

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
66	2015-0888	MCHENRY	24	01
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 62B93		

INDEX OF SHEETS 08-04-2017 LETTING ITEM 021

- 1 COVER SHEET
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- 3-6 SUMMARY OF QUANTITIES
- 7-8 TYPICAL SECTIONS
- 9 SCHEDULES OF QUANTITIES
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- 14 DETOUR PLAN
- 15 SOIL BORING LOGS
- 16-22 DISTRICT ONE DETAILS
- 23-24 CROSS SECTIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**PROPOSED
HIGHWAY PLANS**

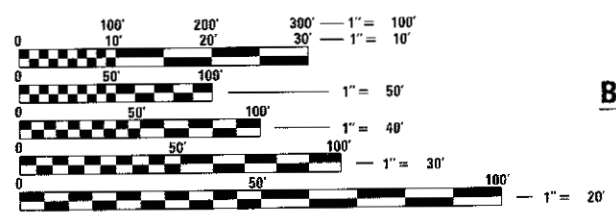
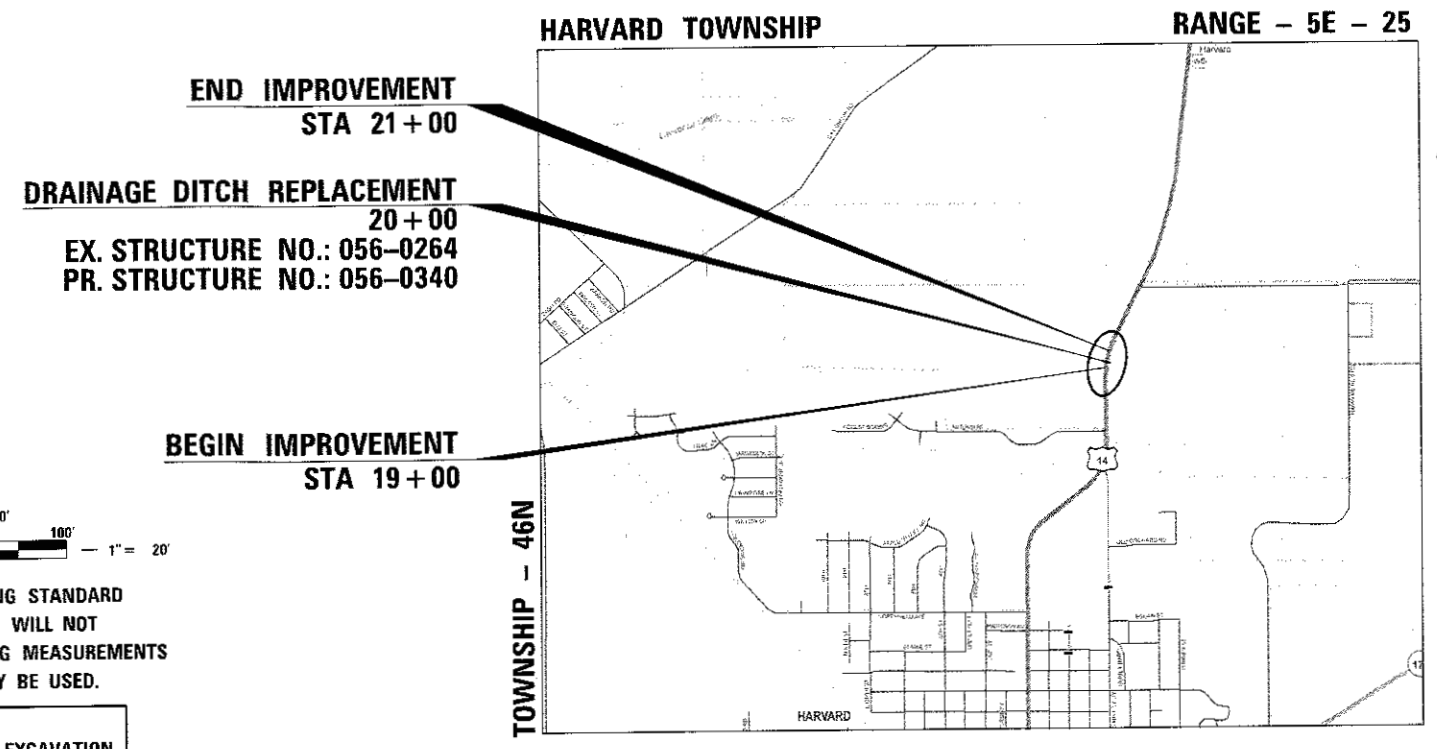
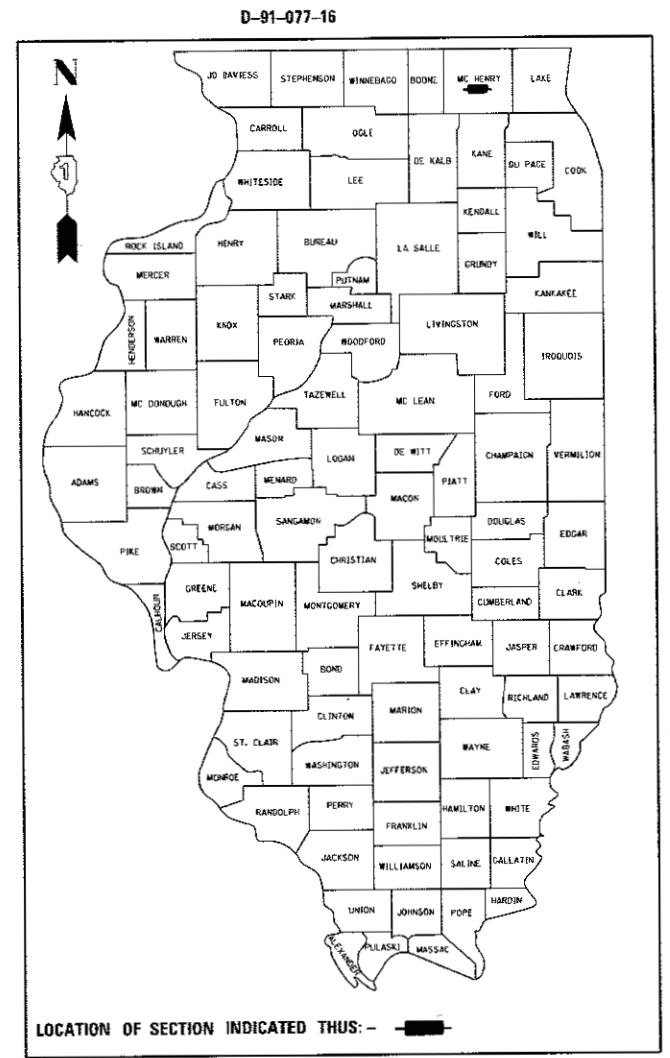
F.A.P ROUTE 066: (U.S. ROUTE 14)
DRAINAGE DITCH 3.6 MI
S. OF STATE LINE
SECTION 2015-088B
PROJECT NHPP-0066(009)
CULVERT REPLACEMENT
MCHENRY COUNTY
C - 91 - 178 - 16

FOR LIST OF HIGHWAY STANDARDS, SEE SHEET NO. 2

THE IMPROVEMENT IS LOCATED IN
THE CITY OF HARVARD

DESIGN DESIGNATION:

CLASS II TRUCK ROUTE
ADT (2015) = 10,200
POSTED SPEED LIMIT = 45 MPH
DESIGN SPEED LIMIT = 45 MPH



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

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

PROJECT MANAGER: ISSAM RAYYAN, P.E. (847) 705-4178
PROJECT ENGINEER: J. ALAIN MIDY, P.E. (847) 221-3056

CONTRACT NO. 62B93

LOCATION MAP
NOT TO SCALE
GROSS LENGTH = 200 FT. = 0.04 MI.
NET LENGTH = 200 FT. = 0.04 MI.

STATE OF ILLINOIS
JAMEEL AHMED
ILLINOIS 062-06172
LICENSED PROFESSIONAL ENGINEER
Jameel Ahmed
DATE 5/15/17
LICENSE EXPIRES ON 11/30/2017

MOHAMMED SALEEM
081.006145
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS
Mohammed Saleem
DATE 5/15/17
LICENSE EXPIRES ON 11/30/2018

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
SUBMITTED *May 16* 20 *17*
Amrany A. Qasbi
REGIONAL ENGINEER
June 30 20 *17*
Maureen M. Addis, P.E.
ENGINEER OF DESIGN AND ENVIRONMENT
June 30 20 *17*
Amrany A. Qasbi
DIRECTOR OF PROGRAM, DEVELOPMENT

AES AES Services, Inc.
111 S. Wacker Drive, Suite 3910
Chicago, IL 60606
Ph: 312-235-6783
ILLINOIS PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-003052

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HIGHWAY STANDARDS

STANDARD NO DESCRIPTION

000001-06	STANDARDS SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
482011-03	HMA SHLD. STRIPS/SHLDS. WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
542001-06	CONCRETE END SECTIONS FOR PIPE CULVERTS 15" (375 MM) THRU 84" (2100 MM) DIA.
542311-06	TRAVERSABLE PIPE GRATE
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701011-04	OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS DAY ONLY
701901-06	TRAFFIC CONTROL DEVICES

DISTRICT 1 STANDARDS

STANDARD NO DESCRIPTION

BD32	BUTT JOINT AND HMA TAPER DETAILS
BD51	BENCHING DETAIL FOR EMBANKMENT WIDENING
TC-10	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
TC-11	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)
TC-13	DISTRICT ONE TYPICAL PAVEMENT MARKINGS
TC-21	DETOUR SIGNING FOR CLOSING STATE HIGHWAYS

GENERAL NOTES

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES (48 HOUR NOTIFICATION IS REQUIRED).
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE CITY OF HARVARD.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- ANY PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS OBLITERATED BY MILLING AND RESURFACING OPERATIONS ON SIDE STREETS AND ENTRANCES SHALL BE REPLACED AND PAID FOR IN KIND.
- WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1/2 INCHES WHERE SPEED LIMIT IS 45 MPH OR LESS AND 1 INCH WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H) OR A NOTED LONGITUDINAL WEDGE IS USED.
- BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE PREFERENCE, ALL EXISTING PAVEMENT MARKING LINES AND REVISED REFLECTIVE PAVEMENT MARKERS IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.
- THE RESIDENT ENGINEER SHALL CONTACT WALTER CZARNY THE AREA TRAFFIC FIELD ENGINEER AT WALTER.CZARNY@ILLINOIS.GOV, A MINIMUM OF TWO WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
- THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847)705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
- THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
- DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- DOUBLE LANE MARKERS ARE TO BE USED AS SHOWN ON THE DISTRICT 1 DETAIL " TYPICAL APPLICATIONS - RAISED REFLECTIVE PAVEMENT MARKERS (SNOW - PLOW RESISTANT)" SHOWN IN THE PLANS
- BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND HOT -MIX ASPHALT TAPER DETAILS" SHEETS INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.
- THE CONTRACTOR SHALL ERECT A TEMPORARY FENCE AROUND THE TREES WITH IN THE CONSTRUCTION AREA TO ESTABLISH A " TREE PROTECTION ZONE" BEFORE ANY WORK BEGINS OR ANY MATERIAL IS DELIVERED TO THE JOB SITE.

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111 S. Wacker Drive, Suite 3910
Chicago, IL 60606
Ph: 312-235-6783

USER NAME = tnohamed	DESIGNED - TOM	REVISED -
	DRAWN - AWM	REVISED -
PLOT SCALE = 2.0000' / in.	CHECKED - JA	REVISED -
PLOT DATE = 5/15/2017	DATE - 5/15/2017	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

HIGHWAY STANDARDS, GENERAL NOTES AND COMMITMENTS	
SCALE	SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
66	2015-088B	MCHENRY	24	02
CONTRACT NO. 62893				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				80/20 (FED/STATE)
				PIPE CULVERT 0004 RURAL
20101000	TEMPORARY FENCE	FOOT	30	30
20101100	TREE TRUNK PROTECTION	EACH	1	1
20101700	SUPPLEMENTAL WATERING	UNIT	1	1
20200100	EARTH EXCAVATION	CU YD	460	460
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	203	203
20700220	POROUS GRANULAR EMBANKMENT	CU YD	1	1
20800150	TRENCH BACKFILL	CU YD	123	123
21101625	TOPSOIL FURNISH AND PLACE, 6"	SQ YD	834	834
25000210	SEEDING, CLASS 2A	ACRE	0.2	0.2
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	18	18
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	18	18
25100630	EROSION CONTROL BLANKET	SQ YD	834	834
28000305	TEMPORARY DITCH CHECKS	FOOT	63	63
28000400	PERIMETER EROSION BARRIER	FOOT	876	876

* SPECIALTY ITEMS

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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				80/20 (RIP/STRAPE)
				PIPE CULVERT 0004 RURAL
* 28000500	INLET AND PIPE PROTECTION	EACH	6	6
28100107	STONE RIPRAP, CLASS A4	SQ YD	9	9
28200200	FILTER FABRIC	SQ YD	9	9
30300112	AGGREGATE SUBGRADE IMPROVEMENT 12"	SQ YD	489	489
35501313	HOT-MIX ASPHALT BASE COURSE, 7 1/4"	SQ YD	200	200
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	510	510
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	26	26
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	90	90
44000100	PAVEMENT REMOVAL	SQ YD	200	200
44000160	HOT-MIX ASPHALT SURFACE REMOVAL, 2 3/4"	SQ YD	600	600
48101202	AGGREGATE SHOULDERS, TYPE B	CU YD	22	22
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	267	267
50105220	PIPE CULVERT REMOVAL	FOOT	66.5	66.5
50200100	STRUCTURE EXCAVATION	CU YD	35	35

* SPECIALTY ITEMS

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111 S. Wacker Drive, Suite 3910
Chicago, IL 60606
Ph: 312-235-6783

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	DATE - 5/15/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
66	2015-088B	MCHENRY	24	04
CONTRACT NO. 62B93				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				80130 (FED/STATE) PIPE CULVERT 0004 RURAL
50200450	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES	CU YD	8	8
50300225	CONCRETE STRUCTURES	CU YD	5	5
50800105	REINFORCEMENT BARS	POUND	592	592
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	343	343
54260311	TRAVERSABLE PIPE GRATE	FOOT	85	85
54261272	CONCRETE END SECTION, STANDARD 542001, 72", 1:2	EACH	1	1
542A0277	PIPE CULVERTS, CLASS A, TYPE 1 72"	FOOT	60	60
63200310	GUARDRAIL REMOVAL	FOOT	154	154
* 66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	194	194
* 66900450	SPECIAL WASTE PLANS AND REPORTS	LSUM	1	1
* 66900530	SOIL DISPOSAL ANALYSIS	EACH	1	1
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6
67100100	MOBILIZATION	LSUM	1	1
70300100	SHORT TERM PAVEMENT MARKING	FOOT	450	450

* SPECIALTY ITEMS

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Chicago, IL 60606
Ph: 312-235-6783

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PLOT DATE = 5/15/2017	CHECKED - JA	REVISED -
	DATE - 5/15/2017	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
SCALE	SHEET	OF	SHEETS

F.A.P. RTE. 66	SECTION 2015-088B	COUNTY MCHENRY	TOTAL SHEETS 24	SHEET NO. 05
CONTRACT NO. 62B93				
ILLINOIS FED. AID PROJECT				

