CONSTRUCTION PLANS FOR BLUE JAY ROAD WATER MAIN EXTENSION

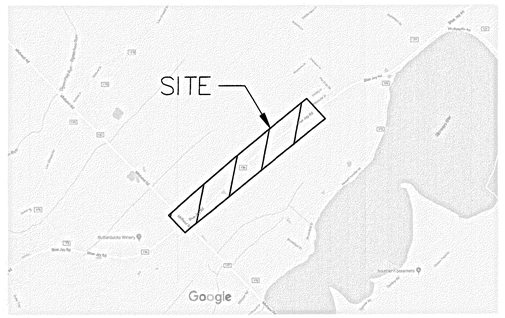
EFFINGHAM COUNTY, GEORGIA
prepared for:
EFFINGHAM COUNTY BOARD OF COMMISSIONERS
FEBRUARY 2018

COUNTY OFFICIALS

WESLEY CORBITT	CHAIRMAN
VERA JONES	BOARD MEMBER
FORREST FLOYD	BOARD MEMBER
JAMIE DELOACH	BOARD MEMBER
PHIL KIEFFER	BOARD MEMBER
REGGIE LOPER	BOARD MEMBER
STEVE DAVIS	COUNTY ADMINISTRATOR

PROJECT #: PE17183

VICINITY MAP



INDEX OF DRAWINGS

GEORGE WESLEY PARKER

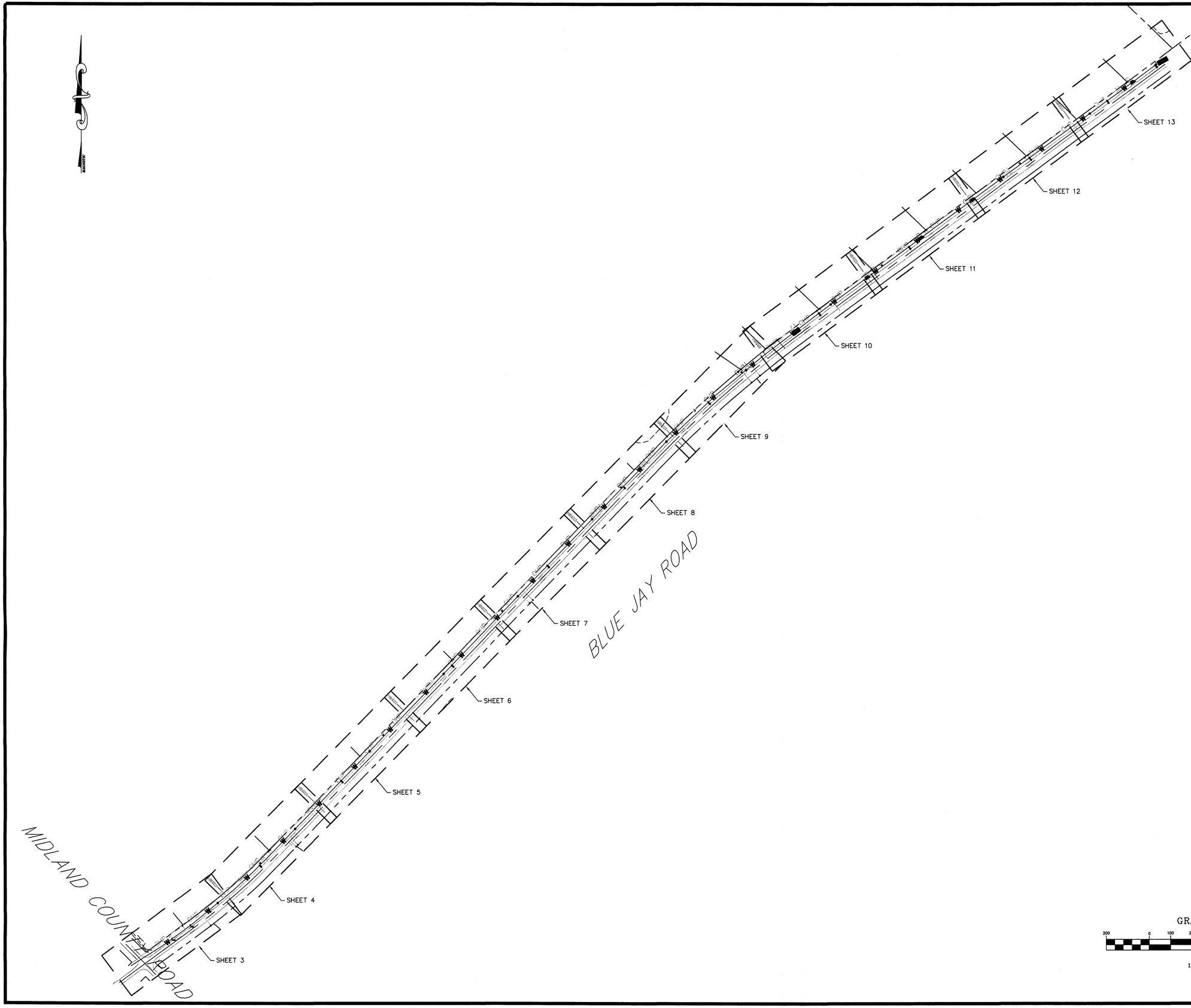
0000033463 — LEVEL II CERTIFICATION NUMBER

05/04/2019 — EXPIRES

PARKER Engineering

36 COURTLAND STREET, SUITE B
STATESBORO, GEORGIA 30458
PHONE: 912-764-7722

GEORGIA811 Utilities Protection Center, Inc.
Know what's below. Call before you dig.



GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

GEORGIA REGISTERED No. 25043 PROFESSIONAL ENGINEER GEORGE WESLEY PARKER

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PARKER Engineering

BLUE JAY ROAD WATER MAIN EXTENSION
EFFINGHAM COUNTY, GA
prepared for:
EFFINGHAM CO. BOARD OF COMMISSIONERS

No.	Date	Revision
1	12/15/2017	INITIAL SUBMITTAL
2	1/29/2018	REVISION 1

Sheet Title:
OVERALL LAYOUT

Drawn by: WAS
Designed by: WAS
Checked by: GWP
Scale: 1"=200'
Project No. PE17183

Sheet 2

POWER POLE
FIRE HYDRANT
Conc. Mkr (F)
5/8" Rebar(F)
Telephone fiber optics
Telephone pedestal

RALPH DANIEL BREWSTER

MIDLAND COUNTY ROAD
80' R\W

EDGE OF PAVEMENT, TYP.

APPROX. NON-LARS WETLANDS LOCATION

DUANE B. PIERCE

NOTE: WATER MAIN TO BE INSTALLED AT LEAST TEN (10) FEET HORIZONTALLY OR AT LEAST 18 INCHES VERTICALLY FROM ANY SANITARY OR STORM SEWER PARALLEL TO IT.

SOIL TYPE, TYP

RdA
RIDGELAND BOULOGNE

ALTERNATE (IN LIEU OF JACK AND BORE)
16" FUSIBLE PVC HORIZONTAL DIRECTIONAL DRILL

JACK AND BORE
70 LF 16" C900 PVC CARRIER IN 24" STEEL CASING
(0.312" MIN. WALL THICKNESS)

RECEIVING BORE PIT

FBOX
TPED
PP

EXISTING FIRE HYDRANT

EX. 16" WATER MAIN TYP. (APPROX. LOCATION; CONTRACTOR TO FIELD VERIFY EXACT LOCATION)

CONNECT TO EXISTING 16" WATER MAIN (COORDINATE W/ COUNTY)

EX. WATER VALVE W/ PLUG

Sd1-NS

Sd1-S
(DOUBLE ROW)

BORE LAUNCH PIT

4" GAB

DIRT DRIVE

UT

EX. 18" CMP

RELOCATE EXISTING SIGN

BEGIN TELEPHONE LINE RELOCATION

Sd1-NS

1" POLYETHYLENE WATER LATERAL W/ METER (METER FURNISHED AND INSTALLED BY COUNTY)

END TELEPHONE LINE RELOCATION

CONTRACTOR TO COORDINATE W/ TELEPHONE COMPANY TO RELOCATE EXISTING UGT LINE

ROAD CENTER LINE, TYP.

EX. RIGHT-OF-WAY

EX. OVERHEAD POWER LINE

EX. UNDERGROUND TELEPHONE

CMF

Du
DS1
DS2
DS3

UTILITY MARKING POST

EOP

FIELD VERIFY DEPTH OF EX. UGT AND ADJUST DEPTH OF WATER MAIN AS REQUIRED

16" C900 PVC WATER MAIN, TYP.

40 LF 1" DIRECTIONAL BORE

1" POLYETHYLENE WATER LATERAL W/ METER (METER FURNISHED AND INSTALLED BY COUNTY)

1" POLYETHYLENE WATER LATERAL W/ METER (METER FURNISHED AND INSTALLED BY COUNTY)

6" GAS

BLUE JAY ROAD 80' R\W

DANNY AMBROSE

LnA
LEON SAND

SOIL DELINEATION, TYP.

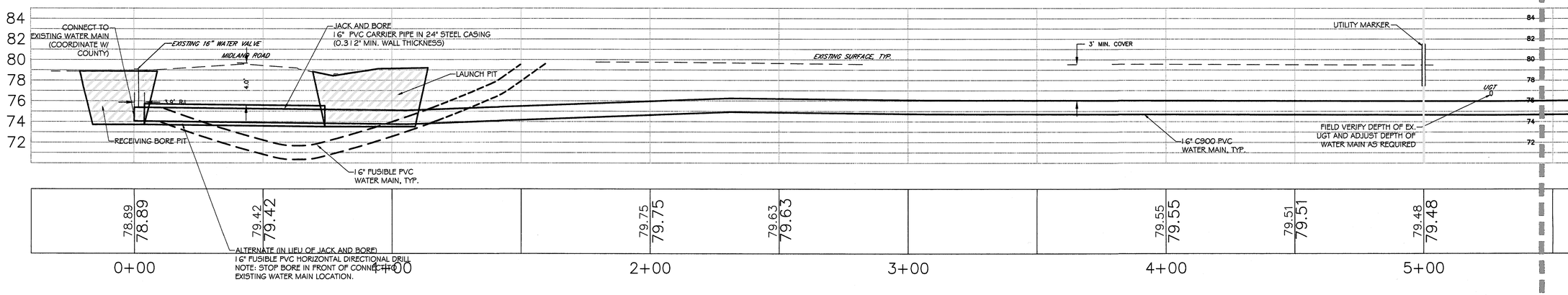
DANNY AMBROSE

MATCHLINE SHEET 3
MATCHLINE SHEET 4

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

GEORGE WESLEY PARKER

0000033463 **05/04/2019**
LEVEL II CERTIFICATION NUMBER **EXPIRES**



PROPOSED WATER MAIN
STA: 6+00-12+08
H: 1" = 20'
V: 1" = 4'

GEORGIA REGISTERED No. 033463 PROFESSIONAL ENGINEER GEORGE WESLEY PARKER

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PARKER Engineering

BLUE JAY ROAD WATER MAIN EXTENSION
EFFINGHAM COUNTY, GA
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EFFINGHAM CO. BOARD OF COMMISSIONERS

No.	Date	Revision
1	12/15/2017	INITIAL SUBMITTAL
2	1/29/2018	REVISION 1

Sheet Title:
UTILITY PLAN AND PROFILE #1

Drawn by: WAS
Designed by: WAS
Checked by: GWP
Scale: 1"=20'
Project No. PE17183
Sheet 3

MATCHLINE SHEET 3
MATCHLINE SHEET 4

SOIL DELINEATION, TYP.

BERNARD C. PIERCE &
EDRA Z. PIERCE

SOIL TYPE, TYP.

LhA
LEON SAND

Du
DS1
DS2
DS3

LINDA P. & MICHAEL B. DASHER

MATCHLINE SHEET 4
MATCHLINE SHEET 5

1" POLYETHYLENE WATER LATERAL W/ METER (METER FURNISHED AND INSTALLED BY COUNTY)

4" GAB

EX. OVERHEAD POWER LINE

EX. UNDERGROUND TELEPHONE

EX. RIGHT-OF-WAY

6" FIRE HYDRANT W/ VALVE IN BOX

Sd1-NS

TPED

EX. 18" RCP

CMF

EX. UNDERGROUND TELEPHONE

1" POLYETHYLENE WATER LATERAL W/ METER (METER FURNISHED AND INSTALLED BY COUNTY)

4" GAB

DIRT

EX. 18" RCP

78 77 76 79 80

6+00 7+00 8+00 9+00 10+00 11+00

10.00'

6" RJ VALVE IN BOX

(4) 45° VERTICAL ELL

EDGE OF PAVEMENT, TYP.

UTILITY MARKING POST

ROAD CENTER LINE, TYP.

EX. 18" RCP

6" C900 PVC WATER MAIN, TYP.

EDGE OF PAVEMENT, TYP.

40 LF 1" DIRECTIONAL BORE

1" POLYETHYLENE WATER LATERAL W/ METER (METER FURNISHED AND INSTALLED BY COUNTY)

BLUE JAY ROAD 80' R/W

EX. RIGHT-OF-WAY

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

DANNY AMBROSE

STORMWATER SAMPLING LOCATION

CAROL PAGE

MATCHLINE SHEET 3
MATCHLINE SHEET 4

MATCHLINE SHEET 4
MATCHLINE SHEET 5

GEORGE WESLEY PARKER

0000033463 — LEVEL II CERTIFICATION NUMBER

05/04/2019 — EXPIRES

6" FIRE HYDRANT W/ VALVE IN BOX

3' MIN. COVER

UTILITY MARKER

EXISTING SURFACE, TYP.

6" C900 PVC WATER MAIN, TYP.

6" RJ VALVE IN BOX

40' RJ | 40' RJ | 54' RJ | 14 LF RJ | 60' RJ

EXISTING 18" RCP

RJ TEE CONNECTION

(4) 45° VERTICAL ELL

84 82 80 78 76 74 72

80.15 80.25 80.18 80.10 80.13 80.16 80.13

6+00 7+00 8+00 9+00 10+00 11+00

PROPOSED WATER MAIN
STA: 12+08-18+13
H: 1" = 20'
V: 1" = 4'

GEORGIA REGISTERED No. 25845 PROFESSIONAL ENGINEER GEORGE WESLEY PARKER

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PARKER Engineering

BLUE JAY ROAD WATER MAIN EXTENSION
EFFINGHAM COUNTY, GA
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No.	Date	Revision
1	12/15/2017	INITIAL SUBMITTAL
2	1/29/2018	REVISION 1

Sheet Title:
UTILITY PLAN AND PROFILE #2

Drawn by:	WAS
Designed by:	WAS
Checked by:	GWP
Scale:	1"=20'
Project No.	PE17183

Sheet: 4

MATCHLINE SHEET 4
MATCHLINE SHEET 5

LINDA P. & MICHAEL B. DASHER

SOIL TYPE, TYP.

RdA
RIDGELAND BOULOGNE

PHILLIP S. PAGE, SR. &
CAROLYN D. PAGE

MATCHLINE SHEET 5
MATCHLINE SHEET 6

Du
DS1
DS2
DS3

Sd1-NS

4" GAB
DIRT DRIVE
TRED
EX. 18" RCP
RP
EX. OVERHEAD POWER LINE
EX. RIGHT-OF-WAY
CMP
EX. UNDERGROUND TELEPHONE
EX. UNDERGROUND TELEPHONE
PP
UTILITY MARKING POST
6" C900 PVC WATER MAIN, TYP.
6" FIRE HYDRANT W/ VALVE IN BOX
6" RJ VALVE IN BOX
EDGE OF PAVEMENT, TYP.
ROAD CENTER LINE, TYP.
EDGE OF PAVEMENT, TYP.
40 LF 1" DIRECTIONAL BORE
BLUE JAY ROAD 80' R/W
1" POLYETHYLENE WATER LATERAL W/ METER (METER FURNISHED AND INSTALLED BY COUNTY)
EX. RIGHT-OF-WAY
SOIL DELINEATION, TYP.

