

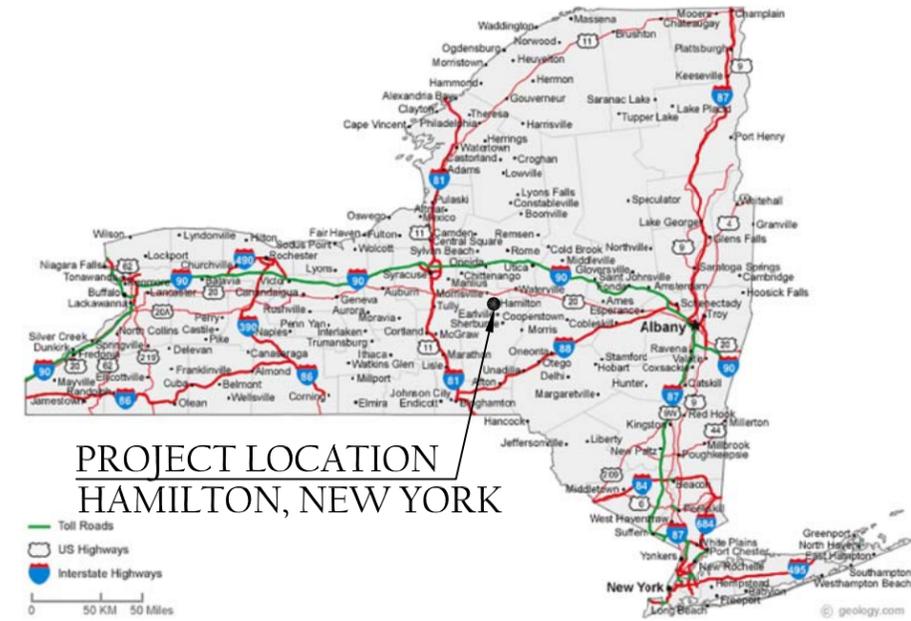
VILLAGE OF HAMILTON

COUNTY OF MADISON

STATE OF NEW YORK

GAS MAIN EXPANSION

NOVEMBER 09, 2013



PROJECT LOCATION
HAMILTON, NEW YORK

PREPARED FOR:
VILLAGE OF HAMILTON

MAYOR:
MARGARET MILLER

TRUSTEES:
SAMUEL L. COOPER
DEBORAH S. KLIMAN, Ph.D.
RUSSELL LURA
JENNIFER SERVEDIO

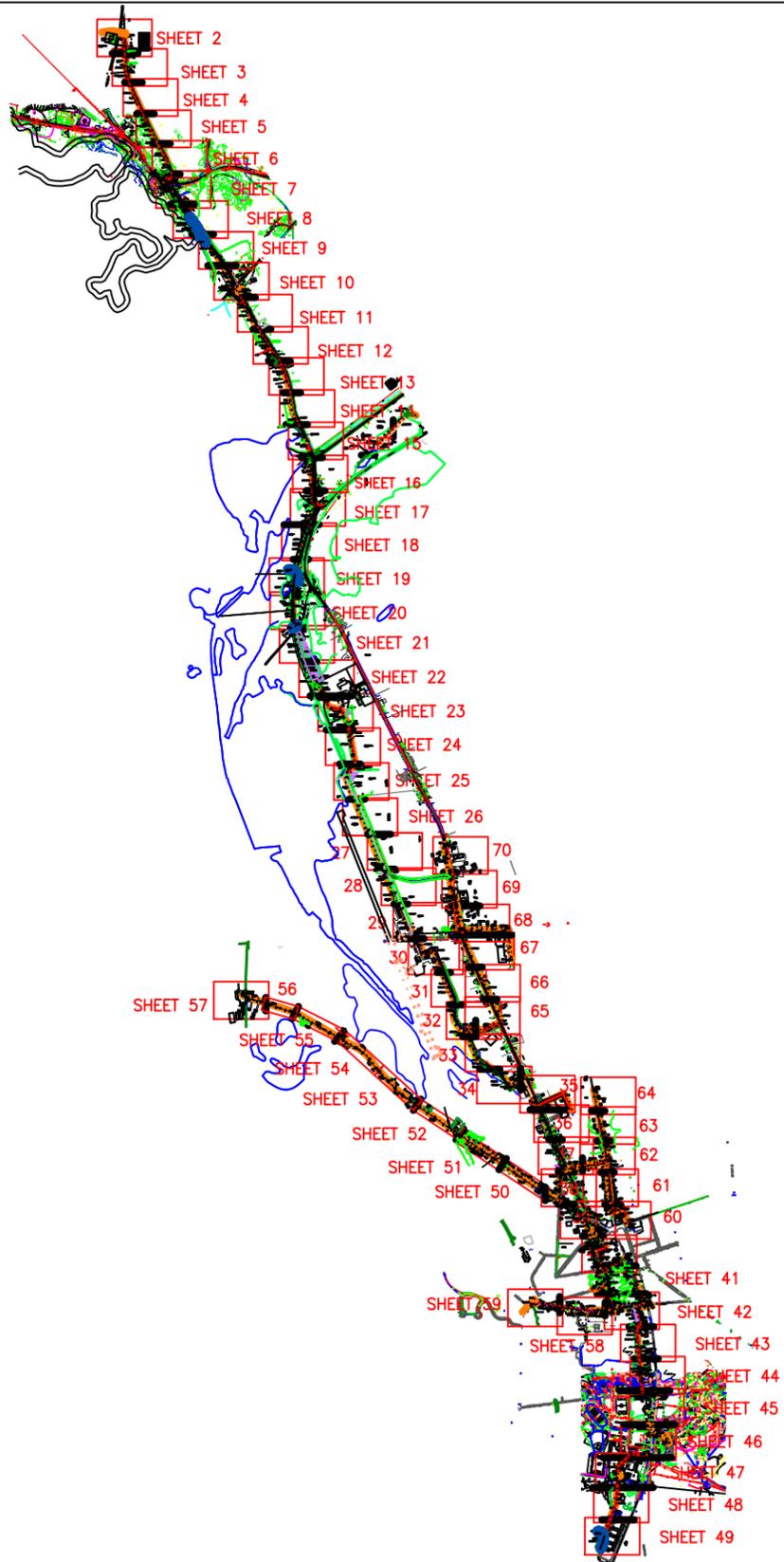
VILLAGE OF HAMILTON MUNICIPAL UTILITIES COMMISSION

COMMISSIONERS:
JOHN BASHER, PRESIDENT
ROB GUSTAFSON
ROBERT HOLCOMB
LARRY BAKER
RUSS LURA

SHEET INDEX

SHEET NUMBER	REV.	DESCRIPTION
SHEET 1	0	AERIAL INDEX AND LEGEND
SHEET 2-32	0	CONSTRUCTION PLANS - 10" PIPE
SHEET 33-46	0	CONSTRUCTION PLANS - 8" PIPE
SHEET 47-49	0	CONSTRUCTION PLANS - HAMILTON HOSPITAL & COLGATE APARTMENTS
SHEET 50-57	0	CONSTRUCTION PLANS - EATON / SMITH STREET EXTENSION
SHEET 58-59	0	CONSTRUCTION PLANS - HAMILTON HIGH SCHOOL EXTENSION
SHEET 60-64	0	CONSTRUCTION PLANS - COLGATE INN AND MADISON ST. EXTENSION
SHEET 65-70	0	CONSTRUCTION PLANS - MADISON MARKETPLACE EXTENSION
SHEET 71	0	MISCELLANEOUS DETAILS
SHEET 72-73	0	DOT DETAILS & NOTES
SHEET 74-77	0	BORE PROFILES
SHEET 78-86	0	CITY GATE STATION DESIGN
SHEET EV1-EV3	0	ENVIRONMENTAL DETAILS

NOTE
PHOTOGRAPHIC REPRODUCTIONS
THESE PLANS ARE NOT TO SCALE. ALL
SCALES ARE REDUCED FROM INDICATED
SCALE TO APPROXIMATELY HALF SIZE.

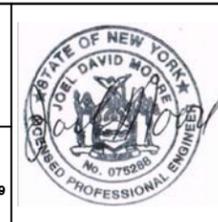


LEGEND

	BUILDINGS		PROPERTY LINE / ROW
	CATCH BASIN		STREAM
	CENTER LINE OF ROAD		TRACER WIRE BOX
	CONIFEROUS TREE		TREE
	DETAILS		TREE LINE
	DRIVE WAY & FIELD ACCESS		UNDERGROUND CABLE
	EDGE OF PAVEMENT		UNDERGROUND CABLE MARKER
	EXISTING GAS LINE		UNDERGROUND ELECTRIC
	FIRE HYDRANT		UTILITY POLE
	GUARD RAIL		UTILITY POLE ANCHOR
	MAIL BOX		WATER VALVE
	MANHOLE COVER		WELL
	MATCHLINE		WET LANDS
	PROPOSED GAS LINE		TEMPORARY WORKSPACE
	PROP PIN		PERMANENT EASEMENT
	VALVE		MILE MARKER SIGN
	REDUCER		CENTERLINE
	SIGN		DEC ADJ. AREA
	EASEMENT		DELINEATED WETLAND
	KEEP OFF PROPERTY		BORE PIT
	LIGHT POLE		EROSION CONTROLS

Call 811
before you dig

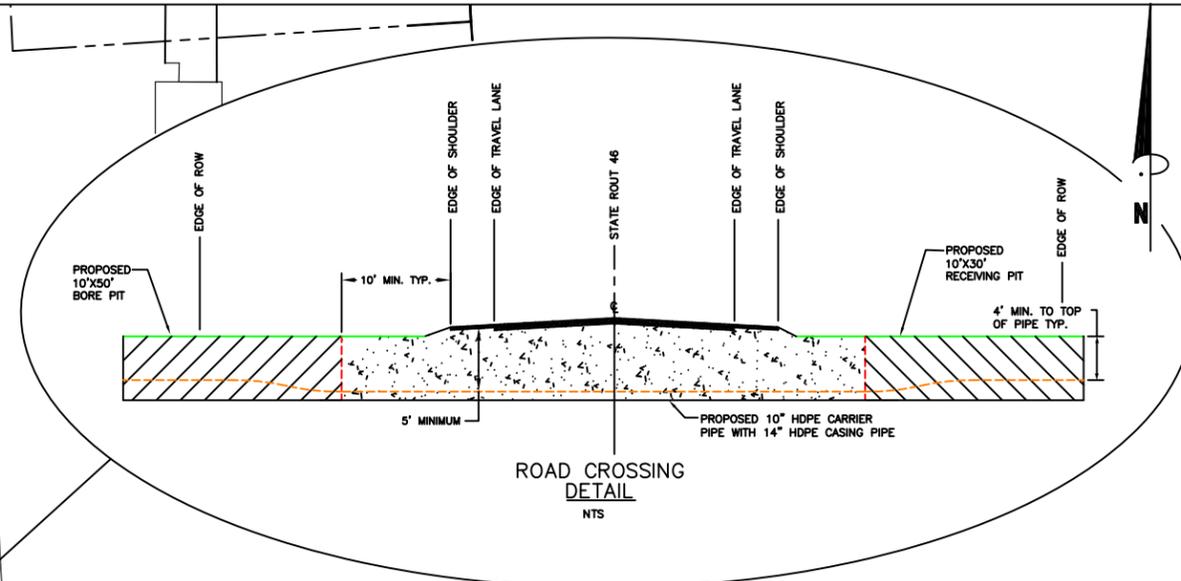
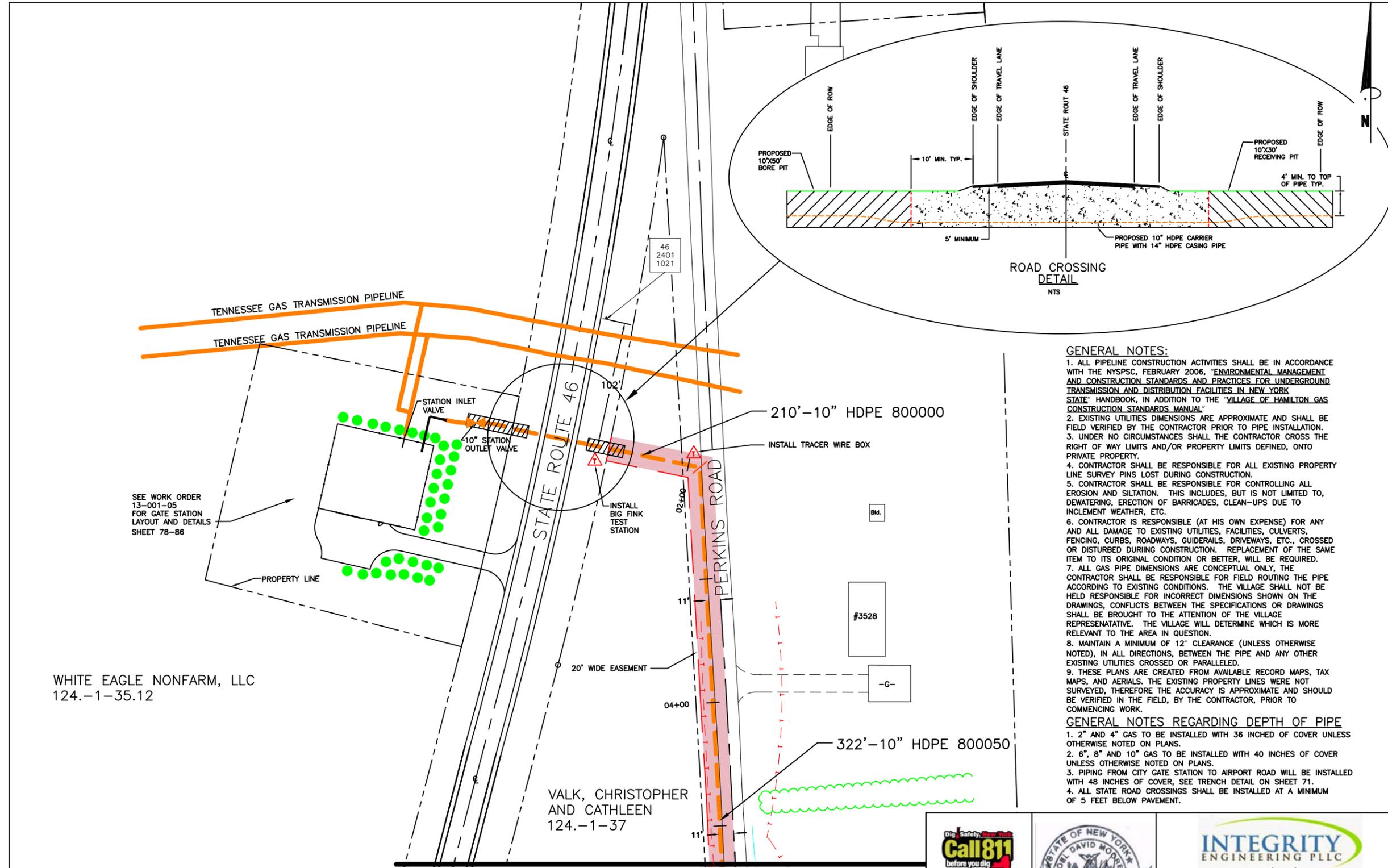
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW



INTEGRITY ENGINEERING PLLC
www.gasengineering.com

HAMILTON PIPELINE

SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	NTS	DATE 11-01-13	SHEET 1 OF 86



- GENERAL NOTES:**
1. ALL PIPELINE CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH THE NYSpsc, FEBRUARY 2006, "ENVIRONMENTAL MANAGEMENT AND CONSTRUCTION STANDARDS AND PRACTICES FOR UNDERGROUND TRANSMISSION AND DISTRIBUTION FACILITIES IN NEW YORK STATE" HANDBOOK, IN ADDITION TO THE "VILLAGE OF HAMILTON GAS CONSTRUCTION STANDARDS MANUAL"
 2. EXISTING UTILITIES DIMENSIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO PIPE INSTALLATION.
 3. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR CROSS THE RIGHT OF WAY LIMITS AND/OR PROPERTY LIMITS DEFINED, ONTO PRIVATE PROPERTY.
 4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING PROPERTY LINE SURVEY PINS LOST DURING CONSTRUCTION.
 5. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING ALL EROSION AND SILTATION. THIS INCLUDES, BUT IS NOT LIMITED TO, DEWATERING, ERECTION OF BARRICADES, CLEAN-UPS DUE TO INCLEMENT WEATHER, ETC.
 6. CONTRACTOR IS RESPONSIBLE (AT HIS OWN EXPENSE) FOR ANY AND ALL DAMAGE TO EXISTING UTILITIES, FACILITIES, CULVERTS, FENCING, CURBS, ROADWAYS, GUIDERAILS, DRIVEWAYS, ETC., CROSSED OR DISTURBED DURING CONSTRUCTION. REPLACEMENT OF THE SAME ITEM TO ITS ORIGINAL CONDITION OR BETTER, WILL BE REQUIRED.
 7. ALL GAS PIPE DIMENSIONS ARE CONCEPTUAL ONLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD ROUTING THE PIPE ACCORDING TO EXISTING CONDITIONS. THE VILLAGE SHALL NOT BE HELD RESPONSIBLE FOR INCORRECT DIMENSIONS SHOWN ON THE DRAWINGS, CONFLICTS BETWEEN THE SPECIFICATIONS OR DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE VILLAGE REPRESENTATIVE. THE VILLAGE WILL DETERMINE WHICH IS MORE RELEVANT TO THE AREA IN QUESTION.
 8. MAINTAIN A MINIMUM OF 12" CLEARANCE (UNLESS OTHERWISE NOTED), IN ALL DIRECTIONS, BETWEEN THE PIPE AND ANY OTHER EXISTING UTILITIES CROSSED OR PARALLELED.
 9. THESE PLANS ARE CREATED FROM AVAILABLE RECORD MAPS, TAX MAPS, AND AERIALS. THE EXISTING PROPERTY LINES WERE NOT SURVEYED, THEREFORE THE ACCURACY IS APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD, BY THE CONTRACTOR, PRIOR TO COMMENCING WORK.

- GENERAL NOTES REGARDING DEPTH OF PIPE**
1. 2" AND 4" GAS TO BE INSTALLED WITH 36 INCHES OF COVER UNLESS OTHERWISE NOTED ON PLANS.
 2. 6", 8" AND 10" GAS TO BE INSTALLED WITH 40 INCHES OF COVER UNLESS OTHERWISE NOTED ON PLANS.
 3. PIPING FROM CITY GATE STATION TO AIRPORT ROAD WILL BE INSTALLED WITH 48 INCHES OF COVER, SEE TRENCH DETAIL ON SHEET 71.
 4. ALL STATE ROAD CROSSINGS SHALL BE INSTALLED AT A MINIMUM OF 5 FEET BELOW PAVEMENT.

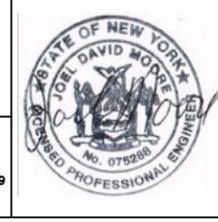
WHITE EAGLE NONFARM, LLC
124.-1-35.12

VALK, CHRISTOPHER
AND CATHLEEN
124.-1-37

MATCH LINE W/SHT2

Call 811
before you dig

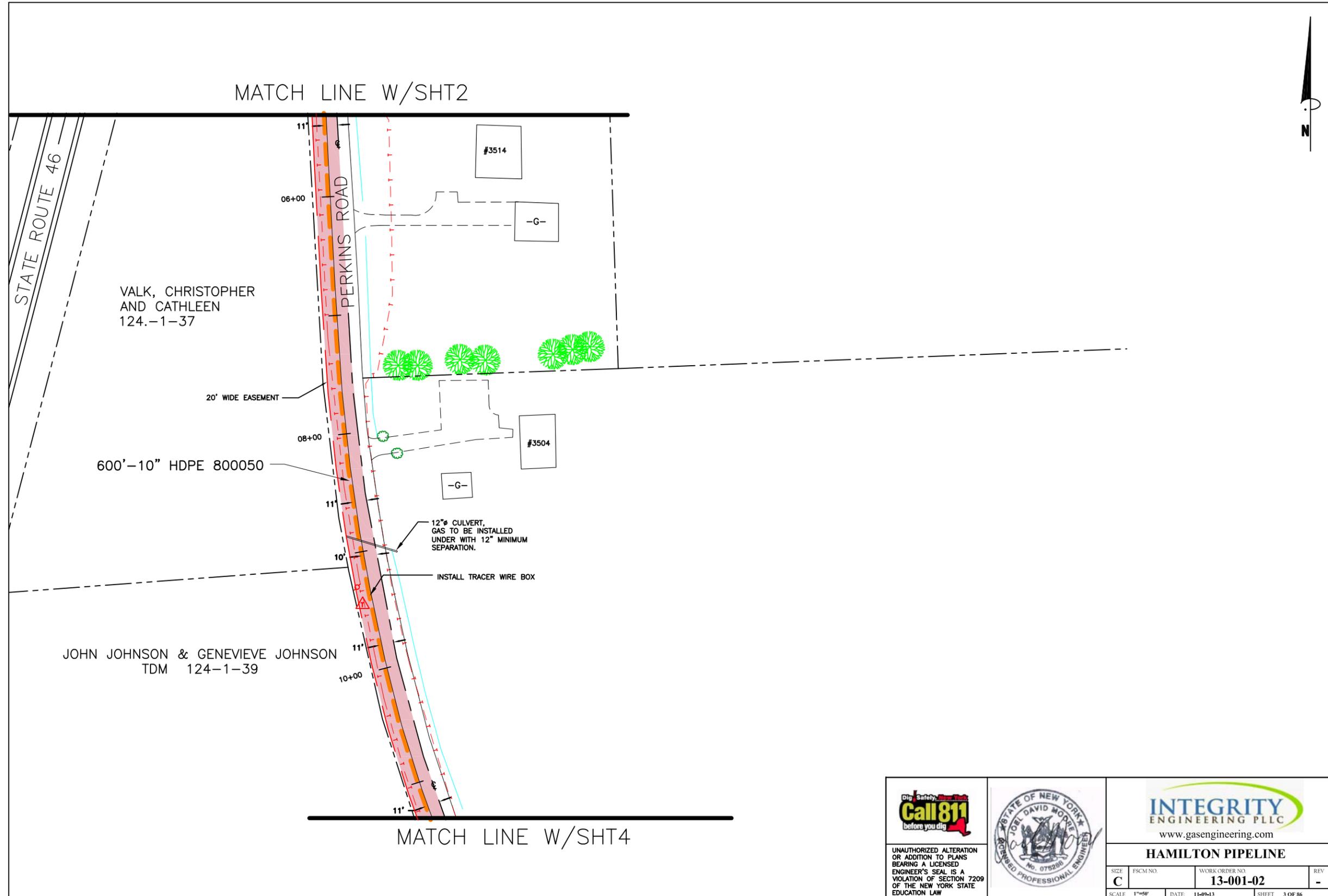
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HAMILTON PIPELINE

SIZE C	FSCM NO.	WORK ORDER NO. 13-001-02	REV -
SCALE 1"=50'	DATE 11-09-13	SHEET 2 OF 86	



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		www.gasengineering.com HAMILTON PIPELINE	
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SCALE: 1"=50' DATE: 11-09-13 SHEET: 3 OF 86	SIZE: C FSCM NO.: WORK ORDER NO.: 13-001-02 REV: -	

MATCH LINE W/SHT3



682'-10" HDPE 800050

20' WIDE EASEMENT

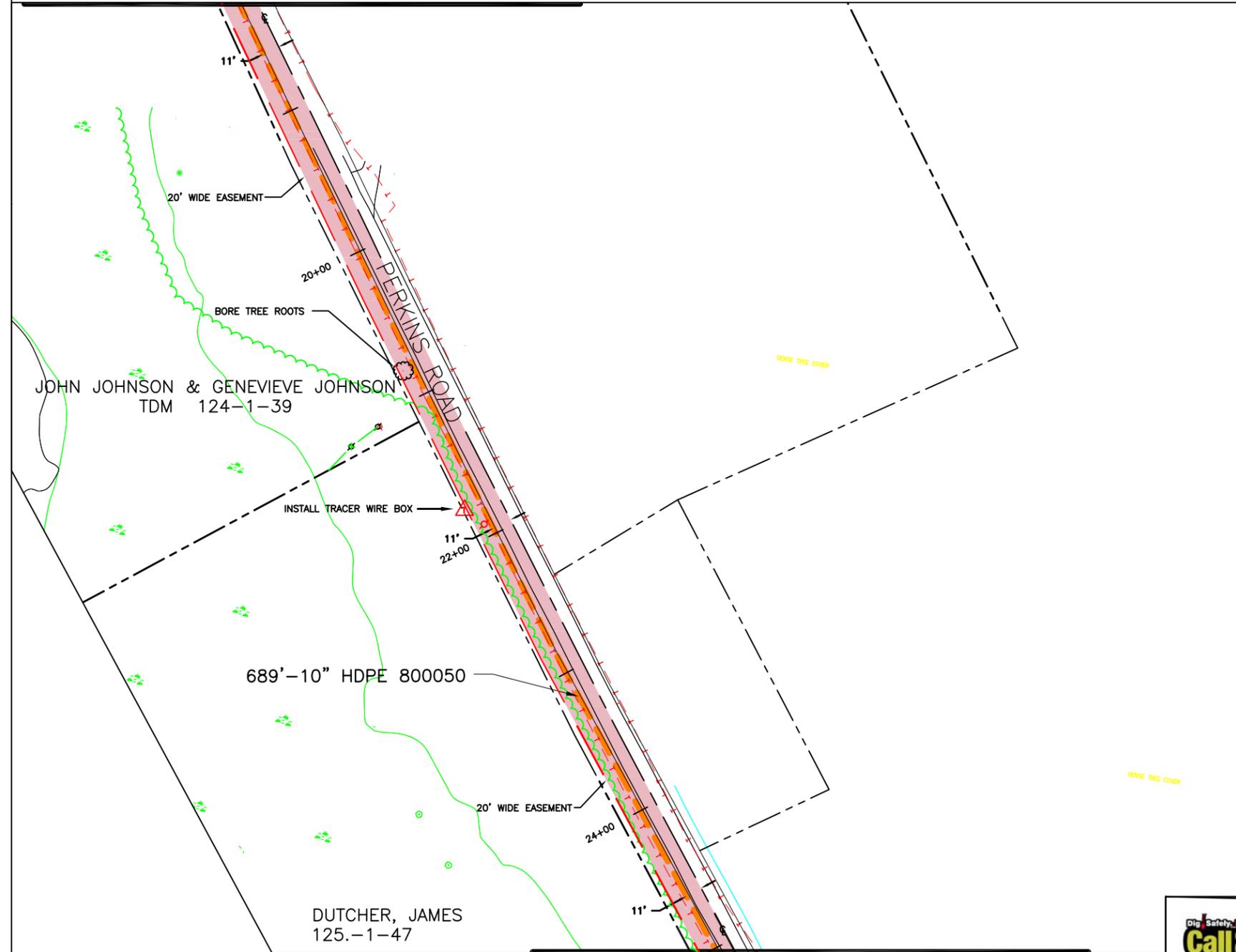
JOHN JOHNSON & GENEVIEVE JOHNSON
TDM 124-1-39

PERKINS ROAD

MATCH LINE W/SHT5

 <small>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</small>		 <small>www.gasengineering.com</small>	
		HAMILTON PIPELINE	
<small>SCALE</small> 1"=50'	<small>DATE</small> 11-09-13	<small>WORK ORDER NO.</small> 13-001-02	<small>REV</small> -
<small>SIZE</small> C		<small>SHEET</small> 4 OF 86	

MATCH LINE W/SHT4



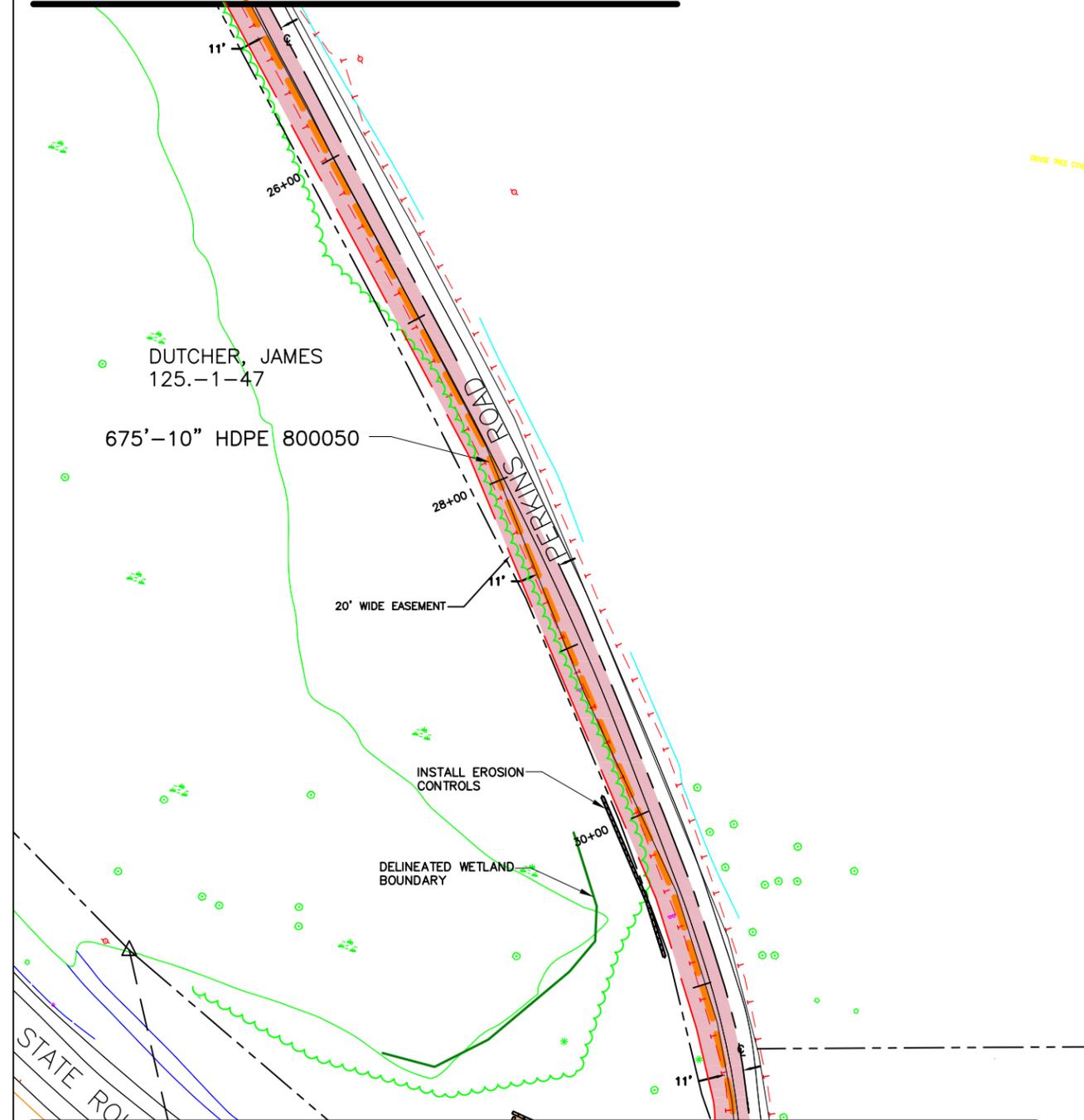
JOHN JOHNSON & GENEVIEVE JOHNSON
TDM 124-1-39

DUTCHER, JAMES
125-1-47

MATCH LINE W/SHT6

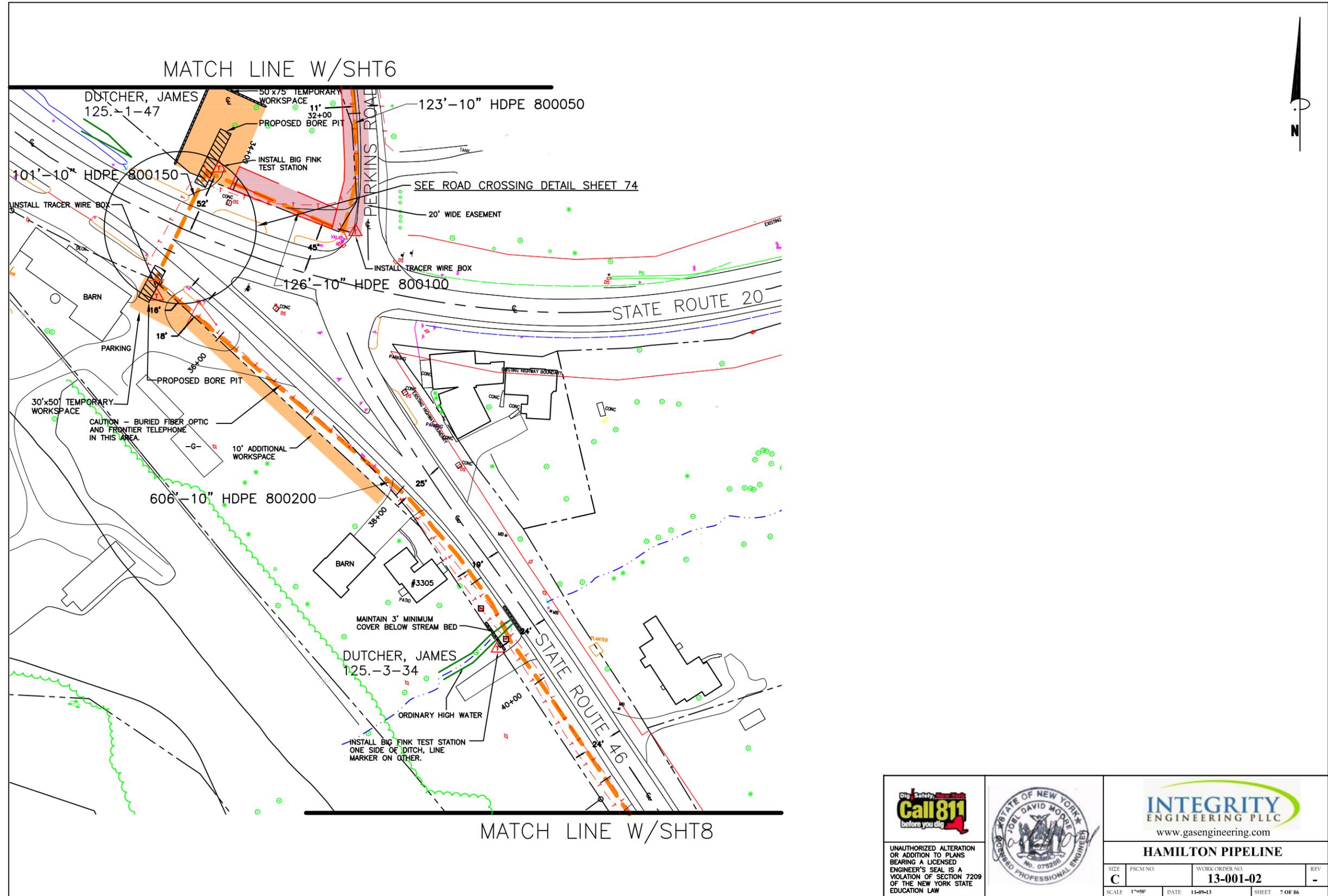
		HAMILTON PIPELINE	
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SCALE: 1"=50' DATE: 11-09-13 SHEET: 5 OF 86	WORK ORDER NO. 13-001-02	REV. -

MATCH LINE W/SHT5

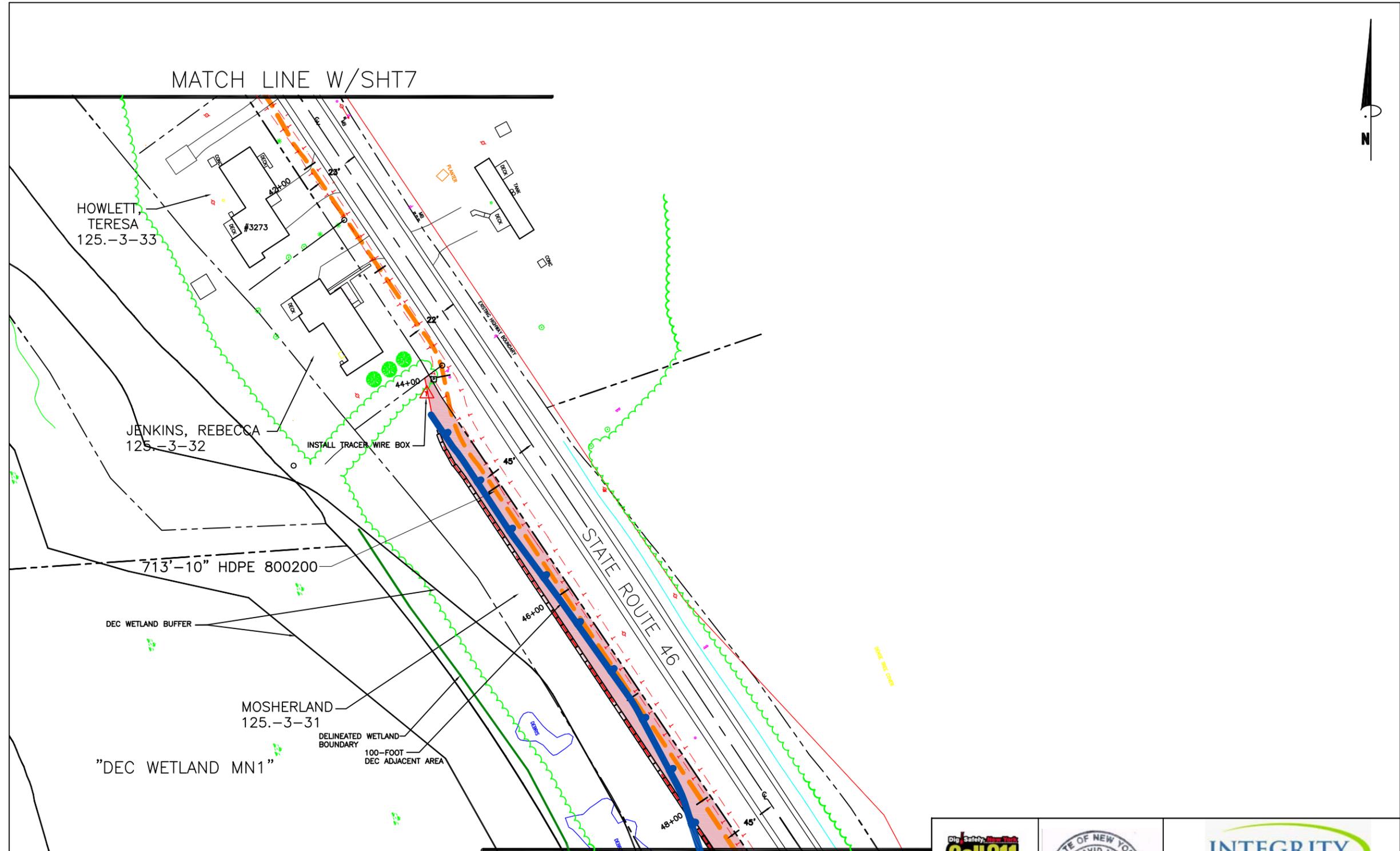


MATCH LINE W/SHT7

		www.gasengineering.com	
HAMILTON PIPELINE			
SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	DATE	SHEET	6 OF 86
1"=50'	11-09-13		



		 www.gasengineering.com		
		HAMILTON PIPELINE		
<small>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</small>	<small>SCALE</small> C	<small>FSCM NO.</small>	<small>WORK ORDER NO.</small> 13-001-02	<small>REV.</small> -
<small>DATE</small> 11-09-13	<small>SHEET</small> 7 OF 86			



MATCH LINE W/SHT7

HOWLETT, TERESA
125.-3-33

JENKINS, REBECCA
125.-3-32

713'-10" HDPE 800200

DEC WETLAND BUFFER

MOSHERLAND
125.-3-31

"DEC WETLAND MN1"

DELINEATED WETLAND BOUNDARY
100-FOOT DEC ADJACENT AREA

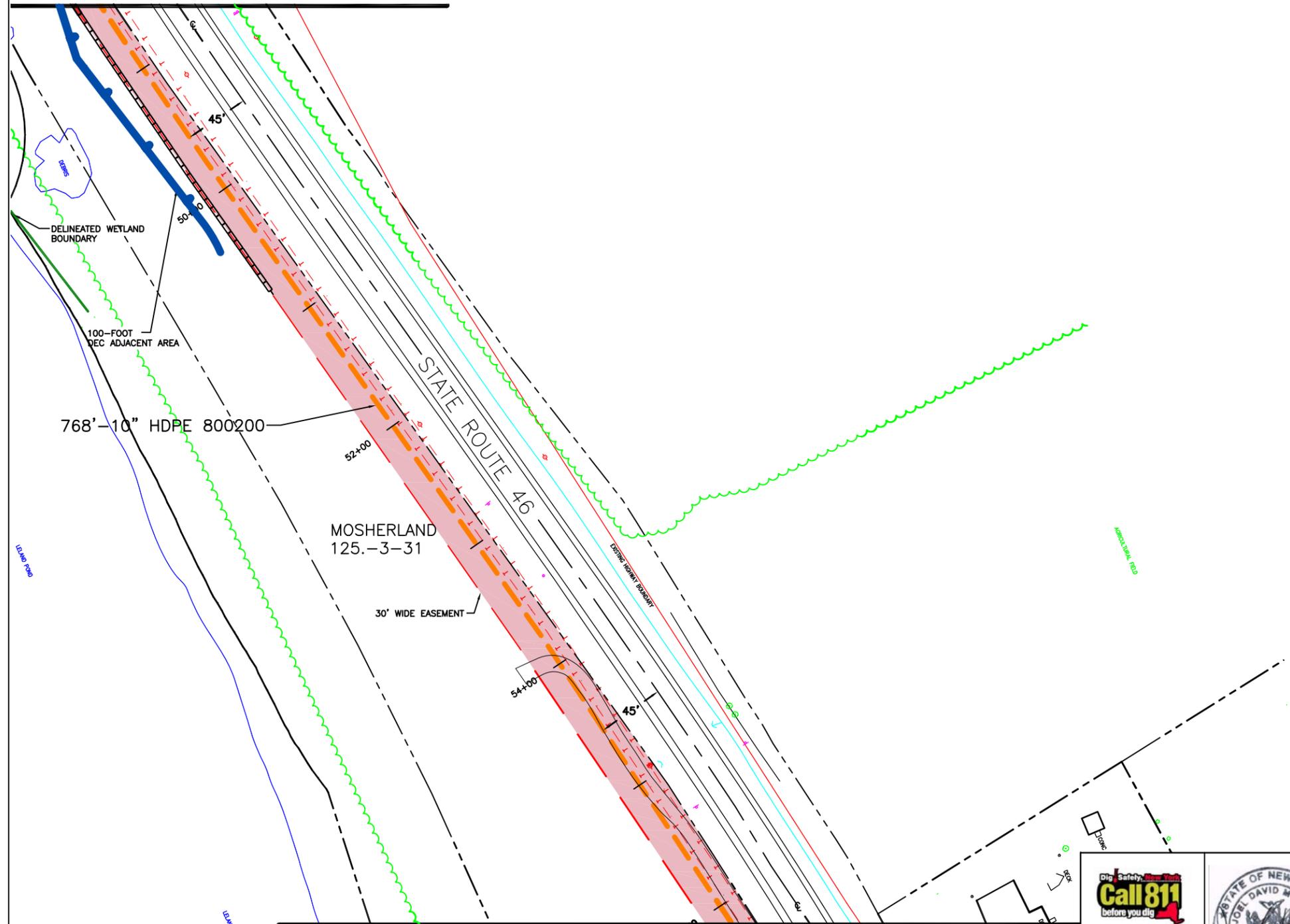
STATE ROUTE 46

MATCH LINE W/SHT9



		www.gasengineering.com HAMILTON PIPELINE	
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SIZE C	FSCM NO. -	WORK ORDER NO. 13-001-02
SCALE 1"=50'	DATE 11-09-13	SHEET 8 OF 86	REV -

MATCH LINE W/SHT8



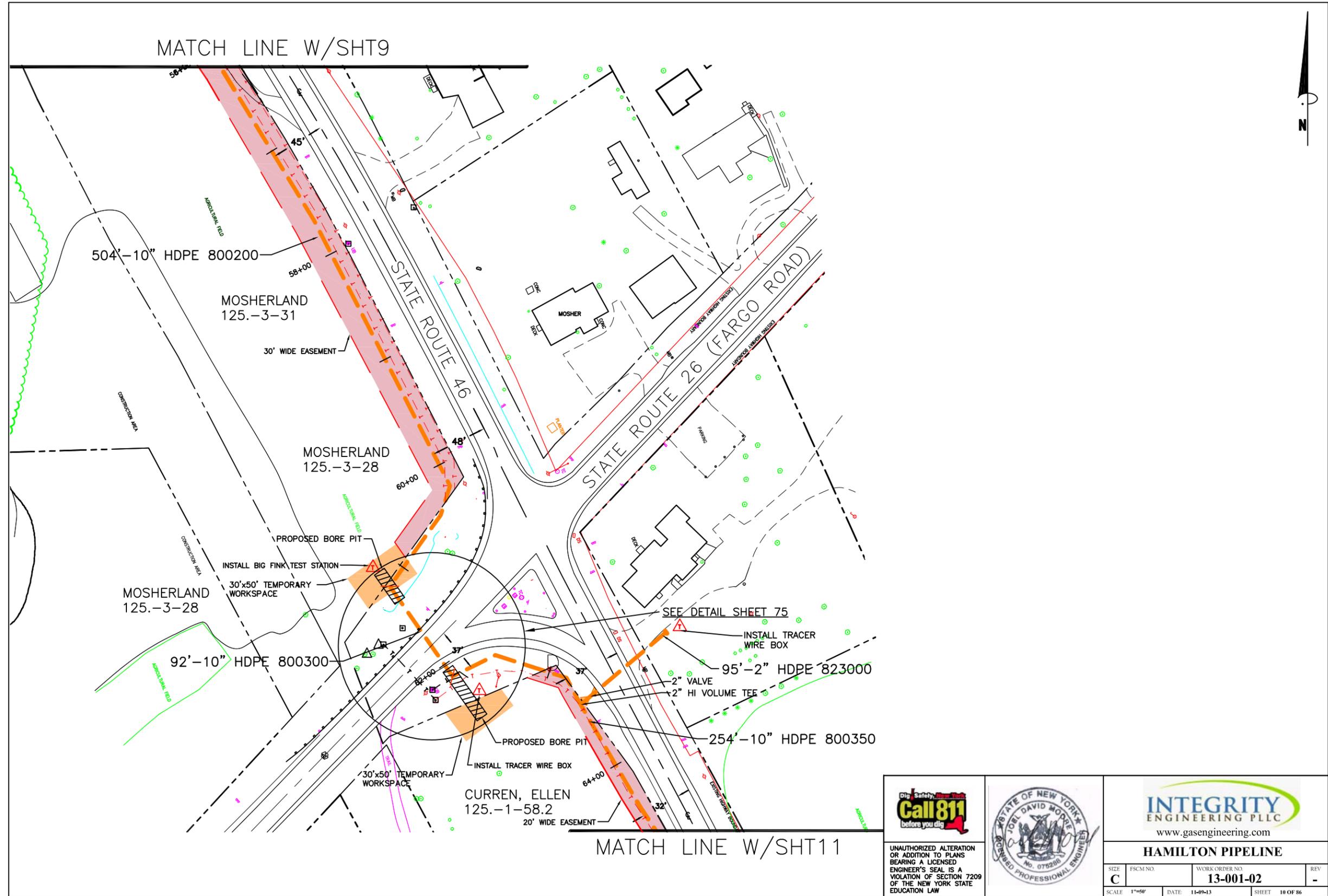
MATCH LINE W/SHT10



HAMILTON PIPELINE

UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW

SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	DATE	SHEET	
1"=50'	11-09-13	9 OF 86	



MATCH LINE W/SHT9

MATCH LINE W/SHT11

504'-10" HDPE 800200

MOSHERLAND
125.-3-31

30' WIDE EASEMENT

MOSHERLAND
125.-3-28

MOSHERLAND
125.-3-28

92'-10" HDPE 800300

CURREN, ELLEN
125.-1-58.2

20' WIDE EASEMENT

SEE DETAIL SHEET 75

INSTALL TRACER
WIRE BOX

95'-2" HDPE 823000

2" VALVE

2" HI VOLUME TEE

254'-10" HDPE 800350



UNAUTHORIZED ALTERATION
OR ADDITION TO PLANS
BEARING A LICENSED
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EDUCATION LAW



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HAMILTON PIPELINE

SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	DATE	SHEET	10 OF 86
1"=50'	11-09-13		

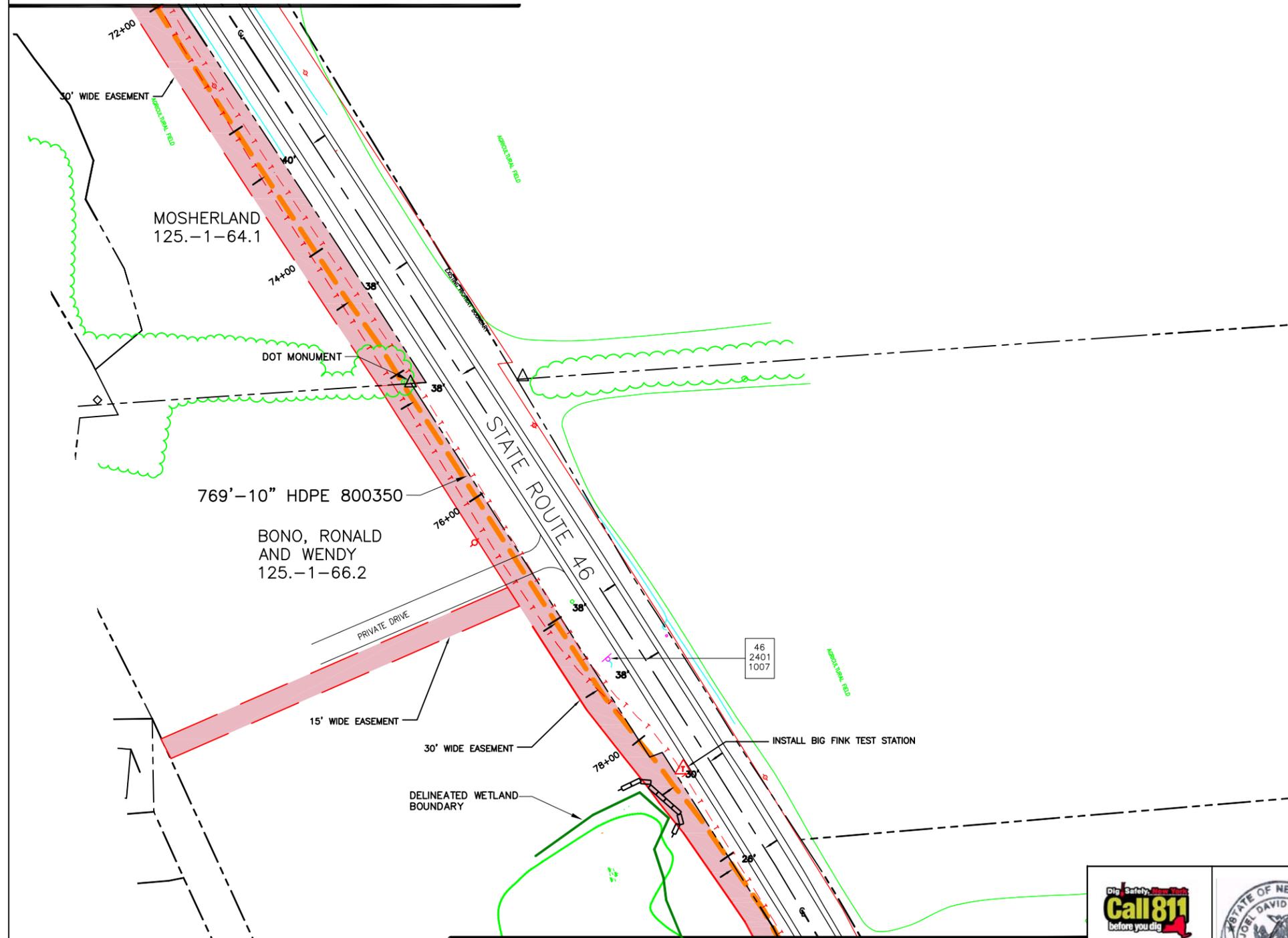
MATCH LINE W/SHT10



MATCH LINE W/SHT12

		www.gasengineering.com HAMILTON PIPELINE		
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SIZE C	FSCM NO. 	WORK ORDER NO. 13-001-02	REV -
SCALE 1"=50'	DATE 11-09-13	SHEET 11 OF 86		

