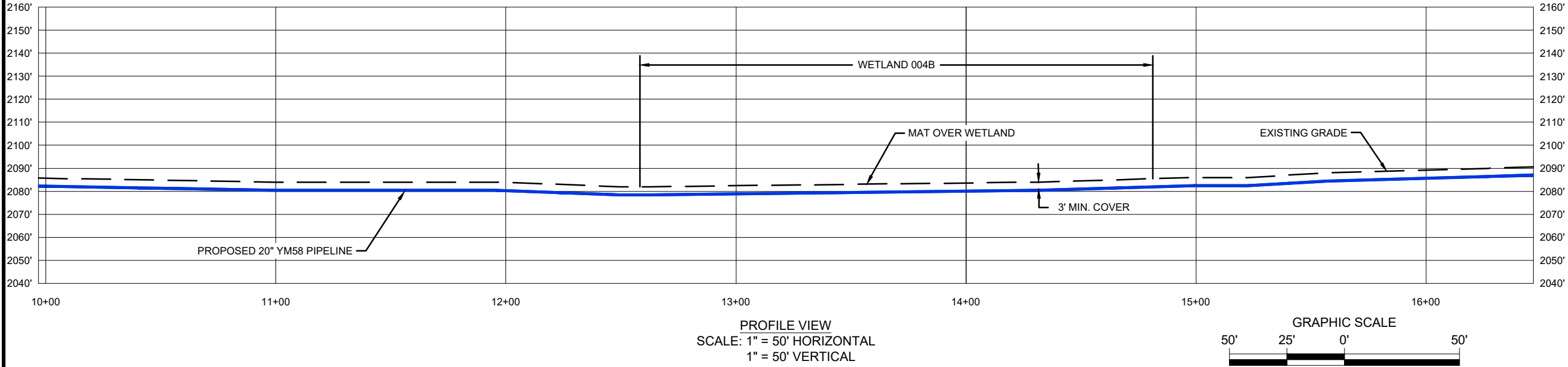
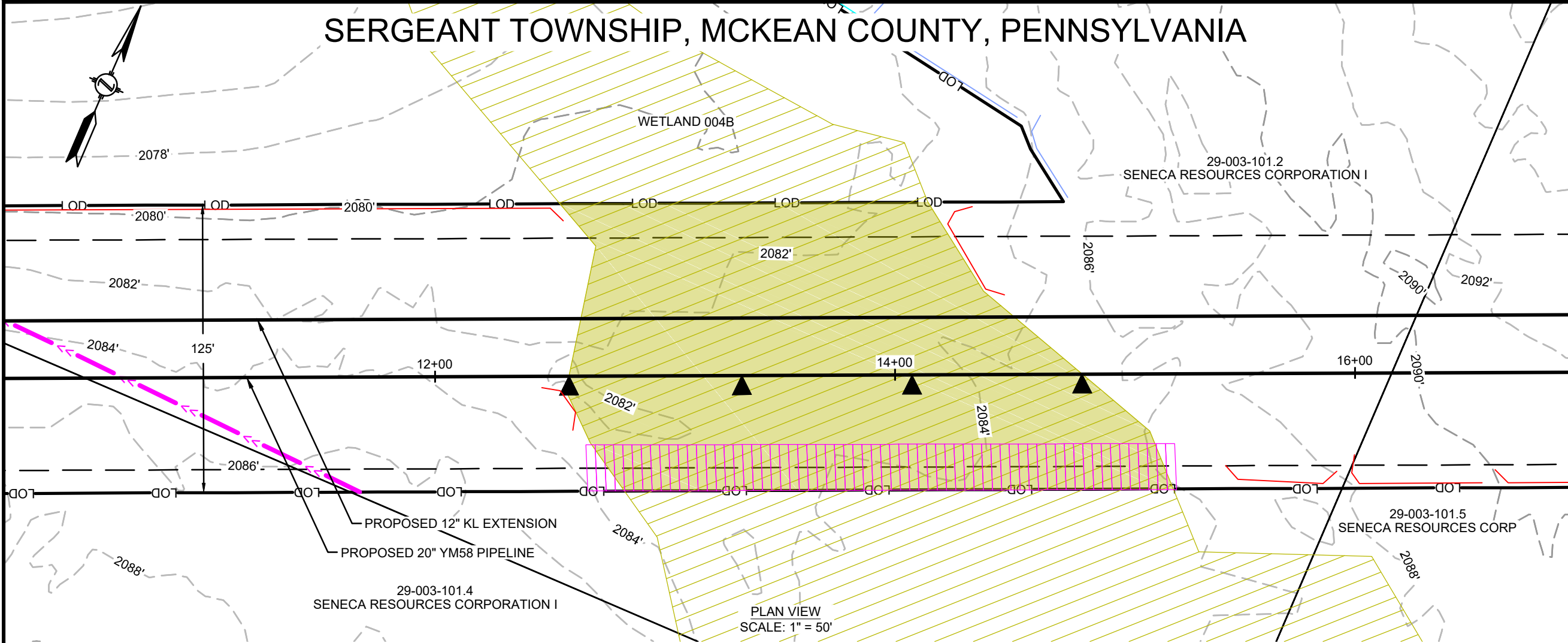


SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA

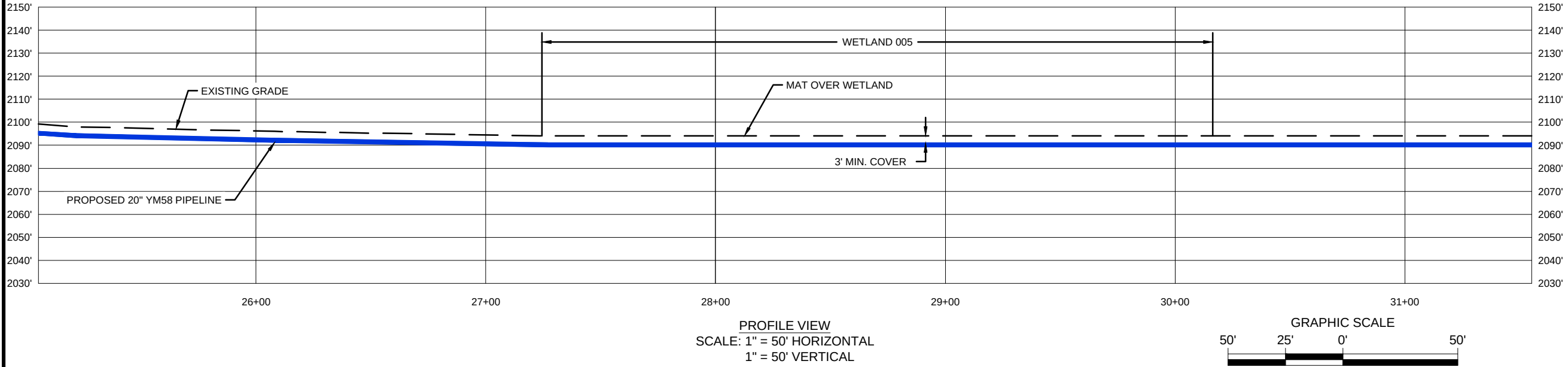
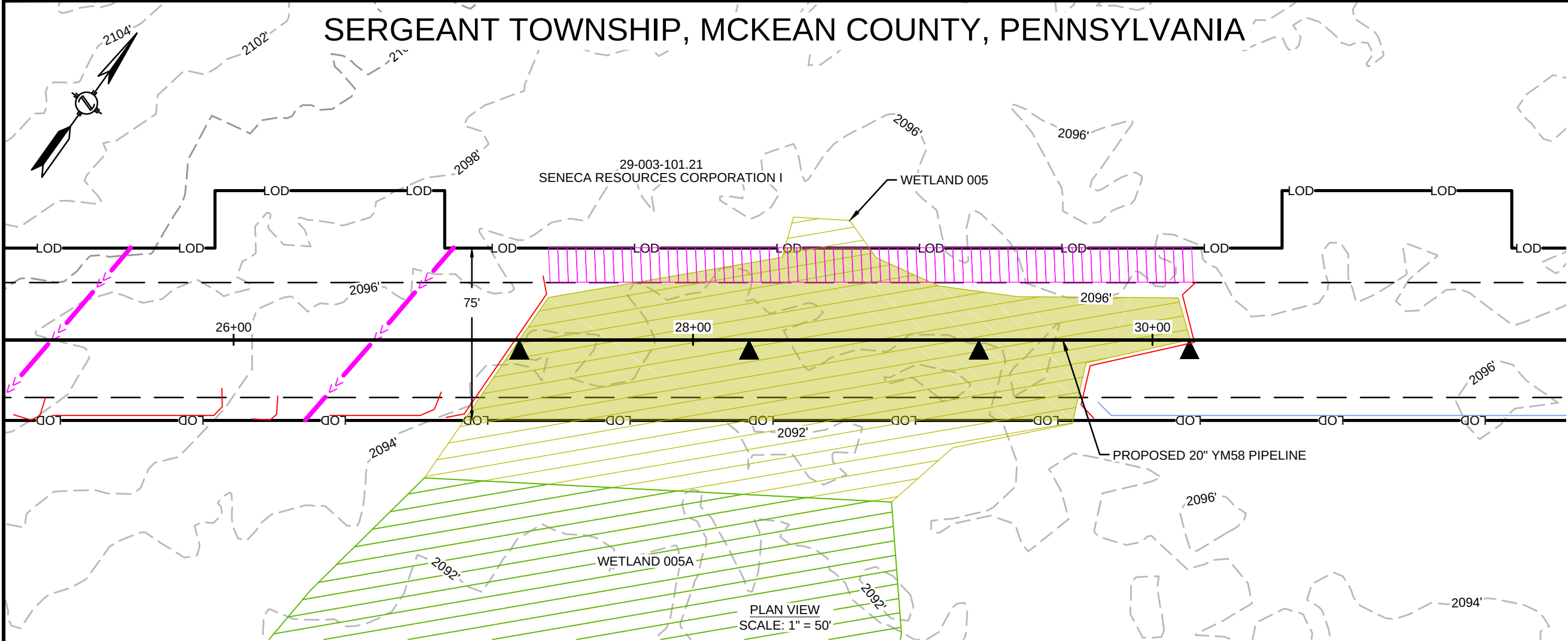


FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 004B	WETLAND	0.571	-	-		0.013	-	-	OPEN CUT	MAT BRIDGE OR EQUIVALENT

REVISIONS						APPROVALS		PREPARED FOR:	PREPARED BY:	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 0.3		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019		 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	SCALE		
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE			DRAWING NO.		
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD	ENG. APPROVAL	DATE			REVISION		
						MJD (MM)	07/2020			1" = 50'		
						P.M. APPROVAL	DATE			WSS-MCK-ML-001		
										C		

12/16/2020 2:01 PM, HECTOR MORALES
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SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 005	WETLAND	0.370	-	-		0.011	-	-	OPEN CUT	MAT BRIDGE OR EQUIVALENT

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:
 

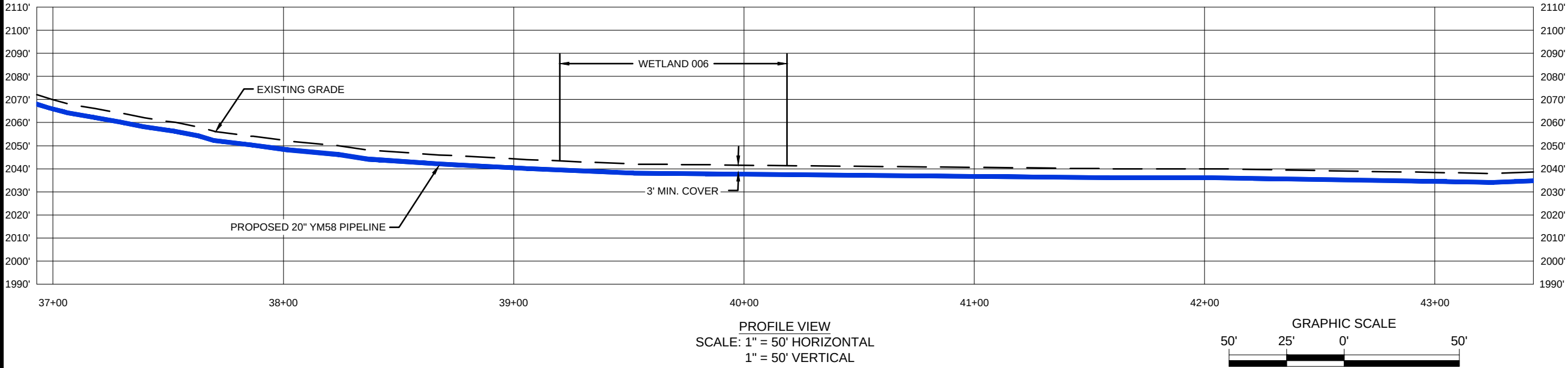
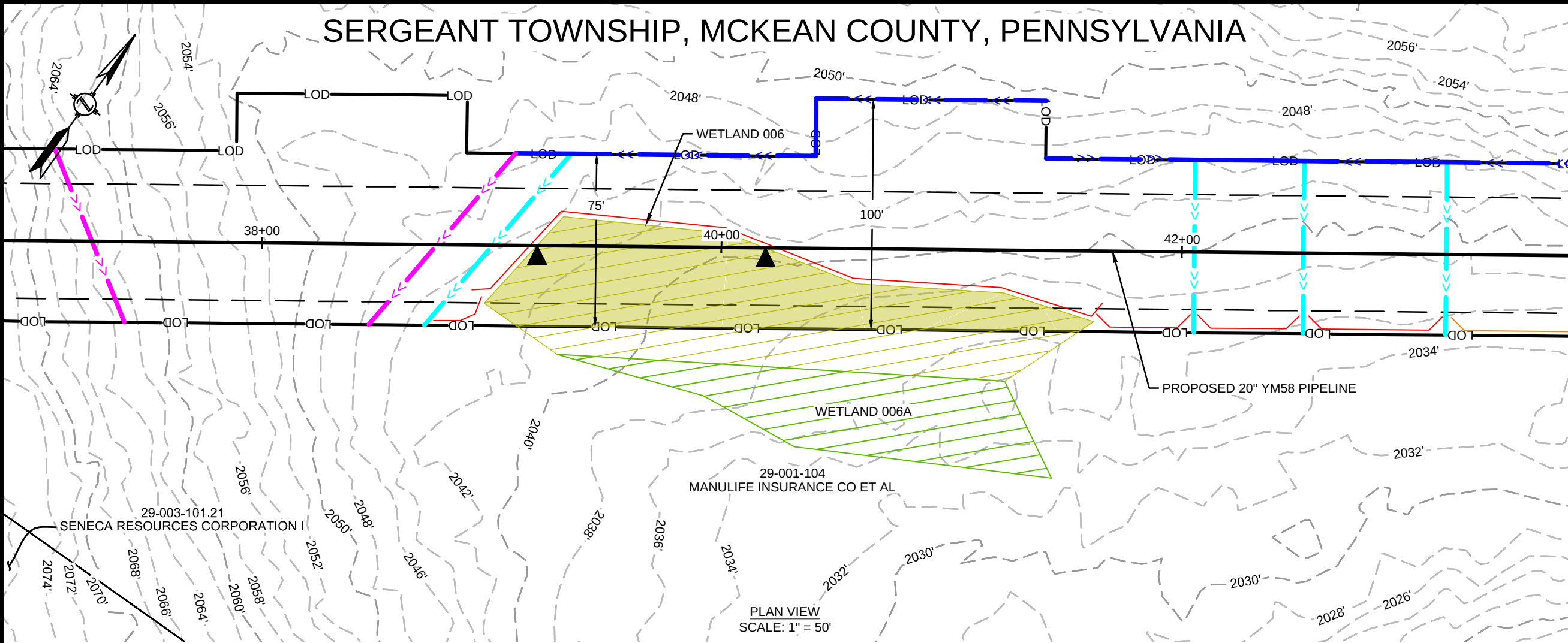
PREPARED BY:



111 WOOD AVENUE
 SOUTH ISELIN, NJ 08830
 UNITED STATES
 973-379-3400
 INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 0.5		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-002	B

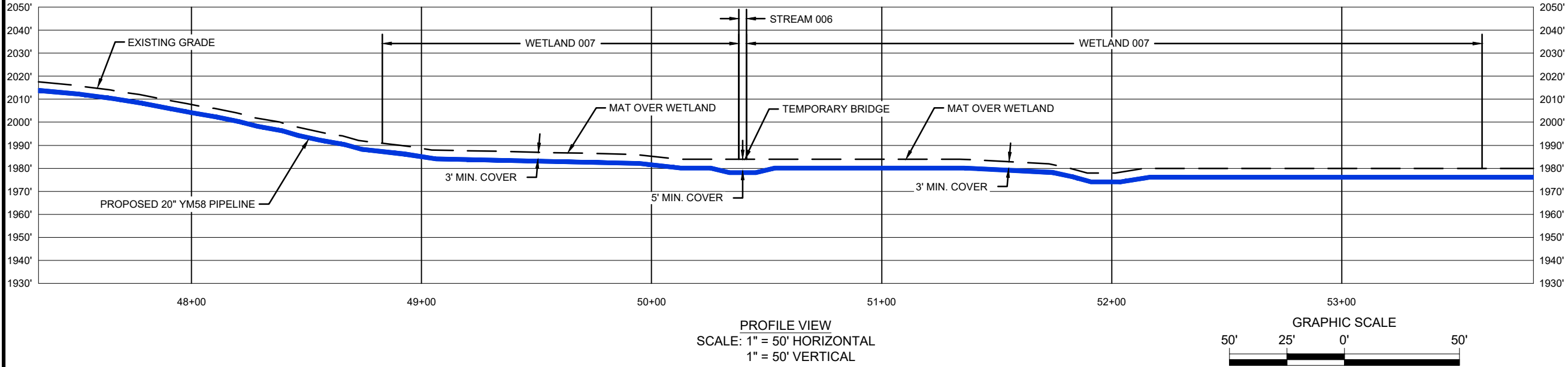
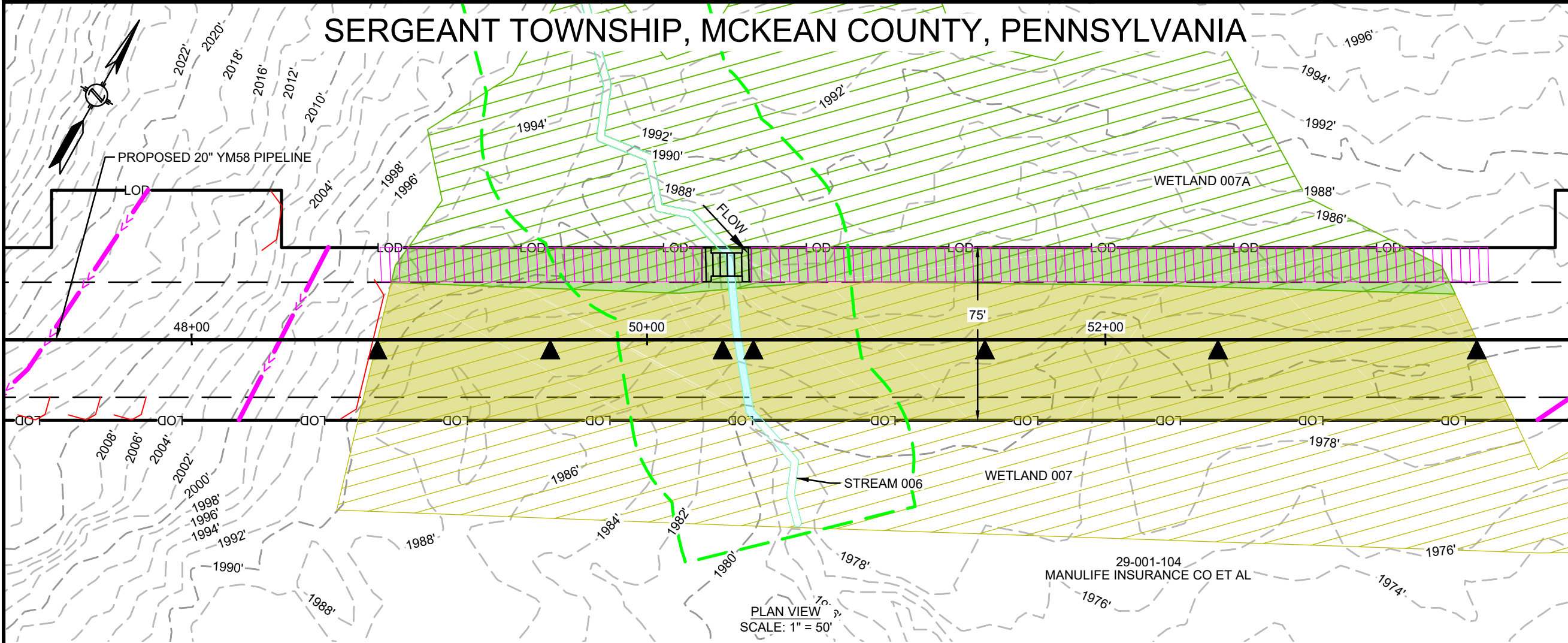
SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
		0.165	-	-		0.004	-	-		
WETLAND 006	WETLAND								OPEN CUT	N/A

REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY:  111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 0.8		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019					
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE					
						KEK (MM)	07/2019					
						ENG. APPROVAL	DATE					
						MJD (MM)	07/2019					
						P.M. APPROVAL	DATE					

SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)		PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WETLAND	WATERCOURSE CHANNEL		
WETLAND 007	WETLAND	0.799	-	0.023	-	OPEN CUT	N/A
WETLAND 007A	WETLAND	0.176	-	-	-	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT
STREAM 006	WATERBODY	-	0.006	-	<0.001	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT

NO.

DATE

DESCRIPTION

DRAWN

CHECK

APPROVAL

REVISIONS

A

10/2019

ISSUED FOR PADEP PERMIT

B

09/2020

REVISED FOR PADEP

C

12/2020

REVISED FOR PADEP

DRAWN BY

DATE

HM (MM)

07/2019

CHECKED BY

DATE

KEK (MM)

07/2019

ENG. APPROVAL

DATE

MJD (MM)

07/2019

P.M. APPROVAL

DATE

APPROVALS

APPROVED

DATE

APPROVED

DATE

PREPARED FOR:

PREPARED BY:

M

M

MOTT MACDONALD

111 WOOD AVENUE

SOUTH ISELIN, NJ 08830

UNITED STATES

973-379-3400

INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT

WETLAND & STREAM CROSSING PLAN

PROPOSED 20" YM58 PIPELINE

SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA

M.P. 1.0

SCALE

DRAWING NO.

REVISION

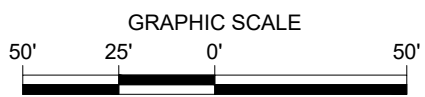
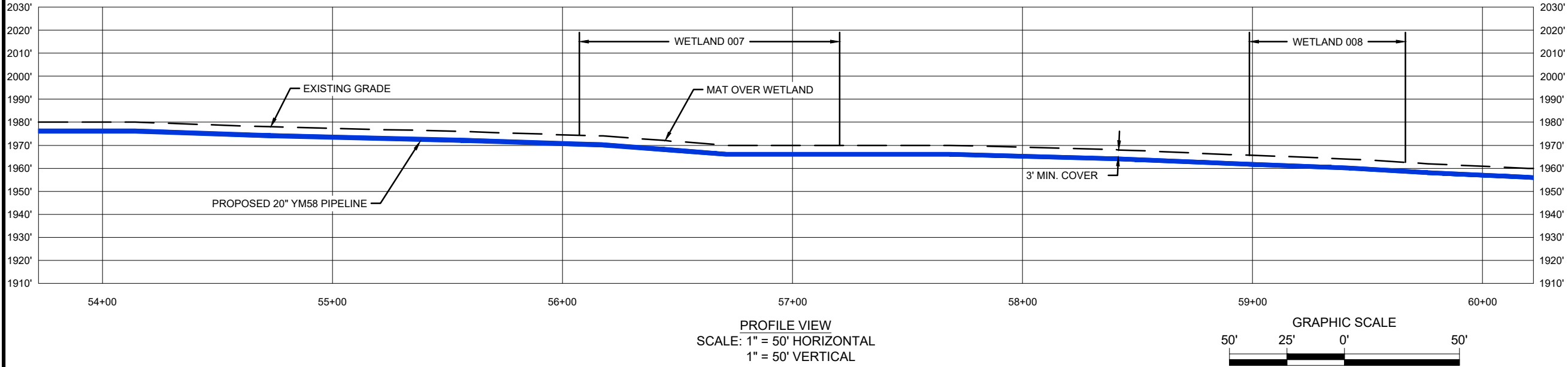
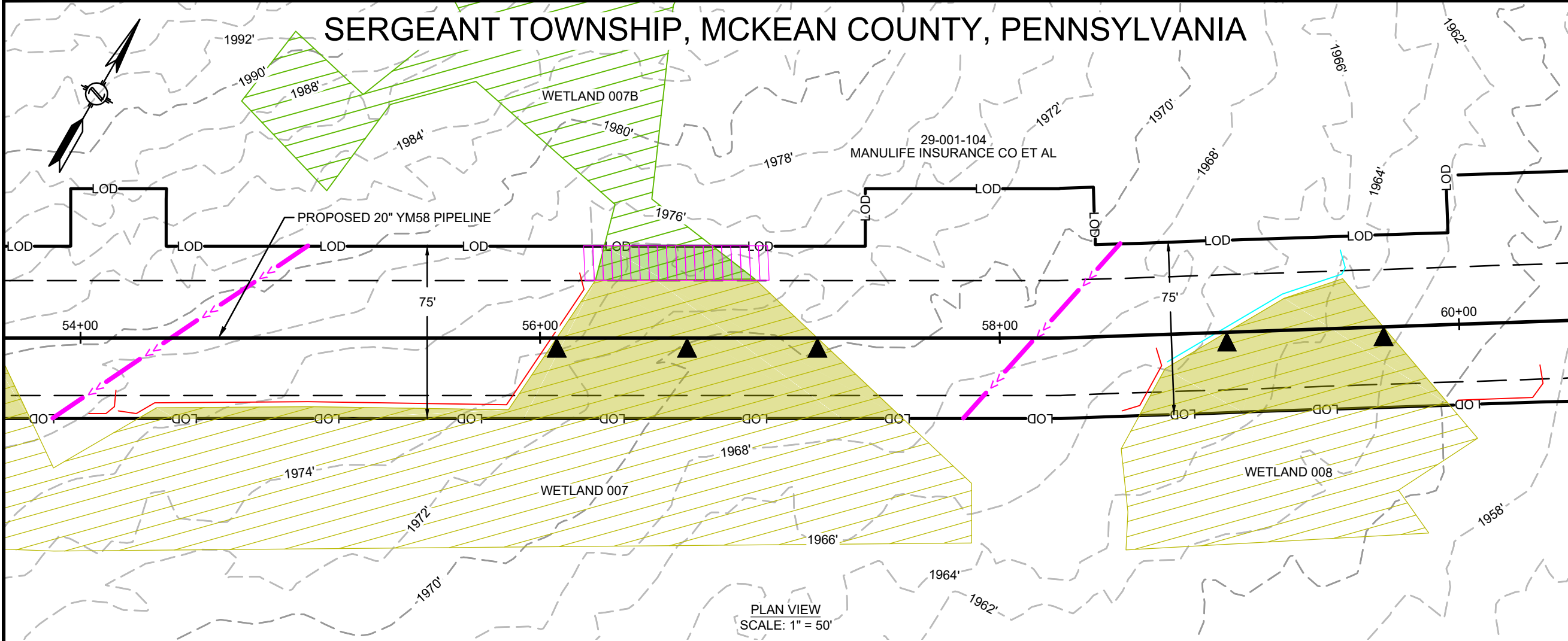
1" = 50'

WSS-MCK-ML-004

C

12/16/2020 2:03 PM, HECTOR MORALES
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SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA

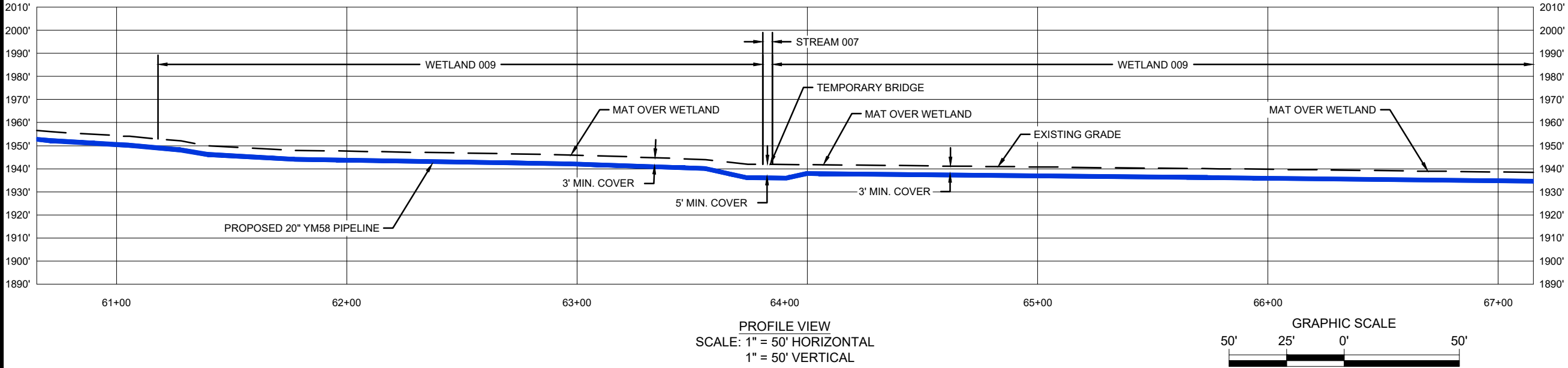
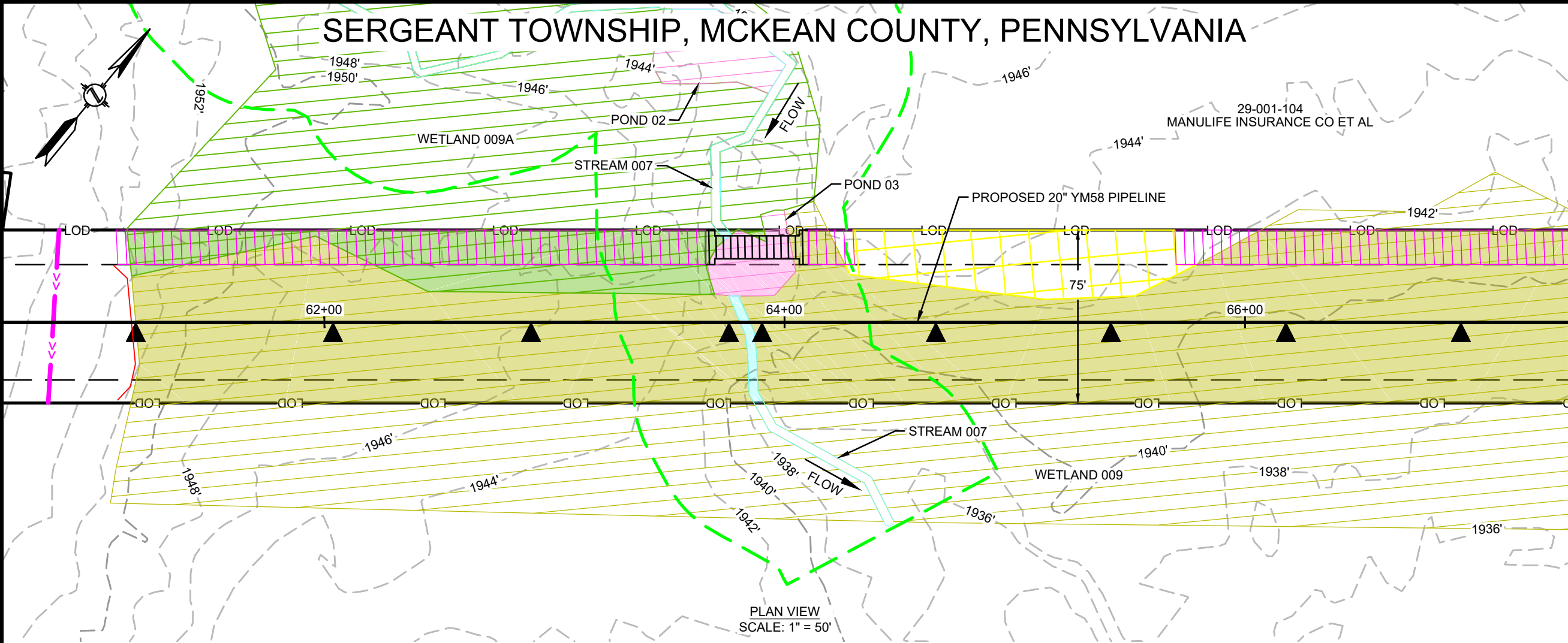


REVISIONS						APPROVALS		PREPARED FOR:  NATIONAL FUEL SUPPLY CORPORATION	PREPARED BY: M M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 1.1		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019					
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE					
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD	ENG. APPROVAL	DATE					
						MJD (MM)	07/2019					
						P.M. APPROVAL	DATE					

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)		PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD		EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WATERCOURSE FLOODWAY	
WETLAND 007								
WETLAND 008	WETLAND	0.101	-	0.003	-	OPEN CUT	-	N/A
WETLAND 007B	WETLAND	0.020	-	-	-	N/A - WORKSPACE	-	MAT BRIDGE OR EQUIVALENT

12/17/2020 11:29 AM - HECTOR MORALES
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12/16/2020 2:06 PM, HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATERSPEC\FICS\WSS-MCK-ML-006.DWG



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 009	WETLAND	1.056	-	-	0.031	-	-	OPEN CUT	MAT BRIDGE OR EQUIVALENT
WETLAND 009A	WETLAND	0.116	-	-	-	-	-	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT
STREAM 007	WATERBODY	-	0.004	0.002	-	<0.001	<0.001	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT
POND 03	WETLAND	0.020	-	-	-	-	-	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

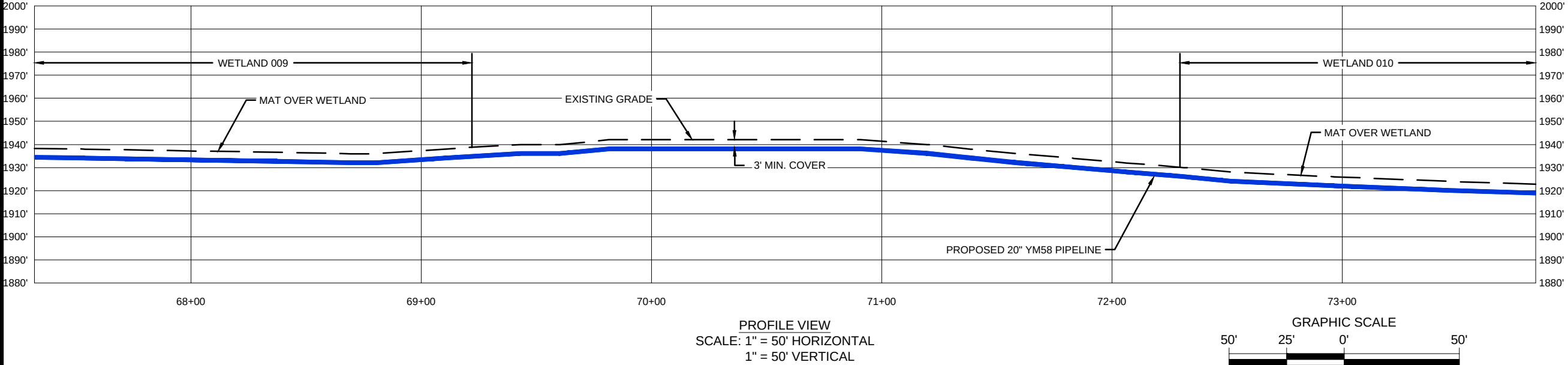
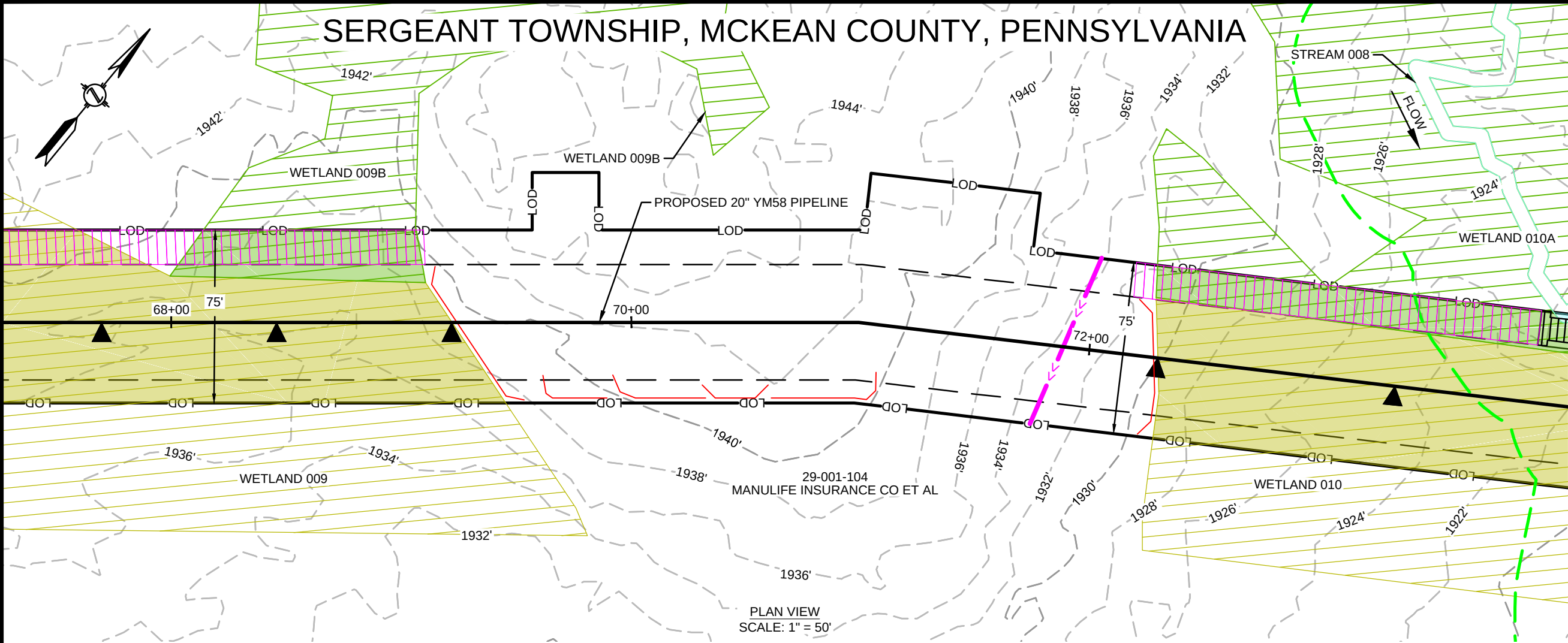
M

MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 1.2		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-006	C

9/4/2020 12:48 PM: HECTOR MORALES
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REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

GRAPHIC SCALE

50'

25'

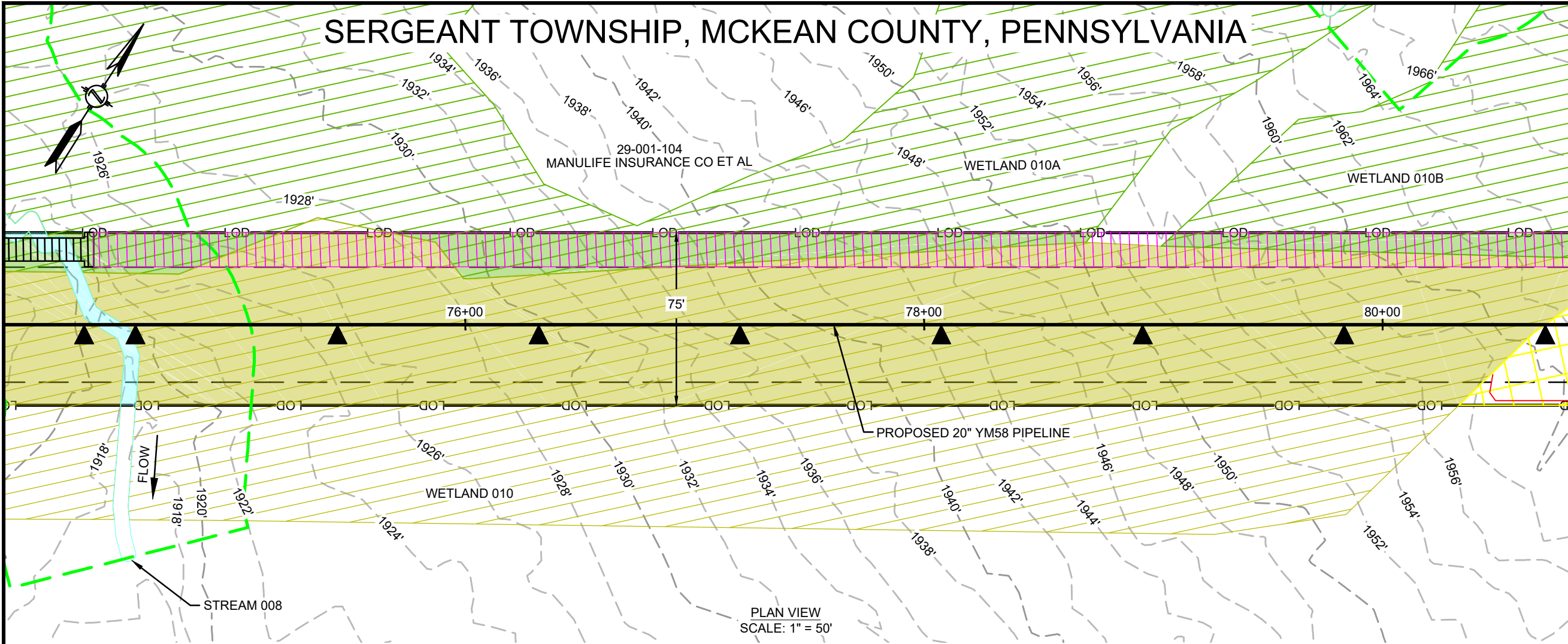
0'

50'

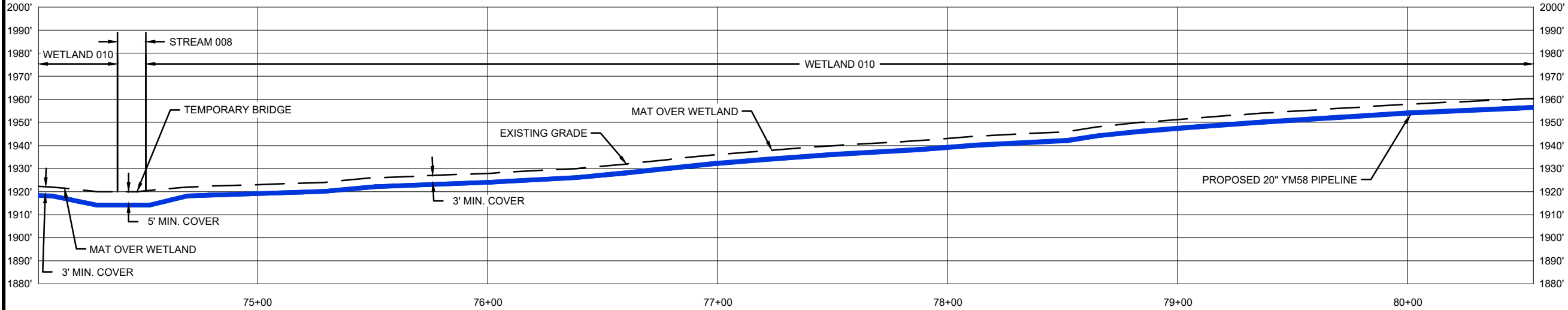
FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 1.3		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-007	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 009B	WETLAND	0.050	-	-	-	-	-	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT
WETLAND 009									
WETLAND 010									
WETLAND 010A	WETLAND	0.176	-	-	-	-	-	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT

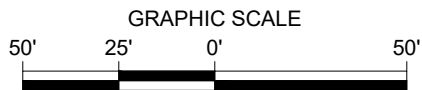
SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



PLAN VIEW
SCALE: 1" = 50'



PROFILE VIEW
SCALE: 1" = 50' HORIZONTAL
1" = 50' VERTICAL



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

PREPARED BY:

M

M

MOTT
MACDONALD

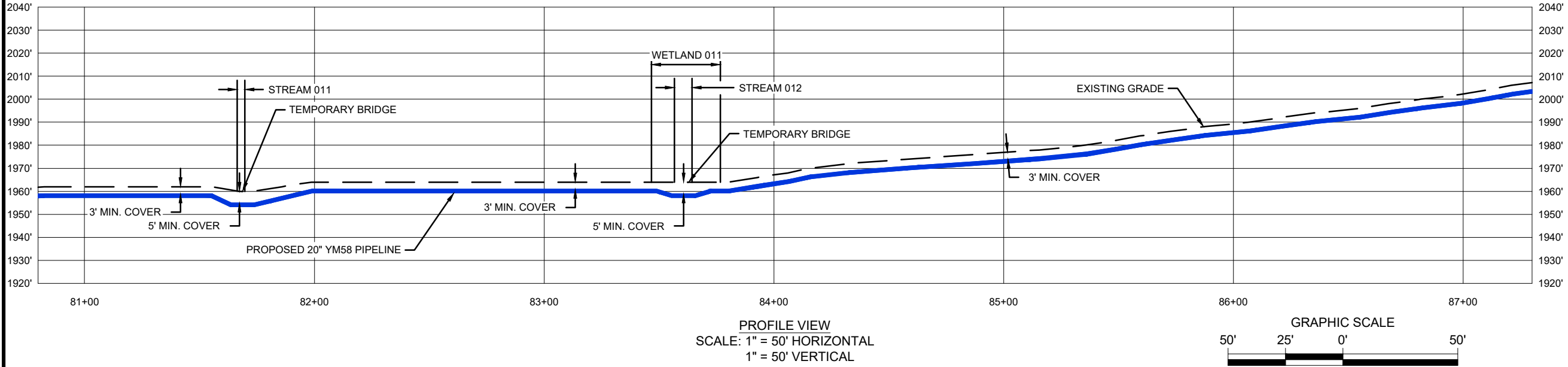
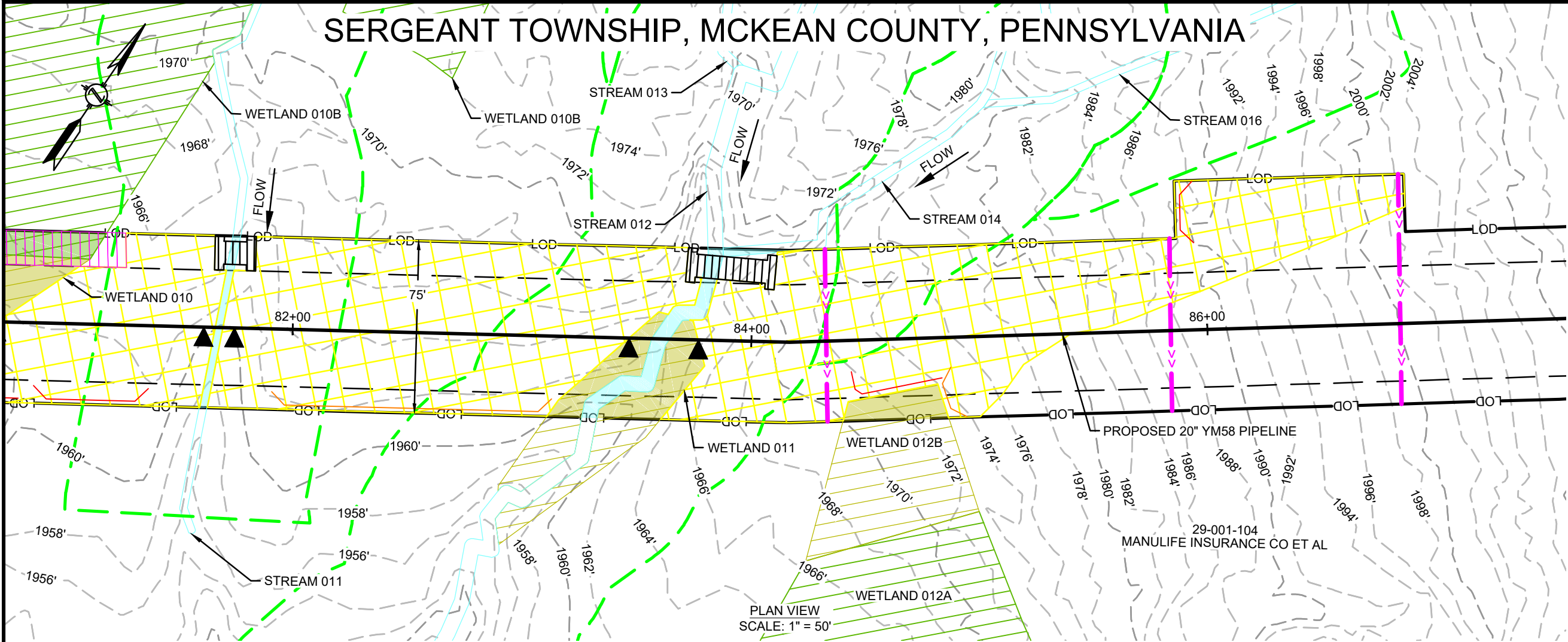
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 1.4		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-008	C

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	FLOODWAY	WETLAND	WATERCOURSE CHANNEL	FLOODWAY		
WETLAND 010A									
WETLAND 010	WETLAND	1.185	-	-	0.032	-	-	OPEN CUT	MAT BRIDGE OR EQUIVALENT
WETLAND 010B	WETLAND	0.042	-	-	-	-	-	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT
STREAM 008	WATERBODY	-	0.015	-	-	<0.001	-	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT

REFER TO DWG WSS-MCK-ML-007 FOR IMPACT ACRES

SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 010									
WETLAND 011	WETLAND	0.030	-	-	0.001	-	-	OPEN CUT	N/A
WETLAND 012B	WETLAND	0.012	-	-	-	-	-	N/A - WORKSPACE	N/A
STREAM 014	WATERBODY	-	0.001	0.020	-	-	0.028	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT
STREAM 012	WATERBODY	-	0.016	0.061	-	<0.001	0.126	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT
STREAM 011	WATERBODY	-	0.006	0.058	-	<0.001	0.116	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT

REFER TO DWG WSS-MCK-ML-008 FOR IMPACT ACRES

12/16/2020 2:10 PM, HECTOR MORALES
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REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

PREPARED BY:

M
MOTT
MACDONALD

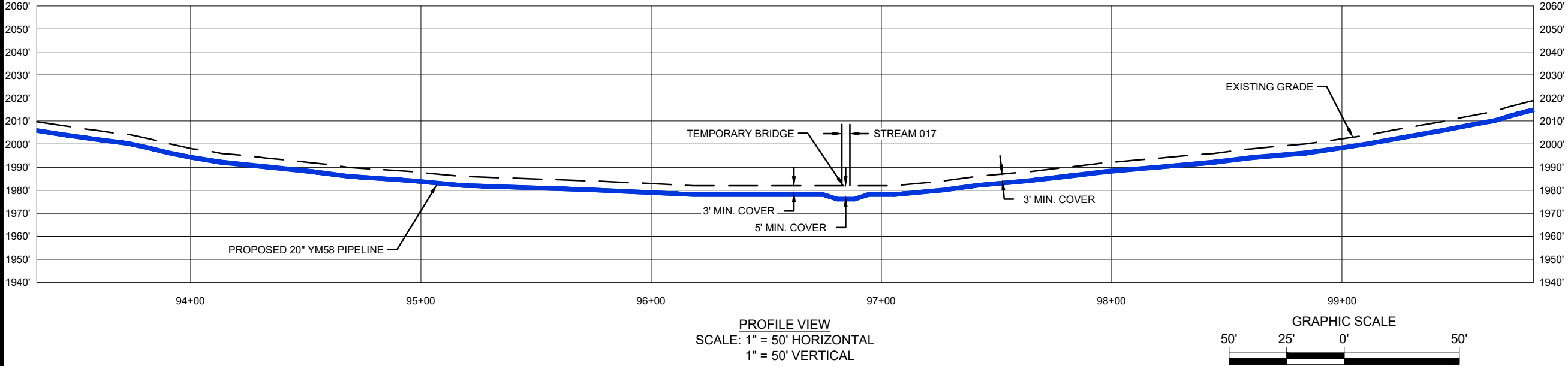
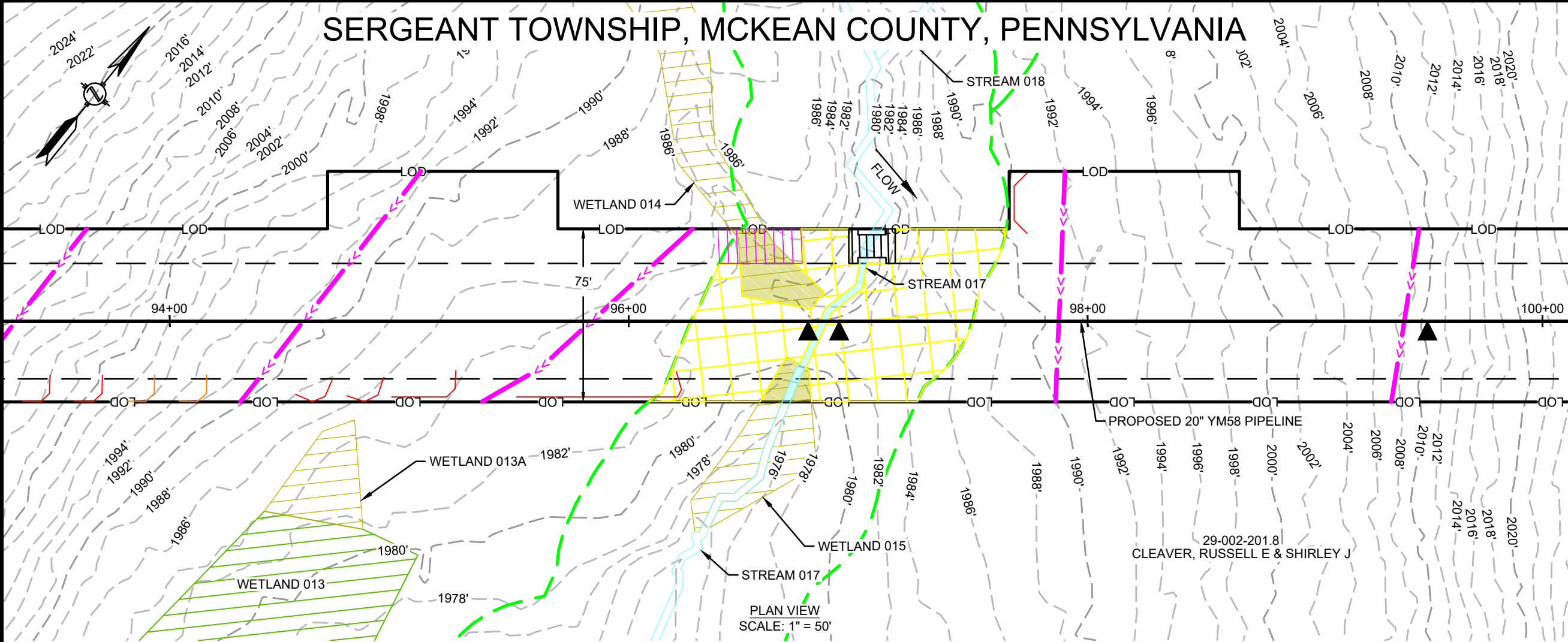
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT

WETLAND & STREAM CROSSING PLAN
PROPOSED 20" YM58 PIPELINE
SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA
M.P. 1.6

SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-009	C

SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)		PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WETLAND	WATERCOURSE CHANNEL		
WETLAND 014	WETLAND	0.018	-	-	-	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT
WETLAND 015	WETLAND	0.006	-	-	-	N/A - WORKSPACE	N/A
STREAM 017	WATERBODY	-	0.007	0.055	0.120	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

PREPARED BY:

M
MOTT
MACDONALD

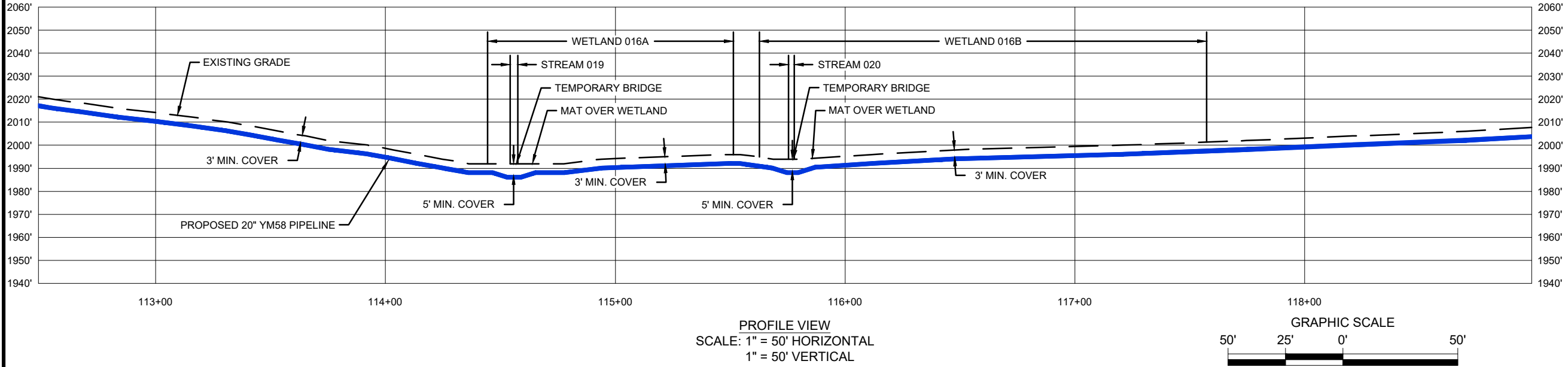
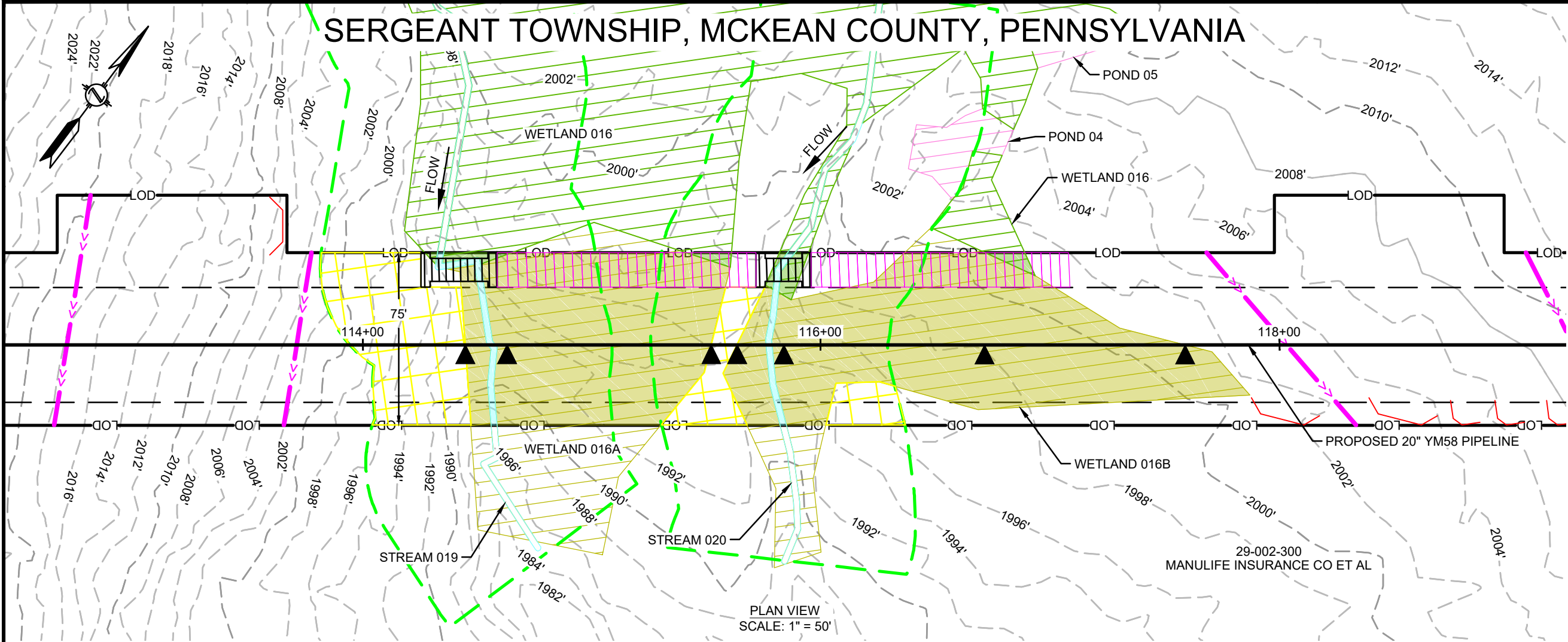
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT

WETLAND & STREAM CROSSING PLAN
PROPOSED 20" YM58 PIPELINE
SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA
M.P. 01.8

SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-010	C

SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)		PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WETLAND	WATERCOURSE CHANNEL		
WETLAND 016A	WETLAND	0.171	-	0.004	-	OPEN CUT	MAT BRIDGE OR EQUIVALENT
WETLAND 016B	WETLAND	0.224	-	0.007	-	OPEN CUT	MAT BRIDGE OR EQUIVALENT
WETLAND 016	WETLAND	0.010	-	-	-	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT
STREAM 020	WATERBODY	-	0.005	-	<0.001	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT
STREAM 019	WATERBODY	-	0.006	-	<0.001	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