Rev

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				80/20 (FED/STATE) PIPE CULVERT 0004 RURAL
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	50 FT	413	413
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	800	800
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	1200	1200
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	32	32
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	10	10
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	10	10
Z0013798	CONSTRUCTION LAYOUT	LSUM	1	1
Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1	1
X4810200	AGGREGATE SHOULDER REMOVAL	CU YD	60	60
X5000015	REMOVE AND RE-INSTALL PIPE CULVERTS	FOOT	45	45
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	LSUM	1	1
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	20	20

* SPECIALTY ITEMS

12

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311 S. Wacker Drive, Suite 3910
Chicago, IL 60606
PH: 312-236-8793

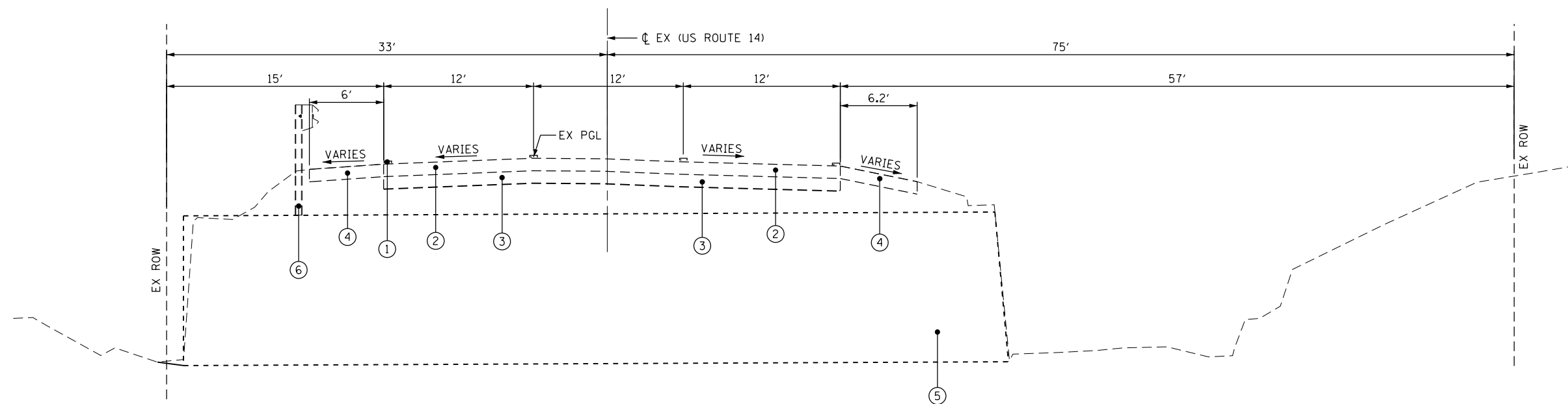
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PLOT DATE = 5/15/2017	DATE - 5/15/2017	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES				
SCALE	SHEET	OF	SHEETS	STA. TO STA.

F.A.P. RTE. 66	SECTION 2015-088B	COUNTY MCHENRY	TOTAL SHEETS 24	SHEET NO. 06
CONTRACT NO. 62B93				
ILLINOIS FED. AID PROJECT				

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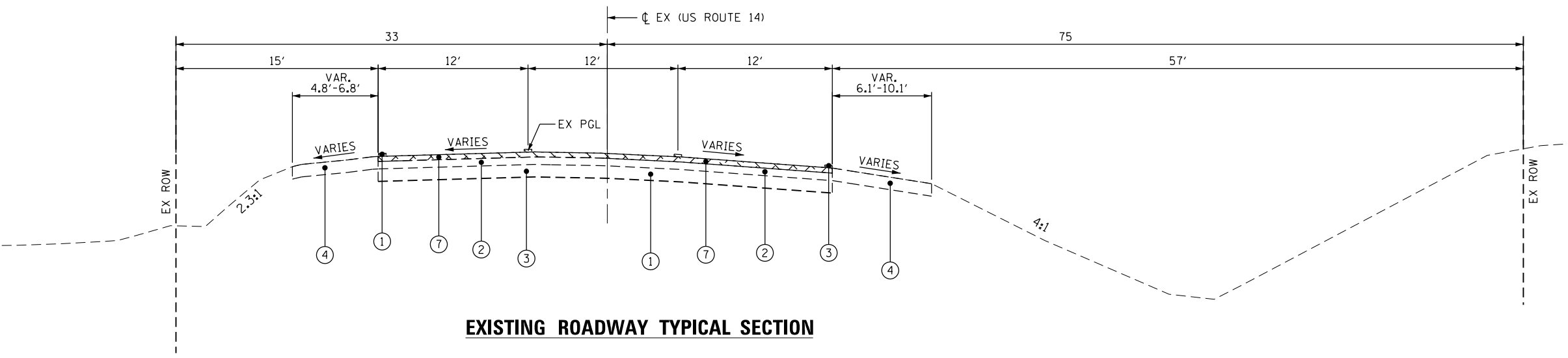


EXISTING ROADWAY TYPICAL SECTION AT DRAINAGE DITCH

FROM STA 19+96.50 TO STA 20+02.50

LEGEND:

- ① EXISTING PAVEMENT MARKING
- ② EXISTING HOT MIX ASPHALT PAVEMENT, 5"
- ③ EXISTING PAVEMENT (9" CONCRETE)
- ④ EXISTING SHOULDER
- ⑤ EXISTING 72" CORRUGATED METAL PIPE
- ⑥ EXISTING GUARD RAIL
- ⑦ HOT MIX ASPHALT SURFACE REMOVAL 2 1/2"



EXISTING ROADWAY TYPICAL SECTION

FROM STA 19+00.00 TO STA 19+96.50
FROM STA 20+02.50 TO STA 21+00.00

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AES Services, Inc.
111 S. Wacker Drive, Suite 3910
Chicago, IL 60606
Ph: 312-235-6783

USER NAME = tmohammed	DESIGNED - TOM	REVISED -
DRAWN - AWM	CHECKED - JA	REVISED -
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PLOT DATE = 5/15/2017		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

EXISTING TYPICAL SECTIONS				
SCALE	SHEET	OF	SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
66	2015-088B	MCHENRY	24	07
CONTRACT NO. 62B93				
ILLINOIS FED. AID PROJECT				

HMA MIXTURE REQUIREMENTS

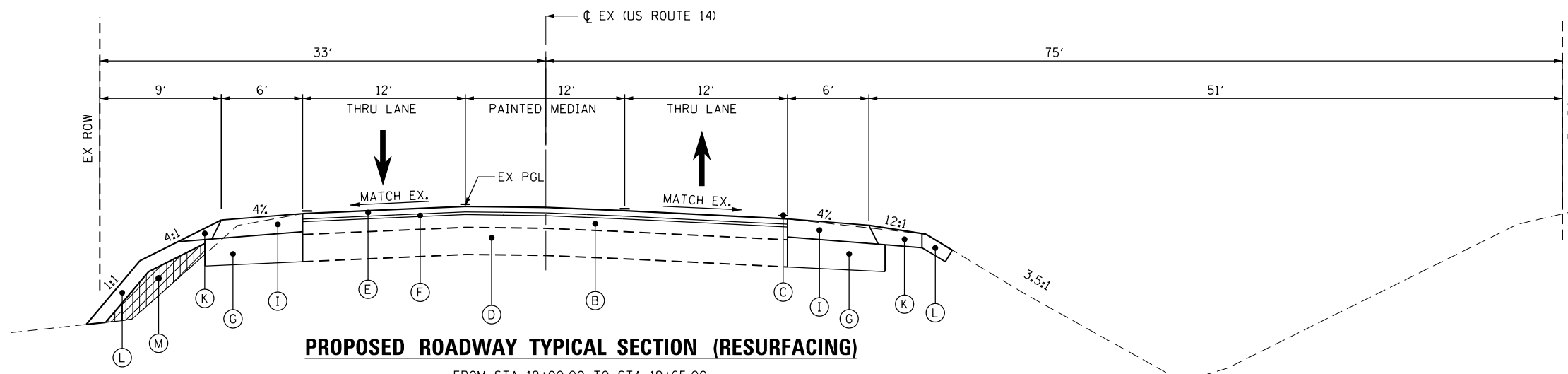
MIXTURE TYPE	AIR VOIDS @ NDES	QUALITY MANAGEMENT PROGRAM (QMP)
PAVEMENT RECONSTRUCTION		
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL 9.5 MM)	4% @ 70 GYR	QC/OA
HOT-MIX ASPHALT BASE COURSE, (HMA BINDER IL-19.0) 7 1/4"	4% @ 70 GYR	QC/OA
PAVEMENT RESURFACING		
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL 9.5 MM)	4% @ 70 GYR	QC/OA
LEVELING BINDER (MM), N70 (IL-9.5 MM)	4% @ 70 GYR	QC/OA
HOT MIX ASPHALT SHOULDERS, 8"		
2" HMA SURFACE COURSE, MIX D N70 (IL 9.5 MM)	4% @ 70 GYR	QC/OA
6" HMA BINDER IL-19 MM	4% @ 70 GYR	QC/OA
QMP DESIGNATION: QUALITY CONTROL/QUALITY ASSURANCE (QC/OA)		

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SQYD/IN.
 THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS. FOR USE OF RECYCLED MATERIALS SEE SPECIAL PROVISIONS. QUALITY MANAGEMENT PROGRAM (QMP) IDENTIFIES THE PARTICULAR QUALITY CONTROL SPECIFICATION THAT APPLIES TO THE HMA MIXTURE.

PROPOSED

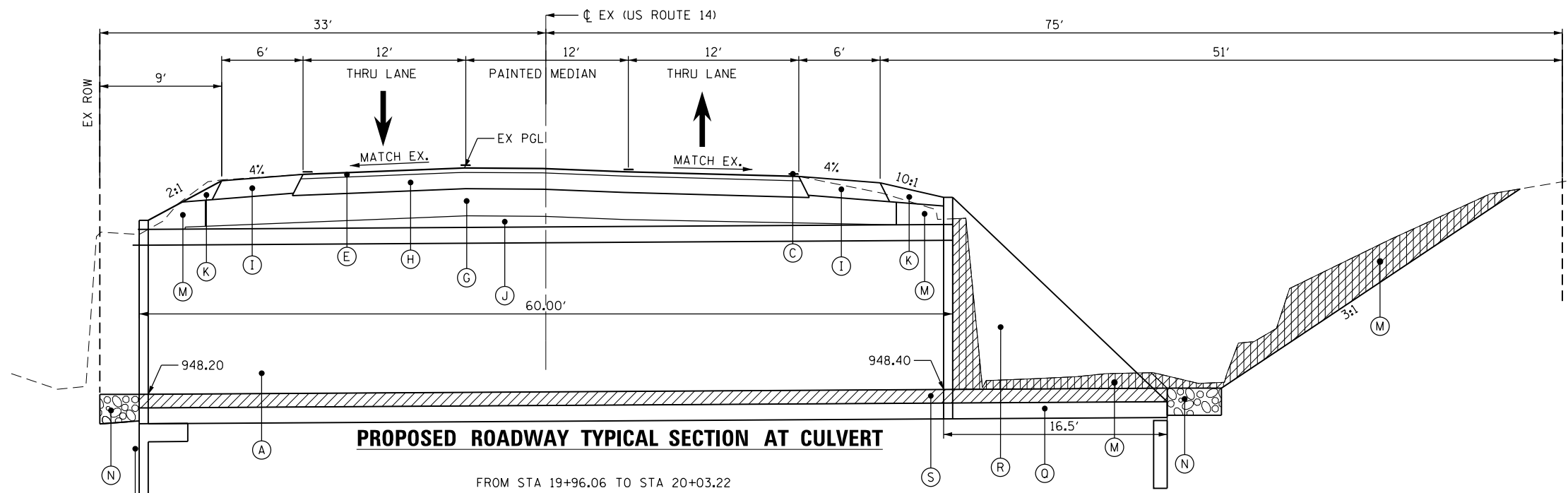
- (A) REINFORCED CONCRETE PIPE CULVERT 72"
- (B) EXISTING HMA BASE TO REMAIN
- (C) THERMO PLASTIC PAVEMENT MARKING
- (D) EXISTING CONCRETE SUBBASE TO REMAIN
- (E) HOT-MIX ASPHALT SURFACE COURSE, MIX D, N70, 2"
- (F) LEVELING BINDER (MACHINE METHOD), N70, 3/4"
- (G) AGGREGATE SUBGRADE IMPROVEMENT 12"
- (H) HOT-MIX ASPHALT BASE COURSE, 7 1/4"
- (I) HOT-MIX ASPHALT SHOULDERS, 8"
- (J) TRENCH BACKFILL
- (K) AGGREGATE SHOULDER TYPE B.
- (L) SEEDING WITH TOPSOIL FURNISH AND PLACE-6"
- (M) EARTH EXCAVATION
- (N) STONE RIPRAP, CLASS A4
- (P) REINFORCED CONCRETE END SECTION (SEE STRUCTURAL PLANS)
- (Q) CONCRETE END SECTION, FOR PIPE CULVERTS
- (R) TRAVERSABLE PIPE GRATE
- (S) 6" TRENCH BACKFILL BEDDING

NOTE:
CONTRACTOR SHALL MILL FIRST BEFORE PATCHING



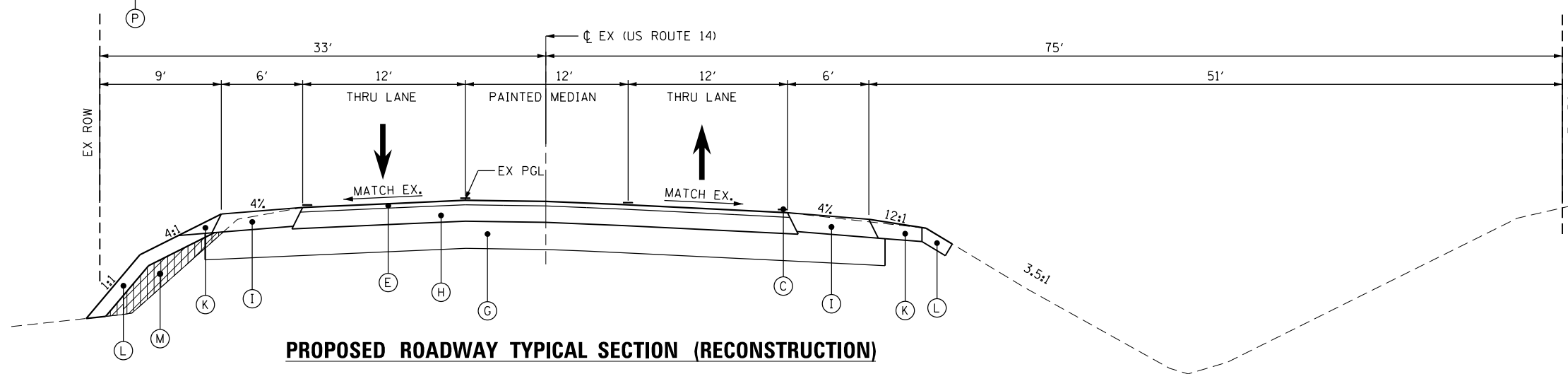
PROPOSED ROADWAY TYPICAL SECTION (RESURFACING)

FROM STA 19+00.00 TO STA 19+65.00
 FROM STA 20+15.00 TO STA 21+00.00



PROPOSED ROADWAY TYPICAL SECTION AT CULVERT

FROM STA 19+96.06 TO STA 20+03.22



PROPOSED ROADWAY TYPICAL SECTION (RECONSTRUCTION)