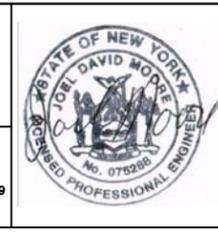
MATCH LINE W/SHT11



MATCH LINE W/SHT13

Call 811
before you dig

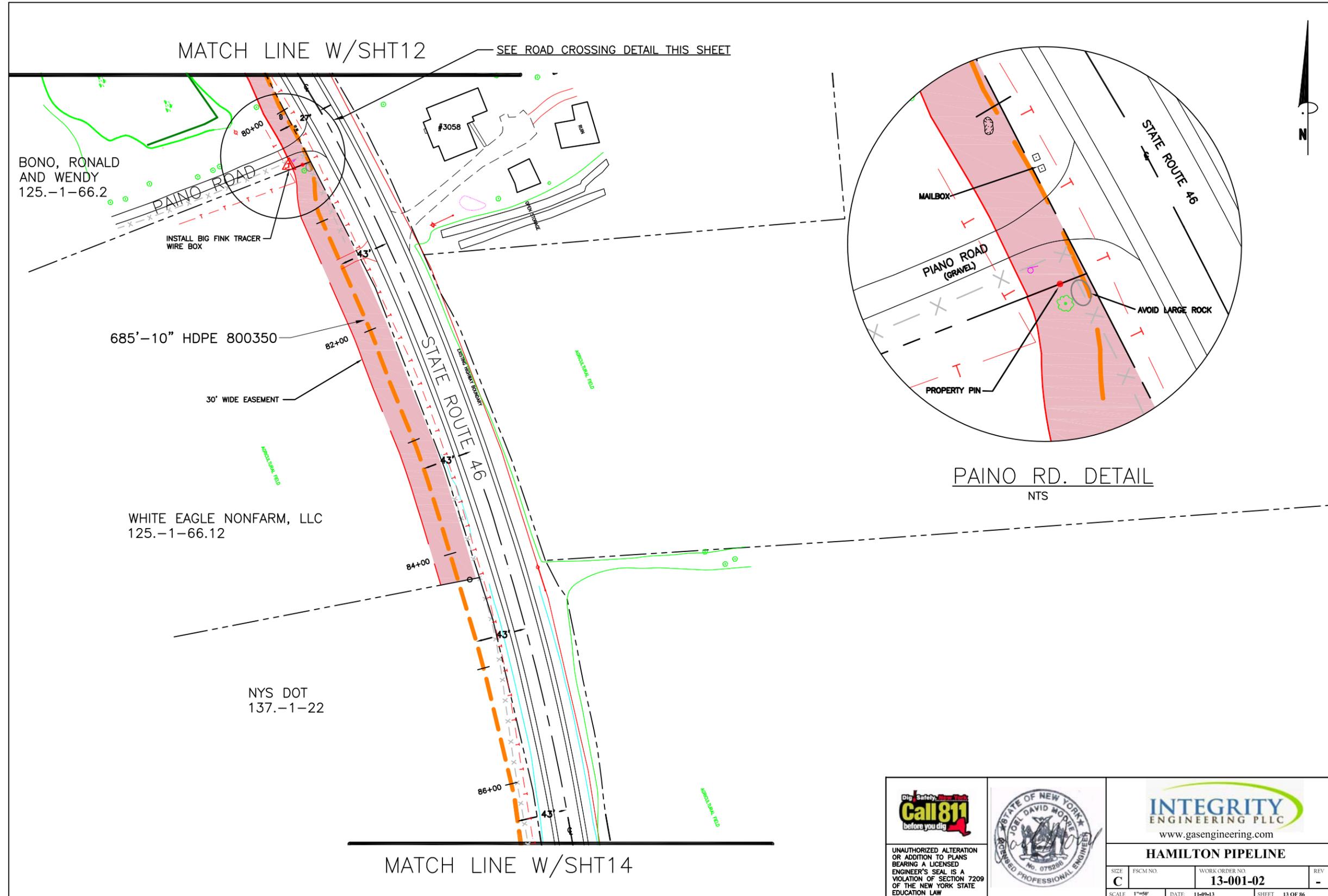
UNAUTHORIZED ALTERATION
OR ADDITION TO PLANS
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ENGINEER'S SEAL IS A
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HAMILTON PIPELINE

SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	DATE	SHEET	
1"=50'	11-09-13	12 OF 86	



MATCH LINE W/SHT12 SEE ROAD CROSSING DETAIL THIS SHEET

BONO, RONALD AND WENDY
125.-1-66.2

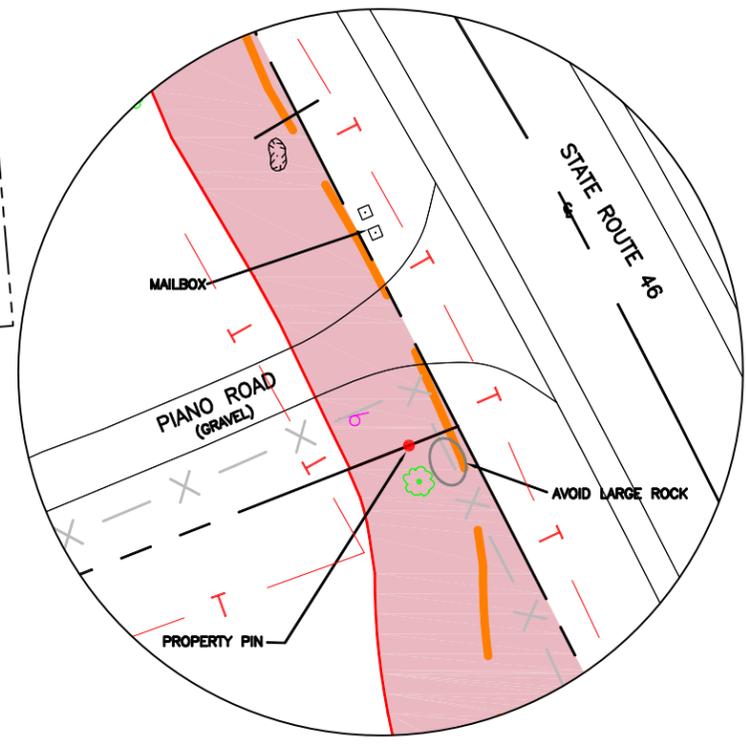
685'-10" HDPE 800350

30' WIDE EASEMENT

WHITE EAGLE NONFARM, LLC
125.-1-66.12

NYS DOT
137.-1-22

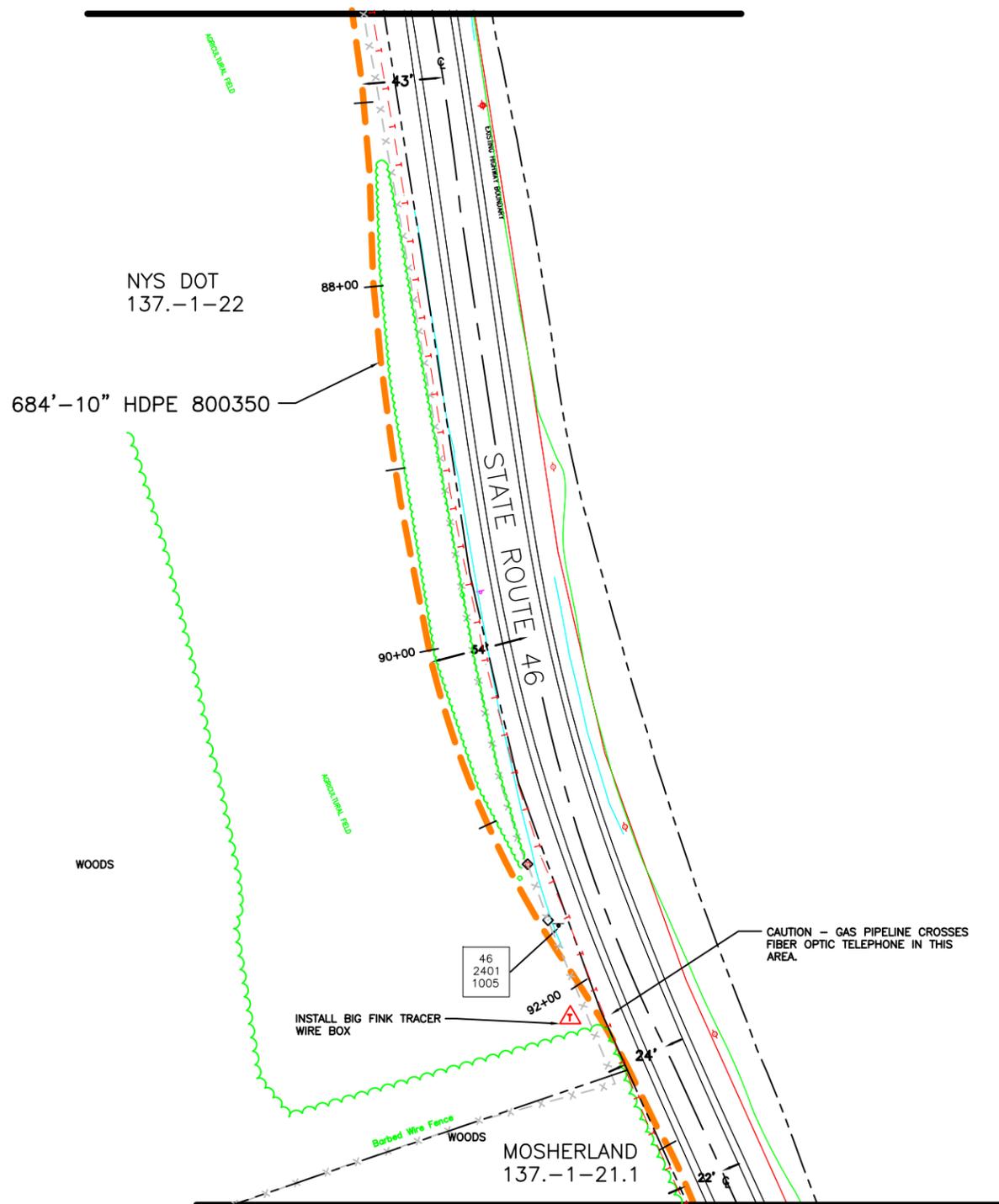
MATCH LINE W/SHT14



PAINO RD. DETAIL
NTS

		 www.gasengineering.com	
		HAMILTON PIPELINE	
<small>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</small>	<small>SCALE</small> 1"=50'	<small>DATE</small> 11-09-13	<small>WORK ORDER NO.</small> 13-001-02
	<small>SIZE</small> C	<small>DATE</small> 11-09-13	<small>REV</small> -
		<small>DATE</small> 11-09-13	<small>SHEET</small> 13 OF 86

MATCH LINE W/SHT13



NYS DOT
137.-1-22

684'-10" HDPE 800350

STATE ROUTE
46

WOODS

CAUTION - GAS PIPELINE CROSSES
FIBER OPTIC TELEPHONE IN THIS
AREA.

INSTALL BIG FINK TRACER
WIRE BOX

46
2401
1005

Barbed Wire Fence

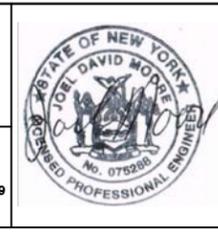
WOODS

MOSHERLAND
137.-1-21.1

MATCH LINE W/SHT15

Call 811
before you dig

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OR ADDITION TO PLANS
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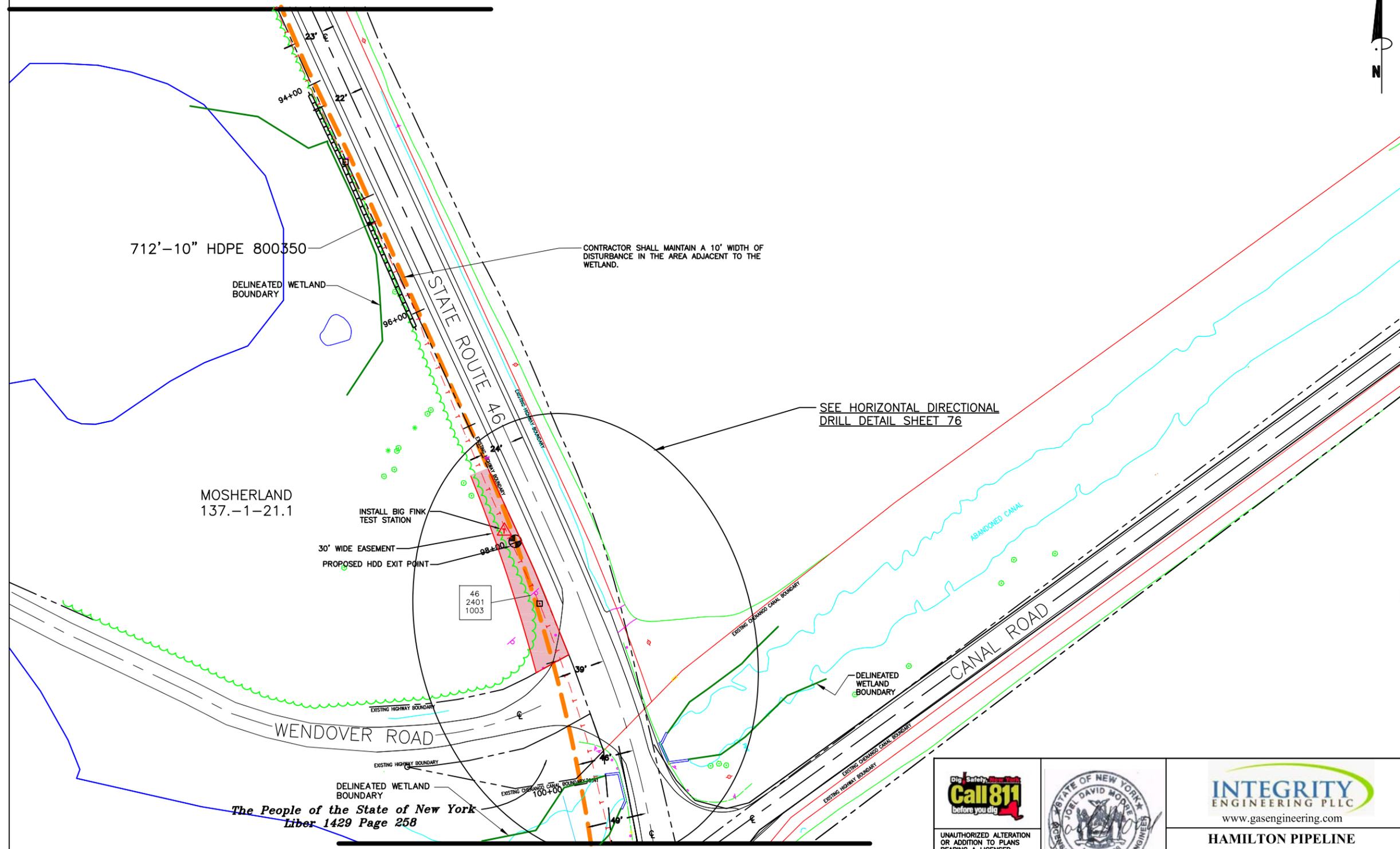


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HAMILTON PIPELINE

SIZE C	FSCM NO.	WORK ORDER NO. 13-001-02	REV -
SCALE 1"=50'	DATE 11-09-13	SHEET 14 OF 86	

MATCH LINE W/SHT14



712'-10" HDPE 800350

DELINEATED WETLAND BOUNDARY

CONTRACTOR SHALL MAINTAIN A 10' WIDTH OF DISTURBANCE IN THE AREA ADJACENT TO THE WETLAND.

STATE ROUTE 46

SEE HORIZONTAL DIRECTIONAL DRILL DETAIL SHEET 76

MOSHERLAND 137.-1-21.1

INSTALL BIG FINK TEST STATION

30' WIDE EASEMENT

PROPOSED HDD EXIT POINT

46
2401
1003

ABANDONED CANAL

CANAL ROAD

WENDOVER ROAD

The People of the State of New York
Liber 1429 Page 258

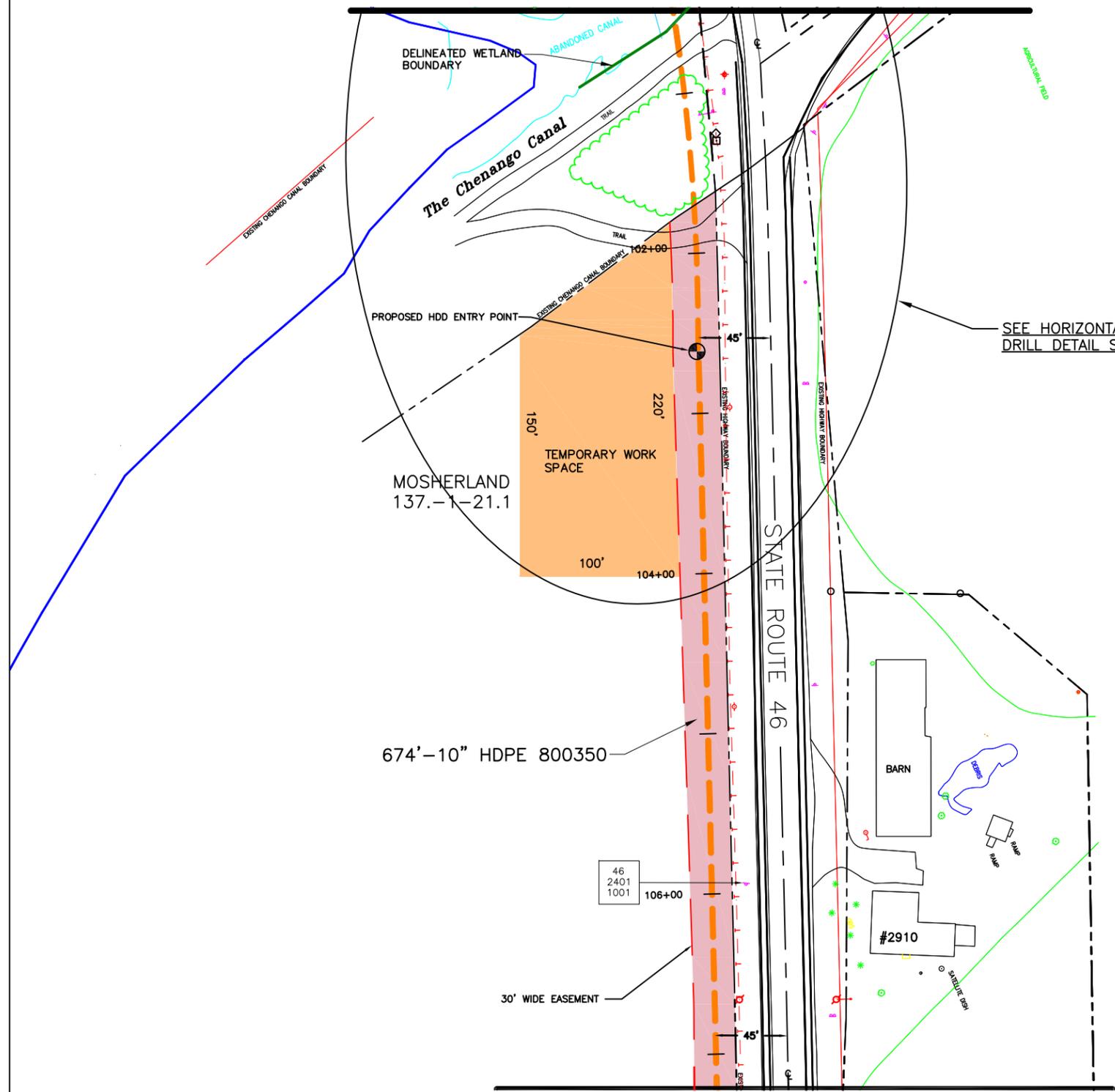
MATCH LINE W/SHT16



HAMILTON PIPELINE

SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	DATE	SHEET	
1"=50'	11-09-13	15 OF 86	

MATCH LINE W/SHT15



SEE HORIZONTAL DIRECTIONAL
DRILL DETAIL SHEET 76

Mosherland LLC.
137.-1-21.1

MOSHERLAND
137.-1-21.1

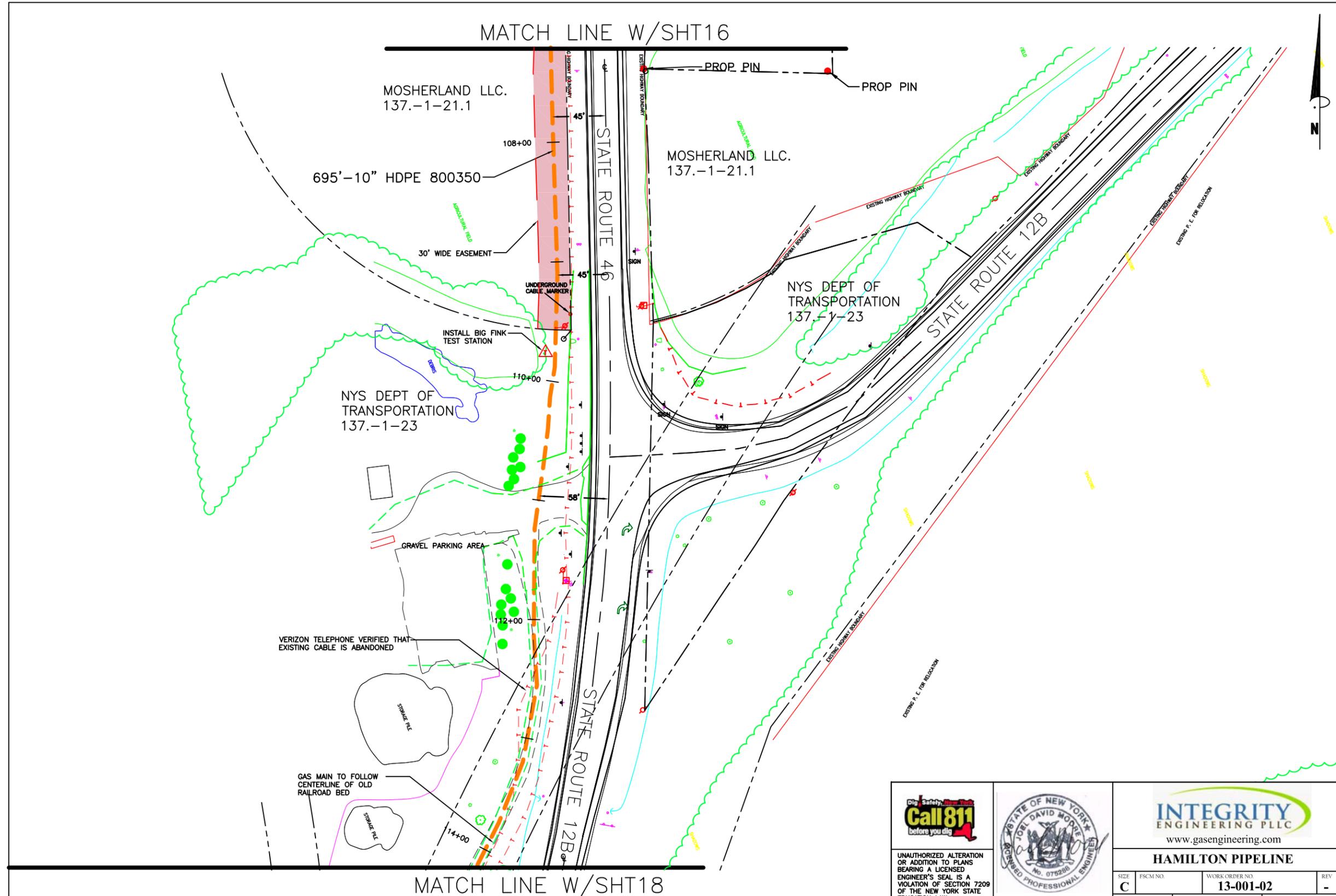
674'-10" HDPE 800350

46
2401
1001

30' WIDE EASEMENT

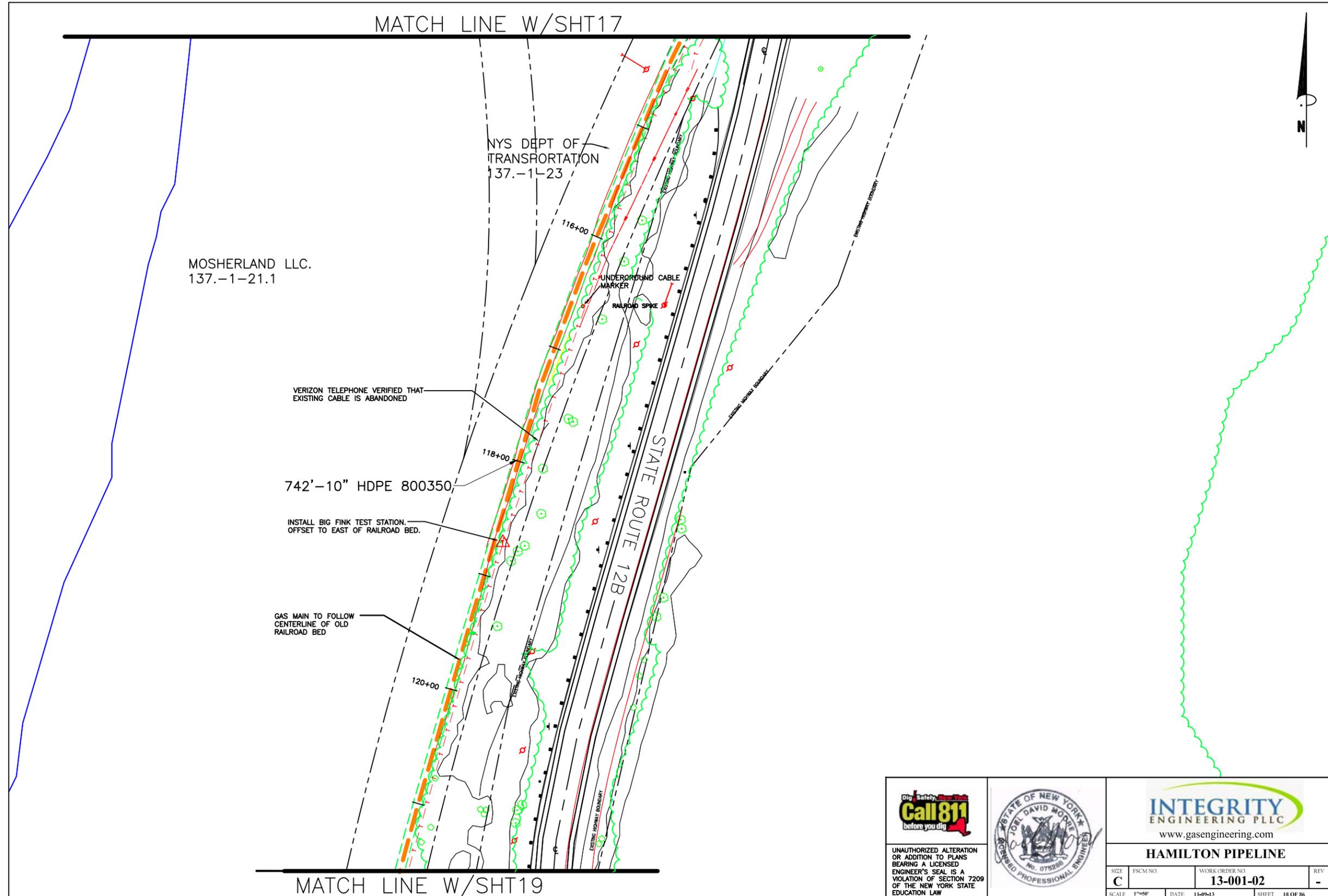
MATCH LINE W/SHT17

<p>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</p>		<p>www.gasengineering.com</p>	
		<p>HAMILTON PIPELINE</p>	
<p>SCALE: 1"=50'</p>	<p>FSCM NO. C</p>	<p>WORK ORDER NO. 13-001-02</p>	<p>REV. -</p>
<p>DATE: 11-09-13</p>	<p>SHEET 16 OF 86</p>		



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		 www.gasengineering.com		
		HAMILTON PIPELINE		
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SIZE: C	FSCM NO:	WORK ORDER NO: 13-001-02	REV: -
SCALE: 1"=50'	DATE: 11-09-13	SHEET: 17 OF 86		

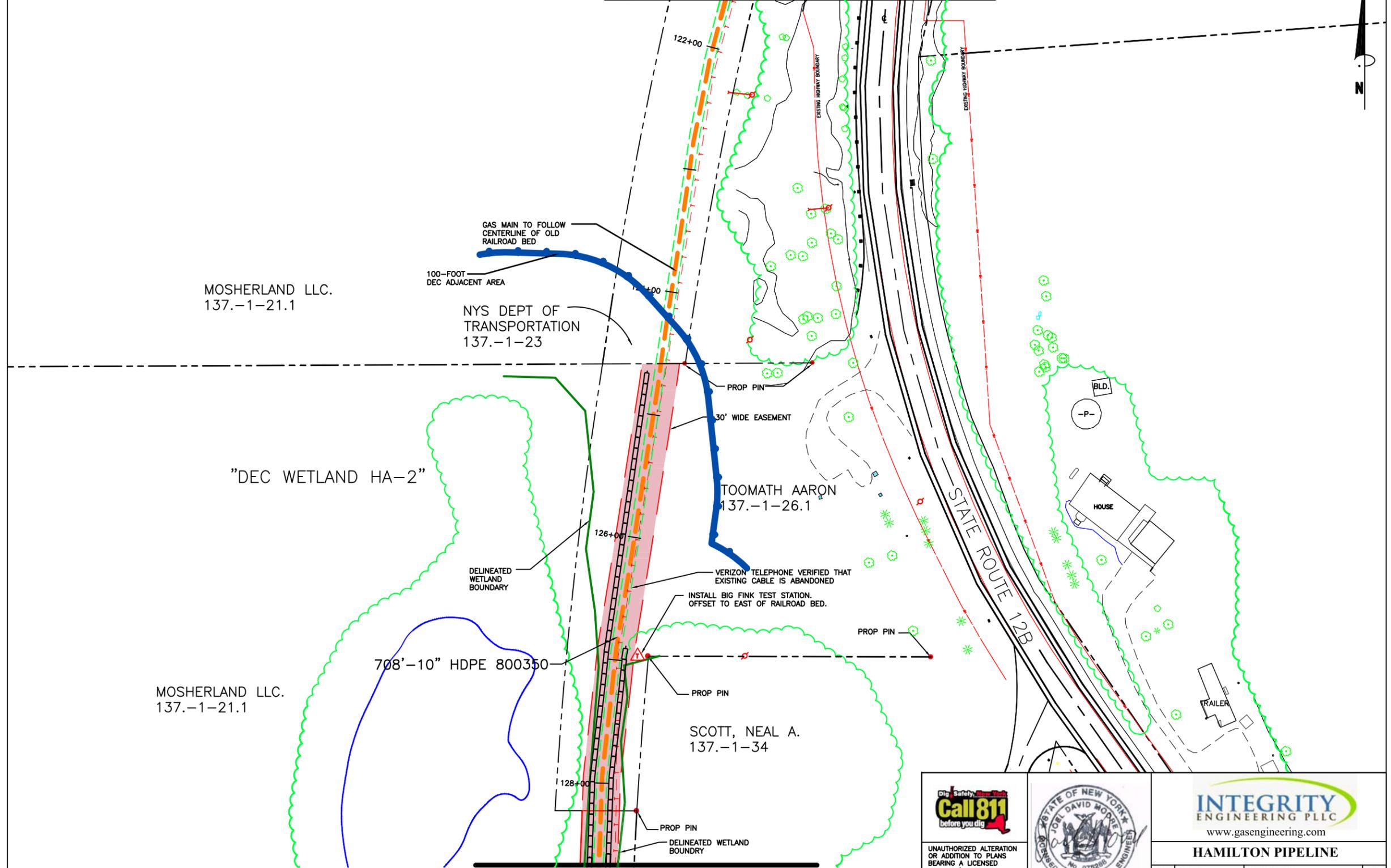


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		www.gasengineering.com	
HAMILTON PIPELINE			
SIZE C	FSCM NO.	WORK ORDER NO. 13-001-02	REV -
SCALE 1"=50'	DATE 11-09-13	SHEET 18 OF 86	

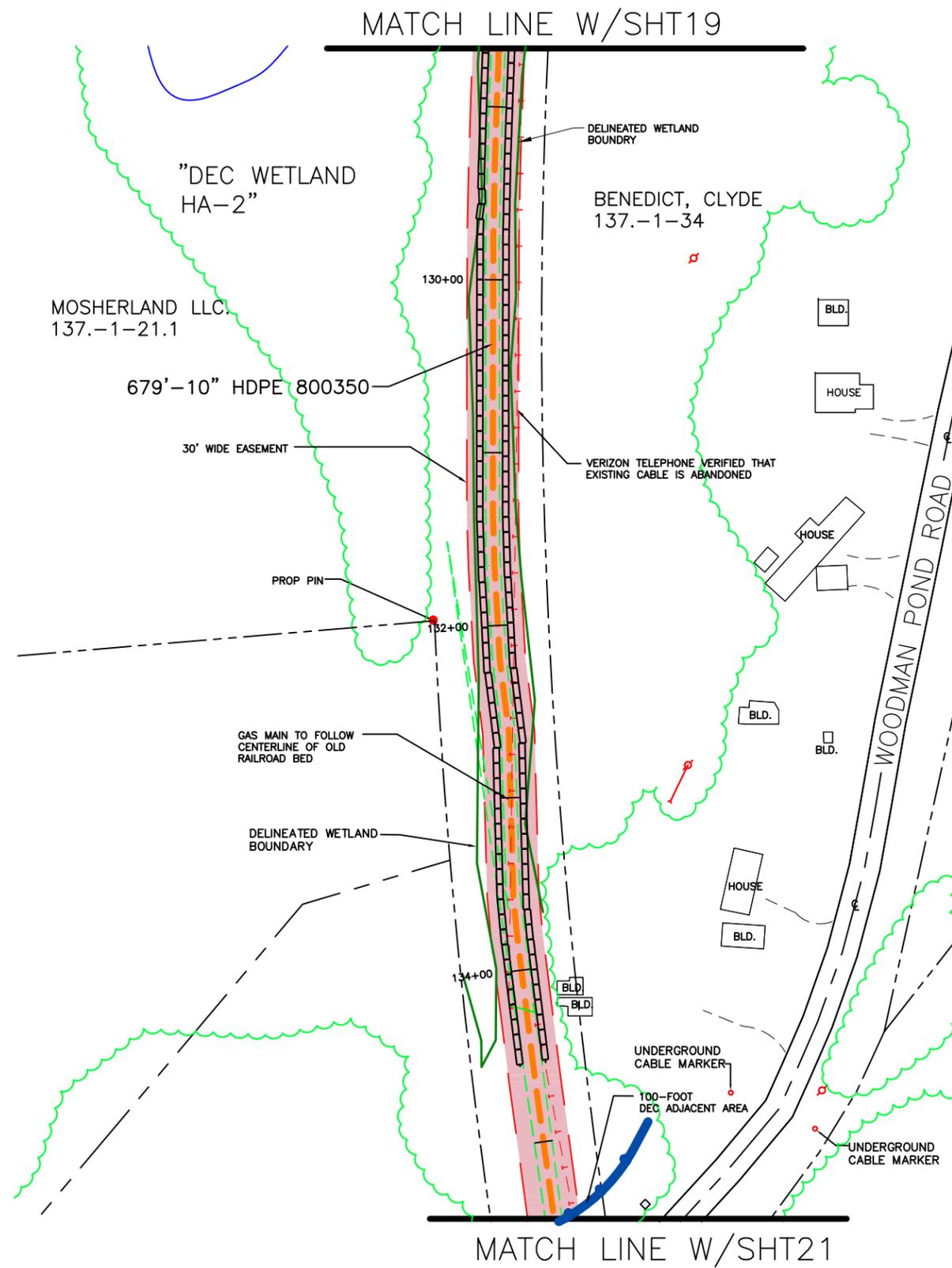
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW

MATCH LINE W/SHT18

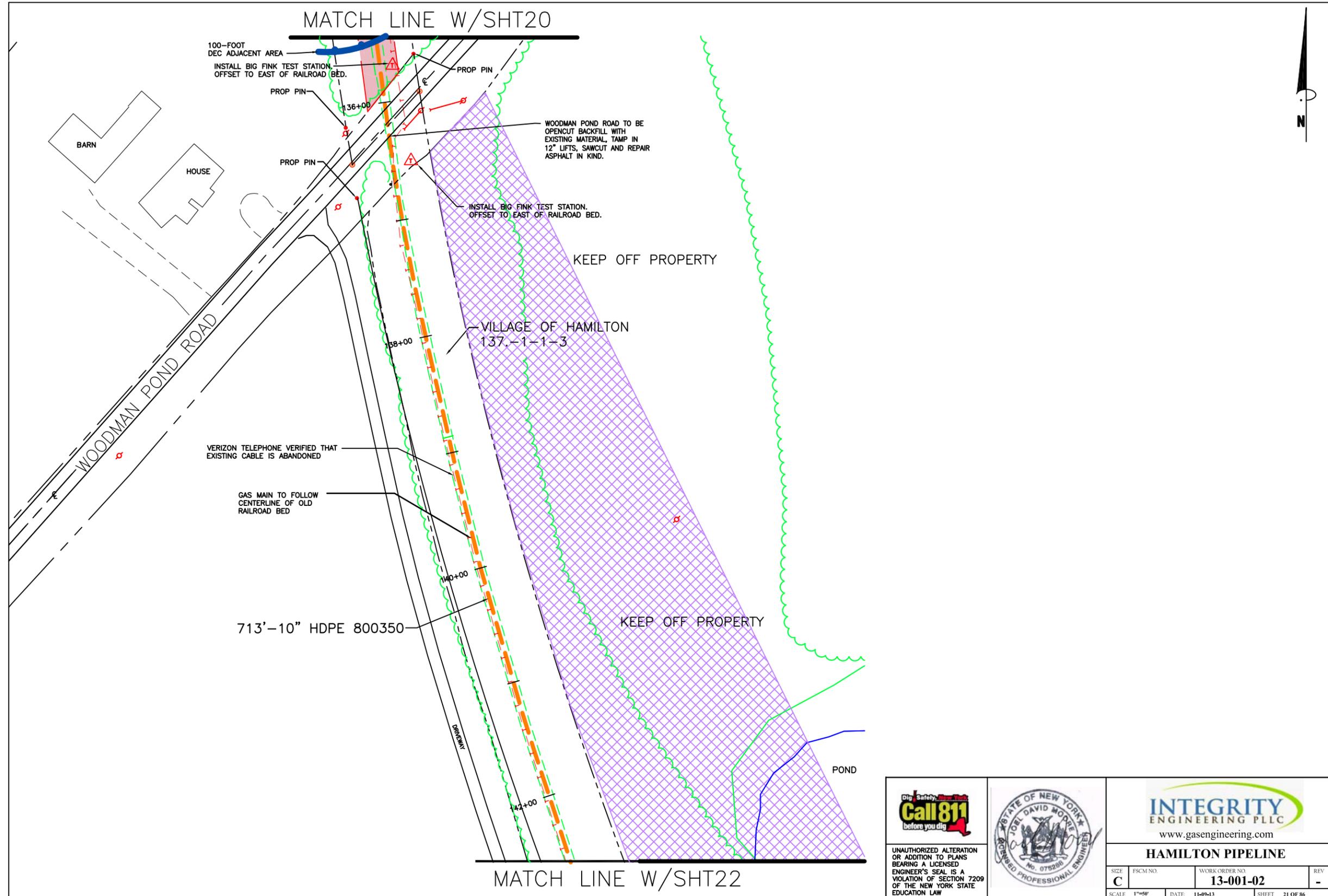


MATCH LINE W/SHT20

		www.gasengineering.com	
HAMILTON PIPELINE			
SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	DATE	SHEET	19 OF 86
1"=50'	11-09-13		

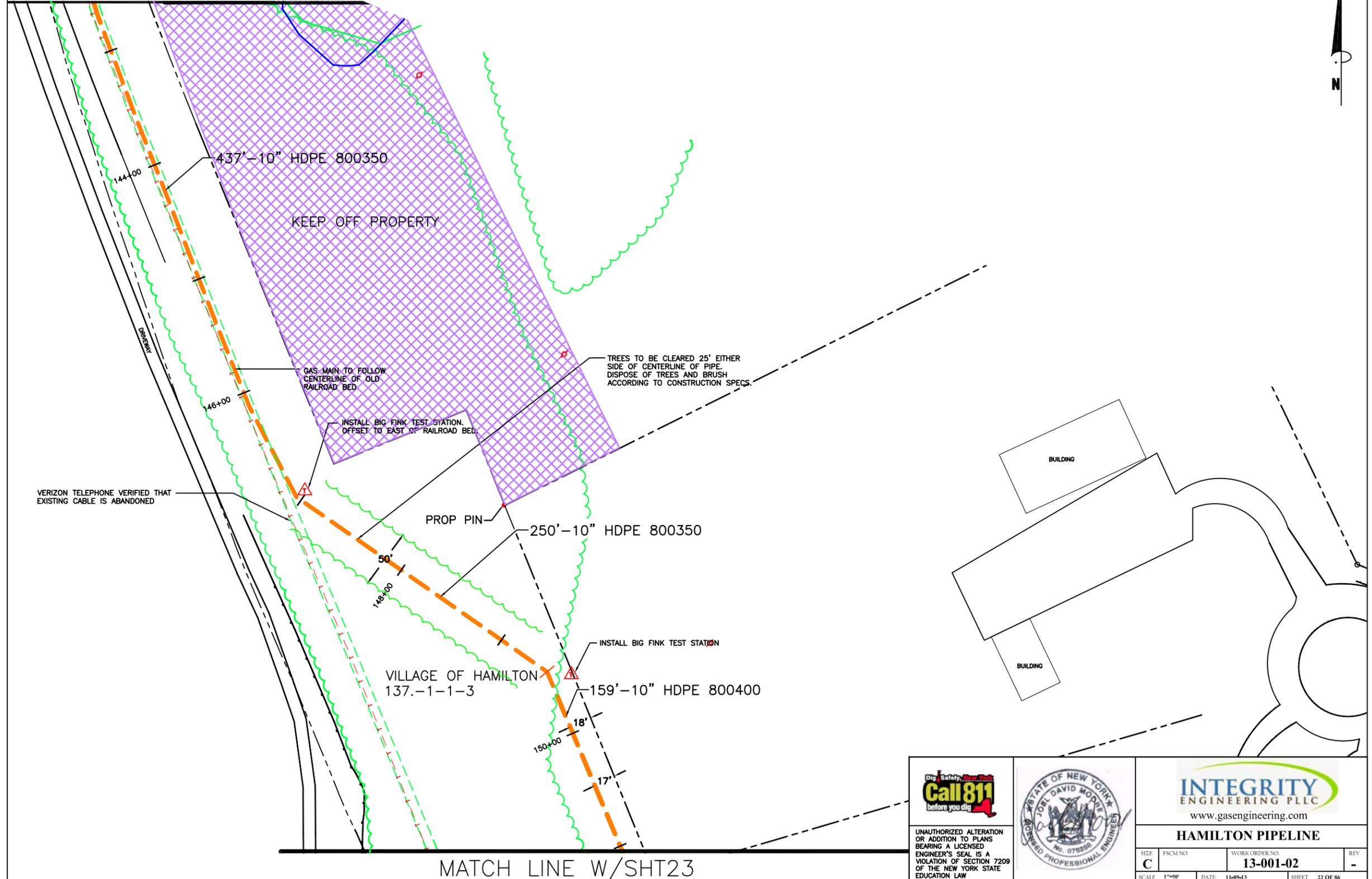


<p>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</p>		<p>www.gasengineering.com</p> <p>HAMILTON PIPELINE</p>													
		<table border="1"> <tr> <td>SIZE</td> <td>FSCM NO.</td> <td>WORK ORDER NO.</td> <td>REV.</td> </tr> <tr> <td>C</td> <td></td> <td>13-001-02</td> <td>-</td> </tr> </table>	SIZE	FSCM NO.	WORK ORDER NO.	REV.	C		13-001-02	-	<table border="1"> <tr> <td>SCALE</td> <td>DATE</td> <td>SHEET</td> </tr> <tr> <td>1"=50'</td> <td>11-09-13</td> <td>20 OF 86</td> </tr> </table>	SCALE	DATE	SHEET	1"=50'
SIZE	FSCM NO.	WORK ORDER NO.	REV.												
C		13-001-02	-												
SCALE	DATE	SHEET													
1"=50'	11-09-13	20 OF 86													



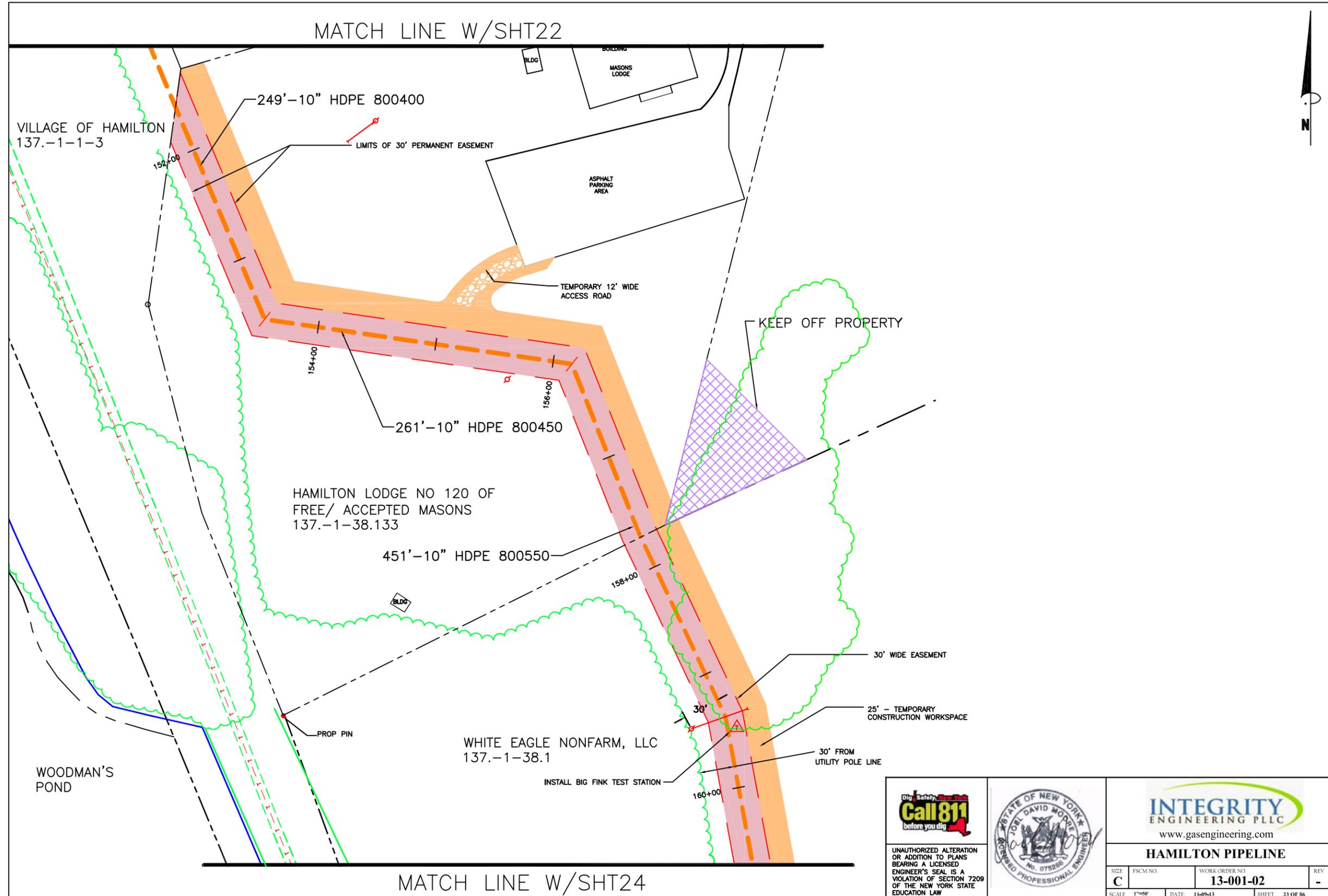
		www.gasengineering.com	
HAMILTON PIPELINE			
SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	DATE	SHEET	
1"=50'	11-09-13	21 OF 86	

MATCH LINE W/SHT21



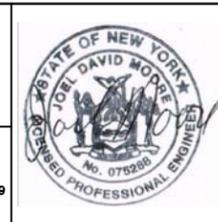
MATCH LINE W/SHT23

		www.gasengineering.com HAMILTON PIPELINE		
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SIZE C	FSCM NO. -	WORK ORDER NO. 13-001-02	REV -
SCALE 1"=50'	DATE 11-09-13	SHEET 22 OF 86		



Call 811
before you dig

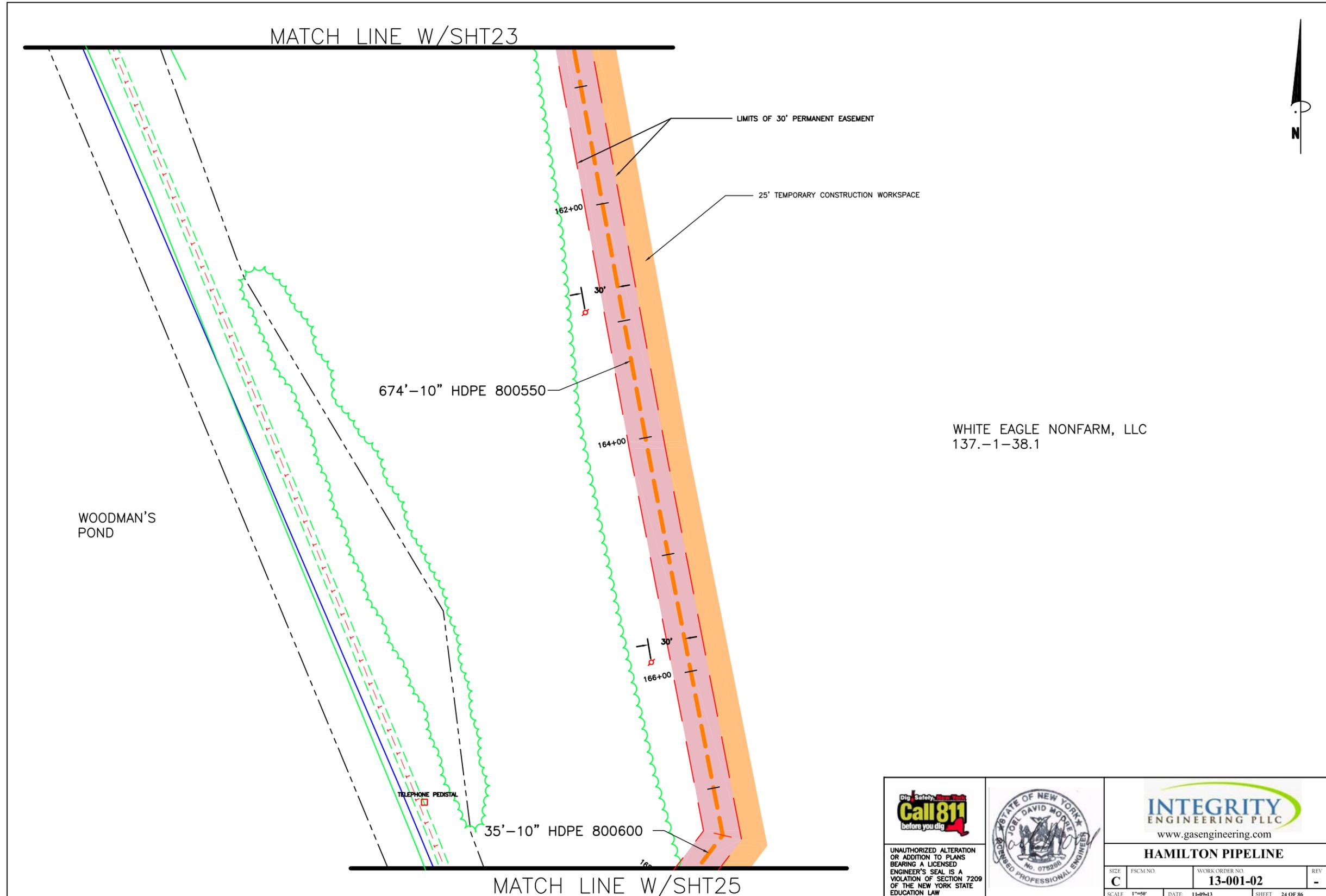
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW



INTEGRITY ENGINEERING PLLC
www.gasengineering.com

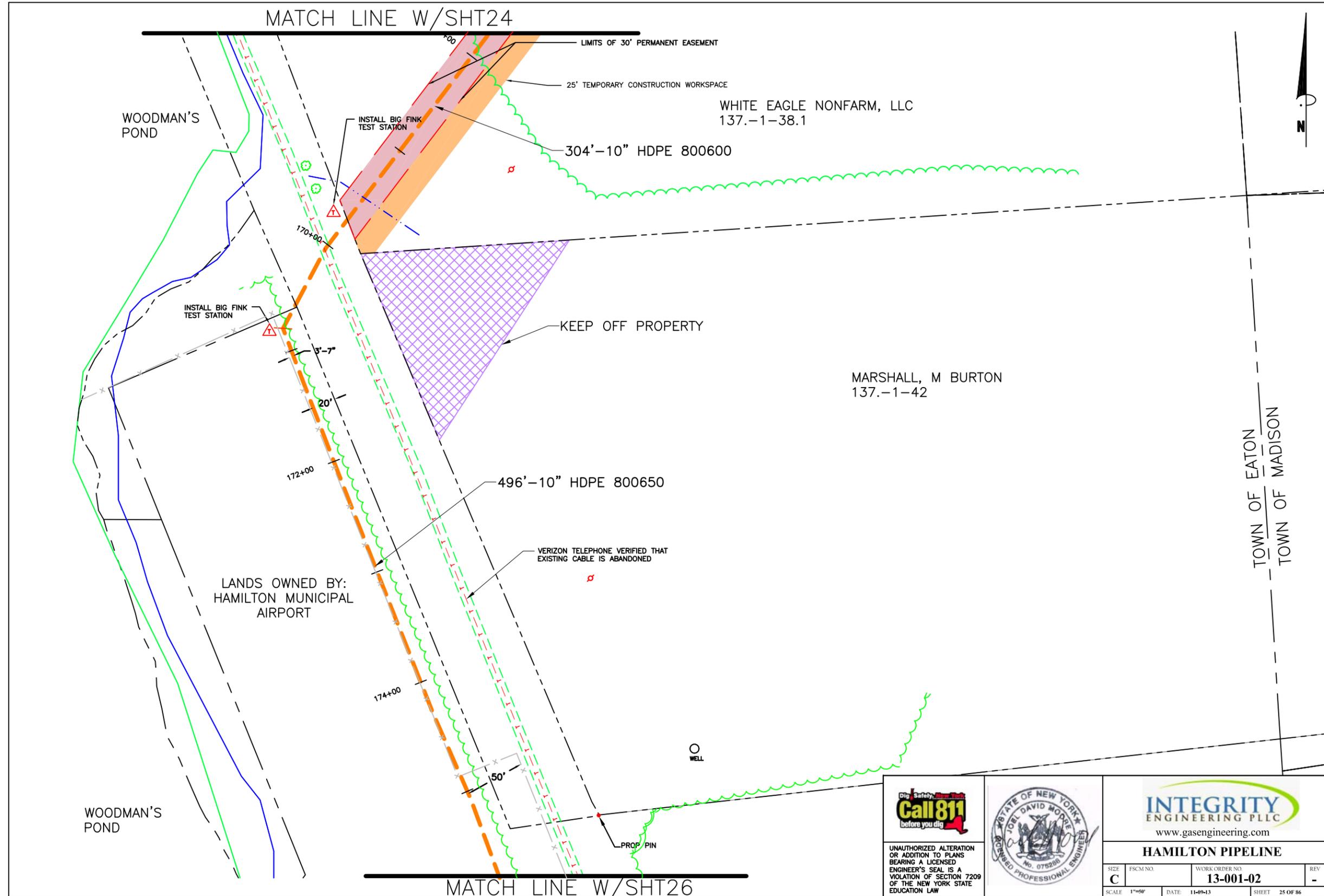
HAMILTON PIPELINE

SIZE	FSCM NO	WORK ORDER NO	REV
C		13-001-02	-
SCALE	DATE	SHEET	
1"=50'	11-09-13	23 OF 86	



WHITE EAGLE NONFARM, LLC
137.-1-38.1

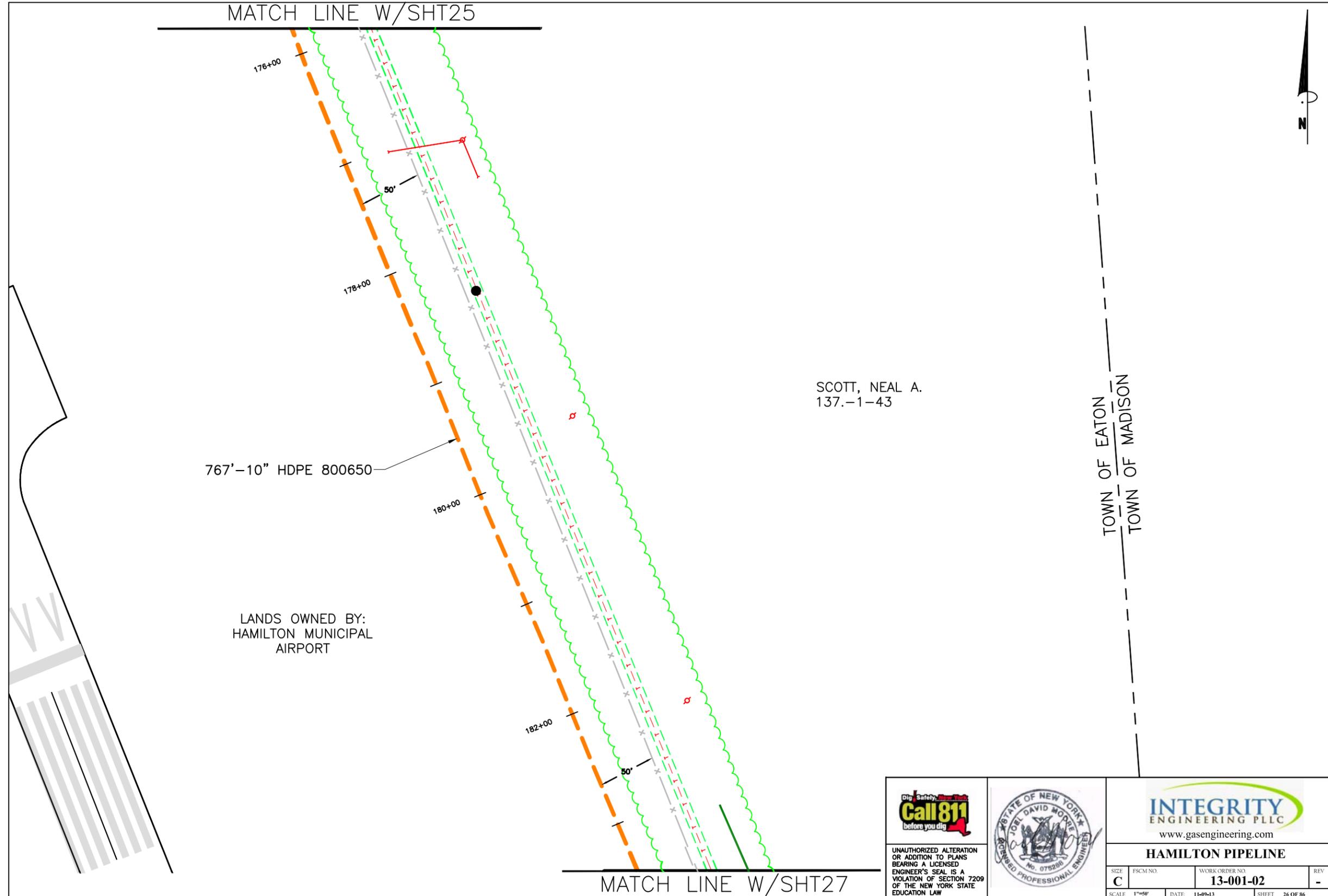
		www.gasengineering.com HAMILTON PIPELINE		
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SIZE: C	FSCM NO.:	WORK ORDER NO.: 13-001-02	REV: -
SCALE: 1"=50'	DATE: 11-09-13	SHEET: 24 OF 86		



