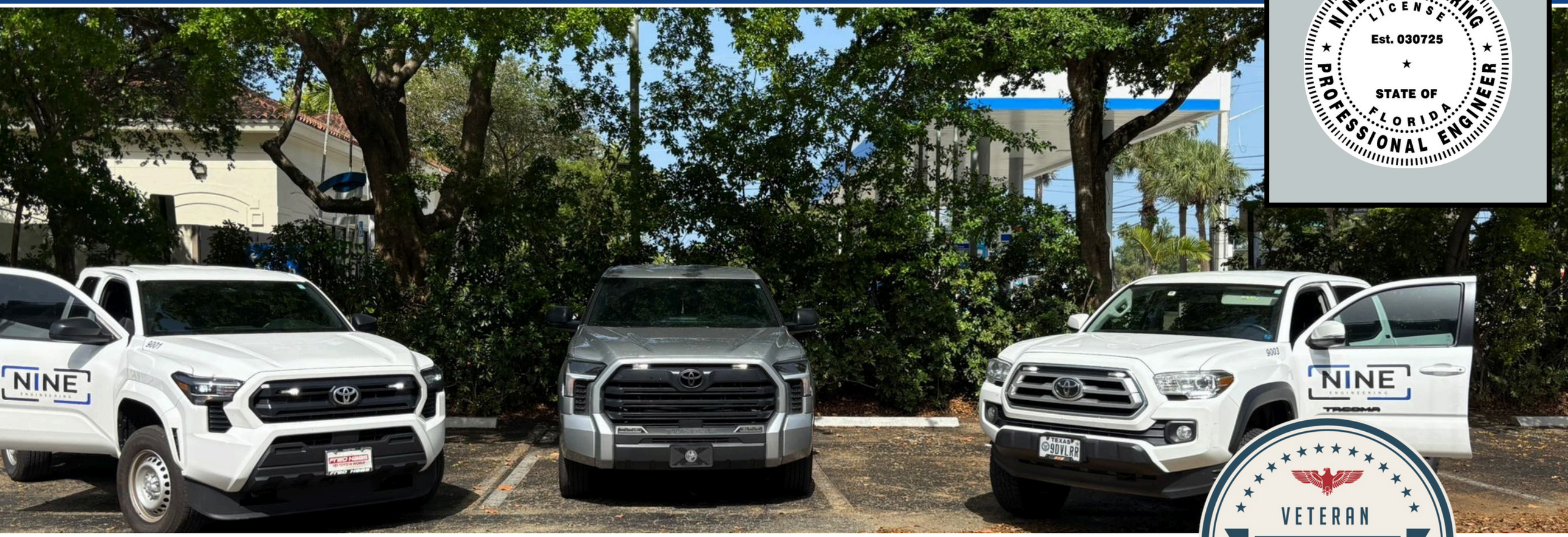
INNOVATIVE ENGINEERING
“ A TURN KEY SOLUTION FOR RIGHT OF WAY PERMITS ”

Drafting & Engineering Services
Subsurface Utility Engineering (SUE)
Natural Gas Designs
Surveying, Site Verification & GPR Utilities Mapping
Temporary Traffic Control (Site Specific Detailed MOT)
Permitting Liaison

Director of Operations

+1 (832) 525 -6758
Orlando.Dager@9eng.com
8751 W. Broward BLVD#505
Plantation, Fl 33324

NINE ENGINEERING LICENSE Est. 030725 STATE OF FLORIDA PROFESSIONAL ENGINEER



VETERAN OWNED BUSINESS

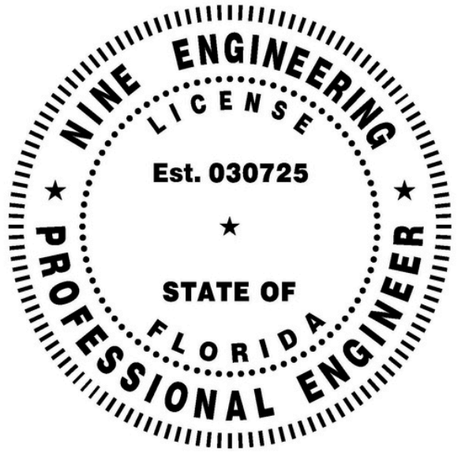
Info@9eng.com

Mission Statement :

At Nine Engineering, we are dedicated to advancing the field of Subsurface Utility Engineering (SUE) through cutting-edge technology and unwavering commitment to public safety. Utilizing industry-leading tools such as Ground Penetrating Radar (GPR) and the Radiodetection RD8200, we deliver accurate, data-driven utility mapping that reduces risk and drives smarter decisions.

We believe that strong, long-term client partnerships are the foundation of every successful project. Through transparency, responsiveness, and technical excellence, we earn trust and build lasting relationships—project after project.

Above all, we prioritize public safety in everything we do, ensuring that critical underground infrastructure is identified, protected, and respected. With precision, integrity, and innovation, we help build safer communities from the ground down.



Info@9eng.com

Portfolio of Services

Orlando Dager
Orlando.Dager@9eng.com
Info@9eng.com
+1 (832) 525-6758

Table Of Contents

Ground Penetrating Radar (GPR).....Pg. 5 - 17

Cathodic Protection.....Pg. 18- 22

Cut & Cap.....Pg. 23-27

New Gas Service.....Pg. 28-33

Undetectable Gas Main Spot Dig.....Pg. 34-45

Gas Main Extension.....Pg. 46-53

U.S. Army Corps of Engineers (Intercoastal work).....Pg. 54-60

Site Specific Traffic Control, MOT (Temporary Traffic Control) .....Pg. 61-70

Certifications & Licensing.....Pg. 71

Contact Sheet.....Pg. 72

Orlando Dager
Orlando.Dager@9eng.com
Info@9eng.com
+1 (832) 525-6758

Ground Penetrating Radar (GPR)

Orlando Dager
Orlando.Dager@9eng.com
Info@9eng.com
+1 (832) 525-6758

Orlando Dager
Orlando.Dager@9eng.com
Info@9eng.com
+1 (832) 525-6758

Introduction

At Nine Engineering, we believe that reliable data is the foundation of every safe and successful project. Our integrated approach to Surveying, Site Verification, and Ground Penetrating Radar (GPR) Mapping provides our clients with the clarity needed for confident decision-making during excavation, design validation, and infrastructure development. Whether you're detecting utilities or preparing for civil works, our methods minimize risk and ensure precision from planning to execution.

Ground Penetrating Radar (GPR) Mapping

GPR technology enables us to detect subsurface structures without excavation. By sending high-frequency radar pulses into the ground, we can identify buried utilities, voids, and material changes.

At Nine Engineering, our GPR services offer:

- Real-time subsurface mapping High-resolution
- anomaly detection Safe utility identification to
- prevent strikes Valuable data for engineering and
- construction teams

We combine cutting-edge hardware and expert interpretation to ensure that every scan results in meaningful, project-ready insights.

Sample of Aerial Survey Map

GPR Reports: Structure and Interpretation

GPR REPORT

8751 W BROWARD BLVD #505
PLANTATION, FL 33325

NINE ENGINEERING

GPR PATH A.	CONDUIT SIZE	TYPE OF UTILITY	DEPTH	COMMENTS
50'	2"	TELECOM	5' +/-	Approx. 6' W of E Sidewalk

GPR MARKER	REFERENCE POINT A	REFERENCE POINT B	STATION NUMBER	TYPE OF UTILITY	DEPTH OF UTILITY	COMMENTS
START A.	20' (N) of N EOP	6' (W) of E SW	0+00			20' North of N EOP
A.1	1' (S) of N EOP	6' (W) of E SW	0+21	AT&T	3' +/-	6' West of E Sidewalk
A.2	3' (S) of N EOP	6' (W) of E SW	0+23	SD	1' +/-	6' West of E Sidewalk
A.3	5' (S) of N EOP	6' (W) of E SW	0+25	TV	2' +/-	6' West of E Sidewalk
A.4	10' (S) of N EOP	6' (W) of E SW	0+30	SS	3' +/-	6' West of E Sidewalk
A.5	14' (S) of N EOP	6' (W) of E SW	0+34	G	2' +/-	6' West of E Sidewalk
A.6	16' (S) of N EOP	6' (W) of E SW	0+36	WM	1.5' +/-	6' West of E Sidewalk
END A.	13' (S) of S EOP	6' (W) of E SW	0+50			13' South of S EOP

GPR PATH B.	CONDUIT SIZE	TYPE OF UTILITY	DEPTH	COMMENTS
440'	2"	TELECOM	5' +/-	Approx. 2' S of N Edge of Pavement

GPR MARKER	REFERENCE POINT A	REFERENCE POINT B	STATION NUMBER	TYPE OF UTILITY	DEPTH OF UTILITY	COMMENTS
START B.	3' (E) of W SW	2' (S) of N EOP	0+00			3' (E) of W front of Sidewalk
B.1	12' (E) of W SW	2' (S) of N EOP	0+09	SD	1' +/-	12' (E) of W front of Sidewalk
B.2	27' (E) of W SW	2' (S) of N EOP	0+24	SS	3' +/-	27' (E) of W front of Sidewalk
B.3	35' (E) of W SW	2' (S) of N EOP	0+32	WM	1.5' +/-	25' (E) of W front of Sidewalk
B.4	125' (E) of W SW	2' (S) of N EOP	1+22	WM	1.5' +/-	125' (E) of W front of Sidewalk
B.5	129' (E) of W SW	2' (S) of N EOP	1+26	SS	3' +/-	129' (E) of W front of Sidewalk
B.6	148' (E) of W SW	2' (S) of N EOP	1+45	G	2' +/-	148' (E) of W front of Sidewalk
B.7	191' (E) of W SW	2' (S) of N EOP	1+88	G	2' +/-	191' (E) of W front of Sidewalk
B.8	221' (E) of W SW	2' (S) of N EOP	2+18	WM	1.5' +/-	221' (E) of W front of Sidewalk
B.9	253' (E) of W SW	2' (S) of N EOP	2+50	G	2' +/-	253' (E) of W front of Sidewalk
B.10	273' (E) of W SW	2' (S) of N EOP	2+70	SS	3' +/-	273' (E) of W front of Sidewalk
B.11	285' (E) of W SW	2' (S) of N EOP	2+82	WM	1.5' +/-	285' (E) of W front of Sidewalk
B.12	293' (E) of W SW	2' (S) of N EOP	2+90	TV	2' +/-	293' (E) of W front of Sidewalk
B.13	345' (E) of W SW	2' (S) of N EOP	3+42	WM	1.5' +/-	345' (E) of W front of Sidewalk
B.14	354' (E) of W SW	2' (S) of N EOP	3+51	G	2' +/-	354' (E) of W front of Sidewalk
B.15	368' (E) of W SW	2' (S) of N EOP	3+65	WM	1.5' +/-	368' (E) of W front of Sidewalk

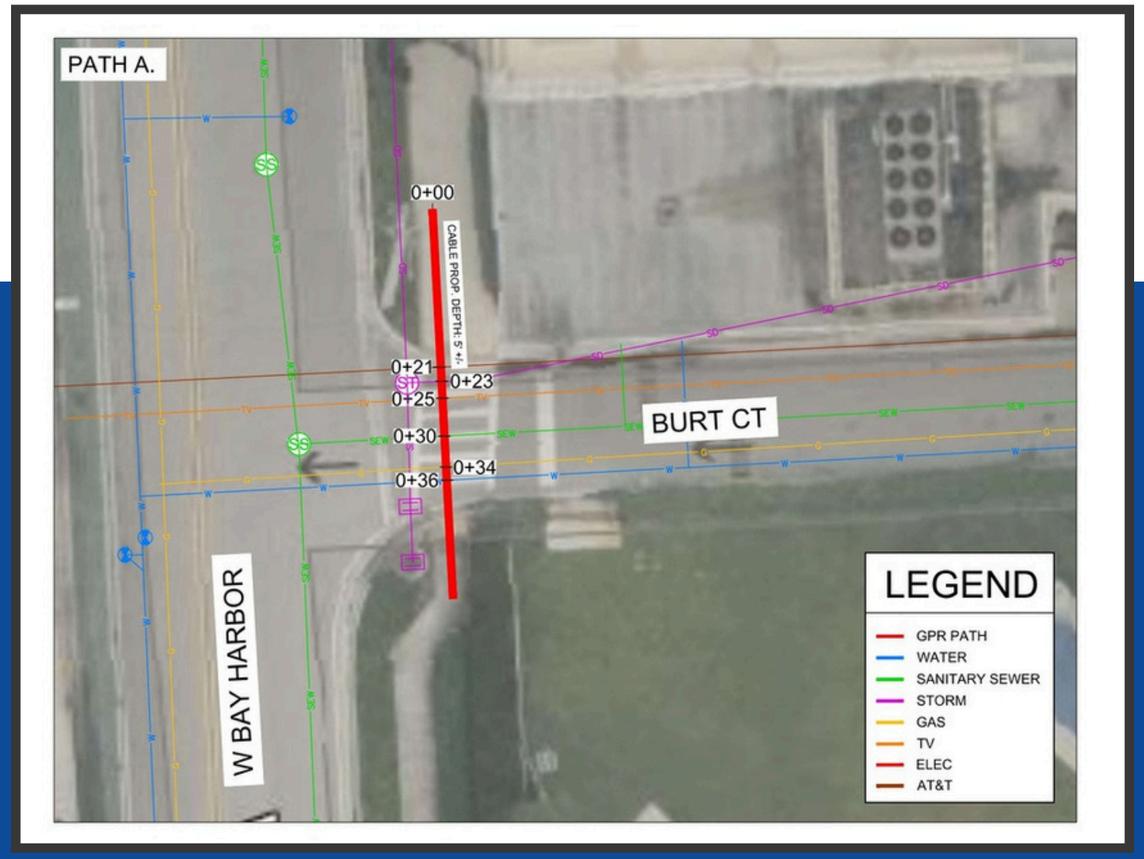
GPR PATH B.	CONDUIT SIZE	TYPE OF UTILITY	DEPTH	COMMENTS
440'	2"	TELECOM	5' +/-	Approx. 2' S of N Edge of Pavement

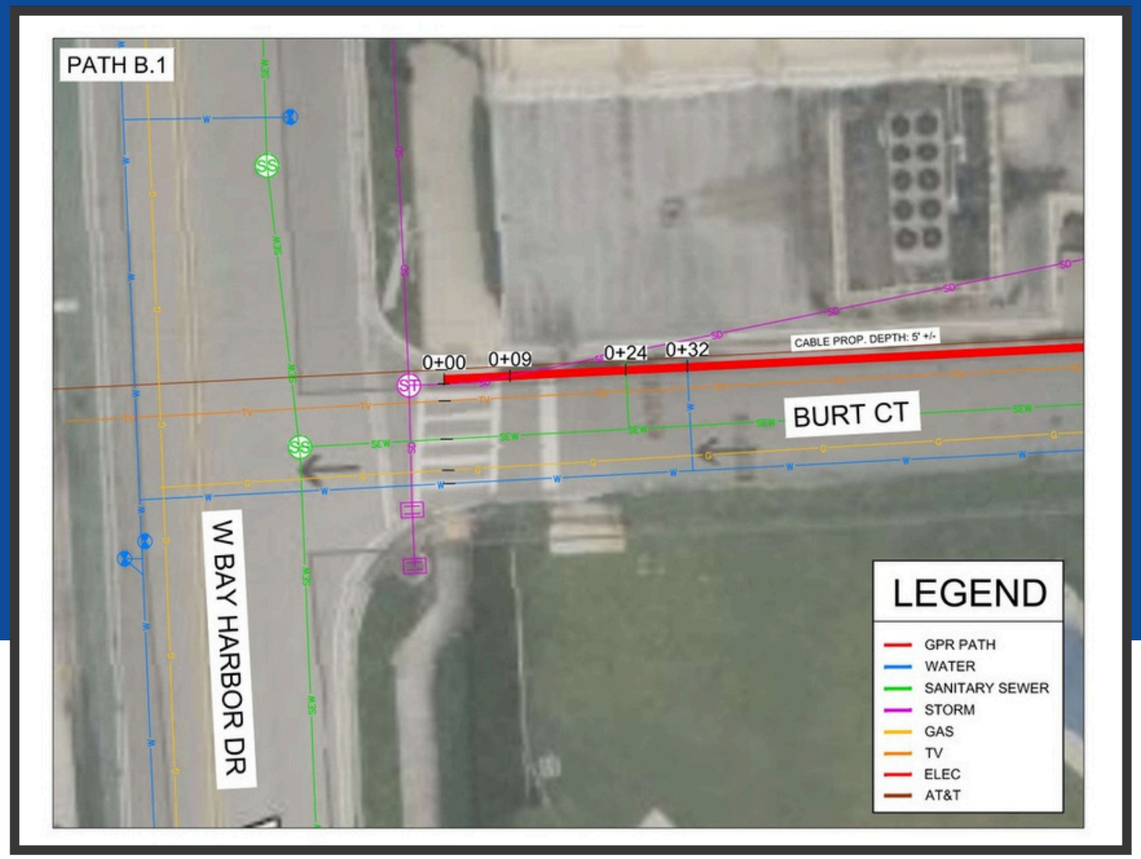
GPR MARKER	REFERENCE POINT A	REFERENCE POINT B	STATION NUMBER	TYPE OF UTILITY	DEPTH OF UTILITY	COMMENTS
B.16	373' (E) of W SW	2' (S) of N EOP	3+70	SS	3' +/-	373' (E) of W front of Sidewalk
B.17	401' (E) of W SW	2' (S) of N EOP	3+98	G	2' +/-	401' (E) of W front of Sidewalk
B.18	427' (E) of W SW	2' (S) of N EOP	4+24	SS	3' +/-	427' (E) of W front of Sidewalk
B.19	439' (E) of W SW	2' (S) of N EOP	4+36	WM	1.5' +/-	439' (E) of W front of Sidewalk
B.20	443' (E) of W SW	2' (S) of N EOP	4+40	ELEC	2' +/-	443' (E) of W front of Sidewalk
END. B	443' (E) of W SW	2' (S) of N EOP	4+40			443' (E) of W front of Sidewalk

GPR PATH A.	CONDUIT SIZE	TYPE OF UTILITY	DEPTH	COMMENTS
40'	2"	TELECOM	5' +/-	160' West of East Sidewalk

GPR MARKER	REFERENCE POINT A	REFERENCE POINT B	STATION NUMBER	TYPE OF UTILITY	DEPTH OF UTILITY	COMMENTS
START.C	7' (N) of N EOP	160' (W) of E SW	0+00			7' North of N Edge of Pavement
C.1	14' (S) of N EOP	160' (W) of E SW	0+07	AT&T	3' +/-	160' (W) of East Sidewalk
C.2	16' (S) of N EOP	160' (W) of E SW	0+09	ELEC	2' +/-	160' (W) of East Sidewalk
C.3	18' (S) of N EOP	160' (W) of E SW	0+11	TV	2' +/-	160' (W) of East Sidewalk
C.4	22' (S) of N EOP	160' (W) of E SW	0+15	SS	3' +/-	160' (W) of East Sidewalk
C.5	26' (S) of N EOP	160' (W) of E SW	0+19	G	2' +/-	160' (W) of East Sidewalk
C.6	29' (S) of N EOP	160' (W) of E SW	0+22	WM	1.5' +/-	160' (W) of East Sidewalk
END.C	17' (S) of S EOP	160' (W) of E SW	0+40			17' South of S Edge of Pavement

