	SURVEY MONUMENT COVER ASSEMBLY	EACH	3		3
f						
*	Z0070202	SURVEY MARKER VAULT	EACH	1		1
-						
F						
-						

*= SPECIALTY ITEM



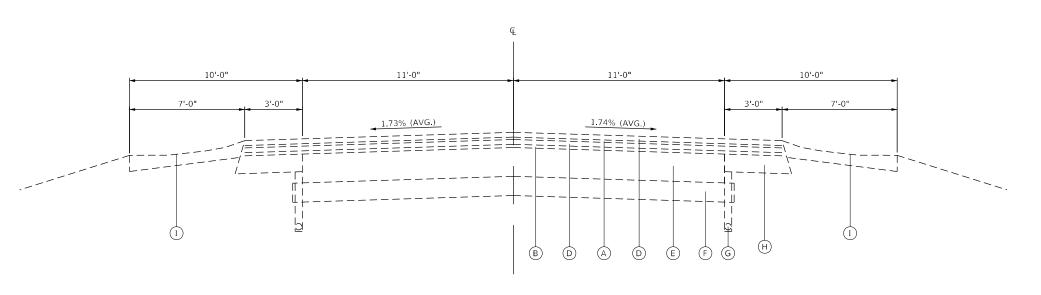
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

						F.A.P. RTE	SECTION
	S	UMMARY	OF QU	ANTITIES	S	317	(30, 31)RS-2
SCALE: N.T.S.	SHEET 5	OF 5	SHEETS	STA.	TO STA.		ILLINOIS FED. A

CONSTRUCTION CODE

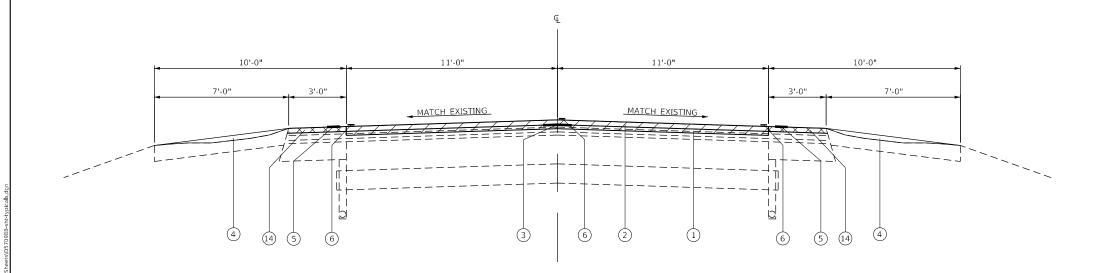
MCLEAN 60 7

CONTRACT NO 700



(1) **EXISTING TYPICAL SECTION**

STA. 850+78.52 TO STA. 903+53.50 STA. 903+80.50 TO STA. 916+23.00 STA. 916+49.00 TO STA. 984+46.25 STA. 984+77.75 TO STA. 1069+97.50* STA. 1077+02.50 TO STA. 1086+00.00 STA. 1098+70.00 TO STA. 1125+99.02 STA. 1126+20.98 TO STA. 1132+85.32



(1) **PROPOSED TYPICAL SECTION** (1)

STA. 850+78.52 TO STA. 903+53.50 STA. 903+80.50 TO STA. 916+23.00 STA. 916+49.00 TO STA. 984+46.25 STA. 984+77.75 TO STA. 1069+97.50 * STA. 1077+02.50 TO STA. 1086+00.00 STA. 1098+70.00 TO STA. 1125+99.02 STA. 1126+20.98 TO STA. 1132+85.32

 \star STA. EQUATION STA. 989+98.74 BK = STA. 990+05.68 AH

LEGEND

- A EX. HMA BINDER, 0.75"
- (B) EX. HMA BINDER, 1"
- © EX. HMA BINDER, 1.5"
- (D) EX. HMA SURFACE, 1.5"
- (E) EX. PCC PAVEMENT, 9"
- (F) EX. SUB-BASE, 6"
- (G) EX. PIPE UNDERDRAINS, 4"
- (H) EX. BITUMINOUS SHOULDER, 5 1/2"
- (I) EX. AGGREGATE SHOULDER, TYPE B
- (J) EX. CLASS C PATCH, 9"
- K EX. POROUS GRANULAR EMBANKMENT
- (L) EX. 3/4" TIE BARS @ 2'-0" CENTERS
- (M) EX. AGGREGATE SHOULDERS, TYPE B, 6"
- N EX. POROUS GRANULAR MATERIAL
- O EX. PRECAST BOX CULVERT
- P EX. DOUBLE 36" DIA. CMP
- 1 PR. HOT-MIX ASPHALT BINDER COURSE,
- IL-9.5FG, N70, 140 LBS/SQ YD
 (2) PR. HOT-MIX ASPHALT SURFACE COURSE,

IL-9.5, MIX "C", N70, 168 LBS/SQ YD

- (3) PR. LONGITUDINAL JOINT SEALANT
- (4) PR. AGGREGATE WEDGE SHOULDER, TYPE B (SEE NOTE 1)
- (5) PR. SHOULDER RUMBLE STRIPS. 8"
- (6) PR. PAINT PAVEMENT MARKING
- (7) PR. CLASS C PATCH, 14"
- (8) PR. AGGREGATE SHOULDERS, TYPE B, 6"
- 9 PR. POROUS GRANULAR EMBANKMENT, VARIES 2 3/4" - 5 3/4"
- (10) PR. TIE BARS 3/4" @ 2'-0" CENTERS
- (1) PR. POROUS GRANULAR MATERIAL
- 12) PR. MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES
- (13) PR. EMBANKMENT
- (14) PR. HOT-MIX ASPHALT SHOULDERS, 1 1/2"



HMA SURFACE REMOVAL, 2 3/4" (SEE NOTE 2)



HMA SURFACE REMOVAL, 1 1/2" (SEE NOTE 2)

NOTE:

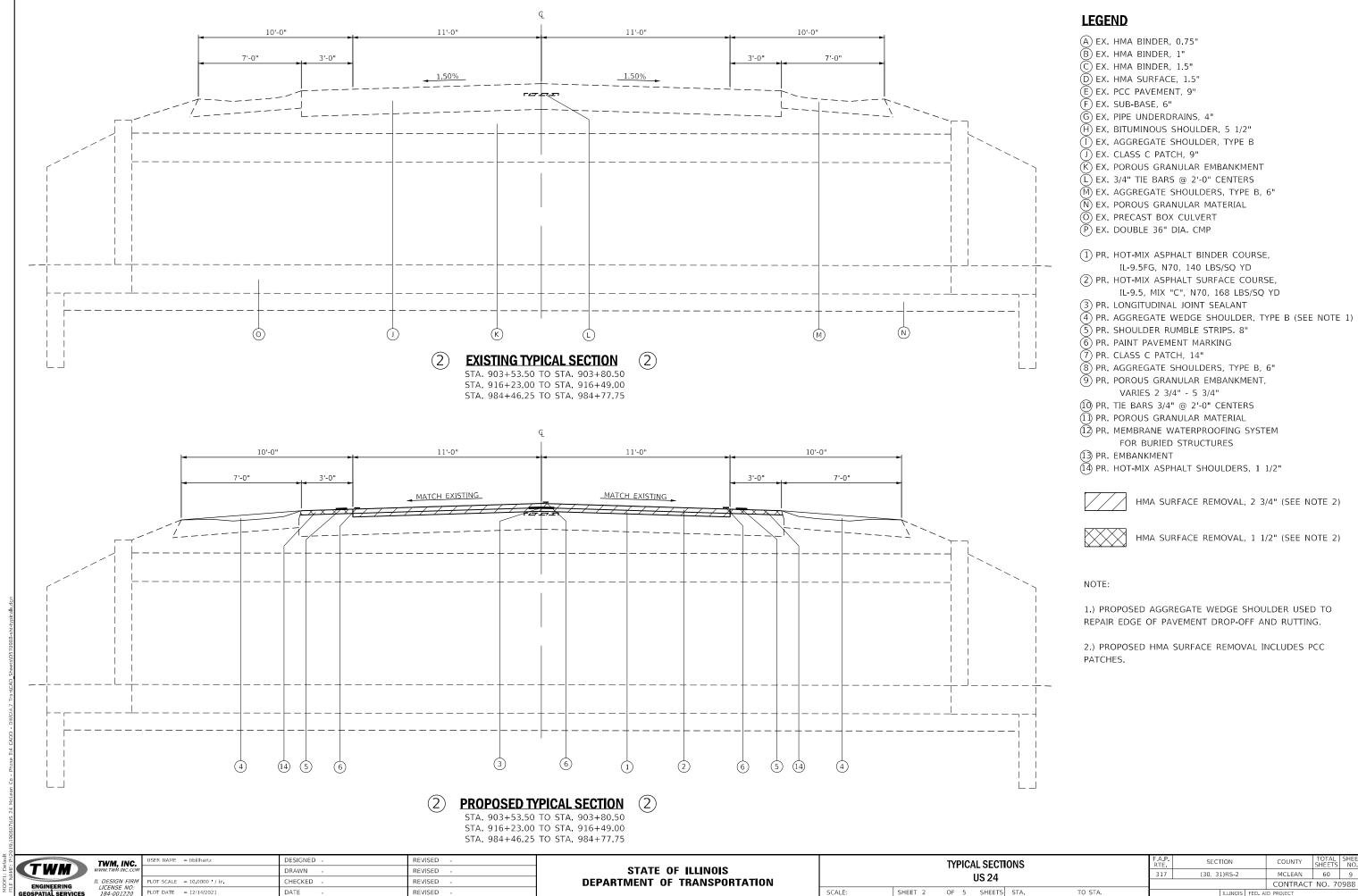
- 1.) PROPOSED AGGREGATE WEDGE SHOULDER USED TO REPAIR EDGE OF PAVEMENT DROP-OFF AND RUTTING.
- 2.) PROPOSED HMA SURFACE REMOVAL INCLUDES PCC PATCHES.

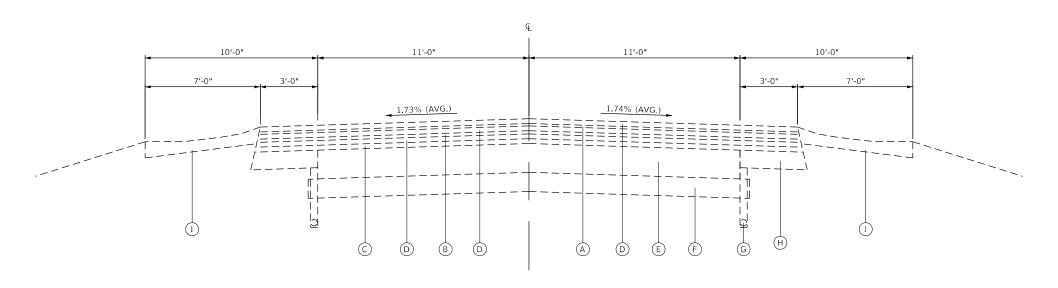
TWM	
ENGINEERING GEOSPATIAL SERVICES	

TWM. INC.	FIRM PLOT SCALE = 10,0000 / in	DESIGNED -	REVISED -
WWW.TWM-INC.COM		DRAWN -	REVISED -
IL DESIGN FIRM	PLOT SCALE = 10.0000 / in.	CHECKED -	REVISED -
LICENSE NO: 184-001220	PLOT DATE = 12/14/2021	DATE -	REVISED -

STATE OF	: ILLINOIS
DEPARTMENT OF	TRANSPORTATION

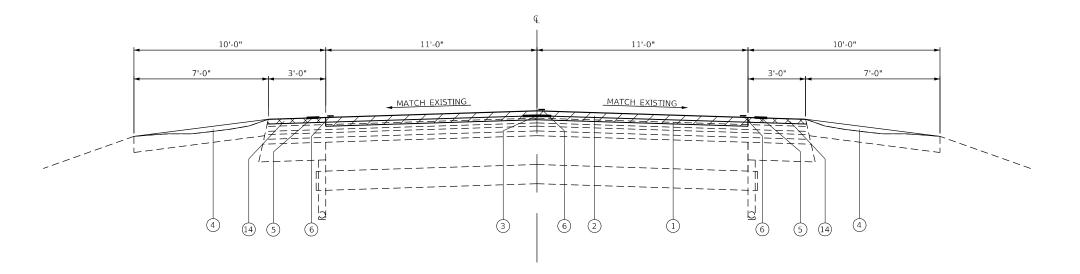
	TYPIC	AL SECTI	ONS		F.A.P. RTE	SECTI	ION		COUNTY	TOTAL SHEETS	SHEE NO.
		US 24			317	(30, 31))RS-2		MCLEAN	60	8
		0327							CONTRACT	NO. 70	988
SHEET 1	OF 5	SHEETS	STA.	TO STA.		1	ILLINOIS	FED ΔI	D PROJECT		





EXISTING TYPICAL SECTION

STA. 1069+97.50 TO STA. 1077+02.50 STA. 1086+00.00 TO STA. 1089+00.00 STA. 1096+33.00 TO STA. 1098+70.00



PROPOSED TYPICAL SECTION (3)

STA. 1069+97.50 TO STA. 1077+02.50 STA. 1086+00.00 TO STA. 1089+00.00 STA. 1096+33.00 TO STA. 1098+70.00

LEGEND

- (A) EX. HMA BINDER, 0.75"
- (B) EX. HMA BINDER, 1"
- © EX. HMA BINDER, 1.5"
- D EX. HMA SURFACE, 1.5"
- (E) EX. PCC PAVEMENT, 9"
- (F) EX. SUB-BASE, 6"
- (G) EX. PIPE UNDERDRAINS, 4"
- (H) EX. BITUMINOUS SHOULDER, 5 1/2"
- (I) EX. AGGREGATE SHOULDER, TYPE B
- (J) EX. CLASS C PATCH, 9"
- (K) EX. POROUS GRANULAR EMBANKMENT
- (L) EX. 3/4" TIE BARS @ 2'-0" CENTERS
- (M) EX. AGGREGATE SHOULDERS, TYPE B, 6"
- (N) EX. POROUS GRANULAR MATERIAL
- (O) EX. PRECAST BOX CULVERT
- P EX. DOUBLE 36" DIA. CMP
- 1) PR. HOT-MIX ASPHALT BINDER COURSE,

IL-9.5FG, N70, 140 LBS/SQ YD

- (2) PR. HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N70, 168 LBS/SQ YD
- (3) PR. LONGITUDINAL JOINT SEALANT
- (4) PR. AGGREGATE WEDGE SHOULDER, TYPE B (SEE NOTE 1)
- (5) PR. SHOULDER RUMBLE STRIPS. 8"
- (6) PR. PAINT PAVEMENT MARKING
- (7) PR. CLASS C PATCH, 14"
- (8) PR. AGGREGATE SHOULDERS, TYPE B, 6"
- (9) PR. POROUS GRANULAR EMBANKMENT, VARIES 2 3/4" - 5 3/4"
- (10) PR. TIE BARS 3/4" @ 2'-0" CENTERS
- (1) PR. POROUS GRANULAR MATERIAL
- (12) PR. MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES
- (13) PR. EMBANKMENT
- (14) PR. HOT-MIX ASPHALT SHOULDERS, 1 1/2"



HMA SURFACE REMOVAL, 2 3/4" (SEE NOTE 2)



HMA SURFACE REMOVAL, 1 1/2" (SEE NOTE 2)

NOTE:

- 1.) PROPOSED AGGREGATE WEDGE SHOULDER USED TO REPAIR EDGE OF PAVEMENT DROP-OFF AND RUTTING.
- 2.) PROPOSED HMA SURFACE REMOVAL INCLUDES PCC PATCHES.

TWM	ı
ENGINEERING GEOSPATIAL SERVICES	1

TWM. INC.

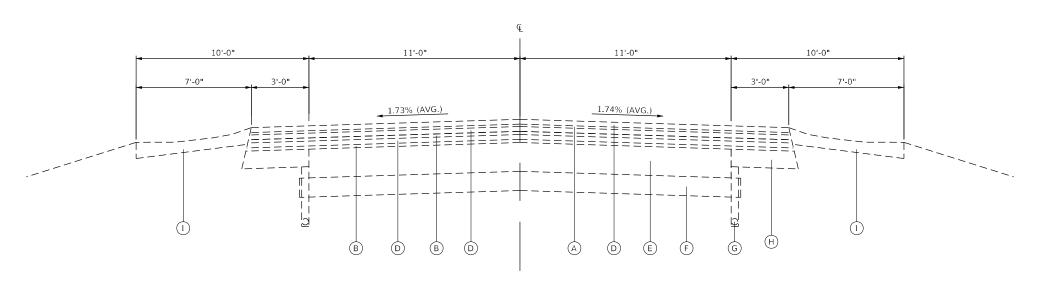
JSER NAME = bbillhartz PLOT DATE = 12/14/2021 DATE

DESIGNED REVISED DRAWN REVISED HECKED REVISED

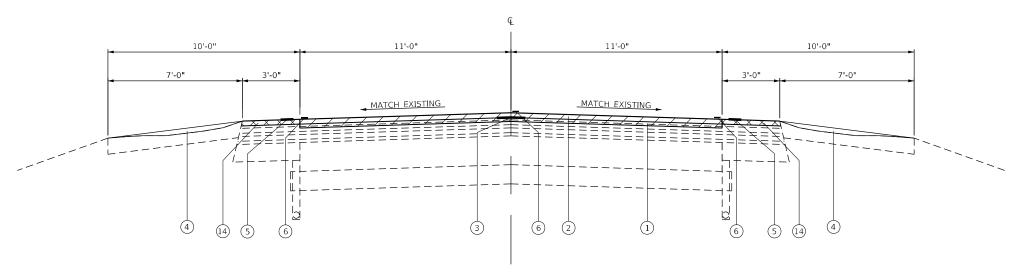
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTIONS **US 24** SHEET 3 OF 5 SHEETS STA.

SECTION (30, 31)RS-2 MCLEAN 60 10 CONTRACT NO. 70988



EXISTING TYPICAL SECTION STA. 1089+00.00 TO STA. 1096+33.00



PROPOSED TYPICAL SECTION STA. 1089+00.00 TO STA. 1096+33.00

LEGEND

- (A) EX. HMA BINDER, 0.75"
- (B) EX. HMA BINDER, 1"
- © EX. HMA BINDER, 1.5"
- D EX. HMA SURFACE, 1.5"
- (E) EX. PCC PAVEMENT, 9"
- (F) EX. SUB-BASE, 6"
- (G) EX. PIPE UNDERDRAINS, 4"
- (H) EX. BITUMINOUS SHOULDER, 5 1/2"
- (I) EX. AGGREGATE SHOULDER, TYPE B
- (J) EX. CLASS C PATCH, 9"
- (K) EX. POROUS GRANULAR EMBANKMENT
- (L) EX. 3/4" TIE BARS @ 2'-0" CENTERS
- (M) EX. AGGREGATE SHOULDERS, TYPE B, 6"
- (N) EX. POROUS GRANULAR MATERIAL
- (O) EX. PRECAST BOX CULVERT
- P EX. DOUBLE 36" DIA. CMP
- 1) PR. HOT-MIX ASPHALT BINDER COURSE,
- IL-9.5FG, N70, 140 LBS/SQ YD (2) PR. HOT-MIX ASPHALT SURFACE COURSE,
- IL-9.5, MIX "C", N70, 168 LBS/SQ YD
- (3) PR. LONGITUDINAL JOINT SEALANT
- (4) PR. AGGREGATE WEDGE SHOULDER, TYPE B (SEE NOTE 1)
- (5) PR. SHOULDER RUMBLE STRIPS. 8"
- (6) PR. PAINT PAVEMENT MARKING
- (7) PR. CLASS C PATCH, 14"
- (8) PR. AGGREGATE SHOULDERS, TYPE B, 6"
- (9) PR. POROUS GRANULAR EMBANKMENT, VARIES 2 3/4" - 5 3/4"
- (10) PR. TIE BARS 3/4" @ 2'-0" CENTERS
- (1) PR. POROUS GRANULAR MATERIAL
- (12) PR. MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES
- (13) PR. EMBANKMENT
- (14) PR. HOT-MIX ASPHALT SHOULDERS, 1 1/2"



HMA SURFACE REMOVAL, 2 3/4" (SEE NOTE 2)



HMA SURFACE REMOVAL, 1 1/2" (SEE NOTE 2)

NOTE:

- 1.) PROPOSED AGGREGATE WEDGE SHOULDER USED TO REPAIR EDGE OF PAVEMENT DROP-OFF AND RUTTING.
- 2.) PROPOSED HMA SURFACE REMOVAL INCLUDES PCC PATCHES.

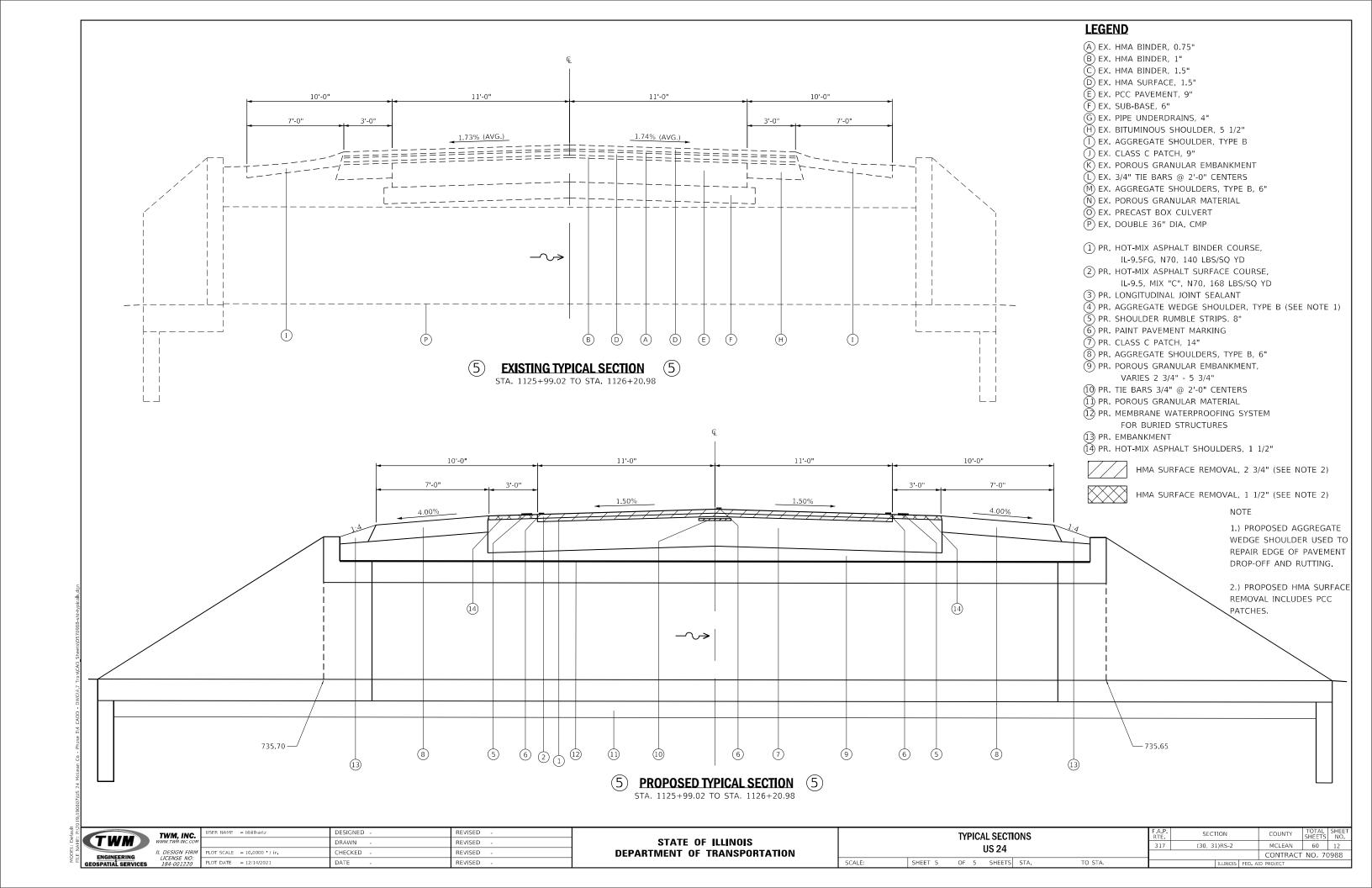
TWM	ı
ENGINEERING	1

DESIGNED REVISED DRAWN REVISED HECKED REVISED PLOT DATE = 12/14/2021 DATE

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTIONS **US 24** SHEET 4 OF 5 SHEETS STA.