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HAMILTON PIPELINE					
SIZE	FSCM NO.	WORK ORDER NO.	REV.		
C		13-001-02	-		
SCALE	DATE	SHEET			
1"=50'	11-09-13	25 OF 86			

UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW



MATCH LINE W/SHT25

767'-10" HDPE 800650

LANDS OWNED BY:
HAMILTON MUNICIPAL
AIRPORT

SCOTT, NEAL A.
137.-1-43

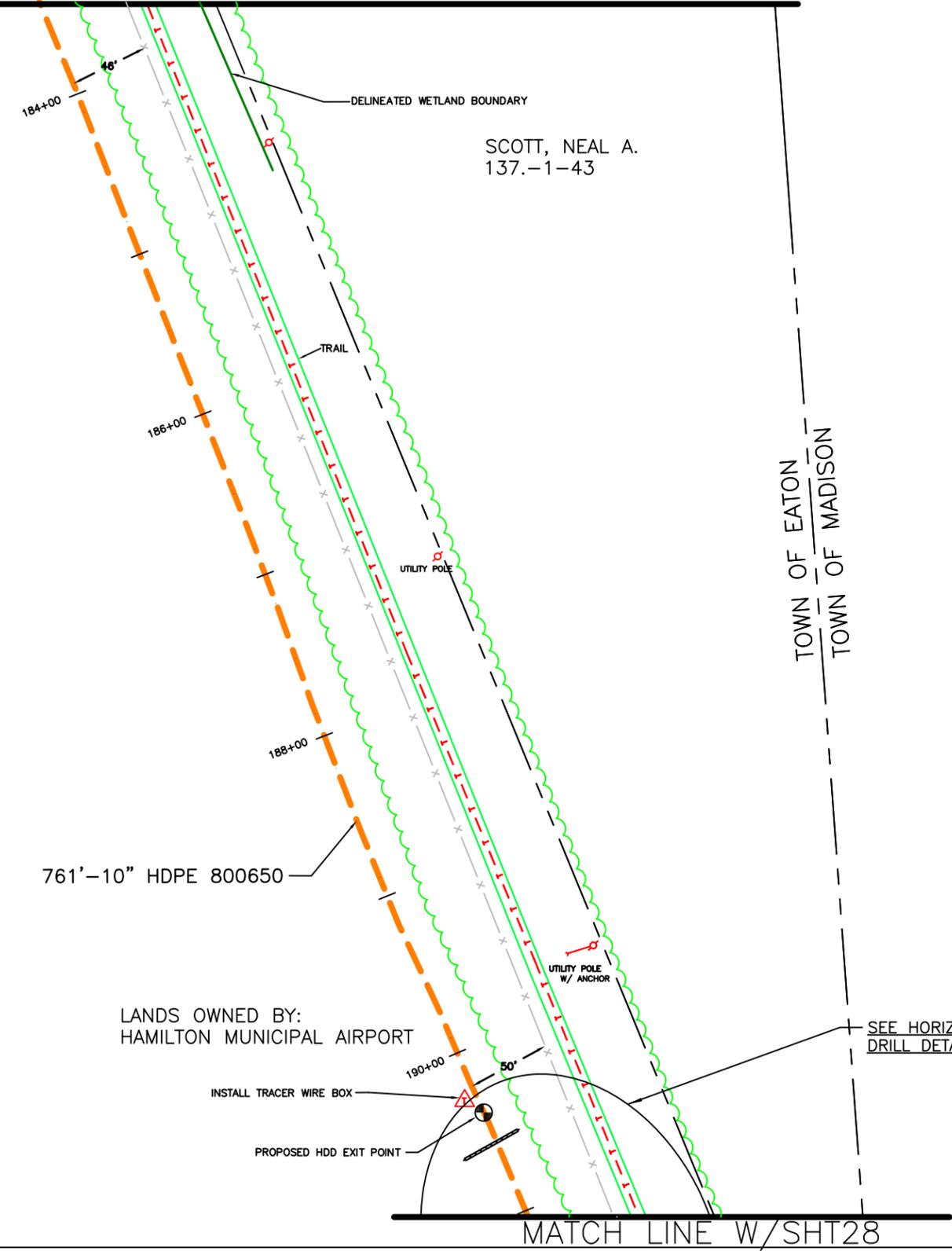
TOWN OF EATON
TOWN OF MADISON



MATCH LINE W/SHT27

		<p>www.gasengineering.com</p> <p>HAMILTON PIPELINE</p>	
<p>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</p>	<p>SCALE: 1"=50'</p>	<p>DATE: 11-09-13</p>	<p>WORK ORDER NO: 13-001-02</p>
<p>SIZE: C</p>	<p>FSCM NO:</p>	<p>DATE: 11-09-13</p>	<p>REV: -</p>
<p>SHEET 26 OF 86</p>		<p>SHEET 26 OF 86</p>	

MATCH LINE W/SHT26



SCOTT, NEAL A.
137.-1-43

TOWN OF EATON
TOWN OF MADISON

761'-10" HDPE 800650

LANDS OWNED BY:
HAMILTON MUNICIPAL AIRPORT

INSTALL TRACER WIRE BOX

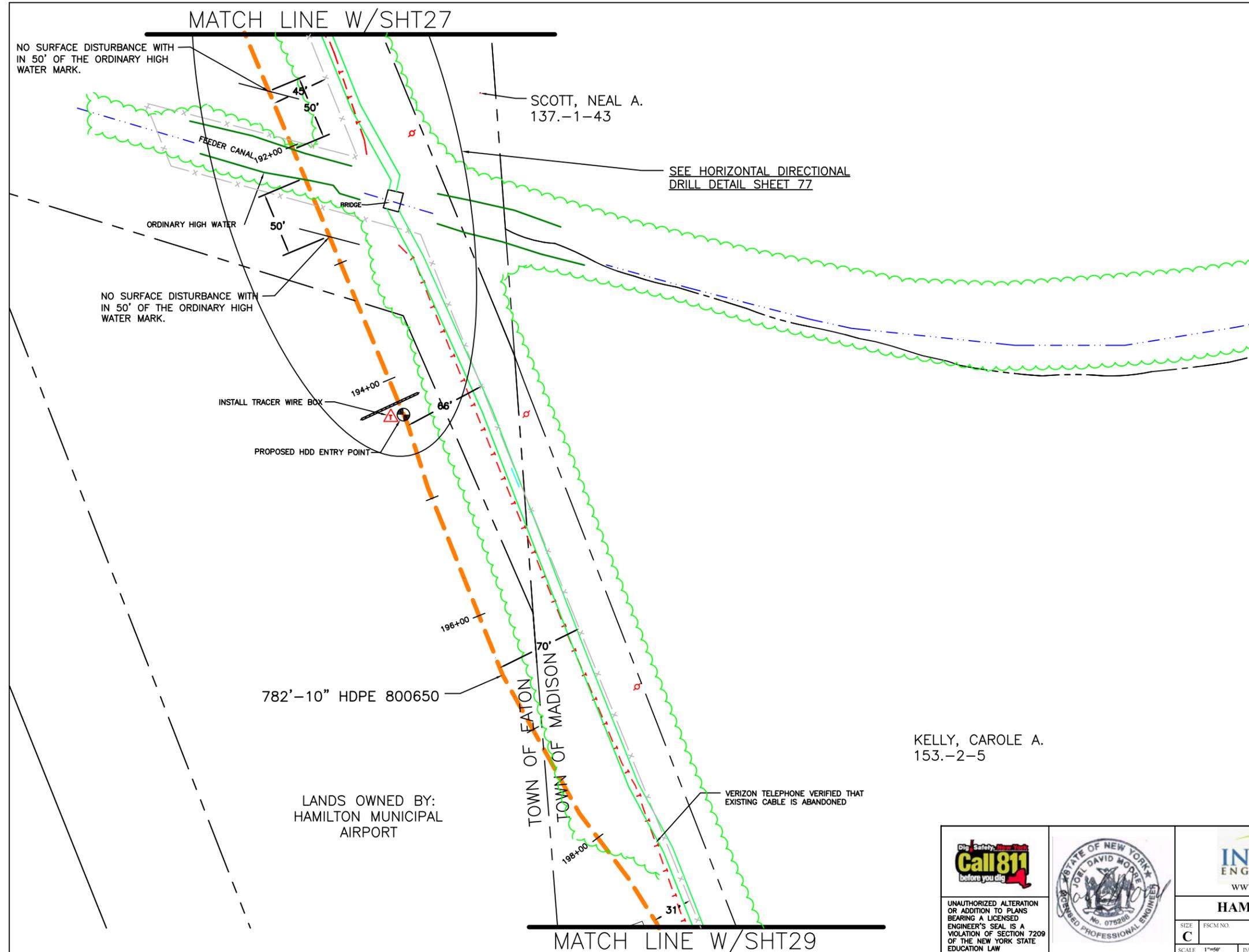
PROPOSED HDD EXIT POINT

SEE HORIZONTAL DIRECTIONAL
DRILL DETAIL SHEET 77

MATCH LINE W/SHT28



		HAMILTON PIPELINE	
<small>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</small>	<small>SCALE</small> C	<small>DATE</small> 11-09-13	<small>WORK ORDER NO.</small> 13-001-02 <small>REV</small> -
		<small>DATE</small> 11-09-13	<small>SHEET</small> 27 OF 86



NO SURFACE DISTURBANCE WITH
IN 50' OF THE ORDINARY HIGH
WATER MARK.

NO SURFACE DISTURBANCE WITH
IN 50' OF THE ORDINARY HIGH
WATER MARK.

LANDS OWNED BY:
HAMILTON MUNICIPAL
AIRPORT

SCOTT, NEAL A.
137.-1-43

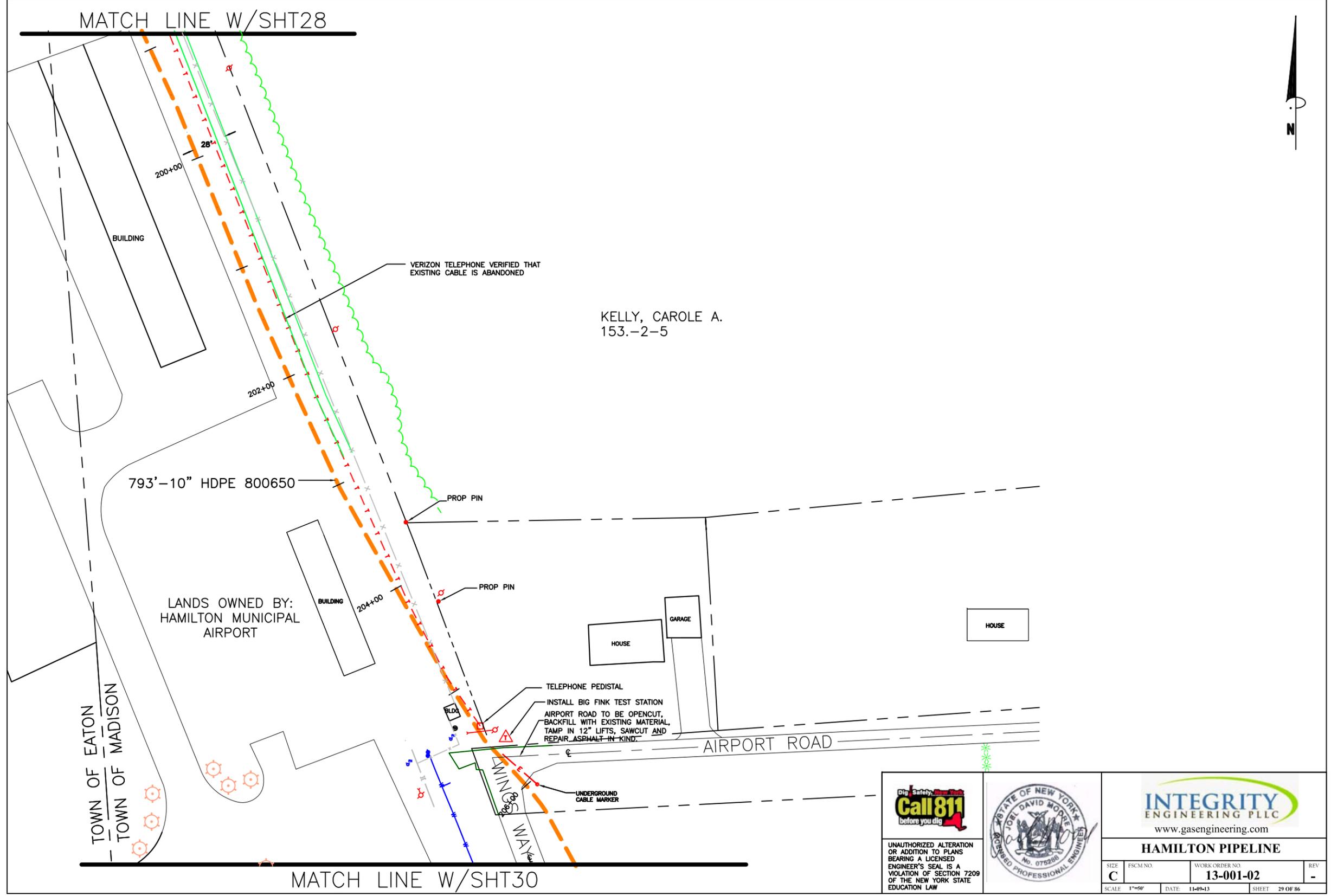
SEE HORIZONTAL DIRECTIONAL
DRILL DETAIL SHEET 77

KELLY, CAROLE A.
153.-2-5

782'-10" HDPE 800650

VERIZON TELEPHONE VERIFIED THAT
EXISTING CABLE IS ABANDONED

		www.gasengineering.com HAMILTON PIPELINE		
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SIZE C	FSCM NO. 	WORK ORDER NO. 13-001-02	REV -
SCALE 1"=50'	DATE 11-09-13	SHEET 28 OF 86		



KELLY, CAROLE A.
153.-2-5

C:\Integrity Engineering\Hamilton\DWG\13-001-02.dwg

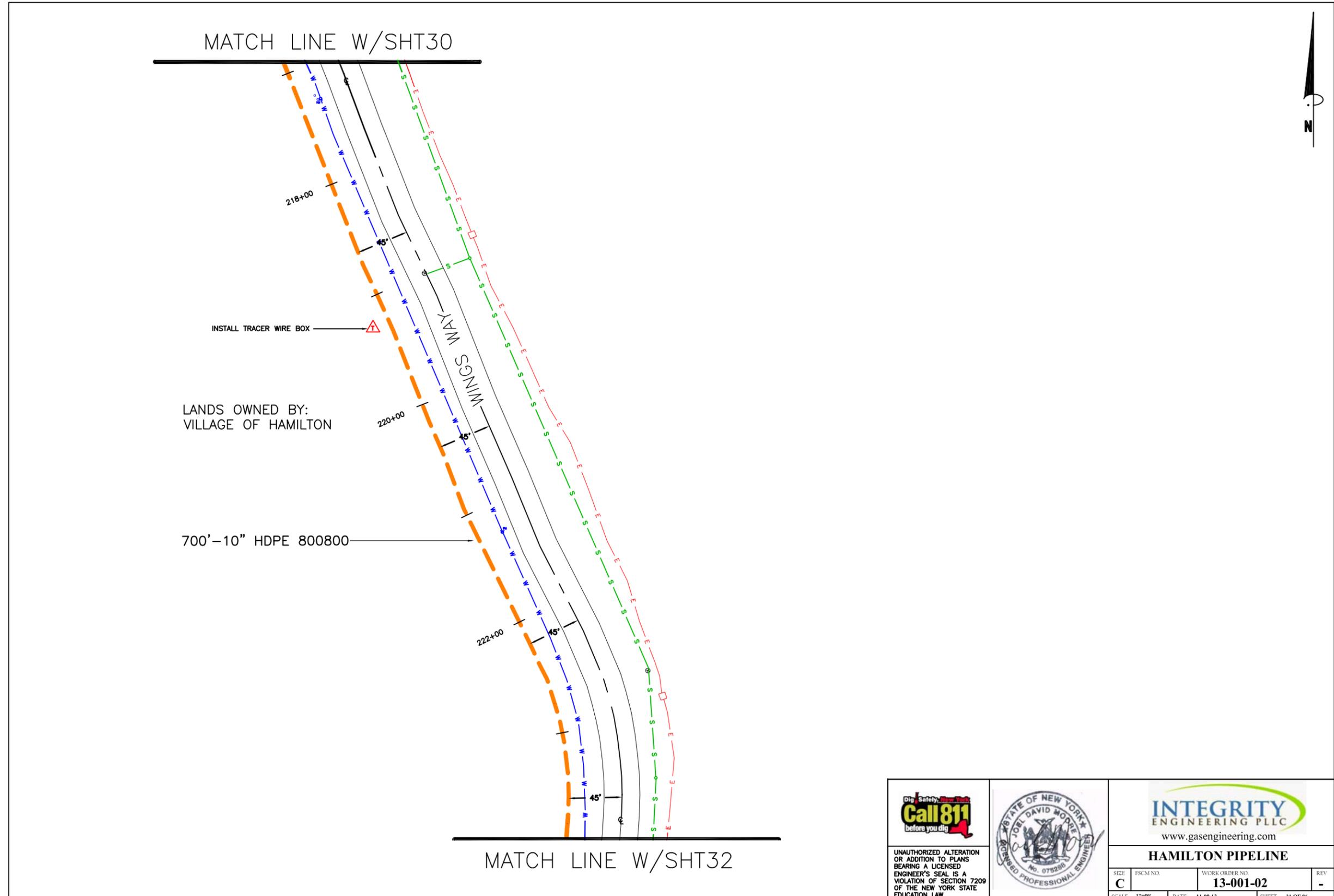
		 www.gasengineering.com		
		HAMILTON PIPELINE		
<small>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</small>	<small>SCALE</small> C	<small>FSCM NO.</small>	<small>WORK ORDER NO.</small> 13-001-02	<small>REV.</small> -
	<small>DATE</small> 11-09-13		<small>SHEET</small> 29 OF 86	

MATCH LINE W/SHT29



MATCH LINE W/SHT31

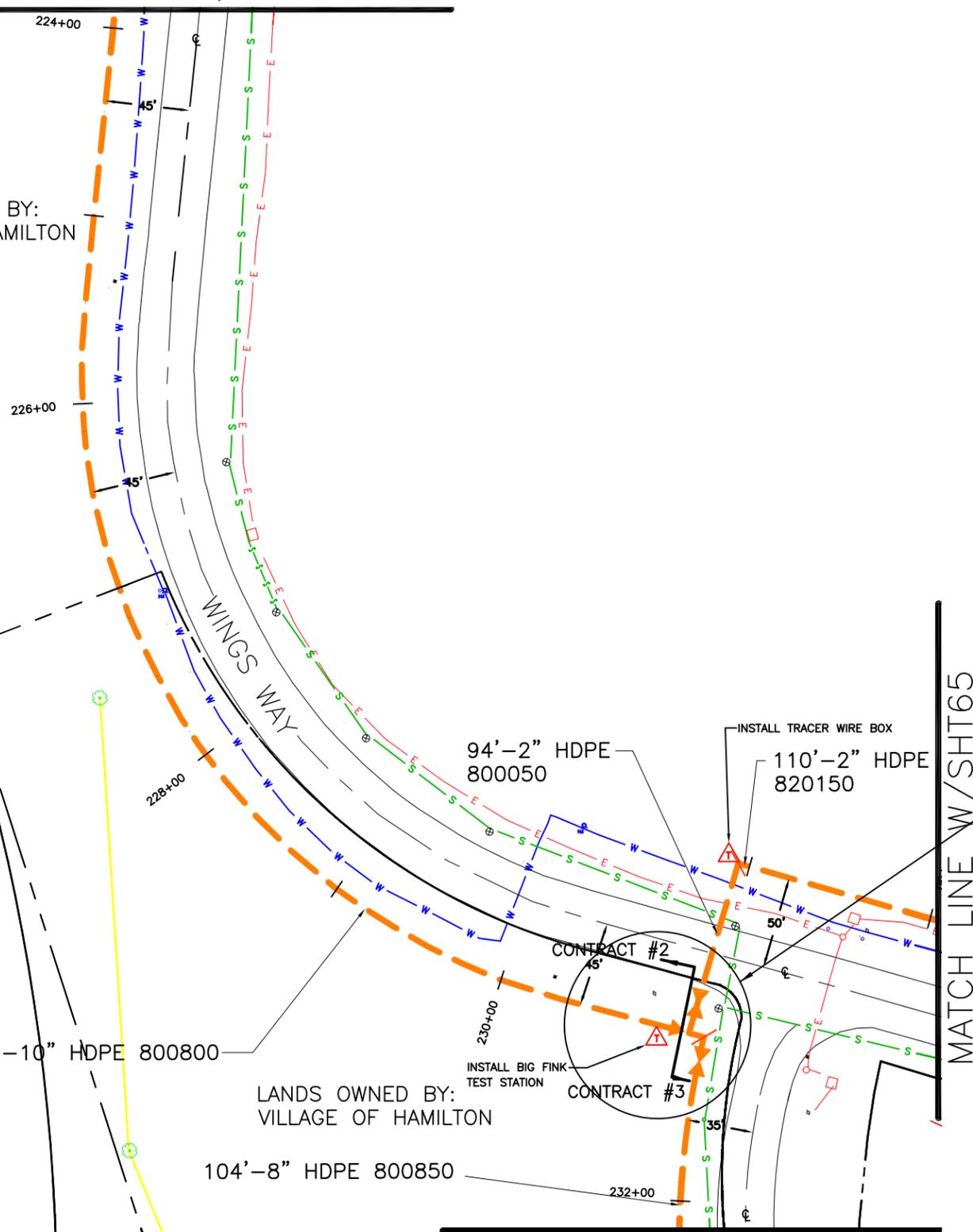
		HAMILTON PIPELINE www.gasengineering.com	
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SIZE: C SCALE: 1"=50'	WORK ORDER NO.: 13-001-02 DATE: 11-09-13	REV: - SHEET: 30 OF 86



		 www.gasengineering.com	
		HAMILTON PIPELINE	
<small>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</small>	<small>SCALE</small> C	<small>DATE</small> 11-09-13	<small>WORK ORDER NO.</small> 13-001-02 <small>REV</small> -
<small>SCALE</small> 1"=50'		<small>DATE</small> 11-09-13	<small>SHEET</small> 31 OF 86

MATCH LINE W/SHT31

LANDS OWNED BY:
VILLAGE OF HAMILTON

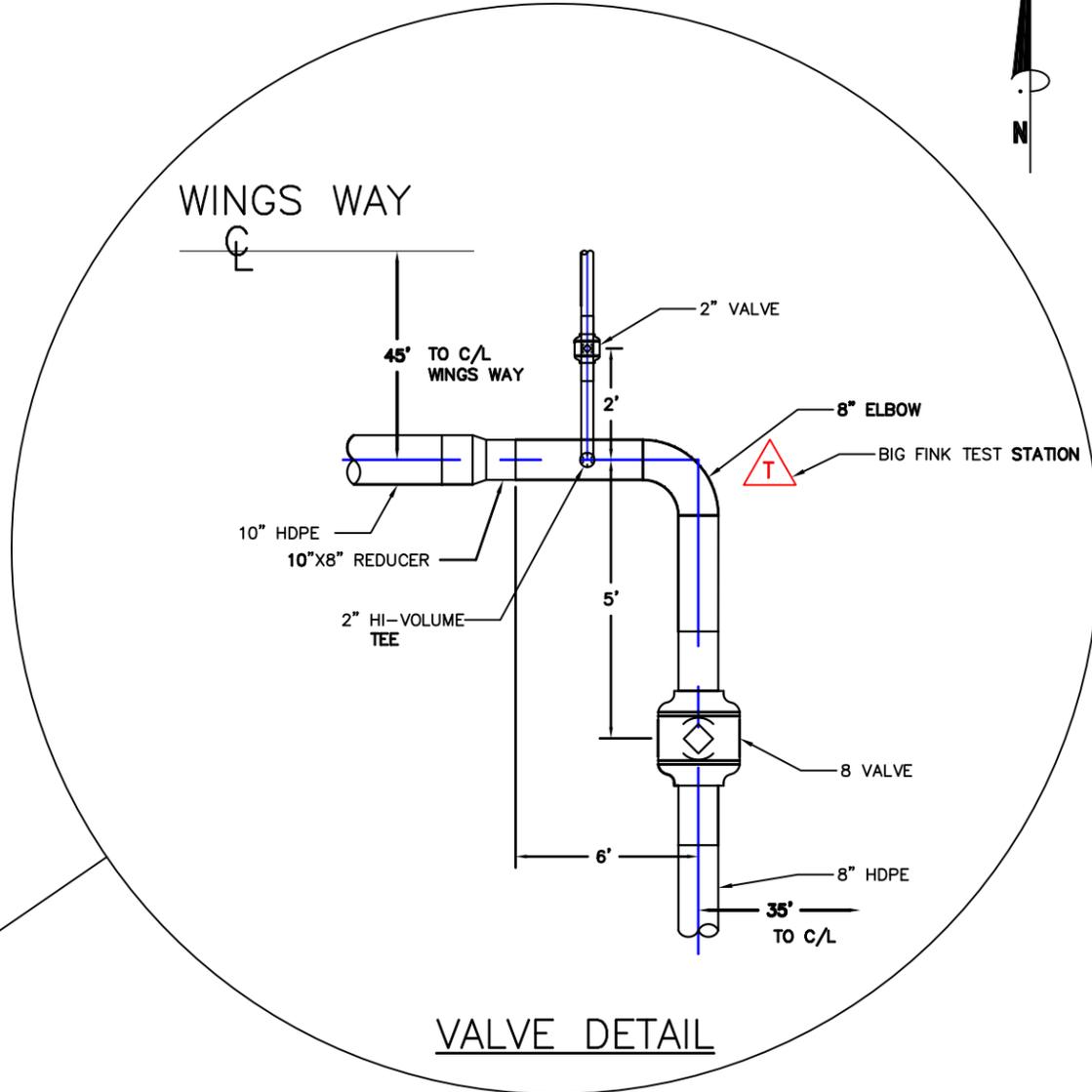


MATCH LINE W/SHT65

MATCH LINE W/SHT33



WINGS WAY



VALVE DETAIL

722'-10" HDPE 800800

LANDS OWNED BY:
VILLAGE OF HAMILTON

104'-8" HDPE 800850

CONTRACT #2

CONTRACT #3

		www.gasengineering.com	
HAMILTON PIPELINE			
SIZE C	FSCM NO.	WORK ORDER NO. 13-001-02	REV -
SCALE 1"=50'	DATE 11-09-13	SHEET 32 OF 86	

MATCH LINE W/SHT32



857'-8" HDPE 800850

234+00

236+00

238+00

240+00

PRESERVE SURVEY MARKER

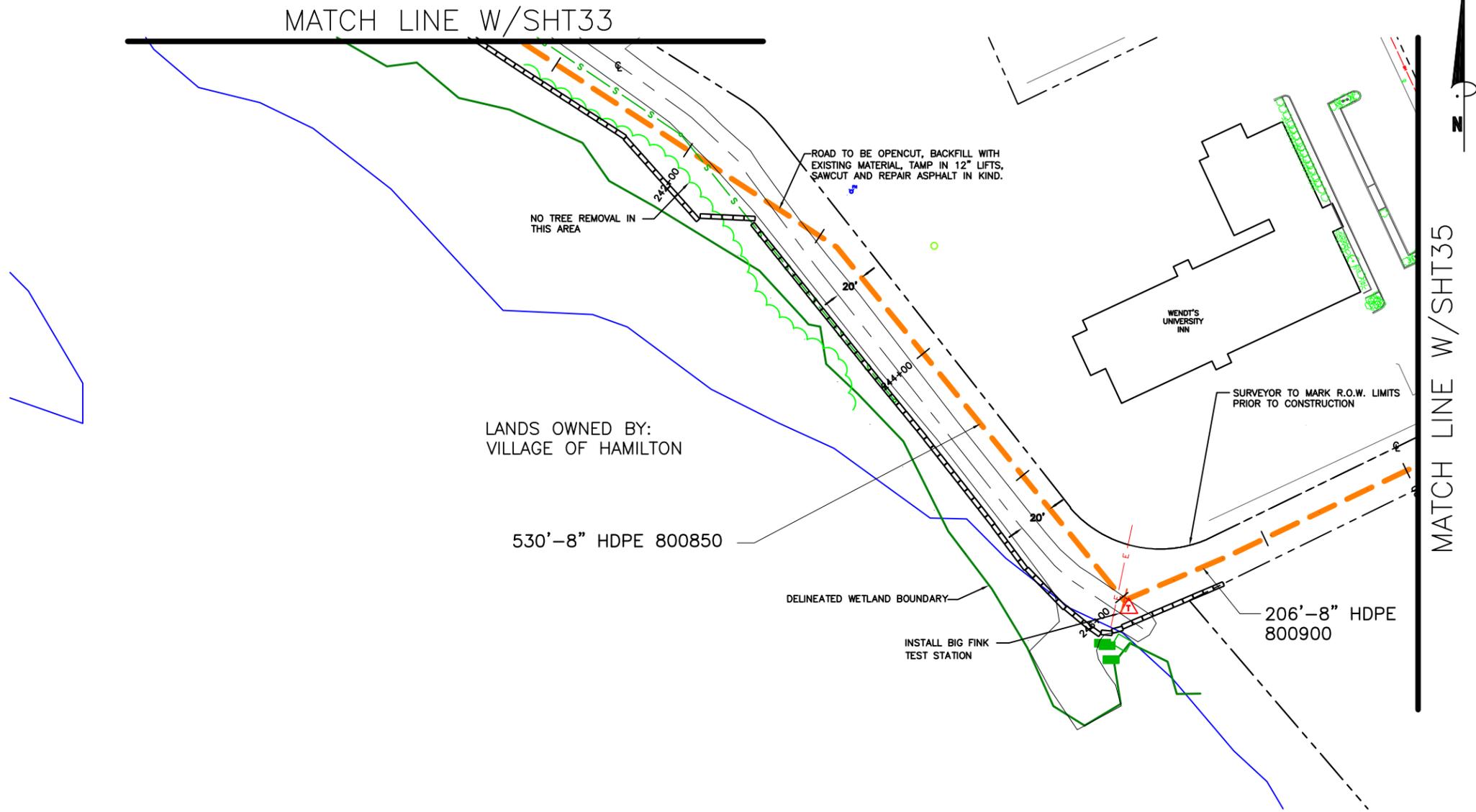
NO TREE REMOVAL IN THIS AREA

DELINEATED WETLAND BOUNDARY

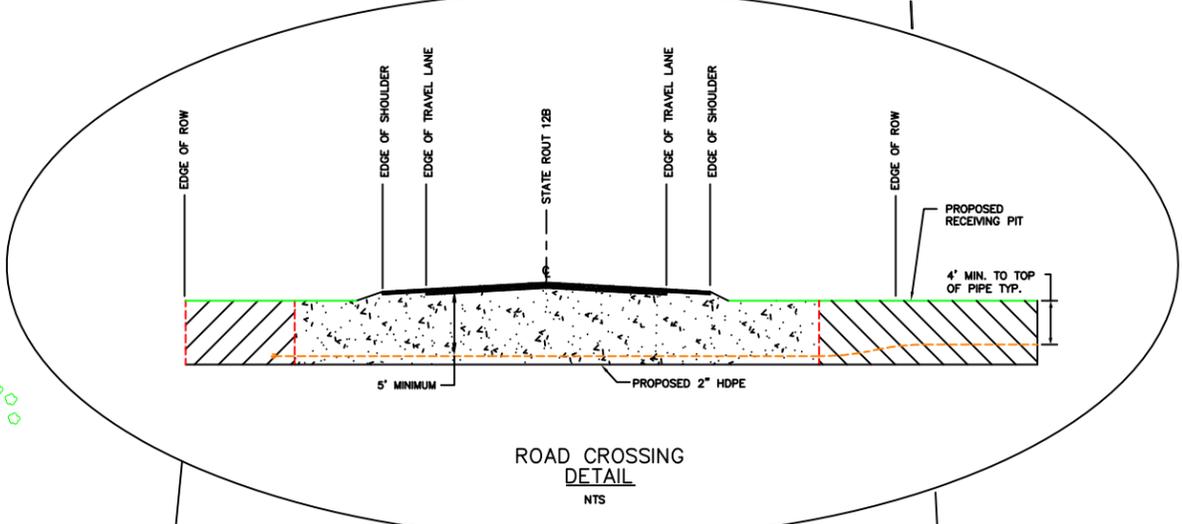
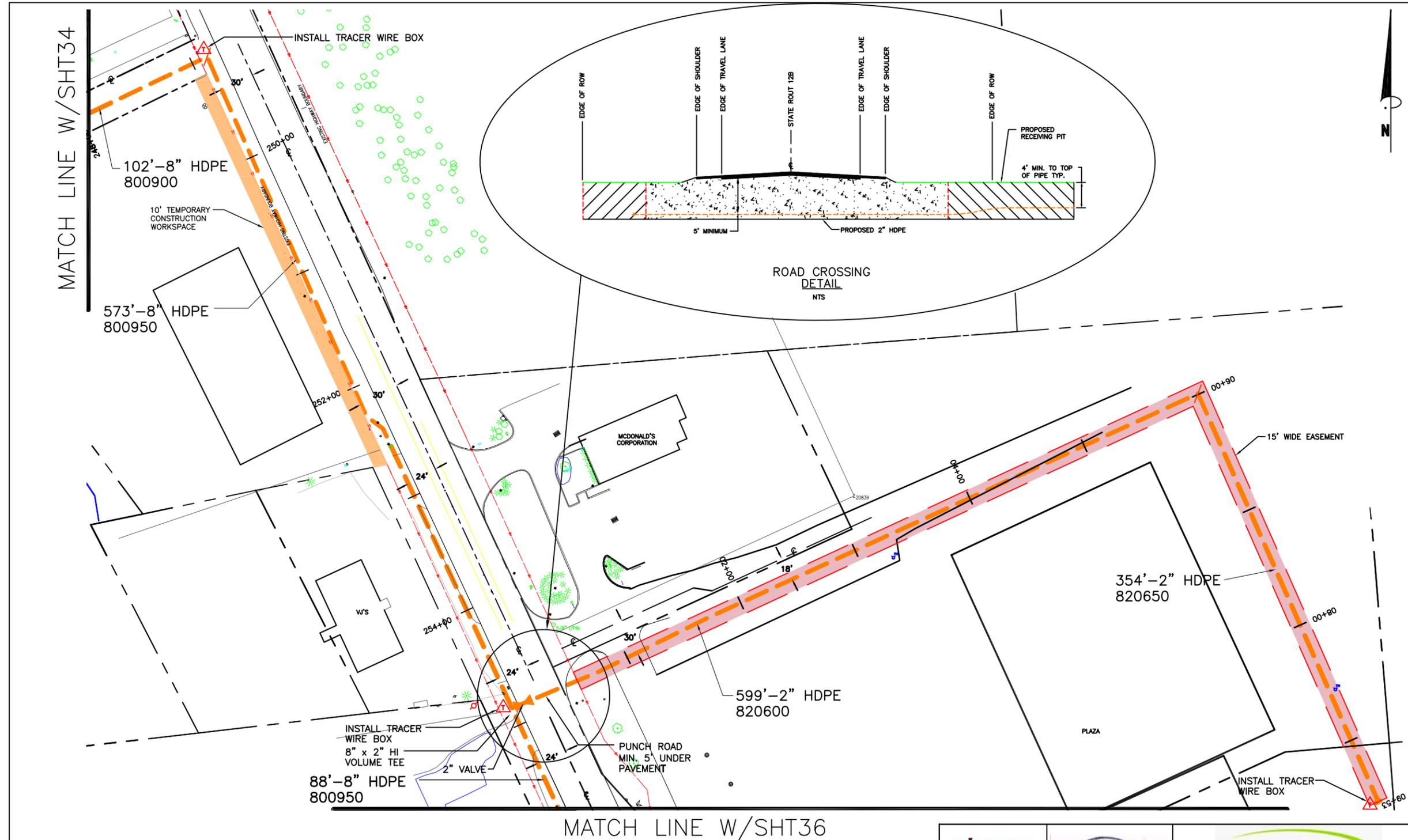
MATCH LINE W/SHT34



		www.gasengineering.com	
HAMILTON PIPELINE			
SIZE C	FSCM NO.	WORK ORDER NO. 13-001-02	REV -
SCALE 1"=50'	DATE 11-09-13	SHEET 33 OF 86	



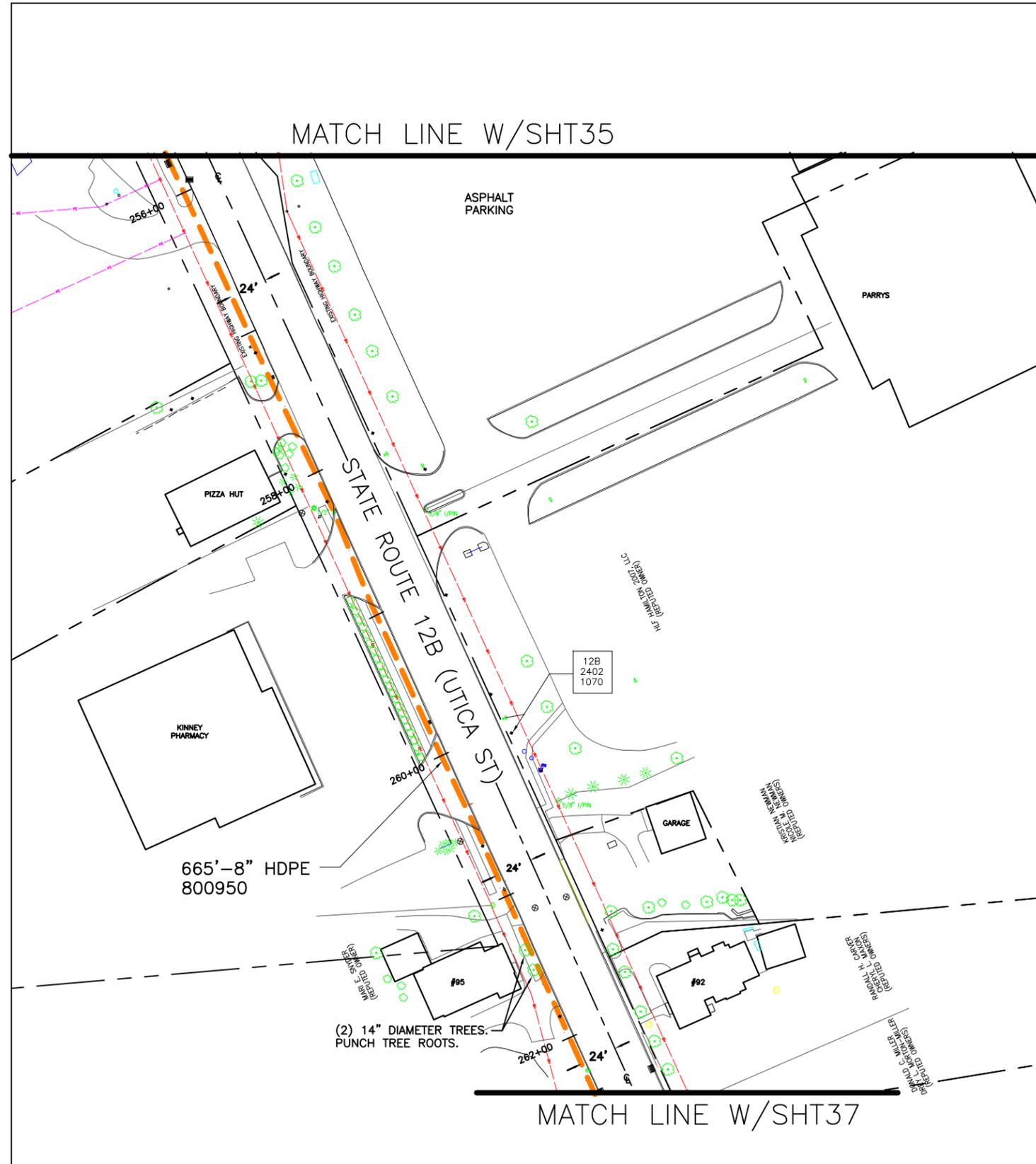
		www.gasengineering.com HAMILTON PIPELINE		
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SIZE C	FSCM NO. 	WORK ORDER NO. 13-001-02	REV -
SCALE 1"=50'	DATE 11-09-13	SHEET 34 OF 86		



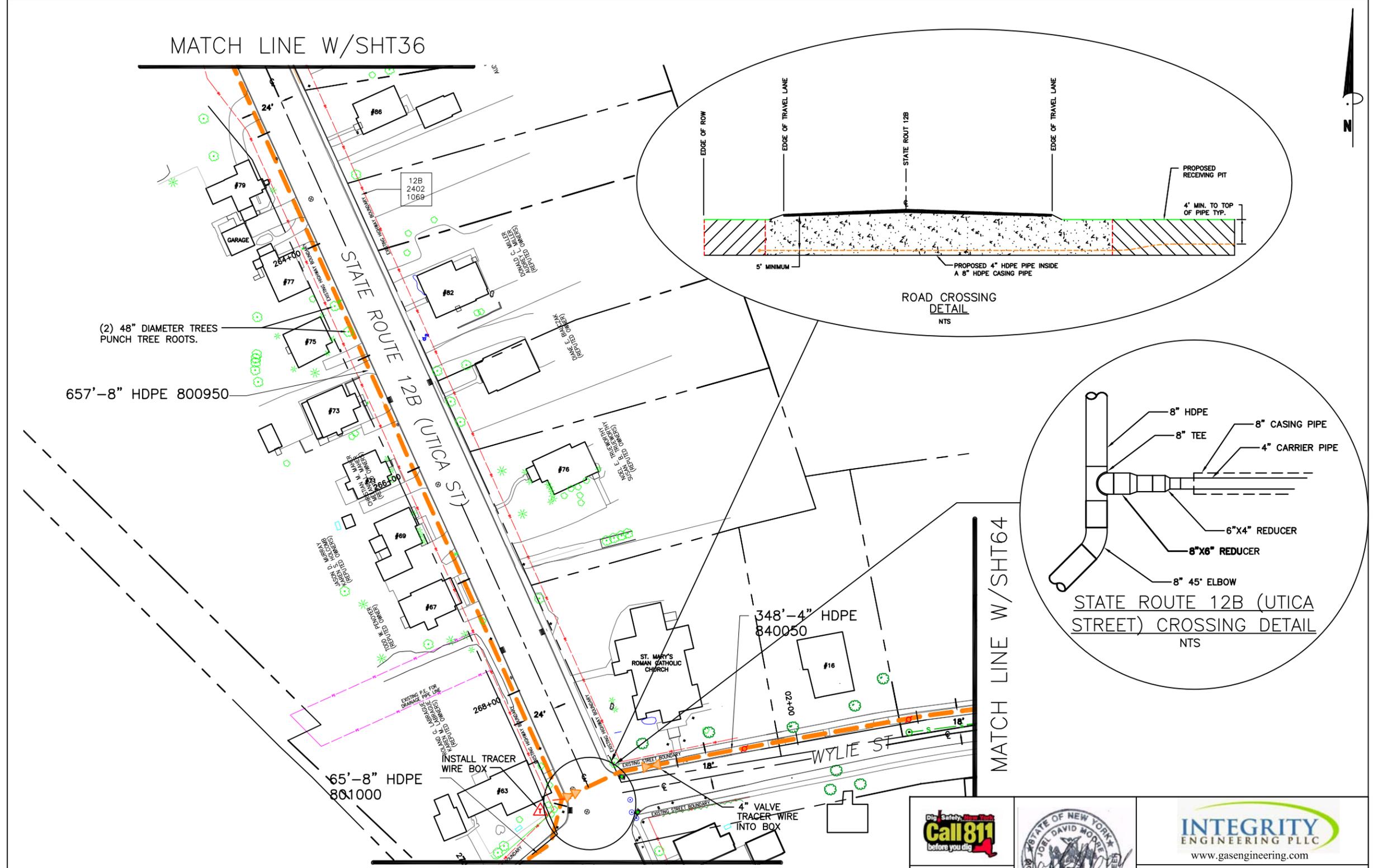
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW

HAMILTON PIPELINE

SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	DATE	SHEET	
1"=50'	11-09-13	35 OF 86	



		www.gasengineering.com HAMILTON PIPELINE		
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SIZE C	FSCM NO. -	WORK ORDER NO. 13-001-02	REV -
SCALE 1"=50'	DATE 11-09-13	SHEET 36 OF 86		



MATCH LINE W/SHT36

ROAD CROSSING
DETAIL
NTS

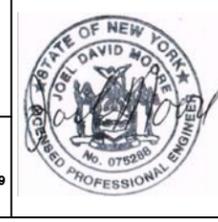
STATE ROUTE 12B (UTICA
STREET) CROSSING DETAIL
NTS

MATCH LINE W/SHT64

MATCH LINE W/SHT38

Call 811
before you dig

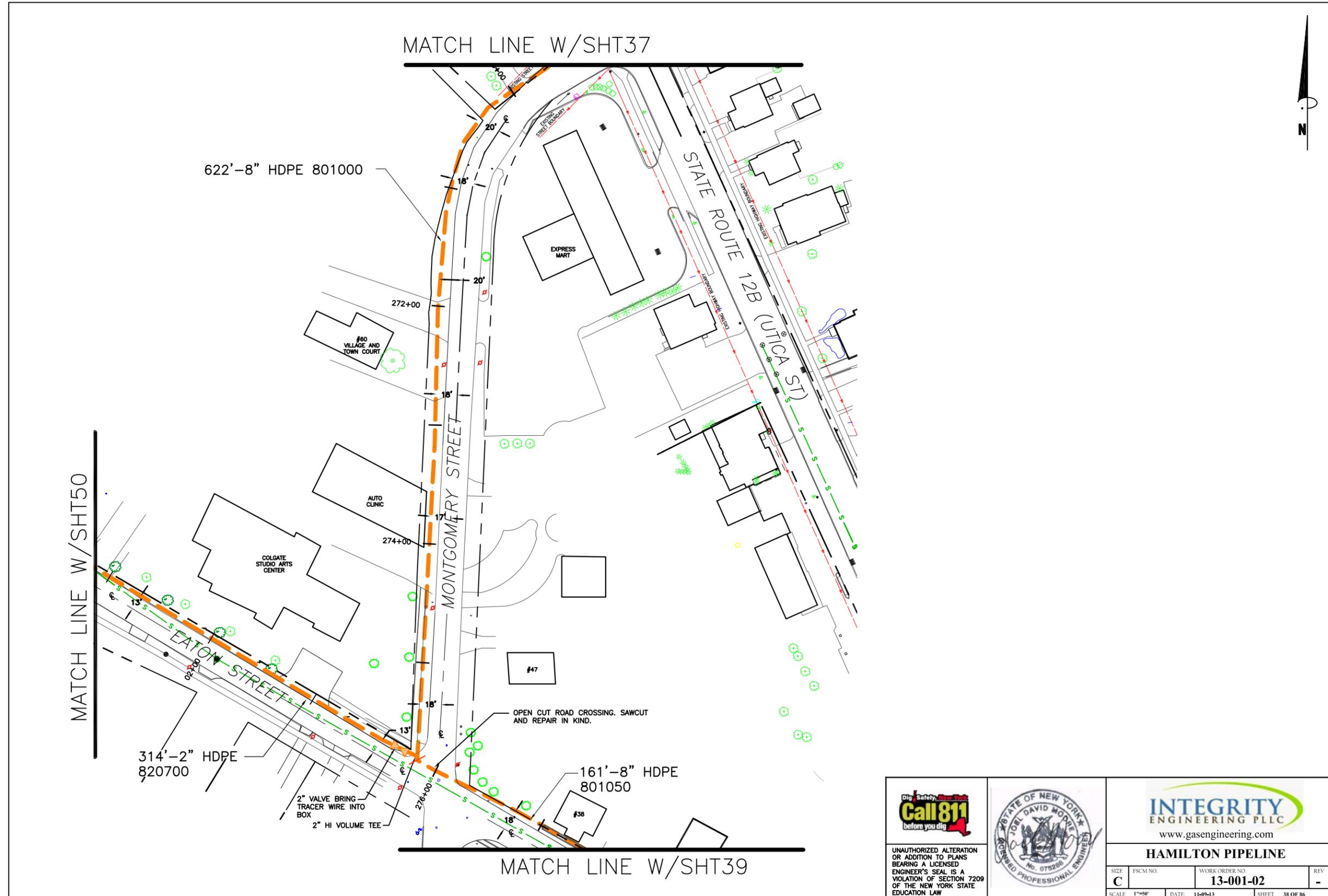
UNAUTHORIZED ALTERATION
OR ADDITION TO PLANS
BEARING A LICENSED
ENGINEER'S SEAL IS A
VIOLATION OF SECTION 7209
OF THE NEW YORK STATE
EDUCATION LAW