National Fuel
SUPPLY CORPORATION

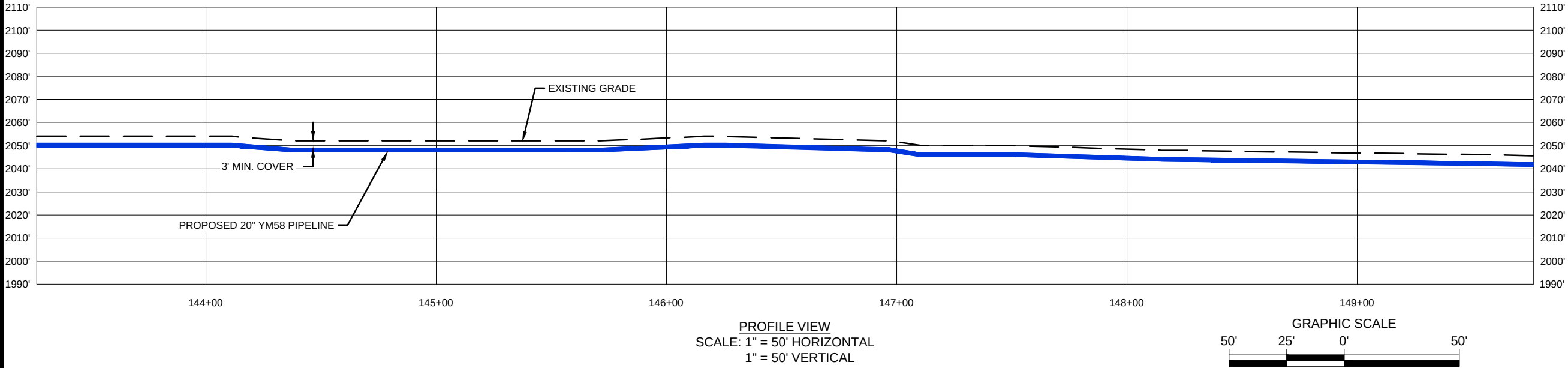
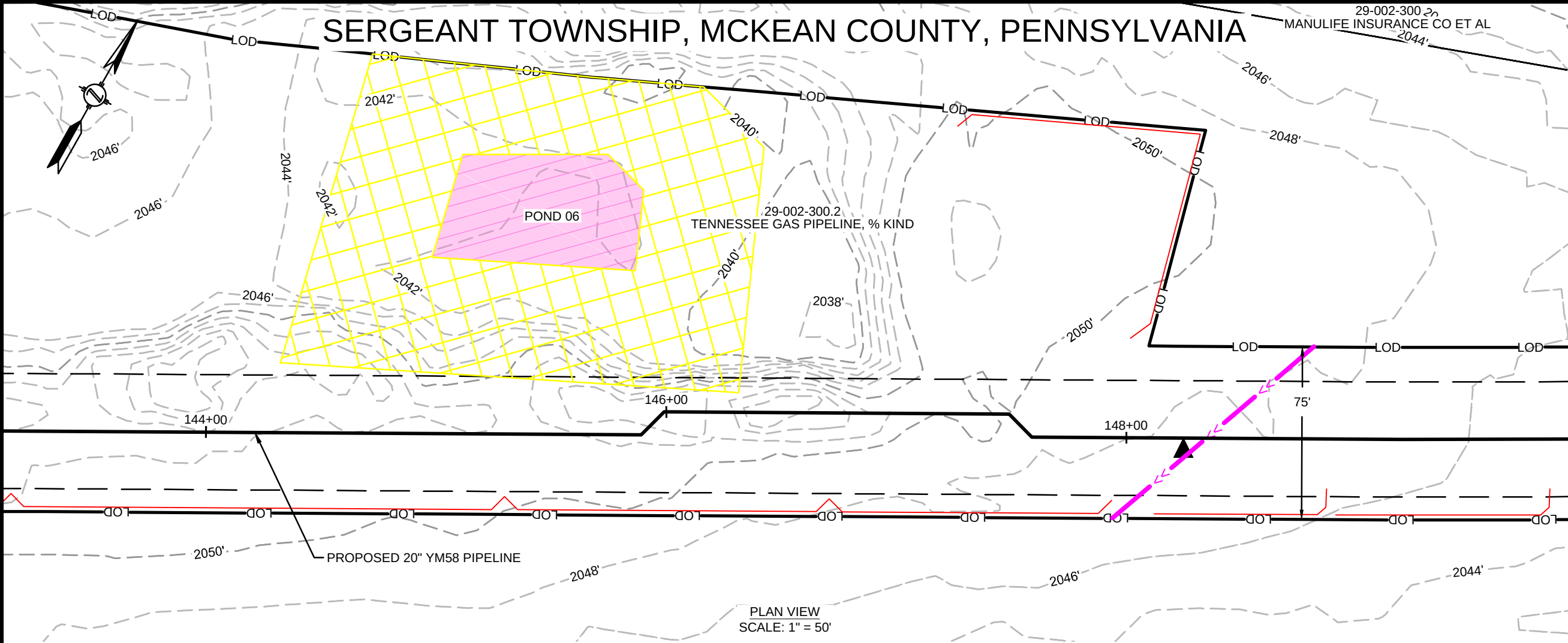
PREPARED BY:

M
MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 2.2		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-011A	C

9/8/2020 3:01 PM, HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATERSPEC\WSS-MCK-ML-012.DWG



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

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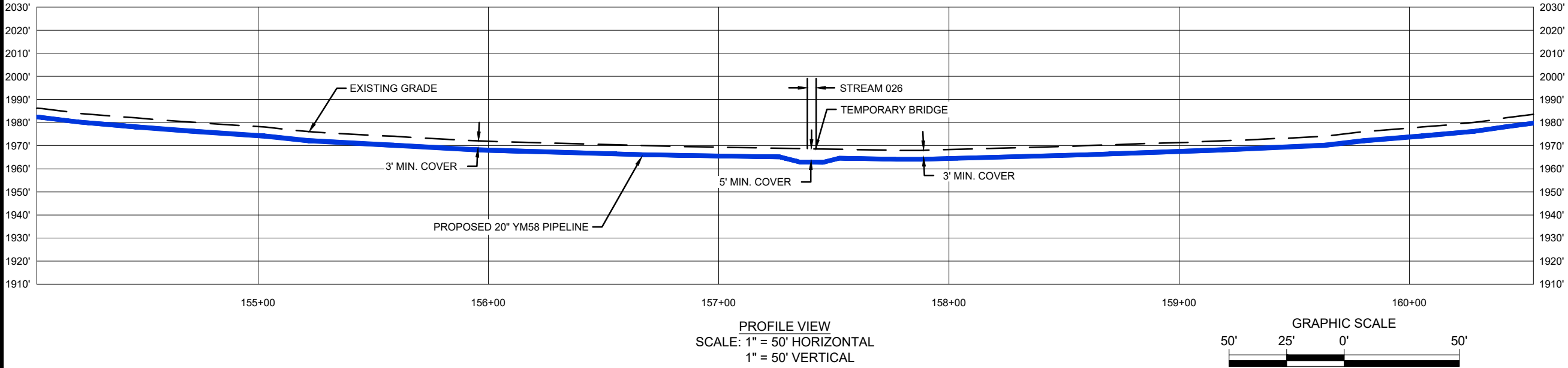
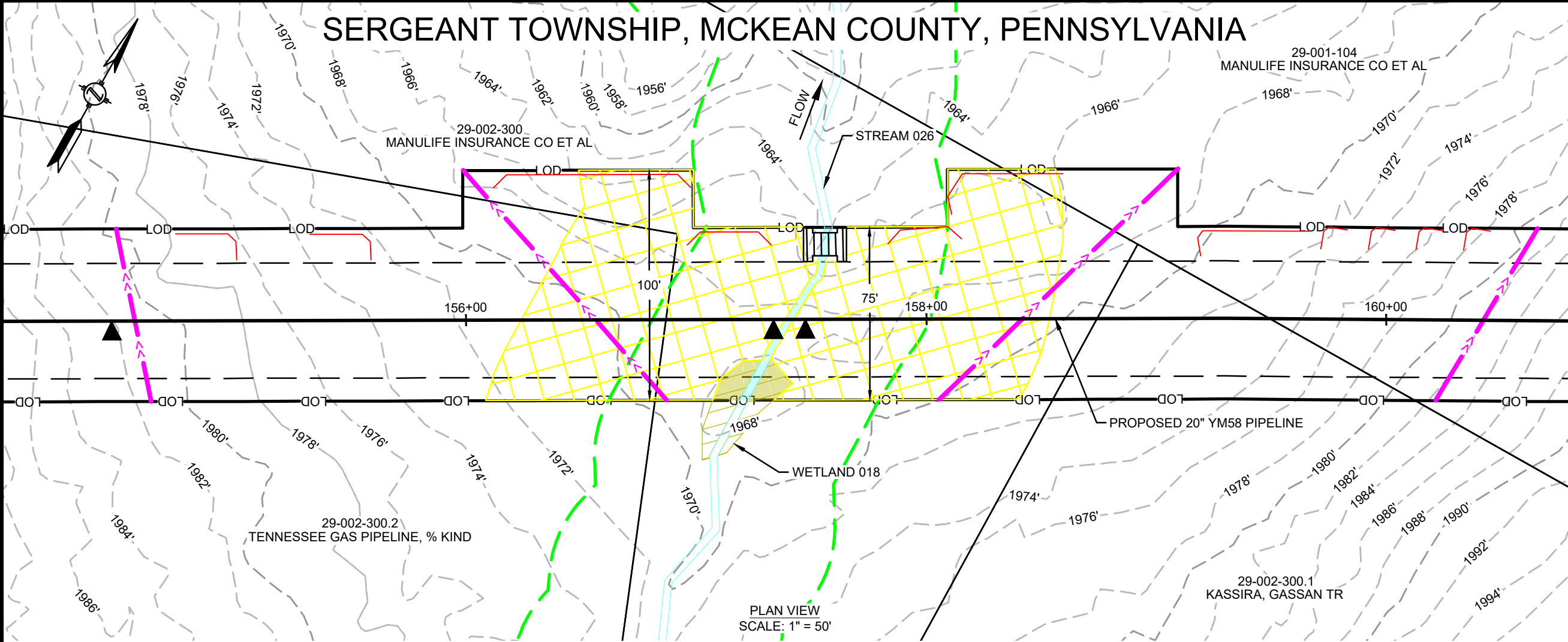
MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 2.8		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-012	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
POND 06	WETLAND	0.090	-	-	-	-	-	-	N/A - WORKSPACE	N/A

SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 018	WETLAND	0.009	-	-	-	-	-	N/A - WORKSPACE	N/A
STREAM 026	WATERBODY	-	0.006	0.056	<0.001	-	0.129	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

PREPARED BY:

M

M

MOTT MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

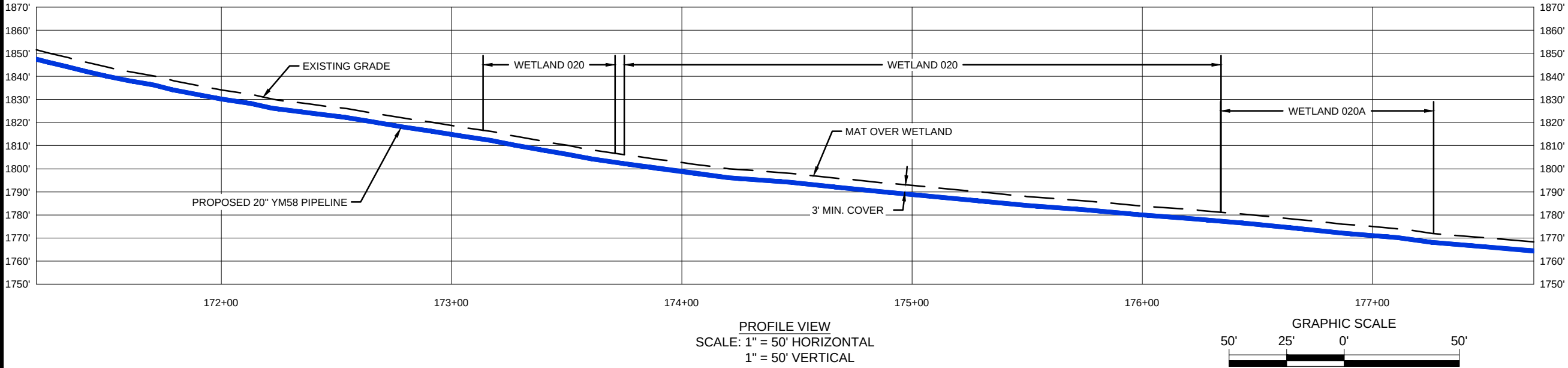
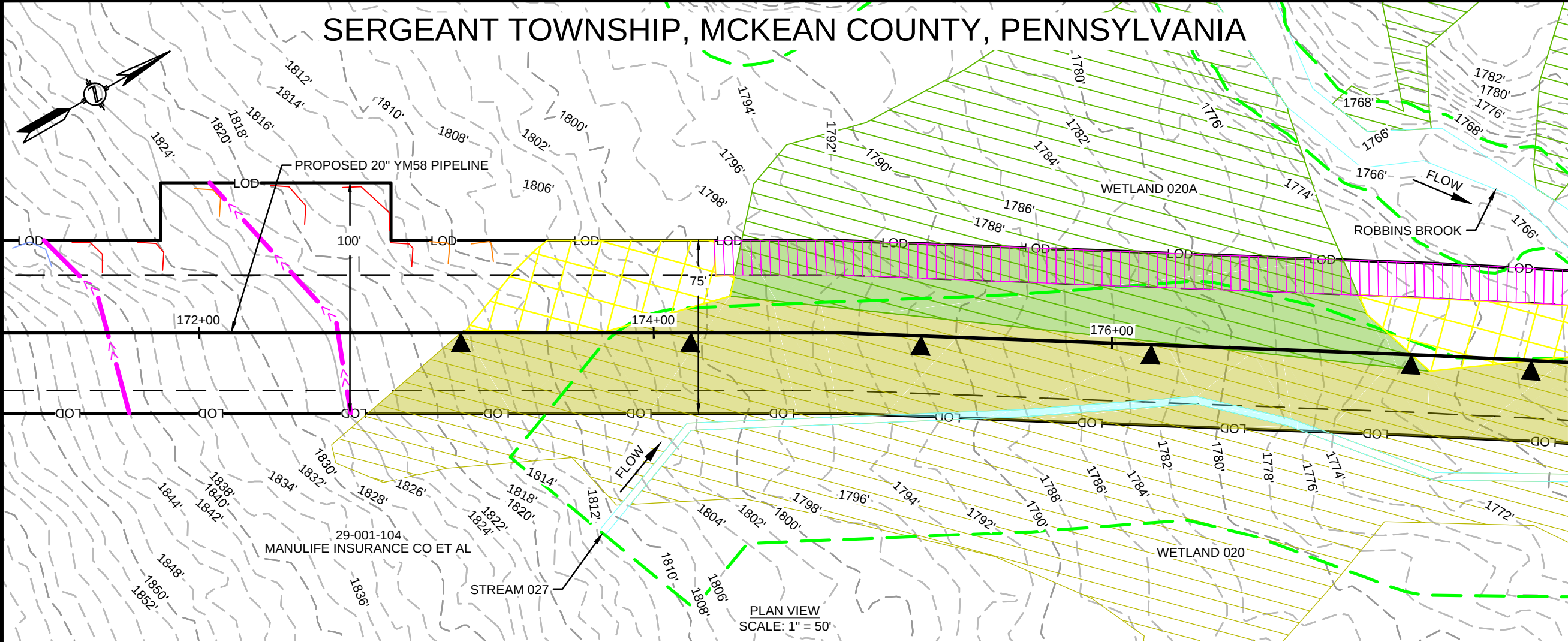
FM100 MODERNIZATION PROJECT

WETLAND & STREAM CROSSING PLAN
PROPOSED 20" YM58 PIPELINE
SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA
M.P. 3.0

SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-013	C

12/16/2020 2:15 PM, HECTOR MORALES
G:\NATIONAL FUEL\GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATERSPECIFIC\WSS-MCK-ML-013.DWG

SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)		PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WETLAND	WATERCOURSE CHANNEL		
WETLAND 020	WETLAND	0.473	-	0.015	-	OPEN CUT	N/A
WETLAND 020A	WETLAND	0.206	-	0.021	-	OPEN CUT	MAT BRIDGE OR EQUIVALENT
STREAM 027	WATERBODY	-	0.013	-	0.007	N/A - WORKSPACE	N/A

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

PREPARED BY:

M
MOTT
MACDONALD

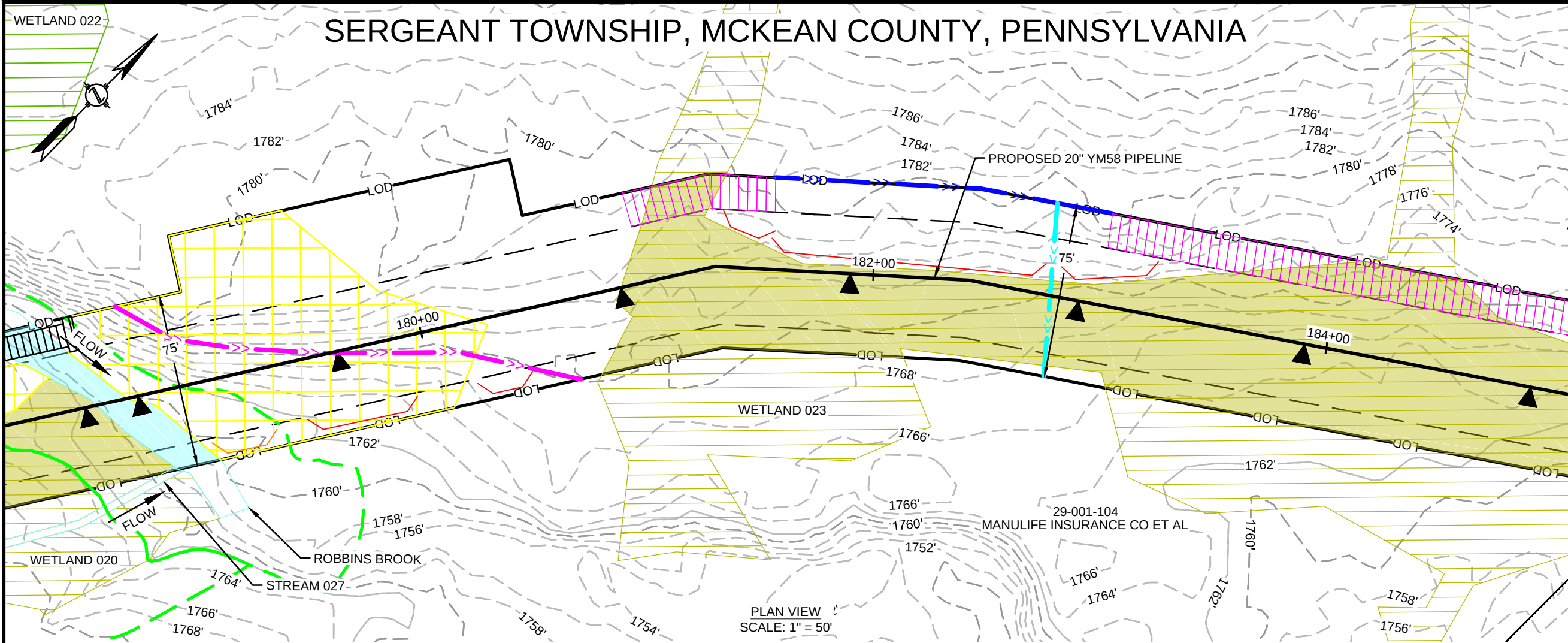
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT

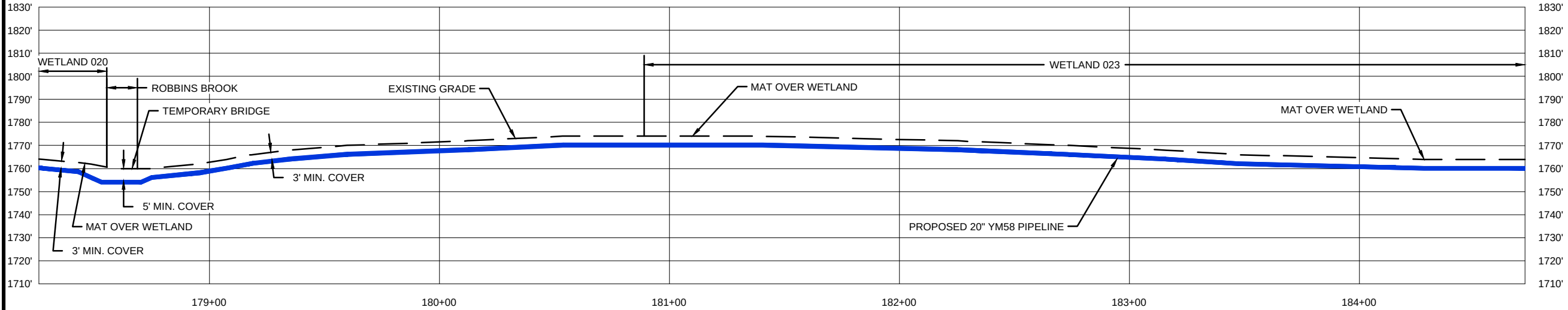
WETLAND & STREAM CROSSING PLAN
PROPOSED 20" YM58 PIPELINE
SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA
M.P. 3.3

SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-014	C

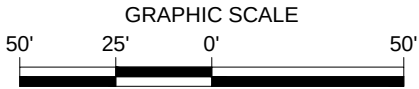
SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



PLAN VIEW
SCALE: 1" = 50'



PROFILE VIEW
SCALE: 1" = 50' HORIZONTAL
1" = 50' VERTICAL



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	FLOODWAY	WETLAND	WATERCOURSE CHANNEL	FLOODWAY		
WETLAND 020									
WETLAND 023	WETLAND	0.787	-	-	0.028	-	-	OPEN CUT	MAT BRIDGE OR EQUIVALENT
ROBBINS BROOK	WATERBODY	-	0.033		-	0.001	0.039	DAM AND PUMP/FUME	MAT BRIDGE OR EQUIVALENT
STREAM 027									

REFER TO DWG WSS-MCK-ML-014 FOR IMPACT ACRES

REFER TO DWG WSS-MCK-ML-014 FOR IMPACT ACRES

12/17/2020 8:53 AM, HECTOR MORALES

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REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

PREPARED BY:

M
MOTT
MACDONALD

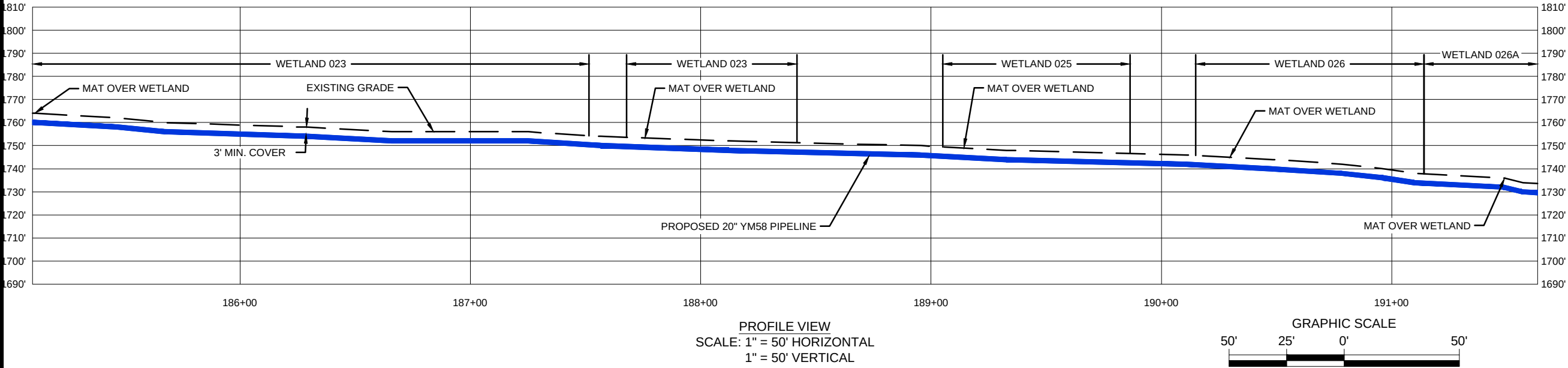
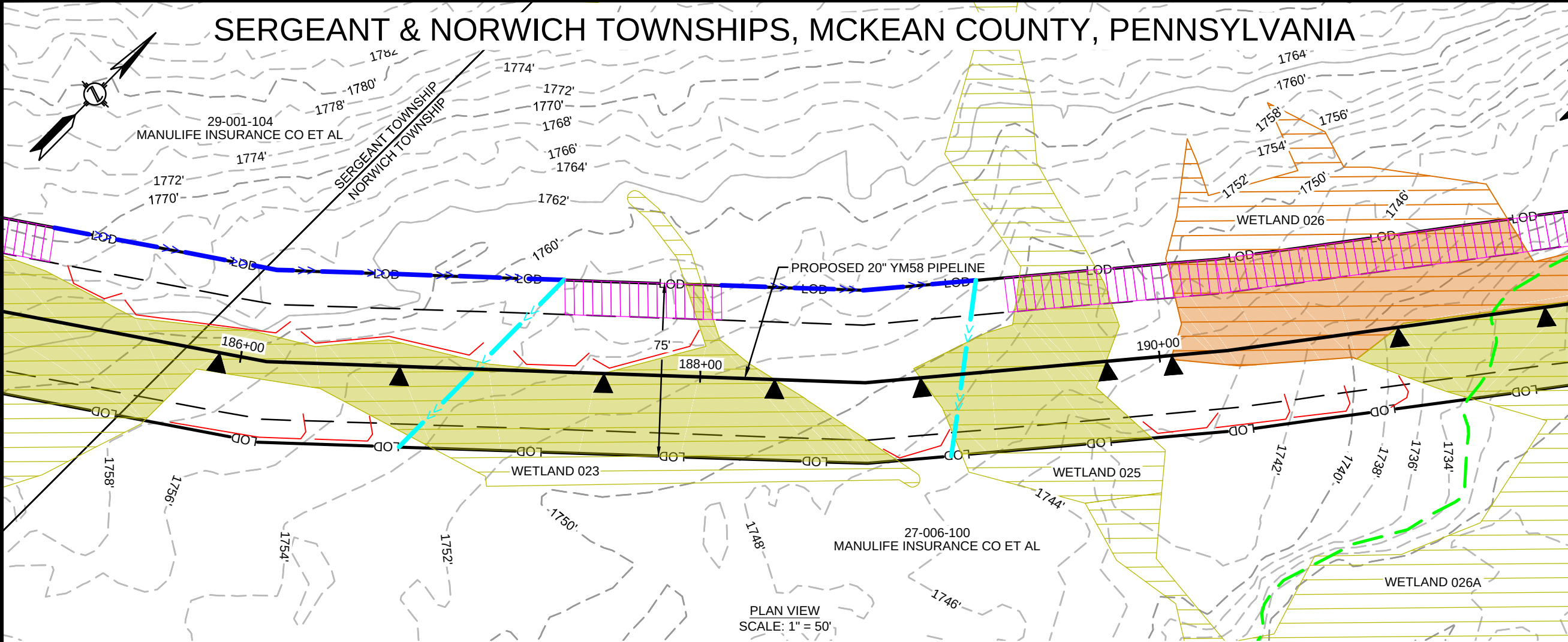
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT

WETLAND & STREAM CROSSING PLAN
PROPOSED 20" YM58 PIPELINE
SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA
M.P. 3.5

SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-015	C

9/4/2020 12:55 PM: HECTOR MORALES
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REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

GRAPHIC SCALE

50'

25'

0'

50'

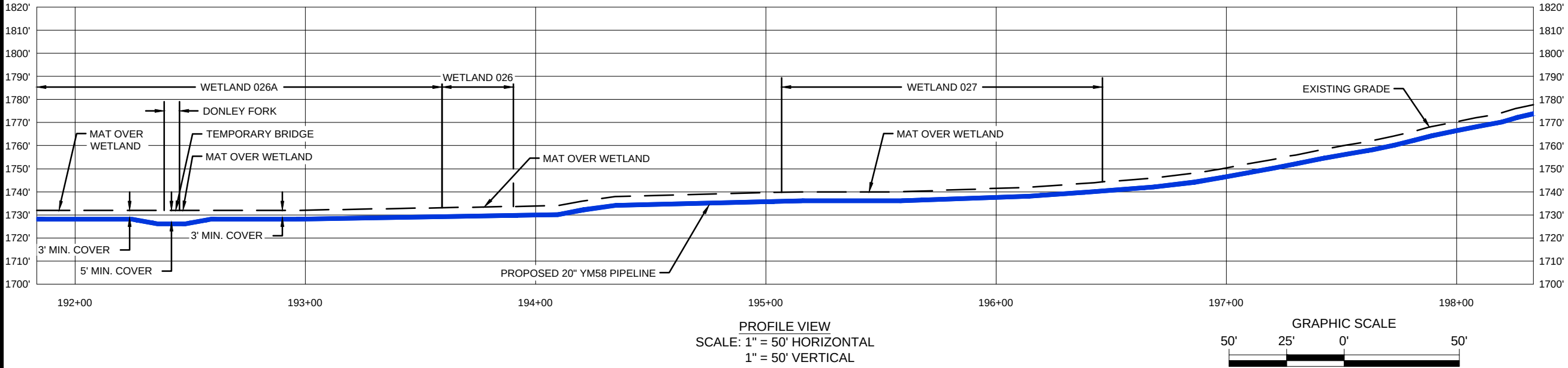
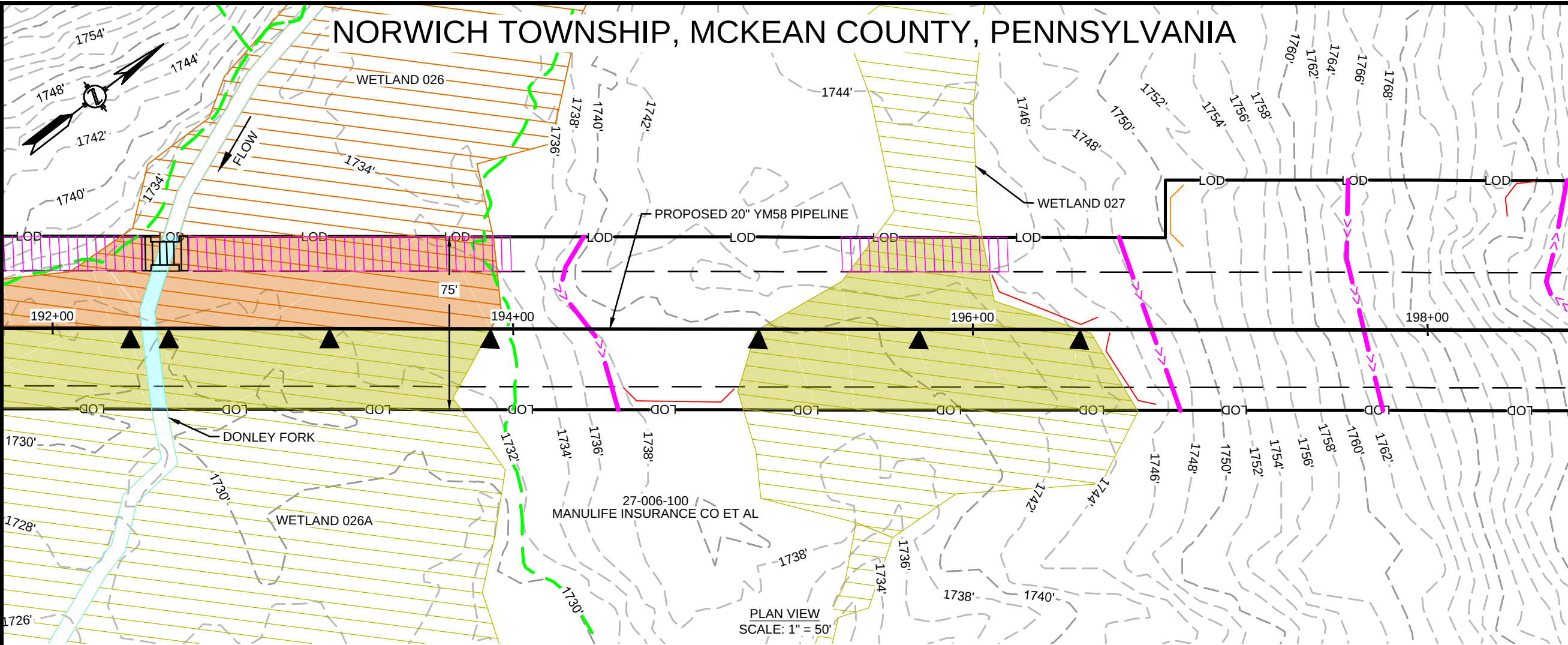
FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT & NORWICH TOWNSHIPS, MCKEAN COUNTY, PENNSYLVANIA M.P. 3.6		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-016	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	FLOODWAY	WETLAND	WATERCOURSE CHANNEL	FLOODWAY		
WETLAND 023									
WETLAND 025	WETLAND	0.108	-	-	0.003	-	-	OPEN CUT	MAT BRIDGE OR EQUIVALENT
WETLAND 026	WETLAND	0.285	-	-	0.050	-	-	OPEN CUT	MAT BRIDGE OR EQUIVALENT
WETLAND 026A									

REFER TO DWG WSS-MCK-ML-015 FOR IMPACT ACRES

REFER TO DWG WSS-MCK-ML-017 FOR IMPACT ACRES

12/17/2020 9:08 AM, HECTOR MORALES
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REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



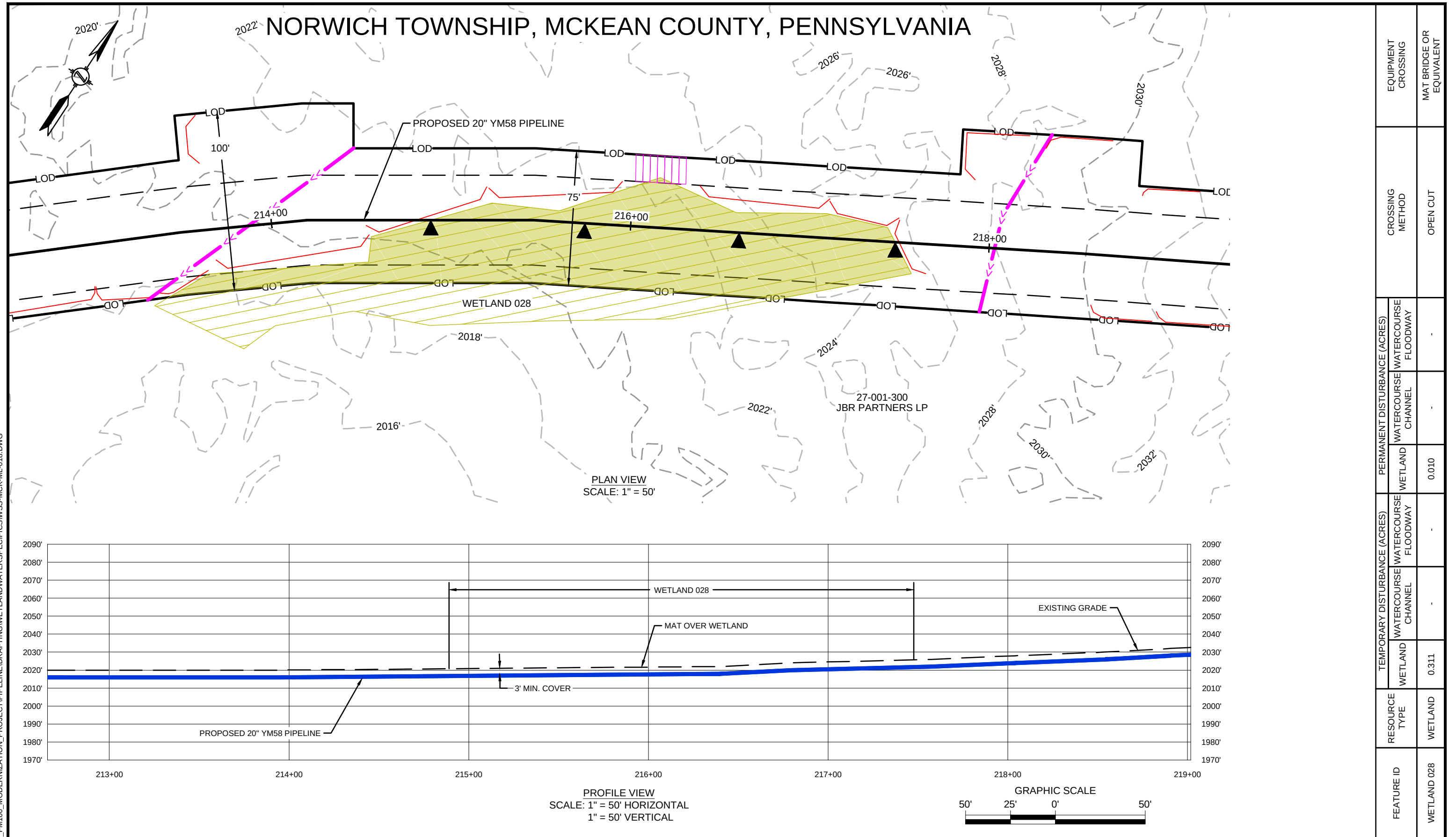
PREPARED BY:



111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

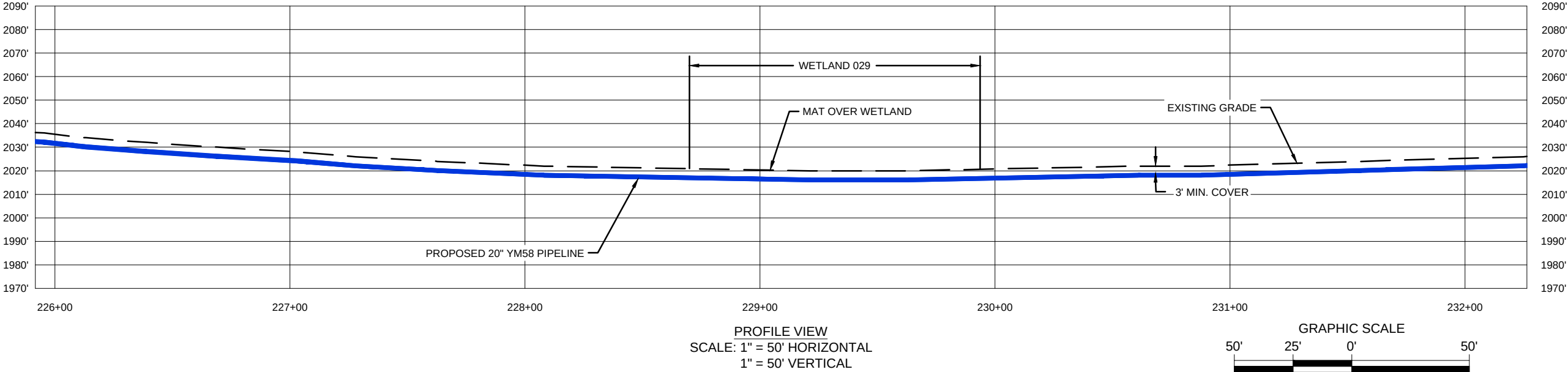
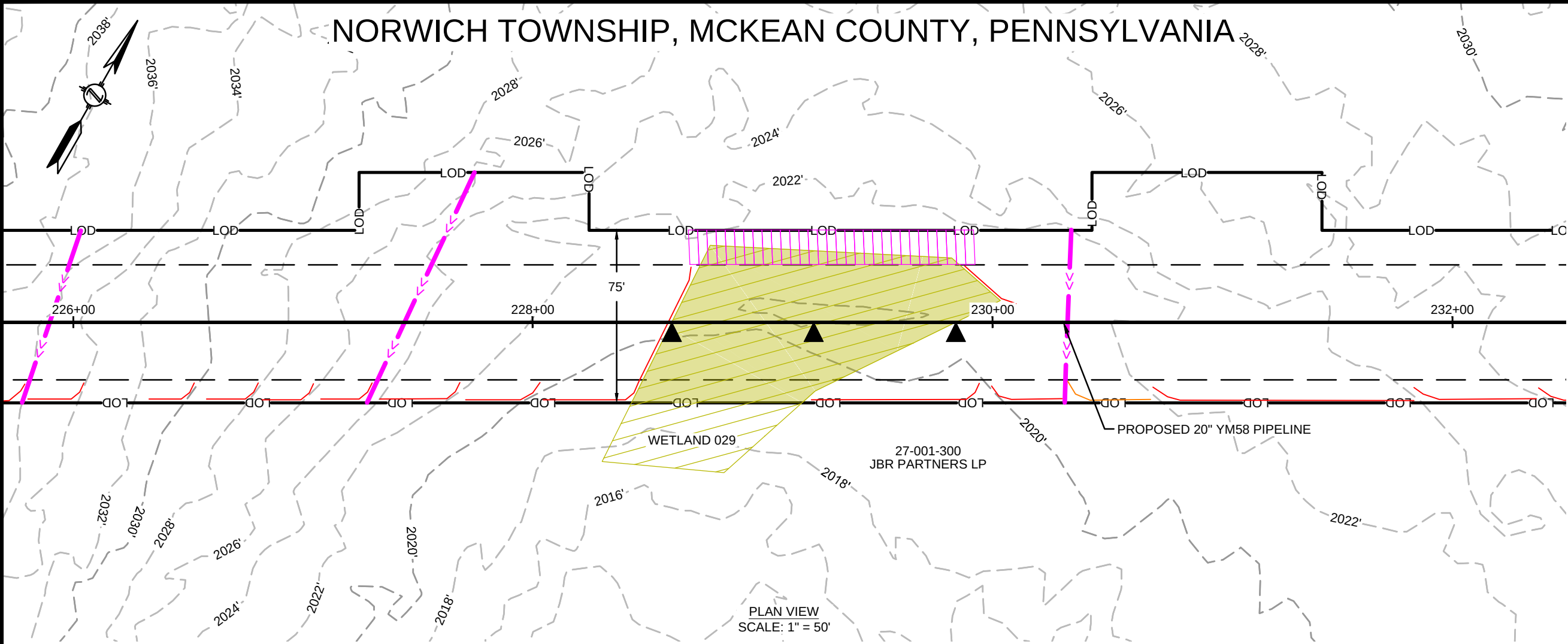
FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 3.7		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-017	C

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)		PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL		
WETLAND 026	REFER TO DWG WSS-MCK-ML-016 FOR IMPACT ACRES							
WETLAND 026A	WETLAND	0.212	-	-	0.010	-	OPEN CUT	N/A
WETLAND 027	WETLAND	0.193	-	-	0.005	-	OPEN CUT	MAT BRIDGE OR EQUIVALENT
DONLEY FORK	WATERBODY	-	0.012	0.007	-	<0.001	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT



REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 4.1		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019			SCALE	DRAWING NO.	REVISION
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE			1" = 50'	WSS-MCK-ML-018	C
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD	KEK (MM)	07/2019					
						ENG. APPROVAL	DATE					
						MJD (MM)	07/2019					
						P.M. APPROVAL	DATE					

9/4/2020 12:58 PM: HECTOR MORALES
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REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

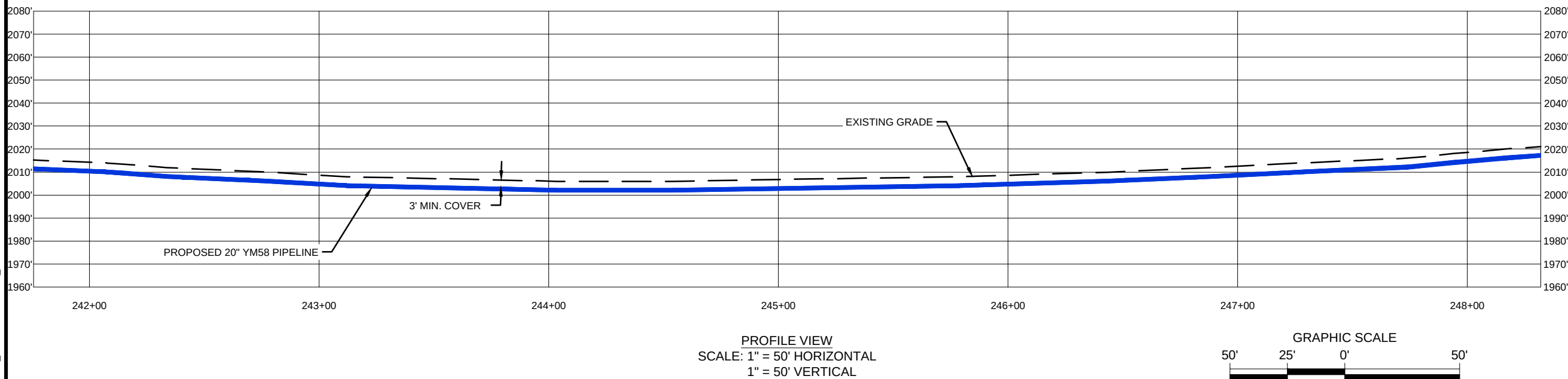
M

MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

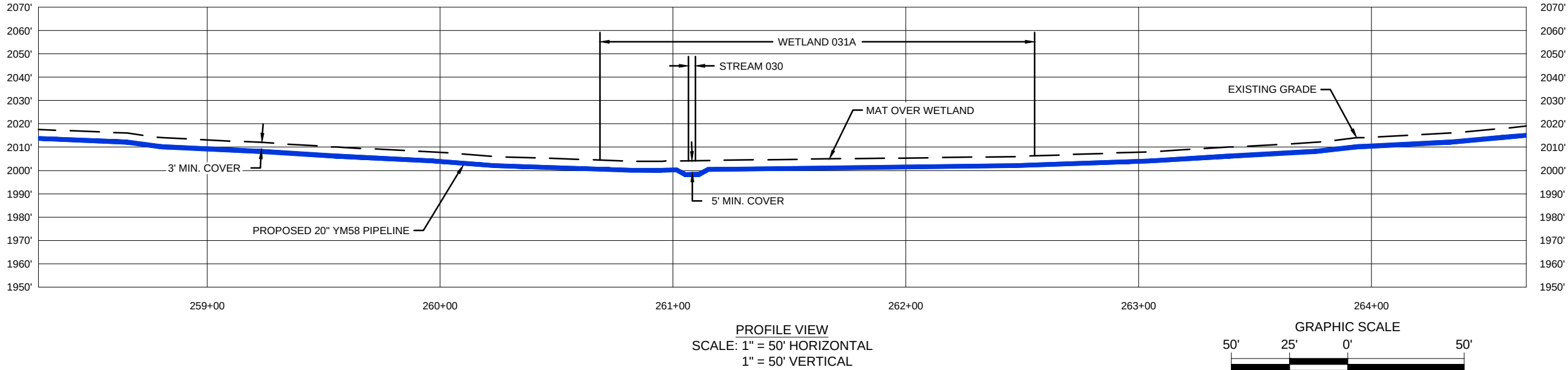
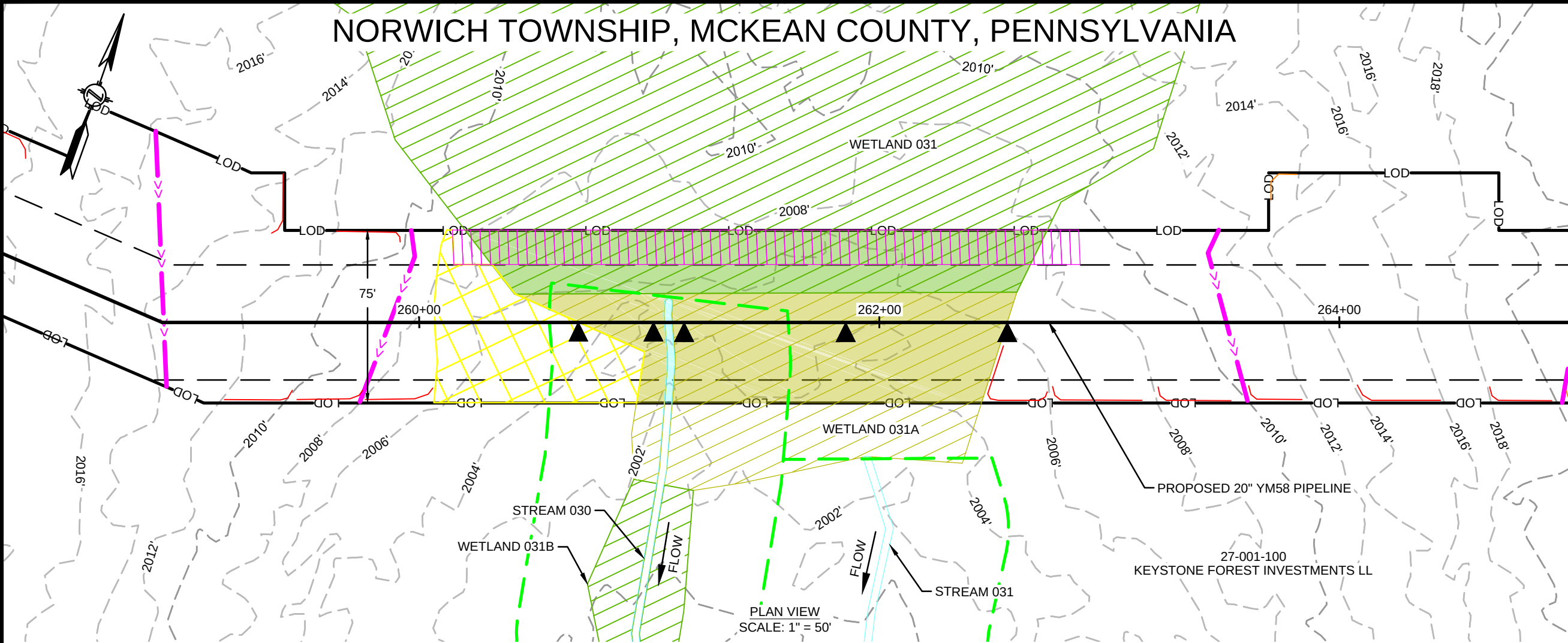
FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 4.3		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-019	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)		PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WETLAND	WATERCOURSE CHANNEL		
WETLAND 029	WETLAND	0.160	-	0.005	-	OPEN CUT	MAT BRIDGE OR EQUIVALENT



REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M M 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 4.6		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019					
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE					
						KEK (MM)	07/2019					
						ENG. APPROVAL	DATE					
						MJD (MM)	07/2019					
						P.M. APPROVAL	DATE			SCALE		
								DRAWING NO.				
								REVISION				
								1" = 50'				
								WSS-MCK-ML-020				
								B				

9/4/2020 12:59 PM: HECTOR MORALES
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REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

GRAPHIC SCALE

50'

25'

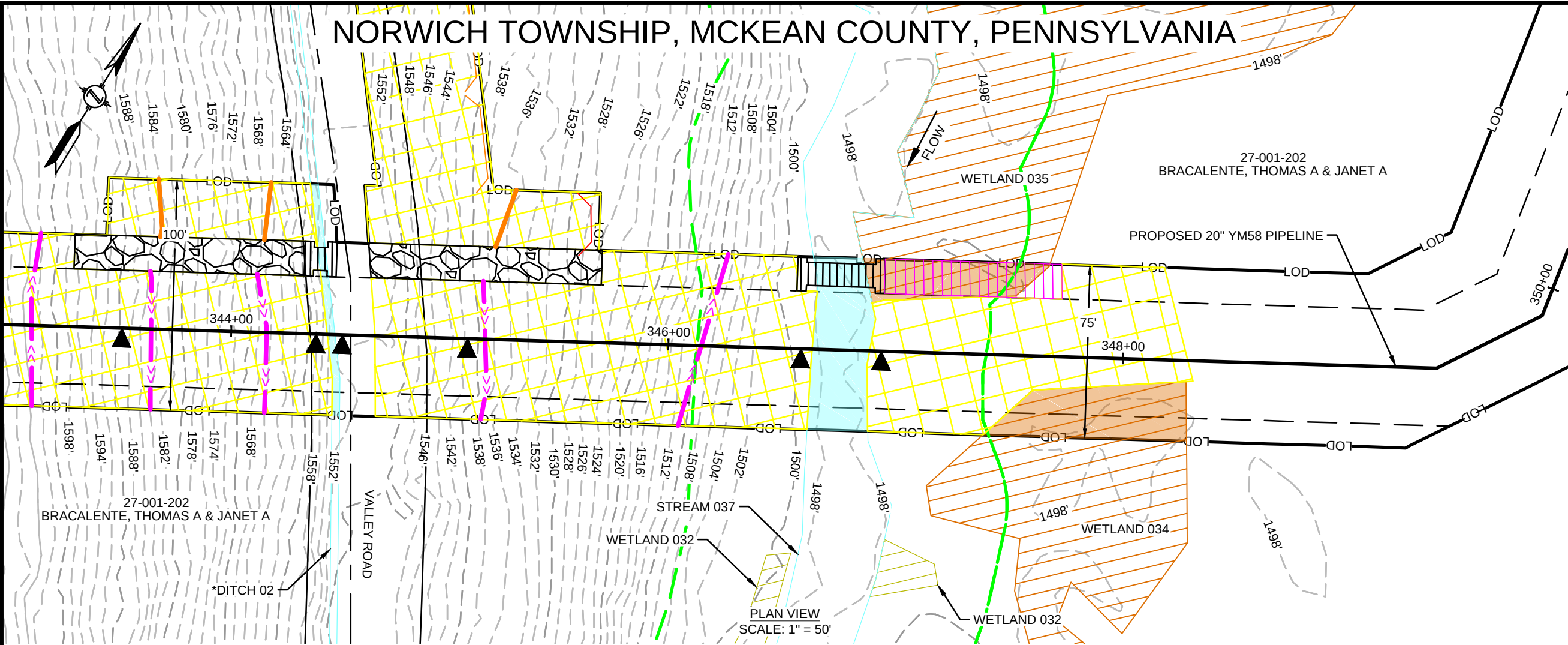
0'

50'

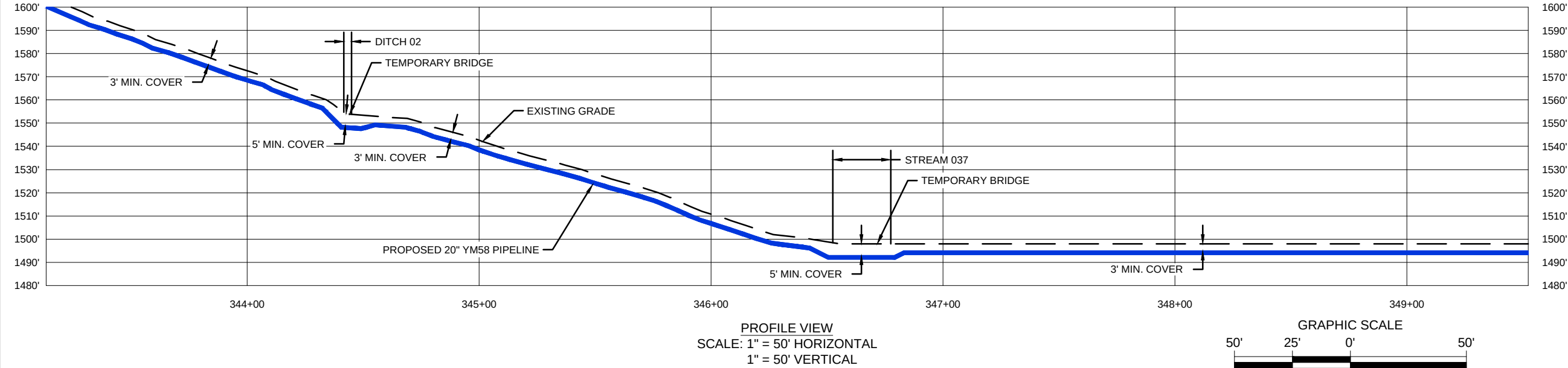
FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 4.9		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-021	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)		PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WETLAND	WATERCOURSE CHANNEL		
WETLAND 031	WETLAND	0.147	-	-	-	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT
WETLAND 031A	WETLAND	0.176	-	0.007	-	OPEN CUT	N/A
STREAM 030 - 1	WATERBODY	-	0.003	-	<0.001	DAM AND PUMP/FLUME	N/A

NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



*DITCH 02 DOES NOT CONTRIBUTE PERENNIAL OR INTERMITTENT SURFACE WATER FLOW TO OTHER JURISDICTIONAL WATERS OF THE COMMONWEALTH, AS SUCH, IT IS NOT A REGULATED WATER AND IS NOT INCLUDED ON THE ARIT TABLE.



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)		PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WETLAND	WATERCOURSE CHANNEL		
WETLAND 034	WETLAND	0.040	-	-	-	N/A - WORKSPACE	N/A
WETLAND 035 - 1	WETLAND	0.027	-	-	-	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT
STREAM 037	WATERBODY	-	0.042	0.001	0.113	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

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MACDONALD

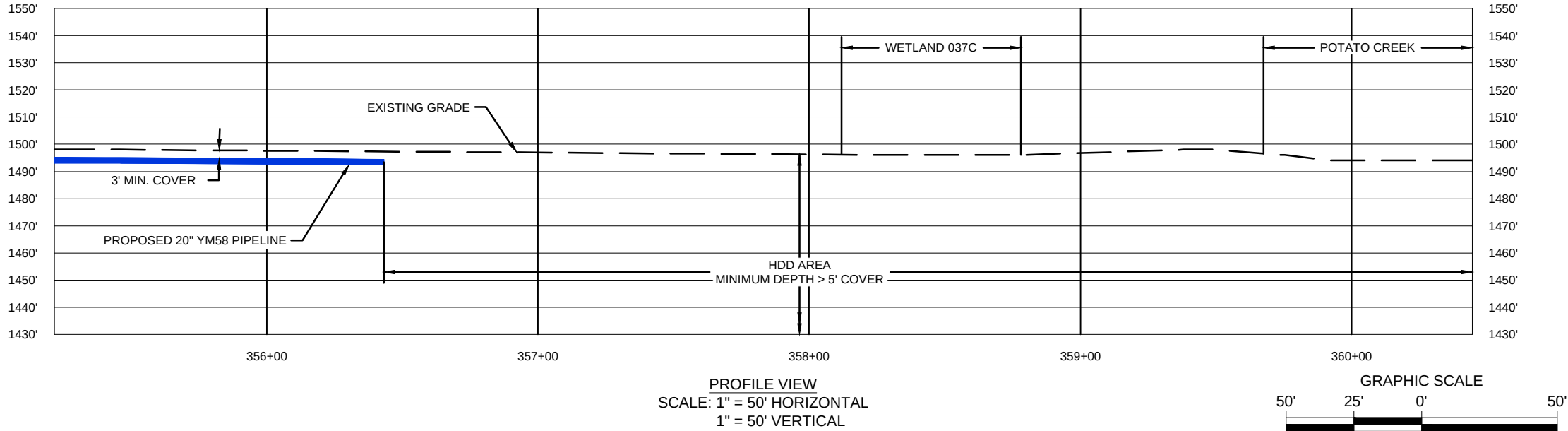
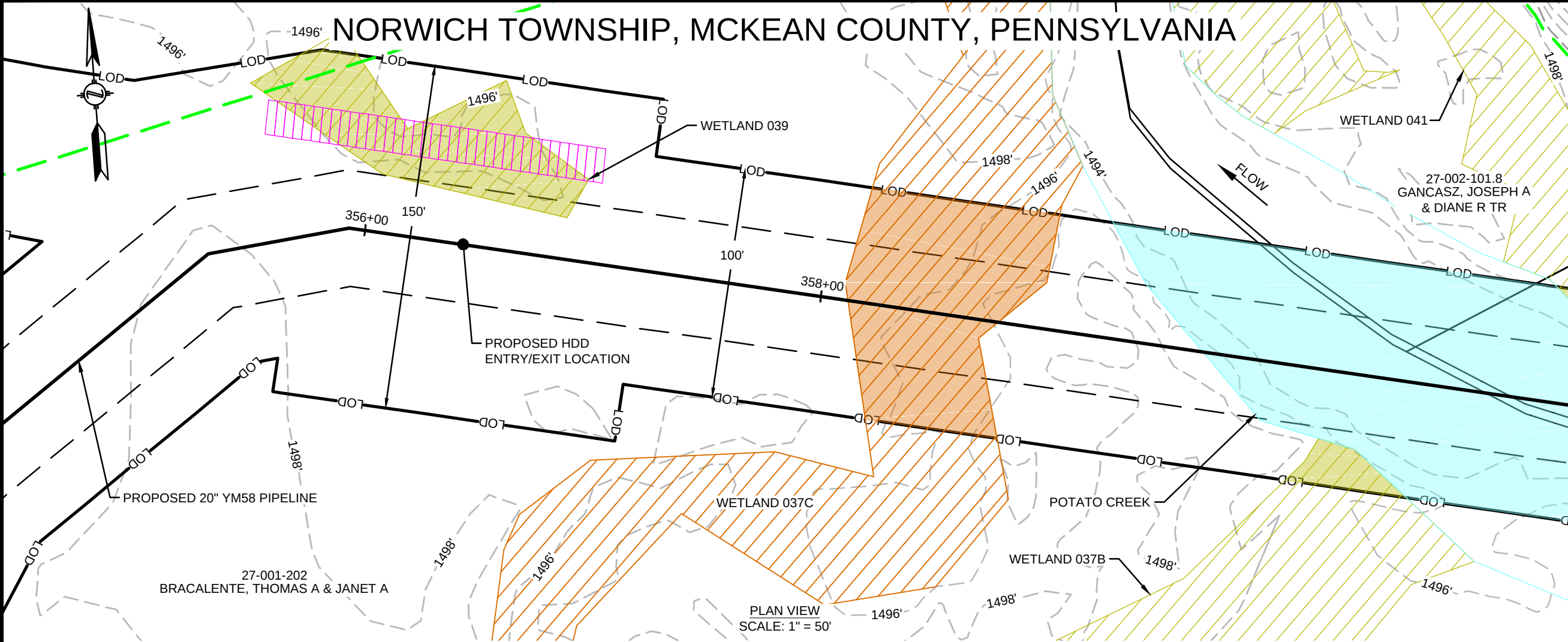
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT

WETLAND & STREAM CROSSING PLAN
PROPOSED 20" YM58 PIPELINE
NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA
M.P. 6.6

SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-022	C

9/4/2020 1:01 PM, HECTOR MORALES
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FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)		PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WETLAND	WATERCOURSE CHANNEL		
WETLAND 039	WETLAND	0.105	-	-	-	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT
WETLAND 037C	WETLAND	0.144	-	0.015	-	HDD	N/A
POTATO CREEK						REFER TO DWG WSS-MCK-ML-024 FOR IMPACT ACRES	
WETLAND 041						REFER TO DWG WSS-MCK-ML-024 FOR IMPACT ACRES	
WETLAND 037B	WETLAND	0.014	-	-	-	HDD	N/A

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

MOTT MACDONALD

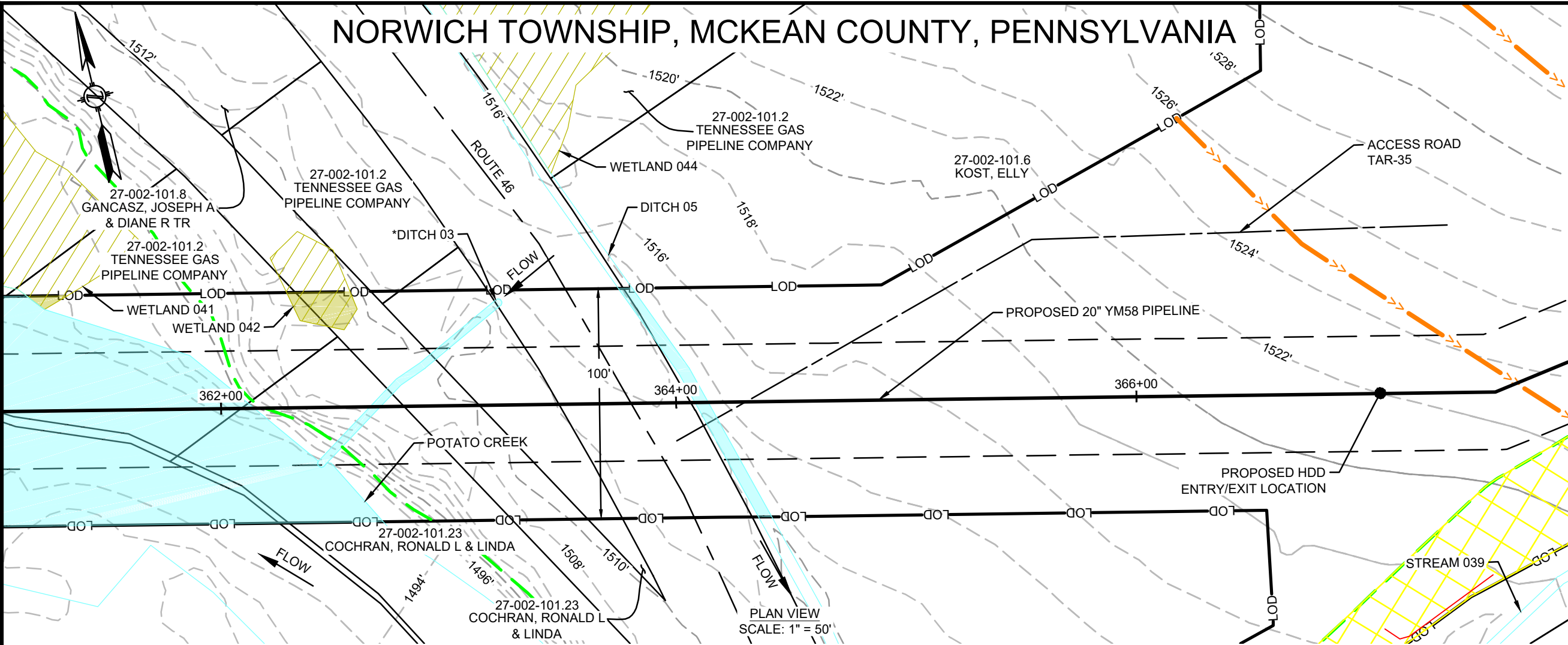
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT

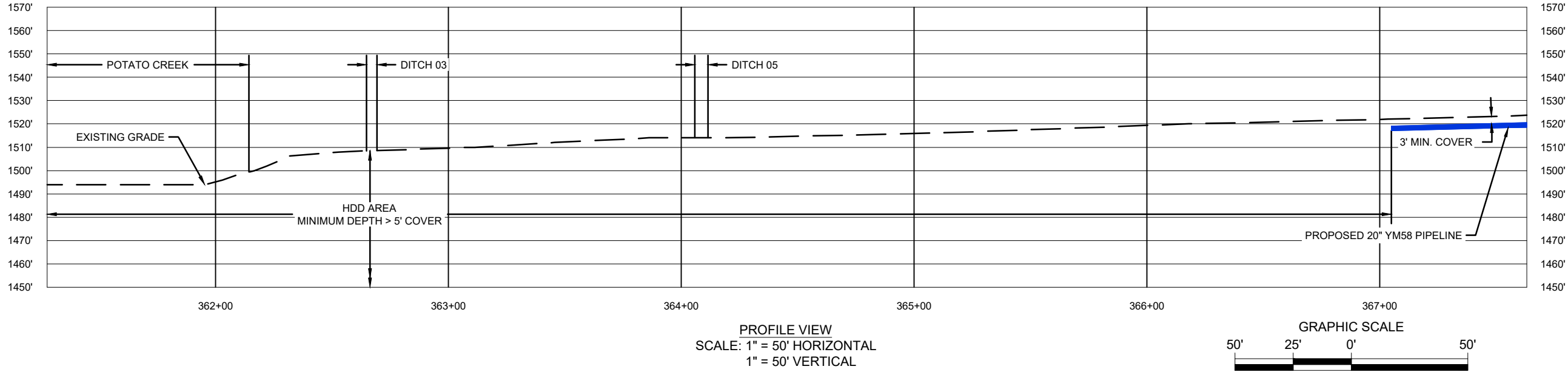
WETLAND & STREAM CROSSING PLAN
PROPOSED 20" YM58 PIPELINE
NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA
M.P. 6.7

SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-023	B

NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



*DITCH 03 DOES NOT CONTRIBUTE PERENNIAL OR INTERMITTENT SURFACE WATER FLOW TO OTHER JURISDICTIONAL WATERS OF THE COMMONWEALTH, AS SUCH, IT IS NOT A REGULATED WATER AND IS NOT INCLUDED ON THE ARIT TABLE.