GRAPHIC SCALE
20 0 10 20 40 60
(IN FEET)
1 inch = 20 ft.

CAROL PAGE

LnA
LEON SAND

MATCHLINE SHEET 4
MATCHLINE SHEET 5

MATCHLINE SHEET 5
MATCHLINE SHEET 6

GEORGE WESLEY PARKER

0000033463 — LEVEL II CERTIFICATION NUMBER
05/04/2019 — EXPIRES

6" FIRE HYDRANT W/ VALVE IN BOX
UTILITY MARKER
3'- MIN.- COVER
6" RJ VALVE IN BOX
40'- RJ
40'- RJ
EXISTING SURFACE, TYP.
6" C900 PVC WATER MAIN, TYP.
RJ TEE CONNECTION

80.13 80.07 80.13 80.22 80.31 80.30 80.28 80.13 79.97 79.93 79.90 79.91 79.89

12+00 13+00 14+00 15+00 16+00 17+00

PROPOSED WATER MAIN
STA: 12+08-18+13
H: 1" = 20'
V: 1" = 4'

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PARKER Engineering

BLUE JAY ROAD WATER MAIN EXTENSION
EFFINGHAM COUNTY, GA
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EFFINGHAM CO. BOARD OF COMMISSIONERS

No.	Date	Revision
1	12/15/2017	INITIAL SUBMITTAL
2	1/29/2018	REVISION 1

Sheet Title:
UTILITY PLAN AND PROFILE #3

Drawn by:	WAS
Designed by:	WAS
Checked by:	GWP
Scale:	1"=20'
Project No.	PE17183
Sheet	5

MATCHLINE SHEET 5
MATCHLINE SHEET 6

PHILLIP S. PAGE, SR. &
CAROLYN D. PAGE

1" POLYETHYLENE WATER LATERAL W/ METER (METER FURNISHED AND INSTALLED BY COUNTY)

Sd1-NS

4" GAB

TPED

EX. RIGHT-OF-WAY

EX. OVERHEAD POWER LINE

EX. 18" HDPE

EX. UNDERGROUND TELEPHONE

EX. UNDERGROUND TELEPHONE

18+00 | 19+00 | 20+00 | 21+00 | 22+00 | 23+00

78 | 72 | 77 | 78 | 79 | 80

19.61'

EDGE OF PAVEMENT, TYP.

UTILITY MARKING POST

ROAD CENTER LINE, TYP.

EDGE OF PAVEMENT, TYP.

BLUE JAY ROAD 80' R/W

SOIL TYPE, TYP.

RdA
RIDGELAND BOULOGNE

Du
DS1
DS2
DS3

GAIL PAGE RUD

Sd1-NS

6" C900 PVC WATER MAIN, TYP.

40 LF 1" DIRECTIONAL BORE

1" POLYETHYLENE WATER LATERAL W/ METER (METER FURNISHED AND INSTALLED BY COUNTY)

EX. RIGHT-OF-WAY

MATCHLINE SHEET 6
MATCHLINE SHEET 7

GRAPHIC SCALE
20 0 10 20 40 60
(IN FEET)
1 inch = 20 ft.

SOIL DELINEATION, TYP.

CAROL PAGE

LnA
LEON SAND

APPROX. WETLAND LOCATION

MATCHLINE SHEET 5
MATCHLINE SHEET 6

MATCHLINE SHEET 6
MATCHLINE SHEET 7

GEORGE WESLEY PARKER

0000033463 — LEVEL II CERTIFICATION NUMBER
05/04/2019 — EXPIRES

84 | 82 | 80 | 78 | 76 | 74 | 72

UTILITY MARKER

3' MIN. COVER

EXISTING SURFACE, TYP.

6" C900 PVC WATER MAIN, TYP.

18+00	19+00	20+00	21+00	22+00	23+00
79.89	79.96	80.00	79.33	79.75	79.92
79.89	79.96	80.00	79.33	79.75	79.92
79.98	80.04	80.10	80.16	80.18	80.18
79.98	80.04	80.10	80.16	80.18	80.18
					80.15

PROPOSED WATER MAIN
STA: 12+08-18+13
H: 1" = 20'
V: 1" = 4'

GEORGIA REGISTERED No. 25845 PROFESSIONAL ENGINEER GEORGE WESLEY PARKER

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PARKER Engineering

BLUE JAY ROAD WATER MAIN EXTENSION
EFFINGHAM COUNTY, GA
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EFFINGHAM CO. BOARD OF COMMISSIONERS

No.	Date	Revision
1	12/15/2017	INITIAL SUBMITTAL
2	1/29/2018	REVISION 1

Sheet Title:
UTILITY PLAN AND PROFILE #4

Drawn by:	WAS
Designed by:	WAS
Checked by:	GWP
Scale:	1"=20'
Project No.	PE17183

Sheet: 6

MATCHLINE SHEET 6
MATCHLINE SHEET 7
MATCHLINE SHEET 7
MATCHLINE SHEET 8

SOIL TYPE, TYP.

RdA
RIDGELAND BOULOGNE

GAIL PAGE RUD

SOIL DELINEATION, TYP.

LnA
LEON SAND

Du
DS1
DS2
DS3

Sd1-NS

6" FIRE HYDRANT W/ VALVE IN BOX

EX. UNDERGROUND TELEPHONE

EX. RIGHT-OF-WAY

EX. OVERHEAD POWER LINE

16" C900 PVC WATER MAIN, TYP.

16" RJ VALVE IN BOX

UTILITY MARKING POST

24+00 25+00 26+00 27+00 28+00 29+00

80'

EDGE OF PAVEMENT, TYP.

ROAD CENTER LINE, TYP.

EDGE OF PAVEMENT, TYP.

BLUE JAY ROAD 80' R/W

EX. RIGHT-OF-WAY

MIKELL DASHER

CAROL PAGE

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

MATCHLINE SHEET 6
MATCHLINE SHEET 7
MATCHLINE SHEET 7
MATCHLINE SHEET 8

GEORGE WESLEY PARKER

0000033463 — LEVEL II CERTIFICATION NUMBER
05/04/2019 — EXPIRES

6" FIRE HYDRANT W/ VALVE IN BOX

UTILITY MARKER

EXISTING SURFACE, TYP.

3' MIN. COVER

16" RJ VALVE IN BOX

40' RJ

40' RJ

RJ TEE CONNECTION

16" C900 PVC WATER MAIN, TYP.

84 82 80 78 76 74 72

24+00	25+00	26+00	27+00	28+00	29+00
80.15	80.01	79.89	79.86	79.85	79.93	80.02	80.09	80.17	80.18	80.19	80.22	80.25

PROPOSED WATER MAIN
STA: 12+08-18+13
H: 1" = 20'
V: 1" = 4'

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BLUE JAY ROAD WATER MAIN EXTENSION
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No.	Date	Revision
1	12/18/2017	INITIAL SUBMITTAL
2	1/29/2018	REVISION 1

Sheet Title:
UTILITY PLAN AND PROFILE #5

Drawn by:	WAS
Designed by:	WAS
Checked by:	GWP
Scale:	1"=20'
Project No.	PE17183

Sheet 7

MATCHLINE SHEET 7
MATCHLINE SHEET 8

GAIL PAGE RUD

SOIL TYPE, TYP.
LnA
LEON SAND

ARTHUR RUD, JR.

Du
DS1
DS2
DS3

APPROX. WETLANDS LOCATION

MARKED

MATCHLINE SHEET 8
MATCHLINE SHEET 9

1" POLYETHYLENE WATER LATERAL W/ METER (METER FURNISHED AND INSTALLED BY COUNTY)

Sd1-NS

Sd1-NS

6" FIRE HYDRANT W/ VALVE IN BOX

1" POLYETHYLENE WATER LATERAL W/ METER (METER FURNISHED AND INSTALLED BY COUNTY)

Sd1-NS

DIRT DRIVE

RBF

FBOX

PP

4" GAB

EX. UNDERGROUND TELEPHONE

EX. OVERHEAD POWER LINE

EX. UNDERGROUND TELEPHONE

EX. RIGHT-OF-WAY

UT

OHP

W

79

78

80

EX. 18" CMP

EX. 18" RCP

12.7'

30+00

31+00

32+00

33+00

34+00

35+00

UTILITY MARKING POST

6" C900 PVC WATER MAIN, TYP.

6" RJ VALVE IN BOX

EDGE OF PAVEMENT, TYP.

UTILITY MARKING POST

ROAD CENTER LINE, TYP.

EDGE OF PAVEMENT, TYP.

40 LF 1" DIRECTIONAL BORE

BLUE JAY ROAD 80' R/W

EX. RIGHT-OF-WAY

1" POLYETHYLENE WATER LATERAL W/ METER (METER FURNISHED AND INSTALLED BY COUNTY)

MIKELL DASHER

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

MATCHLINE SHEET 7
MATCHLINE SHEET 8

MATCHLINE SHEET 8
MATCHLINE SHEET 9

GEORGE WESLEY PARKER

0000033463 — LEVEL II CERTIFICATION NUMBER
05/04/2019 — EXPIRES

6" FIRE HYDRANT W/ VALVE IN BOX

UTILITY MARKER

EXISTING SURFACE, TYP.

6" RJ VALVE IN BOX

40' RJ

40' RJ

RJ TEE CONNECTION

6" C900 PVC WATER MAIN, TYP.

UTILITY MARKER

3' MIN. COVER

84
82
80
78
76
74
72

80.25 80.23 80.20 80.18 80.21 80.17 80.17 80.33 80.40 80.41 80.21 80.16 80.32

30+00 31+00 32+00 33+00 34+00 35+00

PROPOSED WATER MAIN
STA: 12+08-18+13
H: 1" = 20'
V: 1" = 4'

GEORGIA REGISTERED No. 3463 PROFESSIONAL GEORGE WESLEY PARKER

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PARKER Engineering

BLUE JAY ROAD WATER MAIN EXTENSION
EFFINGHAM COUNTY, GA
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No.	Date	Revision
1	12/15/2017	INITIAL SUBMITTAL
2	1/29/2018	REVISION 1

Sheet Title:
UTILITY PLAN AND PROFILE #6

Drawn by: WAS
Designed by: WAS
Checked by: GWP
Scale: 1"=20'
Project No. PE17183

Sheet 08

MATCHLINE SHEET 8
MATCHLINE SHEET 9

APPROX. WETLANDS LOCATION

ARTHUR RUD, JR.

SOIL TYPE, TYP.

LnA
LEON SAND

JOHN B. WARREN AND
GERALDINE, ET. AL.

MATCHLINE SHEET 9
MATCHLINE SHEET 10

Du
DS1
DS2
DS3

Sd1-NS

EX. UNDERGROUND TELEPHONE
EX. RIGHT-OF-WAY
EX. OVERHEAD POWER LINE
EX. UNDERGROUND TELEPHONE

35+00
36+00
37+00
38+00
39+00
40+00
41+00

UTILITY MARKING POST

16" C900 PVC WATER MAIN, TYP.

EDGE OF PAVEMENT, TYP.
ROAD CENTER LINE, TYP.
EDGE OF PAVEMENT, TYP.

BLUE JAY ROAD 80' R/W

EX. RIGHT-OF-WAY

6" FIRE HYDRANT W/ VALVE IN BOX

1" POLYETHYLENE WATER LATERAL W/ METER (METER FURNISHED AND INSTALLED BY COUNTY)

EX. 18" RCP

4" GAB

UTILITY MARKING POST

16" RJ VALVE IN BOX

MIKELL DASHER

IRMA DAVIS

GRAPHIC SCALE

20 0 10 20 40 60
(IN FEET)
1 inch = 20 ft.

GEORGE WESLEY PARKER

0000033463 — LEVEL II CERTIFICATION NUMBER
05/04/2019 — EXPIRES

6" FIRE HYDRANT W/ VALVE IN BOX
3' MIN. COVER
UTILITY MARKER
EXISTING SURFACE, TYP.
40' RJ
40' RJ
RJ TEE CONNECTION
16" RJ VALVE IN BOX
16" C900 PVC WATER MAIN, TYP.

84 82 80 78 76 74 72

80.32 80.47 80.62 80.72 80.67 80.61 80.74 80.87 81.08 81.17 81.18 81.02 81.06

36+00 37+00 38+00 39+00 40+00 41+00

PROPOSED WATER MAIN
STA: 12+08-18+13
H: 1" = 20'
V: 1" = 4'

GEORGIA REGISTERED No. 25845 PROFESSIONAL ENGINEER GEORGE WESLEY PARKER

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PARKER Engineering

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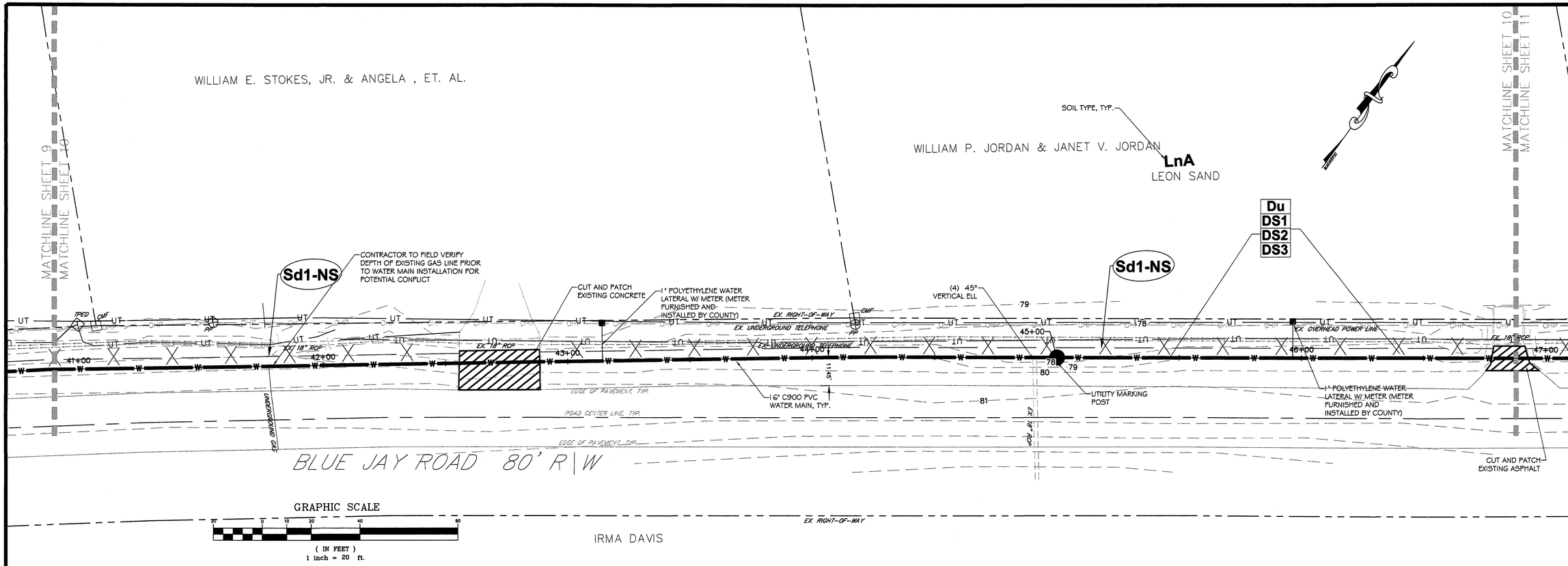
No.	Date	Revision
1	12/15/2017	INITIAL SUBMITTAL
2	1/29/2018	REVISION 1

Sheet Title:
UTILITY PLAN AND PROFILE #7

Drawn by:	WAS
Designed by:	WAS
Checked by:	GWP
Scale:	1"=20'
Project No.	PE17183
Sheet	9