INTEGRITY ENGINEERING PLLC
www.gasengineering.com

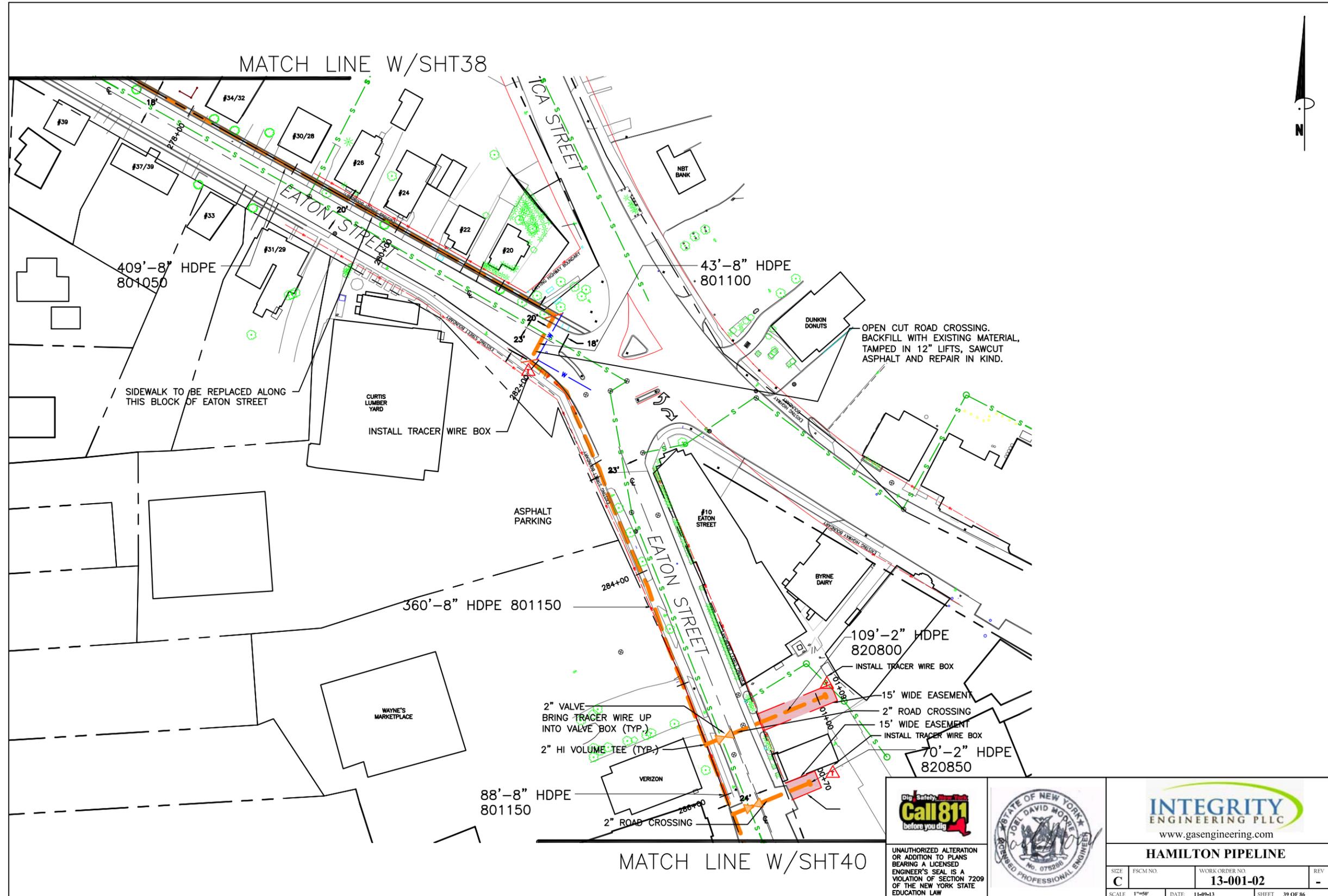
HAMILTON PIPELINE

SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	DATE	SHEET	
1"=50'	11-09-13	37 OF 86	



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	HAMILTON PIPELINE			
<small>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</small>	<small>SCALE</small> C	<small>FSCM NO.</small>	<small>WORK ORDER NO.</small> 13-001-02	<small>REV.</small> -
	<small>DATE</small> 11-09-13		<small>SHEET</small> 38 OF 86	



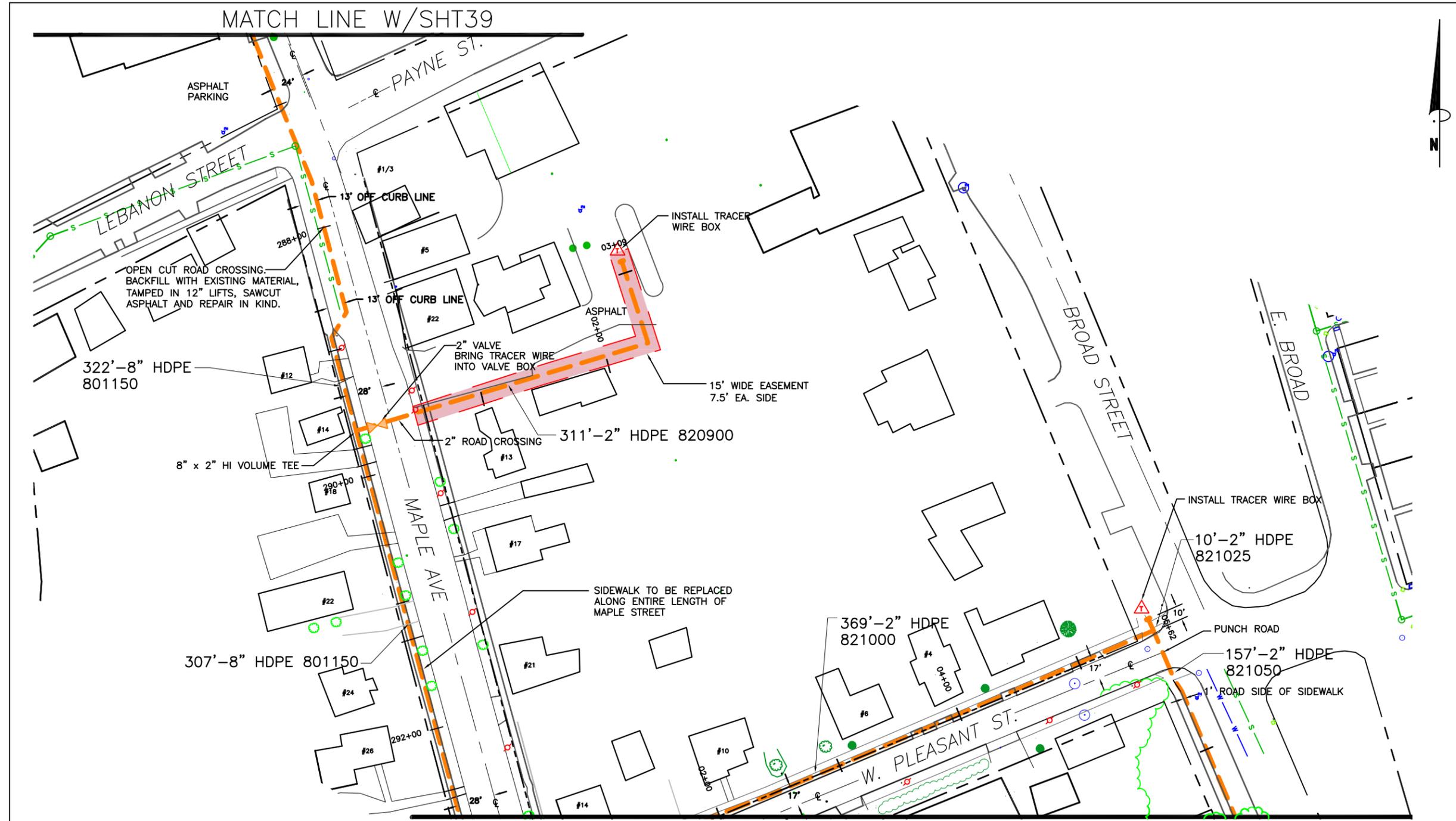
Call 811
before you dig

UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW

INTEGRITY
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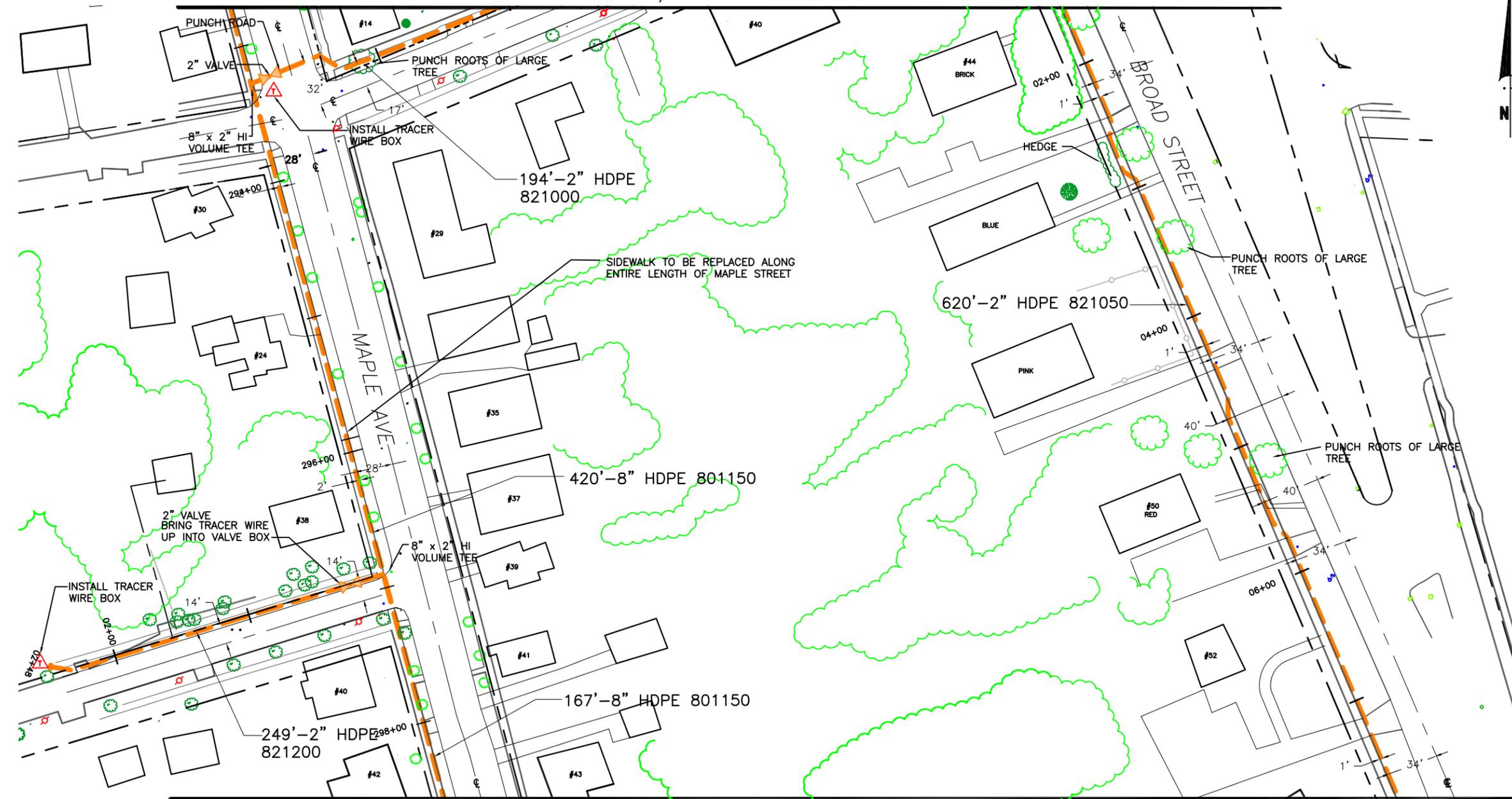
HAMILTON PIPELINE

SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	DATE	SHEET	
1"=50'	11-09-13	39 OF 86	



		 www.gasengineering.com	
		HAMILTON PIPELINE	
<small>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</small>	<small>SCALE</small> 1"=50'	<small>DATE</small> 11-09-13	<small>WORK ORDER NO.</small> 13-001-02
<small>SIZE</small> C	<small>FSCM NO.</small>	<small>REV</small> -	<small>SHEET</small> 40 OF 86

MATCH LINE W/SHT40

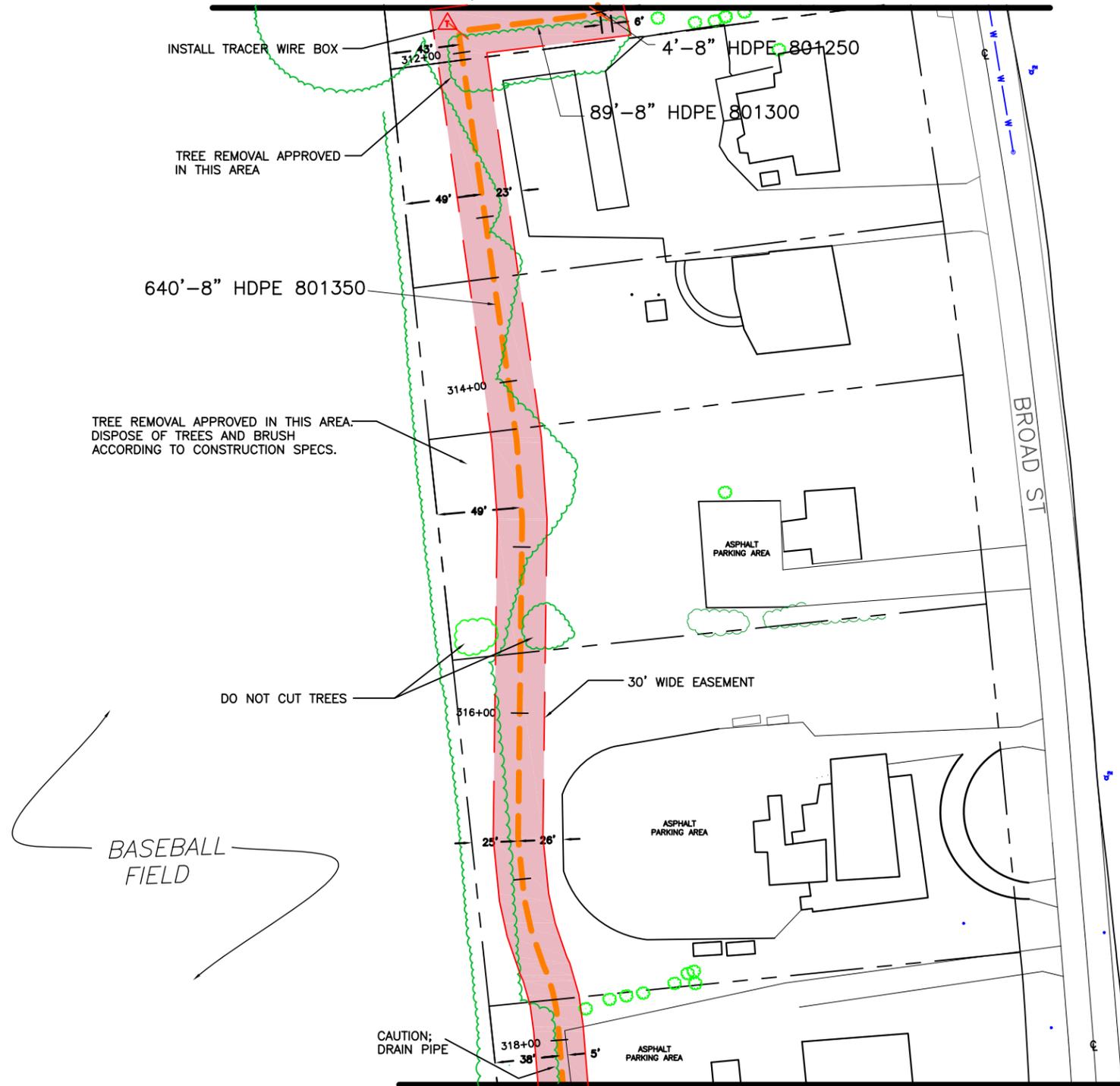


MATCH LINE W/SHT42



		www.gasengineering.com HAMILTON PIPELINE		
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SIZE C	FSCM NO. -	WORK ORDER NO. 13-001-02	REV -
SCALE 1"=50'	DATE 11-09-13	SHEET 41 OF 86		

MATCH LINE W/SHT42



INSTALL TRACER WIRE BOX

TREE REMOVAL APPROVED IN THIS AREA

640'-8" HDPE 801350

TREE REMOVAL APPROVED IN THIS AREA. DISPOSE OF TREES AND BRUSH ACCORDING TO CONSTRUCTION SPECS.

DO NOT CUT TREES

BASEBALL FIELD

CAUTION: DRAIN PIPE

4'-8" HDPE 801250

89'-8" HDPE 801300

ASPHALT PARKING AREA

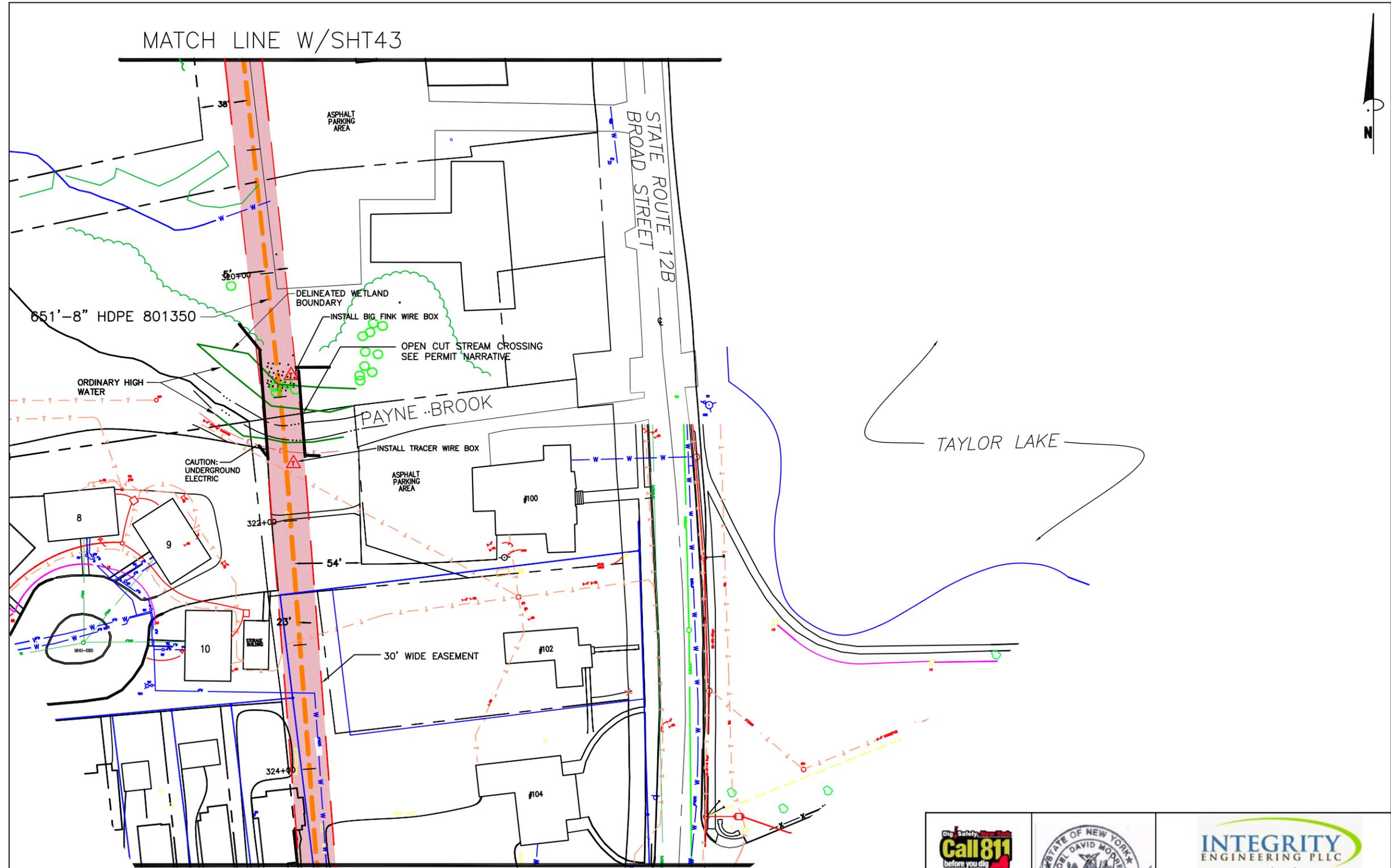
30' WIDE EASEMENT

ASPHALT PARKING AREA

ASPHALT PARKING AREA

MATCH LINE W/SHT44

		www.gasengineering.com HAMILTON PIPELINE	
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SCALE: 1"=50' DATE: 11-09-13 SHEET: 43 OF 86	WORK ORDER NO. 13-001-02	REV. -

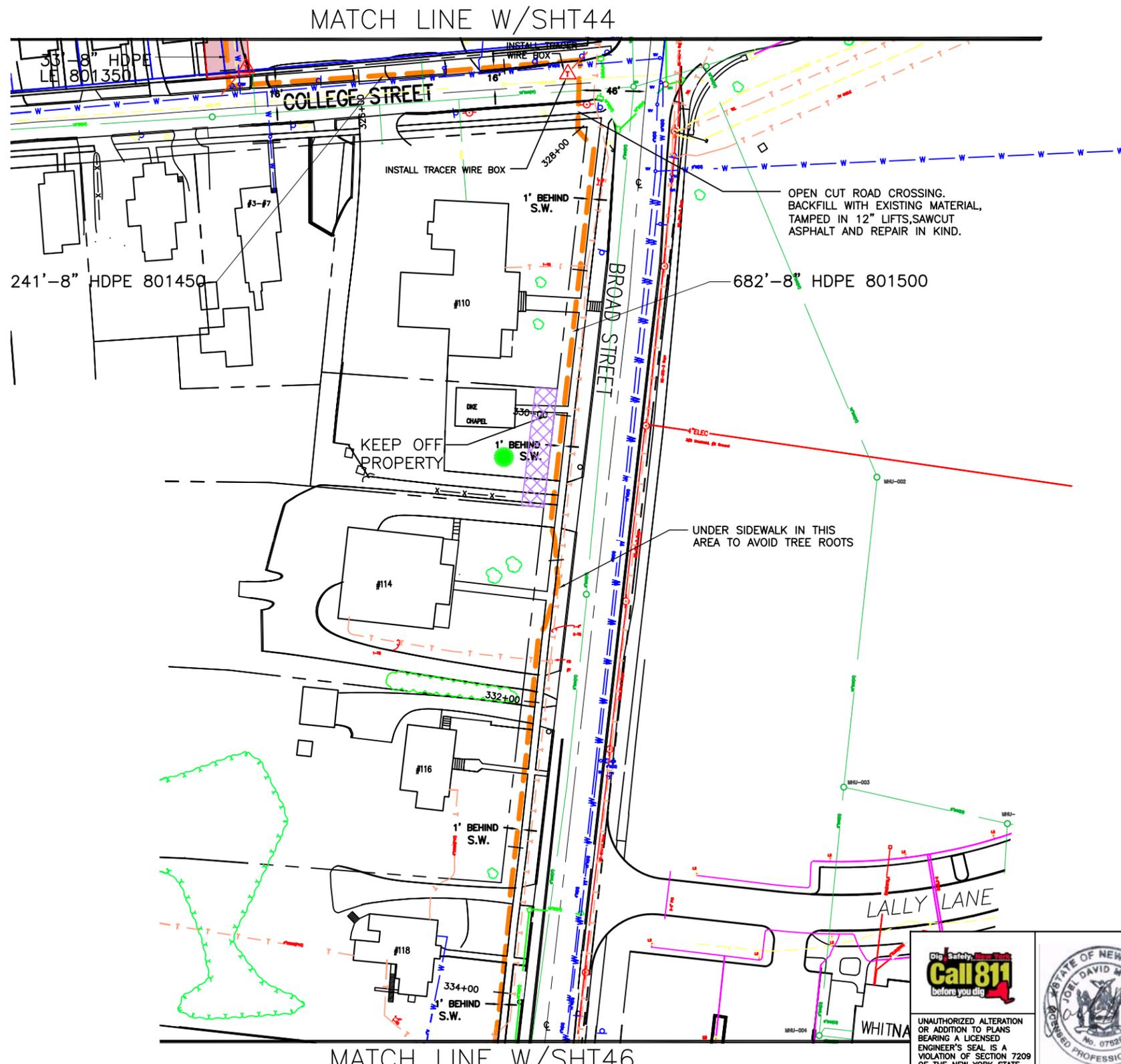


MATCH LINE W/SHT43

MATCH LINE W/SHT45



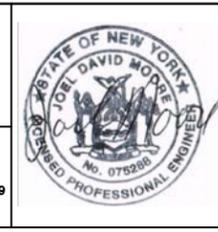
		 www.gasengineering.com	
		HAMILTON PIPELINE	
<small>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</small>	<small>SCALE</small> C	<small>DATE</small> 11-09-13	<small>WORK ORDER NO.</small> 13-001-02
			<small>REV</small> -
			<small>SHEET</small> 44 OF 86



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Call 811
before you dig

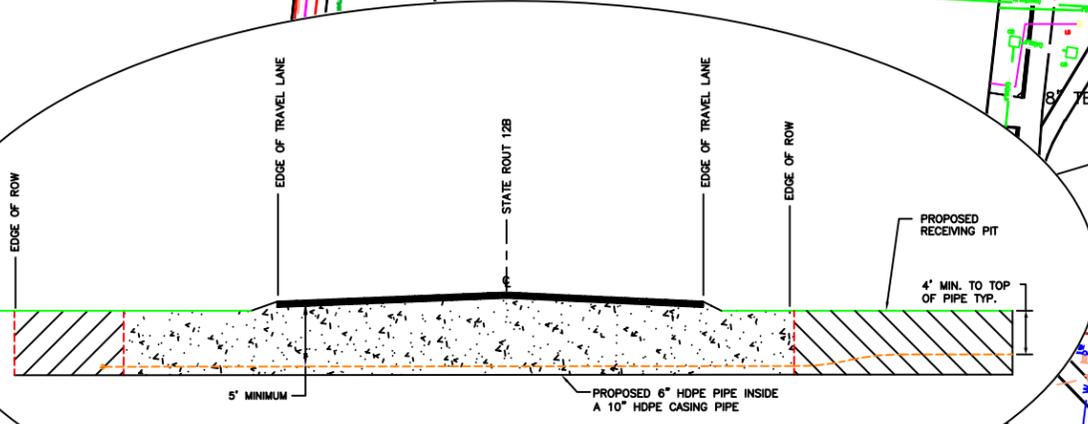
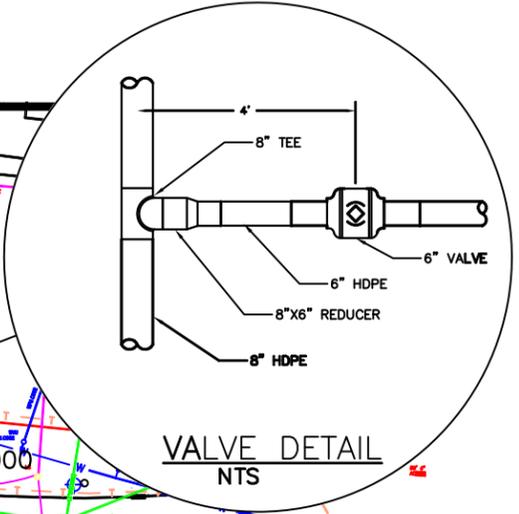
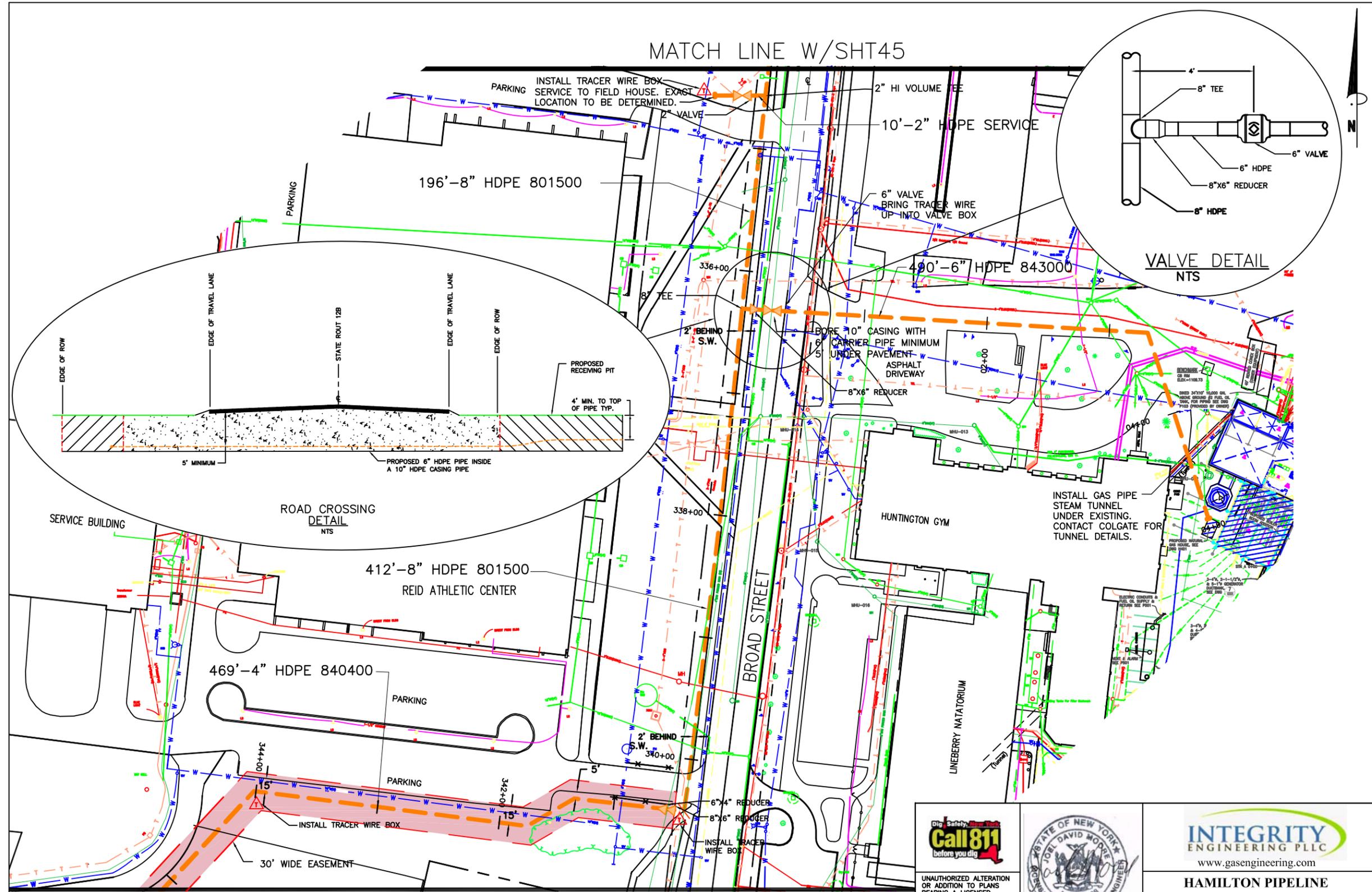
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW



INTEGRITY ENGINEERING PLLC
www.gasengineering.com

HAMILTON PIPELINE

SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	DATE	SHEET	
1"=50'	11-09-13	45 OF 86	



Call 811
before you dig

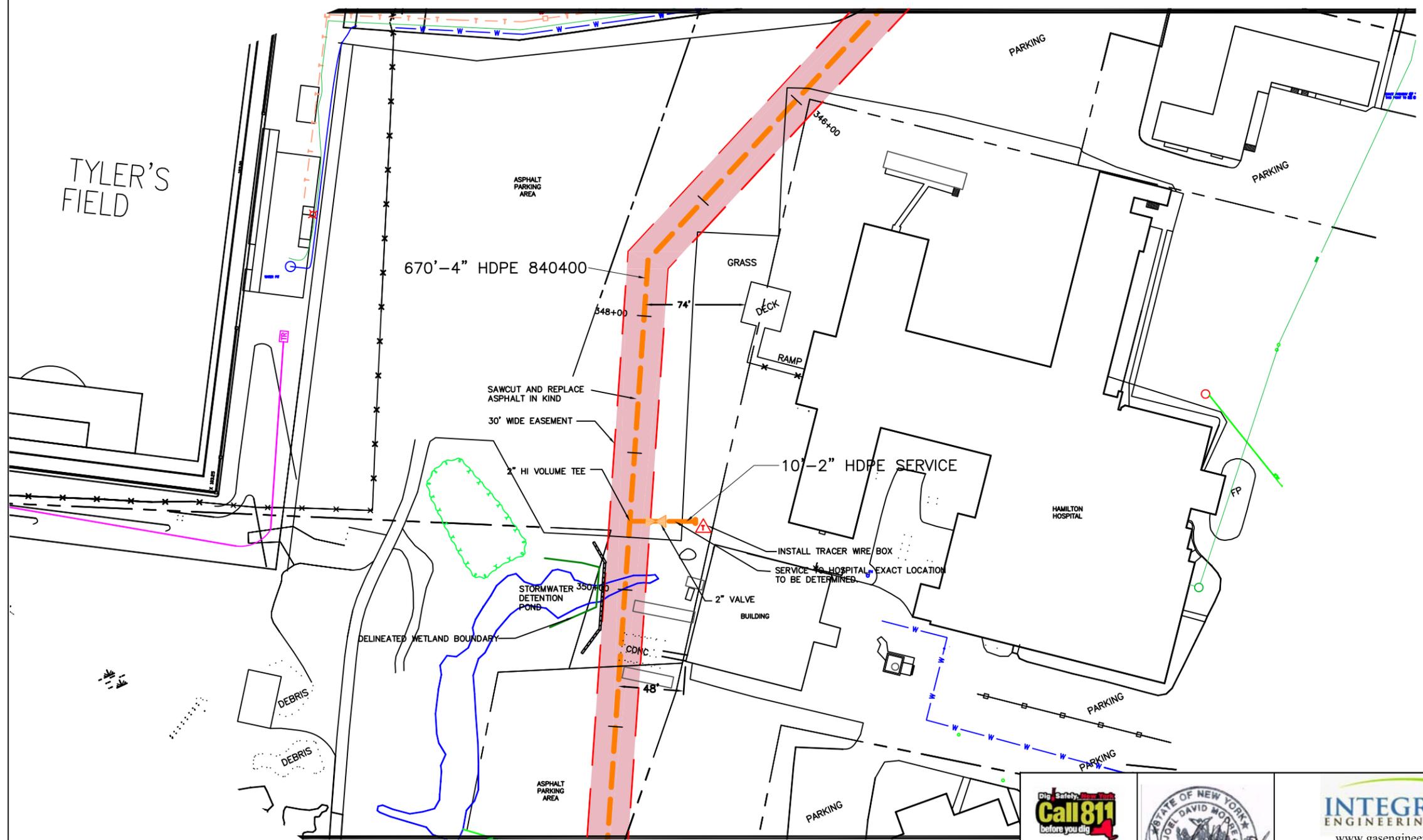
www.gasengineering.com

HAMILTON PIPELINE

SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	DATE	SHEET	
1"=50'	11-09-13	46 OF 86	

UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW

MATCH LINE W/SHT46



MATCH LINE W/SHT48

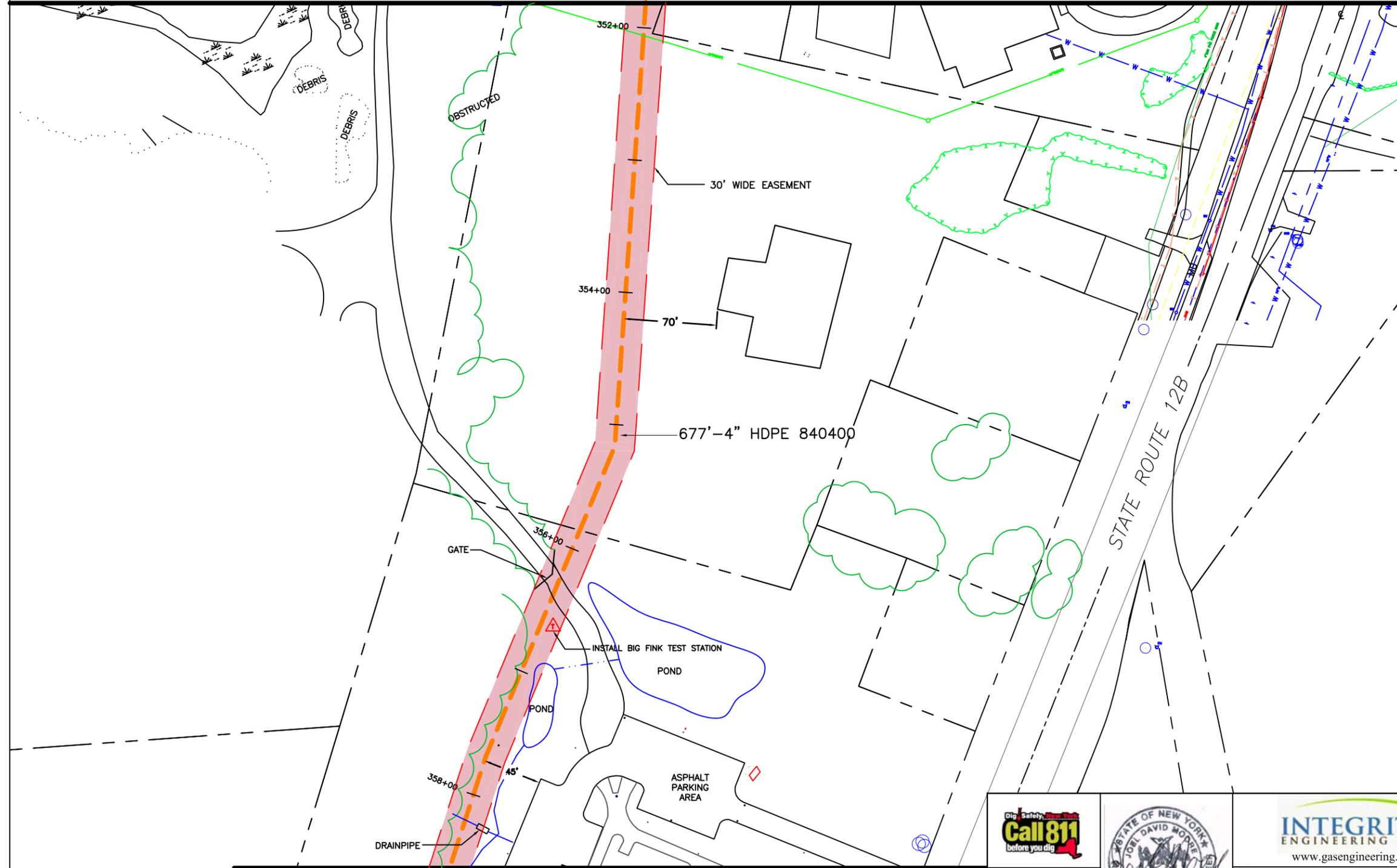


HAMILTON PIPELINE

UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW

SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	DATE	SHEET	
1"=50'	11-09-13	47 OF 86	

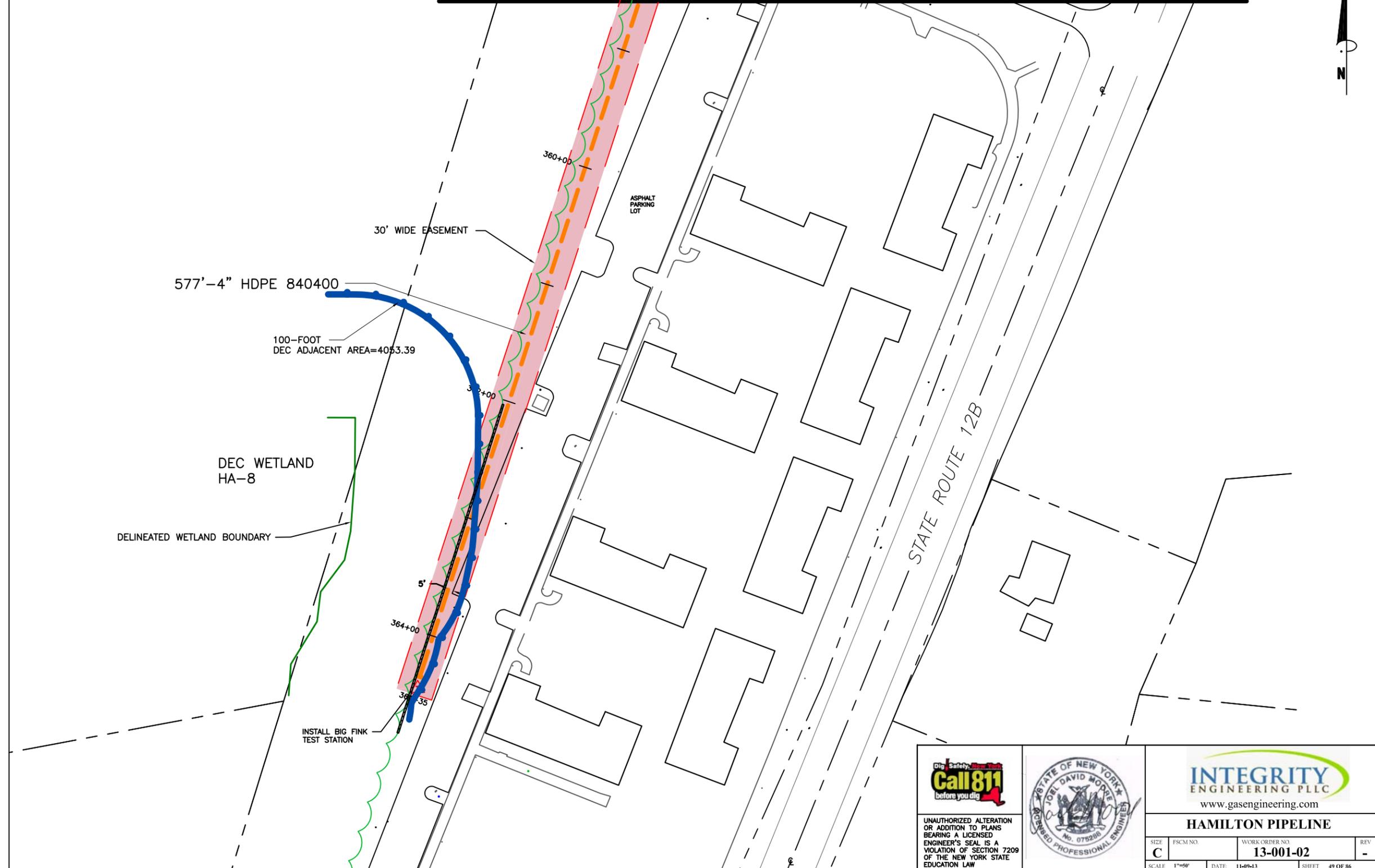
MATCH LINE W/SHT47



MATCH LINE W/SHT49

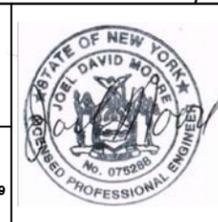
		www.gasengineering.com	
HAMILTON PIPELINE			
SIZE C	FSCM NO.	WORK ORDER NO. 13-001-02	REV -
SCALE 1"=50'	DATE 11-09-13	SHEET 48 OF 86	

MATCH LINE W/SHT48



Call 811
before you dig

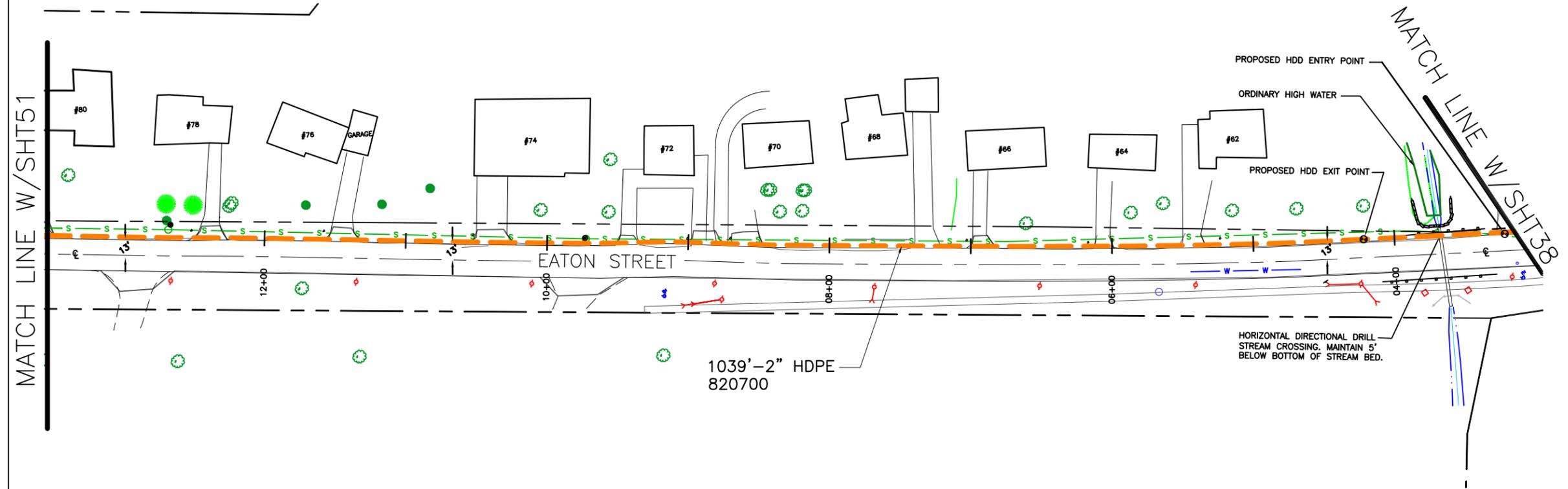
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW



INTEGRITY ENGINEERING PLLC
www.gasengineering.com

HAMILTON PIPELINE

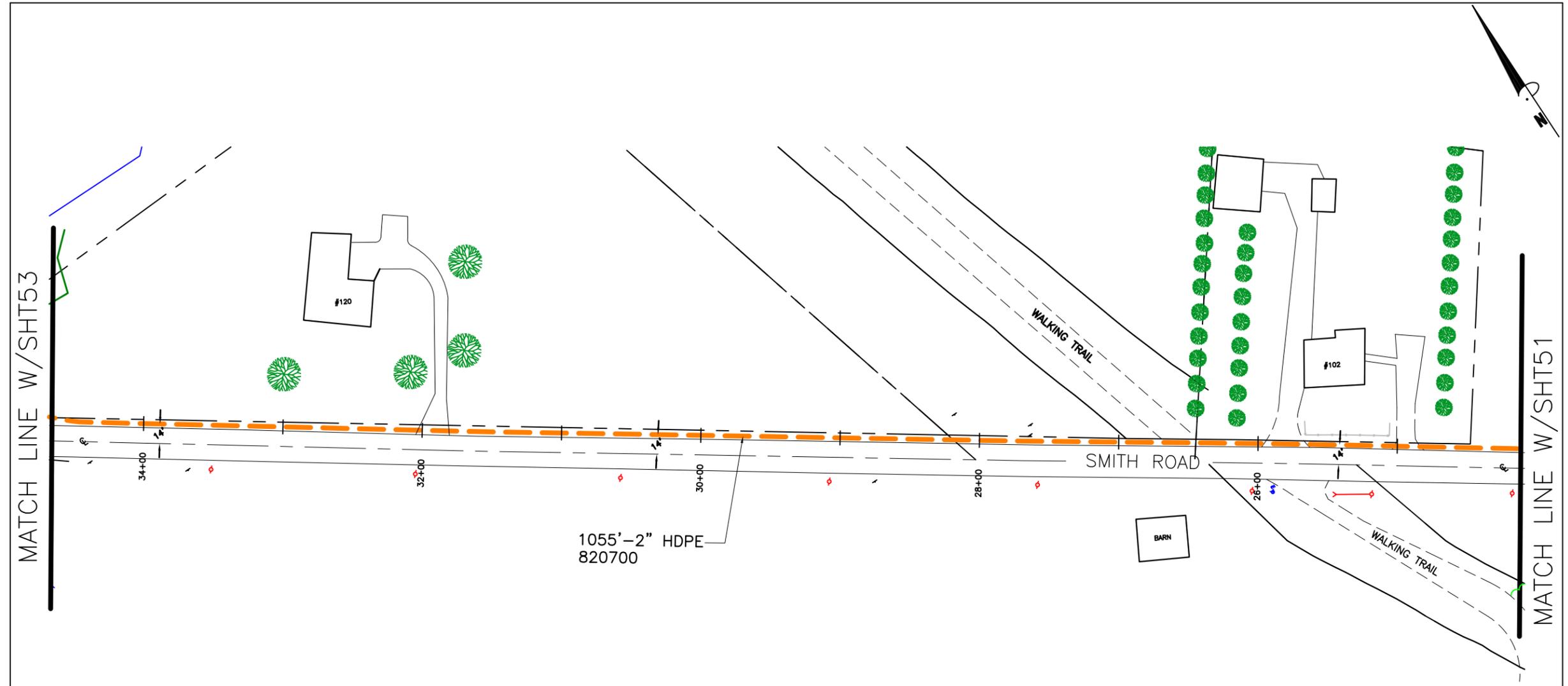
SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	DATE	SHEET	
1"=50'	11-09-13	49 OF 86	



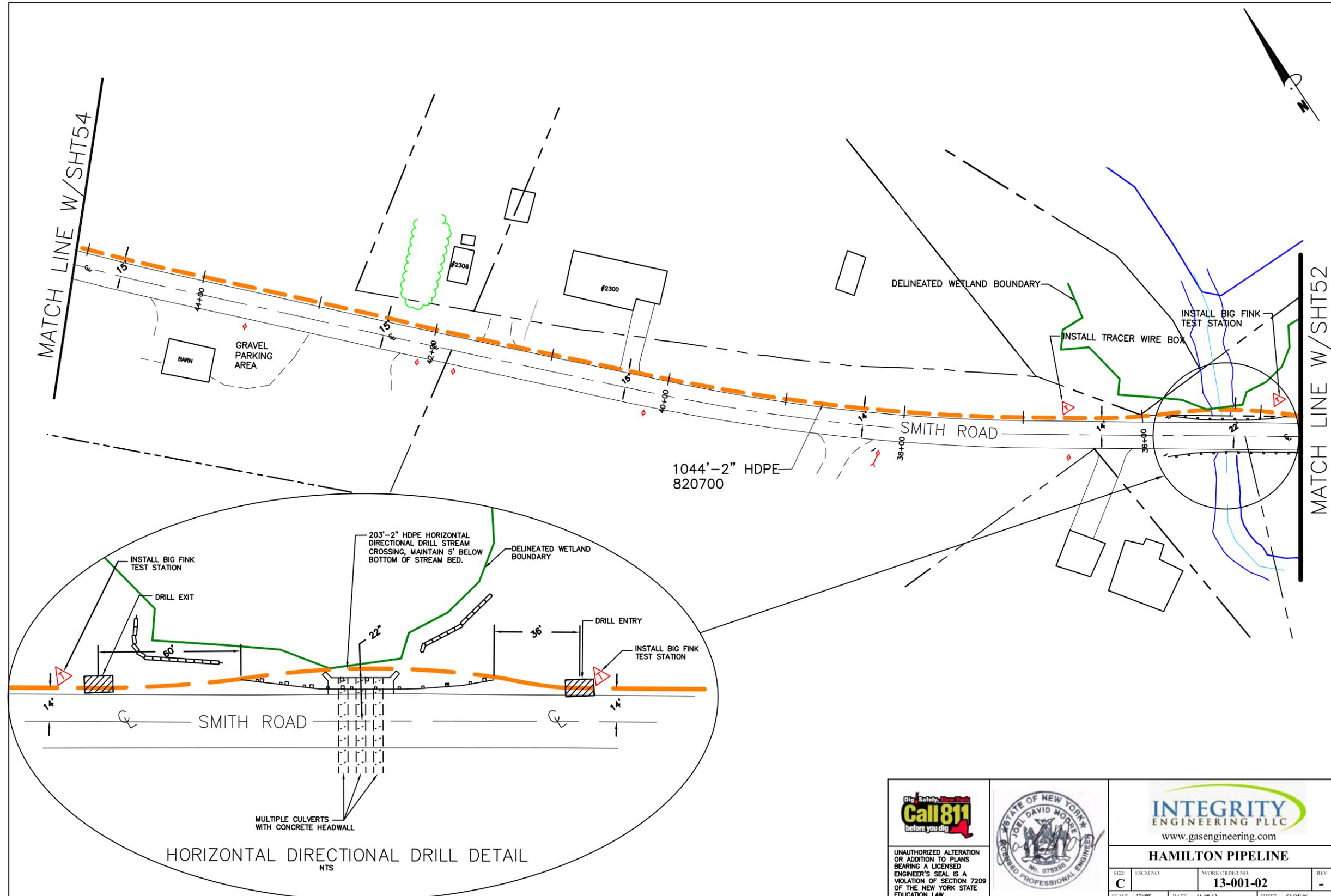
<p>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</p>		<p>www.gasengineering.com</p>	
		<p>HAMILTON PIPELINE</p>	
<p>SIZE: C</p>	<p>FSCM NO:</p>	<p>WORK ORDER NO: 13-001-02</p>	<p>REV: -</p>
<p>SCALE: 1"=50'</p>	<p>DATE: 11-09-13</p>	<p>SHEET: 50 OF 86</p>	



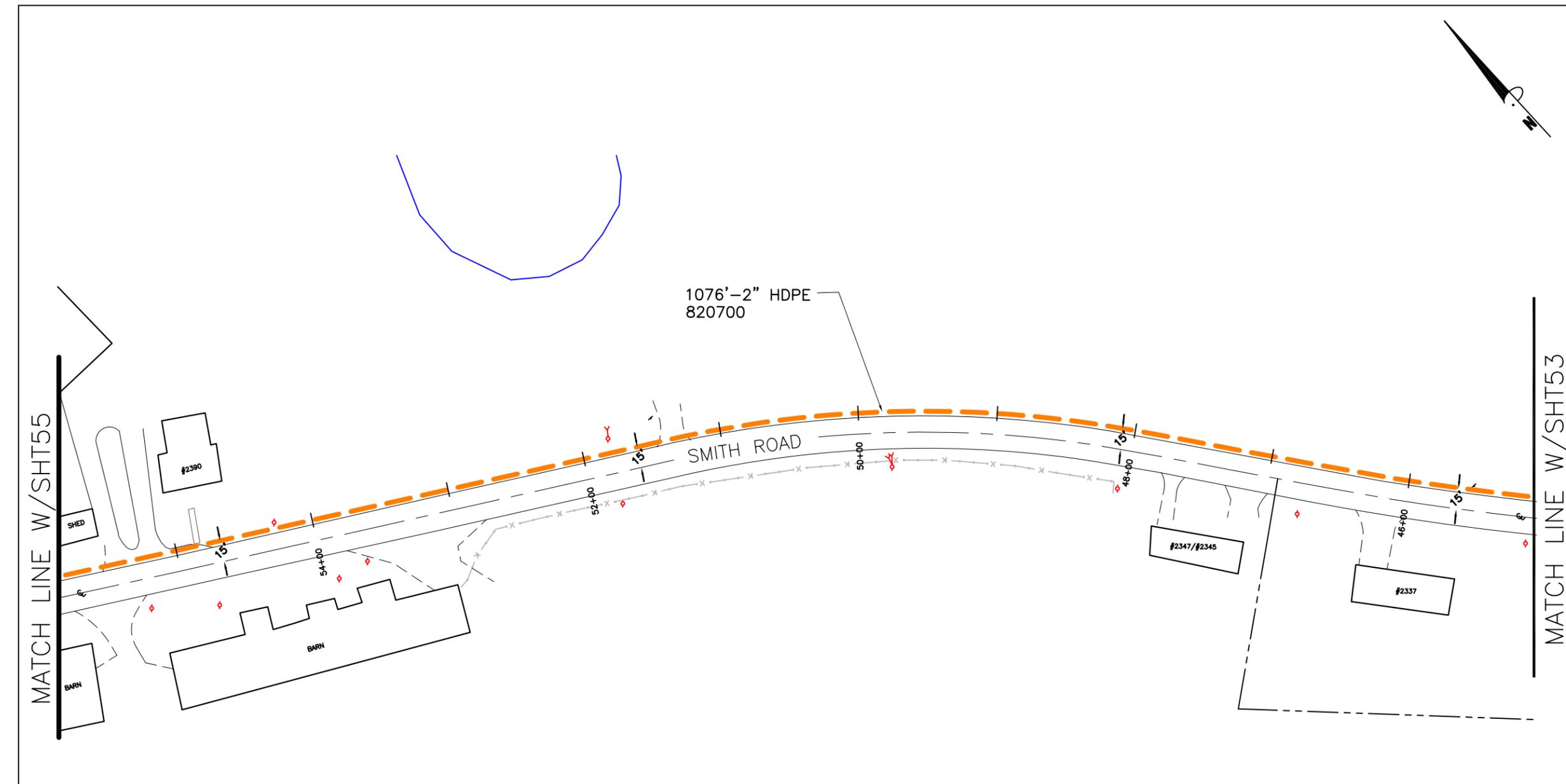
 <small>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</small>		 <small>www.gasengineering.com</small>	
		HAMILTON PIPELINE	
<small>SCALE 1"=50'</small>	<small>DATE 11-09-13</small>	<small>WORK ORDER NO.</small> 13-001-02	<small>REV</small> -
		<small>SHEET</small> 51 OF 86	