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)		PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WETLAND	WATERCOURSE CHANNEL		
WETLAND 041	WETLAND	0.001	-	-	-	HDD	N/A
WETLAND 042	WETLAND	0.008	-	-	-	HDD	N/A
POTATO CREEK	WATERBODY	-	0.522	1.337	1.315	HDD	N/A
DITCH 05-1	WATERBODY	-	0.013	-	<0.001	HDD	N/A
STREAM 039							

REFER TO DWGWSS-MCK-ML-025 FOR IMPACT ACRES

12/18/2020 10:36 AM - HECTOR MORALES
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REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



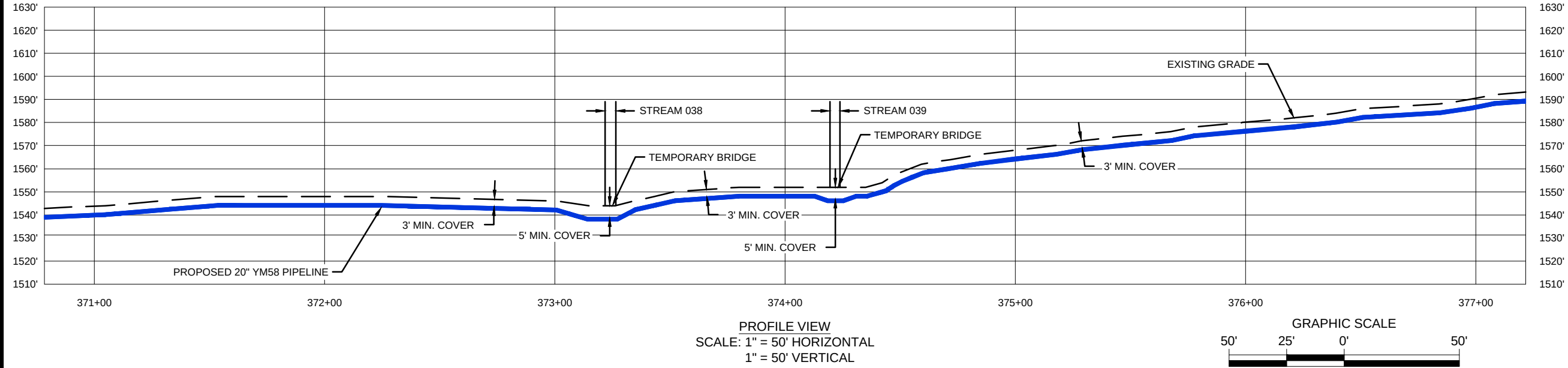
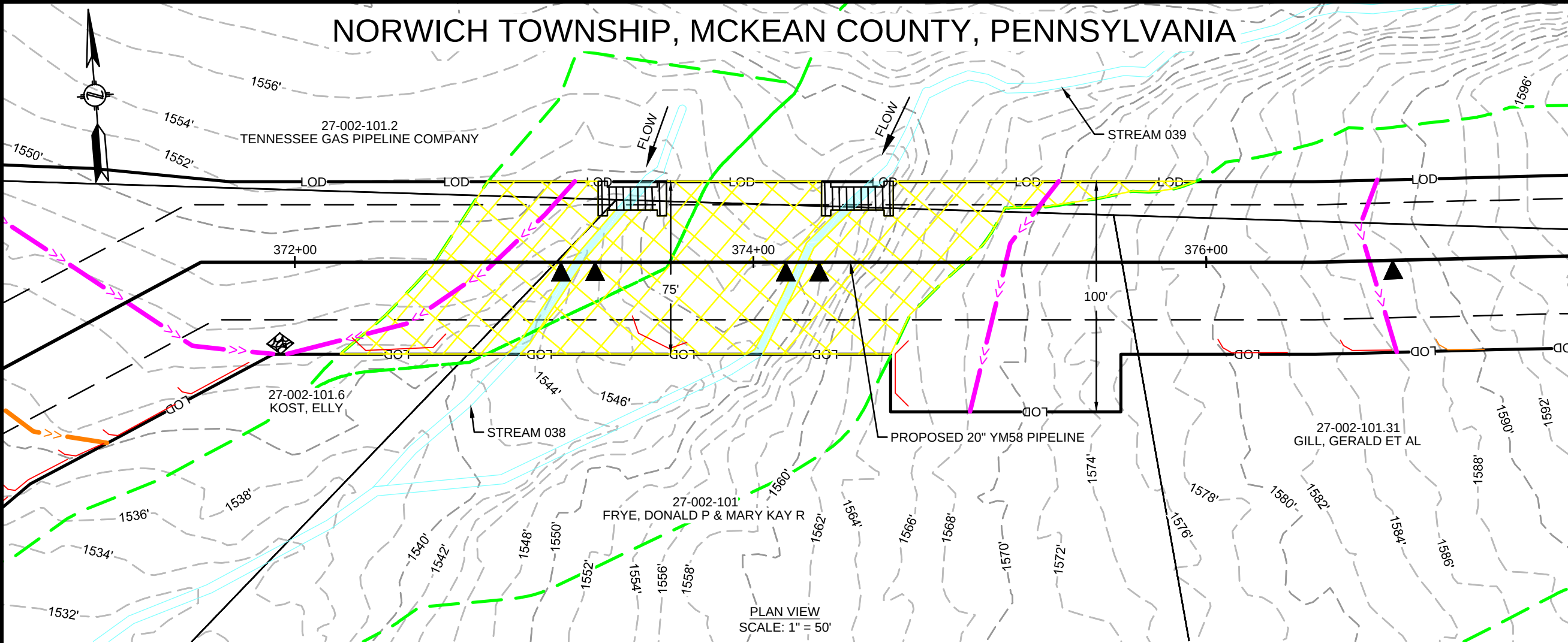
PREPARED BY:



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UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 6.8		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-024	C

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REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

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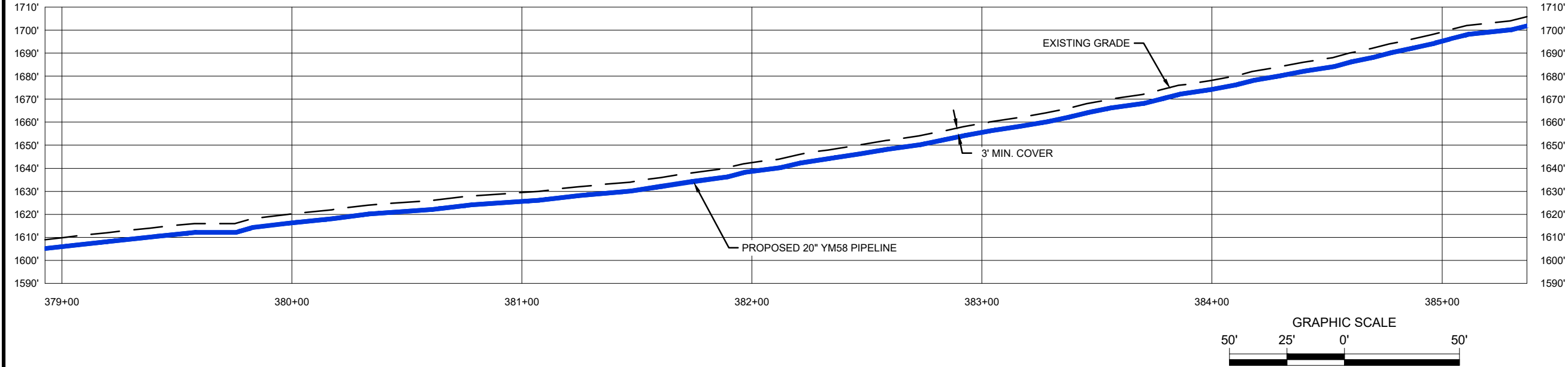
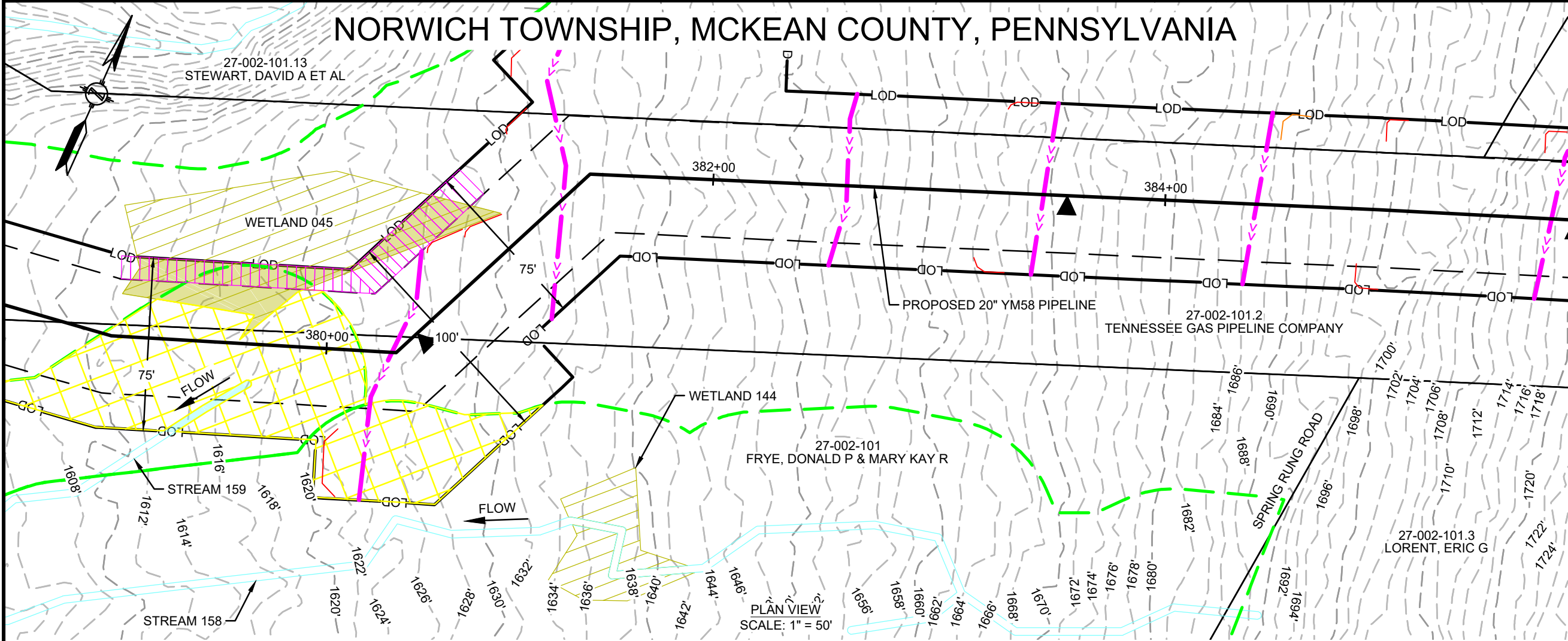
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UNITED STATES
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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 7.1		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-025	C

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
STREAM 038	WATERBODY	-	0.009	0.045	-	<0.001	0.104	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT
STREAM 039	WATERBODY	-	0.009	0.338	-	<0.001	0.157	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT

NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

**National Fuel**
SUPPLY CORPORATION

PREPARED BY:

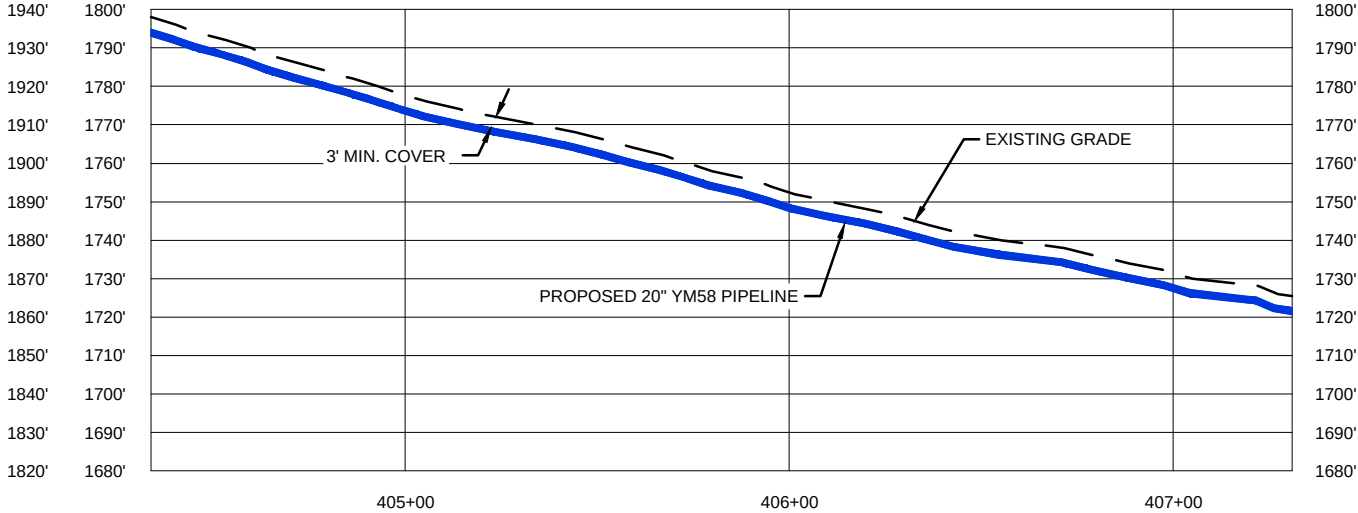
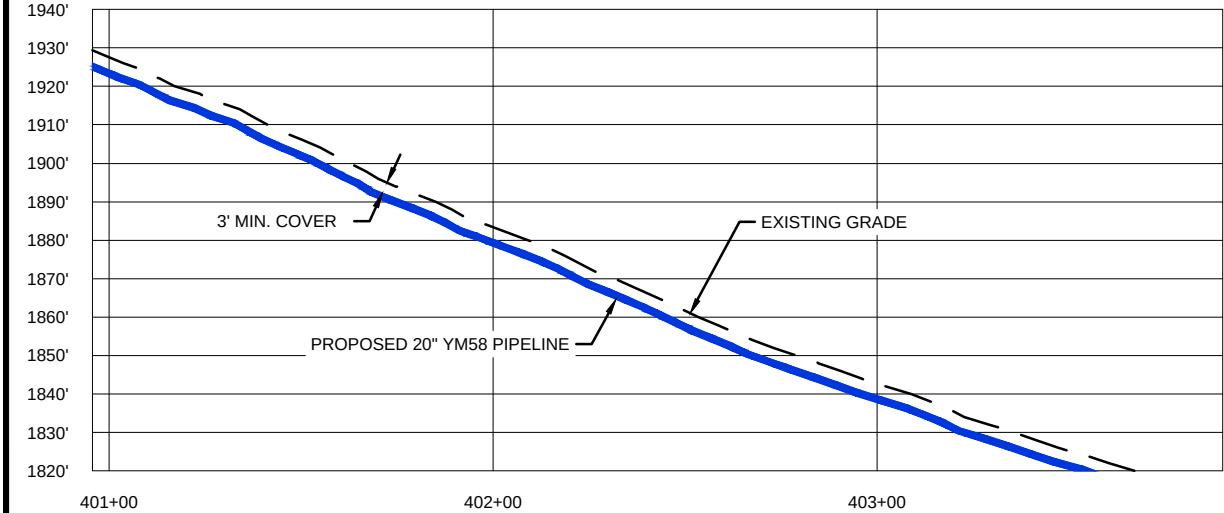
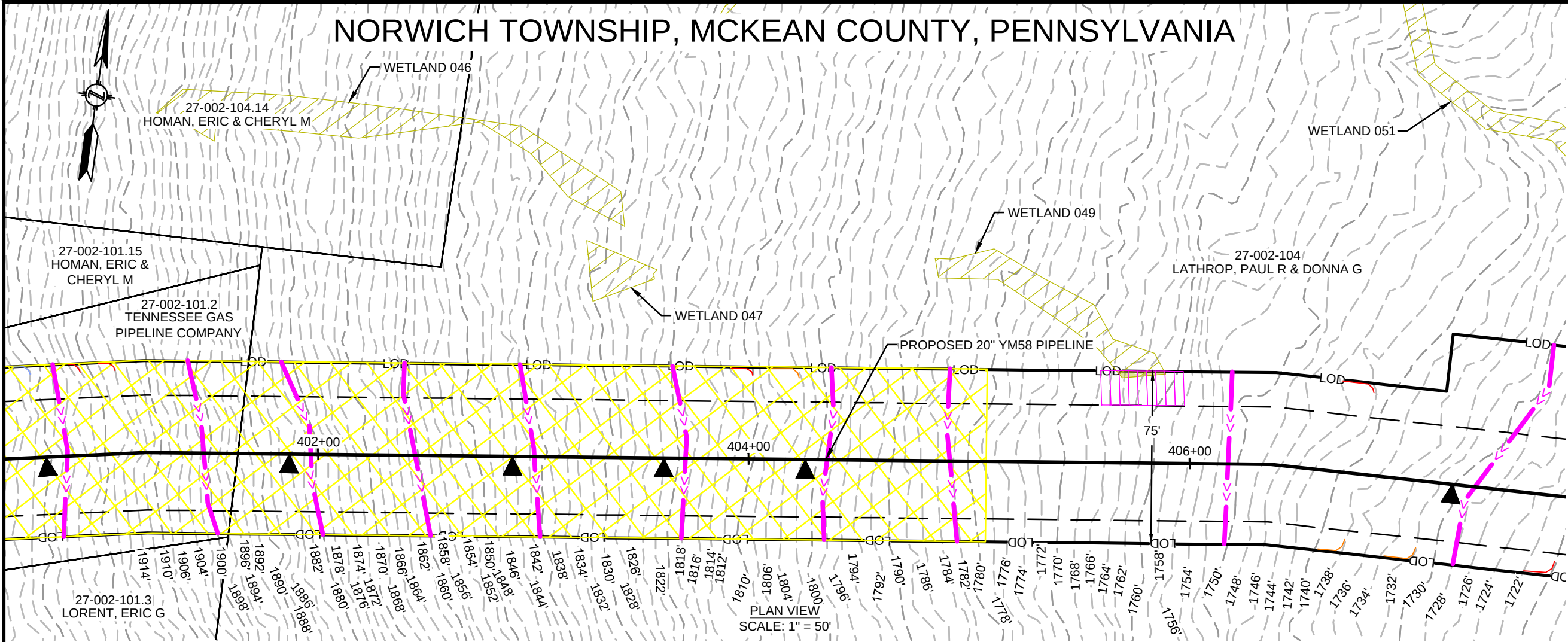
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SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

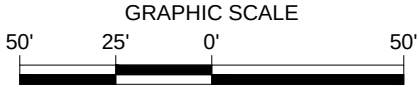
FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 7.2		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-026	C

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)		PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WETLAND	WATERCOURSE CHANNEL		
WETLAND 045	WETLAND	0.050	-	-	-	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT
STREAM 159	WATERBODY	-	0.003	-	-	N/A - WORKSPACE	N/A
STREAM 158	WATERBODY	-	-	-	-	N/A - WORKSPACE	N/A

NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



PROFILE VIEW
SCALE: 1" = 50' HORIZONTAL
1" = 50' VERTICAL



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

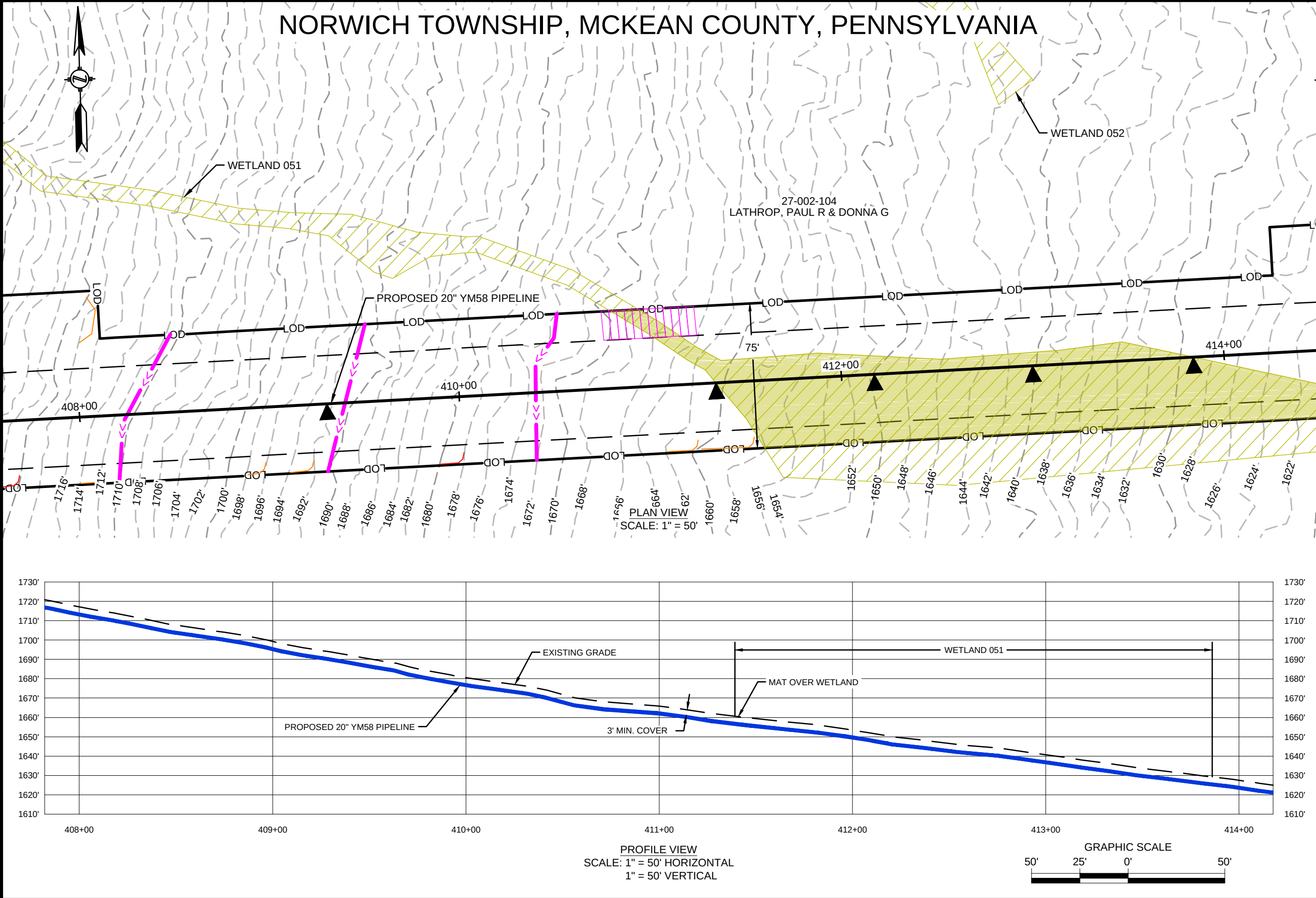


111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 7.7		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-027	C

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 049	WETLAND	0.001	.	.	.	.	.	.	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT

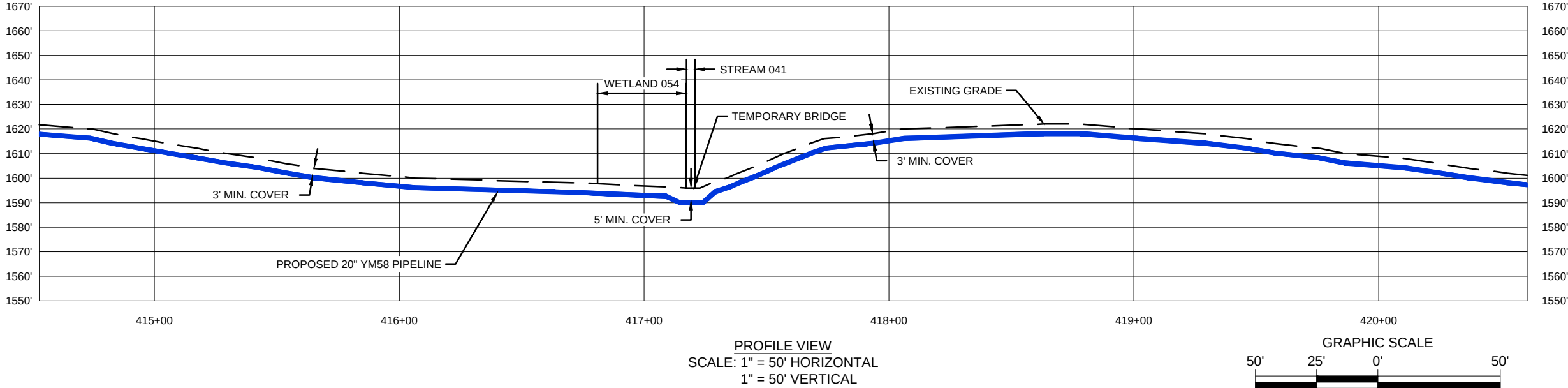
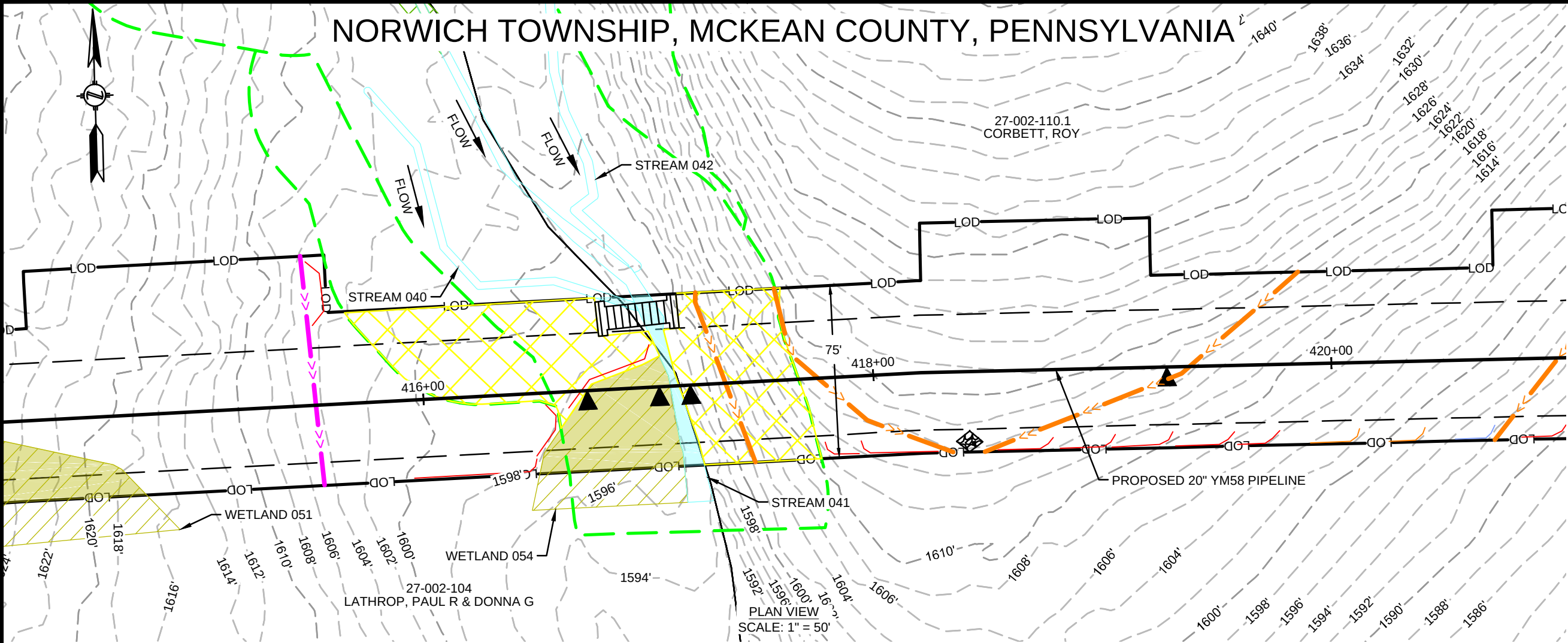
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G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATERSPEC\WSS-MCK-ML-028.DWG



REVISIONS						APPROVALS		PREPARED FOR:	PREPARED BY:	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 7.8		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019			SCALE		
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE			DRAWING NO.		
						KEK (MM)	07/2020			REVISION		
						ENG. APPROVAL	DATE		 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	1" = 50'		
						MJD (MM)	07/2020			WSS-MCK-ML-028		
						P.M. APPROVAL	DATE			B		

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 051	WETLAND	0.284	-	-	0.009	-	-	OPEN CUT	MAT BRIDGE OR EQUIVALENT

9/4/2020 1:05 PM, HECTOR MORALES
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FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 051	WETLAND	0.046	-	-	0.001	-	-	OPEN CUT	N/A
WETLAND 054	WATERBODY	-	0.011	0.051	-	<0.001	0.088	DAM AND PUMP/FLOUME	MAT BRIDGE OR EQUIVALENT
STREAM 041	WATERBODY	-	0.001	0.020	-	-	0.037	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT

REFER TO DWG WSS-MCK-ML-028 FOR IMPACT ACRES

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



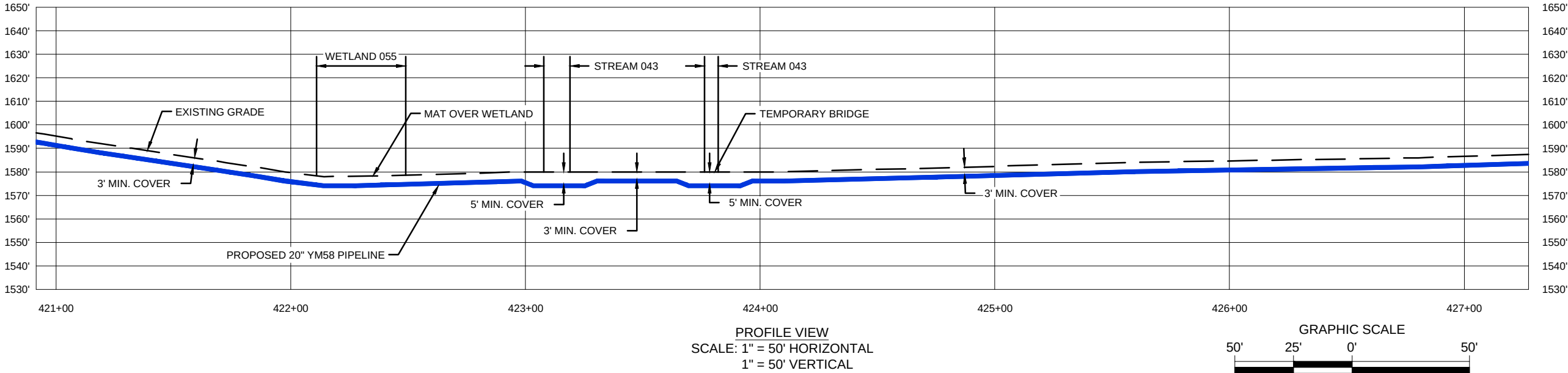
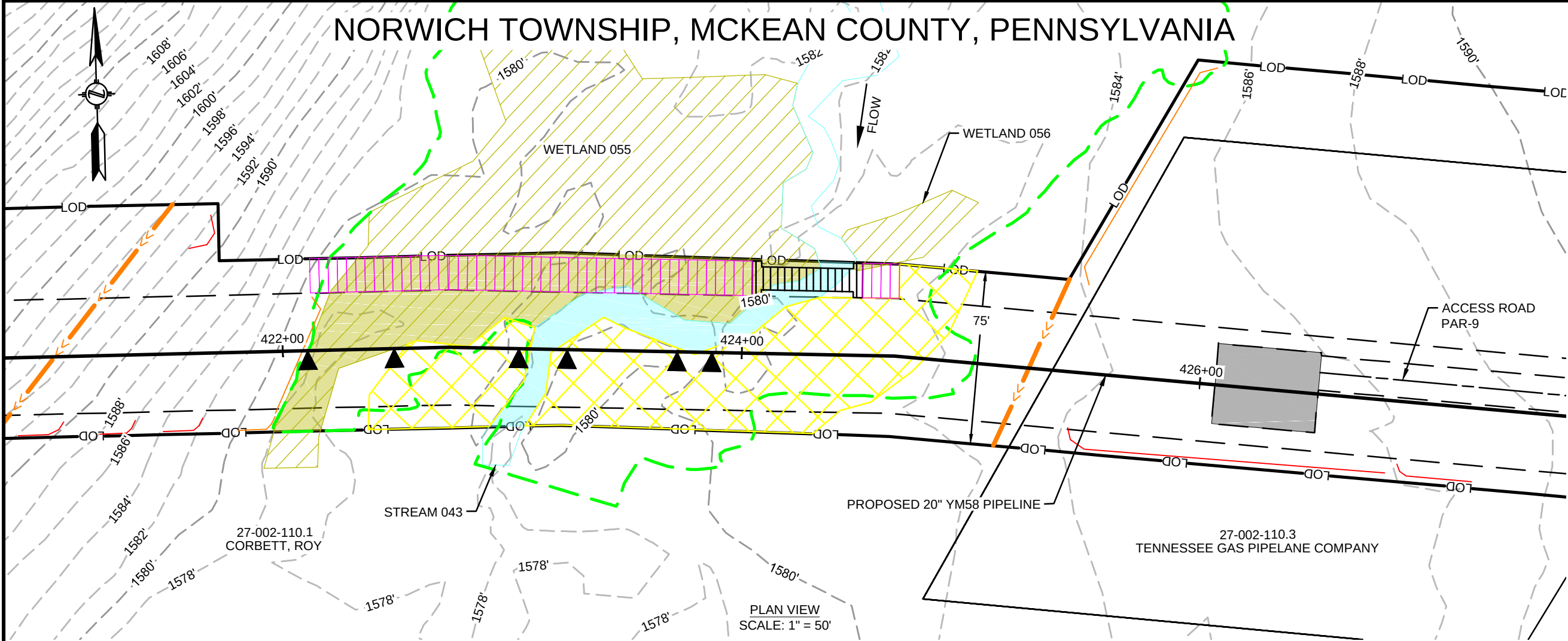
PREPARED BY:



111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 7.9		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-029	B

NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 055	WETLAND	0.147	-	-	0.001	-	-	OPEN CUT	MAT BRIDGE OR EQUIVALENT
WETLAND 056	WETLAND	0.001	-	-	-	-	-	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT
STREAM 043	WATERBODY	-	0.050	0.042	-	0.001	0.170	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

MOTT MACDONALD

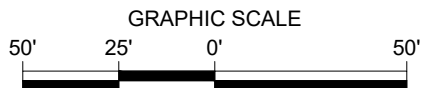
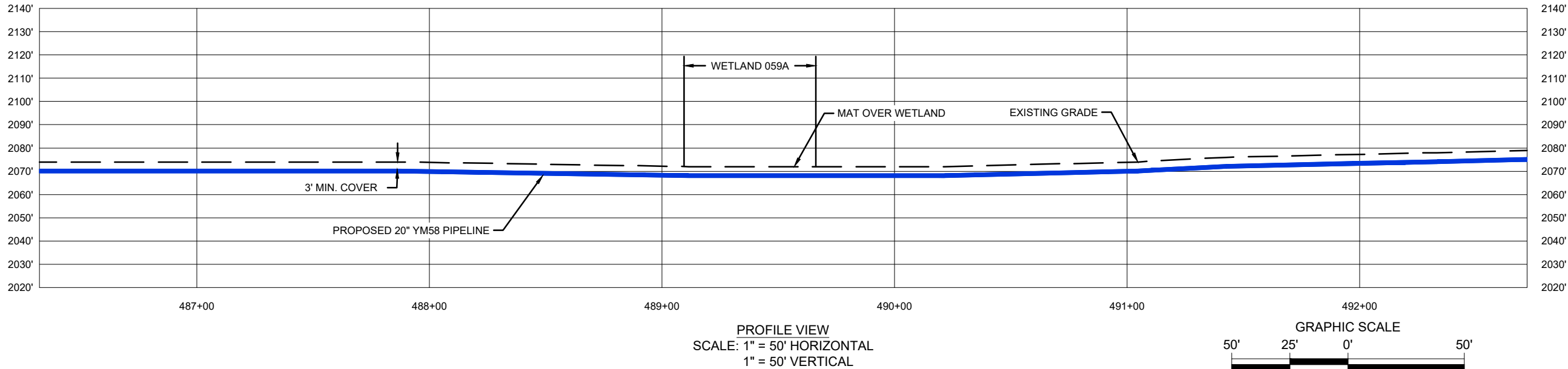
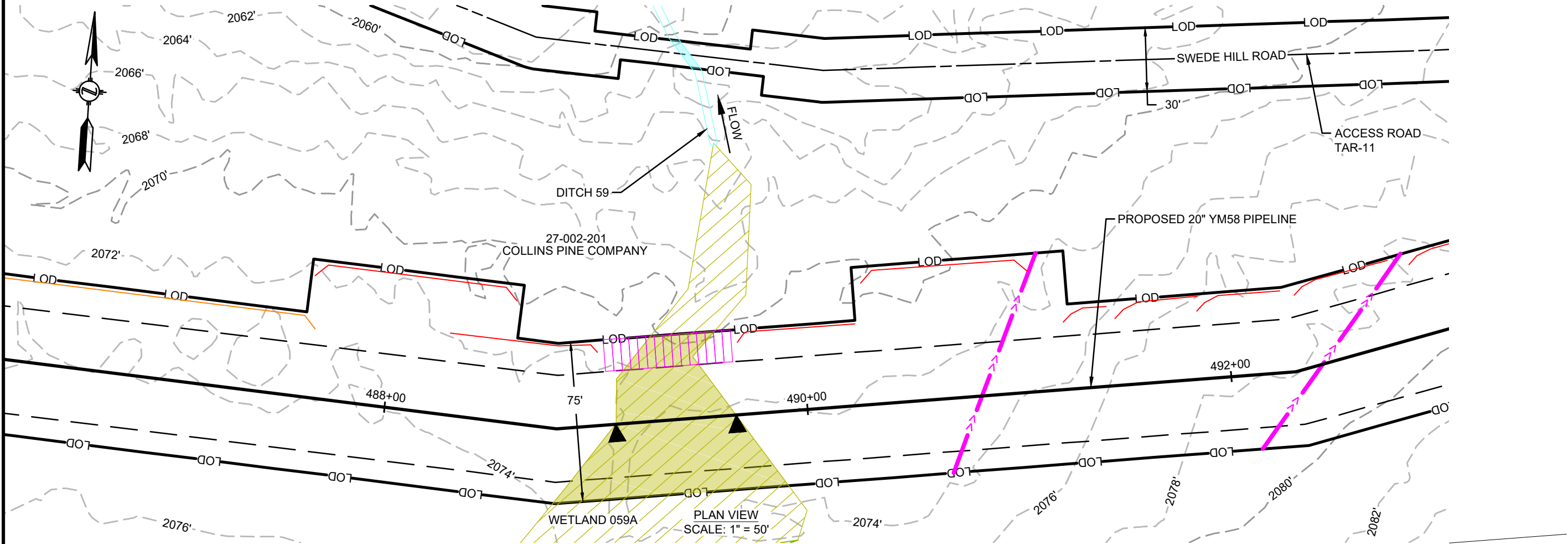
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT

WETLAND & STREAM CROSSING PLAN
PROPOSED 20" YM58 PIPELINE
NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA
M.P. 8.0

SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-030	C

NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 059A	WETLAND	0.104	-	-	0.002	-	-	OPEN CUT	MAT BRIDGE OR EQUIVALENT
DITCH 59	WATERBODY	-	0.001	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
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APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

PREPARED BY:

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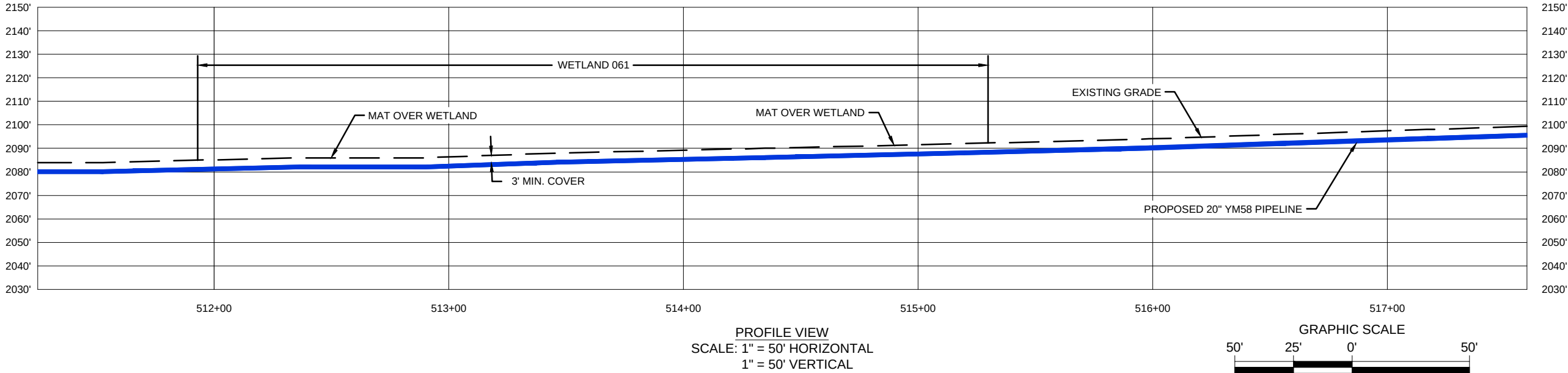
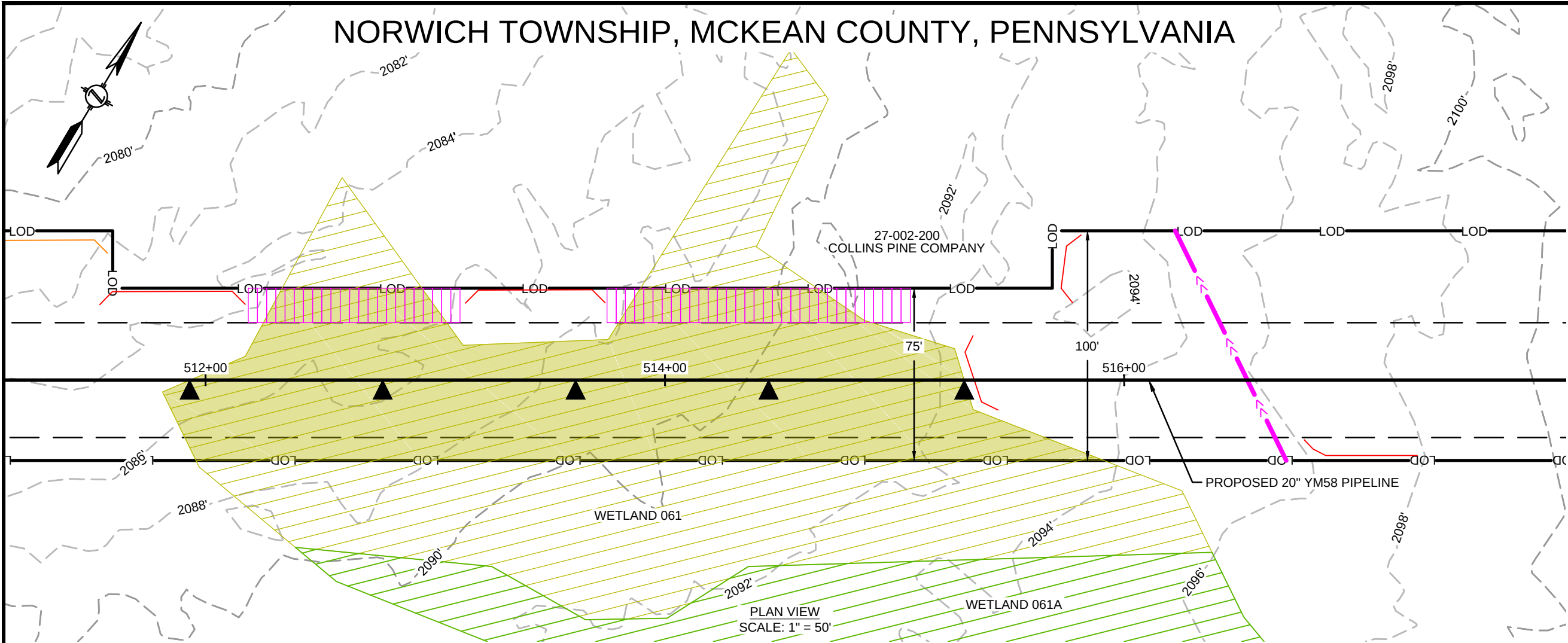
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SOUTH ISELIN, NJ 08830
UNITED STATES
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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 9.2		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-031	C

NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

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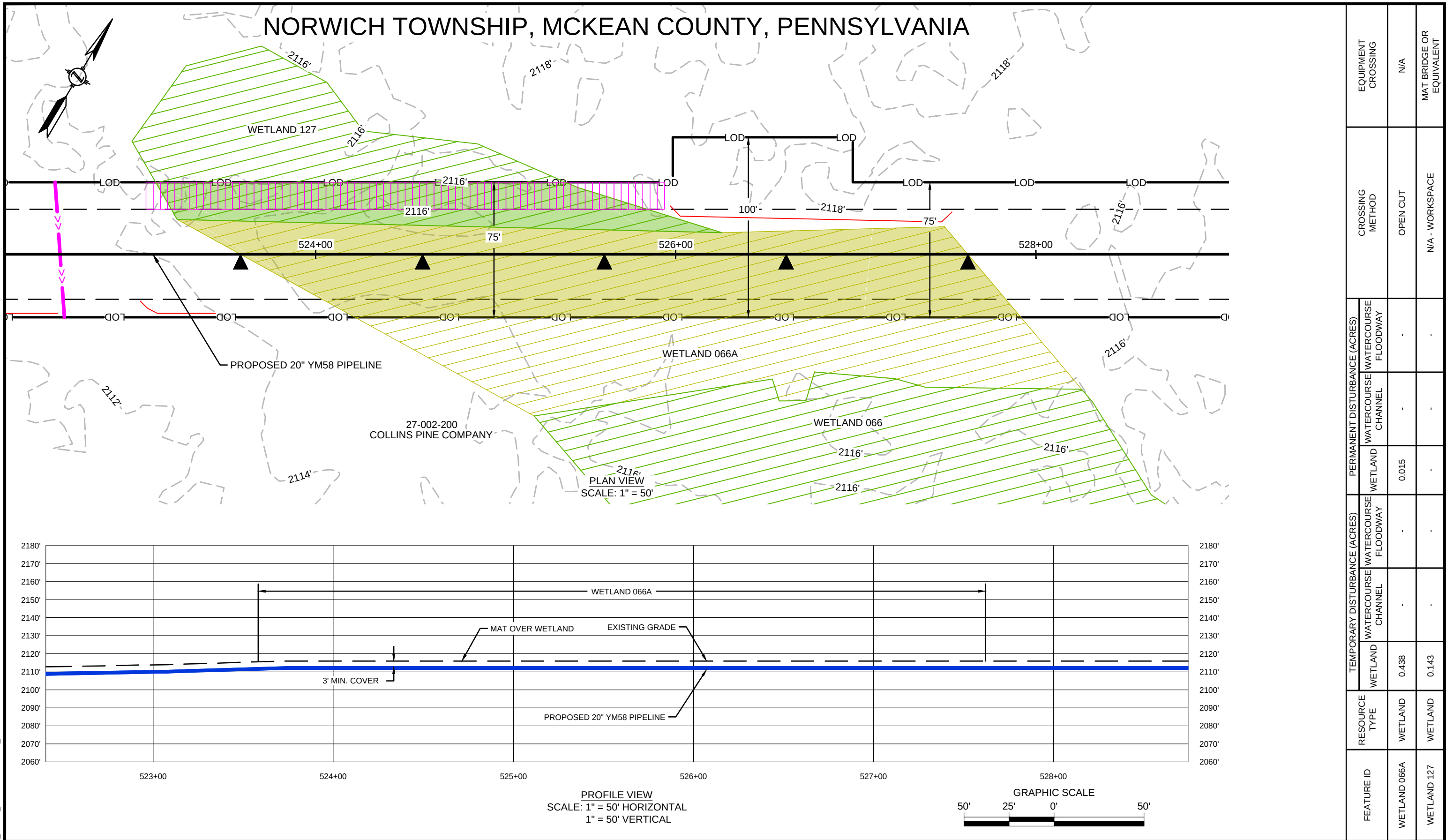
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INFO@MOTTMAC.COM

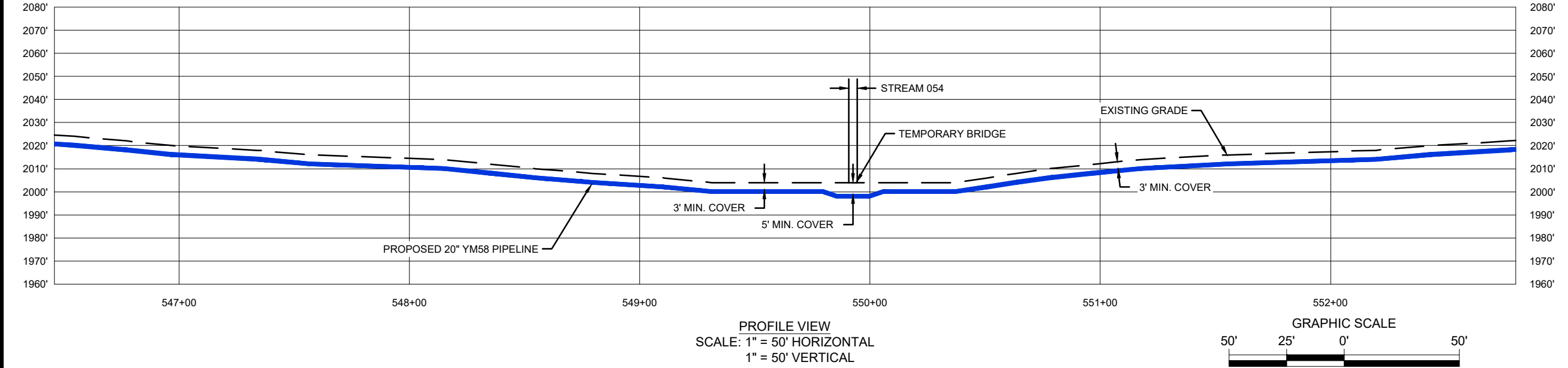
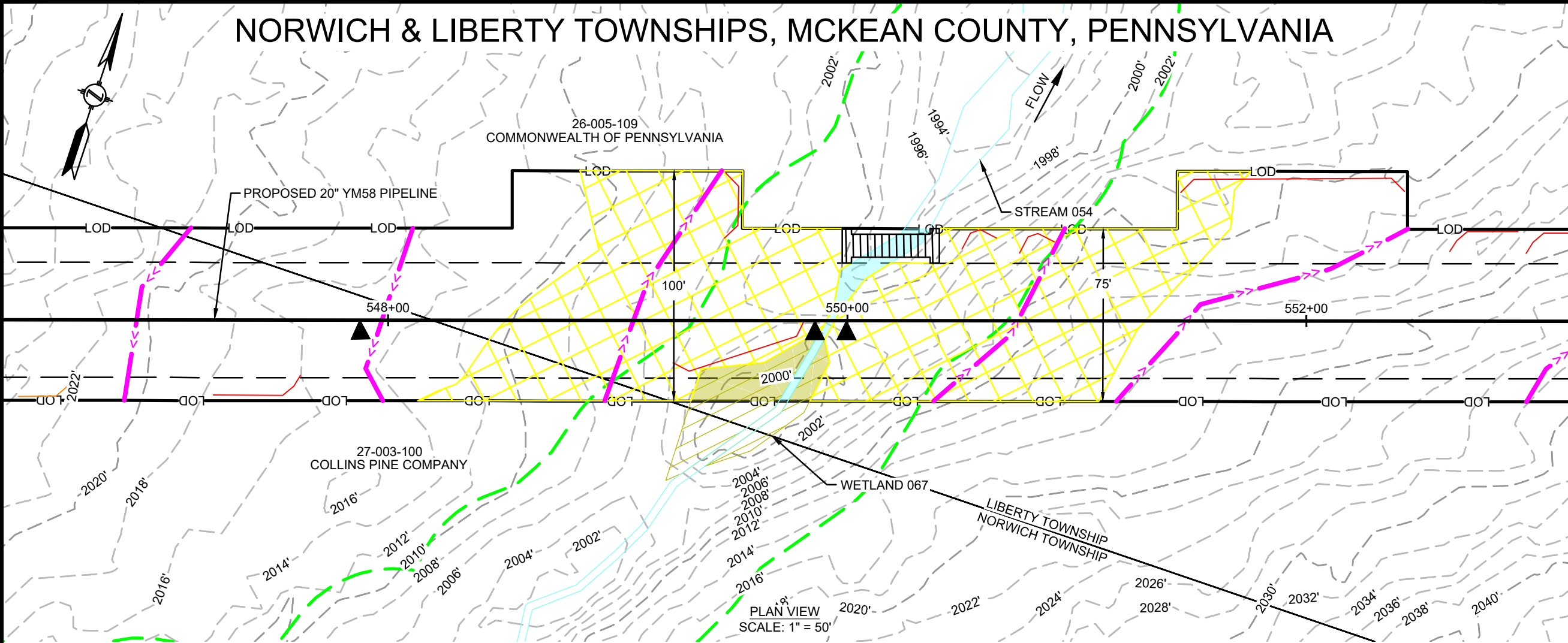
FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 9.7		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-032	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 061	WETLAND	0.496	-	-	0.013	-	-	OPEN CUT	MAT BRIDGE OR EQUIVALENT



REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 9.9		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019					
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE					
						KEK (MM)	07/2019					
						ENG. APPROVAL	DATE					
						MJD (MM)	07/2019					
						P.M. APPROVAL	DATE					
								SCALE 1" = 50'	DRAWING NO. WSS-MCK-ML-033	REVISION B		

12/16/2020 2:30 PM, HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATERSPECIFIC\WSS-MCK-ML-034.DWG



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

PREPARED BY:

M

M

MOTT
MACDONALD

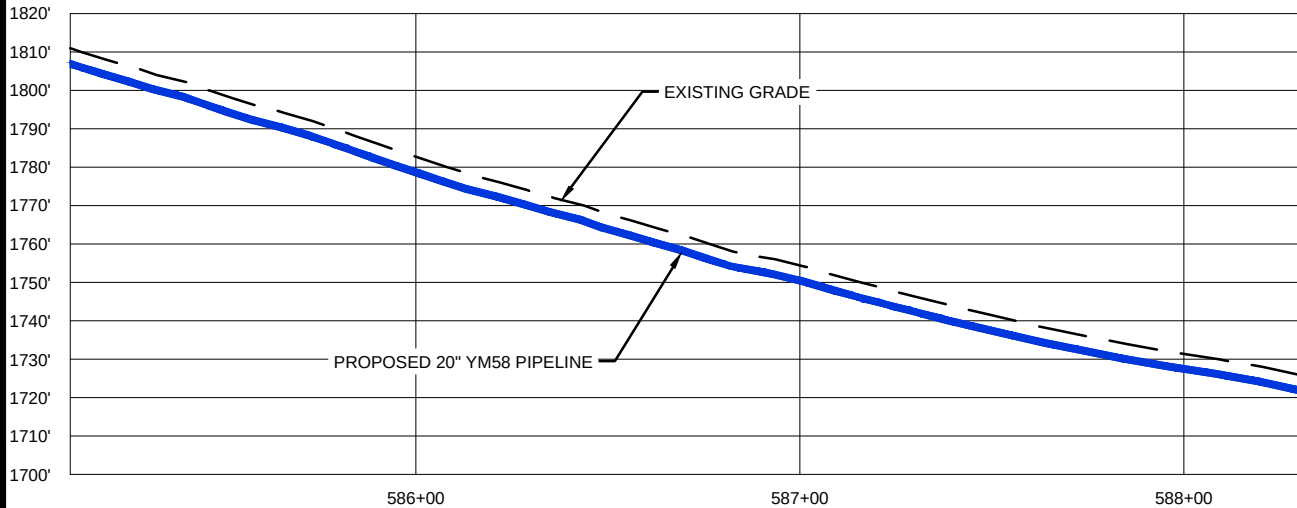
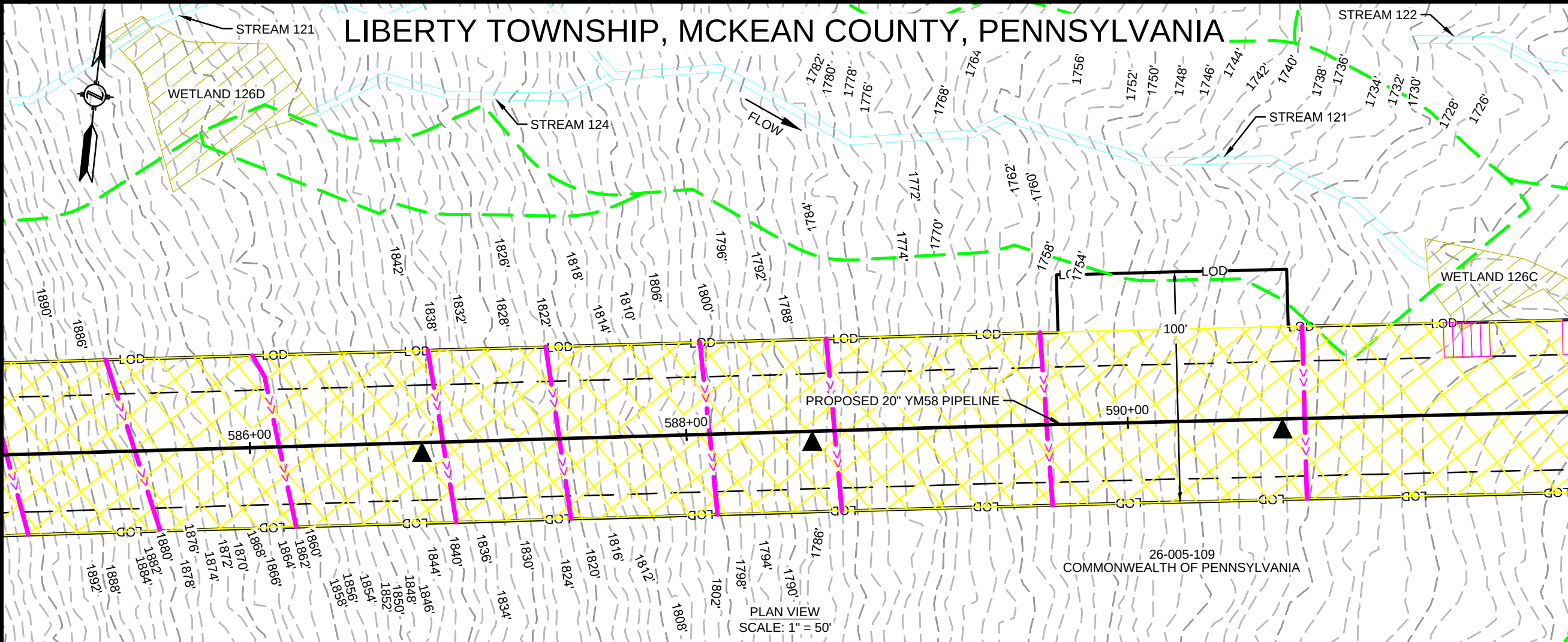
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH & LIBERTY TOWNSHIPS, MCKEAN COUNTY, PENNSYLVANIA M.P. 10.4		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-034	C

