06-14-2019 LETTING ITEM 004

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

FAP ROUTE 333 / IL ROUTE 120 (WASHINGTON STREET)
OVER DITCH (1.2 MILES EAST OF U.S. ROUTE 14)
SECTION 2016-053B PROJECT NO.: NHPP-RD69(632) **CULVERT REPLACEMENT MCHENRY COUNTY** C-91-012-17

UNINCORPORATED GREENWOOD TOWNSHIP

THE IMPROVEMENT IS LOCATED IN UNINCORPORATED GREENWOOD TOWNSHIP **DESIGN DESIGNATION:**

FOR INDEX OF SHEETS, SEE SHEET NO. 2

OTHER PRINCIPAL ARTERIAL

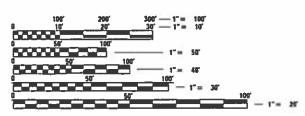
TRAFFIC DATA:

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ADT (2015) = 3,000 POSTED SPEED = 40 MPH DESIGN SPEED = 45 MPH

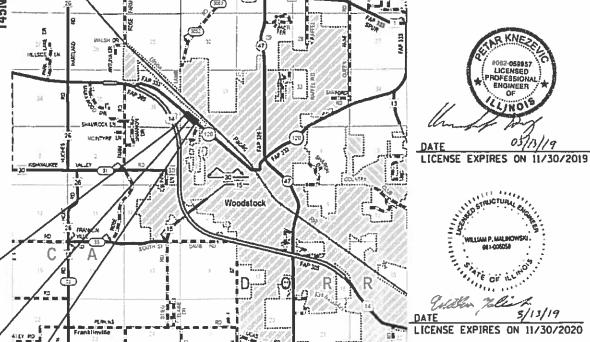


ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT MANAGER: FAWAD AQUEEL, PE, PTOE (847) 705-4247

END IMPROVEMENT STA. 51 + 00



CULVERT REPLACEMENT 50 + 00 EX. STRUCTURE NO.: 056-0201

PR. STRUCTURE NO.: 056-0330

NOT TO SCALE GROSS LENGTH = 200 FT. = 0.038 MILE NET LENGTH = 200 FT. = 0.038 MILE

LOCATION MAP

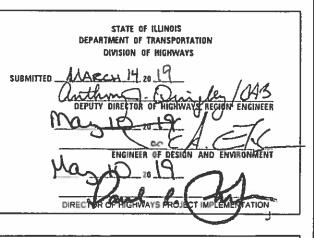
SUITE 300 CHICAGO, IL 60631

ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE NO. 184-003962-0014

SECTION 2016-0538 MCHENRY 27 ILLINOIS CONTRACT NO. 62039

D-91-012-17





PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

CONTRACT NO. 62D39

INDEX OF SHEETS:

- COVER SHEETS
- 2 HIGHWAY STANDARDS, GENERAL NOTES AND COMMITMENTS
- 3-5 SUMMARY OF QUANTITIES
- 6-7 TYPICAL SECTIONS 8 SCHEDULES OF QUANTITES
- 9 ALIGNMENT, TIES AND BENCHMARKS
- 10 REMOVAL PLAN
- 1 ROADWAY PLAN AND PROFILE
- 12 EROSION CONTROL AND DRAINAGE PLAN AND PROFILE
- 13 PAVEMENT MARKING AND LANDSCAPING PLAN
- 14 DETOUR PLAN
- 15-19 STRUCTURAL PLANS
- 20-25 DISTRICT ONE DETAILS
- 26-27 CROSS SECTIONS

HIGHWAY STANDARDS

STANDARD NO DESCRIPTION

000001-07	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
406201-01	MAILBOX TURNOUT
482011-03	HMA SHOULDER STRIPS/SHOULDERS WITH RS OR WIDENING & RS PROJECTS
542001-06	CONRETE END SECTIONS FOR PIPE CULVERTS 15" THRU 84" DIAMETER
542311-07	TRAVERSABLE PIPE GRATE FOR CONCRETE END SECTION
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

DISTRICT 1 STANDARDS

STANDARD NO DESCRIPTION

BD32	BUTT JOINT AND HMA TAPER DETAILS
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
TC-22	ARTERIAL ROAD INFORMATION SIGN

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 GREENWOOD TOWNSHIP.
- 3. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- 4. 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.
- 5. WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1½ 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.
- 6. 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 FINGINEER.
- 7. 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.
- 8. THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT KALPANA. KANNAN-HOSADURGA@ILLINOIS.GOV A MINIMUM OF 72 HOURS IN ADVANCED OF BEGINNING WORK.
- 9. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
- 10. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
- 11. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- 12. 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.
- 13. 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.
- 14. A MINIMUM OF TWO WEEKS PRIOR TO ROUTE CLOSURE, THE CONTRACTOR SHALL CONTACT LIEUTENANT MATT HEDGES DIRECTOR, FIRE PREVENTION BUREAU WITH THE WOODSTOCK FIRE RESCUE DISTRICT AT (815)338-2621, PREVENTIONS WERD, ORG.
- 15. A MINIMUM OF TWO WEEKS PRIOR TO ROUTE CLOSURE, THE CONTRACTOR SHALL CONTACT RICHARD WILLMAN, PE, TRANSPORTATION ENGINEER WITH PACE AT (847)228-3584, RICHARD, WILLMAN® PACEBUS, COM.
- 16. THIS PROJECT REQUIRES A US ARMY CORPS OF ENGINEERS (USACE) 404 PERMIT THAT WILL BE SECURED BY THE DEPARTMENT. AS A CONDITION OF THIS PERMIT, THE CONTRACTOR WILL NEED TO SUBMIT AN IN-STREAM WORK PLAN TO THE DEPARTMENT FOR APPROVAL. GUIDELINES ON ACCEPTABLE IN-STREAM WORK TECHNIQUES CAN BE FOUND ON THE USACE WEBSITE. THE USACE DEFINES AND DETERMINES IN-STREAM WORK. THE COST OF ALL MATERIALS AND LABOR NECESSARY TO COMPLY WITH THE ABOVE PROVISIONS TO PREPARE AND IMPLEMENT AN IN-STREAM WORK PLAN WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED WITH THE EXCEPTION OF COFFERDAMS WHICH WILL BE PAID FOR AS COFFERDAM (TYPE 1)(IN-STREAM/WETLAND WORK) WITH A BASIS OF PAYMENT OF EACH.

COMMITMENTS

NO COMMITMENTS FOR THIS PROJECT.

SCALE:

USER NAME = gustavo.pallares	DESIGNED	-	PK	REVISED -
	DRAWN	-	GJ	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED	-	CP	REVISED -
PLOT DATE = 4/22/2019	DATE	-	01/14/19	REVISED -

	IL 1	20 OV	ER DRAINAGE DITCH	
HIGHWAY	STANDAR	DS, GE	NERAL NOTES AND CON	IMITMENTS
	SHEET	OF	SHEETS STA.	TO STA.

- 1		TI I INOTE	FFD A	D PROJECT		
				CONTRACT	NO. 6	2D39
[333	2016-053B		MCHENRY	27	2
	F.A.P RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEE NO.

				CONSTR. CODE	CONSTR. CODE
			URBAN	80% FEDERAL	/20% STATE
				ROADWAY	BOX CULVERT
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0004	0004
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	62	62	
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	16	16	
20101700	SUPPLEMENTAL WATERING	UNIT	1	1	
			-	-	
20200100	EARTH EXCAVATION	CU YD	249	249	
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	75	75	
20700220	POROUS GRANULAR EMBANKMENT	CU YD	70	70	
20800150	TRENCH BACKFILL	CU YD	42	42	
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	581	581	
25000312	SEEDING, CLASS4A	ACRE	0.12	0.12	
25100635	HEAVY DUTY EROSION CONTROL BLANKET	SQ YD	581	581	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	24	24	
28000305	TEMPORARY DITCH CHECKS	FOOT	480	480	
28000400	PERIMETER EROSION BARRIER	FOOT	630	630	
28000500	INLET AND PIPE PROTECTION	EACH	4	4	
30300001	AGGREGATE SUBGRADE IMPROVEMENT	CU YD	2	2	
30300112	AGGREGATE SUBGRADE IMPROVEMENT 12"	SQ YD	60	60	

*SPECIALTY ITEMS

wood

USER NAME = gustavo.pallares	DESIGNED	-	PK	REVISED -
	DRAWN	-	GJ	REVISED -
PLOT SCALE = 40.0000 '/ in.	CHECKED	-	CP	REVISED -
PLOT DATE = 3/22/2019	DATE	-	01/14/19	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE:

II	L 120 OVER	DRAIN	AGE DITCH		F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SUMMARY OF QUANTITIES				333	2016-053B	MCHENRY	27	3	
	JUMINAIII	OI UO	ANTITIES				CONTRACT	NO. 6	2D39
SHEET	OF	SHEETS	STA.	TO STA.		[ILLINOIS FED. A	ID PROJECT		
							DE	\ /·	2/10

POUND TON	URBAN TOTAL QUANTITY 46 1,213 99.7	80% FEDER ROADWAY 0004 46 1213 99. 7	BOX CULVERT 0004
SQ YD POUND TON	QUANTITY 46 1,213 99.7	0004 46 1213 99. 7	
SQ YD POUND TON	QUANTITY 46 1,213 99.7	0004 46 1213 99. 7	
POUND	1, 213 99. 7	1213 99. 7	
POUND	1, 213 99. 7	1213 99. 7	
TON	99. 7	99. 7	
TON	84.3	84. 3	_
SQ YD	60	60	
SQ YD	470	470	
SQ YD	55	55	
FACIL	1		1
EACH	1		
FOOT	32	32	
RES CU YD	37		37
EACH	1		1
SQ FT	1,034		1034
EACH	2		2
FOOT	42		42
	SQ YD SQ YD EACH FOOT RES CU YD EACH	SQ YD 470 SQ YD 55 EACH 1 FOOT 32 RES CU YD 37 EACH 1 SQ FT 1,034 EACH 2	SO YD 470 470 SO YD 55 55 EACH 1 FOOT 32 32 RES CU YD 37 EACH 1 SO FT 1,034 EACH 2

*SPECIALTY ITEMS

wood.

USER NAME = gustavo.pallares	DESIGNED -	PK	REVISED -
	DRAWN -	GJ	REVISED -
PLOT SCALE = 40.0000 '/ in.	CHECKED -	CP	REVISED -
PLOT DATE = 3/22/2019	DATE -	01/14/19	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE:

IL 120 OVER DRAINAGE DITCH SUMMARY OF QUANTITIES					F.A.P RTE.	SECTION	COUNTY	TOTAL	SHEET NO.
					333	2016-053B	MCHENRY	27	4
SUMMANT OF QUANTITIES							CONTRAC	T NO. 6	2D39
SHEET	OF	SHEETS	STA.	TO STA.	Ì	ILLINOIS FED. AID PROJECT			
DEV. 5/2/10									

CONSTR. CODE

CONSTR. CODE

				URBAN	80% FEDERA	AL/20% STATE
	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0004	BOX CULVERT 0004
	542A2755	PIPE CULVERTS, CLASS A, TYPE 4 30"	FOOT	50	50	
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	63		63
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6	
	67100100	MOBILIZATION	L SUM	1	1	
*	66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	249	249	
*	66900530	SOIL DISPOSAL ANALYSIS	EACH	2	2	
*	66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	L SUM	1	1	
*	66901002	ON-SITE MONITORING OF REGULATED SUBSTANCES	DAYS	2	2	
*	66901003	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	L SUM	1	1	
*	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE4"	FOOT	450	450	
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	5	5	
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	5	5	
	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1	
	X0900064	MEMBRANE WATERFROOFING FOR BURIED STRUCTURES	SQ YD	63		63
	X0900075	COFFERDAM (TYPE 1) (IN-STREAM/WETLAND WORK)	EACH	1	1	
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1	

*SPECIALTY ITEMS

wood.