GEORGE WESLEY PARKER

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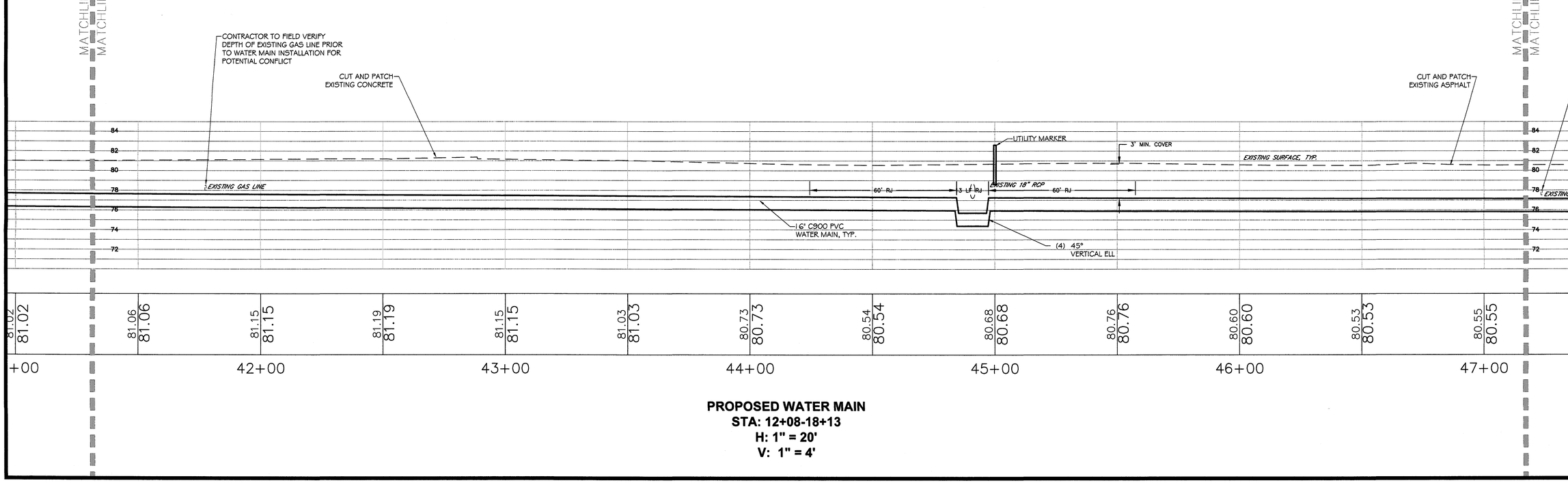
05/04/2019 — EXPIRES



PROPOSED WATER MAIN
STA: 12+08-18+13
H: 1" = 20'
V: 1" = 4'

GEORGIA REGISTERED No. 33463 PROFESSIONAL GEORGE WESLEY PARKER

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PARKER Engineering

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No.	Date	Revision
1	12/15/2017	INITIAL SUBMITTAL
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Sheet Title:
UTILITY PLAN AND PROFILE #8

Drawn by:	WAS
Designed by:	WAS
Checked by:	GWP
Scale:	1"=20'
Project No.	PE17183
Sheet	10

MATCHLINE SHEET 10
MATCHLINE SHEET 11

LnA
LEON SAND

JAMES G. RAY A& WANDA W. RAY

SOIL DELINEATINON, TYP.

CONTRACTOR TO FIELD VERIFY DEPTH OF EXISTING GAS LINE PRIOR TO WATER MAIN INSTALLATION FOR POTENTIAL CONFLICT

6" FIRE HYDRANT W/ VALVE IN BOX

Sd1-NS

1" POLYETHYLENE WATER LATERAL W/ METER (METER FURNISHED AND INSTALLED BY COUNTY)

CUT AND PATCH EXISTING ASPHALT

SOIL TYPE, TYP.

EcA
ECHAW CENTENARY

GAY GENE BRAZELL

Du
DS1
DS2
DS3

1" POLYETHYLENE WATER LATERAL W/ METER (METER FURNISHED AND INSTALLED BY COUNTY)

Sd1-NS

SOIL DELINEATINON, TYP.

MATCHLINE SHEET 11
MATCHLINE SHEET 12

EX. RIGHT-OF-WAY
EX. UNDERGROUND TELEPHONE
EX. OVERHEAD POWER LINE
EX. 18" RCP
EX. 24" RCP
EX. GAS UNDERGROUND

47+00 48+00 49+00 50+00 51+00 52+00 53+00

6" RJ VALVE IN BOX

6" C900 PVC WATER MAIN, TYP.

UTILITY MARKING POST

EDGE OF PAVEMENT, TYP.

ROAD CENTER LINE, TYP.

40 LF 1" DIRECTIONAL BORE

CUT AND PATCH EXISTING ASPHALT

BLUE JAY ROAD 80' R/W

GRAPHIC SCALE

20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

EX. RIGHT-OF-WAY

IRMA DAVIS

LnA
LEON SAND

MATCHLINE SHEET 10
MATCHLINE SHEET 11

MATCHLINE SHEET 11
MATCHLINE SHEET 12

GEORGE WESLEY PARKER

0000033463 — LEVEL II CERTIFICATION NUMBER
05/04/2019 — EXPIRES

CONTRACTOR TO FIELD VERIFY DEPTH OF EXISTING GAS LINE PRIOR TO WATER MAIN INSTALLATION FOR POTENTIAL CONFLICT

6" FIRE HYDRANT W/ VALVE IN BOX

UTILITY MARKER

CUT AND PATCH EXISTING ASPHALT

3' MIN. COVER

EXISTING SURFACE, TYP.

EXISTING GAS LINE

40' RJ

40' RJ

6" RJ VALVE IN BOX

RJ TEE CONNECTION

CUT AND PATCH EXISTING ASPHALT

6" C900 PVC WATER MAIN, TYP.

84 82 80 78 76 74 72

80.55	80.56	80.52	80.57	80.55	80.50	80.50	80.40	80.34	80.21	79.99	79.99	80.28

7+00 48+00 49+00 50+00 51+00 52+00 53+00

PROPOSED WATER MAIN
STA: 12+08-18+13
H: 1" = 20'
V: 1" = 4'

GEORGIA REGISTERED No. 28845 PROFESSIONAL ENGINEER GEORGE WESLEY PARKER

36 Courtland Street, Suite B
Statesboro, Georgia 30458
Phone: 912-764-7722
Fax: 912-764-6960

PARKER Engineering

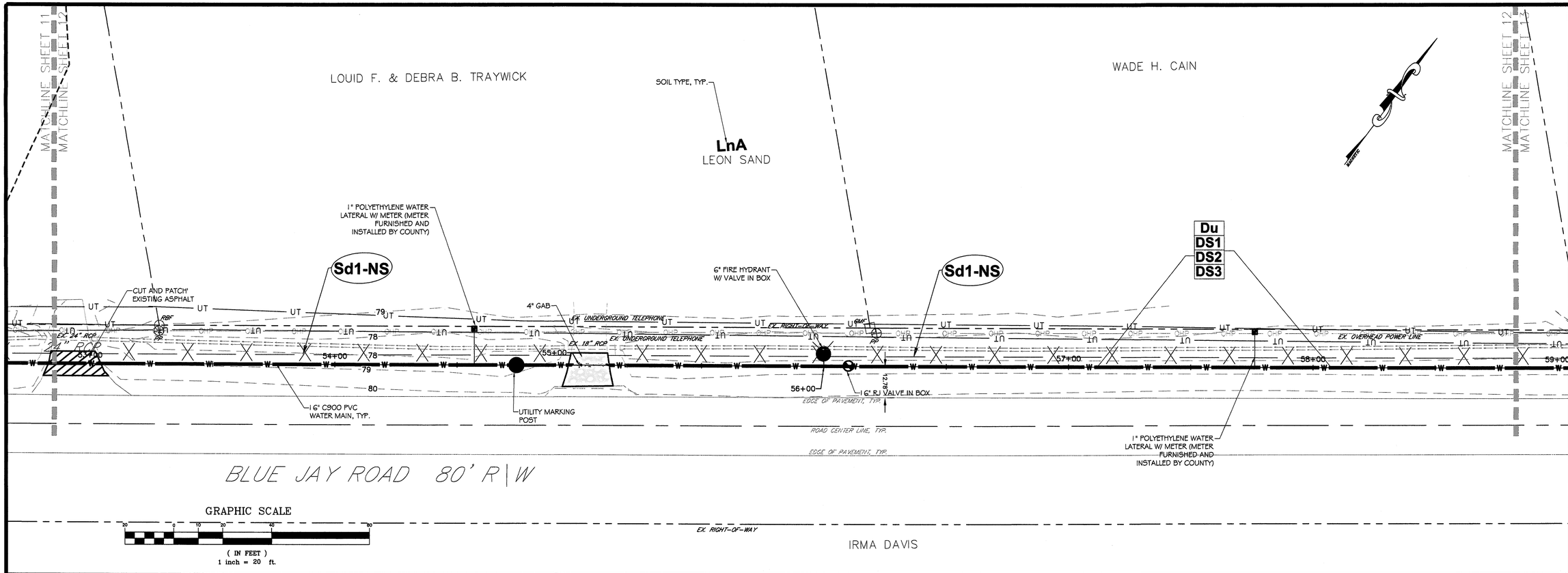
BLUE JAY ROAD WATER MAIN EXTENSION
EFFINGHAM COUNTY, GA
prepared for:
EFFINGHAM CO. BOARD OF COMMISSIONERS

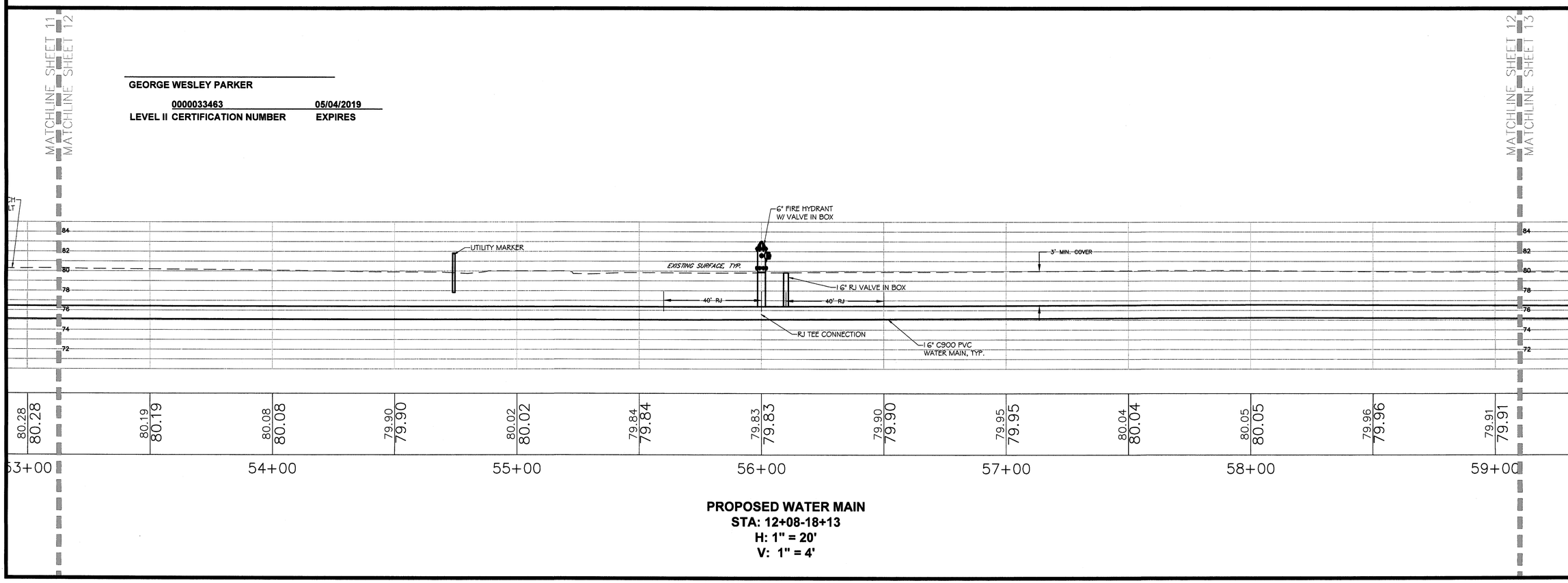
No.	Date	Revision
1	12/15/2017	INITIAL SUBMITTAL
2	1/29/2018	REVISION 1

Sheet Title:
UTILITY PLAN AND PROFILE #9

Drawn by:	WAS
Designed by:	WAS
Checked by:	GWP
Scale:	1"=20'
Project No.	PE17183

Sheet 11





PROPOSED WATER MAIN
STA: 12+08-18+13
H: 1" = 20'
V: 1" = 4'

GEORGE WESLEY PARKER

0000033463 — LEVEL II CERTIFICATION NUMBER
05/04/2019 — EXPIRES

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BLUE JAY ROAD WATER MAIN EXTENSION
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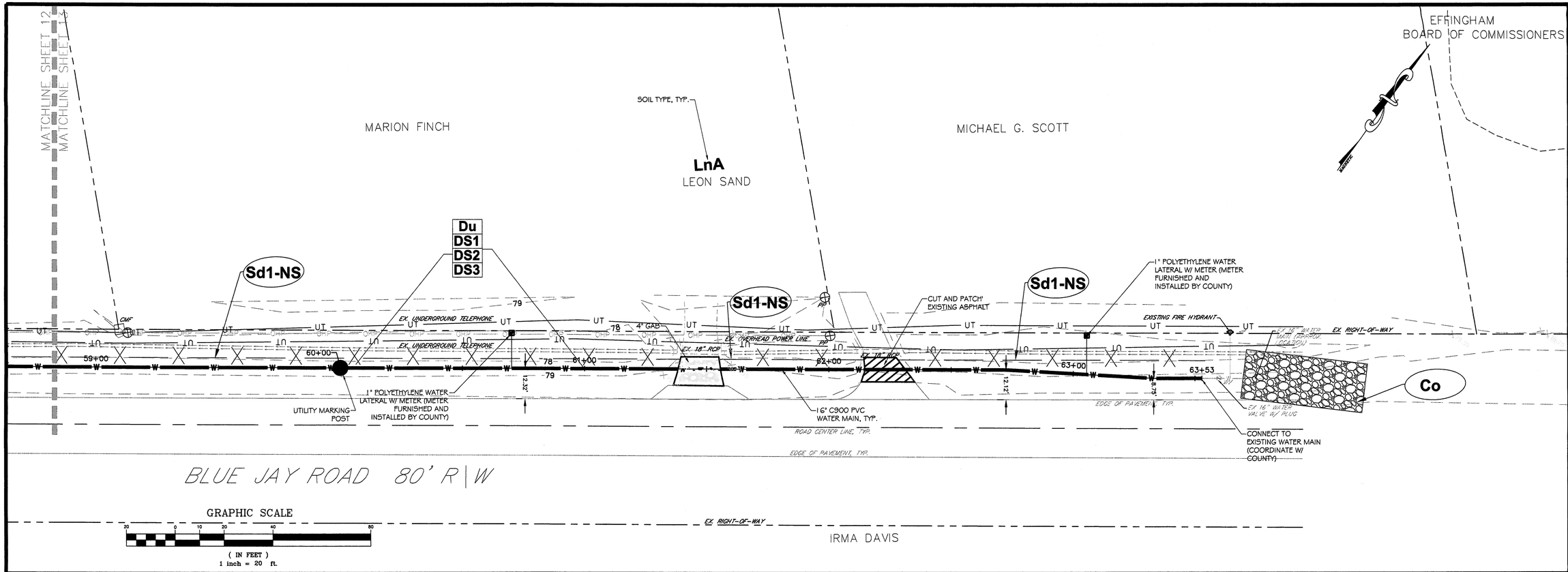
No.	Date	Revision
1	12/15/2017	INITIAL SUBMITTAL
2	1/29/2018	REVISION 1