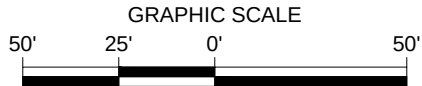
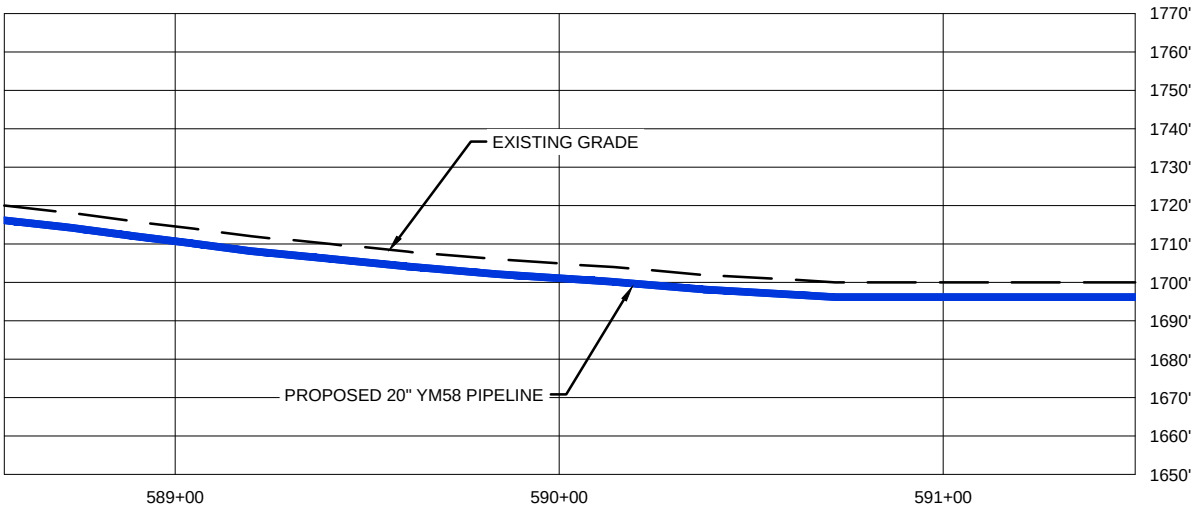
FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	FLOODWAY	WETLAND	WATERCOURSE CHANNEL	FLOODWAY		
WETLAND 067	WETLAND	0.022	-	-	-	-	-	N/A - WORKSPACE	N/A
STREAM 054	WATERBODY	-	0.013	0.064	-	<0.001	0.138	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT

9/4/2020 1:10 PM, HECTOR MORALES

G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PIPELINE\PROJECT\PIPELINE\DRAWING\WETLAND\WATERSPEC\WSS-MCK-ML-035.DWG



PROFILE VIEW
SCALE: 1" = 50' HORIZONTAL
1" = 50' VERTICAL



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:



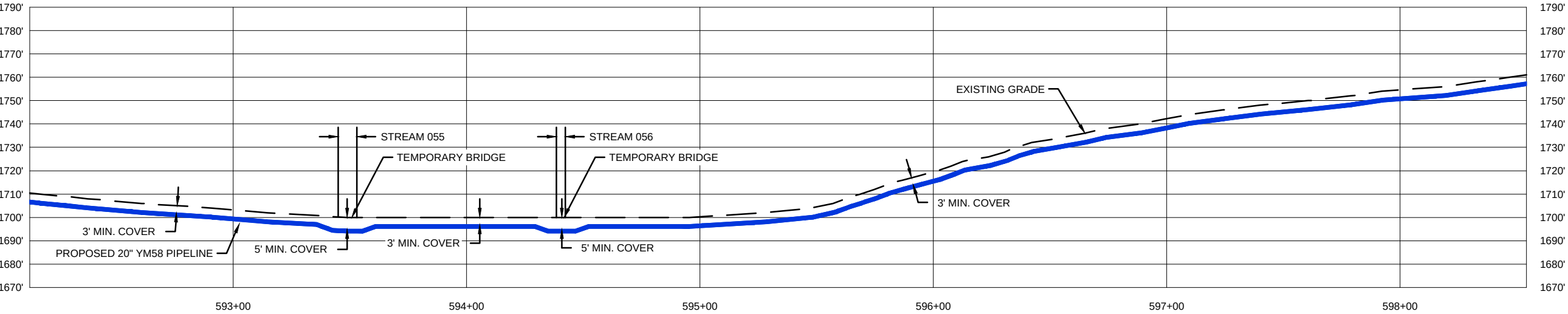
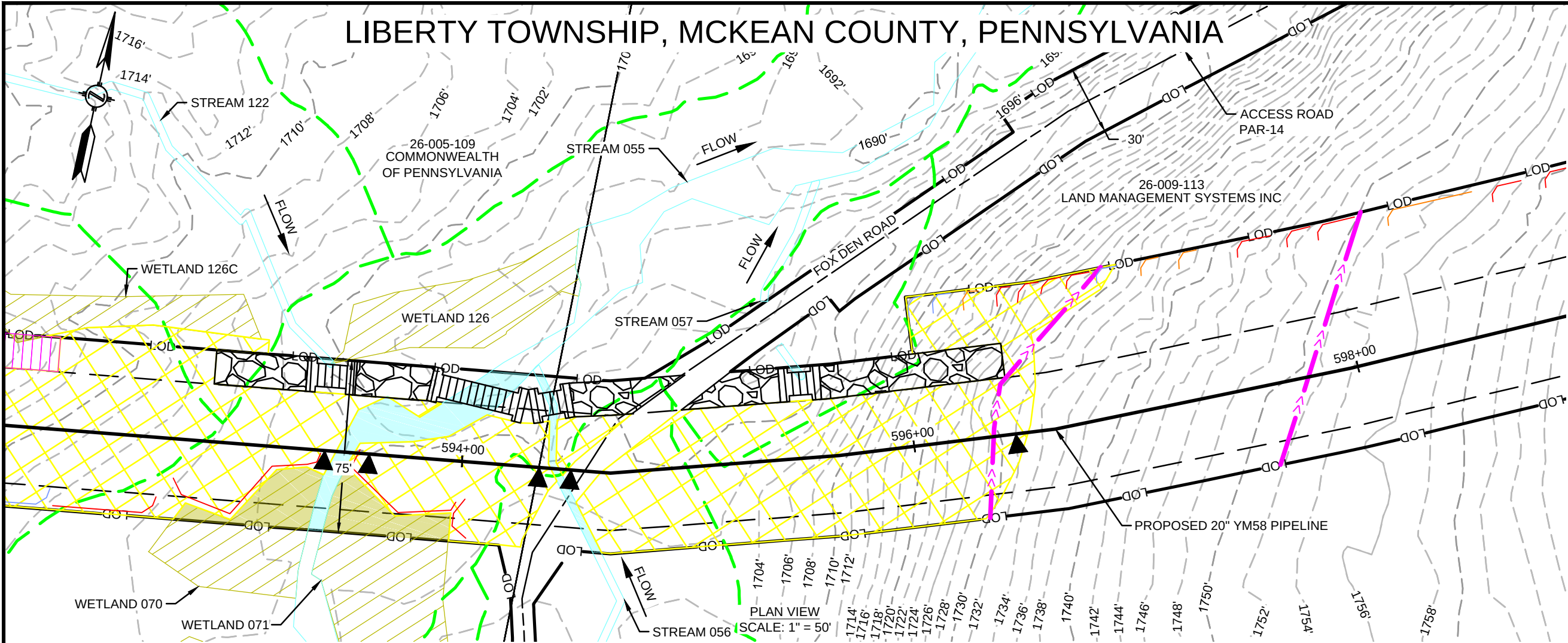
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 11.1		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-035	B

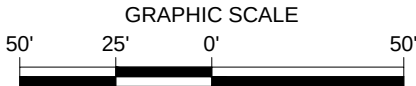
FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE	FLOODWAY	WETLAND	WATERCOURSE	FLOODWAY		
STREAM 121	WATERBODY	-	-	0.014	-	-	-	N/A - WORKSPACE	N/A
WETLAND 126C									

REFER TO DWG WSS-MCK-ML-036 FOR IMPACT ACRES

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



PROFILE VIEW
SCALE: 1" = 50' HORIZONTAL
1" = 50' VERTICAL



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M
MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 11.2		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-036A	B

12/16/2020 2:31 PM, HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATER SPECIFICS\WSS-MCK-ML-036.DWG

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 071	WETLAND	0.018	-	-	-	-	-	N/A - WORKSPACE	N/A
WETLAND 070	WETLAND	0.019	-	-	-	-	-	N/A - WORKSPACE	N/A
WETLAND 126	WETLAND	<0.001	-	-	-	-	-	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT
WETLAND 126C	WETLAND	0.001	-	-	-	-	-	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT
STREAM 055	WATERBODY	-	0.032	0.065	-	<0.001	0.130	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT
STREAM 056	WATERBODY	-	0.006	0.213	-	<0.001	0.073	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT
STREAM 057	WATERBODY	-	<0.001	0.085	-	-	0.023	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT
STREAM 122	WATERBODY	-	<0.001	0.012	-	-	0.005	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT

REVISIONS						APPROVALS	
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD	KEK (MM)	07/2019
						ENG. APPROVAL	DATE
						MJD (MM)	07/2019
						P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

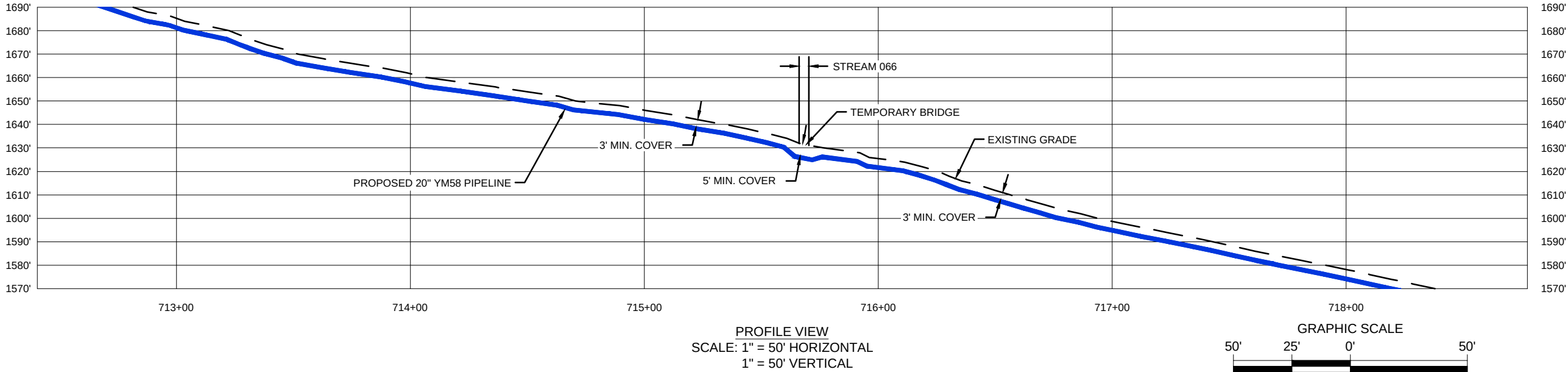
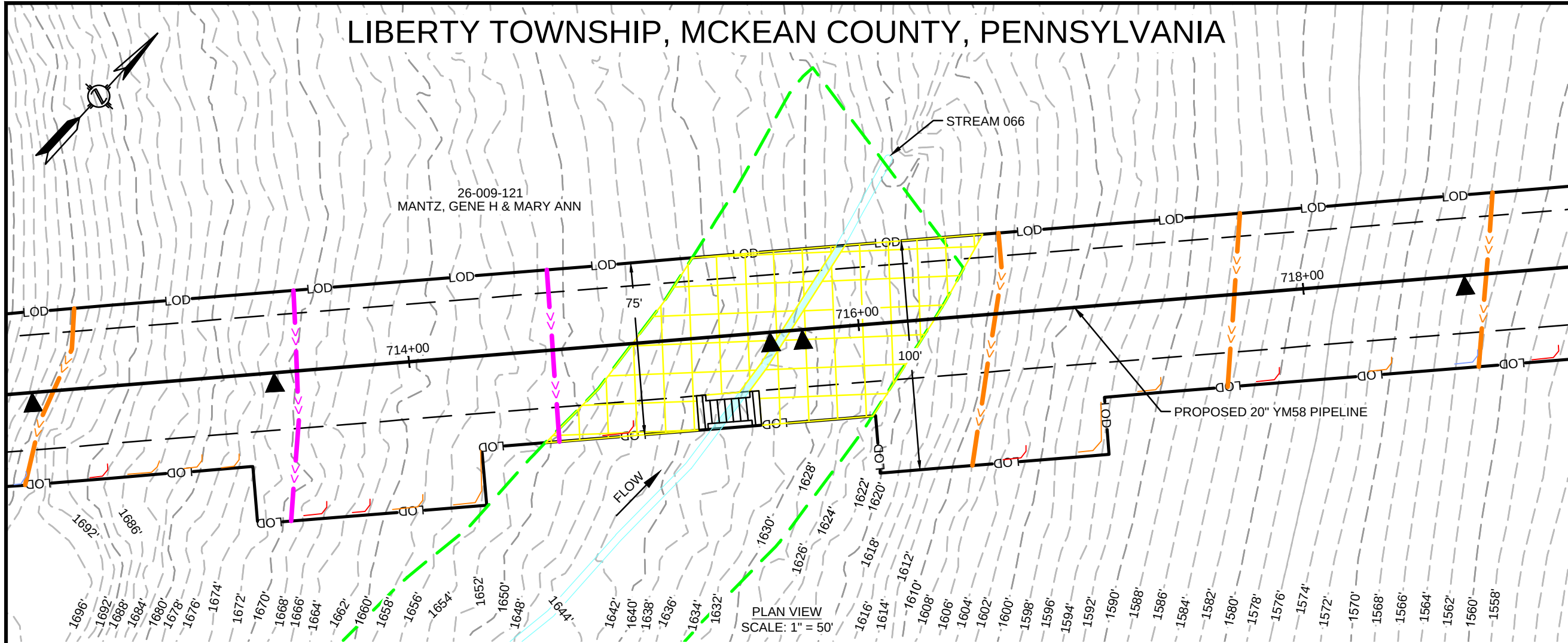
MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 11.2		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-036B	C

9/4/2020 1:12 PM, HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATERSPECIFICS\WSS-MCK-ML-037.DWG

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:



**MOTT
MACDONALD**

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 13.5		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-037	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL		
STREAM 066	WATERBODY	-	0.007	0.072	-	<0.001	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT

9/4/2020 1:13 PM, HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATER SPECIFIC\WSS-MCK-ML-038.DWG

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



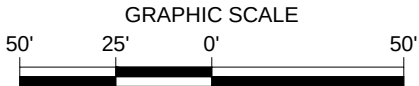
26-009-115
YOUNG, JAMES R & JULIE R

26-009-121
MANTZ, GENE H & MARY ANN

PLAN VIEW
SCALE: 1" = 50'

DITCH 09

FLOW



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

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SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

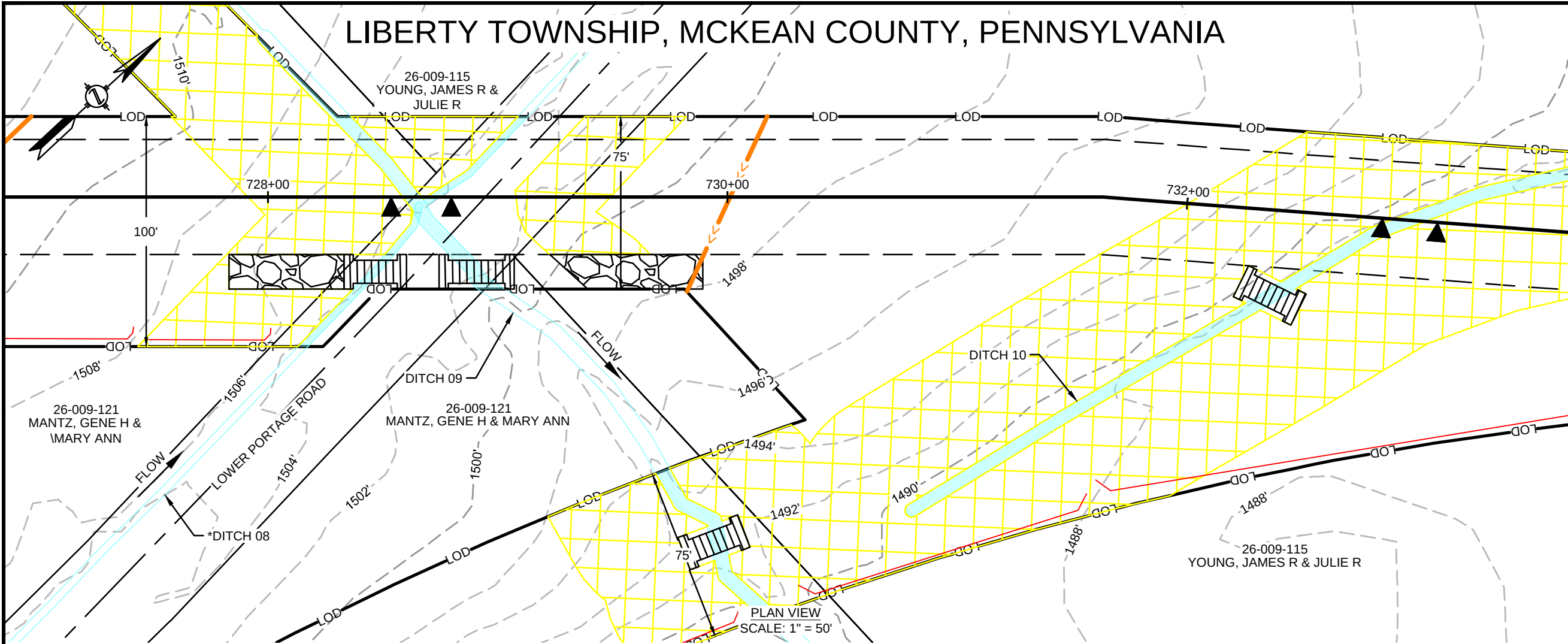
FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 13.8		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-038	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
DITCH 09									

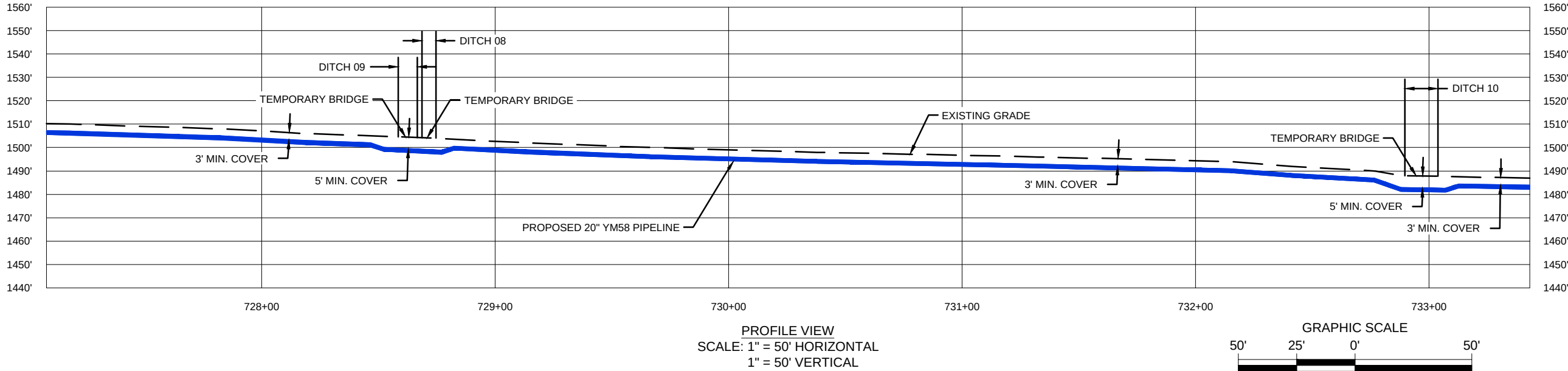
REFER TO DWG WSS-MCK-ML-039 FOR IMPACT ACRES

12/18/2020 11:35 AM - HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATER SPECIFICS\WSS-MCK-ML-039.DWG

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



*DITCH 08 DOES NOT CONTRIBUTE PERENNIAL OR INTERMITTENT SURFACE WATER FLOW TO OTHER JURISDICTIONAL WATERS OF THE COMMONWEALTH, AS SUCH, IT IS NOT A REGULATED WATER AND IS NOT INCLUDED ON THE ARIT TABLE.



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
DITCH 09	WATERBODY	-	0.034	-	-	<0.001	-	DRY CROSSING IF NO FLOW / DAM AND PUMP	MAT BRIDGE OR EQUIVALENT
DITCH 10									

REFER TO DWG WSS-MCK-ML-040 FOR IMPACT ACRES

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

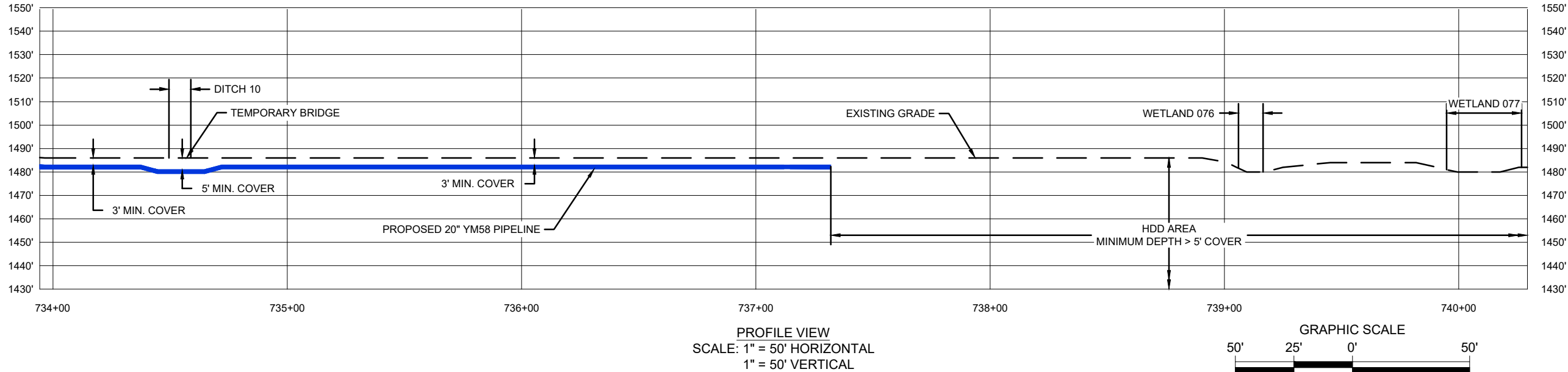
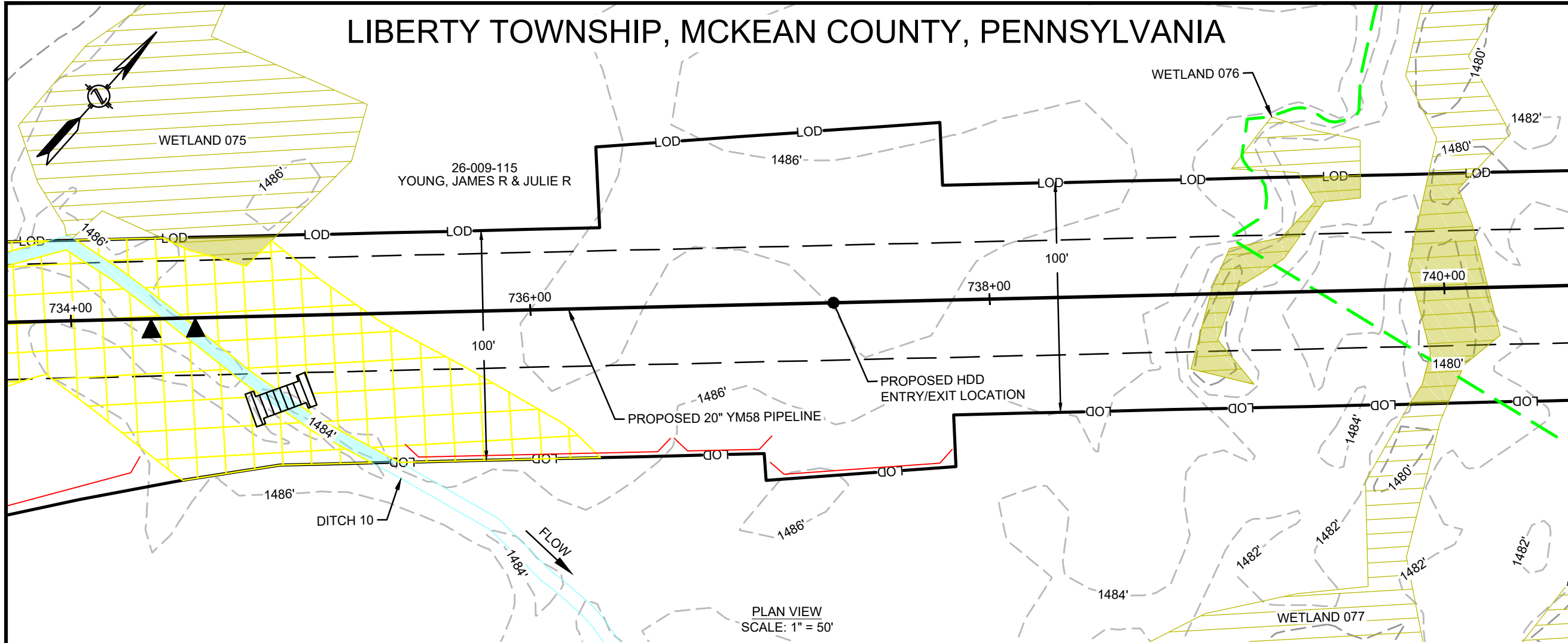


111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 13.8		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-039	C

12/16/2020 2:33 PM, HECTOR MORALES
G:\NATIONAL FUEL\GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATERSPEC\WSS-MCK-ML-040.DWG

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 077	WETLAND	0.055	-	-	0.001	-	-	HDD	N/A
WETLAND 076	WETLAND	0.028	-	-	<0.001	-	-	HDD	N/A
WETLAND 075	WETLAND	0.008	-	-	-	-	-	N/A - WORKSPACE	N/A
DITCH 10	WATERBODY	-	0.071	-	-	0.001	-	DRY CROSSING IF NO FLOW / DAM AND PUMP	MAT BRIDGE OR EQUIVALENT

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

GRAPHIC SCALE

50'

25'

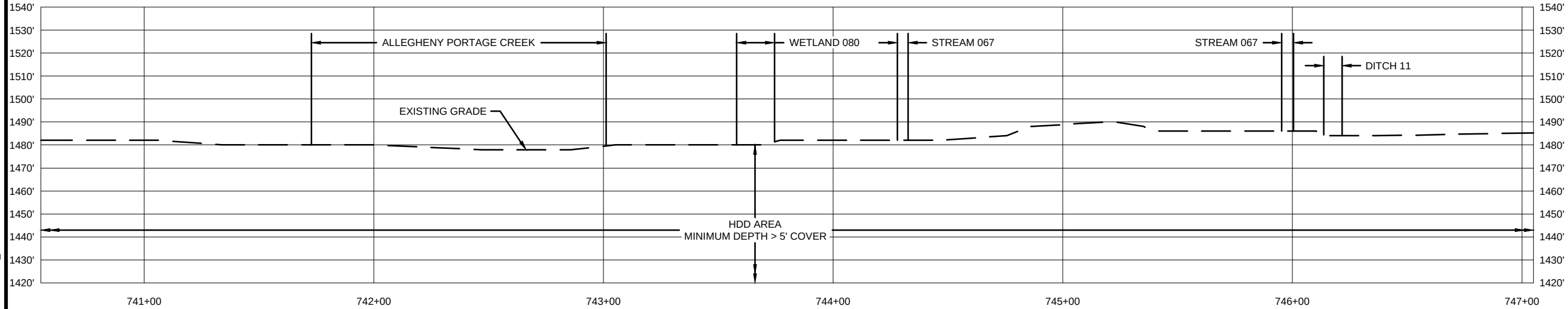
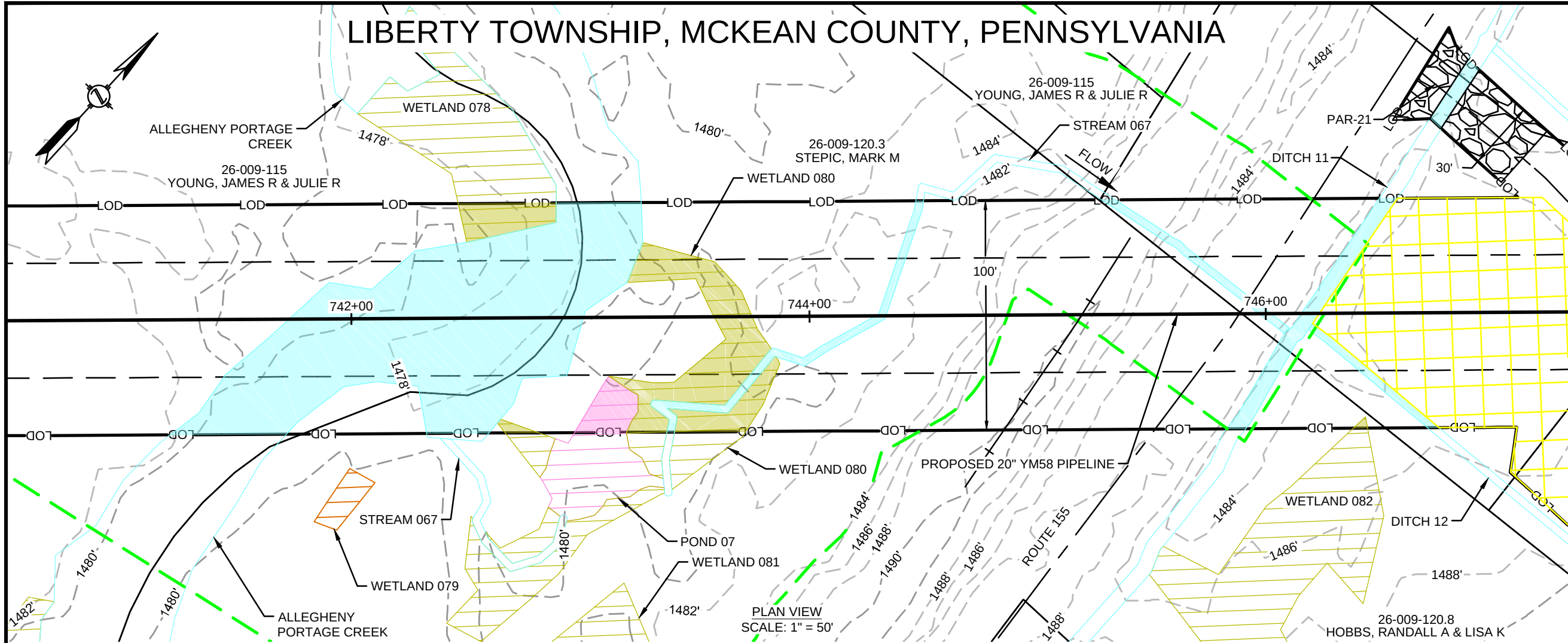
0'

50'

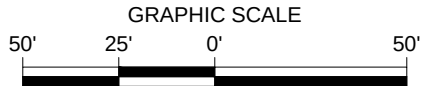
FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 14.0		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-040	C

9/4/2020 1:15 PM, HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATERSPEC\WSS-MCK-ML-041.DWG

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



PROFILE VIEW
SCALE: 1" = 50' HORIZONTAL
1" = 50' VERTICAL



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

National Fuel
SUPPLY CORPORATION

PREPARED BY:

M
MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 14.1		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-041A	B

9/4/2020 1:16 PM, HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATER SPECIFICS\WSS-MCK-ML-041.DWG

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 082	WETLAND	<0.001	-	-	-	-	-	HDD	N/A
WETLAND 080	WETLAND	0.057	-	-	0.001	-	-	HDD	N/A
WETLAND 078	WETLAND	0.012	-	-	-	-	-	HDD	N/A
STREAM 067	WATERBODY	-	0.021	-	-	<0.001	-	HDD	N/A
ALLEGHENY PORTAGE CREEK	WATERBODY	-	0.233	0.513	-	0.005	0.513	HDD	N/A
POND 07	WETLAND	0.010	-	-	-	-	-	HDD	N/A
DITCH 11-1	WATERBODY	-	0.018	-	-	<0.001	-	HDD	N/A
DITCH 11-2	WATERBODY	-	0.005	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
DITCH 12	REFER TO DWG WSS-MCK-ML-042 FOR IMPACT ACREAGES								

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

MOTT MACDONALD

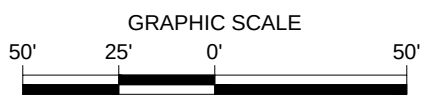
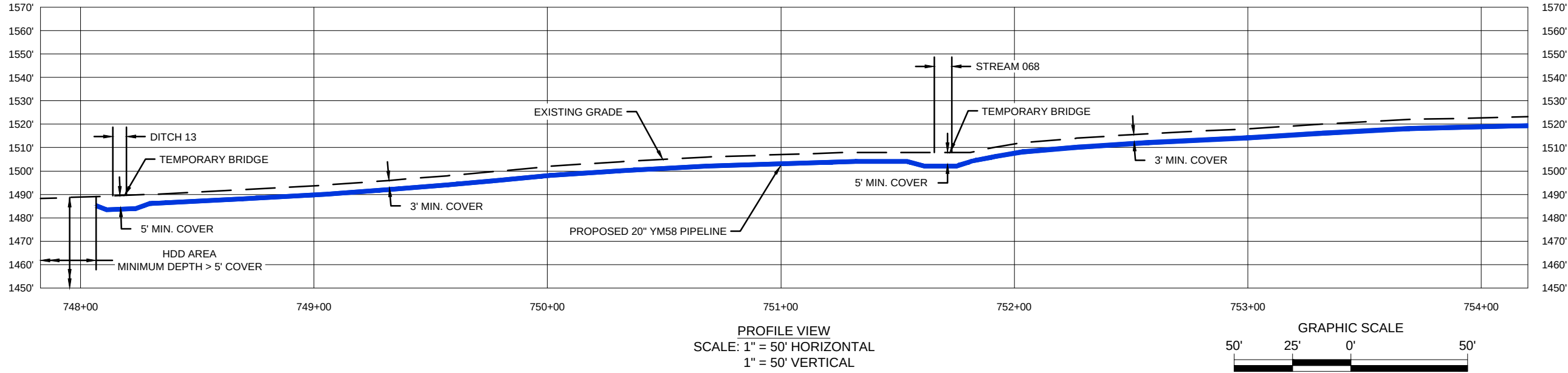
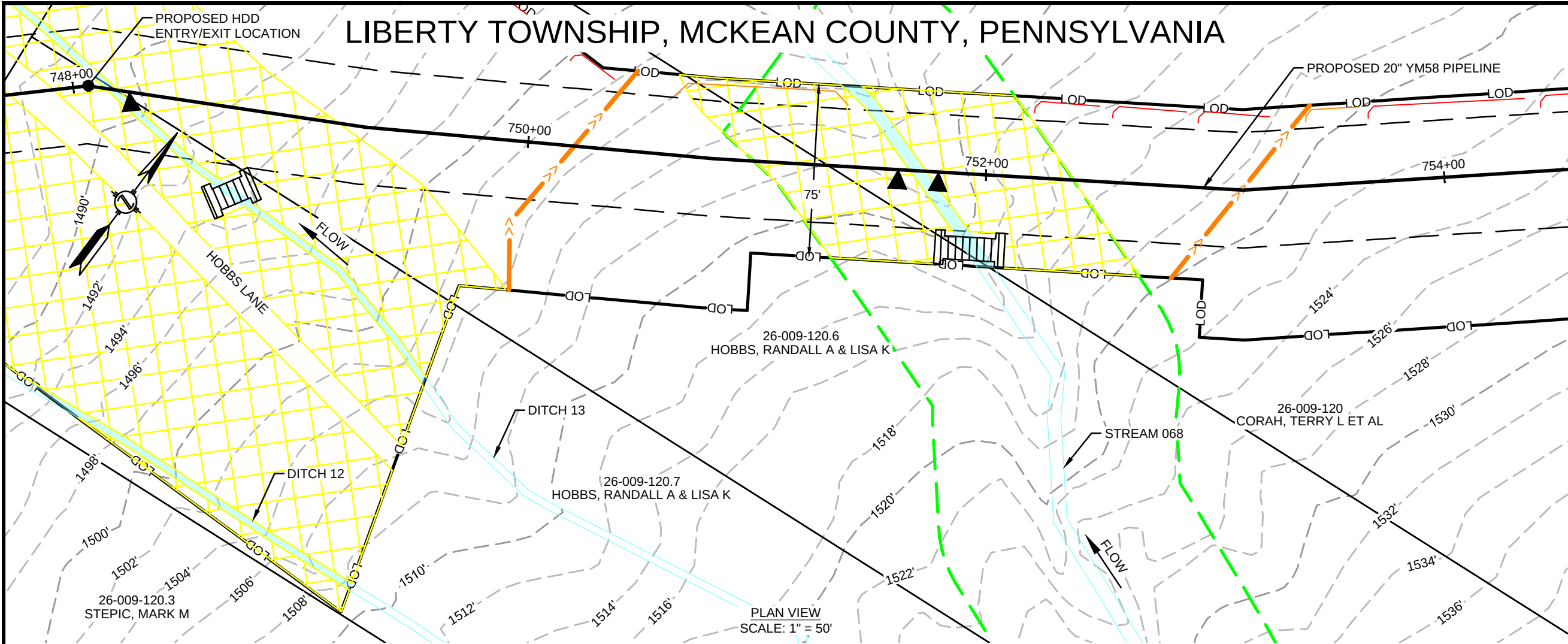
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 14.1		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-041B	B

12/17/2020 12:40 PM - HECTOR MORALES
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LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)		PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WETLAND	WATERCOURSE CHANNEL		
STREAM 068	WATERBODY	-	0.013	-	0.148	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT
DITCH 12	WATERBODY	-	0.017	-	-	N/A - WORKSPACE	N/A
DITCH 13	WATERBODY	-	0.019	-	-	DRY CROSSING IF NO FLOW / DAM AND PUMP	MAT BRIDGE OR EQUIVALENT

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

MOTT MACDONALD

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SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT

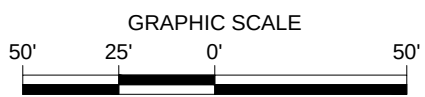
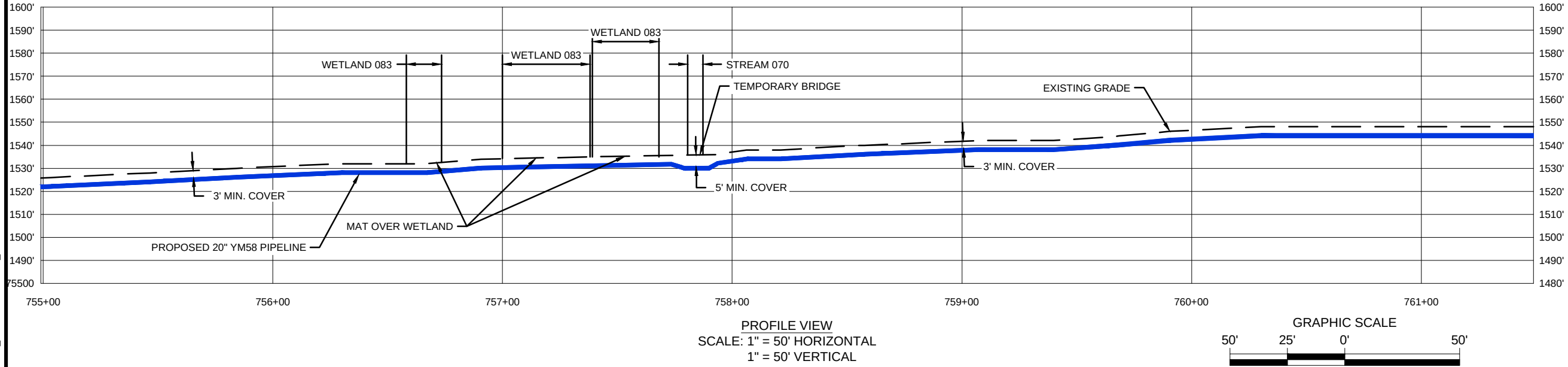
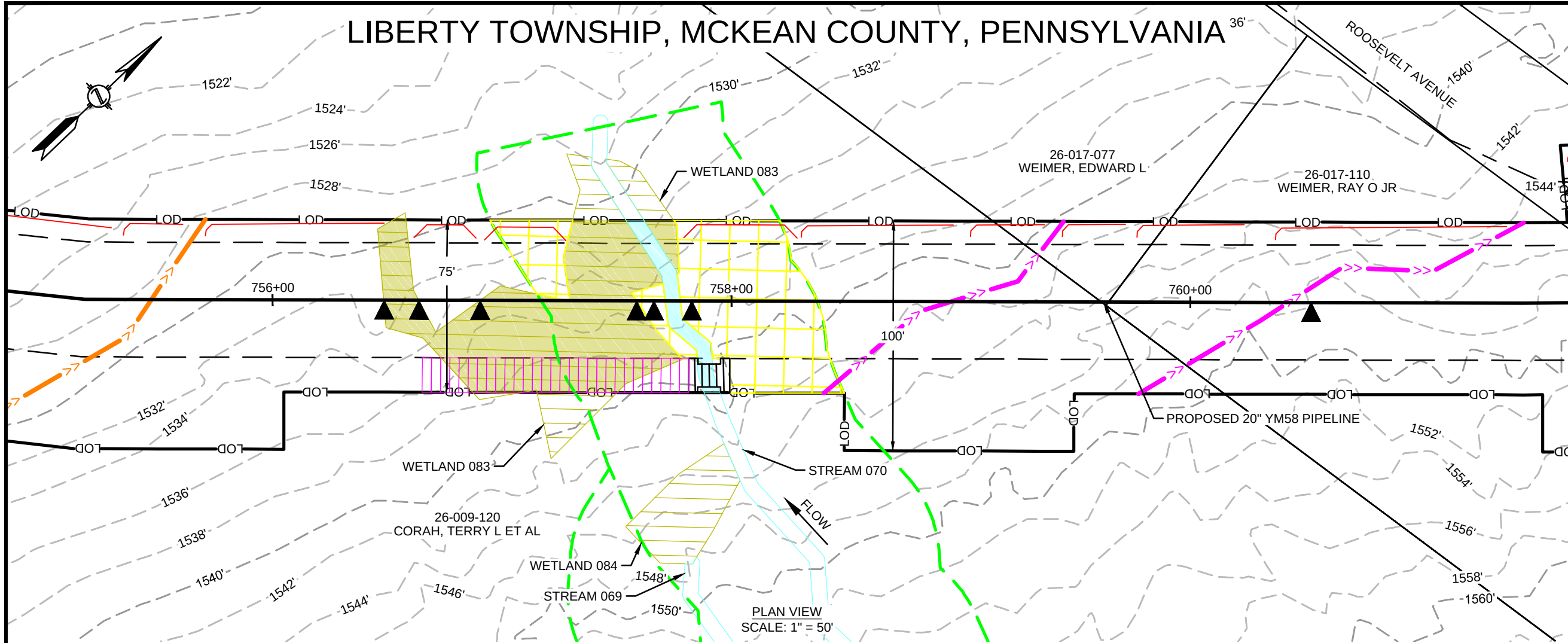
WETLAND & STREAM CROSSING PLAN
PROPOSED 20" YM58 PIPELINE
LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA
M.P. 14.2

SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-042	C

9/4/2020 1:17 PM, HECTOR MORALES

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LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

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MACDONALD

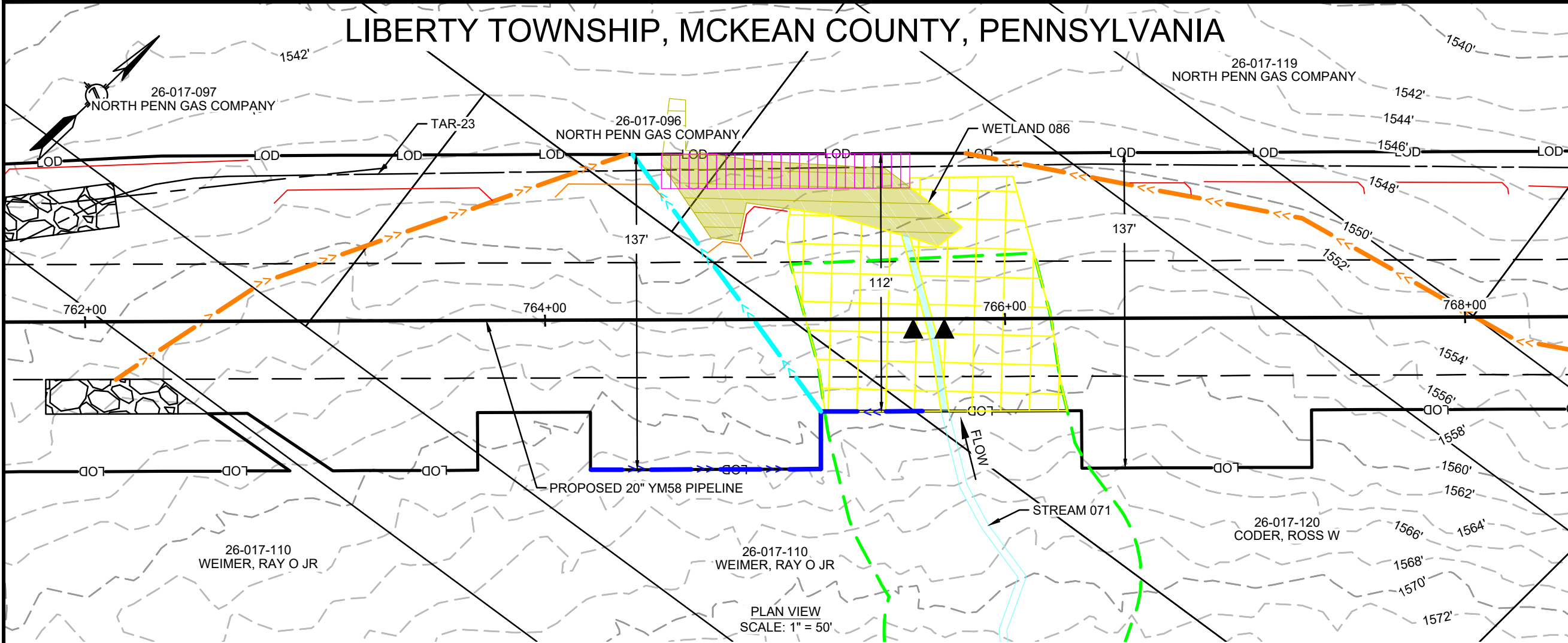
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 14.3		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-043	B

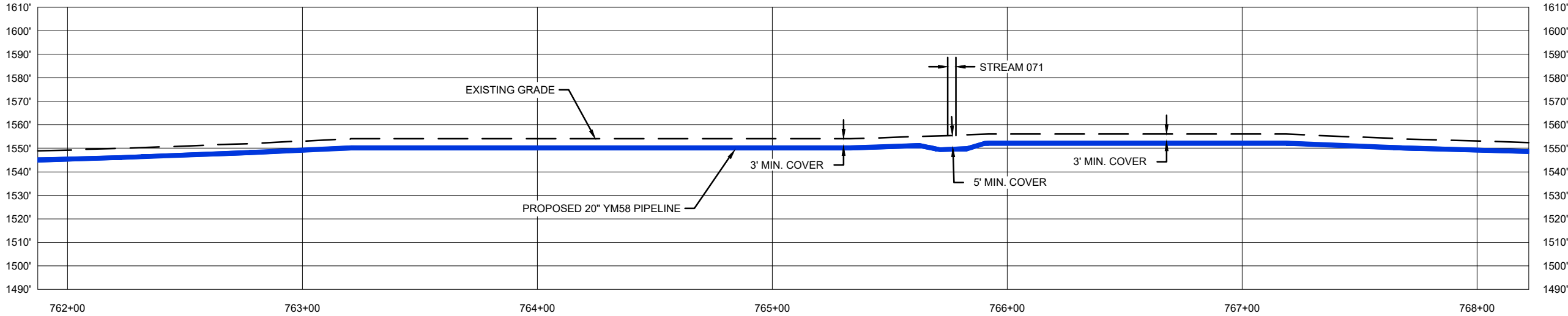
FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 083	WETLAND	0.128	-	-	0.003	-	-	OPEN CUT	MAT BRIDGE OR EQUIVALENT
STREAM 070	WATERBODY	-	0.013	0.048	-	<0.001	0.080	DAM AND PUMP/FLOUME	MAT BRIDGE OR EQUIVALENT

12/16/2020 2:36 PM, HECTOR MORALES
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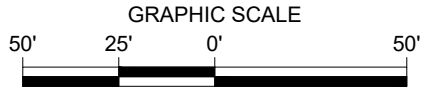
LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



PLAN VIEW
SCALE: 1" = 50'



PROFILE VIEW
SCALE: 1" = 50' HORIZONTAL
1" = 50' VERTICAL



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

PREPARED BY:

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MACDONALD

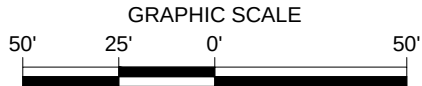
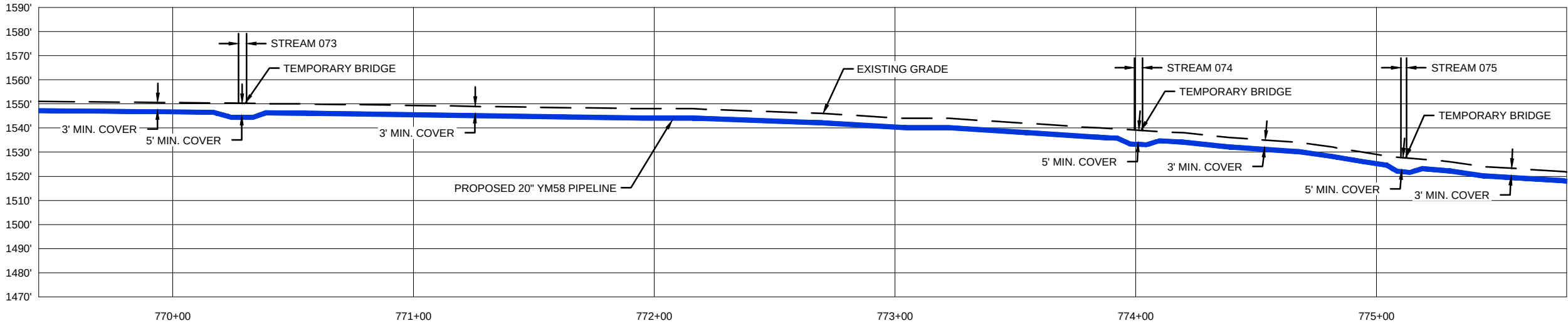
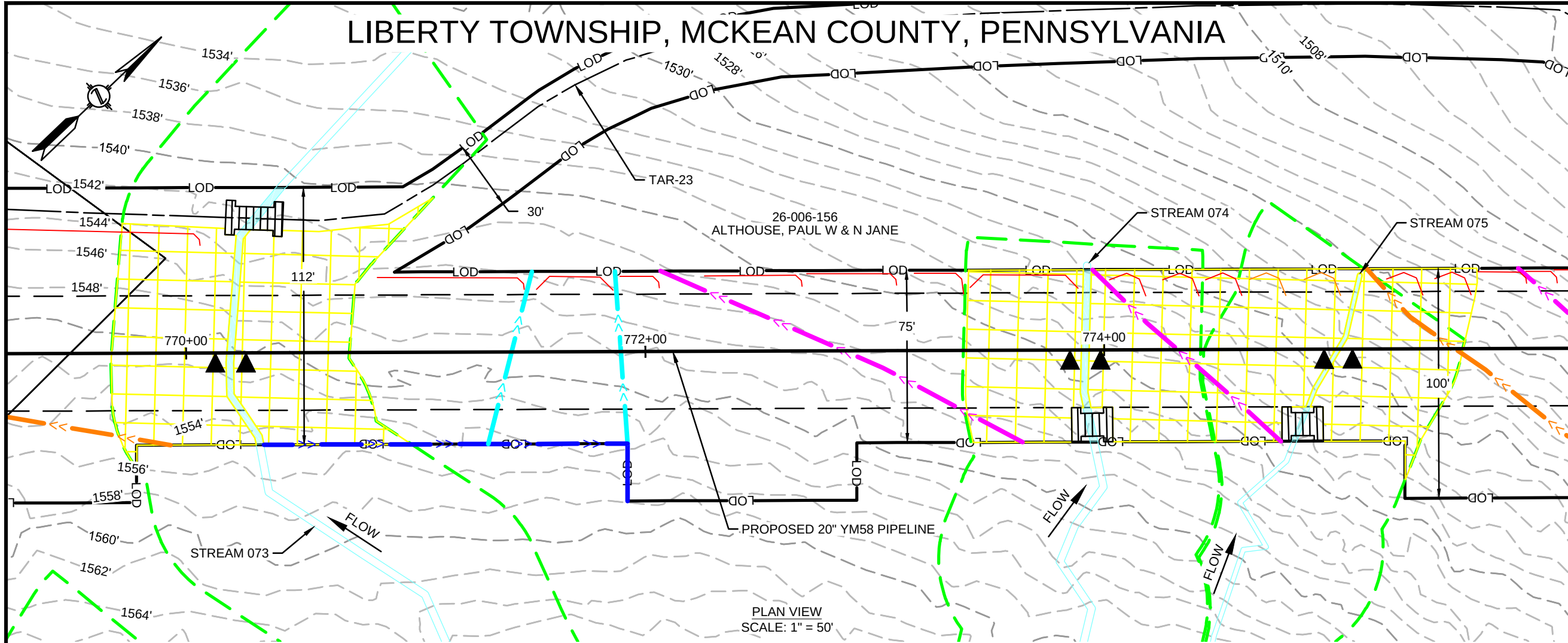
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 14.5		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-044A	C

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	FLOODWAY	WETLAND	WATERCOURSE CHANNEL	FLOODWAY		
WETLAND 086	WETLAND	0.066	-	-	-	-	-	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT
STREAM 071	WATERBODY	-	0.006	0.038	-	<0.001	0.118	DAM AND PUMP/FLUME	N/A

9/4/2020 1:19 PM, HECTOR MORALES
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LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



PROFILE VIEW
SCALE: 1" = 50' HORIZONTAL
1" = 50' VERTICAL

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL		
STREAM 075	WATERBODY	-	0.004	0.047	-	<0.001	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT
STREAM 074	WATERBODY	-	0.006	0.058	-	<0.001	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT
STREAM 073	WATERBODY	-	0.009	0.169	-	<0.001	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

PREPARED BY:

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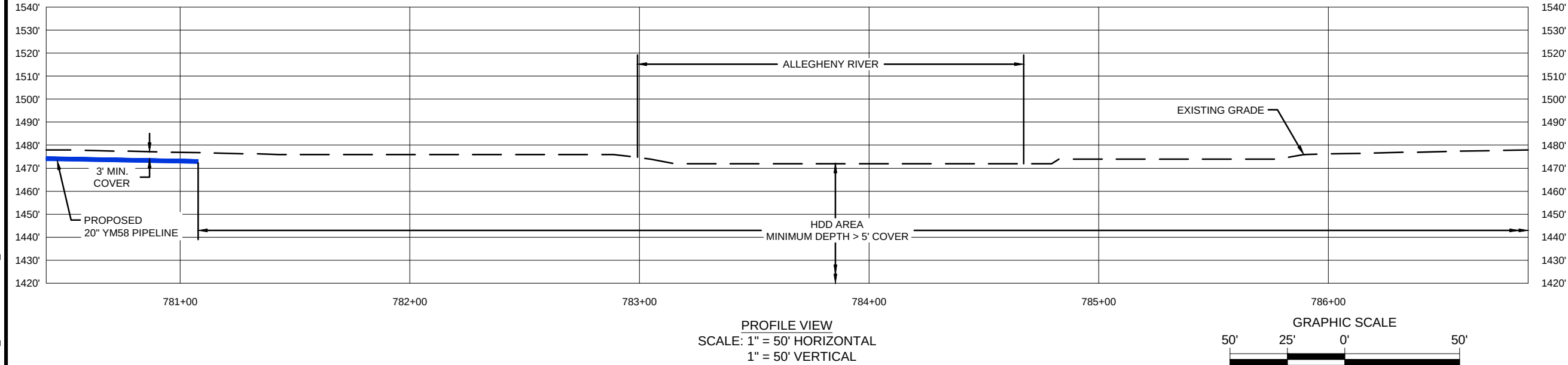
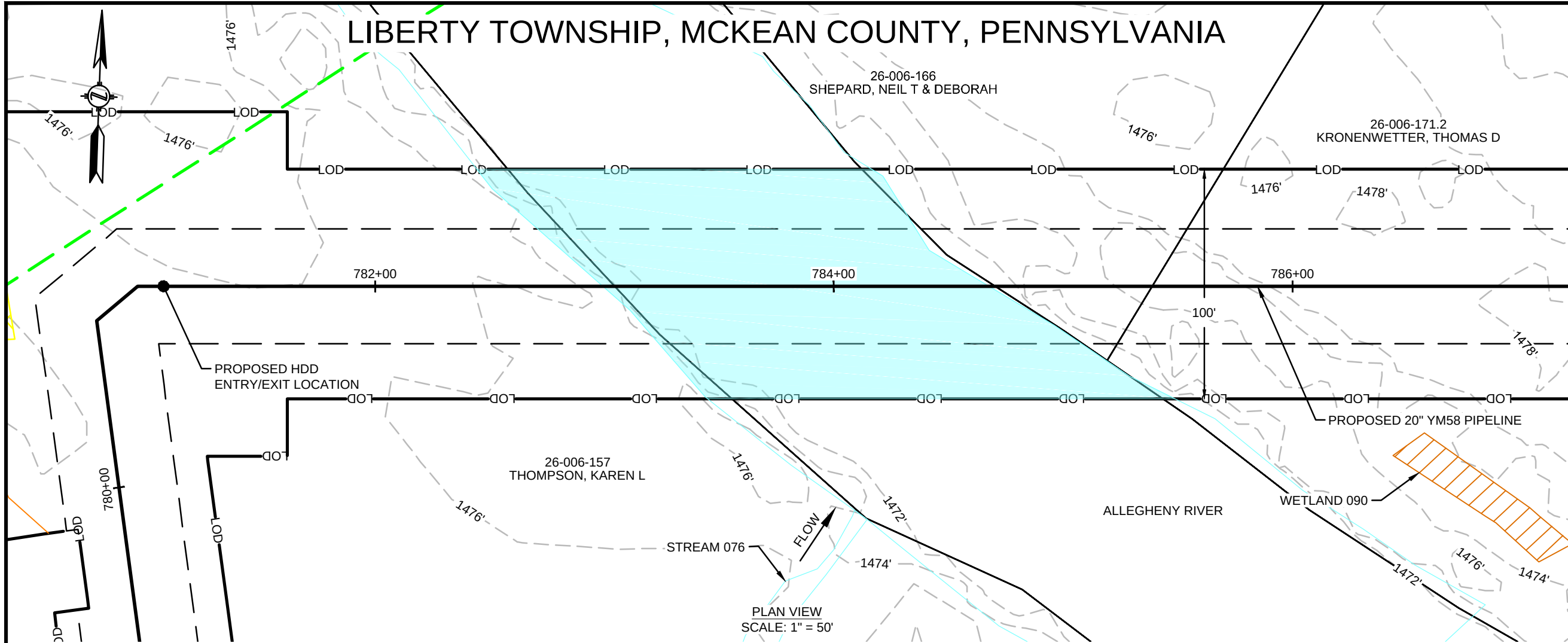
MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 14.6		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-045	B

9/9/2020 9:26 AM, HECTOR MORALES
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LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

PREPARED BY:

M

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MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 14.8		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-046	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL		
ALLEGHENY RIVER	WATERBODY	-	0.396	2.106		-	0.006	HDD	N/A

9/9/2020 9:33 AM, HECTOR MORALES
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LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA

26-006-166
SHEPARD, NEIL T & DEBORAH
26-006-171.2
KRONENWETTER, THOMAS D

26-006-171
HENNING, BERNARD J SR

PROPOSED 20" YM58 PIPELINE

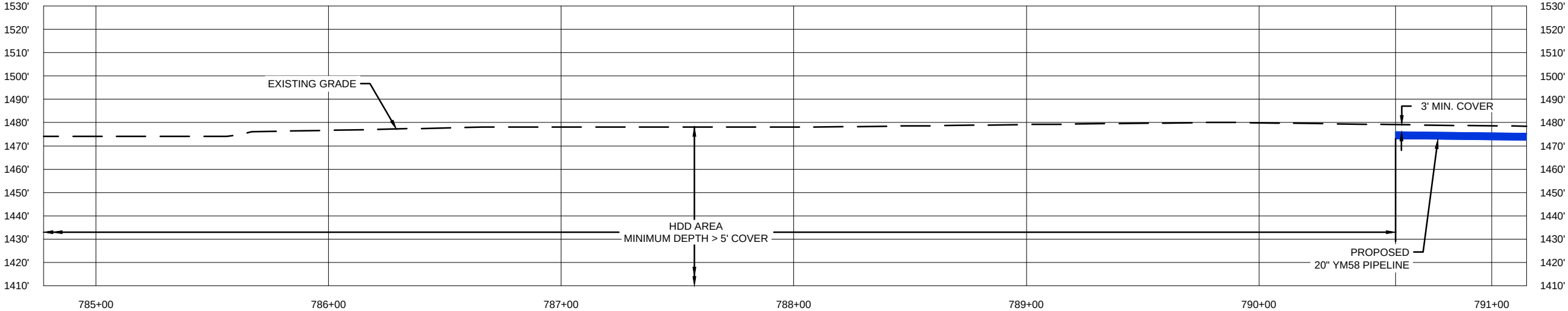
PROPOSED HDD
ENTRY/EXIT LOCATION

ALLEGHENY RIVER

WETLAND 090

CUTLER ROAD

PLAN VIEW
SCALE: 1" = 50'