FROM STA 19+65.00 TO STA 19+96.06
 FROM STA 20+03.22 TO STA 20+15.00

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AES Services, Inc.
 111 S. Wacker Drive, Suite 3910
 Chicago, IL 60606
 Ph: 312-235-6783

USER NAME = awmohammed	DESIGNED - TOM	REVISED -
PLOT SCALE = 10.0000' / in.	DRAWN - AWM	REVISED -
PLOT DATE = 5/31/2017	CHECKED - JA	REVISED -
	DATE - 5/15/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED TYPICAL SECTIONS	
SCALE	SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
66	2015-088B	MCHENRY	24	08
CONTRACT NO. 62893				
ILLINOIS FED. AID PROJECT				

PAVEMENT REMOVAL SCHEDULE

LOCATION			HOT-MIX ASPHALT SURFACE REMOVAL, 2 3/4"	PAVEMENT REMOVAL
STATION	TO	STATION	(SQ YD)	(SQ YD)
19+00.00	TO	19+65.00	260	
19+65.00	TO	20+15.00		200
20+15.00	TO	21+00.00	340	
TOTAL			600	200

EARTHWORK SCHEDULE

LOCATION			EARTH EXCAVATION (CU YD)	UNSUITABLE MATERIAL (CU YD)	15% ADJUSTMENT FOR SHRINKAGE (CU YD)	FILL EMBANKMENT (CU YD)	EARTHWORK BALANCE WASTE(+) SHORTAGE(-) (CU YD)
STATION	TO	STATION					
19+00.00	TO	19+50.00	74.425	7.442	56.93	29.49	27.44
19+50.00	TO	19+85.00	178.26	119	50.371	20.72	29.65
19+85.00	TO	20+15.00	61.47	61.47	0.00	26.72	-26.72
20+15.00	TO	20+50.00	65.99	6.59	50.49	37.13	13.36
20+50.00	TO	21+00.00	80.06	8.06	61.2	35.41	35.79
TOTAL			460.20	202.56	218.99	149.47	79.52

PAVEMENT SCHEDULE

LOCATION	SIDE	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N70, 2"	LEVELING BINDER (MACHINE METHOD), N70, 3/4"	AGGREGATE SUBGRADE IMPROVEMENT 12"	HOT-MIX ASPHALT BASE COURSE, 7 1/4"	HOT-MIX ASPHALT SHOULDERS, 8"	TRENCH BACKFILL
STATION TO STATION	LT/RT	(TON)	(TON)	(SQ YD)	(SQ YD)	(SQ YD)	(CU YD)
19+00.00 TO 19+65.00		29.12	11.00	93.88		86.66	
19+65.00 TO 19+85.00		22.80		272.22	200	66.66	59.00
19+85.00 TO 20+15.00							64.00
20+15.00 TO 21+00.00		38.08	15.00	122.87		113.7	
TOTAL		90	26.00	489.00	200	267.00	123

P:\606162005\09-PTB177-004_40*9-US Rt 14 Culvert-62B93\01C00D\005Sheets\9_62B93-ht-chedule.dgn

CP #1

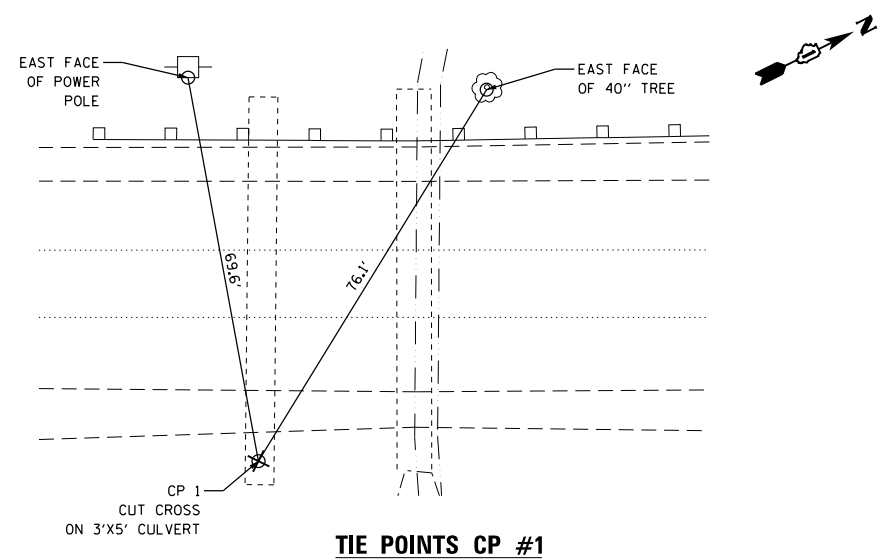
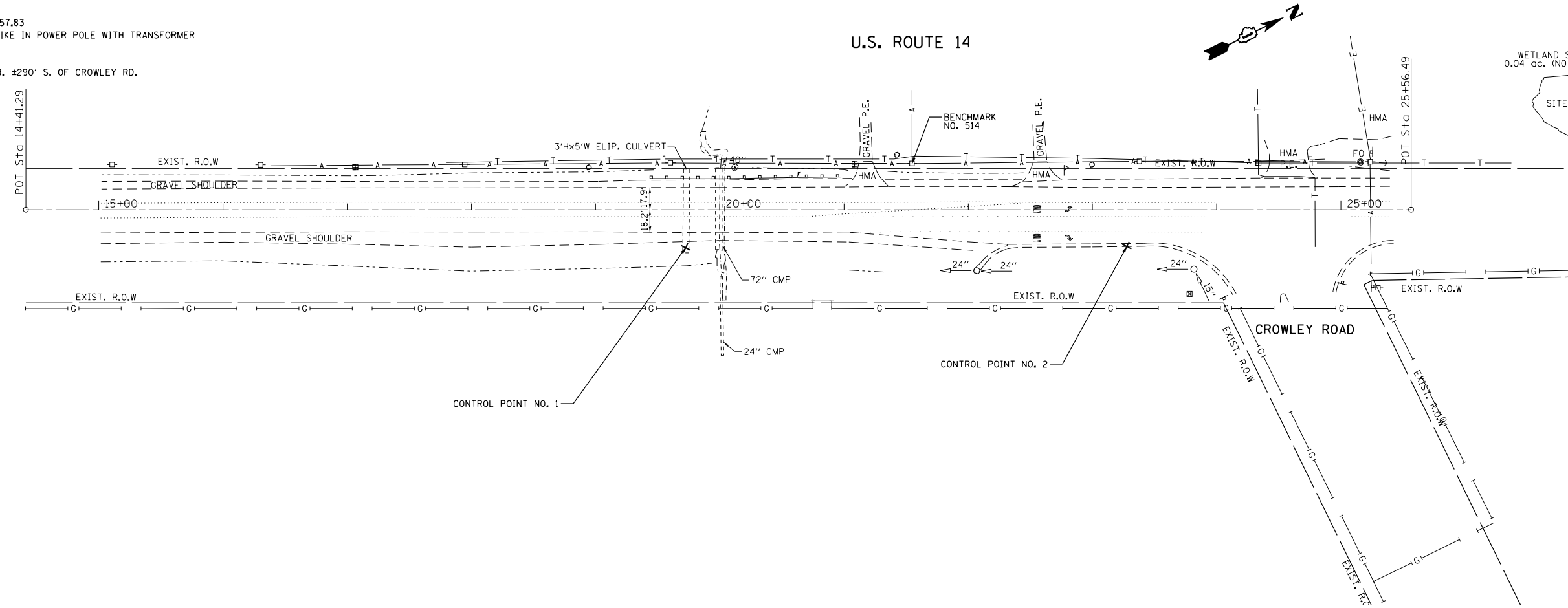
CUT CROSS ON TOP OF 3' X 5' CONC. ELLIPTICAL CULVERT, STA. 19+72.48, EL. 955.69
 NORTHING: 2104005.93
 EASTING: 910292.84

CP #2

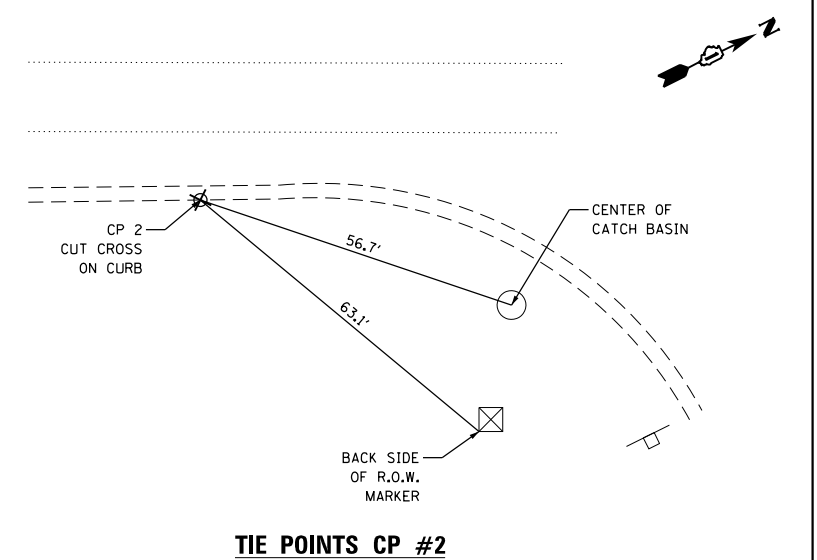
CUT CROSS ON CURB, STA. 23+27.67, EL. 957.08
 NORTHING: 2104324.56
 EASTING: 910449.81

BM #514

ELEVATION NGVD 88 = 957.83
 TYPE OF MARKER: RR SPIKE IN POWER POLE WITH TRANSFORMER
 NORTHING: 2104199.80
 EASTING: 910314.22
 LOCATION: STA. 21+54.69, ±290' S. OF CROWLEY RD.



TIE POINTS CP #1



TIE POINTS CP #2

P:\606162005\09-PTB177-004_40*9-US_Rt_14_Culvert-62B93\01CADD\005Sheets\10_62B93-sh1-ATB.dgn

AES Services, Inc.
 111 S. Wacker Drive, Suite 3910
 Chicago, IL 60606
 Ph: 312-235-6783

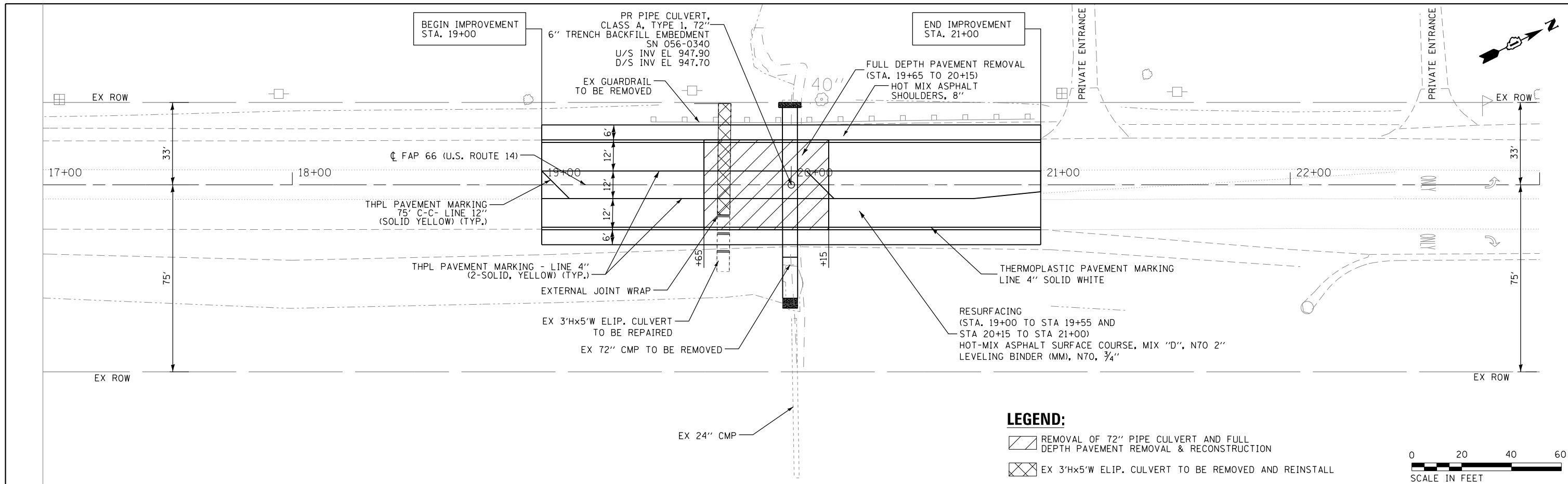
USER NAME = tmohammed	DESIGNED - TOM	REVISED -
DRAWN - AWM	REVISOR -	
CHECKED - JA	REVISOR -	
DATE - 5/15/2017	REVISOR -	

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**ALIGNMENT, TIES AND
 BENCHMARKS**

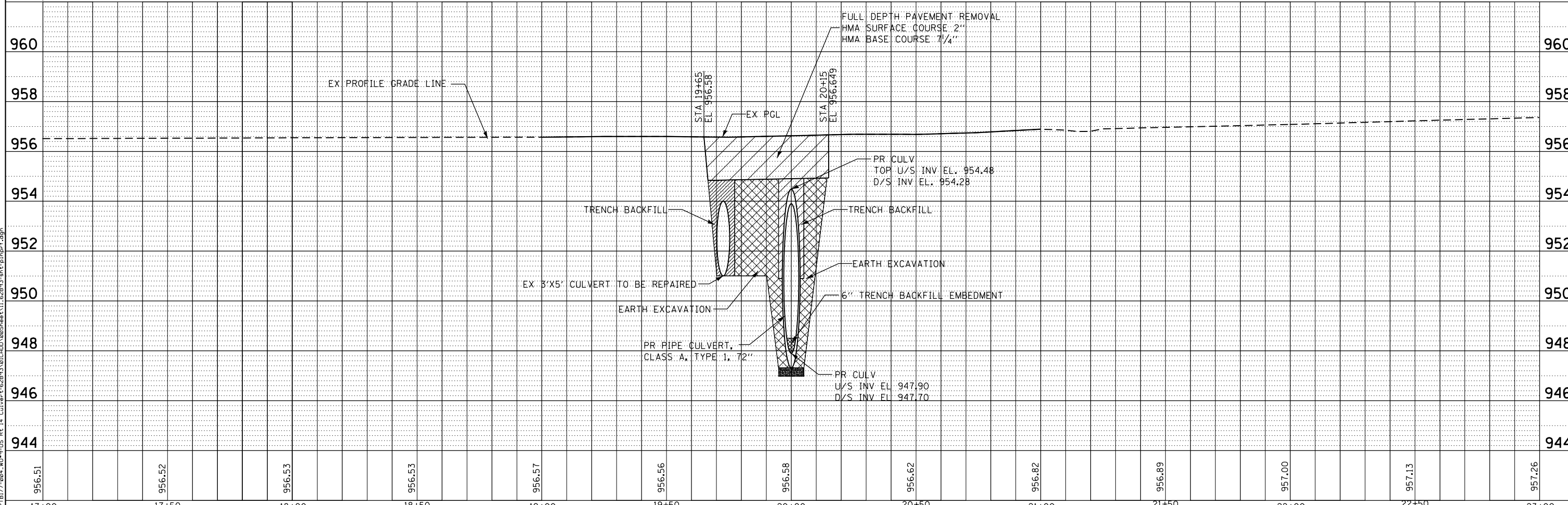
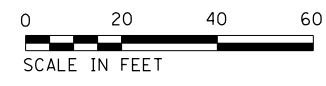
SCALE	SHEET	OF	SHEETS	STA.	TO	STA.
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
66	2015-088B	MCHENRY	24	10
CONTRACT NO. 62B93				
ILLINOIS FED. AID PROJECT				