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	DRAWN	-	GJ	REVISED -
PLOT SCALE = 40.0000 '/ in.	CHECKED	-	CP	REVISED -
PLOT DATE = 3/22/2019	DATE	-	01/14/19	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE:

	IL 120 OVER	DRAINAGE DITCH	
	SUMMARY	OF QUANTITIES	
SHEET	0F	SHEETS STA.	TO STA

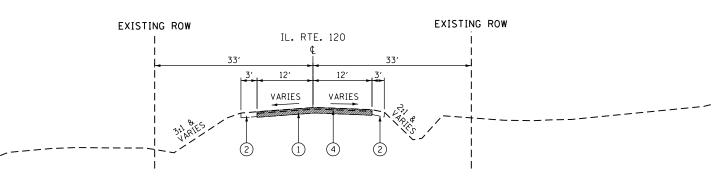
CONSTR. CODE

CONSTR. CODE

EXISTING ROW EXISTING ROW IL. RTE. 120 VARIES VARIES

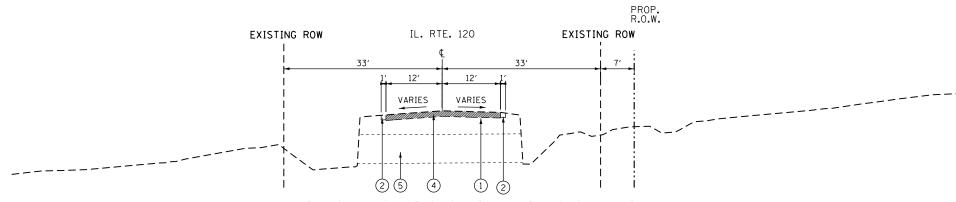
IL 120 EXISTING TYPICAL SECTION

STA. 49+00.00 TO STA. 49+91.19



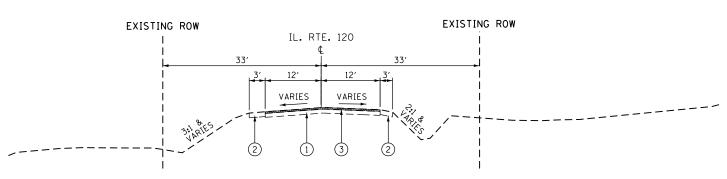
IL 120 EXISTING TYPICAL SECTION

STA. 49+91.19 TO STA. 49+98.38 STA. 50+04.38 TO STA. 50+13.65



IL 120 EXISTING TYPICAL SECTION (AT EXISTING CULVERT)

STA. 49+98.38 TO STA. 50+04.38



IL 120 EXISTING TYPICAL SECTION

STA. 50+13.65 TO STA. 51+00.00

wood.

USER NAME = gustavo.pallares	DESIGNED	-	PK	REVISED -
	DRAWN	-	GJ	REVISED -
PLOT SCALE = 40.0000 '/ in.	CHECKED	-	CP	REVISED -
PLOT DATE = 3/7/2019	DATE	-	01/14/19	REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

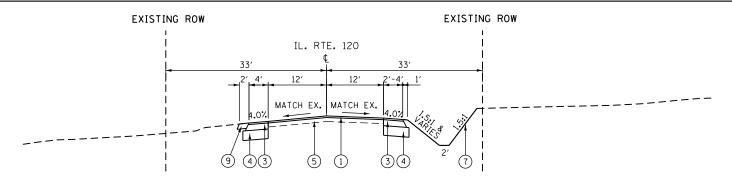
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I.	L 120 OVE	R DRAIN	AGE DITC	:H	F.A.P RTE.	
	EXISTING	TVPICAL	SECTION	ıs	333	
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SECTION 2016-053B MCHENRY 27 6 CONTRACT NO. 62D39 SHEETS STA.

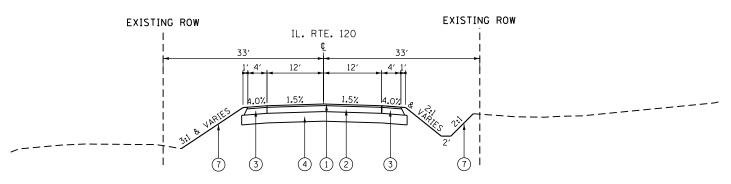
LEGEND:

- 1 EXISTING HOT-MIX ASPHALT PAVEMENT, 7"
- 2 EXISTING AGGREGATE SHOULDER
- (3) HOT-MIX ASPHALT SURFACE REMOVAL, 2"
- 4 EXISTING PAVEMENT REMOVAL
- (5) EXISTING 6'X3' CONCRETE ARCH CULVERT (SN: 056-0201) TO BE REMOVED
- 6 EXISTING DRIVEWAY
- 7) DRIVEWAY REMOVAL



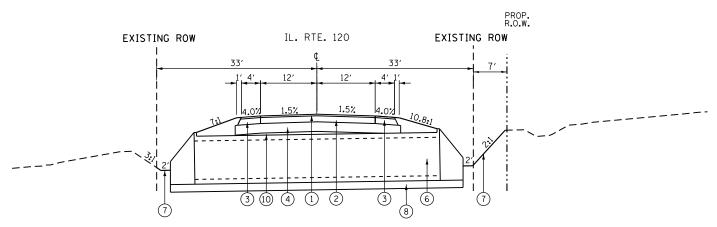
IL 120 PROPOSED TYPICAL SECTION (RESURFACING)

STA. 49+00.00 TO STA. 49+91.19



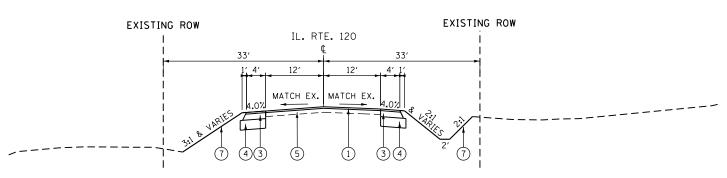
IL 120 PROPOSED TYPICAL SECTION (RECONSTRUCTION)

STA. 49+91.19 TO STA. 49+97.87 STA. 50+06.96 TO STA. 50+13.65



IL 120 PROPOSED TYPICAL SECTION (AT PROPOSED CULVERT)

STA. 49+97.87 TO STA. 50+06.96



IL 120 PROPOSED TYPICAL SECTION (RESURFACING)

STA. 50+13.65 TO STA. 51+00.00

LEGEND:

- 1 HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50, 2"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, 71/2"
- (3) HOT-MIX ASPHALT SHOULDERS:

HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50, 2"
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, 71/2"

- (4) AGGREGATE SUBGRADE IMPROVEMENT 12"
- (5) EXISTING PAVEMENT
- (6) PROPOSED 8'X4' REINFORCED CONCRETE BOX CULVERT (SN: 056-0330)
- (7) SEEDING WITH TOPSOIL FURNISH AND PLACE, 4"
- (8) 6" POROUS GRANULAR MATERIAL
- 9 HMA DRIVEWAY, 8"
- (10) AGGREGATE SUBGRADE IMPROVEMENT

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	AIR VOID @NDES	QUALITY MANAGEMENT PROGRAM (QMP)			
PAVEMENT RECONSTRUCTION					
HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50 (IL 9.5 MM); 2"	4% © 50 GYR	QC/QA			
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50; 71/2"	4% ⊚ 50 GYR	QC/QA			
PAVEMENT RESURFACING					
HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50 (IL 9.5 MM); 2"	4% ⊚ 50 GYR	QC/QA			
SHOULDERS					
HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50 (IL 9.5 MM); 2"	4% @ 50 GYR	QC/QA			
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50; 71/2"	4% ⊚ 50 GYR	QC/QA			
HOT-MIX ASPHALT DRIVEWAY					
HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50 (IL 9.5 MM); 2"	4% @ 50 GYR	QC/QA			
HOT-MIX ASPHALT BASE COURSE (HMA BINDER IL-19 MM); 6''	4% @ 50 GYR	QC/QA			
QMP DESIGNATION: QUALITY CONTROL/QUALITY ASSURANCE (QC/QA)					

THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE COURSE IS 112 LBS/SQ YD/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.
OUALITY MANAGEMENT PROGRAM (OMP) IDENTIFIES THE PARTICULAR OUALITY
CONTROL SPECIFICATION THAT APPLIES TO THE HMA MIXTURE.

wood.

USER NAME = gustavo.pallares	DESIGNED	-	PK	REVISED -
	DRAWN	-	GJ	REVISED -
PLOT SCALE = 40.0000 '/ in.	CHECKED	-	CP	REVISED -
PLOT DATE = 4/22/2019	DATE	_	01/14/19	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET

IL 120 OVE	R DRAIN	AGE DITCH	I	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHE
PROPOSEI	N TVDICA	L SECTION	e	333	2016-053B	MCHENRY	27	7
I HOI OSLI						CONTRACT	NO. 6	62D3
0F	SHEETS	STA.	TO STA.		TILITADIS EED A	IN PROJECT		

TREE REMOVAL SCHEDULE

TREE REMOVAL (6 TO 15 UNITS DIAMETER)						
LOC	DIA (INI.)	LINUT				
STA	LT/RT	DIA (IN.)	UNIT			
49+37.35	RT	6	6			
49+42.61	RT	12	12			
50+42.27	RT	8	8			
50+75.94	RT	12	12			
50+81.32	RT	12	12			
50+81.25	RT	12	12			
	62					

TREE REMOVAL (OVER 15 UNITS DIAMETER)					
LOC	CATION	DIA (INI.)	UNIT		
STA	LT/RT	DIA (IN.)	UNIT		
49+28.09	49+28.09 RT		16		
	16				

EARTHWORK AND TOPSOIL SCHEDULE

	LOCATION		EARTH	15% ADJUSTMENT	FILL	EARTHWORK BALANCE	REMOVAL AND DISPOSAL
STATION		STATION	(CU YD)	FOR SHRINKAGE (CU YD)	(CU YD)	WASTE (+) SHORTAGE (-) (CU YD)	OF UNSUITABLE MATERIAL (CU YD)
49+00.00	TO	49+50.00	35	30	10	20	12
49+50.00	TO	49+70.44	19	16	3	14	3
49+70.44	TO	49+91.19	21	18	17	1	7
49+91.19	то	50+00.00	27	23	8	15	6
50+00.00	TO	50+01.40	7	6	0	6	1
50+01.40	TO	50+13.65	44	37	7	30	6
50+13.65	TO	50+50.00	57	48	27	22	19
50+50.00	TO	51+00.00	40	34	21	13	21
	TOTAL		249	212	91	120	75