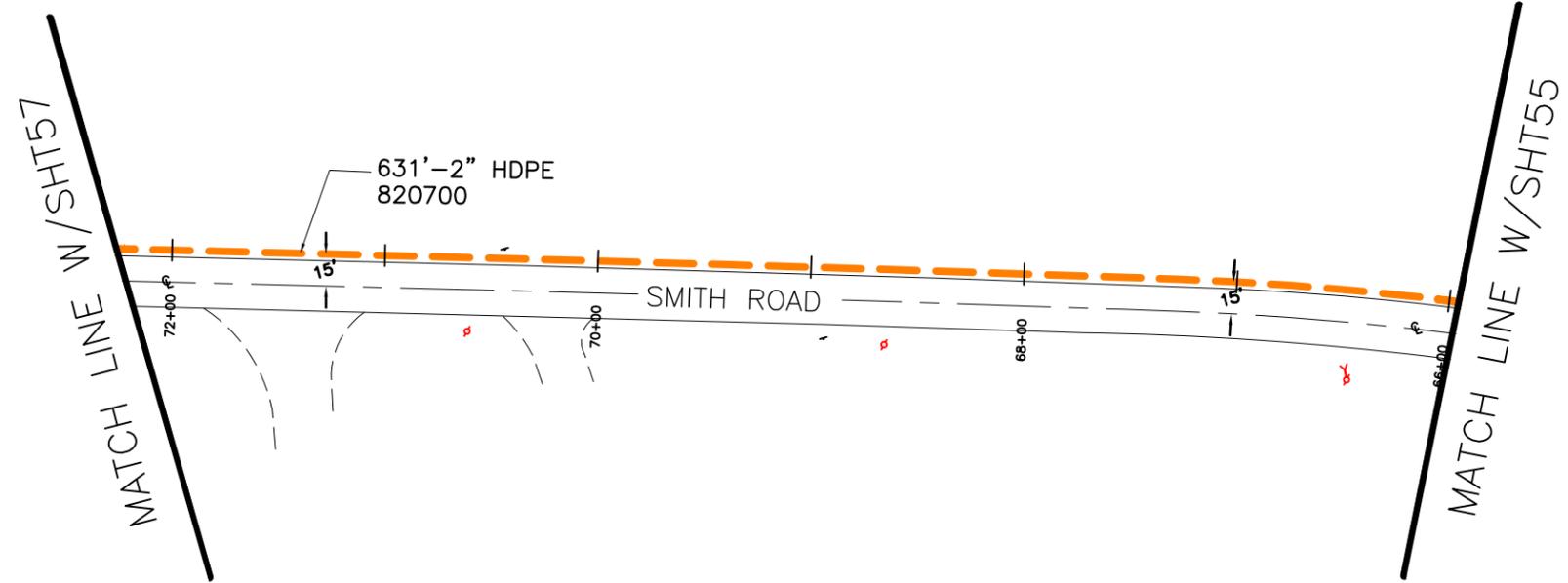
		www.gasengineering.com HAMILTON PIPELINE		
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SIZE C	FSCM NO. 	WORK ORDER NO. 13-001-02	REV -
SCALE 1"=50'	DATE 11-09-13	SHEET 52 OF 86		



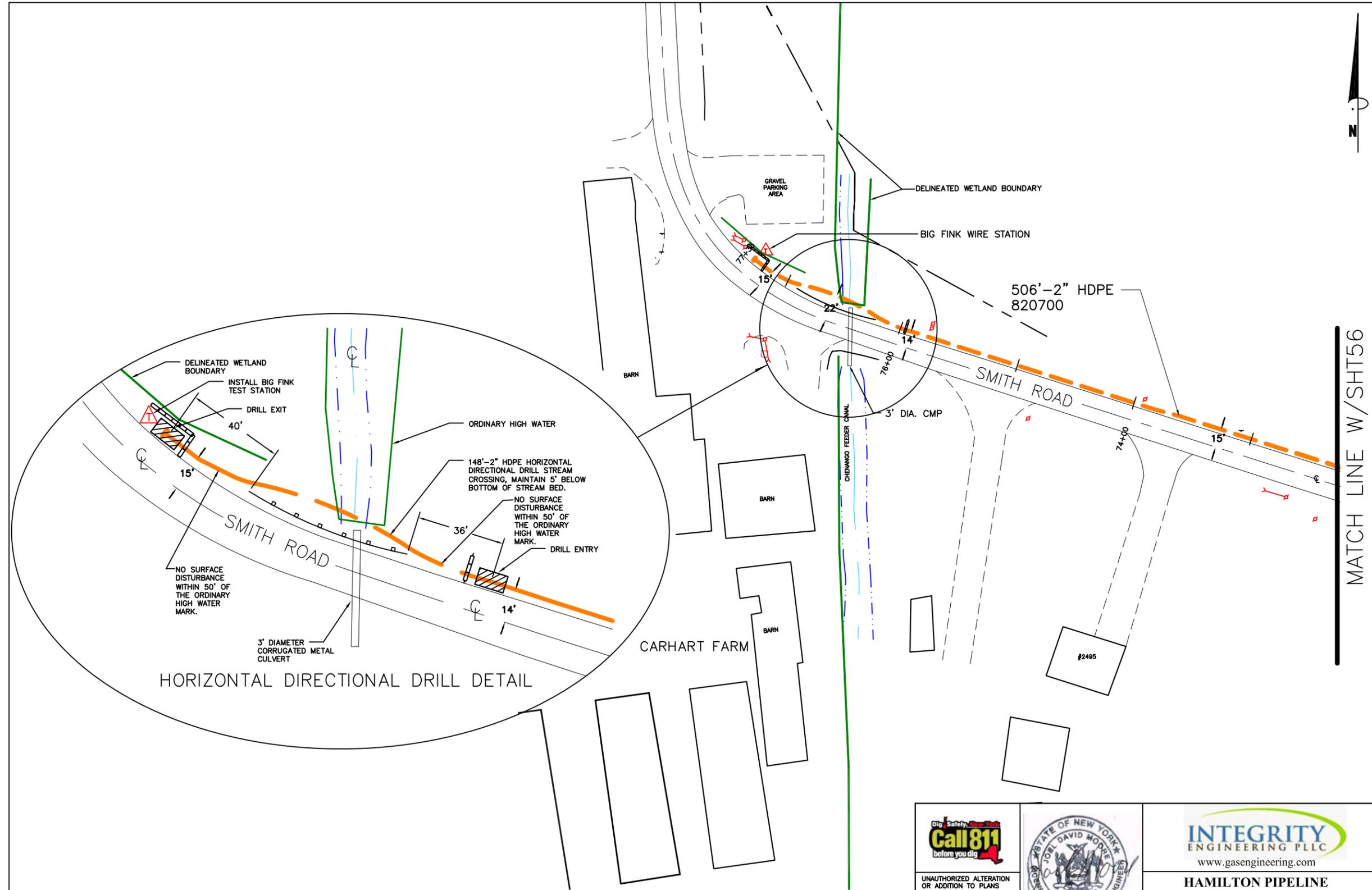
 <p>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</p>		 <p>www.gasengineering.com</p>	
		<p>HAMILTON PIPELINE</p>	
<p>SCALE: 1"=50'</p>	<p>DATE: 11-09-13</p>	<p>WORK ORDER NO: 13-001-02</p>	<p>REV: -</p>
<p>SHEET 53 OF 86</p>			



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UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SIZE C	FSCM NO. -	WORK ORDER NO. 13-001-02
SCALE 1"=50'	DATE 11-09-13	SHEET 54 OF 86	REV -



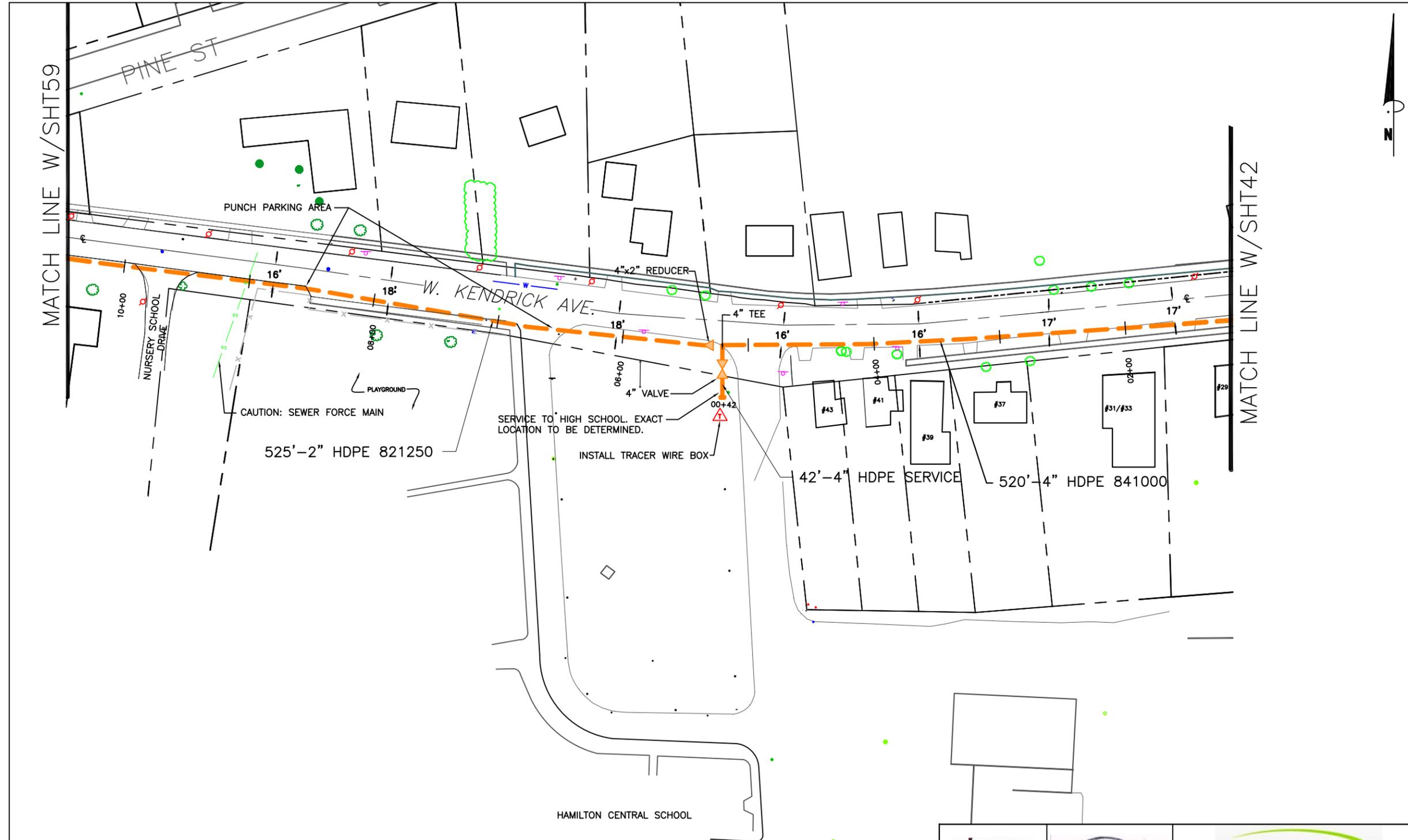
 UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW		 www.gasengineering.com	
		HAMILTON PIPELINE	
SIZE C	FSCM NO.	WORK ORDER NO. 13-001-02	REV -
SCALE 1"=50'	DATE 11-09-13	SHEET 56 OF 86	



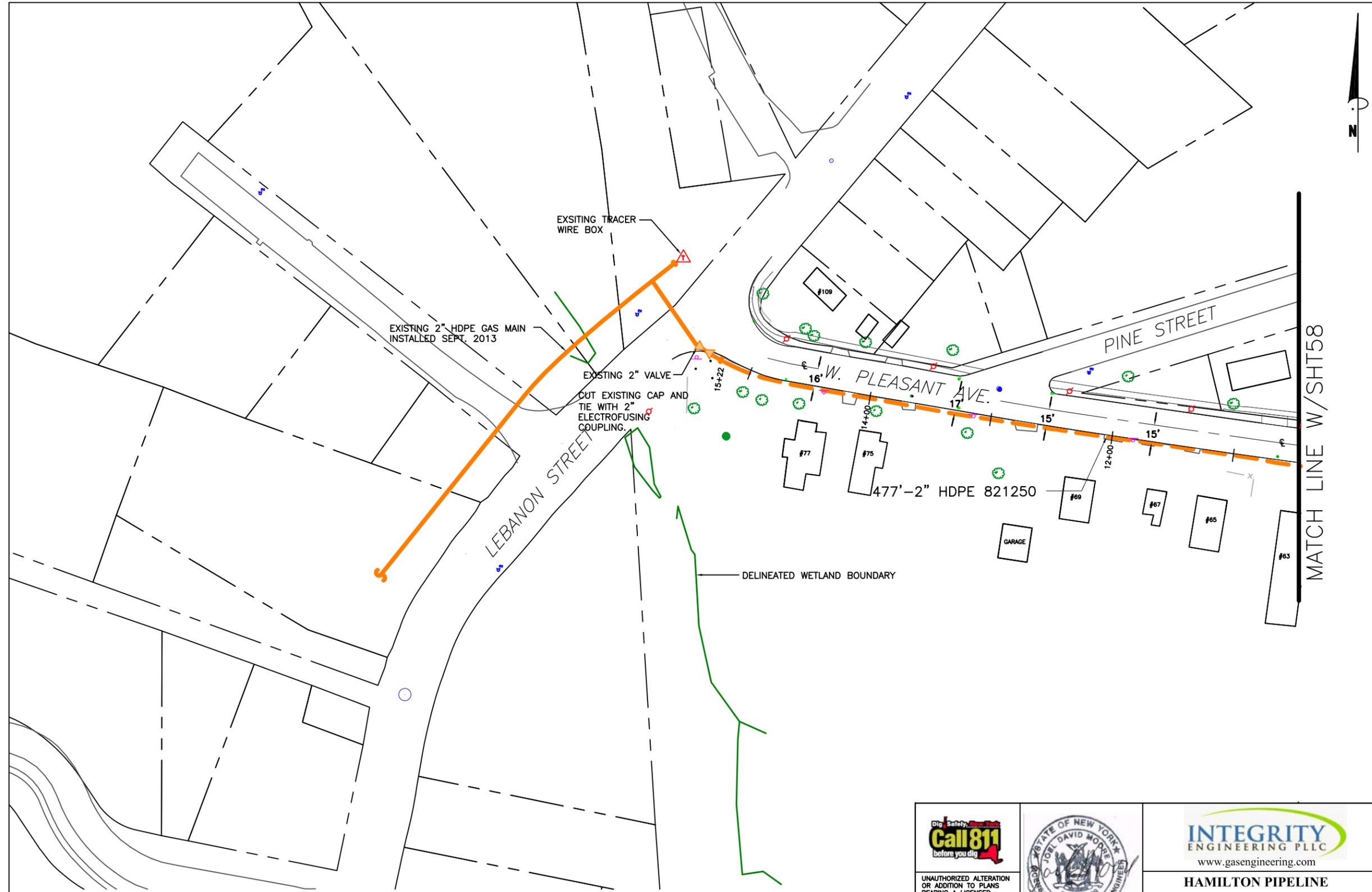
HORIZONTAL DIRECTIONAL DRILL DETAIL

MATCH LINE W/SHT56

 <small>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</small>		 <small>www.gasengineering.com</small>	
		HAMILTON PIPELINE	
<small>SIZE</small> C	<small>FSCM NO.</small> 	<small>WORK ORDER NO.</small> 13-001-02	<small>REV.</small>
<small>SCALE</small> 1"=50'	<small>DATE</small> 11-09-13	<small>SHEET</small> 57 OF 86	

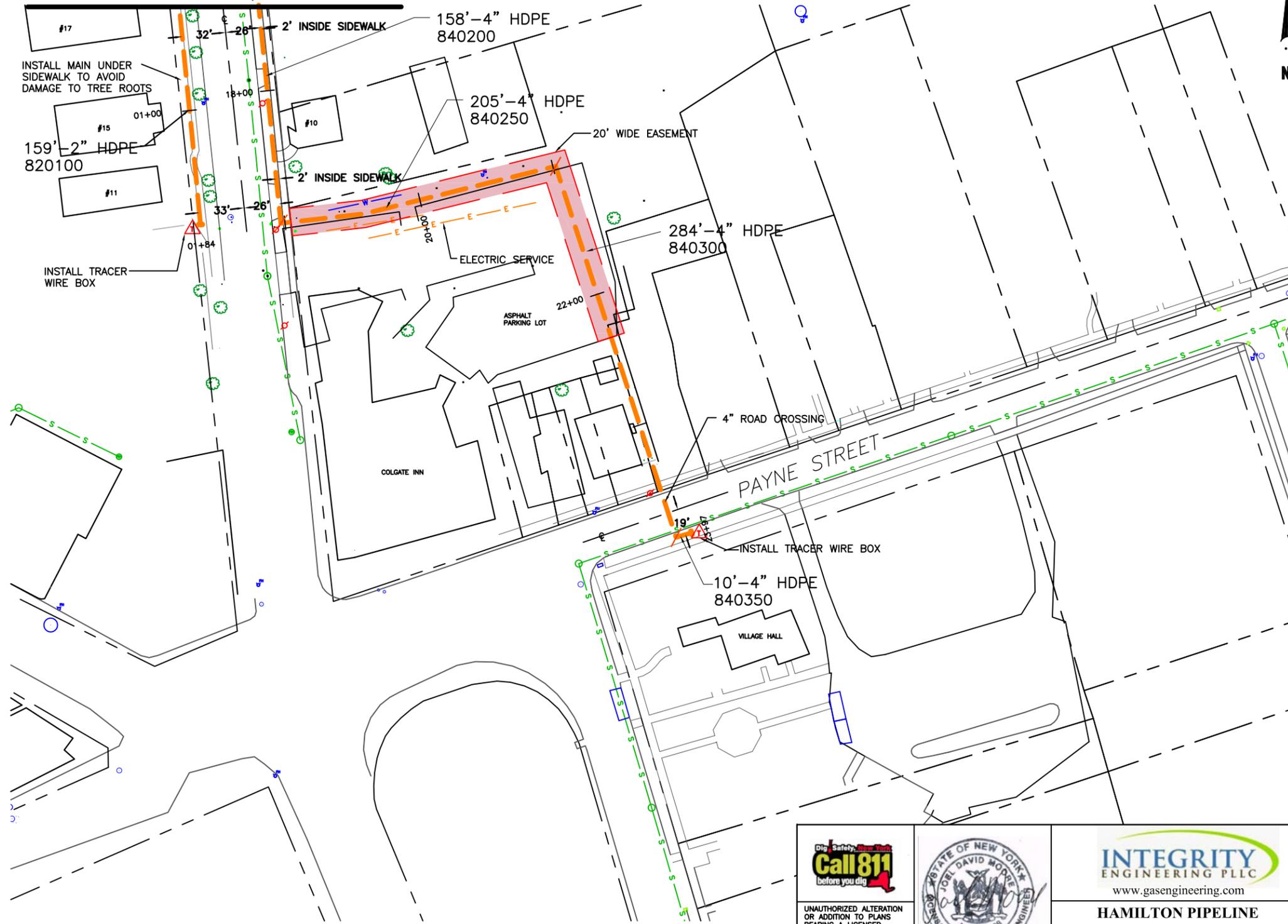


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		HAMILTON PIPELINE		
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SIZE C	FSCM NO. -	WORK ORDER NO. 13-001-02	REV -
SCALE 1"=50'	DATE 11-09-13	SHEET 58 OF 86		

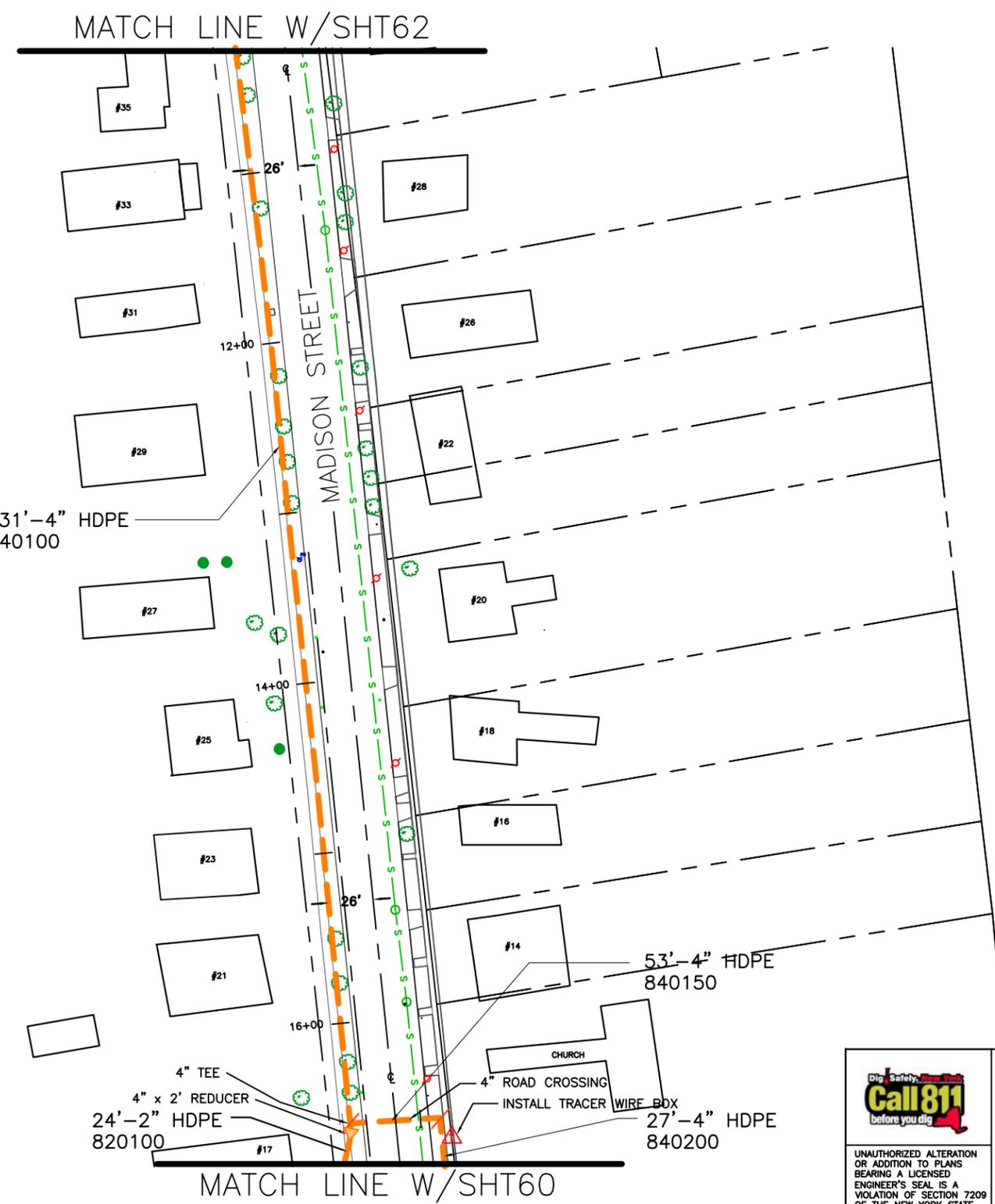


		 www.gasengineering.com	
		HAMILTON PIPELINE	
<small>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</small>	<small>SCALE</small> 1"=50'	<small>DATE</small> 11-09-13	<small>WORK ORDER NO.</small> 13-001-02
<small>SIZE</small> C	<small>FSCM NO.</small>	<small>REVISION</small> -	<small>SHEET</small> 59 OF 86

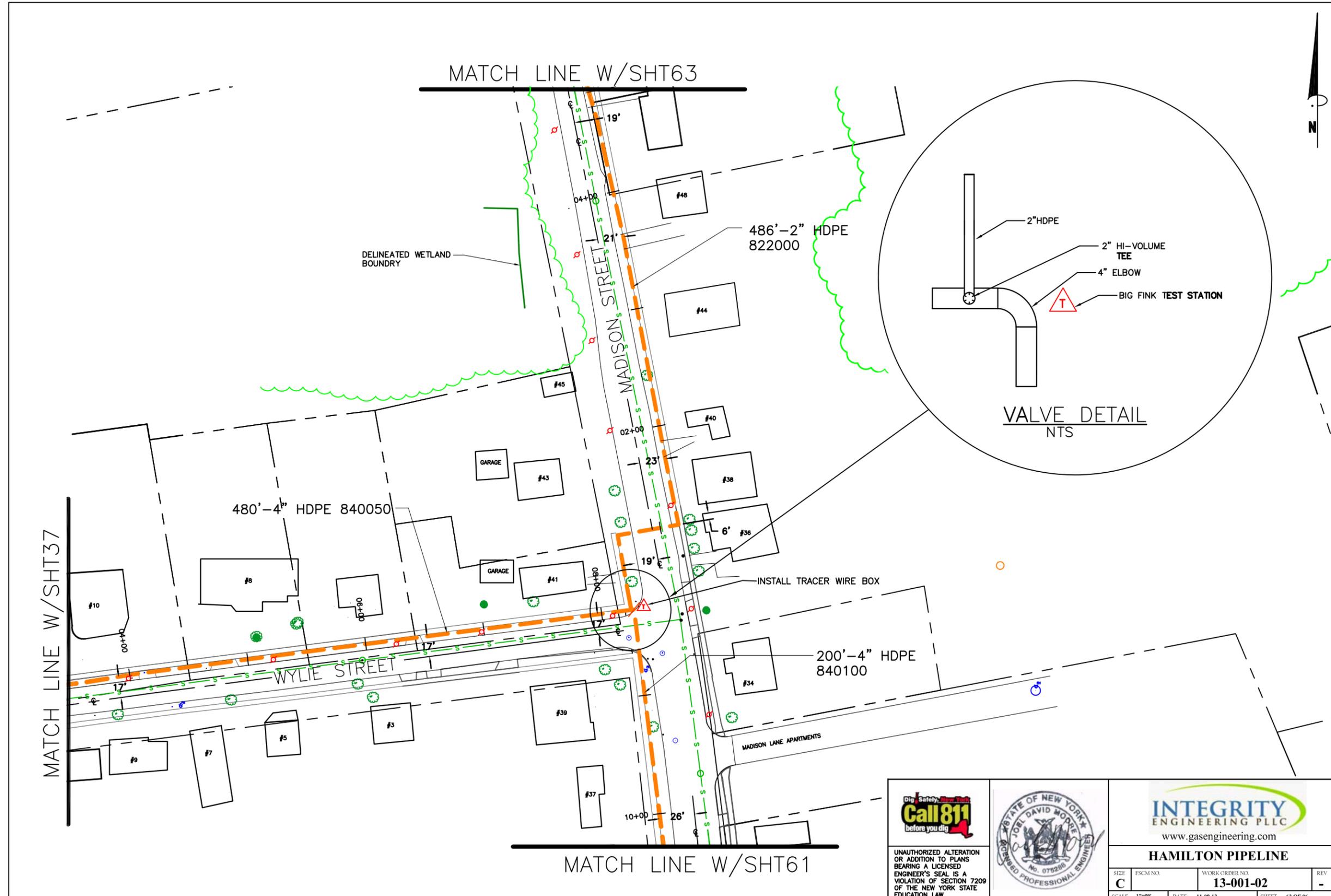
MATCH LINE W/SHT61



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		HAMILTON PIPELINE		
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SIZE C	FSCM NO. 	WORK ORDER NO. 13-001-02	REV -
SCALE 1"=50'	DATE 11-09-13	SHEET 60 OF 86		



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		HAMILTON PIPELINE	
<small>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</small>	<small>SCALE</small> 1"=50'	<small>DATE</small> 11-09-13	<small>WORK ORDER NO.</small> 13-001-02 <small>REV</small> -
		<small>DATE</small> 11-09-13	<small>SHEET</small> 61 OF 86



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<small>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</small>	<small>SIZE</small> C	<small>FSCM NO.</small> 	<small>WORK ORDER NO.</small> 13-001-02	<small>REV.</small> -
<small>SCALE</small> 1"=50'	<small>DATE</small> 11-09-13	<small>SHEET</small> 62 OF 86		

MATCH LINE W/SHT64

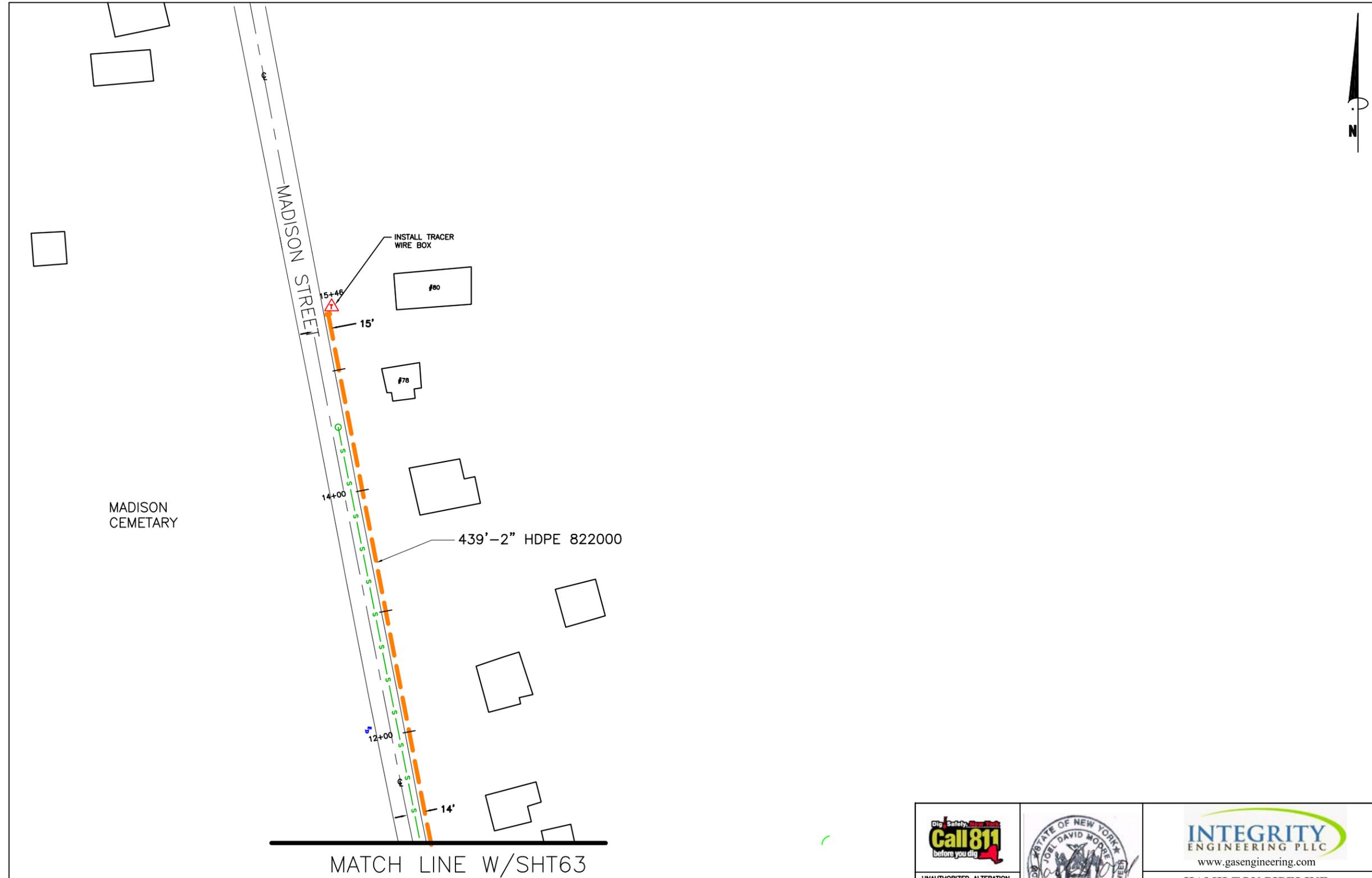


619'-2" HDPE
822000

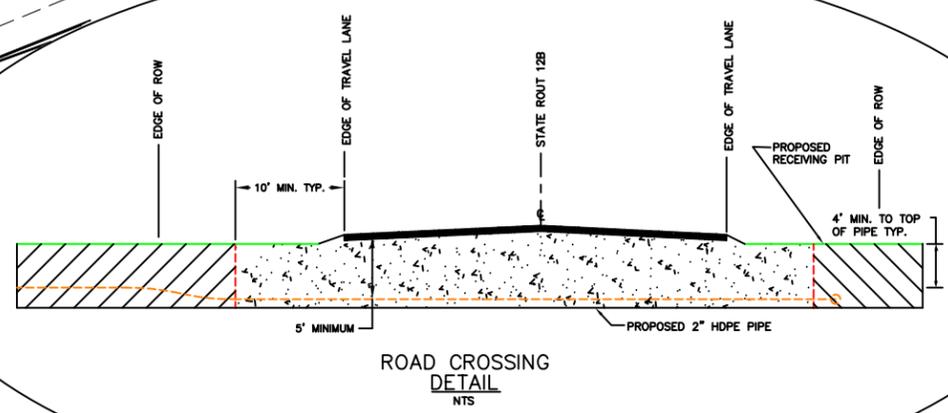
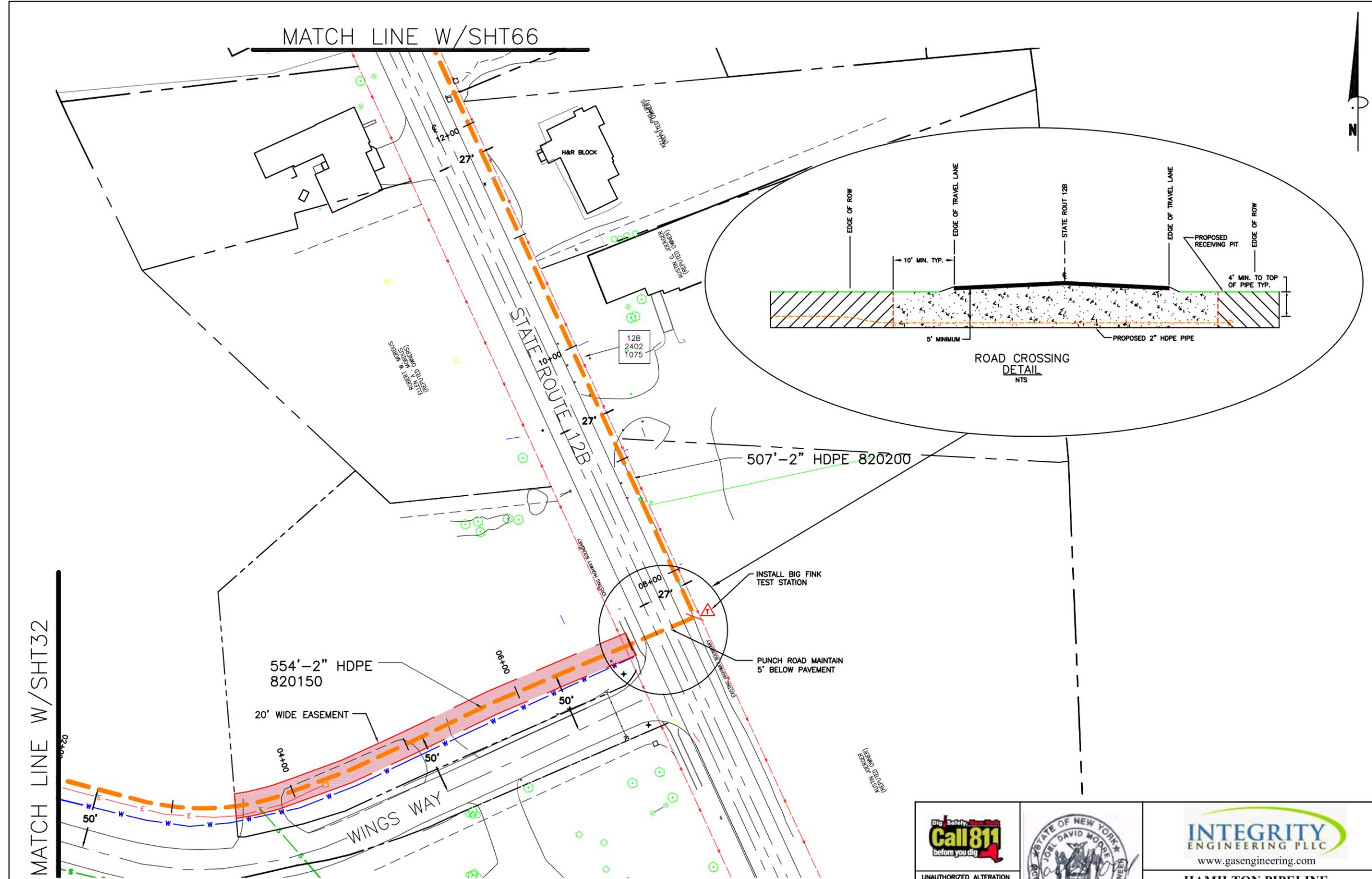
MADISON STREET

MATCH LINE W/SHT62

 <small>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</small>		 <small>www.gasengineering.com</small>	
		HAMILTON PIPELINE	
<small>SCALE</small> 1"=50' <small>SIZE</small> C	<small>FSCM NO.</small>	<small>WORK ORDER NO.</small> 13-001-02	<small>REV.</small> -
<small>DATE</small> 11-09-13		<small>SHEET</small> 63 OF 86	



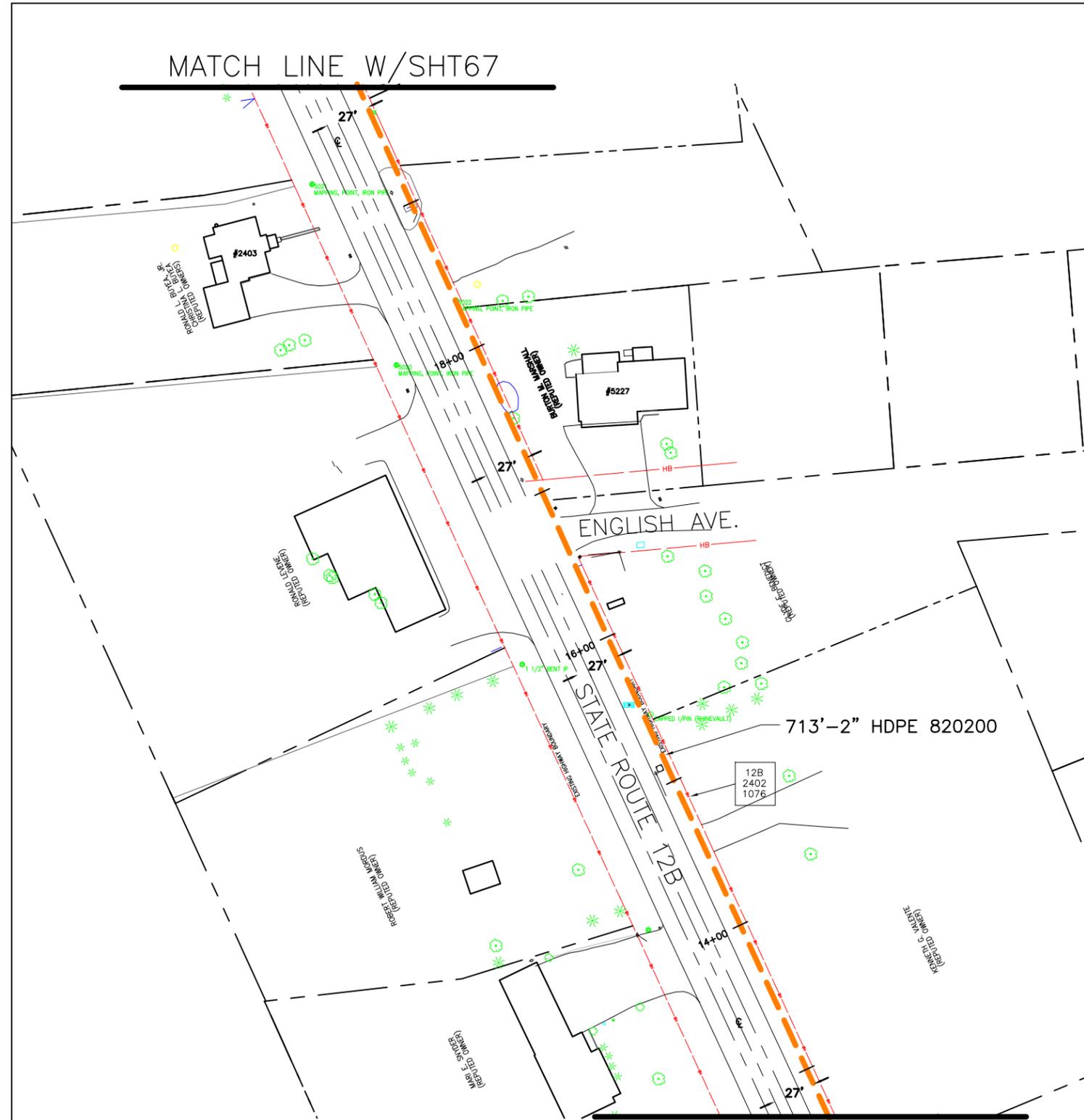
		www.gasengineering.com	
HAMILTON PIPELINE			
SIZE C	FSCM NO.	WORK ORDER NO. 13-001-02	REV -
SCALE 1"=50'	DATE 11-09-13	SHEET 64 OF 86	



MATCH LINE W/SHT32

MATCH LINE W/SHT66

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			<small>SHEET</small> 65 OF 86



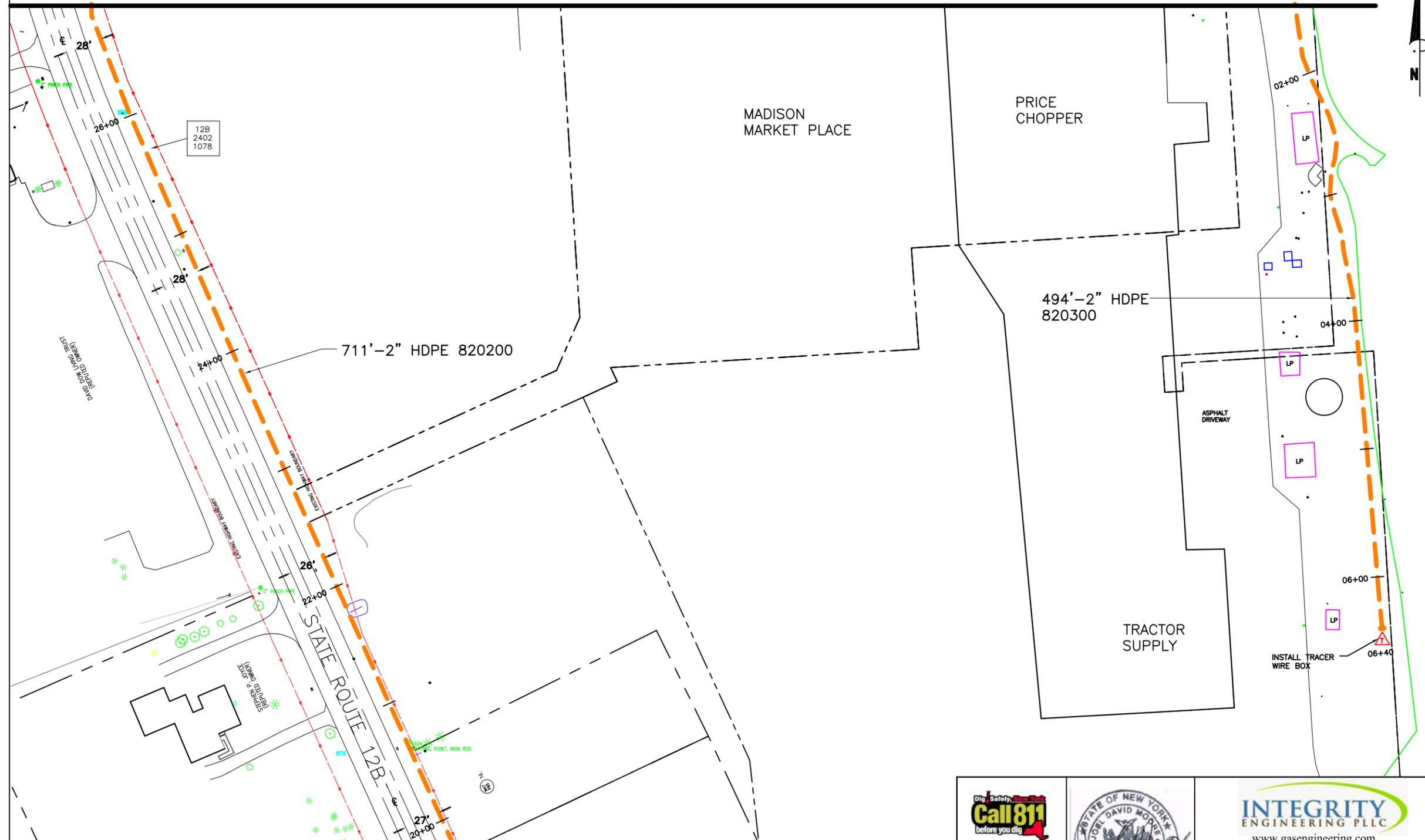
MATCH LINE W/SHT67

MATCH LINE W/SHT65



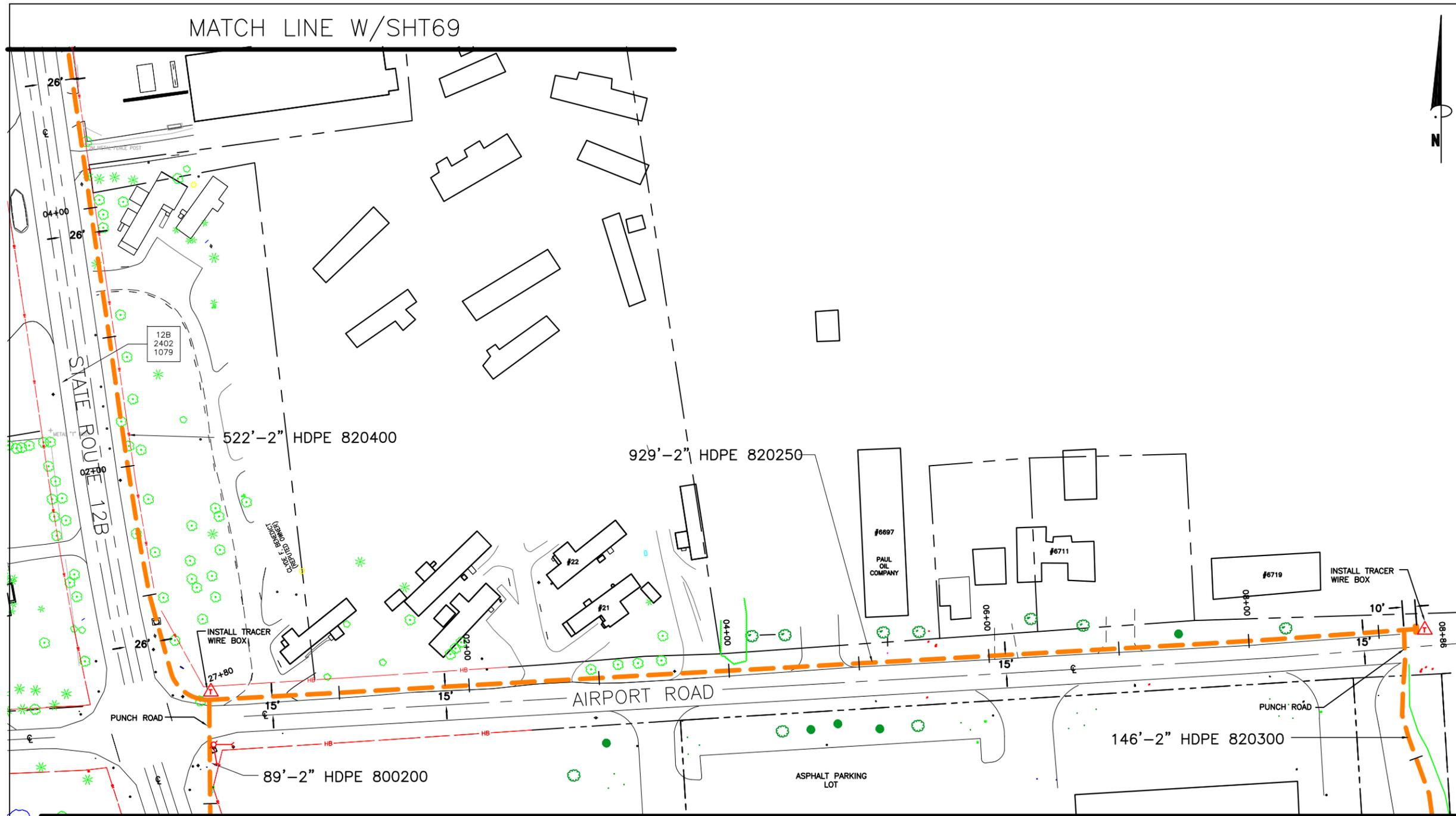
		www.gasengineering.com HAMILTON PIPELINE	
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SIZE C	FSCM NO. -	WORK ORDER NO. 13-001-02
SCALE 1"=50'	DATE 11-09-13	SHEET 66 OF 86	REV -

MATCH LINE W/SHT68



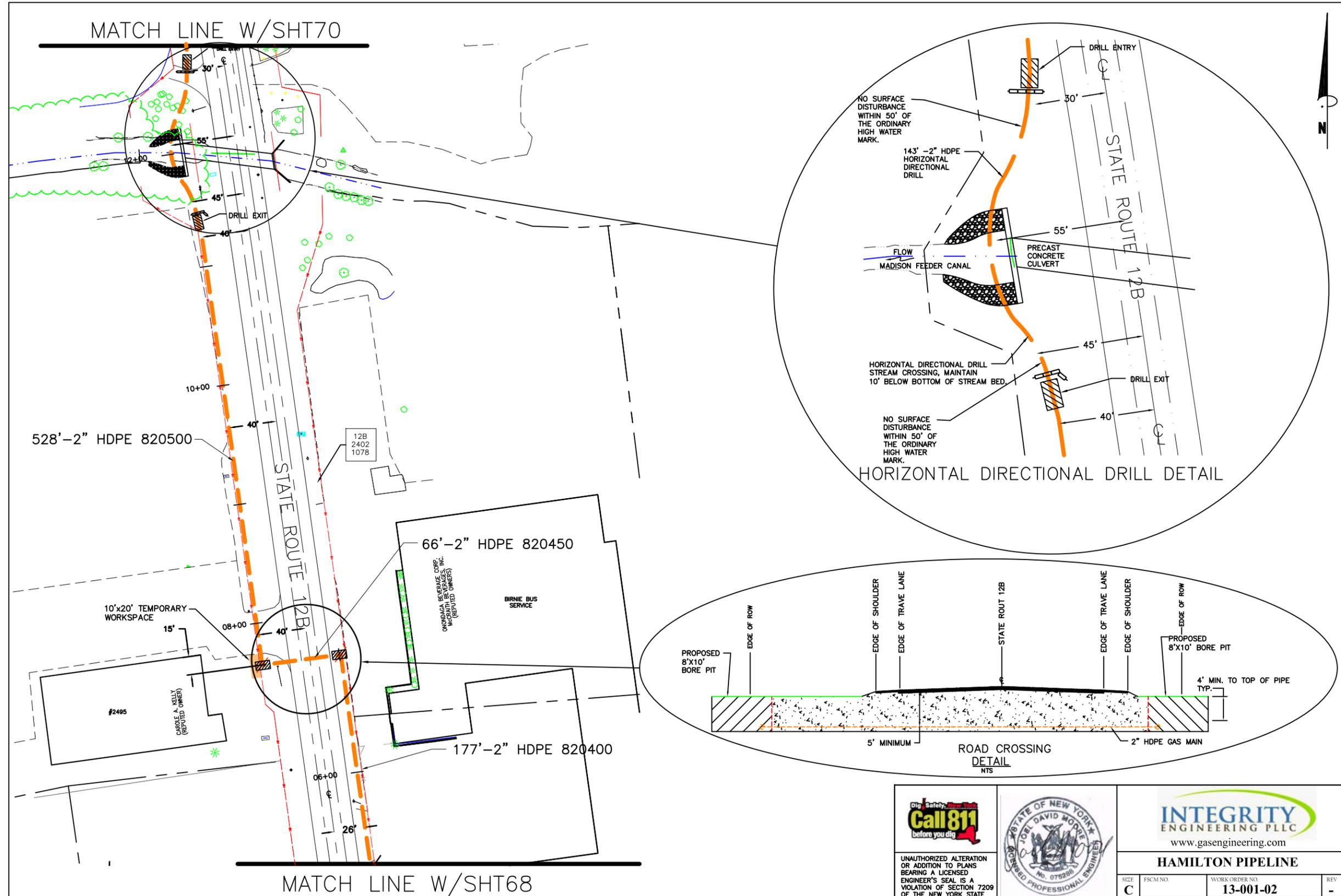
MATCH LINE W/SHT66

 Dig Safety. Call 811 before you dig		 www.gasengineering.com		
		HAMILTON PIPELINE		
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW	SIZE: C	FSCM NO.:	WORK ORDER NO.: 13-001-02	REV: -
SCALE: 1"=50'	DATE: 11-09-13	SHEET: 67 OF 86		