LEGEND:

- REMOVAL OF 72" PIPE CULVERT AND FULL DEPTH PAVEMENT REMOVAL & RECONSTRUCTION
- EX 3'Hx5'W ELIP. CULVERT TO BE REMOVED AND REINSTALL



P:\606162005\09-PT1717-004_4099-US_Rt_14_Culvert-62893\01CADD\005Sheets\11_62893-ht-pln.pcr.dgn

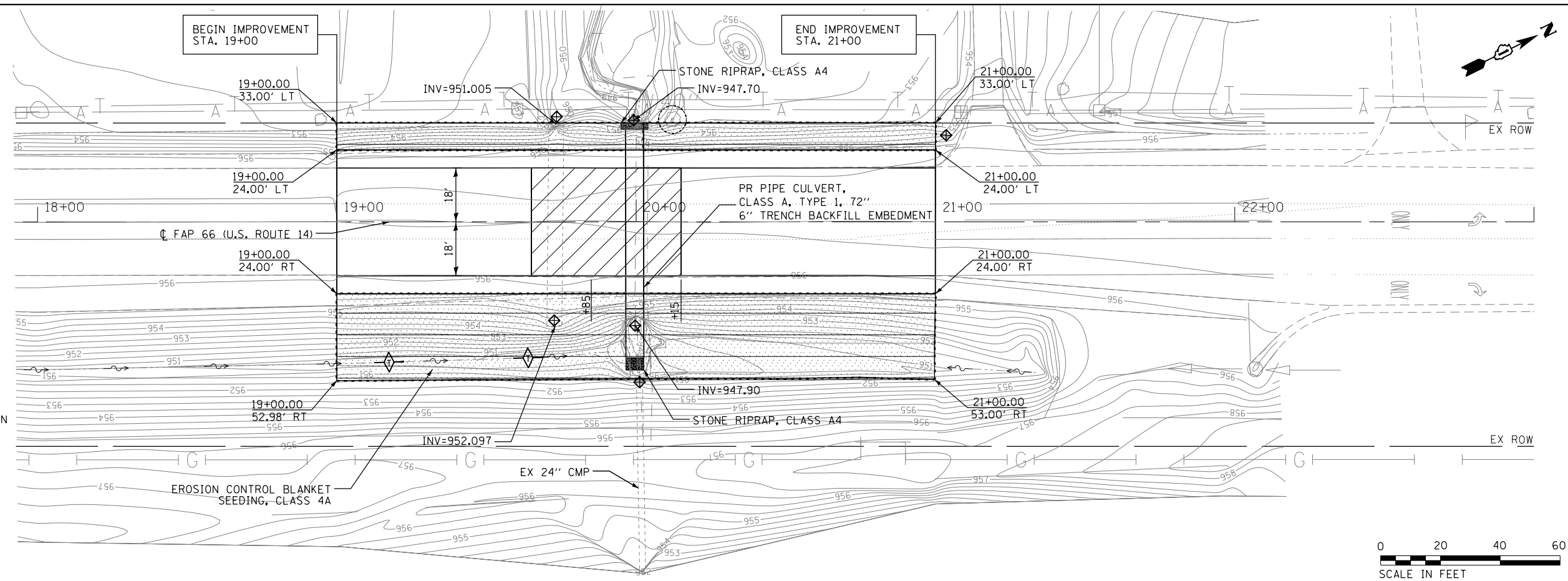
AES Services, Inc.
111 S. Wacker Drive, Suite 3910
Chicago, IL 60606
Ph: 312-235-6783

USER NAME = awmohammed	DESIGNED - TOM	REVISED -
DRAWN - AWM	CHECKED - JA	REVISED -
PLOT SCALE = 40.0000' / in.	DATE - 5/15/2017	REVISED -

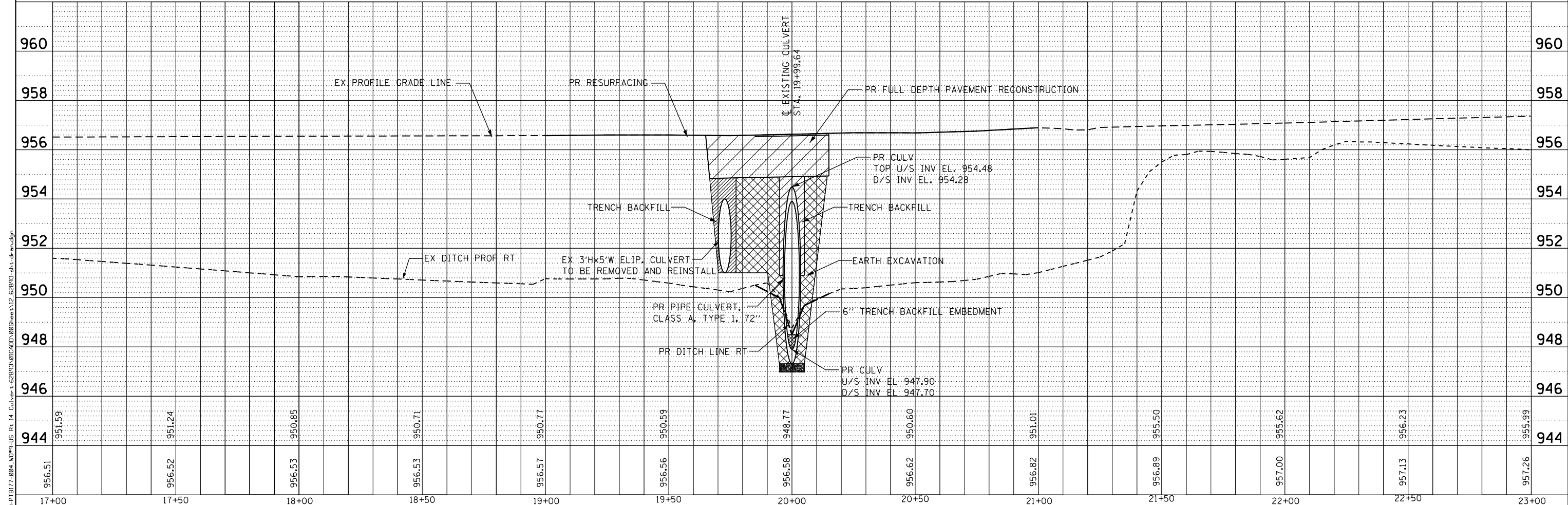
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PLAN AND PROFILE	
SCALE	SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
66	2015-088B	MCHENRY	24	11
CONTRACT NO. 62893				
ILLINOIS FED. AID PROJECT				



- LEGEND:**
- EXISTING STRUCTURE AND PAVEMENT REMOVAL
 - TEMPORARY DITCH CHECK
 - INLET FILTERS/ INLET AND PIPE PROTECTION
 - PERIMETER EROSION BARRIER
 - TREE PROTECTION ZONE
 - EROSION CONTROL BLANKET/ HEAVY DUTY EROSION CONTROL BLANKET
 - EXISTING DITCH
 - EXISTING SHEET FLOW



956.51	956.52	956.53	956.53	956.57	956.56	956.58	956.62	956.82	956.89	957.00	957.13	957.26
17+00	17+50	18+00	18+50	19+00	19+50	20+00	20+50	21+00	21+50	22+00	22+50	23+00

AES Services, Inc.
111 S. Wacker Drive, Suite 3910
Chicago, IL 60606
Ph: 312-235-6783

USER NAME = awmohammed	DESIGNED - TOM	REVISED -
DRAWN - AWM	REVISIONS -	
PLOT SCALE = 48.0000' / in.	CHECKED - JA	REVISIONS -
PLOT DATE = 5/31/2017	DATE - 5/15/2017	REVISIONS -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE, UTILITY AND EROSION CONTROL PLAN

SCALE	SHEET	OF	SHEETS	STA.	TO	STA.
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F.A.P. RTE. 66	SECTION 2015-088B	COUNTY MCHENRY	TOTAL SHEETS 24	SHEET NO. 12
CONTRACT NO. 62B93				

ILLINOIS FED. AID PROJECT

BENCH MARK #514:

Elevation NGVD 88 = 957.83
 Type of Marker: RR Spike in power pole with transformer.
 Northing: 2104199.80,
 Easting: 910314.22
 Location: STA. 21+54.69,
 ±290' S. of Crowley Rd.

CONTROL POINT CP#1:

Cut cross on top of 3' X 5' Conc. elliptical culvert,
 STA. 19+72.48, EL. 955.69
 Northing: 2104005.93;
 Easting: 910292.84

CONTROL POINT CP#2:

Cut cross on curb,
 STA. 23+27.67, EL. 957.08
 Northing: 2104324.56
 Easting: 910449.81

EXISTING STRUCTURE:

The existing structure SN 056-0264 is a 66-foot, 72" corrugated metal pipe culvert carrying US Route 14 over a drainage ditch in the City of Harvard, McHenry County. The existing structure will be removed and replaced with a 72" reinforced concrete pipe with a concrete end section at the east ditch and an L type retaining wall at the west ditch.

STAGING:

No staging required.
 Traffic shall be detoured

SALVAGE:

No Salvage

HIGHWAY CLASSIFICATION

F.A.P 66
 Functional Class: Class II Truck Route
 ADT: 10,200 (2015)
 Design Speed: 45 MPH
 Posted Speed: 45 MPH

LOADING HL-93

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

DESIGN SPECIFICATIONS

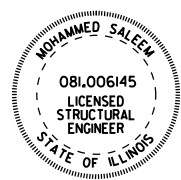
2012 AASHTO Standard Specifications for Highway Bridges, 6th edition with 2013 interims ASTM C 1577

DESIGN STRESSES

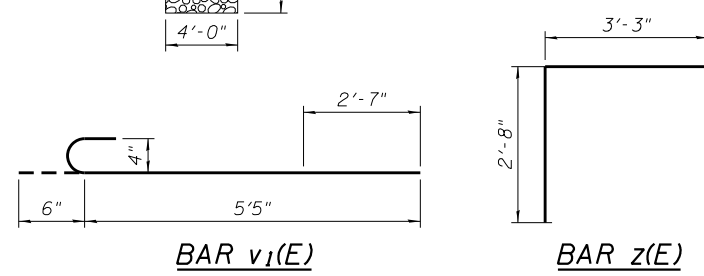
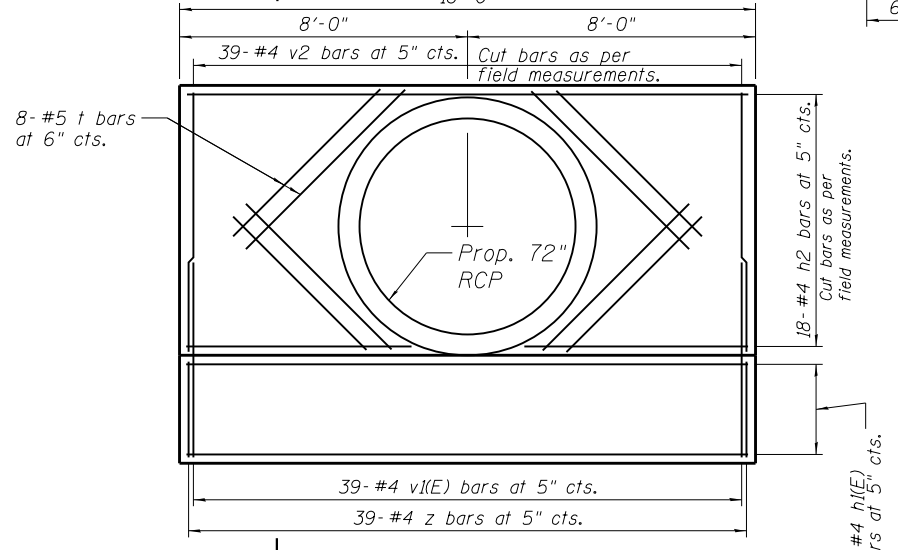
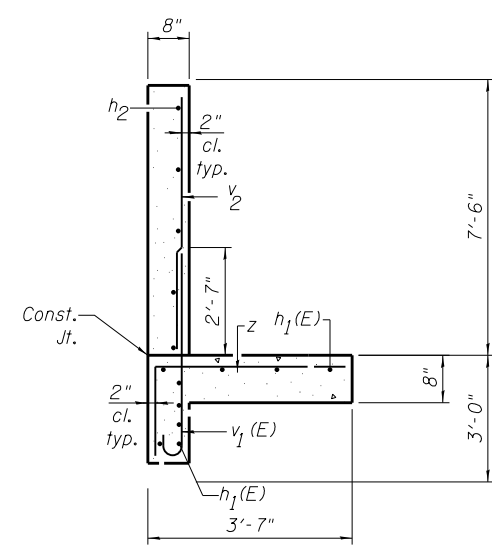
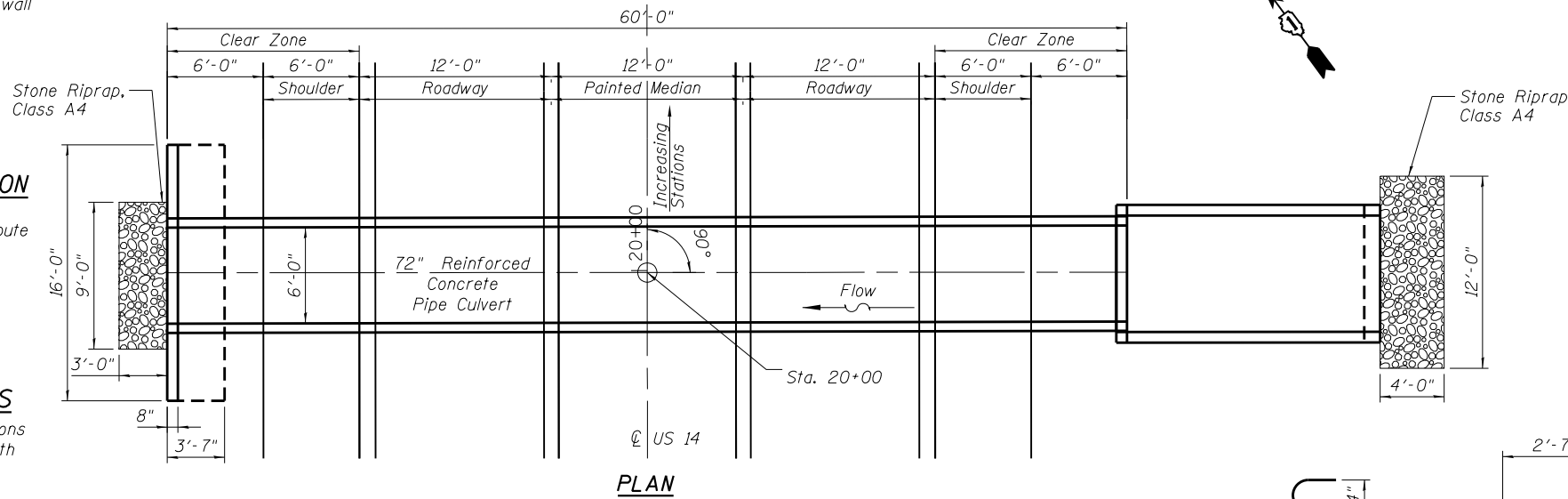
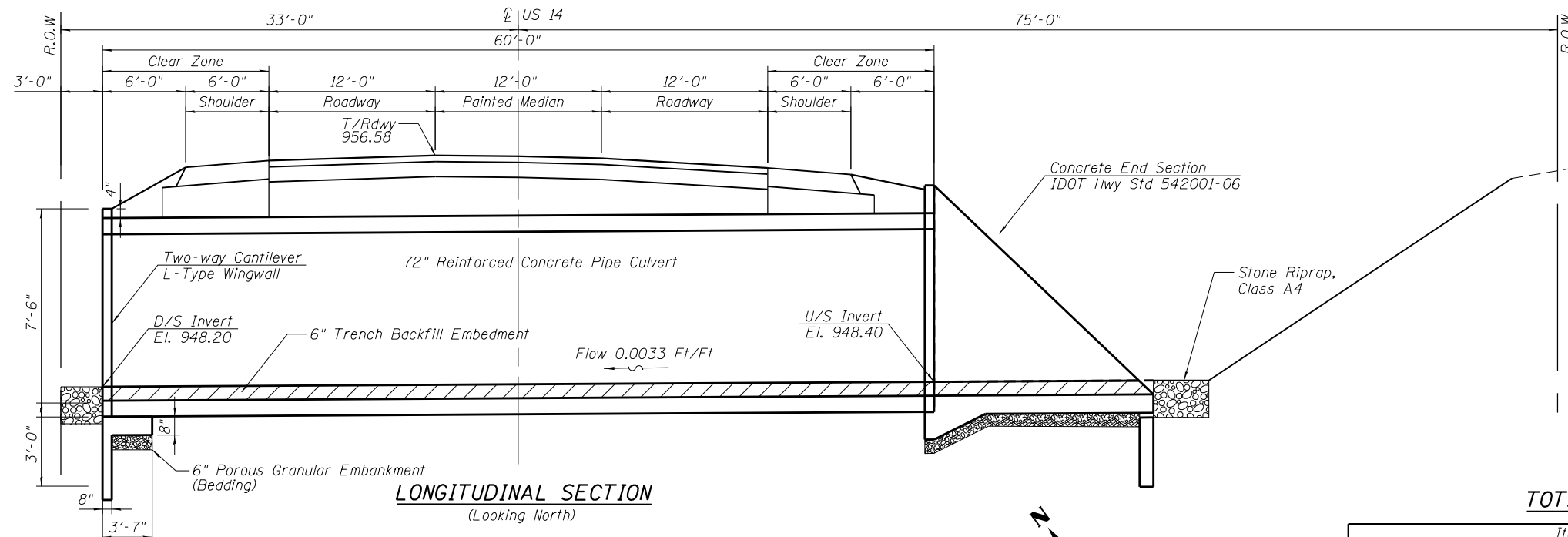
Cast-in-place units
 $f'c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