SECTION (30, 31)RS-2 MCLEAN 60 11 CONTRACT NO. 70988



EARTHWORK SCHEDULE *											
			20200100	FOR INFORMATION ONLY							
LOCATION			EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR 25% SHRINKAGE	EMBANKMENT	BALANCE WASTE (+) SHORTAGE (-)					
STATION	ТО	STATION	CU YD	CU YD	CU YD	CU YD					
US 24											
1124+85.56 TO 1127+22.76			79	59	48	11					
		SUB-TOTAL:	79	59	48	11					
		PAY TOTAL:	80			•					

* UNSUITABLE MATERIAL NOT INCLUDED IN EARTHWORK QUANTITIES (SEE POROUS GRANULAR EMBANKMENT DETAIL)

SURVEY MARKER SCHEDULE											
		XZ193400	Z0070202	Z0070100							
LOCATI	ON	SURVEY MARKER, TYPE 2 (SPECIAL)	SURVEY MARKER VAULT	SURVEY MONUMENT COVER ASSEMBLY							
STATION	OFFSET	EACH EACH		EACH							
US 24											
1016+62.10	0.90' RT	1		1							
1072+82.51	4.80' LT	1		1							
1117+15.20	0.54' LT		1	1							
	PAY TOTAL:	2	1	3							

	ENTRANCE SCHEDULE											
		X4400196	40200800	40800029	40800050							
LOCATION	I	HOT-MIX ASPHALT SURFACE REMOVAL, SPECIAL	AGGREGATE SURFACE COURSE, TYPE B	BITUMINOUS MATERIALS (TACK COAT)	INCIDENTAL HOT-MIX ASPHALT SURFACING							
STATION	LT/RT	SQ YD	TON	POUND	TON							
US 24	1											
852+50.20	RT	51.7	4.2	23.3	4.3							
894+47.56	RT	82.4	8.4	37.1	6.9							
952+13.01	LT	50.5	2.9	22.7	4.2							
956+25.12	RT	42.2	8.2	19.0	3.6							
956+25.12	LT	21.6		9.7	1.8							
1020+21.47	RT	39.8	6.0	17.9	3.3							
1020+18.10	LT	31.6		14.2	2.7							
1038+40.81	LT	39.7		17.9	3.3							
1062+45.53	RT	45.3	9.5	20.4	3.8							
1062+45.53	LT	30.0		13.5	2.5							
1074+37.06	LT	66.8	7.0	30.1	5.6							
1111+25.24	RT	35.4	4.0	15.9	3.0							
1111+25.24	LT	31.4		14.1	2.6							
1129+73.46	LT	55.9		25.2	4.7							
1132+20.56	LT	51.4		23.1	4.3							
PA	Y TOTAL:	676	50	304	57							

* SEE HOT-MIX ASPHALT PAVING SHEDULE FOR ADDITIONAL QUANTITY

SEEDING SCHEDULE												
				25000210	25000400	25000500	25000600	25100115	28000250			
	L	OCATION		SEEDING, CLASS 2A	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	MULCH, METHOD 2	TEMPORARY EROSION CONTROL SEEDING			
STATION	TO	STATION	LT/RT	ACRE	POUND	POUND	POUND	ACRE	POUND			
US 24												
1124+85.56	TO	1127+22.76	LT	0.17	15.2	15.2	15.2	0.17	33.8			
1124+85.56 TO 1127+22.76 RT		0.17	15.6	15.6	15.6	0.17	34.6					
			TOTAL :	0.34	30.8	30.8	30.8	0.34	68.4			
			PAY TOTAL:	0.5	45	45	45	0.5	100			

				SHOULDE	R SCHEDULE			
				48203003	48101500	48102100	66300105	64200108
	LOC	CATION		HOT-MIX ASPHALT SHOULDERS, 1 1/2"	AGGREGATE SHOULDERS, TYPE B 6"	AGGREGATE WEDGE SHOULDER, TYPE B	CALCIUM CHLORIDE APPLIED	SHOULDER RUMBLE STRIPS, 8 INCH
STATION	ТО	STATION	LT/RT	SQ YD	SQ YD	TON	TON	FOOT
US 24								
850+78.52	ТО	1132+85.32	RT	9280.2				F 4022
850+78.52	TO	1132+85.32	LT	9519.8				54033
851+41.52	ТО	852+44.25	RT			10.5		
851+44.51	TO	870+63.15	LT			195.9		
852+56.15	ТО	894+28.35	RT			425.9		
871+45.40	ТО	890+65.79	LT			196.0		
891+69.65	ТО	904+01.31	LT			125.7		
894+67.97	TO	903+97.64	RT			94.9		
904+52.99	TO	956+11.94	RT			526.6		
904+59.76	ТО	952+02.96	LT			484.2		
952+26.98	ТО	1003+54.07	LT			522.7		
956+38.29	TO	983+63.08	RT			278.1		
984+43.32	TO	1010+48.03	RT			265.2		
1004+63.91	ТО	1010+40.22	LT			58.8		
1010+93.39	TO	1020+10.12	RT			93.6		
1011+06.88	TO	1037+19.15	LT			266.7		
1020+35.10	TO	1037+03.56	RT			170.3		
1037+63.81	ТО	1062+33.53	RT			252.1		
1038+85.79	TO	1074+22.79	LT			361.1		
1062+60.36	ТО	1111+19.89	RT			496.1		
1074+53.62	TO	1116+89.17	LT			432.4		
1111+35.76	ТО	1116+81.30	RT			55.7		
1117+49.45	TO	1122+06.36	LT			46.6		
1117+53.81	ТО	1124+85.56	RT			74.7		
1123+44.78	ТО	1124+85.56	LT			14.4		
1124+85.56	ТО	1127+22.76	RT		184.5		0.5	
1124+85.56	TO	1127+22.76	LT		184.5		0.5	
1127+22.76	TO	1132+85.32	RT			57.4		
1127+22.76	ТО	1129+52.08	LT			23.4		
1129+96.55	ТО	1131+99.21	LT			20.7		
1132+37.58	ТО	1132+85.32	LT			4.9		
1037+46.12	TO	1037+88.71	LT			4.4		
		PA'	Y TOTAL:	18800	369	5559	1	54033

	-						F.A.P. RTE	SECT	ΓΙΟΝ	COUNTY	TOTAL SHEETS	SHEET NO.
	SU	HEDI	JLE	OF QUA	ANTITIES		317	(30, 33	1)RS-2	MCLEAN	60	13
										CONTRACT	NO. 70	988
SCALE: N.T.S.	SHEET 1	OF	4	SHEETS	STA.	TO STA.			ILLINOIS FED. A	ID PROJECT		

						HOT-MIX A	ASPHALT PAV	ING SCHEDUL	E				
				40600982	44000155	44000160	X4400196	40600290	40600370	40602970	40604052	40800029	40800050
LOCATION				ASPHALT ASPHAL SURFACE SURFAC REMOVAL - REMOVAL	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	ASPHALT ASPHALT SURFACE SURFACE REMOVAL, REMOVAL,	HOT-MIX ASPHALT SURFACE REMOVAL, SPECIAL	BITUMINOUS MATERIALS (TACK COAT)	LONGITUDINAL JOINT SEALANT	HOT-MIX ASPHALT BINDER COURSE, IL-9.5FG, N70	HOT-MIX ASPHALT SURFACE COURSE IL-9.5, MIX "C" N70		INCIDENTAL HOT-MIX ASPHALT SURFACING
STATION	ТО	STATION	LT/RT	SQ YD	SQ YD	SQ YD	SQ YD	POUND	FOOT	TON	TON	POUND	TON
US 24													1
850+78.52	TO	989+98.74	LT/RT		18836.0	68933.0		27144.4	13920.2	2393.2	2874.5		
990+05.68	TO	1132+85.32	LT/RT		10030.0	00933.0		27845.3	14279.6	2455.0	2948.8		
SIDEROADS													
851+19.03			LT				158.1					106.7	24.4
851+19.03			RT				140.3					94.7	21.6
904+28.53			LT				144.6					97.6	22.3
904+28.53			RT				142.1					95.9	21.9
984+00.70			RT				255.5					172.4	39.3
1010+68.42			LT				195.4					131.9	30.1
1010+68.42			RT				101.3					68.4	15.6
1037+34.46			RT				156.8					105.9	24.2
1117+15.28			RT				191.5					129.3	29.5
1117+20.64			LT	156.58								105.7	24.1
		PAY	TOTAL:	157	18836	68933	1485	54990	28200	4848	5823	1108	253

^{*} SEE ENTRANCE SCHEDULE FOR ADDITIONAL QUANTITY

	PAT	CHING SCHED	ULE AT CULVER	T REPLACEM	IENT				
			44201409	44213204	44200050				
LOCATION			CLASS C PATCHES, TYPE IV, 14 INCH	TIE BARS 3/4"	WELDED WIRE REINFORCEMENT				
STATION	ТО	STATION	SQ YD	EACH	SQ YD				
US 24									
1125+99.02	ТО	1126+20.98	68.3	1 1	68.3				
		PAY TOTAL:	68	68 11					

		EROS I	ОИ СОИТ	ROL	SCHEDUL	E				
				28	000305	28000400	28000500			
LOCATION					MPORARY CH CHECKS	PERIMETER EROSION BARRIER	INLET AND PIPE PROTECTION			
STATION	ТО	STATION	LT/RT	EA	FOOT	FOOT	EACH			
US 24										
1124+85.56	ТО	1127+22.76	LT	2	22.0	100.0				
1124+85.56	TO	1127+22.76	RT	2	22.0	100.0	1			
			PAY T	: JATC	44	200	1			

							CULVER	T SCHEDULE					
				20700220	28100201	50100300	52200020	54001001	54010803	54260315	59100100	X0900064	51500100
LOC.		LOCATION		POROUS GRANULAR EMBANKMENT	STONE RIPRAP, CLASS A1	REMOVAL OF EXISTING STRUCTURES NO. 1	TEMPORARY SOIL RETENTION SYSTEM	BOX CULVERT END SECTIONS, CULVERT NO. 1	PRECAST CONCRETE BOX CULVERTS 8' X 3'	TRAVERSABLE PIPE GRATE FOR CONCRETE END SECTION	GEOCOMPOSITE WALL DRAIN	MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES	NAME PLATES
		STATION	LT/RT	CU YD	TON	EACH	SQ FT	EACH	FOOT	FOOT	SQ YD	SQ YD	EACH
US 24													
1126+10.00	1126+10.00		LT/RT	56.6	52.2	1.0	55.6	2	41.5	95.0	59.0	59.0	1
PAY TOTAL			TOTAL:	57	52	1	56	2	42	95	59	59	1

INC.	USER NAME = bbillhartz	DESIGNED -	REVISED -
ис.сом		DRAWN -	REVISED -
FIRM	PLOT SCALE = 40.0000 / in.	CHECKED -	REVISED -
NO: 1220	PLOT DATE = 12/14/2021	DATE -	REVISED -

					F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	
I		SCHEDULE OF QU	ANTITIES		317	(30, 31)RS-2	MCLEAN	60	14
l							CONTRACT	NO. 70	0988
l	SCALE: N.T.S.	SHEET 2 OF 4 SHEETS		ILLINOIS FED.	AID PROJECT				

				P.A	AVEMENT MAR	RKING SCHED	ULE						
					78100100	78300200	7800	01110	70300100	70300150	703	00221	78300202
	LOCATION					RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	LIN	PAINT PAVEMENT MARKING - LINE 4"		SHORT TERM PAVEMENT MARKING REMOVAL	MARK	Y PAVEMENT ING - - PAINT	PAVEMENT MARKING REMOVAL - WATER BLASTING
							YELLOW	WHITE			YELLOW	WHITE	
STATION	ТО	STATION	LOCATION	TYPE	EACH	EACH	FOOT	FOOT	FOOT	SQ FT	FOOT	FOOT	SQ FT
US 24								•					
850+78.52	ТО	989+98.74	CENTERLINE	SKIP-DASH YELLOW	174	174	3480.1		4176	464	3480.1		1160.0
990+05.68	ТО	1132+85.32	CENTERLINE	SKIP-DASH YELLOW	178	178	3569.9		4284	476	3569.9		1190.0
851+47.86	ТО	903+85.85	EDGE LINE RT	SOLID WHITE				5238.0				5238.0	1746.0
904+61.21	ТО	983+56.96	EDGE LINE RT	SOLID WHITE				7895.8				7895.8	2631.9
984+46.69	ТО	1010+40.20	EDGE LINE RT	SOLID WHITE				2586.6				2586.6	862.2
1011+00.72	ТО	1036+92.59	EDGE LINE RT	SOLID WHITE				2591.9				2591.9	864.0
1037+79.37	ТО	1116+74.11	EDGE LINE RT	SOLID WHITE				7894.7				7894.7	2631.6
1117+63.81	ТО	1132+85.32	EDGE LINE RT	SOLID WHITE				1521.5				1521.5	507.2
851+45.88	ТО	903+87.66	EDGE LINE LT	SOLID WHITE				5241.8				5241.8	1747.3
904+64.20	ТО	1010+28.88	EDGE LINE LT	SOLID WHITE				10557.7				10557.7	3519.3
1011+20.86	ТО	1116+75.48	EDGE LINE LT	SOLID WHITE				10554.6				10554.6	3518.2
1117+63.29	ТО	1132+85.32	EDGE LINE LT	SOLID WHITE				1522.0				1522.0	507.3
	•			PAY TOTAL:	352	352	7050	55605	8460	940	7050	55605	20885
							62	655			62	2655	

P:\2019\190607\US 24 McLean Co - Phase II\4 CADD - DWG\4.7 Tran\CA

ENGINEERING GEOSPATIAL SERVICES

M, INC.	USER NAME = bbillhartz	DESIGNED -	REVISED -
TWM-INC.COM		DRAWN -	REVISED -
SIGN FIRM	PLOT SCALE = 40.0000 / in.	CHECKED -	REVISED -
ENSE NO: 4-001220	PLOT DATE = 12/14/2021	DATE -	REVISED -

STATE	OF	ILLINOIS
DEPARTMENT (OF 1	TRANSPORTATION

			F.A.P. RTE	SECTION	cou	INTY	TOTAL SHEETS	SHEET NO.
	SCHEDULE OF QUAN	IIIIES	317	(30, 31)RS-2	MCI	EAN	60	15
					CON	TRACT	NO. 70	988
SCALE: N.T.S.	SHEET 3 OF 4 SHEETS S	ΓA. TO STA.		ILLINOIS	FED. AID PROJE	ET.		

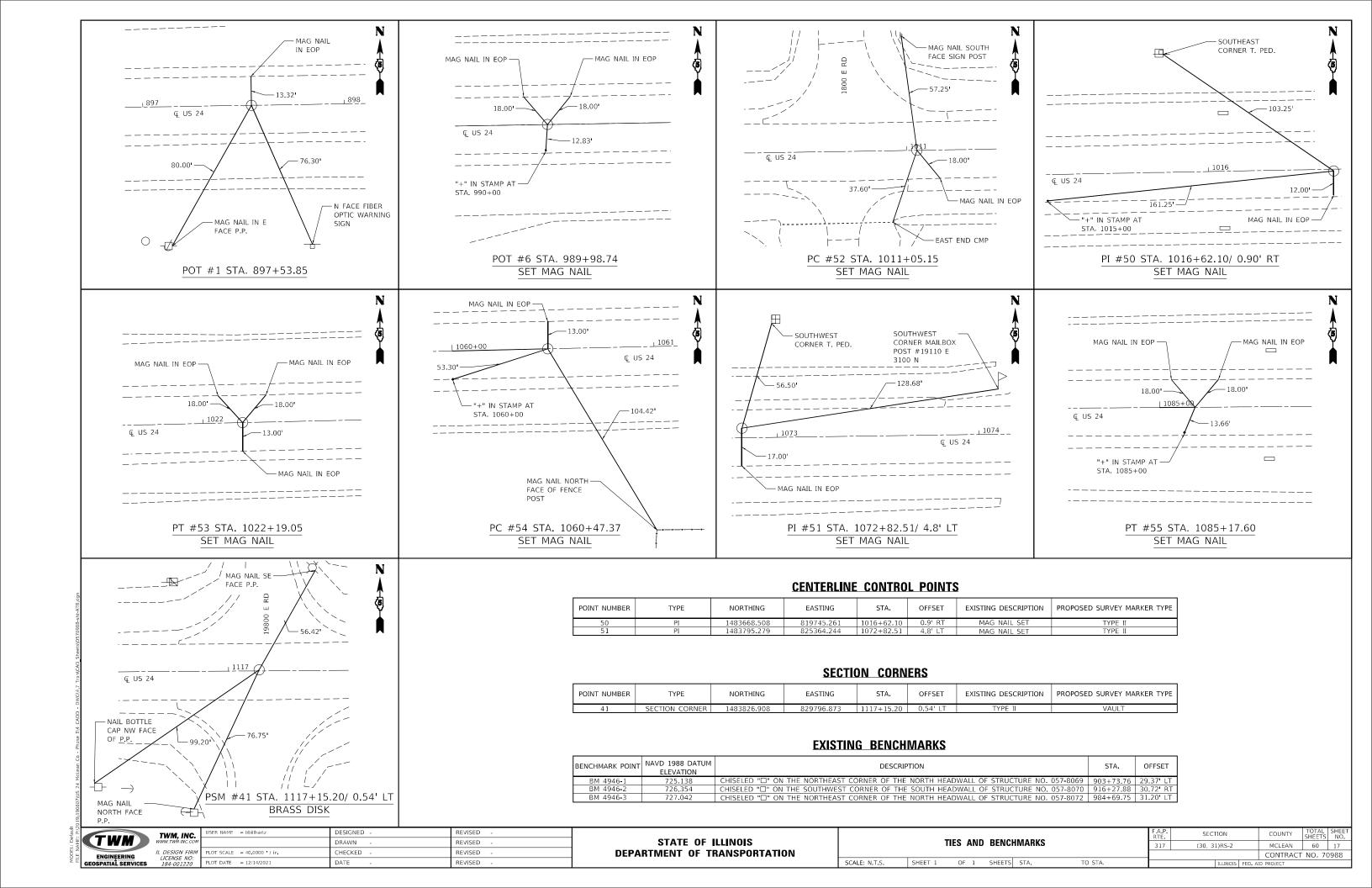
		ATCHING	SHCEDU	LE	
				44201815	44201819
LOC	ATION	PATCH	SIZE		PATCHES,
				Type II	Type III
				<u> </u>	INCH
STATION	LANE	LENGTH	WIDTH	SQ YD	SQ YD
852+03	EB	4	14	6.2	
852+03	WB	4	14	6.2	
853+90	EB	4	14	6.2	
853+90	WB	6	14	9.3	
854+86	EB	6	14	9.3	
854+86	WB	8	14	12.4	
861+59	EB	6	14	9.3	
861+59	WB	6	14	9.3	
862+85	WB	4	14	6.2	
863+79	EB	6	14	9.3	
863+79	WB	6	14	9.3	
864+72	EB	7	14	10.9	
864+72	WB	7	14	10.9	
865+71	WB	7	14	10.9	
866+68	EB	6	14	9.3	
866+68	WB	6	14	9.3	
868+70	WB	6	14	9.3	
868+70	EB	10	14		15.6
872+59	EB	6	14	9.3	
872+59	WB	6	14	9.3	
873+53	EB	6	14	9.3	
875+53	WB	6	14	9.3	
877+48	EB	6	14	9.3	
877+48	WB	6	14	9.3	
879+43	EB	8	14	12.4	
879+43	WB	8	14	12.4	
881+44	EB	6	14	9.3	
881+44	WB	6	14	9.3	
885+33	EB	4	14	6.2	
885+33	WB	4	14	6.2	
890+25	EB	6	14	9.3	
890+25	WB	6	14	9.3	
893+26	EB	6	14	9.3	
893+26	WB	6	14	9.3	
901+33	WB	6	14	9.3	
904+36	WB	6	14	9.3	
906+27	WB	6	14	9.3	
917+32	EB	6	14	9.3	
917+32	WB	6	14	9.3	
917+32	EB	4	14	6.2	
919+03	WB	4	14	6.2	
				9.3	
942+30	WB	6	14		
942+32	EB	4	14	6.2	

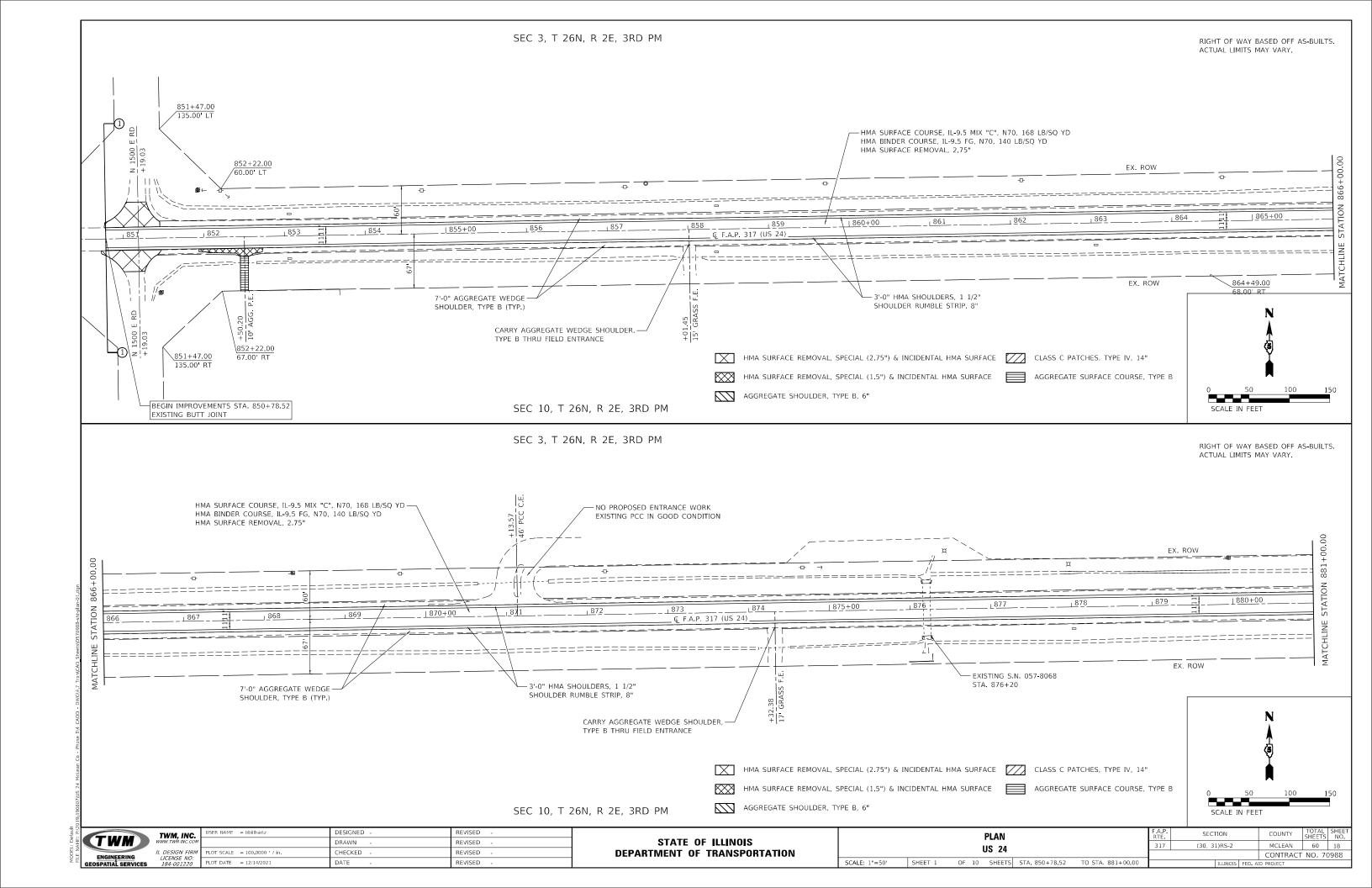
	PATCHI	NG SHCE	DULE CON	NT I NUED					
44201815 44201819									
LOCA	NOITA	PATCH	SIZE		PATCHES,				
		-		Type II 14	Type III INCH				
STATION	LANE	LENGTH	WIDTH	SQ YD	SQ YD				
945+26	EB	6	14	9.3					
945+26	WB	6	14	9.3					
947+24	WB	6	14	9.3					
968+12	EB	4	14	6.2					
968+12	WB	4	14	6.2					
974+35	WB	6	14	9.3					
975+07	WB	25	6		16.7				
987+70	EB	6	14	9.3					
987+70	WB	6	14	9.3					
988+64	WB	6	14	9.3					
992+43	EB	12	14		18.7				
1012+64	EB	6	14	9.3					
1012+64	WB	6	14	9.3					
1022+75	EB	8	14	12.4					
1022+75	WB	8	14	12.4					
1028+67	WB	8	14	12.4					
1033+70	EB	6	14	9.3					
1033+70	WB	6	14	9.3					
1047+62	WB	4	14	6.2					
1048+55	EB	6	14	9.3					
1048+55	WB	6	14	9.3					
1051+57	EB	8	14	12.4					
1051+57	WB	8	14	12.4					
1054+47	EB	8	14	12.4					
1054+47	WB	8	14	12.4					
1066+53	EB	6	14	9.3					
1066+53	WB	6	14	9.3					
1082+67	EB	12	14		18.7				
1088+71	EB	6	14	9.3					
1088+71	WB	6	14	9.3					
1090+60	EB	6	14	9.3					
1090+60	WB	6	14	9.3					
1095+07	EB	6	14	9.3					
1102+55	EB	6	14	9.3					
1102+55	WB	6	14	9.3					
1107+47	EB	10	14		15.6				
1107+47	WB	10	14		15.6				
1114+45	EB	8	14	12.4					
1115+41	EB	8	14	12.4					
1115+41	WB	8	14	12.4					
1121+45	EB	8	14	12.4					
1121+45	WB	8	14	12.4					
1127+35	EB	12	14		18.7				
1127+35	WB	12	14		18.7				
		1	TOTAL :	749	138				

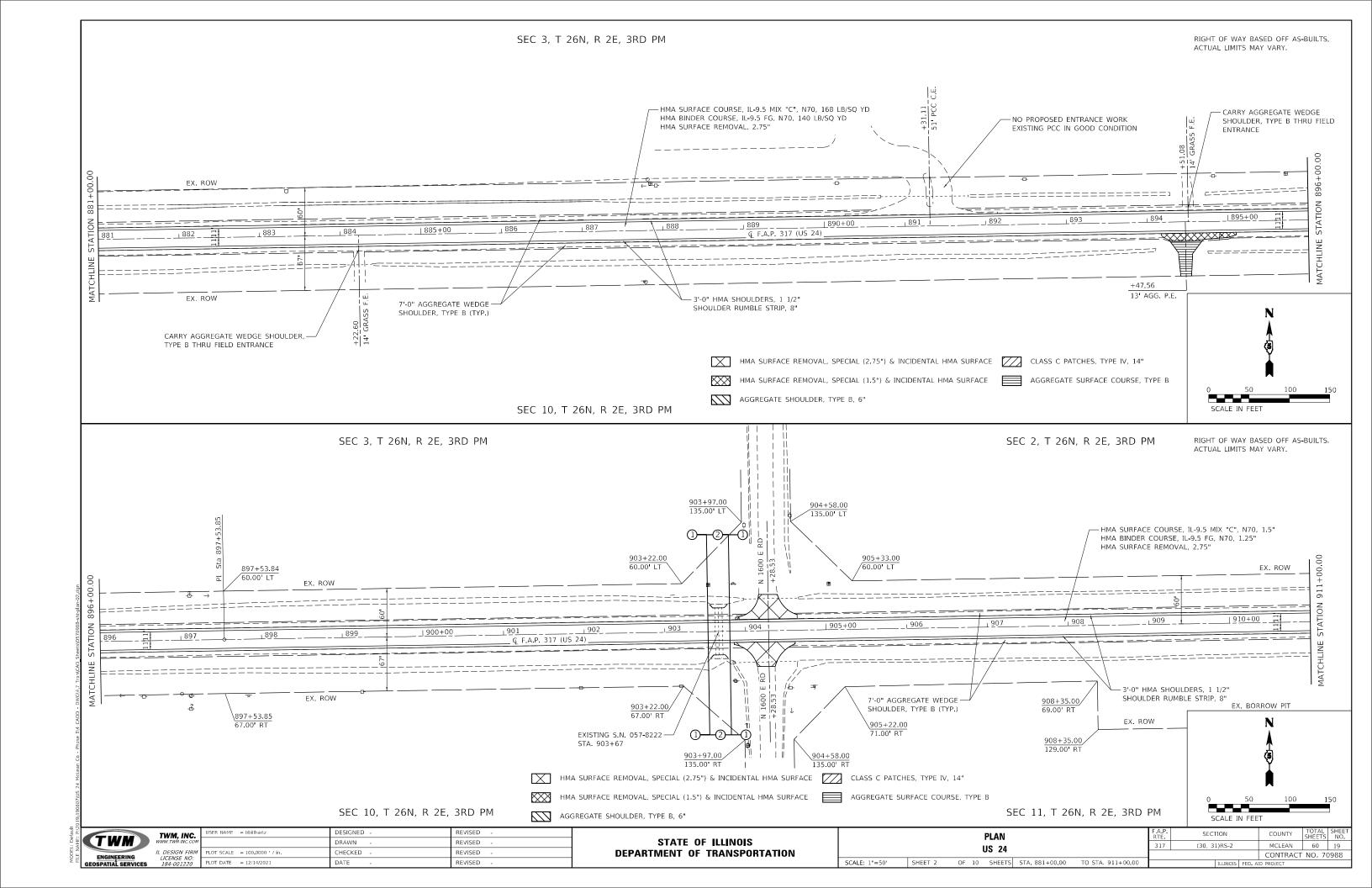
SCALE:

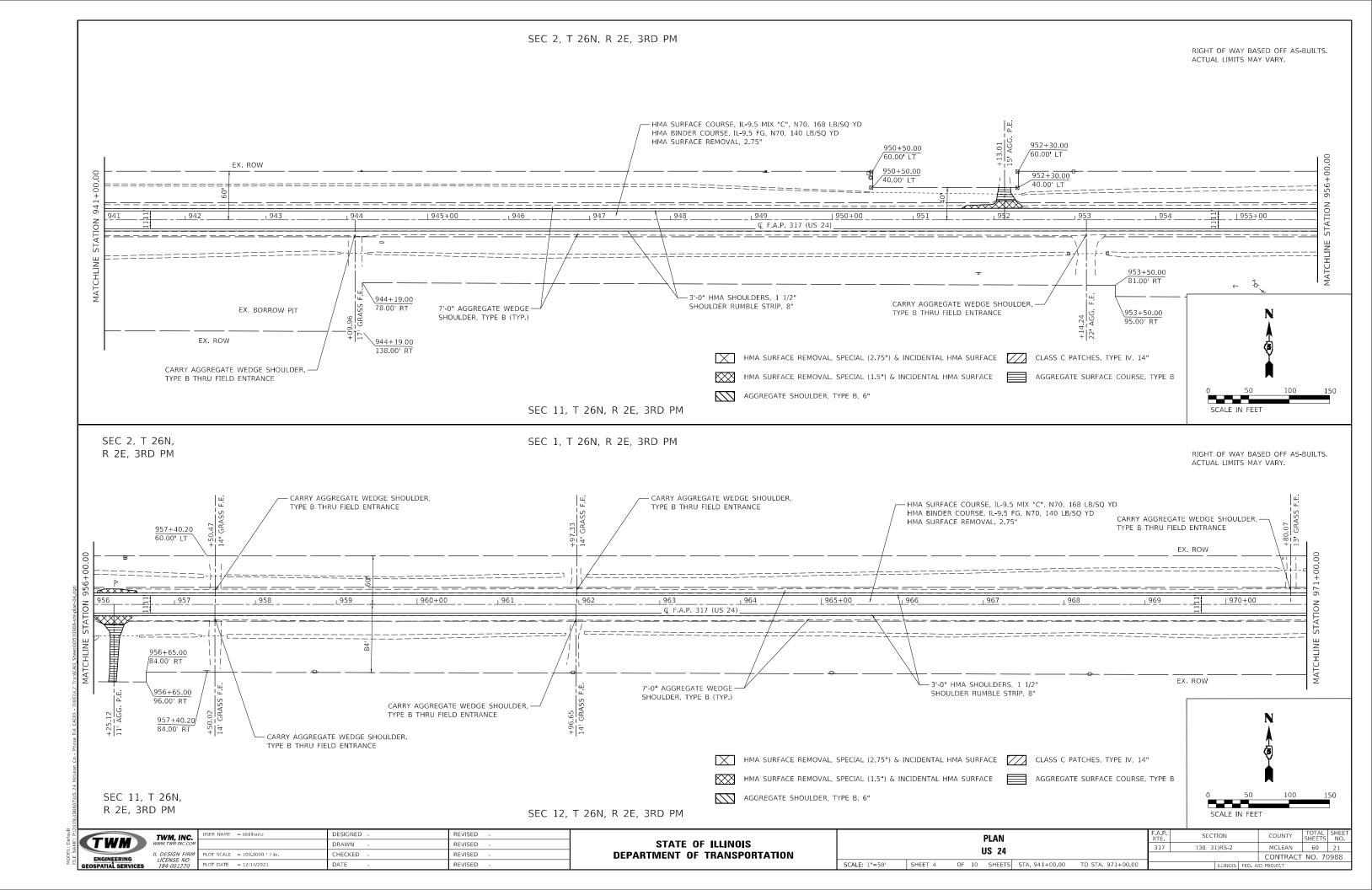
	TWM
1	ENGINEERING GEOSPATIAL SERVICES

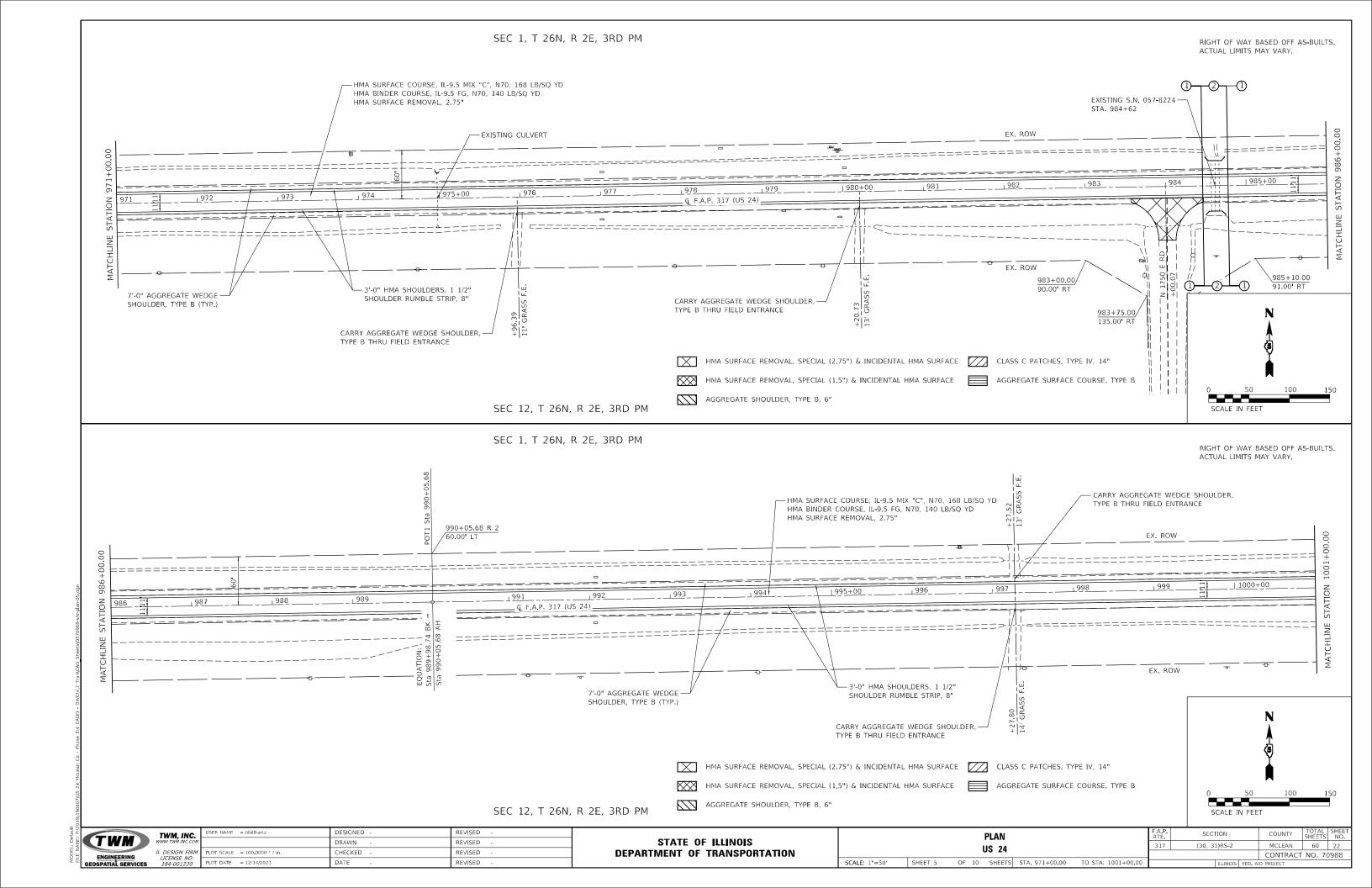
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