PAVEMENT/DRIVEWAY PAVEMENT REMOVAL SCHEDULE

	LOCATI	ON		PAVEMENT REMOVAL	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	DRIVEWAY PAVEMENT REMOVAL
STATION	TO	STATION	LT/RT	(SQ YD)	(SQ YD)	(SQ YD)
49+91.19		50+13.65		60		
49+00.00		49+91.19			242	
50+13.65		51+00.00			228	
49+00.00		49+76.38	LT			55
	TOTA	L		60	470	55

PAVEMENT SCHEDULE

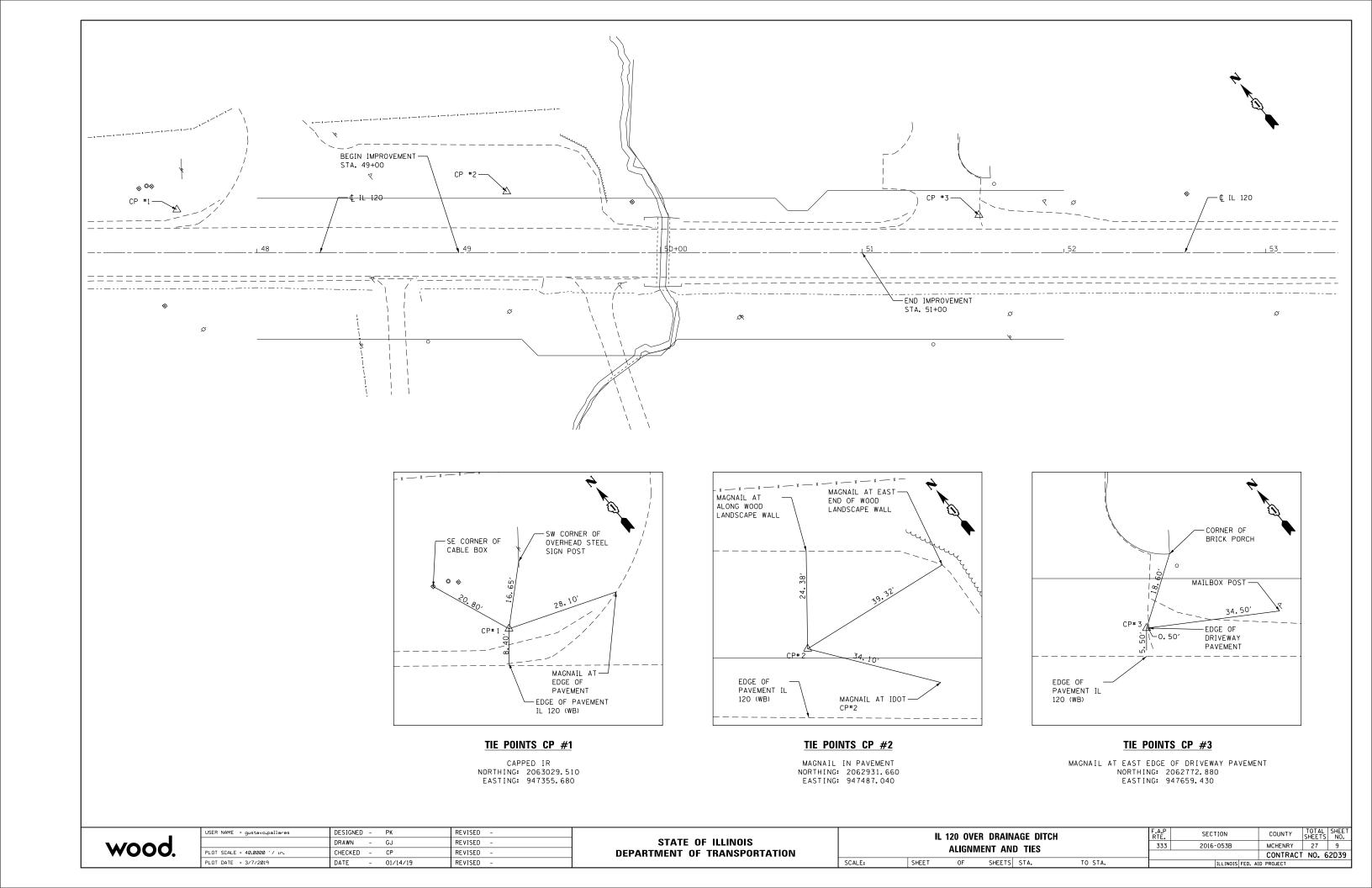
	LOCA	TION		AGGREGATE SUBGRADE IMPROVEMENT	AGGREGATE SUBGRADE IMPROVEMENT 12"	HOT-MIX ASPHALT BASE COURSE, 6"	BITUMINOUS MATERIAL (TACK COAT)	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50
STATION	то	STATION	LT/RT	CU YD	SQ YD	SQ YD	(POUND)	(TON)	(TON)
	MAINLINE								
49+00.00		49+91.19					417		27.2
49+91.19		50+13.65		2	60		103	25.6	6.7
50+13.65		51+00.00					395		25.8
	SHOULDER	2							
49+00.00		51+00.00	LT				153	38.0	10.0
49+00.00		51+00.00	RT				145	36.1	9.5
	DRIVEWAY	,							
49+00.00		49+76.38	LT			16	27		1.8
49+63.74			RT			30	51		3.3
	TOT	AL		2	60	46	1291	99.7	84.3

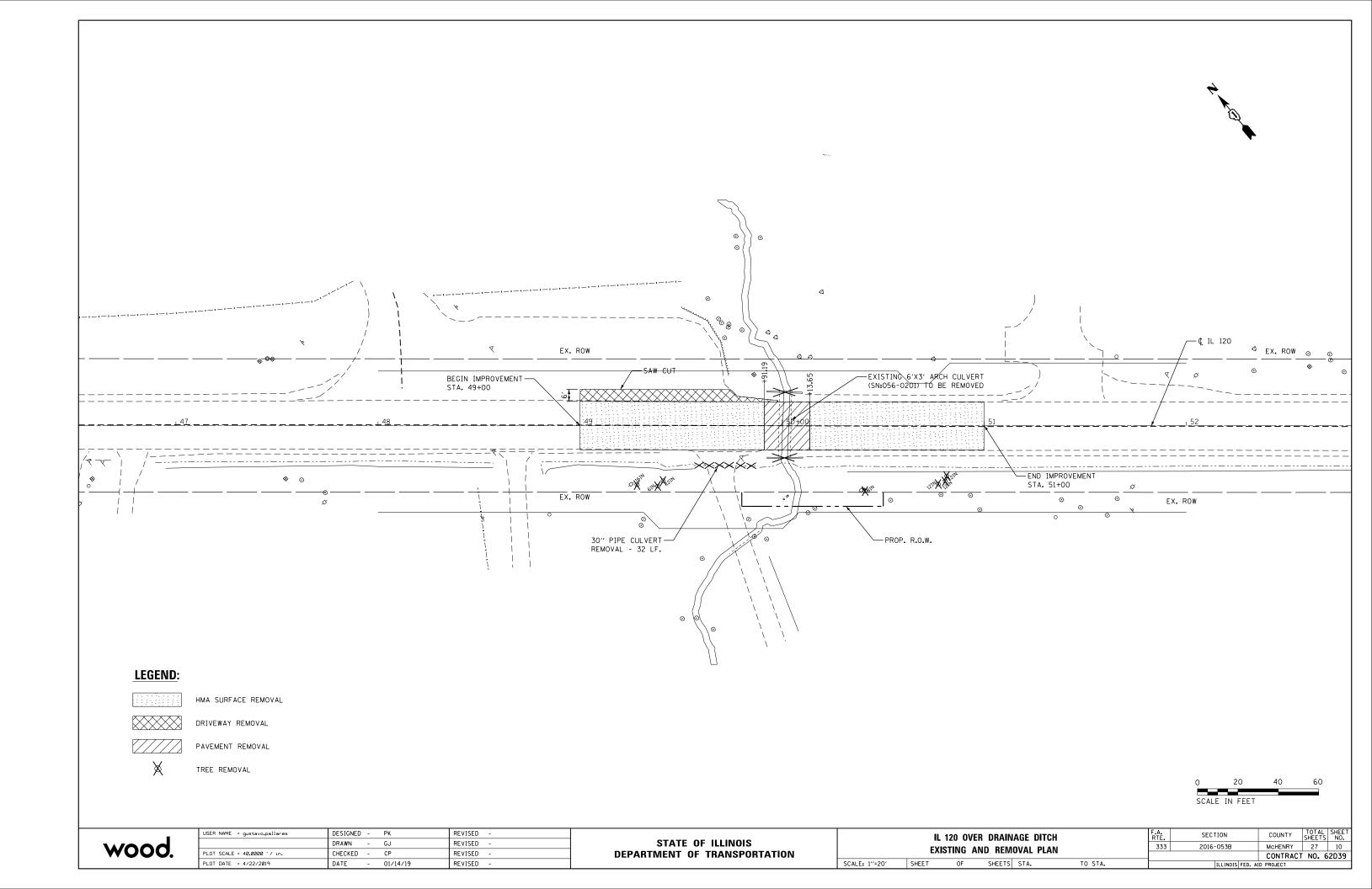
SCALE:

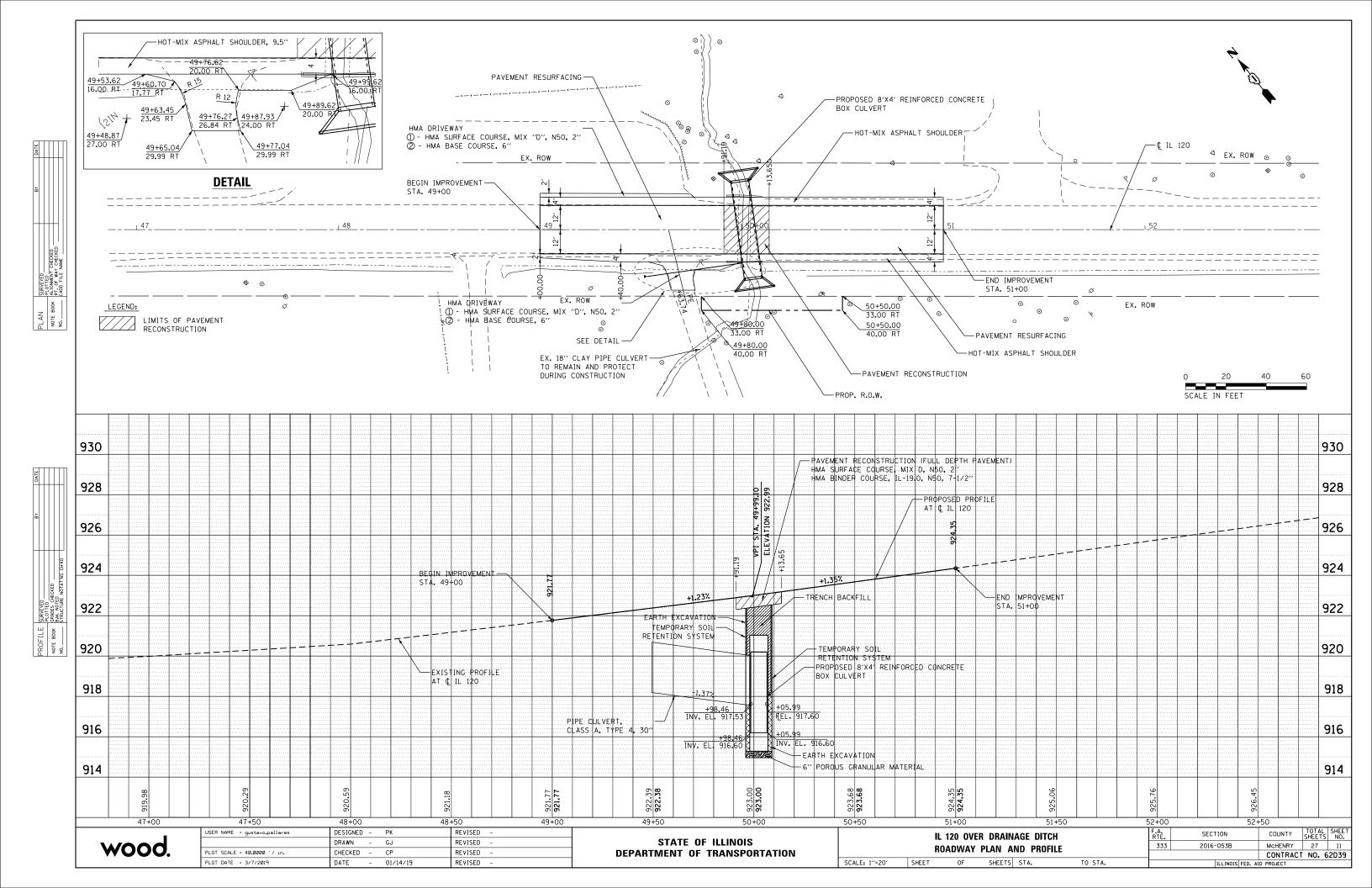


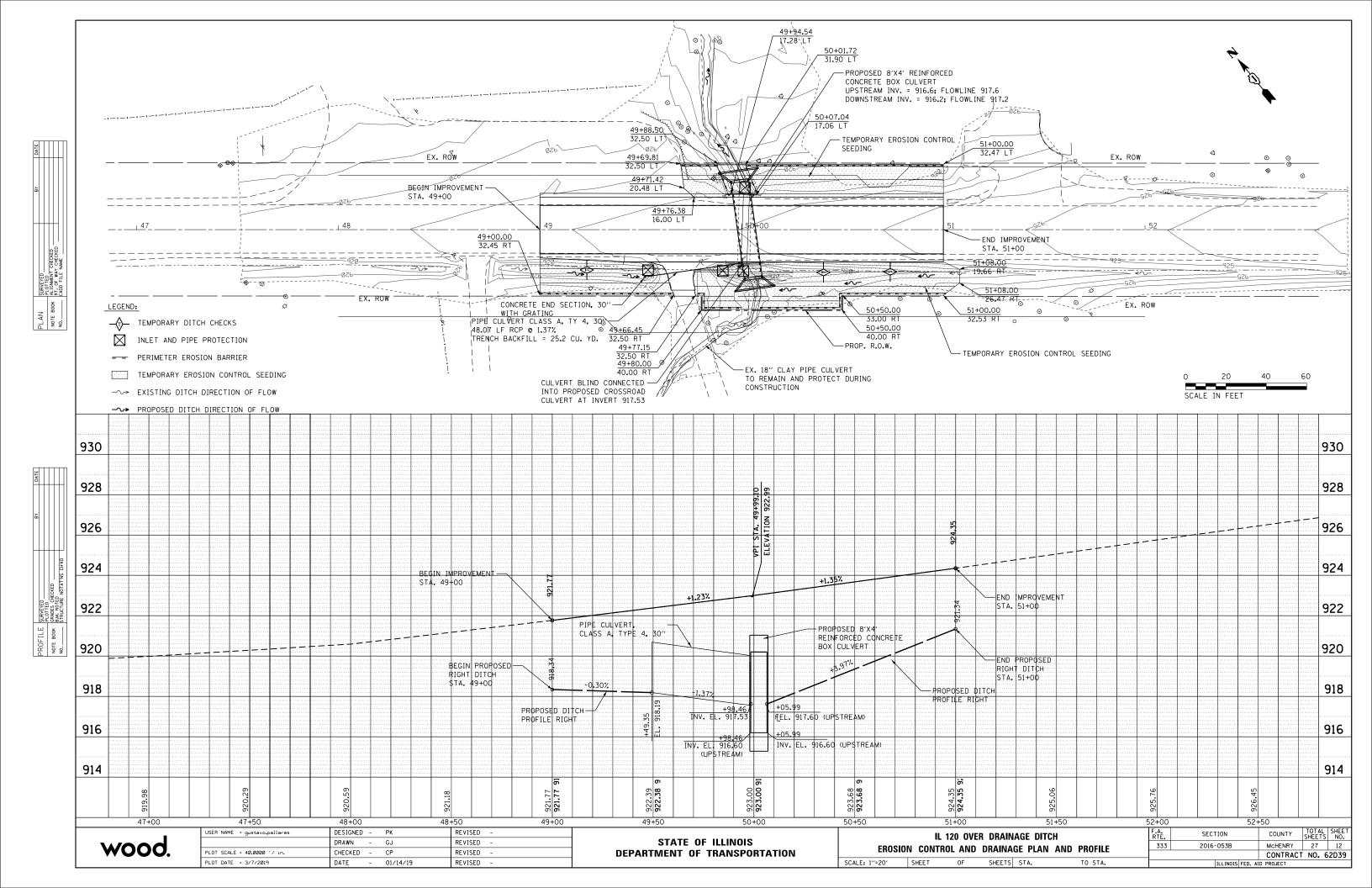
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	DRAWN	-	GJ	REVISED -
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PLOT DATE = 4/22/2019	DATE	-	01/14/19	REVISED -

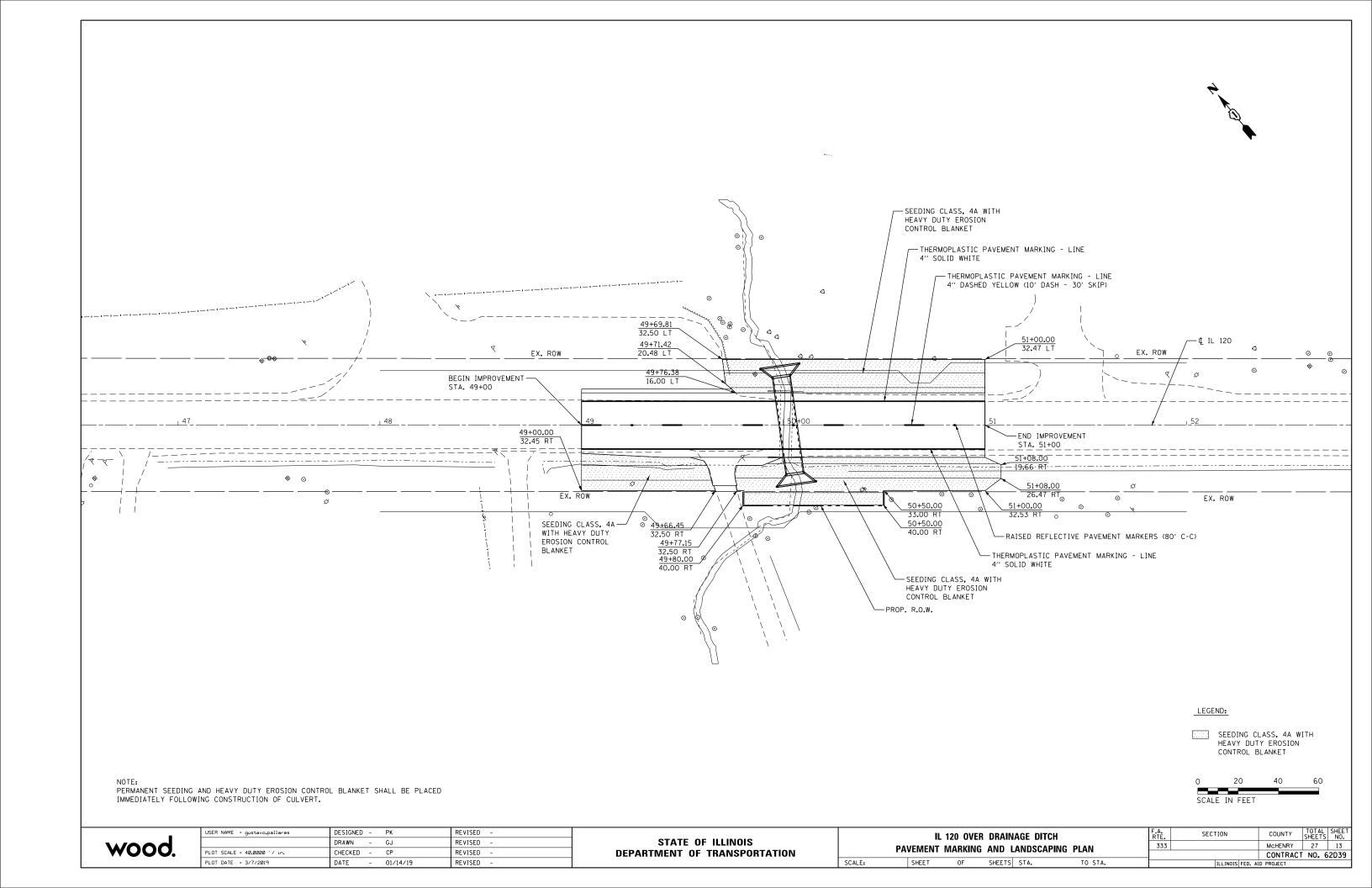
	IL 120 OVER DRAINAGE DITCH				F.A.P RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.	
SCHEDULE OF QUANTITIES				333	2016-053B		MCHENRY	27	8		
		JUILDULI	L 01 40	ANTITLE					CONTRACT	NO. 6	2D39
	SHEET	OF	SHEETS	STA.	TO STA.		ILL INOIS F	FED. AII	PROJECT		