MATCH LINE W/SHT67

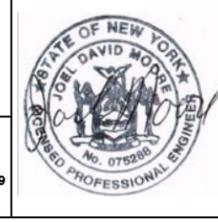
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		<p>HAMILTON PIPELINE</p>	
<p>SIZE: C</p>	<p>FSCM NO:</p>	<p>WORK ORDER NO: 13-001-02</p>	<p>REV: -</p>
<p>SCALE: 1"=50'</p>	<p>DATE: 11-09-13</p>	<p>SHEET: 68 OF 86</p>	



C:\Integrity Engineering\Hamilton\DWG\13-001-02.dwg

Call 811
before you dig

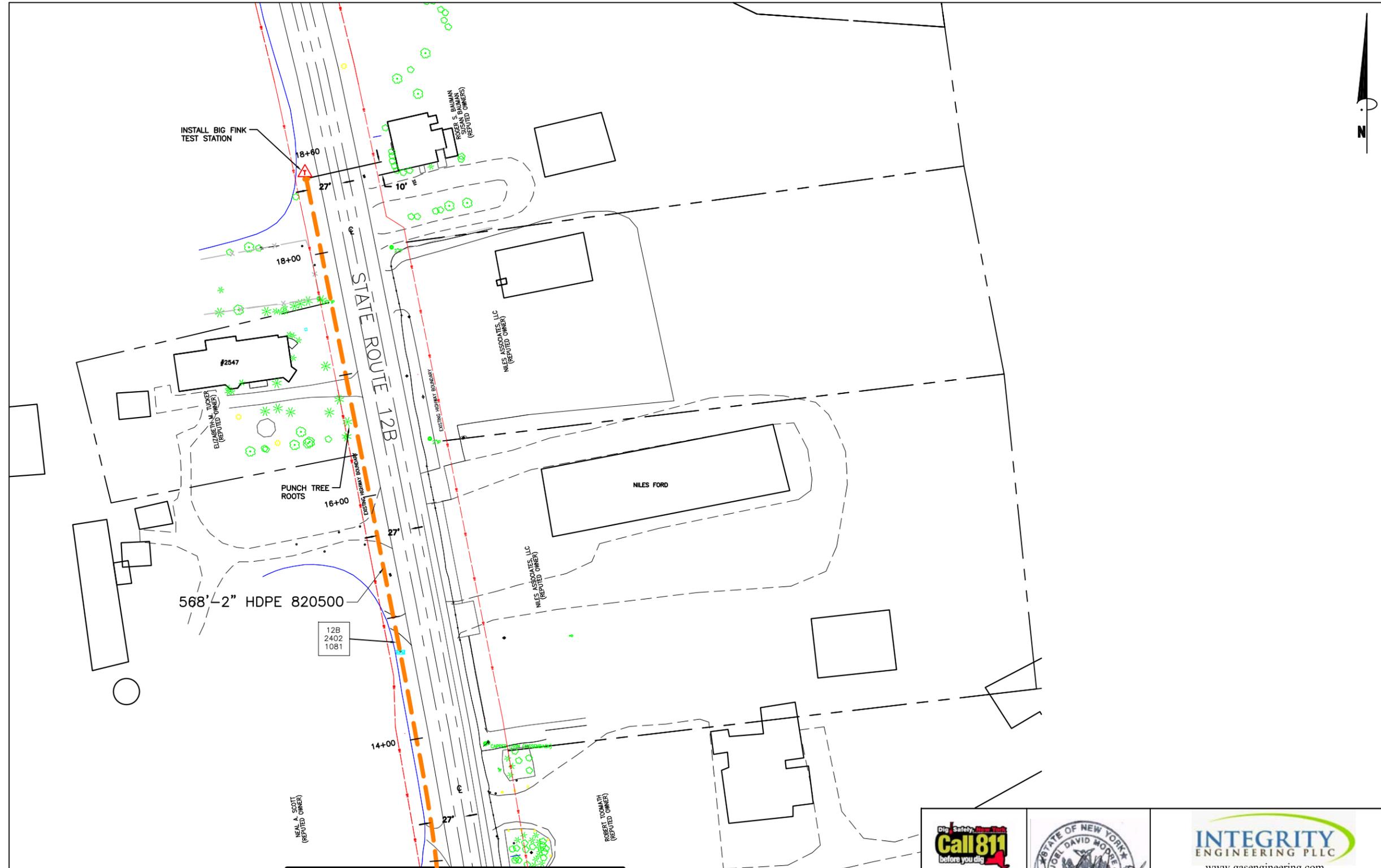
UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW



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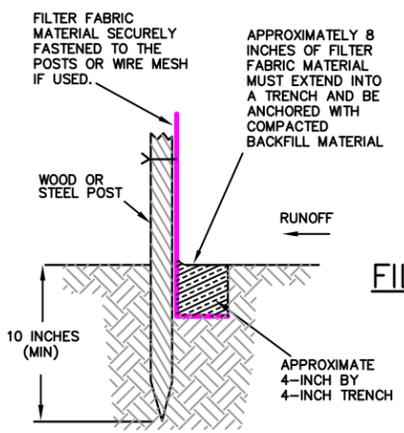
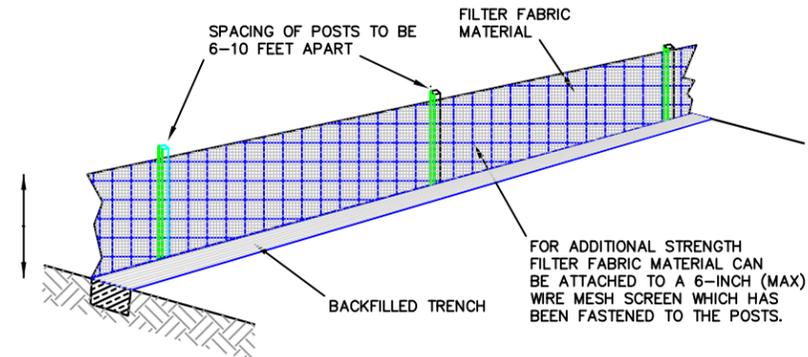
HAMILTON PIPELINE

SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	DATE	SHEET	69 OF 86
1"=50'	11-09-13		

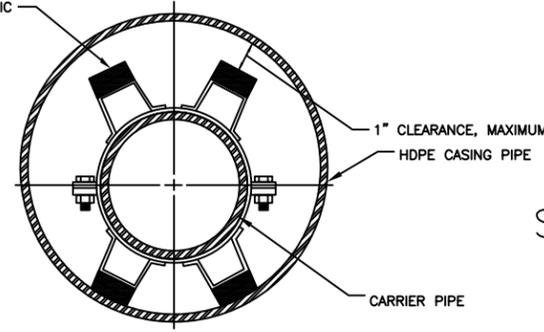
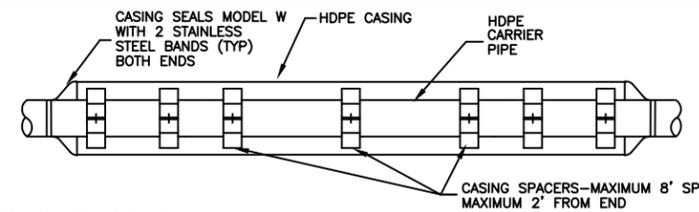
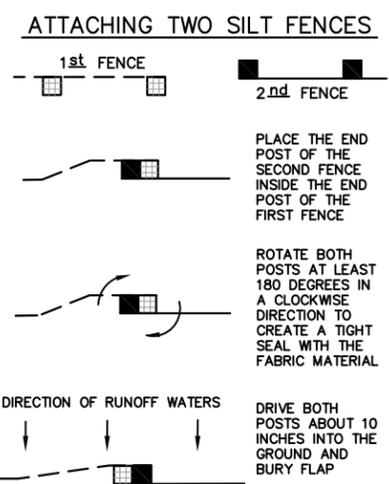


MATCH LINE W/SHT69

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		HAMILTON PIPELINE		
<small>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</small>	<small>SIZE</small> C	<small>FSCM NO.</small> 	<small>WORK ORDER NO.</small> 13-001-02	<small>REV</small> -
<small>SCALE</small> 1"=50'	<small>DATE</small> 11-09-13	<small>SHEET</small> 70 OF 86		



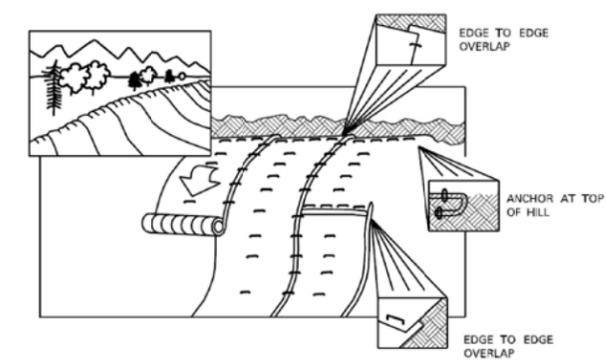
INSTALLING A FILTER FABRIC SILT FENCE



*NOTE:
2" ROAD CROSSING NO CASING IS REQUIRED

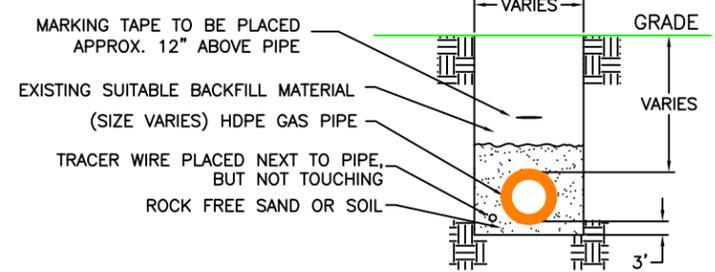
CARRIER HDPE PIPE NOMINAL DIA	CASING HDPE PIPE NOMINAL DIA
4"	8"
6"	10"
8"	12"
10"	14"

STATE ROAD CROSSING CASING DETAIL

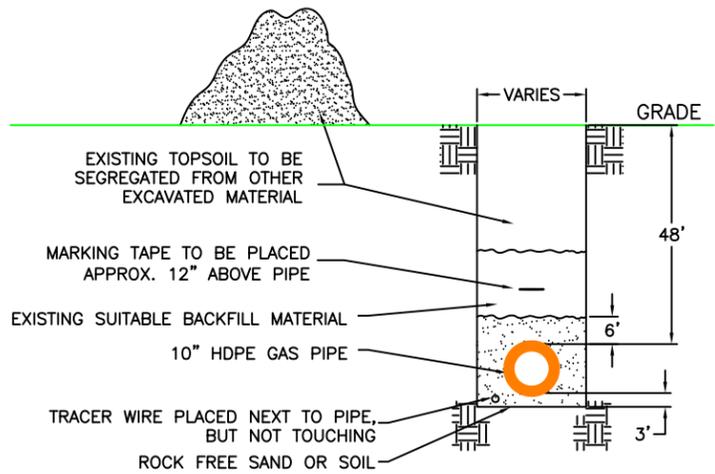


NOTES:

- EROSION CONTROL MATTING (BLANKETS) SHALL BE USED AT LOCATIONS IDENTIFIED IN THE PLAN AND/OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
- EROSION CONTROL MATTING SHALL MEET THE REQUIREMENTS SPECIFIED IN THE PLAN AND/OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
- STAPLES SHALL BE MADE OF 11 GAUGE WIRE, U-SHAPED WITH 6" LEGS AND A 1" CROWN. STAPLES SHALL BE DRIVEN INTO THE GROUND FOR THE FULL LENGTH OF THE STAPLE LEGS.
- MATting SHALL BE INSTALLED ACCORDING TO MANUFACTURER SPECIFICATIONS OR AS STATED BELOW:
 - EXTEND TOP OF BLANKET 3 FEET PAST THE UPPER EDGE OF THE SLOPE.
 - ANCHOR ("KEY") THE UPPER EDGE OF THE BLANKET INTO THE SLOPE USING A 6" DEEP TRENCH AND ROLL THE BLANKET DOWN THE HILL, DOUBLE STAPLE EVERY 12" BEFORE BACKFILLING AND COMPACTING TRENCH.
 - AVOID STRETCHING EROSION CONTROL MATTING (LOOSELY) DURING INSTALLATION.
 - BRING MAT ROLL BACK OVER THE TOP OF THE TRENCH AND CONTINUE TO ROLL DOWN SLOPE. STAPLE EVERY 12" WHERE MAT EXITS THE TRENCH AT THE TOP OF THE SLOPE.
 - WHEN BLANKETS ARE SPLICED DOWN-SLOPE TO ADJOINING MATS (SLOPE OR STREAM BANK MATS), THE UPPER BLANKET SHALL BE PLACED OVER THE LOWER MAT (SHINGLE STYLE) WITH APPROXIMATELY 6" OF OVERLAP. STAPLE THROUGH THE OVERLAPPED AREA EVERY 12".
 - OVERLAP ADJACENT BLANKETS 6". STAPLE EDGES OF BLANKETS AND CENTER EVERY 36".
- IN LIVESTOCK AREAS WHERE EROSION CONTROL MATTING IS APPLIED TO THE SLOPES, FENCING WILL BE USED IF NECESSARY TO EXCLUDE LIVESTOCK, WITH PERMISSION OF THE LANDOWNER.
- MONITOR WASHOUTS, STAPLE INTEGRITY OR MAT MOVEMENT. REPLACE OR REPAIR AS NECESSARY.



GAS TRENCH DETAIL



TYPICAL GAS TRENCH DETAIL AGRICULTURAL AREAS

UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW

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HAMILTON PIPELINE

SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	NONE	DATE	11-09-13
			SHEET 71 OF 86

N.Y.S.D.O.T. STANDARD GENERAL PLAN NOTES

- ROAD TO BE KEPT CLEAN OF MUD AND DEBRIS AT ALL TIMES.
- ROADSIDE DRAINAGE TO BE MAINTAINED AT ALL TIMES.
- MATERIALS, EQUIPMENT AND VEHICLES ARE NOT TO BE STORED OR PARKED WITHIN THE NEW YORK STATE RIGHT-OF-WAY.
- MAINTENANCE AND PROTECTION OF TRAFFIC MUST COMPLY WITH THE CURRENT NATIONAL MUTCD WITH NYS SUPPLEMENT, SECTION 619 OF THE CURRENT N.Y.S.D.O.T. STANDARD SPECIFICATIONS, THESE PLANS AND AS ORDERED BY THE ASSISTANT RESIDENT ENGINEER. ON A N.Y.S.D.O.T. CONSTRUCTION PROJECT, MAINTENANCE AND PROTECTION OF TRAFFIC MUST COMPLY WITH THESE PLANS AND BE IN ACCORDANCE WITH THE N.Y.S.D.O.T. CONTRACT DOCUMENTS AND AS DEEMED NECESSARY BY THE N.Y.S. ENGINEER-IN-CHARGE.
- NOTIFY THE N.Y.S.D.O.T. ASSISTANT RESIDENT ENGINEER, AT THE APPROPRIATE NUMBER AS NOTED BELOW, THREE (3) WORK DAYS PRIOR TO WORKING IN THE N.Y.S. RIGHT-OF-WAY.

MADISON CO. – KEVIN MERCHANT (315)336-0660
- NOTIFY NYSDOT SIGNAL MAINTENANCE FACILITY 5 DAYS PRIOR TO WORKING WITHIN 350' OF A SIGNALIZED INTERSECTION. NOTIFY DIG SAFELY NEW YORK 2 WORK DAYS PRIOR TO DIGGING, DRILLING OR BLASTING AT 811 FOR A UTILITY STAKE-OUT.
- ALL MATERIALS USED WITHIN THE N.Y.S. RIGHT-OF-WAY MUST COMPLY WITH THE CURRENT N.Y.S.D.O.T. SPECIFICATIONS ALONG WITH ANY APPROPRIATE CURRENT N.Y.S.D.O.T. STANDARD SHEETS.
- QUALITY CONTROL OF ASPHALT CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 401 OF THE STANDARD SPECIFICATIONS. ALL ASPHALT PRODUCED AS PART OF SECTION 401 WILL BE PAID AT A FINAL QUANTITY ADJUSTMENT FACTOR OF 1.0. ASPHALT COURSE DEPTHS SHOWN ON THE PLANS ARE COMPACTED DEPTHS.
- NO NIGHT WORK SHALL BE ALLOWED UNLESS APPROVED PRIOR TO START OF PROJECT. ADDITIONAL MAINTENANCE AND PROTECTION OF TRAFFIC MAY BE REQUIRED INCLUDING THE ADDITION OF REFLECTIVE MATERIALS AND LIGHTING.
- HAZARDOUS WASTE NOTIFICATION – THE PERMITEE ACCEPTS THE RIGHT-OF-WAY OF THE STATE HIGHWAY IN IT'S "AS IS" CONDITION. THE DEPARTMENT OF TRANSPORTATION MAKES NO REPRESENTATION AS TO THE ABSENCE OF UNDERGROUND TANKS, STRUCTURES, FEATURES OR SIMILAR IMPEDIMENTS TO THE COMPLETION OF THE WORK PERMITTED HEREUNDER. SHOULD PERMITEE FIND SOME PREVIOUSLY UNKNOWN UNDERGROUND IMPEDIMENTS TO ITS WORK, THE DEPARTMENT OF TRANSPORTATION SHALL HAVE NO OBLIGATION TO CURE, REMOVE, REMEDY OR OTHERWISE DEAL WITH SUCH PREVIOUSLY UNKNOWN UNDERGROUND IMPEDIMENTS. THE PERMITEE IS REQUIRED TO REMOVE, MODIFY OR OTHERWISE DEAL WITH SUCH UNDERGROUND TANK, STRUCTURES, FEATURES OR IMPEDIMENTS IN A MANNER WHICH MEETS ACCEPTABLE ENGINEERING PRACTICE AND IS APPROVED BY THE DEPARTMENT OF TRANSPORTATION.
- NO VEHICLES, MATERIALS, EQUIPMENT OR WORKERS SHALL OCCUPY THE ROADWAY.
- NO EXCAVATIONS SHALL BE LEFT OPEN OVER NIGHT.

UTILITY PERMIT NOTES

- ROAD PAVEMENT, SHOULDER AND DRAINAGE ARE NOT TO BE DISTURBED OR UNDERMINED UNLESS INDICATED OTHERWISE IN THE PLANS
- SUITABLE NON-FROZEN, NON SATURATED BACKFILL TO BE USED AND PLACED IN 6" COMPACTED LIFTS.
- PAVEMENT TO BE MAINTAINED UNTIL A PERMANENT REPAIR CAN BE MADE.
- PAVEMENT TO BE REPLACED IN KIND OR AS SPECIFIED ON ATTACHED PLANS.
- ALL DISTURBED GRASS AREAS WITHIN THE R.O.W. ARE TO BE FINE GRADED, 4" TOPSOIL PLACED AND TURF ESTABLISHED.

NOTE

ROAD PLATES SHALL NOT BE USED DURING THE "SNOW AND ICE SEASON" (NOVEMBER 1ST THROUGH APRIL 1ST). DURING THE MONTHS OF OCTOBER AND APRIL, CALL THE WORK AREA JURISDICTIONAL N.Y.S.D.O.T. TRANSPORTATION MAINTENANCE RESIDENCY WITH PLATE LOCATIONS. ROAD PLATES SHALL BE PINNED AND EITHER DEPRESSED OR RAMPED.

WINTER ASPHALT PAVEMENT AND SHOULDER RESTORATION

EXCAVATION BACKFILL SHALL BE SUITABLE (NON-FROZEN AND NON-SATURATED) GRAVEL PLACED IN 6 INCH (6") COMPACTED COURSES TO FOUR INCHES (4") FROM THE EXISTING PAVEMENT SURFACE. THE REMAINING FOUR INCHES (4") SHALL HAVE CONCRETE PLACED TO MATCH EXISTING ADJACENT PAVEMENT GRADE AND SHALL HAVE A GOOD, SMOOTH, NON-POLISHED RIDING SURFACE.

IN THE SPRING, WHEN ASPHALT PLANTS OPEN, THE CONCRETE AND ADEQUATE GRAVEL SHALL BE REMOVED IN ORDER TO PERFORM FINAL RESTORATION PER PREVIOUSLY APPROVED N.Y.S.D.O.T. PAVEMENT RESTORATION PROCEDURES.

EXCAVATION SUPPORT SYSTEM REQUIREMENTS

ANY EXCAVATIONS EXCEEDING 5 FEET IN DEPTH AND WHICH HAVE LIVE TRAFFIC, A UTILITY, OR A STRUCTURE FOUNDATION LOCATED WITHIN A 1 ON 1 SLOPE MEASURED FROM THE BOTTOM CORNER OF THE EXCAVATION SIDES. THE SHEETING SYSTEM SHALL ACCOMMODATE ANY ASSOCIATED SURCHARGE LOADS. THE SHEETING SYSTEM OF DESIGN SHALL BE SUBMITTED TO NYSDOT'S REGIONAL GEOTECHNICAL ENGINEER FOR REVIEW AND APPROVAL.

WHEN A SHEETING SYSTEM IS NOT REQUIRED, AN EXCAVATION PROTECTION SYSTEM, AS DESCRIBED IN SECTION 552 OF THE 2008 NYSDOT STANDARD SPECIFICATIONS, SHALL BE USED FOR ALL EXCAVATIONS IN THE ROADWAY WHICH ARE GREATER THAN 5 FEET IN DEPTH OR ANY EXCAVATION WHICH CANNOT BE SAFELY MAINTAINED WITH VERTICAL SIDES. A SLOPING (LAYBACK) OPTION WILL NOT BE ALLOWED.

THE SHEETING SYSTEM AND EXCAVATION PROTECTION SYSTEM REQUIREMENTS DO NOT PERTAIN TO TEST PITS WHICH ARE 18" OF LESS IN DIAMETER.

WORK ZONE TRAFFIC CONTROL SIGN TABLE					
SIGN	MUTCD CODE	COLOR CODE	CONVENTIONAL ROAD	EXPRESSWAY	FREEWAY
	G20-1	A	36"x18"	42"x24"	42"x24"
	G20-2	A	36"x18"	42"x24"	42"x24"
	W7-3a	A	36"x18"	24"x18"	24"x18"
	W20-1	A	36"x36"	48"x48"	48"x48"
	W20-4	A	36"x36"	48"x48"	48"x48"
	W20-7a	A	36"x36"	48"x48"	48"x48"
	W21-5	A	30"x30"	48"x48"	48"x48"
	W21-5bR	A	36"x36"	48"x48"	48"x48"

ROADWAY DEFINITIONS:

CONVENTIONAL ROAD- A STREET OR HIGHWAY OTHER THAN A FREEWAY, OR EXPRESSWAY.

EXPRESSWAY- A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.

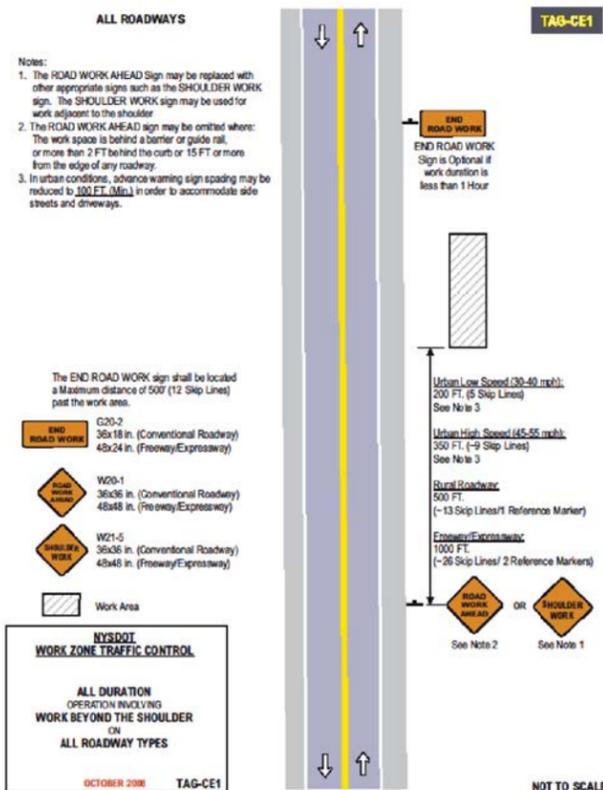
FREEWAY- A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS.

COLOR CODE LEGEND

CODE	DESCRIPTION
A	BLACK LEGEND & BORDER ON AN ORANGE BACKGROUND
B	BLACK LEGEND & BORDER ON AN WHITE BACKGROUND
C	WHITE LEGEND & BORDER ON AN GREEN BACKGROUND
D	WHITE LEGEND & BORDER ON AN RED BACKGROUND
E	RED LEGEND & BORDER ON AN WHITE BACKGROUND
F	BLACK LEGEND & BORDER ON A FLORESCENT YELLOW GREEN BACKGROUND

NOTES:

- FOR MULTI-LANE UNDIVIDED CONVENTIONAL ROADWAYS USE EXPRESSWAY SIGN SIZES.
- DIMENSIONS ARE SHOWN IN INCHES AND ARE SHOWN AS WIDTH x HEIGHT.
- THESE TABLES ARE FOR REFERENCE PURPOSES ONLY. FOR ADDITIONAL SIGNAGE NOT SHOWN ON THESE TABLES REFER TO M.U.T.C.D.
- WHEN USED IN CONJUNCTION WITH A PEDESTRIAN CROSSING SIGN (W11-2) COLOR CODE F IS TO BE USED.
- MULTICOLORED SYMBOL IMPOSED ON BLACK ON ORANGE SIGN.



WORK ZONE TRAFFIC CONTROL LEGEND	
SYMBOL	DESCRIPTION
	ARROW PANEL
	ARROW PANEL, CAUTION MODE
	ARROW PANEL TRAILER OR SUPPORT
	CHANGEABLE MESSAGE SIGN (PVMS)
	CHANNELIZING DEVICE
	CRASH CUSHION/TEMPORARY IMPACT ATTENUATOR
	DIRECTION OF TEMPORARY TRAFFIC DETOUR
	DIRECTION OF TRAFFIC
	FLAGGER
	FLAG TREE
	LUMINAIRE
	PAVEMENT MARKINGS THAT SHALL BE REMOVED FOR A LONG TERM PROJECT
	SIGN, TEMPORARY
	TEMPORARY BARRIER
	TEMPORARY BARRIER WITH WARNING LIGHTS
	TRAFFIC OR PEDESTRIAN SIGNAL
	TYPE III BARRICADE
	WARNING LIGHTS
	WORK SPACE
	WORK VEHICLE
	WORK VEHICLE W/ TRUCK MOUNTED ATTENUATOR

WORK DURATION DEFINITIONS	
LONG-TERM STATIONARY IS WORK THAT OCCUPIES A LOCATION MORE THAN 3 CONSECUTIVE DAYS.	
INTERMEDIATE-TERM STATIONARY IS WORK THAT OCCUPIES A LOCATION MORE THAN ONE DAYLIGHT PERIOD UP TO 3 CONSECUTIVE DAYS, OR NIGHTTIME WORK LASTING MORE THAN 1 HOUR.	
SHORT-TERM STATIONARY IS DAYTIME WORK THAT OCCUPIES A LOCATION FOR MORE THAN 1 HOUR WITHIN A SINGLE DAYLIGHT PERIOD.	
MOBILE IS WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY.	

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UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW



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HAMILTON PIPELINE

SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	NONE	DATE	11-09-13
		SHEET	72 OF 86

WORK ZONE TRAFFIC CONTROL GENERAL NOTES:

1. THE TYPICAL DETAILS DEPICTED ON THE STANDARD SHEETS AND IN THE MUTCD, REFLECT THE MINIMUM REQUIREMENTS.
2. THE CONTRACTOR MUST SUBMIT TO THE ENGINEER, IN WRITING, PROPOSED REVISIONS TO THE TRAFFIC CONTROL PLAN FOR REVIEW AND APPROVAL BY THE REGIONAL DIRECTOR OR HIS/HER DESIGNEE FIVE (5) WORK DAYS PRIOR TO THE PLANNED IMPLEMENTATION OF SUCH PROPOSED REVISIONS. EXCEPT FOR CHANGES THAT ALTER THE SCOPE OF THE TRAFFIC CONTROL PLAN. SUCH CHANGES IN SCOPE MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL BY THE REGIONAL DIRECTOR OR HIS/HER DESIGNEE THIRTY (30) WORKING DAYS PRIOR TO IMPLEMENTATION OF SUCH REVISIONS.
3. THE CONTRACTOR SHALL PROVIDE THE ENGINEER, IN WRITING, WITH THE NAMES, ADDRESSES, AND TELEPHONE NUMBERS OF STAFF WHO ARE AUTHORIZED TO SECURE LABOR, MATERIALS, AND EQUIPMENT FOR EMERGENCY REPAIRS OUTSIDE NORMAL WORKING HOURS. THE ENGINEER WILL PROVIDE THE SUBMITTED INFORMATION TO REGIONAL MANAGEMENT, THE NEW YORK STATE POLICE, THE RESIDENT ENGINEER, AND THE LOCAL POLICE.

ACTIVITY AREA

1. THE CONTRACTOR SHALL MAINTAIN A MINIMUM 500' LONGITUDINAL DISTANCE BETWEEN CONSTRUCTION OPERATIONS ON ALTERNATE SIDES OF THE ROADWAY, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
2. WHEN TWO OR MORE AREAS ARE ADJACENT, OVERLAP, OR ARE IN CLOSE PROXIMITY, THE CONTRACTOR SHALL ENSURE THERE ARE NO CONFLICTING SIGNS AND THAT LANE CONTINUITY IS MAINTAINED THROUGHOUT ALL WORK AREAS.

SIGNS

1. THE LOCATIONS OF THE SIGNS SHOWN ON THE WORK ZONE TRAFFIC CONTROL PLANS AND DETAILS MAY BE ADJUSTED BASED ON SIGHT DISTANCE AND OTHER CONSIDERATIONS. THE FINAL LOCATIONS OF SIGNS ARE SUBJECT TO APPROVAL OF THE ENGINEER.
2. ANY EXISTING SIGNS, INCLUDING OVERHEAD SIGNS, WHICH CONFLICT WITH THE TEMPORARY TRAFFIC CONTROL SIGN LAYOUT SHALL BE COVERED, REMOVED, STORED OR RESET, AS APPROVED BY THE ENGINEER. ALL APPROPRIATE EXISTING SIGNS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND/OR LOCATION UNLESS OTHERWISE REPLACED IN THIS CONTRACT.
3. SIGNS AT OR NEAR INTERSECTIONS SHALL BE PLACED SO THAT THEY DO NOT OBSTRUCT A MOTORIST'S LINE OF SIGHT.
4. ALL WARNING AND REGULATORY SIGNS SHALL BE POSTED ON BOTH SIDES OF MULTI-LANE DIVIDED HIGHWAYS, MULTI-LANE RAMPS, AND ONE-WAY STREETS. IN CASES WHERE LANE RESTRICTIONS REDUCE THE TRAVEL LANE TO ONE LANE, SIGNS SHALL BE POSTED ON THE RIGHT SIDE OF THE ACTIVE TRAVEL LANE, UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
5. SIGNS MOUNTED ON THE MEDIAN OF DIVIDED HIGHWAYS WHERE MEDIAN BARRIER IS IN PLACE MAY BE MOUNTED ON THE BARRIER WITH A SADDLE TYPE BRACKET. LAYING THE SIGN DOWN IN A HORIZONTAL POSITION IS NOT PERMITTED.
6. THE DIMENSIONS OF WORK ZONE TRAFFIC CONTROL SIGNS ARE DESCRIBED IN THE MUTCD. ANY CHANGES TO THE DIMENSIONS SHALL BE APPROVED BY THE REGIONAL DIRECTOR OR BY HIS/HER DESIGNEE. NY9-12 MAY BE USED IN PLACE OF NY9-11.

CHANNELIZING DEVICES

1. WHERE POSSIBLE ALL CHANNELIZING AND GUIDING DEVICES ARE TO BE PLACED SO AS TO PROVIDE A MINIMUM 2' LATERAL CLEARANCE TO THE TRAVELED WAY.
2. DRUMS SHALL BE USED FOR ANY LANE CLOSURE OR SHOULDER CLOSURES WHICH ARE TO REMAIN OVERNIGHT.

PUBLIC ACCESS

1. PROPERTY OWNERS WHOSE DRIVEWAYS WILL BE MADE INACCESSIBLE SHALL BE NOTIFIED BY THE CONTRACTOR AT LEAST 24 HOURS PRIOR TO RESTRICTING USE OF THE DRIVEWAY. FOR MULTIPLE ACCESS PROPERTIES, AT LEAST ONE DRIVEWAY SHALL BE OPEN AT ALL TIMES. ACCESS SHALL BE RESTORED TO ALL DRIVEWAYS AS SOON AS POSSIBLE.
2. SUITABLE RAMPS SHALL BE INSTALLED TO MAINTAIN SMOOTH TRANSITIONS FROM RESIDENTIAL AND COMMERCIAL DRIVEWAYS TO AND FROM THE WORK AREA.

LANE CLOSURES

1. THE CONTRACTOR SHALL LOCATE LANE CLOSURES TO PROVIDE OPTIMUM VISIBILITY, I.E. BEFORE CURVES AND CRESTS, TO THE EXTENT CONDITIONS PERMIT.
2. THE ENGINEER MAY REQUIRE THAT ALL LANES BE RE-OPENED TO TRAFFIC AT ANY TIME IF THE ROUTE IS NEEDED FOR EMERGENCY PURPOSES. THIS COULD INCLUDE INCIDENTS AT LOCATIONS OUTSIDE THE CONTRACT LIMITS.

LANE WIDTHS

1. UNLESS AUTHORIZED BY THE ENGINEER, THE MINIMUM LANE WIDTHS FOR WORK ZONE TRAVEL LANES SHALL BE AS FOLLOWS: FREEWAYS AND/OR EXPRESSWAYS IS 11'. THE MINIMUM LANE WIDTH FOR ALL OTHER TYPES OF ROADWAYS IS 10'.
2. THE CONTRACTOR SHALL PROVIDE A WRITTEN NOTICE TO THE ENGINEER, A MINIMUM OF 21 CALENDAR DAYS IN ADVANCE OF PERFORMING ANY WORK THAT RESULTS IN THE REDUCED WIDTH OF AN EXISTING ROADWAY, SO THAT THE ENGINEER MAY NOTIFY THE REGIONAL PERMIT ENGINEER IN A TIMELY MANNER.

BARRIER/SHADOW VEHICLES

1. BARRIER AND SHADOW VEHICLES SHALL BE REQUIRED AS PER STANDARD SHEET TITLED "WORK ZONE TRAFFIC CONTROL LEGEND & TABLES".
2. NO WORK ACTIVITY, EQUIPMENT, VEHICLES AND/OR MATERIALS SHALL BE LOCATED BETWEEN THE BARRIER OR SHADOW VEHICLE AND THE ACTIVE WORK AREA (ROLL AHEAD DISTANCE).
3. THE CONTRACTOR MAY BE REQUIRED TO PROVIDE A BARRIER VEHICLE IN CONJUNCTION WITH POLICE PRESENCE IN THE WORK ZONE, TO BE INCLUDED IN THE UNIT BID PRICE FOR BASIC WORK ZONE TRAFFIC CONTROL.

WORK ZONE TRAFFIC CONTROL LEGEND AND TABLES

TABLE NY1-A BARRIER VEHICLE USE REQUIREMENTS (LONG TERM, INTERMEDIATE TERM, & SHORT TERM STATIONARY CLOSURES)					
CLOSURE TYPE	EXPOSURE CONDITION ¹	USE REQUIREMENTS ^{4,5}			
		FREEWAY	NON-FREEWAY (PRECONSTRUCTION POSTED SPEED LIMIT) ≥45 MPH	35-40 MPH	≤30 MPH
LANE CLOSURE	WORKERS ON FOOT OR IN VEHICLES EXPOSED TO TRAFFIC	REQUIRED ³	REQUIRED ³	REQUIRED ³	OPTIONAL ²
	NON-TRANSVERSABLE HAZARD (IE. EQUIPMT, MATLS EXCAVATIONS) ONLY NO WORKERS EXPOSED	REQUIRED ³	REQUIRED ³	OPTIONAL ²	OPTIONAL ²
SHOULDER CLOSURE	WORKERS ON FOOT OR IN VEHICLES EXPOSED TO TRAFFIC	REQUIRED ³	REQUIRED ³	OPTIONAL ²	OPTIONAL ²
	NON-TRANSVERSABLE HAZARD (IE. EQUIPMT, MATLS EXCAVATIONS) ONLY NO WORKERS EXPOSED	REQUIRED ³	OPTIONAL ²	OPTIONAL ²	OPTIONAL ²

1. EXPOSURE CONDITIONS DESCRIBED IN TABLE NY1-A ASSUMES THERE IS NO POSITIVE PROTECTION (TEMPORARY TRAFFIC BARRIER) PRESENT. WHERE WORKERS OR HAZARDS ARE PROTECTED BY A TEMPORARY TRAFFIC BARRIER, BARRIER VEHICLES ARE NOT REQUIRED.

2. WHERE THE REQUIREMENT IS "OPTIONAL", EITHER A BARRIER VEHICLE OR THE STANDARD LONGITUDINAL BUFFER SPACE (TABLE 6C-2) SHALL BE PROVIDED.

3. REQUIREMENTS SHALL INCLUDE PROVIDING A SEPARATE BARRIER VEHICLE FOR EACH CLOSED LANE AND EACH CLOSED PAVED SHOULDER 8' OR GREATER IN WIDTH. IF THE WORK SPACE MOVES WITHIN THE STATIONARY CLOSURE, THE BARRIER VEHICLE SHALL BE REPOSITIONED ACCORDINGLY. BARRIER VEHICLES PROTECTING NON-TRANSVERSABLE HAZARDS SHALL REMAIN IN PLACE DURING BOTH WORKING AND NON-WORKING HOURS UNTIL THE HAZARD NO LONGER EXISTS. EXCEPTIONS TO THESE REQUIREMENTS MAY BE MADE AS APPROVED BY THE REGIONAL DIRECTOR OR HIS/HER DESIGNEE WHERE BARRIER VEHICLE PLACEMENT WOULD BE INEFFECTIVE OR WOULD INTERFERE WITH THE SAFE OPERATION OF TRAFFIC.

4. BARRIER VEHICLES ARE NOT REQUIRED FOR MILLING AND/OR PAVING OPERATIONS, BUT THE STANDARD LONGITUDINAL BUFFER SPACE (TABLE 6C-2) SHALL BE PROVIDED.

5. BARRIER VEHICLES ARE NOT REQUIRED FOR FLAGGING OPERATIONS, BUT THE STANDARD LONGITUDINAL BUFFER SPACE (TABLE 6C-2) SHALL BE PROVIDED.

TABLE NY1-B BARRIER VEHICLE USE REQUIREMENTS (LONG TERM, INTERMEDIATE TERM, & SHORT TERM STATIONARY CLOSURES)					
CLOSURE TYPE	EXPOSURE CONDITION	USE REQUIREMENTS			
		FREEWAY	NON-FREEWAY (PRECONSTRUCTION POSTED SPEED LIMIT) ≥45 MPH	35-40 MPH	≤30 MPH
LANE CLOSURE	WHEN ANY WORKER, VEHICLE, OR OTHER HAZARD IS EXPOSED TO TRAFFIC	REQUIRED ^{2,4}	REQUIRED ^{2,4}	REQUIRED ^{2,4}	REQUIRED ^{2,4}
SHOULDER CLOSURE	WHEN ANY WORKER, VEHICLE, OR OTHER HAZARD IS EXPOSED TO TRAFFIC	REQUIRED ^{2,4}	REQUIRED ^{2,4}	REQUIRED ^{2,4}	REQUIRED ^{2,4}

PLACEMENT DISTANCE FOR BARRIER VEHICLES

PRE-CONSTRUCTION POSTED SPEED LIMIT (MPH)

>55
45-55
<45

* AS DEFINED IN NYS DOT STANDARD SPECIFICATIONS 619:

BARRIER VEHICLE - VEHICLE USED FOR STATIONARY SHOULDER CLOSURES, LANE CLOSURES AND OTHER STATIONARY WORK ZONES.

MINIMUM DISTANCE SHOWN REFLECTS THE ACTUAL ROLL AHEAD DISTANCE FROM MANUFACTURER.

PLACEMENT DISTANCE FOR BARRIER VEHICLES

PRE-CONSTRUCTION POSTED SPEED LIMIT (MPH)

>55
45-55
<45

* AS DEFINED IN NYS DOT STANDARD SPECIFICATIONS 619:

SHADOW VEHICLE - VEHICLE USED FOR MOBILE OR SHORT DURATION WORK OPERATIONS.

MINIMUM DISTANCE SHOWN REFLECTS THE ACTUAL ROLL AHEAD DISTANCE FROM MANUFACTURER.

TABLE 6H-4 FORMULAS FOR DETERMINING TAPER LENGTHS										
SPEED LIMIT (S) (MPH)	TAPER LENGTH (L) (FT.)		L = TAPER LENGTH W = WIDTH OF OFFSET (FT) S = PRE CONSTRUCTION POSTED SPEED LIMIT (MPH)							
(40 MPH) OR LESS	L = WS ² /60									
(45 MPH) OR MORE	L = WS									
STANDARD TAPER LENGTHS										
LATERAL SHIFT OF TRAFFIC FLOW PATH	TEMPORARY TRAFFIC CONTROL ZONE PRE CONSTRUCTION POSTED SPEED LIMIT									
	(25 MPH)	(30 MPH)	(35 MPH)	(40 MPH)	(45 MPH)	(50 MPH)	(55 MPH)	(60 MPH)	(65 MPH)	(70 MPH)
4	45	60	85	110	180	200	220	240	260	280
5	55	75	105	135	225	250	275	300	325	350
6	65	90	125	160	270	300	330	360	390	420
7	75	105	145	190	315	350	385	420	455	490
8	85	120	165	215	360	400	440	480	520	560
9	95	135	185	240	405	450	495	540	585	630
10	105	150	205	270	450	500	550	600	650	700
11	115	165	225	295	495	550	605	660	715	770
12	125	180	245	320	540	600	660	720	780	840

TABLE 6C-3 TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES	
TYPE OF TAPER	TAPER LENGTH (L)
MERGING TAPER	L
SHIFTING TAPER	L/2
SHOULDER TAPER	L/3
ONE-LANE, TWO-WAY TRAFFIC TAPER	100 FT. MAXIMUM
DOWNSTREAM TAPER	100 FT. PER LANE

TABLE 6C-2 LONGITUDINAL BUFFER SPACE	
PRECONSTRUCTION POSTED SPEED LIMIT (MPH)	DISTANCE
25	155 FT.
30	200 FT.
35	250 FT.
40	305 FT.
45	360 FT.
50	425 FT.
55	495 FT.
60	570 FT.
65	645 FT.

TABLE 619-4 FLARE RATES FOR POSITIVE BARRIER					
TYPE OF POSITIVE BARRIER	POSTED SPEED LIMIT				
	30 (MPH)	40 (MPH)	50 (MPH)	55 (MPH)	65 (MPH)
TEMP. CONCRETE BARRIER	8:1	11:1	14:1	16:1	20:1
BOX BEAM OR HEAVY POST CORRUGATED BEAM	7:1	9:1	11:1	12:1	15:1

TABLE NY6H-3 ADVANCE WARNING SIGN SPACING					
ROAD TYPE	DISTANCE BETWEEN SIGNS			SIGN LEGEND	
	A (FT.)	B (FT.)	C (FT.)	XX	YY
URBAN (≤30 MPH*)	100	100	100	AHEAD	AHEAD
URBAN (35-40 MPH*)	200	200	200	AHEAD	AHEAD
URBAN (≥45 MPH*)	350	350	350	1000 FT	AHEAD
RURAL	500	500	500	1500 FT	1000 FT
EXPRESSWAY/FREEWAY	1000	1500	2640	1 MILE	1/2 MILE

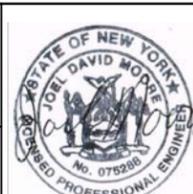
* PRECONSTRUCTION POSTED SPEED LIMIT

URBAN: (MEETS MORE THAN 1 OF THE FOLLOWING CRITERIA) SIDEWALKS, BICYCLE USAGE, CURBING, CLOSED DRAINAGE SYSTEMS, DRIVEWAY DENSITIES GREATER THAN 24 DRIVEWAYS PER MILE, MINOR COMMERCIAL DRIVEWAY DENSITIES OF 10 DRIVEWAYS PER MILE OR GREATER, MAJOR COMMERCIAL DRIVEWAYS, NUMEROUS RIGHT OF WAY CONSTRAINTS, HIGH DENSITY OF CROSS STREETS, 85TH PERCENTILE SPEEDS OF 45 MPH OR LESS.

EXPRESSWAY: DIVIDED HIGHWAYS FOR THROUGH TRAFFIC WITH FULL OR PARTIAL CONTROL OF ACCESS AND GENERALLY WITH GRADE SEPARATIONS AT MAJOR CROSSROADS.

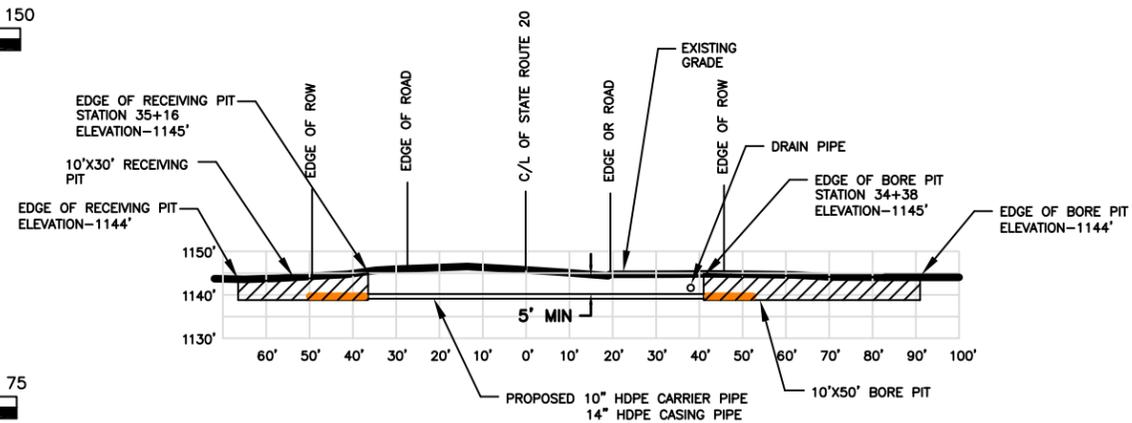
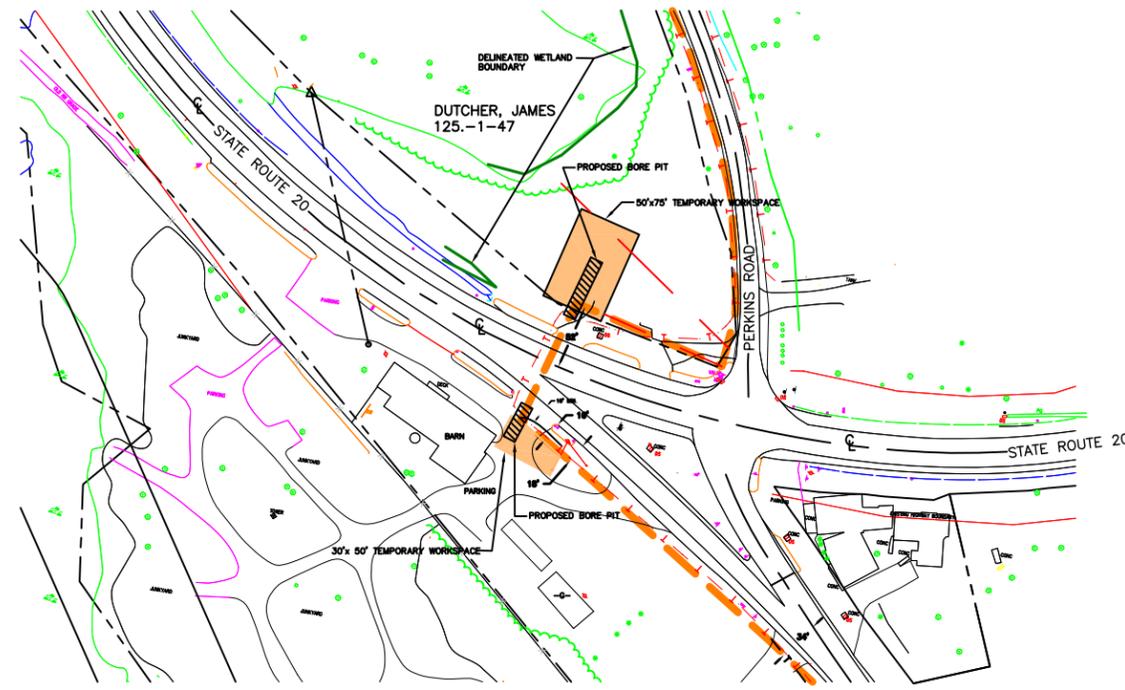
FREWAYS/INTERSTATE: LOCAL OR INTER REGIONAL HIGH-SPEED, DIVIDED, HIGH-VOLUME FACILITIES WITH FULL OR PARTIAL CONTROL OF ACCESS.

RURAL: ANY AREA NOT EXHIBITING MORE THAN ONE OF ABOVE CHARACTERISTICS.