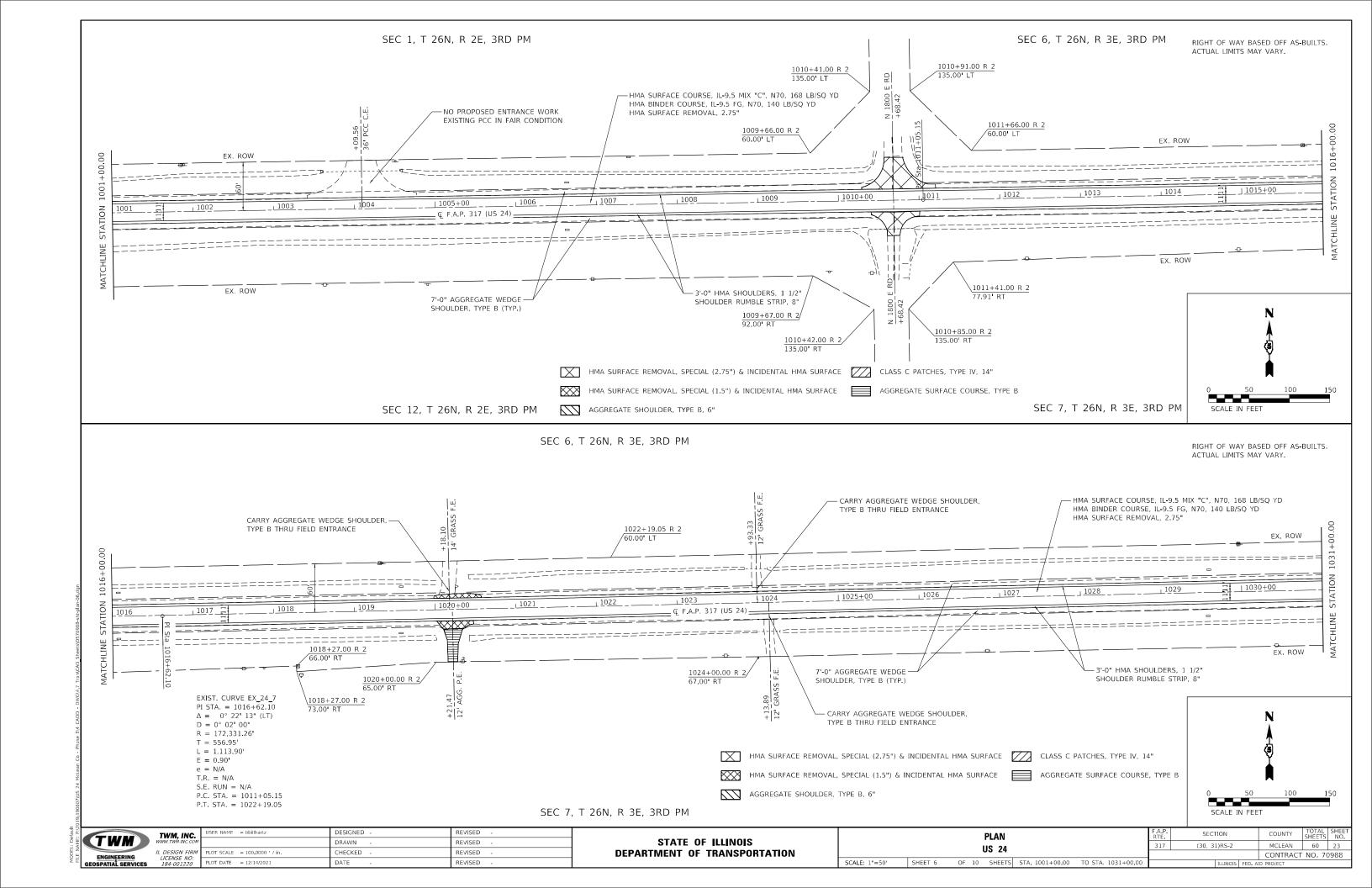


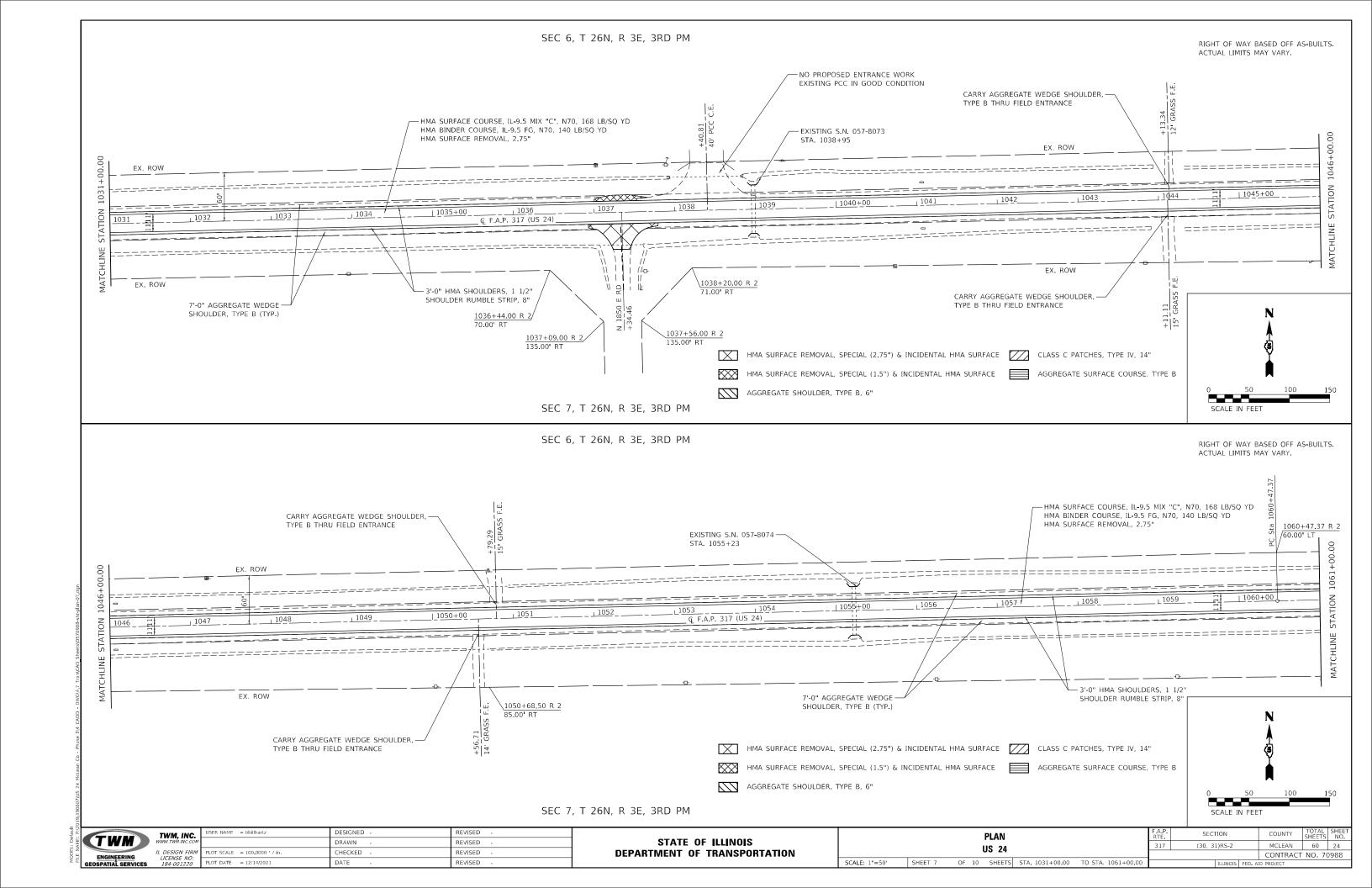


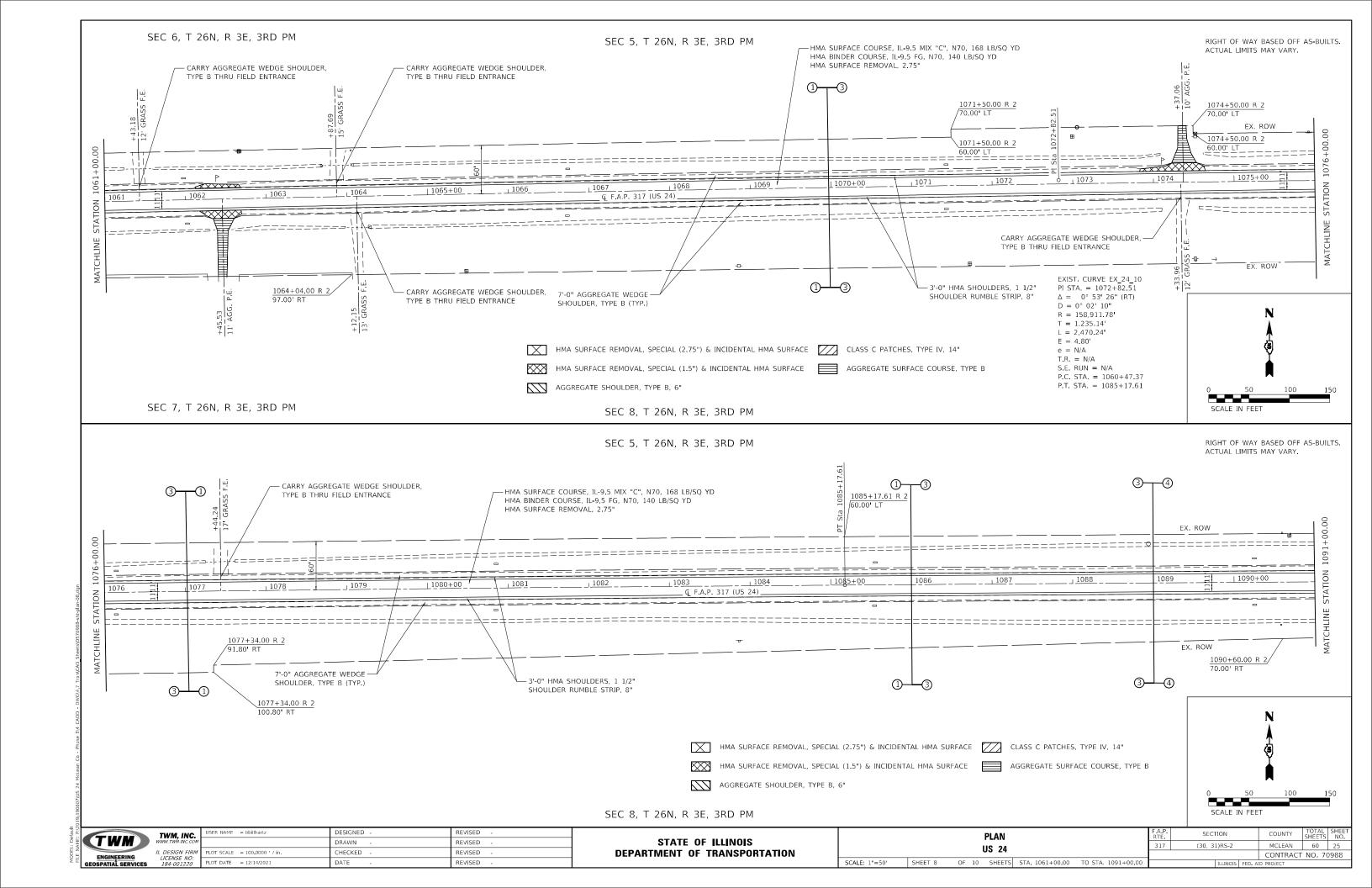


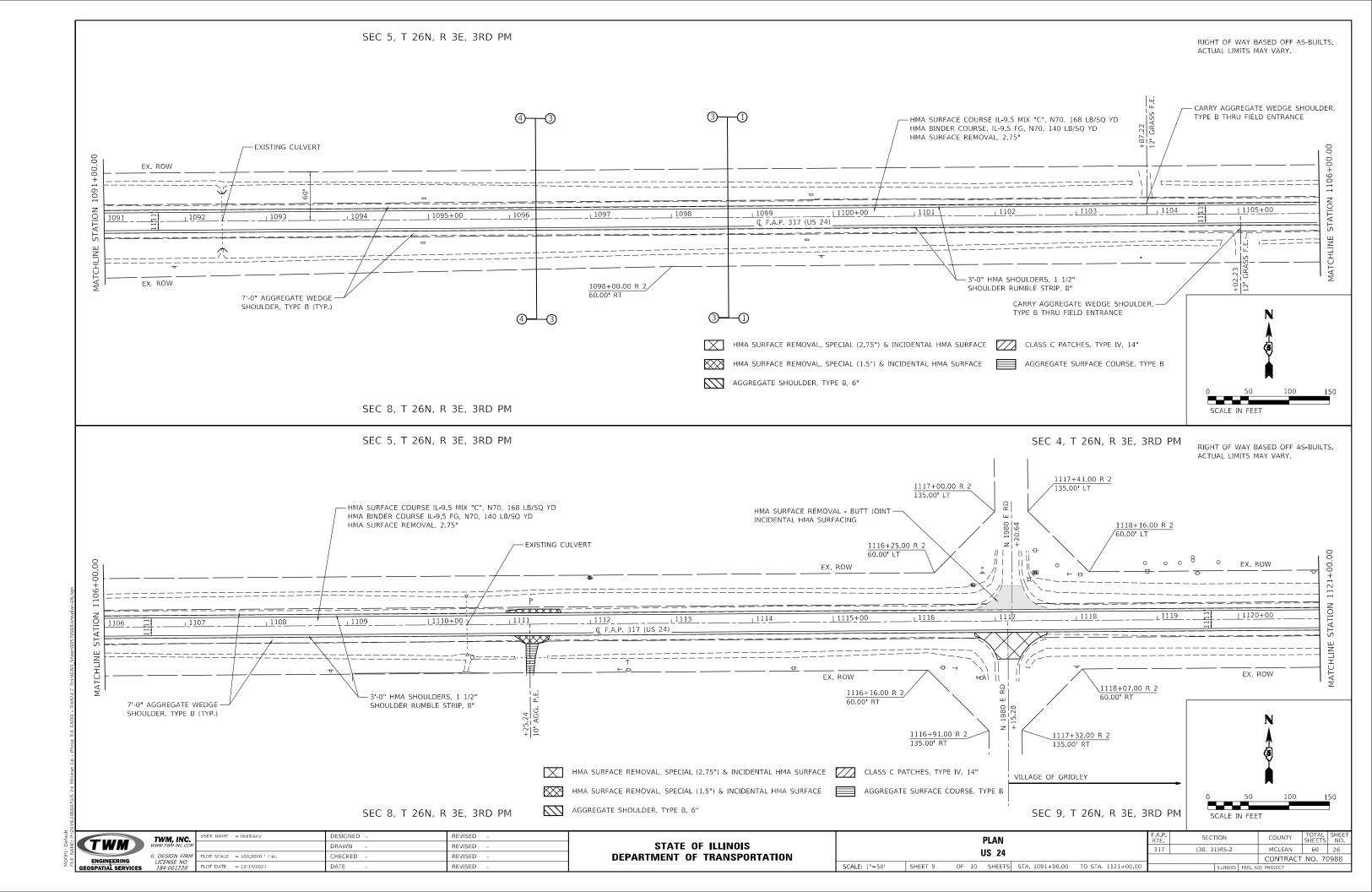


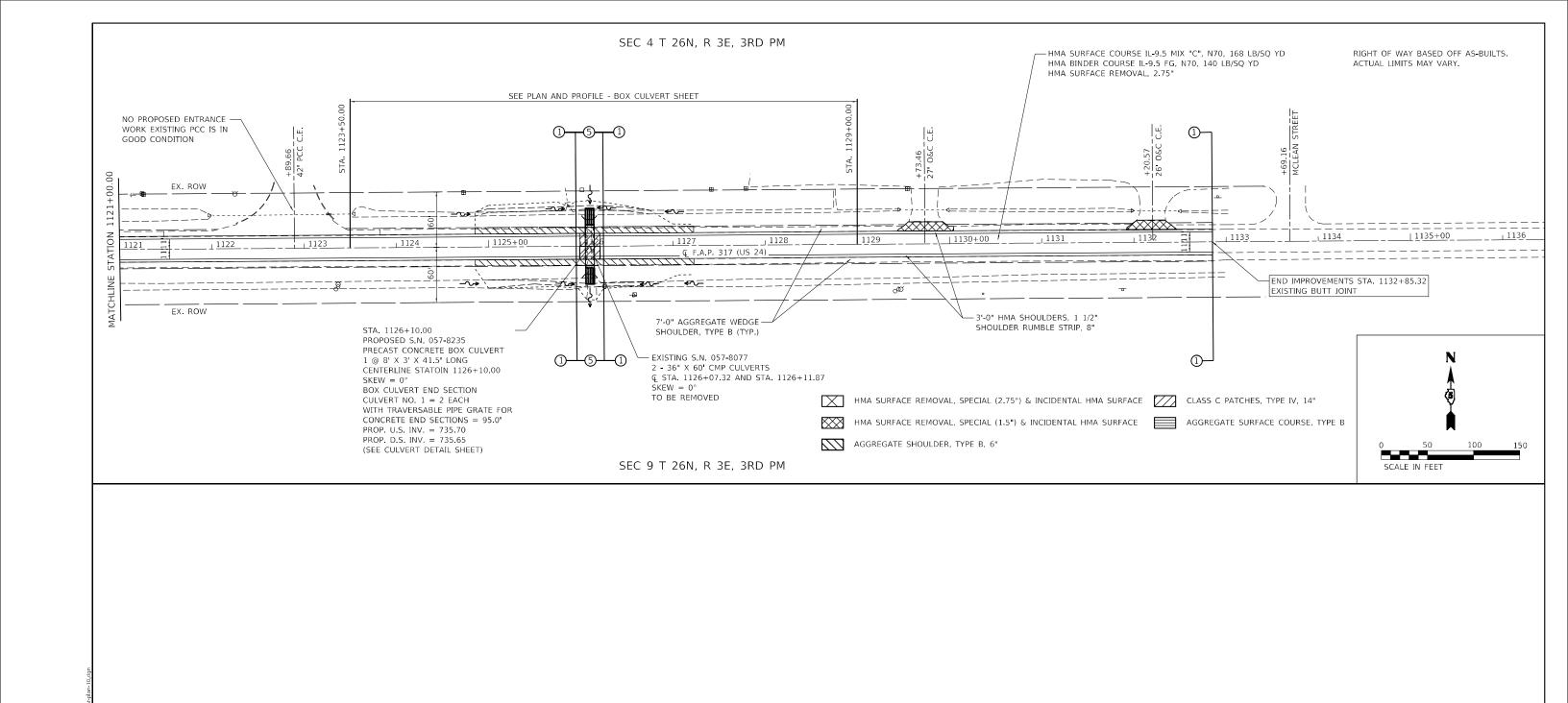












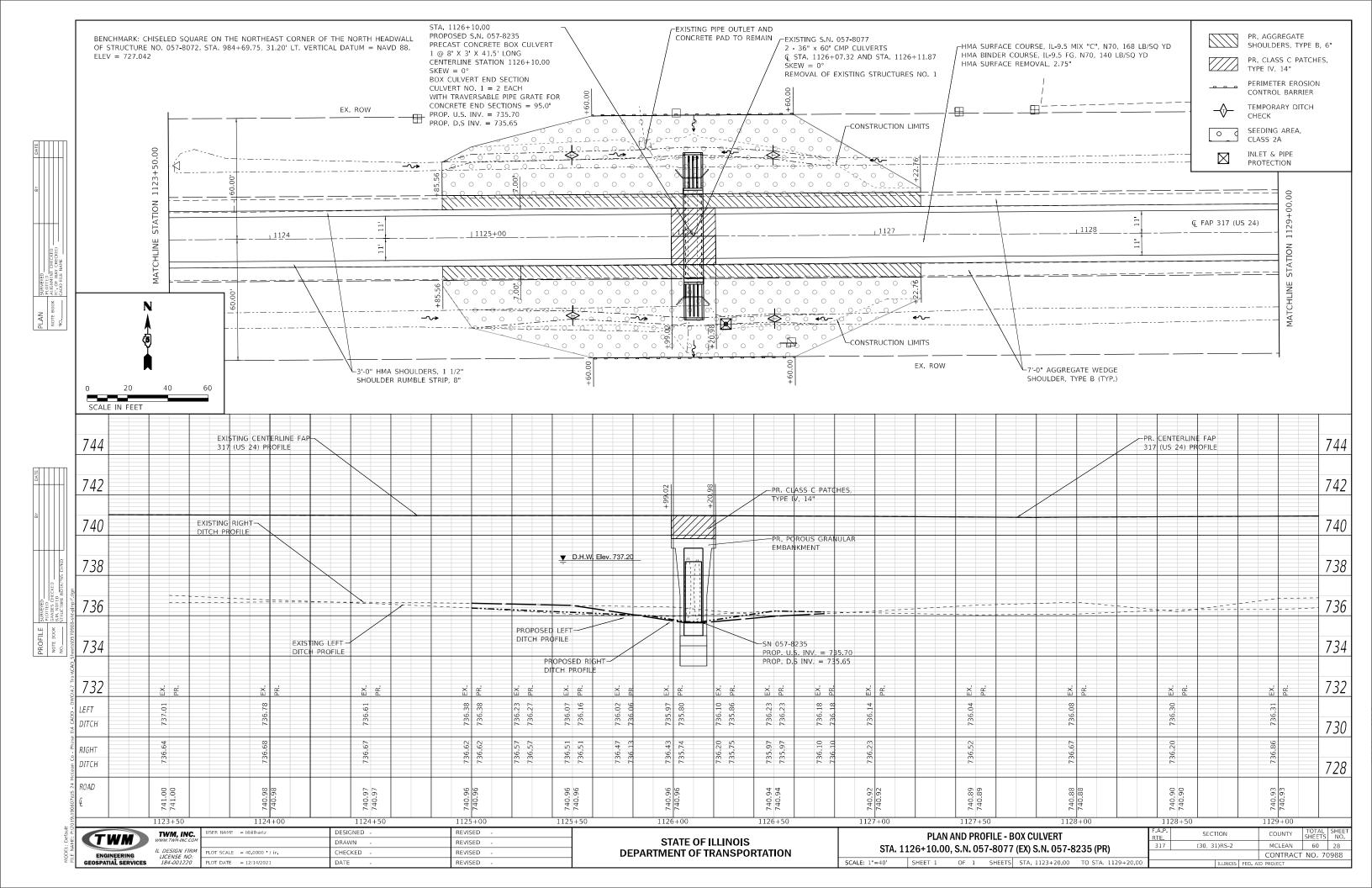
ENGINEERING GEOSPATIAL SERVICES

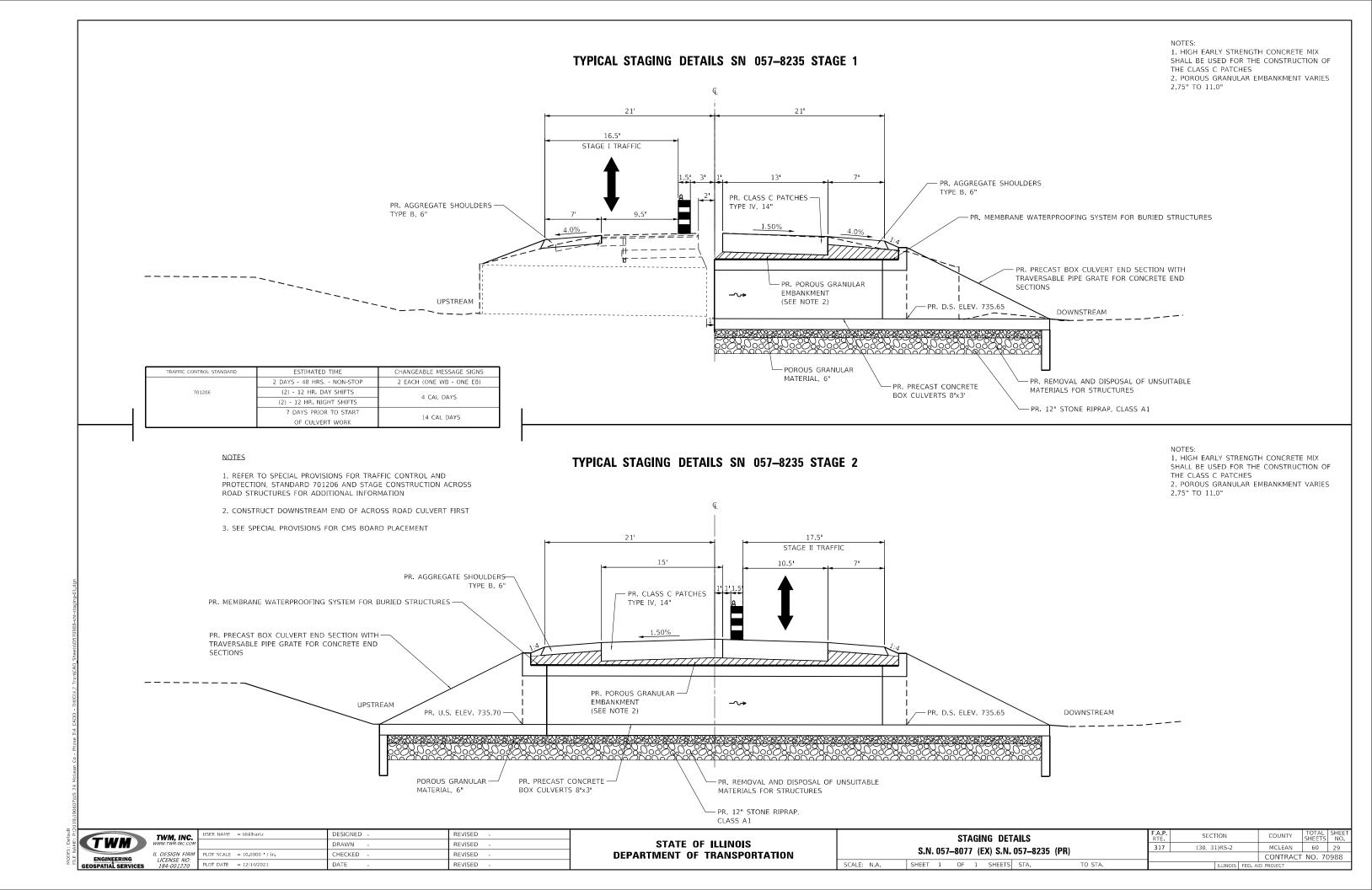
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

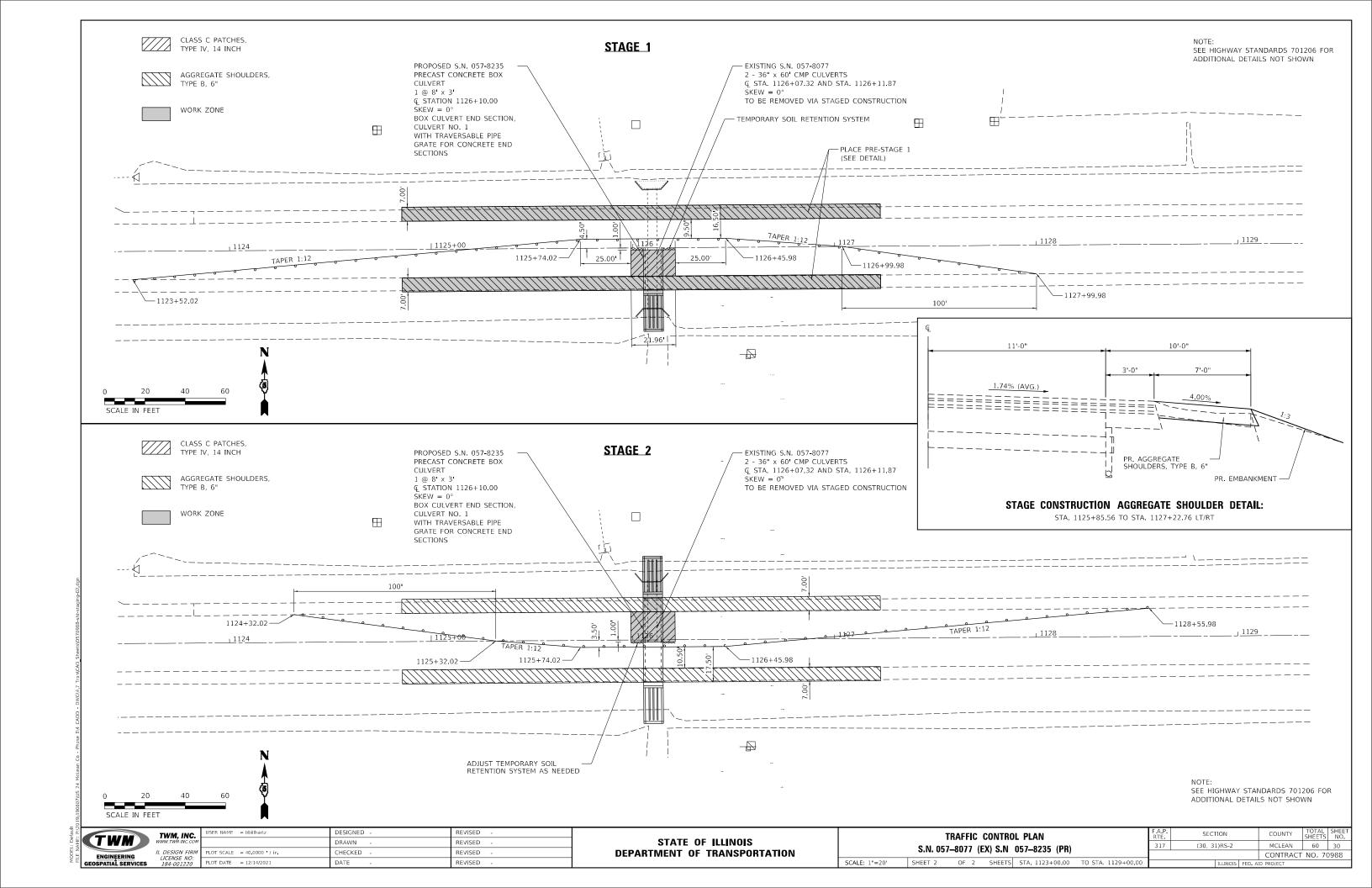
F.A.P. SECTION COUNTY TOTAL SHEE SHEETS NO.

317 (30, 31)RS-2 MCLEAN 60 27

CONTRACT NO. 70988







- @ Roadway 20'-8" 20'-9" 20'-9" 20'-8" Pay Limits for Precast Concrete Box Culverts Pay Limits for Box Culvert Pay Limits for Precast Concrete Box Culverts Pay Limits for Box Culvert End Sections End Sections 10'-0" 11'-0" 11'-0" 10'-0" 7'-0" 3'-0" 3'-0" 7'-0" - Cr. Elev. 740.97 <u>1.</u>50% 4.00% .50% 1.50% 1.50% 4.00% ▼ D.H.E. 737.20 3" Ø Drain holes (See General Notes) Elev. 735.70 ๙ Elev. 735.65 6" Porous Granular ELEVATION 12" Stone Riprap Material Class A1 Porous granular embankment limits (Typ. each side) 18'-8" — ⊊ Roadway Sta. 1126+10.00 Flow ∟ Ç Culvert Plate 23'-9" 23'-9' 47-6" Out to Out of Headwalls PLAN

Benchmark: Chiseled Square on the Northeast Corner of the North Headwall of Str. No. 057-8072. STA. 984+69.75, 31.20' LT. Vertical Datum = NAVD 88, ELEV. = 727.042.

INDEX OF SHEETS

- General Plan and Elevation
- Single Cell Precast Box Culvert Tapered End Sections
- Traversable Pipe Grate For Box Culverts
- Porous Granular Embankment Detail
- As Built Plans

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications Customary U.S. Units, 9th Edition

LOADING HL-93

DESIGN STRESSES

PRECAST UNITS

f'c = 5,000 psi

fy = 65,000 psi (Welded Wire Reinforcement)

STATION 1126+10.00 BUILT 202X BY STATE OF ILLINOIS F.A.P. RT. 317 SEC. (30,31)RS-2 LOADING HL-93 STR. NO. 057-8235

> NAME PLATE See Std. 515001



TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Removal of Existing Structures No. 1	Each	1
Name Plates	Each	1
Box Culvert End Sections, Culvert No. 1	Each	2
Precast Concrete Box Culverts, 8' x 3'	Foot	42
Porous Granular Embankment	Cu. Yd.	57
Traversable Pipe Grate for Concrete End Section	Foot	95
Membrane Waterproofing System for Buried Structures	Sq. Yd.	59
Stone Riprap, Class A1	Ton	5 <i>2</i>
Temporary Soil Retention System	Sq. Ft.	56
Permanent Benchmarks	Each	1
Geocomposite Wall Drain	Sq. Yd.	59

GENERAL NOTES

The design fill height for this box is 1.63 ft. The precast box culvert sections shall conform to the requirements of

Drain holes shall be provided on exterior culvert walls for each precast box segment with a clear rise greater than 3 ft. The drain hole shall be located within 1/3 of the clear rise of the box culvert, shall not intercept the haunch, and shall conform to the requirements of Article 503.11 of the Standard Specification.

Nonwoven geotextile fabric shall conform to the requirements of Art. 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

Precast concrete box culverts and box culvert end sections shall be backfilled with Porous Granular Embankment in the required excavation areas on the sides of the box culvert from the top of the box culvert to the bottom of the box culvert. This area of PGE is included in the Porous Granular Embankment pay item. The 6-inch thick layer of porous granular material required under the precast concrete box culvert, according to Section 540.06 of the standard specifications, shall also apply to the end sections. Cost of this porous granular material will not be paid for separately but shall be included in the unit price of the work for which it is required.

SCALE: N.T.S.

GENERAL PLAN AND ELEVATION US 24 OVER DITCH F.A.P. RTE. 317 SEC. (30,31)RS-2 MCLEAN COUNTY STATION 1126+10.00 S.N. 057-8235

SCB-GPE (MODIFIED)

10 69.8

100 111.0

75 | 105.6

500 153.5

50 96.6 7.0

Flood

Base

7-23-2021 DESIGNED REVISED TWM. INC. DRAWN REVISED HECKED REVISED PLOT DATE = 12/14/2021 REVISED DATE

737.2

14 737.4

Opening Sq. Ft. Nat. | Head - Ft. Headwater E.

Exist. Prop. H.W.E. Exist. Prop. Exist. Prop

10 737.0 2.3 1.0 739.3 738.0

12 737.2 3.2 1.4 740.4 738.6 737.3 3.7 1.6 741.0 738.9

3.7

WATERWAY INFORMATION

13

Drainage Area = 55.0 acre Low Grade Elev. = 740.88 @ Sta. 1127+79.73

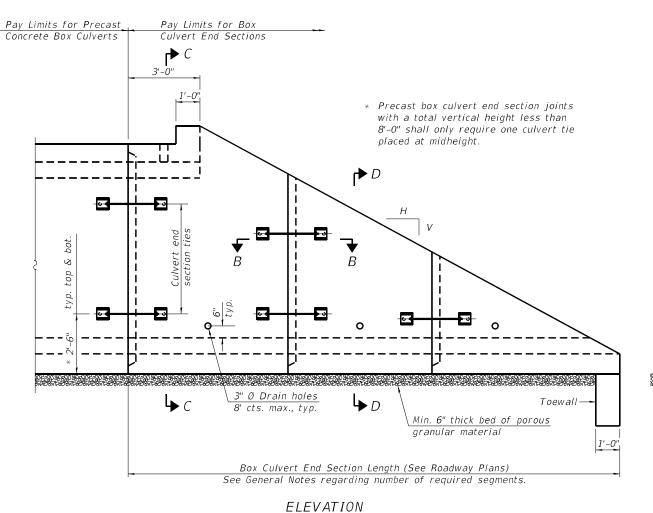
5.6

7.4

7.2

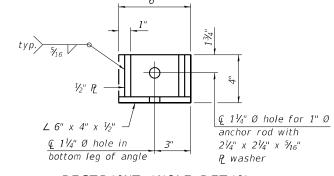
Existing Structure: Dual 36" CMP Culverts with Cast-in-Place Headwalls

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** **GENERAL PLAN AND ELEVATION** S.N. 057-8235; CULVERT NO. 1 OF 1 SHEETS STA. TO STA. (30, 31)RS-2 MCLEAN 60 31 CONTRACT NO. 70988

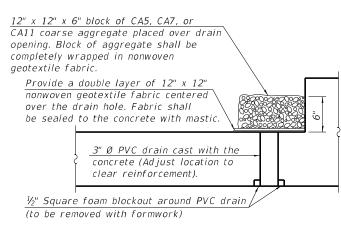


Headwall -2'-0" typ. Span Porous granular

END VIEW



RESTRAINT ANGLE DETAIL



SECTION A-A

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.) (Sheet 1 of 2)

GENERAL NOTES

Box Culvert End 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, materials, 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 portion of the culvert within the limits of Precast Concrete Box Culverts except as modified herein.

Number of segments shown in 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 (V:H).

1" \emptyset anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, 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. $2\frac{1}{4}$ " x $2\frac{1}{4}$ " x $2\frac{1}{4}$ " plate washers shall be provided under each nut required for the anchor rods. Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 1/2 turn on one of the nuts for anchor rods installed in the walls. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of using formed holes.

All costs associated with furnishing and installing or constructing the toewall 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.

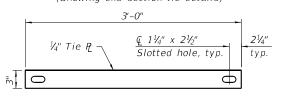
Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications unless noted otherwise.

Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01. The minimum weight of the fabric shall be 6 oz. / sq. yd..

For end sections with traversable pipe grate systems, see grate detail sheet for required modifications.

13/4" Restraint angle typ. 1'-4" 1'-4" **♀** 1" Ø anchor rods with 21/4" x 21/4" x 5/16" P washers installed in 11/8" Ø formed holes in culvert walls

SECTION B-B (Showing end section tie details)



TIE PLATE DETAIL

SCB-TES

TWM. INC.

¢ 3" Ø Drain hole→

DESIGNED REVISED DRAWN REVISED HECKED REVISED PLOT DATE = 12/14/2021 REVISED DATE

2-17-2017

PLAN

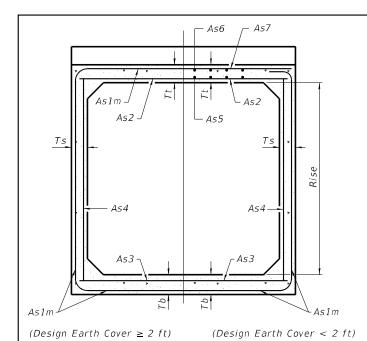
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

E ♠

ΕŠ

SINGLE CELL PRECAST BOX CULVERT TAPERED END SECTIONS STRUCTURE NO. SCALE: N.T.S. SHEET 1 OF 2 SHEETS STA. TO STA.

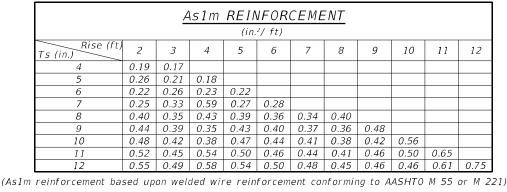
SECTION (30, 31)RS-2 MCLEAN 60 32 CONTRACT NO. 70988



SECTION C-C

Optional bonded construction joint v2 typ. As1m J 2 typ.

ALTERNATE SECTION D-D



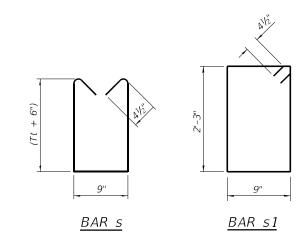
L DIMENSION

#3 bar = 2'-0" #4 bar = 2'-8" $#5 \ bar = 3'-4''$ $#6 \ bar = 3'-11''$

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 v2 bars shall provide a minimum reinforcement area along each face of the walls (in.2/ft.) equal to 1.10*(As1m). v2 bars may consist of #3 thru #6 size reinforcement 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.



#4 s bars at spacing = Tt (Spacing need not be less than 8") 4-h bars (See Section F-F) HEADWALL ELEVATION (Allow sidewall reinforcement to extend into end of headwall.)

TOEWALL CONSTRUCTION SEQUENCE

1. Perform excavation and construct toewall.

SECTION D-D

- 2. Backfill according to the applicable paragraphs of Article 502.10 of the Standard Specifications and place bedding for precast box culvert end sections.
- 3. Set precast box culvert end section.
- 4. Drill and epoxy grout reinforcement in toewall in accordance with Section 584 of the Standard Specifications.
- 5. Pressure grout voids using non-shrink grout conforming to Section 1024 of the Standard Specifications.
- The Contractor may furnish a precast or cast-in-place toewall. The Contractor shall be responsible for the strength and stability of the precast toewall during handling. Additional lifting points may be required depending upon the length of the toewall or the Contractor may need to modify the design of the toewall for the proposed handling the method.
- ** If soil conditions permit, the sides of the toewall may be poured directly against the soil. The clear cover on the sides of the toewall shall be increased to 3" by increasing the thickness of the toewall.

3" Ø corrugated PE pipe per Article 1040.04 of the Standard Specifications. Fill with non-shrink grout 6-#5 h1 bars placed as shown #4 v1 bars drilled and grouted into toewall in 9" min. deep holes at 1'-6" cts., max. #4 s1 bars at 1½" cI. 1'-0" cts., max. typ. 1'-0"

SECTION E-E

$2-#7 \ h \ bars (S < 8'-0")$ 1'-0" 2-#8 h bars (5 ≥ 8'-0") Top and bottom of headwall ¾" "∆" Drip notch full length of span

SECTION F-F

(Chapt 2 of 2)

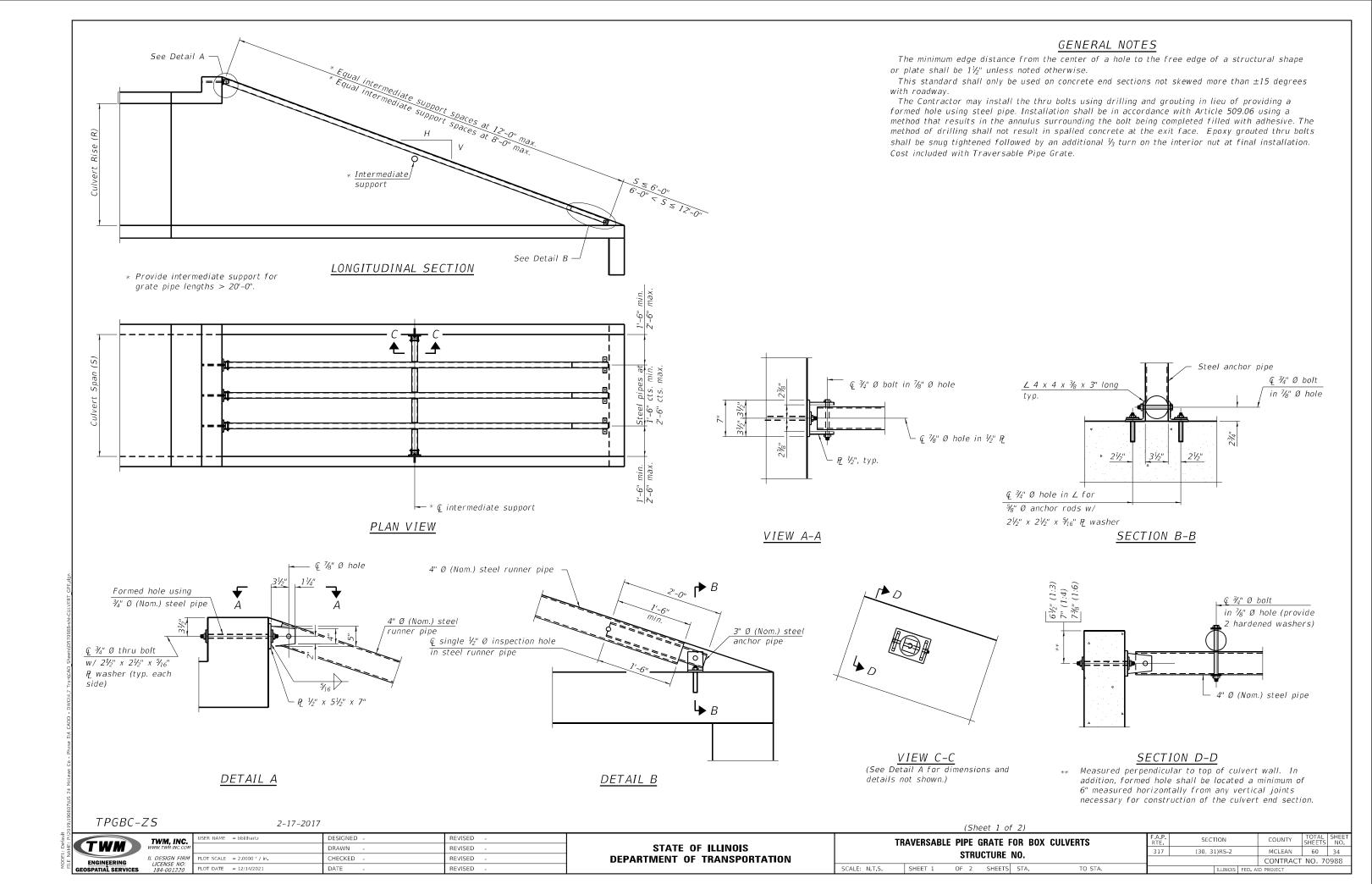
2019/19	SCB-TES	
NAME: POL	TWM	
1	ENGINEERING GEOSPATIAL SERVICES	

	TWM. INC.	Ĺ
)	TWM, INC. www.twm-inc.com	
	IL DESIGN FIRM LICENSE NO:	P
	184-001220	Р

	2-17-2017		
VM. INC.	USER NAME = bbillhartz	DESIGNED -	REVISED -
TWM-INC.COM		DRAWN -	REVISED -
ESIGN FIRM	PLOT SCALE = 2 0000 / in	CHECKED -	REVISED -
ENSE NO: 4-001220	PLOT DATE = 12/14/2021	DATE -	REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

		(Sne	et 2 or	2)						
SINGLE C	ELL PRECA	ST BOX	CULVER	T TAPERED	END SECTIONS	F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CTRI	CTURE	NO		317	(30, 31)RS-2	MCLEAN	60	33
		31110	OTOTIL	140.				CONTRAC	T NO. 70	988
SCALE: N.T.S.	SHEET 2	OF 2	SHEETS	STA.	TO STA.		ILLINOIS FED	. AID PROJECT		