Sheet Title:
UTILITY PLAN AND PROFILE #10

Drawn by:	WAS
Designed by:	WAS
Checked by:	GWP
Scale:	1"=20'
Project No.	PE17183

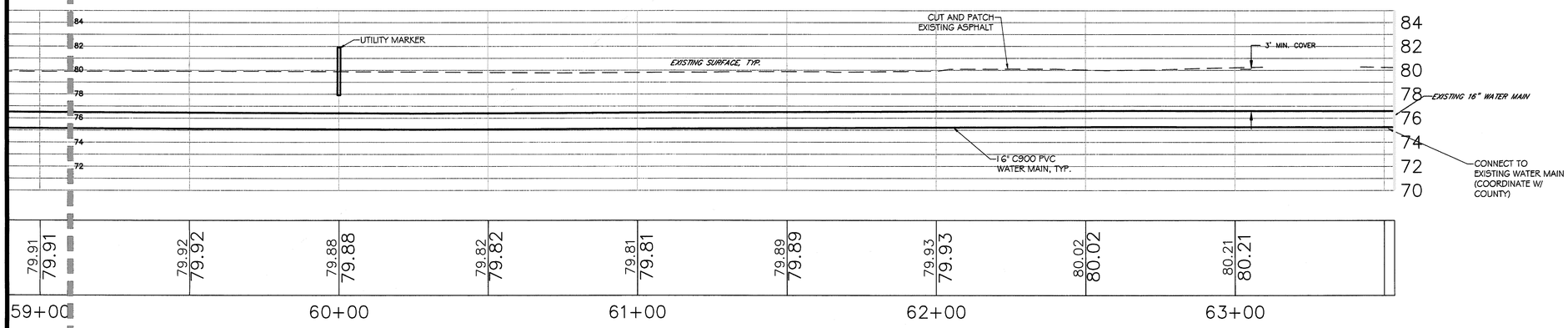
Sheet: 12



GEORGE WESLEY PARKER

0000033463 — LEVEL II CERTIFICATION NUMBER

05/04/2019 — EXPIRES



PROPOSED WATER MAIN
STA: 12+08-18+13
H: 1" = 20'
V: 1" = 4'

PARKER Engineering
36 Courtland Street, Suite B
Statesboro, Georgia 30458
Phone: 912-764-7722
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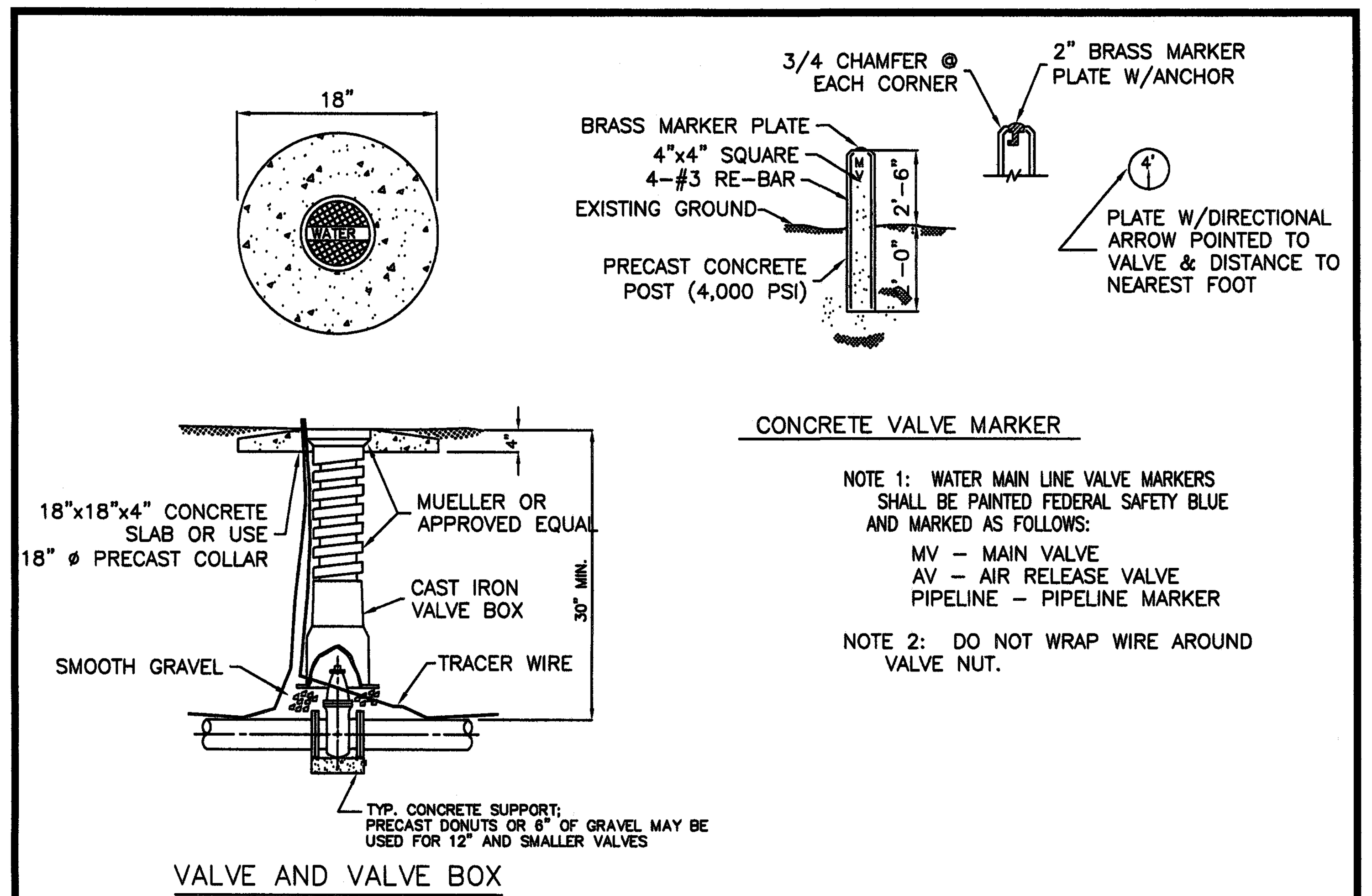
GEORGIA REGISTERED No. 25845 PROFESSIONAL ENGINEER GEORGE WESLEY PARKER

BLUE JAY ROAD WATER MAIN EXTENSION
EFFINGHAM COUNTY, GA
prepared for:
EFFINGHAM CO. BOARD OF COMMISSIONERS

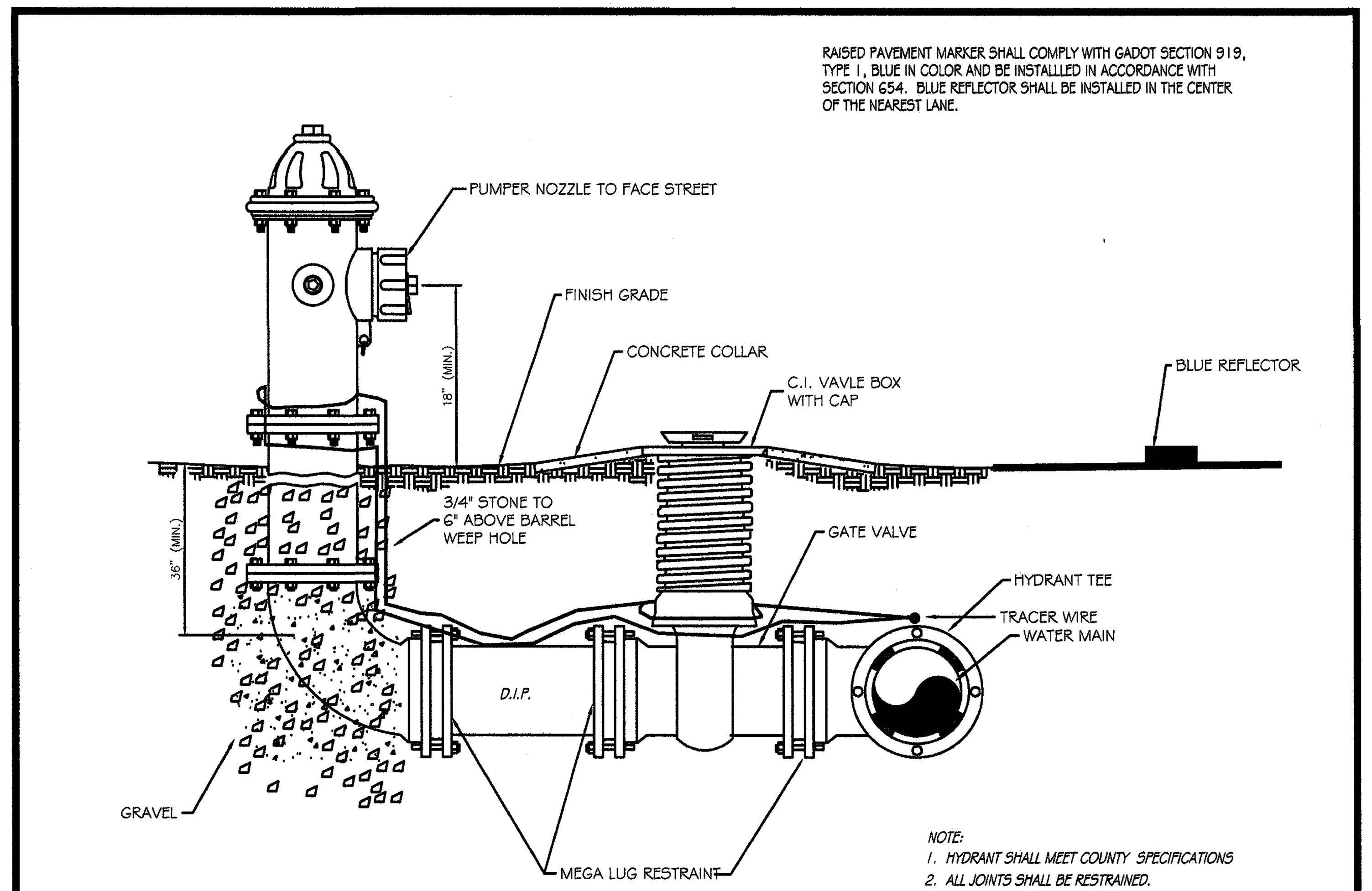
No.	Date	Revision
1	12/15/2017	INITIAL SUBMITTAL
2	1/29/2018	REVISION 1

Sheet Title: UTILITY PLAN AND PROFILE #11

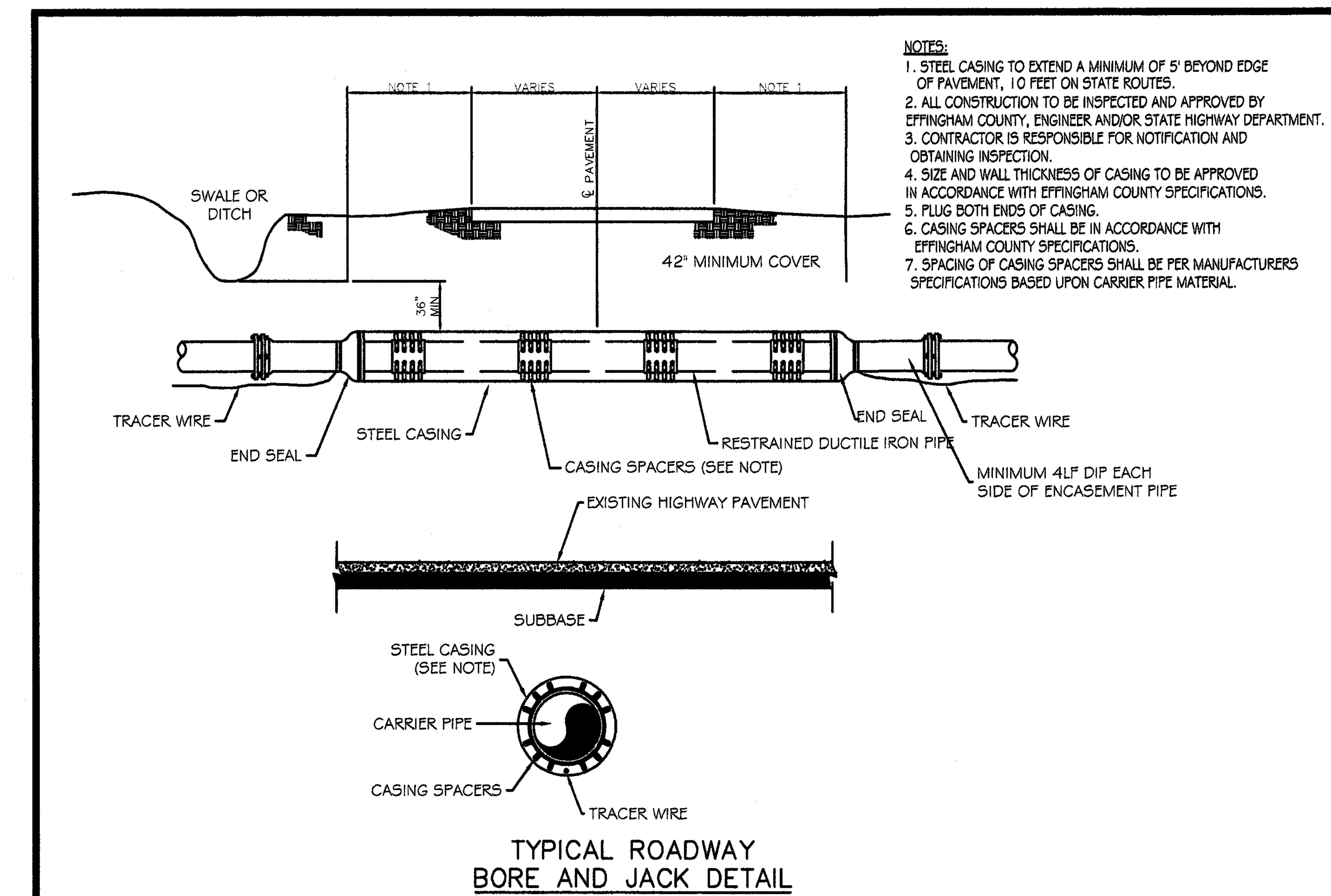
Drawn by:	WAS
Designed by:	WAS
Checked by:	GWP
Scale:	1"=20'
Project No.	PE17183
Sheet	13



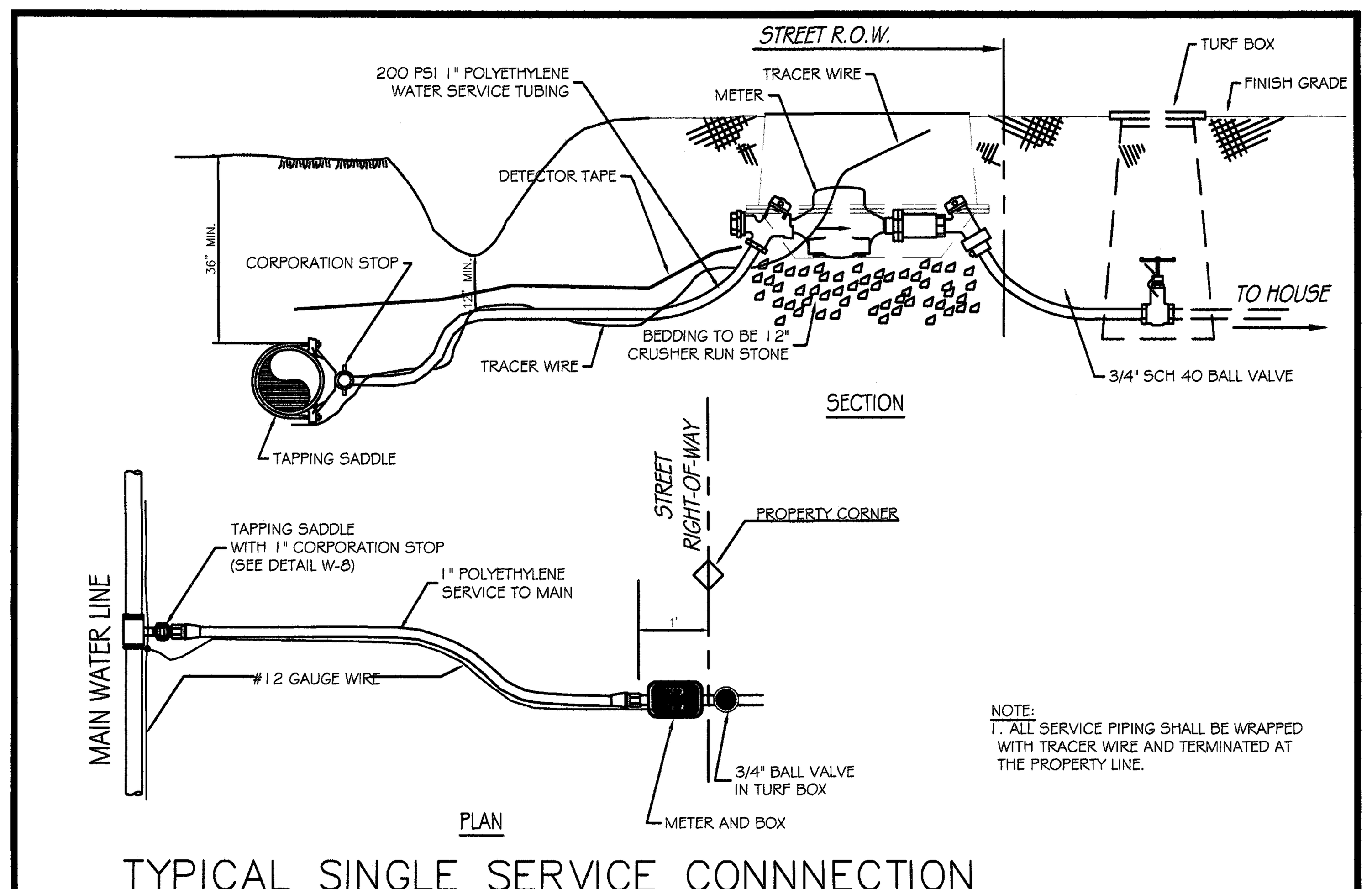
EFFINGHAM COUNTY	VALVE DETAIL	SCALE N.T.S. DATE August 2004	W-2