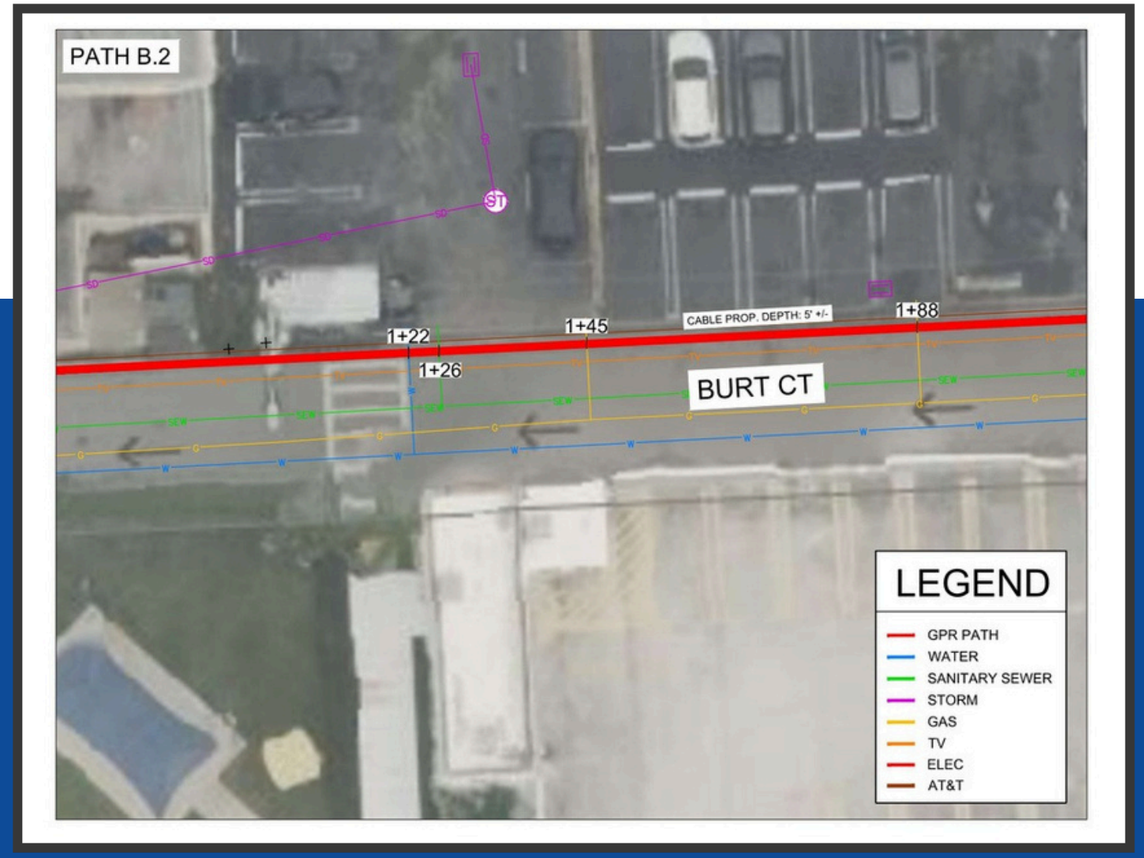
Sample GPR

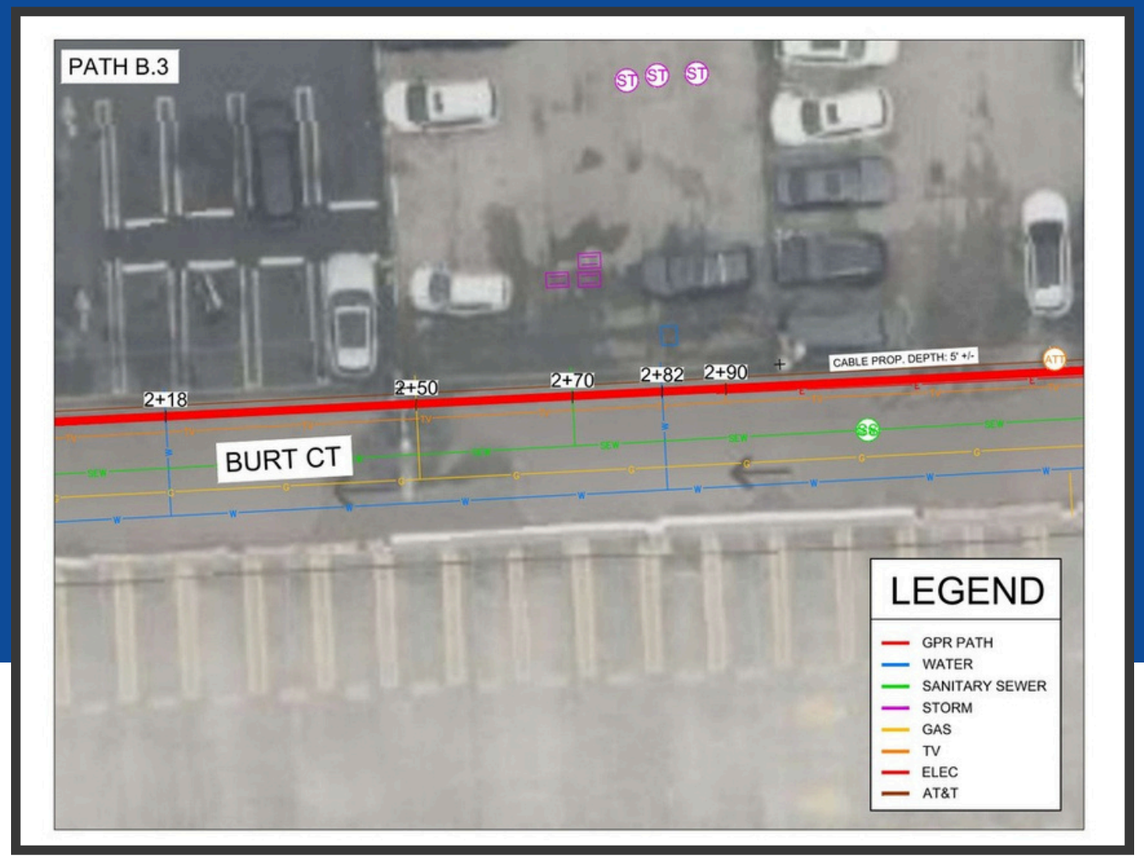




NINE ENGINEERING

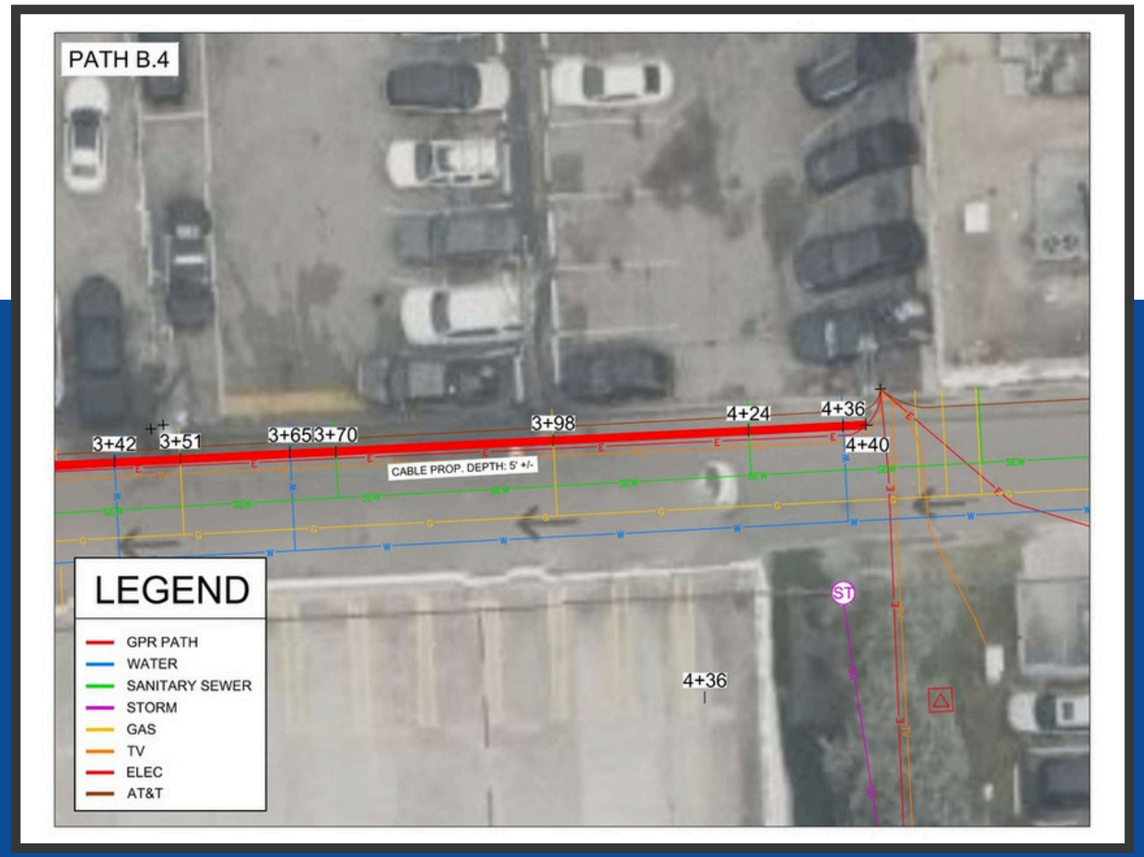
Sample GPR

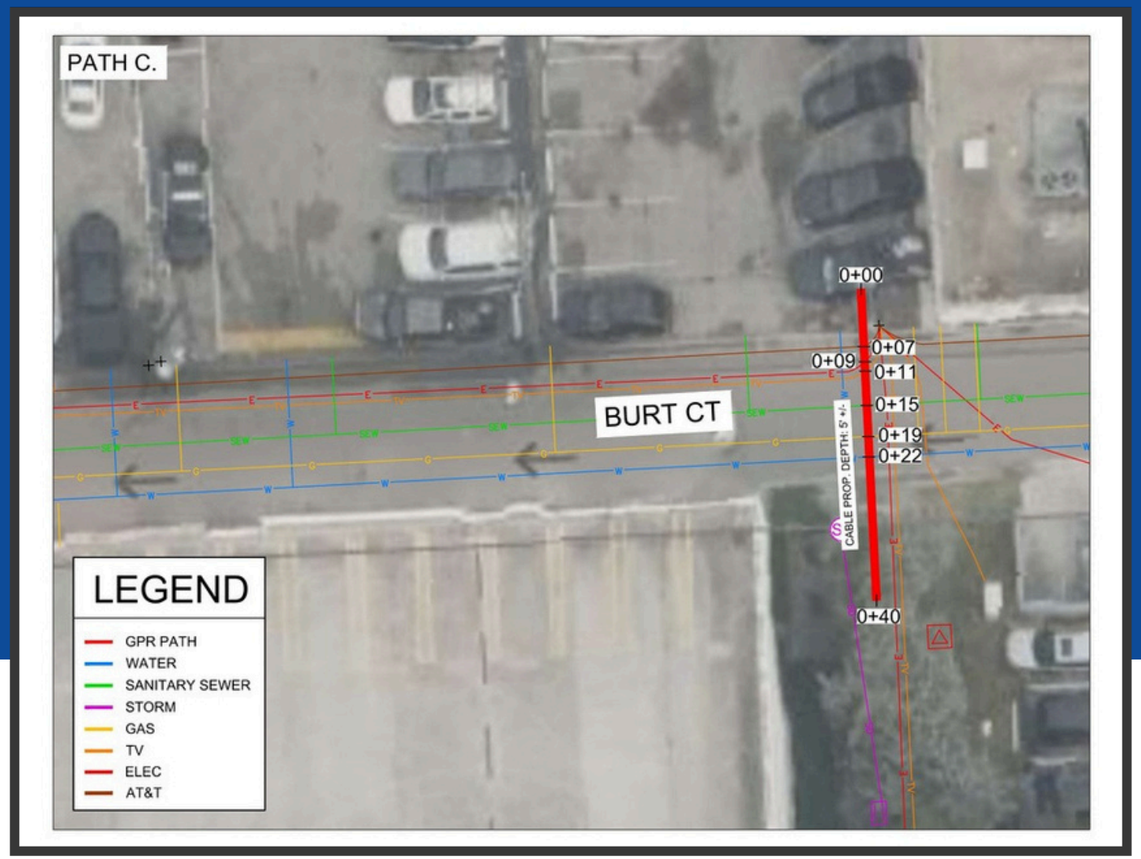




NINE ENGINEERING

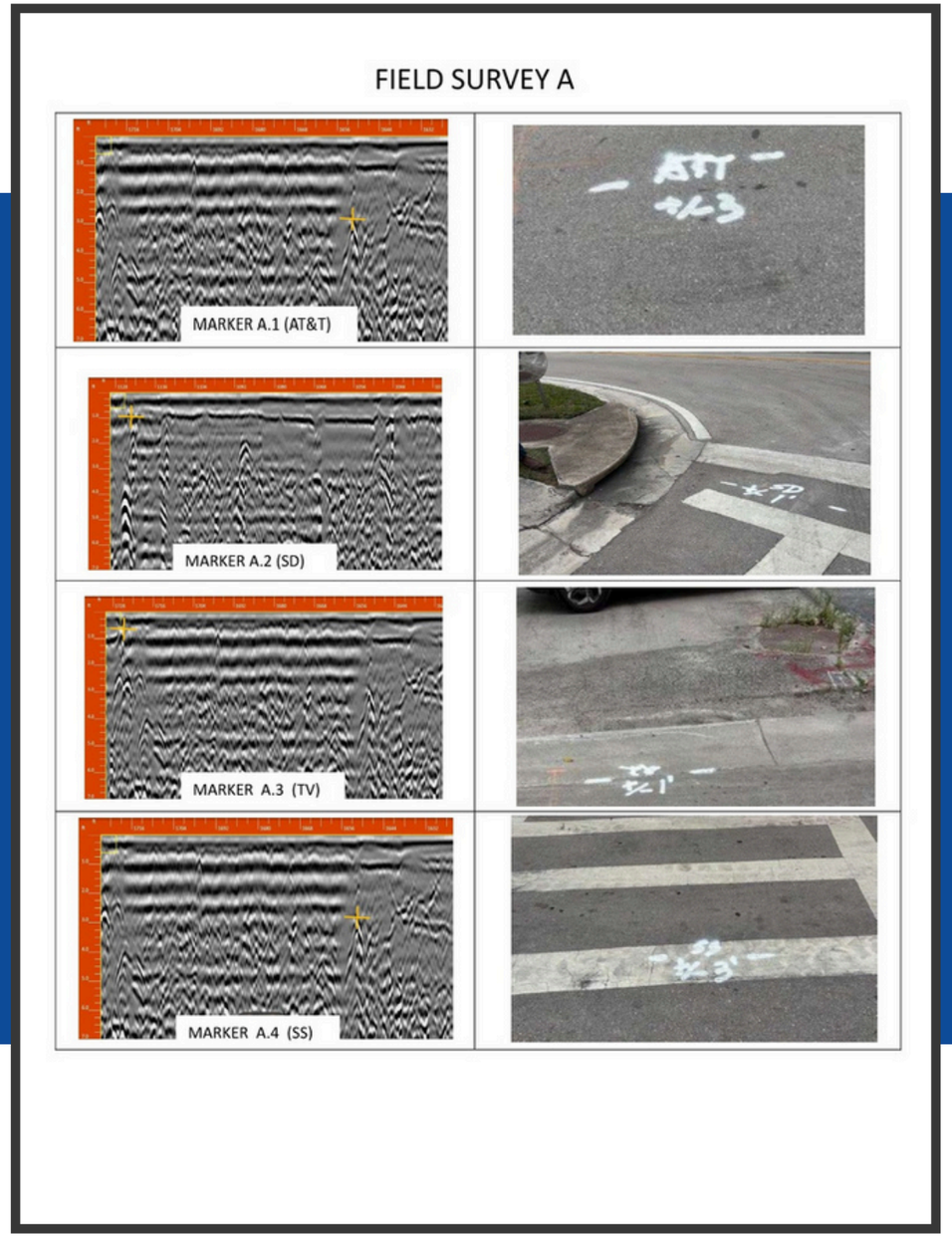
Sample GPR

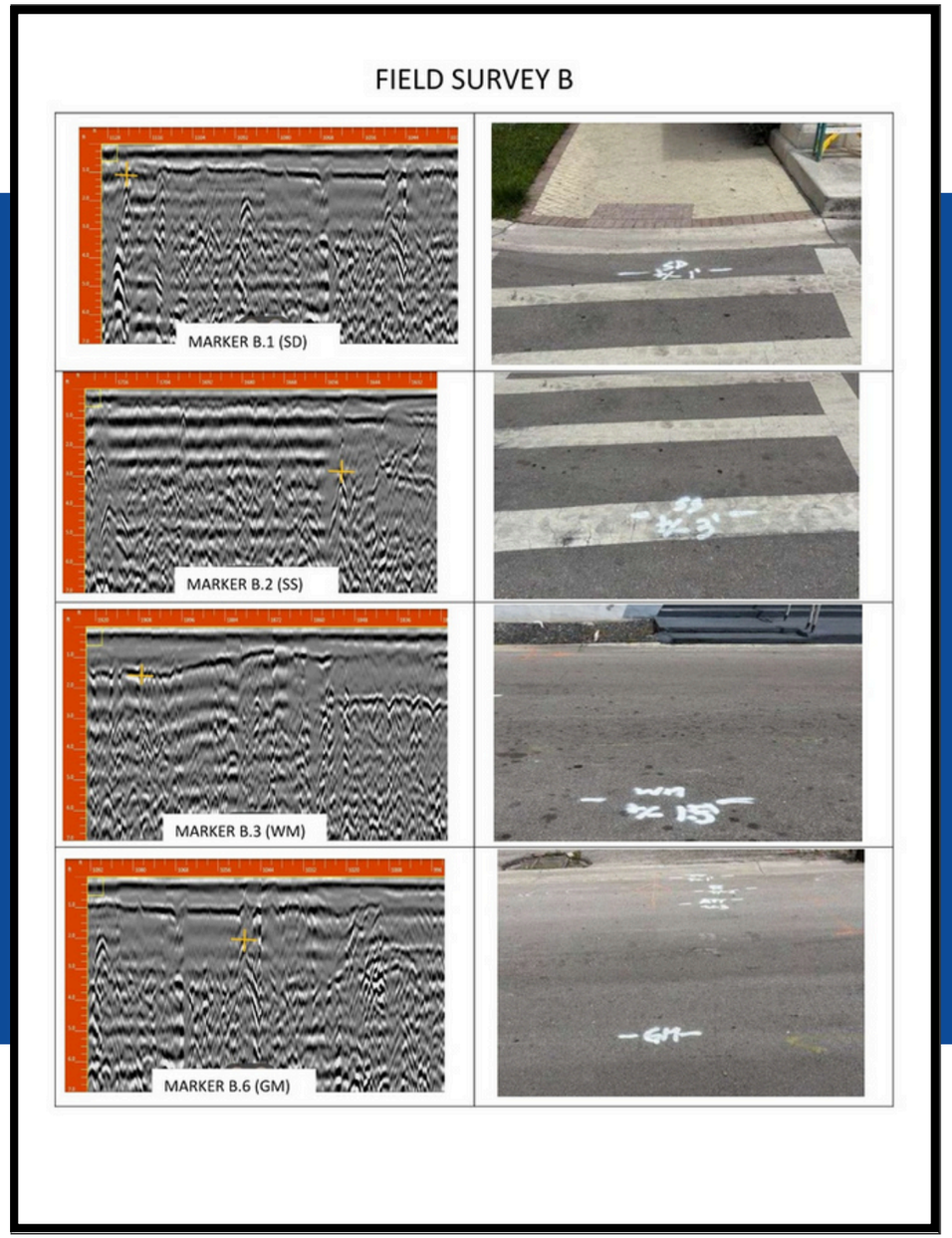




NINE ENGINEERING

Sample GPR Report

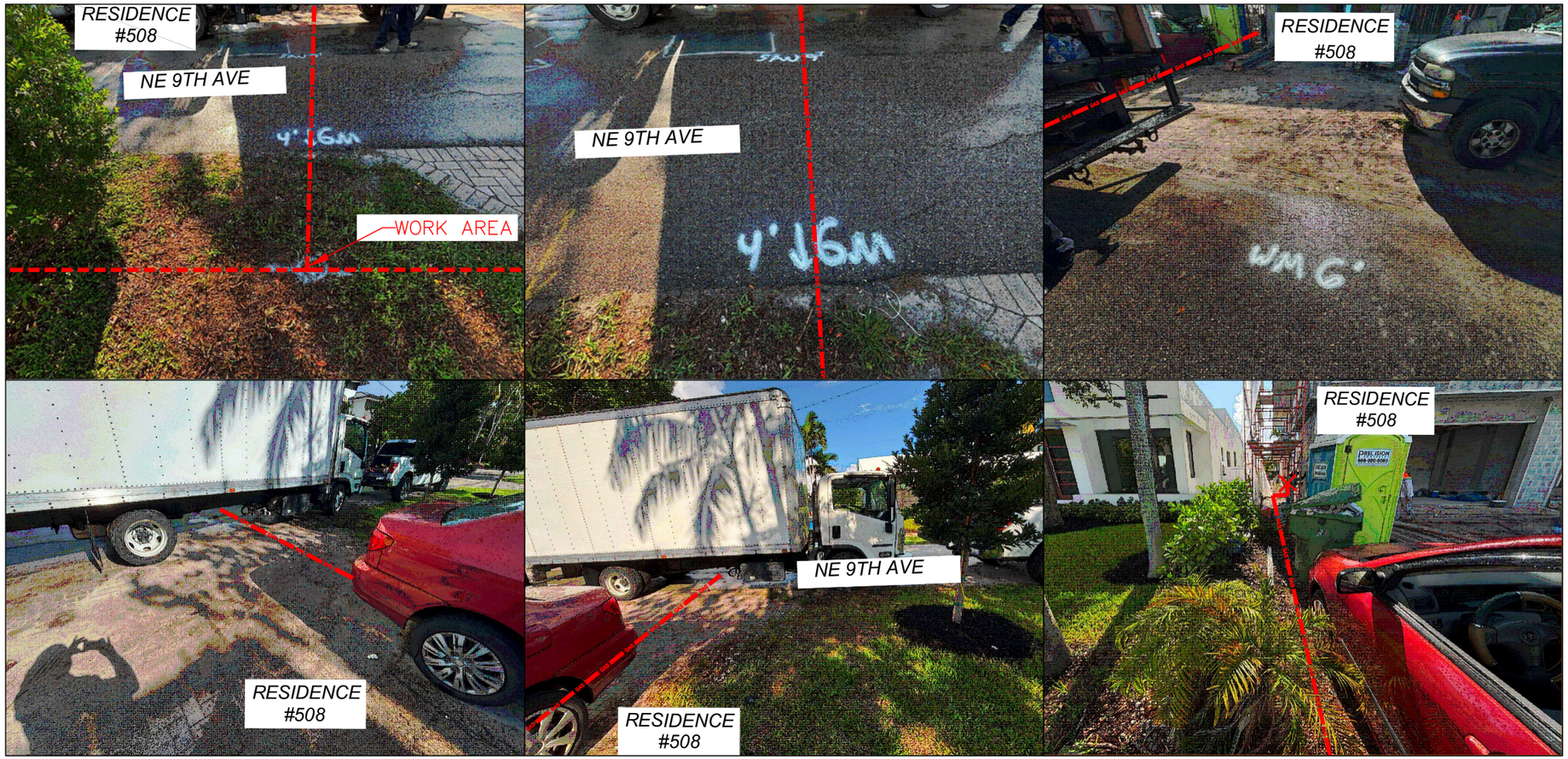




Field Documentation and Reporting

Transparency and traceability define us. Every site visit includes thorough documentation for informed decisions and compliance. Our deliverables—annotated field photos, GPR data visualizations, equipment logs, calibration records, and multi-format reports—mean you get more than data; you get ready-to-use, project-aligned documentation for engineering, permitting, and construction.

Sample GPR Field Pictures



CALL 48 HOURS BEFORE YOU DIG IN FLORIDA
ITS THE LAW!
1-800-432-4770
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

REVIEWED BY: David Dagany
DATE: 16-06-2025

NINE ENGINEERING
PLANTATION, FL 33324
DANIEL WILLIAMS JR.
P.E. # 92321

PROJECT TYPE:
FIELD PICTURES

PROJECT ADDRESS:
8751 W BROWARD BLVD
#505
PLANTATION, FL 33325

NO.	DATE	REVISION

NO. OF SHEETS: 4
SHEET NO.: 3

Info@9eng.com

Final Notes

Surveying, site verification, and GPR mapping are critical to understanding what lies beneath and around your project site. With Nine Engineering as your partner, you gain access to a robust, data-driven methodology that helps prevent costly mistakes, improve safety, and accelerate project timelines.

Build with confidence. Detect with precision. Trust Nine Engineering.

Info@9eng.com

NINE ENGINEERING

Natural Gas Designs

Cathodic Protection

Orlando Dager
Orlando.Dager@9eng.com
Info@9eng.com
+1 (832) 525-6758

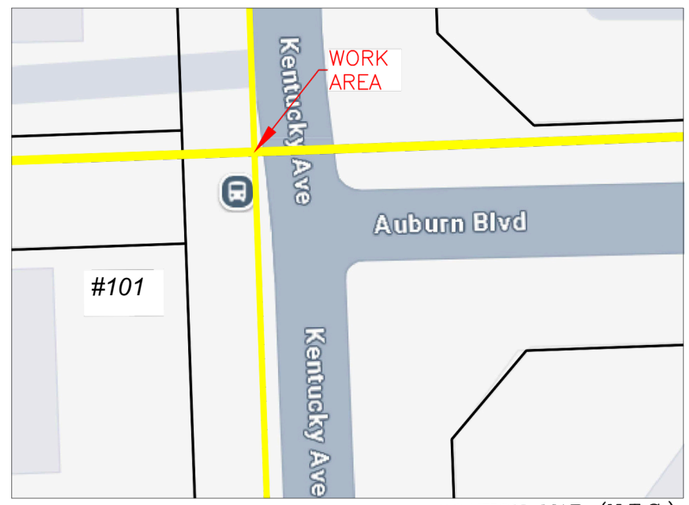
Sample: Cathodic Protection Design

NINE ENGINEERING

8751 W BROWARD BLVD #505
PLANTATION, FL 33325

LEGEND

- ℄ CENTER LINE
- M MONUMENT LINE
- R/W RIGHT OF WAY
- P/L PROPERTY LINE
- E.O.P. EDGE OF PAVEMENT
- T.T. TAPPING TEE
- E.F.V. EXCESS FLOW VALVE
- SVC SERVICE LINE
- PE POLYETHYLENE
- C.S. COATED STEEL
- S.D. STORM DRAINAGE
- SAN. SANITARY SEWER
- W.M. WATER MAIN
- MANHOLE
- FIRE HYDRANT
- ELECTRONIC MARKER
- INLET PROTECTION
- LIGHT POLE
- SANITARY MANHOLE
- STORM DRAIN MANHOLE
- CURB INLET
- WATER VALVE
- GAS VALVE
- SEWER VALVE
- BORE PIT
- FIRE HYDRANT



LOCATION MAP (N.T.S.)

PREMISE: XXXXXXXX

PROJECT DESCRIPTION:
INSTALL TWO #10 GREEN WIRES AT CROSSING/ INSTALL 2-17# ANODES AND INSTALL CP TEST POST AT BACK OF SIDEWALK.

INDEX

PAGE 1 OF 4 -------- COVER
PAGE 2 OF 4 -------- DESIGN
PAGE 3 OF 4 -------- FIELD PICTURES
PAGE 4 OF 4 -------- MUNICIPALITY NOTES

811 Know what's below. Call before you dig.

SUNSHINE # 1-800-432-4770

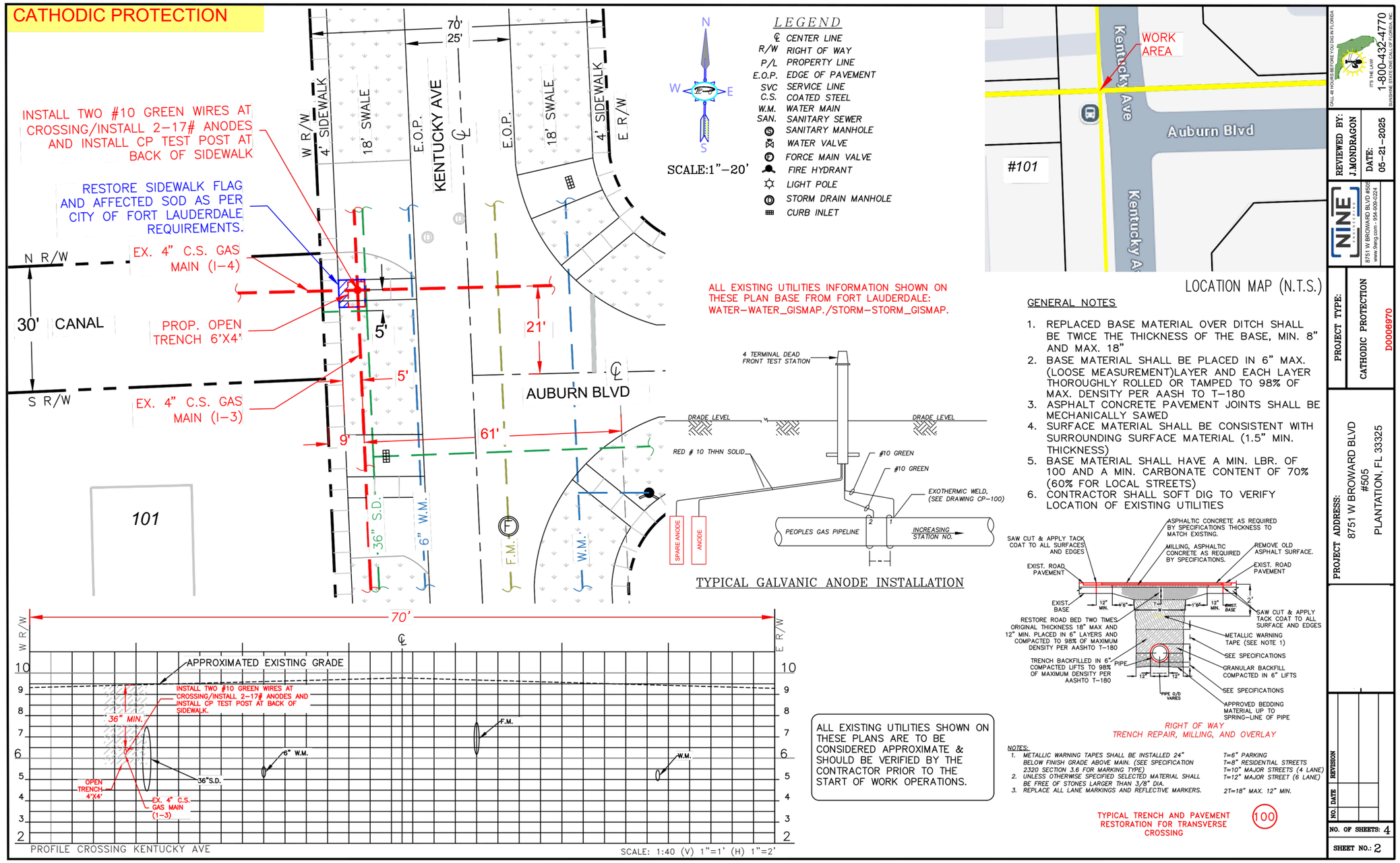
ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE TO BE CONSIDERED APPROXIMATE & SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF WORK OPERATIONS.

ATT EMERGENCY # 1- 866 - 844 - 5144
FPL EMERGENCY # 954 - 737 - 5000
FIBERNET/CROWN EMERGENCY # 1- 800 - 788 - 7011
XFINITY /COMCAST EMERGENCY # 1- 800 - 266 - 2278
UTILITY WATER / SEWER 24 HOUR 954 - 828 - 8000

NINE ENGINEERING LICENSE Est. 030725 STATE OF FLORIDA PROFESSIONAL ENGINEER

NINE ENGINEERING

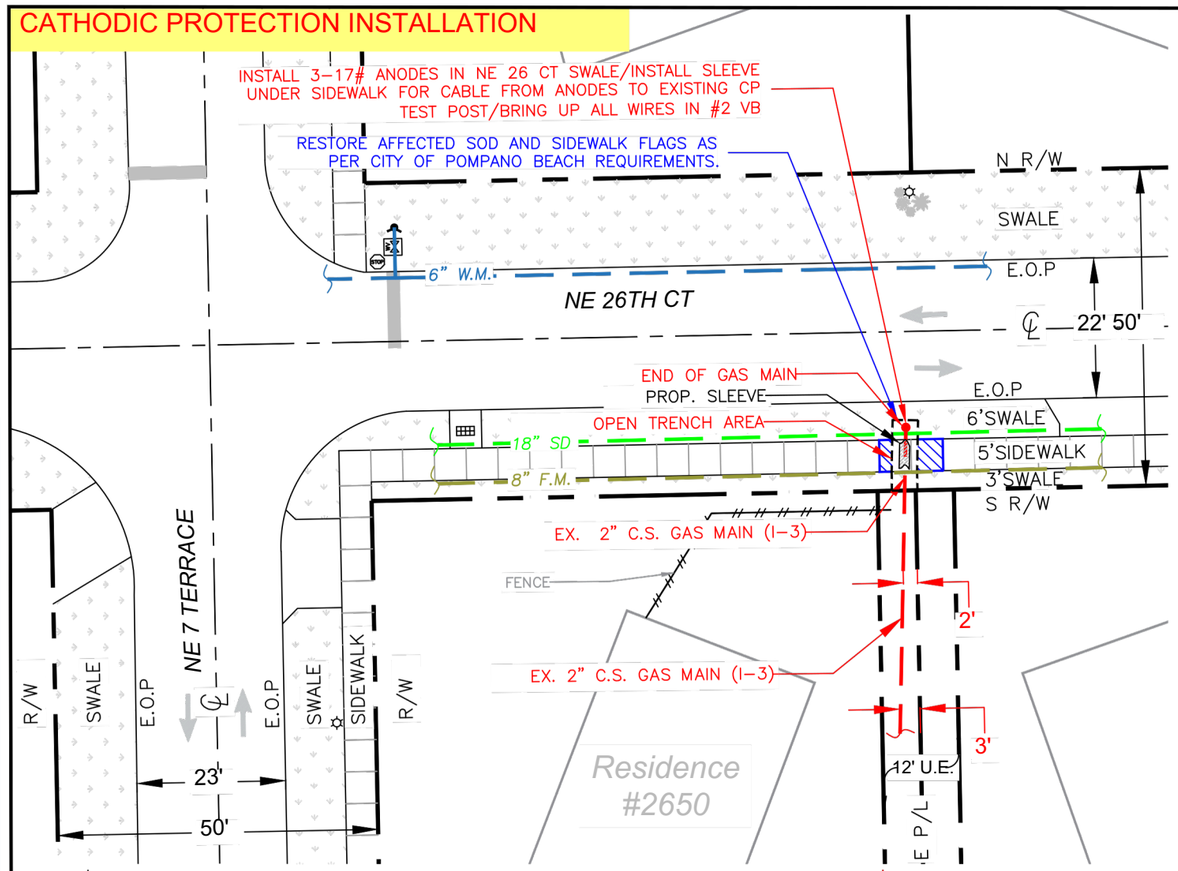
8751 W BROWARD BLVD #505
PLANTATION, FL 33324
954-909-0224 INFO@9ENG.COM

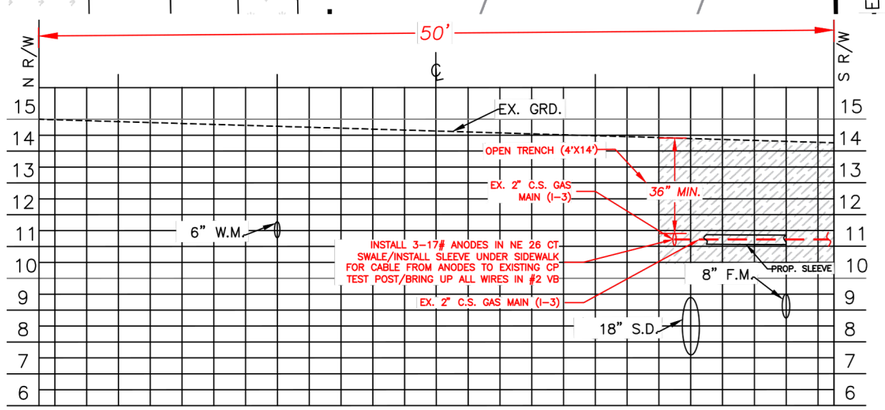


Sample: Cathodic Protection Design

Info@9eng.com

CATHODIC PROTECTION INSTALLATION



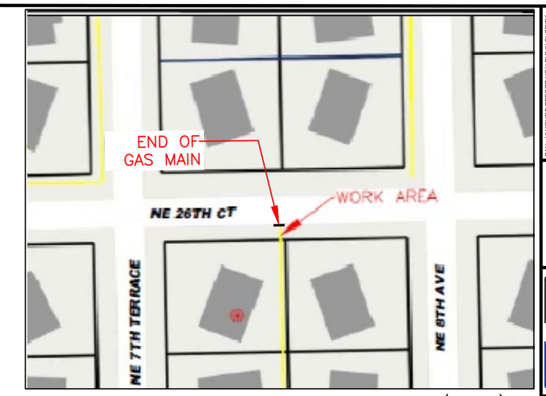


PROFILE CROSSING NE 26TH CT

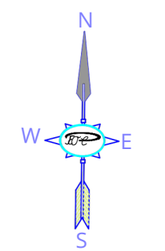
SCALE: 1:40 (V) 1"=1' (H) 1"=2'

LEGEND

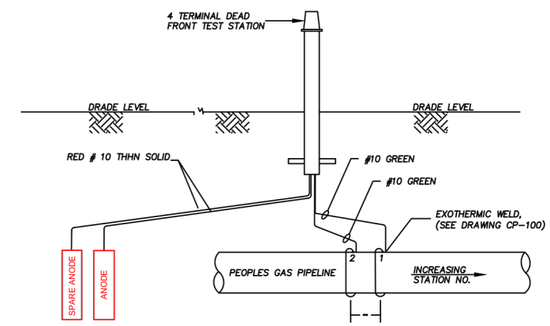
℄	CENTER LINE
M	MONUMENT LINE
R/W	RIGHT OF WAY
P/L	PROPERTY LINE
E.O.P.	EDGE OF PAVEMENT
T.T.	TAPPING TEE
E.F.V.	EXCESS FLOW VALVE
SVC	SERVICE LINE
PE	POLYETHYLENE
C.S.	COATED STEEL
S.D.	STORM DRAINAGE
SAN.	SANITARY SEWER
W.M.	WATER MAIN
	FIRE HYDRANT
	LIGHT POLE
	CURB INLET
	WATER VALVE
STOP	STOP SIGN
F.M.	FORCE MAIN



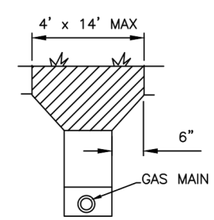
LOCATION MAP (N.T.S.)



SCALE:1"–20'



TYPICAL GALVANIC ANODE INSTALLATION



SOD RESTORATION DETAIL

ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE TO BE CONSIDERED APPROXIMATE & SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF WORK OPERATIONS.

ALL EXISTING UTILITIES INFORMATION SHOWN ON THESE PLAN BASE FROM–POMPANO BEACH WATER/BROWARD COUNTY WATER & WASTEWATER SERVICES UTILITY ATLAS/STORM UTILITY ATLAS

GENERAL NOTES

1. REPLACED BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE BASE, MIN. 8" AND MAX. 18"
2. BASE MATERIAL SHALL BE PLACED IN 6" MAX. (LOOSE MEASUREMENT)LAYER AND EACH LAYER THOROUGHLY ROLLED OR TAMPED TO 98% OF MAX. DENSITY PER AASH TO T–180
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED
4. SURFACE MATERIAL SHALL BE CONSISTENT WITH SURROUNDING SURFACE MATERIAL (1.5" MIN. THICKNESS)
5. BASE MATERIAL SHALL HAVE A MIN. LBR. OF 100 AND A MIN. CARBONATE CONTENT OF 70% (60% FOR LOCAL STREETS)
6. CONTRACTOR SHALL SOFT DIG TO VERIFY LOCATION OF EXISTING UTILITIES

CALL 48 HOURS BEFORE YOU DIG IN FLORIDA
IT'S THE LAW!
1-800-432-4770
SUNSHINE STATE ONE-CALL OF FLORIDA, INC.