-			Slope of End Section									
	ecast B rt Dimei			1:3		1:4 1:6						
cuivei			Main Pipe	Int. Support	Total Length	Main Pipe	Int. Support	Total Length	Main Pipe Int. Support Total Leng			
S (ft)	R (ft)	Tt (in)	No. / Length	No. / Length	of Pipe	No. / Length	No. / Length	of Pipe	No. / Length	No. / Length	of Pipe	
4	2	7.5	1 @ 8'-10"	N/A	8'-10"	1 @ 11'-7"	N/A	11'-7"	1 @ 17'-2"	N/A	17'-2"	
4	2	5	1 @ 8'-2"	N/A	8'-2"	1 @ 10'-8"	N/A	10'-8"	1 @ 15'-11"	N/A	15'-11"	
4	3	7.5	1 @ 12'-0"	N/A	12'-0"	1 @ 15'-8"	N/A	15'-8"	1 @ 23'-3"	1 @ 3'-7"	26'-10"	
4	3	5	1 @ 11'-4"	N/A	11'-4"	1 @ 14'-10"	N/A	14'-10"	1 @ 22'-0"	1 @ 3'-7"	25'-7"	
4	4	7.5	1 @ 15'-2"	N/A	15'-2"	1 @ 19'-10"	1 @ 3'-7"	23'-5"	1 @ 29'-4"	2 @ 3'-7"	36'-6"	
<i>4 5</i>	2	5 8	1 @ 14'-6" 1 @ 8'-11"	N/A N/A	14'-6" 8'-11"	1 @ 18'-11" 1 @ 11'-9"	N/A	18'-11" 11'-9"	1 @ 28'-1" 1 @ 17'-5"	2 @ 3'-7"	35'-3" 17'-5"	
5	2	6	1 @ 8'-11	N/A N/A	8'-5"	1 @ 11'-1"	N/A N/A	11'-1"	1 @ 17-5"	N/A N/A	16'-5"	
5	3	8	1 @ 12'-1"	N/A N/A	12'-1"	1 @ 15'-10"	N/A N/A	15'-10"	1 @ 23'-6"	1 @ 4'-7"	28'-1"	
5	3	6	1 @ 11'-7"	N/A	11'-7"	1 @ 15'-2"	N/A	15'-2"	1 @ 22'-6"	1 @ 4'-7"	27'-1"	
5	4	8	1 @ 15'-3"	N/A	15'-3"	1 @ 20'-0"	1 @ 4'-7"	24'-7"	1 @ 29'-7"	2 @ 4'-7"	38'-9"	
5	4	6	1 @ 14'-9"	N/A	14'-9"	1 @ 19'-3"	N/A	19'-3"	1 @ 28'-7"	2 @ 4'-7"	37'-9"	
5	5	8	1 @ 18'-5"	N/A	18'-5"	1 @ 24'-1"	2 @ 4'-7"	33'-3"	1 @ 35'-8"	3 @ 4'-7"	49'-5"	
5	5	6	1 @ 17'-11"	N/A	17'-11"	1 @ 23'-5"	1 @ 4'-7"	28'-0"	1 @ 34'-8"	2 @ 4'-7"	43'-10"	
6	2	8	2 @ 8'-11"	N/A	17'-10"	2 @ 11'-9"	N/A	23'-6"	2 @ 17'-5"	N/A	34'-10"	
6	2	7	2 @ 8'-8"	N/A	17'-4"	2 @ 11'-5"	N/A	22'-10"	2 @ 16'-11"	N/A	33'-10"	
6	3	8	2 @ 12'-1"	N/A	24'-2"	2 @ 15'-10"	N/A	31'-8"	2 @ 23'-6"	1 @ 5'-7"	52'-7"	
6	3	7	2 @ 11'-10"	N/A	23'-8"	2 @ 15'-6"	N/A	31'-0"	2 @ 23'-0"	1 @ 5'-7"	51'-7"	
6 6	4	<i>8 7</i>	2 @ 15'-3" 2 @ 15'-0"	N/A N/A	30'-6" 30'-0"	2 @ 20'-0" 2 @ 19'-8"	1 @ 5'-7" 1 @ 5'-7"	45'-7" 44'-11"	2 @ 29'-7" 2 @ 29'-1"	2 @ 5'-7" 2 @ 5'-7"	70'-4" 69'-4"	
6	5	8	2 @ 15'-0" 2 @ 18'-5"	N/A N/A	36'-10"	2 @ 19'-8"	1 @ 5'-7" 2 @ 5'-7"	59'-4"	2 @ 29'-1"	2 @ 5'-7" 3 @ 5'-7"	88'-1"	
6	5	7	2 @ 18-3	N/A N/A	36'-4"	2 @ 24-1	2 @ 5'-7"	58'-8"	2 @ 35'-8"	2 @ 5'-7"	81'-6"	
6	6	8	2 @ 21'-7"	1 @ 5'-7"	48'-9"	2 @ 28'-3"	2 @ 5'-7"	67'-8"	2 @ 41'-9"	3 @ 5'-7"	100'-3"	
6	6	7	2 @ 21'-4"	1 @ 5'-7"	48'-3"	2 @ 27'-11"	2 @ 5'-7"	67'-0"	2 @ 41'-3"	3 @ 5'-7"	99'-3"	
7	2	8	2 @ 8'-11"	N/A	17'-10"	2 @ 11'-9"	N/A	23'-6"	2 @ 17'-5"	N/A	34'-10"	
7	3	8	2 @ 12'-1"	N/A	24'-2"	2 @ 15'-10"	N/A	31'-8"	2 @ 23'-6"	2 @ 6'-7"	60'-2"	
7	4	8	2 @ 15'-3"	N/A	30'-6"	2 @ 20'-0"	2 @ 6'-7"	53'-2"	2 @ 29'-7"	3 @ 6'-7"	78'-11"	
7	5	8	2 @ 18'-5"	N/A	36'-10"	2 @ 24'-1"	3 @ 6'-7"	67'-11"	2 @ 35'-8"	4 @ 6'-7"	97'-8"	
7	6	8	2 @ 21'-7"	2 @ 6'-7"	56'-4"	2 @ 28'-3"	3 @ 6'-7"	76'-3"	2 @ 41'-9"	5 @ 6'-7"	116'-5"	
7	7	8	2 @ 24'-9"	3 @ 6'-7"	69'-3"	2 @ 32'-4"	4 @ 6'-7"	91'-0"	2 @ 47'-10"	6 @ 6'-7"	135'-2"	
8	2	8	3 @ 8'-11"	N/A	26'-9"	3 @ 11'-9"	N/A	35'-3"	3 @ 17'-5"	N/A	52'-3"	
8 8	3 4	8 8	3 @ 12'-1"	N/A	36'-3" 45'-9"	3 @ 15'-10"	N/A 2 @ 7'-7"	47'-6" 75'-2"	3 @ 23'-6" 3 @ 29'-7"	2 @ 7'-7"	85'-8" 111'-6"	
8	5	8	3 @ 15'-3" 3 @ 18'-5"	N/A N/A	55'-3"	3 @ 20'-0" 3 @ 24'-1"	3 @ 7'-7"	95'-0"	3 @ 29 -7 3 @ 35'-8"	3 @ 7'-7" 4 @ 7'-7"	137'-4"	
8	6	8	3 @ 21'-7"	2 @ 7'-7"	79'-11"	3 @ 28'-3"	3 @ 7'-7"	93-0 107'-6"	3 @ 41'-9"	5 @ 7'-7"	163'-2"	
8	7	8	3 @ 24'-9"	3 @ 7'-7"	97'-0"	3 @ 32'-4"	4 @ 7'-7"	127'-4"	3 @ 47'-10"	6 @ 7'-7"	189'-0"	
8	8	8	3 @ 27'-11"	3 @ 7'-7"	106'-6"	3 @ 36'-6"	4 @ 7'-7"	139'-10"	3 @ 53'-11"	6 @ 7'-7"	207'-3"	
9	2	9	3 @ 9'-3"	N/A	27'-9"	3 @ 12'-1"	N/A	36'-3"	3 @ 17'-11"	N/A	53'-9"	
9	3	9	3 @ 12'-4"	N/A	37'-0"	3 @ 16'-2"	N/A	48'-6"	3 @ 24'-0"	3 @ 8'-7"	97'-9"	
9	4	9	3 @ 15'-6"	N/A	46'-6"	3 @ 20'-4"	2 @ 8'-7"	78'-2"	3 @ 30'-1"	3 @ 8'-7"	116'-0"	
9	5	9	3 @ 18'-8"	N/A	56'-0"	3 @ 24'-5"	3 @ 8'-7"	99'-0"	3 @ 36'-2"	4 @ 8'-7"	142'-10"	
9	6	9	3 @ 21'-10"	2 @ 8'-7"	82'-8"	3 @ 28'-7"	3 @ 8'-7"	111'-6"	3 @ 42'-3"	5 @ 8'-7"	169'-8"	
9	7	9	3 @ 25'-0"	3 @ 8'-7"	100'-9"	3 @ 32'-8"	4 @ 8'-7"	132'-4"	3 @ 48'-4"	6 @ 8'-7"	196'-6"	
9	8	9	3 @ 28'-2"	3 @ 8'-7"	110'-3"	3 @ 36'-10"	4 @ 8'-7"	144'-10"	3 @ 54'-5"	6 @ 8'-7"	214'-9"	
9	9	9	3 @ 31'-4"	3 @ 8'-7"	119'-9"	3 @ 40'-11"	5 @ 8'-7"	165'-8"	3 @ 60'-6"	7 @ 8'-7"	241'-7"	
10 10	<i>2</i>	10 10	3 @ 9'-6" 3 @ 12'-8"	N/A N/A	28'-6" 38'-0"	3 @ 12'-5" 3 @ 16'-6"	N/A N/A	37'-3" 49'-6"	3 @ 18'-5" 3 @ 24'-6"	N/A 3 @ 9'-7"	55'-3" 102'-3"	
10	4	10	3 @ 12-8"	N/A N/A	47'-6"	3 @ 20'-8"	N/A 2 @ 9'-7"	81'-2"	3 @ 24'-6"	3 @ 9'-7"	102-3"	
10	5	10	3 @ 19'-0"	N/A N/A	57'-0"	3 @ 24'-9"	3 @ 9'-7"	103'-0"	3 @ 36'-8"	4 @ 9'-7"	148'-4"	
10	6	10	3 @ 22'-1"	2 @ 9'-7"	85'-5"	3 @ 28'-11"	3 @ 9'-7"	115'-6"	3 @ 42'-9"	5 @ 9'-7"	176'-2"	
10	7	10	3 @ 25'-3"	3 @ 9'-7"	104'-6"	3 @ 33'-0"	4 @ 9'-7"	137'-4"	3 @ 48'-10"	6 @ 9'-7"	204'-0"	
10	8	10	3 @ 28'-5"	3 @ 9'-7"	114'-0"	3 @ 37'-2"	4 @ 9'-7"	149'-10"	3 @ 54'-11"	6 @ 9'-7"	222'-3"	
10	9	10	3 @ 31'-7"	4 @ 9'-7"	133'-1"	3 @ 41'-3"	5 @ 9'-7"	171'-8"	3 @ 61'-0"	7 @ 9'-7"	250'-1"	
10	10	10	3 @ 34'-9"	4 @ 9'-7"	142'-7"	3 @ 45'-5"	5 @ 9'-7"	184'-2"	3 @ 67'-1"	8 @ 9'-7"	277'-11"	
11	2	11	4 @ 9'-9"	N/A	39'-0"	4 @ 12'-9"	N/A	51'-0"	4 @ 18'-11"	N/A	75'-8"	
11	3	11	4 @ 12'-11"	N/A	51'-8"	4 @ 16'-11"	N/A	67'-8"	4 @ 25'-0"	3 @ 10'-7"	131'-9"	
11	4	11	4 @ 16'-1"	N/A	64'-4"	4 @ 21'-0"	2 @ 10'-7"	105'-2"	4 @ 31'-1"	3 @ 10'-7"	156'-1"	
11	6	11	4 @ 22'-5"	2 @ 10'-7"	110'-10"	4 @ 29'-3"	3 @ 10'-7"	148'-9"	4 @ 43'-3"	5 @ 10'-7"	225'-11"	
11	8	11	4 @ 28'-9"	3 @ 10'-7"	146'-9"	4 @ 37'-6"	4 @ 10'-7"	192'-4"	4 @ 55'-5"	6 @ 10'-7"	285'-2"	
1 1 1 1	10 11	11 11	4 @ 35'-0" 4 @ 38'-2"	4 @ 10'-7" 4 @ 10'-7"	182'-4" 195'-0"	4 @ 45'-9" 4 @ 49'-10"	5 @ 10'-7" 6 @ 10'-7"	235'-11" 262'-10"	4 @ 67'-7" 4 @ 73'-8"	8 @ 10'-7" 9 @ 10'-7"	355'-0" 389'-11"	
12	2	12	4 @ 38 -2	N/A	40'-0"	4 @ 49-10	N/A	52'-4"	4 @ 73 -8	9 @ 10 -7 N/A	77'-8"	
12	3	12	4 @ 13'-2"	N/A N/A	52'-8"	4 @ 17'-3"	N/A N/A	69'-0"	4 @ 25'-6"	3 @ 11'-7"	136'-9"	
12	4	12	4 @ 16'-4"	N/A	65'-4"	4 @ 21'-4"	2 @ 11'-7"	108'-6"	4 @ 31'-7"	4 @ 11'-7"	172'-8"	
12	6	12	4 @ 22'-8"	2 @ 11'-7"	113'-10"	4 @ 29'-7"	3 @ 11'-7"	153'-1"	4 @ 43'-9"	5 @ 11'-7"	232'-11"	
	8	12	4 @ 29'-0"	3 @ 11'-7"	150'-9"	4 @ 37'-10"	4 @ 11'-7"	197'-8"	4 @ 55'-11"	7 @ 11'-7"	304'-9"	
12												
12	10	12	4 @ 35'-4"	4 @ 11'-7" 5 @ 11'-7"	187'-8" 224'-7"	4 @ 46'-1"	5 @ 11'-7" 6 @ 11'-7"	242'-3"	4 @ 68'-1"	8 @ 11'-7"	365'-0" 436'-10"	

2-17-2017

	TWM, INC.	USER NAME	=
[WM]	WWW.TWM-INC.COM		
NGINEERING	IL DESIGN FIRM	PLOT SCALE	-
PATIAL SERVICES	LICENSE NO: 184-001220	PLOT DATE	=

INC.	USER NAME = bbillhartz	DESIGNED -	REVISED	-	
-INC.COM		DRAWN -	REVISED	-	
N FIRM E NO:	PLOT SCALE = 2 0000 / in	CHECKED -	REVISED	-	
1220	PLOT DATE = 12/14/2021	DATE -	REVISED	-	

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

					V 01111/EDW0	F.A.P. RTE	SECTION
TRAVERSABLE PIPE GRATE FOR BOX CULVERTS						317	(30, 31)RS-2
SCALE: N.T.S.	SHEET 2	OF 2	SHEETS	STA.	TO STA.		ILLINOIS

COUNTY SHEETS NO.

MCLEAN 60 35

CONTRACT NO. 70988

TPGBC-ZS

(Sheet 2 of 2)

STONE RIPRAP, CLASS A1

STONE RIPRAP, CLASS A1 SHALL BE USED TO ADDRESS UNSTABLE SOIL CONDITIONS AS DETERMINED BY THE GEOTECHNICAL ENGINEER.

THE WORK SHOWN IN THE DETAIL SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE PORTIONS OF SECTION 281 OF THE STANDARD SPECIFICATIONS.

THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR STONE RIPRAP, CLASS A1.

THE EXCAVATION AND DISPOSAL OF UNSUITABLE MATERIAL SHALL NOT BE MEASURED FOR PAYMENT. COST INCLUDED WITH STONE RIPRAP, CLASS A1.

MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES

SEE SPECIAL PROVISIONS

POROUS GRANULAR EMBANKMENT

POROUS GRANULAR BACKFILL SHALL EXTEND 2 FT. BEYOND THE AGGREGATE SHOULDER.

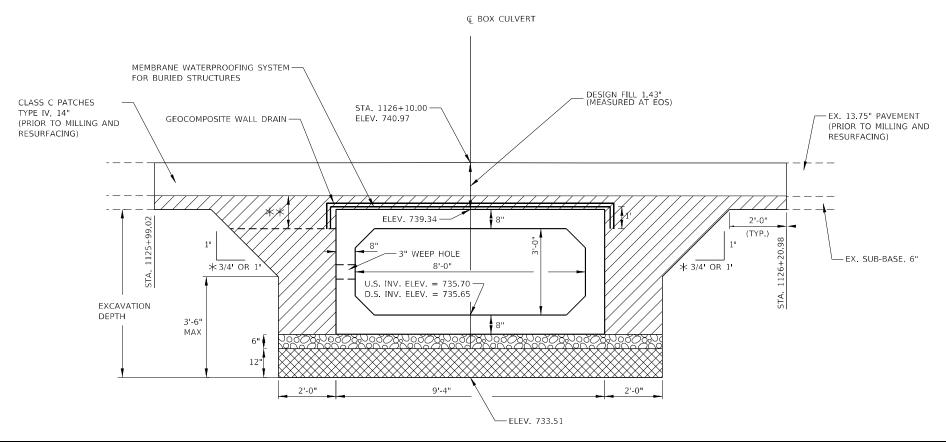
THE WORK SHOWN IN THE DETAIL SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 207 AND SECTION 540 OF THE STANDARD SPECIFICATIONS.

THE COARSE AGGREGATE QUALITY SHALL BE CLASS D OR BETTER AND THE GRADTION SHALL BE CA-6 OR CA-10.

POROUS GRANULAR BACKFILL WILL BE MEASURED FOR PAYMENT IN CUBIC YARDS, IN PLACE AS SHOWN. IF THE CONTRACTOR CHOOSES TO EXCAVATE BEYOND THE LIMITS SHOWN, ADDITIONAL QUANTITIES OF POROUS GRANULAR BACKFILL WILL BE AT HIS/HER OWN EXPENSE.

THE AREA TO BE EXCAVATED FOR THE PROPOSED BOX CULVERT AND END SECTIONS SHALL NOT BE MEASURED FOR PAYMENT. COST INCLUDED WITH PRECAST CONCRETE BOX CULVERTS.

** IN LIEU OF POROUS GRANULAR BACKFILL, THE CONTRACTOR MAY, AT NO ADDITIONAL COST TO THE DEPARTMENT, BACKFILL THE TRENCH FROM THE MEMBRANE WATERPROOFING TO BOTTOM OF PAVEMENT, EXCEPT THE OUTER 3 FT, WITH CONTROLLED LOW-STRENGTH MATERIAL ACCORDING TO SECTION 593.



EXCAVATION DEPTHS	* SLOPES
5'-0" < EXCAVATION DEPTH <= 8'-0"	3/4': 1'
8'-0" < EXCAVATION DEPTH <= 12'-0"	1' : 1'
12'-0" < EXCAVATION DEPTH <= 20'-0 MUST BE SLOPED FROM EXCAVATION BOTTOM OR SPECIAL DESIGN BY S.E. SEE ARTICLE 522.07 FOR TEMPORARY SOIL RETENTION SYSTEM	1': 1'

* SLOPED EXCAVATION IN TYPE A SOIL SHOWN PER APPENDIX B OF OSHA CFR LABOR 29 PART 1926 SUBPART P - EXCAVATIONS

OPTIONAL CONFIGURATIONS MAY BE CONSTRUCTED IN ACCORDANCE WITH OSHA REQUIREMENTS CONTAINED IN THE CODE OF FEDERAL REGULATIONS LABOR 29 PART 1926 SUBPART P - EXCAVATIONS.

SEE ARTICLE 107.28 FOR CONTRACTOR SAFETY RESPONSIBILITY.

BILL OF MATERIAL

Item	Unit	Total
POROUS GRANULAR EMBANKMENT	CU YD	57
STONE RIPRAP, CLASS A1	TON	52
MEMBRANE WATERPROOFING SYSTEM	SQ YD	59
FOR BURIED STRUCTURES		
GEOCOMPOSITE WALL DRAIN	SQ YD	59

POROUS GRANULAR EMBANKMENT

POROUS GRANULAR MATERIAL (CA-7)
(included with precast box culvert)

STONE RIPRAP, CLASS A1

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

ENGINEERING

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

POROUS GRANULAR EMBANKMENT DETAIL
S.N. 057—8235

SHEET 1 OF 1 SHEETS STA. TO STA.

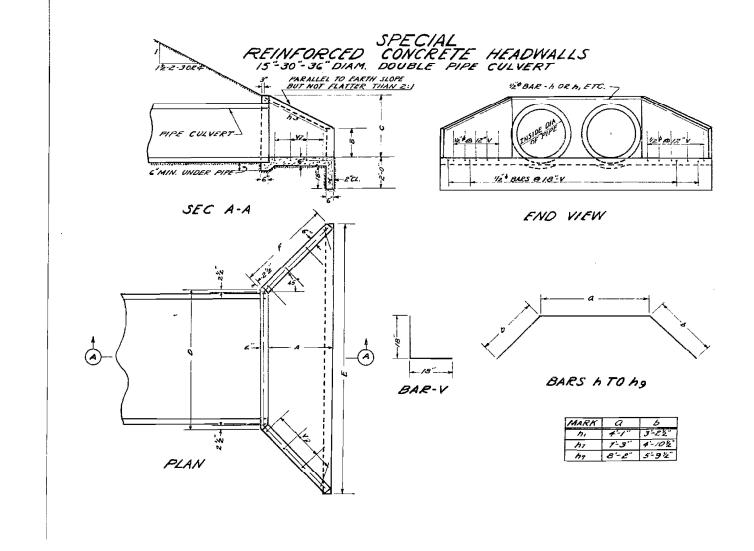
 F.A.P. RTE.
 SECTION
 COUNTY
 TOTAL SHEETS
 SHEETS NO.

 317
 (30, 31)RS-2
 MCLEAN
 60
 36

 CONTRACT NO. 70988

MODEL: Default TLE NAME: P:\2019\19

FOR INFORMATION ONLY



		DIAM.							CL-X CONC				ARS
	LOCATION	PIPE	A	B	C	D	E	7	GU. 705,		LENGTH	NO NO	TOTAL WT.
DEDUCTED -	574. 7.22+54		2'22"	0'-10"-	1'-11"	4'-3"	8-10%	3-34	/-:5"	- h,	10-6"	26"	70:-
	" 1/69+57	30"	3'-4"	1'-7"	3'-3"	7'-5"	14'-1"	4'-11"	9.8 3.7	hj	17'-0"	40	100/12
	· 1126+10	36"	4'-0"	1'-10"	3'-10"	8'-5"	16-5	5'-10%	4.5	hg	19'-9	48	130 h
									5.1				130

OR INFORMATION ON!

TWM, INC.

LOT SCALE = 2.0000 ' / in. PLOT DATE = 12/14/2021

7-23-2021

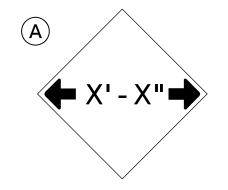
DESIGNED -REVISED DRAWN REVISED CHECKED REVISED DATE

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** SCALE: N.T.S. SHEET 1

CULVERT NO.1 OF 1 SHEETS STA.

AS BUILT PLANS TO STA.

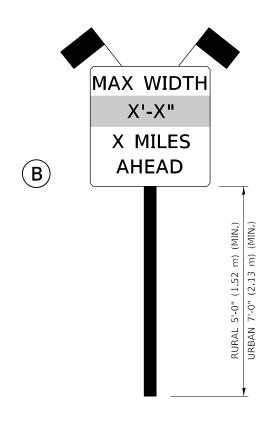
SECTION MCLEAN 60 37 (30, 31)RS-2 CONTRACT NO. 70988



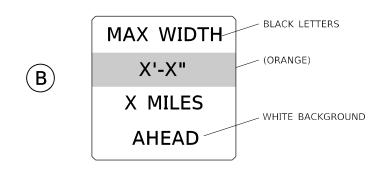
W12-2(0)-48"x48"(1200x1200)

SIGN (A) 2 SIGNS - W12-2(O)-48"x48"(1200x1200) ARE TO BE PLACED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

SIGN (B) 2 SIGNS - (SIGN PANEL, TYPE II) AS SHOWN ARE TO BE PLACED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.



SIGN PANEL, TYPE II



W12-I103(O)-48"x48"(1200x1200) "D" LETTERS/NUMBERS

GENERAL NOTES

- 1. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
- 2. ALL (B) SIGNS SHALL HAVE FLAGS INSTALLED UNLESS OTHERWISE DIRECTED.
- 3. LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
- 4. ALL TRAFFIC CONTROL SHOWN ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR WIDTH RESTRICTION
- 5. ALL SIGNS SHALL BE POST MOUNTED UNLESS OTHERWISE DIRECTED.
- 6. ALL SIGNS SHOWN ORANGE (O) SHALL BE FLUORESCENT ORANGE.
- 7. ALL SIGNS SHOWN SHALL CONSIST OF THE CURRENT RETROREFLECTIVE SHEETING REQUIREMENTS AS OUTLINED IN SECTION 1106.01 OF THE STANDARD SPECIFICATIONS BOOK.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

	_			
DISTRICT	5	DETAIL	NIO	ソフクハハクロ
DISTILL	.,	ULIAIL	INU.	$\Lambda I Z U U Z I$



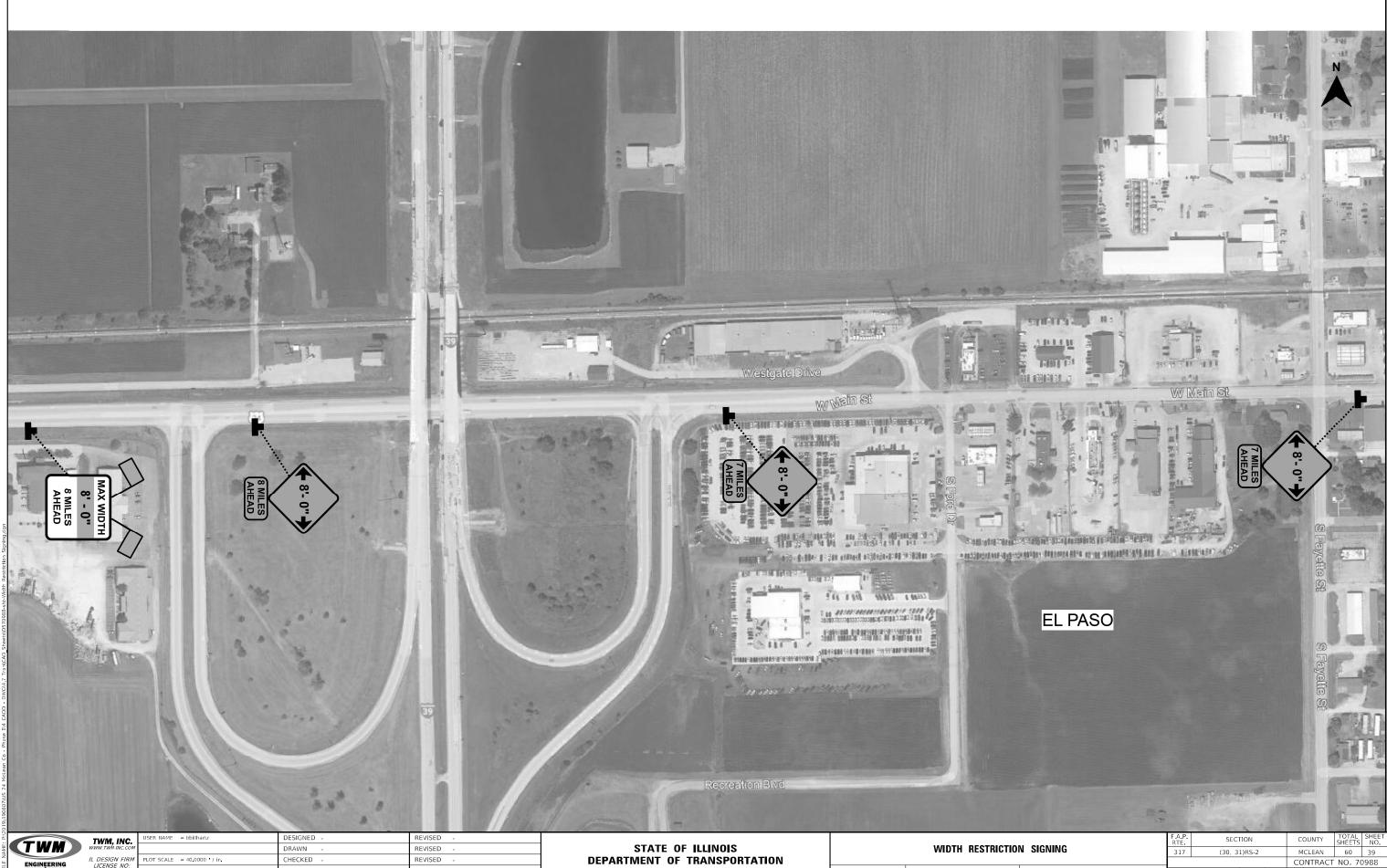
TWM, INC.