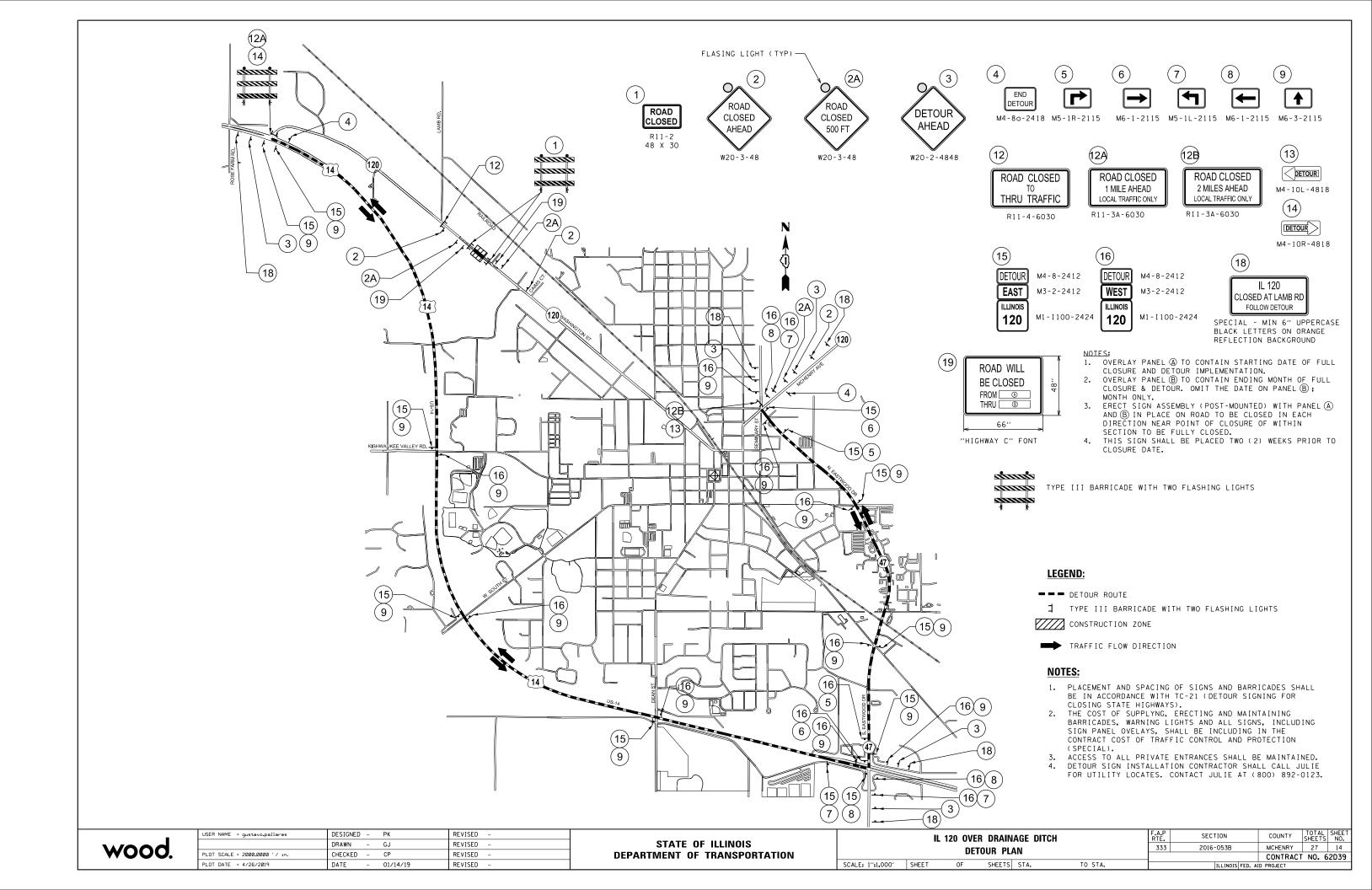


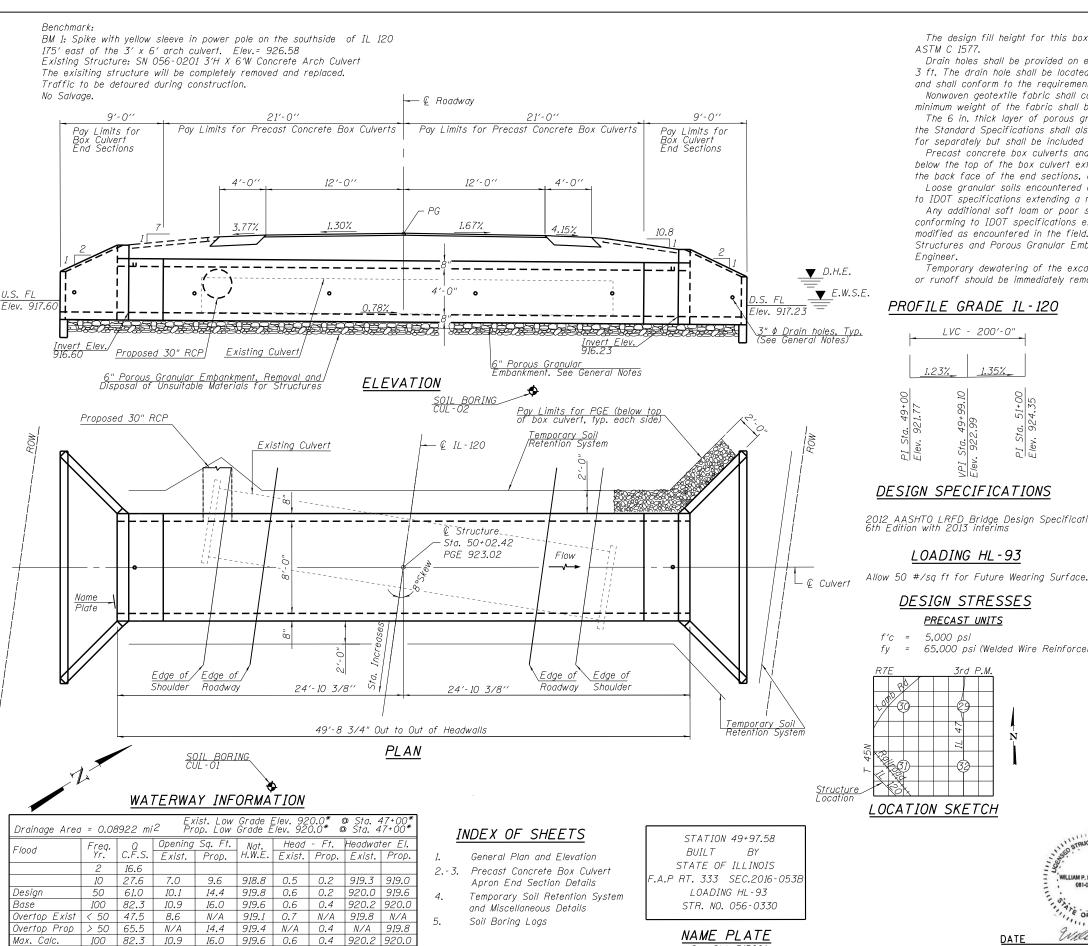












GENERAL NOTES

The design fill height for this box is 2 ft. The precast box culvert sections shall conform to the requirements of ASTM C 1577.

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.

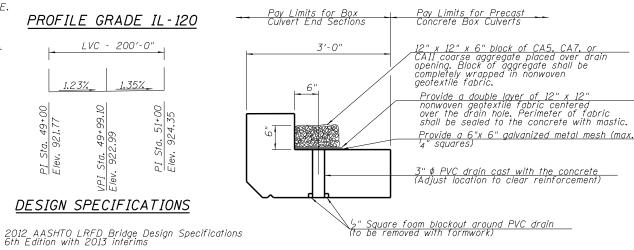
The 6 in. thick layer of porous granular material required for precast concrete box culverts, per Art. 540.06 of the Standard Specifications shall also apply to the end sections. Cost of the porous granular material will not be paid for separately but shall be included in the unit price of the work for which it is required.

Precast concrete box culverts and box culvert end sections shall be backfilled with Porous Granular Embankment below the top of the box culvert extending to a vertical plane 2 ft from the exterior sides of the culvert, 2 ft from the back face of the end sections, and not closer than 2 ft from the face of embankment.

Loose granular soils encountered at the base of the culvert should be replaced with compacted aggregate conforming to IDOT specifications extending a minimum of 2 ft beyond each side of the culvert and to a depth of 12".

Any additional soft loam or poor soils encountered during construction should be replaced with compacted aggregate conforming to IDOT specifications extending a minimum of 2 ft beyond each side of the culvert. Undercut limits may be modified as encountered in the field. This work shall be paid for as Removal and Disposal of Unsuitable Materials for Structures and Porous Granular Embankment. If the depth of poor soils is greater than 2', contact the Geotechnical

Temporary dewatering of the excavations will be required. Any water that accumulates in open excavations by seepage or runoff should be immediately removed according to Article 540.04 of the Standard Specifications.



DRAIN DETAIL

(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.)

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu. Yd.	70
Removal of Existing Structures	Each	1
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	37
Cofferdam (Type 1) (In-stream/Wetland Work)	Each	1
Name Plates	Each	1
Temporary Soil Retention System	Sq. Ft.	1034
Box Culvert End Sections, Culvert No. 1	Each	2
Precast Concrete Box Culverts, 8 x 4	Foot	42
Geocomposite Wall Drain	Sq. Yd.	63
Membrane Waterproofing System for Buried Structures	Sq. Yd.	63

GENERAL PLAN AND ELEVATION IL RTE. 120 OVER DITCH F.A.P. RTE. 333 SEC. 2016-053B MCHENRY COUNTY STATION 49+97.58 S.N. 056 - 0330

Willes Toland 4/20/19

See Std. 515001

LICENSE EXPIRES ON 11/30/2020

PROFILE GRADE IL-120

LVC - 200'-0"

99.10

LOADING HL-93

DESIGN STRESSES PRECAST UNITS

65,000 psi (Welded Wire Reinforcement)

5,000 psi

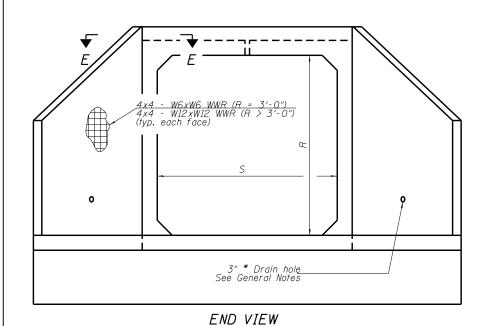
USER NAME =	DESIGNED -	BJD	REVISED	
	CHECKED -	MGH	REVISED	
PLOT SCALE =	DRAWN -	BJD	REVISED	
PLOT DATE =	CHECKED -	WPM	REVISED	- <u> </u>

Actual overtopping occurs approximately 314 ft northwest of the culvert (Station 46+86) where a private entrance meets Illinois Route 120's edge of shoulder at elevation 919.8

> STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

GENERAL PLAN AND ELEVATION STRUCTURE NO. 056-0330 333 SHEET 1 OF 5 SHEETS

SECTION COUNTY 2016-053B MCHENRY 27 15 CONTRACT NO. 62D39



<u>Culvert Ties</u> (typ.) Ts **r▶** B **₽** B __ 4x4 - W6xW6 WWR (Tb = 5") 4x4 - W12xW12 WWR (Tb > 5") (typ. top and bottom) See Section D-D 1'-0"

PLAN

SCB-AES 2-17-2017

USER NAME = REVISED DESIGNED - BJD CHECKED - MGH REVISED Wood BJD REVISED PLOT DATE = CHECKED -REVISED WPM

See General Notes

regarding culvert ties.

SECTION A-A

6'-0" min. (R = 3'-0")

10'-0" min. (R > 3'-0")

GENERAL NOTES

Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. End sections will be paid for at the contract unit price per each for Box Culvert End Sections.

The Contractor may furnish the end section as a single precast concrete piece or construct the end section in the field using cast-in-place (CIP) construction. For CIP construction, the bottom slab thickness shall be ncreased by 2" and the clear cover to the bottom mat of reinforcement shall be increased to 3".

Box section dimensions, materials, and reinforcement details for Box Culvert End Sections shall be according to the requirements for 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.

The number of culvert ties shall be sufficient to engage the minimum length of culvert barrel shown within the pay limits for Precast Concrete Box Culverts and will be dependent upon the length of box culvert segments furnished by the Contractor. Culvert ties are not required for box culverts having a rise (R) less than or equal to 3 ft and a span (S) greater than or equal to 10 ft.