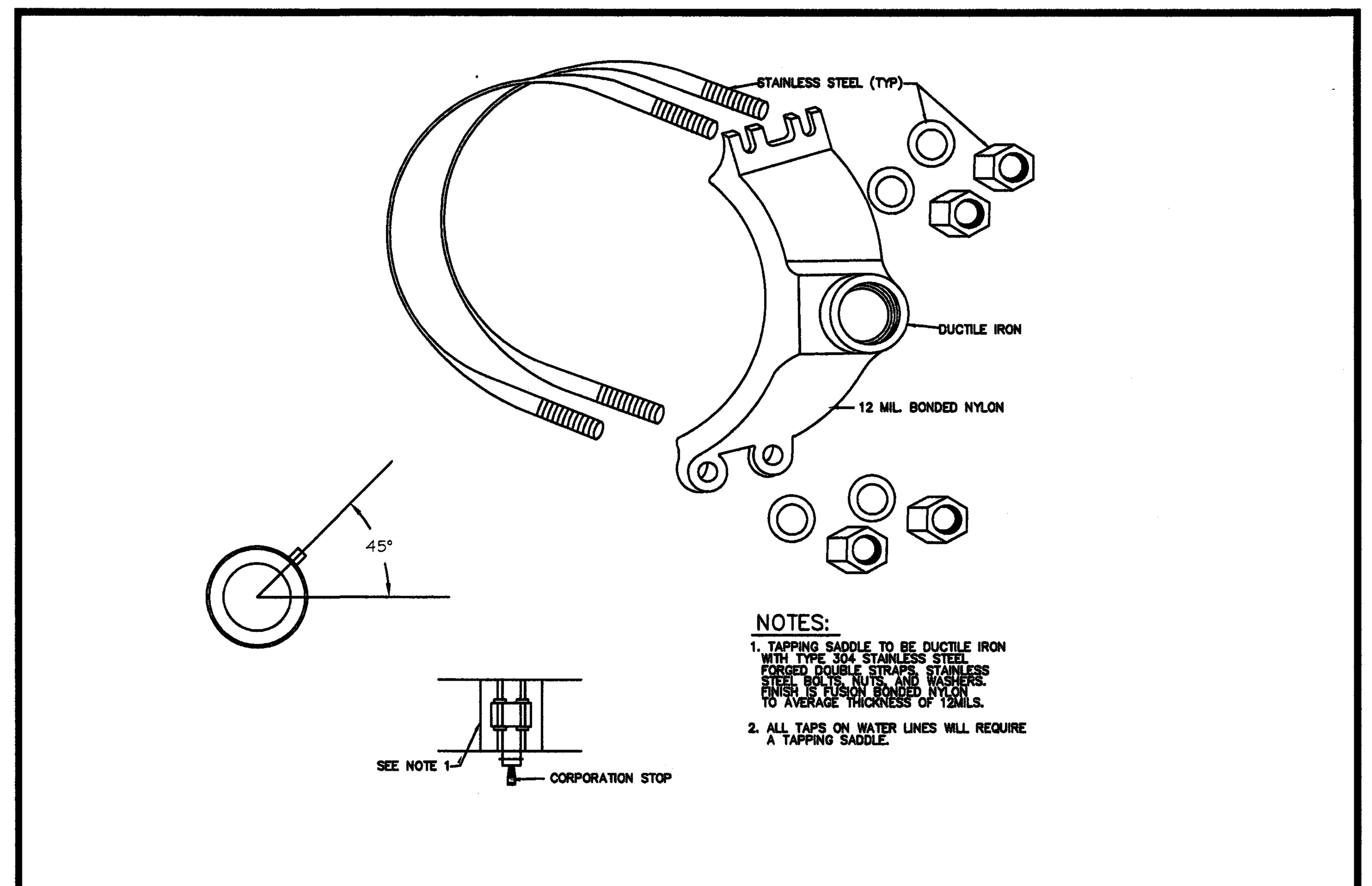
EFFINGHAM COUNTY	FIRE HYDRANT DETAIL	SCALE N.T.S. DATE August 2004	W-3



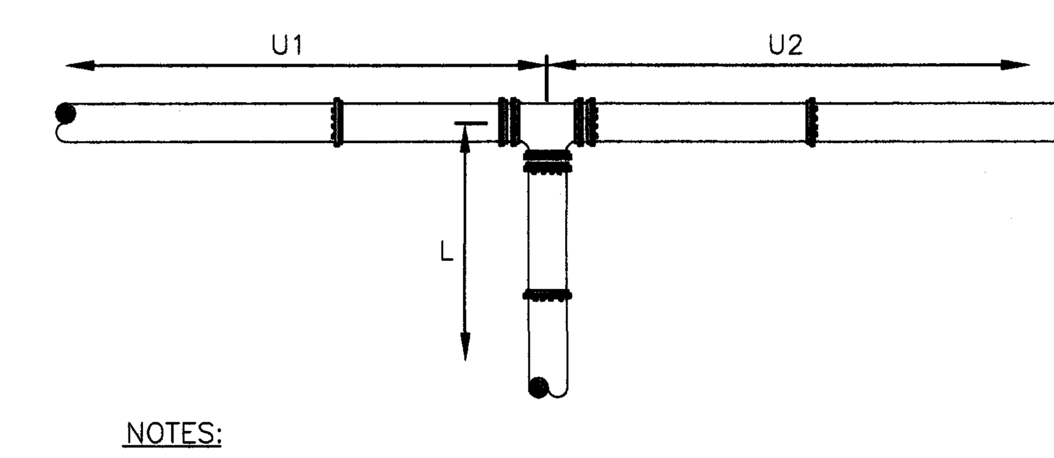
EFFINGHAM COUNTY	JACK AND BORE DETAIL (WATER SYSTEM ONLY)	SCALE N.T.S. DATE August 2004	W-6



EFFINGHAM COUNTY	SERVICE CONNECTION DETAIL	SCALE N.T.S. DATE August 2004	W-7



EFFINGHAM COUNTY	1" & 2" TAPPING SADDLE	SCALE N.T.S. DATE August 2004	W-8



NOTES:

1. LENGTH OF RESTRAINT SHOWN IS IN FEET.
2. WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.
3. U1 AND U2 = UNINTERUPTED STRAIGHT RUNS OF PIPE IN EACH DIRECTION.
4. Ur = THE SMALLER OF U1 OR U2.
5. L = MINIMUM RESTRAINED LENGTH ALONG THE BRANCH.
6. WHERE Ur IS LESS THAN 5', RESTRAIN TEE AS A 90° HORIZONTAL BEND.

PVC LINE

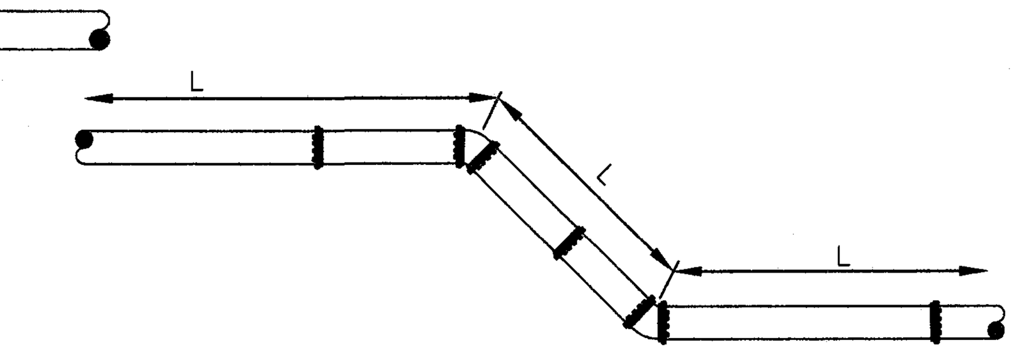
TEE \ Ur	5'–10'	11'–20'	21'–35'	> 35'
4X4	43	28	4	*
6X4	38	17	*	*
6X6	64	49	25	*
8X4	34	6	*	*
8X6	61	42	10	*
8X8	87	72	48	12
10X4	29	*	*	*
10X6	58	34	*	*
10X8	84	66	35	*
10X10	106	91	67	31
12X4	24	*	*	*
12X6	54	26	*	*
12X8	82	60	23	*
12X10	104	86	57	13
12X12	126	112	87	51

MINIMUM RESTRAINED LENGTH (L)

R*ESTRAIN AT TEE ONLY.

TEE RESTRAINT (PVC LINE)

NOT TO SCALE



PVC LINE

	BEND ANGLE			
PIPE DIA.	11 1/4°	22 1/2°	45°	90°
4	5	10	22	52
6	7	15	30	74
8	9	19	40	96
10	11	23	48	115
12	13	27	56	136

DUCTILE IRON LINE

	BEND ANGLE			
PIPE DIA.	11 1/4°	22 1/2°	45°	90°
4	3	6	12	28
6	4	8	17	40
8	4	10	22	52
10	5	12	26	62
12	6	15	30	73
16	7	19	39	94
20	11	23	47	114
24	13	26	55	132

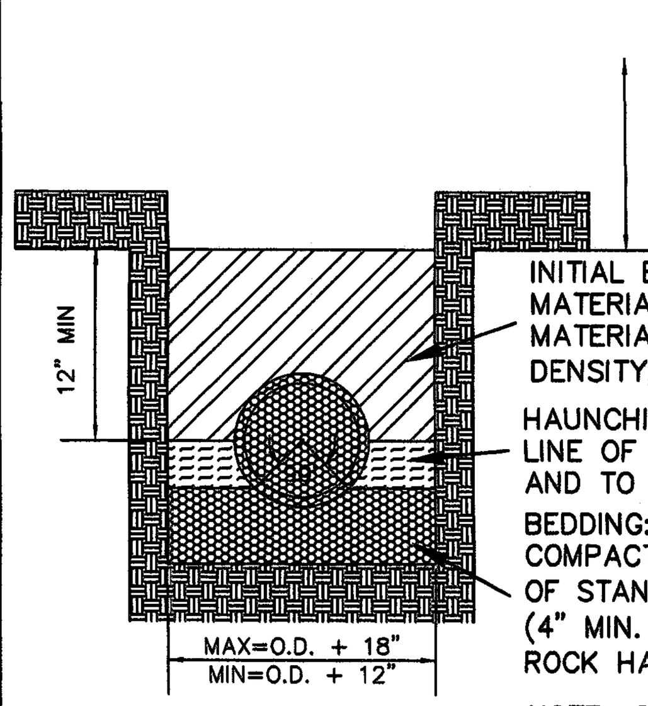
MINIMUM RESTRAINED LENGTH (L)

NOTES:

1. LENGTH OF RESTRAINT SHOWN IS IN FEET.
2. WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.

VERTICAL BEND RESTRAINT

NOT TO SCALE



TAMPED BACKFILL MATERIAL 6" LAYERS

INITIAL BACKFILL: USE CLASS I, II, OR III MATERIALS. COMPACT CLASS II OR III MATERIALS TO 90% OF STANDARD PROCTOR DENSITY, IN 6" MAX. LIFTS.

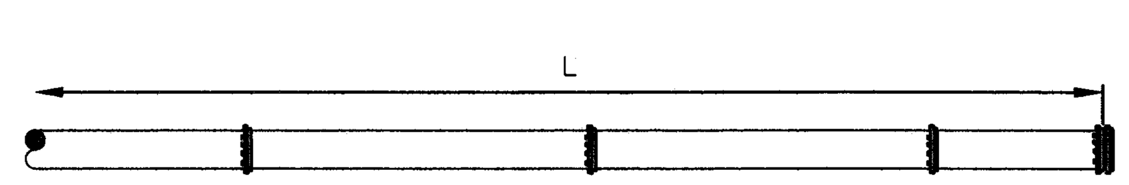
HAUNCHING: USE CLASS I MATERIAL TO SPRING LINE OF PIPE IN DRY TRENCH CONDITIONS, AND TO TOP OF PIPE IN WET TRENCH CONDITIONS.

BEDDING: USE CLASS I, II, OR III MATERIALS. COMPACT CLASS I OR II MATERIALS TO 90% OF STANDARD PROCTOR DENSITY 6" MAX. (4" MIN. IF TRENCH IS UNSTABLE OR WHERE ROCK HAS BEEN ENCOUNTERED)

NOTE: CLASS I, II, & III MATERIALS ARE DEFINED IN ASTM D-2321.