DESIGNED -REVISED DRAWN REVISED CHECKED REVISED PLOT DATE = 12/14/2021 REVISED DATE

DEPARTMENT OF TRANSPORTATION

WIDTH RESTRICTION SIGNING SHEET 1 OF 3 SHEETS STA.

SECTION (30, 31)RS-2 MCLEAN 60 38 CONTRACT NO. 70988



SCALE: N.T.S.

SHEET 2 OF 3 SHEETS STA.

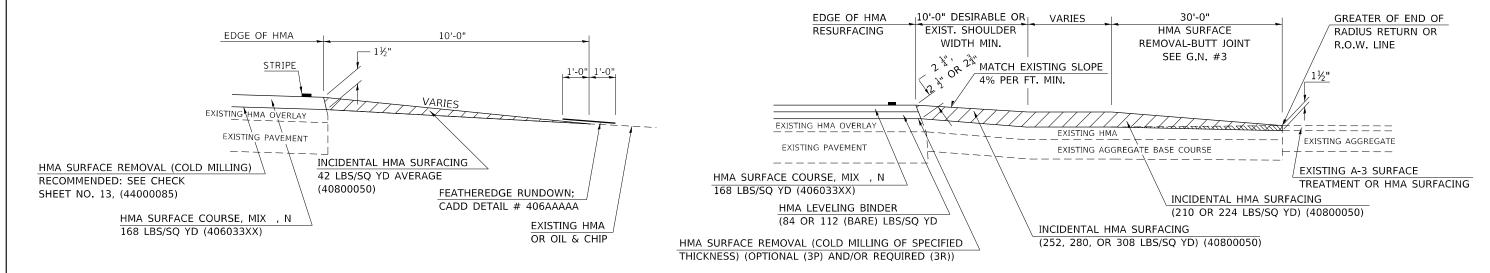
MODEL: Default



MODEL: Default

S.M.A.R.T. IMPROVEMENTS (ALSO CONTRACT MAINTENANCE)

"3P" OR "3R" IMPROVEMENTS



PROJECTS WITH RECONSTRUCTION

("3R" IMPROVEMENTS) WITH HMA SHOULDER WITHOUT HMA SHOULDER A -EXISTING 20' EXISTING LESS EXISTING 20' EXISTING LESS OR GREATER THAN 20' OR GREATER THAN 20' EXISTING WIDTH __2'-0" EXISTING WIDTH EXIST. R.O.W. LINE EXIST. R.O.W. LINE EXIST. R.O.W. LINE EXIST. R.O.W. LINE AGGREGATE SHOULDERS, AGGREGATE SHOULDERS, TYPE B TYPE B B 🚤 B 🚤 STRIPE STRIPE EDGE OF PROPOSED EDGE OF PROPOSED HMA SHOULDERS HMA SHOULDERS RESURFACING RESURFACING B 🚤 A-

GENERAL NOTES

- 1. THE EXISTING SURFACE SHALL BE PREPARED IN ACCORDANCE WITH SECTION 408 OF THE STANDARD SPECIFICATIONS
- PROPOSED SIDEROAD GRADES SHALL BE AS SHOWN IN THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.
- 3. MAJOR SIDEROAD/SIDESTREETS (>400 ADT) SHALL HAVE "BUTT JOINTS" CONSTRUCTED WHETHER THE EXISTING ENTRANCE IS HMA OR PCC. MINOR SIDEROAD/SIDESTREETS (<400 ADT) SHALL HAVE "FEATHEREDGE RUNDOWNS".
- 4. AGGREGATE BASE COURSE, TYPE B OF THE THICKNESS SPECIFIED IN THE PLANS 6" MIN. SHALL BE USED WHERE IN THE OPINION OF THE ENGINEER THERE IS NOT 6" EXISTING BASE MATERIAL FOR THE PROPOSED SIDEROAD RETURNS. THIS MATERIAL SHALL BE USED TO WIDEN SIDEROAD RETURNS.
- THE AGGREGATE BASE COURSE SHALL BE CONSTRUCTED 1' WIDER THAN THE SURFACE DIMENSIONS.
- 6. AGGREGATE SHOULDERS, TYPE B WILL BE WRAPPED AROUND THE SIDEROAD RETURNS. TAPER WIDTH FROM 4' ALONG MAINLINE TO 2' AT BACK OF RETURN.

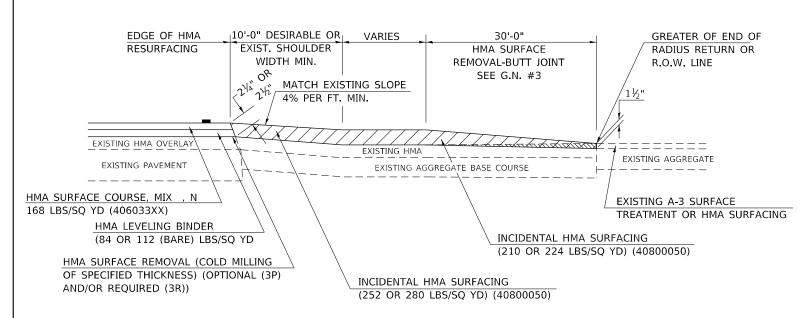
Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

	DISTRICT	5 DE	TAIL	NO. 4080	00AA	
F.A.P. RTE	SEC ⁻	TION		COUNTY	TOTAL SHEETS	SHEE NO.
317	(30, 3	1)RS-2		MCLEAN	60	41
				CONTRACT	NO. 70	988
		ILLINOIS	FED. A	ID PROJECT		

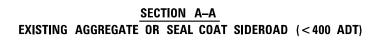
NAME: P:\	TWM
FILE	ENGINEERING GEOSPATIAL SERVICES

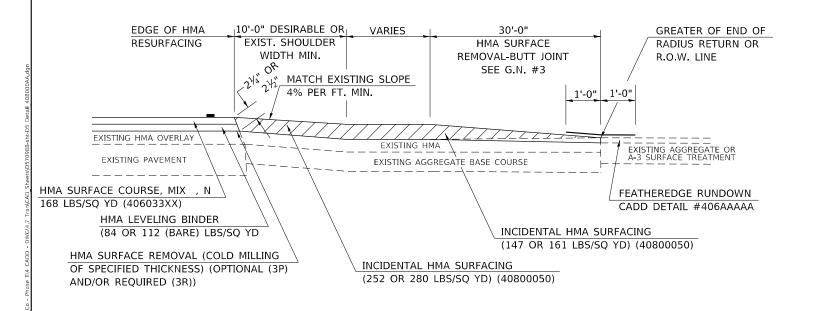
TWM. INC.	USER NAME = bbillhartz	DESIGNED -	REVISED -
www.twm-inc.com		DRAWN -	REVISED -
IL DESIGN FIRM	PLOT SCALE = 40.0000 / in.	CHECKED -	REVISED -
LICENSE NO: 184-001220	PLOT DATE = 12/14/2021	DATE -	REVISED -

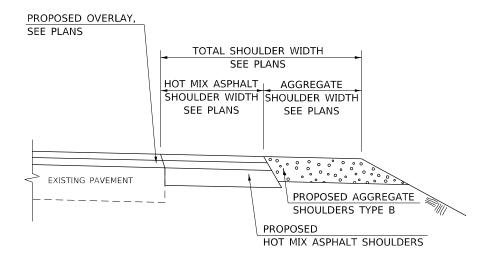
SECTION A-A EXISTING HMA OR PCC SIDEROAD (>400 ADT)



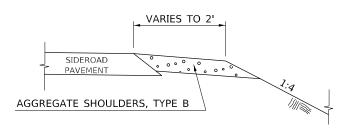
RURAL SIDEROAD DESIGN STANDARDS (PPM 40-06) New Construction & 3R (Existing 3R (Existing Width 20 ft or Width Less Than 20 ft) Greater) & 3P SMART & Contract Maintenance DESIGN ELEMENT min. des. min. des. des. max. max. SURFACE WIDTH (FT); 24 (Measured at end of radius or 24 Coordinate Resurface existing configuration to row line; greatest distance completion of radius return or row from edge of traveled way) Geometrics line; greatest distance from edge RADIUS (FT) 30 30 Engineer of traveled way; major sideroads SHOULDER WIDTH (FT) 4 10 (> 400 adt) shall have "butt joints" SHOULDER SLOPE (%) 2 4 12 constructed whether the entrance resurface existing configuration ENTRANCE GRADE (%) 1 to 4 with the completion of a 10 ft. is hma or pcc; minor sideroads BREAKOVER (%) 10 (< 400 adt) shall have "featheredge featheredge rundown for ALL SIDE SLOPE (FT) 1:10 1:6 1:4 rundown" as shown in district sideroads as shown in district INTERSECTION ANGLE 60 75 to 90 cadd detail 406AAAA cadd detail 406AAAAA SURFACE TYPE INCIDENTAL HMA taper from 2 1/4" to 1 1/2" or SURFACING (INCH) taper from 1 1/2" to featheredge featheredge AGGREGATE BASE if applicable use item: 35800100 COURSE, TYPE A (INCH) Preparation of Base PAVEMENT (INCH)







SECTION B-B **MAINLINE SHOULDER TREATMENT**



SECTION C-C SIDEROAD SHOULDER TREATMENT

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT	5	DETAIL	NO. 408000AA	

DESIGNED REVISED TWM. INC. DRAWN REVISED HECKED REVISED PLOT DATE = 12/14/202 REVISED DATE

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

SIDEROAD & SIDESTREETS (RURAL) SHEET 2 OF 2 SHEETS STA.

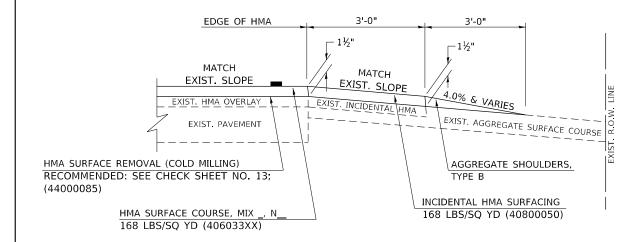
SECTION (30, 31)RS-2 MCLEAN 60 42 CONTRACT NO. 70988

("3R" WITHOUT RECONSTRUCTION, 3P, SMART AND CM)

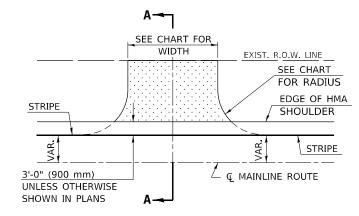
PROJECTS WITH RECONSTRUCTION

("3R" IMPROVEMENTS AND SMART/3P "SPOT" LOCATIONS)

S.M.A.R.T. IMPROVEMENTS (POLICY RESURFACING; BDE 53-4.03; 1½")

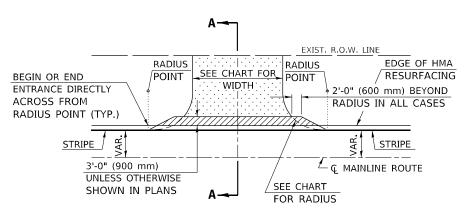


ADJACENT TO PROPOSED HMA SHOULDERS (AGGREGATE OR EARTH ENTRANCE)



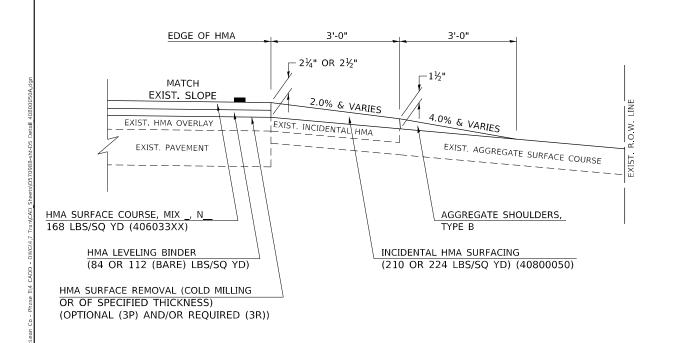
TYPICAL APPLICATION

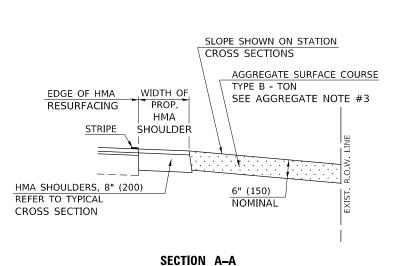
EXISTING AGGREGATE OR EARTH ENTRANCE



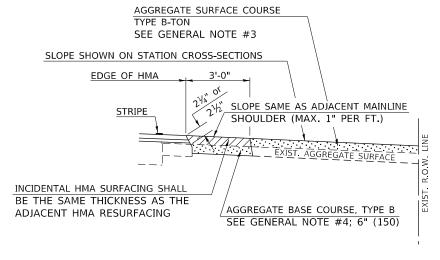
TYPICAL APPLICATION

"3P" OR "3R" IMPROVEMENTS (POLICY RESURFACING; BDE 53-4.02; 2½" OR 2½" ON BARE CONCRETE)





SCALE:



SECTION A-A

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 40800050A	
---------------------------------	--



M. INC.	USER NAME = bbillhartz	DESIGNED -	REVISED -
TWM-INC.COM		DRAWN -	REVISED -
ESIGN FIRM ENSE NO:	PLOT SCALE = 40.0000 / in.	CHECKED -	REVISED -
4-001220	PLOT DATE = 12/14/2021	DATE -	REVISED -

F	IELD	ENTRA	NCI	ES	(NONCO	MMERICAL	. RURAL)
	SHEET	1	OF	2	SHEETS	STA.	TO STA.

F.A.P. RTE	SECTION		COUNTY	TOTAL SHEETS	SHEE NO.
317	(30, 31)RS-2		MCLEAN	60	43
		CONTRACT	NO. 70	988	
	ILLINOIS	FED. AI	D PROJECT		

			RUI	RAL ENT	RANCE DI	ESIGN ST	ANDARD	S (PPM 4	10-09)					
	3R w/out RECONSTRUCTION, 3P, SMART & CM													
		NO	NCOMMERO	CIAL					NOI	NCOMMER	CIAL			
				FIELD \	N/FARM									
	PR	IVATE & FI	ELD	IMPLE	MENTS	С	OMMERCIA	٩L	PR	IVATE & FI	ELD	С	OMMERCIA	٩L
DESIGN ELEMENT	min.	des.	max.	min.	max.	min.	des.	max.	min.	des.	max.	min.	des.	max.
						1	LANE, 1 W	AY				1	LANE, 1 W	Δ Υ
SURFACE WIDTH (FT)	12	16	24	24	30	14	16	24						
						2	LANE, 2 W	AY				2	LANE, 2 W	4 Υ
						24	30	35						
RADIUS (FT)	15	25	40	30		20	30	50	resurface	existing cor	nfiguration; e	existing aggr	egate or ea	rth
SHOULDER WIDTH (FT)	2	2		2		1	3		entrances	shall have	the continua	ation of aggre	egate should	ders
SHOULDER SLOPE (%)	2	4	6	4		2	4	6	placed be	hind them				
ENTRANCE GRADE (%)	0	2 to 5	10 or 12	2 to 5	10 or 12	0	2 to 5	8 or 10						
SIDE SLOPE (FT)	1:4	1:6	1:10	1:4	1:6	1:4	1:6	1:10						
SURFACE TYPE														
INCIDENTAL HMA		2		2		3 or 4			taper from	hma resurfa	cing thickne	ess (2 1/2", 2	1/4" or 1 1/	(2")
SURFACING (INCH)				2		3014			to 1 1/2" to	minimize ag	ggregate sh	oulder		
AGGREGATE SURFACE		6		6		8			if applicable	e, use items	: Preparatio	n of Base &	Aggregate	
COURSE, TYPE B (INCH)		6		0		8			Base Repa	ir; see PPM	I 30-02			
PCC DRIVEWAY								0 0 0						
PAVEMENT (INCH)		6						6 or 8						

GENERAL NOTES

- 1. THE EXISTING SURFACE SHALL BE PREPARED IN ACCORDANCE WITH SECTION 408 OF THE STANDARD SPECIFICATIONS.
- 2. ANY NECESSARY WORK BEHIND THE HMA SHOULDER OR THE INCIDENTAL HMA SURFACING SHALL BE AS SHOWN IN THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.
- 3. EARTH EXCAVATION REQUIRED FOR THE CONSTRUCTION OF THE AGGREGATE SURFACE COURSE SHALL BE INCLUDED IN THE COST OF AGGREGATE SURFACE COURSE.
- 4. AGGREGATE BASE COURSE, TYPE B, 6" (150 mm) MIN. SHALL BE USED WHERE IN THE OPINION OF THE ENGINEER THERE IS NOT SUFFICIENT BASE MATERIAL FOR THE PROPOSED ENTRANCES. THIS MATERIAL SHALL GENERALLY BE USED TO WIDEN ANY EXISTING RETURN OR TO CONSTRUCT NEW ENTRANCES WHERE NONE NOW EXISTS.
- 5. THE AGGREGATE BASE COURSE SHALL BE CONSTRUCTED 12" (300 mm) WIDER THAN THE SURFACE DIMENSIONS AS SHOWN ABOVE.
- 6. EXISTING FIELD ENTRANCES OF AGGREGATE OR EARTH WITH NO HMA APRON SHALL NOT RECEIVE A NEW HMA APRON WITHOUT PROPER APPROVAL THROUGH THE BUREAU OF OPERATIONS "POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS".
- 7. TO ASSURE APPROPRIATE ACCESS POLICIES ARE FOLLOWED ALL NEW ACCESS SHALL BE APPLIED FOR THROUGH THE BUREAU OF OPERATIONS PERMIT APPLICATION PROCESS. PLAN PREPARATION MEMORANDUMS 40-09 ALONG WITH DISTRICT PROJECT IMPLEMENTATION MEMORANDUM 104/01 DISCUSS THIS PROCEDURE.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

ı	DISTRICT 5 DETAIL	NO. 40800)050A	
F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHE
317	(30, 31)RS-2	MCLEAN	60	44

TWM, INC.

JSER NAME = bbillhartz DESIGNED -REVISED DRAWN REVISED HECKED REVISED PLOT DATE = 12/14/2021 REVISED DATE

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

S.M.A.R.T. IMPROVEMENTS "3P" OR "3R" IMPROVEMENTS (POLICY RESURFACING; BDE 53-4.02; 21/4" OR 21/2" ON BARE CONCRETE) (POLICY RESURFACING; BDE 53-4.03; $1\frac{1}{2}$ ") EDGE OF SHOULDER EDGE OF SHOULDER 8'-0" & VARIES 8'-0" & VARIES EDGE OF HMA EDGE OF HMA 3'-0" & VARIES & VARIES -1½' -2½" OR 2½' MATCH MATCH MATCH EXIST. SLOPE EXIST. SLOPE EXIST. SLOPE 2.0% & VARIES 4.0% VARIE VARIES EXIST. INCIDENTAL HMA EXIST. HMA OVERLAY EXIST. HMA OVERLAY EXIST. INCIDENTAL HMA EXIST. PAVEMENT EXIST. PAVEMENT HMA SURFACE REMOVAL (COLD MILLING) AGGREGATE SHOULDERS, RECOMMENDED: SEE CHECK SHEET NO. 13; TYPE B (44000085) HMA SURFACE COURSE, MIX _, N_ AGGREGATE SHOULDERS, HMA SURFACE COURSE, MIX _, N_ INCIDENTAL HMA SURFACING 168 LBS/SQ YD (406033XX) TYPE B 168 LBS/SQ YD (406033XX) 168 LBS/SQ YD (40800050) HMA LEVELING BINDER INCIDENTAL HMA SURFACING (84 OR 112 (BARE) LBS/SQ YD) (210 OR 224 LBS/SQ YD AVERAGE) (40800050) HMA SURFACE REMOVAL (COLD MILLING EXIST. R.O.W. LINE OR OF SPECIFIED THICKNESS) SEE GENERAL NOTE #5 (OPTIONAL (3P) AND/OR REQUIRED (3R)) 10' 20' (6.1 m) DEPARTURE SIDE ARRIVAL SIDE (3 m (3 m) EDGE OF RELOCATED SHOULDER | MAILBOX PROJECTS WITH RECONSTRUCTION EDGE OF HMA RESURFACING ("3R" IMPROVEMENTS) 20' (6.1 m) MIN. UNLESS STRIPE \ STRIPE NORMAL 4'-0" - 8'-0" 10'-0" OTHERWISE SHOWN IN WIDTH OF SHOULDER TRAFFIC FLOW (1.2 m - 2.4 m) (3.0 m)THE PLANS WIDTH OF TURNOUT 8'-0" - 10'-0" 8'-0" (2.4 m)(2.4 m - 3.0 m) TYPICAL APPLICATION - - - - - - ENTRANCE P 20' (6.1 m) MIN UNLESS OTHERWISE SHOWN IN THE PLANS SEE GENERAL NOTE #5 SEE GENERAL NOTE #5 EDGE OF HMA Y=LENGTH OF RESURFACING INC. HMA SURFACING 20' (6.1 m) 10' 32 (9.7 m) ARRIVAL SIDE 8'-0" (2.4 m) MIN. DESIRABLE DEPARTURE SIDE (3 m) STRIPE (3 m) (3 m) (3 m) EDGE OF RELOCATED RELOCATED SEE GENERAL SHOULDER 1'-0" MAILBOX MAILBOX NOTE #6 (300) EDGE OF HMA RESURFACING AGGREGATE BASE COURSE, TYPE B STRIPE STRIPE NORMAL NORMAL SEE GENERAL NOTE #2 20' (6.1 m) MIN. UNLESS 6" (150) ENTRANCE ENTRANCE ■ NORMAL TRAFFIC FLOW OTHERWISE SHOWN IN MIN. FLARE INCIDENTAL HMA SURFACING FLARE THE PLANS SHALL BE THE SAME THICKNESS **∠** ⊊ MAINLINE ROUTE AS THE ADJACENT HMA RESURFACING TYPICAL MAILBOX TURNOUT PLACEMENT SECTION A-A ADJACENT TO ENTRANCE

GENERAL NOTES

- 1. THE EXISTING SURFACE SHALL BE PREPARED IN ACCORDANCE WITH SECTION 408 OF THE STANDARD SPECIFICATIONS.
- 2. AGGREGATE BASE COURSE, TYPE B, 6" (150) MIN. SHALL BE USED WHERE IN THE OPINION OF THE ENGINEER THERE IS NOT SUFFICIENT BASE MATERIAL FOR THE PROPOSED MAILBOX TURNOUTS. THIS MATERIAL SHALL GENERALLY BE USED TO WIDEN ALL EXISTING MAILBOX TURNOUTS OR TO CONSTRUCT NEW MAILBOX TURNOUTS WHERE NONE NOW EXISTS.
- 3. ANY NECESSARY WORK BEHIND THE INCIDENTAL HMA SURFACING SHALL BE AS SHOWN IN THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.
- 4. THE TEMPORARY RELOCATION OF EXISTING MAILBOXES SHALL BE IN ACCORDANCE WITH ARTICLE 107.20 OF THE STANDARD SPECIFICATIONS.
- 5. WHEN MORE THAN ONE RELOCATED MAILBOX IS INCLUDED IN A PARTICULAR LOCATION THE TWO 10' (3 m) DIMENSIONS AS SHOWN ABOVE SHALL BE FROM THE END MAILBOX.
- 6. CROSS SLOPE SHALL BE AS SHOWN ON THE STATION CROSS SECTIONS AND/OR AS DIRECTED BY THE ENGINEER.

 MINIMUM 4% (1/2"/') DESIRABLE; MAXIMUM 8% (1"/')
- 7. WHEN MAILBOX TURNOUTS ARE CONSTRUCTED ADJACENT TO FIELD ENTRANCES, THE WIDTH OF THE INCIDENTAL HMA SURFACING CONSTRUCTED FOR THE FIELD ENTRANCE SHALL MATCH THE WIDTH OF THE PROPOSED MAILBOX TURNOUT SURFACING.
- 8. THE TOTAL SHOULDER WIDTH, 2.4 m (8') MINIMUM, SHALL BE PAVED BETWEEN SIDEROADS ENTRANCES AND/OR MAILBOX TURNOUTS AT LOCATIONS WHERE THE DISTANCE BETWEEN RADIUS OR TAPER CONTROL POINTS IS LESS THAN 15.0 m (50').
- MAILBOXES SHALL BE MOUNTED SUCH THAT THE FACE OF THE MAILBOX IS 6" (150 mm) TO 12" (300 mm) AND THE POST A MINIMUM OF 24" (600 mm) FROM THE EDGE OF THE TURNOUT SURFACING.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT	5	DETAIL	NO	40800050B	
DISTINCT	J	VEIAL	IVO.	TUUUUUJUU	

TWM

 TWIN, INC.
 USER NAME
 = bbillhartz
 DESIGNED
 REVISED

 IL DESIGN FIRM LICENSE NO: 184-001220
 FLOT SCALE
 = 40.0000 / in.
 CHECKED
 REVISED

 PLOT DATE
 = 12/14/2021
 DATE
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAILBOX TURNOUT (RURAL)

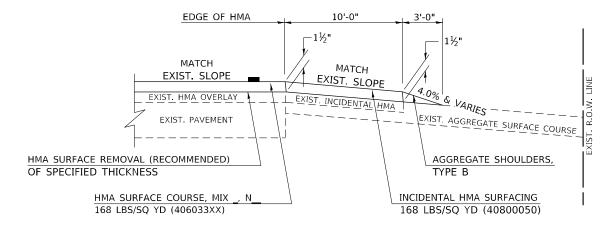
SHEET 1 OF 1 SHEETS STA.