REVIEWED BY: David Dagney
DATE: 05–29–2025

9 ENGINEERING
8751 W BROWARD BLVD #505
PLANTATION, FL 33324

PROJECT TYPE: CATHODIC PROTECTION INSTALLATION
D0006970

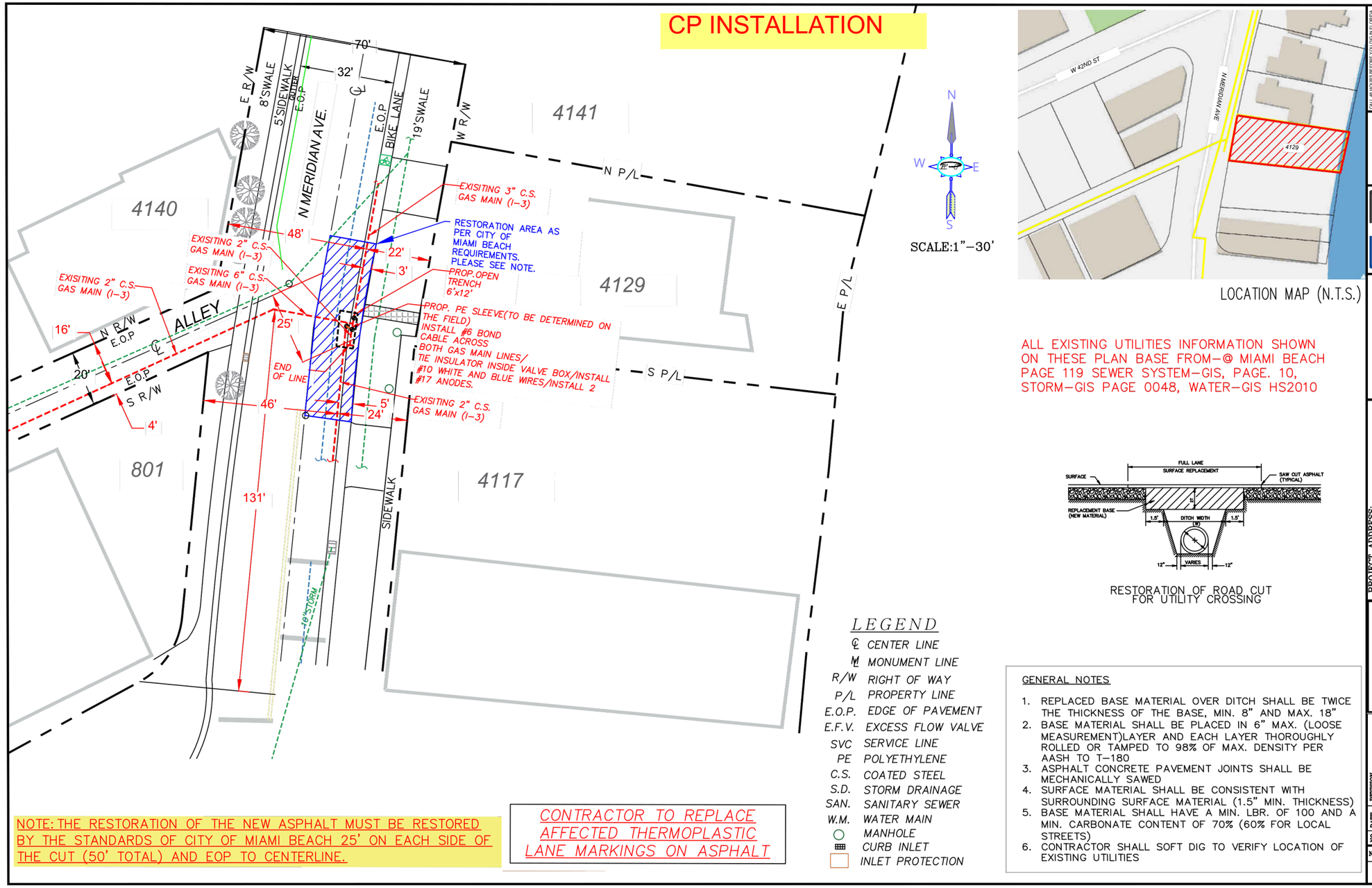
PROJECT ADDRESS: 8751 W BROWARD BLVD #505 PLANTATION, FL 33325

NO.	DATE	REVISION

NO. OF SHEETS: 3
SHEET NO.: 2

Sample: Cathodic Protection Design
Info@9eng.com

CP INSTALLATION



Natural Gas Designs

Cut & Cap

Orlando Dager
Orlando.Dager@9eng.com
Info@9eng.com
+1 (832) 525-6758

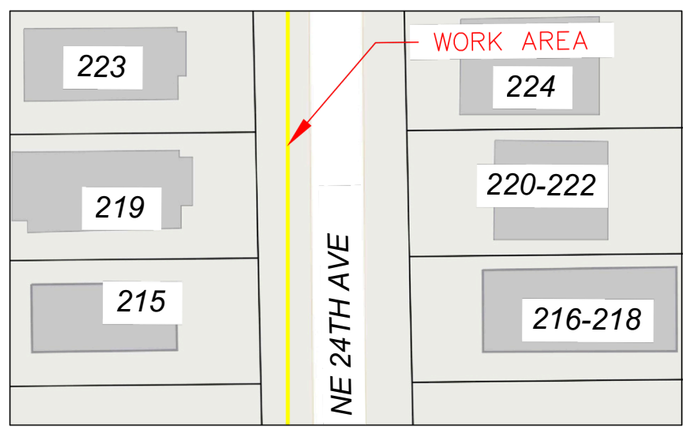
Sample: Cut & Cap Design

NINE ENGINEERING

8751 W BROWARD BLVD #505
PLANTATION, FL 33325

LEGEND

- ℄ CENTER LINE
- M MONUMENT LINE
- R/W RIGHT OF WAY
- P/L PROPERTY LINE
- E.O.P. EDGE OF PAVEMENT
- T.T. TAPPING TEE
- E.F.V. EXCESS FLOW VALVE
- SVC SERVICE LINE
- PE POLYETHYLENE
- C.S. COATED STEEL
- S.D. STORM DRAINAGE
- SAN. SANITARY SEWER
- W.M. WATER MAIN
- MANHOLE
- FIRE HYDRANT
- EM ELECTRONIC MARKER
- INLET PROTECTION
- LIGHT POLE
- SANITARY MANHOLE
- STORM DRAIN MANHOLE
- CURB INLET
- WV WATER VALVE
- GAS VALVE
- SEWER VALVE
- BORE PIT
- FIRE HYDRANT



LOCATION MAP N.T.S

PREMISE: XXXXXXXX

PROJECT DESCRIPTION:

CUT & CAP EX. GAS SERVICE AT THE MAIN.

INDEX

PAGE 1 OF 3 -------- COVER
PAGE 2 OF 3 -------- DESIGN
PAGE 3 OF 3 -------- FIELD PICTURES

811 Know what's below. Call before you dig.

SUNSHINE # 1-800-432-4770

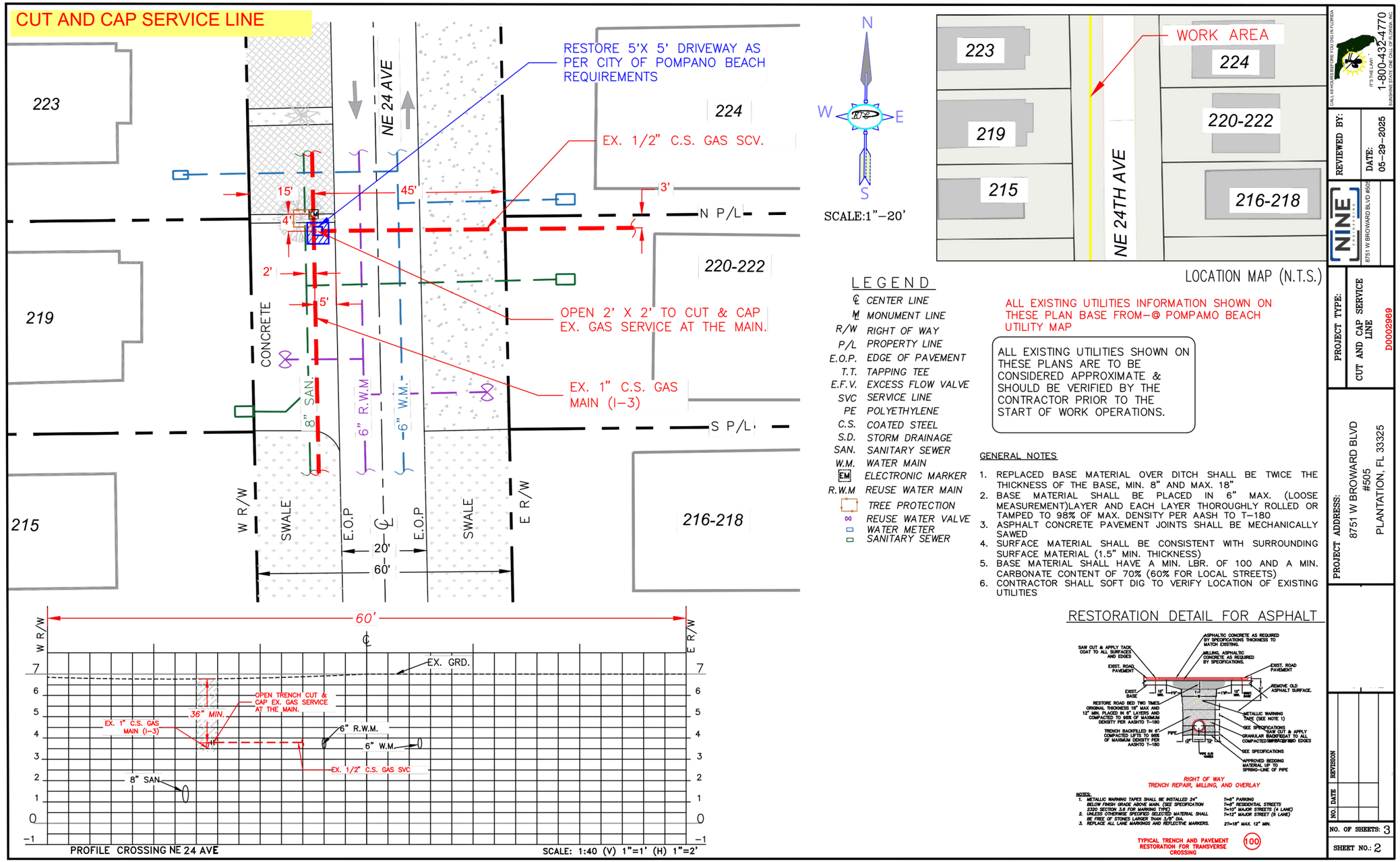
ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE TO BE CONSIDERED APPROXIMATE & SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF WORK OPERATIONS.

ATT EMERGENCY # 1- 866 - 844 - 5144
FPL EMERGENCY # 954 - 737 - 5000
FIBERNET/CROWN EMERGENCY # 1- 800 - 788 - 7011
XFINITY /COMCAST EMERGENCY # 1- 800 - 266 - 2278

NINE ENGINEERING LICENSE Est. 030725 STATE OF FLORIDA PROFESSIONAL ENGINEER

NINE ENGINEERING

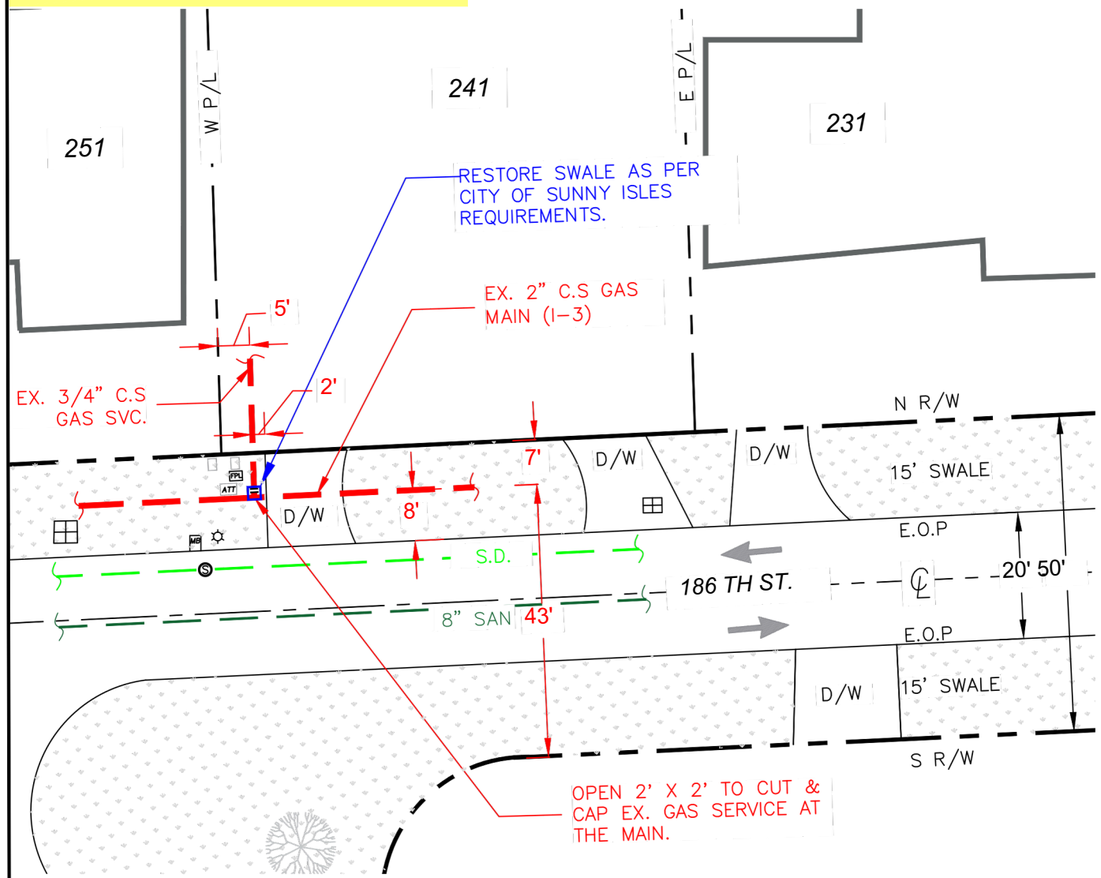
8751 W BROWARD BLVD #505
PLANTATION, FL 33324
954-909-0224 INFO@9ENG.COM



Sample: Cut & Cap Design

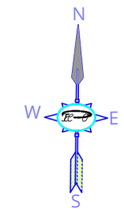
Info@9eng.com

CUT & CAP SERVICE LINE



ALL EXISTING UTILITIES INFORMATION SHOWN ON THESE PLAN BASE FROM-@ SUNNY ISLES WATER & SEWER ATLAS

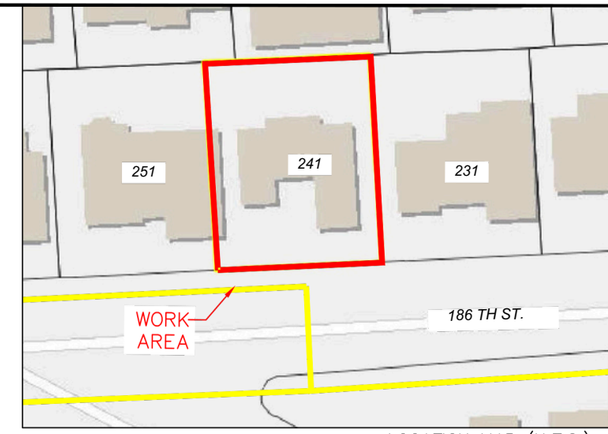
ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE TO BE CONSIDERED APPROXIMATE & SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF WORK OPERATIONS.



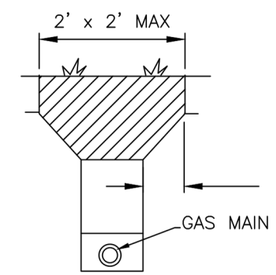
SCALE:1"-20'

LEGEND

- ℄ CENTER LINE
- M MONUMENT LINE
- R/W RIGHT OF WAY
- P/L PROPERTY LINE
- E.O.P. EDGE OF PAVEMENT
- T.T. TAPPING TEE
- E.F.V. EXCESS FLOW VALVE
- SVC SERVICE LINE
- PE POLYETHYLENE
- C.S. COATED STEEL
- S.D. STORM DRAINAGE
- SAN. SANITARY SEWER
- W.M. WATER MAIN
- FPL FPL GENERATOR
- LIGHT POLE
- D/W DRIVEWAY
- MB MAILBOX
- CURB INLET
- SANITARY MANHOLE
- WATER METER



LOCATION MAP (N.T.S.)



SOD RESTORATION DETAIL

GENERAL NOTES

1. REPLACED BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE BASE, MIN. 8" AND MAX. 18"
2. BASE MATERIAL SHALL BE PLACED IN 6" MAX. (LOOSE MEASUREMENT)LAYER AND EACH LAYER THOROUGHLY ROLLED OR TAMPED TO 98% OF MAX. DENSITY PER AASH TO T-180
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED
4. SURFACE MATERIAL SHALL BE CONSISTENT WITH SURROUNDING SURFACE MATERIAL (1.5" MIN. THICKNESS)
5. BASE MATERIAL SHALL HAVE A MIN. LBR. OF 100 AND A MIN. CARBONATE CONTENT OF 70% (60% FOR LOCAL STREETS)
6. CONTRACTOR SHALL SOFT DIG TO VERIFY LOCATION OF EXISTING UTILITIES

CALL 48 HOURS BEFORE YOU DIG IN FLORIDA
IT'S THE LAW!
1-800-432-4770
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

REVIEWED BY: David Dugany
DATE: 05-30-2025

NINE ENGINEERS
8751 W BROWARD BLVD #505
PLANTATION, FL 33324

PROJECT TYPE: CUT & CAP SERVICE LINE
D0002989

PROJECT ADDRESS:
8751 W BROWARD BLVD
#505
PLANTATION, FL 33325

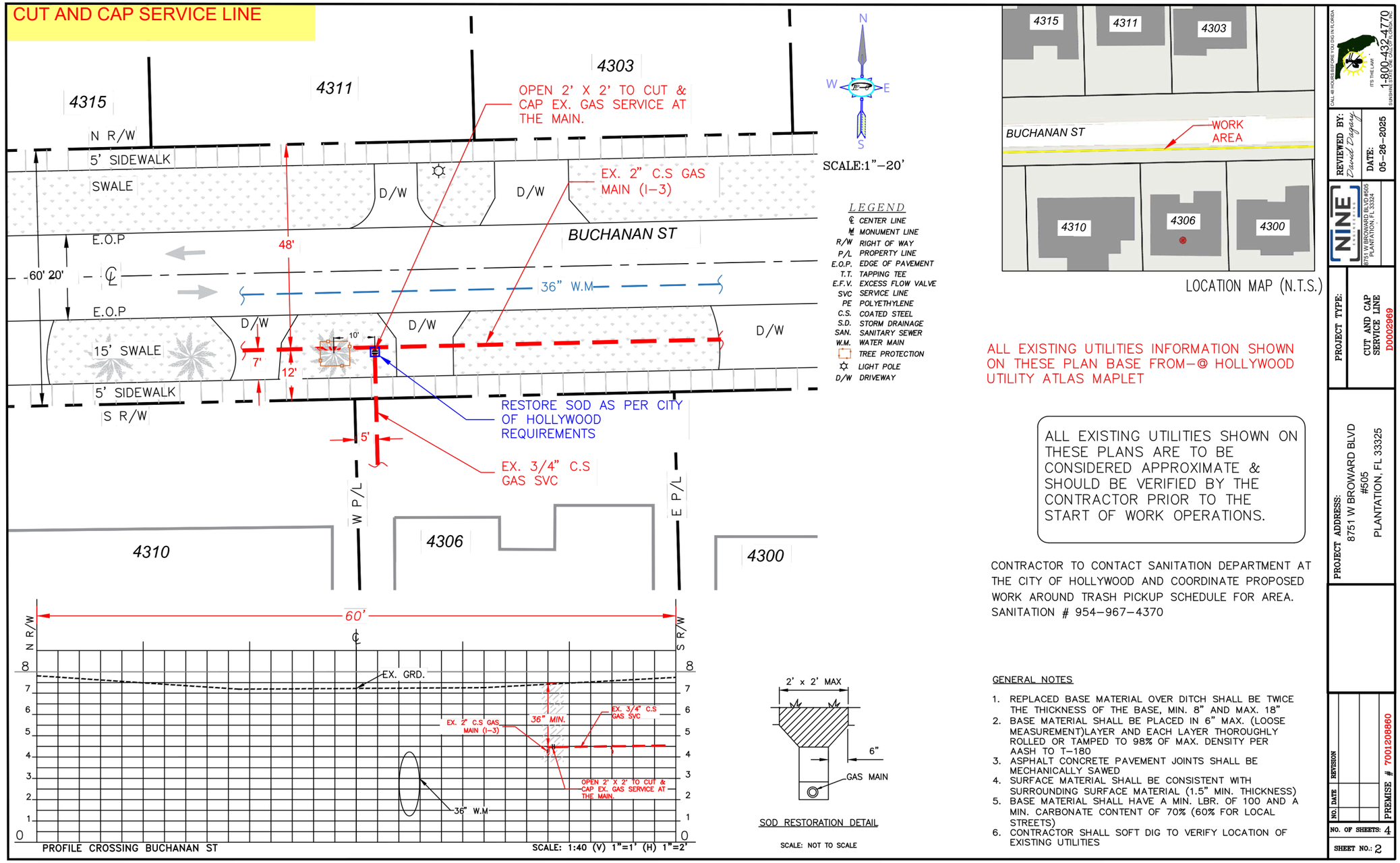
NO.	DATE	REVISION

PREMISE # 7000997297

NO. OF SHEETS: 3
SHEET NO.: 2

Sample: Cut & Cap Design

Info@9eng.com



Sample: Cut & Cap Design

Info@9eng.com

Natural Gas Designs

New Gas Service

Orlando Dager
Orlando.Dager@9eng.com
Info@9eng.com
+1 (832) 525-6758

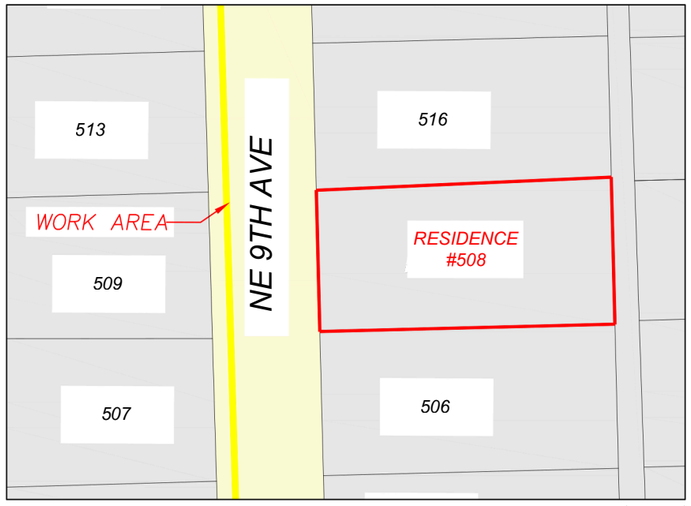
Sample: New Gas Service

NINE ENGINEERING

8751 W BROWARD BLVD #505
PLANTATION, FL 33325

LEGEND

℄	CENTER LINE
M	MONUMENT LINE
R/W	RIGHT OF WAY
P/L	PROPERTY LINE
E.O.P.	EDGE OF PAVEMENT
T.T.	TAPPING TEE
E.F.V.	EXCESS FLOW VALVE
SVC	SERVICE LINE
PE	POLYETHYLENE
C.S.	COATED STEEL
S.D.	STORM DRAINAGE
SAN.	SANITARY SEWER
W.M.	WATER MAIN
	MANHOLE
	FIRE HYDRANT
EM	ELECTRONIC MARKER
	INLET PROTECTION
	LIGHT POLE
S	SANITARY MANHOLE
D	STORM DRAIN MANHOLE
	CURB INLET
	WATER VALVE
	GAS VALVE
	SEWER VALVE
	BORE PIT
	FIRE HYDRANT



LOCATION MAP (N.T.S)

PREMISE: XXXXXXXX

PROJECT DESCRIPTION:

NEW GAS SERVICE LINE

TOTAL PIPE IN PROJECT: APPROX.98'

INDEX

PAGE 1 OF 4 --------- COVER
PAGE 2 OF 4 --------- DESIGN
PAGE 3 OF 4 --------- FIELD PICTURES
PAGE 4 OF 4 --------- MUNICIPALITY NOTES

811 Know what's below. Call before you dig.

SUNSHINE # 1-800-432-4770

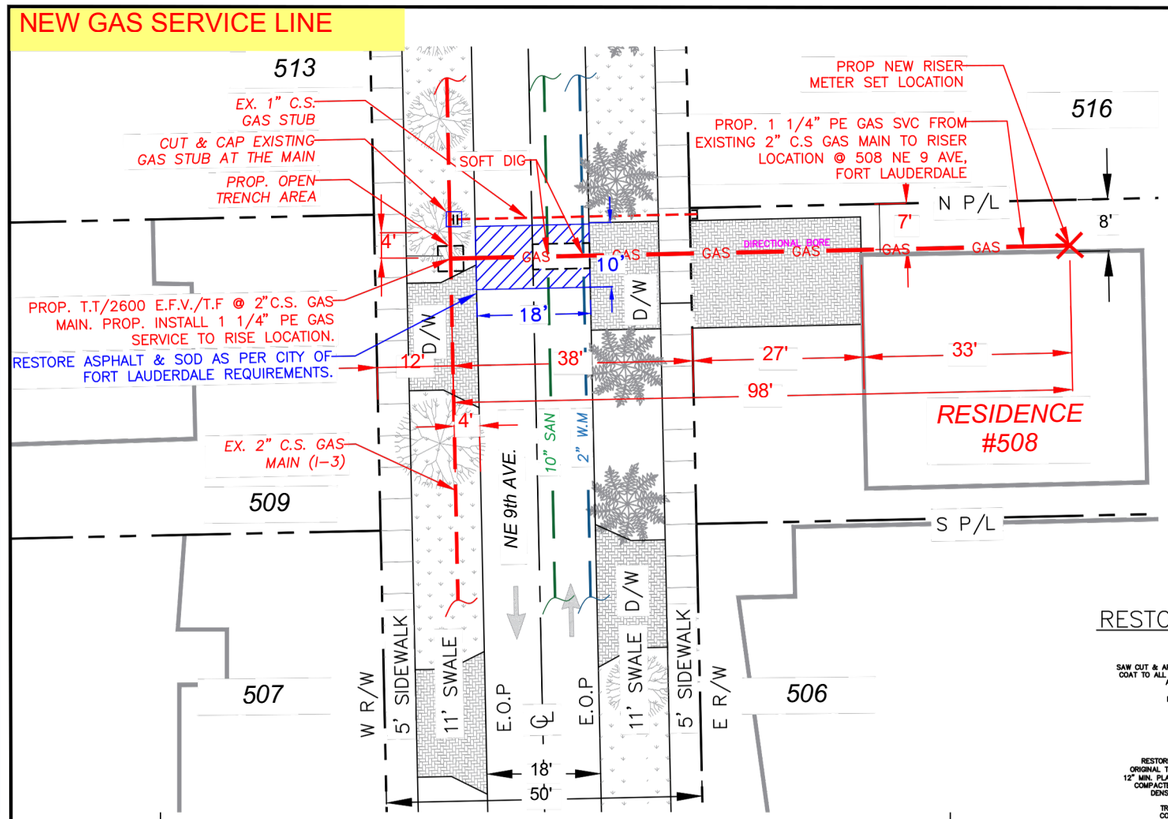
ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE TO BE CONSIDERED APPROXIMATE & SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF WORK OPERATIONS.

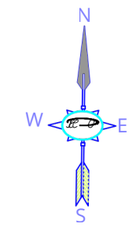
ATT EMERGENCY # 1- 866 - 844 - 5144
FPL EMERGENCY # 954 - 737 - 5000
FIBERNET/CROWN EMERGENCY # 1- 800 - 788 - 7011
XFINITY /COMCAST EMERGENCY # 1- 800 - 266 - 2278
UTILITY WATER / SEWER 24 HOUR 954 - 828 - 8000

NINE ENGINEERING LICENSE Est. 030725 STATE OF FLORIDA PROFESSIONAL ENGINEER

NINE ENGINEERING

8751 W BROWARD BLVD #505
PLANTATION, FL 33324
954-909-0224 INFO@9ENG.COM

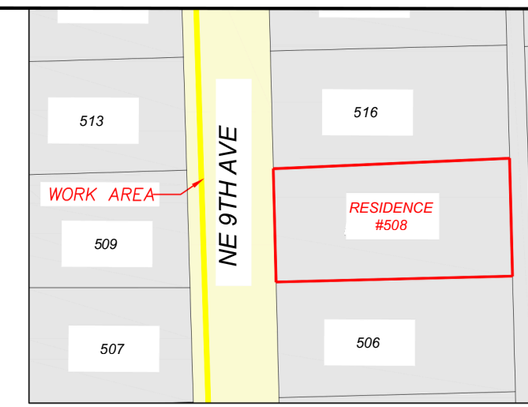




SCALE:1"–20'

LEGEND

℄	CENTER LINE
M	MONUMENT LINE
R/W	RIGHT OF WAY
P/L	PROPERTY LINE
E.O.P.	EDGE OF PAVEMENT
T.T.	TAPPING TEE
E.F.V.	EXCESS FLOW VALVE
SVC	SERVICE LINE
PE	POLYETHYLENE
C.S.	COATED STEEL
S.D.	STORM DRAINAGE
SAN.	SANITARY SEWER
W.M.	WATER MAIN
	TREE PROTECTION
D/W	DRIVEWAY

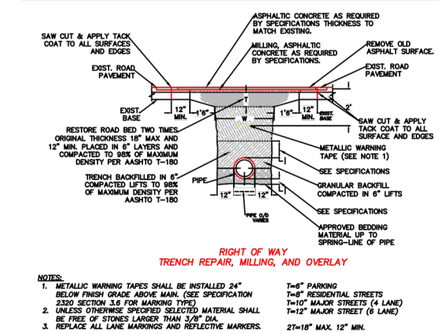


LOCATION MAP (N.T.S.)

ALL EXISTING UTILITIES INFORMATION SHOWN ON THESE PLAN BASE FROM–@ FORT LAUDARDALE SEWER GIS MAP/WATER GIS MAP/STORM GIS MAP.

NOTE: IF DIRECTIONAL BORE CAN NOT BE ACHIEVED, MISSILE OR MICRO BORING WILL NOT BE USED. OPEN CUT IS AN ACCEPTABLE SOLUTION AND THE RESTORATION WILL BE COMPLETED AS PER CITY REQUIREMENTS.

RESTORATION DETAIL FOR ASPHALT

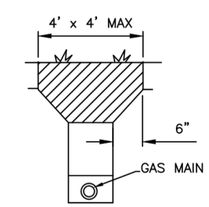


NOTES:
1. METALLIC WARNING TAPES SHALL BE INSTALLED 24" BELOW FINISH GRADE ABOVE MAIN. (SEE SPECIFICATION 2320 SECTION 3.6 FOR MARKING TYPE)
2. UNLESS OTHERWISE SPECIFIED SELECTED MATERIAL SHALL BE FREE OF STONES LARGER THAN 3/4" DIA.
3. REPLACE ALL LANE MARKINGS AND REFLECTIVE MARKERS.

T=6" PARKING
T=8" RESIDENTIAL STREETS
T=10" MAJOR STREETS (4 LANE)
T=12" MAJOR STREET (6 LANE)
2T=18" MAX. 12" MIN.

TYPICAL TRENCH AND PAVEMENT RESTORATION FOR TRANSVERSE CROSSING

100



SOD RESTORATION DETAIL

SCALE: NOT TO SCALE

ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE TO BE CONSIDERED APPROXIMATE & SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF WORK OPERATIONS.

GENERAL NOTES

1. REPLACED BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE BASE, MIN. 8" AND MAX. 18"
2. BASE MATERIAL SHALL BE PLACED IN 6" MAX. (LOOSE MEASUREMENT)LAYER AND EACH LAYER THOROUGHLY ROLLED OR TAMPED TO 98% OF MAX. DENSITY PER AASH TO T–180
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED
4. SURFACE MATERIAL SHALL BE CONSISTENT WITH SURROUNDING SURFACE MATERIAL (1.5" MIN. THICKNESS)
5. BASE MATERIAL SHALL HAVE A MIN. LBR. OF 100 AND A MIN. CARBONATE CONTENT OF 70% (60% FOR LOCAL STREETS)
6. CONTRACTOR SHALL SOFT DIG TO VERIFY LOCATION OF EXISTING UTILITIES

CALL 48 HOURS BEFORE YOU DIG IN FLORIDA
1-800-432-4770
SUNSHINE STATE ONE CALL OF FLORIDA, INC.
IT'S THE LAW!

REVIEWED BY: David Dugan
DATE: 06–21–2025

NINE ENGINEERING
8751 W BROWARD BLVD #505
PLANTATION, FL 33324
DANIEL WILLIAMS JR.
FL P.E # 82321

PROJECT TYPE: NEW GAS SERVICE LINE

PROJECT ADDRESS: 8751 W BROWARD BLVD #505 PLANTATION, FL 33325

NO.	DATE	REVISION

NO. OF SHEETS: 4
SHEET NO.: 2

Sample: New Gas Service (FDOT)

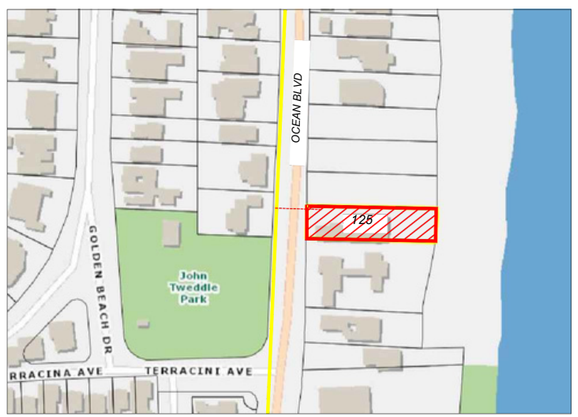
NINE ENGINEERING

8751 W BROWARD BLVD #505
PLANTATION, FL 33325

LEGEND

- ℄ CENTER LINE
- M MONUMENT LINE
- R/W RIGHT OF WAY
- P/L PROPERTY LINE
- E.O.P. EDGE OF PAVEMENT
- T.T. TAPPING TEE
- E.F.V. EXCESS FLOW VALVE
- SVC SERVICE LINE
- PE POLYETHYLENE
- C.S. COATED STEEL
- S.D. STORM DRAINAGE
- SAN. SANITARY SEWER
- W.M. WATER MAIN
- CURB INLET
- TREE PROTECTION BARRIER
- STORM DRAIN MANHOL

ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE TO BE CONSIDERED APPROXIMATE & SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF WORK OPERATIONS.