DESIGN FILL HEIGHT

Fill Height: Varies from 1'-2" to 1'-8"



DATE LICENSE EXPIRES ON 11/30/2018



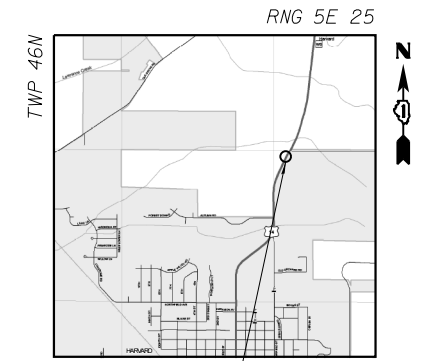
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
*h1 (E)	18	#4	15'-8"	—
h2	19	#4	15'-8"	—
t	8	#5	5'-9"	—
v1 (E)	39	#4	5'-11"	U
*v2	39	#4	7'-4"	—
z	39	#4	5'-11"	L

NOTE: * Cut bars around pipe per field measurements.

TOTAL BILL OF MATERIAL

Item	Unit	Total
Porous Granular Embankment	Cu. Yd.	1
Stone Riprap, Class A4	Sq. Yd.	9
Filter Fabric	Sq. Yd.	9
Structure Excavation	Cu. Yd.	35
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	8
Concrete Structures	Cu. Yd.	5
Reinforcement Bars	Pound	592
Reinforcement Bars Epoxy Coated	Pound	343



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
US ROUTE 14
OVER DRAINAGE DITCH
F.A.P ROUTE 66
SECTION 2015-088B
HARVARD, MCHENRY COUNTY
STATION 20+00
SN 056-0340

BENCH MARK #514:

Elevation NGVD 88 = 957.83
 Type of Marker: RR Spike in power pole with transformer.
 Northing: 2104199.80,
 Easting: 910314.22
 Location: STA. 21+54.69,
 ±290' S. of Crowley Rd.

CONTROL POINT CP#1:

Cut cross on top of 3' X 5' Conc. elliptical culvert,
 STA. 19+72.48, EL. 955.69
 Northing: 2104005.93,
 Easting: 910292.84

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 STA. 23+27.67, EL. 957.08
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STAGING:

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 Traffic shall be detoured

SALVAGE:

No Salvage

HIGHWAY CLASSIFICATION

F.A.P 66
 Functional Class: Class II Truck Route
 ADT: 10,200 (2015)
 Design Speed: 45 MPH
 Posted Speed: 45 MPH

LOADING HL-93

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

DESIGN SPECIFICATIONS

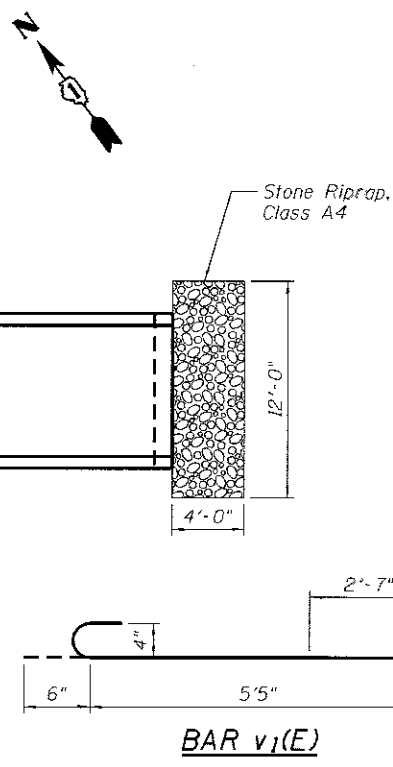
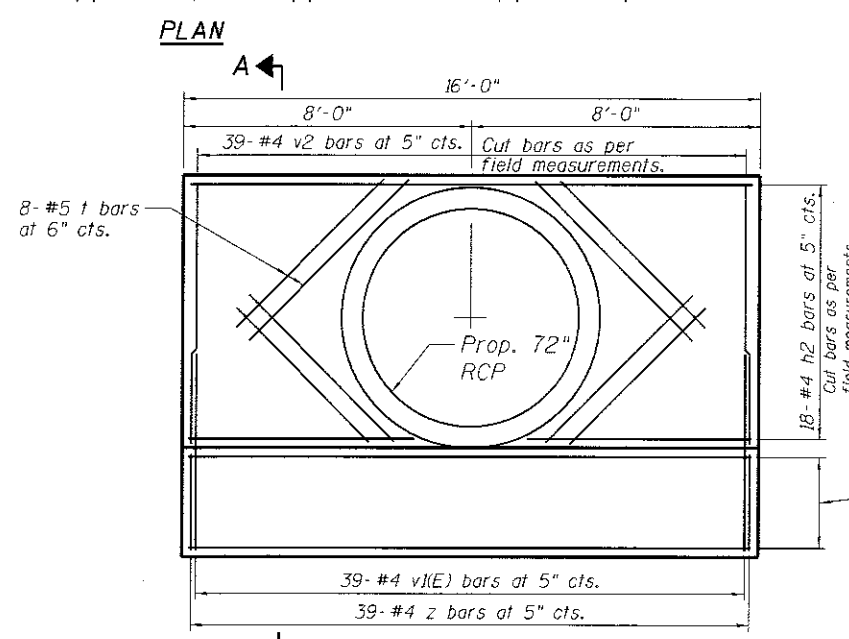
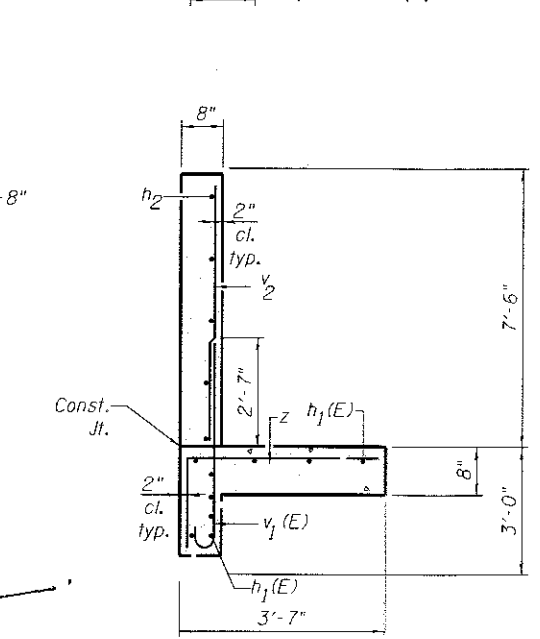
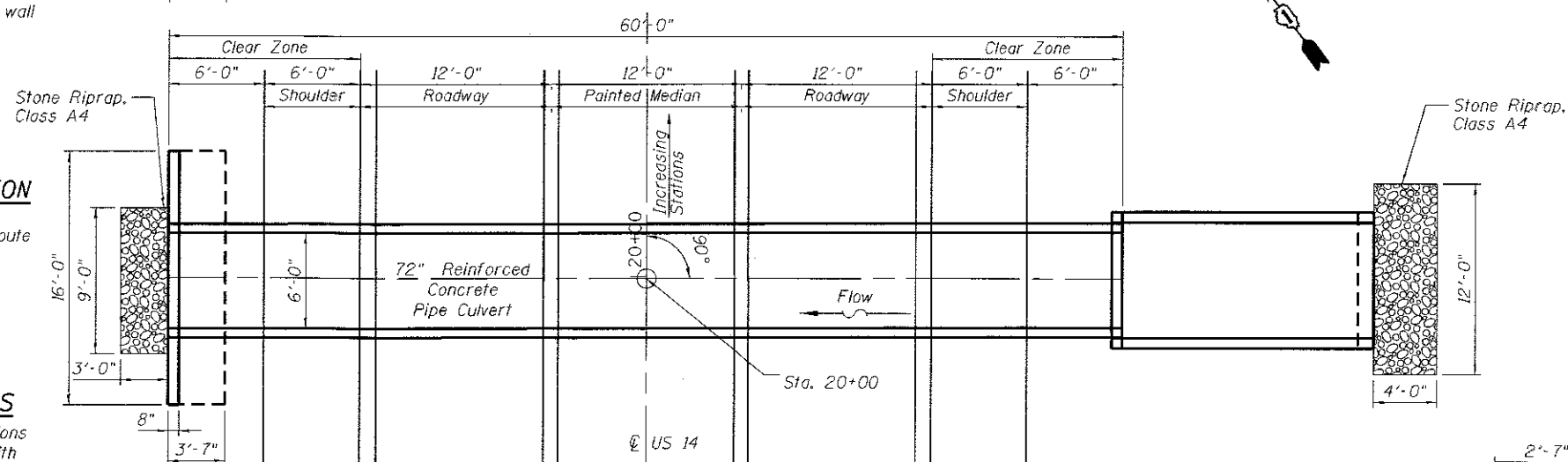
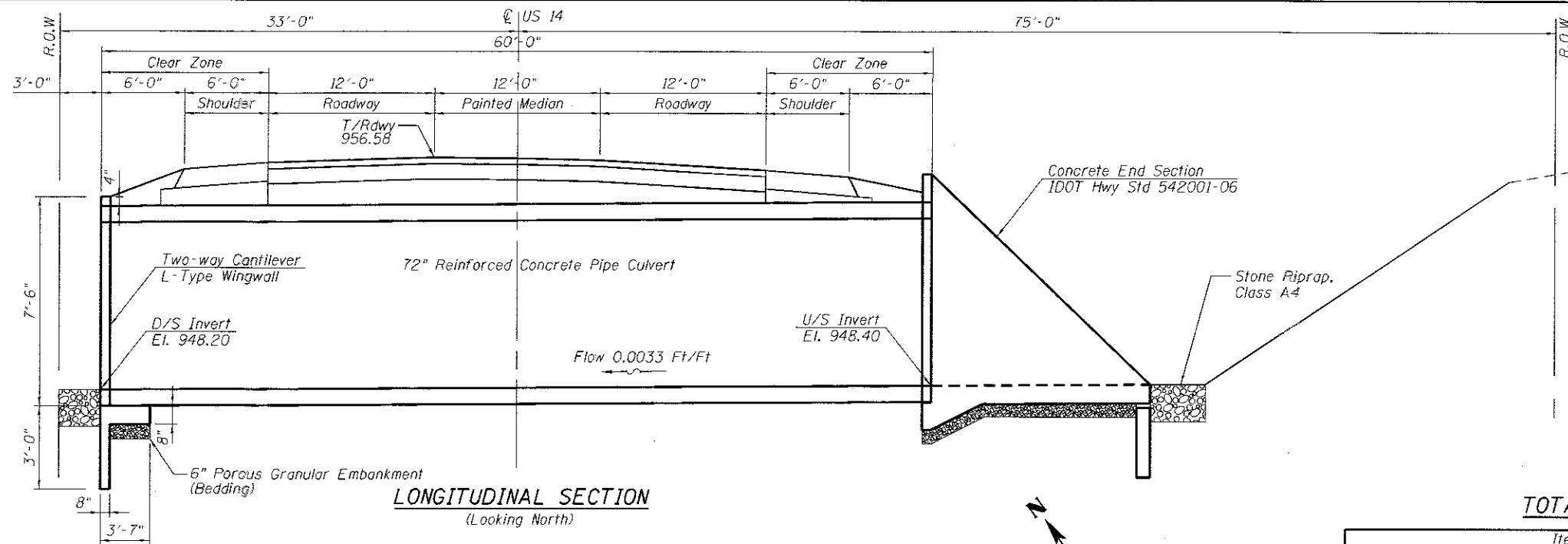
2012 AASHTO Standard Specifications for Highway Bridges, 6th edition with 2013 interims ASTM C 1577

DESIGN STRESSES

Cast-in-place units
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

DESIGN FILL HEIGHT

Fill Height: Varies from 1'-2" to 1'-8"



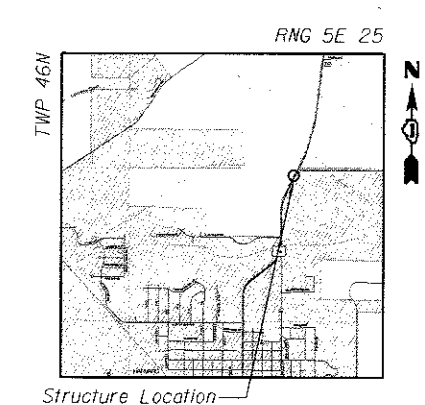
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
*h1 (E)	18	#4	15'-8"	—
h2	19	#4	15'-8"	—
z	8	#5	5'-9"	—
v1 (E)	39	#4	5'-11"	U
*v2	39	#4	7'-4"	—
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NOTE: * Cut bars around pipe per field measurements.