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 unit price for Box Culvert End Sections of the culvert

Shop drawings that detail slab thickness and reinforcement layout for the Box Culvert End Sections shall be provided to the Engineer for review and approval. Reinforcement bars not detailed herein shall be detailed with a clear distance at the end of the reinforcement not less than ${\rlap/}\!\!/_2$ " nor more than 2". For the precast option, it shall be the Contractor's responsibility for determining a method of handling and a construction procedure shall be included on the shop drawings. The Contractor shall determine and detail in the shop drawings any necessary strengthening or stiffening provisions necessary to handle the precast segment. Any required modifications shall be at no extra charge.

The Contractor may use reinforcement bars in lieu of welded wire reinforcement (WWR). Reinforcement bars shall be limited to the sizes of #3 through #5 bars, a maximum spacing of the lesser of 8" or the member thickness, and shall result in an area of reinforcement equal to or greater than that provided by the WWR. Minimum lap lengths detailed herein are applicable to WWR and reinforcement bars.

Reinforcement (circumferential and longitudinal) in the culvert barrel portion of the end section being lapped with reinforcement from the wingwalls or bottom slab of the end section shall not be less than that required by ASTM C 1577 for the design fill height or the reinforcement detailed for the end section, whichever is greater.

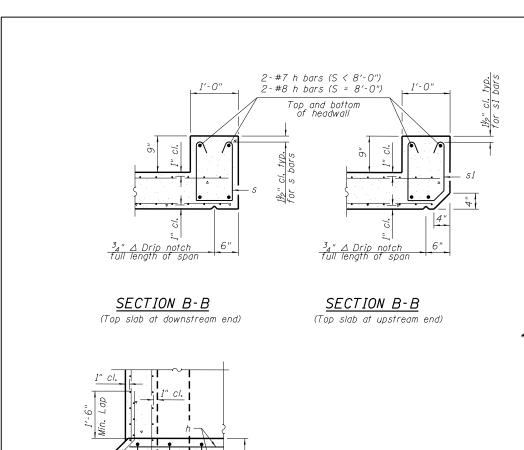
One drain hole shall be provided in each wingwall for end sections of box culverts having an opening with a clear rise greater than 3 ft. The drain hole shall be located within the lower 1/3 of the clear rise of the box culvert and shall conform to the requirements of Article 503.11 of the Standard Specifications.

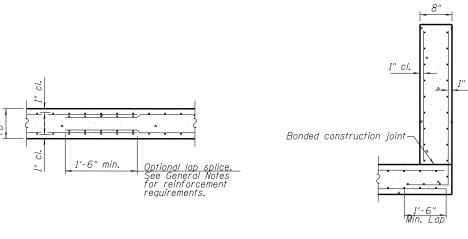
APRON END SECTION DIMENSIONS

(S)	ert Ties equired Yes
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3'-0" 3'-0" 7" 6" 4" 4'-4" 2'-8" 3'-10\frac{9}{6}" 5'-6" 12-4\frac{5}{6}" 3.7 3'-0" 3'-0" 4" 4" 4'-1" 2'-7" 3'-7\frac{9}{6}" 5'-6" 12-4\frac{5}{6}" 3.7 3'-0" 3'-0" 4" 4" 4'-1" 2'-7" 3'-7\frac{9}{6}" 5'-2" 11'-11" 3.1 4'-0" 2'-0" 7.5" 6" 5" 3'-4\frac{1}{6}" 2'-2\frac{1}{6}" 2'-1\frac{1}{6}" 3'-1\frac{1}{6}" 5'-2" 11'-11" 3.1 4'-0" 2'-0" 5" 5" 5" 3'-2\frac{1}{6}" 2'-2\frac{1}{6}" 2'-1\frac{1}{6}" 4'-2" 11'-2\frac{1}{6}" 3.3 4'-0" 3'-0" 7.5" 6" 5" 4'-2\frac{1}{6}" 2'-3\frac{1}{6}" 3'-11\frac{1}{6}" 5'-7" 13'-2\frac{1}{6}" 4.2 4'-0" 3'-0" 5" 5" 5" 4'-2\frac{1}{6}" 3'-2\frac{1}{6}" 4'-11\frac{1}{6}" 5'-7" 13'-2\frac{1}{6}" 3.7 4'-0" 3'-0" 5" 5" 5" 5'-4\frac{1}{6}" 3'-2\frac{1}{6}" 4'-11\frac{1}{6}" 7'-0" 15'-8\frac{1}{6}" 3.7 4'-0" 3'-0" 5" 5" 5'-5'-2\frac{1}{6}" 3'-2\frac{1}{6}" 4'-1\frac{1}{6}" 7'-0" 15'-2\frac{1}{6}" 3.7 4'-0" 4'-0" 5" 5" 5'-2\frac{1}{6}" 3'-5" 2'-3" 2'-1\frac{1}{6}" 4'-2" 12'-10" 3.9 5'-0" 2'-0" 6" 6" 6" 3'-5" 2'-3" 2'-1\frac{1}{6}" 4'-0" 12'-7\frac{1}{4}" 3.5 5'-0" 2'-0" 6" 6" 6" 4'-5" 2'-9" 3'-11\frac{1}{6}" 5'-7" 14'-10\frac{1}{6}" 4.9 5'-0" 3'-0" 6" 6" 6" 4'-3" 2'-2" 2'-10" 4'-0" 12'-7\frac{1}{4}" 3.5 5'-0" 3'-0" 8" 7" 6" 5'-5" 3'-3" 3'-2\frac{1}{6}" 4'-10\frac{1}{6}" 4'-0" 12'-7\frac{1}{4}" 4.9 5'-0" 3'-0" 8" 7" 6" 5'-5" 3'-3" 3'-2\frac{1}{6}" 4'-9\frac{1}{4}" 4'-9\frac^	Yes
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$8'-0"$ $2'-0"$ $8"$ $8"$ $8"$ $3'-5"$ $2'-3"$ $2'-11\frac{7}{8}"$ $4'-2"$ $16'-2"$ 5.3 $8'-0"$ $3'-0"$ $8"$ $8"$ $8"$ $4'-5"$ $2'-9"$ $3'-11\frac{7}{8}"$ $5'-7"$ $18'-2\frac{1}{8}"$ 6.5 $8'-0"$ $4'-0"$ $8"$ $8"$ $8"$ $5'-5"$ $3'-3"$ $4'-11\frac{7}{8}"$ $7'-0"$ $20'-2\frac{1}{8}"$ 7.8 $8'-0"$ $5'-0"$ $8"$ $8"$ $8"$ $6'-5"$ $3'-9"$ $5'-11\frac{7}{8}"$ $8'-5"$ $22'-2\frac{1}{8}"$ 9.3	
8'-0" 3'-0" 8" 8" 8" 4'-5" 2'-9" 3'-11\%" 5'-7" 18'-2\%" 6.5 8'-0" 4'-0" 8" 8" 8" 5'-5" 3'-3" 4'-11\%" 7'-0" 20'-2\%" 7.8 8'-0" 5'-0" 8" 8" 8" 6'-5" 3'-9" 5'-11\%" 8'-5" 22'-2\%" 9.3	Yes
8'-0" 4'-0" 8" 8" 8" 5'-5" 3'-3" 4'-11¾" 7'-0" 20'-2½" 7.8 8'-0" 5'-0" 8" 8" 8" 6'-5" 3'-9" 5'-11¾" 8'-5" 22'-2½" 9.3	Yes
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1407 011 157 011 1 1011 1 1011 1 1011 1 107 1 1 1 1	No No Yes Yes Yes No No Yes
	No No Yes Yes Yes No No Yes Yes Yes
	No No Yes Yes Yes No No Yes

Two sets of apron end section dimensions are shown above for some box culvert sizes due to the top and bottom slabs having different thicknesses per ASTM C 1577 for design fill heights less than 2 ft.

SECTION COUNTY PRECAST CONCRETE BOX CULVERT APRON END 333 2016-053B MCHENRY 27 16 SECTION DETAILS - STRUCTURE NO. 056-0330 CONTRACT NO. 62D39 SHEET 2 OF 5 SHEETS





SECTION C-C

SECTION D-D

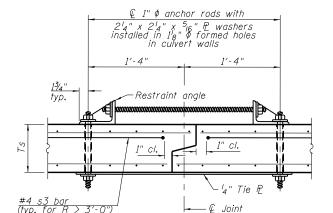
#4 s2 bars at 1'-0" cts., max.

Fill with non-shrink grout

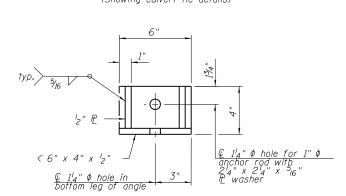
#4 v1 bars drilled and epoxy grouted into toewall in 9" min. deep holes at 1'-6" cts., max.

SECTION B-B

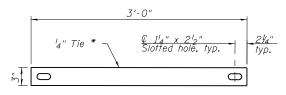
***This dimension shall be increased by 2" for CIP construction.



SECTION F-F (Showing culvert tie details)



RESTRAINT ANGLE DETAIL



TIE PLATE DETAIL

TOEWALL CONSTRUCTION SEQUENCE

1'-0"

- 1. Perform excavation and construct toewall.
- 2. Backfill accordingly 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 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.

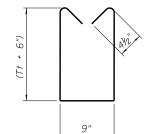
COUNTY

MCHENRY 27 17

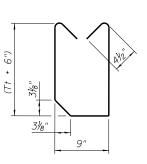
CONTRACT NO. 62D39

Notes:

1" ϕ anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for the 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, $2\frac{1}{4}x2\frac{1}{4}x^{5}$ 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 $\frac{1}{2}$ 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.



BAR s



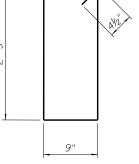
BAR s1

#4 s or s1 bars at spacing = Tt

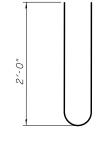
(Spacing need not be less than 8")

SECTION E-E





BAR s2



BAR s3

SCB-AES

2-17-2017

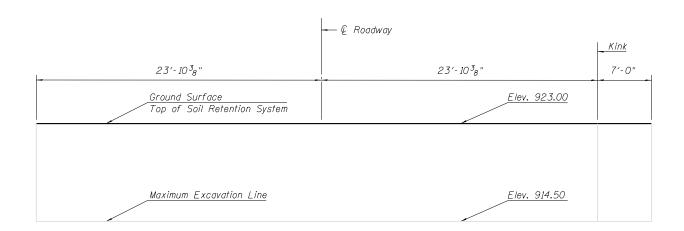
wood

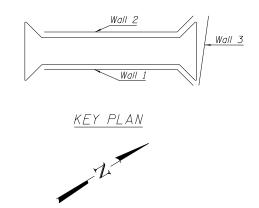
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	CHECKED -	MGH	REVISED	=
PLOT SCALE =	DRAWN -	BJD	REVISED	=
PLOT DATE =	CHECKED -	WPM	REVISED	=

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

(Sheet 2 of 2) SECTION PRECAST CONCRETE BOX CULVERT APRON END 333 2016-053B SECTION DETAILS - STRUCTURE NO. 056-0330 SHEET 3 OF 5 SHEETS

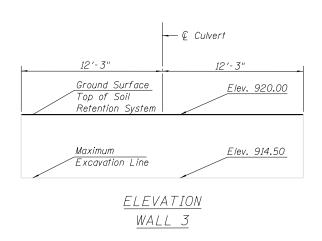
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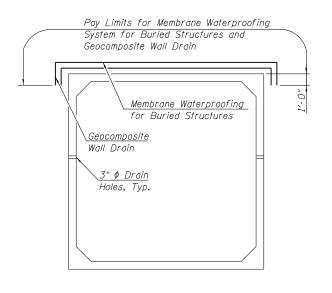




ELEVATION WALL 1

(Wall 2 West side of culvert)





Note: Geocomposite Wall Drain shall be according to Section 591 of the Standard Specifications, except that concrete nails shall not be used in areas where it overlaps Membrane Waterproofing System for Buried Structures.