LOCATION MAP

PREMISE: XXXXXXXX

PROJECT DESCRIPTION:

NEW GAS SERVICE LINE INSTALLATION

TOTAL PIPE IN PROJECT: APPROX. 103'

INDEX

PAGE 1 OF 4 -------- COVER
PAGE 2 OF 4 -------- DESIGN
PAGE 3 OF 4 -------- FIELD PICTURES
PAGE 4 OF 4 -------- FDOT NOTES

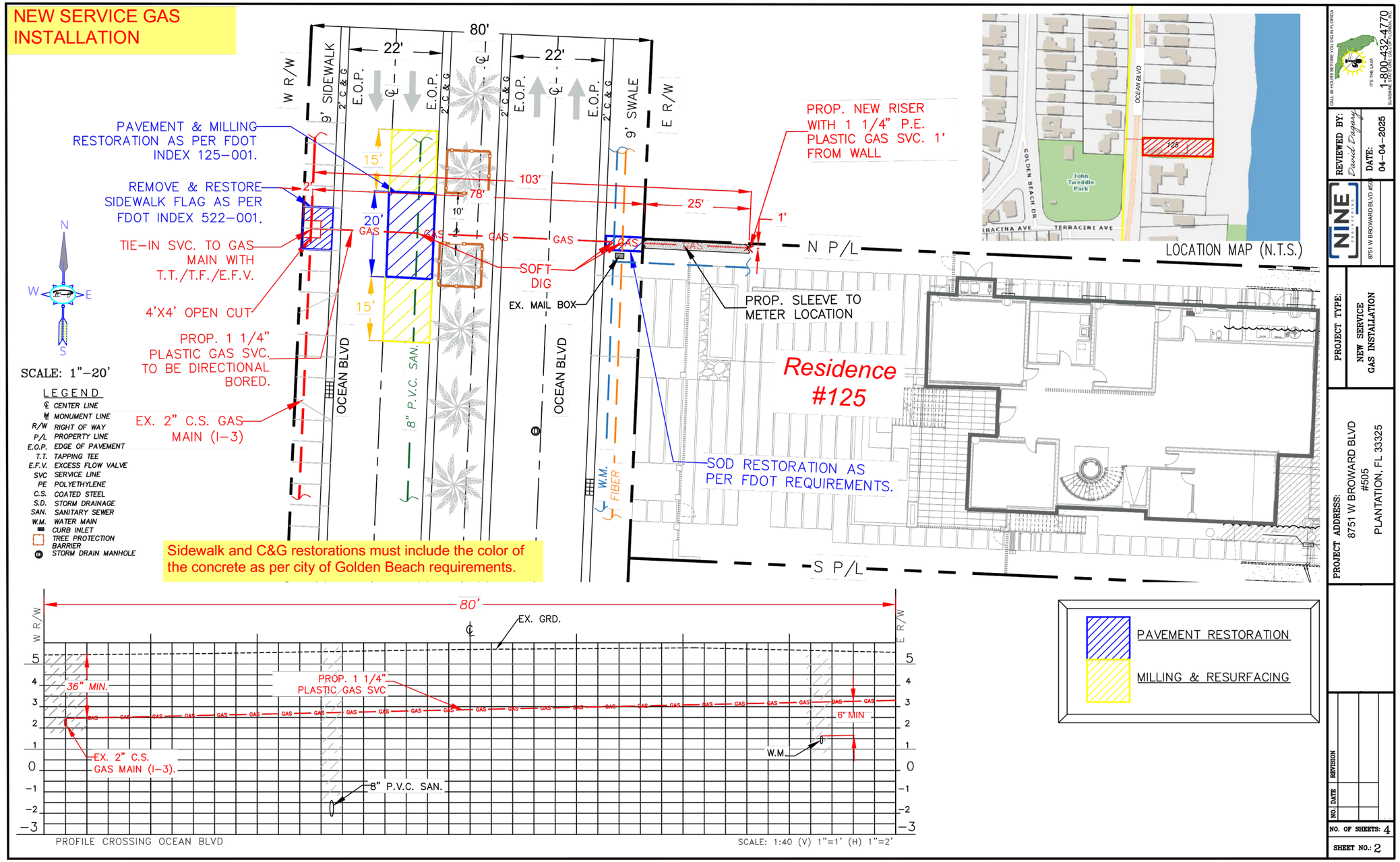
811 Know what's below. Call before you dig.

SUNSHINE # 1-800-432-4770

ATT EMERGENCY # 1- 866 - 844 - 5144
FPL EMERGENCY # 954 - 737 - 5000
FIBERNET/CROWN EMERGENCY # 1- 800 - 788 - 7011
XFINITY /COMCAST EMERGENCY # 1- 800 - 266 - 2278

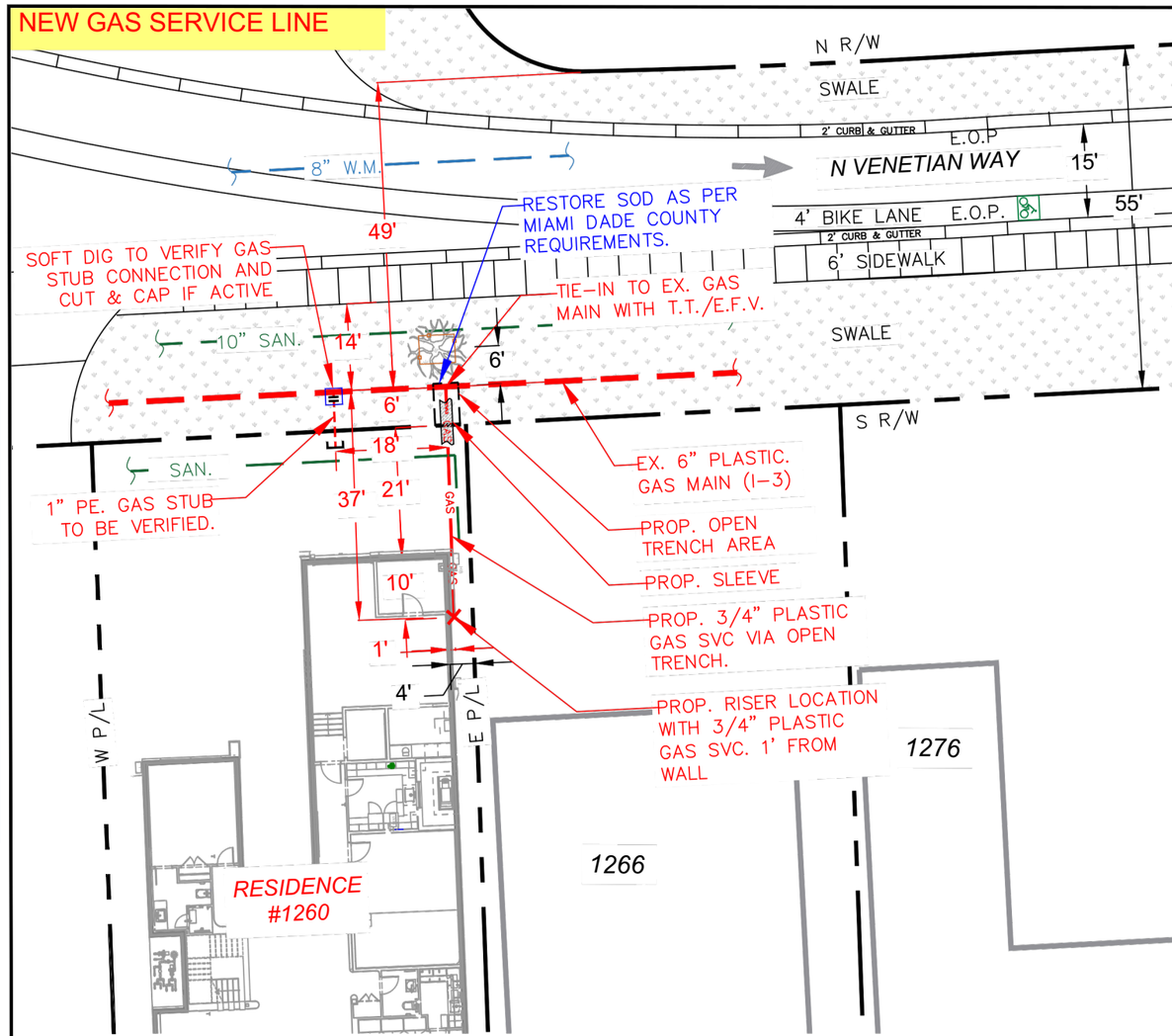
NINE ENGINEERING LICENSE Est. 030725 STATE OF FLORIDA PROFESSIONAL ENGINEER

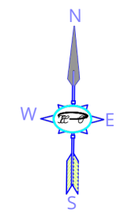
NINE ENGINEERING
8751 W BROWARD BLVD #505
PLANTATION, FL 33324
954-909-0224 INFO@9ENG.COM



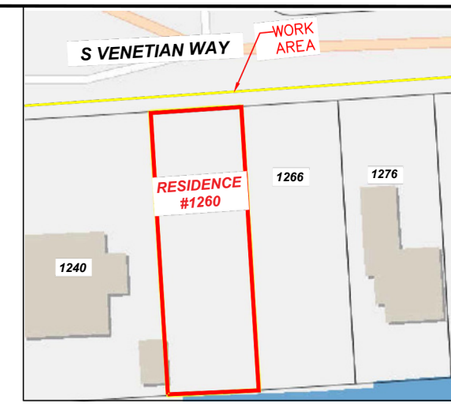
Sample: New Gas Service (FDOT)

Info@9eng.com





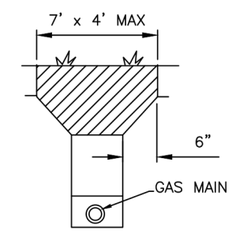
SCALE:1"–20'



LOCATION MAP (N.T.S.)

LEGEND

℄	CENTER LINE
M	MONUMENT LINE
R/W	RIGHT OF WAY
P/L	PROPERTY LINE
E.O.P.	EDGE OF PAVEMENT
T.T.	TAPPING TEE
E.F.V.	EXCESS FLOW VALVE
SVC	SERVICE LINE
PE	POLYETHYLENE
C.S.	COATED STEEL
S.D.	STORM DRAINAGE
SAN.	SANITARY SEWER
W.M.	WATER MAIN
	TREE PROTECTION



SOD RESTORATION DETAIL

SCALE: NOT TO SCALE

GENERAL NOTES

1. REPLACED BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE BASE, MIN. 8" AND MAX. 18"
2. BASE MATERIAL SHALL BE PLACED IN 6" MAX. (LOOSE MEASUREMENT)LAYER AND EACH LAYER THOROUGHLY ROLLED OR TAMPED TO 98% OF MAX. DENSITY PER AASH TO T-180
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED
4. SURFACE MATERIAL SHALL BE CONSISTENT WITH SURROUNDING SURFACE MATERIAL (1.5" MIN. THICKNESS)
5. BASE MATERIAL SHALL HAVE A MIN. LBR. OF 100 AND A MIN. CARBONATE CONTENT OF 70% (60% FOR LOCAL STREETS)
6. CONTRACTOR SHALL SOFT DIG TO VERIFY LOCATION OF EXISTING UTILITIES

Note:There shall be no lane closure and/or interruption of traffic pemitted during AM&PM peak hours(7 am-10 am &4 pm-7 pm).

ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE TO BE CONSIDERED APPROXIMATE & SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF WORK OPERATIONS.

ALL EXISTING UTILITIES INFORMATION SHOWN ON THESE PLAN BASE FROM-@ MIAMI BEACH/SEWER ATLAS D13/WATER ATLAS D13

CALL 48 HOURS BEFORE YOU DIG IN FLORIDA
1-800-432-4770
SUNSHINE STATE ONE CALL OF FLORIDA, INC.
IT'S THE LAW!

REVIEWED BY: Daniel Dugany
DATE: 10-07-2025

9 ENGINEERING
8751 W. BROWARD BLVD #505
PLANTATION, FL 33324

PROJECT TYPE: NEW GAS SERVICE LINE

PROJECT ADDRESS:
8751 W BROWARD BLVD
#505
PLANTATION, FL 33325

NO.	DATE	REVISION

PREMISE # 7001247562

NO. OF SHEETS: 3

SHEET NO.: 2

Sample: New Gas Service

Info@9eng.com

Natural Gas Designs

Undetectable Gas Main Spot Dig

Orlando Dager
Orlando.Dager@9eng.com
Info@9eng.com
+1 (832) 525-6758

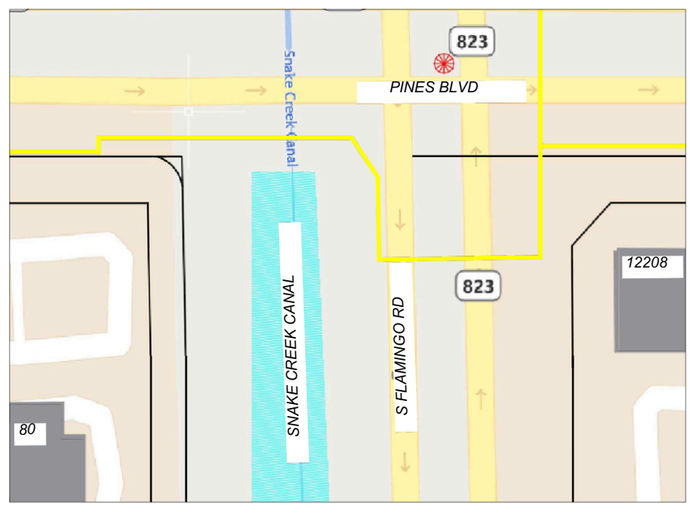
Sample: Undetectable Gas Main Spot Dig

NINE ENGINEERING

8751 W BROWARD BLVD #505
PLANTATION, FL 33325

LEGEND

- ℄ CENTER LINE
- M MONUMENT LINE
- R/W RIGHT OF WAY
- P/L PROPERTY LINE
- E.O.P. EDGE OF PAVEMENT
- T.T. TAPPING TEE
- E.F.V. EXCESS FLOW VALVE
- SVC SERVICE LINE
- PE POLYETHYLENE
- C.S. COATED STEEL
- S.D. STORM DRAINAGE
- SAN. SANITARY SEWER
- W.M. WATER MAIN
- MANHOLE
- FIRE HYDRANT
- EM ELECTRONIC MARKER
- INLET PROTECTION
- LIGHT POLE
- SANITARY MANHOLE
- STORM DRAIN MANHOLE
- CURB INLET
- WV WATER VALVE
- GAS VALVE
- SEWER VALVE
- BORE PIT
- FIRE HYDRANT



LOCATION MAP

PREMISE: XXXXXXXX

PROJECT DESCRIPTION:
SPOT DIG AND INSTALL LOCATING DEVICES ON OR ABOVE THE MAIN

INDEX

PAGE 1 OF 6 -------- COVER
PAGE 2 OF 6 -------- DESIGN
PAGE 3 OF 6 -------- PROFILES
PAGE 4 OF 6 -------- PROFILE & RESTORATION DETAIL
PAGE 5 OF 6 -------- FIELD PICTURES
PAGE 6 OF 6 -------- FDOT NOTES

811 Know what's below. Call before you dig.

SUNSHINE # 1-800-432-4770

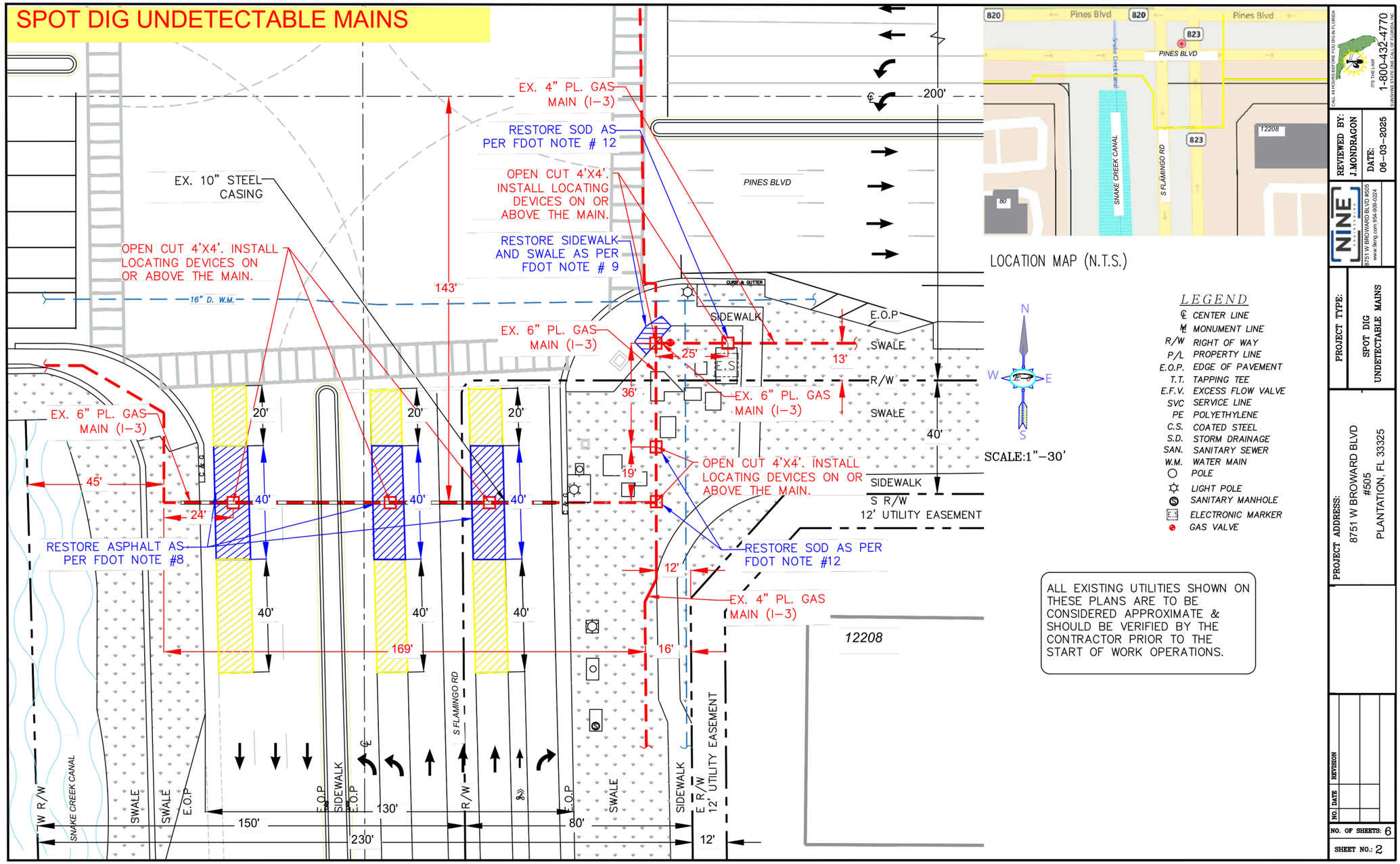
ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE TO BE CONSIDERED APPROXIMATE & SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF WORK OPERATIONS.

ATT EMERGENCY # 1- 866 - 844 - 5144
FPL EMERGENCY # 954 - 737 - 5000
FIBERNET/CROWN EMERGENCY # 1- 800 - 788 - 7011
XFINITY /COMCAST EMERGENCY # 1- 800 - 266 - 2278
UTILITY WATER / SEWER 24 HOUR 954 - 828 - 8000

NINE ENGINEERING LICENSE Est. 030725 STATE OF FLORIDA PROFESSIONAL ENGINEER

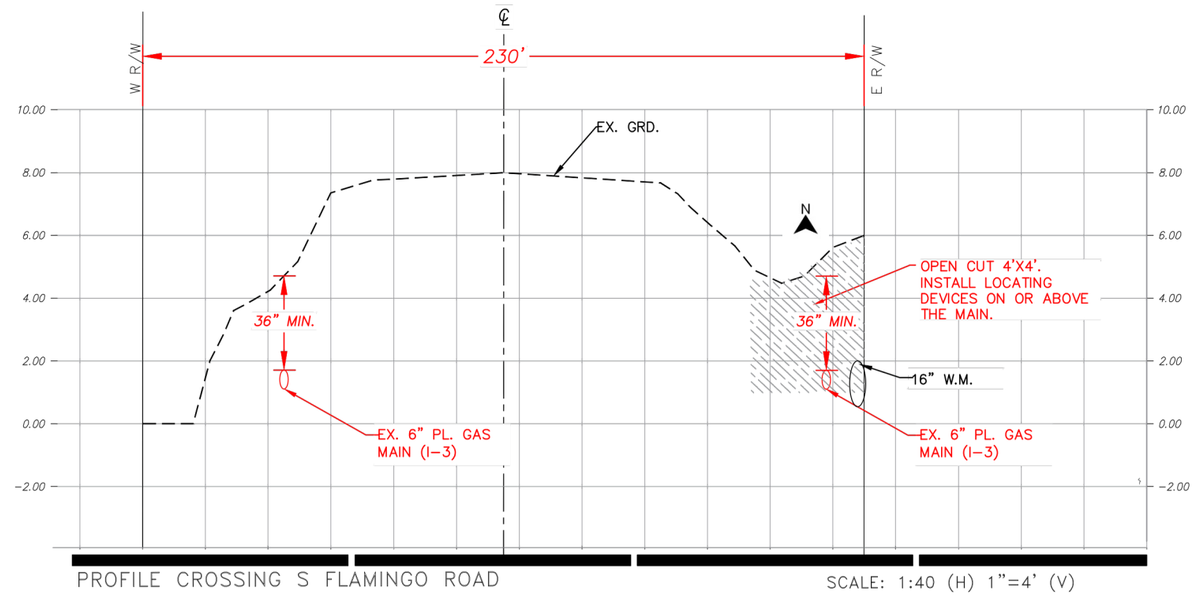
NINE ENGINEERING

8751 W BROWARD BLVD #505
PLANTATION, FL 33324
954-909-0224 INFO@9ENG.COM



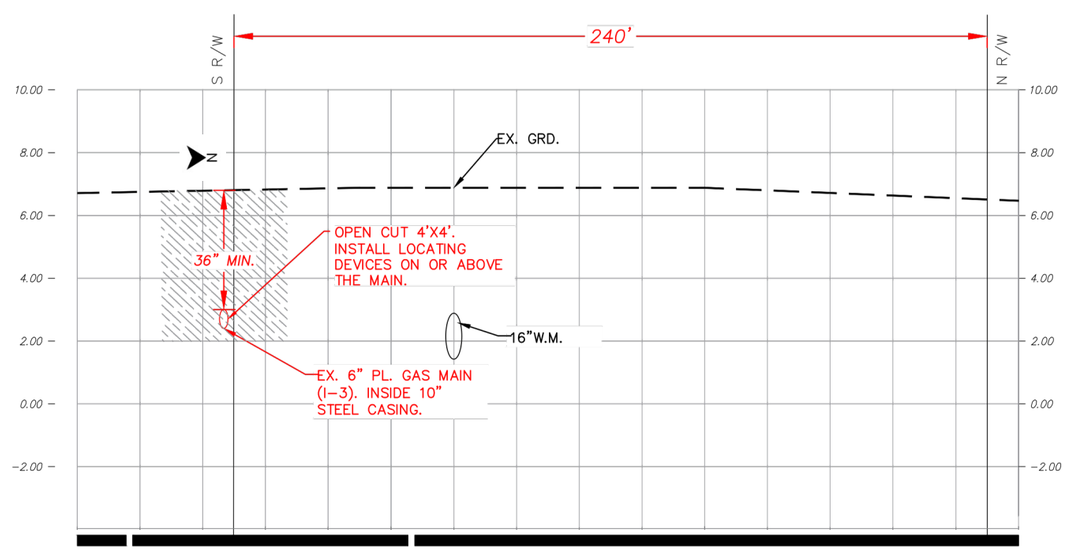
Sample: Undetectable Gas Main Spot Dig

Info@9eng.com



PROFILE CROSSING S FLAMINGO ROAD

SCALE: 1:40 (H) 1"=4' (V)



PROFILE CROSSING PINES BLVD

SCALE: 1:40 (H) 1"=4' (V)

CALL 48 HOURS BEFORE YOU DIG IN FLORIDA
IT'S THE LAW
1-800-432-4770
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

REVIEWED BY: J.MONDRAGON
DATE: 06-03-2025

NINE ENGINEERING
8751 W BROWARD BLVD #505
www.9eng.com 954.600.0264

PROJECT TYPE: PROFILES

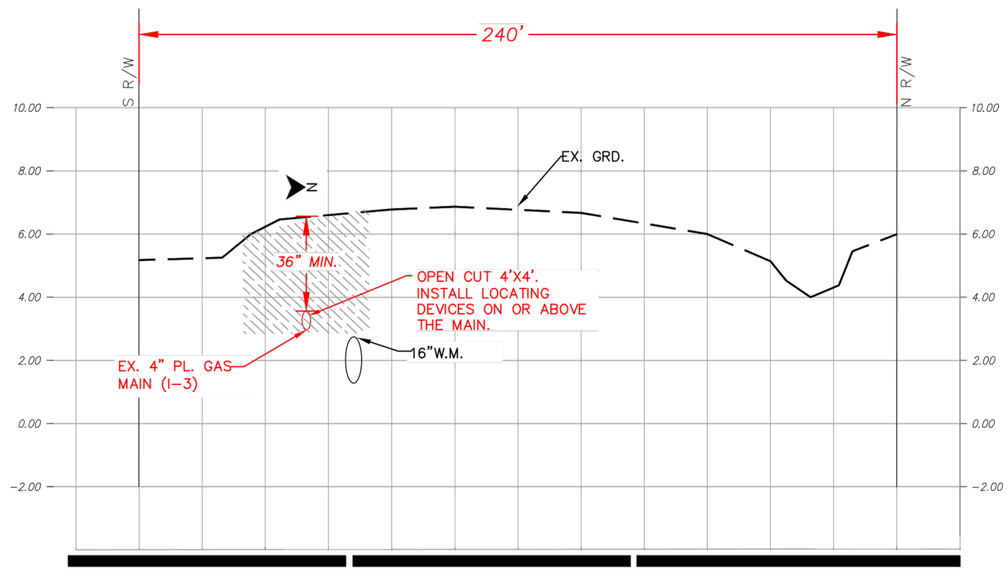
PROJECT ADDRESS:
8751 W BROWARD BLVD
#505
PLANTATION, FL 33325

NO.	DATE	REVISION

NO. OF SHEETS: 6
SHEET NO.: 3

Sample: Undetectable Gas Main Spot Dig

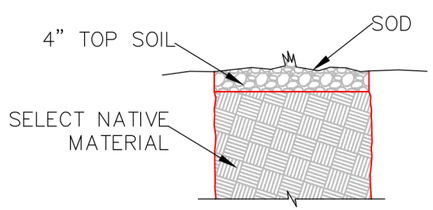
Info@9eng.com



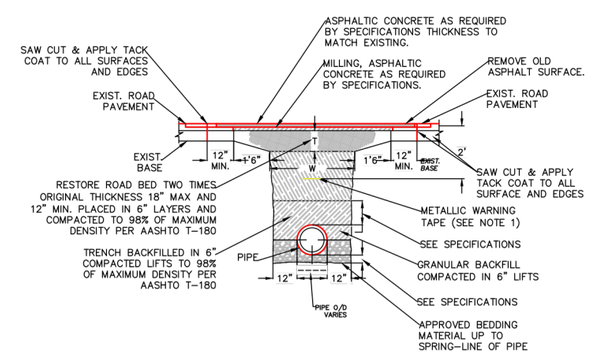
PROFILE CROSSING PINES BLVD

SCALE: 1:40 (H) 1"=4' (V)

RESTORATION DETAIL FOR ASPHALT



SURFACE RESTORATION
IN R/W ABOVE THE PIPE ZONE



RIGHT OF WAY
TRENCH REPAIR, MILLING, AND OVERLAY

NOTES:

1. *METALLIC WARNING TAPES SHALL BE INSTALLED 24" BELOW FINISH GRADE ABOVE MAIN. (SEE SPECIFICATION 2320 SECTION 3.6 FOR MARKING TYPE)*
2. *UNLESS OTHERWISE SPECIFIED SELECTED MATERIAL SHALL BE FREE OF STONES LARGER THAN 3/8" DIA.*
3. *REPLACE ALL LANE MARKINGS AND REFLECTIVE MARKERS.*

T=6" PARKING
T=8" RESIDENTIAL STREETS
T=10" MAJOR STREETS (4 LANE)
T=12" MAJOR STREET (6 LANE)

2T=18" MAX. 12" MIN.

TYPICAL TRENCH AND PAVEMENT
RESTORATION FOR TRANSVERSE
CROSSING

100

CALL 48 HOURS BEFORE YOU DIG IN FLORIDA
ITS THE LAW
1-800-432-4770
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

REVIEWED BY: J.MONDRAGON
DATE: 06-03-2025

NINE ENGINEERING
8751 W. BROWARD BLVD #505
PLANTATION, FL 33324

PROJECT TYPE:
PROFILE & RESTORATION DETAIL

PROJECT ADDRESS:
8751 W BROWARD BLVD
#505
PLANTATION, FL 33325

NO.	DATE	REVISION

NO. OF SHEETS: 6
SHEET NO.: 4

Sample: Undetectable Gas Main Spot Dig

Info@9eng.com

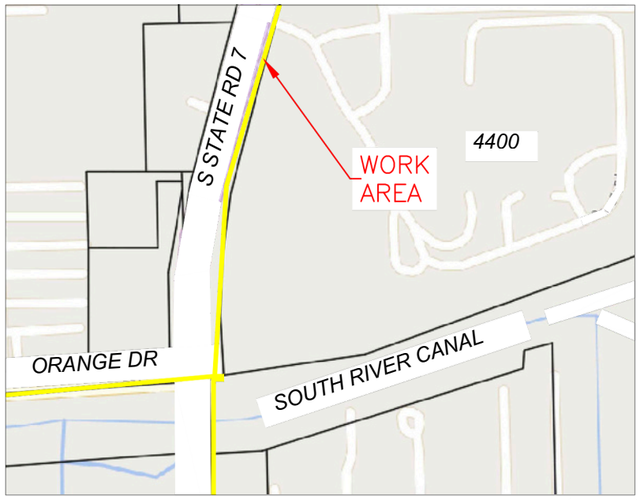
Sample: Undetectable Gas Main Spot Dig

NINE ENGINEERING

8751 W BROWARD BLVD #505
PLANTATION, FL 33325

LEGEND

- ℄ CENTER LINE
- M MONUMENT LINE
- R/W RIGHT OF WAY
- P/L PROPERTY LINE
- E.O.P. EDGE OF PAVEMENT
- T.T. TAPPING TEE
- E.F.V. EXCESS FLOW VALVE
- SVC SERVICE LINE
- PE POLYETHYLENE
- C.S. COATED STEEL
- S.D. STORM DRAINAGE
- SAN. SANITARY SEWER
- W.M. WATER MAIN
- MANHOLE
- FIRE HYDRANT
- EM ELECTRONIC MARKER
- INLET PROTECTION
- TREE PROTECTION
- LIGHT POLE
- SANITARY MANHOLE
- STORM DRAIN MANHOLE
- CURB INLET
- WV WATER VALVE
- GAS VALVE
- SEWER VALVE
- BORE PIT
- FIRE HYDRANT



LOCATION MAP (N.T.S.)