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Filter Fabric	Sq. Yd.	9
Structure Excavation	Cu. Yd.	35
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	8
Concrete Structures	Cu. Yd.	5
Reinforcement Bars	Pound	592
Reinforcement Bars Epoxy Coated	Pound	343



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
US ROUTE 14
OVER DRAINAGE DITCH
F.A.P ROUTE 66
SECTION 2015-088B
HARVARD, MCHENRY COUNTY
STATION 20+00
SN 056-0340

MOHAMMED SALEEM
 081.006145
 LICENSED STRUCTURAL ENGINEER
 STATE OF ILLINOIS

DATE: 5/15/2017
 LICENSE EXPIRES ON 11/30/2018



BORING LOG CBPC-01

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

Client: **AES Services, Inc.**
Project: **US 14 Culvert Replacement**
Location: **McHenry County, Illinois**

Datum: NAVD 88
Elevation: 955.82 ft
North: 2104023.65 ft
East: 910284.16 ft
Station: NA
Offset: NA

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	954.1	21-inch thick, ASPHALT --PAVEMENT--															
	952.6	Medium dense, dark brown, LOAM, some gravel; moist	1		4		NP	14									
		Stiff, brown SILTY CLAY LOAM to SILTY CLAY	2		3		1.07	28									
			3		1		1.07	23									
	947.8	--L _L (%)=64, P _L (%)=20-- --%Gravel=0.0-- --%Sand=2.8-- --%Silt=66.2-- --%Clay=31.0-- --A-7-6 (48)--	4		3		NP	18									
		Medium dense to dense, fine to coarse brown, SAND and gravel; saturated	5		7		NP	13									
			6		4		NP	16									
			7		9		NP	15									
	937.8	Medium dense, pink, SANDY LOAM; wet	8		9		NP	20									
	936.3	Medium dense, gray, very fine SAND and SILT; wet	9		12												
	935.3	Loose, brown, coarse SAND and gravel	10		5		2.50	25									
	933.8	Very stiff, dark brown, SILTY CLAY to SILTY CLAY LOAM	11		2												
	930.8	Boring terminated at 25.00 ft	12		2		2.71	18									

GENERAL NOTES

Begin Drilling: 02-28-2017 Complete Drilling: 02-28-2017
 Drilling Contractor: Wang Testing Services Drill Rig: D50 TMR [78%]
 Driller: R&N Logger: M. Schmelzel Checked by: A. Hamad
 Drilling Method: 3.25 ID HSA; boring backfilled upon completion

WATER LEVEL DATA

While Drilling: 8.50 ft
 At Completion of Drilling: 15.00 ft
 Time After Drilling: NA
 Depth to Water: NA

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



BORING LOG CB-02

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

Client: **AES Services, Inc.**
Project: **US 14 Culvert Replacement**
Location: **McHenry County, Illinois**

Datum: NAVD 88
Elevation: 955.55 ft
North: 2104066.81 ft
East: 910275.08 ft
Station: NA
Offset: NA

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	955.24	21-inch thick, ASPHALT --PAVEMENT--															
	954.8	5-inch thick, CONCRETE --PAVEMENT--	1		6		NA	20									
	952.6	Dark brown, CLAY LOAM, trace gravel	2		2		1.50	27									
		Stiff, brown SILTY CLAY LOAM to SILTY CLAY, trace gravel	3		3		1.89	24									
	947.6	--cobbles--	4		6		NP	14									
		Medium dense to dense, brown, fine to coarse, SAND to GRAVELLY SAND; saturated	5		10		NP	16									
		--%Gravel=36.1-- --%Sand=55.3-- --%Silt=7.9-- --%Clay=0.6--	6		6		NP	20									
			7		4		NP	14									
			8		8		NP	15									
	934.1	Medium stiff to stiff, brown and dark brown, SILTY CLAY LOAM	9		2		0.82	20									
	930.6	Boring terminated at 25.00 ft	10		4		1.47	23									

GENERAL NOTES

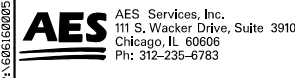
Begin Drilling: 02-28-2017 Complete Drilling: 02-28-2017
 Drilling Contractor: Wang Testing Services Drill Rig: D50 TMR [78%]
 Driller: R&N Logger: M. Schmelzel Checked by: A. Hamad
 Drilling Method: 3.25" ID HSA; boring backfilled upon completion

WATER LEVEL DATA

While Drilling: 8.50 ft
 At Completion of Drilling: 22.00 ft
 Time After Drilling: NA
 Depth to Water: NA

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

P:\606162005\09-17\177-004_4079-US_Rt_14_Culvert-62893\01C00D\09Sheets\14_62893-sh1-eol1.dgn



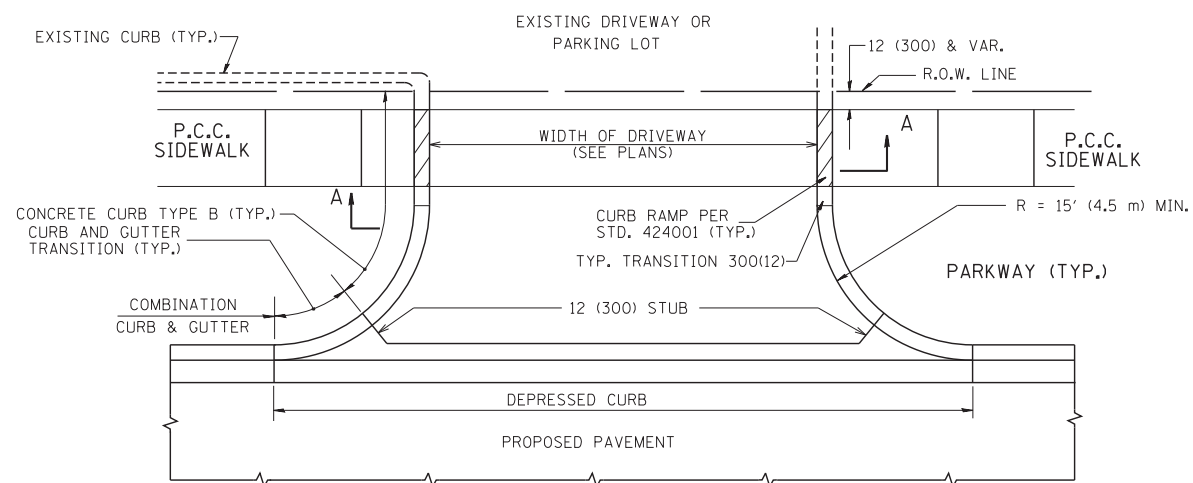
USER NAME: tmoahmed	DESIGNED: TOM	REVISED: -
PLOT SCALE: 2.0000' / in.	CHECKED: JA	REVISED: -
PLOT DATE: 5/15/2017	DATE: 5/15/2017	REVISED: -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

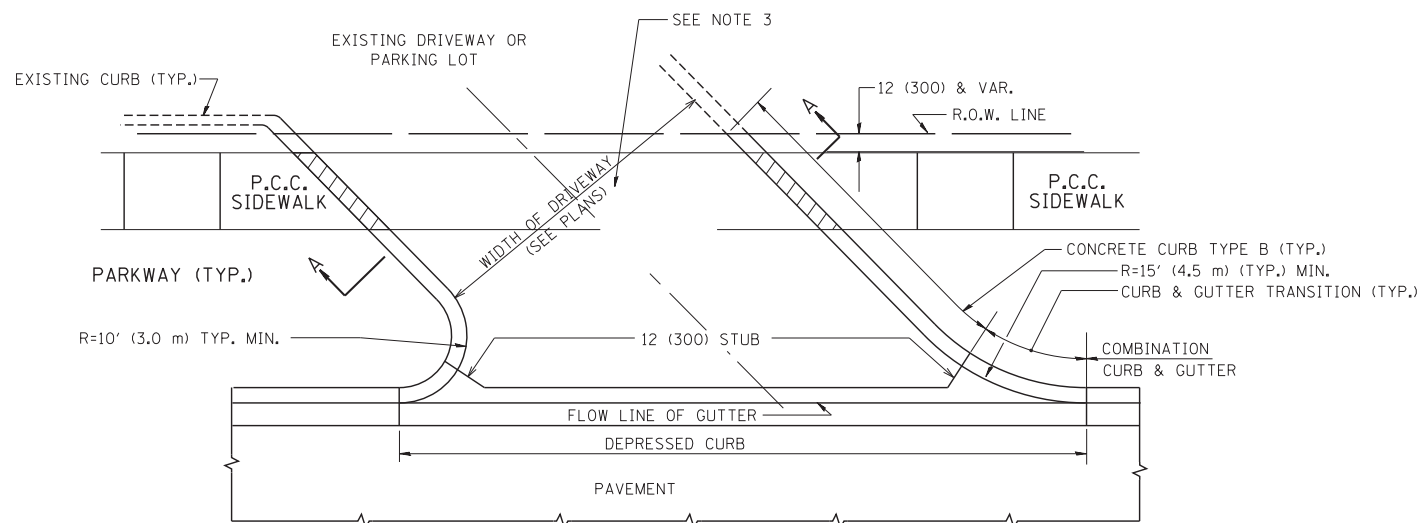
SOIL BORING

SCALE SHEET OF SHEETS STA. TO STA.

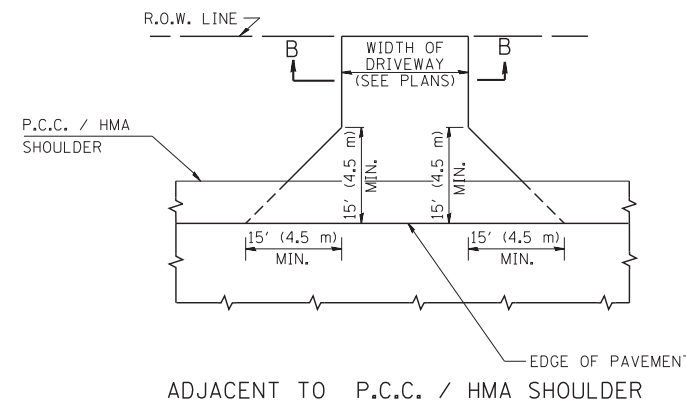
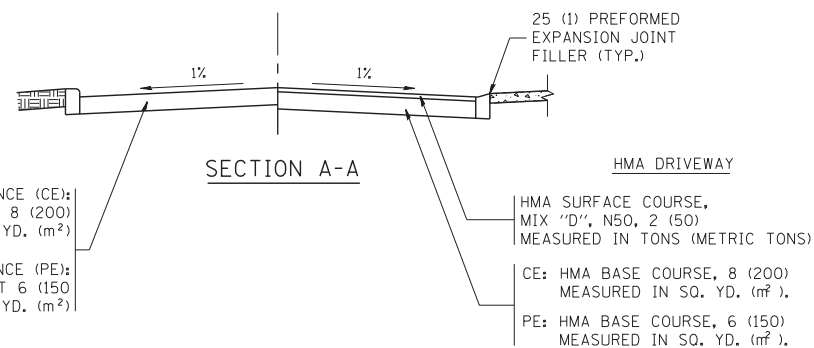
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
66	2015-088B	MCHENRY	24	15
CONTRACT NO. 62893				
ILLINOIS FED. AID PROJECT				



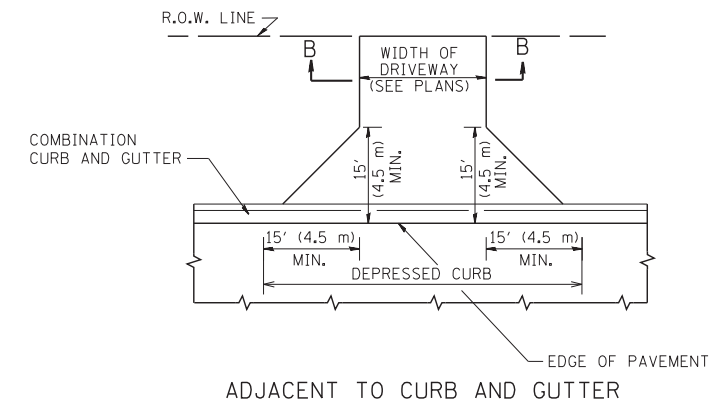
WITH CONCRETE CURB, TYPE B



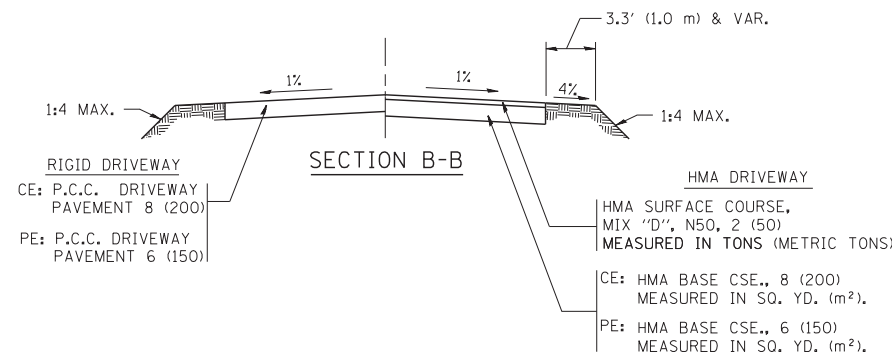
WITH CONCRETE CURB, TYPE B



ADJACENT TO P.C.C. / HMA SHOULDER



ADJACENT TO CURB AND GUTTER



RURAL FIELD ENTRANCE (FE)

HMA SURFACE COURSE,
MIX "D", N50, 2 (50)
MEASURED IN TONS (METRIC TONS)

AGGREGATE BASE CSE., TYPE B, 8 (200)
MEASURED IN SQ. YD. (m²).