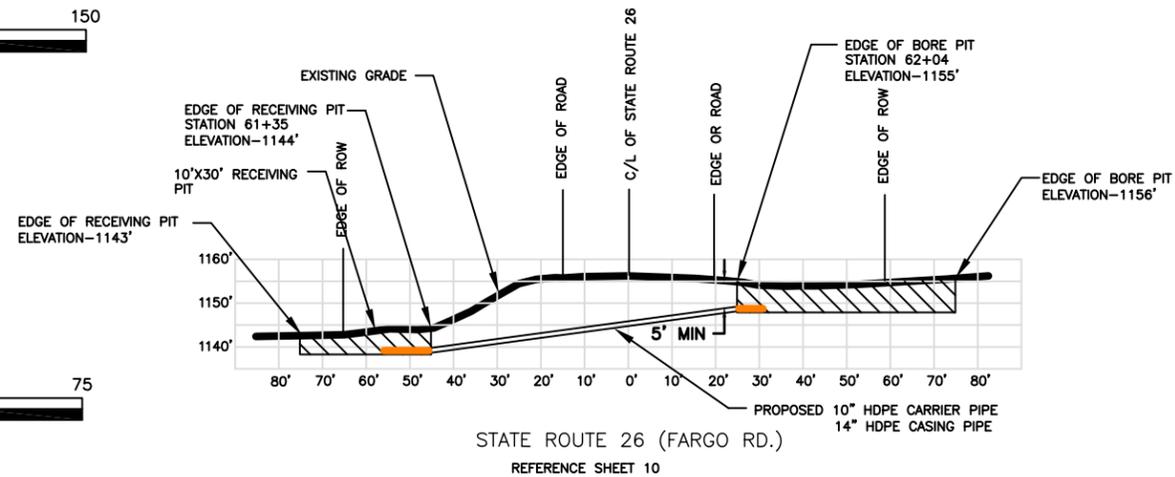
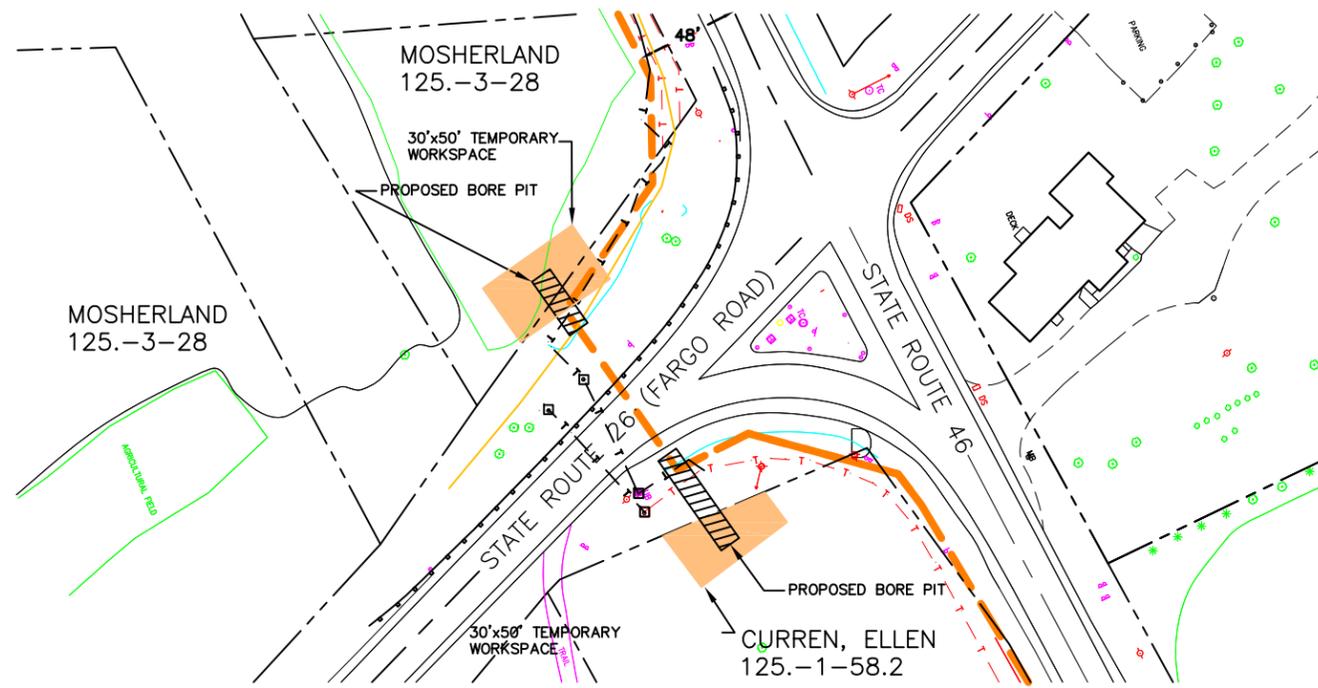
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SIZE	FSCM NO.	WORK ORDER NO.	REV.
C		13-001-02	-
SCALE	NONE	DATE	11-09-13
		SHEET	73 OF 86

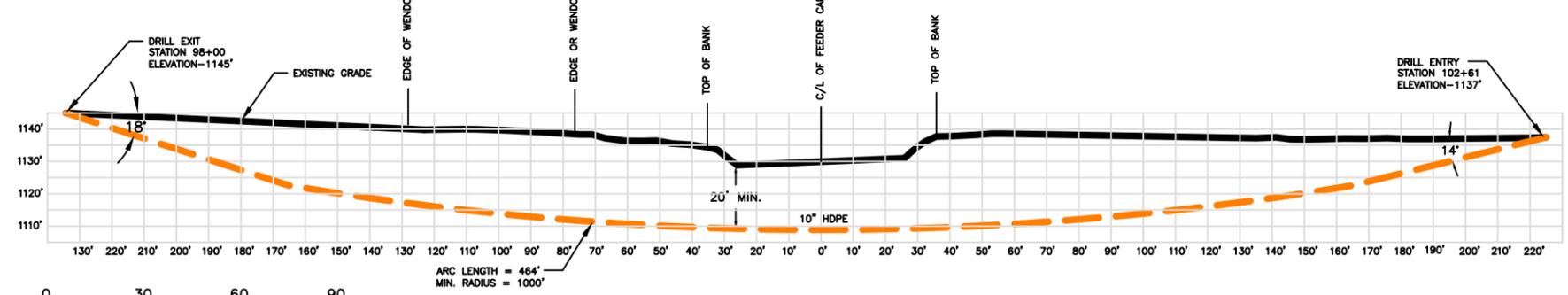


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<small>SIZE</small> C	<small>FSCM NO.</small>	<small>REVISION</small> -	<small>SHEET</small> 74 OF 86

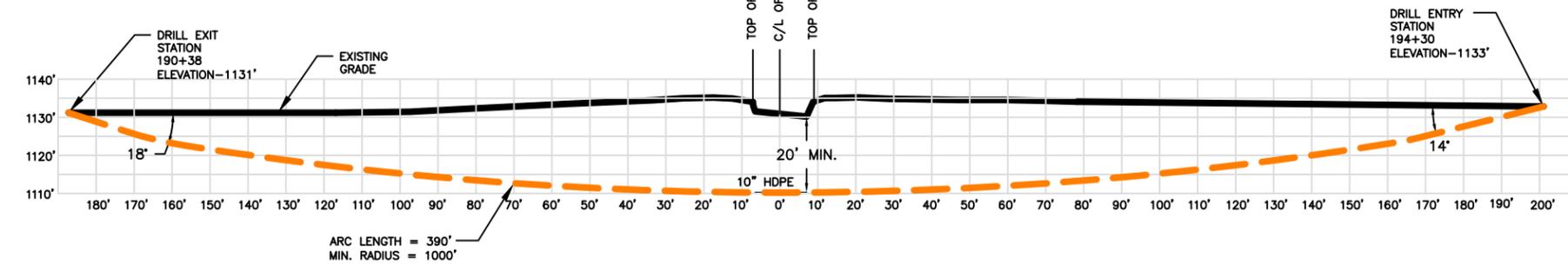
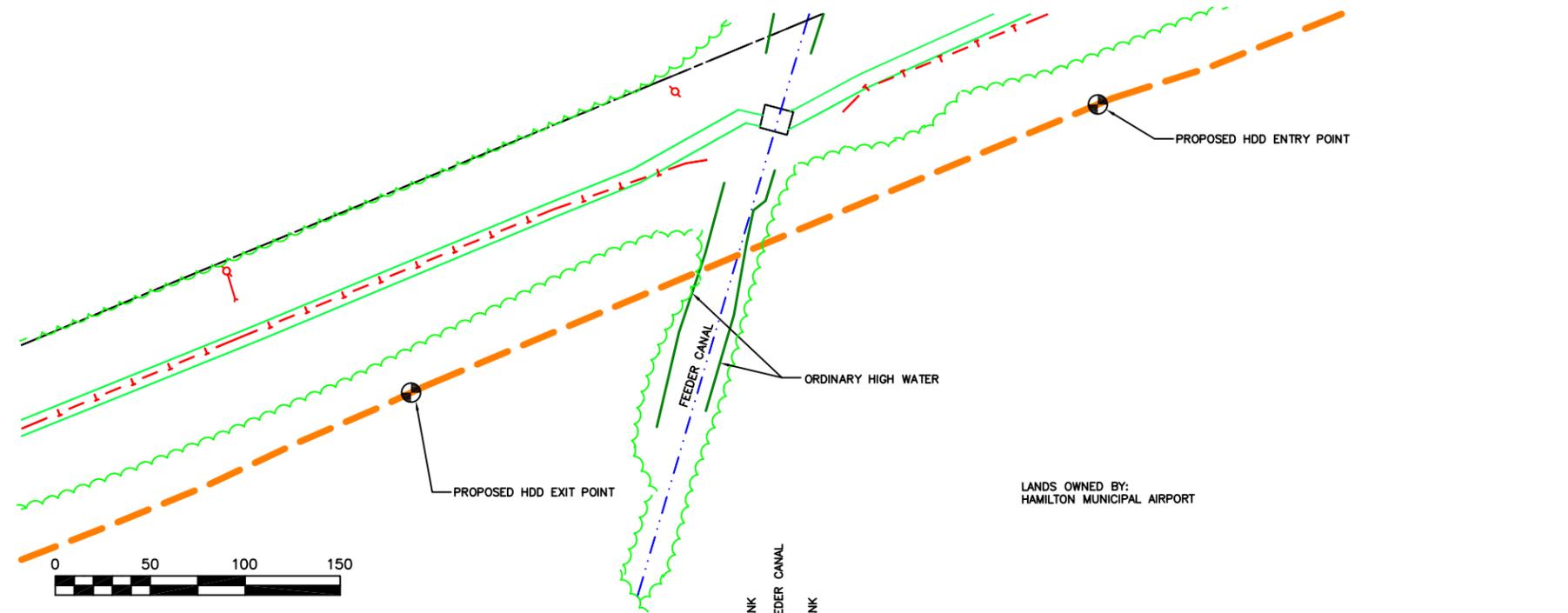


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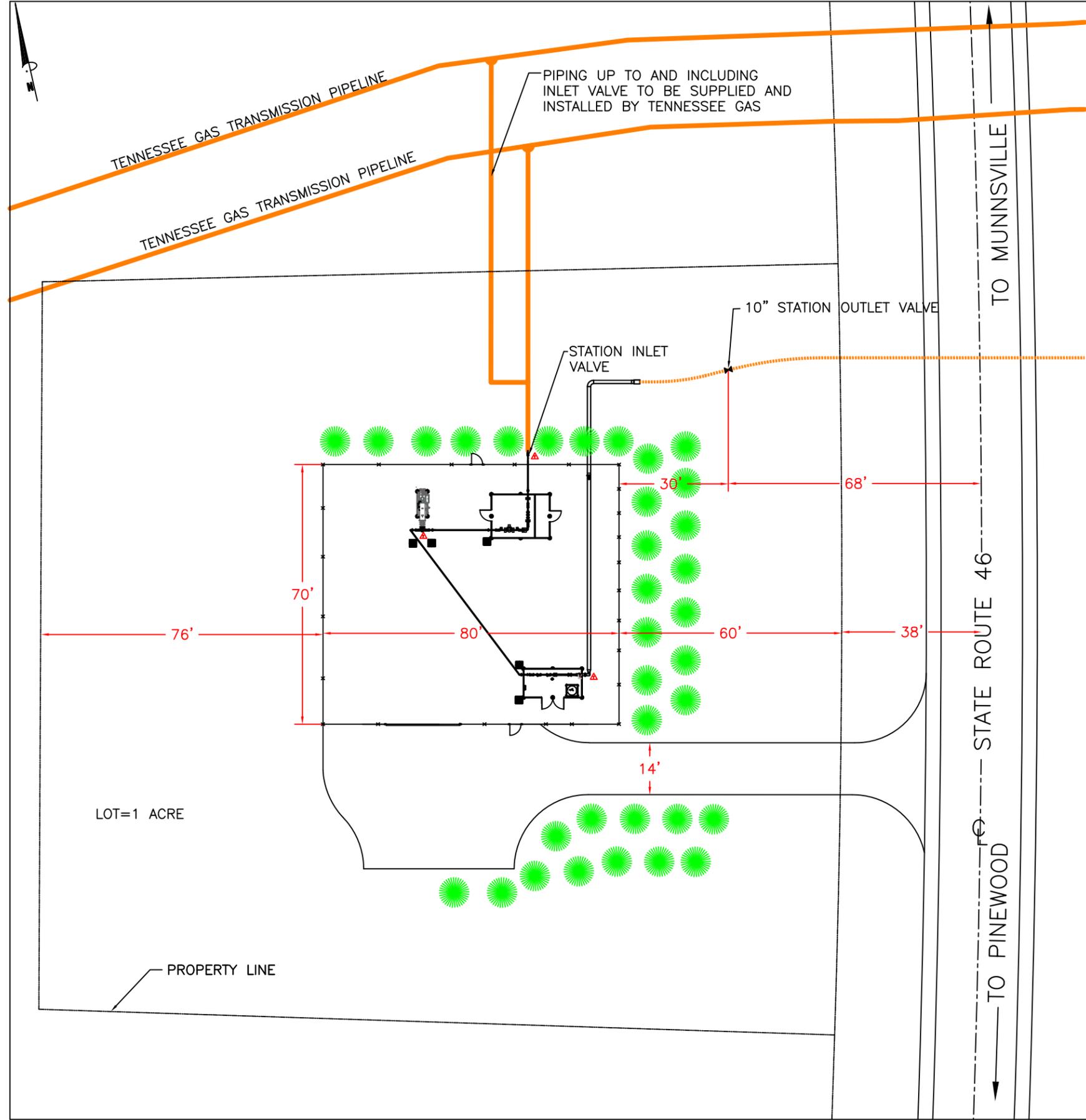
HORIZONTAL DIRECTIONAL DRILL-WENDOVER ROAD
REFERENCE SHEET 15 AND 16

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<small>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</small>	<table border="1"> <tr> <td>SIZE</td> <td>FSCM NO.</td> <td>WORK ORDER NO.</td> <td>REV.</td> </tr> <tr> <td>C</td> <td></td> <td>13-001-02</td> <td>-</td> </tr> <tr> <td>SCALE</td> <td>NONE</td> <td>DATE</td> <td>11-09-13</td> </tr> <tr> <td></td> <td></td> <td>SHEET</td> <td>76 OF 86</td> </tr> </table>	SIZE	FSCM NO.	WORK ORDER NO.	REV.	C		13-001-02	-	SCALE	NONE	DATE	11-09-13			SHEET	76 OF 86		
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C		13-001-02	-																
SCALE	NONE	DATE	11-09-13																
		SHEET	76 OF 86																



HORIZONTAL DIRECTIONAL DRILL—AIRPORT PROPERTY
REFERENCE SHEET 27 AND 28

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	<small>SIZE: C</small>	<small>DATE: 11-09-13</small>	<small>REV: -</small>
		<small>SHEET: 77 OF 86</small>	



GENERAL NOTES – CITY GATE STATION

- EXISTING UTILITIES DIMENSIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO PIPE INSTALLATION.
- UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR CROSS THE RIGHT OF WAY LIMITS AND/OR PROPERTY LIMITS DEFINED, ONTO PRIVATE PROPERTY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING PROPERTY LINE SURVEY PINS LOST DURING CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING ALL EROSION AND SILTATION. THIS INCLUDES, BUT IS NOT LIMITED TO, DEWATERING, ERECTION OF BARRICADES, CLEAN-UPS DUE TO INCLEMENT WEATHER, ETC.
- CONTRACTOR IS RESPONSIBLE (AT HIS OWN EXPENSE) FOR ANY AND ALL DAMAGE TO EXISTING UTILITIES, FACILITIES, CULVERTS, FENCING, CURBS, ROADWAYS, GUIDERAILS, DRIVEWAYS, ETC., CROSSED OR DISTURBED DURING CONSTRUCTION. REPLACEMENT OF THE SAME ITEM TO ITS ORIGINAL CONDITION OR BETTER, WILL BE REQUIRED.
- ALL GAS PIPE DIMENSIONS ARE CONCEPTUAL ONLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD ROUTING THE PIPE ACCORDING TO EXISTING CONDITIONS. THE VILLAGE SHALL NOT BE HELD RESPONSIBLE FOR INCORRECT DIMENSIONS SHOWN ON THE DRAWINGS, CONFLICTS BETWEEN THE SPECIFICATIONS OR DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE VILLAGE REPRESENTATIVE. THE VILLAGE WILL DETERMINE WHICH IS MORE RELEVANT TO THE AREA IN QUESTION.
- MAINTAIN A MINIMUM OF 12" CLEARANCE (UNLESS OTHERWISE NOTED), IN ALL DIRECTIONS, BETWEEN THE PIPE AND ANY OTHER EXISTING UTILITIES CROSSED OR PARALLELED.
- MINIMUM DEPTH OF COVER SHALL BE 36" ABOVE TOP OF PIPE, UNDER NORMAL CONDITIONS, INSIDE THE FENCING PERIMETER.
- ALL WELDING SHALL BE PERFORMED IN STRICT ACCORDANCE WITH API 1104, NYCRR255. ONLY QUALIFIED WELDERS WILL BE ALLOWED TO PERFORM WELD ACTIVITIES.
- ALL BUTT WELDS WILL BE 100% X-RAYED BY A VILLAGE APPROVED RADIOGRAPHY TESTING COMPANY.
- CONFLICTS OR AMBIGUITY BETWEEN CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE VILLAGE REPRESENTATIVE. THE VILLAGE WILL DETERMINE WHICH IS THE MOST PERTINENT TO THE AREA IN QUESTION.
- CONTRACTORS SHALL COAT AND WRAP ALL ABOVE GRADE PIPING (UP TO 6" ABOVE GRADE) AND PAINT ALL ABOVE GRADE PIPE WITH AN APPROVED PAINT.
- CONTRACTOR TO REMOVE TOP SOIL FROM THE SITE AND REPLACE WITH AN APPROVED FILL MATERIAL. THEN TOP WITH FILTER FABRIC AND A MINIMUM OF 6" OF CRUSHER RUN TO A SLOPING GRADE ON THE OUTSIDE OF THE FENCE LINE. CONTRACTOR TO FURNISH AND INSTALL.
- CONTRACTOR TO INSTALL AN INSULATING FULL FACE GASKET AT STATION INLET VALVE FLANGE, INLET & OUTLET OF METER BUILDING, INLET & OUTLET HEATER, AND INLET & OUTLET OF REGULATOR BUILDING.
- ALL BELOW GRADE PIPING IS TO BE SAND PADDED 3" BELOW AND 6" ABOVE PIPE.
- CONTRACTOR TO FURNISH AND INSTALL A CORRUGATED SLUCE PIPE AS REQUIRED BY NYSDOT DRIVEWAY PERMIT.
- ANY PLANTINGS OUTSIDE OF THE FENCE WILL BE SUPPLIED AND INSTALLED UNDER SEPARATE CONTRACT.

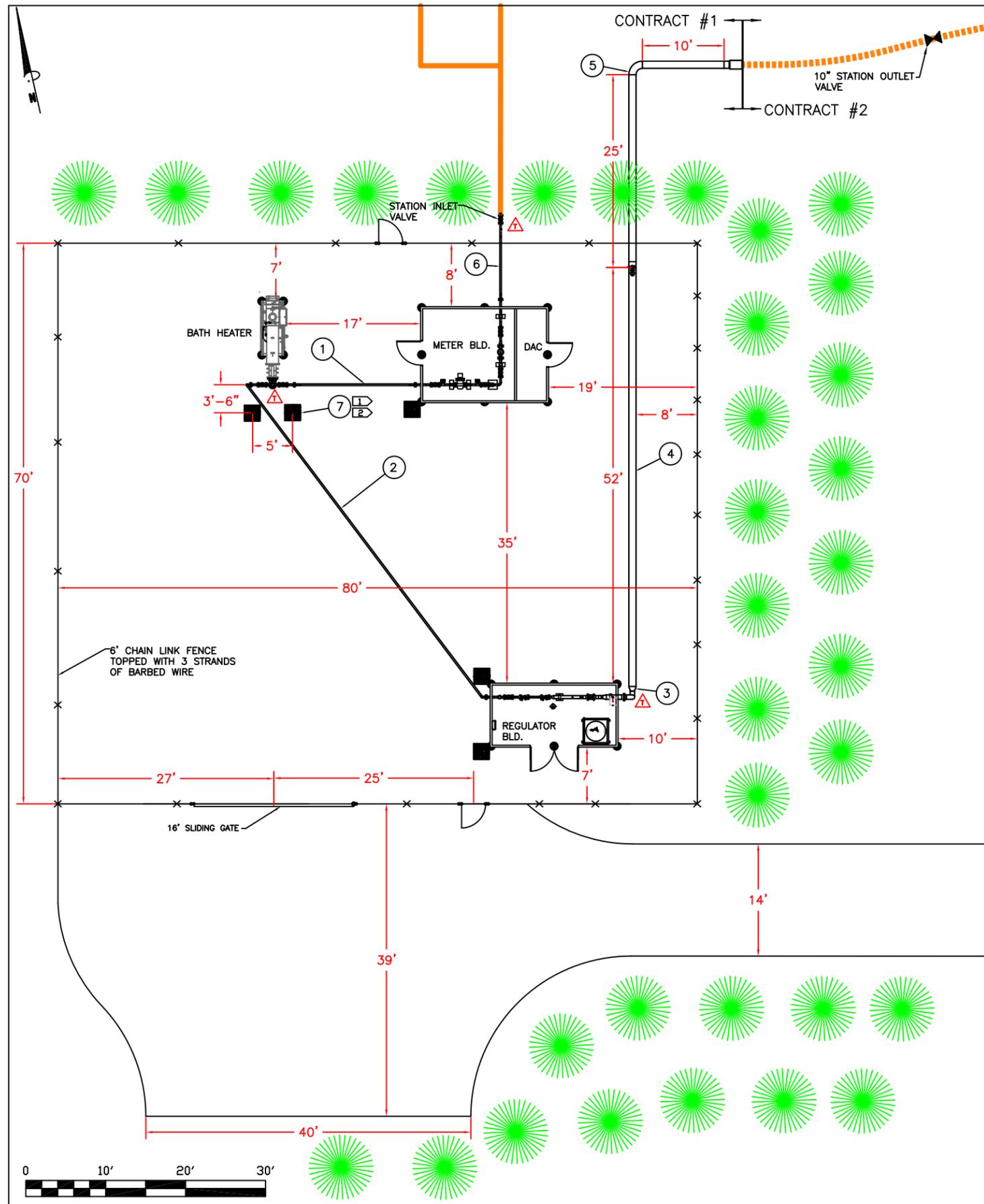


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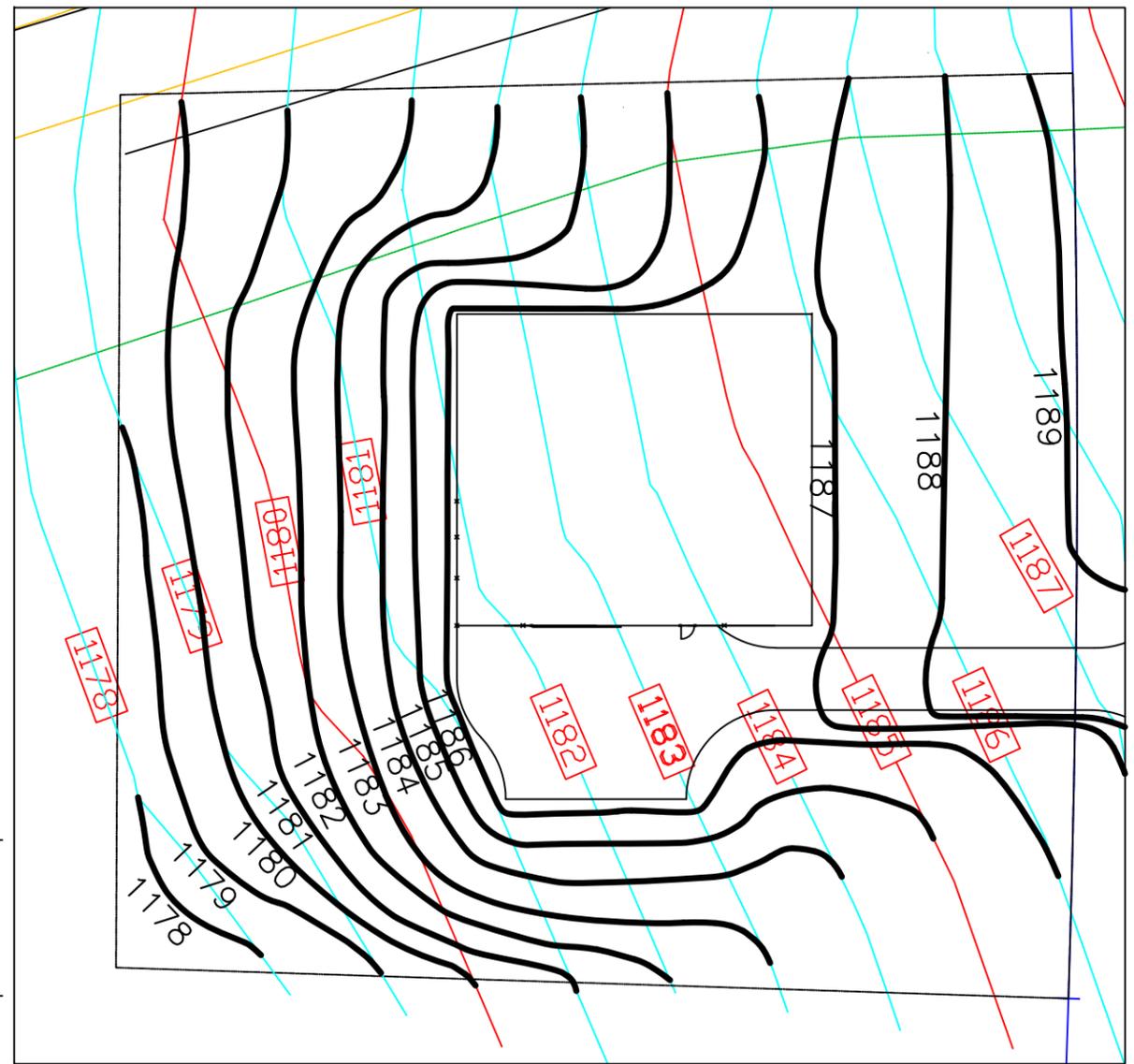
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SIZE	FSCM NO.	WORK ORDER NO.	REV
C		13-001-05	-
SCALE	1"=20'	DATE	11-09-13
		SHEET	78 OF 86



BILL OF MATERIALS				
ITEM	QTY.	SIZE	CLASS	DESCRIPTION
1	16FT	2"	XS	PIPE, XS, .218, X52, SMLS, FBE
2	55FT	2"	XS	PIPE, XS, .218, X52, SMLS, FBE
3	1 EA	6"x10"	STD	REDUCER, STD, CONCENTRIC
4	87FT	10"	STD	PIPE, STD, .365 X52, SMLS, FBE
5	1 EA	10"	STD	ELL, STD, LR, 90°
6	7FT	2"	XS	PIPE, XS, .218, X52, SMLS, FBE
7	5	4"	N/A	BOLLARD, 4" PIPE, CONCRETE,

NOTE:
 1 SEE DETAILS FOR BOLLARDS ON SHT. 85
 2 NON DIMENSIONED BOLLARDS PLACE APPROXIMATELY AS SHOWN



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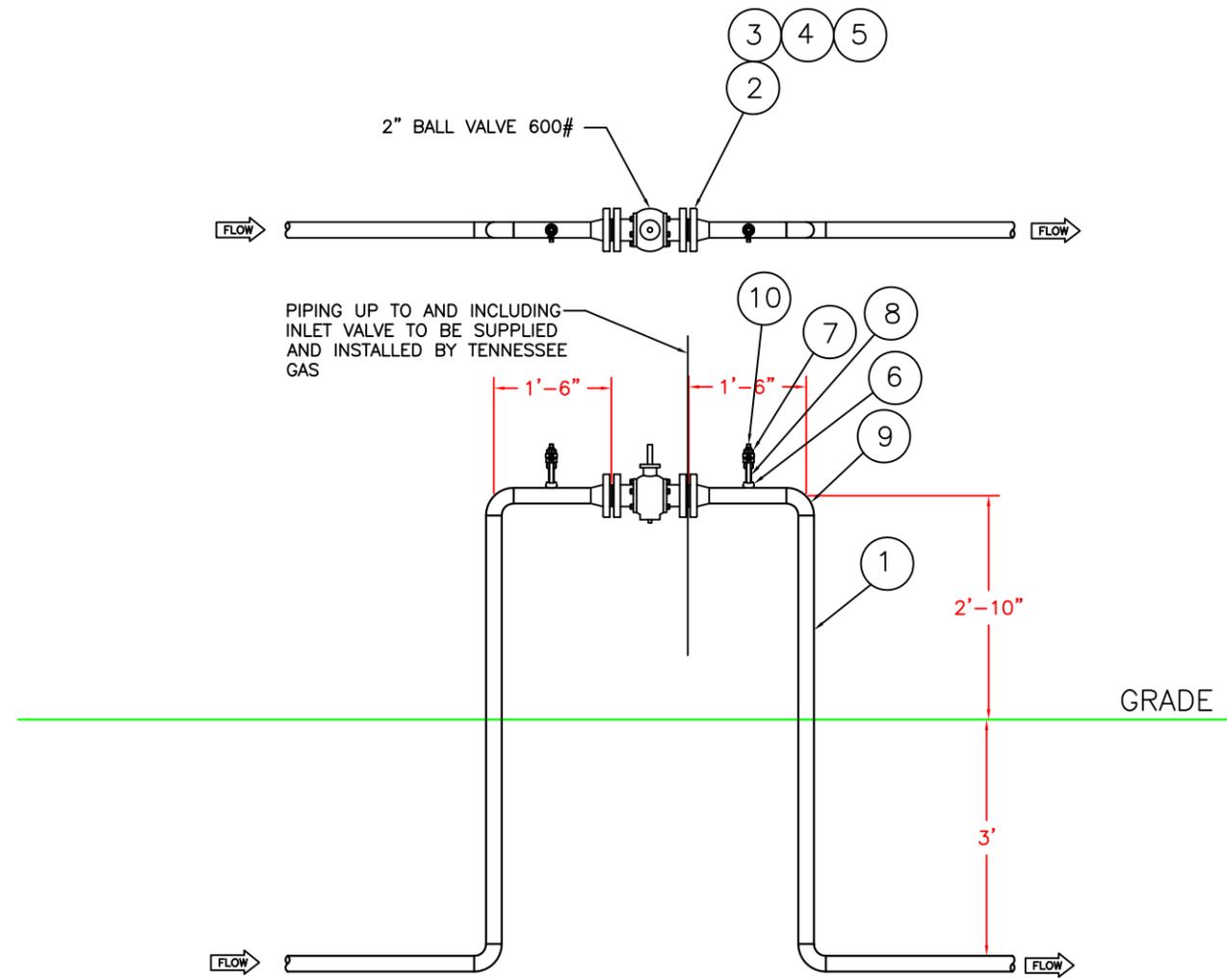
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SIZE	FSCM NO.	WORK ORDER NO.	REV
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PIPING UP TO AND INCLUDING
INLET VALVE TO BE SUPPLIED
AND INSTALLED BY TENNESSEE
GAS

2" BALL VALVE 600#

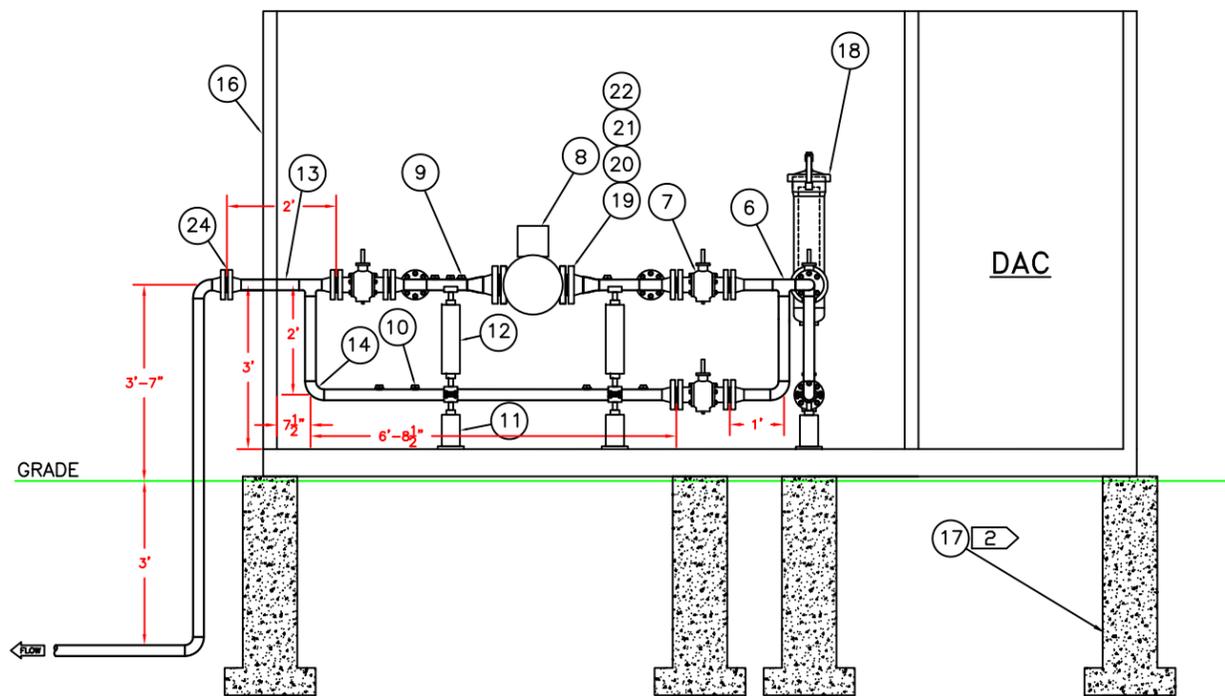
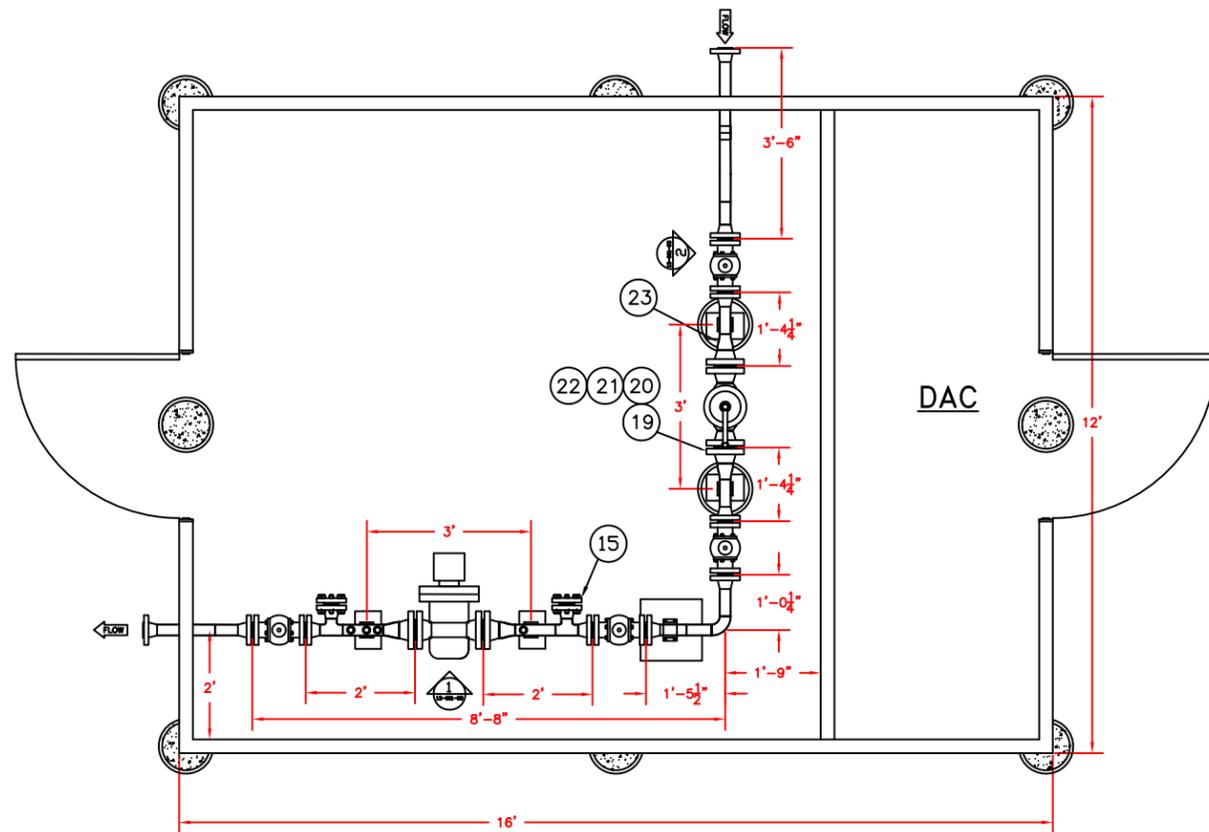
INLET VALVE

BILL OF MATERIALS				
ITEM	QTY.	SIZE	CLASS	DESCRIPTION
1	7FT	2"	XS	PIPE, XS, .218, X52, SMLS, FBE
2	1	2"	600#	FLANGE, WLDNK, RF
3	1	2"	600#	GASKET, INSULATING, FLANGE KIT
4	8	5/8"	N/A	BOLT STUD, ASTM A193, GRADE B7, 5/8" X 4-1/4"
5	16	5/8"	N/A	NUT, HVY, HEX, ASTM A194, GRADE 2H, 5/8" DIA
6	1	3/4"	N/A	THREAD-O-LET, WELD, 3/4" X 2"
7	2	3/4"		VALVE, BALL, STAINLESS STEEL
8	1FT	3/4"	XS	PIPE, XS, 3/4", X52, SMLS, BARE
9	2	2"	XS	ELBOW, LR, BW, 90°
10	1	3/4"	N/A	PLUG, STAINLESS STEEL, SQUARE HEAD

NOTE:
1. ALL FLANGE DIMENSIONS ARE TO THE FACE OF THE FLANGE



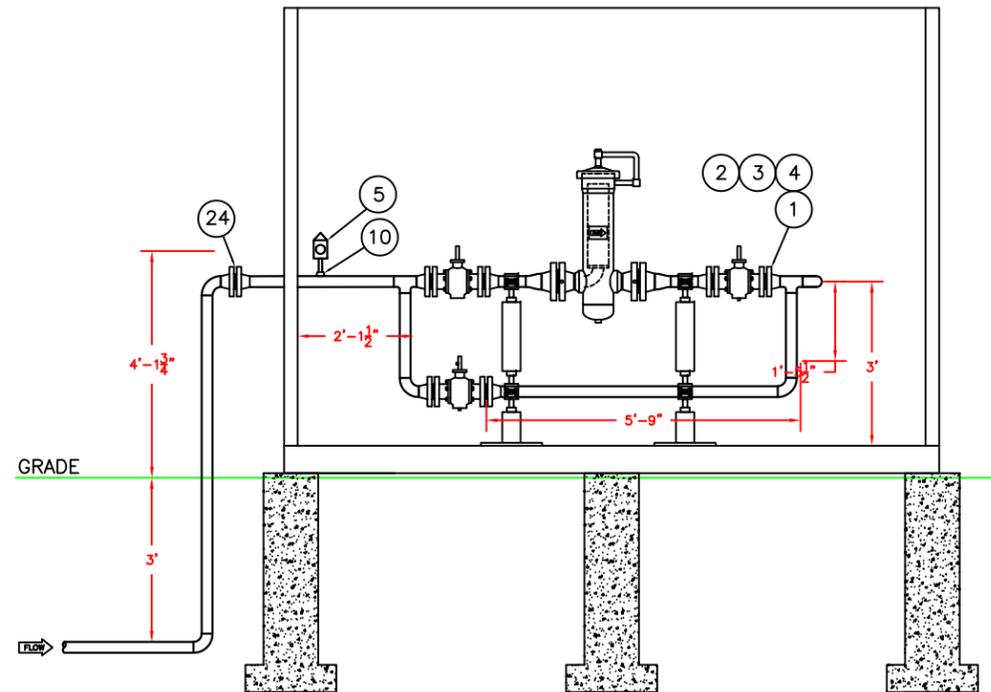
		www.gasengineering.com	
HAMILTON PIPELINE		SIZE: C	WORK ORDER NO: 13-001-05
<small>UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW</small>		SCALE: 3/4"=1'	DATE: 11-09-13
		SHEET: 80 OF 86	REV: -



METER BUILDING
 1 METER SECTION VIEW
 13-001-05

BILL OF MATERIALS				
ITEM	QTY.	SIZE	CLASS	DESCRIPTION
1	18	2"	600#	FLANGE, WLDNK RF
2	14	2"	600#	GASKET, SPIRAL WOUND W/ FLEXIBLE GRAPHITE
3	128	5/8"	N/A	BOLT STUD, ASTM A193, GRADE B7, 5/8" X 4-1/4"
4	256	5/8"	N/A	NUT, HVY, HEX, ASTM A194, GRADE 2H, 5/8" DIA
5	1	-	N/A	PRESSURE TRANSDUCER, ANALOG
6	4	2"	XS	TEE, XS, BW
7	6	2"	600#	VALVE, BALL, RF, RP
8	1	3"	N/A	7M DRESSER ROOTS B3-HPC 3" ROTARY METER
9	7	3/4"	N/A	THREAD-0-LET, WELD 3/4" X 2"
10	2	1"	N/A	THREAD-0-LET, WELD 1" X 2"
11	4	2"	N/A	PIPE SUPPORT, W / BASE
12	4	2"	N/A	PIPE SUPPORT, DOUBLE ENDS
13	38FT	2"	XS	PIPE, XS, .218, X52, SMLS, BARE
14	9	2"	XS	ELBOW, XS, LR, BW, 90°
15	2	2"	600#	FLANGE, WLDNK, RF, BLIND
16	1	6"X12"	N/A	BUILDING, METAL PARKLINE
17	10	12"	N/A	SONO TUBE
18	1	3"	600#	FILTER, RF, COALESCING APOLLO
19	4	3"	600#	FLANGE, WLDNK, RF
20	4	3"	600#	GASKET, SPIRAL WOUND W/ FLEXIBLE GRAPHITE
21	32	3/4"	N/A	STUD, ASTM A193, GRADE B7, 3/4" X 5"
22	64	3/4"	N/A	NUT, HVY, HEX, ASTM A194, GRADE 2H, 3/4" DIA
23	4	3"X2"	XS	REDUCER, XS, BW, CONCENTRIC
24	2	2"	600#	GASKET, INSULATING, FLANGE KIT

- NOTE:
 1. ALL FLANGE DIMENSIONS ARE TO THE FACE OF THE FLANGE
 2. SEE DETAILS FOR SONOTUBES ON SHIT. 8
 3. ALL THREAD-0-LETS TO BE TAPPED WITH 3/4" OR 1" SS QUARTER TURN VALVE WITH SS PLUGS.
 4. SEE GROUNDING DETAILS ON SHEET #83.



2 COALESCING FILTER SECTION VIEW
 13-001-05

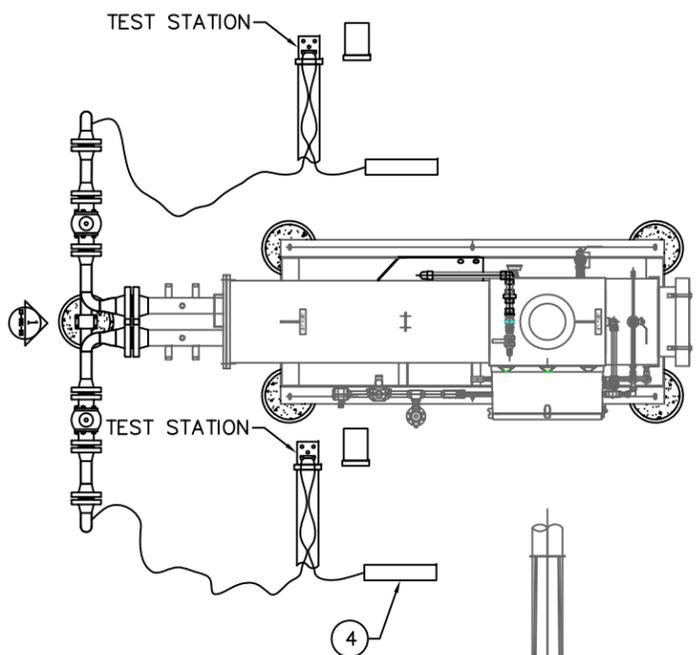


UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW

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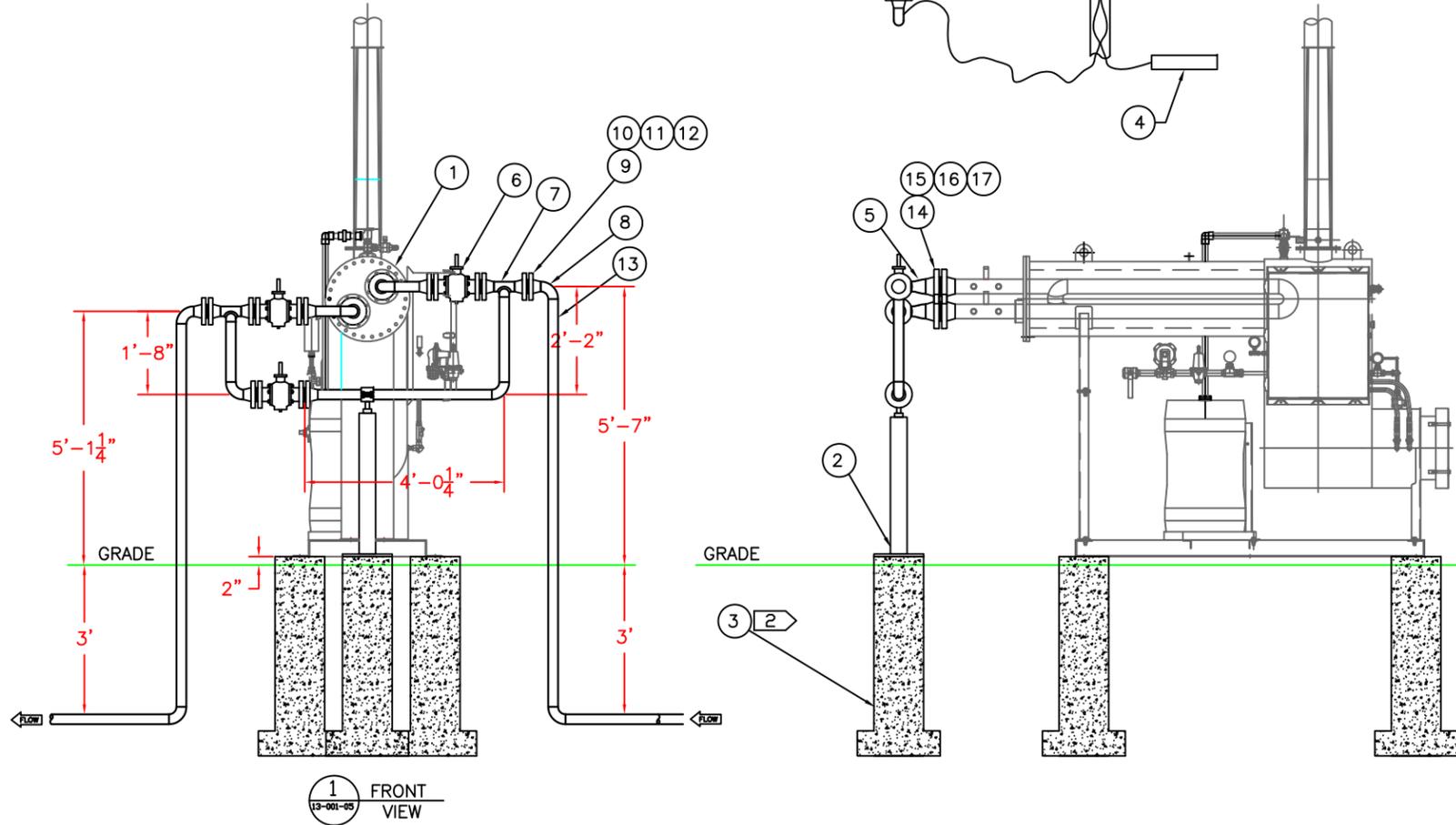
HAMILTON PIPELINE

SIZE	FSCM NO.	WORK ORDER NO.	REV
C		13-001-05	-
SCALE	1"=24"	DATE	11-09-13
		SHEET	81 OF 86



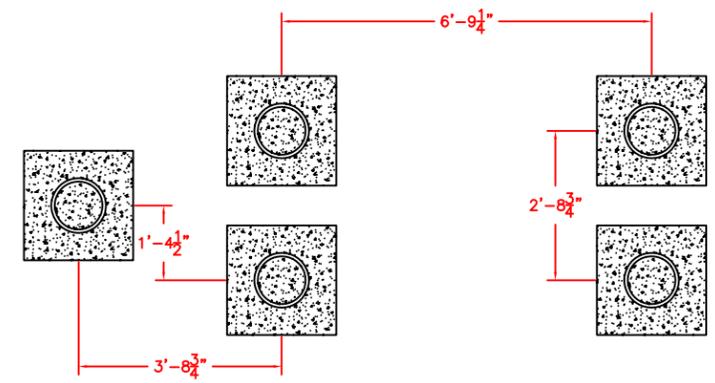
BILL OF MATERIALS				
ITEM	QTY.	SIZE	CLASS	DESCRIPTION
1	1			HEATER, CWT, WATER BATH, MODEL, 140
2	1			PIPE SUPPORT, W / BASE
3	5	12"		SONO TUBE
4	2	50 LB	N/A	ANODE, MAGNESIUM, 50#
5	2	2"x3"	XS	REDUCER, XS, BW, CONCENTRIC
6	3	2"	600#	VALVE, BALL, RF, RP
7	2	2"	XS	TEE, XS, BW
8	6	2"	XS	ELBOW, XS, LR, BW, 90°
9	10	2"	600#	FLANGE, WLDNK, RF
10	8	2"	600#	SPIRAL WOUND W/ FLEXIBLE GRAPHITE
11	64	5/8"		BOLT STUD, ASTM A193, GRADE B7, 5/8" X 4-1/4"
12	128	5/8"		NUT, HVY, HEX, ASTM A194, GRADE 2H, 5/8" DIA
13	30FT	2"	XS	PIPE, XS, .218, X52, SMLS, FBE
14	2	3"	600#	FLANGE, WLDNK, RF
15	2	3"	600#	GASKET, INSULATING FLANGE KIT
16	16	3/4"		STUD, ASTM A193, GRADE B7, 3/4" X 5"
17	32	3/4"		NUT, HVY, HEX, ASTM A194, GRADE 2H, 3/4" DIA

NOTE:
 1. ALL FLANGE DIMENSIONS ARE TO THE FACE OF THE FLANGE
 2. SEE DETAILS FOR SONOTUBES ON SHT. 8



1 FRONT VIEW
13-001-05

BATH HEATER



HEATER FOUNDATION PLAN



Call 811
before you dig

UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW

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HAMILTON PIPELINE

SIZE	FSCM NO.	WORK ORDER NO.	REV
C		13-001-05	-
SCALE	DATE	SHEET	
1"=24"	11-09-13	82 OF 86	

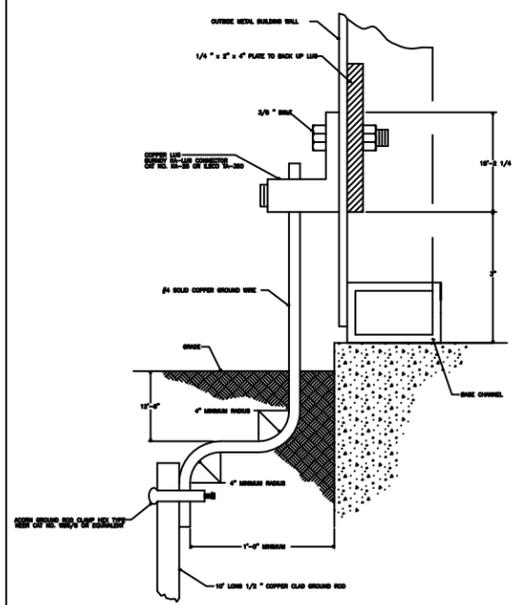
GUIDELINES FOR GROUNDING AND LIGHTNING PROTECTION SYSTEMS FOR SMALL METAL M&R BUILDINGS

THE HAZARDS OF LIGHTNING STRIKING A BUILDING IS PRESENT IN VARIOUS DEGREES DEPENDING ON THE LOCATION OF THE STRUCTURE, ITS SURROUNDINGS, AND THE FREQUENCY AND SEVERITY OF THUNDERSTORMS IN THE AREA. PROPER GROUNDING OF A METAL BUILDING STRUCTURE DOES NOT PREVENT A LIGHTNING STRIKE, BUT DOES PROVIDE A PATH TO CONDUCT THE DISCHARGE TO THE GROUND WITHOUT PASSING THROUGH THE NON-CONDUCTING PORTION OF THE BUILDING WHICH WOULD HAVE BEEN SUBJECTED TO DAMAGE FROM THE HEAT AND MECHANICAL FORCES DEVELOPED. THIS IS WHY MASONRY BUILDINGS CAN SUSTAIN MORE DAMAGE FROM A LIGHTNING STRIKE AS COMPARED WITH THE MORE CONDUCTIVE METAL BUILDINGS.

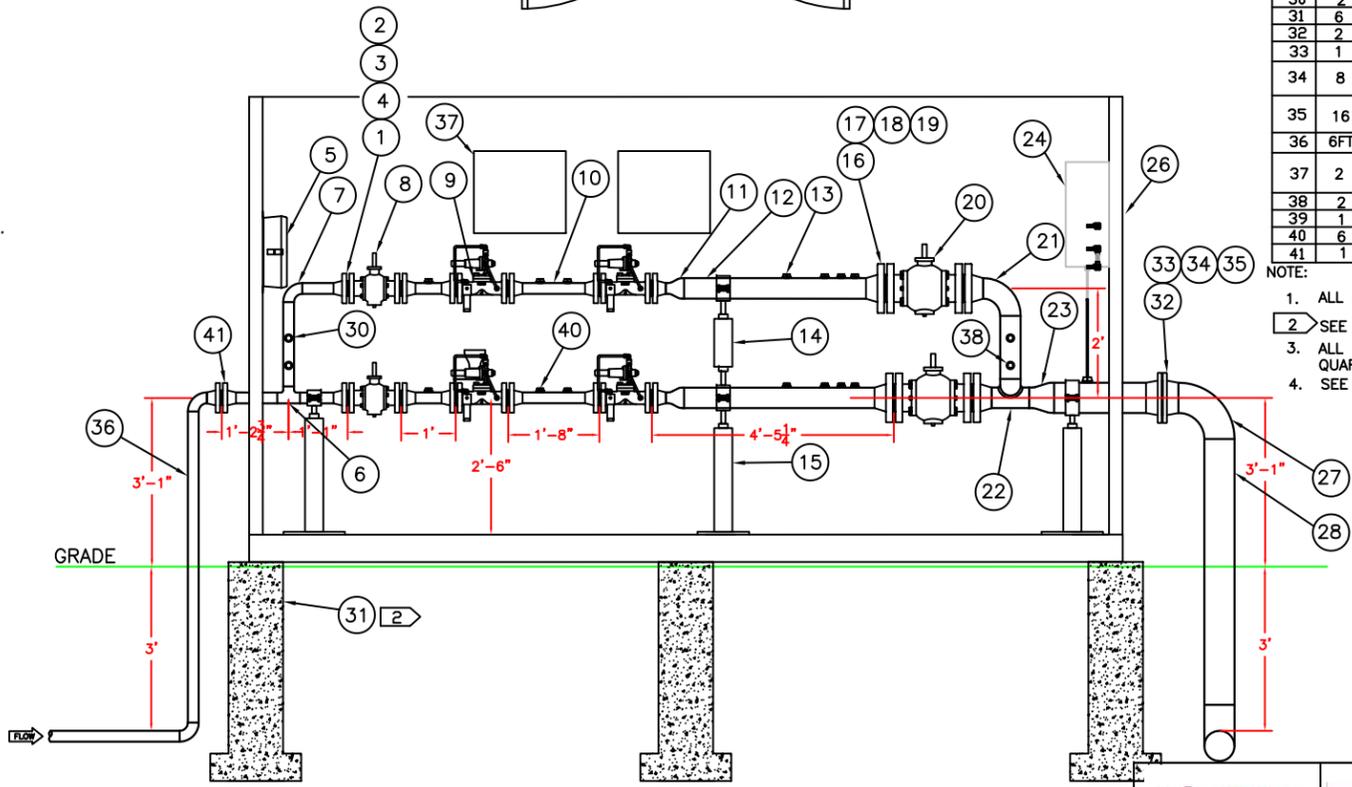
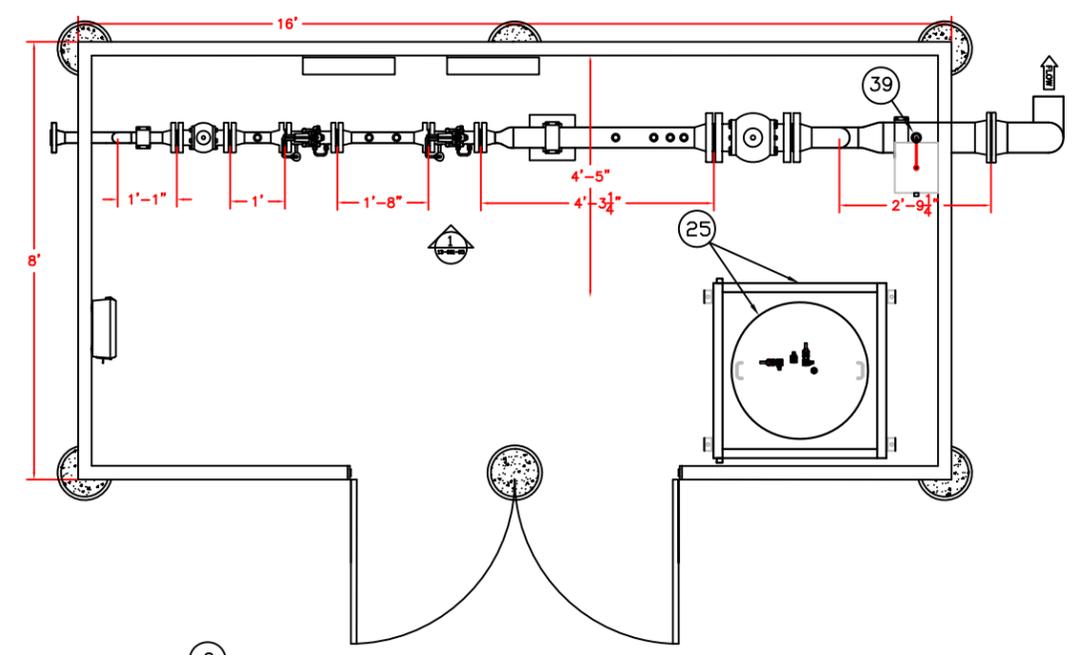
ALL METAL BUILDINGS REQUIRE A MINIMUM GROUNDING SYSTEM, BUT NOT ALL LOCATIONS WILL REQUIRE LIGHTNING PROTECTION. LOCAL JUDGEMENT IS NECESSARY IN DETERMINING WHETHER A LIGHTNING PROTECTION SYSTEM SHOULD BE INSTALLED ALONG WITH GROUNDING IN A GIVEN BUILDING. FOR EXAMPLE, HIGHER BUILDINGS SURROUNDING THE M&R BUILDING ARE PRIMARY LIGHTNING TARGETS AND AS SUCH ELIMINATED THE NEED FOR LIGHTNING PROTECTION ON SMALL BUILDINGS. A LOCATION IN A NARROW VALLEY SURROUNDED BY HILLS OR AN AREA WHERE LARGE TREES, OVERHEAD WIRES, TOWERS AND OTHER HIGH OBJECTS ARE NEARBY, ALL REDUCE THE NECESSITY FOR LIGHTNING PROTECTION ON COMPANY BUILDINGS. CONVERSELY, A LOCATION ON A HILLTOP OR ON FLAT OPEN AGRICULTURAL LAND WOULD REQUIRE LIGHTNING PROTECTION TIES INTO AN ADEQUATE GROUNDING SYSTEM.