MEMBRANE WATERPROOFING SYSTEM
AND GEOCOMPOSITE WALL DRAIN

wood.

USER NAME =	DESIGNED - BJD	REVISED
	CHECKED - MGH	REVISED
PLOT SCALE =	DRAWN - BJD	REVISED
PLOT DATE =	CHECKED - WPM	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY SOIL RETENTION SYSTEM AND RICE SECTION COUNTY TOTAL SHEET'S NO. 333 2016-053B MCHANY 27 18

SHEET 4 0F 5 SHEETS SHEETS SHEETS SHEETS SHEETS NO. 62D39

Wang

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

BORING LOG CUL-01

WEI Job No.: 199-02-05

AES Services, Inc. Illinois Route 120 over Unnamed Ditch Project McHenry County, Illinois Location

Datum: NAVD88 Elevation: 923.32 ft North: 2062837.80 ft East: 947538.99 ft Station: 50+23.81 Offset: 8.55 RT

Profile	SOIL AND ROCK DESCRIPTION	(ft) Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCI		Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	922.95-inch thick, black SILTY CLAY 922.3	/=	1	6 2 2	0.41 B	14			%Clay	=48.1 =17.5 -4 (3) -		11	3 5 5	1.15 B	14
	FILL RDR 2 L _L (%)=50, P _L (%)=21 _{917.8} %Gravel=4.7	5	2	2 2 5	0.41 B	25				- 30_ -		12	4 6 6	0.82 B	13
	%Sand=34.8 %Silt=40.5 %Clay=20.0 A-7-6 (15)	Ā	3	8 5 4	NP	11				- - - -		13	5 6 10	1.39 B	13
	915.3Loose, brown, wet SANDY GRAVEL Medium stiff, pinkish brown, moist to wet CLAY LOAM to LOAM, little gravel		4	6 3 4	NA	12		888.3	ring terminated at 35.00	- - - 35		14	9 10 12	1.64 B	12
	RDR 2		5	4 4 7	0.74 B	13			ining terminated at 55.50	- - - -					
<i>∠</i> ;;;;;	910.3 Medium stiff to stiff, pinkish gray, moist to wet LOAM to SILTY LOAM, trace to little gravelRDR 21	5	6	3 6 7	1.48 B	12				- - - 40_	-				
			7	3 5 7	0.98 B	12				- - - -					
	2	0	8	3 5 5	0.98 B	13				- - 45_ -					
T 10/8/18			9	4 5 6	0.82 B	12				- - -					
J WANGENG.GDT	L _L (%)=21, P _L (%)=12 %Gravel=1.9 %Sand=32.52	5_	10	4 6 6	1.15 B	13				- - 50_	-				
5.GPJ	Begin Drilling 09-21-2018 Complete Drilling 06-21-2018 Drilling Contractor Wang Testing Services Drill Rig D50 TMR [78%]								WATE	R LEVE					
ğ ,									While Drilling	<u>¥</u>		• • • • •	5 ft		
									At Completion of Drilling	¥		18.0	00 ft		
Driller J&K Logger M. Ciapas Checked by C. Marin Drilling Method 3,25" HSA; boring backfilled upon completion								Time After Drilling Depth to Water	NA NA	••••					
Drilling Method 3.25". HSA; boring backfilled upon completion									The stratification lines repr	esent the app	oroxima may b	ate b	oundary dual	<u></u>	

wangeng@wangeng.com 1145 N MAin Street Lombard, IL 60148 Telephone: (630) 953-9928

Fax: (630) 953-9938

BORING LOG CUL-02

WEI Job No.: 199-02-05

AES Services, Inc. Client Illinois Route 120 over Unnamed Ditch Project McHenry County, Illinois Location

Elevation: 922.82 ft North: 2062876.18 ft East: 947520.89 ft Station: 49+85.68 Offset: 9.03 LT

Datum: NAVD88

SOIL AND ROCK SOIL AND ROCK DESCRIPTION DESCRIPTION 22.27-inch thick, ASPHALT --PAVEMENT--Brown, damp SANDY GRAVEL 3 4 10 0.82 12 Loose, brown, damp SANDY В 6 LOAM, to LOAM, some gravel --FILL----RDR 2-4 2 3 6 6 7 Medium stiff, brown and black 1.23 0.90 22 В CLAY LOAM, some gravel; damp В Boring terminated at 30.00 ft --FILL-Loose, brown, moist GRAVELLY SANDY LOAM; damp 4 2 NP 16 4 Loose brownand black, moist SANDY LOAM, trace gravel --RDR 2--12 Loose, pinkish brown, wet to saturated LOAM to SANDY В 3 LOAM, little to some gravel --RDR 2----L_L(%)=18, P_L(%)=12--0.49 10 --%Gravel=13.9--4 --%Sand=42.6----%Silt=34.5----%Clay=9.0----A-4 (0)--4 5 0.57 10 Medium stiff to stiff, pinkish 6 В brown and gray, moist to wet LOAM to SILTY LOAM, trace to little gravel 3 3 --RDR 2--0.74 13 5 --L_L(%)=19, P_L(%)=12--3 4 13 --%Gravel=4.9--0.74 --%Sand=31.4--20_ --%Silt=48.5----%Clay=15.2----A-4 (1) 3 4 0.74 13 В 0.82 13 **GENERAL NOTES WATER LEVEL DATA** 09-21-2018 06-21-2018 While Drilling 5.50 ft Complete Drilling Wang Testing Services Drill Rig D50 TMR [78%] At Completion of Drilling 28.00 ft **Drilling Contractor** Logger M. Ciapas Checked by C. Marin NA Time After Drilling

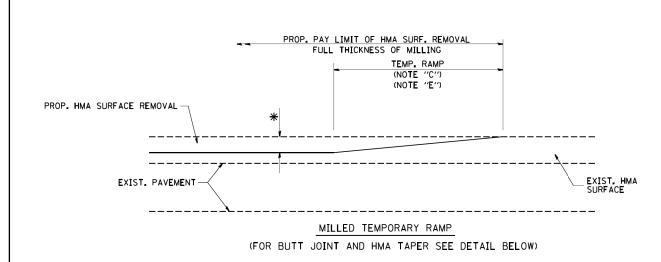
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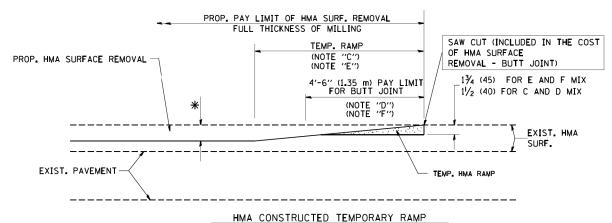
SECTION **SOIL BORING LOGS** MCHENRY 27 19 333 2016-053B STRUCTURE NO. 056-0330 CONTRACT NO. 62D39 SHEET 5 OF 5 SHEETS

Drilling Method 3.25" HSA; boring backfilled upon completion

NA $ar{m{\Lambda}}$ Depth to Water The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



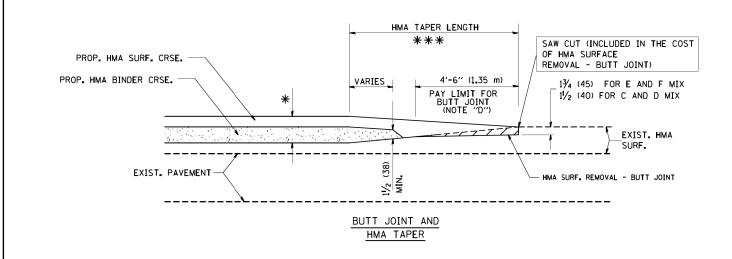
OPTION 1



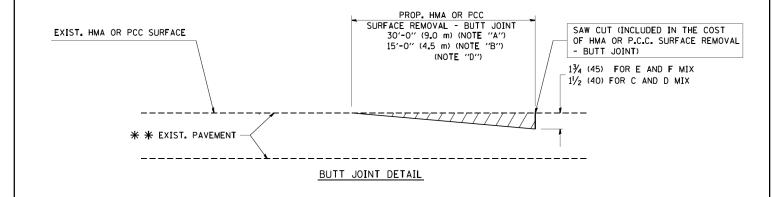
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

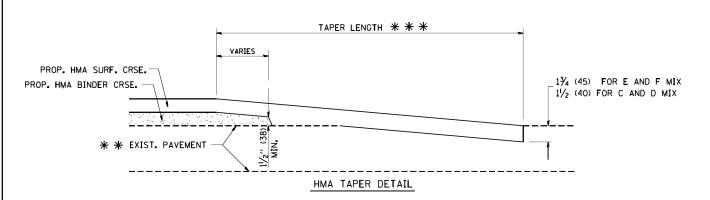
OPTION 2

TYPICAL TEMPORARY RAMP



TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING





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".

SCALE:

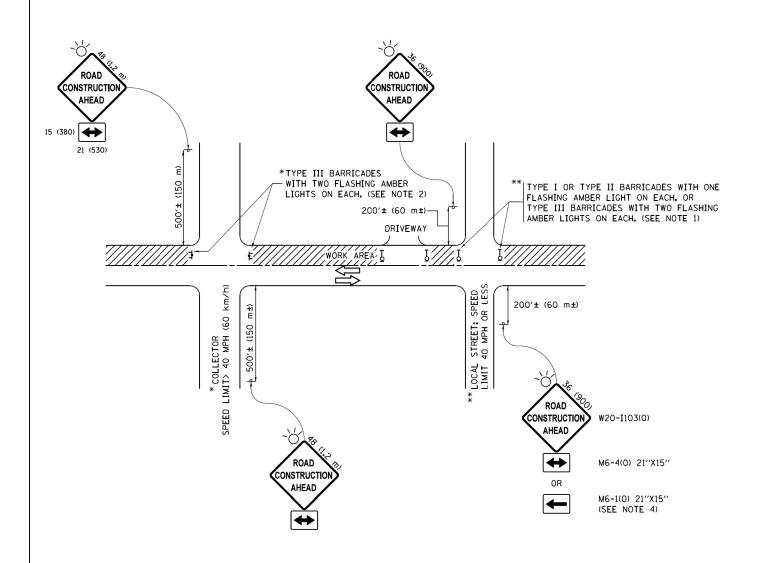
SHEET

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



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IL 120 OVER DRAINAGE DITCH DISTRICT ONE DETAILS		F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEE NO.			
			333	2016-053B	MCHENRY	27	20		
	DISTRICT UNE DETAILS						CONTRACT	NO. 6	52D39
T	OF	SHEETS	STA.	TO STA.		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:
 - a) 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.
 - b) 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.
- 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 48 \times 48 (1.2 m \times 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) 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.
- 3. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710)
- 4. 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).

SCALE:

- 5. 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.
- 6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE
- 7. 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.