STANDARD PIPE BEDDING AND BACKFILL FOR PVC & DUCTILE PIPE

NTS



DUCITLE IRON LINE

PIPE DIA.	L
4	28
6	40
8	52
10	62
12	73
16	94
20	114
24	132

PVC LINE

PIPE DIA.	L
4	52
6	74
8	96
10	115
12	136

NOTES:

1. LENGTH OF RESTRAINT SHOWN IS IN FEET.
2. WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.

DEAD END RESTRAINT

NOT TO SCALE

PVC LINE

	BEND ANGLE			
PIPE DIA.	11 1/4°	22 1/2°	45°	90°
4	3	6	12	29
6	4	8	17	41
8	5	11	22	53
10	6	13	26	64
12	7	15	31	75

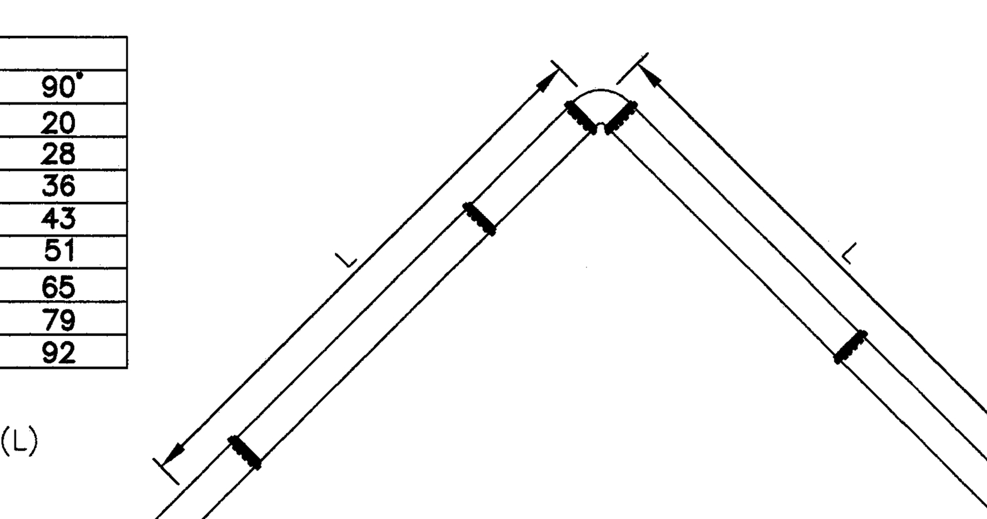
DUCTILE IRON LINE

	BEND ANGLE			
PIPE DIA.	11 1/4°	22 1/2°	45°	90°
4	2	4	8	20
6	3	6	12	28
8	4	7	15	36
10	4	9	18	43
12	5	10	21	51
16	6	13	27	65
20	8	16	33	79
24	9	18	38	92

MINIMUM RESTRAINED LENGTH (L)

NOTES:

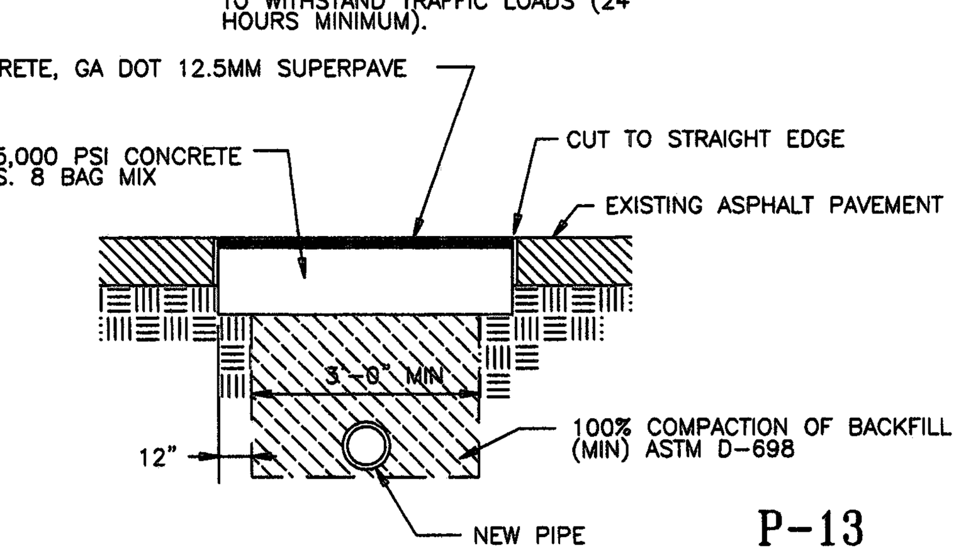
1. LENGTH OF RESTRAINT SHOWN IS IN FEET.
2. WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.



HORIZONTAL BEND RESTRAINT

NOT TO SCALE

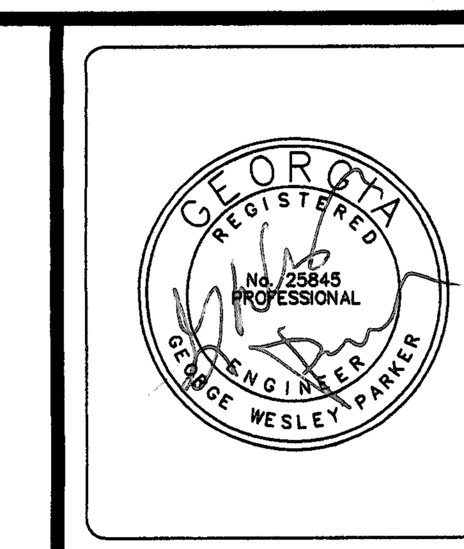
NOTE : ALL LATERAL STREET CUTS MUST BE COVERED WITH STEEL PLATES OF SUFFICIENT THICKNESS TO SPAN THE CUT WITHOUT NOTICEABLE DEFLECTION. PLATES TO REMAIN IN PLACE UNTIL THE CONCRETE BASE HAS GAINED SUFFICIENT STRENGTH TO WITHSTAND TRAFFIC LOADS (24 HOURS MINIMUM).



P-13

PAVEMENT REPLACEMENT

N.T.S.



36 Courtland Street, Suite B
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PARKER Engineering

BLUE JAY ROAD WATER MAIN EXTENSION
EFFINGHAM COUNTY, GA
prepared for:
EFFINGHAM CO. BOARD OF COMMISSIONERS

No.	Date	Revision

Sheet Title: CONSTRUCTION DETAILS

Drawn by:	WAS	Sheet
Designed by:	WAS	14
Checked by:	GWP	
Scale:	NTS	
Project No.	PE17183	

1. THE APPLICABLE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN CHECKLIST IS ENCLOSED WITH THESE PLANS.

2. THE LEVEL II CERTIFICATION NUMBER ISSUED BY THE COMMISSION, SIGNATURE AND SEAL OF THE CERTIFIED DESIGN PROFESSIONAL IS SHOWN ON ALL EROSION CONTROL SHEETS.

GSWCC LEVEL II CERTIFIED DESIGN PROFESSIONAL

GEORGE WESLEY PARKER

0000033463 — LEVEL II CERTIFICATION NUMBER

05/04/2019 — EXPIRES

3. 24-HOUR CONTACT – STEVE DAVIS, COUNTY ADMINISTRATOR
1-912-754-8060

4. PRIMARY PERMITEE / OWNER – EFFINGHAM COUNTY BOARD OF COMMISSIONERS
601 N. LAUREL STREET
SPRINGFIELD, GA 31329
1-912-754-8060

5. TOTAL ACREAGE –1.5 ACRES
DISTURBED ACREAGE 1.5 ACRES

6. BEGINNING OF PROJECT: LATITUDE 32.232 ° N LONGITUDE -81.329 ° W
ENDING OF PROJECT: LATITUDE 32.244 ° N LONGITUDE -81.313 ° W

7. SEE ALL SHEETS FOR INITIAL DATE OF THE PLAN AND ANY DATES OF REVISIONS MADE TO THE PLAN.

8. CONSTRUCTION ACTIVITY DESCRIPTION – NEW WATER MAIN TO LOOP EXISTING SYSTEM.

9. SEE THE COVER PAGE FOR THE VICINITY MAP SHOWING SITE'S RELATION TO SURROUNDING AREAS.

10. THE RECEIVING WATER FOR THIS SITE IS AN UNNAMED TRIBUTARY TO SKINNERS BAY. THIS PROJECT IS LOCATED OFF BLUE JAY ROAD IN EFFINGHAM COUNTY, GA.

11. I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION.

G. WESLEY PARKER

12. "I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECIEVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100002."

G. WESLEY PARKER

13. "I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR THE MONITORING OF:(A) ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES SHOWN ON THE USGS TOPOGRAPHIC MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES, OR (B) WHERE ANY SUCH SPECIFIC IDENTIFIED PERENNIAL OR INTERMITTENT STREAM AND OTHER WATER BODY IS NOT PROPOSED TO BE SAMPLED, I HAVE DETERMINED IN MY PROFESSIONAL JUDGEMENT, UTILIZING THE FACTORS REQUIRED IN THE GENERAL NPDES PERMIT NO. GAR 100002, THAT THE INCREASE IN TURBIDITY OF EACH SPECIFIC IDENTIFIED SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECIEVING WATER."

G. WESLEY PARKER

14. **THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS, PERIMETERS CONTROL BMP's, AND SEDIMENT BASINS IN ACCORDANCE WITH PART IV.A.5. WITHIN 7 DAYS AFTER INSTALLATION.**

15. **NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.**

16. **NO BUFFER VARIANCE IS REQUIRED.**

17. **AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.**

18. **WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.**

19. **THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO WITH LAND DISTURBING ACTIVITIES.**

20. **EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.**

21. **ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.**

22. THIS SITE DOES NOT DISCHARGE STORM WATER INTO AN IMPAIRED STREAM SEGMENT.

23. N/A

24. THIS PROJECT DOES NOT ALLOW FOR THE CONCRETE WASHDOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND REARS OF VEHICLES ONSITE. WASHDOWN MUST BE PERFORMED OFF-SITE.

25. NOTES REGARDING BMPS FOR THE REMEDIATION OF PETROLEUM SPILLS AND LEAKS

1. LOCAL STATE AND MANUFATURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL.
2. MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES BUT IS NOT LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SAWDUST, AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS.
3. SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
4. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, FEDERAL AND STATE REGULATIONS.
5. FOR SPILLS THAT MAY IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER) THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
6. FOR SPILLS OF AN UNKNOWN AMOUNT, THE NRC WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
7. FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL BE CONTACTED WITHIN 24 HOURS.
8. FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.
9. THE CONTRACTOR SHALL NOTIFY THE DESIGN PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THAN 1320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY OF GREATER THAN 660 GALLONS. THE CONTRACTOR WILL ALSO NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.

CONTRACTOR SHALL PREVENT PETROLEUM PRODUCTS FROM COMING INTO CONTACT WITH STORMWATER:

A. STORE IN A DRY COVERED AREA
B. MAINTAIN AND INSPECT (DAILY) TANKS AND CONTAINERS FOR LEAKS
C. PROVIDE EQUIPMENT ON SITE TO CLEAN UP PETROLEUM SPILLS
D. LOCATE EQUIPMENT MAINTENANCE AREAS AWAY FROM STATE WATERS, NATURAL DRAINS AND STORMWATER INLETS.
E. TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION
F. DISCHARGE OF OILS, FUELS AND LUBRICANTS IS PROHIBITED
G. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED PER STATE AND LOCAL REGULATIONS
H. CONTAINERS FROM PRODUCTS SUCH AS FUELS, LUBRICANTS AND TAR WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT.

26. CONTRACTOR SHALL REDUCE THE AMOUNT OF FERTILIZER/PESTICIDE THAT CONTACTS STORMWATER:

A. DO NOT DISCHARGE WASH WATER INTO STORM DRAINAGE SYSTEM
B. MAINTAIN VEGETATION ON SITE
C. APPLY MORE FREQUENTLY AT LOWER RATES
D. DO NOT APPLY AT RATES HIGHER THAN THE GUIDELINES SET FORTH IN THE GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA.
E. STORE FERTILIZERS AND PESTICIDES UNDER A ROOF IN SEALED CONTAINERS

CONTRACTOR SHALL DISPOSE OF CONSTRUCTION WASTES (EXTRA BUILDING SUPPLIES, DEMOLITION MATERIALS, AND PACKAGING) IN THE FOLLOWING MANNER:

A. FOLLOW A CONSISTENT REMOVAL SCHEDULE
B. IF POSSIBLE, LOCATE CONTAINERS IN COVERED AREAS
C. PROVIDE LIDS FOR WASTE CONTAINERS
D. NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE
E. DISPOSE BUILDING MATERIAL USING PROPER WASTE DISPOSAL PROCEDURE

PAINTS/FINISHES/SOLVENTS – ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORM WATER COLLECTION SYSTEM. EXCESS PRODUCT, MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURE'S SPECIFICATIONS AND RECOMMENDATIONS.

NOTES REGARDING HAZARDOUS WASTES AND SANITARY WASTES

A. HAZARDOUS WASTES

ALL HAZARDOUS WASTES MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL, STATE, AND/OR FEDERAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS. THE JOB SITE SUPERINTENDENT WHO WILL ALSO BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED, WILL INSTRUCT SITE PERSONNEL IN THESE PRACTICES. MATERIAL SAFETY DATA SHEETS (MSDS'S) FOR EACH SUBSTANCE WITH HAZARDOUS PROPERTIES THAT IS USED ON THE JOB SITE WILL BE OBTAINED AND USED FOR THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULT FROM THESE PRODUCTS. ALL MSDS WILL BE POSTED IN THE IMMEDIATE AREA WHERE SUCH PRODUCT IS STORED AND/OR USED AND ANOTHER COPY OF EACH MSDS WILL BE MAINTAINED IN THE ESPCP FILE AT THE JOB SITE CONSTRUCTION TRAILER OFFICE. EACH EMPLOYEE WHO MUST HANDLE A SUBSTANCE WITH HAZARDOUS PROPERTIES WILL BE INSTRUCTED ON THE USE OF MSDS SHEETS AND THE SPECIFIC INFORMATION IN THE APPLICABLE MSDS FOR THE PRODUCT HE/SHE IS USING PARTICULARLY REGARDING SPILL CONTROL TECHNIQUES.

THE CONTRACTOR WILL IMPLEMENT THE SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN FOUND WITHIN THIS ESPCP AND WILL TRAIN ALL PERSONNEL IN THE PROPER CLEANUP AND HANDLING OF SPILLED MATERIALS. NO SPILLED HAZARDOUS MATERIALS OR HAZARDOUS WASTES WILL BE ALLOWED TO COME IN CONTACT WITH STORMWATER DISCHARGES. IF SUCH CONTACT OCCURS, THE STORMWATER DISCHARGE WILL BE CONTAINED ON SITE UNTIL APPROPRIATE MEASURES IN COMPLIANCE WITH STATE AND FEDERAL REGULATIONS ARE TAKEN TO DISPOSE OF SUCH CONTAMINATED STORMWATER. IT SHALL BE THE RESPONSIBILITY OF THE JOB SITE SUPERINTENDENT TO PROPERLY TRAIN ALL PERSONNEL IN THE USE OF THE SPCC PLAN.

B. SANITARY WASTES

A MINIMUM OF ONE PORTABLE SANITARY UNIT WILL BE PROVIDED FOR EVERY TEN WORKERS ON THE SITE. ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONE TIME PER WEEK BY A LICENSED PORTABLE FACILTY PROVIDER IN COMPLIANCE WITH LOCAL AND STATE REGULATIONS.

ALL SANITARY WASTE UNITS WILL BE LOCATED IN AN AREA WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORM WATER DISCHARGE IS NEGLIGIBLE. ADDITIONAL CONTAINMENT BMPS MUST BE IMPLEMENTED, SUCH AS GRAVEL BAGS OR SPECIALLY DESIGNED PLASTIC SKID CONTAINERS AROUND THE BASE, TO PREVENT WASTES FROM CONTRIBUTING TO STORM WATER DISCHARGES. THE LOCATION OF SANITARY WASTE UNITS MUST BE IDENTIFIED ON THE EROSION CONTROL PLAN GRADING PHASE BY THE CONTRACTOR ONCE THE LOCATIONS HAVE BEEN DETERMINED.

27. DESCRIPTION OF MEASURES INSTALLED DURING CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORMWATER THAT WILL OCCUR AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED:

PETROLEUM BASED PRODUCTS – CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS, AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ONSITE VEHICLES AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATERS, NATURAL DRAINS, AND STORM WATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS, AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.

PAINTS/FINISHES/SOLVENTS – ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORM WATER COLLECTION SYSTEM. EXCESS PRODUCT, MATERIALS USED WITH THESE PRODUCTS, AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

CONCRETE TRUCK WASHING – NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONSITE.

FERTILIZER/HERBICIDES – THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR IN THE GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS.

BUILING MATERIALS – NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.

28.

ACTIVITY SCHEDULE – MAR 2018 – JUL 2018

MONTH	1	2	3	4	5
INSTALL SILT FENCE	▬				
MAINTAIN SILT FENCE & BMP'S	▬	▬	▬	▬	▬
PLANT TEMP. VEGETATION	▬	▬	▬	▬	
UTILITY CONSTRUCTION			▬	▬	
PAVING					▬
PLANT PERM. VEGETATION					▬

29. SEE SHEET 17 FOR REQUIREMENTS OF INSPECTIONS AND RECORD KEEPING.

30. SEE SHEET 17 FOR REQUIREMENTS OF SAMPLING FREQUENCY AND AND REPORTING OF SAMPLING RESULTS.

31. RETENTION OF RECORDS:

1. THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A N.O.T. IS SUBMITTED IN ACCORDANCE WITH PART VI.
A. A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD.
B. A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT.
C. THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5 OF THIS PERMIT.
D. A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT.
E. A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A OF THIS PERMIT.
F. A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2 OF THIS PERMIT;
G. DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A. OF THIS PERMIT.