PREMISE: XXXXXXXX

PROJECT DESCRIPTION:

SPOT DIG AND INSTALL LOCATING DEVICES ON OR ABOVE THE MAIN, EXCAVATE APPROXIMATELY EVERY 50' UP TO 1500' NORTH OF ORANGE DR ON S STATE RD 7.

INDEX

PAGE 1 OF 12-------- COVER
PAGE 2 OF 12-------- DESIGN 1
PAGE 3 OF 12-------- DESIGN 2
PAGE 4 OF 12-------- DESIGN 3
PAGE 5 OF 12-------- DESIGN 4
PAGE 6 OF 12-------- DESIGN 5
PAGE 7 OF 12-------- DESIGN 6
PAGE 8 OF 12-------- FIELD PICTURES 1
PAGE 9 OF 12-------- FIELD PICTURES 2
PAGE 10 OF 12------- FIELD PICTURES 3
PAGE 11 OF 12------- FIELD PICTURES 4
PAGE 12 OF 12------- FDOT NOTES

811 Know what's below. Call before you dig.

SUNSHINE # 1-800-432-4770

ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE TO BE CONSIDERED APPROXIMATE & SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF WORK OPERATIONS.

ATT EMERGENCY # 1- 866 - 844 - 5144

FPL EMERGENCY # 954 - 737 - 5000

FIBERNET/CROWN EMERGENCY # 1- 800 - 788 - 7011

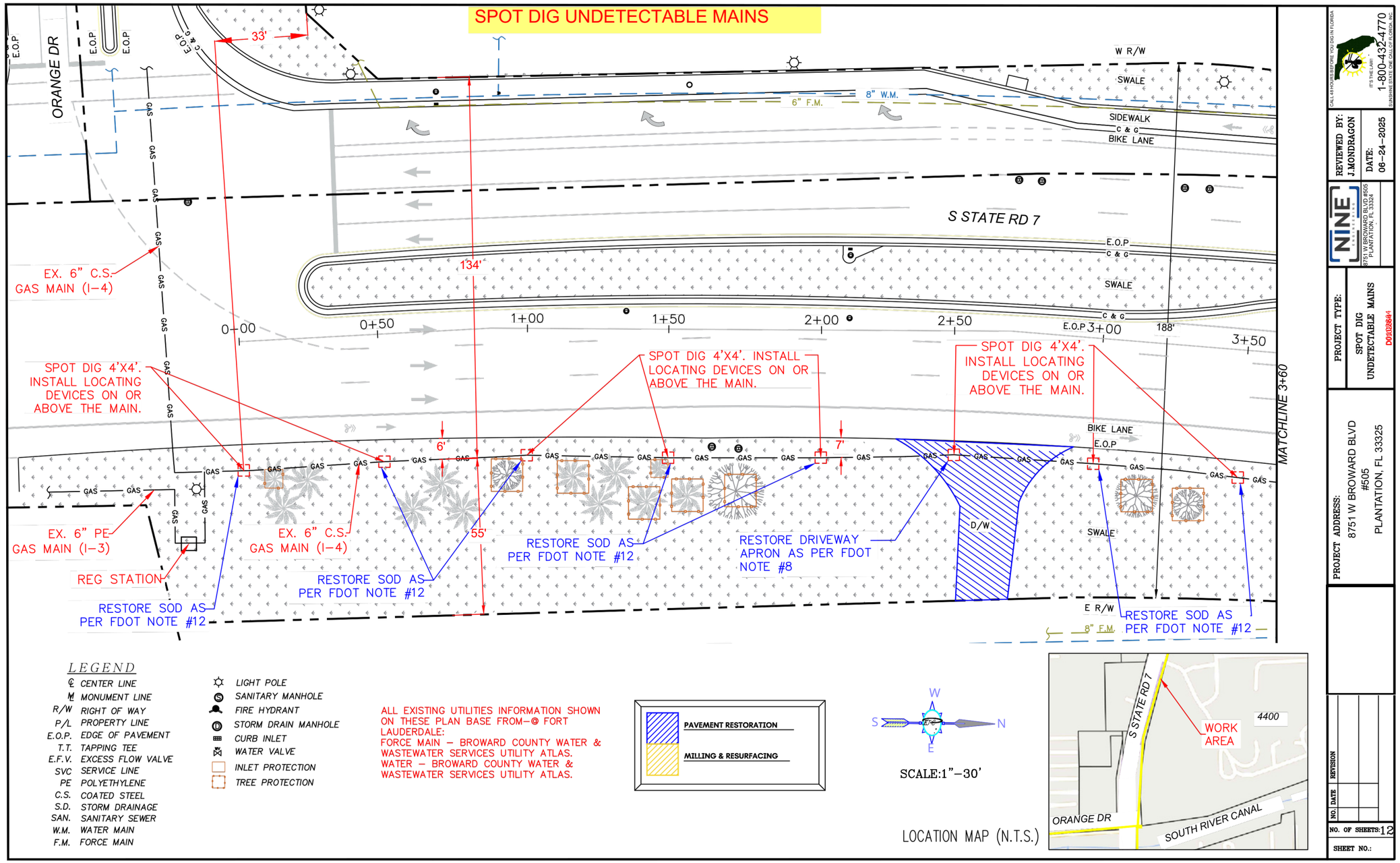
XFINITY /COMCAST EMERGENCY # 1- 800 - 266 - 2278

UTILITY WATER / SEWER 24 HOUR 954 - 828 - 8000

NINE ENGINEERING LICENSE Est. 030725 STATE OF FLORIDA PROFESSIONAL ENGINEER

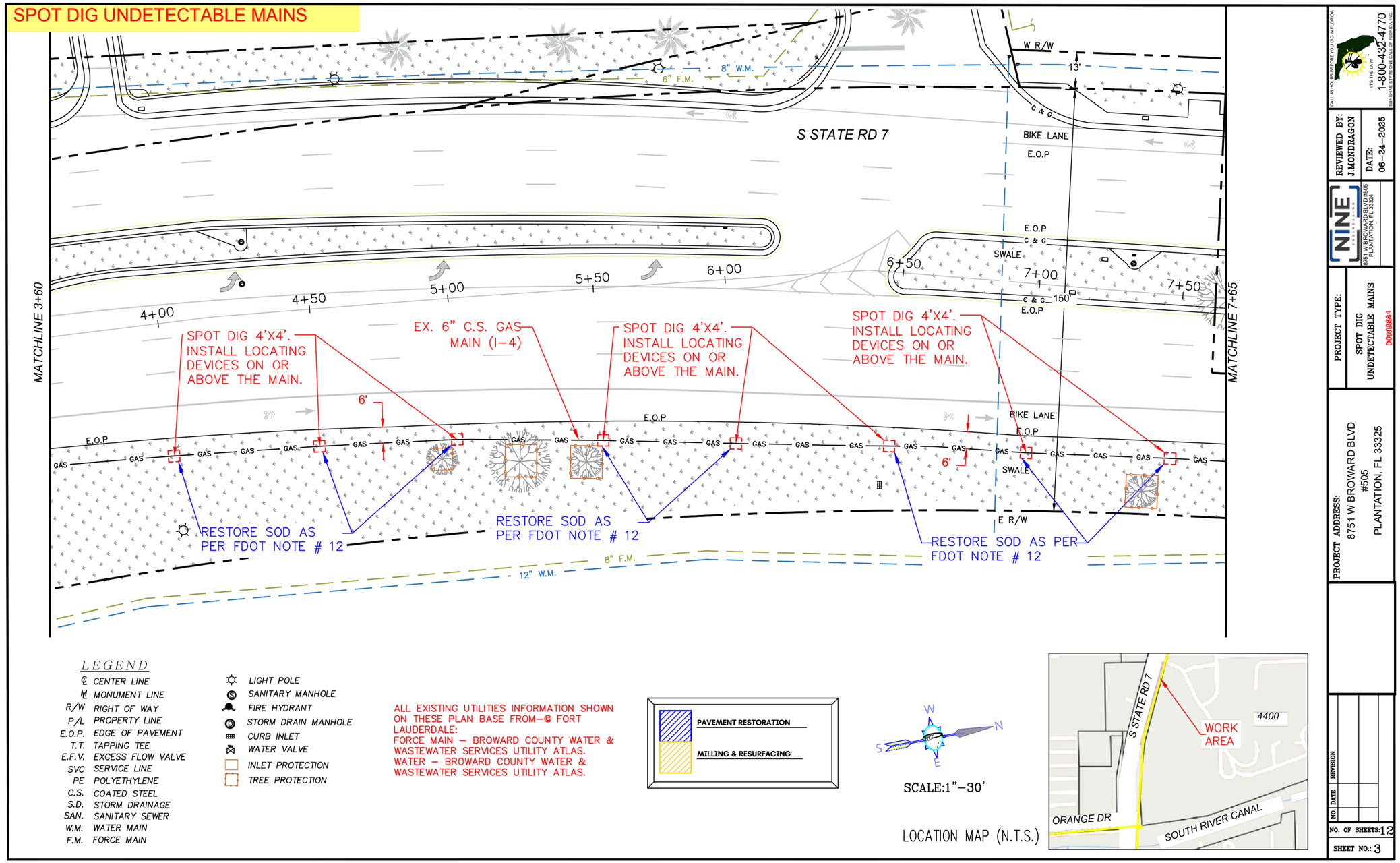
NINE ENGINEERING

8751 W BROWARD BLVD #505
PLANTATION, FL 33324
954-909-0224 INFO@9ENG.COM



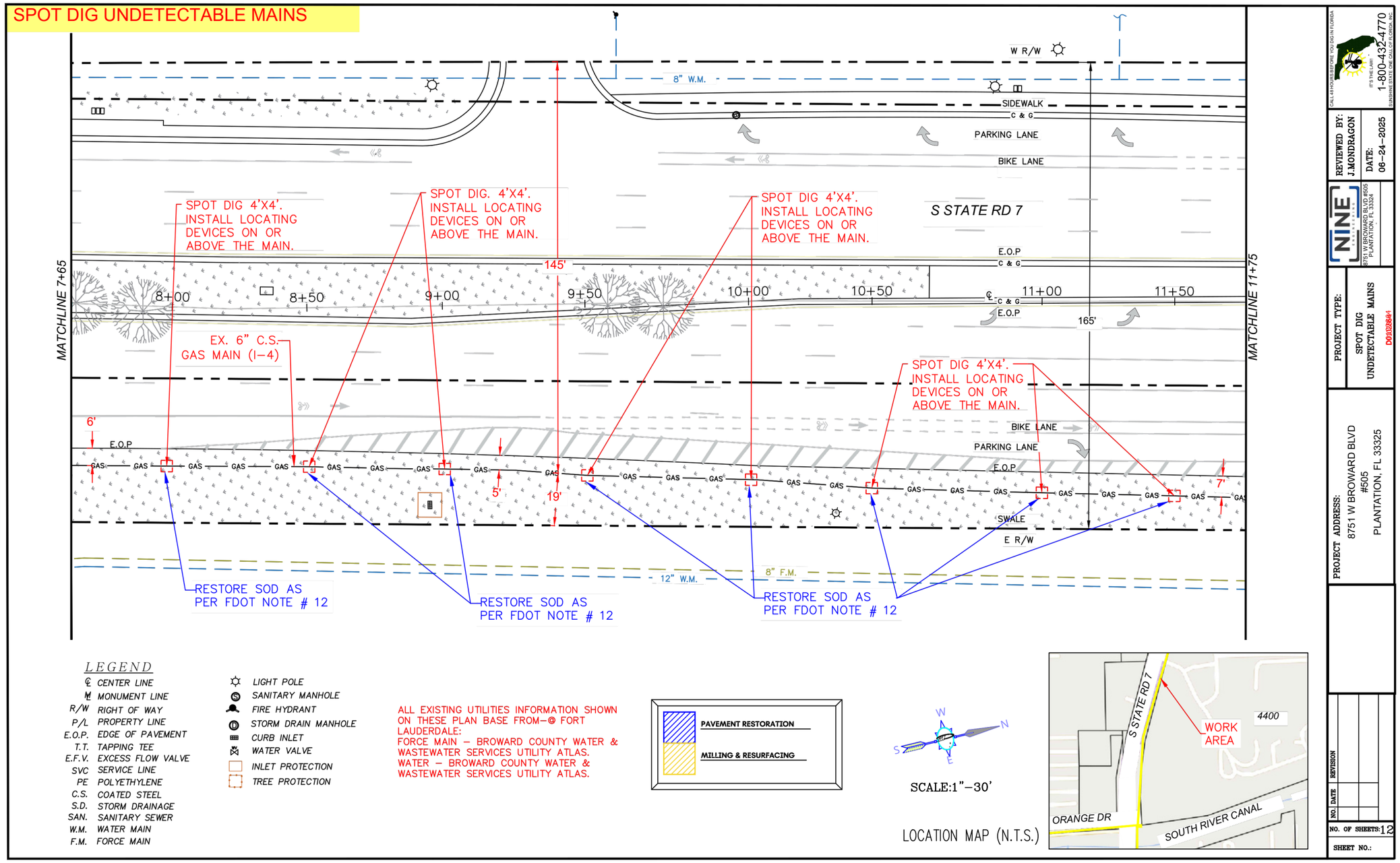
Sample: Undetectable Gas Main Spot Dig

Info@9eng.com



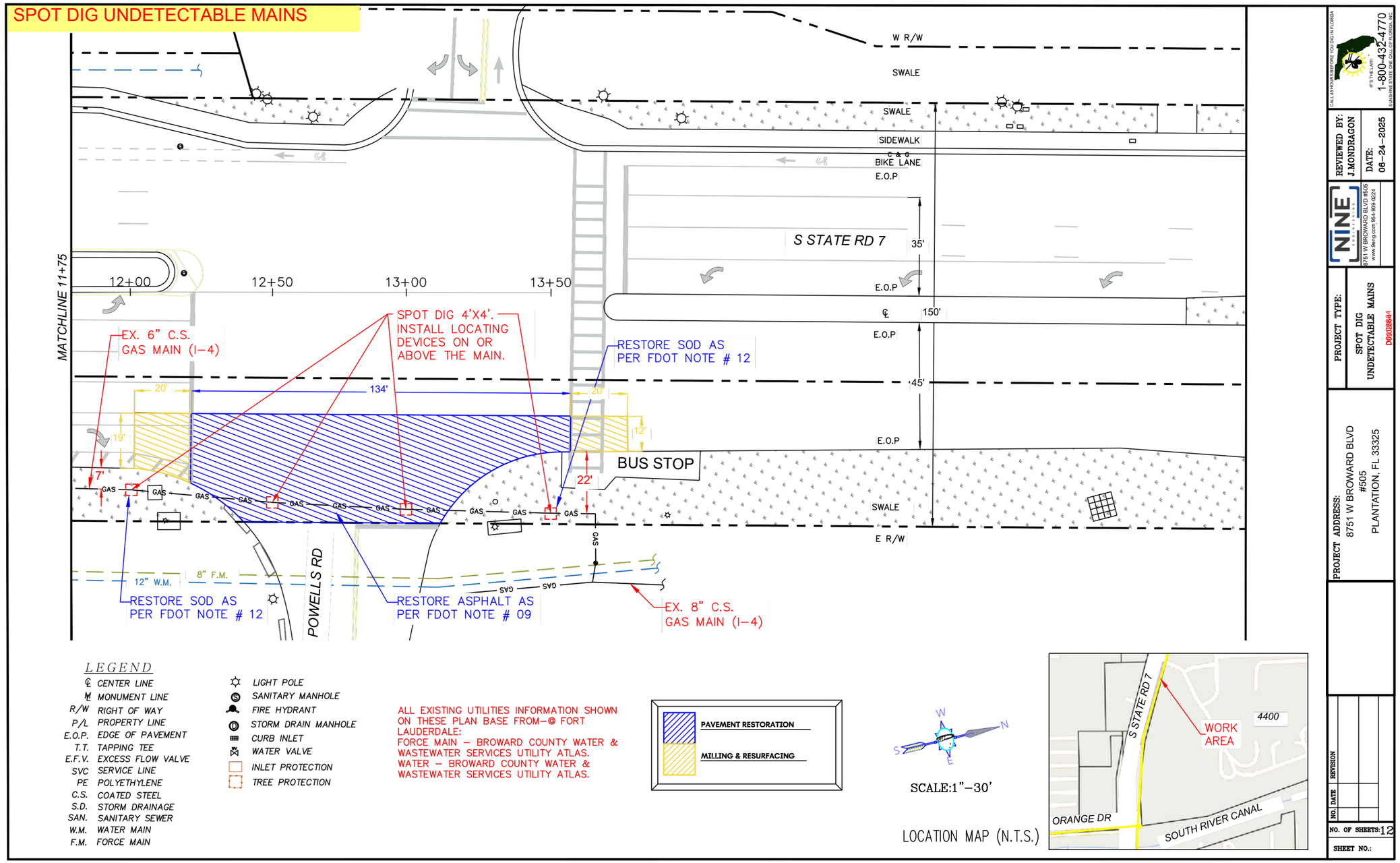
Sample: Undetectable Gas Main Spot Dig

Info@9eng.com



Sample: Undetectable Gas Main Spot Dig

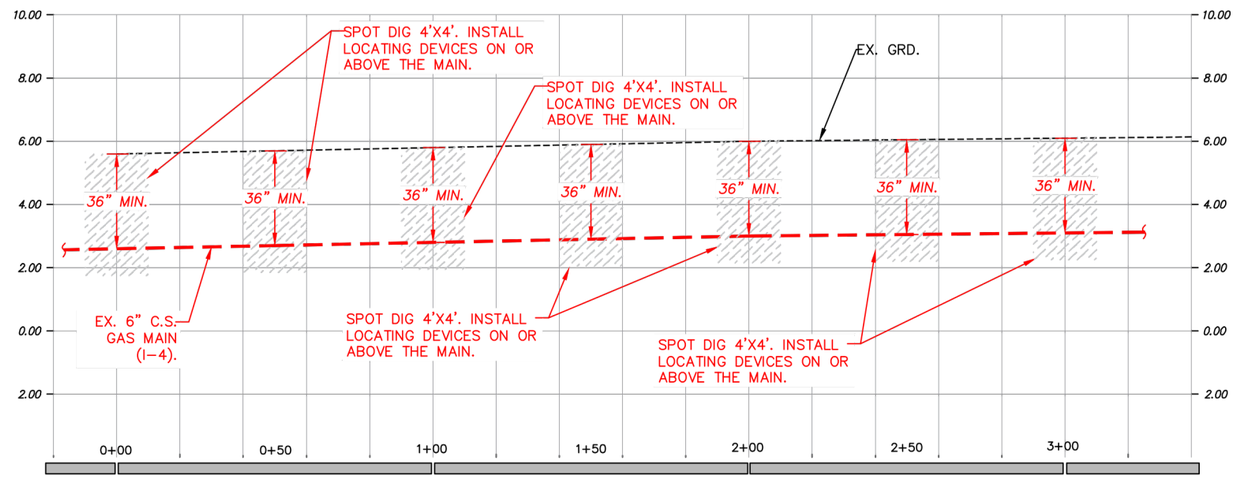
Info@9eng.com



Sample: Undetectable Gas Main Spot Dig

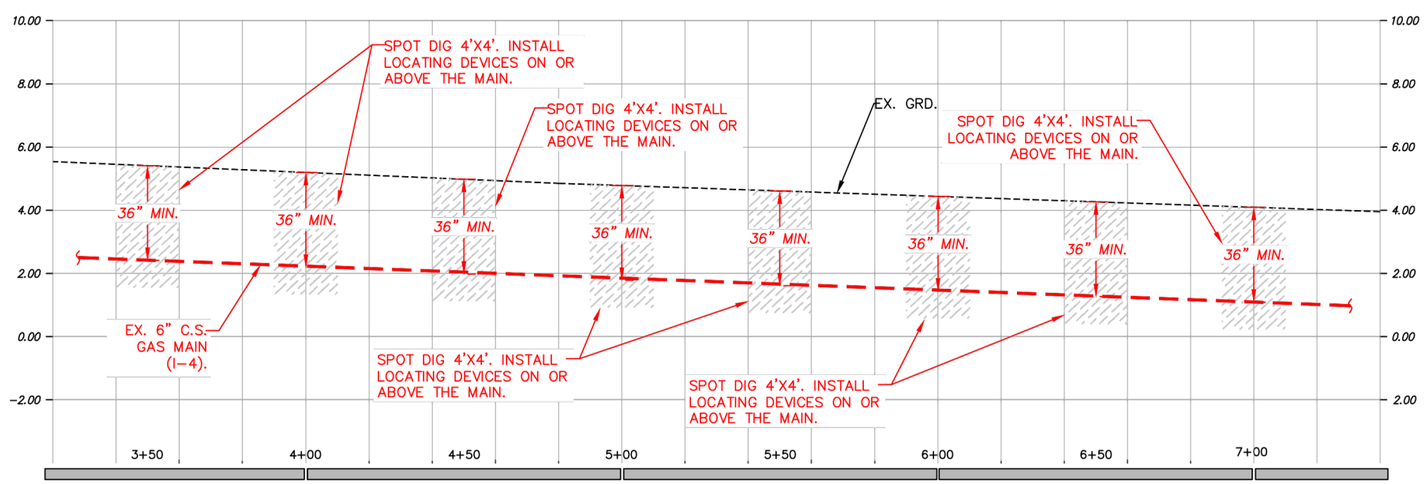
Info@9eng.com

TYPICAL PROFILE ALONG S STATE RD 7



PROFILE ALONG S STATE RD 7

SCALE: 1:40 (H) 1"=4' (V)



PROFILE ALONG S STATE RD 7

SCALE: 1:40 (H) 1"=4' (V)

CALL 48 HOURS BEFORE YOU DIG IN FLORIDA
(TO THE LAW!)
1-800-432-4770
EUREKA-STATE ENG. CALL CENTER OF FLORIDA, INC.

REVIEWED BY: J.MONDRAGON
DATE: 06-24-2025

NINE ENGINEERING
8751 W BROWARD BLVD #505
PLANTATION, FL 33324

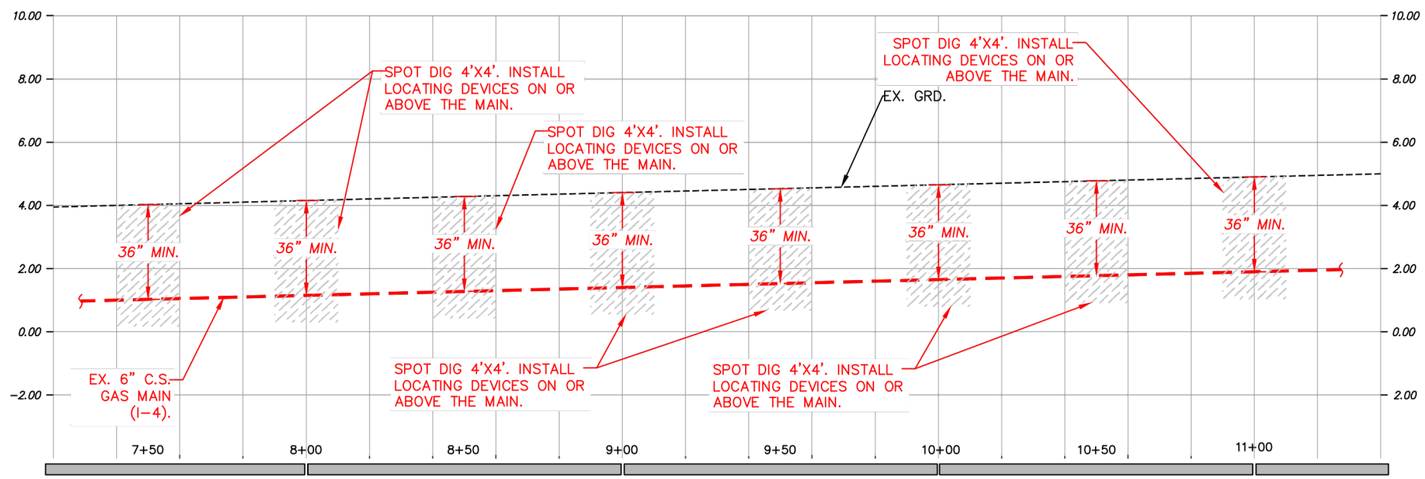
PROJECT TYPE: PROFILES
D91028684

PROJECT ADDRESS:
8751 W BROWARD BLVD
#505
PLANTATION, FL 33325

NO.	DATE	REVISION

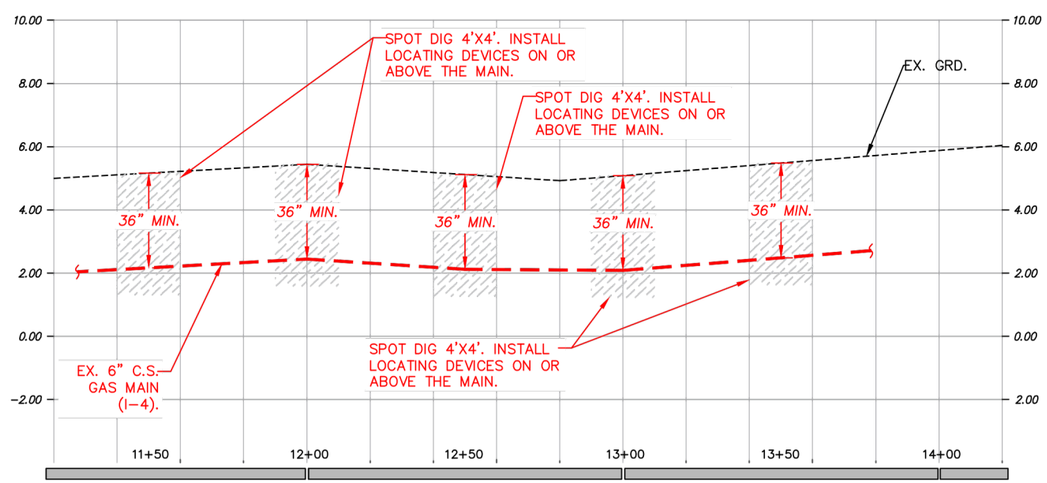
NO. OF SHEETS: 12
SHEET NO.: 6

TYPICAL PROFILE ALONG S STATE RD 7



PROFILE ALONG S STATE RD 7

SCALE: 1:40 (H) 1"=4' (V)



PROFILE ALONG S STATE RD 7

SCALE: 1:40 (H) 1"=4' (V)

CALL 48 HOURS BEFORE YOU DIG IN FLORIDA
ITS THE LAW!
1-800-432-4770
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

REVIEWED BY: J.MONDRAGON
DATE: 06-24-2025

NINE ENGINEERING
8751 W BROWARD BLVD #505
PLANTATION, FL 33324

PROJECT TYPE: PROFILES
D91028641

PROJECT ADDRESS: 8751 W BROWARD BLVD #505 PLANTATION, FL 33325

NO.	DATE	REVISION

NO. OF SHEETS: 12
SHEET NO.: 7

Natural Gas Designs

Gas Main

Orlando Dager
Orlando.Dager@9eng.com
Info@9eng.com
+1 (832) 525-6758

Sample: Gas Main Extension

NINE ENGINEERING

8751 W BROWARD BLVD #505
PLANTATION, FL 33325

LEGEND

- ℄ CENTER LINE
- M MONUMENT LINE
- R/W RIGHT OF WAY
- P/L PROPERTY LINE
- E.O.P. EDGE OF PAVEMENT
- T.T. TAPPING TEE
- E.F.V. EXCESS FLOW VALVE
- SVC SERVICE LINE
- PE POLYETHYLENE
- C.S. COATED STEEL
- S.D. STORM DRAINAGE
- SAN. SANITARY SEWER
- W.M. WATER MAIN
- MANHOLE
- FIRE HYDRANT
- EM ELECTRONIC MARKER
- INLET PROTECTION
- LIGHT POLE
- SANITARY MANHOLE
- STORM DRAIN MANHOLE
- CURB INLET
- WATER VALVE
- GAS VALVE
- SEWER VALVE
- BORE PIT
- FIRE HYDRANT

811 Know what's below. Call before you dig.

SUNSHINE # 1-800-432-4770

ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE TO BE CONSIDERED APPROXIMATE & SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF WORK OPERATIONS.

NOTES

CONSTRUCTION

1. LOCATE AND PROTECT ALL UTILITIES IN AREA OF CONSTRUCTION. SUNSHINE # 1-800-432-4770
2. RESTORE ALL AREAS TO PRIOR CONDITIONS
3. ALL CONSTRUCTION TO FOLLOW JURISDICTIONAL GOVERNMENT AND TPG STANDARDS.