TO STA.

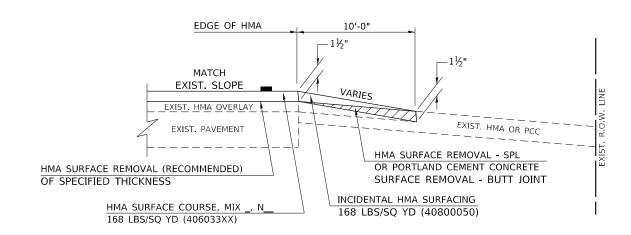
SCALE:

A.P. SECTION COUNTY TOTAL SHEETS NO. 317 (30, 31)RS-2 MCLEAN 60 45 CONTRACT NO. 70988

S.M.A.R.T. IMPROVEMENTS (POLICY RESURFACING; BDE 53–4.03; $1\frac{1}{2}$ ")

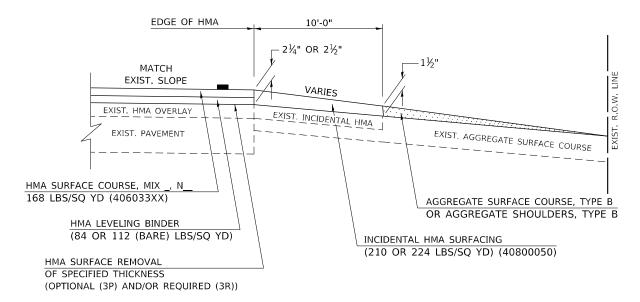


EXISTING AGGREGATE ENTRANCE

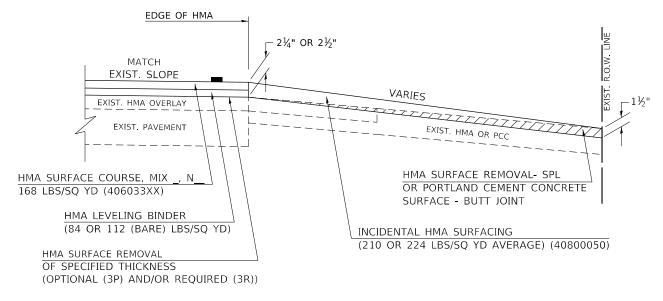


EXISTING HMA OR PCC ENTRANCE

"3P" OR "3R" IMPROVEMENTS (POLICY RESURFACING; BDE 53-4.02; 2\%" OR 2\%" ON BARE CONCRETE)



EXISTING AGGREGATE ENTRANCE



EXISTING HMA OR PCC ENTRANCE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

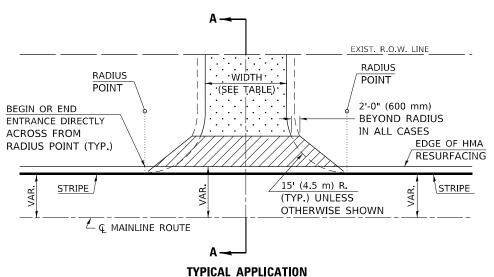
DISTRICT	5	DETAIL	NO.	40800050C

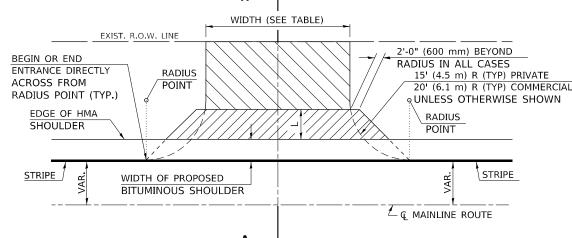


WM. INC.	USER NAME = bbillhartz	DESIGNED -	REVISED -
vw.twm-inc.com		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 / in.	CHECKED -	REVISED -
ICENSE NO: 184-001220	PLOT DATE = 12/14/2021	DATE -	REVISED -

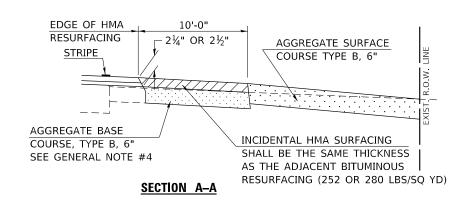
AGGREGATE ENTRANCE (3R IMPROVEMENTS)

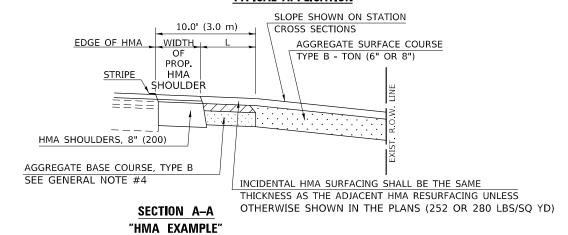
HMA OR PCC ENTRANCE





TYPICAL APPLICATION





RURAL ENTRANCE DESIGN STANDARDS (PPM 40-09) NEW CONSTRUCTION & 3R with CONSTRUCTION 3R w/out RECONSTRUCTION, 3P, SMART & CM NONCOMMERCIAL NONCOMMERCIAL FIELD W/FARM PRIVATE & FIELD **IMPLEMENTS** COMMERCIAL PRIVATE & FIELD COMMERCIAL DESIGN ELEMENT min. des. max. min. max. min. des. max. min. des. max. min. des. max. 1 LANE, 1 WAY 1 LANE, 1 WAY SURFACE WIDTH (FT) 12 16 24 24 30 14 16 24 2 LANE, 2 WAY 2 LANE, 2 WAY 24 30 35 RADIUS (FT) 15 25 40 30 50 20 30 resurface existing configuration; existing aggregate or earth SHOULDER WIDTH (FT) 2 2 2 3 entrances shall have the continuation of aggregate shoulders SHOULDER SLOPE (%) 2 4 2 4 6 placed behind them 4 6 ENTRANCE GRADE (%) 0 2 to 5 10 or 12 2 to 5 10 or 12 2 to 5 8 or 10 SIDE SLOPE (FT) 1:10 1:10 1:6 1:4 1:6 1:4 1:6 1:4 SURFACE TYPE INCIDENTAL HMA taper from hma resurfacing thickness (2 1/2", 2 1/4" or 1 1/2") 2 2 3 or 4 SURFACING (INCH) to 1 1/2" to minimize aggregate shoulder AGGREGATE SURFACE if applicable, use items: Preparation of Base & Aggregate COURSE, TYPE B (INCH) Base Repair, see PPM 30-02 PCC DRIVEWAY 6 or 8 PAVEMENT (INCH)

GENERAL NOTES

- 1. THE EXISTING SURFACE SHALL BE PREPARED IN ACCORDANCE WITH SECTION 408 OF THE STANDARD SPECIFICATIONS.
- ANY NECESSARY WORK BEHIND THE HMA SHOULDER OR THE INCIDENTAL HMA SURFACING SHALL BE AS SHOWN IN THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.
- 3. EARTH EXCAVATION REQUIRED FOR THE CONSTRUCTION OF THE AGGREGATE SURFACE COURSE SHALL BE INCLUDED IN THE COST OF AGGREGATE SURFACE COURSE.
- 4. AGGREGATE BASE COURSE, TYPE B, 6" (150 mm) MIN. SHALL BE USED WHERE IN THE OPINION OF THE ENGINEER THERE IS NOT SUFFICIENT BASE MATERIAL FOR THE PROPOSED ENTRANCES. THIS MATERIAL SHALL GENERALLY BE USED TO WIDEN ANY EXISTING RETURN OR TO CONSTRUCT NEW
- 5. ENTRANCES WHERE NONE NOW EXISTS.
- 6. THE AGGREGATE BASE COURSE SHALL BE CONSTRUCTED 12" (300 mm) WIDER THAN THE SURFACE DIMENSIONS AS SHOWN ABOVE.
- 7. EXISTING FIELD ENTRANCES OF AGGREGATE OR EARTH WITH NO HMA APRON SHALL NOT RECEIVE A NEW HMA APRON WITHOUT PROPER APPROVAL THROUGH THE BUREAU OF OPERATIONS "POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS".

TO ASSURE APPROPRIATE ACCESS POLICIES ARE FOLLOWED ALL NEW ACCESS SHALL BE APPLIED FOR THROUGH THE BUREAU OF OPERATIONS PERMIT APPLICATION PROCESS. PLAN PREPARATION MEMORANDUMS 40-09 ALONG WITH DISTRICT PROJECT IMPLEMENTATION MEMO 104/01 DISCUSS THIS PROCEDURE.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 40800050C



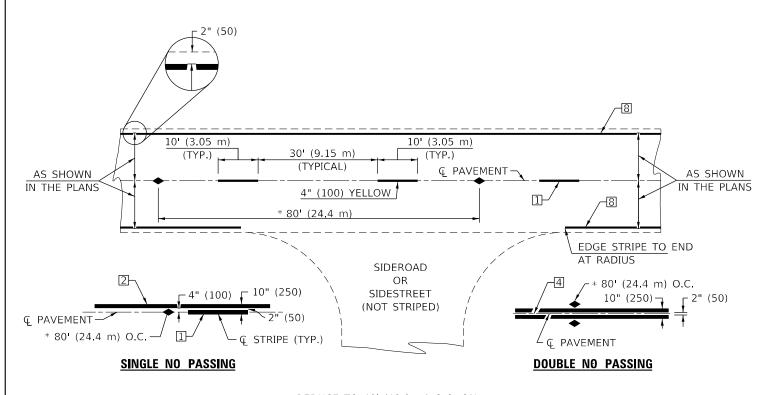
| VALUE | VALU

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRIVATE COMMERCIAL ENTRANCES
(NONCOMMERCIAL AND COMMERCIAL RURAL)

SHEET 2 OF 2 SHEETS STA. TO S

F.A.P. SECTION COUNTY TOTAL SHEE RTE. 317 (30, 31)RS-2 MCLEAN 60 47 CONTRACT NO. 70988



* REDUCE TO 40' (12.2 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEEDS OF 45 mph (70 km/h) OR LESS.

TWO LANE/TWO WAY

US 24 - SKIP DASH STA. 850+78.52 TO STA. 1132+85.32

REVISED

REVISED

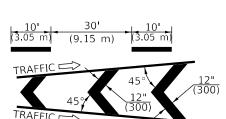
REVISED

TYPICAL PAVEMENT MARKING LEGEND

- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 RESERVED
- 6 RESERVED
- 7 4" (100) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 4" (100) LANE LINE EXTENSIONS (WHITE)
- 4" (100) PARKING WHITE

TYPICAL PAVEMENT MARKERS LEGEND

- TWO-WAY AMBER MARKER
- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER



4' TYP.

24" TYP. (610)

_ 2" (50)

╬**=** 6" (150) CTS.

(610)

							(610	J - (300)			
	3 @ 80' O.C. (24.4 m)	3 @ 40' O.C. (12.2 m)	1		RURAL LEFT TUR	<u>N</u> 			3 @ 40' O.C. (12.2 m)	3 @ 80' C	D.C.
. DWGIA 7 TzzalCAD SpeatsIDS71088_ckt.DS Datail 78010AAA nm	500' (164 m) MIN		4	3-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	Rn) U E 7 1	40' (12.2 m) O.C. (TYP.) 3 MARKERS MIN. FOR TURN LANE BAY (TYP.) **	*** 4	4		[2] [2] [7] [500']	(164 m) MIN.

- *** REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.
- ** TURN ARROWS SHALL BE PLACED AS SHOWN ON SHEET #2.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

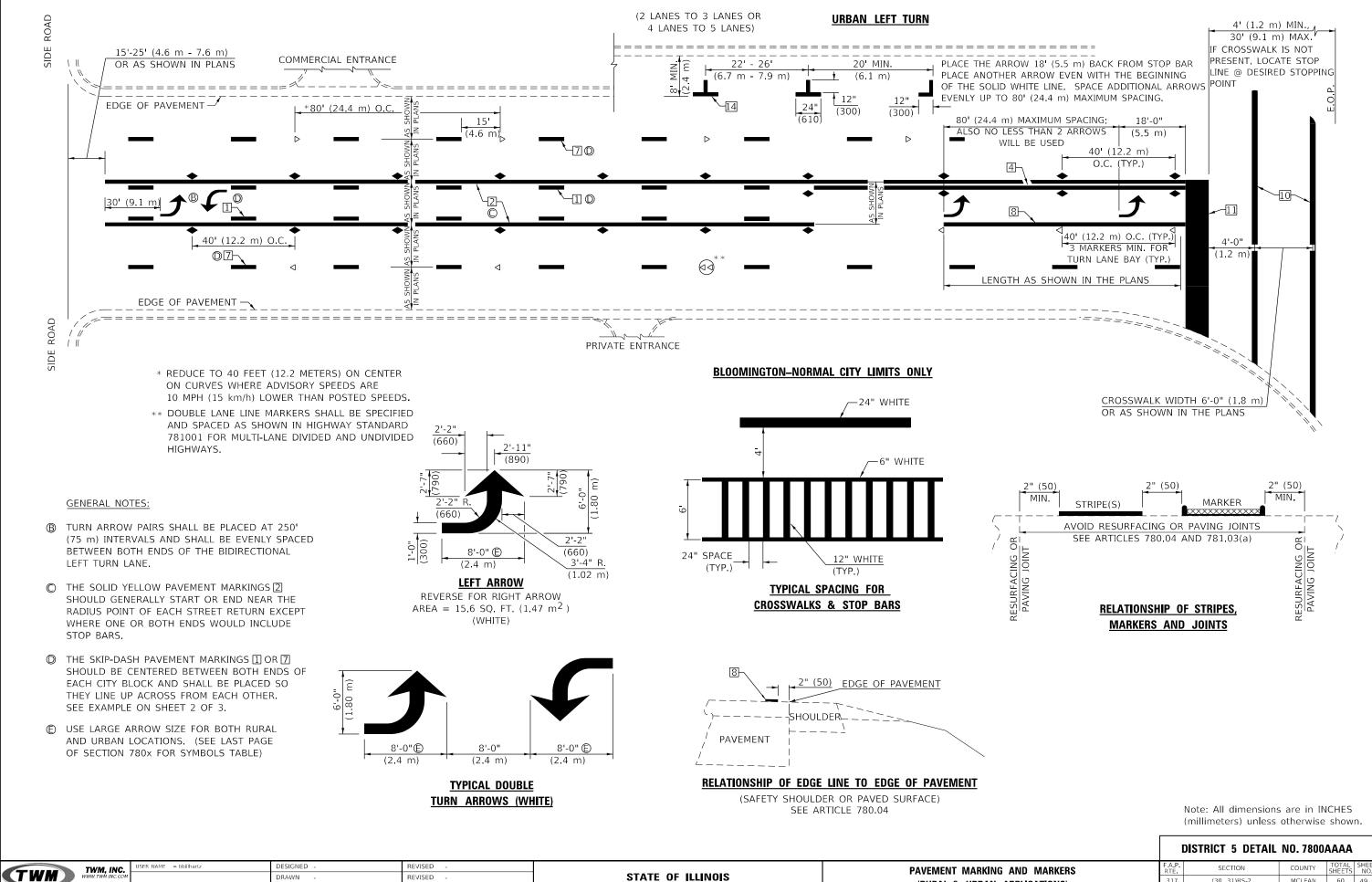
I	DISTRICT 5 DETAIL	NO. 7800	AAAA	
F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEE NO.
317	(30, 31)RS-2	MCLEAN	60	48

DESIGNED -TWM, INC. DRAWN CHECKED PLOT DATE = 12/14/2021 DATE

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

PAVEMENT MARKING AND MARKERS (RURAL & URBAN APPLICATIONS) SHEET 1 OF 4 SHEETS STA.

CONTRACT NO. 70988



DEPARTMENT OF TRANSPORTATION

MCLEAN

CONTRACT NO. 70988

(RURAL & URBAN APPLICATIONS)

TO STA.

SHEET 2 OF 4 SHEETS STA.

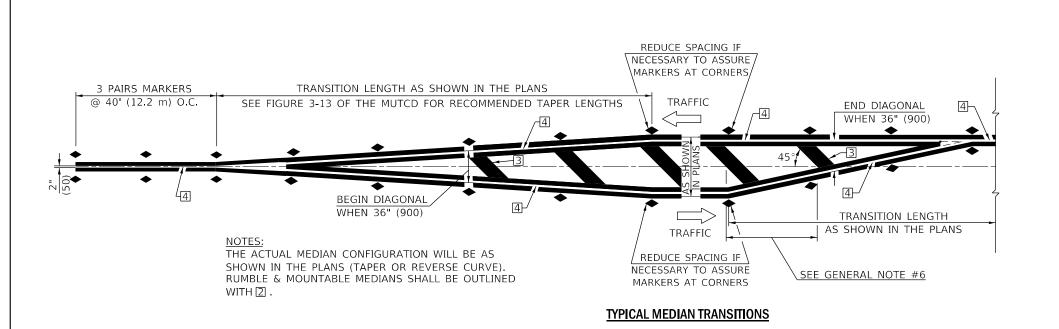
60 49

HECKED

DATE

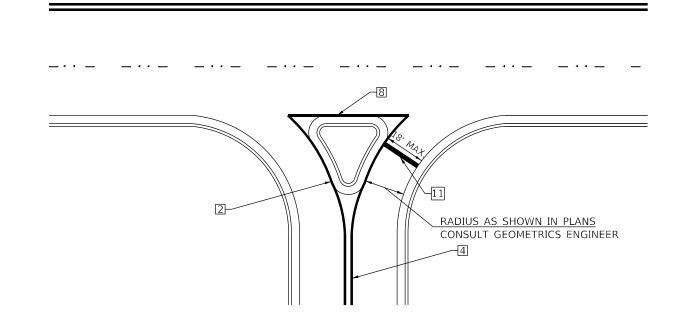
PLOT DATE = 12/14/2021

REVISED

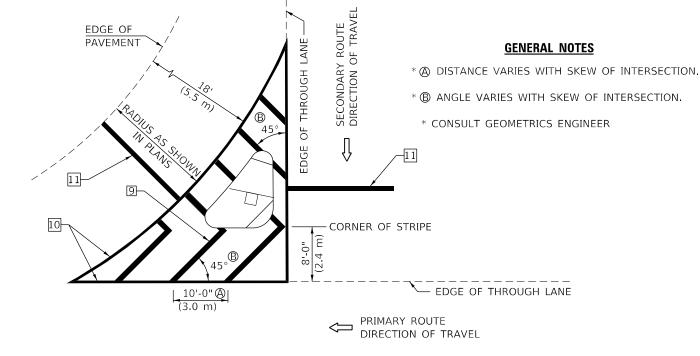


GENERAL NOTES

- 1. WHEN MEDIANS ARE PRESENT, PAVEMENT MARKINGS ARE TO BE PLACED ADJACENT TO MEDIANS.
- 2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
- 3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
- 4. A STRIPING KEY IS AVAILABLE ELSEWHERE AND SHALL BE SHOWN WHERE THE QUANTITIES ARE LISTED.
- 5. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
- 6. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING, <30 MPH USE 15' (<50 km/h USE 4.5 m) 30-45 MPH USE 20' (50-75 km/h USE 6.0 m) >45 MPH USE 30' (>75 km/h USE 9.0 m)



RIGHT IN - RIGHT OUT ACCESS



ISLAND

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

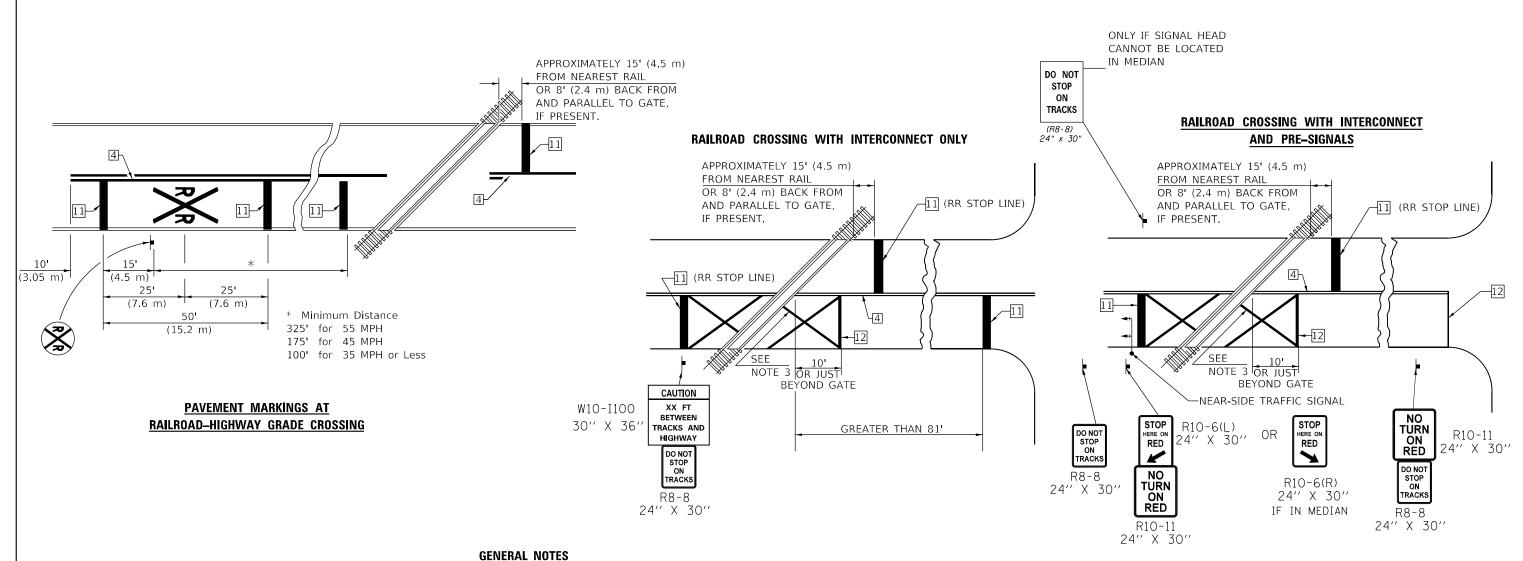
DISTRICT 5 DETAIL NO. 7800AAAA	AAA
--------------------------------	-----

ENGINEERING GEOSPATIAL SERVICES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS
(RURAL & URBAN APPLICATIONS)

SHEET 3 OF 4 SHEETS STA.



- 1. SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
- 2. EXTEND PAVEMENT MARKINGS TO THE INTERSECTION ONLY WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED.
- 3. 6" WHITE PAVEMENT MARKINGS AT 45° TO PAVEMENT, 8' CENTER TO CENTER.
- 4. XX DISTANCE TO BE SHOWN ON SIGN MEASURED FROM A POINT 6 FEET FROM THE RAIL CLOSEST TO THE INTERSECTION OR FROM THE CLOSEST POINT ALONG THE EXIT GATE IF PRESENT OVER THE ROADWAY WHEN IN THE LOWERED POSITION TO THE STOP BAR OR CROSSWALK, WHICH EVER IS CLOSEST, ROUNDED DOWN TO NEAREST 5 FEET. WHERE THERE IS NO STOP LINE, MEASURE TO POINT WHERE DRIVER HAS A VIEW OF APPROACHING TRAFFIC.
- 5. THE CLEARANCE SIGN IS ALSO TO BE USED AS AN INTERIM MEASURE AT LOCATIONS WITH INTERCONNECTED INTERSECTION TRAFFIC SIGNALS WHERE IT IS PLANNED TO CHANGE THEM TO NEAR-SIDE SIGNALS AT A FUTURE TIME. IN THIS CASE, THE DISTANCE TO BE SHOWN ON THE SIGN IS MEASURED FROM THE EDGE OF THE STRIPED-OUT AREA INSTEAD OF 6 FEET FROM THE RAIL. THE SIGN IS TO BE REMOVED WHEN THE NEAR-SIDE SIGNALS ARE INSTALLED AND THE PAVEMENT MARKINGS EXTENDED TO THE INTERSECTION.

SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING

ON RED

R10-6a(R)

24" X 30"

ALTERNATE SIGNS

RED

24" X 30"

R10-6a(L)

<u>NOTES</u>

THE TRAVERSE SPREAD OF THE "X" MAY VARY ACCORDING TO LANE WIDTH.

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

WHEN THE PAVEMENT MARKING SYMBOL IS USED, A PORTION OF THE SYMBOL SHOULD BE LOCATED DIRECTLY ADJACENT TO THE ADVANCE WARNING SIGN (W10-1) AS PLACED BY TABLE II-1, CONDITION B OF THE MUTCD.

Note: All dimensions are in INCHES

(millimeters) unless otherwise shown. DISTRICT 5 DETAIL NO. 7800AAAA



8' (2.4 m) OR

AS DIRECTED BY

THE ENGINEER.

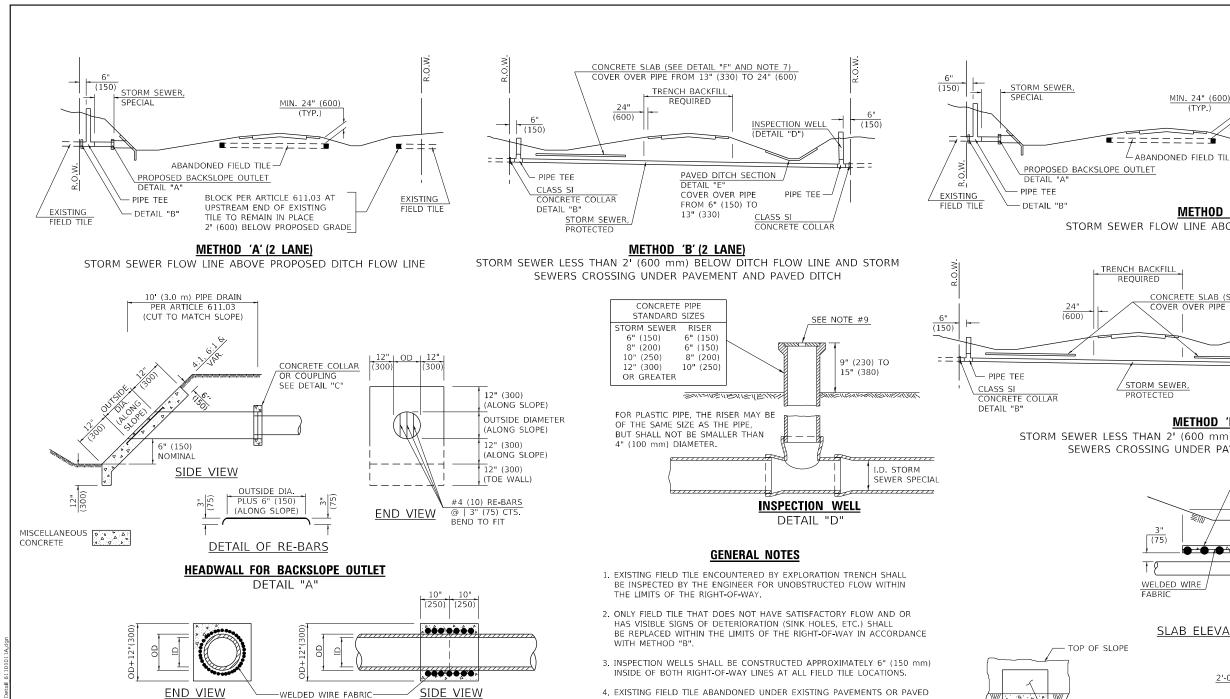
-LANE Q

DESIGNED SER NAME = bbillharta REVISED TWM. INC. DRAWN REVISED HECKED REVISED PLOT DATE = 12/14/2021 REVISED DATE

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

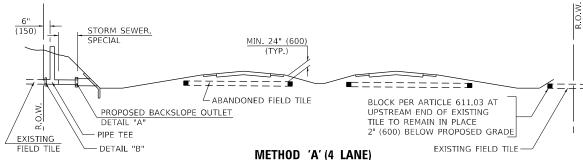
PAVEMENT MARKING AND MARKERS (RURAL & URBAN APPLICATIONS) SHEET 4 OF 4 SHEETS STA. TO STA.