PROFILE VIEW
SCALE: 1" = 50' HORIZONTAL
1" = 50' VERTICAL



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

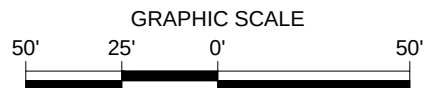
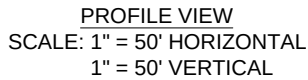
MOTT MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 14.9		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-046.1	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	FLOODWAY	WETLAND	WATERCOURSE CHANNEL	FLOODWAY		
ALLEGHENY RIVER									

REFER TO DWG WSS-MCK-ML-046 FOR IMPACT ACRES



APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE



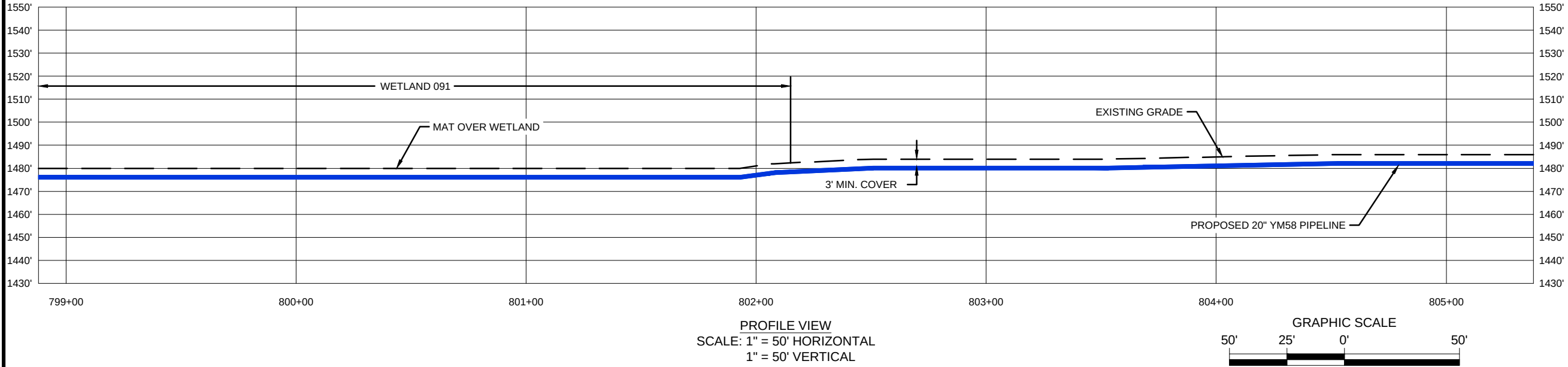
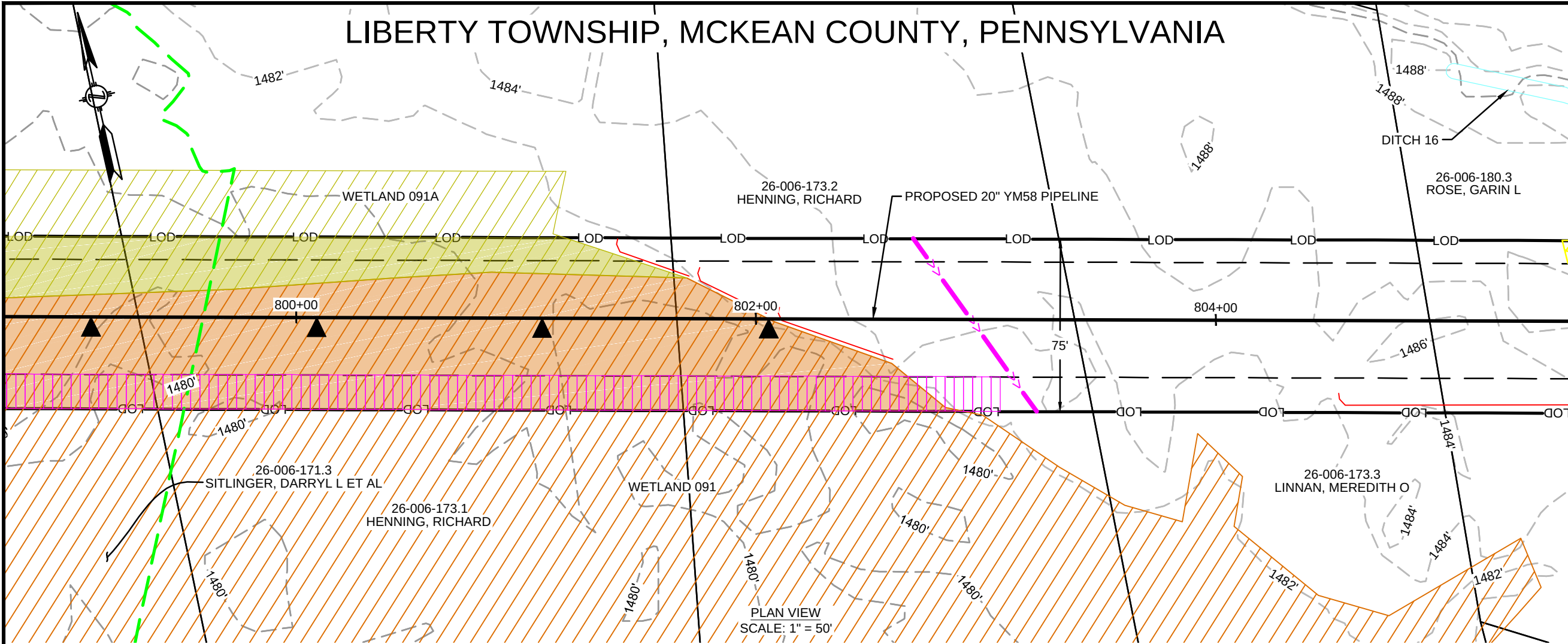
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MACDONALD

WETLAND & STREAM CROSSING PLAN
PROPOSED 20" YM58 PIPELINE
LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA
M.P. 15.1

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 091A	WETLAND	0.382	-	-	0.003	-	-	OPEN CUT	N/A
STREAM 077	WATERBODY	-	0.018	-	-	<0.001	-	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT
WETLAND 091	WETLAND	0.660	-	-	0.141	-	-	OPEN CUT	MAT BRIDGE OR EQUIVALENT

9/4/2020 1:22 PM, HECTOR MORALES
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LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

PREPARED BY:

M

MOTT

MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

GRAPHIC SCALE

50'

25'

0'

50'

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 15.2		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-048	B

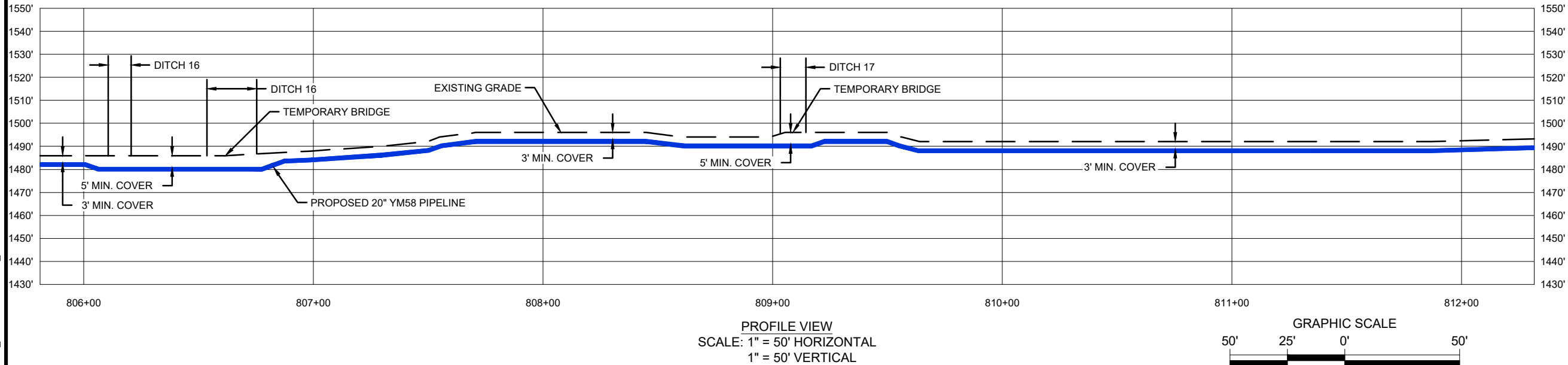
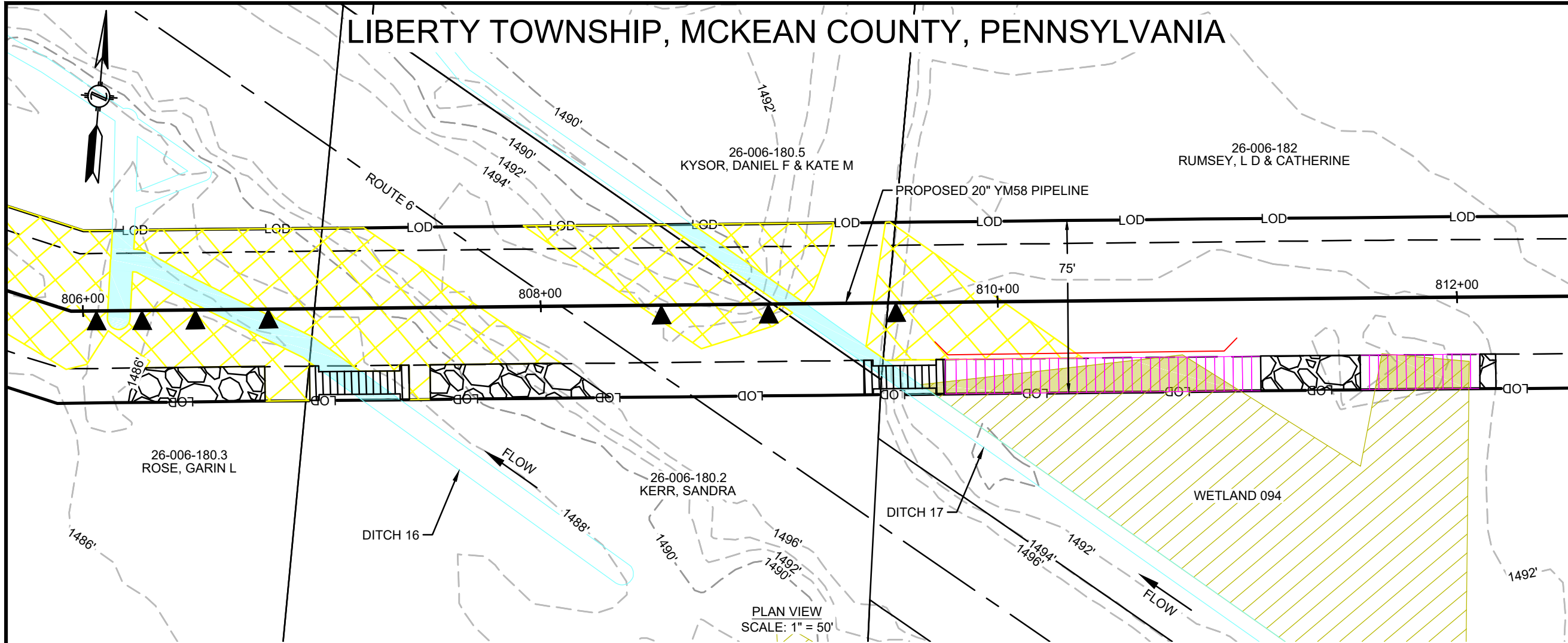
FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE	FLOODWAY	WETLAND	WATERCOURSE	FLOODWAY		
WETLAND 091A									
WETLAND 091									

REFER TO DWG WSS-MCK-ML-047 FOR IMPACT ACRES

REFER TO DWG WSS-MCK-ML-047 FOR IMPACT ACRES

12/16/2020 2:38 PM, HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATER\SPEC\WSS-MCK-ML-049.DWG

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)		PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WETLAND	WATERCOURSE CHANNEL		
DITCH 16	WATERBODY	-	0.037	-	0.001	DRY CROSSING IF NO FLOW / DAM AND PUMP	MAT BRIDGE OR EQUIVALENT
DITCH 17	WATERBODY	-	0.020	-	<0.001	DRY CROSSING IF NO FLOW / DAM AND PUMP	MAT BRIDGE OR EQUIVALENT
WETLAND 094	WETLAND	0.043	-	-	-	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



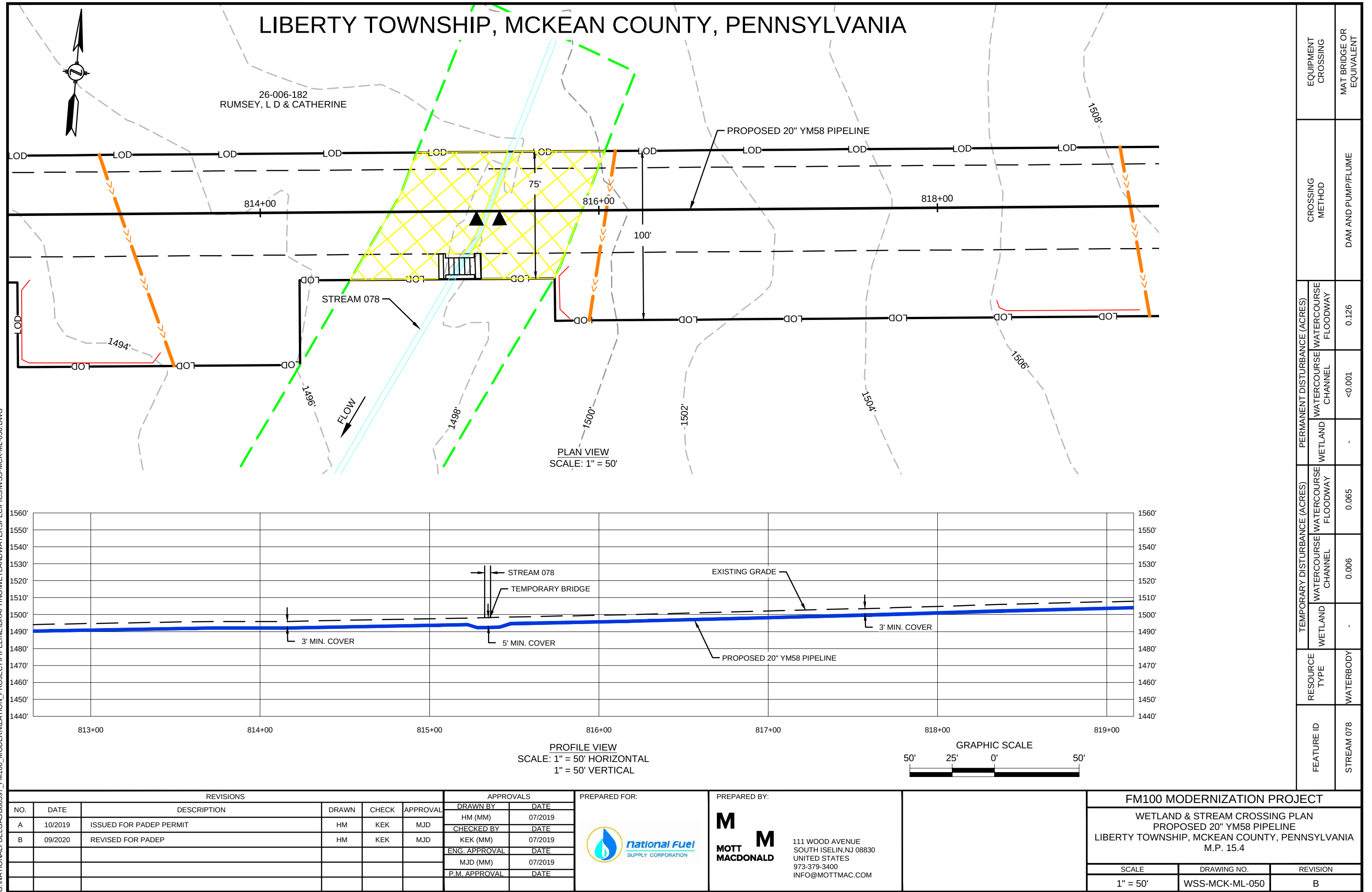
PREPARED BY:



**MOTT
MACDONALD**

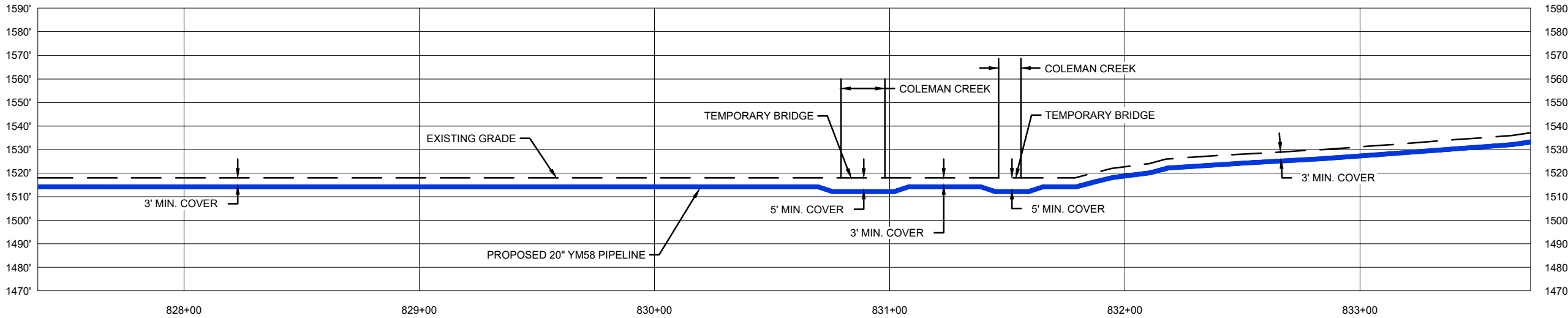
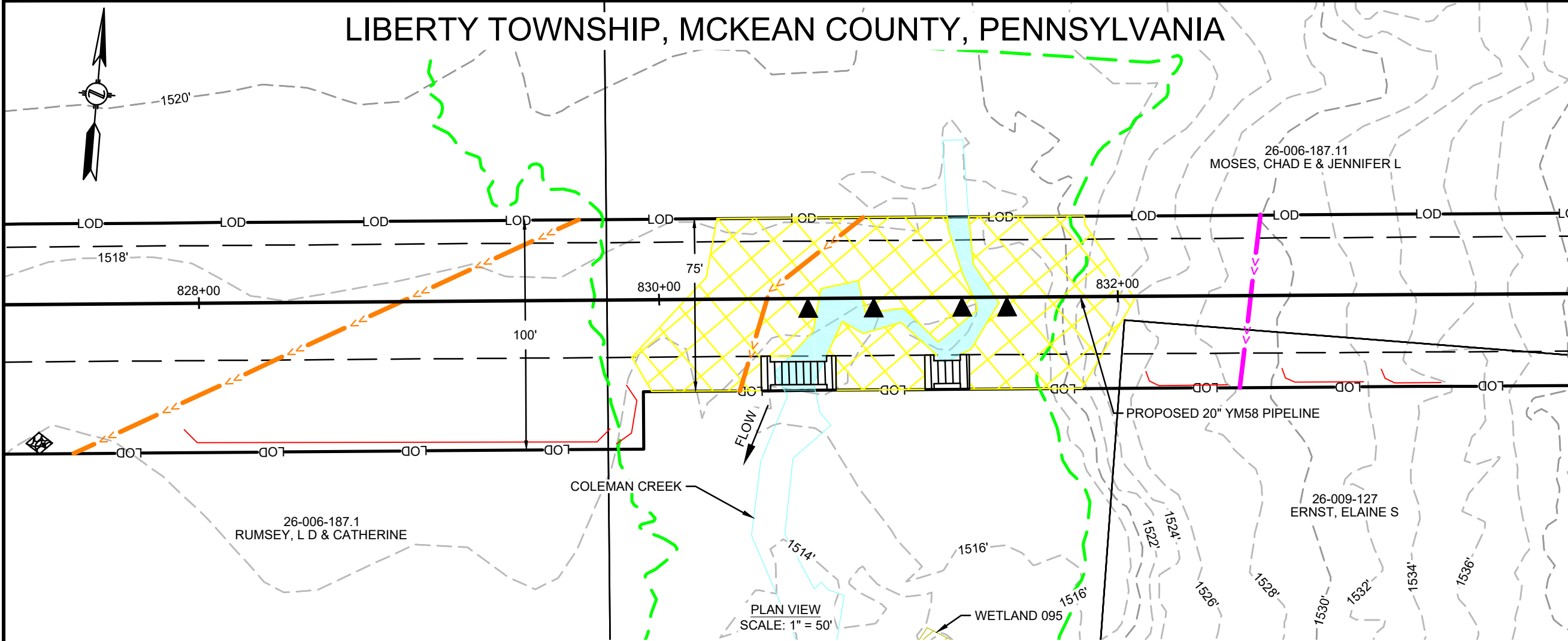
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 15.3		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-049	C

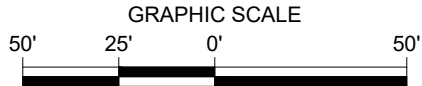


12/16/2020 2:39 PM, HECTOR MORALES
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LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



PROFILE VIEW
SCALE: 1" = 50' HORIZONTAL
1" = 50' VERTICAL



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

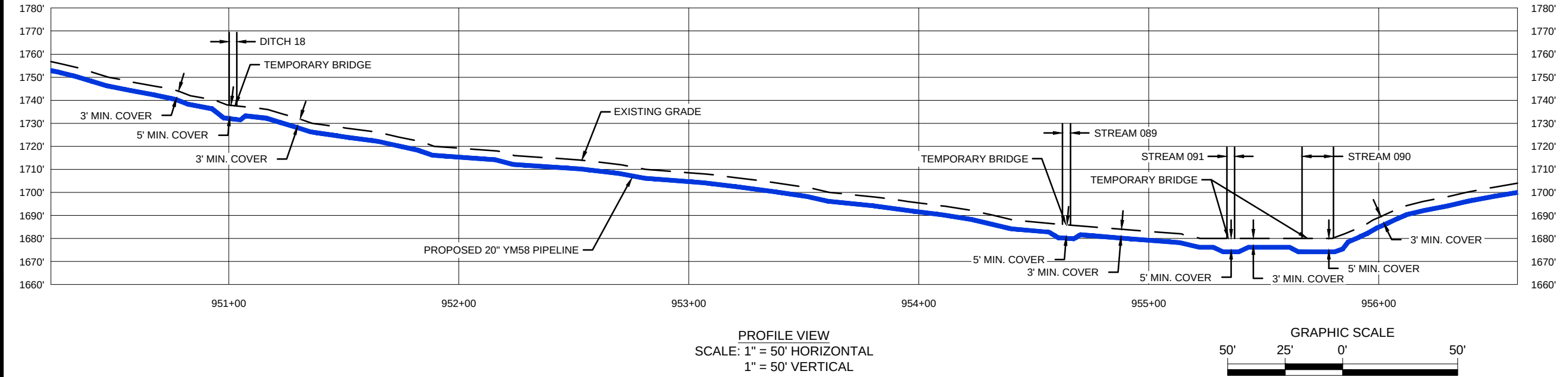
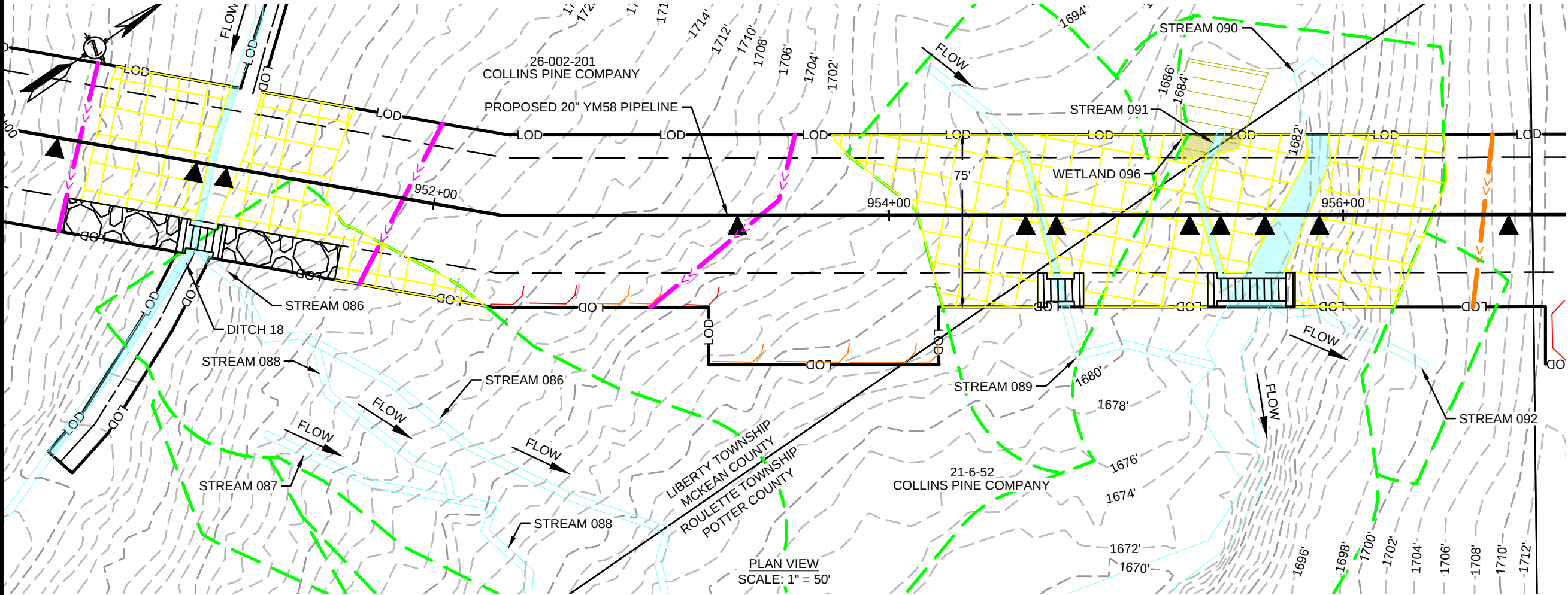
M
MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 15.7		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-051	C

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
COLEMAN CREEK - 1	WATERBODY	-	0.035	0.111	-	0.001	0.207	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT

LIBERTY TOWNSHIP, MCKEAN COUNTY & ROULETTE TOWNSHIP, POTTER COUNTY, PENNSYLVANIA



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:



111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY & ROULETTE TOWNSHIP, POTTER COUNTY, PENNSYLVANIA M.P. 18.0		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-052A	B

12/16/2020 2:41 PM, HECTOR MORALES
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FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 096	WETLAND	0.004	-	-	-	-	-	N/A - WORKSPACE	N/A
STREAM 089 (MCKEAN COUNTY)	WATERBODY	-	0.005	0.043	-	<0.001	0.106	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT
STREAM 089 (POTTER COUNTY)	WATERBODY	-	0.001	0.009	-	-	0.007	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT
STREAM 090 (MCKEAN COUNTY)	WATERBODY	-	-	0.001	-	-	0.005	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT
STREAM 090 (POTTER COUNTY)	WATERBODY	-	0.024	0.055	-	0.001	0.117	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT
STREAM 091 (MCKEAN COUNTY)	WATERBODY	-	0.001	0.004	-	-	0.002	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT
STREAM 091 (POTTER COUNTY)	WATERBODY	-	0.004	-	-	<0.001	-	DAM AND PUMP/FLUME	MAT BRIDGE OR EQUIVALENT
STREAM 092 (POTTER COUNTY)	WATERBODY	-	<0.001	0.015	-	-	0.008	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT
STREAM 086	WATERBODY	-	0.001	0.049	-	-	0.022	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
DITCH 18-1	WATERBODY	-	0.007	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
DITCH 18-2	WATERBODY	-	0.006	-	-	<0.001	-	DRY CROSSING IF NO FLOW / DAM AND PUMP	MAT BRIDGE OR EQUIVALENT
DITCH 18-3	WATERBODY	-	0.006	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

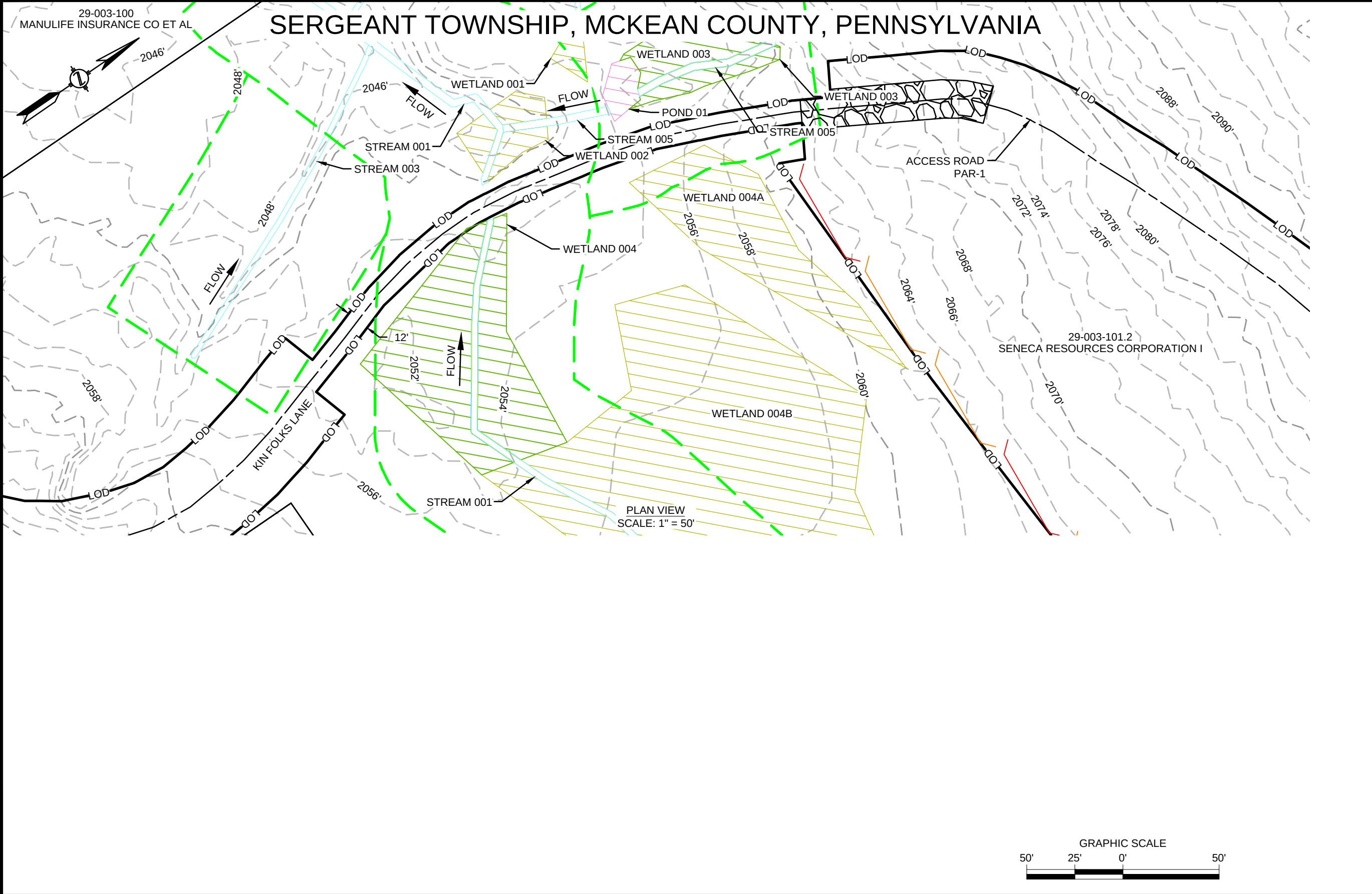
MOTT MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY & ROULETTE TOWNSHIP, POTTER COUNTY, PENNSYLVANIA M.P. 18.0		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-ML-052B	C

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FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 004	WETLAND	<0.001	-	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 001	WATERBODY	-	-	0.038	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 005	WATERBODY	-	-	0.034	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 003	WATERBODY	-	-	0.016	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

MOTT MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

GRAPHIC SCALE

50'

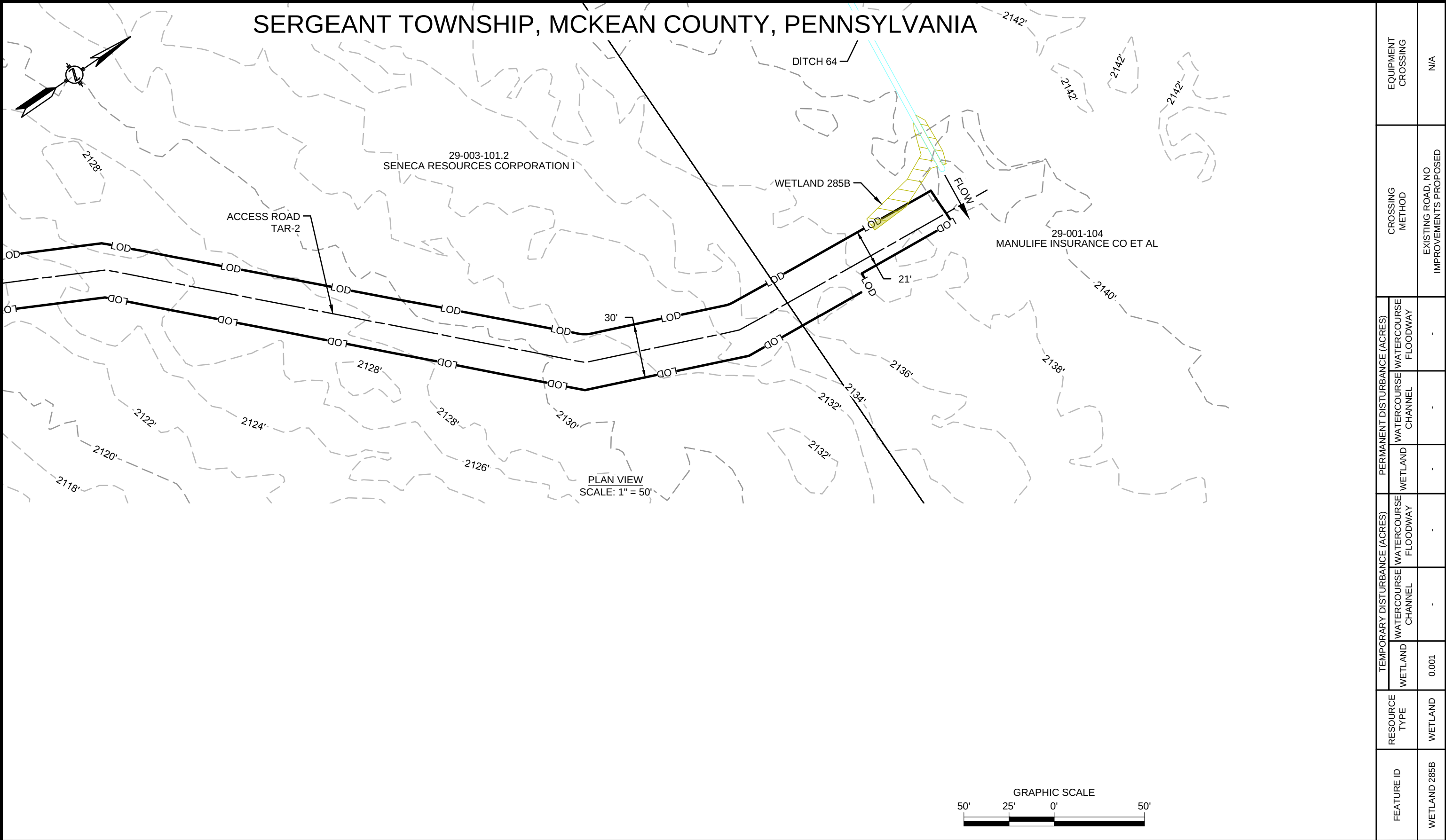
25'

0'

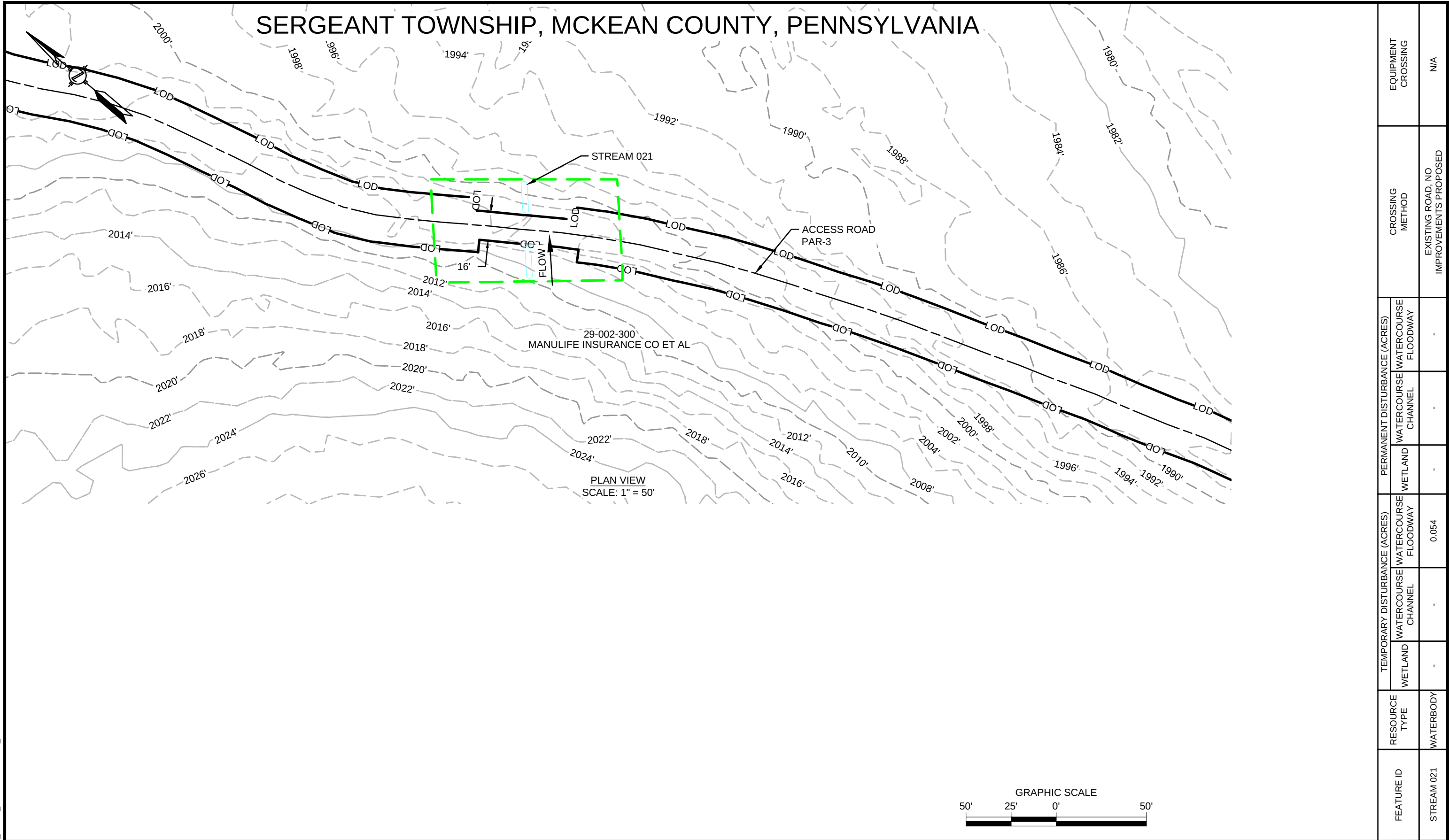
50'

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 0.1		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-001	B

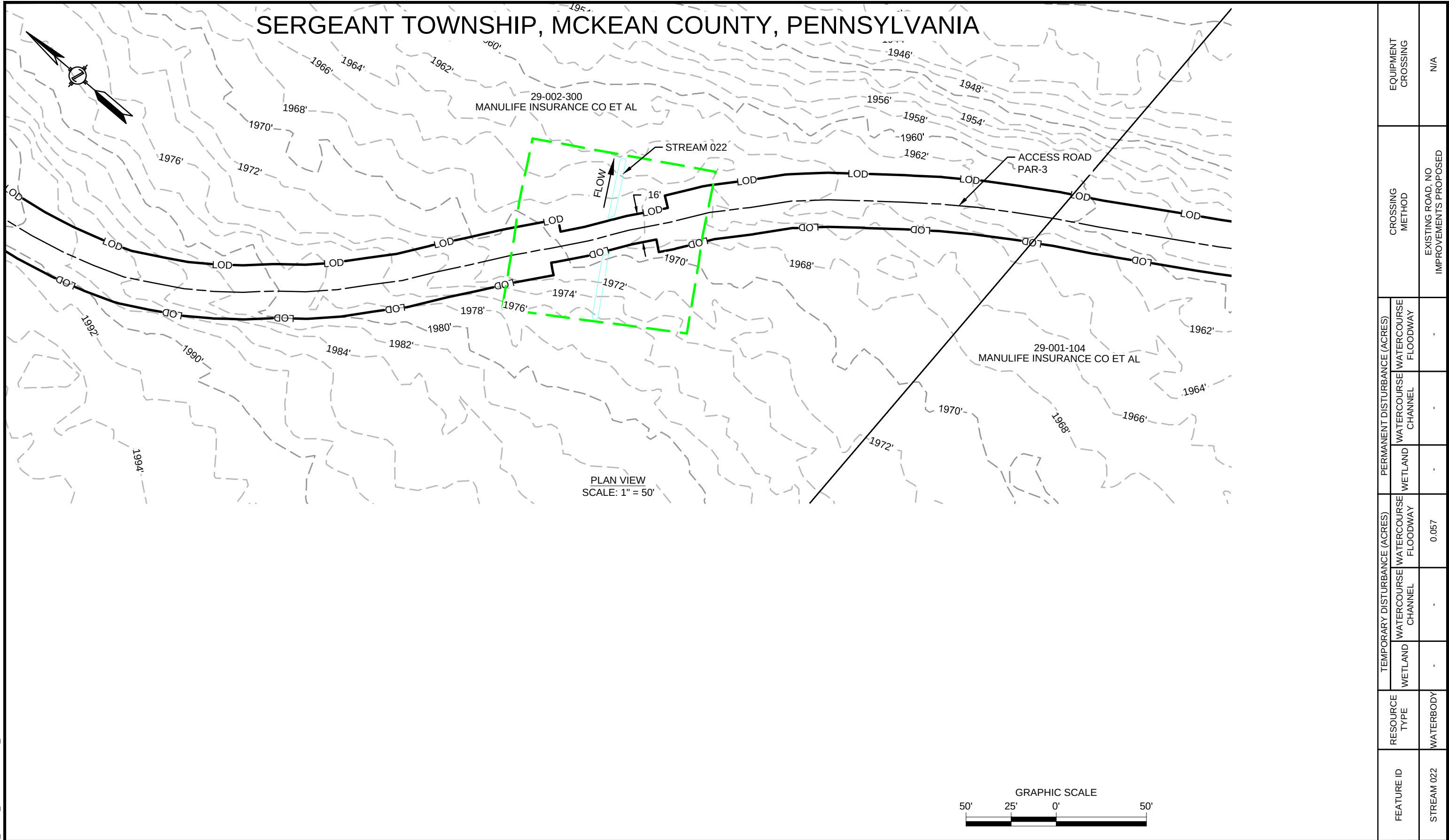
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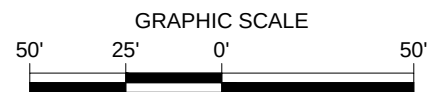
REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 0.1		
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B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE					
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						P.M. APPROVAL	DATE					
SCALE		DRAWING NO.		REVISION								
1" = 50'		WSS-MCK-AR-001A		B								



REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M M 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 2.6		
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B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE					
						KEK (MM)	07/2019					
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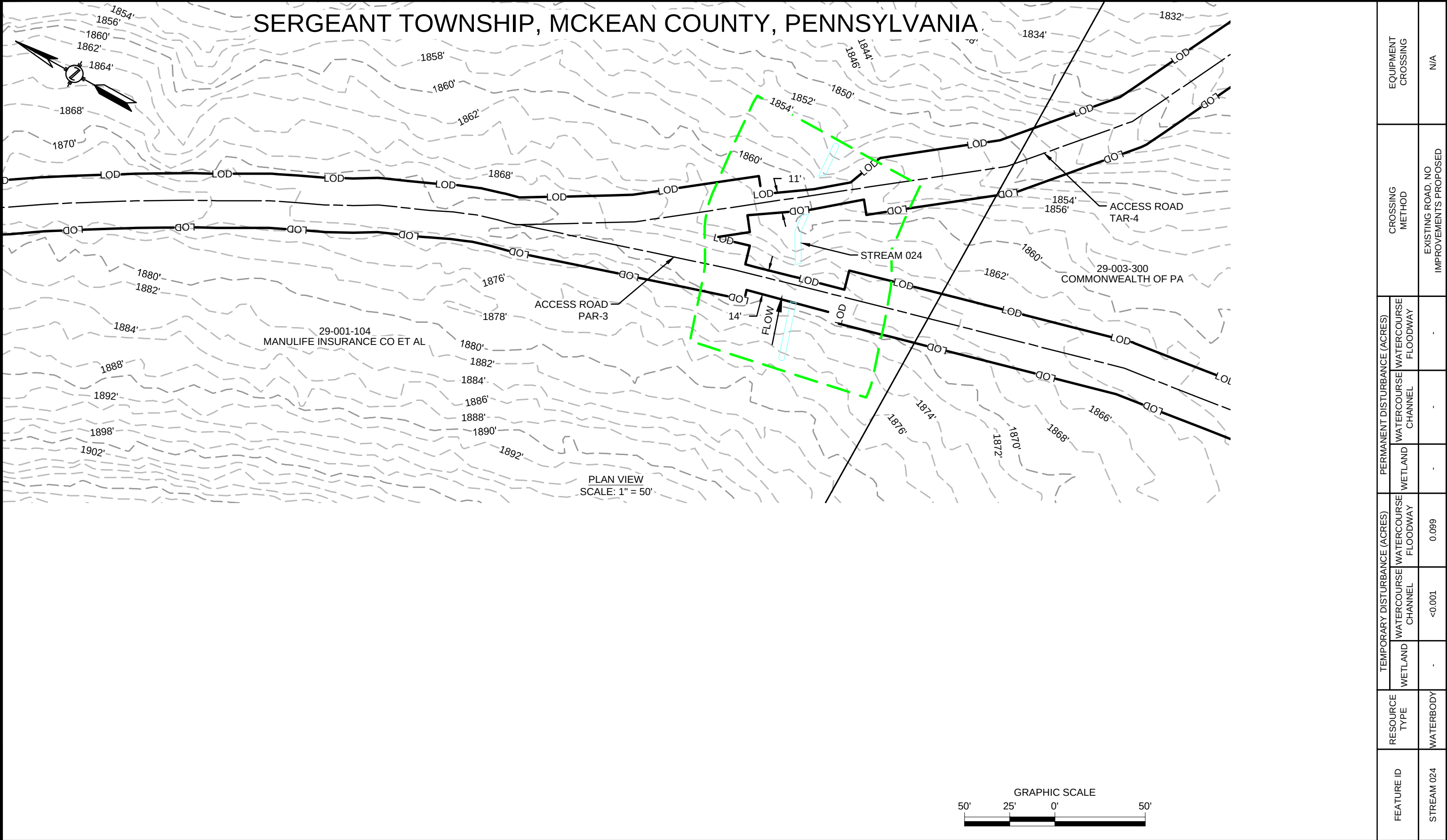


REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M M 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 2.6		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019					
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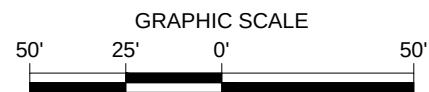


REVISIONS						APPROVALS		PREPARED FOR:  NATIONAL FUEL SUPPLY CORPORATION	PREPARED BY: M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 2.6		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019					
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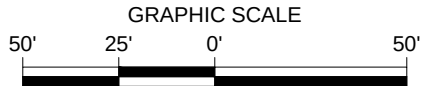
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REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT			
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE						WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 2.6
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019						
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE						
						KEK (MM)	07/2019						
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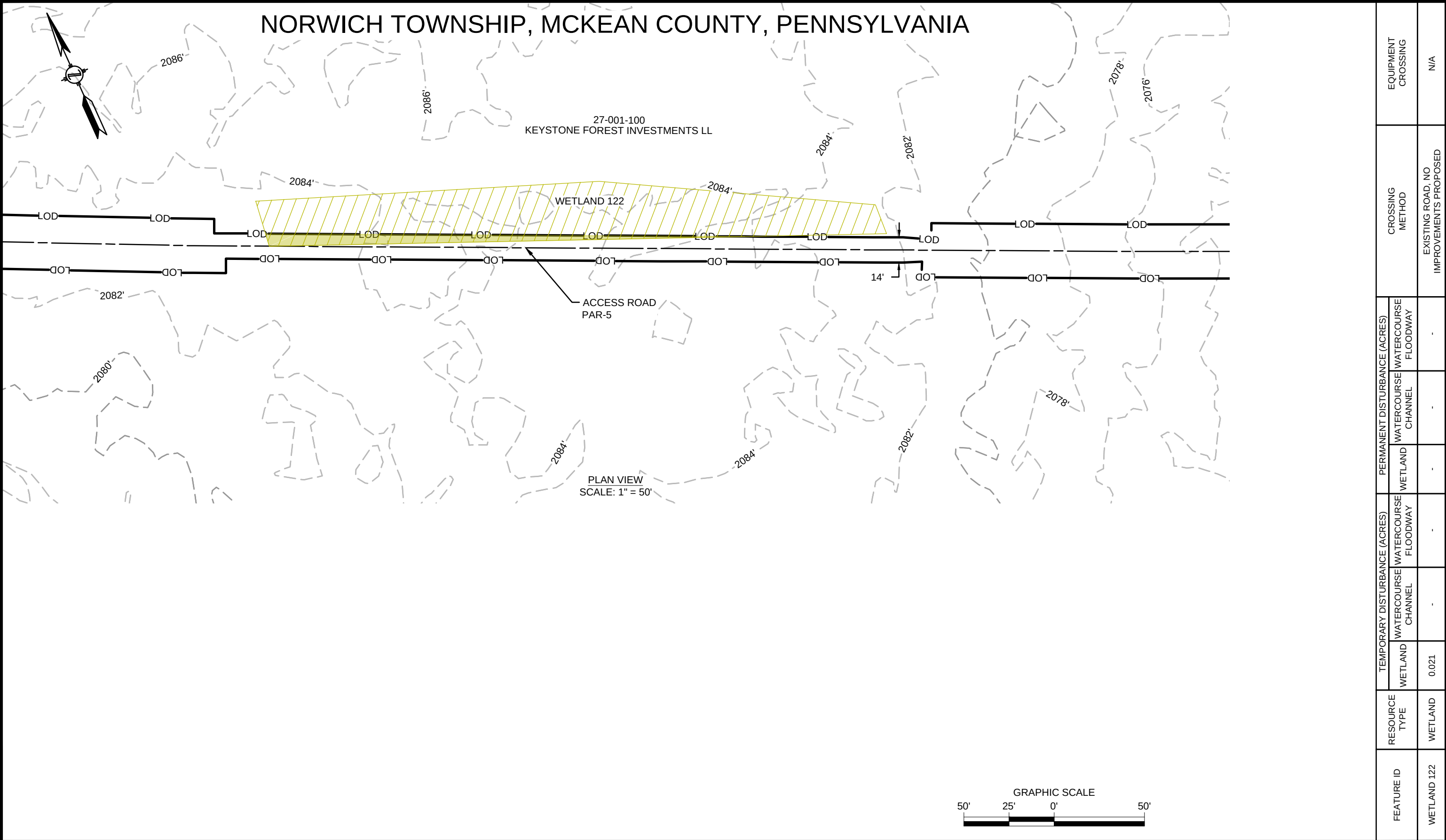


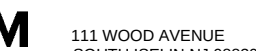
REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 2.6		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019			SCALE		
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						P.M. APPROVAL	DATE			B		

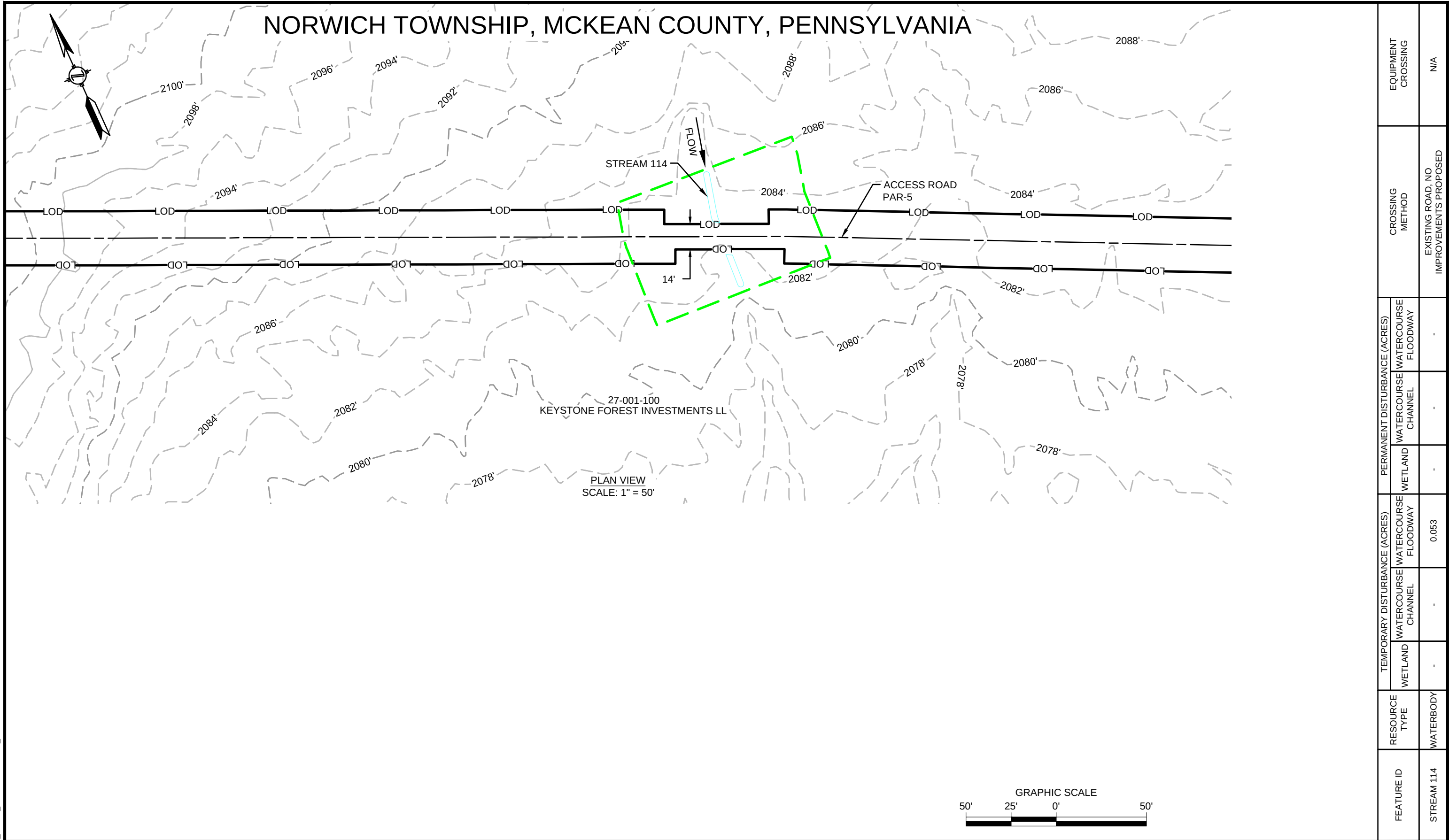


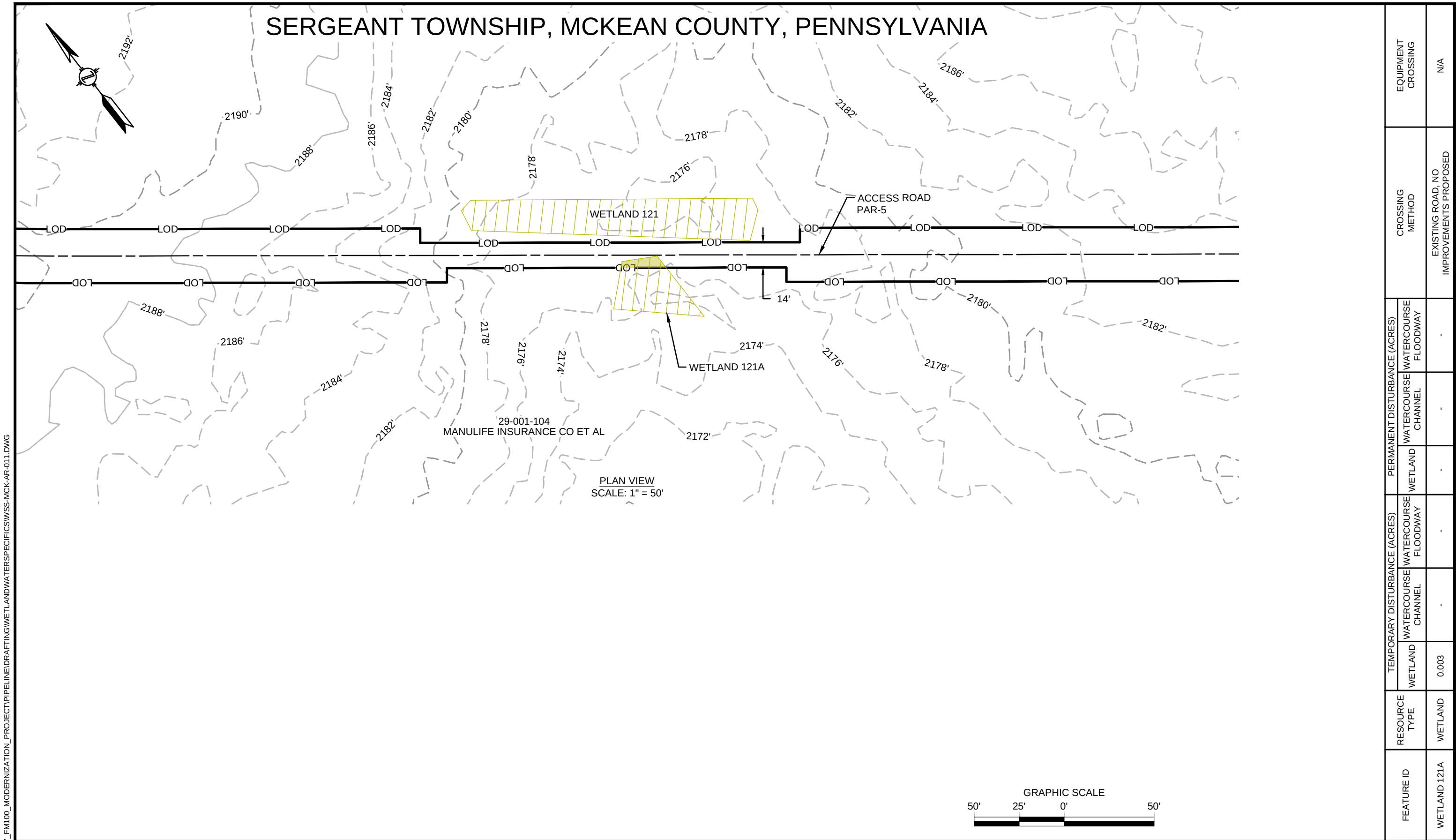
REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 4.6		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019					
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE					
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						P.M. APPROVAL	DATE					
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9/4/2020 12:04 PM: HECTOR MORALES
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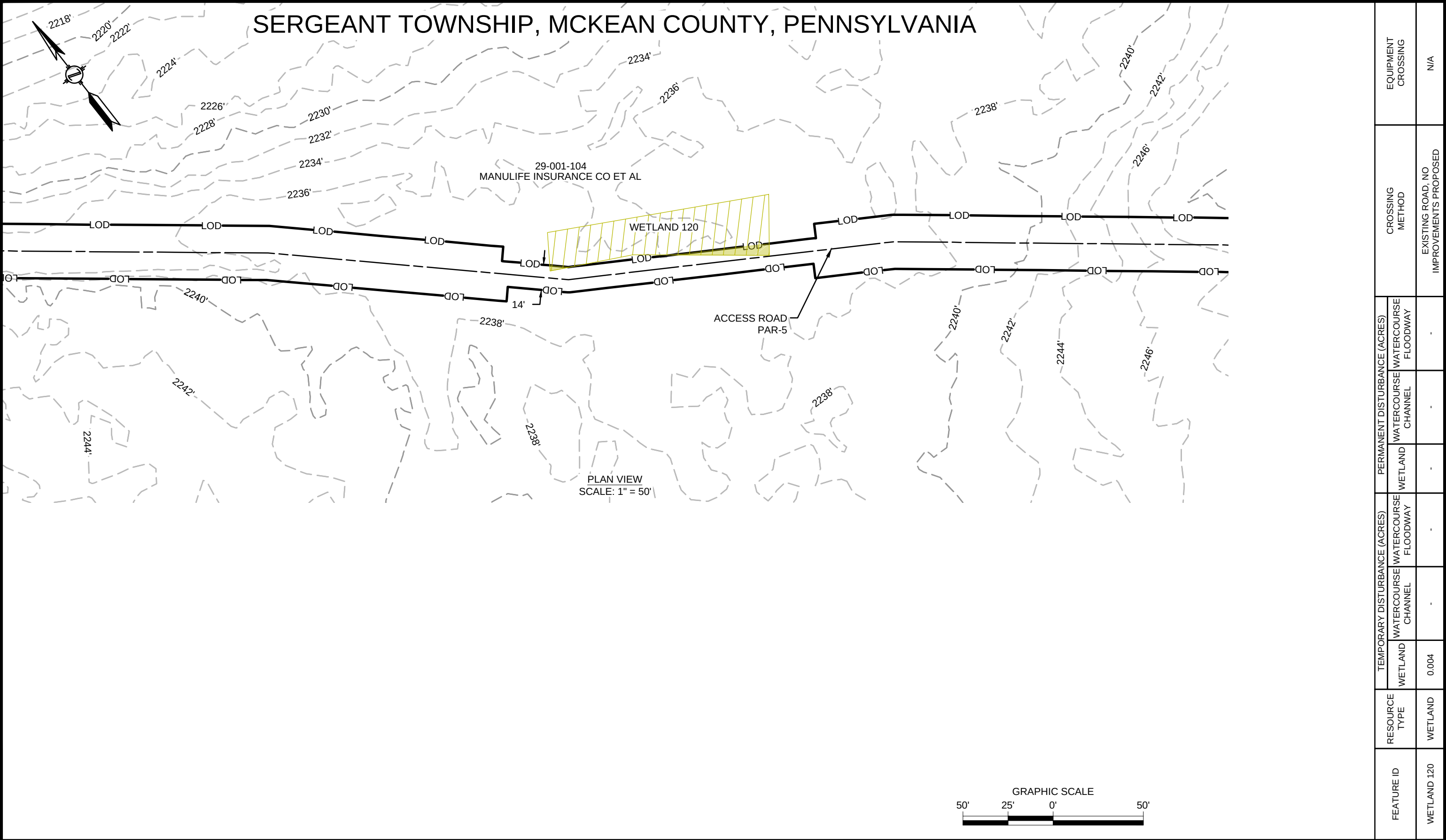


REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY:  111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM		FM100 MODERNIZATION PROJECT			
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE				WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 4.6			
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019							
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE							
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						P.M. APPROVAL	DATE							

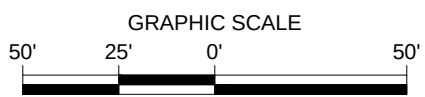
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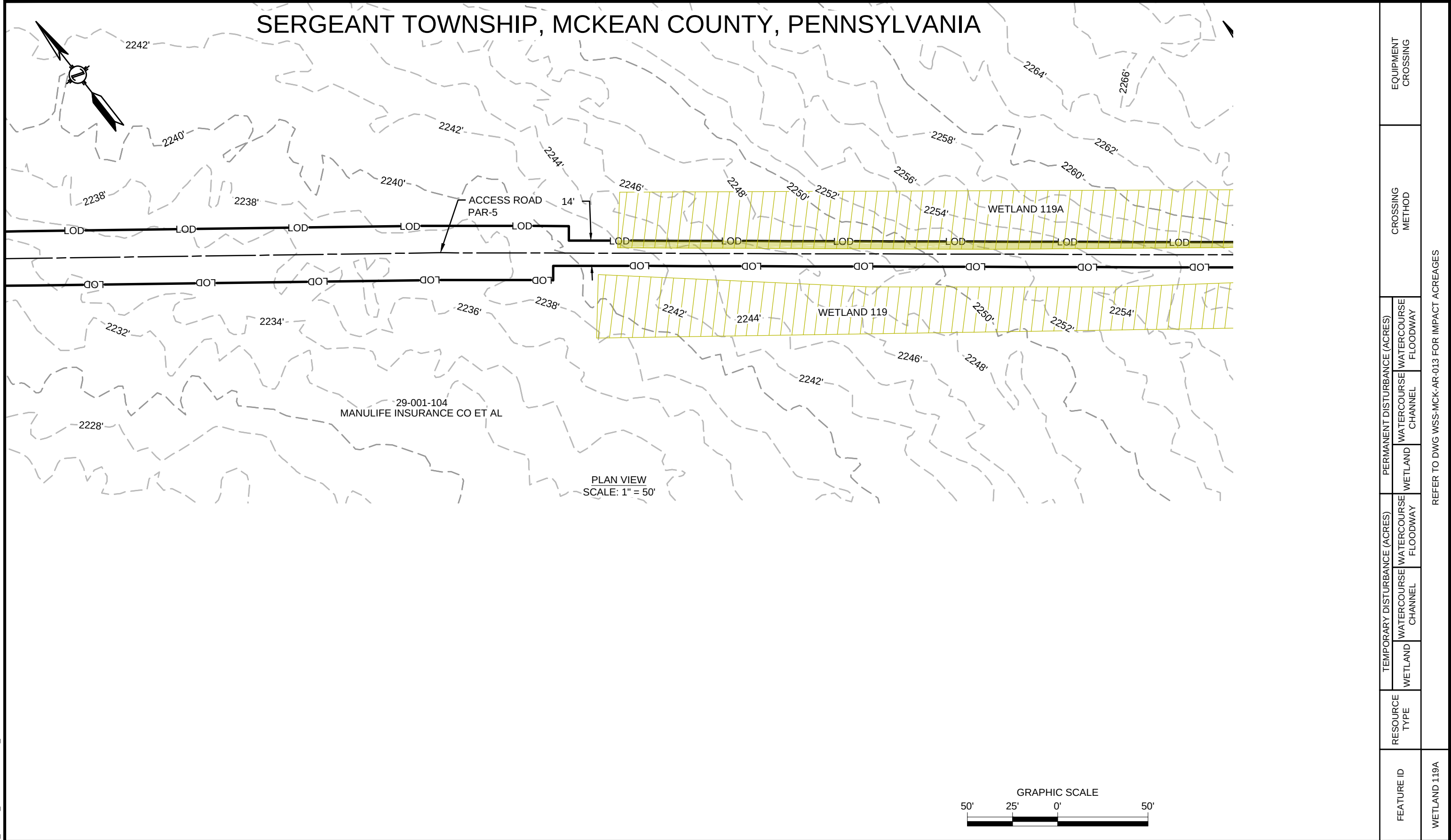
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	NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE					
	A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019					
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							P.M. APPROVAL	DATE					



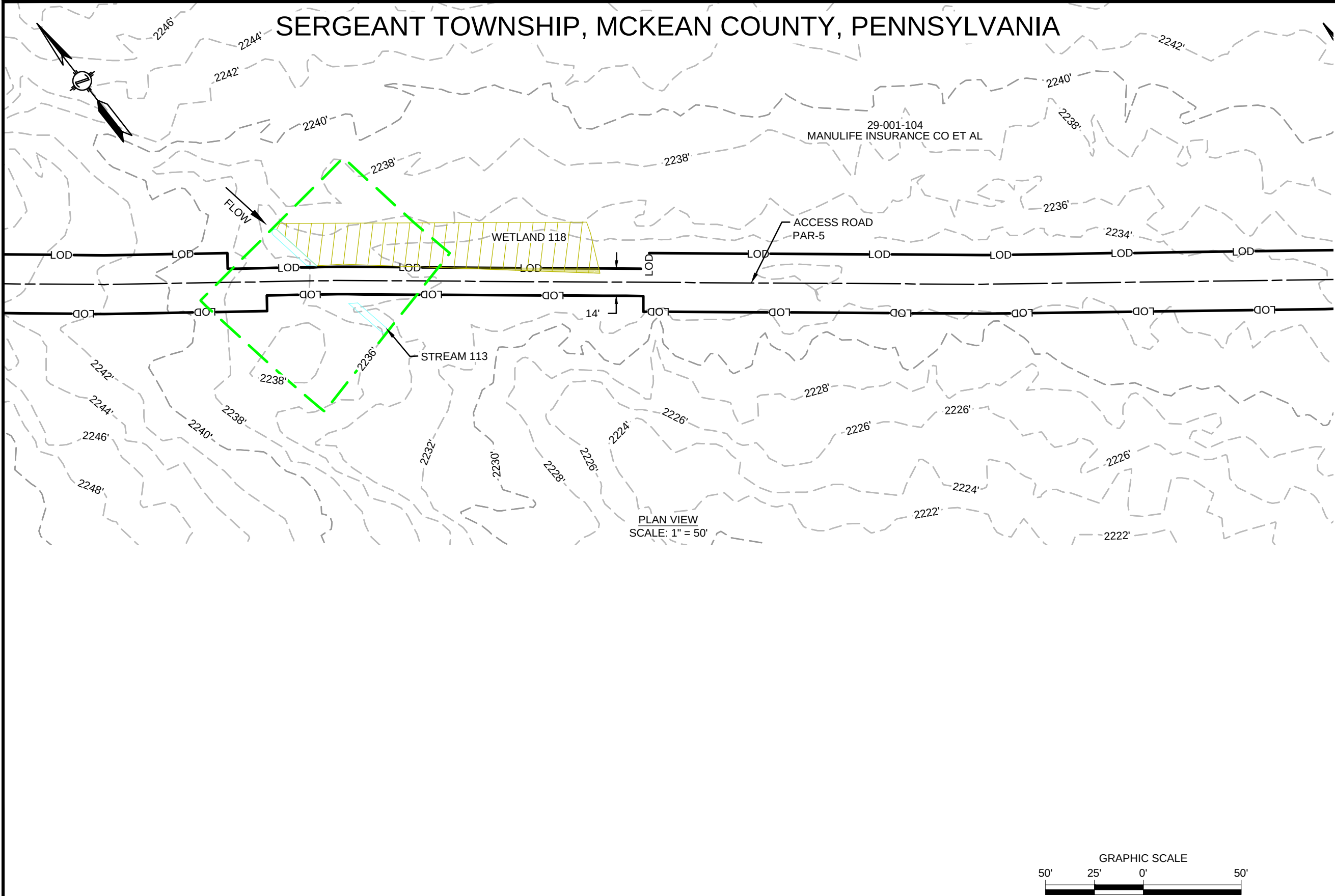
REVISIONS						APPROVALS		PREPARED FOR:  National Fuel SUPPLY CORPORATION	PREPARED BY: M M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 4.6		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019					
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									1" = 50'	WSS-MCK-AR-012	B	



REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT				
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE						WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 4.6	
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019			CHECKED BY	DATE			
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	KEK (MM)	07/2019			ENG. APPROVAL	DATE			
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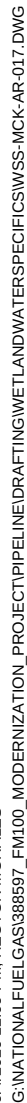


REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M M 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT				
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 4.6				
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019							
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								1" = 50'			WSS-MCK-AR-014		B	

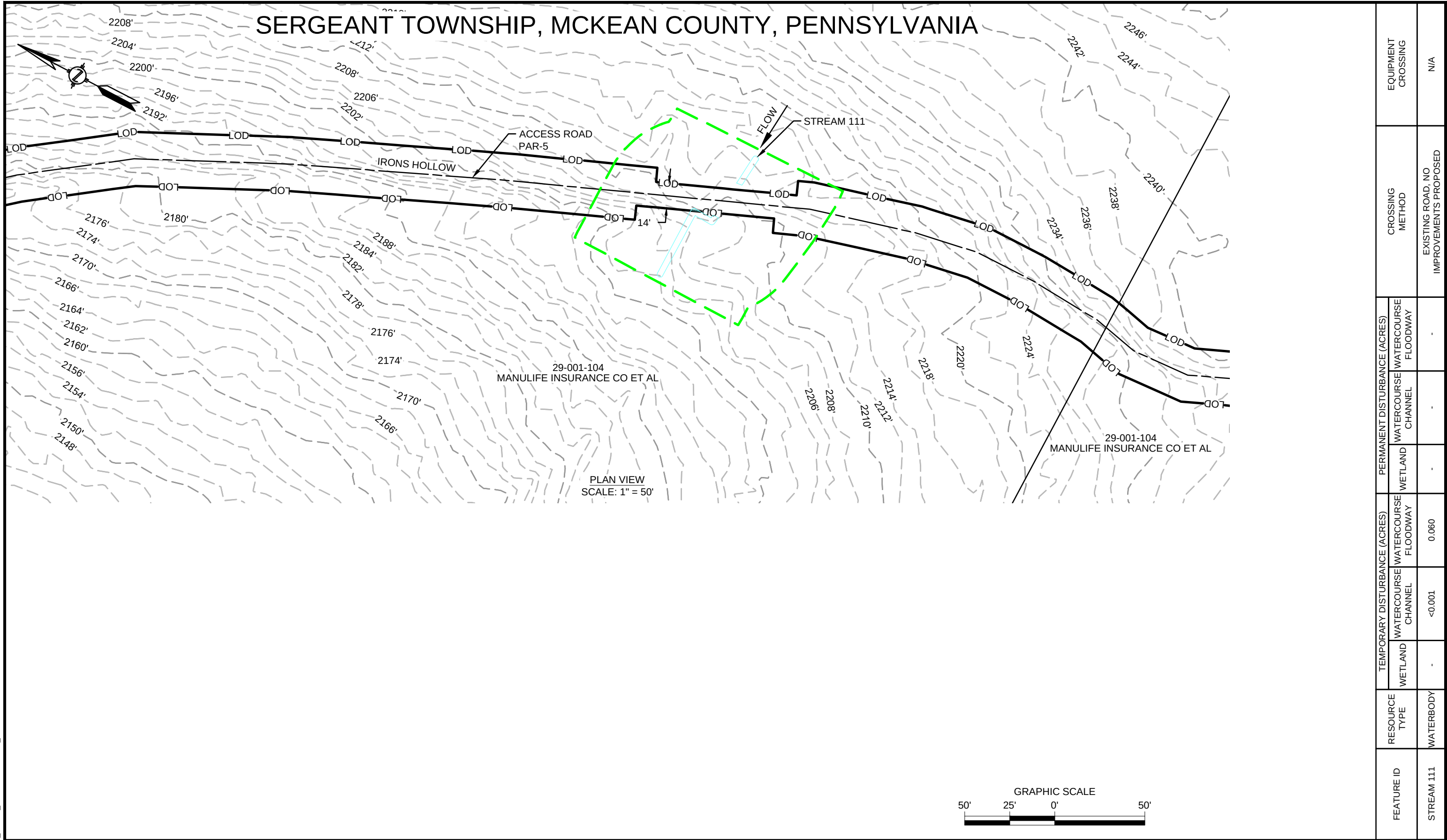


FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)		PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 118	WETLAND	0.002	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 113	WATERBODY	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 4.6		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019					
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE					
						KEK (MM)	07/2019					
						ENG. APPROVAL	DATE					
						MJD (MM)	07/2019					
						P.M. APPROVAL	DATE					
								SCALE	DRAWING NO.	REVISION		
								1" = 50'	WSS-MCK-AR-015	B		

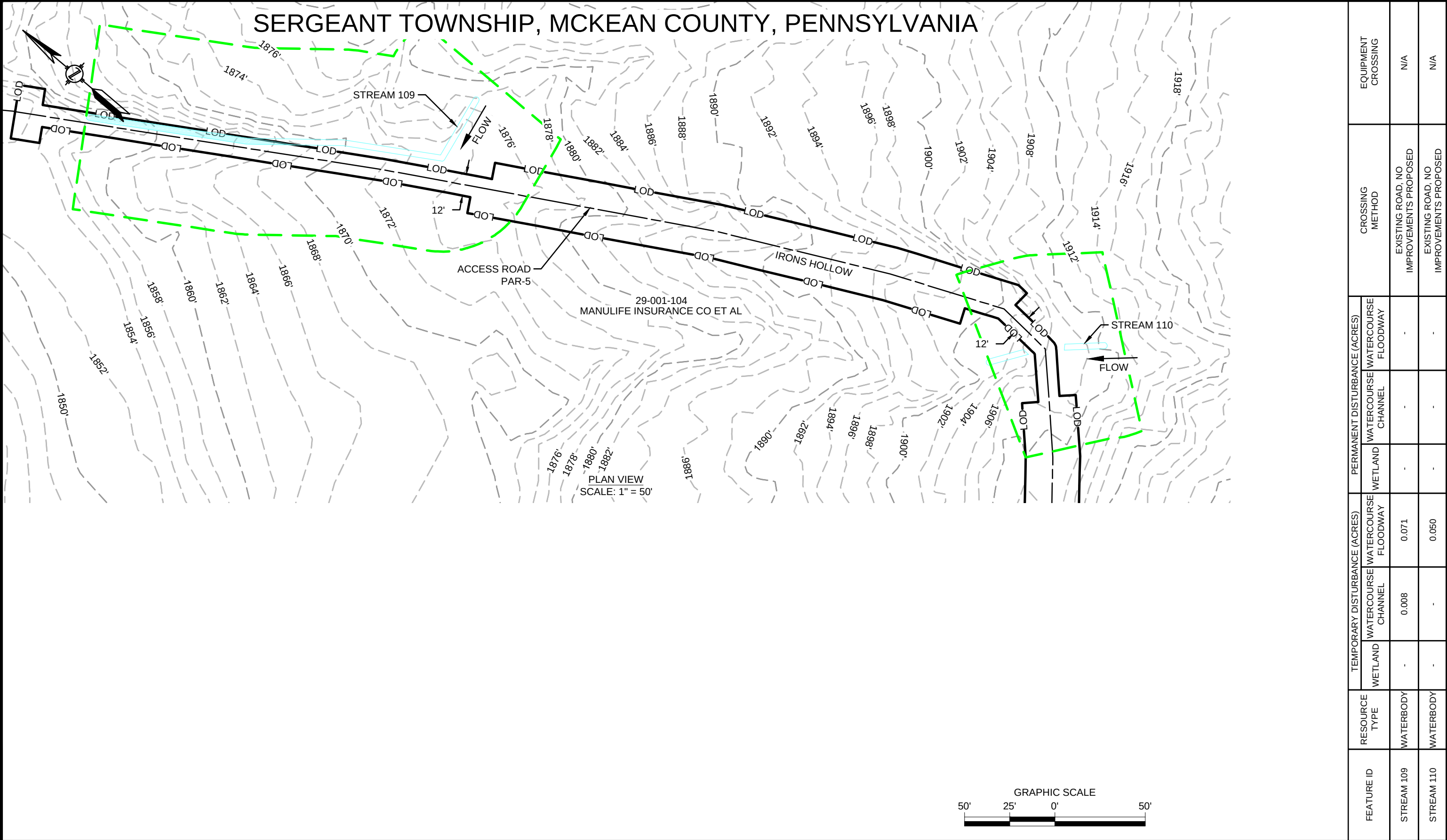


REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 4.6		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019					
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE					
						KEK (MM)	07/2019					
						ENG. APPROVAL	DATE					
						MJD (MM)	07/2019					
						P.M. APPROVAL	DATE					
										SCALE	DRAWING NO.	REVISION
										1" = 50'	WSS-MCK-AR-017	B



REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 4.6		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019					
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE					
						KEK (MM)	07/2019					
						ENG. APPROVAL	DATE					
						MJD (MM)	07/2019					
						P.M. APPROVAL	DATE					
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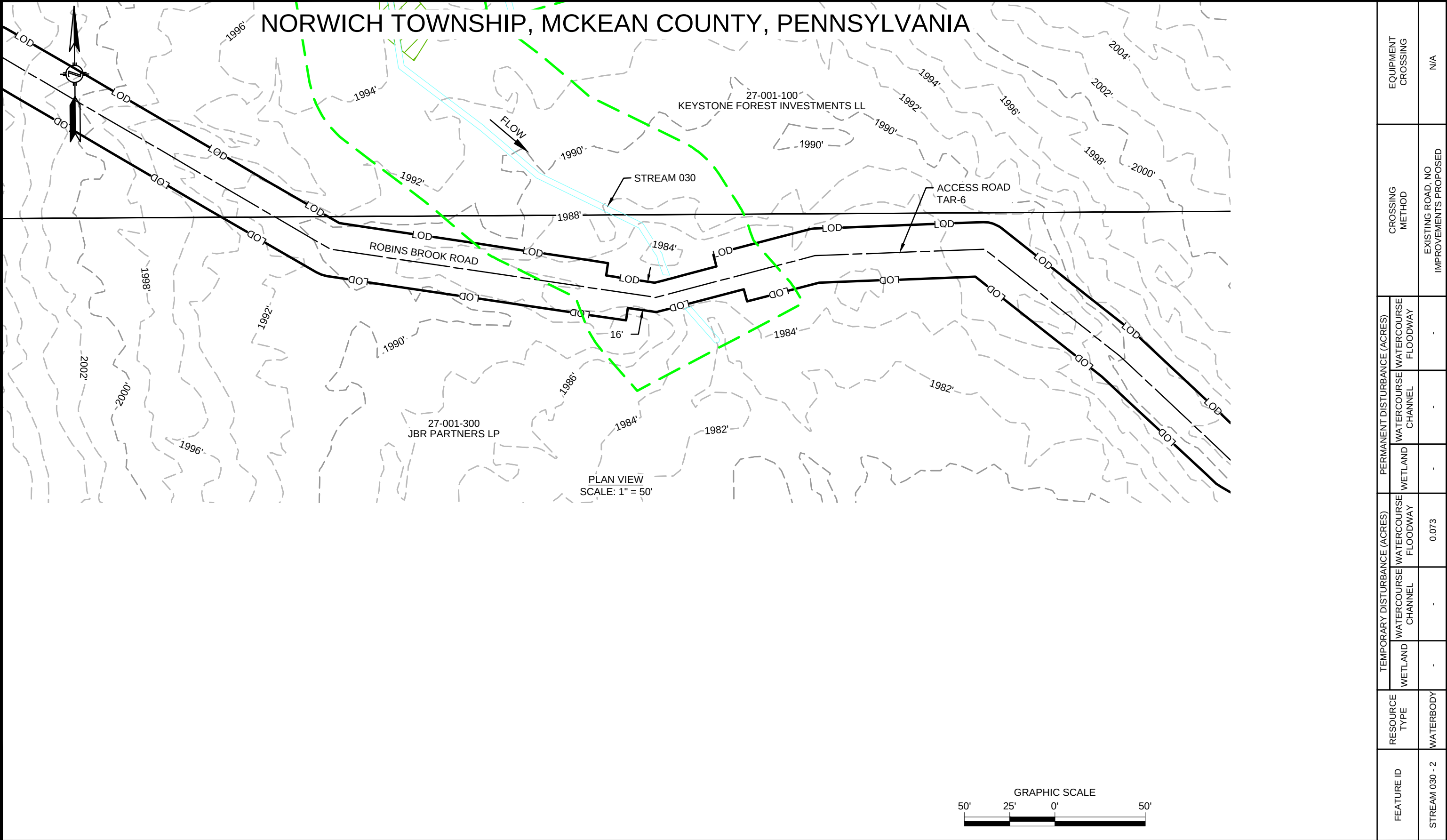
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REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 4.6		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019					
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE					
						KEK (MM)	07/2019					
						ENG. APPROVAL	DATE					
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						P.M. APPROVAL	DATE					

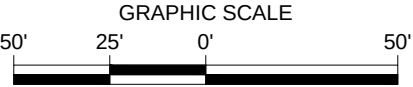
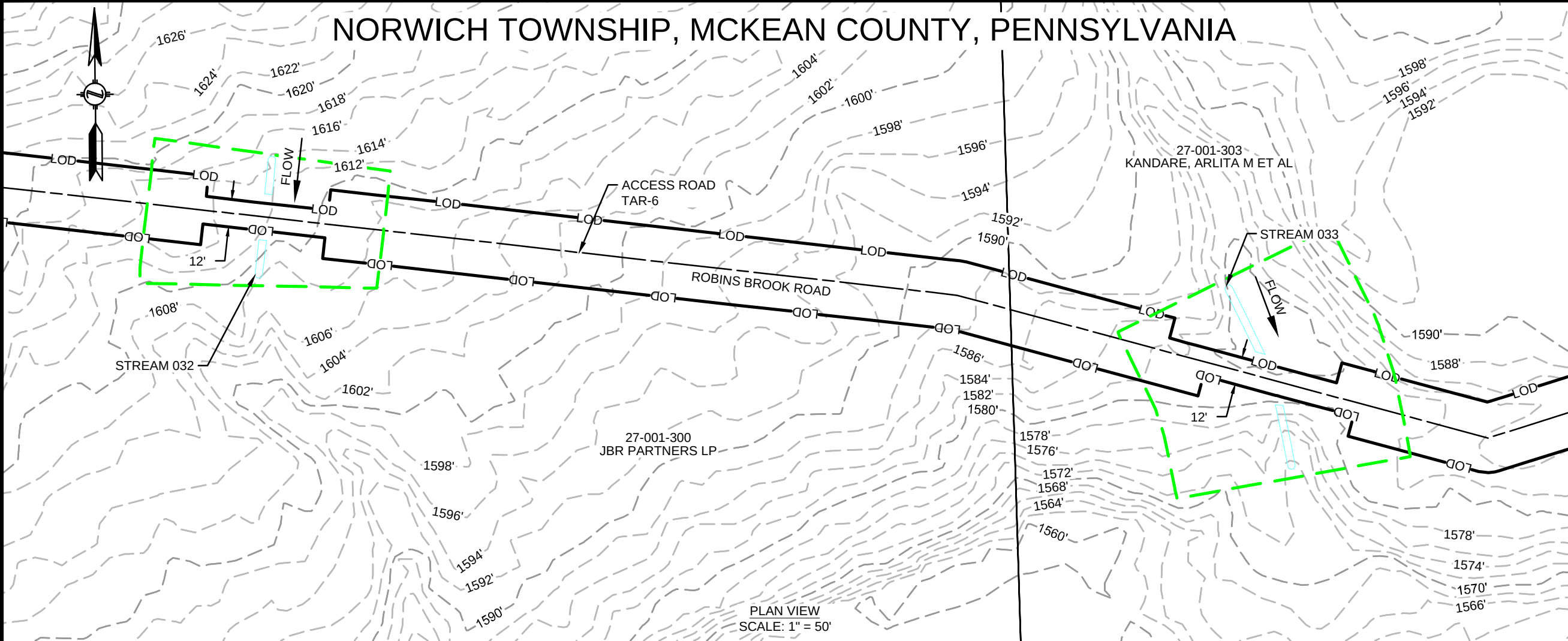
SCALE		DRAWING NO.	REVISION
1" = 50'		WSS-MCK-AR-019	B

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REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 4.8		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019					
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE					
						KEK (MM)	07/2019					
						ENG. APPROVAL	DATE					
						MJD (MM)	07/2019					
						P.M. APPROVAL	DATE					
								FEATURE ID				
								STREAM 030 - 2				
								RESOURCE TYPE				
								WATERBODY				

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REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

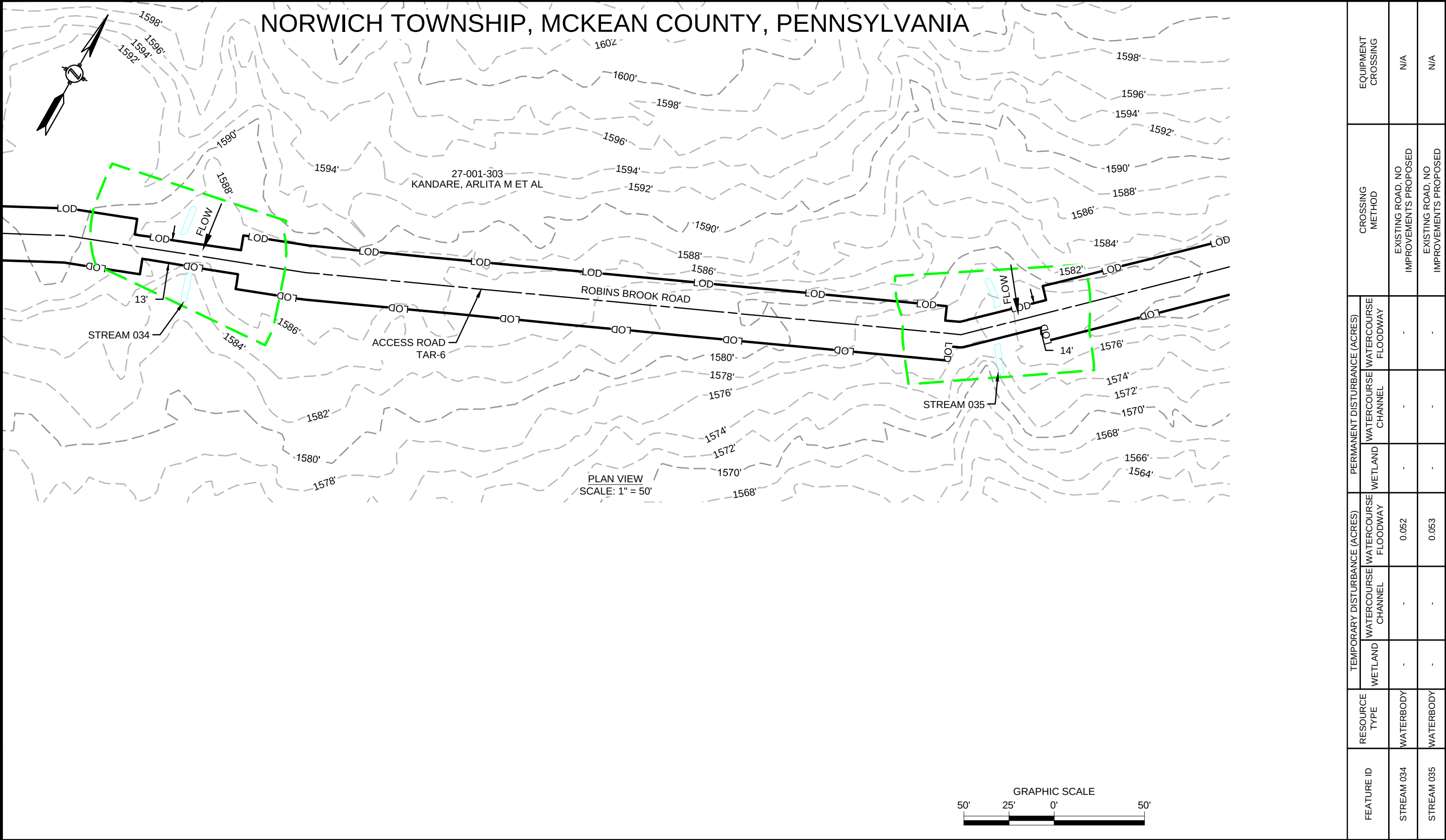
MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 4.8		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-021	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
STREAM 032	WATERBODY	-	-	0.049	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 033	WATERBODY	-	-	0.054	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

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REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

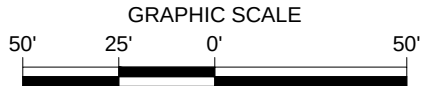
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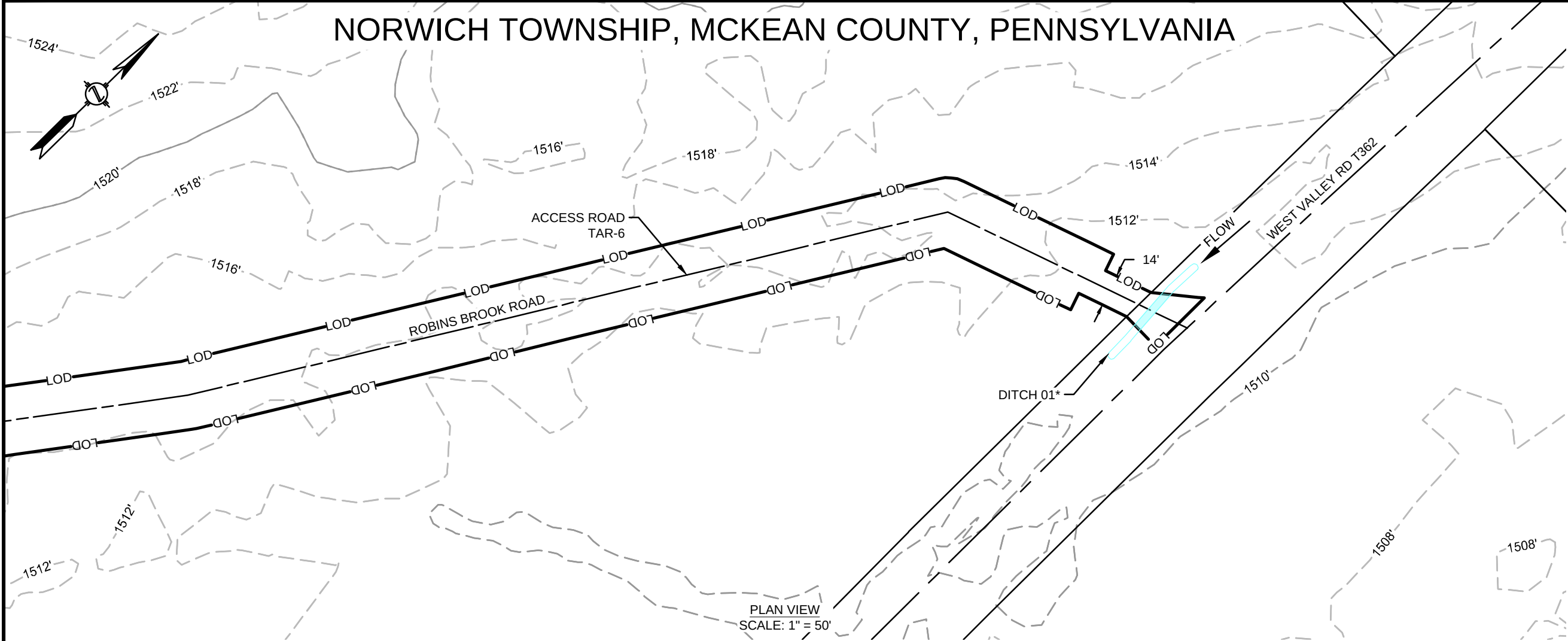
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 4.8		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-022	B

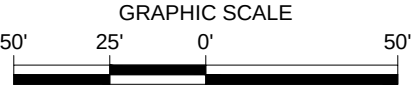


REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 4.8		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019			SCALE	DRAWING NO.	REVISION
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE			1" = 50'	WSS-MCK-AR-023	B
						KEK (MM)	07/2019					
						ENG. APPROVAL	DATE					
						MJD (MM)	07/2019					
						P.M. APPROVAL	DATE					

NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



*DITCH 01 DOES NOT CONTRIBUTE PERENNIAL OR INTERMITTENT SURFACE WATER FLOW TO OTHER JURISDICTIONAL WATERS OF THE COMMONWEALTH, AS SUCH, IT IS NOT A REGULATED WATER AND IS NOT INCLUDED ON THE ARIT TABLE.



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

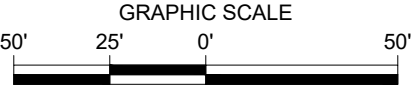
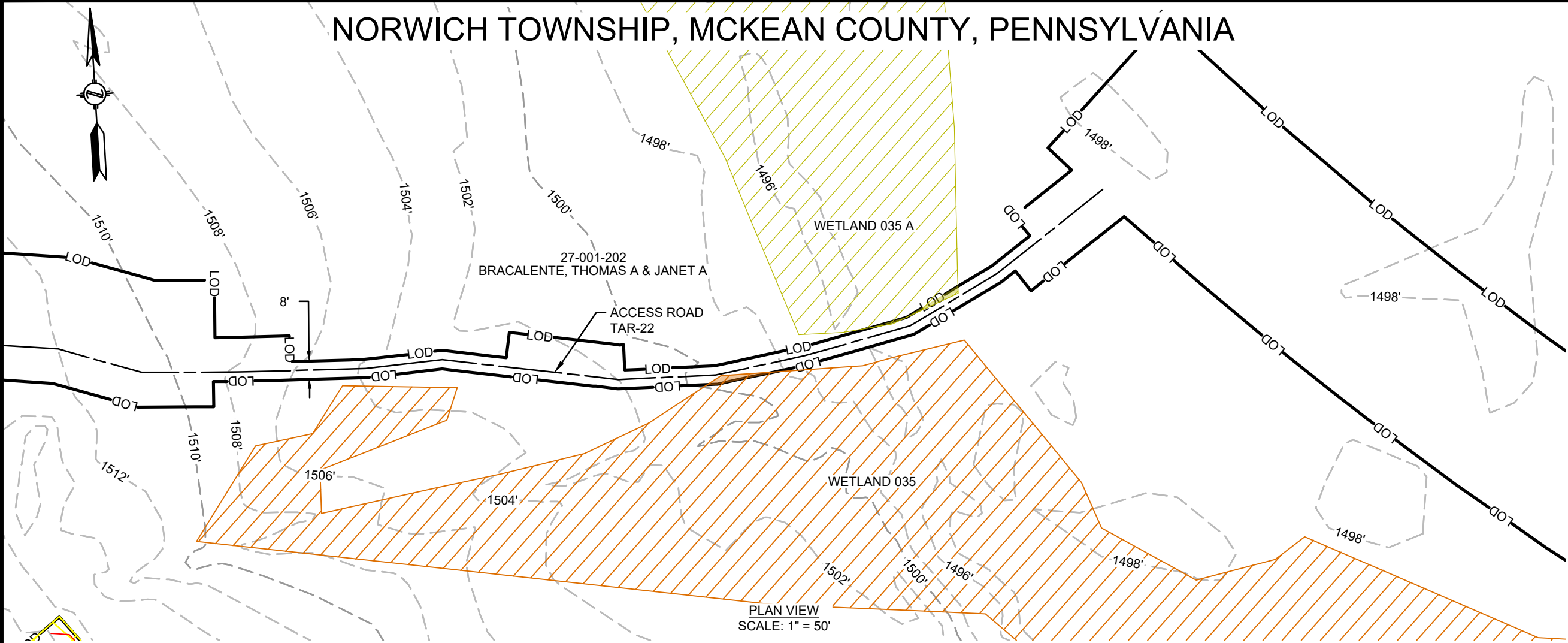
M

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111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 4.8		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-024	C

NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 035A	WETLAND	0.001	-	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
WETLAND 035 - 2	WETLAND	0.001	-	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

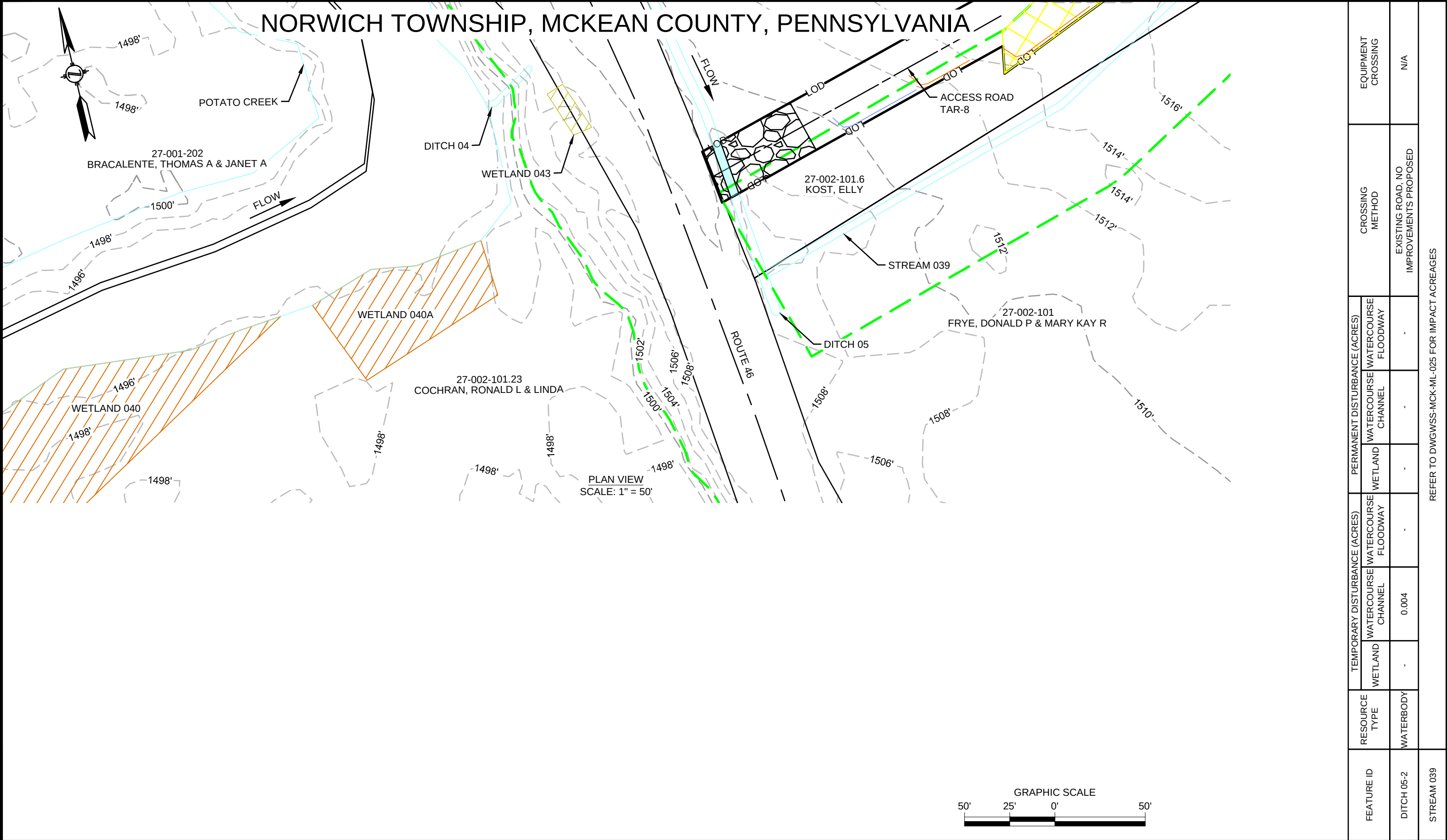
M

MOTT MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 6.7		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-025	C

9/4/2020 12:14 PM: HECTOR MORALES
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REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

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MACDONALD

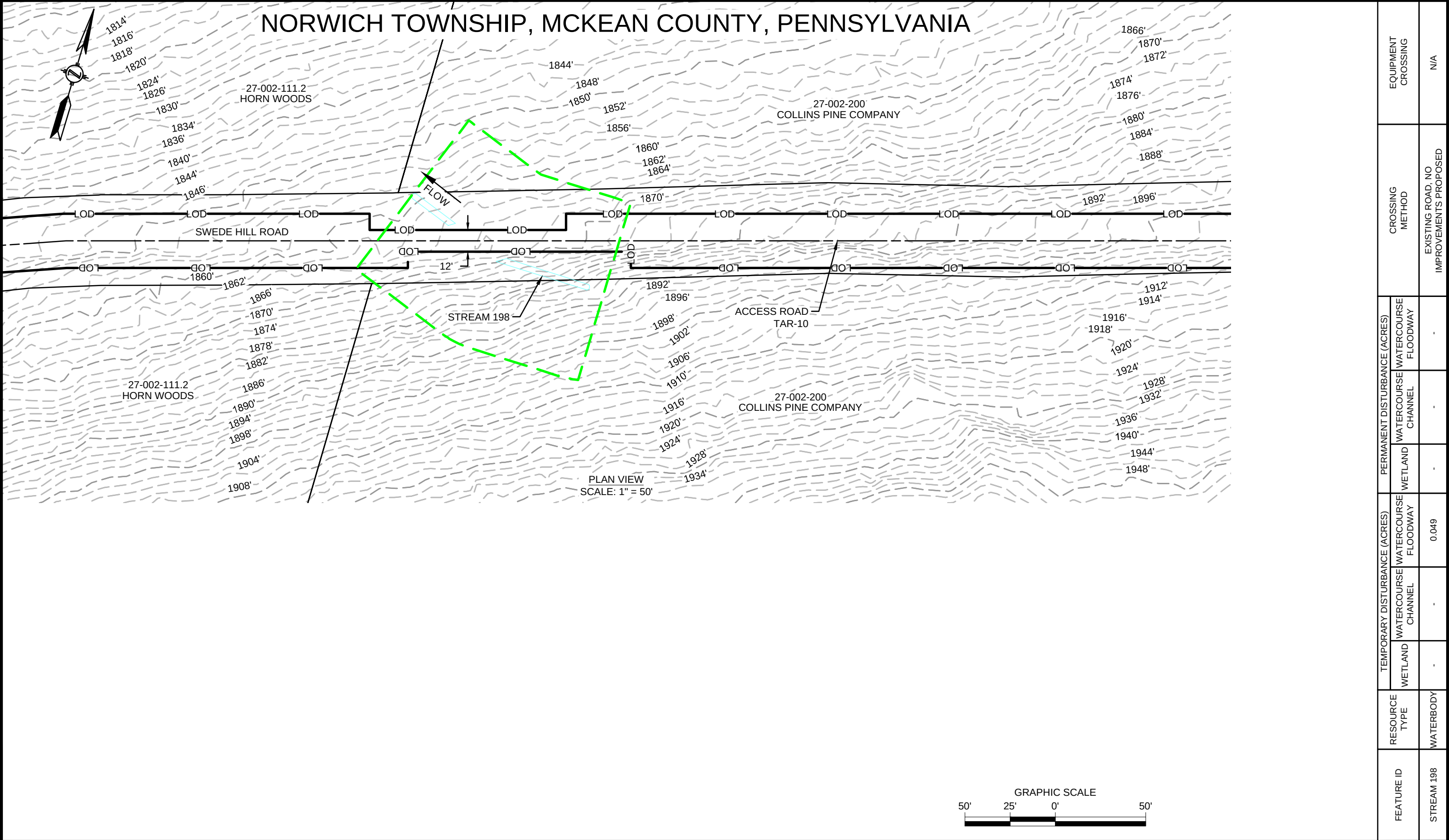
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 6.8		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-025.1	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)		PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WETLAND	WATERCOURSE CHANNEL		
DITCH 05-2	WATERBODY	-	0.004	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 039						REFER TO DWGWSS-MCK-ML-025 FOR IMPACT ACRES	

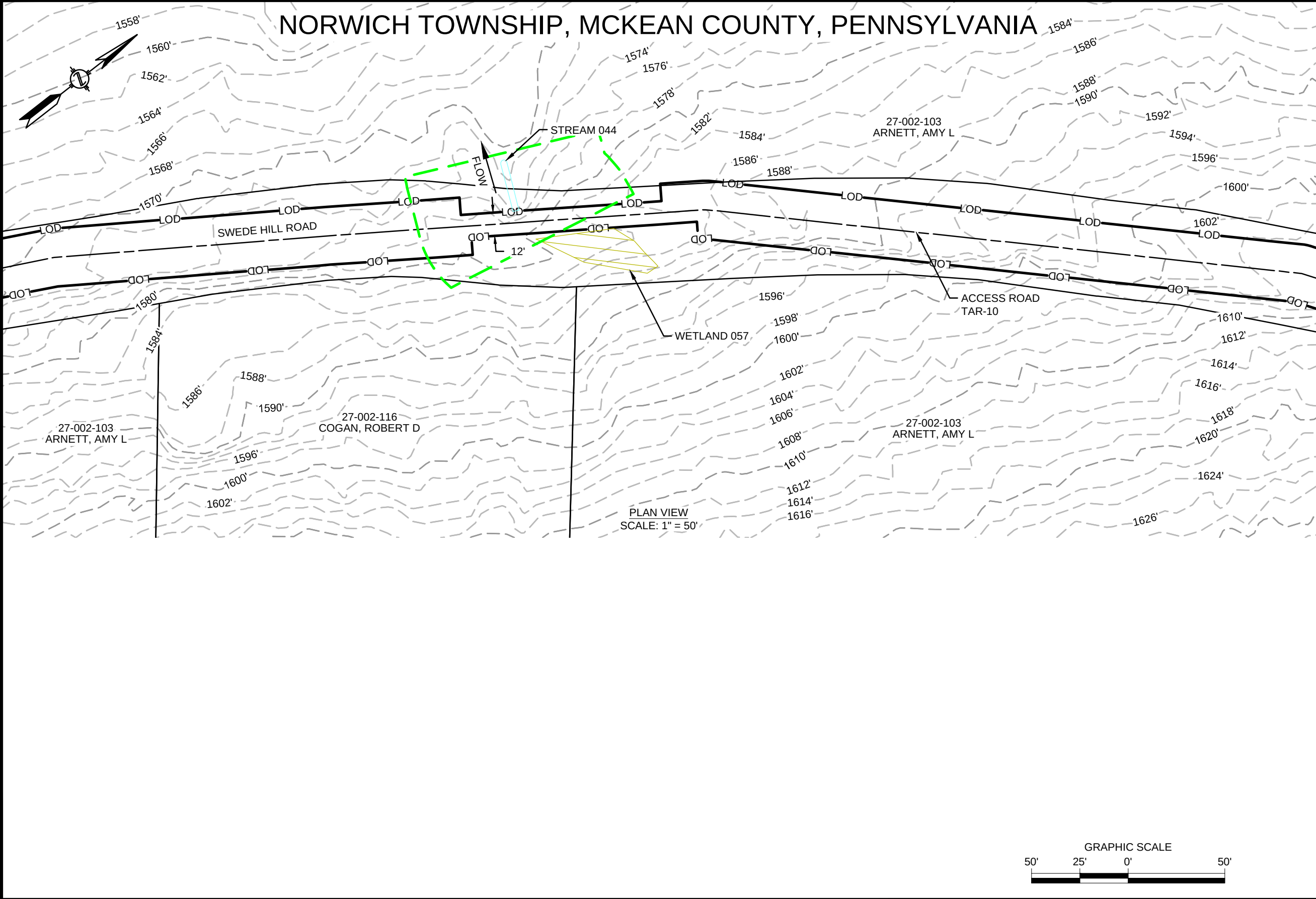
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REVISIONS						APPROVALS		PREPARED FOR:  National Fuel SUPPLY CORPORATION	PREPARED BY: M M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM		FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE				WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 9.0		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019						
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE						
						KEK (MM)	07/2019						
						ENG. APPROVAL	DATE						
						MJD (MM)	07/2019						
						P.M. APPROVAL	DATE						

SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-027	B

9/4/2020 12:17 PM: HECTOR MORALES
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REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

GRAPHIC SCALE

50'

25'

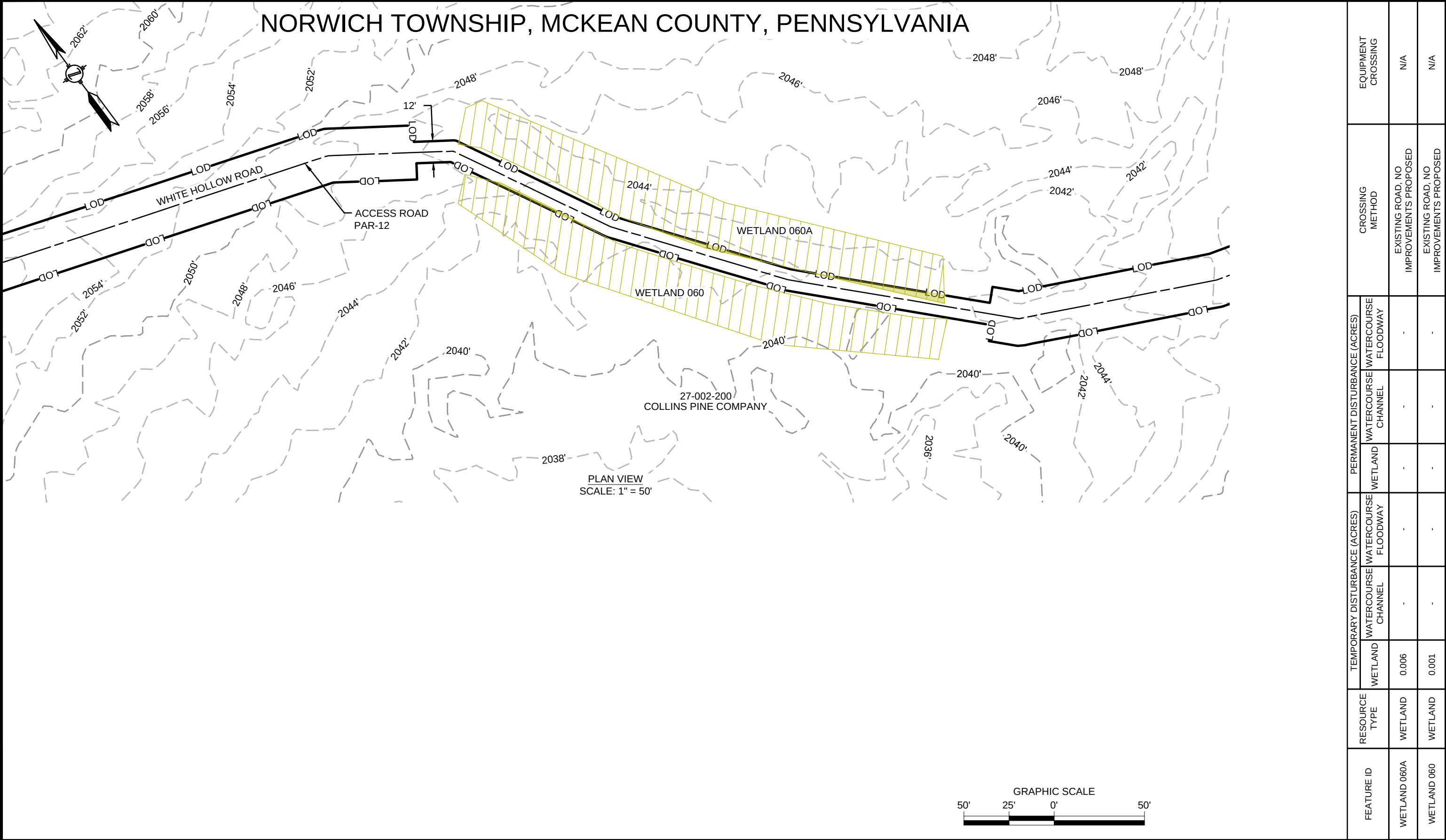
0'

50'

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 9.0		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-028	B

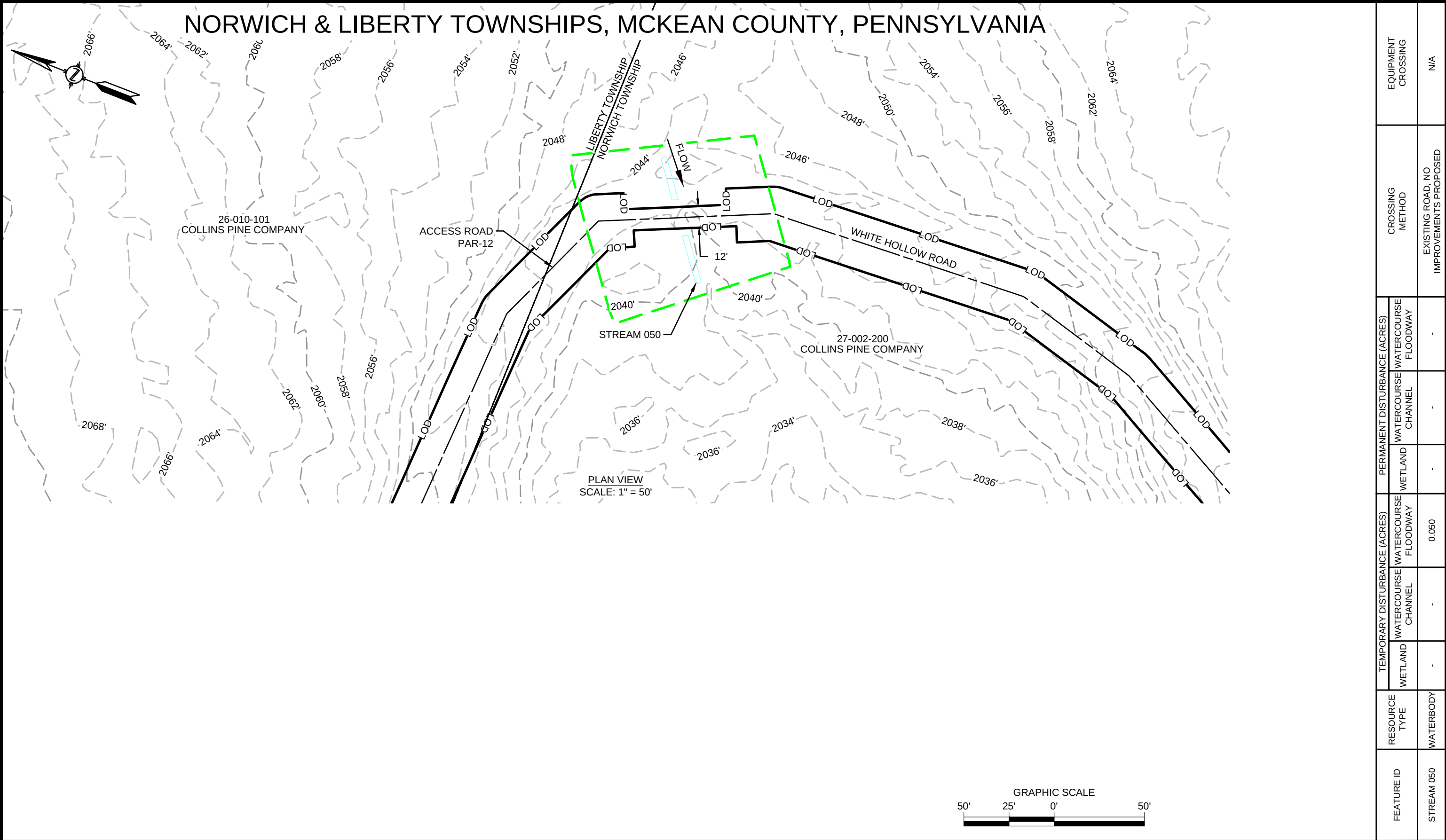
FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WATERCOURSE FLOODWAY		
STREAM 044	WATERBODY	-	<0.001	0.034	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

9/4/2020 12:17 PM: HECTOR MORALES
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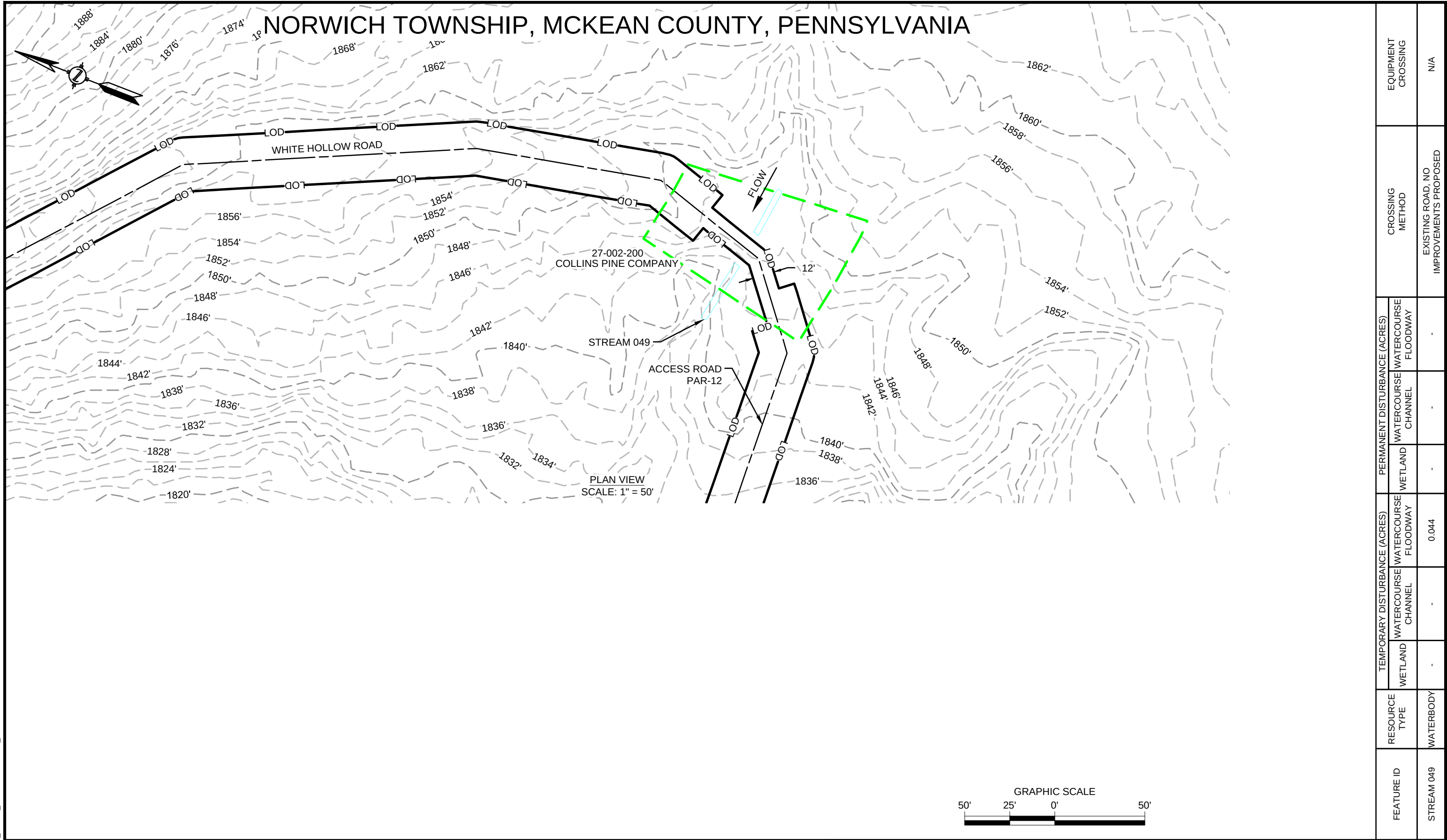
REVISIONS						APPROVALS		PREPARED FOR:	PREPARED BY:		FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE				WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 9.6		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019						
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE						
						KEK (MM)	07/2019						
						ENG. APPROVAL	DATE		 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM		SCALE	DRAWING NO.	REVISION
						MJD (MM)	07/2019				1" = 50'	WSS-MCK-AR-029	B
						P.M. APPROVAL	DATE						