2. COPIES OF ALL NOTICES ON INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION), OR OTHER REPORTS REQUESTED BY THE EPD, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT AND ALL OTHER RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE PERMITTEE WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE N.O.T. IS SUBMITTED IN ACCORDANCE WITH PART VI OF THIS PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS OR AT A DESIGNATED ALTERNATIVE LOCATION ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

32. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF BMP'S THROUGHOUT THE DURATION OF THE PROJECT AND IS RESPONSIBLE FOR MONITORING OUTFALLS, ANAYLSIS AND REPORTING. MONITORING SCHEDULE AND METHODOLOGY IS TO COMPLY WITH STATE OF GEORGIA GENERAL PERMIT NO. GAR 100002, 40 CFR PART 136, AND "NPDES STORMWATER SAMPLING GUIDANCE DOCUMENT," EPA 833-B-92-001.

33. SITE IS 1.5 ACRES. FOR WARM WATER FISHERIES, DESIGNATED NTU VALUE UP TO 10 ACRES AND UP TO 5 SQ MILES DRAINAGE AREA IS 75.

34. SEE ALL OF THE EROSION CONTROL PLANS FOR ALL DELINEATED SAMPLING LOCATIONS, PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATERS BODIES IN WHICH THE STORM WATER IS DISCHARGED. A DISCHARGE OF STORM WATER RUNOFF FROM DISTURBED AREAS WHERE BEST MANAGEMENT PRACTICES HAVE NOT BEEN PROPERLY DESIGNED, INSTALLED, AND MAINTAINED SHALL CONSTITUTE A SEPARATE VIOLATION FOR EACH DAY ON WHICH SUCH DISCHARGE RESULTS IN THE TURBIDITY OF RECEIVING WATERS BEING OVER 75.

35. SEE THE EROSION CONTROL PLANS FOR THE LOCATION OF BEST MANAGEMENT PRACTICES THAT ARE CONSISTENT WITH THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA.

36. SEE THE EROSION CONTROL PLANS FOR THE GRAPHIC SCALE AND NORTH ARROW.

37. SEE THE EROSION CONTROL PLANS FOR THE EXISTING AND PROPOSED CONTOUR LINES.

38. CPOP SILT FENCING MAY BE USED AS AN ALTERNATE FOR THIS PROJECT.

39. CPOP SILT FENCING MAY BE USED AS AN ALTERNATE FOR THIS PROJECT.

40. NO BUFFERS ARE REQUIRED FOR THIS PROJECT.

41. SEE PLANS FOR APPROXIMATE DELINEATIONS OF WETLANDS AND STATE WATERS WITHIN 200' OF THE SITE.

42. SEE QUAD MAP ON SHEET 16 FOR DELINEATION OF ACREAGE OF CONTRIBUTING DRAINAGE BASINS.

43. SEE DETAIL SHEET 16 FOR TOPOGRAPHICAL SHEET.

44. PRE-DEVELOPED SITE HAS A CN VALUE OF 80. POST-DEVELOPED SITE HAS A CN VALUE OF 80.

45. THERE ARE NO DRAIN PIPES TO BE CONSTRUCTED; WEIR VELOCITIES NOT APPLICABLE.

HYDROLOGY:
WITHIN THE DISTURBED ACREAGE, THE PRE-DEVELOPED CONDITIONS WILL HAVE ITS STORMWATER RUNOFF PEAK AT 2.8 CFS. UNDER POST-DEVELOPED CONDITIONS, THE PEAK WILL ALSO BE 2.8 CFS. AS SUCH, AND BECAUSE THIS IS A STANDARD WATER MAIN CORRIDOR CONSTRUCTION, NO DETENTION SHALL BE PROVIDED.

GEORGIA REGISTERED No. 25845 PROFESSIONAL ENGINEER GEORGE WESLEY PARKER

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PARKER Engineering

BLUE JAY ROAD WATER MAIN EXTENSION
EFFINGHAM COUNTY, GA
prepared for:
EFFINGHAM CO. BOARD OF COMMISSIONERS

No.	Date	Revision
1	12/15/2017	INITIAL SUBMITTAL
2	1/29/2018	REVISION 1

Sheet Title:
EROSION CONTROL NOTES

Drawn by:	WAS
Designed by:	WAS
Checked by:	GWP
Scale:	NTS
Project No.	PE17183

Sheet 15

46. SEE ALL EROSION CONTROL PLANS FOR THE SOIL SERIES LOCATED ON PROJECT SITE. SEE BELOW FOR SOIL SERIES DESCRIPTION.

47. SEE ALL EROSION CONTROL PLANS FOR THE LIMITS OF DISTURBANCE.

48.

SEDIMENT CALCULATIONS		
DISTURBED ACREAGE	1.5 AC.	SUB-BASIN 1 = 2.9 AC; SUB-BASIN 2 = 4.2 AC.
REQD. STORAGE PER ACRE	67 YARDS	
REQD. STORAGE	101 YDS	(67 YDS/AC. * 1.5 AC.)
REQD. STORAGE	424 CY	TO BE STORED IN SILT FENCE

30" SILT FENCE CALC: 6102 LF SILT FENCE (3' WIDE/1.25' OR 50% CLEANOUT HEIGHT: 424 CY STORAGE > 101 CY)

49.

CODE	PRACTICE	DESCRIPTION
Sd1	SEDIMENT BARRIER	A BARRIER TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. IT MAY BE SANDBAGS, HAYBALES, BRUSH, LOGS OR A SEDIMENT FENCE. BARRIERS ARE TEMPORARY.
Ds1	STABILIZATION	ESTABLISHING A TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDINGS ON DISTURBED AREAS BY MULCHING.
Ds2	TEMPORARY VEGETATION	ESTABLISHING A TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDINGS ON DISTURBED AREAS. (INCLUDES MULCHING) HYDROSEEDING IS AN ALTERNATIVE
Ds3	PERMANENT VEGETATION	ESTABLISHING PERMANENT VEGETATIVE COVER SUCH AS GRASS, TREES, SHRUBS, ETC. ON DISTURBED GROUND
Du	DUST CONTROL	CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADWAYS AND SIMILAR SITES

50. SEE THIS SHEET FOR DETAILED DRAWINGS FOR ALL STRUCTURAL PRACTICES.

Effingham County, Georgia (GA103)

Effingham County, Georgia (GA103)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
EcA	Echaw-Centenary complex, 0 to 2 percent slopes	5.0	4.1%
LnA	Leon sand, 0 to 2 percent slopes	77.1	63.6%
RdA	Ridgeland-Boulogne complex, 0 to 2 percent slopes	39.1	32.2%
Totals for Area of Interest		**121.2**	**100.0%**

51. VEGETATIVE PLAN FOR DISTURBED AREAS

All bare areas resulting from construction operations will established to perennial vegetation as soon as possible after final grading is complete.

SEEDBED
Prepare seedbed to a depth of at least 4 inches on all areas where a good seedbed is not present. Remove rocks, roots, or other objects that will interfere with vegetation establishment or maintenance operations.

FERTILIZER
Apply agricultural lime at the rate of 1 tons per acre. Apply 1000 lbs. 15-15-15 fertilizer per acre. Spread lime and fertilizer uniformly over all areas immediately before final land preparation and mix thoroughly with the soil. Apply topdressing of 100 lbs. per acre of ammonium nitrate (or equivalent) when plants are 2 to 4 inches tall.

PLANTING
All areas shall be seed with the following:

SEPTEMBER-MARCH
Rye (Temporary Grassing)/Bermuda Mixture (Permanent Grassing)
Rye @ 1/2 bushel (3.9 lbs.) per 1000 sqft
Unhulled Bermuda @ 0.22 lbs. per 1000 sqft

DS2
DS3

MARCH-SEPTEMBER
Browntop Millet (Temporary Grassing)/Bermuda Mixture (Permanent Grassing)
Browntop Millet @ 10 lbs. per acre
Hulled Bermuda @ 10 lbs. per acre

MULCHING
2 Tons per acre of straw. Anchor mulch into ground. Mulch shall be approximately 1-2 inches thick.

MAINTENANCE
Apply 400 lbs. per acre or 10-10-10 fertilizer and topdress with 30 lbs. of ammonium nitrate per acre every year. Apply 1 ton of lime per 5 years.

PROVIDE VEGETATION AND MULCHING TO ALL DISTURBED AREAS IMMEDIATELY AFTER GRADING. LAND CLEARING SHALL BE KEPT TO A MINIMUM AND SHALL BE ACCOMPLISHED IN A WAY TO MINIMIZE EROSION. SCHEDULE LAND DISTURBING ACTIVITIES WITH REGARD TO WEATHER FORECAST TO LIMIT EXPOSURE OF UNPROTECTED LAND FROM WIND, RAIN AND OTHER EROSIVE FORCES.

GENERAL EROSION CONTROL NOTES

THIS SITE IS NOT LOCATED WITHIN A FLOOD ZONE.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT ALL STAGES OF CONSTRUCTION.

CONSTRUCTION OR LAND CLEARING SHALL BEGIN WITH THE INSTALLATION OF EROSION CONTROL MEASURES.

SEDIMENT CONTROL WILL BE ACHIEVED BY USE OF SILT FENCE AND CHECK DAMS. REMOVE ACCUMULATED SILT FROM SILT FENCE AND CHECK DAMS WHEN THEY REACH 1.5' IN DEPTH.

CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES DAILY AND AFTER ALL RAIN EVENTS. ANY DAMAGES SHOULD BE REPAIRED BY THE END OF THE DAY. SEDIMENT DISPOSAL SHALL BE ACCOMPLISHED BY SPREADING EVENLY OVER THE SITE. SEDIMENT FENCES SHALL REMAIN UNTIL THE AREA IS STABILIZED.

EROSION CONTROL MEASURES IN THE PLAN ARE THE MINIMUM REQUIRED. THE CONTRACTOR SHALL PROVIDE ADDITIONAL CONTROL MEASURES AS DETERMINED BY ACTUAL FIELD CONDITIONS.

ALL RIP-RAP SHALL BE INSTALLED FLUSH WITH CHANNEL BANKS AND BOTTOM.

SPILL CONTINGENCY PLAN

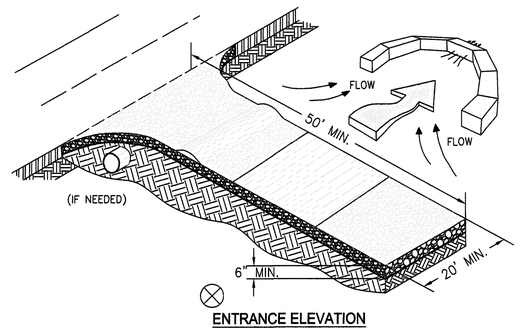
A. CONTAIN THE SPILL
B. STOP THE SOURCE
C. CLEANUP PROCEDURES SHALL BE CLEARLY POSTED
D. CLEANUP MATERIALS SHALL BE READILY AVAILABLE

NOTES REGARDING CRITICAL WORK ZONE

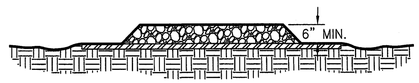
AT THE END OF EACH WORK DAY ALL SLOPES 2:1 OR STEEPER AND HIGHER THAN 5 FEET SHALL RECEIVE SURFACE ROUGHENING, POLYMERS, AND EROSION CONTROL MATTING, ADDITIONALLY, ALL FILL SLOPES SHALL RECEIVE A DIVERSION DIKE AND TEMPORARY DOWN DRAINS ALONG THE TOP OF THE SLOPE PREVENTING DRAINAGE SPILLING OVER THE EDGE AND DOWN THE FACE OF THE SLOPE. THE TEMPORARY DOWN DRAINS SHALL BE CONSTRUCTED WITH PERFORATED STAND PIPES AT THE TOP OF THE SLOPE AND RECONSTRUCTED EACH DAY AS THE SLOPE INCREASES IN HEIGHT.

CRUSHED STONE CONSTRUCTION EXIT

EXIT DIAGRAM



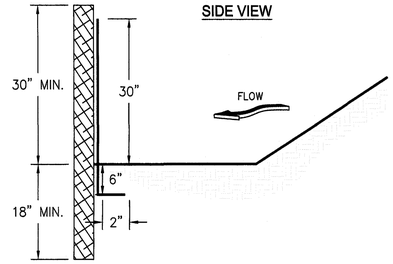
ENTRANCE ELEVATION



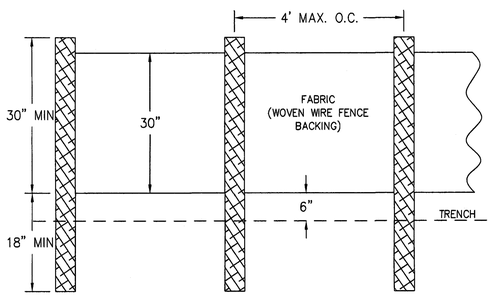
NOTES:
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

SILT FENCE - TYPE SENSITIVE

SIDE VIEW



FRONT VIEW

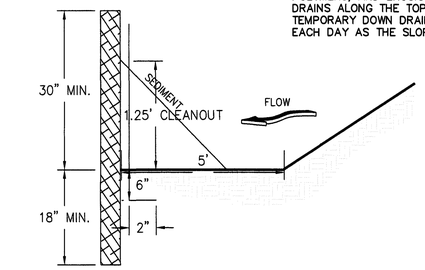


NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. HEIGHT (*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

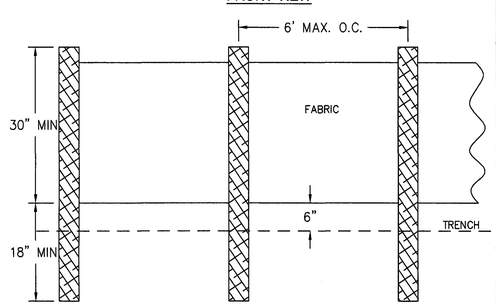
GEORGE WESLEY PARKER

0000033463 — LEVEL II CERTIFICATION NUMBER

05/04/2019 — EXPIRES



FRONT VIEW



NOTES:
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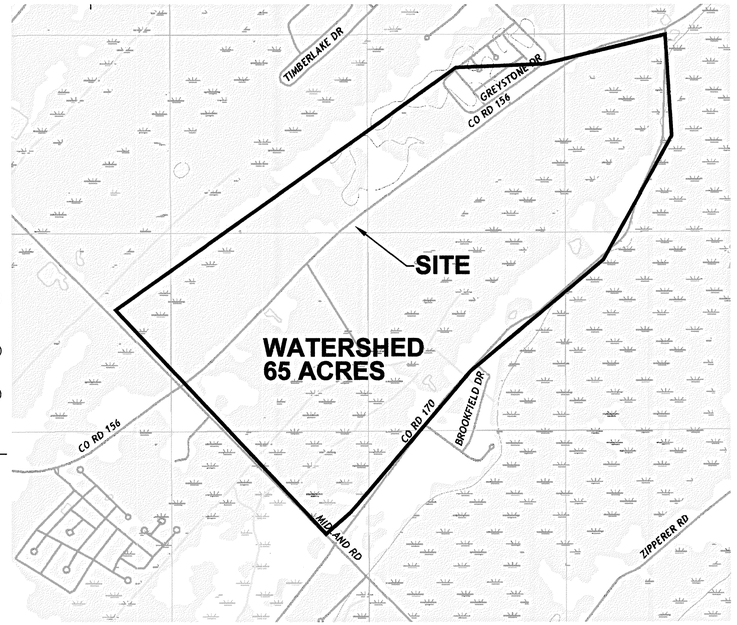
2. HEIGHT (*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

Sd-1NS
SILT FENCE TYPE NON-SENSITIVE
NTS



USGS TOPO MAP
N.T.S

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BLUE JAY ROAD WATER MAIN EXTENSION
EFFINGHAM COUNTY, GA
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No.	Date	Revision
1	12/15/2017	INITIAL SUBMITTAL
2	1/29/2018	REVISION 1

Sheet Title:
EROSION CONTROL NOTES

Drawn by:	WAS
Designed by:	WAS
Checked by:	GWP
Scale:	NTS
Project No.	PE17183

Sheet 16

29. INSPECTIONS

4. Inspections.

a. Permittee requirements.