GENERAL NOTES

1. REPLACED BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE BASE, MIN. 8" AND MAX. 18"
2. BASE MATERIAL SHALL BE PLACED IN 6" MAX. (LOOSE MEASUREMENT)LAYER AND EACH LAYER THOROUGHLY ROLLED OR TAMPED TO 98% OF MAX. DENSITY PER AASH TO T-180
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED
4. SURFACE MATERIAL SHALL BE CONSISTENT WITH SURROUNDING SURFACE MATERIAL (1.5" MIN. THICKNESS)
5. BASE MATERIAL SHALL HAVE A MIN. LBR. OF 100 AND A MIN. CARBONATE CONTENT OF 70% (60% FOR LOCAL STREETS)
6. CONTRACTOR SHALL SOFT DIG TO VERIFY LOCATION OF EXISTING UTILITIES

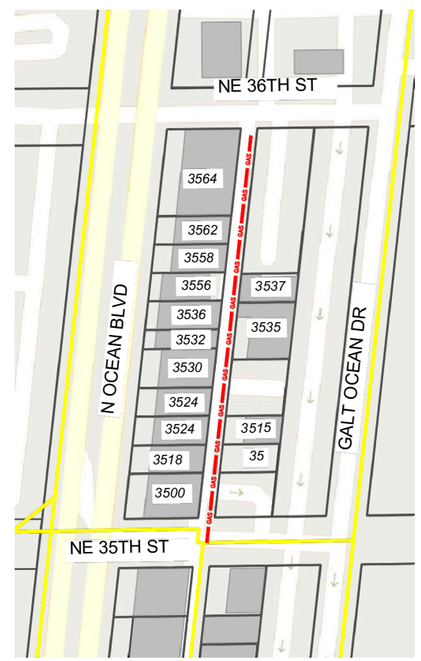
ATT EMERGENCY # 1- 866 - 844 - 5144

FPL EMERGENCY # 954 - 737 - 5000

FIBERNET/CROWN EMERGENCY # 1- 800 - 788 - 7011

XFINITY /COMCAST EMERGENCY # 1- 800 - 266 - 2278

UTILITY WATER / SEWER 24 HOUR 954 - 828 - 8000



LOCATION MAP (N.T.S)

INDEX

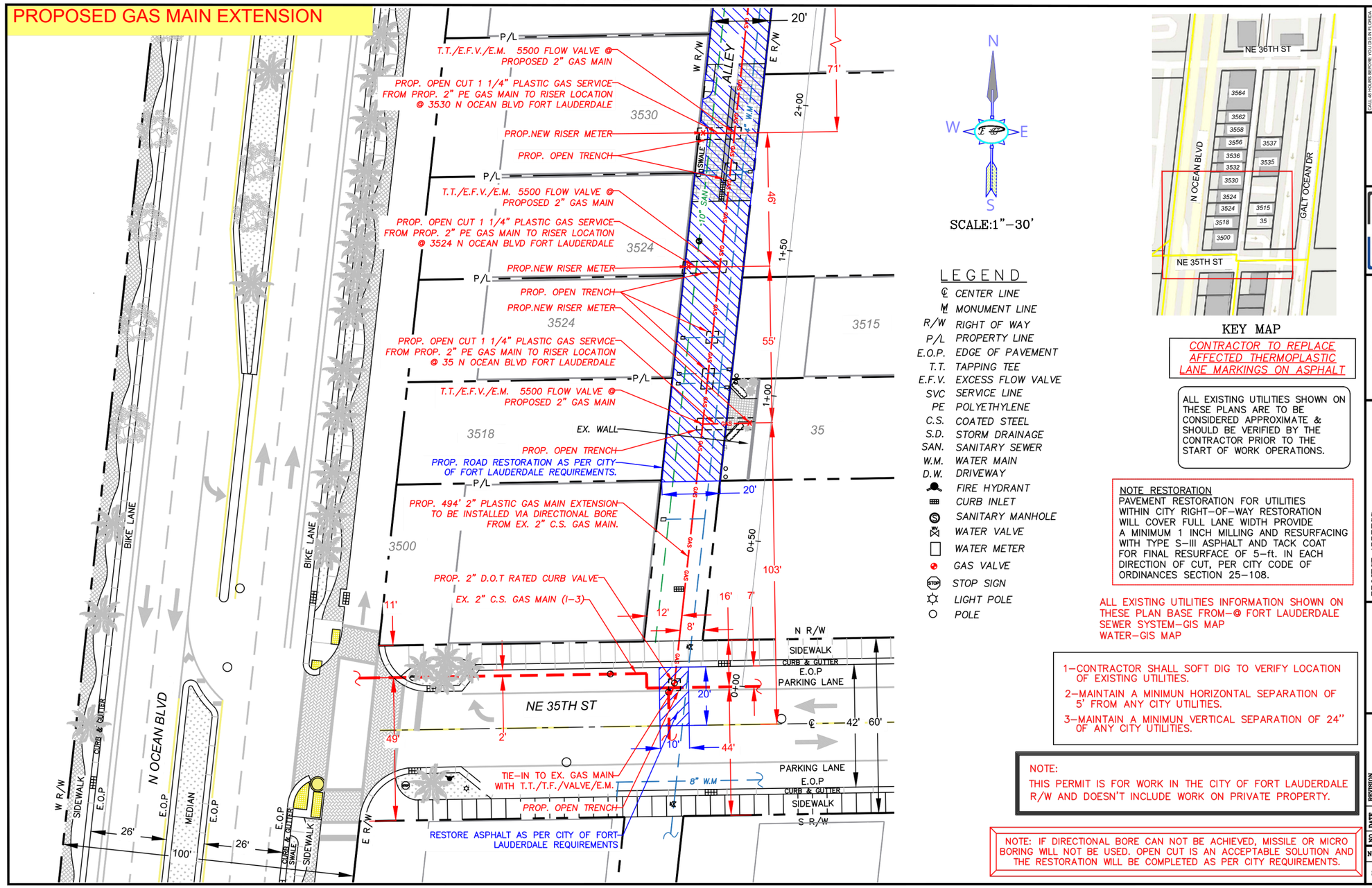
PAGE 1 OF 7 -------- COVER
PAGE 2 OF 7 -------- DESIGN
PAGE 3 OF 7 -------- DESIGN
PAGE 4 OF 7 -------- FIELD PICTURES AND PROFILE
PAGE 5 OF 7 -------- FIELD PICTURES
PAGE 6 OF 7 -------- FIELD PICTURES
PAGE 7 OF 7 -------- MUNICIPALITY NOTES

NINE ENGINEERING LICENSE Est. 030725 STATE OF FLORIDA PROFESSIONAL ENGINEER

NINE ENGINEERING

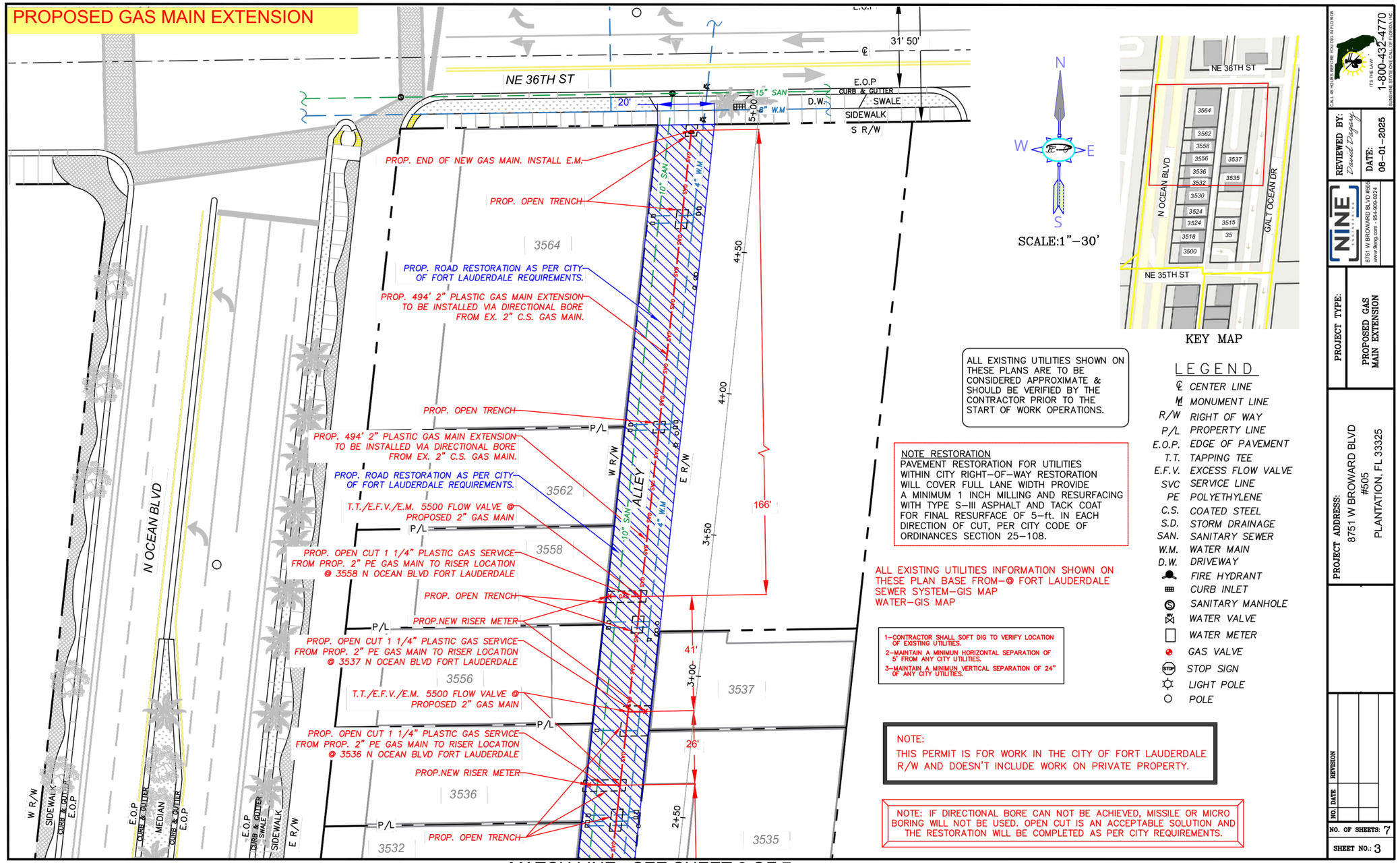
8751 W BROWARD BLVD #505
PLANTATION, FL 33324
954-909-0224 INFO@9ENG.COM

MATCH LINE - SEE SHEET 3 OF 7

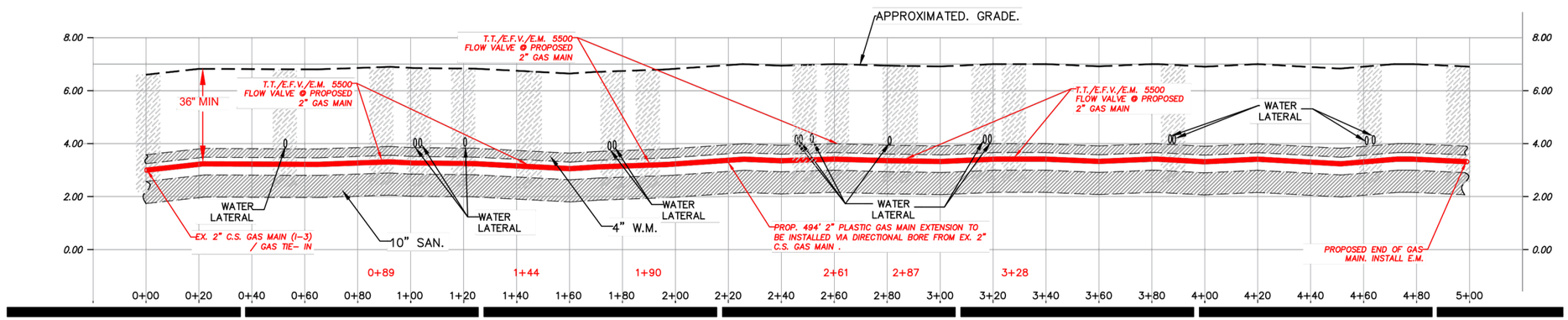


Sample: Gas Main Extension

Info@9eng.com

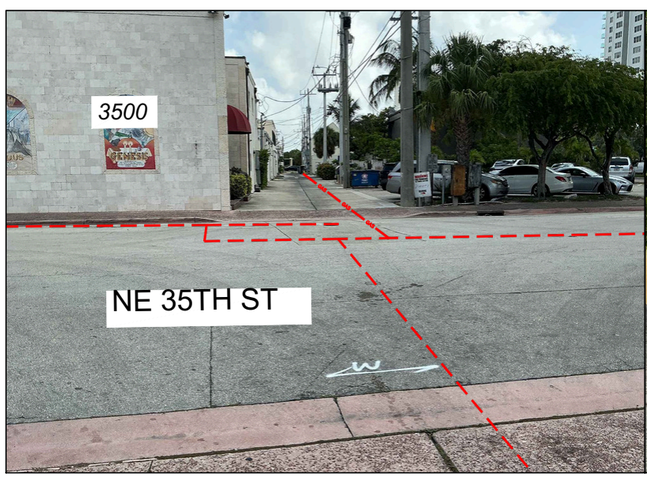


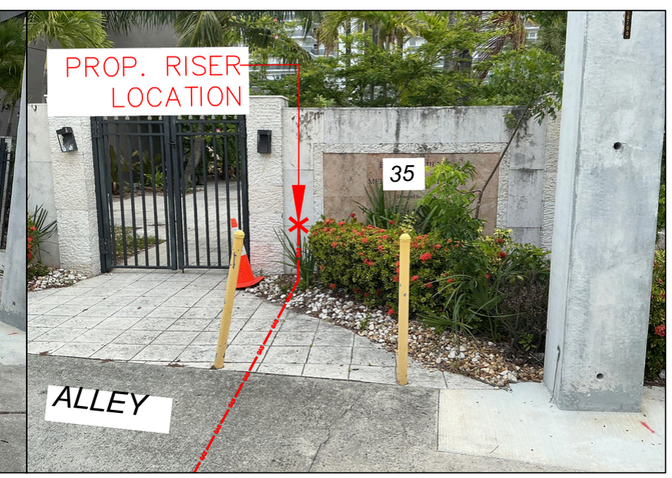
MATCH LINE - SEE SHEET 2 OF 7



PROFILE ALONG ALLEY

SCALE: 1:40 (H) 1"=4' (V)





CALL 48 HOURS BEFORE YOU DIG IN FLORIDA
IT'S THE LAW!
1-800-432-4770
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

REVIEWED BY: David Dagany
DATE: 08-01-2025

NINE ENGINEERING
8751 W BROWARD BLVD #505
www.9eng.com - 954-909-0224

PROJECT TYPE: FIELD PICTURES AND PROFILE

PROJECT ADDRESS:
8751 W BROWARD BLVD
#505
PLANTATION, FL 33325

NO.	DATE	REVISION

NO. OF SHEETS: 7
SHEET NO.: 5

Sample: Gas Main Extension

Info@9eng.com

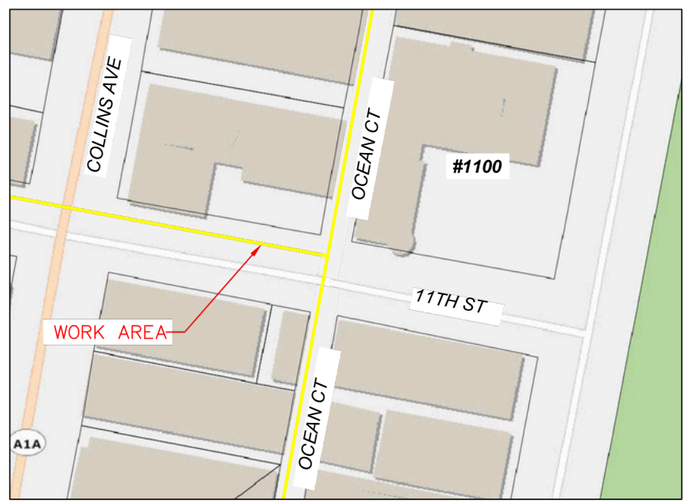
Sample: After the Fact Gas Leak Repair

NINE ENGINEERING

8751 W BROWARD BLVD #505
PLANTATION, FL 33325

LEGEND

- ℄ CENTER LINE
- M MONUMENT LINE
- R/W RIGHT OF WAY
- P/L PROPERTY LINE
- E.O.P. EDGE OF PAVEMENT
- T.T. TAPPING TEE
- E.F.V. EXCESS FLOW VALVE
- SVC SERVICE LINE
- PE POLYETHYLENE
- C.S. COATED STEEL
- S.D. STORM DRAINAGE
- SAN. SANITARY SEWER
- W.M. WATER MAIN
- MANHOLE
- FIRE HYDRANT
- EM ELECTRONIC MARKER
- INLET PROTECTION
- LIGHT POLE
- SANITARY MANHOLE
- STORM DRAIN MANHOLE
- CURB INLET
- WATER VALVE
- GAS VALVE
- SEWER VALVE
- BORE PIT
- FIRE HYDRANT



LOCATION MAP (N.T.S)

PREMISE: XXXXXXXX

PROJECT DESCRIPTION:

AFTER THE FACT GAS LEAK REPAIRED.

INDEX

PAGE 1 OF 3 -------- COVER
PAGE 2 OF 3 -------- DESIGN
PAGE 3 OF 3 -------- FIELD PICTURES

811 Know what's below. Call before you dig.

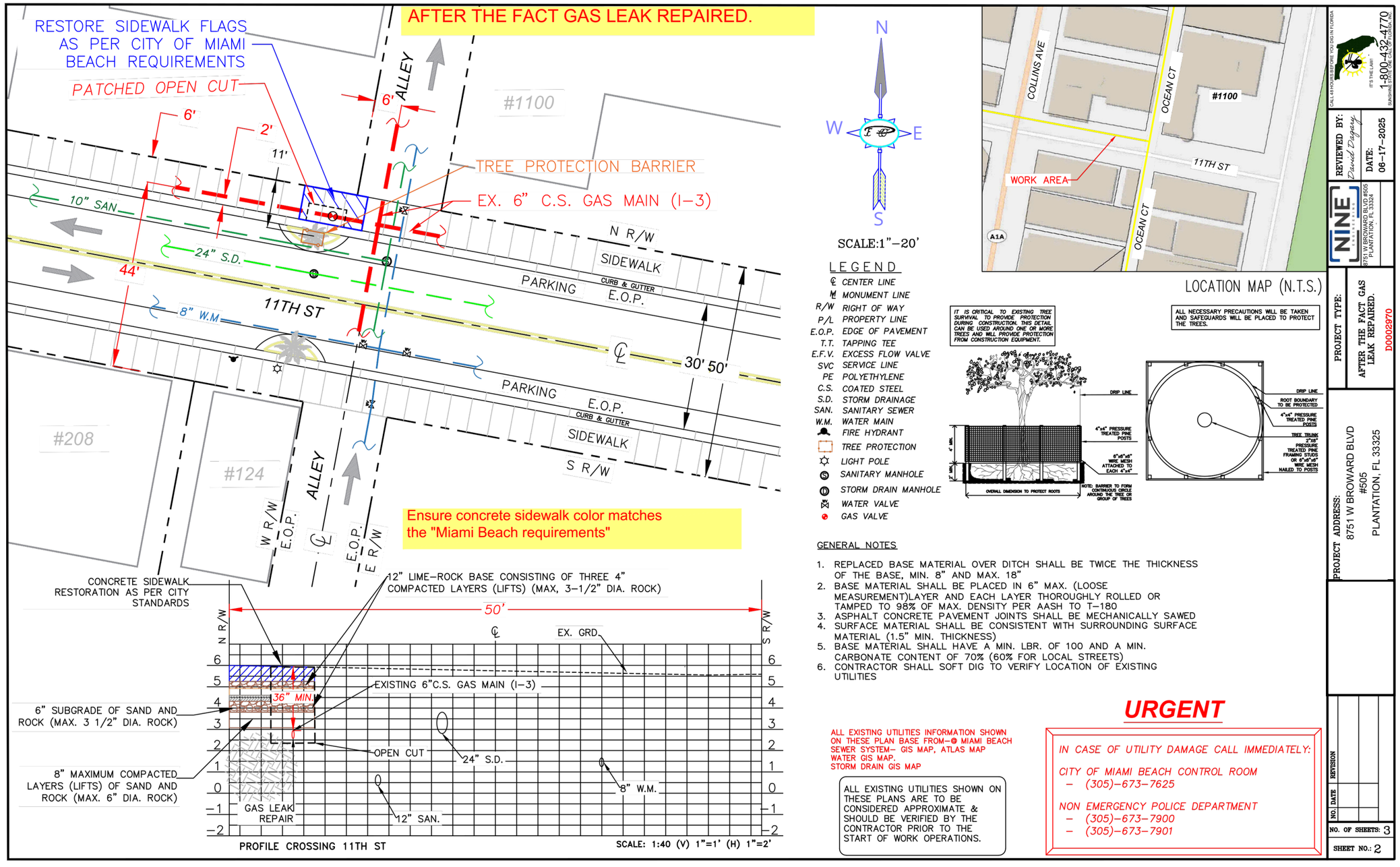
SUNSHINE # 1-800-432-4770

ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE TO BE CONSIDERED APPROXIMATE & SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF WORK OPERATIONS.

ATT EMERGENCY # 1- 866 - 844 - 5144
FPL EMERGENCY # 954 - 737 - 5000
FIBERNET/CROWN EMERGENCY # 1- 800 - 788 - 7011
XFINITY /COMCAST EMERGENCY # 1- 800 - 266 - 2278

NINE ENGINEERING LICENSE Est. 030725 STATE OF FLORIDA PROFESSIONAL ENGINEER

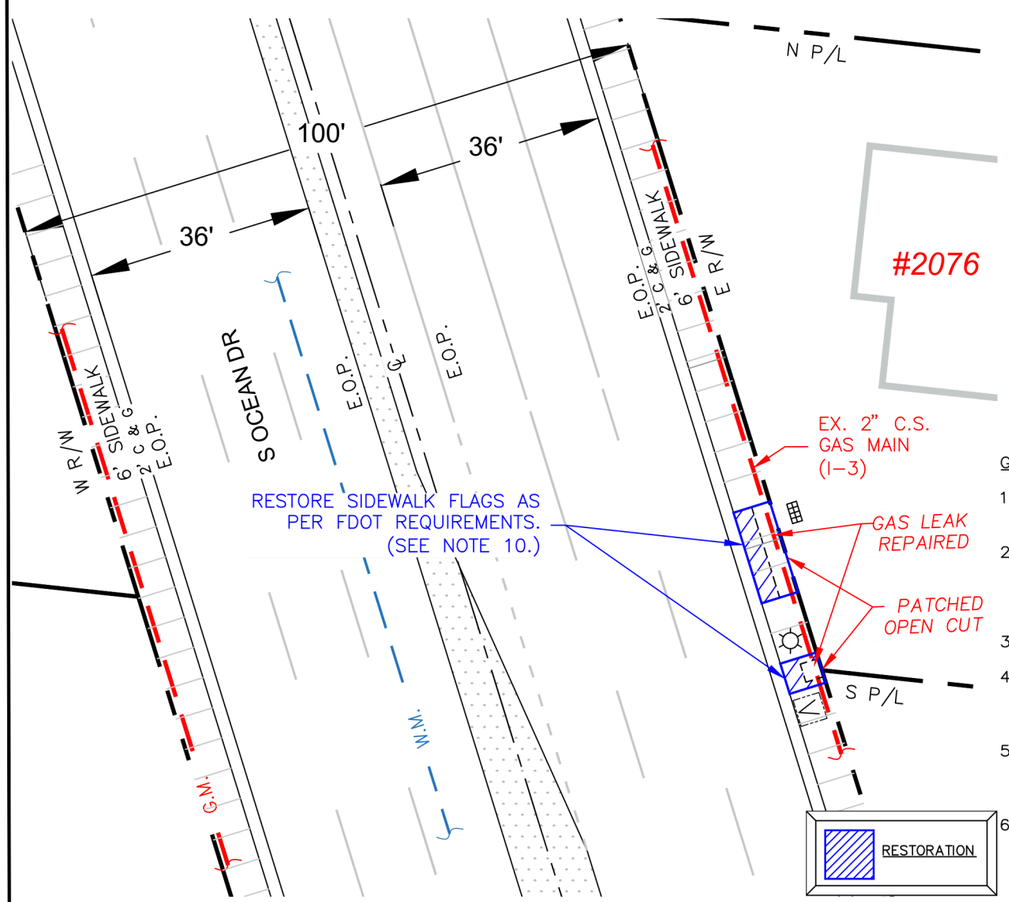
NINE ENGINEERING
8751 W BROWARD BLVD #505
PLANTATION, FL 33324
954-909-0224 INFO@9ENG.COM

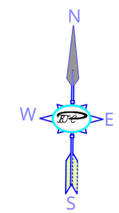


Sample: After the Fact Gas Leak Repair

Info@9eng.com

AFTER THE FACT GAS LEAK REPAIRED.





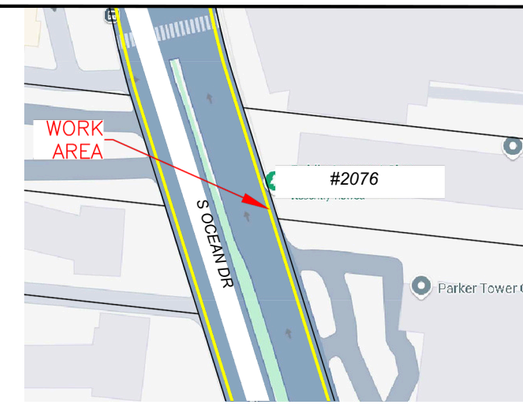
SCALE:1"=20'

LEGEND

℄	CENTER LINE
M	MONUMENT LINE
R/W	RIGHT OF WAY
P/L	PROPERTY LINE
E.O.P.	EDGE OF PAVEMENT
T.T.	TAPPING TEE
E.F.V.	EXCESS FLOW VALVE
SVC	SERVICE LINE
PE	POLYETHYLENE
C.S.	COATED STEEL
S.D.	STORM DRAINAGE
SAN.	SANITARY SEWER
W.M.	WATER MAIN
V	TELECOM
	LIGHT POLE
	CURB INLET

GENERAL NOTES

1. REPLACED BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE BASE, MIN. 8" AND MAX. 18"
2. BASE MATERIAL SHALL BE PLACED IN 6" MAX. (LOOSE MEASUREMENT)LAYER AND EACH LAYER THOROUGHLY ROLLED OR TAMPED TO 98% OF MAX. DENSITY PER AASH TO T-180
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED
4. SURFACE MATERIAL SHALL BE CONSISTENT WITH SURROUNDING SURFACE MATERIAL (1.5" MIN. THICKNESS)
5. BASE MATERIAL SHALL HAVE A MIN. LBR. OF 100 AND A MIN. CARBONATE CONTENT OF 70% (60% FOR LOCAL STREETS)
6. CONTRACTOR SHALL SOFT DIG TO VERIFY LOCATION OF EXISTING UTILITIES

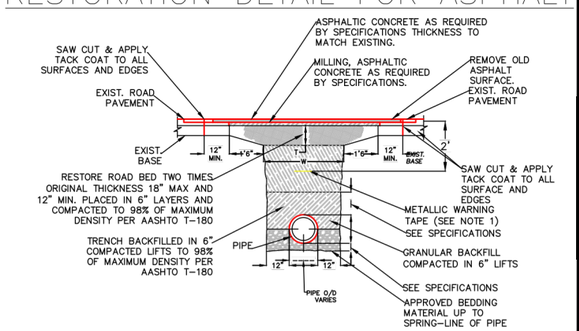


LOCATION MAP (N.T.S.)

ALL EXISTING UTILITIES INFORMATION SHOWN ON THESE PLAN BASE FROM HALLANDALE BEACH REQUIREMENTS.

ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE TO BE CONSIDERED APPROXIMATE & SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF WORK OPERATIONS.

RESTORATION DETAIL FOR ASPHALT



RIGHT OF WAY
TRENCH REPAIR, MILLING, AND OVERLAY

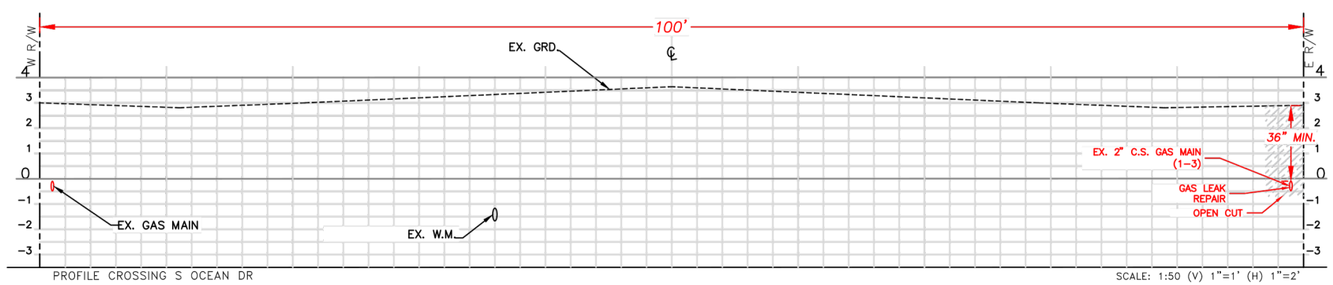
NOTES:
1. METALLIC WARNING TAPES SHALL BE INSTALLED 24" BELOW FINISH GRADE ABOVE MAIN. (SEE SPECIFICATION 2320 SECTION 3.6 FOR MARKING TYPE)
2. UNLESS OTHERWISE SPECIFIED SELECTED MATERIAL SHALL BE FREE OF STONES LARGER THAN 3/8" DIA.
3. REPLACE ALL LANE MARKINGS AND REFLECTIVE MARKERS.

T=6" PARKING
T=8" RESIDENTIAL STREETS
T=10" MAJOR STREETS (4 LANE)
T=12" MAJOR STREET (6 LANE)

2T=18" MAX. 12" MIN.

TYPICAL TRENCH AND PAVEMENT RESTORATION FOR TRANSVERSE CROSSING

100



PROFILE CROSSING S OCEAN DR

SCALE: 1:50 (V) 1"=1' (H) 1"=2'

CALL 48 HOURS BEFORE YOU DIG IN FLORIDA
IT'S THE LAW!
1-800-432-4770
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

REVIEWED BY: David Pagan
DATE: 05-05-2025

9 ENGINEERING
8751 W BROWARD BLVD #505
www.9eng.com - 954-909-0224

PROJECT TYPE: AFTER THE FACT GAS LEAK REPAIRED.
D0096971

PROJECT ADDRESS: 8751 W BROWARD BLVD #505 PLANTATION, FL 33325

NO.	DATE	REVISION

PREMISE #

NO. OF SHEETS: 4

SHEET NO.: 2

U.S. Army Corps of Engineers

Intercoastal Work

Orlando Dager
Orlando.Dager@9eng.com
Info@9eng.com
+1 (832) 525-6758

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS,JACKSONVILLE DISTRICT
701 SAN MARCO BOULEVARD JACKSONVILLE, FLORIDA
32207

August 14, 2025

Regulatory Division
South Branch
Miami Permits Section
SAJ-2025-01648 (NWP-SDR)

Orlando Dager
NineEngineering
8751W Broward Blvd. #505
Plantation, FL 3332
Sentvia email: Orlando.Dager@9ENG.com

DearApplicant:

The U.S. Army Corps of Engineers (Corps) has completed the review of your application for a Department of the Army permit received on June 6, 2025. Your application was assigned file number SAJ-2025-01648. A review of the information and drawings provided indicates that the proposed work would result in the installation of approximately 400 linear feet (150 linear feet of which is subaqueous) of two (2) 4.0” HDPE conduits beneath the Bay Harbor Waterway Canal via horizontal directional drill method. The activities subject to this permit are authorized pursuant to authorities under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 403). The project is located across a segment of Bay Harbor Waterway Canal adjacent to 96th St (Kane Concourse), within Section 27, Township 52 S, Range 42 E; at centroid coordinates Latitude 25.886621° and Longitude -80.1340083°; in Bay Harbor Islands, Miami-Dade County, Florida.

Your project, as depicted on the enclosed drawings, is authorized by Nationwide Permit (NWP) 57 (Electric Utility Line and Telecommunications Activities)**. This verification is valid until March 14, 2026.** In order for this NWP authorization to be valid, you must ensure that the work is performed in accordance with the Nationwide Permit General Conditions, the Jacksonville District Regional Conditions, and the General and Project-Specific Special Conditions listed below. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant NWP is modified or revoked, you will have 12 months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP. You can access the U.S. Army Corps of Engineers' (Corps) Jacksonville District's Regulatory Source Book webpage for links to view NWP information at: https://www.saj.usace.army.mil/Missions/Regulatory/Source-Book/. Please be aware this Internet address is case sensitive and should be entered as it

INDEX OF DRAWINGS

SHEET INDEX

No.	DESCRIPTION
01 of 14	INDEX SHEET
02 of 14	COVER SHEET
03 of 14	KEY MAP
04 of 14	PLAN SHEET
06 of 14	PROFILE SHEET
08 of 14	TREE PROTECTION AND SUPPORT
09 of 14	MOT INDEX (570)
10 of 14	MOT INDEX (602)
11 of 14	MOT INDEX (604)
12 of 14	MOT INDEX (660)
13 of 14	PLAT BOOK 46-5
14 of 14	SURVEY

NINE ENGINEERING LICENSE Est. 030725 STATE OF FLORIDA PROFESSIONAL ENGINEER

TWP/RNG/SEC: 52 / 42 / 27	PLAT BOOK: 46 PAGE: 5
	DRAWN BY: NINE ENGINEERING

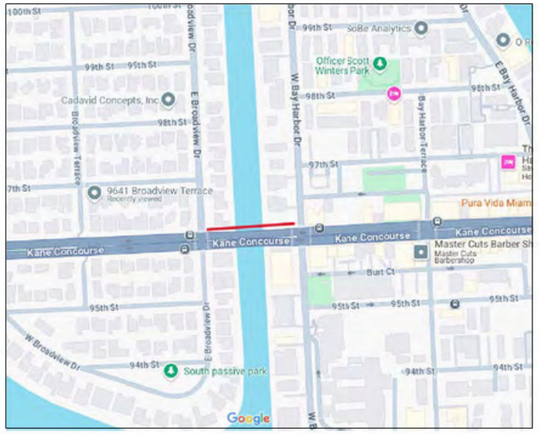
811 Know what's below Call before you dig

UNDERGROUND CABLE CONSTRUCTION

INDEX SHEET

PERMITTING AGENCY: DERM - USACE - FDOT	PROJECT: FTTP
DATE: MAY 28TH, 2025	TRACKING #: 25C-90011
SCALE: N.T.S	LOCATION: BAY HARBOR WATERWAY - 96TH ST. (KANE CONCOURSE)
FILE NAME: JB0001936848	SHEET NUMBER: 01OF14

LOCATION MAP N.T.S.