GENERALLY SPEAKING, THE PREFABRICATED METAL BUILDING, BEING CONDUCTIVE, WILL ONLY REQUIRE TWO 1/2" X 10' LONG COPPER GROUND RODS CONNECTED BY 3/8" COPPER CLAD GROUNDING CABLES THAT TIE INTO THE BUILDING WALLS AT OPPOSITE SIDES OF THE BUILDING FOR SUFFICIENT PROTECTION. THE GROUND RODS WILL BE INSTALLED 1'-0" OR FURTHER FROM THE BUILDING WALL AND ALL MATERIAL WILL BE SIMILAR TO THAT SHOWN ON THE ADJACENT GROUNDING DETAIL. IF THE BUILDING SITS ON SHALLOW SOIL WHERE UNDERLYING ROCK PREVENTS THE 10' OF GROUND ROD FROM BEING DRIVEN VERTICALLY, LENGTHS OF CONDUCTOR WIRE EQUIVALENT TO 1/2 THE BUILDING'S PERIMETER CAN BE BURIED IN TRENCHES TO SUBSTITUTE FOR THE GROUND ROD. NOTE: A WORDS OF CAUTION WHEN SELECTING AND MARKING THE LOCATION FOR GROUND RODS IN THE FIELD, BE SURE THE GAS LINE IS NOT DIRECTLY UNDERNEATH. IF, IN THE JUDGMENT OF FIELD PERSONNEL, THE METAL BUILDING IS VULNERABLE TO LIGHTNING, NYSEG ENGINEERING DEPARTMENT CAN PROVIDE A MORE ELABORATE SYSTEM OF LIGHTNING AND GROUNDING PROTECTION. ALSO, IF THE BUILDING HAS ELECTRICAL SERVICE, THE FIELD SHOULD REQUEST ADDITIONAL GROUNDING INFORMATION FROM ENGINEERING.

- NOTES:**
1. ALL METAL BUILDINGS SHALL HAVE A MINIMUM OF TWO GROUNDING POINTS AS SHOWN IN THE ADJACENT DETAIL LOCATED AT DIAGONAL CORNERS OR OPPOSITE SIDES OF THE BUILDING.
 2. ALL GROUNDING MUST CONFORM TO LATEST SPECIFICATIONS OF THE NATIONAL ELECTRICAL CODE (NEC) AND RELEVANT LOCAL REGULATIONS.
 3. ALL BENDS ON GROUND WIRE TO BE SMOOTH LONG RADIUS BENDS (NO KINKING PERMITTED).
 4. ALL CONNECTIONS SHALL BE MADE WITH CLAMP TYPE CONNECTORS. NO SOLDERING IS PERMITTED.
 5. GROUND RODS SHALL BE OF COPPERWELD OR COPPER AND NO SMALLER THAN 1/2" X 10' LONG. GROUND RODS SHALL BE OF SUCH LENGTH TO PENETRATE THE EARTH INTO PERMANENTLY MOIST SOIL BELOW FROST LEVEL AND SHALL BE SPACED APART HORIZONTALLY NOT LESS THAN 6'.
 6. 18" MINIMUM COVER IS REQUIRED ON ALL GROUND WIRE.



PURCHASE STATION GROUNDING DETAIL
NOTES



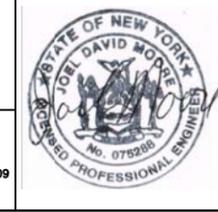
REGULATOR BUILDING



BILL OF MATERIALS

ITEM	QTY.	SIZE	CLASS	DESCRIPTION
1	14	2"	600#	FLANGE, WLDNK, RF
2	12	2"	600#	GASKET, SPIRAL WOUND W/ FLEXIBLE GRAPHITE
3	104	5/8"		STUD, ASTM A193, GRADE B7, 5/8" X 4-1/4"
4	208	5/8"		NUT, HVY, HEX, ASTM A194, GRADE 2H, 5/8" DIA
5	1	12"	N/A	PRESS/TEMP RECORDER, DUAL PEN, 30 DAY
6	1	2"	XS	TEE, BW
7	3	2"	XS	ELBOW, LR, BW, 90°
8	2	2"	600#	VALVE, BALL, RF, RP
9	4	2"	600#	REGULATOR, MOONEY FLOW GRID, RF
10	10FT	2"	XS	PIPE, XS, .218, X52, SMLS, BARE
11	2	4"X2"	XS	REDUCER, BW, CONCENTRIC
12	10FT	4"	XS	PIPE, XS, .337, X52, SMLS, BARE
13	8	3/4"		THREAD-0-LET, WELD, 3/4" X 4"
14	1	2"	N/A	PIPE SUPPORT, DOUBLE ENDS
15	3	2"	N/A	PIPE SUPPORT, W / BASE
16	4	4"	600#	FLANGE, WLDNK, RF
17	4	4"	600#	GASKET, SPIRAL WOUND W/ FLEXIBLE GRAPHITE
18	32	7/8"		STUD, ASTM A193, GRADE B7, 7/8" X 5.75"
19	64	7/8"		NUT, HVY, HEX, ASTM A194, GRADE 2H, 7/8" DIA
20	2	4"	600#	VALVE, BALL, RF, RP
21	1	4"	XS	ELBOW, LR, BW, 90°
22	1	4"	XS	TEE, BW
23	1	6"X4"	XS	REDUCER, BW, CONCENTRIC
24	1	9.5"X11"X23"	N/A	ODORIZER, Z9000, ZECK
25	1	120 GAL	N/A	ODORIZER TANK AND CONTAINMENT, 120 GALLON
26	1	8'X16'		BUILDING, METAL PARKLINE
27	2	6"	STD	ELBOW, LR, BW, 90°
28	10FT	6"	N/A	PIPE, .280, X52, SMLS, FBE
29				
30	2	1"		THREAD-0-LET, WELD, 1" X 2"
31	6	12"	N/A	SONO TUBE
32	2	6"	150#	FLANGE, WLDNK, RF
33	1	6"	150#	GASKET, INSULATING, FLANGE KIT
34	8	1"		STUD, ASTM A193, GRADE B7, 1" X 4.00"
35	16	1"		NUT, HVY, HEX, ASTM A194, GRADE 2H, 1" DIA
36	6FT	2"	XS	PIPE, XS, .218, X52, SMLS, FBE
37	2	N/A	N/A	BRUEST INSTRUMENT GAS HEATER, MODEL 1800, DUAL COIL
38	2	1"		THREAD-0-LET, WELD, 1" X 4"
39	1	1"		THREAD-0-LET, WELD, 1" X 6"
40	6	3/4"		THREAD-0-LET, WELD, 3/4" X 2"
41	1	2"	600#	GASKET, INSULATING, FLANGE KIT

- NOTE:**
1. ALL FLANGE DIMENSIONS ARE TO THE FACE OF THE FLANGE
 2. SEE DETAILS FOR SONOTUBES ON SHT. 85
 3. ALL THREAD-0-LETS TO BE TAPPED WITH 3/4" OR 1" SS QUARTER TURN VALVE WITH SS PLUGS.
 4. SEE GROUNDING DETAILS THIS SHEET.



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HAMILTON PIPELINE

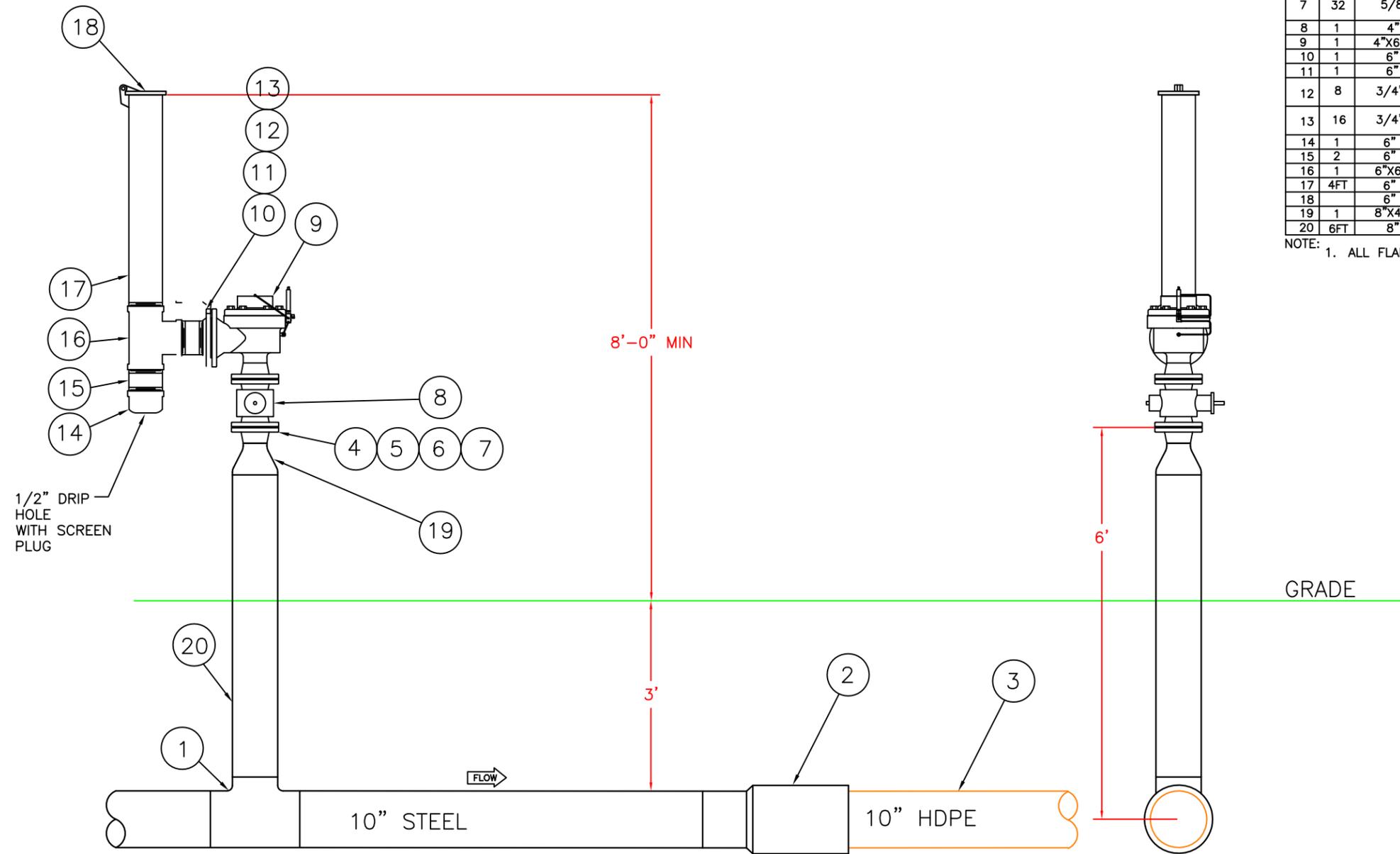
SCALE: 1"=24" DATE: 11-09-13 SHEET: 83 OF 86

SIZE: C FSCM NO. WORK ORDER NO. 13-001-05 REV: -

UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW

BILL OF MATERIALS				
ITEM	QTY.	SIZE	CLASS	DESCRIPTION
1	1	10"X8"	STD	TEE, REDUCER, STD, BW
2	1	10"X10"	N/A	10" ST, STD WE X 10" POLY SDR11 TRANSITION FITTING
3	TBD	10"	N/A	PIPE, POLY, HDPE, SDR11
4	1	4"	150#	FLANGE, WLDNK, RF
5	2	4"	150#	GASKET, RING, CLASS 150#
6	16	5/8"	N/A	STUD, ASTM A193, GRADE B7, 5/8" X 3-3/4"
7	32	5/8"	N/A	NUT, HVY, HEX, ASTM A194, GRADE 2H, 5/8" DIA
8	1	4"	150#	VALVE BALL, 150#, FULL PORT, WITH LOCKING COLLAR
9	1	4"X6"	150#	SAFETY RELIEF VALVE 4" X 6", 150#
10	1	6"	150#	FLANGE, THREADED, RF
11	1	6"	150#	GASKET, RING, CLASS 150#
12	8	3/4"		STUD, ASTM A193, GRADE B7, 3/4" X 4"
13	16	3/4"		NUT, HVY, HEX, ASTM A194, GRADE 2H, 3/4" DIA
14	1	6"	STD	CAP, THREADED, ALUMINUM
15	2	6"	STD	NIPPLE, THREADED, ALUMINUM, 6"X4"
16	1	6"X6"	STD	TEE, ALUMINUM, THREADED
17	4FT	6"	STD	PIPE, ALUMINUM
18	6"	N/A		CAP, VENT, WEATHER, ALUMINUM
19	1	8"X4"	STD	REDUCER, BW, CONCENTIC
20	6FT	8"	N/A	PIPE, .250, X52, SMLS, FBE

NOTE: 1. ALL FLANGE DIMENSIONS ARE TO THE FACE OF THE FLANGE

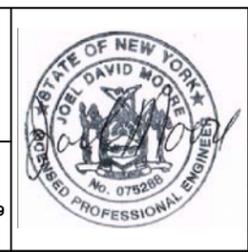


RELIEF VALVE



Call 811
before you dig

UNAUTHORIZED ALTERATION OR ADDITION TO PLANS BEARING A LICENSED ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW



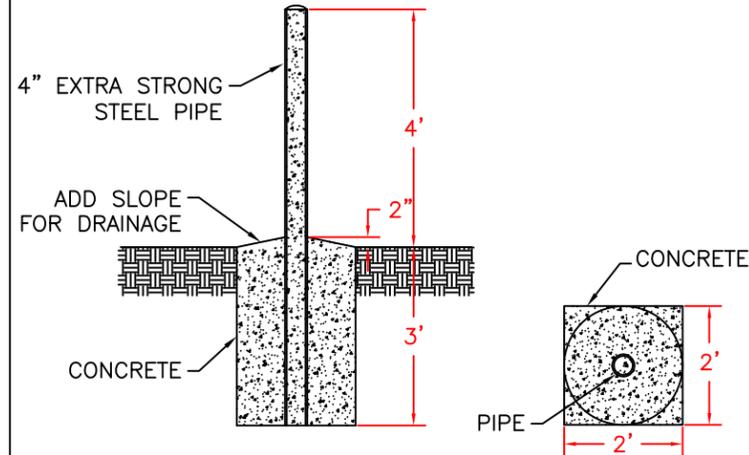
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HAMILTON PIPELINE

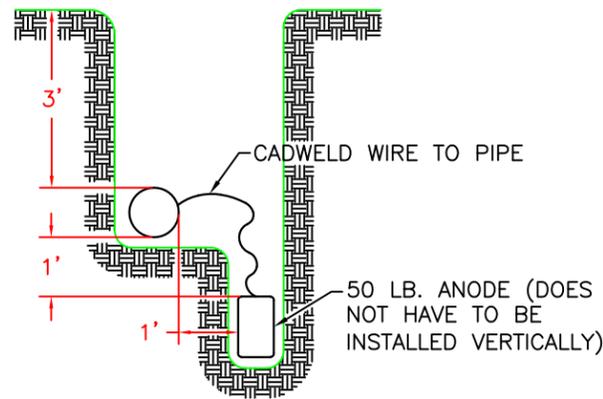
SIZE	FSCM NO.	WORK ORDER NO.	REV
C		13-001-05	-
SCALE	DATE	SHEET	
3/4"=1'	11-09-13	84 OF 86	

NOTE:

1. **GENERAL**
 - A. HOLE FOR STEEL PIPE MAY BE DUG ROUND OR SQUARE 2' WIDE AND 3' DEEP.
 - B. PIPE TO BE FILLED WITH CONCRETE COMPLETELY AND ROUNDED OFF AT THE TOP TO SHED WATER, DO NOT PARTIALLY FILL.
2. **PAINT:**
 - A. BARRICADE SHALL BE PRIMED AND PAINTED.
 - B. FINISH COLOR: SAFETY YELLOW UNLESS OTHERWISE SPECIFIED.



PIPE BOLLARD DETAIL



TYPICAL ANODE INSTALLATION



CITY GATE STATION EQUIPMENT SPECIFICATIONS

BUILDINGS: METAL BUILDINGS

- 12' x 16' x 8'H METER & DAC BUILDING
 - 2 SINGLE DOORS WITH PUSH PANIC HARDWARE
 - EXPLOSION PROOF LIGHTING
 - RIDGE VENT AND DOOR LOUVERS
 - CONTAINS: FILTER, METER RUN, ELECTRONICS, PIPE AND VALVING
- 8' x 16' x 8'H REGULATOR BUILDING
 - DOUBLE DOOR WITH PUSH PANIC HARDWARE
 - EXPLOSION PROOF LIGHTING
 - RIDGE VENT AND DOOR LOUVERS
 - CONTAINS: REGULATORS, PIPING AND VALVING, ODORIZER AND TANK, RECORDING CHART,
 - PILOT HEATERS

VALVES:

- 2" QUARTER TURN, BALL VALVES
 - CLASS 600 RF x RF
 - REDUCED PORT
 - LEVER OPERATED
 - TRUNION MOUNTED
 - BLOCK AND BLEED LINES
- 4" QUARTER TURN, BALL VALVES
 - CLASS 600 RF x RF
 - REDUCED PORT
 - LEVER OPERATED
 - TRUNION MOUNTED
 - BLOCK AND BLEED LINES

HEATER: COLD WATER TECHNOLOGIES

- MODEL 140
 - 3" CLASS 600 FLANGES

FILTER: APOLLO

- 3" CLASS 600, RF x RF
 - COALESCING FILTER ELEMENT
 - LINE MOUNTED WITH QUICK OPENING TOP

METER: DRESSER ROOTS

- SERIES B3-HPC METER
 - 7M
 - METER INDEX WITH INSTRUMENT DRIVE
 - MERCURY MMX P&T CORRECTOR
 - 3" CLASS 600, RF x RF, INLET AND OUTLET FLANGES
 - MINIMUM FLOW= 33 Mscfd @ 700 psig
 - MAXIMUM FLOW= 6969 Mscfd @ 600 psig

REGULATORS: MOONEY FLOWGRID

- DUAL REDUNDENT RUNS
 - STANDBY MONITOR SET
 - 2" CLASS 600, RF x RF

CATHODIC PROTECTION:

- 50 LB. MAGNESIUM ANODES
 - TEST STATION REQUIRED FOR EACH SECTION OF BURIED STEEL PIPE

ODORIZER: ZECK

- Z9000
 - TBM
 - 120 GALLON TANK WITH CONTAINMENT
 - REQUIRES PULSES FROM THE METER OR FLOW RATE FROM AN RTU TO ODORIZE AUTOMATICALLY

RECORDING CHART: MERCURY

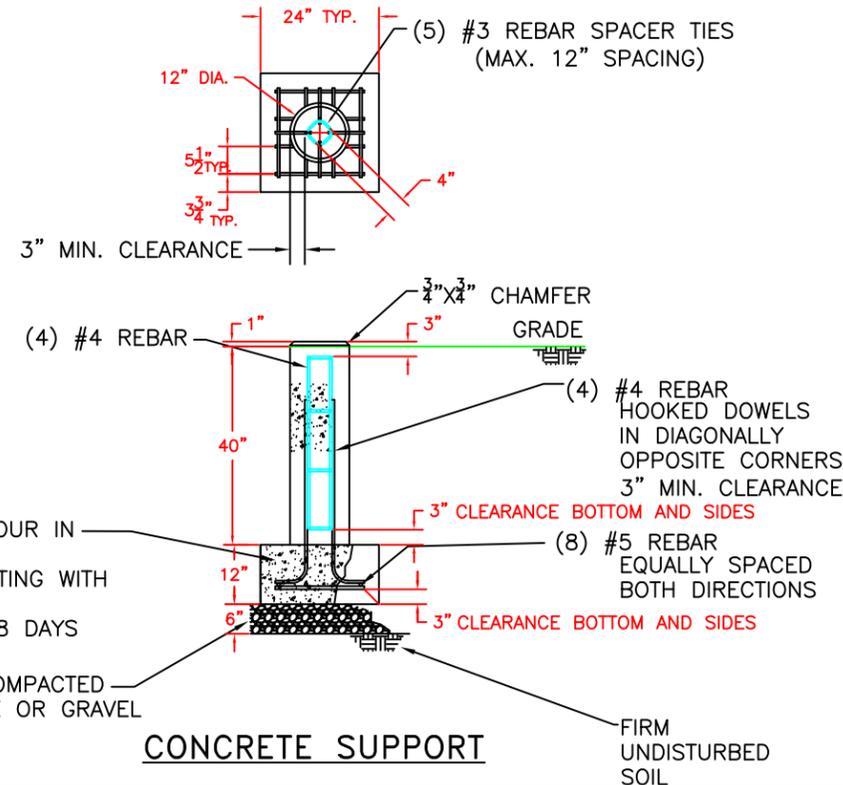
- 12" DUAL PEN
 - WALL MOUNT
 - P1 0-1500 PSIG
 - P2 0-150 PSIG

PILOT HEATER: BRUEST

- MODEL 1800
 - DUAL COIL
 - FM W/EXP JUNCTION BOX

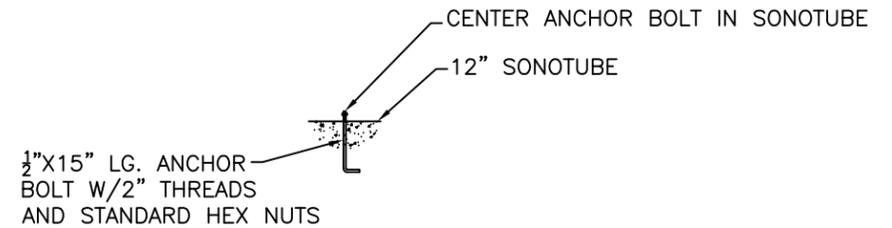
SAFETY RELIEF VALVE:

- MERCER
 - 4" x 6" CLASS 150



4" TO 6" OF COMPACTED CRUSHER STONE OR GRAVEL

CONCRETE SUPPORT



ANCHOR BOLT DETAIL

NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL LOCAL, STATE, AND FEDERAL PERMITS PRIOR TO PERFORMING ANY WORK.
2. THESE PLANS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A SECURE AND SAFE SITE DURING ALL ASPECTS OF CONSTRUCTION. EXCAVATIONS AND TRENCHING SHALL BE PERFORMED IN ACCORDANCE WITH STATE OF NEW YORK INDUSTRIAL CODE. RULE 23, O.S.H.A. TITLE 29, PART 1926, NEW YORK STATE DEPARTMENT OF LABOR, TITLE 12, PART 23, AND ALL OTHER APPLICABLE SAFETY STANDARDS AND CODES.
3. GENERAL STANDARD: ACI 301 LATEST EDITION
4. DESIGN STANDARD: ACI 318 LATEST EDITION
5. DETAILING STANDARD: ACI 315 LATEST EDITION
6. THE VILLAGE/CONTRACTOR SHALL EMPLOY ACCEPTABLE TESTING LABORATORY TO PERFORM MATERIALS EVALUATION.
7. CONTRACTOR SHALL FULLY COMPLY WITH NYCRRB PART 753-DIGSAFELY NEW YORK AND SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES BEFORE COMMENCING WORK. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE UNDERGROUND UTILITIES.
8. BACKFILL AROUND FOUNDATION SHALL BE PROPERLY COMPACTED IN 6" TO 8" LIFTS.
9. SPREAD FOOTING SHALL BE INSTALLED ON A 4" TO 6" BASE OF COMPACTED CRUSHED STONE OR GRAVEL.
10. THE SUBBASE SHALL EXTEND AT LEAST A MINIMUM OF ONE FOOT BEYOND THE OUTSIDE OF THE FOOTER, IN ALL DIRECTIONS.
11. SPREAD FOOTING SHALL BE A CONTINUOUS POURED IN PLACE FOOTING AND REQUIRES 7 DAYS OF CURE TIME BEFORE USE.
12. ALL CONCRETE MUST HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
13. REINFORCEMENT SHALL MEET THE REQUIREMENTS OF ASTM A615, GRADE 60, DEFORMED BARS AND SHALL BE HELD SECURELY IN POSITION WITH STANDARD ACCESSORIES IN CONFORMANCE WITH CRSI MANUAL OF STANDARD PRACTICE AND ACI 531 DURING THE PLACING OF THE CONCRETE. DO NOT WELD OR TACKWELD REINFORCING STEEL.
14. REINFORCING BARS SHOULD BE MILD STEEL WITH A MINIMUM YIELD STRENGTH OF 60 PSI.
15. ALL REINFORCING BAR BENDS SHOULD BE MADE MECHANICALLY. HEAT BENDING SHOULD NOT BE PERMITTED.
16. THE FINISHED GROUND WITHIN A 10' PERIMETER ADJACENT TO PIER MUST BE GRADED TO PROVIDE ADEQUATE DRAINAGE TO DIVERT WATER AWAY FROM PIERS.

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		<p>HAMILTON PIPELINE</p>	
<p>SIZE: C</p>	<p>FSCM NO.:</p>	<p>WORK ORDER NO. 13-001-05</p>	<p>REV: -</p>
<p>SCALE: 1"=24"</p>	<p>DATE: 11-09-13</p>	<p>SHEET: 85 OF 86</p>	

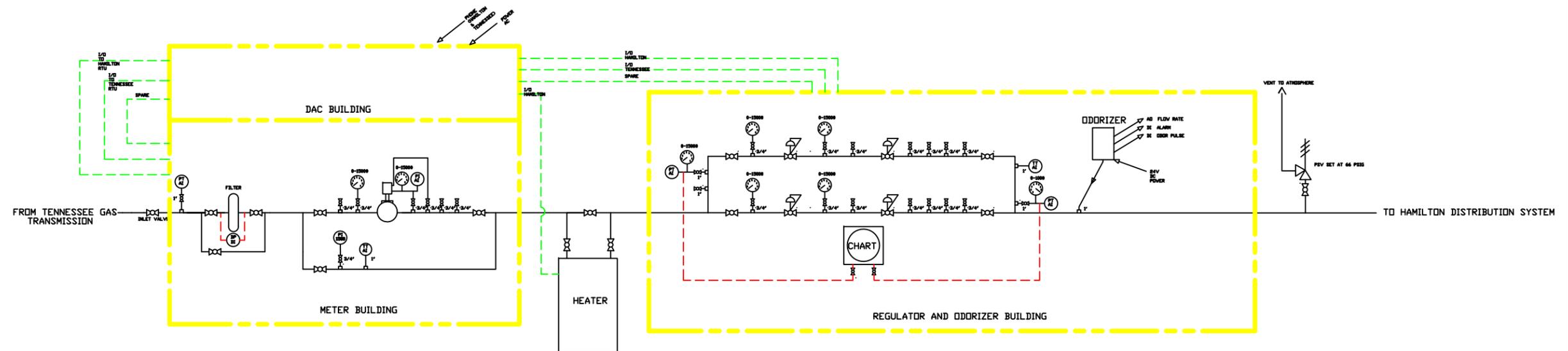
NOTES: THE CONTRACTOR SHALL FURNISH THE REQUIRED LABOR, MATERIALS, AND SUPERVISION NECESSARY TO PROVIDE THE SHOWN CIRCUITS.

110 VOLT CIRCUITS

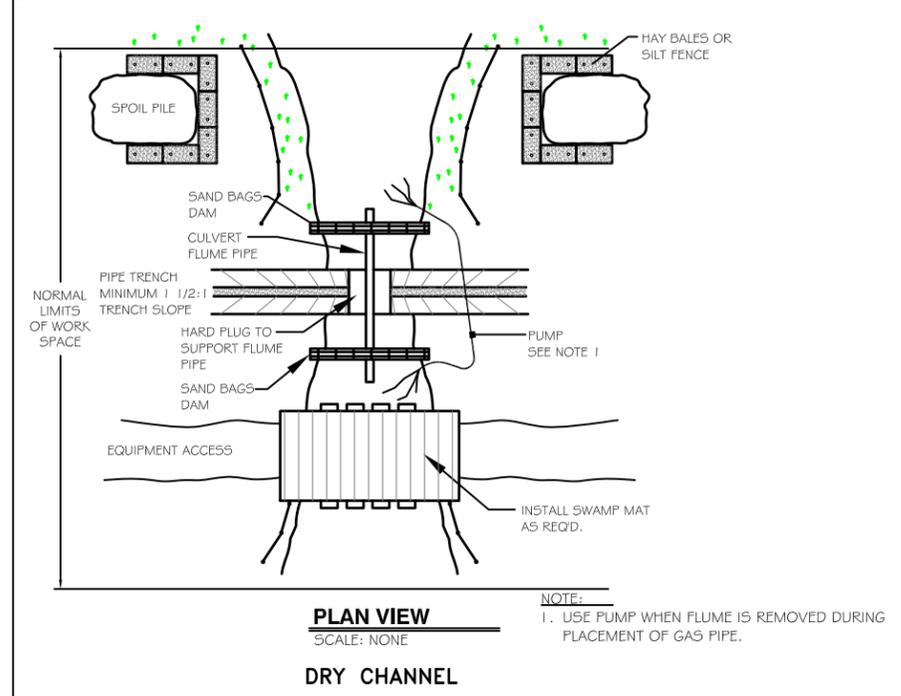
- TO REGULATOR BUILDING LIGHTS
- TO REGULATOR BLDG. RECEPTACLES (OUTDOOR WATERPROOF DUPLEX) AND OUTDOOR SECURITY LIGHT.
- TO THE CWT HEATER
- TO THE ODORIZER
- TO THE METER BUILDING LIGHTS
- TO METER BUILDING RECEPTACLES (OUTDOOR WATERPROOF DUPLEX) AND OUTDOOR SECURITY LIGHT.

24 VOLT CIRCUITS

- FROM DAC BUILDING TO REGULATOR BUILDING (6 PR.)
- FROM DAC BUILDING TO ODORIZER (2 PR.)
- FROM DAC BUILDING TO INLET PRESSURE TRANSDUCER (REG. BUILDING) (2 PR.)
- FROM DAC BUILDING TO OUTLET PRESSURE TRANSDUCER (REG. BUILDING) (2 PR.)
- FROM DAC BUILDING TO CWT HEATER (4 PR.)
- FROM DAC BUILDING TO METER BUILDING (6 PR.)

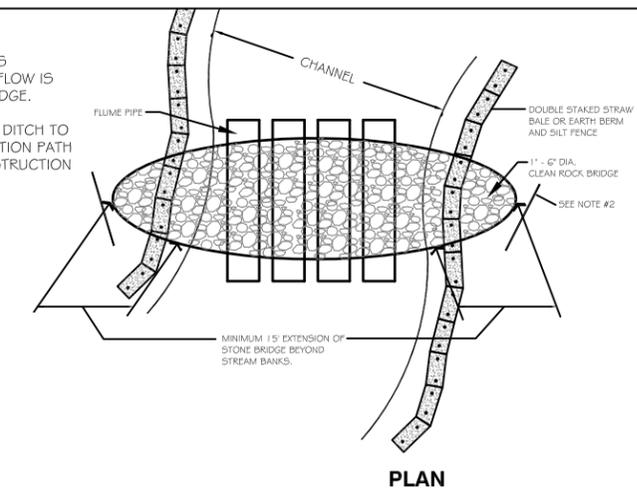


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		<p>HAMILTON PIPELINE</p>		
<p>SCALE: NTS</p>	<p>DATE: 11-09-13</p>	<p>WORK ORDER NO. 13-001-05</p>	<p>REV: -</p>	<p>SHEET: 86 OF 86</p>

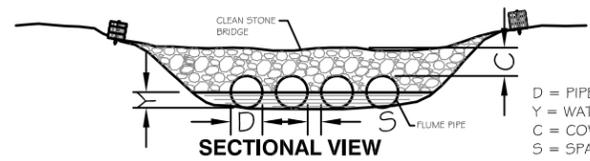


PLAN VIEW
SCALE: NONE
DRY CHANNEL

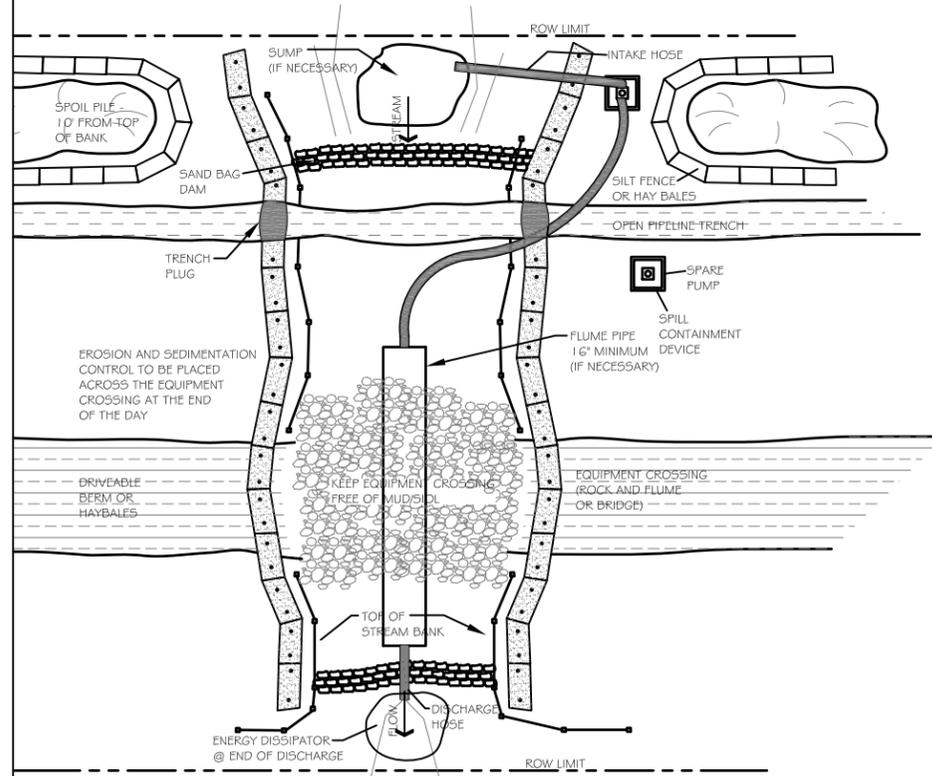
- NOTES:**
1. USE AS MANY FLUME PIPES AS REQUIRED TO ENSURE STREAM FLOW IS NOT OBSTRUCTED BY ROCK BRIDGE.
 2. STRAW BALES OF DIVERSION DITCH TO BE PLACED ACROSS CONSTRUCTION PATH AT THE END OF EACH DAY CONSTRUCTION ACTIVITIES.



PLAN

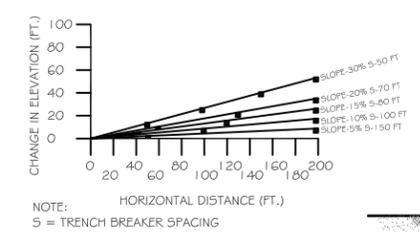


SECTIONAL VIEW
STONE AND FLUME STREAM CROSSING

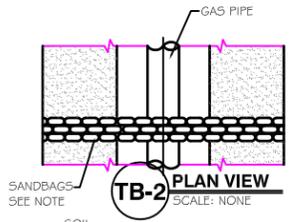


DAM AND PUMP AROUND STREAM CROSSING

1. USE DAM AND PUMP METHOD ON WATER COURSES WITH LIMITED STREAM FLOW TO PREVENT SEDIMENTATION AND INTERRUPTION OF STREAM FLOW DURING CONSTRUCTION. IF FISH PASSAGE IS A CONCERN, THIS METHOD IS NOT APPROPRIATE.
2. SCHEDULE CONSTRUCTION DURING LOW FLOW PERIOD, IF POSSIBLE.
3. RESTORE STREAM BANKS AND APPROACHES FOR A DISTANCE OF AT LEAST 50 FT. AND PERMANENTLY STABILIZE WITHIN 3 DAYS OF INITIAL RESTORATION.
4. SET UP PUMP AND HOSE AS SHOWN, OR USE PRACTICAL ALTERNATIVES. PUMP SHOULD HAVE TWICE THE PUMPING CAPACITY OF ANTICIPATED LOW. HAVE STANDBY PUMP ON SITE. DEPENDING ON STREAM FLOW, DIG SUMP HOLE TO CONCENTRATE WATER AT INTAKE.
5. INSTALL UPSTREAM DAM COMPOSED OF SANDBAGS, METAL PLATING OR A COMBINATION OF BOTH. INSTALL DOWNSTREAM DAM, IF REQUIRED, TO KEEP STREAM BED DRY.
6. AFTER DAMS ARE IN PLACE, IT MAY BE NECESSARY TO USE ADDITIONAL PUMPS TO HANDLE STREAM FLOW.
7. EXCAVATE TRENCH AND LOWER IN PIPE UNDER HOSE. MOVE HOSE AS REQUIRED OR DISCONNECT, IF TEMPORARY FLOW BLOCKAGE IS ACCEPTABLE. BACKFILL TRENCH.
8. DISMANTLE DOWNSTREAM DAM, THEN UPSTREAM DAM. KEEP PUMP RUNNING TO MAINTAIN STREAM FLOW.

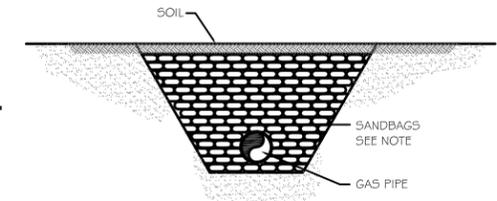


TB-1 BREAKER SPACING
SCALE: NONE



TB-2 PLAN VIEW
SCALE: NONE

NOTE:
PERMANENT TRENCH BREAKER SANDBAGS SHALL NOT BE FILLED WITH TOPSOIL.



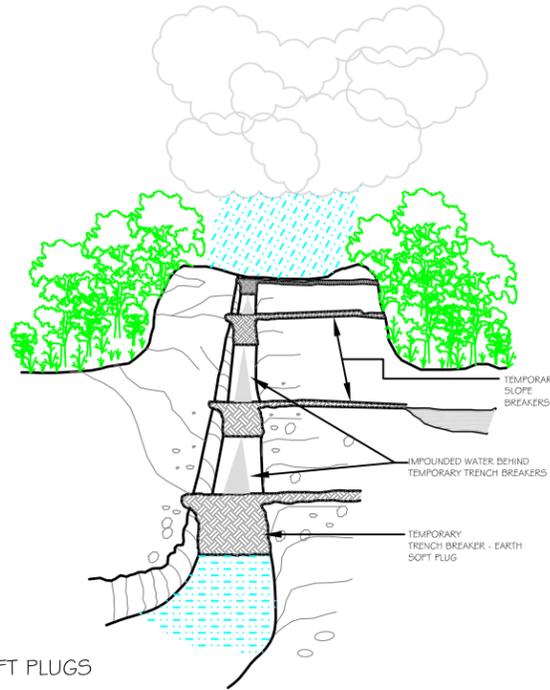
TB-3 PROFILE VIEW
SCALE: NONE

PERMANENT TRENCH DETAILS

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		<p>HAMILTON PIPELINE</p>	
<p>SIZE: C</p>	<p>FSCM NO:</p>	<p>WORK ORDER NO: 13-001-02</p>	<p>REV: -</p>
<p>SCALE: NONE</p>	<p>DATE: 11-09-13</p>	<p>SHEET: EV-1 OF 3</p>	

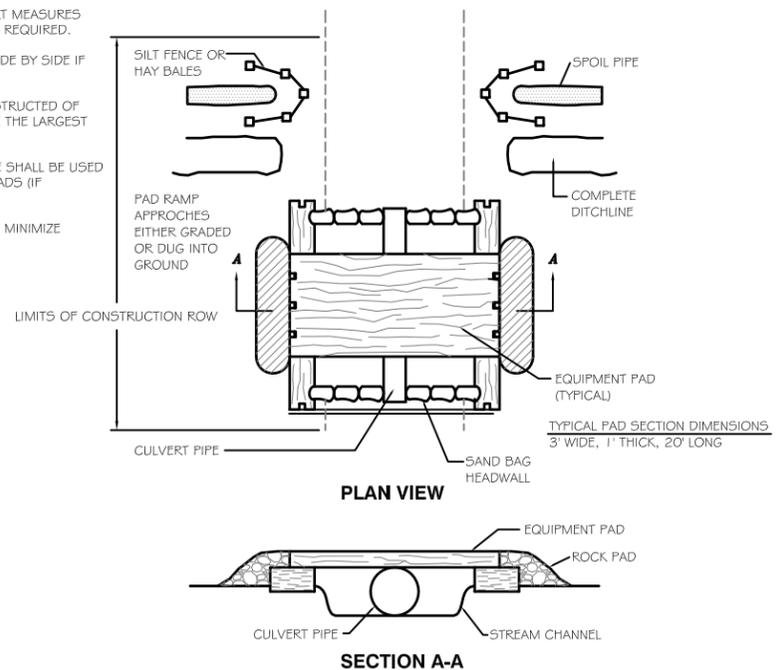
NOTES:

1. TEMPORARY TRENCH BREAKERS WILL BE INSTALLED TO PROVIDE CROSSING AS NECESSARY FOR PROPERTY OWNERS, FARMERS AND WILDLIFE OR TO CURTAIL THE FLOW OF WATER ALONG THE DITCH, IN AREAS OF SLOPE.
2. TEMPORARY TRENCH BREAKERS WILL BE MAINTAINED DURING THE VARIOUS STAGES OF CONSTRUCTION AND WILL BE REMOVED IMMEDIATELY PRIOR TO LOWERING-IN OPERATIONS.
3. ANY PONDED WATER BEHIND THE SOFT PLUG SHALL BE PUMPED OUT OF THE DITCH BEFORE THE REMOVAL OF THE SOFT PLUG.
4. TEMPORARY SLOPE BREAKERS SHOULD BE INSTALLED IN THE SAME LOCATION AS THE TRENCH BREAKERS TO DIVERT WATER OFF OF RIGHT-OF-WAY.



TEMPORARY TRENCH BREAKERS - SOFT PLUGS

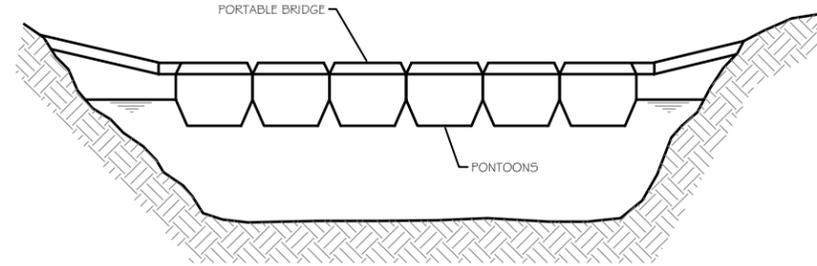
1. CULVERT PIPE OR OTHER SUPPORT MEASURES UTILIZED IF ADDITIONAL SUPPORT IS REQUIRED.
2. ADDITIONAL PADS CAN BE PUT SIDE BY SIDE IF EXTRA WIDTH IS REQUIRED.
3. EQUIPMENT PAD TYPICALLY CONSTRUCTED OF HARDWOOD; MUST ACCOMMODATE THE LARGEST EQUIPMENT USED.
4. ROCK PADS OR CRUSHED STONE SHALL BE USED AT ENTRANCE TO THE EQUIPMENT PADS (IF NECESSARY).
5. CROSSING WILL BE DESIGNED TO MINIMIZE SILTATION INTO WATER BODY.



TEMPORARY EQUIPMENT CROSSING - WOOD MATT BRIDGES

NOTES:

1. STABILIZE EDGES WITH SANDBAGS OR STONE.
2. REMOVE DURING CLEANUP.

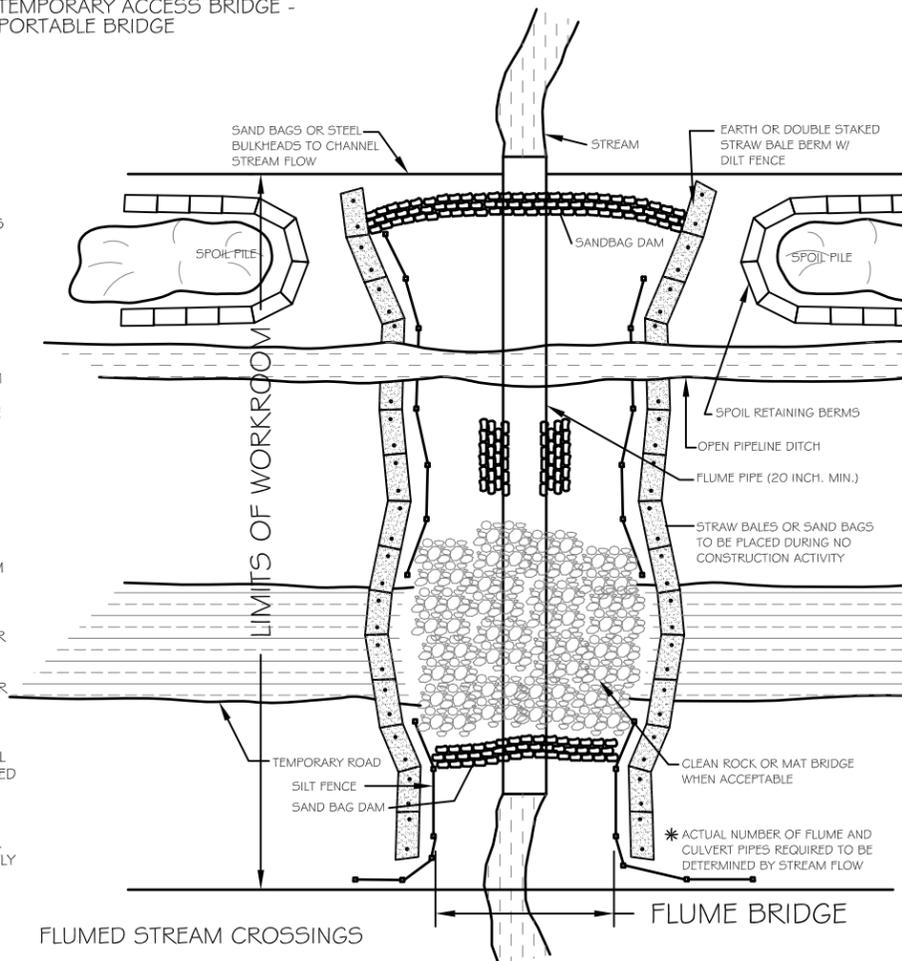


SECTION DETAIL

TEMPORARY ACCESS BRIDGE - PORTABLE BRIDGE

NOTES:

1. INSTALL A FLUME ON MINOR TO INTERMEDIATE WATER COURSES WHEN DOWNSTREAM SITUATION IS TO BE AVOIDED.
2. SCHEDULE CONSTRUCTION DURING LOW FLOW PERIODS.
3. SIZE FLUMES TO HANDLE ANTICIPATED FLOWS. INSTALL FLUME IN WATER COURSE.
4. CONSTRUCT UPSTREAM AND THEN DOWNSTREAM SANDBAG DAM. WHERE NECESSARY TO ENSURE A WATERTIGHT BARRIER, INSTALL THICK METAL FLANGE ON UPSTREAM END OF FLUME AND SEAL TO SUBSTRATE WITH SANDBAGS AND POLYETHYLENE LINER.
5. INSTALL SUFFICIENT LENGTH OF FLUME ON TRENCH, AND SPOIL SIDE OF THE RIGHT-OF-WAY TO COMPENSATE FOR THE SWING OF THE BACKHOE BOOM. TO MINIMIZE STREAM SILTATION, DURING TRENCHING ACTIVITIES IN AND AROUND THE STREAM CHANNEL.
6. PUMP STREAM CHANNEL DRY BETWEEN THE SANDBAG DAMS AS NECESSARY. DISCHARGE WATER INTO SEDIMENT BAG TO PREVENT EROSION.
7. EXCAVATE ACROSS STREAM CHANNEL AND UNDER FLUME(S).
8. LOWER IN PIPE BY PASSING UNDER FLUME(S). BACKFILL IMMEDIATELY. LEAVE FLUME IN PLACE UNTIL THE STREAM BED AND STREAM BANKS ARE RESTORED TO THE POINT WHERE THE FLUME NEEDS TO BE REMOVED.
9. RESTORE STREAM BANKS AND APPROACHES FOR A DISTANCE OF AT LEAST 50 FEET, AND PERMANENTLY STABILIZE WITHIN 3 DAYS OF INITIAL RESTORATION.

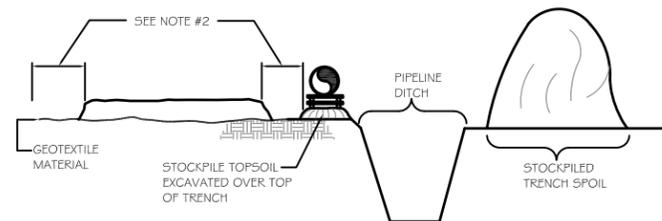


FLUMED STREAM CROSSINGS

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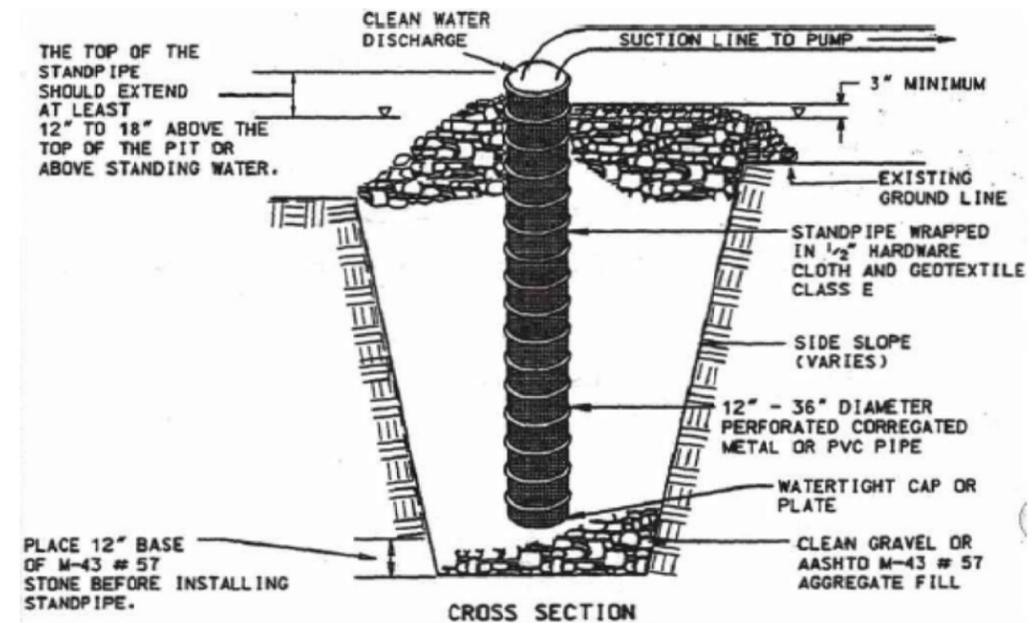
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		<p>HAMILTON PIPELINE</p>	
<p>SCALE: NONE</p>	<p>FSCM NO: C</p>	<p>WORK ORDER NO: 13-001-02</p>	<p>REV: -</p>
<p>DATE: 11-09-13</p>	<p>SHEET: EV-2 OF 3</p>		



WETLAND ACCESS ROAD CONSTRUCTION FILTER FABRIC AND STONE ROAD

NOTES:

1. CUT STUMPS FLUSH WITH THE GROUND LINE OR REMOVE STUMP WITH DOZER OR BACKHOE TO MAKE A RELATIVELY LEVEL SURFACE TO PLACE GEOTECH MAT AND STONE ROAD.
2. FILL MATERIAL SHALL BE PLACED ON TOP OF THE GEOTEXTILE MATERIAL NOT OVERLAPING THE EDGES OF THE GEOTECH. THERE SHOULD BE 1 TO 2 FEET OF EXPOSED GEOTECH ON EITHER SIDE OF THE ROAD.
3. THE GEOTEXTILE MATERIAL USED SHOULD BE THICK ENOUGH TO KEEP THE TEARING OF THE MATERIAL TO A MINIMUM DURING REMOVAL.
4. THE ROAD THICKNESS SHOULD BE ADEQUATE TO SUPPORT THE NECESSARY EQUIPMENT TO CONSTRUCT THE PIPELINE THROUGH THE WETLAND.



Construction Specifications

1. Pit dimensions are variable, with the minimum diameter being 2 times the standpipe diameter.
2. The standpipe should be constructed by perforating a 12" to 24" diameter corrugated or PVC pipe. Then wrapping with 1/2" hardware cloth and Geotextile Class E. The perforations shall be 1/2" x 6" slits or 1" diameter holes.
3. A base of filter material consisting of clean gravel or #57 stone should be placed in the pit to a depth of 12". After installing the standpipe, the pit surrounding the standpipe should then be backfilled with the same filter material.
4. The standpipe should extend 12" to 18" above the lip of the pit or the riser crest elevation (basin dewatering only) and the filter material should extend 3" minimum above the anticipated standing water elevation.

SUMP PIT

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