GENERAL NOTES:

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

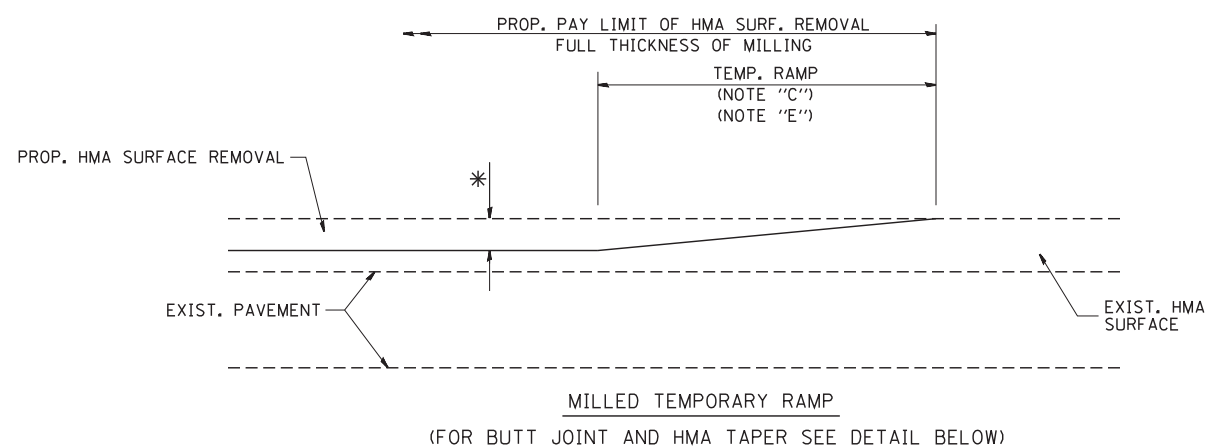
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

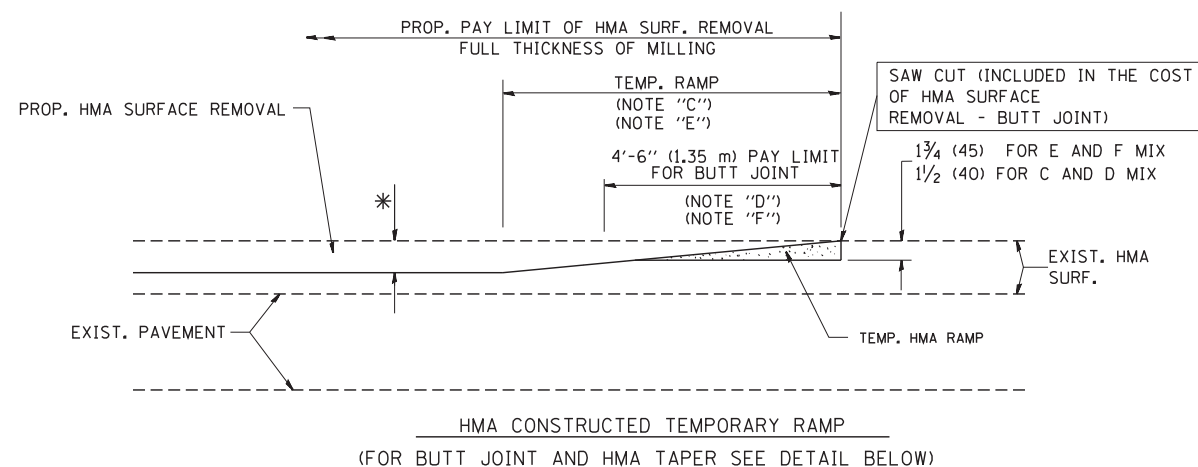
DRIVEWAY DETAILS - DISTANCE BETWEEN R.O.W.
AND FACE OF CURB & EDGE OF SHOULDER >= 15' (4.5 m)

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
66	2015-088B	MCHENRY	24	16
BD0156-07 (BD-01)		CONTRACT NO. 62B93		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

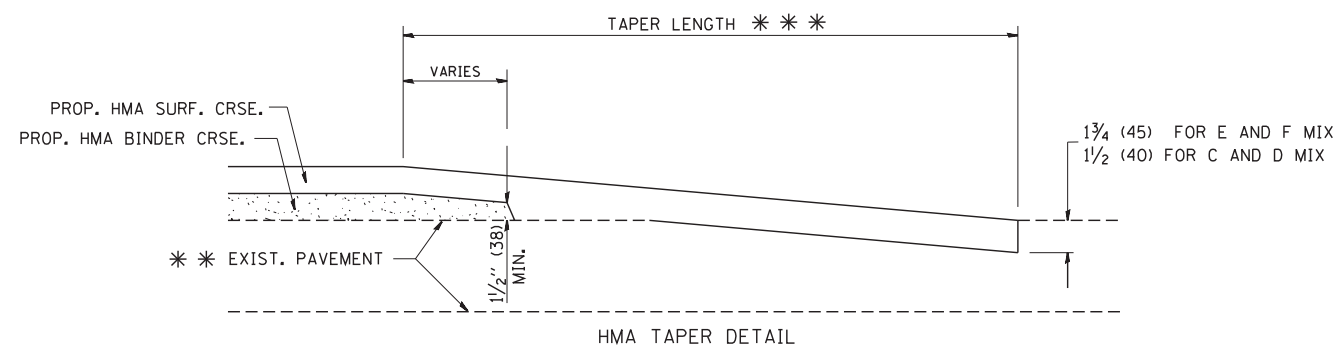
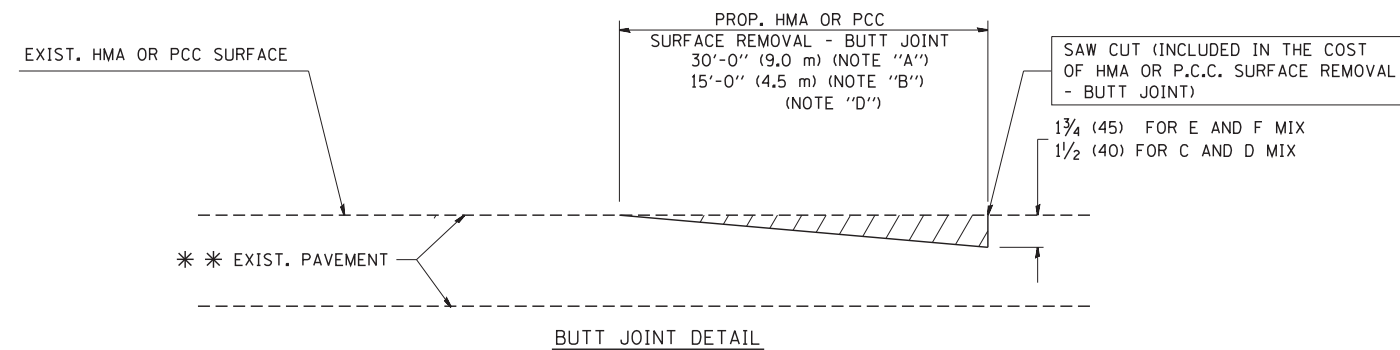


OPTION 1



OPTION 2

TYPICAL TEMPORARY RAMP



TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

*** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

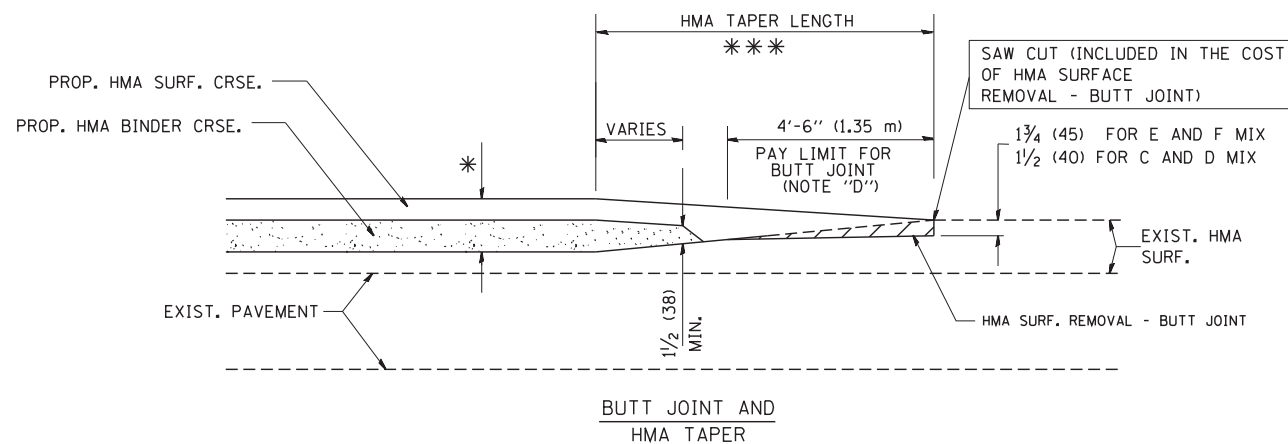
NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
 - B: MINOR SIDE ROADS.
 - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
 - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
 - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
 - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
 - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- *** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.



TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING

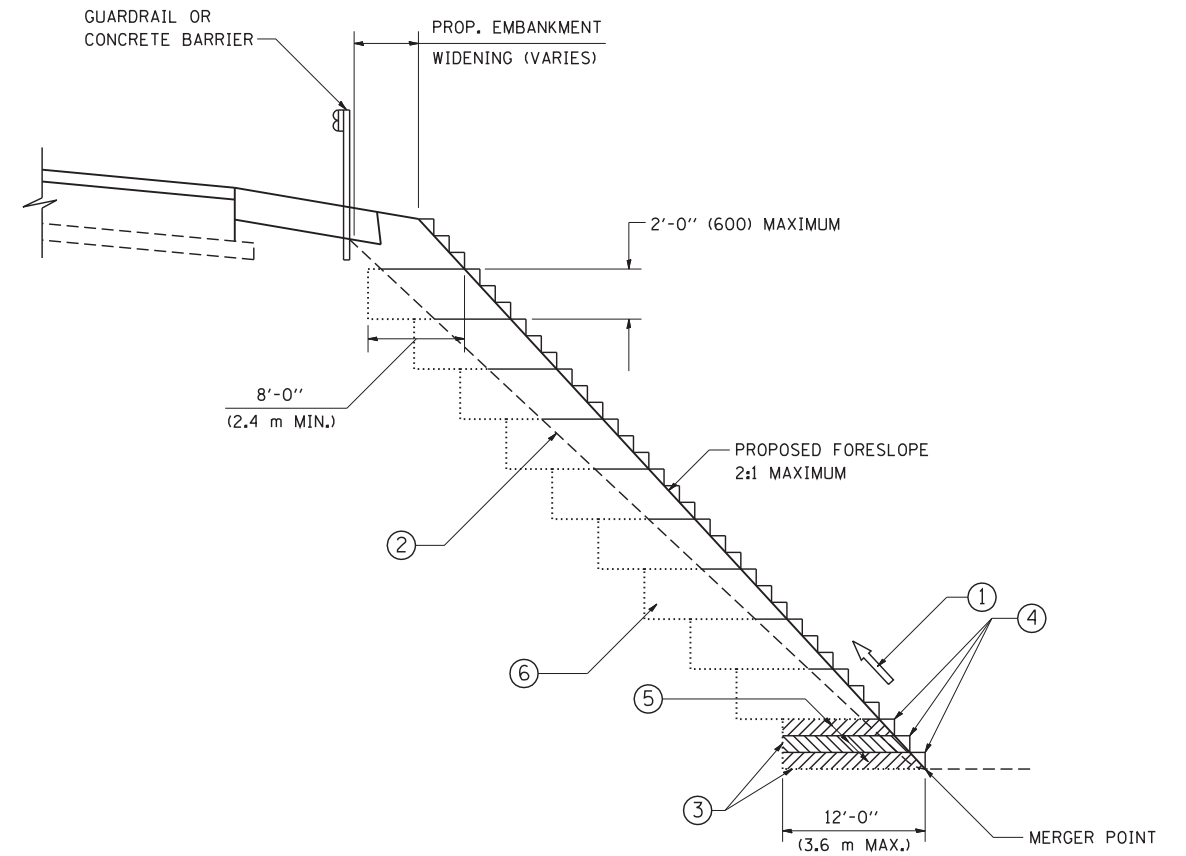
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	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BUTT JOINT AND
HMA TAPER DETAILS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
66	2015-088B	MCHENRY	24	17
BD400-05 BD32		CONTRACT NO. 62B93		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



TYPICAL BENCHING DETAIL
FOR EMBANKMENT

NOTES:

- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ⑦ SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

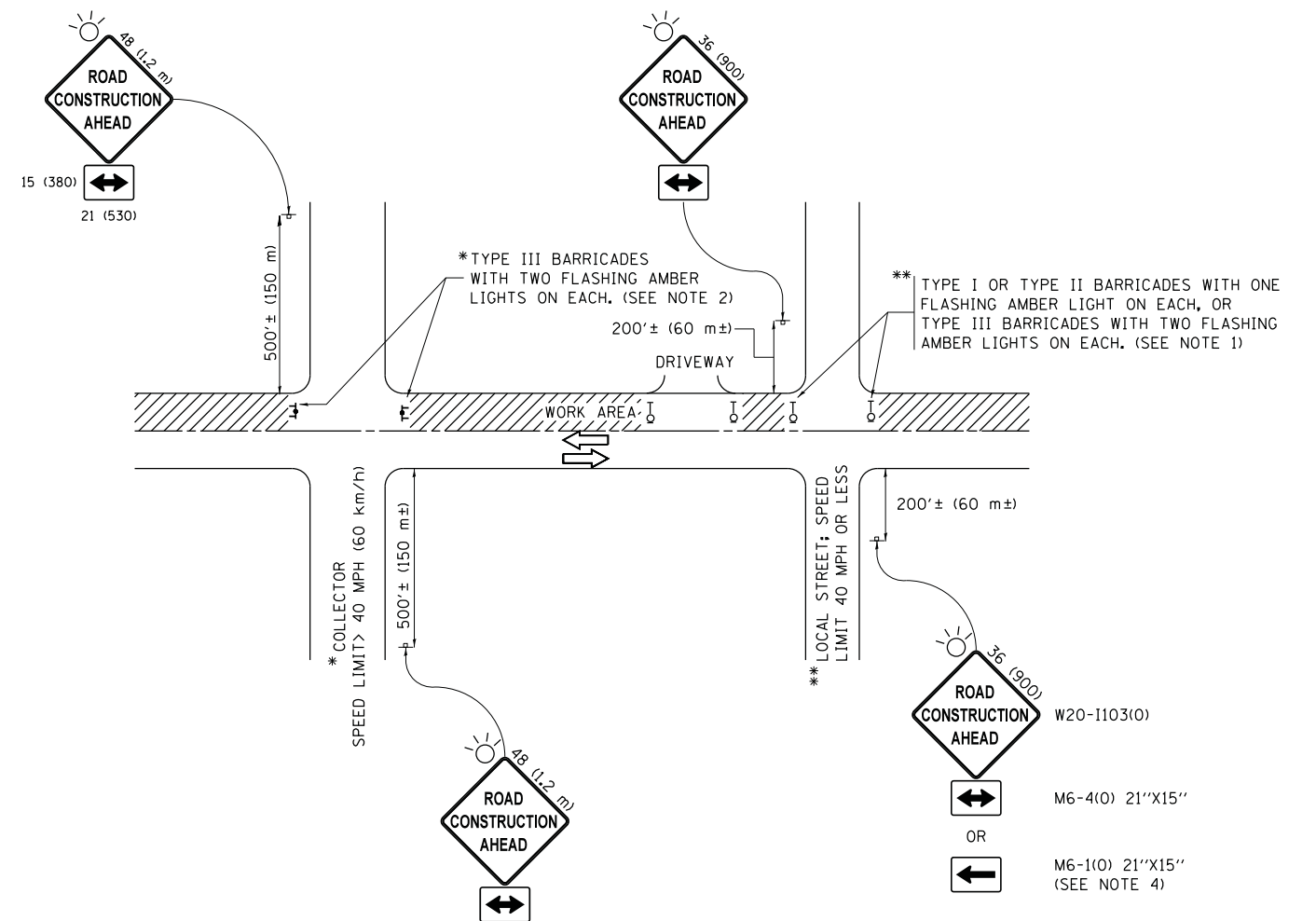
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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		CHECKED - S.E.B.	REVISED -
		DATE - 06-16-04	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BENCHING DETAIL			
FOR EMBANKMENT WIDENING			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
66	2015-088B	MCHENRY	24	18
BD-51		CONTRACT NO. 62B93		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



NOTES:

- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE "ROAD CONSTRUCTION AHEAD" SIGN 36 x 36 (900x900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE "ROAD CONSTRUCTION AHEAD" SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
- WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
- ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
- THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in inches (millimeters) unless otherwise shown.