COUNTY

MCHENRY 27 21

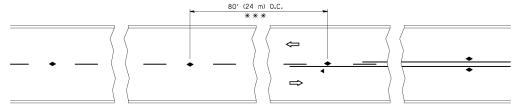
CONTRACT NO. 62D39



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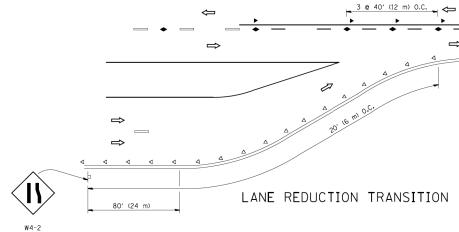
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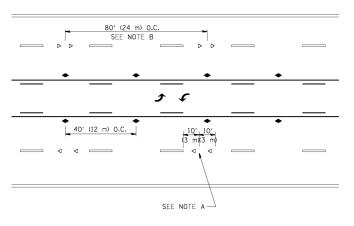
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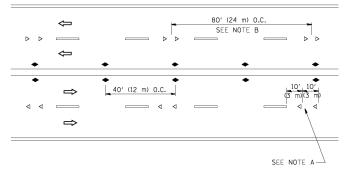
*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

TWO-LANE/TWO-WAY

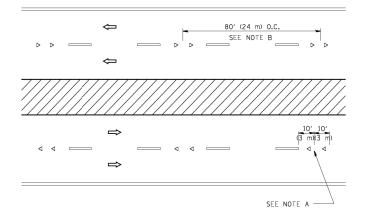




TWO-WAY LEFT TURN



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.
- MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

LANE MARKER NOTES

A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

SCALE:

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.

SYMBOLS

---- YELLOW STRIPE

── WHITE STRIP

- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

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

LEFT TURN

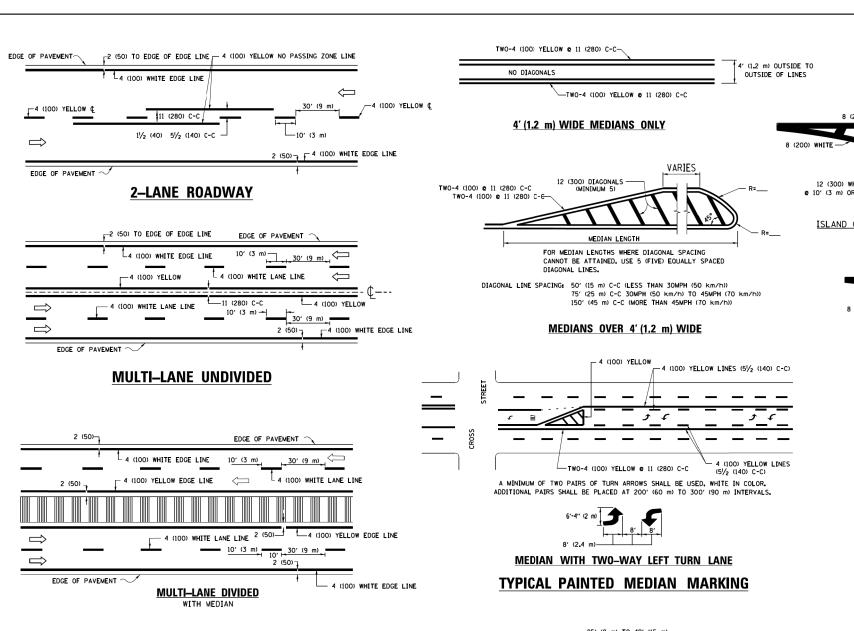
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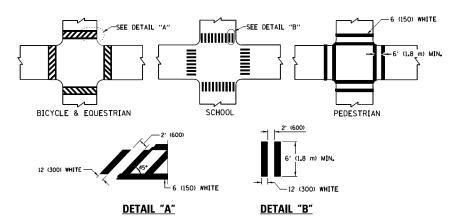
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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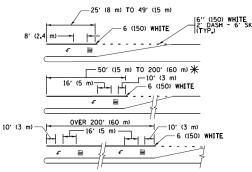


TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING

* MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES

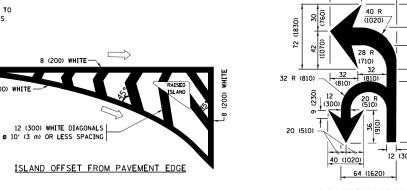


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. \P AREA = 15.6 SO. FT. (1.5 m²)

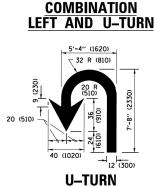
* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

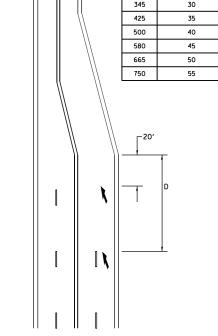
TYPICAL TURN LANE MARKING







6'-4" (1930)



D(FT)

SPEED LIMIT

LANE REDUCTION TRANSITION

* LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING /REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 © 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MEDIANS IN YELLOW
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH, 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 e 6 (150) 12 (300) e 45° 12 (300) e 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1,2 m) IN ADVANCE OF AND PARALLEL TO CROSSMALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4,5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF1 "R"23.6 SO. FT. (0.33 m²) EACH "X"254.0 SO. FT. (5.0 m²)
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS > 8')	12 (300) e 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (0VER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

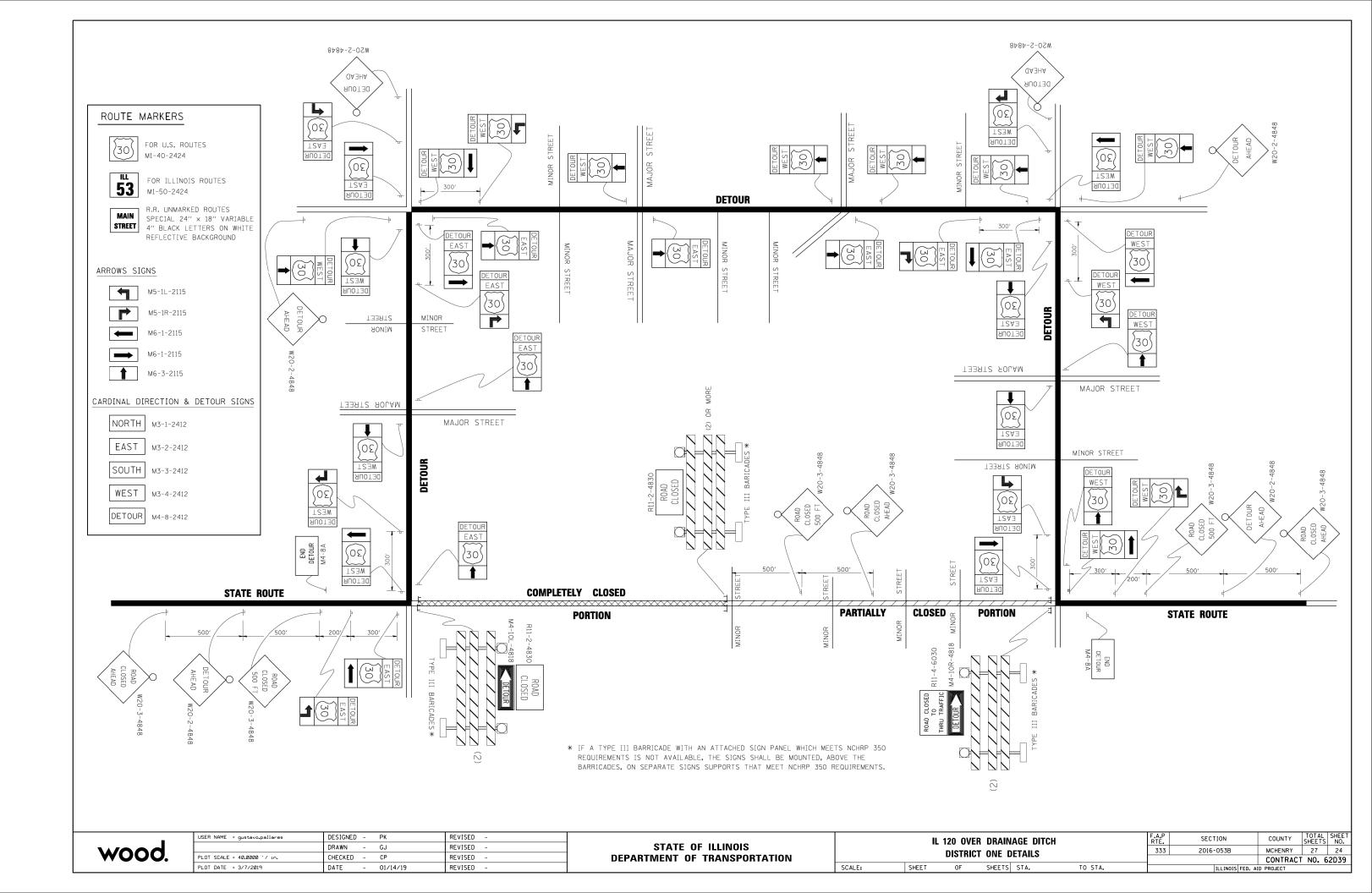
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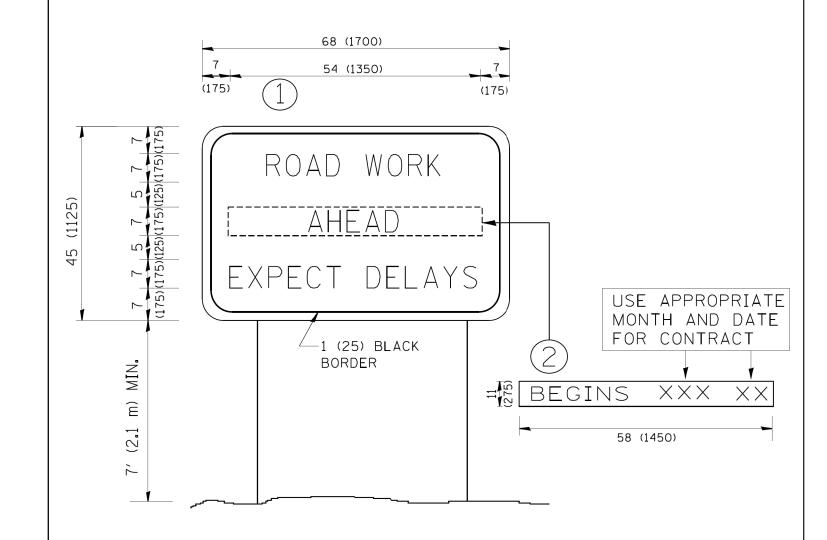
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	IL 120 OVER DRAINAGE DITCH				F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
DISTRICT ONE DETAILS			333	2016-053B	MCHENRY	27	23			
	DISTRICT ONE DETAILS					CONTRACT NO. 62D				2D39
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NOTES:

- 1. USE BLACK LETTERING ON ORANGE BACKGROUND.
- 2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
- 3. ERECT SIGN () WITH INSTALLED PANEL (2) ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
- 4. REMOVE PANEL 2 SOON AFTER THE START OF CONSTRUCTION.
- 5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
- 6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
- 7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

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



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STATE OF ILLINOIS				
DEPARTMENT	OF TRANSPORTA	TION		

IL 120 OVER DRAINAGE DITCH								
DISTRICT ONE DETAILS								
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F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEE NO.
333	2016-053B	MCHENRY	27	25
		CONTRACT	NO. 6	2D39
	TILLINOIS FED. A	D PROJECT		