MCLEAN (30, 31)RS-2 60 51 CONTRACT NO. 70988

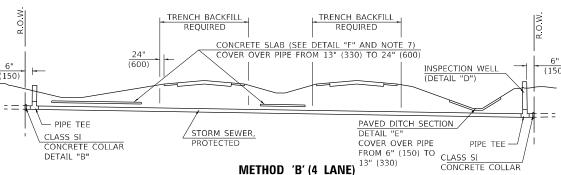


ARTICLE 109.04.

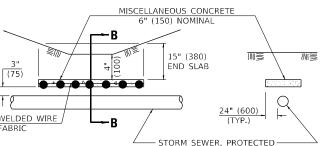
- 4. EXISTING FIELD TILE ABANDONED UNDER EXISTING PAVEMENTS OR PAVED SHOULDERS SHALL BE FILLED WITH FLOWABLE GROUT AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR ACCORDING TO
- 5. NON-CIRCULAR FIELD TILE SHALL BE REPLACED WITH STORM SEWER, SPECIAL OF AT LEAST THE SAME CROSS SECTIONAL AREA. ALL EXISTING FIELD TILE SHALL BE REPLACED WITH STORM SEWER OF THE TYPE REQUIRED FOR THE MINIMUM DEPTH OF COVER.
- 6. THE 6" (150 mm) CONCRETE SLAB OR DITCH LINING SHALL BE POURED THE LENGTH OF THE TRENCH AT ALL DITCH FLOW LINE LOCATIONS WITHIN THE RIGHT-OF-WAY WITH LESS THAN 2' (600 mm) OF EARTH COVER. MISCELLANEOUS CONCRETE SHALL BE USED ACCORDING TO SECTION 611.
- 7. ALL MISCELLANEOUS SLABS, APRONS AND DITCH LININGS SHALL BE REINFORCED WITH WELDED WIRE FABRIC AS SHOWN FOR PAVED DITCH IN STANDARD 606401.
- 8. HEADWALL FOR BACKSLOPE OUTLET MAY BE USED FOR PIPE DRAIN DIAMETERS UP TO 10" (250 mm). SPECIAL DESIGNS WILL BE REQUIRED FOR LARGER SIZES
- 9. THE INSPECTION WELL LID FOR P.C.C. PIPE SHALL BE CONSTRUCTED OF 3/8" (10 mm) CAST IRON AND PROVIDED WITH A 1" (25 mm) DIAMETER HOLE IN CENTER. THE LID FOR THE OTHER PIPE MATERIALS SHALL BE A GRATE ASSEMBLY PREFABRICATED FOR AND COMPATIBLE WITH THE PIPE SYSTEM.

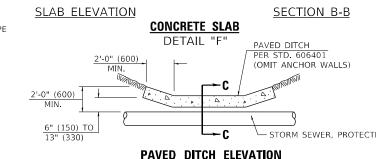


STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE



STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENTS AND PAVED DITCHES





- STORM SEWER, PROTECTED PAVED DITCH ELEVATION

> Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 61101011A

TWM

(150)

(150)

PIPE DRAIN

ELEVATION

DESIGNED REVISED TWM. INC. DRAWN REVISED HECKED REVISED LOT DATE = 12/14/202 REVISED DATE

WELDED WIRE FABRIC

PROPOSED PIPE

(150)

SIDE

DRAIN

CONCRETE COLLAR

DETAIL "B"

EXISTING FIELD TILE OR

PROPOSED STORM SEWER, SPECIAL

CLASS SI COLLAR

DETAIL "C"

OR STORM SEWER, PROTECTED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** FIELD TILE SYSTEMS (TREATMENT OF EXISTING) SHEET 1 OF 1 SHEETS STA.

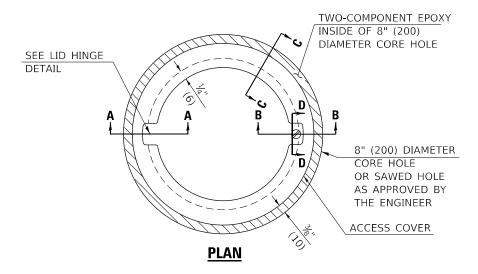
PAVED

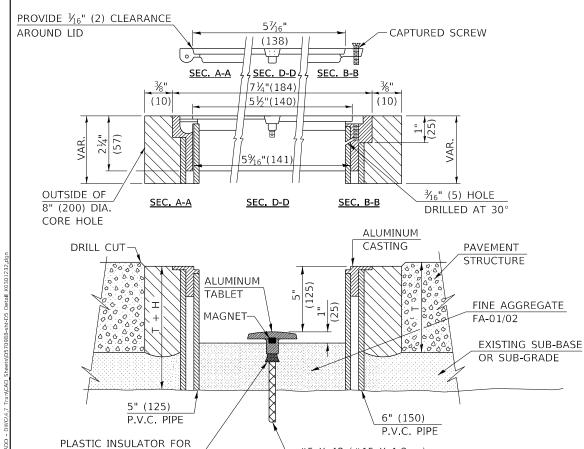
SECTION C-C

PAVED DITCH

DETAIL "E'

60 52 (30, 31)RS-2 MCLEAN CONTRACT NO. 70988 TO BE INSTALLED IN RIGID OR COMPOSITE PAVEMENT FOR PRESERVING LAND SURVEY MONUMENTS (SECTION OR SUBSECTION CORNERS)



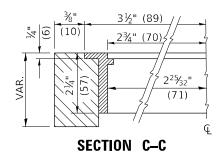


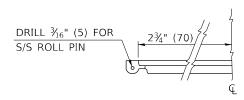
ELEVATION

LEGEND



- ALUMINUM CASTING
- 5" (125) OR 6" (150) P.V.C. PIPE
- TWO-COMPONENT EPOXY
 - T = THICKNESS OF PAVEMENT STRUCTURE
 - H = THE THICKNESS OF THE SUB-BASE GRANULAR + 1" (25)





<u>LID HINGE DETAIL</u>

SPECIFICATIONS FOR ACCESS COVER FOR USE WITH SURVEY MARKER VAULT(S) AND SURVEY MARKER COVER ASSEMBLY(S): THE ACCESS COVER WILL BE CAST FROM A SPECIAL ALUMINUM ALLOY THAT IS COMPARABLE TO BRONZE IN HARDNESS. THE ACCESS COVER SHALL BE SPECIALLY ENGINEERED AND DESIGNED TO PROVIDE A SNUG FIT, INCORPORATING EQUIDISTANT LOCKING RIDGES, INSIDE A STANDARD 6" (150 mm) DIAMETER, OR OUTSIDE A STANDARD 5" (125 mm) DIAMETER, SCHEDULE 40 PVC PIPE. THE ACCESS COVER SHALL HAVE SPECIAL UNIFORM 1" (25 mm) THICK TOP SURFACE TO PERMIT INFORMATION TO BE EASILY MACHINE-STAMPED INTO IT. THE ACCESS COVER SHALL INCLUDE A STAINLESS CAPTURED SCREW AND AN OPPOSING RECESSED HINGE ASSEMBLY AS ITS LOCKING MECHANISM. THE ACCESS COVER SHALL INCORPORATE A SPECIAL ACCESS HOLE FOR CLEANING AND DRAINAGE, DRILLED AT 30° INSIDE THE RING OF THE ACCESS COVER, TO THE DRILLED AND TAPPED HOLE PROVIDED FOR THE STAINLESS CAPTURED SCREW. COMPOSITION: ALUMINUM 92-93%; MAGNESIUM 6.5-7.5%. STRENGTH: YIELD - 19,000-21,000 PSI (131-145 MPa); TENSILE - 38,000-44,000 PSI (262-303 MPa); ELONGATION - 10-15% IN 2" (50 mm). SPECIFICATIONS: ALLOY 535.0; QQ-A-601Es. NO EXCEPTIONS.

RE-BAR-SURVEY MARKER, TYPE I, (SPECIAL) TO BE FURNISHED BY THE CONTRACTOR AND SET BY AN ILLINOIS PROFESSIONAL LAND SURVEYOR (SEE SPECIAL DETAIL SHEET FOR ALUMINUM TABLET AND RE-BAR SPECIFICATIONS).

BILL OF MATERIAL

ALUMINUM CASTING OF THE DIMENSIONS AND SPECIFICATIONS SHOWN OR OTHER SUBJECT TO ENGINEER'S APPROVAL OF SHOP DRAWINGS, 5" OR 6" (125 mm OR 150 mm) DIAMETER P.V.C. PIPE, SCHEDULE 40, ALUMINUM TABLET, STAMPED IN ACCORDANCE WITH STANDARD 667101. %" X 48" (#15 X 1.2 m) RE-BAR, EPOXY AND FA-01/02 AGGREGATE.

GENERAL NOTES

- 1. ALUMINUM CASTING SHALL BE EITHER PLACED OVER A 5" (125 mm) P.V.C. PIPE OR INSIDE OF A 6" (150 mm) P.V.C. PIPE.
- 2. BACKFILL WITH FINE AGGREGATE FA-01/02.
- 3. WORK SHALL NOT START ON THIS ITEM UNTIL THE FINAL LIFT OF SURFACE HAS BEEN COMPLETED.
- 4. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR SURVEY MARKER VAULT WHICH PRICE SHALL INCLUDE ALL LABOR AND MATERIAL AS SPECIFIED INCLUDING CORING, EPOXY AND FA-01/02 AGGREGATE AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

SCALE:

- 5. THE CASTING SHALL BE ANCHORED IN THE 8" (200 mm) DIAMETER CORE HOLE WITH TWO-COMPONENT EPOXY CONFORMING TO APPLICABLE PORTIONS OF ARTICLE 1025.01 OF THE STANDARD SPECIFICATIONS.
- 6. ALL SURVEY MARKER (VAULTS) SHALL BE PLACED 1/4" (6 mm) | BELOW THE FINAL SURFACE.

TO STA.

7. THE 8" (200 mm) DIAMETER CORE HOLE SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. X0301232

ENGINEERING GEOSPATIAL SERVICES

CORROSION PREVENTION

#5 X 48 (#15 X 1.2 m)

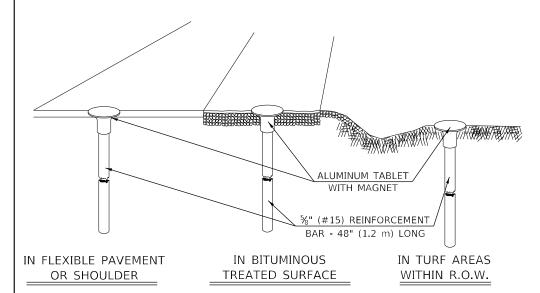
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

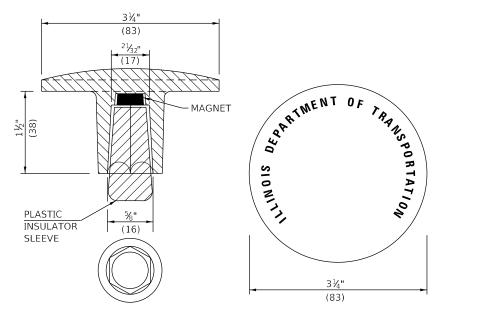
		SURVEY	,	MARKER	VAULT	
SHEET	1	OF 1	1	SHEETS	STA.	

F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHE
317	(30, 31)RS-2	MCLEAN	60	53
		CONTRACT	NO. 70	988

XZ193300 - SURVEY MARKER, TYPE 1 (SPECIAL)

TO BE INSTALLED IN FLEXIBLE PAVEMENT OR SHOULDER, BITUMINOUS TREATED SURFACE AND TURF AREAS WITHIN THE RIGHT-OF-WAY FOR PRESERVING PERMANENT SURVEY MARKERS (PI'S, PT'S, PC'S, POC'S, & POT'S)





THE DIMENSIONS SHOWN SHALL BE EXACT, OTHERS MAY VARY, BUT SHALL BE SHOWN ON SHOP DRAWINGS.

GENERAL NOTES

- 1. THE CONTRACT UNIT PRICE, EACH, FOR SURVEY MARKER, TYPE 1 (SPECIAL) SHALL BE PAYMENT IN FULL FOR FURNISHING THE REINFORCEMENT BAR AND ALUMINUM TABLET AND FOR ALL LABOR AND MATERIAL REQUIRED TO SET THE MARKER IN PLACE.
- 2. ALL SURVEY MARKERS, TYPE 1 (SPECIAL) SHALL BE PLACED $\pm 1/4$ " (6 mm) BELOW THE FINAL SURFACE.
- 3. WHEN THE TABLET AND REBAR ARE PLACED AS PART OF A SURVEY MARKER VAULT, THEY SHALL BE CONSIDERED AS INCLUDED IN THAT PAY ITEM AND THERE WILL BE NO PAYMENT FOR THE SURVEY MARKER, TYPE 1 (SPECIAL).

XZ193400 - SURVEY MARKER, TYPE 2 (SPECIAL)

TO BE INSTALLED IN RIGID OR COMPOSITE PAVEMENT FOR PRESERVING PERMANENT SURVEY MARKERS (PI'S, PT'S, PC'S, POC'S, & POT'S)

SPECIFICATIONS FOR ALUMINUM TABLET

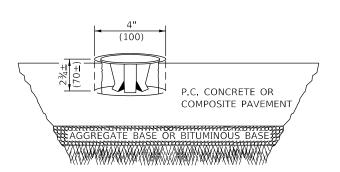
SURVEY CAP FOR REBAR. 31/4" (83 mm) CONVEX SURVEY CAP FOR %" (15 mm) REBAR WITH ILLINOIS DEPARTMENT OF TRANSPORTATION LOGO. THIS LOGO SHALL PROVIDE LETTERS RECESSED INTO THE SURFACE A MINIMUM OF ⅓2" (0,8 mm) FOR EASY AND LONG-TERM LEGIBILITY, THE ALUMINUM CAP FOR REBAR SHALL BE PRODUCED BY THE PROCESS OF ORBITAL FORGING TO PRODUCE A HIGH-STRENGTH AND DURABLE MARKER CAP WHICH WILL NOT CHIP OR BREAK AND PROVIDE A SMOOTH FINISH FOR STAMPING OF DATA IN THE FIELD. THE ALUMINUM CAP FOR REBAR SHALL BE TAPERED FOR A PERFECT COMPRESSION FIT. A SPECIAL PLASTIC INSULATOR SHALL BE INSTALLED TO PREVENT DISSIMILAR METAL CONTACT AND CORROSION. THE PLASTIC INSULATOR SHALL FORM READILY TO THE OUTER SHAPE OF THE REBAR AND TO THE INNER SHAPE OF THE ALUMINUM CAP SOCKET. THE PLASTIC INSULATOR SHALL BE LOW DENSITY POLYETHYLENE, A MINIMUM 1½" (38 mm) LONG AND CONFORM TO FEDERAL SPECIFICATION L-P 390.

COMPOSITION: ALUMINUM 98.3-98.7%; OTHER 1.3-1.7%; STRENGTH: YIELD 28 KSI (193 MPa), ULTIMATE 32 KSI (221 MPa). ELONGATION 15% [IN 2" (50 mm)]. SPECIFICATIONS: ALUMINUM ALLOY 6101-0; ASTM B317-83 (EXCEPT TEMPER) AS FORGED. NO EXCEPTIONS.

SPECIFICATIONS FOR REBAR

REBAR FOR ALUMINUM TABLET. REINFORCEMENT BAR SHALL BE $\frac{1}{2}$ " (#15) X 48" (1.2 m) (DEFORMED).

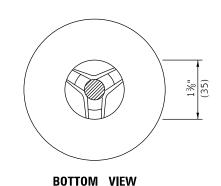
INSPECTION OF REINFORCEMENT BAR %" (#15) SHALL BE DONE BY DISTRICT PERSONNEL OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS.



SPECIFICATIONS FOR ALUMINUM TABLET (FORKED)

ALUMINUM TABLET (FORKED) FOR USE WITH "SURVEY MARKER, TYPE 2, (SPECIAL)" SHALL BE AS SHOWN ON THE DETAIL FOR THE 3¼" (83 mm) CONVEX SURVEY TABLET WITH ILLINOIS DEPARTMENT OF TRANSPORTATION LOGO. THIS LOGO SHALL PROVIDE FOR LETTERS RECESSED INTO THE SURFACE A MINIMUM OF $\frac{1}{32}$ " (0.8 mm) FOR EASY AND LONG-TERM LEGIBILITY. THE ALUMINUM TABLET SHALL BE PRODUCED BY THE PROCESS OF ORBITAL FORGING TO PRODUCE A HIGH-STRENGTH AND DURABLE MARKER CAP WHICH WILL NOT CHIP OR BREAK AND PROVIDE A SMOOTH FINISH FOR STAMPING OF DATA IN THE FIELD. THE ALUMINUM TABLET SHALL BE DESIGNED NOT TO TURN OR ROTATE. THREE PRONGS ON A 2½" (63 mm) STEM SHALL BE SUCH THAT THE ALUMINUM TABLET CANNOT BE EASILY REMOVED.

COMPOSITION: ALUMINUM 92-93%; MAGNESIUM 6.5-7.5%. STRENGTH: YIELD 19,000-21,000 PSI (131-145 MPa); TENSILE 38,000-44,000 PSI (262-303 MPa); ELONGATION 10-15% [IN 2" (50 mm)]. SPECIFICATIONS: ALLOY 535.0; QQ-A-601ES. NO EXCEPTIONS.



THE DIMENSIONS SHOWN SHALL BE EXACT, OTHERS MAY VARY, BUT SHALL BE SHOWN ON SHOP DRAWINGS.

GENERAL NOTES

- 1. WORK ON THIS ITEM SHALL NOT START UNTIL THE FINAL SURFACE IS COMPLETED.
- THE ALUMINUM TABLET (FORKED) SHALL REST UPON THE BOTTOM OF THE 4" (100 mm) CORE HOLE. IF THE HOLE IS TOO DEEP, EPOXY GROUT MUST BE USED TO DECREASE THE DEPTH AND ALLOWED TO HARDEN BEFORE PROCEEDING.
- 3. THE ALUMINUM TABLET SHALL BE ANCHORED IN THE 4" (100 mm)
 DIAMETER HOLE IN THE NEW PAVEMENT WITH TWO-COMPONENT EPOXY
 CONFORMING TO APPLICABLE PORTIONS OF ARTICLE 1025.01 OF THE
 STANDARD SPECIFICATIONS.

SCALE:

- 4. THE 4" (100 mm) CORE HOLE SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
- 5. THE CONTRACT PRICE, EACH, FOR SURVEY MARKER, TYPE 2 (SPECIAL) SHALL BE PAYMENT IN FULL FOR FURNISHING THE ALUMINUM TABLET AND FOR ALL LABOR AND MATERIAL REQUIRED TO SET THE MARKER IN PLACE, AS SPECIFIED, INCLUDING CORING THE NEW PAVEMENT.
- 6. ALL SURVEY MARKERS, TYPE 2 (SPECIAL) SHALL BE PLACED ± 1/4" (6 mm) BELOW THE FINAL SURFACE.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. XZ193AAA



TWM, INC.

WWW.TWM.INC.COM

IL DESIGN FIRM
LICENSE NO:
184-001220

PLOT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

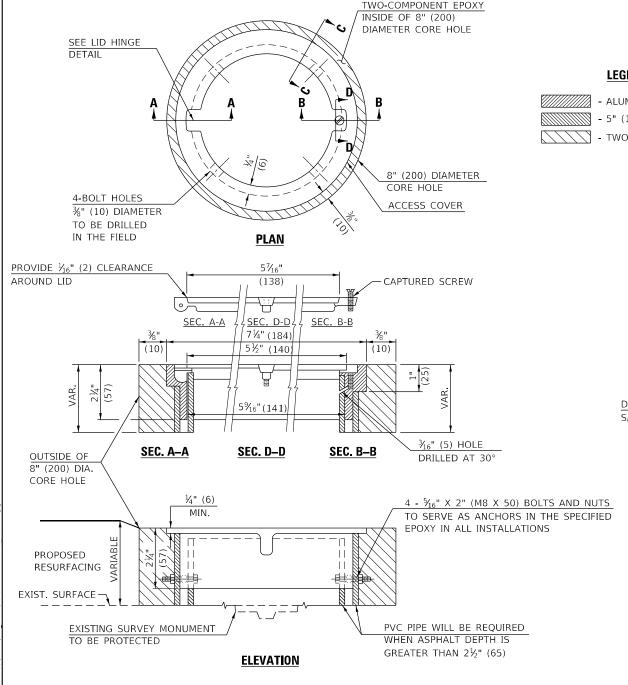
SURVERY MARKERS TYPE 1 & 2 (SPECIAL)

SHEET 1 OF 1 SHEETS STA. TO

יוט	SINICI S DEIAII	L INU. AZ	1193 <i>F</i>	(H
4.P. ΓΕ	SECTION	COUNTY	TOTAL SHEETS	SHI N
17	(30, 31)RS-2	MCLEAN	60	54
		CONTRACT	NO. 70	98

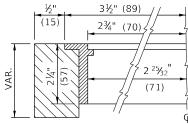
MODEL: Default FILE NAME: P:\2019\19

TO BE INSTALLED IN ALL PAVEMENT TYPES FOR PRESERVING PERMANENT SURVEY MARKERS (PI'S, PT'S, PC'S, POC'S, & POT'S) AND LAND SURVEY MONUMENTS (SECTION OR SUBSECTION CORNERS)

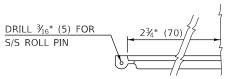


LEGEND

- ALUMINUM CASTING
- 5" (125) OR 6" (150) P.V.C. PIPE
- TWO-COMPONENT EPOXY



SECTION C-C



LID HINGE DETAIL

SPECIFICATIONS FOR ACCESS COVER FOR USE WITH SURVEY MARKER VAULT(S) AND SURVEY MARKER COVER ASSEMBLY(S): THE ACCESS COVER WILL BE CAST FROM A SPECIAL ALUMINUM ALLOY THAT IS COMPARABLE TO BRONZE IN HARDNESS. THE ACCESS COVER SHALL BE SPECIALLY ENGINEERED AND DESIGNED TO PROVIDE A SNUG FIT, INCORPORATING EQUIDISTANT LOCKING RIDGES, INSIDE A STANDARD 6" (150 mm) DIAMETER, OR OUTSIDE A STANDARD 5" (125 mm) DIAMETER, SCHEDULE 40 PVC PIPE. THE ACCESS COVER SHALL HAVE SPECIAL UNIFORM 1" (25 mm) THICK TOP SURFACE TO PERMIT INFORMATION TO BE EASILY MACHINE-STAMPED INTO IT. THE ACCESS COVER SHALL INCLUDE A STAINLESS CAPTURED SCREW AND AN OPPOSING RECESSED HINGE ASSEMBLY AS ITS LOCKING MECHANISM. THE ACCESS COVER SHALL INCORPORATE A SPECIAL ACCESS HOLE FOR CLEANING AND DRAINAGE, DRILLED AT 30° INSIDE THE RING OF THE ACCESS COVER, TO THE DRILLED AND TAPPED HOLE PROVIDED FOR THE STAINLESS CAPTURED SCREW. COMPOSITION: ALUMINUM 92-93%; MAGNESIUM 6.5-7.5%. STRENGTH: YIELD - 19,000-21,000 PSI (131-145 MPa); TENSILE - 38,000-44,000 PSI (262-303 MPa); ELONGATION - 10-15% IN 2" (50 mm). SPECIFICATIONS: ALLOY 535.0; QQ-A-601Es. NO EXCEPTIONS.

BILL OF MATERIAL

ALUMINUM CASTING OF THE DIMENSIONS AND SPECIFICATIONS SHOWN OR OTHER SUBJECT TO ENGINEER'S APPROVAL OF SHOP DRAWINGS, 4 EACH - 5/16" X 2" (M8 X 50) BOLTS WITH NUTS, EPOXY, 5" OR 6" (125 mm OR 150 mm) DIAMETER P.V.C. PIPE, SCHEDULE 40 (WHEN REQUIRED).

GENERAL NOTES

- 1. WORK SHALL NOT START ON THIS ITEM UNTIL THE FINAL LIFT OF SURFACE HAS BEEN COMPLETED.
- 2. THE SURVEY MONUMENT COVER ASSEMBLY SHALL BE CENTERED ABOVE THE SURVEY MONUMENT TO BE PROTECTED.
- 3. MODIFICATION OF THE ALUMINUM CASTING SHALL BE DONE BY GRINDING OR SAWING WHEN HEIGHT REDUCTION IS REQUIRED.
- 4. ALL SURVEY MONUMENT COVER ASSEMBLIES SHALL BE PLACED 1/4" (6 mm) ± BELOW THE FINAL SURFACE.
- 5. ALUMINUM CASTING SHALL BE PLACED OVER A 5" (125 mm) P.V.C. PIPE OR INSIDE OF A 6" (150 mm) P.V.C. PIPE WHEN AN INCREASE IN HEIGHT IS REQUIRED.

- 6. THE CASTING SHALL BE ANCHORED IN THE 8" (200 mm) DIAMETER CORE HOLE WITH TWO-COMPONENT EPOXY CONFORMING TO APPLICABLE PORTIONS OF ARTICLE 1025.01 OF THE STANDARD SPECIFICATIONS.
- 7. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR SURVEY MONUMENT COVER ASSEMBLY WHICH PRICE SHALL INCLUDE ALL LABOR AND MATERIAL AS SPECIFIED INCLUDING CORING THE NEW PAVEMENT SURFACE AND EPOXY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 8. THE 8" (200 mm) DIAMETER CORE HOLE SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT	_	DETAIL	NIA	7007040
IIIVIKII	•		13111	/ I I I I / I I I I I I

DESIGNED REVISED TWM. INC. DRAWN REVISED HECKED REVISED PLOT DATE = 12/14/202 REVISED DATE

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

SURVEY MONUMENT COVER ASSEMBLY SHEET 1 OF 1 SHEETS STA.

SECTION COUNTY 60 | 55 MCLEAN CONTRACT NO. 70988