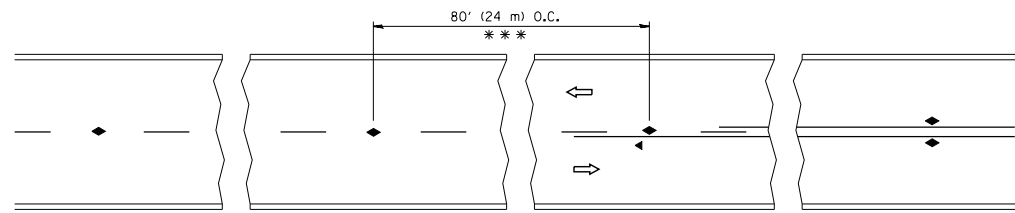
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	PLOT DATE = 9/15/2016		REVISED - A. SCHUETZE 09-15-16

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL AND PROTECTION FOR
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS**

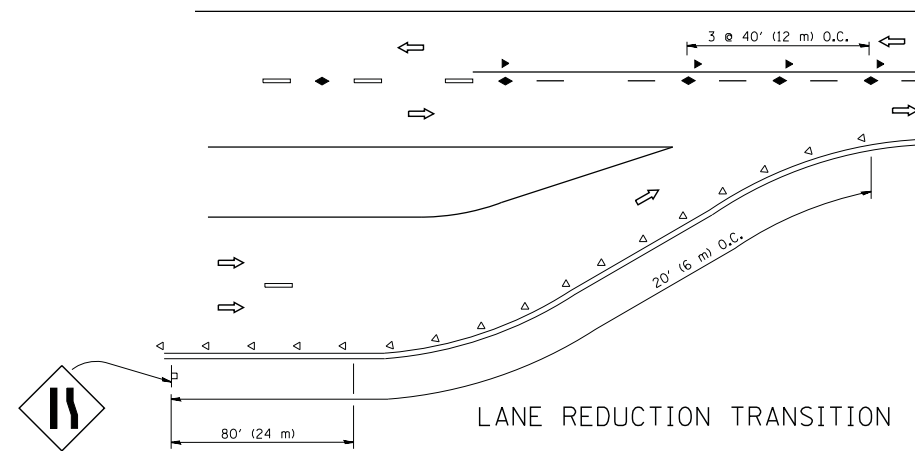
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TC-10			CONTRACT NO. 62B93	
ILLINOIS FED. AID PROJECT				

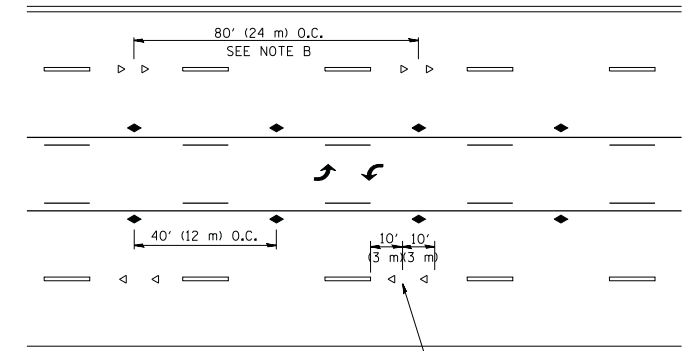


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

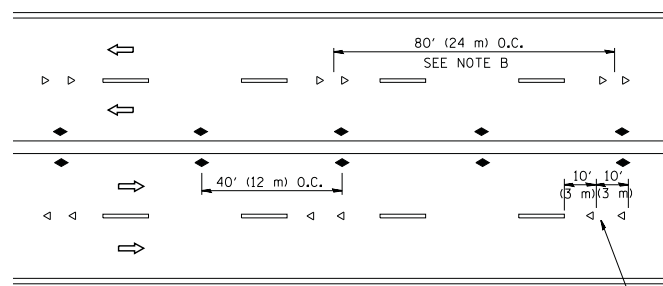
TWO-LANE/TWO-WAY



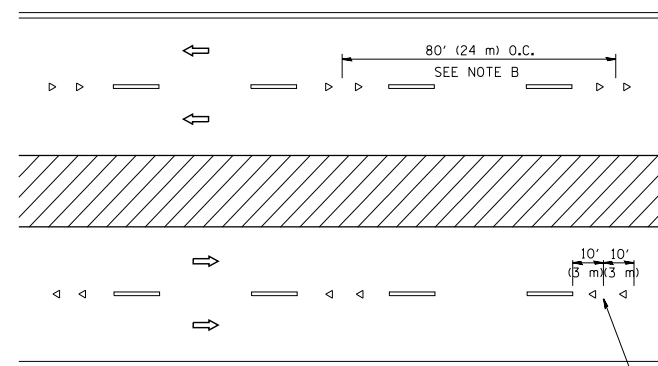
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

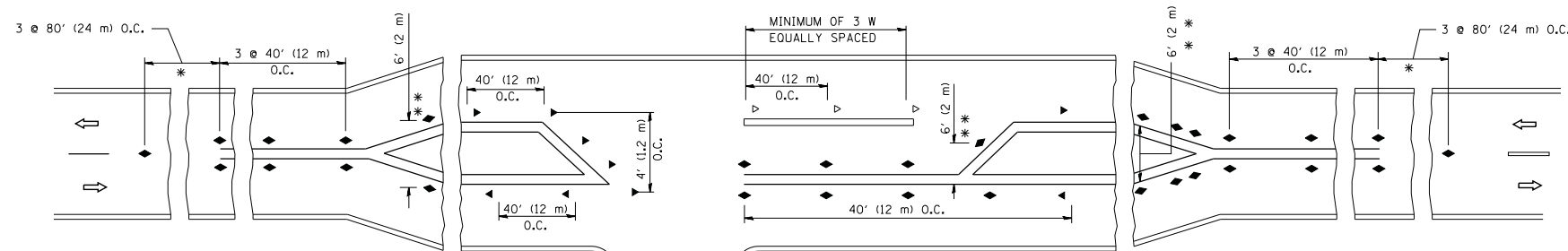
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



LEFT TURN

* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE
 ** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

All dimensions are in inches (millimeters) unless otherwise shown.

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		CHECKED -	REVISED - T. RAMMACHER 01-06-00
		DATE -	REVISED - C. JUCIUS 09-09-09

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)		66	2015-088B	MCHENRY	24	20
SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		CONTRACT NO. 62B93		
		STA. TO STA.		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		

ROUTE MARKERS

FOR U.S. ROUTES
M1-40-2424

FOR ILLINOIS ROUTES
M1-50-2424

R.R. UNMARKED ROUTES
SPECIAL 24" x 18" VARIABLE
4" BLACK LETTERS ON WHITE
REFLECTIVE BACKGROUND

ARROWS SIGNS

M5-1L-2115

M5-1R-2115

M6-1-2115

M6-2-2115

M6-3-2115

CARDINAL DIRECTION & DETOUR SIGNS

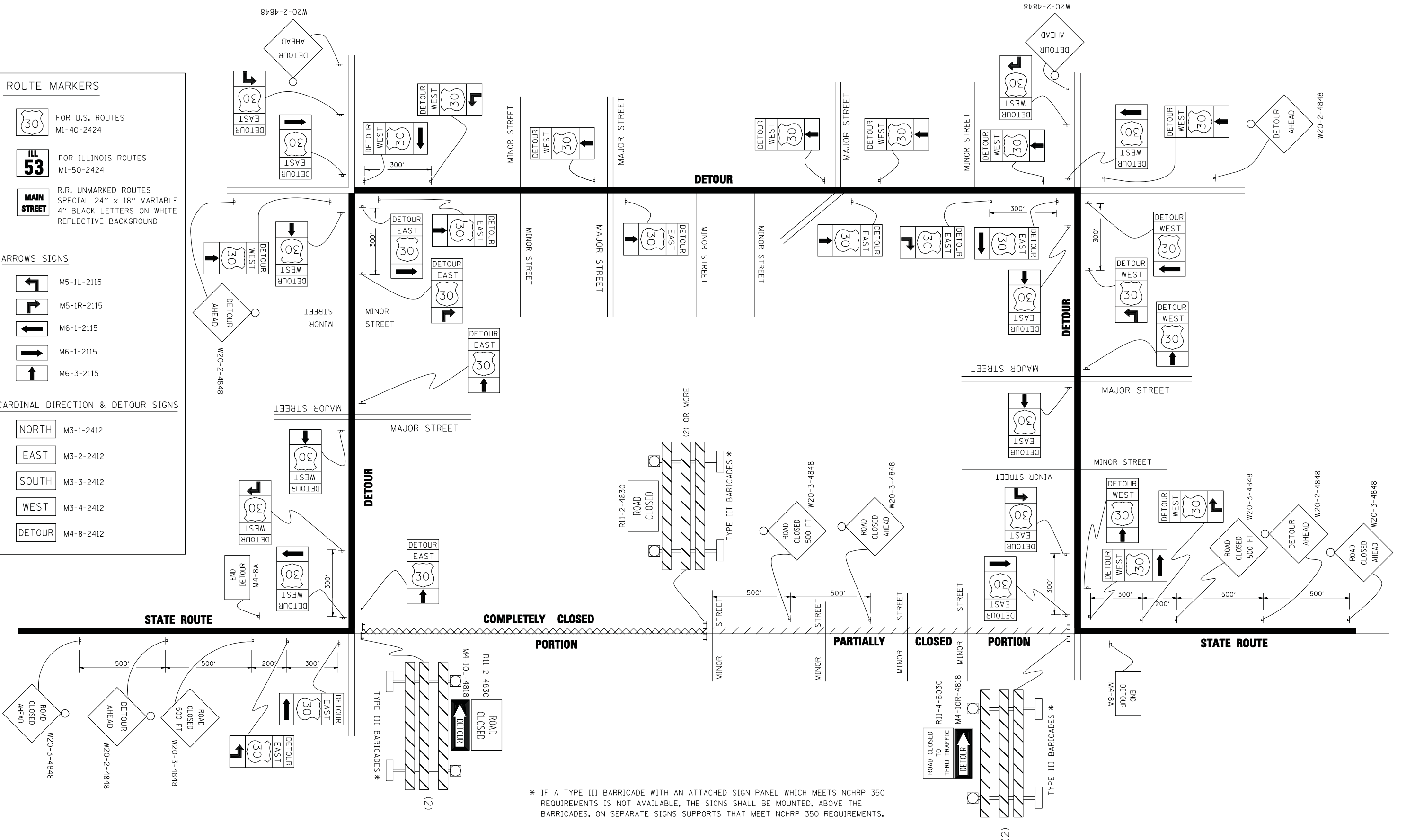
NORTH M3-1-2412

EAST M3-2-2412

SOUTH M3-3-2412

WEST M3-4-2412

DETOUR M4-8-2412



* IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.

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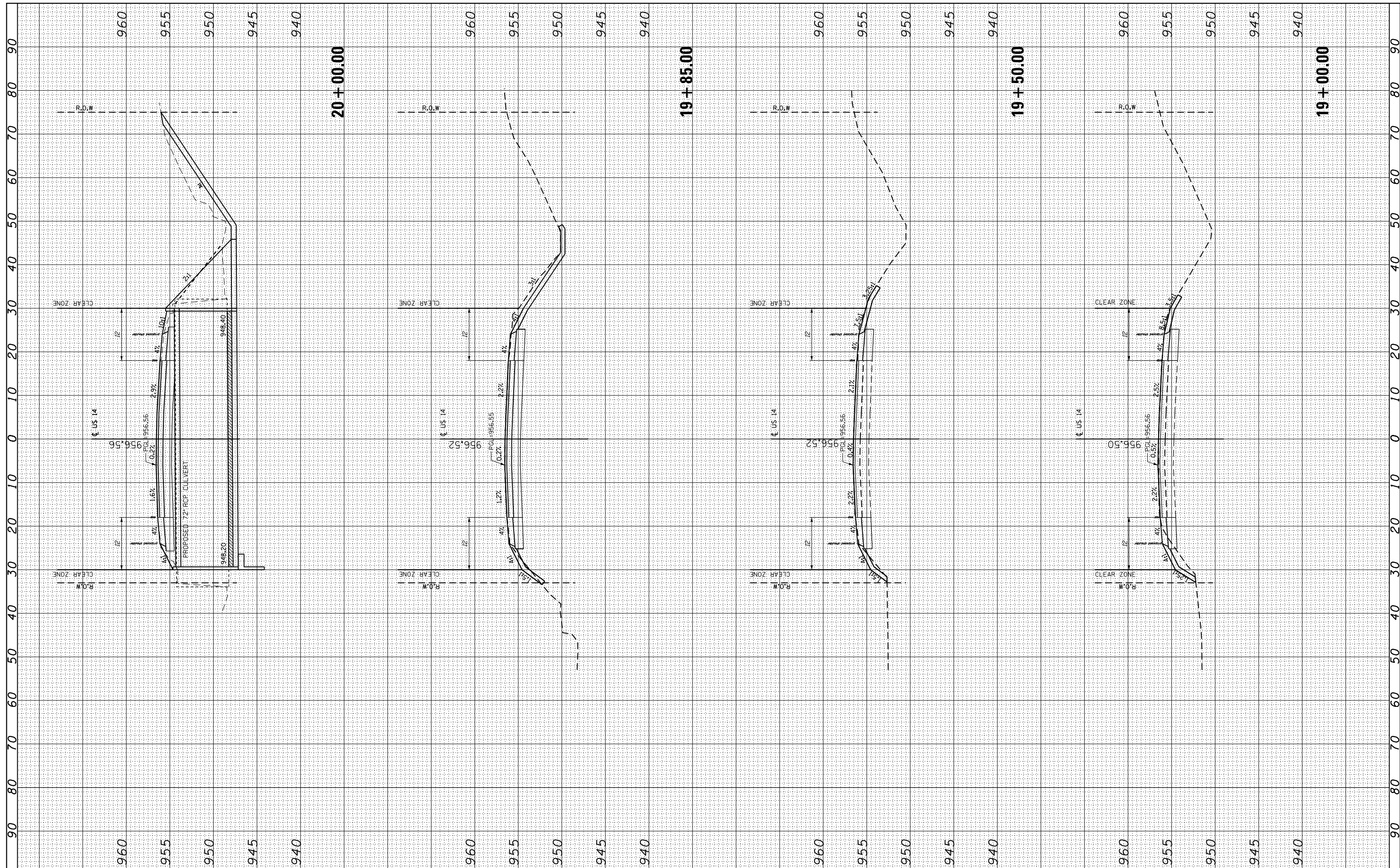
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DETOUR SIGNING FOR CLOSING STATE HIGHWAYS			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
66	2015-088B	MCHENRY	24	22
TC-21		CONTRACT NO. 62B93		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

FINAL SURVEY	SURVEYED	BY	DATE
NO.	PLOTTED		
	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NO.	PLOTTED		
	TEMPLATE		
	AREAS CHECKED		



FILE NAME =
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USER NAME = *USER*
 DESIGNED - AWM
 DRAWN - TOM
 CHECKED - JA
 DATE - 2/28/2017

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS
U.S. ROUTE 14 OVER DITCH (3.6 MILES S0 STATE LINE)
 SCALE: 1"=10' SHEET NO. X OF X SHEETS STA. XXX+XX TO STA. XXX+XX

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
66	2015-088B	MCHENRY	24	23
CONTRACT NO. 62B93				
ILLINOIS FED. AID PROJECT				