9/4/2020 12:18 PM: HECTOR MORALES
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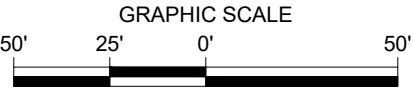
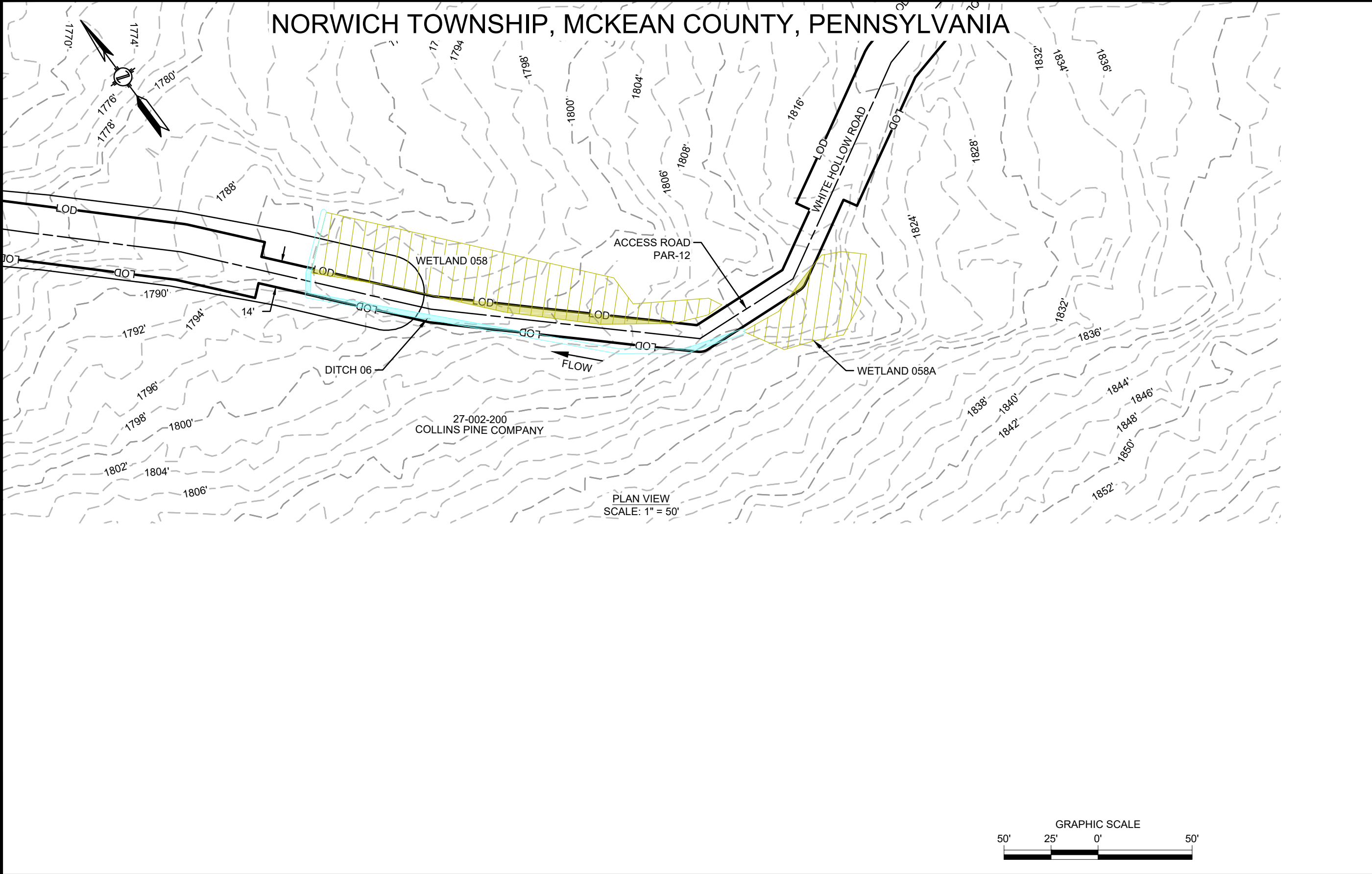
REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY:  111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM		FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE				WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH & LIBERTY TOWNSHIPS, MCKEAN COUNTY, PENNSYLVANIA M.P. 9.6		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019						
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE						
						KEK (MM)	07/2019						
						ENG. APPROVAL	DATE		 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM		SCALE	DRAWING NO.	REVISION
						MJD (MM)	07/2019				1" = 50'	WSS-MCK-AR-030	B
						P.M. APPROVAL	DATE						

RESOURCE TYPE	WATERBODY				
FEATURE ID	STREAM 050				
TEMPORARY DISTURBANCE (ACRES)		WETLAND	-	WATERCOURSE FLOODWAY	0.050
PERMANENT DISTURBANCE (ACRES)		WETLAND	-	WATERCOURSE FLOODWAY	-
CROSSING METHOD		EXISTING ROAD, NO IMPROVEMENTS PROPOSED			
EQUIPMENT CROSSING		N/A			



REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 9.6		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019					
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE					
						KEK (MM)	07/2019					
						ENG. APPROVAL	DATE					
						MJD (MM)	07/2019					
						P.M. APPROVAL	DATE					
								SCALE 1" = 50'	DRAWING NO. WSS-MCK-AR-031	REVISION B		

12/16/2020 4:54 PM, HECTOR MORALES
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REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

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MACDONALD

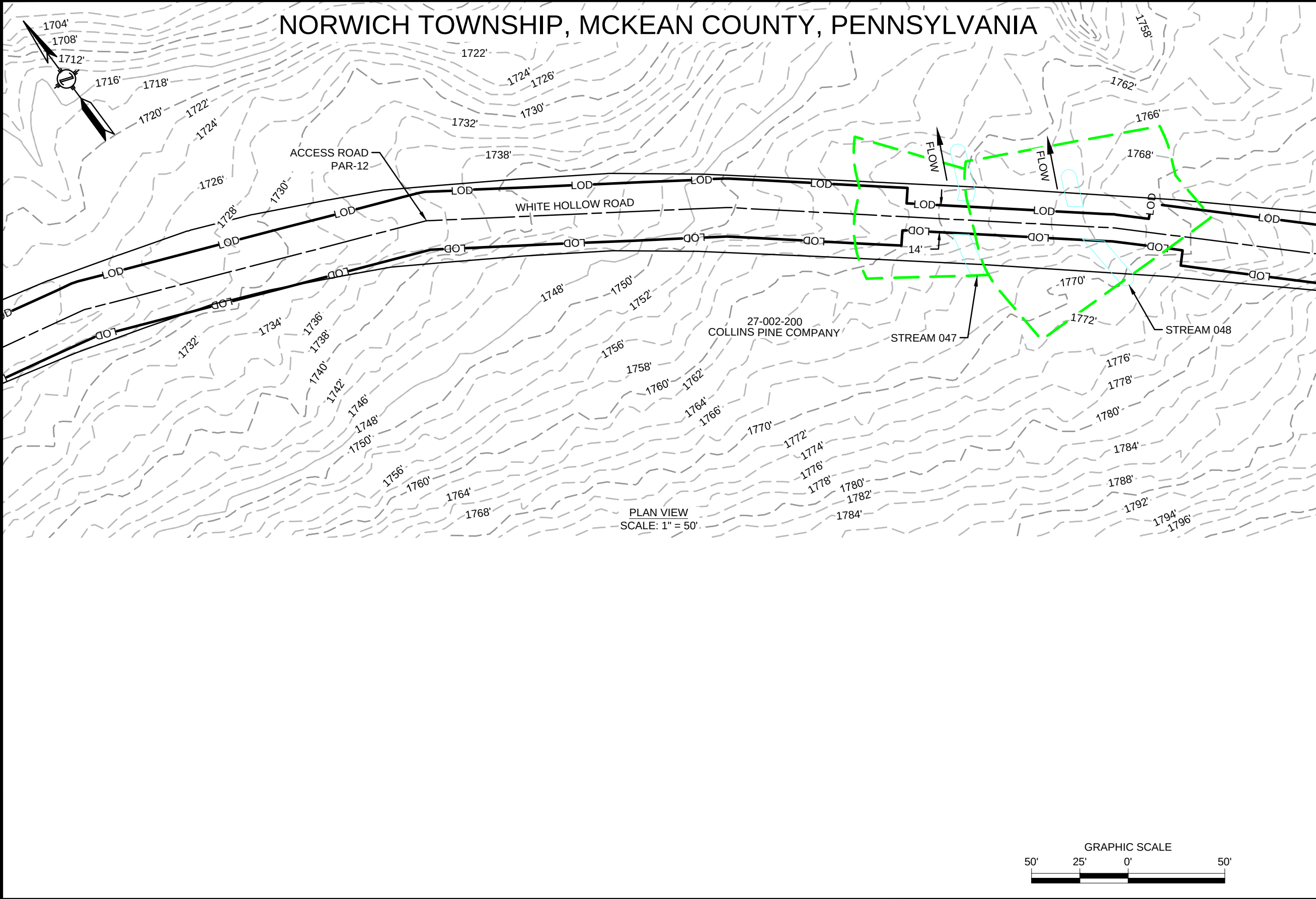
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 9.6		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-032	C

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)		PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WETLAND	WATERCOURSE CHANNEL		
WETLAND 058	WETLAND	0.011	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
WETLAND 058A	WETLAND	0.001	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
DITCH 06	WATERBODY	-	0.008	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

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REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

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111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

GRAPHIC SCALE

50'

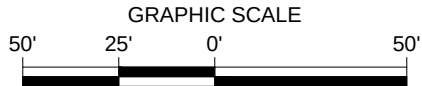
25'

0'

50'

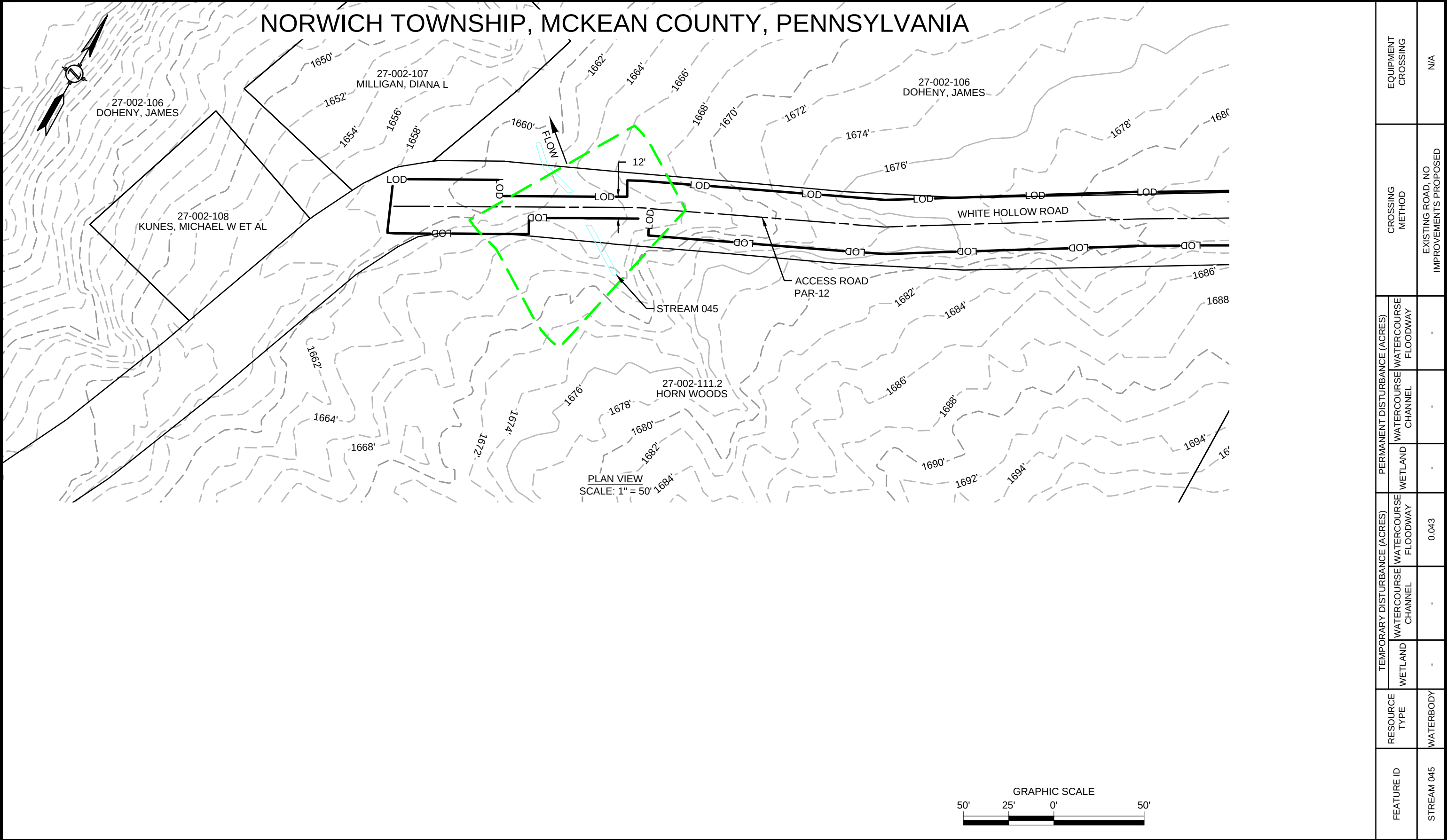
FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 09.6		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-033	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
		-	-	0.029	-	-	-		
STREAM 047	WATERBODY	-	-	0.029	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 048	WATERBODY	-	<0.001	0.041	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A



REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 9.6		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019					
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE					
						KEK (MM)	07/2019					
						ENG. APPROVAL	DATE					
						MJD (MM)	07/2019					
						P.M. APPROVAL	DATE					
									SCALE DRAWING NO. REVISION 1" = 50' WSS-MCK-AR-034 B			

9/4/2020 12:22 PM: HECTOR MORALES
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REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

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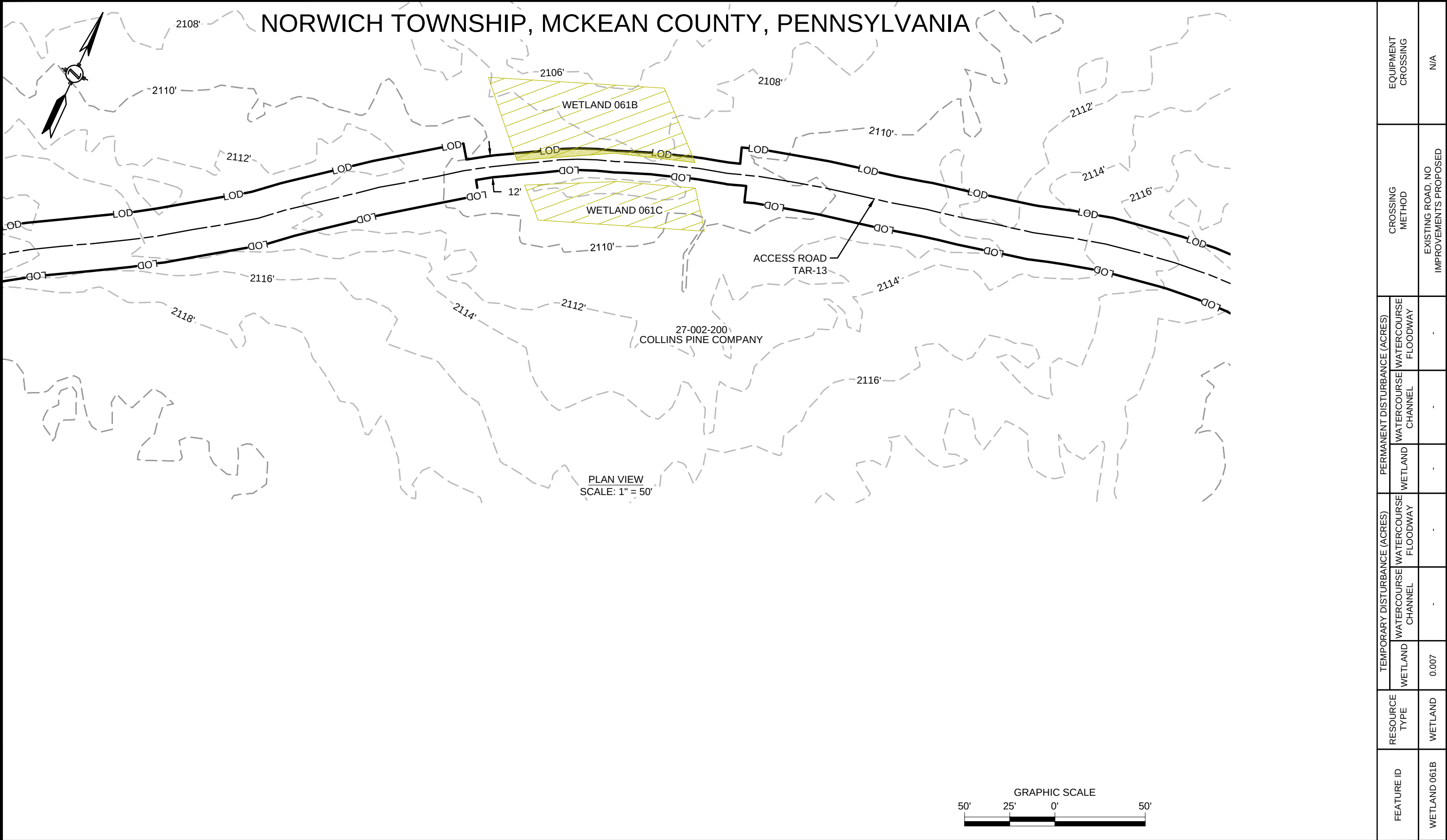
MOTT MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 9.6		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-035	B

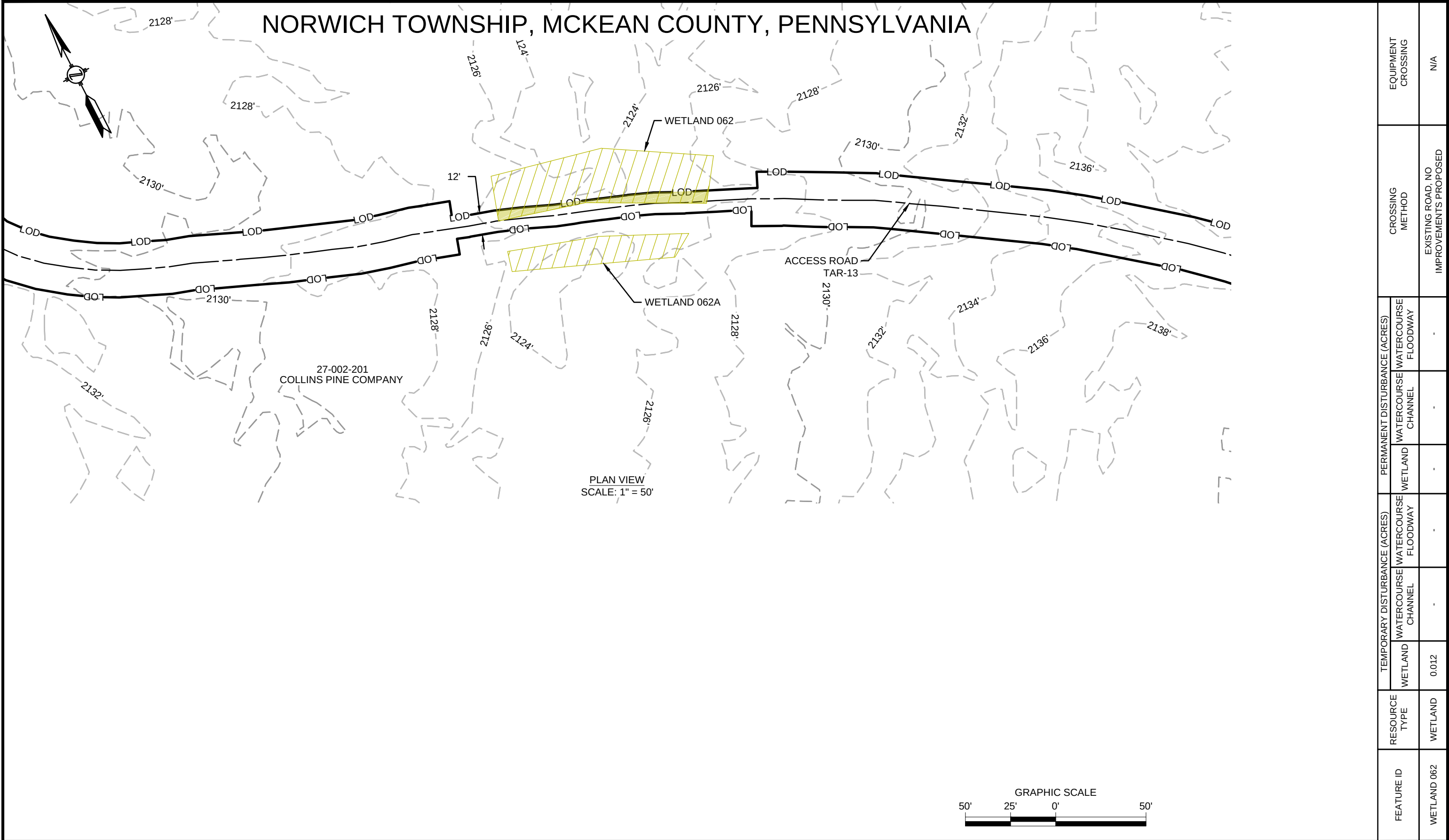
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REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY:  111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 9.6		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019					
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE					
						KEK (MM)	07/2019					
						ENG. APPROVAL	DATE					
						MJD (MM)	07/2019					
						P.M. APPROVAL	DATE					

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 061B	WETLAND	0.007	-	-	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

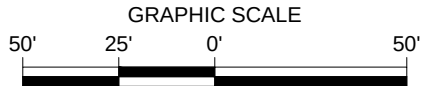
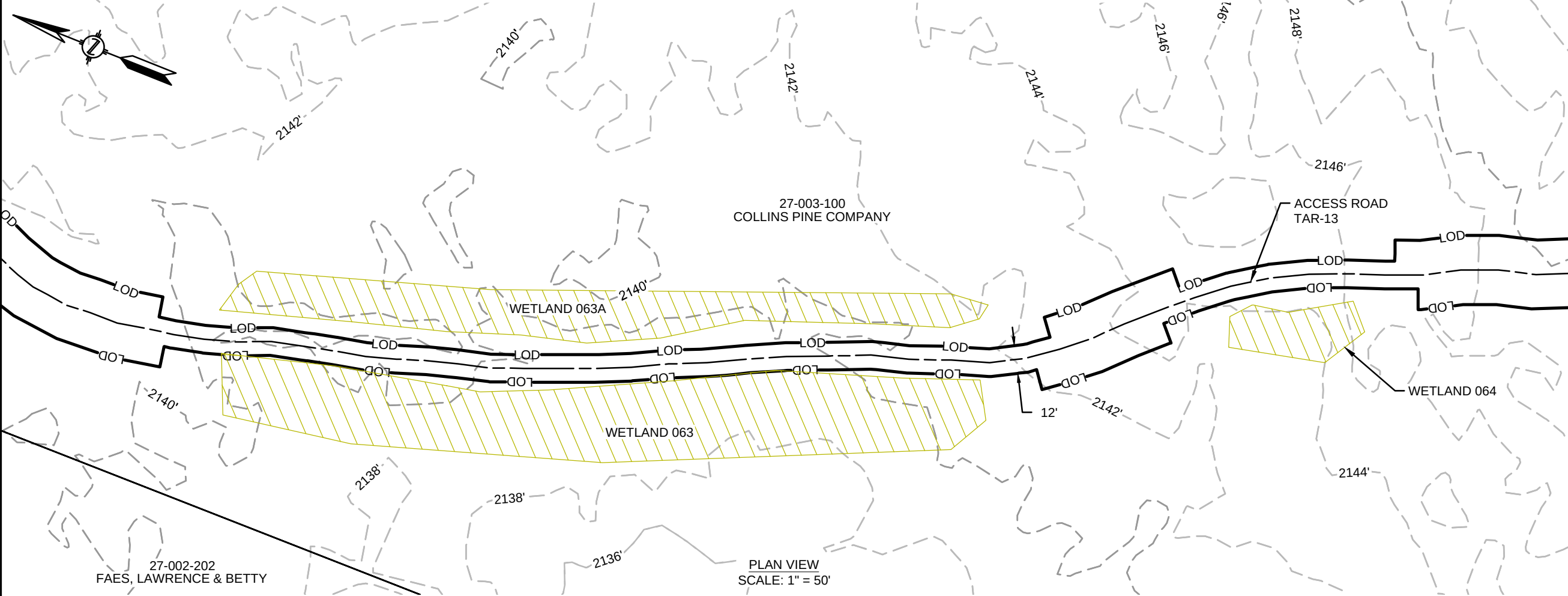
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REVISIONS						APPROVALS		PREPARED FOR:	PREPARED BY:		FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE				WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 9.6		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019						
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE						
						KEK (MM)	07/2019						
						ENG. APPROVAL	DATE		 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM		SCALE		
						MJD (MM)	07/2019				DRAWING NO.		
						P.M. APPROVAL	DATE				REVISION		
											1" = 50'	WSS-MCK-AR-037	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
WETLAND 062	WETLAND	0.012	WETLAND	WATERCOURSE CHANNEL	-	WATERCOURSE FLOODWAY	-	WATERCOURSE FLOODWAY	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 063	WETLAND	<0.001	-	-	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

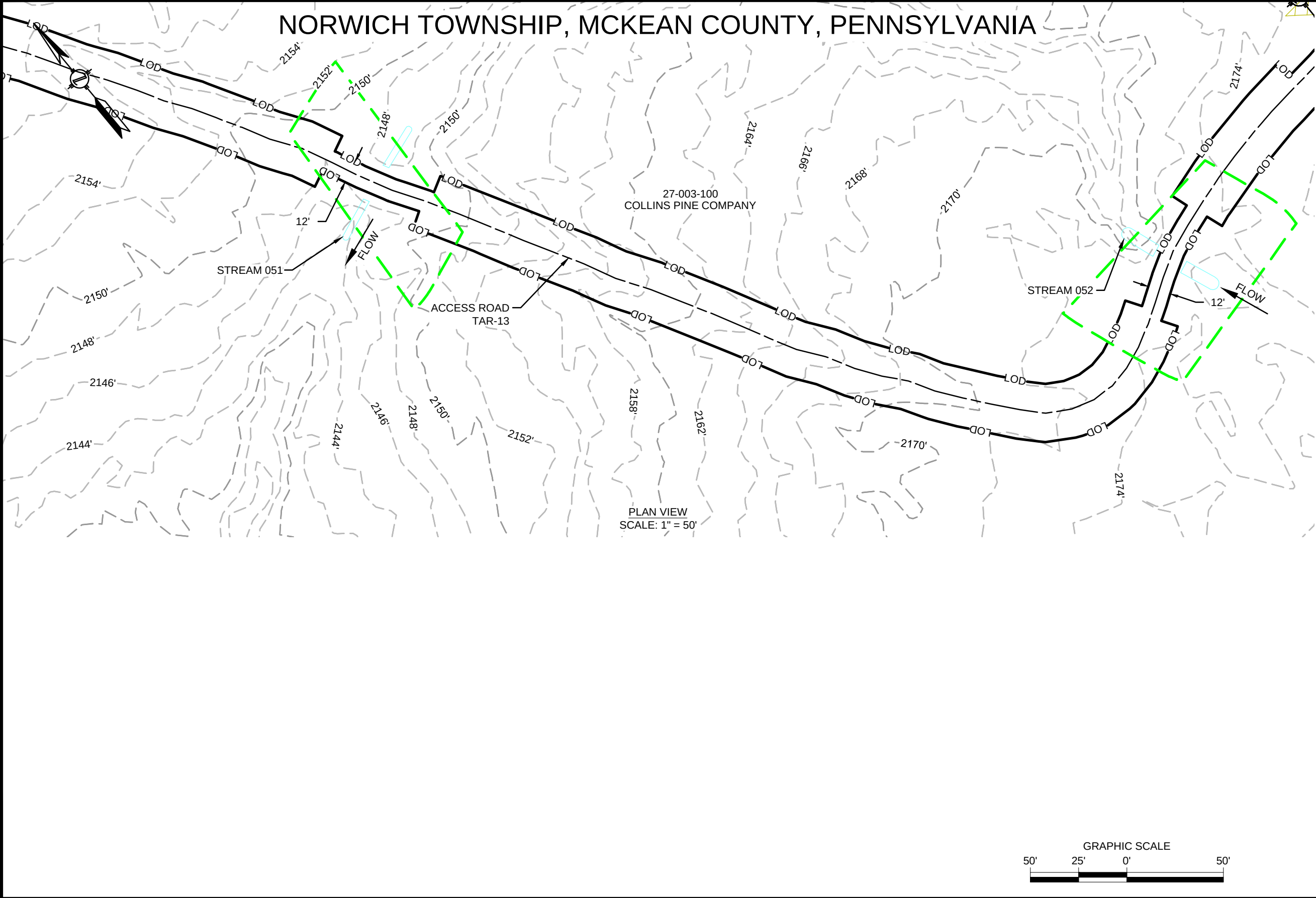
M

MOTT MACDONALD

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SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 09.6		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-038	B

9/4/2020 12:24 PM: HECTOR MORALES
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REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

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MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

GRAPHIC SCALE

50'

25'

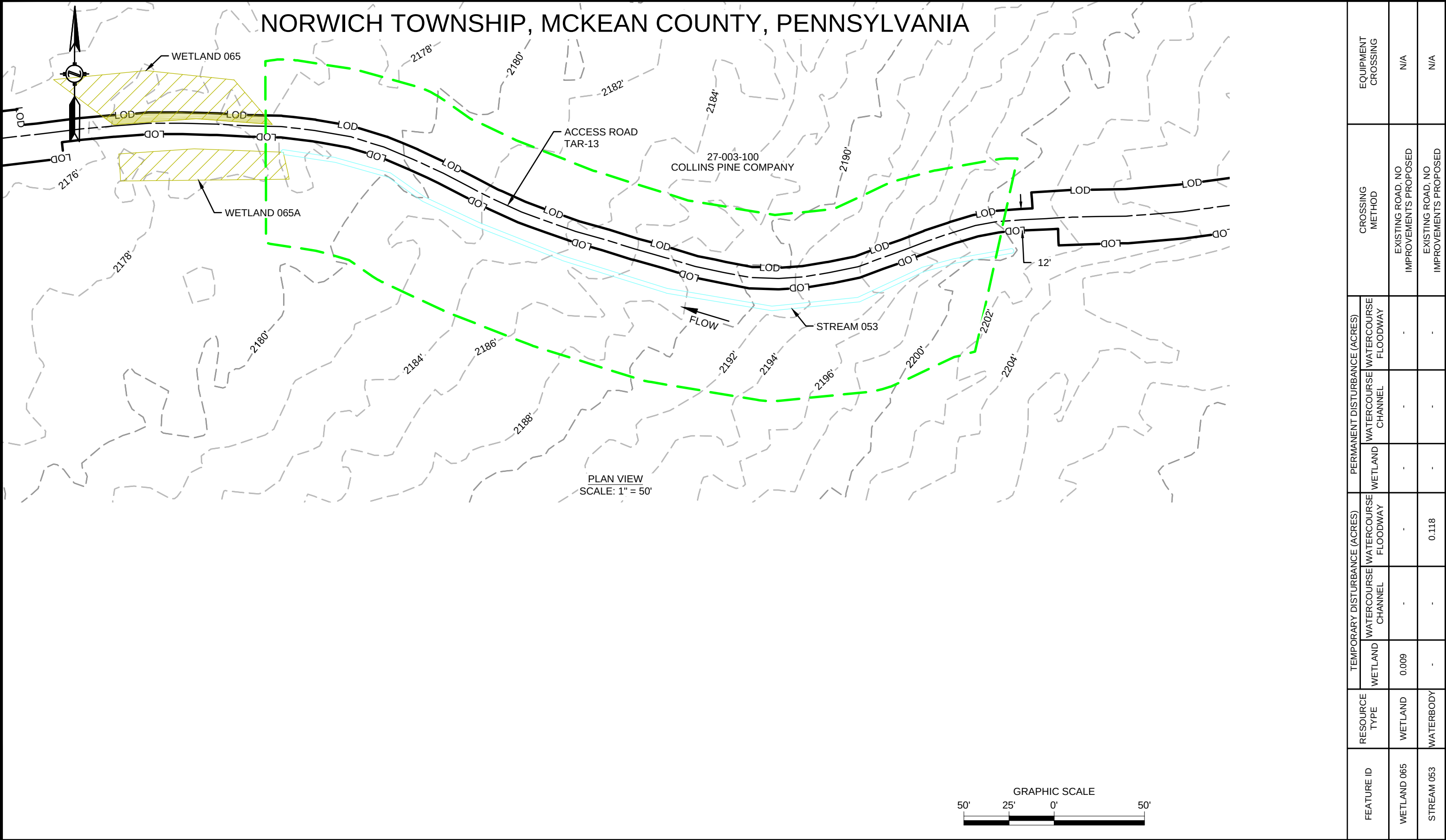
0'

50'

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 09.6		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-039	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
		-	-	0.033	-	-	-		
STREAM 051	WATERBODY	-	-	0.033	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 052	WATERBODY	-	-	0.049	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

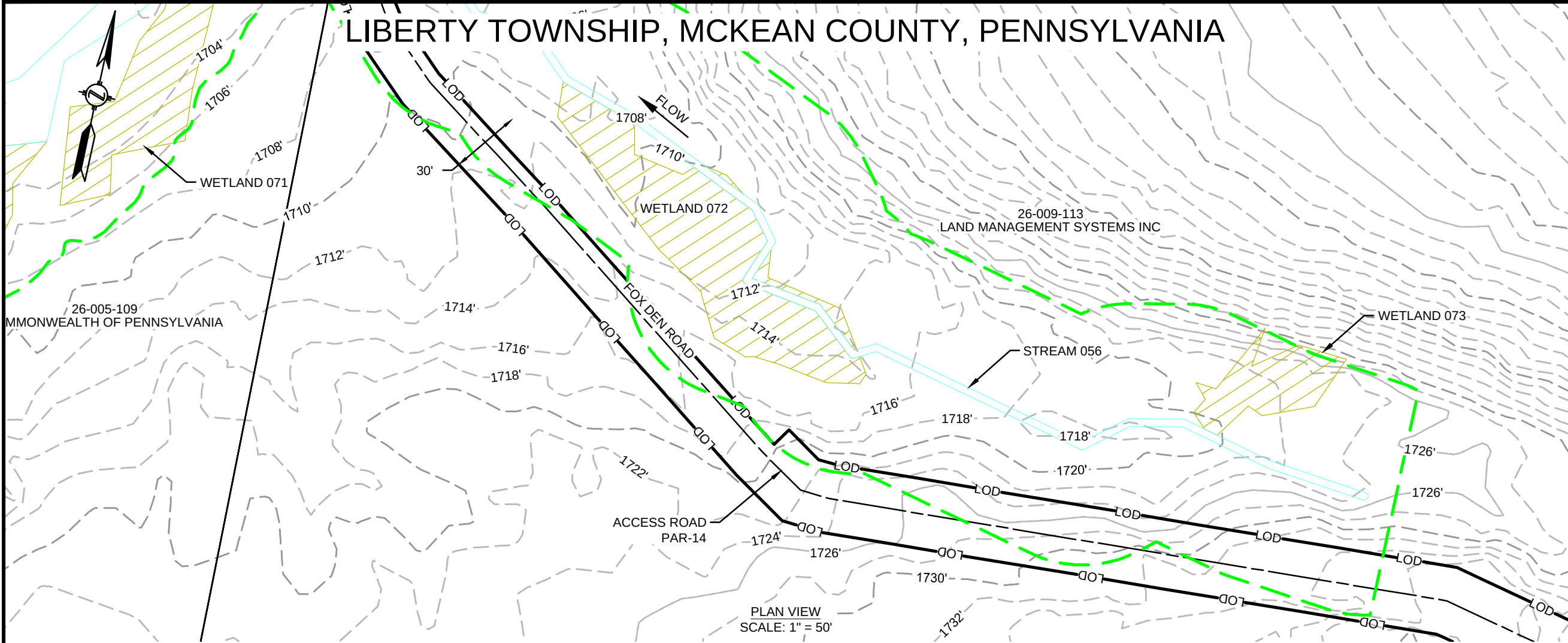
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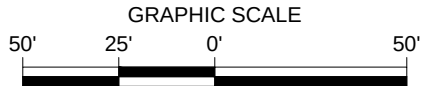
REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN, NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE NORWICH TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 9.6		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019			SCALE		
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE			DRAWING NO.		
						ENG. APPROVAL	DATE			REVISION		
						MJD (MM)	07/2019			1" = 50'		
						P.M. APPROVAL	DATE			WSS-MCK-AR-040		
										B		

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LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



PLAN VIEW
SCALE: 1" = 50'



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

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111 WOOD AVENUE
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UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

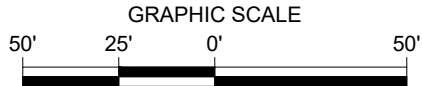
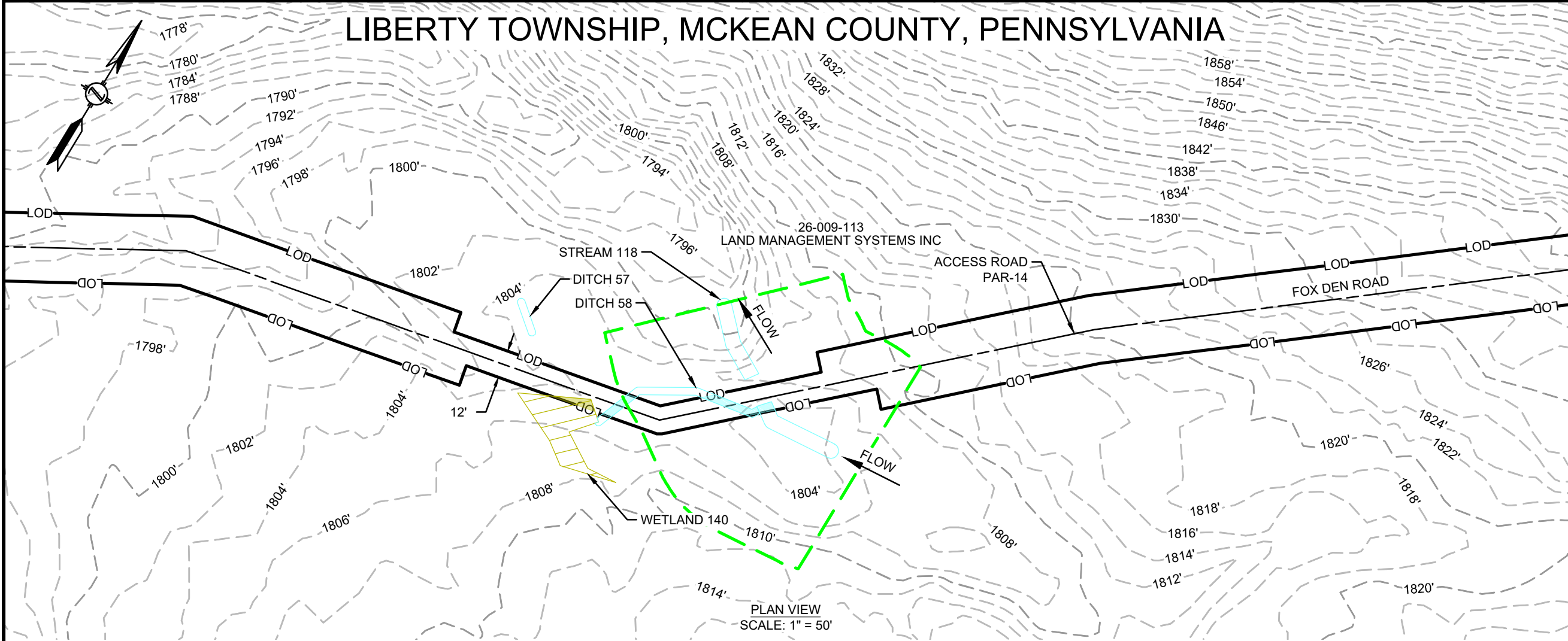
FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 11.2		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-041	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL		
STREAM 056								

REFER TO DWG WSS-MCK-ML-036 FOR IMPACT ACRES

12/16/2020 1:53 PM, HECTOR MORALES
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LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

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MACDONALD

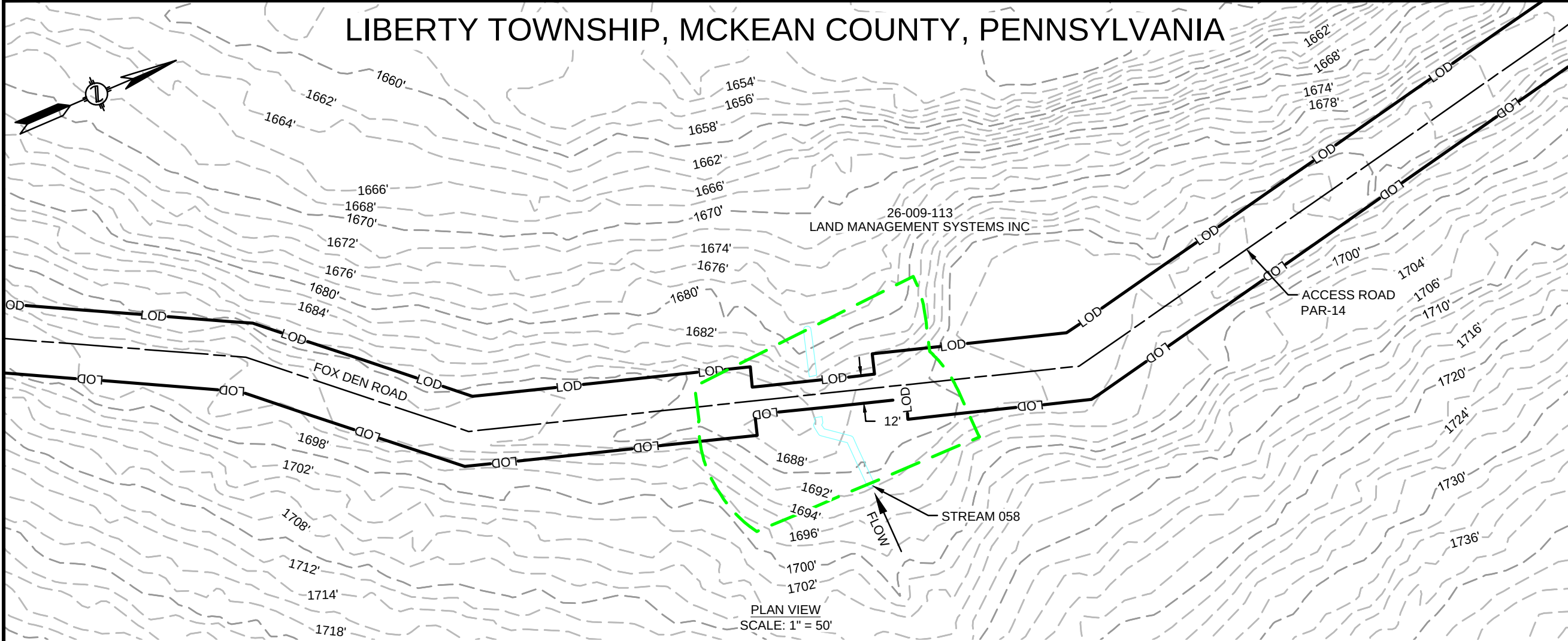
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 11.2		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-042	C

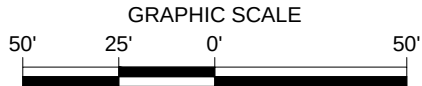
FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)		PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WETLAND	WATERCOURSE CHANNEL		
WETLAND 140	WETLAND	0.001	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
DITCH 58	WATERBODY	-	0.003	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 118	WATERBODY	-	0.001	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

9/4/2020 12:28 PM: HECTOR MORALES
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LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



PLAN VIEW
SCALE: 1" = 50'



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

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MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

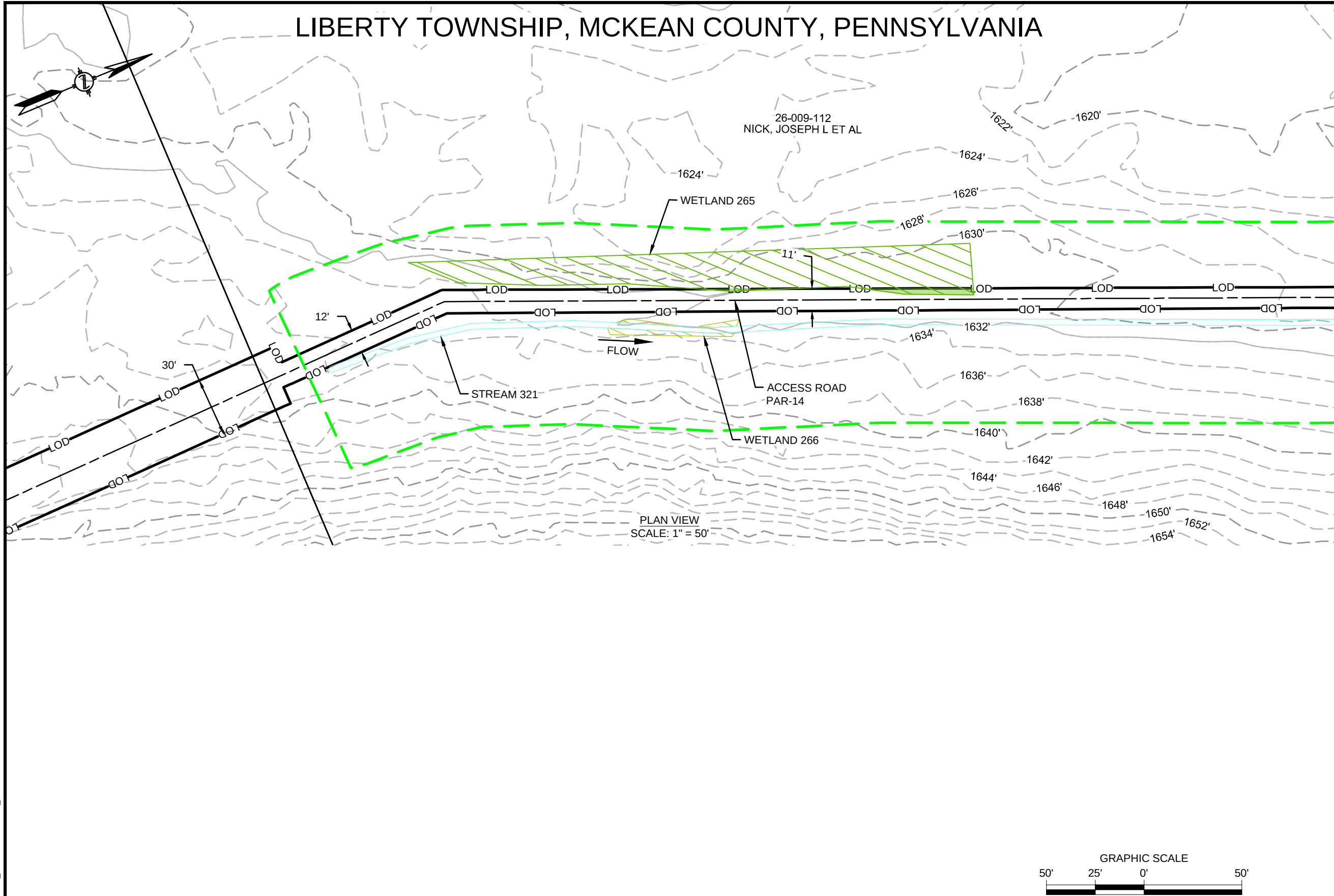
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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 11.2		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-043	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WATERCOURSE FLOODWAY		
STREAM 058	WATERBODY	-	-	0.051	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

9/4/2020 12:27 PM, HECTOR MORALES
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LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

GRAPHIC SCALE

50'

25'

0'

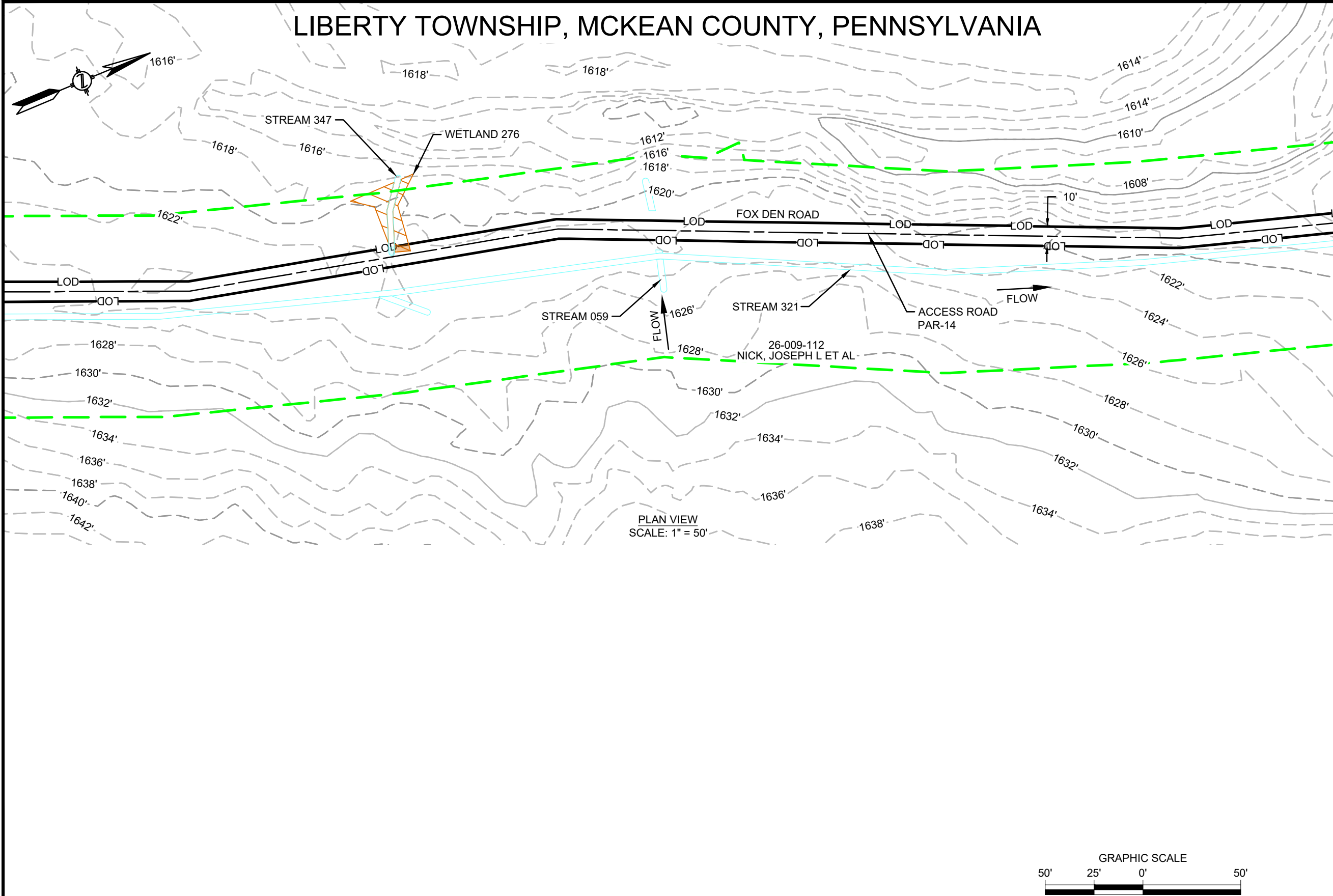
50'

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 11.2		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-043.1	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
STREAM 321										
WETLAND 265	WETLAND	0.004	-	-	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

12/16/2020 1:54 PM, HECTOR MORALES
G:\NATIONAL FUEL\GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATER SPECIFICS\WSS-MCK-AR-044.DWG

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
STREAM 321	WATERBODY	-	0.004	0.501	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 347	WATERBODY	-	<0.001	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
WETLAND 276	WETLAND	0.001	-	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

MOTT MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

GRAPHIC SCALE

50'

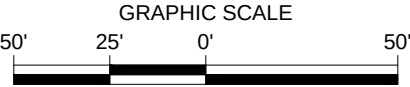
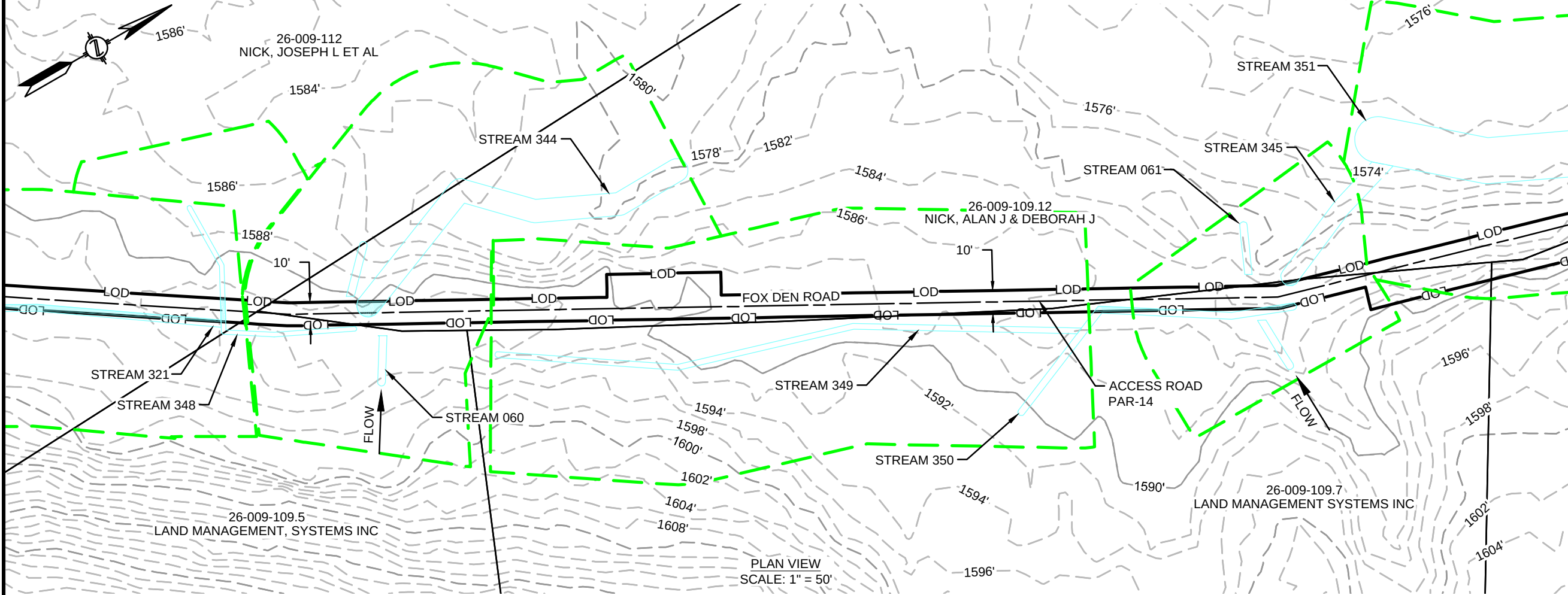
25'

0'

50'

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 11.2		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-044	C

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

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MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 11.2		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-045A	B

9/4/2020 12:30 PM: HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATER SPECIFICS\WSS-MCK-AR-045.DWG

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
STREAM 321	REFER TO DWG WSS-MCK-AR-044 FOR IMPACT ACREAGES								
STREAM 061	WATERBODY	-	-	0.025	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 344	WATERBODY	-	0.001	0.023	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 345	WATERBODY	-	<0.001	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 348	WATERBODY	-	<0.001	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 349	WATERBODY	-	-	0.071	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 350	WATERBODY	-	0.001	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 351	REFER TO DWG WSS-MCK-AR-045.1 FOR IMPACT ACREAGES								

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

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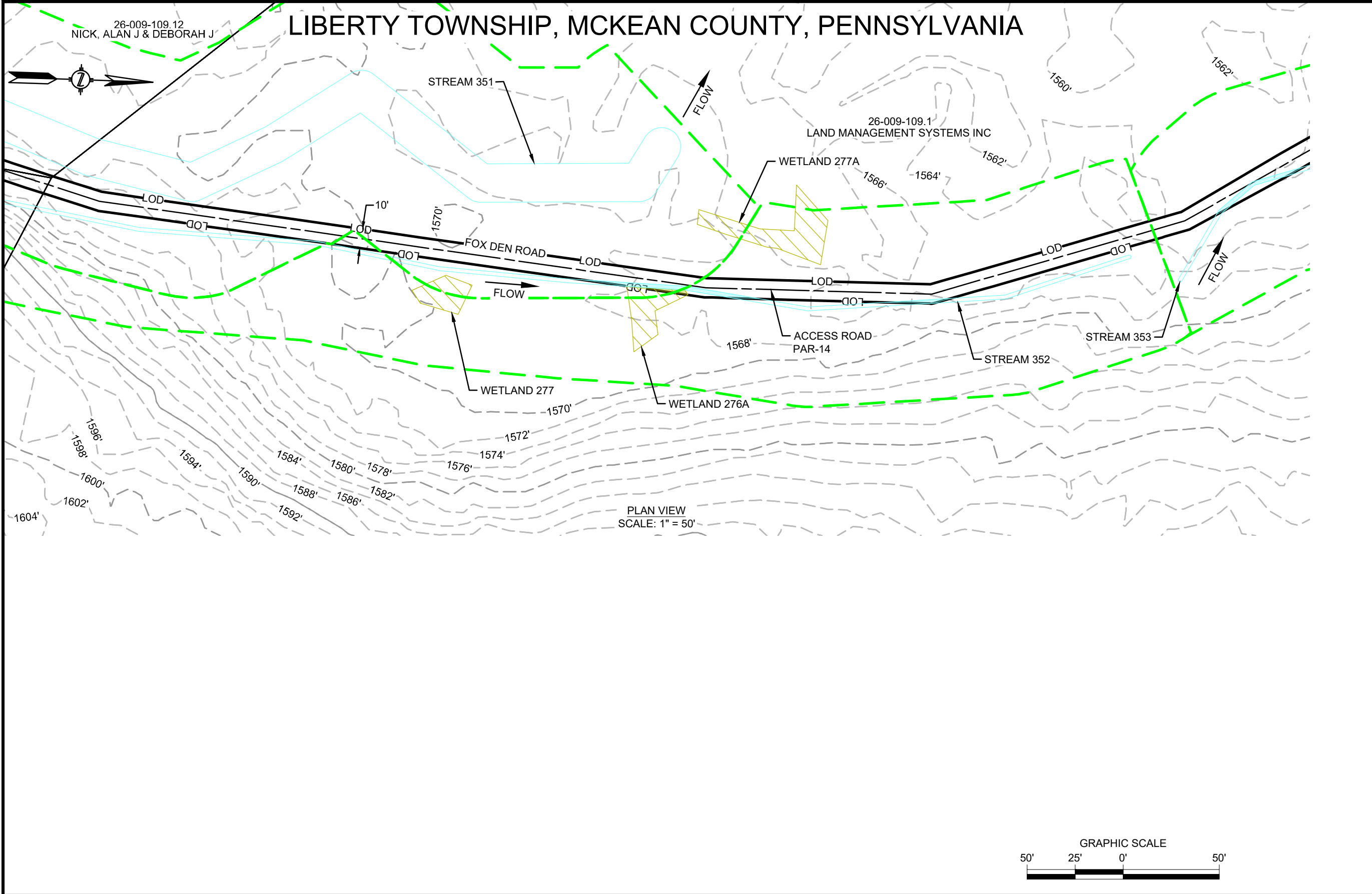
MOTT MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

--

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 11.2		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-045B	B

12/16/2020 1:56 PM, HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATERSPECIFICS\WSS-MCK-AR-045.1.DWG



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
STREAM 352	WATERBODY	-	0.004	0.056	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
WETLAND 276A	WETLAND	0.001	-	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 353	WATERBODY	-	0.003	0.138	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 351	WATERBODY	-	-	0.130	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

GRAPHIC SCALE

50'

25'

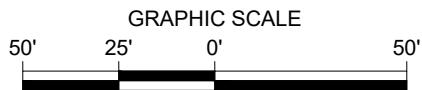
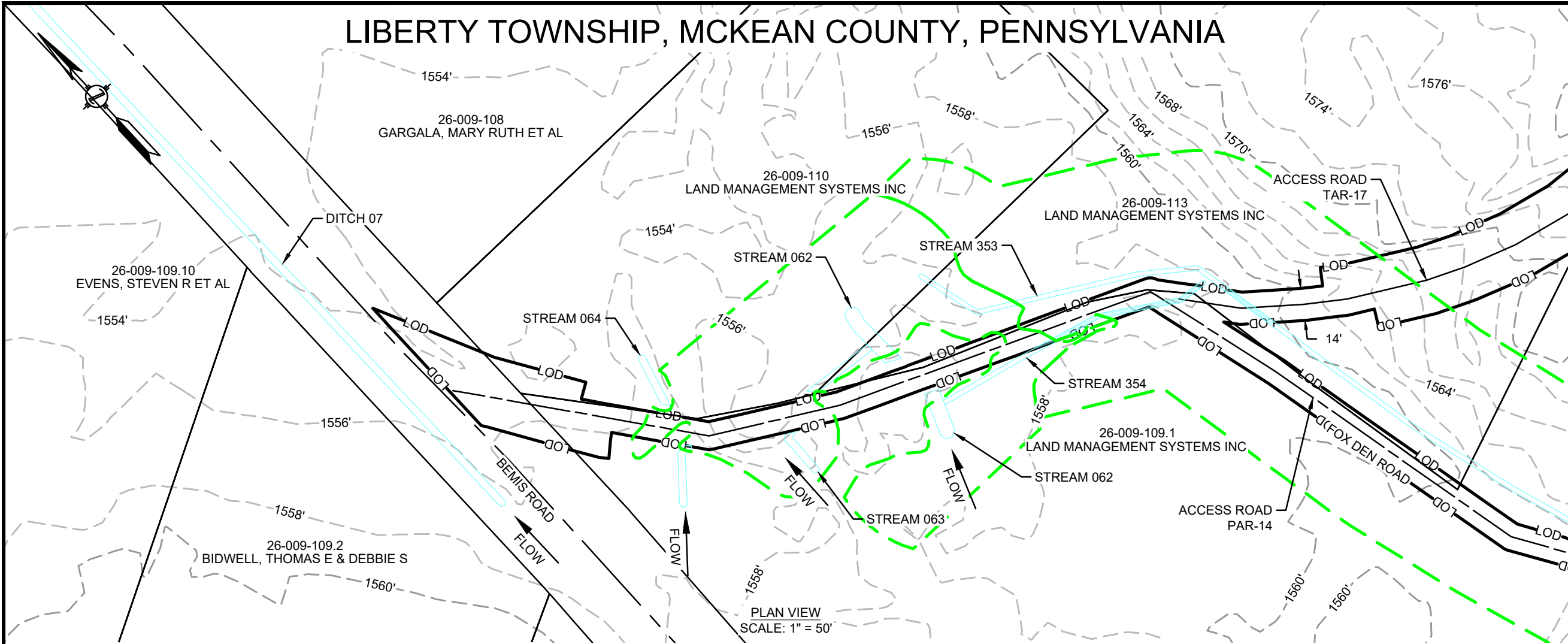
0'

50'

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 11.2		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-045.1	C

12/17/2020 11:25 AM - HECTOR MORALES
G:\NATIONAL FUEL\GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATER\SPECIFICS\WSS-MCK-AR-046.DWG

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
STREAM 062	WATERBODY	-	-	0.026		-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 064	WATERBODY	-	<0.001	-		-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 354	WATERBODY	-	0.003	-		-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 353										

REFER TO DWG WSS-MCK-AR-045.1 FOR IMPACT ACRES

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

PREPARED BY:

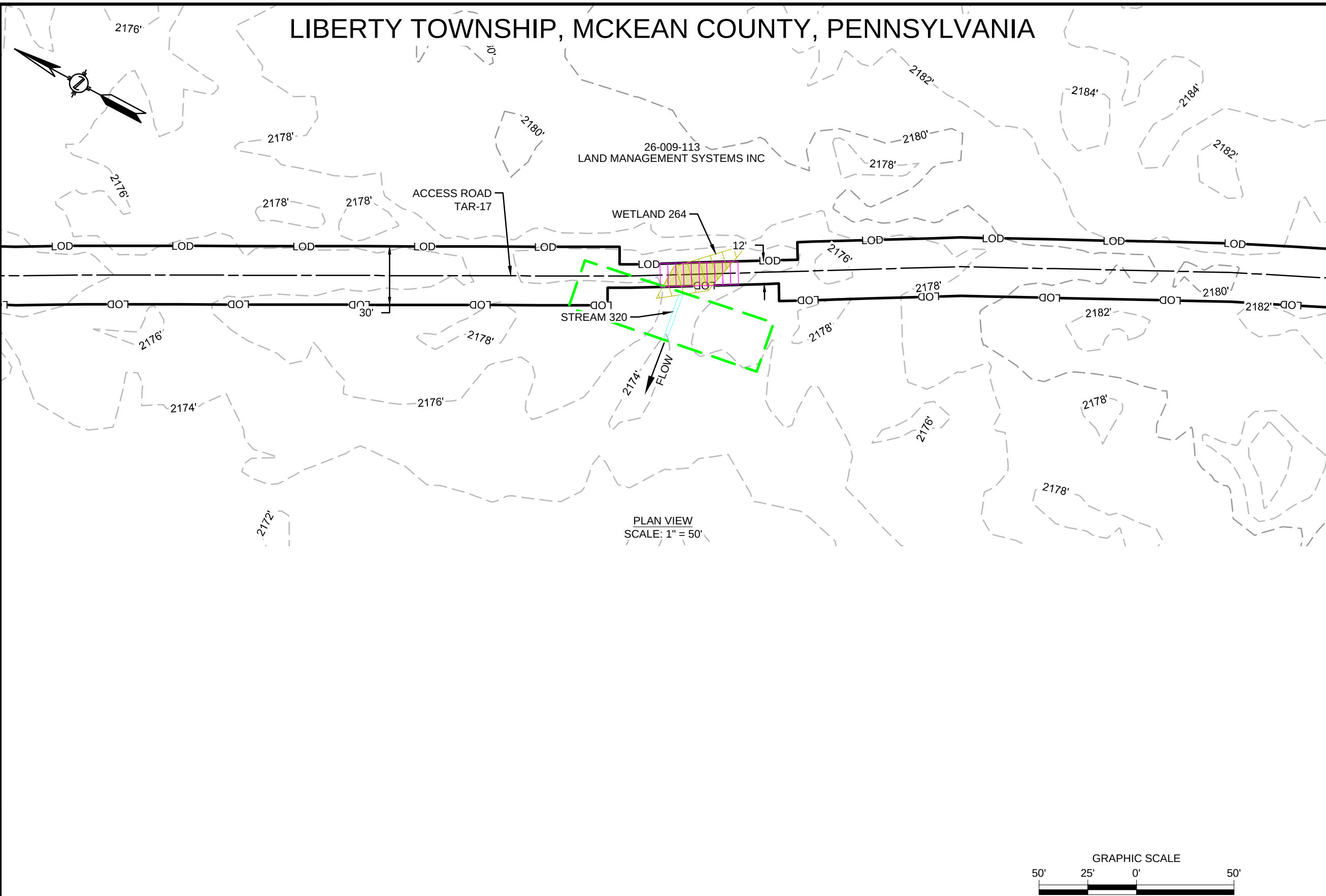
MOTT MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

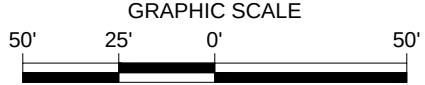
FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 11.2		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-046	C

9/4/2020 12:31 PM: HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATER SPECIFICS\WSS-MCK-AR-046.1.DWG

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



PLAN VIEW
SCALE: 1" = 50'



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

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MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

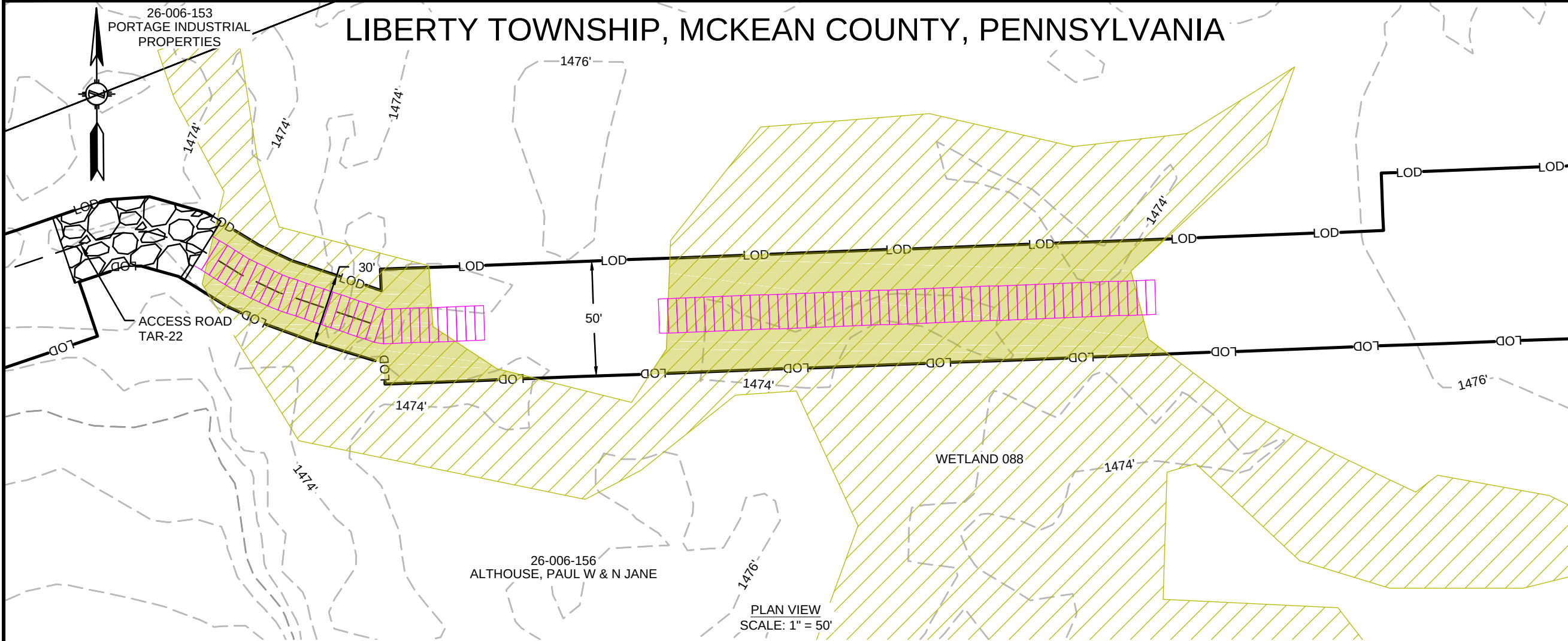
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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 12.6		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-046.1	B

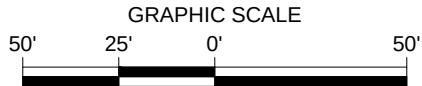
FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 264	WETLAND	0.007	-	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	MAT BRIDGE OR EQUIVALENT
STREAM 320	WATERBODY	-	-	0.011	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

9/4/2020 12:33 PM: HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATER SPECIFICS\WSS-MCK-AR-047.DWG

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



PLAN VIEW
SCALE: 1" = 50'



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

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MACDONALD

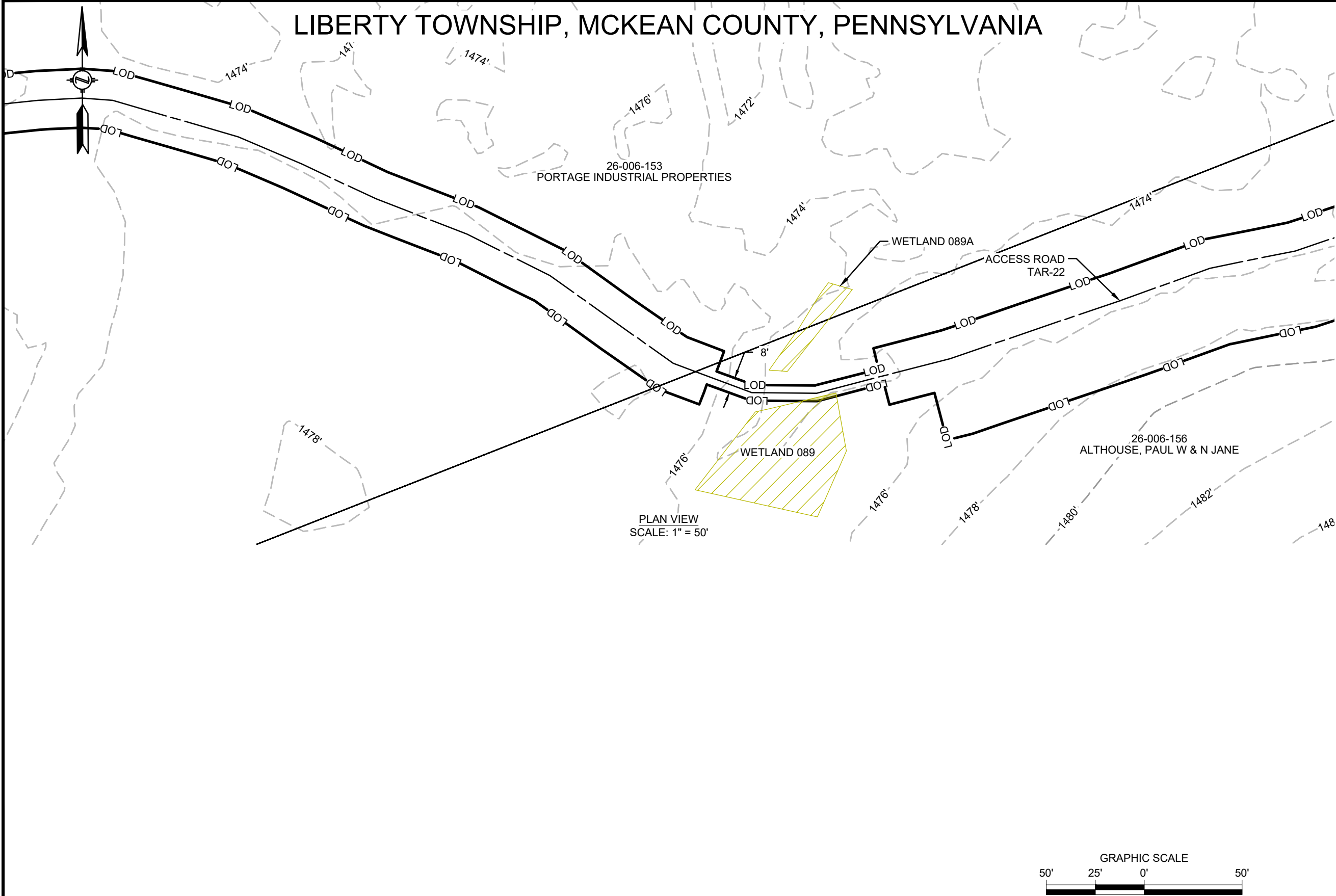
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 14.7		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-047	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 088	WETLAND	0.331	-	-	-	-	-	-	N/A - WORKSPACE	MAT BRIDGE OR EQUIVALENT

12/17/2020 11:27 AM - HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATER SPECIFICS\WSS-MCK-AR-048.DWG

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD
C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

**National Fuel**
SUPPLY CORPORATION

PREPARED BY:

M
MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 14.7		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-048	C

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 089	WETLAND	0.001	-	-	-	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

12/18/2020 8:55 AM, HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATER SPECIFICS\WSS-MCK-AR-048.1.DWG

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA

26-006-133
POSTLEWAIT
LOGGING COMPANY

26-006-153.1
L.GOODREAU, MARK A & KANDI R C

26-006-153
PORTAGE INDUSTRIAL PROPERTIES

26-006-154
IRWIN, SUSANNA

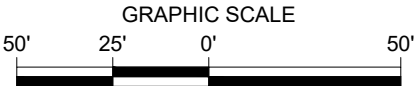
26-006-156
ALTHOUSE, PAUL W & N JANE

*DITCH 15

ACCESS ROAD
TAR-22

PLAN VIEW
SCALE: 1" = 50'

*DITCH 15 DOES NOT CONTRIBUTE PERENNIAL OR INTERMITTENT SURFACE WATER FLOW TO OTHER JURISDICTIONAL WATERS OF THE COMMONWEALTH, AS SUCH, IT IS NOT A REGULATED WATER AND IS NOT INCLUDED ON THE ARIT TABLE.



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
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C	12/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

PREPARED BY:

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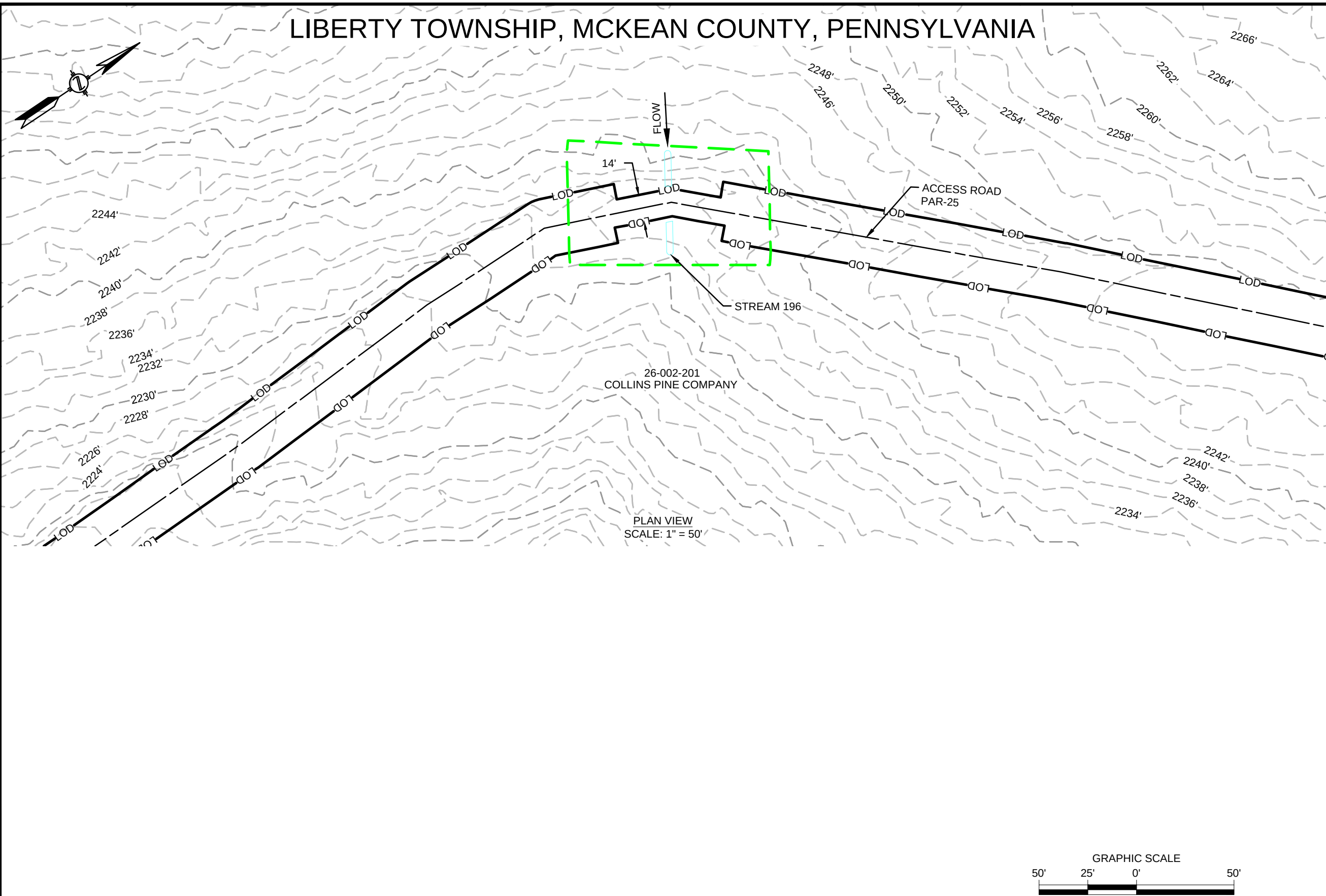
MOTT
MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 14.7		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-048.1	C

9/4/2020 12:35 PM: HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATER SPECIFICS\WSS-MCK-AR-049.DWG

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
STREAM 196	WATERBODY	-	-	0.052		-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

MOTT MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

GRAPHIC SCALE

50'

25'

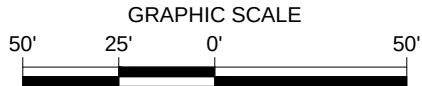
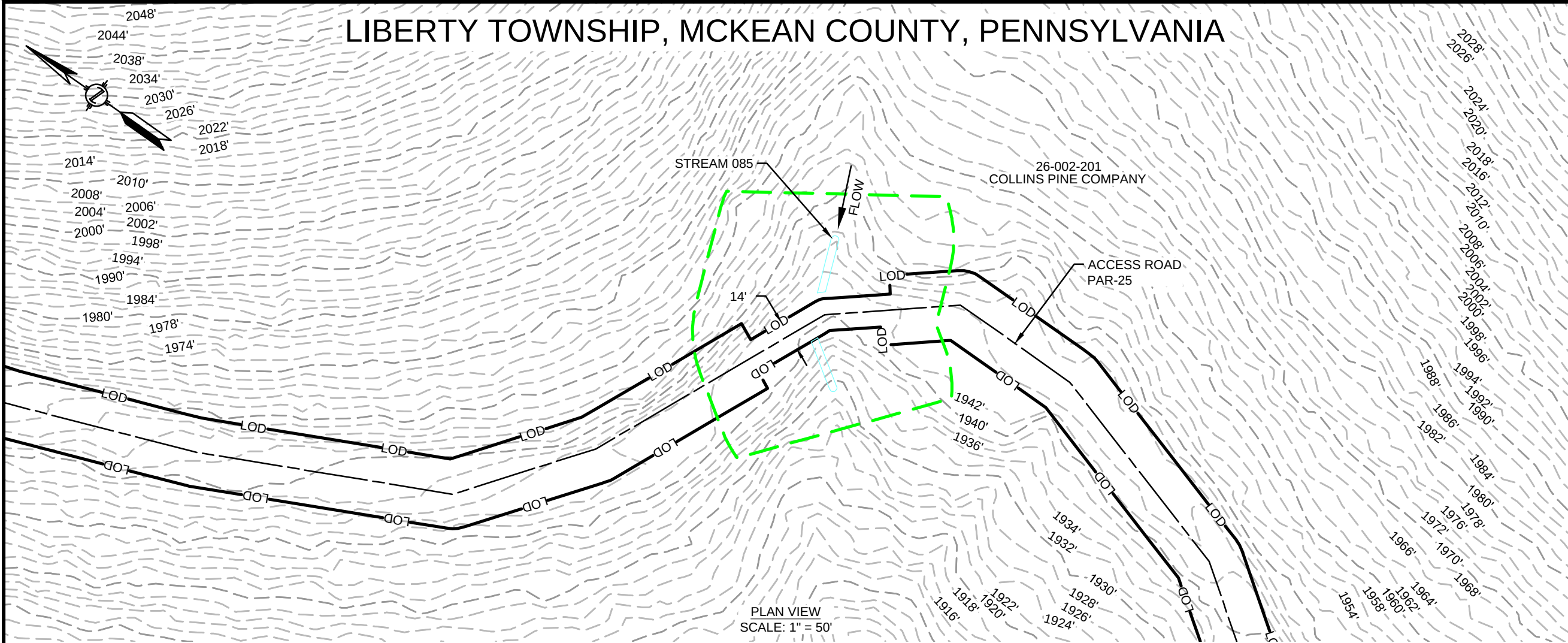
0'

50'

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 17.7		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-049	B

9/4/2020 12:36 PM: HECTOR MORALES
G:\NATIONAL FUEL\GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATERSPECIFICS\WSS-MCK-AR-050.DWG

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:
 

PREPARED BY:



111 WOOD AVENUE
 SOUTH ISELIN, NJ 08830
 UNITED STATES
 973-379-3400
 INFO@MOTTMAC.COM

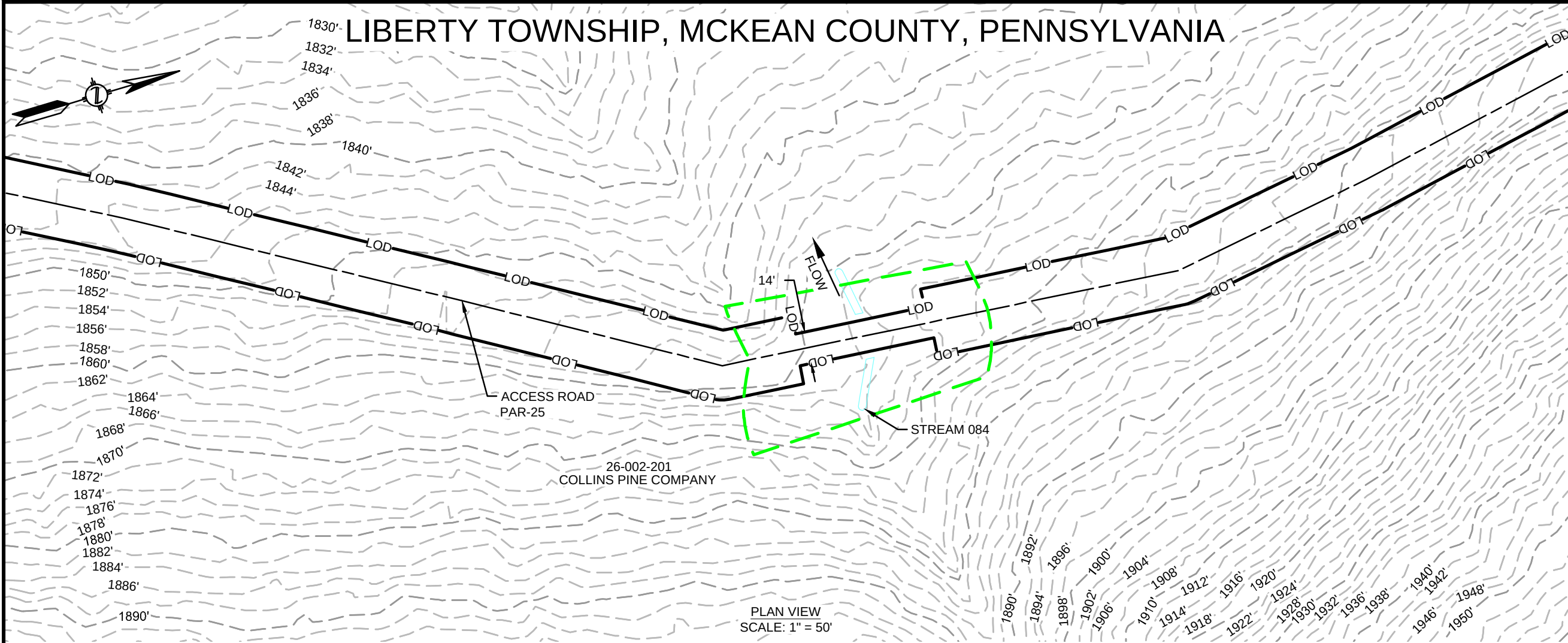
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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 17.7		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-050	B

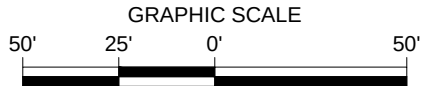
FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
STREAM 085	WATERBODY	-	-	0.054		-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

9/4/2020 12:36 PM: HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATER SPECIFICS\WSS-MCK-AR-051.DWG

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



PLAN VIEW
SCALE: 1" = 50'



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

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MACDONALD

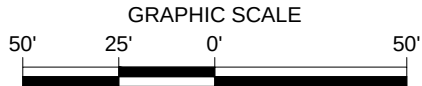
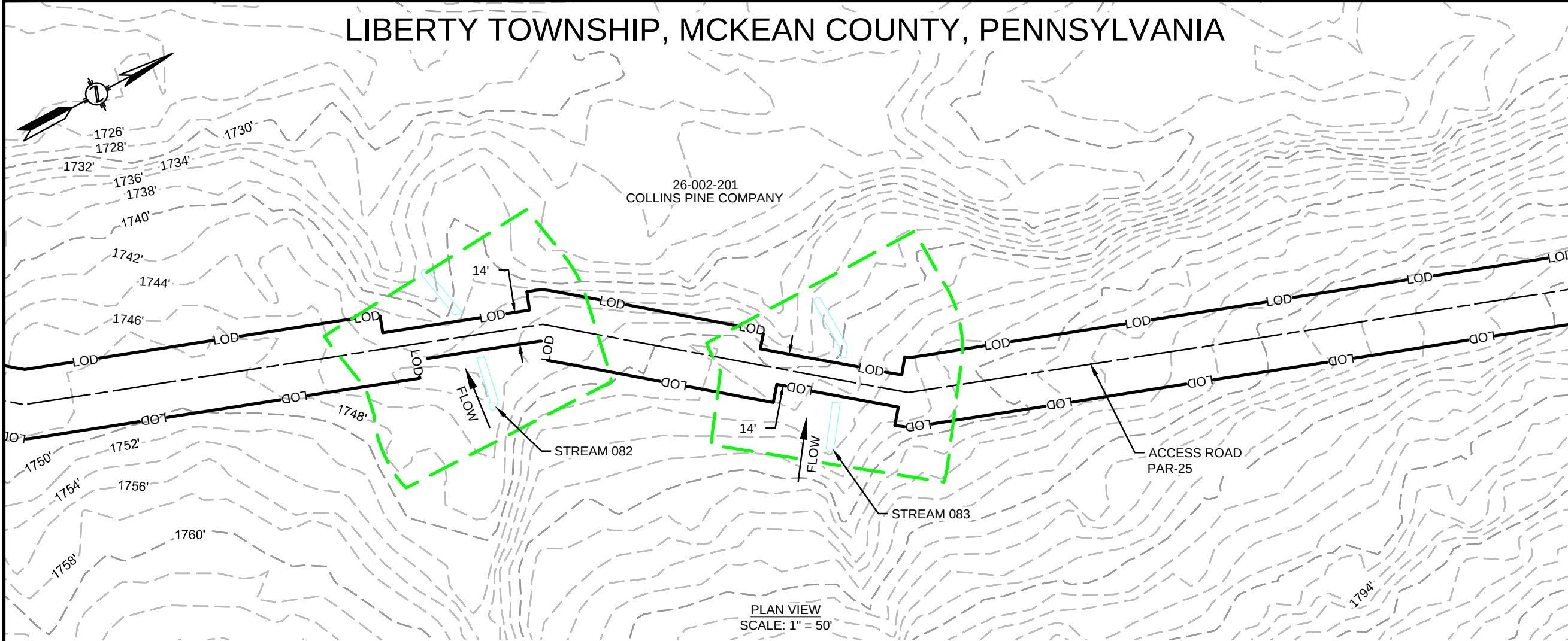
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 17.7		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-051	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL		
STREAM 084	WATERBODY	-	-	0.053		-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

9/4/2020 12:37 PM: HECTOR MORALES
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LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

M

MOTT MACDONALD

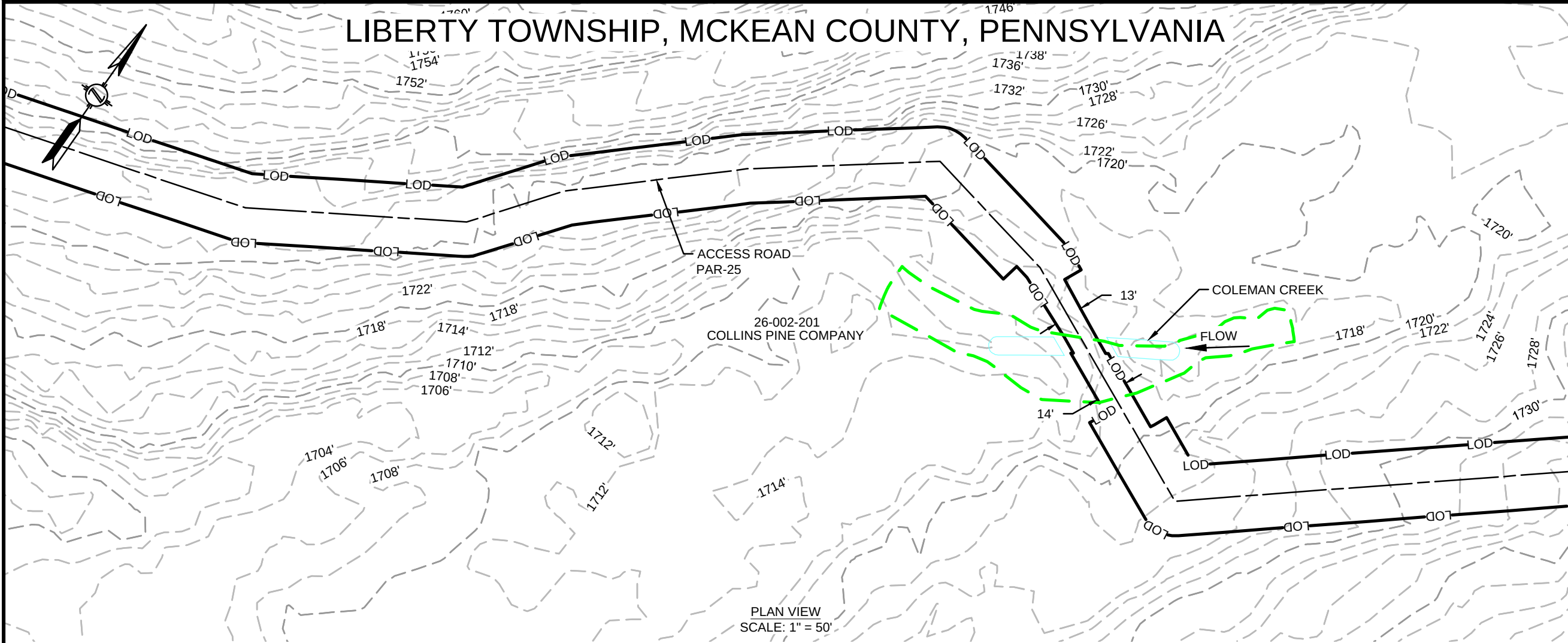
111 WOOD AVENUE
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973-379-3400
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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 17.7		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-052	B

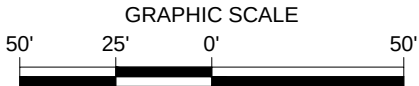
FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
STREAM 082	WATERBODY	-	-	0.055	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A
STREAM 083	WATERBODY	-	-	0.052	-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

9/4/2020 12:38 PM: HECTOR MORALES
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LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



PLAN VIEW
SCALE: 1" = 50'



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

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MACDONALD

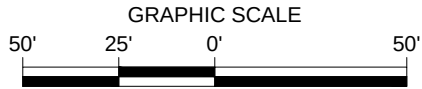
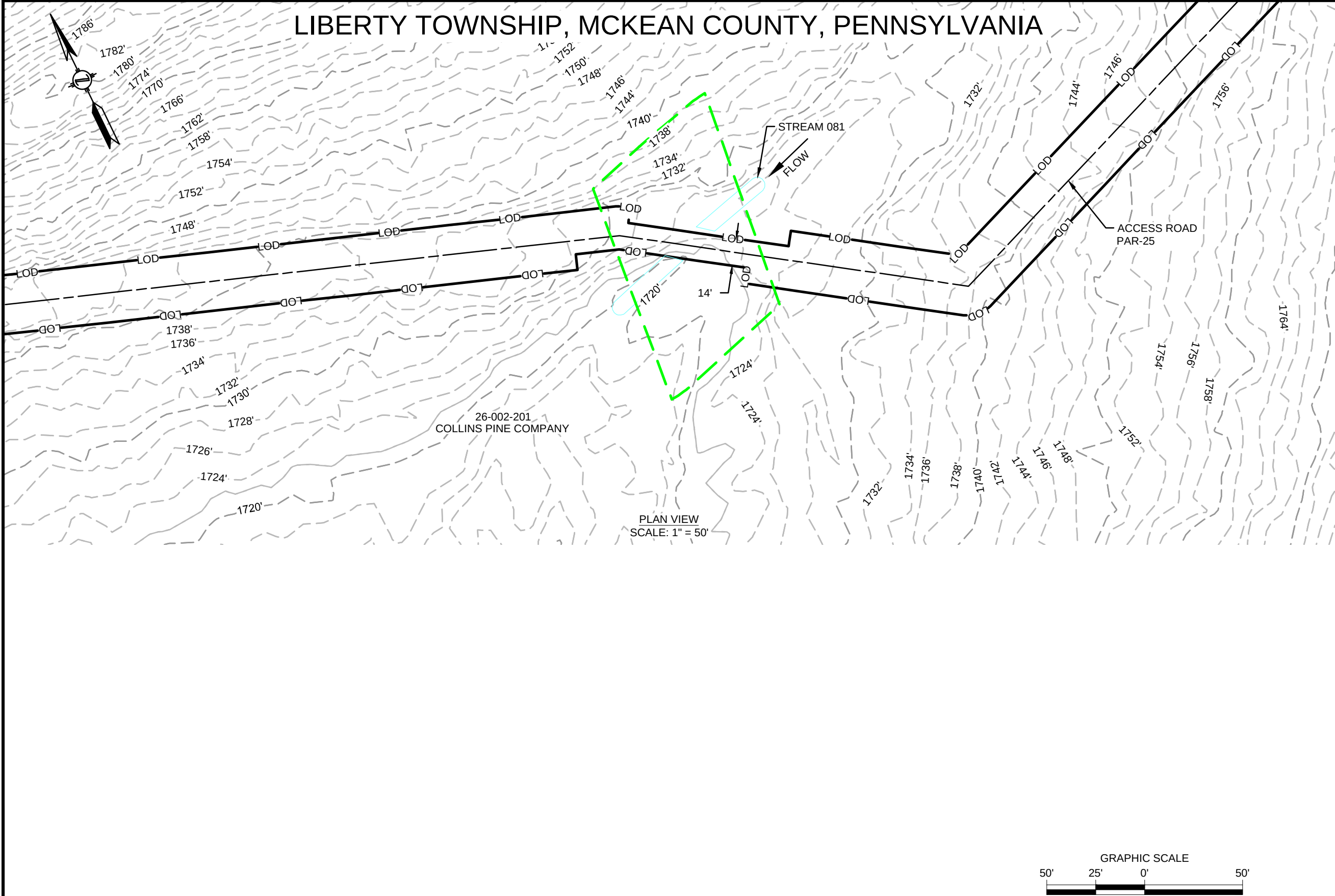
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 17.7		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-053	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
COLEMAN CREEK - 2	WATERBODY	-	-	0.009		-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

9/4/2020 12:39 PM: HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATER SPECIFICS\WSS-MCK-AR-054.DWG

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

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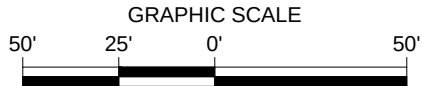
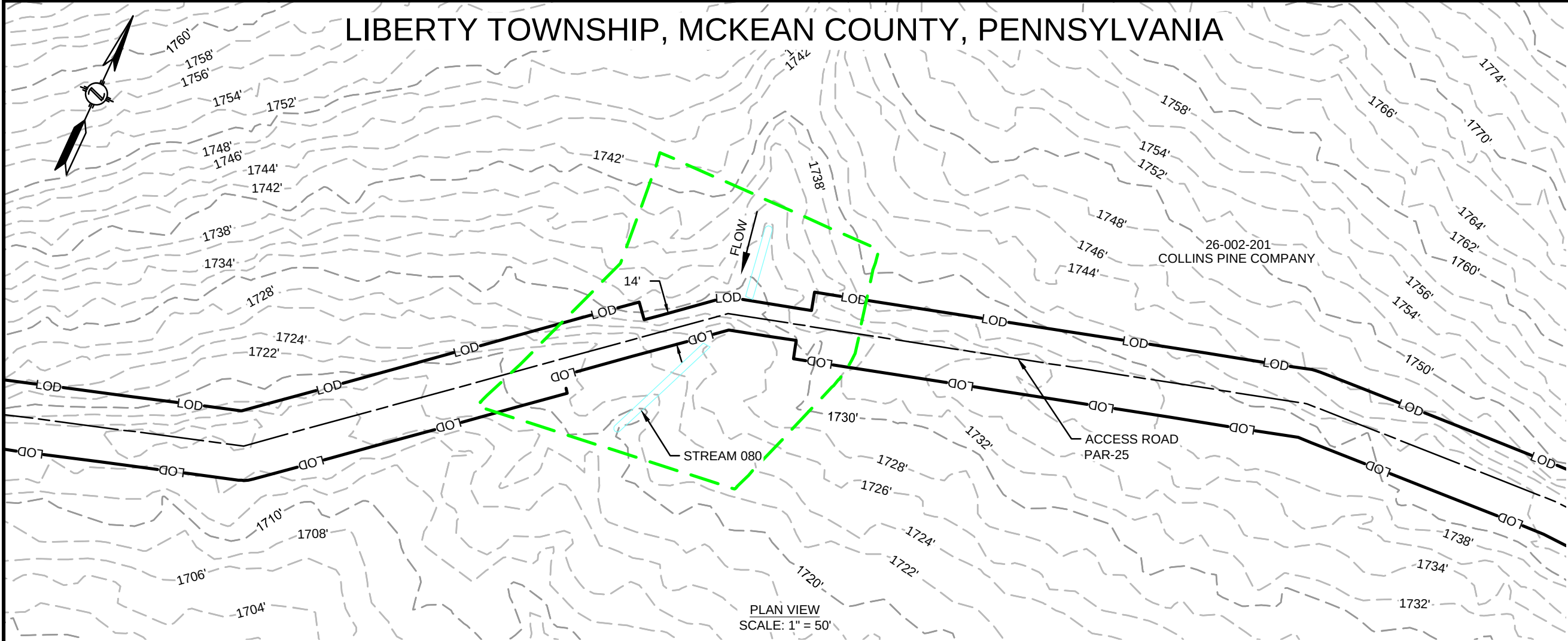
111 WOOD AVENUE
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 973-379-3400
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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 17.7		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-054	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
STREAM 081	WATERBODY	-	<0.001	0.030		-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

9/4/2020 12:39 PM: HECTOR MORALES
G:\NATIONAL FUEL GAS\388597_FM100_MODERNIZATION_PROJECT\PIPELINE\DRAWING\WETLAND\WATER SPECIFICS\WSS-MCK-AR-055.DWG

LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:



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MACDONALD**

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UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

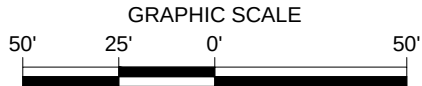
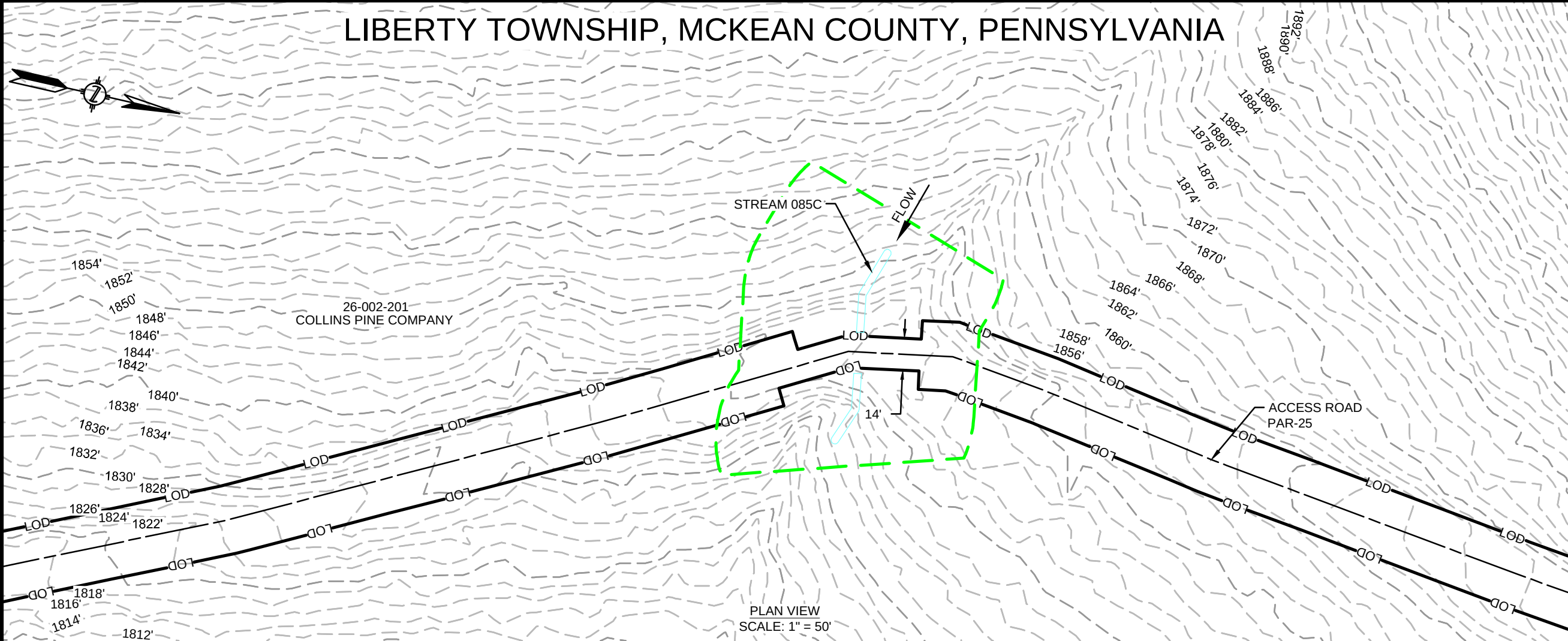
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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 17.7		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-055	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
STREAM 080	WATERBODY	-	-	0.073		-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

9/4/2020 12:40 PM: HECTOR MORALES
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LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

M

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MACDONALD

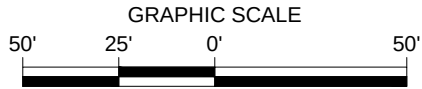
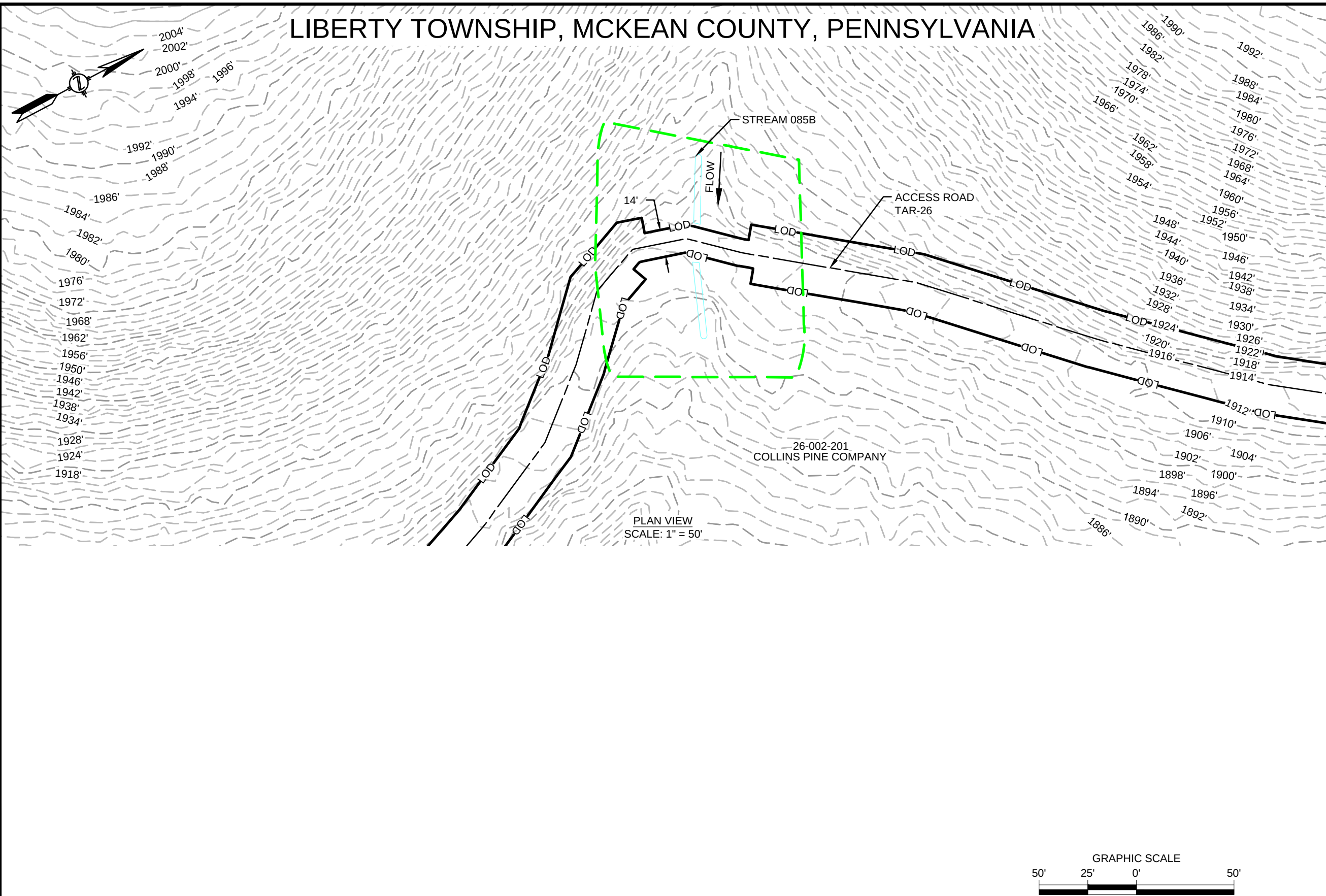
111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 18.0		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-056	B

FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WATERCOURSE FLOODWAY		
STREAM 085C	WATERBODY	-	-	0.055	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

9/4/2020 12:41 PM: HECTOR MORALES
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LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
STREAM 085B	WATERBODY	-	-	0.061		-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:
 

PREPARED BY:

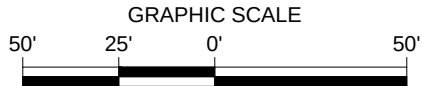
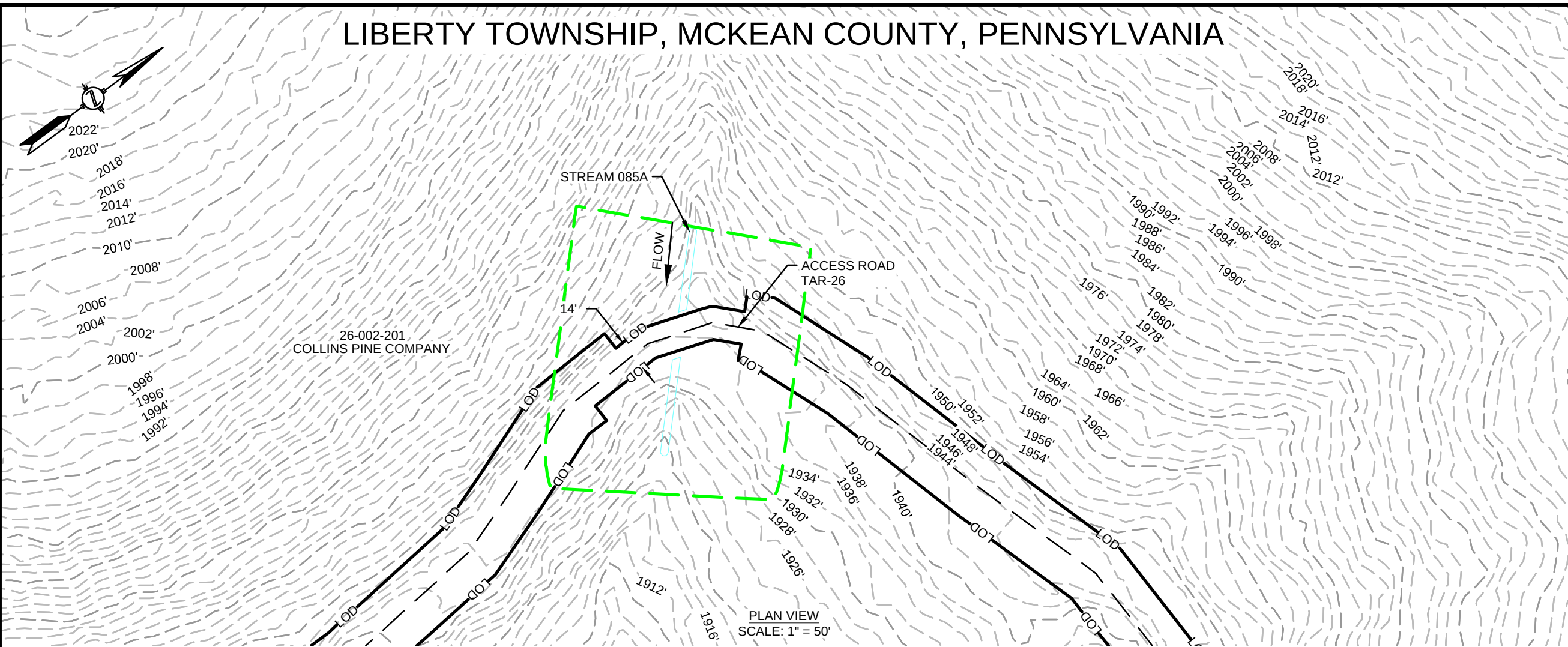


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 INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 18.0		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-057	B

9/4/2020 12:42 PM: HECTOR MORALES
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LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

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MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

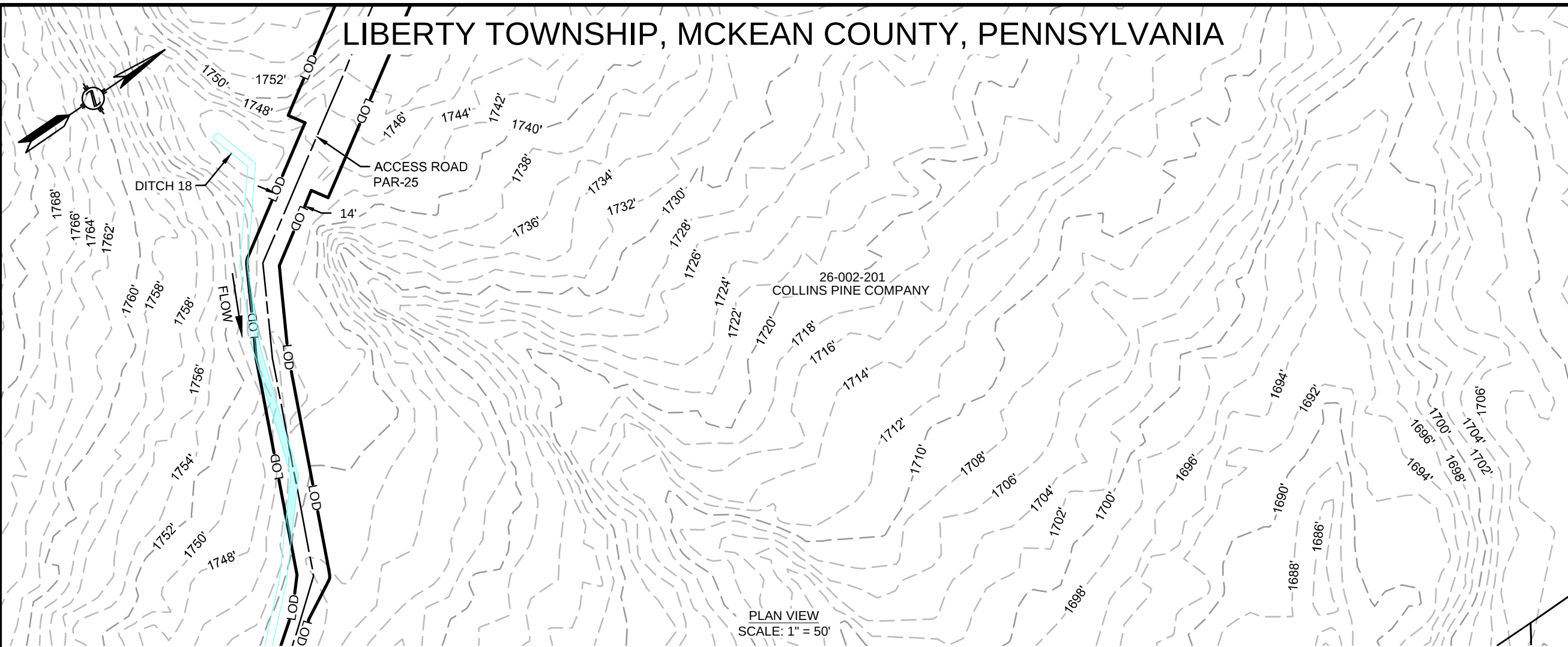
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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 18.0		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-058	B

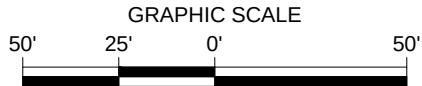
FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
STREAM 085A	WATERBODY	-	-	0.064		-	-	-	EXISTING ROAD, NO IMPROVEMENTS PROPOSED	N/A

9/4/2020 1:26 PM, HECTOR MORALES
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LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



PLAN VIEW
SCALE: 1" = 50'



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:



PREPARED BY:

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MACDONALD

111 WOOD AVENUE
SOUTH ISELIN, NJ 08830
UNITED STATES
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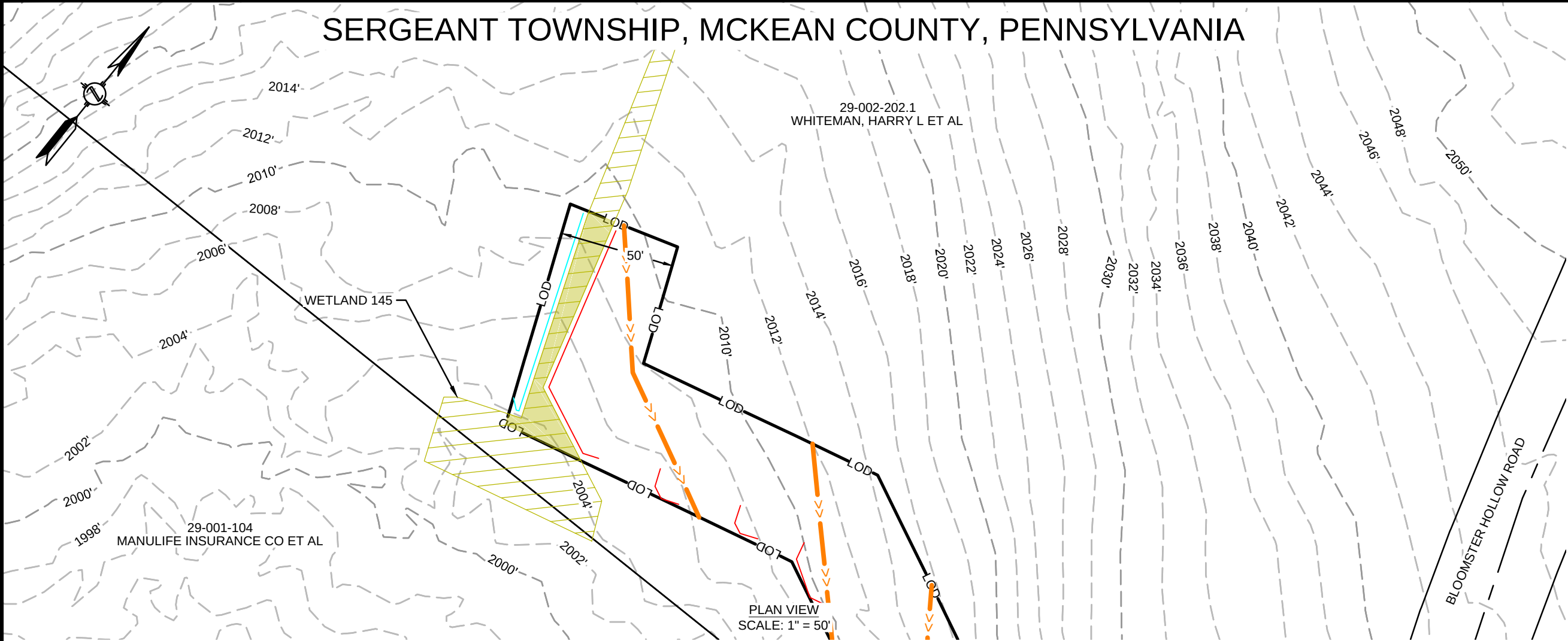
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FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE LIBERTY TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 18.0		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AR-059	B

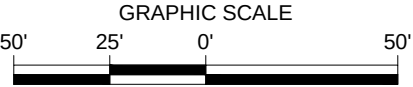
FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)			PERMANENT DISTURBANCE (ACRES)		CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY	WETLAND	WATERCOURSE CHANNEL		
DITCH 18 - 1								

REFER TO DWG WSS-MCK-ML-052B FOR IMPACT ACREAGES

SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA



FEATURE ID	RESOURCE TYPE	TEMPORARY DISTURBANCE (ACRES)				PERMANENT DISTURBANCE (ACRES)			CROSSING METHOD	EQUIPMENT CROSSING
		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		WETLAND	WATERCOURSE CHANNEL	WATERCOURSE FLOODWAY		
WETLAND 145	WETLAND	0.025	-	-	-	-	-	-	N/A - WORKSPACE	N/A



REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	07/2019
CHECKED BY	DATE
KEK (MM)	07/2019
ENG. APPROVAL	DATE
MJD (MM)	07/2019
P.M. APPROVAL	DATE

PREPARED FOR:

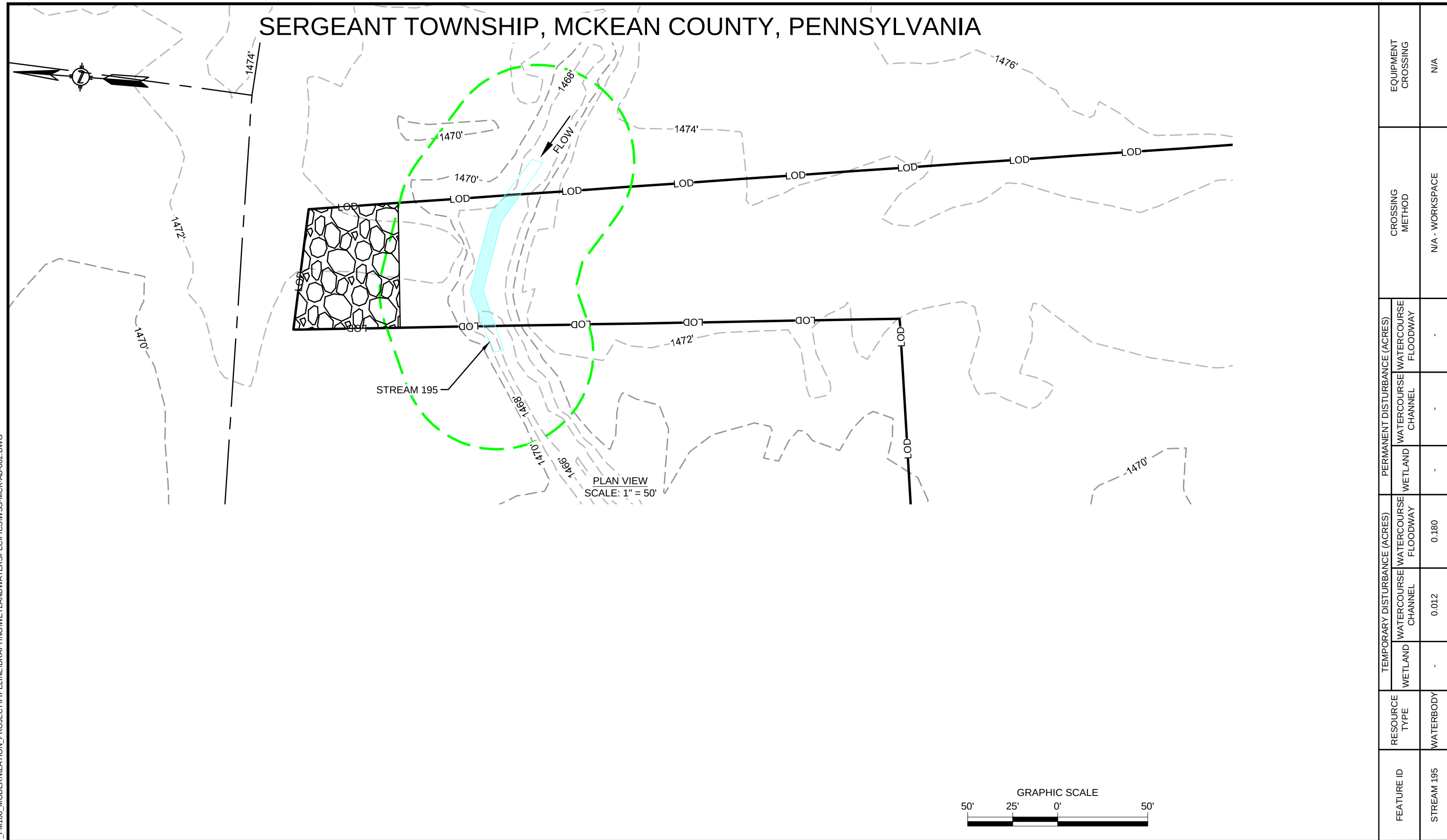


PREPARED BY:

MOTT MACDONALD

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SOUTH ISELIN, NJ 08830
UNITED STATES
973-379-3400
INFO@MOTTMAC.COM

FM100 MODERNIZATION PROJECT		
WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 1.6		
SCALE	DRAWING NO.	REVISION
1" = 50'	WSS-MCK-AB-001	B



REVISIONS						APPROVALS		PREPARED FOR: 	PREPARED BY: M M MOTT MACDONALD 111 WOOD AVENUE SOUTH ISELIN,NJ 08830 UNITED STATES 973-379-3400 INFO@MOTTMAC.COM	FM100 MODERNIZATION PROJECT		
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL	DRAWN BY	DATE			WETLAND & STREAM CROSSING PLAN PROPOSED 20" YM58 PIPELINE SERGEANT TOWNSHIP, MCKEAN COUNTY, PENNSYLVANIA M.P. 04.6		
A	10/2019	ISSUED FOR PADEP PERMIT	HM	KEK	MJD	HM (MM)	07/2019					
B	09/2020	REVISED FOR PADEP	HM	KEK	MJD	CHECKED BY	DATE					
						KEK (MM)	07/2019					
						ENG. APPROVAL	DATE					
						MJD (MM)	07/2019					
						P.M. APPROVAL	DATE					
								SCALE	DRAWING NO.	REVISION		
								1" = 50'	WSS-MCK-AB-002	B		