(1). Each day when any type of construction activity has taken place at a primary permittee's site, certified personnel provided by the primary permittee shall inspect: (a) all areas at the primary permittee's site where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment and (b) all locations at the primary permittee's site where vehicles enter or exit the site for evidence of off-site sediment tracking. These inspections must be conducted until a Notice of Termination is submitted.

(2). Measure rainfall once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal holiday until a Notice of Termination is submitted. Measurement of rainfall may be suspended if all areas of the site have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region.

(3). Certified personnel (provided by the primary permittee) shall inspect the following at least once every fourteen (14) calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater (unless such storm ends after 5:00 PM on any Friday or on any non-working Saturday, non-working Sunday or any non-working Federal holiday in which case the inspection shall be completed by the end of the next business day and/or working day, whichever occurs first): (a) disturbed areas of the primary permittee's construction site , (b) areas used by the primary permittee for storage of materials that are exposed to precipitation ; and (c) structural control measures. Erosion and sediment control measures identified in the Plan applicable to the primary permittee's site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). For areas of a site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region, the permittee must comply with Part IV.D.4.a.(4). These inspections must be conducted until a Notice of Termination is submitted.

(4). Certified personnel (provided by the primary permittee) shall inspect at least once per month during the term of this permit (i.e., until a Notice of Termination is submitted to EPD) the areas of the site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and the receiving water(s). Erosion and sediment control measures identified in the Plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving-water(s).

(5). Based on the results of each inspection, the site description and the pollution prevention and control measures identified in the Erosion, Sedimentation and Pollution Control Plan, the Plan shall be revised as appropriate not later than seven (7) calendar days following each inspection. Implementation of such changes shall be made as soon as practical but in no case later than seven (7) calendar days following each inspection.

(6). A report of each inspection that includes the name(s) of certified personnel making each inspection, the date(s) of each inspection, construction phase (i.e., initial, intermediate or final), major observations relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan, and actions taken in accordance with Part IV.D.4.a.(5). of the permit shall be made and retained at the site or be readily available at a designated alternate location until the entire site or that portion of a construction project that has been phased has undergone final stabilization and a Notice of Termination is submitted to EPD. Such reports shall be readily

available by end of the second business day and/or working day and shall identify all incidents of best management practices that have not been properly installed and/or maintained as described in the Plan. Where the report does not identify any incidents, the inspection report shall contain a statement that the best management practices are in compliance with the Erosion, Sedimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.G.2. of this permit.

5. Maintenance. The Plan shall include a description of procedures to ensure the timely maintenance of vegetation, erosion and sediment control measures and other protective measures identified in the site plan.

6. Sampling Requirements. This permit requires the monitoring of nephelometric turbidity in receiving water(s) or outfalls in accordance with this permit. The following procedures constitute EPD's guidelines for sampling turbidity.

a. *Sampling Requirements* shall include the following:

(1) A USGS topographic map, a topographic map or a drawing (referred to as a topographic map) that is a scale equal to or more detailed than a 1:24000 map showing the location of the infrastructure construction; (a) the location of all perennial and intermittent streams and other water bodies as shown on a USGS topographic map, and all other perennial and intermittent streams and other water bodies located during mandatory field verification, into which the storm water is discharged and (b) the receiving water and/or outfall sampling locations for each representative stormwater outfall. When the permittee has chosen to use a USGS topographic map and the receiving water(s) is not shown on the USGS topographic map, the location of the receiving water(s) must be hand-drawn on the USGS topographic map from where the storm water(s) enters the receiving water(s) to the point where the receiving water(s) combines with the first blue line stream shown on the USGS topographic map;

(2). A written narrative of site specific analytical methods used to collect and analyze the samples including quality control/quality assurance procedures. This narrative must include precise sampling methodology for each sampling location;

(3) When the permittee has determined that some or all outfalls will be sampled, a rationale must be included on the Plan for the NTU limit(s) selected from Appendix B. This rationale must include the size of the construction site, the calculation of the size of the surface water drainage area, and the type of receiving water(s) (i.e., trout stream or supporting warm water fisheries); and

(4). Any additional information EPD determines necessary to be part of the Plan. EPD will provide written notice to the permittee of the information necessary and the time line for submittal.

b. *Sample Type.* All sampling shall be collected by "grab samples" and the analysis of these samples must be conducted in accordance with methodology and test procedures established by 40 CFR Part 136 (unless other test procedures have been approved); the guidance document titled "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001" and guidance documents that may be prepared by the EPD.

(1). Sample containers should be labeled prior to collecting the samples.

(2). Samples should be well mixed before transferring to a secondary container.

(3). Large mouth, well cleaned and rinsed glass or plastic jars should be used for collecting samples. The jars should be cleaned thoroughly to avoid contamination.

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30. SAMPLING

(4). Any additional information EPD determines necessary to be part of the Plan. EPD will provide written notice to the permittee of the information necessary and the time line for submittal.

b. *Sample Type.* All sampling shall be collected by "grab samples" and the analysis of these samples must be conducted in accordance with methodology and test procedures established by 40 CFR Part 136 (unless other test procedures have been approved); the guidance document titled "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001" and guidance documents that may be prepared by the EPD.

(1). Sample containers should be labeled prior to collecting the samples.

(2). Samples should be well mixed before transferring to a secondary container.

(3). Large mouth, well cleaned and rinsed glass or plastic jars should be used for collecting samples. The jars should be cleaned thoroughly to avoid contamination.

(4). Manual, automatic or rising stage sampling may be utilized. Samples required by this permit should be analyzed immediately, but in no case later than 48 hours after collection. However, samples from automatic samplers must be collected no later than the next business day after their accumulation, unless flow through automated analysis is utilized. If automatic sampling is utilized and the automatic sampler is not activated during the qualifying event, the permittee must utilize manual sampling or rising stage sampling during the next qualifying event. Dilution of samples is not required. Samples may be analyzed directly with a properly calibrated turbidimeter. Samples are not required to be cooled.

(5). Sampling and analysis of the receiving water(s) or outfalls beyond the minimum frequency stated in this permit must be reported to EPD as specified in Part IV.E.

c. *Sampling Points.*

(1). For construction activities the primary permittee must sample all perennial and intermittent streams and other water bodies shown on the USGS topographic map and all other field verified perennial and intermittent streams and other water bodies, or all outfalls into such streams and other water bodies, or a combination thereof. However, provided for in and in accordance with Part IV.D.6.c.(2). of this permit, primary permittees on an infrastructure construction project may sample the representative perennial and intermittent streams, other water bodies or outfalls, or a combination thereof. Samples taken for the purpose of compliance with this permit shall be representative of the monitored activity and representative of the water quality of the receiving water(s) and/or the storm water outfalls using the following minimum guidelines:

(a). The upstream sample for each receiving water(s) must be taken immediately upstream of the confluence of the first storm water discharge from the permitted activity (i.e., the discharge farthest upstream at the site) but downstream of any other storm water discharges not associated with the permitted activity. Where appropriate, several upstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the upstream turbidity value.

(b). The downstream sample for each receiving water(s) must be taken downstream of the confluence of the last storm water discharge from the permitted activity (i.e., the discharge farthest downstream at the site) but upstream of any other storm water discharge not associated with the permitted activity. Where appropriate, several downstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the downstream turbidity value.

(c). Ideally the samples should be taken from the horizontal and vertical center of the receiving water(s) or the storm water outfall channel(s).

(d). Care should be taken to avoid stirring the bottom sediments in the receiving water(s) or in the outfall storm water channel.

(e). The sampling container should be held so that the opening faces upstream.

(f). The samples should be kept free from floating debris.

(g). Permittees do not have to sample sheetflow that flows onto undisturbed natural areas or areas stabilized by the project. For purposes of this section, stabilized shall mean, for unpaved areas and areas not covered by permanent structures., 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped according to the Plan (uniformly covered with landscaping materials in planned landscaped areas), or equivalent permanent stabilization measures as defined in the Manual (excluding a crop of annual vegetation and a seeding of target crop perennials appropriate for the region). For infrastructure construction projects on land used for agricultural or silvicultural purposes, final stabilization may be accomplished by stabilizing the disturbed land for its agricultural or silvicultural use.

(h). All sampling pursuant to this permit must be done in such a way (including generally accepted sampling methods, locations, timing, and frequency) as to accurately reflect whether storm water runoff from the construction site is in compliance with the standard set forth in Parts III.D.3. or III.D.4., whichever is applicable.

(2). For infrastructure construction projects, the permittee is not required to sample a perennial or intermittent stream or other water bodies (or the associated outfall, if applicable) if the design professional preparing the Plan certifies that an increase in the turbidity of a specific identified receiving water to be sampled will be representative of the increase in the turbidity of a specific identified un-sampled receiving water. A written justification and detailed analysis shall be prepared by the design professional justifying such proposed sampling. A summary chart of the justification and analysis for the representative sampling must be included on the Plan. The justification and analysis shall include the location and description of the specified sampled and un-sampled receiving water and shall contain a detailed comparison and discussion of each such receiving water in the following areas:

(a). site land disturbances and characteristics;

(b). receiving water watershed sizes and characteristics; and

(c). site and watershed runoff characteristics utilizing the methods in Appendix A-1 (United States Department of Agriculture Soil Conservation Service's TR-55, Urban Hydrology for Small Watersheds) of the most recent version of the "Manual for Erosion and Sedimentation Control in Georgia" for the various precipitation events and any other such considerations necessary to show that the increase in the turbidity of a specific identified sampled receiving water will be representative of the increases in the turbidity of a specific identified un-sampled receiving waters.

(3). For infrastructure construction projects, when the permittee determines that some receiving water(s) will not be sampled due to representative sampling, the design professional making this determination and preparing the Plan must include and sign the following certification in the Plan:

"I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for the monitoring of: (a) all perennial and intermittent streams and other water bodies shown on the USGS topographic map and all other field verified perennial and intermittent steams and other water bodies, or (b) where any such specific identified perennial or intermittent stream and other water body is not proposed to be sampled, I have determined in my professional judgment, utilizing the factors required in the General NPDES Permit No. GAR 100002, that the increase in the turbidity of each specific identified sampled receiving water will be representative of the increase in the turbidity of a specific identified un-sampled receiving water."

(4). For infrastructure construction projects, if at any time during the life of the project a selected receiving water no longer represents another receiving water, then the permittee shall sample the latter receiving water until selection of an alternative representative receiving water.

(5). For infrastructure construction projects, if at any time during the life of the project a receiving water is determined not to be represented as certified in the Plan, the permittee shall sample that receiving water until a Notice of Termination is submitted or until the applicable phase is stabilized in accordance with this permit.

(6). For infrastructure construction projects, monitoring obligations shall cease for any phase of the project that has been stabilized in accordance with Part IV.D.6.c.(1).(g).

d. *Sampling Frequency.*

(1). The primary permittee must sample in accordance with the Plan at least once for each rainfall event described below. For a qualifying event, the permittee shall sample at the beginning of any storm water discharge to a monitored receiving water and/or from a monitored outfall location within forty-five (45) minutes or as soon as possible. .

(2). However, where manual and automatic sampling are impossible (as defined in this permit), or are beyond the permittee's control, the permittee shall take samples as soon as possible, but in no case more than twelve (12) hours after the beginning of the storm water discharge.

(3). Sampling by the permittee shall occur for the following qualifying events:

(a). For each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a storm water discharge that occurs during normal business hours as defined in this permit. after all clearing and grubbing operations have been completed, but prior to completion of mass grading operations, in the drainage area of the location selected as the representative sampling location;

(b). In addition to (a) above, for each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a storm water discharge that occurs during normal business hours as defined in this permit either 90 days after the first sampling event or after all mass grading operations have been completed, but prior to submittal of a NOT, in the drainage area of the location selected as the representative sampling location, whichever comes first;

(c). At the time of sampling performed pursuant to (a) and (b) above, if BMPs in any area of the site that discharges to a receiving water or from an outfall are not properly designed, installed and maintained, corrective action shall be defined and implemented within two (2) business days, and turbidity samples shall be taken from discharges from that area of the site for each subsequent rain event that reaches or exceeds 0.5 inch

during normal business hours* until the selected turbidity standard is attained, or until post-storm event inspections determine that BMPs are properly designed, installed and maintained;

(d). Where sampling pursuant to (a), (b) or (c) above is required but not possible (or not required because there was no discharge), the permittee, in accordance with Part IV.D.4.a.(6), must include a written justification in the inspection report of why sampling was not performed. Providing this justification does not relieve the permittee of any subsequent sampling obligations under (a), (b) or (c) above; and

(e).. Existing construction activities, i.e., those that are occurring on or before the effective date of this permit, that have met the sampling required by (a) above shall sample in accordance with (b). Those existing construction activities that have met the sampling required by (b) above shall not be required to conduct additional sampling other than as required by (c) above.

*Note that the Permittee may choose to meet the requirements of (a) and (b) above by collecting turbidity samples from any rain event that reaches or exceeds 0.5 inch and allows for sampling at any time of the day or week.

7. Non-storm water discharges. Except for flows from fire fighting activities, sources of non-storm water listed in Part III.A.2. of this permit that are combined with storm water discharges associated with construction activity must be identified in the Plan. The Plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

E. Reporting.

1. The applicable permittees are required to submit the sampling results to the EPD at the address shown in Part II.C. by the fifteenth day of the month following the reporting period. Reporting periods are months during which samples are taken in accordance with this permit. Sampling results shall be in a clearly legible format. Upon written notification, EPD may require the applicable permittee to submit the sampling results on a more frequent basis. Sampling and analyses of any storm water discharge(s) or the receiving water(s) beyond the minimum frequency stated in this permit must be reported in a similar manner to the EPD. The sampling reports must be signed in accordance with Part V.G.2. Sampling reports must be submitted to EPD until such time as a NOT is submitted in accordance with Part VI.

2. All sampling reports shall include the following information:

a. The rainfall amount, date, exact place and time of sampling or measurements;
b. The name(s) of the certified personnel who performed the sampling and measurements;
c. The date(s) analyses were performed;
d. The time(s) analyses were initiated;
e. The name(s) of the certified personnel who performed the analyses;
f. References and written procedures, when available, for the analytical techniques or methods used;
g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results;
h. Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU;" and
i. Certification statement that sampling was conducted as per the Plan.

3.. All written correspondence required by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate District Office of the EPD according to the schedule in Appendix A of this permit. The permittee shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated location from commencement of construction until such time as a NOT is submitted in accordance with Part VI. If an electronic submittal is provided by EPD then the written correspondence may be submitted electronically; if required, a paper copy must also be submitted by return receipt certified mail or similar service.

F. Retention of Records

1. The primary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part VI:

a. A copy of all Notices of Intent submitted to EPD;
b. A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit;
c. The design professional's report of the results of the inspection conducted in accordance with Part IV.A.5. of this permit;
d. A copy of all sampling information, results, and reports required by this permit;
e. A copy of all inspection reports generated in accordance with Part IV.D.4.a. of this permit;

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BLUE JAY ROAD WATER MAIN EXTENSION
EFFINGHAM COUNTY, GA
prepared for:
EFFINGHAM CO. BOARD OF COMMISSIONERS

No.	Date	Revision
1	12/15/2017	INITIAL SUBMITTAL
2	1/29/2018	REVISION 1

Sheet Title:
EROSION CONTROL NOTES

Drawn by:	WAS
Designed by:	WAS
Checked by:	GWP
Scale:	NTS
Project No.	PE17183
Sheet	17