PROJECT TYPE

- ☐ NEW BUILD
- ☐ MAINTENANCE
- ☐ SPAN REPLACEMENT
- ☐ METRO-E
- ☐ HYPERBUILD
- ☐ SMB
- ☐ RESIDENTIAL
- ☐ NODE SPLIT
- ☐ FORCED RELOCATION
- ☐ PLANT EXTENSION
- ☐ POWER SUPPLY
- ☐ C.O.I.
- ☐ EASEMENT ACQUISITION
- ☐ RE-WIRE
- ■ FTTP

CONSTRUCTION NOTES:

1. MINIMUM THICKNESS OF ASPHALT RESTORATION SHALL BE 1–1/2"
2. MINIMUM DIMENSIONS OF ASPHALT RESTORATION SHALL BE 10 FEET X 10 FEET
3. DENSITY COMPACTION TEST SHALL BE PERFORMED ON COMPACTED MATERIAL TO ARCHIVE 98% PROCTOR ON ROADWAY AND 95% PROCTOR ON SHOULDER, RESULTS SHALL BE SUBMITTED TO RODNEY CARRERO SANTANA AND E–MAILED TO rdaniel@bayharborislands–fl.gov FOR REVIEW PRIOR TO ASPHALT.
4. PROVIDE A SCHEDULE OF WORK WITH START AND FINISH TIMES FOR ALL PROJECT ELEMENTS.E–MAIL TO ADDRESS ABOVE.
5. AFTER THE PERMIT BEEN APPROVED, CONTRACTOR SHALL CALL TO ARRANGE A PRE–CONSTRUCTION MEETING
6. CONTRACTOR SHALL SOFT DIG TO VERIFY LOCATION OF EXISTING UTILITIES
7. EXCAVATE FOR NEW GAS SERVICE AND REMOVE ALL SPOIL FROM EXCAVATION; EXCAVATION SHALL BE FILLED COMPACTED LIMEROCK
8. ENSURE THAT STEEL PLATES ARE ON SITE TO OPEN ROADWAY TO TRAFFIC AT THE END OF THE WORKING DAY.
9. HOURS OF CONSTRUCTION ON THE WEST ISLAND STARTS AT 9:00AM. NO WORK CAN BE PERFORMED BEFORE THAT TIME.
10. CONTRACTOR SHALL SUBMIT AN MOT PERMIT APPLICATION WITH THE PUBLIC WORKS DEPARTMENT. MOT DETAILS SHALL BE PROVIDED WITH THE APPLICATION. CONTACT rdaniel@bayharborislands–fl.gov FOR THE APPLICATION FORM.
11. CONTRACTOR SHALL SCHEDULE AN OFF DUTY OFFICER FOR THE WORK PERFORMED WITHIN THE RIGHT OF WAY.

PROJECT:

BAY HARBOR WATERWAY
PERMIT AGENGY : DERM - USACE - FDOT

SHEET INDEX

No.	DESCRIPTION
01 of 14	INDEX SHEET
02 of 14	COVER SHEET
03 of 14	KEY MAP
04 of 14	PLAN SHEET
06 of 14	PROFILE SHEET
08 of 14	TREE PROTECTION AND SUPPORT
09 of 14	MOT INDEX (570)
10 of 14	MOT INDEX (602)
11 of 14	MOT INDEX (604)
12 of 14	MOT INDEX (660)
13 of 14	PLAT BOOK 46-5
14 of 14	SURVEY

FOOTAGE DATA

PLACEMENT DESCRIPTION	FTG
BURIED ROUTE	397'
VAULTS	2

LINETYPES

- CATV - Proposed UG
- CATV - Proposed OH
- Right of Way LIne
- Easement
- Centerline
- Property Line
- Buried Electric
- Water
- Sanitary Sewer
- Force Main
- Storm Sewer
- Buried Telephone
- Gas
- Traffic
- Existing CATV
- Other FOC
- Guardrail
- Fence
- Proposed Trench
- Proposed Fiber
- Proposed Coax

SYMBOLS

- CATV Service Box
- CATV Vault - Proposed
- Fiber Vault
- Utility Pole
- Light Pole
- Mast Arm Signal Pole
- Traffic Cabinet
- Sanitary Manhole
- Storm Manhole
- Storm Inlet
- Traffic Vault
- Traffic Pullbox
- Telephone Manhole
- Telephone Cabinet
- Fire Hydrant
- Water Valve
- Electric Manhole
- Power Transformer
- Existing Ped
- Proposed Ped
- Proposed Splice Case
- Proposed Down Guy & Anchor
- Slack Coil

MOT NOTES:
TRAFFIC CONTROL SHALL COMPLY WITH FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND F.D.O.T. DESIGN STANDARD

NOTES AND SPECIFICATIONS

(WHEN APPLICABLE)

- SAW CUT AND REMOVE EXISTING ASPHALT PAVEMENT FOR DUCTBANK INSTALLATION. BACKFILL, RESTORE AND REPAVE AS PER PERMITTING SPECIFICATIONS GOVERNMENT AGENCY.
- PLACE FLUSH MOUNTED CONCRETE VAULTS IN SIDEWALK AT LOCATIONS NOTED.
- ALL TRENCHES SHALL BE BACKFILLED AND TAMPED IN 6" LAYERS AS PER PERMITTING SPECIFICATIONS GOVERNMENT AGENCY.
- REPLACE TO EXPANSION JOINTS WHEN RESTORING CONCRETE SIDEWALKS.
- MINIMUM CLEARANCE FROM DUCTBANK TO CROSSING OTHER UTILITIES IS TO BE 24".
- MINIMUM CLEARANCE FROM DUCTBANK TO PARALLELING OTHER UTILITIES IS TO BE 24".
- TUNNEL UNDER ALL CURBS AND GUTTERS.
- PLACE MARKER TAPE 12" ABOVE DUCTBANK THROUGHOUT ROUTE.
- HAND TRENCHING IS REQUIRED WHERE DUCTBANK CROSSES OTHER UTILITIES. SUPPORT EXISTING UTILITIES EXPOSED DURING EXCAVATION TO PREVENT DAMAGE DUE TO SAGGING AND DISTORTION.
- INFORMATION SHOWN ON DRAWINGS REGARDING THE PRESENCE, CHARACTER AND LOCATION OF EXISTING UTILITIES IS A SCHEMATIC REPRESENTATION TAKEN FROM THE BEST AVAILABLE INFORMATION. THERE IS NO CERTAINTY OF THE ACCURACY OF THIS INFORMATION. UTILITIES AND STRUCTURES NOT SHOWN MAY BE ENCOUNTERED.
- NO CONSTRUCTION SHALL COMMENCE PRIOR TO THE LOCATION OF ALL UNDERGROUND UTILITIES. UTILITY LOCATION SERVICE: 1-800-432-4770.
- THIS NOTES APPLY TO ALL PERMITS IN THIS SET.
- USE THE "ACCUPUNCTURE TYPE MISSILE" FOR ALL SIDEWALK CROSSINGS AND DRIVEWAY CROSSINGS UP TO 40' MAXIMUM.
- ALL OPEN ASPHALT CUTS SHALL BE RESTORED TO PERMITTING AUTHORITY "MINIMUM STANDARDS" WHEN APPLICABLE.
- CONTRACTOR TO FIELD ADJUST ACTUAL LOCATION OF THE PROPOSED WORK TO MEET THE MINIMUM SEPARATION REQUIREMENTS.
- EXACT LOCATION OF TRENCH MAY VARY DUE TO THE LOCATION OF EXISTING UTILITIES AND OTHER HAZARDS.
- NO OPEN TRENCH TO LEFT OVERNIGHT, UNLESS THERE IS A UTILITY DAMAGED, IN THAT CASE CONTRACTOR SHALL PLACE A SAFETY NETTING AROUND OPEN TRENCH.

TWP/RNG/SEC: 52 / 42 / 27	PLAT BOOK: 46 PAGE: 5
.	DRAWN BY: NINE ENGINEERING

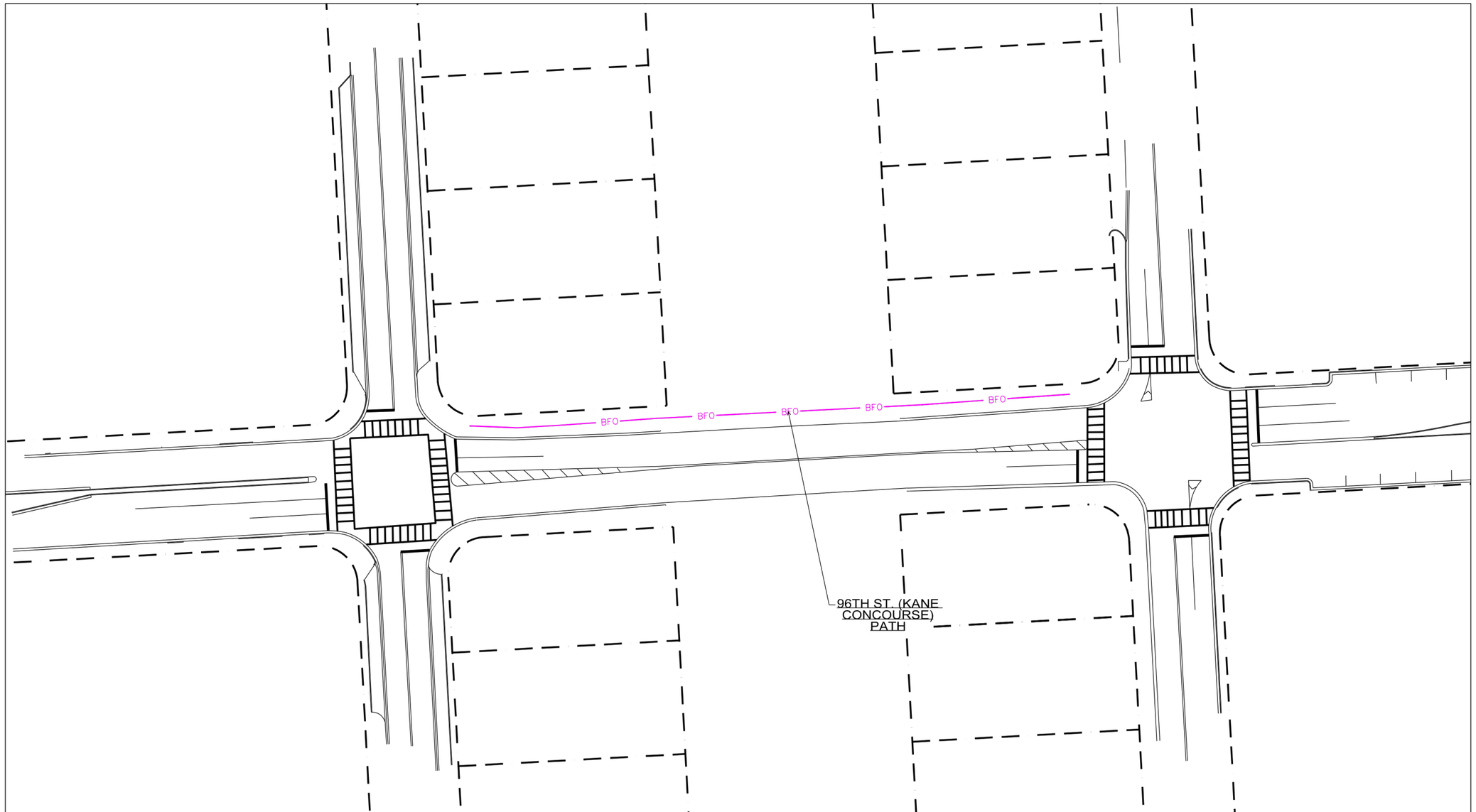
811 Know what's below Call before you dig

UNDERGROUND CABLE CONSTRUCTION

COVER SHEET

PERMITTING AGENCY: DERM - USACE - FDOT	PROJECT: FTTP
DATE: MAY 28TH, 2025	TRACKING #: 25C-90011
SCALE: N.T.S	LOCATION: BAY HARBOR WATERWAY - 96TH ST. (KANE CONCOURSE)
FILE NAME: JB0001936848	SHEET NUMBER: 02 OF 14

N

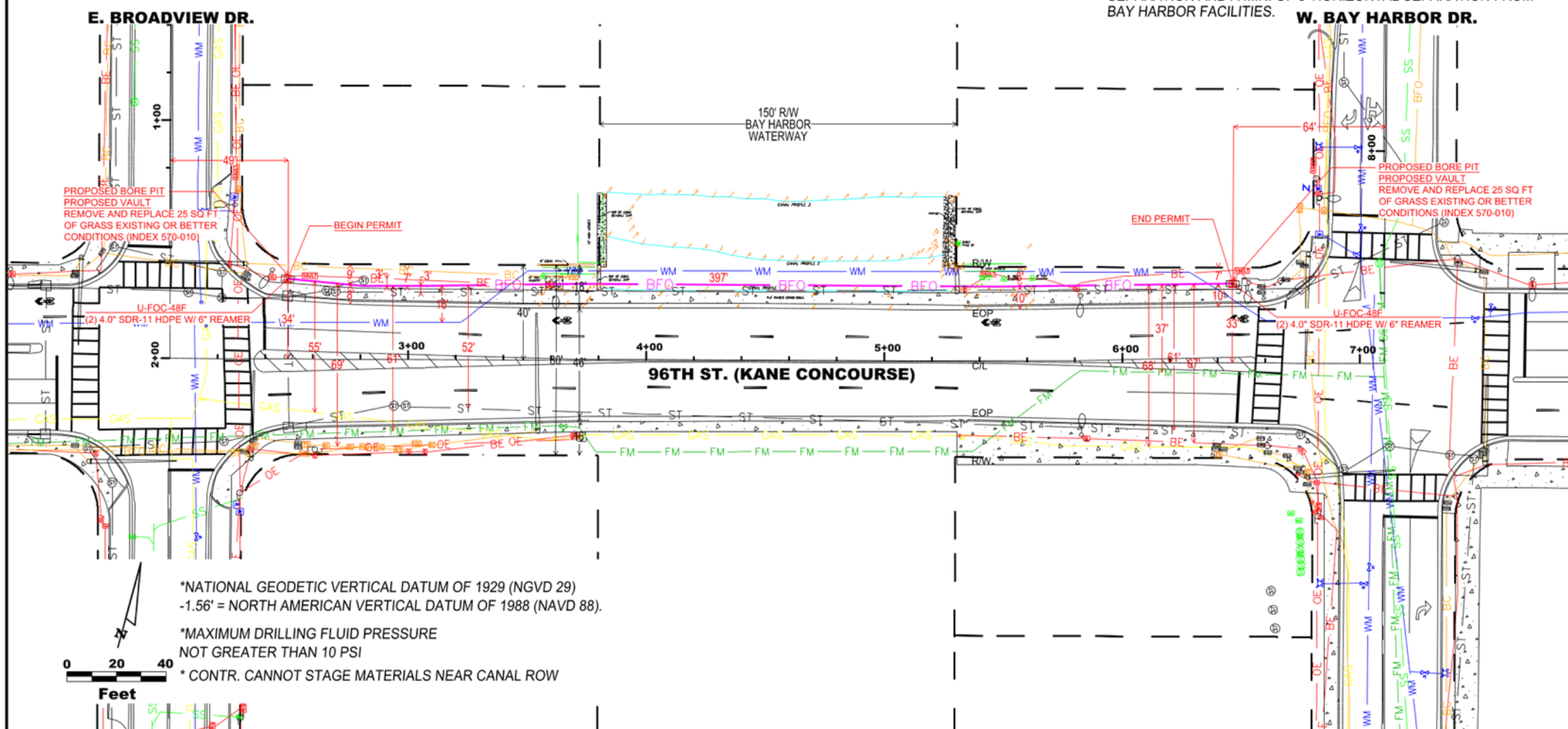


UNDERGROUND CABLE CONSTRUCTION	PERMITTING AGENCY: DERM - USACE - FDOT	PROJECT: FTTP	N
	DATE: MAY 28TH, 2025	TRACKING #: 25C-90011	
KEY MAP	SCALE: N.T.S	LOCATION: BAY HARBOR WATERWAY - 96TH ST. (KANE CONCOURSE)	
	FILE NAME: JB0001936848	SHEET NUMBER: 03 OF 14	

Sample: Intercoastal Work
Info@9eng.com

NOTES:

1. MINIMUM THICKNESS OF ASPHALT RESTORATION SHALL BE 1-1/2"
2. MINIMUM DIMENSIONS OF ASPHALT RESTORATION SHALL BE 10 FEET X 10 FEET
3. DENSITY COMPACTION TEST SHALL BE PERFORMED ON COMPACTED MATERIAL TO ARCHIVE 98% PROCTOR ON ROADWAY AND 95% PROCTOR ON SHOULDER, RESULTS SHALL BE SUBMITTED TO RODNEY CARRERO SANTANA AND E-MAILED TO rdaniel@bayharborislands-fl.gov FOR REVIEW PRIOR TO ASPHALT.
4. PROVIDE A SCHEDULE OF WORK WITH START AND FINISH TIMES FOR ALL PROJECT ELEMENTS E-MAIL TO ADDRESS ABOVE.
5. AFTER THE PE[illegible] ACTOR SHALL CALL TO ARRANGE A PRE-CONSTRUCTION MEETING
6. CONTRACTOR SHALL SOFT DIG TO VERIFY LOCATION OF EXISTING UTILITIES
7. EXCAVATE FOR NEW GAS SERVICE AND REMOVE ALL SPOIL FROM EXCAVATION; EXCAVATION SHALL BE FILLED COMPACTED LIMEROCK
8. ENSURE THAT STEEL PLATES ARE ON SITE TO OPEN ROADWAY TO TRAFFIC AT THE END OF THE WORKING DAY.
9. HOURS OF CONSTRUCTION ON THE WEST ISLAND STARTS AT 9:00AM. NO WORK CAN BE PERFORMED BEFORE THAT TIME.
10. CONTRACTOR SHALL SUBMIT AN MOT PERMIT APPLICATION WITH THE PUBLIC WORKS DEPARTMENT. MOT DETAILS SHALL BE PROVIDED WITH THE APPLICATION. CONTACT rdaniel@bayharborislands-fl.gov FOR THE APPLICATION FORM.
11. CONTRACTOR SHALL SCHEDULE AN OFF DUTY OFFICER FOR THE WORK PERFORMED WITHIN THE RIGHT OF WAY.
12. CONTRACTOR TO MAINTAIN A MIN. OF 24" -36" OF VERTICAL SEPARATION AND A MIN. OF 5' HORIZONTAL SEPARATION FROM BAY HARBOR FACILITIES.



REVISIONS			
DATE	NO.	BY	REMARKS

NINE ENGINEERING
8751 W. BROWARD BLVD.
SUITE 505
PLANTATION, FL 33324

PREPARED FOR:

INVESTIGATE BEFORE YOU EXCAVATE
"CALL SUNSHINE"
1-800-432-4770
TOLL FREE
FL STATUE 556 (1990) REQUIRES MIN. OF 2 DAYS AND MAX. OF 5 DAYS NOTICE BEFORE YOU EXCAVATE.

BAY HARBOR WATERWAY
CANAL CROSSING - 96TH ST. (KANE CONCOURSE)
BAY HARBOR ISLANDS, FL

SHEET NO.
04 OF 14

Sample: Intercoastal Work
Info@9eng.com

NOTES:

1. MINIMUM THICKNESS OF ASPHALT RESTORATION SHALL BE 11/2"

2. MINIMUM DIMENSIONS OF ASPHALT RESTORATION SHALL BE 10 FEET X 10 FEET

3. DENSITY COMPACTION TEST SHALL BE PERFORMED ON COMPACTED MATERIAL TO ARCHIVE 98% PROCTOR ON ROADWAY AND 95% PROCTOR ON SHOULDER, RESULTS SHALL BE SUBMITTED TO RODNEY CARRERO SANTANA AND E-MAILED TO rdaniel@bayharborislands-fl.gov FOR REVIEW PRIOR TO ASPHALT.

4. PROVIDE A SCHEDULE OF WORK WITH START AND FINISH TIMES FOR ALL PROJECT ELEMENTS.E-MAIL TO ADDRESS ABOVE.

5. AFTER THE PERMIT BEEN APPROVED, CONTRACTOR SHALL CALL TO ARRANGE A PRE-CONSTRUCTION MEETING

6. CONTRACTOR SHALL SOFT DIG TO VERIFY LOCATION OF EXISTING UTILITIES

7. EXCAVATE FOR NEW GAS SERVICE AND REMOVE ALL SPOIL FROM EXCAVATION; EXCAVATION SHALL BE FILLED COMPACTED LIMEROCK

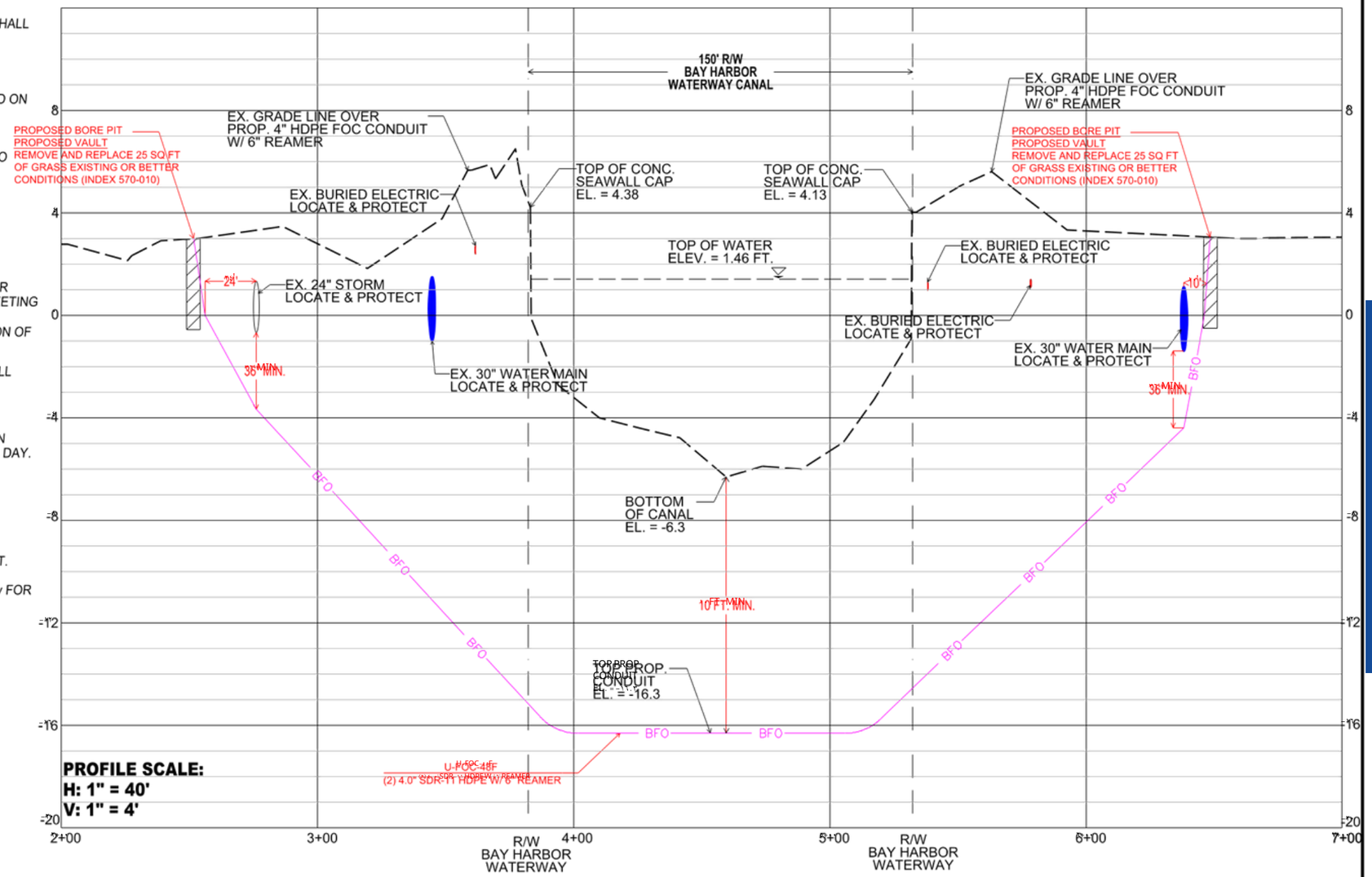
8. ENSURE THAT STEEL PLATES ARE ON SITE TO OPEN ROADWAY TO TRAFFIC AT THE END OF THE WORKING DAY.

9. HOURS OF CONSTRUCTION ON THE WEST ISLAND STARTS AT 9:00AM. NO WORK CAN BE PERFORMED BEFORE THAT TIME.

10. CONTRACTOR SHALL SUBMIT AN MOT PERMIT APPLICATION WITH THE PUBLIC WORKS DEPARTMENT. MOT DETAILS SHALL BE PROVIDED WITH THE APPLICATION. CONTACT rdaniel@bayharborislands-fl.gov FOR THE APPLICATION FORM.

11. CONTRACTOR SHALL SCHEDULE AN OFF DUTY OFFICER FOR THE WORK PERFORMED WITHIN THE RIGHT OF WAY.

12. CONTRACTOR TO MAINTAIN A MIN. OF 24" -36" OF VERTICAL SEPARATION AND A MIN. OF 5' HORIZONTAL SEPARATION FROM BAY HARBOR FACILITIES.



*MAXIMUM DRILLING FLUID PRESSURE NOT GREATER THAN 10 PSI

*NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29) -1.56' = NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

* CONTR. CANNOT STAGE MATERIALS NEAR CANAL ROW

PROP. 4.0" SDR-11 HDPE W/ 6" REAMER PROFILE ALONG 96TH ST. (KANE CONCOURSE) CROSSING BAY HARBOR WATERWAY

DATE	NO.	BY	REMARKS

NINE ENGINEERING
8751 W. BROWARD BLVD. SUITE 505
PLANTATION, FL 33324

CONTRACTOR INSTRUCTIONS: CONTACT "811" BEFORE YOU EXCAVATE
CALL SUNSHINE 1-800-432-4770 TOLL-FREE
FL STATUTE 556 (1993) REQUIRES MIN. OF 2 DAYS AND MAX. OF 5 DAYS NOTICE BEFORE YOU EXCAVATE.

BAY HARBOR WATERWAY
CANAL CROSSING - 96TH ST. (KANE CONCOURSE)
UNDERGROUND CABLE CONSTRUCTION
BAY HARBOR ISLANDS, FL

SHEET NO.
06 OF 14

Sample: Intercoastal Work
Info@9eng.com

Site Specific Traffic Control (MOT)

Temporary Traffic Control

Orlando Dager
Orlando.Dager@9eng.com
Info@9eng.com
+1 (832) 525-6758

FDOT

ORLANDO DAGER

Certificate:

630459

Issued: 09/23/2024

Expires: 09/16/2028

Instructor: K R

Has Completed a FDOT Approved Temporary Traffic Control: Advanced Course.

Training Provider:

ATSSA
SAFER ROADS SAVE LIVES

American Traffic Safety Services Association (ATSSA)
15 Riverside Parkway Ste.100
Fredericksburg, VA 22406
Ph: 540-368-1701

Verify this Certificate at www.motadmin.com.

Introduction

At Nine Engineering, we ensure safe and efficient traffic flow around work zones through expertly designed Maintenance of Traffic (MOT) plans. Whether for construction, utility work, or road maintenance, our temporary traffic control strategies protect workers and the public while minimizing disruption.

SAMPLE MOT

8751 W BROWARD BLVD #505
PLANTATION, FL 33325

INDEX OF DRAWINGS

SHEET INDEX

No.	DESCRIPTION	PHASE
1 of 55	COVER SHEET	
2 of 55	KEY MAP	
3-5 of 55	PINE TREE DR CIR	PHASES 1-3
6-7 of 55	LA GORCE DR	PHASES 4-5
8 of 55	PINETREE DR	PHASE 6
9 of 55	ALTON RD	PHASE 7
10 of 55	W 63 ST & N BAY RD	PHASE 8
11, 14-27 of 55	N BAY RD	PHASES 9, 12-24
12-13 of 55	W 62 ST	PHASES 10-11
28-31, 37-39 of 55	W 51 ST	PHASES 25-28, 33-35
32-33 of 55	W 51 TER & CHEROKEE AVE	PHASE 30-32, 39-40
34-36, 43-45 of 55	W 50 ST	PHASE 30-32, 39-40
40-42, 49-51 of 55	W 49 ST	PHASES 36-38, 44-46
47-48 of 55	LAKE VIEW DR	PHASES 41-43
52 of 55	LAKE VIEW CT	PHASE 47
53 of 55	W 55 ST	PHASE 48
54 of 55	W 60 ST	PHASE 49
55 of 55	W 61 ST	PHASE 50

LOCATION MAP N.T.S.

FDOT

Certificate:
630459
Issued: 09/23/2024
Expires: 09/16/2028
Instructor: K R

ORLANDO DAGER

Has Completed a FDOT Approved Temporary Traffic Control: Advanced Course.

Training Provider:
American Traffic Safety Services Association (ATSSA)
15 Riverside Parkway Ste.100
Fredericksburg, VA 22406
Ph: 540 368 1701

Verify this Certificate at: www.motadmin.com.

DRAWN BY: NINE ENGINEERING 954-296-6561

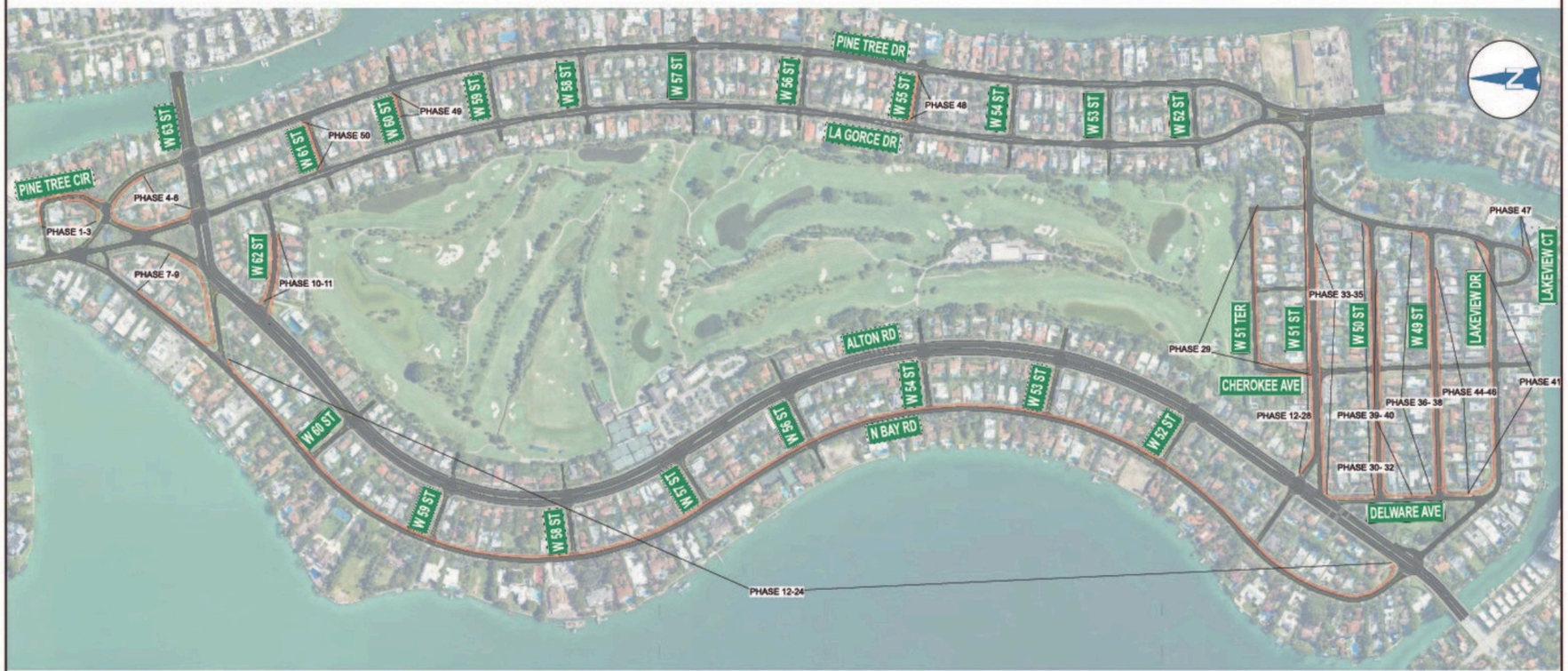
DETAIL SITE SPECIFIC MOT

COVER SHEET

PERMITTING AGENCY: CITY OF MIAMI BEACH	PROJECT: NEW BUILD
DATE: JUNE 3, 2025	TRACKING #: 25C-90018
SCALE:	LOCATION: 5435 ALTON RD
FILE NAME: JB0001866315	SHEET NUMBER: 01 OF 55

SAMPLE MOT

www.invarion.com



www.invarion.com

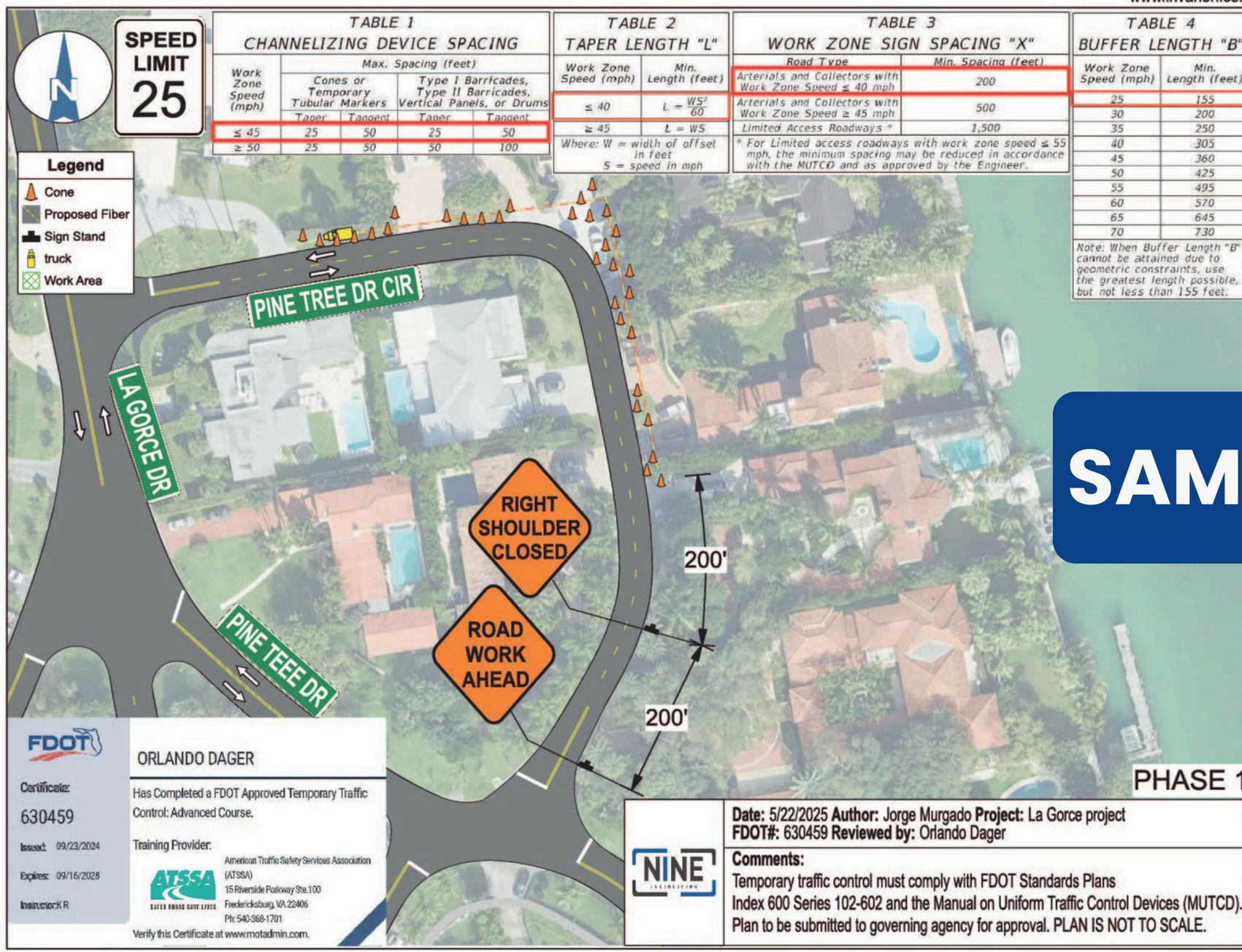


TABLE 1
CHANNELIZING DEVICE SPACING

Work Zone Speed (mph)	Max. Spacing (feet)			
	Cones or Temporary Tubular Markers		Type I Barricades, Type II Barricades, Vertical Panels, or Drums	
	Taper	Tangent	Taper	Tangent
≤ 45	25	50	25	50
≥ 50	25	50	50	100

TABLE 2
TAPER LENGTH "L"

Work Zone Speed (mph)	Min. Length (feet)
≤ 40	$L = \frac{WS^2}{60}$
≥ 45	$L = WS$

Where: W = width of offset in feet
S = speed in mph

TABLE 3
WORK ZONE SIGN SPACING "X"

Road Type	Min. Spacing (feet)
Arterials and Collectors with Work Zone Speed ≤ 40 mph	200
Arterials and Collectors with Work Zone Speed ≥ 45 mph	500
Limited Access Roadways *	1,500

* For Limited access roadways with work zone speed ≤ 55 mph, the minimum spacing may be reduced in accordance with the MUTCD and as approved by the Engineer.

TABLE 4
BUFFER LENGTH "B"

Work Zone Speed (mph)	Min. Length (feet)
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730

Note: When Buffer Length "B" cannot be attained due to geometric constraints, use the greatest length possible, but not less than 155 feet.

SAMPLE MOT

MOT - Multi Lane Closure

www.invarion.com

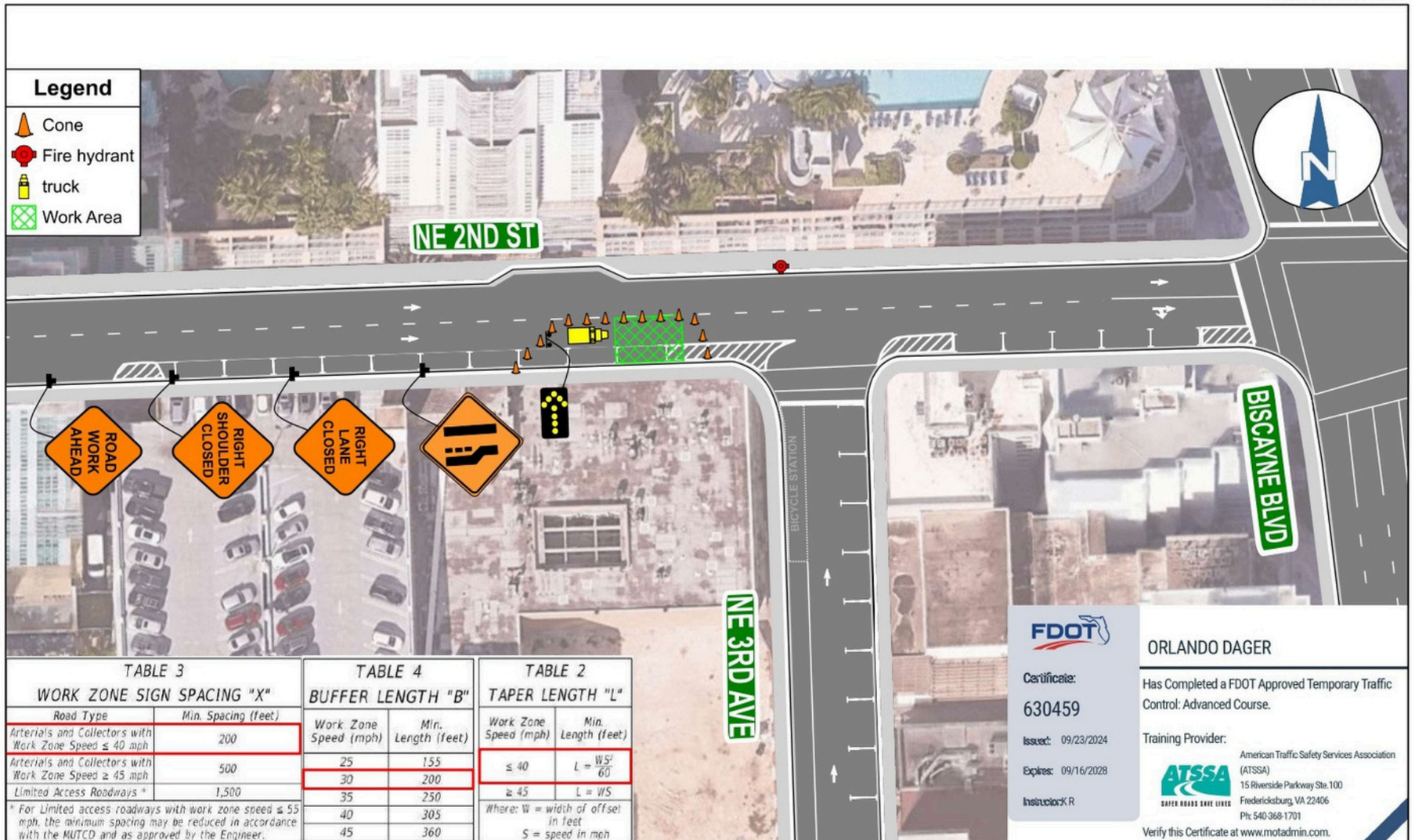


TABLE 3
WORK ZONE SIGN SPACING "X"

Road Type	Min. Spacing (feet)
Arterials and Collectors with Work Zone Speed ≤ 40 mph	200
Arterials and Collectors with Work Zone Speed ≥ 45 mph	500
Limited Access Roadways *	1,500

* For Limited access roadways with work zone speed ≤ 55 mph, the minimum spacing may be reduced in accordance with the MUTCD and as approved by the Engineer.

TABLE 1
CHANNELIZING DEVICE SPACING

Work Zone Speed (mph)	Max. Spacing (feet)			
	Cones or Temporary Tubular Markers		Type I Barricades, Type II Barricades, Vertical Panels, or Drums	
	Taper	Tangent	Taper	Tangent
≤ 45	25	50	25	50
≥ 50	25	50	50	100

TABLE 4
BUFFER LENGTH "B"

Work Zone Speed (mph)	Min. Length (feet)
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730

Note: When Buffer Length "B" cannot be attained due to geometric constraints, use the greatest length possible, but not less than 155 feet.

TABLE 2
TAPER LENGTH "L"

Work Zone Speed (mph)	Min. Length (feet)
≤ 40	$L = \frac{WS^2}{60}$
≥ 45	$L = WS$

Where: W = width of offset in feet
S = speed in mph

FDOT

Certificate: 630459
Issued: 09/23/2024
Expires: 09/16/2028
Instructor: K R

ORLANDO DAGER

Has Completed a FDOT Approved Temporary Traffic Control: Advanced Course.

Training Provider:
American Traffic Safety Services Association (ATSSA)
15 Riverside Parkway Ste. 100
Fredericksburg, VA 22406
Ph: 540-368-1701

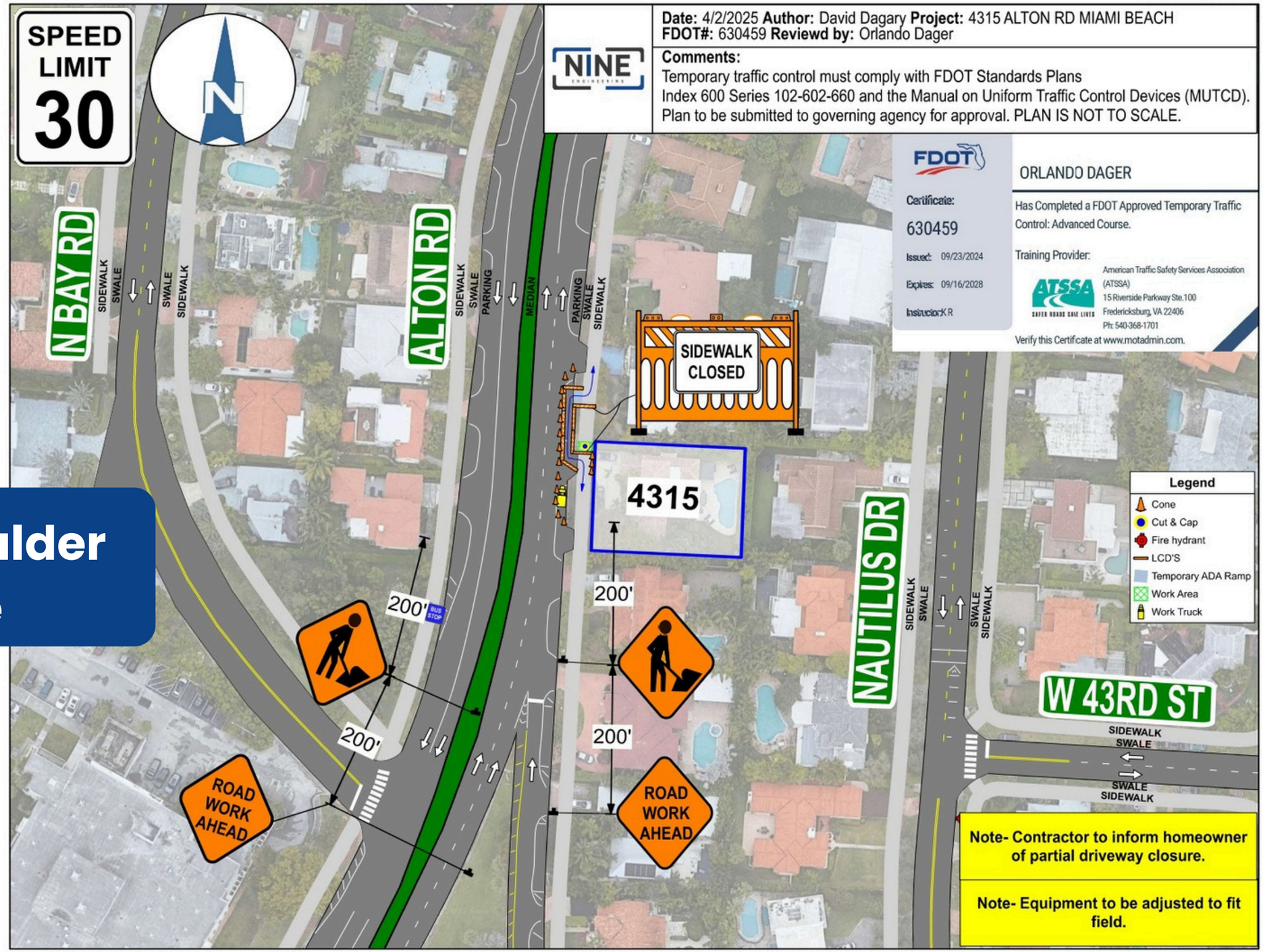
Verify this Certificate at www.motadmin.com.

NINE ENGINEERING

Date: 6/4/2025 **Author:** David Dagary **Project:** 269 NE 2 ST MIAMI
FDOT#: 630459 **Reviewd by:** Orlando Dager

Comments:
Temporary traffic control must comply with FDOT Standards Plans Index 600 Series 102-613 and the Manual on Uniform Traffic Control Devices (MUTCD). Plan to be submitted to governing agency for approval. PLAN IS NOT TO SCALE.

MOT - Shoulder Closure



NINE ENGINEERING

Date: 4/2/2025 **Author:** David Dagary **Project:** 4315 ALTON RD MIAMI BEACH
FDOT#: 630459 **Reviewd by:** Orlando Dager

Comments:
Temporary traffic control must comply with FDOT Standards Plans
Index 600 Series 102-602-660 and the Manual on Uniform Traffic Control Devices (MUTCD).
Plan to be submitted to governing agency for approval. PLAN IS NOT TO SCALE.

FDOT

Certificate: 630459
Issued: 09/23/2024
Expires: 09/16/2028
Instructor: K R

ORLANDO DAGER

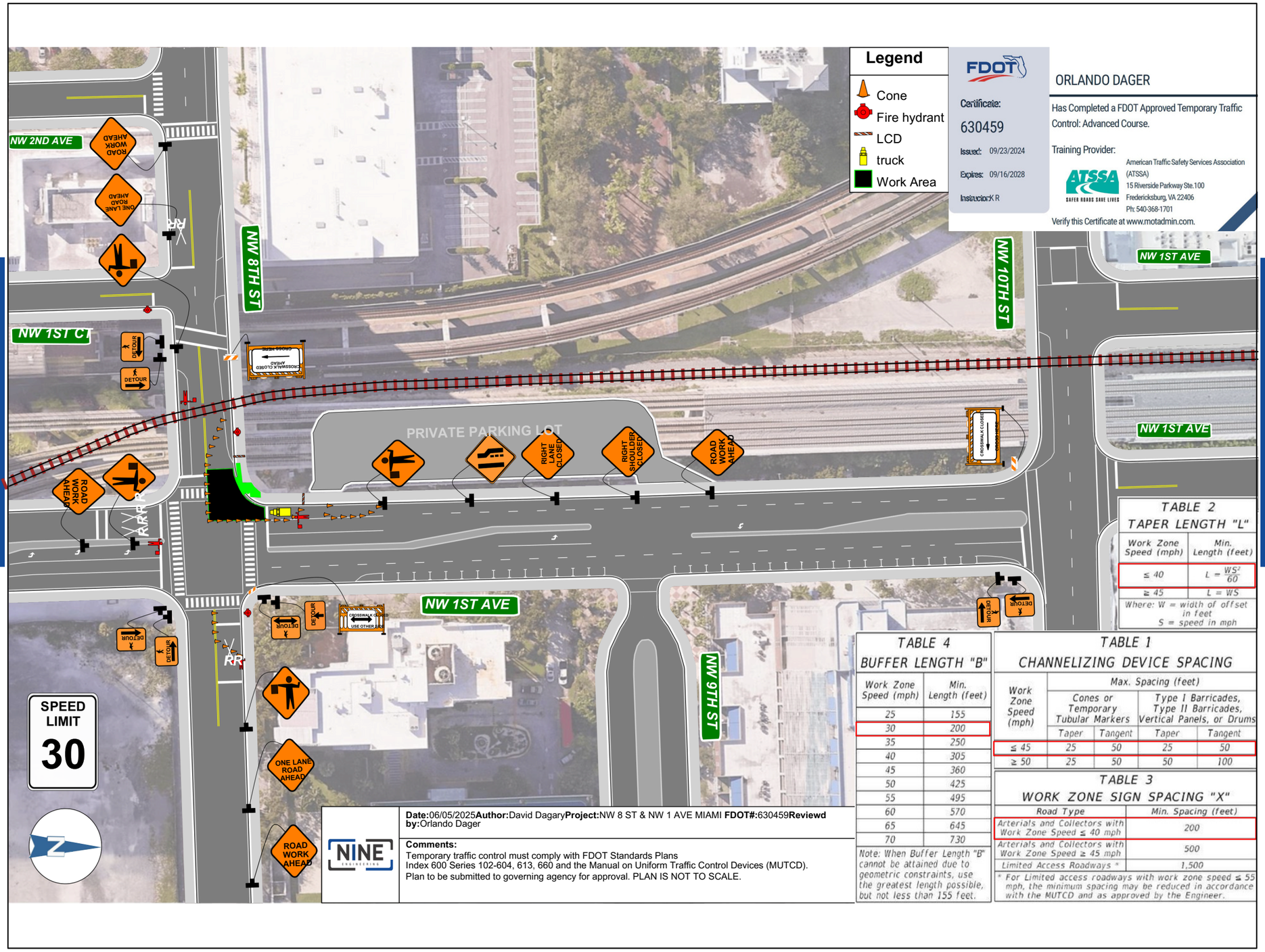
Has Completed a FDOT Approved Temporary Traffic Control: Advanced Course.

Training Provider:
American Traffic Safety Services Association (ATSSA)
15 Riverside Parkway Ste.100
Fredericksburg, VA 22406
Ph: 540-368-1701

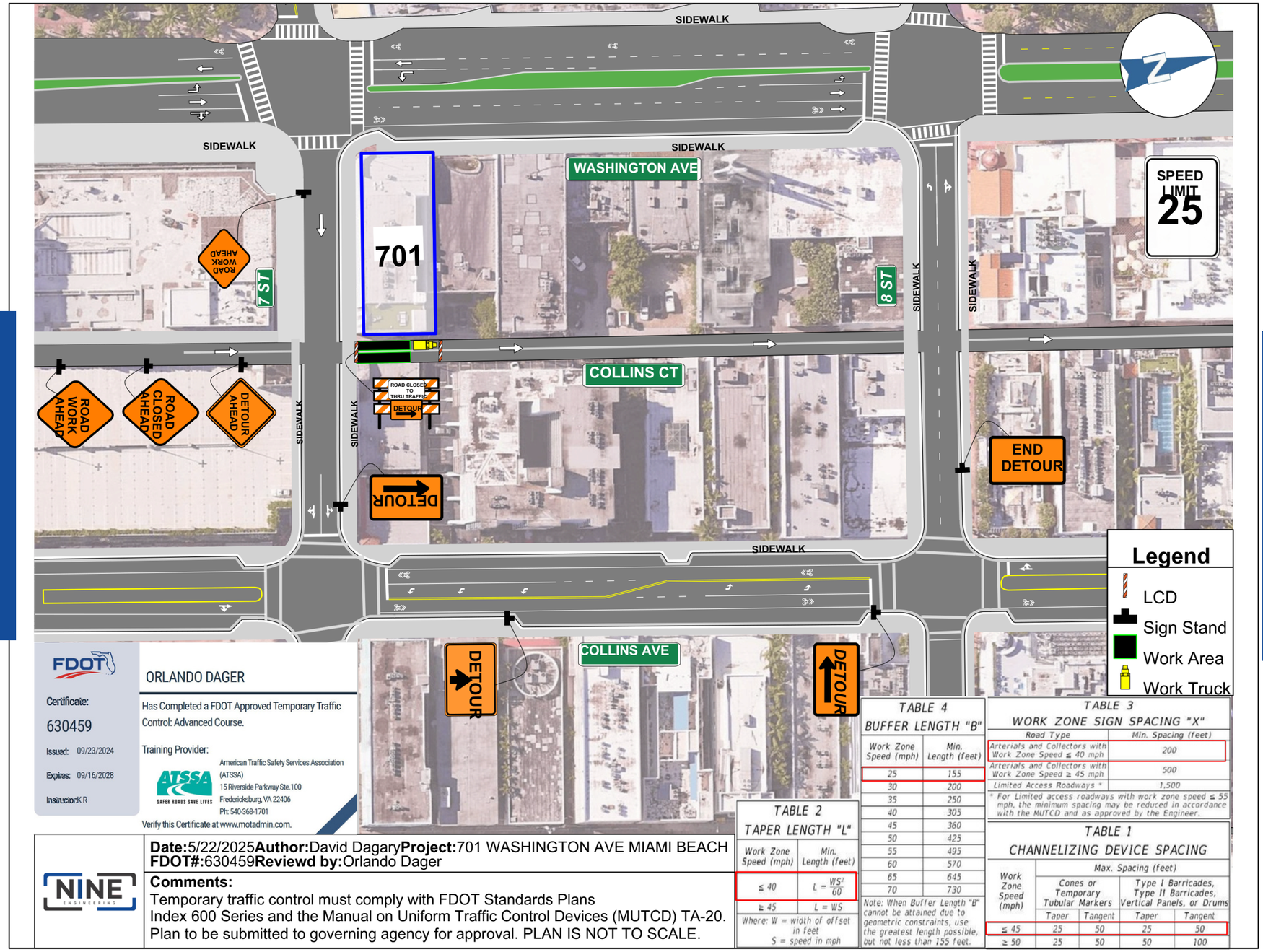
Verify this Certificate at www.motadmin.com.

Info@9eng.com

MOT - Pedestrian Diversion



MOT – Detour


SIDEWALK
WASHINGTON AVE
701
7 ST
8 ST
COLLINS CT
COLLINS AVE
ROAD WORK AHEAD
ROAD CLOSED AHEAD
DETOUR AHEAD
ROAD CLOSED TO THRU TRAFFIC
DETOUR
END DETOUR
SPEED LIMIT 25
Legend
LCD
Sign Stand
Work Area
Work Truck
FDOT
ORLANDO DAGER
Certificate: 630459
Issued: 09/23/2024
Expires: 09/16/2028
Has Completed a FDOT Approved Temporary Traffic Control: Advanced Course.
Training Provider:
American Traffic Safety Services Association (ATSSA)
15 Riverside Parkway Ste.100
Fredericksburg, VA 22406
Ph: 540-368-1701
Verify this Certificate at www.motadmin.com.
NINE ENGINEERING
Date:5/22/2025Author:David DagaryProject:701 WASHINGTON AVE MIAMI BEACH
FDOT#:630459Reviewd by:Orlando Dager
Comments:
Temporary traffic control must comply with FDOT Standards Plans
Index 600 Series and the Manual on Uniform Traffic Control Devices (MUTCD) TA-20.
Plan to be submitted to governing agency for approval. PLAN IS NOT TO SCALE.
TABLE 2
TAPER LENGTH "L"
Work Zone Speed (mph) | Min. Length (feet)
≤ 40 | L = WS²/60
≥ 45 | L = WS
Where: W = width of offset in feet
S = speed in mph
TABLE 4
BUFFER LENGTH "B"
Work Zone Speed (mph) | Min. Length (feet)
25 | 155
30 | 200
35 | 250
40 | 305
45 | 360
50 | 425
55 | 495
60 | 570
65 | 645
70 | 730
Note: When Buffer Length "B" cannot be attained due to geometric constraints, use the greatest length possible, but not less than 155 feet.
TABLE 3
WORK ZONE SIGN SPACING "X"
Road Type | Min. Spacing (feet)
Arterials and Collectors with Work Zone Speed ≤ 40 mph | 200
Arterials and Collectors with Work Zone Speed ≥ 45 mph | 500
Limited Access Roadways * | 1,500
* For Limited access roadways with work zone speed ≤ 55 mph, the minimum spacing may be reduced in accordance with the MUTCD and as approved by the Engineer.
TABLE 1
CHANNELIZING DEVICE SPACING
Work Zone Speed (mph) | Max. Spacing (feet) | Cones or Temporary Tubular Markers | Type I Barricades, Type II Barricades, Vertical Panels, or Drums
Taper | Tangent | Taper | Tangent
≤ 45 | 25 | 50 | 25 | 50
≥ 50 | 25 | 50 | 50 | 100

Final Notes

MOT is not just about managing traffic—it's about ensuring safety, reducing risk, and maintaining project momentum. At Nine Engineering, our traffic control solutions are thoughtfully engineered to meet regulations, protect lives, and keep your worksite moving efficiently from start to finish.

Smart planning. Safe execution. That’s the Nine Engineering standard.

Info@9eng.com

Certifications & Licensing

ISO 9001 is an international standard for Quality Management Systems (QMS). It specifies requirements for organizations to demonstrate their ability to consistently provide products and services that meet customer and regulatory requirements

ISO 14001 is an internationally recognized standard for environmental management systems (EMS) that provides a framework for organizations to improve their environmental performance and comply with regulations.

ISO 45001 is an international standard that specifies requirements for an occupational health and safety (OH&S) management system. It provides a framework for organizations to manage risks and improve OH&S performance.


FDOT

ORLANDO DAGER

Certificate: 630459

Issued: 09/23/2024

Expires: 09/16/2028

Instructor: K R

Has Completed a FDOT Approved Temporary Traffic Control: Advanced Course.

Training Provider:

ATSSA SAFER ROADS SAVE LIVES

American Traffic Safety Services Association (ATSSA)
15 Riverside Parkway Ste.100
Fredericksburg, VA 22406
Ph: 540-368-1701

Verify this Certificate at www.motadmin.com.


GSSI

Certifies that:

Completed a Training Course in the Theory and Practice of Applying Subsurface Interface Radar in Engineering and Geophysical Investigations.

UtilityScan®

Christopher Hawekotte, President

Kevin O'Hara, Training Manager

Geophysical Survey Systems, Inc.
40 Simon Street • Nashua, NH 03060-3075
www.geophysical.com

DANIEL E. WILLIAMS JR. LICENSE No 92321 STATE OF FLORIDA PROFESSIONAL ENGINEER

Lead Engineer
Florida, Texas & Georgia

BROCK H. DANIELS LICENSE No 75386 STATE OF FLORIDA PROFESSIONAL ENGINEER

Senior Engineer
Florida & Texas

JERMAINE G. LAWRENCE LICENSE No 84218 STATE OF FLORIDA PROFESSIONAL ENGINEER

Lead Structural Engineer
Florida

NINE ENGINEERING

Contact

Orlando Dager
Director of Operations

Orlando.Dager@9eng.com

832-525-6758

8751 W. Broward BLVD #505
Plantation, FL 33324

For Sales:

Info@9eng.com

Visit us at:

www.9eng.com

NINE ENGINEERING LICENSE Est. 030725 STATE OF FLORIDA PROFESSIONAL ENGINEER

ENVIRONMENTAL MANAGEMENT SYSTEM ISO 14001 CERTIFIED

OCCUPATIONAL HEALTH AND SAFETY ISO 45001 CERTIFIED

CERTIFIED ISO 9001:2008 COMPANY

VETERAN OWNED BUSINESS